



DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

S29-15s-27w Gove,KS

Bentley-Rover Unit #29-1

Start Date: 2013.07.28 @ 19:22:00

End Date: 2013.07.29 @ 03:11:09

Job Ticket #: 52785 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.02 @ 08:28:22

H&C Oil Operating, Inc.

Bentley-Rover Unit #29-1

S29-15s-27w Gove,KS

DST # 1

LKC'E'

2013.07.28



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.

Bentley-Rover Unit #29-1

PO Box 86
Plainville, KS 67663

S29-15s-27w Gove,KS

ATTN: Marc Downing

Job Ticket: 52785

DST#: 1

Test Start: 2013.07.28 @ 19:22:00

GENERAL INFORMATION:

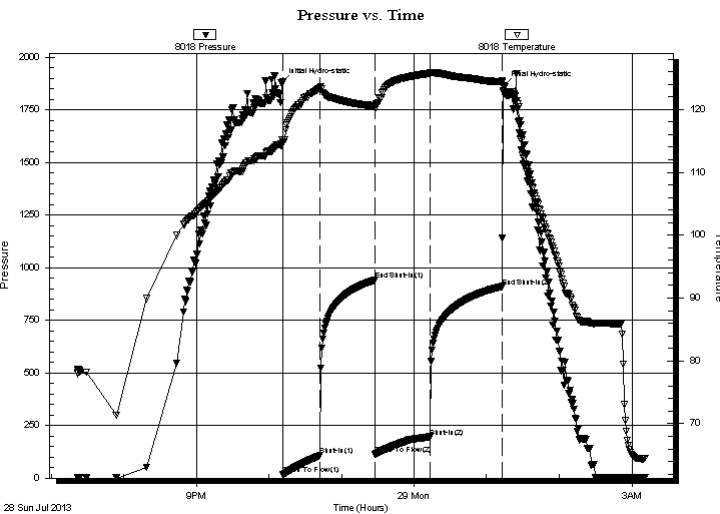
Formation: **LKC 'E'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:11:50
 Time Test Ended: 03:11:09
 Interval: **3791.00 ft (KB) To 3807.00 ft (KB) (TVD)**
 Total Depth: 3807.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Chuck Smith
 Unit No: 62
 Reference Elevations: 2472.00 ft (KB)
 2461.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8018

Inside

Press @ Run Depth: 196.55 psig @ 3794.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.28 End Date: 2013.07.29 Last Calib.: 2013.07.29
 Start Time: 19:22:02 End Time: 03:11:10 Time On Btm: 2013.07.28 @ 22:10:20
 Time Off Btm: 2013.07.29 @ 01:14:09

TEST COMMENT: 8 1/2" Blow .
 No return.
 8" Blow .
 No retrun.



PRESSURE SUMMARY

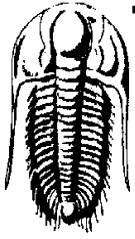
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1878.59	114.30	Initial Hydro-static
2	16.15	114.65	Open To Flow (1)
32	107.39	123.42	Shut-In(1)
78	940.73	120.53	End Shut-In(1)
78	112.51	120.20	Open To Flow (2)
123	196.55	125.72	Shut-In(2)
183	910.96	124.36	End Shut-In(2)
184	1864.21	122.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
369.00	MW 5m95w	1.81
31.00	OSMW 50m 50w	0.43

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.

Bentley-Rover Unit #29-1

PO Box 86
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S29-15s-27w Gove,KS

ATTN: Marc Downing

Job Ticket: 52785

DST#: 1

Test Start: 2013.07.28 @ 19:22:00

GENERAL INFORMATION:

Formation: **LKC 'E'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:11:50

Time Test Ended: 03:11:09

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Smith

Unit No: 62

Interval: 3791.00 ft (KB) To 3807.00 ft (KB) (TVD)

Reference Elevations: 2472.00 ft (KB)

Total Depth: 3807.00 ft (KB) (TVD)

2461.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 6751 Outside

Press @ RunDepth: psig @ 3794.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.07.28

End Date:

2013.07.29

Last Calib.:

2013.07.29

Start Time: 19:22:05

End Time:

03:10:50

Time On Btm:

Time Off Btm:

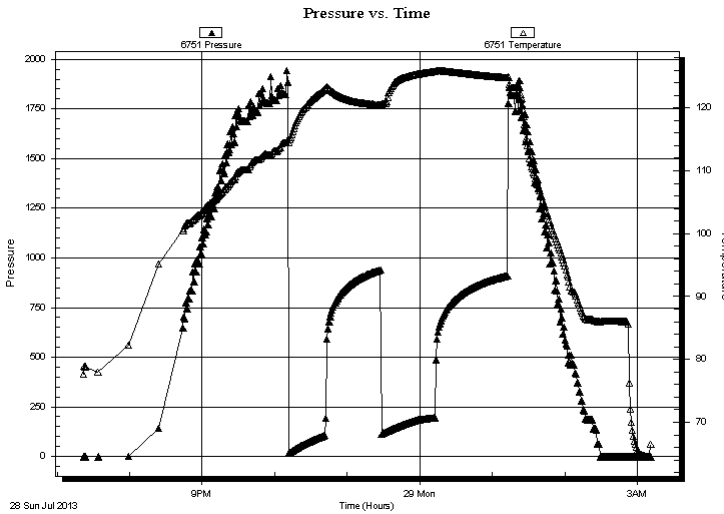
TEST COMMENT: 8 1/2" Blow .

No return.

8" Blow .

No retrun.

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
369.00	MW 5m95w	1.81
31.00	OSMW 50m 50w	0.43

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating, Inc.

Bentley-Rover Unit #29-1

PO Box 86
Plainville, KS 67663

S29-15s-27w Gove,KS

ATTN: Marc Downing

Job Ticket: 52785

DST#: 1

Test Start: 2013.07.28 @ 19:22:00

Tool Information

Drill Pipe:	Length: 3424.00 ft	Diameter: 3.80 inches	Volume: 48.03 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: 369.00 ft	Diameter: 2.25 inches	Volume: 1.81 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 49.84 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	3791.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	16.00 ft			
Tool Length:	36.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3772.00	
Shut In Tool	5.00			3777.00	
Hydraulic tool	5.00			3782.00	
Packer	5.00			3787.00	20.00 Bottom Of Top Packer
Packer	4.00			3791.00	
Stubb	1.00			3792.00	
Perforations	2.00			3794.00	
Recorder	0.00	8018	Inside	3794.00	
Recorder	0.00	6751	Outside	3794.00	
Perforations	10.00			3804.00	
Perforations	3.00			3807.00	16.00 Bottom Packers & Anchor

Total Tool Length: 36.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc.

Bentley-Rover Unit #29-1

PO Box 86
Plainville, KS 67663

S29-15s-27w Gove,KS

Job Ticket: 52785 **DST#: 1**

ATTN: Marc Downing

Test Start: 2013.07.28 @ 19:22:00

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: 105000 ppm	
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.97 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
369.00	MW 5m95w	1.815
31.00	OSMW 50m 50w	0.435

