



DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

McGrath Unit W #36-1

36-9s-25w Graham,KS

Start Date: 2013.04.20 @ 13:15:00

End Date: 2013.04.20 @ 21:16:30

Job Ticket #: 50283 DST #: 1

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

Printed: 2013.04.26 @ 15:39:20



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operating Inc.

36-9s-25w Graham,KS

PO Box 86
Plainville KS 67663

McGrath Unit W #36-1

ATTN: Marc Downing

Job Ticket: 50283

DST#: 1

Test Start: 2013.04.20 @ 13:15:00

GENERAL INFORMATION:

Formation: **KC"C,D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:17:00

Time Test Ended: 21:16:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

Interval: 3835.00 ft (KB) To 3880.00 ft (KB) (TVD)

Reference Elevations: 2502.00 ft (KB)

Total Depth: 3880.00 ft (KB) (TVD)

2497.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6753 Inside

Press @ RunDepth: 93.34 psig @ 3836.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.20 End Date: 2013.04.20

Last Calib.: 2013.04.20

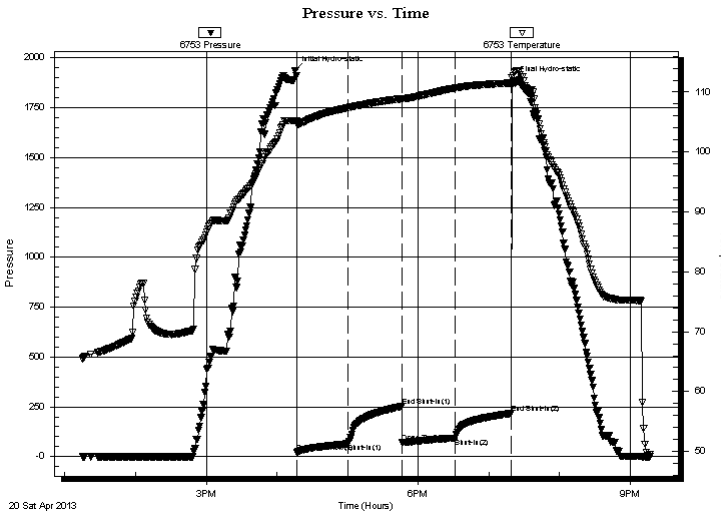
Start Time: 13:15:05 End Time: 21:16:29

Time On Btm: 2013.04.20 @ 16:15:30

Time Off Btm: 2013.04.20 @ 19:20:30

TEST COMMENT: IF-BOB in 32 min
ISI-Weak surface blow
FF-6" blow
FSI-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1937.24	105.27	Initial Hydro-static
2	23.32	104.69	Open To Flow (1)
45	65.15	107.39	Shut-In(1)
91	251.34	108.87	End Shut-In(1)
91	69.88	108.83	Open To Flow (2)
136	93.34	110.66	Shut-In(2)
184	216.59	111.54	End Shut-In(2)
185	1884.75	112.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	SGOCM 5%G 25%O 70%M	0.84
125.00	GO 20%G 80%O	1.75
0.00	60ft GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc.

36-9s-25w Graham,KS

PO Box 86
Plainville KS 67663

McGrath Unit W #36-1

Job Ticket: 50283

DST#: 1

ATTN: Marc Downing

Test Start: 2013.04.20 @ 13:15:00

Tool Information

Drill Pipe:	Length: 3840.00 ft	Diameter: 3.80 inches	Volume: 53.87 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 53.87 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3835.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	66.00 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			3815.00	
Shut In Tool	5.00			3820.00	
Hydraulic tool	5.00			3825.00	
Packer	5.00			3830.00	21.00 Bottom Of Top Packer
Packer	5.00			3835.00	
Stubb	1.00			3836.00	
Recorder	0.00	6753	Inside	3836.00	
Recorder	0.00	8166	Outside	3836.00	
Perforations	7.00			3843.00	
Change Over Sub	1.00			3844.00	
Drill Pipe	32.00			3876.00	
Change Over Sub	1.00			3877.00	
Bullnose	3.00			3880.00	45.00 Bottom Packers & Anchor

Total Tool Length: 66.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc.

36-9s-25w Graham,KS

PO Box 86
Plainville KS 67663

McGrath Unit W #36-1

Job Ticket: 50283

DST#: 1

ATTN: Marc Downing

Test Start: 2013.04.20 @ 13:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	SGOCM 5%G 25%O 70%M	0.842
125.00	GO 20%G 80%O	1.753
0.00	60ft GIP	0.000

Total Length: 185.00 ft

Total Volume: 2.595 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

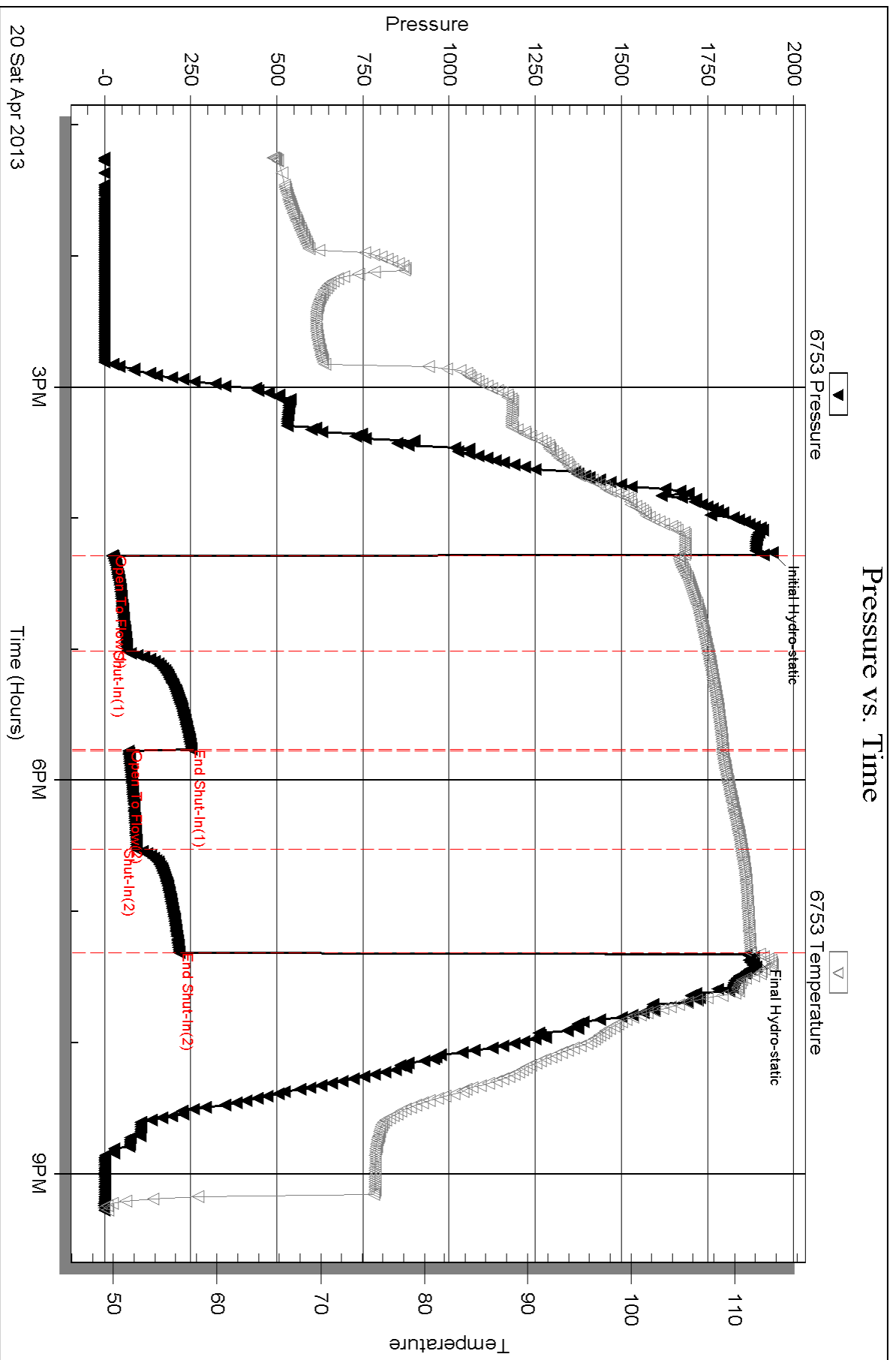
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

