

1265816



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 Cores Taken <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
Cell 785-324-1041

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

No. 1042

Date	Sec.	Twp.	Range	County	State	On Location	Finish
9-19-15	22	19	13	Barclay	KS		6:00 AM

Location Great Bend Jwd Rd 1E 2S to 10 Rd

Lease Howard Well No. # 1 Owner Nine

Contractor Royal #1 To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish
Type Job Surface cementer and helper to assist owner or contractor to do work as listed.

Hole Size 12 1/4 T.D. 745 Charge To RJM

Csg. 8 5/8 Depth 745 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. 30' Shoe Joint Cement Amount Ordered 300 70/30 3% cc 2% bel

Meas Line Displace 415 1/2 bbl

EQUIPMENT

Pumptrk 18 No. Cementer Helper Craig Common

Bulktrk 4 No. Driver Nick Poz. Mix

Bulktrk pu No. Driver Brett Gel.

JOB SERVICES & REMARKS

Remarks: 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

Handling Sand

Mileage 4 5/8

FLOAT EQUIPMENT

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

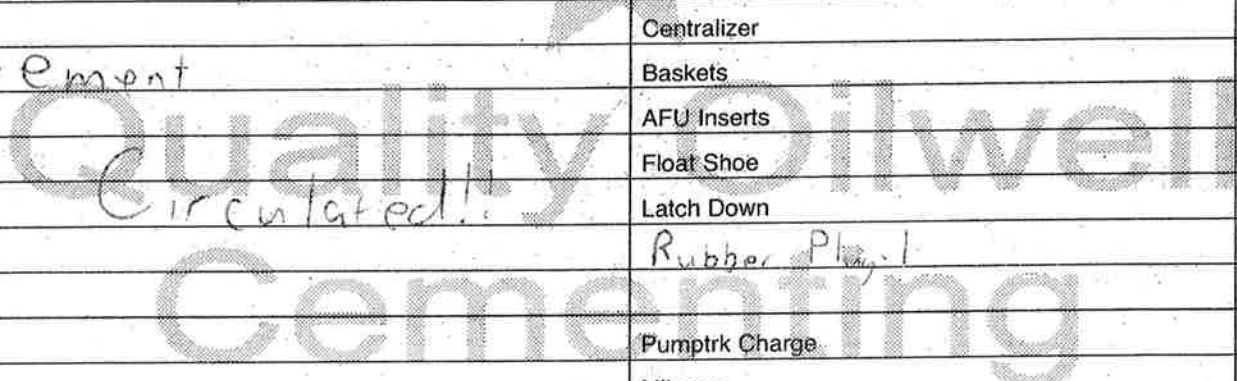
Rubber Plug-1

Pumptrk Charge

Mileage

Signature Wong Buehly

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. 1633

Date	9-24-15	Sec.	22	Twp.	19	Range	13	County	Barton	State	Ks	On Location		Finish	11:00 AM
Lease								Howard		Well No.		1			
Contractor								Royal 1		Owner		N15			
Type Job								plug		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.			
Hole Size				7 7/8"		T.D.		3485'		Charge To		RJM Company			
Csg.				Depth		Street									
Tbg. Size				4 1/2" D.P.		Depth		3416'		City		State			
Tool				Depth		The above was done to satisfaction and supervision of owner agent or contractor.									
Cement Left in Csg.				Shoe Joint		Cement Amount Ordered		255 @ 40 4% Sol 1/4# Fl. ser							
Meas Line				Displace		4201 mud									
EQUIPMENT								Common							
Pumptrk		18		No.		Cementer		Helper		Travis		Poz. Mix			
Bulktrk		9		No.		Driver		Driver		Billy		Gel.			
Berftrk		p.u.		No.		Driver		Driver		Rick		Calcium			
JOB SERVICES & REMARKS								Hulls							
Remarks:				3410' - 50 SX				Salt							
Rat Hole				800' - 50 SX				Flowseal							
Mouse Hole				425' - 100 SX				Kol-Seal							
Centralizers				40' - 10 SX w/ plug				Mud CLR 48							
Baskets				Rat hole w/ 30 SX				CFL-117 or CD110 CAF 38							
D/V or Port Collar				Mouse hole w/ 10 SX				Sand							
Cement did Circulate								Handling							
								Mileage							
FLOAT EQUIPMENT								Guide Shoe							
								Centralizer							
								Baskets							
								AFU Inserts							
								Float Shoe							
								Latch Down							
								1 - Dry hole plug							
								Pumptrk Charge							
								Mileage							
								Tax							
								Discount							
								Total Charge							
Signature		Wong Rudy													



