



DRILL STEM TEST REPORT

Prepared For: **Jaspar Co**
PO Box 1120
Hays KS 67601

ATTN: Jeff Lawler

Davis-Wiens Unit #1

4 7s 20w Rooks,KS

Start Date: 2015.11.25 @ 20:22:00

End Date: 2015.11.26 @ 02:52:00

Job Ticket #: 61675 DST #: 1

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

Printed: 2015.11.27 @ 09:45:05



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Jaspar Co
 PO Box 1120
 Hays KS 67601
 ATTN: Jeff Lawler

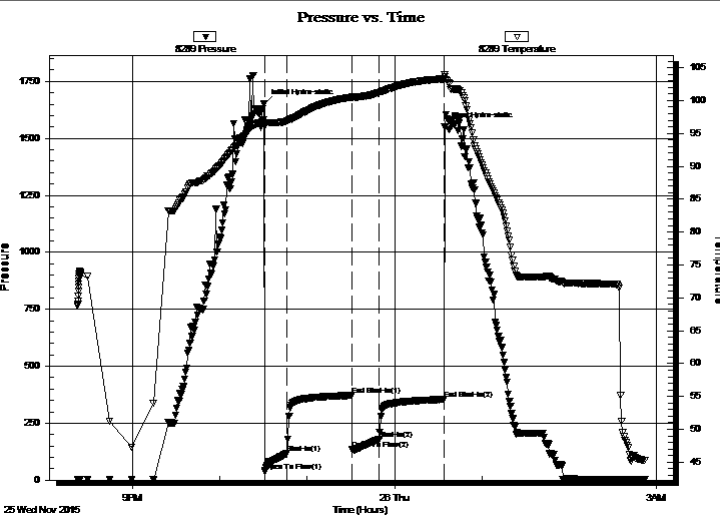
4 7s 20w Rooks,KS
Davis-Wiens Unit #1
 Job Ticket: 61675 **DST#: 1**
 Test Start: 2015.11.25 @ 20:22:00

GENERAL INFORMATION:

Formation: **Toronto & LKC " A "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:30:45
 Time Test Ended: 02:52:00
 Interval: **3318.00 ft (KB) To 3366.00 ft (KB) (TVD)**
 Total Depth: 3366.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jim Svaty
 Unit No: 76
 Reference Elevations: 2144.00 ft (KB)
 2139.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8289 Outside
 Press@RunDepth: 178.53 psig @ 3331.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.11.25 End Date: 2015.11.26 Last Calib.: 2015.11.26
 Start Time: 20:22:02 End Time: 02:52:00 Time On Btm: 2015.11.25 @ 22:30:30
 Time Off Btm: 2015.11.26 @ 00:34:30

TEST COMMENT: 15-IF- BOB in 3 min.
 45-ISI- Surface Blow Building to 1 1/4". Died Back in 22 min.
 15-FF- BOB in 8 1/2 min.
 45-FSI Surface Blow Building to 1" Died Back in 14 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1651.11	97.03	Initial Hydro-static
1	37.15	96.07	Open To Flow (1)
16	119.61	96.90	Shut-In(1)
61	371.64	100.50	End Shut-In(1)
61	135.64	100.39	Open To Flow (2)
79	178.53	101.20	Shut-In(2)
124	354.93	103.28	End Shut-In(2)
124	1552.76	103.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
150.00	OCM 45% o 55% m	1.02
280.00	CO 100%	3.93
0.00	125 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Jeff Lawler

4 7s 20w Rooks,KS
Davis-Wiens Unit #1
Job Ticket: 61675 **DST#: 1**
Test Start: 2015.11.25 @ 20:22:00

Tool Information

Drill Pipe:	Length: 3188.00 ft	Diameter: 3.80 inches	Volume: 44.72 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	58000.00 lb
			<u>Total Volume: 45.31 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	53000.00 lb
Depth to Top Packer:	3318.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	48.00 ft				
Tool Length:	69.00 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			3298.00	
Shut In Tool	5.00			3303.00	
Hydraulic tool	5.00			3308.00	
Packer	5.00			3313.00	21.00 Bottom Of Top Packer
Packer	5.00			3318.00	
Stubb	1.00			3319.00	
Perforations	11.00			3330.00	
Change Over Sub	1.00			3331.00	
Recorder	0.00	8789	Inside	3331.00	
Recorder	0.00	8289	Outside	3331.00	
Blank Spacing	31.00			3362.00	
Change Over Sub	1.00			3363.00	
Bullnose	3.00			3366.00	48.00 Bottom Packers & Anchor

