



DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc.**

562 W. State Rd #4
Olmitz, KS 67564

ATTN: Vern Schrag

Geneva #1-28

28-18s-28w Lane, KS

Start Date: 2014.02.16 @ 16:09:00

End Date: 2014.02.16 @ 21:22:12

Job Ticket #: 55710 DST #: 1

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

Printed: 2014.02.21 @ 10:39:48



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering Inc.

28-18s-28w Lane, KS

562 W. State Rd #4
Olmitz, KS 67564

Geneva #1-28

Job Ticket: 55710

DST#: 1

ATTN: Vern Schrag

Test Start: 2014.02.16 @ 16:09:00

GENERAL INFORMATION:

Formation: **LKC H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:15:24

Time Test Ended: 21:22:12

Test Type: Conventional Bottom Hole (Initial)

Tester: Cornelio Landa III

Unit No: 62

Interval: 4109.00 ft (KB) To 4135.00 ft (KB) (TVD)

Reference Elevations: 2707.00 ft (KB)

Total Depth: 4135.00 ft (KB) (TVD)

2700.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8645 Outside

Press@RunDepth: 87.88 psig @ 4112.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.16

End Date:

2014.02.16

Last Calib.:

2014.02.16

Start Time: 16:09:05

End Time:

21:22:12

Time On Btm:

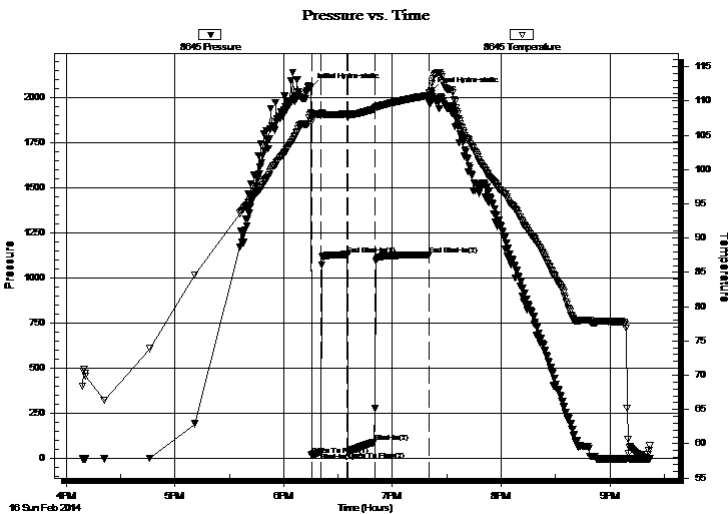
2014.02.16 @ 18:15:12

Time Off Btm:

2014.02.16 @ 19:21:18

TEST COMMENT: IF: 2" of blow
IS: No return
FF: 6" of blow
FS: Bled off in 1 1/2 min.- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2057.63	108.26	Initial Hydro-static
1	17.48	107.05	Open To Flow (1)
6	35.49	107.95	Shut-In(1)
20	1127.55	108.14	End Shut-In(1)
21	38.77	107.54	Open To Flow (2)
35	87.88	108.83	Shut-In(2)
65	1129.26	110.84	End Shut-In(2)
67	2034.47	111.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Mw 30m 70w	0.59

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc.

28-18s-28w Lane, KS

562 W. State Rd #4
Olmitz, KS 67564

Geneva #1-28

Job Ticket: 55710

DST#: 1

ATTN: Vern Schrag

Test Start: 2014.02.16 @ 16:09:00

Tool Information

Drill Pipe:	Length: 3952.00 ft	Diameter: 3.80 inches	Volume: 55.44 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 146.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose: 10000.00 lb
		Total Volume: 56.16 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4109.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	53.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4083.00	
Shut In Tool	5.00			4088.00	
Hydraulic tool	5.00			4093.00	
Jars	5.00			4098.00	
Safety Joint	2.00			4100.00	
Packer	5.00			4105.00	27.00 Bottom Of Top Packer
Packer	4.00			4109.00	
Stubb	1.00			4110.00	
Perforations	2.00			4112.00	
Recorder	0.00	8357	Inside	4112.00	
Recorder	0.00	8645	Outside	4112.00	
Perforations	20.00			4132.00	
Bullnose	3.00			4135.00	26.00 Bottom Packers & Anchor

Total Tool Length: 53.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc.

28-18s-28w Lane, KS

562 W. State Rd #4
Olmitz, KS 67564

Geneva #1-28

Job Ticket: 55710

DST#: 1

ATTN: Vern Schrag

Test Start: 2014.02.16 @ 16:09:00

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:

74000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2300.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	Mw 30m 70w	0.590

