



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1226012
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: _____



1226012

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> <i>(Submit ACO-4)</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	Rosalie 17-2
Doc ID	1226012

All Electric Logs Run

Dual Induction log
Dual Compensated Porosity log
Microresistivity log
Cement bond log

Marc A. Downing		Geologic Report	
Consulting Petroleum Geologist		Drilling Time and Sample Log	
Operator H&C Oil Operating, Inc.		Elevation KB 2471 DF 2469 GL 2464	
Lease Rosalie No. 17-2		Casing Record Surface 8 5/8" @ 264' Production 5 1/2" 4089'	
API # 15-065-24016-0000		Electrical Surveys CNL/CDL, DIL, MEL	
Field Hurlbut West		Location 1200' FNL & 330' FWL	
Sec. 17	Twp. 9s	Rge. 24w	
County Graham		State Kansas	
Formation	Sample tops	Log Tops	Datum
Top Anhydrite	2141	2140	+331
Base Anhydrite	2176	2174	+297
Topoka	3552	3552	-1081
Heebner	3767	3765	-1294
Toronto	3791	3797	-1326
LKC	3809	3809	-1338
BKC	4033	4031	-1560
Total Depth	4090	4090	-1619
Reference Well For Structural Comparison	H&C Oil Operating, Inc.		
Rosalie #17-1	2310' FNL & 660' FWL		Sec. 17-9s-24w

Drilling Contractor	American Eagle, Rig #2	
Commenced	3-15-14	Completed 3-21-14
Samples Saved From	3750	To RTD
Drilling Time Kept From	3450	To RTD
Samples Examined From	3750	To RTD
Geological Supervision From	3750	To RTD

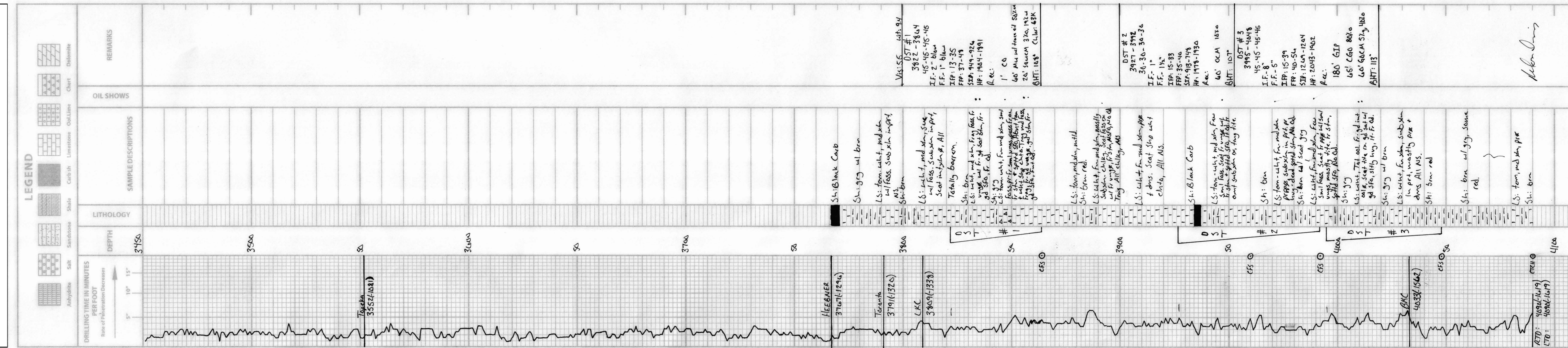
Summary and Recommendations

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

Perforate:
LKC K: 4003-4008
LKC J: 3987-3993 (Before Abandonment)
LKC H: 3950-3952 (Before Abandonment)

Respectfully Submitted,

Marc A. Downing





DRILL STEM TEST REPORT

Prepared For: **H & C Oil Oper. Inc.**

P.O. Box 86
Plainville, KS 67663

ATTN: Marc Downing

Rosalie #17-2

17-9s-24w Graham,KS

Start Date: 2014.03.18 @ 15:49:12

End Date: 2014.03.18 @ 22:16:42

Job Ticket #: 52485 DST #: 1

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

Printed: 2014.03.21 @ 16:11:52



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

H & C Oil Oper. Inc.

17-9s-24w Graham,KS

P.O. Box 86
Plainville, KS 67663

Rosalie #17-2

Job Ticket: 52485

DST#: 1

ATTN: Marc Downing

Test Start: 2014.03.18 @ 15:49:12

GENERAL INFORMATION:

Formation: **LKC "H"**
 Deviated: No Whipstock: 0.00 ft (KB)
 Time Tool Opened: 17:29:42
 Time Test Ended: 22:16:42
 Interval: **3822.00 ft (KB) To 3864.00 ft (KB) (TVD)**
 Total Depth: 3864.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Ryan Reynolds
 Unit No: 68
 Reference Elevations: 2479.00 ft (KB)
 2473.00 ft (CF)
 KB to GR/CF: 6.00 ft

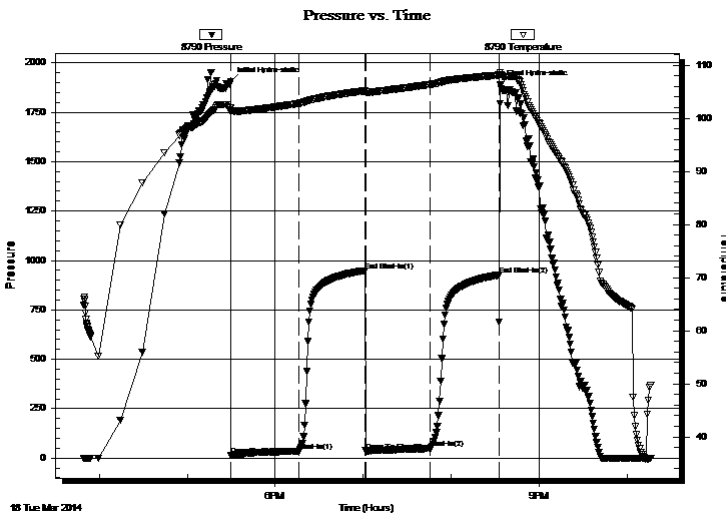
Serial #: 8790

Inside

Press@RunDepth: 48.39 psig @ 3827.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.03.18 End Date: 2014.03.18 Last Calib.: 2014.03.18
 Start Time: 15:49:17 End Time: 22:16:41 Time On Btm: 2014.03.18 @ 17:29:27
 Time Off Btm: 2014.03.18 @ 20:33:42

TEST COMMENT: IF: Weak blow . surf. - 2"
 IS: No blow
 FF: Weak blow . surf. - 1"
 FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1904.22	101.90	Initial Hydro-static
1	12.60	101.16	Open To Flow (1)
47	35.09	102.79	Shut-In(1)
92	948.94	105.14	End Shut-In(1)
93	36.72	104.87	Open To Flow (2)
137	48.39	106.33	Shut-In(2)
183	926.39	108.09	End Shut-In(2)
185	1890.69	108.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	VSLI OCWM trc%o, 50%w, 50%m	0.57
20.00	OWCM 3%o, 19%w, 78%m	0.28
1.00	Clean oil 100%oil	0.01

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H & C Oil Oper. Inc.

