



## DRILL STEM TEST REPORT

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

250 N. Water, Ste 300  
Wichita KS 67202

ATTN: Ken Wallace

### **Jones B #3-9**

#### **9-1s-37w Cheyenne,KS**

Start Date: 2014.05.19 @ 01:46:00

End Date: 2014.05.19 @ 09:47:00

Job Ticket #: 58302                      DST #: 1

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

Printed: 2014.05.27 @ 10:21:03



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**9-1s-37w Cheyenne,KS**

250 N. Water, Ste 300  
Wichita KS 67202

**Jones B #3-9**

Job Ticket: 58302

**DST#: 1**

ATTN: Ken Wallace

Test Start: 2014.05.19 @ 01:46:00

## GENERAL INFORMATION:

Formation: **LKC D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:45:30

Time Test Ended: 09:47:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: #54

**Interval: 4201.00 ft (KB) To 4256.00 ft (KB) (TVD)**

Reference Elevations: 3212.00 ft (KB)

Total Depth: 4256.00 ft (KB) (TVD)

3202.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6753**

**Inside**

Press@RunDepth: 66.40 psig @ 4202.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.19

End Date:

2014.05.19

Last Calib.:

2014.05.19

Start Time:

01:46:05

End Time:

09:46:59

Time On Btm:

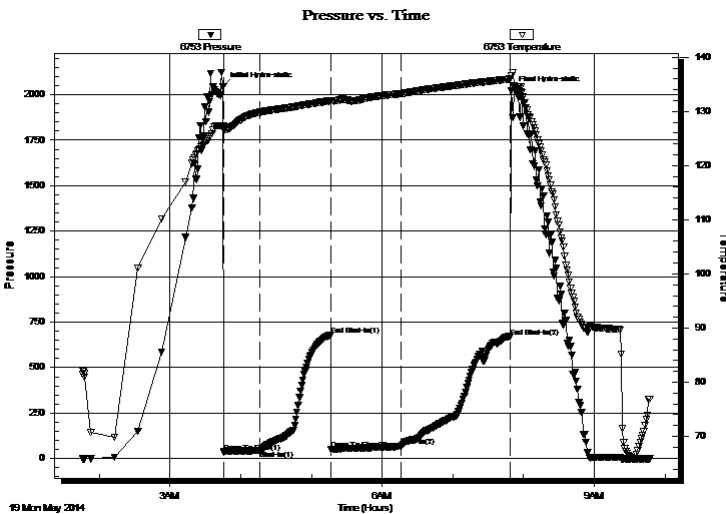
2014.05.19 @ 03:45:15

Time Off Btm:

2014.05.19 @ 07:49:45

**TEST COMMENT:** 30 - IF - Surface blow built to 6 1/4"  
60 - ISI - No Return  
60 - FF - Weak surface started 4 mins in and built to 1 1/4"  
90 - FSI - No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2046.27	127.39	Initial Hydro-static
1	33.31	126.59	Open To Flow (1)
31	44.68	129.83	Shut-In(1)
91	679.63	131.97	End Shut-In(1)
92	49.73	131.84	Open To Flow (2)
151	66.40	133.25	Shut-In(2)
244	669.07	135.97	End Shut-In(2)
245	2022.04	136.64	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
94.00	GOCM - 50M - 40o - 10G	0.46
15.00	Free Oil	0.07

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**9-1s-37w Cheyenne,KS**

250 N. Water, Ste 300  
Wichita KS 67202

**Jones B #3-9**

Job Ticket: 58302

**DST#: 1**

ATTN: Ken Wallace

Test Start: 2014.05.19 @ 01:46:00

## Tool Information

Drill Pipe:	Length: 3619.19 ft	Diameter: 3.80 inches	Volume: 50.77 bbl	Tool Weight: 2500.00 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: 559.02 ft	Diameter: 2.25 inches	Volume: 2.75 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 53.52 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.21 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4201.00 ft			Final 77000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	82.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4179.00	
Hydraulic tool	5.00			4184.00	
Jars	5.00			4189.00	
Safety Joint	3.00			4192.00	
Packer	4.00			4196.00	27.00 Bottom Of Top Packer
Packer	5.00			4201.00	
Stubb	1.00			4202.00	
Recorder	0.00	8368	Inside	4202.00	
Recorder	0.00	6753	Inside	4202.00	
Perforations	17.00			4219.00	
Change Over Sub	1.00			4220.00	
Drill Pipe	31.00			4251.00	
Change Over Sub	1.00			4252.00	
Bullnose	4.00			4256.00	55.00 Bottom Packers & Anchor

**Total Tool Length: 82.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**9-1s-37w Cheyenne,KS**

250 N. Water, Ste 300  
Wichita KS 67202

**Jones B #3-9**

Job Ticket: 58302

**DST#: 1**

ATTN: Ken Wallace

Test Start: 2014.05.19 @ 01:46:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

30 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
94.00	GOCM - 50M - 40o - 10G	0.462
15.00	Free Oil	0.074

