

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1354391
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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 SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- 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 ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

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
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1354391

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 List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

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				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	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> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	King, Rodney L. dba King Oil Operation
Well Name	ENGEL-BOYD UNIT 1-12
Doc ID	1354391

All Electric Logs Run

Dual Induction
Compensated Density Neutron
Micro Resistivity
Cement Bond Log



DRILL STEM TEST REPORT

Prepared For: **King Oil Operations**

1746 150th Ave
Ellis, KS 67637

ATTN: Jason Alm

Engel-Boyd Unit 1-12

12-12s-32w Logan,KS

Start Date: 2017.02.07 @ 14:10:00

End Date: 2017.02.07 @ 20:47:45

Job Ticket #: 61311 DST #: 1

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

Printed: 2017.02.09 @ 10:29:13



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

King Oil Operations

12-12s-32w Logan,KS

1746 150th Ave
Ellis, KS 67637

Engel-Boyd Unit 1-12

ATTN: Jason Alm

Job Ticket: 61311

DST#: 1

Test Start: 2017.02.07 @ 14:10:00

GENERAL INFORMATION:

Formation: **LKC - H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:04:15

Time Test Ended: 20:47:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 78

Interval: 4180.00 ft (KB) To 4276.00 ft (KB) (TVD)

Reference Elevations: 2988.00 ft (KB)

Total Depth: 4276.00 ft (KB) (TVD)

2980.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8845 Outside

Press@RunDepth: 18.73 psig @ 4181.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.02.07 End Date: 2017.02.07

Last Calib.: 2017.02.07

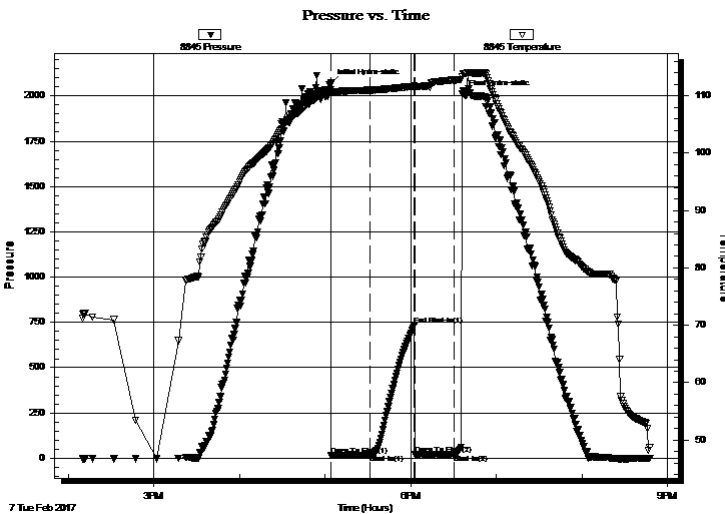
Start Time: 14:10:05 End Time: 20:47:44

Time On Btm: 2017.02.07 @ 17:04:00

Time Off Btm: 2017.02.07 @ 18:36:00

TEST COMMENT: IF: 1/2" blow , receded to surface.
IS: No return.
FF: No blow Flushed tool. blow died
FS: Pulled test.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2070.35	111.09	Initial Hydro-static
1	14.50	110.47	Open To Flow (1)
27	18.73	110.98	Shut-In(1)
59	735.81	111.68	End Shut-In(1)
60	20.01	111.59	Open To Flow (2)
87	23.46	112.73	Shut-In(2)
92	2009.84	113.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud 100m (Oil spots in tool)	0.16

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

King Oil Operations

12-12s-32w Logan,KS

1746 150th Ave
Ellis, KS 67637

Engel-Boyd Unit 1-12

ATTN: Jason Alm

Job Ticket: 61311

DST#: 1

Test Start: 2017.02.07 @ 14:10:00

GENERAL INFORMATION:

Formation: **LKC - H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:04:15

Time Test Ended: 20:47:45

Interval: 4180.00 ft (KB) To 4276.00 ft (KB) (TVD)

Total Depth: 4276.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 78

Reference Elevations: 2988.00 ft (KB)

2980.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8365 Inside

Press@RunDepth: psig @ 4181.00 ft (KB)

Start Date: 2017.02.07

End Date:

2017.02.07

Start Time: 14:10:05

End Time:

20:47:44

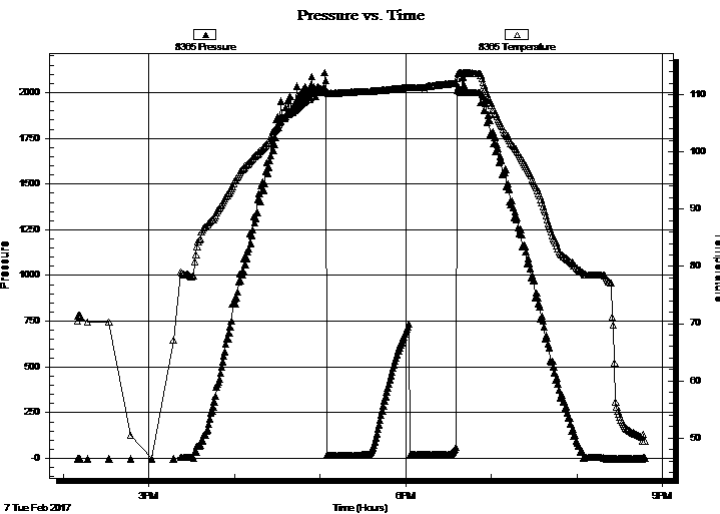
Capacity: 8000.00 psig

Last Calib.: 2017.02.07

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 1/2" blow , receded to surface.
IS: No return.
FF: No blow Flushed tool. blow died
FS: Pulled test.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud 100m (Oil spots in tool)	0.16

