



DRILL STEM TEST REPORT

Prepared For: **Pickrell Drlg. Co. Inc.**

100 S. Main Ste. 505
Wichita, KS 67202-3738

ATTN: Aaron Young

Young 'A' #3

12-30s-8w Kingman,KS

Start Date: 2015.01.25 @ 23:05:26

End Date: 2015.01.26 @ 08:46:26

Job Ticket #: 59962 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.01.28 @ 08:54:17



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Pickrell Drig. Co. Inc.
100 S. Main Ste. 505
Wichita, KS 67202-3738
ATTN: Aaron Young

12-30s-8w Kingman,KS
Young 'A' #3
Job Ticket: 59962 **DST#: 1**
Test Start: 2015.01.25 @ 23:05:26

GENERAL INFORMATION:

Formation: **Mississippian**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:26:41
Time Test Ended: 08:46:26
Interval: **4110.00 ft (KB) To 4125.00 ft (KB) (TVD)**
Total Depth: 4125.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Ryan Reynolds
Unit No: 68
Reference Elevations: 1481.00 ft (KB)
1471.00 ft (CF)
KB to GR/CF: 10.00 ft

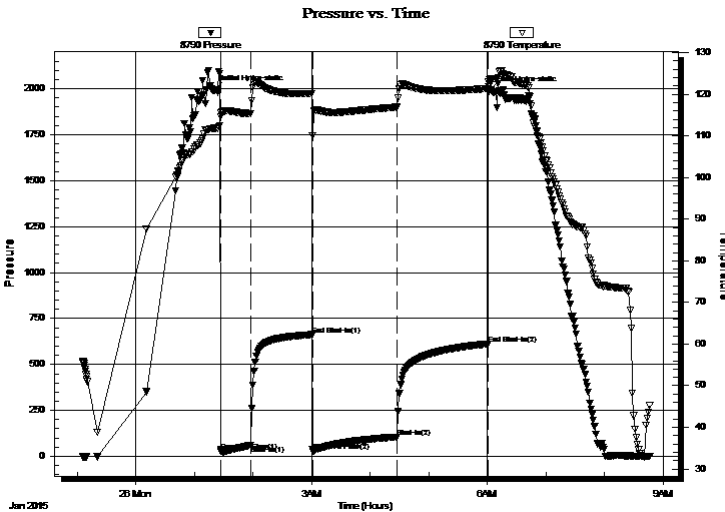
Serial #: 8790

Inside

Press@RunDepth: 106.00 psig @ 4115.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2015.01.25 End Date: 2015.01.26 Last Calib.: 2015.01.26
Start Time: 23:05:31 End Time: 08:46:26 Time On Btm: 2015.01.26 @ 01:20:41
Time Off Btm: 2015.01.26 @ 06:01:11

TEST COMMENT: IF: Strong blow . BOB @ 1min.
IS: GTS on blow dow n. No Blow Back.
FF: Strong blow . BOB immed. Gauged gas.
FS: No blow .

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1996.59	111.82	Initial Hydro-static
6	28.38	114.59	Open To Flow (1)
37	60.86	115.26	Shut-In(1)
100	662.09	120.17	End Shut-In(1)
101	28.48	110.02	Open To Flow (2)
187	106.00	116.89	Shut-In(2)
280	612.12	121.35	End Shut-In(2)
281	1987.21	121.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOMCW 5%o, 10%g, 10%m, 75%w	0.84
30.00	GOWCM 5%o, 5%w, 30%g, 60%m	0.42
0.00	GTS	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	17.00	11.75
Last Gas Rate	0.13	62.00	28.60
Max. Gas Rate	0.13	62.00	28.60



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pickrell Drig. Co. Inc.