Total Length: 120.00 ft Total Volume: 0.590 bbl

Num Fluid Samples: 0

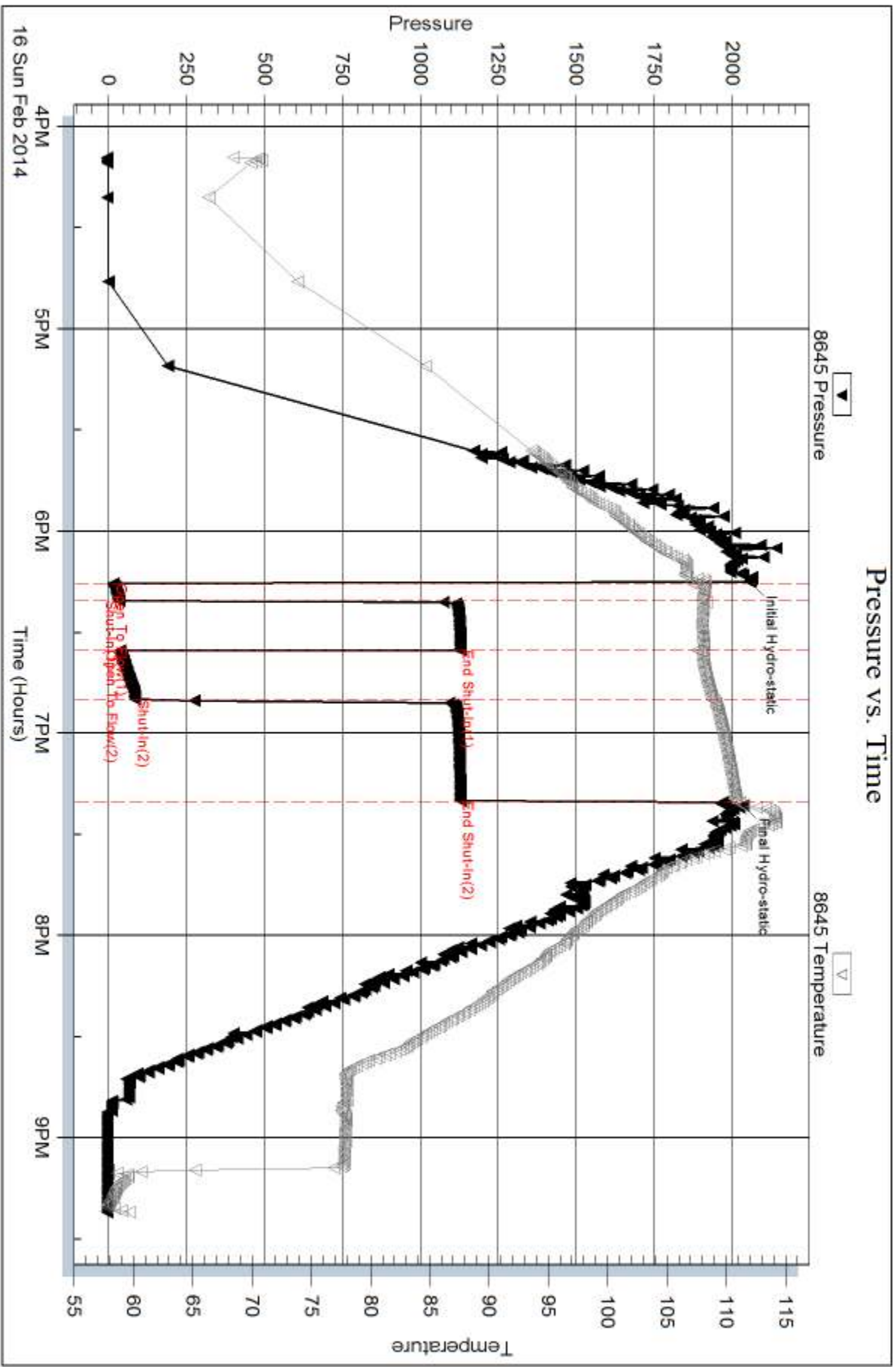
Num Gas Bombs: 0

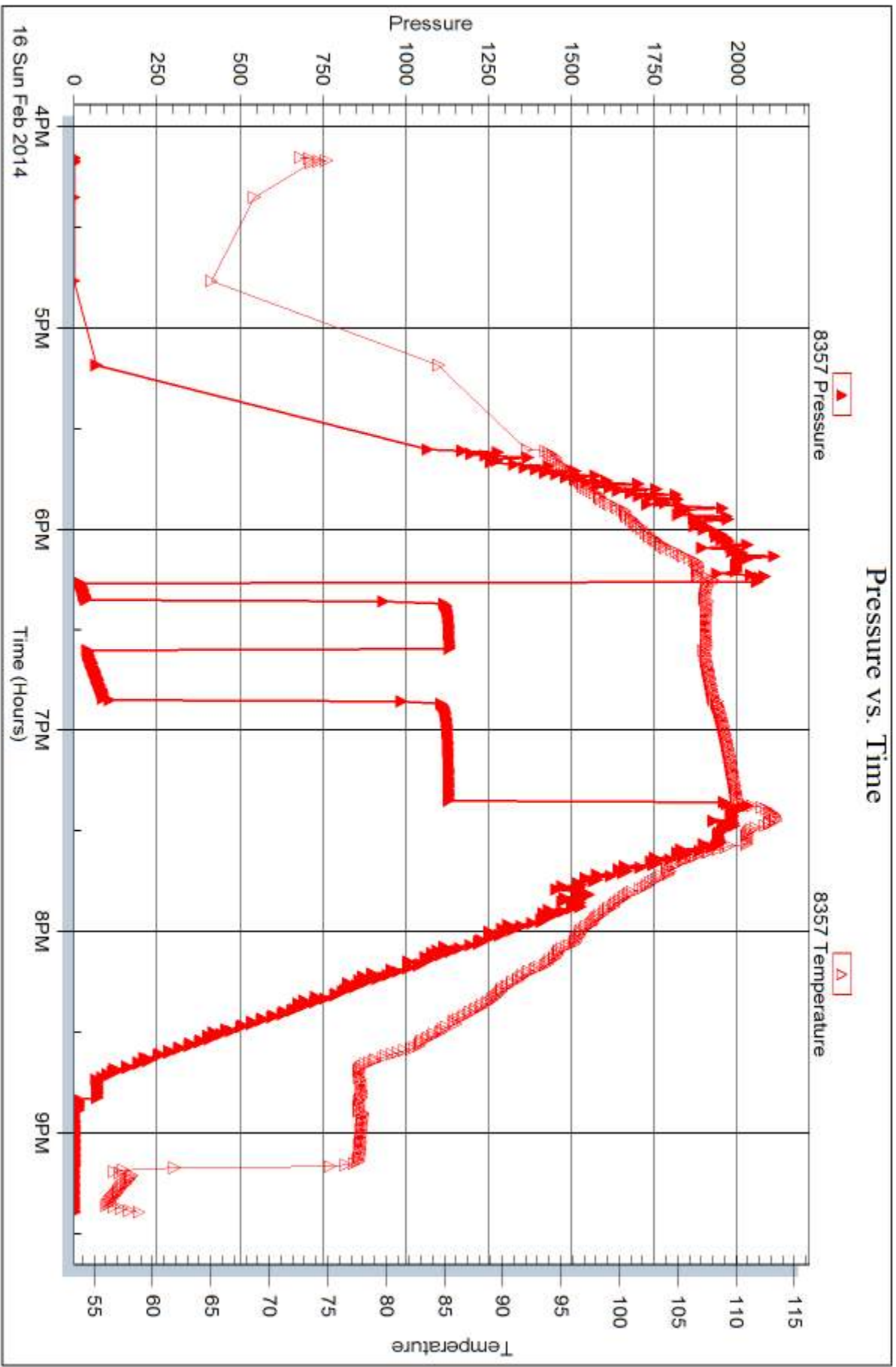
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .175@41=74000ppm







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc.**

562 W. State Rd #4
Olmitz, KS 67564

ATTN: Vern Schrag

Geneva #1-28

28-18s-28w Lane, KS

Start Date: 2014.02.17 @ 12:28:00

End Date: 2014.02.17 @ 18:06:36

Job Ticket #: 55711 DST #: 2

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

Printed: 2014.02.21 @ 10:39:24



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering Inc.

28-18s-28w Lane, KS

562 W. State Rd #4
Olmitz, KS 67564

Geneva #1-28

Job Ticket: 55711

DST#: 2

ATTN: Vern Schrag

Test Start: 2014.02.17 @ 12:28:00

GENERAL INFORMATION:

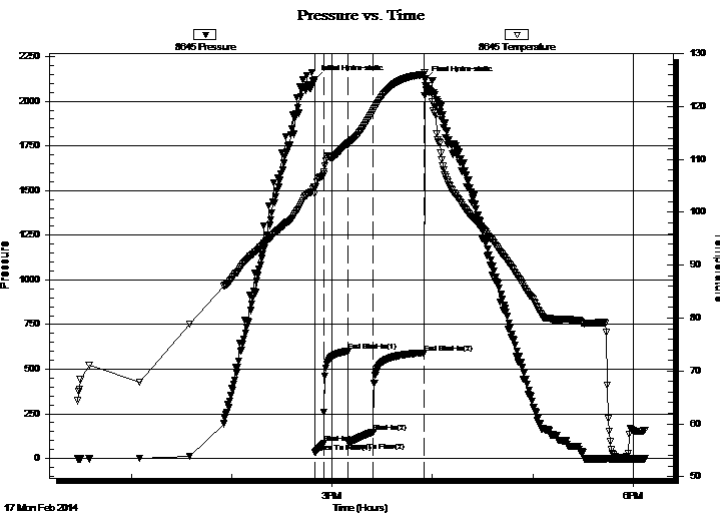
Formation: **Lkc K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:49:48
 Time Test Ended: 18:06:36
 Interval: **4199.00 ft (KB) To 4220.00 ft (KB) (TVD)**
 Total Depth: 4220.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Cornelio Landa III
 Unit No: 62
 Reference Elevations: 2707.00 ft (KB)
 2700.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8645

Outside

Press@RunDepth: 148.04 psig @ 4202.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.02.17 End Date: 2014.02.17 Last Calib.: 2014.02.17
 Start Time: 12:28:05 End Time: 18:06:36 Time On Btm: 2014.02.17 @ 14:49:42
 Time Off Btm: 2014.02.17 @ 15:55:24

TEST COMMENT: IF: 7" of blow
 IS: Bled off in 2 min.-Surface blow back throughout shut-in
 FF: BOB in 9 min..
 FS: Bled off in 2 min.-Surfaceblow back-Built to 1" of Blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2120.78	104.85	Initial Hydro-static
1	32.74	103.52	Open To Flow (1)
6	83.19	107.17	Shut-In(1)
20	598.79	113.08	End Shut-In(1)
20	92.67	112.74	Open To Flow (2)
35	148.04	119.15	Shut-In(2)
65	591.68	126.01	End Shut-In(2)
66	2118.33	126.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
146.00	Gw m 5g 45w 50m	0.72
40.00	Gocmw 10g 10o 20m 60w	0.56
10.00	Cgo 10g 90o	0.14
0.00	70 GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc.

