



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling CO, INC.**

250 N Water STE 300
Wichita KS 67202

ATTN: Robert Hendrix

Dan #1-9

9-1s-35w Rawlins,KS

Start Date: 2014.07.14 @ 09:15:00

End Date: 2014.07.14 @ 16:17:00

Job Ticket #: 58426 DST #: 1

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

Printed: 2014.07.18 @ 10:59:00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling CO, INC.

9-1s-35w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Dan #1-9

Job Ticket: 58426

DST#: 1

ATTN: Robert Hendrix

Test Start: 2014.07.14 @ 09:15:00

GENERAL INFORMATION:

Formation: **LKC "A-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:15:00

Time Test Ended: 16:17:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Robert Zodrow

Unit No: 49

Interval: 4065.00 ft (KB) To 4172.00 ft (KB) (TVD)

Reference Elevations: 3173.00 ft (KB)

Total Depth: 4172.00 ft (KB) (TVD)

3163.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6769 Outside

Press@RunDepth: 36.42 psig @ 4066.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.14

End Date:

2014.07.14

Last Calib.:

2014.07.14

Start Time: 09:15:05

End Time:

16:16:59

Time On Btm:

2014.07.14 @ 11:14:30

Time Off Btm:

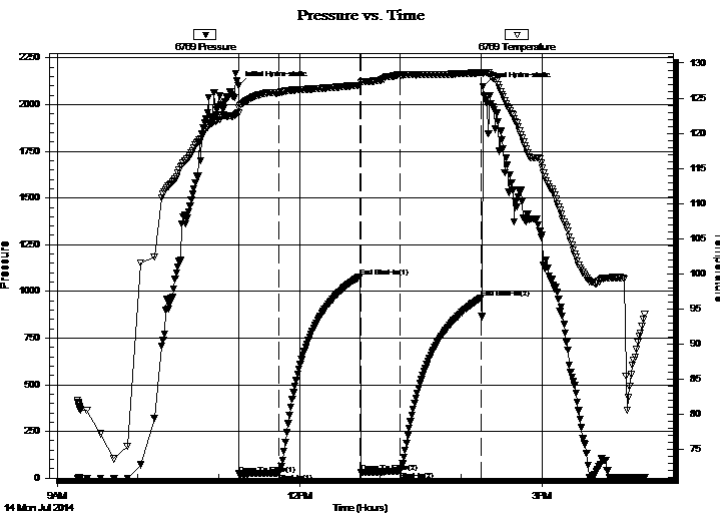
2014.07.14 @ 14:16:30

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

60-IS- No return

30-FF- No blow

60-FS- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2100.99	122.86	Initial Hydro-static
1	21.94	123.63	Open To Flow (1)
30	28.17	125.76	Shut-In(1)
90	1078.44	126.84	End Shut-In(1)
91	30.67	127.20	Open To Flow (2)
120	36.42	128.31	Shut-In(2)
181	966.31	128.62	End Shut-In(2)
182	2097.12	128.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100%m	0.02

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-35w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Dan #1-9

Job Ticket: 58426

DST#: 1

ATTN: Robert Hendrix

Test Start: 2014.07.14 @ 09:15:00

Tool Information

Drill Pipe:	Length: 3846.00 ft	Diameter: 3.88 inches	Volume: 56.24 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: 204.00 ft	Diameter: 2.25 inches	Volume: 1.00 bbl	Weight to Pull Loose:	90000.00 lb
			<u>Total Volume: 57.24 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	78000.00 lb
Depth to Top Packer:	4065.00 ft			Final	78000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	107.00 ft				
Tool Length:	134.00 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			4043.00	
Hydraulic tool	5.00			4048.00	
Jars	5.00			4053.00	
Safety Joint	3.00			4056.00	
Packer	5.00			4061.00	27.00 Bottom Of Top Packer
Packer	4.00			4065.00	
Stubb	1.00			4066.00	
Recorder	0.00	8521	Inside	4066.00	
Recorder	0.00	6769	Outside	4066.00	
Perforations	8.00			4074.00	
Change Over Sub	1.00			4075.00	
Drill Pipe	93.00			4168.00	
Change Over Sub	1.00			4169.00	
Bullnose	3.00			4172.00	107.00 Bottom Packers & Anchor

Total Tool Length: 134.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling CO, INC.

9-1s-35w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Dan #1-9

Job Ticket: 58426

DST#: 1

ATTN: Robert Hendrix

Test Start: 2014.07.14 @ 09:15:00

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: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%m	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

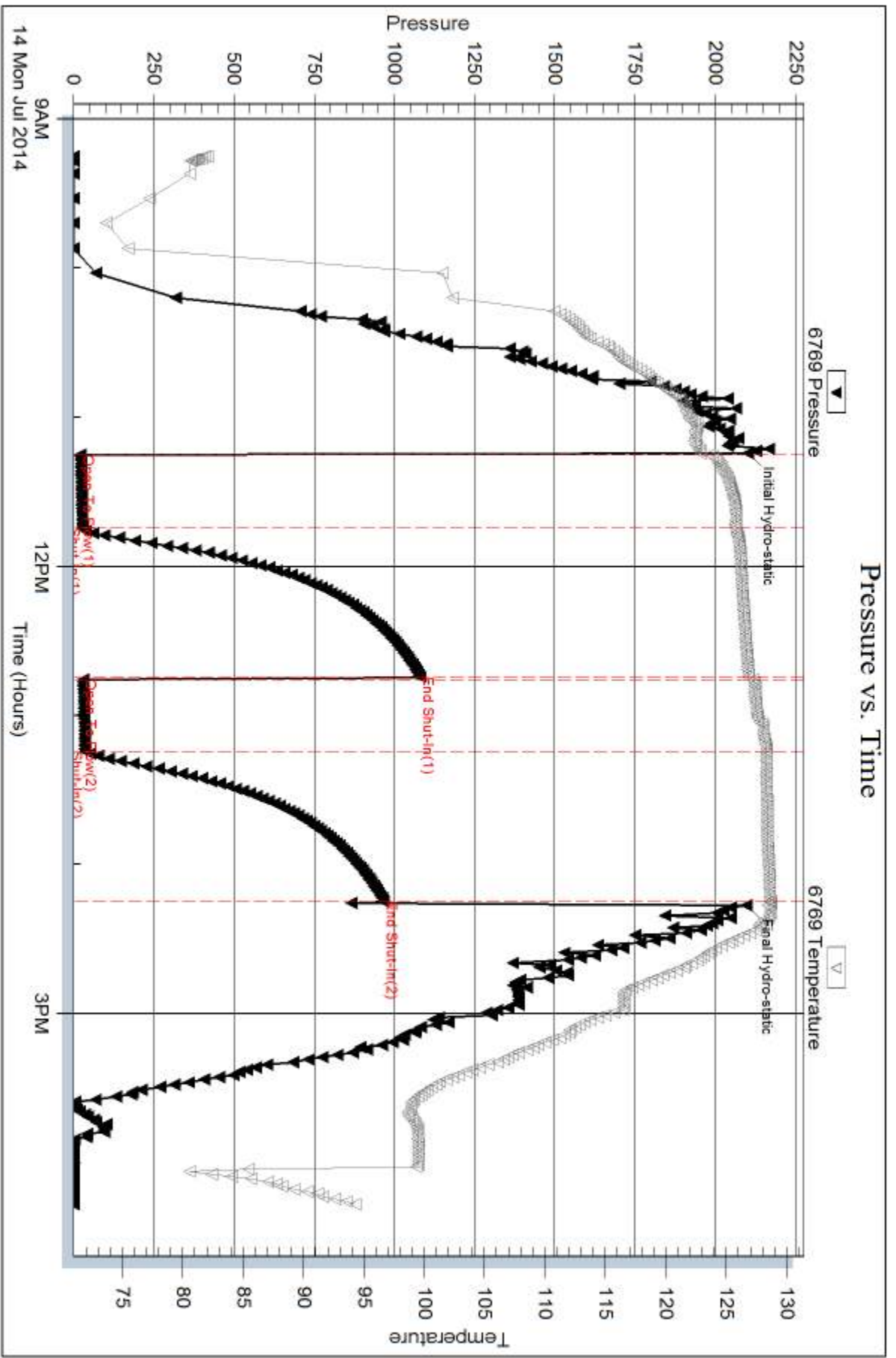
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



