



DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd 4
Olmitz KS. 67564

ATTN: Vern Schrag

Shapland "A" # 1-27

27-18s-28w Lane,KS

Start Date: 2013.10.24 @ 13:54:00

End Date: 2013.10.24 @ 18:42:24

Job Ticket #: 49067 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.31 @ 13:36:22



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering Inc

27-18s-28w Lane, KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

ATTN: Vern Schrag

Job Ticket: 49067

DST#: 1

Test Start: 2013.10.24 @ 13:54:00

GENERAL INFORMATION:

Formation: **LKC " H "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:51:55

Time Test Ended: 18:42:24

Test Type: Conventional Bottom Hole (Initial)

Tester: Will MacLean

Unit No: 58

Interval: **4100.00 ft (KB) To 4130.00 ft (KB) (TVD)**

Reference Elevations: 2711.00 ft (KB)

Total Depth: 4130.00 ft (KB) (TVD)

2702.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: **8674**

Inside

Press @ Run Depth: 19.73 psig @ 4101.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.24

End Date:

2013.10.24

Last Calib.: 2013.10.24

Start Time: 13:54:00

End Time:

18:42:24

Time On Btm: 2013.10.24 @ 15:51:40

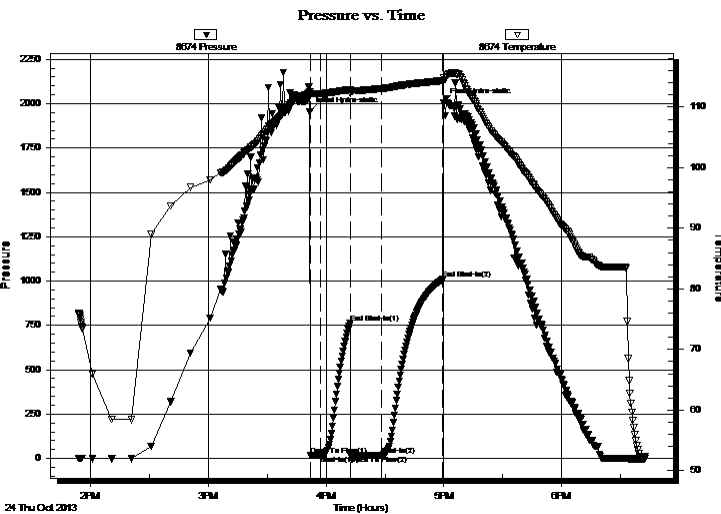
Time Off Btm: 2013.10.24 @ 16:59:40

TEST COMMENT: IF- Weak Surface Blow 1/4"

IS- No Blow

FF- No Blow

FS- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1954.80	112.49	Initial Hydro-static
1	17.54	112.01	Open To Flow (1)
6	18.24	112.23	Shut-In(1)
21	764.23	112.86	End Shut-In(1)
21	17.07	112.27	Open To Flow (2)
37	19.73	113.05	Shut-In(2)
68	1009.94	114.38	End Shut-In(2)
68	2006.86	114.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	100% m with Oil Spots	0.01

Gas Rates

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



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562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49067

DST#: 1

ATTN: Vern Schrag

Test Start: 2013.10.24 @ 13:54:00

GENERAL INFORMATION:

Formation: **LKC " H "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:51:55

Time Test Ended: 18:42:24

Test Type: Conventional Bottom Hole (Initial)

Tester: Will MacLean

Unit No: 58

Interval: **4100.00 ft (KB) To 4130.00 ft (KB) (TVD)**

Reference Elevations: 2711.00 ft (KB)

Total Depth: 4130.00 ft (KB) (TVD)

2702.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: **8355** Outside

Press @ Run Depth: psig @ 4101.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.24

End Date:

2013.10.24

Last Calib.:

2013.10.24

Start Time: 13:54:05

End Time:

18:43:29

Time On Btm:

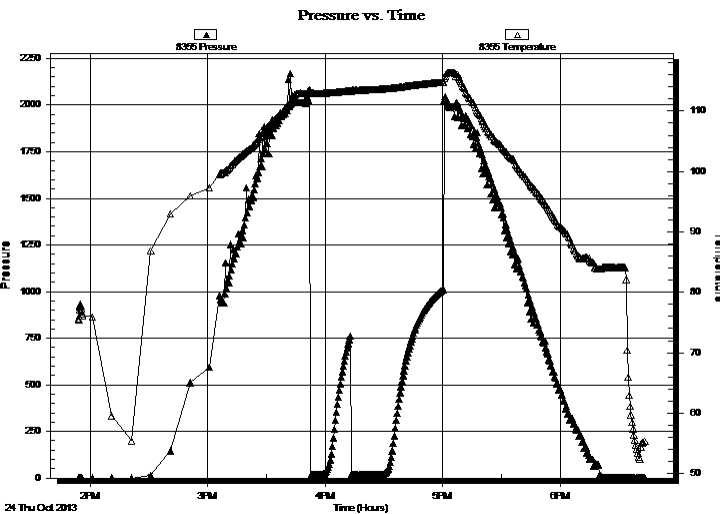
Time Off Btm:

TEST COMMENT: IF- Weak Surface Blow 1/4"

IS- No Blow

FF- No Blow

FS- No Blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
2.00	100% m with Oil Spots	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

27-18s-28w Lane,KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49067

DST#: 1

ATTN: Vern Schrag

Test Start: 2013.10.24 @ 13:54:00

Tool Information

Drill Pipe:	Length: 3951.00 ft	Diameter: 3.80 inches	Volume: 55.42 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 148.00 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 20000.00 lb
			<u>Total Volume: 56.15 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4100.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	57.00 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			4074.00	
Shut In Tool	5.00			4079.00	
Hydraulic tool	5.00			4084.00	
Jars	5.00			4089.00	
Safety Joint	2.00			4091.00	
Packer	5.00			4096.00	27.00 Bottom Of Top Packer
Packer	4.00			4100.00	
Stubb	1.00			4101.00	
Recorder	0.00	8355	Outside	4101.00	
Recorder	0.00	8674	Inside	4101.00	
Perforations	24.00			4125.00	
Bullnose	5.00			4130.00	30.00 Bottom Packers & Anchor

Total Tool Length: 57.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

27-18s-28w Lane, KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49067

DST#: 1

ATTN: Vern Schrag

Test Start: 2013.10.24 @ 13:54:00

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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.52 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	100% m with Oil Spots	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

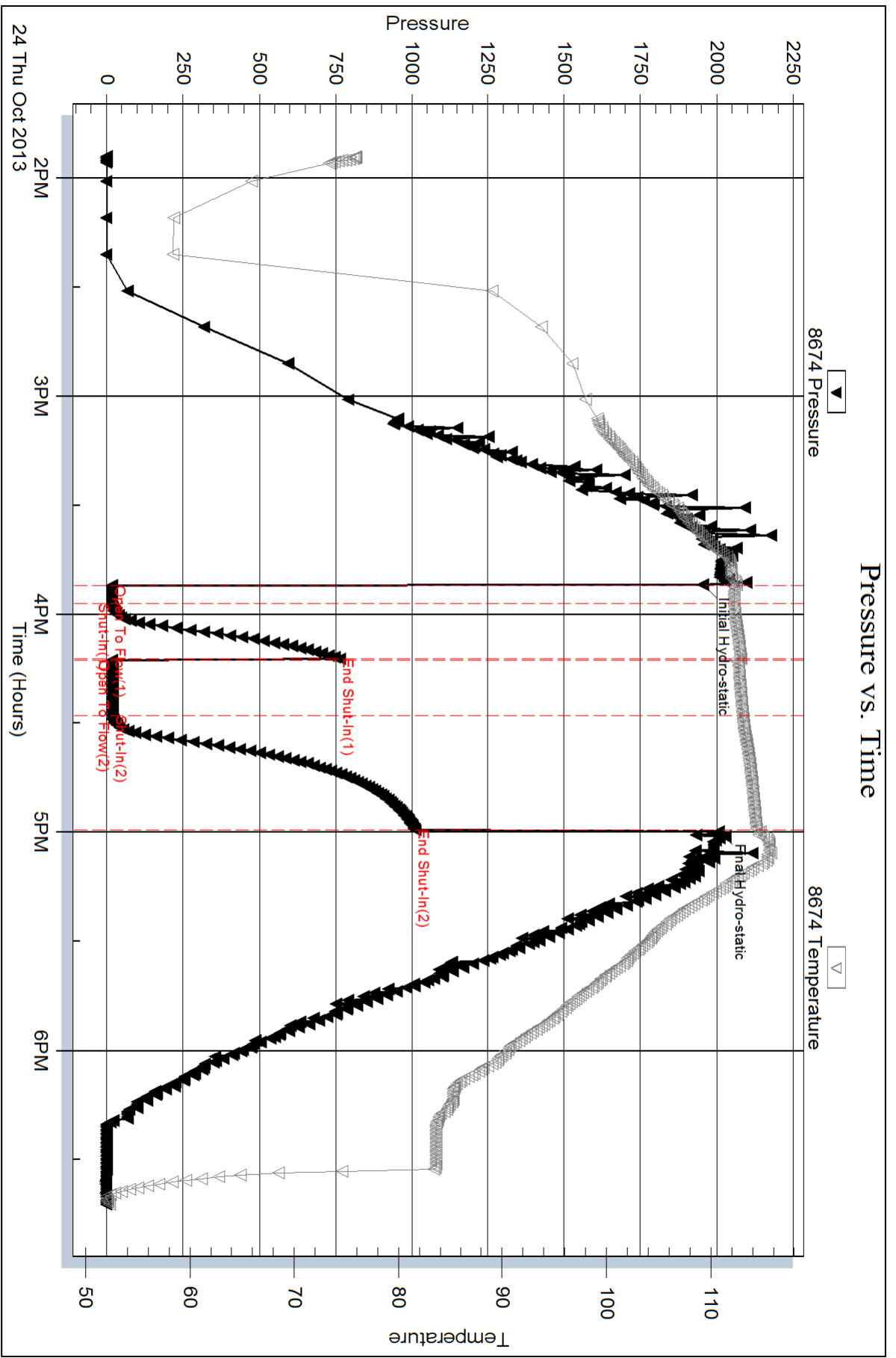
Num Gas Bombs: 0

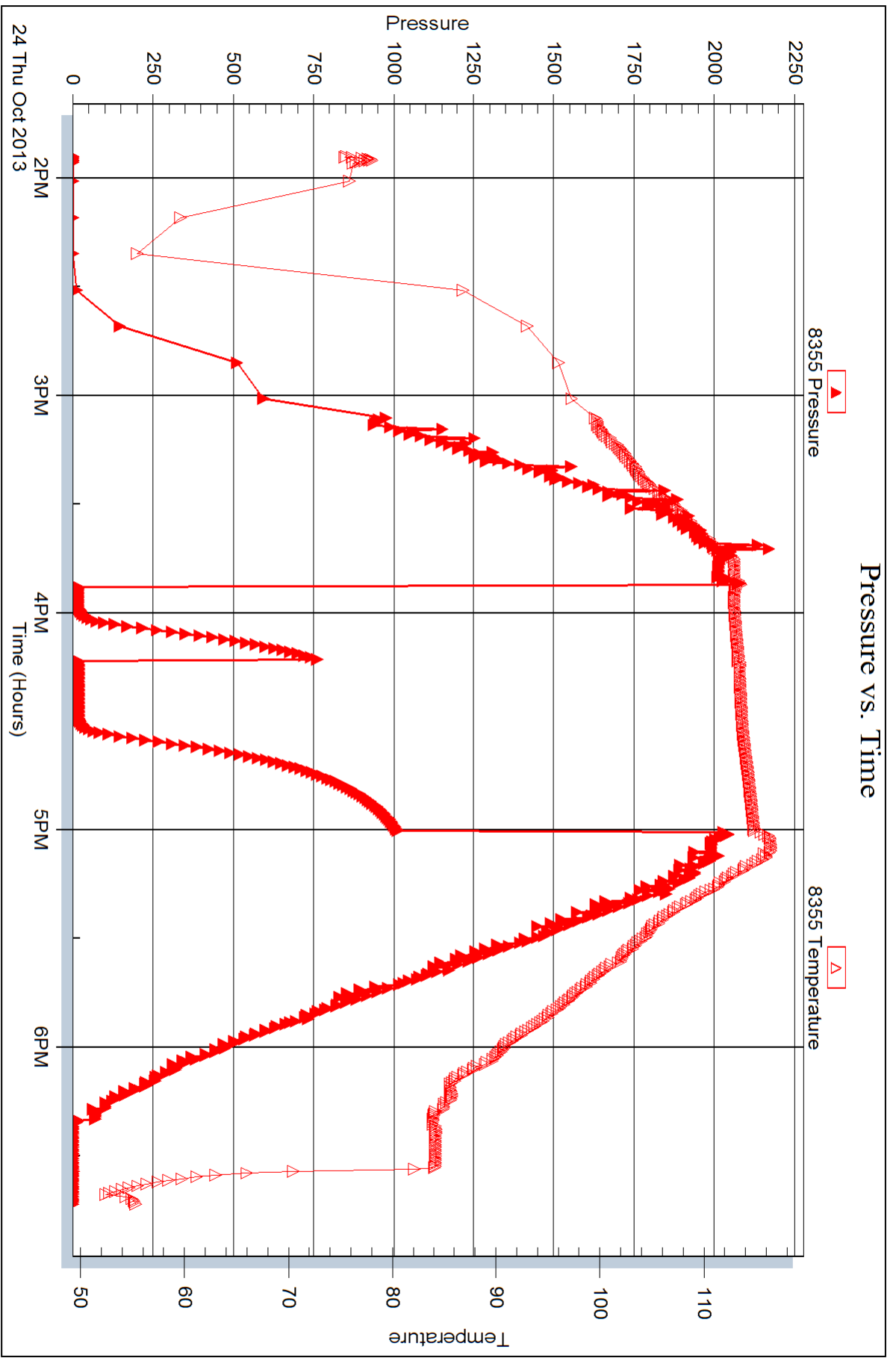
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd 4
Olmitz KS. 67564

