



DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Fink #22-1

22-8s-22w Graham, KS

Start Date: 2012.10.05 @ 10:04:56

End Date: 2012.10.05 @ 15:33:26

Job Ticket #: 48627 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.09 @ 12:03:26



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H & C Oil Operating, Inc.

22-8s-22w Graham, KS

PO Box 86
Plainville, KS 67663

Fink #22-1

Job Ticket: 48627

DST#: 1

ATTN: Marc Downing

Test Start: 2012.10.05 @ 10:04:56

GENERAL INFORMATION:

Formation: **LKC "A"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:52:26
 Time Test Ended: 15:33:26
 Interval: **3415.00 ft (KB) To 3445.00 ft (KB) (TVD)**
 Total Depth: 3445.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brian Fairbank
 Unit No: 41
 Reference Elevations: 2173.00 ft (KB)
 2168.00 ft (CF)
 KB to GR/CF: 5.00 ft

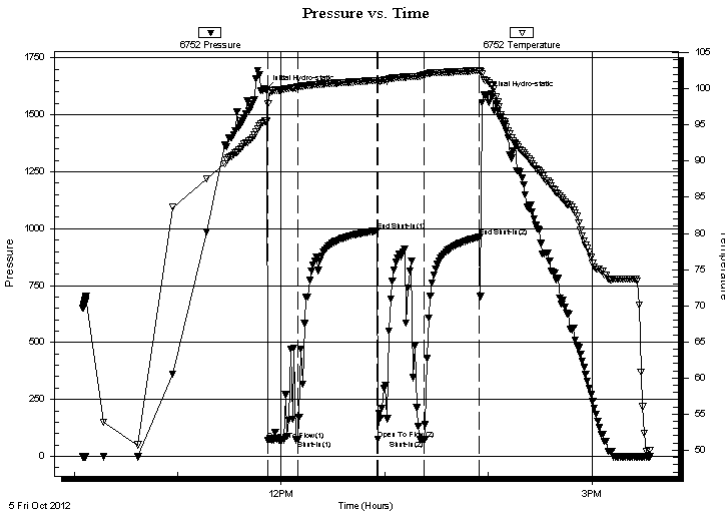
Serial #: 6752

Inside

Press @ Run Depth: 71.43 psig @ 3417.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.10.05 End Date: 2012.10.05 Last Calib.: 2012.10.05
 Start Time: 10:04:57 End Time: 15:33:26 Time On Btm: 2012.10.05 @ 11:50:56
 Time Off Btm: 2012.10.05 @ 13:58:26

TEST COMMENT: IFP - 1 1/4" blow - died 22 min
 ISI - no blow back
 FFP - no blow 27 min - weak sur blow
 FSI - no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1611.11	95.53	Initial Hydro-static
2	71.99	98.00	Open To Flow (1)
19	72.87	100.24	Shut-In (1)
65	990.21	101.20	End Shut-In (1)
65	74.35	100.84	Open To Flow (2)
92	71.43	101.94	Shut-In (2)
124	962.96	102.56	End Shut-In (2)
128	1584.87	101.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
115.00	drl mud 100%	1.61

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H & C Oil Operating, Inc.

22-8s-22w Graham, KS

PO Box 86
Plainville, KS 67663

Fink #22-1

Job Ticket: 48627

DST#: 1

ATTN: Marc Downing

Test Start: 2012.10.05 @ 10:04:56

Tool Information

Drill Pipe:	Length: 3402.00 ft	Diameter: 3.80 inches	Volume: 47.72 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 47.72 bbl</u>	Tool Chased 15.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3415.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	50.00 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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Shut In Tool	5.00			3400.00	
Hydraulic tool	5.00			3405.00	
Packer	5.00			3410.00	20.00 Bottom Of Top Packer
Packer	5.00			3415.00	
Stubb	1.00			3416.00	
Perforations	1.00			3417.00	
Recorder	0.00	6752	Inside	3417.00	
Recorder	0.00	6741	Outside	3417.00	
Perforations	25.00			3442.00	
Bullnose	3.00			3445.00	30.00 Bottom Packers & Anchor
Total Tool Length:	50.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H & C Oil Operating, Inc.

22-8s-22w Graham, KS

PO Box 86
Plainville, KS 67663

Fink #22-1

Job Ticket: 48627

DST#: 1

ATTN: Marc Downing

Test Start: 2012.10.05 @ 10:04:56

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
115.00	drl mud 100%	1.613

Total Length: 115.00 ft Total Volume: 1.613 bbl

Num Fluid Samples: 0

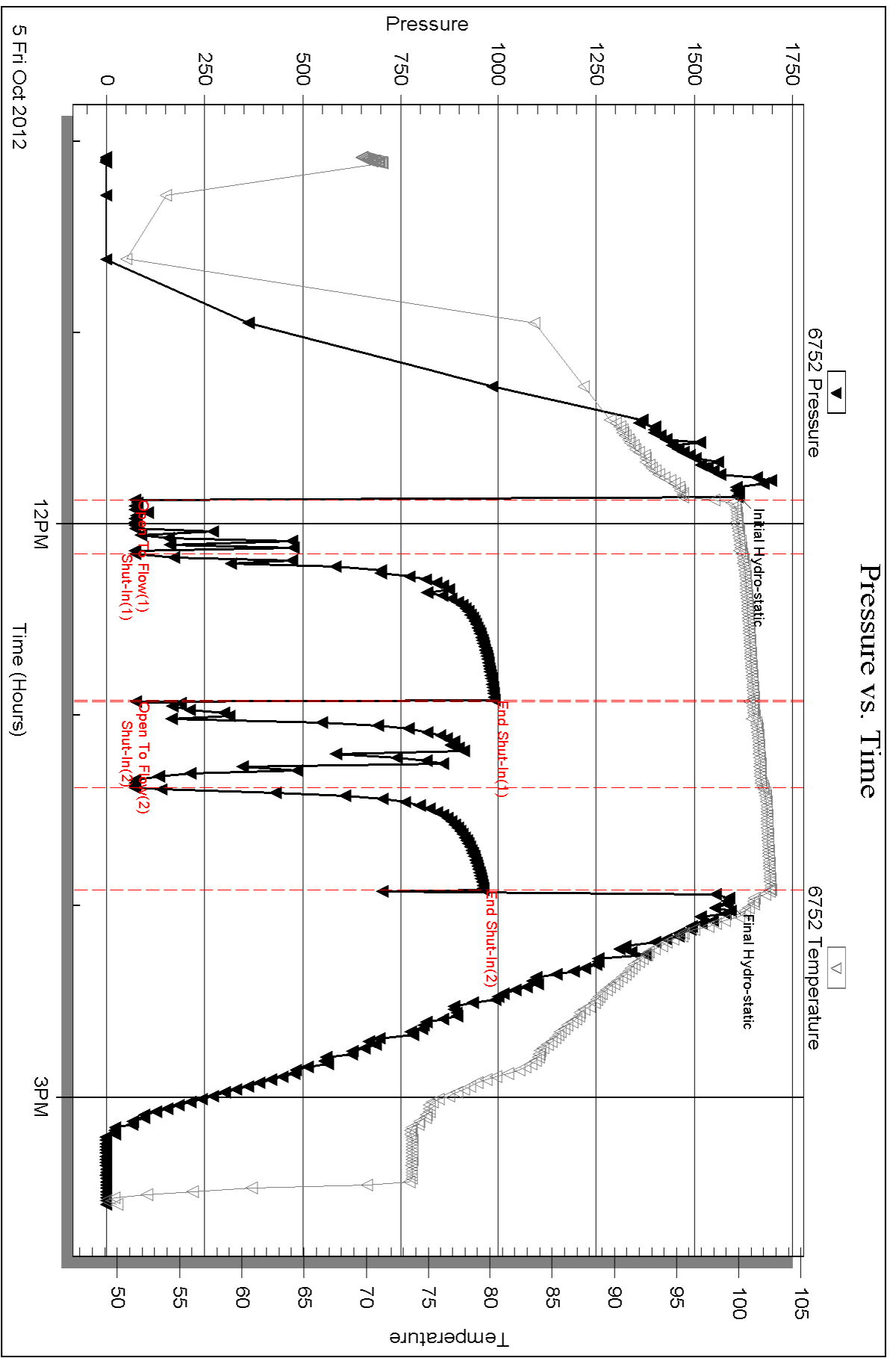
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

