



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1195845
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: _____

1195845

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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: Yes No

Date of First, Resumed Production, SWD or ENHR: _____ Producing Method: Flowing Pumping Gas Lift Other *(Explain)* _____

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> _____ <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	Newell 23-1
Doc ID	1195845

All Electric Logs Run

Microresistivity
Dual induction
Dual compensated porosity
Sector Bond/Gamma Ray CCL

Form	ACO1 - Well Completion
Operator	H & C Oil Operating Inc.
Well Name	Newell 23-1
Doc ID	1195845

Tops

Name	Top	Datum
Top Anhydrite	1621	+477
Base Anhydrite	1652	+446
Topeka	3076	-978
Heebner	3289	-1191
Toronto	3312	-1214
LKC	3328	-1230
BKC	3546	-1448
Arbuckle	3637	-1539



DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Newell #23-1

23-8s-21w Graham, KS

Start Date: 2014.02.09 @ 11:49:09

End Date: 2014.02.09 @ 20:49:39

Job Ticket #: 54001 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.02.14 @ 14:46:10



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.

23-8s-21w Graham, KS

PO Box 86
Plainville, KS 67663

Newell #23-1

Job Ticket: 54001

DST#: 1

ATTN: Marc Downing

Test Start: 2014.02.09 @ 11:49:09

GENERAL INFORMATION:

Formation: **LKC 'C-D'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:46:09

Time Test Ended: 20:49:39

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan L

Unit No: 48

Interval: 3354.00 ft (KB) To 3400.00 ft (KB) (TVD)

Reference Elevations: 2098.00 ft (KB)

Total Depth: 3400.00 ft (KB) (TVD)

2091.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8372

Inside

Press@RunDepth: 664.80 psig @ 3363.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.09

End Date:

2014.02.09

Last Calib.:

2014.02.09

Start Time: 11:49:10

End Time:

20:49:39

Time On Btm:

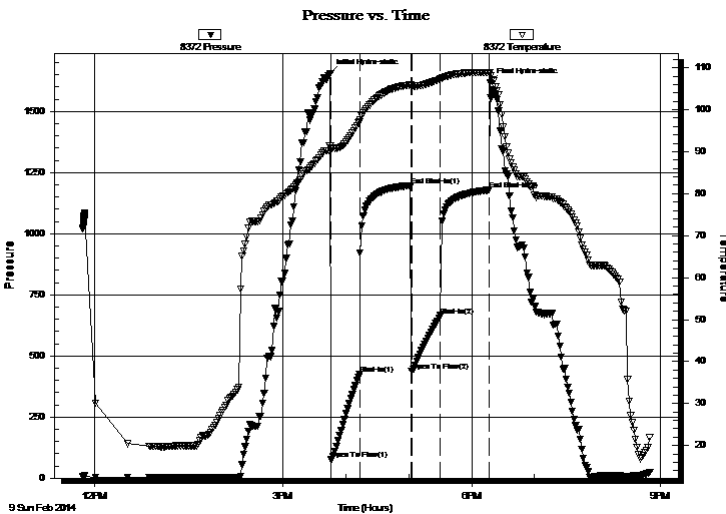
2014.02.09 @ 15:44:39

Time Off Btm:

2014.02.09 @ 18:17:39

TEST COMMENT: 30- IF- BOB 1 1/2 mins
45- IS- No blow
30- FF- BOB 1 1/2 mins
45- FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1655.94	91.31	Initial Hydro-static
2	77.32	90.57	Open To Flow (1)
29	424.77	97.21	Shut-In(1)
78	1196.94	105.95	End Shut-In(1)
78	437.71	105.63	Open To Flow (2)
106	664.80	107.28	Shut-In(2)
152	1178.57	108.80	End Shut-In(2)
153	1616.79	108.91	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
1375.00	MW, 90%W	18.52

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating, Inc.

23-8s-21w Graham, KS

PO Box 86
Plainville, KS 67663

Newell #23-1

Job Ticket: 54001

DST#: 1

ATTN: Marc Downing

Test Start: 2014.02.09 @ 11:49:09

Tool Information

Drill Pipe:	Length: 3308.00 ft	Diameter: 3.75 inches	Volume: 45.19 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - 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: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 33000.00 lb
Depth to Top Packer:	3354.00 ft			Final 39000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.00 ft			
Tool Length:	66.00 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			3335.00	
Shut In Tool	5.00			3340.00	
Hydraulic tool	5.00			3345.00	
Packer	5.00			3350.00	20.00 Bottom Of Top Packer
Packer	4.00			3354.00	
Stubb	1.00			3355.00	
Perforations	8.00			3363.00	
Recorder	0.00	8372	Inside	3363.00	
Recorder	0.00	8321	Outside	3363.00	
Blank Spacing	34.00			3397.00	
Bullnose	3.00			3400.00	46.00 Bottom Packers & Anchor

Total Tool Length: 66.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc.

