



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1226221
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: _____

1226221

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
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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				

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	H & C Oil Operating Inc.
Well Name	Kern 3
Doc ID	1226221

All Electric Logs Run

Microresistivity log
dual induction log
Dual compensated porosity log
Sonic Bond log

Form	ACO1 - Well Completion
Operator	H & C Oil Operating Inc.
Well Name	Kern 3
Doc ID	1226221

Tops

Name	Top	Datum
Top Anhydrite	1796	+509
Base Anhydrite	1833	+472
Topeka	3331	-1026
Heebner	3538	-1233
Toronto	3559	-1254
LKC	3576	-1271
BKC	3800	-1495
Arbuckle	3866	-1561

Marc A. Downing		Geologic Report		
Consulting Petroleum Geologist		Drilling Time and Sample Log		
Operator H&C Oil Operating, Inc.		Elevation		
Lease Kern No. 3		KB	2305	
API # 15-163-24259-0000		DF	2303	
Field Kern		GL	2298	
Location 596' FSL & 1186' FWL		Casing Record		
Sec. 28 Twp. 9s Rge. 20		Surface		
County Rooks State Kansas		Production		
Formation		Electrical Surveys		
Top Anhydrite	NA	8 5/8" @ 262'		
Base Anhydrite	NA	5 1/2" @ 3953'		
		CNL/CDL, DIL, MEL		
Topoka	3333	3331	-1026	+2
Heebner	3540	3538	-1233	+1
Toronto	3562	3559	-1254	+2
LKC	3578	3576	-1271	+2
BKC	3805	3800	-1495	+3
Arbuckle	3870	3866	-1561	+3
Total Depth	3955	3953	-1648	
Reference Well For Structural Comparison		H&C Oil Operating, Inc.		
Kern A-1	490' FSL & 1080' FWL	Sec. 26-8s-21w		

Drilling Contractor	American Eagle, Rig #2	
Commenced	9-24-14	Completed 10-1-14
Samples Saved From	3450	To RTD
Drilling Time Kept From	3200	To RTD
Samples Examined From	3450	To RTD
Geological Supervision From	3200	To RTD

Summary and Recommendations

Due to structural position, DST recovery, and log evaluation, it was decided to set 5 1/2" production casing for completion.

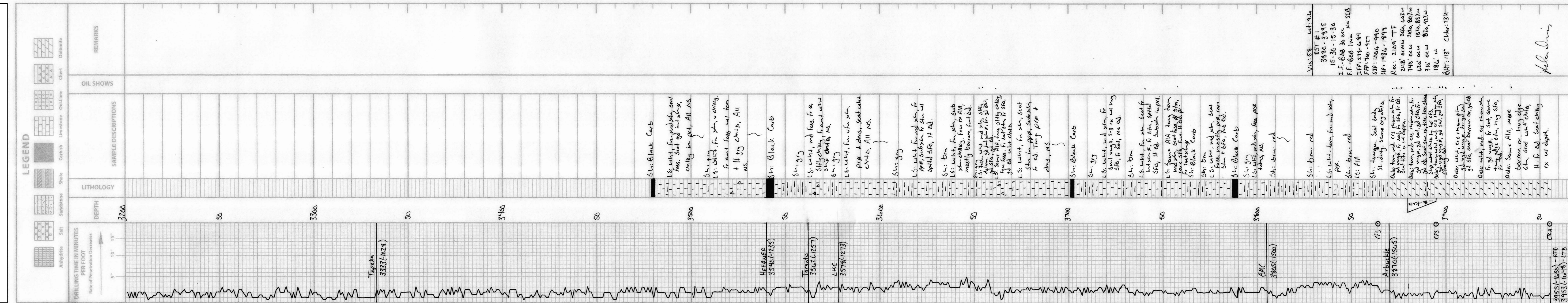
Perforate:

Arbuckle: 3892-3895 (First)
3879-3880 (Covered in DST #1)

LKC C: 3616-3619 (Before Abandonment)