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

King Oil Operations

12-12s-32w Logan,KS

1746 150th Ave
Ellis, KS 67637

Engel-Boyd Unit 1-12

Job Ticket: 61311

DST#: 1

ATTN: Jason Alm

Test Start: 2017.02.07 @ 14:10:00

Tool Information

Drill Pipe:	Length: 3880.00 ft	Diameter: 3.80 inches	Volume: 54.43 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 312.00 ft	Diameter: 2.90 inches	Volume: 2.55 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 56.98 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4180.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	96.00 ft			
Tool Length:	116.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4161.00	
Shut In Tool	5.00			4166.00	
Hydraulic tool	5.00			4171.00	
Packer	5.00			4176.00	20.00 Bottom Of Top Packer
Packer	4.00			4180.00	
Stubb	1.00			4181.00	
Recorder	0.00	8365	Inside	4181.00	
Recorder	0.00	8845	Outside	4181.00	
Perforations	27.00			4208.00	
Change Over Sub	1.00			4209.00	
Drill Pipe	63.00			4272.00	
Change Over Sub	1.00			4273.00	
Bullnose	3.00			4276.00	96.00 Bottom Packers & Anchor

Total Tool Length: 116.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

King Oil Operations

12-12s-32w Logan,KS

1746 150th Ave
Ellis, KS 67637

Engel-Boyd Unit 1-12

Job Ticket: 61311

DST#: 1

ATTN: Jason Alm

Test Start: 2017.02.07 @ 14:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	Mud 100m (Oil spots in tool)	0.163

Total Length: 20.00 ft Total Volume: 0.163 bbl

Num Fluid Samples: 0

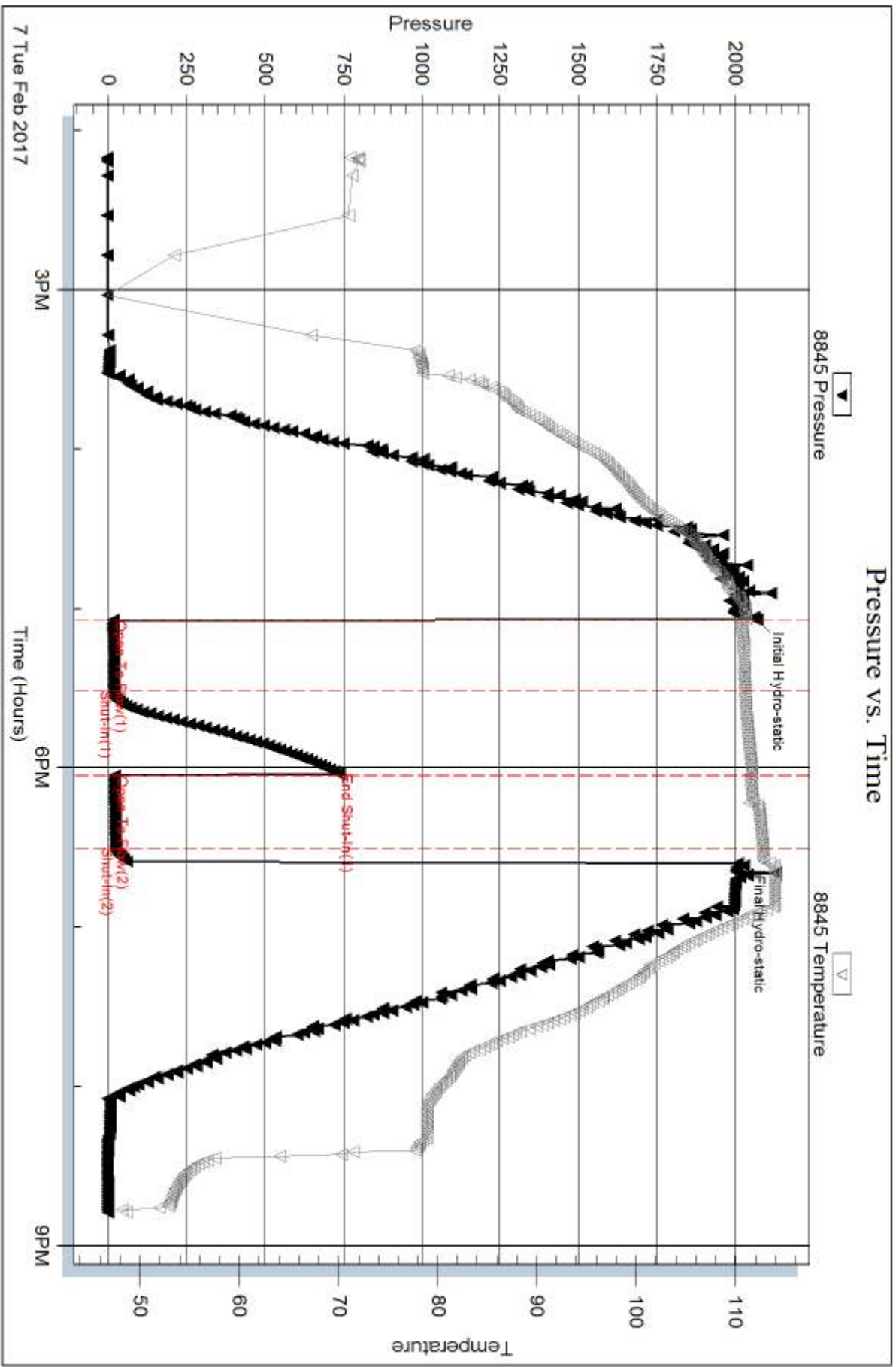
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



