



DRILL STEM TEST REPORT

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

PO Box 86
Plainville, KS 67663

ATTN: Marc Downing

Minium #26-1

26-8s-25w Graham KS

Start Date: 2013.06.16 @ 00:58:00

End Date: 2013.06.16 @ 09:32:45

Job Ticket #: 52751 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.06.18 @ 11:20:13



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

H&C Oil Operating, Inc.

26-8s-25w Graham KS

PO Box 86
Plainville, KS 67663

Minium #26-1

Job Ticket: 52751

DST#: 1

ATTN: Marc Downing

Test Start: 2013.06.16 @ 00:58:00

GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:50:45

Time Test Ended: 09:32:45

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 57

Interval: 3858.00 ft (KB) To 3896.00 ft (KB) (TVD)

Reference Elevations: 2393.00 ft (KB)

Total Depth: 3896.00 ft (KB) (TVD)

2388.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8671

Inside

Press @ Run Depth: 106.88 psig @ 3859.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.06.16

End Date:

2013.06.16

Last Calib.:

2013.06.16

Start Time: 00:58:05

End Time:

09:32:45

Time On Btm:

2013.06.16 @ 03:50:30

Time Off Btm:

2013.06.16 @ 07:02:45

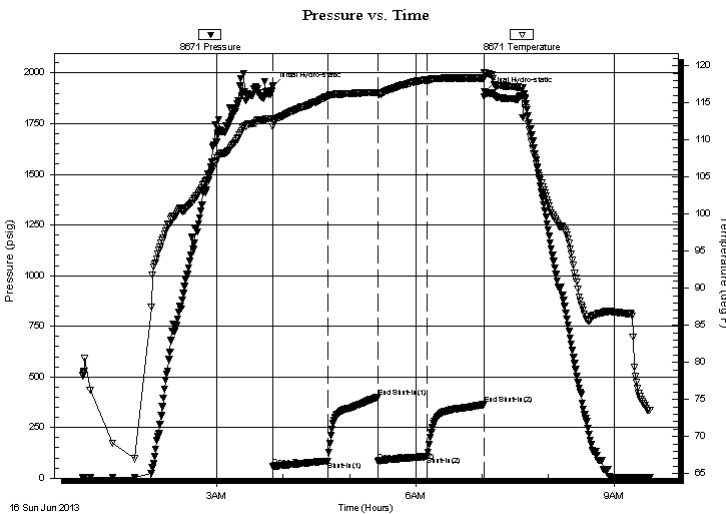
TEST COMMENT: 45 - IF: Blow built to BOB in 13 1/2 min.

45 - IS: Blow back built to 1 1/2"

45 - FF: Blow built to BOB in 12 min.

45 - FS: Blow back built to 5"

PRESSURE SUMMARY



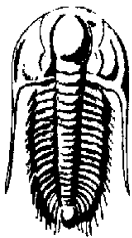
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1934.09	112.89	Initial Hydro-static
1	58.59	111.78	Open To Flow (1)
50	84.30	115.86	Shut-In(1)
96	400.22	116.43	End Shut-In(1)
96	83.63	116.18	Open To Flow (2)
140	106.88	118.04	Shut-In(2)
192	363.91	118.37	End Shut-In(2)
193	1909.09	119.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
130.00	GOCM 56% _m , 23% _g , 21% _o	1.82
90.00	CGO 77% _o , 21% _g , 2% _m	1.26
0.00	GIP = 1025'	0.00

Gas Rates

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



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Minium #26-1

Job Ticket: 52751

DST#: 1

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Time Test Ended: 09:32:45

Interval: 3858.00 ft (KB) To 3896.00 ft (KB) (TVD)

Total Depth: 3896.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: James Winder

Unit No: 57

Reference Elevations: 2393.00 ft (KB)

2388.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8320 Outside

Press @ Run Depth: psig @ 3859.00 ft (KB)

Start Date: 2013.06.16

End Date:

2013.06.16

Capacity: 8000.00 psig

Last Calib.:

2013.06.16

Start Time:

00:58:05

End Time:

09:33:45

Time On Btm:

Time Off Btm:

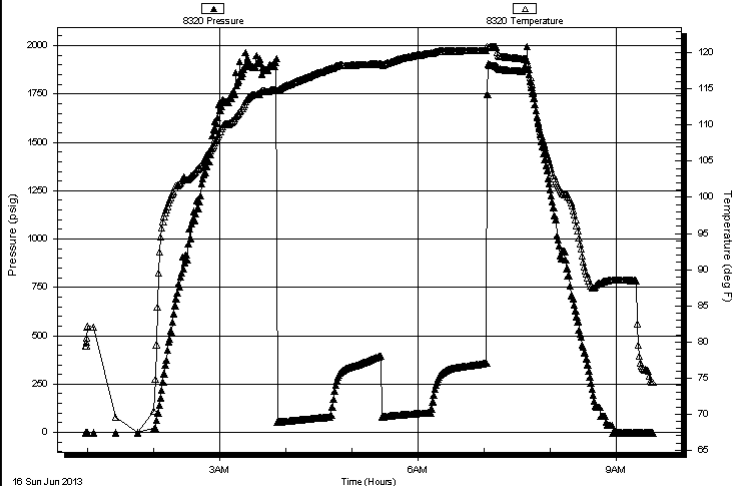
TEST COMMENT: 45 - IF: Blow built to BOB in 13 1/2 min.

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Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
130.00	GOCM 56%m, 23%g, 21%o	1.82
90.00	CGO 77%o, 21%g, 2%m	1.26
0.00	GIP = 1025'	0.00

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating, Inc.

26-8s-25w Graham KS

PO Box 86
Plainville, KS 67663

Minium #26-1

Job Ticket: 52751

DST#: 1

ATTN: Marc Downing

Test Start: 2013.06.16 @ 00:58:00

Tool Information

Drill Pipe:	Length: 3871.00 ft	Diameter: 3.80 inches	Volume: 54.30 bbl	Tool Weight: 2000.00 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: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			Total Volume: 54.30 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3858.00 ft			Final 43000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	58.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: tool opened on bridge 3' - 4' high lost about 20' of mud - had to add another joint to get to bottom

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3843.00	
Hydraulic tool	5.00			3848.00	
Packer	5.00			3853.00	20.00 Bottom Of Top Packer
Packer	5.00			3858.00	
Stubb	1.00			3859.00	
Recorder	0.00	8671	Inside	3859.00	
Recorder	0.00	8320	Outside	3859.00	
Perforations	34.00			3893.00	
Bullnose	3.00			3896.00	38.00 Bottom Packers & Anchor
Total Tool Length:	58.00				



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FLUID SUMMARY

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PO Box 86
Plainville, KS 67663

Minium #26-1

Job Ticket: 52751

DST#: 1

ATTN: Marc Downing

Test Start: 2013.06.16 @ 00:58:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 57.00 sec/qt
Water Loss: 7.38 in³
Resistivity: ohm.m
Salinity: 1100.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 41.6 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
130.00	GOCM 56% <i>m</i> , 23% <i>g</i> , 21% <i>o</i>	1.824
90.00	CGO 77% <i>o</i> , 21% <i>g</i> , 2% <i>m</i>	1.262
0.00	GIP = 1025'	0.000

Total Length: 220.00 ft Total Volume: 3.086 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

