



DRILL STEM TEST REPORT

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

250 N. Water, Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

Alex #2-23

23-4s-31w Rawlins,KS

Start Date: 2014.04.25 @ 12:02:00

End Date: 2014.04.25 @ 21:30:15

Job Ticket #: 55214 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.04.29 @ 10:31:06



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water, Ste 300
 Wichita KS 67202
 ATTN: Bob Stolzle

23-4s-31w Rawlins, KS

Alex #2-23

Job Ticket: 55214

DST#: 1

Test Start: 2014.04.25 @ 12:02:00

GENERAL INFORMATION:

Formation: **Toronto - LKC B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:39:00

Time Test Ended: 21:30:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 54

Interval: 3922.00 ft (KB) To 4005.00 ft (KB) (TVD)

Reference Elevations: 2925.00 ft (KB)

Total Depth: 4005.00 ft (KB) (TVD)

2920.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6753

Inside

Press@RunDepth: 132.33 psig @ 3923.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.25

End Date:

2014.04.25

Last Calib.:

2014.04.25

Start Time: 12:02:05

End Time:

21:30:15

Time On Btm:

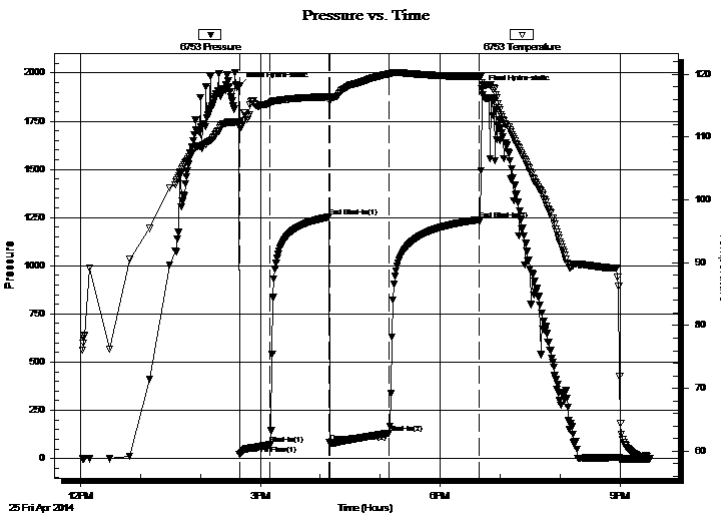
2014.04.25 @ 14:38:45

Time Off Btm:

2014.04.25 @ 18:41:45

TEST COMMENT: 30 - IF - Surface blow built up to 4"
 60 - ISI - No Return
 60 - FF - Surface blow built to 6 1/2"
 90 - FSI - No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1927.96	112.37	Initial Hydro-static
1	21.58	111.54	Open To Flow (1)
31	72.04	115.36	Shut-In(1)
91	1253.02	116.38	End Shut-In(1)
91	83.90	115.61	Open To Flow (2)
151	132.33	120.05	Shut-In(2)
241	1239.21	119.59	End Shut-In(2)
243	1915.74	118.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
126.00	OSMW - 10M - 90W - oil spots	1.20
126.00	OCWM - 60M - 30W - 10o	1.77

Gas Rates

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



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DRILL STEM TEST REPORT

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23-4s-31w Rawlins, KS

250 N. Water, Ste 300
Wichita KS 67202

Alex #2-23

Job Ticket: 55214

DST#: 1

ATTN: Bob Stolzle

Test Start: 2014.04.25 @ 12:02:00

GENERAL INFORMATION:

Formation: **Toronto - LKC B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:39:00

Time Test Ended: 21:30:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: 54

Interval: 3922.00 ft (KB) To 4005.00 ft (KB) (TVD)

Total Depth: 4005.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2925.00 ft (KB)

2920.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8368

Inside

Press@RunDepth: psig @ 3923.00 ft (KB)

Start Date: 2014.04.25

End Date:

2014.04.25

Capacity: 8000.00 psig

Last Calib.:

2014.04.25

Start Time:

12:02:05

End Time:

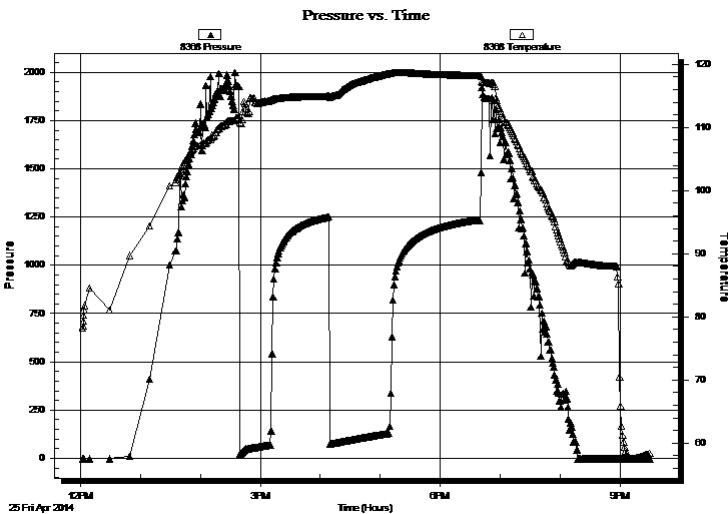
21:30:15

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF - Surface blow built up to 4"
60 - ISI - No Return
60 - FF - Surface blow built to 6 1/2"
90 - FSI - No Return

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
126.00	OSMW - 10M - 90W - oil spots	1.20
126.00	OCWM - 60M - 30W - 10o	1.77

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

23-4s-31w Rawlins,KS

250 N. Water, Ste 300
Wichita KS 67202

Alex #2-23

Job Ticket: 55214

DST#: 1

ATTN: Bob Stolzle

Test Start: 2014.04.25 @ 12:02:00

Tool Information

Drill Pipe:	Length: 3840.31 ft	Diameter: 3.80 inches	Volume: 53.87 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: 62.69 ft	Diameter: 2.25 inches	Volume: 0.31 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 54.18 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3922.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	83.00 ft			
Tool Length:	110.00 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			3900.00	
Hydraulic tool	5.00			3905.00	
Jars	5.00			3910.00	
Safety Joint	3.00			3913.00	
Packer	4.00			3917.00	27.00 Bottom Of Top Packer
Packer	5.00			3922.00	
Stubb	1.00			3923.00	
Recorder	0.00	8368	Inside	3923.00	
Recorder	0.00	6753	Inside	3923.00	
Perforations	13.00			3936.00	
Change Over Sub	1.00			3937.00	
Drill Pipe	63.00			4000.00	
Change Over Sub	1.00			4001.00	
Bullnose	4.00			4005.00	83.00 Bottom Packers & Anchor