23-8s-21w Graham, KS

PO Box 86
Plainville, KS 67663

Newell #23-1

Job Ticket: 54001

DST#: 1

ATTN: Marc Downing

Test Start: 2014.02.09 @ 11:49:09

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:

100000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1375.00	MW, 90%W	18.521

Total Length: 1375.00 ft Total Volume: 18.521 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

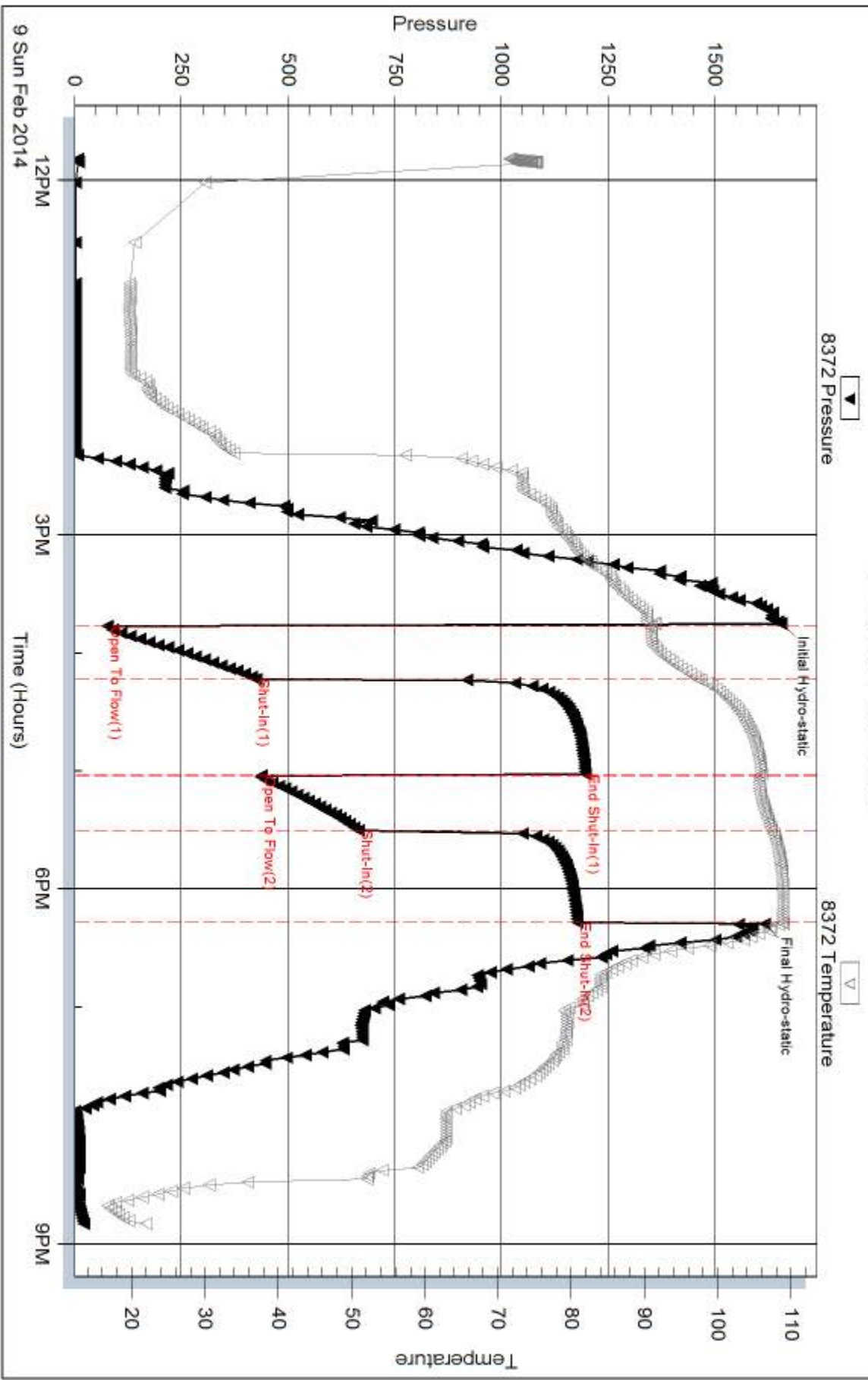
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

