

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

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 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  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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Form	ACO1 - Well Completion
Operator	Pollok Energy, LLC
Well Name	BOCK 1-17
Doc ID	1373218

All Electric Logs Run

Mud Log
Induction Log
Density Neutron Log
Microlog





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Pollok Energy  
501 N 4th  
Purcell, OK 73080  
ATTN: David Hickman

**17-28S-8W Kingman**  
**1-17 Bock**  
Job Ticket: 57849      **DST#: 1**  
Test Start: 2017.11.05 @ 22:14:23

## GENERAL INFORMATION:

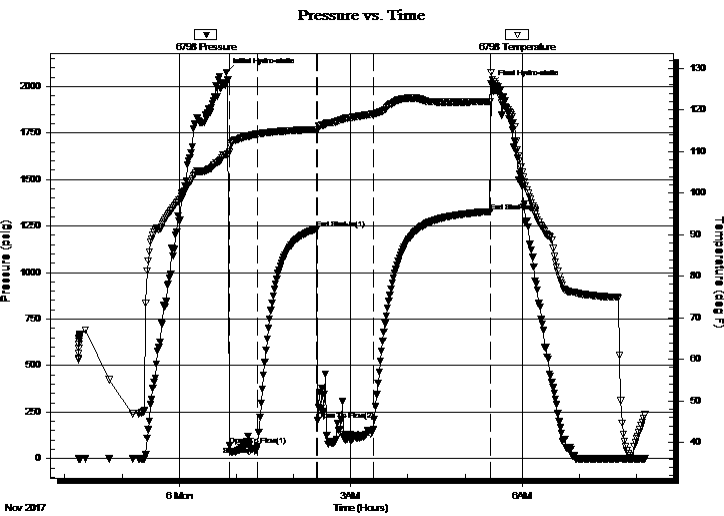
Formation: **Mississippi**  
Deviated: No    Whipstock:                      ft (KB)      Test Type: Conventional Bottom Hole (Initial)  
Time Tool Opened: 00:52:23      Tester: Leal Cason  
Time Test Ended: 08:09:38      Unit No: 74  
**Interval: 4133.00 ft (KB) To 4203.00 ft (KB) (TVD)**      Reference Elevations: 1670.00 ft (KB)  
Total Depth: 4203.00 ft (KB) (TVD)      1662.00 ft (CF)  
Hole Diameter: 7.88 inches    Hole Condition: Good      KB to GR/CF: 8.00 ft

## Serial #: 6798

Inside

Press@RunDepth: 158.84 psig @ 4134.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2017.11.05      End Date: 2017.11.06      Last Calib.: 2017.11.06  
Start Time: 22:14:24      End Time: 08:09:38      Time On Btm: 2017.11.06 @ 00:49:53  
Time Off Btm: 2017.11.06 @ 05:27:23

**TEST COMMENT:** IF: Strong Blow , BOB in 90 seconds  
IS: Blow Back Built to 6 inches  
FF: Strong Blow , BOB in 30 seconds, GTS in 1 minute, Caught Sample & Guaged  
FS: Blow Back Built to 4 inches



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2075.51	109.22	Initial Hydro-static
3	69.22	109.83	Open To Flow (1)
33	65.08	114.20	Shut-In(1)
94	1232.77	115.32	End Shut-In(1)
95	204.24	115.08	Open To Flow (2)
154	158.84	119.01	Shut-In(2)
277	1327.96	121.95	End Shut-In(2)
278	2011.91	129.03	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	GTS	0.00
180.00	GWCM 5%G 20%W 75%M	2.52

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	3.00	4.76
Last Gas Rate	0.13	14.00	5.24
Max. Gas Rate	0.13	14.00	5.24





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Pollok Energy

**17-28S-8W Kingman**

501 N 4th  
Purcell, OK 73080

**1-17 Bock**

Job Ticket: 57849

**DST#: 1**

ATTN: David Hickman

Test Start: 2017.11.05 @ 22:14:23

## 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:

82000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	GTS	0.000
180.00	GWCM 5%G 20%W 75%M	2.525

Total Length: 180.00 ft      Total Volume: 2.525 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

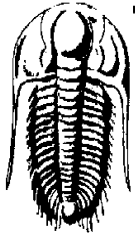
Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .2 @ 32 degrees

Sampler Data: 100 ml WCM 80%M 20%W

7 CU FT Gas @ 10PSI



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**GAS RATES**

Pollok Energy

**17-28S-8W Kingman**

501 N 4th  
Purcell, OK 73080

**1-17 Bock**

Job Ticket: 57849

**DST#: 1**

ATTN: David Hickman

Test Start: 2017.11.05 @ 22:14:23

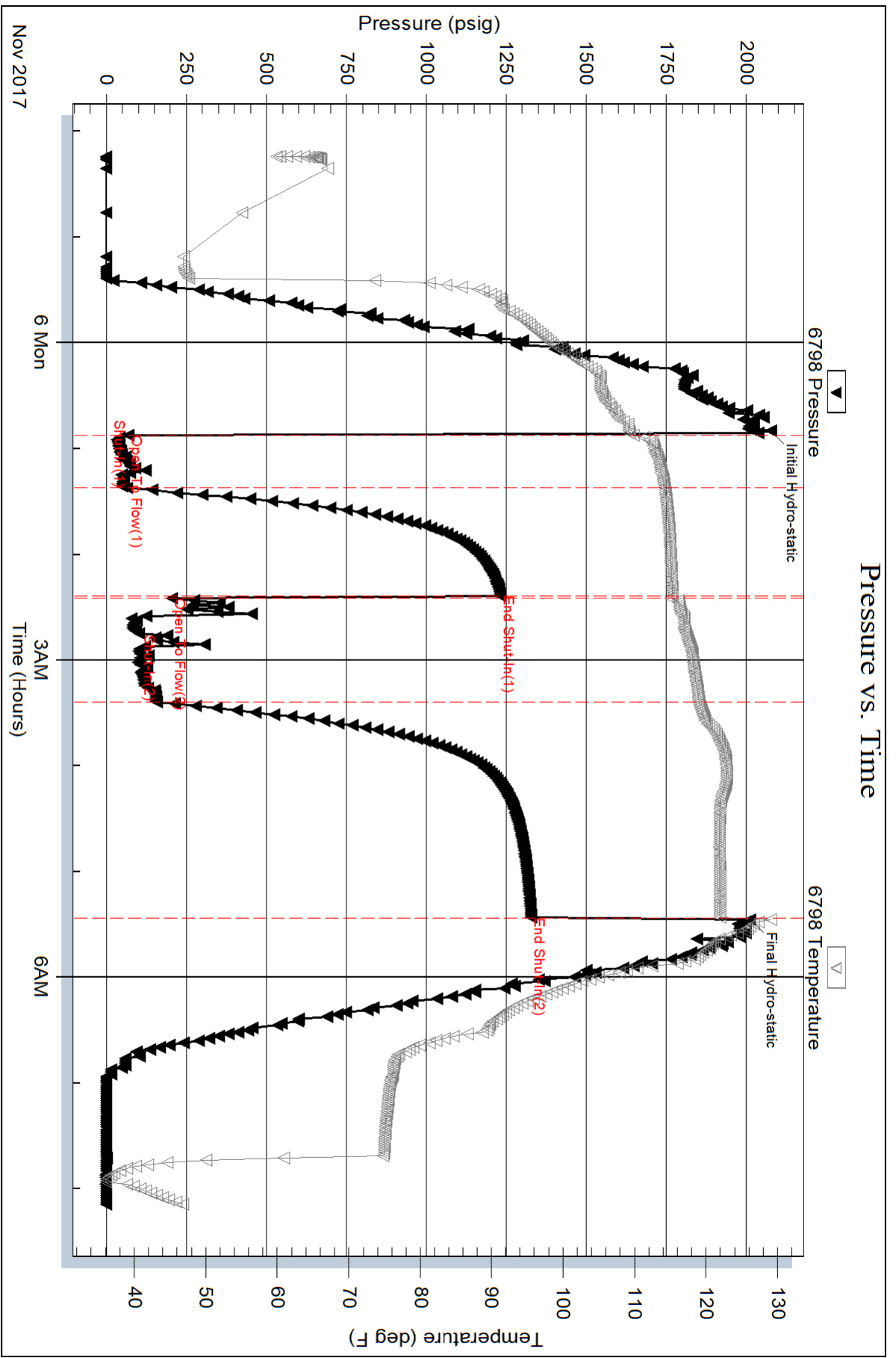
### Gas Rates Information

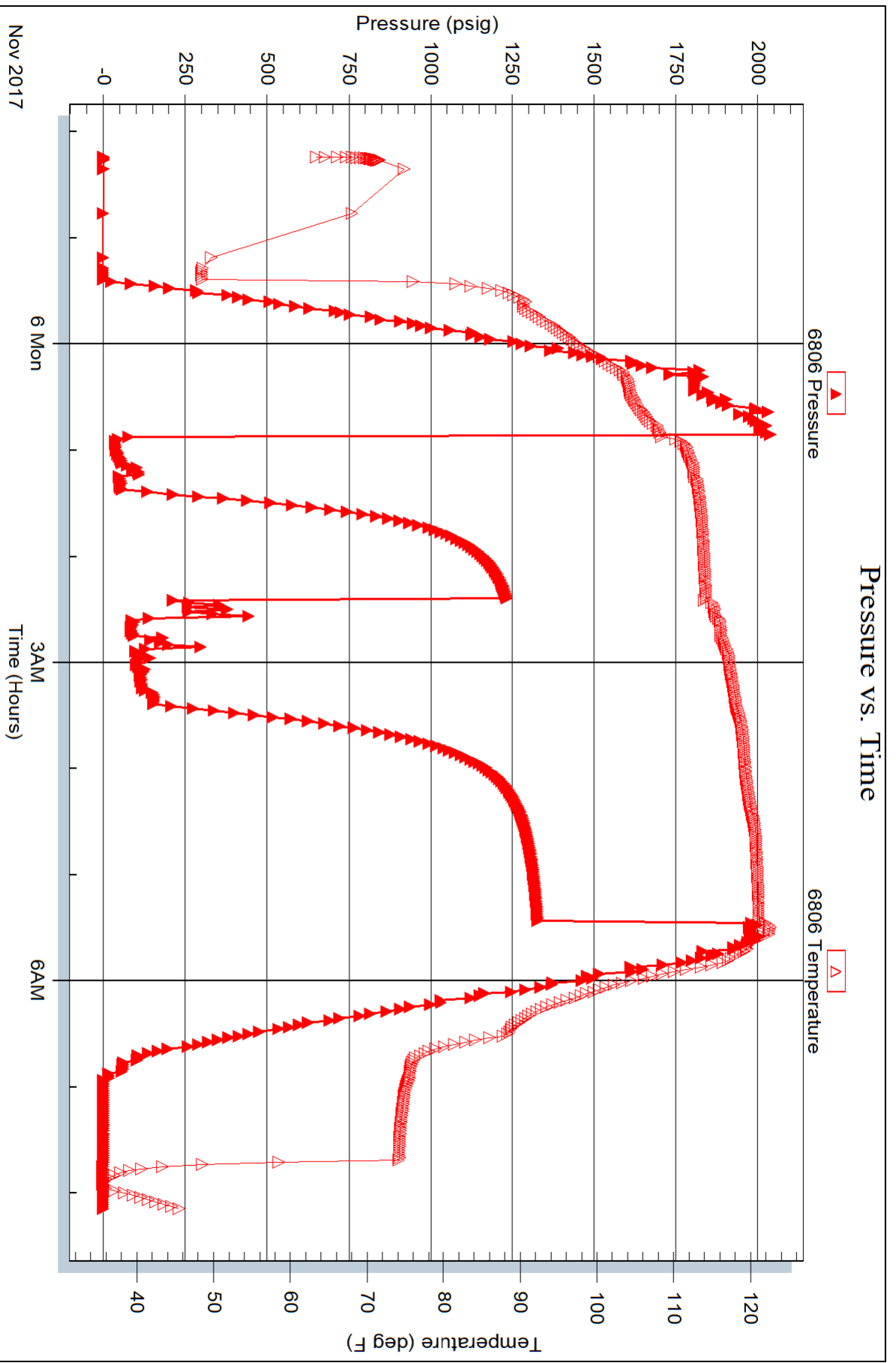
Temperature: 59 (deg F)  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	0.25	3.00	4.76
2	20	0.13	4.00	1.50
2	30	0.13	7.00	2.62
2	40	0.13	10.00	3.74
2	50	0.13	12.00	4.49
2	60	0.13	14.00	5.24









