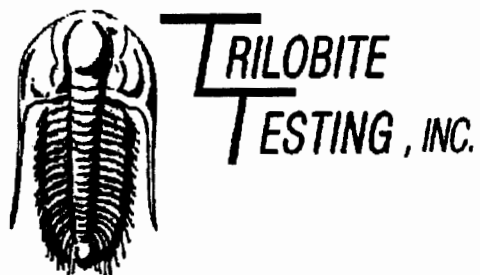


15-065-23722

29-65-23w



DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663

ATTN: Charles Ramsey

29-6-23 Graham KS

Heim # 29-1

Start Date: 2011.03.06 @ 00:12:15

End Date: 2011.03.06 @ 06:49:45

Job Ticket #: 041692 DST #: 1

KCC
MAR 28 2011
CONFIDENTIAL

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KANSAS CORPORATION COMMISSION

MAR 29 2011

CONSERVATION DIVISION
WICHITA, KS

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

H&C Oil Operating Inc

PO Box 86
Plainville KS 67663

ATTN: Charles Ramsey

Heim # 29-1

29-6-23 Graham KS

Job Ticket: 041692

DST#: 1

Test Start: 2011.03.06 @ 00:12:15

GENERAL INFORMATION:

Formation: C LKC

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:54:15

Time Test Ended: 06:49:45

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 38

Interval: 3763.00 ft (KB) To 3792.00 ft (KB) (TVD)

Total Depth: 3792.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2479.00 ft (KB)

2472.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8354

Inside

Press@RunDepth: 20.56 psig @ 3764.00 ft (KB)

Start Date: 2011.03.06

End Date:

2011.03.06

Start Time: 00:22:15

End Time:

06:49:45

Capacity: 8000.00 psig

Last Calib.: 2011.03.06

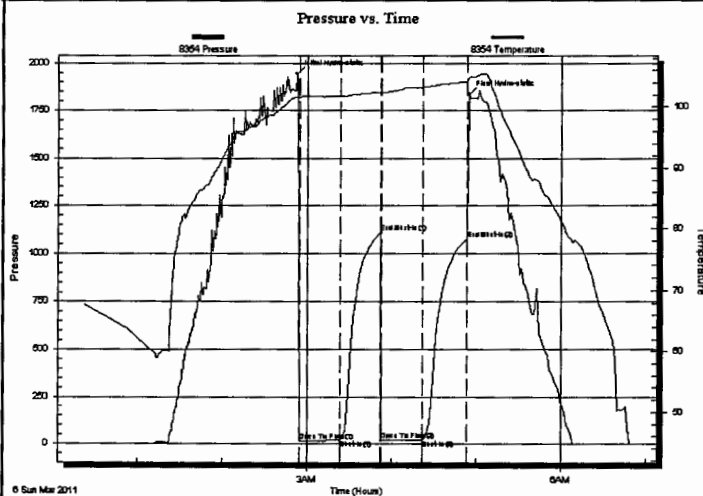
Time On Btm: 2011.03.06 @ 02:52:15

Time Off Btm: 2011.03.06 @ 04:54:45

TEST COMMENT: IF-Weak steady surface blow

FF-Weak steady surface blow

Times[30-30-30-30]



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1943.46	101.67	Initial Hydro-static
2	14.66	101.51	Open To Flow (1)
31	18.07	101.78	Shut-In(1)
60	1109.08	102.50	End Shut-In(1)
60	18.68	102.16	Open To Flow (2)
90	20.56	103.30	Shut-In(2)
121	1076.33	104.23	End Shut-In(2)
123	1838.95	104.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Drig Mud	0.14