DRILL STEM TEST REPORT

Prepared For: **RJM COMPANY**

P.O. BOX 256
CLAFLIN ,KANSAS 67525-0256

ATTN: WYATT URBAN

HOWARD 1

22-19S-13W BARTON

Start Date: 2015.09.22 @ 17:53:00

End Date: 2015.09.22 @ 00:00:00

Job Ticket #: 01237 DST #: 1

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

Printed: 2015.09.22 @ 23:10:19

RJM COMPANY
22-19S-13W BARTON
HOWARD 1
DST # 1
KANSAS CITY 'A-F'
2015.09.22



DRILL STEM TEST REPORT

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525-0256
 ATTN: WYATT URBAN

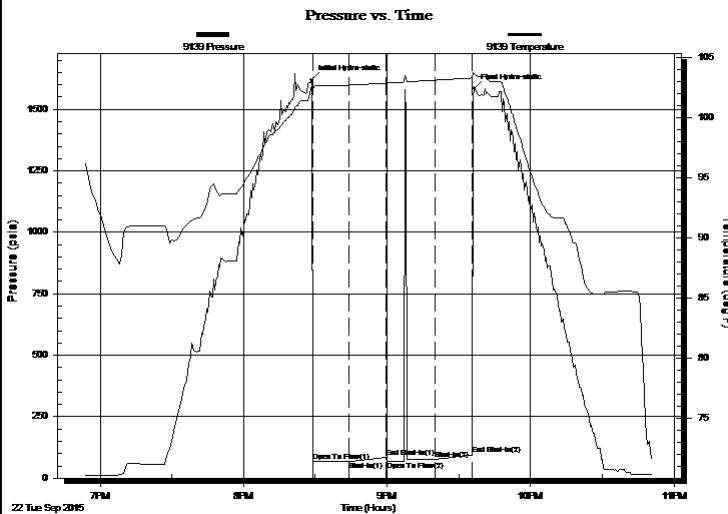
22-19S-13W BARTON
HOWARD 1
 Job Ticket: 01237 **DST#: 1**
 Test Start: 2015.09.22 @ 17:53:00

GENERAL INFORMATION:

Formation: **KANSAS CITY 'A-F'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:29:00
 Time Test Ended: 00:00:00
 Interval: **3166.00 ft (KB) To 3250.00 ft (KB) (TVD)**
 Total Depth: 3250.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GENE BUDIG
 Unit No: 1-0
 Reference Elevations: 1849.00 ft (KB)
 1843.00 ft (CF)
 KB to GR/CF: 6.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 95.27 psia @ 3245.21 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.09.22 End Date: 2015.09.22 Last Calib.: 2015.09.22
 Start Time: 18:53:00 End Time: 22:51:00 Time On Btm: 2015.09.22 @ 20:28:30
 Time Off Btm: 2015.09.22 @ 21:36:30

TEST COMMENT: 1ST OPENING 15 MINUTES VERY WEAK SURFACE BLOW FOR 12 MINUTES ANBD DIED
 1ST SHUT-IN 15 MINUTES
 2ND OPENING 20 MINUTES VERY WEAK SURFACE BLOW FOR 8 MINUTES AND DIED FLUSHED TOOL
 GOOD SURGE VERY WEAK SURFACE BLOW FOR 6 MINUTES AND DIED



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1620.78	102.64	Initial Hydro-static
1	66.81	102.37	Open To Flow (1)
16	68.30	102.73	Shut-In(1)
31	85.01	102.90	End Shut-In(1)
32	67.01	102.89	Open To Flow (2)
52	75.93	103.13	Shut-In(2)
67	95.27	103.33	End Shut-In(2)
68	1584.30	103.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	DRILLING MUD	0.21

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

RJM COMPANY

22-19S-13W BARTON

P.O. BOX 256
CLAFLIN, KANSAS 67525-0256

HOWARD 1

Job Ticket: 01237

DST#: 1

ATTN: WYATT URBAN

Test Start: 2015.09.22 @ 17:53:00

Tool Information

Drill Pipe:	Length: 3166.00 ft	Diameter: 3.80 inches	Volume: 44.41 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: 44.41 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3166.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	84.21 ft			
Tool Length:	104.21 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3151.00	
Hydraulic tool	5.00			3156.00	
Top Packer	5.00			3161.00	
Packer	5.00			3166.00	20.00 Bottom Of Top Packer
Anchor	5.00			3171.00	
Change Over Sub	0.75			3171.75	
Drill Pipe	63.71			3235.46	
Change Over Sub	0.75			3236.21	
Anchor	9.00			3245.21	
Recorder	0.00	9119	Inside	3245.21	
Recorder	0.00	9139	Outside	3245.21	
Bullnose	5.00			3250.21	84.21 Anchor Tool

