

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operation Inc.
 8411 Preston Road Suite 800
 Dallas TX 75225+5520
 ATTN: Jim Musgrove

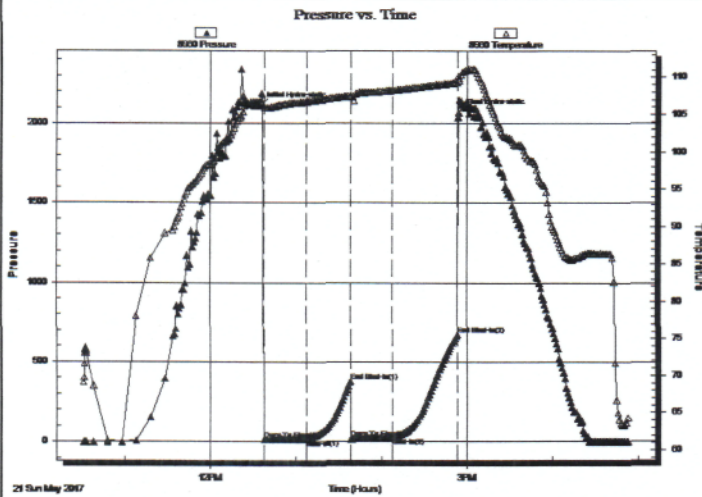
16-20S-22W Ness,KS
D&D Unit #1
 Job Ticket: 64781 **DST#: 1**
 Test Start: 2017.05.21 @ 10:31:00

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:37:30
 Time Test Ended: 16:52:30
 Interval: **4318.00 ft (KB) To 4365.00 ft (KB) (TVD)**
 Total Depth: 4365.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Ken Swinney
 Unit No: 72
 Reference Elevations: 2217.00 ft (KB)
 2209.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8960 **Outside**
 Press@RunDepth: 674.79 psig @ 4362.16 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.05.21 End Date: 2017.05.21 Last Calib.: 2017.05.21
 Start Time: 10:31:05 End Time: 16:52:29 Time On Btm: 2017.05.21 @ 12:35:00
 Time Off Btm: 2017.05.21 @ 14:54:00

TEST COMMENT: IFP 30 Minutes Surface blow died in 5 minutes
 ISI 30 Minutes No blow back
 FFP 30 Minutes No blow / Flush tool/ Surface blow died in 1 minute
 FSI 45 Minutes No blow back



PRESSURE SUMMARY

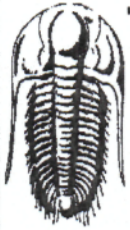
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2108.31	106.67	Initial Hydro-static
3	13.53	105.99	Open To Flow (1)
32	15.99	106.74	Shut-In(1)
63	376.61	107.51	End Shut-In(1)
64	16.45	107.32	Open To Flow (2)
92	22.16	108.22	Shut-In(2)
138	674.79	109.29	End Shut-In(2)
139	2068.48	109.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	VSOCM Oil 2% Mud 98%	0.15

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operation Inc.
8411 Preston Road Suite 800
Dallas TX 75225+5520
ATTN: Jim Musgrove

16-20S-22W Ness,KS
D&D Unit #1
Job Ticket: 64781 **DST#: 1**
Test Start: 2017.05.21 @ 10:31:00

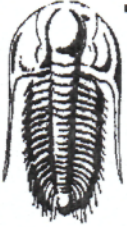
Tool Information

Drill Pipe:	Length: 3970.00 ft	Diameter: 3.80 inches	Volume: 55.69 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: 20000.00 lb
Drill Collar:	Length: 359.00 ft	Diameter: 2.25 inches	Volume: 1.77 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 57.46 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4318.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.16 ft			
Tool Length:	67.16 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4303.00	
Hydraulic tool	5.00			4308.00	
Top Packer	5.00			4313.00	
Packer	5.00			4318.00	20.00 Bottom Of Top Packer
Anchor	9.00			4327.00	
Change Over Sub	1.00			4328.00	
Drill Pipe	31.16			4359.16	
Change Over Sub	1.00			4360.16	
Recorder	1.00	8354	Inside	4361.16	
Recorder	1.00	8960	Outside	4362.16	
Bullnose	3.00			4365.16	47.16 Anchor Tool

Total Tool Length: 67.16



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operation Inc.