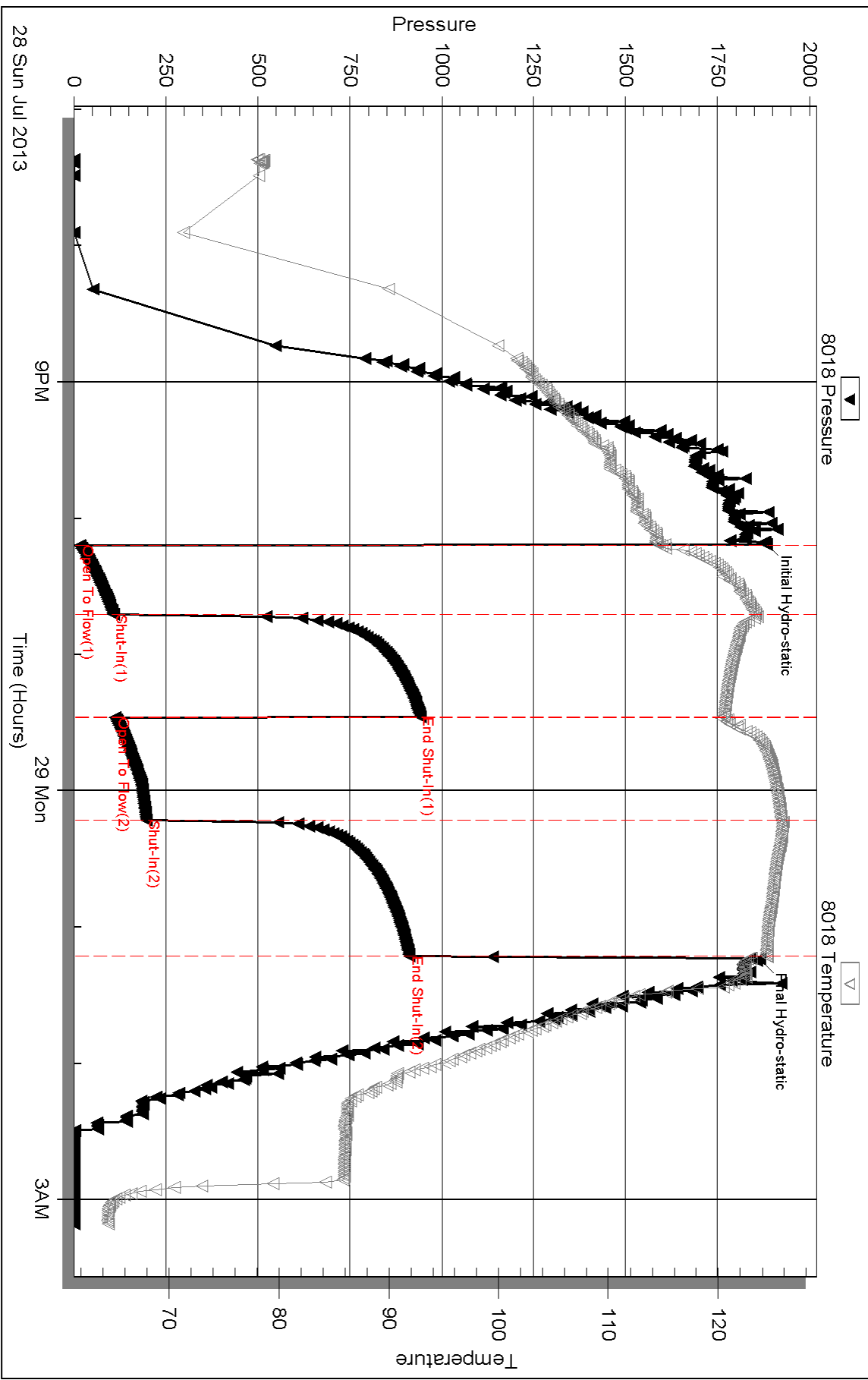
Total Length: 400.00 ft Total Volume: 2.250 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW: .090 @ 60 Degrees F = 105000 PPM.

Pressure vs. Time



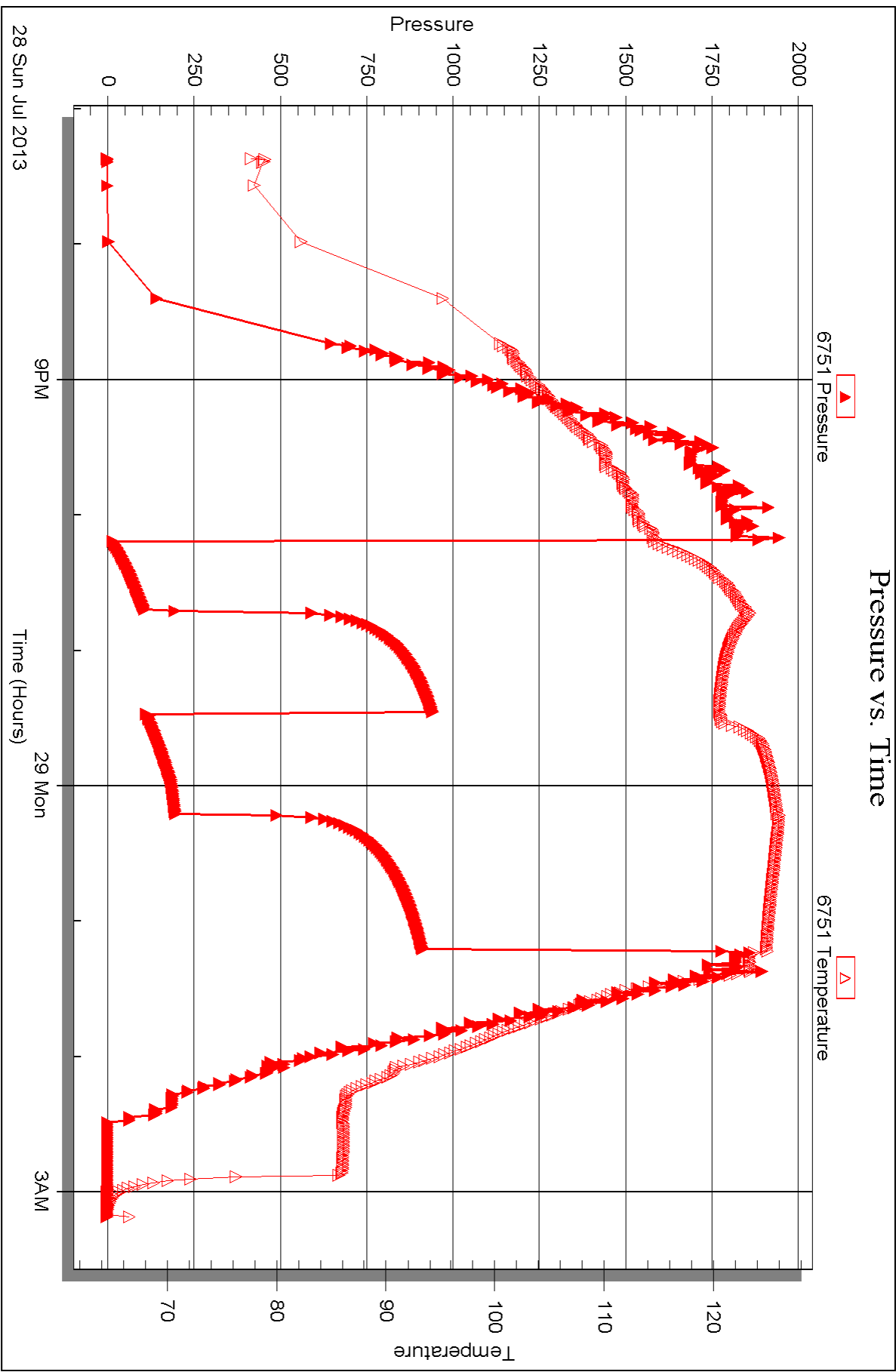
Serial #: 6751

Outside

H&C Oil Operating, Inc.

S29-15s-27w Gove KS

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

S29-15s-27w Gove,KS

Bentley-Rover Unit #29-1

Start Date: 2013.07.29 @ 15:20:00

End Date: 2013.07.29 @ 21:33:20

Job Ticket #: 52786 DST #: 2

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

Printed: 2013.08.02 @ 08:27:42

H&C Oil Operating, Inc.

Bentley-Rover Unit #29-1

S29-15s-27w Gove,KS

DST # 2

LKC 'H-I'

2013.07.29



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Bentley-Rover Unit #29-1

S29-15s-27w Gove,KS

Job Ticket: 52786

DST#: 2

Test Start: 2013.07.29 @ 15:20:00

GENERAL INFORMATION:

Formation: **LKC 'H-I'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:30:00

Time Test Ended: 21:33:20

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: 3855.00 ft (KB) To 3914.00 ft (KB) (TVD)

Total Depth: 3914.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2472.00 ft (KB)

2461.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8018

Inside

Press @ Run Depth: 72.68 psig @ 3857.00 ft (KB)

Start Date: 2013.07.29

End Date:

2013.07.29

Start Time: 15:20:02

End Time:

21:33:19

Capacity: 8000.00 psig

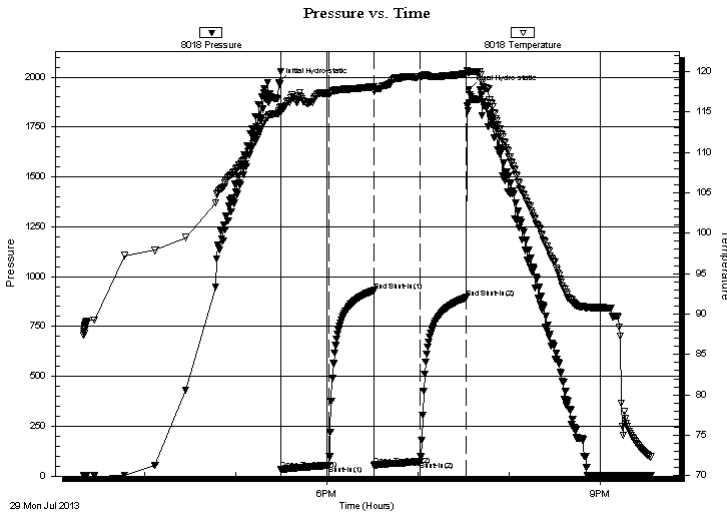
Last Calib.: 2013.07.29

Time On Btm: 2013.07.29 @ 17:28:40

Time Off Btm: 2013.07.29 @ 19:33:30

TEST COMMENT: 1+'' Blow .
No return.
No blow .
No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1970.67	115.19	Initial Hydro-static
2	31.78	114.99	Open To Flow (1)
33	53.82	117.20	Shut-In(1)
63	930.56	118.11	End Shut-In(1)
63	55.35	117.56	Open To Flow (2)
93	72.68	119.34	Shut-In(2)
124	894.79	119.71	End Shut-In(2)
125	1937.67	119.97	Final Hydro-static

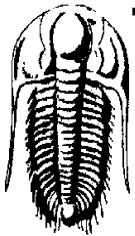
Recovery

Length (ft)	Description	Volume (bbl)
120.00	OSM 100m	0.59

Gas Rates

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

* Recovery from multiple tests



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DRILL STEM TEST REPORT

H&C Oil Operating, Inc.

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Bentley-Rover Unit #29-1

S29-15s-27w Gove,KS

Job Ticket: 52786 **DST#: 2**

Test Start: 2013.07.29 @ 15:20:00

GENERAL INFORMATION:

Formation: **LKC 'H-I'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:30:00

Time Test Ended: 21:33:20

Interval: 3855.00 ft (KB) To 3914.00 ft (KB) (TVD)

Total Depth: 3914.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Reference Elevations: 2472.00 ft (KB)

2461.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 6751 Outside

Press @ Run Depth: psig @ 3857.00 ft (KB)

Start Date: 2013.07.29

End Date:

2013.07.29

Capacity: 8000.00 psig

Last Calib.:

2013.07.29

Start Time: 15:20:05

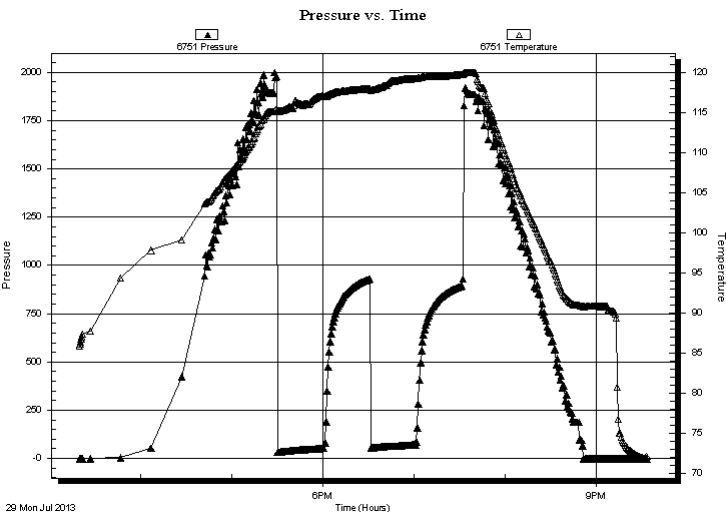
End Time:

21:33:20

Time On Btm:

Time Off Btm:

TEST COMMENT: 1+" Blow .
No return.
No blow .
No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
120.00	OSM 100m	0.59

* 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.

Bentley-Rover Unit #29-1

PO Box 86
Plainville, KS 67663

S29-15s-27w Gove,KS

ATTN: Marc Downing

Job Ticket: 52786

DST#: 2

Test Start: 2013.07.29 @ 15:20:00

Tool Information

Drill Pipe:	Length: 3488.00 ft	Diameter: 3.80 inches	Volume: 48.93 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: 369.00 ft	Diameter: 2.25 inches	Volume: 1.81 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 50.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	3855.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	59.00 ft			
Tool Length:	79.00 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			3836.00	
Shut In Tool	5.00			3841.00	
Hydraulic tool	5.00			3846.00	
Packer	5.00			3851.00	20.00 Bottom Of Top Packer
Packer	4.00			3855.00	
Stubb	1.00			3856.00	
Perforations	1.00			3857.00	
Recorder	0.00	8018	Inside	3857.00	
Recorder	0.00	6751	Outside	3857.00	
Perforations	21.00			3878.00	
Change Over Sub	1.00			3879.00	
Drill Pipe	31.00			3910.00	
Bullnose	1.00			3911.00	
Bullnose	3.00			3914.00	59.00 Bottom Packers & Anchor

Total Tool Length: 79.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc.

Bentley-Rover Unit #29-1

PO Box 86
Plainville, KS 67663

S29-15s-27w Gove,KS

Job Ticket: 52786 **DST#: 2**

ATTN: Marc Downing

Test Start: 2013.07.29 @ 15:20:00

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:	ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.97 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

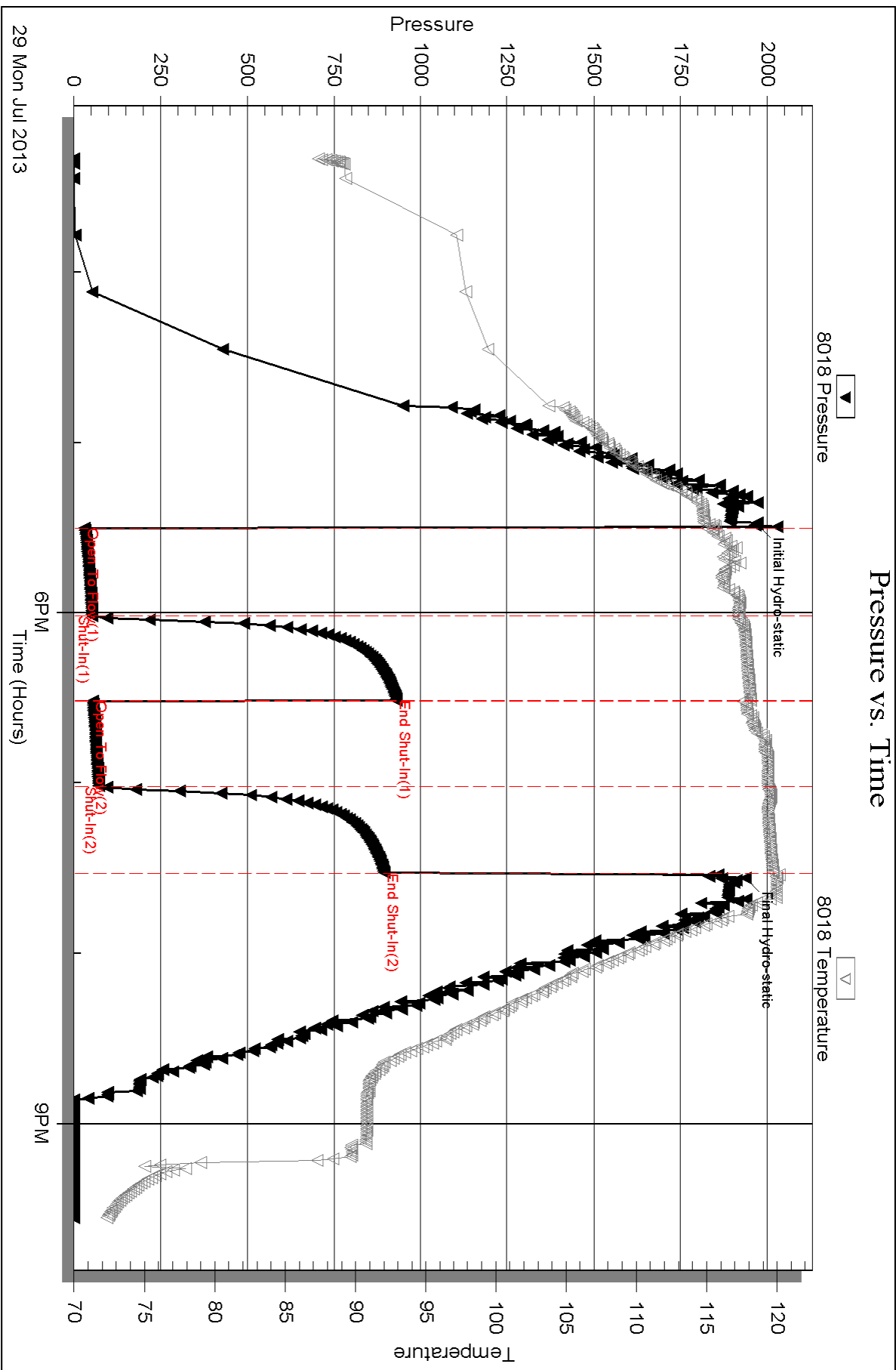
Length ft	Description	Volume bbl
120.00	OSM 100m	0.590

