

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) (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	Royal Energy, Inc.
Well Name	PRAEGER 4R
Doc ID	1396880

All Electric Logs Run

CNL/CDL
DI
MICRO
SONIC

Form	ACO1 - Well Completion
Operator	Royal Energy, Inc.
Well Name	PRAEGER 4R
Doc ID	1396880

Tops

Name	Top	Datum
Anhydrite Top	968	1048
Anhydrite Base	989	1027
Heebner	3616	-1600
Lansing	3781	-1765
Stark	3998	-1982
B/KC	4056	-2040
Mississippian	4202	-2186
Viola	4334	-2318
Simpson	4486	-2470
Arbuckle	4532	-2516

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. 636

Date	1-18-18	Sec.	36	Twp.	24	Range	15	County	Stafford	State	Ks	On Location		Finish	2:30 AM
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Lease Pracegs Well No. 4R Location 281 + So Jct - 9W to 90th Ave

Contractor Southwind 1 Owner 2 1/2 S W 15
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. 355' Charge Royal Energy

Csg. 8 5/8" Depth 353' To Royal Energy

Tbg. Size _____ Depth _____ Street _____ City _____ State _____

Tool _____ Depth _____ The above was done to satisfaction and supervision of owner agent or contractor

Cement Left in Csg. 20' Shoe Joint 20' Cement Amount Ordered 420 80/20 3%CC 2% Gel 1/2H

Meas Line _____ Displace 21 1/4 BUS

EQUIPMENT

Pumptrk	16	No.	Cementer		Common
			Helper	<u>Travis</u>	
Bulktrk	19	No.	Driver	<u>Jordan</u>	Poz. Mix
			Driver	<u>Rick</u>	
Bulktrk	p.u.	No.	Driver		Gel.
			Driver		Calcium

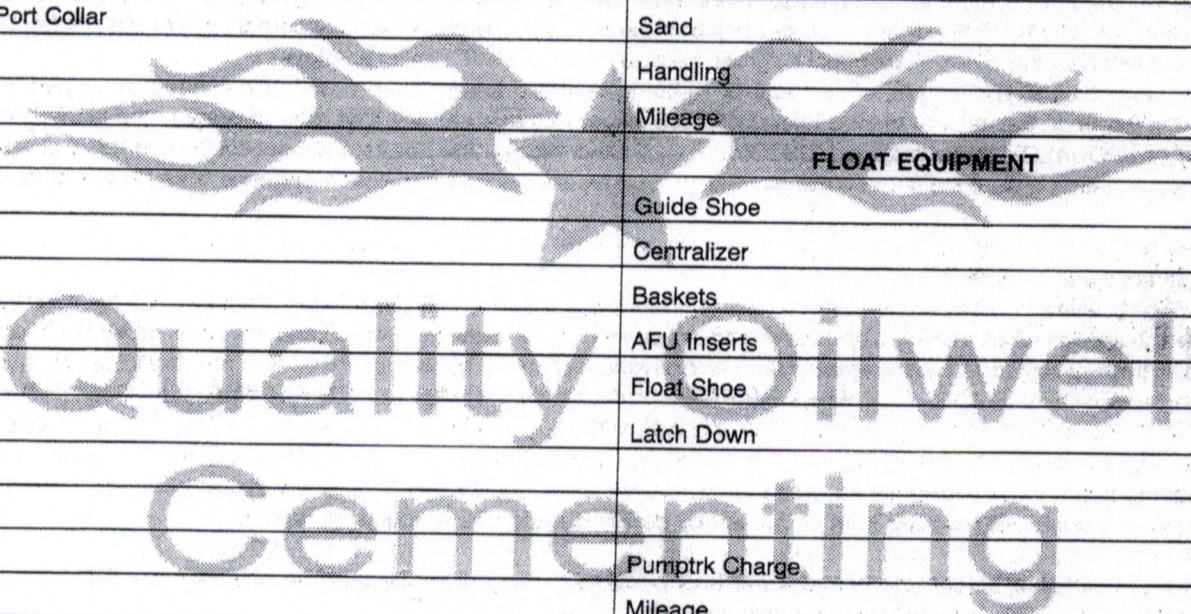
JOB SERVICES & REMARKS

Remarks:	<u>Cement did Circulate</u>	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





QUALITY OILWELL CEMENTING, INC.
 PO BOX 32 - 740 WEST WICHITA AVE, RUSSELL KS 67665
 PHONE:785-324-1041 FAX:785-483-1087
 EMAIL: cementing@ruraltel.net

Date: 1/18/2018
 Invoice # 636
 P.O.#:
 Due Date: 2/17/2018
 Division: Russell

Invoice

ENTERED

Contact:
 Royal World Energy
Address/Job Location:

PO BOX 1820
 Dodge City ks 67801

Reference:
 PRAEGER 4R SEC 36-24-15

Description of Work:
 SURFACE JOB

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 609.31	No				
Common-Class A	255	\$ 3,587.41	Yes				
Calcium Chloride	12	\$ 458.93	Yes				
POZ Mix-Standard	75	\$ 358.54	Yes				
Bulk Truck Matl-Material Service Charge	420	\$ 286.83	No				
Premium Gel (Bentonite)	6	\$ 118.83	Yes				
Pump Truck Mileage-Job to Nearest Camp	35	\$ 107.56	No				
Bulk Truck Mileage-Job to Nearest Bulk Plant	35	\$ 83.66	No				

Invoice Terms:

Net 30

SubTotal: \$ 5,611.06
 Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (140.28)

SubTotal for Taxable Items: \$ 4,410.61
 SubTotal for Non-Taxable Items: \$ 1,060.17

7.50% Stafford County Sales Tax

Total: \$ 5,470.78
 Tax: \$ 330.80

Thank You For Your Business!

Amount Due: \$ 5,801.58
Applied Payments:
Balance Due: \$ 5,801.58

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
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QUALITY OILWELL CEMENTING, INC.
 PO Box 32 - 740 WEST WICHITA AVE, RUSSELL KS 67665
 PHONE:785-324-1041 FAX:785-483-1087
 EMAIL: cementing@ruraltel.net

Date: 1/27/2018
 Invoice # 460

P.O.#:
 Due Date: 2/26/2018
 Division: Russell

Invoice

ENTERED

Contact:
 Royal World Energy
Address/Job Location:

PO BOX 1820
 Dodge City ks 67801

Reference:
 PRUEGER 4R SEC 36-24-15

Description of Work:
 PROD STRING

Services / Items Included:	Quantity	Price	Taxable	Item	Quantity	Price	Taxable
Labor		\$ 710.86	No	5 1/2" Basket	1	\$191.22	Yes
Common-Class A	205	\$ 2,884.00	Yes	Latch Down Plug & Baffle, 5 1/2"	1	\$181.66	Yes
Gilsonite	875	\$ 896.34	Yes	Gas Block	85	\$174.15	Yes
Cement Scratchers Rotating Type	10	\$ 682.93	Yes	Bulk Truck Matl-Material Service Charge	251	\$171.41	No
CFL 117	160	\$ 673.09	Yes	Salt (Fine)	16	\$143.14	Yes
CD-110	160	\$ 437.07	Yes	Pump Truck Mileage-Job to Nearest Camp	35	\$107.56	No
5 1/2" Turbolizer	8	\$ 393.37	Yes	Bulk Truck Mileage-Job to Nearest Bulk Plant	35	\$83.66	No
Defoamer A or CAF-38	75	\$ 358.54	Yes				
Mud Clear	500	\$ 252.68	Yes				
Auto Fill Float Shoe, 5 1/2"	1	\$ 229.46	Yes				
POZ Mix-Standard	45	\$ 215.12	Yes				

SubTotal: \$ 8,786.26

Invoice Terms:

Net 30

Discount Available ONLY if Invoice is Paid & Received within listed terms of invoice: \$ (219.66)

SubTotal for Taxable Items:	\$ 7,519.95
SubTotal for Non-Taxable Items:	\$ 1,046.66
Total:	\$ 8,566.60
Tax:	\$ 564.00

7.50% Stafford County Sales Tax

Thank You For Your Business!

Amount Due: \$ 9,130.60
Applied Payments:
Balance Due: \$ 9,130.60

Past Due Invoices are subject to a service charge (annual rate of 24%)
 This does not include any applicable taxes unless it is listed.
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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. 480

Date	1-27-18	Sec.	36	Twp.	24	Range	15	County	Stafford	State	KS	On Location		Finish	4:30 AM
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Lease P. Praeger Location Hwy 281 + 50 Jct 9w 2 3/4 S w

Well No. 4R Owner To Quality Oilwell Cementing, Inc.