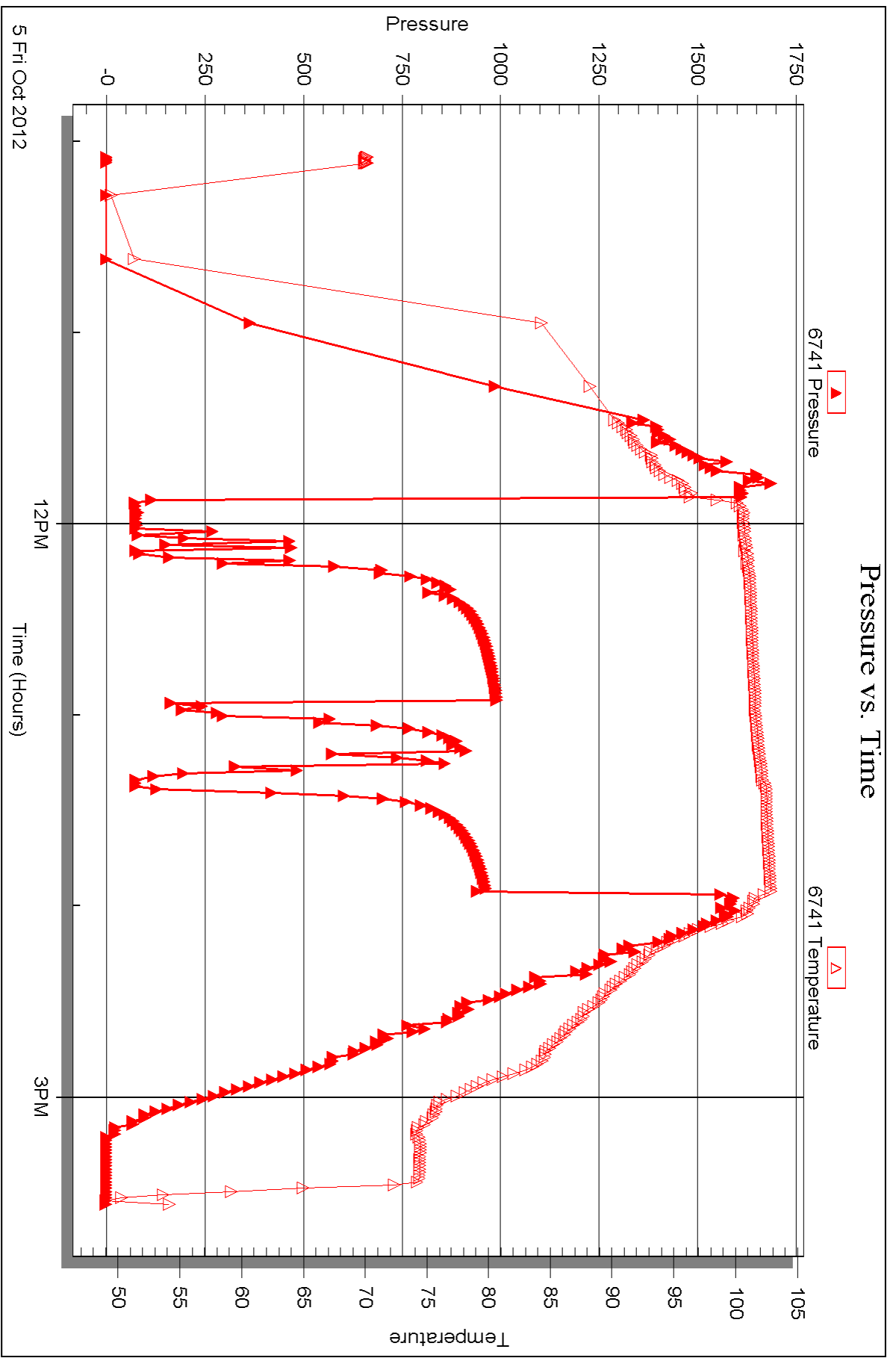


Serial #: 6741

Outside H & C Oil Operating, Inc.

Fmk #22-1

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 48627

Printed: 2012.10.09 @ 12:03:32



DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Fink #22-1

22-8s-22w Graham, KS

Start Date: 2012.10.06 @ 07:24:40

End Date: 2012.10.06 @ 12:46:00

Job Ticket #: 48628 DST #: 2

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

Printed: 2012.10.09 @ 12:02:39



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H & C Oil Operating, Inc.

22-8s-22w Graham, KS

PO Box 86
Plainville, KS 67663

Fink #22-1

Job Ticket: 48628

DST#: 2

ATTN: Marc Downing

Test Start: 2012.10.06 @ 07:24:40

GENERAL INFORMATION:

Formation: **LKC "I-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:17:00

Time Test Ended: 12:46:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Brian Fairbank

Unit No: 41

Interval: 3564.00 ft (KB) To 3600.00 ft (KB) (TVD)

Reference Elevations: 2173.00 ft (KB)

Total Depth: 3600.00 ft (KB) (TVD)

2168.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6752

Inside

Press @ Run Depth: 253.57 psig @ 3572.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.06

End Date:

2012.10.06

Last Calib.:

2012.10.06

Start Time: 07:24:41

End Time:

12:46:00

Time On Btm:

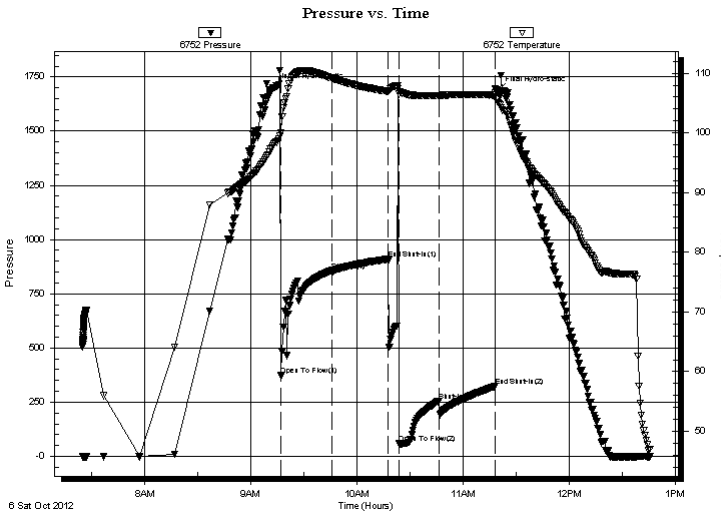
2012.10.06 @ 09:13:40

Time Off Btm:

2012.10.06 @ 11:19:40

TEST COMMENT: IFP - 1/4" blow - died 22 min
ISI - no blow back
FFP - no blow - flush - 1/2" - 1 1/4" - died 9 min
FSI - no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1700.96	98.38	Initial Hydro-static
4	372.37	99.94	Open To Flow (1)
33	857.15	109.12	Shut-In(1)
64	909.25	106.97	End Shut-In(1)
70	59.08	106.52	Open To Flow (2)
93	253.57	106.23	Shut-In(2)
125	322.46	106.37	End Shut-In(2)
126	1687.89	105.13	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
85.00	O spt DRL MUD 100%	1.19

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H & C Oil Operating, Inc.

