



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1111850
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: _____



1111850

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: 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	Bentley 36-2
Doc ID	1111850

All Electric Logs Run

Dual induction log
Sonic Cement Bond Log
Dual Compensated Porosity log
Microresistivity Log

Form	ACO1 - Well Completion
Operator	H & C Oil Operating Inc.
Well Name	Bentley 36-2
Doc ID	1111850

Tops

Name	Top	Datum
Top Anhydrite	1948	+573
Base Anhydrite	1982	+539
Heebner	3706	-1185
Lansing	3742	-1221
Stark	3996	-1475
BKC	4061	-1540
Marmaton	4084	-1563
Fort Scott	4247	-1726
Cherokee	4272	-1751
Mississippi	4344	-1823
Warsaw	4349	-1828

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



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

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

March 06, 2013

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

Re: ACO1
API 15-063-22077-00-00
Bentley 36-2
SE/4 Sec.36-15S-28W
Gove County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Charles Ramsay



DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

Bentley #36-2

36-15s-28w Gove,KS

Start Date: 2013.01.22 @ 14:56:00

End Date: 2013.01.22 @ 23:31:10

Job Ticket #: 49991 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.01.31 @ 08:12:05



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating Inc.

36-15s-28w Gove,KS

PO Box 86
Plainville KS 67663

Bentley #36-2

Job Ticket: 49991

DST#: 1

ATTN: Marc Downing

Test Start: 2013.01.22 @ 14:56:00

GENERAL INFORMATION:

Formation: **LKC " E & F "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:55:40

Time Test Ended: 23:31:10

Test Type: Conventional Bottom Hole (Initial)

Tester: Will MacLean

Unit No: 58

Interval: 3822.00 ft (KB) To 3854.00 ft (KB) (TVD)

Reference Elevations: 2521.00 ft (KB)

Total Depth: 3854.00 ft (KB) (TVD)

2510.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8674

Inside

Press @ Run Depth: 336.95 psig @ 3823.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.22

End Date:

2013.01.22

Last Calib.:

2013.01.22

Start Time: 14:56:00

End Time:

23:31:10

Time On Btm:

2013.01.22 @ 17:55:25

Time Off Btm:

2013.01.22 @ 20:57:39

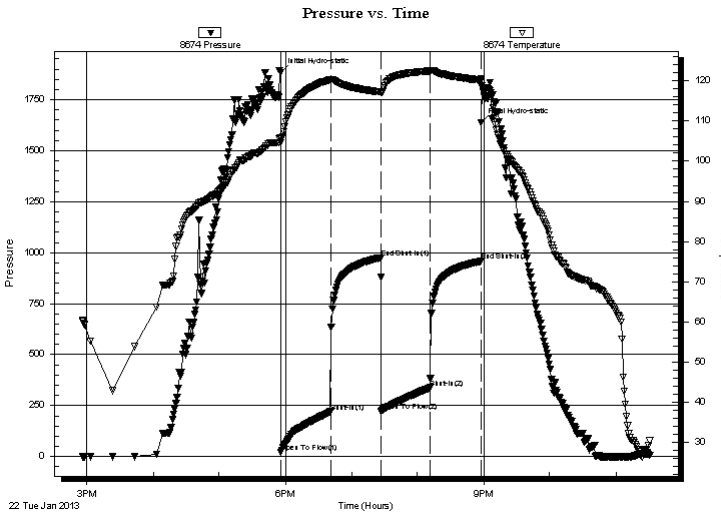
TEST COMMENT: IF- Surface Blow Built to BOB in 12 3/4 min

IS- No Blow

FF- Weak Surface Built to 4"

FS- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1883.47	105.73	Initial Hydro-static
1	21.34	104.67	Open To Flow (1)
46	219.36	120.29	Shut-In(1)
91	974.57	117.23	End Shut-In(1)
92	223.48	117.08	Open To Flow (2)
136	336.95	122.47	Shut-In(2)
182	957.53	120.15	End Shut-In(2)
183	1637.67	120.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	MCW 20% m 80% w with Skim of Oil on	1.21
372.00	MCW 8% m 92% w	5.22
89.00	MCW 32% m 68% w	1.25

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc.

36-15s-28w Gove,KS

PO Box 86
Plainville KS 67663

Bentley #36-2

Job Ticket: 49991

DST#: 1

ATTN: Marc Downing

Test Start: 2013.01.22 @ 14:56:00

Tool Information

Drill Pipe:	Length: 3583.00 ft	Diameter: 3.80 inches	Volume: 50.26 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 237.00 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 4000.00 lb
			<u>Total Volume: 51.43 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3822.00 ft			Final 66000.00 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			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	
Recorder	0.00	8355	Outside	3823.00	
Recorder	0.00	8674	Inside	3823.00	
Perforations	28.00			3851.00	
Bullnose	3.00			3854.00	32.00 Bottom Packers & Anchor
Total Tool Length:	52.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc.

36-15s-28w Gove,KS

PO Box 86
Plainville KS 67663

Bentley #36-2

Job Ticket: 49991

DST#: 1

ATTN: Marc Downing

Test Start: 2013.01.22 @ 14:56:00

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:

95000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.90 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
240.00	MCW 20%m 80%w with Skim of Oil on to	1.208
372.00	MCW 8%m 92%w	5.218
89.00	MCW 32%m 68%w	1.248

Total Length: 701.00 ft Total Volume: 7.674 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