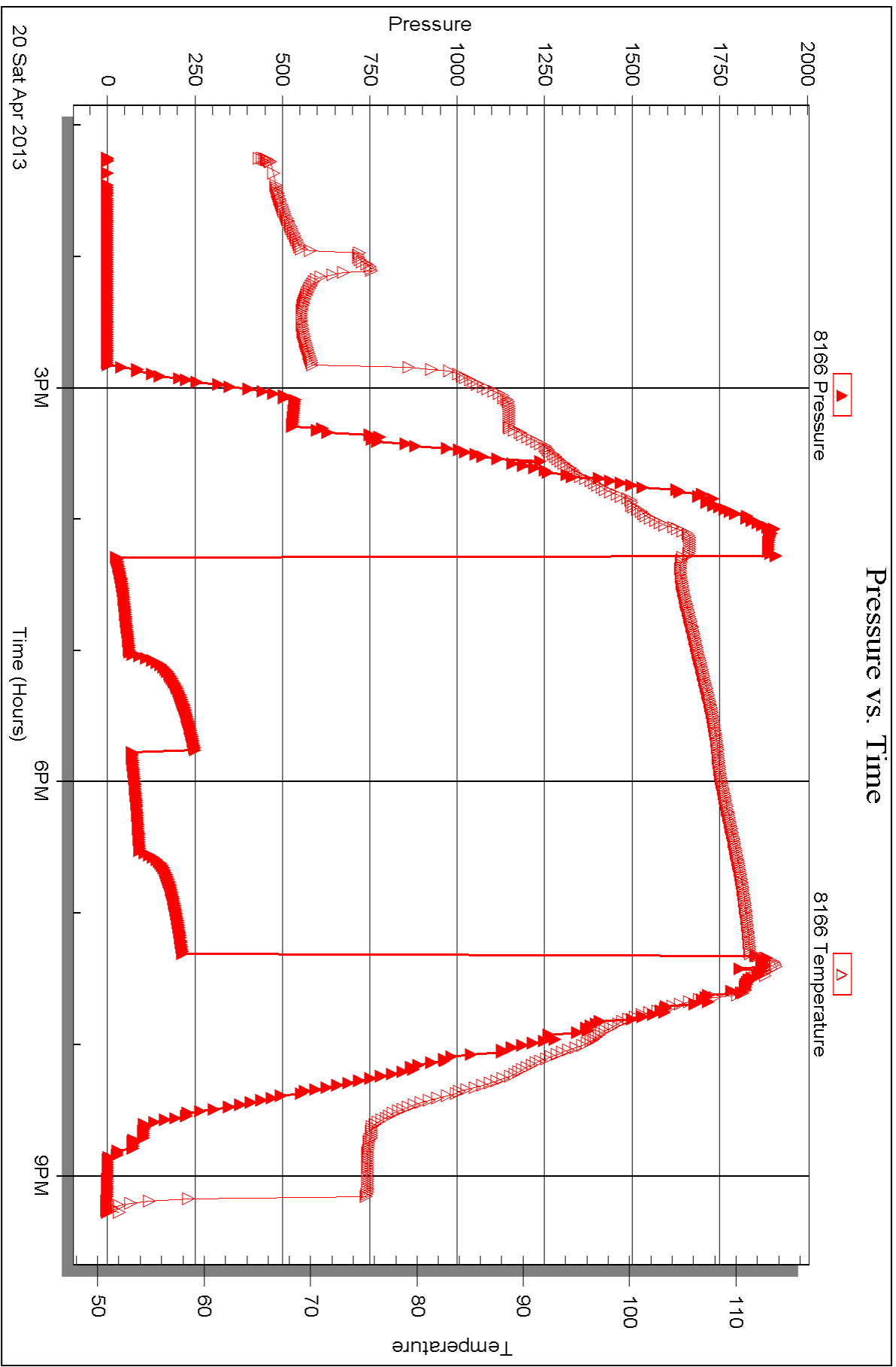


Serial #: 8166

Outside H&C Oil Operating Inc.

McGrath Unit W#36-1

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

McGrath Unit W #36-1

36-9s-25w Graham,KS

Start Date: 2013.04.21 @ 06:10:00

End Date: 2013.04.21 @ 13:15:30

Job Ticket #: 50284 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.26 @ 15:38:08

H&C Oil Operating Inc.

36-9s-25w Graham,KS

McGrath Unit W #36-1

DST # 2

KC "F"

2013.04.21



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating Inc.