Contractor Southwind #1 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 String Charge To Royal Energy

Hole Size 7 7/8 T.D. 4575' Street

Csg. 5 1/2 Depth

Tbg. Size Depth City State

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

Cement Left in Csg. 23.92 Shoe Joint 23.92 Cement Amount Ordered 75cu 60/100

Meas Line Displace 105 1/2 bbl 175 Q pro-C 10% salt 5% Gel 1/2% Gels

EQUIPMENT Common .25% Defoamer .1% C.F.R. 1% CD 110

Pumptrk 16 No. Cementer Brett Poz. Mix 45

Bulktrk 15 No. Driver Glenn Gel. Com 205

Bulktrk 9 No. Driver Doug David Calcium CAF-38 Defoamer 75#

JOB SERVICES & REMARKS Hulls CD-110 160#

Remarks: Salt 16

Rat Hole -30' Flowseal

Mouse Hole 25 sv Kol-Seal 875 #

Centralizers 1,3,6,8,9,12,19,24 Mud CLR 48 -500 Gal Mud Flush

Baskets 3 CFL-117 or CD110 CAF 38 -160#

D/V or Port Collar Sand Can Block

Handling 751 Mileage 85 mi

Run 4575' of 5 1/2" + 5' for **FLOAT EQUIPMENT**

Plugged Rat & Mouse w/ 60/100 Mixed Guide Shoe

Mixed 25 sv Scavenger w/ 60/100 Centralizer - 8 sur bag

Mixed 175 cu Q pro-C Baskets - 1

Displace 105 1/2 bbl H₂O AFU Inserts

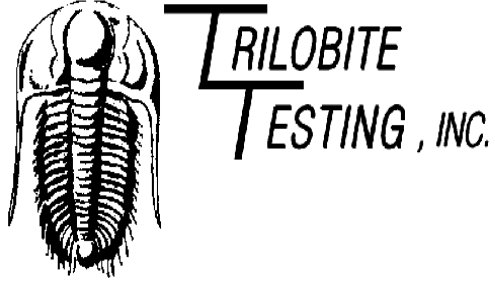
Little pressure @ 700 lbs Float Shoe

Landed plug @ 1500 lbs Latch Down - 1

Plug held 10-scratchers Pumptrk Charge prod string Mileage 35

X Signature [Signature]

Tax
Discount
Total Charge



DRILL STEM TEST REPORT

Prepared For: **Royal Energy**

PO Box 1820
Dodge City, KS 67801

ATTN: Eli Felts

Praeger #4 R

36-24S-15W Stafford,KS

Start Date: 2018.01.19 @ 19:29:01

End Date: 2018.01.20 @ 00:15:46

Job Ticket #: 63649 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.01.27 @ 08:10:43



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Royal Energy
PO Box 1820
Dodge City, KS 67801
ATTN: Eii Felts

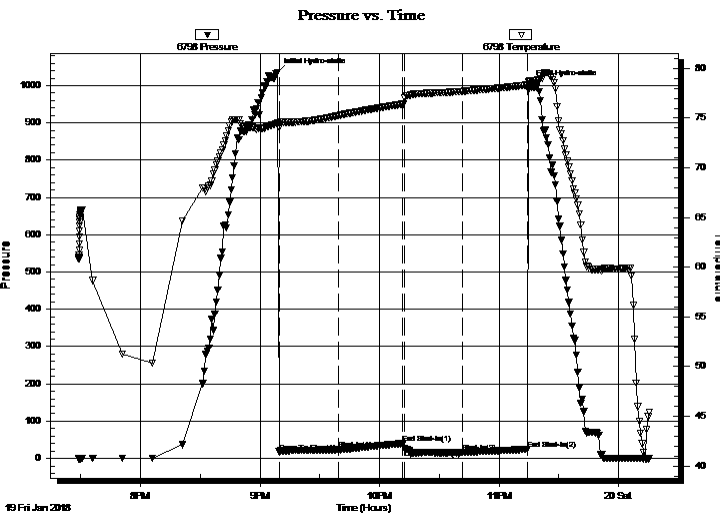
36-24S-15W Stafford,KS
Praeger #4 R
Job Ticket: 63649 **DST#: 1**
Test Start: 2018.01.19 @ 19:29:01

GENERAL INFORMATION:

Formation: **Herington-Krider**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:09:31
Time Test Ended: 00:15:46
Interval: **23057.0 ft (KB) To 2075.00 ft (KB) (TVD)**
Total Depth: 2075.00 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: 2016.00 ft (KB)
2006.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 6798 Inside
Press@RunDepth: 16.35 psig @ 2058.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.01.19 End Date: 2018.01.20 Last Calib.: 2018.01.20
Start Time: 19:29:02 End Time: 00:15:46 Time On Btm: 2018.01.19 @ 21:08:46
Time Off Btm: 2018.01.19 @ 23:15:01

TEST COMMENT: IF: Weak 1/2" Blow
IS: No Blow Back
FF: Weak 1/2" Blow
FS: No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1035.06	74.50	Initial Hydro-static
1	17.80	74.02	Open To Flow (1)
31	23.42	75.27	Shut-In(1)
63	40.22	76.41	End Shut-In(1)
64	25.60	77.01	Open To Flow (2)
93	16.35	77.69	Shut-In(2)
126	24.25	78.32	End Shut-In(2)
127	1002.27	78.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Royal Energy
PO Box 1820
Dodge City, KS 67801
ATTN: Eii Felts

36-24S-15W Stafford,KS
Praeger #4 R
Job Ticket: 63649 **DST#: 1**
Test Start: 2018.01.19 @ 19:29:01

Tool Information

Drill Pipe:	Length: 1932.00 ft	Diameter: 3.80 inches	Volume: 27.10 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: 114.00 ft	Diameter: 2.25 inches	Volume: 0.56 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 27.66 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 28000.00 lb
Depth to Top Packer:	2057.00 ft			Final 28000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	44.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Ran 2 Shale Packers

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			2036.00	
Hydraulic tool	5.00			2041.00	
Jars	5.00			2046.00	
Safety Joint	2.00			2048.00	
Packer	5.00			2053.00	26.00 Bottom Of Top Packer
Packer	4.00			2057.00	
Stubb	1.00			2058.00	
Recorder	0.00	6798	Inside	2058.00	
Recorder	0.00	6806	Outside	2058.00	
Perforations	14.00			2072.00	
Bullnose	3.00			2075.00	18.00 Bottom Packers & Anchor

Total Tool Length: 44.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Royal Energy
PO Box 1820
Dodge City, KS 67801
ATTN: Eii Felts

36-24S-15W Stafford,KS
Praeger #4 R
Job Ticket: 63649 **DST#: 1**
Test Start: 2018.01.19 @ 19:29:01

Mud and Cushion Information

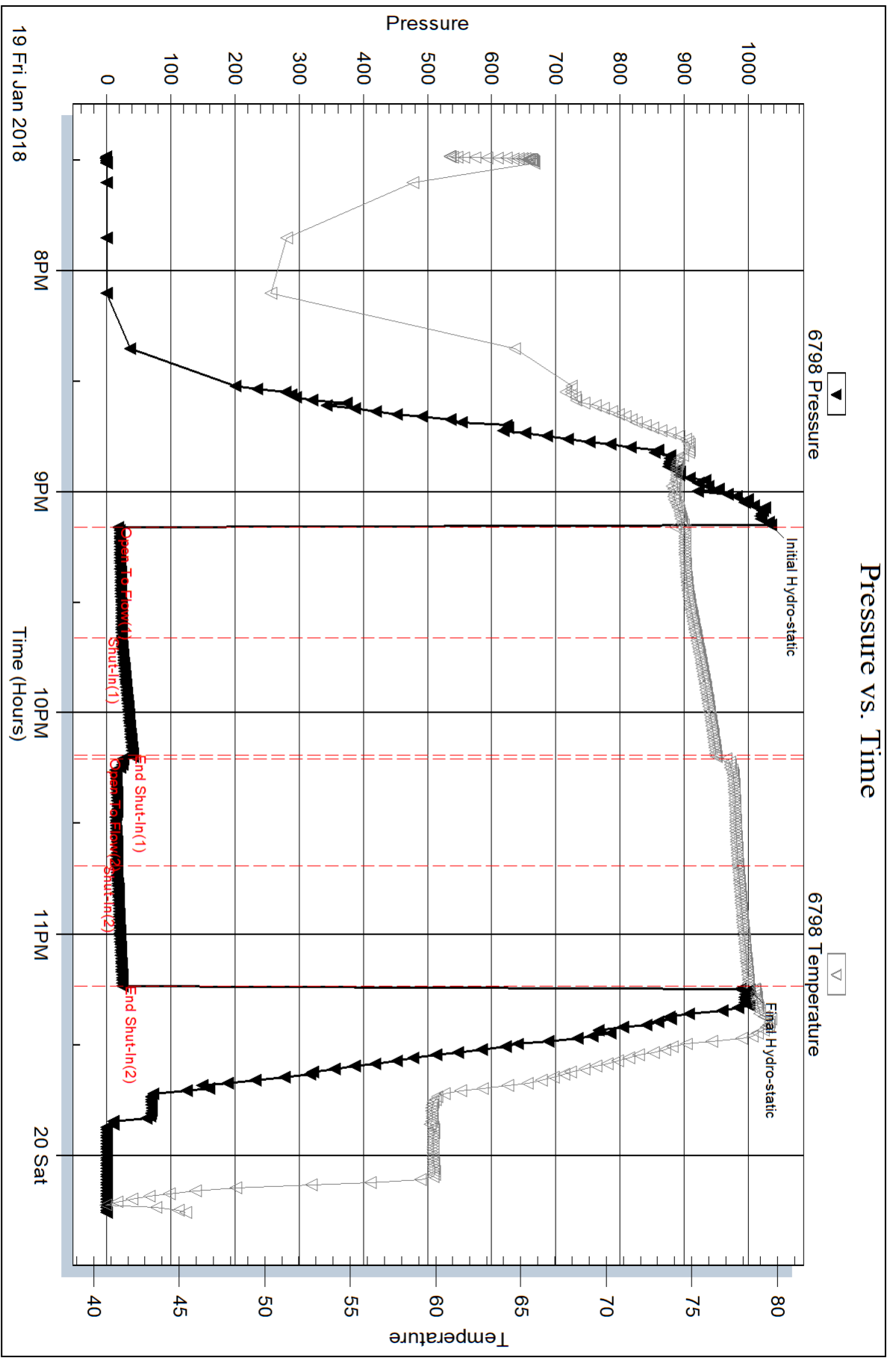
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 27.00 sec/qt	Cushion Volume: bbl		
Water Loss: in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 113000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

