

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
November 2016

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Recompletion Date Date Reached TD Completion Date or Recompletion Date

API No.: _____

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 Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No TCores aken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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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				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
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> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

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

No. 1650

Cell 785-324-1041

Date	11-4-15	Sec.	12	Twp.	19	Range	13	County	Barton	State	Ks	On Location		Finish	2:30 AM
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Location Great Bend, Ks - N to Juco Rd, 4E

Lease	Barton County		Well No.	1	Owner	to 40th Ave, 1N, 3/8 W, 5/8	
Contractor	Royal 1				To Quality Oilwell Cementing, Inc.		
Type Job	Surface				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	12 1/4"	T.D.	305'	Charge To	RJM Company		
Csg.	8 5/8"	Depth	305'	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.	15'	Shoe Joint	15'	Cement Amount Ordered	180 80/20 3% Ce 2% Gel		
Meas Line		Displace	18 1/4 BLS				

EQUIPMENT

Pumptrk	18	No.	Cementer		Common
			Helper	T. Davis	
Bulktrk	14	No.	Driver	Billie	Poz. Mix
			Driver		Gel.
Bulktrk	p.u.	No.	Driver	Rick	Calcium
			Driver		

JOB SERVICES & REMARKS

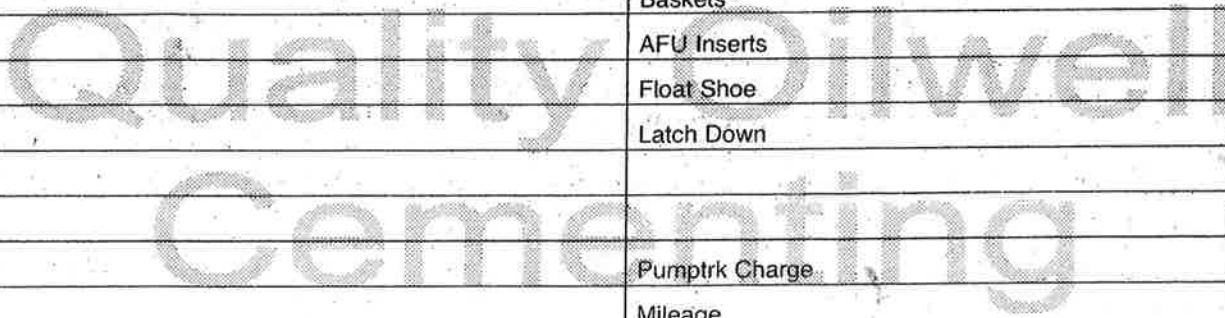
Remarks:	Cement d'd	Circulate	Hulls
Rat Hole			Salt
Mouse Hole			Flowseal
Centralizers			Kol-Seal
Baskets			Mud CLR 48
D/V or Port Collar			CFL-117 or CD110 CAF 38
			Sand
			Handling
			Mileage

FLOAT EQUIPMENT

	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

	Pumptrk Charge	
	Mileage	
		Tax
		Discount
		Total Charge

X Signature Doug Budig



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. 1289

Date	11-10-15	Sec.	12	Twp.	R	Range	13	County	Barton	State	KS	On Location		Finish	6:45 PM
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Location *Great Bend Kr - 281 + Juco Rd.*

Lease *Barton County* Well No. *1* Owner *4E to 40 Ave, IA, 3/8 W, 5/8*

Contractor *Royal 1* 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.

Type Job *Production*

Hole Size *7 7/8"* T.D. *3530'* Charge To *RTM Company*

Csg. *5 1/2" New 15.50* Depth *3524'* 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. *9.72'* Shoe Joint *9.72'* Cement Amount Ordered *180 Com 10% Salt*

Meas Line Displace *83 1/2 Bbl* *5% Gilsomite - 500 gal Mud Clear 48*

EQUIPMENT

Pumptrk	<i>18</i>	No.	Cementer	<i>Billy</i>	Common
			Helper		Poz. Mix
Bulktrk	<i>9</i>	No.	Driver	<i>Downy</i>	Gel.
			Driver		Calcium
Bulktrk	<i>p.u.</i>	No.	Driver	<i>Rick</i>	
			Driver		

JOB SERVICES & REMARKS

Remarks: *Ⓟ*

Rat Hole Flowseal

Mouse Hole Kol-Seal

Centralizers *1-9* Mud CLR 48

Baskets *2+5* CFL-117 or CD110 CAF 38

D/V or Port Collar *pipe on bottom break* Sand

Circulation pump 500 gal Mud Handling

Clear 48 plug Rothole w/ 305x Mileage

plug mousehole w/ 155x Hook + 5x **FLOAT EQUIPMENT**

Casing + mixed 135 sr Cement Guide Shoe

Shut down wash pump + lines Centralizer *9*

Released plug + Displaced w/ 83 1/2 Bbl Baskets *2*

of H₂O. Released + held AFU Inserts

Lift pressure 750 # Float Shoe *1*

Land plug to 1500 # Latch Down *1*

Rotating Head

Pumptrk Charge

Mileage

Signature *Harry Ludwig* Tax

Total Charge Discount



DRILL STEM TEST REPORT

Prepared For: **RJM COMPANY**

P.O. BOX 256
CLAFLIN, KANSAS 67525

ATTN: WYATT URBAN

BARTON COUNTY 1

12-19S-12W BARTON

Start Date: 2015.11.07 @ 07:06:00

End Date: 2015.11.07 @ 11:41:00

Job Ticket #: 01246 DST #: 1

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2015.11.08 @ 00:02:21

RJM COMPANY

12-19S-12W BARTON

BARTON COUNTY 1

DST # 1

KANSAS CITY 'A-F'

2015.11.07



DRILL STEM TEST REPORT

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

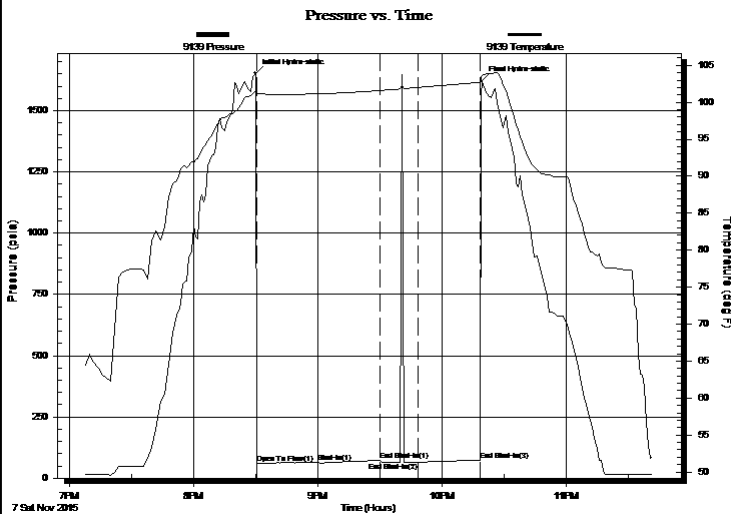
12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01246 **DST#: 1**
 Test Start: 2015.11.07 @ 07:06:00

GENERAL INFORMATION:

Formation: **KANSAS CITY 'A-F'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:30:00
 Time Test Ended: 11:41:00
 Interval: **3182.00 ft (KB) To 3252.00 ft (KB) (TVD)**
 Total Depth: 3252.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GENE BUDIG
 Unit No: 1-18
 Reference Elevations: 1877.00 ft (KB)
 1872.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 74.47 psia @ 3241.78 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.11.07 End Date: 2015.11.07 Last Calib.: 2015.11.08
 Start Time: 19:06:45 End Time: 23:41:45 Time On Btm: 2015.11.07 @ 20:29:45
 Time Off Btm: 2015.11.07 @ 22:19:15