Total Tool Length: 69.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Jeff Lawler

4 7s 20w Rooks,KS
Davis-Wiens Unit #1
Job Ticket: 61675 **DST#: 1**
Test Start: 2015.11.25 @ 20:22:00

Mud and Cushion Information

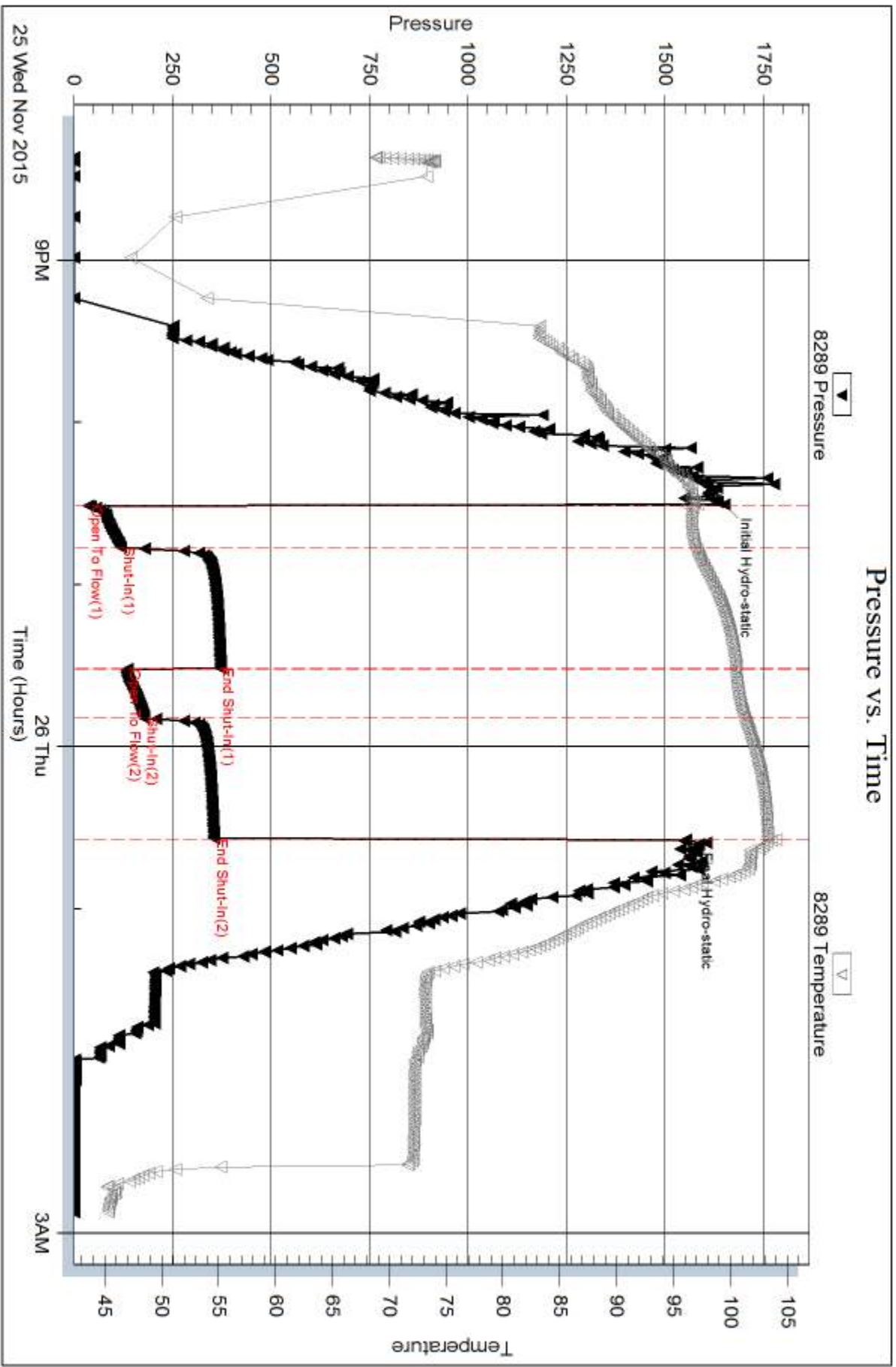
Mud Type: Gel Chem	Cushion Type:	Oil API: 33 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.18 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 1650.00 ppm		
Filter Cake: inches		