12-30s-8w Kingman,KS

100 S. Main Ste. 505
Wichita, KS 67202-3738

Young 'A' #3

Job Ticket: 59962

DST#: 1

ATTN: Aaron Young

Test Start: 2015.01.25 @ 23:05:26

Tool Information

Drill Pipe:	Length: 4102.00 ft	Diameter: 3.80 inches	Volume: 57.54 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 21000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 63000.00 lb
			<u>Total Volume: 57.54 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	4110.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 ft			
Tool Length:	41.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4093.00	
Hydraulic tool	5.00			4098.00	
Jars	5.00			4103.00	
Safety Joint	2.00		Inside	4105.00	
Packer	5.00			4110.00	22.00 Bottom Of Top Packer
Packer - Shale	4.00			4114.00	
Stubb	1.00			4115.00	
Recorder	0.00	8790	Inside	4115.00	
Recorder	0.00	8792	Outside	4115.00	
Perforations	11.00			4126.00	
Bullnose	3.00			4129.00	19.00 Anchor Tool

Total Tool Length: 41.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Pickrell Drig. Co. Inc.
100 S. Main Ste. 505
Wichita, KS 67202-3738
ATTN: Aaron Young

12-30s-8w Kingman,KS
Young 'A' #3
Job Ticket: 59962 **DST#: 1**
Test Start: 2015.01.25 @ 23:05:26

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: 115000 ppm	
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: 0.08 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GOMCW 5%o, 10%g, 10%m, 75%w	0.842
30.00	GOWCM 5%o, 5%w, 30%g, 60%m	0.421
0.00	GTS	0.000

Total Length: 90.00 ft Total Volume: 1.263 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none
 Laboratory Name: Laboratory Location:
 Recovery Comments:



**TRILOBITE
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DRILL STEM TEST REPORT

GAS RATES

Pickrell Drig. Co. Inc.