Total Length: 109.00 ft

Total Volume: 0.536 bbl

Num Fluid Samples: 0

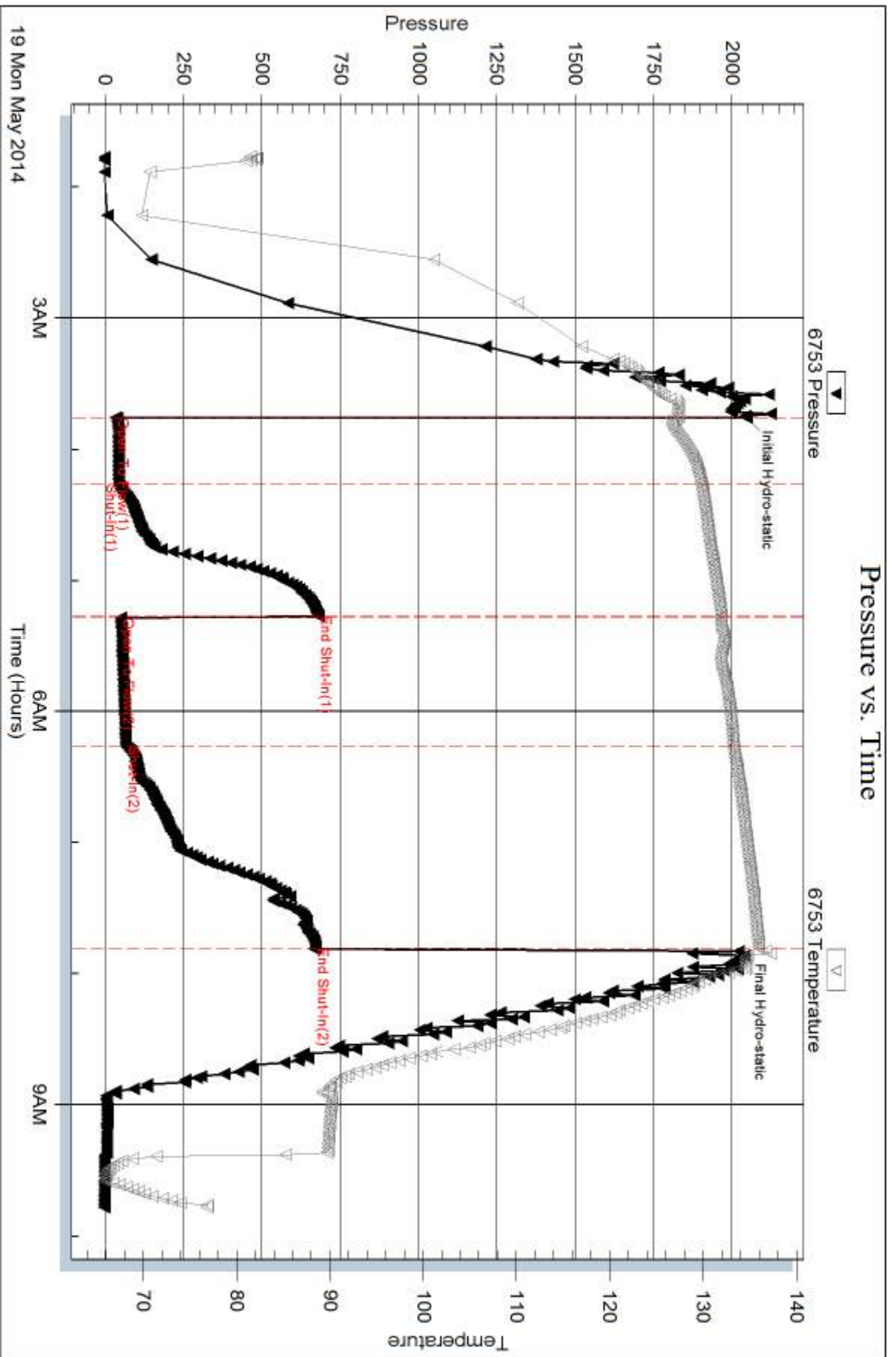
Num Gas Bombs: 0

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: Ken Wallace

### **Jones B #3-9**

#### **9-1s-37w Cheyenne,KS**

Start Date: 2014.05.19 @ 21:47:00

End Date: 2014.05.20 @ 04:54:00

Job Ticket #: 58303                      DST #: 2

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

Printed: 2014.05.27 @ 10:20:34



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**9-1s-37w Cheyenne,KS**

250 N. Water, Ste 300  
Wichita KS 67202

**Jones B #3-9**

Job Ticket: 58303

**DST#: 2**

ATTN: Ken Wallace

Test Start: 2014.05.19 @ 21:47:00

## GENERAL INFORMATION:

Formation: **LKC G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:53:45

Time Test Ended: 04:54:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: #54

**Interval: 4267.00 ft (KB) To 4310.00 ft (KB) (TVD)**

Reference Elevations: 3212.00 ft (KB)

Total Depth: 4310.00 ft (KB) (TVD)

3202.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6753**

**Inside**

Press@RunDepth: 21.22 psig @ 4268.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.19

End Date:

2014.05.20

Last Calib.: 2014.05.20

Start Time: 21:47:05

End Time:

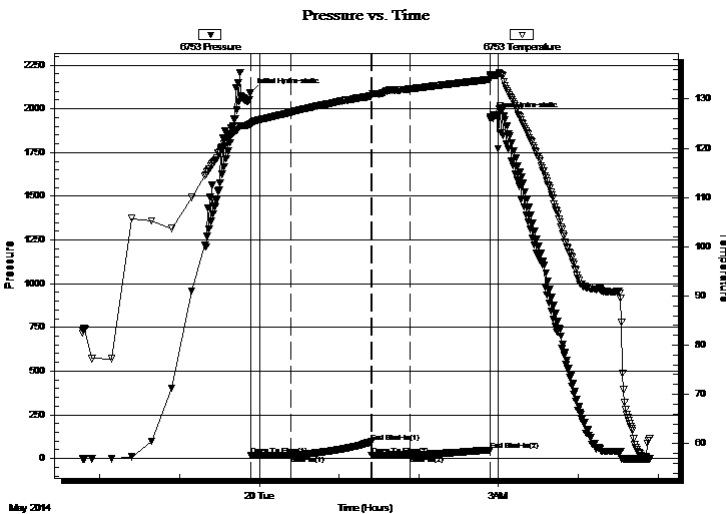
04:53:59

Time On Btm: 2014.05.19 @ 23:53:15

Time Off Btm: 2014.05.20 @ 02:54:00

**TEST COMMENT:** 30 - IF - No Surface blow  
60 - ISI - No Return  
30 - FF - No Surface blow  
60 - FSI - No Return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2091.14	125.02	Initial Hydro-static
1	16.66	124.66	Open To Flow (1)
31	18.28	127.32	Shut-In(1)
91	95.71	130.58	End Shut-In(1)
92	20.46	130.61	Open To Flow (2)
121	21.22	132.06	Shut-In(2)
181	49.08	133.98	End Shut-In(2)
181	1955.00	134.63	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	OSM - 100M - oil spots	0.01

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**9-1s-37w Cheyenne,KS**

250 N. Water, Ste 300  
Wichita KS 67202

**Jones B #3-9**

Job Ticket: 58303

**DST#: 2**

ATTN: Ken Wallace

Test Start: 2014.05.19 @ 21:47:00

## Tool Information

Drill Pipe:	Length: 3713.98 ft	Diameter: 3.80 inches	Volume: 52.10 bbl	Tool Weight: 2500.00 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: 559.02 ft	Diameter: 2.25 inches	Volume: 2.75 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 54.85 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 76000.00 lb
Depth to Top Packer:	4267.00 ft			Final 76000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.00 ft			
Tool Length:	70.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4245.00	
Hydraulic tool	5.00			4250.00	
Jars	5.00			4255.00	
Safety Joint	3.00			4258.00	
Packer	4.00			4262.00	27.00 Bottom Of Top Packer
Packer	5.00			4267.00	
Stubb	1.00			4268.00	
Recorder	0.00	8368	Inside	4268.00	
Recorder	0.00	6753	Inside	4268.00	
Perforations	5.00			4273.00	
Change Over Sub	1.00			4274.00	
Drill Pipe	31.00			4305.00	
Change Over Sub	1.00			4306.00	
Bullnose	4.00			4310.00	43.00 Bottom Packers & Anchor

**Total Tool Length: 70.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**9-1s-37w Cheyenne,KS**

250 N. Water, Ste 300  
Wichita KS 67202

**Jones B #3-9**

Job Ticket: 58303

**DST#: 2**

ATTN: Ken Wallace

Test Start: 2014.05.19 @ 21:47:00

### 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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	OSM - 100M - oil spots	0.010