## DRILL STEM TEST REPORT

Prepared For: **Pollok Energy**

501 N 4th  
Purcell, OK 73080

ATTN: David Hickman

### **Bock #1-17**

#### **17-28S-8W Kingman,KS**

Start Date: 2017.11.05 @ 22:14:23

End Date: 2017.11.06 @ 08:09:38

Job Ticket #: 57849                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.11.09 @ 10:49:37



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Pollok Energy  
 501 N 4th  
 Purcell, OK 73080  
 ATTN: David Hickman

**17-28S-8W Kingman,KS**  
**Bock #1-17**  
 Job Ticket: 57849      **DST#: 1**  
 Test Start: 2017.11.05 @ 22:14:23

## GENERAL INFORMATION:

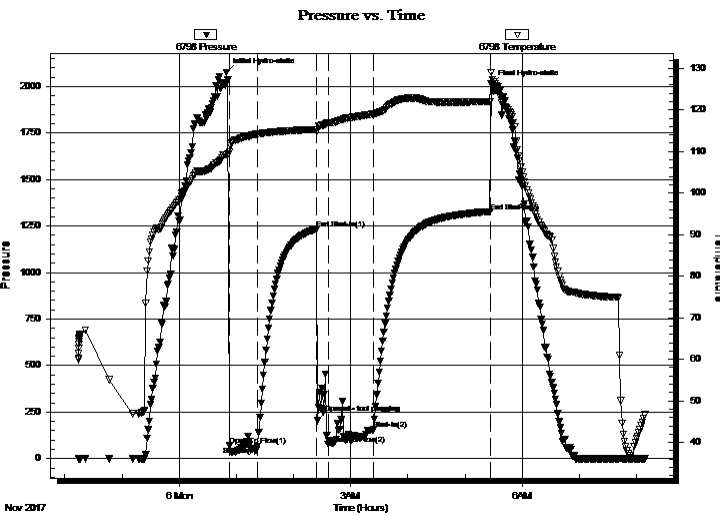
Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:52:23  
 Time Test Ended: 08:09:38  
 Interval: **4133.00 ft (KB) To 4203.00 ft (KB) (TVD)**  
 Total Depth: 4203.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Leal Cason  
 Unit No: 74  
 Reference Elevations: 1670.00 ft (KB)  
 1662.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 6798

Inside

Press@RunDepth: 158.84 psig @ 4134.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.11.05 End Date: 2017.11.06 Last Calib.: 2017.11.06  
 Start Time: 22:14:24 End Time: 08:09:38 Time On Btm: 2017.11.06 @ 00:49:53  
 Time Off Btm: 2017.11.06 @ 05:27:23

TEST COMMENT: IF: Strong Blow , BOB in 90 seconds  
 IS: Blow Back Built to 6"  
 FF: Strong Blow , BOB in 30 seconds, GTS in 1 minute, Caught Sample & Gauged  
 FS: Blow Back Built to 4"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2075.51	109.22	Initial Hydro-static
3	69.22	109.83	Open To Flow (1)
33	65.08	114.20	Shut-In(1)
94	1232.77	115.32	End Shut-In(1)
95	204.24	115.08	Opened - tool plugging
107	78.96	116.93	Open To Flow (2)
154	158.84	119.01	Shut-In(2)
277	1327.96	121.95	End Shut-In(2)
278	2011.91	129.03	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	3953 GIP	0.00
180.00	GWCM 5%G 20%W 75%M	2.52

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	3.00	4.76
Last Gas Rate	0.13	14.00	5.24
Max. Gas Rate	0.13	14.00	5.24



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Pollok Energy  
501 N 4th  
Purcell, OK 73080  
ATTN: David Hickman

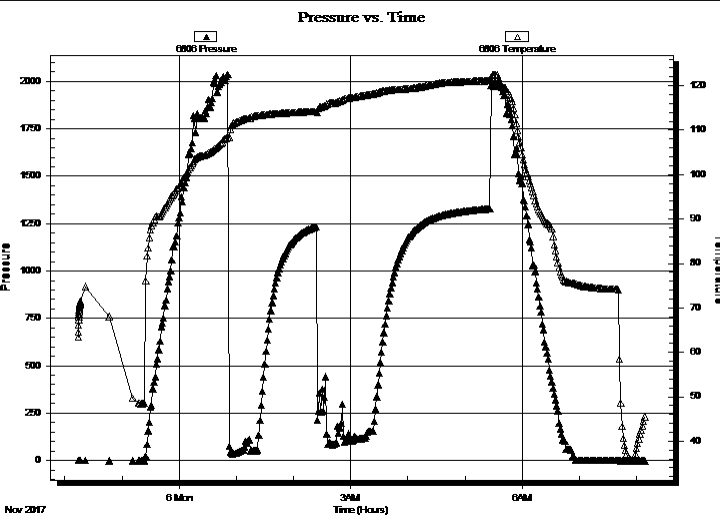
**17-28S-8W Kingman, KS**  
**Bock #1-17**  
Job Ticket: 57849      **DST#: 1**  
Test Start: 2017.11.05 @ 22:14:23

## GENERAL INFORMATION:

Formation:	<b>Mississippi</b>			
Deviated:	No	Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened:	00:52:23			Tester: Leal Cason
Time Test Ended:	08:09:38			Unit No: 74
<b>Interval:</b>	<b>4133.00 ft (KB) To 4203.00 ft (KB) (TVD)</b>			Reference Elevations: 1670.00 ft (KB)
Total Depth:	4203.00 ft (KB) (TVD)			1662.00 ft (CF)
Hole Diameter:	7.88 inches	Hole Condition:	Good	KB to GR/CF: 8.00 ft

<b>Serial #: 6806</b>	<b>Outside</b>				
Press@RunDepth:	psig @	4134.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2017.11.05	End Date:	2017.11.06	Last Calib.:	2017.11.06
Start Time:	22:14:24	End Time:	08:09:38	Time On Btm:	
				Time Off Btm:	

**TEST COMMENT:** IF: Strong Blow , BOB in 90 seconds  
 IS: Blow Back Built to 6"  
 FF: Strong Blow , BOB in 30 seconds, GTS in 1 minute, Caught Sample & Gauged  
 FS: Blow Back Built to 4"



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery		
Length (ft)	Description	Volume (bbl)
0.00	3953 GIP	0.00
180.00	GWCM 5%G 20%W 75%M	2.52

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	3.00	4.76
Last Gas Rate	0.13	14.00	5.24
Max. Gas Rate	0.13	14.00	5.24



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Pollok Energy  
501 N 4th  
Purcell, OK 73080  
ATTN: David Hickman

**17-28S-8W Kingman,KS**  
**Bock #1-17**  
Job Ticket: 57849      **DST#: 1**  
Test Start: 2017.11.05 @ 22:14:23

**Tool Information**

Drill Pipe:	Length: 4133.00 ft	Diameter: 3.80 inches	Volume: 57.98 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 57.98 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4133.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	98.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Shut In Tool	5.00			4110.00	
Sampler	2.00			4112.00	
Hydraulic tool	5.00			4117.00	
Jars	5.00			4122.00	
Safety Joint	2.00			4124.00	
Packer	5.00			4129.00	28.00      Bottom Of Top Packer
Packer	4.00			4133.00	
Stubb	1.00			4134.00	
Recorder	0.00	6798	Inside	4134.00	
Recorder	0.00	6806	Outside	4134.00	
Perforations	3.00			4137.00	
Change Over Sub	1.00			4138.00	
Drill Pipe	31.00			4169.00	
Change Over Sub	2.00			4171.00	
perforations	29.00			4200.00	
Bullnose	3.00			4203.00	70.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>98.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Pollok Energy

**17-28S-8W Kingman,KS**

501 N 4th  
Purcell, OK 73080

**Bock #1-17**

Job Ticket: 57849

**DST#: 1**

ATTN: David Hickman

Test Start: 2017.11.05 @ 22:14:23

## 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:

82000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	3953 GIP	0.000
180.00	GWCM 5%G 20%W 75%M	2.525

Total Length: 180.00 ft      Total Volume: 2.525 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .2 @ 32 degrees