TEST COMMENT: 1ST OPENING 30 MINUTES WEAK BLOW BUILT TO 1 INCH DECREASED AND DIED IN 15 MINUTE
 1ST SHUT-IN 30 MINUTES-NO BLOW BACK
 2ND OPENING 18 MINUTES-VERY WEAK SURFACE BLOW FOR 1 MINUTE AND DIED FLUSHED TOOL GOOD SURGE
 VERY WEAK SURFACE BLOW FOR 2 MINUTES AND DIED



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1652.83	101.57	Initial Hydro-static
1	62.38	100.95	Open To Flow (1)
30	62.67	101.14	Shut-In(1)
60	73.06	101.59	End Shut-In(1)
79	64.77	102.00	End Shut-In(2)
109	74.47	102.71	End Shut-In(3)
110	1621.01	103.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)

Gas Rates

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



DRILL STEM TEST REPORT

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

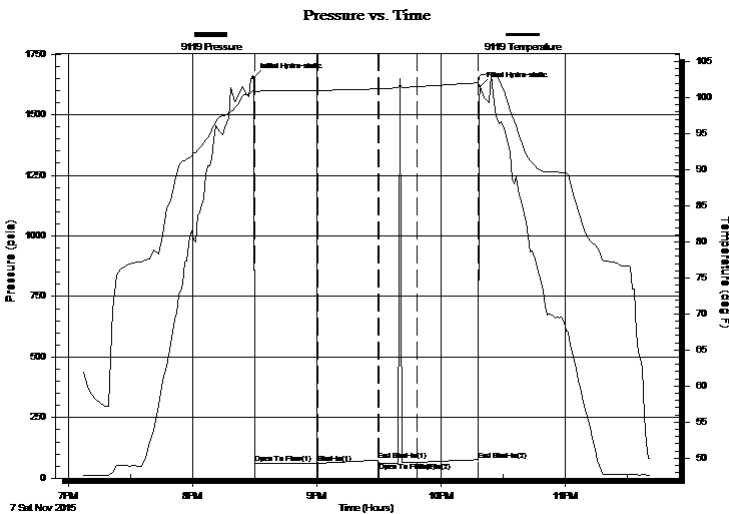
12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01246 **DST#: 1**
 Test Start: 2015.11.07 @ 07:06:00

GENERAL INFORMATION:

Formation: **KANSAS CITY 'A-F'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:30:00
 Time Test Ended: 11:41:00
 Interval: **3182.00 ft (KB) To 3252.00 ft (KB) (TVD)**
 Total Depth: 3252.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GENE BUDIG
 Unit No: 1-18
 Reference Elevations: 1877.00 ft (KB)
 1872.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 9119 Inside
 Press@RunDepth: 75.29 psia @ 3241.78 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.11.07 End Date: 2015.11.07 Last Calib.: 2015.11.08
 Start Time: 19:06:20 End Time: 23:41:20 Time On Btm: 2015.11.07 @ 20:29:20
 Time Off Btm: 2015.11.07 @ 22:18:50

TEST COMMENT: 1ST OPENING 30 MINUTES WEAK BLOW BUILT TO 1 INCH DECREASED AND DIED IN 15 MINUTE
 1ST SHUT-IN 30 MINUTES-NO BLOW BACK
 2ND OPENING 18 MINUTES-VERY WEAK SURFACE BLOW FOR 1 MINUTE AND DIED FLUSHED TOOL GOOD SURGE
 VERY WEAK SURFACE BLOW FOR 2 MINUTES AND DIED



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1653.81	101.09	Initial Hydro-static
1	60.77	100.76	Open To Flow (1)
31	62.20	101.03	Shut-In(1)
61	74.75	101.23	End Shut-In(1)
61	64.36	101.24	Open To Flow (2)
79	65.63	101.52	Shut-In(2)
109	75.29	102.08	End Shut-In(2)
110	1617.95	103.08	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01246 **DST#: 1**
 Test Start: 2015.11.07 @ 07:06:00

Tool Information

Drill Pipe:	Length: 3171.00 ft	Diameter: 3.80 inches	Volume: 44.48 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: 55000.00 lb
			<u>Total Volume: 44.48 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3182.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.78 ft			
Tool Length:	84.78 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			3167.00	
Hydraulic tool	5.00			3172.00	
Top Packer	5.00			3177.00	
Packer	5.00			3182.00	20.00 Bottom Of Top Packer
Anchor	3.00			3185.00	
Change Over Sub	0.75			3185.75	
Drill Pipe	31.28			3217.03	
Change Over Sub	0.75			3217.78	
Anchor	24.00			3241.78	
Recorder	0.00	9119	Inside	3241.78	
Recorder	0.00	9139	Outside	3241.78	
Bullnose	5.00			3246.78	64.78 Anchor Tool

Total Tool Length: 84.78



DRILL STEM TEST REPORT

FLUID SUMMARY

RJM COMPANY
P.O. BOX 256
CLAFLIN, KANSAS 67525
ATTN: WYATT URBAN

12-19S-12W BARTON
BARTON COUNTY 1
Job Ticket: 01246 **DST#: 1**
Test Start: 2015.11.07 @ 07:06:00

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:	53.00 sec/qt	Cushion Volume:	bbbl		
Water Loss:	8.00 in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psia		
Salinity:	4000.00 ppm				
Filter Cake:	0.00 inches				