22-8s-22w Graham, KS

PO Box 86
Plainville, KS 67663

Fink #22-1

Job Ticket: 48628

DST#: 2

ATTN: Marc Downing

Test Start: 2012.10.06 @ 07:24:40

GENERAL INFORMATION:

Formation: **LKC "I-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:17:00

Time Test Ended: 12:46:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Brian Fairbank

Unit No: 41

Interval: 3564.00 ft (KB) To 3600.00 ft (KB) (TVD)

Reference Elevations: 2173.00 ft (KB)

Total Depth: 3600.00 ft (KB) (TVD)

2168.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6741 Outside

Press @ Run Depth: psig @ 3572.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.06

End Date:

2012.10.06

Last Calib.:

2012.10.06

Start Time: 07:24:32

End Time:

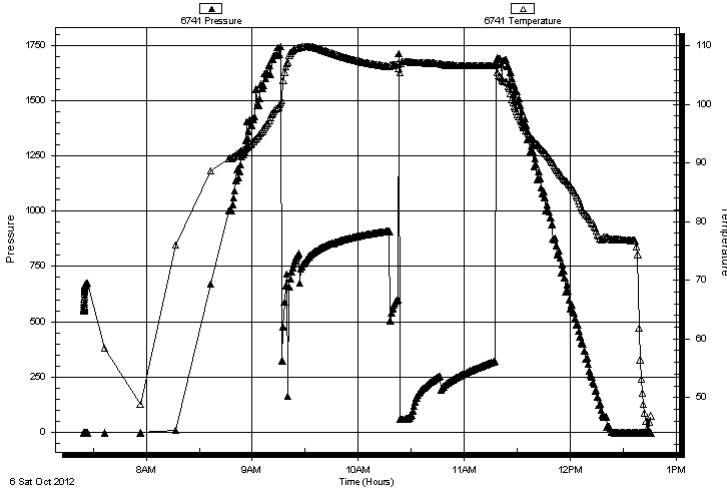
12:45:51

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP - 1/4" blow - died 22 min
ISI - no blow back
FFP - no blow - flush - 1/2" - 1 1/4" - died 9 min
FSI - no blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
85.00	O spt DRL MUD 100%	1.19

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H & C Oil Operating, Inc.

22-8s-22w Graham, KS

PO Box 86
Plainville, KS 67663

Fink #22-1

Job Ticket: 48628

DST#: 2

ATTN: Marc Downing

Test Start: 2012.10.06 @ 07:24:40

Tool Information

Drill Pipe:	Length: 3560.00 ft	Diameter: 3.80 inches	Volume: 49.94 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	52000.00 lb
			<u>Total Volume: 49.94 bbl</u>	Tool Chased	15.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial	45000.00 lb
Depth to Top Packer:	3564.00 ft			Final	47000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	56.00 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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Shut In Tool	5.00			3549.00	
Hydraulic tool	5.00			3554.00	
Packer	5.00			3559.00	20.00 Bottom Of Top Packer
Packer	5.00			3564.00	
Stubb	1.00			3565.00	
Perforations	7.00			3572.00	
Recorder	0.00	6752	Inside	3572.00	
Recorder	0.00	6741	Outside	3572.00	
Perforations	25.00			3597.00	
Bullnose	3.00			3600.00	36.00 Bottom Packers & Anchor
Total Tool Length:	56.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H & C Oil Operating, Inc.

22-8s-22w Graham, KS

PO Box 86
Plainville, KS 67663

Fink #22-1

Job Ticket: 48628

DST#: 2

ATTN: Marc Downing

Test Start: 2012.10.06 @ 07:24:40

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:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
85.00	O spt DRL MUD 100%	1.192

Total Length: 85.00 ft Total Volume: 1.192 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

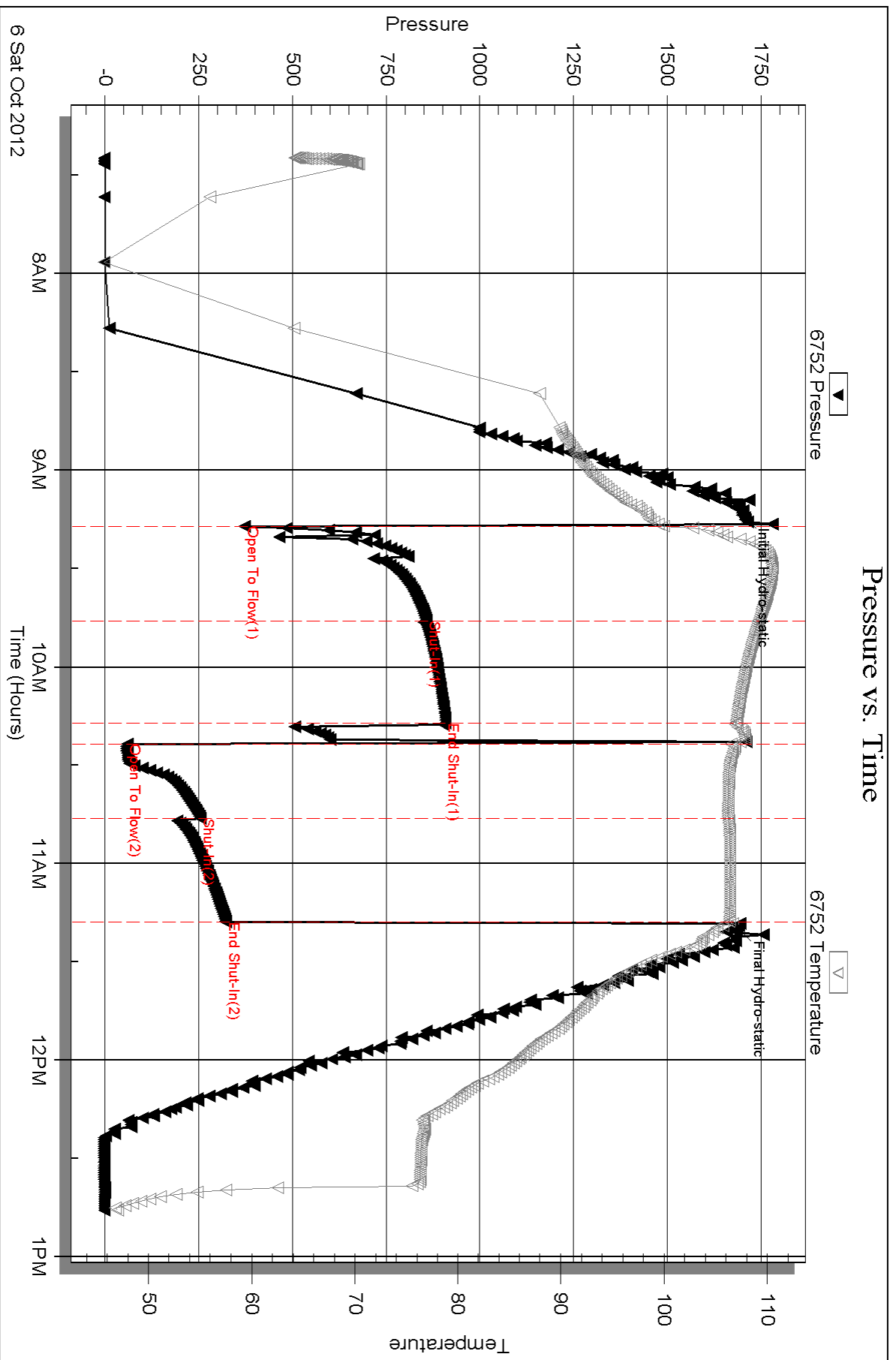
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

