



## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville KS 67663-0086

ATTN: Marc Downing

**Griffith #2-1**

**2-8s-22w Graham,KS**

Start Date: 2013.08.13 @ 12:32:00

End Date: 2013.08.13 @ 19:30:00

Job Ticket #: 50455                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.16 @ 16:42:03



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc  
PO Box 86  
Plainville KS 67663-0086  
ATTN: Marc Downing

**2-8s-22w Graham,KS**  
**Griffith #2-1**  
Job Ticket: 50455      **DST#: 1**  
Test Start: 2013.08.13 @ 12:32:00

## GENERAL INFORMATION:

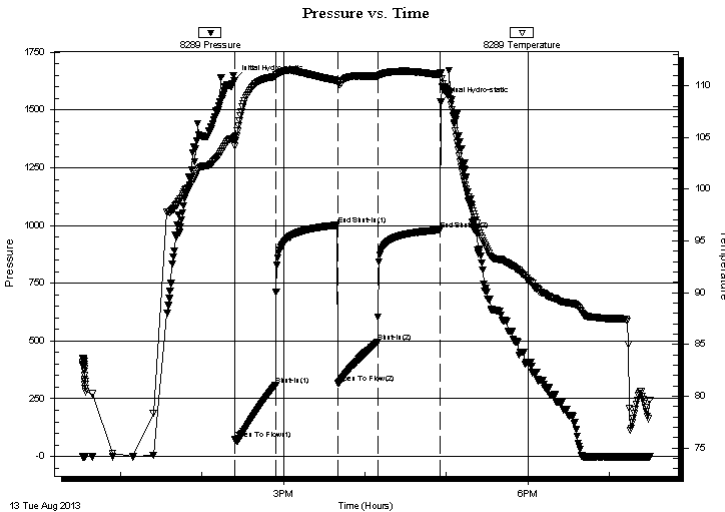
Formation: **LKC " A "**  
Deviated: No Whipstock:      ft (KB)  
Time Tool Opened: 14:24:15  
Time Test Ended: 19:30:00  
Interval: **3360.00 ft (KB) To 3388.00 ft (KB) (TVD)**  
Total Depth: 3388.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Jim Svaty  
Unit No: 54  
Reference Elevations: 2146.00 ft (KB)  
2139.00 ft (CF)  
KB to GR/CF: 7.00 ft

## Serial #: 8289      Outside

Press @ Run Depth: 494.79 psig @ 3361.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2013.08.13      End Date: 2013.08.13      Last Calib.: 2013.08.13  
Start Time: 12:32:02      End Time: 19:29:45      Time On Btm: 2013.08.13 @ 14:24:00  
Time Off Btm: 2013.08.13 @ 16:55:45

TEST COMMENT: 30-IFP- BOB in 1 min. 10 sec.  
45-ISIP- BOB in 9 min. 30 sec.  
30-FFP- BOB in 2 min.  
45-FSIP- Surface Blow Building to 4" in 16 min.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1630.18	105.05	Initial Hydro-static
1	73.38	104.15	Open To Flow (1)
30	307.49	110.86	Shut-In(1)
76	1001.72	110.49	End Shut-In(1)
77	315.97	110.23	Open To Flow (2)
106	494.79	110.90	Shut-In(2)
152	981.44	111.02	End Shut-In(2)
152	1536.45	111.28	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	MCO 20% m 80% o	0.88
1340.00	GCO 15% g 85% o	18.80
0.00	945' 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  
PO Box 86  
Plainville KS 67663-0086  
ATTN: Marc Downing

**2-8s-22w Graham,KS**  
**Griffith #2-1**  
Job Ticket: 50455      **DST#: 1**  
Test Start: 2013.08.13 @ 12:32:00

**Tool Information**

Drill Pipe:	Length: 3343.00 ft	Diameter: 3.80 inches	Volume: 46.89 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 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:	58000.00 lb
			<u>Total Volume: 46.89 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial	40000.00 lb
Depth to Top Packer:	3360.00 ft			Final	46000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	28.00 ft				
Tool Length:	49.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3340.00	
Shut In Tool	5.00			3345.00	
Hydraulic tool	5.00			3350.00	
Packer	5.00			3355.00	21.00      Bottom Of Top Packer
Packer	5.00			3360.00	
Stubb	1.00			3361.00	
Recorder	0.00	8789	Inside	3361.00	
Recorder	0.00	8289	Outside	3361.00	
Perforations	24.00			3385.00	
Bullnose	3.00			3388.00	28.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>49.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc  
PO Box 86  
Plainville KS 67663-0086  
ATTN: Marc Downing

**2-8s-22w Graham,KS**  
**Griffith #2-1**  
Job Ticket: 50455      **DST#: 1**  
Test Start: 2013.08.13 @ 12:32:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 36 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.94 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 400.00 ppm		
Filter Cake: 1.50 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	MCO 20% <i>m</i> 80% <i>o</i>	0.884
1340.00	GCO 15% <i>g</i> 85% <i>o</i>	18.797
0.00	945' GIP	0.000

Total Length: 1403.00 ft      Total Volume: 19.681 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:



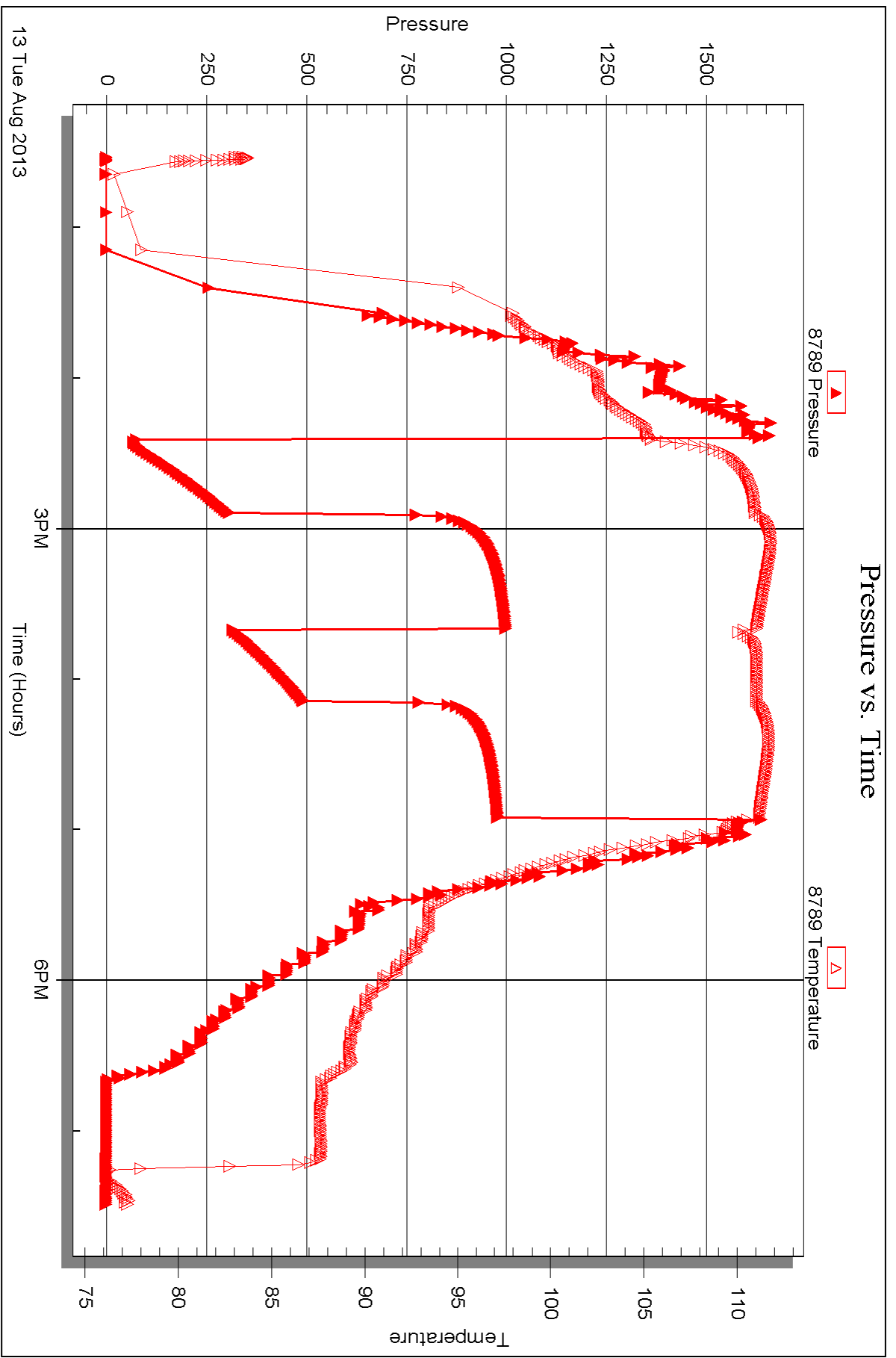
Serial #: 8789

Inside

H&C Oil Operating Inc

Griffith #2-1

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 50455

Printed: 2013.08.16 @ 16:42:07



## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville KS 67663-0086

ATTN: Marc Downing

**Griffith #2-1**

**2-8s-22w Graham,KS**

Start Date: 2013.08.14 @ 02:10:00

End Date: 2013.08.14 @ 09:04:00

Job Ticket #: 50456                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.16 @ 16:41:29





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

H&C Oil Operating Inc  
PO Box 86  
Plainville KS 67663-0086  
ATTN: Marc Downing

**2-8s-22w Graham,KS**  
**Griffith #2-1**  
Job Ticket: 50456      **DST#: 2**  
Test Start: 2013.08.14 @ 02:10:00

## GENERAL INFORMATION:

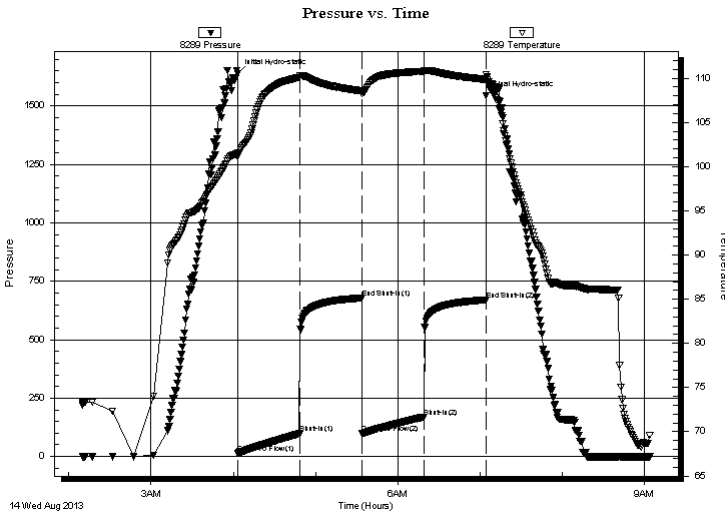
Formation: **LKC " C "**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 04:03:30  
Time Test Ended: 09:04:00  
Interval: **3388.00 ft (KB) To 3412.00 ft (KB) (TVD)**  
Total Depth: 3412.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Jim Svaty  
Unit No: 54  
Reference Elevations: 2146.00 ft (KB)  
2139.00 ft (CF)  
KB to GR/CF: 7.00 ft

## Serial #: 8289 Outside

Press @ Run Depth: 169.27 psig @ 3389.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2013.08.14 End Date: 2013.08.14 Last Calib.: 2013.08.14  
Start Time: 02:10:02 End Time: 09:04:00 Time On Btm: 2013.08.14 @ 04:03:15  
Time Off Btm: 2013.08.14 @ 07:04:45

TEST COMMENT: 45-IFP- BOB in 18 min.  
45-ISIP- No Blow  
45-FFP- BOB in 25 min.  
45-FSIP- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1639.30	101.56	Initial Hydro-static
1	14.14	101.10	Open To Flow (1)
45	97.35	110.10	Shut-In(1)
91	678.83	108.56	End Shut-In(1)
91	97.82	108.27	Open To Flow (2)
136	169.27	110.76	Shut-In(2)
182	670.72	109.86	End Shut-In(2)
182	1545.74	110.42	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
315.00	MCW 5% m 95% w	4.42
13.00	MCW 40% m 60% w	0.18
2.00	CO 100%	0.03

\* 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  
PO Box 86  
Plainville KS 67663-0086  
ATTN: Marc Downing

**2-8s-22w Graham,KS**  
**Griffith #2-1**  
Job Ticket: 50456      **DST#: 2**  
Test Start: 2013.08.14 @ 02:10:00

**Tool Information**

Drill Pipe:	Length: 3375.00 ft	Diameter: 3.80 inches	Volume: 47.34 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 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: 46000.00 lb
			<u>Total Volume: 47.34 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3388.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	45.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3368.00	
Shut In Tool	5.00			3373.00	
Hydraulic tool	5.00			3378.00	
Packer	5.00			3383.00	21.00      Bottom Of Top Packer
Packer	5.00			3388.00	
Stubb	1.00			3389.00	
Recorder	0.00	8789	Inside	3389.00	
Recorder	0.00	8289	Outside	3389.00	
Perforations	20.00			3409.00	
Bullnose	3.00			3412.00	24.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>45.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc  
PO Box 86  
Plainville KS 67663-0086  
ATTN: Marc Downing

