



DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell KS 67665-2635

ATTN: Austin Klaus

Frisbie B#1

19-11s-18w Ellis,KS

Start Date: 2017.09.16 @ 04:10:07

End Date: 2017.09.16 @ 11:12:01

Job Ticket #: 63076 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2017.09.19 @ 16:25:02



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O Farmer Inc
 PO Box 352
 Russell KS 67665-2635
 ATTN: Austin Klaus

19-11s-18w Ellis,KS
Frisbie B#1
 Job Ticket: 63076 **DST#: 1**
 Test Start: 2017.09.16 @ 04:10:07

GENERAL INFORMATION:

Formation: **LKC A-D**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 06:04:17 Tester: Ray Schwager
 Time Test Ended: 11:12:01 Unit No: 77
 Interval: **3234.00 ft (KB) To 3318.00 ft (KB) (TVD)** Reference Elevations: 1994.00 ft (KB)
 Total Depth: 3318.00 ft (KB) (TVD) 1986.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

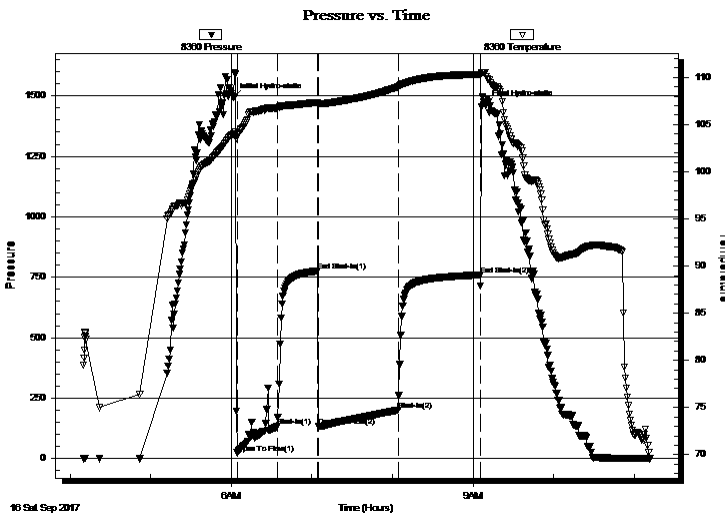
Serial #: 8360

Inside

Press@RunDepth: 200.47 psig @ 3236.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.09.16 End Date: 2017.09.16 Last Calib.: 2017.09.16
 Start Time: 04:10:07 End Time: 11:12:01 Time On Btm: 2017.09.16 @ 06:02:02
 Time Off Btm: 2017.09.16 @ 09:09:16

TEST COMMENT: 30-IFP-w k to BOB in 25 min
 30-ISIP-no bl bk
 60-FFP-w k to BOB in 22 min
 60-FSIP-1/4" bl bk

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1494.33	103.99	Initial Hydro-static
3	23.36	103.88	Open To Flow (1)
33	131.92	106.75	Shut-In(1)
62	775.87	107.35	End Shut-In(1)
63	133.47	107.19	Open To Flow (2)
123	200.47	108.99	Shut-In(2)
184	759.72	110.30	End Shut-In(2)
188	1462.61	110.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	O&GCMW 15%G10%O35%M40%W	0.44
124.00	G&WCMO 10%G10%W40%M40%O	0.88
165.00	MGO 15%G10%M75%O	1.88
0.00	330' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer Inc
PO Box 352
Russell KS 67665-2635
ATTN: Austin Klaus

19-11s-18w Ellis,KS
Frisbie B#1
Job Ticket: 63076 **DST#: 1**
Test Start: 2017.09.16 @ 04:10:07

Tool Information

Drill Pipe:	Length: 2969.00 ft	Diameter: 3.80 inches	Volume: 41.65 bbl	Tool Weight: 22000.00 lb
Heavy Wt. Pipe:	Length: 248.00 ft	Diameter: 2.70 inches	Volume: 1.76 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 43.41 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3234.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	84.00 ft			
Tool Length:	105.00 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			3214.00	
Shut In Tool	5.00			3219.00	
Hydraulic tool	5.00			3224.00	
Packer	5.00			3229.00	21.00 Bottom Of Top Packer
Packer	5.00			3234.00	
Stubb	1.00			3235.00	
Perforations	1.00			3236.00	
Recorder	0.00	8360	Inside	3236.00	
Recorder	0.00	8673	Outside	3236.00	
Blank Spacing	64.00			3300.00	
Perforations	15.00			3315.00	
Bullnose	3.00			3318.00	84.00 Bottom Packers & Anchor

Total Tool Length: 105.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc
PO Box 352
Russell KS 67665-2635
ATTN: Austin Klaus

19-11s-18w Ellis,KS
Frisbie B#1
Job Ticket: 63076 **DST#: 1**
Test Start: 2017.09.16 @ 04:10:07

Mud and Cushion Information

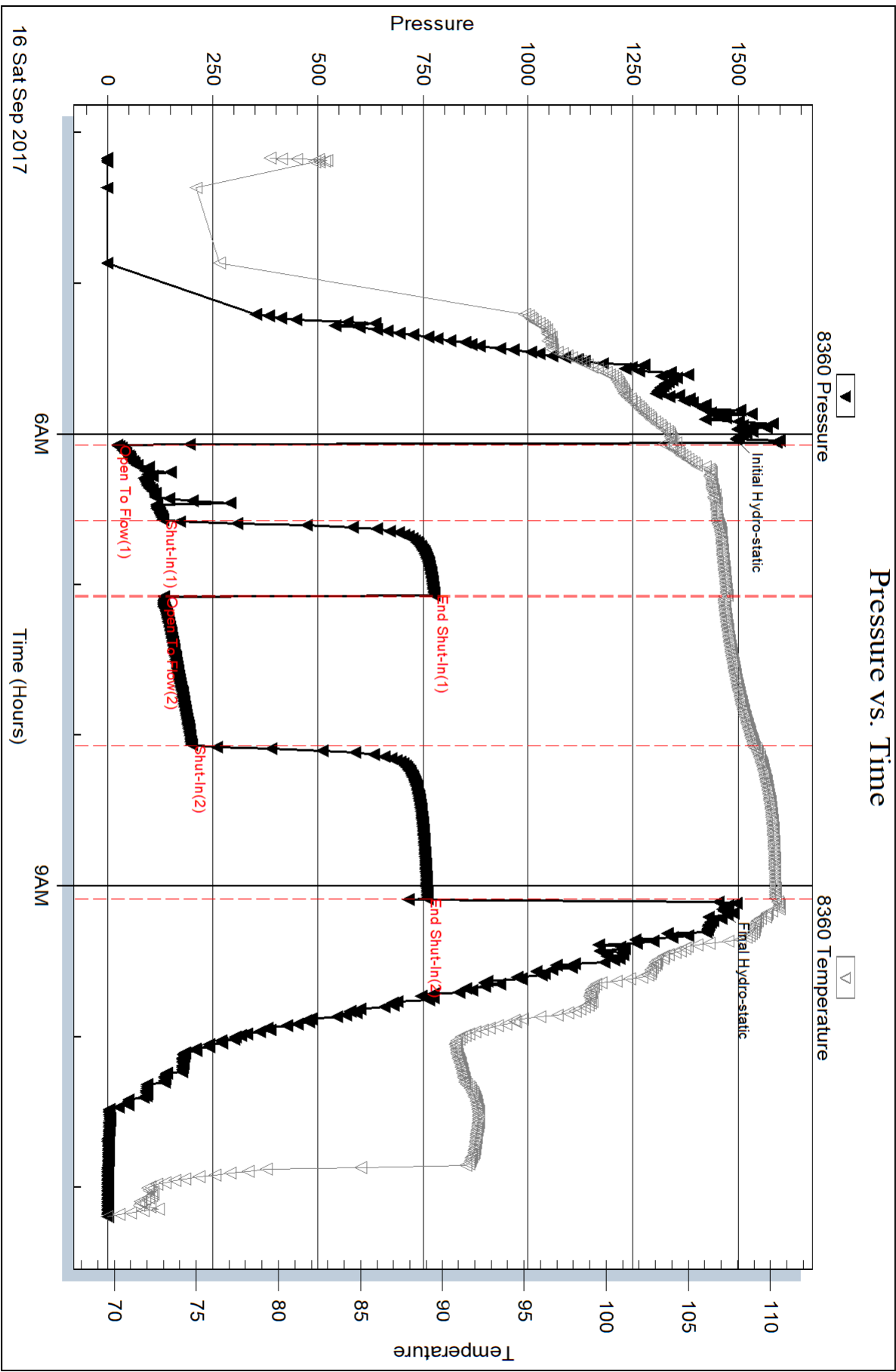
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	75000 ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.71 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	O&GCMW 15%G10%O35%M40%W	0.439
124.00	G&WCMO 10%G10%W40%M40%O	0.878
165.00	MGO 15%G10%M75%O	1.884
0.00	330' GIP	0.000

Total Length: 351.00 ft Total Volume: 3.201 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: RW .1 @ 70F

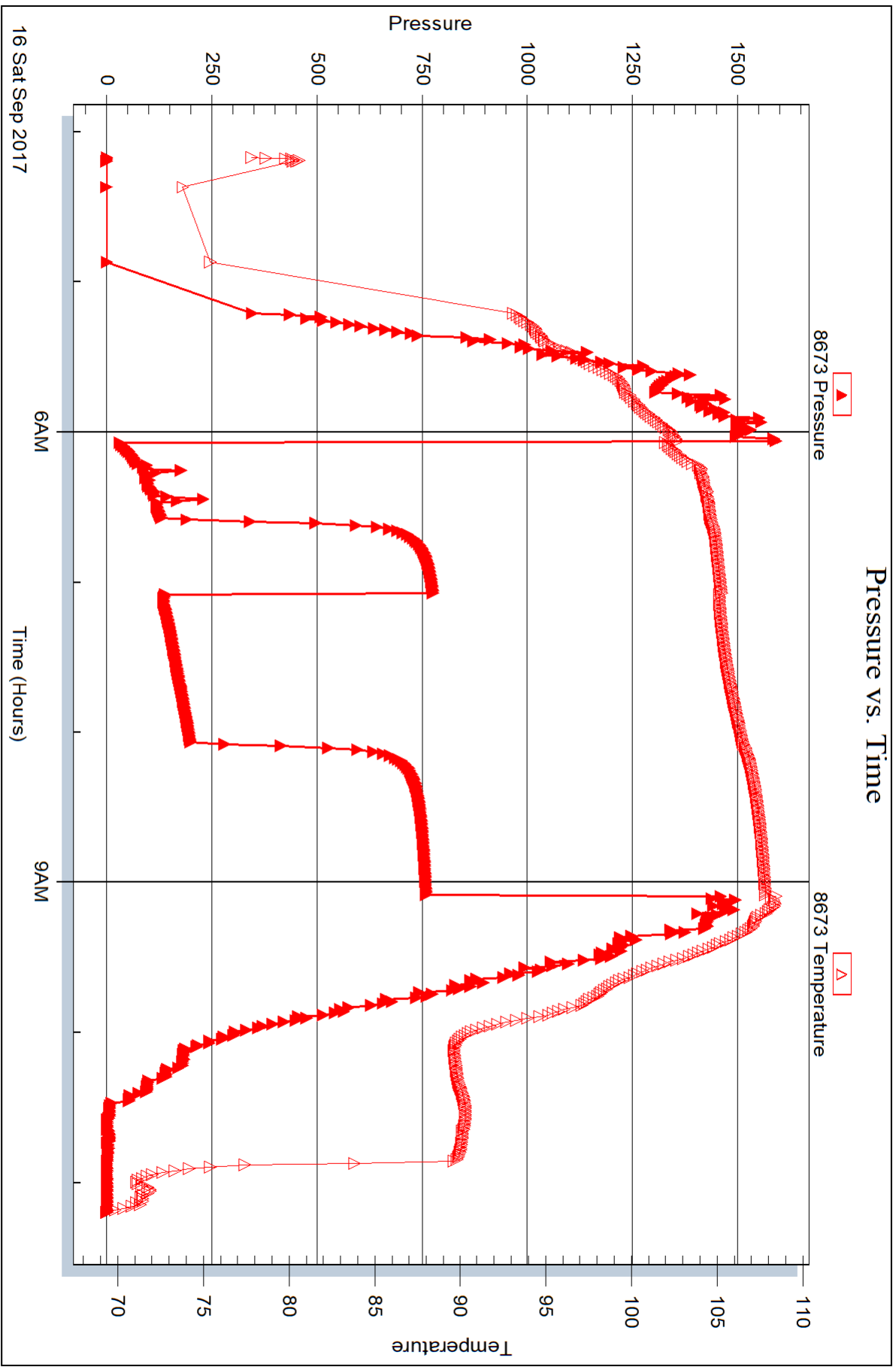


Serial #: 8673

Outside John O Farmer Inc

Friskie B#1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 63076

Printed: 2017.09.19 @ 16:25:03



DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell KS 67665-2635

ATTN: Austin Klaus

Frisbie B#1

19-11s-18w Ellis,KS

Start Date: 2017.09.16 @ 17:45:49

End Date: 2017.09.16 @ 22:44:28

Job Ticket #: 63077 DST #: 2

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

Printed: 2017.09.19 @ 16:22:04



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O Farmer Inc
 PO Box 352
 Russell KS 67665-2635
 ATTN: Austin Klaus

19-11s-18w Ellis,KS
Frisbie B#1
 Job Ticket: 63077 **DST#: 2**
 Test Start: 2017.09.16 @ 17:45:49

GENERAL INFORMATION:

Formation: **LKC E-F**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:15:59
 Time Test Ended: 22:44:28
 Interval: **3314.00 ft (KB) To 3332.00 ft (KB) (TVD)**
 Total Depth: 3332.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ray Schwager
 Unit No: 77
 Reference Elevations: 1994.00 ft (KB)
 1986.00 ft (CF)
 KB to GR/CF: 8.00 ft

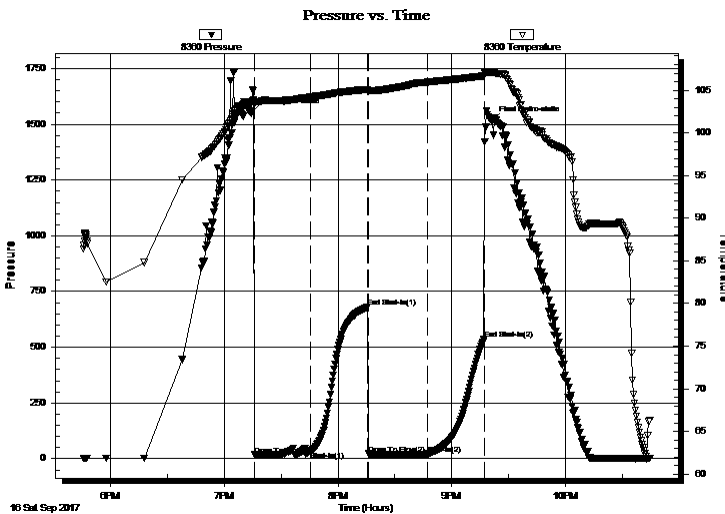
Serial #: 8360

Inside

Press@RunDepth: 20.52 psig @ 3316.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.09.16 End Date: 2017.09.16 Last Calib.: 2017.09.16
 Start Time: 17:45:49 End Time: 22:44:28 Time On Btm: 2017.09.16 @ 19:14:14
 Time Off Btm: 2017.09.16 @ 21:21:14

TEST COMMENT: 30-IFP-vy w k bl thru-out 1/8" to surface bl
 30-ISIP-no bl bk
 30-FFP-no bl
 30-FSIP-no bl bk

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1551.32	103.66	Initial Hydro-static
2	17.40	103.32	Open To Flow (1)
32	35.13	104.20	Shut-In(1)
62	679.20	105.09	End Shut-In(1)
62	21.64	104.93	Open To Flow (2)
93	20.52	105.93	Shut-In(2)
123	534.67	106.67	End Shut-In(2)
127	1514.48	107.08	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OCM 10%O90%M	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

John O Farmer Inc
PO Box 352
Russell KS 67665-2635
ATTN: Austin Klaus

19-11s-18w Ellis,KS
Frisbie B#1
Job Ticket: 63077 **DST#: 2**
Test Start: 2017.09.16 @ 17:45:49

Tool Information

Drill Pipe:	Length: 3065.00 ft	Diameter: 3.80 inches	Volume: 42.99 bbl	Tool Weight: 22000.00 lb
Heavy Wt. Pipe:	Length: 248.00 ft	Diameter: 2.70 inches	Volume: 1.76 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 44.75 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3314.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	39.00 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			3294.00	
Shut In Tool	5.00			3299.00	
Hydraulic tool	5.00			3304.00	
Packer	5.00			3309.00	21.00 Bottom Of Top Packer
Packer	5.00			3314.00	
Stubb	1.00			3315.00	
Perforations	1.00			3316.00	
Recorder	0.00	8360	Inside	3316.00	
Recorder	0.00	8673	Outside	3316.00	
Perforations	13.00			3329.00	
Bullnose	3.00			3332.00	18.00 Bottom Packers & Anchor

Total Tool Length: 39.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc
PO Box 352
Russell KS 67665-2635
ATTN: Austin Klaus

19-11s-18w Ellis,KS
Frisbie B#1
Job Ticket: 63077 **DST#: 2**
Test Start: 2017.09.16 @ 17:45:49

Mud and Cushion Information

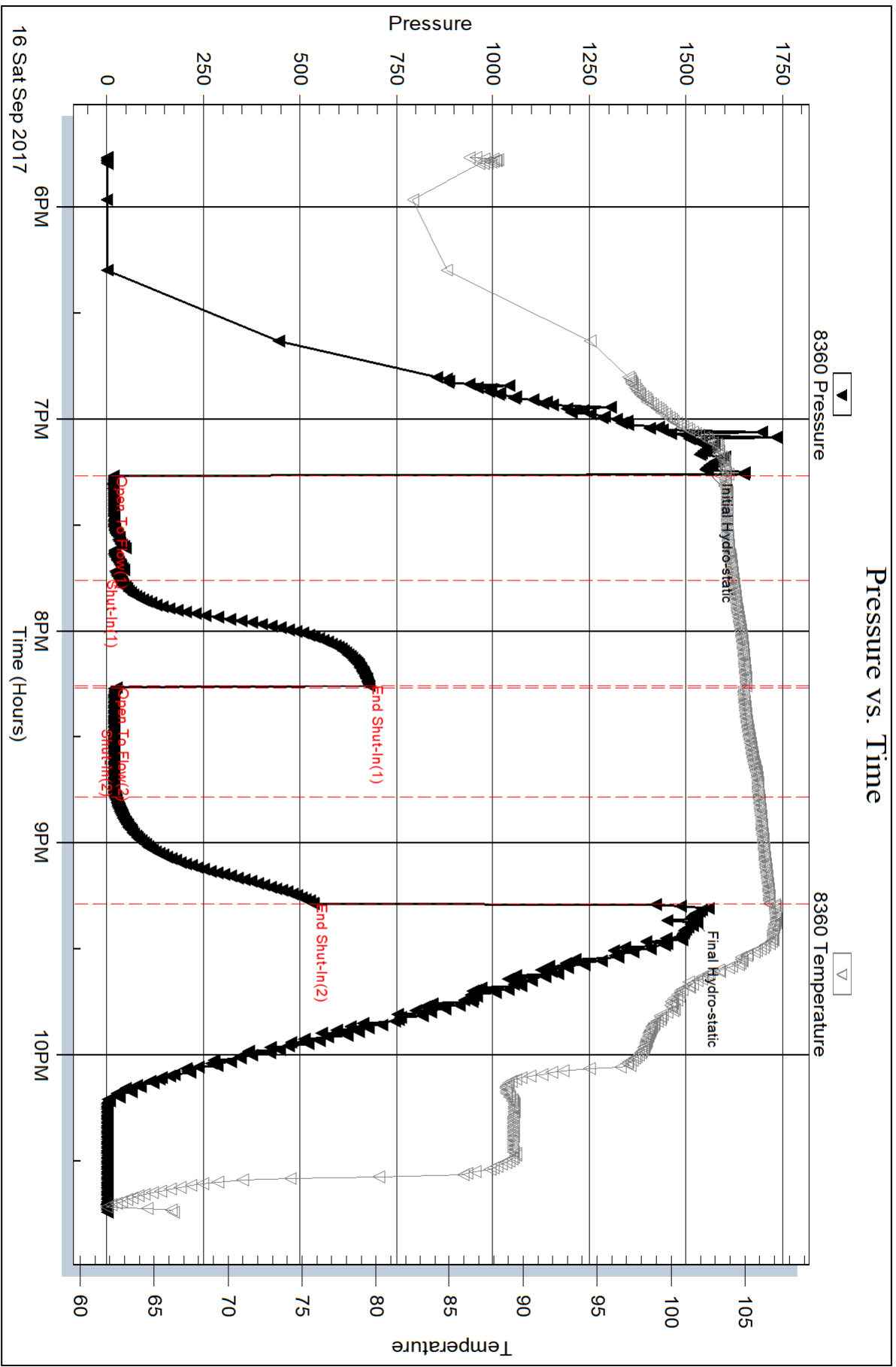
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.94 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6000.00 ppm			
Filter Cake: 1.00 inches			

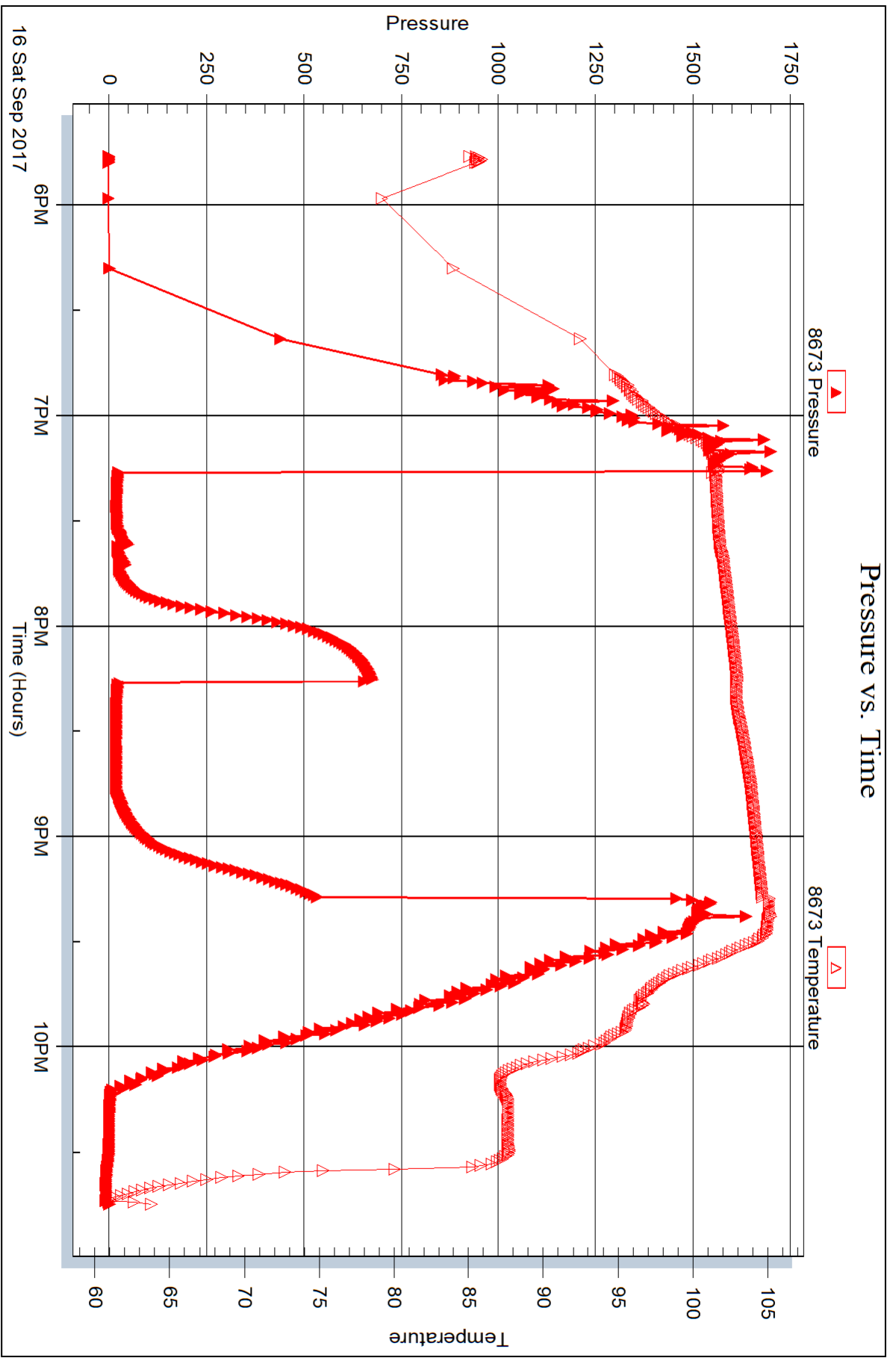
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OCM 10%O90%M	0.071

Total Length: 10.00 ft Total Volume: 0.071 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell KS 67665-2635

ATTN: Austin Klaus

Frisbie B#1

19-11s-18w Ellis,KS

Start Date: 2017.09.17 @ 12:25:47

End Date: 2017.09.17 @ 19:19:26

Job Ticket #: 63078 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2017.09.19 @ 16:17:11



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O Farmer Inc
 PO Box 352
 Russell KS 67665-2635
 ATTN: Austin Klaus

19-11s-18w Ellis,KS
Frisbie B#1
 Job Ticket: 63078 **DST#: 3**
 Test Start: 2017.09.17 @ 12:25:47

GENERAL INFORMATION:

Formation: **LKC I-K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:19:12
 Time Test Ended: 19:19:26
 Interval: **3397.00 ft (KB) To 3465.00 ft (KB) (TVD)**
 Total Depth: 3465.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ray Schwager
 Unit No: 77
 Reference Elevations: 1994.00 ft (KB)
 1986.00 ft (CF)
 KB to GR/CF: 8.00 ft

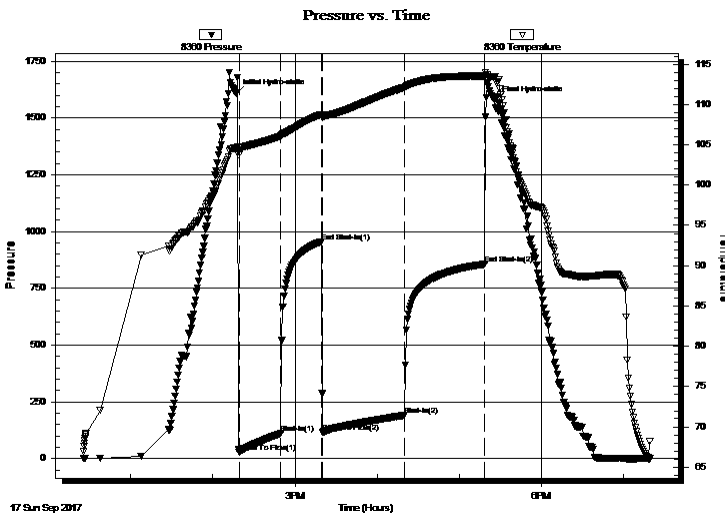
Serial #: 8360

Inside

Press@RunDepth: 190.86 psig @ 3400.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.09.17 End Date: 2017.09.17 Last Calib.: 2017.09.17
 Start Time: 12:25:47 End Time: 19:19:26 Time On Btm: 2017.09.17 @ 14:17:27
 Time Off Btm: 2017.09.17 @ 17:25:56

TEST COMMENT: 30-IFP-w k to a gd bl 1/2" to 8" bl
 30-ISIP-no bl bk
 60-FFP-w k to a fr bl surface to 6" bl
 60-FSIP-no bl bk

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1605.90	104.66	Initial Hydro-static
2	26.45	104.43	Open To Flow (1)
33	110.25	106.07	Shut-In(1)
62	954.91	108.75	End Shut-In(1)
63	114.59	108.54	Open To Flow (2)
123	190.86	112.13	Shut-In(2)
182	856.95	113.53	End Shut-In(2)
189	1577.01	113.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
310.00	Water	2.63
62.00	MW 20%M80%W w/show of oil	0.87

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer Inc
 PO Box 352
 Russell KS 67665-2635
 ATTN: Austin Klaus

19-11s-18w Ellis,KS
Frisbie B#1
 Job Ticket: 63078 **DST#: 3**
 Test Start: 2017.09.17 @ 12:25:47

Tool Information

Drill Pipe:	Length: 3156.00 ft	Diameter: 3.80 inches	Volume: 44.27 bbl	Tool Weight: 22000.00 lb
Heavy Wt. Pipe:	Length: 248.00 ft	Diameter: 2.70 inches	Volume: 1.76 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 46.03 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3397.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	89.00 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			3377.00	
Shut In Tool	5.00			3382.00	
Hydraulic tool	5.00			3387.00	
Packer	5.00			3392.00	21.00 Bottom Of Top Packer
Packer	5.00			3397.00	
Stubb	1.00			3398.00	
Perforations	2.00			3400.00	
Recorder	0.00	8360	Inside	3400.00	
Recorder	0.00	8673	Outside	3400.00	
Blank Spacing	33.00			3433.00	
Perforations	29.00			3462.00	
Bullnose	3.00			3465.00	68.00 Bottom Packers & Anchor

Total Tool Length: 89.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc
PO Box 352
Russell KS 67665-2635
ATTN: Austin Klaus

19-11s-18w Ellis,KS
Frisbie B#1
Job Ticket: 63078 **DST#: 3**
Test Start: 2017.09.17 @ 12:25:47

Mud and Cushion Information

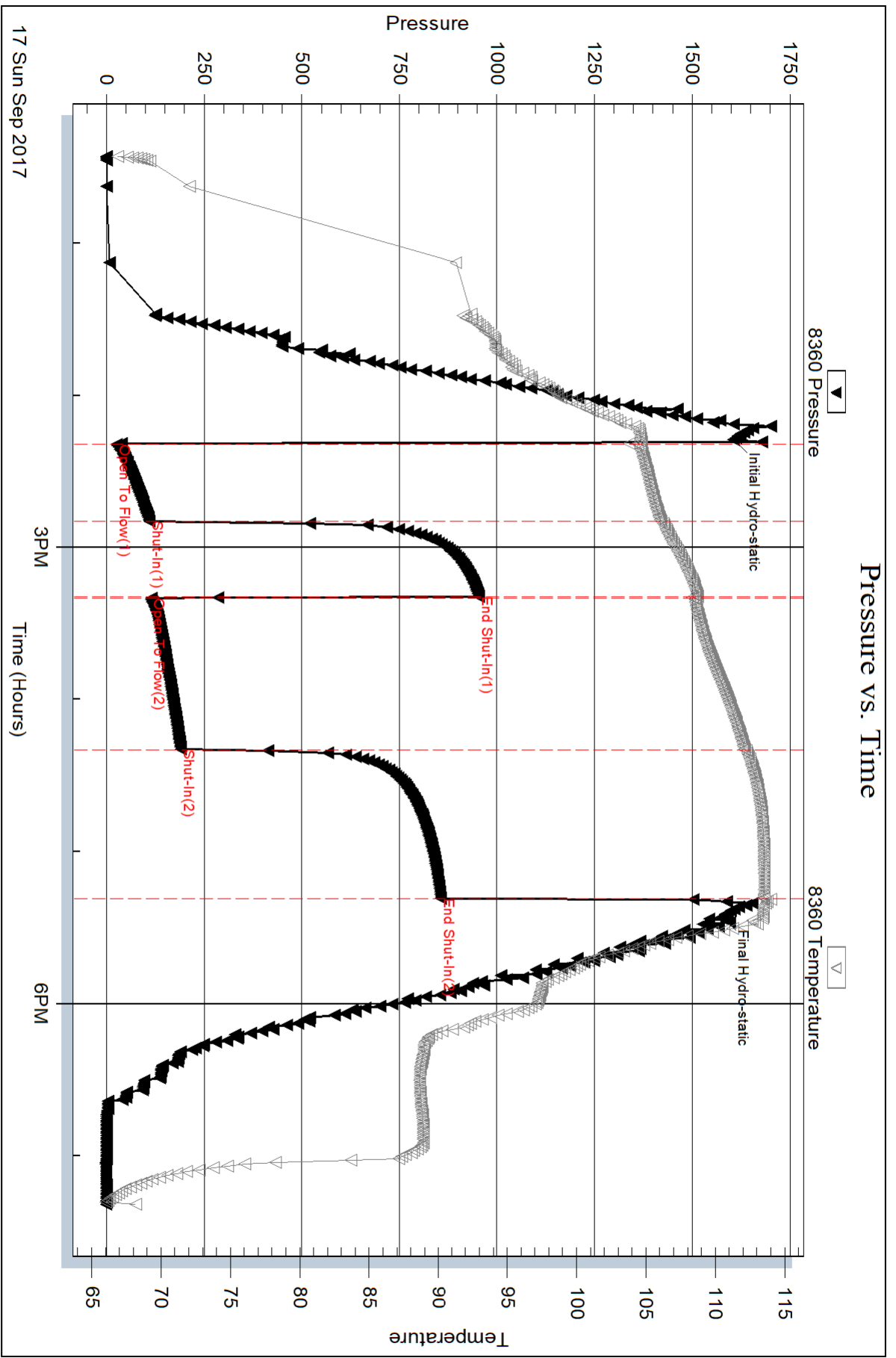
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	70000 ppm
Viscosity: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.93 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 7500.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
310.00	Water	2.626
62.00	MW 20%M80%W w/show of oil	0.870

Total Length: 372.00 ft Total Volume: 3.496 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW .1@75F

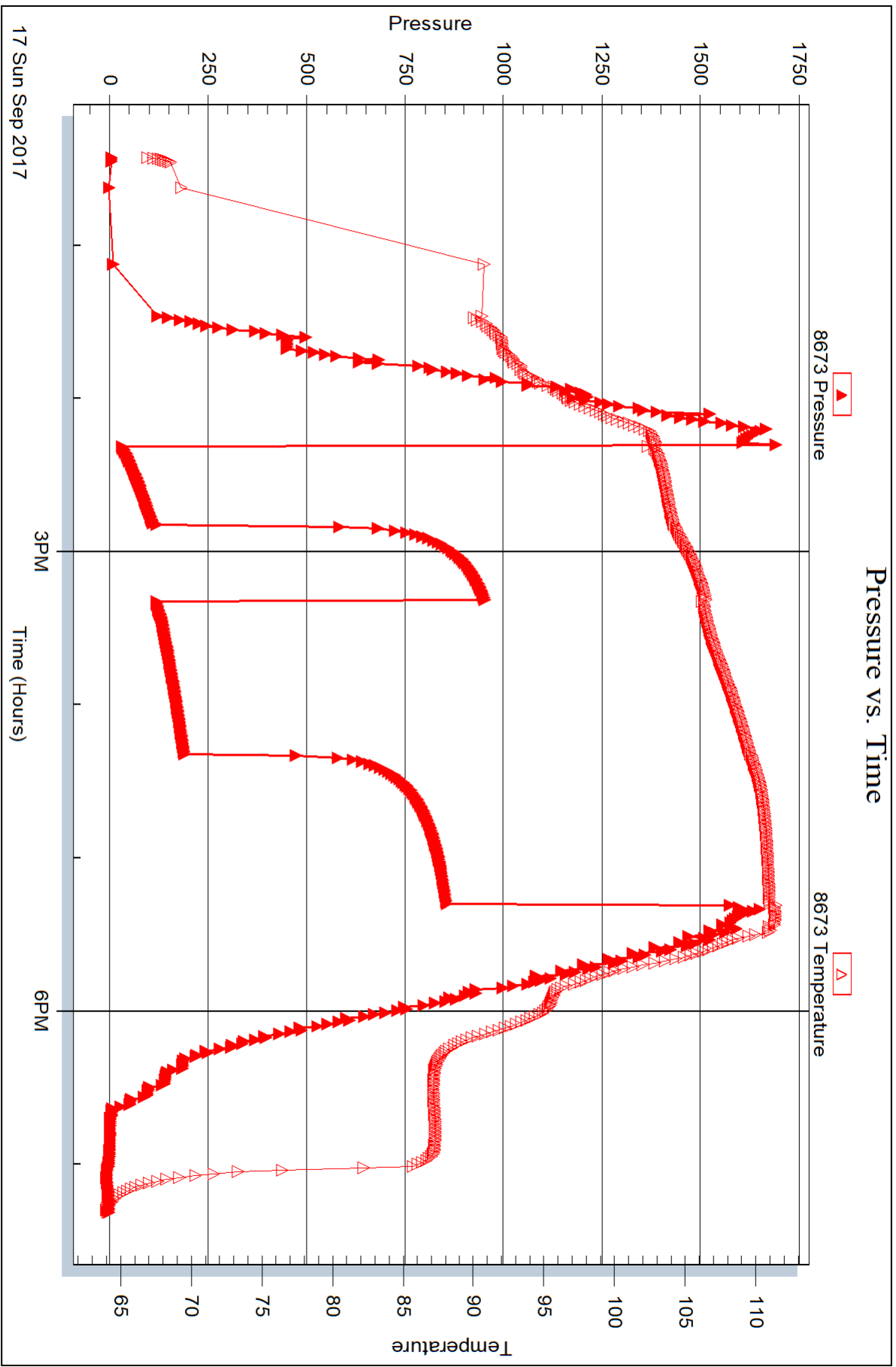


Serial #: 8673

Outside John O Farmer Inc

Frisbie B#1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 63078

Printed: 2017.09.19 @ 16:17:12



DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell KS 67665-2635

ATTN: Austin Klaus

Frisbie B#1

19-11s-18w Ellis,KS

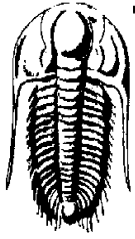
Start Date: 2017.09.18 @ 20:50:06

End Date: 2017.09.19 @ 01:43:30

Job Ticket #: 63079 DST #: 4

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

Printed: 2017.09.19 @ 16:12:11



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O Farmer Inc
 PO Box 352
 Russell KS 67665-2635
 ATTN: Austin Klaus

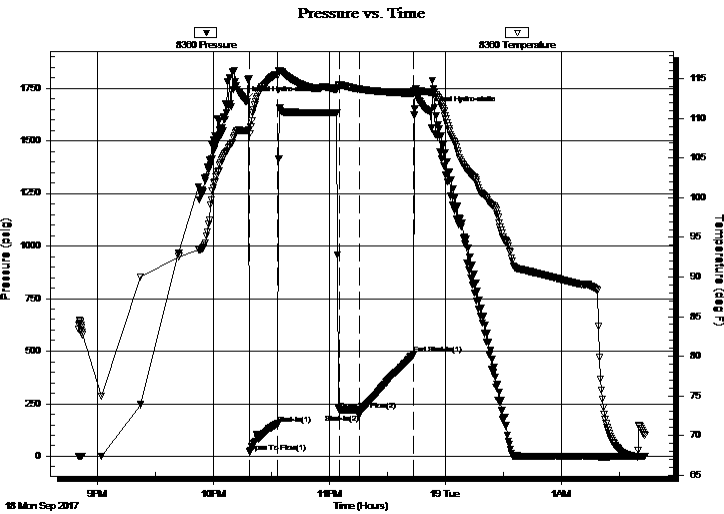
19-11s-18w Ellis, KS
Frisbie B#1
 Job Ticket: 63079 **DST#: 4**
 Test Start: 2017.09.18 @ 20:50:06

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 22:18:46 Tester: Ray Schwager
 Time Test Ended: 01:43:30 Unit No: 77
 Interval: **3525.00 ft (KB) To 3568.00 ft (KB) (TVD)** Reference Elevations: 1994.00 ft (KB)
 Total Depth: 3640.00 ft (KB) (TVD) 1986.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8360 Inside
 Press@RunDepth: 154.73 psig @ 3527.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.09.18 End Date: 2017.09.19 Last Calib.: 2017.09.19
 Start Time: 20:50:06 End Time: 01:43:30 Time On Btm: 2017.09.18 @ 22:16:31
 Time Off Btm: 2017.09.18 @ 23:51:16

TEST COMMENT: 15-IFP-BOB in 6 min
 30-ISIP-no bl bk
 10-FFP-BOB thru-out
 30-FSIP-no bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1688.48	108.44	Initial Hydro-static
3	20.89	108.06	Open To Flow (1)
17	154.73	115.48	Shut-In(1)
49	221.09	114.25	Open To Flow (2)
59	199.56	113.68	Shut-In(2)
87	485.92	113.15	End Shut-In(1)
95	1641.98	113.33	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
435.00	MW 40%M60%W	4.38

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer Inc
PO Box 352
Russell KS 67665-2635
ATTN: Austin Klaus

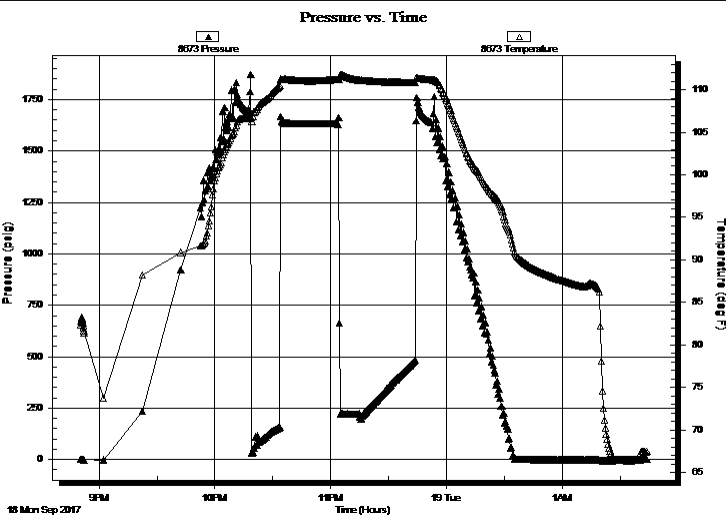
19-11s-18w Ellis,KS
Frisbie B#1
Job Ticket: 63079 **DST#: 4**
Test Start: 2017.09.18 @ 20:50:06

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:18:46
Time Test Ended: 01:43:30
Interval: **3525.00 ft (KB) To 3568.00 ft (KB) (TVD)**
Total Depth: 3640.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schwager
Unit No: 77
Reference Elevations: 1994.00 ft (KB)
1986.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8673 Outside
Press@RunDepth: psig @ 3527.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2017.09.18 End Date: 2017.09.19 Last Calib.: 2017.09.19
Start Time: 20:50:27 End Time: 01:43:36 Time On Btm:
Time Off Btm:

TEST COMMENT: 15-IFP-BOB in 6 min
30-ISIP-no bl bk
10-FFP-BOB thru-out
30-FSIP-no bl bk



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
435.00	MW 40%M60%W	4.38

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer Inc
PO Box 352
Russell KS 67665-2635
ATTN: Austin Klaus

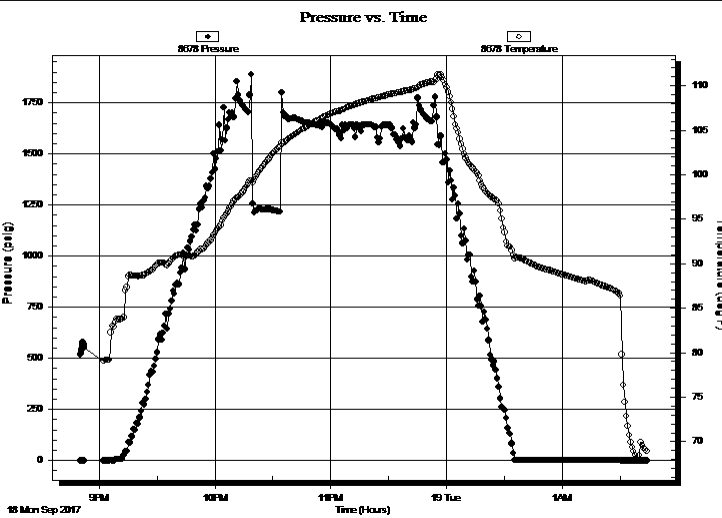
19-11s-18w Ellis,KS
Frisbie B#1
Job Ticket: 63079 **DST#: 4**
Test Start: 2017.09.18 @ 20:50:06

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:18:46
Time Test Ended: 01:43:30
Interval: **3525.00 ft (KB) To 3568.00 ft (KB) (TVD)**
Total Depth: 3640.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 1994.00 ft (KB)
1986.00 ft (CF)
KB to GR/CF: 8.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schwager
Unit No: 77

Serial #: 8678 Below (Straddle)
Press@RunDepth: psig @ 3577.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2017.09.18 End Date: 2017.09.19 Last Calib.: 2017.09.19
Start Time: 20:50:24 End Time: 01:44:09 Time On Btm:
Time Off Btm:

TEST COMMENT: 15-IFP-BOB in 6 min
30-ISIP-no bl bk
10-FFP-BOB thru-out
30-FSIP-no bl bk



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

Recovery		
Length (ft)	Description	Volume (bbl)
435.00	MW 40%M60%W	4.38

* Recovery from multiple tests

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer Inc
PO Box 352
Russell KS 67665-2635
ATTN: Austin Klaus

19-11s-18w Ellis,KS
Frisbie B#1
Job Ticket: 63079 **DST#: 4**
Test Start: 2017.09.18 @ 20:50:06

Tool Information

Drill Pipe:	Length: 3282.00 ft	Diameter: 3.80 inches	Volume: 46.04 bbl	Tool Weight: 22000.00 lb
Heavy Wt. Pipe:	Length: 248.00 ft	Diameter: 2.70 inches	Volume: 1.76 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 47.80 bbl</u>	Tool Chased 6.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3525.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	119.00 ft			
Tool Length:	140.00 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			3505.00	
Shut In Tool	5.00			3510.00	
Hydraulic tool	5.00			3515.00	
Packer	5.00			3520.00	21.00 Bottom Of Top Packer
Packer	5.00			3525.00	
Stubb	1.00			3526.00	
Perforations	1.00			3527.00	
Recorder	0.00	8360	Inside	3527.00	
Recorder	0.00	8673	Outside	3527.00	
Blank Spacing	32.00			3559.00	
Perforations	5.00			3564.00	
Blank Off Sub	1.00			3565.00	
Blank Spacing	3.00			3568.00	119.00 Tool Interval
Packer	5.00			3573.00	
Stubb	1.00			3574.00	
Perforations	3.00			3577.00	
Recorder	0.00	8678	Below	3577.00	
Blank Spacing	64.00			3641.00	
Bullnose	3.00			3644.00	1000139.00 Bottom Packers & Anchor

Total Tool Length: 140.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc
PO Box 352
Russell KS 67665-2635
ATTN: Austin Klaus

19-11s-18w Ellis,KS
Frisbie B#1
Job Ticket: 63079 **DST#: 4**
Test Start: 2017.09.18 @ 20:50:06

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:	24000 ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.96 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 8000.00 ppm			
Filter Cake: 1.00 inches			

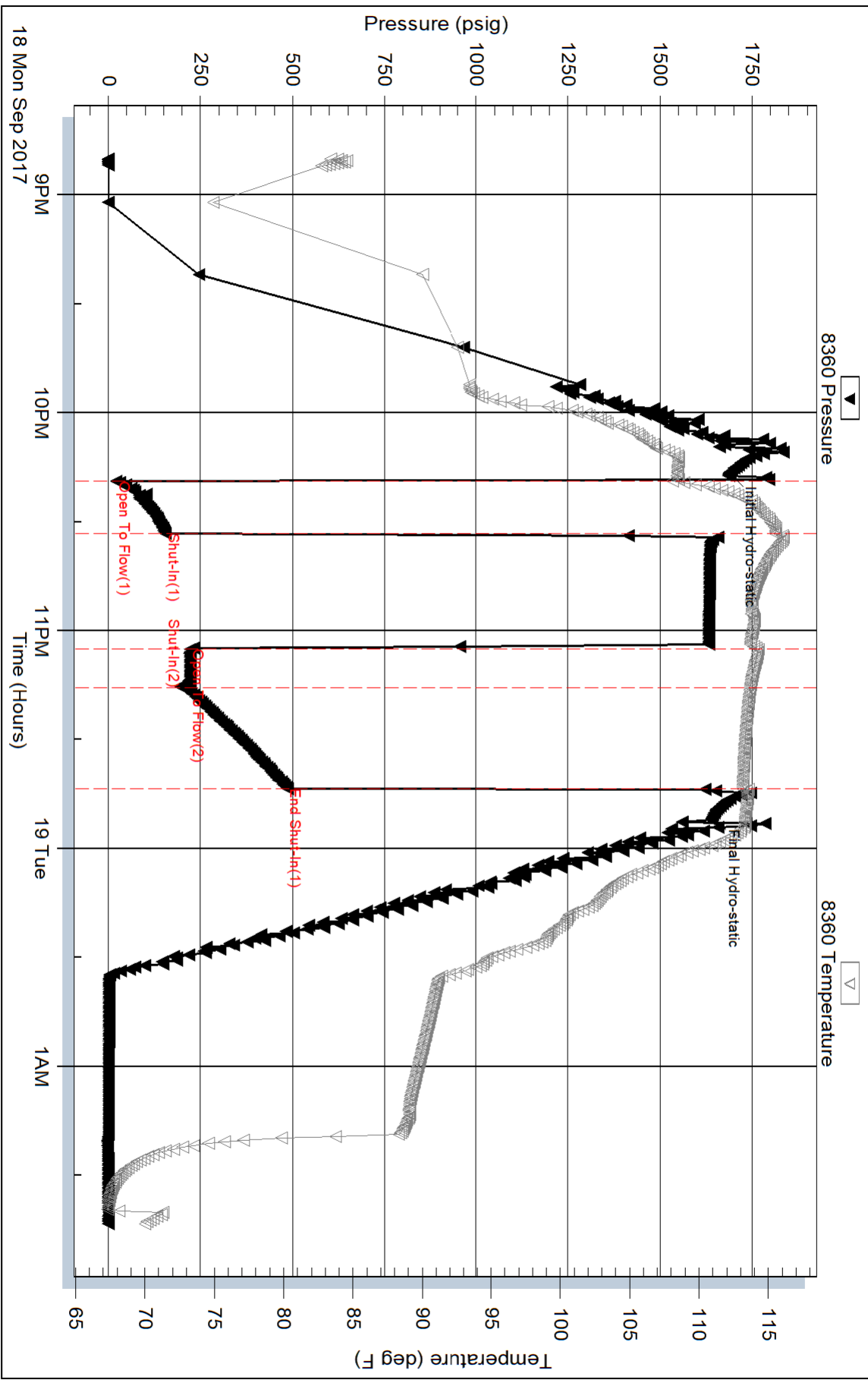
Recovery Information

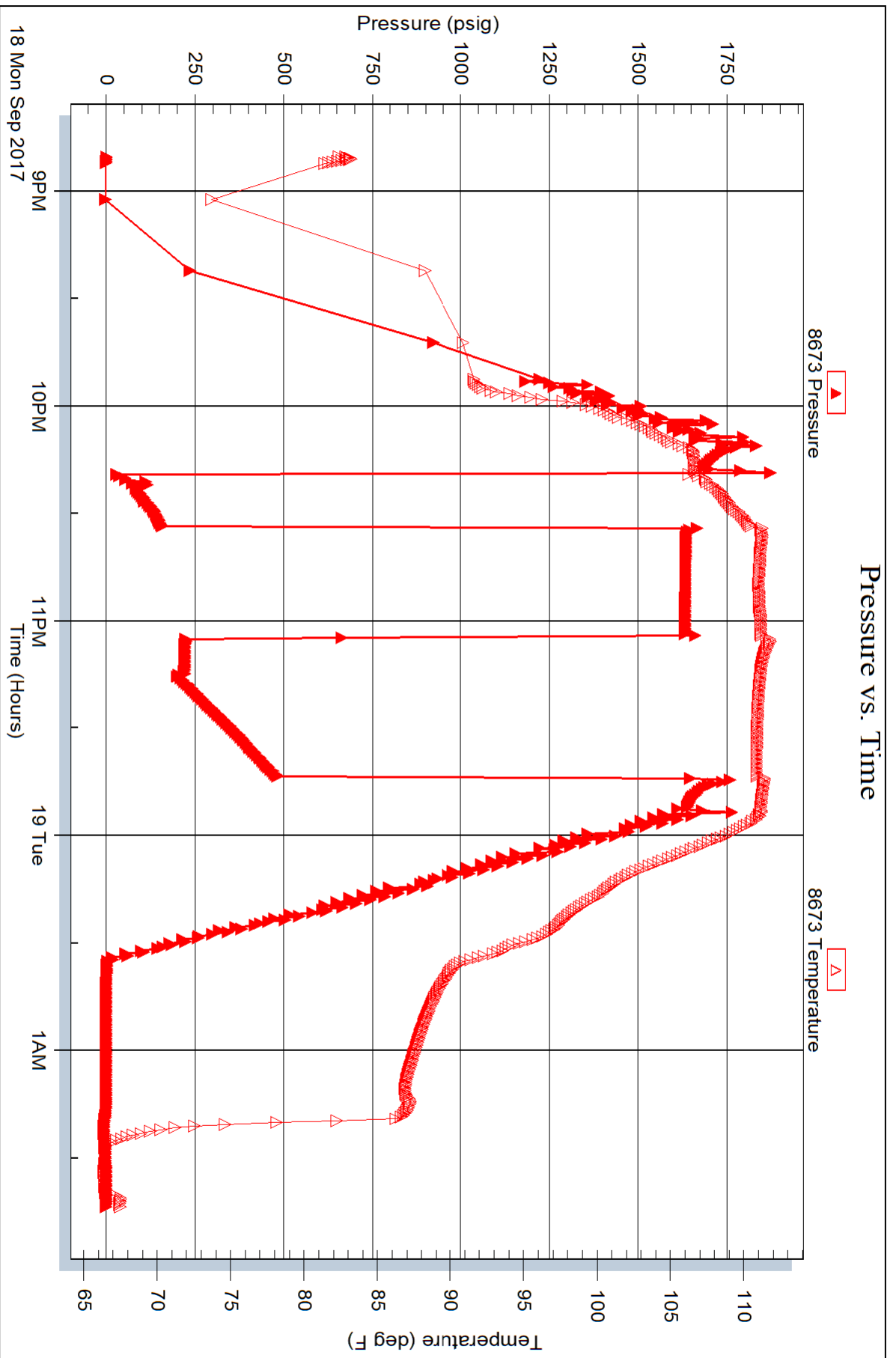
Recovery Table

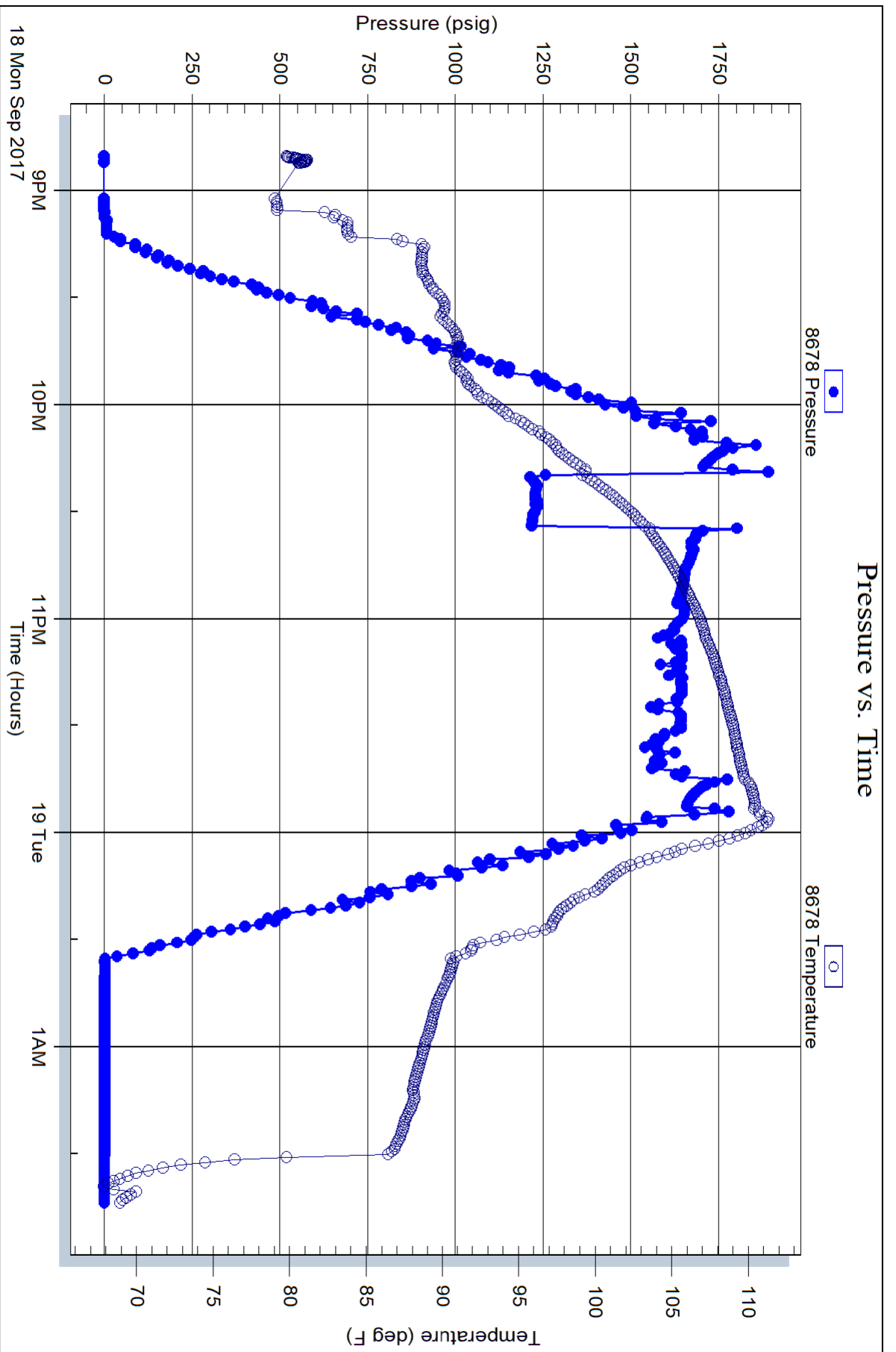
Length ft	Description	Volume bbl
435.00	MW 40%M60%W	4.379

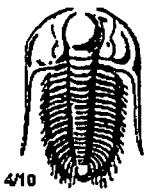
Total Length: 435.00 ft Total Volume: 4.379 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: RW .3@65F

Pressure vs. Time









TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63076

Well Name & No. Frisbie B#1 Test No. 1 Date 9-16-17
 Company John O. Farmer Inc Elevation 1994 KB 1986 GL
 Address 370 W. Wichita Ave. PO Box 352 Russell, Ko 67665-2635
 Co. Rep / Geo. Austin Klaus Rig Discovery rig 2
 Location: Sec. 19 Twp. 11^s Rge. 18^w Co. ELLIS State Ko

Interval Tested 3234-3318 Zone Tested LKC A-0
 Anchor Length 84 Drill Pipe Run 2969 Mud Wt. 8.8
 Top Packer Depth 3229 Drill Collars Run - Vis 53
 Bottom Packer Depth 3234 Wt. Pipe Run 248 WL 8.8
 Total Depth 3318 Chlorides 5000 ppm System LCM 2 1/2 #

Blow Description IFP - WEAK TO BOB IN 25 MIN
ISIP - NO BLOW BACK
FFP - WEAK TO BOB IN 22 MIN
FSTP - 1/4" BLOW BACK

Rec	Feet of	%gas	%oil	%water	%mud
330	GTP				
165	MGO	15	25		10
124	G+WCMO	10	40	10	40
62	O+GCMW	15	10	40	35

Rec Total 351 BHT 110 Gravity - API RW .1 @ 70 °F Chlorides 75000 ppm

(A) Initial Hydrostatic 1494
 (B) First Initial Flow 23
 (C) First Final Flow 131
 (D) Initial Shut-In 775
 (E) Second Initial Flow 133
 (F) Second Final Flow 200
 (G) Final Shut-In 759
 (H) Final Hydrostatic 1462

- Test 1050
- Jars
- Safety Joint
- Circ Sub
- Hourly Standby
- Mileage 45 RT 33.75
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 1083.75

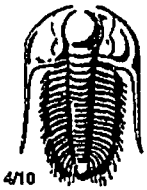
T-On Location 0230
 T-Started 0410
 T-Open 0605
 T-Pulled 0905
 T-Out 1112
 Comments _____
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1083.75
 MP/DST Disc't _____

Initial Open 30
 Initial Shut-In 30
 Final Flow 60
 Final Shut-In 60

Approved By _____

Our Representative

RAY Schwager
 Thank you



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63077

Well Name & No. Frisbie B #1 Test No. 2 Date 9-16-17
 Company John O. Farmer Inc Elevation 1994 KB 1986 GL
 Address 370 W. WICHITA AVE PO Box 352 Russell, Ks 67665-2635
 Co. Rep / Geo. AUSTIN KLAUS Rig Discovery rig 2
 Location: Sec. 19 Twp. 11^s Rge. 18^w Co. ELLIS State Ks

Interval Tested 3314-3332 Zone Tested LKC E-F
 Anchor Length 18 Drill Pipe Run 3065 Mud Wt. 8.7
 Top Packer Depth 3309 Drill Collars Run — Vis 53
 Bottom Packer Depth 3314 Wt. Pipe Run 248 WL 8
 Total Depth 3332 Chlorides 6000 ppm System LCM 2#

Blow Description IFP - Very Weak Blow thru-out
TSIP - NO BLOW BACK
FFP - NO BLOW
FSIP - NO BLOW BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>OCM</u>	<u>10</u>		<u>90</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 10 BHT 106 Gravity — API RW — @ — °F Chlorides — ppm

- (A) Initial Hydrostatic 1551
- (B) First Initial Flow 17
- (C) First Final Flow 35
- (D) Initial Shut-In 679
- (E) Second Initial Flow 21
- (F) Second Final Flow 20
- (G) Final Shut-In 534
- (H) Final Hydrostatic 1514

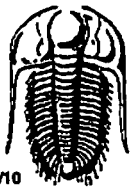
- Test 1050
- Jars
- Safety Joint
- Circ Sub
- Hourly Standby
- Mileage 45 RT 33.75
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 1083.75

T-On Location 1730
 T-Started 1745
 T-Open 1915
 T-Pulled 2115
 T-Out 2244
 Comments _____
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1083.75
 MP/DST Disc't _____

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

Approved By _____

Our Representative RAY SCHWARTZ Thank you



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63078

Well Name & No. Trishie B #1 Test No. 3 Date 9-17-17
 Company John O. Farmer Inc Elevation 1994 KB 1986 GL
 Address 370 W. WICHITA Ave PO Box 352 Russell, Ko 67665-2635
 Co. Rep / Geo. Austin Klays Rig Discovery rig 2
 Location: Sec. 19 Twp. 11^s Rge. 18^w Co. Ellis State K

Interval Tested 3397-3465 Zone Tested LKC I-K
 Anchor Length 68 Drill Pipe Run 3156 Mud Wt. 8.9
 Top Packer Depth 3392 Drill Collars Run — Vis 47
 Bottom Packer Depth 3397 Wt. Pipe Run 248 WL 10
 Total Depth 3465 Chlorides 7500 ppm System LCM 1#

Blow Description IFP - WEAK TO A GOOD BLOW 1/2" TO 8" BLOW
ISIP - NO BLOWBACK
EFP - WEAK TO A FAIR BLOW SURFACE TO 6" BLOW
FSIP - NO BLOWBACK

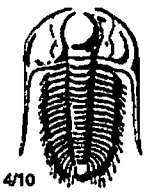
Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>MW w/show oil</u>				
<u>310</u>	<u>WATER</u>				

Rec Total 372 BHT 113 Gravity — API RW .1 @ 75 °F Chlorides 75000 ppm

(A) Initial Hydrostatic 1605 Test 1050 T-On Location 1150
 (B) First Initial Flow 26 Jars — T-Started 1225
 (C) First Final Flow 110 Safety Joint — T-Open 1420
 (D) Initial Shut-In 954 Circ Sub — T-Pulled 1720
 (E) Second Initial Flow 114 Hourly Standby — T-Out 1919
 (F) Second Final Flow 190 Mileage 4.5 RT 33.75
 (G) Final Shut-In 856 Sampler —
 (H) Final Hydrostatic 1577 Straddle —

Initial Open 30 Ruined Shale Packer —
 Initial Shut-In 30 Ruined Packer —
 Final Flow 60 Extra Copies —
 Final Shut-In 60 Extra Recorder —
 Day Standby — Sub Total 0
 Accessibility — Total 1083.75
 Sub Total 1083.75 MP/DST Disc't —

Approved By _____ Our Representative RAY Schwager Thank you



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63079

Well Name & No. Frisbie B #1 Test No. 4 Date 9-18-17
 Company John O. Farmer Inc Elevation 1994 KB 1986 GL
 Address 370 W. Wichita Ave PO Box 352 Russell Ks 67665-2635
 Co. Rep / Geo. Austin Klaus Rig Discovery rig 2
 Location: Sec. 19 Twp. 11^s Rge. 18^w Co. ELLIS State K

Interval Tested 3525-3568 Zone Tested AR buckle
 Anchor Length 43 Drill Pipe Run 3282 Mud Wt. 8.9
 Top Packer Depth 3525-3520 Drill Collars Run — Vis 50
 Bottom Packer Depth 3568 Wt. Pipe Run 248 WL 10
 Total Depth 3640 Chlorides 8000 ppm System LCM 5#

Blow Description IFP - BOB IN 6min
ISIP - NO BLOW BACK
FFP - BOB THRU-OUT
FSIP - NO BLOW BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>435</u>	<u>10 MW</u>			<u>60</u>	<u>40</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 435 BHT 113 Gravity — API RW .3 @ 65 °F Chlorides 24000 ppm

(A) Initial Hydrostatic 1688 Test 1050 T-On Location 2000
 (B) First Initial Flow 20 Jars _____ T-Started 2050
 (C) First Final Flow 154 Safety Joint _____ T-Open 2220
 (D) Initial Shut-In _____ Circ Sub _____ T-Pulled 2345
 (E) Second Initial Flow 221 Hourly Standby _____ T-Out 01
 (F) Second Final Flow 199 Mileage 45RT 33.75 Comments _____
 (G) Final Shut-In 485 Sampler _____
 (H) Final Hydrostatic 1641 Straddle 600 Ruined Shale Packer _____

Initial Open 15 Shale Packer _____
 Initial Shut-In 30 Extra Packer _____
 Final Flow 10 Extra Recorder _____
 Final Shut-In 30 Day Standby _____
 Sub Total 1683.75 Accessibility _____
 Total 1683.75 MP/DST Disc't _____

Approved By _____ Our Representative RAUSCHWAGER Thank you