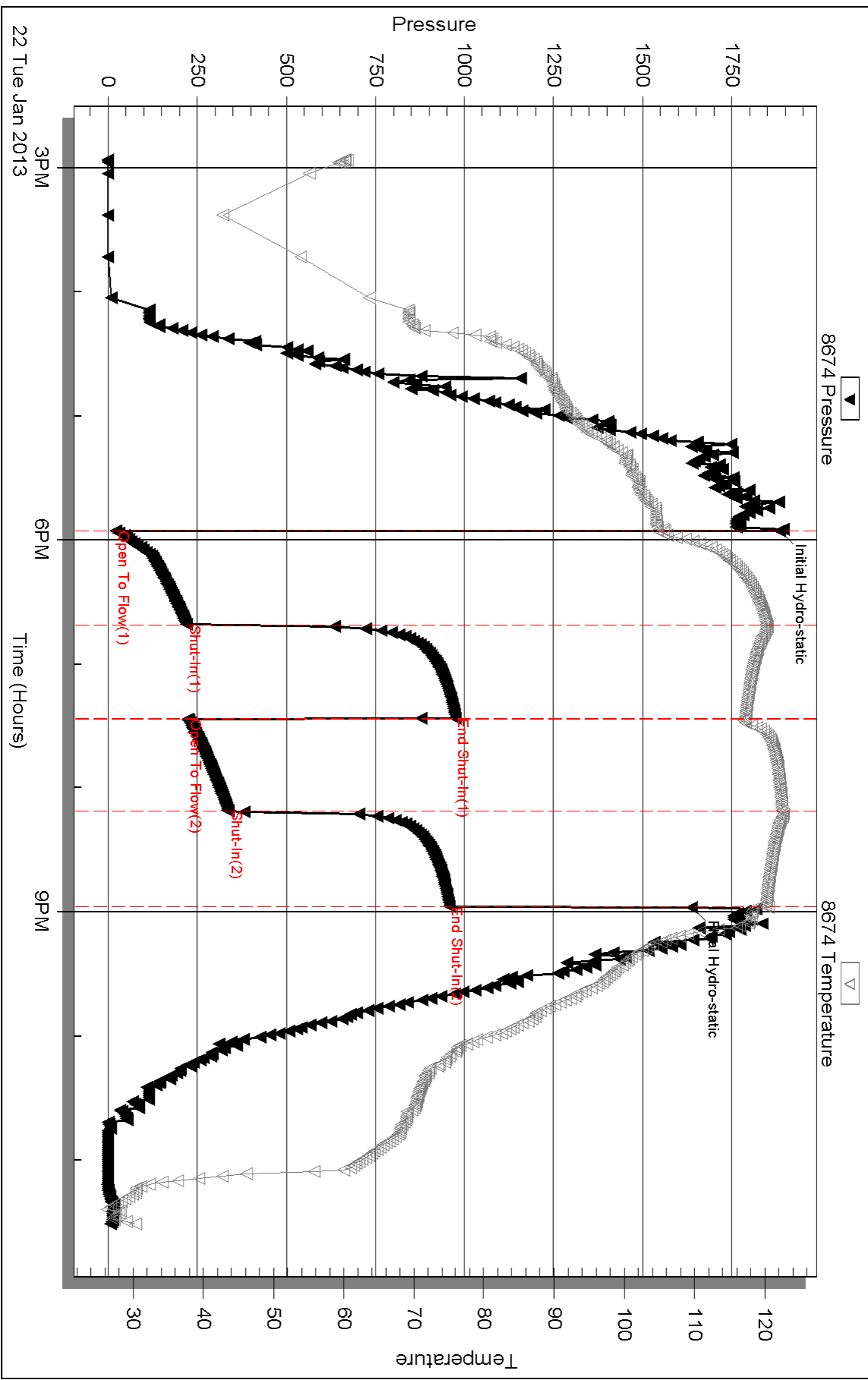
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW is .162 @ 34f = 95000