17-9s-24w Graham, KS

P.O. Box 86
Plainville, KS 67663

Rosalie #17-2

ATTN: Marc Downing

Job Ticket: 52485 **DST#: 1**

Test Start: 2014.03.18 @ 15:49:12

GENERAL INFORMATION:

Formation: **LKC "H"**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 17:29:42

Time Test Ended: 22:16:42

Interval: **3822.00 ft (KB) To 3864.00 ft (KB) (TVD)**

Total Depth: 3864.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Reynolds

Unit No: 68

Reference Elevations: 2479.00 ft (KB)

2473.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: 8792 Outside

Press@RunDepth: psig @ 3827.00 ft (KB)

Start Date: 2014.03.18 End Date: 2014.03.18

Start Time: 15:45:18 End Time: 22:17:27

Capacity: 8000.00 psig

Last Calib.: 2014.03.18

Time On Btm:

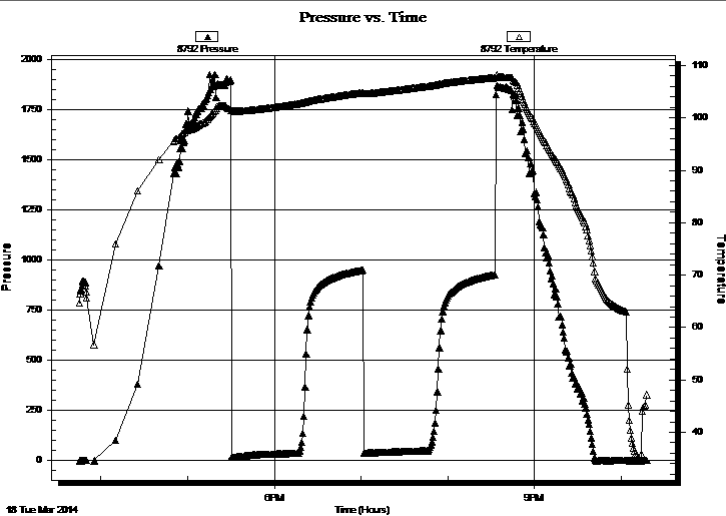
Time Off Btm:

TEST COMMENT: IF: Weak blow . surf. - 2"

IS: No blow

FF: Weak blow . surf. - 1"

FS: No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	VSLI OCWM trc%o, 50%w, 50%m	0.57
20.00	OWCM 3%o, 19%w, 78%m	0.28
1.00	Clean oil 100%oil	0.01

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H & C Oil Oper. Inc.

17-9s-24w Graham,KS

P.O. Box 86
Plainville, KS 67663

Rosalie #17-2

Job Ticket: 52485

DST#: 1

ATTN: Marc Downing

Test Start: 2014.03.18 @ 15:49:12

Tool Information

Drill Pipe:	Length: 3782.00 ft	Diameter: 3.80 inches	Volume: 53.05 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 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: 53.20 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3822.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	62.00 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			3803.00	
Shut In Tool	5.00			3808.00	
Hydraulic tool	5.00			3813.00	
Packer	5.00			3818.00	20.00 Bottom Of Top Packer
Packer	4.00			3822.00	
Stubb	1.00			3823.00	
Perforations	3.00			3826.00	
Change Over Sub	1.00			3827.00	
Recorder	0.00	8790	Inside	3827.00	
Recorder	0.00	8792	Outside	3827.00	
Drill Pipe	31.00			3858.00	
Change Over Sub	1.00			3859.00	
Perforations	2.00			3861.00	
Bullnose	3.00			3864.00	42.00 Bottom Packers & Anchor

Total Tool Length: 62.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H & C Oil Oper. Inc.

17-9s-24w Graham,KS

P.O. Box 86
Plainville, KS 67663

Rosalie #17-2

Job Ticket: 52485

DST#: 1

ATTN: Marc Downing

Test Start: 2014.03.18 @ 15:49:12

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:

63000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	VSLI OCWM trc%o, 50%w, 50%m	0.568
20.00	OWCM 3%o, 19%w, 78%m	0.281
1.00	Clean oil 100%oil	0.014

Total Length: 81.00 ft

Total Volume: 0.863 bbl

Num Fluid Samples: 0

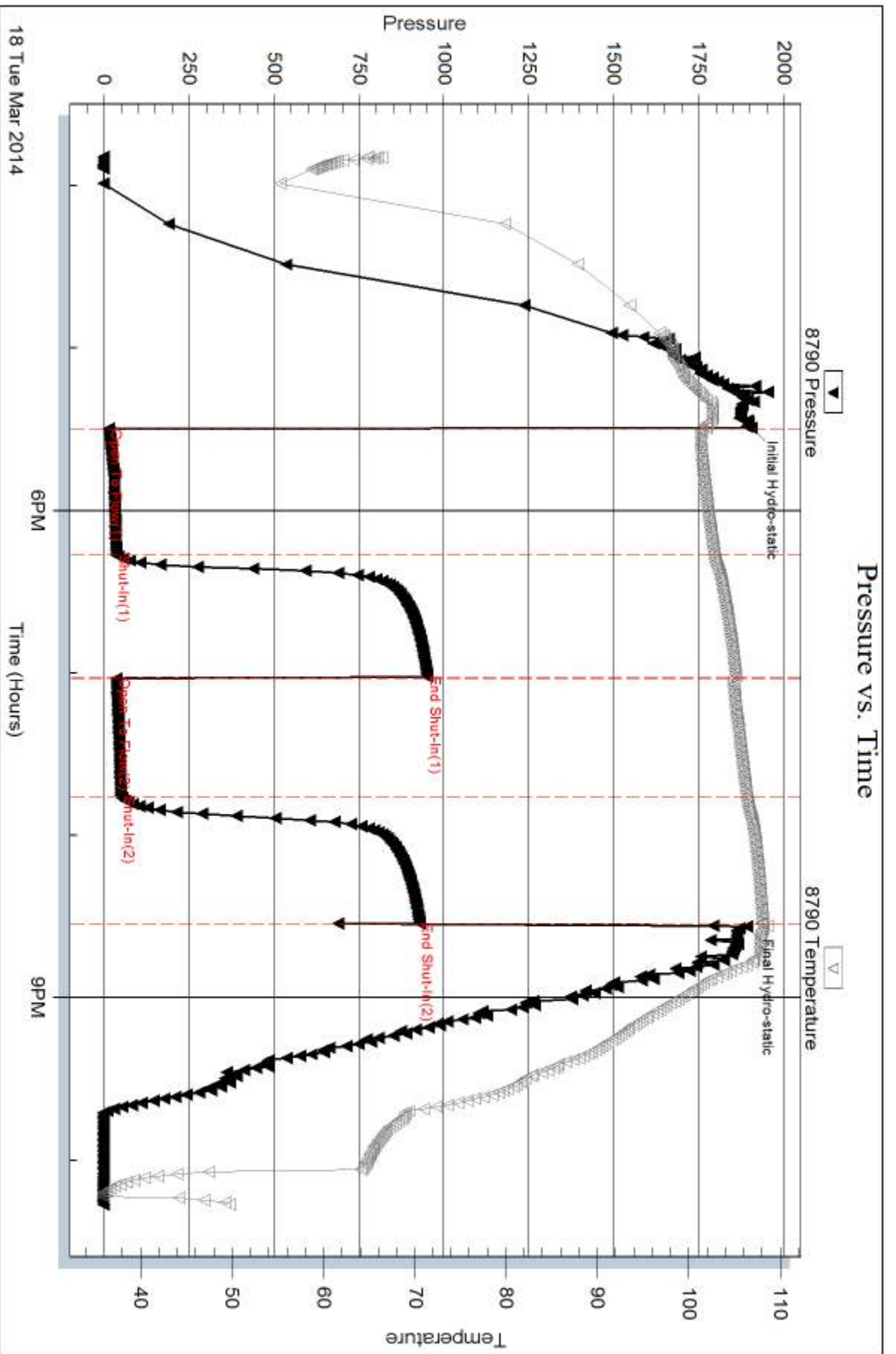
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