Sampler Data: 100 ml WCM 80%M 20%W

7 CU FT Gas @ 10PSI



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**GAS RATES**

Pollok Energy

**17-28S-8W Kingman, KS**

501 N 4th  
Purcell, OK 73080

**Bock #1-17**

Job Ticket: 57849

**DST#: 1**

ATTN: David Hickman

Test Start: 2017.11.05 @ 22:14:23

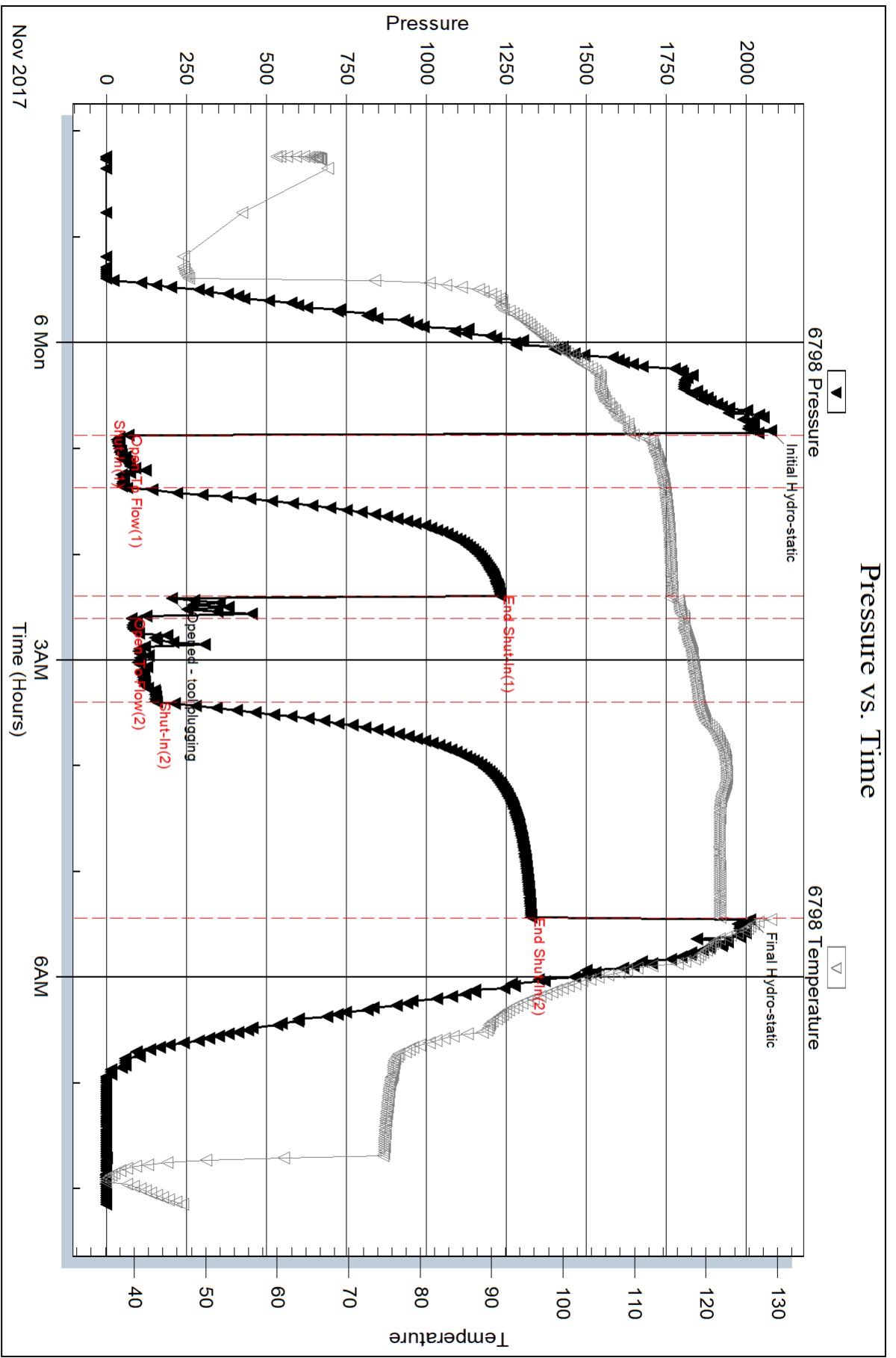
### Gas Rates Information

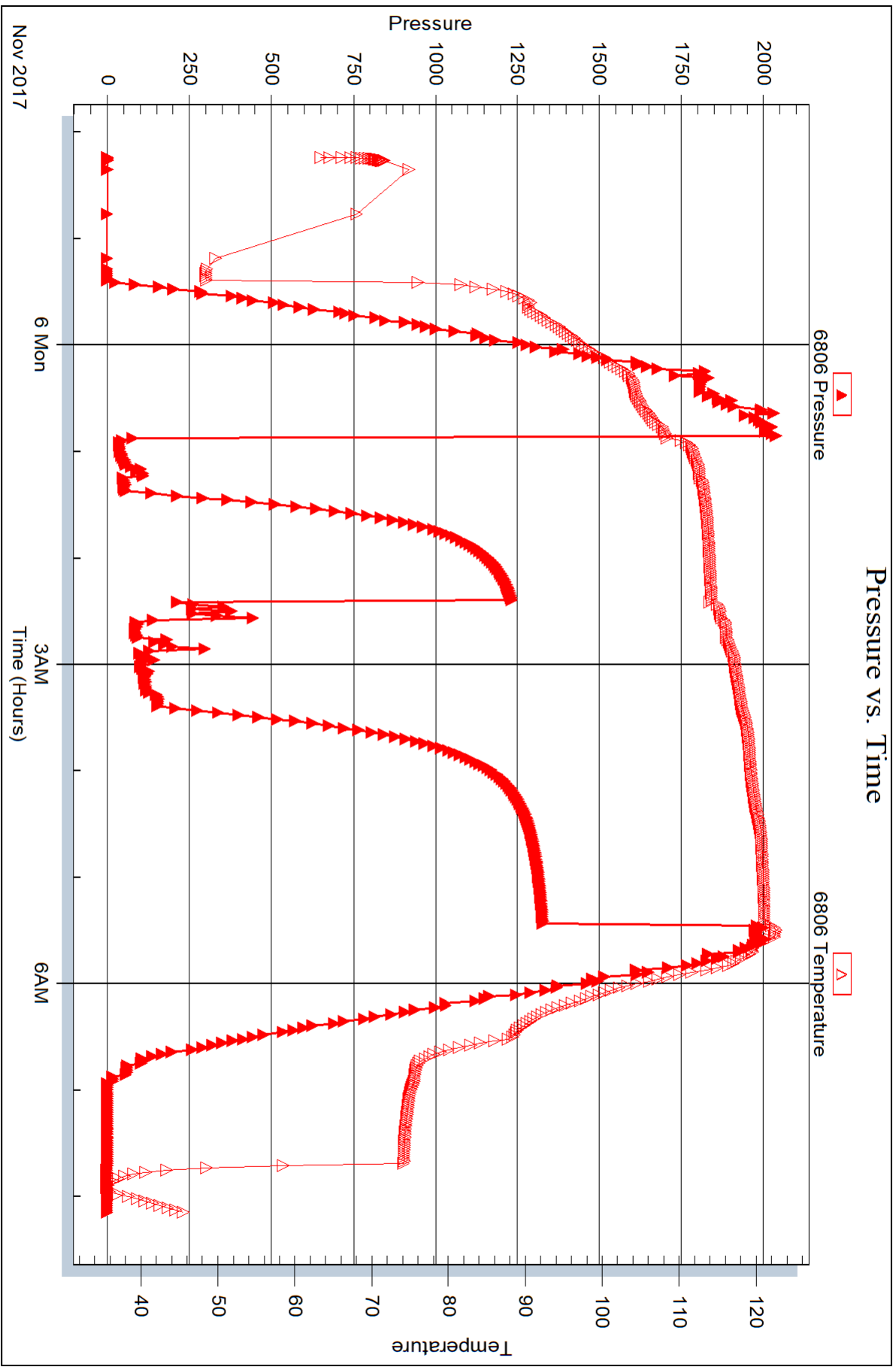
Temperature: 59 (deg F)  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	0.25	3.00	4.76
2	20	0.13	4.00	1.50
2	30	0.13	7.00	2.62
2	40	0.13	10.00	3.74
2	50	0.13	12.00	4.49
2	60	0.13	14.00	5.24









## DRILL STEM TEST REPORT

Prepared For: **Pollok Energy**

501 N 4th  
Purcell, OK 73080

ATTN: David Hickman

### **Bock #1-17**

#### **17-28S-8W Kingman,KS**

Start Date: 2017.11.06 @ 14:37:01

End Date: 2017.11.06 @ 23:10:16

Job Ticket #: 57850                      DST #: 2

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.11.09 @ 10:52:08



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Pollok Energy  
 501 N 4th  
 Purcell, OK 73080  
 ATTN: David Hickman

**17-28S-8W Kingman, KS**  
**Bock #1-17**  
 Job Ticket: 57850      **DST#: 2**  
 Test Start: 2017.11.06 @ 14:37:01

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: No      Whipstock:      ft (KB)  
 Time Tool Opened: 16:18:16  
 Time Test Ended: 23:10:16  
 Interval: **4205.00 ft (KB) To 4244.00 ft (KB) (TVD)**  
 Total Depth: 4244.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches      Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Leal Cason  
 Unit No: 74  
 Reference Elevations: 1670.00 ft (KB)  
 1662.00 ft (CF)  
 KB to GR/CF: 8.00 ft

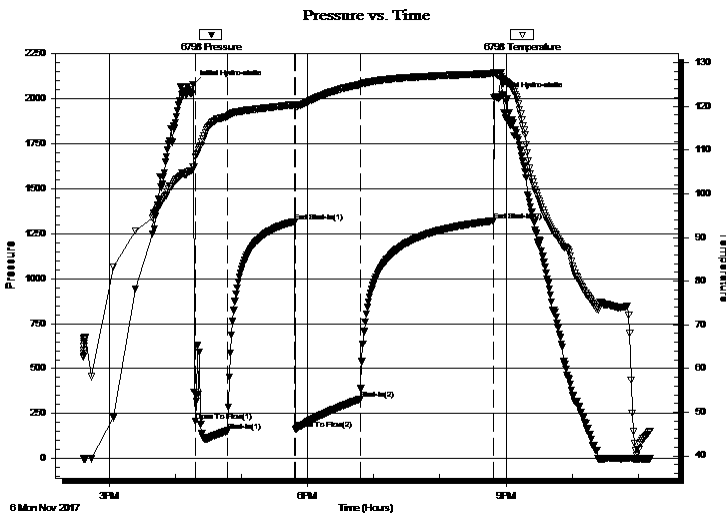
## Serial #: 6798

Inside

Press@RunDepth: 331.90 psig @ 4206.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2017.11.06      End Date: 2017.11.06      Last Calib.: 2017.11.06  
 Start Time: 14:37:02      End Time: 23:10:16      Time On Btm: 2017.11.06 @ 16:16:16  
 Time Off Btm: 2017.11.06 @ 20:50:16

TEST COMMENT: IF: Strong Blow , BOB in 60 secods  
 IS: Weak Surface Blow Back  
 FF: Fair Blow , BOB in 5 minutes  
 FS: Weak Surface Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2080.63	106.03	Initial Hydro-static
2	208.72	108.46	Open To Flow (1)
31	154.79	117.69	Shut-In(1)
92	1317.49	120.36	End Shut-In(1)
93	162.33	120.03	Open To Flow (2)
152	331.90	124.98	Shut-In(2)
272	1321.20	127.46	End Shut-In(2)
274	2014.14	127.46	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
441.00	Water	6.19
189.00	GOMCW 5%G 5%O 30%M 60%W	2.65
55.00	SGCM 2%G 98%M	0.77

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Pollok Energy  
501 N 4th  
Purcell, OK 73080  
ATTN: David Hickman

**17-28S-8W Kingman,KS**  
**Bock #1-17**  
Job Ticket: 57850      **DST#: 2**  
Test Start: 2017.11.06 @ 14:37:01

**Tool Information**

Drill Pipe:	Length: 4195.00 ft	Diameter: 3.80 inches	Volume: 58.84 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
		Total Volume: 58.84 bbl		Tool Chased ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4205.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	68.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			4182.00	
sampler	2.00			4184.00	
Hydraulic tool	5.00			4189.00	
Jars	5.00			4194.00	
Safety Joint	2.00			4196.00	
Packer	5.00			4201.00	28.00      Bottom Of Top Packer
Packer	4.00			4205.00	
Stubb	1.00			4206.00	
Recorder	0.00	6798	Inside	4206.00	
Recorder	0.00	6806	Outside	4206.00	
Perforations	36.00			4242.00	
Bullnose	3.00			4245.00	40.00      Bottom Packers & Anchor

**Total Tool Length: 68.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Pollok Energy  
501 N 4th  
Purcell, OK 73080  
ATTN: David Hickman

**17-28S-8W Kingman,KS**  
**Bock #1-17**  
Job Ticket: 57850      **DST#: 2**  
Test Start: 2017.11.06 @ 14:37:01

## Mud and Cushion Information

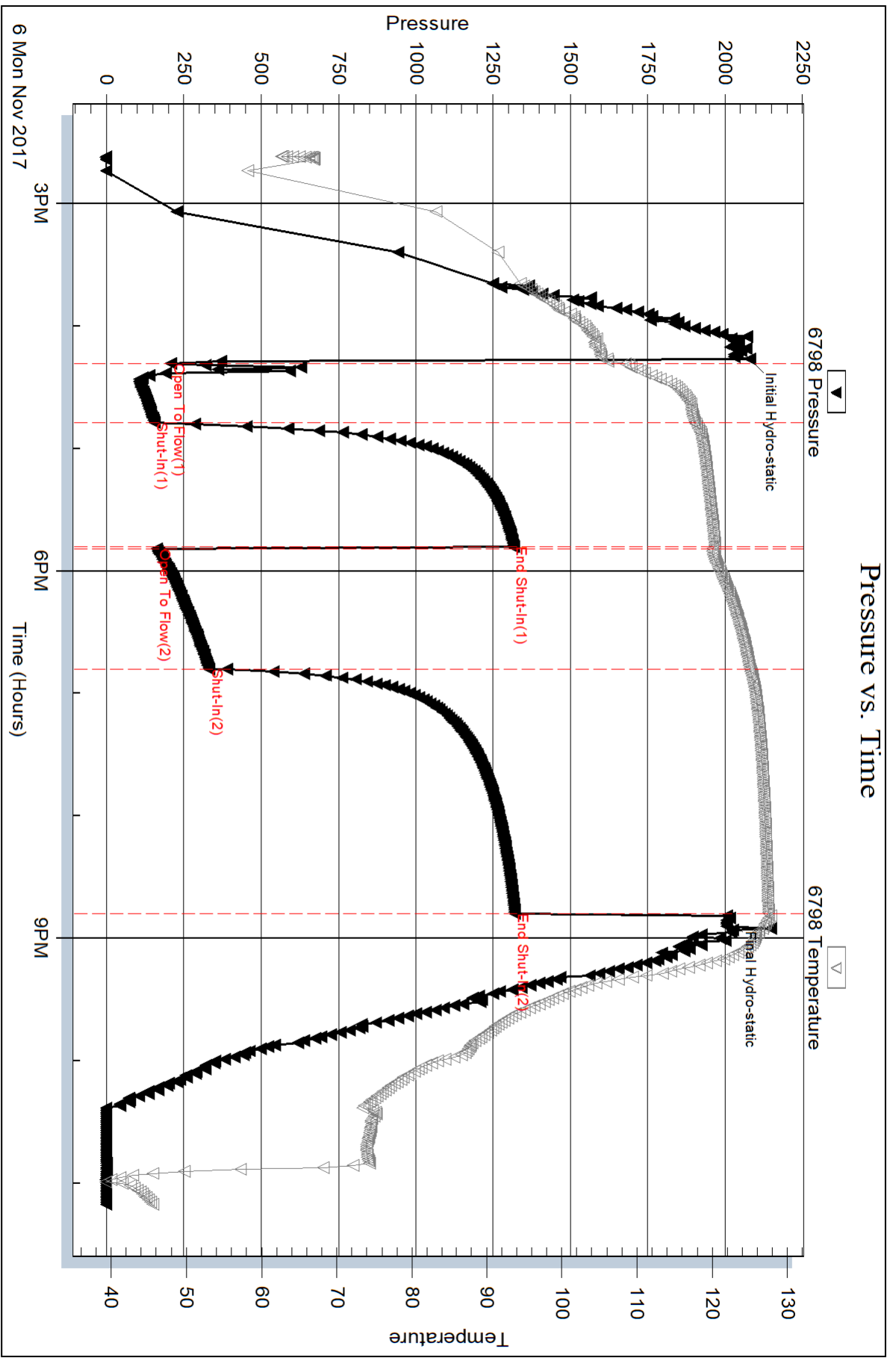
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	79000 ppm
Viscosity: 69.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.18 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.02 inches			

