



DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Henry #1

5 13s 20w Ellis,KS

Start Date: 2013.10.21 @ 14:34:00

End Date: 2013.10.21 @ 21:57:00

Job Ticket #: 52269 DST #: 1

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

Printed: 2013.10.25 @ 13:23:00

TDI Inc.
5 13s 20w Ellis,KS
Henry #1
DST # 1
LKC " H "
2013.10.21



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

5 13s 20w Ellis, KS
Henry #1
Job Ticket: 52269 **DST#: 1**
Test Start: 2013.10.21 @ 14:34:00

GENERAL INFORMATION:

Formation: **LKC " H "**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 17:10:15
 Time Test Ended: 21:57:00
 Interval: **3556.00 ft (KB) To 3595.00 ft (KB) (TVD)**
 Total Depth: 3595.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jim Svaty
 Unit No: 54
 Reference Elevations: 2151.00 ft (KB)
 2141.00 ft (CF)
 KB to GR/CF: 10.00 ft

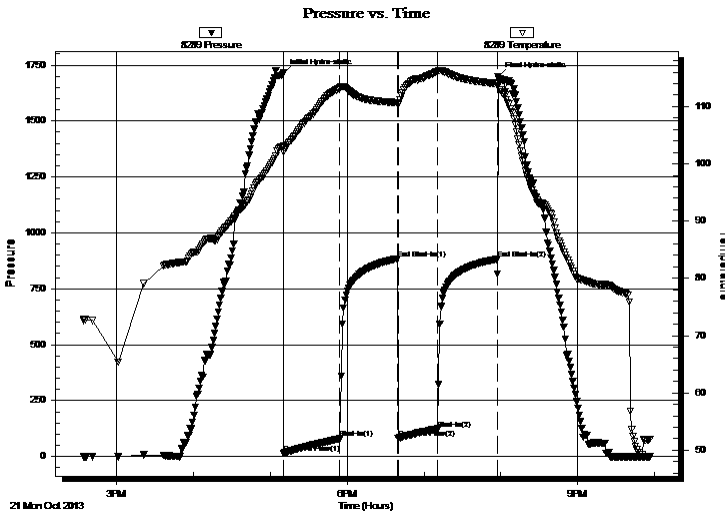
Serial #: 8289

Outside

Press @ Run Depth: 124.22 psig @ 3557.00 ft (KB)
 Start Date: 2013.10.21 End Date: 2013.10.21
 Start Time: 14:34:02 End Time: 21:57:00
 Capacity: 8000.00 psig
 Last Calib.: 2013.10.21
 Time On Btm: 2013.10.21 @ 17:10:00
 Time Off Btm: 2013.10.21 @ 19:57:45

TEST COMMENT: 45-IFP- Surface Blow Building to 10"
 45-ISIP- No Blow
 30-FFP- No Blow Flushed - No Blow
 45-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1713.59	103.07	Initial Hydro-static
1	15.14	102.02	Open To Flow (1)
45	79.83	113.24	Shut-In(1)
90	884.60	110.66	End Shut-In(1)
90	81.97	110.42	Open To Flow (2)
121	124.22	116.13	Shut-In(2)
167	882.05	113.98	End Shut-In(2)
168	1699.51	114.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	MCW 5% m 95% w	3.37

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

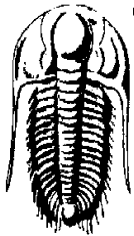
5 13s 20w Ellis, KS
Henry #1
Job Ticket: 52269 **DST#: 1**
Test Start: 2013.10.21 @ 14:34:00

Tool Information

Drill Pipe:	Length: 3565.00 ft	Diameter: 3.80 inches	Volume: 50.01 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 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: 50.01 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	37000.00 lb
Depth to Top Packer:	3556.00 ft			Final	37000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	39.00 ft				
Tool Length:	60.00 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			3536.00	
Shut In Tool	5.00			3541.00	
Hydraulic tool	5.00			3546.00	
Packer	5.00			3551.00	21.00 Bottom Of Top Packer
Packer	5.00			3556.00	
Stubb	1.00			3557.00	
Recorder	0.00	8789	Inside	3557.00	
Recorder	0.00	8289	Outside	3557.00	
Perforations	35.00			3592.00	
Bullnose	3.00			3595.00	39.00 Bottom Packers & Anchor
Total Tool Length:	60.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **5 13s 20w Ellis,KS**
 1310 Bison Rd **Henry #1**
 Hays KS 67601 Job Ticket: 52269 **DST#: 1**
 ATTN: Herb Deines Test Start: 2013.10.21 @ 14:34:00

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:	85000 ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.75 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2100.00 ppm			
Filter Cake: 2.00 inches			

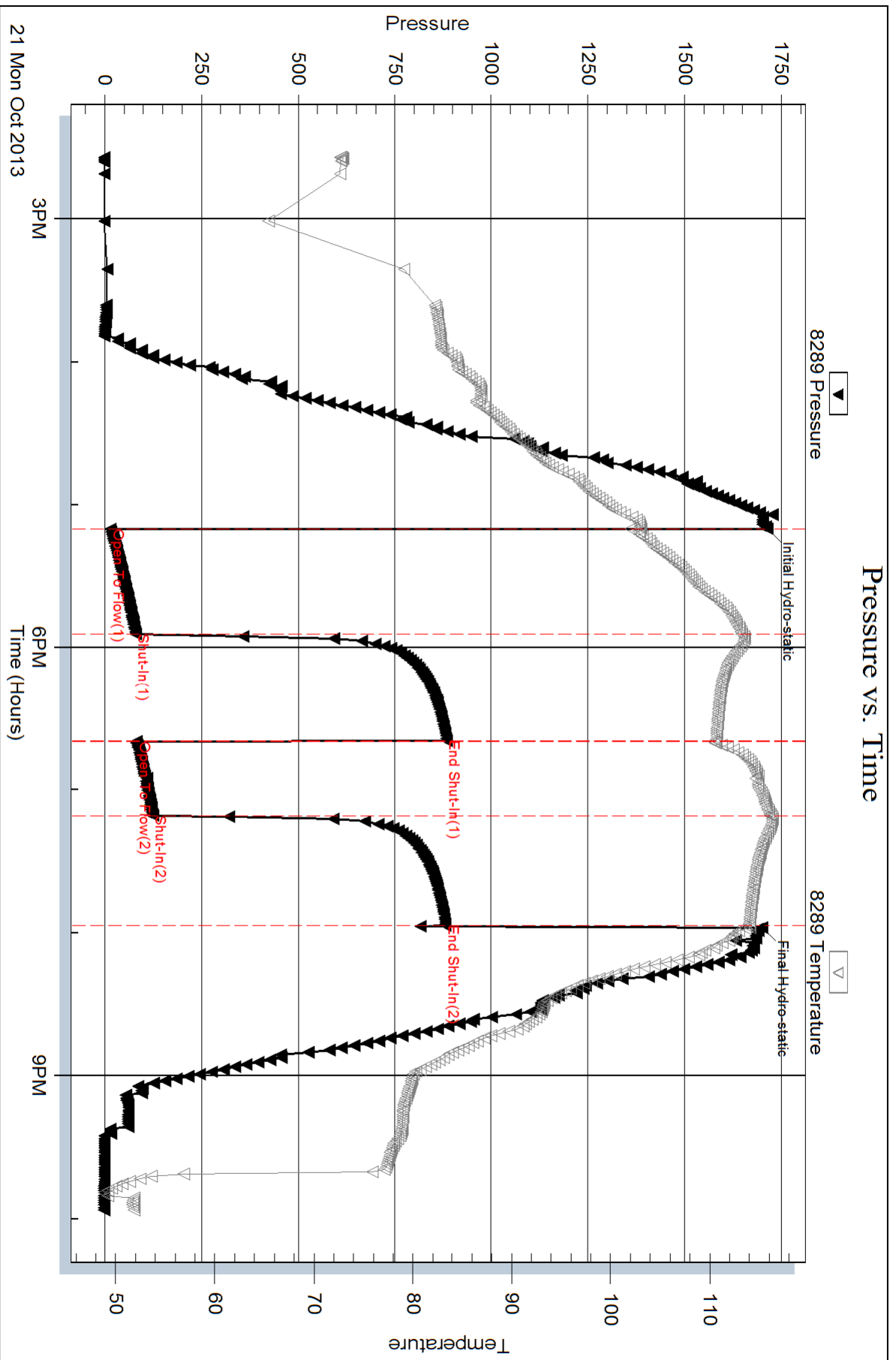
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
240.00	MCW 5% _m 95% _w	3.367

Total Length: 240.00 ft Total Volume: 3.367 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: .130 @ 52