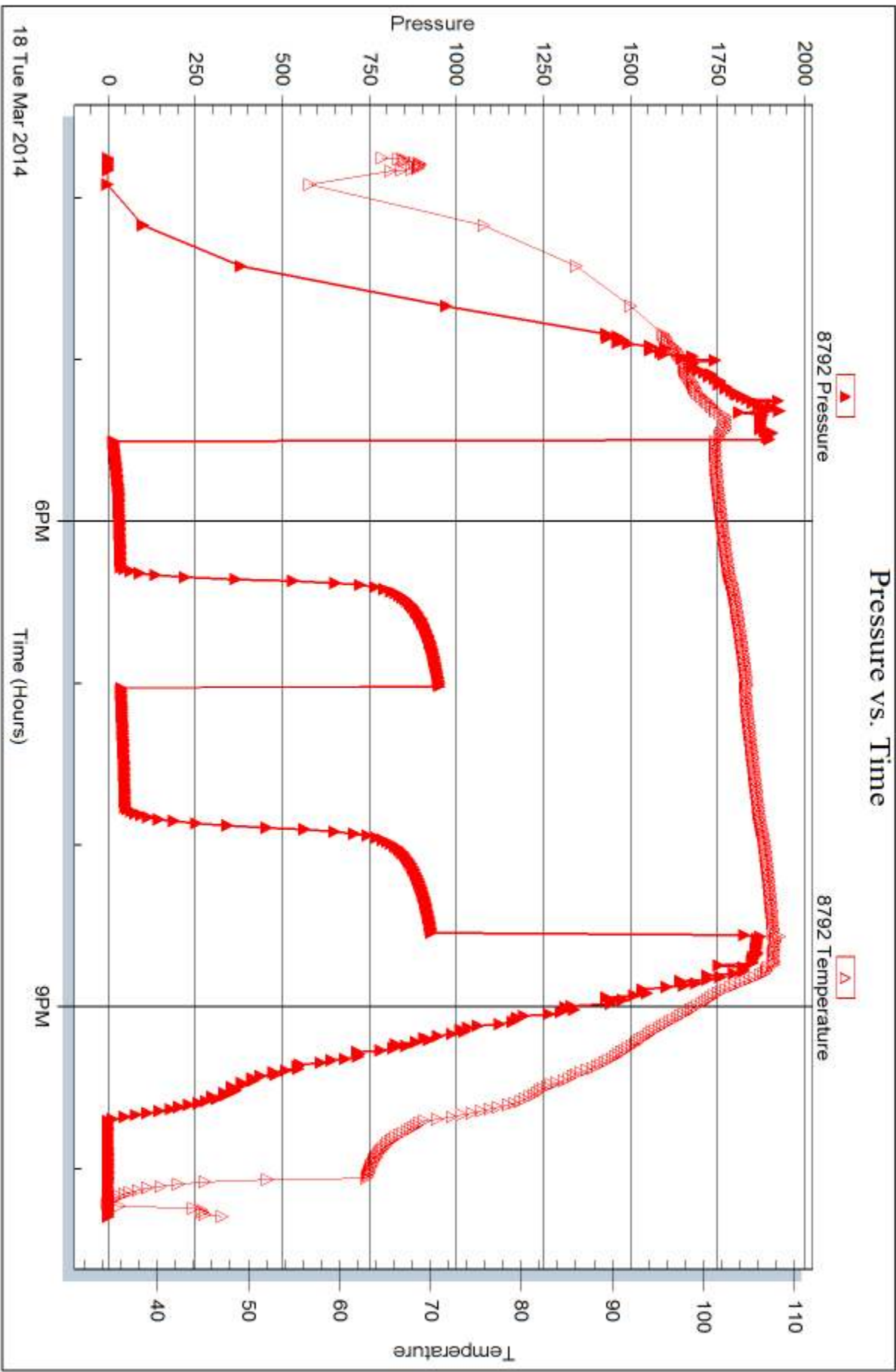


Serial #: 8792

Outside H & C Oil Oper. Inc.

Rosalie #17-2

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 52485

Printed: 2014.03.21 @ 16:11:54



DRILL STEM TEST REPORT

Prepared For: **H & C Oil Oper. Inc.**

P.O. Box 86
Plainville, KS 67663

ATTN: Marc Downing

Rosalie #17-2

17-9s-24w Graham,KS

Start Date: 2014.03.19 @ 16:17:14

End Date: 2014.03.19 @ 21:53:44

Job Ticket #: 52486 DST #: 2

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

Printed: 2014.03.21 @ 16:11:24

H & C Oil Oper. Inc. 17-9s-24w Graham,KS Rosalie #17-2 DST # 2 LKC H-J 2014.03.19



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

H & C Oil Oper. Inc.

17-9s-24w Graham,KS

P.O. Box 86
Plainville, KS 67663

Rosalie #17-2

Job Ticket: 52486

DST#: 2

ATTN: Marc Downing

Test Start: 2014.03.19 @ 16:17:14

GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 18:13:44

Time Test Ended: 21:53:44

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Reynolds

Unit No: 68

Interval: 3927.00 ft (KB) To 3992.00 ft (KB) (TVD)

Reference Elevations: 2479.00 ft (KB)

Total Depth: 3992.00 ft (KB) (TVD)

2473.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 8790

Inside

Press@RunDepth: 40.05 psig @ 3931.50 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.03.19

End Date:

2014.03.19

Last Calib.:

2014.03.19

Start Time: 16:17:19

End Time:

21:53:43

Time On Btm:

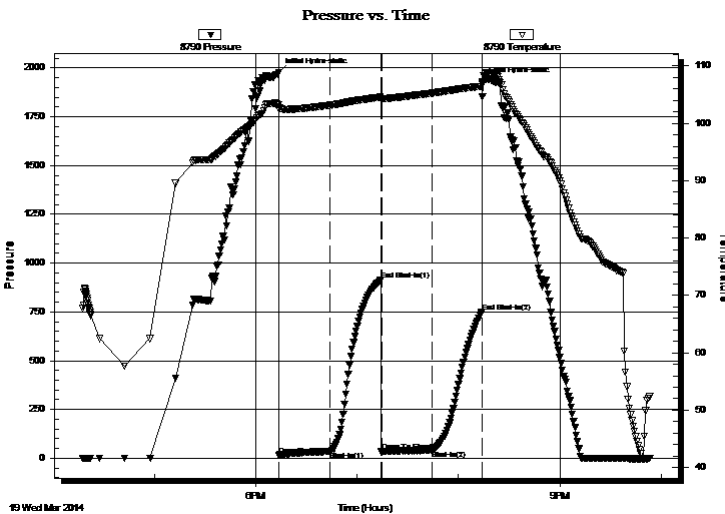
2014.03.19 @ 18:13:29

Time Off Btm:

2014.03.19 @ 20:13:59

TEST COMMENT: IF: Weak blow . surf. - 1"
IS: No blow
FF: Weak blow . surf. - 1 1/2"
FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1977.82	103.21	Initial Hydro-static
1	15.24	102.51	Open To Flow (1)
31	33.36	103.15	Shut-In(1)
61	912.88	104.54	End Shut-In(1)
61	34.79	104.30	Open To Flow (2)
91	40.05	105.26	Shut-In(2)
121	747.53	106.45	End Shut-In(2)
121	1929.73	106.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCM 10%o, 90%m	0.57
0.00	free oil in hyd. tool	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



DRILL STEM TEST REPORT

H & C Oil Oper. Inc.