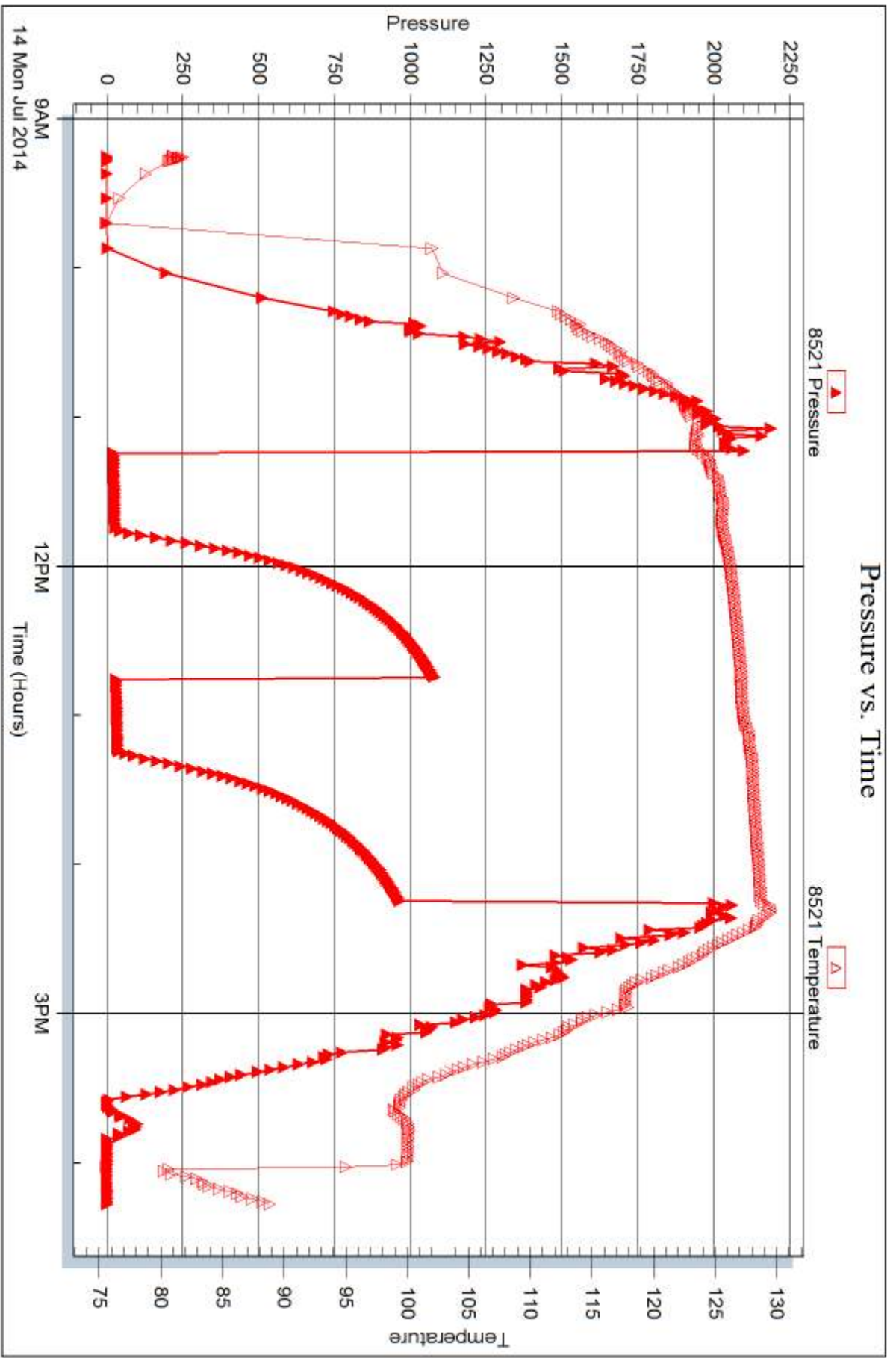
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Inside

Murfin Drilling CO., INC.

Dan #1-9

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling CO, INC.**

250 N Water STE 300
Wichita KS 67202

ATTN: Robert Hendrix

Dan #1-9

9-1s-35w Rawlins,KS

Start Date: 2014.07.15 @ 02:00:00

End Date: 2014.07.15 @ 10:11:00

Job Ticket #: 58427 DST #: 2

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

Printed: 2014.07.18 @ 10:58:29



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling CO, INC.

9-1s-35w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Dan #1-9

Job Ticket: 58427

DST#: 2

ATTN: Robert Hendrix

Test Start: 2014.07.15 @ 02:00:00

GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:04:00

Time Test Ended: 10:11:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Robert Zodrow

Unit No: 49

Interval: 4174.00 ft (KB) To 4230.00 ft (KB) (TVD)

Reference Elevations: 3173.00 ft (KB)

Total Depth: 4230.00 ft (KB) (TVD)

3163.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6769 Outside

Press@RunDepth: 53.97 psig @ 4175.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.15

End Date:

2014.07.15

Last Calib.:

2014.07.15

Start Time: 02:00:05

End Time:

10:10:59

Time On Btm:

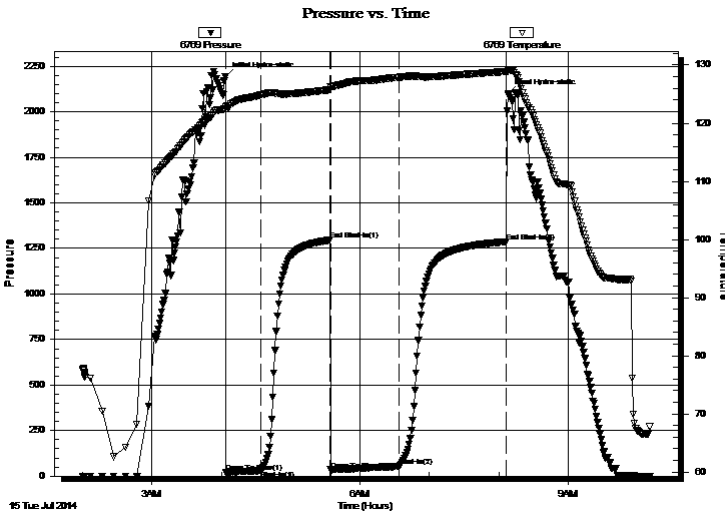
2014.07.15 @ 04:03:30

Time Off Btm:

2014.07.15 @ 08:08:00

TEST COMMENT: 30-IS- Blow built to 4"
60-IS- No return
60-FF- Blow built to 7"
90-FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2193.17	122.46	Initial Hydro-static
1	20.85	122.89	Open To Flow (1)
31	30.55	124.86	Shut-In(1)
90	1295.70	125.74	End Shut-In(1)
91	34.19	126.32	Open To Flow (2)
150	53.97	127.88	Shut-In(2)
243	1287.28	128.87	End Shut-In(2)
245	2098.44	128.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	gocm 5%g 40%o 55%m	0.25
70.00	go 10%g 90%o	0.34
0.00	120' GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling CO, INC.

9-1s-35w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Dan #1-9

Job Ticket: 58427

DST#: 2

ATTN: Robert Hendrix

Test Start: 2014.07.15 @ 02:00:00

Tool Information

Drill Pipe:	Length: 3972.00 ft	Diameter: 3.88 inches	Volume: 58.09 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: 204.00 ft	Diameter: 2.25 inches	Volume: 1.00 bbl	Weight to Pull Loose: 84000.00 lb
			<u>Total Volume: 59.09 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4174.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	83.00 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			4152.00	
Hydraulic tool	5.00			4157.00	
Jars	5.00			4162.00	
Safety Joint	3.00			4165.00	
Packer	5.00			4170.00	27.00 Bottom Of Top Packer
Packer	4.00			4174.00	
Stubb	1.00			4175.00	
Recorder	0.00	8521	Inside	4175.00	
Recorder	0.00	6769	Outside	4175.00	
Perforations	19.00			4194.00	
Change Over Sub	1.00			4195.00	
Drill Pipe	31.00			4226.00	
Change Over Sub	1.00			4227.00	
Bullnose	3.00			4230.00	56.00 Bottom Packers & Anchor

Total Tool Length: 83.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling CO, INC.

9-1s-35w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Dan #1-9

Job Ticket: 58427

DST#: 2

ATTN: Robert Hendrix

Test Start: 2014.07.15 @ 02:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
50.00	gocm 5%g 40%o 55%m	0.246
70.00	go 10%g 90%o	0.344
0.00	120' GIP	0.000

