TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Paris-Hineman #1-7

7-19s-28w Lane,KS

Start Date: 2015.01.07 @ 08:00:00
End Date: 2015.01.07 @ 14:58:30
Job Ticket #: 58518 DST #: 1

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

Printed: 2015.01.13 @ 09:03:48

DRILL STEM TEST REPORT

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58518 **DST#: 1**

Test Start: 2015.01.07 @ 08:00:00

GENERAL INFORMATION:

Formation: **LKC 'E'**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:18:45
Time Test Ended: 14:58:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Jace McKinney
Unit No: 75

Interval: 4074.00 ft (KB) To 4100.00 ft (KB) (TVD)
Total Depth: 4100.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor

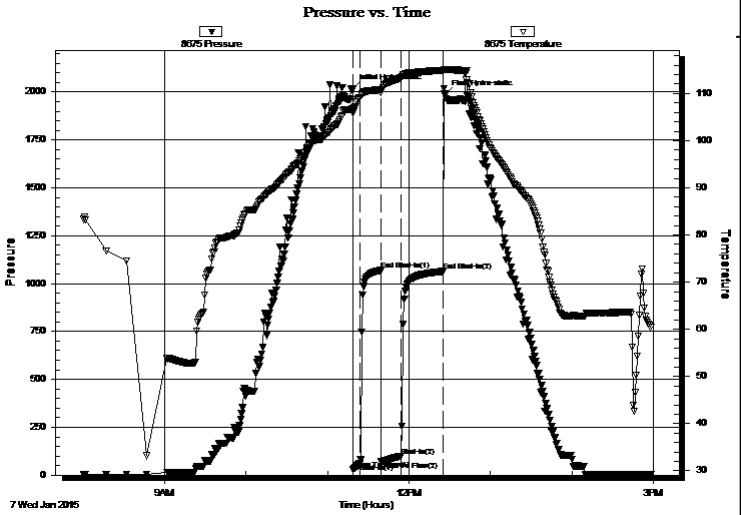
Reference Elevations: 2801.00 ft (KB)
2791.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 99.78 psig @ 4097.00 ft (KB)
Start Date: 2015.01.07 End Date: 2015.01.07
Start Time: 08:00:15 End Time: 14:58:30

Capacity: 8000.00 psig
Last Calib.: 2015.01.07
Time On Btm: 2015.01.07 @ 11:18:30
Time Off Btm: 2015.01.07 @ 12:26:15

TEST COMMENT: Built to 5"
Bled off for 2 min, No return blow
B.O.B. in 11 min
Bled off for 3, min, Built to 3/4" return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2015.89	106.67	Initial Hydro-static
1	28.09	105.84	Open To Flow (1)
6	61.31	109.16	Shut-In(1)
21	1068.85	110.79	End Shut-In(1)
21	69.56	110.20	Open To Flow (2)
36	99.78	113.41	Shut-In(2)
67	1063.46	114.94	End Shut-In(2)
68	1988.67	115.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	gcom 10%G 40%O 50%M	0.61
76.00	mco 50%M 50%O	1.07

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58518 **DST#: 1**

Test Start: 2015.01.07 @ 08:00:00

GENERAL INFORMATION:

Formation: **LKC 'E'**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:18:45
Time Test Ended: 14:58:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Jace McKinney
Unit No: 75

Interval: 4074.00 ft (KB) To 4100.00 ft (KB) (TVD)
Total Depth: 4100.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor

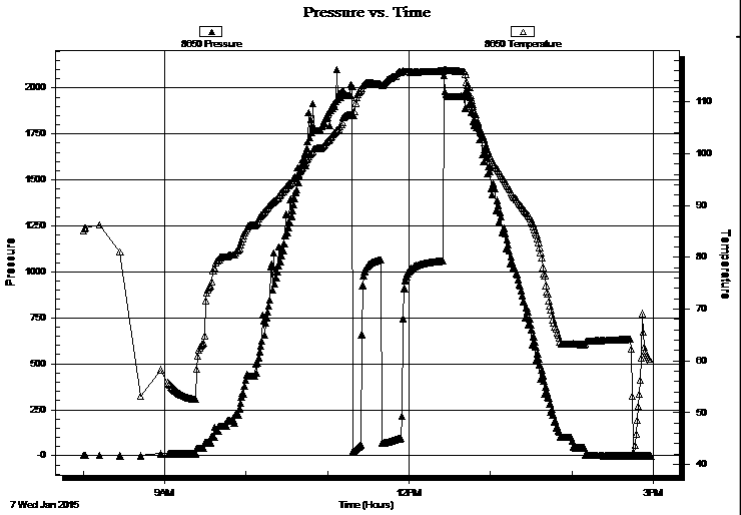
Reference Elevations: 2801.00 ft (KB)
2791.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8650 **Outside**

Press@RunDepth: psig @ 4097.00 ft (KB)
Start Date: 2015.01.07 End Date: 2015.01.07
Start Time: 08:00:15 End Time: 14:58:30

Capacity: 8000.00 psig
Last Calib.: 2015.01.07
Time On Btm:
Time Off Btm:

TEST COMMENT: Built to 5"
Bled off for 2 min, No return blow
B.O.B. in 11 min
Bled off for 3, min, Built to 3/4" return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
124.00	gcom 10%G 40%O 50%M	0.61
76.00	mco 50%M 50%O	1.07

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58518 **DST#: 1**

Test Start: 2015.01.07 @ 08:00:00

Tool Information

Drill Pipe:	Length:	3951.65 ft	Diameter:	3.80 inches	Volume:	55.43 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	124.09 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	
					Total Volume:	56.04 bbl	

Drill Pipe Above KB:	29.24 ft
Depth to Top Packer:	4074.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	26.00 ft
Tool Length:	53.50 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		30000.00 lb
Weight to Pull Loose:		71000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	60000.00 lb
	Final	61000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4047.50		
Shut In Tool	5.00			4052.50		
Hydraulic tool	5.00			4057.50		
Jars	5.00			4062.50		
Safety Joint	2.50			4065.00		
Packer	5.00			4070.00	27.50	Bottom Of Top Packer
Packer	4.00			4074.00		
Stubb	1.00			4075.00		
Perforations	22.00			4097.00		
Change Over Sub	0.00			4097.00		
Recorder	0.00	8675	Inside	4097.00		
Recorder	0.00	8650	Outside	4097.00		
Drill Pipe	0.00			4097.00		
Change Over Sub	0.00			4097.00		
Perforations	0.00			4097.00		
Bullnose	3.00			4100.00	26.00	Bottom Packers & Anchor
Total Tool Length:	**53.50**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58518 **DST#: 1**

Test Start: 2015.01.07 @ 08:00:00

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:	60.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	5.98 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2600.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