Total Length: 120.00 ft Total Volume: 0.590 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:



29 Mon Jul 2013

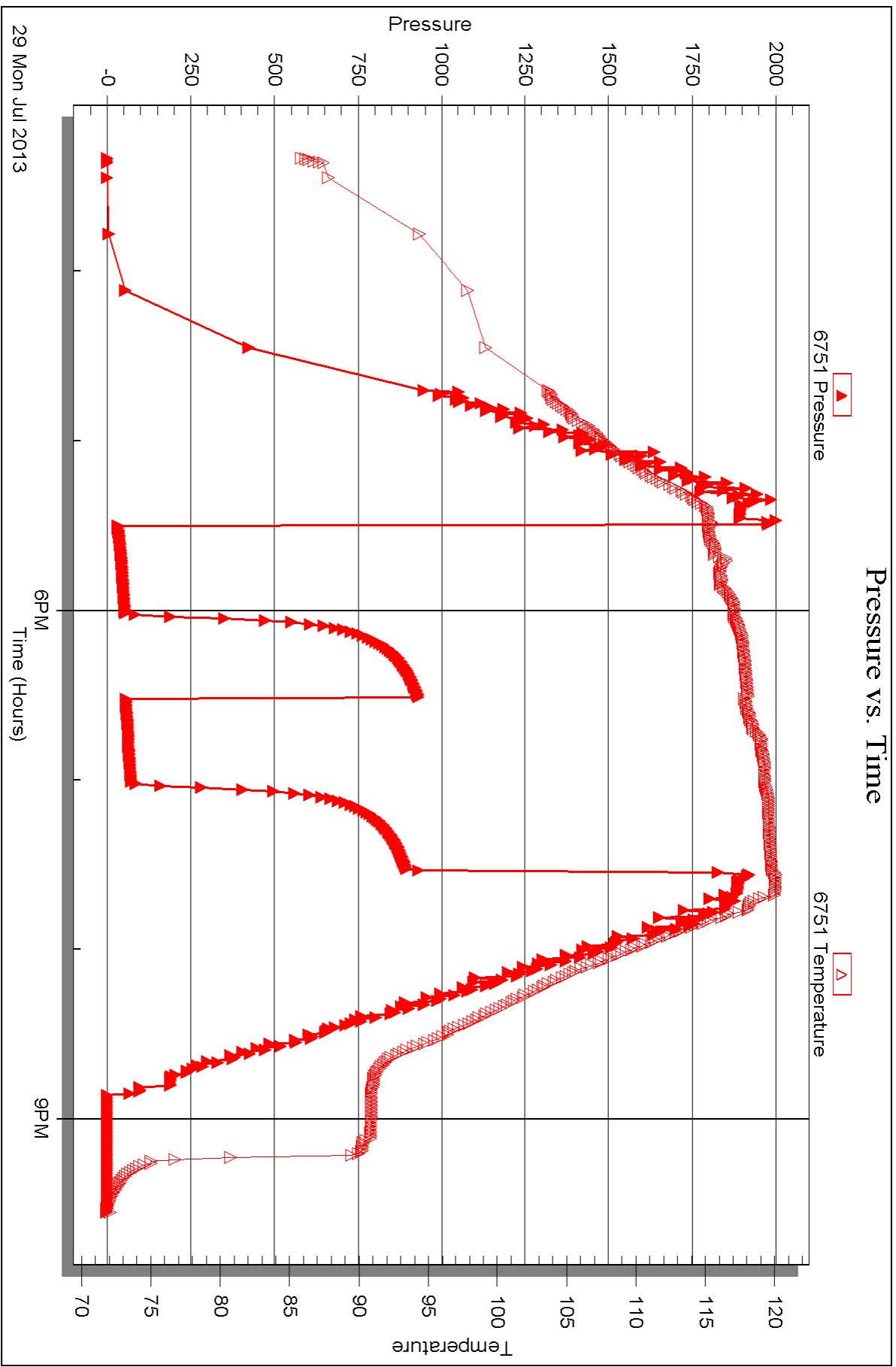
Serial #: 6751

Outside

H&C Oil Operating, Inc.

S29-15s-27w Gove KS

DST Test Number: 2



29 Mon Jul 2013

Triobite Testing, Inc

Ref. No: 52786

Printed: 2013.08.02 @ 08:27:46



DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

S29-15s-27w Gove,KS

Bentley-Rover Unit #29-1

Start Date: 2013.07.30 @ 06:10:00

End Date: 2013.07.30 @ 13:37:50

Job Ticket #: 52787 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.02 @ 08:27:10

H&C Oil Operating, Inc.

Bentley-Rover Unit #29-1

S29-15s-27w Gove,KS

DST # 3

LKC 'J'

2013.07.30



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Bentley-Rover Unit #29-1

S29-15s-27w Gove,KS

Job Ticket: 52787

DST#: 3

Test Start: 2013.07.30 @ 06:10:00

GENERAL INFORMATION:

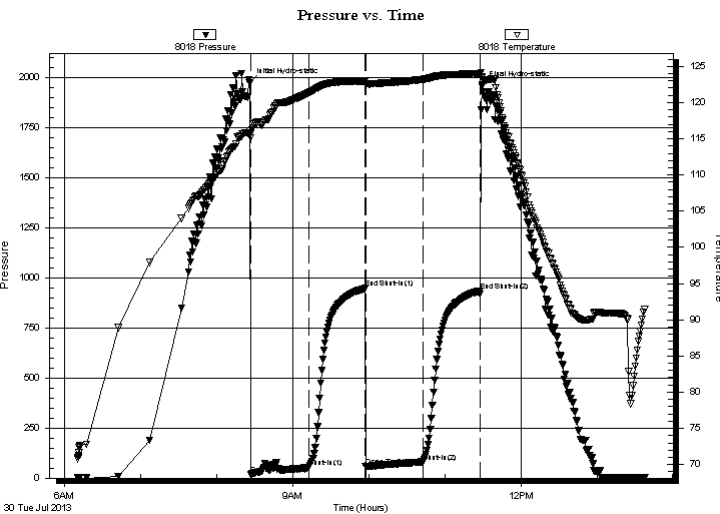
Formation: **LKC 'J'**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 08:26:40
 Tester: Chuck Smith
 Time Test Ended: 13:37:50
 Unit No: 62
 Interval: **3922.00 ft (KB) To 3950.00 ft (KB) (TVD)**
 Reference Elevations: 2472.00 ft (KB)
 Total Depth: 3950.00 ft (KB) (TVD)
 2461.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 11.00 ft

Serial #: 8018

Inside

Press @ Run Depth: 81.48 psig @ 3925.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.30 End Date: 2013.07.30 Last Calib.: 2013.07.30
 Start Time: 06:10:02 End Time: 13:37:49 Time On Btm: 2013.07.30 @ 08:25:40
 Time Off Btm: 2013.07.30 @ 11:29:09

TEST COMMENT: 3" Blow .
 No return.
 1" Blow .
 No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1974.32	115.87	Initial Hydro-static
1	19.04	115.17	Open To Flow (1)
47	52.46	121.34	Shut-In(1)
92	948.23	123.00	End Shut-In(1)
92	58.01	122.48	Open To Flow (2)
138	81.48	123.21	Shut-In(2)
182	935.76	124.00	End Shut-In(2)
184	1962.32	123.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
93.00	OSWM 20w 80m	0.46
50.00	OCM 10o 90m	0.25

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.