Total Tool Length: 110.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

23-4s-31w Rawlins,KS

250 N. Water, Ste 300
Wichita KS 67202

Alex #2-23

Job Ticket: 55214

DST#: 1

ATTN: Bob Stolzle

Test Start: 2014.04.25 @ 12:02:00

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
126.00	OSMW - 10M - 90W - oil spots	1.196
126.00	OCWM - 60M - 30W - 10o	1.767

Total Length: 252.00 ft Total Volume: 2.963 bbl

Num Fluid Samples: 0

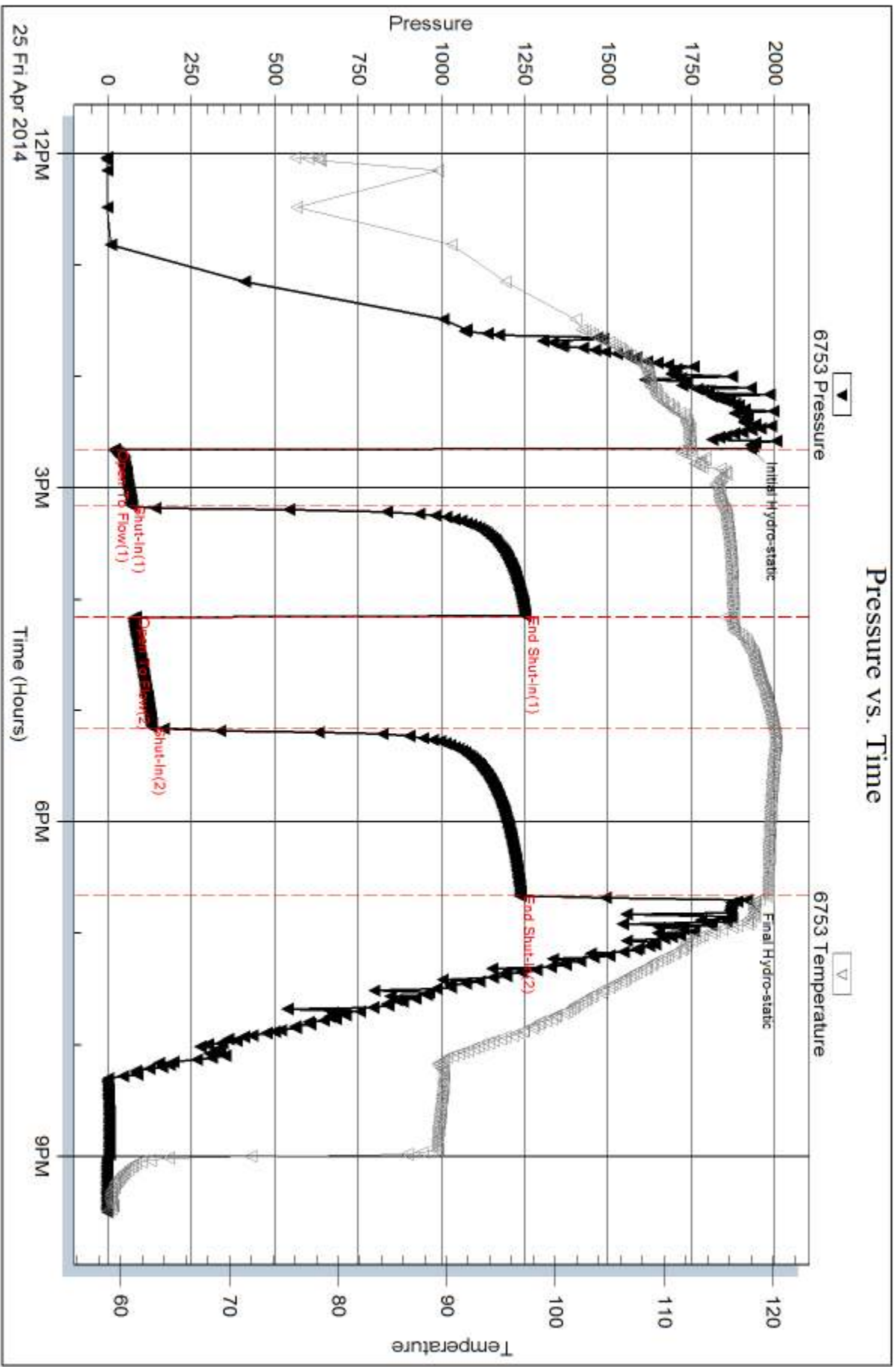
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