ATTN: Vern Schrag

Shapland "A" # 1-27

27-18s-28w Lane,KS

Start Date: 2013.10.25 @ 05:40:00

End Date: 2013.10.25 @ 10:53:09

Job Ticket #: 49068 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.31 @ 13:35:38



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

27-18s-28w Lane, KS
Shapland "A" # 1-27
 Job Ticket: 49068 **DST#: 2**
 Test Start: 2013.10.25 @ 05:40:00

GENERAL INFORMATION:

Formation: **LKC " J "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:26:55
 Time Test Ended: 10:53:09
 Interval: **4173.00 ft (KB) To 4187.00 ft (KB) (TVD)**
 Total Depth: 4187.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Will MacLean
 Unit No: 58
 Reference Elevations: 2711.00 ft (KB)
 2702.00 ft (CF)
 KB to GR/CF: 9.00 ft

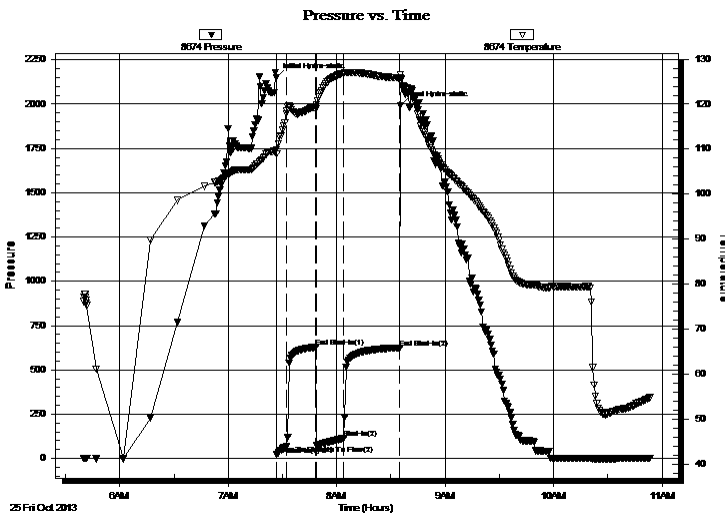
Serial #: 8674

Inside

Press @ Run Depth: 113.76 psig @ 4174.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.25 End Date: 2013.10.25 Last Calib.: 2013.10.25
 Start Time: 05:40:00 End Time: 10:53:09 Time On Btm: 2013.10.25 @ 07:26:40
 Time Off Btm: 2013.10.25 @ 08:35:10

TEST COMMENT: IF- Weak Surface Blow Built to 5"
 IS- No Blow
 FF- Weak Surface Blow Built to BOB in 14 min
 FS- Weak Surface Blow in 8 min Built to 1/2"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2148.07	109.87	Initial Hydro-static
1	24.84	108.95	Open To Flow (1)
6	67.06	118.58	Shut-In(1)
22	627.42	119.30	End Shut-In(1)
23	72.44	119.90	Open To Flow (2)
38	113.76	126.88	Shut-In(2)
69	624.65	125.83	End Shut-In(2)
69	1990.69	126.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	OMCW 2%oil 12%m 86%w	0.30
62.00	OMCW 5%oil 30%m 65%w	0.30
62.00	OGWCM 6%oil 9%g 29%w 56%m	0.65
37.00	GWMCO 4%g 14%w 33%m 49%oil	0.52
15.00	GO 4%g 96%oil	0.21
0.00	134' of GIP	0.00

* Recovery from multiple tests

Gas Rates

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



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Larson Engineering Inc

27-18s-28w Lane, KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49068

DST#: 2

ATTN: Vern Schrag

Test Start: 2013.10.25 @ 05:40:00

GENERAL INFORMATION:

Formation: **LKC " J "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:26:55

Time Test Ended: 10:53:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4173.00 ft (KB) To 4187.00 ft (KB) (TVD)

Reference Elevations: 2711.00 ft (KB)

Total Depth: 4187.00 ft (KB) (TVD)

2702.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8355 Outside

Press @ Run Depth: psig @ 4174.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.25

End Date:

2013.10.25

Last Calib.:

2013.10.25

Start Time: 05:40:05

End Time:

10:54:29

Time On Btm:

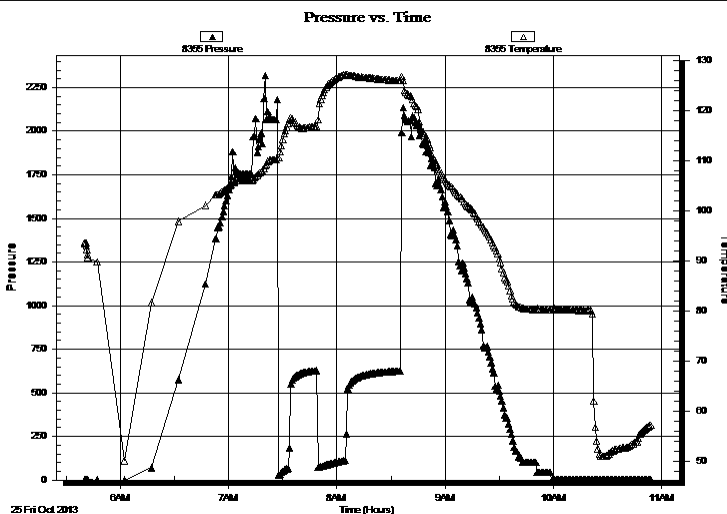
Time Off Btm:

TEST COMMENT: IF- Weak Surface Blow Built to 5"

IS- No Blow

FF- Weak Surface Blow Built to BOB in 14 min

FS- Weak Surface Blow in 8 min Built to 1/2"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	OMCW 2%oil 12%m 86%w	0.30
62.00	OMCW 5%oil 30%m 65%w	0.30
62.00	OGWCM 6%oil 9%g 29%w 56%m	0.65
37.00	GWMCO 4%g 14%w 33%m 49%oil	0.52
15.00	GO 4%g 96%oil	0.21
0.00	134' of GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

27-18s-28w Lane,KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49068

DST#: 2

ATTN: Vern Schrag

Test Start: 2013.10.25 @ 05:40:00

Tool Information

Drill Pipe:	Length: 4014.00 ft	Diameter: 3.80 inches	Volume: 56.31 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 26000.00 lb
Drill Collar:	Length: 148.00 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 14000.00 lb
			<u>Total Volume: 57.04 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4173.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	41.00 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			4147.00	
Shut In Tool	5.00			4152.00	
Hydraulic tool	5.00			4157.00	
Jars	5.00			4162.00	
Safety Joint	2.00			4164.00	
Packer	5.00			4169.00	27.00 Bottom Of Top Packer
Packer	4.00			4173.00	
Stubb	1.00			4174.00	
Recorder	0.00	8355	Outside	4174.00	
Recorder	0.00	8674	Inside	4174.00	
Perforations	8.00			4182.00	
Bullnose	5.00			4187.00	14.00 Bottom Packers & Anchor

Total Tool Length: 41.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

27-18s-28w Lane,KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49068

DST#: 2

ATTN: Vern Schrag

Test Start: 2013.10.25 @ 05:40:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

35000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.52 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	OMCW 2%oil 12%m 86%w	0.305
62.00	OMCW 5%oil 30%m 65%w	0.305
62.00	OGWCM 6%oil 9%g 29%w 56%m	0.651
37.00	GWMCO 4%g 14%w 33%m 49%oil	0.519
15.00	GO 4%g 96%oil	0.210
0.00	134' of GIP	0.000

Total Length: 238.00 ft Total Volume: 1.990 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

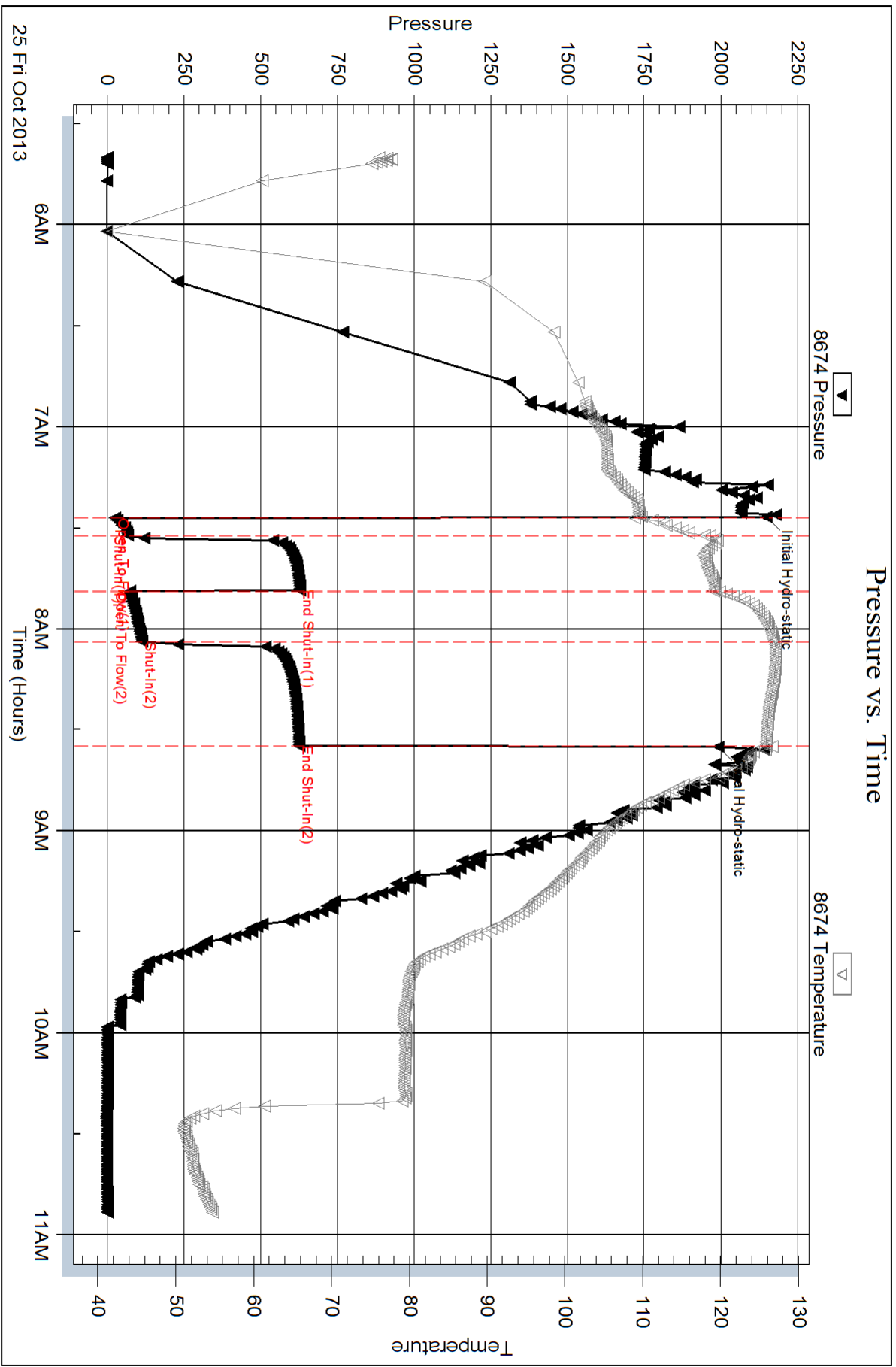
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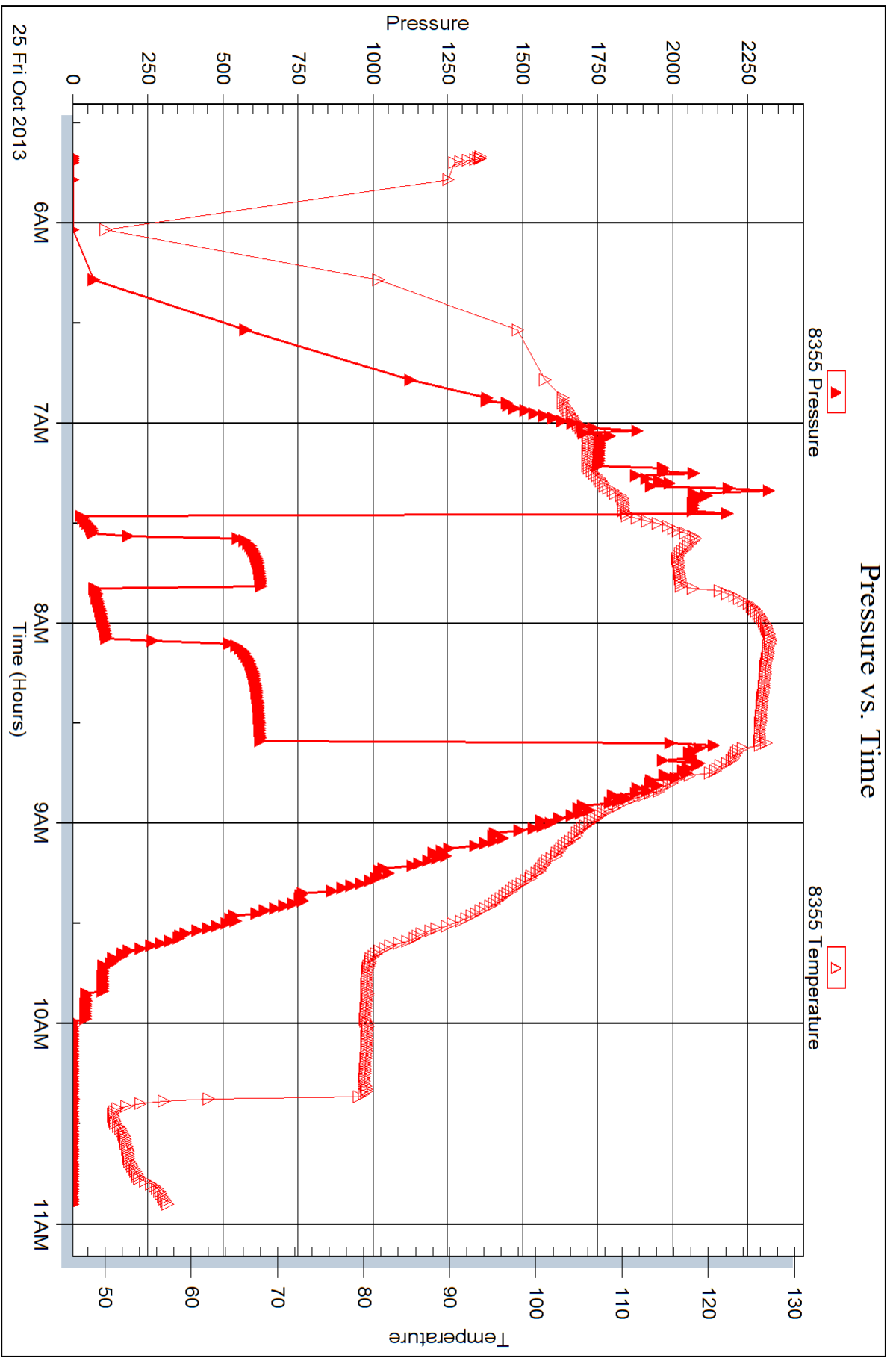
Laboratory Name:

Laboratory Location:

Recovery Comments: API is 36 @ 50f = 37

RW is .233 @ 58f = 35000







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd 4
Olmitz KS. 67564

ATTN: Vern Schrag

Shapland "A" # 1-27

27-18s-28w Lane,KS

Start Date: 2013.10.25 @ 18:50:00

End Date: 2013.10.26 @ 00:19:39

Job Ticket #: 49069 DST #: 3

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

Printed: 2013.10.31 @ 13:35:05



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Engineering Inc

27-18s-28w Lane, KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49069

DST#: 3

ATTN: Vern Schrag

Test Start: 2013.10.25 @ 18:50:00

GENERAL INFORMATION:

Formation: **LKC " K "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:33:10

Time Test Ended: 00:19:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: **4201.00 ft (KB) To 4215.00 ft (KB) (TVD)**

Reference Elevations: 2711.00 ft (KB)

Total Depth: 4215.00 ft (KB) (TVD)

2702.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: **8674**

Inside

Press @ Run Depth: 34.13 psig @ 4202.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.25

End Date:

2013.10.26

Last Calib.:

2013.10.26

Start Time: 18:50:00

End Time:

00:19:39

Time On Btm:

2013.10.25 @ 20:32:55

Time Off Btm:

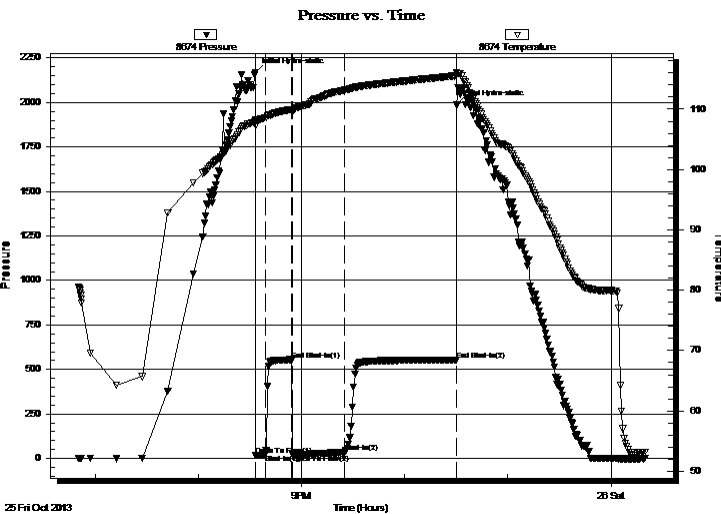
2013.10.25 @ 22:30:10

TEST COMMENT: IF- Weak Surface Blow Built to 1/2"

IS- No Blow

FF- Weak Surface Blow Built to 1 1/2"

FS- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2168.39	108.23	Initial Hydro-static
1	17.68	107.32	Open To Flow (1)
6	20.82	108.56	Shut-In(1)
22	554.41	109.95	End Shut-In(1)
22	21.88	109.75	Open To Flow (2)
52	34.13	113.14	Shut-In(2)
117	553.73	115.53	End Shut-In(2)
118	1984.96	116.08	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
29.00	WOGCM 2%w 5%oil 6%g 87%m	0.14
1.00	100%oil	0.00

* Recovery from multiple tests

Gas Rates

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



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DRILL STEM TEST REPORT

Larson Engineering Inc

27-18s-28w Lane, KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

ATTN: Vern Schrag

Job Ticket: 49069

DST#: 3

Test Start: 2013.10.25 @ 18:50:00

GENERAL INFORMATION:

Formation: **LKC " K "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:33:10

Time Test Ended: 00:19:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4201.00 ft (KB) To 4215.00 ft (KB) (TVD)

Reference Elevations: 2711.00 ft (KB)

Total Depth: 4215.00 ft (KB) (TVD)

2702.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8355 Outside

Press @ RunDepth: psig @ 4202.00 ft (KB)

Start Date: 2013.10.25

End Date: 2013.10.26

Capacity: 8000.00 psig

Last Calib.: 2013.10.26

Start Time: 18:50:05

End Time: 00:20:44

Time On Btm:

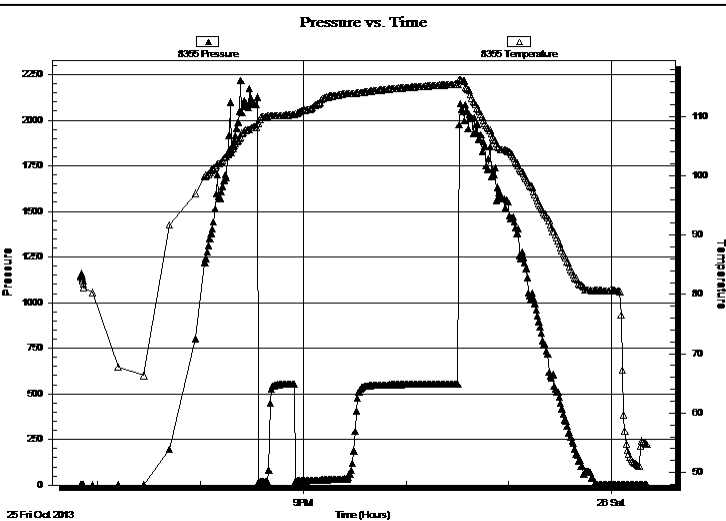
Time Off Btm:

TEST COMMENT: IF- Weak Surface Blow Built to 1/2"

IS- No Blow

FF- Weak Surface Blow Built to 1 1/2"

FS- No Blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
29.00	WOGCM 2%w 5%oil 6%g 87%m	0.14
1.00	100%oil	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

27-18s-28w Lane,KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49069

DST#: 3

ATTN: Vern Schrag

Test Start: 2013.10.25 @ 18:50:00

Tool Information

Drill Pipe:	Length: 4044.00 ft	Diameter: 3.80 inches	Volume: 56.73 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 148.00 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 10000.00 lb
			<u>Total Volume: 57.46 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4201.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	41.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4175.00	
Shut In Tool	5.00			4180.00	
Hydraulic tool	5.00			4185.00	
Jars	5.00			4190.00	
Safety Joint	2.00			4192.00	
Packer	5.00			4197.00	27.00 Bottom Of Top Packer
Packer	4.00			4201.00	
Stubb	1.00			4202.00	
Recorder	0.00	8355	Outside	4202.00	
Recorder	0.00	8674	Inside	4202.00	
Perforations	8.00			4210.00	
Bullnose	5.00			4215.00	14.00 Bottom Packers & Anchor

Total Tool Length: 41.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

27-18s-28w Lane, KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49069

DST#: 3

ATTN: Vern Schrag

Test Start: 2013.10.25 @ 18:50:00

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.54 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
29.00	WOGCM 2%w 5%oil 6%g 87%m	0.143
1.00	100%oil	0.005

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

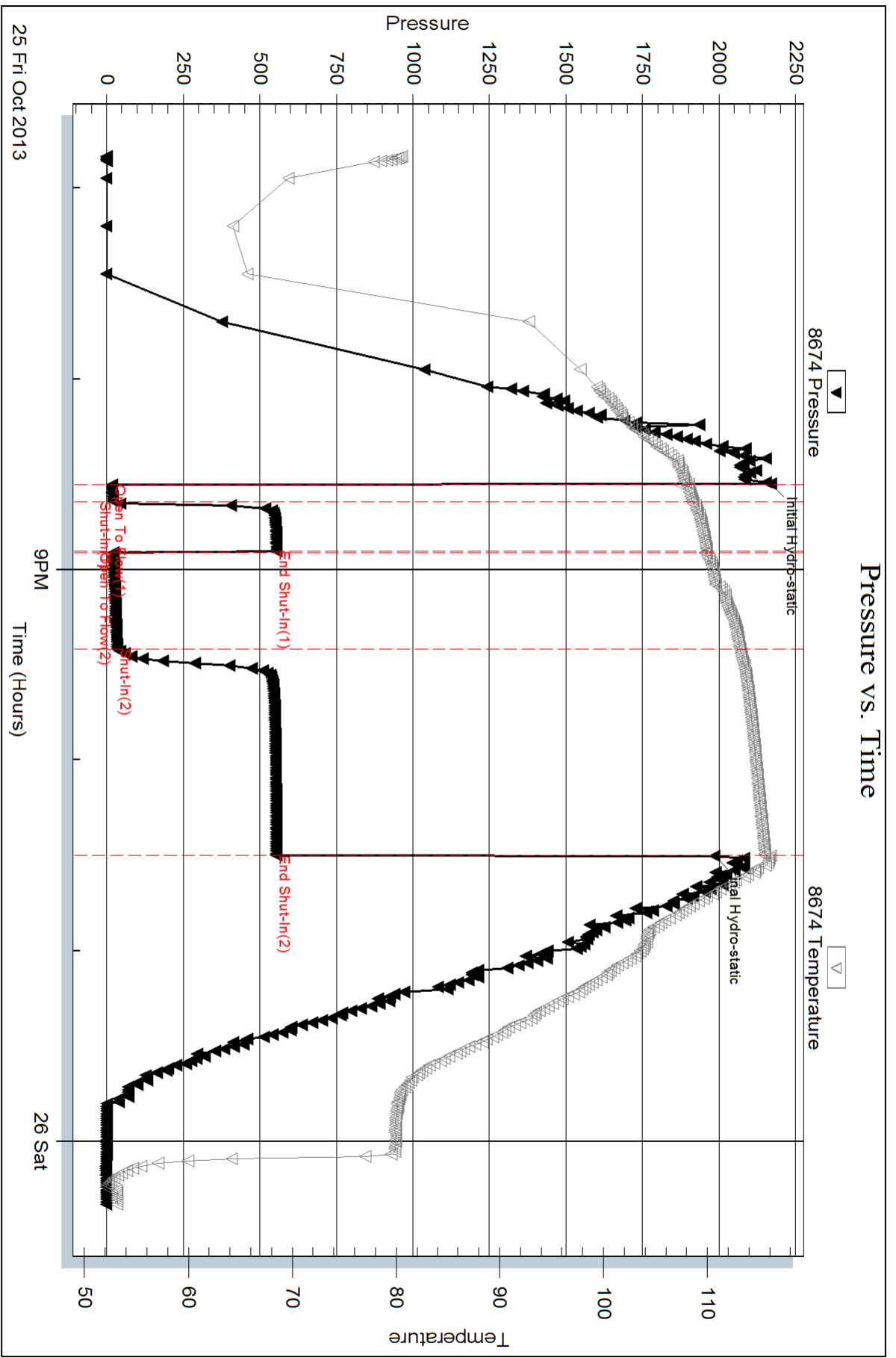
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

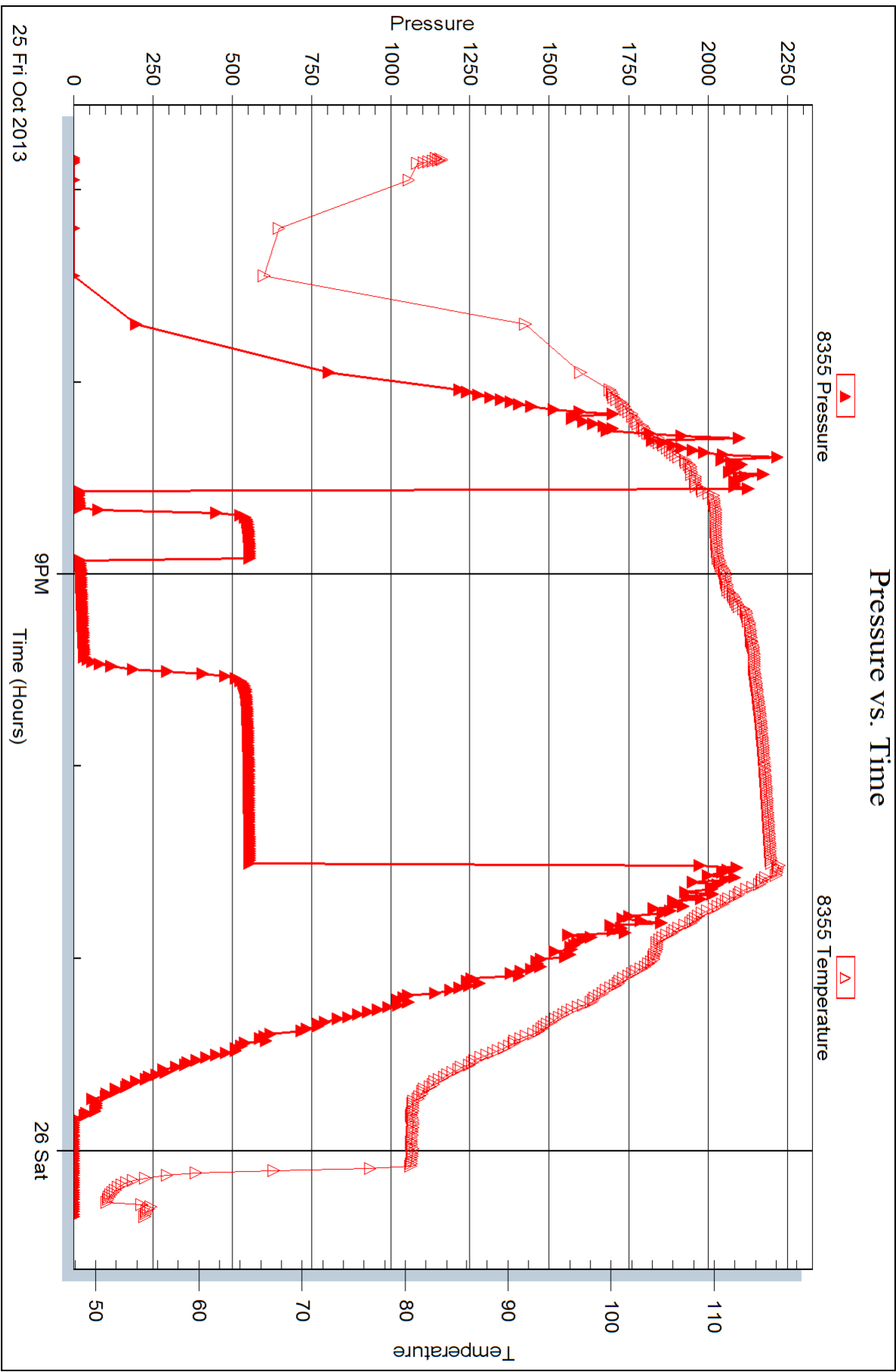


Serial #: 8355

Outside Larson Engineering Inc

Shapland "A" # 1-27

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd 4
Olmitz KS. 67564

ATTN: Vern Schrag

Shapland "A" # 1-27

27-18s-28w Lane,KS

Start Date: 2013.10.26 @ 06:46:00

End Date: 2013.10.26 @ 12:27:09

Job Ticket #: 49070 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.31 @ 13:34:29