## Recovery Information

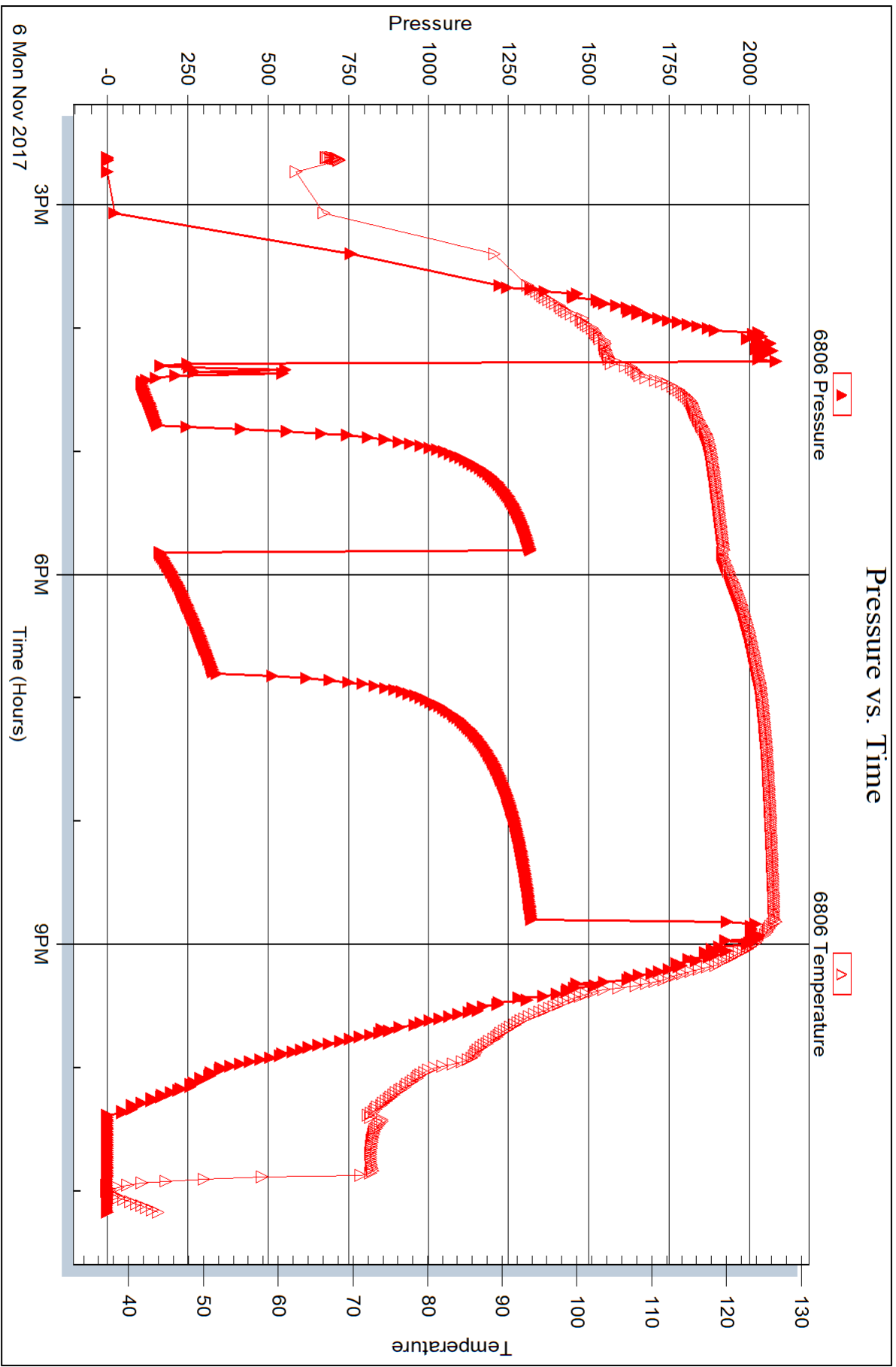
Recovery Table

Length ft	Description	Volume bbl
441.00	Water	6.186
189.00	GOMCW 5%G 5%O 30%M 60%W	2.651
55.00	SGCM 2%G 98%M	0.772

Total Length: 685.00 ft      Total Volume: 9.609 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: RW w as .17 @ 41 degrees  
 Sampler Data: 2.02 CU FT Gas, 600ml Water @ 2 psi









## DRILL STEM TEST REPORT

Prepared For: **Pollok Energy**

501 N 4th  
Purcell, OK 73080

ATTN: David Hickman

### **Bock #1-17**

#### **17-28S-8W Kingman,KS**

Start Date: 2017.11.07 @ 08:53:33

End Date: 2017.11.07 @ 17:48:18

Job Ticket #: 63626                      DST #: 3

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.11.09 @ 10:50:55



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Pollok Energy  
 501 N 4th  
 Purcell, OK 73080  
 ATTN: David Hickman

**17-28S-8W Kingman, KS**  
**Bock #1-17**  
 Job Ticket: 63626      **DST#: 3**  
 Test Start: 2017.11.07 @ 08:53:33

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 11:03:48  
 Tester: Leal Cason  
 Time Test Ended: 17:48:18  
 Unit No: 74  
 Interval: **4243.00 ft (KB) To 4278.00 ft (KB) (TVD)**  
 Reference Elevations: 1670.00 ft (KB)  
 Total Depth: 4278.00 ft (KB) (TVD)  
 1662.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 8.00 ft

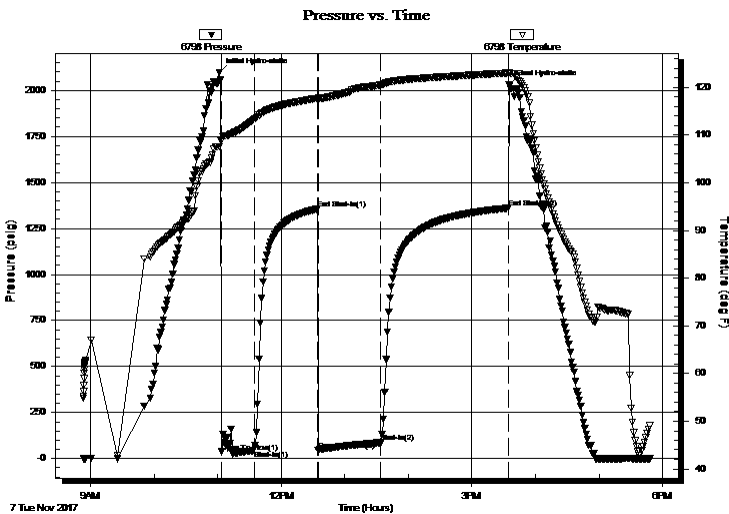
## Serial #: 6798

Inside

Press@RunDepth: 86.75 psig @ 4244.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2017.11.07      End Date: 2017.11.07      Last Calib.: 2017.11.07  
 Start Time: 08:53:34      End Time: 17:48:18      Time On Btm: 2017.11.07 @ 11:01:33  
 Time Off Btm: 2017.11.07 @ 15:35:03

TEST COMMENT: IF: Fair Blow , BOB in 16 minutes  
 IS: No Blow Back  
 FF: Weak Blow , BOB in 32 minutes  
 FS: No Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2097.30	107.59	Initial Hydro-static
3	36.87	108.80	Open To Flow (1)
33	43.59	113.24	Shut-In(1)
93	1355.31	117.70	End Shut-In(1)
94	46.29	117.68	Open To Flow (2)
153	86.75	120.51	Shut-In(2)
273	1360.35	123.00	End Shut-In(2)
274	2032.83	123.13	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
126.00	MCW 5%M 95%W	1.77
15.00	MOCW 10%M 20%O 70%W	0.21

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Pollok Energy  
501 N 4th  
Purcell, OK 73080  
ATTN: David Hickman

**17-28S-8W Kingman,KS**  
**Bock #1-17**  
Job Ticket: 63626      **DST#: 3**  
Test Start: 2017.11.07 @ 08:53:33

**Tool Information**

Drill Pipe:	Length: 4239.00 ft	Diameter: 3.80 inches	Volume: 59.46 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 59.46 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial	64000.00 lb
Depth to Top Packer:	4243.00 ft			Final	65000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	35.00 ft				
Tool Length:	63.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Shut In Tool	5.00			4220.00	
sampler	2.00			4222.00	
Hydraulic tool	5.00			4227.00	
Jars	5.00			4232.00	
Safety Joint	2.00			4234.00	
Packer	5.00			4239.00	28.00      Bottom Of Top Packer
Packer	4.00			4243.00	
Stubb	1.00			4244.00	
Recorder	0.00	6798	Inside	4244.00	
Recorder	0.00	6806	Outside	4244.00	
Perforations	31.00			4275.00	
Bullnose	3.00			4278.00	35.00      Bottom Packers & Anchor

**Total Tool Length: 63.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Pollok Energy

**17-28S-8W Kingman,KS**

501 N 4th  
Purcell, OK 73080

**Bock #1-17**

Job Ticket: 63626

**DST#: 3**

ATTN: David Hickman

Test Start: 2017.11.07 @ 08:53:33

### 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:

77000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.36 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.02 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
126.00	MCW 5%M 95%W	1.767
15.00	MOCW 10%M 20%O 70%W	0.210

Total Length: 141.00 ft      Total Volume: 1.977 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