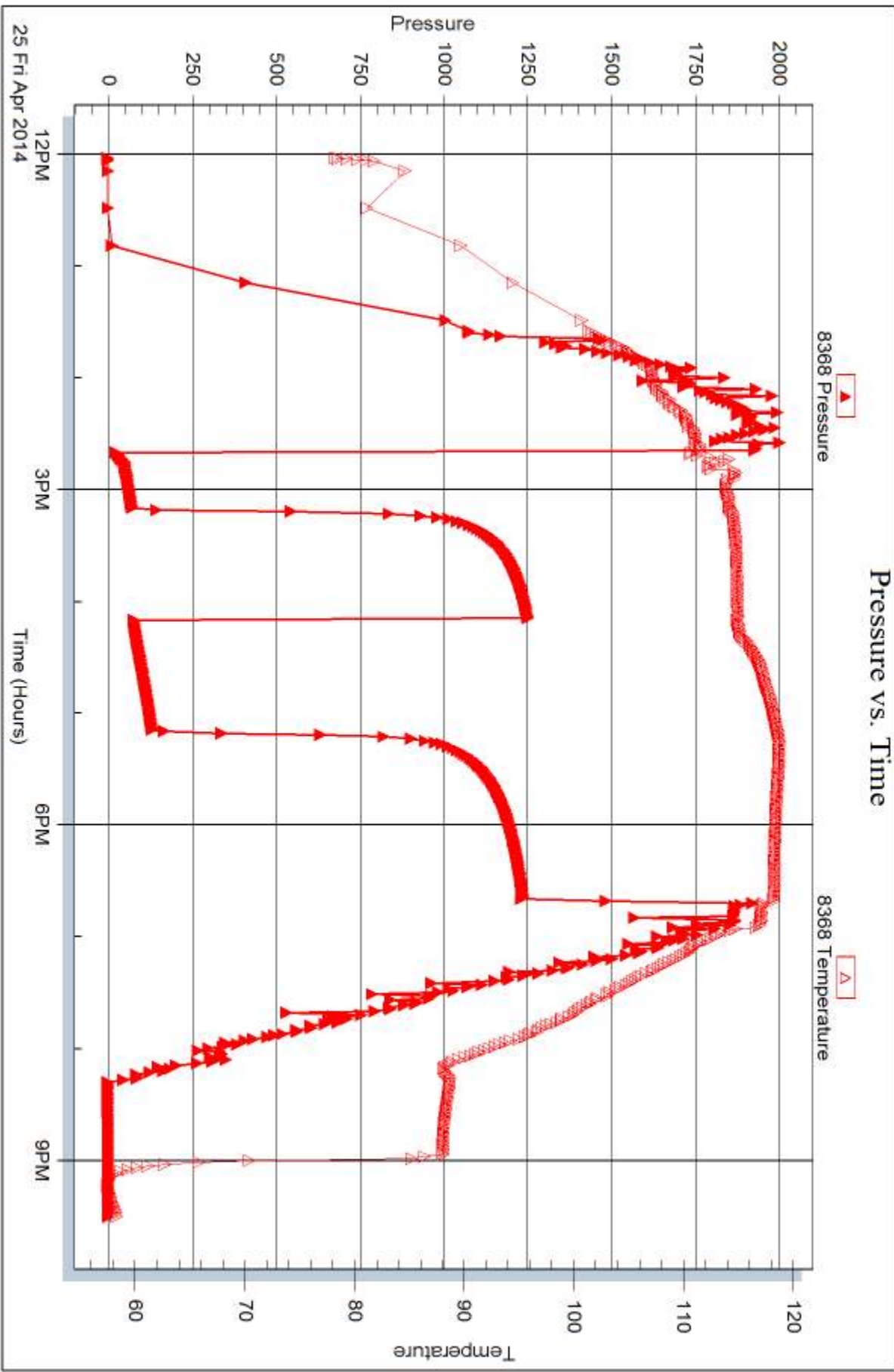
Serial #: 8368

Inside

Murfin Drilling Co., Inc.

Alex #2-23

DST Test Number: 1





DRILL STEM TEST REPORT

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

250 N. Water, Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

Alex #2-23

23-4s-31w Rawlins,KS

Start Date: 2014.04.26 @ 10:00:00

End Date: 2014.04.26 @ 18:57:00

Job Ticket #: 55215 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.04.29 @ 10:30:38



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
250 N. Water, Ste 300
Wichita KS 67202
ATTN: Bob Stolzle

23-4s-31w Rawlins, KS

Alex #2-23

Job Ticket: 55215

DST#: 2

Test Start: 2014.04.26 @ 10:00:00

GENERAL INFORMATION:

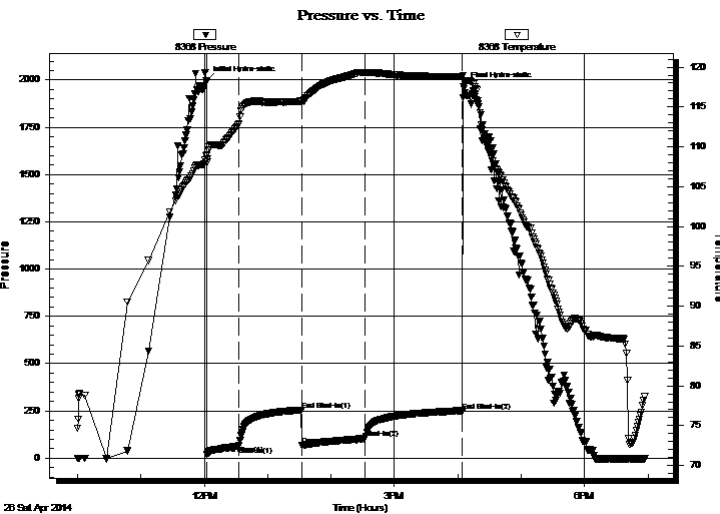
Formation: **LKC 'F' - 'G'**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:02:30
 Time Test Ended: 18:57:00
 Interval: **4020.00 ft (KB) To 4060.00 ft (KB) (TVD)**
 Total Depth: 4060.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Royal Fisher
 Unit No: #54
 Reference Elevations: 2925.00 ft (KB)
 2920.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8368

Inside

Press@RunDepth: 104.12 psig @ 4021.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.26 End Date: 2014.04.26 Last Calib.: 2014.04.26
 Start Time: 10:00:05 End Time: 18:57:00 Time On Btm: 2014.04.26 @ 12:02:15
 Time Off Btm: 2014.04.26 @ 16:05:30

TEST COMMENT: 30 - IF - Surface blow built to bottom of bucket in 27 mins.
 60 - ISI - Faint Return started 5 mins. into and died off in 20 mins.
 60 - FF - Surface blow built up to 11"
 90 - FSI - No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1997.07	108.92	Initial Hydro-static
1	21.75	108.06	Open To Flow (1)
31	63.37	112.83	Shut-In(1)
90	255.01	115.72	End Shut-In(1)
90	68.32	115.63	Open To Flow (2)
150	104.12	119.33	Shut-In(2)
242	248.01	118.80	End Shut-In(2)
244	1963.69	118.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
169.00	OSMW - 15M - 85W - oil spots	1.80
25.00	Free Oil - 100o	0.35
0.00	184' GIP	0.00

Gas Rates

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



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DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

23-4s-31w Rawlins, KS

250 N. Water, Ste 300
Wichita KS 67202

Alex #2-23

ATTN: Bob Stolzle

Job Ticket: 55215

DST#: 2

Test Start: 2014.04.26 @ 10:00:00

GENERAL INFORMATION:

Formation: **LKC 'F' - 'G'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:02:30

Time Test Ended: 18:57:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: #54

Interval: 4020.00 ft (KB) To 4060.00 ft (KB) (TVD)

Total Depth: 4060.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2925.00 ft (KB)

2920.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6753 Inside

Press@RunDepth: psig @ 4021.00 ft (KB)