Pressure vs. Time



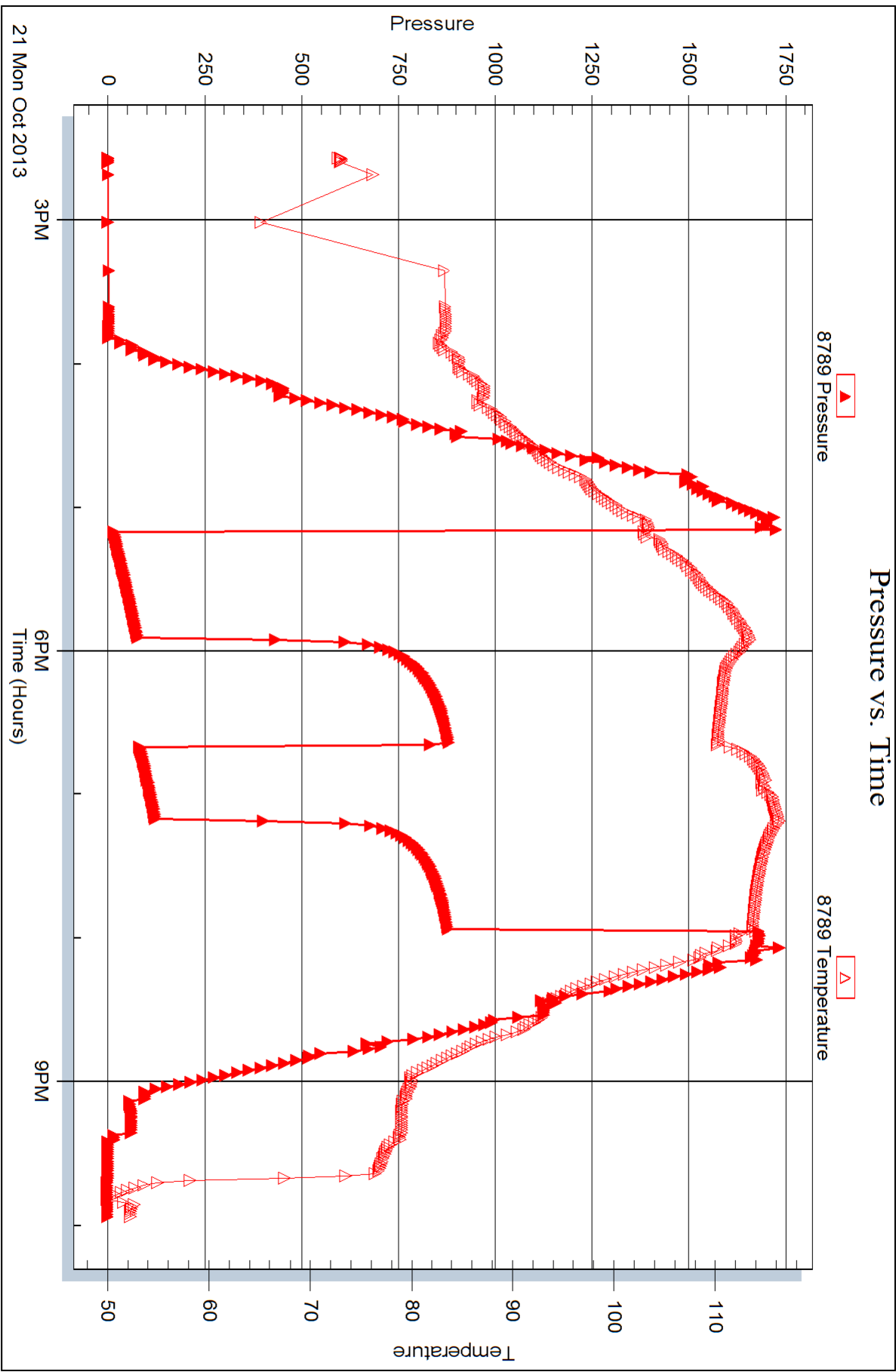
Serial #: 8789

Inside

TDI Inc.

Henry #1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Henry #1

5 13s 20w Ellis,KS

Start Date: 2013.10.23 @ 00:03:00

End Date: 2013.10.23 @ 07:40:00

Job Ticket #: 52270 DST #: 2

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

Printed: 2013.10.25 @ 13:22:24



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

5 13s 20w Ellis, KS
Henry #1
Job Ticket: 52270 **DST#: 2**
Test Start: 2013.10.23 @ 00:03:00

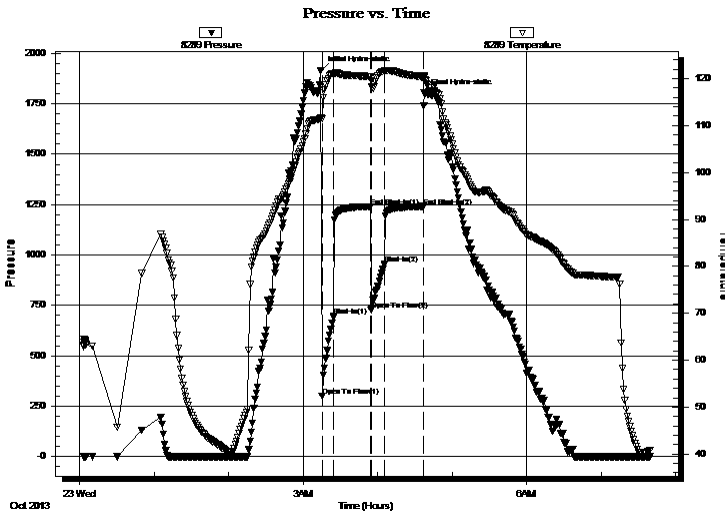
GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:15:15
Time Test Ended: 07:40:00
Interval: **3744.00 ft (KB) To 3798.00 ft (KB) (TVD)**
Total Depth: 3595.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Straddle (Reset)
Tester: Jim Svaty
Unit No: 54
Reference Elevations: 2151.00 ft (KB)
2141.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8289 Outside
Press @ Run Depth: 953.96 psig @ 3745.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.10.23 End Date: 2013.10.23 Last Calib.: 2013.10.23
Start Time: 00:03:02 End Time: 07:39:45 Time On Btm: 2013.10.23 @ 03:14:30
Time Off Btm: 2013.10.23 @ 04:37:30

TEST COMMENT: 10-IFP- BOB in 40 sec.
30-ISIP- No Blow
10-FFP- BOB in 40 sec.
30-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1915.54	111.58	Initial Hydro-static
1	298.36	111.52	Open To Flow (1)
10	694.91	121.02	Shut-In(1)
40	1239.58	120.41	End Shut-In(1)
41	728.31	119.53	Open To Flow (2)
51	953.96	121.65	Shut-In(2)
83	1241.14	120.27	End Shut-In(2)
83	1802.46	120.33	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
434.00	MCW 15% m 85% w	6.09
1184.00	MCW 40% m 60% w	16.61
372.00	Mud 100%	5.22

* 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

5 13s 20w Ellis, KS
Henry #1
Job Ticket: 52270 **DST#: 2**
Test Start: 2013.10.23 @ 00:03:00

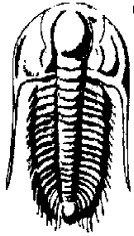
Tool Information

Drill Pipe:	Length: 3754.00 ft	Diameter: 3.80 inches	Volume: 52.66 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 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: 52.66 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3744.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	3798.00 ft			
Interval between Packers:	54.00 ft			
Tool Length:	206.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Mis-run Straddle Packer Failed

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3724.00	
Shut In Tool	5.00			3729.00	
Hydraulic tool	5.00			3734.00	
Packer	5.00			3739.00	21.00 Bottom Of Top Packer
Packer	5.00			3744.00	
Stubb	1.00			3745.00	
Recorder	0.00	8789	Inside	3745.00	
Recorder	0.00	8289	Outside	3745.00	
Perforations	15.00			3760.00	
Change Over Sub	1.00			3761.00	
Blank Spacing	31.00			3792.00	
Change Over Sub	1.00			3793.00	
Perforations	1.00			3794.00	
Blank Off Sub	1.00			3795.00	
Blank Spacing	3.00			3798.00	54.00 Tool Interval
Packer	1.00			3799.00	
Perforations	3.00			3802.00	
Change Over Sub	1.00			3803.00	
Recorder	0.00	6668	Below	3803.00	
Blank Spacing	126.00			3929.00	131.00 Bottom Packers & Anchor

Total Tool Length: 206.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc.
1310 Bison Rd
Hays KS 67601

5 13s 20w Ellis,KS

Henry #1

Job Ticket: 52270

DST#: 2

ATTN: Herb Deines

Test Start: 2013.10.23 @ 00:03:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 54.00 sec/qt
Water Loss: 6.76 in³
Resistivity: ohm.m
Salinity: 2000.00 ppm
Filter Cake: 2.00 inches

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

Oil API: deg API
Water Salinity: 28000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
434.00	MCW 15%m 85%w	6.088
1184.00	MCW 40%m 60%w	16.608
372.00	Mud 100%	5.218