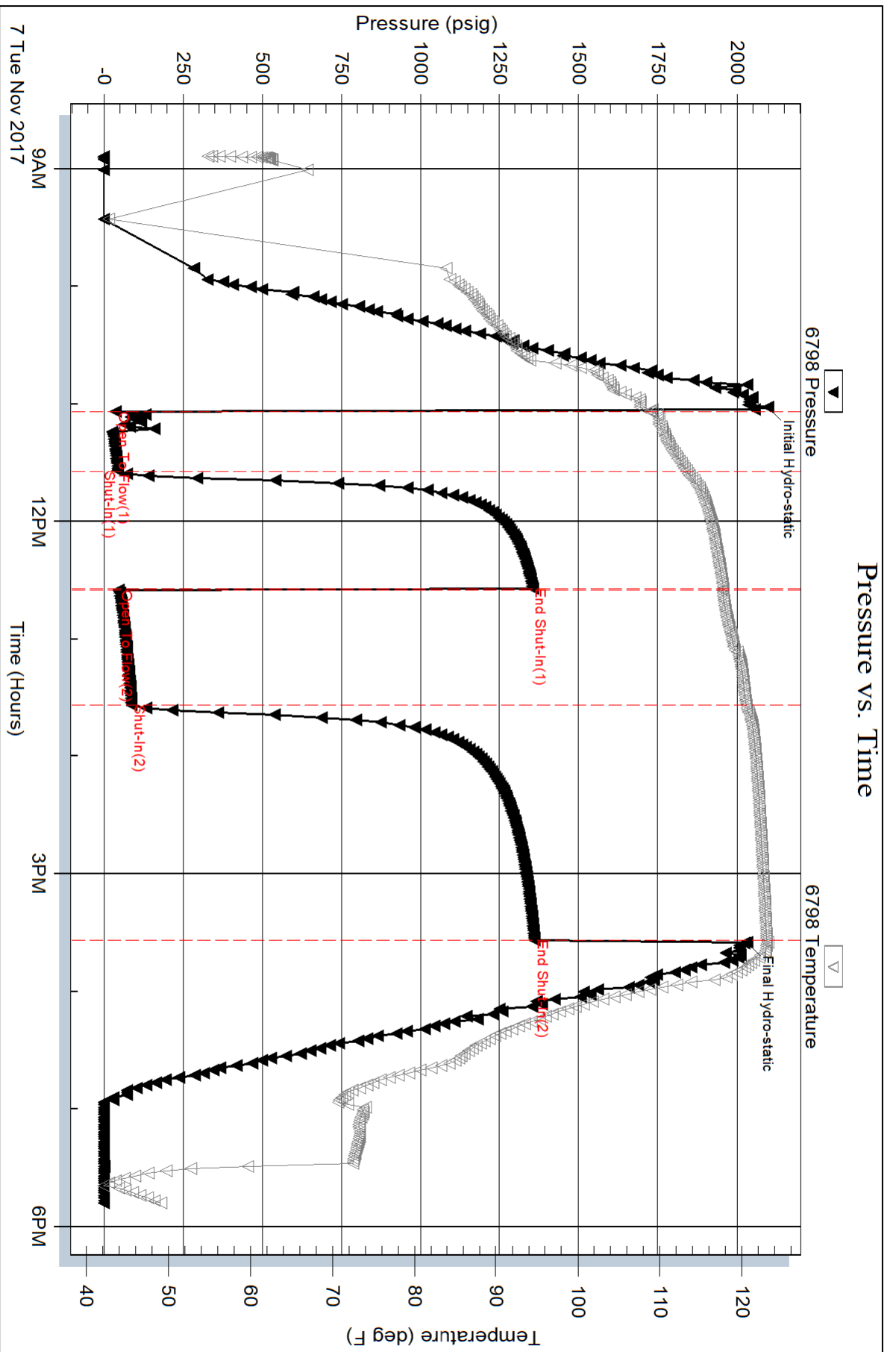
Serial #:

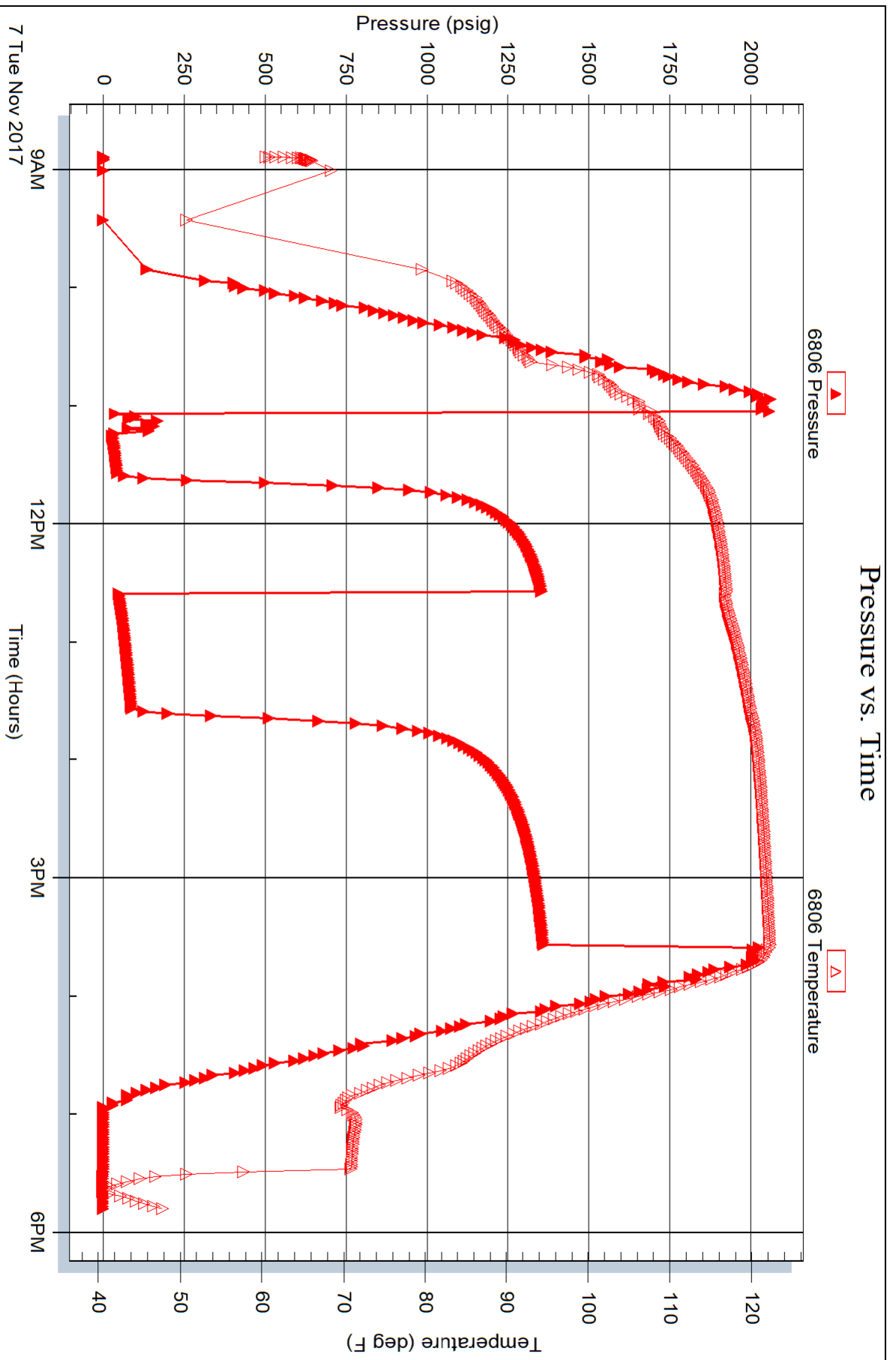
Laboratory Name:

Laboratory Location:

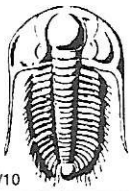
Recovery Comments: RW w as .19 @ 37 degrees

Sampler Data: 200 ml Water









# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 57849

Well Name & No. J-17 BOCK Test No. 1 Date 10/05/17  
 Company Pollok Energy Elevation 1670 KB 1662 GL  
 Address 501 N. 4th Purcell, OK 73080  
 Co. Rep / Geo. David Hickman Rig Duke 2  
 Location: Sec. 17 Twp. 28S Rge. 8W Co. Kingman State KS

Interval Tested 4133 - 4203 Zone Tested MISSISSIPPI  
 Anchor Length 70 Drill Pipe Run 4133 Mud Wt. 9.3  
 Top Packer Depth 4128 Drill Collars Run 0 Vis 45  
 Bottom Packer Depth 4133 Wt. Pipe Run \_\_\_\_\_ WL 9.4  
 Total Depth 4203 Chlorides 4000 ppm System LCM 2

Blow Description IF: Strong Blow, BOB in 90 seconds  
ISI: Blow Back Built to 6 inches  
FF: Strong Blow, BOB in 30 seconds, GTS in 1 minute, caught sample + Gauged  
FSI: Blow Back Built to 4 inches

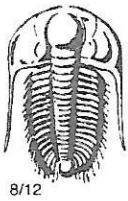
Rec	Feet of	%gas	%oil	%water	%mud
<u>3953</u>	<u>GIP</u>				
<u>180</u>	<u>GWCM</u>	<u>5</u>		<u>20</u>	<u>75</u>
____	____	%gas	%oil	%water	%mud
____	____	%gas	%oil	%water	%mud
____	____	%gas	%oil	%water	%mud

Rec Total 180 BHT 129 Gravity \_\_\_\_\_ API RW .2 @ 32 ° F Chlorides 82,000 ppm

(A) Initial Hydrostatic 2075  Test 1150 T-On Location 20:15  
 (B) First Initial Flow 69  Jars 250 T-Started \_\_\_\_\_  
 (C) First Final Flow 65  Safety Joint 75 T-Open \_\_\_\_\_  
 (D) Initial Shut-In 1233  Circ Sub \_\_\_\_\_ T-Pulled \_\_\_\_\_  
 (E) Second Initial Flow 204  Hourly Standby \_\_\_\_\_ T-Out \_\_\_\_\_  
 (F) Second Final Flow 159  Mileage (90) 67.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 1328  Sampler 250 \_\_\_\_\_  
 (H) Final Hydrostatic 2012  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1792.50  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1792.50

Approved By \_\_\_\_\_ Our Representative [Signature]

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**TRILOBITE  
TESTING** INC.

1515 Commerce Parkway • Hays, Kansas 67601

# Gas Volume Report

Pollok Energy

1-17 BOCK

1

Operator

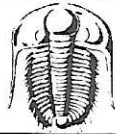
Well Name and No.

DST No.

GTS-1 minute

Min.	Ins. of Water PSIG	Orifice Size	CF/D	Min.	<del>Ins. of Water</del> PSIG	Orifice Size	<del>CF/D</del>
				10	3	1/4	4.759
				20	4	1/8	1.497
				30	7	1/8	2.620
				40	10	1/8	3.743
				50	12	1/8	4.491
				60	14	1/8	5.240

Remarks:



# TRILOBITE TESTING, INC.

P.O. Box 362 • Hays, Kansas 67601

## FLUID SAMPLER DATA

Ticket No. 57849 Date 11/05/17  
 Company Name Pollak Energy  
 Lease 1-17 BOCK Test No. 1  
 County Kingman Sec. 17 Twp. 28S Rng. 8W

### SAMPLER RECOVERY

Gas 7 cu FT ML  
 Oil N/A ML  
 Mud 80 ML  
 Water 20 ML  
 Other N/A ML  
 Pressure 10 PSI ML  
 Total 100 ML

### PIT MUD ANALYSIS

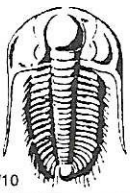
Chlorides 4000 ppm.  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Viscosity 45  
 Mud Weight 9.3  
 Filtrate 9.4  
 Other 2# LCM

### SAMPLER ANALYSIS

Resistivity .2 ohms @ 32 F  
 Chlorides 82000 ppm.  
 Gravity \_\_\_\_\_ corrected @60F

### PIPE RECOVERY

**TOP**  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.  
**MIDDLE**  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.  
**BOTTOM**  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 57850

Well Name & No. 1-17 BOCK Test No. 2 Date 11/06/17  
 Company Pollok Energy Elevation 1670 KB 1662 GL  
 Address 501 N. 4th Purcell, OK 73080  
 Co. Rep / Geo. David Hickman Rig Duke 2  
 Location: Sec. 17 Twp. 29S Rge. 8W Co. Kingman State KS

Interval Tested 4205 - 4244 Zone Tested Mississippi  
 Anchor Length 39 Drill Pipe Run 4195 Mud Wt. 9.0  
 Top Packer Depth 4200 Drill Collars Run 0 Vis 69  
 Bottom Packer Depth 4205 Wt. Pipe Run 0 WL 9.2  
 Total Depth 4244 Chlorides 5000 ppm System LCM 2

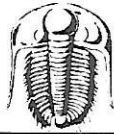
Blow Description IF: Strong Blow, BOB in 1 minute  
ISI: weak surface Blow Back  
FF: Fair Blow, BOB in 5 minutes  
FST: weak surface Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>55</u>	<u>SGCM</u>	<u>2</u>			<u>98</u>
<u>189</u>	<u>GOMCW</u>	<u>5</u>	<u>5</u>	<u>60</u>	<u>30</u>
<u>441</u>	<u>water</u>				
Rec Total	<u>685</u>	BHT <u>127</u>	Gravity <u>NIC</u>	API RW <u>17</u> @ <u>41</u> °F	Chlorides <u>79000</u> ppm

(A) Initial Hydrostatic 2081  Test 1150 T-On Location 14:00  
 (B) First Initial Flow 209  Jars 250 T-Started 14:37  
 (C) First Final Flow 155  Safety Joint 75 T-Open 16:18  
 (D) Initial Shut-In 1317  Circ Sub \_\_\_\_\_ T-Pulled 20:48  
 (E) Second Initial Flow 162  Hourly Standby \_\_\_\_\_ T-Out 23:10  
 (F) Second Final Flow 332  Mileage (90) 67.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 1321  Sampler 250 \_\_\_\_\_  
 (H) Final Hydrostatic 2014  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1792.50 MP/DST Disc't \_\_\_\_\_

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING, INC.

