



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1230776
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: _____

1230776

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	H & C Oil Operating Inc.
Well Name	Cova Unit 27-1
Doc ID	1230776

Tops

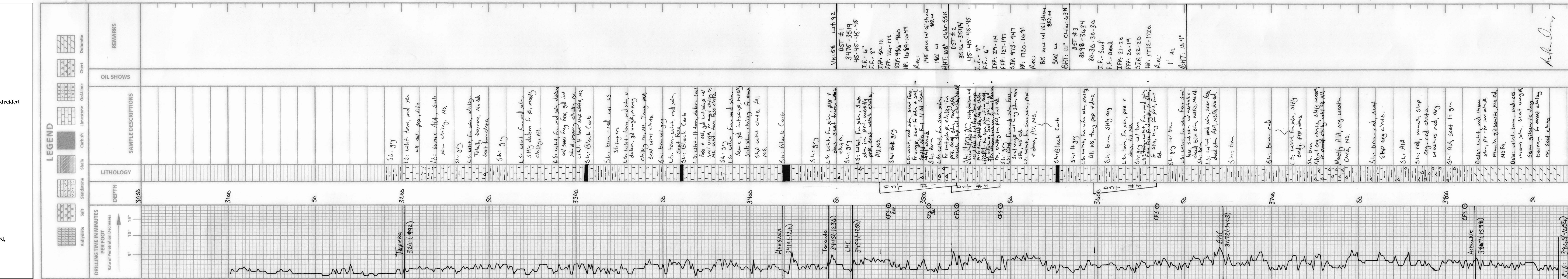
Name	Top	Datum
Top Anhydrite	1781	+428
Base Anhydrite	1815	+394
Topeka	3198	-989
Heebner	3416	-1207
Toronto	3442	-1233
LKC	3456	-1247
BKC	3669	-1460
ARbuckle	3813	-1604

Marc A. Downing Consulting Petroleum Geologist		Geologic Report Drilling Time and Sample Log			
Operator H&C Oil Operating, Inc.		Elevation 2209		KB	
Lease Cova Unit No. 27-1		2202		DF	
API # 15-065-24083-0000		Casing Record Surface			
Field Mickelson		8 5/8" @ 263' Production			
Location 2500' FNL & 150' FEL		None			
Sec. 27 Twp. 8s Rgc. 22w		Electrical Surveys			
County Graham State Kansas		CNL/CDL, DIL, MEL			
Formation		Sample tops		Log Tops	
Datum		Struct Comp			
Top Anhydrite		1782		1781	
Base Anhydrite		1816		1815	
Topeka		3201		3198	
Heebner		3419		3416	
Toronto		3445		3442	
LKC		3459		3456	
BKC		3672		3669	
Arbuckle		3817		3813	
Total Depth		3865		3863	
Reference Well For Structural Comparison		Jones-Shelburne-Farmer			
Mickelson "C" #2		NW SE NE Sec. 27-8s-22w			

Drilling Contractor	American Eagle, Rig #2	
Commenced	10-28-14	Completed 11-4-14
Samples Saved From	3200	To RTD
Drilling Time Kept From	3100	To RTD
Samples Examined From	3200	To RTD
Geological Supervision From	3100	To RTD

Summary and Recommendations
Due to structural position, DST recovery, and log evaluation, it was decided to plug and abandon the well.

Respectfully Submitted,
Marc A. Downing





DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663

ATTN: Charles Ramsay, Marc

Cova Unit #27-1

27-8s-22w Graham,KS

Start Date: 2014.11.01 @ 20:51:04

End Date: 2014.11.02 @ 04:13:58

Job Ticket #: 60893 DST #: 1

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

Printed: 2014.11.07 @ 09:23:11



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating Inc

27-8s-22w Graham,KS

PO Box 86
Plainville KS 67663

Cova Unit #27-1

Job Ticket: 60893

DST#: 1

ATTN: Charles Ramsay, Marc

Test Start: 2014.11.01 @ 20:51:04

GENERAL INFORMATION:

Formation: **LKC C-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:18:59

Time Test Ended: 04:13:58

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 70

Interval: 3475.00 ft (KB) To 3519.00 ft (KB) (TVD)

Reference Elevations: 2209.00 ft (KB)

Total Depth: 3519.00 ft (KB) (TVD)

2202.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8018

Inside

Press@RunDepth: 172.87 psig @ 3483.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.11.01

End Date:

2014.11.02

Last Calib.: 2014.11.02

Start Time: 20:51:04

End Time:

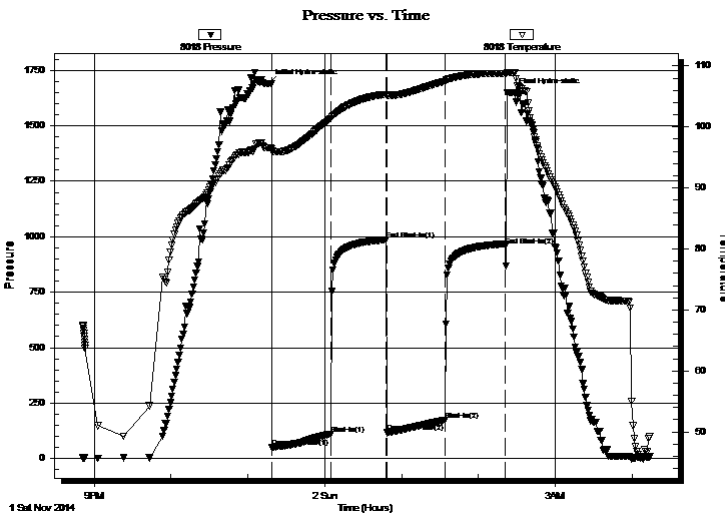
04:13:58

Time On Btm: 2014.11.01 @ 23:16:29

Time Off Btm: 2014.11.02 @ 02:26:28

TEST COMMENT: 45-IFP-w k to a gd bl 1/2"to 6"bl
45-ISIP-no bl
45-FFP-w k bl thru-out 1/4"to 3"bl
45-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1689.65	96.57	Initial Hydro-static
3	50.10	96.01	Open To Flow (1)
48	111.24	101.41	Shut-In(1)
92	986.34	105.37	End Shut-In(1)
92	116.91	105.15	Open To Flow (2)
137	172.87	107.49	Shut-In(2)
185	960.96	108.77	End Shut-In(2)
190	1649.99	108.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
140.00	MW 20% mud 80% Water w / show of oil	1.69
180.00	Water	2.52