Total Length: 120.00 ft Total Volume: 0.590 bbl

Num Fluid Samples: 0

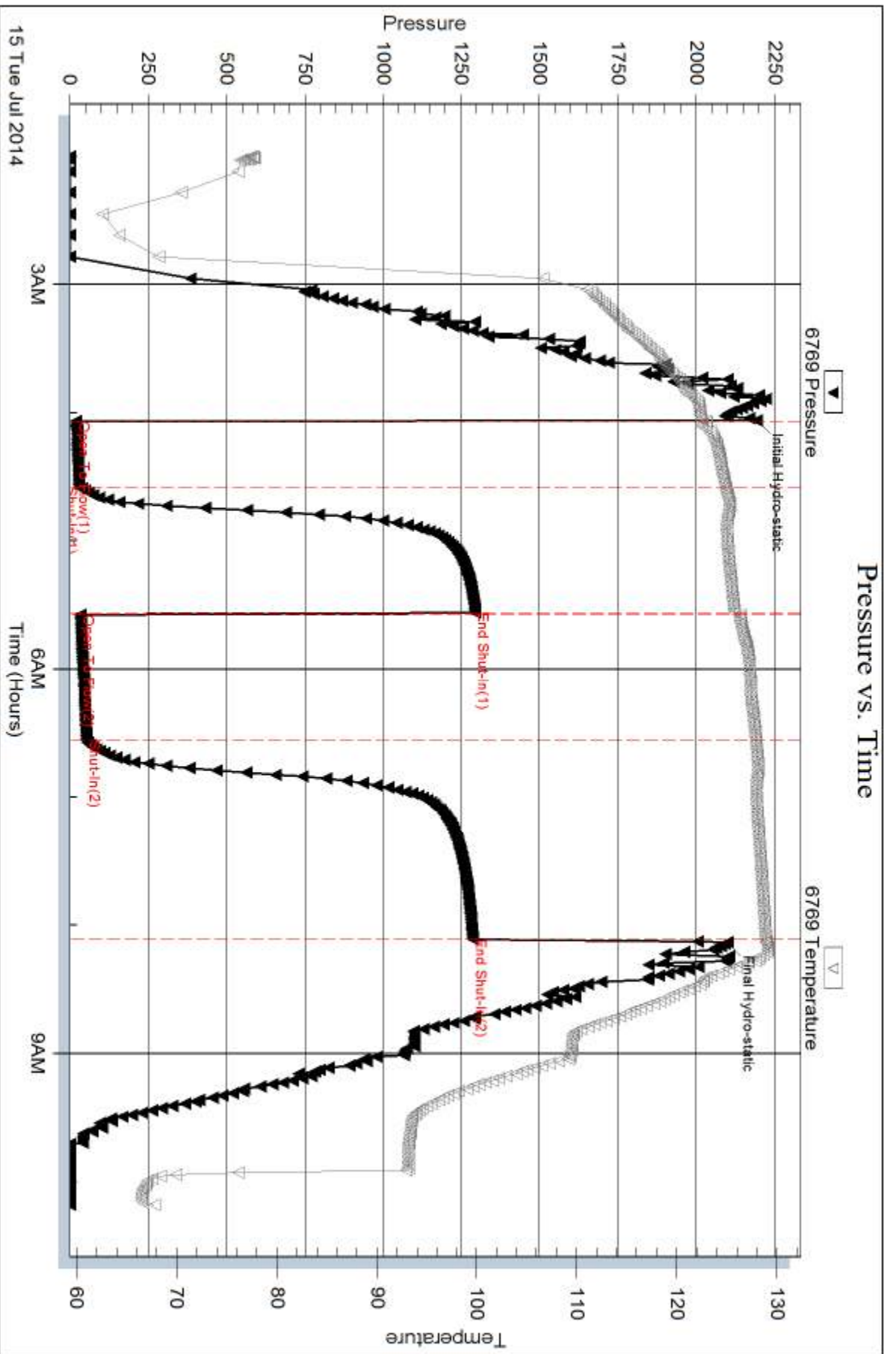
Num Gas Bombs: 0

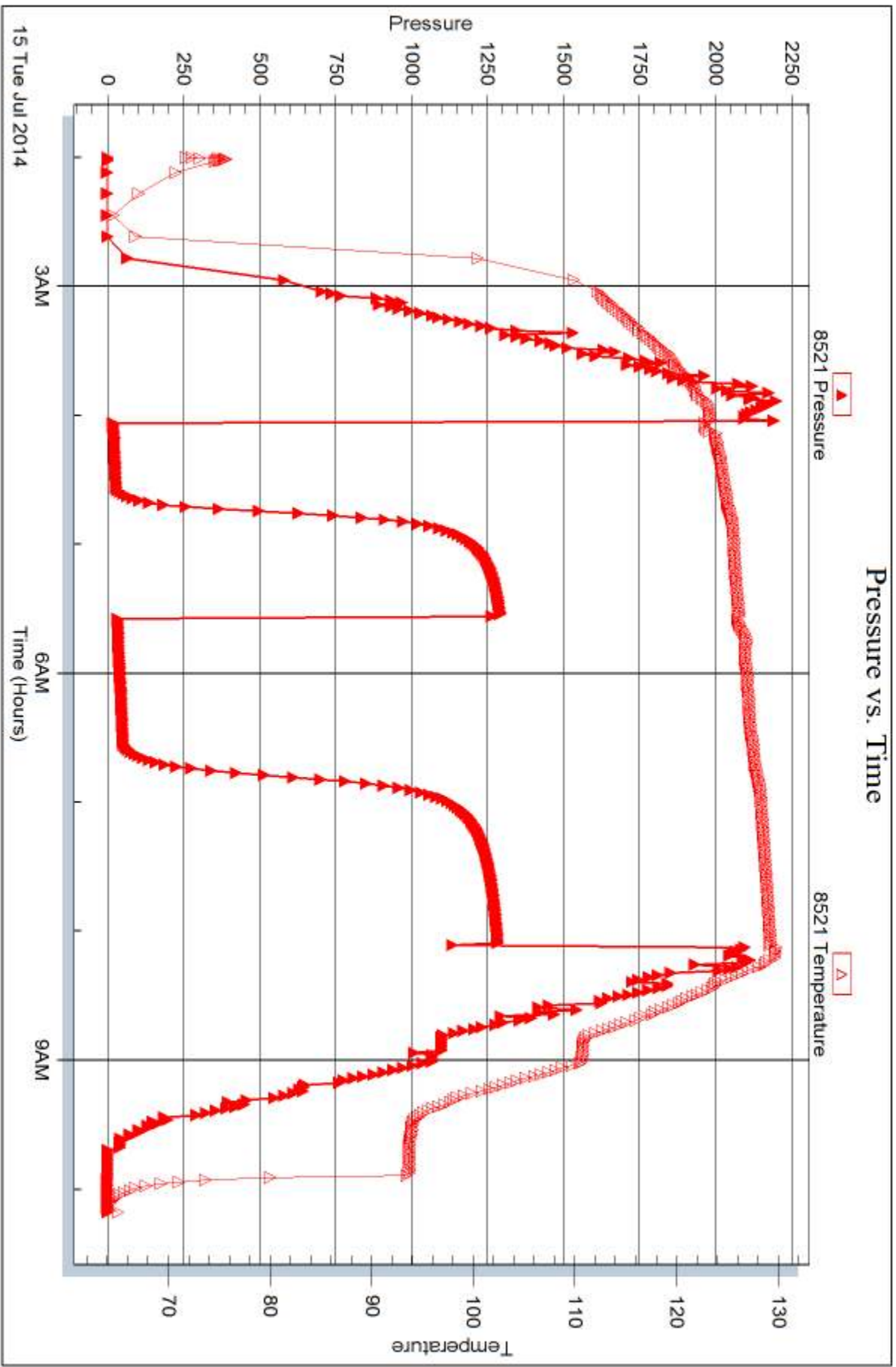
Serial #:

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: Robert Hendrix

Dan #1-9

9-1s-35w Rawlins,KS

Start Date: 2014.07.15 @ 21:15:00

End Date: 2014.07.16 @ 05:05:00

Job Ticket #: 58428 DST #: 3

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

Printed: 2014.07.18 @ 10:58:01

Murfin Drilling CO, INC. 9-1s-35w Rawlins,KS Dan #1-9 DST # 3 LKC "H" 2014.07.15



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling CO, INC.

9-1s-35w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Dan #1-9

Job Ticket: 58428

DST#: 3

ATTN: Robert Hendrix

Test Start: 2014.07.15 @ 21:15:00

GENERAL INFORMATION:

Formation: **LKC "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:57:30

Time Test Ended: 05:05:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Robert Zodrow

Unit No: 49

Interval: 4232.00 ft (KB) To 4278.00 ft (KB) (TVD)

Reference Elevations: 3173.00 ft (KB)

Total Depth: 4278.00 ft (KB) (TVD)

3163.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6769 Outside

Press@RunDepth: 32.36 psig @ 4233.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.15

End Date:

2014.07.16

Last Calib.:

2014.07.16

Start Time: 21:15:05

End Time:

05:04:59

Time On Btm:

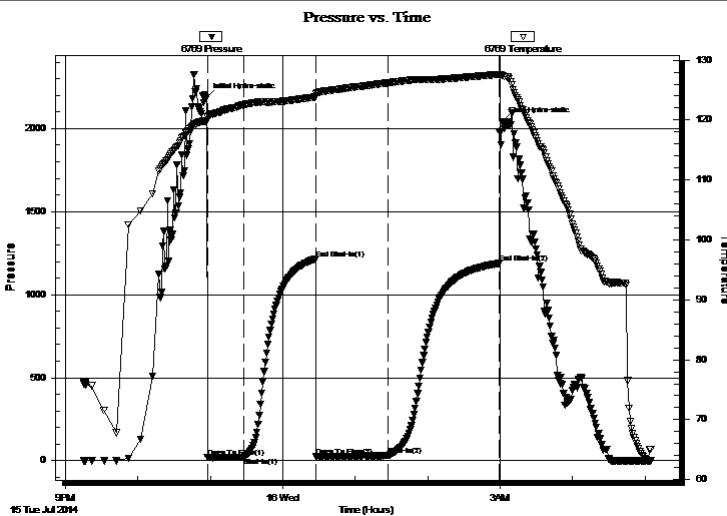
2014.07.15 @ 22:57:00

Time Off Btm:

2014.07.16 @ 03:01:30

TEST COMMENT: 30-IS- Blow built to 1 1/4"
60-IS- No return
60-FF- Surface blow started in 13 mins built to 1 1/8"
90-FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2187.61	119.75	Initial Hydro-static
1	20.40	120.51	Open To Flow (1)
31	22.15	122.56	Shut-In(1)
90	1216.40	123.87	End Shut-In(1)
91	27.34	124.42	Open To Flow (2)
150	32.36	126.22	Shut-In(2)
242	1188.70	127.63	End Shut-In(2)
245	2040.57	127.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
8.00	ocm 40%o 60%m	0.04
2.00	clean oil 100%o	0.01

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling CO, INC.