36-9s-25w Graham,KS

PO Box 86
Plainville KS 67663

McGrath Unit W #36-1

ATTN: Marc Downing

Job Ticket: 50284

DST#: 2

Test Start: 2013.04.21 @ 06:10:00

GENERAL INFORMATION:

Formation: **KC "F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:41:30
 Time Test Ended: 13:15:30
 Interval: **3881.00 ft (KB) To 3911.00 ft (KB) (TVD)**
 Total Depth: 3911.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brett Dickinson
 Unit No: 59
 Reference Elevations: 2502.00 ft (KB)
 2497.00 ft (CF)
 KB to GR/CF: 5.00 ft

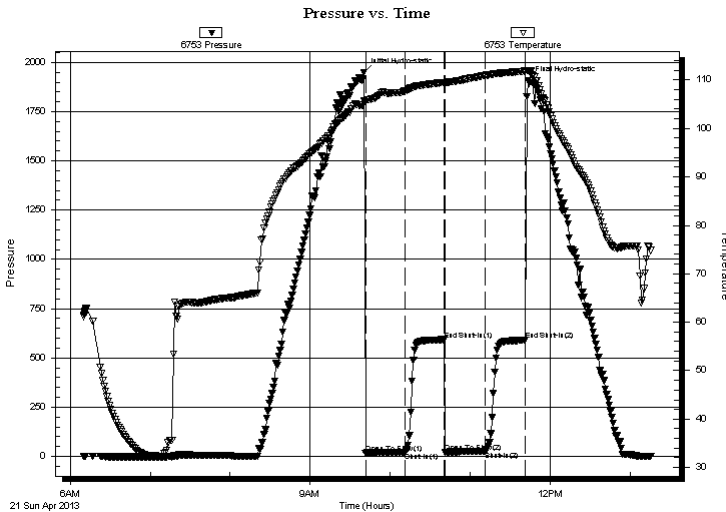
Serial #: 6753

Inside

Press @ RunDepth: 25.33 psig @ 3882.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.04.21 End Date: 2013.04.21 Last Calib.: 2013.04.21
 Start Time: 06:10:05 End Time: 13:15:29 Time On Btm: 2013.04.21 @ 09:40:30
 Time Off Btm: 2013.04.21 @ 11:43:30

TEST COMMENT: IF-1" blow
 IS-No blow
 FF-Weak surface blow
 FS-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1947.69	105.64	Initial Hydro-static
1	17.09	105.50	Open To Flow (1)
31	20.80	107.75	Shut-In(1)
60	592.74	109.53	End Shut-In(1)
61	22.27	109.39	Open To Flow (2)
91	25.33	110.99	Shut-In(2)
121	589.85	111.85	End Shut-In(2)
123	1907.09	111.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Oil spotted mud	0.28

Gas Rates

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

* Recovery from multiple tests



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H&C Oil Operating Inc.

36-9s-25w Graham,KS

PO Box 86
Plainville KS 67663

McGrath Unit W #36-1

Job Ticket: 50284

DST#: 2

ATTN: Marc Downing

Test Start: 2013.04.21 @ 06:10:00

GENERAL INFORMATION:

Formation: **KC "F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:41:30

Time Test Ended: 13:15:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 3881.00 ft (KB) To 3911.00 ft (KB) (TVD)

Total Depth: 3911.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2502.00 ft (KB)

2497.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8166 Outside

Press @ RunDepth: psig @ 3882.00 ft (KB)

Start Date: 2013.04.21

End Date:

2013.04.21

Start Time: 06:10:05

End Time:

13:15:29

Capacity: 8000.00 psig

Last Calib.:

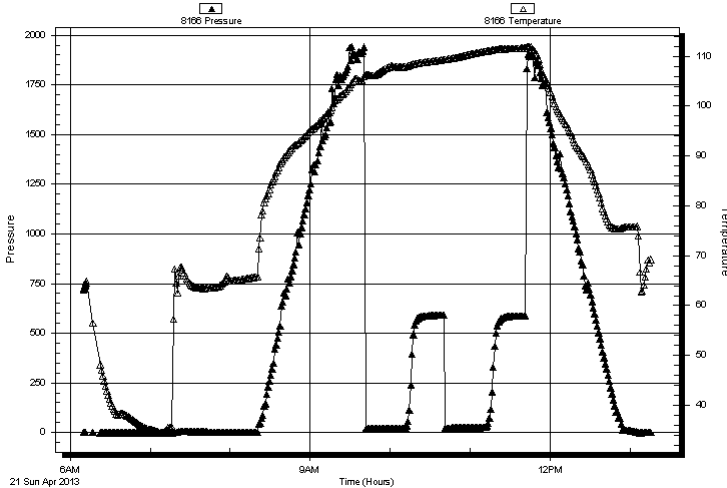
2013.04.21

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-1" blow
ISI-No blow
FF-Weak surface blow
FSI-No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Oil spotted mud	0.28

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.

36-9s-25w Graham,KS

PO Box 86
Plainville KS 67663

McGrath Unit W #36-1

Job Ticket: 50284

DST#: 2

ATTN: Marc Downing

Test Start: 2013.04.21 @ 06:10:00

Tool Information

Drill Pipe:	Length: 3873.00 ft	Diameter: 3.80 inches	Volume: 54.33 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	45000.00 lb
			<u>Total Volume: 54.33 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial	42000.00 lb
Depth to Top Packer:	3881.00 ft			Final	42000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	30.00 ft				
Tool Length:	51.00 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			3861.00	
Shut In Tool	5.00			3866.00	
Hydraulic tool	5.00			3871.00	
Packer	5.00			3876.00	21.00 Bottom Of Top Packer
Packer	5.00			3881.00	
Stubb	1.00			3882.00	
Recorder	0.00	6753	Inside	3882.00	
Recorder	0.00	8166	Outside	3882.00	
Perforations	26.00			3908.00	
Bullnose	3.00			3911.00	30.00 Bottom Packers & Anchor
Total Tool Length:	51.00				



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DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc.

36-9s-25w Graham,KS

PO Box 86
Plainville KS 67663

McGrath Unit W #36-1

Job Ticket: 50284

DST#: 2

ATTN: Marc Downing

Test Start: 2013.04.21 @ 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:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	Oil spotted mud	0.281

Total Length: 20.00 ft Total Volume: 0.281 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