Total Length: 2.00 ft      Total Volume: 0.010 bbl

Num Fluid Samples: 0

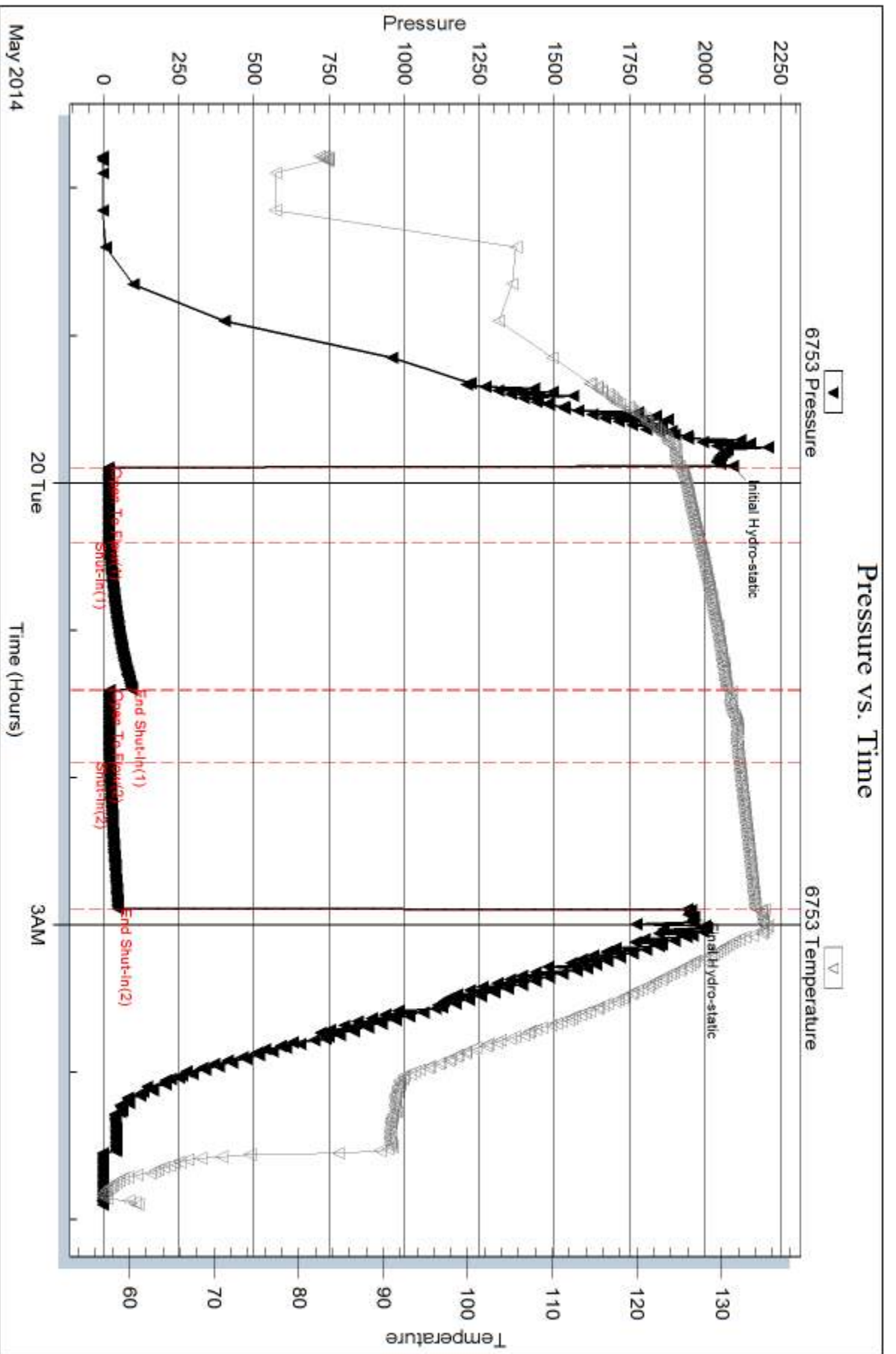
Num Gas Bombs: 0

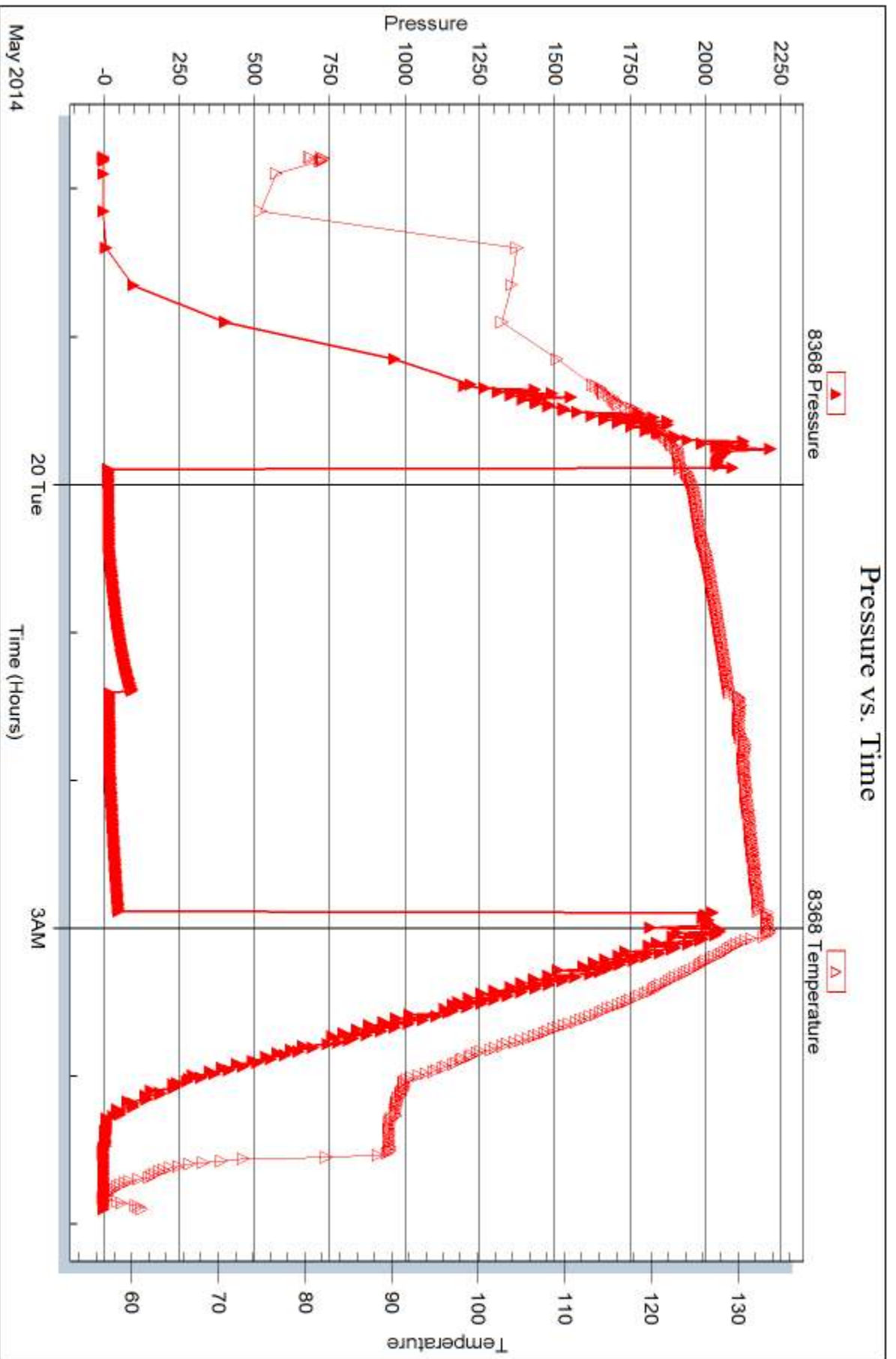
Serial #:

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: Ken Wallace

### **Jones B #3-9**

#### **9-1s-37w Cheyenne,KS**

Start Date: 2014.05.20 @ 18:52:00

End Date: 2014.05.21 @ 03:53:00

Job Ticket #: 58304                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.05.27 @ 10:19:59



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**9-1s-37w Cheyenne,KS**

250 N. Water, Ste 300  
Wichita KS 67202

**Jones B #3-9**

Job Ticket: 58304

**DST#: 3**

ATTN: Ken Wallace

Test Start: 2014.05.20 @ 18:52:00

## GENERAL INFORMATION:

Formation: **LKC 'J'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:59:00

Time Test Ended: 03:53:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: #54

**Interval: 4307.00 ft (KB) To 4405.00 ft (KB) (TVD)**

Reference Elevations: 3212.00 ft (KB)

Total Depth: 4405.00 ft (KB) (TVD)

3202.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6753**

**Inside**

Press@RunDepth: 534.41 psig @ 4308.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.20

End Date:

2014.05.21

Last Calib.:

2014.05.21

Start Time:

18:52:05

End Time:

03:53:00

Time On Btm:

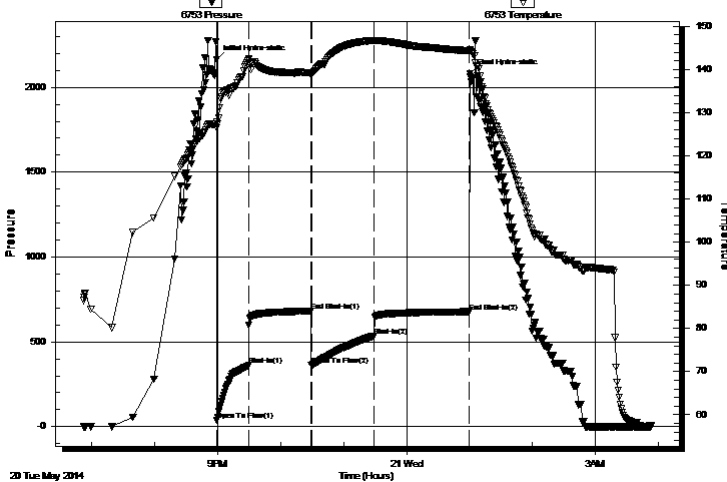
2014.05.20 @ 20:58:45

Time Off Btm:

2014.05.21 @ 01:00:30

**TEST COMMENT:** 30 - IF - Surface blow built to bottom of bucket in 8 mins  
60 - ISI - No Return  
60 - FF - Surface blow built to bottom of bucket in 21 mins.  
90 - FSI - No Return

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2162.32	127.78	Initial Hydro-static
1	36.11	126.45	Open To Flow (1)
31	360.41	142.23	Shut-In(1)
91	680.71	139.11	End Shut-In(1)
91	361.18	138.94	Open To Flow (2)
151	534.41	146.67	Shut-In(2)
241	677.57	144.33	End Shut-In(2)
242	2081.73	144.28	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
846.00	MW - 5M - 95W	6.77
292.00	OSWM - 65M - 35W - oil spots	4.10

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**9-1s-37w Cheyenne,KS**

250 N. Water, Ste 300  
Wichita KS 67202

**Jones B #3-9**

Job Ticket: 58304

**DST#: 3**

ATTN: Ken Wallace

Test Start: 2014.05.20 @ 18:52:00

## Tool Information

Drill Pipe:	Length: 3746.11 ft	Diameter: 3.80 inches	Volume: 52.55 bbl	Tool Weight: 2500.00 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: 559.02 ft	Diameter: 2.25 inches	Volume: 2.75 bbl	Weight to Pull Loose: 88000.00 lb
			<u>Total Volume: 55.30 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.13 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4307.00 ft			Final 79000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	98.00 ft			
Tool Length:	125.00 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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Shut In Tool	5.00			4285.00	
Hydraulic tool	5.00			4290.00	
Jars	5.00			4295.00	
Safety Joint	3.00			4298.00	
Packer	4.00			4302.00	27.00 Bottom Of Top Packer
Packer	5.00			4307.00	
Stubb	1.00			4308.00	
Recorder	0.00	8368	Inside	4308.00	
Recorder	0.00	6753	Inside	4308.00	
Perforations	28.00			4336.00	
Change Over Sub	1.00			4337.00	
Drill Pipe	63.00			4400.00	
Change Over Sub	1.00			4401.00	
Bullnose	4.00			4405.00	98.00 Bottom Packers & Anchor

**Total Tool Length: 125.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Murfin Drilling Co., Inc.

**9-1s-37w Cheyenne,KS**

250 N. Water, Ste 300  
Wichita KS 67202

**Jones B #3-9**

Job Ticket: 58304

**DST#: 3**

ATTN: Ken Wallace

Test Start: 2014.05.20 @ 18:52:00

### 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:

75000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbf
846.00	MW - 5M - 95W	6.775
292.00	OSWM - 65M - 35W - oil spots	4.096