Respectfully Submitted,

Marc A. Downing





DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating Inc**

PO Box 86
Plainville, KS 67663-0086

ATTN: Marc Downing

Kerns #3

28-9s-20w Rooks,KS

Start Date: 2014.09.30 @ 17:25:50

End Date: 2014.10.01 @ 00:16:44

Job Ticket #: 60883 DST #: 1

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

Printed: 2014.10.03 @ 10:15:34



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

H&C Oil Operating Inc
 PO Box 86
 Plainville, KS 67663-0086
 ATTN: Marc Downing

28-9s-20w Rooks,KS
Kerns #3
 Job Ticket: 60883 **DST#: 1**
 Test Start: 2014.09.30 @ 17:25:50

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:36:45
 Time Test Ended: 00:16:44
 Interval: **3880.00 ft (KB) To 3895.00 ft (KB) (TVD)**
 Total Depth: 3895.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Ray Schwager
 Unit No: 70
 Reference Elevations: 2305.00 ft (KB)
 2298.00 ft (CF)
 KB to GR/CF: 7.00 ft

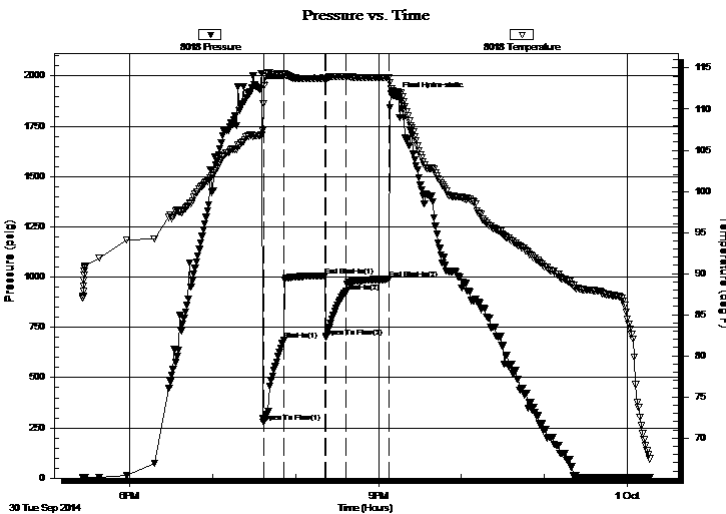
Serial #: 8018

Inside

Press@RunDepth: 927.83 psig @ 3887.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.09.30 End Date: 2014.10.01 Last Calib.: 2014.10.01
 Start Time: 17:25:50 End Time: 00:16:44 Time On Btm: 2014.09.30 @ 19:33:45
 Time Off Btm: 2014.09.30 @ 21:12:45

TEST COMMENT: 15-IFP-strg bl in 30 sec.
 30-ISIP-no bl bk
 15-FFP-strg bl in 1min
 30-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1936.05	106.76	Initial Hydro-static
3	278.92	110.72	Open To Flow (1)
18	684.38	114.21	Shut-In(1)
48	1006.67	113.70	End Shut-In(1)
48	700.66	113.55	Open To Flow (2)
63	927.83	113.93	Shut-In(2)
94	990.17	113.84	End Shut-In(2)
99	1898.48	112.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	OCMW 20%O20%M60%W	3.21
745.00	OCW 20%O80%W	10.45
620.00	OCW 15%O85%W	8.70
310.00	OCW 8%O92%W	4.35
186.00	Water	2.61

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc
 PO Box 86
 Plainville, KS 67663-0086
 ATTN: Marc Downing

28-9s-20w Rooks, KS
Kerns #3
 Job Ticket: 60883 **DST#: 1**
 Test Start: 2014.09.30 @ 17:25:50

Tool Information

Drill Pipe:	Length: 3859.00 ft	Diameter: 3.80 inches	Volume: 54.13 bbl	Tool Weight:	2200.00 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	45000.00 lb
			<u>Total Volume: 54.28 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	37000.00 lb
Depth to Top Packer:	3880.00 ft			Final	40000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	15.00 ft				
Tool Length:	36.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3860.00	
Shut In Tool	5.00			3865.00	
Hydraulic tool	5.00			3870.00	
Packer	5.00			3875.00	21.00 Bottom Of Top Packer
Packer	5.00			3880.00	
Stubb	1.00			3881.00	
Perforations	6.00			3887.00	
Recorder	0.00	8018	Inside	3887.00	
Recorder	0.00	8700	Outside	3887.00	
Perforations	5.00			3892.00	
Bullnose	3.00			3895.00	15.00 Bottom Packers & Anchor