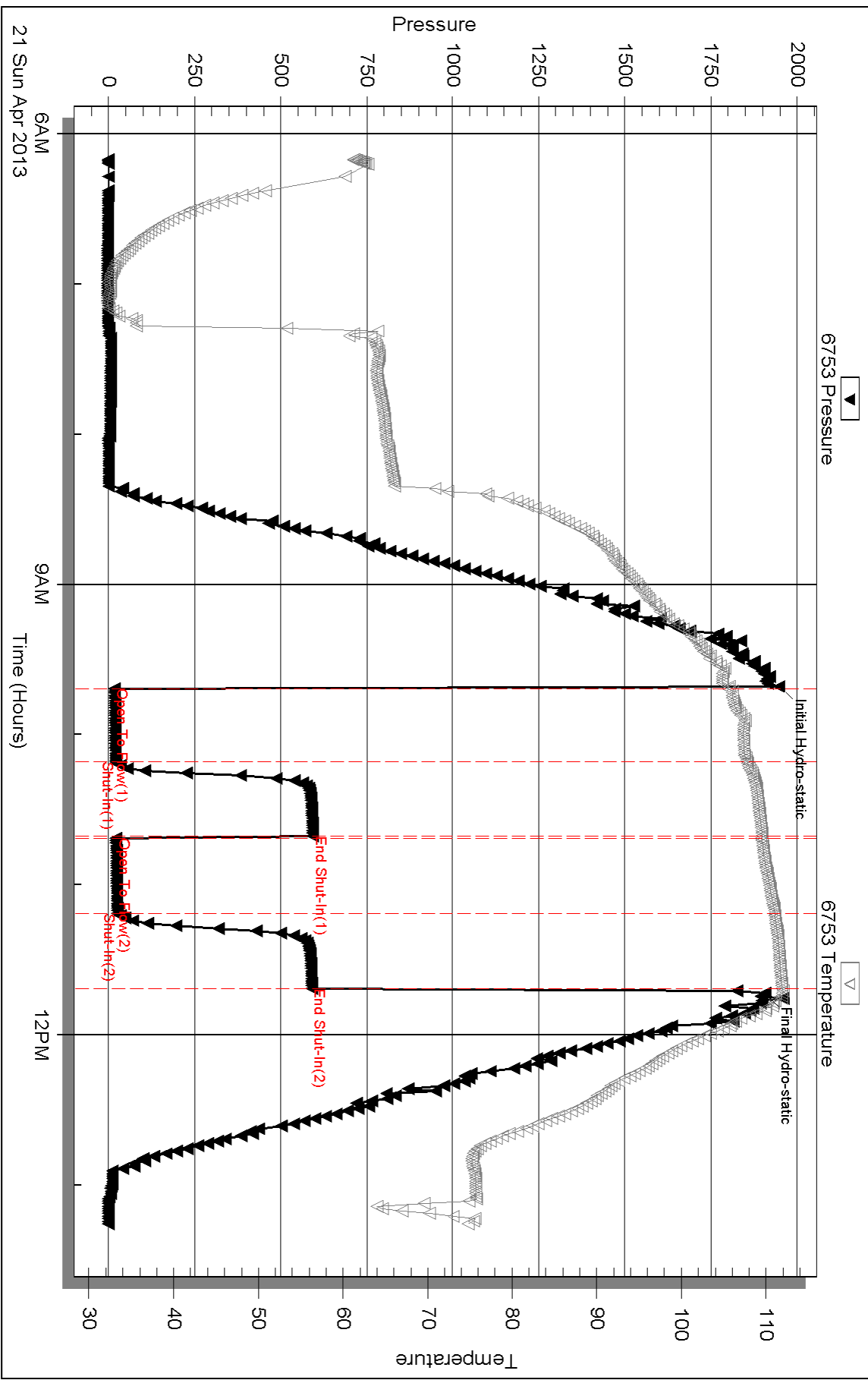
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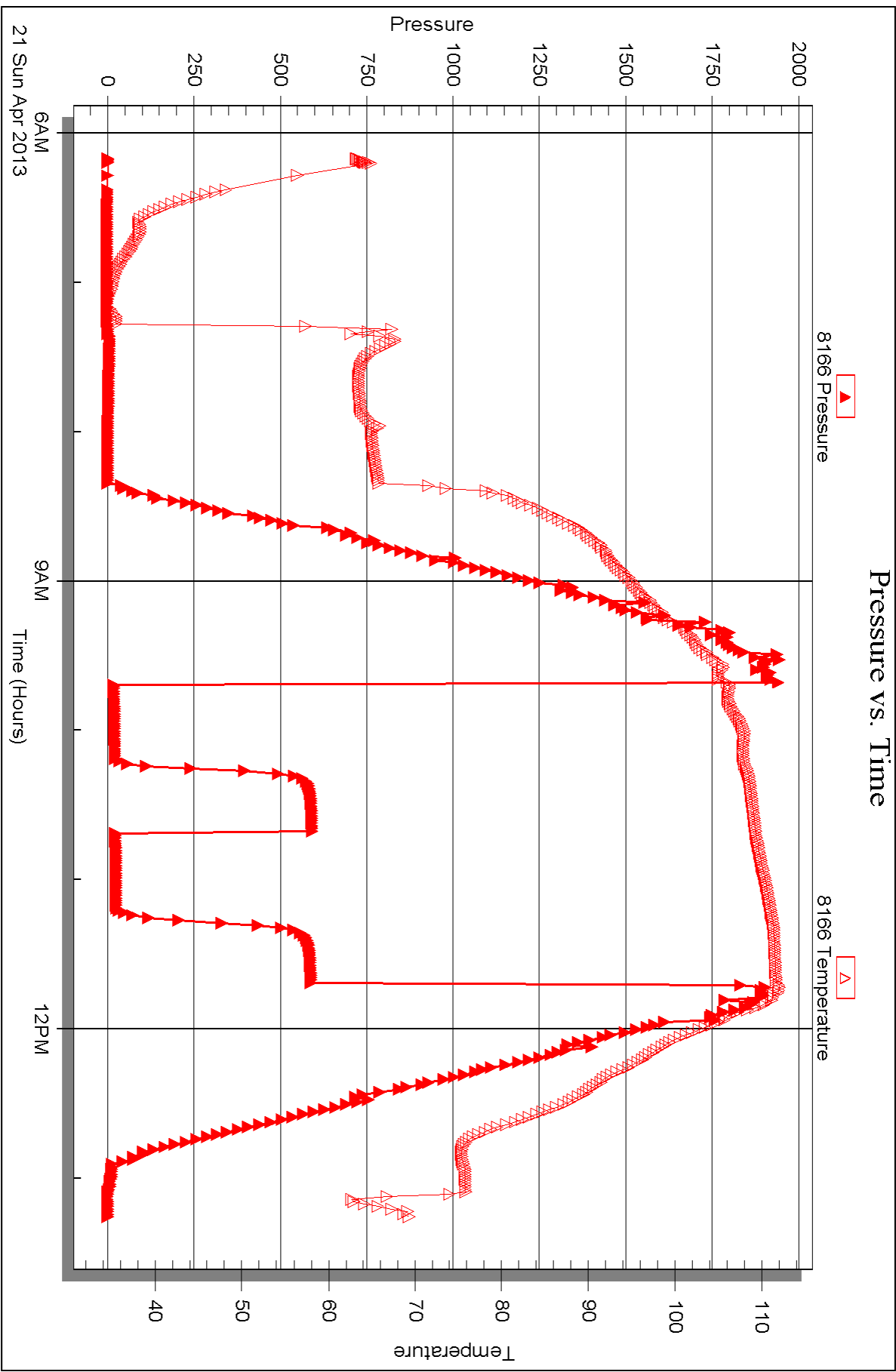
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663

ATTN: Marc Downing

McGrath Unit W #36-1

36-9s-25w Graham,KS

Start Date: 2013.04.22 @ 14:50:00

End Date: 2013.04.22 @ 21:44:00

Job Ticket #: 50285 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.04.26 @ 15:31:26

H&C Oil Operating Inc.