Total Length: 1138.00 ft

Total Volume: 10.871 bbl

Num Fluid Samples: 0

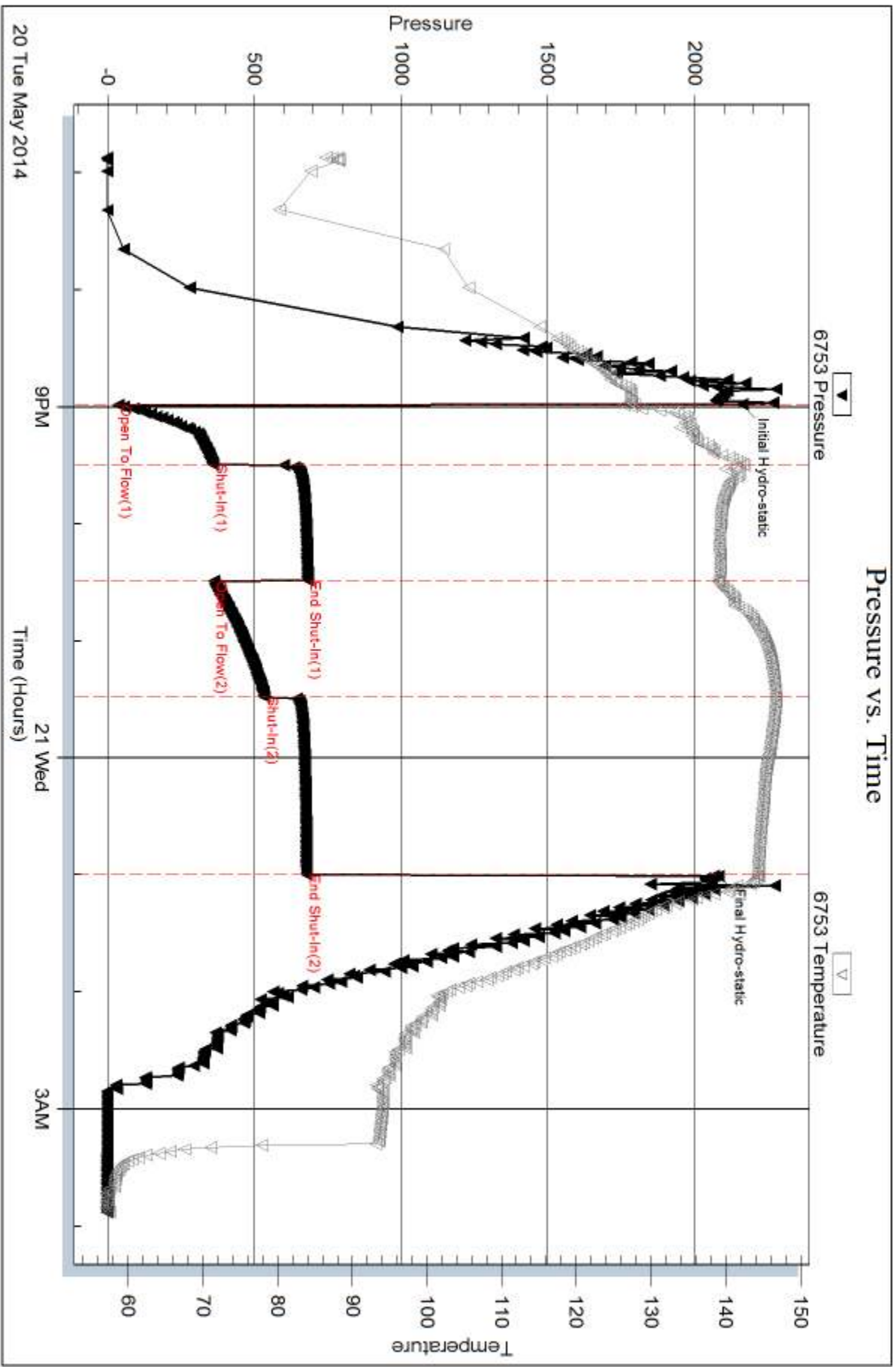
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



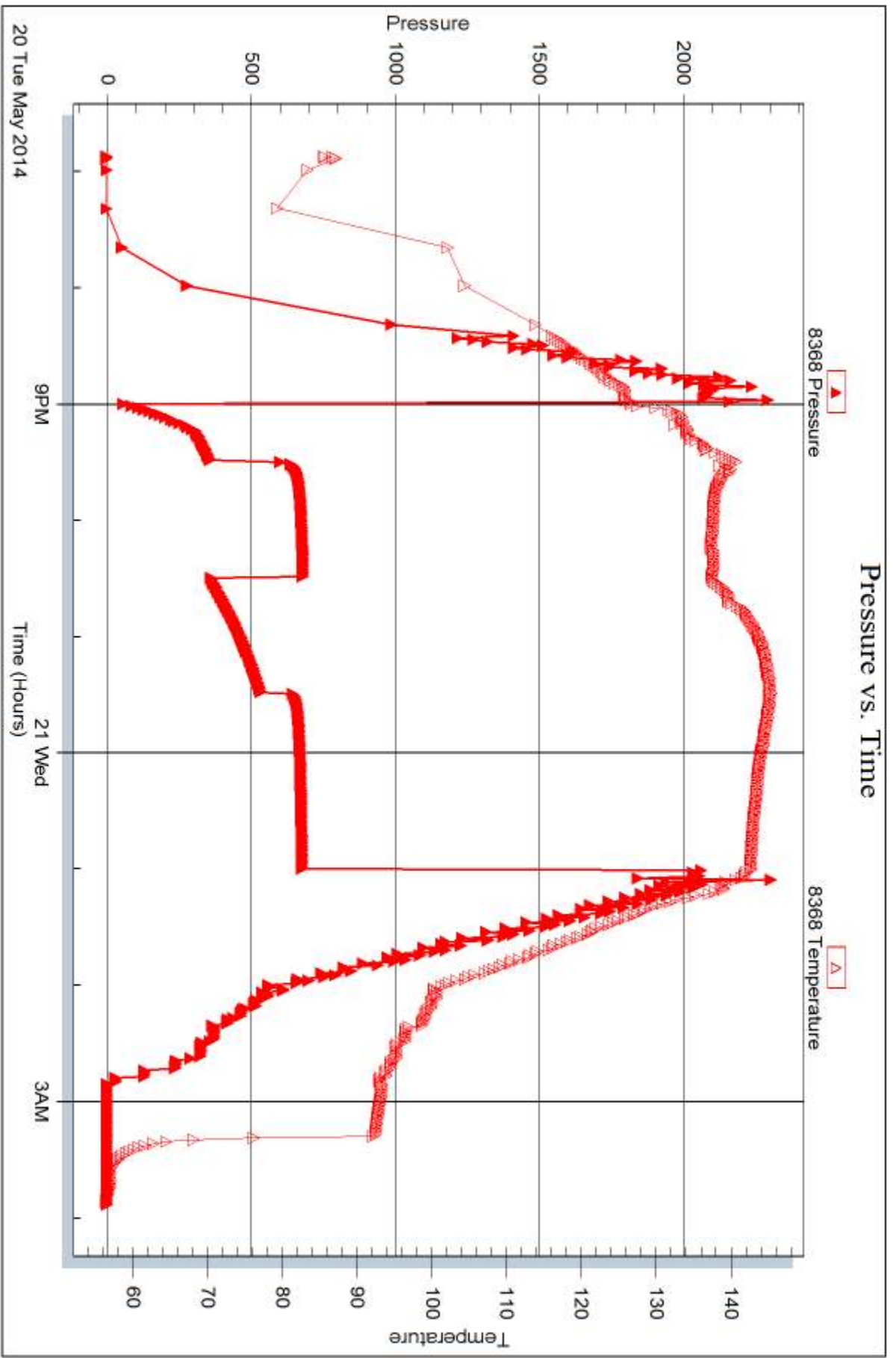
Serial #: 8368

Inside

Murfin Drilling Co., Inc.