**2-8s-22w Graham,KS**  
**Griffith #2-1**  
Job Ticket: 50456      **DST#: 2**  
Test Start: 2013.08.14 @ 02:10:00

## Mud and Cushion Information

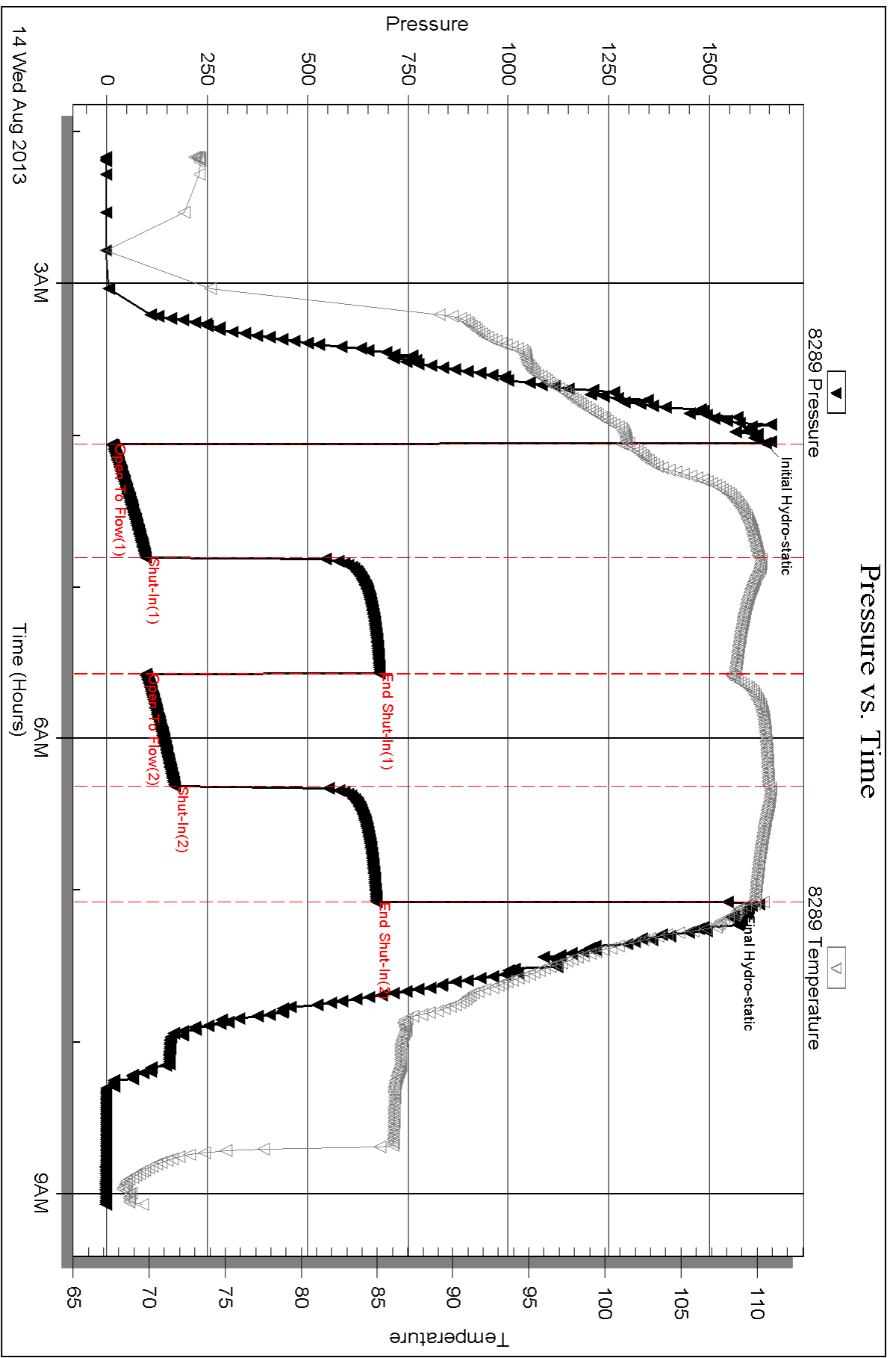
Mud Type: Gel Chem	Cushion Type:	Oil API: 29 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 92000 ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.93 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 400.00 ppm		
Filter Cake: 1.50 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
315.00	MCW 5%m 95%w	4.419
13.00	MCW 40%m 60%w	0.182
2.00	CO 100%	0.028

Total Length: 330.00 ft      Total Volume: 4.629 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments: .100 @ 62