P.O. Box 362 • Hays, Kansas 67601

## FLUID SAMPLER DATA

Ticket No. 57850 Date 11/06/17  
 Company Name Pollak Energy  
 Lease 1-17 BACK Test No. 2  
 County Kingman Sec. 17 Twp. 28 S Rng. 8 W

### SAMPLER RECOVERY

Gas 2.02 cuFT ML  
 Oil \_\_\_\_\_ ML  
 Mud \_\_\_\_\_ ML  
 Water 600 ml ML  
 Other \_\_\_\_\_ ML  
 Pressure 2 psi ML  
 Total 600 ML

### PIT MUD ANALYSIS

Chlorides 5000 ppm.  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Viscosity 69  
 Mud Weight 9.0  
9.2  
 Filtrate \_\_\_\_\_  
 Other 2# LCM

### SAMPLER ANALYSIS

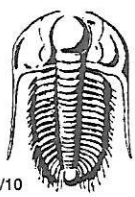
Resistivity .17 ohms @ 41° F  
 Chlorides 79000 ppm.  
 Gravity \_\_\_\_\_ corrected @60F

### PIPE RECOVERY

**TOP**  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.

**MIDDLE**  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.

**BOTTOM**  
 Resistivity .17 ohms @ 41 F  
 Chlorides 79000 ppm.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **63626**

Well Name & No. 1-17 BOEK Test No. 3 Date 11/07/17  
 Company Pollok Energy Elevation 1670 KB 1662 GL  
 Address 501 N. 4th Purcell, OK 73080  
 Co. Rep / Geo. David Hickman Rig Duke 2  
 Location: Sec. 17 Twp. 28S Rge. 8W Co. Kingman State KS

Interval Tested ~~4250~~ 4243 - 4278 Zone Tested Mississippi  
 Anchor Length 35 Drill Pipe Run 4239 Mud Wt. 9.0  
 Top Packer Depth 4238 Drill Collars Run 0 Vis 52  
 Bottom Packer Depth 4243 Wt. Pipe Run 0 WL 9.2  
 Total Depth 4278 Chlorides 5000 ppm System LCM 1

Blow Description IF: Fair Blow, BOB in 16 minutes  
ISI: NO Blow Back  
FF: weak Blow, BOB in 32 minutes  
FSI:

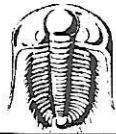
Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>OMCW</u>		<u>20%</u>	<u>70%</u>	<u>10%</u>
<u>126</u>	<u>MCW</u>			<u>95%</u>	<u>5%</u>

Rec Total 141 BHT 123 Gravity N/C API RW .19 @ 37° F Chlorides 77000 ppm

(A) Initial Hydrostatic <u>2097</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>06:45</u>
(B) First Initial Flow <u>37</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>08:53</u>
(C) First Final Flow <u>44</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>11:03</u>
(D) Initial Shut-In <u>1355</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>15:34</u>
(E) Second Initial Flow <u>46</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>17:48</u>
(F) Second Final Flow <u>87</u>	<input checked="" type="checkbox"/> Mileage <u>90</u> <sup>67.50</sup> +67.50	Comments <u>loaded TOOLS</u>
(G) Final Shut-In <u>1360</u>	<input checked="" type="checkbox"/> Sampler <u>250</u>	<u>@ 2200 on 11/08</u>
(H) Final Hydrostatic <u>2033</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>120</u>	<input type="checkbox"/> Day Standby	Total <u>1860.00</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1860</u>	

Approved By \_\_\_\_\_ Our Representative [Signature]

TriLOBITE TESTING INC. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING, INC.

P.O. Box 362 • Hays, Kansas 67601

## FLUID SAMPLER DATA

Ticket No. 63626 Date 11/07/17  
 Company Name Pollok Energy  
 Lease 1-17 BOCK Test No. 3  
 County Kingman Sec. 17 Twp. 285 Rng. 8W

### SAMPLER RECOVERY

Gas \_\_\_\_\_ ML  
 Oil \_\_\_\_\_ ML  
 Mud \_\_\_\_\_ ML  
 Water 200 ML  
 Other \_\_\_\_\_ ML  
 Pressure \_\_\_\_\_ ML  
 Total 200 ML

### PIT MUD ANALYSIS

Chlorides \_\_\_\_\_ ppm.  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Viscosity \_\_\_\_\_  
 Mud Weight \_\_\_\_\_  
 Filtrate \_\_\_\_\_  
 Other \_\_\_\_\_

### SAMPLER ANALYSIS

Resistivity .19 ohms @ 37 F  
 Chlorides 77000 ppm.  
 Gravity \_\_\_\_\_ corrected @60F

### PIPE RECOVERY

**TOP**  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.

**MIDDLE**  
 Resistivity \_\_\_\_\_ ohms @ \_\_\_\_\_ F  
 Chlorides \_\_\_\_\_ ppm.

**BOTTOM**  
 Resistivity .19 ohms @ 37 F  
 Chlorides 77000 ppm.



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Pollok Energy  
501 N 4th  
Purcell, OK 73080  
ATTN: David Hickman

**17-28S-8W Kingman**  
**1-17 Bock**  
Job Ticket: 57850      **DST#: 2**  
Test Start: 2017.11.06 @ 14:37:01

## GENERAL INFORMATION:

Formation: **Mississippi**  
Deviated: No    Whipstock:                      ft (KB)      Test Type: Conventional Bottom Hole (Reset)  
Time Tool Opened: 16:18:16      Tester: Leal Cason  
Time Test Ended: 23:10:16      Unit No: 74  
**Interval: 4205.00 ft (KB) To 4244.00 ft (KB) (TVD)**      Reference Elevations: 1670.00 ft (KB)  
Total Depth: 4244.00 ft (KB) (TVD)      1662.00 ft (CF)  
Hole Diameter: 7.88 inches    Hole Condition: Good      KB to GR/CF: 8.00 ft

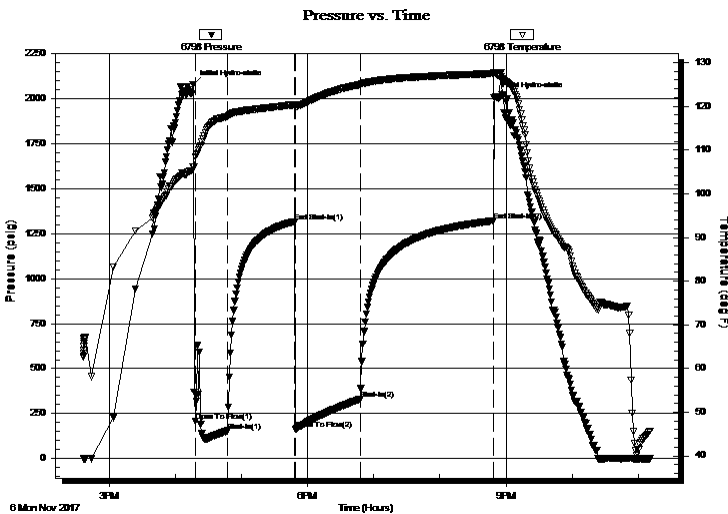
## Serial #: 6798

Inside

Press@RunDepth: 331.90 psig @ 4206.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2017.11.06      End Date: 2017.11.06      Last Calib.: 2017.11.06  
Start Time: 14:37:02      End Time: 23:10:16      Time On Btm: 2017.11.06 @ 16:16:16  
Time Off Btm: 2017.11.06 @ 20:50:16

TEST COMMENT: IF: Strong Blow , BOB in 60 seconds  
IS: Weak Surface Blow Back  
FF: Fair Blow , BOB in 5 minutes  
FS: Weak Surface Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2080.63	106.03	Initial Hydro-static
2	208.72	108.46	Open To Flow (1)
31	154.79	117.69	Shut-In(1)
92	1317.49	120.36	End Shut-In(1)
93	162.33	120.03	Open To Flow (2)
152	331.90	124.98	Shut-In(2)
272	1321.20	127.46	End Shut-In(2)
274	2014.14	127.46	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
441.00	Water	6.19
189.00	GOMCW 5%G 5%O 30%M 60%W	2.65
55.00	SGCM 2%G 98%M	0.77

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Pollok Energy  
 501 N 4th  
 Purcell, OK 73080  
 ATTN: David Hickman

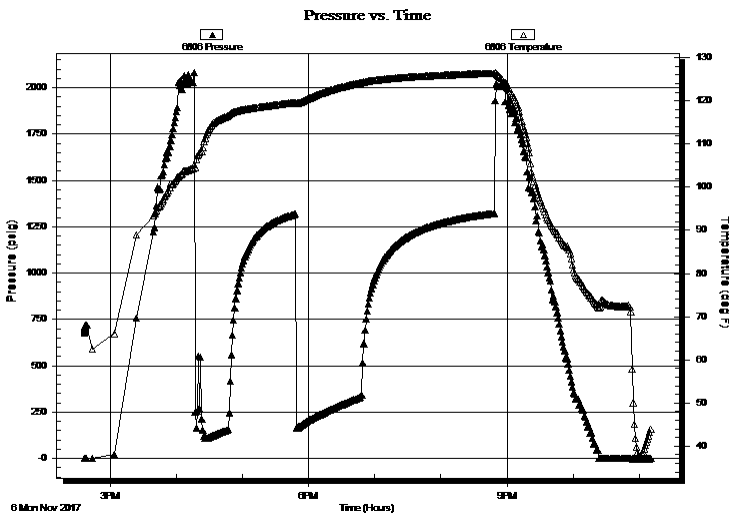
**17-28S-8W Kingman**  
**1-17 Bock**  
 Job Ticket: 57850 **DST#: 2**  
 Test Start: 2017.11.06 @ 14:37:01

**GENERAL INFORMATION:**

Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 16:18:16 Tester: Leal Cason  
 Time Test Ended: 23:10:16 Unit No: 74  
**Interval: 4205.00 ft (KB) To 4244.00 ft (KB) (TVD)** Reference Elevations: 1670.00 ft (KB)  
 Total Depth: 4244.00 ft (KB) (TVD) 1662.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 8.00 ft

**Serial #: 6806 Outside**  
 Press@RunDepth: psig @ 4206.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.11.06 End Date: 2017.11.06 Last Calib.: 2017.11.06  
 Start Time: 14:37:02 End Time: 23:10:31 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF: Strong Blow , BOB in 60 seconds  
 IS: Weak Surface Blow Back  
 FF: Fair Blow , BOB in 5 minutes  
 FS: Weak Surface Blow Back



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

**Recovery**

Length (ft)	Description	Volume (bbl)
441.00	Water	6.19
189.00	GOMCW 5%G 5%O 30%M 60%W	2.65
55.00	SGCM 2%G 98%M	0.77

**Gas Rates**

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Pollok Energy

**17-28S-8W Kingman**

501 N 4th  
Purcell, OK 73080

**1-17 Bock**

Job Ticket: 57850

**DST#: 2**

ATTN: David Hickman

Test Start: 2017.11.06 @ 14:37:01

## 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:

79000 ppm

Viscosity: 69.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
441.00	Water	6.186
189.00	GOMCW 5%G 5%O 30%M 60%W	2.651
55.00	SGCM 2%G 98%M	0.772