Jones B#3-9

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 58304

Printed: 2014.05.27 @ 10:20:00



## DRILL STEM TEST REPORT

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

250 N. Water, Ste 300  
Wichita KS 67202

ATTN: Ken Wallace

### **Jones B #3-9**

#### **9-1s-37w Cheyenne,KS**

Start Date: 2014.05.21 @ 22:21:00

End Date: 2014.05.22 @ 05:14:15

Job Ticket #: 58305                      DST #: 4

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

Printed: 2014.05.27 @ 10:19:21



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

**9-1s-37w Cheyenne,KS**

250 N. Water, Ste 300  
Wichita KS 67202

**Jones B #3-9**

Job Ticket: 58305

**DST#: 4**

ATTN: Ken Wallace

Test Start: 2014.05.21 @ 22:21:00

## GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:21:45

Time Test Ended: 05:14:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: #54

**Interval: 4550.00 ft (KB) To 4596.00 ft (KB) (TVD)**

Reference Elevations: 3212.00 ft (KB)

Total Depth: 4596.00 ft (KB) (TVD)

3202.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6753**

**Inside**

Press@RunDepth: 31.79 psig @ 4551.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.21

End Date:

2014.05.22

Last Calib.:

2014.05.22

Start Time:

22:21:05

End Time:

05:14:14

Time On Btm:

2014.05.22 @ 00:21:30

Time Off Btm:

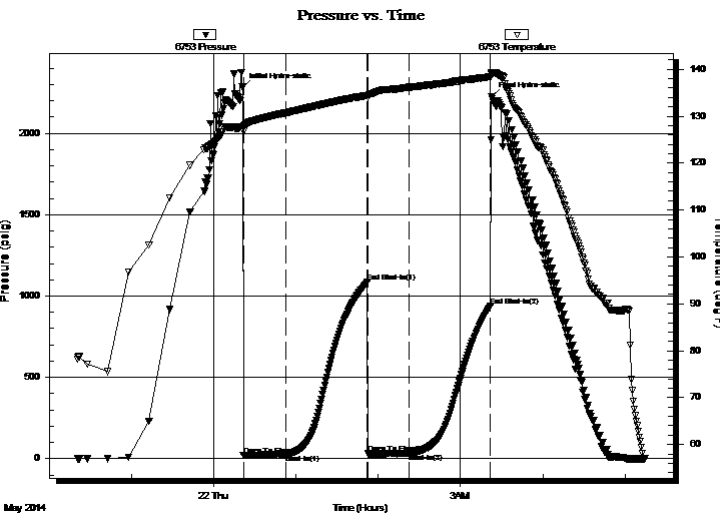
2014.05.22 @ 03:22:45

TEST COMMENT: 30 - IF - Surface blow built to 1/4"

60 - ISI - No Return

30 - FF - No Surface blow

60 - FSI - No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2281.53	127.80	Initial Hydro-static
1	20.53	126.81	Open To Flow (1)
31	25.18	130.70	Shut-In(1)
91	1087.13	134.44	End Shut-In(1)
91	30.37	134.02	Open To Flow (2)
122	31.79	136.19	Shut-In(2)
181	938.67	138.36	End Shut-In(2)
182	2224.29	139.33	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
6.00	OSM - 100M - Oil Spots	0.03

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Murfin Drilling Co., Inc.

**9-1s-37w Cheyenne,KS**

250 N. Water, Ste 300  
Wichita KS 67202

**Jones B #3-9**

Job Ticket: 58305

**DST#: 4**

ATTN: Ken Wallace

Test Start: 2014.05.21 @ 22:21:00

## Tool Information

Drill Pipe:	Length: 3968.04 ft	Diameter: 3.80 inches	Volume: 55.66 bbl	Tool Weight: 2500.00 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: 559.02 ft	Diameter: 2.25 inches	Volume: 2.75 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 58.41 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.06 ft			String Weight: Initial 79000.00 lb
Depth to Top Packer:	4550.00 ft			Final 79000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.00 ft			
Tool Length:	73.00 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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Shut In Tool	5.00			4528.00	
Hydraulic tool	5.00			4533.00	
Jars	5.00			4538.00	
Safety Joint	3.00			4541.00	
Packer	4.00			4545.00	27.00 Bottom Of Top Packer
Packer	5.00			4550.00	
Stubb	1.00			4551.00	
Recorder	0.00	8368	Inside	4551.00	
Recorder	0.00	6753	Inside	4551.00	
Perforations	8.00			4559.00	
Change Over Sub	1.00			4560.00	
Drill Pipe	31.00			4591.00	
Change Over Sub	1.00			4592.00	
Bullnose	4.00			4596.00	46.00 Bottom Packers & Anchor

**Total Tool Length: 73.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Murfin Drilling Co., Inc.

**9-1s-37w Cheyenne,KS**

250 N. Water, Ste 300  
Wichita KS 67202

**Jones B #3-9**

Job Ticket: 58305

**DST#: 4**

ATTN: Ken Wallace

Test Start: 2014.05.21 @ 22:21:00

## 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: 69.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
6.00	OSM - 100M - Oil Spots	0.030

Total Length: 6.00 ft      Total Volume: 0.030 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