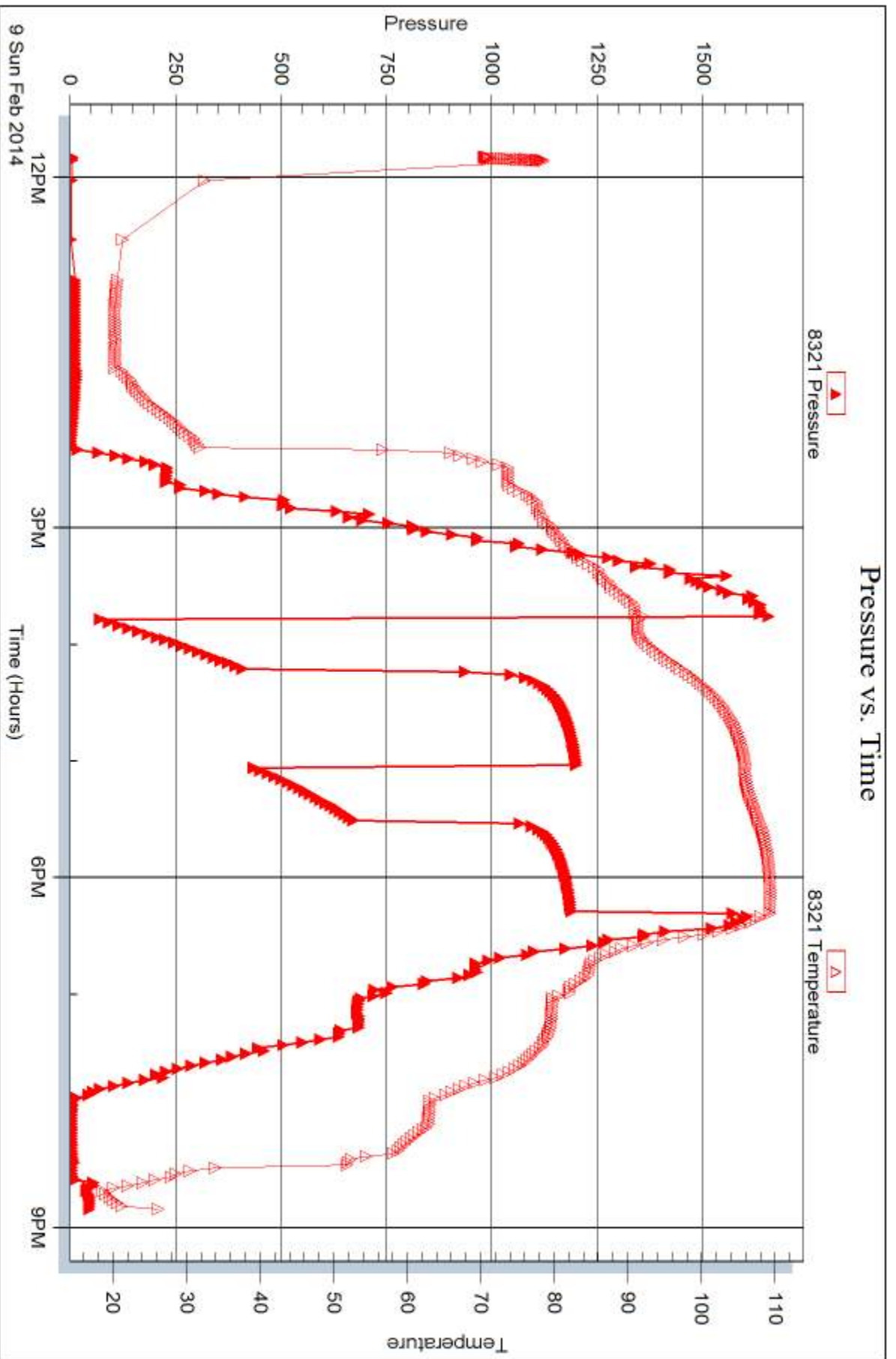


Serial #: 8321

Outside H&C Oil Operating, Inc.

New well #23-1

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Newell #23-1

23-8s-21w Graham, KS

Start Date: 2014.02.10 @ 17:44:25

End Date: 2014.02.11 @ 00:44:55

Job Ticket #: 54002 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.02.14 @ 14:45:09



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.

23-8s-21w Graham, KS

PO Box 86
Plainville, KS 67663

Newell #23-1

Job Ticket: 54002

DST#: 2

ATTN: Marc Downing

Test Start: 2014.02.10 @ 17:44:25

GENERAL INFORMATION:

Formation: **LKC "H-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:07:25

Time Test Ended: 00:44:55

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan L

Unit No: 48

Interval: 3444.00 ft (KB) To 3532.00 ft (KB) (TVD)

Reference Elevations: 2098.00 ft (KB)

Total Depth: 3532.00 ft (KB) (TVD)

2091.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8372

Inside

Press@RunDepth: 47.39 psig @ 3464.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.10

End Date:

2014.02.11

Last Calib.: 2014.02.11

Start Time: 17:44:26

End Time:

00:44:55

Time On Btm: 2014.02.10 @ 20:04:25

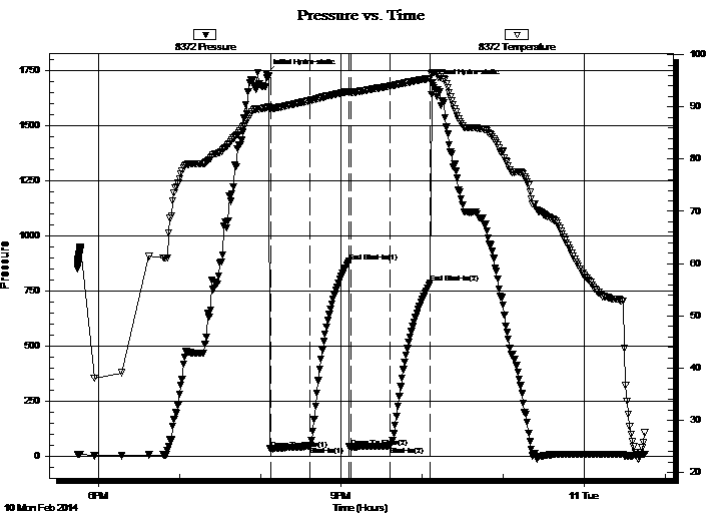
Time Off Btm: 2014.02.10 @ 22:07:25

TEST COMMENT: 30- IF- Built slowly to 2"

30- IS- No blow

30- FF- Built to 1/2"

30- FS- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1736.91	89.83	Initial Hydro-static
3	34.46	89.68	Open To Flow (1)
32	46.14	91.19	Shut-In(1)
61	884.31	92.95	End Shut-In(1)
63	43.97	92.72	Open To Flow (2)
92	47.39	93.96	Shut-In(2)
122	786.43	95.46	End Shut-In(2)
123	1692.98	96.50	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	M	0.15

* 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.

23-8s-21w Graham, KS

PO Box 86
Plainville, KS 67663

Newell #23-1

Job Ticket: 54002

DST#: 2

ATTN: Marc Downing

Test Start: 2014.02.10 @ 17:44:25

Tool Information

Drill Pipe:	Length: 3401.00 ft	Diameter: 3.75 inches	Volume: 46.46 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - 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: 34000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 33000.00 lb
Depth to Top Packer:	3444.00 ft			Final 34000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	88.00 ft			
Tool Length:	108.00 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			3425.00	
Shut In Tool	5.00			3430.00	
Hydraulic tool	5.00			3435.00	
Packer	5.00			3440.00	20.00 Bottom Of Top Packer
Packer	4.00			3444.00	
Stubb	1.00			3445.00	
Perforations	19.00			3464.00	
Recorder	0.00	8372	Inside	3464.00	
Recorder	0.00	8321	Outside	3464.00	
Blank Spacing	65.00			3529.00	
Bullnose	3.00			3532.00	88.00 Bottom Packers & Anchor

Total Tool Length: 108.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc.

