



DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS. 67202

ATTN: Saman ShariFaie

Abell Ranch #2-25

25-12s-31w Gove,KS

Start Date: 2013.10.05 @ 21:26:00

End Date: 2013.10.06 @ 05:33:54

Job Ticket #: 49052 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.15 @ 10:38:25

Murfin Drilling Co. Inc
25-12s-31w Gove,KS
Abell Ranch #2-25
DST # 1
LeCompton
2013.10.05



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49052

DST#: 1

ATTN: Saman ShariFaie

Test Start: 2013.10.05 @ 21:26:00

GENERAL INFORMATION:

Formation: **LeCompton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:23:55

Time Test Ended: 05:33:54

Test Type: Conventional Bottom Hole (Initial)

Tester: Will MacLean

Unit No: 58

Interval: 3788.00 ft (KB) To 3857.00 ft (KB) (TVD)

Reference Elevations: 2885.00 ft (KB)

Total Depth: 3857.00 ft (KB) (TVD)

2874.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8674 Inside

Press @ Run Depth: 176.78 psig @ 3790.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.05

End Date:

2013.10.06

Last Calib.:

2013.10.06

Start Time:

21:26:00

End Time:

05:33:54

Time On Btm:

2013.10.05 @ 23:23:40

Time Off Btm:

2013.10.06 @ 03:25:54

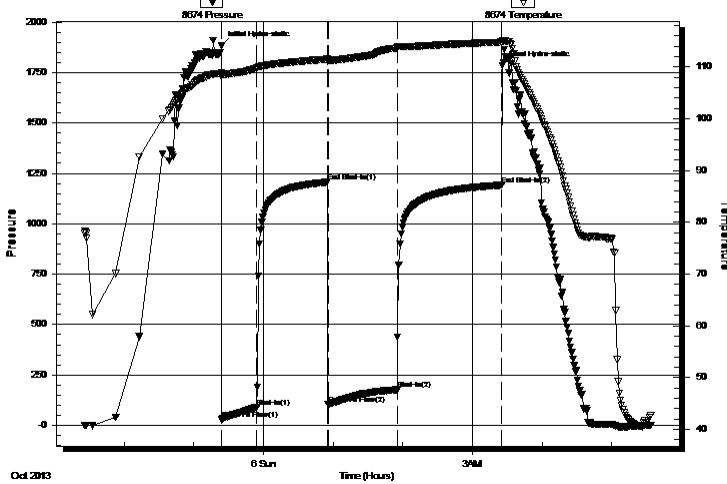
TEST COMMENT: IF- Weak Surface Blow Built to 5"

IS- No Blow

FF- Weak Surface Blow Built to 7"

FS- No Blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1882.10	108.85	Initial Hydro-static
1	30.23	108.18	Open To Flow (1)
31	89.78	109.74	Shut-In(1)
92	1206.86	111.50	End Shut-In(1)
93	103.44	111.16	Open To Flow (2)
152	176.78	113.66	Shut-In(2)
242	1192.11	114.79	End Shut-In(2)
243	1785.42	115.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	WGOCM 2%w 3%g 3%oil 92%m	0.61
124.00	OCM 3%oil 97%m	0.61
72.00	100%m w with Skim of Oil on Top	0.74

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49052

DST#: 1

ATTN: Saman ShariFaie

Test Start: 2013.10.05 @ 21:26:00

Tool Information

Drill Pipe:	Length: 3490.00 ft	Diameter: 3.80 inches	Volume: 48.96 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	28000.00 lb
Drill Collar:	Length: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose:	8000.00 lb
			<u>Total Volume: 50.33 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial	68000.00 lb
Depth to Top Packer:	3788.00 ft			Final	68000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	69.00 ft				
Tool Length:	97.00 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			3761.00	
Shut In Tool	5.00			3766.00	
Hydraulic tool	5.00			3771.00	
Jars	5.00			3776.00	
Safety Joint	3.00			3779.00	
Packer	5.00			3784.00	28.00 Bottom Of Top Packer
Packer	4.00			3788.00	
Stubb	1.00			3789.00	
Perforations	1.00			3790.00	
Recorder	0.00	8355	Outside	3790.00	
Recorder	0.00	8674	Inside	3790.00	
Perforations	25.00			3815.00	
Change Over Sub	1.00			3816.00	
Drill Pipe	31.00			3847.00	
Change Over Sub	1.00			3848.00	
Perforations	4.00			3852.00	
Bullnose	5.00			3857.00	69.00 Bottom Packers & Anchor
Total Tool Length:	97.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49052

DST#: 1

ATTN: Saman ShariFaie

Test Start: 2013.10.05 @ 21:26:00

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: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.70 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
124.00	WGOCM 2%w 3%g 3%oil 92%m	0.610
124.00	OCM 3%oil 97%m	0.610
72.00	100%m with Skim of Oil on Top	0.737

Total Length: 320.00 ft

Total Volume: 1.957 bbl

Num Fluid Samples: 0

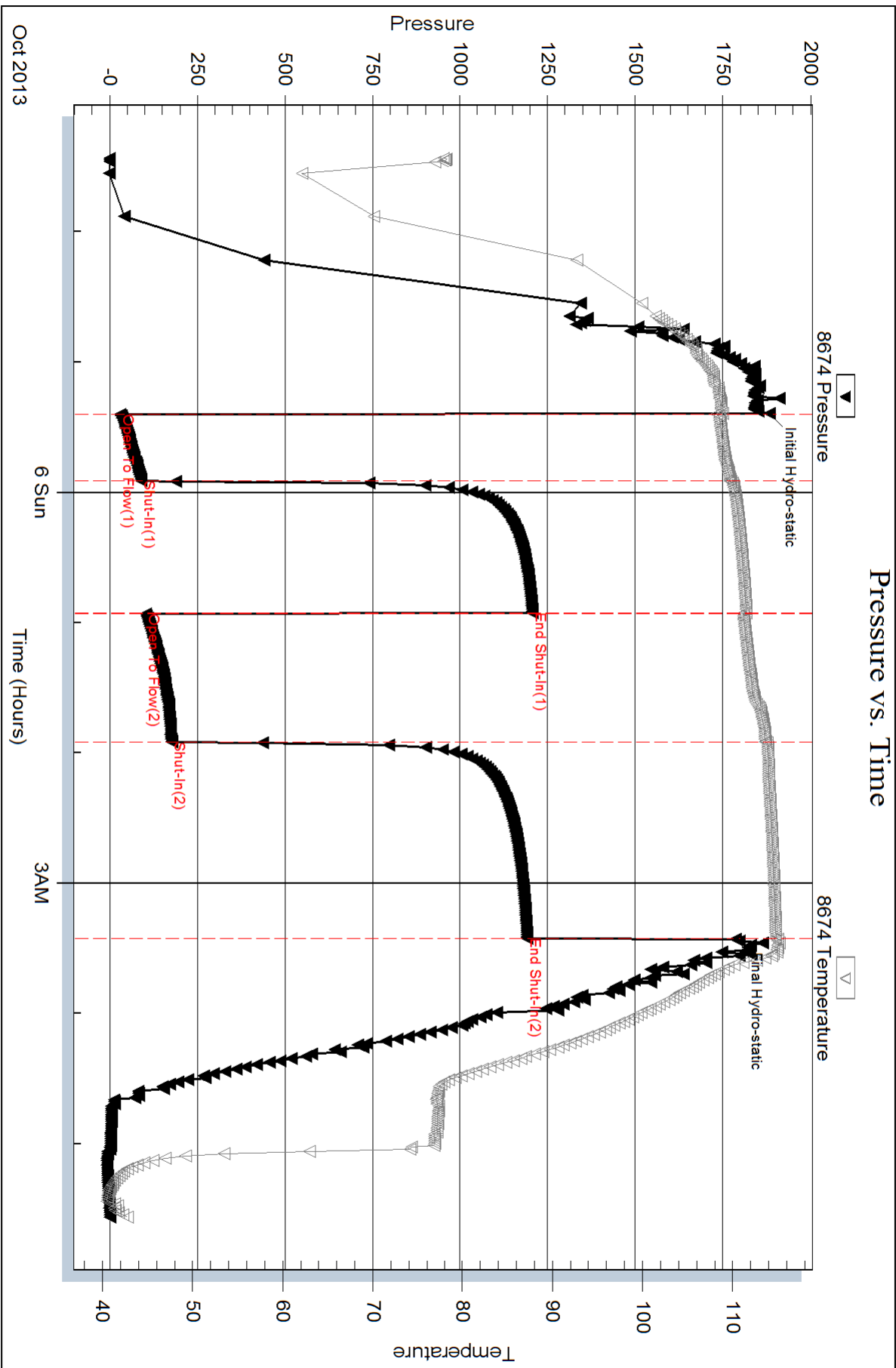
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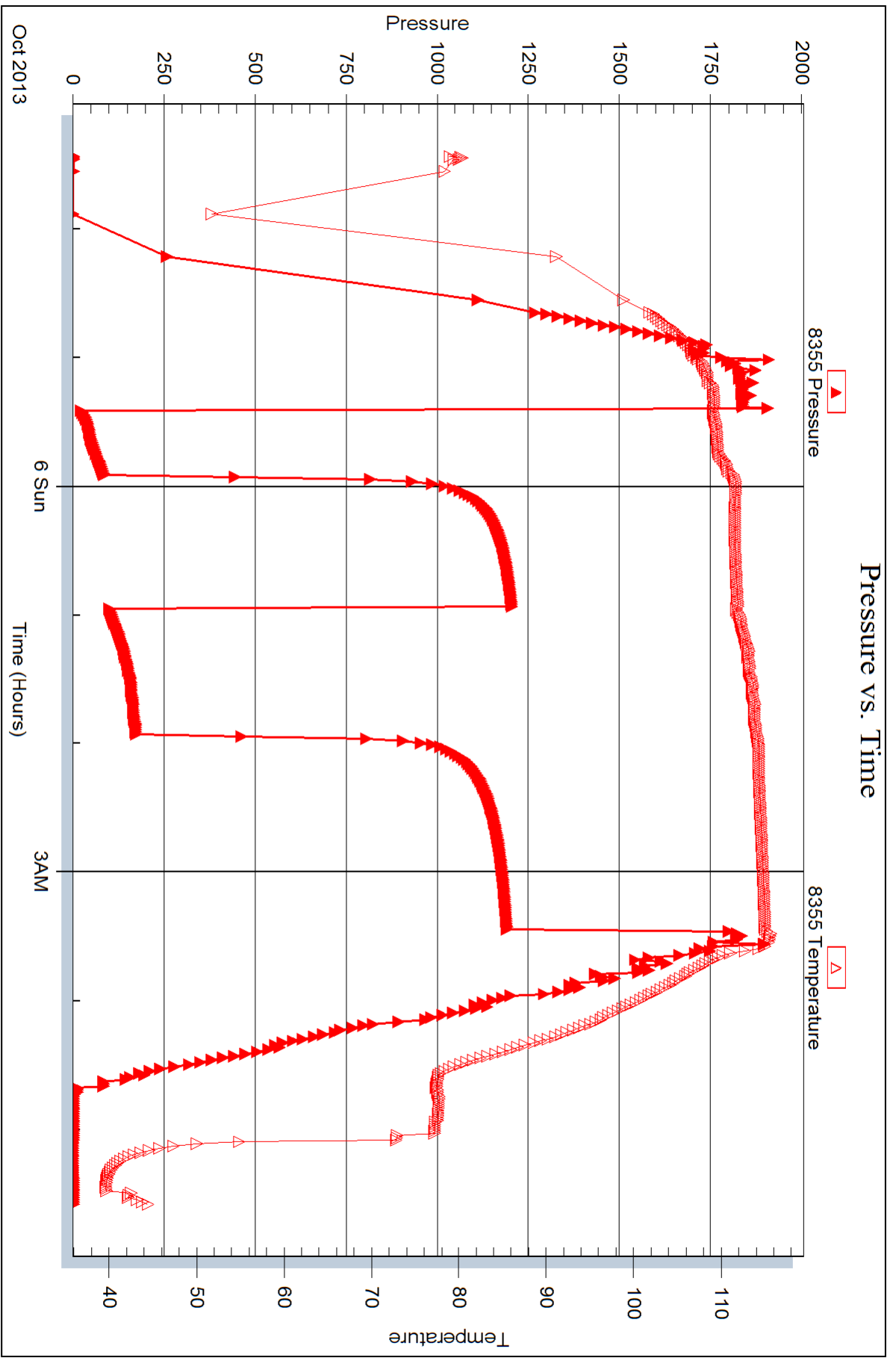
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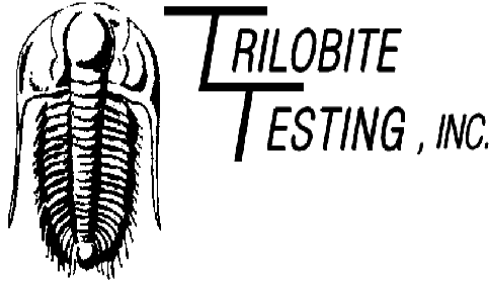
Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS. 67202