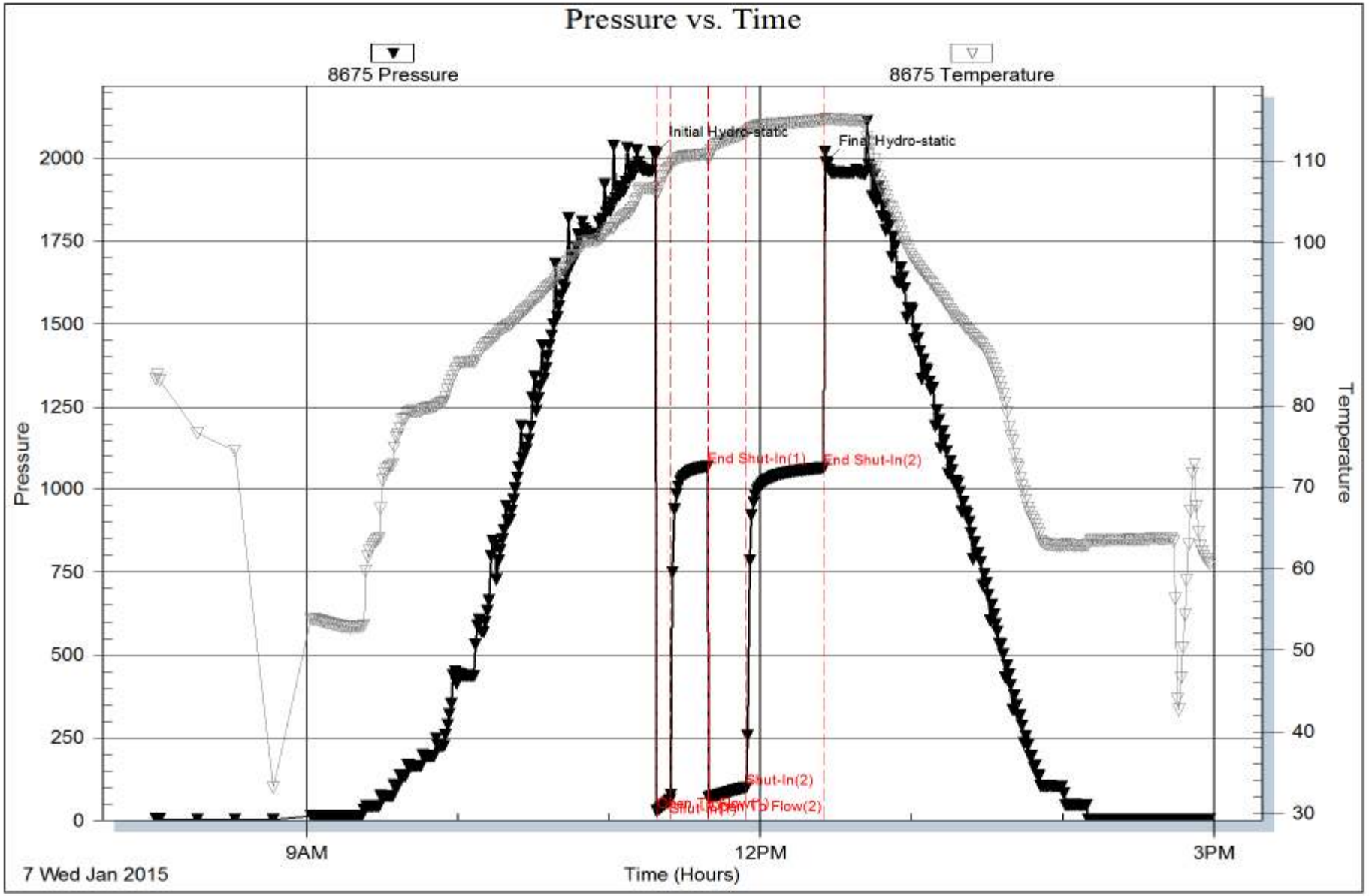
Recovery Table

Length ft	Description	Volume bbl
124.00	gcom 10%G 40%O 50%M	0.610
76.00	mco 50%M 50%O	1.065

Total Length: 200.00 ft Total Volume: 1.675 bbl

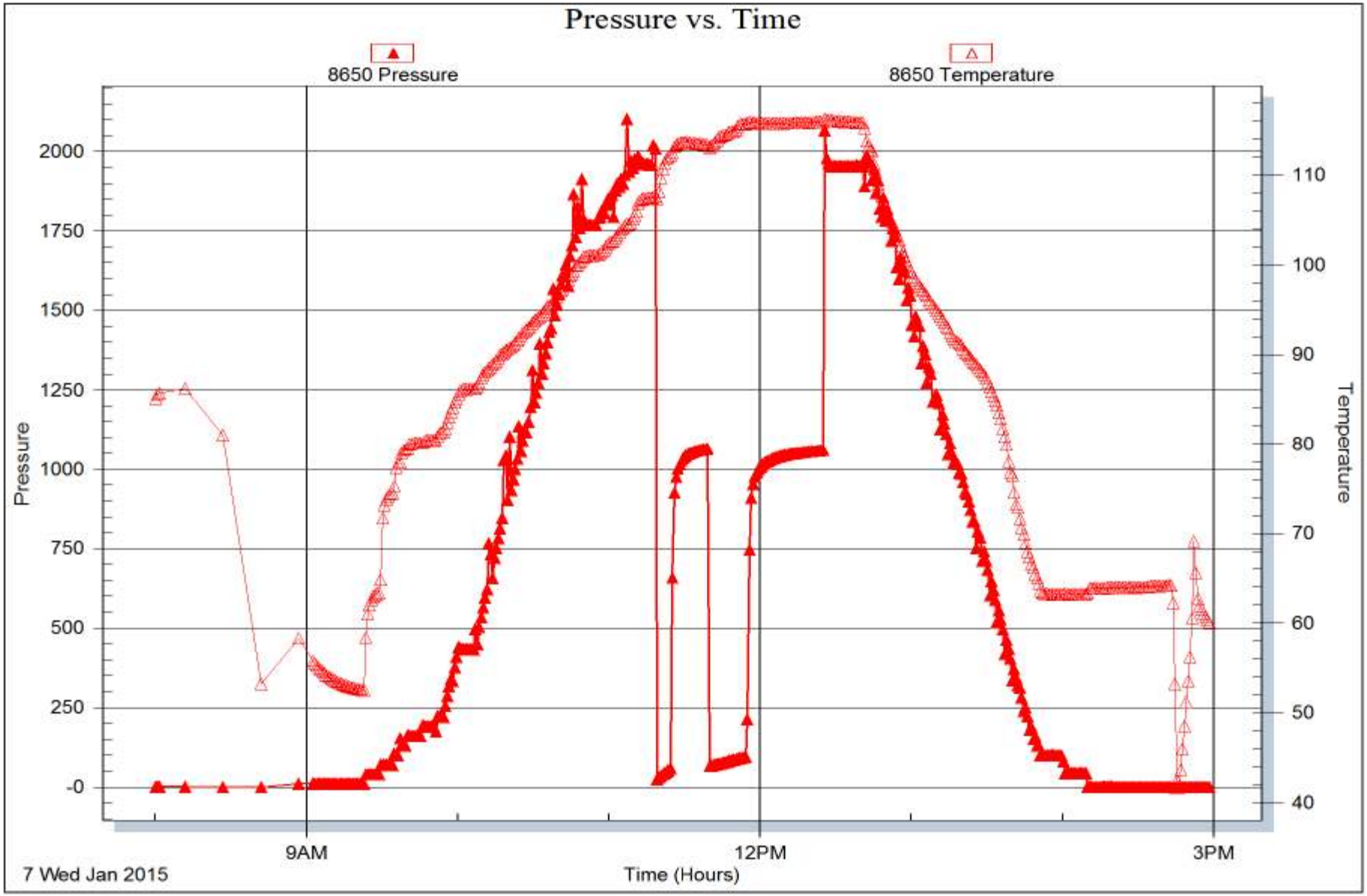
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8675 **Inside** Larson Engineering, Inc Paris-Hineman #1-7 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 58518 Printed: 2015.01.13 @ 09:03:49

Serial #: 8650 **Outside** Larson Engineering, Inc Paris-Hineman #1-7 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 58518 Printed: 2015.01.13 @ 09:03:50

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Paris-Hineman #1-7

7-19s-28w Lane,KS

Start Date: 2015.01.08 @ 03:15:00
End Date: 2015.01.08 @ 09:36:30
Job Ticket #: 58519 DST #: 2

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

Printed: 2015.01.13 @ 09:03:22

DRILL STEM TEST REPORT

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58519 **DST#: 2**

Test Start: 2015.01.08 @ 03:15:00

GENERAL INFORMATION:

Formation: **LKC 'H'**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:52:15
Time Test Ended: 09:36:30

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 75

Interval: 4166.00 ft (KB) To 4188.00 ft (KB) (TVD)
Total Depth: 4188.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor

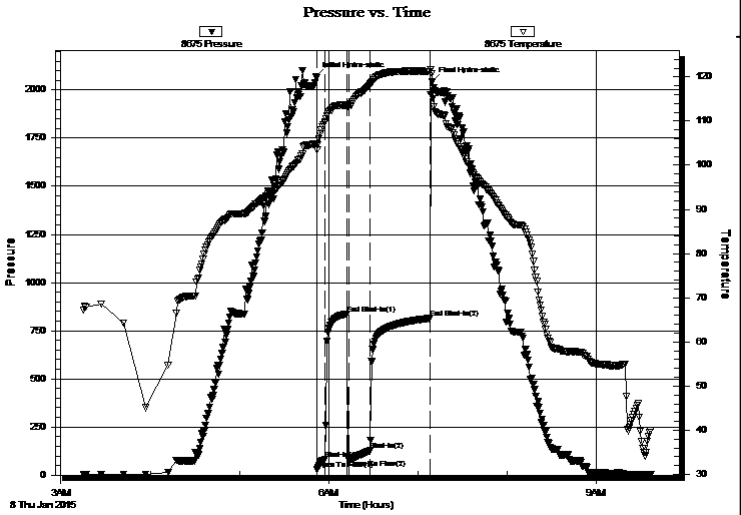
Reference Elevations: 2801.00 ft (KB)
2791.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 126.53 psig @ 4185.00 ft (KB)
Start Date: 2015.01.08 End Date: 2015.01.08
Start Time: 03:15:15 End Time: 09:36:30