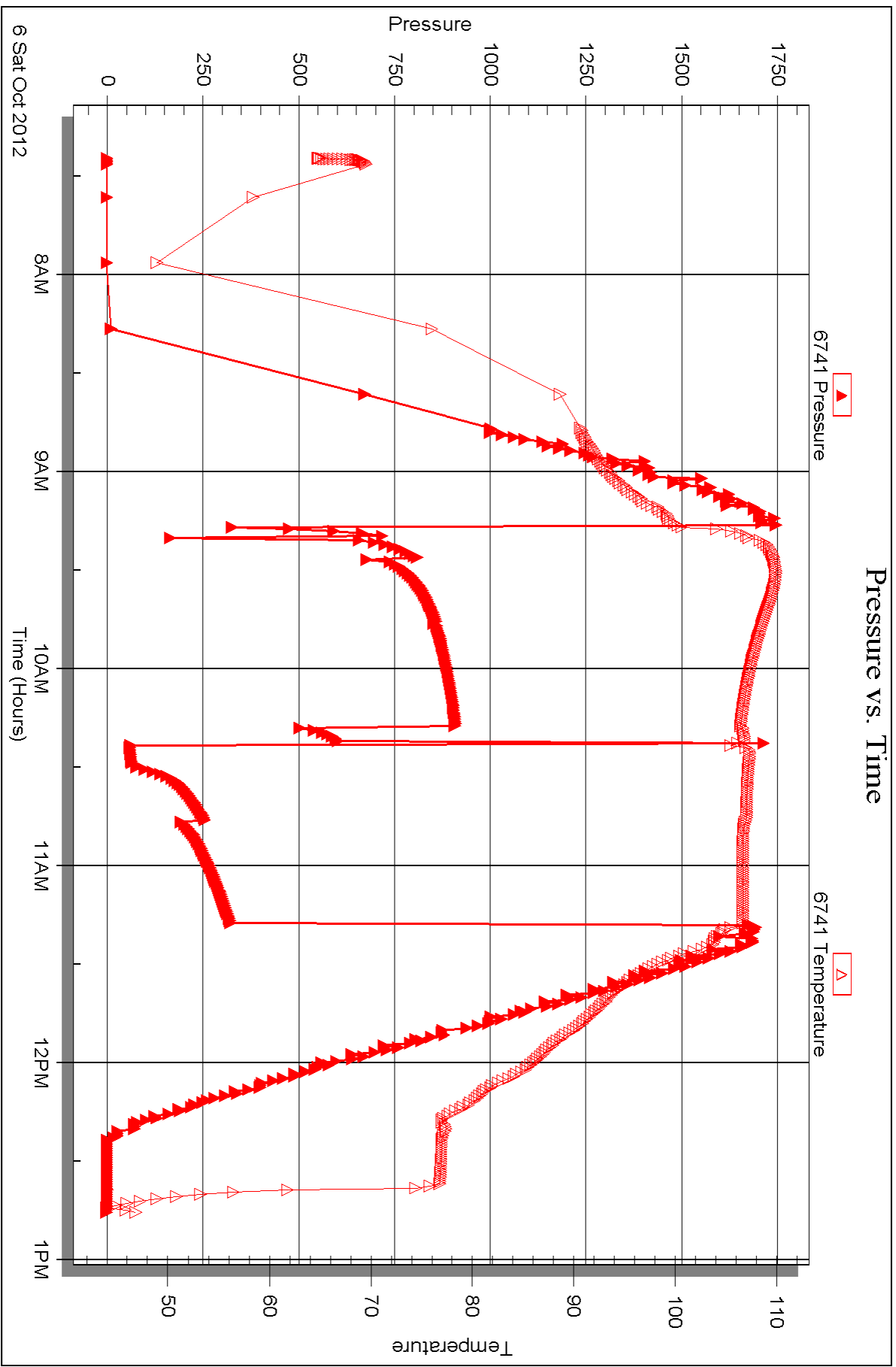


Serial #: 6741

Outside H & C Oil Operating, Inc.

Fmk #22-1

DST Test Number: 2





DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Fink #22-1

22-8s-22w Graham, KS

Start Date: 2012.10.07 @ 05:50:02

End Date: 2012.10.07 @ 12:32:02

Job Ticket #: 48629 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.09 @ 12:01:54



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H & C Oil Operating, Inc.

22-8s-22w Graham, KS

PO Box 86
Plainville, KS 67663

Fink #22-1

Job Ticket: 48629

DST#: 3

ATTN: Marc Downing

Test Start: 2012.10.07 @ 05:50:02

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 07:39:42
 Tester: Brian Fairbank
 Time Test Ended: 12:32:02
 Unit No: 41
 Interval: **3706.00 ft (KB) To 3770.00 ft (KB) (TVD)**
 Reference Elevations: 2173.00 ft (KB)
 Total Depth: 3770.00 ft (KB) (TVD)
 2168.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 5.00 ft

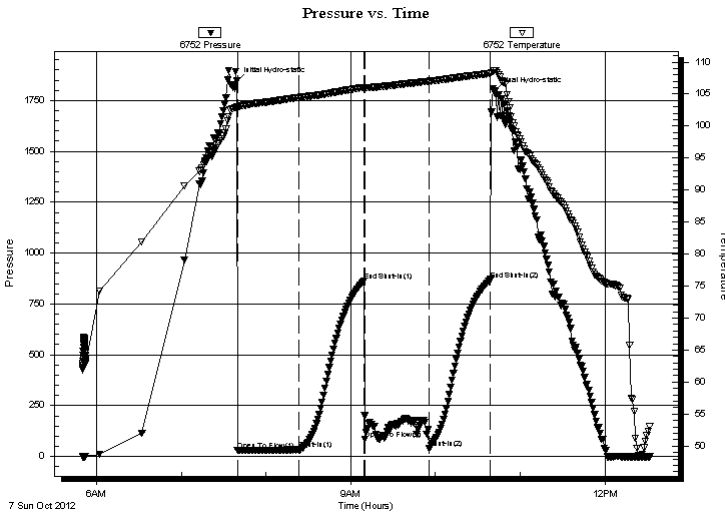
Serial #: 6752

Inside

Press @ Run Depth: 41.33 psig @ 3711.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.10.07 End Date: 2012.10.07 Last Calib.: 2012.10.07
 Start Time: 05:50:03 End Time: 12:32:02 Time On Btm: 2012.10.07 @ 07:39:02
 Time Off Btm: 2012.10.07 @ 10:41:22

TEST COMMENT: IFP - weak blow throughout 1/4" - 1 1/2"
 ISI - no blow back
 FFP - sur blow back - died 32 min
 FSI - no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1845.16	103.07	Initial Hydro-static
1	30.15	102.72	Open To Flow (1)
44	34.90	104.46	Shut-In(1)
91	864.07	106.06	End Shut-In(1)
91	84.55	105.95	Open To Flow (2)
137	41.33	106.99	Shut-In(2)
180	869.65	108.22	End Shut-In(2)
183	1795.75	108.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	SOCM 5%O, 95%M	0.21
10.00	FREE OIL 90%O, 10%M	0.14

* 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.