9-1s-35w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Dan #1-9

Job Ticket: 58428

DST#: 3

ATTN: Robert Hendrix

Test Start: 2014.07.15 @ 21:15:00

Tool Information

Drill Pipe:	Length: 4007.00 ft	Diameter: 3.88 inches	Volume: 58.60 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: 204.00 ft	Diameter: 2.25 inches	Volume: 1.00 bbl	Weight to Pull Loose:	86000.00 lb
			<u>Total Volume: 59.60 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial	80000.00 lb
Depth to Top Packer:	4232.00 ft			Final	80000.00 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			4210.00	
Hydraulic tool	5.00			4215.00	
Jars	5.00			4220.00	
Safety Joint	3.00			4223.00	
Packer	5.00			4228.00	27.00 Bottom Of Top Packer
Packer	4.00			4232.00	
Stubb	1.00			4233.00	
Recorder	0.00	8521	Inside	4233.00	
Recorder	0.00	6769	Outside	4233.00	
Perforations	9.00			4242.00	
Change Over Sub	1.00			4243.00	
Drill Pipe	31.00			4274.00	
Change Over Sub	1.00			4275.00	
Bullnose	3.00			4278.00	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-35w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Dan #1-9

Job Ticket: 58428

DST#: 3

ATTN: Robert Hendrix

Test Start: 2014.07.15 @ 21:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
8.00	ocm 40%o 60%m	0.039
2.00	clean oil 100%o	0.010

Total Length: 10.00 ft Total Volume: 0.049 bbf

Num Fluid Samples: 0

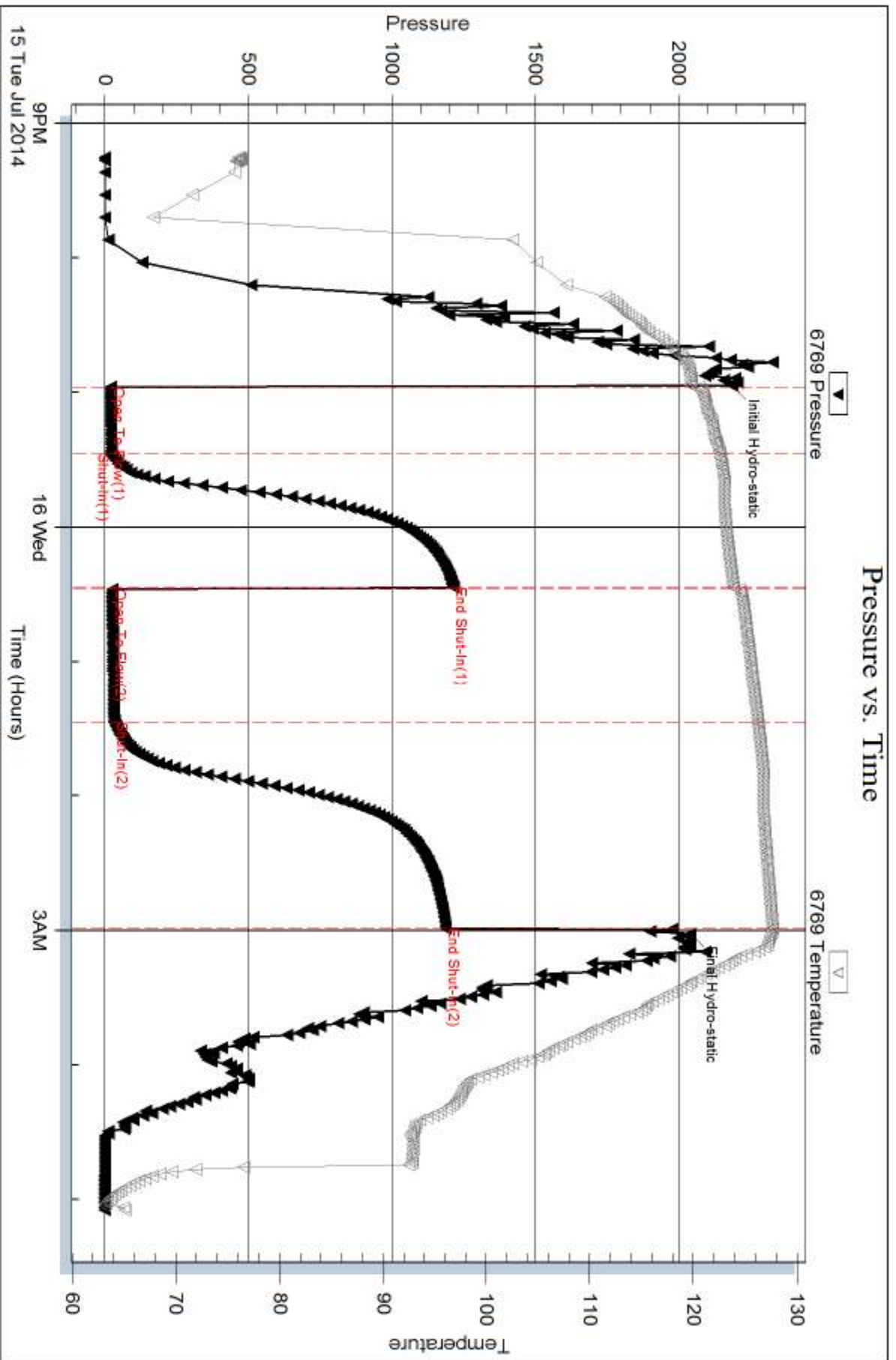
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



