



DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663-0086

ATTN: Charles Ramsey

Longsmith #27-1

27-7s-24w Graham,KS

Start Date: 2012.11.26 @ 14:05:14

End Date: 2012.11.26 @ 20:43:53

Job Ticket #: 51502 DST #: 1

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

Printed: 2012.11.29 @ 11:28:51

H&C Oil Operating
27-7s-24w Graham,KS
Longsmith #27-1
DST # 1
LKC-C-D
2012.11.26



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operating
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

27-7s-24w Graham,KS
Longsmith #27-1
Job Ticket: 51502 **DST#: 1**
Test Start: 2012.11.26 @ 14:05:14

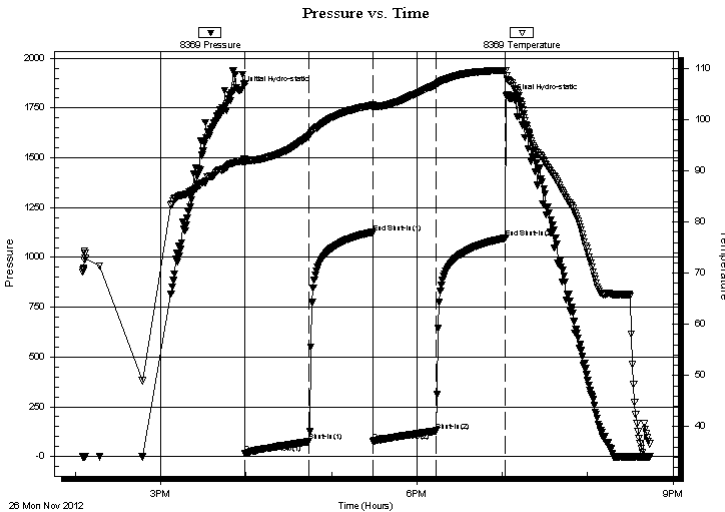
GENERAL INFORMATION:

Formation: **LKC C-D**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:59:24
Time Test Ended: 20:43:53
Interval: **3740.00 ft (KB) To 3780.00 ft (KB) (TVD)**
Total Depth: 3780.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Ray Schwager
Unit No: 42
Reference Elevations: 2428.00 ft (KB)
2423.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8369 Inside
Press @ Run Depth: 128.88 psig @ 3744.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.11.26 End Date: 2012.11.26 Last Calib.: 2012.11.26
Start Time: 14:05:14 End Time: 20:43:53 Time On Btm: 2012.11.26 @ 15:55:54
Time Off Btm: 2012.11.26 @ 19:05:08

TEST COMMENT: 45-IFP-w k to a fr bl 1/4" to 4" bl
45-ISIP-no bl
45-FFP-w k bl thru-out 1/4" to 2 1/2" bl
45-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1836.17	91.87	Initial Hydro-static
4	15.63	91.54	Open To Flow (1)
49	76.10	96.93	Shut-In(1)
93	1124.74	102.83	End Shut-In(1)
94	77.67	102.41	Open To Flow (2)
138	128.88	106.83	Shut-In(2)
187	1097.30	109.63	End Shut-In(2)
190	1799.19	107.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	MW 20%M80%W	0.84
180.00	Water	2.52

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

27-7s-24w Graham,KS
Longsmith #27-1
Job Ticket: 51502 **DST#: 1**
Test Start: 2012.11.26 @ 14:05:14

Tool Information

Drill Pipe:	Length: 3744.00 ft	Diameter: 3.80 inches	Volume: 52.52 bbl	Tool Weight: 2200.00 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: 55000.00 lb
			<u>Total Volume: 52.52 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3740.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 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			3720.00	
Shut In Tool	5.00			3725.00	
Hydraulic tool	5.00			3730.00	
Packer	5.00			3735.00	21.00 Bottom Of Top Packer
Packer	5.00			3740.00	
Stubb	1.00			3741.00	
Perforations	3.00			3744.00	
Recorder	0.00	8369	Inside	3744.00	
Recorder	0.00	8700	Outside	3744.00	
Blank Spacing	33.00			3777.00	
Bullnose	3.00			3780.00	40.00 Bottom Packers & Anchor

Total Tool Length: 61.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating

27-7s-24w Graham,KS

PO Box 86
Plainville KS 67663-0086

Longsmith #27-1

Job Ticket: 51502

DST#: 1

ATTN: Charles Ramsey

Test Start: 2012.11.26 @ 14:05:14

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:

53000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.75 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
60.00	MW 20%M80%W	0.842
180.00	Water	2.525

Total Length: 240.00 ft Total Volume: 3.367 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .16@62F

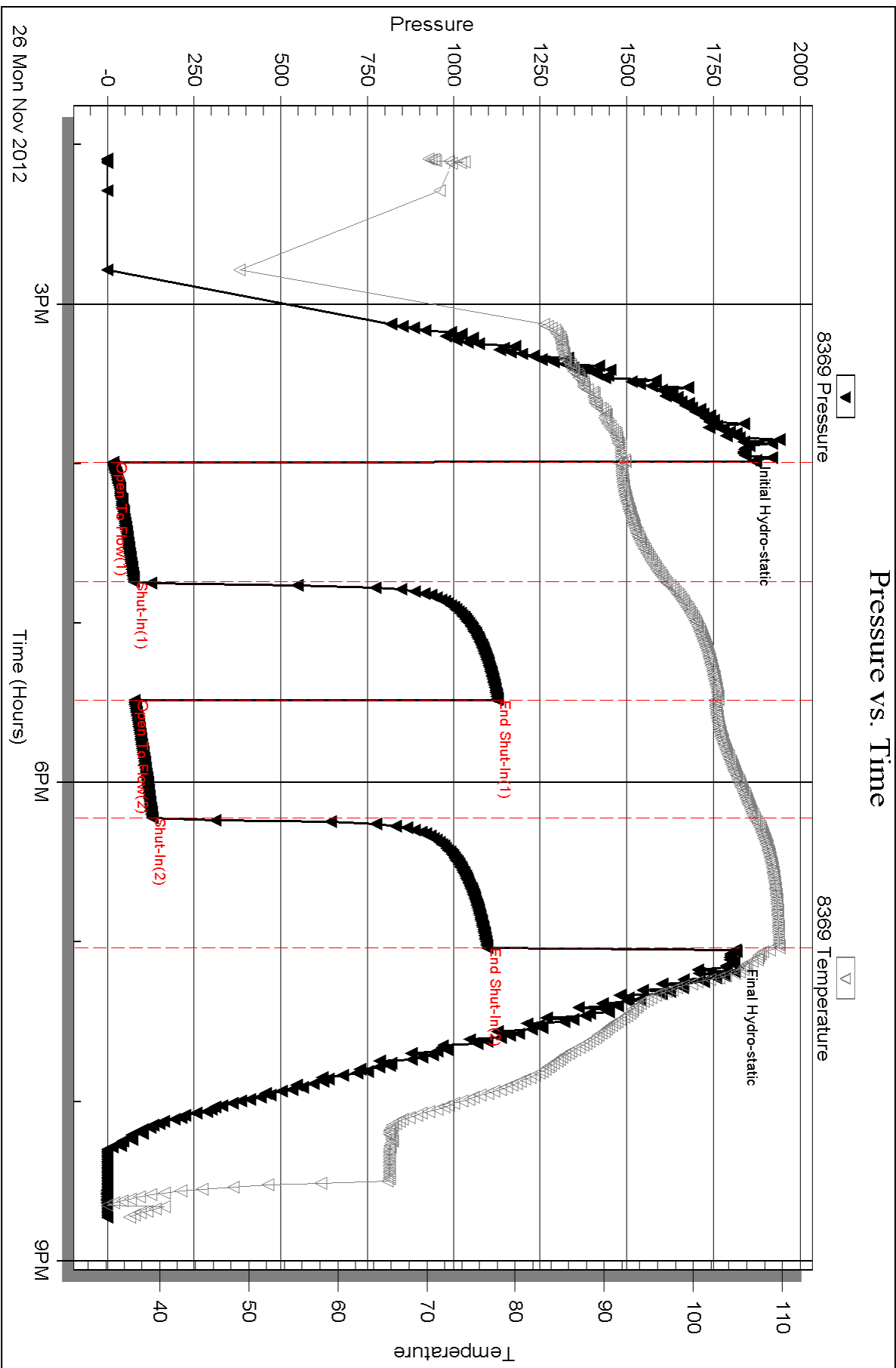
Serial #: 8369

Inside

H&C Oil Operating

Longsmith #27-1

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 51502

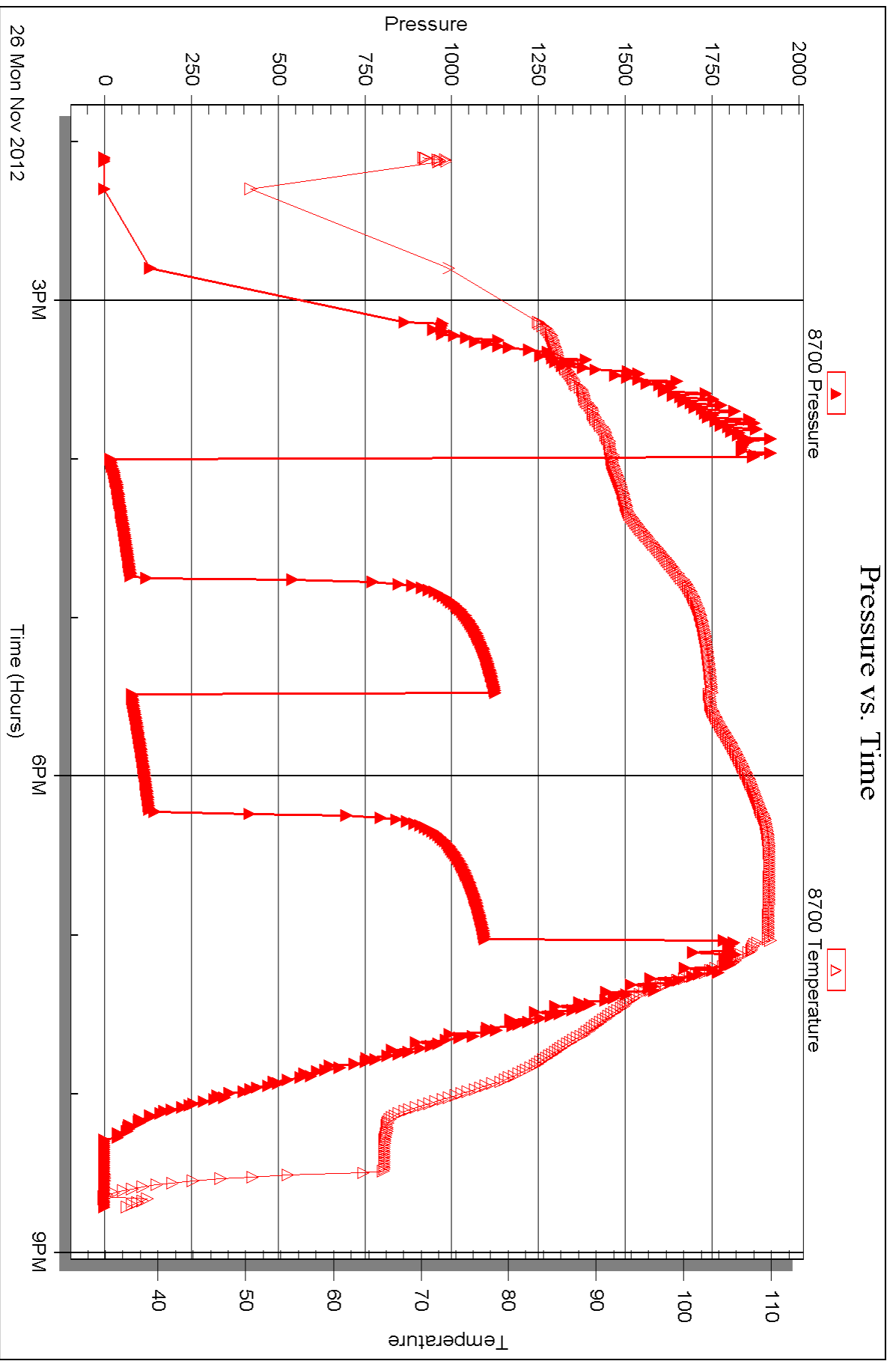
Printed: 2012.11.29 @ 11:28:55

Serial #: 8700

Outside H&C Oil Operating

Longsrnth #27-1

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663-0086

ATTN: Charles Ramsey

Longsmith #27-1

27-7s-24w Graham,KS

Start Date: 2012.11.27 @ 12:15:46

End Date: 2012.11.27 @ 18:05:55

Job Ticket #: 51503 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.11.29 @ 11:28:01

H&C Oil Operating
27-7s-24w Graham,KS
Longsmith #27-1
DST # 2
LKC:H-J
2012.11.27



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating
PO Box 86
Plainville KS 67663-0086
ATTN: Charles Ramsey