28-18s-28w Lane, KS

562 W. State Rd #4
Olmitz, KS 67564

Geneva #1-28

Job Ticket: 55711

DST#: 2

ATTN: Vern Schrag

Test Start: 2014.02.17 @ 12:28:00

Tool Information

Drill Pipe:	Length: 4048.00 ft	Diameter: 3.80 inches	Volume: 56.78 bbl	Tool Weight:	2500.00 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: 146.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose:	10000.00 lb
			<u>Total Volume: 57.50 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	4199.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	21.00 ft				
Tool Length:	48.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4173.00	
Shut In Tool	5.00			4178.00	
Hydraulic tool	5.00			4183.00	
Jars	5.00			4188.00	
Safety Joint	2.00			4190.00	
Packer	5.00			4195.00	27.00 Bottom Of Top Packer
Packer	4.00			4199.00	
Stubb	1.00			4200.00	
Perforations	2.00			4202.00	
Recorder	0.00	8357	Inside	4202.00	
Recorder	0.00	8645	Outside	4202.00	
Perforations	15.00			4217.00	
Bullnose	3.00			4220.00	21.00 Bottom Packers & Anchor

Total Tool Length: 48.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc.

28-18s-28w Lane, KS

562 W. State Rd #4
Olmitz, KS 67564

Geneva #1-28

Job Ticket: 55711

DST#: 2

ATTN: Vern Schrag

Test Start: 2014.02.17 @ 12:28:00

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:

60000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.57 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2900.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
146.00	Gw m 5g 45w 50m	0.718
40.00	Gocmw 10g 10o 20m 60w	0.561
10.00	Cgo 10g 90o	0.140
0.00	70 GIP	0.000

Total Length: 196.00 ft Total Volume: 1.419 bbf

Num Fluid Samples: 0

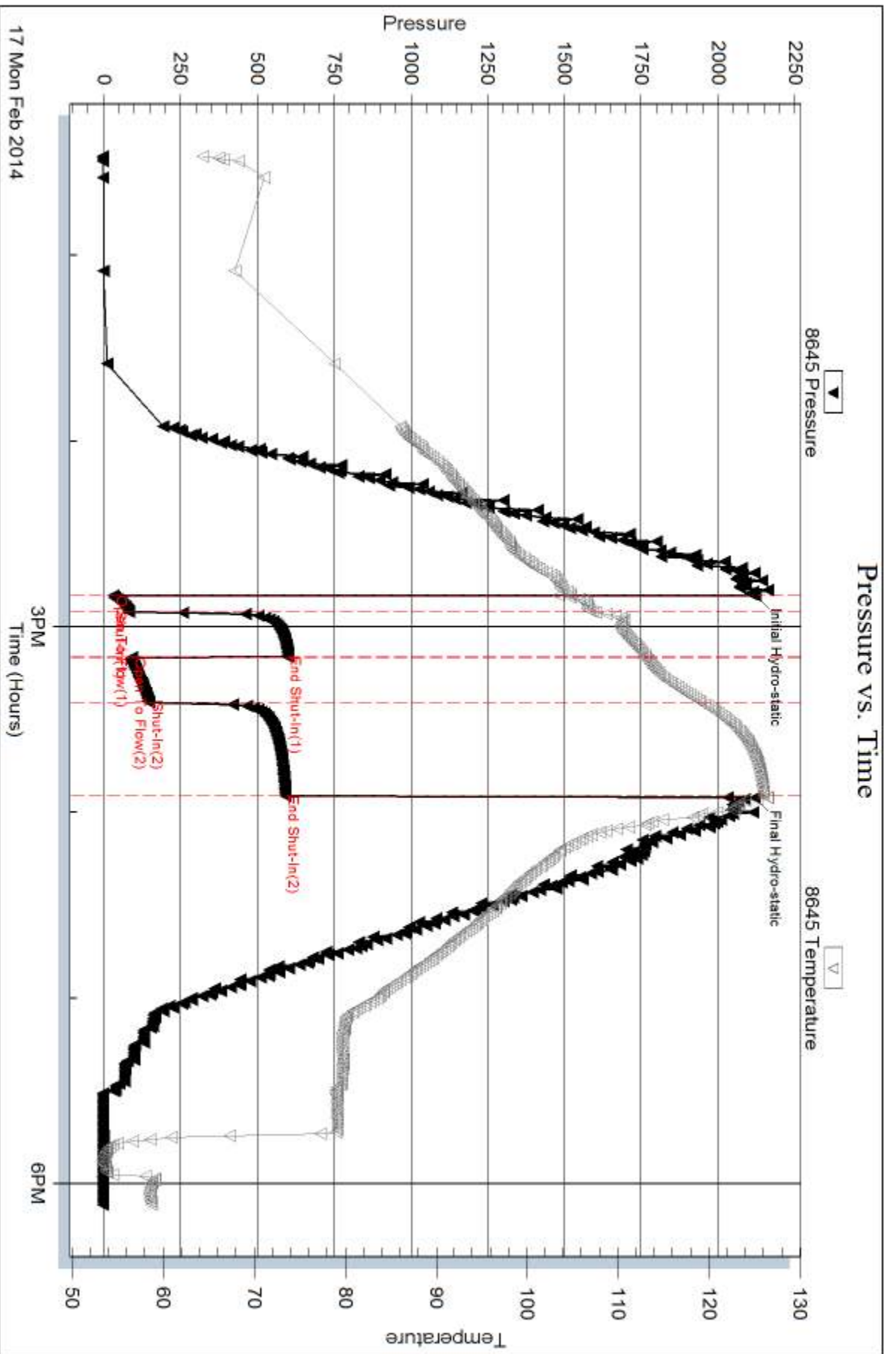
Num Gas Bombs: 0

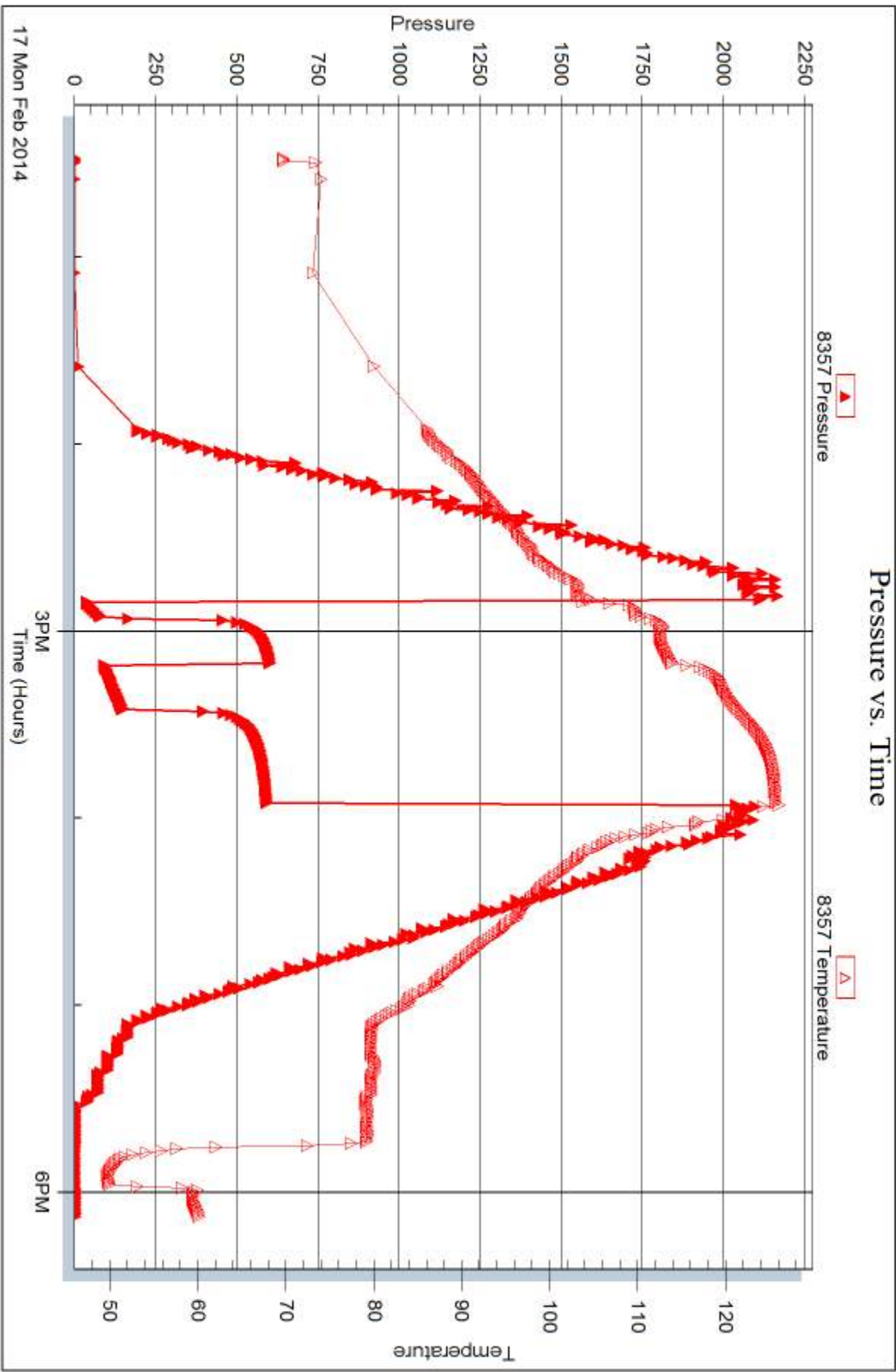
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .175@49=60000 Gravity=34