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc

Heim # 29-1

PO Box 86
Plainville KS 67663

29-6-23 Graham KS

Job Ticket: 041692

DST#: 1

ATTN: Charles Ramsey

Test Start: 2011.03.06 @ 00:12:15

Tool Information

Drill Pipe:	Length: 3758.00 ft	Diameter: 3.80 inches	Volume: 52.71 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
		Total Volume: 52.71 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3763.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	29.00 ft			
Tool Length:	57.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3736.00	
Shut In Tool	5.00			3741.00	
Hydraulic tool	5.00			3746.00	
Jars	5.00			3751.00	
Safety Joint	3.00			3754.00	
Packer	5.00			3759.00	28.00 Bottom Of Top Packer
Packer	4.00			3763.00	
Stubb	1.00			3764.00	
Recorder	0.00	8354	Inside	3764.00	
Recorder	0.00	8520	Outside	3764.00	
Perforations	25.00			3789.00	
Bullnose	3.00			3792.00	29.00 Bottom Packers & Anchor

Total Tool Length: 57.00

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MAR 29 2011

CONSERVATION DIVISION
WICHITA, KS



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc

Heim # 29-1

PO Box 86
Plainville KS 67663

29-6-23 Graham KS

Job Ticket: 041692 DST#: 1

ATTN: Charles Ramsey

Test Start: 2011.03.06 @ 00:12:15

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:

bbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Drig Mud	0.140

Total Length: 10.00 ft

Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

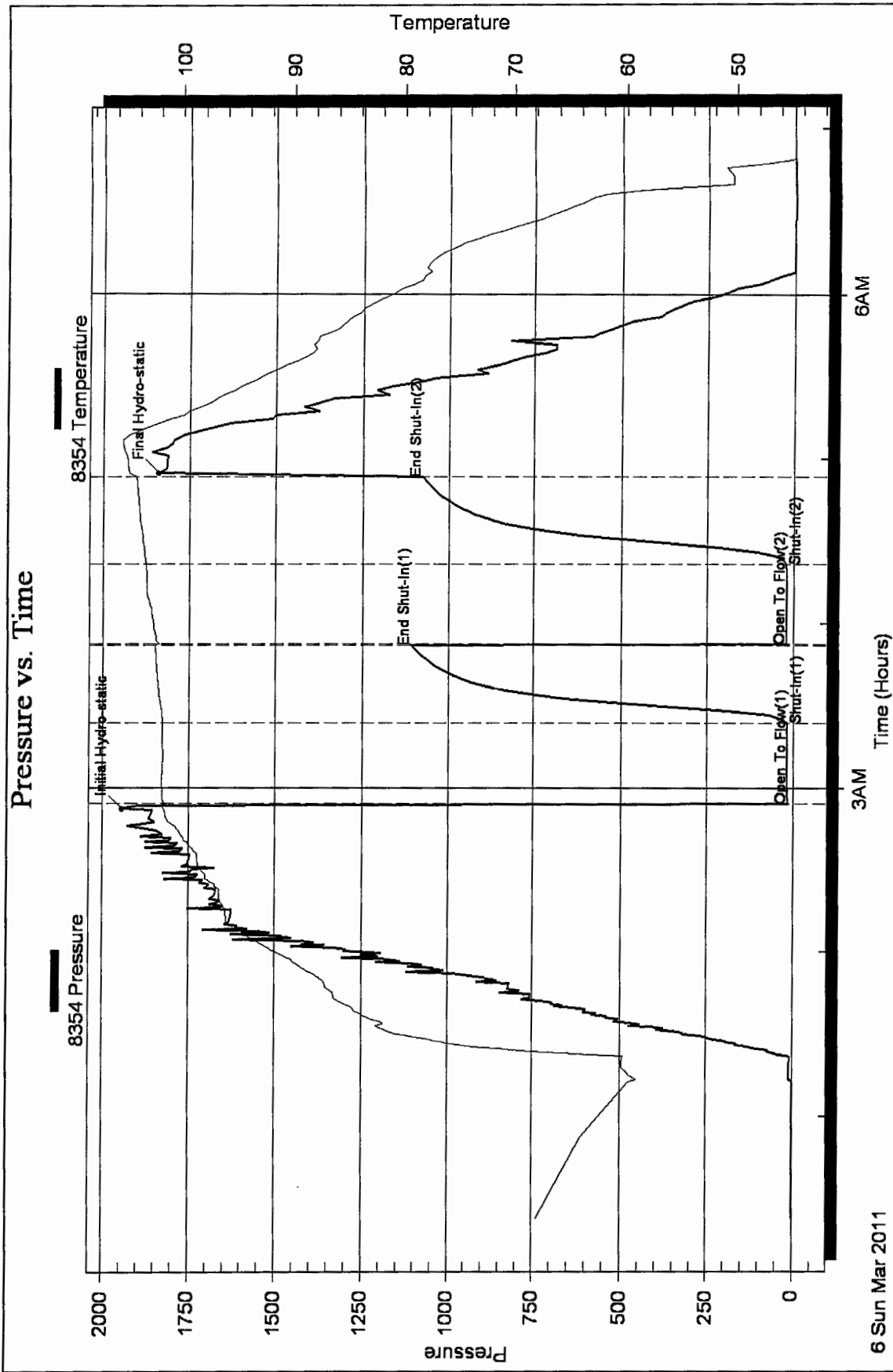
Serial #: 8354

Inside

H&C Oil Operating Inc

29-6-23 Graham KS

DST Test Number: 1



Ref. No: 041692

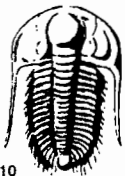
Printed: 2011.03.17 @ 16:18:45 Page 5

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CONSERVATION DIVISION
WICHITA, KS

Trilobite Testing, Inc.



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 04169215477

Well Name & No. Heim #29-1 Test No. 1 Date 3-5-11
Company H+C Oil Operating Inc Elevation 2479 KB 2472 GL
Address Box 86 Plainville KS. 67663
Co. Rep / Geo. Marc Downing Rig Am Eagle #2
Location: Sec. 19 Twp. 6 Rge. 13 Co. Graham State KS

Interval Tested 3763-3792 Zone Tested C LKC
Anchor Length 29 Drill Pipe Run 3750 Mud Wt. 9.1
Top Packer Depth 3758 Drill Collars Run — Vis 62
Bottom Packer Depth 3763 Wt. Pipe Run — WL 7.6
Total Depth 3792 Chlorides 1600 ppm System LCM 1.5-#
Blow Description IF Weak steady surface blow

FF- Weak steady surface blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Drilg Mud</u>				

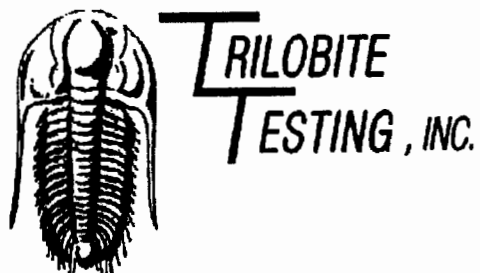
Rec Total 10 BHT 104 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1943</u>	☐ Test <u>1125'</u>	T-On Location <u>17:58</u>
(B) First Initial Flow <u>14</u>	☐ Jars <u>X 250'</u>	T-Started <u>00:12</u>
(C) First Final Flow <u>18</u>	☐ Safety Joint <u>X 75'</u>	T-Open <u>02:50</u>
(D) Initial Shut-In <u>1109</u>	☐ Circ Sub <u>—</u>	T-Pulled <u>04:50</u>
(E) Second Initial Flow <u>18</u>	☐ Hourly Standby <u>34hr 325'</u>	T-Out <u>06:49</u>
(F) Second Final Flow <u>20</u>	☐ Mileage <u>152 RT 190'</u>	Comments <u>—</u>
(G) Final Shut-In <u>1076</u>	☐ Sampler <u>—</u>	
(H) Final Hydrostatic <u>18.38</u>	☐ Straddle <u>—</u>	

Initial Open <u>30</u>	☐ Shale Packer <u>—</u>	☐ Ruined Shale Packer <u>—</u>
Initial Shut-In <u>30</u>	☐ Extra Packer <u>—</u>	☐ Ruined Packer <u>—</u>
Final Flow <u>30</u>	☐ Extra Recorder <u>—</u>	☐ Extra Copies <u>—</u>
Final Shut-In <u>30</u>	☐ Day Standby <u>—</u>	Sub Total <u>0</u>
	☐ Accessibility <u>—</u>	Total <u>1965'</u>
	Sub Total <u>1965'</u>	MP/DST Disc't <u>—</u>

Approved By — Our Representative Dan Rangle

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.