12-30s-8w Kingman,KS

100 S. Main Ste. 505
Wichita, KS 67202-3738

Young 'A' #3

Job Ticket: 59962

DST#: 1

ATTN: Aaron Young

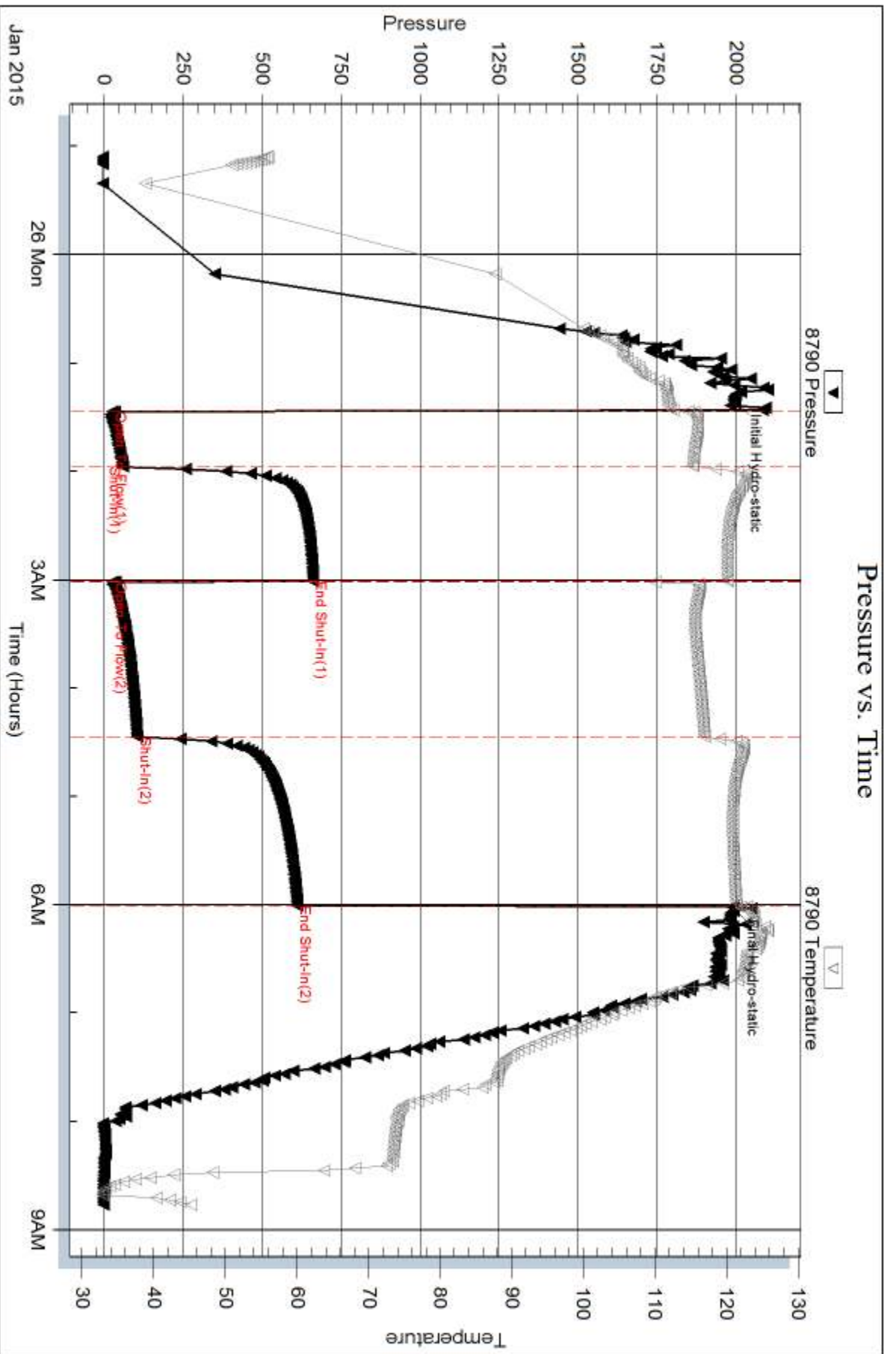
Test Start: 2015.01.25 @ 23:05:26

Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	0.13	17.00	11.75
2	20	0.13	28.00	15.87
2	30	0.13	37.00	19.24
2	40	0.13	43.00	21.48
2	50	0.13	48.00	23.35
2	60	0.13	53.00	25.23
2	70	0.13	56.00	26.35
2	80	0.13	59.00	27.47
2	90	0.13	62.00	28.60