36-9s-25w Graham,KS

McGrath Unit W #36-1

DST # 3

KC"H-I"

2013.04.22



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating Inc.

36-9s-25w Graham,KS

PO Box 86
Plainville KS 67663

McGrath Unit W #36-1

ATTN: Marc Downing

Job Ticket: 50285

DST#: 3

Test Start: 2013.04.22 @ 14:50:00

GENERAL INFORMATION:

Formation: **KC"H-I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:42:00

Time Test Ended: 21:44:00

Test Type: Conventional Straddle (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 3940.00 ft (KB) To 4014.00 ft (KB) (TVD)

Reference Elevations: 2502.00 ft (KB)

Total Depth: 4104.00 ft (KB) (TVD)

2497.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8319

Inside

Press @ Run Depth: 39.30 psig @ 4010.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.04.22

End Date:

2013.04.22

Last Calib.:

2013.04.22

Start Time: 14:50:05

End Time:

21:43:59

Time On Btm:

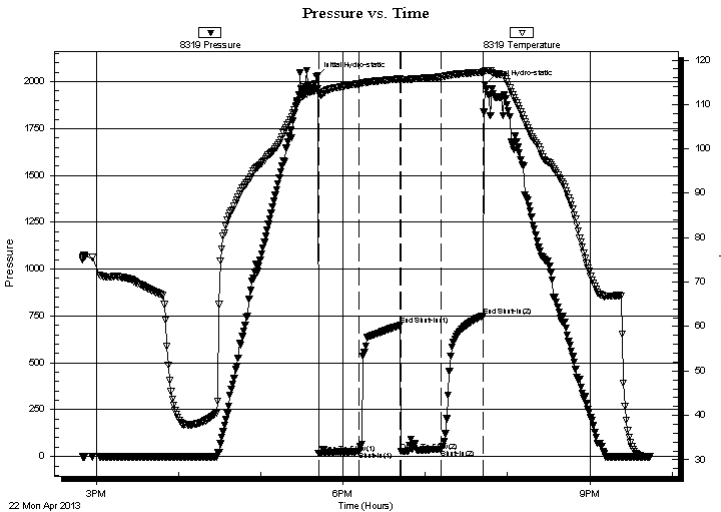
2013.04.22 @ 17:41:00

Time Off Btm:

2013.04.22 @ 19:43:30

TEST COMMENT: IF-1.25in blow
ISI-No blow
FF-1/8in blow
FSI-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2025.03	113.47	Initial Hydro-static
1	16.12	112.65	Open To Flow (1)
31	26.04	114.63	Shut-In(1)
61	700.15	115.72	End Shut-In(1)
62	27.74	115.58	Open To Flow (2)
91	39.30	116.24	Shut-In(2)
121	750.92	117.25	End Shut-In(2)
123	1984.86	117.58	Final Hydro-static

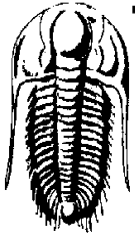
Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud	0.63

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

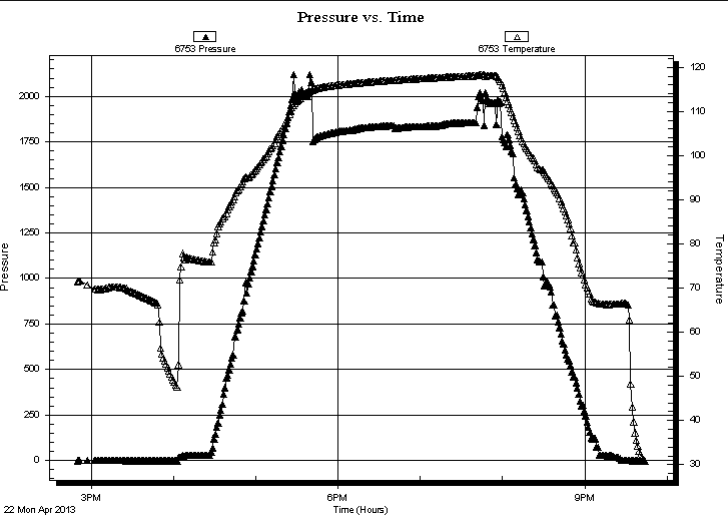
36-9s-25w Graham,KS
McGrath Unit W #36-1
Job Ticket: 50285 **DST#: 3**
Test Start: 2013.04.22 @ 14:50:00

GENERAL INFORMATION:

Formation: KC"H-I"		
Deviated: No Whipstock: ft (KB)	Test Type: Conventional Straddle (Reset)	
Time Tool Opened: 17:42:00	Tester: Brett Dickinson	
Time Test Ended: 21:44:00	Unit No: 59	
Interval: 3940.00 ft (KB) To 4014.00 ft (KB) (TVD)	Reference Elevations: 2502.00 ft (KB)	
Total Depth: 4104.00 ft (KB) (TVD)	2497.00 ft (CF)	
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 5.00 ft

Serial #: 6753	Below (Straddle)				
Press @ Run Depth: psig @ 4019.00 ft (KB)	Capacity: 8000.00 psig				
Start Date: 2013.04.22	End Date: 2013.04.22	Last Calib.: 2013.04.22			
Start Time: 14:50:05	End Time: 21:43:29	Time On Btm:			
		Time Off Btm:			

TEST COMMENT: IF-1.25in blow
IS-No blow
FF-1/8in blow
FS-No blow



PRESSURE SUMMARY

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

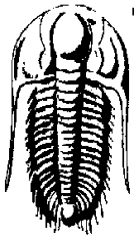
Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud	0.63

* 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.

36-9s-25w Graham, KS

PO Box 86
Plainville KS 67663

McGrath Unit W #36-1

Job Ticket: 50285 **DST#: 3**

ATTN: Marc Downing

Test Start: 2013.04.22 @ 14:50:00

GENERAL INFORMATION:

Formation: **KC"H-I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:42:00

Time Test Ended: 21:44:00

Test Type: Conventional Straddle (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 3940.00 ft (KB) To 4014.00 ft (KB) (TVD)

Total Depth: 4104.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2502.00 ft (KB)

2497.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8166 Outside

Press @ RunDepth: psig @ 4010.00 ft (KB)