DRILL STEM TEST REPORT

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

PO Box 86
Plainville KS 67663

ATTN: Charles Ramsey

29-6-23 Graham KS

Heim # 29-1

Start Date: 2011.03.06 @ 18:18:43

End Date: 2011.03.07 @ 00:23:13

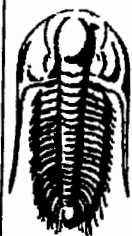
Job Ticket #: 041693 DST #: 2

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CONSERVATION DIVISION
WICHITA, KS

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating Inc

PO Box 86
Plainville KS 67663

ATTN: Charles Ramsey

Helm # 29-1

29-6-23 Graham KS

Job Ticket: 041693

DST#: 2

Test Start: 2011.03.06 @ 18:18:43

GENERAL INFORMATION:

Formation: J LKC

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:23:13

Time Test Ended: 00:23:13

Interval: 3877.00 ft (KB) To 3905.00 ft (KB) (TVD)

Total Depth: 3905.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 38

Reference Elevations: 2479.00 ft (KB)

2472.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8354

Inside

Press@RunDepth: 18.08 psig @ 3878.00 ft (KB)

Start Date: 2011.03.06 End Date: 2011.03.07

Start Time: 18:28:43 End Time: 00:23:13

Capacity: 8000.00 psig

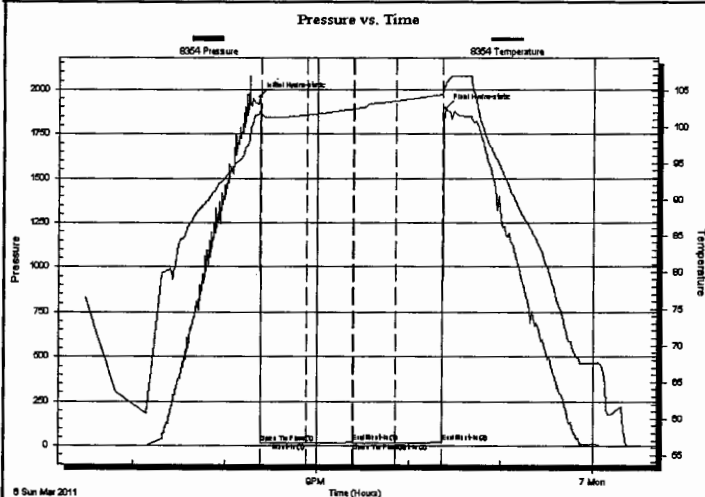
Last Calib.: 2011.03.07

Time On Btm: 2011.03.06 @ 20:22:03

Time Off Btm: 2011.03.06 @ 22:23:13

TEST COMMENT: IF-Weak died in 20 min

FF-No blow flushed tool



PRESSURE SUMMARY

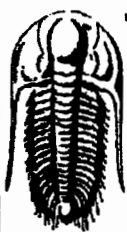
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1960.10	102.02	Initial Hydro-static
2	17.39	101.46	Open To Flow (1)
32	17.01	101.57	Shut-In (1)
62	21.47	102.42	End Shut-In (1)
62	16.88	102.44	Open To Flow (2)
90	18.08	103.51	Shut-In (2)
120	20.76	104.43	End Shut-In (2)
122	1896.34	105.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Drig Mud	0.01