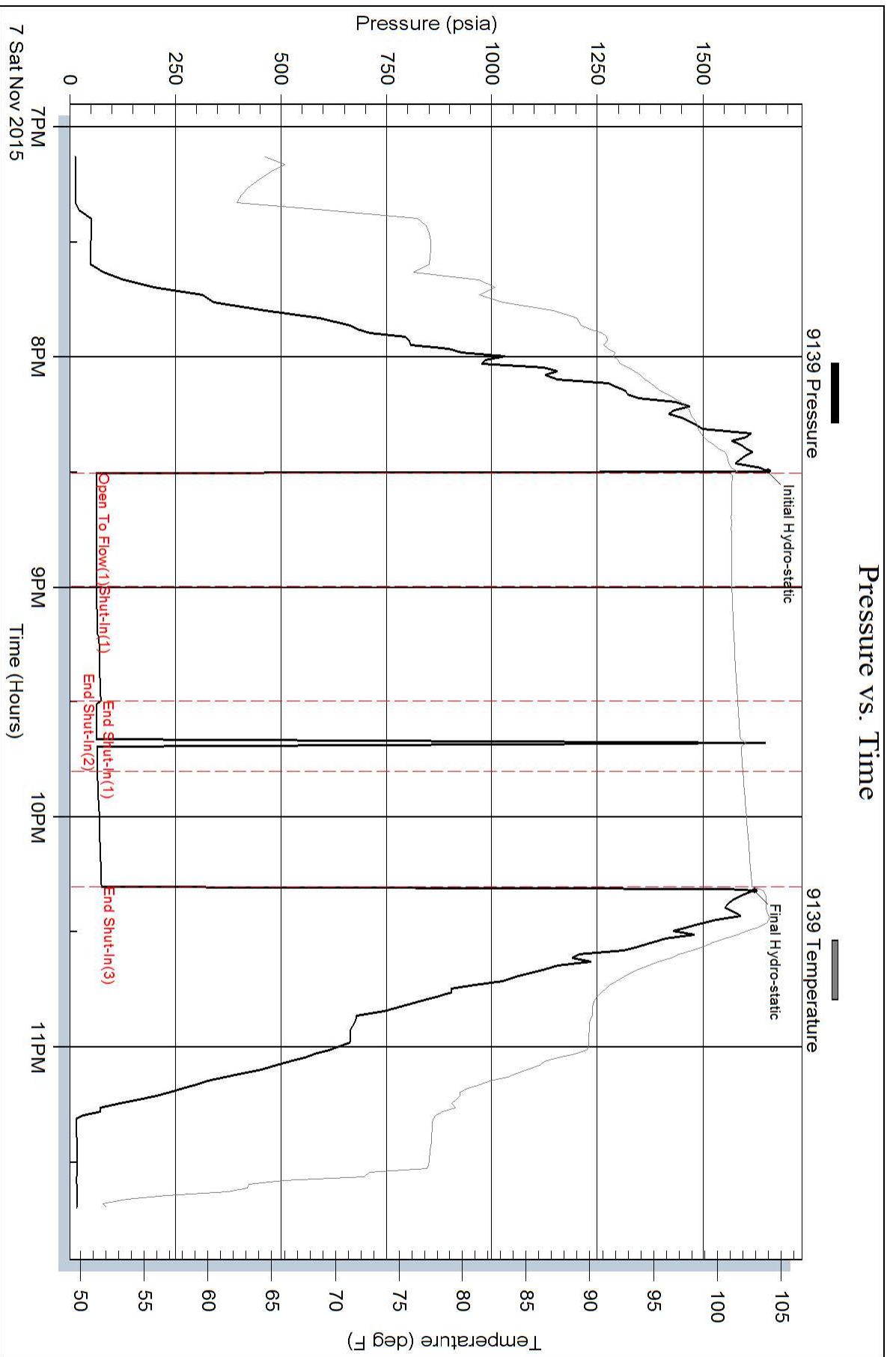
Recovery Information

Recovery Table

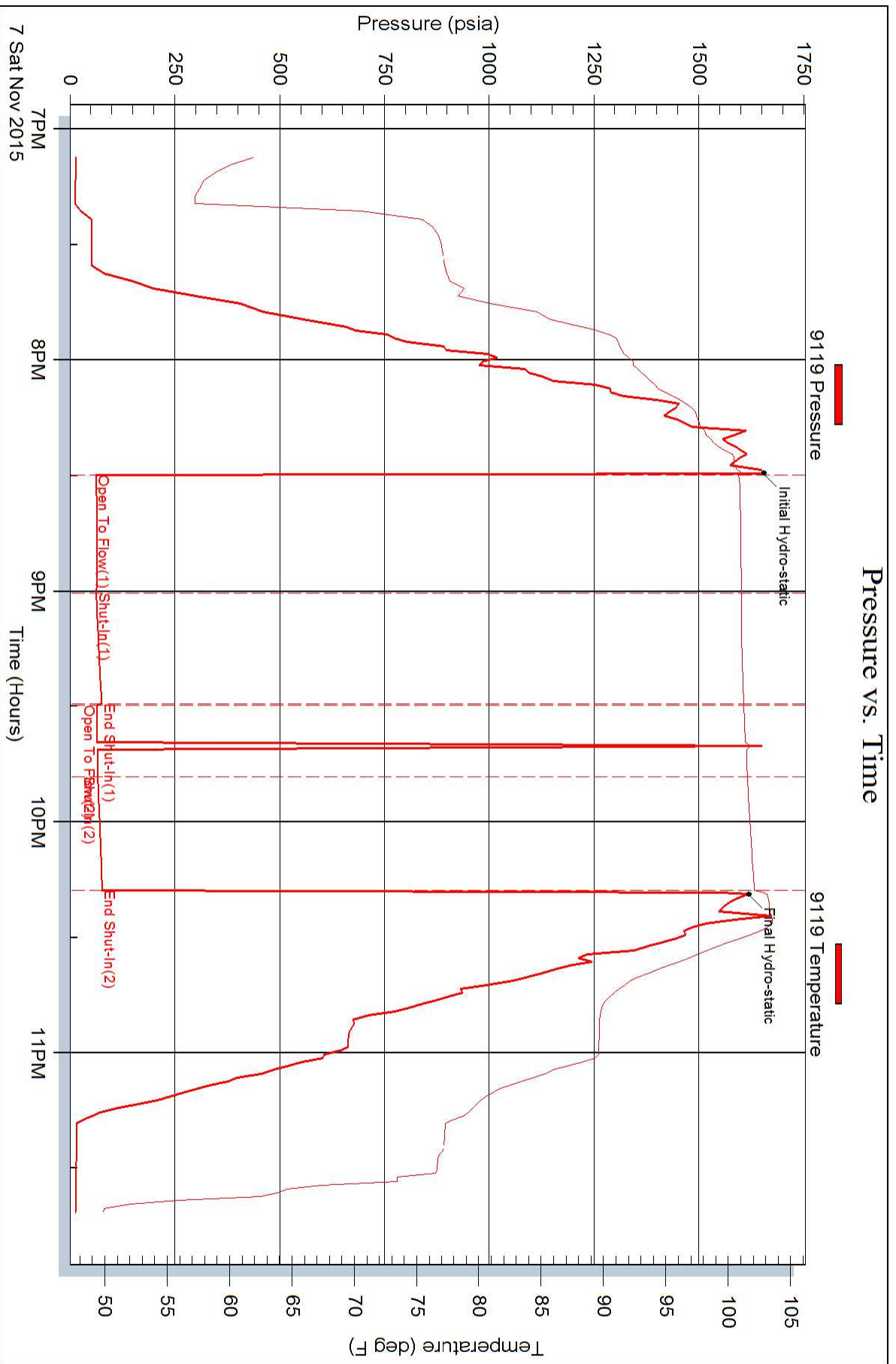
Length ft	Description	Volume bbbl

Total Length: ft Total Volume: 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: **RJM COMPANY**

P.O. BOX 256
CLAFLIN, KANSAS 67525

ATTN: WYATT URBAN

BARTON COUNTY 1

12-19S-12W BARTON

Start Date: 2015.11.08 @ 06:06:00

End Date: 2015.11.08 @ 10:40:00

Job Ticket #: 01247 DST #: 2

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2015.11.08 @ 10:40:23

RJM COMPANY
12-19S-12W BARTON
BARTON COUNTY 1
DST # 2
KANSAS CITY G
2015.11.08



DRILL STEM TEST REPORT

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

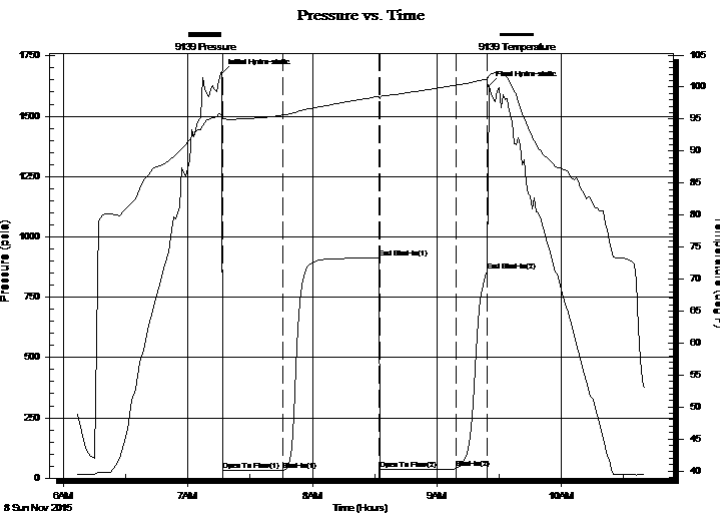
12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01247 **DST#: 2**
 Test Start: 2015.11.08 @ 06:06:00

GENERAL INFORMATION:

Formation: **KANSAS CITY G**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:01:00
 Time Test Ended: 10:40:00
 Interval: **3265.00 ft (KB) To 3280.00 ft (KB) (TVD)**
 Total Depth: 3280.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GENE BUDIG
 Unit No: 1
 Reference Elevations: 1877.00 ft (KB)
 1872.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 859.47 psia @ 3275.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.11.08 End Date: 2015.11.08 Last Calib.: 2015.11.08
 Start Time: 06:06:00 End Time: 10:40:30 Time On Btm: 2015.11.08 @ 07:16:30
 Time Off Btm: 2015.11.08 @ 09:25:00

TEST COMMENT: 1ST OPENING 30 MINUTES WEAK STEADY 1/2 INCH BLOW THROUGH OUT
 1ST SHUT-IN 45 MINUTES-NO BLOW BACK
 2ND OPENING 37 MINUTES-VERY WEAK INTERMITTANT BLOW THROUGH OUT
 2ND SHUT-IN 15 MINUTES-NO BLOW BACK



PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1678.24	95.60	Initial Hydro-static
1	31.87	95.12	Open To Flow (1)
30	33.56	95.64	Shut-In(1)
76	911.79	98.55	End Shut-In(1)
76	35.62	98.26	Open To Flow (2)
113	39.12	100.27	Shut-In(2)
128	859.47	101.26	End Shut-In(2)
129	1625.78	101.85	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
20.00	DRILLING MUD	0.29

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



DRILL STEM TEST REPORT

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

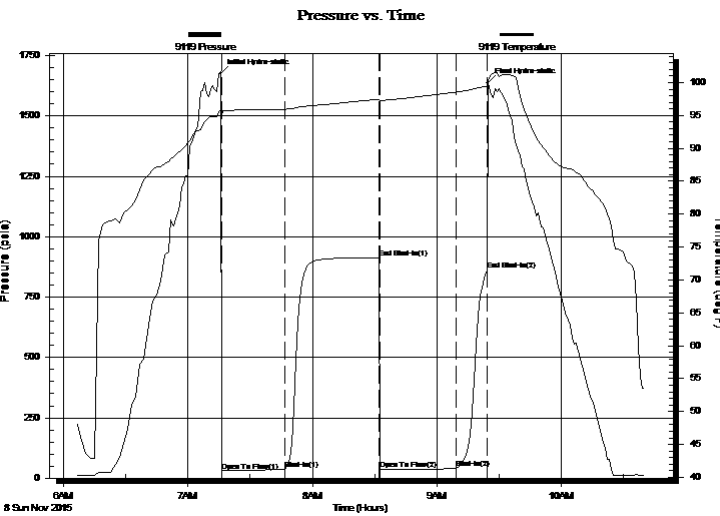
12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01247 **DST#: 2**
 Test Start: 2015.11.08 @ 06:06:00

GENERAL INFORMATION:

Formation: **KANSAS CITY G**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:01:00
 Time Test Ended: 10:40:00
 Interval: **3265.00 ft (KB) To 3280.00 ft (KB) (TVD)**
 Total Depth: 3280.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GENE BUDIG
 Unit No: 1
 Reference Elevations: 1877.00 ft (KB)
 1872.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 9119 Inside
 Press@RunDepth: 864.18 psia @ 3275.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.11.08 End Date: 2015.11.08 Last Calib.: 2015.11.08
 Start Time: 06:06:00 End Time: 10:40:30 Time On Btm: 2015.11.08 @ 07:16:00
 Time Off Btm: 2015.11.08 @ 09:24:30

TEST COMMENT: 1ST OPENING 30 MINUTES WEAK STEADY 1/2 INCH BLOW THROUGH OUT
 1ST SHUT-IN 45 MINUTES-NO BLOW BACK
 2ND OPENING 37 MINUTES-VERY WEAK INTERMITTANT BLOW THROUGH OUT
 2ND SHUT-IN 15 MINUTES-NO BLOW BACK



PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1677.16	95.91	Initial Hydro-static
1	29.16	94.92	Open To Flow (1)
31	35.48	95.95	Shut-In(1)
76	912.69	97.48	End Shut-In(1)
77	34.91	97.25	Open To Flow (2)
113	39.61	98.53	Shut-In(2)
128	864.18	99.41	End Shut-In(2)
129	1638.04	100.17	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
20.00	DRILLING MUD	0.29

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

RJM COMPANY

12-19S-12W BARTON

P.O. BOX 256
CLAFLIN, KANSAS 67525

BARTON COUNTY 1

Job Ticket: 01247

DST#: 2

ATTN: WYATT URBAN

Test Start: 2015.11.08 @ 06:06:00

Tool Information

Drill Pipe:	Length: 3267.00 ft	Diameter: 3.86 inches	Volume: 47.29 bbl	Tool Weight:	lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	lb
			Total Volume: 47.29 bbl	Tool Chased	ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial	lb
Depth to Top Packer:	3265.00 ft			Final	lb
Depth to Bottom Packer:	ft				
Interval between Packers:	15.00 ft				
Tool Length:	35.00 ft				
Number of Packers:	2	Diameter:	inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3250.00	
Hydraulic tool	5.00			3255.00	
Top Packer	5.00			3260.00	
Packer	5.00			3265.00	20.00 Bottom Of Top Packer
Anchor	10.00			3275.00	
Recorder	0.00	9119	Inside	3275.00	
Recorder	0.00	9139	Outside	3275.00	
Bullnose	5.00			3280.00	15.00 Anchor Tool

Total Tool Length: 35.00



DRILL STEM TEST REPORT

FLUID SUMMARY

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01247 **DST#: 2**
 Test Start: 2015.11.08 @ 06:06:00

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: 50.00 sec/qt	Cushion Volume: bbl		
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			