ATTN: Saman ShariFaie

Abell Ranch #2-25

25-12s-31w Gove,KS

Start Date: 2013.10.06 @ 18:58:00

End Date: 2013.10.07 @ 01:47:39

Job Ticket #: 49053 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.15 @ 10:38:02



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49053

DST#: 2

ATTN: Saman ShariFaie

Test Start: 2013.10.06 @ 18:58:00

GENERAL INFORMATION:

Formation: **Toronto / LKC " A-B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:46:55

Time Test Ended: 01:47:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 3896.00 ft (KB) To 3990.00 ft (KB) (TVD)

Reference Elevations: 2885.00 ft (KB)

Total Depth: 3990.00 ft (KB) (TVD)

2874.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8674

Inside

Press @ Run Depth: 83.45 psig @ 3897.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.06

End Date:

2013.10.07

Last Calib.: 2013.10.07

Start Time: 18:58:00

End Time:

01:47:39

Time On Btm: 2013.10.06 @ 20:46:40

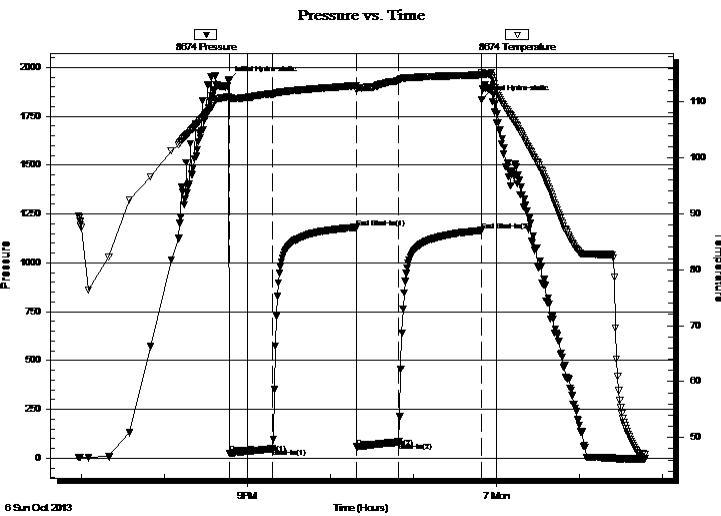
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TEST COMMENT: IF- Weak Surface Blow Built to 1 1/2"

IS- No Blow

FF- Weak Surface Blow Built to 1/4"

FS- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1933.65	110.97	Initial Hydro-static
1	23.42	110.29	Open To Flow (1)
32	48.26	111.36	Shut-In(1)
92	1181.63	112.89	End Shut-In(1)
93	57.54	112.09	Open To Flow (2)
123	83.45	113.82	Shut-In(2)
183	1165.85	114.82	End Shut-In(2)
183	1834.47	115.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	100% m with a Few Oil Spots in Tool	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

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49053

DST#: 2

ATTN: Saman ShariFaie

Test Start: 2013.10.06 @ 18:58:00

Tool Information

Drill Pipe:	Length: 3616.00 ft	Diameter: 3.80 inches	Volume: 50.72 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 18000.00 lb
			<u>Total Volume: 52.09 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	3896.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	94.00 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
Change Over Sub	1.00			3869.00	
Shut In Tool	5.00			3874.00	
Hydraulic tool	5.00			3879.00	
Jars	5.00			3884.00	
Safety Joint	3.00			3887.00	
Packer	5.00			3892.00	28.00 Bottom Of Top Packer
Packer	4.00			3896.00	
Stubb	1.00			3897.00	
Recorder	0.00	8355	Outside	3897.00	
Recorder	0.00	8674	Inside	3897.00	
Perforations	23.00			3920.00	
Change Over Sub	1.00			3921.00	
Drill Pipe	63.00			3984.00	
Change Over Sub	1.00			3985.00	
Bullnose	5.00			3990.00	94.00 Bottom Packers & Anchor

Total Tool Length: 122.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49053

DST#: 2

ATTN: Saman ShariFaie

Test Start: 2013.10.06 @ 18:58:00

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: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.92 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	100%m with a Few Oil Spots in Tool	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:

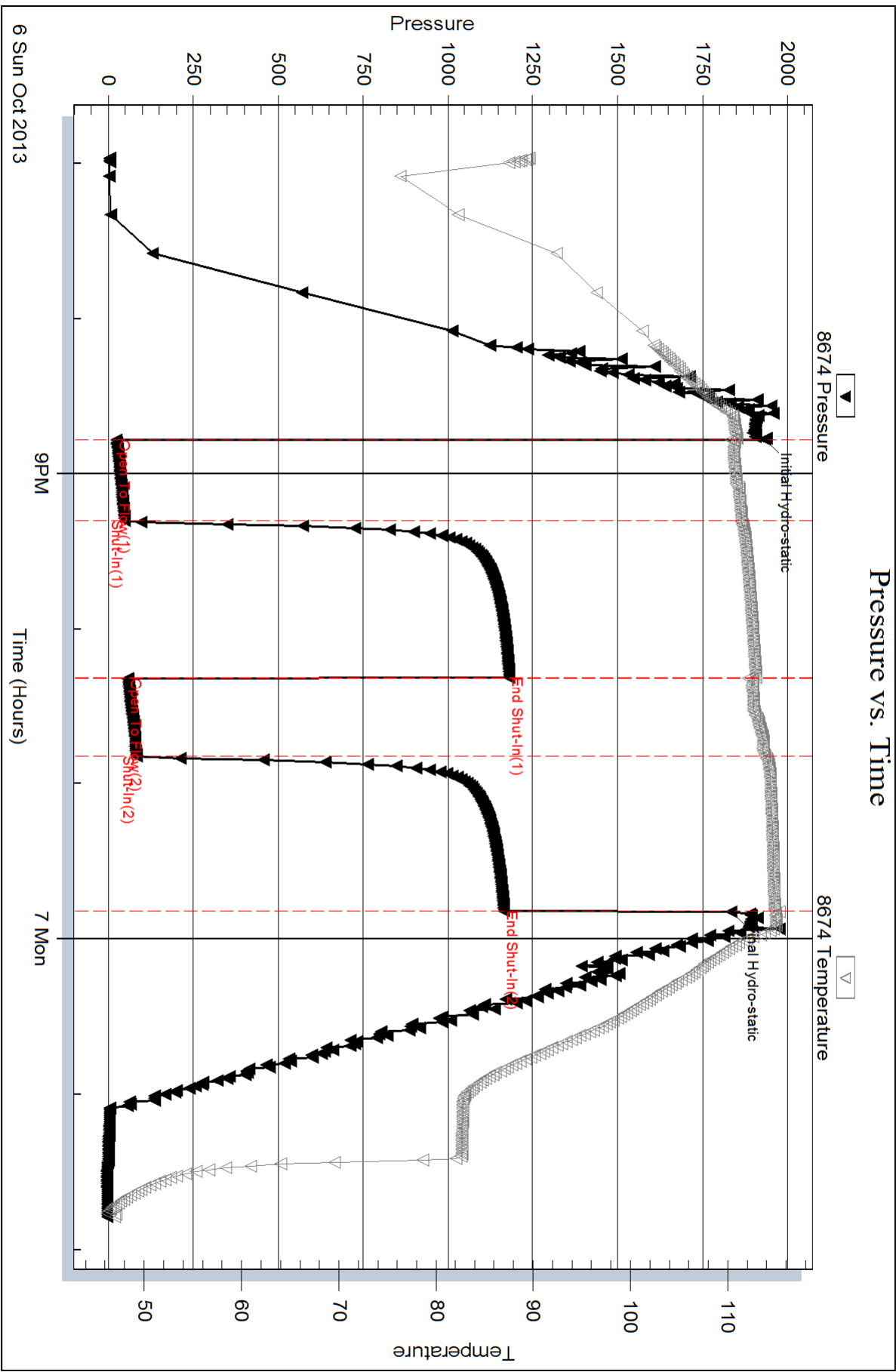
Serial #: 8674

Inside

Murfin Drilling Co. Inc

Abell Ranch #2-25

DST Test Number: 2

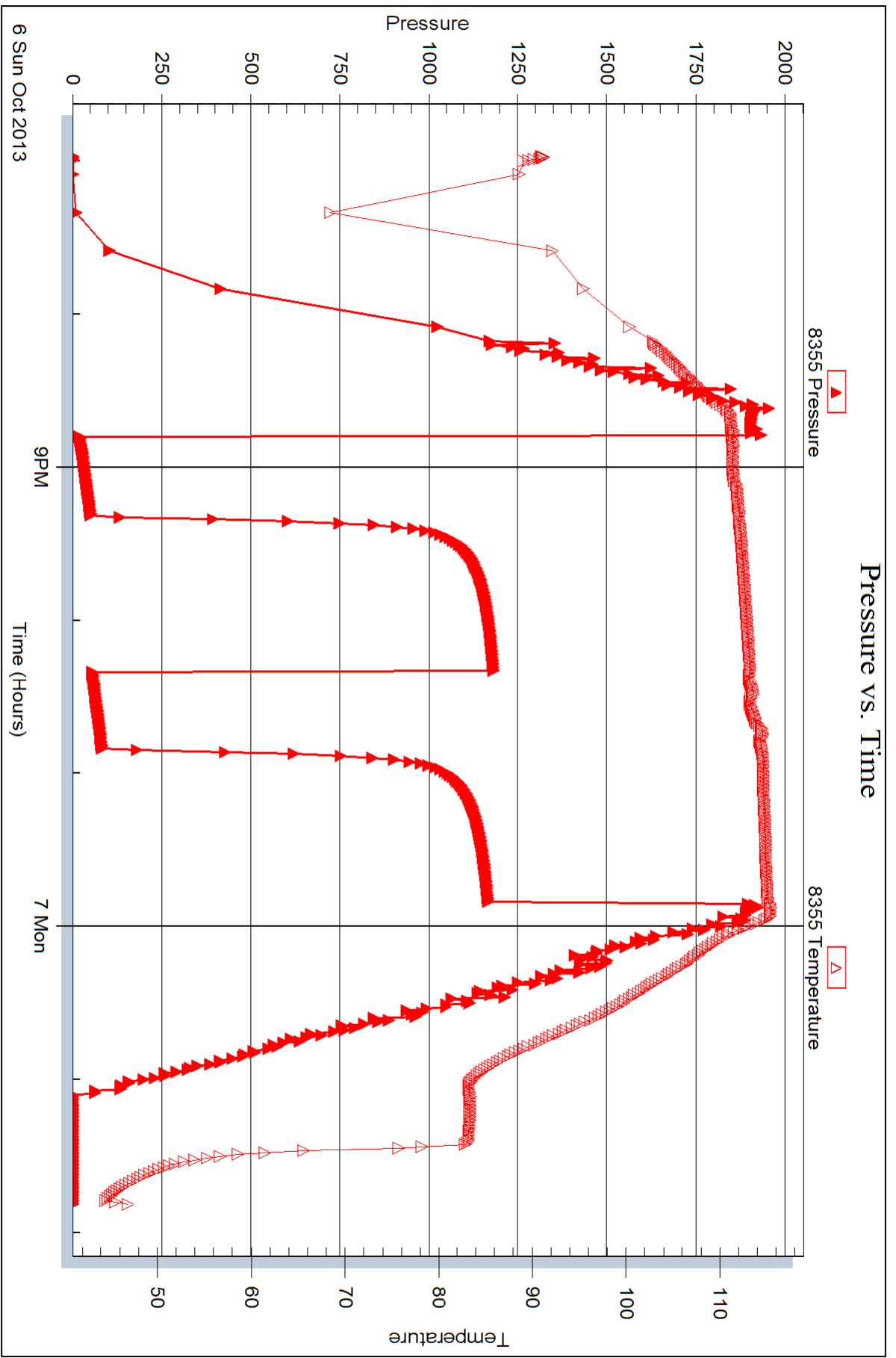


Serial #: 8355

Outside Murfin Drilling Co. Inc

Abell Ranch #2-25

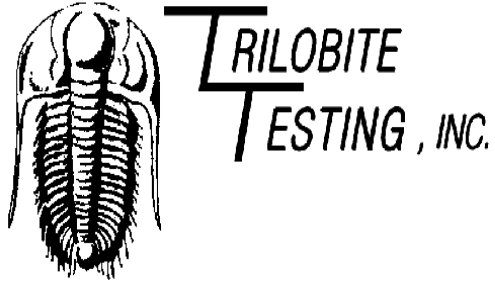
DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 49053

Printed: 2013.10.15 @ 10:38:04



DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS. 67202

ATTN: Saman ShariFaie

Abell Ranch #2-25

25-12s-31w Gove,KS

Start Date: 2013.10.07 @ 10:56:00

End Date: 2013.10.07 @ 17:46:54

Job Ticket #: 49054 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.15 @ 10:37:23



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49054

DST#: 3

ATTN: Saman ShariFaie

Test Start: 2013.10.07 @ 10:56:00

GENERAL INFORMATION:

Formation: **LKC " D - F "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:44:40

Time Test Ended: 17:46:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 3990.00 ft (KB) To 4041.00 ft (KB) (TVD)

Reference Elevations: 2885.00 ft (KB)

Total Depth: 4041.00 ft (KB) (TVD)

2874.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8674

Inside

Press @ Run Depth: 28.05 psig @ 3991.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.07

End Date:

2013.10.07

Last Calib.: 2013.10.07

Start Time: 10:56:00

End Time:

17:46:54

Time On Btm: 2013.10.07 @ 12:44:25

Time Off Btm: 2013.10.07 @ 15:48:09

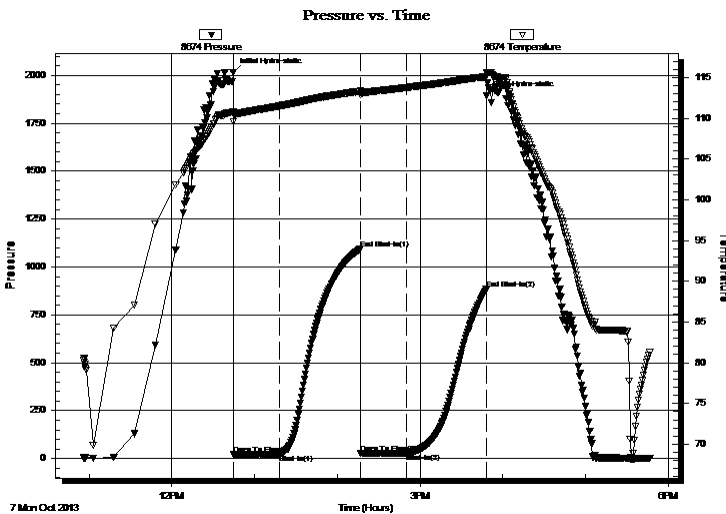
TEST COMMENT: IF- Weak Surface Blow 1/4"

IS- No Blow

FF- No Blow

FS- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2013.43	110.79	Initial Hydro-static
1	20.57	109.57	Open To Flow (1)
34	23.10	111.50	Shut-In(1)
93	1094.85	113.31	End Shut-In(1)
93	25.91	112.86	Open To Flow (2)
126	28.05	113.77	Shut-In(2)
184	882.88	115.10	End Shut-In(2)
184	1892.29	115.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% m with Oil Spots	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

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49054

DST#: 3

ATTN: Saman ShariFaie

Test Start: 2013.10.07 @ 10:56:00

Tool Information

Drill Pipe:	Length: 3710.00 ft	Diameter: 3.80 inches	Volume: 52.04 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 26000.00 lb
Drill Collar:	Length: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 10000.00 lb
			<u>Total Volume: 53.41 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	3990.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3963.00	
Shut In Tool	5.00			3968.00	
Hydraulic tool	5.00			3973.00	
Jars	5.00			3978.00	
Safety Joint	3.00			3981.00	
Packer	5.00			3986.00	28.00 Bottom Of Top Packer
Packer	4.00			3990.00	
Stubb	1.00			3991.00	
Recorder	0.00	8355	Outside	3991.00	
Recorder	0.00	8674	Inside	3991.00	
Perforations	12.00			4003.00	
Change Over Sub	1.00			4004.00	
Drill Pipe	31.00			4035.00	
Change Over Sub	1.00			4036.00	
Bullnose	5.00			4041.00	51.00 Bottom Packers & Anchor

Total Tool Length: 79.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49054

DST#: 3

ATTN: Saman ShariFaie

Test Start: 2013.10.07 @ 10:56:00

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: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.94 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	100% m with Oil Spots	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:

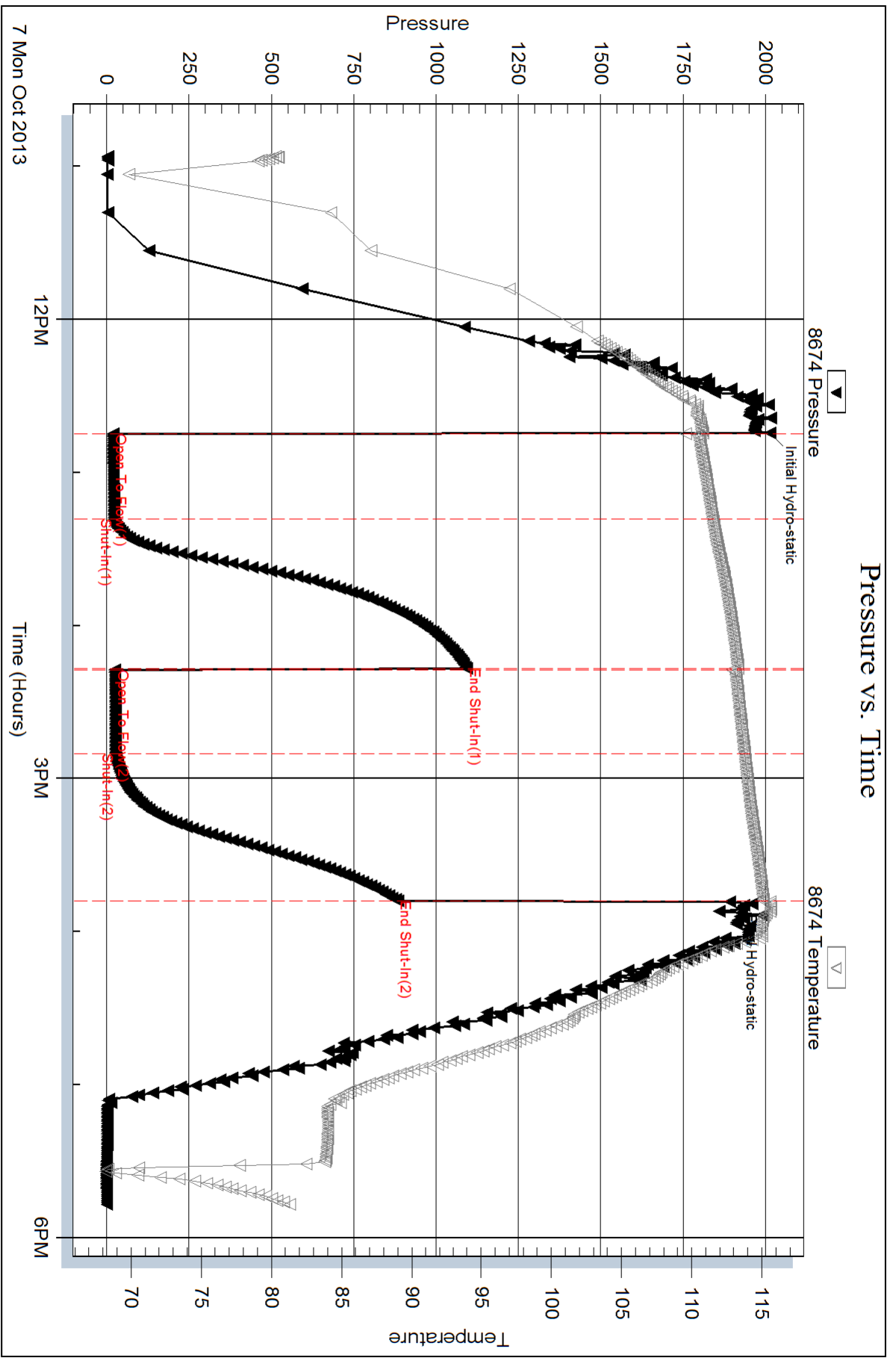
Serial #: 8674

Inside

Murfin Drilling Co. Inc

Abell Ranch #2-25

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 49054

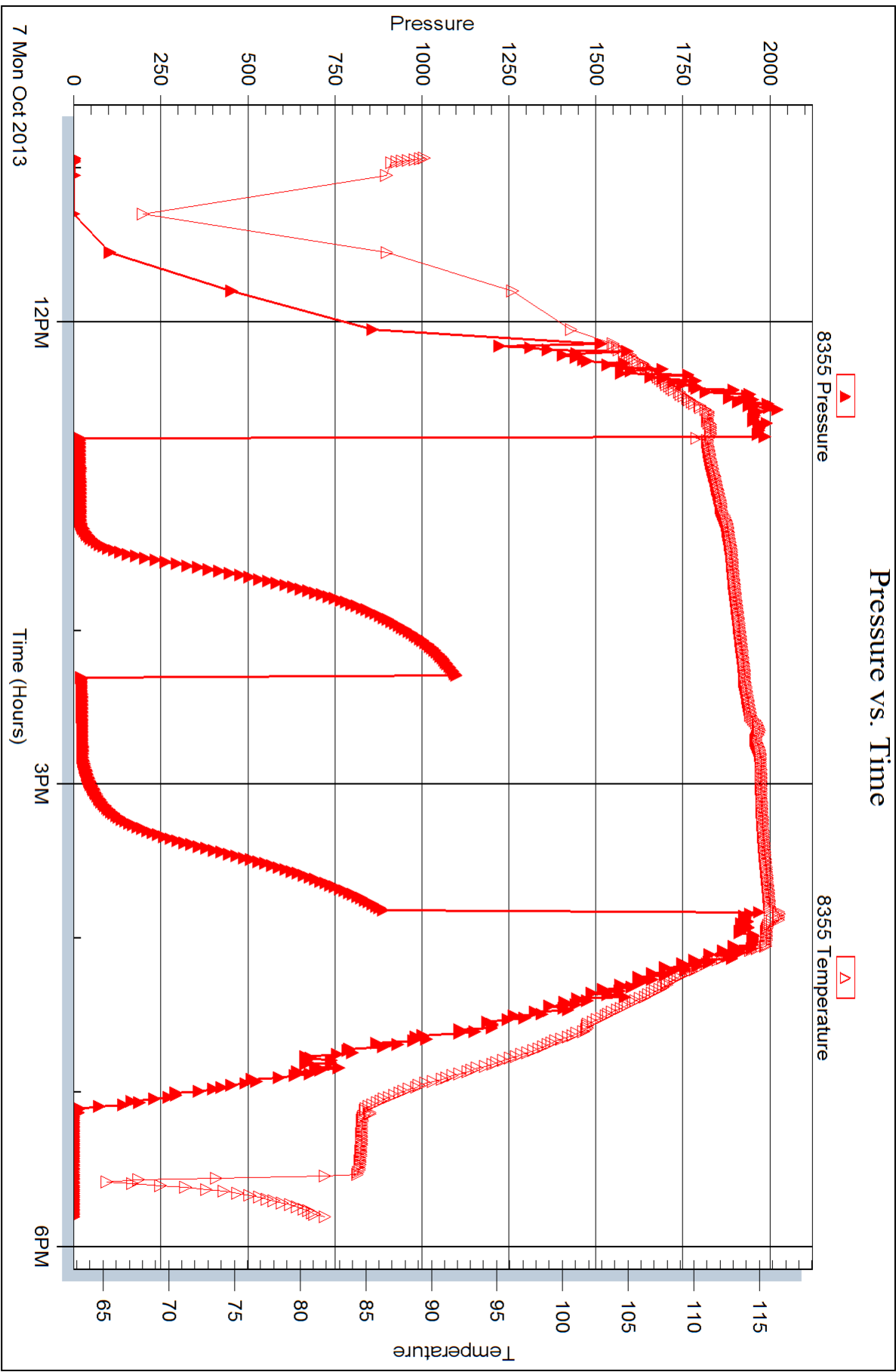
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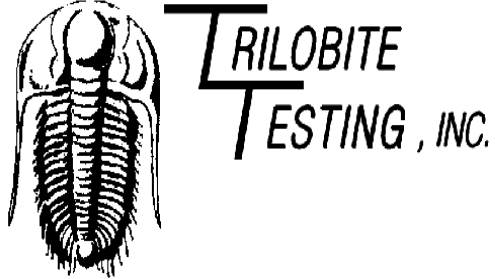
Serial #: 8355

Outside Murfin Drilling Co. Inc

Abell Ranch #2-25

DST Test Number: 3





DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS. 67202

ATTN: Saman ShariFaie

Abell Ranch #2-25

25-12s-31w Gove,KS

Start Date: 2013.10.08 @ 13:06:00

End Date: 2013.10.08 @ 21:36:54

Job Ticket #: 49055 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.15 @ 10:36:59



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49055

DST#: 4

ATTN: Saman ShariFaie

Test Start: 2013.10.08 @ 13:06:00

GENERAL INFORMATION:

Formation: **LKC " H - K "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:07:25

Time Test Ended: 21:36:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4080.00 ft (KB) To 4190.00 ft (KB) (TVD)

Reference Elevations: 2885.00 ft (KB)

Total Depth: 3857.00 ft (KB) (TVD)

2874.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8674

Inside

Press @ Run Depth: 260.94 psig @ 4081.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.08

End Date:

2013.10.08

Last Calib.: 2013.10.08

Start Time: 13:06:00

End Time:

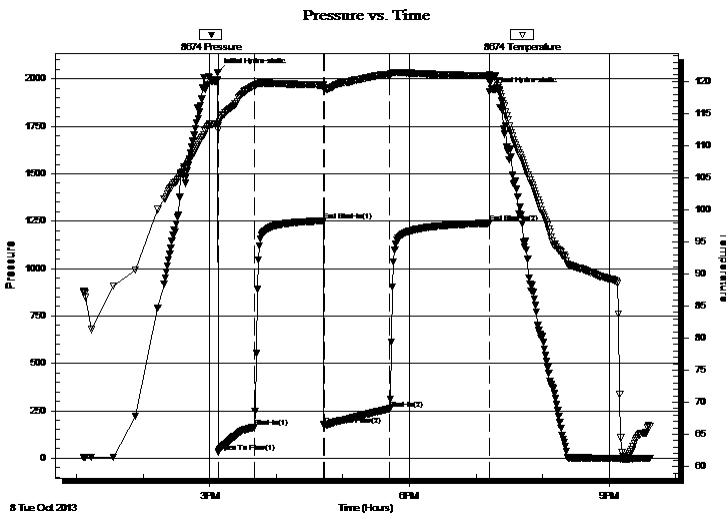
21:36:54

Time On Btm: 2013.10.08 @ 15:07:10

Time Off Btm: 2013.10.08 @ 19:12:09

TEST COMMENT: IF- Weak Surface Blow Built to BOB in 21 min
IS- No Blow
FF- Weak Surface Blow Built to BOB in 28 min
FS- Weak Surface Blow in 24 min Built to 2"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2034.53	113.48	Initial Hydro-static
1	31.92	112.42	Open To Flow (1)
33	163.56	119.26	Shut-In(1)
95	1251.99	119.41	End Shut-In(1)
96	175.36	118.92	Open To Flow (2)
155	260.94	121.10	Shut-In(2)
245	1239.63	120.85	End Shut-In(2)
245	1934.73	121.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	OGWCM 4%oil 12%g 22%w 62%m	0.91
124.00	WOGCM 3%w 5%oil 15%g 77%m	0.90
124.00	OMCG 11%oil 55%g 34%m	1.74
93.00	OGCM 3%oil 5%g 92%m	1.30
0.00	403' of 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