Start Date: 2013.04.22

End Date: 2013.04.22

Capacity: 8000.00 psig

Last Calib.: 2013.04.22

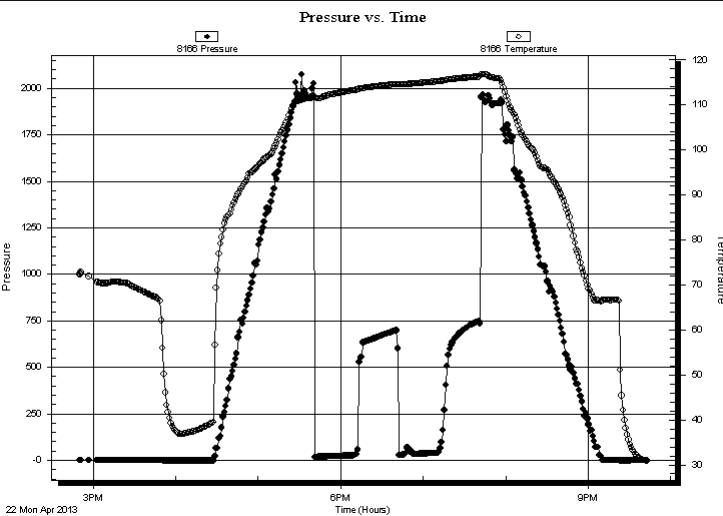
Start Time: 14:50:05

End Time: 21:42:59

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-1.25in blow
IS- No blow
FF-1/8in blow
FS- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud	0.63

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.

36-9s-25w Graham,KS

PO Box 86
Plainville KS 67663

McGrath Unit W #36-1

Job Ticket: 50285

DST#: 3

ATTN: Marc Downing

Test Start: 2013.04.22 @ 14:50:00

Tool Information

Drill Pipe:	Length: 3934.00 ft	Diameter: 3.80 inches	Volume: 55.18 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 55.18 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3940.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	4014.00 ft			
Interval between Packers:	74.00 ft			
Tool Length:	186.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description

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

Change Over Sub	1.00			3921.00	
Shut In Tool	5.00			3926.00	
Hydraulic tool	5.00			3931.00	
Packer	4.00			3935.00	20.00 Bottom Of Top Packer
Packer	5.00			3940.00	
Stubb	1.00			3941.00	
Perforations	1.00			3942.00	
change Over Sub	1.00			3943.00	
Blank Spacing	61.00			4004.00	
change Over Sub	1.00			4005.00	
Perforations	5.00			4010.00	
Recorder	0.00	8319	Inside	4010.00	
Recorder	0.00	8166	Outside	4010.00	
Blank Off Sub	4.00			4014.00	74.00 Tool Interval
Packer	4.00			4018.00	
Stubb	1.00			4019.00	
Recorder	0.00	6753	Below	4019.00	
perforations	20.00			4039.00	
Change Over Sub	1.00			4040.00	
Blank Spacing	62.00			4102.00	
Change Over Sub	1.00			4103.00	
Bullnose	3.00			4106.00	92.00 Bottom Packers & Anchor

Total Tool Length: 186.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc.

36-9s-25w Graham,KS

PO Box 86
Plainville KS 67663

McGrath Unit W #36-1

Job Ticket: 50285

DST#: 3

ATTN: Marc Downing

Test Start: 2013.04.22 @ 14:50:00

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
45.00	Mud	0.631

Total Length: 45.00 ft Total Volume: 0.631 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

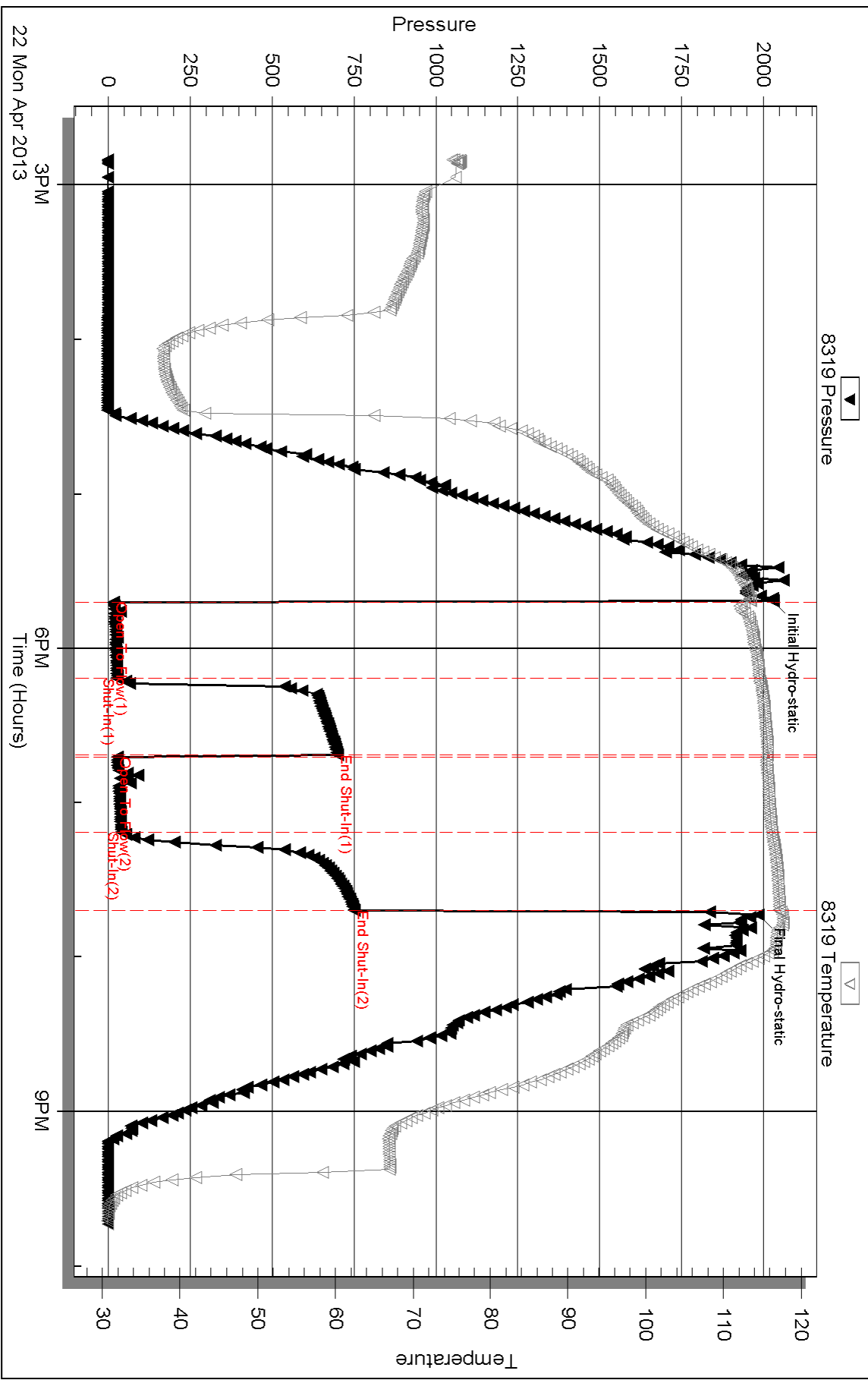
Serial #:

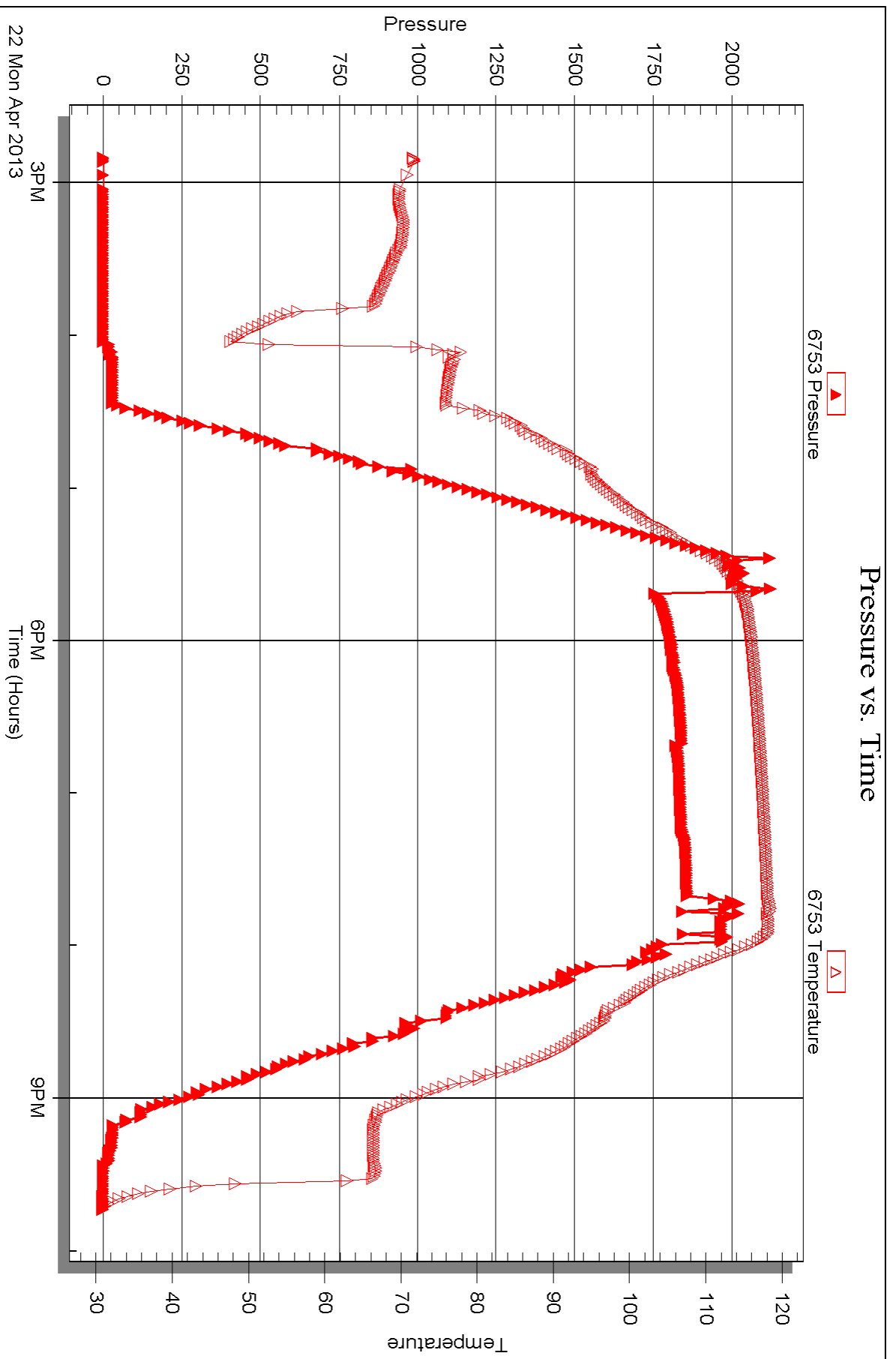
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