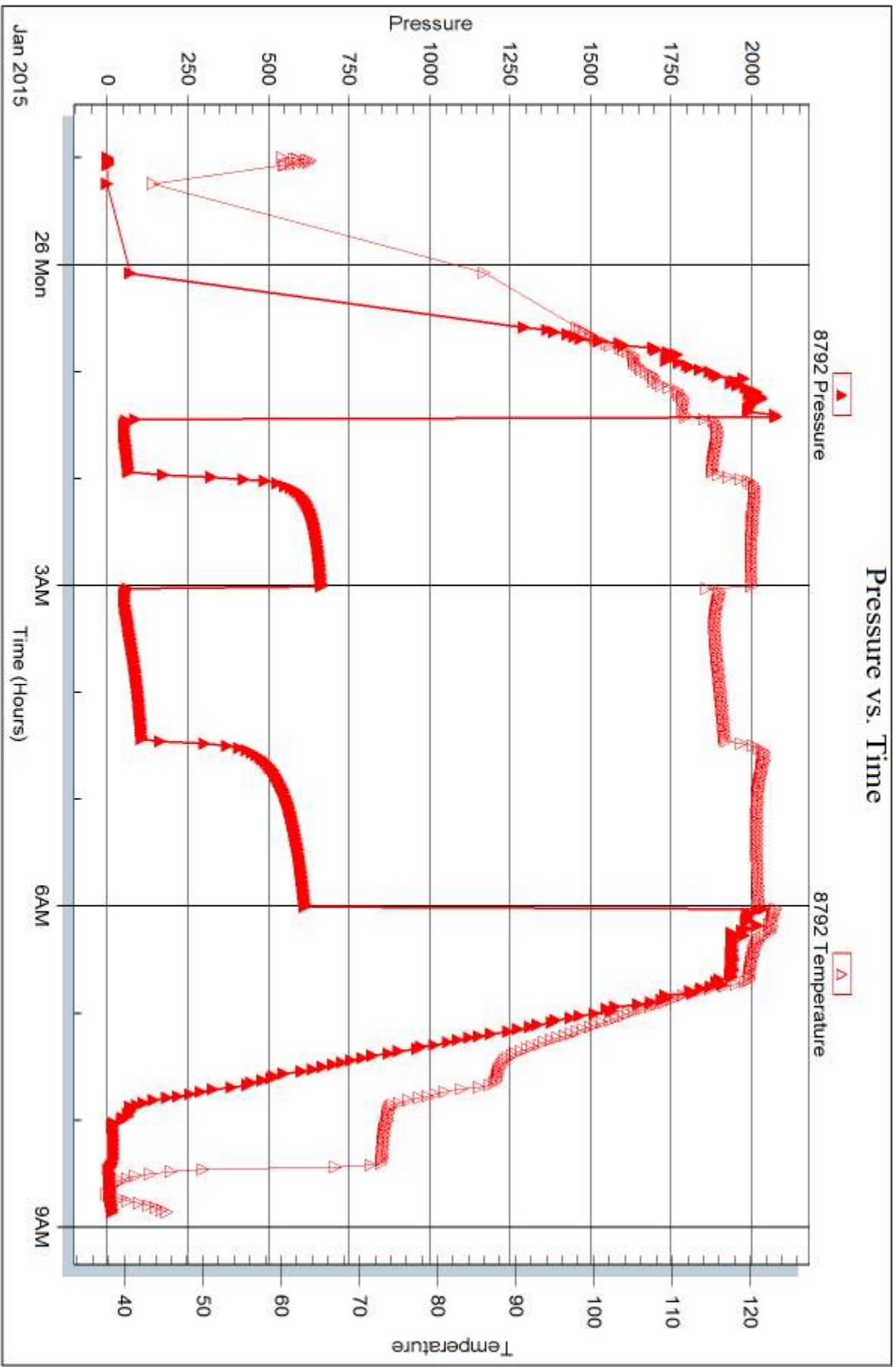


Serial #: 8792

Outside Pckell Drg. Co. Inc.

Young A.#3

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 59962

Printed: 2015.01.28 @ 08:54:18



DRILL STEM TEST REPORT

Prepared For: **Pickrell Drlg. Co. Inc.**

100 S. Main Ste. 505
Wichita, KS 67202-3738

ATTN: Aaron Young

Young 'A' #3

12-30s-8w Kingman,KS

Start Date: 2015.01.26 @ 15:27:59

End Date: 2015.01.27 @ 01:17:29

Job Ticket #: 59963 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.01.28 @ 08:56:25



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Pickrell Drig. Co. Inc.
100 S. Main Ste. 505
Wichita, KS 67202-3738
ATTN: Aaron Young

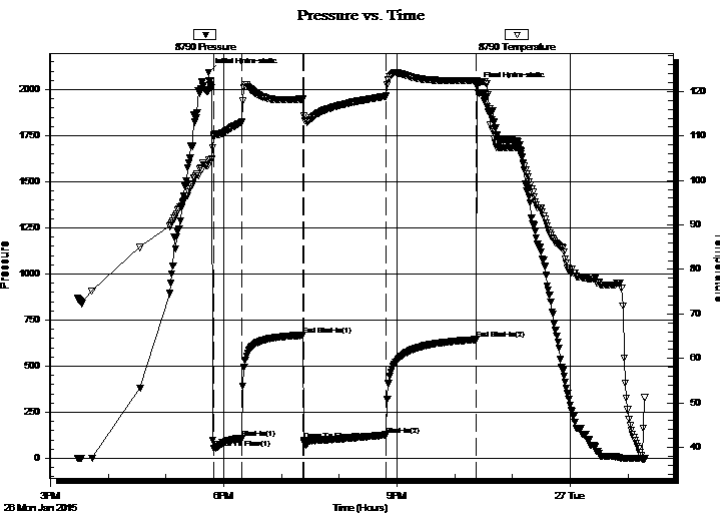
12-30s-8w Kingman,KS
Young 'A' #3
Job Ticket: 59963 **DST#: 2**
Test Start: 2015.01.26 @ 15:27:59

GENERAL INFORMATION:

Formation: **Mississippian**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:49:14
Time Test Ended: 01:17:29
Interval: **4125.00 ft (KB) To 4145.00 ft (KB) (TVD)**
Total Depth: 4145.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Ryan Reynolds
Unit No: 68
Reference Elevations: 1481.00 ft (KB)
1471.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8790 **Inside**
Press@RunDepth: 127.24 psig @ 4130.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2015.01.26 End Date: 2015.01.27 Last Calib.: 2015.01.27
Start Time: 15:28:04 End Time: 01:17:29 Time On Btm: 2015.01.26 @ 17:44:14
Time Off Btm: 2015.01.26 @ 22:23:14