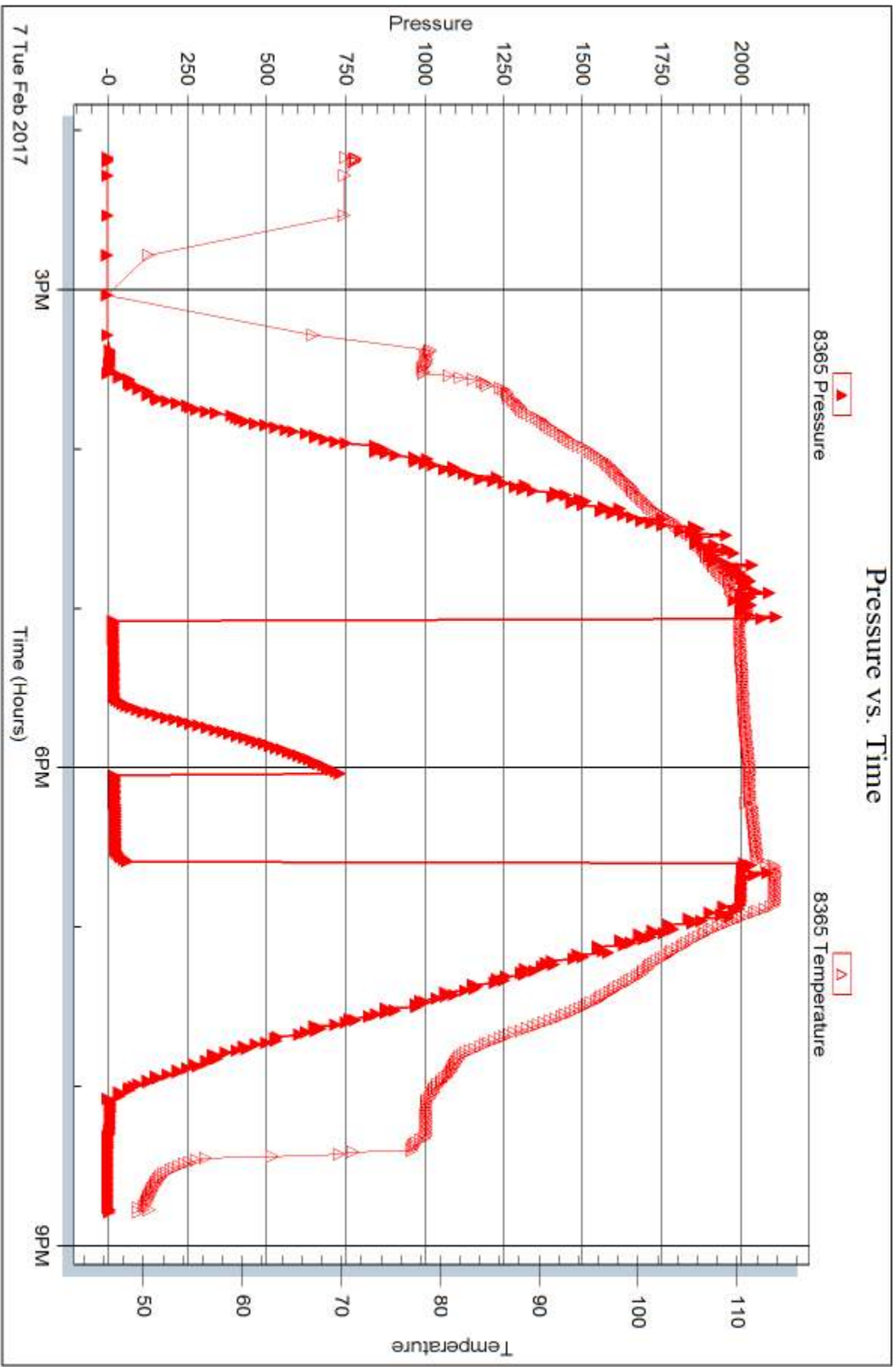
Serial #: 8365

Inside

King Oil Operations

Engel-Boyd Unit 1-12

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 61311

Printed: 2017.02.09 @ 10:29:14



DRILL STEM TEST REPORT

Prepared For: **King Oil Operations**

1746 150th Ave
Ellis, KS 67637

ATTN: Jason Alm

Engel-Boyd Unit 1-12

12-12s-32w Logan,KS

Start Date: 2017.02.08 @ 23:27:00

End Date: 2017.02.09 @ 09:45:00

Job Ticket #: 61312 DST #: 2

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

Printed: 2017.02.09 @ 10:24:46



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

King Oil Operations

12-12s-32w Logan,KS

1746 150th Ave
Ellis, KS 67637

Engel-Boyd Unit 1-12

ATTN: Jason Alm

Job Ticket: 61312

DST#: 2

Test Start: 2017.02.08 @ 23:27:00

GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:20:00

Time Test Ended: 09:45:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 4545.00 ft (KB) To 4607.00 ft (KB) (TVD)