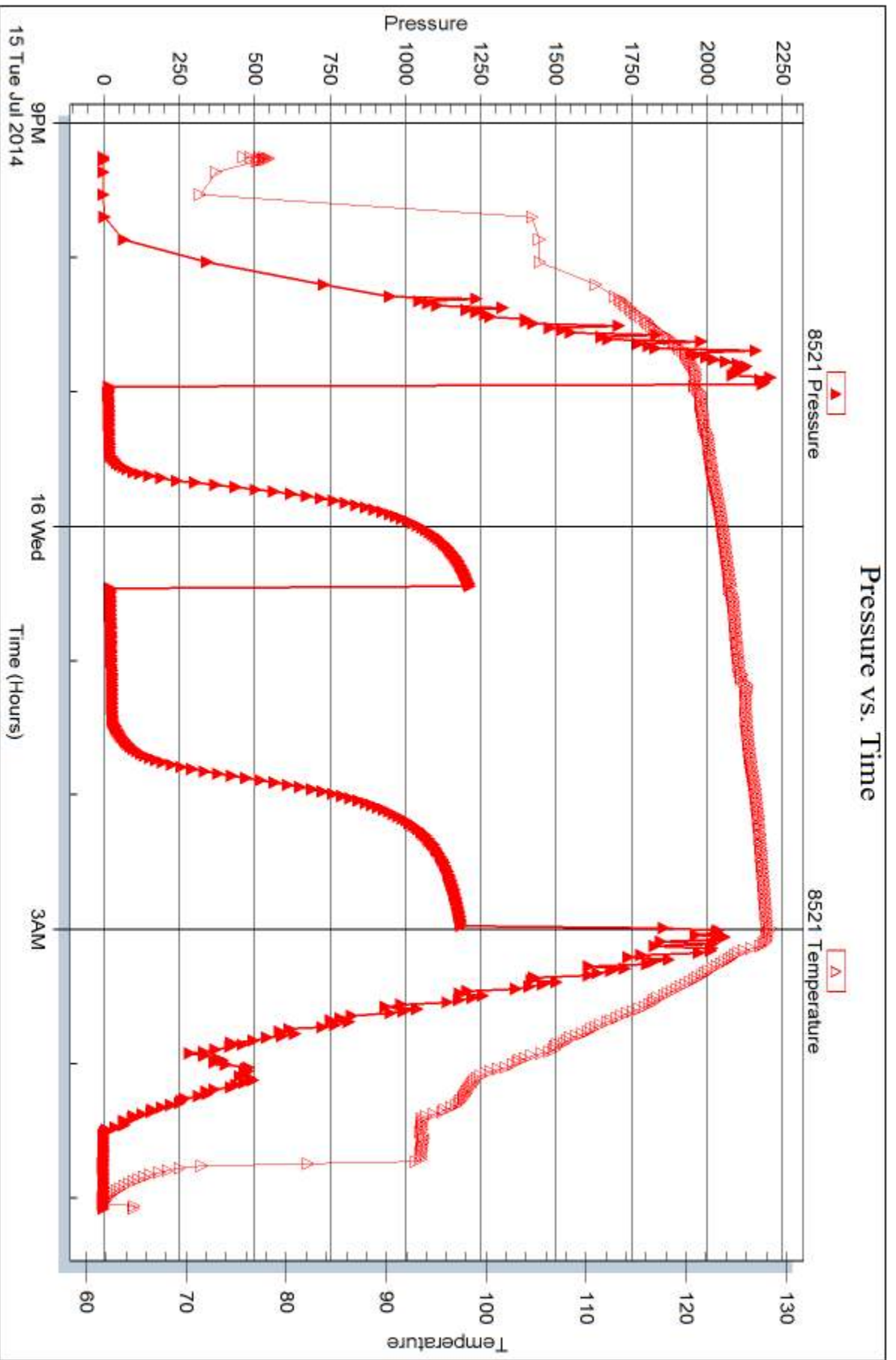
Serial #: 8521

Inside

Murfin Drilling CO., INC.

Dan #1-9

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling CO, INC.**

250 N Water STE 300
Wichita KS 67202

ATTN: Robert Hendrix

Dan #1-9

9-1s-35w Rawlins,KS

Start Date: 2014.07.16 @ 15:35:00

End Date: 2014.07.16 @ 23:42:00

Job Ticket #: 58429 DST #: 4

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

Printed: 2014.07.18 @ 10:57:34

Murfin Drilling CO, INC.
9-1s-35w Rawlins,KS
Dan #1-9
DST # 4
LKC: "J"
2014.07.16



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling CO, INC.

9-1s-35w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Dan #1-9

Job Ticket: 58429

DST#: 4

ATTN: Robert Hendrix

Test Start: 2014.07.16 @ 15:35:00

GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:40:00

Time Test Ended: 23:42:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Robert Zodrow

Unit No: 49

Interval: 4273.00 ft (KB) To 4325.00 ft (KB) (TVD)

Reference Elevations: 3173.00 ft (KB)

Total Depth: 4325.00 ft (KB) (TVD)

3163.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6769 Outside

Press@RunDepth: 57.90 psig @ 4274.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.16

End Date:

2014.07.16

Last Calib.:

2014.07.16

Start Time: 15:35:05

End Time:

23:41:59

Time On Btm:

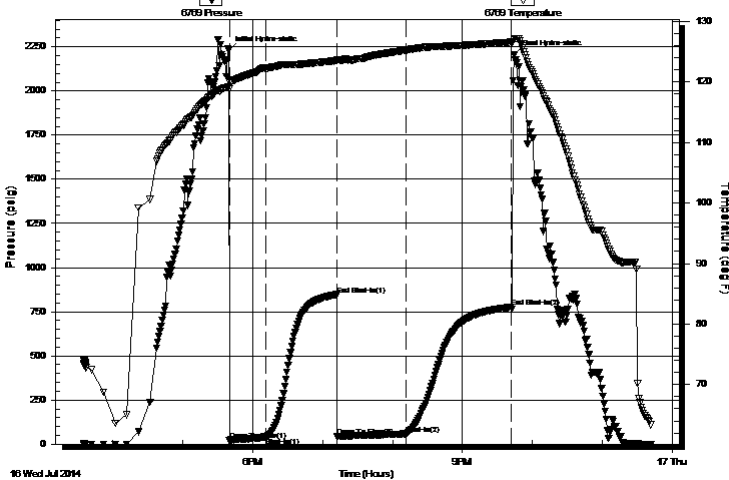
2014.07.16 @ 17:39:30

Time Off Btm:

2014.07.16 @ 21:44:30

TEST COMMENT: 30-IF- Blow built to 3 1/4"
60-ISI- No return
30-FF- Blow started in 15 mins built to 1"
60-FSI- No return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2227.71	119.23	Initial Hydro-static
1	19.49	118.92	Open To Flow (1)
32	37.90	122.23	Shut-In(1)
93	846.66	123.52	End Shut-In(1)
93	44.40	123.69	Open To Flow (2)
152	57.90	125.26	Shut-In(2)
243	776.38	126.59	End Shut-In(2)
245	2204.16	127.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	ocm 35%o 65%m	0.34

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling CO, INC.

9-1s-35w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Dan #1-9

Job Ticket: 58429

DST#: 4

ATTN: Robert Hendrix

Test Start: 2014.07.16 @ 15:35:00

Tool Information

Drill Pipe:	Length: 4070.00 ft	Diameter: 3.88 inches	Volume: 59.52 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: 204.00 ft	Diameter: 2.25 inches	Volume: 1.00 bbl	Weight to Pull Loose: 86000.00 lb
			<u>Total Volume: 60.52 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4273.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	79.00 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			4251.00	
Hydraulic tool	5.00			4256.00	
Jars	5.00			4261.00	
Safety Joint	3.00			4264.00	
Packer	5.00			4269.00	27.00 Bottom Of Top Packer
Packer	4.00			4273.00	
Stubb	1.00			4274.00	
Recorder	0.00	8521	Inside	4274.00	
Recorder	0.00	6769	Outside	4274.00	
Perforations	15.00			4289.00	
Change Over Sub	1.00			4290.00	
Drill Pipe	31.00			4321.00	
Change Over Sub	1.00			4322.00	
Bullnose	3.00			4325.00	52.00 Bottom Packers & Anchor

Total Tool Length: 79.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling CO, INC.

9-1s-35w Rawlins,KS

250 N Water STE 300
Wichita KS 67202

Dan #1-9

Job Ticket: 58429

DST#: 4

ATTN: Robert Hendrix

Test Start: 2014.07.16 @ 15:35:00

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: 165.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: 4.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	ocm 35%o 65%m	0.344

