

**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations Inc**

8411 Preston Rd Ste 800
Dallas, TX 75225-5520

ATTN: Jim Musgrove

Wildcat 5#!

19-20s-22w Ness, KS

Start Date: 2016.06.09 @ 01:02:42

End Date: 2016.06.09 @ 07:26:57

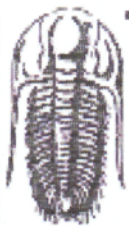
Job Ticket #: 61857 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2016.06.11 @ 16:48:45



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Mai Oil Operations Inc
 8411 Preston Rd Ste 800
 Dallas, TX 75225-5520
 ATTN: Jim Musgrove

19-20s-22w Ness, KS
Wildcat 5#1
 Job Ticket: 61857 **DST#: 1**
 Test Start: 2016.06.09 @ 01:02:42

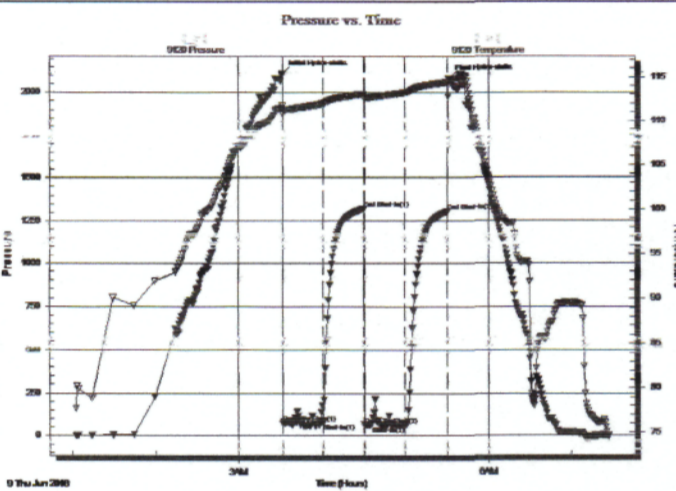
GENERAL INFORMATION:

Formation: **Miss**
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole (Initial)**
 Time Test Started: **03:31:42** Tester: **Shana McBride**
 Time Test Ended: **07:26:57** Unit No: **84**
 Interval: **4241.00 ft (KB) To 4325.00 ft (KB) (TVD)** Reference Elevations: **2208.00 ft (KB)**
 Total Depth: **4325.00 ft (KB) (TVD)** **2197.00 ft (KB)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair** KB to GR/CF: **11.00 ft**

Serial #: 9120 Outside

Start Date: **2016.06.09** End Date: **2016.06.09** Last Calib.: **2016.06.09**
 Start Time: **01:02:42** End Time: **07:26:57** Time On Btm: **2016.06.09 @ 03:31:27**
 Time Off Btm: **2016.06.09 @ 05:24:27**

TEST COMMENT: Surface blow died in 12 min
 No return
 No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2113.21	111.72	Initial Hydro-static
1	71.12	110.79	Open To Flow (1)
30	73.27	111.94	Shut-In(1)
59	1320.68	113.08	End Shut-In(1)
59	62.91	112.54	Open To Flow (2)
89	57.60	113.23	Shut-In(2)
120	1304.39	114.40	End Shut-In(2)
120	2086.32	114.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	s o c m 5%o 95%m	0.14

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations Inc
8411 Preston Rd Ste 800
Dallas, TX 75225-5520
ATTN: Jim Musgrove

19-20s-22w Ness, KS
Wildcat 5#1
Job Ticket: 61857 **DST#: 1**
Test Start: 2016.06.09 @ 01:02:42