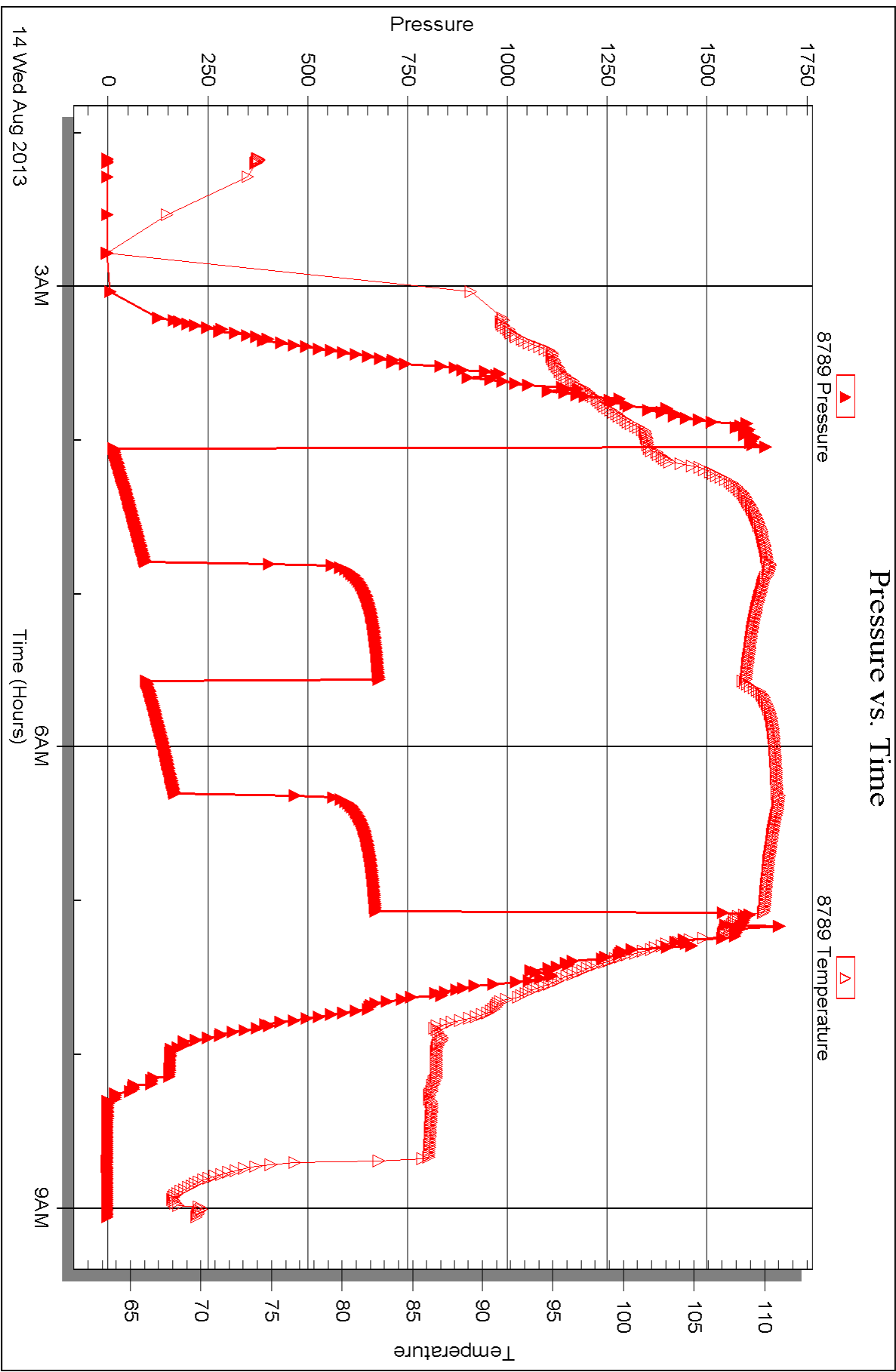
Serial #: 8789

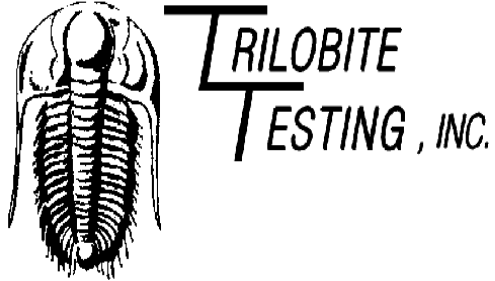
Inside

H&C Oil Operating Inc

Griffith #2-1

DST Test Number: 2





## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville KS 67663-0086

ATTN: Marc Downing

**Griffith #2-1**

**2-8s-22w Graham,KS**

Start Date: 2013.08.14 @ 15:00:00

End Date: 2013.08.14 @ 22:25:00

Job Ticket #: 50457                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.16 @ 16:40:51









**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

H&C Oil Operating Inc  
PO Box 86  
Plainville KS 67663-0086  
ATTN: Marc Downing

**2-8s-22w Graham,KS**  
**Griffith #2-1**  
Job Ticket: 50457      **DST#: 3**  
Test Start: 2013.08.14 @ 15:00:00

**Tool Information**

Drill Pipe:	Length: 3438.00 ft	Diameter: 3.80 inches	Volume: 48.23 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 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:	48000.00 lb
			<u>Total Volume: 48.23 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial	42000.00 lb
Depth to Top Packer:	3425.00 ft			Final	44000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	25.00 ft				
Tool Length:	46.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3405.00	
Shut In Tool	5.00			3410.00	
Hydraulic tool	5.00			3415.00	
Packer	5.00			3420.00	21.00      Bottom Of Top Packer
Packer	5.00			3425.00	
Stubb	1.00			3426.00	
Recorder	0.00	8789	Inside	3426.00	
Recorder	0.00	8289	Outside	3426.00	
Perforations	21.00			3447.00	
Bullnose	3.00			3450.00	25.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>46.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc  
PO Box 86  
Plainville KS 67663-0086  
ATTN: Marc Downing