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc

27-8s-22w Graham,KS

PO Box 86
Plainville KS 67663

Cova Unit #27-1

Job Ticket: 60893

DST#: 1

ATTN: Charles Ramsay, Marc

Test Start: 2014.11.01 @ 20:51:04

Tool Information

Drill Pipe:	Length: 3456.00 ft	Diameter: 3.80 inches	Volume: 48.48 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: 60000.00 lb
			<u>Total Volume: 48.63 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3475.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	65.00 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			3455.00	
Shut In Tool	5.00			3460.00	
Hydraulic tool	5.00			3465.00	
Packer	5.00			3470.00	21.00 Bottom Of Top Packer
Packer	5.00			3475.00	
Stubb	1.00			3476.00	
Perforations	7.00			3483.00	
Recorder	0.00	8018	Inside	3483.00	
Recorder	0.00	8700	Outside	3483.00	
Blank Spacing	33.00			3516.00	
Bullnose	3.00			3519.00	44.00 Bottom Packers & Anchor

Total Tool Length: 65.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc

27-8s-22w Graham,KS

PO Box 86
Plainville KS 67663

Cova Unit #27-1

Job Ticket: 60893

DST#: 1

ATTN: Charles Ramsay, Marc

Test Start: 2014.11.01 @ 20:51:04

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:

55000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.35 in³

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
140.00	MW 20% mud 80% Water w / show of oil	1.691
180.00	Water	2.525

Total Length: 320.00 ft Total Volume: 4.216 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .17@55F