27-7s-24w Graham,KS
Longsmith #27-1
Job Ticket: 51503 **DST#: 2**
Test Start: 2012.11.27 @ 12:15:46

Tool Information

Drill Pipe:	Length: 3827.00 ft	Diameter: 3.80 inches	Volume: 53.68 bbl	Tool Weight: 2200.00 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: 53.68 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3828.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	83.00 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			3808.00	
Shut In Tool	5.00			3813.00	
Hydraulic tool	5.00			3818.00	
Packer	5.00			3823.00	21.00 Bottom Of Top Packer
Packer	5.00			3828.00	
Stubb	1.00			3829.00	
Perforations	5.00			3834.00	
Recorder	0.00	8369	Inside	3834.00	
Recorder	0.00	8700	Outside	3834.00	
Blank Spacing	33.00			3867.00	
Perforations	20.00			3887.00	
Bullnose	3.00			3890.00	62.00 Bottom Packers & Anchor

Total Tool Length: 83.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating

27-7s-24w Graham,KS

PO Box 86
Plainville KS 67663-0086

Longsmith #27-1

Job Ticket: 51503

DST#: 2

ATTN: Charles Ramsey

Test Start: 2012.11.27 @ 12:15:46

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: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.95 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
30.00	Mud	0.421

Total Length: 30.00 ft Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

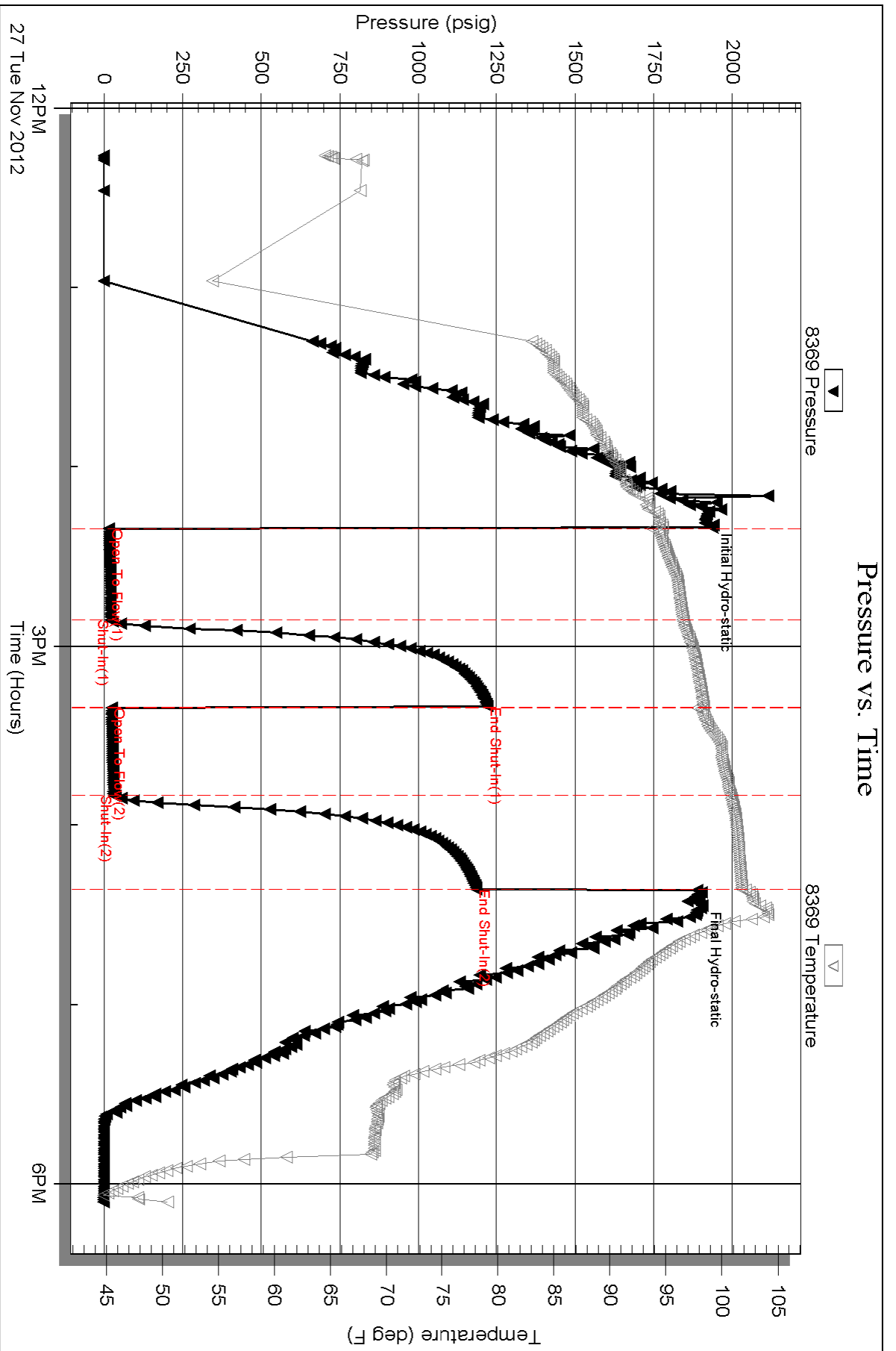
Serial #: 8369

Inside

H&C Oil Operating

Longsmith #27-1

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 51503

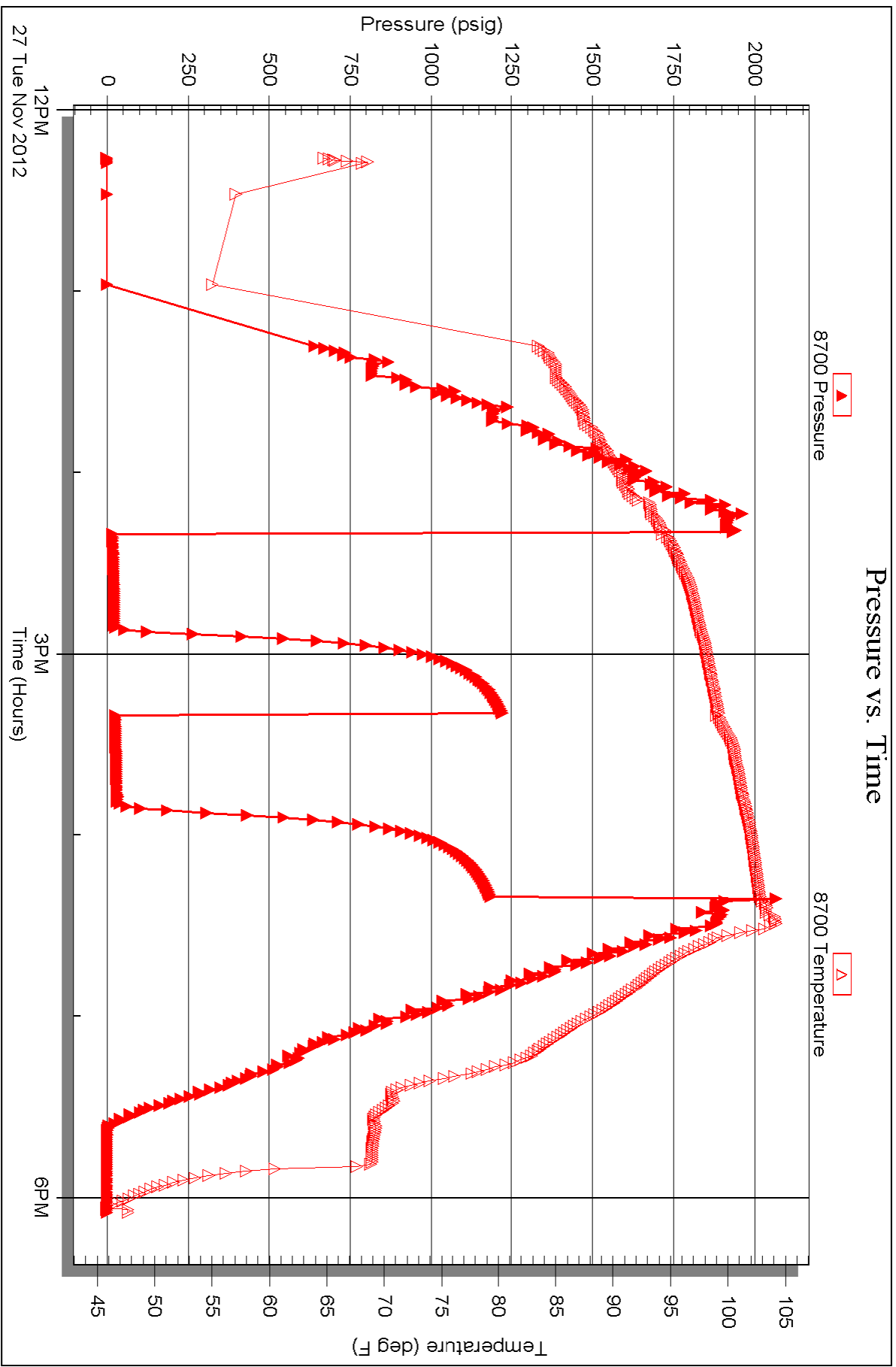
Printed: 2012.11.29 @ 11:28:05