Total Length: 1990.00 ft Total Volume: 27.914 bbl

Num Fluid Samples: 0

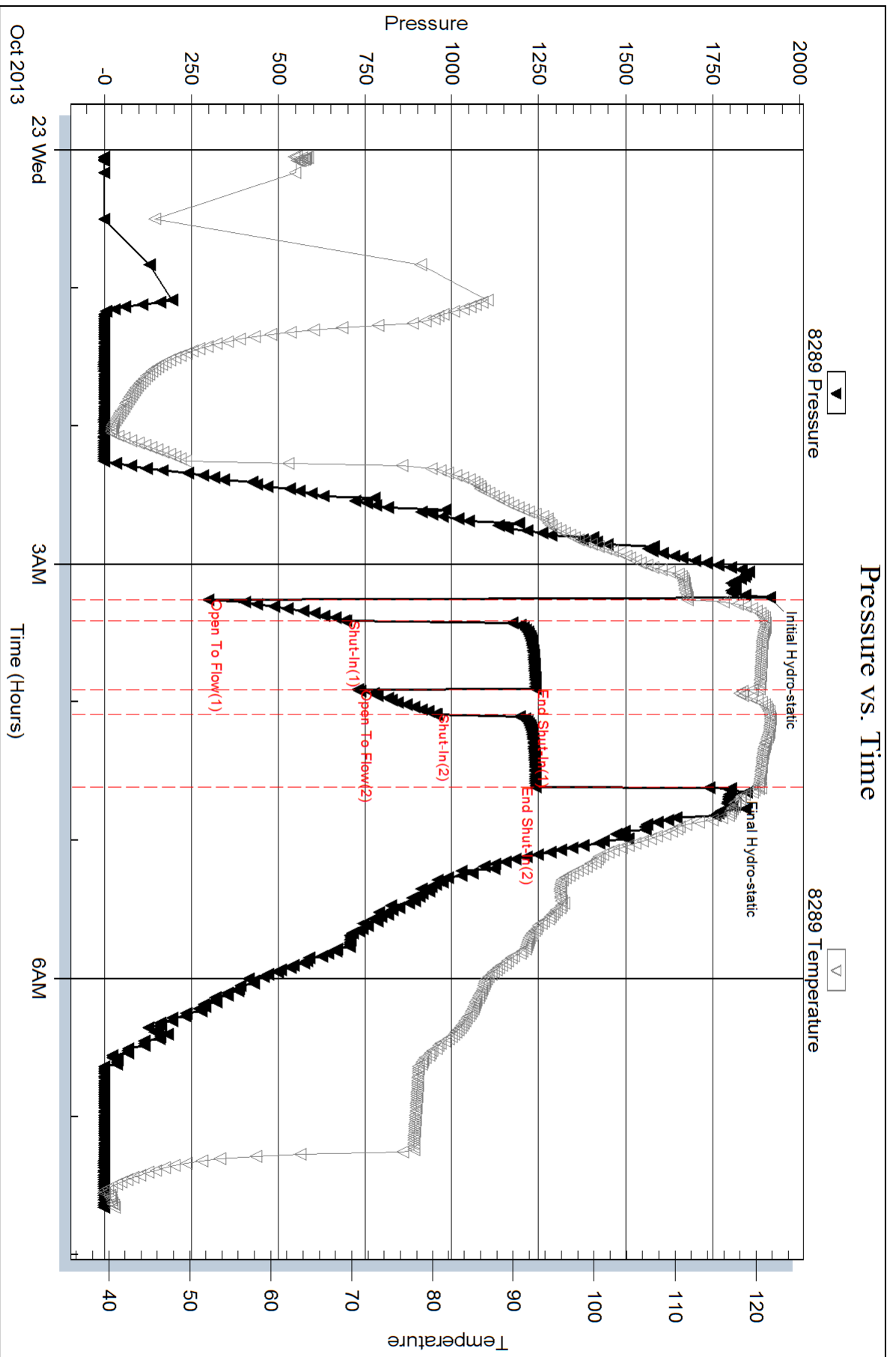
Num Gas Bombs: 0

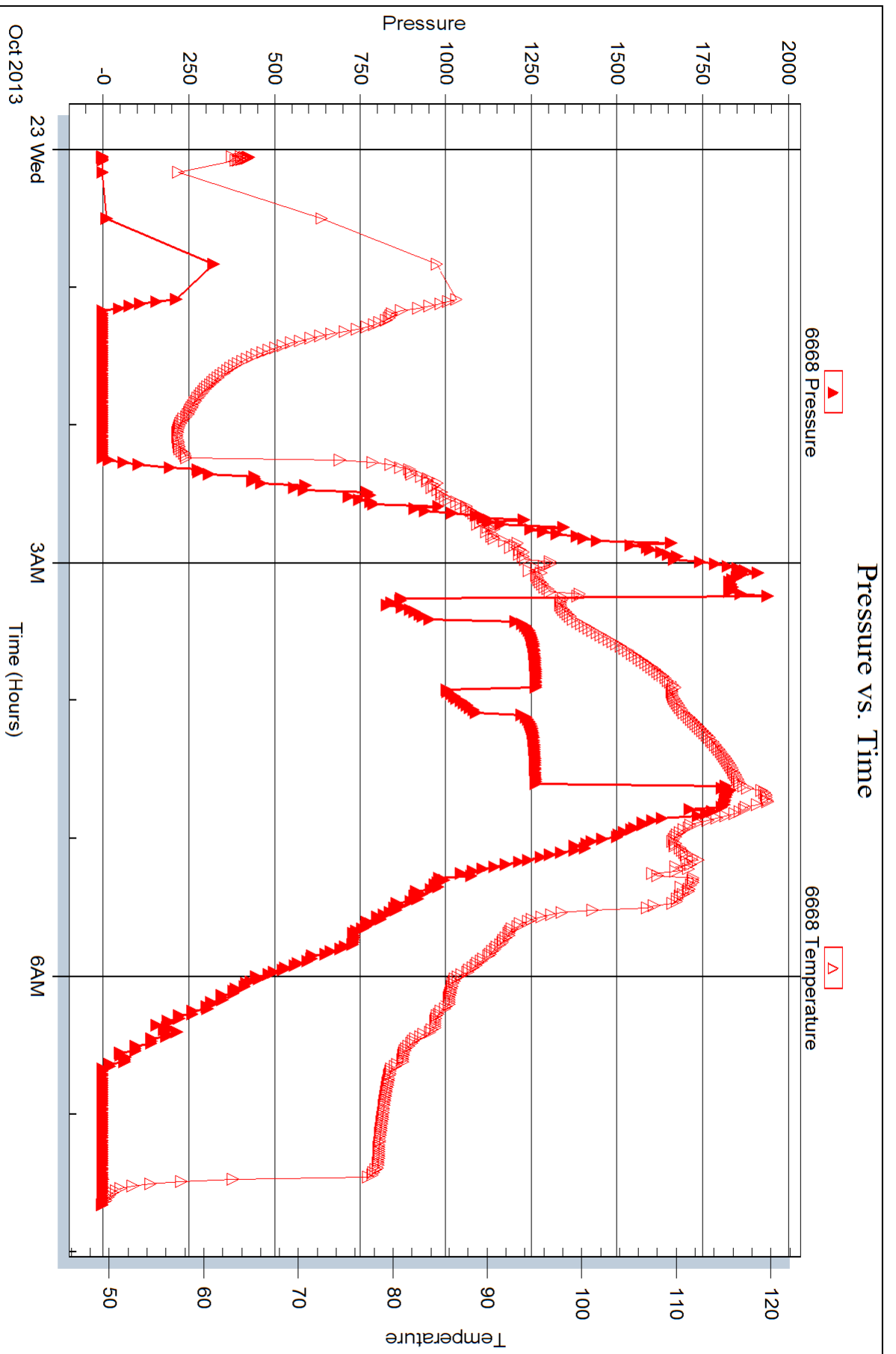
Serial #:

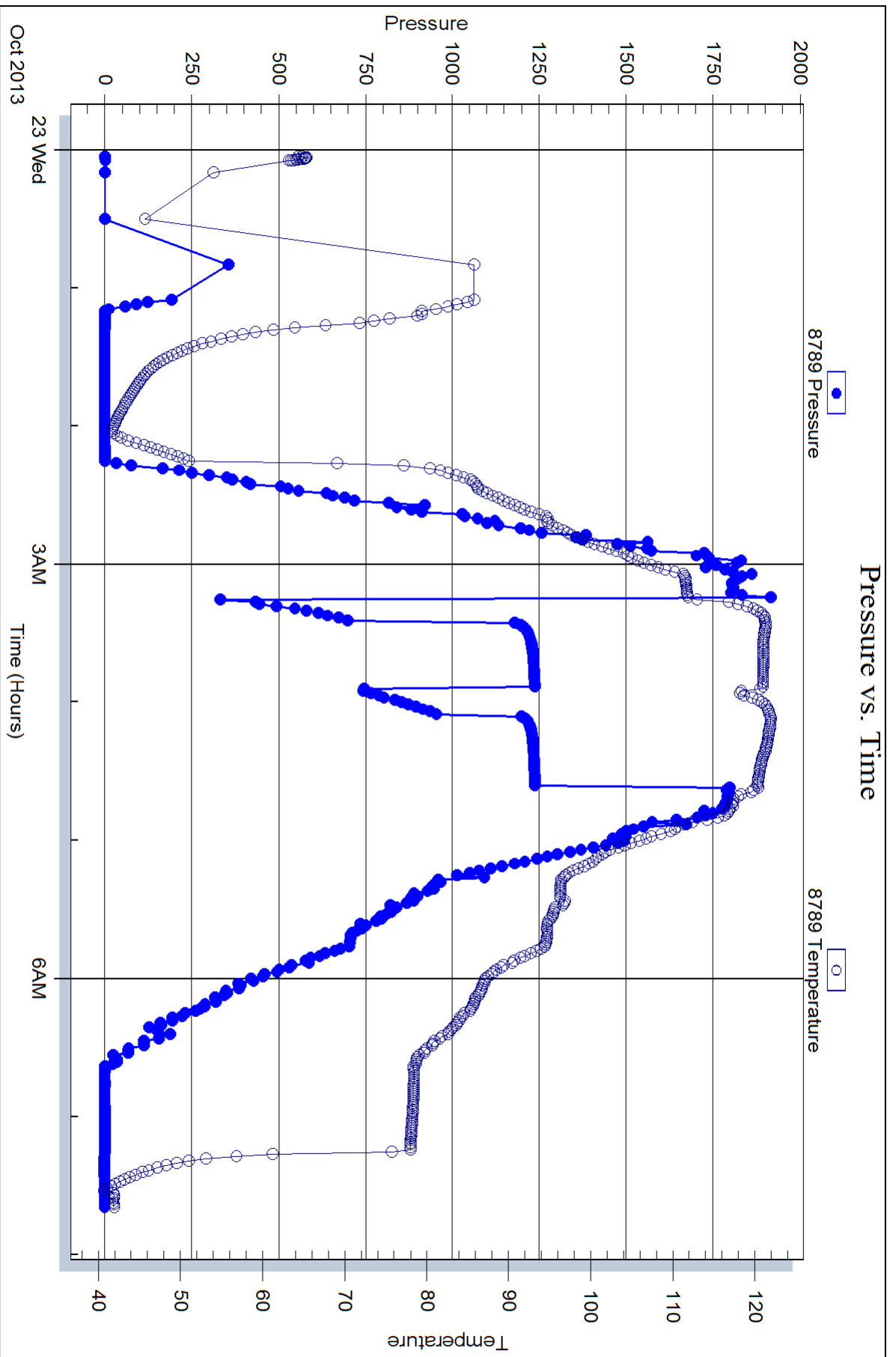
Laboratory Name:

Laboratory Location:

Recovery Comments: .435 @ 40









DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Henry #1

5 13s 20w Ellis,KS

Start Date: 2013.10.23 @ 08:53:00

End Date: 2013.10.23 @ 14:20:00

Job Ticket #: 52271 DST #: 3

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

Printed: 2013.10.25 @ 13:21:52

TDI Inc.
5 13s 20w Ellis,KS
Henry #1
DST # 3
Marmaton
2013.10.23



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

5 13s 20w Ellis, KS
Henry #1
Job Ticket: 52271 **DST#: 3**
Test Start: 2013.10.23 @ 08:53:00

GENERAL INFORMATION:

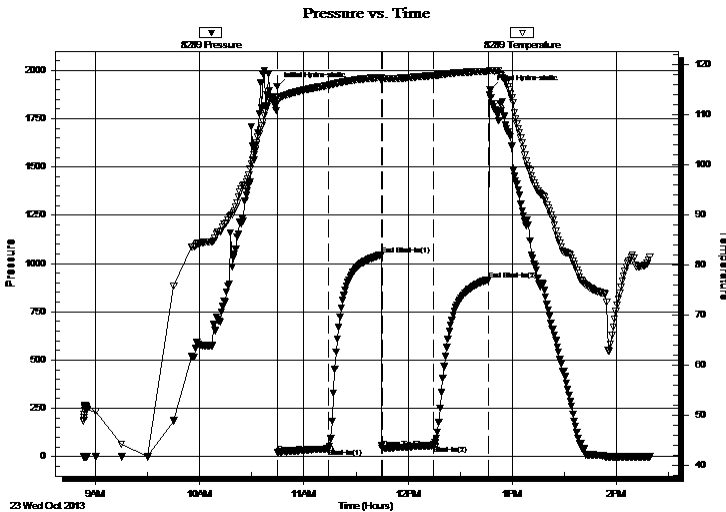
Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 10:44:45
Time Test Ended: 14:20:00
Interval: **3744.00 ft (KB) To 3823.00 ft (KB) (TVD)**
Total Depth: 3930.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Straddle (Reset)
Tester: Jim Svaty
Unit No: 54
Reference Elevations: 2151.00 ft (KB)
2141.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8289 Outside

Press @ Run Depth: 57.34 psig @ 3751.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.10.23 End Date: 2013.10.23 Last Calib.: 2013.10.23
Start Time: 08:53:02 End Time: 14:19:45 Time On Btm: 2013.10.23 @ 10:44:30
Time Off Btm: 2013.10.23 @ 12:47:15

TEST COMMENT: 30-IFP- Good Surge on Open No Blow
30-ISIP- No Blow
30-FFP- Surface Blow Building to 3 in.
30-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1916.84	113.73	Initial Hydro-static
1	19.76	112.58	Open To Flow (1)
30	40.58	115.93	Shut-In(1)
60	1044.76	117.45	End Shut-In(1)
61	41.63	117.18	Open To Flow (2)
91	57.34	117.88	Shut-In(2)
122	912.89	118.72	End Shut-In(2)
123	1898.75	118.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	MCW 40% m 60% w Show of Oil	1.12
10.00	CO 100%	0.14

* 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

5 13s 20w Ellis, KS
Henry #1
Job Ticket: 52271 **DST#: 3**
Test Start: 2013.10.23 @ 08:53:00

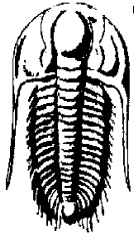
Tool Information

Drill Pipe:	Length: 3754.00 ft	Diameter: 3.80 inches	Volume: 52.66 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 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: 52.66 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	38000.00 lb
Depth to Top Packer:	3744.00 ft			Final	38000.00 lb
Depth to Bottom Packer:	3823.00 ft				
Interval between Packers:	79.00 ft				
Tool Length:	206.00 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			3724.00	
Shut In Tool	5.00			3729.00	
Hydraulic tool	5.00			3734.00	
Packer	5.00			3739.00	21.00 Bottom Of Top Packer
Packer	5.00			3744.00	
Stubb	1.00			3745.00	
Perforations	5.00			3750.00	
Change Over Sub	1.00			3751.00	
Recorder	0.00	8789	Inside	3751.00	
Recorder	0.00	8289	Outside	3751.00	
Blank Spacing	62.00			3813.00	
Change Over Sub	1.00			3814.00	
Perforations	5.00			3819.00	
Blank Off Sub	1.00			3820.00	
Blank Spacing	3.00			3823.00	79.00 Tool Interval
Packer	1.00			3824.00	
Perforations	7.00			3831.00	
Change Over Sub	1.00			3832.00	
Recorder	0.00	6668	Below	3832.00	
Blank Spacing	93.00			3925.00	
Change Over Sub	1.00			3926.00	
Bullnose	3.00			3929.00	106.00 Bottom Packers & Anchor

Total Tool Length: 206.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **5 13s 20w Ellis,KS**
 1310 Bison Rd **Henry #1**
 Hays KS 67601 Job Ticket: 52271 **DST#: 3**
 ATTN: Herb Deines Test Start: 2013.10.23 @ 08:53:00