Serial #: 8018

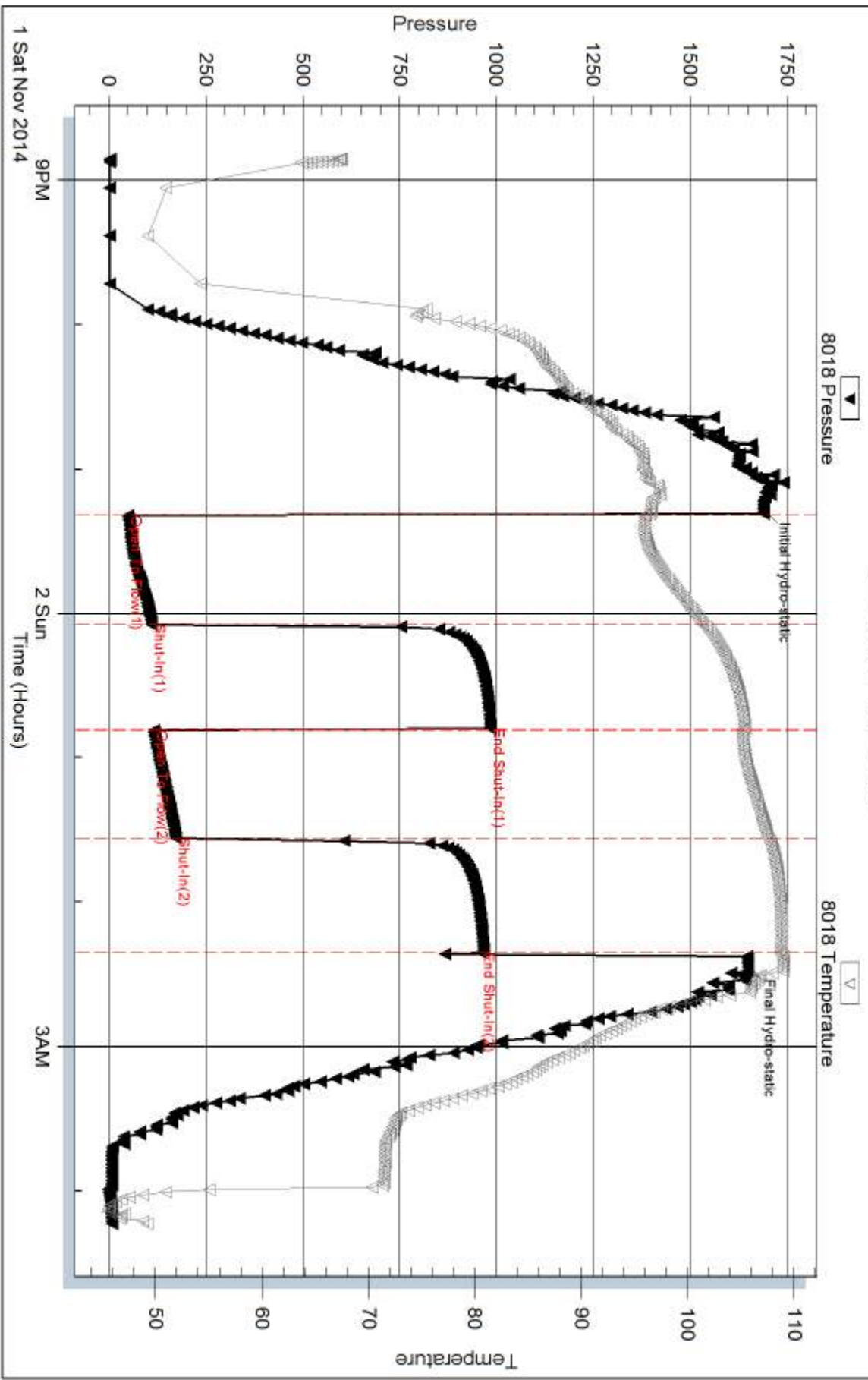
Inside

H&C Oil Operating Inc

Cova Unit #27-1

DST Test Number: 1

Pressure vs. Time

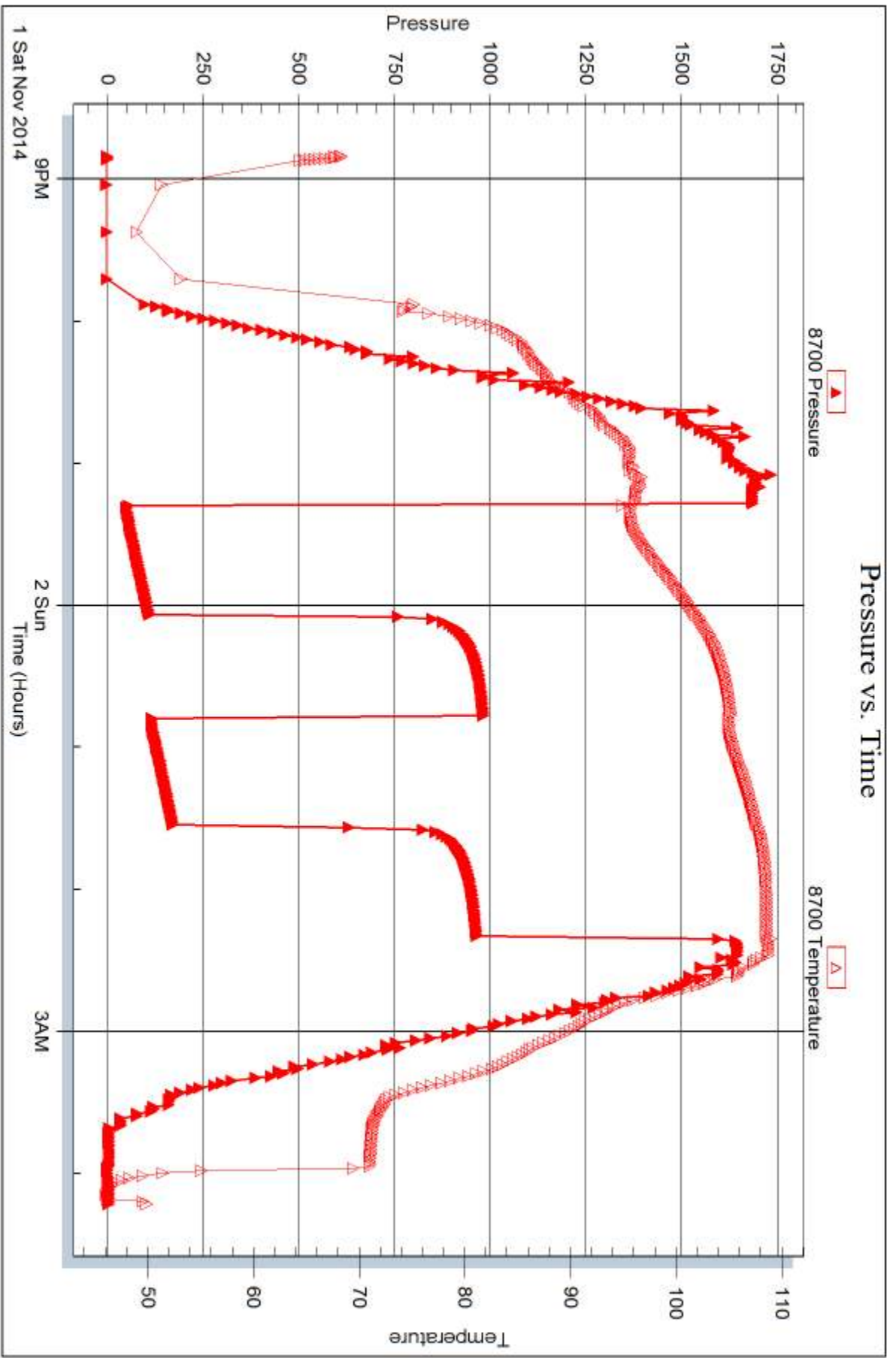


Serial #: 8700

Outside H&C Oil Operating Inc

Cova Unit #27-1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 60893

Printed: 2014.11.07 @ 09:23:12



DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663

ATTN: Charles Ramsay, Marc

Cova Unit #27-1

27-8s-22w Graham,KS

Start Date: 2014.11.02 @ 10:05:57

End Date: 2014.11.02 @ 17:05:51

Job Ticket #: 60894 DST #: 2

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

Printed: 2014.11.07 @ 09:22:46



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

H&C Oil Operating Inc

27-8s-22w Graham,KS

PO Box 86
Plainville KS 67663

Cova Unit #27-1

Job Ticket: 60894

DST#: 2

ATTN: Charles Ramsay, Marc

Test Start: 2014.11.02 @ 10:05:57

GENERAL INFORMATION:

Formation: **LKC E-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:58:52

Time Test Ended: 17:05:51

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

Interval: 3516.00 ft (KB) To 3544.00 ft (KB) (TVD)

Reference Elevations: 2209.00 ft (KB)

Total Depth: 3544.00 ft (KB) (TVD)

2202.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8018

Inside

Press@RunDepth: 197.96 psig @ 3521.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.11.02 End Date: 2014.11.02