Capacity: 8000.00 psig
Last Calib.: 2015.01.08
Time On Btm: 2015.01.08 @ 05:51:15
Time Off Btm: 2015.01.08 @ 07:09:15

TEST COMMENT: Built to 9 1/2"
Bled off for 3 min, Weak surface return blow
B.O.B. in 5 min
Bled off for 5 min, Built to 3" return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2071.24	104.83	Initial Hydro-static
1	30.95	103.55	Open To Flow (1)
7	81.53	109.86	Shut-In(1)
22	838.68	113.66	End Shut-In(1)
23	81.86	113.48	Open To Flow (2)
37	126.53	118.25	Shut-In(2)
77	814.80	121.23	End Shut-In(2)
78	2041.40	120.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	gcmo 10%G 40%M 50%O	0.61
171.00	gco 30%G 70%O	2.40
0.00	205 feet gas in pipe	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58519 **DST#: 2**

Test Start: 2015.01.08 @ 03:15:00

GENERAL INFORMATION:

Formation: **LKC 'H'**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:52:15
Time Test Ended: 09:36:30

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 75

Interval: 4166.00 ft (KB) To 4188.00 ft (KB) (TVD)
Total Depth: 4188.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor

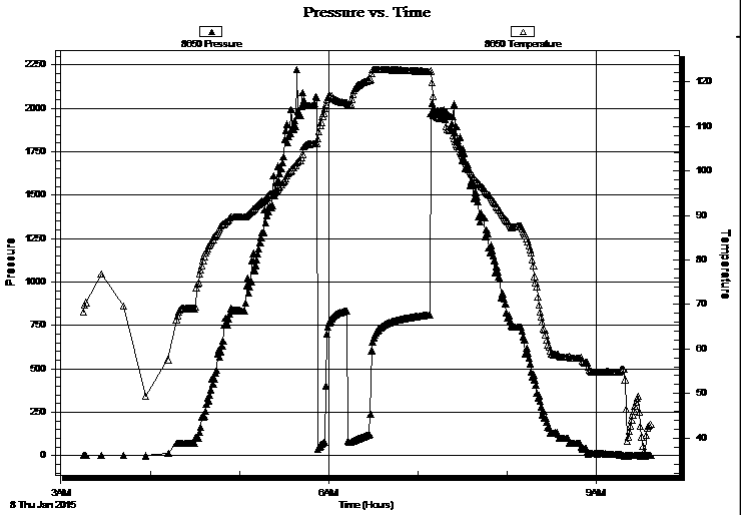
Reference Elevations: 2801.00 ft (KB)
2791.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8650 **Outside**

Press@RunDepth: psig @ 4185.00 ft (KB)
Start Date: 2015.01.08 End Date: 2015.01.08
Start Time: 03:15:15 End Time: 09:36:15

Capacity: 8000.00 psig
Last Calib.: 2015.01.08
Time On Btm:
Time Off Btm:

TEST COMMENT: Built to 9 1/2"
Bled off for 3 min, Weak surface return blow
B.O.B. in 5 min
Bled off for 5 min, Built to 3" return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
124.00	gcmo 10%G 40%M 50%O	0.61
171.00	gco 30%G 70%O	2.40
0.00	205 feet gas in pipe	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58519 **DST#: 2**

Test Start: 2015.01.08 @ 03:15:00

Tool Information

Drill Pipe:	Length:	4045.54 ft	Diameter:	3.80 inches	Volume:	56.75 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	124.09 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	
					Total Volume:	57.36 bbl	

Drill Pipe Above KB:	31.13 ft
Depth to Top Packer:	4166.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	22.00 ft
Tool Length:	49.50 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		30000.00 lb
Weight to Pull Loose:		72000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	60000.00 lb
	Final	62000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4139.50		
Shut In Tool	5.00			4144.50		
Hydraulic tool	5.00			4149.50		
Jars	5.00			4154.50		
Safety Joint	2.50			4157.00		
Packer	5.00			4162.00	27.50	Bottom Of Top Packer
Packer	4.00			4166.00		
Stubb	1.00			4167.00		
Perforations	18.00			4185.00		
Change Over Sub	0.00			4185.00		
Recorder	0.00	8675	Inside	4185.00		
Recorder	0.00	8650	Outside	4185.00		
Drill Pipe	0.00			4185.00		
Change Over Sub	0.00			4185.00		
Perforations	0.00			4185.00		
Bullnose	3.00			4188.00	22.00	Bottom Packers & Anchor
Total Tool Length:	**49.50**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58519 **DST#: 2**

Test Start: 2015.01.08 @ 03:15:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	34 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.39 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2500.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	gcmo 10%G 40%M 50%O	0.610
171.00	gco 30%G 70%O	2.398
0.00	205 feet gas in pipe	0.000

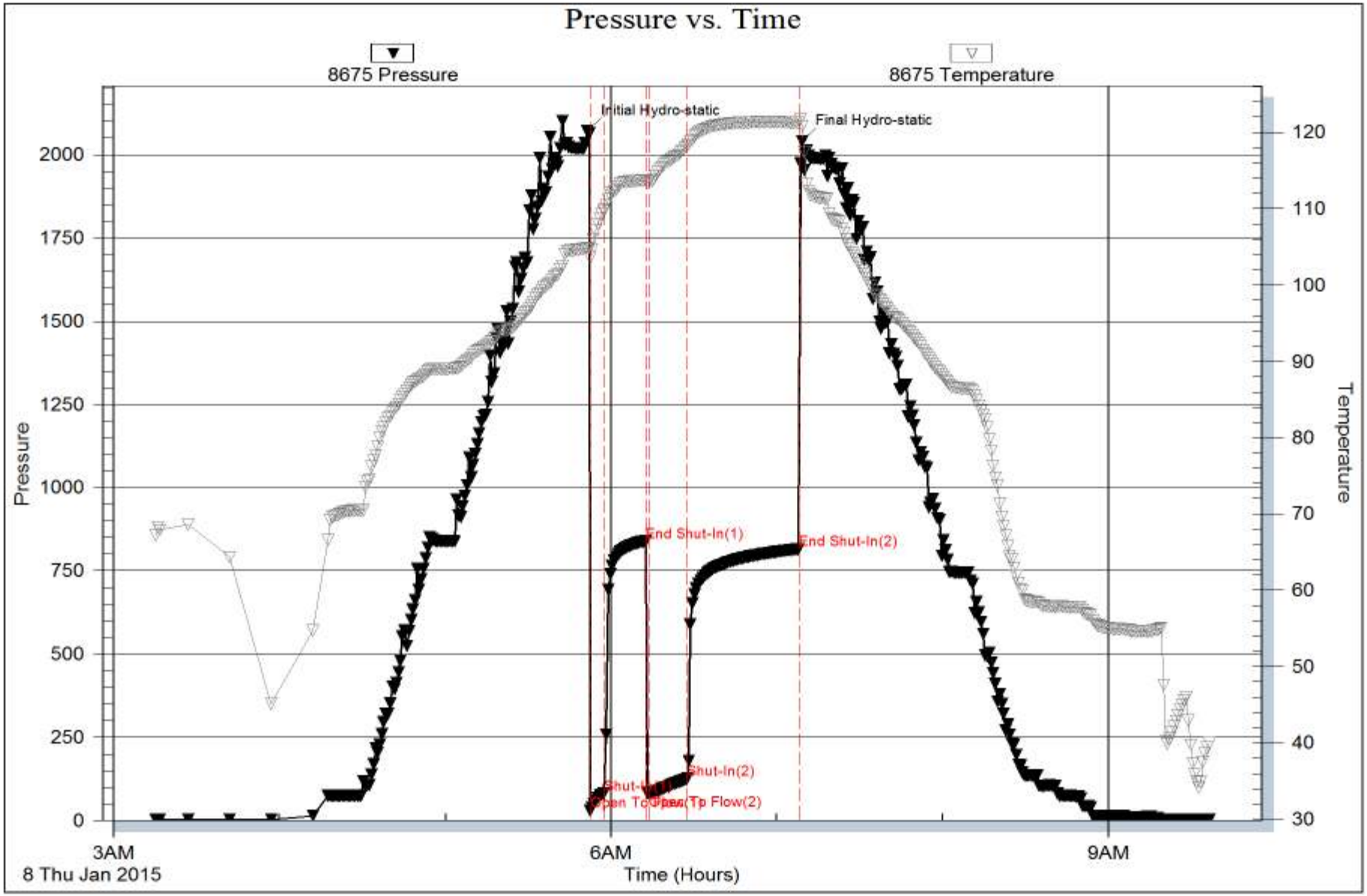
Total Length: 295.00 ft Total Volume: 3.008 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