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

27-18s-28w Lane, KS
Shapland "A" # 1-27
 Job Ticket: 49070 **DST#: 4**
 Test Start: 2013.10.26 @ 06:46:00

GENERAL INFORMATION:

Formation: **LKC " K "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:34:10
 Time Test Ended: 12:27:09
 Interval: **4214.00 ft (KB) To 4220.00 ft (KB) (TVD)**
 Total Depth: 4220.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Will MacLean
 Unit No: 58
 Reference Elevations: 2711.00 ft (KB)
 2702.00 ft (CF)
 KB to GR/CF: 9.00 ft

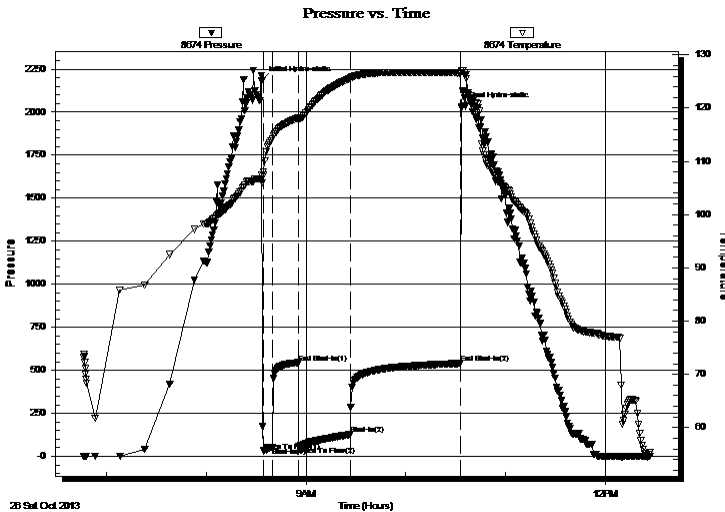
Serial #: 8674

Inside

Press @ Run Depth: 128.65 psig @ 4215.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.26 End Date: 2013.10.26 Last Calib.: 2013.10.26
 Start Time: 06:46:00 End Time: 12:27:09 Time On Btm: 2013.10.26 @ 08:33:25
 Time Off Btm: 2013.10.26 @ 10:33:25

TEST COMMENT: IF- Weak Surface Blow Built to 3 3/4"
 IS- No Blow
 FF- Weak Surface Blow Built to 7 1/4"
 FS- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2183.81	107.48	Initial Hydro-static
1	32.28	107.36	Open To Flow (1)
7	54.61	114.29	Shut-In(1)
22	544.23	118.09	End Shut-In(1)
22	56.91	117.80	Open To Flow (2)
54	128.65	125.58	Shut-In(2)
120	539.79	126.59	End Shut-In(2)
120	2033.43	127.08	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	MCW 9% <i>m</i> 91% <i>w</i>	0.61
125.00	MCW 35% <i>m</i> 65% <i>w</i> with Skin of Oil on	1.53

* 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

27-18s-28w Lane,KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49070

DST#: 4

ATTN: Vern Schrag

Test Start: 2013.10.26 @ 06:46:00

Tool Information

Drill Pipe:	Length: 4045.00 ft	Diameter: 3.80 inches	Volume: 56.74 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	28000.00 lb
Drill Collar:	Length: 148.00 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose:	8000.00 lb
			<u>Total Volume: 57.47 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	4214.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	6.00 ft				
Tool Length:	33.00 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			4188.00	
Shut In Tool	5.00			4193.00	
Hydraulic tool	5.00			4198.00	
Jars	5.00			4203.00	
Safety Joint	2.00			4205.00	
Packer	5.00			4210.00	27.00 Bottom Of Top Packer
Packer	4.00			4214.00	
Stubb	1.00			4215.00	
Recorder	0.00	8355	Outside	4215.00	
Recorder	0.00	8674	Inside	4215.00	
Bullnose	5.00			4220.00	6.00 Bottom Packers & Anchor

Total Tool Length: 33.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

27-18s-28w Lane, KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49070

DST#: 4

ATTN: Vern Schrag

Test Start: 2013.10.26 @ 06:46:00

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.56 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	MCW 9% _m 91% _w	0.610
125.00	MCW 35% _m 65% _w with Skim of Oil on Top	1.535

Total Length: 249.00 ft Total Volume: 2.145 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

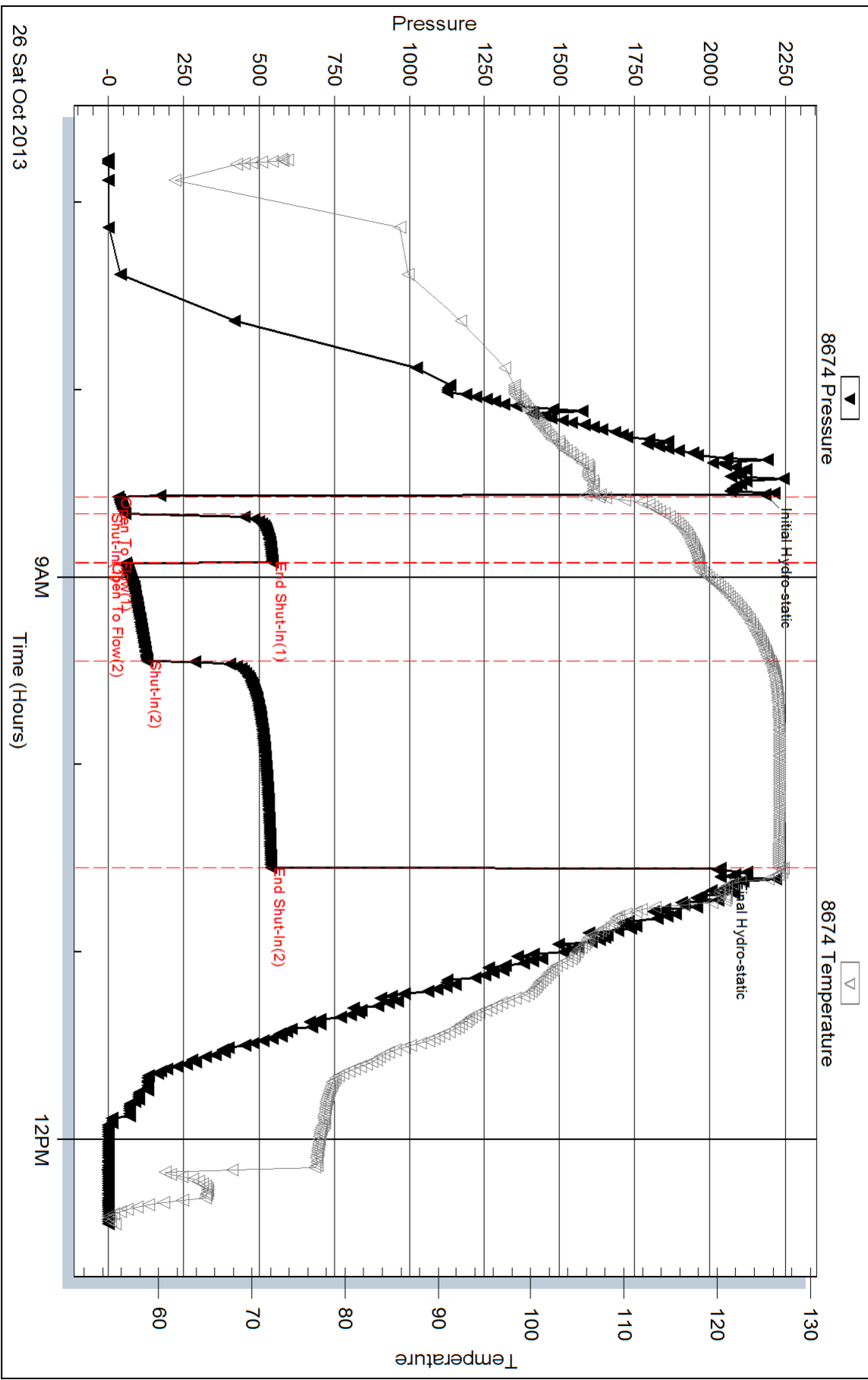
Serial #:

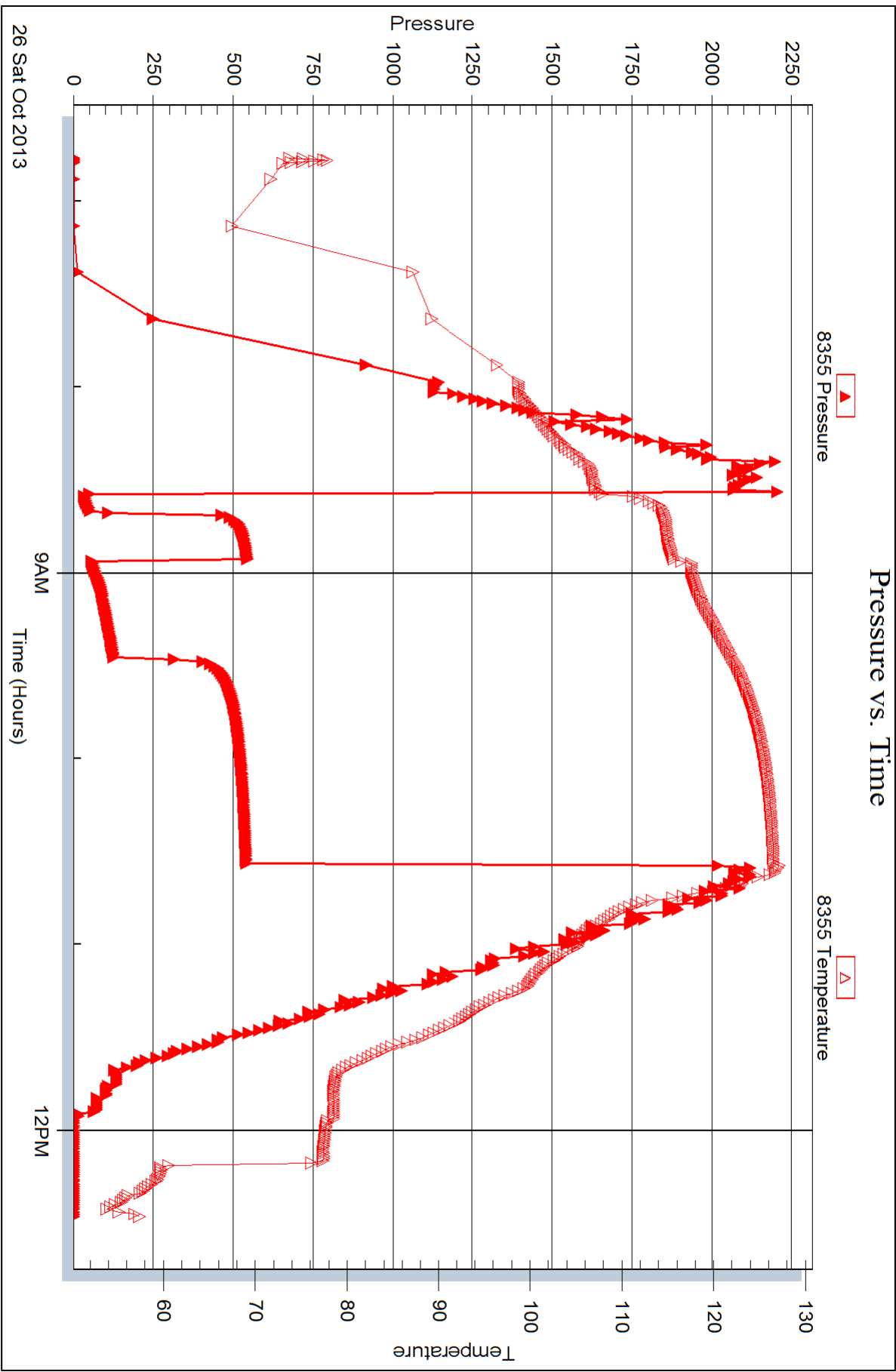
Laboratory Name:

Laboratory Location:

Recovery Comments: RW is .186 @ 60f = 42,200

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd 4
Olmitz KS. 67564

ATTN: Vern Schrag

Shapland "A" # 1-27

27-18s-28w Lane,KS

Start Date: 2013.10.26 @ 22:42:00

End Date: 2013.10.27 @ 04:32:39

Job Ticket #: 49071 DST #: 5

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

Printed: 2013.10.31 @ 13:33:58



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

27-18s-28w Lane, KS
Shapland "A" # 1-27
 Job Ticket: 49071 **DST#: 5**
 Test Start: 2013.10.26 @ 22:42:00