23-8s-21w Graham, KS

PO Box 86
Plainville, KS 67663

Newell #23-1

Job Ticket: 54002

DST#: 2

ATTN: Marc Downing

Test Start: 2014.02.10 @ 17:44:25

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: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	M	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

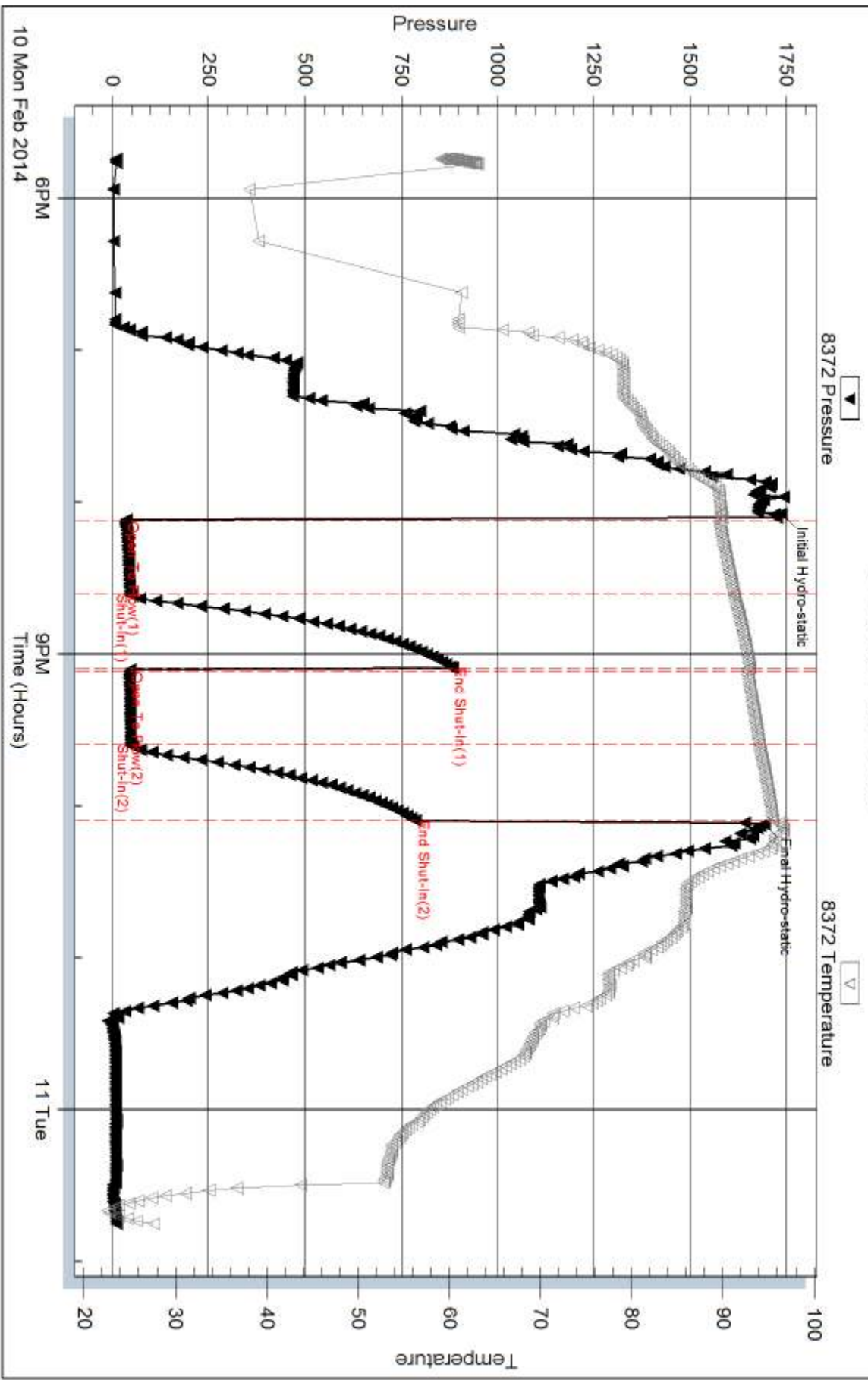
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