Pressure vs. Time

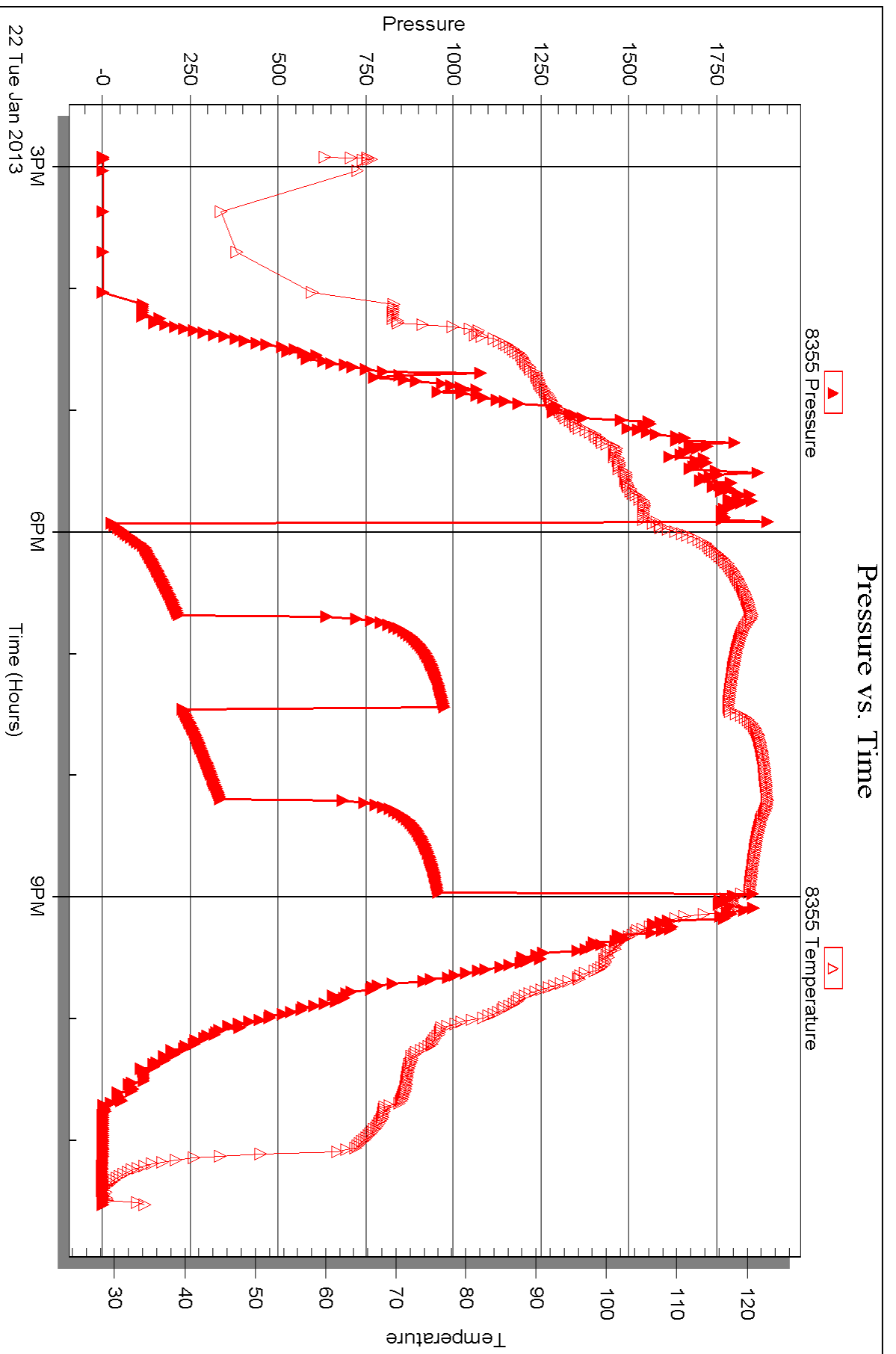


Serial #: 8355

Outside H&C Oil Operating Inc.

Bentley #36-2

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

Bentley #36-2

36-15s-28w Gove,KS

Start Date: 2013.01.23 @ 12:40:00

End Date: 2013.01.23 @ 20:57:09

Job Ticket #: 49992 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.01.31 @ 08:11:18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating Inc.

36-15s-28w Gove, KS

PO Box 86
Plainville KS 67663

Bentley #36-2

Job Ticket: 49992

DST#: 2

ATTN: Marc Downing

Test Start: 2013.01.23 @ 12:40:00

GENERAL INFORMATION:

Formation: **LKC "H-1"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:04:55

Time Test Ended: 20:57:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 3896.00 ft (KB) To 3964.00 ft (KB) (TVD)

Reference Elevations: 2521.00 ft (KB)

Total Depth: 3854.00 ft (KB) (TVD)

2510.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8674

Inside

Press @ Run Depth: 150.31 psig @ 3897.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.23

End Date:

2013.01.23

Last Calib.:

2013.01.23

Start Time: 12:40:00

End Time:

20:57:09

Time On Btm:

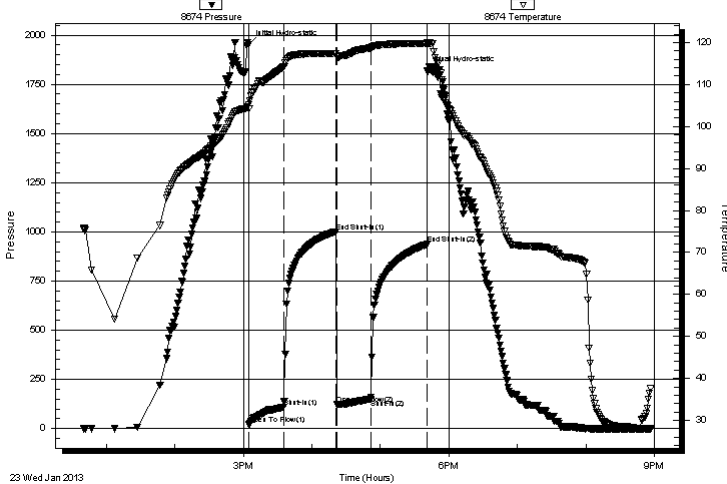
2013.01.23 @ 15:04:40

Time Off Btm:

2013.01.23 @ 17:40:54

TEST COMMENT: IF- Weak Surface Blow Built to BOB in 10 1/2 min
IS- Weak Surface Blow in 8min Built to 1/2"
FF- Weak Surface Blow Built to BOB in 11 1/2 min
FS- Weak Surface Blow in 5min Built to 3/4'

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1952.54	105.12	Initial Hydro-static
1	19.29	104.27	Open To Flow (1)
31	109.25	114.18	Shut-In(1)
76	1000.84	117.31	End Shut-In(1)
78	122.80	116.58	Open To Flow (2)
107	150.31	118.72	Shut-In(2)
156	936.21	119.71	End Shut-In(2)
157	1819.99	120.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	WMOCG 2%w 25%m 33%oil 40%g	0.30
180.00	MCOG 19%m 32%g 49%oil	0.91
62.00	MCGO 18%m 20%g 62%oil	0.87
77.00	GO 7%g 93%oil	1.08
0.00	481' of GIP	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.

36-15s-28w Gove,KS

PO Box 86
Plainville KS 67663

Bentley #36-2

Job Ticket: 49992

DST#: 2

ATTN: Marc Downing

Test Start: 2013.01.23 @ 12:40:00

Tool Information

Drill Pipe:	Length: 3645.00 ft	Diameter: 3.80 inches	Volume: 51.13 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 237.00 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 18000.00 lb
			<u>Total Volume: 52.30 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3896.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	88.00 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			3877.00	
Shut In Tool	5.00			3882.00	
Hydraulic tool	5.00			3887.00	
Packer	5.00			3892.00	20.00 Bottom Of Top Packer
Packer	4.00			3896.00	
Stubb	1.00			3897.00	
Recorder	0.00	8355	Outside	3897.00	
Recorder	0.00	8674	Inside	3897.00	
Perforations	28.00			3925.00	
Change Over Sub	1.00			3926.00	
Packer - Shale	31.00			3957.00	
Change Over Sub	1.00			3958.00	
Perforations	3.00			3961.00	
Bullnose	3.00			3964.00	68.00 Bottom Packers & Anchor

Total Tool Length: 88.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc.