TEST COMMENT: IF: Strong blow . BOB @ 30sec. GTS @ 19 min.
IS: No blow
FF: Strong blow . BOB immed. Gauged gas.
FS: No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2093.12	104.54	Initial Hydro-static
5	51.72	109.74	Open To Flow (1)
35	106.73	113.13	Shut-In(1)
98	667.96	118.34	End Shut-In(1)
99	96.77	114.49	Open To Flow (2)
185	127.24	118.94	Shut-In(2)
279	644.17	122.51	End Shut-In(2)
279	2016.65	122.50	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Water 100%w	0.49
120.00	Clean Gassy Oil 10%g, 90%o	1.68
60.00	GMWCO 5%m, 15%w, 30%g, 50%o	0.84
60.00	GMWCO 15%m, 26%w, 22%g, 37%o	0.84
0.00	GTS	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	48.00	98.99
Last Gas Rate	0.25	17.00	49.81
Max. Gas Rate	0.25	49.00	100.58



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pickrell Drig. Co. Inc.

12-30s-8w Kingman,KS

100 S. Main Ste. 505
Wichita, KS 67202-3738

Young 'A' #3

Job Ticket: 59963

DST#: 2

ATTN: Aaron Young

Test Start: 2015.01.26 @ 15:27:59

Tool Information

Drill Pipe:	Length: 4103.00 ft	Diameter: 3.80 inches	Volume: 57.55 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 23000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 57.55 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	0.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4125.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4108.00	
Hydraulic tool	5.00			4113.00	
Jars	5.00			4118.00	
Safety Joint	2.00		Inside	4120.00	
Packer	5.00			4125.00	22.00 Bottom Of Top Packer
Packer - Shale	4.00			4129.00	
Stubb	1.00			4130.00	
Recorder	0.00	8790	Inside	4130.00	
Recorder	0.00	8792	Outside	4130.00	
Perforations	16.00			4146.00	
Bullnose	3.00			4149.00	24.00 Anchor Tool

Total Tool Length: 46.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Pickrell Drig. Co. Inc.
100 S. Main Ste. 505
Wichita, KS 67202-3738
ATTN: Aaron Young

12-30s-8w Kingman,KS
Young 'A' #3
Job Ticket: 59963 **DST#: 2**
Test Start: 2015.01.26 @ 15:27:59

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 38 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 120000 ppm
Viscosity: 45.00 sec/qt	Cushion Volume: bbl	
Water Loss: 9.58 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 8500.00 ppm		
Filter Cake: 0.08 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
35.00	Water 100%w	0.491
120.00	Clean Gassy Oil 10%g, 90%o	1.683
60.00	GMWCO 5%m, 15%w, 30%g, 50%o	0.842
60.00	GMWCO 15%m, 26%w, 22%g, 37%o	0.842
0.00	GTS	0.000

Total Length: 275.00 ft Total Volume: 3.858 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none
 Laboratory Name: Laboratory Location:
 Recovery Comments:



**TRILOBITE
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DRILL STEM TEST REPORT

GAS RATES

Pickrell Drig. Co. Inc.