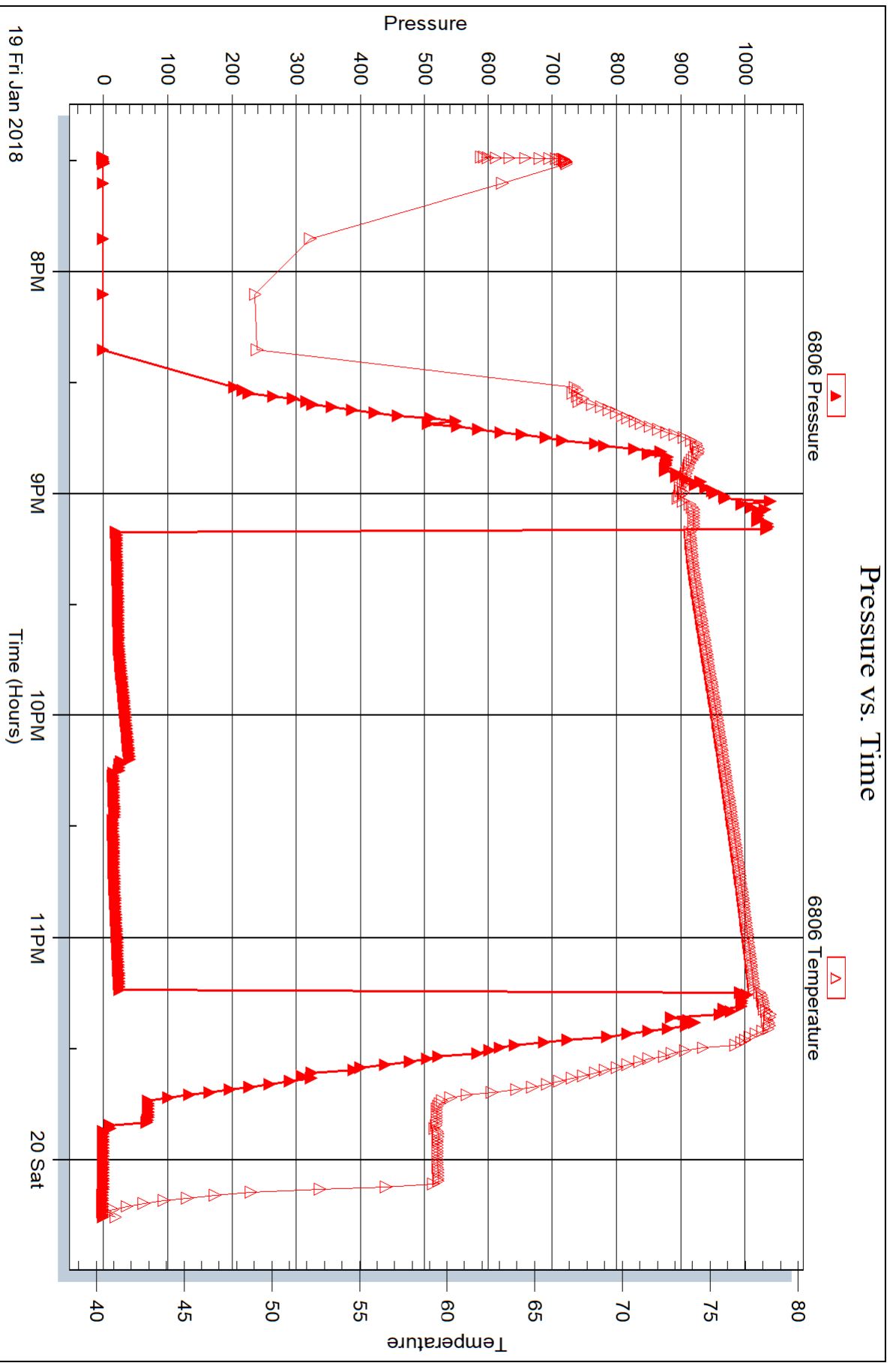


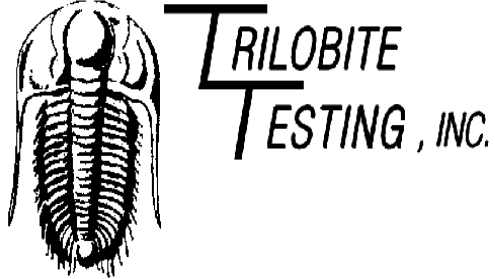
Serial #: 6806

Outside Royal Energy

Prager #4 R

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Royal Energy**

PO Box 1820
Dodge City, KS 67801

ATTN: Eli Felts

Praeger #4 R

36-24S-15W Stafford,KS

Start Date: 2018.01.23 @ 06:21:24

End Date: 2018.01.23 @ 13:41:21

Job Ticket #: 63650 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.01.27 @ 08:10:13

Royal Energy
36-24S-15W Stafford,KS
Praeger #4 R
DST # 2
Lansing "B"
2018.01.23



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Royal Energy
 PO Box 1820
 Dodge City, KS 67801
 ATTN: Eii Felts

36-24S-15W Stafford,KS
Praeger #4 R
 Job Ticket: 63650 **DST#: 2**
 Test Start: 2018.01.23 @ 06:21:24

GENERAL INFORMATION:

Formation: **Lansing "B"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:30:21
 Time Test Ended: 13:41:21
 Interval: **3794.00 ft (KB) To 3820.00 ft (KB) (TVD)**
 Total Depth: 3976.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Straddle (Reset)
 Tester: Leal Cason
 Unit No: 74
 Reference Elevations: 2016.00 ft (KB)
 2006.00 ft (CF)
 KB to GR/CF: 10.00 ft

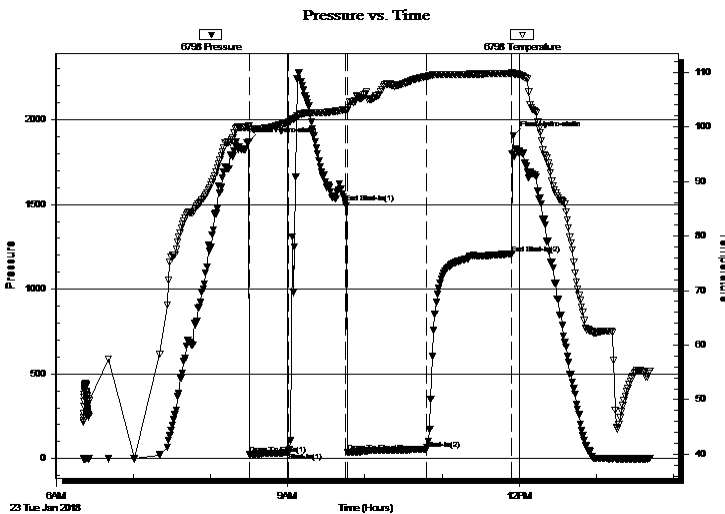
Serial #: 6798

Inside

Press@RunDepth: 56.93 psig @ 3795.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.01.23 End Date: 2018.01.23 Last Calib.: 2018.01.23
 Start Time: 06:21:25 End Time: 13:41:20 Time On Btm: 2018.01.23 @ 08:29:51
 Time Off Btm: 2018.01.23 @ 11:55:21

TEST COMMENT: IF: Weak Blow , Built to 3"
 IS: No Blow Back
 FF: Weak Blow , Built to 1 1/2"
 FS: No Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1871.42	100.11	Initial Hydro-static
1	23.00	99.62	Open To Flow (1)
31	36.58	100.86	Shut-In(1)
75	1508.59	103.12	End Shut-In(1)
77	36.97	102.94	Open To Flow (2)
139	56.93	109.25	Shut-In(2)
205	1207.31	109.80	End Shut-In(2)
206	1905.23	109.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	SGCM 2%G 98%M	1.12

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Royal Energy
PO Box 1820
Dodge City, KS 67801
ATTN: Eii Felts

36-24S-15W Stafford,KS
Praeger #4 R
Job Ticket: 63650 **DST#: 2**
Test Start: 2018.01.23 @ 06:21:24

Tool Information

Drill Pipe:	Length: 3772.00 ft	Diameter: 3.80 inches	Volume: 52.91 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: 30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
		Total Volume: 52.91 bbl		Tool Chased 5.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3794.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	3820.00 ft			
Interval between Packers:	26.00 ft			
Tool Length:	208.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments: Tool Slid During IF & ISI
Successful Straddle

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3773.00	
Hydraulic tool	5.00			3778.00	
Jars	5.00			3783.00	
Safety Joint	2.00			3785.00	
Packer	5.00			3790.00	26.00 Bottom Of Top Packer
Packer	4.00			3794.00	
Stubb	1.00			3795.00	
Recorder	0.00	6798	Inside	3795.00	
Recorder	0.00	6806	Outside	3795.00	
Perforations	24.00			3819.00	
Blank Off Sub	1.00			3820.00	26.00 Tool Interval
Packer	3.00			3823.00	
Perforations	16.00			3839.00	
Change Over Sub	1.00			3840.00	
Recorder	0.00	8358	Below	3840.00	
Drill Pipe	127.00			3967.00	
Change Over Sub	2.00			3969.00	
Perforations	4.00			3973.00	
Bullnose	3.00			3976.00	156.00 Bottom Packers & Anchor