Reference Elevations: 2988.00 ft (KB)

Total Depth: 4607.00 ft (KB) (TVD)

2980.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8365

Inside

Press@RunDepth: 191.05 psig @ 4546.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.02.08

End Date:

2017.02.09

Last Calib.:

2017.02.09

Start Time: 23:27:05

End Time:

09:45:00

Time On Btm:

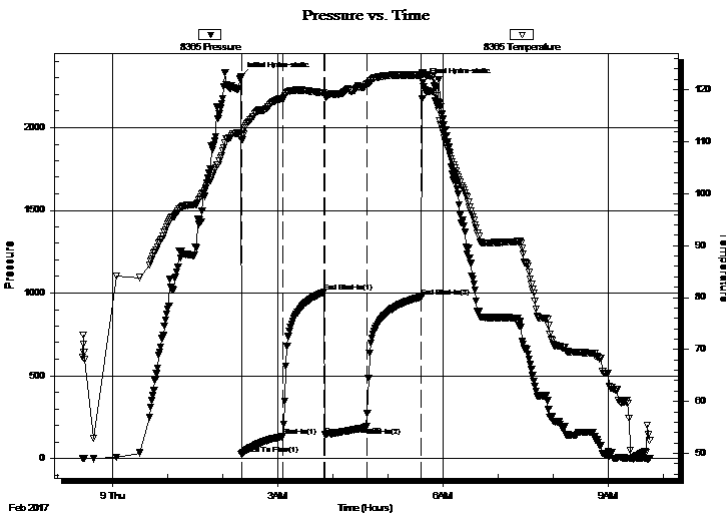
2017.02.09 @ 02:19:45

Time Off Btm:

2017.02.09 @ 05:38:00

TEST COMMENT: IF: BOB @ 18 min.
IS: 1 1/4" return, receded to 3/4".
FF: BOB @ 20 min.
FS: 3 1/2" blow .

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2305.40	111.22	Initial Hydro-static
1	24.18	110.36	Open To Flow (1)
45	131.85	118.31	Shut-In(1)
91	1004.80	119.42	End Shut-In(1)
91	143.11	119.02	Open To Flow (2)
137	191.05	121.07	Shut-In(2)
197	975.96	122.87	End Shut-In(2)
199	2270.30	123.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
250.00	gmco 35g 30m 35o	1.84
190.00	go 10g 90o	2.25
0.00	630' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

King Oil Operations
 1746 150th Ave
 Ellis, KS 67637
 ATTN: Jason Alm

12-12s-32w Logan,KS

Engel-Boyd Unit 1-12

Job Ticket: 61312 **DST#: 2**

Test Start: 2017.02.08 @ 23:27:00

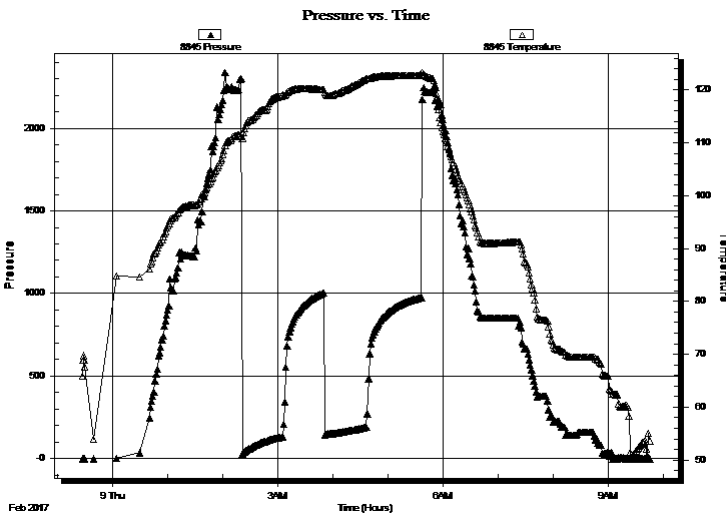
GENERAL INFORMATION:

Formation: Johnson			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)	
Time Tool Opened: 02:20:00		Tester: Bradley Walter	
Time Test Ended: 09:45:00		Unit No: 78	
Interval: 4545.00 ft (KB) To 4607.00 ft (KB) (TVD)		Reference Elevations: 2988.00 ft (KB)	
Total Depth: 4607.00 ft (KB) (TVD)		2980.00 ft (CF)	
Hole Diameter: 7.88 inches	Hole Condition: Good	KB to GR/CF: 8.00 ft	

Serial #: 8845 Outside

Press@RunDepth:	psig @	4546.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2017.02.08	End Date:	2017.02.09	Last Calib.:	1899.12.30
Start Time:	23:27:05	End Time:	09:45:00	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: IF: BOB @ 18 min.
 IS: 1 1/4" return, receded to 3/4".
 FF: BOB @ 20 min.
 FS: 3 1/2" blow .