Mud and Cushion Information

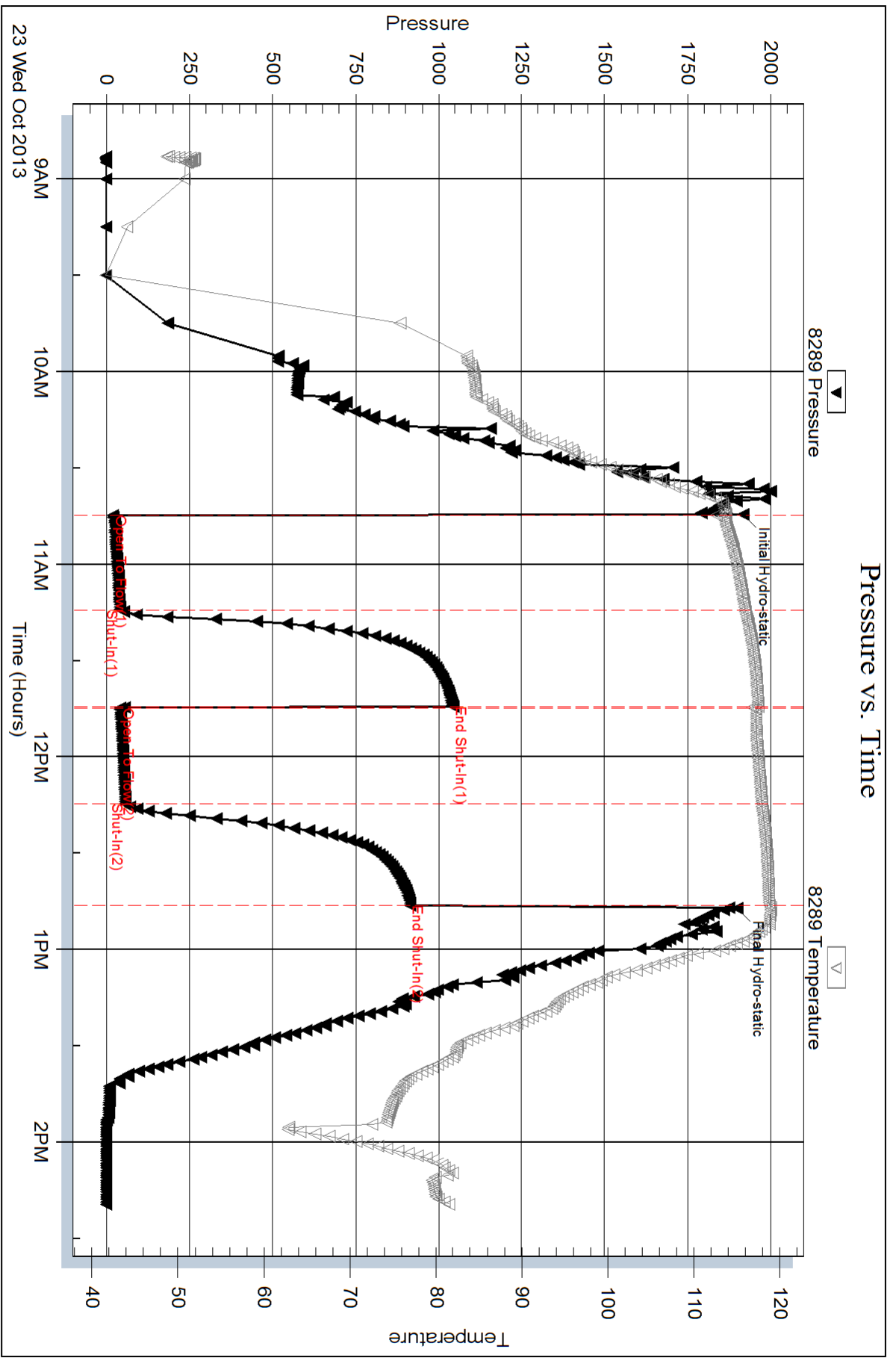
Mud Type: Gel Chem	Cushion Type:	Oil API: 37 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 24000 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.78 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 2000.00 ppm		
Filter Cake: 2.00 inches		

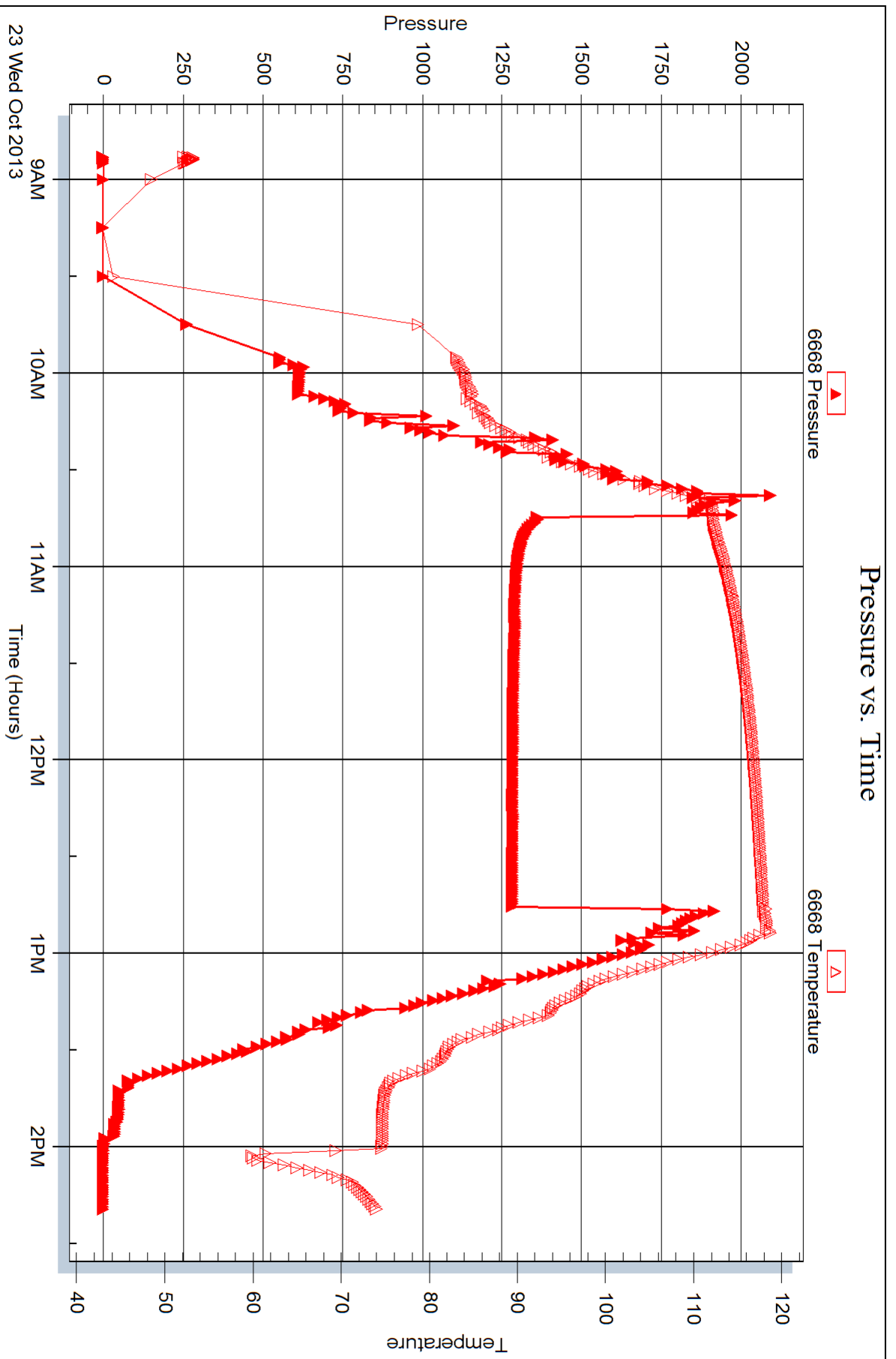
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	MCW 40%m 60%w Show of Oil	1.122
10.00	CO 100%	0.140

Total Length: 90.00 ft Total Volume: 1.262 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: .253 @ 78





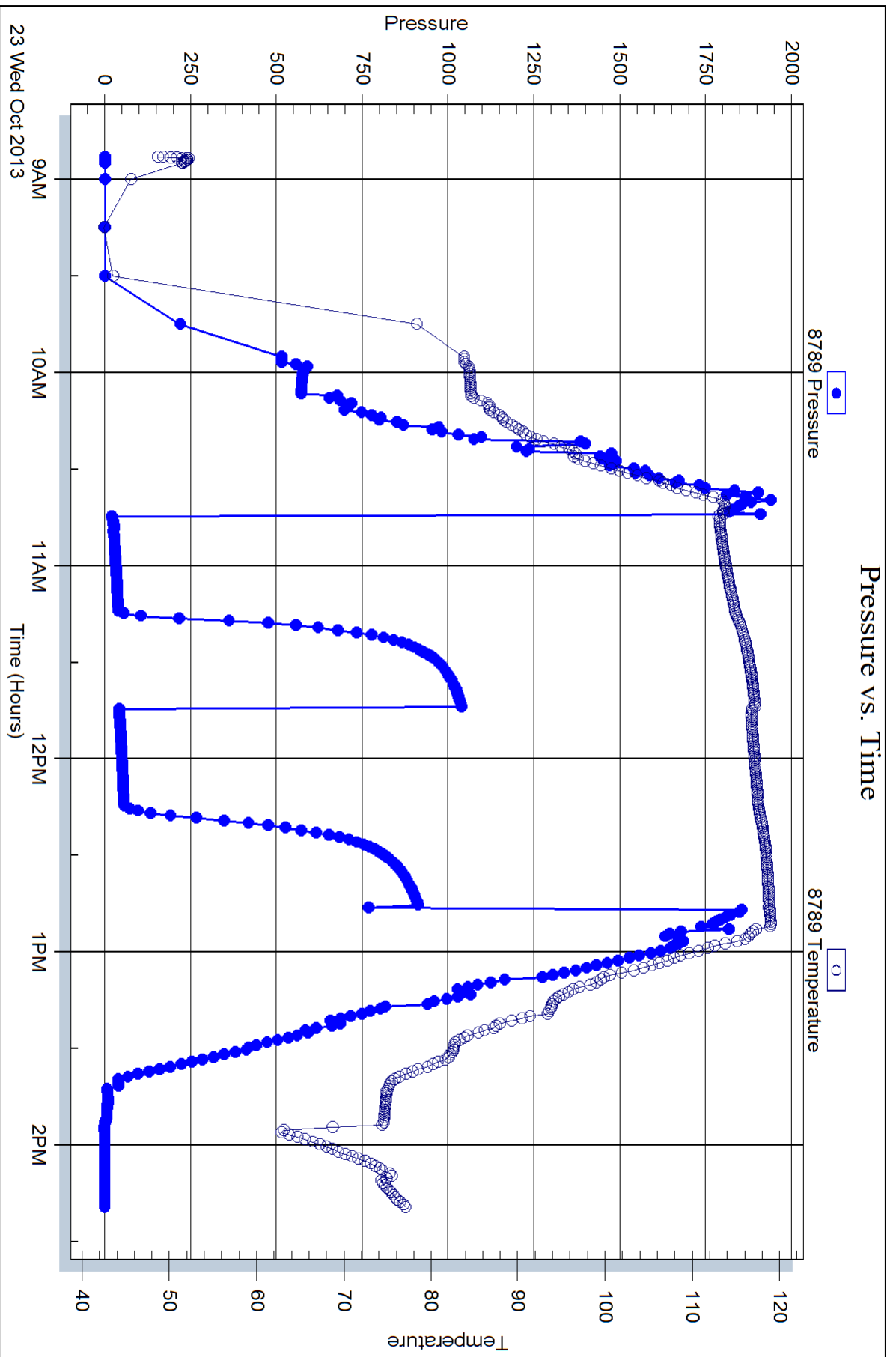
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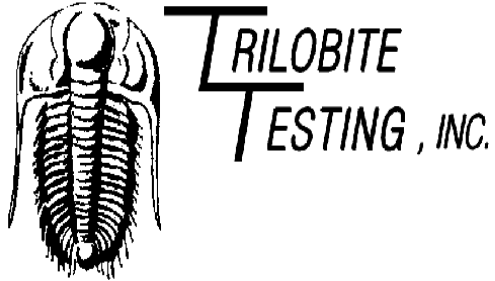
Inside

TDI Inc.

Henry #1

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Henry #1

5 13s 20w Ellis,KS

Start Date: 2013.10.23 @ 21:04:00

End Date: 2013.10.24 @ 02:22:00

Job Ticket #: 52272 DST #: 4

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

Printed: 2013.10.25 @ 13:21:23

TDI Inc.
5 13s 20w Ellis,KS
Henry #1
DST # 4
LKC " 1 "
2013.10.23



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

5 13s 20w Ellis, KS
Henry #1
Job Ticket: 52272 **DST#: 4**
Test Start: 2013.10.23 @ 21:04:00

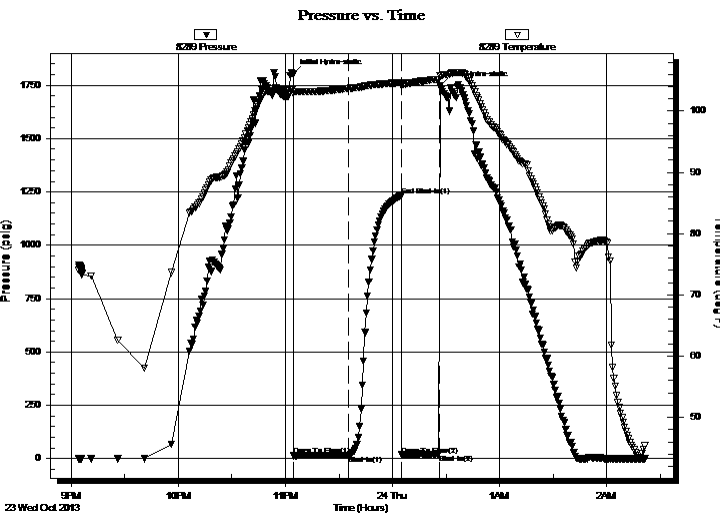
GENERAL INFORMATION:

Formation: **LKC " I "**
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Straddle (Reset)
 Time Tool Opened: 23:04:30 Tester: Jim Svaty
 Time Test Ended: 02:22:00 Unit No: 54
 Interval: **3588.00 ft (KB) To 3610.00 ft (KB) (TVD)** Reference Elevations: 2151.00 ft (KB)
 Total Depth: 3930.00 ft (KB) (TVD) 2141.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

Serial #: 8289 Outside

Press @ Run Depth: 15.36 psig @ 3589.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.10.23 End Date: 2013.10.24 Last Calib.: 2013.10.24
 Start Time: 21:04:02 End Time: 02:21:45 Time On Btm: 2013.10.23 @ 23:04:15
 Time Off Btm: 2013.10.24 @ 00:26:30

TEST COMMENT: 30-IFP- Surface Blow
 30-ISIP- No Blow
 20-FFP- No Blow Flushed at 15min. Good Surge No Blow
 Pulled



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1802.93	103.55	Initial Hydro-static
1	13.51	102.87	Open To Flow (1)
31	15.36	103.71	Shut-In(1)
61	1232.44	104.66	End Shut-In(1)
61	17.60	104.07	Open To Flow (2)
82	20.20	105.15	Shut-In(2)
83	1748.06	105.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100%	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

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

5 13s 20w Ellis,KS
Henry #1
Job Ticket: 52272 **DST#: 4**
Test Start: 2013.10.23 @ 21:04:00

Tool Information

Drill Pipe:	Length: 3598.00 ft	Diameter: 3.80 inches	Volume: 50.47 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 44000.00 lb
			<u>Total Volume: 50.47 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3588.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	3610.00 ft			
Interval between Packers:	22.00 ft			
Tool Length:	363.00 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			3568.00	
Shut In Tool	5.00			3573.00	
Hydraulic tool	5.00			3578.00	
Packer	5.00			3583.00	21.00 Bottom Of Top Packer
Packer	5.00			3588.00	
Stubb	1.00			3589.00	
Recorder	0.00	8789	Inside	3589.00	
Recorder	0.00	8289	Outside	3589.00	
Perforations	17.00			3606.00	
Blank Off Sub	1.00			3607.00	
Blank Spacing	3.00			3610.00	22.00 Tool Interval
Packer	1.00			3611.00	
Perforations	3.00			3614.00	
Change Over Sub	1.00			3615.00	
Recorder	0.00	6668	Below	3615.00	
Blank Spacing	315.00			3930.00	320.00 Bottom Packers & Anchor
Total Tool Length:	363.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **5 13s 20w Ellis,KS**
 1310 Bison Rd **Henry #1**
 Hays KS 67601 Job Ticket: 52272 **DST#: 4**
 ATTN: Herb Deines Test Start: 2013.10.23 @ 21:04:00

Mud and Cushion Information

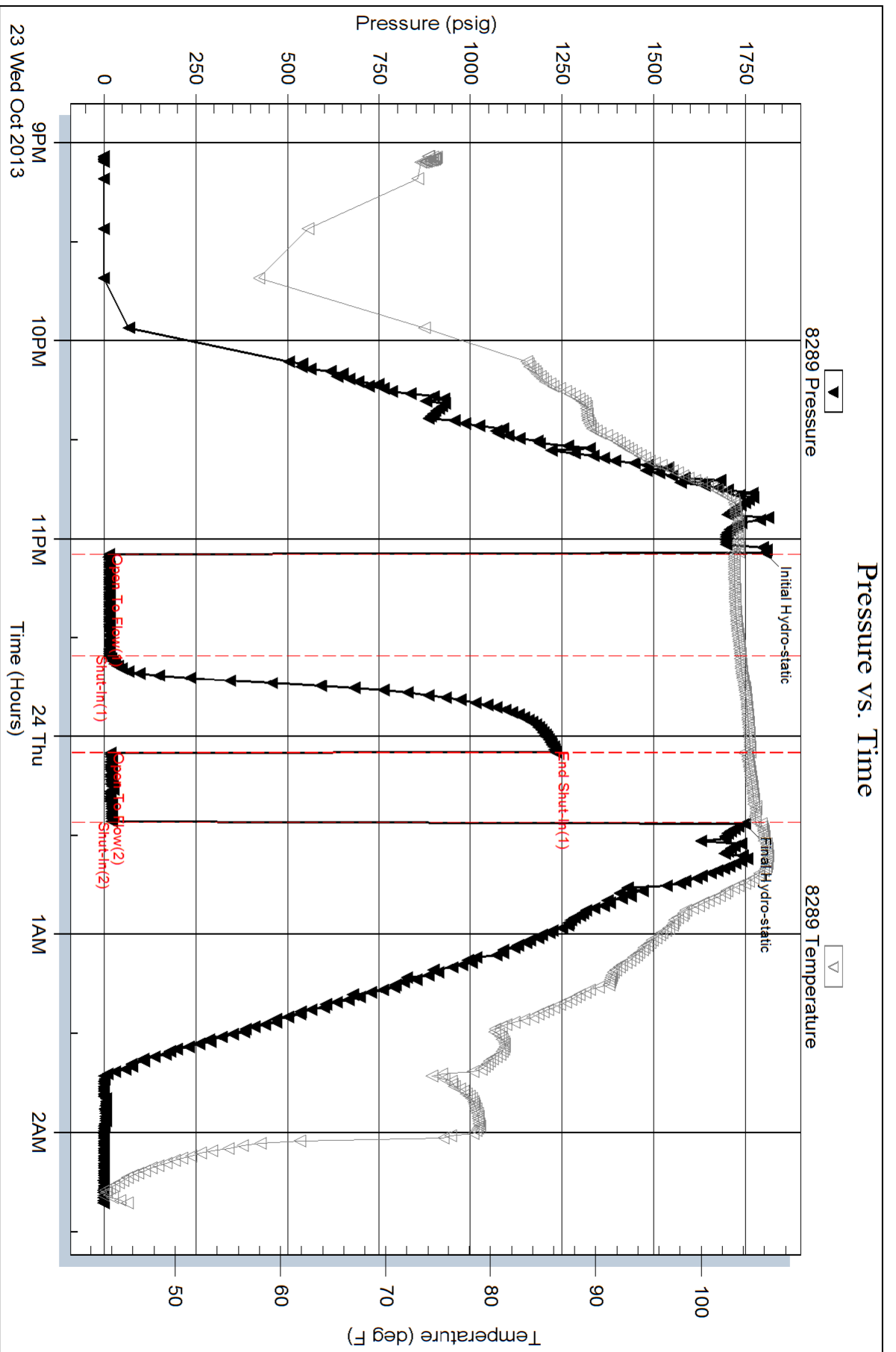
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100%	0.070