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49055

DST#: 4

ATTN: Saman ShariFaie

Test Start: 2013.10.08 @ 13:06:00

Tool Information

Drill Pipe:	Length: 3804.00 ft	Diameter: 3.80 inches	Volume: 53.36 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 14000.00 lb
			<u>Total Volume: 54.73 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4080.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	110.00 ft			
Tool Length:	138.00 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			4053.00	
Shut In Tool	5.00			4058.00	
Hydraulic tool	5.00			4063.00	
Jars	5.00			4068.00	
Safety Joint	3.00			4071.00	
Packer	5.00			4076.00	28.00 Bottom Of Top Packer
Packer	4.00			4080.00	
Stubb	1.00			4081.00	
Recorder	0.00	8355	Outside	4081.00	
Recorder	0.00	8674	Inside	4081.00	
Perforations	8.00			4089.00	
Change Over Sub	1.00			4090.00	
Drill Pipe	94.00			4184.00	
Change Over Sub	1.00			4185.00	
Bullnose	5.00			4190.00	110.00 Bottom Packers & Anchor

Total Tool Length: 138.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49055

DST#: 4

ATTN: Saman ShariFaie

Test Start: 2013.10.08 @ 13:06:00

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:

54000 ppm

Viscosity: 70.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.35 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
186.00	OGWCM 4%oil 12%g 22%w 62%m	0.915
124.00	WOGCM 3%w 5%oil 15%g 77%m	0.901
124.00	OMCG 11%oil 55%g 34%m	1.739
93.00	OGCM 3%oil 5%g 92%m	1.305
0.00	403' of GIP	0.000

Total Length: 527.00 ft Total Volume: 4.860 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW is .143 @ 67f = 54000

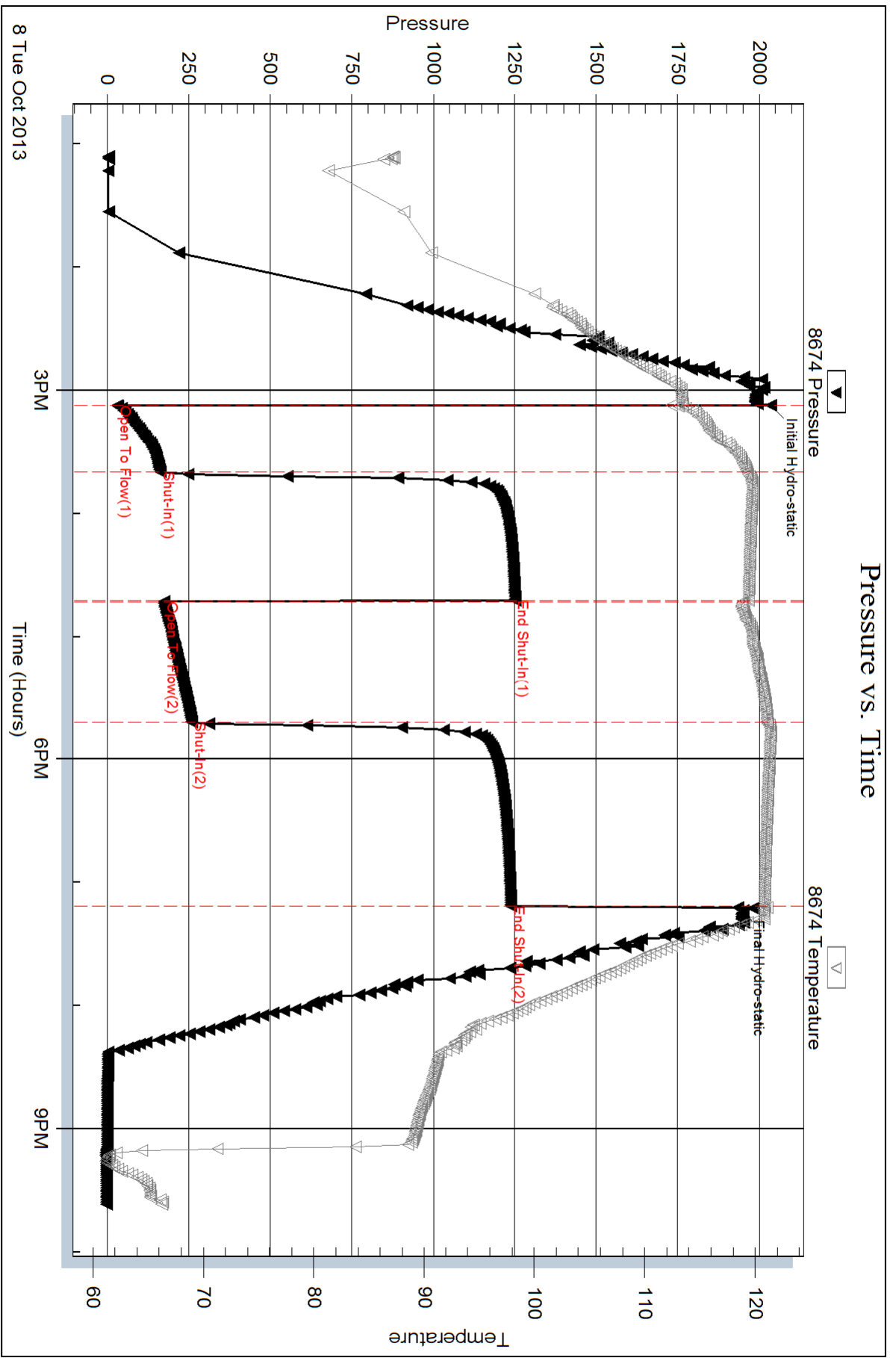
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Inside

Murfin Drilling Co. Inc

Abell Ranch #2-25

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 49055

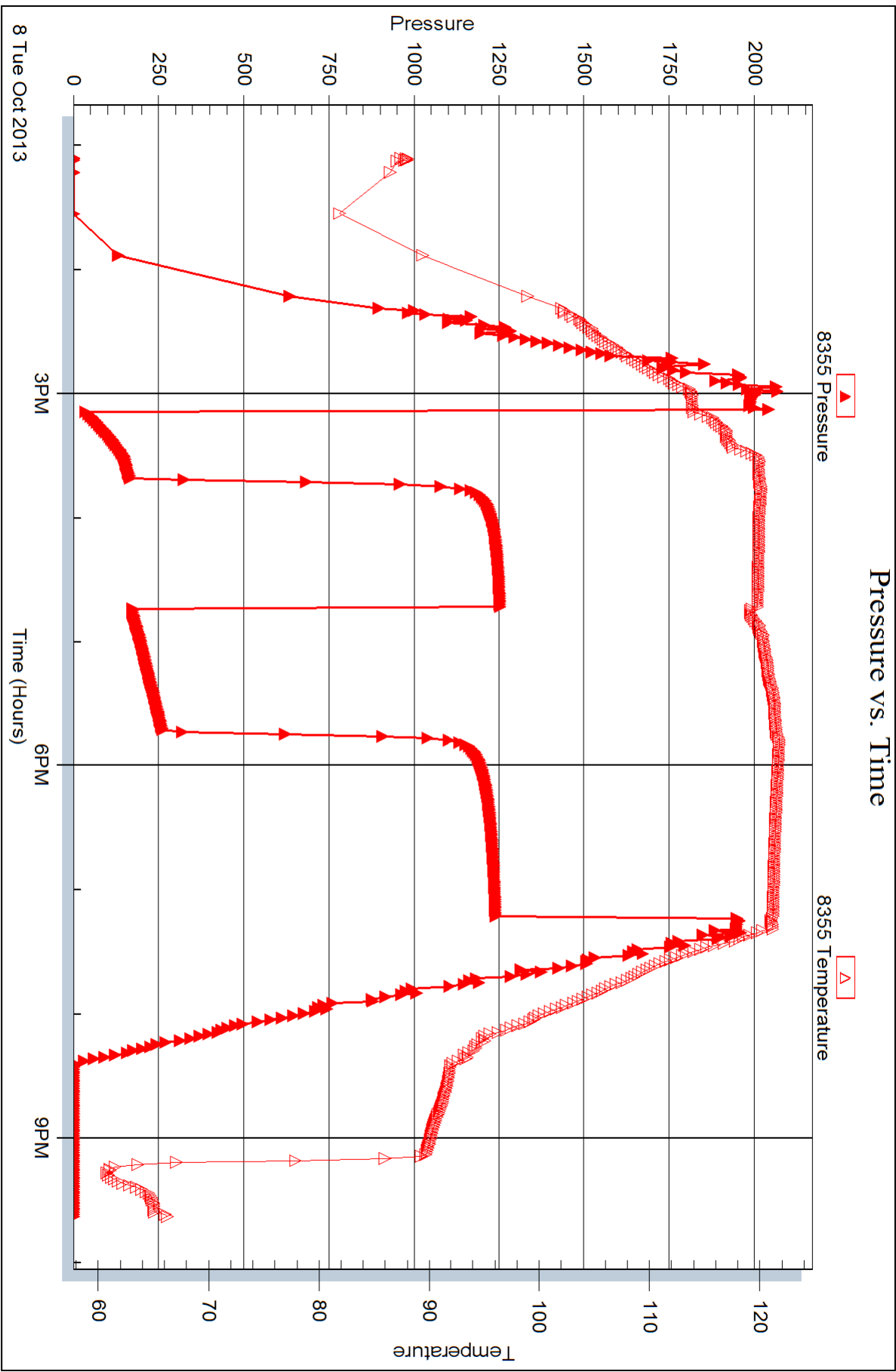
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Serial #: 8355

Outside Murfin Drilling Co. Inc

Abell Ranch #2-25

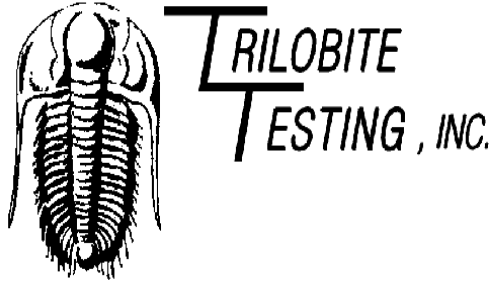
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Trilobite Testing, Inc

Ref. No: 49055

Printed: 2013.10.15 @ 10:37:01



DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS. 67202

ATTN: Saman ShariFaie

Abell Ranch #2-25

25-12s-31w Gove,KS

Start Date: 2013.10.09 @ 06:10:00

End Date: 2013.10.09 @ 14:10:09

Job Ticket #: 49056 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.15 @ 10:36:35