Total Tool Length: 208.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Royal Energy
PO Box 1820
Dodge City, KS 67801
ATTN: Eii Felts

36-24S-15W Stafford,KS
Praeger #4 R
Job Ticket: 63650 **DST#: 2**
Test Start: 2018.01.23 @ 06:21:24

Mud and Cushion Information

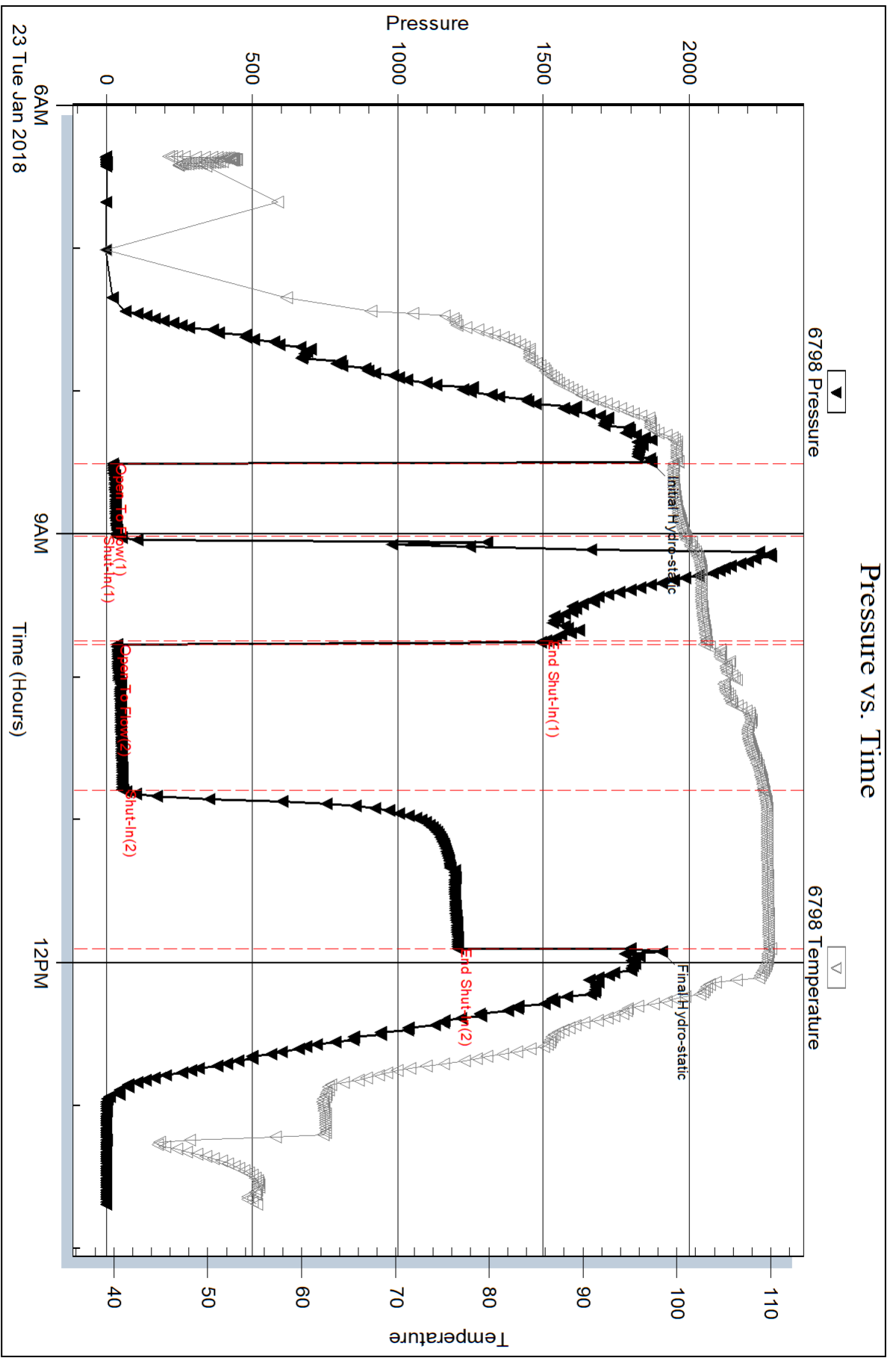
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.58 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5500.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	SGCM 2%G 98%M	1.122

Total Length: 80.00 ft Total Volume: 1.122 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

