



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co. Inc**

250 N Water STE 300
Wichita KS 67202

ATTN: Wes Hansen

R&B #1-27

27-17s-36w Wichita,KS

Start Date: 2015.01.22 @ 07:12:00

End Date: 2015.01.22 @ 17:09:30

Job Ticket #: 61512 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.01.29 @ 08:35:39

Murfin Drilling Co. Inc
27-17s-36w Wichita,KS
R&B #1-27
DST # 1
LKC E-F
2015.01.22



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc
 250 N Water STE 300
 Wichita KS 67202
 ATTN: Wes Hansen

27-17s-36w Wichita, KS

R&B #1-27

Job Ticket: 61512

DST#: 1

Test Start: 2015.01.22 @ 07:12:00

GENERAL INFORMATION:

Formation: **LKC E-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:52:30

Time Test Ended: 17:09:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Justin Harris

Unit No: 58

Interval: 4116.00 ft (KB) To 4140.00 ft (KB) (TVD)

Reference Elevations: 3269.00 ft (KB)

Total Depth: 4140.00 ft (KB) (TVD)

3258.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 11.00 ft

Serial #: 6625 Outside

Press@RunDepth: 486.24 psig @ 4136.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.22

End Date: 2015.01.22

Last Calib.: 2015.01.22

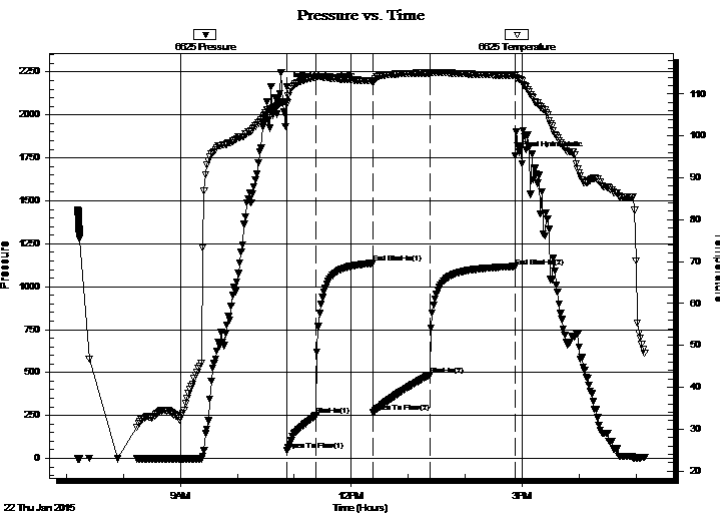
Start Time: 07:12:01

End Time: 17:09:30

Time On Btm: 2015.01.22 @ 10:52:00

Time Off Btm: 2015.01.22 @ 14:52:30

TEST COMMENT: 30: B.O.B in 8 mins.
 60: No Return.
 60: B.O.B in 8 mins.
 90: No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2164.43	108.26	Initial Hydro-static
1	47.73	107.85	Open To Flow (1)
31	253.13	114.06	Shut-In(1)
91	1136.39	113.14	End Shut-In(1)
91	268.60	112.78	Open To Flow (2)
151	486.24	115.06	Shut-In(2)
240	1117.75	114.39	End Shut-In(2)
241	1762.08	114.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
282.00	mcw 20m 80w	1.44
678.00	mcw 10m 90w	9.51

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc
250 N Water STE 300
Wichita KS 67202
ATTN: Wes Hansen

27-17s-36w Wichita,KS
R&B #1-27
Job Ticket: 61512 **DST#: 1**
Test Start: 2015.01.22 @ 07:12:00

Tool Information

Drill Pipe:	Length: 3835.00 ft	Diameter: 3.80 inches	Volume: 53.79 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 276.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4116.00 ft			Final 86000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	52.00 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			4089.00	
Shut In Tool	5.00			4094.00	
Hydraulic tool	5.00			4099.00	
Jars	5.00			4104.00	
Safety Joint	3.00			4107.00	
Packer	5.00			4112.00	28.00 Bottom Of Top Packer
Packer	4.00			4116.00	
Stubb	1.00			4117.00	
Perforations	19.00			4136.00	
Recorder	0.00	6625	Outside	4136.00	
Recorder	0.00	8319	Inside	4136.00	
Bullnose	4.00			4140.00	24.00 Bottom Packers & Anchor

Total Tool Length: 52.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc
250 N Water STE 300
Wichita KS 67202
ATTN: Wes Hansen

27-17s-36w Wichita,KS
R&B #1-27
Job Ticket: 61512 **DST#: 1**
Test Start: 2015.01.22 @ 07:12:00

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: 20000 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.96 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 6500.00 ppm		
Filter Cake: 2.00 inches		