GENERAL INFORMATION:

Formation: **LKC " L "**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 00:24:55 Tester: Will MacLean
 Time Test Ended: 04:32:39 Unit No: 58
 Interval: **4239.00 ft (KB) To 4251.00 ft (KB) (TVD)** Reference Elevations: 2711.00 ft (KB)
 Total Depth: 4239.00 ft (KB) (TVD) 2702.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 9.00 ft

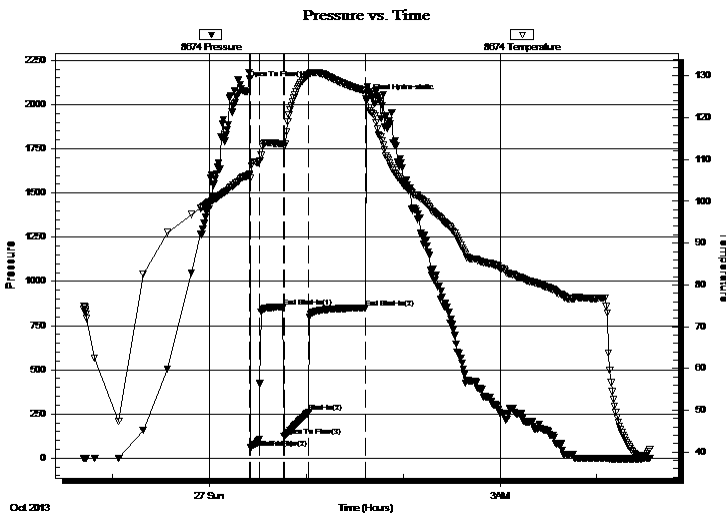
Serial #: 8674

Inside

Press @ Run Depth: 106.57 psig @ 4241.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.26 End Date: 2013.10.27 Last Calib.: 2013.10.27
 Start Time: 22:42:00 End Time: 04:32:39 Time On Btm:
 Time Off Btm: 2013.10.27 @ 01:36:55

TEST COMMENT: IF- Surface Blow Built to BOB in 1 1/4min
 IS- Weak Surface Blow Built to 4 3/4"
 FF- Surface Blow Built to BOB in 2 3/4min
 FS- Weak Surface Blow Built to 1 3/4"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2147.33	106.46	Open To Flow (1)
1	58.61	105.54	Open To Flow (2)
6	106.57	109.38	Shut-In(1)
21	856.30	113.77	End Shut-In(1)
22	122.41	113.27	Open To Flow (3)
37	260.14	130.33	Shut-In(2)
72	849.99	126.42	End Shut-In(2)
72	2032.78	126.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	OGCM 15%oil 40%g 45%m	0.30
124.00	MGCO 7%m 45%g 48%oil	0.96
434.00	MGCO 3%m 40%g 57%oil	6.09
250.00	GO 35%g 65%oil	3.51
0.00	742' of GIP	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

27-18s-28w Lane, KS

Shapland "A" # 1-27

Job Ticket: 49071

DST#: 5

Test Start: 2013.10.26 @ 22:42:00

GENERAL INFORMATION:

Formation: **LKC " L "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:24:55

Time Test Ended: 04:32:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4239.00 ft (KB) To 4251.00 ft (KB) (TVD)

Reference Elevations: 2711.00 ft (KB)

Total Depth: 4239.00 ft (KB) (TVD)

2702.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: 8355 Outside

Press @ Run Depth: psig @ 4241.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.26

End Date:

2013.10.27

Last Calib.:

2013.10.27

Start Time: 22:42:05

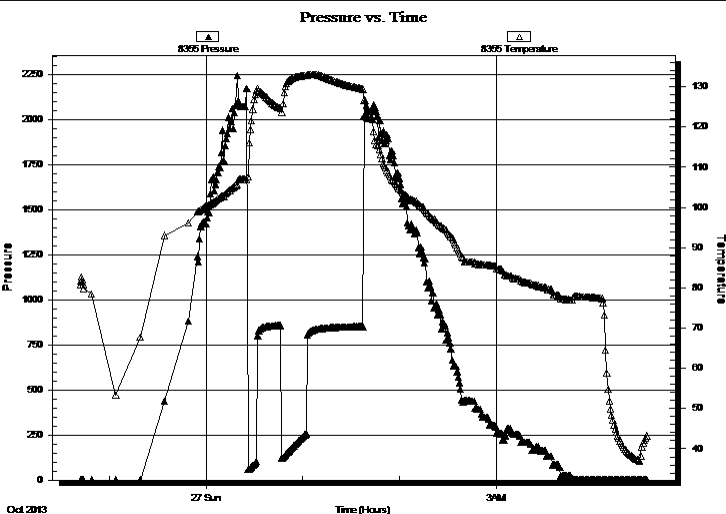
End Time:

04:33:44

Time On Btm:

Time Off Btm:

TEST COMMENT: IF- Surface Blow Built to BOB in 1 1/4min
 IS- Weak Surface Blow Built to 4 3/4"
 FF- Surface Blow Built to BOB in 2 3/4min
 FS- Weak Surface Blow Built to 1 3/4"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	OGCM 15%oil 40%g 45%m	0.30
124.00	MGCO 7%m 45%g 48%oil	0.96
434.00	MGCO 3%m 40%g 57%oil	6.09
250.00	GO 35%g 65%oil	3.51
0.00	742' of GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

27-18s-28w Lane,KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49071

DST#: 5

ATTN: Vern Schrag

Test Start: 2013.10.26 @ 22:42:00

Tool Information

Drill Pipe:	Length: 4076.00 ft	Diameter: 3.80 inches	Volume: 57.18 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 26000.00 lb
Drill Collar:	Length: 148.00 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 12000.00 lb
			<u>Total Volume: 57.91 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4239.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	39.00 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	
Perforations	1.00			4241.00	
Recorder	0.00	8355	Outside	4241.00	
Recorder	0.00	8674	Inside	4241.00	
Perforations	5.00			4246.00	
Bullnose	5.00			4251.00	12.00 Bottom Packers & Anchor

Total Tool Length: 39.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

27-18s-28w Lane,KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49071

DST#: 5

ATTN: Vern Schrag

Test Start: 2013.10.26 @ 22:42:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.94 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 bbbl
62.00	OGCM 15%oil 40%g 45%m	0.305
124.00	MGCO 7%m 45%g 48%oil	0.956
434.00	MGCO 3%m 40%g 57%oil	6.088
250.00	GO 35%g 65%oil	3.507
0.00	742' of GIP	0.000

Total Length: 870.00 ft Total Volume: 10.856 bbl

Num Fluid Samples: 0

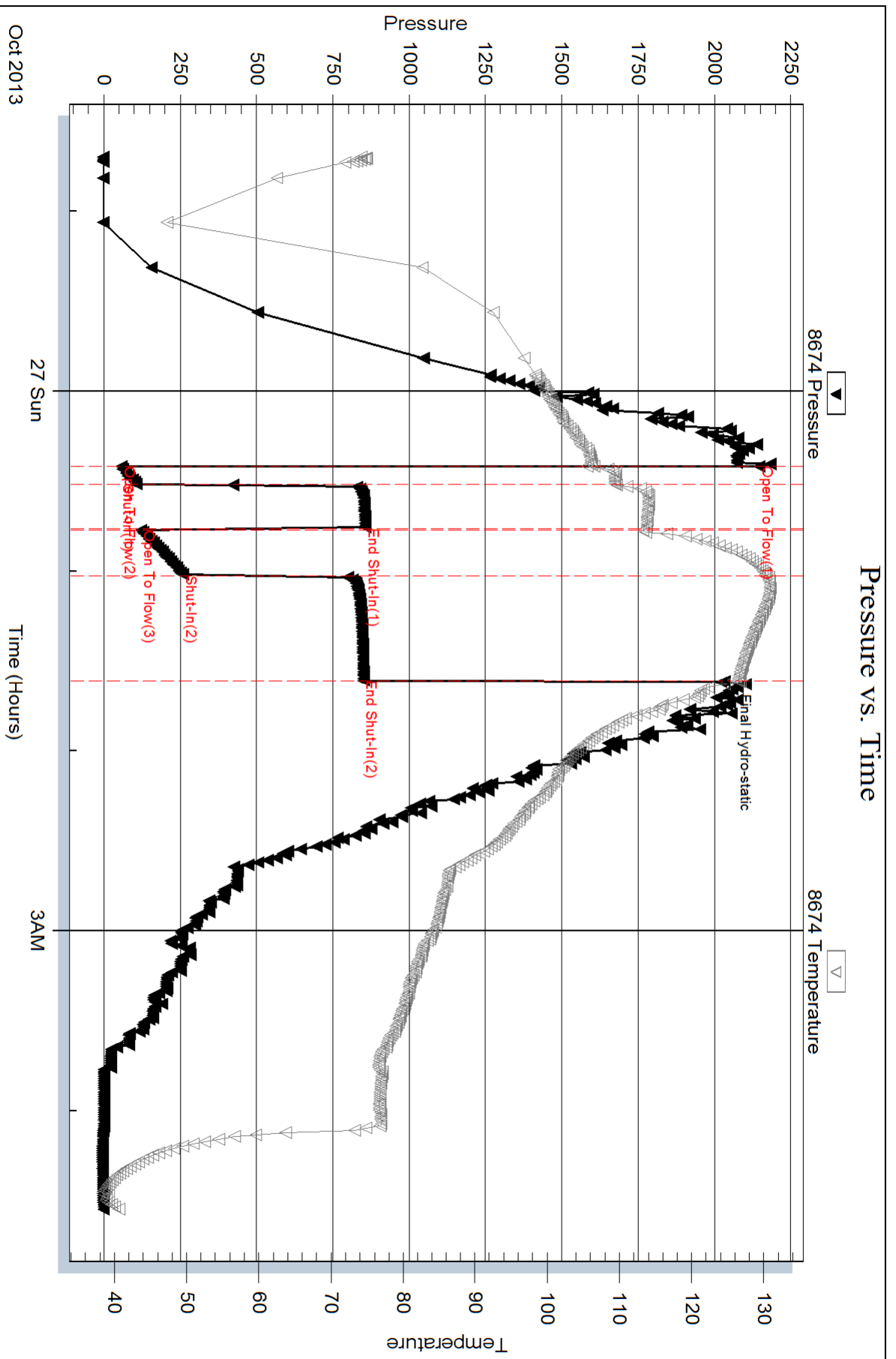
Num Gas Bombs: 0

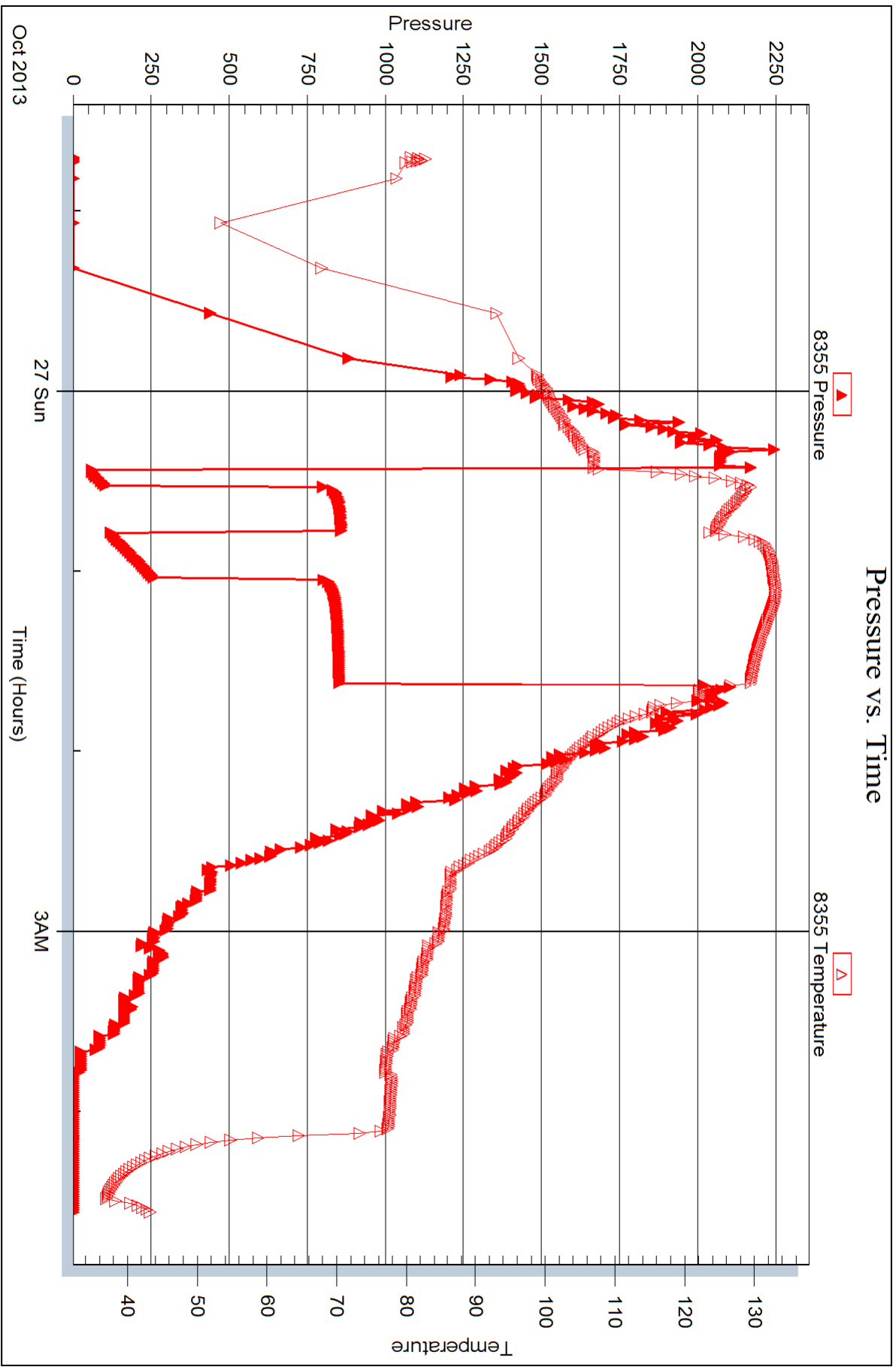
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API is 35 @ 40f = 37