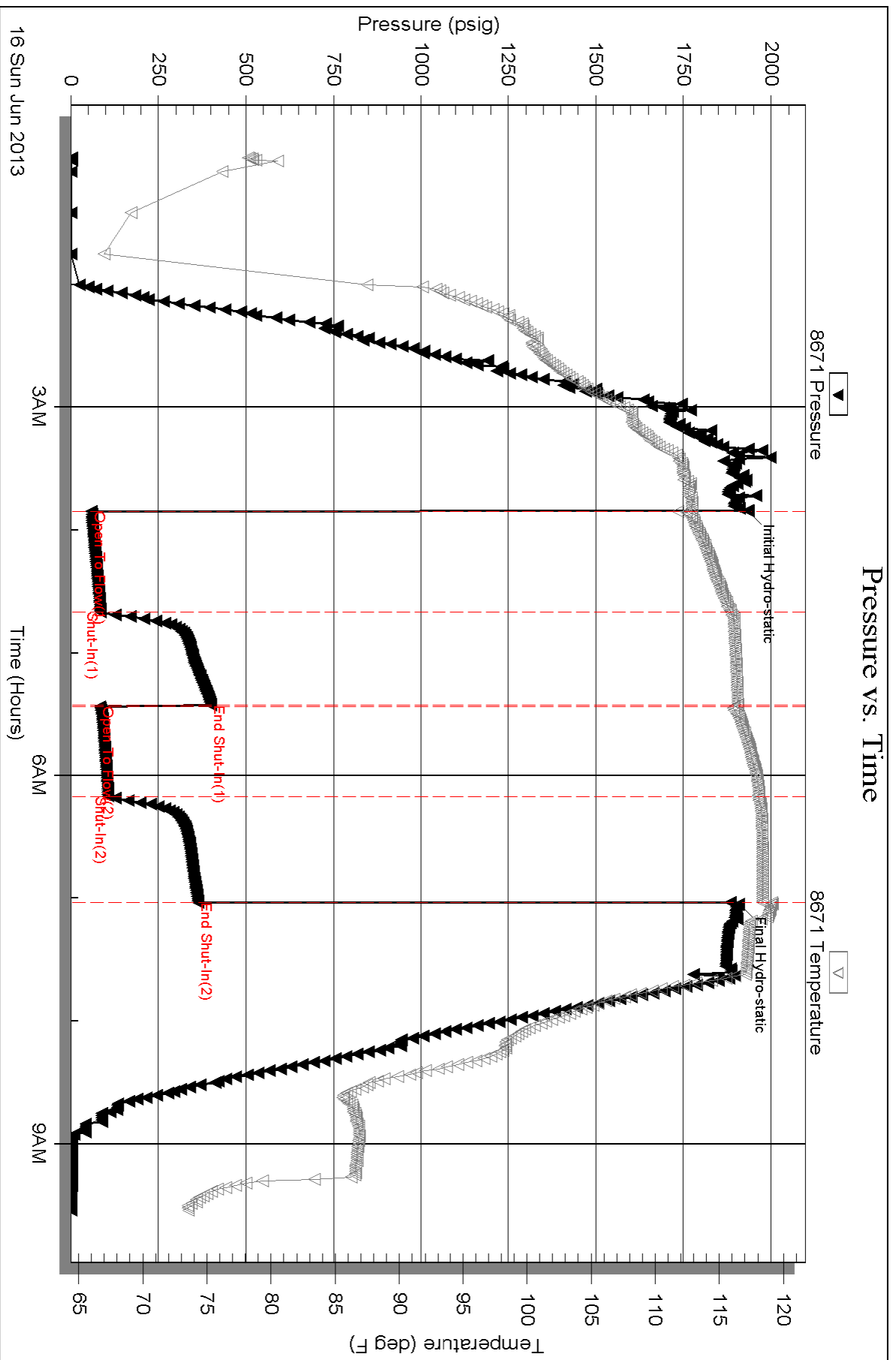
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 42.8 api @ 72 deg F
Corrected Gravity = 41.6 api