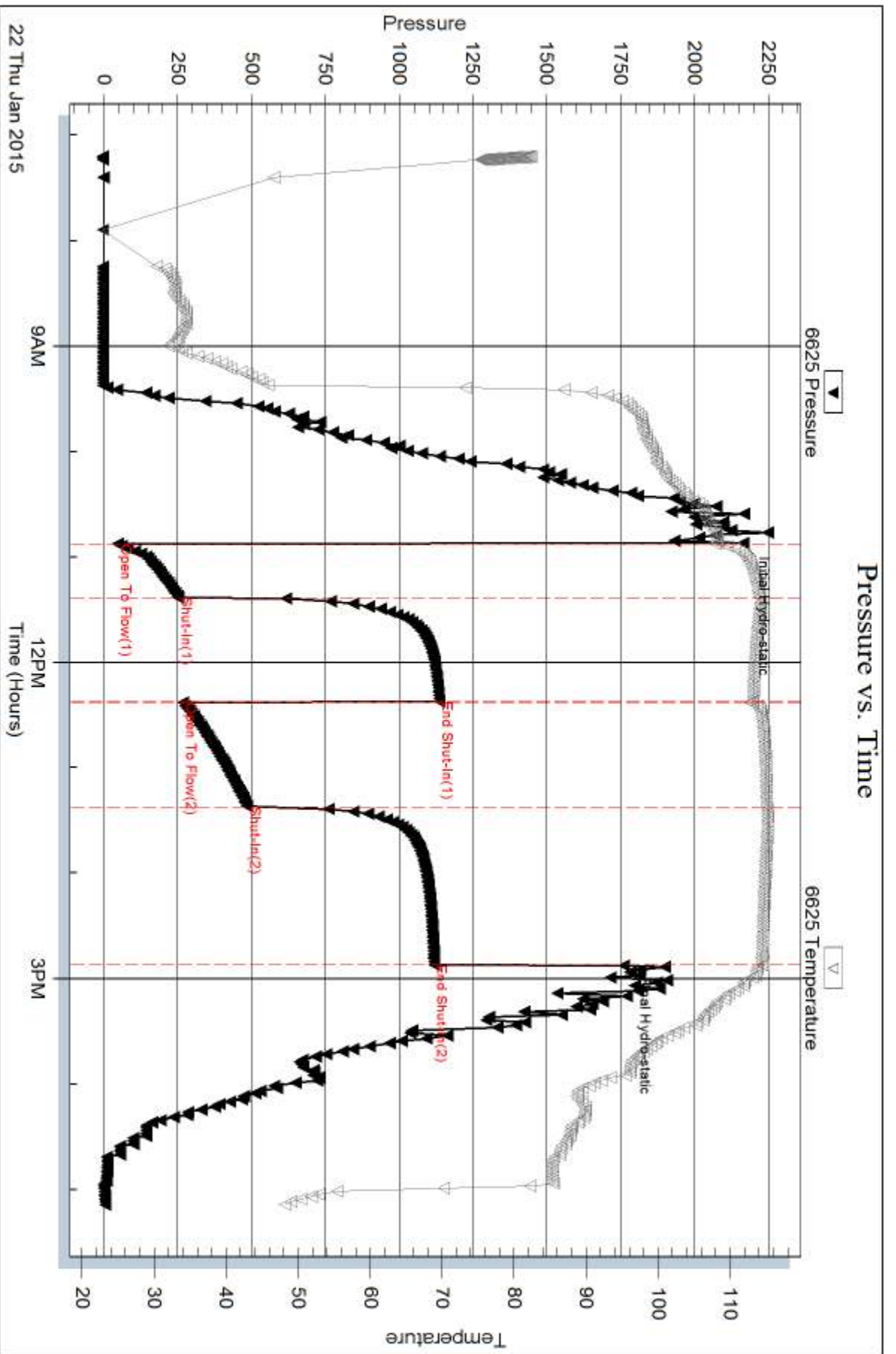
Recovery Information

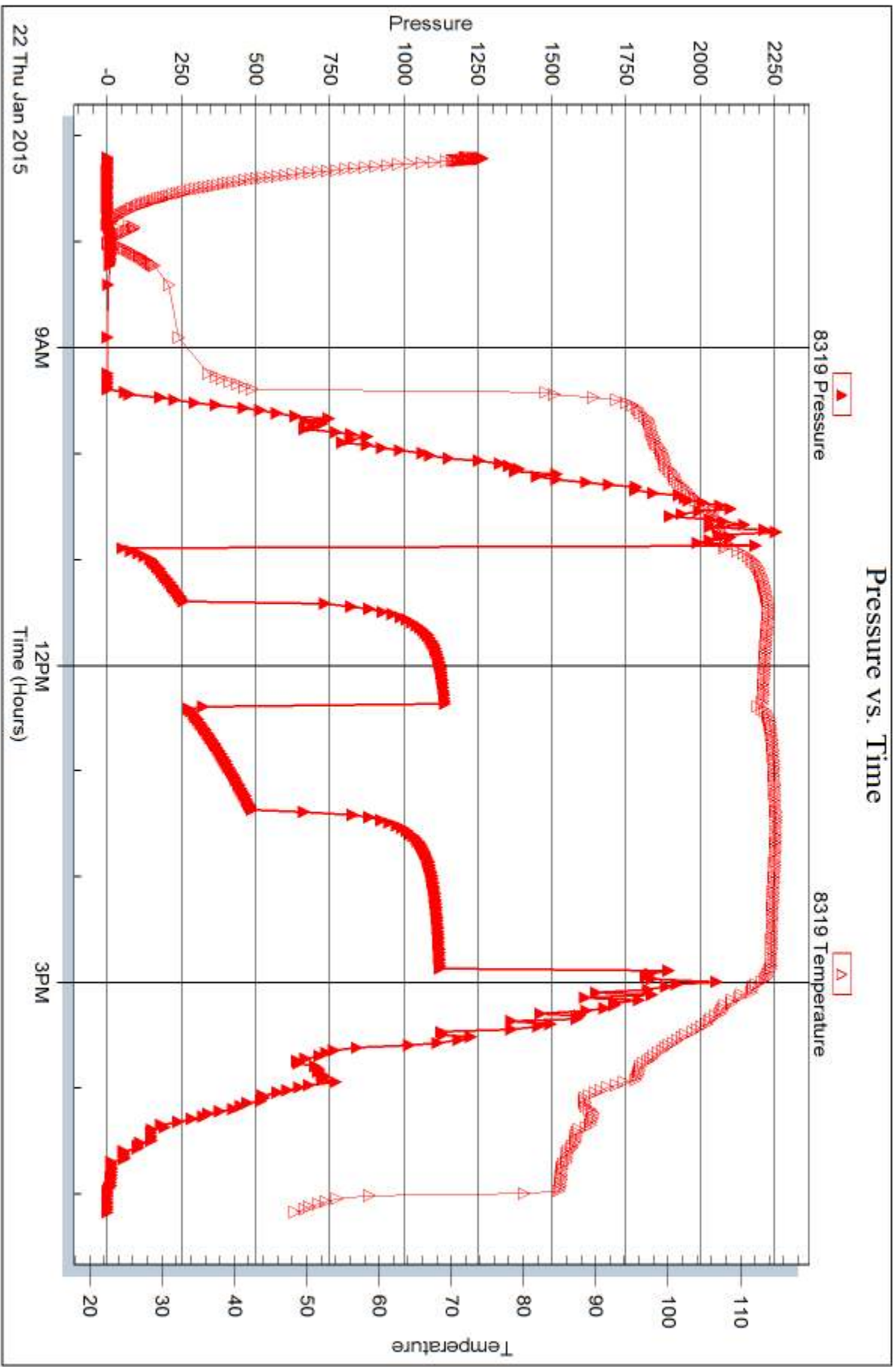
Recovery Table

Length ft	Description	Volume bbl
282.00	mcw 20m 80w	1.441
678.00	mcw 10m 90w	9.511

Total Length: 960.00 ft Total Volume: 10.952 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: API RW .5 @ 50F = 20000 Chlorides







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co. Inc**

250 N Water STE 300
Wichita KS 67202

ATTN: Wes Hansen

R&B #1-27

27-17s-36w Wichita,KS

Start Date: 2015.01.23 @ 07:48:00

End Date: 2015.01.23 @ 17:05:00

Job Ticket #: 61513 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.01.29 @ 08:35:19



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc
 250 N Water STE 300
 Wichita KS 67202
 ATTN: Wes Hansen

27-17s-36w Wichita, KS

R&B #1-27

Job Ticket: 61513

DST#: 2

Test Start: 2015.01.23 @ 07:48:00

GENERAL INFORMATION:

Formation: **LKC I**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 10:55:00
 Tester: Justin Harris
 Time Test Ended: 17:05:00
 Unit No: 58
 Interval: **5220.00 ft (KB) To 4250.00 ft (KB) (TVD)**
 Reference Elevations: 3269.00 ft (KB)
 Total Depth: 4250.00 ft (KB) (TVD)
 3258.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Poor
 KB to GR/CF: 11.00 ft

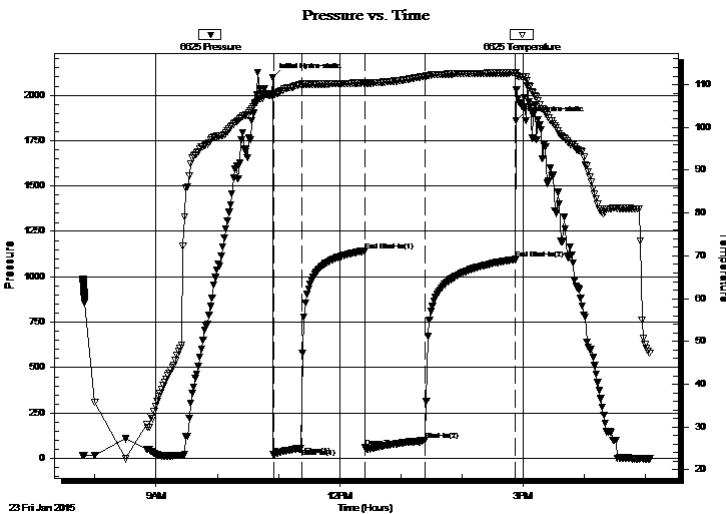
Serial #: 6625

Outside

Press@RunDepth: 99.91 psig @ 4246.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.01.23 End Date: 2015.01.23 Last Calib.: 2015.01.23
 Start Time: 07:48:01 End Time: 17:05:00 Time On Btm: 2015.01.23 @ 10:54:30
 Time Off Btm: 2015.01.23 @ 14:53:00

