



DRILL STEM TEST REPORT

Prepared For: **TDI Inc**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Madden South #1

16-11s-18w Ellis,KS

Start Date: 2014.05.29 @ 22:25:00

End Date: 2014.05.30 @ 06:36:30

Job Ticket #: 55282 DST #: 1

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

Printed: 2014.06.02 @ 13:42:31

TDI Inc
16-11s-18w Ellis,KS
Madden South #1
DST # 1
Toronto - LKC "D"
2014.05.29



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TDI Inc
 1310 Bison Rd
 Hays KS 67601
 ATTN: Herb Deines

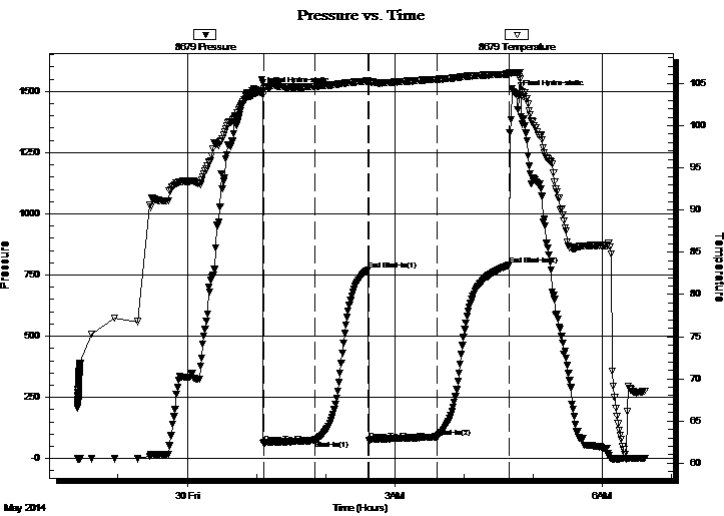
16-11s-18w Ellis,KS
Madden South #1
 Job Ticket: 55282 **DST#: 1**
 Test Start: 2014.05.29 @ 22:25:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "D"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:06:00
 Time Test Ended: 06:36:30
 Interval: **3090.00 ft (KB) To 3210.00 ft (KB) (TVD)**
 Total Depth: 3210.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Bob Hamel
 Unit No: 67
 Reference Elevations: 1903.00 ft (KB)
 1893.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8679 Inside
 Press@RunDepth: 88.26 psig @ 3188.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.05.29 End Date: 2014.05.30 Last Calib.: 2014.05.30
 Start Time: 22:25:01 End Time: 06:36:30 Time On Btm: 2014.05.30 @ 01:03:30
 Time Off Btm: 2014.05.30 @ 04:45:00

TEST COMMENT: IF. - 45 - Weak blow built to 7 1/4"
 ISL. - 45 - No blow back
 FF. - 60 - BOB in 45 min
 FSL. - 60 - No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1500.60	103.92	Initial Hydro-static
3	62.92	103.71	Open To Flow (1)
48	73.35	104.64	Shut-In(1)
93	770.76	105.27	End Shut-In(1)
94	73.03	105.13	Open To Flow (2)
153	88.26	105.48	Shut-In(2)
216	790.39	106.10	End Shut-In(2)
222	1488.56	106.28	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
146.00	G,O,C,M, 20%G 30%O 50%M	2.05
0.00	169' G.I.P. (FAINT)	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TDI Inc
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

16-11s-18w Ellis,KS
Madden South #1
Job Ticket: 55282 **DST#: 1**
Test Start: 2014.05.29 @ 22:25:00

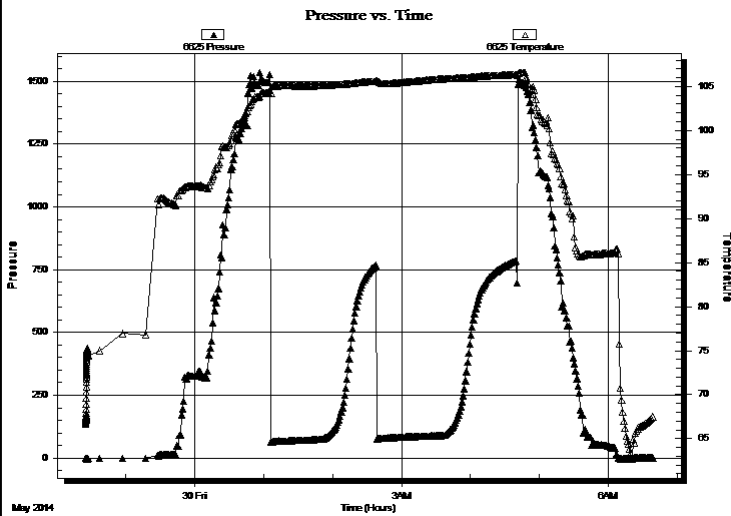
GENERAL INFORMATION:

Formation: **Toronto - LKC "D"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:06:00
 Time Test Ended: 06:36:30
Interval: 3090.00 ft (KB) To 3210.00 ft (KB) (TVD)
 Total Depth: 3210.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Bob Hamel
 Unit No: 67
 Reference Elevations: 1903.00 ft (KB)
 1893.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 6625 Outside

Press@RunDepth: psig @ 3188.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.05.29 End Date: 2014.05.30 Last Calib.: 1899.12.30
 Start Time: 22:25:01 End Time: 06:39:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF. - 45 - Weak blow built to 7 1/4"
 ISL. - 45 - No blow back
 FF. - 60 - BOB in 45 min
 FSL. - 60 - No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
146.00	G,O,C,M, 20%G 30%O 50%M	2.05
0.00	169' G.I.P. (FAINT)	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

16-11s-18w Ellis,KS
Madden South #1
Job Ticket: 55282 **DST#: 1**
Test Start: 2014.05.29 @ 22:25:00

Tool Information

Drill Pipe:	Length: 3088.00 ft	Diameter: 3.80 inches	Volume: 43.32 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume: 43.32 bbl</u>	Tool Chased	5.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial	41000.00 lb
Depth to Top Packer:	3090.00 ft			Final	41000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	120.00 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			3071.00	
Shut In Tool	5.00			3076.00	
Hydraulic tool	5.00			3081.00	
Packer	4.00			3085.00	20.00 Bottom Of Top Packer
Packer	5.00			3090.00	
Stubb	1.00			3091.00	
Perforations	2.00			3093.00	
Change Over Sub	1.00			3094.00	
Drill Pipe	93.00			3187.00	
Change Over Sub	1.00			3188.00	
Recorder	0.00	6625	Outside	3188.00	
Recorder	0.00	8679	Inside	3188.00	
Perforations	18.00			3206.00	
Bullnose	4.00			3210.00	120.00 Bottom Packers & Anchor

Total Tool Length: 140.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc **16-11s-18w Ellis,KS**
 1310 Bison Rd **Madden South #1**
 Hays KS 67601 Job Ticket: 55282 **DST#: 1**
 ATTN: Herb Deines Test Start: 2014.05.29 @ 22:25:00

Mud and Cushion Information

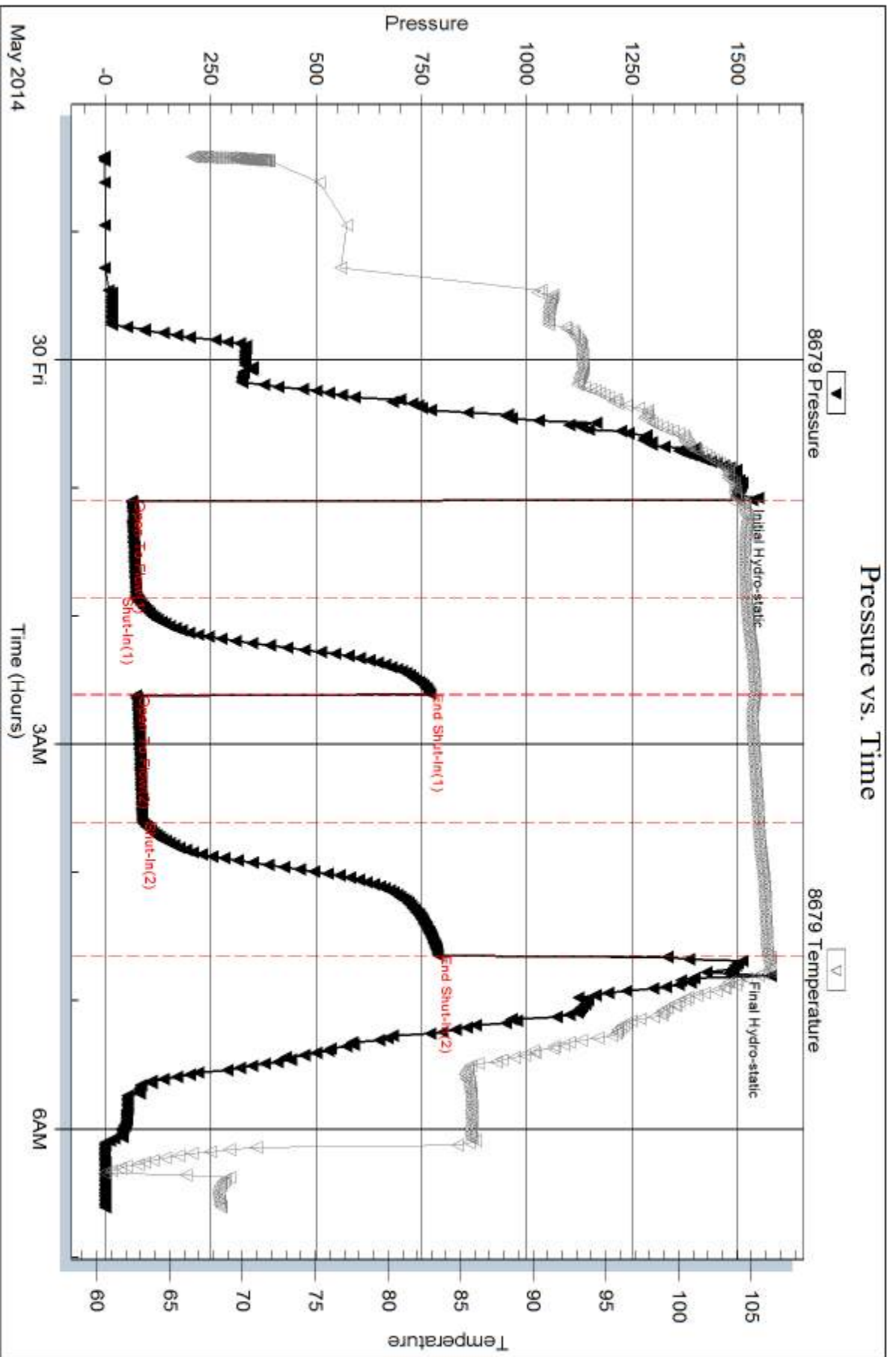
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 1900.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
146.00	G,O,C,M, 20%G 30%O 50%M	2.048
0.00	169' G.I.P. (FAINT)	0.000

Total Length: 146.00 ft Total Volume: 2.048 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

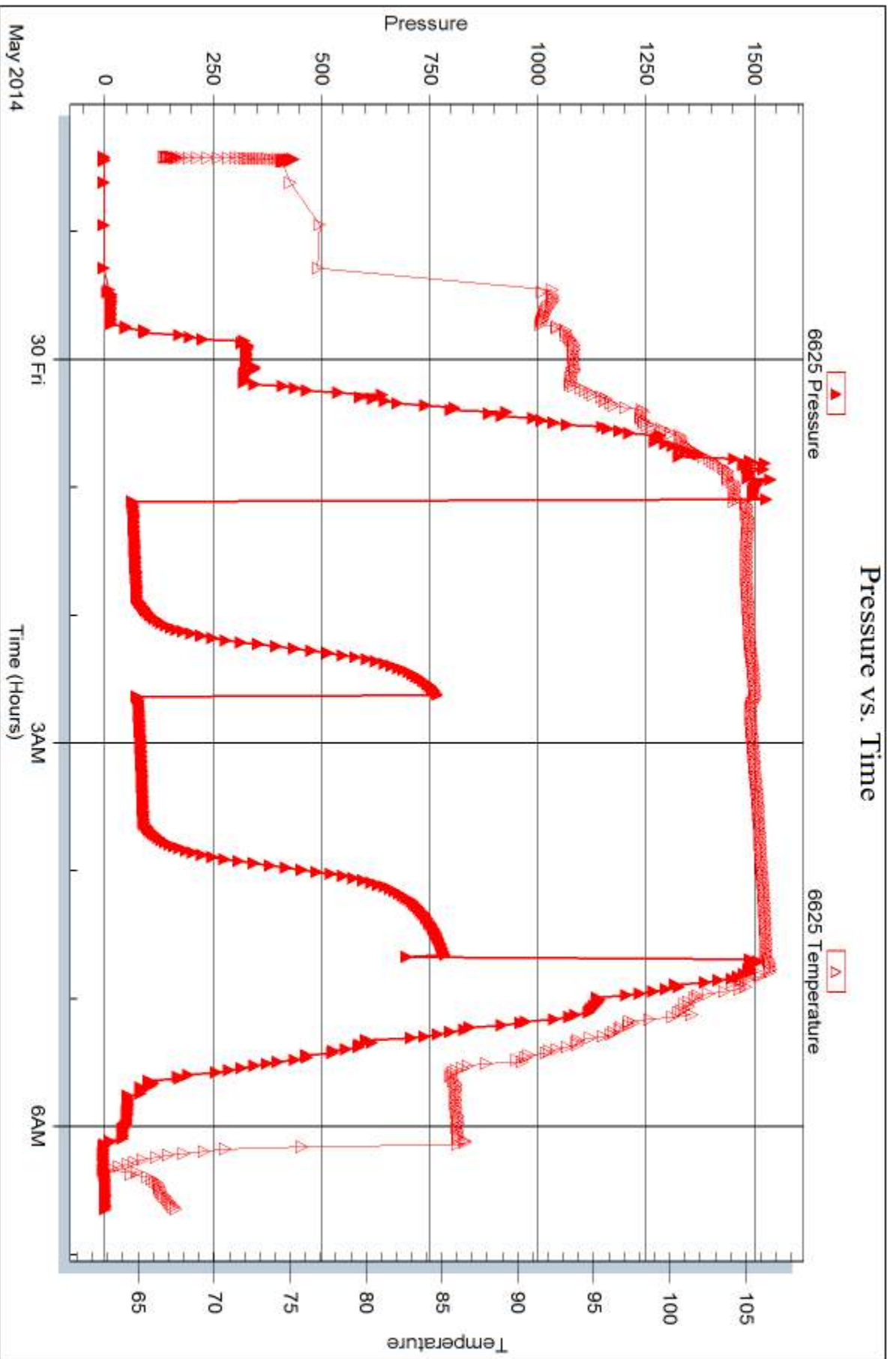


Serial #: 6625

Outside TDI Inc

Madden South #1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **TDI Inc**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Madden South #1

16-11s-18w Ellis,KS

Start Date: 2014.05.30 @ 17:20:00

End Date: 2014.05.30 @ 23:49:30

Job Ticket #: 55283 DST #: 2

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

Printed: 2014.06.02 @ 13:42:01

TDI Inc
16-11s-18w Ellis,KS
Madden South #1
DST # 2
LKC "I-J"
2014.05.30



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TDI Inc
 1310 Bison Rd
 Hays KS 67601
 ATTN: Herb Deines

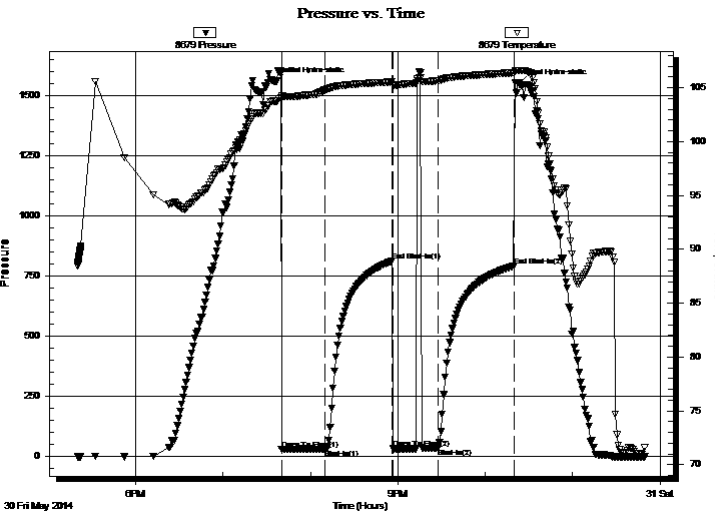
16-11s-18w Ellis,KS
Madden South #1
 Job Ticket: 55283 **DST#: 2**
 Test Start: 2014.05.30 @ 17:20:00

GENERAL INFORMATION:

Formation: **LKC "I-J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:40:00
 Time Test Ended: 23:49:30
 Interval: **3284.00 ft (KB) To 3320.00 ft (KB) (TVD)**
 Total Depth: 3320.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Bob Hamel
 Unit No: 67
 Reference Elevations: 1903.00 ft (KB)
 1893.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8679 Inside
 Press@RunDepth: 34.86 psig @ 3288.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.05.30 End Date: 2014.05.30 Last Calib.: 2014.05.30
 Start Time: 17:20:01 End Time: 23:49:30 Time On Btm: 2014.05.30 @ 19:36:00
 Time Off Btm: 2014.05.30 @ 22:23:00

TEST COMMENT: I.F. - 30 - Weak blow built to 3" died back to 1 3/4"
 I.S.I. - 45 - No blow back
 F.F. - 30 - No blow - flushed tool - no blow
 F.S.I. - 45 - No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1559.63	103.76	Initial Hydro-static
4	30.46	104.05	Open To Flow (1)
34	31.88	104.79	Shut-In(1)
80	812.40	105.55	End Shut-In(1)
81	32.78	105.26	Open To Flow (2)
112	34.86	105.67	Shut-In(2)
164	792.11	106.39	End Shut-In(2)
167	1549.80	106.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	MUD 100%	0.63

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

16-11s-18w Ellis,KS
Madden South #1
Job Ticket: 55283 **DST#: 2**
Test Start: 2014.05.30 @ 17:20:00

GENERAL INFORMATION:

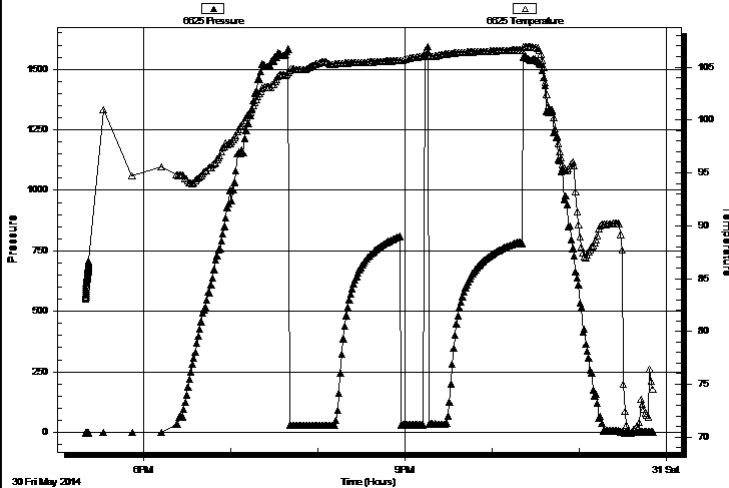
Formation: **LKC "I-J"**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened: 19:40:00 Tester: Bob Hamel
Time Test Ended: 23:49:30 Unit No: 67
Interval: 3284.00 ft (KB) To 3320.00 ft (KB) (TVD) Reference Elevations: 1903.00 ft (KB)
Total Depth: 3320.00 ft (KB) (TVD) 1893.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

Serial #: 6625 Outside

Press@RunDepth: psig @ 3288.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.05.30 End Date: 2014.05.30 Last Calib.: 2014.05.31
Start Time: 17:20:01 End Time: 23:50:30 Time On Btm:
Time Off Btm:

TEST COMMENT: I.F. - 30 - Weak blow built to 3" died back to 1 3/4"
I.S.I. - 45 - No blow back
F.F. - 30 - No blow - flushed tool - no blow
F.S.I. - 45 - No blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
45.00	MUD 100%	0.63

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

16-11s-18w Ellis,KS
Madden South #1
Job Ticket: 55283 **DST#: 2**
Test Start: 2014.05.30 @ 17:20:00

Tool Information

Drill Pipe:	Length: 3276.00 ft	Diameter: 3.80 inches	Volume: 45.95 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 45.95 bbl</u>	Tool Chased	10.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	44000.00 lb
Depth to Top Packer:	3284.00 ft			Final	44000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	56.00 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			3265.00	
Shut In Tool	5.00			3270.00	
Hydraulic tool	5.00			3275.00	
Packer	4.00			3279.00	20.00 Bottom Of Top Packer
Packer	5.00			3284.00	
Stubb	1.00			3285.00	
Perforations	3.00			3288.00	
Recorder	0.00	6625	Outside	3288.00	
Recorder	0.00	8679	Inside	3288.00	
Perforations	28.00			3316.00	
Bullnose	4.00			3320.00	36.00 Bottom Packers & Anchor

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

16-11s-18w Ellis,KS
Madden South #1
Job Ticket: 55283
Test Start: 2014.05.30 @ 17:20:00

DST#: 2

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: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2600.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	MUD 100%	0.631

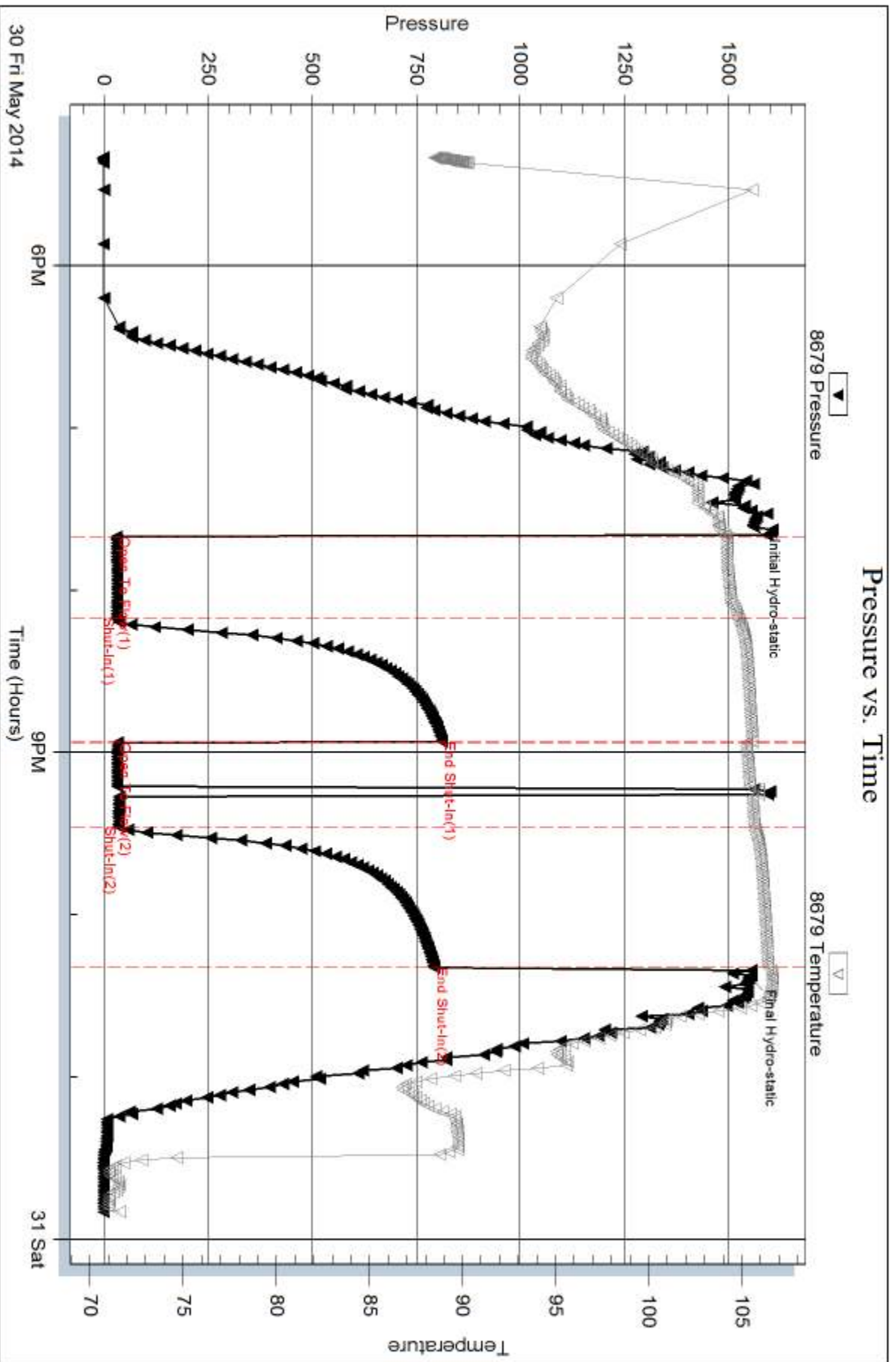
Total Length: 45.00 ft Total Volume: 0.631 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time

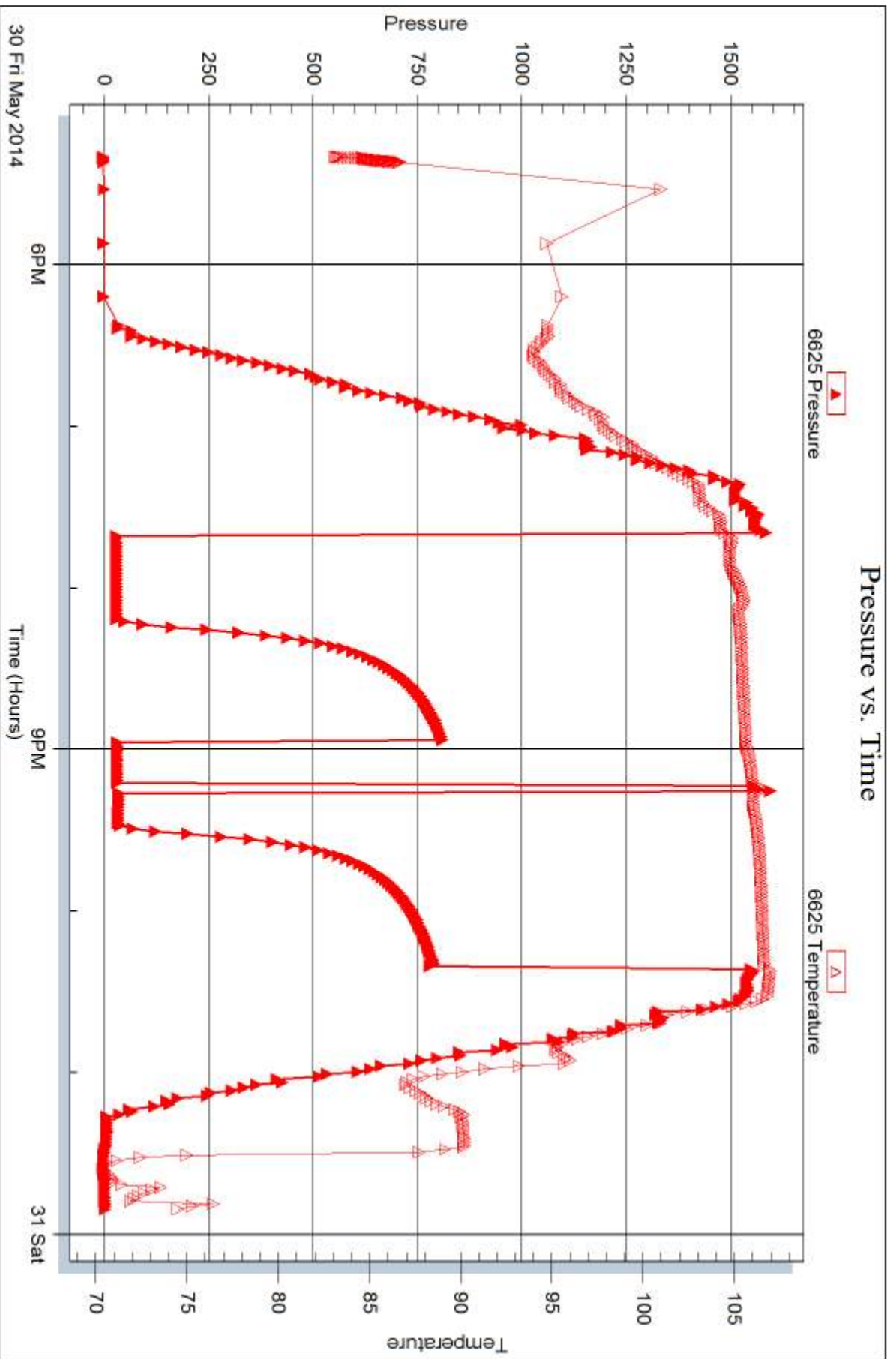


Serial #: 6625

Outside TDI Inc

Madden South #1

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 55283

Printed: 2014.06.02 @ 13:42:02



DRILL STEM TEST REPORT

Prepared For: **TDI Inc**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Madden South #1

16-11s-18w Ellis,KS

Start Date: 2014.05.31 @ 10:58:00

End Date: 2014.05.31 @ 17:28:00

Job Ticket #: 55284 DST #: 3

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

Printed: 2014.06.02 @ 13:40:35



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TDI Inc
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

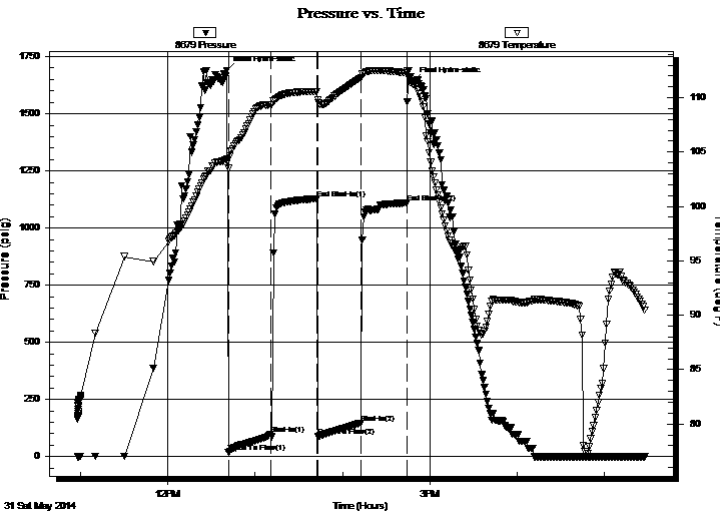
16-11s-18w Ellis,KS
Madden South #1
Job Ticket: 55284 **DST#: 3**
Test Start: 2014.05.31 @ 10:58:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:41:30
Time Test Ended: 17:28:00
Interval: **3427.00 ft (KB) To 3450.00 ft (KB) (TVD)**
Total Depth: 3450.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Bob Hamel
Unit No: 67
Reference Elevations: 1903.00 ft (KB)
1893.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8679 Inside
Press@RunDepth: 147.79 psig @ 3428.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.05.31 End Date: 2014.05.31 Last Calib.: 2014.05.31
Start Time: 10:58:01 End Time: 17:28:00 Time On Btm: 2014.05.31 @ 12:40:30
Time Off Btm: 2014.05.31 @ 14:48:30

TEST COMMENT: I.F. - 30 - BOB in 12 min
I.S.I. - 30 - No blow back
F.F. - 30 - BOB in 16 min
F.S.I. - 30 - No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1688.87	104.33	Initial Hydro-static
1	19.15	103.52	Open To Flow (1)
30	98.94	109.38	Shut-In(1)
62	1127.67	110.57	End Shut-In(1)
63	90.36	109.78	Open To Flow (2)
92	147.79	111.81	Shut-In(2)
124	1110.29	112.25	End Shut-In(2)
128	1640.72	111.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	S,M,C,O,W, 5%M 40%O 55%W	0.88
335.00	CLEAN OIL 100%	4.70
0.00	63' G.I.P.	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TDI Inc
 1310 Bison Rd
 Hays KS 67601
 ATTN: Herb Deines

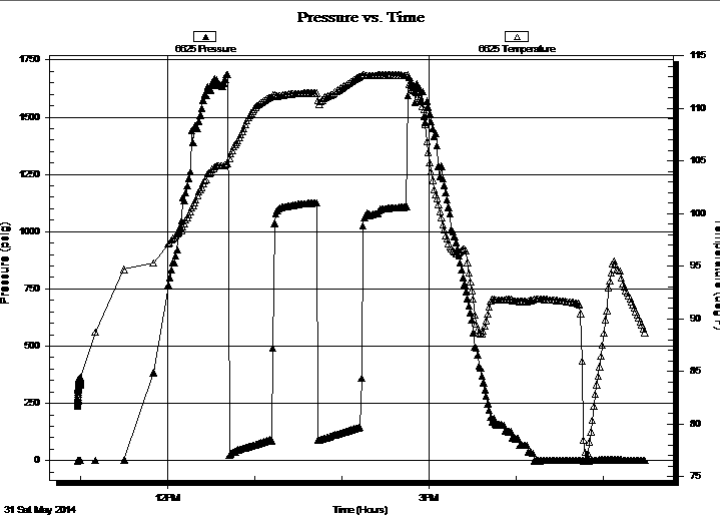
16-11s-18w Ellis,KS
Madden South #1
 Job Ticket: 55284 **DST#: 3**
 Test Start: 2014.05.31 @ 10:58:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:41:30
 Time Test Ended: 17:28:00
Interval: 3427.00 ft (KB) To 3450.00 ft (KB) (TVD)
 Total Depth: 3450.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Bob Hamel
 Unit No: 67
 Reference Elevations: 1903.00 ft (KB)
 1893.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 6625 Outside
 Press@RunDepth: psig @ 3428.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.05.31 End Date: 2014.05.31 Last Calib.: 1899.12.30
 Start Time: 10:58:01 End Time: 17:29:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: I.F. - 30 - BOB in 12 min
 I.S.I. - 30 - No blow back
 F.F. - 30 - BOB in 16 min
 F.S.I. - 30 - No blow back



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

Recovery		
Length (ft)	Description	Volume (bbl)
63.00	S,M,C,O,W, 5%M 40%O 55%W	0.88
335.00	CLEAN OIL 100%	4.70
0.00	63' G.I.P.	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

TDI Inc
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

16-11s-18w Ellis,KS
Madden South #1
Job Ticket: 55284 **DST#: 3**
Test Start: 2014.05.31 @ 10:58:00

Tool Information

Drill Pipe:	Length: 3436.00 ft	Diameter: 3.80 inches	Volume: 48.20 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume: 48.20 bbl</u>	Tool Chased	3.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial	44000.00 lb
Depth to Top Packer:	3427.00 ft			Final	44000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	23.00 ft				
Tool Length:	43.00 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			3408.00	
Shut In Tool	5.00			3413.00	
Hydraulic tool	5.00			3418.00	
Packer	4.00			3422.00	20.00 Bottom Of Top Packer
Packer	5.00			3427.00	
Stubb	1.00			3428.00	
Recorder	0.00	6625	Outside	3428.00	
Recorder	0.00	8679	Inside	3428.00	
Perforations	18.00			3446.00	
Bullnose	4.00			3450.00	23.00 Bottom Packers & Anchor
Total Tool Length:	43.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

16-11s-18w Ellis,KS
Madden South #1
Job Ticket: 55284 **DST#: 3**
Test Start: 2014.05.31 @ 10:58:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 22.8 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 40000 ppm
Viscosity: 62.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.20 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 2600.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	S,M,C,O,W, 5%M 40%O 55%W	0.884
335.00	CLEAN OIL 100%	4.699
0.00	63' G.I.P.	0.000

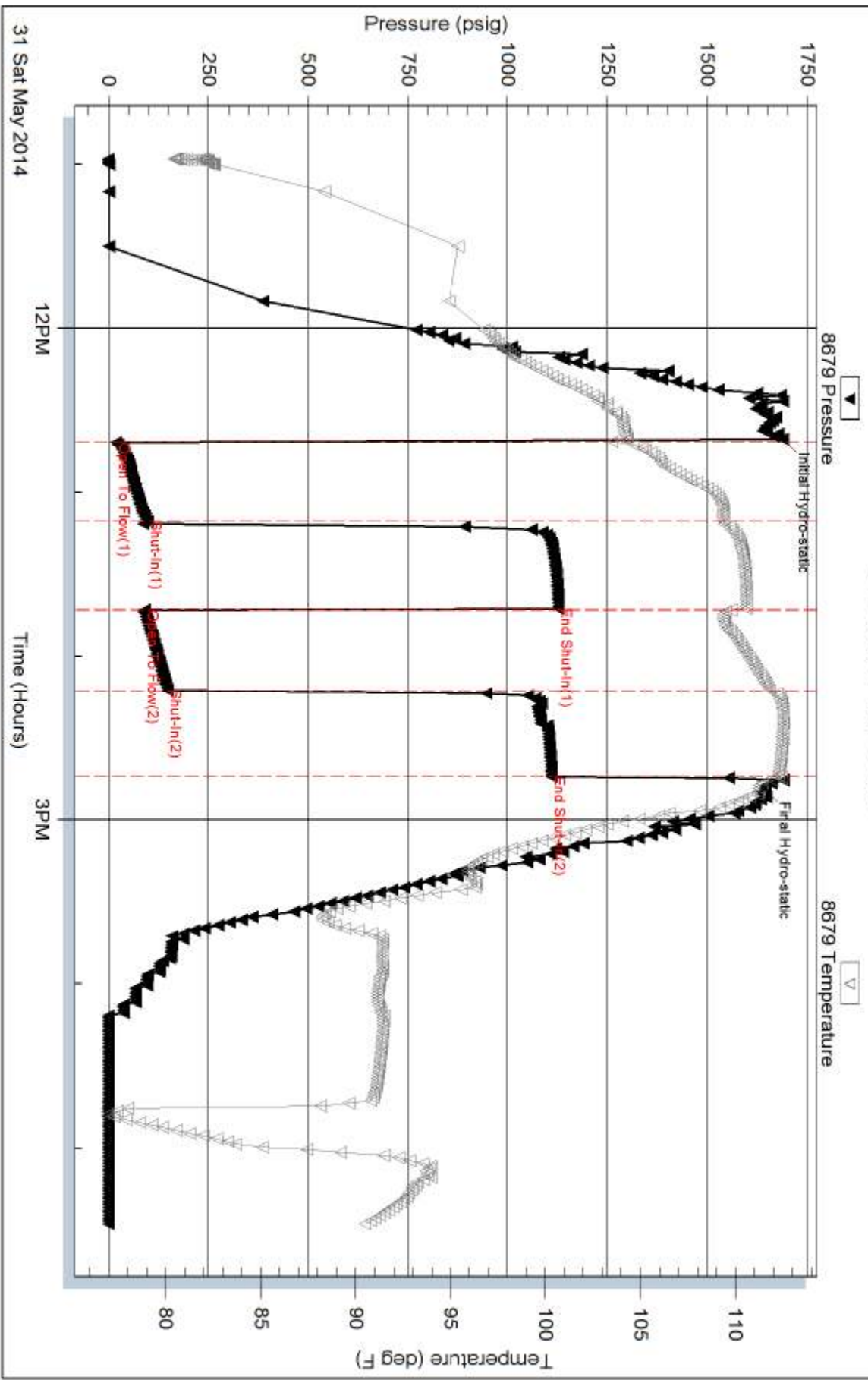
Total Length: 398.00 ft Total Volume: 5.583 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: "R.W. = .13 OHMS @ 94.2 DEG."

Pressure vs. Time

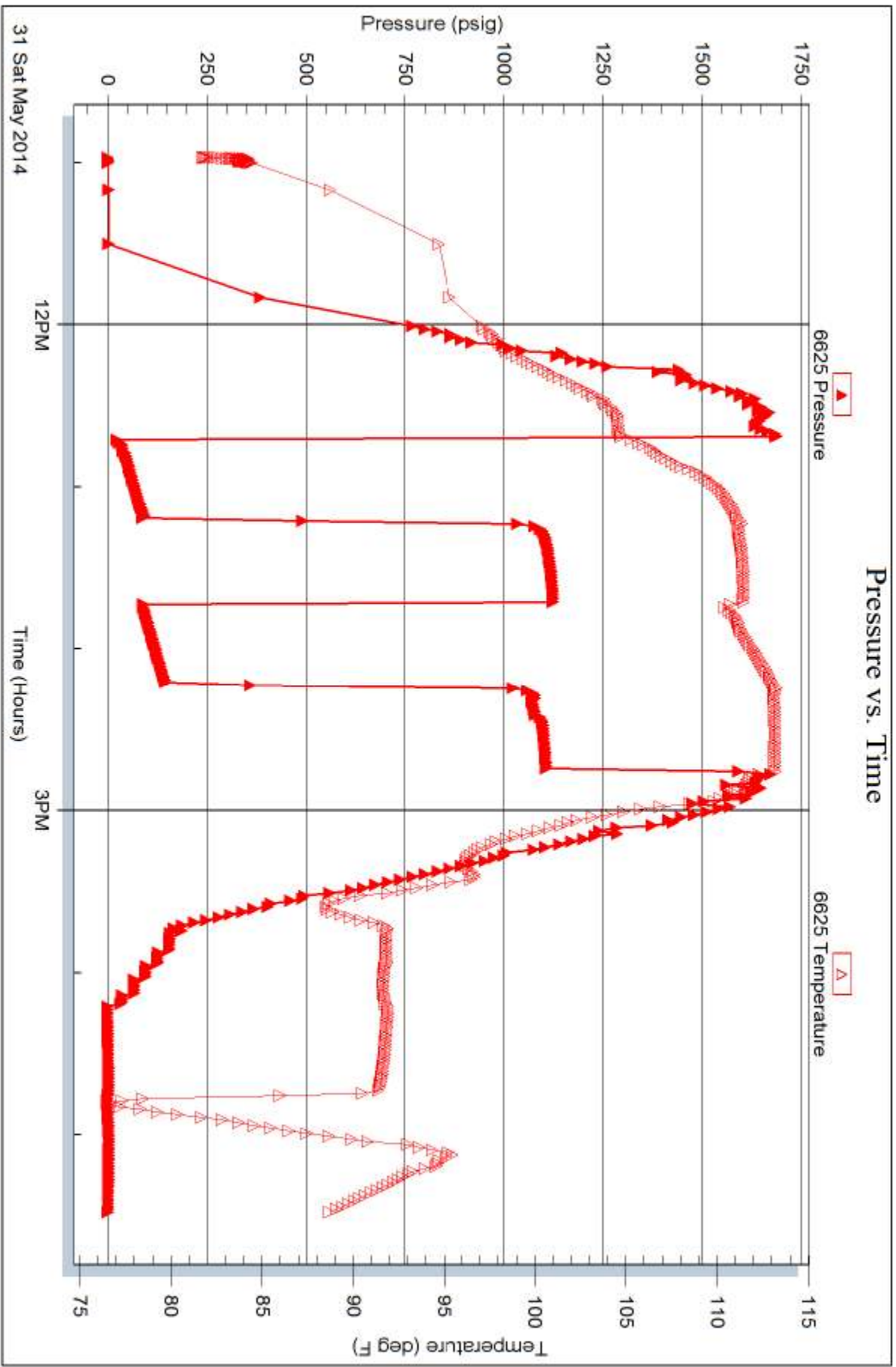


Serial #: 6625

Outside TDI Inc

Madden South #1

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55282

Well Name & No. Madden South #1 Test No. 1 Date 5/29/14
 Company TDI INC. Elevation 1903 KB 1893 GL
 Address 1310 Bison R.D. Hays, KS. 67601
 Co. Rep / Geo. Herb Deines Rig Southwind #1
 Location: Sec. 16 Twp. 11 - S. Rge. 18 - W. Co. Ellis State KS.

Interval Tested 3090 - 3210 Zone Tested Toronto - "D"
 Anchor Length 120' Drill Pipe Run 3088 Mud Wt. 8.8
 Top Packer Depth 3085 Drill Collars Run --- Vis 48
 Bottom Packer Depth 3090 Wt. Pipe Run --- WL 2.2
 Total Depth 3210 Chlorides 1900 ppm System LCM 3

Blow Description I.F. - 1/2" INT. Blow Built to 1 1/4" in 45 min.
E.S.T. - 45 - No B.B.
E.F. - 60 - 3/4" INT. Blow Built to (B.O.B. in 45 min.)
E.S.T. - 60 - No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>0</u>	Feet of <u>169' G.I.P. (Faint)</u>	<u>100%</u>			
Rec <u>146'</u>	Feet of <u>[REDACTED]</u>	<u>20%</u>	<u>30%</u>		<u>50%</u>
Rec	Feet of <u>G.O.C.M.</u>				

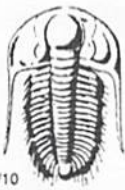
Rec Total 146 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1501 Test 1150 T-On Location 21:50:00
 (B) First Initial Flow 63 Jars _____ T-Started 22:25:00
 (C) First Final Flow 73 Safety Joint _____ T-Open 01:20:00
 (D) Initial Shut-In 771 Circ Sub _____ T-Pulled 04:50:00
 (E) Second Initial Flow 73 Hourly Standby _____ T-Out 06:45:00
 (F) Second Final Flow 88 Mileage 32 R.T. 49.60 Comments _____
 (G) Final Shut-In 790 Sampler _____ "Thank you"
 (H) Final Hydrostatic 1,489 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 45 Extra Packer _____ Extra Copies _____
 Initial Shut-In 45 Extra Recorder _____ Sub Total 0
 Final Flow 60 Day Standby _____ Total 1199.60
 Final Shut-In 60 Accessibility _____ MP/DST Disc't _____
 Sub Total 1199.60

Approved By _____ Our Representative Bob Stone

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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55283**

Well Name & No. Madden South #1 Test No. 2 Date 5/30/14
 Company T.D.T. INC. Elevation 1903 KB 1893 GL
 Address 1310 Bison R.D. Hays, KS. 67601
 Co. Rep / Geo. Herb Deines Rig Southwind #1
 Location: Sec. 16 Twp. 11-S. Rge. 18-W. Co. Ellis State KS.

Interval Tested 3284-3320 Zone Tested "I-J"
 Anchor Length 36 Drill Pipe Run 3276 Mud Wt. 9.0
 Top Packer Depth 3279 Drill Collars Run --- Vis 50
 Bottom Packer Depth 3284 Wt. Pipe Run --- WL 6.8
 Total Depth 3320 Chlorides 2,600 ppm System LCM 2

Blow Description IF-30-3/4" INT. Blow Built to 3" then Died to (3/4" in 30 min.)
LSI-45-No B.B.
FF-30-No Blow Flushed tool @ 16 min. No Blow
F.S.I.-45-No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>45'</u>	Feet of <u>Mud</u>				<u>100</u> %mud
Rec	Feet of <u>"show of free oil in"</u>				
Rec	Feet of <u>test tool</u>				
Rec	Feet of				

Rec Total 45 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1560. Test 1150 T-On Location 17'00.00
 (B) First Initial Flow 30 Jars _____ T-Started 17'20.00
 (C) First Final Flow 32 Safety Joint _____ T-Open 19'46.00
 (D) Initial Shut-In 812 Circ Sub _____ T-Pulled 21'16.00
 (E) Second Initial Flow 33 Hourly Standby _____ T-Out 23'50.00
 (F) Second Final Flow 35 Mileage 32/R.T. 49.60 Comments Flashed tool
 (G) Final Shut-In 792 Sampler _____ "Thank-you"
 (H) Final Hydrostatic 1550 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 45 Day Standby _____ Total 1199.60
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 45 Sub Total 1199.60

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55284

Well Name & No. Madden South #1 Test No. 3 Date 5/31/84
 Company T.O.I. INC. Elevation 1903 KB 1893 GL
 Address 1310 Bison Rd. Hays, KS. 67601
 Co. Rep / Geo. Herb Deines Rig Southwind Rig #1
 Location: Sec. 16 Twp. 11-S Rge. 18-W Co. Ellis State KS.

Interval Tested 3427-3450 Zone Tested Arbuckle
 Anchor Length 23 Drill Pipe Run 3436 Mud Wt. 9.1
 Top Packer Depth 3422 Drill Collars Run — Vis 62
 Bottom Packer Depth 3427 Wt. Pipe Run — WL 72
 Total Depth 3450 Chlorides 2,600 ppm System LCM 1

Blow Description I.F. - 30 - 1/2" INT. Blow Built to (B.O.B. in 12 min.)
I.S.I. - 30 - No B.B.
E.C. - 30 - W.S.B. Started @ 1 min Built to (B.O.B. in 16 min.)
E.S.I. - 30 - No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>0</u>	<u>63 G.I.P</u>	<u>100</u>			
<u>335</u>	<u>C/O</u>		<u>100</u>		
<u>63</u>	<u>S, M, C, O, W</u>	<u>40</u>	<u>55</u>	<u>5</u>	

Rec Total 398 BHT 111 Gravity 22.8 API RW 13 @ 94.2° F Chlorides 40,000 ppm
 Test 1150 T-On Location 10:40:00
 Jars T-Started 10:58:00
 Safety Joint T-Open 12:43:00
 Circ Sub T-Pulled 14:43:00
 Hourly Standby T-Out 17:50:00
 Mileage 32/R.T. 49.60
 Sampler
 Straddle
 Shale Packer
 Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30
 Sub Total 1199.60
 Total 1199.60
 MP/DST Disc't

Approved By _____ Our Representative Bol Hamed

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.