Bentley-Rover Unit #29-1

PO Box 86
Plainville, KS 67663

S29-15s-27w Gove,KS

ATTN: Marc Downing

Job Ticket: 52787

DST#: 3

Test Start: 2013.07.30 @ 06:10:00

GENERAL INFORMATION:

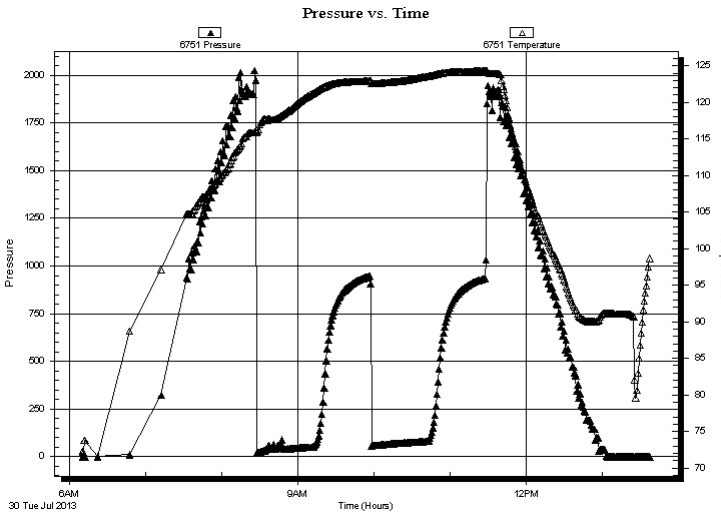
Formation: **LKC 'J'**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 08:26:40
 Tester: Chuck Smith
 Time Test Ended: 13:37:50
 Unit No: 62
Interval: 3922.00 ft (KB) To 3950.00 ft (KB) (TVD)
 Reference Elevations: 2472.00 ft (KB)
 Total Depth: 3950.00 ft (KB) (TVD)
 2461.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 11.00 ft

Serial #: 6751 Outside

Press @ Run Depth: psig @ 3925.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.07.30 End Date: 2013.07.30 Last Calib.: 2013.07.30
 Start Time: 06:10:05 End Time: 13:37:40 Time On Btm:
 Time Off Btm:

TEST COMMENT: 3" Blow .
 No return.
 1" Blow .
 No return.

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
93.00	OSWM 20w 80m	0.46
50.00	OCM 10o 90m	0.25

* 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.

Bentley-Rover Unit #29-1

PO Box 86
Plainville, KS 67663

S29-15s-27w Gove,KS

ATTN: Marc Downing

Job Ticket: 52787

DST#: 3

Test Start: 2013.07.30 @ 06:10:00

Tool Information

Drill Pipe:	Length: 3550.00 ft	Diameter: 3.80 inches	Volume: 49.80 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 369.00 ft	Diameter: 2.25 inches	Volume: 1.81 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 51.61 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	3922.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	48.00 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			3903.00	
Shut In Tool	5.00			3908.00	
Hydraulic tool	5.00			3913.00	
Packer	5.00			3918.00	20.00 Bottom Of Top Packer
Packer	4.00			3922.00	
Stubb	1.00			3923.00	
Perforations	2.00			3925.00	
Recorder	0.00	8018	Inside	3925.00	
Recorder	0.00	6751	Outside	3925.00	
Perforations	22.00			3947.00	
Perforations	3.00			3950.00	28.00 Bottom Packers & Anchor

Total Tool Length: 48.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc.

Bentley-Rover Unit #29-1

PO Box 86
Plainville, KS 67663

S29-15s-27w Gove,KS

Job Ticket: 52787

DST#: 3

ATTN: Marc Downing

Test Start: 2013.07.30 @ 06:10:00

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:

48000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 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
93.00	OSWM 20w 80m	0.457
50.00	OCM 10o 90m	0.246

Total Length: 143.00 ft Total Volume: 0.703 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

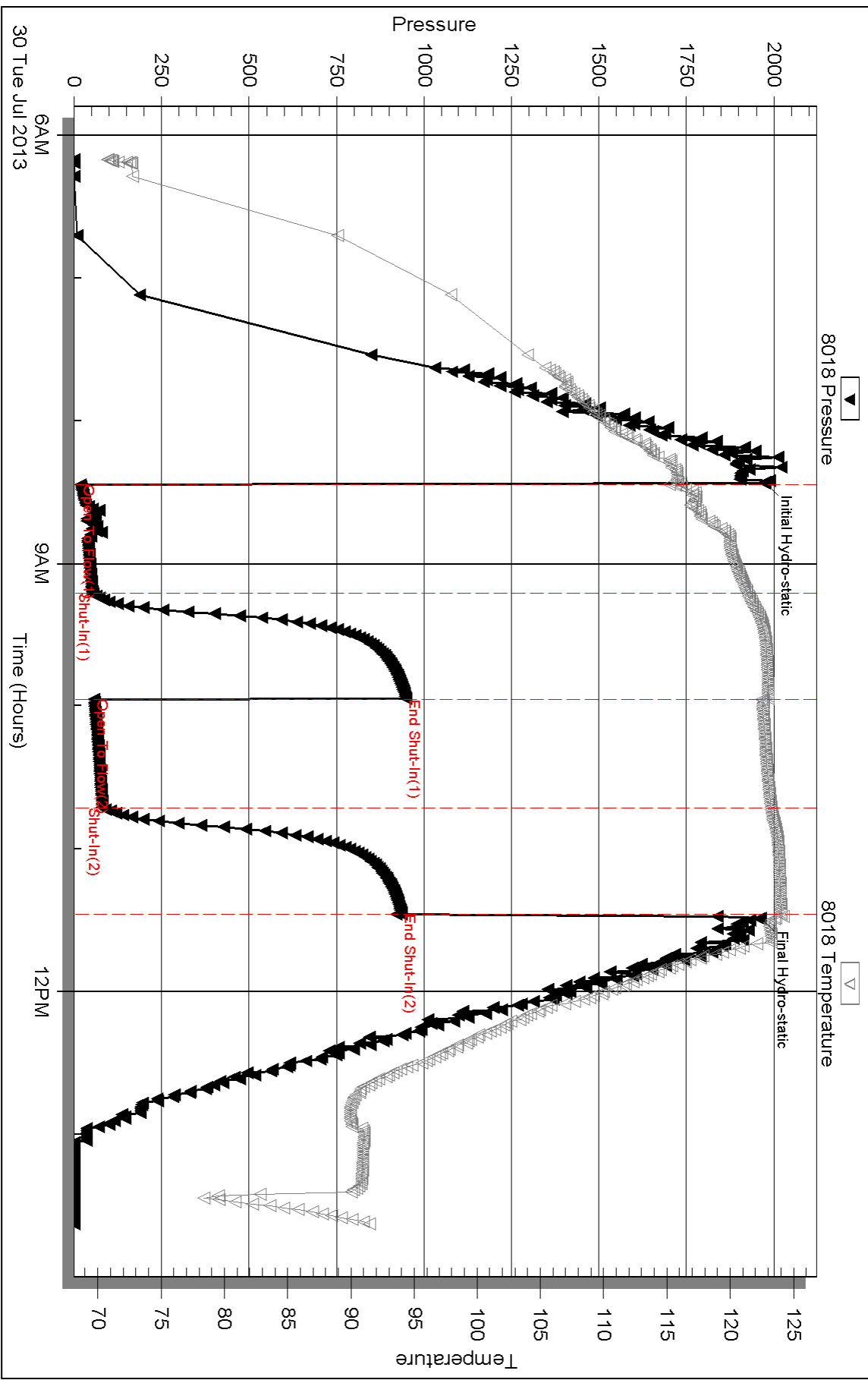
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .129 @ 82 Degrees F = 48000 PPM.