36-15s-28w Gove,KS

PO Box 86
Plainville KS 67663

Bentley #36-2

Job Ticket: 49992

DST#: 2

ATTN: Marc Downing

Test Start: 2013.01.23 @ 12:40:00

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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.76 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	WMOCG 2%w 25%m 33%oil 40%g	0.295
180.00	MCOG 19%m 32%g 49%oil	0.913
62.00	MCGO 18%m 20%g 62%oil	0.870
77.00	GO 7%g 93%oil	1.080
0.00	481' of GIP	0.000

Total Length: 379.00 ft Total Volume: 3.158 bbl

Num Fluid Samples: 0

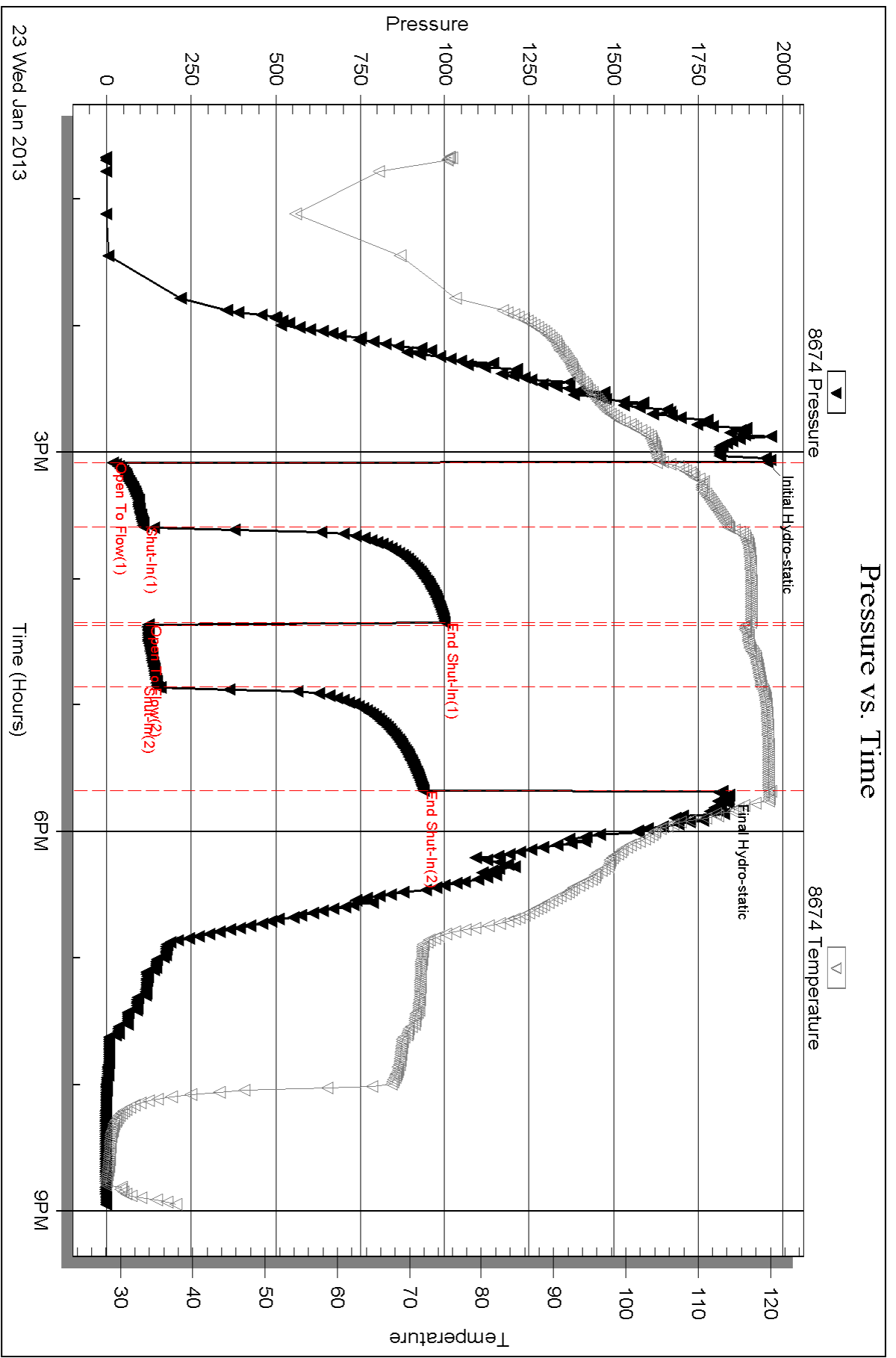
Num Gas Bombs: 0

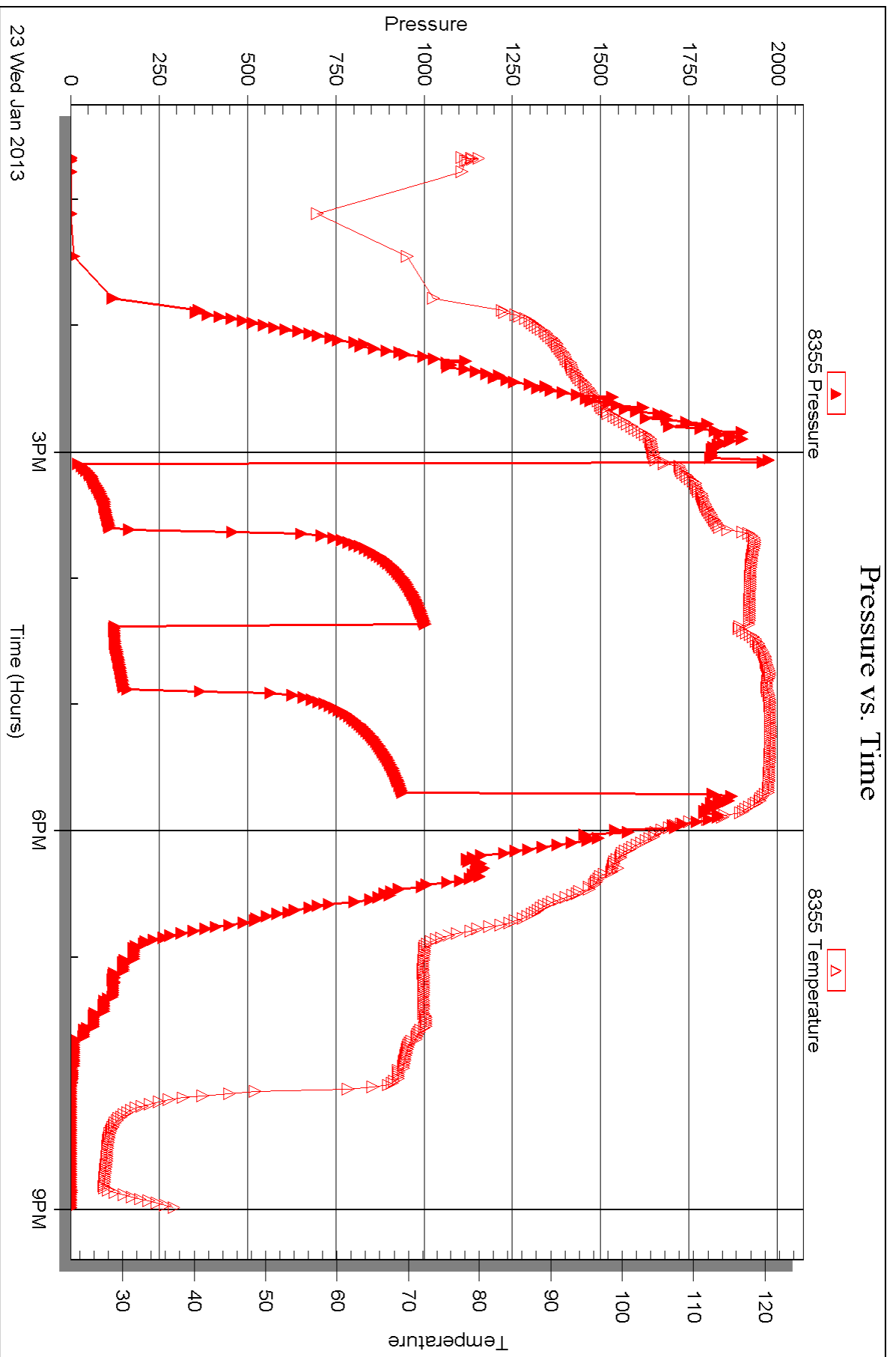
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API is 32 @ 40f = 34







DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

Bentley #36-2

36-15s-28w Gove,KS

Start Date: 2013.01.24 @ 15:18:00

End Date: 2013.01.24 @ 23:49:39

Job Ticket #: 49993 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.01.31 @ 08:09:27



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating Inc.

36-15s-28w Gove, KS

PO Box 86
Plainville KS 67663

Bentley #36-2

Job Ticket: 49993

DST#: 3

ATTN: Marc Downing

Test Start: 2013.01.24 @ 15:18:00

GENERAL INFORMATION:

Formation: **LKC " L "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:05:10

Time Test Ended: 23:49:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4030.00 ft (KB) To 4070.00 ft (KB) (TVD)

Reference Elevations: 2521.00 ft (KB)

Total Depth: 4070.00 ft (KB) (TVD)

2510.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8674

Inside

Press @ Run Depth: 89.28 psig @ 4031.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.24

End Date:

2013.01.24

Last Calib.:

2013.01.24

Start Time: 15:18:00

End Time:

23:49:39

Time On Btm:

2013.01.24 @ 18:03:40

Time Off Btm:

2013.01.24 @ 21:16:24

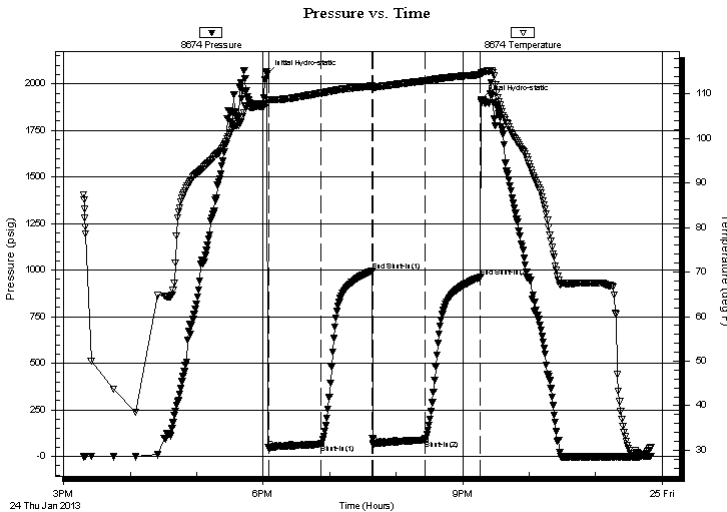
TEST COMMENT: IF- Chased Tool to Bottom 5' 3" Blow Built to 9"

IS- No Blow

FF- Weak Surface Blow Built to 9 3/4"

FS- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2052.07	107.80	Initial Hydro-static
2	46.29	108.74	Open To Flow (1)
49	64.90	110.19	Shut-In(1)
95	996.03	111.81	End Shut-In(1)
96	66.54	111.51	Open To Flow (2)
143	89.28	112.96	Shut-In(2)
193	962.67	114.36	End Shut-In(2)
193	1913.68	114.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM 12%g 19%oil 69%m	0.30
60.00	OGCM 15%oil 23%g 62%m	0.30
60.00	OGCM 2%oil 4%g 94%m	0.30
0.00	246' of GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc.