Total Length: 685.00 ft      Total Volume: 9.609 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

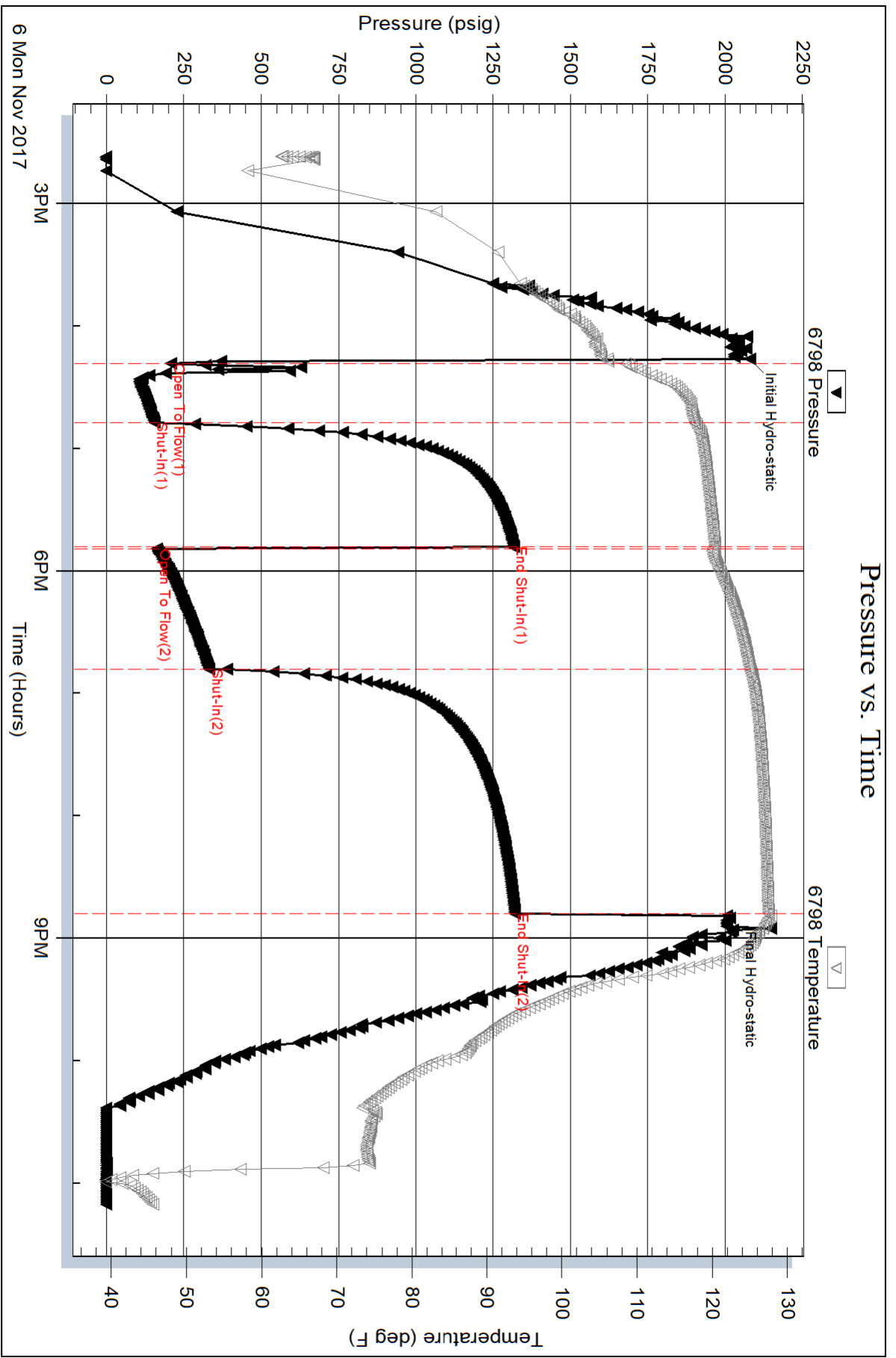
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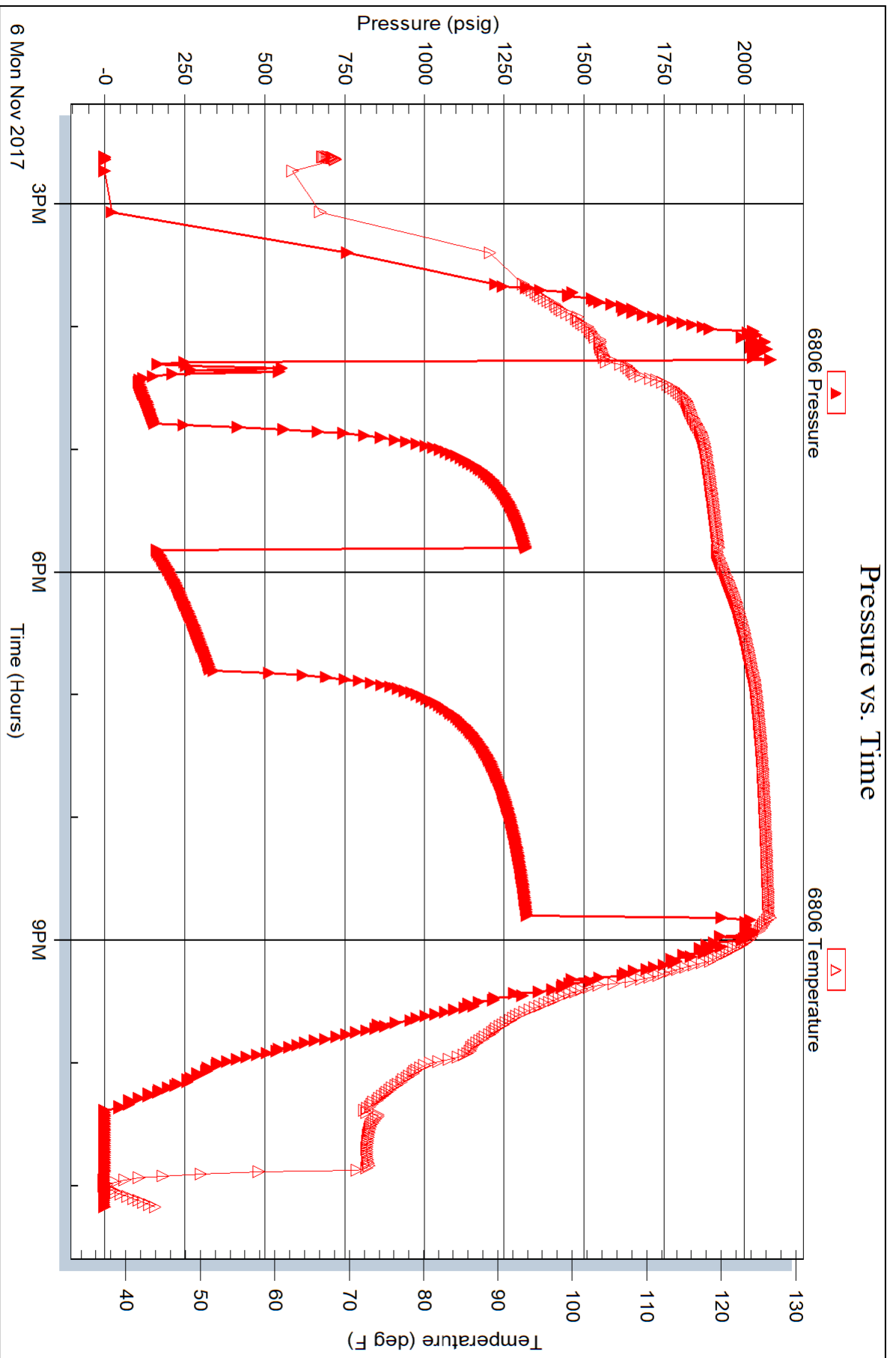
Laboratory Name:

Laboratory Location:

Recovery Comments: RW w as .17 @ 41 degrees

Sampler Data: 2.02 CU FT Gas, 600ml Water @ 2 psi







**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Pollok Energy  
 501 N 4th  
 Purcell, OK 73080  
 ATTN: David Hickman

**17-28S-8W Kingman**  
**1-17 Bock**  
 Job Ticket: 63626      **DST#: 3**  
 Test Start: 2017.11.07 @ 08:53:33

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:03:48  
 Time Test Ended: 17:48:18  
 Interval: **4243.00 ft (KB) To 4278.00 ft (KB) (TVD)**  
 Total Depth: 4278.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Leal Cason  
 Unit No: 74  
 Reference Elevations: 1670.00 ft (KB)  
 1662.00 ft (CF)  
 KB to GR/CF: 8.00 ft

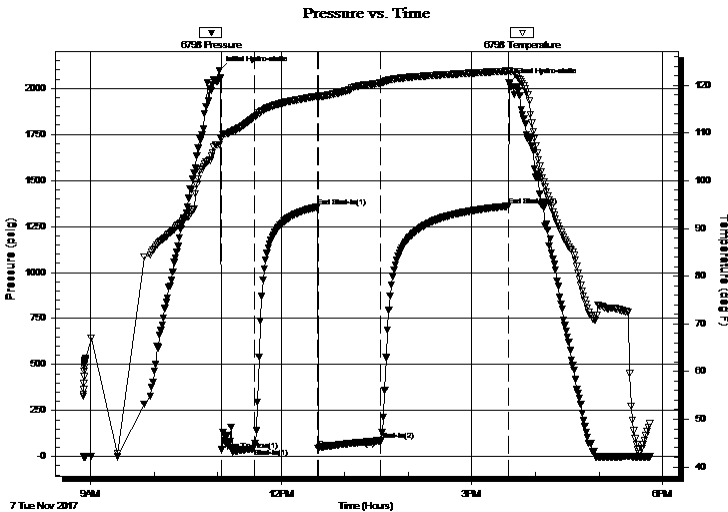
## Serial #: 6798

Inside

Press@RunDepth: 86.75 psig @ 4244.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2017.11.07 End Date: 2017.11.07 Last Calib.: 2017.11.07  
 Start Time: 08:53:34 End Time: 17:48:18 Time On Btm: 2017.11.07 @ 11:01:33  
 Time Off Btm: 2017.11.07 @ 15:35:03

TEST COMMENT: IF: Fair Blow , BOB in 16 minutes  
 IS: No Blow Back  
 FF: Weak Blow , BOB in 32 minutes  
 FS: No Blow Back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2097.30	107.59	Initial Hydro-static
3	36.87	108.80	Open To Flow (1)
33	43.59	113.24	Shut-In(1)
93	1355.31	117.70	End Shut-In(1)
94	46.29	117.68	Open To Flow (2)
153	86.75	120.51	Shut-In(2)
273	1360.35	123.00	End Shut-In(2)
274	2032.83	123.13	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
126.00	MCW 5%M 95%W	1.77
15.00	MOCW 10%M 20%O 70%W	0.21

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Pollok Energy

**17-28S-8W Kingman**

501 N 4th  
Purcell, OK 73080

**1-17 Bock**

Job Ticket: 63626

**DST#: 3**

ATTN: David Hickman

Test Start: 2017.11.07 @ 08:53:33

## 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:

77000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.36 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
126.00	MCW 5%M 95%W	1.767
15.00	MOCW 10%M 20%O 70%W	0.210

Total Length: 141.00 ft      Total Volume: 1.977 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