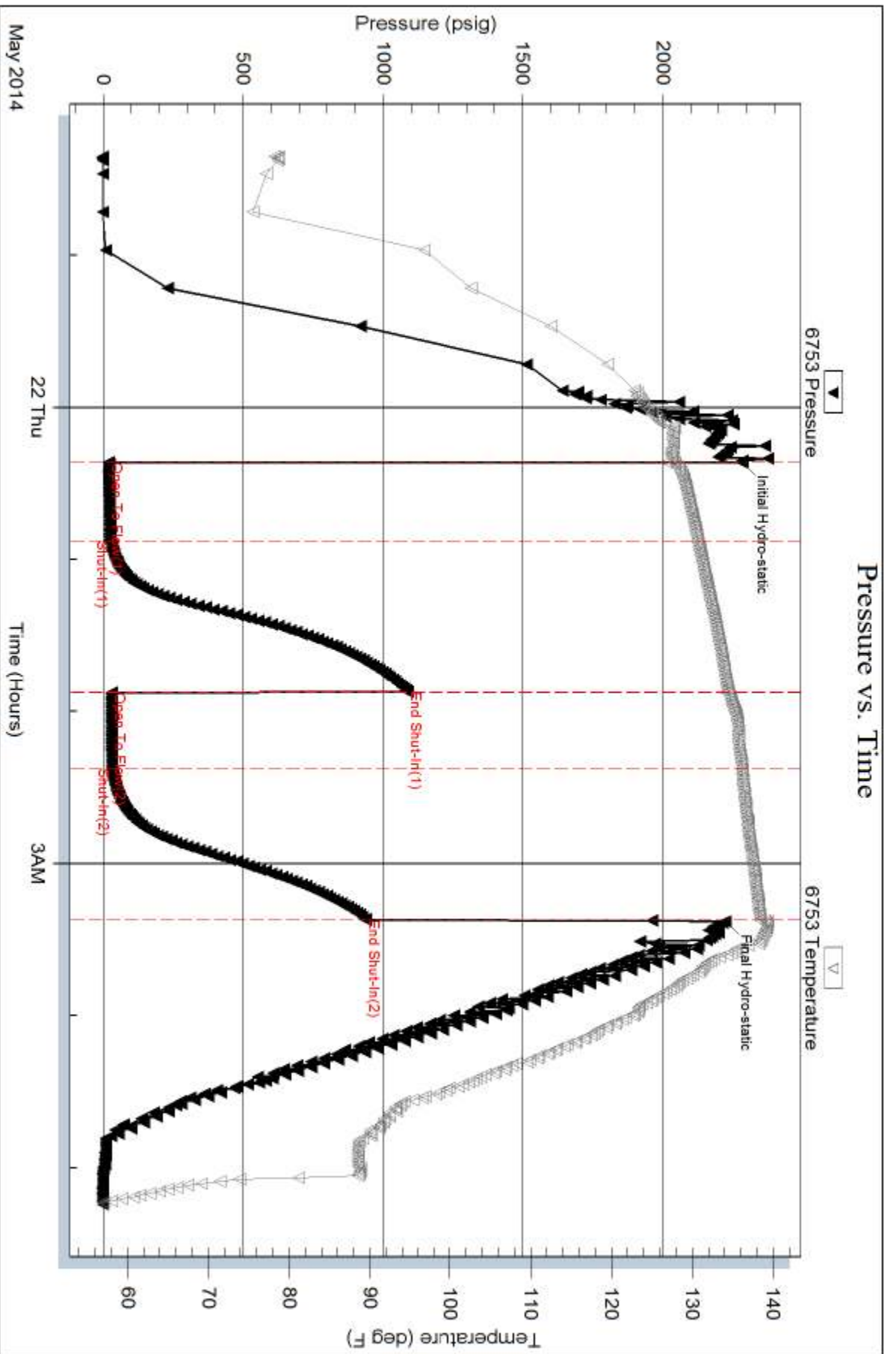
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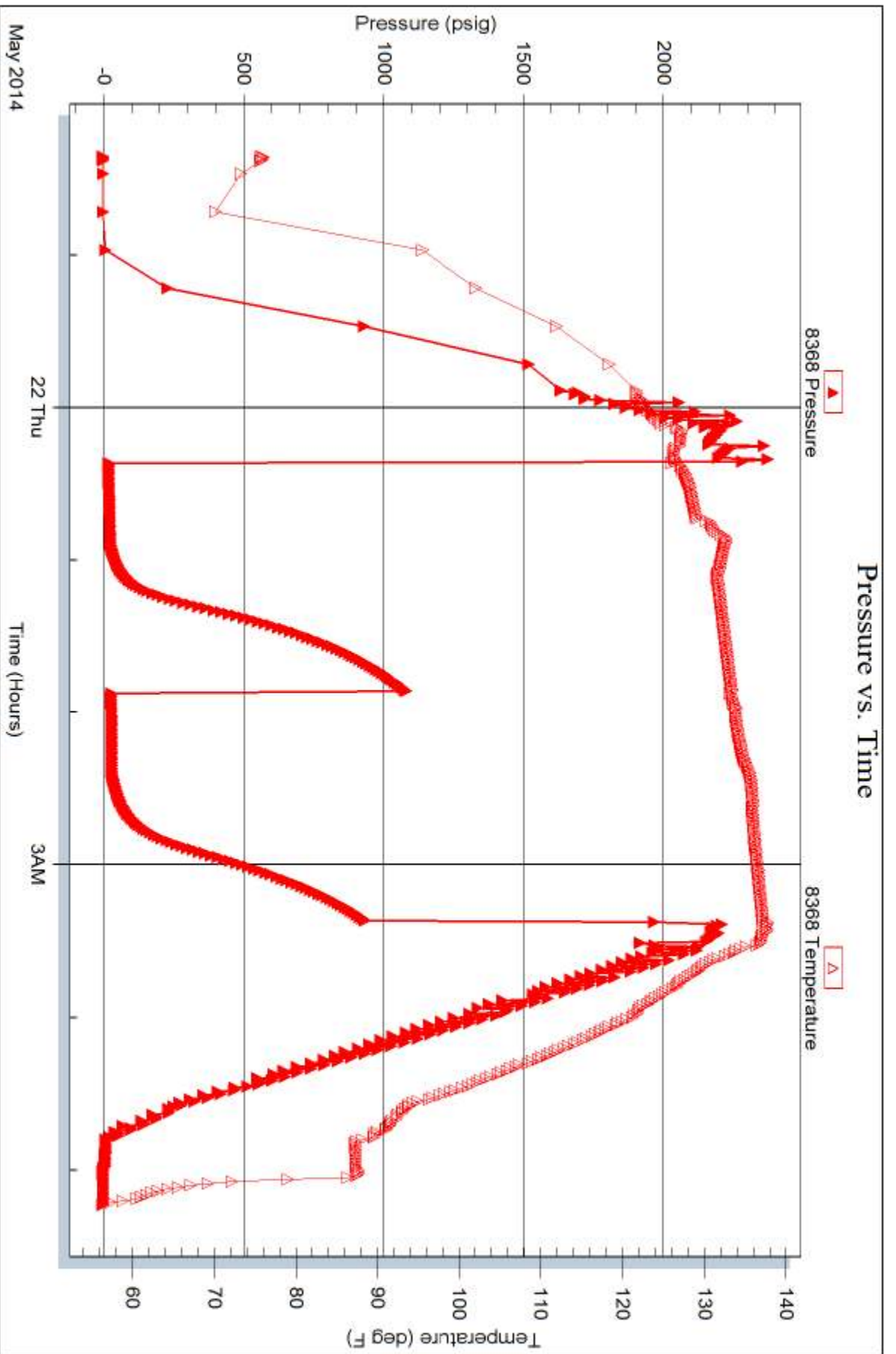
Laboratory Name:

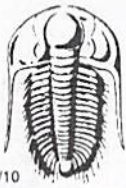
Laboratory Location:

Recovery Comments:









# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 58302

4/10

Well Name & No. Jones B #3-9 Test No. 1 Date 5-19-14  
 Company Murfin Drilling Co., Inc. Elevation 3212 KB 3202 GL  
 Address 250 N. Water, Ste 300 Wichita KS 67202  
 Co. Rep / Geo. Ken Wallace Rig Murfin #14  
 Location: Sec. 9 Twp. 1 Rge. 37W Co. Cheyenne State KS

Interval Tested 4201-4256 Zone Tested Lans-O  
 Anchor Length 55' Drill Pipe Run 3619.19' Mud Wt. 9.2  
 Top Packer Depth 4196 Drill Collars Run 559.02' Vis 62  
 Bottom Packer Depth 4201 Wt. Pipe Run 0 WL 6.0  
 Total Depth 4256 Chlorides 600 ppm System LCM 3#  
 Blow Description IF - surface blow built to 6 1/4"  
ISI - No Return  
FF - Weak surface blow started 4 mins into - built to 1 1/4"  
FST - No Return