17-9s-24w Graham, KS

P.O. Box 86
Plainville, KS 67663

Rosalie #17-2

ATTN: Marc Downing

Job Ticket: 52486 **DST#: 2**
Test Start: 2014.03.19 @ 16:17:14

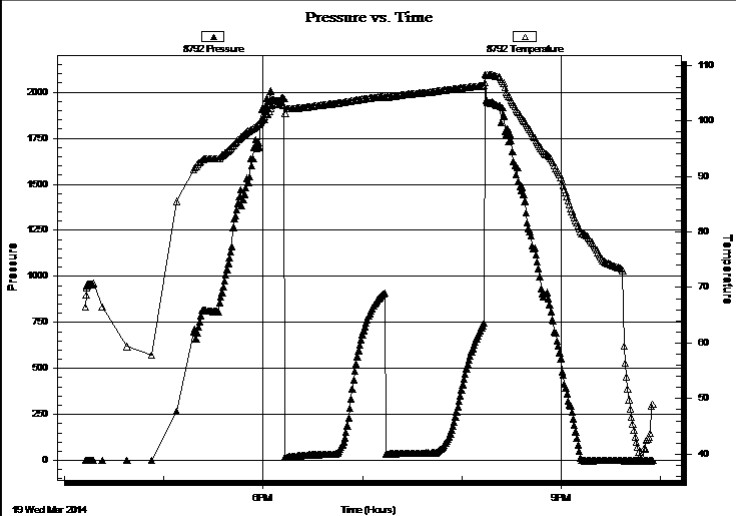
GENERAL INFORMATION:

Formation: **LKC H-J**
 Deviated: No Whipstock: 0.00 ft (KB)
 Time Tool Opened: 18:13:44
 Time Test Ended: 21:53:44
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ryan Reynolds
 Unit No: 68
 Interval: **3927.00 ft (KB) To 3992.00 ft (KB) (TVD)**
 Reference Elevations: 2479.00 ft (KB)
 Total Depth: 3992.00 ft (KB) (TVD)
 2473.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 6.00 ft

Serial #: 8792 **Outside**

Press@RunDepth: psig @ 3931.50 ft (KB)	Capacity: 8000.00 psig
Start Date: 2014.03.19	End Date: 2014.03.19
Start Time: 16:12:43	End Time: 21:55:37
	Last Calib.: 2014.03.19
	Time On Btm:
	Time Off Btm:

TEST COMMENT: IF: Weak blow . surf. - 1"
 IS: No blow
 FF: Weak blow . surf. - 1 1/2"
 FS: No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCM 10%o, 90%m	0.57
0.00	free oil in hyd. tool	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m³/d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H & C Oil Oper. Inc.

17-9s-24w Graham,KS

P.O. Box 86
Plainville, KS 67663

Rosalie #17-2

Job Ticket: 52486

DST#: 2

ATTN: Marc Downing

Test Start: 2014.03.19 @ 16:17:14

Tool Information

Drill Pipe:	Length: 3901.00 ft	Diameter: 3.80 inches	Volume: 54.72 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 54.87 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3927.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	65.00 ft			
Tool Length:	85.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3908.00	
Shut In Tool	5.00			3913.00	
Hydraulic tool	5.00			3918.00	
Packer	5.00			3923.00	20.00 Bottom Of Top Packer
Packer	4.00			3927.00	
Stubb	1.00			3928.00	
Perforations	3.00			3931.00	
Change Over Sub	0.50			3931.50	
Recorder	0.00	8790	Inside	3931.50	
Recorder	0.00	8792	Outside	3931.50	
Drill Pipe	30.50			3962.00	
Change Over Sub	1.00			3963.00	
Perforations	26.00			3989.00	
Bullnose	3.00			3992.00	65.00 Bottom Packers & Anchor

Total Tool Length: 85.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H & C Oil Oper. Inc.

17-9s-24w Graham,KS

P.O. Box 86
Plainville, KS 67663

Rosalie #17-2

Job Ticket: 52486

DST#: 2

ATTN: Marc Downing

Test Start: 2014.03.19 @ 16:17:14

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 10.00 lb/gal

Viscosity: 52.00 sec/qt

Water Loss: 5.99 in³

Resistivity: ohm.m

Salinity: 1200.00 ppm

Filter Cake: 0.02 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: 1200 ppm

deg API

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	OCM 10%o, 90%m	0.568
0.00	free oil in hyd. tool	0.000

Total Length: 60.00 ft Total Volume: 0.568 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

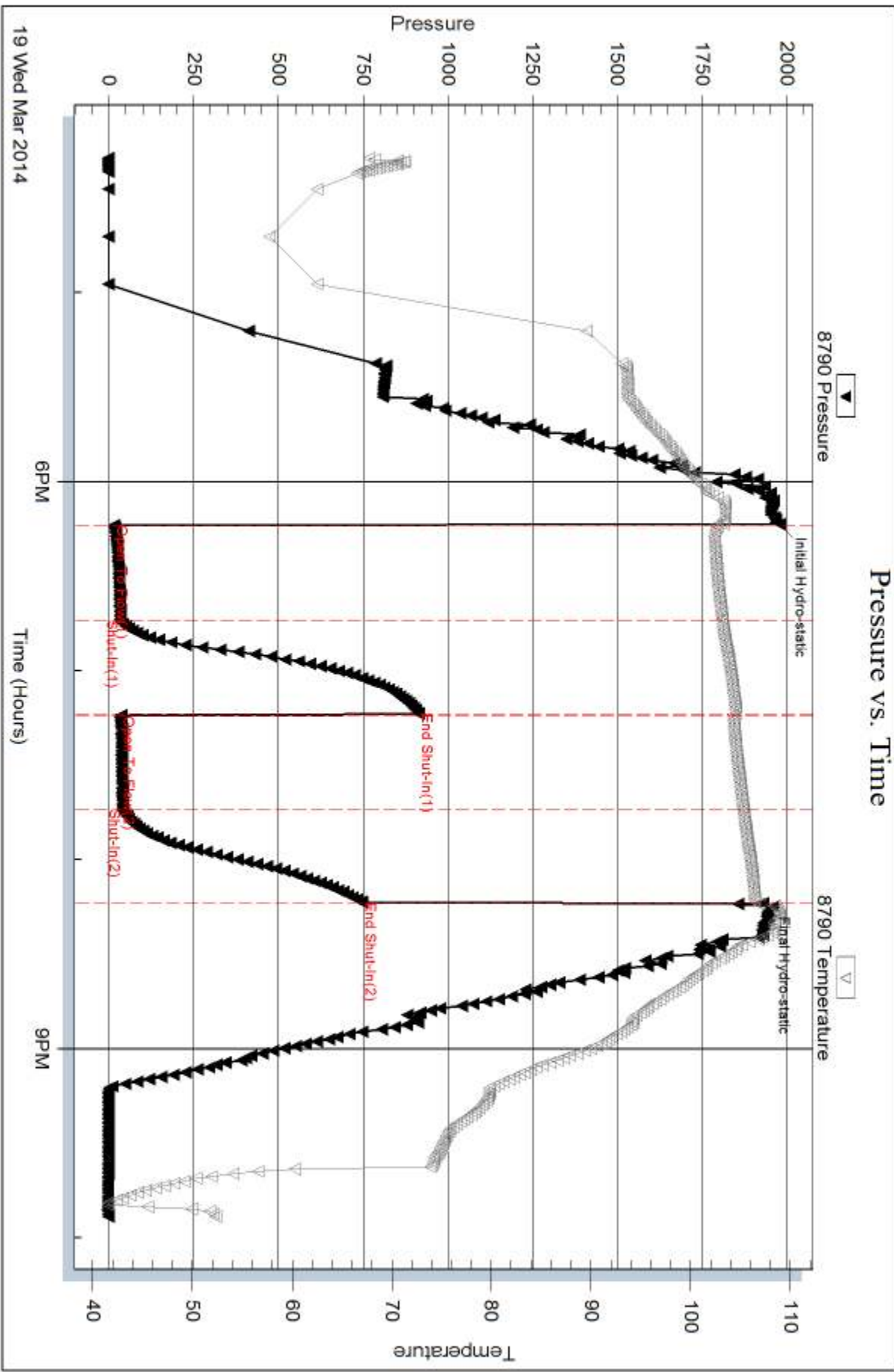
Serial #: 8790

Inside

H & C Oil Oper. Inc.