36-15s-28w Gove,KS

PO Box 86
Plainville KS 67663

Bentley #36-2

Job Ticket: 49993

DST#: 3

ATTN: Marc Downing

Test Start: 2013.01.24 @ 15:18:00

Tool Information

Drill Pipe:	Length: 3801.00 ft	Diameter: 3.80 inches	Volume: 53.32 bbl	Tool Weight:	1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	28000.00 lb
Drill Collar:	Length: 237.00 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose:	6000.00 lb
			<u>Total Volume: 54.49 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial	64000.00 lb
Depth to Top Packer:	4030.00 ft			Final	64000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	40.00 ft				
Tool Length:	60.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			4011.00	
Shut In Tool	5.00			4016.00	
Hydraulic tool	5.00			4021.00	
Packer	5.00			4026.00	20.00 Bottom Of Top Packer
Packer	4.00			4030.00	
Stubb	1.00			4031.00	
Recorder	0.00	8355	Outside	4031.00	
Recorder	0.00	8674	Inside	4031.00	
Perforations	36.00			4067.00	
Bullnose	3.00			4070.00	40.00 Bottom Packers & Anchor
Total Tool Length:	60.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc.

36-15s-28w Gove,KS

PO Box 86
Plainville KS 67663

Bentley #36-2

Job Ticket: 49993

DST#: 3

ATTN: Marc Downing

Test Start: 2013.01.24 @ 15:18:00

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:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.37 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	GOCM 12%g 19%oil 69%m	0.295
60.00	OGCM 15%oil 23%g 62%m	0.295
60.00	OGCM 2%oil 4%g 94%m	0.295
0.00	246' of GIP	0.000

Total Length: 180.00 ft

Total Volume: 0.885 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

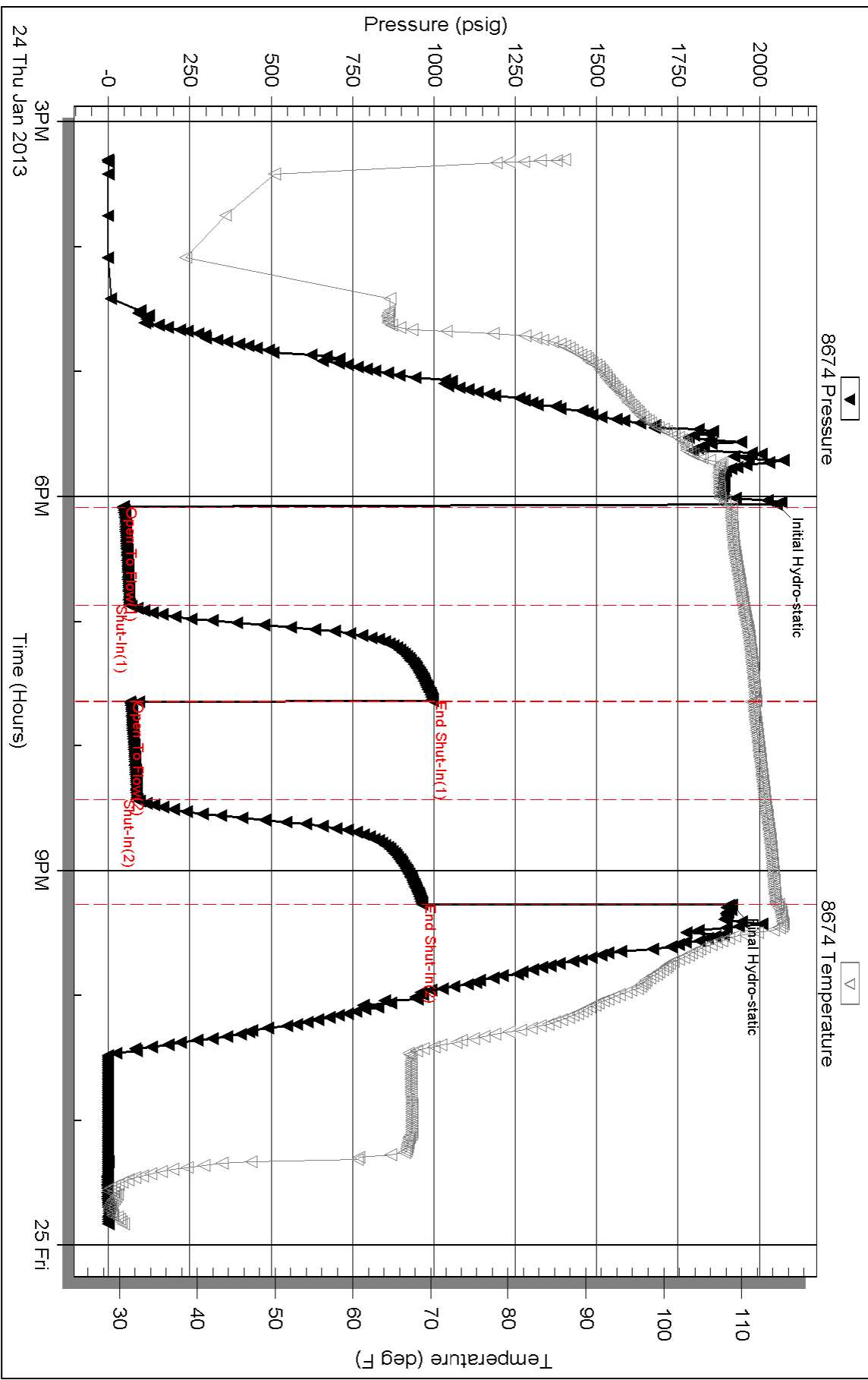
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