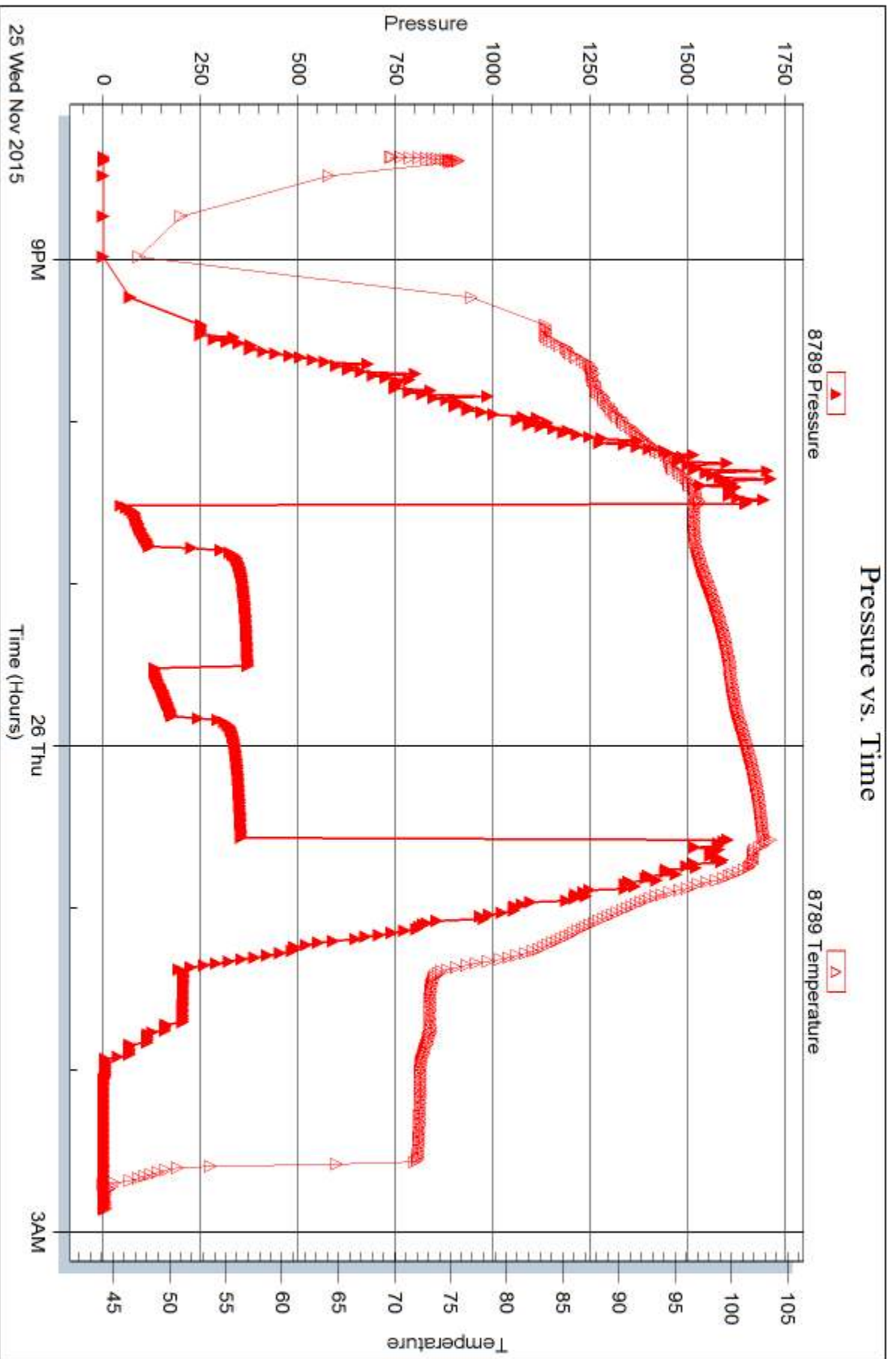
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
150.00	OCM 45%o 55%m	1.020
280.00	CO 100%	3.928
0.00	125 GIP	0.000

Total Length: 430.00 ft Total Volume: 4.948 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Jaspar Co**
PO Box 1120
Hays KS 67601