12-30s-8w Kingman,KS

100 S. Main Ste. 505
Wichita, KS 67202-3738

Young 'A' #3

Job Ticket: 59963

DST#: 2

ATTN: Aaron Young

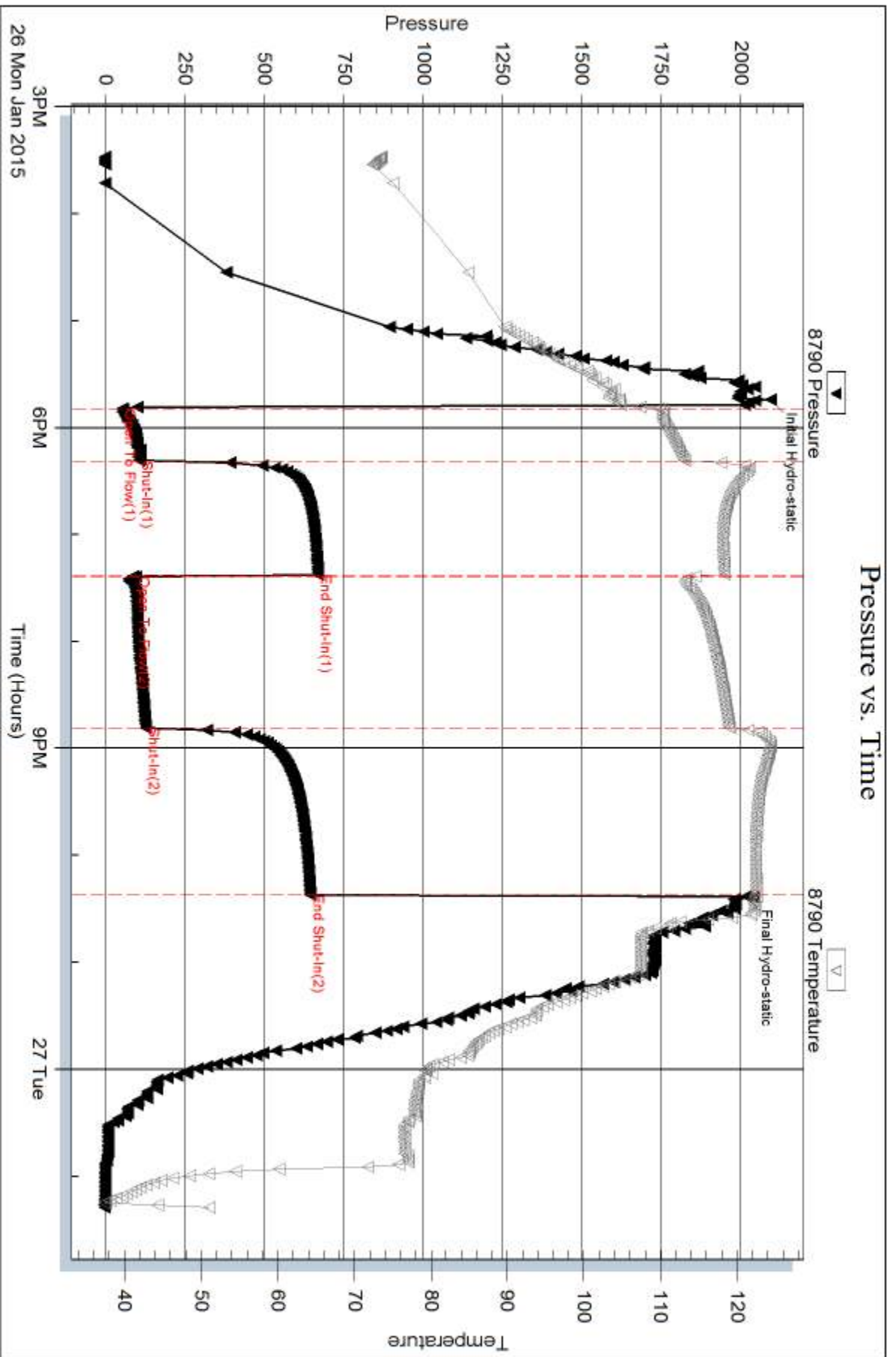
Test Start: 2015.01.26 @ 15:27:59

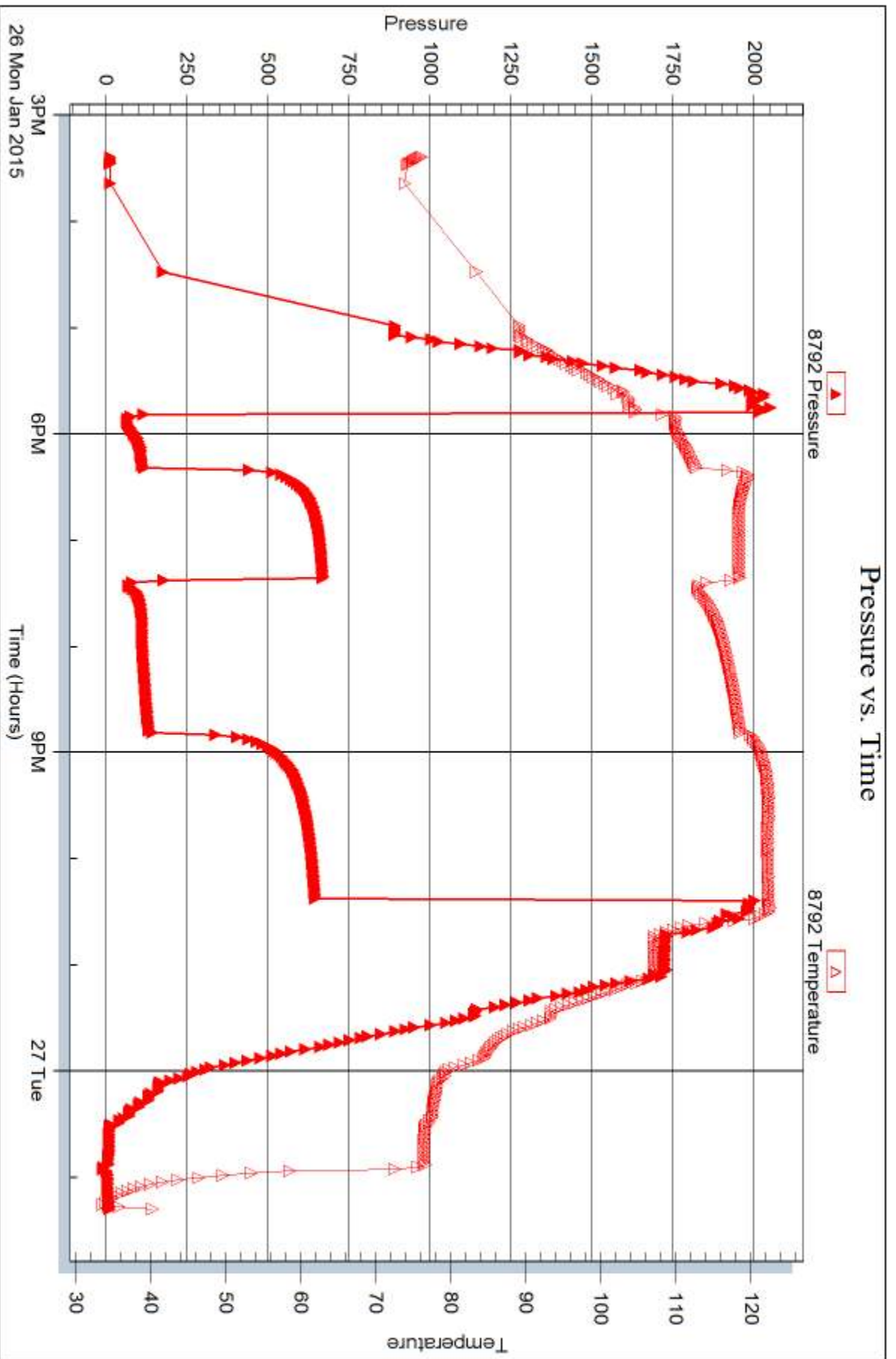
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1	20	0.25	48.00	98.99
1	30	0.25	49.00	100.58
2	10	0.25	32.00	73.61
2	20	0.25	34.00	76.78
2	30	0.25	39.00	84.71
2	40	0.25	32.00	73.61
2	50	0.25	23.00	59.33
2	60	0.25	21.00	56.16
2	70	0.25	19.00	52.99
2	80	0.25	18.00	51.40
2	90	0.25	17.00	49.81







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59962

Well Name & No. Young 'A' #3 Test No. 1 Date 1-25-15
 Company Pickrell Drilling Co., Inc. Elevation 1481 KB 1471 GL
 Address 100 S. Main Ste. 505 Wichita, KS 67202-3738
 Co. Rep / Geo. Aaron Young Rig Pickrell #1
 Location: Sec. 12 Twp. 30s Rge. 8w Co. Kingman State KS

Interval Tested 4110 - 4125 Zone Tested Miss.
 Anchor Length 15 Drill Pipe Run 4102 Mud Wt. 9.3
 Top Packer Depth 4105 Drill Collars Run Ø Vis 55
 Bottom Packer Depth 4110 Wt. Pipe Run Ø WL 8.8
 Total Depth 4125 Chlorides 4000 ppm System LCM 2#

Blow Description IF: Strong blow. BOB ~~immed.~~ @ 1 min.
ISF: GTS on blow down. No blow back
FF: Strong blow. BOB immed. Gauged gas.
FST: No blow.