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd 4
Olmitz KS. 67564

ATTN: Vern Schrag

Shapland "A" # 1-27

27-18s-28w Lane,KS

Start Date: 2013.10.28 @ 02:36:00

End Date: 2013.10.28 @ 07:28:24

Job Ticket #: 49072 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.31 @ 13:33:30

Larson Engineering Inc

27-18s-28w Lane,KS

Shapland "A" # 1-27

DST # 6

Marmanton

2013.10.28



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

27-18s-28w Lane, KS
Shapland "A" # 1-27
 Job Ticket: 49072 **DST#: 6**
 Test Start: 2013.10.28 @ 02:36:00

GENERAL INFORMATION:

Formation: **Marmanton**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:33:40
 Time Test Ended: 07:28:24
 Interval: **4296.00 ft (KB) To 4390.00 ft (KB) (TVD)**
 Total Depth: 4390.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Will MacLean
 Unit No: 58
 Reference Elevations: 2711.00 ft (KB)
 2702.00 ft (CF)
 KB to GR/CF: 9.00 ft

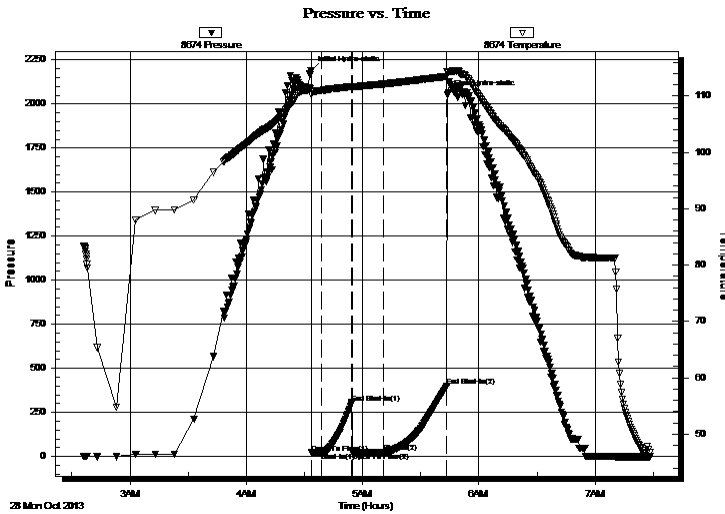
Serial #: 8674

Inside

Press @ Run Depth: 23.53 psig @ 4297.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.28 End Date: 2013.10.28 Last Calib.: 2013.10.28
 Start Time: 02:36:00 End Time: 07:28:24 Time On Btm: 2013.10.28 @ 04:33:25
 Time Off Btm: 2013.10.28 @ 05:43:40

TEST COMMENT: IF- Weak Surface Blow Built to 1/2"
 IS- No Blow
 FF- Weak Surface Blow
 FS- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2190.40	111.34	Initial Hydro-static
1	20.68	110.22	Open To Flow (1)
6	21.29	110.99	Shut-In(1)
21	304.64	111.68	End Shut-In(1)
22	21.97	111.51	Open To Flow (2)
38	23.53	112.11	Shut-In(2)
70	399.11	113.46	End Shut-In(2)
71	2051.06	114.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	WCM 2%w 98%m with Skim of Oil on	T0.05

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering Inc

27-18s-28w Lane, KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

ATTN: Vern Schrag

Job Ticket: 49072

DST#: 6

Test Start: 2013.10.28 @ 02:36:00

GENERAL INFORMATION:

Formation: **Marmanton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:33:40

Time Test Ended: 07:28:24

Interval: **4296.00 ft (KB) To 4390.00 ft (KB) (TVD)**

Total Depth: 4390.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Reference Elevations: 2711.00 ft (KB)

2702.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: **8355** Outside

Press @ Run Depth: psig @ 4297.00 ft (KB)

Start Date: 2013.10.28 End Date: 2013.10.28

Start Time: 02:36:05 End Time: 07:29:29

Capacity: 8000.00 psig

Last Calib.: 2013.10.28

Time On Btm:

Time Off Btm:

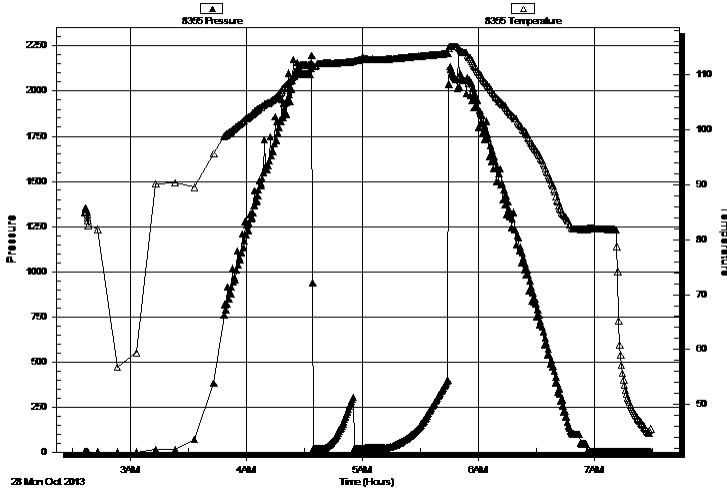
TEST COMMENT: IF- Weak Surface Blow Built to 1/2"

IS- No Blow

FF- Weak Surface Blow

FS- No Blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	WCM 2%w 98%m with Skim of Oil on	T0.05

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering Inc

27-18s-28w Lane,KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49072

DST#: 6

ATTN: Vern Schrag

Test Start: 2013.10.28 @ 02:36:00

Tool Information

Drill Pipe:	Length: 4139.00 ft	Diameter: 3.80 inches	Volume: 58.06 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	28000.00 lb
Drill Collar:	Length: 148.00 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose:	10000.00 lb
			<u>Total Volume: 58.79 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	4296.00 ft			Final	56000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	94.00 ft				
Tool Length:	121.00 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			4270.00	
Shut In Tool	5.00			4275.00	
Hydraulic tool	5.00			4280.00	
Jars	5.00			4285.00	
Safety Joint	2.00			4287.00	
Packer	5.00			4292.00	27.00 Bottom Of Top Packer
Packer	4.00			4296.00	
Stubb	1.00			4297.00	
Recorder	0.00	8355	Outside	4297.00	
Recorder	0.00	8674	Inside	4297.00	
Perforations	24.00			4321.00	
Change Over Sub	1.00			4322.00	
Drill Pipe	62.00			4384.00	
Change Over Sub	1.00			4385.00	
Bullnose	5.00			4390.00	94.00 Bottom Packers & Anchor

Total Tool Length: 121.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

27-18s-28w Lane,KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49072

DST#: 6

ATTN: Vern Schrag

Test Start: 2013.10.28 @ 02:36:00

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: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.96 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	WCM 2%w 98%m with Skim of Oil on Top	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

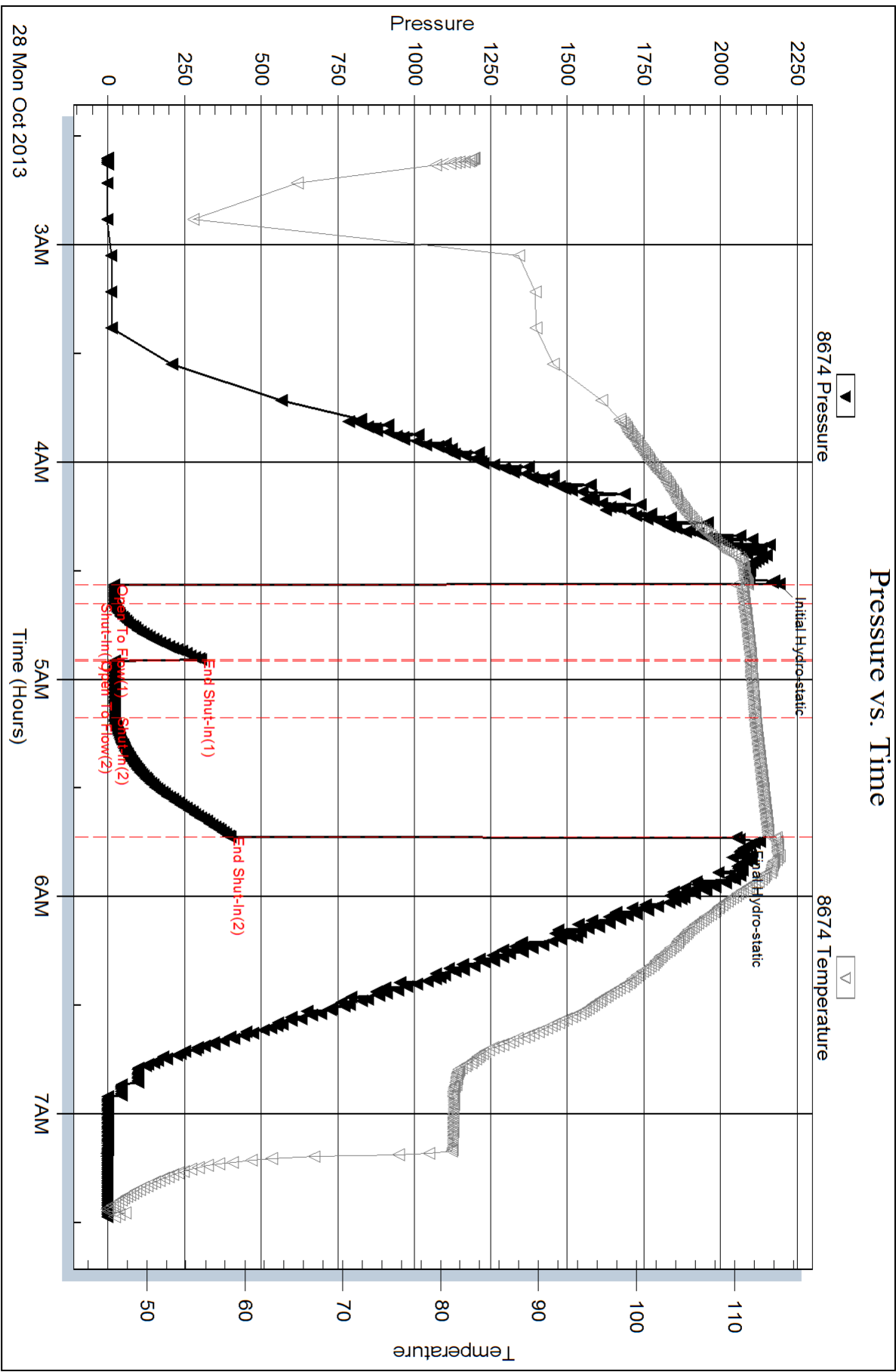
Num Gas Bombs: 0

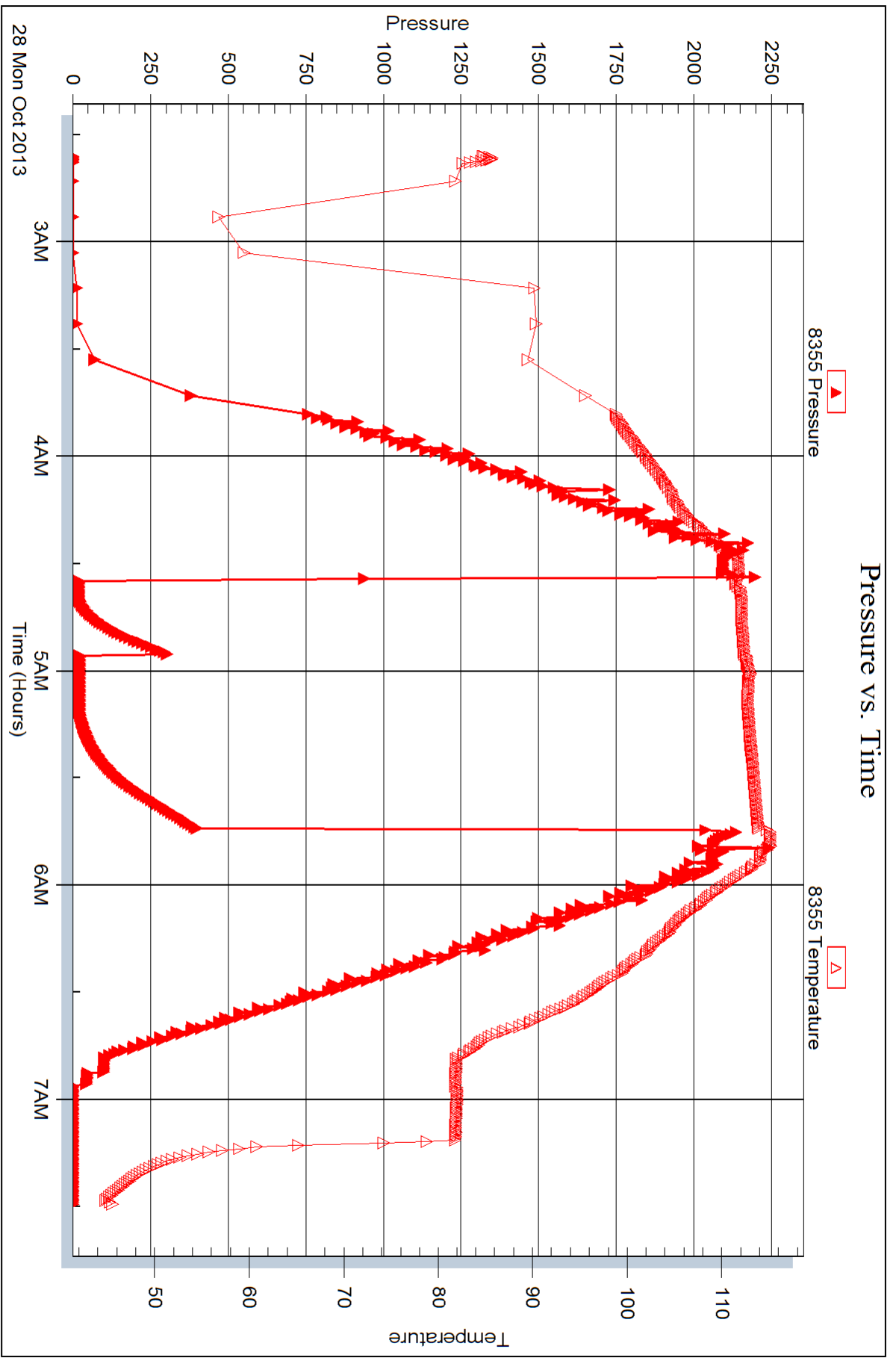
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Larson Engineering Inc**