Last Calib.: 2014.11.02

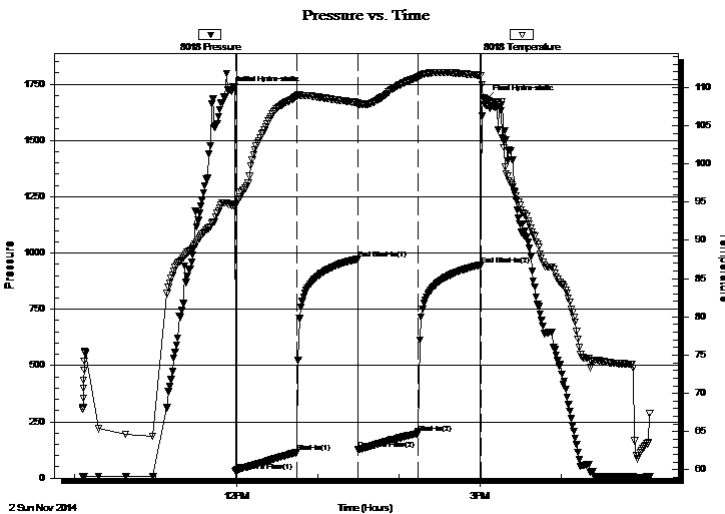
Start Time: 10:05:57 End Time: 17:05:51

Time On Btm: 2014.11.02 @ 11:55:22

Time Off Btm: 2014.11.02 @ 15:04:21

TEST COMMENT: 45-IFP-w k to a gd bl 1/2"to 7" bl
45-ISIP-no bl
45-FFP-w k to a gd bl 1/4"to 6" bl
45-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1720.96	94.60	Initial Hydro-static
4	29.25	94.51	Open To Flow (1)
49	114.84	108.86	Shut-In(1)
94	973.49	108.01	End Shut-In(1)
95	127.28	107.74	Open To Flow (2)
139	197.96	111.30	Shut-In(2)
185	947.00	111.56	End Shut-In(2)
189	1681.44	107.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	MW 15%M85%W w /slight show of oil	0.85
300.00	Water	4.21

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc

27-8s-22w Graham,KS

PO Box 86
Plainville KS 67663

Cova Unit #27-1

Job Ticket: 60894

DST#: 2

ATTN: Charles Ramsay, Marc

Test Start: 2014.11.02 @ 10:05:57

Tool Information

Drill Pipe:	Length: 3490.00 ft	Diameter: 3.80 inches	Volume: 48.96 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: 55000.00 lb
			<u>Total Volume: 49.11 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3516.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	49.00 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			3496.00	
Shut In Tool	5.00			3501.00	
Hydraulic tool	5.00			3506.00	
Packer	5.00			3511.00	21.00 Bottom Of Top Packer
Packer	5.00			3516.00	
Stubb	1.00			3517.00	
Perforations	4.00			3521.00	
Recorder	0.00	8018	Inside	3521.00	
Recorder	0.00	8700	Outside	3521.00	
Perforations	20.00			3541.00	
Bullnose	3.00			3544.00	28.00 Bottom Packers & Anchor

Total Tool Length: 49.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc

27-8s-22w Graham,KS

PO Box 86
Plainville KS 67663

Cova Unit #27-1

Job Ticket: 60894

DST#: 2

ATTN: Charles Ramsay, Marc

Test Start: 2014.11.02 @ 10:05:57

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:

63000 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
80.00	MW 15%M85%W w /slight show of oil	0.849
300.00	Water	4.208

Total Length: 380.00 ft Total Volume: 5.057 bbl

Num Fluid Samples: 0

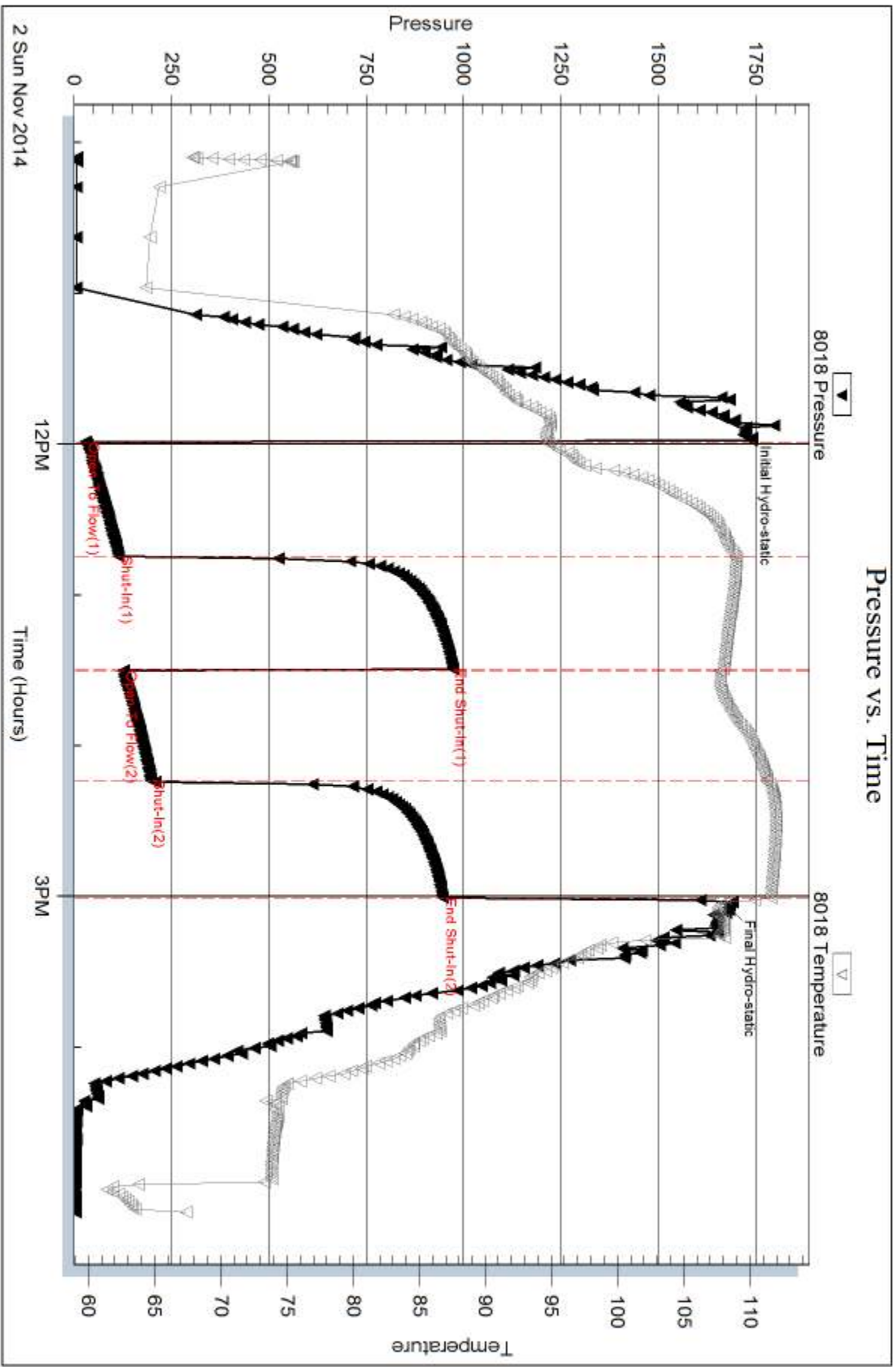
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .14@60F