22-8s-22w Graham, KS

PO Box 86
Plainville, KS 67663

Fink #22-1

Job Ticket: 48629

DST#: 3

ATTN: Marc Downing

Test Start: 2012.10.07 @ 05:50:02

Tool Information

Drill Pipe:	Length: 3717.00 ft	Diameter: 3.80 inches	Volume: 52.14 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 52.14 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3706.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.00 ft			
Tool Length:	84.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3691.00	
Hydraulic tool	5.00			3696.00	
Packer	5.00			3701.00	20.00 Bottom Of Top Packer
Packer	5.00			3706.00	
Stubb	1.00			3707.00	
Perforations	3.00			3710.00	
Change Over Sub	1.00			3711.00	
Recorder	0.00	6752	Inside	3711.00	
Recorder	0.00	6741	Outside	3711.00	
Blank Spacing	30.00			3741.00	
Change Over Sub	1.00			3742.00	
Perforations	25.00			3767.00	
Bullnose	3.00			3770.00	64.00 Bottom Packers & Anchor
Total Tool Length:		84.00			



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H & C Oil Operating, Inc.

22-8s-22w Graham, KS

PO Box 86
Plainville, KS 67663

Fink #22-1

Job Ticket: 48629

DST#: 3

ATTN: Marc Downing

Test Start: 2012.10.07 @ 05:50:02

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

25 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
15.00	SOCM 5%O, 95%M	0.210
10.00	FREE OIL 90%O, 10%M	0.140

Total Length: 25.00 ft Total Volume: 0.350 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

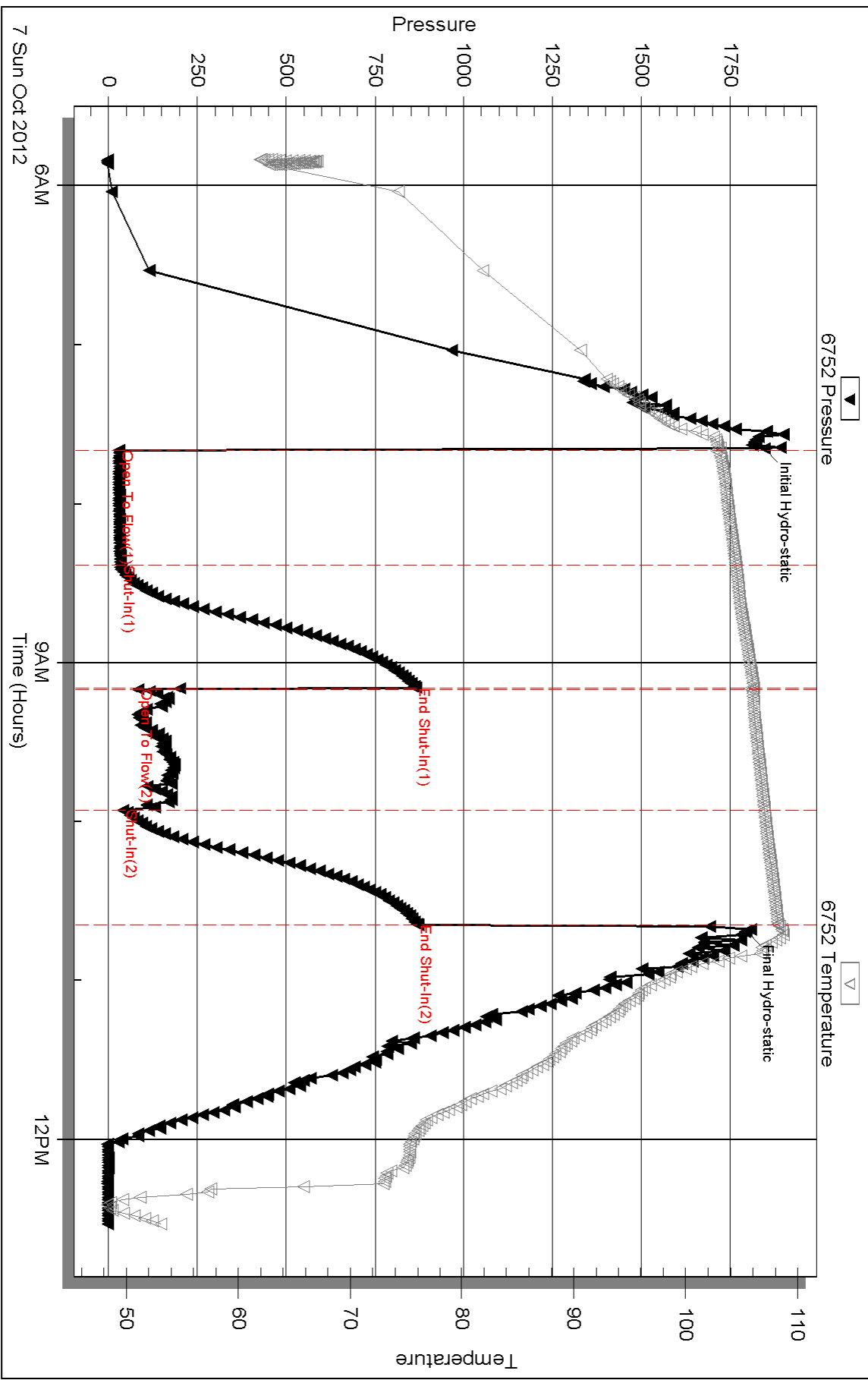
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