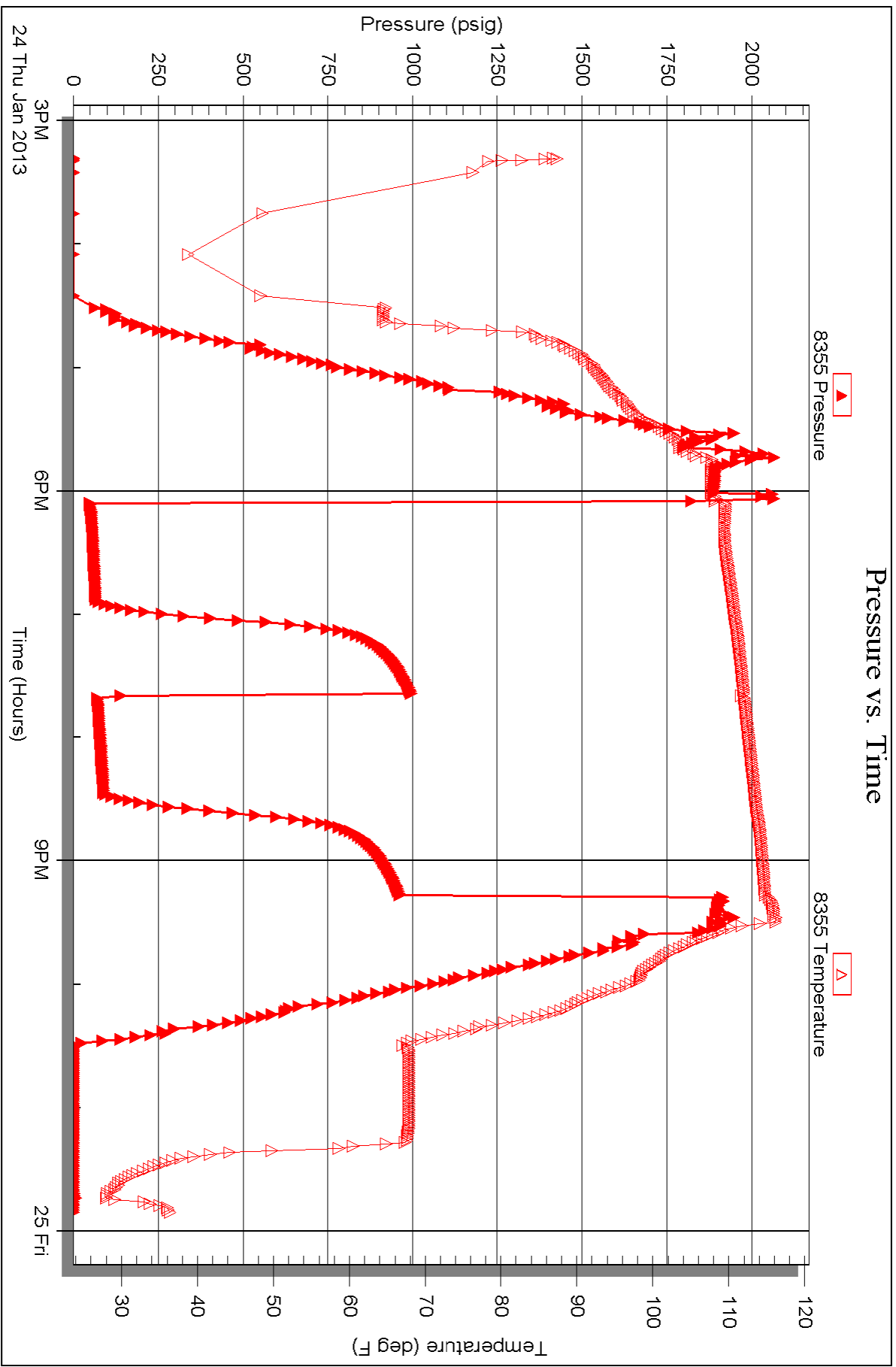


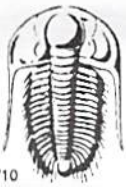
Serial #: 8355

Outside H&C Oil Operating Inc.

Bentley #36-2

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 49991

Well Name & No. Bentley #36-2 Test No. DST #1 Date 1-22-13
 Company H+C Oil Operating Inc Elevation 2521 KB 2510 GL
 Address P.O. Box 86 Plainville KS 67663
 Co. Rep / Geo. Marc Dawning Rig H-2 Rg #2
 Location: Sec. 36 Twp. 15s Rge. 28W Co. Gove State KS

Interval Tested 3822 - 3854 Zone Tested LKC "E+F"
 Anchor Length 32 Drill Pipe Run 3583 Mud Wt. 9.1
 Top Packer Depth 3818 Drill Collars Run 237 Vis 58
 Bottom Packer Depth 3822 Wt. Pipe Run 0 WL 8.0
 Total Depth 3854 Chlorides 2000 ppm System LCM 216

Blow Description IF - Surface Blow Built to BOB in 12 3/4"
TSI - No Blow
FF - Weak Surface Blow Built to 4"
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
89	MCW with SK mot Oil on Top		68	32	
372	MCW		92	8	
240	MCW		80	20	

Rec Total 701 BHT 110 Gravity API RW, 162 @ 34° F Chlorides 95000 ppm

(A) Initial Hydrostatic 1883 Test 1150 T-On Location 12:00
 (B) First Initial Flow 21 Jars _____ T-Started 14:56
 (C) First Final-Flow 219 Safety Joint _____ T-Open 17:55
 (D) Initial Shut-In 974 Circ Sub NIC T-Pulled 20:57
 (E) Second Initial Flow 223 Hourly Standby _____ T-Out 23:31
 (F) Second Final Flow 336 Mileage 86 RIT 133.30 Comments _____
 (G) Final Shut-In 957 Sampler _____
 (H) Final Hydrostatic 1637 Straddle _____ Ruined Shale Packer _____

Initial Open 45 Shale Packer _____ Ruined Packer _____
 Initial Shut-In 45 Extra Packer _____ Extra Copies _____
 Final Flow 45 Extra Recorder _____ Sub Total 0
 Final Shut-In 45 Day Standby _____ Total 1433.30
 Accessibility 150 MP/DST Disc't _____
 Sub Total 1433.30

Approved By _____ Our Representative Tim Moe



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 49992

Well Name & No. Bentley #36.2 Test No. DST #2 Date 1-23-13
 Company H&C Oil Operating Inc Elevation 2521 KB 2510 GL
 Address P.O. Box 86 Plainville KS 67663
 Co. Rep / Geo. Marc Downing Rig H2 R.s #2
 Location: Sec. 36 Twp. 15S Rge. 28W Co. Grove State KS