TEST COMMENT: 30: Weak surface blow build to 2".
 60: No Return.
 60: Weak surface blow
 90: No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2095.32	107.83	Initial Hydro-static
1	19.99	107.47	Open To Flow (1)
28	58.04	110.05	Shut-In(1)
90	1142.93	110.43	End Shut-In(1)
91	60.04	109.96	Open To Flow (2)
149	99.91	111.91	Shut-In(2)
238	1095.90	112.76	End Shut-In(2)
239	1860.44	112.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	w cm 10w 90m	0.61

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc
250 N Water STE 300
Wichita KS 67202
ATTN: Wes Hansen

27-17s-36w Wichita,KS
R&B #1-27
Job Ticket: 61513
Test Start: 2015.01.23 @ 07:48:00

DST#: 2

Tool Information

Drill Pipe:	Length: 3929.00 ft	Diameter: 3.80 inches	Volume: 55.11 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 276.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose:	90000.00 lb
			<u>Total Volume:</u> - bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial	80000.00 lb
Depth to Top Packer:	4220.00 ft			Final	81000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	30.00 ft				
Tool Length:	58.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4193.00	
Shut In Tool	5.00			4198.00	
Hydraulic tool	5.00			4203.00	
Jars	5.00			4208.00	
Safety Joint	3.00			4211.00	
Packer	5.00			4216.00	28.00 Bottom Of Top Packer
Packer	4.00			4220.00	
Stubb	1.00			4221.00	
Perforations	25.00			4246.00	
Recorder	0.00	6625	Outside	4246.00	
Recorder	0.00	8319	Inside	4246.00	
Bullnose	4.00			4250.00	30.00 Bottom Packers & Anchor

Total Tool Length: 58.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc
250 N Water STE 300
Wichita KS 67202
ATTN: Wes Hansen

27-17s-36w Wichita,KS
R&B #1-27
Job Ticket: 61513 **DST#: 2**
Test Start: 2015.01.23 @ 07:48:00

Mud and Cushion Information

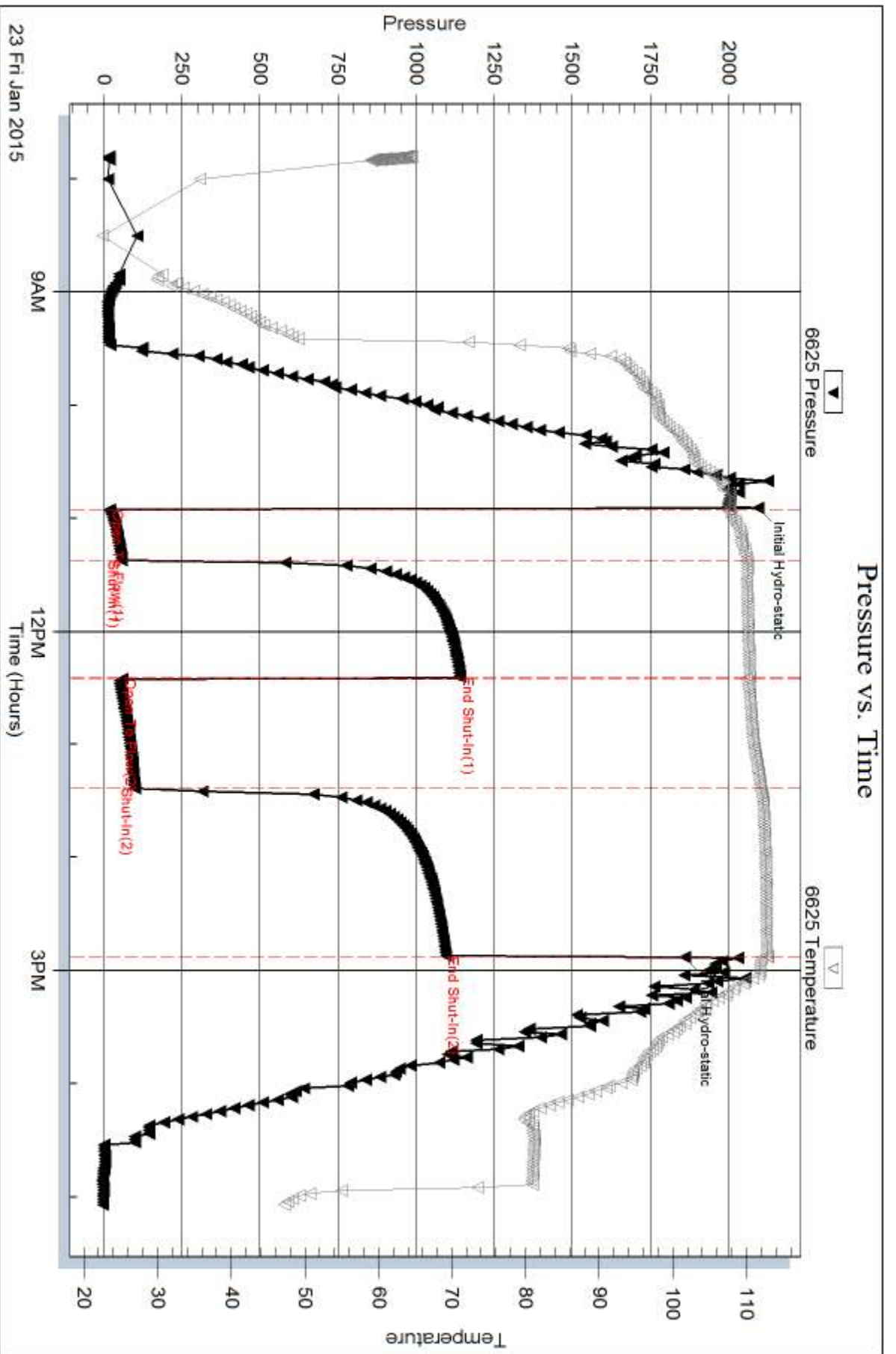
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 18000 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.96 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 6500.00 ppm		
Filter Cake: 2.00 inches		