Total Length: 5.00 ft Total Volume: 0.070 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

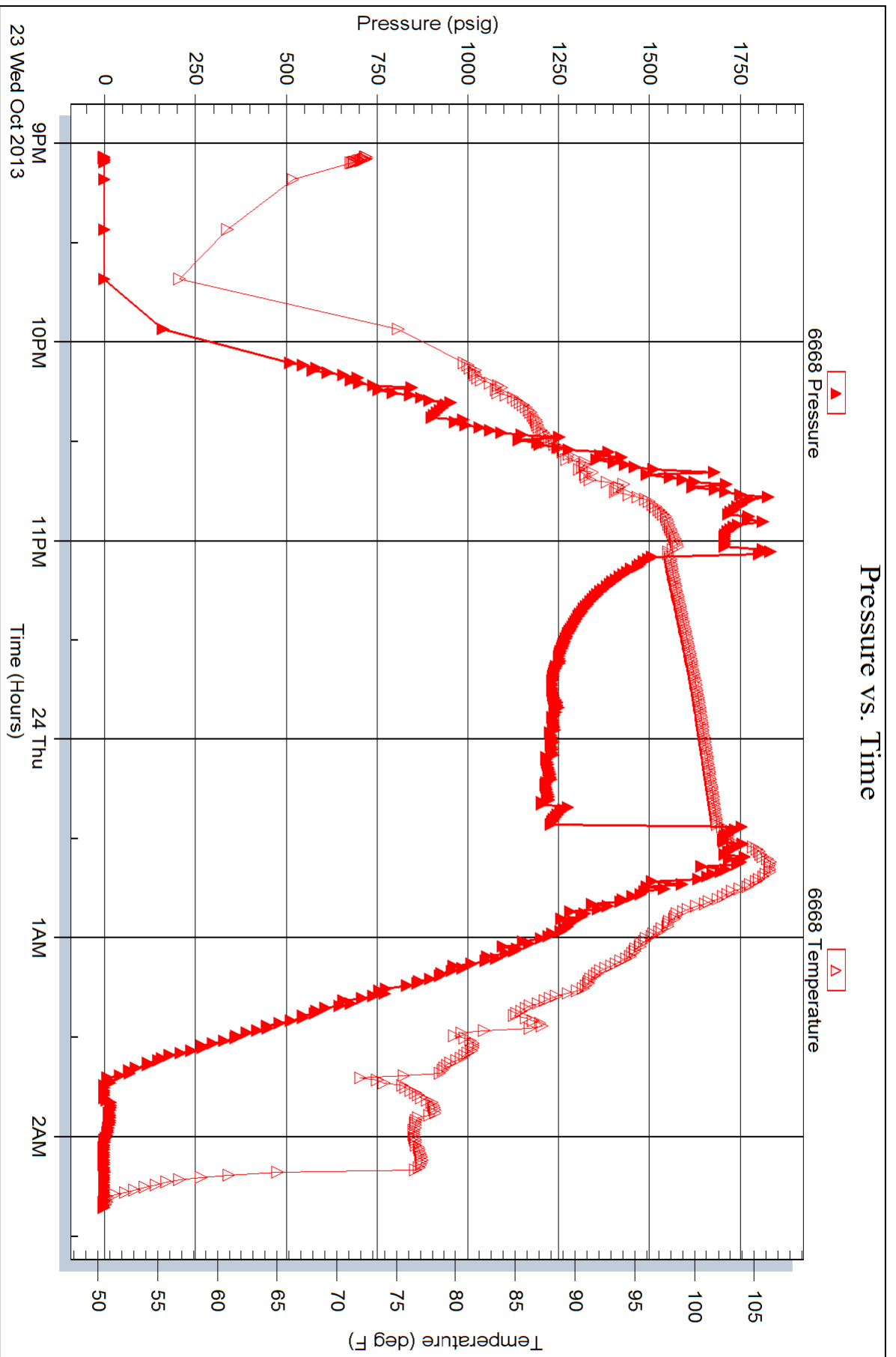


Serial #: 6668

Below (Straddled)

Henry #1

DST Test Number: 4



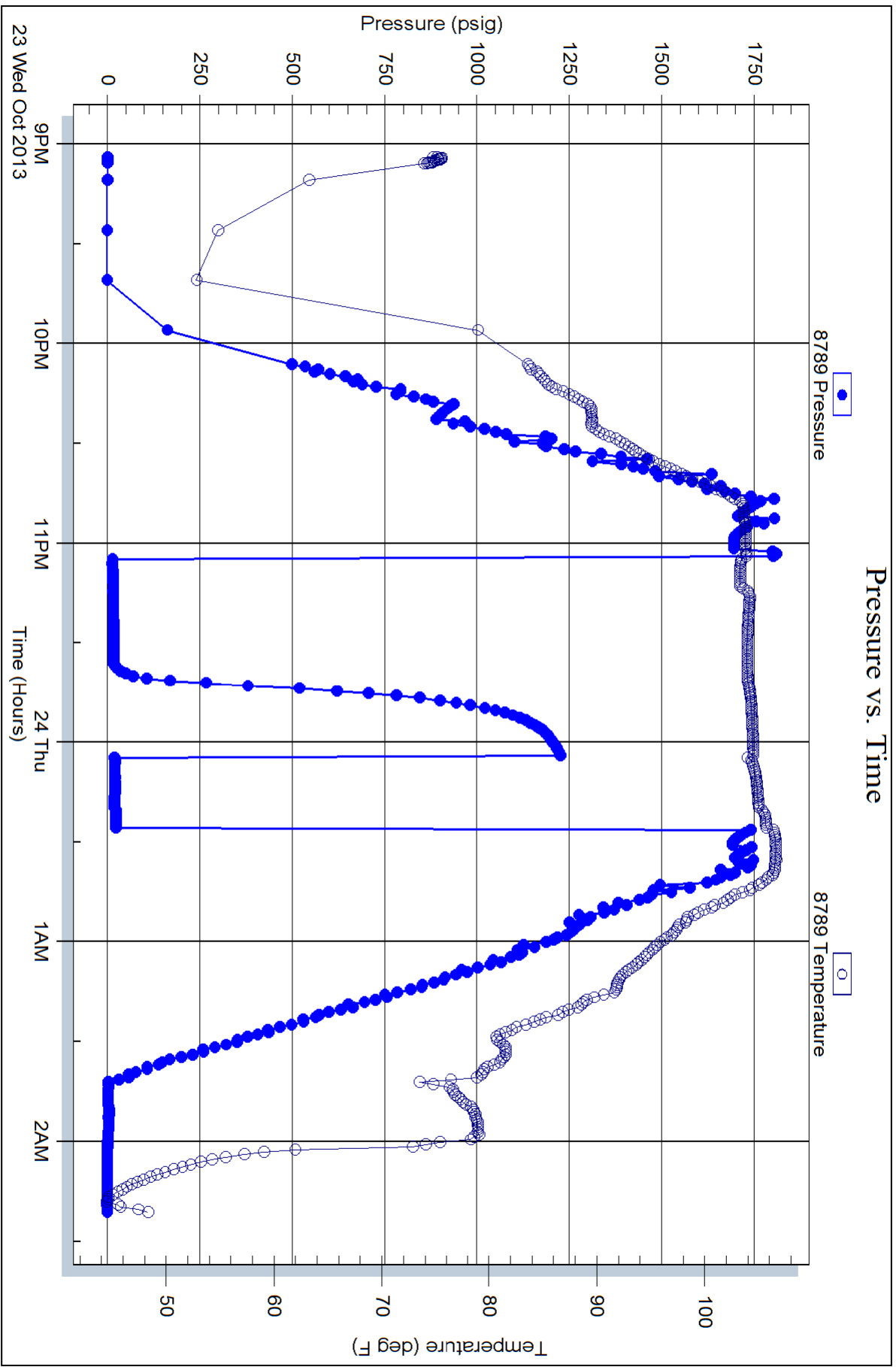
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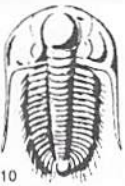
Inside

TDI Inc.