Rosalie #17-2

DST Test Number: 2

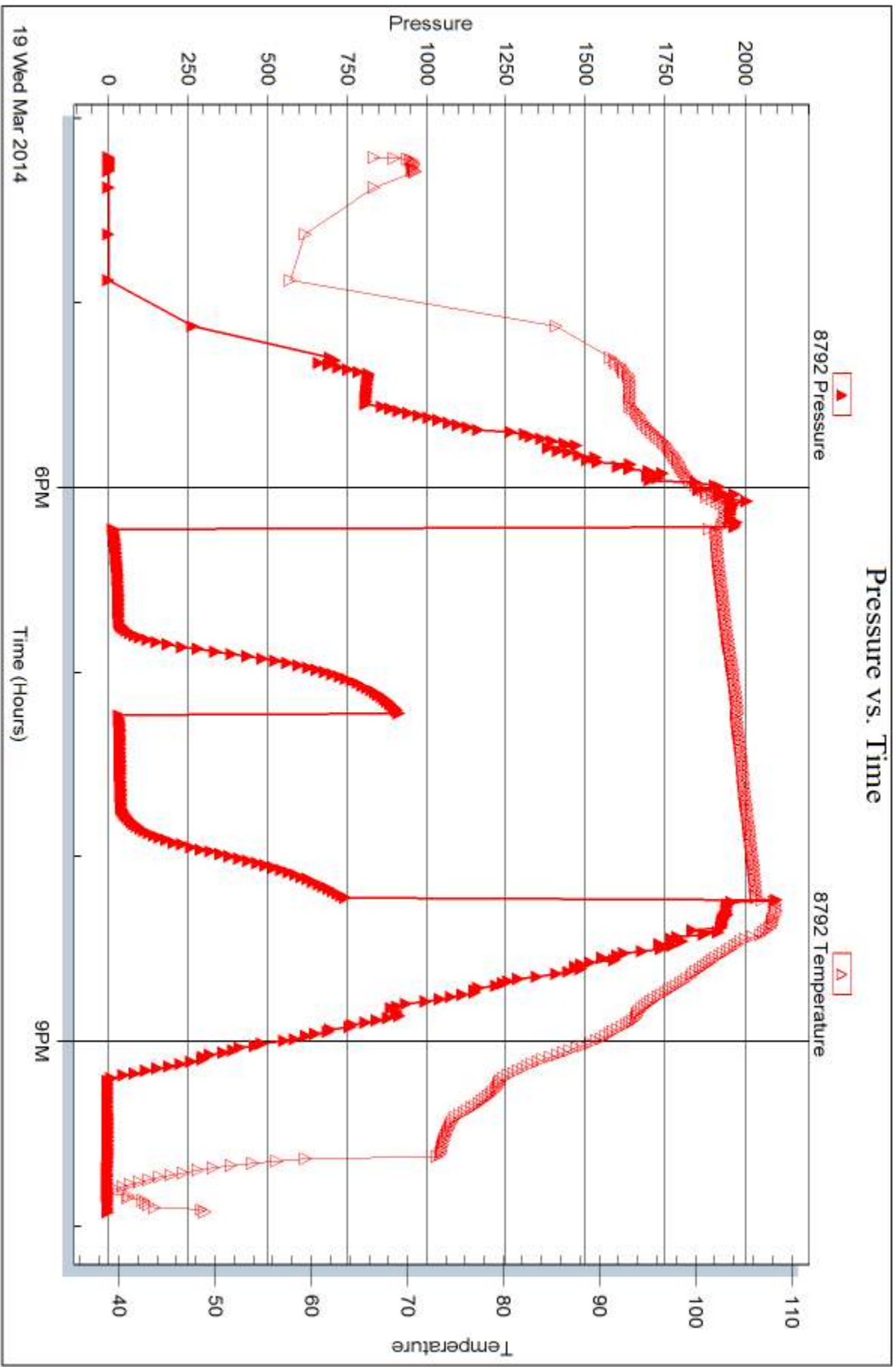


Serial #: 8792

Outside H & C Oil Oper. Inc.

Rosalie #17-2

DST Test Number: 2



19 Wed Mar 2014

Trilobite Testing, Inc

Ref. No: 52486

Printed: 2014.03.21 @ 16:11:26



DRILL STEM TEST REPORT

Prepared For: **H & C Oil Oper. Inc.**

P.O. Box 86
Plainville, KS 67663

ATTN: Marc Downing

Rosalie #17-2

17-9s-24w Graham,KS

Start Date: 2014.03.20 @ 08:25:10

End Date: 2014.03.20 @ 15:12:10

Job Ticket #: 52487 DST #: 3

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

Printed: 2014.03.21 @ 16:10:40

H & C Oil Oper. Inc. 17-9s-24w Graham,KS Rosalie #17-2 DST # 3 LKC K-L 2014.03.20



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

H & C Oil Oper. Inc.

17-9s-24w Graham,KS

P.O. Box 86
Plainville, KS 67663

Rosalie #17-2

Job Ticket: 52487

DST#: 3

ATTN: Marc Downing

Test Start: 2014.03.20 @ 08:25:10

GENERAL INFORMATION:

Formation: **LKC K-L**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 10:11:10

Time Test Ended: 15:12:10

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Reynolds

Unit No: 68

Interval: 3995.00 ft (KB) To 4048.00 ft (KB) (TVD)

Reference Elevations: 2479.00 ft (KB)

Total Depth: 4048.00 ft (KB) (TVD)

2473.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 8790

Inside

Press@RunDepth: 55.65 psig @ 3998.50 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.03.20

End Date:

2014.03.20

Last Calib.:

2014.03.20

Start Time: 08:25:15

End Time:

15:12:09

Time On Btm:

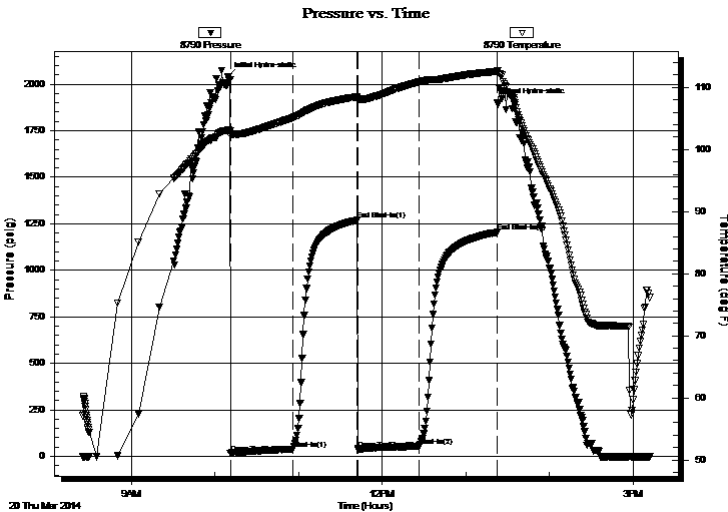
2014.03.20 @ 10:09:25

Time Off Btm:

2014.03.20 @ 13:22:40

TEST COMMENT: IF: Good blow . 1/2" - 8"
IS: No blow
FF: Fair blow . surf. - 5"
FS: No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2042.52	103.13	Initial Hydro-static
2	15.09	102.25	Open To Flow (1)
47	39.20	105.11	Shut-In(1)
93	1268.98	108.48	End Shut-In(1)
94	39.63	108.12	Open To Flow (2)
138	55.65	110.91	Shut-In(2)
193	1204.33	112.58	End Shut-In(2)
194	1902.14	112.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM 5%g, 40%o, 55%m	0.57
65.00	CGO 20%g, 80%o	0.91
0.00	180' GIP	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

H & C Oil Oper. Inc.