Pressure vs. Time

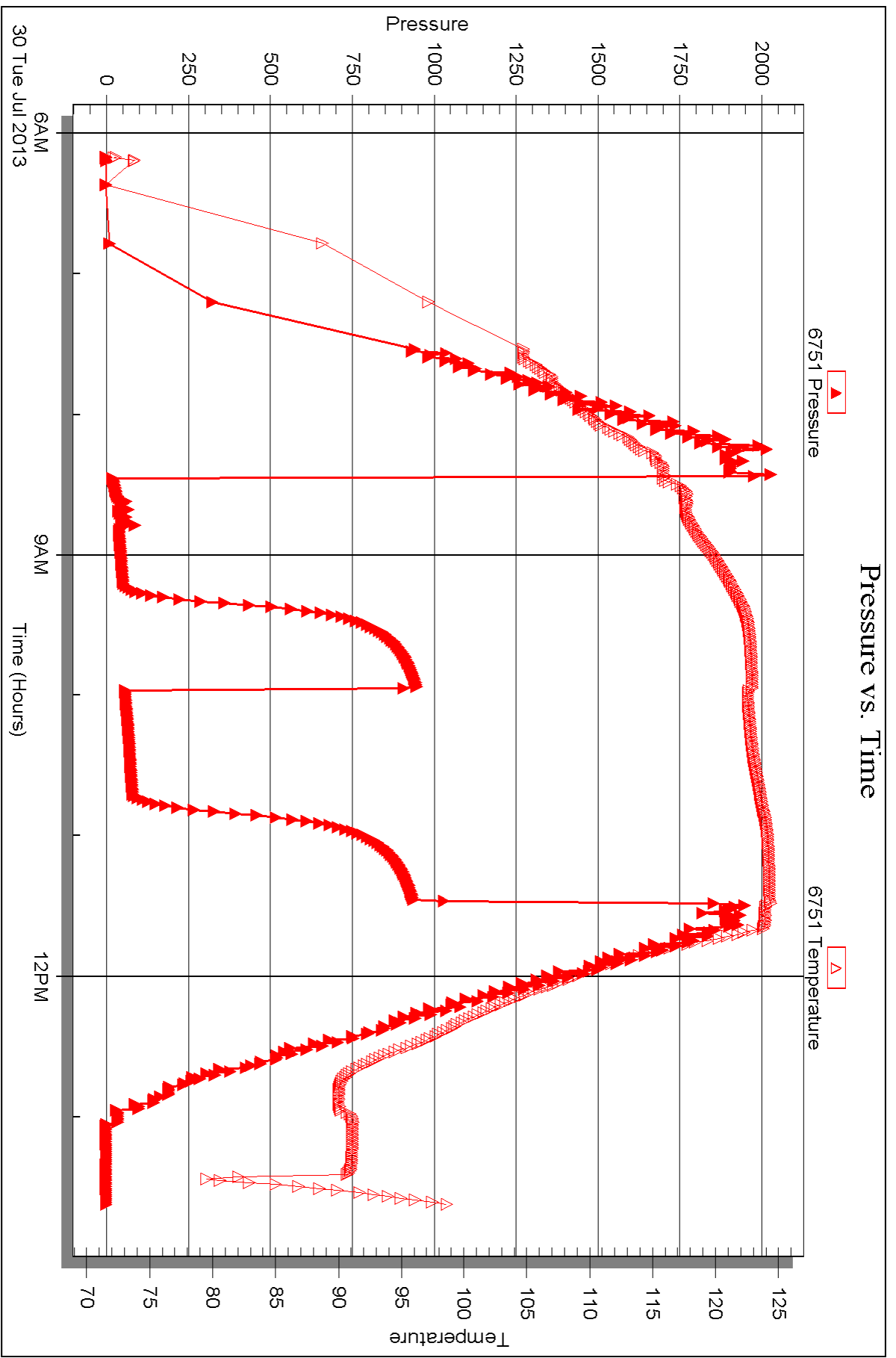


Serial #: 6751

Outside H&C Oil Operating, Inc.

S29-15s-27w Gove KS

DST Test Number: 3





DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

S29-15s-27w Gove,KS

Bentley-Rover Unit #29-1

Start Date: 2013.07.30 @ 21:30:00

End Date: 2013.07.31 @ 03:22:09

Job Ticket #: 52788 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.02 @ 08:26:28

H&C Oil Operating, Inc.

Bentley-Rover Unit #29-1

S29-15s-27w Gove,KS

DST # 4

LKC 'K'

2013.07.30



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Bentley-Rover Unit #29-1

S29-15s-27w Gove,KS

Job Ticket: 52788

DST#: 4

Test Start: 2013.07.30 @ 21:30:00

GENERAL INFORMATION:

Formation: **LKC 'K'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:37:10

Time Test Ended: 03:22:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: 3949.00 ft (KB) To 3990.00 ft (KB) (TVD)

Reference Elevations: 2472.00 ft (KB)

Total Depth: 3990.00 ft (KB) (TVD)

2461.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8018

Inside

Press @ Run Depth: 18.94 psig @ 3951.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.07.30

End Date:

2013.07.31

Last Calib.: 2013.07.31

Start Time: 21:30:02

End Time:

03:22:10

Time On Btm: 2013.07.30 @ 23:36:00

Time Off Btm: 2013.07.31 @ 01:39:50

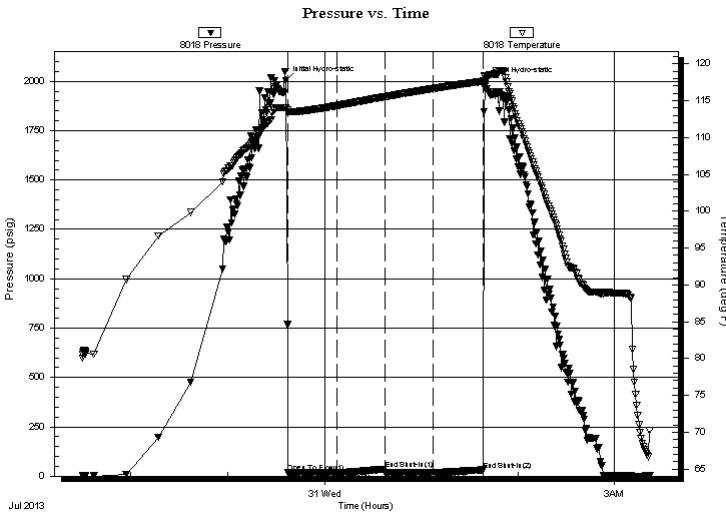
TEST COMMENT: 1/4" Blow died @ 17 min.

No return.

No blow.

No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2002.27	114.00	Initial Hydro-static
2	17.89	113.33	Open To Flow (1)
32	18.38	114.32	Shut-In(1)
62	36.07	115.54	End Shut-In(1)
62	18.06	115.53	Open To Flow (2)
92	18.94	116.65	Shut-In(2)
123	31.73	117.65	End Shut-In(2)
124	1999.39	118.30	Final Hydro-static

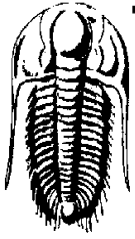
Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM 100m	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

Bentley-Rover Unit #29-1
S29-15s-27w Gove,KS
Job Ticket: 52788 **DST#: 4**
Test Start: 2013.07.30 @ 21:30:00

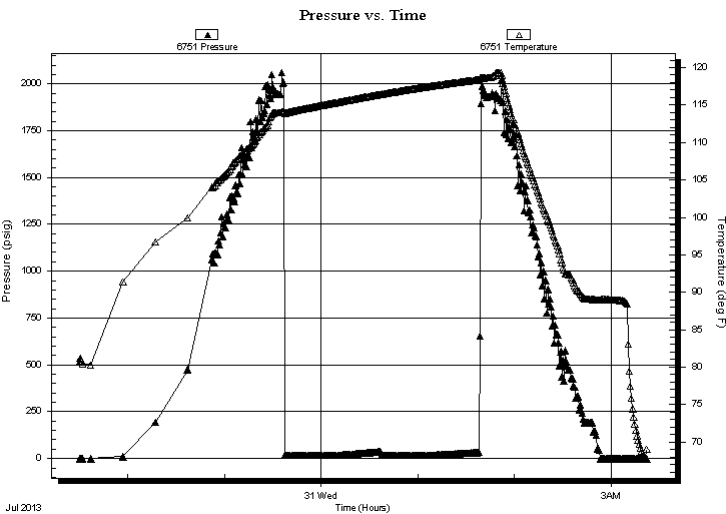
GENERAL INFORMATION:

Formation: LKC 'K'		
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 23:37:10		Tester: Chuck Smith
Time Test Ended: 03:22:09		Unit No: 62
Interval: 3949.00 ft (KB) To 3990.00 ft (KB) (TVD)		Reference Elevations: 2472.00 ft (KB)
Total Depth: 3990.00 ft (KB) (TVD)		2461.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Good	KB to GR/CF: 11.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 3951.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2013.07.30	End Date: 2013.07.31
Start Time: 21:30:05	End Time: 03:22:10
	Last Calib.: 2013.07.31
	Time On Btm:
	Time Off Btm:

TEST COMMENT: 1/4" Blow died @ 17 min.
No return.
No blow.
No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM 100m	0.05

* 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.