Start Date: 2014.04.26

End Date: 2014.04.26

Start Time: 10:00:05

End Time: 18:57:00

Capacity: 8000.00 psig

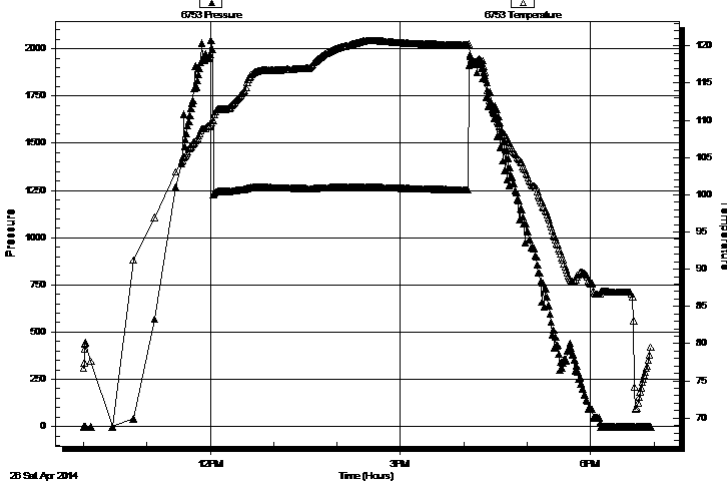
Last Calib.: 2014.04.26

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF - Surface blow built to bottom of bucket in 27 mins.
60 - ISI - Faint Return started 5 mins. into and died off in 20 mins.
60 - FF - Surface blow built up to 11"
90 - FSI - No Return

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
169.00	OSMW - 15M - 85W - oil spots	1.80
25.00	Free Oil - 100o	0.35
0.00	184' GIP	0.00

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

23-4s-31w Rawlins,KS

250 N. Water, Ste 300
Wichita KS 67202

Alex #2-23

Job Ticket: 55215

DST#: 2

ATTN: Bob Stolzle

Test Start: 2014.04.26 @ 10:00:00

Tool Information

Drill Pipe:	Length: 3934.68 ft	Diameter: 3.80 inches	Volume: 55.19 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: 62.69 ft	Diameter: 2.25 inches	Volume: 0.31 bbl	Weight to Pull Loose:	65000.00 lb
			<u>Total Volume: 55.50 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	4.37 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	4020.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	40.00 ft				
Tool Length:	67.00 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			3998.00	
Hydraulic tool	5.00			4003.00	
Jars	5.00			4008.00	
Safety Joint	3.00			4011.00	
Packer	4.00			4015.00	27.00 Bottom Of Top Packer
Packer	5.00			4020.00	
Stubb	1.00			4021.00	
Recorder	0.00	6753	Inside	4021.00	
Recorder	0.00	8368	Inside	4021.00	
Perforations	35.00			4056.00	
Bullnose	4.00			4060.00	40.00 Bottom Packers & Anchor

Total Tool Length: 67.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

23-4s-31w Rawlins,KS

250 N. Water, Ste 300
Wichita KS 67202

Alex #2-23

Job Ticket: 55215

DST#: 2

ATTN: Bob Stolzle

Test Start: 2014.04.26 @ 10:00:00

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:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
169.00	OSMW - 15M - 85W - oil spots	1.800
25.00	Free Oil - 100o	0.351
0.00	184' GIP	0.000

Total Length: 194.00 ft Total Volume: 2.151 bbl

Num Fluid Samples: 0

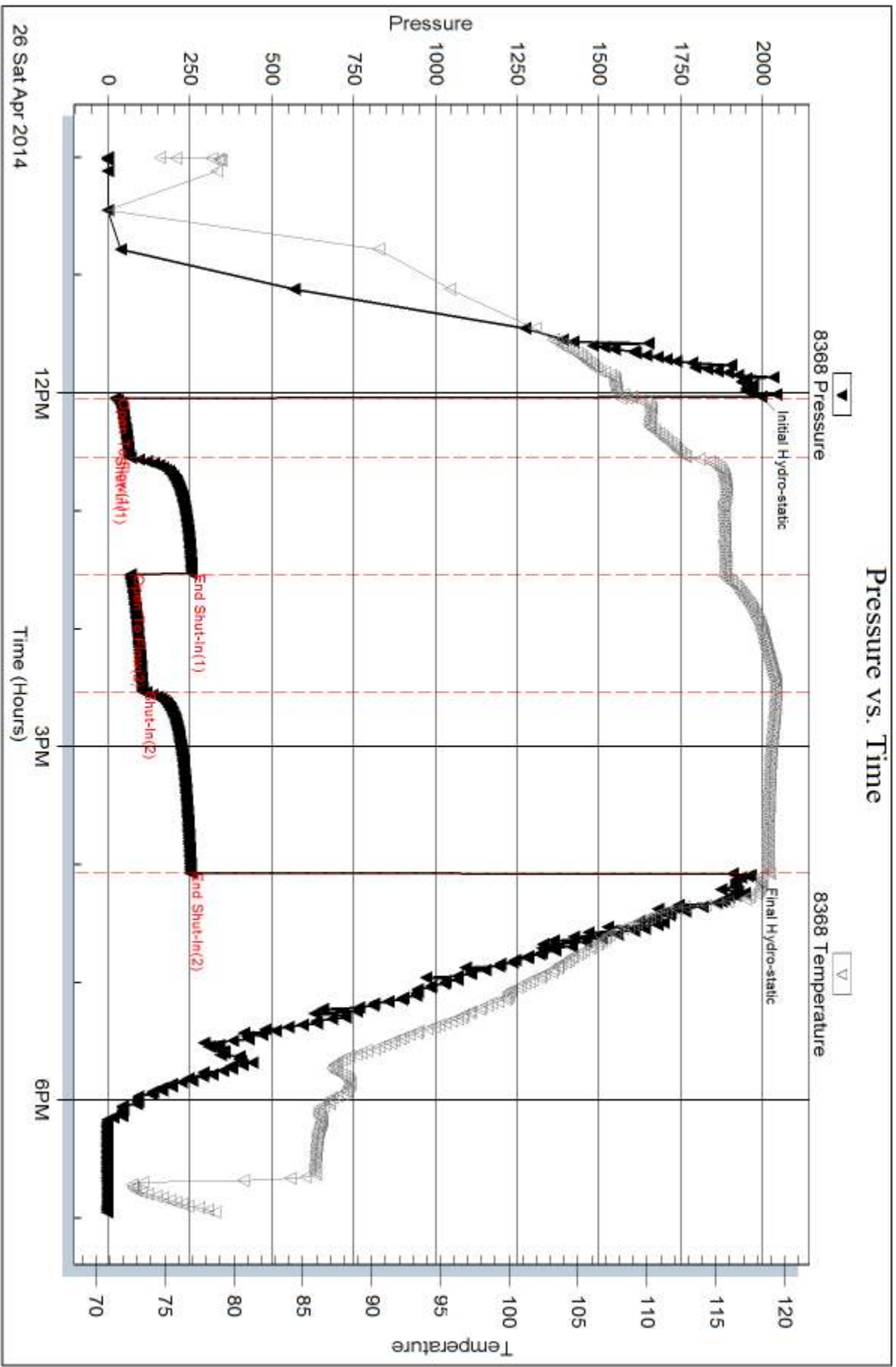
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