17-9s-24w Graham,KS

P.O. Box 86
Plainville, KS 67663

Rosalie #17-2

Job Ticket: 52487

DST#: 3

ATTN: Marc Downing

Test Start: 2014.03.20 @ 08:25:10

GENERAL INFORMATION:

Formation: **LKC K-L**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 10:11:10

Time Test Ended: 15:12:10

Test Type: Conventional Bottom Hole (Reset)

Tester: Ryan Reynolds

Unit No: 68

Interval: 3995.00 ft (KB) To 4048.00 ft (KB) (TVD)

Reference Elevations: 2479.00 ft (KB)

Total Depth: 4048.00 ft (KB) (TVD)

2473.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 8792 Outside

Press@RunDepth: psig @ 3998.50 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.03.20 End Date: 2014.03.20

Last Calib.: 2014.03.20

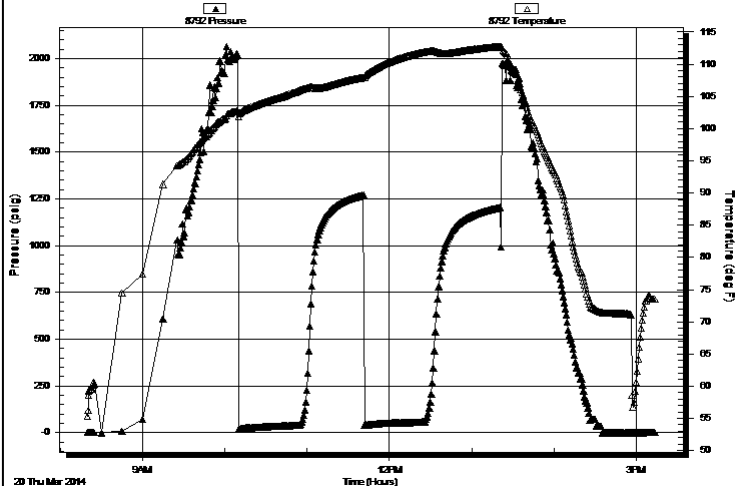
Start Time: 08:20:06 End Time: 15:13:30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Good blow . 1/2" - 8"
IS: No blow
FF: Fair blow . surf. - 5"
FS: No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM 5%g, 40%o, 55%m	0.57
65.00	CGO 20%g, 80%o	0.91
0.00	180' GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (m ³ /d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H & C Oil Oper. Inc.

17-9s-24w Graham,KS

P.O. Box 86
Plainville, KS 67663

Rosalie #17-2

Job Ticket: 52487

DST#: 3

ATTN: Marc Downing

Test Start: 2014.03.20 @ 08:25:10

Tool Information

Drill Pipe:	Length: 3963.00 ft	Diameter: 3.80 inches	Volume: 55.59 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 63000.00 lb
			<u>Total Volume: 55.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	3995.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	53.00 ft			
Tool Length:	73.00 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			3976.00	
Shut In Tool	5.00			3981.00	
Hydraulic tool	5.00			3986.00	
Packer	5.00			3991.00	20.00 Bottom Of Top Packer
Packer	4.00			3995.00	
Stubb	1.00			3996.00	
Perforations	2.00			3998.00	
Change Over Sub	0.50			3998.50	
Recorder	0.00	8790	Inside	3998.50	
Recorder	0.00	8792	Outside	3998.50	
Drill Pipe	30.50			4029.00	
Change Over Sub	1.00			4030.00	
Perforations	15.00			4045.00	
Bullnose	3.00			4048.00	53.00 Bottom Packers & Anchor

Total Tool Length: 73.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H & C Oil Oper. Inc.

17-9s-24w Graham,KS

P.O. Box 86
Plainville, KS 67663

Rosalie #17-2

Job Ticket: 52487

DST#: 3

ATTN: Marc Downing

Test Start: 2014.03.20 @ 08:25:10

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:

1600 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	GOCM 5%g, 40%o, 55%m	0.568
65.00	CGO 20%g, 80%o	0.912
0.00	180' GIP	0.000

Total Length: 125.00 ft

Total Volume: 1.480 bbl

Num Fluid Samples: 0

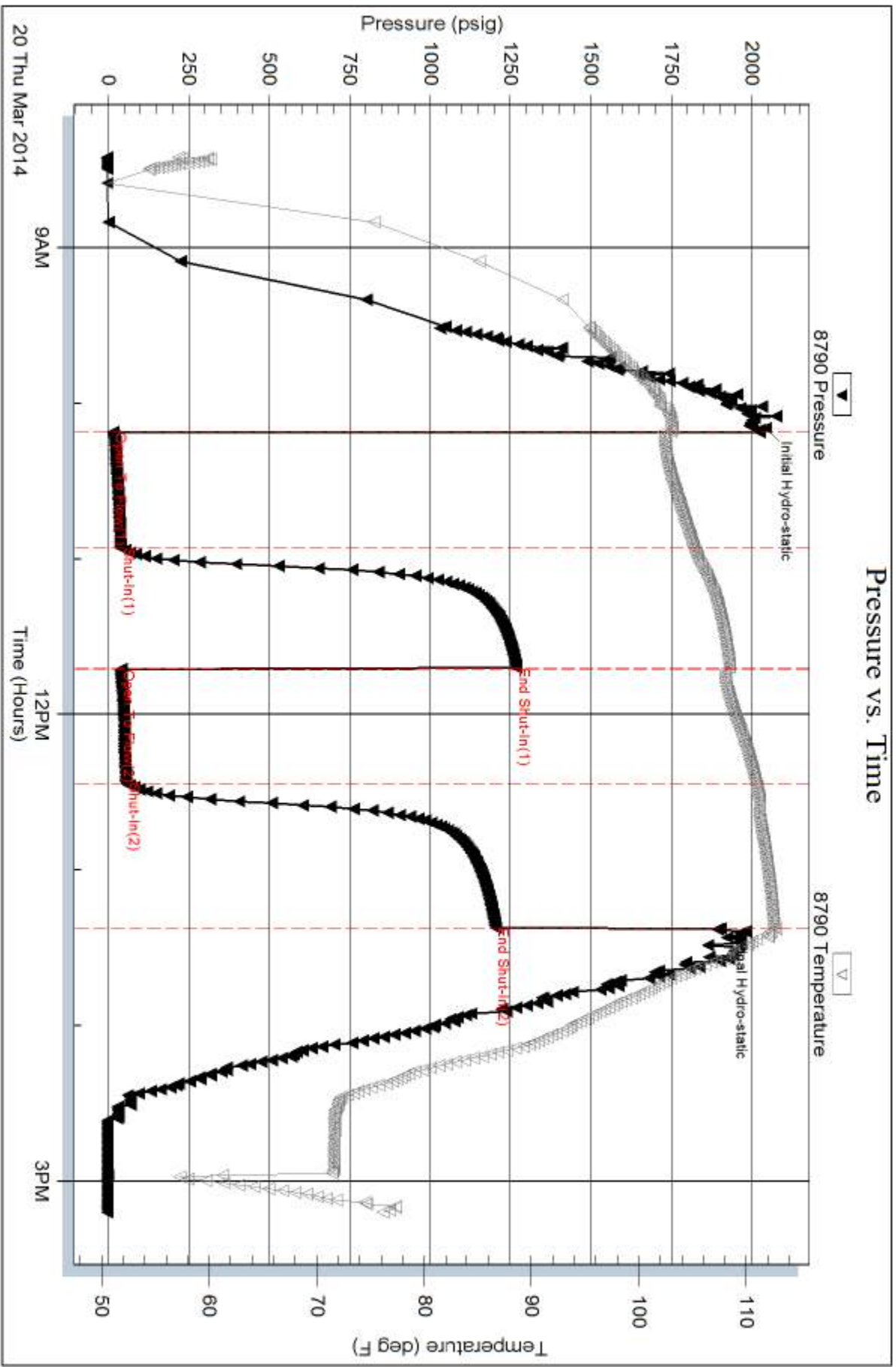
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

