



## DRILL STEM TEST REPORT

Prepared For: **ROYAL ENERGY INC.**

402 CEDAR STREET  
MEADE, KANSAS 67864

ATTN: JEFF BURK

**YOUNG 31**

**7-26S-13W PRATT**

Start Date: 2017.01.12 @ 22:15:00

End Date: 2017.01.12 @ 00:00:00

Job Ticket #: 01143                      DST #: 3

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

Printed: 2017.01.12 @ 04:54:28



# DRILL STEM TEST REPORT

ROYAL ENERGY INC.  
 402 CEDAR STREET  
 MEADE, KANSAS 67864  
 ATTN: JEFF BURK

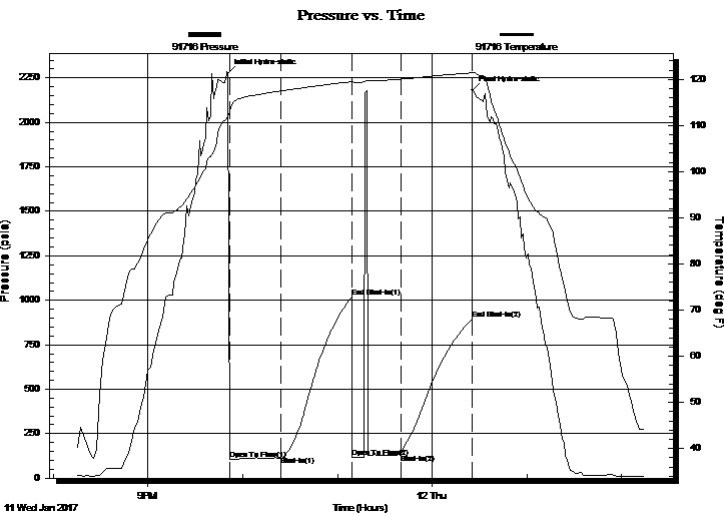
**7-26S-13W PRATT**  
**YOUNG 31**  
 Job Ticket: 01143      **DST#: 3**  
 Test Start: 2017.01.12 @ 22:15:00

## GENERAL INFORMATION:

Formation: **KINDERHOOK-MISSISSIP**  
 Deviated: No Whipstock:      ft (KB)  
 Time Tool Opened: 12:09:00  
 Time Test Ended: 00:00:00  
 Interval: **4250.00 ft (KB) To 4320.00 ft (KB) (TVD)**  
 Total Depth: 4320.00 ft (KB) (TVD)  
 Hole Diameter: 7.86 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: GENE BUDIG  
 Unit No: 1  
 Reference Elevations: 1970.00 ft (KB)  
 1960.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 91716      Inside**  
 Press@RunDepth: 894.13 psia @ 4314.35 ft (KB)      Capacity: 5000.00 psia  
 Start Date: 2017.01.11      End Date: 2017.01.12      Last Calib.: 2017.01.12  
 Start Time: 20:15:00      End Time: 02:15:00      Time On Btm: 2017.01.11 @ 21:50:30  
 Time Off Btm: 2017.01.12 @ 00:25:30

**TEST COMMENT:** 1ST OPENING 30 MINUTES WEAK BLOW FOR 18 MINUTES AND DIED  
 1ST SHUT-IN 45 MINUTES NO BLOW BACK  
 2ND OPENING 30 MINUTES-WEAK BLOW 3 MINUTES DIED FLUSHED TOOL WEAK BLOW 4 MINUTES DIED  
 2ND SHUT-IN 45 MINUTES NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2274.18	112.02	Initial Hydro-static
1	103.42	112.86	Open To Flow (1)
34	125.01	117.47	Shut-In(1)
79	1018.77	119.46	End Shut-In(1)
79	116.49	119.46	Open To Flow (2)
110	131.17	120.06	Shut-In(2)
155	894.13	121.42	End Shut-In(2)
155	2178.48	121.48	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
100.00	DRILLING MUD THERE WERE SPOTS OF	1.40
0.00	OIL BETWEEN THE SHUT-IN AND HYDRA	0.00
0.00	TOOLS	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