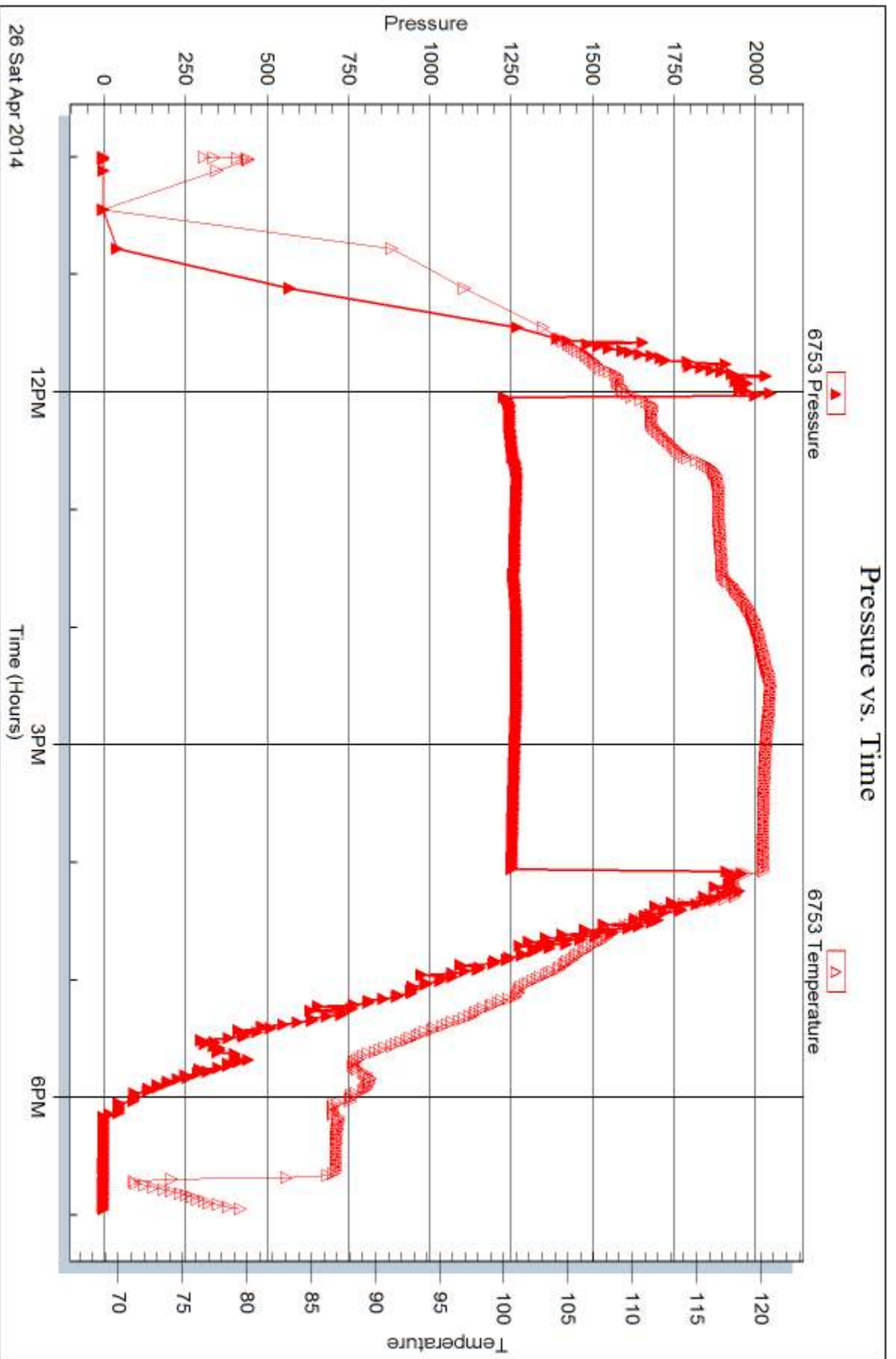
Serial #: 6753

Inside

Murfin Drilling Co., Inc.

Alex #2-23

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 55215

Printed: 2014.04.29 @ 10:30:39



DRILL STEM TEST REPORT

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

250 N. Water, Ste 300
Wichita KS 67202

ATTN: Bob Stolzle

Alex #2-23

23-4s-31w Rawlins,KS

Start Date: 2014.04.27 @ 11:09:00

End Date: 2014.04.27 @ 19:51:45

Job Ticket #: 55216 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.04.29 @ 10:29:13



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water, Ste 300
 Wichita KS 67202
 ATTN: Bob Stolzle

23-4s-31w Rawlins, KS

Alex #2-23

Job Ticket: 55216

DST#: 3

Test Start: 2014.04.27 @ 11:09:00

GENERAL INFORMATION:

Formation: **LKC H - J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:08:45
 Time Test Ended: 19:51:45
 Interval: **4070.00 ft (KB) To 4170.00 ft (KB) (TVD)**
 Total Depth: 4170.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Royal Fisher
 Unit No: #54
 Reference Elevations: 2925.00 ft (KB)
 2920.00 ft (CF)
 KB to GR/CF: 5.00 ft

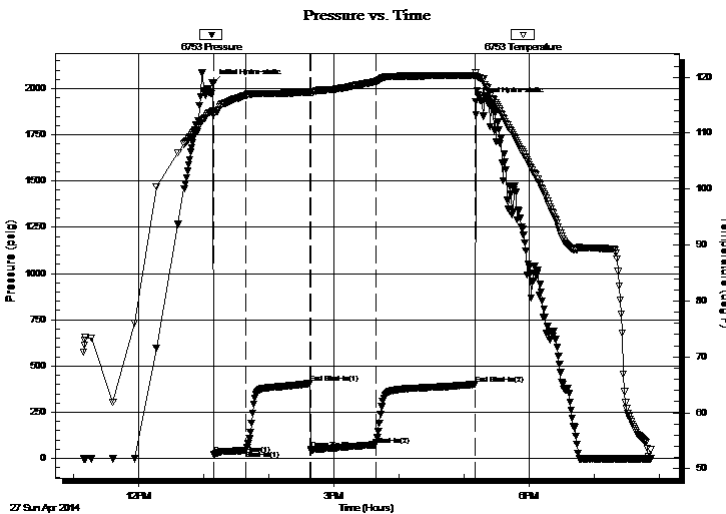
Serial #: 6753

Inside

Press@RunDepth: 74.21 psig @ 4071.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.27 End Date: 2014.04.27 Last Calib.: 2014.04.27
 Start Time: 11:09:05 End Time: 19:51:45 Time On Btm: 2014.04.27 @ 13:08:15
 Time Off Btm: 2014.04.27 @ 17:10:30