Interval Tested 3896 - 3964 Zone Tested LKC "H-I"
 Anchor Length 68 Drill Pipe Run 3645 Mud Wt. 92
 Top Packer Depth 3892 Drill Collars Run 237 Vis 54
 Bottom Packer Depth 3896 Wt. Pipe Run 0 WL 8.8
 Total Depth 3964 Chlorides 3000 ppm System LCM 216

Blow Description IF - Weak Surface Blow Built to 130B in 10 1/2 min
ISI - Weak Surface Blow Built to 1/2"
FF - Weak Surface Blow Built to 130B in 11 1/2 min
FSL - Weak Surface Blow in 5 min Built to 3/4"

Rec	Feet of	%gas	%oil	%water	%mud
<u>77</u>	<u>G0</u>	<u>7</u>	<u>93</u>		
<u>62</u>	<u>MCOO</u>	<u>20</u>	<u>62</u>		<u>18</u>
<u>180180</u>	<u>MCOO</u>	<u>32</u>	<u>49</u>		<u>19</u>
<u>60</u>	<u>WMCOO</u>	<u>40</u>	<u>33</u>	<u>2</u>	<u>25</u>
	<u>481' of G-IP</u>				

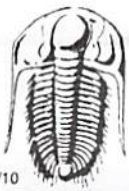
Rec Total 379 BHT 113 Gravity 34 API RW @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1952 Test 1150 T-On Location 11:45
 (B) First Initial Flow 19 Jars T-Started 12:40
 (C) First Final Flow 109 Safety Joint T-Open 15:04
 (D) Initial Shut-In 1606 Circ Sub N/C T-Pulled 17:40
 (E) Second Initial Flow 122 Hourly Standby T-Out 20:57
 (F) Second Final Flow 150 Mileage 86 R/T 133.30 Comments API 32 @ 40f = 34
 (G) Final Shut-In 936 Sampler Ruined Shale Packer
 (H) Final Hydrostatic 1819 Straddle Ruined Packer
 Shale Packer Extra Copies

Initial Open 30 Extra Packer
 Initial Shut-In 45 Extra Recorder Sub Total 0
 Final Flow 30 Day Standby Total 1433.30
 Final Shut-In 45 Accessibility 150 MP/DST Disc't
 Sub Total 1433.30

Approved By _____ Our Representative Will M

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. 49993

Well Name & No. Bentley #36-2 Test No. DST #3 Date 1-24-13
 Company H & C Oil Operating Inc Elevation 2521 KB 2510 GL
 Address P.O. Box 86 Plainville KS 67663
 Co. Rep / Geo. Marc Downing Rig H-2 Rig #2
 Location: Sec. 36 Twp. 15S Rge. 28E Co. Grove State KS

Interval Tested 4030-4070 Zone Tested LKC "L"
 Anchor Length 40 Drill Pipe Run 3801 Mud Wt. 9.5
 Top Packer Depth 4026 Drill Collars Run 237 Vis 51
 Bottom Packer Depth 4030 Wt. Pipe Run 0 WL 10.4
 Total Depth 4070 Chlorides 3000 ppm System LCM 216

Blow Description IF - Chased Tool to Bottom 5' 3" Blow Built to 9"
ISJ - No Blow
FF - Wear Surface Blow Built to 9 3/4"
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>0-6 CM</u>	<u>4</u>	<u>2</u>	<u>94</u>	
<u>60</u>	<u>0-6 CM</u>	<u>23</u>	<u>15</u>	<u>62</u>	
<u>60</u>	<u>6-0 CM</u>	<u>12</u>	<u>19</u>	<u>69</u>	
<u>60</u>	<u>246' of GIP</u>				
<u>60</u>					

Rec Total 180 BHT 108 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

- (A) Initial Hydrostatic 2052 Test 1250
- (B) First Initial Flow 46 Jars _____
- (C) First Final Flow 64 Safety Joint _____
- (D) Initial Shut-In 996 Circ Sub NIC
- (E) Second Initial Flow 66 Hourly Standby _____
- (F) Second Final Flow 89 Mileage 86 RIT X2
266.60
- (G) Final Shut-In 962 Sampler _____
- (H) Final Hydrostatic 1913 Straddle _____

T-On Location 14:16
 T-Started 15:18
 T-Open 18:05
 T-Pulled 21:16
 T-Out 23:49

Comments got called to lead at near
on 1-26-13
 Ruined Shale Packer
 Ruined Packer
 Extra Copies

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45
 Sub Total 800
 Total 2466.60
 MP/DST Disc't _____
 Sub Total 1666.60

Approved By _____ Our Representative Kahn
 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. 0040

Date	1-27-13	Sec.	36	Twp.	15	Range	28	County	GOVE	State	KS	On Location	5:30 AM	Finish
Lease	Bentley													
Contractor	H 2 #2													
Type Job	Drill Job													
Hole Size	7 7/8													
Csg.	5 1/2 14H													
Tbg. Size														
Tool	D/I Tool #47													
Cement Left in Csg.	22													
Meas Line	Displace 10836													
EQUIPMENT														
Pumptrk	No.	Cementary Helper												
Bulktrk	No.	Driver												
Bulktrk	No.	Driver												
JOB SERVICES & REMARKS														
Remarks:														
Rat Hole														
Mouse Hole														
Centralizers														
Baskets														
D/V or Port Collar														
5 1/2 gpr @ 4448 Bobble 4386 13+ Circulator Pump 500 gal Mud 1 Chan 10836 Spare Cement Bit with 165 gal Clear lines D space Plug Displace 45 BL water 54 BL Mud 8 BL water to top Plug. Displace 1500# H ₂ O Release Pressure Dr.														
Open Tool with 160# Cement 1 1/2 HR then Cement Top Stage														
Common Poz. Mix Gel. Calcium Hulls Salt Flowseal Kol-Seal Mud CLR-48 CFL-117 or CD110 CAF 38 Sand Handling Mileage Guide Shoe Centralizer 10 Tubs Baskets AFU Inserts D/I Tool Float Shoe 1 Latch Down 1														
Pumptrk Charge Mileage Tax Discount Total Charge														
Signature: [Signature]														