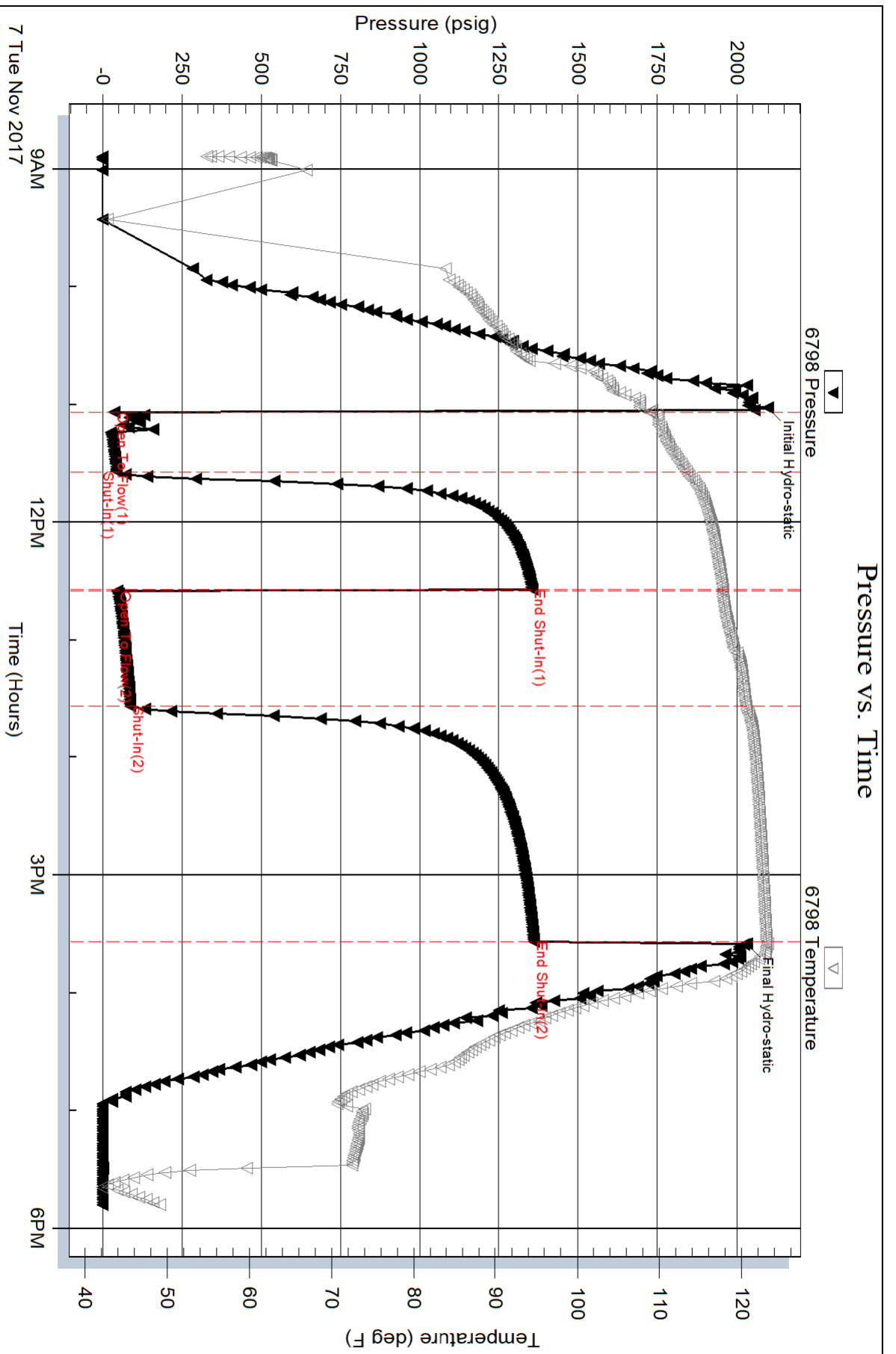
Serial #:

Laboratory Name:

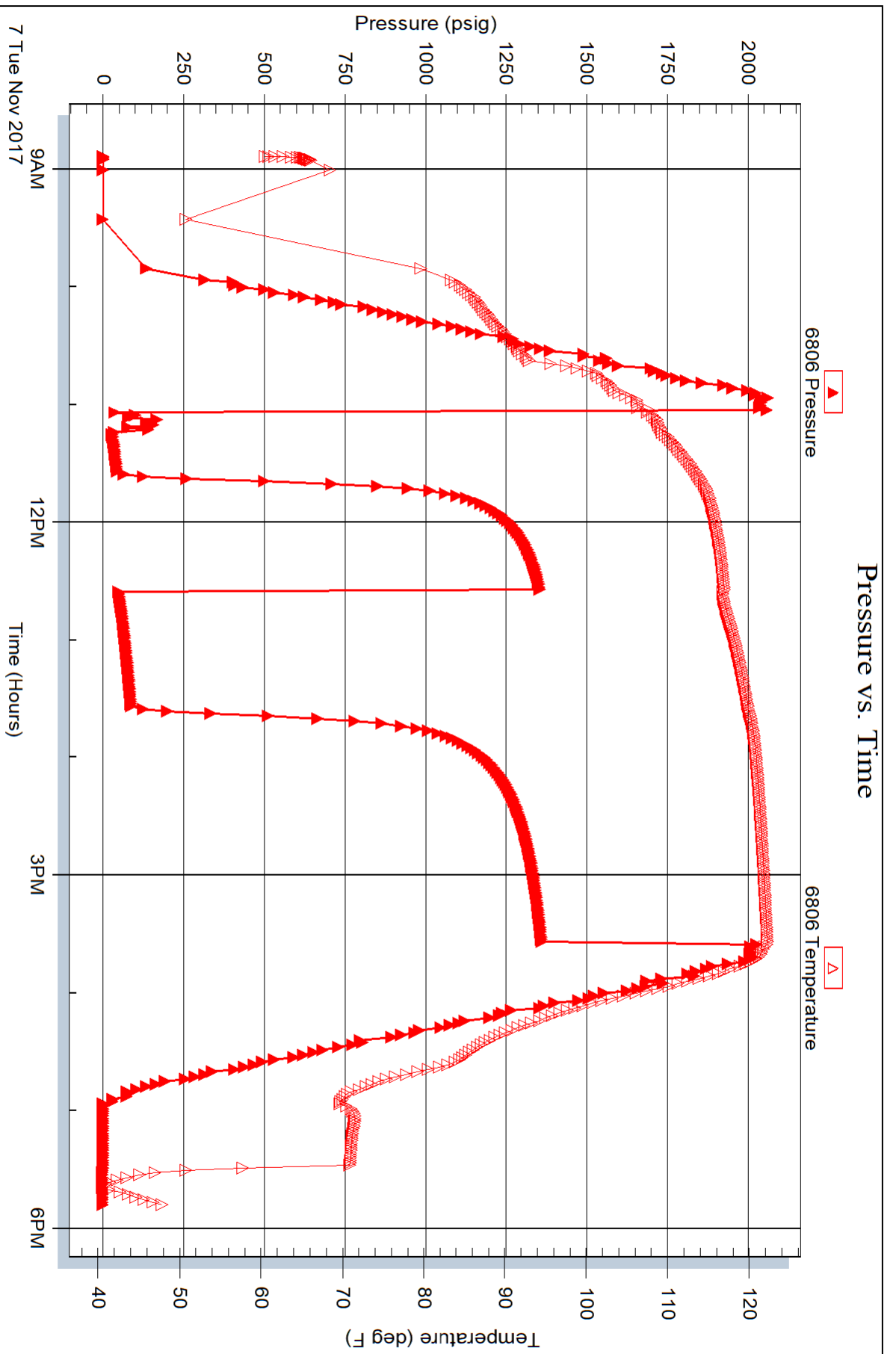
Laboratory Location:

Recovery Comments: RW w as .19 @ 37 degrees

Sampler Data: 200 ml Water









**GEOLOGICAL REPORT**  
**BOCK 1-17**  
**NE/4 SECTION 17-T29S-R8W**  
**KINGMAN COUNTY, KANSAS**

**SUMMARY**

The above noted well was drilled to a depth of 4,600 feet on November 8, 2017. A logging unit was on location at 1,200', with logging beginning at 3,150 feet. At T.D., Weatherford electric logs were run that consisted of Dual Induction, Compensated Neutron-Density, and Micro-log. Drill stem tests were run in the Mississippian aged chert that yielded negative results. From the data collected while drilling and analyzing, no economic accumulations of hydrocarbons were present, so the decision was made to plug and abandon the well.

**Mississippian**

The top of the Mississippian was cut at 4,189 (-2,526) feet. The samples were described as white and off white in color tripolitic, weathered, and fresh. Samples were hard with lesser amounts of brittle and a few pieces were friable. There was abundant yellow fluorescence, moderate brown staining, a strong oil odor with flash cuts. Electric logs indicated a zone of 39 feet with 30% porosity and cross-over in the micro-log. 3 drill stem tests were run with the results below.

---

**DST #1: 4,133'-4,203' 30-60-60-120**

**I.F.: STONG BLOW, BOB 90" F.F.: STONG BLOW, BOB 30", GTS 60"**

**I.S.I.: BLOW BACK BUILT TO 6 INCHES F.S.I.: BLOW BACK BUILT TO 4 INCHES**

**I.F. – 69-65# F.F. – 204-159# I.S.I.P. -1,233# F.S.I.P. – 1,328#**

**I.H. – 2,075# F.H. – 2,012# B.H.T. – 129\*F**

**REC. – 180' GASSY WATER CUT MUD (5% GAS, 20% WATER, & 75% MUD)**

**DST #2: 4,205'-4,244', 30-60-60-120**

**I.F.: STRONG BLOW, BOB 60" F.F.: FAIR BLOW, BOB 5"**

**I.S.I.: WEAK SURFACE BLOW BACK F.S.I.: WEAK SURFACE BLOW BACK**

**I.F. - 209-155# F.F. - 162-332# I.S.I.P. - 1,317# F.S.I.P. - 1,321#**

**I.H. - 2,081# F.H. - 2,014# B.H.T. - 127°F**

**REC. - 55' SLIGHT GAS CUT MUD (2% GAS, 98% MUD)**

**189' GASSY OILY MUD CUT WATER (5% GAS, 5% OIL, 60% WATER, 30% MUD)**

**441' WATER**

**DST #3: 4,243'-4,278', 30-60-60-120**

**I.F.: FAIR BLOW, BOB 16" F.F.: WEAK BLOW, BOB 32"**

**I.S.I.: NO BLOW BACK F.S.I.: NO BLOW BACK**

**I.F. - 37-44# F.F. - 46-87# I.S.I.P. - 1,355# F.S.I.P. - 1,360#**

**I.H. - 2,097# F.H. - 2,033# B.H.T. - 123°F**

## **ELECTRIC LOG TOPS**

	<b>POLLOK ENERGY</b>	<b>LEBEN DRILLING</b>	<b>MESSENGER PETR.</b>
	<b>BOCK 1-17</b>	<b>BOCK 1</b>	<b>DEMME J #2</b>
	<b>W2 E2 NW NE</b>	<b>SW NE</b>	<b>W2 NW SE</b>
	<b>17-T29S-R8W</b>	<b>17-T29S-R8W</b>	<b>8-T29S-R8W</b>
<b>BS/HEEBNER</b>	<b>3,264'</b>	<b>3,274'</b>	<b>3,287'</b>
(SUBSEA)	(-1,601')	(-1,603')	(-1,599')
<b>T/LANSING</b>	<b>3,481'</b>	<b>3,502'</b>	<b>3,511'</b>
(SUBSEA)	(-1,818')	(-1,831')	(-1,823')
<b>BS/HUSHPUCKNEY</b>	<b>3,907'</b>	<b>3,906'</b>	<b>3,901'</b>
(SUBSEA)	(-2,244')	(-2,235')	(-2,213')
<b>T/CHEROKEE</b>	<b>4,104'</b>	<b>4,113'</b>	<b>4,098'</b>
(SUBSEA)	(-2,441')	(-2,442')	(-2,410')
<b>T/MISSISSIPPIAN</b>	<b>4,189'</b>	<b>4,198'</b>	<b>4,165'</b>
(SUBSEA)	(-2,526')	(-2,527')	(-2,477')
<b>T/VIOLA</b>	<b>4,482'</b>	<b>4,489'</b>	<b>NDE</b>
(SUBSEA)	(-2,819')	(-2,818')	

**T/SIMPSON**  
(SUBSEA)

**4,531'**  
(-2,868')

**4,538'**  
(-2,867')

**NDE**

## **Conclusion**

The Bock 1-17 was drilled for potential hydrocarbons in the Hertha Limestone, Mississippian aged chert. After drilling and analyzing and the negative drill stem test results, the decision was made to plug and abandon the Bock 1-17.

Respectfully Submitted

Bill Busch