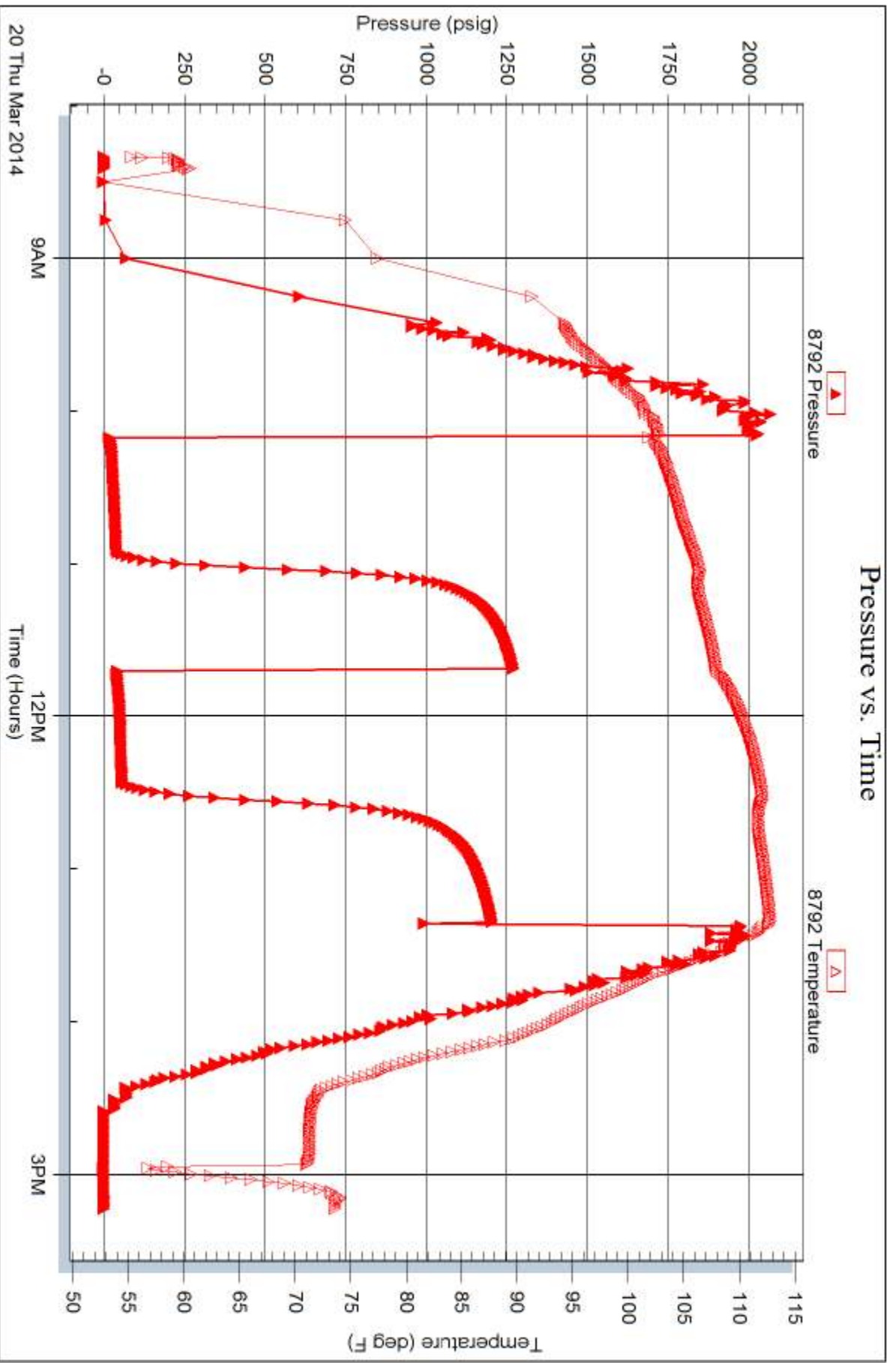


Serial #: 8792

Outside H & C Oil Oper. Inc.

Rosalie #17-2

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 52487

Printed: 2014.03.21 @ 16:10:43



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52485

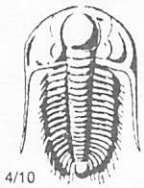
Well Name & No. Rosalie 17-2 Test No. 1 Date 3-18-14
 Company H+C Oil Oper. Inc. Elevation 2479 KB 2473 GL
 Address P.O. Box 86 Plainville, KS 67663-0086
 Co. Rep / Geo. Marc Downing Rig American Eagle #2
 Location: Sec. 17 Twp. 9s. Rge. 24w. Co. Graham State Ks

Interval Tested 3822-3864 Zone Tested LHC "H"
 Anchor Length 42 Drill Pipe Run 3778 Mud Wt. 9.4
 Top Packer Depth 3817 Drill Collars Run 30 Vis 55
 Bottom Packer Depth 3822 Wt. Pipe Run Ø WL 7.2
 Total Depth 3864 Chlorides 1500 ppm System LCM 1 #
 Blow Description IF: Weak blow. Surf. - 2" ISI: No blow.
FF: Weak blow. Surf - 1" FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>OWCM</u>	<u>3</u>	<u>19</u>	<u>78</u>	
<u>60</u>	<u>VSLI OLWM</u>	<u>Trc</u>	<u>50</u>	<u>50</u>	
<u>1</u>	<u>Clean oil</u>	<u>100</u>			

Rec Total 81 BHT 108 Gravity N/C API RW 2 @ 42 °F Chlorides 63000 ppm
 (A) Initial Hydrostatic 1904 Test 1150 T-On Location 1430
 (B) First Initial Flow 13 Jars _____ T-Started 1549
 (C) First Final Flow 35 Safety Joint _____ T-Open 1730
 (D) Initial Shut-In 949 Circ Sub _____ T-Pulled 2030
 (E) Second Initial Flow 37 Hourly Standby _____ T-Out 2217
 (F) Second Final Flow 48 Mileage 114rt 176.70 Comments _____
 (G) Final Shut-In 926 Sampler _____
 (H) Final Hydrostatic 1891 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45
 Sub Total 1326.70
 Total 1326.70
 MP/DST Disc't _____

Approved By _____ Our Representative Ryan Reynolds
 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. 52486

Well Name & No. Rosalie 17-2 Test No. 2 Date 3-19-14
 Company H+C Oil Oper, Inc. Elevation 2479 KB 2473 GL
 Address P.O. Box 86 Plainville, KS 67663 - 0086
 Co. Rep / Geo. Marc Downing Rig American Eagle #2
 Location: Sec. 17 Twp. 9s. Rge. 24w. Co. Graham State KS