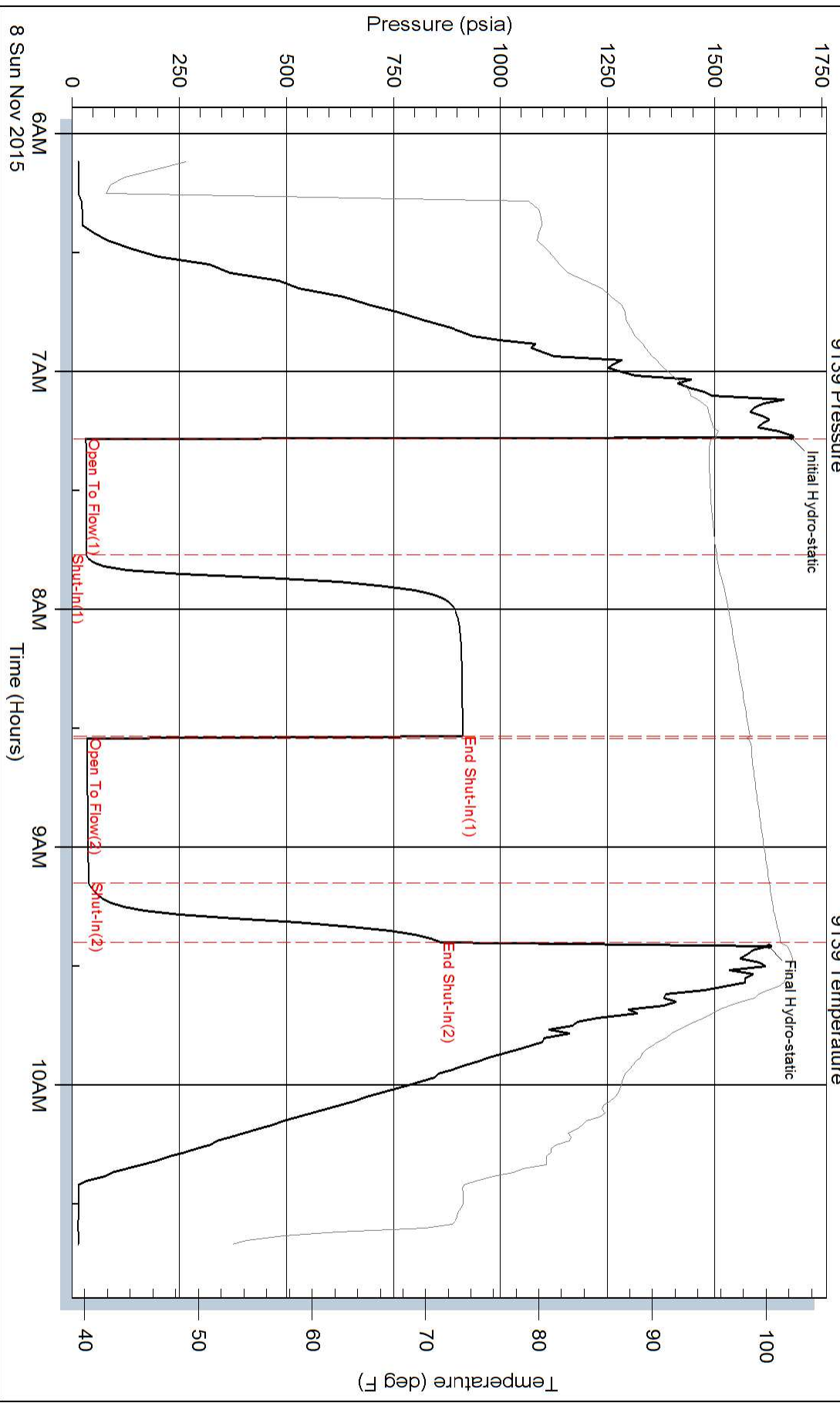
Recovery Information

Recovery Table

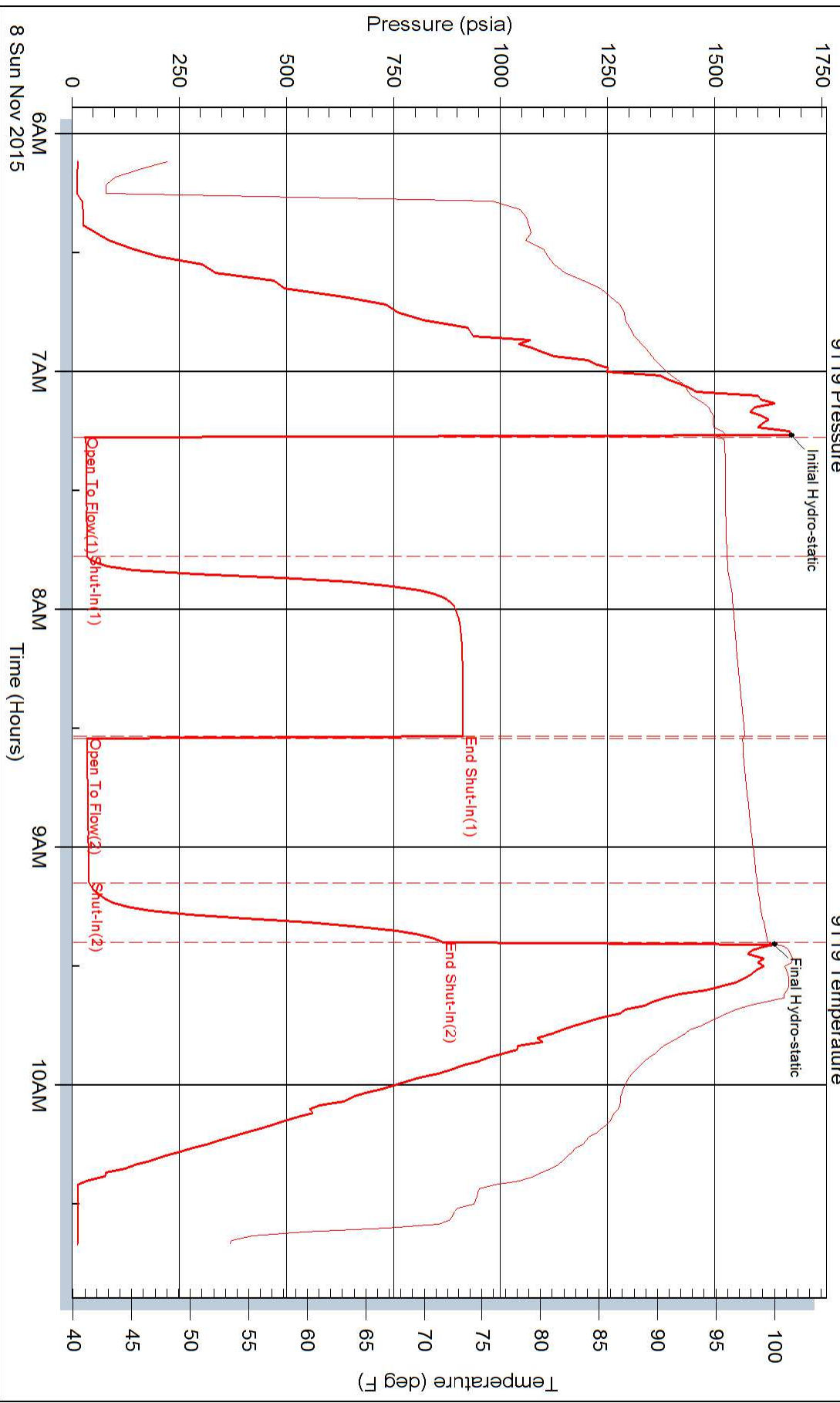
Length ft	Description	Volume bbl
20.00	DRILLING MUD	0.289

Total Length: 20.00 ft Total Volume: 0.289 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: **RJM COMPANY**

P.O. BOX 256
CLAFLIN, KANSAS 67525

ATTN: WYATT URBAN

BARTON COUNTY 1

12-19S-12W BARTON

Start Date: 2015.11.09 @ 02:37:26

End Date: 2015.11.09 @ 08:41:26

Job Ticket #: 01248 DST #: 3

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2015.11.09 @ 09:07:10

RJM COMPANY
12-19S-12W BARTON
BARTON COUNTY 1
DST # 3
ARBUCKLE
2015.11.09



DRILL STEM TEST REPORT

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

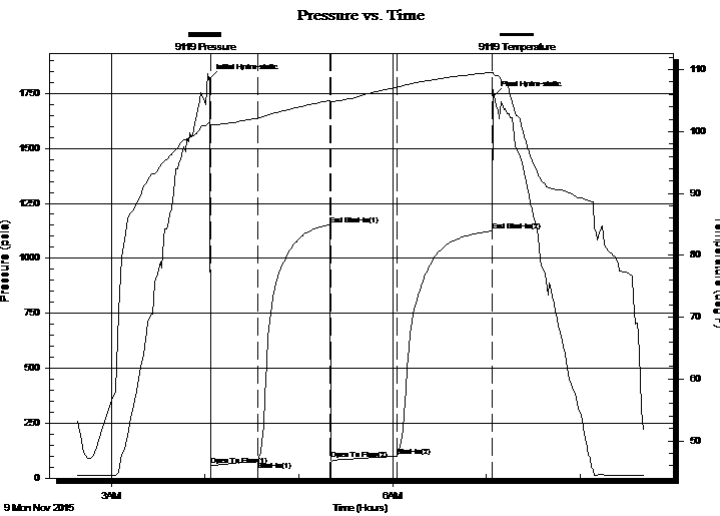
12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01248 **DST#: 3**
 Test Start: 2015.11.09 @ 02:37:26