**2-8s-22w Graham,KS**  
**Griffith #2-1**  
Job Ticket: 50457      **DST#: 3**  
Test Start: 2013.08.14 @ 15:00:00

## Mud and Cushion Information

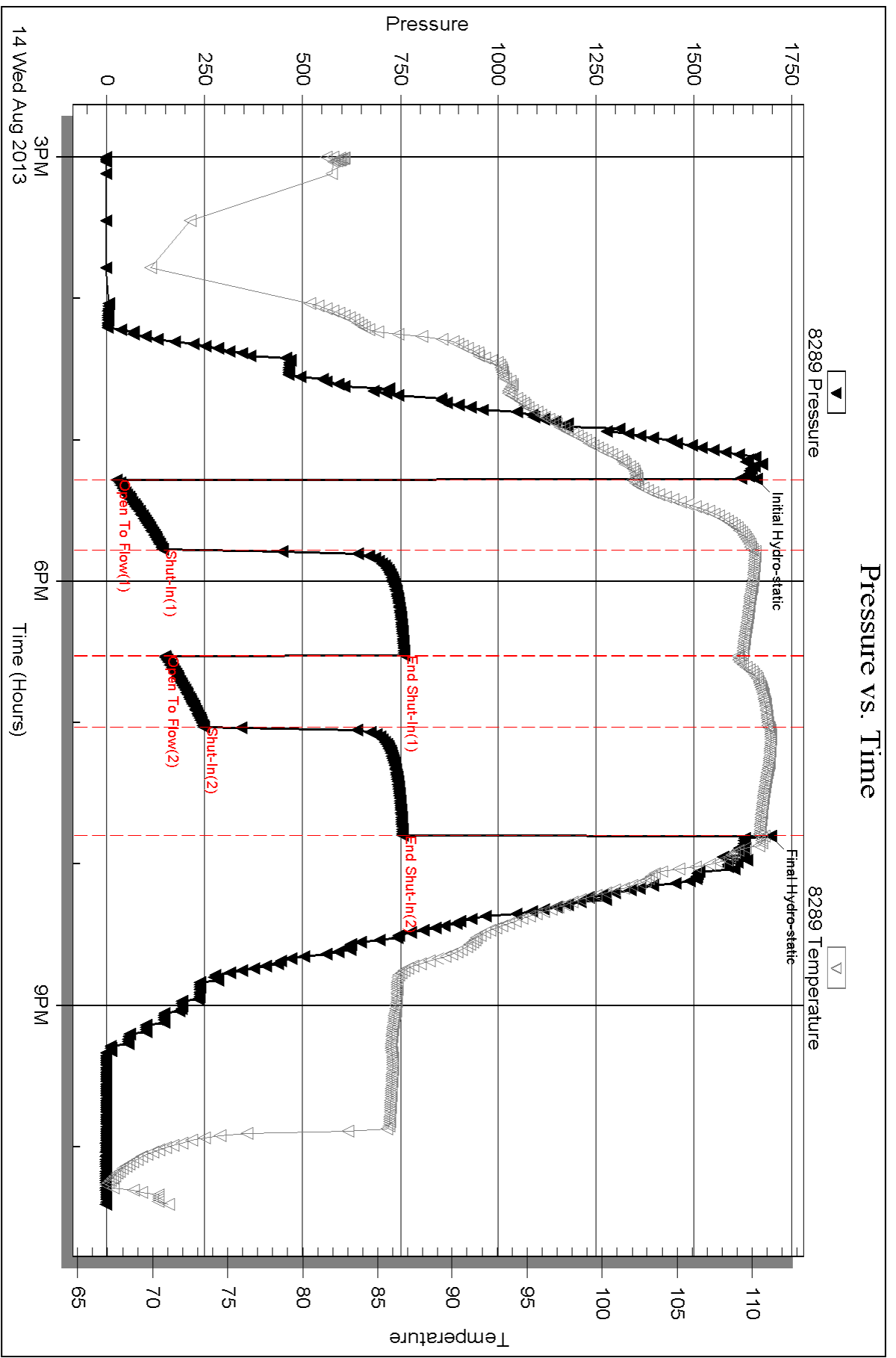
Mud Type: Gel Chem	Cushion Type:	Oil API: 33 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 76000 ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.59 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 500.00 ppm		
Filter Cake: 1.50 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
315.00	MCW 10%m 90%w Show of Oil	4.419
95.00	OWCM 15%o 15%w 70%m	1.333
110.00	CO 100%	1.543
0.00	235' GIP	0.000

Total Length: 520.00 ft      Total Volume: 7.295 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments: .113 @ 66



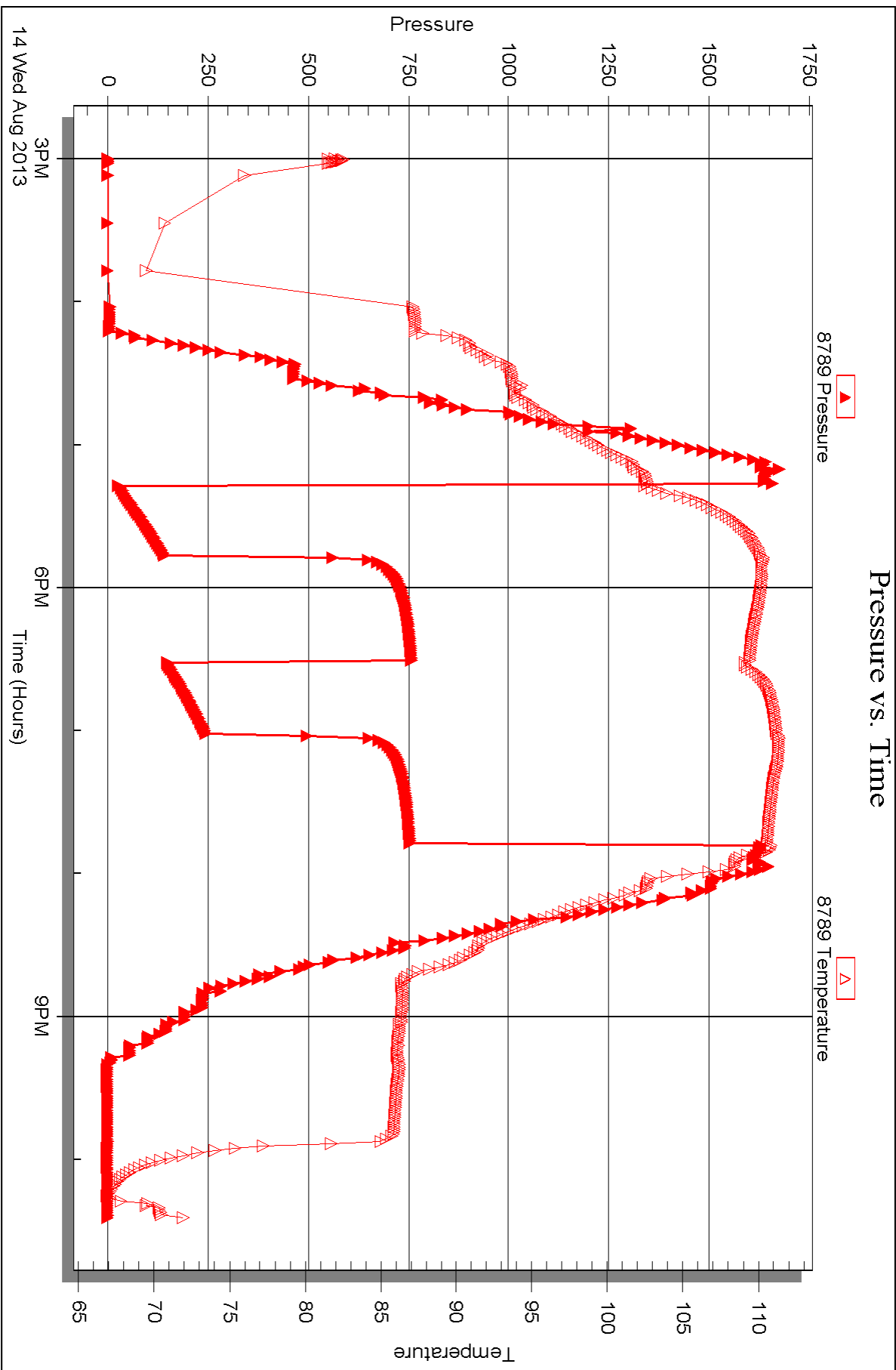
Serial #: 8789

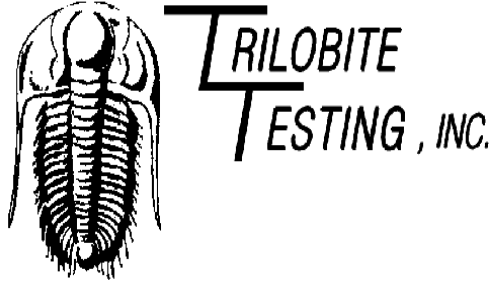
Inside

H&C Oil Operating Inc

Griffith #2-1

DST Test Number: 3





## DRILL STEM TEST REPORT

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

PO Box 86  
Plainville KS 67663-0086

ATTN: Marc Downing

### **Griffith #2-1**

### **2-8s-22w Graham,KS**

Start Date: 2013.08.15 @ 10:07:00

End Date: 2013.08.15 @ 17:05:00

Job Ticket #: 50458                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.16 @ 16:36:12