16-20S-22W Ness,KS

8411 Preston Road Suite 800
Dallas TX 75225+5520

D&D Unit #1

Job Ticket: 64781

DST#: 1

ATTN: Jim Musgrove

Test Start: 2017.05.21 @ 10:31:00

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4900.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	VSOCM Oil 2% Mud 98%	0.148

Total Length: 30.00 ft

Total Volume: 0.148 bbl

Num Fluid Samples: 0

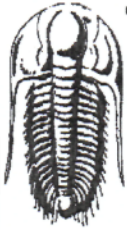
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operation Inc.
 8411 Preston Road Suite 800
 Dallas TX 75225+5520
 ATTN: Jim Musgrove

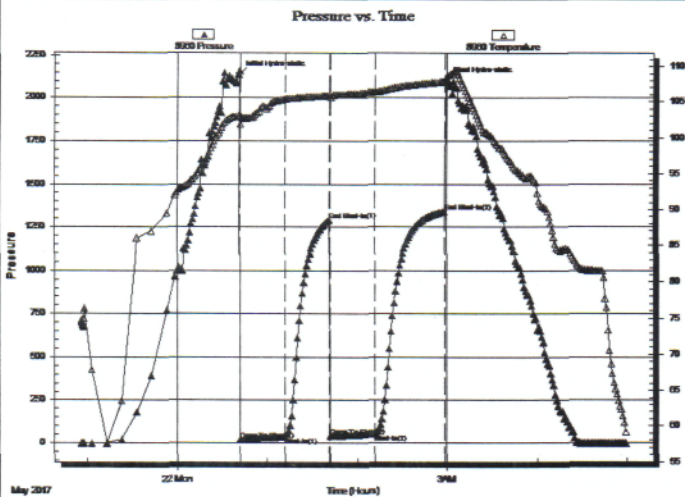
16-20S-22W Ness,KS
D&D Unit #1
 Job Ticket: 64782 **DST#: 2**
 Test Start: 2017.05.21 @ 22:56:00

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:42:00
 Time Test Ended: 05:00:00
 Interval: **4318.00 ft (KB) To 4373.00 ft (KB) (TVD)**
 Total Depth: 4373.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Ken Swinney
 Unit No: 72
 Reference Elevations: 2217.00 ft (KB)
 2209.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8960 **Outside**
 Press@RunDepth: 1340.45 psig @ 4370.16 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.05.21 End Date: 2017.05.22 Last Calib.: 2017.05.22
 Start Time: 22:56:05 End Time: 04:59:59 Time On Btm: 2017.05.22 @ 00:41:00
 Time Off Btm: 2017.05.22 @ 03:00:00

TEST COMMENT: IFP 30 Minutes Blow built to 1/2' then died in 19 minutes
 ISI 30 Minutes No blow back
 FFP 30 Minutes Surface blow died in 9 minutes
 FSI 45 Minutes No blow back



PRESSURE SUMMARY

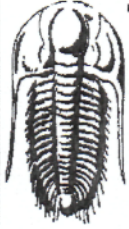
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2136.70	102.99	Initial Hydro-static
1	16.11	101.88	Open To Flow (1)
31	36.30	105.34	Shut-In(1)
61	1292.30	105.86	End Shut-In(1)
62	40.35	105.64	Open To Flow (2)
91	53.61	106.38	Shut-In(2)
138	1340.45	107.84	End Shut-In(2)
139	2104.99	108.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	OCM Oil 10% Mud 90%	0.37

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operation Inc.
8411 Preston Road Suite 800
Dallas TX 75225+5520
ATTN: Jim Musgrove

16-20S-22W Ness,KS
D&D Unit #1
Job Ticket: 64782 **DST#: 2**
Test Start: 2017.05.21 @ 22:56:00

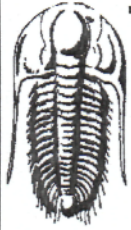
Tool Information

Drill Pipe:	Length: 3958.00 ft	Diameter: 3.80 inches	Volume: 55.52 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:	20000.00 lb
Drill Collar:	Length: 359.00 ft	Diameter: 2.25 inches	Volume: 1.77 bbl	Weight to Pull Loose:	74000.00 lb
			Total Volume: 57.29 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4318.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	55.16 ft				
Tool Length:	75.16 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments: Ruined Packer

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4303.00	
Hydraulic tool	5.00			4308.00	
Top Packer	5.00			4313.00	
Packer	5.00			4318.00	20.00 Bottom Of Top Packer
Anchor	17.00			4335.00	
Change Over Sub	1.00			4336.00	
Drill Pipe	31.16			4367.16	
Change Over Sub	1.00			4368.16	
Recorder	1.00	8354	Inside	4369.16	
Recorder	1.00	8960	Outside	4370.16	
Bullnose	3.00			4373.16	55.16 Anchor Tool

Total Tool Length: 75.16



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operation Inc.