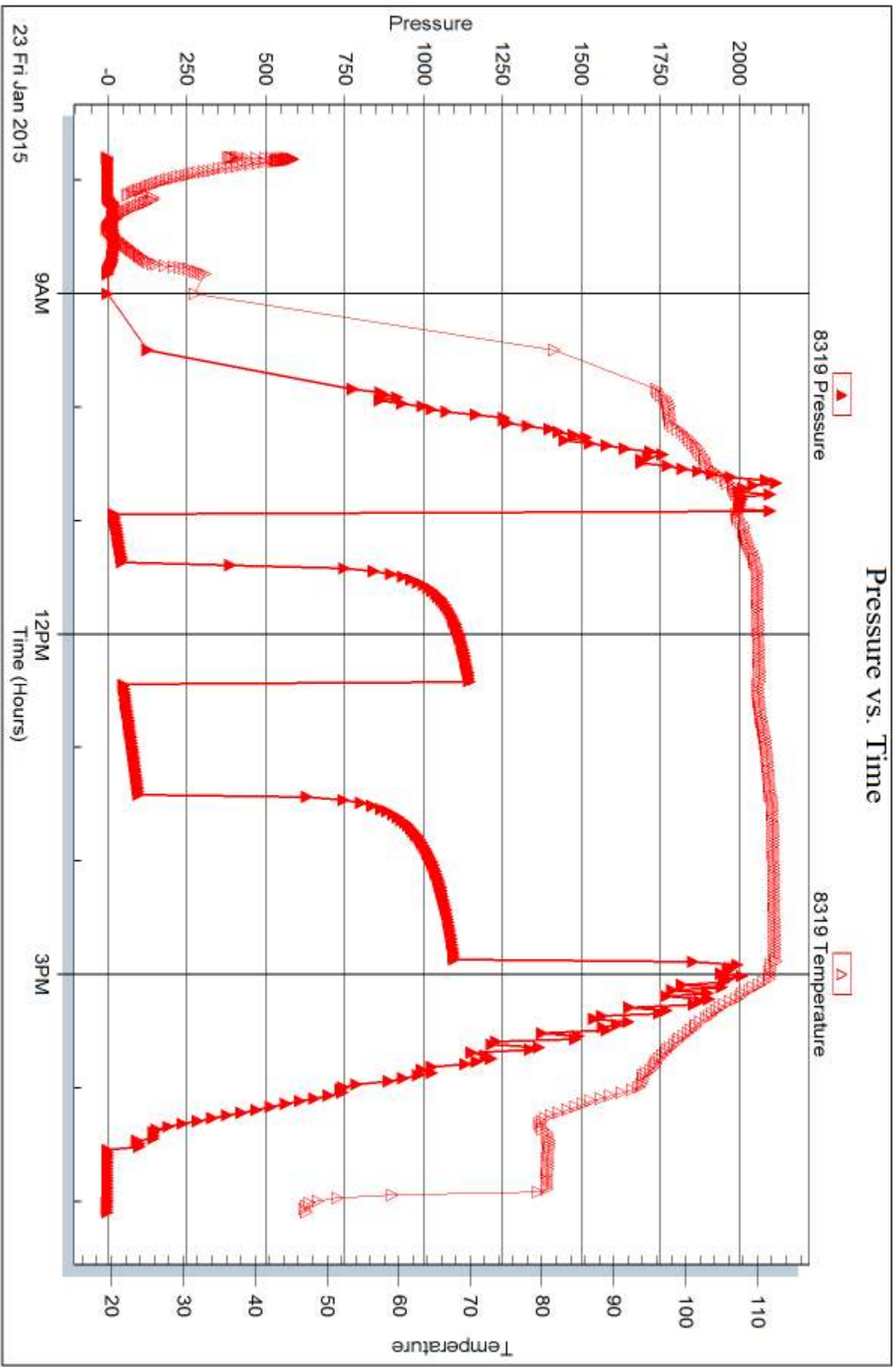
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	w cm 10w 90m	0.610

Total Length: 124.00 ft Total Volume: 0.610 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: API RW .45 @ 60 F = 18000 Chlorides







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co. Inc**

250 N Water STE 300
Wichita KS 67202

ATTN: Wes Hansen

R&B #1-27

27-17s-36w Wichita,KS

Start Date: 2015.01.24 @ 21:30:00

End Date: 2015.01.25 @ 07:14:30

Job Ticket #: DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.01.29 @ 08:34:53



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc
 250 N Water STE 300
 Wichita KS 67202
 ATTN: Wes Hansen

27-17s-36w Wichita, KS

R&B #1-27

Job Ticket: **DST#: 3**

Test Start: 2015.01.24 @ 21:30:00

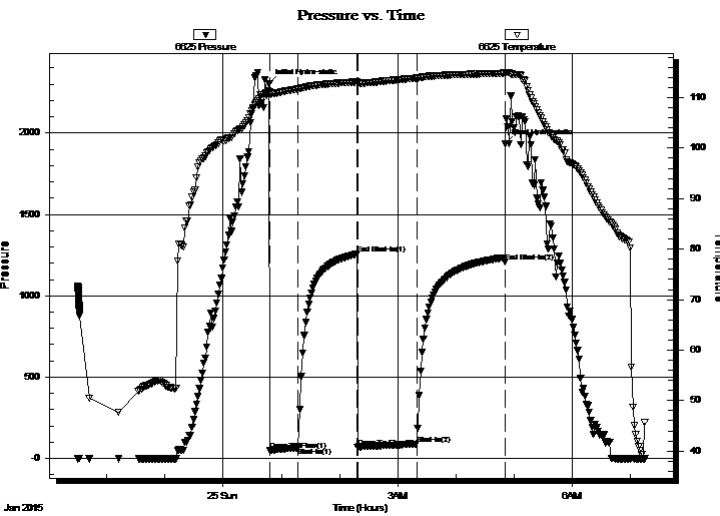
GENERAL INFORMATION:

Formation: **Marmaton**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:48:00
 Time Test Ended: 07:14:30
 Interval: **4446.00 ft (KB) To 4520.00 ft (KB) (TVD)**
 Total Depth: 4520.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Justin Harris
 Unit No: 58
 Reference Elevations: 3269.00 ft (KB)
 3258.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 6625 Outside

Press@RunDepth: 89.11 psig @ 4516.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.01.24 End Date: 2015.01.25 Last Calib.: 2015.01.24
 Start Time: 21:30:01 End Time: 07:14:30 Time On Btm: 2015.01.25 @ 00:47:30
 Time Off Btm: 2015.01.25 @ 04:51:00

TEST COMMENT: 30: Weak surface blow Build to 1 1/2".
 60: No Return.
 60: No Blow .
 90: No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2305.25	111.20	Initial Hydro-static
1	48.41	110.78	Open To Flow (1)
30	71.12	111.74	Shut-In(1)
91	1256.44	113.13	End Shut-In(1)
91	70.58	112.93	Open To Flow (2)
152	89.11	113.88	Shut-In(2)
243	1206.15	114.84	End Shut-In(2)
244	1935.65	115.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
100.00	Mud	0.49

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc
250 N Water STE 300
Wichita KS 67202
ATTN: Wes Hansen

27-17s-36w Wichita,KS
R&B #1-27
Job Ticket: **DST#: 3**
Test Start: 2015.01.24 @ 21:30:00

Tool Information

Drill Pipe:	Length: 4149.00 ft	Diameter: 3.80 inches	Volume: 58.20 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 276.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	4446.00 ft			Final 84000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	74.00 ft			
Tool Length:	102.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4419.00	
Shut In Tool	5.00			4424.00	
Hydraulic tool	5.00			4429.00	
Jars	5.00			4434.00	
Safety Joint	3.00			4437.00	
Packer	5.00			4442.00	28.00 Bottom Of Top Packer
Packer	4.00			4446.00	
Stubb	1.00			4447.00	
Perforations	4.00			4451.00	
Change Over Sub	1.00			4452.00	
Drill Pipe	63.00			4515.00	
Change Over Sub	1.00			4516.00	
Recorder	0.00	6625	Outside	4516.00	
Recorder	0.00	8319	Inside	4516.00	
Bullnose	4.00			4520.00	74.00 Bottom Packers & Anchor