ROYAL ENERGY INC.  
 402 CEDAR STREET  
 MEADE, KANSAS 67864  
 ATTN: JEFF BURK

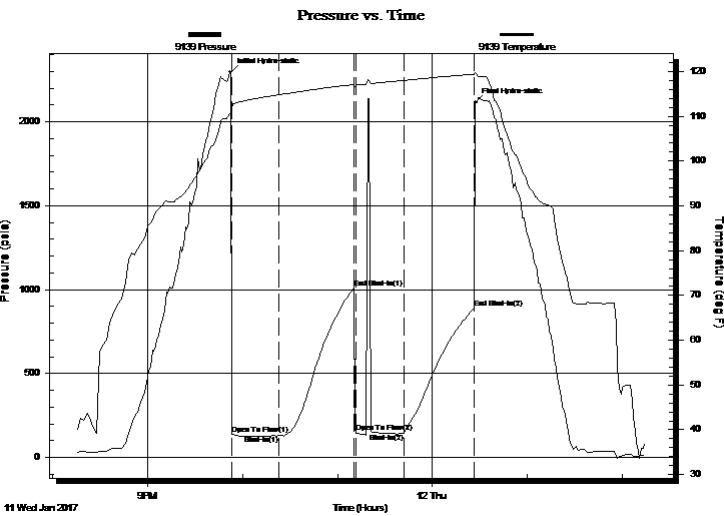
**7-26S-13W PRATT**  
**YOUNG 31**  
 Job Ticket: 01143 **DST#: 3**  
 Test Start: 2017.01.12 @ 22:15:00

## GENERAL INFORMATION:

Formation: **KINDERHOOK-MISSISSIP**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 12:09:00  
 Time Test Ended: 00:00:00  
**Interval: 4250.00 ft (KB) To 4320.00 ft (KB) (TVD)**  
 Total Depth: 4320.00 ft (KB) (TVD)  
 Hole Diameter: 7.86 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: GENE BUDIG  
 Unit No: 1  
 Reference Elevations: 1970.00 ft (KB)  
 1960.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 9139 Outside**  
 Press@RunDepth: 890.15 psia @ 4314.35 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2017.01.11 End Date: 2017.01.12 Last Calib.: 2017.01.12  
 Start Time: 20:15:00 End Time: 02:14:00 Time On Btm: 2017.01.11 @ 21:52:30  
 Time Off Btm: 2017.01.12 @ 00:27:00

**TEST COMMENT:** 1ST OPENING 30 MINUTES WEAK BLOW FOR 18 MINUTES AND DIED  
 1ST SHUT-IN 45 MINUTES NO BLOW BACK  
 2ND OPENING 30 MINUTES-WEAK BLOW 3 MINUTES DIED FLUSHED TOOL WEAK BLOW 4 MINUTES DIED  
 2ND SHUT-IN 45 MINUTES NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2294.64	110.92	Initial Hydro-static
1	139.84	111.62	Open To Flow (1)
31	128.98	114.81	Shut-In(1)
78	1011.47	117.12	End Shut-In(1)
79	148.74	116.95	Open To Flow (2)
110	142.54	118.02	Shut-In(2)
154	890.15	119.42	End Shut-In(2)
155	2114.84	119.81	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
100.00	DRILLING MUD THERE WERE SPOTS OF OIL	1.40
0.00	OIL BETWEEN THE SHUT-IN AND HYDRA	0.00
0.00	TOOLS	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

TOOL DIAGRAM

ROYAL ENERGY INC.  
 402 CEDAR STREET  
 MEADE, KANSAS 67864  
 ATTN: JEFF BURK

7-26S-13W PRATT  
 YOUNG 31  
 Job Ticket: 01143      **DST#: 3**  
 Test Start: 2017.01.12 @ 22:15:00

## Tool Information

Drill Pipe:	Length: 4241.00 ft	Diameter: 3.80 inches	Volume: 59.49 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: 85000.00 lb
			<u>Total Volume: 59.49 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	4250.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	69.35 ft			
Tool Length:	98.35 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			4226.00	
Hydraulic tool	5.00			4231.00	
Jars	7.00			4238.00	
Safety Joint	2.00		Fluid	4240.00	
Top Packer	5.00			4245.00	
Packer	5.00			4250.00	29.00      Bottom Of Top Packer
Anchor	5.00			4255.00	
Change Over Sub	0.75			4255.75	
Drill Pipe	30.85			4286.60	
Change Over Sub	0.75			4287.35	
Anchor	27.00			4314.35	
Recorder	0.00	91716	Inside	4314.35	
Recorder	0.00	9139	Outside	4314.35	
Bullnose	5.00			4319.35	69.35      Anchor Tool

**Total Tool Length: 98.35**



# DRILL STEM TEST REPORT

**FLUID SUMMARY**

ROYAL ENERGY INC.  
 402 CEDAR STREET  
 MEADE, KANSAS 67864  
 ATTN: JEFF BURK

**7-26S-13W PRATT**  
**YOUNG 31**  
 Job Ticket: 01143      **DST#: 3**  
 Test Start: 2017.01.12 @ 22:15:00

## 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: 12.80 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 22000.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
100.00	DRILLING MUD THERE WERE SPOTS OF DEAC	1.403
0.00	OIL BETWEEN THE SHUT-IN AND HYDRAULIC	0.000
0.00	TOOLS	0.000

Total Length: 100.00 ft      Total Volume: 1.403 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

### Pressure vs. Time