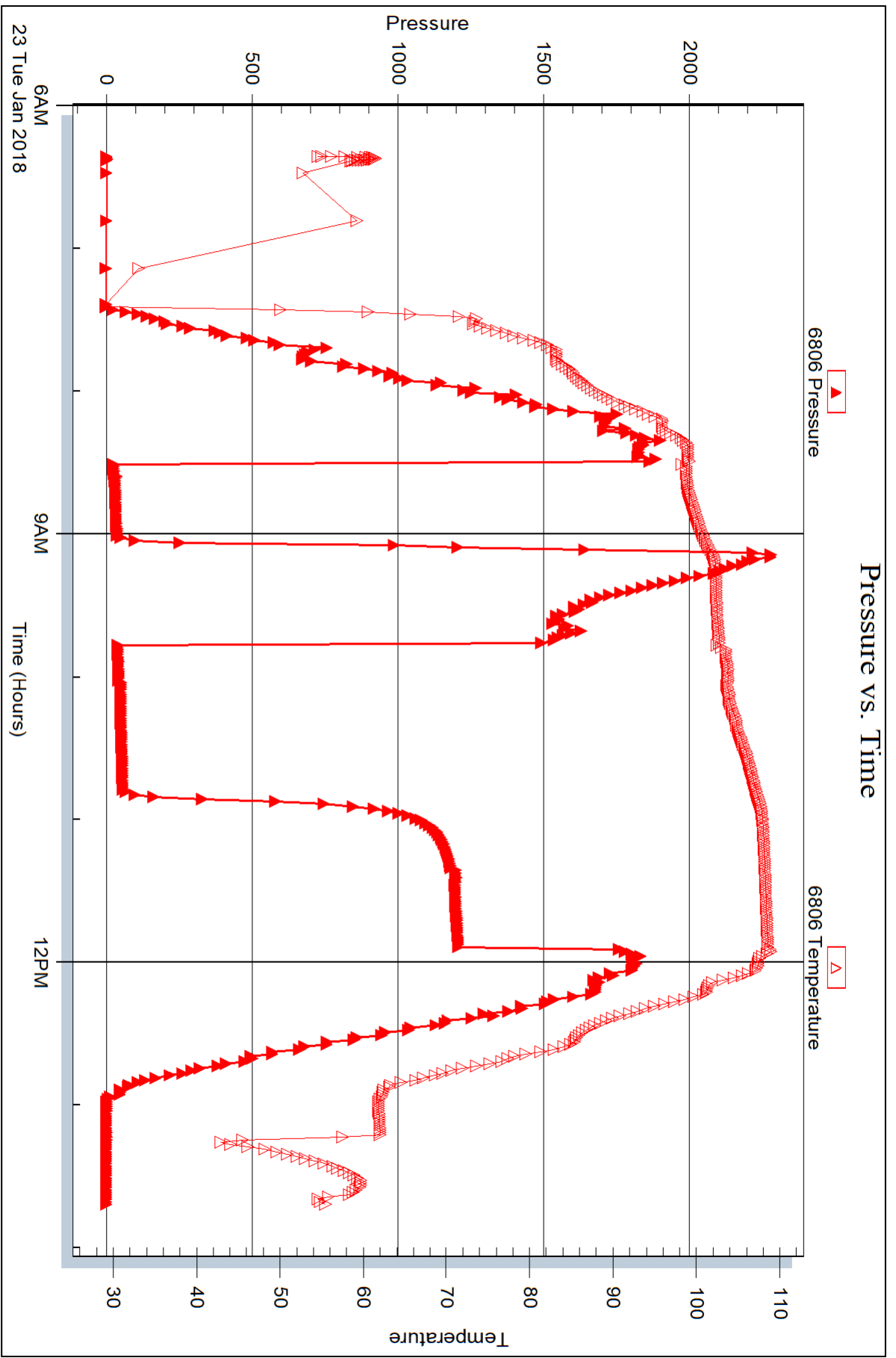


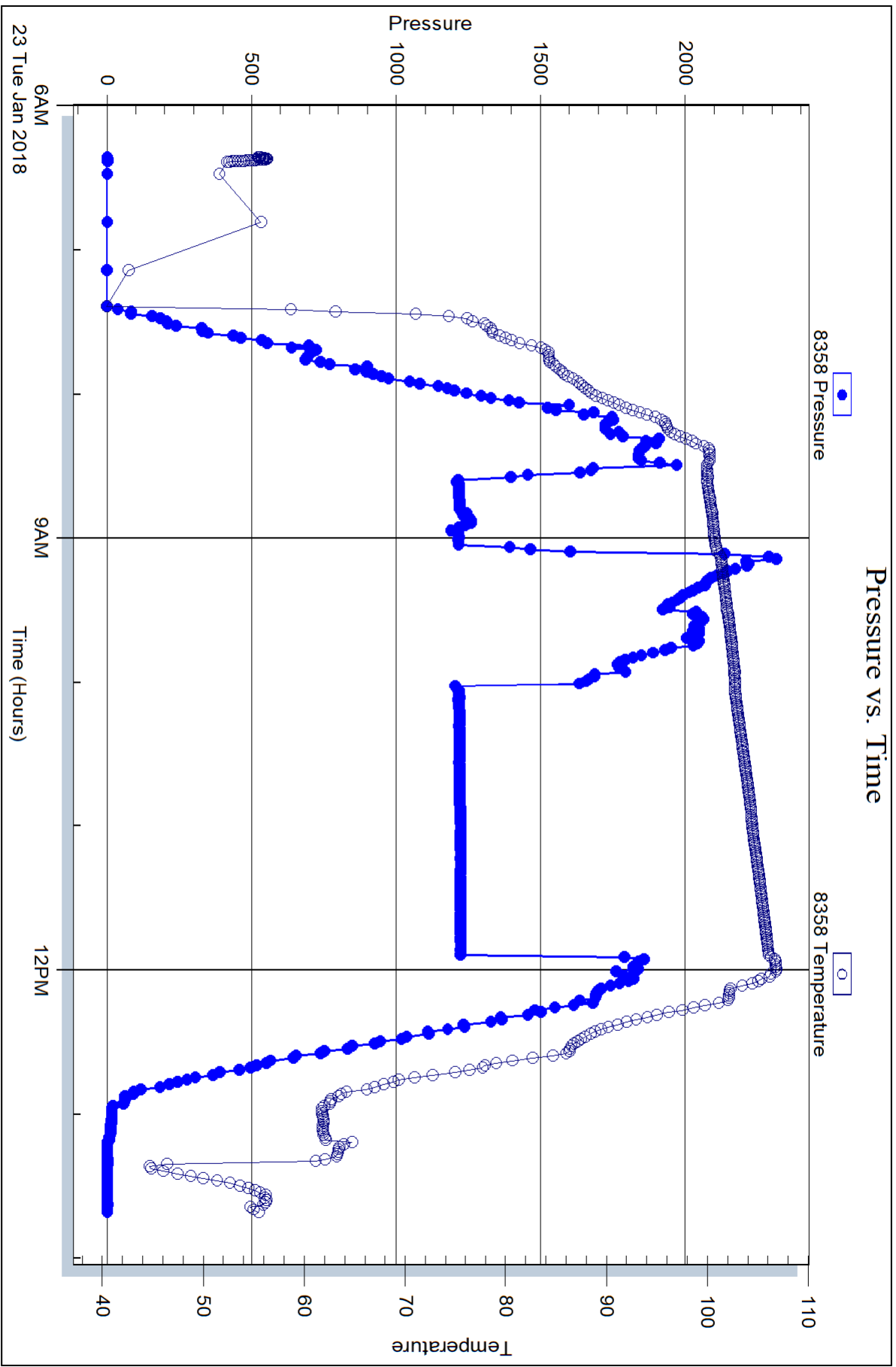
Serial #: 6806

Outside Royal Energy

Paeger #4 R

DST Test Number: 2







DRILL STEM TEST REPORT

Prepared For: **Royal Energy**

PO Box 1820
Dodge City, KS 67801

ATTN: Eli Felts

Praeger #4 R

36-24S-15W Stafford,KS

Start Date: 2018.01.24 @ 08:38:42

End Date: 2018.01.24 @ 17:06:14

Job Ticket #: 63351 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.01.27 @ 08:09:38



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Royal Energy
PO Box 1820
Dodge City, KS 67801
ATTN: Eii Felts

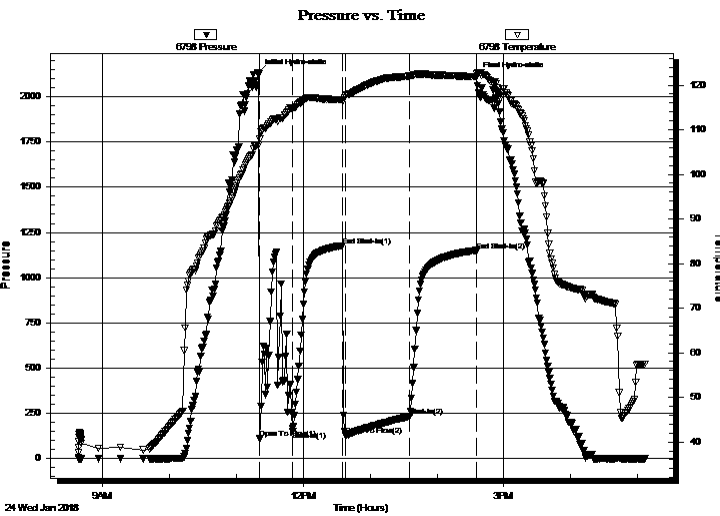
36-24S-15W Stafford,KS
Praeger #4 R
Job Ticket: 63351 **DST#: 3**
Test Start: 2018.01.24 @ 08:38:42

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:21:15
Time Test Ended: 17:06:14
Interval: **4177.00 ft (KB) To 4245.00 ft (KB) (TVD)**
Total Depth: 4245.00 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: 2016.00 ft (KB)
2006.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 6798 Inside
Press@RunDepth: 235.63 psig @ 4178.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2018.01.24 End Date: 2018.01.24 Last Calib.: 2018.01.24
Start Time: 08:38:43 End Time: 17:06:15 Time On Btm: 2018.01.24 @ 11:20:00
Time Off Btm: 2018.01.24 @ 14:35:44

TEST COMMENT: IF: Fair Blow , BOB in 7 minutes
IS: No Blow Back
FF: Strong Blow , BOB immediate, GTS in 13 minutes, Caught Sample, TSTM
FS: Weak Surface Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2130.71	106.55	Initial Hydro-static
2	109.66	107.86	Open To Flow (1)
31	150.87	114.99	Shut-In(1)
76	1177.15	116.73	End Shut-In(1)
78	127.63	117.64	Open To Flow (2)
136	235.63	122.04	Shut-In(2)
195	1150.70	121.93	End Shut-In(2)
196	2109.94	122.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	GTS	0.00
120.00	GMWCO 20%G 6%M 34%W 40%O	1.68
321.00	GMWCO 20%G 5%M 20%W 55%O	4.50
136.00	SOGCM 10%G 2%O 88%M	1.91

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Royal Energy
PO Box 1820
Dodge City, KS 67801
ATTN: Eii Felts

36-24S-15W Stafford, KS
Praeger #4 R
Job Ticket: 63351 **DST#: 3**
Test Start: 2018.01.24 @ 08:38:42

Tool Information

Drill Pipe:	Length: 4183.00 ft	Diameter: 3.80 inches	Volume: 58.68 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: 55000.00 lb
			<u>Total Volume: 58.68 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	4177.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	94.00 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			4156.00	
Hydraulic tool	5.00			4161.00	
Jars	5.00			4166.00	
Safety Joint	2.00			4168.00	
Packer	5.00			4173.00	26.00 Bottom Of Top Packer
Packer	4.00			4177.00	
Stubb	1.00			4178.00	
Recorder	0.00	6798	Inside	4178.00	
Recorder	0.00	6806	Outside	4178.00	
Perforations	9.00			4187.00	
Change Over Sub	1.00			4188.00	
Drill Pipe	32.00			4220.00	
Change Over Sub	2.00			4222.00	
Perforations	20.00			4242.00	
Bullnose	3.00			4245.00	68.00 Bottom Packers & Anchor

Total Tool Length: 94.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Royal Energy
PO Box 1820
Dodge City, KS 67801
ATTN: Eii Felts

36-24S-15W Stafford,KS
Praeger #4 R
Job Ticket: 63351 **DST#: 3**
Test Start: 2018.01.24 @ 08:38:42