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc.**

562 W. State Rd #4
Olmitz, KS 67564

ATTN: Vern Schrag

Geneva #1-28

28-18s-28w Lane, KS

Start Date: 2014.02.18 @ 01:37:00

End Date: 2014.02.18 @ 07:29:30

Job Ticket #: 55712 DST #: 3

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

Printed: 2014.02.21 @ 10:38:57



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering Inc.
562 W. State Rd #4
Olmitz, KS 67564
ATTN: Vern Schrag

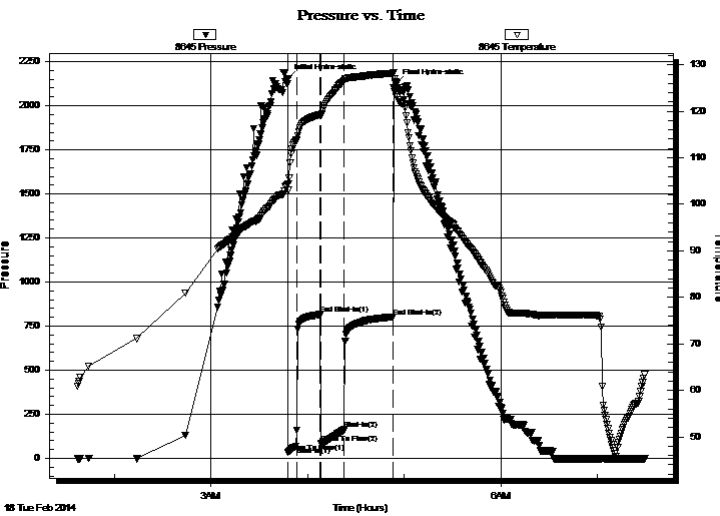
28-18s-28w Lane, KS
Geneva #1-28
Job Ticket: 55712 **DST#: 3**
Test Start: 2014.02.18 @ 01:37:00

GENERAL INFORMATION:

Formation: **Mid-Creek**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:48:00
Time Test Ended: 07:29:30
Interval: **4239.00 ft (KB) To 4248.00 ft (KB) (TVD)**
Total Depth: 4248.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Cornelio Landa III
Unit No: 62
Reference Elevations: 2707.00 ft (KB)
2700.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8645 Outside
Press@RunDepth: 162.73 psig @ 4240.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.02.18 End Date: 2014.02.18 Last Calib.: 2014.02.18
Start Time: 01:37:05 End Time: 07:29:29 Time On Btm: 2014.02.18 @ 03:47:54
Time Off Btm: 2014.02.18 @ 04:54:42

TEST COMMENT: IF: BOB in 3 min.
IS: Bled off in 2 min.- Surface blow back-Built to 8" Blow back
FF: BOB in 30 seconds
FS: Bled off in 2 min.- Surface blow back-Built to BOB in 24 1/2 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2153.16	104.38	Initial Hydro-static
1	32.96	102.99	Open To Flow (1)
6	69.14	113.79	Shut-In(1)
20	816.07	119.33	End Shut-In(1)
21	86.32	119.00	Open To Flow (2)
35	162.73	126.58	Shut-In(2)
65	802.74	128.14	End Shut-In(2)
67	2128.07	126.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
58.00	G & Ocm 20g 30o 50m	0.29
370.00	Cocg 45o 55g	4.39
0.00	GIP= 819	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering Inc.
562 W. State Rd #4
Olmitz, KS 67564
ATTN: Vern Schrag

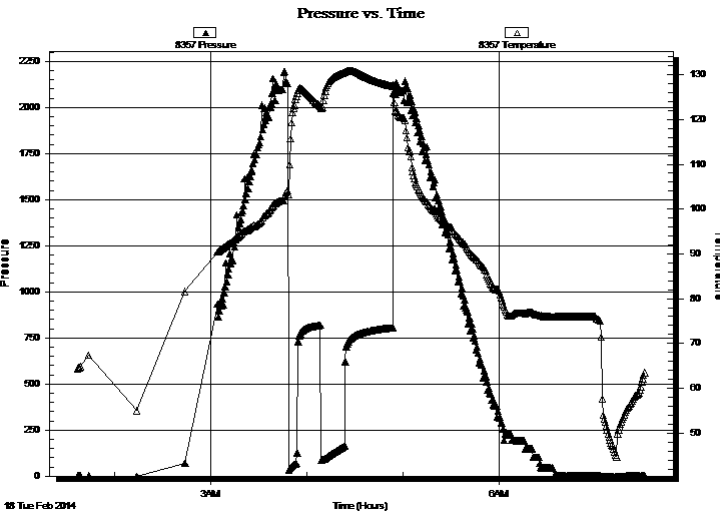
28-18s-28w Lane, KS
Geneva #1-28
Job Ticket: 55712 **DST#: 3**
Test Start: 2014.02.18 @ 01:37:00

GENERAL INFORMATION:

Formation: **Mid-Creek**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 03:48:00 Tester: Cornelio Landa III
Time Test Ended: 07:29:30 Unit No: 62
Interval: 4239.00 ft (KB) To 4248.00 ft (KB) (TVD) Reference Elevations: 2707.00 ft (KB)
Total Depth: 4248.00 ft (KB) (TVD) 2700.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 7.00 ft

Serial #: 8357 Inside
Press@RunDepth: psig @ 4240.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.02.18 End Date: 2014.02.18 Last Calib.: 2014.02.18
Start Time: 01:37:05 End Time: 07:30:54 Time On Btm:
Time Off Btm:

TEST COMMENT: IF: BOB in 3 min.
IS: Bled off in 2 min.- Surface blow back-Built to 8" Blow back
FF: BOB in 30 seconds
FS: Bled off in 2 min.- Surface blow back-Built to BOB in 24 1/2 min.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
58.00	G & Ocm 20g 30o 50m	0.29
370.00	Cocg 45o 55g	4.39
0.00	GIP= 819	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc.

28-18s-28w Lane, KS

562 W. State Rd #4
Olmitz, KS 67564

Geneva #1-28

Job Ticket: 55712

DST#: 3

ATTN: Vern Schrag

Test Start: 2014.02.18 @ 01:37:00

Tool Information

Drill Pipe:	Length: 4081.00 ft	Diameter: 3.80 inches	Volume: 57.25 bbl	Tool Weight: 2500.00 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: 146.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose: 10000.00 lb
			<u>Total Volume: 57.97 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4239.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	36.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4213.00	
Shut In Tool	5.00			4218.00	
Hydraulic tool	5.00			4223.00	
Jars	5.00			4228.00	
Safety Joint	2.00			4230.00	
Packer	5.00			4235.00	27.00 Bottom Of Top Packer
Packer	4.00			4239.00	
Stubb	1.00			4240.00	
Recorder	0.00	8357	Inside	4240.00	
Recorder	0.00	8645	Outside	4240.00	
Perforations	5.00			4245.00	
Bullnose	3.00			4248.00	9.00 Bottom Packers & Anchor

Total Tool Length: 36.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc.