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
250.00	gmco 35g 30m 35o	1.84
190.00	go 10g 90o	2.25
0.00	630' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

King Oil Operations

12-12s-32w Logan,KS

1746 150th Ave
Ellis, KS 67637

Engel-Boyd Unit 1-12

Job Ticket: 61312

DST#: 2

ATTN: Jason Alm

Test Start: 2017.02.08 @ 23:27:00

Tool Information

Drill Pipe:	Length: 4233.00 ft	Diameter: 3.80 inches	Volume: 59.38 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 312.00 ft	Diameter: 2.75 inches	Volume: 2.29 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 67000.00 lb
			<u>Total Volume: 61.67 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4545.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	82.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4526.00	
Shut In Tool	5.00			4531.00	
Hydraulic tool	5.00			4536.00	
Packer	5.00			4541.00	20.00 Bottom Of Top Packer
Packer	4.00			4545.00	
Stubb	1.00			4546.00	
Recorder	0.00	8365	Inside	4546.00	
Recorder	0.00	8845	Outside	4546.00	
Perforations	25.00			4571.00	
Change Over Sub	1.00			4572.00	
Drill Pipe	31.00			4603.00	
Change Over Sub	1.00			4604.00	
Bullnose	3.00			4607.00	62.00 Bottom Packers & Anchor

Total Tool Length: 82.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

King Oil Operations

12-12s-32w Logan,KS

1746 150th Ave
Ellis, KS 67637

Engel-Boyd Unit 1-12

Job Ticket: 61312

DST#: 2

ATTN: Jason Alm

Test Start: 2017.02.08 @ 23:27:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

25 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
250.00	gmco 35g 30m 35o	1.837
190.00	go 10g 90o	2.251
0.00	630' GIP	0.000

Total Length: 440.00 ft

Total Volume: 4.088 bbl

Num Fluid Samples: 0

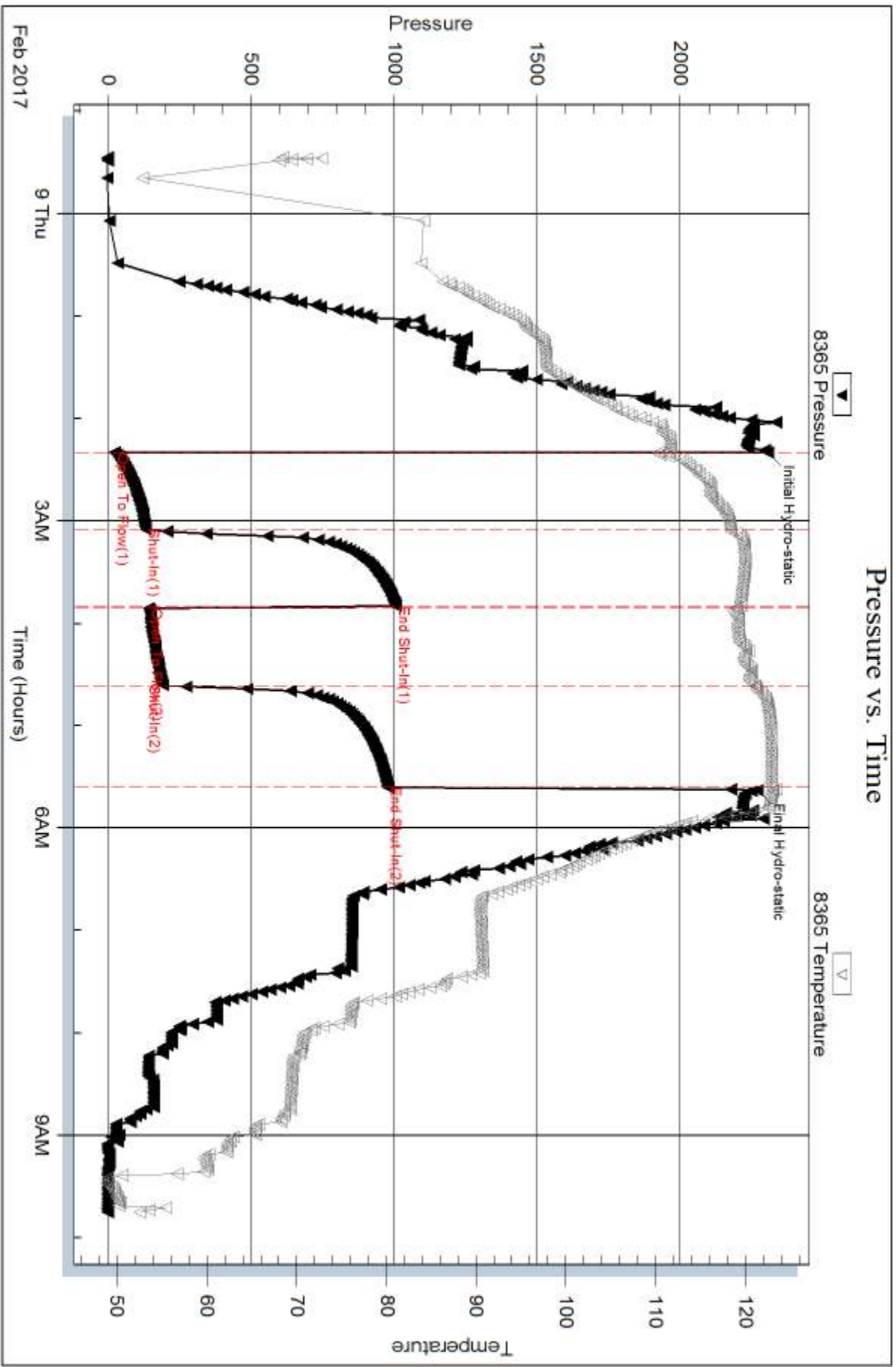
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