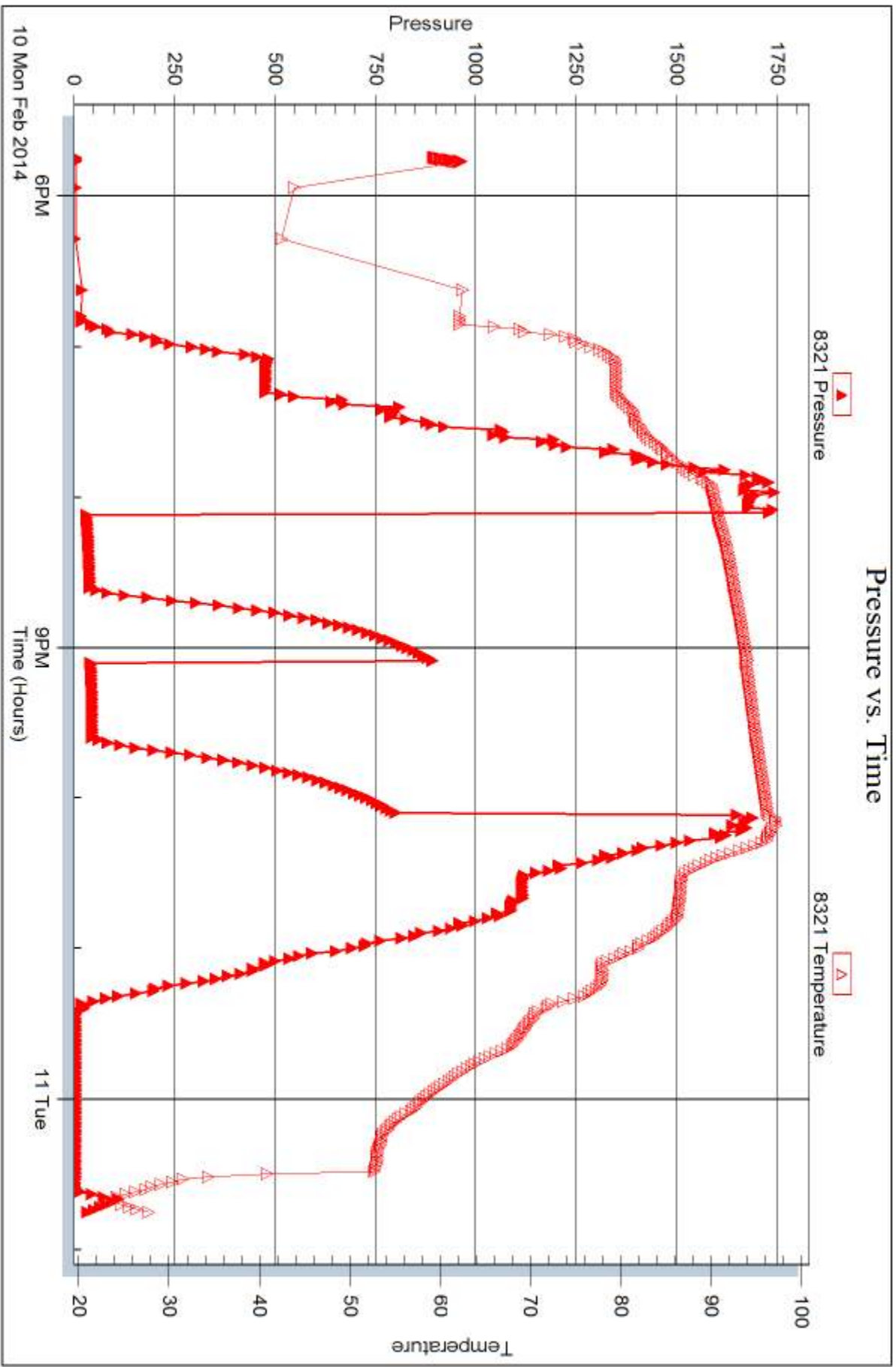


Serial #: 8321

Outside H&C Oil Operating, Inc.

New well #23-1

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 54002

Printed: 2014.02.14 @ 14:45:11



DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Newell #23-1

23-8s-21w Graham, KS

Start Date: 2014.02.11 @ 13:51:00

End Date: 2014.02.11 @ 21:38:00

Job Ticket #: 54003 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.02.14 @ 14:43:45



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.

23-8s-21w Graham, KS

PO Box 86
Plainville, KS 67663

Newell #23-1

Job Ticket: 54003

DST#: 3

ATTN: Marc Downing

Test Start: 2014.02.11 @ 13:51:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:47:30

Time Test Ended: 21:38:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan L

Unit No: 48

Interval: 3611.00 ft (KB) To 3643.00 ft (KB) (TVD)

Reference Elevations: 2098.00 ft (KB)

Total Depth: 3643.00 ft (KB) (TVD)

2091.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8372

Inside

Press@RunDepth: 207.98 psig @ 3640.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.11

End Date:

2014.02.11

Last Calib.:

2014.02.11

Start Time: 13:51:01

End Time:

21:38:00

Time On Btm:

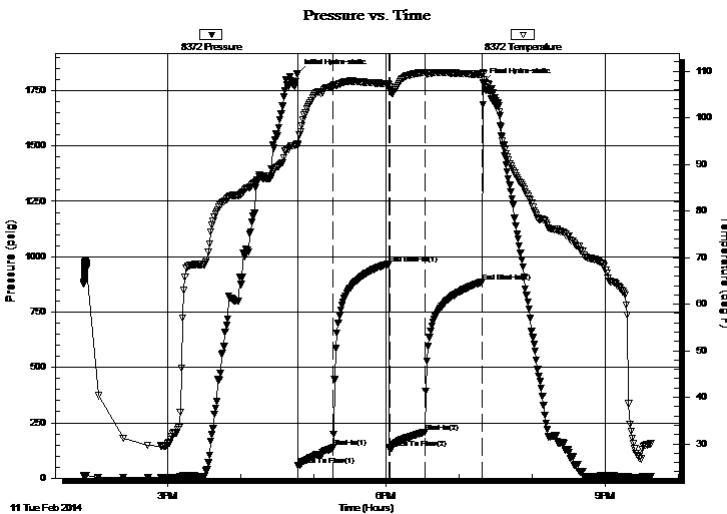
2014.02.11 @ 16:47:00

Time Off Btm:

2014.02.11 @ 19:20:00

TEST COMMENT: 30- IF- BOB 4 mins
45- IS- Steady surface blow
30- FF- BOB 6 mins
45- FS- Surface blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1827.85	94.40	Initial Hydro-static
1	56.90	94.14	Open To Flow (1)
29	137.35	106.78	Shut-In(1)
75	967.02	107.22	End Shut-In(1)
76	134.34	105.99	Open To Flow (2)
105	207.98	109.77	Shut-In(2)
152	885.94	109.31	End Shut-In(2)
153	1785.22	109.50	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
560.00	GO, 80%O	7.39

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.