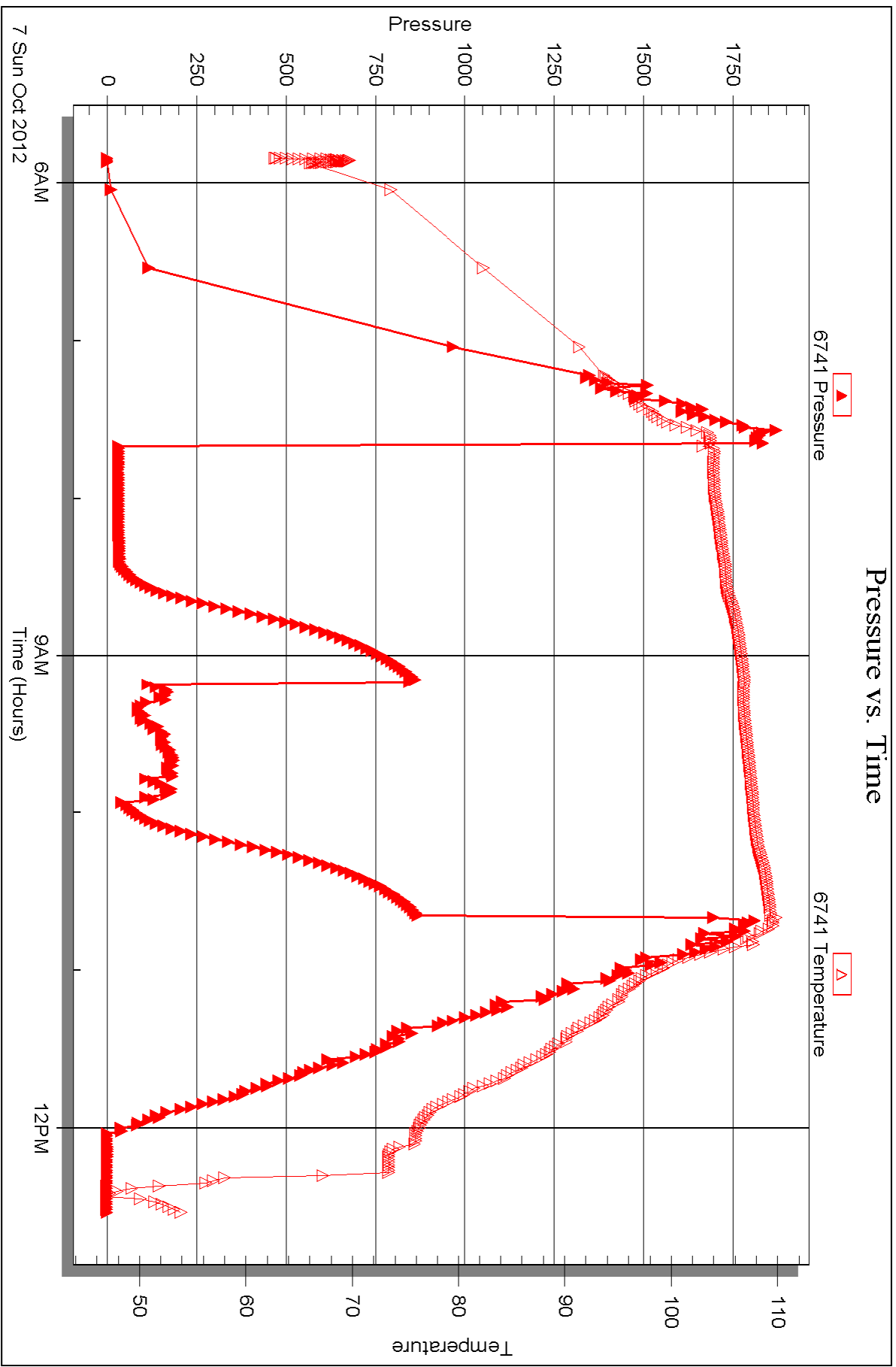


Serial #: 6741

Outside H & C Oil Operating, Inc.

Flnk #22-1

DST Test Number: 3





DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Fink #22-1

22-8s-22w Graham, KS

Start Date: 2012.10.08 @ 01:42:57

End Date: 2012.10.08 @ 08:40:36

Job Ticket #: 48630 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.09 @ 12:00:41



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H & C Oil Operating, Inc.

22-8s-22w Graham, KS

PO Box 86
Plainville, KS 67663

Fink #22-1

Job Ticket: 48630

DST#: 4

ATTN: Marc Downing

Test Start: 2012.10.08 @ 01:42:57

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:47:17

Time Test Ended: 08:40:36

Test Type: Conventional Bottom Hole (Reset)

Tester: Brian Fairbank

Unit No: 41

Interval: 3706.00 ft (KB) To 3780.00 ft (KB) (TVD)

Reference Elevations: 2173.00 ft (KB)

Total Depth: 3780.00 ft (KB) (TVD)

2168.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6752 Inside

Press @ Run Depth: 446.06 psig @ 3709.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.08

End Date:

2012.10.08

Last Calib.:

2012.10.08

Start Time: 01:42:58

End Time:

08:40:37

Time On Btm:

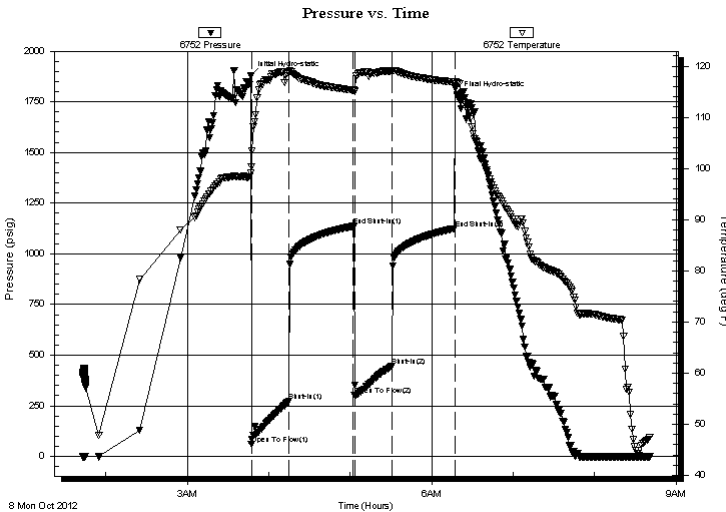
2012.10.08 @ 03:46:37

Time Off Btm:

2012.10.08 @ 06:18:57

TEST COMMENT: IFP - BOB 4 min
ISI - no blow back 5 min - sur blow
FFP - BOB 5 min
FSI - no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1877.05	99.08	Initial Hydro-static
1	60.42	100.30	Open To Flow (1)
28	272.37	118.73	Shut-In(1)
76	1136.00	115.32	End Shut-In(1)
77	303.00	115.14	Open To Flow (2)
105	446.06	118.99	Shut-In(2)
151	1124.47	116.90	End Shut-In(2)
153	1779.18	116.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
225.00	MW w / scum O 95%W, 5%M	3.16
280.00	SO & MCW 5%O, 85%W, 10%M	3.93
245.00	OCMW 10%O, 60%W, 30%M	3.44
100.00	SOCWM 5%O, 25%W, 70%M	1.40
5.00	MO 90%O, 10%M	0.07

* 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.

22-8s-22w Graham, KS

PO Box 86
Plainville, KS 67663

Fink #22-1

Job Ticket: 48630

DST#: 4

ATTN: Marc Downing

Test Start: 2012.10.08 @ 01:42:57

Tool Information

Drill Pipe:	Length: 3716.00 ft	Diameter: 3.80 inches	Volume: 52.13 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 52.13 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3706.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	74.00 ft			
Tool Length:	94.00 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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Shut In Tool	5.00			3691.00	
Hydraulic tool	5.00			3696.00	
Packer	5.00			3701.00	20.00 Bottom Of Top Packer
Packer	5.00			3706.00	
Stubb	1.00			3707.00	
Perforations	1.00			3708.00	
Change Over Sub	1.00			3709.00	
Recorder	0.00	6752	Inside	3709.00	
Recorder	0.00	6741	Outside	3709.00	
Blank Spacing	62.00			3771.00	
Change Over Sub	1.00			3772.00	
Perforations	5.00			3777.00	
Bullnose	3.00			3780.00	74.00 Bottom Packers & Anchor

Total Tool Length: 94.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

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PO Box 86
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Fink #22-1

Job Ticket: 48630

DST#: 4

ATTN: Marc Downing

Test Start: 2012.10.08 @ 01:42:57

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

37000 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
225.00	MW w / scum O 95%W, 5%M	3.156
280.00	SO & MCW 5%O, 85%W, 10%M	3.928
245.00	OCMW 10%O, 60%W, 30%M	3.437
100.00	SOCWM 5%O, 25%W, 70%M	1.403
5.00	MO 90%O, 10%M	0.070