TEST COMMENT: 30 - IF - Surface blow built up to 8"
 60 - ISI - No Return
 60 - FF - Surface blow built to bottom of the bucket in 23 mins.
 90 - FSI - No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2026.26	113.98	Initial Hydro-static
1	20.24	113.37	Open To Flow (1)
31	43.33	116.69	Shut-In(1)
90	406.80	117.28	End Shut-In(1)
91	48.19	117.22	Open To Flow (2)
150	74.21	119.24	Shut-In(2)
242	400.77	120.31	End Shut-In(2)
243	1930.88	120.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	OCM - 70M - 30o	0.34
92.00	Free Oil - 100o	1.29

Gas Rates

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



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DRILL STEM TEST REPORT

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23-4s-31w Rawlins, KS

250 N. Water, Ste 300
Wichita KS 67202

Alex #2-23

Job Ticket: 55216

DST#: 3

ATTN: Bob Stolzle

Test Start: 2014.04.27 @ 11:09:00

GENERAL INFORMATION:

Formation: **LKC H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:08:45

Time Test Ended: 19:51:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Royal Fisher

Unit No: #54

Interval: 4070.00 ft (KB) To 4170.00 ft (KB) (TVD)

Total Depth: 4170.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2925.00 ft (KB)

2920.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8368 Inside

Press@RunDepth: psig @ 4071.00 ft (KB)

Start Date: 2014.04.27

End Date: 2014.04.27

Start Time: 11:09:05

End Time: 19:51:45

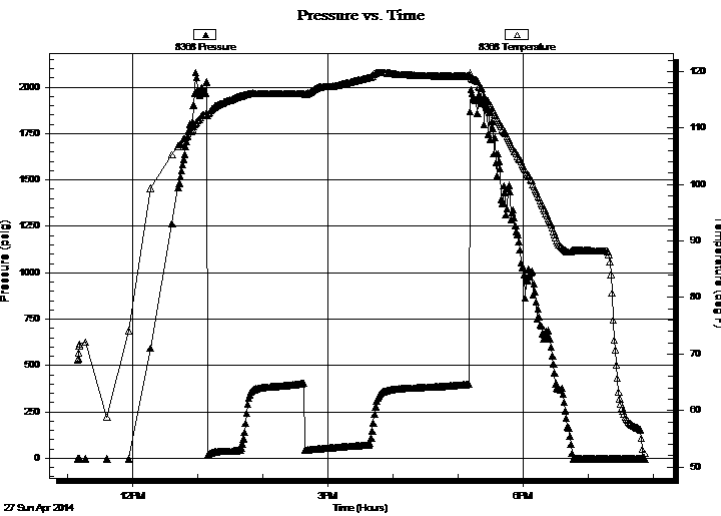
Capacity: 8000.00 psig

Last Calib.: 2014.04.27

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF - Surface blow built up to 8"
60 - ISI - No Return
60 - FF - Surface blow built to bottom of the bucket in 23 mins.
90 - FSI - No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
65.00	OCM - 70M - 30o	0.34
92.00	Free Oil - 100o	1.29

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

23-4s-31w Rawlins,KS

250 N. Water, Ste 300
Wichita KS 67202

Alex #2-23

Job Ticket: 55216

DST#: 3

ATTN: Bob Stolzle

Test Start: 2014.04.27 @ 11:09:00

Tool Information

Drill Pipe:	Length: 3998.20 ft	Diameter: 3.80 inches	Volume: 56.08 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: 62.69 ft	Diameter: 2.25 inches	Volume: 0.31 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: 56.39 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.89 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4070.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	100.00 ft			
Tool Length:	122.00 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			4053.00	
Hydraulic tool	5.00			4058.00	
Safety Joint	3.00			4061.00	
Packer	4.00			4065.00	22.00 Bottom Of Top Packer
Packer	5.00			4070.00	
Stubb	1.00			4071.00	
Recorder	0.00	8368	Inside	4071.00	
Recorder	0.00	6753	Inside	4071.00	
Perforations	30.00			4101.00	
Change Over Sub	1.00			4102.00	
Drill Pipe	63.00			4165.00	
Change Over Sub	1.00			4166.00	
Bullnose	4.00			4170.00	100.00 Bottom Packers & Anchor

Total Tool Length: 122.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

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250 N. Water, Ste 300
Wichita KS 67202

Alex #2-23

Job Ticket: 55216

DST#: 3

ATTN: Bob Stolzle

Test Start: 2014.04.27 @ 11:09:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
65.00	OCM - 70M - 30o	0.341
92.00	Free Oil - 100o	1.291

Total Length: 157.00 ft Total Volume: 1.632 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 473' Gas in pipe