Rec	Feet of	%gas	%oil	%water	%mud
94'	60cm	10	40	50	
15'	Free Oil		100		

Rec Total 109 BHT 136°F Gravity 30@60°F API RW @ °F Chlorides ppm  
 (A) Initial Hydrostatic 2046  Test 1250 T-On Location 12:15am  
 (B) First Initial Flow 33  Jars 250 T-Started 1:46am  
 (C) First Final Flow 44  Safety Joint 75 T-Open 3:45am  
 (D) Initial Shut-In 679  Circ Sub N/C T-Pulled 7:45am  
 (E) Second Initial Flow 49  Hourly Standby T-Out 9:47am  
 (F) Second Final Flow 66  Mileage 150 R/T 232.50 Comments  
 (G) Final Shut-In 669  Sampler  
 (H) Final Hydrostatic 2022  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder Sub Total 0  
 Day Standby Total 1807.50  
 Accessibility MP/DST Disc't  
 Sub Total 1807.50

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. **58303**

4/10

Well Name & No. Jones B #3-9 Test No. 2 Date 5-19-14  
 Company Murfin Drilling Co, Inc. Elevation 3212 KB 3202 GL  
 Address 250 N. Water, Ste. 300 Wichita Ks 67202  
 Co. Rep / Geo. Ken Wallace Rig Murfin #14  
 Location: Sec. 9 Twp. 1 Rge. 37W Co. Cheyenne State KS

Interval Tested 4267-4310 Zone Tested Lans - 'G'  
 Anchor Length ~~4267~~ 43' Drill Pipe Run 3713.98 Mud Wt. 9.3  
 Top Packer Depth 4262 Drill Collars Run ~~559.02~~ Vis 57  
 Bottom Packer Depth 4267 Wt. Pipe Run 0 WL 6.0  
 Total Depth 4310 Chlorides 600 ppm System LCM 2#

Blow Description IF - No surface blow  
ISI - No Return  
FF - No surface blow  
FSI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>2'</u>	<u>asm</u>	<u>spots</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 2' BHT 134°F Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2091  Test 1250 T-On Location 9:00 pm  
 (B) First Initial Flow 16  Jars 250 T-Started 9:47 pm  
 (C) First Final Flow 18  Safety Joint 75 T-Open 11:53 pm  
 (D) Initial Shut-In 95  Circ Sub N/C T-Pulled 2:53 am  
 (E) Second Initial Flow 20  Hourly Standby \_\_\_\_\_ T-Out 4:54 am  
 (F) Second Final Flow 21  Mileage 150 R/T 232.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 49  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1955  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1807.50  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 30  
 Final Shut-In 60  
 Sub Total 1807.50

Approved By \_\_\_\_\_ Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **58304**

Well Name & No. Jones B #3-9 Test No. 3 Date 5-20-14  
 Company Murfin Drilling Co., Inc. Elevation 3212 KB 3202 GL  
 Address 250 N. Water, Ste 300 #1 Wichita KS 67202  
 Co. Rep / Geo. Ken Wallace Rig Murfin #4  
 Location: Sec. 9 Twp. 1 Rge. 37W Co. Cheyenne State KS

Interval Tested 4307 - 4405 Zone Tested Lansing 'J'  
 Anchor Length 98' Drill Pipe Run 3746.11 Mud Wt. 9.2  
 Top Packer Depth 4302 Drill Collars Run 559.02 Vis 56  
 Bottom Packer Depth 4307 Wt. Pipe Run 0 WL 5.2  
 Total Depth 4405 Chlorides 800 ppm System LCM 8#

Blow Description IF - surface blow built to bottom of bucket in 8 mins.  
ISI - No Return  
FF - Bottom surface blow built to bottom of bucket in 21 mins.  
FST - No Return

Rec	Feet of	%gas	spots	%oil	%water	%mud
<u>292'</u>	<u>OSWM</u>			<u>35</u>	<u>65</u>	
<u>846'</u>	<u>MW</u>			<u>95</u>	<u>5</u>	

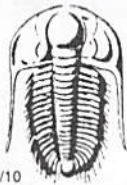
Rec Total 1138' BHT 144 Gravity \_\_\_\_\_ API RW 121 @ 60 ° F Chlorides 35000 ppm

- (A) Initial Hydrostatic 2162  Test 1250 T-On Location 6:25pm
- (B) First Initial Flow 36  Jars 250 T-Started 6:52pm
- (C) First Final Flow 360  Safety Joint 75 T-Open 8:59pm
- (D) Initial Shut-In 680  Circ Sub N/C T-Pulled 12:59am
- (E) Second Initial Flow 361  Hourly Standby \_\_\_\_\_ T-Out 3:53am
- (F) Second Final Flow 534  Mileage 150 R/T 232.50 Comments \_\_\_\_\_
- (G) Final Shut-In 677  Sampler \_\_\_\_\_
- (H) Final Hydrostatic 2081  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Initial Shut-In 60  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Final Flow 60  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Shut-In 90  Day Standby \_\_\_\_\_ Total 1807.50  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1807.50

Approved By \_\_\_\_\_ Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 58305

4/10

Well Name & No. Jones B # 3-9 Test No. 4 Date 5-21-14  
 Company Murfin Drilling Co., Inc. Elevation 3212 KB 3202 GL  
 Address 250 N. Water, Ste 300 Wichita KS 67202  
 Co. Rep / Geo. Ken Wallace Rig Murfin #14  
 Location: Sec. 9 Twp. 1 Rge. 37 W Co. Cheyenne State KS

Interval Tested 4550 - 4596 Zone Tested Pawnee  
 Anchor Length 46' Drill Pipe Run 3968.04 Mud Wt. 9.2  
 Top Packer Depth 4545 Drill Collars Run 559.02 Vis 69  
 Bottom Packer Depth 4550 Wt. Pipe Run 0 WL 5.6  
 Total Depth 4596 Chlorides 1500 ppm System LCM 6 #  
 Blow Description IF - Surface blow built to 1/4"  
ISI - No Return  
FF - No Surface Blow  
FSI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>6'</u>	<u>QSM</u>	<u>Spots</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 6' BHT 138°F Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2281  Test 1250 T-On Location 10:10pm  
 (B) First Initial Flow 20  Jars 250 T-Started 10:21pm  
 (C) First Final Flow 25  Safety Joint 75 T-Open 12:22am  
 (D) Initial Shut-In 1087  Circ Sub N/C T-Pulled 3:22am  
 (E) Second Initial Flow 30  Hourly Standby \_\_\_\_\_ T-Out 5:14am  
 (F) Second Final Flow 31  Mileage 150 R/T 232.50 Comments Picked up tool after test but not released.  
 (G) Final Shut-In 938  Sampler \_\_\_\_\_ Released 5-22-14 in afternoon  
 (H) Final Hydrostatic 2224  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1807.50  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1807.50

Approved By \_\_\_\_\_

Our Representative [Signature]

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