Total Length: 70.00 ft Total Volume: 0.344 bbl

Num Fluid Samples: 0

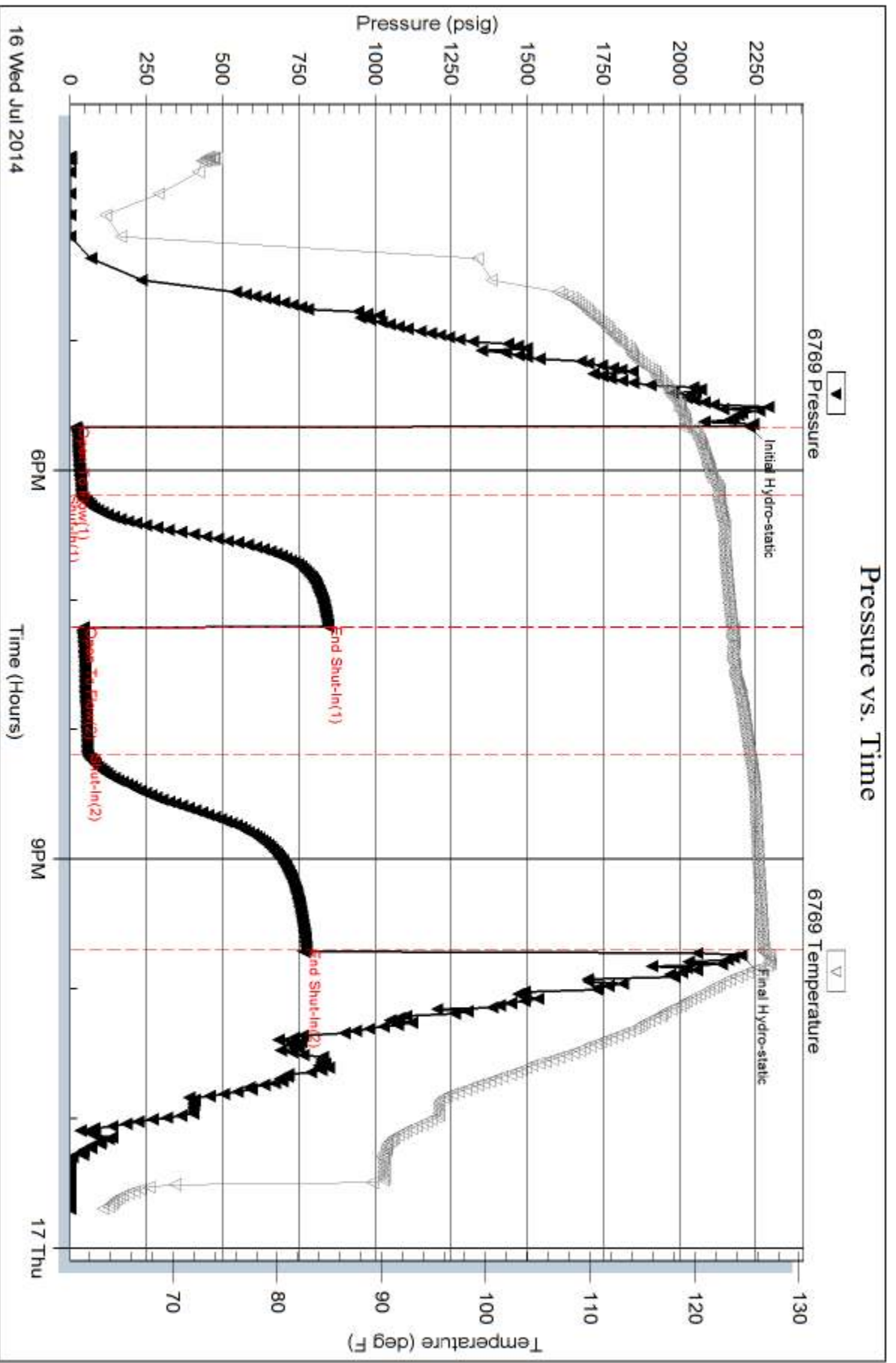
Num Gas Bombs: 0

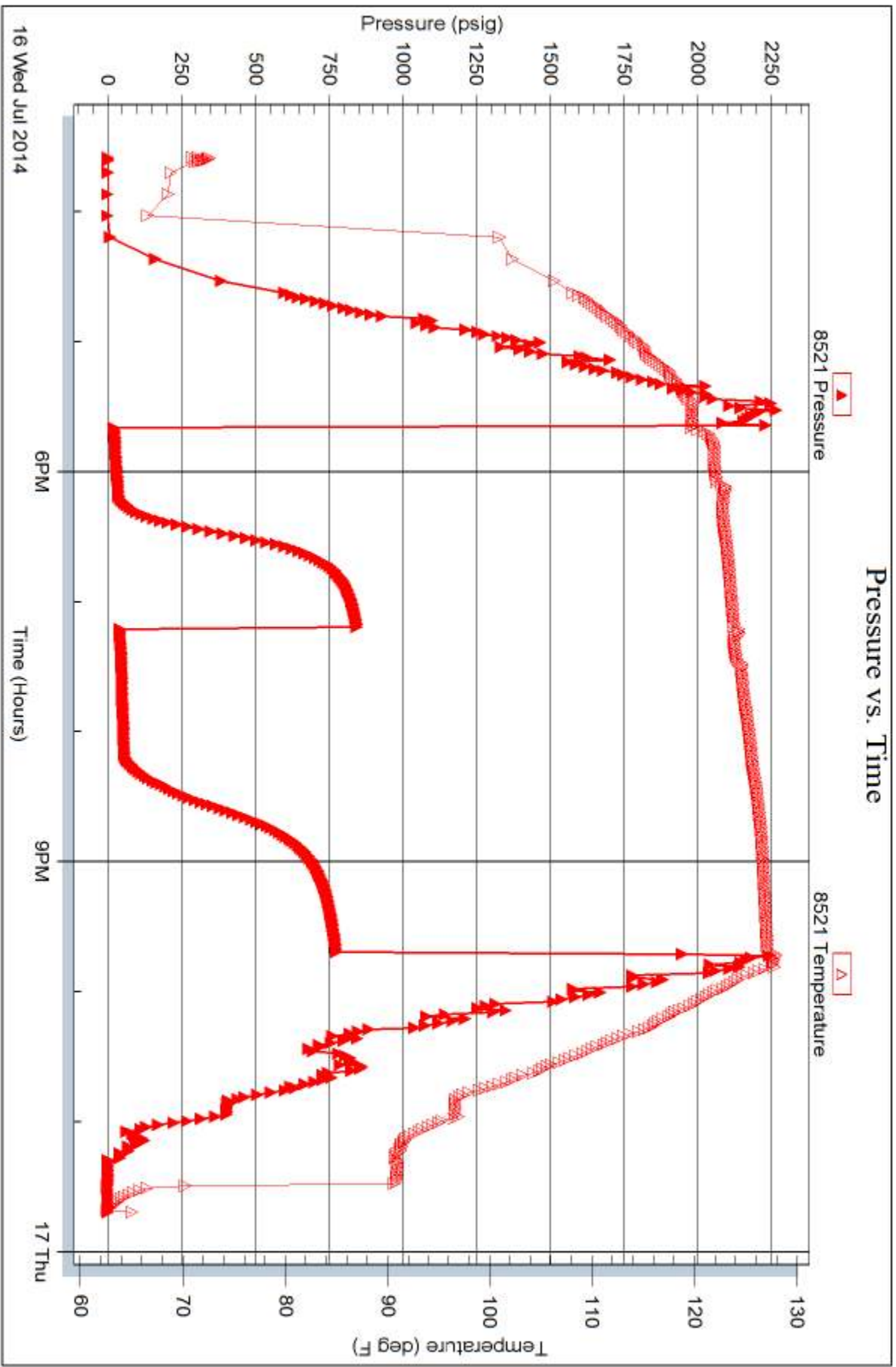
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58426