GENERAL INFORMATION:

Formation: **ARBUCKLE**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:03:26
 Time Test Ended: 08:41:26
 Interval: **3406.00 ft (KB) To 3463.00 ft (KB) (TVD)**
 Total Depth: 3463.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GKENE BUDIG
 Unit No: 1-183406
 Reference Elevations: 1877.00 ft (KB)
 1872.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 9119 Inside
 Press@RunDepth: 101.11 psia @ 3458.32 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.11.09 End Date: 2015.11.09 Last Calib.: 2015.11.09
 Start Time: 02:37:26 End Time: 08:41:26 Time On Btm: 2015.11.09 @ 04:02:56
 Time Off Btm: 2015.11.09 @ 07:04:56

TEST COMMENT: 1ST OPENING 30 MINUTES= WEAK BUILDING BLOW BUILT TO 10 INCHES INTO THE WATER
 1ST SHUT-IN 45 MINUTES-NO BLOW BACK
 2ND OPENING 45 MINUTES- WEAK BUILDING BLOW BUILT TO 12 INCHES INTO THE WATER
 2ND SHUT-IN 60 MINUTES-O BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1818.62	101.46	Initial Hydro-static
1	56.61	101.06	Open To Flow (1)
31	78.58	102.15	Shut-In(1)
77	1153.26	105.02	End Shut-In(1)
78	87.75	104.45	Open To Flow (2)
120	101.11	107.20	Shut-In(2)
181	1123.98	109.56	End Shut-In(2)
182	1738.99	109.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MUDDY OIL 85 15 MUD	1.68
0.00	120 GAS IN THE PIPE	0.00

Gas Rates

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



DRILL STEM TEST REPORT

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

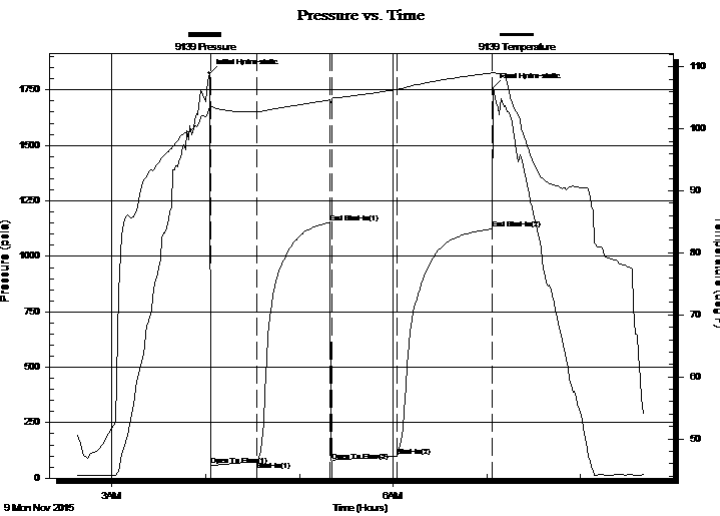
12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01248 **DST#: 3**
 Test Start: 2015.11.09 @ 02:37:26

GENERAL INFORMATION:

Formation: **ARBUCKLE**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:03:26
 Time Test Ended: 08:41:26
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GKENE BUDIG
 Unit No: 1-183406
 Interval: **3406.00 ft (KB) To 3463.00 ft (KB) (TVD)**
 Reference Elevations: 1877.00 ft (KB)
 Total Depth: 3463.00 ft (KB) (TVD) 1872.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 1123.09 psia @ 3458.32 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.11.09 End Date: 2015.11.09 Last Calib.: 2015.11.09
 Start Time: 02:37:00 End Time: 08:41:00 Time On Btm: 2015.11.09 @ 04:02:30
 Time Off Btm: 2015.11.09 @ 07:04:00

TEST COMMENT: 1ST OPENING 30 MINUTES= WEAK BUILDING BLOW BUILT TO 10 INCHES INTO THE WATER
 1ST SHUT-IN 45 MINUTES-NO BLOW BACK
 2ND OPENING 45 MINUTES- WEAK BUILDING BLOW BUILT TO 12 INCHES INTO THE WATER
 2ND SHUT-IN 60 MINUTES-O BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1825.55	103.27	Initial Hydro-static
1	57.68	103.52	Open To Flow (1)
30	74.24	102.75	Shut-In(1)
77	1152.52	104.66	End Shut-In(1)
78	76.66	104.63	Open To Flow (2)
120	100.16	106.34	Shut-In(2)
181	1123.09	109.01	End Shut-In(2)
182	1758.78	109.10	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MUDDY OIL 85 15 MUD	1.68
0.00	120 GAS IN THE PIPE	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01248 **DST#: 3**
 Test Start: 2015.11.09 @ 02:37:26

Tool Information

Drill Pipe:	Length: 3392.00 ft	Diameter: 3.80 inches	Volume: 47.58 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 47.58 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 41000.00 lb
Depth to Top Packer:	3406.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.32 ft			
Tool Length:	77.32 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			3391.00	
Hydraulic tool	5.00			3396.00	
Top Packer	5.00			3401.00	
Packer	5.00			3406.00	20.00 Bottom Of Top Packer
Anchor	10.00			3416.00	
Change Over Sub	0.75			3416.75	
Drill Pipe	31.82			3448.57	
Change Over Sub	0.75			3449.32	
Anchor	9.00			3458.32	
Recorder	0.00	9119	Inside	3458.32	
Recorder	0.00	9139	Outside	3458.32	
Bullnose	5.00			3463.32	57.32 Anchor Tool

Total Tool Length: 77.32



DRILL STEM TEST REPORT

FLUID SUMMARY

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01248 **DST#: 3**
 Test Start: 2015.11.09 @ 02:37:26

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: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.85 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 5000.00 ppm			
Filter Cake: 1.00 inches			