Total Tool Length: 36.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc
PO Box 86
Plainville, KS 67663-0086
ATTN: Marc Downing

28-9s-20w Rooks,KS
Kerns #3
Job Ticket: 60883 **DST#: 1**
Test Start: 2014.09.30 @ 17:25:50

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:	23000 ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.17 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1200.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
248.00	OCMW 20%O20%M60%W	3.206
745.00	OCW 20%O80%W	10.450
620.00	OCW 15%O85%W	8.697
310.00	OCW 8%O92%W	4.348
186.00	Water	2.609

Total Length: 2109.00 ft Total Volume: 29.310 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: RW .29@70F

Serial #: 8018

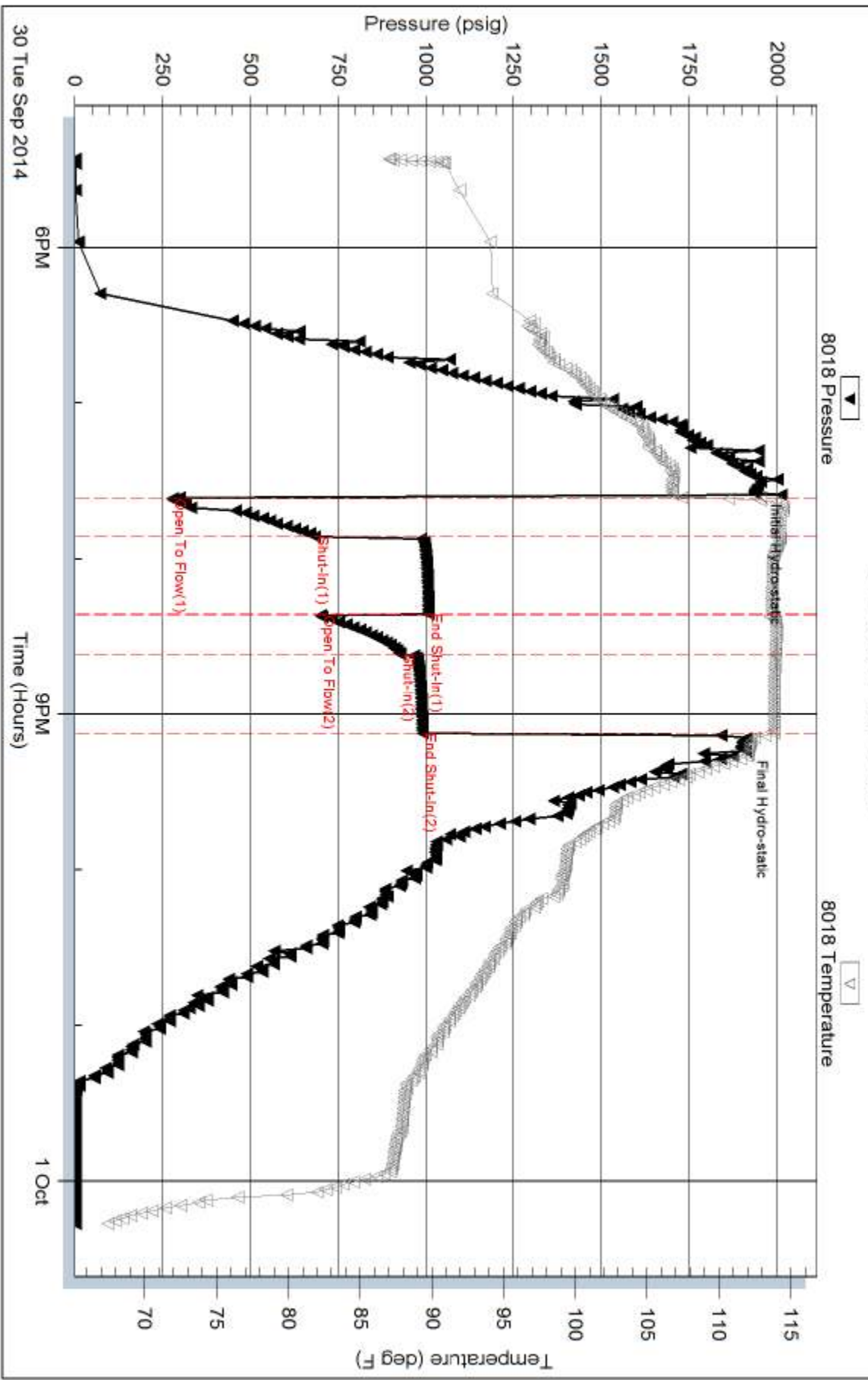
Inside

H&C Oil Operating Inc

Kerns #3

DST Test Number: 1

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 60883

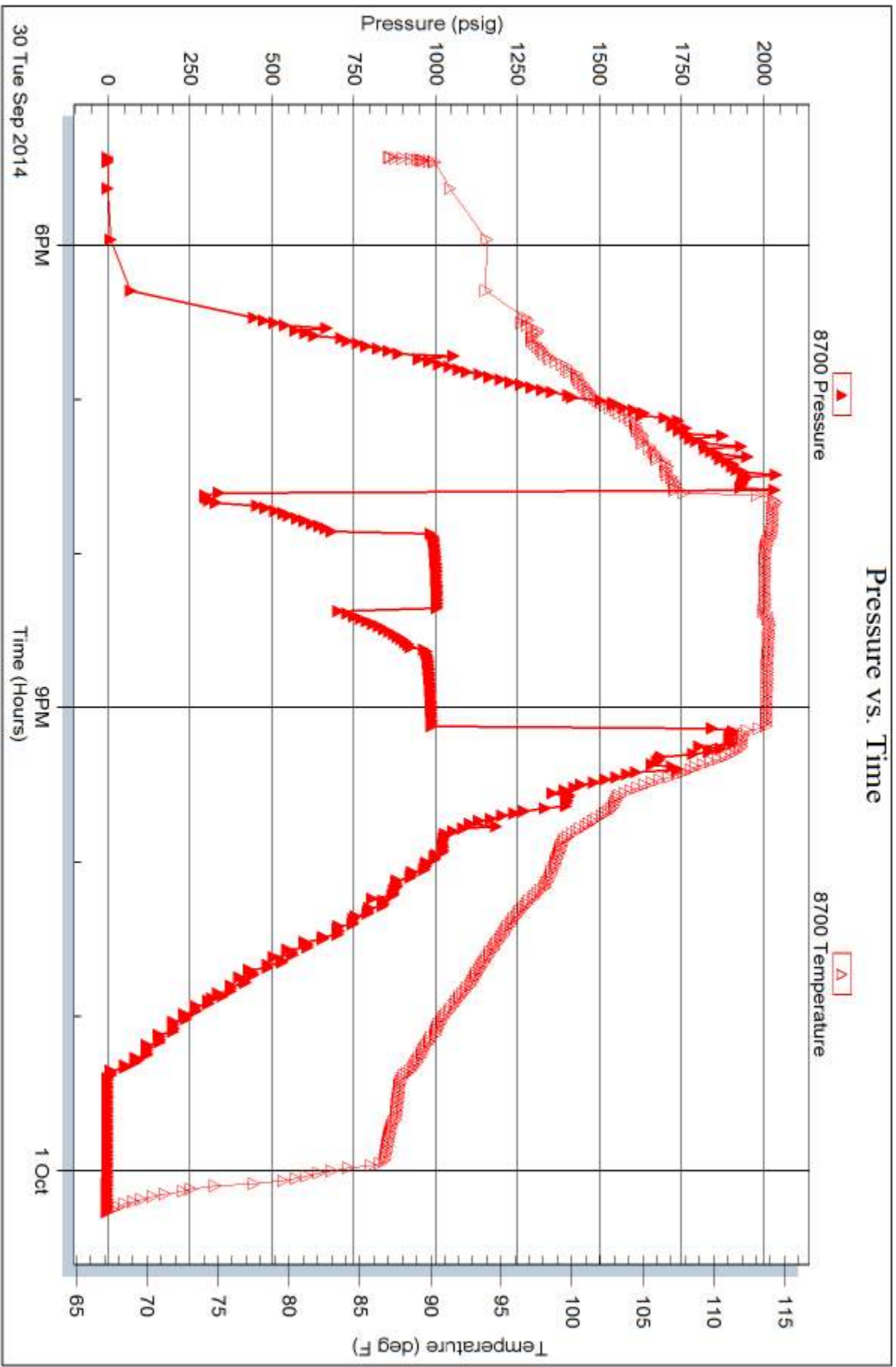
Printed: 2014, 10, 03 @ 10:15:35

Serial #: 8700

Outside H&C Oil Operating Inc

Kerns #3

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 60883

Printed: 2014, 10, 03 @ 10:15:35



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 60883

Well Name & No. Kern #3 Test No. 1 Date 9-30-14
 Company H+C OIL OPERATING INC Elevation 2305 KB 2298 GL
 Address PO BOX 86 PLAINVILLE, KS 67663-0086
 Co. Rep / Geo. MARC DOWNING Rig Am Eagle rig 3
 Location: Sec. 28 Twp. 19^s Rge. 20^w Co. Rooko State Ks