Total Tool Length: 102.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc
250 N Water STE 300
Wichita KS 67202
ATTN: Wes Hansen

27-17s-36w Wichita,KS
R&B #1-27
Job Ticket: **DST#: 3**
Test Start: 2015.01.24 @ 21:30:00

Mud and Cushion Information

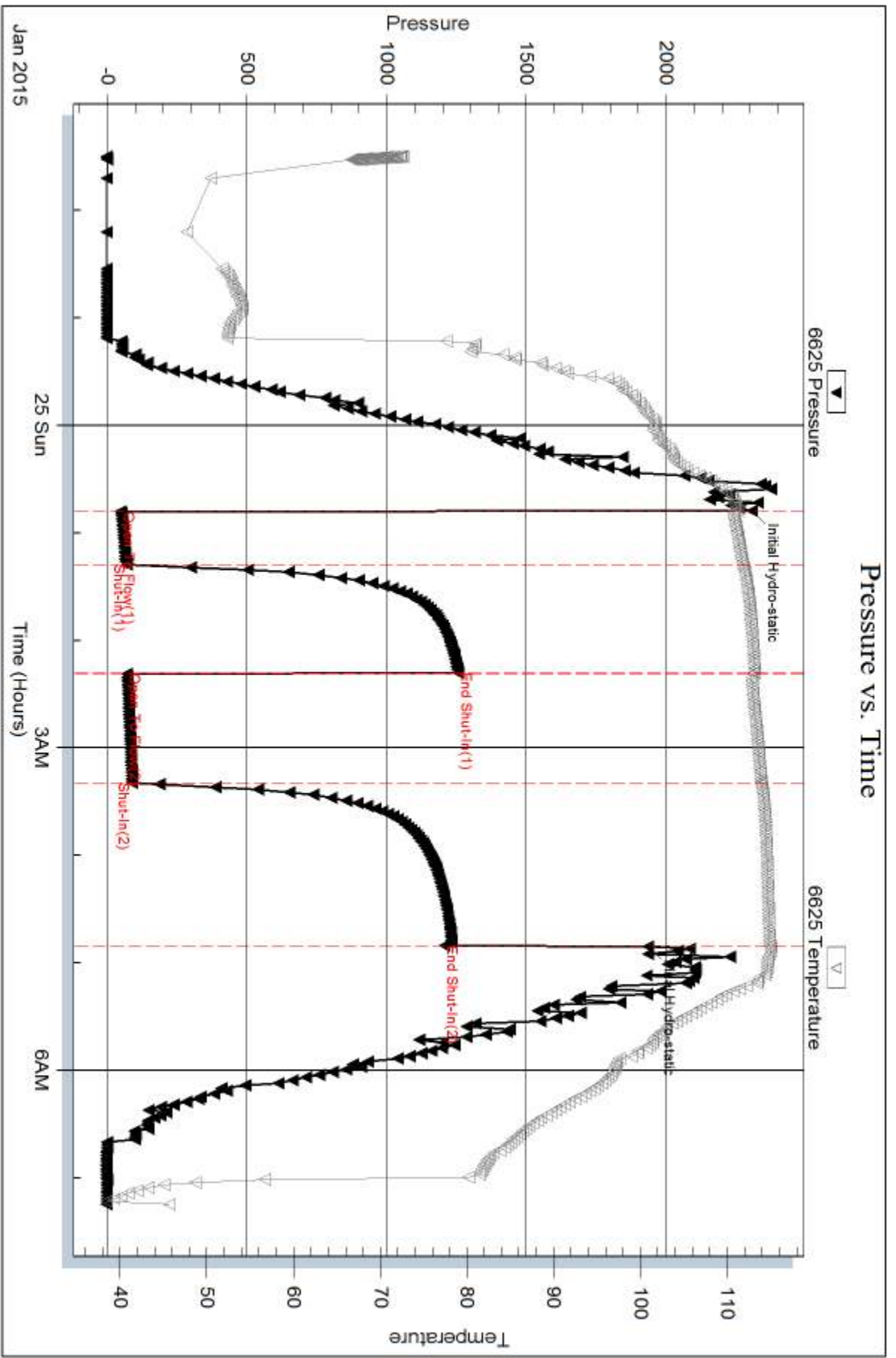
Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.59 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 1.00 inches			

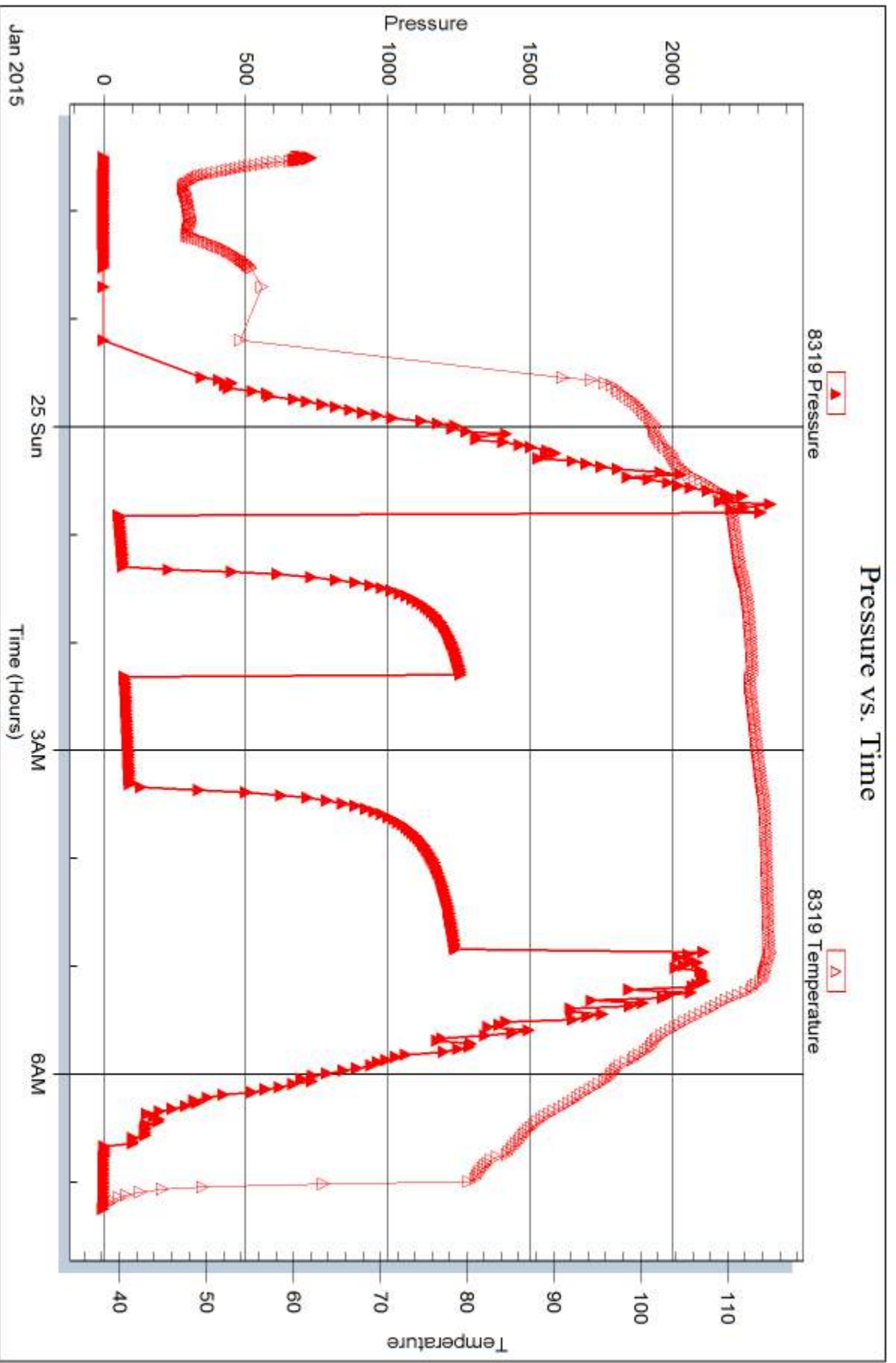
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
100.00	Mud	0.492