28-18s-28w Lane, KS

562 W. State Rd #4
Olmitz, KS 67564

Geneva #1-28

Job Ticket: 55712

DST#: 3

ATTN: Vern Schrag

Test Start: 2014.02.18 @ 01:37:00

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:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2900.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
58.00	G & Ocm 20g 30o 50m	0.285
370.00	Cocg 45o 55g	4.388
0.00	GIP= 819	0.000

Total Length: 428.00 ft Total Volume: 4.673 bbl

Num Fluid Samples: 0

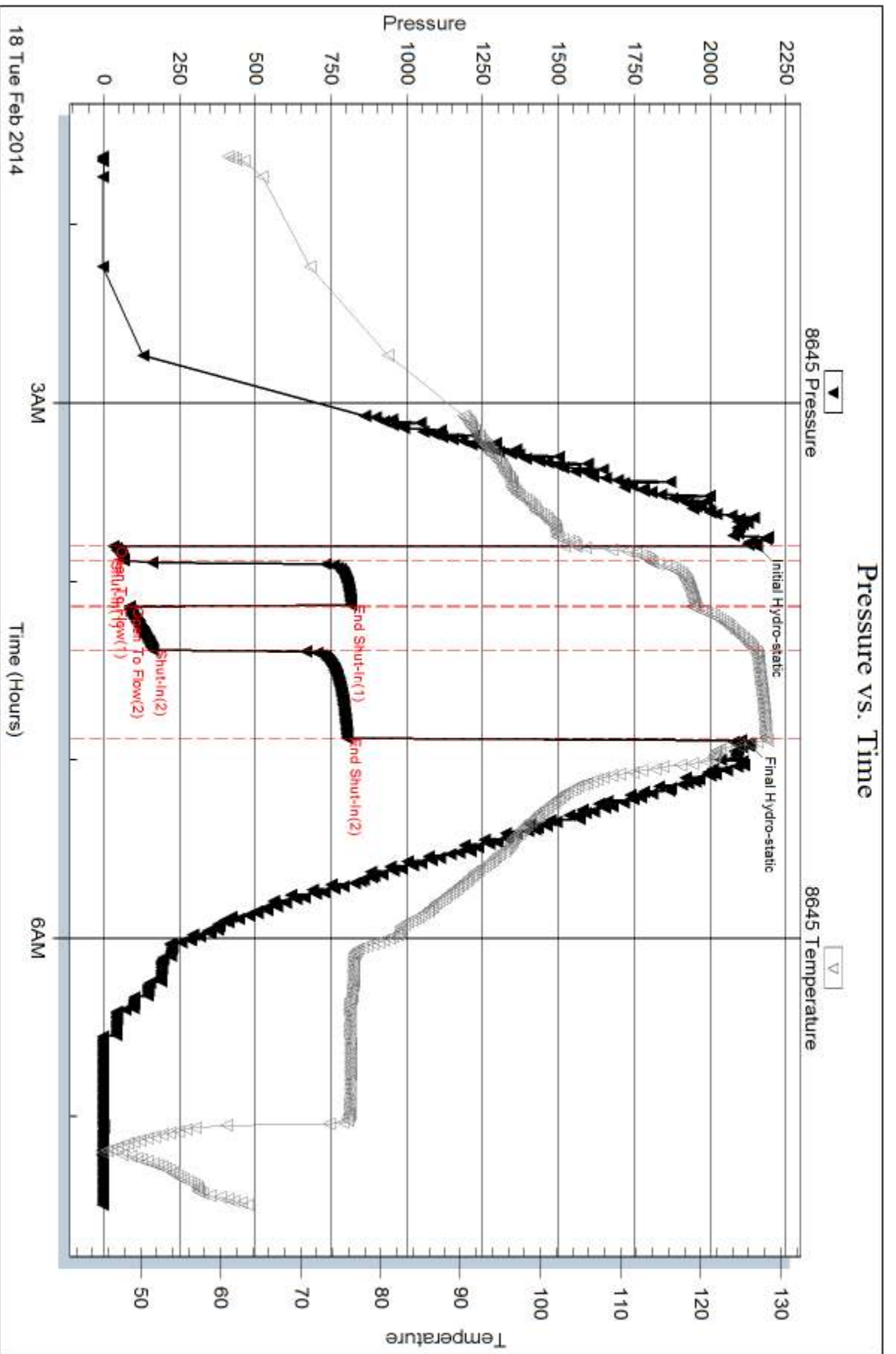
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



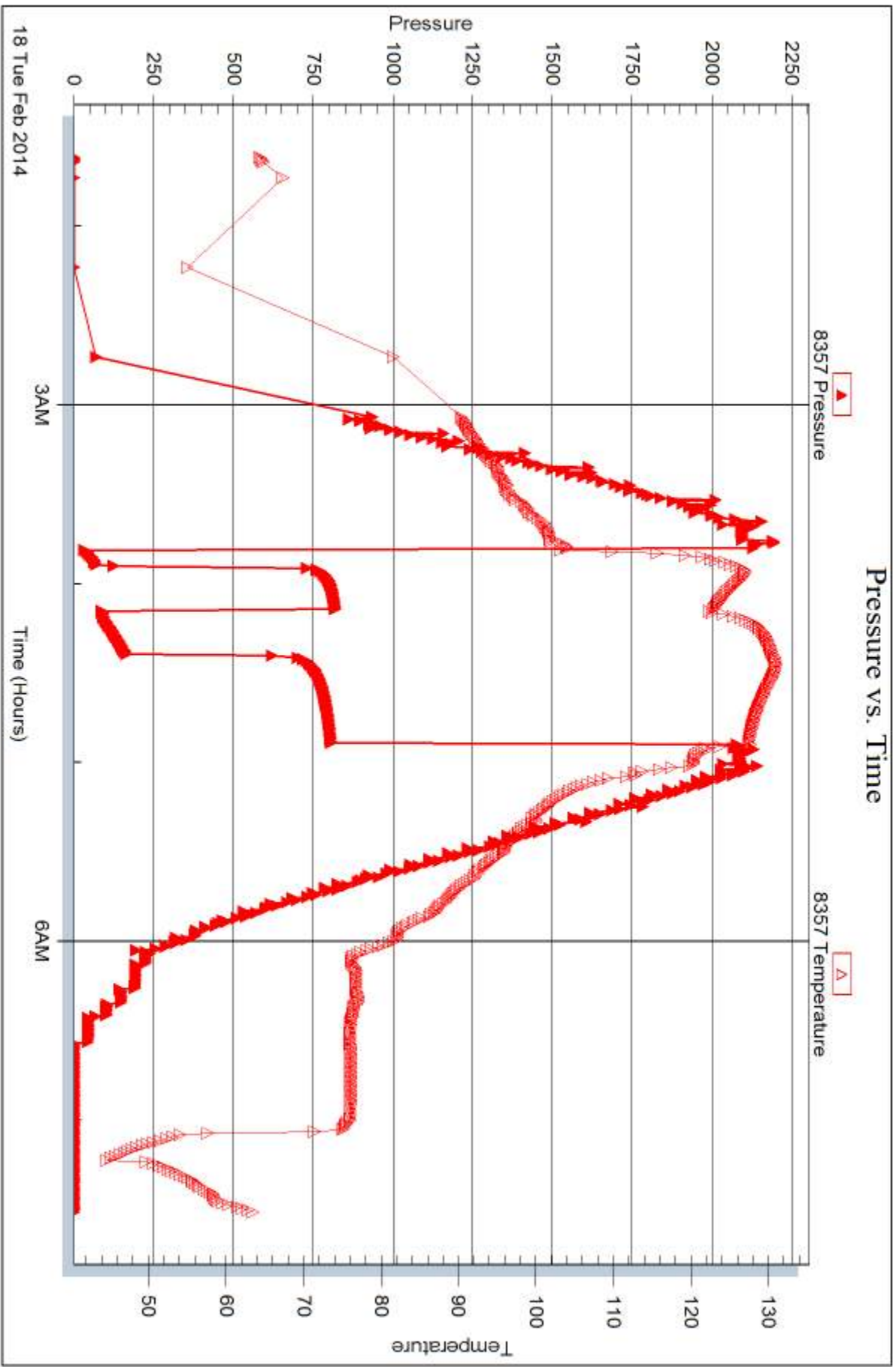
Serial #: 8357

Inside

Larson Engineering Inc.