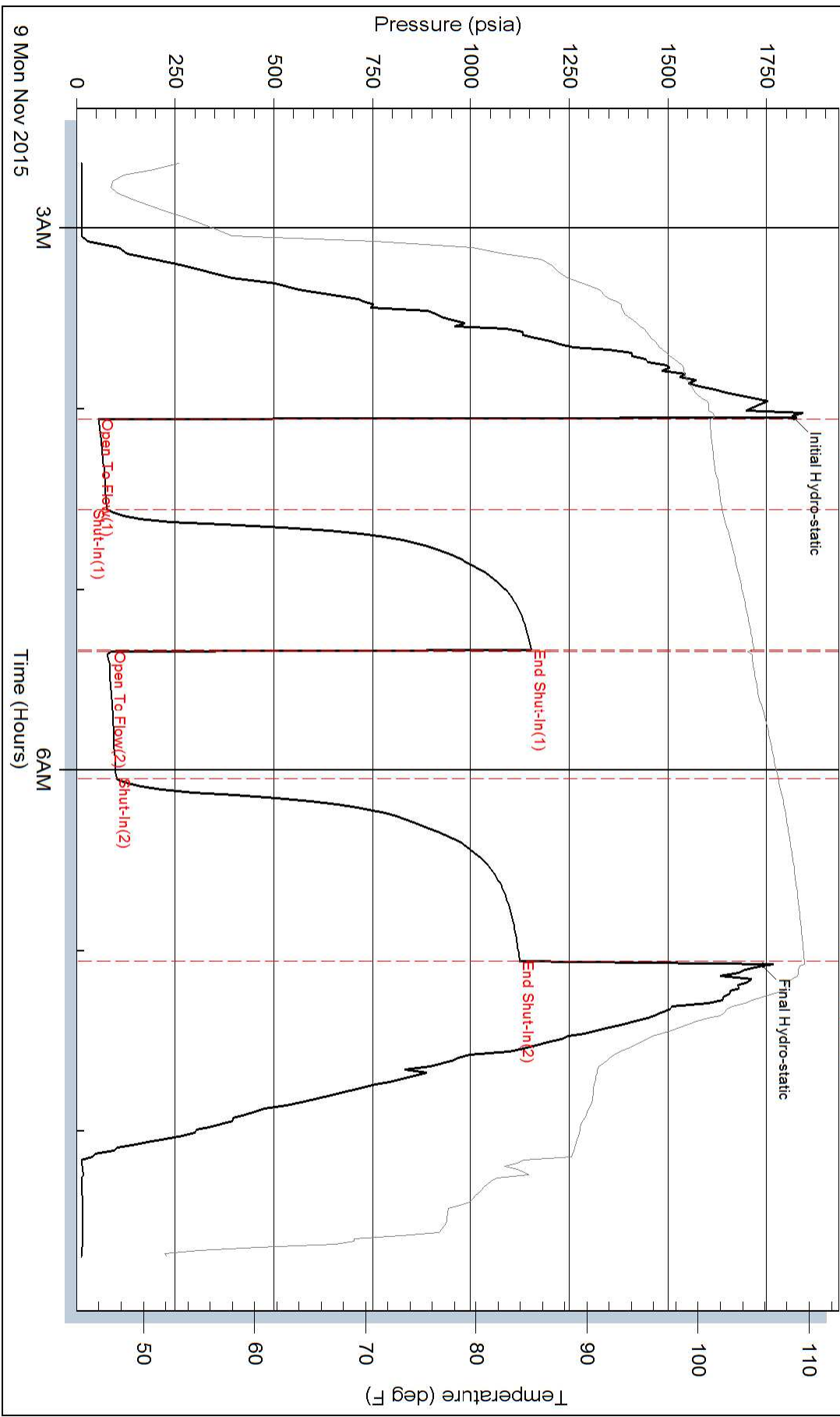
Recovery Information

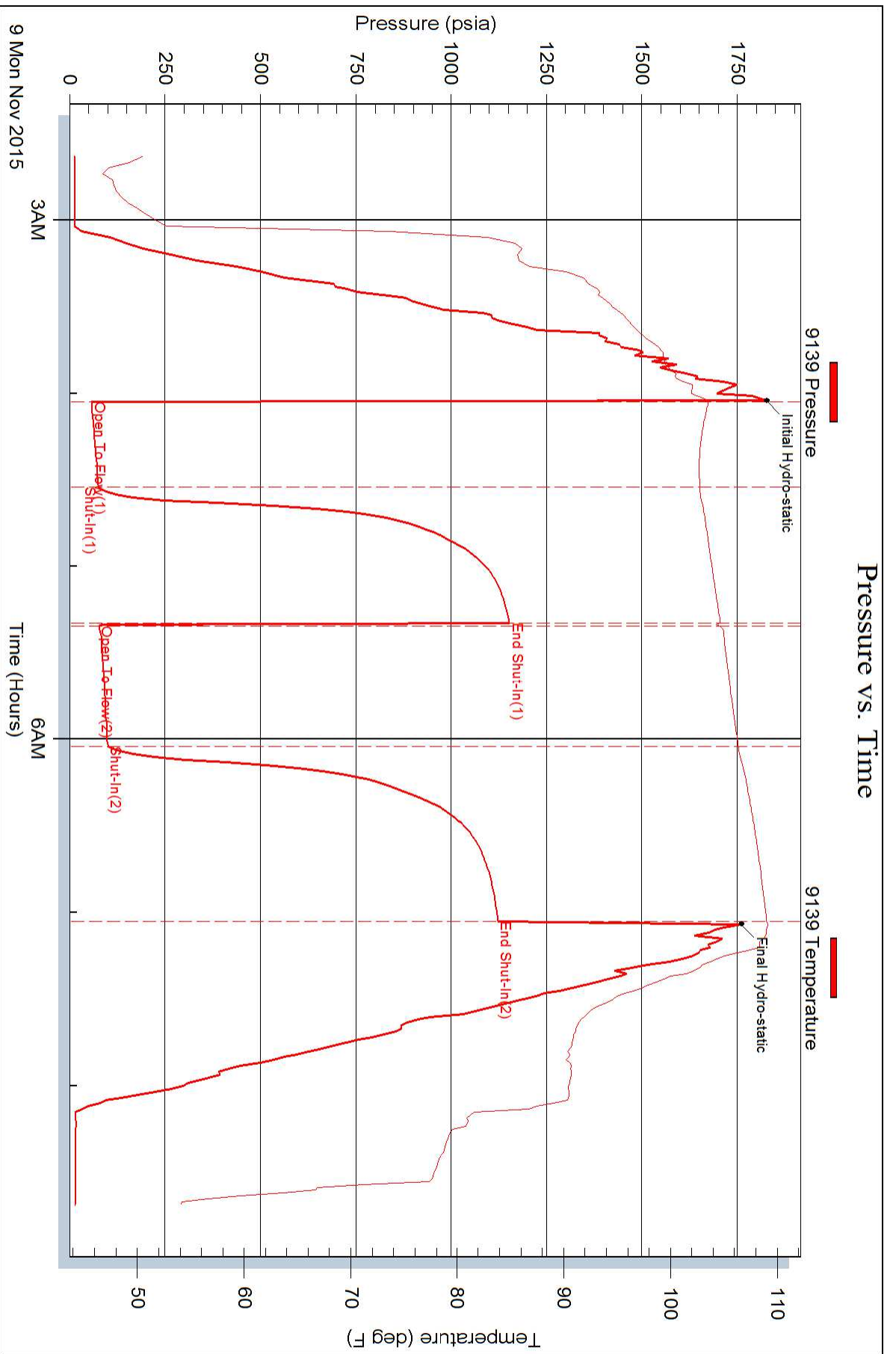
Recovery Table

Length ft	Description	Volume bbl
120.00	MUDDY OIL 85 15 MUD	1.683
0.00	120 GAS IN THE PIPE	0.000

Total Length: 120.00 ft Total Volume: 1.683 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**

P.O. BOX 256
CLAFLIN, KANSAS 67525

ATTN: WYATT URBAN

BARTON COUNTY 1

12-19S-12W BARTON

Start Date: 2015.11.09 @ 15:48:00

End Date: 2015.11.09 @ 21:45:00

Job Ticket #: 01249 DST #: 4

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2015.11.09 @ 22:18:29

RJM COMPANY
12-19S-12W BARTON
BARTON COUNTY 1
DST # 4
ARBUCKLE
2015.11.09



DRILL STEM TEST REPORT

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

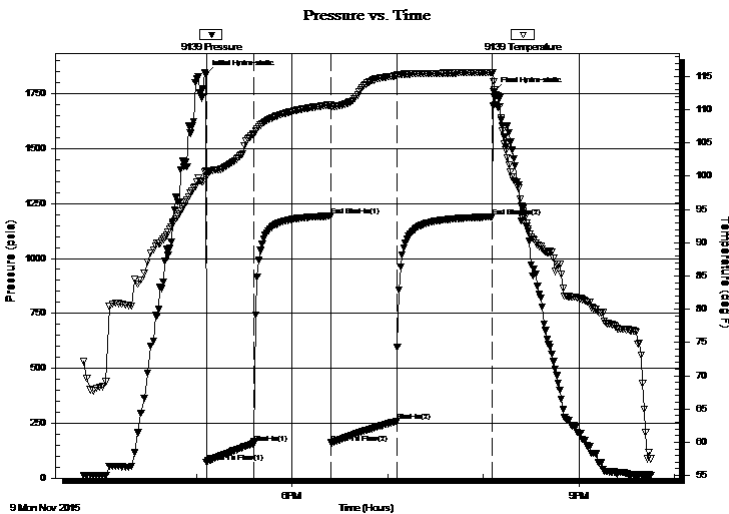
12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01249 **DST#: 4**
 Test Start: 2015.11.09 @ 15:48:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 17:06:00 Tester: GENE BUDIG
 Time Test Ended: 21:45:00 Unit No: 1-19
 Interval: **3406.00 ft (KB) To 3479.00 ft (KB) (TVD)** Reference Elevations: 1877.00 ft (KB)
 Total Depth: 3479.00 ft (KB) (TVD) 1872.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 1189.04 psia @ 3473.78 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.11.09 End Date: 2015.11.09 Last Calib.: 2015.11.09
 Start Time: 15:49:00 End Time: 21:45:00 Time On Btm: 2015.11.09 @ 17:05:30
 Time Off Btm: 2015.11.09 @ 20:06:30