Murfin Drilling Co. Inc

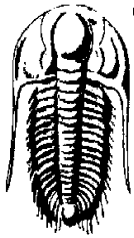
25-12s-31w Gove,KS

Abell Ranch #2-25

DST # 5

LKC " L " / X-Line

2013.10.09



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

ATTN: Saman ShariFaie

Job Ticket: 49056

DST#: 5

Test Start: 2013.10.09 @ 06:10:00

GENERAL INFORMATION:

Formation: **LKC " L " / X-Line**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:54:40

Time Test Ended: 14:10:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4196.00 ft (KB) To 4235.00 ft (KB) (TVD)

Reference Elevations: 2885.00 ft (KB)

Total Depth: 4235.00 ft (KB) (TVD)

2874.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8674

Inside

Press @ Run Depth: 283.88 psig @ 4197.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.09

End Date:

2013.10.09

Last Calib.:

2013.10.09

Start Time: 06:10:00

End Time:

14:10:09

Time On Btm:

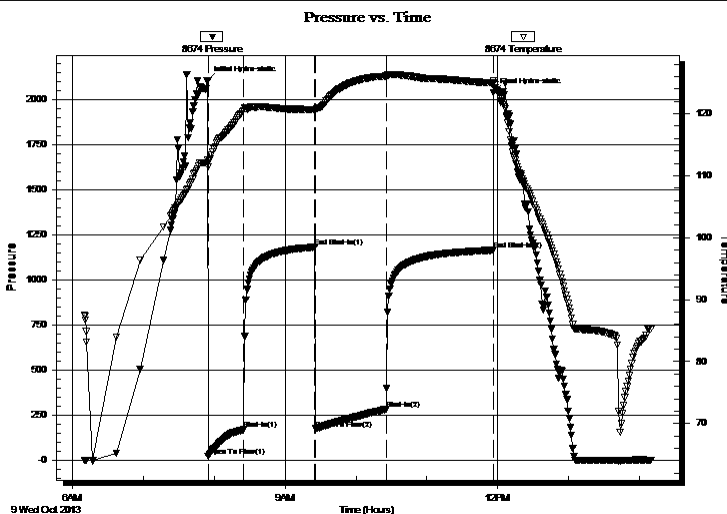
2013.10.09 @ 07:54:25

Time Off Btm:

2013.10.09 @ 11:56:39

TEST COMMENT: IF- Weak Surface Blow Built to BOB in 24 1/4 min
IS- No Blow
FF- Weak Surface Blow Built to BOB in 34 min
FS- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2106.13	112.60	Initial Hydro-static
1	24.05	111.45	Open To Flow (1)
31	170.20	120.57	Shut-In(1)
91	1183.20	120.68	End Shut-In(1)
92	174.98	120.50	Open To Flow (2)
151	283.88	126.07	Shut-In(2)
242	1166.72	124.96	End Shut-In(2)
243	2042.38	125.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	MCW 34%m 66%w with Few Oil Spots	1.22
186.00	MCW 48%m 52%w	2.34
62.00	WCM 21%w 79%m	0.87
77.00	WCM 18%w 82%m	1.08

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

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49056

DST#: 5

ATTN: Saman ShariFaie

Test Start: 2013.10.09 @ 06:10:00

Tool Information

Drill Pipe:	Length: 3898.00 ft	Diameter: 3.80 inches	Volume: 54.68 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 14000.00 lb
			<u>Total Volume: 56.05 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4196.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 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
Change Over Sub	1.00			4169.00	
Shut In Tool	5.00			4174.00	
Hydraulic tool	5.00			4179.00	
Jars	5.00			4184.00	
Safety Joint	3.00			4187.00	
Packer	5.00			4192.00	28.00 Bottom Of Top Packer
Packer	4.00			4196.00	
Stubb	1.00			4197.00	
Recorder	0.00	8355	Outside	4197.00	
Recorder	0.00	8674	Inside	4197.00	
Perforations	33.00			4230.00	
Bullnose	5.00			4235.00	39.00 Bottom Packers & Anchor

Total Tool Length: 67.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49056

DST#: 5

ATTN: Saman ShariFaie

Test Start: 2013.10.09 @ 06:10:00

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:

57000 ppm

Viscosity: 70.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.36 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
248.00	MCW 34%m 66%w with Few Oil Spots in	1.220
186.00	MCW 48%m 52%w	2.336
62.00	WCM 21%w 79%m	0.870
77.00	WCM 18%w 82%m	1.080

Total Length: 573.00 ft Total Volume: 5.506 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW is .104 @ 83f = 57000