ATTN: Jeff Lawler

Davis-Wiens Unit #1

4 7s 20w Rooks,KS

Start Date: 2015.11.26 @ 11:24:00

End Date: 2015.11.26 @ 18:18:00

Job Ticket #: 64751 DST #: 2

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

Printed: 2015.11.27 @ 09:44:42

Jaspar Co
4 7s 20w Rooks,KS
Davis-Wiens Unit #1
DST # 2
LKC " E - G "
2015.11.26



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Jeff Lawler

4 7s 20w Rooks,KS
Davis-Wiens Unit #1
Job Ticket: 64751 **DST#: 2**
Test Start: 2015.11.26 @ 11:24:00

GENERAL INFORMATION:

Formation: **LKC " E - G "**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:33:45
Time Test Ended: 18:18:00
Interval: **3420.00 ft (KB) To 3454.00 ft (KB) (TVD)**
Total Depth: 3454.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Jim Svaty
Unit No: 76
Reference Elevations: 2144.00 ft (KB)
2139.00 ft (CF)
KB to GR/CF: 5.00 ft

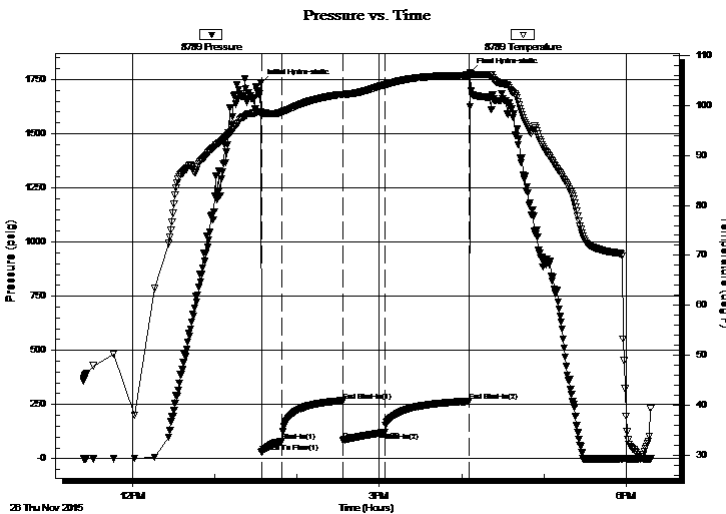
Serial #: 8789

Inside

Press@RunDepth: 120.93 psig @ 3432.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2015.11.26 End Date: 2015.11.26 Last Calib.: 2015.11.26
Start Time: 11:24:02 End Time: 18:18:00 Time On Btm: 2015.11.26 @ 13:33:30
Time Off Btm: 2015.11.26 @ 16:06:15

TEST COMMENT: 15-IF- BOB in 15 min.
45-ISI- No Blow
30-FF- Surface Blow Building to 2" In 10 min. Died Back in 18 min.
60-FSI- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1733.29	98.78	Initial Hydro-static
1	28.28	97.87	Open To Flow (1)
16	80.08	98.61	Shut-In(1)
60	267.75	102.17	End Shut-In(1)
60	85.40	102.08	Open To Flow (2)
91	120.93	104.04	Shut-In(2)
152	265.00	106.00	End Shut-In(2)
153	1782.84	106.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
212.00	Oil Speck MCW 15% m 85% w	1.89
15.00	CO	0.21

* Recovery from multiple tests

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Jaspar Co
PO Box 1120
Hays KS 67601
ATTN: Jeff Lawler

4 7s 20w Rooks,KS
Davis-Wiens Unit #1
Job Ticket: 64751 **DST#: 2**
Test Start: 2015.11.26 @ 11:24:00

Tool Information

Drill Pipe:	Length: 3312.00 ft	Diameter: 3.80 inches	Volume: 46.46 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	58000.00 lb
			<u>Total Volume: 47.05 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	53000.00 lb
Depth to Top Packer:	3420.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	34.00 ft				
Tool Length:	55.00 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			3400.00	
Shut In Tool	5.00			3405.00	
Hydraulic tool	5.00			3410.00	
Packer	5.00			3415.00	21.00 Bottom Of Top Packer
Packer	5.00			3420.00	
Stubb	1.00			3421.00	
Perforations	11.00			3432.00	
Recorder	0.00	8789	Inside	3432.00	
Recorder	0.00	8289	Outside	3432.00	
Perforations	19.00			3451.00	
Bullnose	3.00			3454.00	34.00 Bottom Packers & Anchor

Total Tool Length: 55.00



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Davis-Wiens Unit #1
Job Ticket: 64751 **DST#: 2**
Test Start: 2015.11.26 @ 11:24:00