Interval Tested 3880-3895 Zone Tested Arbuckle
 Anchor Length 15 Drill Pipe Run 3859 Mud Wt. 9.6
 Top Packer Depth 3875 Drill Collars Run 30 Vis 58
 Bottom Packer Depth 3880 Wt. Pipe Run - WL 7.2
 Total Depth 3895 Chlorides 1200 ppm System LCM TR

Blow Description IFP - Strong Blow in 30 sec.
ISIP - NO Blow
FFP - Strong Blow in 1 min
FSTIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>248</u>	<u>OC MW</u>	<u>20</u>	<u>60</u>	<u>20</u>	
<u>745</u>	<u>OCW</u>	<u>20</u>	<u>80</u>		
<u>620</u>	<u>OCW</u>	<u>15</u>	<u>85</u>		
<u>310</u>	<u>OCW</u>	<u>8</u>	<u>92</u>		
<u>186</u>	<u>WATER</u>				

Rec Total 2109 BHT 113 Gravity - API RW .29 @ 70 ° F Chlorides 23000 ppm

(A) Initial Hydrostatic 1936 Test 1150 T-On Location 1505
 (B) First Initial Flow 278 Jars _____ T-Started 1725
 (C) First Final Flow 684 Safety Joint _____ T-Open 1935
 (D) Initial Shut-In 1006 Circ Sub _____ T-Pulled 2105
 (E) Second Initial Flow 700 Hourly Standby _____ T-Out 0016
 (F) Second Final Flow 927 Mileage 80RT 124 Comments _____
 (G) Final Shut-In 990 Sampler _____
 (H) Final Hydrostatic 1898 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1274

Initial Open 15
 Initial Shut-In 30
 Final Flow 15
 Final Shut-In 30

Sub Total 1274 Total 1274 MP/DST Disc't _____

Approved By _____ Our Representative Ray Schwager Thank you

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.

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. 902