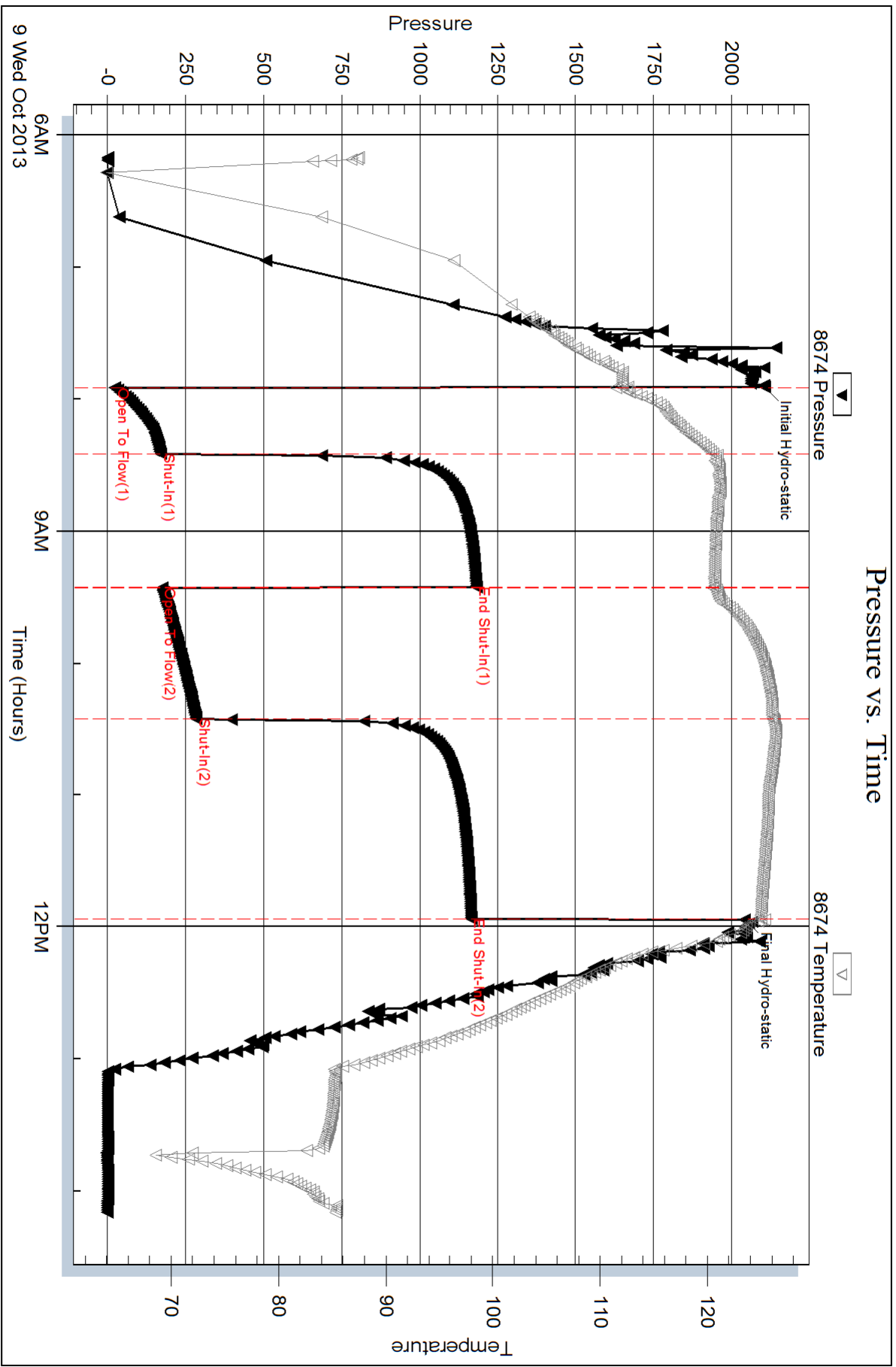
Serial #: 8674

Inside

Murfin Drilling Co. Inc

Abell Ranch #2-25

DST Test Number: 5

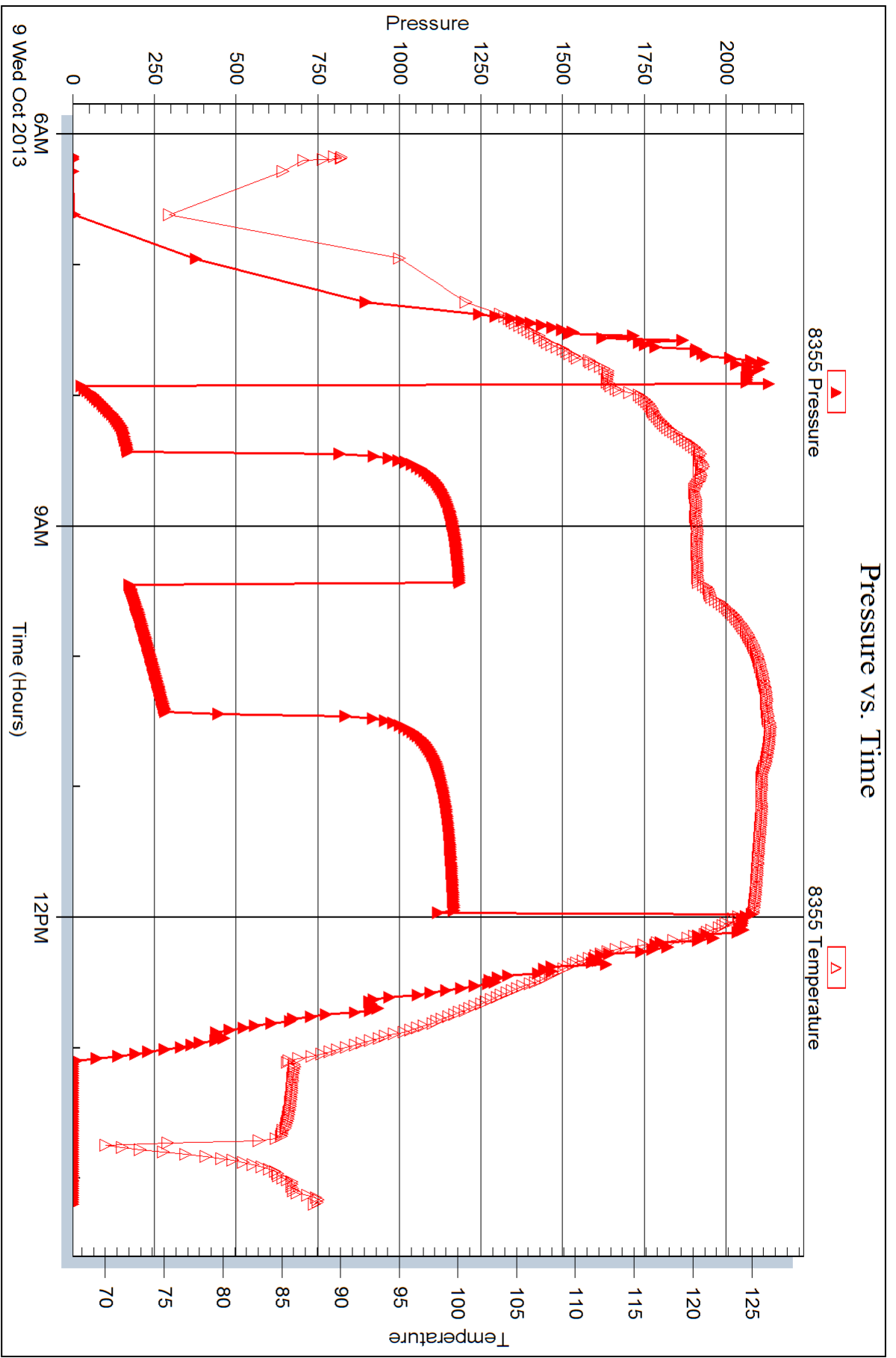


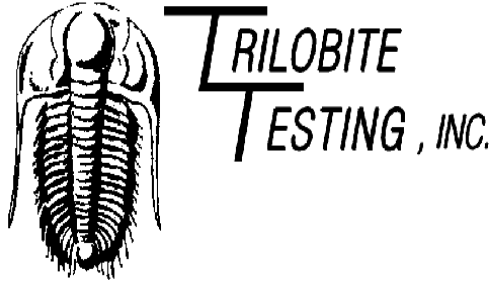
Serial #: 8355

Outside Murfin Drilling Co. Inc

Abell Ranch #2-25

DST Test Number: 5





DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS. 67202

ATTN: Saman ShariFaie

Abell Ranch #2-25

25-12s-31w Gove,KS

Start Date: 2013.10.10 @ 19:24:00

End Date: 2013.10.11 @ 07:14:55

Job Ticket #: 49057 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.15 @ 10:31:32



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49057

DST#: 6

ATTN: Saman ShariFaie

Test Start: 2013.10.10 @ 19:24:00

GENERAL INFORMATION:

Formation: **L Pawnee - Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:33:10

Time Test Ended: 07:14:55

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4365.00 ft (KB) To 4500.00 ft (KB) (TVD)

Reference Elevations: 2885.00 ft (KB)

Total Depth: 4500.00 ft (KB) (TVD)

2874.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8674

Inside

Press @ Run Depth: 799.93 psig @ 4366.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.10

End Date:

2013.10.11

Last Calib.:

2013.10.11

Start Time: 19:24:00

End Time:

07:14:55

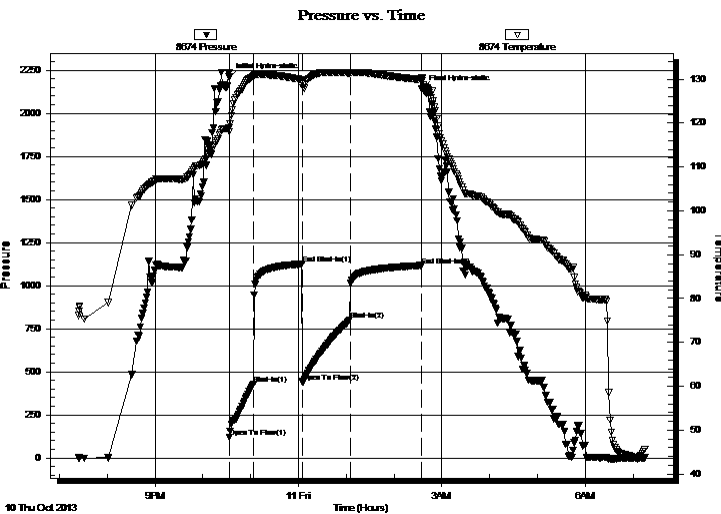
Time On Btm:

2013.10.10 @ 22:32:55

Time Off Btm:

2013.10.11 @ 02:34:54

TEST COMMENT: IF- Surface Blow Built to BOB in 2 1/4 min
 IS- Weak Surface Blow Built to BOB in 3 1/2 min (Gas to Surface in 40 min)
 FF- Surface Blow Built to BOB in 2 3/4 min (Gas to Weak to Guage)
 FS- Surface Blow Built to BOB in 2 1/2 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2209.65	118.83	Initial Hydro-static
1	118.15	118.06	Open To Flow (1)
31	425.61	130.63	Shut-In(1)
92	1125.86	129.86	End Shut-In(1)
92	438.57	129.28	Open To Flow (2)
152	799.93	131.35	Shut-In(2)
242	1116.25	129.87	End Shut-In(2)
242	2140.23	130.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
620.00	WGMCO 3%w 26%g 34%m 37%oil	6.16
372.00	MGCO 19%m 36%g 45%oil	5.22
248.00	MGCO 12%m 27%g 61%oil	3.48
682.00	MGCO 3%m 39%g 58%oil	9.57
268.00	GO 22%g 78%oil	3.76
0.00	2062 of 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

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49057

DST#: 6

ATTN: Saman ShariFaie

Test Start: 2013.10.10 @ 19:24:00

Tool Information

Drill Pipe:	Length: 4085.00 ft	Diameter: 3.80 inches	Volume: 57.30 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 16000.00 lb
			<u>Total Volume: 58.67 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4365.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	135.00 ft			
Tool Length:	163.00 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			4338.00	
Shut In Tool	5.00			4343.00	
Hydraulic tool	5.00			4348.00	
Jars	5.00			4353.00	
Safety Joint	3.00			4356.00	
Packer	5.00			4361.00	28.00 Bottom Of Top Packer
Packer	4.00			4365.00	
Stubb	1.00			4366.00	
Recorder	0.00	8355	Outside	4366.00	
Recorder	0.00	8674	Inside	4366.00	
Perforations	29.00			4395.00	
Change Over Sub	1.00			4396.00	
Drill Pipe	95.00			4491.00	
Change Over Sub	1.00			4492.00	
Perforations	3.00			4495.00	
Bullnose	5.00			4500.00	135.00 Bottom Packers & Anchor
Total Tool Length:	163.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49057

DST#: 6

ATTN: Saman ShariFaie

Test Start: 2013.10.10 @ 19:24:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2100.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
620.00	WGMCO 3%w 26%g 34%m 37%oil	6.165
372.00	MGCO 19%m 36%g 45%oil	5.218
248.00	MGCO 12%m 27%g 61%oil	3.479
682.00	MGCO 3%m 39%g 58%oil	9.567
268.00	GO 22%g 78%oil	3.759
0.00	2062 of GIP	0.000

Total Length: 2190.00 ft Total Volume: 28.188 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API is 36 @ 49f = 38

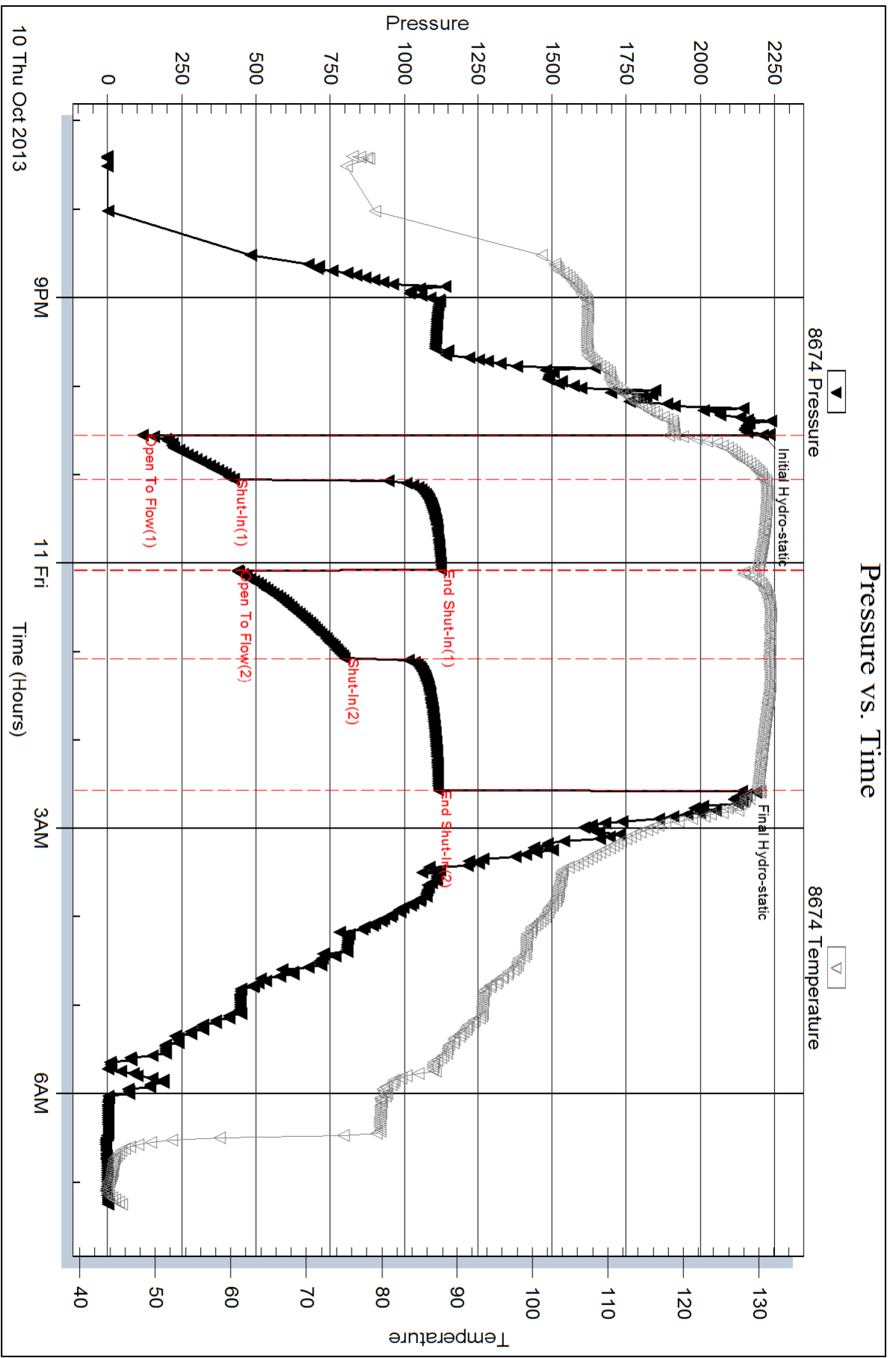
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Inside