**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

H&C Oil Operating Inc  
PO Box 86  
Plainville KS 67663-0086  
ATTN: Marc Downing

**2-8s-22w Graham,KS**  
**Griffith #2-1**  
Job Ticket: 50458      **DST#: 4**  
Test Start: 2013.08.15 @ 10:07:00

**Tool Information**

Drill Pipe:	Length: 3471.00 ft	Diameter: 3.80 inches	Volume: 48.69 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 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: 48.69 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	44000.00 lb
Depth to Top Packer:	3475.00 ft			Final	47000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	77.00 ft				
Tool Length:	98.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3455.00	
Shut In Tool	5.00			3460.00	
Hydraulic tool	5.00			3465.00	
Packer	5.00			3470.00	21.00      Bottom Of Top Packer
Packer	5.00			3475.00	
Stubb	1.00			3476.00	
Perforations	8.00			3484.00	
Recorder	0.00	8789	Inside	3484.00	
Recorder	0.00	8289	Outside	3484.00	
Change Over Sub	1.00			3485.00	
Blank Spacing	63.00			3548.00	
Change Over Sub	1.00			3549.00	
Bullnose	3.00			3552.00	77.00      Bottom Packers & Anchor

**Total Tool Length: 98.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

H&C Oil Operating Inc  
PO Box 86  
Plainville KS 67663-0086  
ATTN: Marc Downing

**2-8s-22w Graham,KS**  
**Griffith #2-1**  
Job Ticket: 50458      **DST#: 4**  
Test Start: 2013.08.15 @ 10:07:00

## Mud and Cushion Information

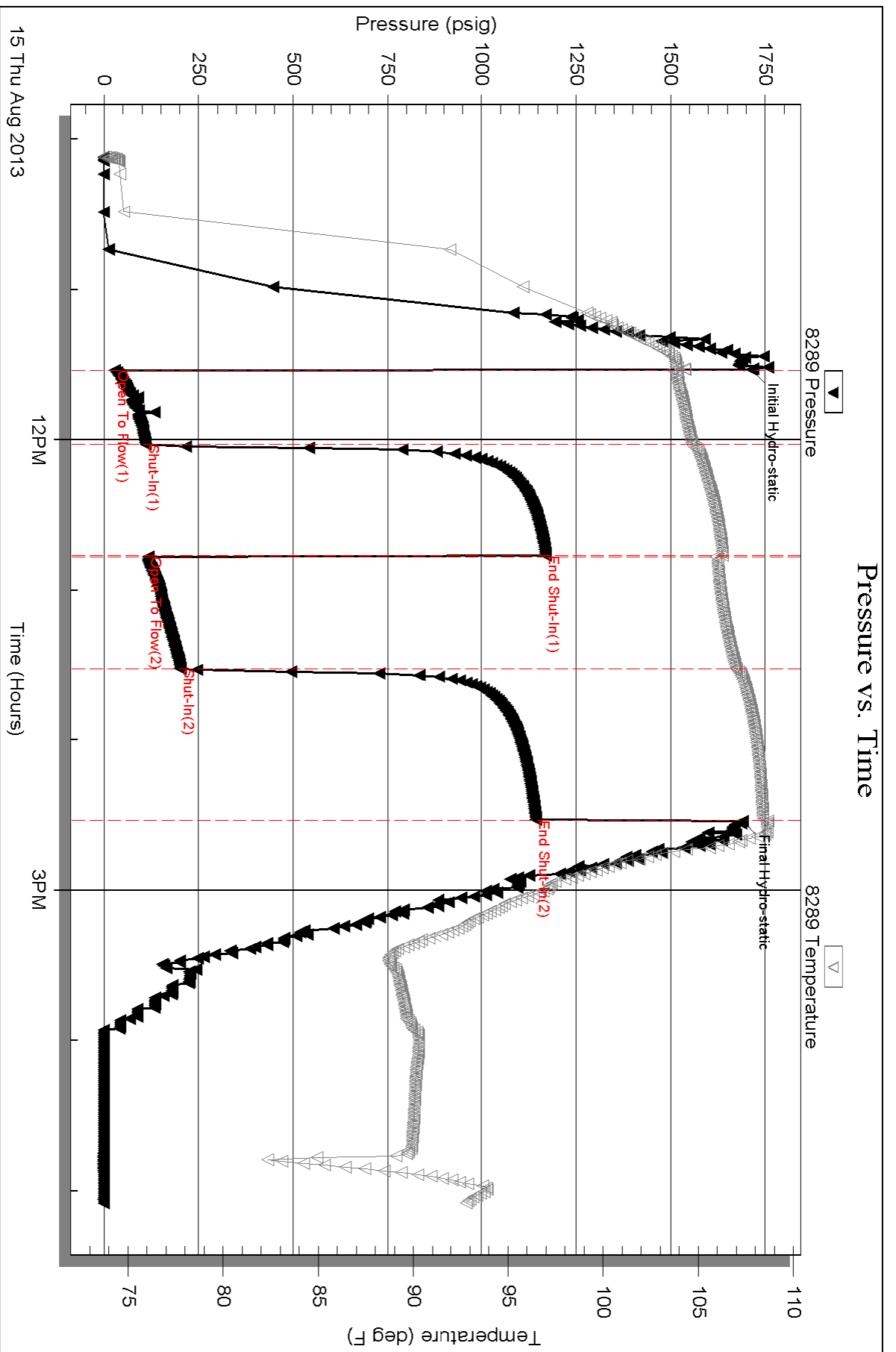
Mud Type: Gel Chem	Cushion Type:	Oil API: 30 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.59 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 800.00 ppm		
Filter Cake: 1.50 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	GOCM 10%g 10%o 80%m	0.884
126.00	GMCO 10%g 40%m 50%o	1.767
126.00	GMCO 10%g 30%m 60%o	1.767
132.00	CO 100%	1.852
0.00	505' GIP	0.000

Total Length: 447.00 ft      Total Volume: 6.270 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:



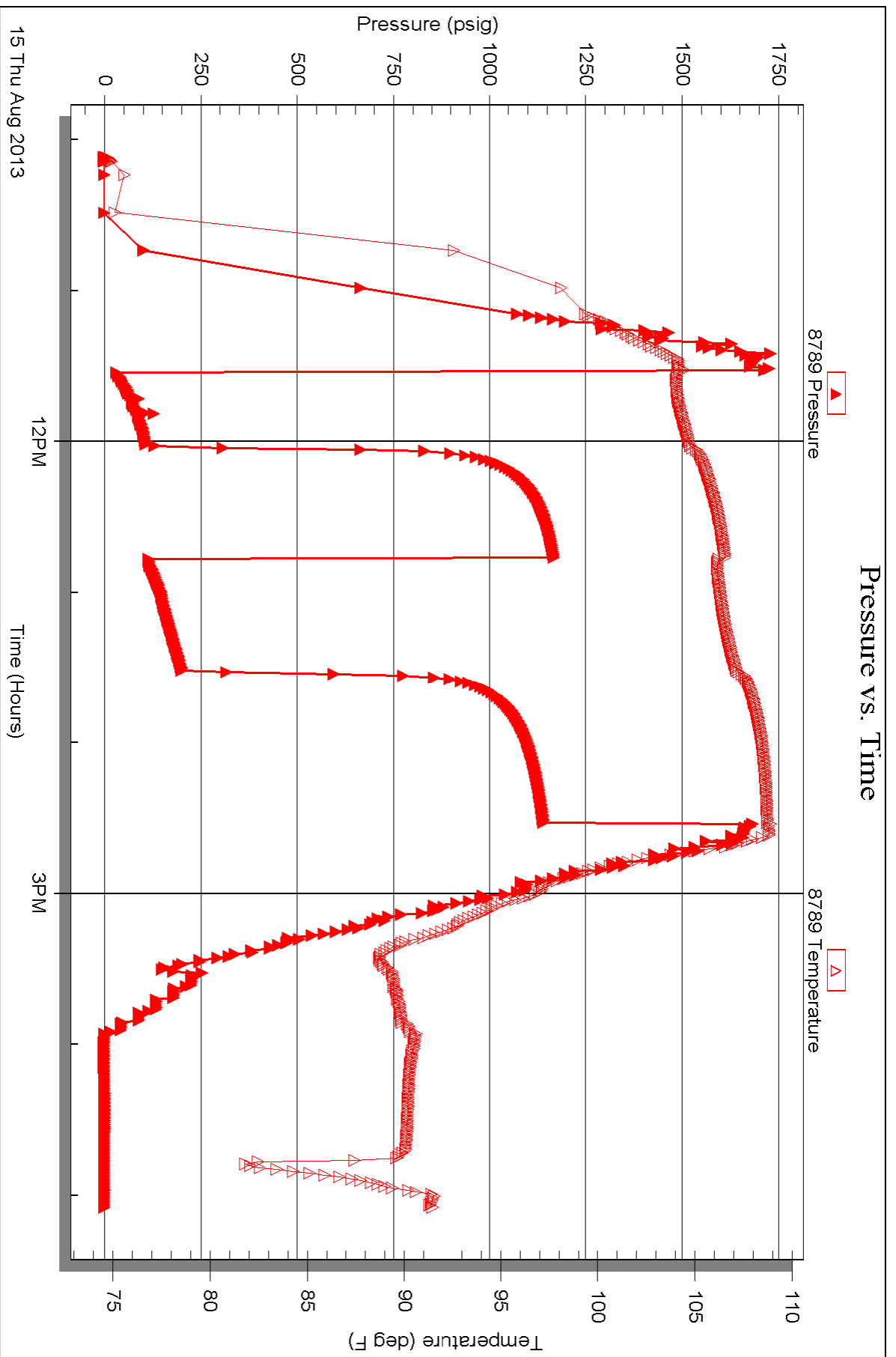
Serial #: 8789

Inside

H&C Oil Operating Inc

Griffith #2-1

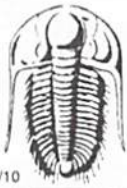
DST Test Number: 4



Triobite Testing, Inc

Ref. No: 50458

Printed: 2013.08.16 @ 16:36:15



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 50455

Well Name & No. Driffith Unit 2-1 Test No. 1 Date 8-13-13  
 Company H&C Oil Operating Inc. Elevation 2146 KB 2139 GL  
 Address P.O. Box 86 Plainville KS. 67663-0086  
 Co. Rep / Geo. Marc Downing Rig Discovery #1  
 Location: Sec. 2 Twp. 85N Rge. 22W Co. Graham State KS

Interval Tested 3360-3388 Zone Tested LKC "A"  
 Anchor Length 28 Drill Pipe Run 3343 Mud Wt. 9.0  
 Top Packer Depth 3355 Drill Collars Run 0 Vis 58  
 Bottom Packer Depth 3360 Wt. Pipe Run 0 WL 8  
 Total Depth 3388 Chlorides 400 ppm System LCM 1.5

Blow Description IFF-BOB in 1min 10sec.  
ISIP-BOB in 2min 30sec.  
FFP-BOB in 2min  
FSIP-Surface Building to 4in. in 16min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>63</u>	<u>MCO</u>	<u>80</u>		<u>20</u>	
<u>1370</u>	<u>SARRY CO</u>	<u>15</u>	<u>85</u>		
	<u>0945 SIP</u>				

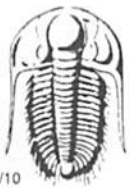
Rec Total 1403. BHT 111 Gravity 36 API RW @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1630</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>11:30</u>
(B) First Initial Flow <u>73</u>	<input type="checkbox"/> Jars _____	T-Started <u>12:32</u>
(C) First Final Flow <u>307</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>14:25</u>
(D) Initial Shut-In <u>1001</u>	<input checked="" type="checkbox"/> Circ Sub <u>50</u>	T-Pulled <u>16:55</u>
(E) Second Initial Flow <u>315</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>19:30</u>
(F) Second Final Flow <u>494</u>	<input checked="" type="checkbox"/> Mileage <u>114 RT</u> 176.70	Comments _____
(G) Final Shut-In <u>981</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1536</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>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>1376.70</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby _____	Total <u>7856395864</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc _____
	Sub Total <u>1376.70</u>	

Approved By \_\_\_\_\_ Our Representative [Signature]

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. 50456

Well Name & No. Griffith Unit #2-1 Test No. 2 Date 8-14-13  
 Company H & C Oil Operating Inc. Elevation 2146 KB 2139 GL  
 Address P.O. Box 86 Plainville KS 67663-0086  
 Co. Rep / Geo. Marc Downing Rig Discovery #1  
 Location: Sec. 2 Twp. 8S Rge. 22W Co. Araham State KS