Mud and Cushion Information

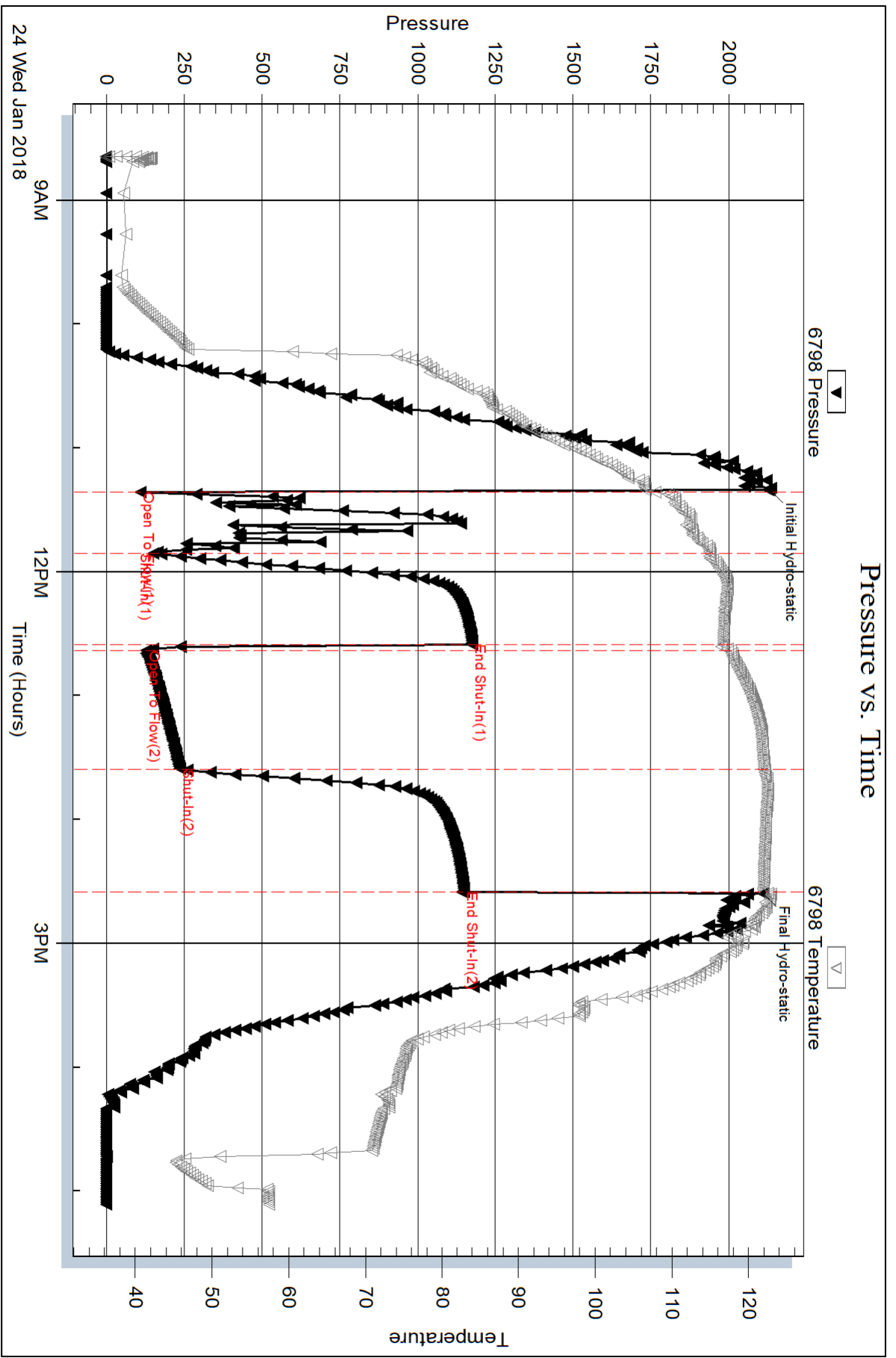
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	72000 ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6700.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	GTS	0.000
120.00	GMWCO 20%G 6%M 34%W 40%O	1.683
321.00	GMWCO 20%G 5%M 20%W 55%O	4.503
136.00	SOGCM 10%G 2%O 88%M	1.908

Total Length: 577.00 ft Total Volume: 8.094 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW w as .15 @ 50 degrees

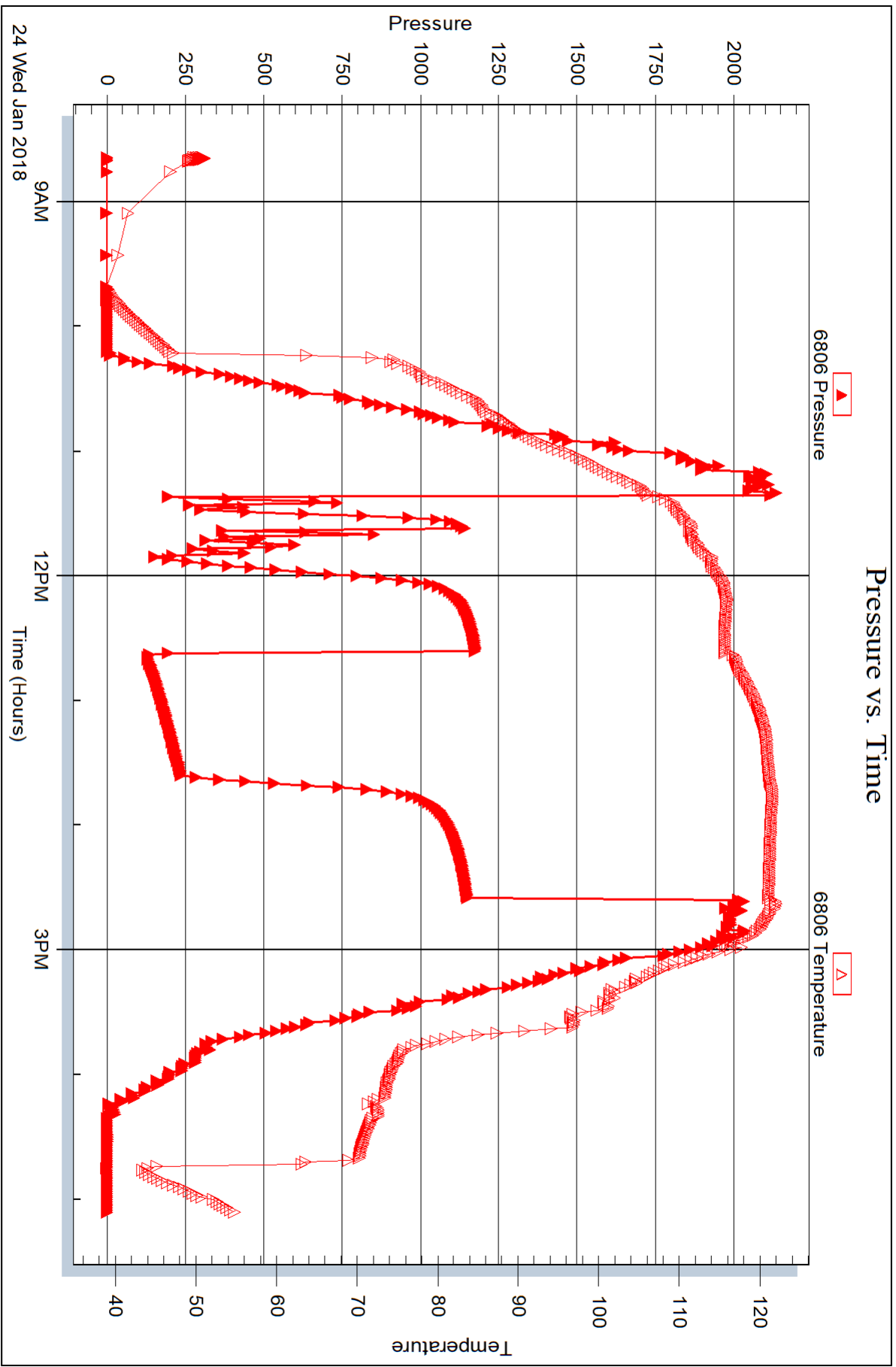


Serial #: 6806

Outside Royal Energy

Prager #4 R

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Royal Energy**

PO Box 1820
Dodge City, KS 67801

ATTN: Eli Felts

Praeger #4 R

36-24S-15W Stafford,KS

Start Date: 2018.01.25 @ 03:08:08

End Date: 2018.01.25 @ 10:12:38

Job Ticket #: 63352 DST #: 4

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.01.27 @ 08:09:17



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Royal Energy
 PO Box 1820
 Dodge City, KS 67801
 ATTN: Eii Felts

36-24S-15W Stafford,KS
Praeger #4 R
 Job Ticket: 63352 **DST#: 4**
 Test Start: 2018.01.25 @ 03:08:08

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:46:08
 Time Test Ended: 10:12:38
 Interval: **4241.00 ft (KB) To 4287.00 ft (KB) (TVD)**
 Total Depth: 4287.00 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: 2016.00 ft (KB)
 2006.00 ft (CF)
 KB to GR/CF: 10.00 ft

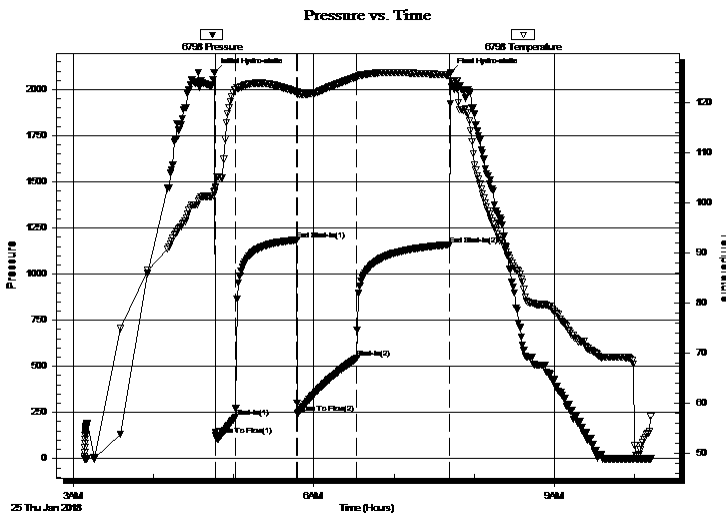
Serial #: 6798

Inside

Press@RunDepth: 544.96 psig @ 4242.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.01.25 End Date: 2018.01.25 Last Calib.: 2018.01.25
 Start Time: 03:08:09 End Time: 10:12:38 Time On Btm: 2018.01.25 @ 04:45:08
 Time Off Btm: 2018.01.25 @ 07:42:38

TEST COMMENT: IF: Strong Blow , BOB in 90 seconds
 IS: Blow Back Built to BOB in 6 minutes
 FF: Strong Blow , BOB in 3 minutes
 FS: BOB Blow Back in 10 minutes