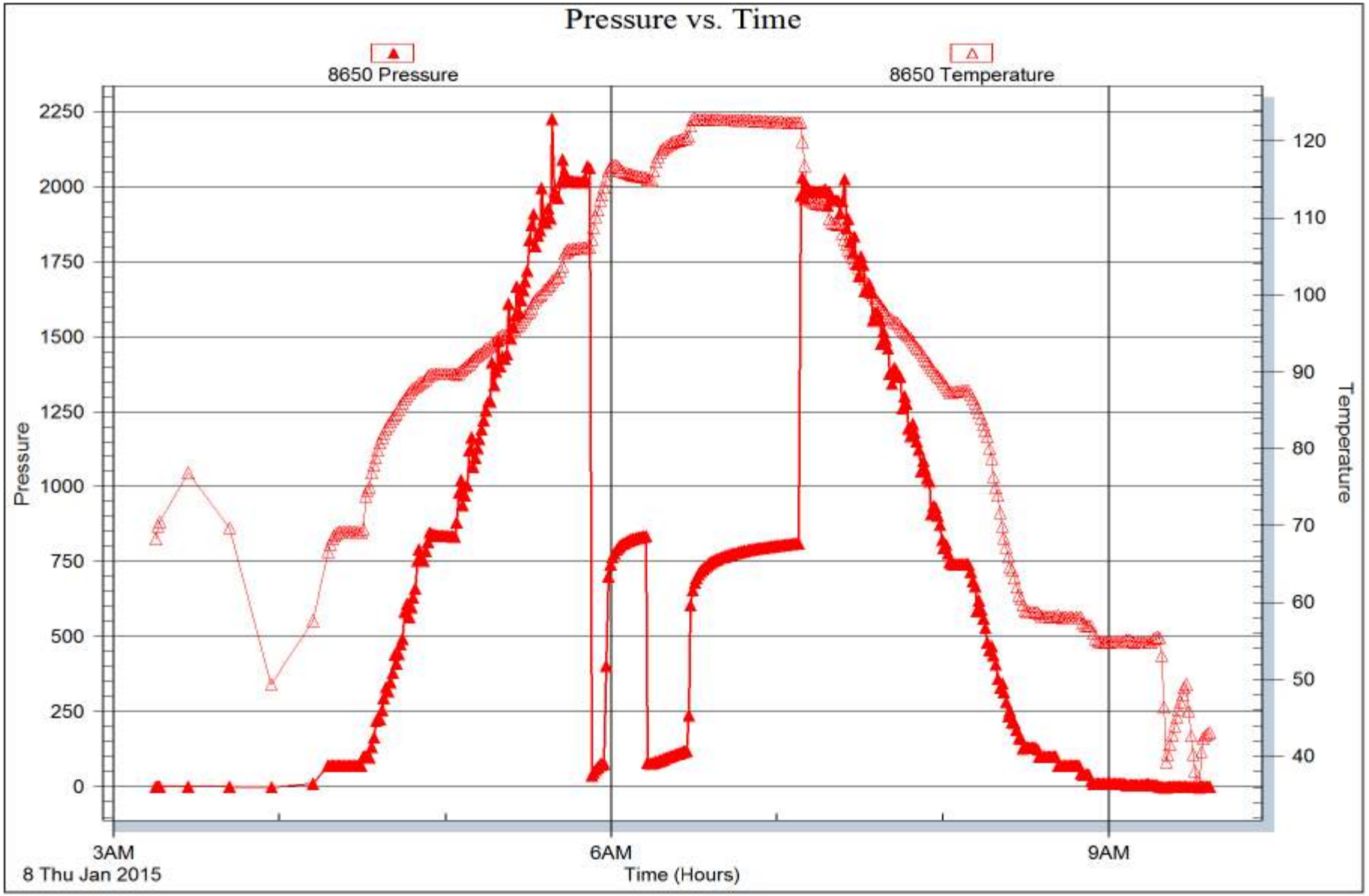
Recovery Comments: API: 31 @ 30 F = 34

Serial #: 8675 **Inside** Larson Engineering, Inc Paris-Hineman #1-7 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 58519 Printed: 2015.01.13 @ 09:03:23

Serial #: 8650 **Outside** Larson Engineering, Inc Paris-Hineman #1-7 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 58519 Printed: 2015.01.13 @ 09:03:23

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Paris-Hineman #1-7

7-19s-28w Lane,KS

Start Date: 2015.01.09 @ 08:35:40
End Date: 2015.01.09 @ 14:20:40
Job Ticket #: 58520 DST #: 3

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

Printed: 2015.01.13 @ 09:02:58

DRILL STEM TEST REPORT

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58520 **DST#: 3**

Test Start: 2015.01.09 @ 08:35:40

GENERAL INFORMATION:

Formation: **LKC 'L'**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:22:40
Time Test Ended: 14:20:40

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 75

Interval: 4308.00 ft (KB) To 4320.00 ft (KB) (TVD)
Total Depth: 4320.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor

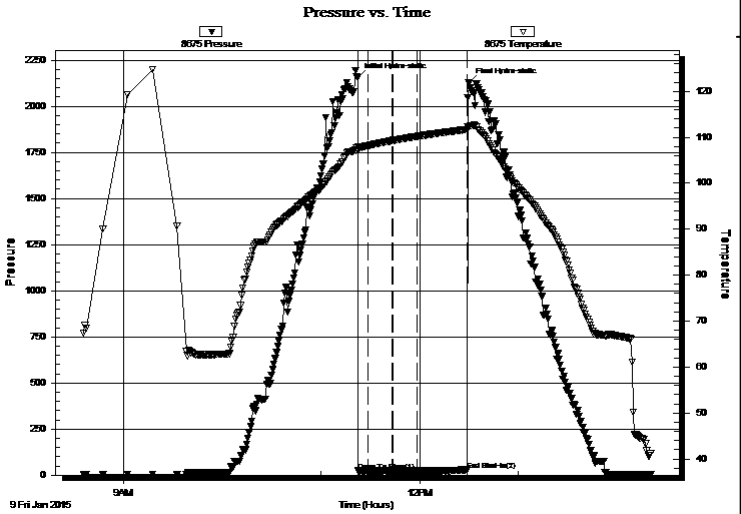
Reference Elevations: 2801.00 ft (KB)
2791.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 24.92 psig @ 4317.00 ft (KB)
Start Date: 2015.01.09 End Date: 2015.01.09
Start Time: 08:35:55 End Time: 14:20:40

Capacity: 8000.00 psig
Last Calib.: 2015.01.09
Time On Btm: 2015.01.09 @ 11:22:25
Time Off Btm: 2015.01.09 @ 12:29:40

TEST COMMENT: Built to 1/2"
Bled off for 2 min, No return blow
Built to 1/4"
Bled off for 3 min, No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2156.29	107.89	Initial Hydro-static
1	22.44	107.11	Open To Flow (1)
7	22.71	108.19	Shut-In(1)
21	24.96	109.26	End Shut-In(1)
21	23.43	109.28	Open To Flow (2)
36	24.92	110.19	Shut-In(2)
67	27.93	111.71	End Shut-In(2)
68	2128.07	112.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	ocm 2%O 98%M	0.05

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58520 **DST#: 3**

Test Start: 2015.01.09 @ 08:35:40

GENERAL INFORMATION:

Formation: **LKC 'L'**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:22:40
Time Test Ended: 14:20:40

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 75

Interval: 4308.00 ft (KB) To 4320.00 ft (KB) (TVD)
Total Depth: 4320.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor

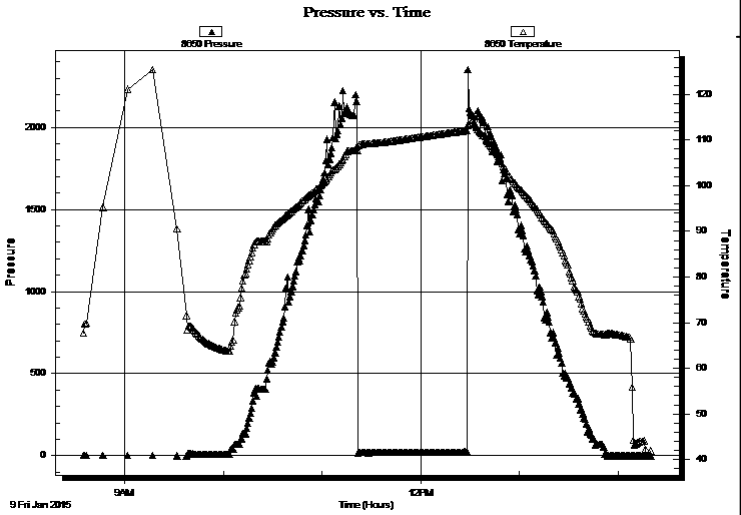
Reference Elevations: 2801.00 ft (KB)
2791.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8650 **Outside**

Press@RunDepth: psig @ 4317.00 ft (KB)
Start Date: 2015.01.09 End Date: 2015.01.09
Start Time: 08:35:15 End Time: 14:19:45

Capacity: 8000.00 psig
Last Calib.: 2015.01.09
Time On Btm:
Time Off Btm:

TEST COMMENT: Built to 1/2"
Bled off for 2 min, No return blow
Built to 1/4"
Bled off for 3 min, No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	ocm 2%O 98%M	0.05

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58520 **DST#: 3**

Test Start: 2015.01.09 @ 08:35:40

Tool Information

Drill Pipe:	Length:	4171.15 ft	Diameter:	3.80 inches	Volume:	58.51 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	124.09 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	
					Total Volume:	59.12 bbl	

Drill Pipe Above KB:	14.74 ft
Depth to Top Packer:	4308.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	12.00 ft
Tool Length:	39.50 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		30000.00 lb
Weight to Pull Loose:		70000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	60000.00 lb
	Final	60000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4281.50		
Shut In Tool	5.00			4286.50		
Hydraulic tool	5.00			4291.50		
Jars	5.00			4296.50		
Safety Joint	2.50			4299.00		
Packer	5.00			4304.00	27.50	Bottom Of Top Packer
Packer	4.00			4308.00		
Stubb	1.00			4309.00		
Perforations	8.00			4317.00		
Change Over Sub	0.00			4317.00		
Recorder	0.00	8675	Inside	4317.00		
Recorder	0.00	8650	Outside	4317.00		
Drill Pipe	0.00			4317.00		
Change Over Sub	0.00			4317.00		
Perforations	0.00			4317.00		
Bullnose	3.00			4320.00	12.00	Bottom Packers & Anchor
Total Tool Length:	**39.50**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58520 **DST#: 3**

Test Start: 2015.01.09 @ 08:35:40

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:	65.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.39 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3300.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

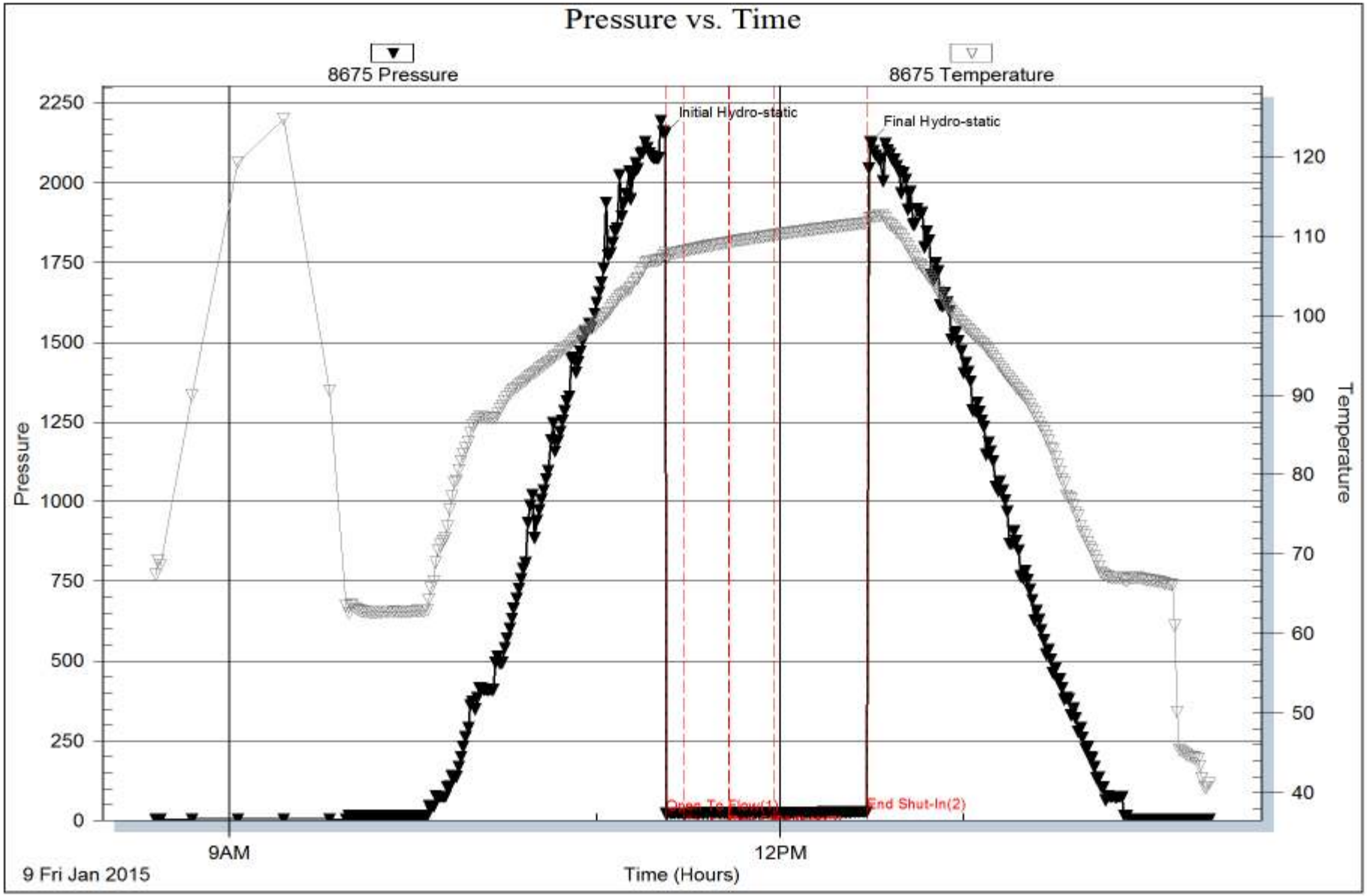
Recovery Table

Length ft	Description	Volume bbl
10.00	ocm 2%O 98%M	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