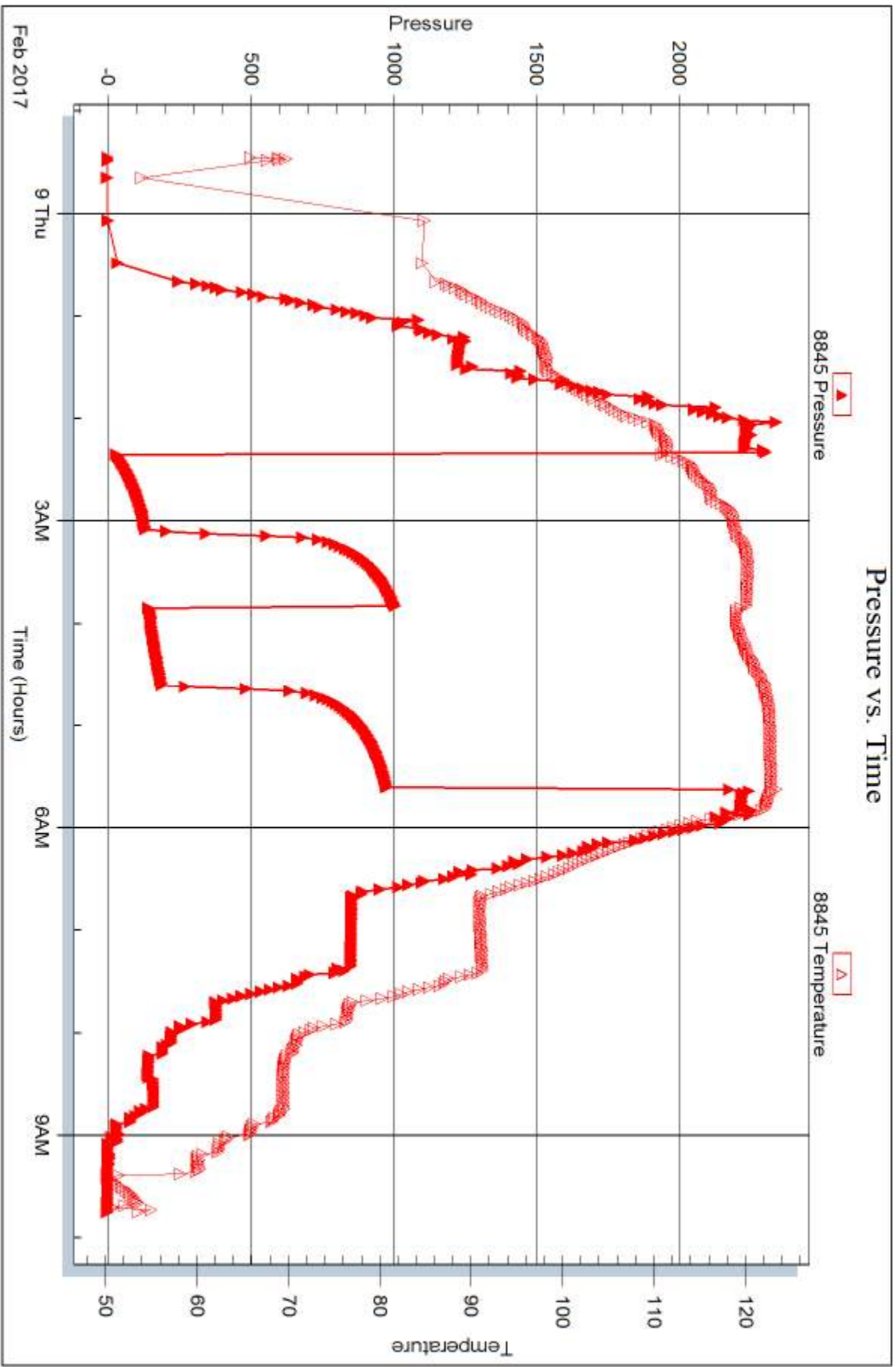


Serial #: 8845

Outside King Oil Operations

Engel-Boyd Unit 1-12

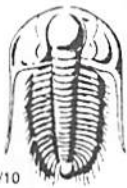
DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 61312

Printed: 2017.02.09 @ 10:24:47



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **61311**

4/10

Well Name & No. Engel-Boyd Unit #1-12 Test No. 1 Date 2/07/17
 Company King Oil Operators Elevation 2988 KB 2980 GL
 Address 1746 150th Ave Ells, Ks 67637
 Co. Rep / Geo. Jason Alin Rig Discovery 1
 Location: Sec. 12 Twp. 12S Rge. 32W Co. Logan State Ks

Interval Tested 4180 - 4276 Zone Tested LKC H, I, J
 Anchor Length 96 Drill Pipe Run 3880 Mud Wt. 9.1
 Top Packer Depth 4175 Drill Collars Run — Vis 53
 Bottom Packer Depth 4180 Wt. Pipe Run 312 WL 5.6
 Total Depth 4276 Chlorides 2,000 ppm System LCM 4#