Mud and Cushion Information

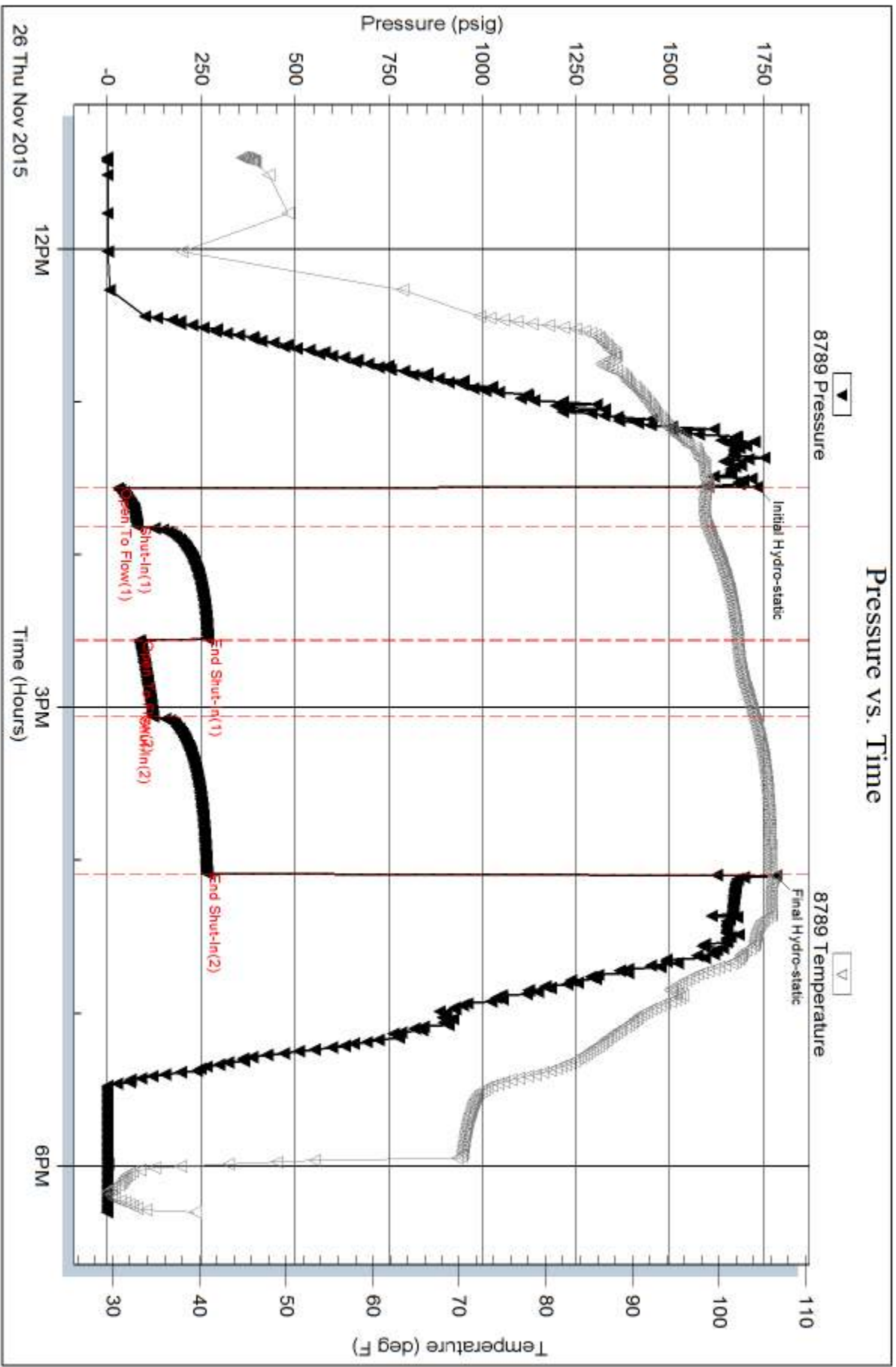
Mud Type: Gel Chem	Cushion Type:	Oil API: 36 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 90000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.19 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 2000.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
212.00	Oil Speck MCW 15%m 85%w	1.890
15.00	CO	0.210

Total Length: 227.00 ft Total Volume: 2.100 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: .180 @ 35





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61675

Well Name & No. DAVIS-WIENS UNIT #1 Test No. 1 Date 11-25-15
 Company JASPAR Co Elevation 2144 KB 2139 GL
 Address 1681 Limestone Rd South Box 1120 HAYS KS 67601
 Co. Rep / Geo. JEFF LAWLER Rig WTW 8
 Location: Sec. 4 Twp. 7^s Rge. 20^w Co. ROOKS State KS