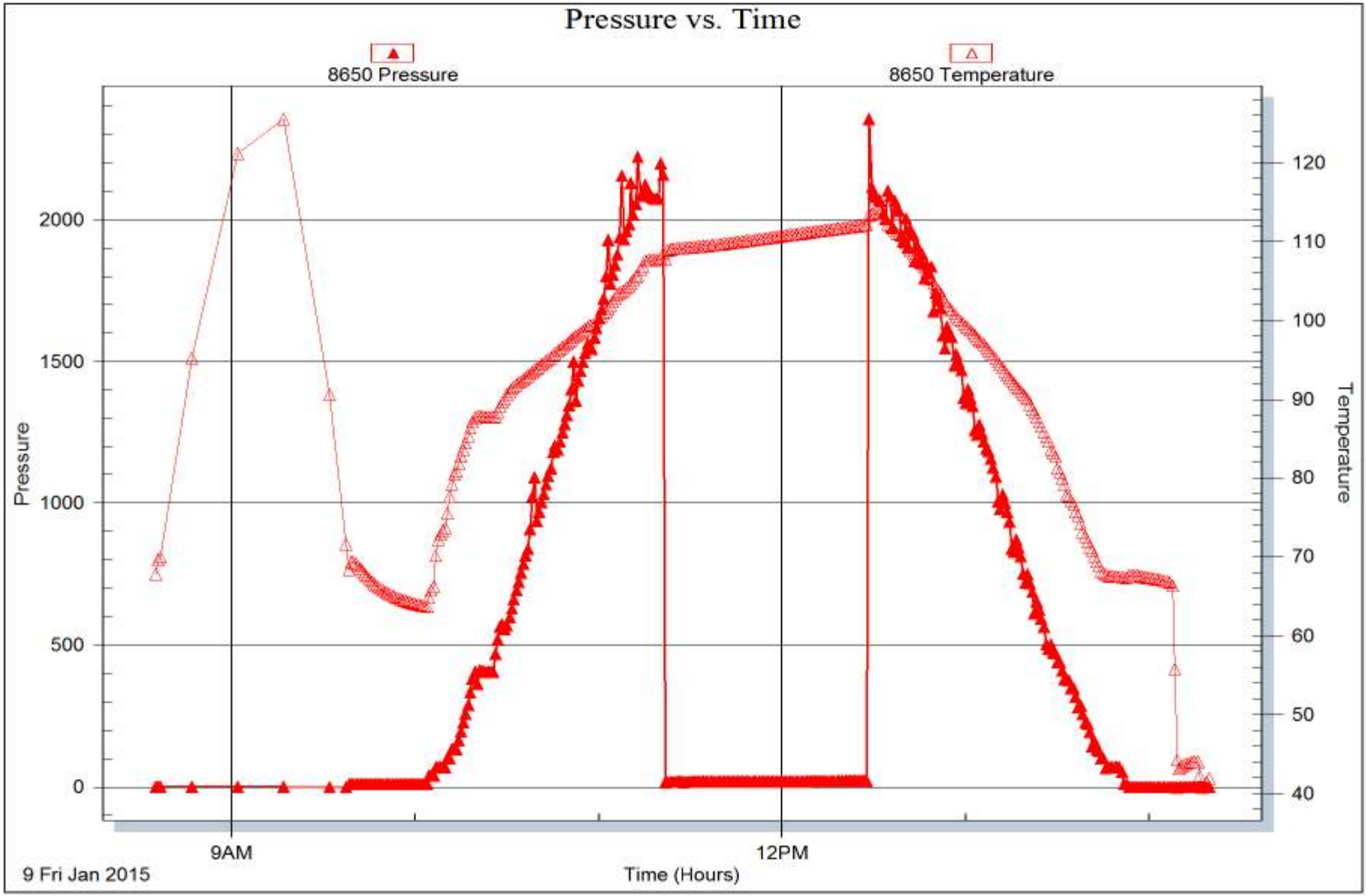
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8675 **Inside** Larson Engineering, Inc Paris-Hineman #1-7 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 58520 Printed: 2015.01.13 @ 09:03:00

Serial #: 8650 **Outside** Larson Engineering, Inc Paris-Hineman #1-7 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 58520 Printed: 2015.01.13 @ 09:03:00

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc**

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

Paris-Hineman #1-7

7-19s-28w Lane,KS

Start Date: 2015.01.10 @ 11:15:00
End Date: 2015.01.10 @ 16:16:00
Job Ticket #: 58521 DST #: 4

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

Printed: 2015.01.13 @ 09:01:17

DRILL STEM TEST REPORT

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58521 **DST#: 4**

Test Start: 2015.01.10 @ 11:15:00

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:30:15
Time Test Ended: 16:16:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 75

Interval: 4353.00 ft (KB) To 4455.00 ft (KB) (TVD)
Total Depth: 4455.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor

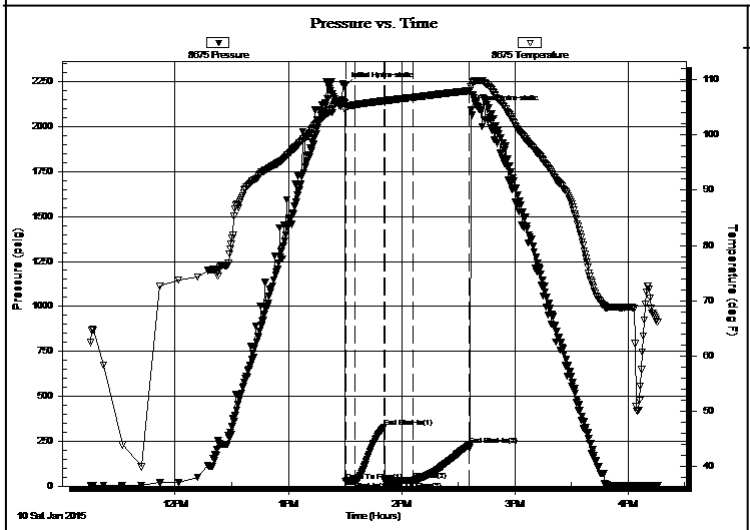
Reference Elevations: 2801.00 ft (KB)
2791.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8675 **Inside**

Press@RunDepth: 30.64 psig @ 4358.00 ft (KB)
Start Date: 2015.01.10 End Date: 2015.01.10
Start Time: 11:15:15 End Time: 16:16:00

Capacity: 8000.00 psig
Last Calib.: 2015.01.10
Time On Btm: 2015.01.10 @ 13:30:00
Time Off Btm: 2015.01.10 @ 14:36:45

TEST COMMENT: Built to 1"
Bled off for 2 min, No return blow
Built to 1/4"
Bled off for 2 min, No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2222.69	105.76	Initial Hydro-static
1	26.37	104.59	Open To Flow (1)
6	28.64	105.47	Shut-In(1)
21	328.61	106.22	End Shut-In(1)
21	28.99	105.99	Open To Flow (2)
36	30.64	106.82	Shut-In(2)
66	230.19	108.04	End Shut-In(2)
67	2091.84	108.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	100% Mud with oil spots	0.05

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58521 **DST#: 4**

Test Start: 2015.01.10 @ 11:15:00

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:30:15
Time Test Ended: 16:16:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 75

Interval: 4353.00 ft (KB) To 4455.00 ft (KB) (TVD)
Total Depth: 4455.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor

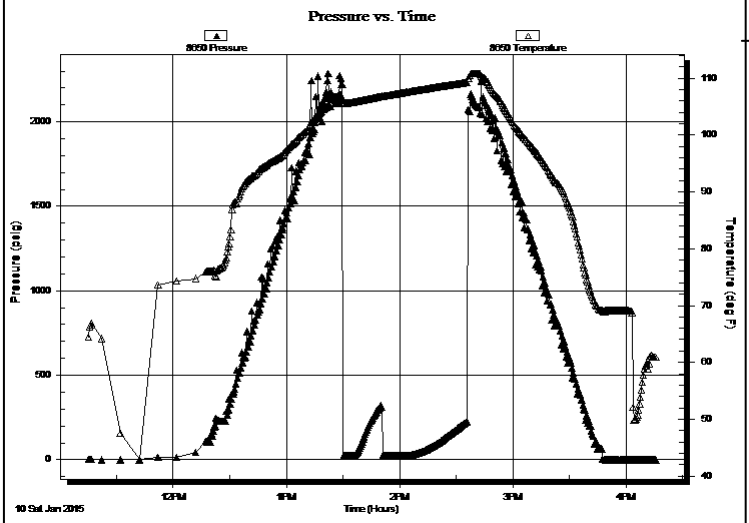
Reference Elevations: 2801.00 ft (KB)
2791.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8650 **Outside**

Press@RunDepth: psig @ 4358.00 ft (KB)
Start Date: 2015.01.10 End Date: 2015.01.10
Start Time: 11:15:15 End Time: 16:15:45

Capacity: 8000.00 psig
Last Calib.: 1899.12.30
Time On Btm:
Time Off Btm:

TEST COMMENT: Built to 1"
Bled off for 2 min, No return blow
Built to 1/4"
Bled off for 2 min, No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	100% Mud with oil spots	0.05

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58521 **DST#: 4**

Test Start: 2015.01.10 @ 11:15:00

Tool Information

Drill Pipe:	Length:	4206.39 ft	Diameter:	3.80 inches	Volume:	59.00 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	124.09 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	
					Total Volume:	59.61 bbl	

Drill Pipe Above KB:	5.98 ft
Depth to Top Packer:	4352.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	103.00 ft
Tool Length:	130.50 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2000.00 lb
Weight set on Packer:		30000.00 lb
Weight to Pull Loose:		72000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	62000.00 lb
	Final	62000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4325.50		
Shut In Tool	5.00			4330.50		
Hydraulic tool	5.00			4335.50		
Jars	5.00			4340.50		
Safety Joint	2.50			4343.00		
Packer	5.00			4348.00	27.50	Bottom Of Top Packer
Packer	4.00			4352.00		
Stubb	1.00			4353.00		
Perforations	4.00			4357.00		
Change Over Sub	1.00			4358.00		
Recorder	0.00	8675	Inside	4358.00		
Recorder	0.00	8650	Outside	4358.00		
Drill Pipe	93.00			4451.00		
Change Over Sub	1.00			4452.00		
Perforations	0.00			4452.00		
Bullnose	3.00			4455.00	103.00	Bottom Packers & Anchor
Total Tool Length:	**130.50**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc

562 West State Rd 4
Olmitz KS 67564-8561

ATTN: Vern Schrag

7-19s-28w Lane,KS

Paris-Hineman #1-7

Job Ticket: 58521 **DST#: 4**

Test Start: 2015.01.10 @ 11:15:00

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:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.98 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3400.00 ppm				
Filter Cake:	2.00 inches				

Recovery Information

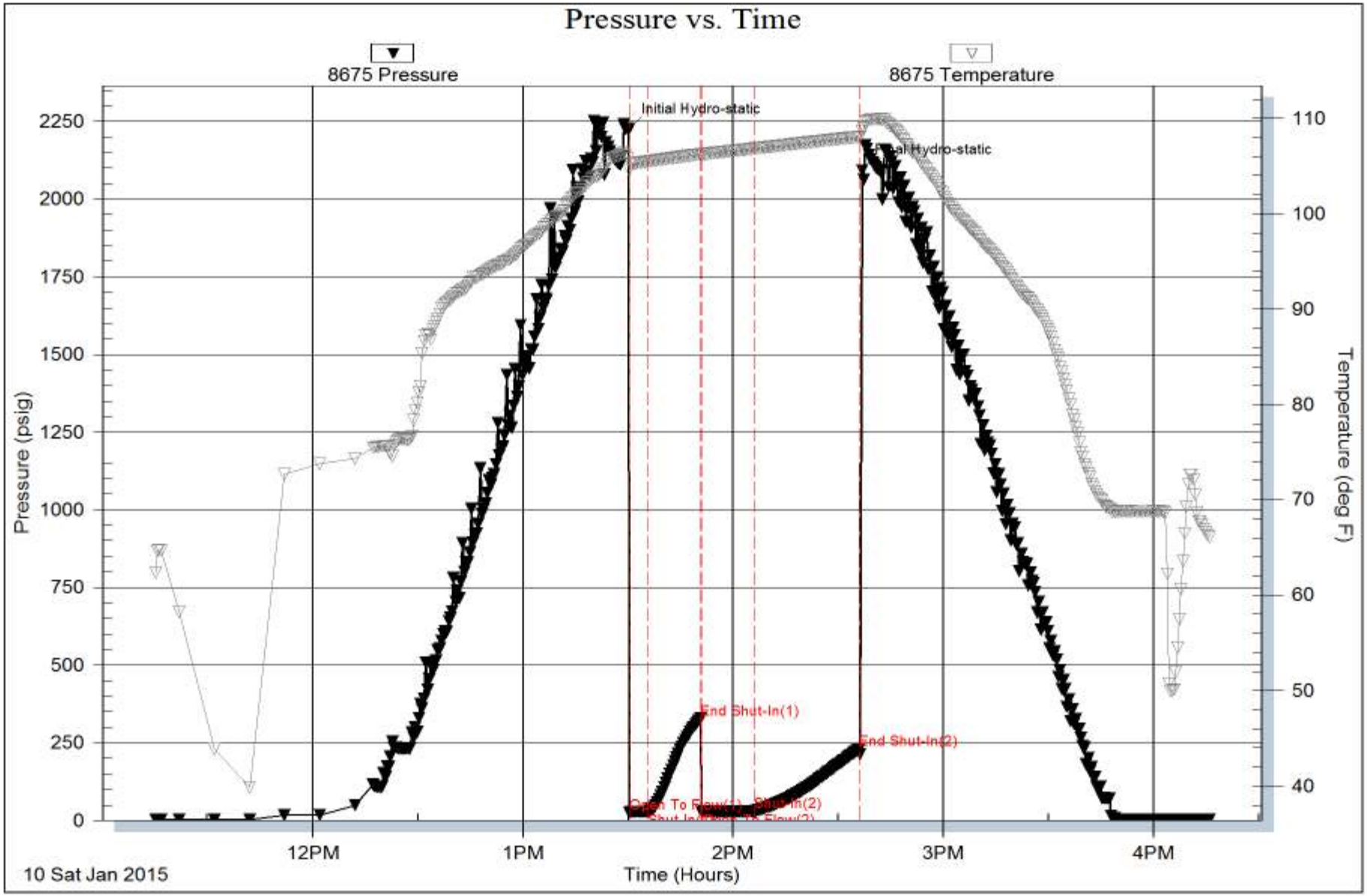
Recovery Table

Length ft	Description	Volume bbl
10.00	100% Mud with oil spots	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

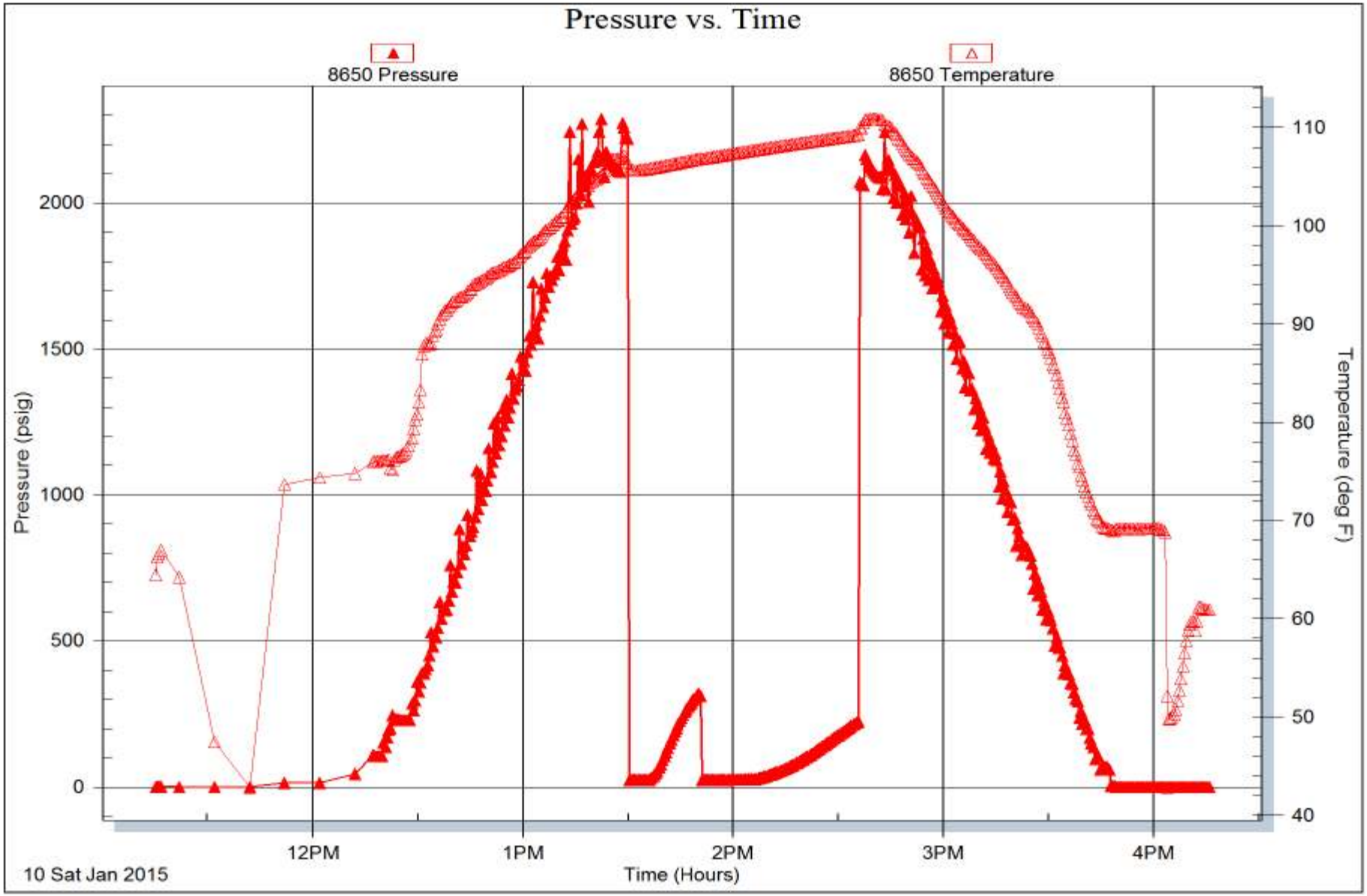
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8675 **Inside** Larson Engineering, Inc Paris-Hineman #1-7 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 58521 Printed: 2015.01.13 @ 09:01:18

Serial #: 8650 **Outside** Larson Engineering, Inc Paris-Hineman #1-7 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 58521 Printed: 2015.01.13 @ 09:01:18

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 58518

Well Name & No. Paris - Hineman #1-7 Test No. 1 Date 1/7/15

Company Lasson Engineering, Inc. Elevation 2801 KB 2791 GL

Address 562 West State Rd 4, Olmitz, KS 67564-8561

Co. Rep / Geo. Vern Schrag Rig 40 Rig 3

Location: Sec. 7 Twp. 19S Rge. 28W Co. Lane County State KS

Interval Tested 4074 - 4100 Zone Tested Kansas City 'E'

Anchor Length 26 Drill Pipe Run 3951 @ 65 Mud Wt. 8.8

Top Packer Depth 4070 Drill Collars Run 124.09 Vis 60

Bottom Packer Depth 4074 Wt. Pipe Run — WL 6.0

Total Depth 4100 Chlorides 2,600 ppm System LCM 2#

Blow Description Built to 5" 1/2 blow

Bled off for 3 min. No return 1/2 blow

B.O.B. in 11 min.