Blow Description IF 1/2" blow recorded to surface
ISI No return.
PF No blow Flushed tool, blow checked
FST Pulled Test

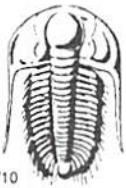
Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>mud</u>			<u>100</u>	
	<u>oil spots in tool</u>				

Rec Total 20 BHT 116 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2070 Test 1150 T-On Location 1045
 (B) First Initial Flow 15 Jars — T-Started 1410
 (C) First Final Flow 19 Safety Joint — T-Open 1702
 (D) Initial Shut-In 736 Circ Sub N/C T-Pulled 1830
 (E) Second Initial Flow 20 Hourly Standby — T-Out 2047
 (F) Second Final Flow 23 Mileage 85 RT 63.75 Comments —
 (G) Final Shut-In — Sampler —
 (H) Final Hydrostatic 2010 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Initial Open 30 Extra Recorder — Sub Total 0
 Initial Shut-In 30 Day Standby — Total 1213.75
 Final Flow Flush Accessibility — MP/DST Disc't —
 Final Shut-In Pull Sub Total 1213.75

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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **61312**

4/10

Well Name & No. Engel Boyd Unit #1-12 Test No. 2 Date 2/09/2017
 Company King Oil Operations Elevation 2985 KB 2950 GL
 Address 1746 150th Ave Ellis, ks 67637
 Co. Rep / Geo. Jason Alm Rig Discovery 1
 Location: Sec. 12 Twp. 12s Rge. 32w Co. Logan State KS

Interval Tested 4545 4607 Zone Tested Johnson
 Anchor Length 62 Drill Pipe Run 4233 Mud Wt. 9.5
 Top Packer Depth 4540 Drill Collars Run 312 Vis 50
 Bottom Packer Depth 4545 Wt. Pipe Run 312 WL 7.2
 Total Depth 4607 Chlorides 2500 ppm System LCM 8 #

Blow Description IF BOB @ 15 min.
ISF No 1 1/4" return, receded to 3/4"
FF BOB @ 18 min.
FSI 3 1/2" return, receded to 2 3/4"

Rec	Feet of	%gas	%oil	%water	%mud
<u>190</u>	<u>60</u>	<u>10</u>	<u>90</u>		
<u>250</u>	<u>6100</u>	<u>35</u>	<u>35</u>		<u>50</u>
	<u>630</u>	<u>GIP</u>			

Rec Total 440 BHT 122 Gravity 25 API RW — @ — °F Chlorides — ppm
 Test 1150 T-On Location 1945
 ~~Test~~ NO T-Started 2327
 Safety Joint T-Open 0221
 Circ Sub 1/c T-Pulled 0521
 Hourly Standby 4hrs 320 T-Out 0945 2/09
 Mileage 85 RT 63.75 Comments unexpected short trip
 Sampler
 Straddle
 Shale Packer
 Ruined Shale Packer
 Ruined Packer 320
 Extra Packer
 Extra Copies
 Extra Recorder Sub Total 320
 Day Standby Total 1533.75 + 320
 Accessibility MP/DST Disc't
 Sub Total 1533.75

Approved By _____ Our Representative 

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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. 7338

Date	2-10-17	Sec.	12	Twp.	12	Range	32	County	Logan	State	KS	On Location		Finish	3:30 p.m.
Location								Campus + I-70 Col's Rd W 4 W 1/2 N							
Lease	Engel-Boyd			Well No.	1-12			Owner	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.						
Contractor	Discover #1			Top Stage			Charge To	King Oil Operations							
Type Job	DU JOB			Hole Size	7 7/8			T.D.	4200						
Csg.	5 1/2 15.50#			Depth	4697			Street							
Tbg. Size				Depth				City	State						
Tool	DU Tool #53			Depth	2504			The above was done to satisfaction and supervision of owner agent or contractor.							
Cement Left in Csg.				Shoe Joint				Cement Amount Ordered	460 6040 QMDC 1/4 #FB						
Meas Line	Displace			59 1/2 BBL											
EQUIPMENT															
Pumptrk	5	No.	Cementer	Craig			Common	275							
			Helper	Brett			Poz. Mix	185							
Bulktrk		No.	Driver				Gel.	12							
Bulktrk	19	No.	Driver	Doug			Calcium	800#							
JOB SERVICES & REMARKS															
Remarks:	S&S Sodium Misicalate 800#														
Rat Hole	30			Flowseal 115#											
Mouse Hole	15			Kol-Seal plaster 800#											
Centralizers	Mud CLR 48														
Baskets	CFL-117 or CD110 CAF 38														
D/V or Port Collar	Sand														
Plug Rathole Marschale Cement				Handling 496											
5 1/2 with 415 SK & Displace				Mileage											
Plug				FLOAT EQUIPMENT											
Cement Circulated!				Guide Shoe											
Plus Tank @ 1500#				Centralizer											
				Baskets											
				AFU Inserts											
				Float Shoe											
				Latch Down											
Pumptrk Charge								prod String Top Stage							
Mileage								15							
Tax															
Discount															
Total Charge															
Signature <i>Cliff Maffett</i>															

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. 7337

Date	2-10-17	Sec.	12	Twp.	12	Range	32	County	Logan	State	KS	On Location		Finish	2:30pm
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Location Camps + I-70 6 1/2 S R/W 4 W 1/2 N

Lease Engel-Boyd Well No. 1-12 Owner _____

Contractor Discovery #1 To Quality Oilwell Cementing, Inc.