Pressure vs. Time



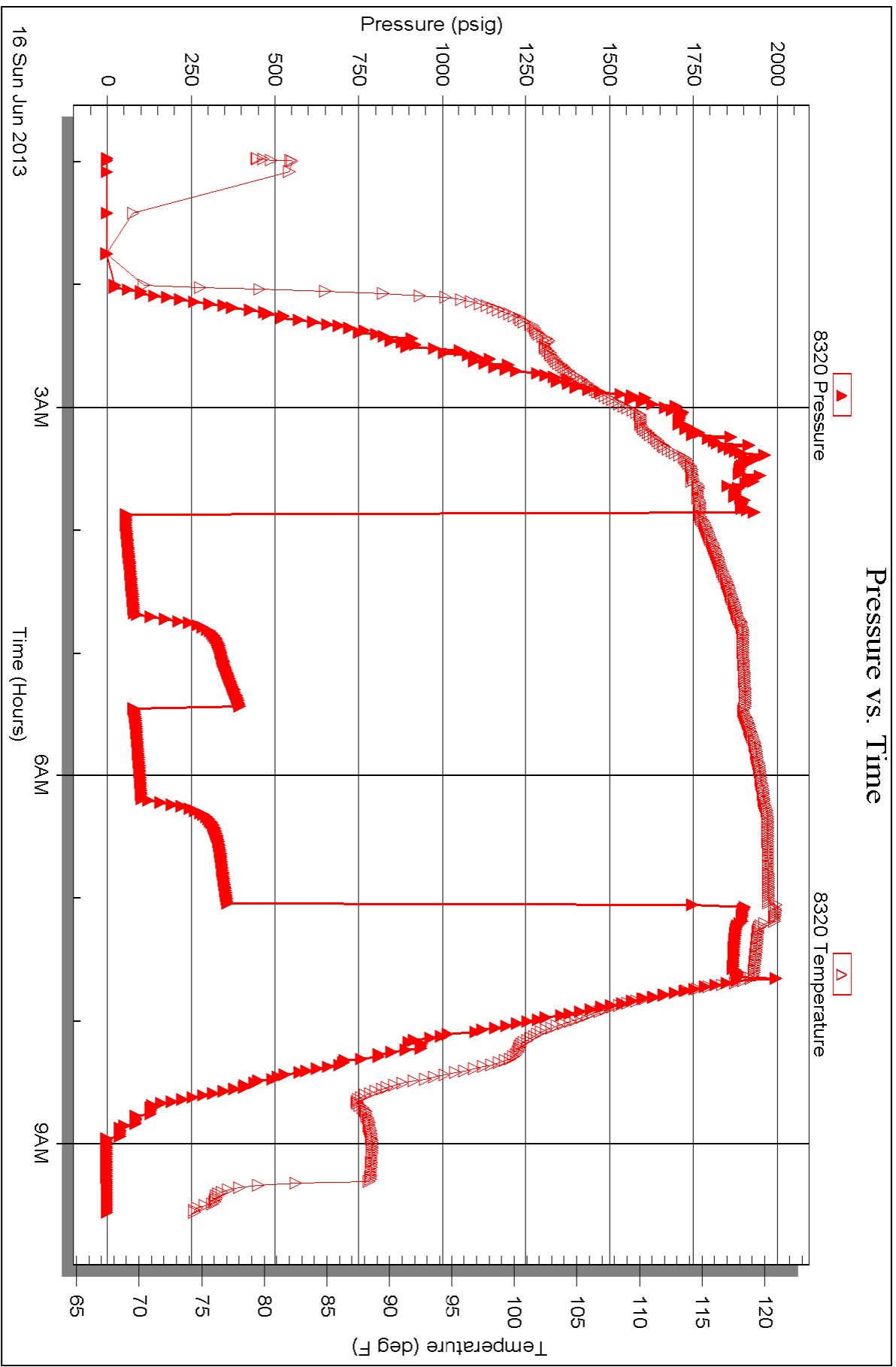
Serial #: 8320

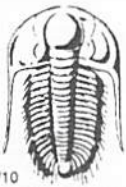
Outside

H&C Oil Operating, Inc.

Mnium#26-1

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52751

Well Name & No. Minium #26-1 Test No. 1 Date 6-16-13
 Company H&C Oil Operating Inc Elevation 2393 KB 2388 GL
 Address PO Box 86 Plainville, KS 67663
 Co. Rep / Geo. Marc Downing Rig American Eagle #3
 Location: Sec. 26 Twp. 8s Rge. 25w Co. Graham State KS

Interval Tested 3858-3896 Zone Tested LKC "I-J"
 Anchor Length 38 Drill Pipe Run 3871 Mud Wt. 9.4
 Top Packer Depth 3853 Drill Collars Run - Vis 57
 Bottom Packer Depth 3858 Wt. Pipe Run - WL 7.4
 Total Depth 3896 Chlorides 1100 ppm System LCM -

Blow Description IF: Blow built to BOB in 13 1/2 min.
ISI: Blowback built to 1 1/2"
FF: Blow built to BOB in 12 min.
FSI: Blowback built to 5"

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>CGO</u>	<u>21</u>	<u>77</u>	<u>-</u>	<u>2</u>
<u>130</u>	<u>60cm</u>	<u>23</u>	<u>21</u>	<u>-</u>	<u>56</u>
	<u>GIP = 1025'</u>				

Rec Total 220 Fluid 1025GAS BHT 118 Gravity 41.6 API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 1934 Test * 1150 T-On Location 23:15 6/15
 (B) First Initial Flow 59 Jars T-Started 00:58 6/16
 (C) First Final Flow 84 Safety Joint T-Open 3:50
 (D) Initial Shut-In 400 Circ Sub * T-Pulled 7:02
 (E) Second Initial Flow 84 Hourly Standby 1 1/4 hr 125 T-Out 9:30 6/16
 (F) Second Final Flow 107 Mileage 122RT x 2 378.20
 (G) Final Shut-In 364 Sampler
 (H) Final Hydrostatic 1909 Straddle Ruined Shale Packer

Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder Sub Total 0
 Day Standby Total 1653.20
 Accessibility MP/DST Disc't
 Sub Total 1653.20

Approved By _____ Our Representative James Winkler

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