Date	10-2-14	Sec.	28	Twp.	9	Range	20	County	Rooks	State	KS	On Location		Finish	12:30 PM		
Lease	Kern		Well No.		A3		Location									Palco & Redline	1/2 E Ninto
Contractor	American Eagle #3																
Type Job	Top Stage																
Hole Size	7 7/8																
Csg.	5 1/2																
Tbg. Size																	
Tool	DV																
Cement Left in Csg.	Shoe Joint																
Meas Line	Displace 58 1/2 bbl																
EQUIPMENT																	
Pumptrk	16	No. Cementer	Rick														
Bulktrk	21	No. Driver	Lannie M														
Bulktrk	P4	No. Driver	Brett														
JOB SERVICES & REMARKS																	
Remarks:																	
Rat Hole	- 30 ² x																
Mouse Hole																	
Centralizers																	
Baskets																	
DV or Port Collar																	
Flowseal	100#																
Kol-Seal																	
Mud CLR	48																
CFL-117 or CD110 CAF	38																
Sand																	
Handling	42.5																
Mileage																	
Guide Shoe	FLOAT EQUIPMENT																
Centralizer	- 16																
Baskets	- 5																
AFU Inserts																	
Float Shoe	- 1																
Latch Down	- 1																
Rubber Plug	- 1																
DV Tool	- 1																
Pumptrk Charge	pred Drly																
Mileage	35																
Tax																	
Discount																	
Total Charge																	

X Signature Bob Plank

Top Stage