Bentley-Rover Unit #29-1

PO Box 86
Plainville, KS 67663

S29-15s-27w Gove,KS

Job Ticket: 52788

DST#: 4

ATTN: Marc Downing

Test Start: 2013.07.30 @ 21:30:00

Tool Information

Drill Pipe:	Length: 3583.00 ft	Diameter: 3.80 inches	Volume: 50.26 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: 369.00 ft	Diameter: 2.25 inches	Volume: 1.81 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 52.07 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	3949.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	41.00 ft			
Tool Length:	61.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3930.00	
Shut In Tool	5.00			3935.00	
Hydraulic tool	5.00			3940.00	
Packer	5.00			3945.00	20.00 Bottom Of Top Packer
Packer	4.00			3949.00	
Stubb	1.00			3950.00	
Perforations	1.00			3951.00	
Recorder	0.00	8018	Inside	3951.00	
Recorder	0.00	6751	Outside	3951.00	
Perforations	3.00			3954.00	
Change Over Sub	1.00			3955.00	
Drill Pipe	31.00			3986.00	
Bullnose	1.00			3987.00	
Bullnose	3.00			3990.00	41.00 Bottom Packers & Anchor

Total Tool Length: 61.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating, Inc.

Bentley-Rover Unit #29-1

PO Box 86
Plainville, KS 67663

S29-15s-27w Gove,KS

Job Ticket: 52788

DST#: 4

ATTN: Marc Downing

Test Start: 2013.07.30 @ 21:30:00

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:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 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 bbl
10.00	OSM 100m	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

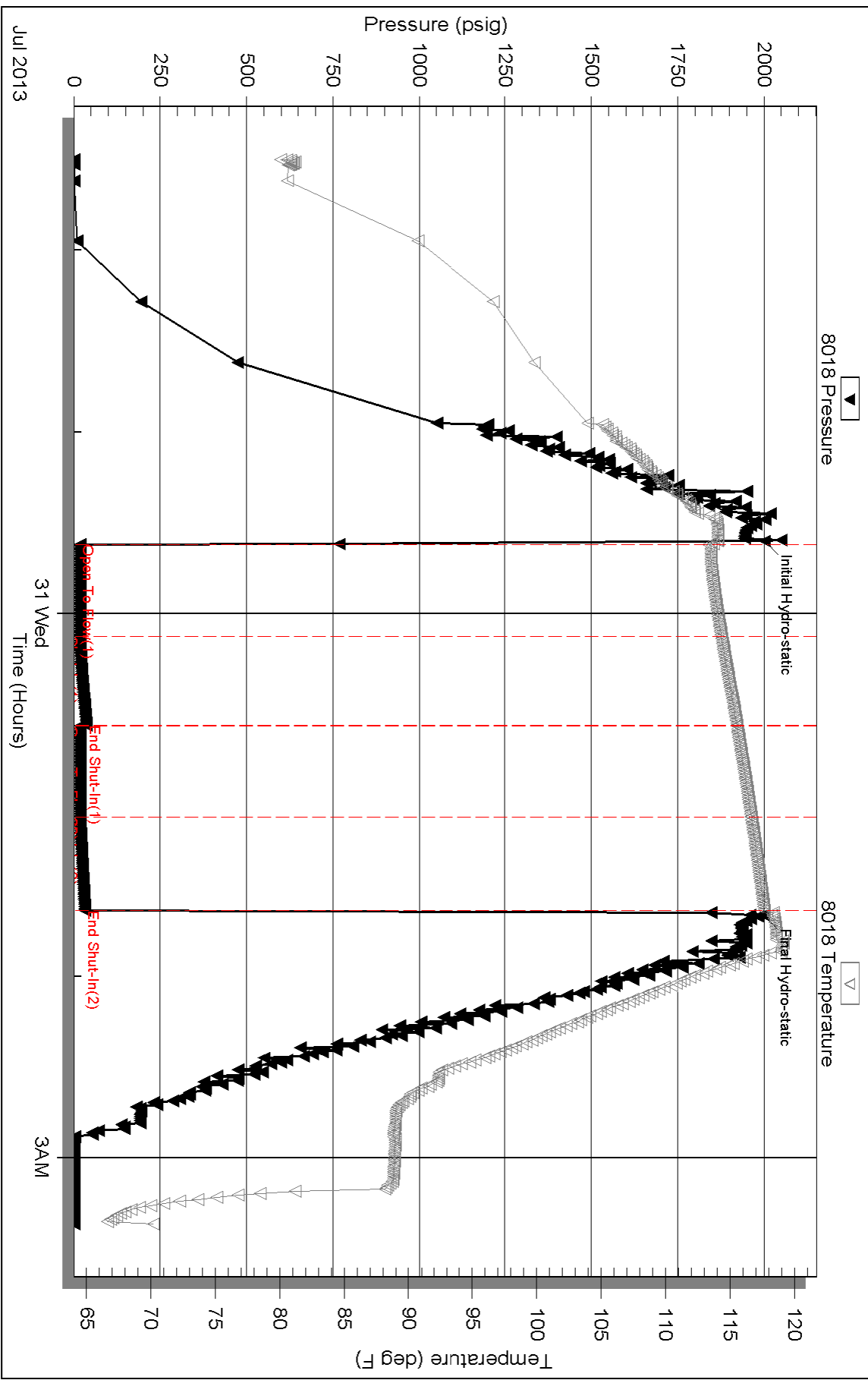
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

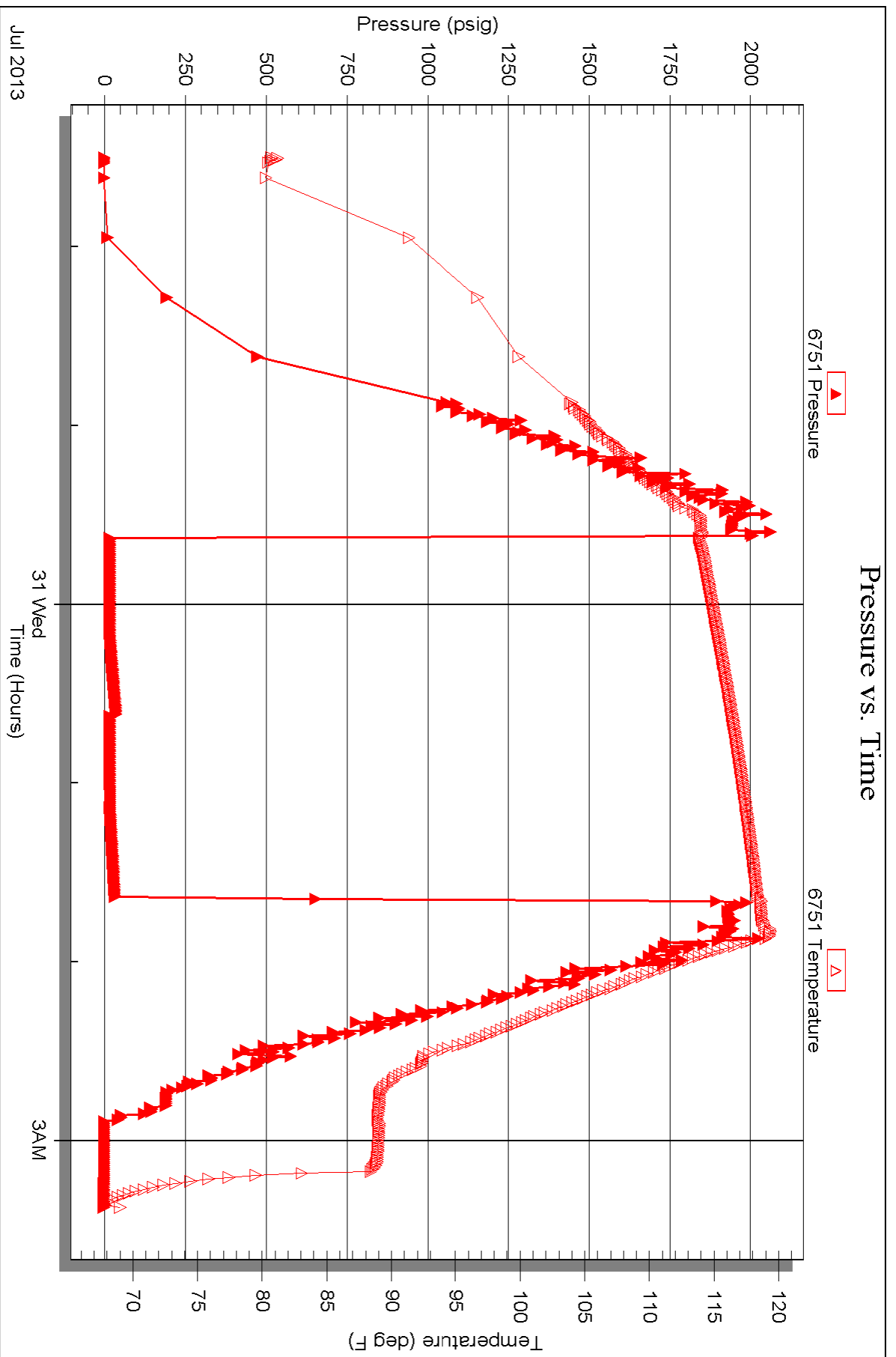


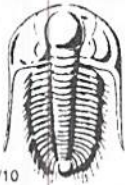
Serial #: 6751

Outside H&C Oil Operating, Inc.