Henry #1

DST Test Number: 4





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52269

4/10

Well Name & No. Henry #1 Test No. 1 Date 10-21-13
 Company TDI INC Elevation 2151 KB 2141 GL
 Address 1310 Bison Rd Hays KS 67601
 Co. Rep / Geo. Herb Deines Rig Southwind #1
 Location: Sec. 5 Twp. 13^s Rge. 20^w Co. Ellis State KS

Interval Tested 3550-3595 Zone Tested LRC "H"
 Anchor Length 39 Drill Pipe Run 3565 Mud Wt. 8.9
 Top Packer Depth 3551 Drill Collars Run 0 Vis 51
 Bottom Packer Depth 3550 Wt. Pipe Run 0 WL 6.8
 Total Depth 3595 Chlorides 2100 ppm System LCM 2

Blow Description IFP - Surface Blow Building to 10 in
ISIP - No Blow
FFP - No Blow Flushed - No Blow
FSIP - No Blow

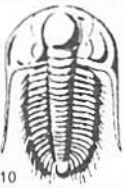
Rec	Feet of	%gas	%oil	%water	%mud
<u>240</u>	<u>MCW</u>		<u>95</u>	<u>5</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 240 BHT 114 Gravity API RW:130 @ 52 °F Chlorides 85000 ppm

(A) Initial Hydrostatic 1713 Test 1150 T-On Location 11:27
 (B) First Initial Flow 15 Jars _____ T-Started 14:34
 (C) First Final Flow 79 Safety Joint _____ T-Open 17:10
 (D) Initial Shut-In 884 Circ Sub _____ T-Pulled 19:55
 (E) Second Initial Flow 81 Hourly Standby _____ T-Out 21:57
 (F) Second Final Flow 124 Mileage 34 RT 52.70 Comments _____
 (G) Final Shut-In 882 Sampler _____
 (H) Final Hydrostatic 1699 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1202.70
 Accessibility _____ MP/DST Disc't _____

Initial Open 45
 Initial Shut-In 45
 Final Flow 30
 Final Shut-In 45
 Sub Total 1202.70

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 cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52270

Well Name & No. Henry #1 Test No. 2 Date 10-22-13
 Company TPI INC. Elevation 2151 KB 2141 GL
 Address 1310 Bison Rd Hays KS 67601
 Co. Rep / Geo. Herb Deines Rig Southwind #1
 Location: Sec. 5 Twp. 13^s Rge. 20^w Co. Ellis State KS

Interval Tested 3744 - 3798 Zone Tested MARMATON
 Anchor Length 54 (132TP) Drill Pipe Run 3754 Mud Wt. 9.1
 Top Packer Depth 3744 Drill Collars Run 0 Vis 54
 Bottom Packer Depth 3798 Wt. Pipe Run 0 WL 6.8
 Total Depth 3930 Chlorides 2000 ppm System LCM 2

Blow Description IFP - BOB in 40 sec.
ISIP - No Blow
FFP - BOB in 40 sec.
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>434</u>	<u>MCW</u>		<u>85</u>	<u>15</u>	
<u>1184</u>	<u>MCW</u>		<u>60</u>	<u>40</u>	
<u>372</u>	<u>MUD</u>			<u>100</u>	
	<u>Miss Run Packer Failed</u>				

Rec Total 1990 BHT 120 Gravity API RW 435 @ 40 °F Chlorides 28000 ppm

(A) Initial Hydrostatic 1915 Test 950 T-On Location 23:14
 (B) First Initial Flow 298 Jars T-Started 00:03
 (C) First Final Flow 694 Safety Joint T-Open 03:15
 (D) Initial Shut-In 1239 Circ Sub T-Pulled 04:35
 (E) Second Initial Flow 728 Hourly Standby T-Out 07:40
 (F) Second Final Flow 953 Mileage 52.70 Comments _____
 (G) Final Shut-In 1241 Sampler _____
 (H) Final Hydrostatic 1802 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 10 Extra Packer _____ Extra Copies _____
 Initial Shut-In 30 Extra Recorder _____ Sub Total 66.67
 Final Flow 10 Day Standby 1d 2h Total 1669.37
 Final Shut-In 30 Accessibility _____ MP/DST Disc't _____
 Sub Total 1602.70

Approved By _____ Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52271

Well Name & No. Henry #1 Test No. 3 Date 10-23-13
 Company TDI Inc Elevation 2151 KB 2141 GL
 Address 1310 Bison Rd Hays KS 67601
 Co. Rep / Geo. Herb Deines Rig Southwind #1
 Location: Sec. 5 Twp. 13^S Rge. 20^W Co. Ellis State KS

Interval Tested 3744 - 3823 Zone Tested MARMATON
 Anchor Length 79 (107TP) Drill Pipe Run 3754 Mud Wt. 9.1
 Top Packer Depth 3744 Drill Collars Run 0 Vis 54
 Bottom Packer Depth 3823 Wt. Pipe Run 0 WL 6.8
 Total Depth 3930 Chlorides 2000 ppm System LCM 2

Blow Description IFP - No Blow Wood Surge on Open
ISIP - No Blow
FFP - Surface Blow Building to 3 in.
FSIP - No Blow

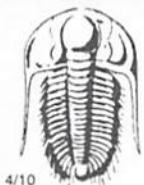
Rec	Feet of	%gas	%oil	%water	%mud
<u>80</u>	<u>mcw show of Oil</u>			<u>60</u>	<u>40</u>
<u>10</u>	<u>CO</u>	<u>100</u>			

Rec Total 90 BHT 118 Gravity 37 API RW 1253 @ 78 °F Chlorides 24000 ppm

(A) Initial Hydrostatic 1916 Test 1150 T-On Location 23:14 - (10-23)
 (B) First Initial Flow 19 Jars _____ T-Started 08:53
 (C) First Final Flow 40 Safety Joint _____ T-Open 10:45
 (D) Initial Shut-In 1044 Circ Sub _____ T-Pulled 12:45
 (E) Second Initial Flow 41 Hourly Standby _____ T-Out 14:20
 (F) Second Final Flow 57 Mileage _____ Comments _____
 (G) Final Shut-In 912 Sampler _____
 (H) Final Hydrostatic 1898 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____
 Initial Shut-In 30 Extra Recorder _____ Sub Total 0
 Final Flow 30 Day Standby _____ Total 1750
 Final Shut-In 30 Accessibility _____ MP/DST Disc't _____
 Sub Total 1750

Approved By _____ Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52272

Well Name & No. Henry #1 Test No. 4 Date 10-23-13
 Company JDI INC. Elevation 2151 KB 2141 GL
 Address 310 Bison Rd Hays KS. 67601
 Co. Rep / Geo. Herb Deines Rig Southwind #1
 Location: Sec. 5 Twp. 13^s Rge. 20^w Co. Ellis State KS

Interval Tested 3588 - 3610 Zone Tested LKC "I"
 Anchor Length 22 (320TP) Drill Pipe Run 3598 ~~3754~~ Mud Wt. 9.1
 Top Packer Depth 3588 Drill Collars Run 0 Vis 54
 Bottom Packer Depth 3610 Wt. Pipe Run 0 WL 6.8
 Total Depth 3930 Chlorides 2000 ppm System LCM 2

Blow Description IFP - SURFACE BLOW
ISIP - NO BLOW
FFP - NO BLOW FLUSHED AT 15min NO BLOW PULLED
FSIP -

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>			<u>100</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 5 BHT 105 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1802</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>21:03</u>
(B) First Initial Flow <u>13</u>	<input type="checkbox"/> Jars _____	T-Started <u>21:04</u>
(C) First Final Flow <u>15</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>23:05</u>
(D) Initial Shut-In <u>1232</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>00:25</u>
(E) Second Initial Flow <u>17</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>02:22</u>
(F) Second Final Flow <u>20</u>	<input checked="" type="checkbox"/> Mileage <u>52.70</u>	Comments _____
(G) Final Shut-In _____	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1748</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>20</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>pulled.</u>	<input type="checkbox"/> Day Standby _____	Total <u>1802.70</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1802.70</u>	

Approved By _____ Our Representative [Signature]

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