Total Length: 855.00 ft

Total Volume: 11.994 bbl

Num Fluid Samples: 0

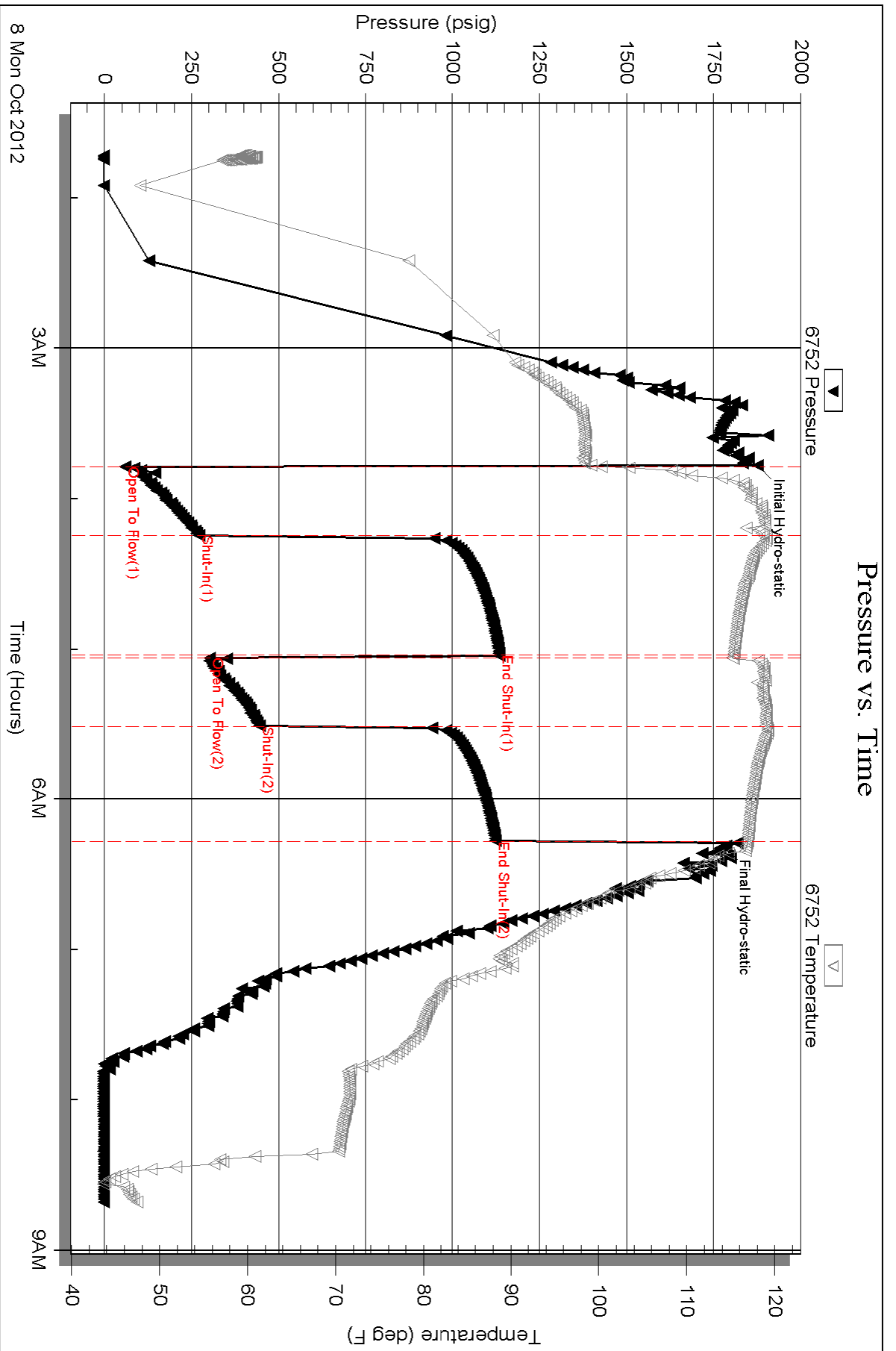
Num Gas Bombs: 0

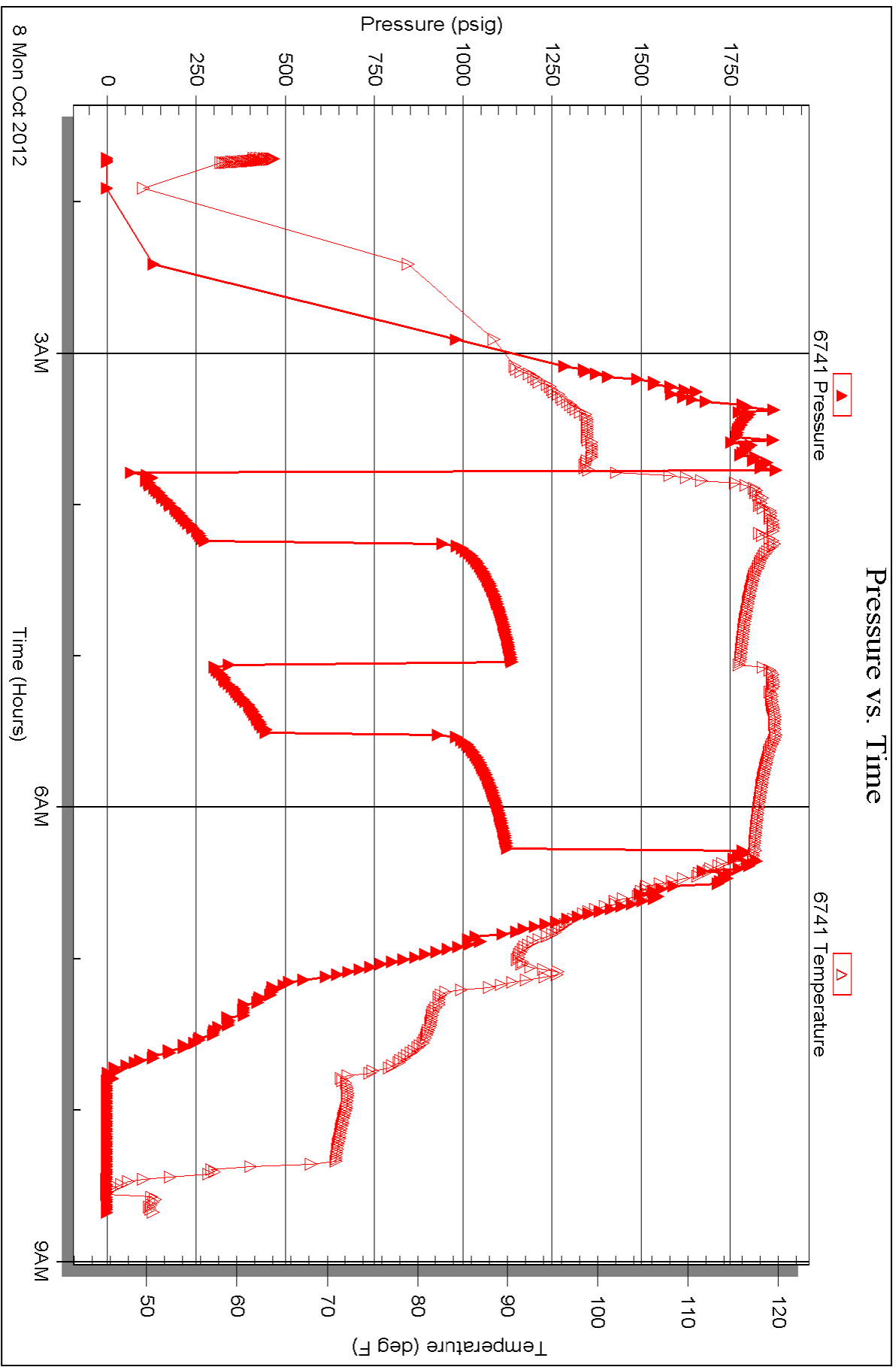
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48627