Interval Tested 3927-3992 Zone Tested LKC H-J
 Anchor Length 65 Drill Pipe Run 3901 Mud Wt. 9.5
 Top Packer Depth 3922 Drill Collars Run 30 Vis 52
 Bottom Packer Depth 3927 Wt. Pipe Run Ø WL 6.0
 Total Depth 3992 Chlorides 1200 ppm System LCM 2#
 Blow Description IF: Weak blow surf - 1" ISI: No blow
FF: Weak blow surf - 1 1/2" FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>OCM</u>	<u>10</u>		<u>90</u>	
Rec	Feet of <u>(Free oil in hyd. Tool)</u>	%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 60 BHT 107 Gravity N/C API RW N/C @ N/C °F Chlorides 1200 ppm
 (A) Initial Hydrostatic 1978 Test 1326.70 T-On Location 1530
 (B) First Initial Flow 15 Jars _____ T-Started 1617
 (C) First Final Flow 33 Safety Joint _____ T-Open 1814
 (D) Initial Shut-In 913 Circ Sub _____ T-Pulled 2015
 (E) Second Initial Flow 35 Hourly Standby _____ T-Out 2154
 (F) Second Final Flow 40 Mileage 176.70 Comments _____
 (G) Final Shut-In 748 Sampler _____
 (H) Final Hydrostatic 1930 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1326.70
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1326.70

Approved By _____ Our Representative Ryan Reynolds
 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. 52487

Well Name & No. Rosalie 17.2 Test No. 3 Date 3-20-14
 Company H+C Oil Oper. Inc. Elevation 2479 KB 2473 GL
 Address P.O. Box 86 Plainville, KS 67663-0086
 Co. Rep / Geo. Marc Downing Rig Am. Eagle #2
 Location: Sec. 17 Twp. 9s. Rge. 24w. Co. Graham State KS

Interval Tested 3995-4048 Zone Tested LKC K+L
 Anchor Length 53 Drill Pipe Run 3963 Mud Wt. 9.5
 Top Packer Depth 3990 Drill Collars Run 30 Vis 54
 Bottom Packer Depth 3995 Wt. Pipe Run Ø WL 7.2
 Total Depth 4048 Chlorides 1600 ppm System LCM 2#
 Blow Description IF: Good blow. 1/2" - 8" ISI: No blow
FF: Fair blow, surf. - 5" FSI: No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>180</u>	<u>GIP</u>	<u>100</u>			
<u>65</u>	<u>Clean gassy oil</u>	<u>20</u>	<u>80</u>		
<u>60</u>	<u>GOCM</u>	<u>5</u>	<u>40</u>	<u>55</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 125 BHT 113 Gravity 36 API RW n/c @ n/c °F Chlorides 1600 ppm

(A) Initial Hydrostatic 2043 Test 1250 T-On Location 0745
 (B) First Initial Flow 15 Jars _____ T-Started 0825
 (C) First Final Flow 39 Safety Joint _____ T-Open 1011
 (D) Initial Shut-In 1269 Circ Sub _____ T-Pulled 1311
 (E) Second Initial Flow 40 Hourly Standby _____ T-Out 1512
 (F) Second Final Flow 56 Mileage 176.70 Comments _____
 (G) Final Shut-In 1204 Sampler _____
 (H) Final Hydrostatic 1902 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

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

Sub Total 1326.70 Sub Total 0
 Total 1326.70 MP/DST Disc't _____

Approved By _____ Our Representative Ryan Reynolds
 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. 006

Date	3-22-14	Sec.	17	Twp.	9 24	Range	24	County	Graham	State	KS	On Location		Finish	2:45 AM
Lease	Rozahr														
Contractor	American Energy														
Type Job	Production string														
Hole Size	7 7/8														
Csg.	5 1/2														
Tbg. Size															
Tool															
Cement Left in Csg.	23.08	Shoe Joint	23.08												
Meas Line	Displace		994 BL												
EQUIPMENT															
Pumptrk	18	No.	Cement	0	Help	0									
Bulktrk	19	No.	Driver	0	Driver	0									
Bulktrk	1	No.	Driver	0	Driver	0									
JOB SERVICES & REMARKS															
Remarks:															
Rat Hole	325K														
Mouse Hole															
Centralizers															
Baskets															
DN or Port Collar															
5'K set @ 4089. Buffalo 4665.															
Est. Connection - Pump 555 gal mud clar															
Cement Ratchet 30SK Cement 5'12															
with 655K Clear lines & Distance Plus															
Pkg handled @ 1800#. Hold. Release															
Pressure Dry.															
Cement Circulated!															
30SK to Pt															
PUMPTRK CHARGE															
Pumptrk Charge															
Mileage	36														
Tax															
Discount															
Total Charge															

Signature: *Bob Short*

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. 7131

Date <u>3-15-14</u>	Sec. <u>17</u>	Twp. <u>9</u>	Range <u>24</u>	County <u>Graham</u>	State <u>KS</u>	On Location	Finish <u>2:15 AM</u>
Lease <u>Rosalie</u>		Well No. <u>17-2</u>		Location <u>Red line & 283, w to 180 Rd, 3N to k Rd 1W,</u>			
Contractor <u>American Eagle #2</u>		Owner <u>SN2</u>					
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.							
Type Job <u>Surface</u>	Charge <u>HQC</u>						
Hole Size <u>12 1/4</u>	T.D. <u>264</u>	Street					
Csg. <u>8 7/8</u>	Depth <u>264</u>	City					
Tbg. Size	Depth	State					
Tool	Depth	The above was done to satisfaction and supervision of owner agent or contractor.					
Cement Left in Csg.	Shoe Joint <u>20</u>	Cement Amount Ordered <u>160 com, 3% cc, 2 % gel</u>					
Meas Line	Displace <u>15 1/2 bbl</u>	Common <u>160</u>					
EQUIPMENT							
Pumptrk <u>17</u>	No. Cementer Helper <u>NICK</u>	Poz. Mix					
Bulktrk <u>19</u>	No. Driver <u>Loante W.</u>	Gel. <u>3</u>					
Bulktrk <u>P4</u>	No. Driver <u>Travis</u>	Calcium <u>5</u>					
JOB SERVICES & REMARKS							
Remarks: <u>Cement did circulate</u>							
Rat Hole	Salt						
Mouse Hole	Flowseal						
Centralizers	Kol-Seal						
Baskets	Mud CLR 48						
D/V or Port Collar	CFL-117 or CD110 CAF 38						
	Sand						
	Handling <u>168</u>						
	Mileage						
	FLOAT EQUIPMENT						
	Guide Shoe						
	Centralizer						
	Baskets						
	AFU Inserts						
	Float Shoe						
	Latch Down						
	Pumptrk Charge <u>Surface</u>						
	Mileage <u>36</u>						
						Tax	
						Discount	
						Total Charge	

X Signature

Quachun Kaban

Quality Oilwell Cementing

Conservation Division
266 N. Main St., Ste. 220
Wichita, KS 67202-1513



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Shari Feist Albrecht, Chair
Jay Scott Emler, Commissioner
Pat Apple, Commissioner

Sam Brownback, Governor

October 14, 2014

Charles R. Ramsay
H & C Oil Operating Inc.
PO BOX 86
PLAINVILLE, KS 67663-0086

Re: ACO-1
API 15-065-24016-00-00
Rosalie 17-2
NW/4 Sec.17-09S-24W
Graham County, Kansas

Dear Charles R. Ramsay:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 3/15/2014 and the ACO-1 was received on October 06, 2014 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department