Type Job DV JOB You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size 7 7/8 T.D. 4700 Charge To King Oil Operations

Csg. 5 1/2 1550 Depth 4697 Street _____

Tbg. Size _____ Depth _____ City _____ State _____

Tool DV Tool #53 Depth 2504 The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. 37.84 Shoe Joint 37.84 Cement Amount Ordered 200 80/20 p/salt 5-1.6 Gilsonite

Meas Line _____ Displace 111 BL _____ 500 gal muck

EQUIPMENT

Pumptrk 5 No. 5 m's Cementer/Helper _____ Common 160

Bulktrk 15 No. 5/11T Driver _____ Poz. Mix 40

Bulktrk 19 No. 11/12 Driver _____ Gel. _____

Bulktrk 19 No. 10/11 Driver _____ Calcium _____

JOB SERVICES & REMARKS

Remarks: _____ Hulls _____

Rat Hole _____ Salt 17

Mouse Hole _____ Flowseal _____

Centralizers _____ Kol-Seal 1000 #

Baskets _____ Mud CLR 48 500 gal

D/V or Port Collar _____ CFL-117 or CD110 CAF 38

_____ Sand _____

5 1/2 size @ 4697 Insert - 4659 Handling 227

Est. Circulation - Mit 200 SK + Displace Mileage _____

Plug. Displace 45BL water - 54BL **FLOAT EQUIPMENT** 5 1/2

mod + 12BL water to land plug Guide Shoe _____

Plug landed @ 1500 # Centralizer 8

Leak pressure 900 # Baskets 4

_____ AEL Inserts DV Tool

_____ Float Shoe 1

_____ Latch Down 1

_____ Pumptrk Charge prod string Bottom Stage

_____ Mileage 15

_____ Tax _____

_____ Discount _____

_____ Total Charge _____

_____ Signature Cliff Mayfield

_____ _____

_____ _____

_____ _____

GLOBAL OIL FIELD SERVICES, LLC

Invoice

24 S. Lincoln
RUSSELL, KS 67665

Date	Invoice #
2/8/2017	2731

Drill

Bill To
KING OIL OPERATIONS 696 D FAIRGROUND RD ELLIS, KS 67637

P.O. No.	Terms	Project
ENGEL BOYD#1-12	Net 15	

Quantity	Description	Rate	Amount
102	COMMON	16.00	1,632.00
68	POZ	9.50	646.00
6	CALCIUM	59.00	354.00
3	GEL	21.50	64.50
179	HANDLING	1.90	340.10
	BULK MILEAGE	143.20	143.20
1	TRI-PLEX PUMP CHARGE FOR SURFACE	750.00	750.00
10	PUMP TRUCK MILEAGE	6.00	60.00
10	PICKUP	3.00	30.00
	23% DISCOUNT IF PAID WITHIN 15 DAYS OF INVOICE		
	Sales Tax	8.00%	0.00
Thank you for your business.		Total	\$4,019.80 <i>924.55</i>

paid 2/11/17
paid CR# 3200

3,095.25

GLOBAL OIL FIELD SERVICES, LLC

2731

REMIT TO 24 S. Lincoln
Russell, KS 67665

SERVICE POINT:

Russell

DATE <u>2-2-17</u>	SEC. <u>12</u>	TWP. <u>12</u>	RANGE <u>32</u>	CALLED OUT	ON LOCATION <u>3:30pm</u>	JOB START	JOB FINISH <u>7:30pm</u>
LEASE <u>Engel 3040</u>	WELL #. <u>A-72</u>	LOCATION <u>Comp 1st S 4W 1st</u>			COUNTY <u>Wagon</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (CIRCLE ONE)							

CONTRACTOR Discovery #1

TYPE OF JOB SURFACE

HOLE SIZE 12 1/4 T.D. 227

CASING SIZE 8 1/2 DEPTH

TUBING SIZE DEPTH

DRILL PIPE 4 1/2 DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15'

PERFS

DISPLACEMENT 13.4 bbls.

EQUIPMENT

PUMP TRUCK # 417 CEMENTER Bill

BULK TRUCK # DRIVER Chris

BULK TRUCK # DRIVER

OWNER _____

CEMENT AMOUNT ORDERED 170 lbs 80/20 39.00 27.60

COMMON @ _____

POZMIX @ _____

GEL @ _____

CHLORIDE @ _____

ASC @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

HANDLING @ _____

MILEAGE @ _____

TOTAL _____

REMARKS:

Ran 5 hrs of 8 1/2" casing, e 224

Cont. w/ 170 lbs 80/20 3-2

Pump plus w/ 13.4 bbls of water

Cont did cirk.

Thank

CHARGE TO: King Oil operations

STREET 1746 150th Ave.

CITY Ellis STATE KS ZIP 67637 + 9300

785-259-3038

Global Oil Field Services, LLC

You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME _____

SIGNATURE [Signature]

SERVICE

DEPTH OF JOB _____

PUMP TRUCK CHARGE 750.00

EXTRA FOOTAGE @ _____

MILEAGE Pick up 10 @ 3 30.00

MANIFOLD pump truck 410 @ 6 60.00

_____ @ _____

_____ @ _____

TOTAL _____

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS