

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations Inc
 8411 Preston RD STE 800
 Dallas, TX. 75225
 ATTN: Jim Musgrove

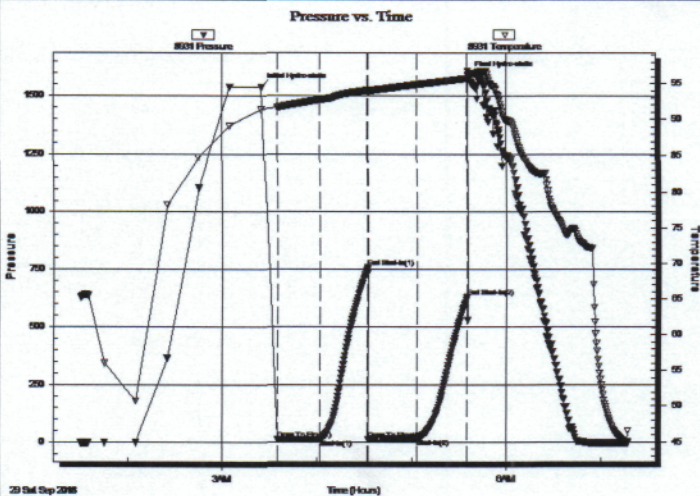
18-21s-12w Stafford,KS
Christiansen #1
 Job Ticket: 64709 **DST#: 1**
 Test Start: 2018.09.29 @ 01:29:58

GENERAL INFORMATION:

Formation: **LKC " B-F "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:34:58
 Time Test Ended: 07:17:28
 Interval: **3286.00 ft (KB) To 3348.00 ft (KB) (TVD)**
 Total Depth: 3348.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Matt Smith
 Unit No: 68
 Reference Elevations: 1868.00 ft (KB)
 1860.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8931 **Inside**
 Press@RunDepth: 14.89 psig @ 3287.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.09.29 End Date: 2018.09.29 Last Calib.: 2018.09.29
 Start Time: 01:30:03 End Time: 07:17:27 Time On Btm: 2018.09.29 @ 03:24:58
 Time Off Btm: 2018.09.29 @ 05:35:58

TEST COMMENT: IF: Weak blow . Built to 1", Decreased to 1/2".
 IS: No blow .
 FF: Weak blow . Surface to 1/2".
 FSI: No blow .



PRESSURE SUMMARY

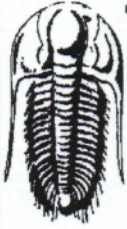
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1535.14	91.36	Initial Hydro-static
10	12.02	91.63	Open To Flow (1)
37	12.89	92.70	Shut-In(1)
67	759.35	94.01	End Shut-In(1)
68	13.34	93.78	Open To Flow (2)
98	14.89	94.83	Shut-In(2)
130	631.06	95.71	End Shut-In(2)
131	1592.09	96.10	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w oil specks 100% mud	0.14

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations Inc
8411 Preston RD STE 800
Dallas, TX. 75225
ATTN: Jim Musgrove

18-21s-12w Stafford,KS
Christiansen #1
Job Ticket: 64709 **DST#: 1**
Test Start: 2018.09.29 @ 01:29:58

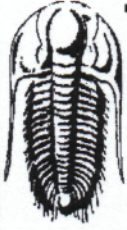
Tool Information

Drill Pipe:	Length: 3288.00 ft	Diameter: 3.80 inches	Volume: 46.12 bbl	Tool Weight: 2100.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 34000.00 lb
			<u>Total Volume: 46.12 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 34000.00 lb
Depth to Top Packer:	3286.00 ft			Final 34000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	82.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3267.00	
Shut In Tool	5.00			3272.00	
Hydraulic tool	5.00			3277.00	
Packer	4.00			3281.00	20.00 Bottom Of Top Packer
Packer	5.00			3286.00	
Stubb	1.00			3287.00	
Recorder	0.00	8931	Inside	3287.00	
Recorder	0.00	8792	Outside	3287.00	
Perforations	5.00			3292.00	
Change Over Sub	1.00			3293.00	
Blank Spacing	31.00			3324.00	
Change Over Sub	1.00			3325.00	
Perforations	20.00			3345.00	
Bullnose	3.00			3348.00	62.00 Bottom Packers & Anchor

Total Tool Length: 82.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations Inc

18-21s-12w Stafford,KS

8411 Preston RD STE 800
Dallas, TX. 75225

Christiansen #1

Job Ticket: 64709

DST#: 1

ATTN: Jim Musgrove

Test Start: 2018.09.29 @ 01:29:58

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:

4400 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4400.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud w oil specks 100%mud	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments: Vis w as 60 +.

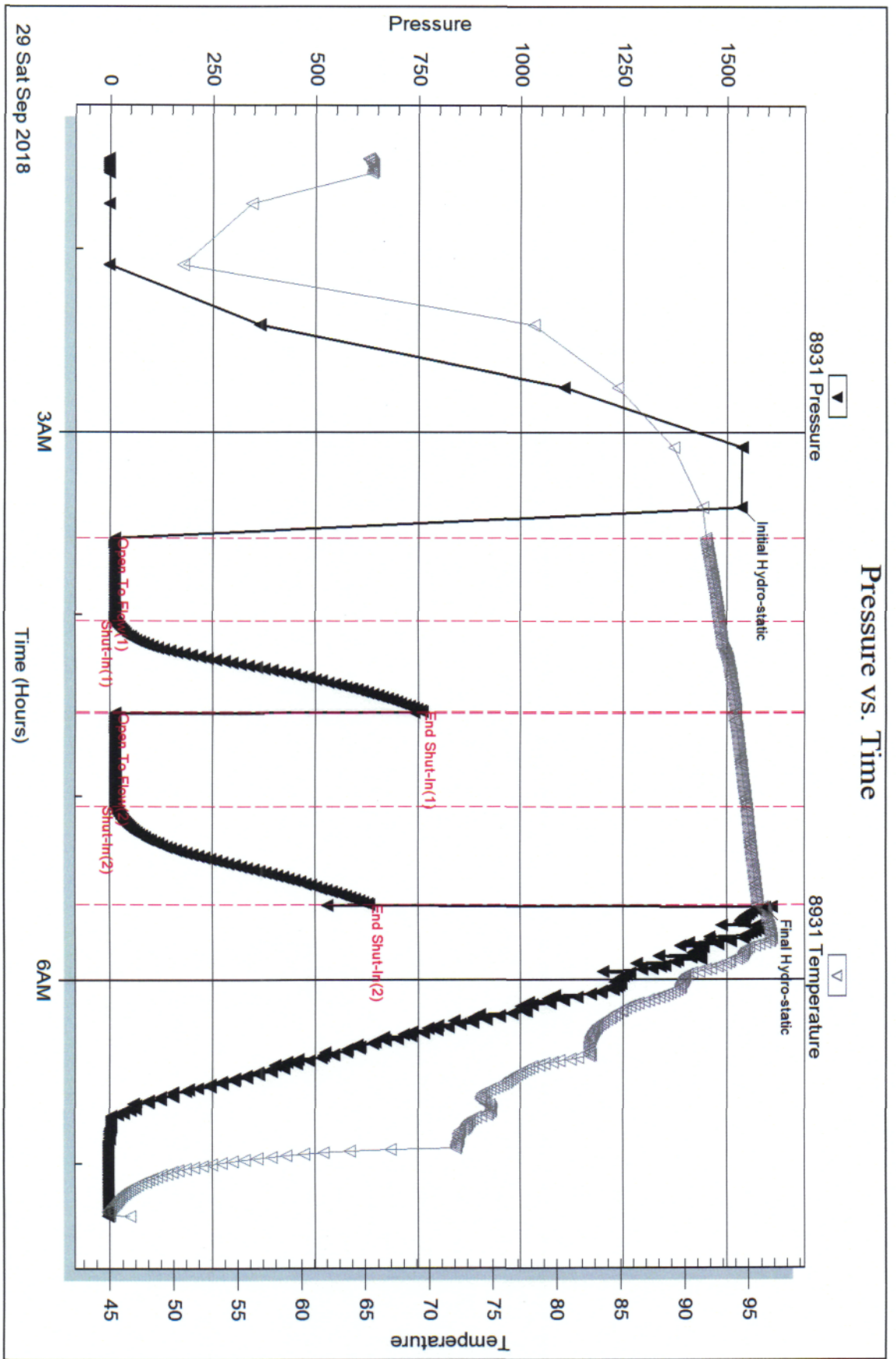
Serial #: 8931

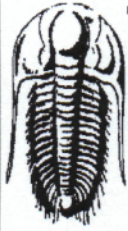
Inside

Mai Oil Operations Inc

Christiansen #1

DST Test Number: 1





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations Inc
 8411 Preston RD STE 800
 Dallas, TX. 75225
 ATTN: Jim Musgrove

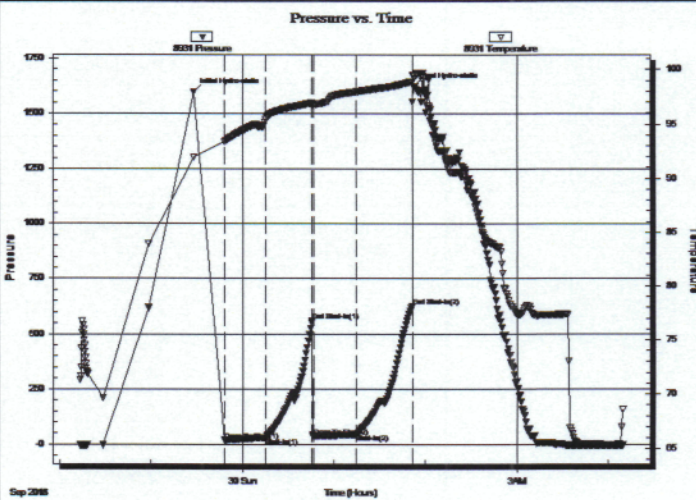
18-21s-12w Stafford,KS
Christiansen #1
 Job Ticket: 64710 **DST#: 2**
 Test Start: 2018.09.29 @ 22:13:21

GENERAL INFORMATION:

Formation: **Lower Lansing**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:48:21
 Time Test Ended: 04:09:36
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Matt Smith
 Unit No: 68
 Interval: **3379.00 ft (KB) To 3500.00 ft (KB) (TVD)**
 Total Depth: 33500.00 ft (KB) (TVD)
 Reference Elevations: 1868.00 ft (KB)
 1860.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 KB to GR/CF: 8.00 ft

Serial #: 8931 Inside
 Press@RunDepth: 45.35 psig @ 3380.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.09.29 End Date: 2018.09.30 Last Calib.: 2018.09.30
 Start Time: 22:13:26 End Time: 04:09:35 Time On Btm: 2018.09.29 @ 23:28:21
 Time Off Btm: 2018.09.30 @ 01:52:21

TEST COMMENT: IF: Strong blow . B.O.B. in 7 mins. Built to 33 1/2".
 IS: Weak blow . Built to 4"@ 24 mins in. Built to 4", decreased to 2".
 FF: Strong blow . B.O.B. immediate. Built to 40".
 FS: Weak blow . Built to 3".



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1596.81	91.94	Initial Hydro-static
20	18.90	93.34	Open To Flow (1)
48	30.94	95.37	Shut-In(1)
78	559.27	96.90	End Shut-In(1)
79	33.83	96.79	Open To Flow (2)
107	45.35	97.93	Shut-In(2)
143	626.10	98.89	End Shut-In(2)
144	1621.38	99.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	VGHMCO 40%g 32%o 28%m	0.88
17.00	GOCM 65%m 33%o 2%g	0.24
0.00	1039' G.I.P. 100% g	0.00

* Recovery from multiple tests

Gas Rates

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



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TOOL DIAGRAM

Mai Oil Operations Inc
8411 Preston RD STE 800
Dallas, TX. 75225
ATTN: Jim Musgrove

18-21s-12w Stafford,KS
Christiansen #1
Job Ticket: 64710 **DST#: 2**
Test Start: 2018.09.29 @ 22:13:21

Tool Information

Drill Pipe:	Length: 3381.00 ft	Diameter: 3.80 inches	Volume: 47.43 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 27000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 47.43 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 37000.00 lb
Depth to Top Packer:	3379.00 ft			Final 39000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	121.00 ft			
Tool Length:	141.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3360.00	
Shut In Tool	5.00			3365.00	
Hydraulic tool	5.00			3370.00	
Packer	4.00			3374.00	20.00 Bottom Of Top Packer
Packer	5.00			3379.00	
Stubb	1.00			3380.00	
Recorder	0.00	8931	Inside	3380.00	
Recorder	0.00	8792	Outside	3380.00	
Perforations	5.00			3385.00	
Change Over Sub	1.00			3386.00	
Blank Spacing	95.00			3481.00	
Change Over Sub	1.00			3482.00	
Perforations	15.00			3497.00	
Bullnose	3.00			3500.00	121.00 Bottom Packers & Anchor

Total Tool Length: 141.00



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18-21s-12w Stafford,KS

8411 Preston RD STE 800
Dallas, TX. 75225

Christiansen #1

Job Ticket: 64710

DST#: 2

ATTN: Jim Musgrove

Test Start: 2018.09.29 @ 22:13:21

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:

6900 ppm

Viscosity: 68.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6900.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	VGHMCO 40%g 32%o 28%m	0.884
17.00	GOCM 65%m 33%o 2%g	0.238
0.00	1039' G.I.P. 100% g	0.000

Total Length: 80.00 ft Total Volume: 1.122 bbl

Num Fluid Samples: 0

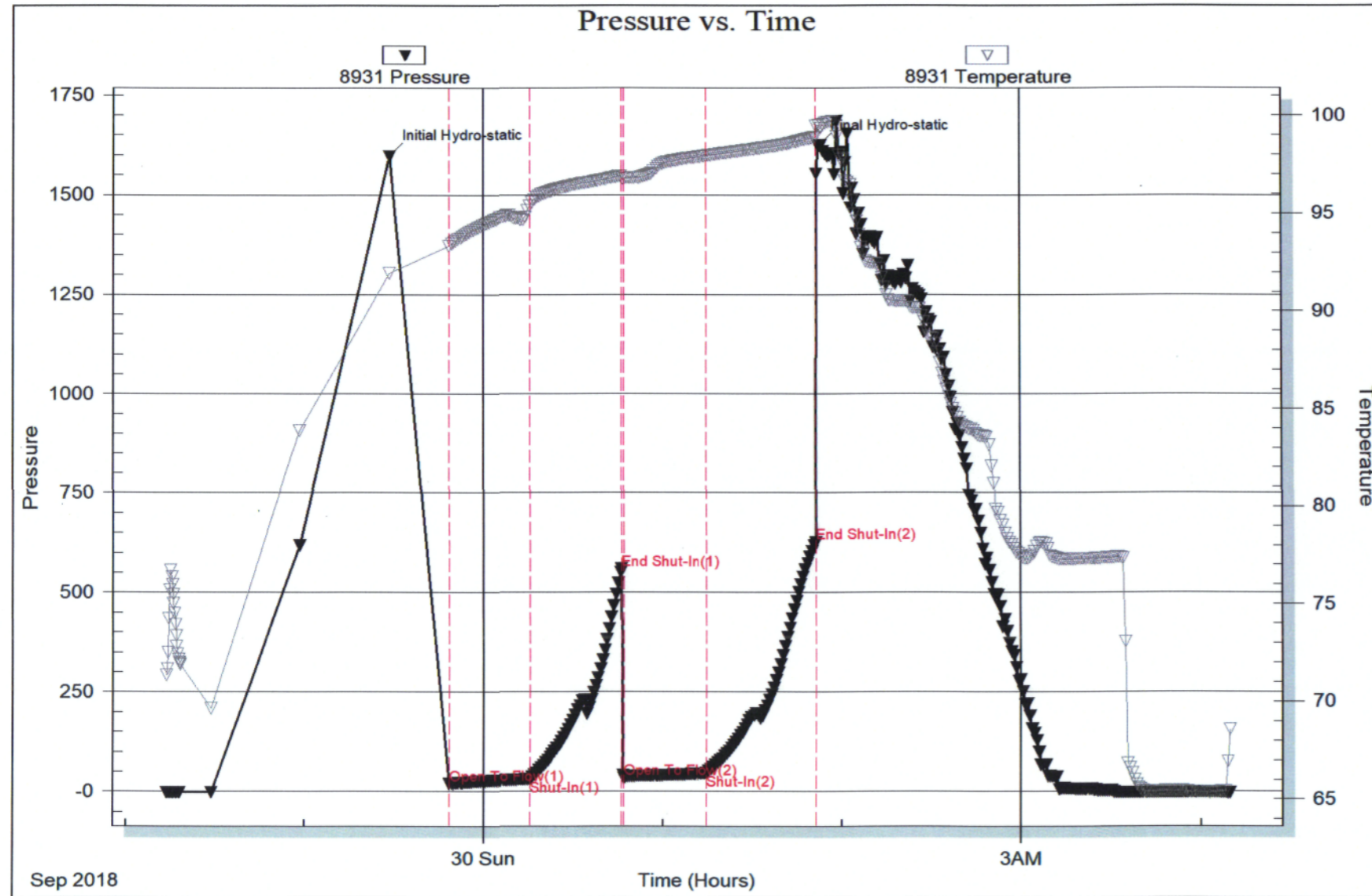
Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:





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Mai Oil Operations Inc
 8411 Preston RD STE 800
 Dallas, TX. 75225
 ATTN: Jim Musgrove

18-21s-12w Stafford,KS
Christiansen #1
 Job Ticket: 64711 **DST#: 3**
 Test Start: 2018.09.30 @ 12:45:57

GENERAL INFORMATION:

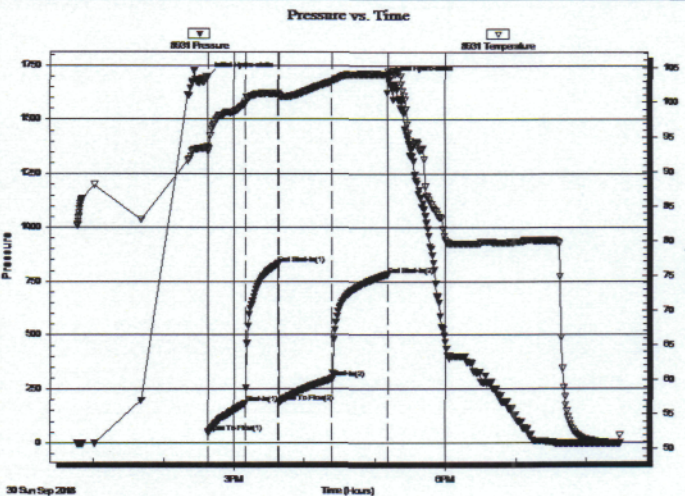
Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:38:12
 Time Test Ended: 20:29:27
 Interval: **3470.00 ft (KB) To 3558.00 ft (KB) (TVD)**
 Total Depth: 3558.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Matt Smith
 Unit No: 68
 Reference Elevations: 1868.00 ft (KB)
 1860.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8931

Inside

Press@RunDepth: 297.90 psig @ 3471.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.09.30 End Date: 2018.09.30 Last Calib.: 2018.09.30
 Start Time: 12:46:02 End Time: 20:29:26 Time On Btm: 2018.09.30 @ 14:37:42
 Time Off Btm: 2018.09.30 @ 17:11:27

TEST COMMENT: IF: Strong blow . B.O.B. in 3 mins. Built to 91 1/4".
 IS: Weak blow .18 mins in Built to 3 1/2".
 FF: Strong blow . B.O.B. in 3 mins. Built to 75 1/2".
 FSI: Weak blow . 16 mins in Built to 3 3/4".



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1700.12	93.60	Initial Hydro-static
1	46.82	93.23	Open To Flow (1)
32	182.87	99.69	Shut-In(1)
61	831.08	101.23	End Shut-In(1)
61	189.98	101.00	Open To Flow (2)
106	297.90	102.94	Shut-In(2)
153	781.84	103.97	End Shut-In(2)
154	1686.89	103.98	Final Hydro-static

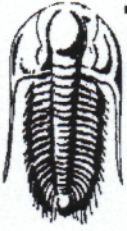
Recovery

Length (ft)	Description	Volume (bbl)
63.00	VGSMCO 73%g 24%o 3%m	0.88
63.00	VGMCO 60%o 35%g 5%m	0.88
693.00	Clean Oil 100%o	9.72
10.00	VGOCM 53%g 32%o 15%m	0.14
0.00	1827' G.I.P. 100%g	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations Inc
8411 Preston RD STE 800
Dallas, TX. 75225
ATTN: Jim Musgrove

18-21s-12w Stafford,KS
Christiansen #1
Job Ticket: 64711 **DST#: 3**
Test Start: 2018.09.30 @ 12:45:57

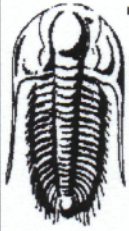
Tool Information

Drill Pipe:	Length: 3477.00 ft	Diameter: 3.80 inches	Volume: 48.77 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 27000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			Total Volume: 48.77 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3470.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	88.00 ft			
Tool Length:	108.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3451.00	
Shut In Tool	5.00			3456.00	
Hydraulic tool	5.00			3461.00	
Packer	4.00			3465.00	20.00 Bottom Of Top Packer
Packer	5.00			3470.00	
Stubb	1.00			3471.00	
Recorder	0.00	8931	Inside	3471.00	
Recorder	0.00	8792	Outside	3471.00	
Perforations	5.00			3476.00	
Change Over Sub	1.00			3477.00	
Blank Spacing	63.00			3540.00	
Change Over Sub	1.00			3541.00	
Perforations	14.00			3555.00	
Bullnose	3.00			3558.00	88.00 Bottom Packers & Anchor

Total Tool Length: 108.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations Inc

18-21s-12w Stafford,KS

8411 Preston RD STE 800
Dallas, TX. 75225

Christiansen #1

Job Ticket: 64711

DST#: 3

ATTN: Jim Musgrove

Test Start: 2018.09.30 @ 12:45:57

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:

7300 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7300.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	VGSMCO 73%g 24%o 3%m	0.884
63.00	VGSMCO 60%o 35%g 5%m	0.884
693.00	Clean Oil 100%o	9.721
10.00	VGOCM 53%g 32%o 15%m	0.140
0.00	1827' G.I.P. 100%g	0.000

Total Length: 829.00 ft Total Volume: 11.629 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

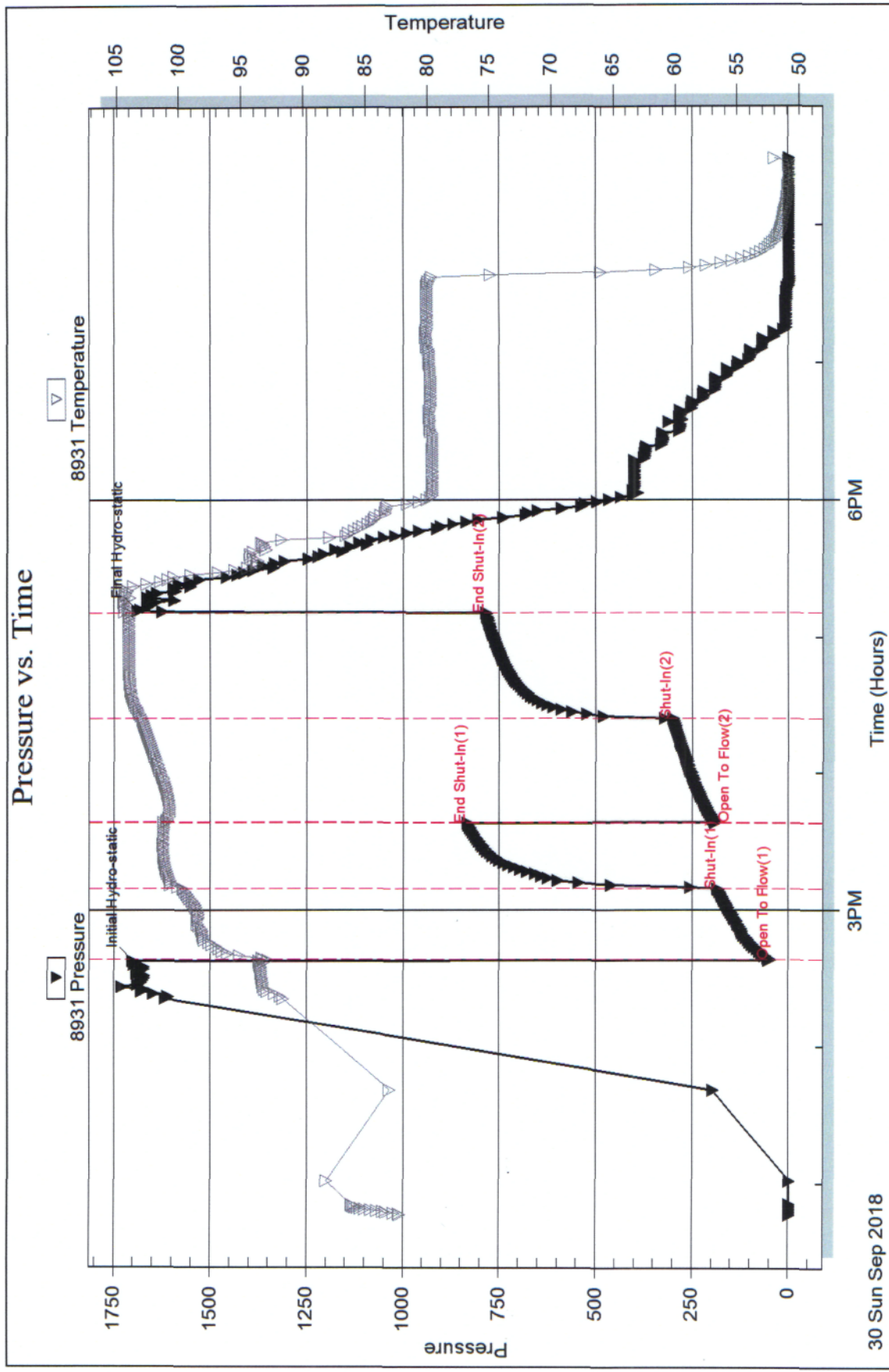
Serial #: none

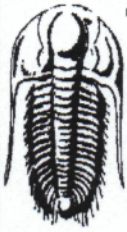
Laboratory Name:

Laboratory Location:

Recovery Comments: 1827' G.I.P.

Gravity w as 39 @ 60 degrees, no correction needed.





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations Inc
 8411 Preston RD STE 800
 Dallas, TX. 75225
 ATTN: Jim Musgrove

18-21s-12w Stafford,KS
Christiansen #1
 Job Ticket: 64712 **DST#: 4**
 Test Start: 2018.10.01 @ 03:05:55

GENERAL INFORMATION:

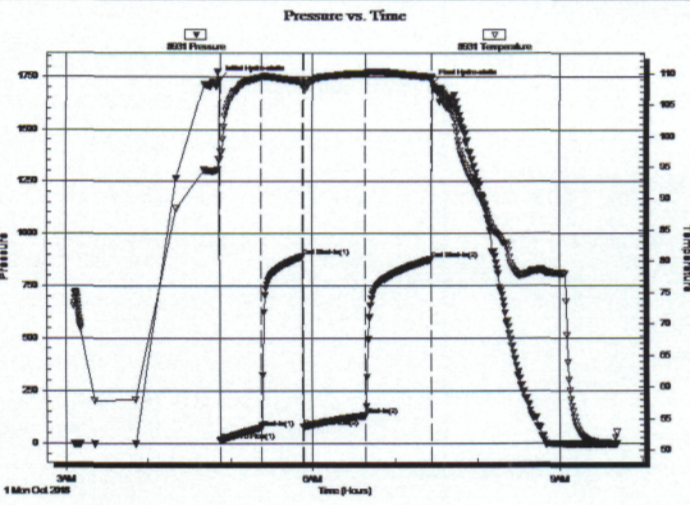
Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:52:25
 Time Test Ended: 09:41:40
 Interval: **3564.00 ft (KB) To 3584.00 ft (KB) (TVD)**
 Total Depth: 3584.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Matt Smith
 Unit No: 68
 Reference Elevations: 1868.00 ft (KB)
 1860.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8931

Inside

Press@RunDepth: 132.78 psig @ 3565.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.10.01 End Date: 2018.10.01 Last Calib.: 2018.10.01
 Start Time: 03:06:00 End Time: 09:41:39 Time On Btm: 2018.10.01 @ 04:51:55
 Time Off Btm: 2018.10.01 @ 07:26:55

TEST COMMENT: IF: Fair blow . Built to 11".
 IS: No blow .
 FF: Fair blow . Built to 8 1/2".
 FSI: No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1737.55	96.29	Initial Hydro-static
1	14.56	96.31	Open To Flow (1)
31	75.10	109.38	Shut-In(1)
61	889.01	108.64	End Shut-In(1)
62	78.08	107.61	Open To Flow (2)
107	132.78	110.00	Shut-In(2)
155	875.47	109.45	End Shut-In(2)
155	1721.12	109.33	Final Hydro-static

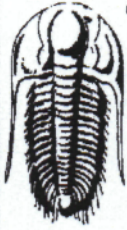
Recovery

Length (ft)	Description	Volume (bbl)
63.00	GMV w / oil scum 77%w 18%m 5%g slt	0.88
63.00	SMCW 98%w 2%m oil specs	0.88
126.00	SMCW 95%w 5%m light oil	1.77
30.00	MV 75%w 25%m slight oil	0.42
0.00	189' G.I.P. 100% g	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations Inc

18-21s-12w Stafford,KS

8411 Preston RD STE 800
Dallas, TX. 75225

Christiansen #1

Job Ticket: 64712

DST#: 4

ATTN: Jim Musgrove

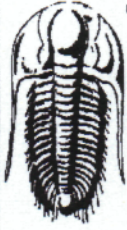
Test Start: 2018.10.01 @ 03:05:55

Tool Information

Drill Pipe:	Length: 3572.00 ft	Diameter: 3.80 inches	Volume: 50.11 bbl	Tool Weight: 2100.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 50.11 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 39000.00 lb
Depth to Top Packer:	3564.00 ft			Final 39000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 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
Change Over Sub	1.00			3545.00	
Shut In Tool	5.00			3550.00	
Hydraulic tool	5.00			3555.00	
Packer	4.00			3559.00	20.00 Bottom Of Top Packer
Packer	5.00			3564.00	
Stubb	1.00			3565.00	
Recorder	0.00	8931	Inside	3565.00	
Recorder	0.00	8792	Outside	3565.00	
Perforations	15.00			3580.00	
Bullnose	3.00			3583.00	19.00 Bottom Packers & Anchor
Total Tool Length:	39.00				



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TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations Inc

18-21s-12w Stafford,KS

8411 Preston RD STE 800
Dallas, TX. 75225

Christiansen #1

Job Ticket: 64712

DST#: 4

ATTN: Jim Musgrove

Test Start: 2018.10.01 @ 03:05:55

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 51.00 sec/qt
Water Loss: 8.78 in³
Resistivity: ohm.m
Salinity: 7300.00 ppm
Filter Cake: 0.20 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: 40000 ppm

Recovery Information

Recovery Table

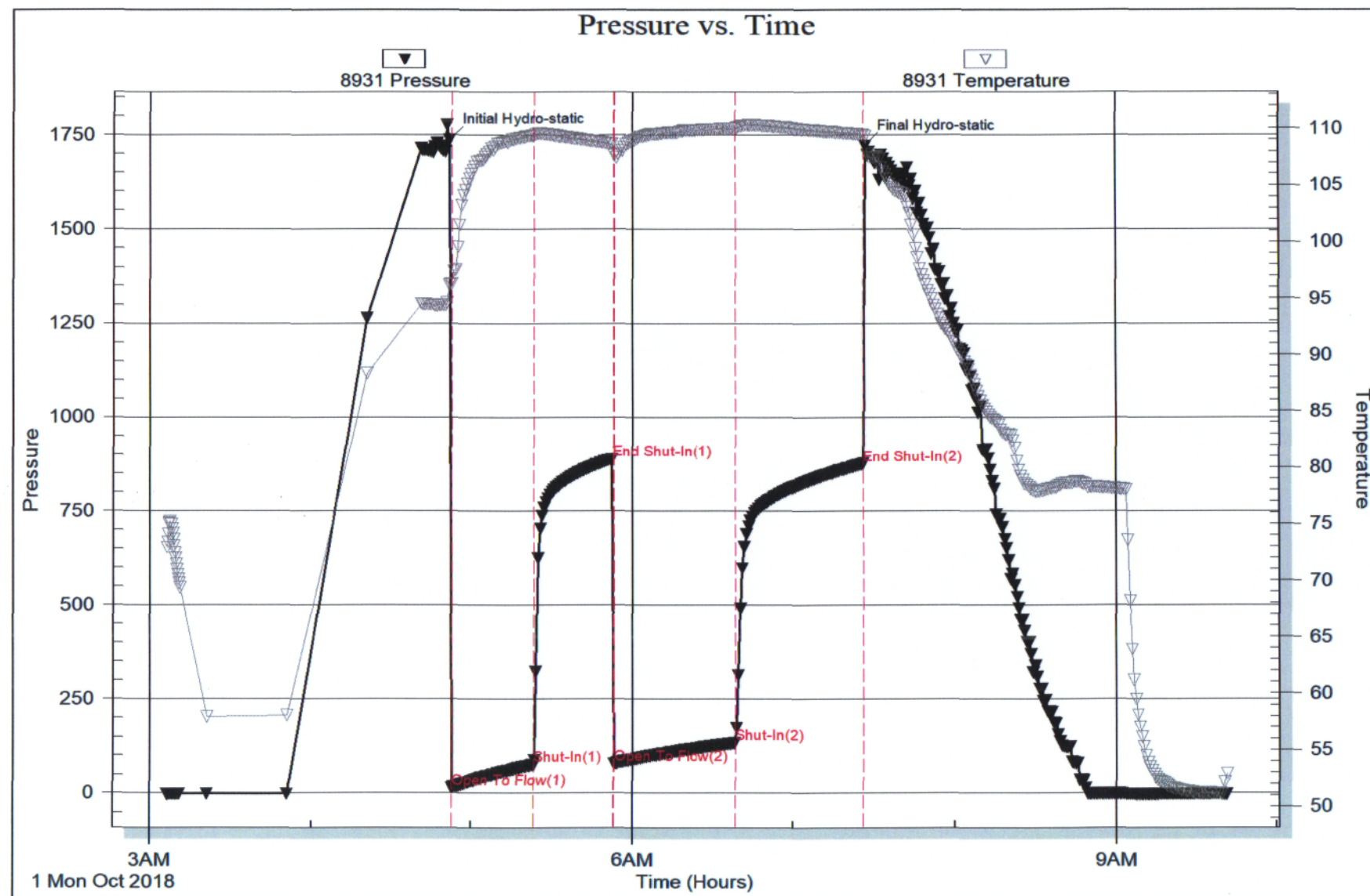
Length ft	Description	Volume bbl
63.00	GMW w / oil scum 77%w 18%m 5%g slight oil	0.884
63.00	SMCW 98%w 2%m oil specs	0.884
126.00	SMCW 95%w 5%m light oil	1.767
30.00	MW 75%w 25%m slight oil	0.421
0.00	189' G.I.P. 100% g	0.000

Total Length: 282.00 ft Total Volume: 3.956 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial#: none

Laboratory Name: Laboratory Location:

Recovery Comments: RW .22 @ 56 degrees = 40,000 chlorides.
189 ft of G.I.P.





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Mai Oil Operations Inc
8411 Preston RD STE 800
Dallas, TX. 75225
ATTN: Jim Musgrove

18-21s-12w Stafford,KS
Christiansen #1
Job Ticket: 64713 **DST#: 5**
Test Start: 2018.10.01 @ 17:03:12

GENERAL INFORMATION:

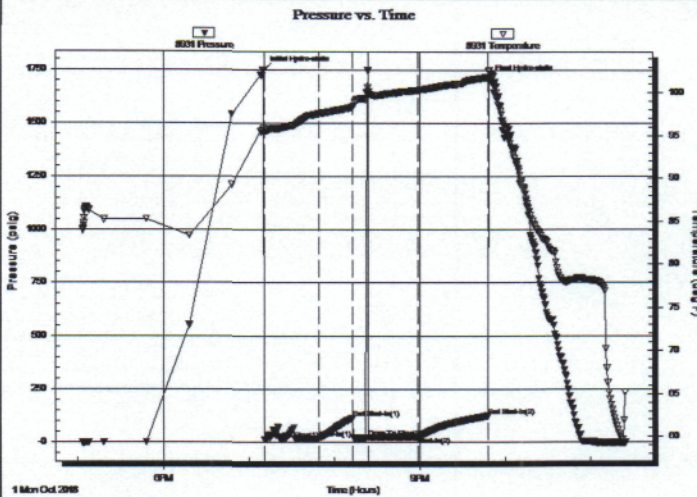
Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:10:57
Time Test Ended: 23:24:12
Interval: **3586.00 ft (KB) To 3603.00 ft (KB) (TVD)**
Total Depth: 3603.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Matt Smith
Unit No: 68
Reference Elevations: 1868.00 ft (KB)
1860.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8931

Inside

Press@RunDepth: 24.77 psig @ 3587.00 ft (KB)
Start Date: 2018.10.01 End Date: 2018.10.01
Start Time: 17:03:17 End Time: 23:24:11
Capacity: 8000.00 psig
Last Calib.: 2018.10.01
Time On Btm: 2018.10.01 @ 19:10:42
Time Off Btm: 2018.10.01 @ 21:48:12

TEST COMMENT: IF: Weak blow . Built to 1 1/2".
IS: No blow .
FF: Weak blow . Surface to 1/4". Flushed tool. Built to 1/2".
FSI: No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1747.13	95.89	Initial Hydro-static
1	12.03	95.32	Open To Flow (1)
39	17.99	97.52	Shut-In(1)
62	114.04	98.29	End Shut-In(1)
74	23.23	100.10	Open To Flow (2)
108	24.77	100.28	Shut-In(2)
158	124.13	101.81	End Shut-In(2)
158	1707.04	102.49	Final Hydro-static

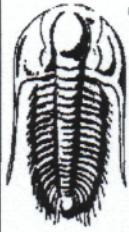
Recovery

Length (ft)	Description	Volume (bbl)
40.00	SWCM 99% m 1% w slight oil	0.56

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations Inc
8411 Preston RD STE 800
Dallas, TX. 75225
ATTN: Jim Musgrove

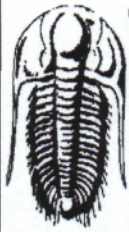
18-21s-12w Stafford,KS
Christiansen #1
Job Ticket: 64713 **DST#: 5**
Test Start: 2018.10.01 @ 17:03:12

Tool Information

Drill Pipe:	Length: 3571.00 ft	Diameter: 3.80 inches	Volume: 50.09 bbl	Tool Weight: 2100.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 50.09 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 39000.00 lb
Depth to Top Packer:	3586.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	17.00 ft			
Tool Length:	37.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3567.00	
Shut In Tool	5.00			3572.00	
Hydraulic tool	5.00			3577.00	
Packer	4.00			3581.00	20.00 Bottom Of Top Packer
Packer	5.00			3586.00	
Stubb	1.00			3587.00	
Recorder	0.00	8931	Inside	3587.00	
Recorder	0.00	8792	Outside	3587.00	
Perforations	13.00			3600.00	
Bullnose	3.00			3603.00	17.00 Bottom Packers & Anchor
Total Tool Length:	37.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations Inc

18-21s-12w Stafford,KS

8411 Preston RD STE 800
Dallas, TX. 75225

Christiansen #1

Job Ticket: 64713

DST#: 5

ATTN: Jim Musgrove

Test Start: 2018.10.01 @ 17:03:12

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:

7400 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7400.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
40.00	SWCM 99% m 1% w slight oil	0.561

Total Length: 40.00 ft

Total Volume: 0.561 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