Geneva #1-28

DST Test Number: 3



Tribble Testing, Inc

Ref. No: 55712

Printed: 2014.02.21 @ 10:39:00



DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc.**

562 W. State Rd #4
Olmitz, KS 67564

ATTN: Vern Schrag

Geneva #1-28

28-18s-28w Lane, KS

Start Date: 2014.02.19 @ 07:59:01

End Date: 2014.02.19 @ 14:46:43

Job Ticket #: 56639 DST #: 4

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

Printed: 2014.02.21 @ 10:38:24



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering Inc.

28-18s-28w Lane, KS

562 W. State Rd #4
Olmitz, KS 67564

Geneva #1-28

Job Ticket: 56639

DST#: 4

ATTN: Vern Schrag

Test Start: 2014.02.19 @ 07:59:01

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:14:13

Time Test Ended: 14:46:43

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: 4314.00 ft (KB) To 4389.00 ft (KB) (TVD)

Reference Elevations: 2707.00 ft (KB)

Total Depth: 4389.00 ft (KB) (TVD)

2700.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 8357

Inside

Press@RunDepth: 25.58 psig @ 4316.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.19

End Date:

2014.02.19

Last Calib.:

2014.02.19

Start Time: 07:59:06

End Time:

14:46:43

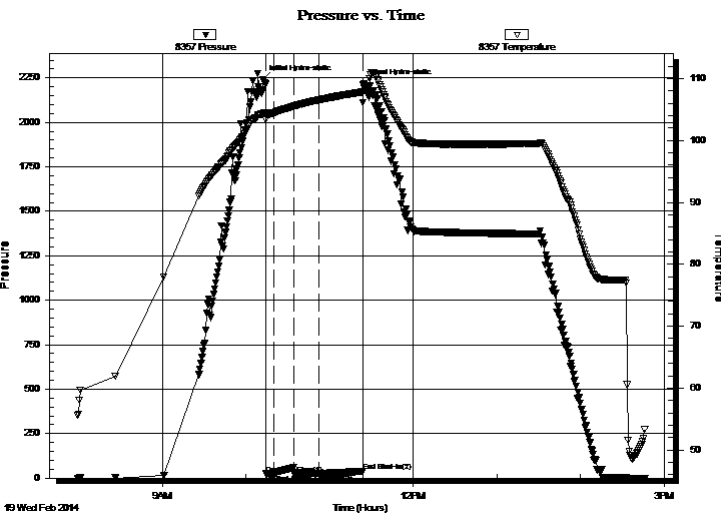
Time On Btm:

2014.02.19 @ 10:12:01

Time Off Btm:

2014.02.19 @ 11:24:25

TEST COMMENT: 1/2" Blow .
No return.
Surface blow .
No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2237.90	104.35	Initial Hydro-static
3	23.37	103.37	Open To Flow (1)
8	23.71	104.42	Shut-In(1)
23	59.61	105.55	End Shut-In(1)
23	24.35	105.54	Open To Flow (2)
41	25.58	106.55	Shut-In(2)
72	38.41	107.83	End Shut-In(2)
73	2218.04	108.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100m	0.02

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Engineering Inc.
 562 W. State Rd #4
 Olmitz, KS 67564
 ATTN: Vern Schrag

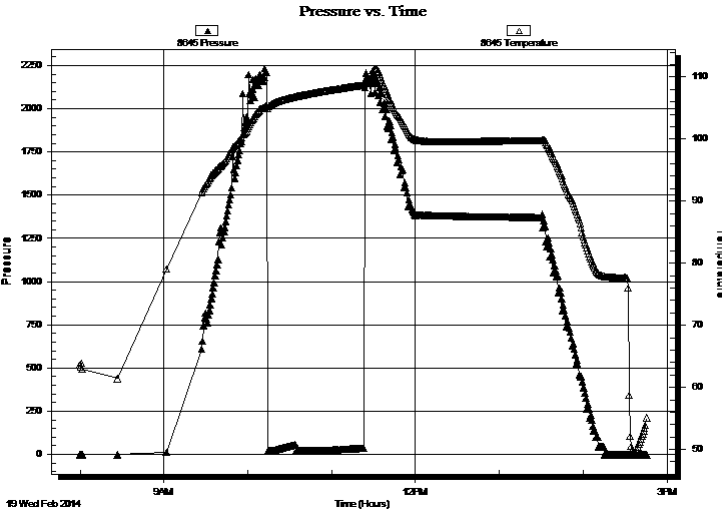
28-18s-28w Lane, KS
Geneva #1-28
 Job Ticket: 56639 **DST#: 4**
 Test Start: 2014.02.19 @ 07:59:01

GENERAL INFORMATION:

Formation: **Marmaton**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 10:14:13 Tester: Chuck Smith
 Time Test Ended: 14:46:43 Unit No: 62
 Interval: **4314.00 ft (KB) To 4389.00 ft (KB) (TVD)** Reference Elevations: 2707.00 ft (KB)
 Total Depth: 4389.00 ft (KB) (TVD) 2700.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 7.00 ft

Serial #: 8645 Outside
 Press@RunDepth: psig @ 4316.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.02.19 End Date: 2014.02.19 Last Calib.: 2014.02.19
 Start Time: 07:59:45 End Time: 14:45:39 Time On Btm:
 Time Off Btm:

TEST COMMENT: 1/2" Blow .
 No return.
 Surface blow .
 No return.



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

Recovery		
Length (ft)	Description	Volume (bbl)
5.00	OSM 100m	0.02

* Recovery from multiple tests

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc.

28-18s-28w Lane, KS

562 W. State Rd #4
Olmitz, KS 67564

Geneva #1-28

Job Ticket: 56639

DST#: 4

ATTN: Vern Schrag

Test Start: 2014.02.19 @ 07:59:01

Tool Information

Drill Pipe:	Length: 4174.00 ft	Diameter: 3.80 inches	Volume: 58.55 bbl	Tool Weight:	2500.00 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: 146.00 ft	Diameter: 2.25 inches	Volume: 0.72 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 59.27 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4314.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	75.00 ft				
Tool Length:	102.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4288.00	
Shut In Tool	5.00			4293.00	
Hydraulic tool	5.00			4298.00	
Jars	5.00			4303.00	
Safety Joint	2.00			4305.00	
Packer	5.00			4310.00	27.00 Bottom Of Top Packer
Packer	4.00			4314.00	
Stubb	1.00			4315.00	
Perforations	1.00			4316.00	
Recorder	0.00	8357	Inside	4316.00	
Recorder	0.00	8645	Outside	4316.00	
Change Over Sub	1.00			4317.00	
Drill Pipe	63.00			4380.00	
Change Over Sub	1.00			4381.00	
Perforations	5.00			4386.00	
Bullnose	3.00			4389.00	75.00 Bottom Packers & Anchor
Total Tool Length:	102.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc.