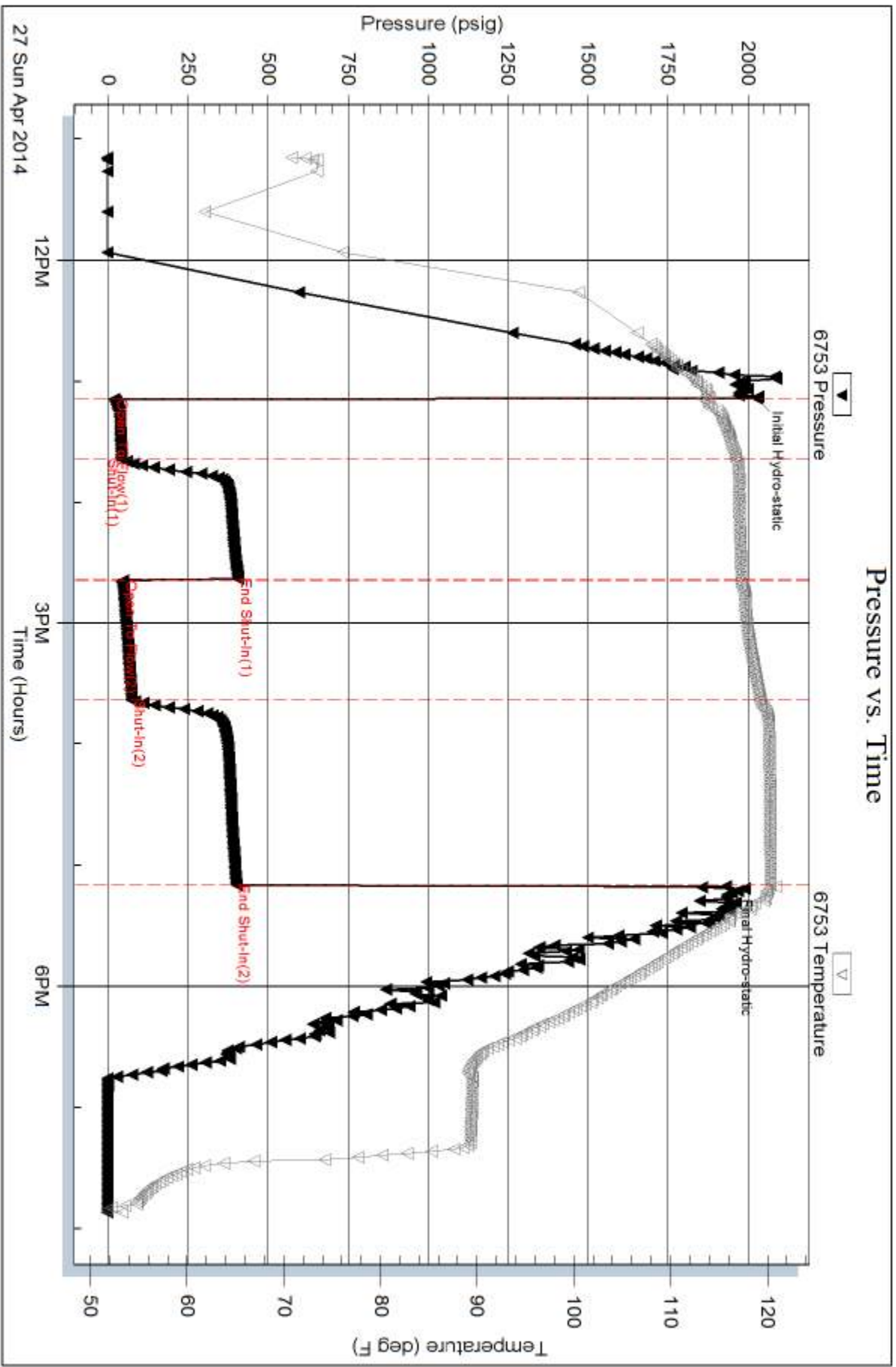
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Inside

Murfin Drilling Co., Inc.

Alex #2-23

DST Test Number: 3



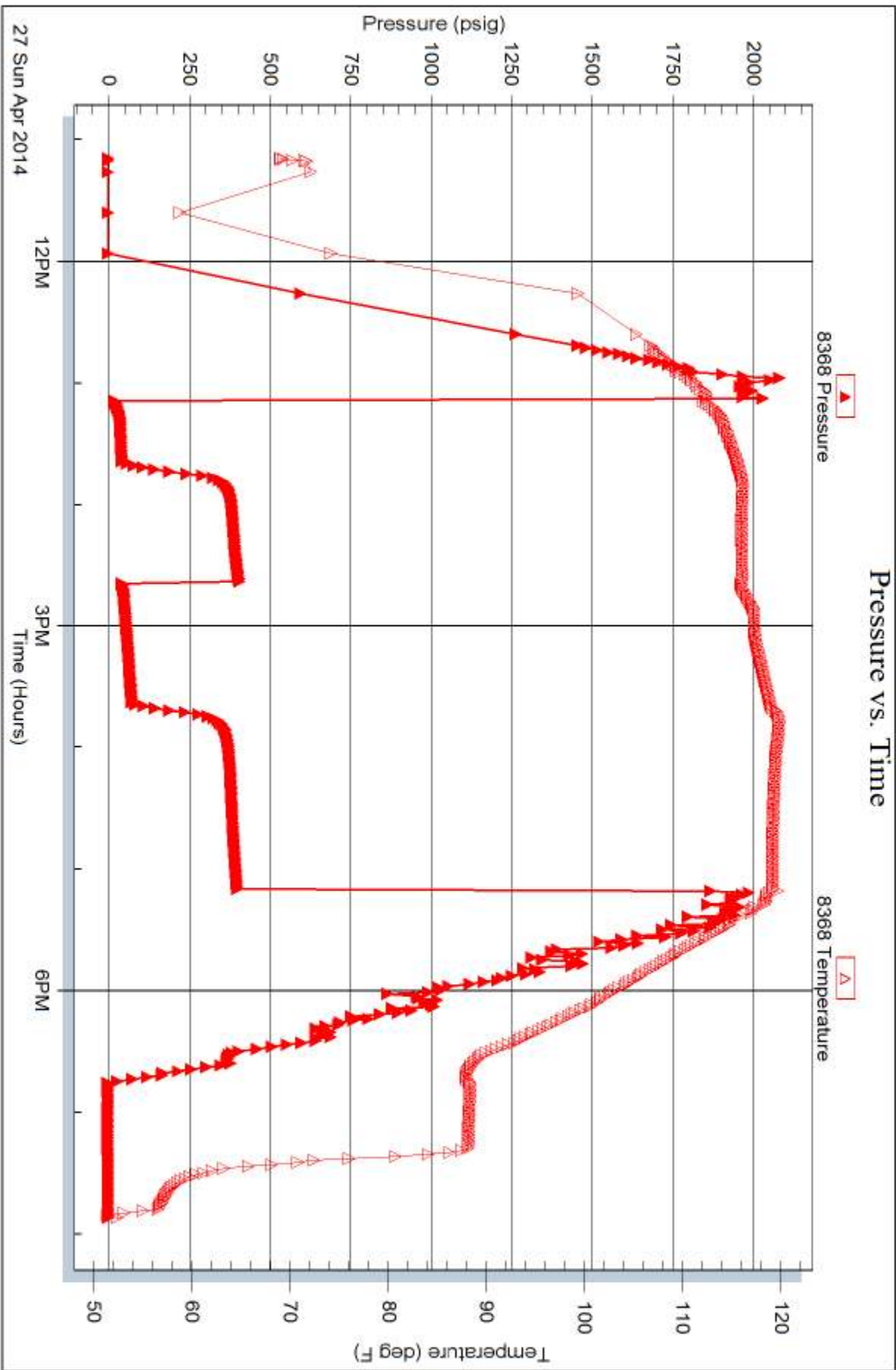
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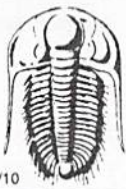
Inside

Murfin Drilling Co., Inc.