Total Tool Length: 104.21



DRILL STEM TEST REPORT

FLUID SUMMARY

RJM COMPANY

22-19S-13W BARTON

P.O. BOX 256
CLAFLIN, KANSAS 67525-0256

HOWARD 1

Job Ticket: 01237

DST#: 1

ATTN: WYATT URBAN

Test Start: 2015.09.22 @ 17:53:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 47.00 sec/qt
Water Loss: 8.80 in³
Resistivity: ohm.m
Salinity: 4000.00 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
15.00	DRILLING MUD	0.210

Total Length: 15.00 ft Total Volume: 0.210 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

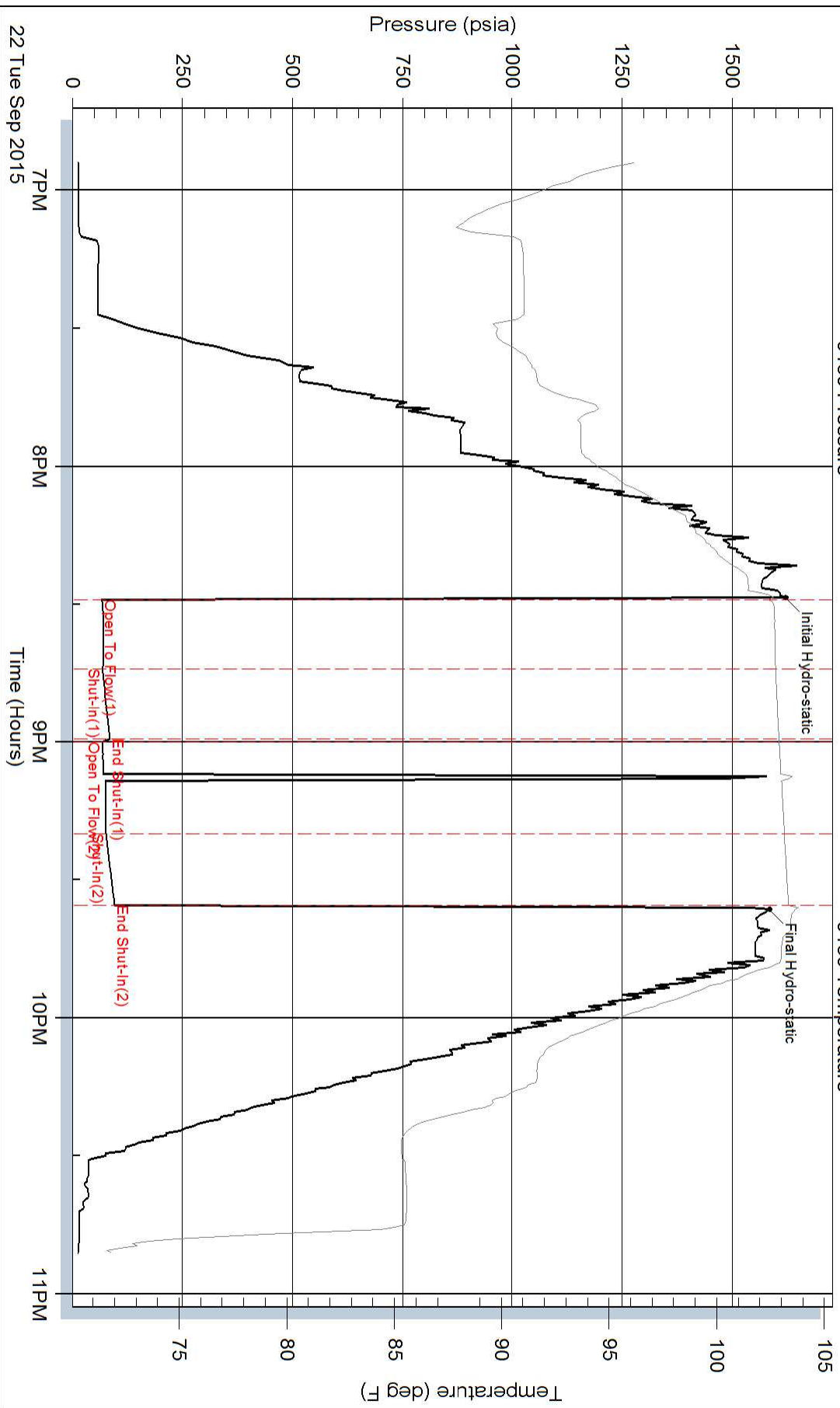
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **RJM COMPANY**