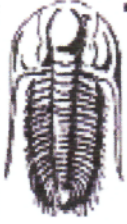
Tool Information

Drill Pipe:	Length: 4251.00 ft	Diameter: 3.80 inches	Volume: 59.63 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 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: 55000.00 lb
			Total Volume: 59.63 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	4241.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	84.00 ft			
Tool Length:	104.00 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			4222.00	
Shut In Tool	5.00			4227.00	
Hydraulic tool	5.00			4232.00	
Packer	5.00			4237.00	20.00 Bottom Of Top Packer
Packer	4.00			4241.00	
Stubb	1.00			4242.00	
Recorder	0.00	9120	Outside	4242.00	
Recorder	0.00	8353	Inside	4242.00	
Perforations	13.00			4255.00	
Change Over Sub	1.00			4256.00	
Drill Pipe	63.00			4319.00	
Change Over Sub	1.00			4320.00	
Bullnose	5.00			4325.00	84.00 Bottom Packers & Anchor

Total Tool Length: 104.00



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations Inc
8411 Preston Rd Ste 800
Dallas, TX 75225-5520
ATTN: Jim Musgrove

19-20s-22w Ness, KS
Wildcat 5#!
Job Ticket: 61857 **DST#: 1**
Test Start: 2016.06.09 @ 01:02:42

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 65.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.38 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 7500.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	s o c m 5% o 95% m	0.140

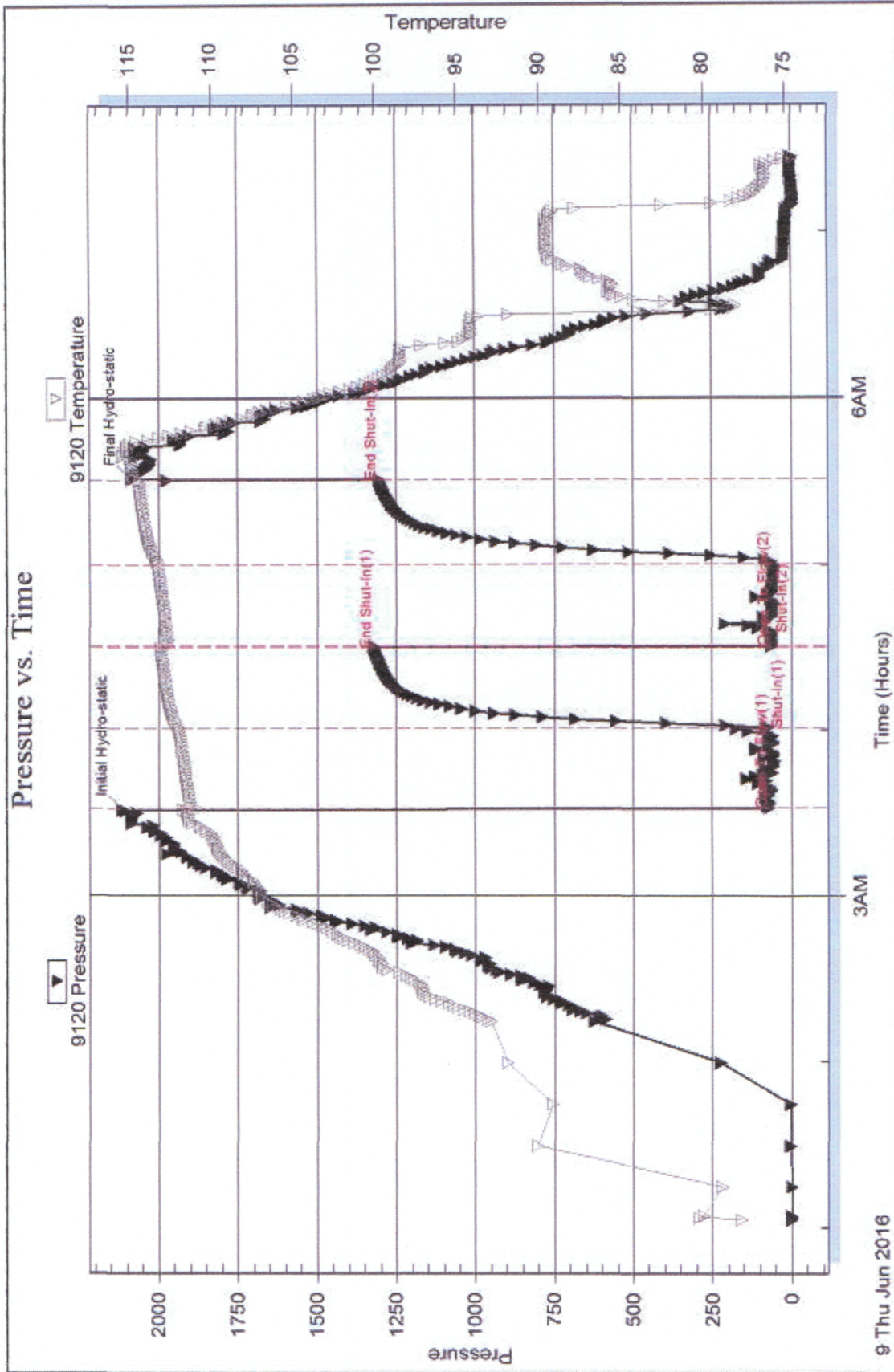
Total Length: 10.00 ft Total Volume: 0.140 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 9120