Alex #2-23

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55214**

Well Name & No. Alex #2-23 Test No. 1 Date 4-25-14
 Company Murfin Drilling Co., Inc. Elevation 2925 KB 2920 GL
 Address 250 N. Water, Ste 300 Wichita KS 67202
 Co. Rep / Geo. Bob Stolzle Rig Murfin #7
 Location: Sec. 23 Twp. 4S Rge. 31W Co. Rawlins State KS

Interval Tested 3922-4005 Zone Tested Toronto, Lans A + B
 Anchor Length 83' Drill Pipe Run 3840.31' Mud Wt. 9.2
 Top Packer Depth 3917 Drill Collars Run 62.69' Vis 56
 Bottom Packer Depth 3922 Wt. Pipe Run 0 WL 6.0
 Total Depth 4005 Chlorides 1300 ppm System LCM 5#
 Blow Description IF - Surface blow built to 4"
ISI - No ~~Return~~ Return
FF - Surface blow built to 6 1/2"
FSI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>126'</u>	<u>OCHM</u>	<u>10</u>	<u>30</u>	<u>60</u>	
<u>126'</u>	<u>asmw</u>	<u>Spots</u>	<u>90</u>	<u>10</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 252' BHT 119°F Gravity _____ API RW 102 @ 66 °F Chlorides 80,000 ppm

(A) Initial Hydrostatic <u>1928</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>10:50am</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>12:02pm</u>
(C) First Final Flow <u>72</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2:39pm</u>
(D) Initial Shut-In <u>1253</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>6:39pm</u>
(E) Second Initial Flow <u>84</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>9:30</u>
(F) Second Final Flow <u>132</u>	<input checked="" type="checkbox"/> Mileage <u>46 R/T</u> <u>71.30</u>	Comments <u>Spots</u>
(G) Final Shut-In <u>1239</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1916</u>	<input type="checkbox"/> Straddle _____	<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>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	Total <u>1646.30</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1646.30</u>	

Approved By _____ Our Representative Bob Stolzle
 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. **55215**

Well Name & No. Alex #2-23 Test No. 2 Date 4-26-14
 Company Murfin Drilling Co., Inc. Elevation 2925 KB 2920 GL
 Address 250 N. Water, Ste 300 Wichita Ks 67202
 Co. Rep / Geo. Bob Stolzle Rig Murfin #7
 Location: Sec. 23 Twp. 4S Rge. 31W Co. Rawlins State KS

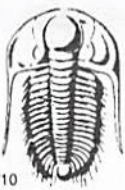
Interval Tested 4020-4060 Zone Tested LKC 'F' & 'G'
 Anchor Length 40' Drill Pipe Run 3934.68 Mud Wt. 9.1
 Top Packer Depth 4015 Drill Collars Run 62.69' Vis 52
 Bottom Packer Depth 4020 Wt. Pipe Run 6 WL 6.4
 Total Depth 4060 Chlorides 2,000 ppm System LCM 4#
 Blow Description IF - Surface blow built to bottom of bucket in 27 min.
ISI - Got a faint return 5min into and died off in 20 mins.
FF - Surface blow built to 11"
FSI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>25'</u>	<u>Free Oil</u>	<u>100</u>			
<u>169'</u>	<u>OSMW</u>	<u>spots</u>	<u>85</u>	<u>15</u>	
	<u>Gas in pipe = 184'</u>	<u>100</u>			

Rec Total 194' BHT 119°F Gravity 37 API RW 217 @ 85 °F Chlorides 27,000 ppm

(A) Initial Hydrostatic <u>1997</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>8:57am</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>10:00am</u>
(C) First Final Flow <u>63</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>12:02pm</u>
(D) Initial Shut-In <u>255</u>	<input checked="" type="checkbox"/> Circ Sub <u>n/c</u>	T-Pulled <u>4:02pm</u>
(E) Second Initial Flow <u>68</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>6:57pm</u>
(F) Second Final Flow <u>104</u>	<input checked="" type="checkbox"/> Mileage <u>46 R/T</u> 71.30	Comments
(G) Final Shut-In <u>248</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1964</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>1646.30</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1646.30</u>	

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

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55216**

Well Name & No. Alex #2-23 Test No. 3 Date 4-27-14
 Company Martin Drilling Co., Inc. Elevation 2925 KB 2920 GL
 Address 250 N. Water, Ste 300 Wichita Ks 67202
 Co. Rep / Geo. Bob Stolzle Rig Martin #7
 Location: Sec. 23 Twp. 4S Rge. 31W Co. Rawlins State Ks

Interval Tested 4070 - 4170 Zone Tested H, I, J
 Anchor Length 100' Drill Pipe Run 3998.20 Mud Wt. 9.2
 Top Packer Depth 4065 Drill Collars Run 62.69' Vis 55
 Bottom Packer Depth 4070 Wt. Pipe Run 0 WL 7.2
 Total Depth 4170 Chlorides 2,000 ppm System LCM 4#

Blow Description IF - Surface blow built up to 8"
ISI - No return
FF - Surface blow built to bottom of bucket in 23 mins.
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>92'</u>	<u>Free Oil</u>	<u>100</u>			
<u>65'</u>	<u>OCM</u>	<u>30</u>		<u>70</u>	
	<u>473' Gas in Pipe</u>	<u>100</u>			

Rec Total 157' BHT 120°F Gravity 32 @ 60°F API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 2026 Test 1250 T-On Location 10:45 am
 (B) First Initial Flow 20 Jars T-Started 11:09 am
 (C) First Final Flow 43 Safety Joint 75 T-Open 1:08 pm
 (D) Initial Shut-In 407 Circ Sub N/C T-Pulled 5:08 pm
 (E) Second Initial Flow 48 Hourly Standby T-Out 6:52 pm
 (F) Second Final Flow 74 Mileage 46 R/T 142.60 Comments Picked up tool 4-28-14
 (G) Final Shut-In 401 Sampler on location 11:30 pm left
 (H) Final Hydrostatic 1931 Straddle at 12:36 am 4-29-14
 Ruined Shale Packer
 Ruined Packer

Initial Open 30 Extra Packer Extra Copies
 Initial Shut-In 60 Extra Recorder Sub Total 800
 Final Flow 60 Day Standby 1d 4.5h Total 2267.60
 Final Shut-In 90 Accessibility MP/DST Disc't
 Sub Total 1467.60

Approved By Our Representative *[Signature]*

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