S29-15s-27w Gove KS

DST Test Number: 4





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52785

4/10

Well Name & No. Bentley - Rover Unit 29-1 Test No. 1 Date 7-28-13
 Company H+C Oil Operating, Inc. Elevation 2472 KB 2461 GL
 Address POB 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig H2#1
 Location: Sec. 29 Twp. 15 Rge. 27 Co. Gove State KS

Interval Tested 3791-3807 Zone Tested LKC 'E'
 Anchor Length 16 Drill Pipe Run 3424 Mud Wt. 9.0
 Top Packer Depth 3787 Drill Collars Run 369 Vis 55
 Bottom Packer Depth 3791 Wt. Pipe Run — WL 8.0
 Total Depth 3807 Chlorides 1000 ppm System LCM 2"
 Blow Description 8 1/2" Blow
No return.
8" Blow
No return

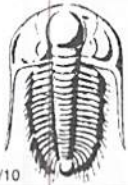
Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>31</u>	Feet of <u>OSMW</u>			<u>50</u>	<u>50</u>
Rec <u>369</u>	Feet of <u>MW</u>			<u>95</u>	<u>5</u>
Rec _____	Feet of _____				
Rec _____	Feet of _____				

Rec Total 400 BHT 124 Gravity — API RW .090 @ 60 °F Chlorides 105,000 ppm

(A) Initial Hydrostatic <u>1879</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>18:00</u>
(B) First Initial Flow <u>116</u>	<input type="checkbox"/> Jars _____	T-Started <u>19:22</u>
(C) First Final Flow <u>107</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>22:12</u>
(D) Initial Shut-In <u>941</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>1:13</u>
(E) Second Initial Flow <u>117</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>3:11</u>
(F) Second Final Flow <u>197</u>	<input checked="" type="checkbox"/> Mileage <u>96RT</u> 148.80	Comments _____
(G) Final Shut-In <u>911</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1864</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>345</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1448.80</u>
	<input checked="" type="checkbox"/> Accessibility <u>150</u>	MP/DST Disc't _____
	Sub Total <u>1448.80</u>	

Approved By _____ Our Representative Chuck Smith

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52786

4/10

Well Name & No. Bentley-Rover Unit 29-1 Test No. 2 Date 7-29-13
 Company H+C Oil Operating, Inc. Elevation 2472 KB 2461 GL
 Address POB 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig H2#1
 Location: Sec. 29 Twp. 15 Rge. 27 Co. Gove State KS

Interval Tested 3855 - 3914 Zone Tested LKC 'H,I'
 Anchor Length 59 Drill Pipe Run 3488 Mud Wt. 9.1
 Top Packer Depth 3851 Drill Collars Run 369 Vis 55
 Bottom Packer Depth 3855 Wt. Pipe Run - WL 8.0
 Total Depth 3914 Chlorides 2000 ppm System LCM 4#
 Blow Description 1" Blow
No return.
No return.
No blow.

Rec	Feet of	%gas	%oil	%water	%mud
Rec	<u>120</u> Feet of <u>OSM</u>				<u>100</u>
Rec	Feet of				
Rec	Feet of				
Rec	Feet of				

Rec Total 120 BHT 120 Gravity - API RW @ °F Chlorides - ppm

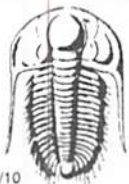
(A) Initial Hydrostatic 1971 Test 1150 T-On Location 14:45
 (B) First Initial Flow 32 Jars T-Started 15:20
 (C) First Final Flow 54 Safety Joint T-Open 17:29
 (D) Initial Shut-In 931 Circ Sub NIC T-Pulled 19:34
 (E) Second Initial Flow 55 Hourly Standby T-Out 21:32
 (F) Second Final Flow 73 Mileage 148.80 Comments
 (G) Final Shut-In 895 Sampler
 (H) Final Hydrostatic 1938 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Initial Open 30 Extra Recorder Sub Total 0
 Initial Shut-In 30 Day Standby Total 1448.80
 Final Flow 30 Accessibility 150 MP/DST Disc't
 Final Shut-In 30 Sub Total 1448.80

Approved By

Our Representative

Chuck Smith

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. 52787

4/10

Well Name & No. Bentley-Rover Unit 29-1 Test No. 3 Date 7-30-13
 Company H+C Oil Operating, Inc. Elevation 2472 KB 2461 GL
 Address POB 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig H2#1
 Location: Sec. 29 Twp. 15 Rge. 27 Co. Gove State KS

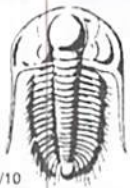
Interval Tested 3922-3950 Zone Tested LKC 'J'
 Anchor Length 28 Drill Pipe Run 3550 Mud Wt. 9.1
 Top Packer Depth 3918 Drill Collars Run 369 Vis 56
 Bottom Packer Depth 3922 Wt. Pipe Run - WL 8.0
 Total Depth 3950 Chlorides 2000 ppm System LCM 2#
 Blow Description 3" Blow.
No return.
1" Blow.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>50</u>	Feet of <u>OCM</u>	%gas	<u>10</u> %oil	%water <u>90</u>	%mud
Rec <u>93</u>	Feet of <u>OSWM</u>	%gas	%oil <u>20</u>	%water <u>80</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 143 BHT 124 Gravity - API RW .129 @ 82 °F Chlorides 48000 ppm
 (A) Initial Hydrostatic 1974 Test 1150 T-On Location 6:10
 (B) First Initial Flow 19 Jars T-Started 6:10
 (C) First Final Flow 52 Safety Joint T-Open 8:
 (D) Initial Shut-In 948 Circ Sub N/C T-Pulled 11:
 (E) Second Initial Flow 58 Hourly Standby T-Out 13:38
 (F) Second Final Flow 81 Mileage 148.80 Comments
 (G) Final Shut-In 934 Sampler
 (H) Final Hydrostatic 1962 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Initial Open 45 Extra Recorder Sub Total 0
 Initial Shut-In 45 Day Standby Total 1448.80
 Final Flow 45 Accessibility 150 MP/DST Disc't
 Final Shut-In 45 Sub Total 1448.80

Approved By Marc Downing Our Representative Chuck Smith

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52788

4/10

Well Name & No. Bentley-Rover Unit 29-1 Test No. 4 Date 7-30-13
 Company H+C Oil Operating, Inc. Elevation 2472 KB 2461 GL
 Address POB 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig H2#1
 Location: Sec. 29 Twp. 15 Rge. 27 Co. Gove State Ks

Interval Tested 3949-3990 Zone Tested LKC 'K'
 Anchor Length 41 Drill Pipe Run 3583 Mud Wt. 9.0
 Top Packer Depth 3945 Drill Collars Run 369 Vis 58
 Bottom Packer Depth 3949 Wt. Pipe Run - WL 8.0
 Total Depth 3990 Chlorides 2000 ppm System LCM 1#

Blow Description 1/4" Blow died @ 17min.
No return.
No blow.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>10</u>	Feet of <u>OS M</u>	%gas	%oil	%water <u>100</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT 118 Gravity - API RW @ °F Chlorides - ppm

(A) Initial Hydrostatic 2002 Test 1150 T-On Location 21:15
 (B) First Initial Flow 18 Jars - T-Started 21:30
 (C) First Final Flow 18 Safety Joint - T-Open 23:37
 (D) Initial Shut-In 36 Circ Sub NIC T-Pulled 01:38
 (E) Second Initial Flow 18 Hourly Standby - T-Out 03:22
 (F) Second Final Flow 19 Mileage X2 297.60 Comments No test, picked up
 (G) Final Shut-In 32 Sampler - tool 8-1-13 22:30
 (H) Final Hydrostatic 1999 Straddle - Ruined Shale Packer -
 Shale Packer - Ruined Packer -
 Extra Packer - Extra Copies -
 Extra Recorder - Sub Total 800
 Day Standby 1d 19.25 Total 2397.60
 Accessibility 150 MP/DST Disc't -
 Sub Total 1597.60

Approved By _____ Our Representative Chuck Smith

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.