Bled off for 5 min. Built to 3/4" return 1/2 blow

Rec 7	Feet of MCO	%gas	50 %oil	%water	50 %mud	
Rec 124	Feet of GCOM	10 %gas	40 %oil	%water	50 %mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	

Rec Total 200 BHT 107 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	2,016	☑ Test	1150	T-On Location	05:45
(B) First Initial Flow	28	☑ Jars	250	T-Started	08:00
(C) First Final Flow	61	☑ Safety Joint	75	T-Open	11:22
(D) Initial Shut-In	1,069	☑ Circ Sub	N/C	T-Pulled	12:24
(E) Second Initial Flow	70	☐ Hourly Standby		T-Out	14:58
(F) Second Final Flow	100	☑ Mileage	60 RT 60	Comments	
(G) Final Shut-In	1,063	☐ Sampler			
(H) Final Hydrostatic	1,989	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	5	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	15	☐ Extra Recorder		Sub Total	0
Final Flow	15	☐ Day Standby		Total	1535
Final Shut-In	30	☐ Accessibility		MP/DST Disc't	
		Sub Total	1535		

Approved By _____ Our Representative _____

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 58519

Well Name & No. Paris - Hineman #1-7 Test No. 2 Date 1/8/15

Company Larson Engineering, Inc. Elevation 2801 KB 2791 GL

Address 562 West State Rd 4, Olmitz KS, 67564-8561

Co. Rep / Geo. Vern Schrag Rig HD Rig 3

Location: Sec. 7 Twp. 19S Rge. 28W Co. Lane County State KS

Interval Tested 4166 - 4188 Zone Tested Kansas City 'H'

Anchor Length 22 Drill Pipe Run 4045.54 Mud Wt. 9.1

Top Packer Depth 4162 Drill Collars Run 124.09 Vis 59

Bottom Packer Depth 4166 Wt. Pipe Run — WL 6.4

Total Depth 4188 Chlorides 2,500 ppm System LCM 2#

Blow Description Built to 9½" below
Bled off for 3 min. Weak surface return below
B.O.B. in 5 min.
Bled off for 5 min. Built to 3" return below

Rec 0	Feet of 205 Feet Gas In Pipe	%gas	%oil	%water	%mud	
Rec 141	Feet of GCO	30 %gas	70 %oil	%water	%mud	
Rec 124	Feet of GCMO	10 %gas	50 %oil	%water	40 %mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	

Rec Total 295 BHT 121 Gravity 34 API RW — @ — F Chlorides — ppm

(A) Initial Hydrostatic	2,071	☑ Test	1150	T-On Location	02:10
(B) First Initial Flow	31	☑ Jars	250	T-Started	03:15
(C) First Final Flow	82	☑ Safety Joint	75	T-Open	05:55
(D) Initial Shut-In	839	☑ Circ Sub	N/C	T-Pulled	07:00
(E) Second Initial Flow	82	☐ Hourly Standby		T-Out	09:30
(F) Second Final Flow	124	☑ Mileage	LOAT 60	Comments	
(G) Final Shut-In	815	☐ Sampler			
(H) Final Hydrostatic	2,041	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	5	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	15	☐ Extra Recorder		Sub Total	0
Final Flow	15	☐ Day Standby		Total	1535
Final Shut-In	30	☐ Accessibility		MP/DST Disc't	
		Sub Total	1535		

Approved By _____ Our Representative _____

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 58520

Well Name & No. Paris - Hineman #1-7 Test No. 3 Date 1/9/15

Company Larson Engineering, Inc. Elevation 2801 KB 2791 GL

Address 562 West State Rd 4, Olmitz KS, 67564-8561

Co. Rep / Geo. Vern Schrag Rig HD Rig 3

Location: Sec. 7 Twp. 19S Rge. 28W Co. Lane County State KS

Interval Tested 4308-4320 Zone Tested Kansas City 'L'

Anchor Length 12 Drill Pipe Run 4271.15 Mud Wt. 9.2

Top Packer Depth 4304 Drill Collars Run 124.09 Vis 65

Bottom Packer Depth 4308 Wt. Pipe Run — WL 6.4

Total Depth 4320 Chlorides 3,300 ppm System LCM 2#

Blow Description Built to ½" blow
Bled off for 2 min. No return blow
Built to ¼" blow
Bled off for 3 min. No return blow

Rec 10	Feet of OCM	%gas	2 %oil	%water	98 %mud	
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 10 BHT 111 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	2,156	☑ Test	1150	T-On Location	04:30
(B) First Initial Flow	22	☑ Jars	250	T-Started	08:35
(C) First Final Flow	23	☑ Safety Joint	75	T-Open	11:23
(D) Initial Shut-In	25	☑ Circ Sub	N/C	T-Pulled	12:28
(E) Second Initial Flow	23	☐ Hourly Standby		T-Out	14:20
(F) Second Final Flow	25	☑ Mileage	~~60~~ 60 RT	60	Comments
(G) Final Shut-In	28	☐ Sampler			
(H) Final Hydrostatic	2,128	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open 5		☐ Extra Packer		☐ Extra Copies	
Initial Shut-In 15		☐ Extra Recorder		Sub Total	0
Final Flow 15		☐ Day Standby		Total	1535
Final Shut-In 30		☐ Accessibility		MP/DST Disc't	
		Sub Total	1535		

Approved By _____ Our Representative _____

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 58521

Well Name & No. Paris-Hineman # 1-7 Test No. 4 Date 1/10/15

Company Larson Engineering, Inc Elevation 2801 KB 2791 GL

Address 562 West State Rd 4 Olmitz KS, 67564-8561

Co. Rep / Geo. Vern Schrag Rig HD Rig 3

Location: Sec. 7 Twp. 19s Rge. 28w Co. Lane County State KS

Interval Tested 4352-4455 Zone Tested Marmaton

Anchor Length 103 Drill Pipe Run 4206.98 Mud Wt. 9.2

Top Packer Depth 4348 Drill Collars Run 124.09 Vis 54

Bottom Packer Depth 4352 Wt. Pipe Run — WL 8.0

Total Depth 4455 Chlorides 3,300 ppm System LCM 2#

Blow Description Built to 1" below
Bled off for 2 min. No return below
Built to 1/4" below
Bled off for 2 min. No return below

Rec 10	Feet of Mud with oil spot	%gas	%oil	%water 100	%mud
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 10 BHT 108 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2,223	☑ Test 1150	T-On Location 10:20
(B) First Initial Flow 26	☑ Jars 250	T-Started 11:15
(C) First Final Flow 29	☑ Safety Joint 75	T-Open 13:32
(D) Initial Shut-In 329	☑ Circ Sub N/C	T-Pulled 14:37
(E) Second Initial Flow 29	☐ Hourly Standby	T-Out 16:16
(F) Second Final Flow 31	☑ Mileage 60 RT 60	Comments
(G) Final Shut-In 230	☐ Sampler	
(H) Final Hydrostatic 2,092	☐ Straddle	☐ Ruined Shale Packer
	☐ Shale Packer	☐ Ruined Packer
Initial Open 5	☐ Extra Packer	☐ Extra Copies
Initial Shut-In 16	☐ Extra Recorder	Sub Total 0
Final Flow 16	☐ Day Standby	Total 1535
Final Shut-In 30	☐ Accessibility	MP/DST Disc't
	Sub Total 1535	

Approved By Our Representative