Interval Tested 3318-3366 Zone Tested Toronto & LRC "A"
 Anchor Length 48 Drill Pipe Run 3188 Mud Wt. 9.1
 Top Packer Depth 3313 Drill Collars Run 119 Vis 56
 Bottom Packer Depth 3318 Wt. Pipe Run 0 WL 7.2
 Total Depth 3366 Chlorides 1650 ppm System LCM TR

Blow Description IF - BOB in 3min.
FSI - Surface Blow Building to 1 1/4 in. Died Back in 22min.
FF - BOB in 8 1/2 min.
FSI - Surface Blow Building to 1 in. Died Back in 14min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>150</u>	<u>OCM</u>	<u>45</u>		<u>55</u>	
<u>280</u>	<u>CO</u>	<u>100</u>			
	<u>125 DIP</u>				

Rec Total 430 BHT 104 Gravity 33 API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1651 Test 1050 T-On Location 15:40
 (B) First Initial Flow 37 Jars _____ T-Started 20:22
 (C) First Final Flow 119 Safety Joint _____ T-Open 22:31
 (D) Initial Shut-In 371 Circ Sub _____ T-Pulled 00:31
 (E) Second Initial Flow 135 Hourly Standby _____ T-Out 02:52
 (F) Second Final Flow 178 Mileage 117 RT Comments _____
 (G) Final Shut-In 354 Sampler _____
 (H) Final Hydrostatic 1552 Straddle _____

Initial Open 15 Ruined Shale Packer _____
 Initial Shut-In 45 Ruined Packer _____
 Final Flow 15 Extra Packer _____
 Final Shut-In 45 Extra Copies _____
 Sub Total 0
 Total 1167
 MP/DST Disc't Brannon
 Sub Total 1167

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. **64751**

Well Name & No. Davis-Wiens Unit #1 Test No. 2 Date 11-26-15
 Company JASPAR Co. Elevation 2144 KB 2139 GL
 Address 1681 Limestone Rd South Box 1120 Hays KS 67601
 Co. Rep / Geo. JEFF LAWLER Rig WW 8
 Location: Sec. 4 Twp. 75 Rge. 20^w Co. ROOKS State KS

Interval Tested 3420-3454 Zone Tested LKC "EF42"
 Anchor Length 34 Drill Pipe Run 3312 Mud Wt. 9.2
 Top Packer Depth 3415 Drill Collars Run 119 Vis 55
 Bottom Packer Depth 3420 Wt. Pipe Run 0 WL 7.2
 Total Depth 3454 Chlorides 2000 ppm System LCM TR

Blow Description IF - BOB in 15 min.
IST - No Blow
FF - Surface Blow Building to 2 in. In 10 min. Died Back in 18 min.
FSTI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>212</u>	<u>Oil speck m CW</u>		<u>85</u>	<u>15</u>	
<u>15</u>	<u>CO</u>	<u>100</u>			

Rec Total 227 BHT 106 Gravity 36 API RW 180 @ 35 °F Chlorides 90,000 ppm

(A) Initial Hydrostatic	<u>1733</u>	<input checked="" type="checkbox"/> Test	<u>1050</u>	T-On Location	<u>11:20</u>
(B) First Initial Flow	<u>28</u>	<input type="checkbox"/> Jars		T-Started	<u>11:24</u>
(C) First Final Flow	<u>80</u>	<input type="checkbox"/> Safety Joint		T-Open	<u>13:34</u>
(D) Initial Shut-In	<u>267</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>16:04</u>
(E) Second Initial Flow	<u>85</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>18:18</u>
(F) Second Final Flow	<u>120</u>	<input checked="" type="checkbox"/> Mileage	<u>117</u>	Comments	
(G) Final Shut-In	<u>265</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>1782</u>	<input type="checkbox"/> Straddle			

Initial Open	<u>15</u>	<input type="checkbox"/> Ruined Shale Packer	
Initial Shut-In	<u>45</u>	<input type="checkbox"/> Ruined Packer	
Final Flow	<u>30</u>	<input type="checkbox"/> Extra Packer	
Final Shut-In	<u>60</u>	<input type="checkbox"/> Extra Recorder	
		<input type="checkbox"/> Day Standby	
		<input type="checkbox"/> Accessibility	
Sub Total	<u>1167</u>	Sub Total	<u>0</u>
		Total	<u>1167</u>
		MP/DST Disc't	

Approved By _____ Our Representative [Signature]
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