Well Name & No. Dan #1-9 Test No. 1 Date 7-14-2014
 Company Murfin Drilling CO, Inc. Elevation 3173 KB 3163 GL
 Address 250 N water STE 300 Wichita KS, 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2
 Location: Sec. 9 Twp. 1 Rge. 35 Co. Rawlins State KS

Interval Tested 4065 - 4172 Zone Tested LKC "A-D"
 Anchor Length 107 Drill Pipe Run 3846 Mud Wt. 9.2
 Top Packer Depth 4061 Drill Collars Run 204 Vis 65
 Bottom Packer Depth 4065 Wt. Pipe Run 0 WL 5.2
 Total Depth 4172 Chlorides 700 ppm System LCM 4.0
 Blow Description IF - Blow built to 1/4"
ISI - NO return
FF - NO blow
FSE - 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 5 BHT 129 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2101</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>08:00 7-14</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>09:15 7-14</u>
(C) First Final Flow <u>28</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>11:15 7-14</u>
(D) Initial Shut-In <u>1078</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>14:15 7-14</u>
(E) Second Initial Flow <u>31</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>16:17 7-14</u>
(F) Second Final Flow <u>36</u>	<input checked="" type="checkbox"/> Mileage <u>106 RT 164.30</u>	Comments _____
(G) Final Shut-In <u>966</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2097</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
	<input type="checkbox"/> Day Standby _____	Total <u>1739.30</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1739.30</u>	

Approved By [Signature] Our Representative Robert Zichow

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. 58427

Well Name & No. Dan #1-9 Test No. 2 Date 7-15-2014
 Company Murfin Drilling CO, Inc. Elevation 3173 KB 3163 GL
 Address 250 N Water STE 300 Wichita KS, 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2
 Location: Sec. 9 Twp. 1 Rge. 3.5 Co. Rawlins State KS

Interval Tested 4174 - 4230 Zone Tested LKC "H"
 Anchor Length 56 Drill Pipe Run 3972 Mud Wt. 9.2
 Top Packer Depth 4170 Drill Collars Run 204 Vis 6.5
 Bottom Packer Depth 4174 Wt. Pipe Run 0 WL 5.2
 Total Depth 4230 Chlorides 700 ppm System LCM 4.0
 Blow Description IF - Blow built to 4"
ISI - No return
FF - Blow built to 7"
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>90</u>	<u>10</u>	<u>90</u>		
<u>50</u>	<u>90cm</u>	<u>5</u>	<u>40</u>	<u>55</u>	
	<u>120' MIP</u>				

Rec Total 120 BHT 129 Gravity 34 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 219.3 Test 1250 T-On Location 01:30 7-15
 (B) First Initial Flow 21 Jars 250 T-Started 02:00 7-15
 (C) First Final Flow 31 Safety Joint 75 T-Open 04:04 7-15
 (D) Initial Shut-In 1296 Circ Sub _____ T-Pulled 08:06 7-15
 (E) Second Initial Flow 34 Hourly Standby _____ T-Out 10:11 7-15
 (F) Second Final Flow 54 Mileage 106 164.30 Comments _____
 (G) Final Shut-In 1287 Sampler _____
 (H) Final Hydrostatic 2098 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1739.30
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 90 Sub Total 1739.30

Approved By Rob D. Shij Our Representative Robert Zedrow

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58428

Well Name & No. Dan #1-9 Test No. 3 Date 7-15-2014
 Company Murfin Drilling Co, Inc. Elevation 3173 KB 3163 GL
 Address 250 N water STE 300 Wichita KS, 67202
 Co. Rep / Geo. Robert Hendrix Rig Murfin #2
 Location: Sec. 9 Twp. 1 Rge. 35 Co. Rawlins State Ks.

Interval Tested 4232 - 4278 Zone Tested LKC "H"
 Anchor Length 46 Drill Pipe Run 4007 Mud Wt. 9.5
 Top Packer Depth 4228 Drill Collars Run 204 Vis 47
 Bottom Packer Depth 4232 Wt. Pipe Run 0 WL 8.4
 Total Depth 4278 Chlorides 700 ppm System LCM 4.0
 Blow Description IF - Blow built to 1 1/4"
ISI - No return
FF - Surface blow started in 13 mins built to 1 1/8"
FBI - No return

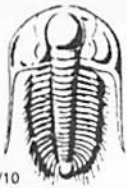
Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>oil</u>	<u>100</u>			
<u>8</u>	<u>OCM</u>	<u>40</u>		<u>60</u>	

Rec Total 10 BHT 128 Gravity 28 API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>2188</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>20:45 7-15</u>
(B) First Initial Flow <u>20</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>21:15 7-15</u>
(C) First Final Flow <u>22</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>22:57 7-15</u>
(D) Initial Shut-In <u>1216</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>02:59 7-16</u>
(E) Second Initial Flow <u>27</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>05:05 7-16</u>
(F) Second Final Flow <u>32</u>	<input checked="" type="checkbox"/> Mileage <u>106 RT</u> 164.30	Comments
(G) Final Shut-In <u>1189</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2041</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>1739.30</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1739.30</u>	

Approved By Robert D. Hendrix Our Representative Robert Zocher

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58429

Well Name & No. Dan #1-9 Test No. 4 Date 7-16-2014
 Company Martin Drilling Co, Inc. Elevation 3173 KB 3163 GL
 Address 250 N Water STE 300 Wichita KS, 67202
 Co. Rep / Geo. Robert Hendrix Rig MURFIN #2
 Location: Sec. 9 Twp. 1 Rge. 35 Co. Rawlins State KS

Interval Tested 4273 - 4325 Zone Tested LKC "J"
 Anchor Length 52 Drill Pipe Run 4070 Mud Wt. 9.3
 Top Packer Depth 4269 Drill Collars Run 204 Vis 165
 Bottom Packer Depth 4273 Wt. Pipe Run 0 WL 7.6
 Total Depth 4325 Chlorides 700 ppm System LCM 4.0
 Blow Description IF-Blow built to 3 1/4
ISF - No return
PF - Blow started in 15 mins built to 1"
BSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>0cm</u>	<u>35</u>		<u>65</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 70 BHT 127 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2228 Test 1250 T-On Location 15:00 7-16
 (B) First Initial Flow 19 Jars 250 T-Started 15:35 7-16
 (C) First Final Flow 38 Safety Joint 75 T-Open 17:40 7-16
 (D) Initial Shut-In 847 Circ Sub _____ T-Pulled 21:42 7-16
 (E) Second Initial Flow 44 Hourly Standby _____ T-Out 23:42 7-16
 (F) Second Final Flow 58 Mileage 106 RT x2 Comments Prove out
 (G) Final Shut-In 776 Sampler 328.60 Loaded tool 7-17
 (H) Final Hydrostatic 2204 Straddle _____ at 11:00 AM
 Ruined Shale Packer _____
 Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____
 Initial Shut-In 60 Extra Recorder _____ Sub Total 0
 Final Flow 60 Day Standby _____ Total 1903.60
 Final Shut-In 90 Accessibility _____ MP/DST Disc't _____
 Sub Total 1903.60

Approved By Robert D. Hendrix Our Representative Robert Zochens

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