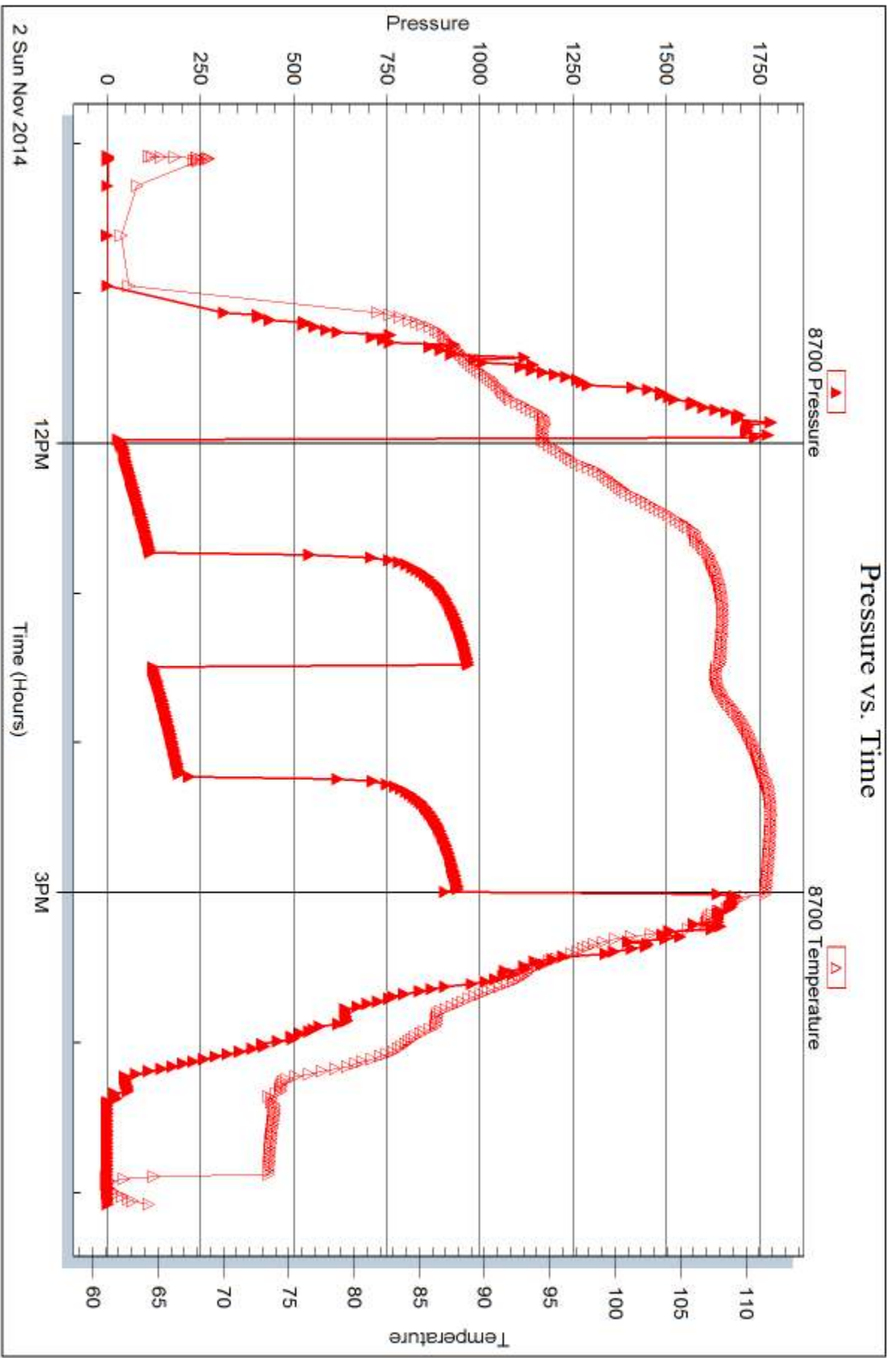


Serial #: 8700

Outside H&C Oil Operating Inc

Cova Unit #27-1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 60894

Printed: 2014.11.07 @ 09:22:48



DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663

ATTN: Charles Ramsay, Marc

Cova Unit #27-1

27-8s-22w Graham,KS

Start Date: 2014.11.03 @ 03:40:12

End Date: 2014.11.03 @ 08:53:42

Job Ticket #: 60895 DST #: 3

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

Printed: 2014.11.07 @ 09:22:20



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

H&C Oil Operating Inc

27-8s-22w Graham,KS

PO Box 86
Plainville KS 67663

Cova Unit #27-1

Job Ticket: 60895

DST#: 3

ATTN: Charles Ramsay, Marc

Test Start: 2014.11.03 @ 03:40:12

GENERAL INFORMATION:

Formation: **LKC I-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:20:12

Time Test Ended: 08:53:42

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

Interval: 3598.00 ft (KB) To 3634.00 ft (KB) (TVD)

Reference Elevations: 2209.00 ft (KB)

Total Depth: 3634.00 ft (KB) (TVD)

2202.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8018 Inside

Press@RunDepth: 19.16 psig @ 3606.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.11.03

End Date:

2014.11.03

Last Calib.:

2014.11.03

Start Time: 03:40:17

End Time:

08:53:41

Time On Btm:

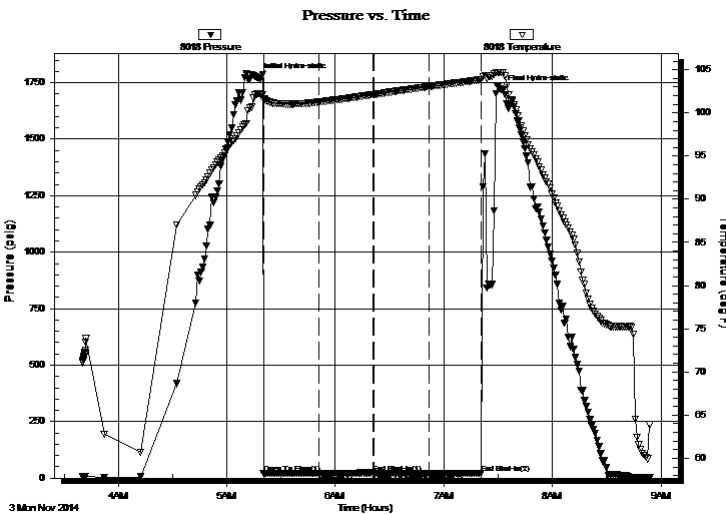
2014.11.03 @ 05:17:12

Time Off Btm:

2014.11.03 @ 07:31:42

TEST COMMENT: 30-IFP-very w k bl , died in 10 min
30-ISIP-no bl
30-FFP-no bl
30-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1772.17	102.21	Initial Hydro-static
3	21.07	101.56	Open To Flow (1)
34	20.79	101.25	Shut-In(1)
64	22.99	102.11	End Shut-In(1)
64	20.96	102.13	Open To Flow (2)
95	19.16	103.04	Shut-In(2)
124	20.63	103.84	End Shut-In(2)
135	1720.14	104.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc

27-8s-22w Graham,KS

PO Box 86
Plainville KS 67663

Cova Unit #27-1

Job Ticket: 60895

DST#: 3

ATTN: Charles Ramsay, Marc

Test Start: 2014.11.03 @ 03:40:12

Tool Information

Drill Pipe:	Length: 3579.00 ft	Diameter: 3.80 inches	Volume: 50.20 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: 50000.00 lb
			<u>Total Volume: 50.35 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3598.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	57.00 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			3578.00	
Shut In Tool	5.00			3583.00	
Hydraulic tool	5.00			3588.00	
Packer	5.00			3593.00	21.00 Bottom Of Top Packer
Packer	5.00			3598.00	
Stubb	1.00			3599.00	
Perforations	7.00			3606.00	
Recorder	0.00	8018	Inside	3606.00	
Recorder	0.00	8700	Outside	3606.00	
Perforations	25.00			3631.00	
Bullnose	3.00			3634.00	36.00 Bottom Packers & Anchor

Total Tool Length: 57.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc

27-8s-22w Graham,KS

PO Box 86
Plainville KS 67663

Cova Unit #27-1

Job Ticket: 60895

DST#: 3

ATTN: Charles Ramsay, Marc

Test Start: 2014.11.03 @ 03:40:12

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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.35 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

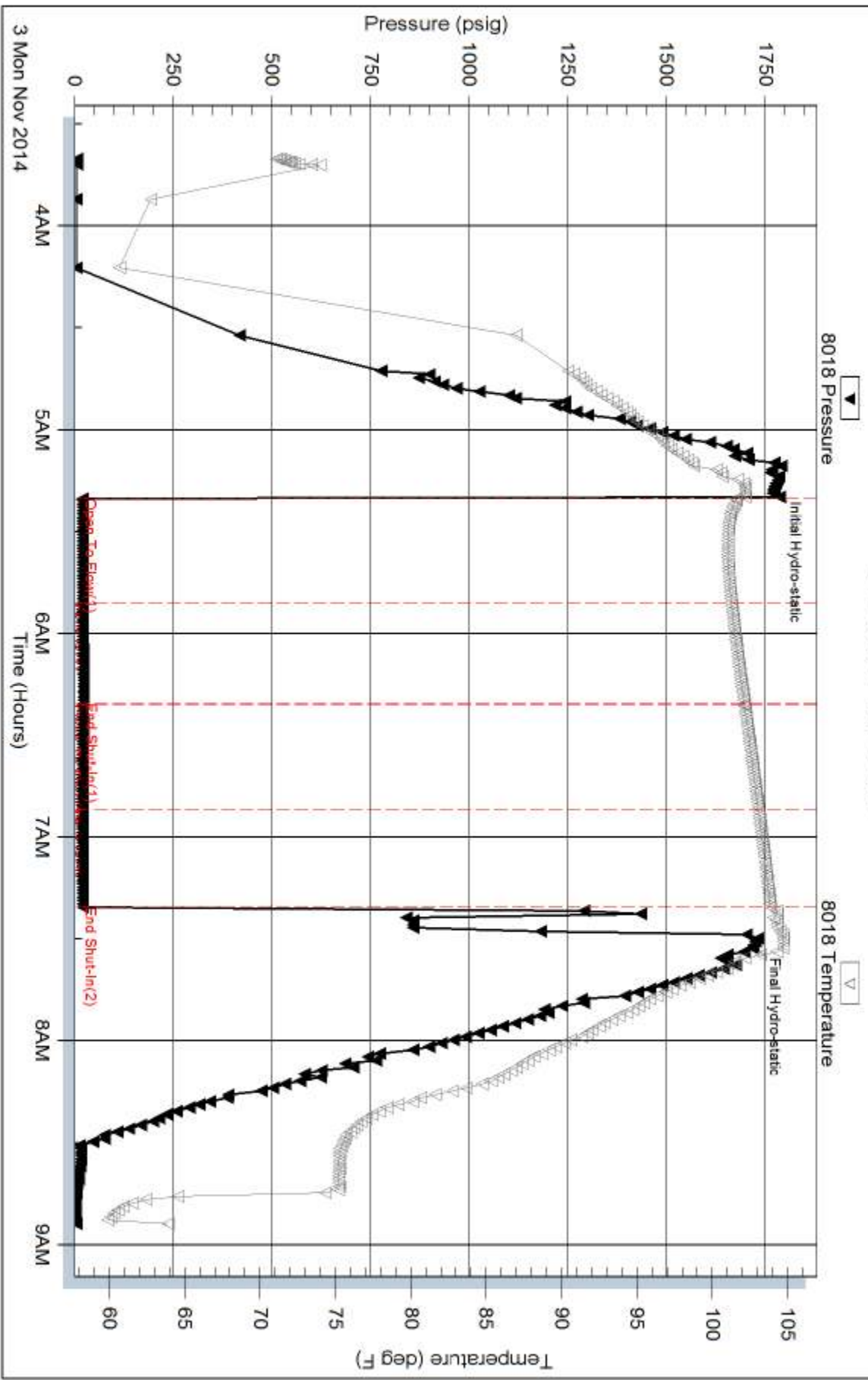
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