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating Inc

Heim # 29-1

PO Box 86
Plainville KS 67663

29-6-23 Graham KS

Job Ticket: 041693

DST#: 2

ATTN: Charles Ramsey

Test Start: 2011.03.06 @ 18:18:43

Tool Information

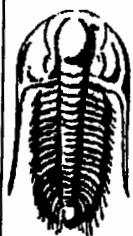
Drill Pipe:	Length: 3873.00 ft	Diameter: 3.80 inches	Volume: 54.33 bbl	Tool Weight: 2300.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
		Total Volume: 54.33 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3877.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 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
Change Over Sub	1.00			3850.00	
Shut In Tool	5.00			3855.00	
Hydraulic tool	5.00			3860.00	
Jars	5.00			3865.00	
Safety Joint	3.00			3868.00	
Packer	5.00			3873.00	28.00 Bottom Of Top Packer
Packer	4.00			3877.00	
Stubb	1.00			3878.00	
Recorder	0.00	8354	Inside	3878.00	
Recorder	0.00	8520	Outside	3878.00	
Perforations	24.00			3902.00	
Bullnose	3.00			3905.00	28.00 Bottom Packers & Anchor

Total Tool Length: 56.00

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CONSERVATION DIVISION
WICHITA, KS



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating Inc

Heim # 29-1

PO Box 86
Plainville KS 67663

29-6-23 Graham KS

Job Ticket: 041693

DST#: 2

ATTN: Charles Ramsey

Test Start: 2011.03.06 @ 18:18:43

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.99 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
1.00	Drig Mud	0.014