4/10

Well Name & No. Fink 22-1 Test No. 1 Date 10-5-12
 Company H&C Oil Operating, Inc Elevation 2173 KB 2168 GL
 Address Po Box 86 Altonville, Ky 67663
 Co. Rep / Geo. Marc Downing Rig Am Egg 63
 Location: Sec. 22 Twp. 8 Rge. 22 Co. Graham State Ky

Interval Tested 3415 - 3445 Zone Tested LKC "A"
 Anchor Length 30 Drill Pipe Run 3402 Mud Wt. 8.8
 Top Packer Depth 3410 Drill Collars Run — Vis 47
 Bottom Packer Depth 3415 Wt. Pipe Run — WL 6.8
 Total Depth 3445 Chlorides 1300 ppm System LCM

Blow Description IFP - 1 1/4" blow - died 22 min
ISI - no blow back
FFP - no blow 27 min - weak sur blow
FSI - no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>115</u>	<u>drl mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 115 BHT 103 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1611 Test 1150 T-On Location 0944
 (B) First Initial Flow 72 Jars T-Started 1004
 (C) First Final Flow 73 Safety Joint T-Open 1152
 (D) Initial Shut-In 990 Circ Sub T-Pulled 1352
 (E) Second Initial Flow 74 Hourly Standby T-Out 1533
 (F) Second Final Flow 71 Mileage 117 RT 181.35 Comments Tool slid 15'
 (G) Final Shut-In 963 Sampler to bottom
 (H) Final Hydrostatic 1585 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder Sub Total 0
 Day Standby Total 1331.35
 Accessibility MP/DST Disc't

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

Sub Total 1331.35

Approved By _____ Our Representative Brian Fairbank

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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48628

Well Name & No. Fink 22-1 Test No. 2 Date 10-6-12
 Company H+C Elevation 2173 KB 2168 GL
 Address _____
 Co. Rep / Geo. Marc Downing Rig Am Egg 63
 Location: Sec. 22 Twp. 8 Rge. 22 Co. Graham State KS

Interval Tested 3564-3600 Zone Tested LKC "I-J"
 Anchor Length 36 Drill Pipe Run 3560 Mud Wt. 9.1
 Top Packer Depth 3559 Drill Collars Run — Vis 55
 Bottom Packer Depth 3564 Wt. Pipe Run — WL 7.2
 Total Depth 3600 Chlorides 1500 ppm System LCM _____

Blow Description IFP - 1/4" blow - died 22 min
ISI - no blow back
FFP - no blow - flush - 1/2 - 1/4 - died 9 min
FSI - no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>85</u>	<u>0 spt dcl mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 85 BHT 106 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1701</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>0628</u>
(B) First Initial Flow <u>372</u>	<input type="checkbox"/> Jars _____	T-Started <u>0724</u>
(C) First Final Flow <u>857</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>0917</u>
(D) Initial Shut-In <u>909</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>1117</u>
(E) Second Initial Flow <u>58</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1246</u>
(F) Second Final Flow <u>254</u>	<input checked="" type="checkbox"/> Mileage <u>181.35</u>	Comments <u>tool slid 15' to bottom</u>
(G) Final Shut-In <u>322</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1689</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

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

Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Sub Total 1331.35

MP/DST Disc't _____

Approved By _____ Our Representative Brian Feiball

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48629

Well Name & No. Fink 22-1 Test No. 3 Date 10-7-12
 Company H+C Elevation 2173 KB 2168 GL
 Address _____
 Co. Rep / Geo. Marc Downing Rig Am Eagle 3
 Location: Sec. 22 Twp. 8 Rge. 22 Co. Graham State Ky

Interval Tested 3706-3770 Zone Tested Arbuckle
 Anchor Length 64 Drill Pipe Run 3717 Mud Wt. 9.1
 Top Packer Depth 3701 Drill Collars Run — Vis 55
 Bottom Packer Depth 3706 Wt. Pipe Run — WL 7.2
 Total Depth 3770 Chlorides 1500 ppm System LCM _____
 Blow Description IIFP - weak flow throughout 1/4" - 1 1/2"
ISI - no blow back
FFP - sur blow - died 32 min
FSI - no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Free oil</u>		<u>90%</u>		<u>10%</u>
<u>15</u>	<u>SOCM</u>		<u>5%</u>		<u>95%</u>
_____	_____		_____		_____
_____	_____		_____		_____
_____	_____		_____		_____

Rec Total 25 BHT 108 Gravity 25 API RW @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1845 Test 1150 T-On Location 0343
 (B) First Initial Flow 30 Jars T-Started 0550
 (C) First Final Flow 35 Safety Joint T-Open 0740
 (D) Initial Shut-In 864 Circ Sub T-Pulled 1040
 (E) Second Initial Flow 85 Hourly Standby T-Out 1232
 (F) Second Final Flow 41 Mileage 181.35 Comments _____
 (G) Final Shut-In 870 Sampler _____
 (H) Final Hydrostatic 1796 Straddle _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 45 Shale Packer _____
 Initial Shut-In 45 Extra Packer _____
 Final Flow 45 Extra Recorder _____
 Final Shut-In 45 Day Standby _____
 Accessibility _____
 Sub Total 1331.35 MP/DST Disc't _____

Approved By _____ Our Representative Brian Fairbank

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48630

4/10

Well Name & No. Fink 22-1 Test No. 4 Date 10-8-12
 Company H+C Elevation 2173 KB 2168 GL
 Address _____
 Co. Rep / Geo. Marc Downing Rig Am Eagle 3
 Location: Sec. 22 Twp. 8 Rge. 22 Co. Gregem State Ka

Interval Tested 3706-3780 Zone Tested Arbuckle
 Anchor Length 74 Drill Pipe Run 3716 Mud Wt. 9.2
 Top Packer Depth 3701 Drill Collars Run _____ Vis 61
 Bottom Packer Depth 3706 Wt. Pipe Run _____ WL 7.8
 Total Depth 3780 Chlorides 1900 ppm System LCM _____

Blow Description IFP- BOB 4 min
ISI- no blow 5 min - sur blow
FFP- BOB 5 min
FST- no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>MO</u>		<u>90</u>		<u>10</u>
<u>100</u>	<u>SOCWM</u>		<u>5</u>	<u>25</u>	<u>70</u>
<u>245</u>	<u>OCMW</u>		<u>10</u>	<u>60</u>	<u>30</u>
<u>280</u>	<u>SO+MCW</u>		<u>5</u>	<u>85</u>	<u>10</u>
<u>255</u>	<u>MW w/ screen</u>		<u>scum</u>	<u>95</u>	<u>5</u>

Rec Total 885 BHT 117 Gravity _____ API RW 254 @ 53 °F Chlorides 37000 ppm

(A) Initial Hydrostatic 1877 Test 1150 T-On Location 0041
 (B) First Initial Flow 60 Jars T-Started 0142
 (C) First Final Flow 272 Safety Joint T-Open 0347
 (D) Initial Shut-In 1136 Circ Sub T-Pulled 0617
 (E) Second Initial Flow 303 Hourly Standby T-Out 0840
 (F) Second Final Flow 446 Milage x2 365.70 Comments milage to
load tools
 (G) Final Shut-In 1124 Sampler
 (H) Final Hydrostatic 1779 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder Sub Total 0
 Day Standby Total 1512.70
 Accessibility MP/DST Disc't _____
 Sub Total 1512.70

Initial Open 30
 Initial Shut-In 45
 Final Flow 30
 Final Shut-In 45

Approved By _____ Our Representative Brian Farbak

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