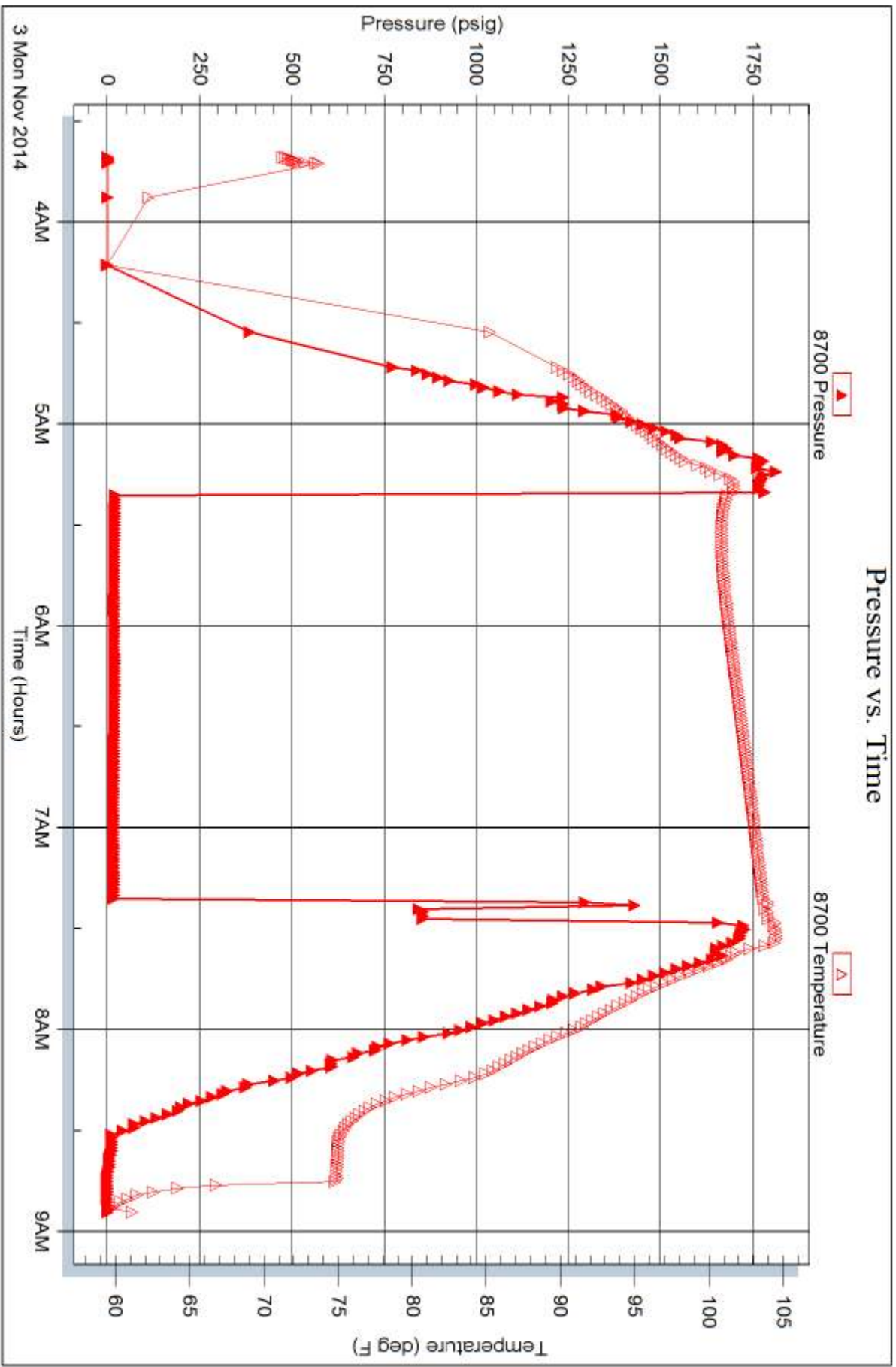


Serial #: 8700

Outside H&C Oil Operating Inc

Cova Unit #27-1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 60895

Printed: 2014.11.07 @ 09:22:21



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 60893

Well Name & No. COVA Unit 27-1 Test No. 1 Date 11-1-14
 Company H+C Oil Operating Inc Elevation 2209 KB 2202 GL
 Address Po Box 86 Plainville Ko 67663
 Co. Rep / Geo. MARC Downing, Charles Ramsay Rig Am Eagle rig 2
 Location: Sec. 27 Twp. 8^s Rge. 22^w Co. GRAHAM State Ko

Interval Tested 3475-3519 Zone Tested LKC C-D
 Anchor Length 44 Drill Pipe Run 3456 Mud Wt. 9.2
 Top Packer Depth 3470 Drill Collars Run 30 Vis 58
 Bottom Packer Depth 3475 Wt. Pipe Run - WL 6.4
 Total Depth 3519 Chlorides 1200 ppm System LCM TR.
 Blow Description IFP - WEAK TO A GOOD BLOW 1/2" TO 6" BLOW
ISIP - NO BLOW
FFP -
FSIP - NO

Rec	Feet of	%gas	%oil	%water	%mud
<u>140</u>	<u>MW w/show foil</u>		<u>80</u>	<u>20</u>	
<u>180</u>	<u>WATER</u>				