TEST COMMENT: 1ST OPENING 30 MINUTES-WEAK BUILDING BLOW BUILT TO THE BOTTOM THE BUCKET IN 14 MINUTES
 1ST SHUT-IN 45 MINUTES-NO BLOW BACK
 2ND OPENING 45 MINUTES-WEAK BUILDING BLOW BUILT TO THE BOTTOM THE BUCKET IN 16 MINUTES
 2ND SHUT-IN 60 MINUTES-NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1835.59	100.81	Initial Hydro-static
1	73.05	99.96	Open To Flow (1)
30	156.96	106.30	Shut-In(1)
79	1193.08	110.73	End Shut-In(1)
79	160.76	110.39	Open To Flow (2)
120	258.69	115.11	Shut-In(2)
180	1189.04	115.61	End Shut-In(2)
181	1757.97	114.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	OIL CUT MUDDY WATER	0.84
0.00	10 GAS 18 OIL 40 MUD 32 WATER	0.00
60.00	OIL CUT MUDDY WATER	0.84
0.00	5 GAS 15 OIL 60 MUD 20 WATER	0.00
120.00	OIL CUT MUDDY WATER	1.68
0.00	15 GAS 25 OIL 30 MUD 30 WATER	0.00

Gas Rates

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



DRILL STEM TEST REPORT

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

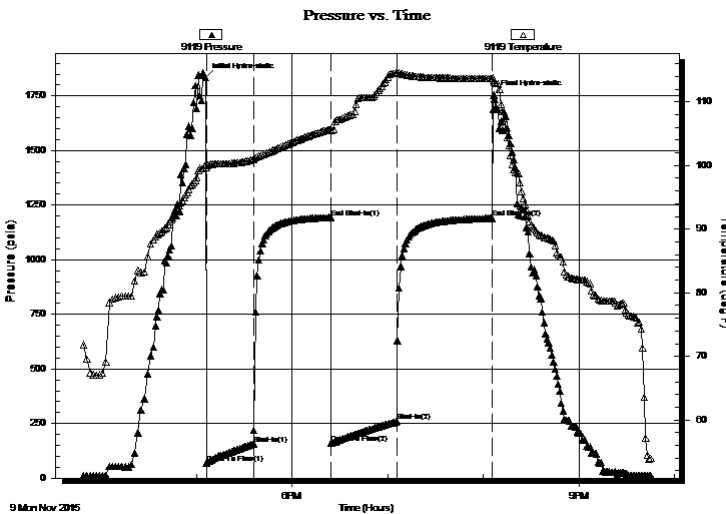
12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01249 **DST#: 4**
 Test Start: 2015.11.09 @ 15:48:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 17:06:00
 Time Test Ended: 21:45:00
 Interval: **3406.00 ft (KB) To 3479.00 ft (KB) (TVD)**
 Total Depth: 3479.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GENE BUDIG
 Unit No: 1-19
 Reference Elevations: 1877.00 ft (KB)
 1872.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 9119 Inside
 Press@RunDepth: 1189.59 psia @ 3473.78 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.11.09 End Date: 2015.11.09 Last Calib.: 2015.11.09
 Start Time: 15:49:00 End Time: 21:45:00 Time On Btm: 2015.11.09 @ 17:05:30
 Time Off Btm: 2015.11.09 @ 20:06:30

TEST COMMENT: 1ST OPENING 30 MINUTES-WEAK BUILDING BLOW BUILT TO THE BOTTOM THE BUCKET IN 14 MINUTES
 1ST SHUT-IN 45 MINUTES-NO BLOW BACK
 2ND OPENING 45 MINUTES-WEAK BUILDING BLOW BUILT TO THE BOTTOM THE BUCKET IN 16 MINUTES
 2ND SHUT-IN 60 MINUTES-NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1834.93	100.17	Initial Hydro-static
1	69.64	99.64	Open To Flow (1)
30	157.08	100.93	Shut-In(1)
79	1193.65	105.72	End Shut-In(1)
79	159.30	105.45	Open To Flow (2)
120	259.16	114.51	Shut-In(2)
180	1189.59	113.65	End Shut-In(2)
181	1754.37	113.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	OIL CUT MUDDY WATER	0.84
0.00	10 GAS 18 OIL 40 MUD 32 WATER	0.00
60.00	OIL CUT MUDDY WATER	0.84
0.00	5 GAS 15 OIL 60 MUD 20 WATER	0.00
120.00	OIL CUT MUDDY WATER	1.68
0.00	15 GAS 25 OIL 30 MUD 30 WATER	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01249 **DST#: 4**
 Test Start: 2015.11.09 @ 15:48:00

Tool Information

Drill Pipe:	Length: 3392.00 ft	Diameter: 3.80 inches	Volume: 47.58 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 56000.00 lb
			<u>Total Volume: 47.58 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3406.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	72.78 ft			
Tool Length:	92.78 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3391.00	
Hydraulic tool	5.00			3396.00	
Top Packer	5.00			3401.00	
Packer	5.00			3406.00	20.00 Bottom Of Top Packer
Anchor	10.00			3416.00	
Change Over Sub	0.75			3416.75	
Drill Pipe	31.28			3448.03	
Change Over Sub	0.75			3448.78	
Anchor	25.00			3473.78	
Recorder	0.00	9119	Inside	3473.78	
Recorder	0.00	9139	Outside	3473.78	
Bullnose	5.00			3478.78	72.78 Anchor Tool

Total Tool Length: 92.78



DRILL STEM TEST REPORT

FLUID SUMMARY

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525
 ATTN: WYATT URBAN

12-19S-12W BARTON
BARTON COUNTY 1
 Job Ticket: 01249 **DST#: 4**
 Test Start: 2015.11.09 @ 15:48:00

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: bbl		
Water Loss: 10.39 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 76000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	OIL CUT MUDDY WATER	0.842
0.00	10 GAS 18 OIL 40 MUD 32 WATER	0.000
60.00	OIL CUT MUDDY WATER	0.842
0.00	5 GAS 15 OIL 60 MUD 20 WATER	0.000
120.00	OIL CUT MUDDY WATER	1.683
0.00	15 GAS 25 OIL 30 MUD 30 WATER	0.000
120.00	OIL CUT MUDDY WATER	1.683
0.00	7 GAS 13 WATER 40 MUD 40 WATER	0.000
60.00	OIL CUT MUDDY WATER	0.842
0.00	0 GAS 5 OIL 45 MUD 50 WATER	0.000
0.00	CHLORIDES 16,000	0.000

Total Length: 420.00 ft Total Volume: 5.892 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time