28-18s-28w Lane, KS

562 W. State Rd #4
Olmitz, KS 67564

Geneva #1-28

Job Ticket: 56639

DST#: 4

ATTN: Vern Schrag

Test Start: 2014.02.19 @ 07:59:01

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:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OSM 100m	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

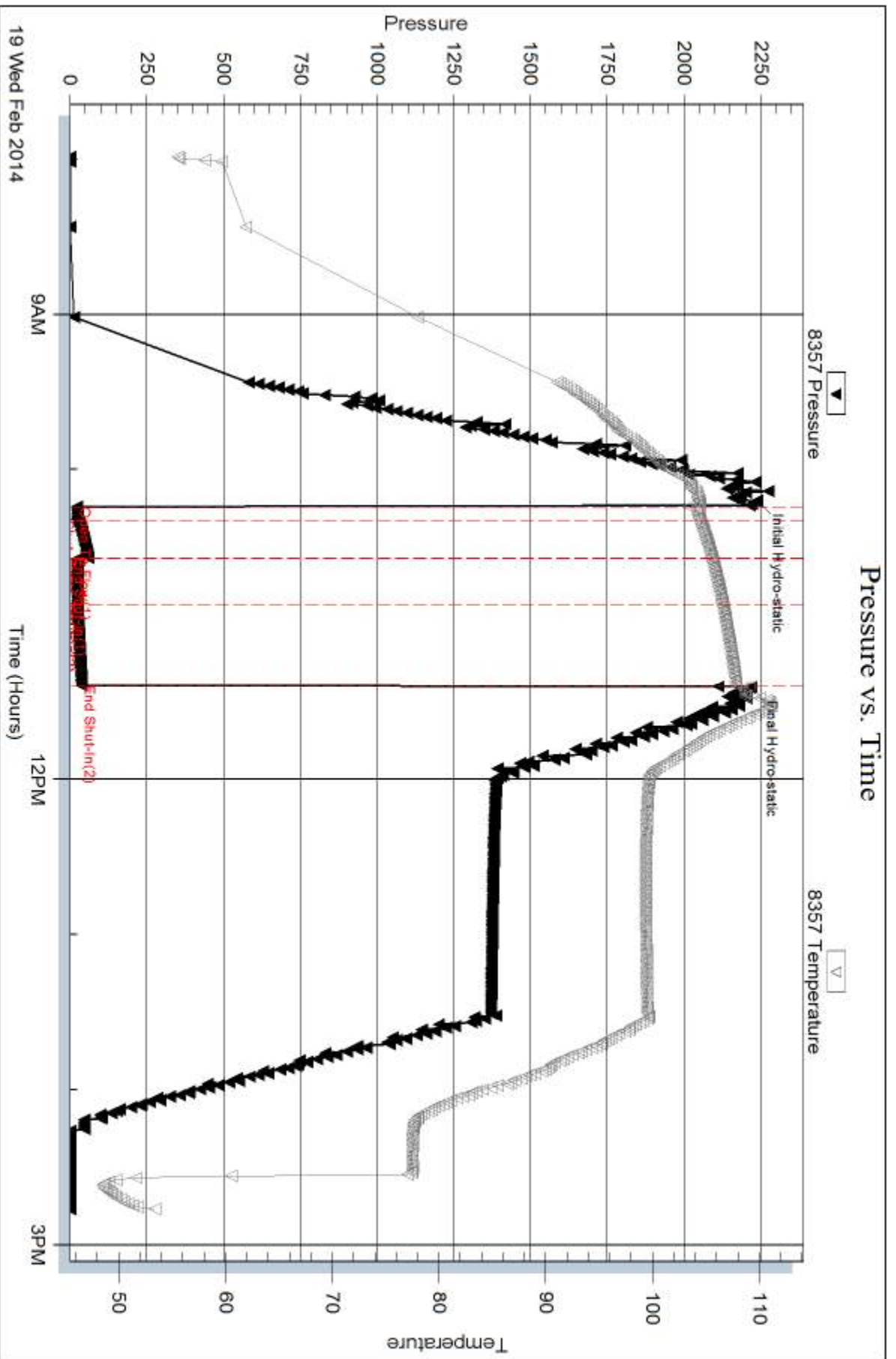
Num Gas Bombs: 0

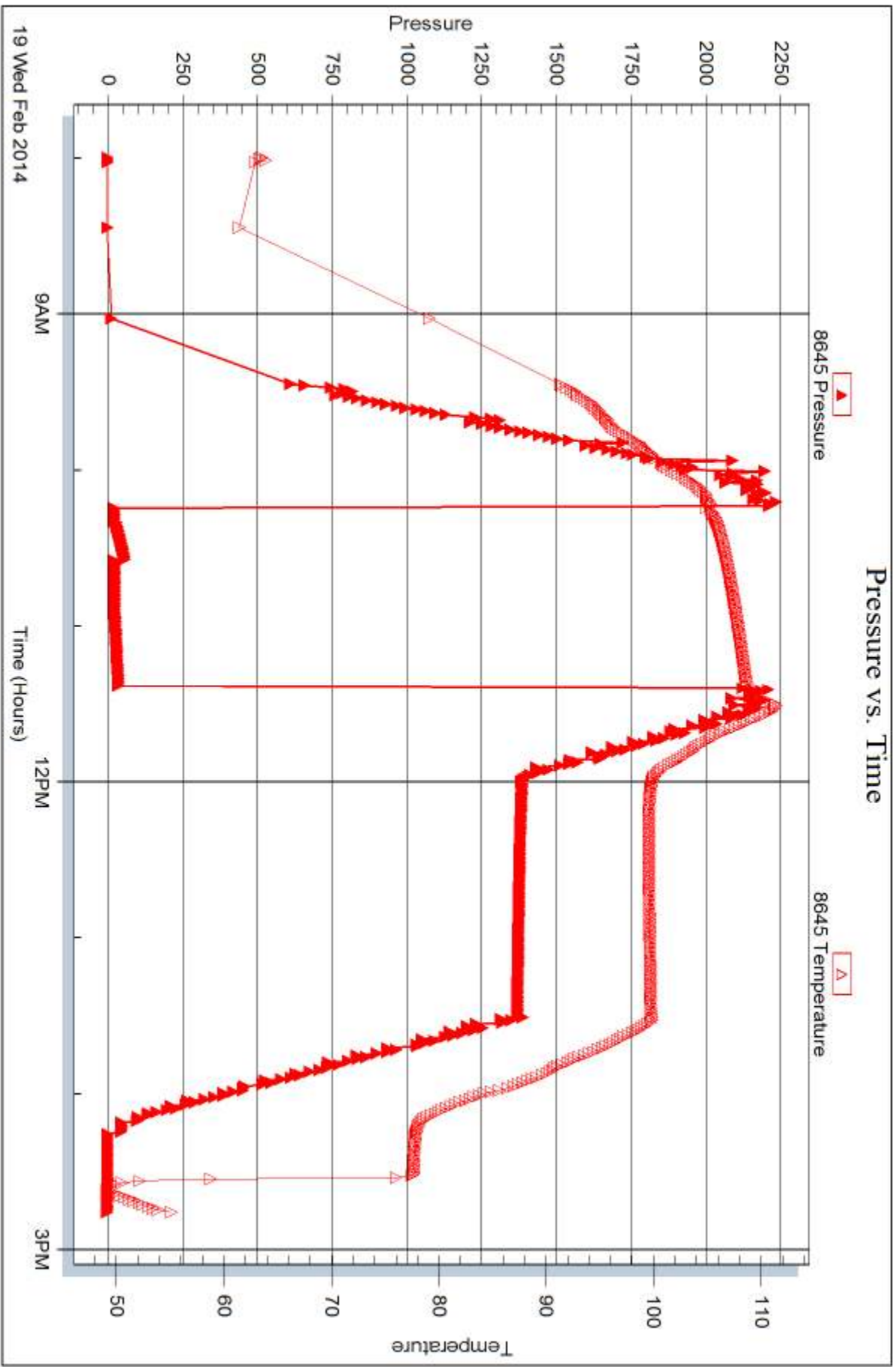
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55710**