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>GOWCML</u>	<u>30</u>	<u>5</u>	<u>5</u>	<u>60</u>
<u>60</u>	<u>GOMCW</u>	<u>10</u>	<u>5</u>	<u>75</u>	<u>10</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 90 BHT 121 Gravity N/C API RW 512 @ 42 °F Chlorides 115000 ppm

(A) Initial Hydrostatic 1997 Test 1150 T-On Location 2245
 (B) First Initial Flow 28 Jars 250 T-Started 2305
 (C) First Final Flow 61 Safety Joint 75 T-Open 0127
 (D) Initial Shut-In 662 Circ Sub _____ T-Pulled 0549
 (E) Second Initial Flow 28 Hourly Standby _____ T-Out 0846
 (F) Second Final Flow 106 Mileage 100 100 Comments Rig to be on bank
 (G) Final Shut-In 612 Sampler _____ @ 11:30pm, on bank @ 9pm
 (H) Final Hydrostatic 1987 Straddle _____ No call, on Loc. 10:45pm

Shale Packer 250 Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1825
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1825

Approved By [Signature] 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. 59963

Well Name & No. Young 'A' #3 Test No. 2 Date 1-26-15
 Company Pickrell Drilling Co., Inc. Elevation 1481 KB 1471 GL
 Address 100 S. Main Ste. 505 Wichita, KS 67202-3738
 Co. Rep / Geo. Aaron Young Rig Pickrell 1
 Location: Sec. 12 Twp. 30s Rge. 8w Co. Kingman State KS

Interval Tested 4125-4145 Zone Tested Mississippi
 Anchor Length 20 Drill Pipe Run 4103 Mud Wt. 9.4
 Top Packer Depth 4120 Drill Collars Run Ø Vis 45
 Bottom Packer Depth 4125 Wt. Pipe Run Ø WL 9.6
 Total Depth 4145 Chlorides 8500 ppm System LCM 1#

Blow Description IF: Strong blow. BOB @ 30 sec. GTS @ 19 min
IST: No blow.
FF: Strong blow. BOB immed. Graged gas
FSI:

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>GMWCO</u>	<u>22</u>	<u>37</u>	<u>26</u>	<u>15</u>
<u>60</u>	<u>GMWCO</u>	<u>30</u>	<u>50</u>	<u>15</u>	<u>5</u>
<u>120</u>	<u>Clean Gassy Oil</u>	<u>10</u>	<u>90</u>		
<u>35</u>	<u>Water</u>			<u>100</u>	

Rec Total 275 BHT 122 Gravity 38 API RW .09 @ 53 °F Chlorides 12000 ppm
 (A) Initial Hydrostatic 2093 Test 1150 T-On Location 1530
 (B) First Initial Flow 52 Jars 250 T-Started 1528
 (C) First Final Flow 107 Safety Joint 75 T-Open 1749
 (D) Initial Shut-In 668 Circ Sub _____ T-Pulled 2210
 (E) Second Initial Flow 97 Hourly Standby _____ T-Out 0117
 (F) Second Final Flow 127 Mileage 100 100 Comments _____
 (G) Final Shut-In 644 Sampler _____
 (H) Final Hydrostatic 2017 Straddle _____ Ruined Shale Packer _____
 Shale Packer 250 Ruined Packer _____
 Extra Packer _____ Extra Copies _____

Initial Open 30
 Initial Shut-In 60
 Final Flow 90
 Final Shut-In 90
 Sub Total 1825
 Total 1825
 MP/DST Disc't _____

Approved By [Signature] Our Representative Ryan Reynolds
 Trilobite Testing Inc. shall not be liable for damaged or 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.