Outside Mai Oil Operations Inc

Wildcat 5#1

DST Test Number: 1



9 Thu Jun 2016

3AM

6AM

Time (Hours)

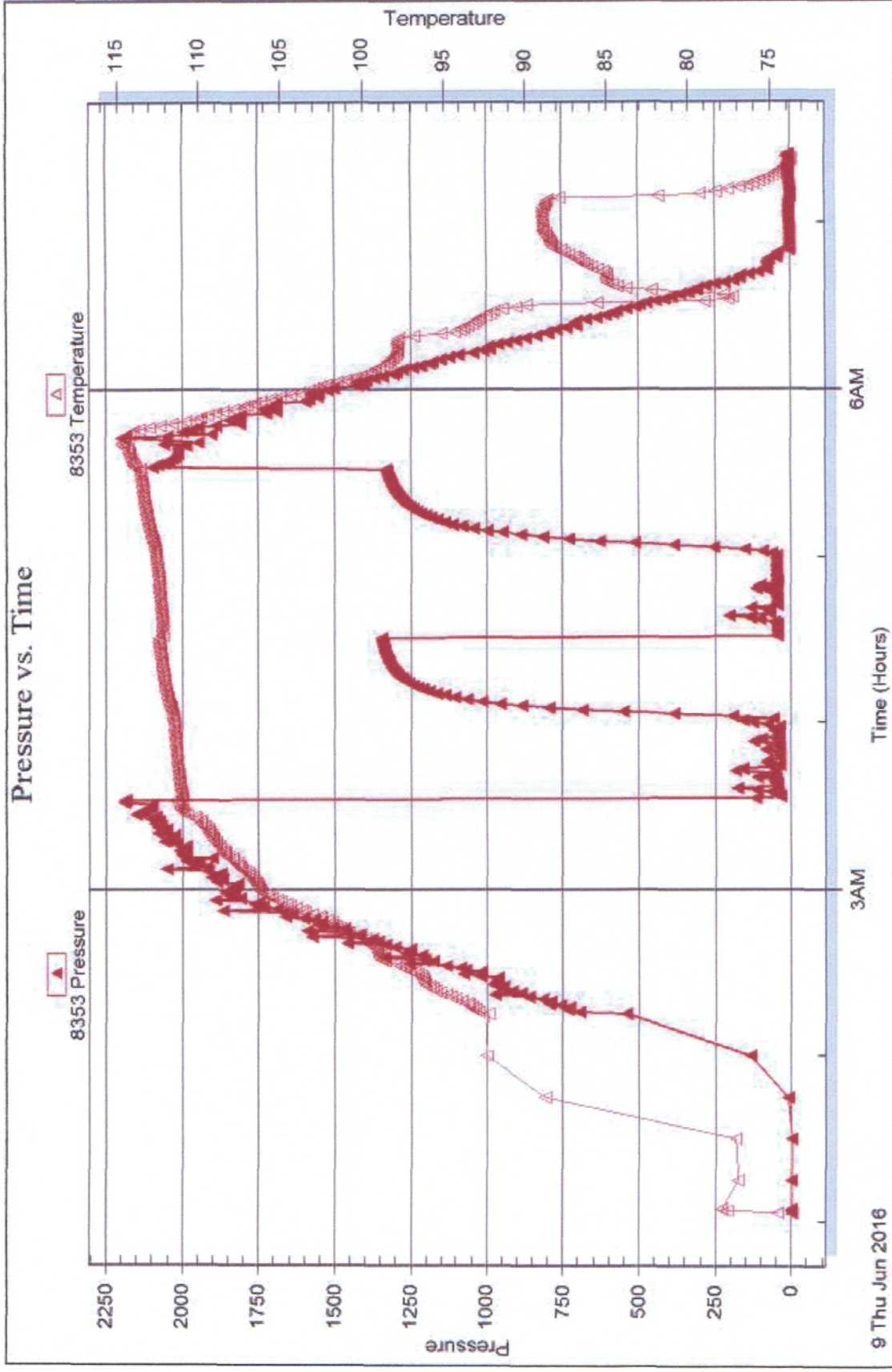
Serial #: 8353

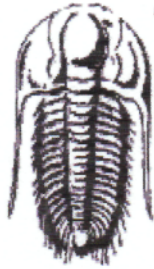
Inside

Mai Oil Operations Inc

Wildcat 5#1

DST Test Number: 1





**TRILOBITE
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DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations Inc**

8411 Preston Rd Ste 800
Dallas, TX 75225-5520

ATTN: Jim Musgrove

Wildcat 5#1

19-20s-22w Ness, KS

Start Date: 2016.06.09 @ 16:21:34

End Date: 2016.06.10 @ 00:40:19

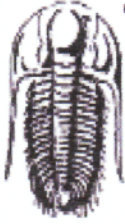
Job Ticket #: 61858 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2016.06.11 @ 16:48:17



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Mai Oil Operations Inc
 8411 Preston Rd Ste 800
 Dallas, TX 75225-5520
 ATTN: Jim Musgrove

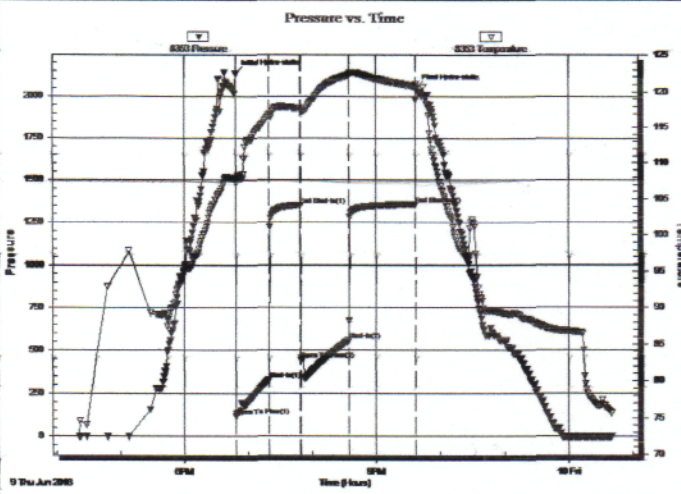
19-20s-22w Ness, KS
Wildcat 5#1
 Job Ticket: 61858 **DST#: 2**
 Test Start: 2016.06.09 @ 16:21:34

GENERAL INFORMATION:

Formation: Miss
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:48:49
Time Test Ended: 00:40:19
Interval: 4242.00 ft (KB) To 4331.00 ft (KB) (TVD)
Total Depth: 4331.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches **Hole Condition:** Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Shane McBride
Unit No: 84
Reference Elevations: 2208.00 ft (KB)
 2197.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8353 **Inside**
Press@RunDepth: 556.53 psig @ 4243.00 ft (KB) **Capacity:** 8000.00 psig
Start Date: 2016.06.09 **End Date:** 2016.06.10 **Last Calib.:** 2016.06.10
Start Time: 16:21:34 **End Time:** 00:40:19 **Time On Btm:** 2016.06.09 @ 18:48:34
Time Off Btm: 2016.06.09 @ 21:37:19

TEST COMMENT: B.O.B. in 5 1/2 min
 No return
 B.O.B. in 9 1/2 min
 No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2131.18	107.83	Initial Hydro-static
1	117.92	107.16	Open To Flow (1)
31	330.17	116.72	Shut-In(1)
60	1352.15	117.70	End Shut-In(1)
61	445.33	117.41	Open To Flow (2)
106	556.53	122.22	Shut-In(2)
168	1356.62	120.73	End Shut-In(2)
169	2049.13	120.91	Final Hydro-static

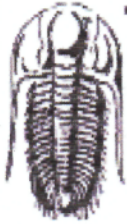
Recovery

Length (ft)	Description	Volume (bbl)
165.00	o c m 30o 70m	2.31
300.00	s m & o c w 10m 20o 70w	4.21
600.00	o c w 15o 85w	8.42

* Recovery from multiple tests

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations Inc
8411 Preston Rd Ste 800
Dallas, TX 75225-5520
ATTN: Jim Musgrove

19-20s-22w Ness, KS
Wildcat 5#1
Job Ticket: 61858 **DST#: 2**
Test Start: 2016.06.09 @ 16:21:34

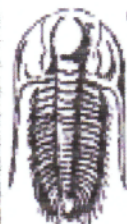
Tool information

Drill Pipe:	Length: 4249.00 ft	Diameter: 3.80 inches	Volume: 59.60 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 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: 65000.00 lb
			<u>Total Volume: 59.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	4242.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	89.00 ft			
Tool Length:	109.00 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			4223.00	
Shut In Tool	5.00			4228.00	
Hydraulic tool	5.00			4233.00	
Packer	5.00			4238.00	20.00 Bottom Of Top Packer
Packer	4.00			4242.00	
Stubb	1.00			4243.00	
Recorder	0.00	9120	Outside	4243.00	
Recorder	0.00	9353	Inside	4243.00	
Perforations	18.00			4261.00	
Change Over Sub	1.00			4262.00	
Drill Pipe	63.00			4325.00	
Change Over Sub	1.00			4326.00	
Bullnose	5.00			4331.00	89.00 Bottom Packers & Anchor

Total Tool Length: 109.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Mai Oil Operations Inc
8411 Preston Rd Ste 800
Dallas, TX 75225-5520
ATTN: Jim Musgrove

19-20s-22w Ness, KS
Wildcat 5#1
Job Ticket: 61858 **DST#: 2**
Test Start: 2016.06.09 @ 16:21:34

Mud and Cushion information

Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 29500 ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl	
Water Loss: 9.98 in"	Gas Cushion type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 8500.00 ppm		

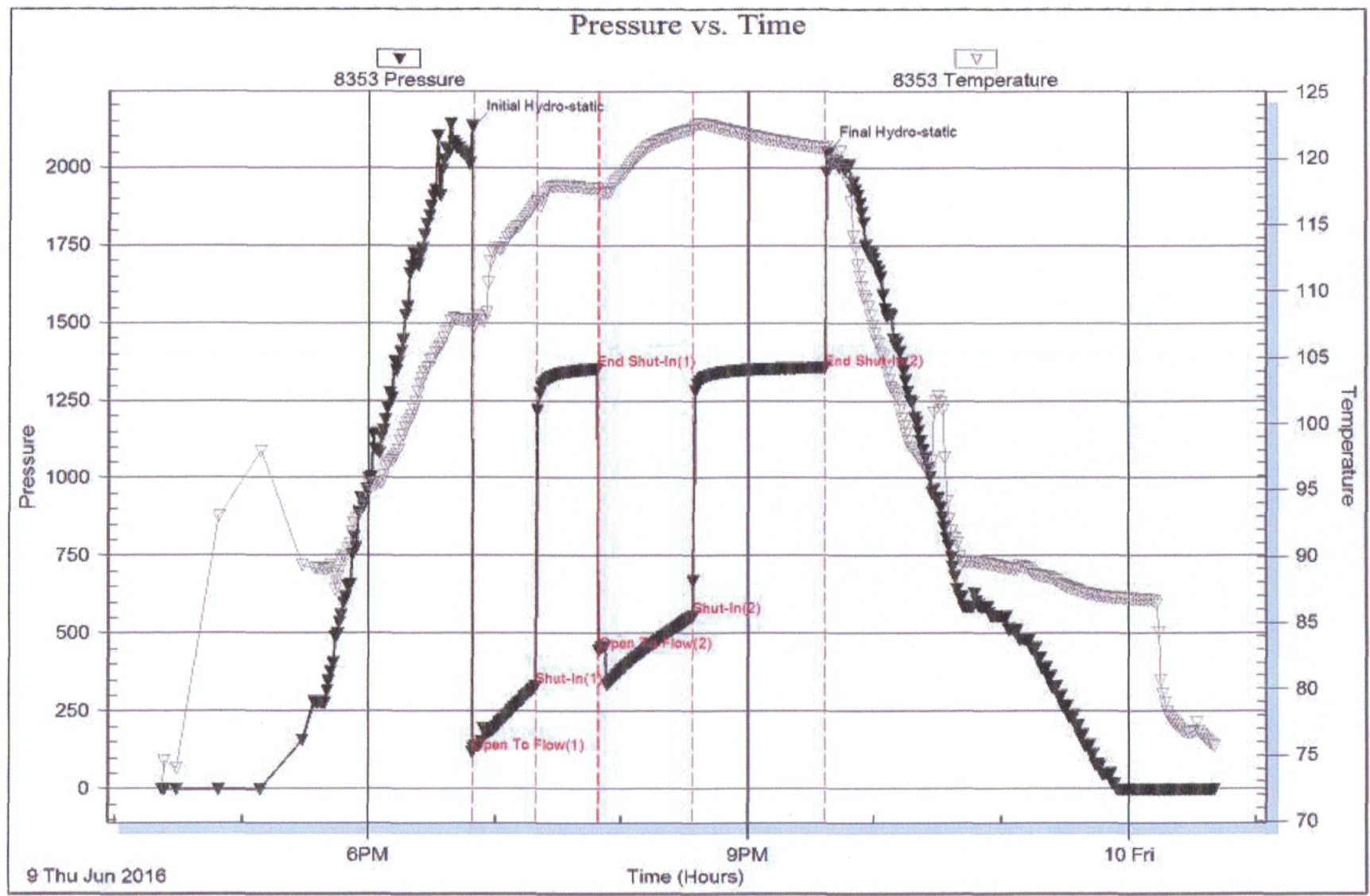
Recovery Information

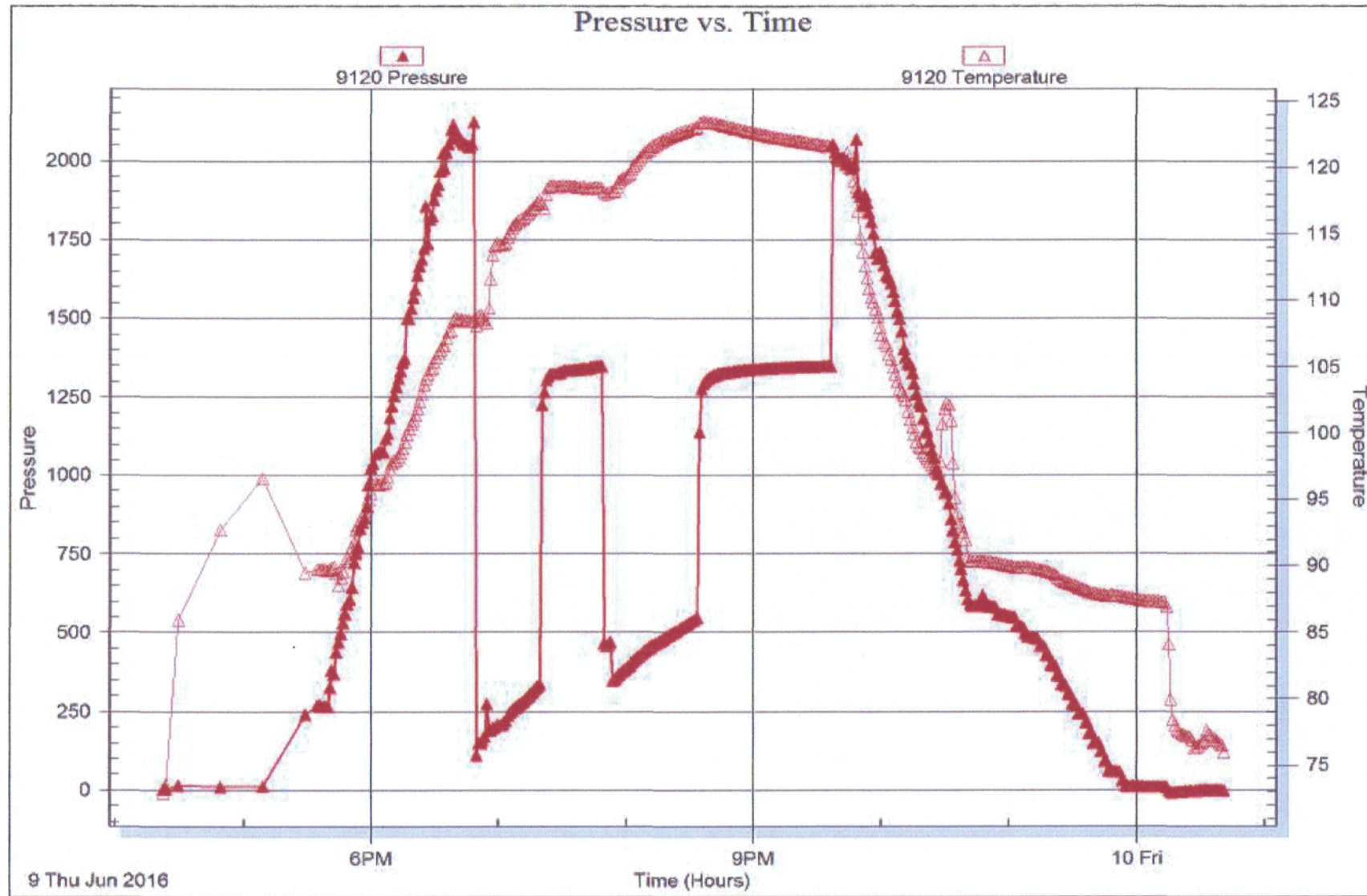
Recovery Table

Length ft	Description	Volume bbl
165.00	o c m 30o 70m	2.315
300.00	s m & o c w 10m 20o /UW	4.208
600.00	o c w 15o 85w	8.416

Total Length: 1065.00 ft Total Volume: 14.939 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: .220 @ 75*f = 29,500 chlor







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61857

Well Name & No. Wildcat 5 #1 Test No. #1 Date 4/9/10
 Company MAE Oil Operations Inc. Elevation 2209 KB 2197 GL
 Address 8411 Preston Rd Ste 800 Dallas TX 75225-5520
 Co. Rep / Geo. Jim Magrove Rig Southward #8
 Location: Sec. 19 Twp. 20S Rge. 22W Co. WESS State K5

Interval Tested 4241 4325 Zone Tested 4M155
 Anchor Length 84' Drill Pipe Run 4251' Mud Wt. 9.1
 Top Packer Depth 4236 Drill Collars Run — Vis 05
 Bottom Packer Depth 4241 Wt. Pipe Run — WL 8.4
 Total Depth 4325 Chlorides 7500 ppm System LCM #1 1/2

Blow Description Surface blow dried in 12 min.
No return
No blow
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10'</u>	<u>SOCM</u>	<u>5</u>	<u>—</u>	<u>95</u>	<u>—</u>
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 115° Gravity — API RW — @ — F Chlorides — ppm

(A) Initial Hydrostatic 2113 Test 1150 T-On Location 23:45
 (B) First Initial Flow 71 Jars — T-Started 01:02
 (C) First Final Flow 73 Safety Joint — T-Open 03:30
 (D) Initial Shut-In 1320 Circ Sub N/C T-Pulled 05:30
 (E) Second Initial Flow 62 Hourly Standby — T-Out 07:30
 (F) Second Final Flow 57 Mileage MAH RT 108 Comments —
 (G) Final Shut-In 1304 Sampler —
 (H) Final Hydrostatic 2080 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Initial Open 30 Extra Recorder — Sub Total 0
 Initial Shut-In 30 Day Standby — Total 1258
 Final Flow 30 Accessibility — MP/DST Disc't —
 Final Shut-In 30 Sub Total 1258

Approved By _____ Our Representative [Signature]

Triobite 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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61858

Well Name & No. Wildcat 5#1 Test No. #2 Date 4/9/16
 Company M&T Oil Operations Inc Elevation 2208 KB 2197 GL
 Address 8411 Preston Rd. Ste 800 Dallas Tx 75225-5520
 Co. Rep / Geo. Jim Musgrave Rig Southward #8
 Location: Sec. 19 Twp. 20S Rge. 22W Co. Ness State Ks

Interval Tested 4242 4331 Zone Tested cm-55
 Anchor Length 89 Drill Pipe Run 4249 Mud Wt. 9.1
 Top Packer Depth 4237 Drill Collars Run --- Vis 53
 Bottom Packer Depth 4242 Wt. Pipe Run --- WL 10.0
 Total Depth 4331 Chlorides 8500 ppm System LCM 1 1/2 #

Blow Description B.O.B. in 5 1/2 min
No return.
B.O.B. in 9 1/2 min.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>165</u>	<u>OCM</u>	<u>30</u>		<u>70</u>	
<u>300</u>	<u>SM OCM</u>	<u>20</u>	<u>70</u>	<u>10</u>	
<u>600</u>	<u>OCW</u>	<u>15</u>	<u>85</u>		

Rec Total 1065 BHT 123.0 Gravity --- API RW .220 @ 75 °F Chlorides 29,500 ppm

(A) Initial Hydrostatic 2131 Test 1150 T-On Location 15.45
 (B) First Initial Flow 117 Jars --- T-Started 16:21
 (C) First Final Flow 330 Safety Joint --- T-Open 18:33
 (D) Initial Shut-In 1352 Circ Sub N/C T-Pulled 21:18
 (E) Second Initial Flow 445 Hourly Standby --- T-Out 00:40
 (F) Second Final Flow 550 Mileage 144 RT 108 Comments Released & loaded
 (G) Final Shut-In 1350 Sampler --- Tool 5 01:15 am
 (H) Final Hydrostatic 2049 Straddle --- 6/10/2016
 Ruined Shale Packer ---
 Ruined Packer ---
 Extra Packer ---
 Extra Recorder ---
 Day Standby ---
 Accessibility ---
 Sub Total 1258 MP/DST Disc't ---

Initial Open 30
 Initial Shut-In 30
 Final Flow 45
 Final Shut-In 60
 Approved By _____ 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 least by the party for whom the test is made.