Well Name & No. Geneva #1-28 Test No. 1 Date 2-16-14
 Company Larson Engineering Inc. Elevation 2707 KB 2700 GL
 Address 562 W. State Rd #4 - 01mi N2, KS 67564
 Co. Rep / Geo. Vern Schrag Rig HD#3
 Location: Sec. 28 Twp. 18-s Rge. 28-w Co. Lane State KS

Interval Tested 4109-4135 Zone Tested Lansing H
 Anchor Length 26' Drill Pipe Run 3952 Mud Wt. 9.1
 Top Packer Depth 4105 Drill Collars Run 146. Vis 59
 Bottom Packer Depth 4109 Wt. Pipe Run 0 WL 6.4
 Total Depth 4135 Chlorides 2300 ppm System LCM #1

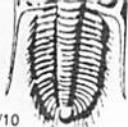
Blow Description IF: 2 in of Blow
~~EST: No Return~~
FF: 6 in of Blow
~~FST Bled off in 1/2 min - No Return~~

Rec	Feet of	%gas	%oil	%water	%mud
<u>120</u>	<u>MW</u>			<u>70</u>	<u>30</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 120 BHT 111 Gravity — API RW .175 @ 41 °F Chlorides 74,000 ppm
 (A) Initial Hydrostatic 2058 Test 15:45
 (B) First Initial Flow 17 Jars 16:09
 (C) First Final Flow 35 Safety Joint 18:16
 (D) Initial Shut-In 1128 Circ Sub N/C T-Pulled 19:21
 (E) Second Initial Flow 39 Hourly Standby 21:22
 (F) Second Final Flow 88 Mileage 54 R-T
 (G) Final Shut-In 1129 Sampler
 (H) Final Hydrostatic 2034 Straddle
 Shale Packer Ruined Shale Packer
 Extra Packer Ruined Packer
 Extra Recorder Extra Copies
 Day Standby Sub Total
 Accessibility Total
 Sub Total MP/DST Disc't

Initial Open 5
 Initial Shut-In 15
 Final Flow 15
 Final Shut-In 30

Approved By Vern Schrag Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55711

Well Name & No. Geneva #1-28 Test No. 2 Date 2-17-14
 Company Larson Engineering Inc. Elevation 2707 KB 2700
 Address 562 W. State Rd #4 - Olmitz, KS 67564
 Co. Rep / Geo. Vern Schragg Rig HD #3
 Location: Sec. 28 Twp. 18-S Rge. 28-W Co. Lane State KS

Interval Tested 4199-4220 Zone Tested LKC K
 Anchor Length 21 Drill Pipe Run 4048 Mud Wt. 9.1
 Top Packer Depth 4195 Drill Collars Run 146 Vis 57
 Bottom Packer Depth 4199 Wt. Pipe Run 0 WL 7.6
 Total Depth 4220 Chlorides 2900 ppm System LCM # 1

Blow Description IF. 7 in of Blow
ISF. Bled off in 2 min. - Surface blowback throughout shut-in
FF. B.O.B. in 9 min.

FSF. Bled off in 2 min. - Surface blowback - Built to 1 in of Blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>146</u>	<u>G + wrm</u>	<u>5</u>		<u>45</u>	<u>50</u>
<u>40</u>	<u>G + GCMW</u>	<u>10</u>	<u>10</u>	<u>60</u>	<u>20</u>
<u>10</u>	<u>CGO</u>	<u>10</u>	<u>90</u>		
<u>-</u>	<u>70 GIP</u>				

Rec Total 196 BHT 126 Gravity 34 API RW .175 @ 49 °F Chlorides 60,000 ppm

(A) Initial Hydrostatic 2121
 (B) First Initial Flow 33
 (C) First Final Flow 83
 (D) Initial Shut-In 599
 (E) Second Initial Flow 93
 (F) Second Final Flow 148
 (G) Final Shut-In 592
 (H) Final Hydrostatic 2118

- Test
- Jars
- Safety Joint
- Circ Sub MLC
- Hourly Standby
- Mileage
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility

T-On Location 12:20
 T-Started 12:28
 T-Open 14:49
 T-Pulled 15:54
 T-Out 18:06

Comments _____
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total _____
 Total _____
 MP/DST Disc't _____

Initial Open 5
 Initial Shut-In 15
 Final Flow 15
 Final Shut-In 30

Approved By Vern C. Schragg Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55712

Well Name & No. Geneva #1-28 Test No. 3 Date 2-18-14
 Company Lawson Engineering Inc. Elevation 2707 KB 2700 GL
 Address St 2 W State Rd #4 - Olmitz, KS 67564
 Co. Rep / Geo. Vern Schrag Rig HD #3
 Location: Sec. 28 Twp. 18-5 Rge. 28-w Co. Lane State KS

Interval Tested 4239-4248 Zone Tested mid-creek
 Anchor Length 9' Drill Pipe Run 4081 Mud Wt. 9.1
 Top Packer Depth 4235 Drill Collars Run 146 Vis 54
 Bottom Packer Depth 4239 Wt. Pipe Run Ø WL 7.6
 Total Depth 4248 Chlorides 2900 ppm System LCM #1

Blow Description FF: B.O.B. in 3 min.
ISE: Bled off in 2 min. - Surface Blowback - Built to 8 in of Blowback

FF: B.O.B. in 30 seconds.
FSE: Bled off in 2 min. - Surface Blowback - Built to B.O.B. in 24 1/2 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>58</u>	<u>G + Ocm</u>	<u>20%</u>	<u>30%</u>	<u>50%</u>	<u>0%</u>
<u>370</u>	<u>COCG</u>	<u>55%</u>	<u>45%</u>	<u>0%</u>	<u>0%</u>
<u> </u>	<u>GIP = 819</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Rec Total 428 BHT 126 Gravity 38 API RW @ F Chlorides ppm

- (A) Initial Hydrostatic 2153
- (B) First Initial Flow 33
- (C) First Final Flow 69
- (D) Initial Shut-In 816
- (E) Second Initial Flow 86
- (F) Second Final Flow 163
- (G) Final Shut-In 803
- (H) Final Hydrostatic 2128

- Test
- Jars
- Safety Joint
- Circ Sub n/c
- Hourly Standby
- Mileage
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total

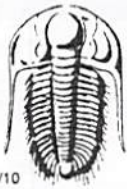
T-On Location 1:30
 T-Started 1:37
 T-Open 3:48
 T-Pulled 4:53
 T-Out 7:29
 Comments

Initial Open 5
 Initial Shut-In 15
 Final Flow 15
 Final Shut-In 30

- Ruined Shale Packer
- Ruined Packer
- Extra Copies
- Sub Total
- Total
- MP/DST Disc't

Approved By Vern Schrag Our Representative Colbert

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **56639**

4/10

Well Name & No. Geneva #1-28 Test No. 4 Date 2-19-4
 Company Larson Engineering Inc Elevation 2707 KB 2700 GL
 Address 562 W. State R4 Olmitz, KS 67564
 Co. Rep / Geo. Vern Schrag Rig HD#3
 Location: Sec. 28 Twp. 18s Rge. 28w Co. Lane State Ks

Interval Tested 4314-4389 Zone Tested Marmaton
 Anchor Length 75 Drill Pipe Run 4174 Mud Wt. 9.1
 Top Packer Depth 4310 Drill Collars Run 146 Vis 54
 Bottom Packer Depth 4314 Wt. Pipe Run 0 WL 7.2
 Total Depth 4389 Chlorides 3500 ppm System LCM 1#
 Blow Description 1/2" Blow.
No return.
Surface blow.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>5</u>	Feet of <u>0.5M</u>			%water <u>100</u>	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 108 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2238</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>7:25</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>7:59</u>
(C) First Final Flow <u>24</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>10:14</u>
(D) Initial Shut-In <u>60</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>11:24</u>
(E) Second Initial Flow <u>24</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>14:47</u>
(F) Second Final Flow <u>26</u>	<input checked="" type="checkbox"/> Mileage <u>54RT</u> 83.70	Comments
(G) Final Shut-In <u>38</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2218</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>5</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>17</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1908.70</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1908.70</u>	

Approved By

[Signature]

Our Representative

[Signature]

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