23-8s-21w Graham, KS

PO Box 86
Plainville, KS 67663

Newell #23-1

Job Ticket: 54003

DST#: 3

ATTN: Marc Downing

Test Start: 2014.02.11 @ 13:51:00

Tool Information

Drill Pipe:	Length: 3590.00 ft	Diameter: 3.75 inches	Volume: 49.04 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - 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: 37000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	3611.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	52.00 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			3592.00	
Shut In Tool	5.00			3597.00	
Hydraulic tool	5.00			3602.00	
Packer	5.00			3607.00	20.00 Bottom Of Top Packer
Packer	4.00			3611.00	
Stubb	1.00			3612.00	
Perforations	28.00			3640.00	
Recorder	0.00	8372	Inside	3640.00	
Recorder	0.00	8321	Outside	3640.00	
Bullnose	3.00			3643.00	32.00 Bottom Packers & Anchor
Total Tool Length:	52.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc.

23-8s-21w Graham, KS

PO Box 86
Plainville, KS 67663

Newell #23-1

Job Ticket: 54003

DST#: 3

ATTN: Marc Downing

Test Start: 2014.02.11 @ 13:51:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
560.00	GO, 80%O	7.388

Total Length: 560.00 ft Total Volume: 7.388 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

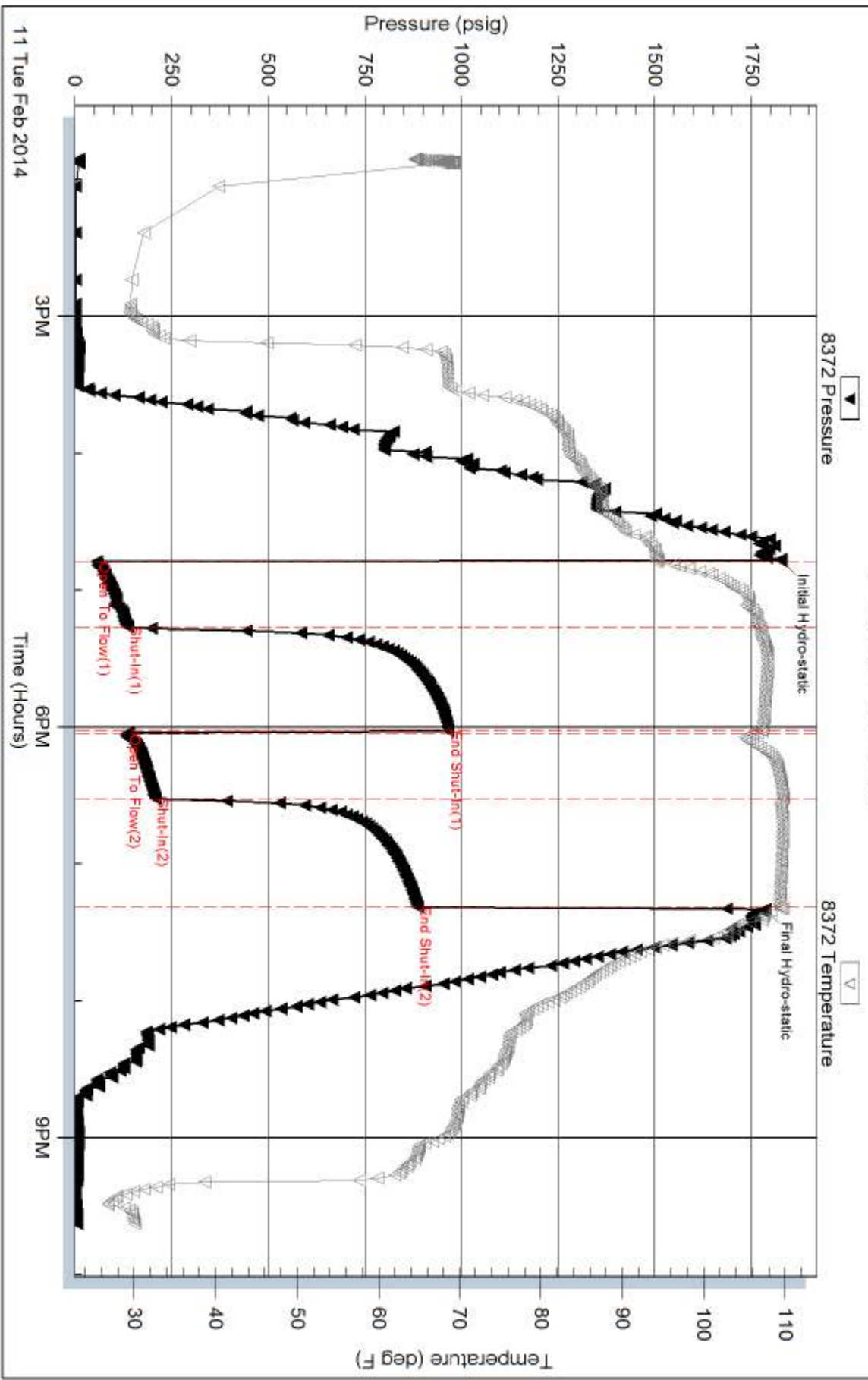
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