16-20S-22W Ness,KS

8411 Preston Road Suite 800
Dallas TX 75225+5520

D&D Unit #1

Job Ticket: 64782

DST#: 2

ATTN: Jim Musgrove

Test Start: 2017.05.21 @ 22:56:00

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4900.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	OCM Oil 10% Mud 90%	0.369

Total Length: 75.00 ft Total Volume: 0.369 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

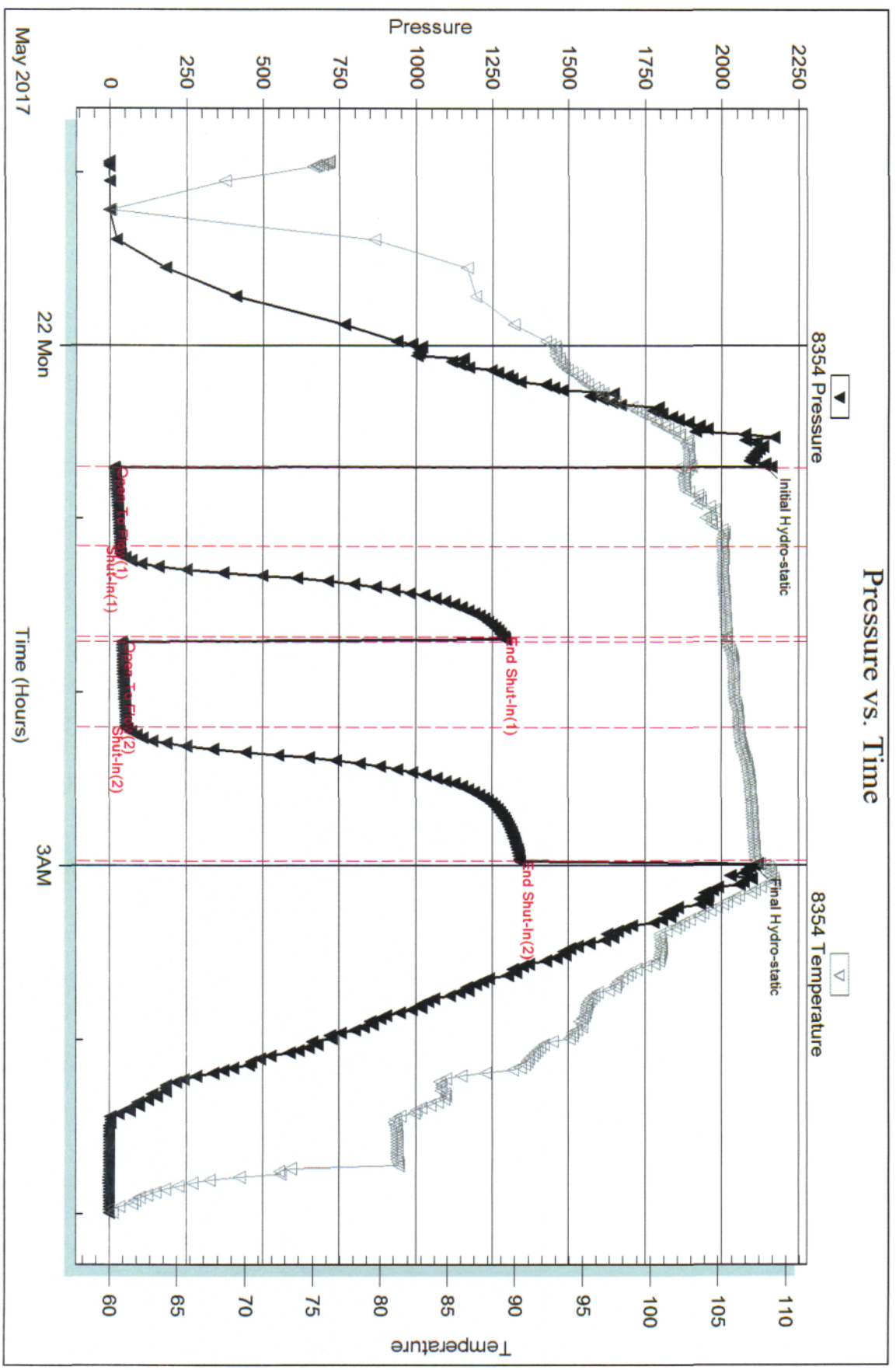
Recovery Comments:

Serial #: 8354

Inside Mai Oil Operation Inc.