Rec Total 320 BHT 108 Gravity - API RW .17 @ 55 °F Chlorides 55000 ppm

(A) Initial Hydrostatic <u>1689</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1100</u>
(B) First Initial Flow <u>50</u>	<input type="checkbox"/> Jars	T-Started <u>2050</u>
(C) First Final Flow <u>111</u>	<input type="checkbox"/> Safety Joint	T-Open <u>2320</u>
(D) Initial Shut-In <u>986</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>0220</u>
(E) Second Initial Flow <u>116</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0413</u>
(F) Second Final Flow <u>172</u>	<input checked="" type="checkbox"/> Mileage <u>120 RT</u> 186	Comments <u>made 2nd short tript</u>
(G) Final Shut-In <u>960</u>	<input type="checkbox"/> Sampler	<u>down for RIG REPAIRS</u>
(H) Final Hydrostatic <u>1649</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>45</u>	<input type="checkbox"/> Day Standby	Total <u>1336</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1336</u>	

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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 60894

Well Name & No. COVA Unit 27-1 Test No. 2 Date 11-2-14
 Company H+C OIL OPERATING Inc Elevation 2209 KB 2202 GL
 Address PO Box 86 Plainville, Ks 67663
 Co. Rep / Geo. MARC Downing, Charles Ramsay Rig Am Eagle rig 2
 Location: Sec. 27 Twp. 8^s Rge. 22^w Co. GRAHAM State Ks

Interval Tested 3516-3544 Zone Tested LKC E, F
 Anchor Length 28 Drill Pipe Run 3490 Mud Wt. 9.4
 Top Packer Depth 3511 Drill Collars Run 30 Vis 61
 Bottom Packer Depth 3516 Wt. Pipe Run - WL 6.4
 Total Depth 3544 Chlorides 2100 ppm System LCM -
 Blow Description IFP - WEAK TO A Good Blow 1/2" TO 7" Blow
ISIP - NO Blow
FFP - WEAK TO A Good Blow 1/4" TO 6" Blow
FSIP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>80</u>	<u>mw w/slight show of oil</u>		<u>85</u>	<u>15</u>	
<u>300</u>	<u>WATER</u>				

Rec Total 380 BHT 111 Gravity - API RW .14 @ 60 °F Chlorides 63000 ppm
 Test 1150 T-On Location 0945
 Jars _____ T-Started 1005
 Safety Joint _____ T-Open 1200
 Circ Sub _____ T-Pulled 1500
 Hourly Standby _____ T-Out 1705
 Mileage 186 Comments _____
 Sampler _____
 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1336 MP/DST Disc't _____

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

Approved By _____ Our Representative RAY Schwager Thank you

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 60895

4/10

Well Name & No. COVA UNIT 27-1 Test No. 3 Date 11-3-14
 Company H+C OIL OPERATING INC Elevation 2209 KB 2202 GL
 Address PO Box 86 PLAINVILLE, KS 67663
 Co. Rep / Geo. MARC DOWNING, CHARLES RAMSAY Rig Am. Eagle rig 2
 Location: Sec. 27 Twp. 8^s Rge. 22 Co. GRAHAM State Ks

Interval Tested 3598 - 3634 Zone Tested LKC I-J
 Anchor Length 36 Drill Pipe Run 3579 Mud Wt. 9.3
 Top Packer Depth 3593 Drill Collars Run 30 Vis 54
 Bottom Packer Depth 3598 Wt. Pipe Run - WL 6.4
 Total Depth 3634 Chlorides 2100 ppm System LCM ~~2100~~
 Blow Description TFP - Very Weak Blow, died in 10 min
TSIP - NO Blow
FFP - NO Blow
FSIP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Mud</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 1 BHT 104 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>1772</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0245</u>
(B) First Initial Flow <u>21</u>	<input type="checkbox"/> Jars	T-Started <u>0340</u>
(C) First Final Flow <u>20</u>	<input type="checkbox"/> Safety Joint	T-Open <u>0520</u>
(D) Initial Shut-In <u>22</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>0720</u>
(E) Second Initial Flow <u>20</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0853</u>
(F) Second Final Flow <u>19</u>	<input checked="" type="checkbox"/> Mileage <u>186 186</u>	Comments <u>Loaded Tool 0930</u>
(G) Final Shut-In <u>20</u>	<input type="checkbox"/> Sampler	<u>11-4-14</u>
(H) Final Hydrostatic <u>1720</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>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1522</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1522</u>	

Approved By _____ Our Representative RAY SCHWAGER Thank you

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QUALITY C'WLWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

No. 836

Home Office P.O. Box 32 Russell, KS 67665

Phone 785-483-2025
Cell 785-324-1041

Date	11-4-2014	Sec.	27	Twp.	8	Range	23	County	GRAHAM	State	KANSAS	On Location		Finish	10:00PM
Lease	COVA UNIT														
Well No.	27-1														
Contractor	AMERICAN EAGLE Rig #														
Type Job	Rotary Plug														
Hole Size	7 7/8	T.D.	3865'												
Csg.	8 5/8 Surface	Depth	262'												
Tbg. Size	4 1/2 X-H	Depth	3796'												
Tool		Depth													
Cement Left in Csg.		Shoe Joint													
Meas Line		Displace													
		EQUIPMENT													
Pumptrk	18	No. Cementer	GKN 6												
		Helper	CODY B.												
Bulktrk	4	No. Driver	TYSON S.												
		No. Driver													
		No. Driver													
JOB SERVICES & REMARKS															
Remarks:															
Rat Hole															
Mouse Hole															
Centralizers															
Baskets															
DV or Port Collar															
	50 SX @ 3796'														
	50 SX @ 1800'														
	100 SX @ 1000'														
	50 SX @ 300'														
	10 SX @ 40'														
	30 SX @ Port Hole														
	FLOAT EQUIPMENT														
	Guide Shoe														
	Centralizer														
	Baskets														
	AFU Inserts														
	Float Shoe														
	Latch Down														
	8 5/8 WOODEN WIPEL PLUG														
	Pumptrk Charge plug														
	Mileage 47														
	Tax														
	Discount														
	Total Charge														

X Signature *Bradford Rubin*

THANKS!