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2091.74	102.10	Initial Hydro-static
1	125.51	102.95	Open To Flow (1)
16	223.60	122.61	Shut-In(1)
62	1185.30	122.20	End Shut-In(1)
63	246.06	121.80	Open To Flow (2)
107	544.96	125.17	Shut-In(2)
177	1159.70	125.50	End Shut-In(2)
178	2090.30	126.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	683 GIP	0.00
1386.00	Water	19.44
126.00	OMCW 2%O 10%M 88%W	1.77
136.00	GOMCW 16%G 24%O 30%M 30%W	1.91

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Royal Energy
PO Box 1820
Dodge City, KS 67801
ATTN: Eii Felts

36-24S-15W Stafford,KS
Praeger #4 R
Job Ticket: 63352 **DST#: 4**
Test Start: 2018.01.25 @ 03:08:08

Tool Information

Drill Pipe:	Length: 4245.00 ft	Diameter: 3.80 inches	Volume: 59.55 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: 59.55 bbl</u>	Tool Chased 4.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4241.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.00 ft			
Tool Length:	72.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Shale Packer on Bottom

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

Shut In Tool	5.00			4220.00	
Hydraulic tool	5.00			4225.00	
Jars	5.00			4230.00	
Safety Joint	2.00			4232.00	
Packer	5.00			4237.00	26.00 Bottom Of Top Packer
Packer	4.00			4241.00	
Stubb	1.00			4242.00	
Recorder	0.00	6798	Inside	4242.00	
Recorder	0.00	6806	Outside	4242.00	
Perforations	42.00			4284.00	
Bullnose	3.00			4287.00	46.00 Bottom Packers & Anchor

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Royal Energy
PO Box 1820
Dodge City, KS 67801
ATTN: Eii Felts

36-24S-15W Stafford,KS
Praeger #4 R
Job Ticket: 63352 **DST#: 4**
Test Start: 2018.01.25 @ 03:08:08

Mud and Cushion Information

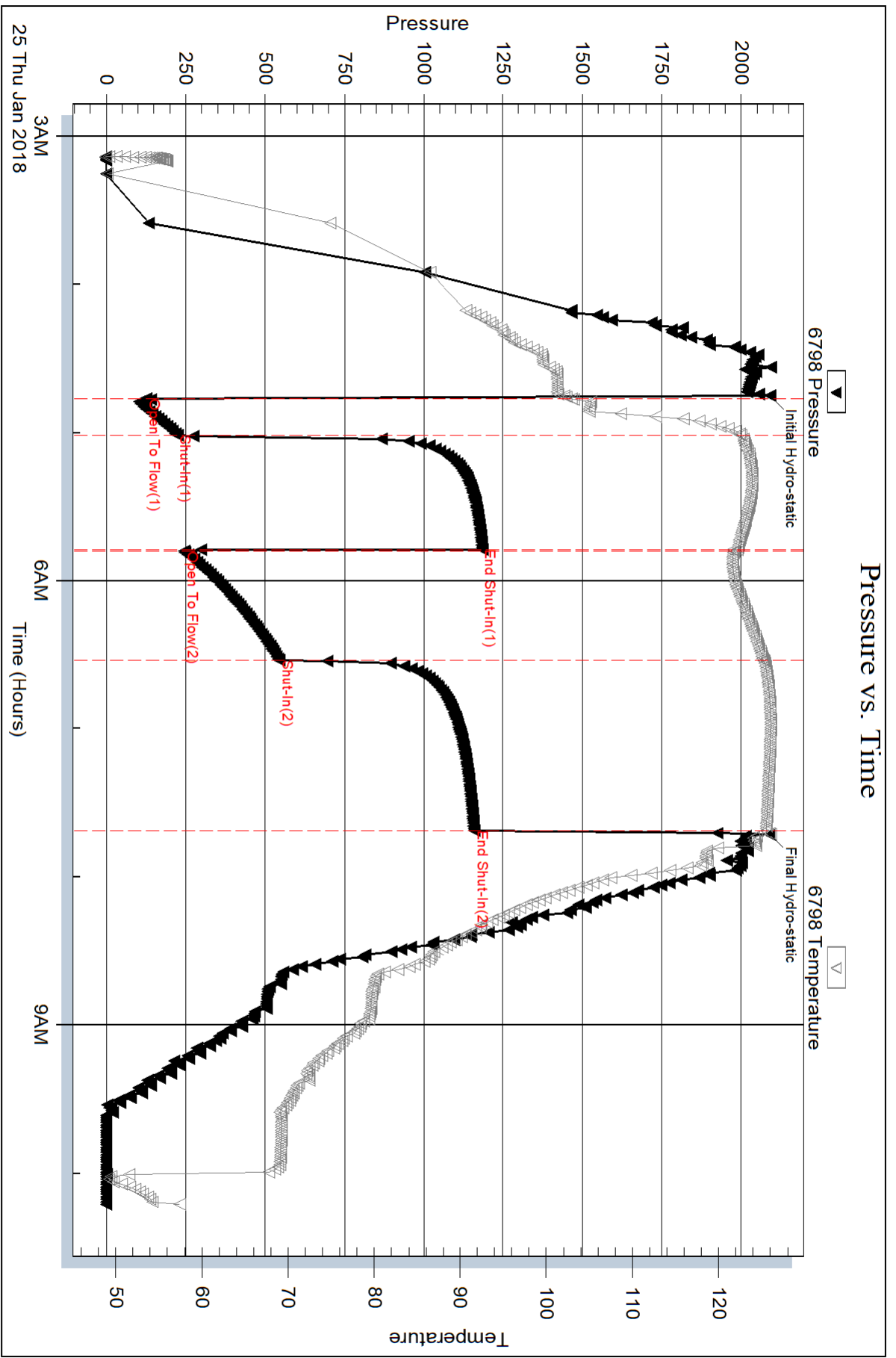
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	70000 ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.59 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 8000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	683 GIP	0.000
1386.00	Water	19.442
126.00	OMCW 2%O 10%M 88%W	1.767
136.00	GOMCW 16%G 24%O 30%M 30%W	1.908

Total Length: 1648.00 ft Total Volume: 23.117 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW w as .19 @ 41 degrees

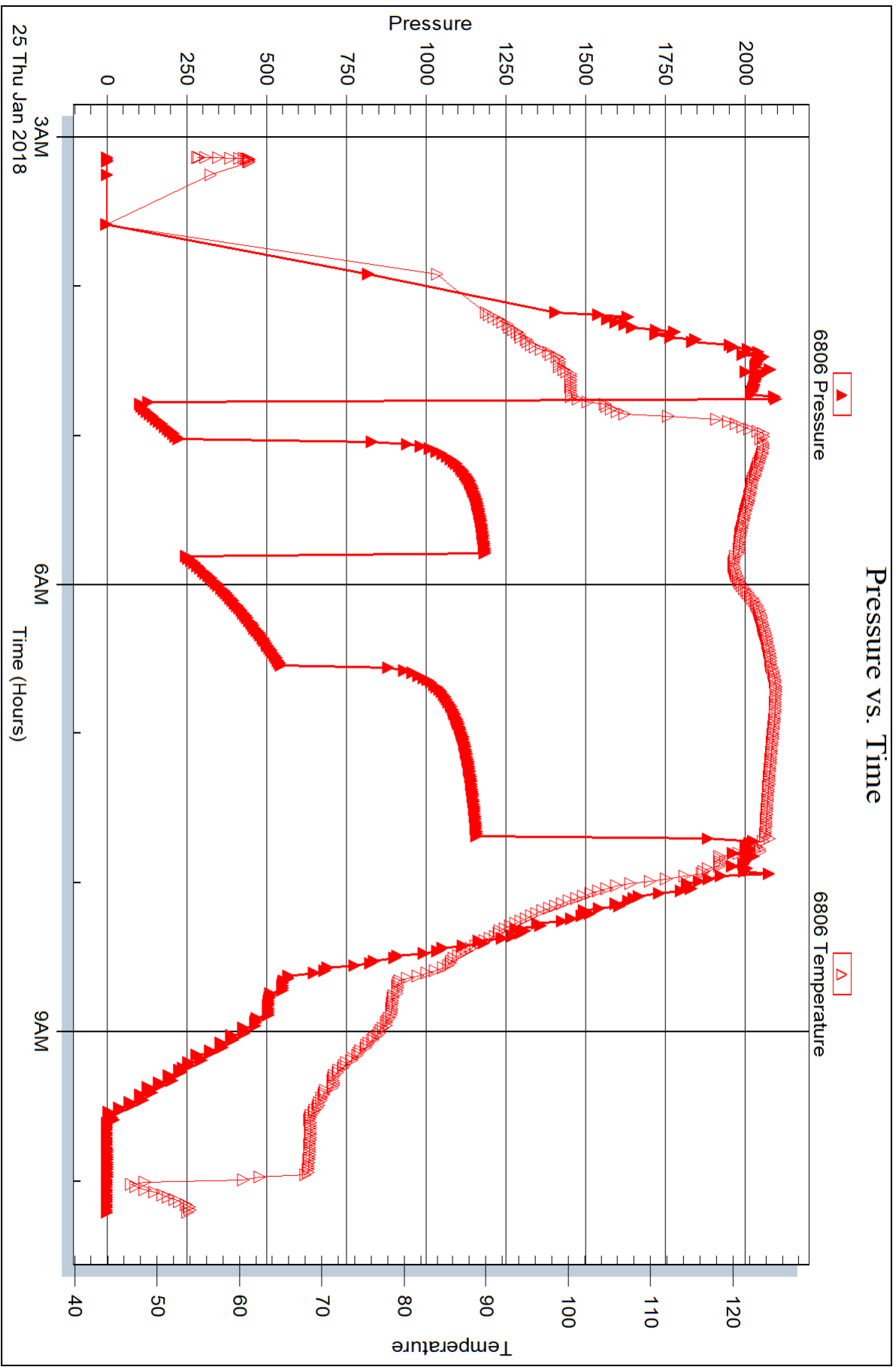


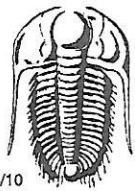
Serial #: 6806

Outside Royal Energy

Præger #4 R

DST Test Number: 4





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63649**

Well Name & No. Praeger 4 R Test No. 1 Date 01/19/18
 Company Royal Energy Elevation 2016 KB 2006 GL
 Address PO Box 1820 Dodge City, KS 67801
 Co. Rep / Geo. Eli Felts Rig Southwind
 Location: Sec. 36 Twp. 24S Rge. 15W Co. Stafford State KS