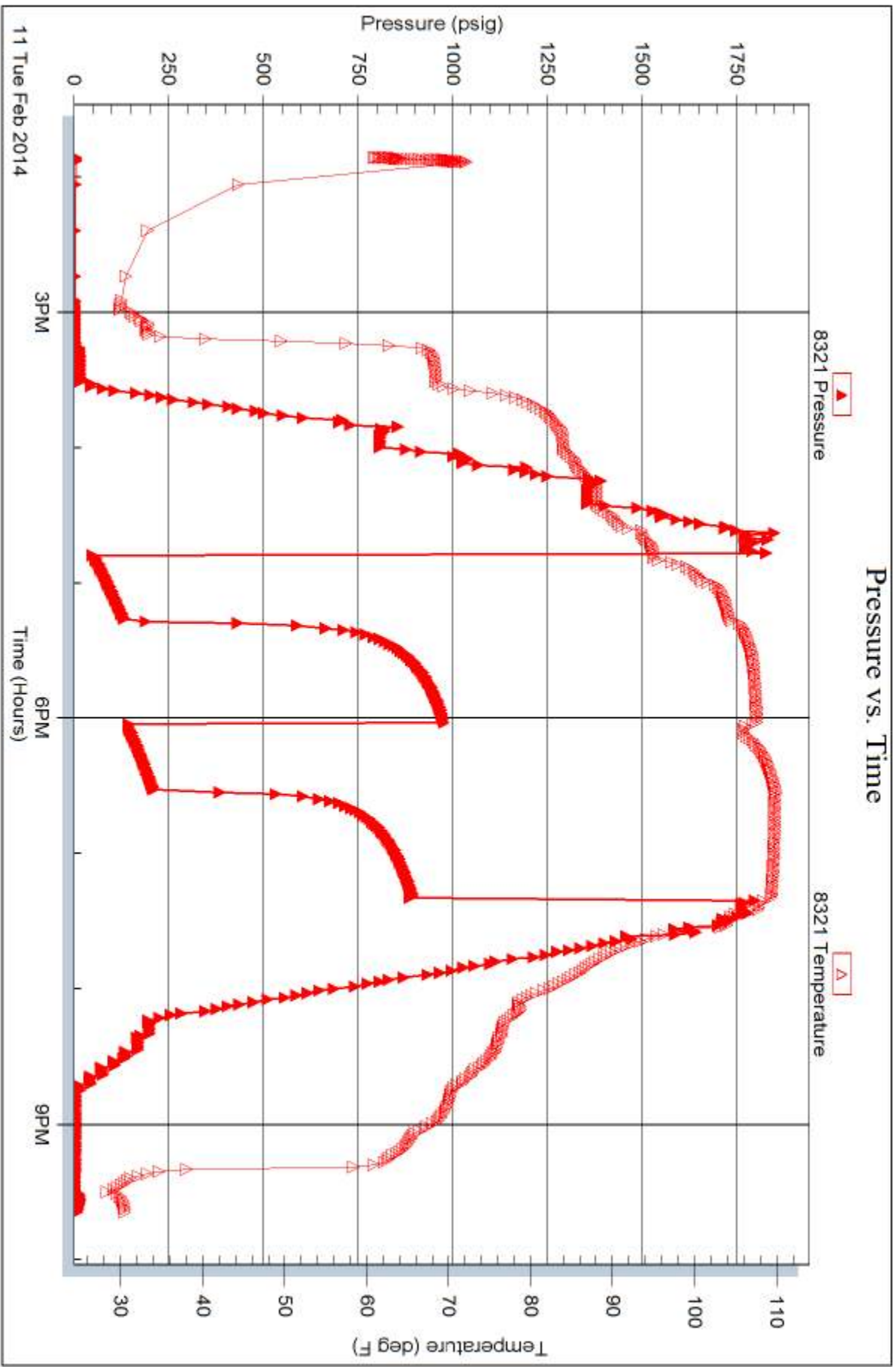


Serial #: 8321

Outside H&C Oil Operating, Inc.

New ell #23-1

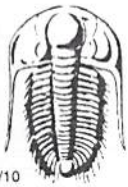
DST Test Number: 3



Tribble Testing, Inc

Ref. No: 54003

Printed: 2014.02.14 @ 14:43:48



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54001

Well Name & No. Newell #23-1 Test No. 1 Date 2/9/14
 Company HOC Oil Operating, Inc. Elevation 2098 KB 2091 GL
 Address PO Box 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #3
 Location: Sec. 23 Twp. 8S Rge. 21w Co. Graham State KS

Interval Tested 3354-3400 Zone Tested LKC "C-D"
 Anchor Length 46' Drill Pipe Run 3308 Mud Wt. 9.0
 Top Packer Depth 3349 Drill Collars Run 30 Vis 47
 Bottom Packer Depth 3354 Wt. Pipe Run --- WL 5.8
 Total Depth 3400 Chlorides 1,000 ppm System LCM 2#

Blow Description IF - BOB 1 1/2 mins
ISI - No blow
FF - BOB 1 1/2 mins
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1375</u>	<u>MW</u>			<u>90</u>	<u>10</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 1375 BHT 109° Gravity --- API RW .18 @ 13 °F Chlorides 100,000 ppm

(A) Initial Hydrostatic 1656 Test 1150 T-On Location 1130
 (B) First Initial Flow 27 Jars --- T-Started 1149
 (C) First Final Flow 425 Safety Joint --- T-Open 1547
 (D) Initial Shut-In 1197 Circ Sub --- T-Pulled 1817
 (E) Second Initial Flow 438 Hourly Standby --- T-Out 2050
 (F) Second Final Flow 665 Mileage 106 RT 164.30
 (G) Final Shut-In 1179 Sampler ---
 (H) Final Hydrostatic 1617 Straddle --- Ruined Shale Packer ---

Initial Open 30 Shale Packer --- Ruined Packer ---
 Initial Shut-In 45 Extra Packer --- Extra Copies ---
 Final Flow 30 Extra Recorder --- Sub Total 0
 Final Shut-In 45 Day Standby --- Total 1314.30
 Accessibility --- MP/DST Disc't ---
 Sub Total 1314.30

Approved By _____ Our Representative Brennan L

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. 54002

Well Name & No. Newell #23-1 Test No. 2 Date 2/10/14
 Company A+C Oil Operating, Inc. Elevation 2098 KB 2091 GL
 Address PO Box 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle 3
 Location: Sec. 23 Twp. 8S Rge. 21W Co. Graham State KS