Serial #: 8700

Outside H&C Oil Operating

Longsmith #27-1

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 51502

Well Name & No. Lonsmith #27-1 Test No. 1 Date 11-26-12
 Company H & C Oil Operating Elevation 2428 KB 2423 GL
 Address PO Box 86 Plainville, Ks 67663-0086
 Co. Rep / Geo. JASON ALM Rig Am Eagle 1193
 Location: Sec. 27 Twp. 7^s Rge. 24^w Co. GRAHAM State Ks

Interval Tested 3740-3780 Zone Tested LKC C-D
 Anchor Length 40 Drill Pipe Run 3744 Mud Wt. 9.3
 Top Packer Depth 3735 Drill Collars Run - Vis 60
 Bottom Packer Depth 3740 Wt. Pipe Run - WL 8.8
 Total Depth 3780 Chlorides 2000 ppm System LCM 2#

Blow Description IFP - WEAK TO A FAIR BLOW 1/4" TO 4" BLOW
ISIP - NO BLOW
FFP - WEAK BLOW THEN-OUT 1/4" TO 2 1/2" BLOW
FSIP - NO BLOW

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>MW</u>		<u>80</u>	<u>20</u>	
<u>180</u>	<u>WATER</u>				

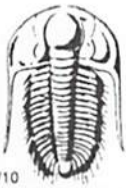
Rec Total 240 BHT 109 Gravity - API RW .16 @ 62° F Chlorides 53000 ppm

(A) Initial Hydrostatic 1836 Test 1150 T-On Location 1300
 (B) First Initial Flow 15 Jars T-Started 1405
 (C) First Final Flow 76 Safety Joint T-Open 1600
 (D) Initial Shut-In 1124 Circ Sub T-Pulled 1900
 (E) Second Initial Flow 77 Hourly Standby T-Out 2043
 (F) Second Final Flow 128 Mileage 150 RT 232.50 Comments
 (G) Final Shut-In 1097 Sampler
 (H) Final Hydrostatic 1799 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45
 Sub Total 1382.50
 Total 1382.50
 MP/DST Disc't

Approved By _____ Our Representative RAY SCHWAGER Thank you