562 W. State Rd 4
Olmitz KS. 67564

ATTN: Vern Schrag

Shapland "A" # 1-27

27-18s-28w Lane,KS

Start Date: 2013.10.29 @ 09:04:00

End Date: 2013.10.29 @ 14:39:54

Job Ticket #: 49073 DST #: 7

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

Printed: 2013.10.31 @ 13:32:46



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larson Engineering Inc

27-18s-28w Lane, KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

ATTN: Vern Schrag

Job Ticket: 49073

DST#: 7

Test Start: 2013.10.29 @ 09:04:00

GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:58:40

Time Test Ended: 14:39:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: **4396.00 ft (KB) To 4535.00 ft (KB) (TVD)**

Reference Elevations: 2711.00 ft (KB)

Total Depth: 4535.00 ft (KB) (TVD)

2702.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

Serial #: **8674**

Inside

Press @ Run Depth: 32.89 psig @ 4398.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.29

End Date:

2013.10.29

Last Calib.: 2013.10.29

Start Time: 09:04:00

End Time:

14:39:54

Time On Btm: 2013.10.29 @ 10:58:25

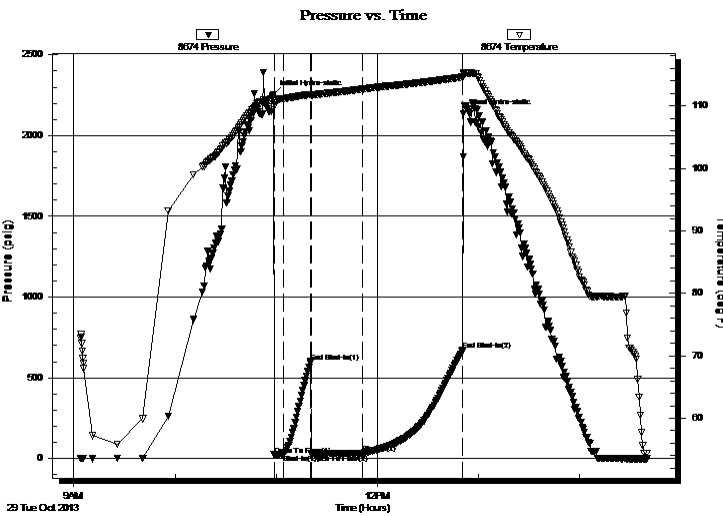
Time Off Btm: 2013.10.29 @ 12:51:10

TEST COMMENT: IF- Weak Surface Blow Built to 3/4"

IS- No Blow

FF- Weak Surface

FS- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2254.29	110.85	Initial Hydro-static
1	22.92	109.89	Open To Flow (1)
6	25.07	111.18	Shut-In(1)
22	600.02	111.85	End Shut-In(1)
23	27.48	111.63	Open To Flow (2)
53	32.89	112.68	Shut-In(2)
113	671.55	114.62	End Shut-In(2)
113	2134.02	115.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	100% m with Oil Spots	0.07

* 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

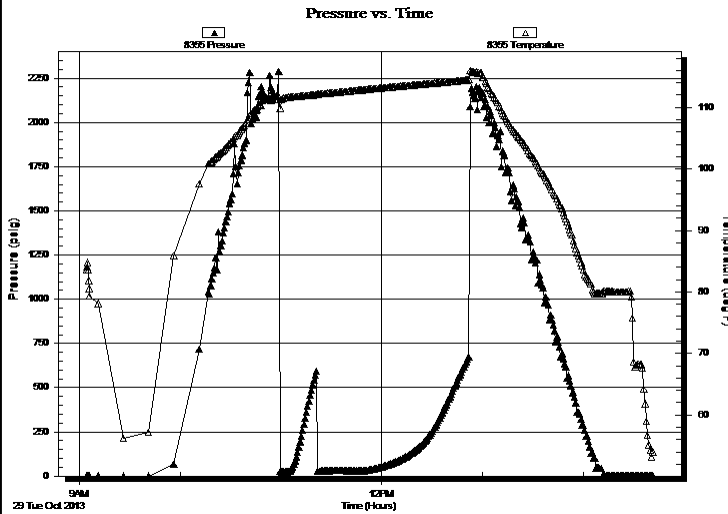
27-18s-28w Lane, KS
 Shapland "A" # 1-27
 Job Ticket: 49073 **DST#: 7**
 Test Start: 2013.10.29 @ 09:04:00

GENERAL INFORMATION:

Formation: **Cherokee**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 10:58:40 Tester: Will MacLean
 Time Test Ended: 14:39:54 Unit No: 58
Interval: 4396.00 ft (KB) To 4535.00 ft (KB) (TVD) Reference Elevations: 2711.00 ft (KB)
 Total Depth: 4535.00 ft (KB) (TVD) 2702.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 9.00 ft

Serial #: 8355 **Outside**
 Press @ Run Depth: psig @ 4398.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.29 End Date: 2013.10.29 Last Calib.: 2013.10.29
 Start Time: 09:04:05 End Time: 14:41:14 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF- Weak Surface Blow Built to 3/4"
 IS- No Blow
 FF- Weak Surface
 FS- No Blow



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

Recovery		
Length (ft)	Description	Volume (bbl)
15.00	100%m with Oil Spots	0.07

* 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

27-18s-28w Lane, KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49073

DST#: 7

ATTN: Vern Schrag

Test Start: 2013.10.29 @ 09:04:00

Tool Information

Drill Pipe:	Length: 4233.00 ft	Diameter: 3.80 inches	Volume: 59.38 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 148.00 ft	Diameter: 2.25 inches	Volume: 0.73 bbl	Weight to Pull Loose: 14000.00 lb
			<u>Total Volume: 60.11 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4396.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	139.00 ft			
Tool Length:	166.00 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			4370.00	
Shut In Tool	5.00			4375.00	
Hydraulic tool	5.00			4380.00	
Jars	5.00			4385.00	
Safety Joint	2.00			4387.00	
Packer	5.00			4392.00	27.00 Bottom Of Top Packer
Packer	4.00			4396.00	
Stubb	1.00			4397.00	
Perforations	1.00			4398.00	
Recorder	0.00	8355	Outside	4398.00	
Recorder	0.00	8674	Inside	4398.00	
Perforations	5.00			4403.00	
Change Over Sub	1.00			4404.00	
Drill Pipe	125.00			4529.00	
Change Over Sub	1.00			4530.00	
Bullnose	5.00			4535.00	139.00 Bottom Packers & Anchor
Total Tool Length:	166.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering Inc

27-18s-28w Lane,KS

562 W. State Rd 4
Olmitz KS. 67564

Shapland "A" # 1-27

Job Ticket: 49073

DST#: 7

ATTN: Vern Schrag

Test Start: 2013.10.29 @ 09:04:00

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: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	100% m with Oil Spots	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

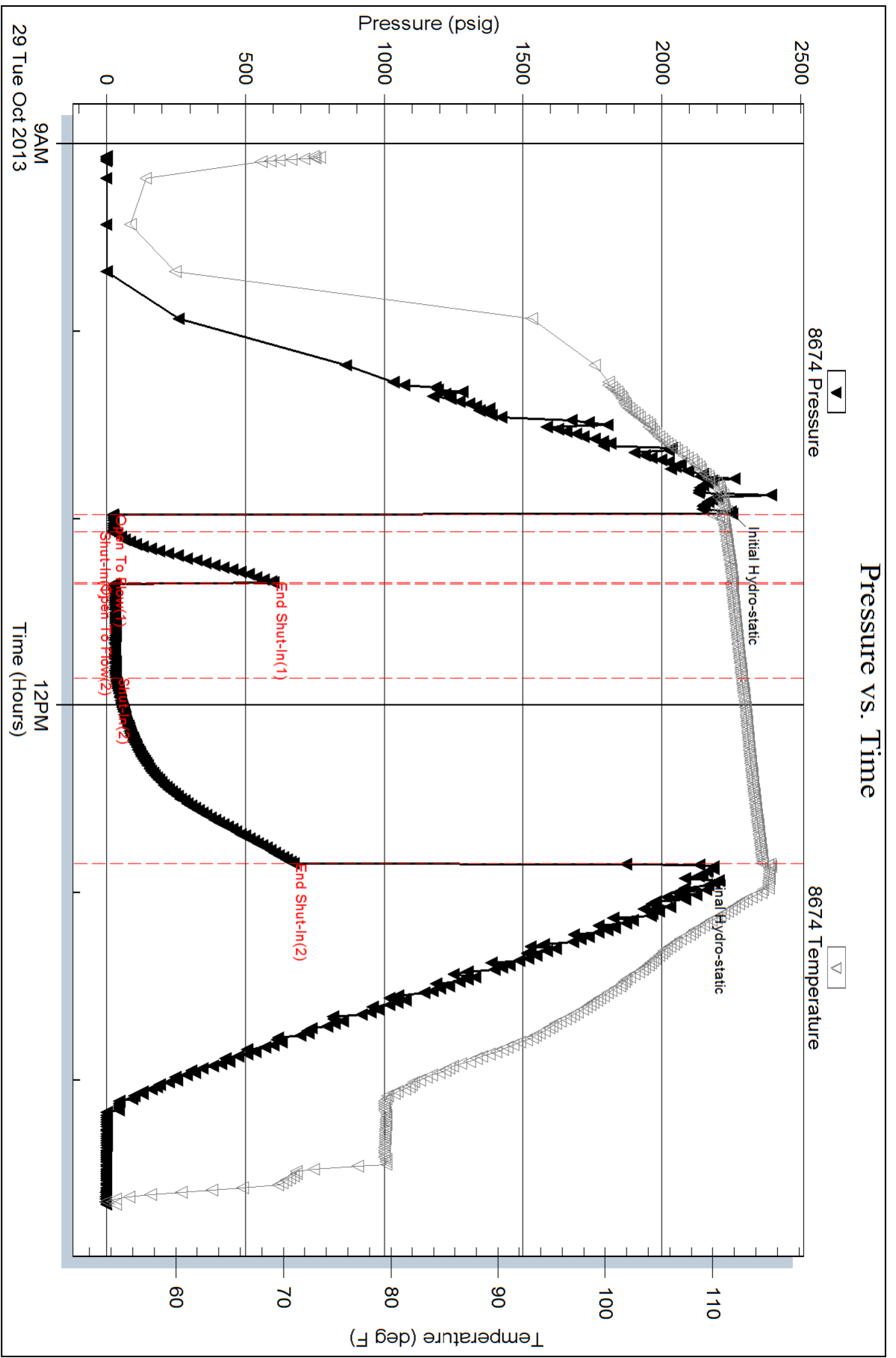
Num Gas Bombs: 0

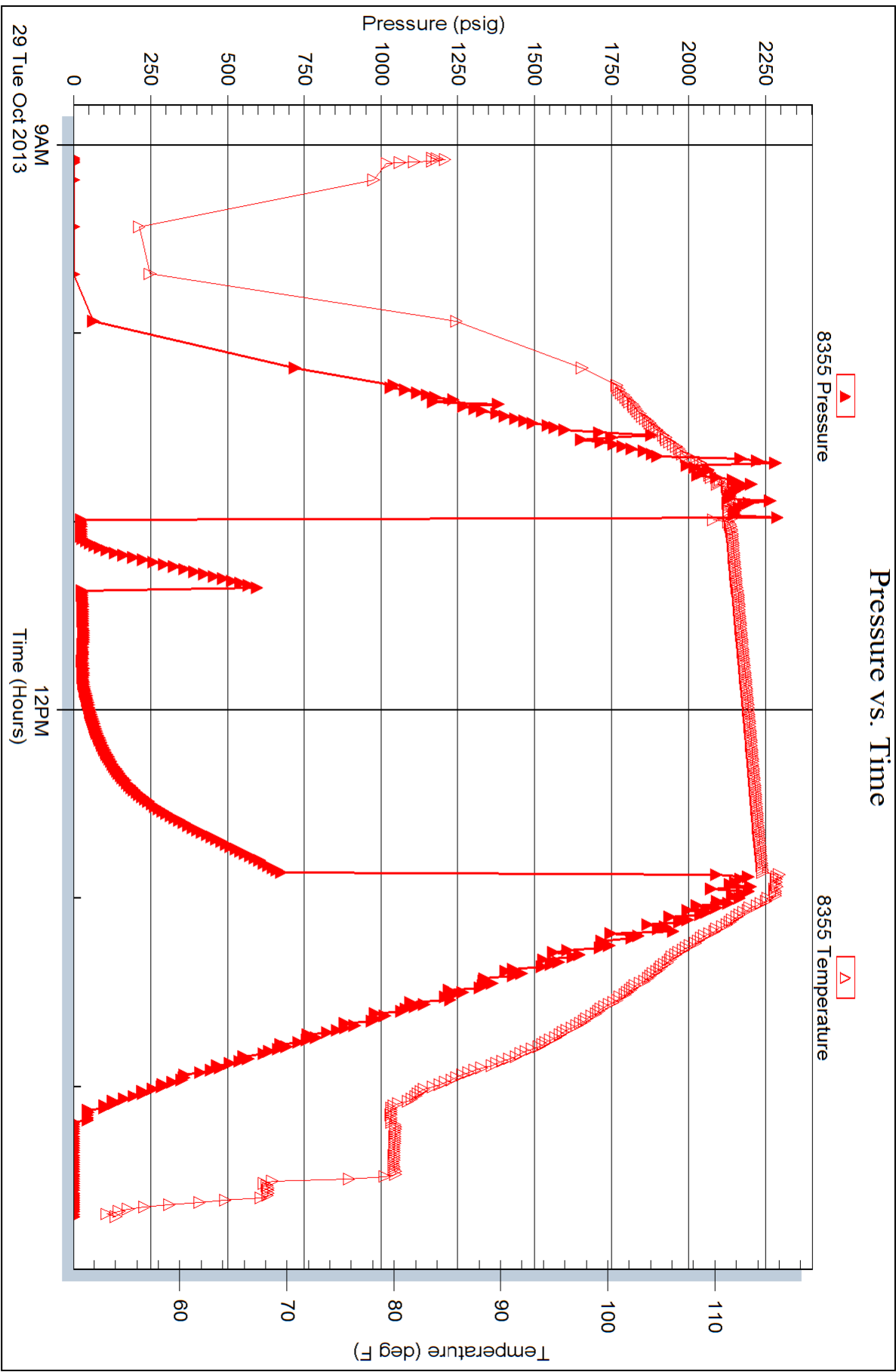
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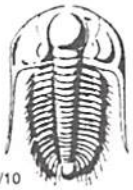
Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49067