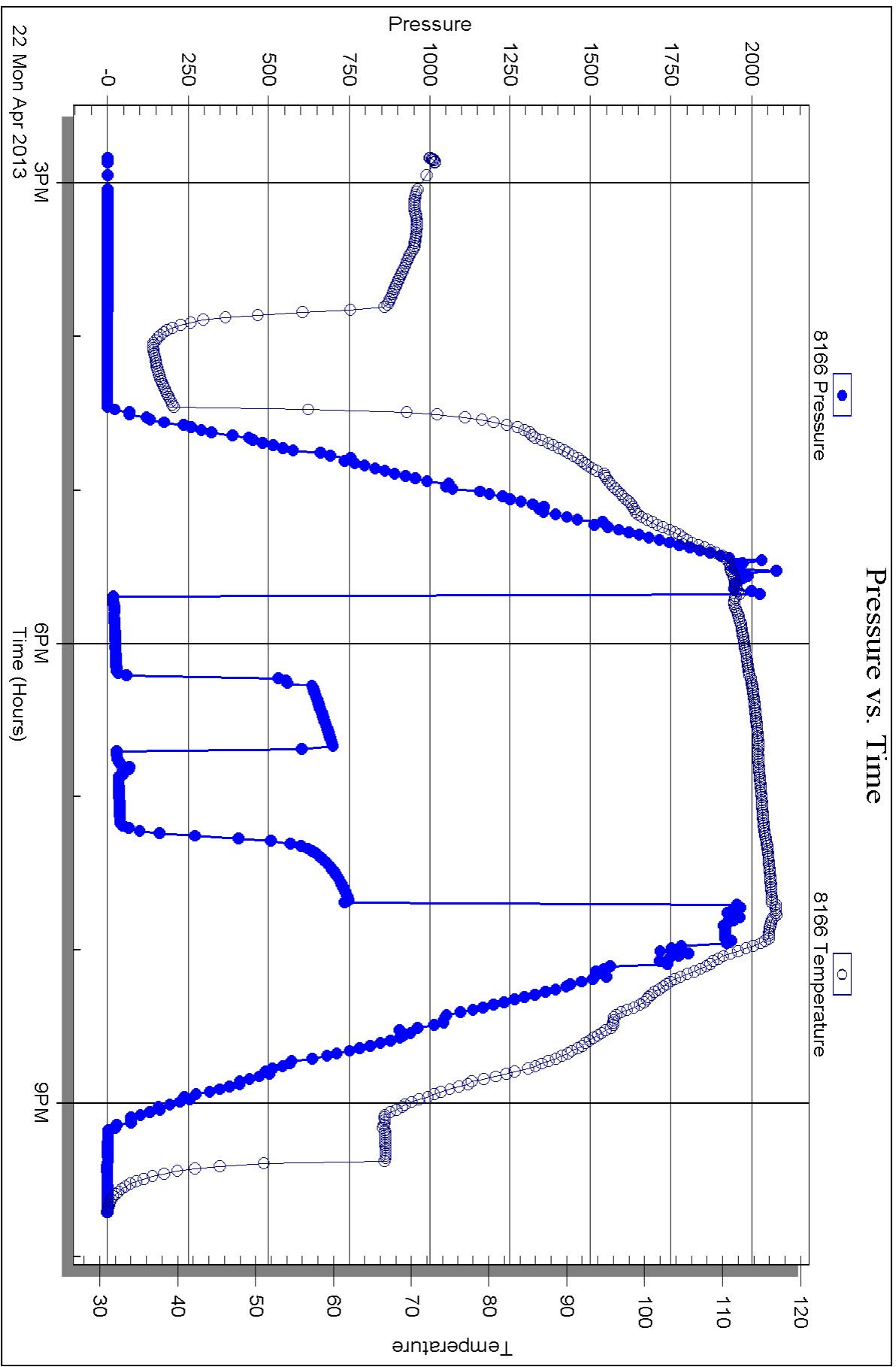


Serial #: 8166

Outside H&C Oil Operating Inc.

McGrath Unit W#36-1

DST Test Number: 3

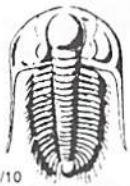


22 Mon Apr 2013

Triobite Testing, Inc

Ref. No: 50285

Printed: 2013.04.26 @ 15:31:30



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50283

Well Name & No. McGrath Unit Well #36-1 Test No. 1 Date 4/20/13
 Company H&C Oil Operating Inc. Elevation 2502 KB 2497 GL
 Address PO Box 86 Plainville KS 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #3
 Location: Sec. 36 Twp. 9s Rge. 25w Co. Graham State KS

Interval Tested 3835 - 3880 Zone Tested KC" C, D"
 Anchor Length 45 Drill Pipe Run 3840 Mud Wt. 9.2
 Top Packer Depth 3830 Drill Collars Run — Vis 60
 Bottom Packer Depth 3835 Wt. Pipe Run — WL 6.8
 Total Depth 3880 Chlorides 1,400 ppm System LCM 2

Blow Description IF - BOB in 32min
ISF - weak surface bb
FF - 6in blow
FSF - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>SGOCM</u>	<u>5</u>	<u>25</u>	<u>70</u>	
<u>125</u>	<u>60</u>	<u>30</u>	<u>70</u>		
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of <u>60ft GFP</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

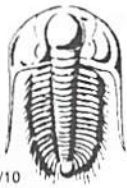
Rec Total 185 BHT 112 Gravity 28 API RW @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1,937 Test 1150 T-On Location 11:00
 (B) First Initial Flow 23 Jars T-Started 13:15
 (C) First Final Flow 65 Safety Joint T-Open 16:15
 (D) Initial Shut-In 251 Circ Sub T-Pulled 19:15
 (E) Second Initial Flow 20 Hourly Standby T-Out 21:20
 (F) Second Final Flow 93 Mileage 127ft 196.85 Comments
 (G) Final Shut-In 217 Sampler
 (H) Final Hydrostatic 1,885 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 1346.85
 Accessibility MP/DST Disc't
 Sub Total 1346.85

Approved By _____ Our Representative Burt Dahn

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. 50284

4/10

Well Name & No. McGrath Unit well #36-1 Test No. 2 Date 4/21/13
 Company H&C Oil Operating Inc. Elevation 2502 KB 2497 GL
 Address PO Box 86 Plainville KS 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #3
 Location: Sec. 36 Twp. 9S Rge. 25W Co. Graham State KS

Interval Tested 3881 - 3911 Zone Tested KC⁴F¹¹
 Anchor Length 30 Drill Pipe Run _____ Mud Wt. _____
 Top Packer Depth 3876 Drill Collars Run — Vis _____
 Bottom Packer Depth 3881 Wt. Pipe Run — WL _____
 Total Depth 3911 Chlorides _____ ppm System LCM _____

Blow Description IF - lin blow
7SI - No blow
FF - weak surface blow
FSE - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>oil spotted Mud</u>				
_____	_____				
_____	_____				
_____	_____				
_____	_____				

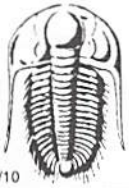
Rec Total 20 BHT 112 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1,948 Test 1150 T-On Location 5:20
 (B) First Initial Flow 17 Jars _____ T-Started 6:10
 (C) First Final Flow 21 Safety Joint _____ T-Open 9:33
 (D) Initial Shut-In 593 Circ Sub _____ T-Pulled 11:33
 (E) Second Initial Flow 22 Hourly Standby _____ T-Out 13:05
 (F) Second Final Flow 25 Mileage 127.7 196.85 Comments _____
 (G) Final Shut-In 590 Sampler _____
 (H) Final Hydrostatic 1,907 Straddle _____

Initial Open 30 Ruined Shale Packer _____
 Initial Shut-In 30 Ruined Packer _____
 Final Flow 30 Extra Copies _____
 Final Shut-In 30 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1346.85
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1346.85

Approved By _____ Our Representative Burt Down

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50285

Well Name & No. McGrath Unit Well #36-1 Test No. 3 Date 4/22/13
 Company H&C Oil Operating Inc. Elevation 2502 KB 2497 GL
 Address PO Box 86 Plainville KS 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #3
 Location: Sec. 36 Twp. 9s Rge. 25w Co. Graham State KS

Interval Tested 3940-4014 Zone Tested KC "H-I"
 Anchor Length 74 Drill Pipe Run _____ Mud Wt. _____
 Top Packer Depth 3935, 3940 Drill Collars Run _____ Vis _____
 Bottom Packer Depth 3014 Wt. Pipe Run _____ WL _____
 Total Depth 4104 Chlorides _____ ppm System LCM _____

Blow Description FF - 1 1/4 in blow
FSI - No blow
FP - 1/8 in blow
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>45</u>	<u>Mud</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 45 BHT 117 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2,025 Test 1250 T-On Location 13:10
 (B) First Initial Flow 16 Jars _____ T-Started 14:50
 (C) First Final Flow 26 Safety Joint _____ T-Open 17:40
 (D) Initial Shut-In 700 Circ Sub _____ T-Pulled 19:40
 (E) Second Initial Flow 28 Hourly Standby _____ T-Out 21:45
 (F) Second Final Flow 39 Mileage 127rt 196.85 Comments _____
 (G) Final Shut-In 751 Sampler _____
 (H) Final Hydrostatic 1485 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 2046.85
 Accessibility _____ MP/DST Disc't _____
 Sub Total 2046.85

Approved By _____ Our Representative Ben Dow

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.