P.O. BOX 256
CLAFLIN ,KANSAS 67525-0256

ATTN: WYATT URBAN

HOWARD 1

22-19S-13W BARTON

Start Date: 2015.09.24 @ 11:09:00

End Date: 2015.09.24 @ 00:00:00

Job Ticket #: 01239 DST #: 2

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

Printed: 2015.09.24 @ 05:59:00

RJM COMPANY
22-19S-13W BARTON
HOWARD 1
DST # 2
ARBUCKLE
2015.09.24



DRILL STEM TEST REPORT

RJM COMPANY
 P.O. BOX 256
 CLAFLIN, KANSAS 67525-0256
 ATTN: WYATT URBAN

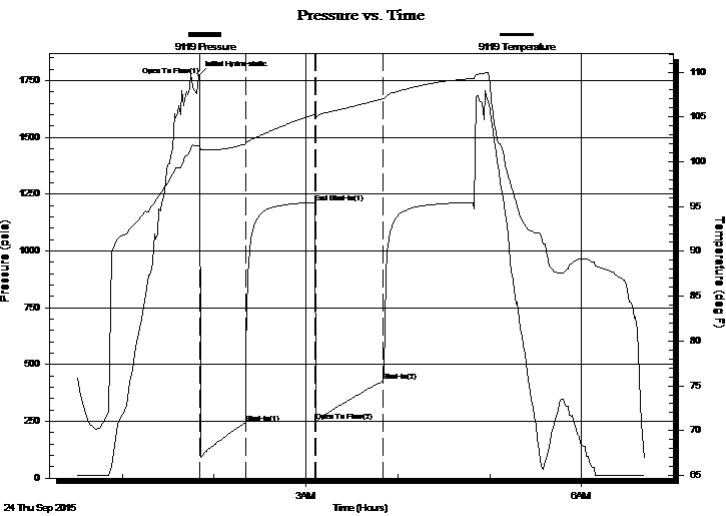
22-19S-13W BARTON
HOWARD 1
 Job Ticket: 01239 **DST#: 2**
 Test Start: 2015.09.24 @ 11:09:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:30:00
 Time Test Ended: 00:00:00
 Interval: **3382.00 ft (KB) To 3385.00 ft (KB) (TVD)**
 Total Depth: 3485.00 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: 1849.00 ft (KB)
 1843.00 ft (CF)
 KB to GR/CF: 6.00 ft

Serial #: 9119 Inside
 Press@RunDepth: 1213.40 psia @ 3480.19 ft (KB) Capacity: psia
 Start Date: 2015.09.24 End Date: 2015.09.24 Last Calib.: 1899.12.30
 Start Time: 00:30:00 End Time: 06:41:30 Time On Btm: 2015.09.24 @ 01:50:00
 Time Off Btm:

TEST COMMENT: 1st OPENING 30 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 7 MINUTES
 1ST SHUT-IN 45 MINUTES-NO BLOW BACK
 2ND OPENING 45 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 8 MINUTES
 2ND SHUT-IN 60 MINUTES-NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1771.17	101.79	Initial Hydro-static
1	1770.17	101.77	Open To Flow (1)
31	241.39	101.99	Shut-In(1)
76	1213.40	105.25	End Shut-In(1)
77	249.59	105.00	Open To Flow (2)
121	427.66	107.04	Shut-In(2)

Recovery

Length (ft)	Description	Volume (bbl)
70.00	mud	0.98
90.00	WATERY MUD 80 MUD 20 WATER	1.26
150.00	MUDDY WATER 50 MUD 50 WATER	2.10
240.00	MUDDY WATER 40 MUD 60 WATER	3.37
120.00	SLIGHTLY MUDDY WATER	1.68
0.00	15 MUD 85 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 67525-0256
 ATTN: WYATT URBAN

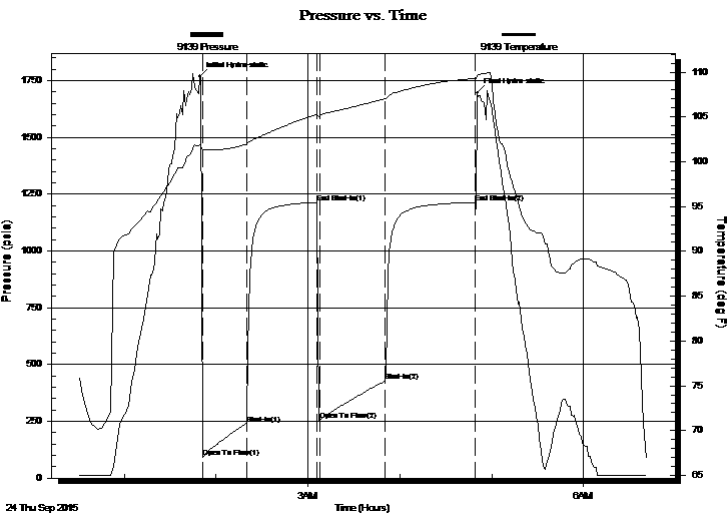
22-19S-13W BARTON
HOWARD 1
 Job Ticket: 01239 **DST#: 2**
 Test Start: 2015.09.24 @ 11:09:00