Total Length: 100.00 ft Total Volume: 0.492 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co. Inc**

250 N Water STE 300
Wichita KS 67202

ATTN: Wes Hansen

R&B #1-27

27-17s-36w Wichita,KS

Start Date: 2015.01.25 @ 22:00:00

End Date: 2015.01.26 @ 05:51:00

Job Ticket #: 61515 DST #: 4

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.01.29 @ 08:34:06



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc
 250 N Water STE 300
 Wichita KS 67202
 ATTN: Wes Hansen

27-17s-36w Wichita,KS

R&B #1-27

Job Ticket: 61515

DST#: 4

Test Start: 2015.01.25 @ 22:00:00

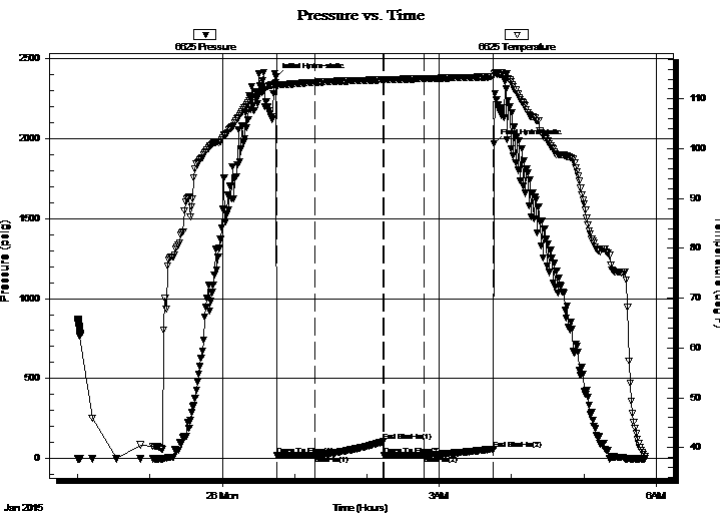
GENERAL INFORMATION:

Formation: **Pawnee - Ft Scott**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:45:00
 Time Test Ended: 05:51:00
 Interval: **4516.00 ft (KB) To 4600.00 ft (KB) (TVD)**
 Total Depth: 4600.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Justin Harris
 Unit No: 58
 Reference Elevations: 3269.00 ft (KB)
 3258.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 6625 Outside

Press@RunDepth: 20.87 psig @ 4596.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.01.25 End Date: 2015.01.26 Last Calib.: 2015.01.26
 Start Time: 22:00:01 End Time: 05:51:00 Time On Btm: 2015.01.26 @ 00:44:30
 Time Off Btm: 2015.01.26 @ 03:45:30

TEST COMMENT: 30: Weak surface blow die in 11 mins.
 60: No Return.
 30: No Blow .
 60: No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2384.90	113.30	Initial Hydro-static
1	17.92	112.40	Open To Flow (1)
33	20.89	113.34	Shut-In(1)
89	104.53	113.85	End Shut-In(1)
90	20.32	113.88	Open To Flow (2)
123	20.87	114.08	Shut-In(2)
181	59.43	114.46	End Shut-In(2)
181	1968.04	115.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc
250 N Water STE 300
Wichita KS 67202
ATTN: Wes Hansen

27-17s-36w Wichita,KS
R&B #1-27
Job Ticket: 61515
Test Start: 2015.01.25 @ 22:00:00

DST#: 4

Tool Information

Drill Pipe:	Length: 4244.00 ft	Diameter: 3.80 inches	Volume: 59.53 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 276.00 ft	Diameter: 2.25 inches	Volume: 1.36 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 84000.00 lb
Depth to Top Packer:	4516.00 ft			Final 84000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	84.00 ft			
Tool Length:	112.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4489.00	
Shut In Tool	5.00			4494.00	
Hydraulic tool	5.00			4499.00	
Jars	5.00			4504.00	
Safety Joint	3.00			4507.00	
Packer	5.00			4512.00	28.00 Bottom Of Top Packer
Packer	4.00			4516.00	
Stubb	1.00			4517.00	
Perforations	14.00			4531.00	
Change Over Sub	1.00			4532.00	
Drill Pipe	63.00			4595.00	
Change Over Sub	1.00			4596.00	
Recorder	0.00	6625	Outside	4596.00	
Recorder	0.00	8319	Inside	4596.00	
Bullnose	4.00			4600.00	84.00 Bottom Packers & Anchor

Total Tool Length: 112.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc

27-17s-36w Wichita,KS

250 N Water STE 300
Wichita KS 67202

R&B #1-27

Job Ticket: 61515

DST#: 4

ATTN: Wes Hansen

Test Start: 2015.01.25 @ 22:00:00

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: 61.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbf

Num Fluid Samples: 0

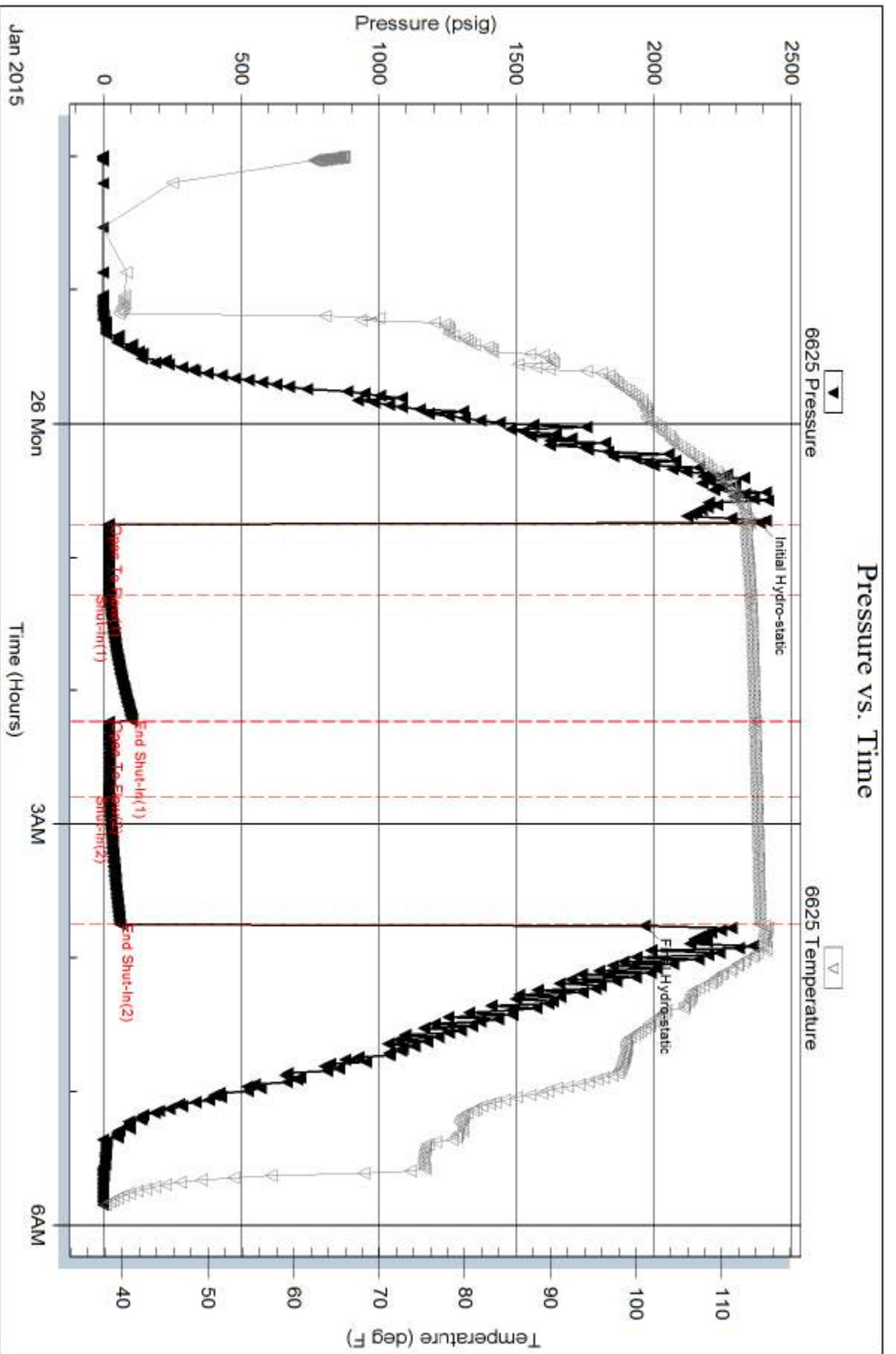
Num Gas Bombs: 0

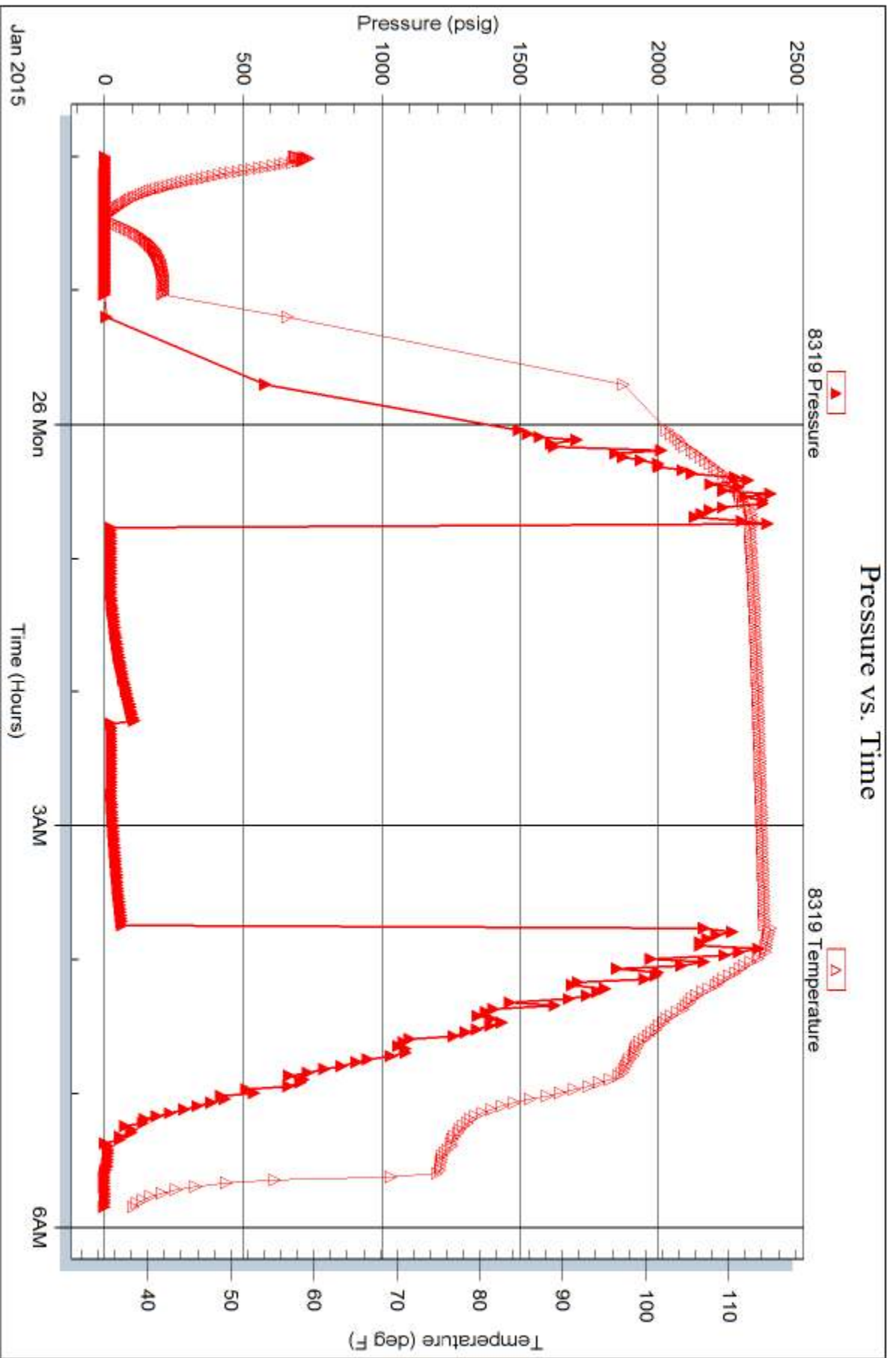
Serial #:

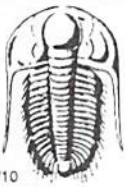
Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **61512**

Well Name & No. R + B 1-27 Test No. 1 Date 1/22
 Company Murfin Drilling Co, Inc. Elevation 3269 KB 3258 GL
 Address 250 N water ST# 300 Wichita KS, 67202
 Co. Rep / Geo. Wes Hansen Rig Murfin #4
 Location: Sec. 27 Twp. 17S Rge. 36W Co. Wichita State KS

Interval Tested 4114 4140 Zone Tested Lansing E + F
 Anchor Length 24 Drill Pipe Run 3835 Mud Wt. 9.4
 Top Packer Depth 4112 Drill Collars Run 276 Vis 60
 Bottom Packer Depth 4114 Wt. Pipe Run 600 WL 8.0
 Total Depth 4140 Chlorides 4500 ppm System LCM 6

Blow Description 30 B.O.B in 8 mins
60 No Return
60 B.O.B in 8 mins
90 No Return

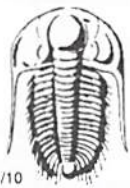
Rec	Feet of	%gas	%oil	%water	%mud
<u>282</u>	<u>mcw</u>			<u>80</u>	<u>20</u>
<u>478</u>	<u>mcw</u>			<u>90</u>	<u>10</u>