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. 51503

4/10

Well Name & No. Longsmith #27-1 Test No. 2 Date 11-27-12
 Company H+C OIL OPERATING Elevation 2428 KB 2423 GL
 Address PO Box 86 Plainville, Ks 67663-0086
 Co. Rep / Geo. JASON ALM Rig Am Eagle 1193
 Location: Sec. 27 Twp. 7^s Rge. 24^w Co. GRAHAM State Ks

Interval Tested 3828-3890 Zone Tested LKC H-5
 Anchor Length 62 Drill Pipe Run 3827 Mud Wt. 9.4
 Top Packer Depth 3823 Drill Collars Run - Vis 62
 Bottom Packer Depth 3828 Wt. Pipe Run - WL 8
 Total Depth 3890 Chlorides 2000 ppm System LCM 2#

Blow Description TFP - Weak Blow thru-out 1/4" to 3/4" Blow
ISIP - NO Blow
FFP - Weak Blow thru-out 1/8" Blow
FSIP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</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 30 BHT 101 Gravity - API RW - @ - F Chlorides - ppm

(A) Initial Hydrostatic 1914 Test 1150 T-On Location 1120
 (B) First Initial Flow 15 Jars - T-Started 1215
 (C) First Final Flow 21 Safety Joint - T-Open 1420
 (D) Initial Shut-In 1221 Circ Sub - T-Pulled 1620
 (E) Second Initial Flow 24 Hourly Standby - T-Out 1805
 (F) Second Final Flow 31 Mileage 232.50 Comments -
 (G) Final Shut-In 1186 Sampler -
 (H) Final Hydrostatic 1881 Straddle -
 Shale Packer - Ruined Shale Packer -
 Extra Packer - Ruined Packer -
 Extra Recorder - Extra Copies -

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30
 Sub Total 1382.50
 Total 1382.50
 MP/DST Disc't -

Approved By _____ Our Representative RAY Schwager **THANK YOU**

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.