D&D Unit #1

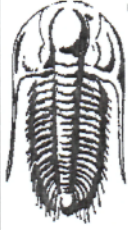
DST Test Number: 2



Triobite Testing, Inc

Ref. No: 64782

Printed: 2017.05.23 @ 13:33:25



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operation Inc.
 8411 Preston Road Suite 800
 Dallas TX 75225+5520
 ATTN: Jim Musgrove

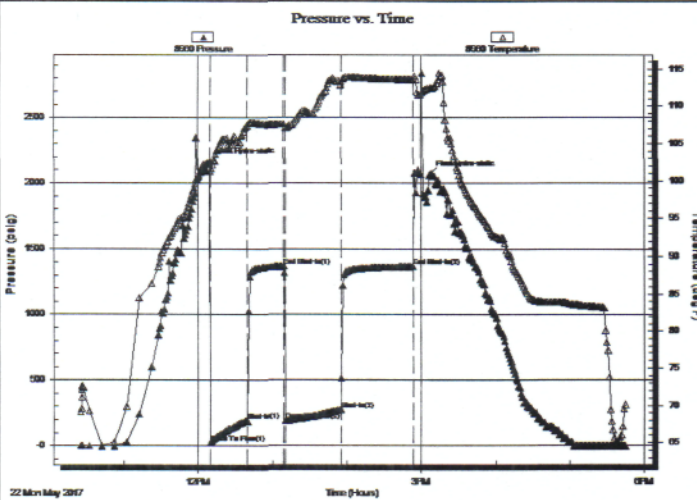
16-20S-22W Ness, KS
D&D Unit #1
 Job Ticket: 64783 **DST#: 3**
 Test Start: 2017.05.22 @ 10:25:00

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:09:30
 Time Test Ended: 17:44:30
 Interval: **4317.00 ft (KB) To 4379.00 ft (KB) (TVD)**
 Total Depth: 4379.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Ken Swinney
 Unit No: 72
 Reference Elevations: 2217.00 ft (KB)
 2209.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8960 **Outside**
 Press@RunDepth: 1370.09 psig @ 4376.16 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.05.22 End Date: 2017.05.22 Last Calib.: 2017.05.22
 Start Time: 10:25:05 End Time: 17:44:29 Time On Btm: 2017.05.22 @ 12:09:00
 Time Off Btm: 2017.05.22 @ 15:06:30

TEST COMMENT: IFP 30 Minutes BOB in 18 minutes
 ISI 30 Minutes No blow back
 FFP 45 Minutes BOB in 18 minutes
 FSI 60 Minutes Blow back built to 1/2" then died after 23 minutes



PRESSURE SUMMARY

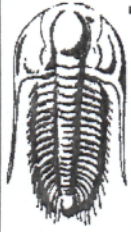
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2163.23	102.39	Initial Hydro-static
1	27.24	101.23	Open To Flow (1)
31	190.46	107.39	Shut-In(1)
60	1370.84	107.60	End Shut-In(1)
62	191.67	107.13	Open To Flow (2)
106	276.47	112.88	Shut-In(2)
165	1370.09	113.58	End Shut-In(2)
178	2062.51	112.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
558.00	MO Mud 50% Oil 50%	2.79
124.00	Clean Oil 100%	1.74
0.00	124' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operation Inc.

16-20S-22W Ness,KS

8411 Preston Road Suite 800
Dallas TX 75225+5520

D&D Unit #1

Job Ticket: 64783

DST#: 3

ATTN: Jim Musgrove

Test Start: 2017.05.22 @ 10:25:00

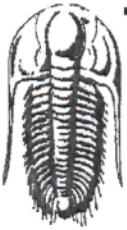
Tool Information

Drill Pipe:	Length: 3958.00 ft	Diameter: 3.80 inches	Volume: 55.52 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 359.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 55.52 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4317.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.16 ft			
Tool Length:	82.16 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Ruined Packer

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			4302.00	
Hydraulic tool	5.00			4307.00	
Top Packer	5.00			4312.00	
Packer	5.00			4317.00	20.00 Bottom Of Top Packer
Anchor	24.00			4341.00	
Change Over Sub	1.00			4342.00	
Drill Pipe	31.16			4373.16	
Change Over Sub	1.00			4374.16	
Recorder	1.00	8354	Inside	4375.16	
Recorder	1.00	8960	Outside	4376.16	
Bullnose	3.00			4379.16	62.16 Anchor Tool

Total Tool Length: 82.16



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operation Inc.

16-20S-22W Ness,KS

8411 Preston Road Suite 800
Dallas TX 75225+5520

D&D Unit #1

Job Ticket: 64783

DST#: 3

ATTN: Jim Musgrove

Test Start: 2017.05.22 @ 10:25:00

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: 11.99 in³

Gas Cushion Type:

Gas Cushion Pressure:

psig

Resistivity: ohm.m

Salinity: 8900.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
558.00	MO Mud 50% Oil 50%	2.791
124.00	Clean Oil 100%	1.739
0.00	124' GIP	0.000

Total Length: 682.00 ft Total Volume: 4.530 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