Total Length: 1.00 ft

Total Volume: 0.014 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

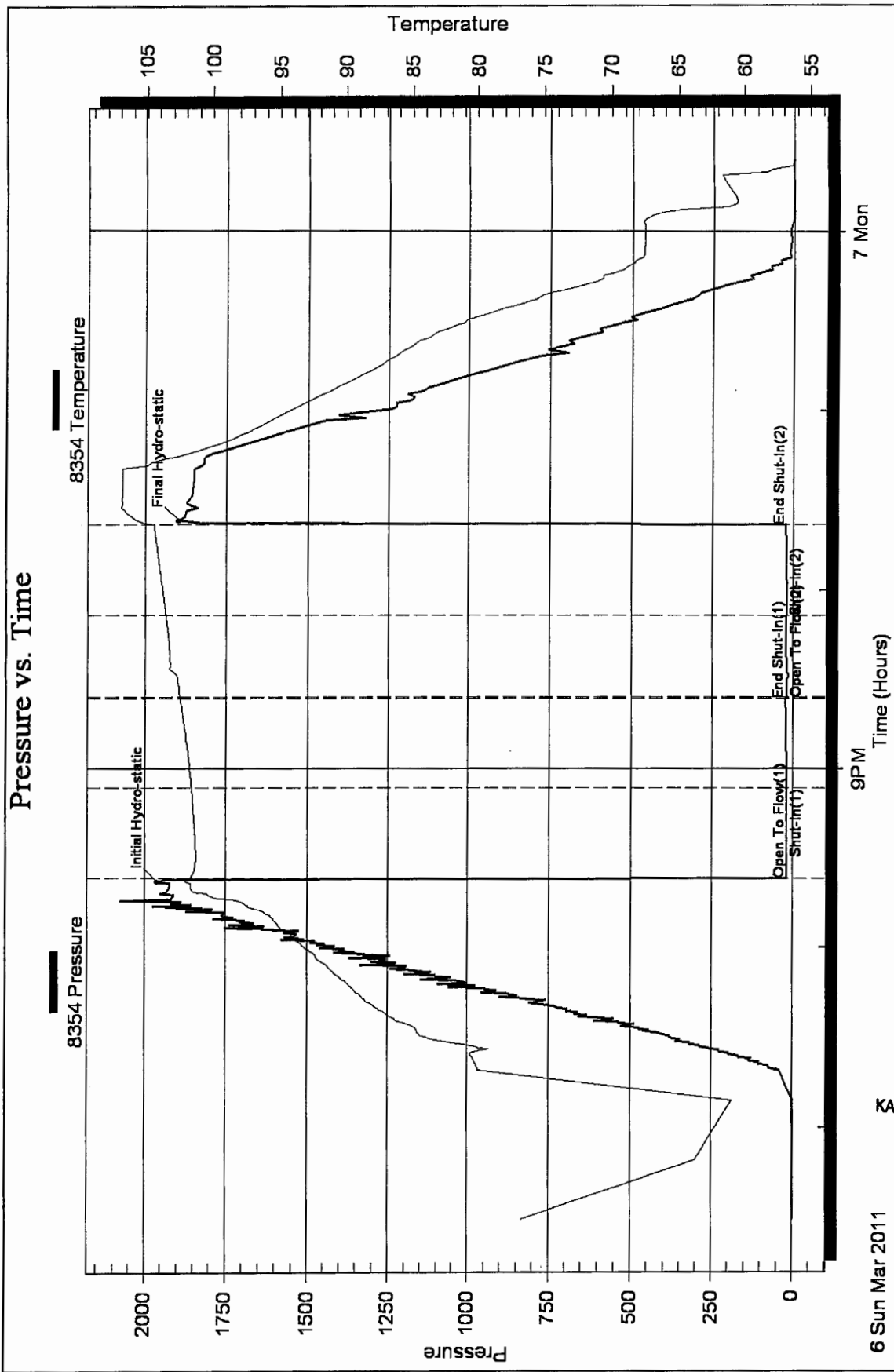
Serial #: 8354

Inside

H&C Oil Operating Inc

29-6-23 Graham KS

DST Test Number: 2



6 Sun Mar 2011

7 Mon

9PM

Time (Hours)

Ref. No: 041693

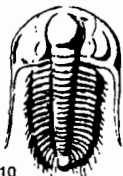
Printed: 2011.03.17 @ 16:19:05 Page 5

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MAR 29 2011

CONSERVATION DIVISION
WICHITA, KS

Trilobite Testing, Inc



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 041693

Well Name & No. Heim #29-1 Test No. 2 Date 3-6-11
 Company H&C Oil Operating Inc Elevation 2479 KB 2472 GL
 Address _____
 Co. Rep / Geo. Marc Downing Rig Am. Eagle #2
 Location: Sec. 29 Twp. 6 Rge. 23 Co. Graham State KS

Interval Tested 3877 — 3905 Zone Tested I LKC
 Anchor Length 28 Drill Pipe Run 3873 Mud Wt. 9.2
 Top Packer Depth 3872 Drill Collars Run — Vis 55
 Bottom Packer Depth 3877 Wt. Pipe Run — WL 8
 Total Depth 3905 Chlorides 1400 ppm System LCM 1.5 #
 Blow Description I.F. Weak - died in 20 min.

E.F. No blow - flushed tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Trlg Mod</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 1 BHT 104 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1960
 (B) First Initial Flow 17
 (C) First Final Flow 17
 (D) Initial Shut-In 21
 (E) Second Initial Flow 16
 (F) Second Final Flow 18
 (G) Final Shut-In 20
 (H) Final Hydrostatic 1896

☐ Test 1125
☒ Jars X 250
☒ Safety Joint X 75
☐ Circ Sub _____
☐ Hourly Standby _____
☒ Mileage 152 RT 190
☐ Sampler _____
☐ Straddle _____
☐ Shale Packer _____
☐ Extra Packer _____
☐ Extra Recorder _____
☐ Day Standby _____
☐ Accessibility _____
 Sub Total 1640

T-On Location 17:49
 T-Started 18:18
 T-Open 20:25
 T-Pulled 22:25
 T-Out 00:23

Comments _____

☐ Ruined Shale Packer _____
☐ Ruined Packer _____
☐ Extra Copies _____
 Sub Total 0
 Total 1640
 MP/DST Disc't _____

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

Approved By _____

Our Representative Don Bangle

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