GENERAL INFORMATION:

Formation: **ARBUCKLE**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:30:00
 Time Test Ended: 00:00:00
 Interval: **3382.00 ft (KB) To 3385.00 ft (KB) (TVD)**
 Total Depth: 3485.00 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: 1849.00 ft (KB)
 1843.00 ft (CF)
 KB to GR/CF: 6.00 ft

Serial #: 9139 Outside
 Press@RunDepth: 1213.92 psia @ 3480.19 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.09.24 End Date: 2015.09.24 Last Calib.: 2015.09.24
 Start Time: 00:30:00 End Time: 06:41:30 Time On Btm: 2015.09.24 @ 01:49:30
 Time Off Btm: 2015.09.24 @ 04:50:30

TEST COMMENT: 1st OPENING 30 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 7 MINUTES
 1ST SHUT-IN 45 MINUTES-NO BLOW BACK
 2ND OPENING 45 MINUTES FAIR BLOW BUILT TO THE BOTTOM OF A 5 GALLON BUCKET IN 8 MINUTES
 2ND SHUT-IN 60 MINUTES-NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1767.69	101.86	Initial Hydro-static
2	93.83	101.36	Open To Flow (1)
31	239.49	101.96	Shut-In(1)
77	1213.40	105.25	End Shut-In(1)
78	253.64	105.07	Open To Flow (2)
121	427.66	107.04	Shut-In(2)
180	1213.92	109.29	End Shut-In(2)
181	1695.60	109.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	mud	0.98
90.00	WATERY MUD 80 MUD 20 WATER	1.26
150.00	MUDDY WATER 50 MUD 50 WATER	2.10
240.00	MUDDY WATER 40 MUD 60 WATER	3.37
120.00	SLIGHTLY MUDDY WATER	1.68
0.00	15 MUD 85 WATER	0.00

Gas Rates

Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

TOOL DIAGRAM

RJM COMPANY

22-19S-13W BARTON

P.O. BOX 256
CLAFLIN, KANSAS 67525-0256

HOWARD 1

Job Ticket: 01239

DST#: 2

ATTN: WYATT URBAN

Test Start: 2015.09.24 @ 11:09:00

Tool Information

Drill Pipe:	Length: 3390.00 ft	Diameter: 3.80 inches	Volume: 47.55 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: 62000.00 lb
			<u>Total Volume: 47.55 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3382.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	103.19 ft			
Tool Length:	123.19 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3367.00	
Hydraulic tool	5.00			3372.00	
Top Packer	5.00			3377.00	
Packer	5.00			3382.00	20.00 Bottom Of Top Packer
Anchor	5.00			3387.00	
Change Over Sub	0.75			3387.75	
Drill Pipe	62.69			3450.44	
Change Over Sub	0.75			3451.19	
Anchor	29.00			3480.19	
Recorder	0.00	9119	Inside	3480.19	
Recorder	0.00	9139	Outside	3480.19	
Bullnose	5.00			3485.19	103.19 Anchor Tool

Total Tool Length: 123.19



DRILL STEM TEST REPORT

FLUID SUMMARY

RJM COMPANY

22-19S-13W BARTON

P.O. BOX 256
CLAFLIN, KANSAS 67525-0256

HOWARD 1

Job Ticket: 01239

DST#: 2

ATTN: WYATT URBAN

Test Start: 2015.09.24 @ 11:09:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 9.20 in³
Resistivity: ohm.m
Salinity: 6000.00 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
70.00	mud	0.982
90.00	WATERY MUD 80 MUD 20 WATER	1.262
150.00	MUDDY WATER 50 MUD 50 WATER	2.104
240.00	MUDDY WATER 40 MUD 60 WATER	3.367
120.00	SLIGHTLY MUDDY WATER	1.683
0.00	15 MUD 85 WATER	0.000
60.00	SLIGHTLY MUDDY WATER	0.842
0.00	10 MUD 90 WATER CHLORIDES 18000	0.000

Total Length: 730.00 ft Total Volume: 10.240 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