Interval Tested 3444-3532 Zone Tested LKC "H-K"
 Anchor Length 88' Drill Pipe Run 3401 Mud Wt. 9.1
 Top Packer Depth 3439 Drill Collars Run 30 Vis 47
 Bottom Packer Depth 3444 Wt. Pipe Run --- WL 5.8
 Total Depth 3532 Chlorides 1,500 ppm System LCM 2#

Blow Description IF-Built slowly to 2"
ISI- No Blow
FF-Built to 1/2"
FSI- No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>M</u>				

Rec Total 30' BHT 96° Gravity --- API RW --- @ --- °F Chlorides --- ppm

(A) Initial Hydrostatic <u>1737</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1715</u>
(B) First Initial Flow <u>34</u>	<input type="checkbox"/> Jars <u>---</u>	T-Started <u>1744</u>
(C) First Final Flow <u>46</u>	<input type="checkbox"/> Safety Joint <u>---</u>	T-Open <u>2006</u>
(D) Initial Shut-In <u>884</u>	<input type="checkbox"/> Circ Sub <u>---</u>	T-Pulled <u>2206</u>
(E) Second Initial Flow <u>44</u>	<input type="checkbox"/> Hourly Standby <u>---</u>	T-Out <u>0045</u>
(F) Second Final Flow <u>47</u>	<input checked="" type="checkbox"/> Mileage <u>106 RT</u> 164.30	Comments <u>---</u>
(G) Final Shut-In <u>786</u>	<input type="checkbox"/> Sampler <u>---</u>	
(H) Final Hydrostatic <u>1693</u>	<input type="checkbox"/> Straddle <u>---</u>	

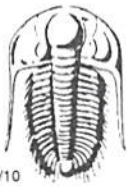
Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30

Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1314.30
 MP/DST Disc't ---

Sub Total 1314.30

Approved By _____ Our Representative Branman L

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54003

Well Name & No. Newell # 23-1 Test No. 3 Date 2/11/14
 Company A+C Oil Operating, Inc. Elevation 2098 KB 2091 GL
 Address PO Box 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle 3
 Location: Sec. 23 Twp. 8s Rge. 21w Co. Graham State KS

Interval Tested 3611-3643 Zone Tested Arbuckle
 Anchor Length 32' Drill Pipe Run 3590 Mud Wt. 9.2
 Top Packer Depth 3606 Drill Collars Run 30 Vis 52
 Bottom Packer Depth 3611 Wt. Pipe Run — WL 6.0
 Total Depth 3643 Chlorides 1400 ppm System LCM 2#

Blow Description IF-BOB 4mins
ISI - Steady surface blow
FF-BOB 6mins
FSI - Surface blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>560</u>	<u>60</u>	<u>20</u>	<u>80</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 560' BHT 109° Gravity 34 API RW — @ —° F Chlorides — ppm

(A) Initial Hydrostatic 1828 Test 1150 T-On Location 1334
 (B) First Initial Flow 57 Jars — T-Started 1351
 (C) First Final Flow 137 Safety Joint — T-Open 1647
 (D) Initial Shut-In 967 Circ Sub — T-Pulled 1917
 (E) Second Initial Flow 134 Hourly Standby — T-Out 2138
 (F) Second Final Flow 208 Mileage 106 RT 328.60 Comments loaded tools 2/12 17:30
 (G) Final Shut-In 886 Sampler —
 (H) Final Hydrostatic 1785 Straddle — Ruined Shale Packer —

Initial Open 30 Shale Packer — Ruined Packer —
 Initial Shut-In 45 Extra Packer — Extra Copies —
 Final Flow 30 Extra Recorder — Sub Total 0
 Final Shut-In 45 Day Standby — Total 1478.60
 Accessibility — MP/DST Disc't —
 Sub Total 1478.60

Approved By _____ Our Representative Brannan L

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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. 7066

Date	02-13-14	Sec.	23	8	21	Range	County	State	On Location	Finish	
							Graham	KS		7:30 AM	
Lease	Newell										
Contractor	American Engr #3										
Type Job	Production string										
Hole Size	7 7/8										
Csg.	5 1/2										
Tbg. Size											
Tool											
Cement Left in Csg.	24.08										
Meas Line	88 1/4 bbl										
	EQUIPMENT										
Pumptrk	18	No.	Cementier	Cody							Brett
Bulktrk	1	No.	Driver	Clayton							
Bulktrk	19	No.	Driver	Craig							
JOB SERVICES & REMARKS											
Remarks:											
Rat Hole	30 ^{5x}										
Mouse Hole											
Centralizers	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 50, 56, 71										
Baskets	2, 51, 57 + 72										
DM or Port Collar											
	Mixed 500 Gal Mud Flush										
	Plugged Ret Hole w/ 30s										
	Mixed 420 QMDC then										
	Mixed 160 Q-Pro C										
	Displaced 88 1/4 bbl										
	Lift pressure 800 lbs										
	Landed @ 1600 lbs										
	Play held										
	Cement circulated!										
	Pumptrk Charge										
	Mileage 44										
	Tax										
	Discount										
	Total Charge										

Well No. 23-1

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.

Charge To
HVC Oil

Street

City

State

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

Cement Amount Ordered 160 Q-Pro - C 10% salt

450 QMDC 1/4 # Flo 5% gilsonite

Common 160 Pro-C

Poz. Mix 450 QMBC

Gel.

Calcium

Hulls

Salt 14

Flowseal 112#

Kol-Seal 800#

Mud CLR 48 - 500 Gal

CFL-117 or CD110 CAF 38

Sand

Handling 632

Mileage

5 1/2 FLOAT EQUIPMENT

Guide Shoe

Centralizer - 14

Baskets - 4

AFU Inserts

Float Shoe - 1

Latch Down - 1

Rubber Plug - 1

Pumptrk Charge

Mileage 44 Prod String

X Signature Bob Plank