Interval Tested 3388-3412 Zone Tested LRC "C"  
 Anchor Length 24 Drill Pipe Run 3375 Mud Wt. 9.0  
 Top Packer Depth 3383 Drill Collars Run 0 Vis 58  
 Bottom Packer Depth 3388 Wt. Pipe Run 0 WL 8.0  
 Total Depth 3412 Chlorides 400 ppm System LCM 1.5

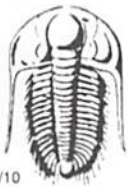
Blow Description IFP- BOB in 18min  
ISIP- No Blow  
FFP- BOB in 25min  
FSIP- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>315</u>	<u>mcw</u>		<u>95</u>	<u>5</u>	
<u>13</u>	<u>mcw</u>		<u>60</u>	<u>40</u>	
<u>2</u>	<u>CO</u>	<u>100</u>			

Rec Total 330 BHT 110 Gravity 29 API RW .100 @ 62 ° F Chlorides 92000 ppm

(A) Initial Hydrostatic 1639  Test 1150 T-On Location 01:52  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 02:10  
 (C) First Final Flow 97  Safety Joint \_\_\_\_\_ T-Open 04:04  
 (D) Initial Shut-In 678  Circ Sub \_\_\_\_\_ T-Pulled 07:04  
 (E) Second Initial Flow 97  Hourly Standby \_\_\_\_\_ T-Out 09:04  
 (F) Second Final Flow 169  Mileage 176.70 Comments \_\_\_\_\_  
 (G) Final Shut-In 670  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1545  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 1326.70  
 Final Flow 45  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 45 Sub Total 1326.70

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 50457

Well Name & No. Driffith Unit #2-1 Test No. 2 Date 8-14-13  
 Company H+C Oil Operating Inc. Elevation 2146 KB 2139 GL  
 Address P.O. Box 86 Plainville KS. 67663-0086  
 Co. Rep / Geo. Marc Downing Rig Discovery #1  
 Location: Sec. 2 Twp. 8 S 22 W Co. Graham State KS

Interval Tested 3425-3450 Zone Tested LKC "E&F"  
 Anchor Length 25 Drill Pipe Run 3438 Mud Wt. 9  
 Top Packer Depth 3420 Drill Collars Run 0 Vis 58  
 Bottom Packer Depth 3425 Wt. Pipe Run 0 WL 7.6  
 Total Depth 3450 Chlorides 500 ppm System LCM 1.5

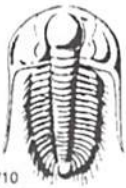
Blow Description IFP - BOB in 6min.  
ISIP - Surface Blow Building to 3 1/4 in. in 32min.  
FFP - BOB in 8 1/2min  
FSIP - Surface Blow Building to 4 in.

Rec	Feet of	%gas	%oil	%water	%mud
<u>315</u>	<u>Feet of MCW show of Oil</u>			<u>90</u>	<u>10</u>
<u>95</u>	<u>Feet of OWCM</u>	<u>15</u>	<u>15</u>	<u>70</u>	
<u>110</u>	<u>Feet of CO</u>	<u>100</u>			
	<u>235 AIP</u>				

Rec Total 520 BHT 110 Gravity 33 API RW .113 @ 66 °F Chlorides 76000 ppm

(A) Initial Hydrostatic 1659  Test 1150 T-On Location 14:57  
 (B) First Initial Flow 25  Jars \_\_\_\_\_ T-Started 15:00  
 (C) First Final Flow 143  Safety Joint \_\_\_\_\_ T-Open 17:17  
 (D) Initial Shut-In 758  Circ Sub \_\_\_\_\_ T-Pulled 19:47  
 (E) Second Initial Flow 149  Hourly Standby \_\_\_\_\_ T-Out 22:25  
 (F) Second Final Flow 248  Mileage 176.70 Comments \_\_\_\_\_  
 (G) Final Shut-In 755  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1695  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 1326.70  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 45 Sub Total 1326.70

Approved By \_\_\_\_\_ Our Representative [Signature]  
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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 50458

Well Name & No. Driffith Unit #2-1 Test No. 4 Date 8-15-13  
 Company H+C Oil Operating Inc. Elevation 2146 KB 2139 GL  
 Address P.O. Box 86 Plainville KS 67663-0086  
 Co. Rep / Geo. MARC DOWNING Rig Discovery #1  
 Location: Sec. 2 Twp. 8<sup>50</sup> Rge. 22<sup>W</sup> Co. Graham State KS

Interval Tested 3475-3552 Zone Tested LKC "H-K"  
 Anchor Length 77 Drill Pipe Run 3471 Mud Wt. 9.3  
 Top Packer Depth 3470 Drill Collars Run 0 Vis 54  
 Bottom Packer Depth 3475 Wt. Pipe Run 0 WL 7.6  
 Total Depth 3552 Chlorides 800 ppm System LCM 1.5

Blow Description IFP - BOB in 9min.  
ISIP - Surface Blow Building to 1 1/4 in. in 5min.  
FFP - BOB in 7min  
FSIP - Surface Blow Building to 5 1/2 in in 25min

Rec	Feet of	%gas	%oil	%water	%mud
<u>63</u>	<u>20cm</u>	<u>10</u>	<u>10</u>	<u>80</u>	
<u>126</u>	<u>2mco</u>	<u>10</u>	<u>50</u>	<u>40</u>	
<u>126</u>	<u>2mco</u>	<u>10</u>	<u>60</u>	<u>30</u>	
<u>132</u>	<u>CO</u>		<u>100</u>		
<u>505</u>	<u>505 SIP</u>				

Rec Total 447 BHT 108 Gravity 30 API RW @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1714</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>09:40</u>
(B) First Initial Flow <u>27</u>	<input type="checkbox"/> Jars _____	T-Started <u>10:07</u>
(C) First Final Flow <u>109</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>11:32</u>
(D) Initial Shut-In <u>1170</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>14:32</u>
(E) Second Initial Flow <u>116</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>17:05</u>
(F) Second Final Flow <u>201</u>	<input checked="" type="checkbox"/> Mileage <u>353.40</u>	Comments _____
(G) Final Shut-In <u>1143</u>	<input type="checkbox"/> Sampler _____	<u>loaded 8/16 14:00</u>
(H) Final Hydrostatic <u>1691</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>45</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1503.40</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1503.40</u>	

Approved By \_\_\_\_\_ Our Representative [Signature]

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