Rec Total 960' BHT 114 Gravity — API RW .50 @ 52 ° F Chlorides 20000 ppm
 (A) Initial Hydrostatic 2144 Test 1150 T-On Location 6:45
 (B) First Initial Flow 48 Jars 250 T-Started 7:12
 (C) First Final Flow 253 Safety Joint 75 T-Open 10:51
 (D) Initial Shut-In 1136 Circ Sub n/c T-Pulled 17:51
 (E) Second Initial Flow 269 Hourly Standby T-Out 17:10
 (F) Second Final Flow 486 Mileage 54 RT 54 Comments _____
 (G) Final Shut-In 1118 Sampler _____
 (H) Final Hydrostatic 1762 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 30 Ruined Shale Packer _____
 Initial Shut-In 60 Ruined Packer _____
 Final Flow 60 Extra Copies _____
 Final Shut-In 90 Sub Total 0
 Total 1529
 Sub Total 1529 MP/DST Disc't _____

Approved By Wesley Hansen 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. 61513

Well Name & No. A + B 1-27 Test No. 2 Date 1/23
 Company Murfin Drilling Co, Inc Elevation 3269 KB 3258 GL
 Address 250 N Water STE 300 Wichita KS, 67202
 Co. Rep / Geo. Wes Hansen Rig Murfin #4
 Location: Sec. 27 Twp. 13s Rge. 36w Co. Wichita State KS

Interval Tested 4220 4250 Zone Tested Lansing "T"
 Anchor Length 30 Drill Pipe Run 3929 Mud Wt. 9.4
 Top Packer Depth 4214 Drill Collars Run 276 Vis 40
 Bottom Packer Depth 4220 Wt. Pipe Run Ø WL 8
 Total Depth 4250 Chlorides 4500 ppm System LCM 6

Blow Description 30 Weak surface blow build to 2"
60 No Return
60 Weak surface blow
90 No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>124</u>	<u>WCM</u>			<u>10</u>	<u>90</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 124 BHT 113 Gravity - API RW .45 @ 60 °F Chlorides 18000 ppm
 (A) Initial Hydrostatic 2095 Test 1150 T-On Location 7:55
 (B) First Initial Flow 20 Jars 250 T-Started 7:48
 (C) First Final Flow 58 Safety Joint 75 T-Open 10:50
 (D) Initial Shut-In 1143 Circ Sub N/C T-Pulled 14:50
 (E) Second Initial Flow 60 Hourly Standby _____ T-Out 17:05
 (F) Second Final Flow 100 Mileage 54 RT 54
 (G) Final Shut-In 1096 Sampler _____
 (H) Final Hydrostatic 1860 Straddle _____

Initial Open 30 Ruined Shale Packer _____
 Initial Shut-In 60 Ruined Packer _____
 Final Flow 60 Extra Packer _____
 Final Shut-In 90 Extra Recorder _____
 Sub Total 0
 Total 1529
 MP/DST Disc't _____
 Sub Total 1529

Approved By Wes Hansen Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 61514

Well Name & No. B + B 1-27 Test No. 3 Date 1/24 1/25
 Company Murfin Drilling Co, Inc Elevation 3269 KB 3258 GL
 Address 250 N Water STE 300 Wichita ks 67202
 Co. Rep / Geo. Wes Hansen Rig Murfin #4
 Location: Sec. 27 Twp. 13S Rge. 36W Co. Wichita State KS

Interval Tested 4446 4520 Zone Tested Marmaton
 Anchor Length 74' Drill Pipe Run 4149 Mud Wt. 9.1
 Top Packer Depth 4442 Drill Collars Run 276 Vis 59
 Bottom Packer Depth 4446 Wt. Pipe Run Ø WL 5.6
 Total Depth 4520 Chlorides 5000 ppm System LCM 6

Blow Description 30 weak surface blow build to 1 1/2"
60 No Return
60 No Blow
70 No Return

Rec	Feet of	%gas	%oil	%water	%mud
100	mud			100	

Rec Total 100 BHT 115 Gravity — API RW — @ — °F Chlorides — ppm

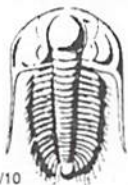
(A) Initial Hydrostatic 2305 Test 1150 T-On Location 21:20
 (B) First Initial Flow 48 Jars 250 T-Started 21:30
 (C) First Final Flow 77 Safety Joint 75 T-Open 00:48
 (D) Initial Shut-In 1264 Circ Sub N/C T-Pulled 4:48
 (E) Second Initial Flow 71 Hourly Standby — T-Out 7:15
 (F) Second Final Flow 89 Mileage 54 RT 54 Comments —
 (G) Final Shut-In 1206 Sampler —
 (H) Final Hydrostatic 1934 Straddle —
 Shale Packer —
 Extra Packer —
 Extra Recorder —
 Day Standby —
 Accessibility —
 Sub Total 1529

Initial Open 30
 Initial Shut-In 60
 Final Flow 60
 Final Shut-In 90

MP/DST Disc't —

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **61515**

4/10

Well Name & No. <u>R & B 1-27</u>	Test No. <u>4</u>	Date <u>1/25/1/26</u>
Company <u>Murfin Drilling Co, Inc</u>	Elevation <u>3269</u>	KB <u>3268</u> GL
Address <u>250 N Water STE 300</u>	<u>Wichita KS, 67202</u>	
Co. Rep / Geo. <u>was Hansen</u>	Rig <u>Murfin #4</u>	
Location: Sec. <u>R7</u> Twp. <u>13S</u> Rge. <u>36W</u>	Co. <u>Wichita</u>	State <u>KS</u>

Interval Tested <u>4516 4400</u>	Zone Tested <u>Pawnee / FT Scott</u>
Anchor Length <u>4512 511'</u>	Drill Pipe Run <u>4244</u> Mud Wt. <u>9.1</u>
Top Packer Depth <u>4512</u>	Drill Collars Run <u>276</u> Vis <u>41</u>
Bottom Packer Depth <u>4510</u>	Wt. Pipe Run <u>Ø</u> WL <u>4.8</u>
Total Depth <u>4400</u>	Chlorides <u>6000</u> ppm System LCM <u>6</u>

Blow Description 30 Weak surface blow Die in 11 min
60 No Return
30 No Blow
40 No Return

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 <u>5</u>	BHT <u>115</u>	Gravity <u>-</u>	API RW <u>-</u>	@ <u>-</u> °F	Chlorides <u>-</u> ppm
(A) Initial Hydrostatic <u>2385</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>21:45</u>			
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>22:00</u>			
(C) First Final Flow <u>21</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>00:42</u>			
(D) Initial Shut-In <u>105</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>3:42</u>			
(E) Second Initial Flow <u>20</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>5:51</u>			
(F) Second Final Flow <u>21</u>	<input checked="" type="checkbox"/> Mileage <u>54 RT X 2</u> 54	Comments <u>Load tool</u>			
(G) Final Shut-In <u>59</u>	<input type="checkbox"/> Sampler 54	<u>at 10:30 AM on</u>			
(H) Final Hydrostatic <u>1968</u>	<input type="checkbox"/> Straddle	<u>1/27/15</u>			

Initial Open <u>30</u>	<input type="checkbox"/> Ruined Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Total <u>1583</u>
	<input type="checkbox"/> Day Standby	MP/DST Disc't
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1583</u>	

Approved By _____ Our Representative [Signature]
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