Interval Tested 2057 - 2075 Zone Tested Herrington-Krider
 Anchor Length 18 Drill Pipe Run 1932 Mud Wt. 10.0
 Top Packer Depth 2052 Drill Collars Run 114 Vis 27
 Bottom Packer Depth 2057 Wt. Pipe Run 0 WL NIC
 Total Depth 2075 Chlorides 113000 ppm System LCM

Blow Description IF: Weak 1/2 inch Blow
ISI: NO Blow Back
FF: Weak 1/2 Blow
FSL: NO Blow Back

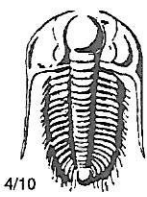
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>				

Rec Total 5 BHT 79 Gravity NIC API RW NIC @ NIC °F Chlorides NIC ppm

(A) Initial Hydrostatic <u>1035</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>18:30</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>19:29</u>
(C) First Final Flow <u>23</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>21:09</u>
(D) Initial Shut-In <u>40 40</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>23:14</u>
(E) Second Initial Flow <u>25 25</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>00:15</u>
(F) Second Final Flow <u>16 16</u>	<input checked="" type="checkbox"/> Mileage <u>(60)</u> <u>45</u>	Comments
(G) Final Shut-In <u>24</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1002</u>	<input type="checkbox"/> Straddle	
	<input checked="" type="checkbox"/> Shale Packer <u>2</u> <u>500</u>	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility	Total <u>1920</u>
	Sub Total <u>1920</u>	MP/DST Disc't

Approved By Eli Felts 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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63650**

Well Name & No. Praeger 4 R Test No. 2 Date 01/23/18
 Company Royal Energy Elevation 2016 KB 2006 GL
 Address PO Box 1820 Dodge City, KS 67801
 Co. Rep / Geo. Eli FELLS Rig ~~607~~ southwind 1
 Location: Sec. 36 Twp. 245 Rge. 15W Co. Stafford State KS

Interval Tested 3794 - 3820 Zone Tested Lansing B'
 Anchor Length 26 Drill Pipe Run 3772 Mud Wt. 8.9
 Top Packer Depth 3789 Drill Collars Run 0 Vis 56
 Bottom Packer Depth 3820 Wt. Pipe Run 0 WL 7.6
 Total Depth 3976 Chlorides 5500 ppm System LCM 2

Blow Description IF: Weak Blow Built to 3 inches

ISI: NO Blow Back

FF: Weak Blow, Built to 1 1/2 inch

FSI: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>80</u>	<u>56cm</u>	<u>2</u>		<u>98</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

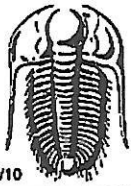
Rec Total 80 BHT 110 Gravity NIC API RW NIC @ NIC °F Chlorides NIC ppm

(A) Initial Hydrostatic <u>1871</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>04:30</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>06:21</u>
(C) First Final Flow <u>37</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>08:30</u>
(D) Initial Shut-In <u>1508</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>11:54</u>
(E) Second Initial Flow <u>37</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>13:41</u>
(F) Second Final Flow <u>57</u>	<input checked="" type="checkbox"/> Mileage <u>60</u> <u>45</u>	Comments <u>Tool slid during IF + ISI.</u>
(G) Final Shut-In <u>1207</u>	<input type="checkbox"/> Sampler	<u>Successful Straddle</u>
(H) Final Hydrostatic <u>1905</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<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>45</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>60</u>	<input type="checkbox"/> Day Standby	Total <u>2020</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>2020</u>	

Approved By Eli Fells

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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63351

Well Name & No. Prager 4 R Test No. 3 Date 6/124/18
 Company Royal Energy Elevation 2016 KB 2006 GL
 Address PO Box 1820 Dodge City, KS 67801
 Co. Rep / Geo. Eli Felts Rig Southwind 1
 Location: Sec. 36 Twp 24S Rge. 15W Co. Stafford State KS

Interval Tested 4177 - 4245 Zone Tested Mississippi
 Anchor Length 68 Drill Pipe Run 4183 Mud Wt. 9.1
 Top Packer Depth 4172 Drill Collars Run 0 Vis 58
 Bottom Packer Depth 4177 Wt. Pipe Run 0 WL 7.2
 Total Depth 4245 Chlorides 6700 ppm System LCM 1

Blow Description IF: Fair Blow, BOB in 7 minutes
ISI: No Blow Back
FF: Strong Blow, BOB immediate, GTS in 13 minutes, caught sample, TSTM
FST: weak surface blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>3606</u>	<u>6IP</u>				
<u>136</u>	<u>506CM</u>	<u>10</u>	<u>2</u>	<u>88</u>	<u>88</u>
<u>321</u>	<u>6MWCO</u>	<u>20</u>	<u>55</u>	<u>20</u>	<u>5</u>
<u>120</u>	<u>6MWCO</u>	<u>20</u>	<u>40</u>	<u>34</u>	<u>6</u>
Rec	Feet of	%gas	%oil	%water	%mud

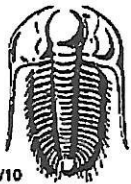
Rec Total 577 BHT 122 Gravity N/C API RW .15 @ 50° F Chlorides 72000 ppm

(A) Initial Hydrostatic <u>2131</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>07:45</u>
(B) First Initial Flow <u>110</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>08:38</u>
(C) First Final Flow <u>151</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>11:21</u>
(D) Initial Shut-In <u>1177</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>14:35</u>
(E) Second Initial Flow <u>128</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>17:06</u>
(F) Second Final Flow <u>236</u>	<input checked="" type="checkbox"/> Mileage <u>(609)</u> 45	Comments <u>made by T. Co. on 6/12/18</u>
(G) Final Shut-In <u>1151</u>	<input type="checkbox"/> Sampler	<u>on 6/12/18</u>
(H) Final Hydrostatic <u>2110</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>45</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>60</u>	<input type="checkbox"/> Day Standby	Total <u>1520</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1520</u>	

Approved By Eli J. Felts 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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63352

Well Name & No. Praegr 4 R Test No. 4 Date 01/25/18
 Company Royal Energy Elevation 2016 KB 2006 GL
 Address PO BOX 1820 Dodge City, KS 67801
 Co. Rep / Geo. Eli Felts Rig Southwind 1
 Location: Sec. 36 Twp 24S Rge. 15W Co. Stafford State KS

Interval Tested 4241 - 4287 Zone Tested Mississippi
 Anchor Length 46 Drill Pipe Run 4245 Mud Wt. 9.4
 Top Packer Depth 4236 Drill Collars Run 0 Vis 51
 Bottom Packer Depth 4241 Wt. Pipe Run 0 WL 9.6
 Total Depth 4287 Chlorides 8000 ppm System LCM 2

Blow Description IF: Strong Blow, BOB in 90 seconds
ISI: Blow Back Built to BOB in 6 minutes
FF: Strong Blow, BOB in 3 minutes
FSI: BOB Blow Back in 10 minutes

Rec	Feet of	%gas	%oil	%water	%mud
<u>683</u>	<u>GIP</u>				
<u>136</u>	<u>GOMCW</u>	<u>16</u>	<u>24</u>	<u>30</u>	<u>30</u>
<u>126</u>	<u>GOMCW</u>		<u>2</u>	<u>88</u>	<u>10</u>
<u>1386</u>	<u>Water</u>				
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1648 BHT 126 Gravity N/C API RW 19 @ 41 °F Chlorides 7000 ppm

(A) Initial Hydrostatic <u>2092</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>02:30</u>
(B) First Initial Flow <u>125</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>03:08</u>
(C) First Final Flow <u>224</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>04:46</u>
(D) Initial Shut-In <u>1185</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>07:41</u>
(E) Second Initial Flow <u>246</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>10:12</u>
(F) Second Final Flow <u>545</u>	<input checked="" type="checkbox"/> Mileage <u>607</u> <u>45</u>	Comments <u>Loaded Tools</u>
(G) Final Shut-In <u>1160</u>	<input type="checkbox"/> Sampler	<u>@ 14:45 on 01/26</u>
(H) Final Hydrostatic <u>2090</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer
	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
	<input type="checkbox"/> Day Standby	Total <u>1770</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1770</u>	

Initial Open 15
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 60

Approved By Eli Felts Our Representative [Signature]

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