Well Name & No. Shapland "A" #1-27 Test No. DST #1 Date 10-24-13
 Company Larson Engineering Inc Elevation 2711 KB 2702 GL
 Address 562 W. State Rd 4 Olmitz KS 67564
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3
 Location: Sec. 27 Twp. 18s Rge. 28W Co. Lane State KS

Interval Tested 4100-4130 Zone Tested LRC "H"
 Anchor Length 30 Drill Pipe Run 3951 Mud Wt. 9.1
 Top Packer Depth 4096 Drill Collars Run 148 Vis 58
 Bottom Packer Depth 4100 Wt. Pipe Run 0 WL 7.6
 Total Depth 4130 Chlorides 2000 ppm System LCM 116
 Blow Description IF - Wear Surface Blow Built to 1/4"
ISI - No Blow
FF - No Blow
FSI - No Blow

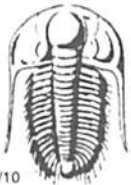
Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Mud with o.i spots</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2 BHT 114 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1954</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>13:26</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>13:54</u>
(C) First Final Flow <u>18</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>15:51</u>
(D) Initial Shut-In <u>764</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>16:59</u>
(E) Second Initial Flow <u>17</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>18:42</u>
(F) Second Final Flow <u>19</u>	<input checked="" type="checkbox"/> Mileage <u>58 R/T</u> 89.90	Comments _____
(G) Final Shut-In <u>1009</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2006</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>15</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1664.90</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>1664.90</u>	

Approved By Vern C Schrag 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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49068

Well Name & No. Shapland "A" #1-27 Test No. DST #2 Date 10-25-13
 Company Larson Engineering Inc Elevation 2711 KB 2702 GL
 Address 562 W. State Rd 4 Olmitz KS 67564
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3
 Location: Sec. 27 Twp. 18S Rge. 28W Co. Lane State KS

Interval Tested 4173-4187 Zone Tested LRC "J"
 Anchor Length 14 Drill Pipe Run 4014 Mud Wt. 9.1
 Top Packer Depth 4169 Drill Collars Run 148 Vis 58
 Bottom Packer Depth 4173 Wt. Pipe Run 0 WL 7.6
 Total Depth 4187 Chlorides 2000 ppm System LCM 116
 Blow Description IF- Wear Surface Blow Built to 5"
ISI- No Blow
FF- Wear Surface Blow Built to BOB in 14 min
FSI- Wear Surface Blow in 8 min Built to 1/2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>60</u>	<u>4</u>	<u>96</u>		
<u>37</u>	<u>OWMCO</u>	<u>4</u>	<u>49</u>	<u>14</u>	<u>33</u>
<u>62</u>	<u>OGWCM</u>	<u>9</u>	<u>6</u>	<u>29</u>	<u>56</u>
<u>62</u>	<u>OMCW</u>		<u>5</u>	<u>65</u>	<u>30</u>
<u>62</u>	<u>OMCW</u>		<u>2</u>	<u>86</u>	<u>12</u>

Rec Total 238 BHT 126 Gravity 37 API RW 233 @ 58 ° F Chlorides 35000 ppm

(A) Initial Hydrostatic 2148 Test 1250 T-On Location 5:10
 (B) First Initial Flow 24 Jars 250 T-Started 5:40
 (C) First Final Flow 67 Safety Joint 75 T-Open 7:26
 (D) Initial Shut-In 627 Circ Sub MC T-Pulled 8:35
 (E) Second Initial Flow 72 Hourly Standby _____ T-Out 10:53
 (F) Second Final Flow 113 Mileage 58 RIT 89.90 Comments _____
 (G) Final Shut-In 624 Sampler _____ API is 36e so f = 37
 (H) Final Hydrostatic 1990 Straddle _____ 134' of GIP
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Initial Open 5 Shale Packer _____
 Initial Shut-In 15 Extra Packer _____
 Final Flow 15 Extra Recorder _____ Sub Total 0
 Final Shut-In 30 Day Standby _____ Total 1664.90
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1664.90

Approved By Vern C Schrag Our Representative Will Mar

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property of 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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49069

Well Name & No. Shapland A #1-27 Test No. DST #3 Date 10-25-13
 Company Larson Engineering Inc Elevation 2711 KB 2702 GL
 Address 562 W. State Rd 4 Olmitz KS 67564
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3
 Location: Sec. 27 Twp. 18S Rge. 26W Co. Lane State KS

Interval Tested 4201 - 4215 Zone Tested LRC "K"
 Anchor Length 14 Drill Pipe Run 4044 Mud Wt. 9.2
 Top Packer Depth 4197 Drill Collars Run 148 Vis 56
 Bottom Packer Depth 4201 Wt. Pipe Run 0 WL 7.6
 Total Depth 4215 Chlorides 2000 ppm System LCM 116
 Blow Description IF - Weak Surface Blow Built to 1/2"
ISI - No Blow
FF - Weak Surface Blow Built to 1 1/2"
FSI - No Blow

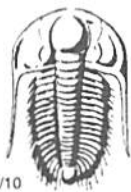
Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Oil</u>	<u>100</u>	<u>0</u>	<u>0</u>	<u>0</u>
<u>29</u>	<u>WOGCM</u>	<u>6</u>	<u>5</u>	<u>2</u>	<u>87</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30 BHT 116 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2168</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>18:20</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>18:50</u>
(C) First Final Flow <u>20</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>20:33</u>
(D) Initial Shut-In <u>554</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>22:30</u>
(E) Second Initial Flow <u>21</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>00:19</u>
(F) Second Final Flow <u>34</u>	<input checked="" type="checkbox"/> Mileage <u>58 RIT</u> 89.90	Comments _____
(G) Final Shut-In <u>553</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1984</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1664.90</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1664.90</u>	

Approved By Vern C. Schrag Our Representative Phil M...

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49070

Well Name & No. Shepland "A" #1-27 Test No. DST #4 Date 10-26-13
 Company Larson Engineering Inc Elevation 2711 KB 2702 GL
 Address 562 W. State Rd 4 Olmitz KS 67564
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3
 Location: Sec. 27 Twp. 18s Rge. 28W Co. Lane State KS

Interval Tested 4214-4220 Zone Tested LRC "K"
 Anchor Length 6 Drill Pipe Run 4045 Mud Wt. 9.2
 Top Packer Depth 4210 Drill Collars Run 148 Vis 56
 Bottom Packer Depth 4214 Wt. Pipe Run 0 WL 7.6
 Total Depth 4220 Chlorides 2000 ppm System LCM 115
 Blow Description IF- Weak Surface Blow Built to 3 3/4"
ISI- No Blow
FF- Weak Surface Blow Built to 7 1/4"
FST- No Blow

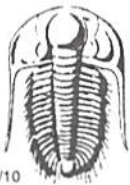
Rec	Feet of	%gas	%oil	%water	%mud
<u>125</u>	<u>MCW with SK in at Old on Top</u>			<u>65%</u>	<u>35%</u>
<u>MCW 124</u>	<u>MCW</u>		<u>91</u>	<u>9</u>	<u>9</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 249 BHT 126 Gravity _____ API RW 186 @ 60 °F Chlorides 42,200 ppm

(A) Initial Hydrostatic <u>2183</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>6:20</u>
(B) First Initial Flow <u>32</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>6:46</u>
(C) First Final Flow <u>54</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>8:34</u>
(D) Initial Shut-In <u>544</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>10:33</u>
(E) Second Initial Flow <u>56</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>12:27</u>
(F) Second Final Flow <u>128</u>	<input checked="" type="checkbox"/> Mileage <u>58 R/T</u> 89.90	Comments _____
(G) Final Shut-In <u>539</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>2033</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Total <u>1664.90</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1664.90</u>	

Approved By Vern Schrag Our Representative Will M...

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49071

Well Name & No. Shapland "A" #1-27 Test No. DST #5 Date 10-26-13
 Company Larson Engineering Inc Elevation 2711 KB 2702 GL
 Address 562 W. State Rd. 4 Olmitz KS 67564
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3
 Location: Sec. 27 Twp. 18s Rge. 28w Co. Lane State KS

Interval Tested 4239-4251 Zone Tested LRC "L"
 Anchor Length 12 Drill Pipe Run 4076 Mud Wt. 9.3
 Top Packer Depth 4235 Drill Collars Run 198 Vis 57
 Bottom Packer Depth 4239 Wt. Pipe Run 0 WL 8.0
 Total Depth 4251 Chlorides 3400 ppm System LCM 116
 Blow Description IF- Surface Blow to BOB in 1 1/4 min
ISI- Weak Surface Built to 4 3/4"
FF- Surface Blow Built to BOB in 2 3/4 min
FSI- Weak Surface Blow Built to 1 3/4"

Rec	Feet of	%gas	%oil	%water	%mud
250	G-O				
434	MO-CO	40%	57%		3%
124	MO-CO	45%	48%		7%
62	OG-CM	40%	15%		45%
	742' of G-IP				

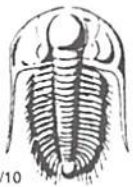
Rec Total _____ BHT 126 Gravity 37 API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2147 Test 1250 T-On Location 22:12
 (B) First Initial Flow 58 Jars 250 T-Started 22:42
 (C) First Final Flow 106 Safety Joint 75 T-Open 00:24
 (D) Initial Shut-In 856 Circ Sub _____ T-Pulled 1:36
 (E) Second Initial Flow 122 Hourly Standby _____ T-Out 4:32
 (F) Second Final Flow 260 Mileage 58 RIT 89.90 Comments _____
 (G) Final Shut-In 849 Sampler _____ API is 35 e 407 = 37
 (H) Final Hydrostatic 2032 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1664.90
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1664.90

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

Approved By Vern Schrag Our Representative Vin

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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49072

Well Name & No. Shapland "A" #1-27 Test No. DST #6 Date 10-28-13
 Company Larson Engineering Inc Elevation 2711 KB 2702 GL
 Address 562 W. State Rd 4 Olmitz KS 67564
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3
 Location: Sec. 27 Twp. 18S Rge. 28W Co. Lane State KS

Interval Tested 4296 - 4390 Zone Tested Marmanton
 Anchor Length 94 Drill Pipe Run 4139 Mud Wt. 9.2
 Top Packer Depth 4292 Drill Collars Run 148 Vis 61
 Bottom Packer Depth 4296 Wt. Pipe Run 0 WL 8.0
 Total Depth 4390 Chlorides 3400 ppm System LCM 1/6
 Blow Description IF - Weak Surface Blow Built to 1/2"
ISI - No Blow
FF - Weak Surface Blow
FST - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>WCM with a skin of oil on top</u>			<u>2</u>	<u>98</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 2 BHT 114 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2190</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>2:02</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>2:36</u>
(C) First Final Flow <u>21</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>4:33</u>
(D) Initial Shut-In <u>304</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>5:43</u>
(E) Second Initial Flow <u>21</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>7:28</u>
(F) Second Final Flow <u>23</u>	<input checked="" type="checkbox"/> Mileage <u>58 RIT</u> 89.90	Comments _____
(G) Final Shut-In <u>399</u>	<input type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>2051</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>15</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>15</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Total <u>1664.90</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>1664.90</u>	

Approved By Vern Schrag Our Representative Will M...

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49073

Well Name & No. Shapland "A" #1-27 Test No. DST #17 Date 10-29-13
 Company Larson Engineering Inc Elevation 2711 KB 2702 GL
 Address 562 W. State Rd 4 Olmitz KS 67564
 Co. Rep / Geo. Vern Schrag Rig H-D Rig #3
 Location: Sec. 27 Twp. 18S Rge. 28W Co. Lane State KS

Interval Tested 4396-4535 Zone Tested Cherokee
 Anchor Length 139 Drill Pipe Run 4233 Mud Wt. 9.2
 Top Packer Depth 4392 Drill Collars Run 148 Vis 62
 Bottom Packer Depth 4396 Wt. Pipe Run 0 WL 7.6
 Total Depth 4535 Chlorides 3000 ppm System LCM 1
 Blow Description IF- Weak Surface Blow Built to 30"
ISI- No Blow
FF- Weak Surface Blow Built to 14"
FSI- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud with Oil Spots</u>			<u>100</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 15 BHT 115 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2254</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>8:02</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>9:04</u>
(C) First Final Flow <u>25</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>10:58</u>
(D) Initial Shut-In <u>600</u>	<input checked="" type="checkbox"/> Circ Sub <u>W/C</u>	T-Pulled <u>12:51</u>
(E) Second Initial Flow <u>27</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>14:39</u>
(F) Second Final Flow <u>32</u>	<input checked="" type="checkbox"/> Mileage <u>58 / RTT</u> 89.90	Comments _____
(G) Final Shut-In <u>671</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2134</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Open <u>5</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Initial Shut-In <u>15</u>	<input type="checkbox"/> Day Standby	Total <u>1664.90</u>
Final Flow <u>30</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
Final Shut-In <u>60</u>	Sub Total <u>1664.90</u>	

Approved By Vern Schrag Our Representative Nim Min

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