Murfin Drilling Co. Inc

Abell Ranch #2-25

DST Test Number: 6

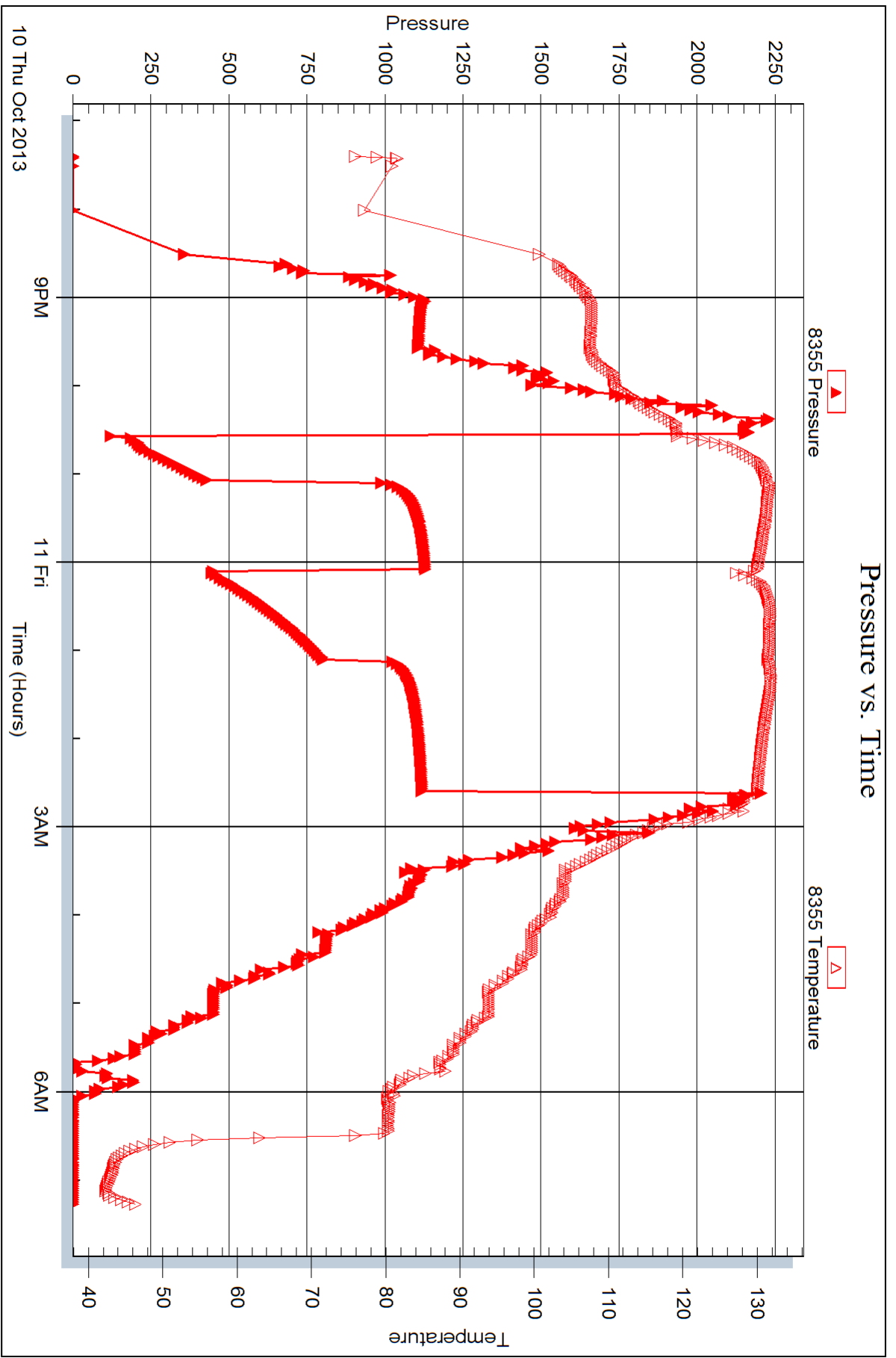


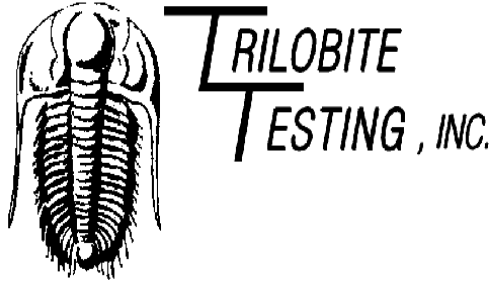
Serial #: 8355

Outside Murfin Drilling Co. Inc

Abell Ranch #2-25

DST Test Number: 6





DRILL STEM TEST REPORT

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

250 N. Water Ste 300
Wichita KS. 67202

ATTN: Saman ShariFaie

Abell Ranch #2-25

25-12s-31w Gove,KS

Start Date: 2013.10.11 @ 15:44:00

End Date: 2013.10.12 @ 00:30:10

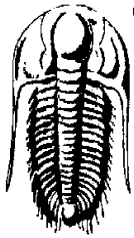
Job Ticket #: 49058 DST #: 7

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.15 @ 10:28:04



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49058

DST#: 7

ATTN: Saman ShariFaie

Test Start: 2013.10.11 @ 15:44:00

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:48:25

Time Test Ended: 00:30:10

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4512.00 ft (KB) To 4530.00 ft (KB) (TVD)

Reference Elevations: 2885.00 ft (KB)

Total Depth: 4530.00 ft (KB) (TVD)

2874.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8674 Inside

Press @ Run Depth: 102.15 psig @ 4515.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.11

End Date:

2013.10.12

Last Calib.: 2013.10.12

Start Time: 15:44:00

End Time:

00:30:10

Time On Btm: 2013.10.11 @ 17:48:10

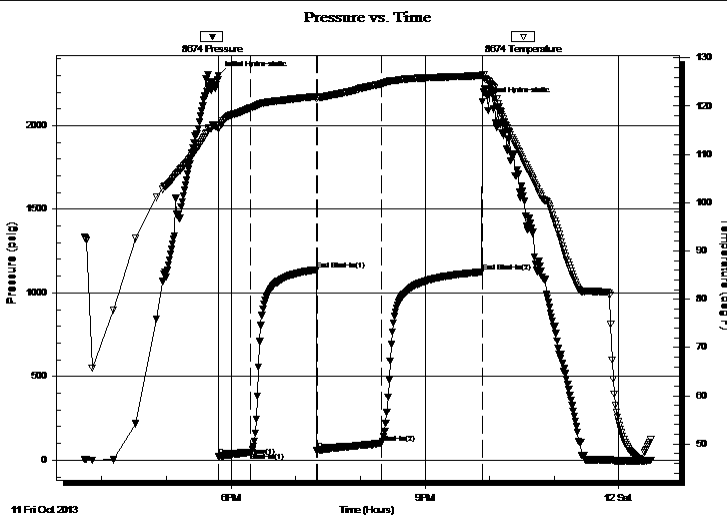
Time Off Btm: 2013.10.11 @ 21:53:39

TEST COMMENT: IF- Weak Surface Blow Built to 3"

IS- No Blow

FF- Weak Surface Blow Built to 4 1/4"

FS- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2299.13	116.15	Initial Hydro-static
1	22.21	115.24	Open To Flow (1)
31	47.50	119.64	Shut-In(1)
91	1138.62	122.01	End Shut-In(1)
93	58.90	121.76	Open To Flow (2)
152	102.15	124.66	Shut-In(2)
245	1124.94	126.32	End Shut-In(2)
246	2141.60	126.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	WGOCM 4%w 14%g 18%oil 64%m	0.30
62.00	WGMCO 2%w 20%g 29%m 49%oil	0.30
62.00	GMCO 24%g 35%m 41%oil	0.30
5.00	GOCM 3%g 39%oil 58%m	0.02
0.00	181' of 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

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49058

DST#: 7

ATTN: Saman ShariFaie

Test Start: 2013.10.11 @ 15:44:00

Tool Information

Drill Pipe:	Length: 4214.00 ft	Diameter: 3.80 inches	Volume: 59.11 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 278.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 12000.00 lb
			<u>Total Volume: 60.48 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4512.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	46.00 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			4485.00	
Shut In Tool	5.00			4490.00	
Hydraulic tool	5.00			4495.00	
Jars	5.00			4500.00	
Safety Joint	3.00			4503.00	
Packer	5.00			4508.00	28.00 Bottom Of Top Packer
Packer	4.00			4512.00	
Stubb	1.00			4513.00	
Perforations	2.00			4515.00	
Recorder	0.00	8355	Outside	4515.00	
Recorder	0.00	8674	Inside	4515.00	
Perforations	10.00			4525.00	
Bullnose	5.00			4530.00	18.00 Bottom Packers & Anchor

Total Tool Length: 46.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc

25-12s-31w Gove,KS

250 N. Water Ste 300
Wichita KS. 67202

Abell Ranch #2-25

Job Ticket: 49058

DST#: 7

ATTN: Saman ShariFaie

Test Start: 2013.10.11 @ 15:44:00

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: 75.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	WGOCM 4%w 14%g 18%oil 64%m	0.305
62.00	WGMCO 2%w 20%g 29%m 49%oil	0.305
62.00	GMCO 24%g 35%m 41%oil	0.305
5.00	GOCM 3%g 39%oil 58%m	0.025
0.00	181' of GIP	0.000

Total Length: 191.00 ft

Total Volume: 0.940 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

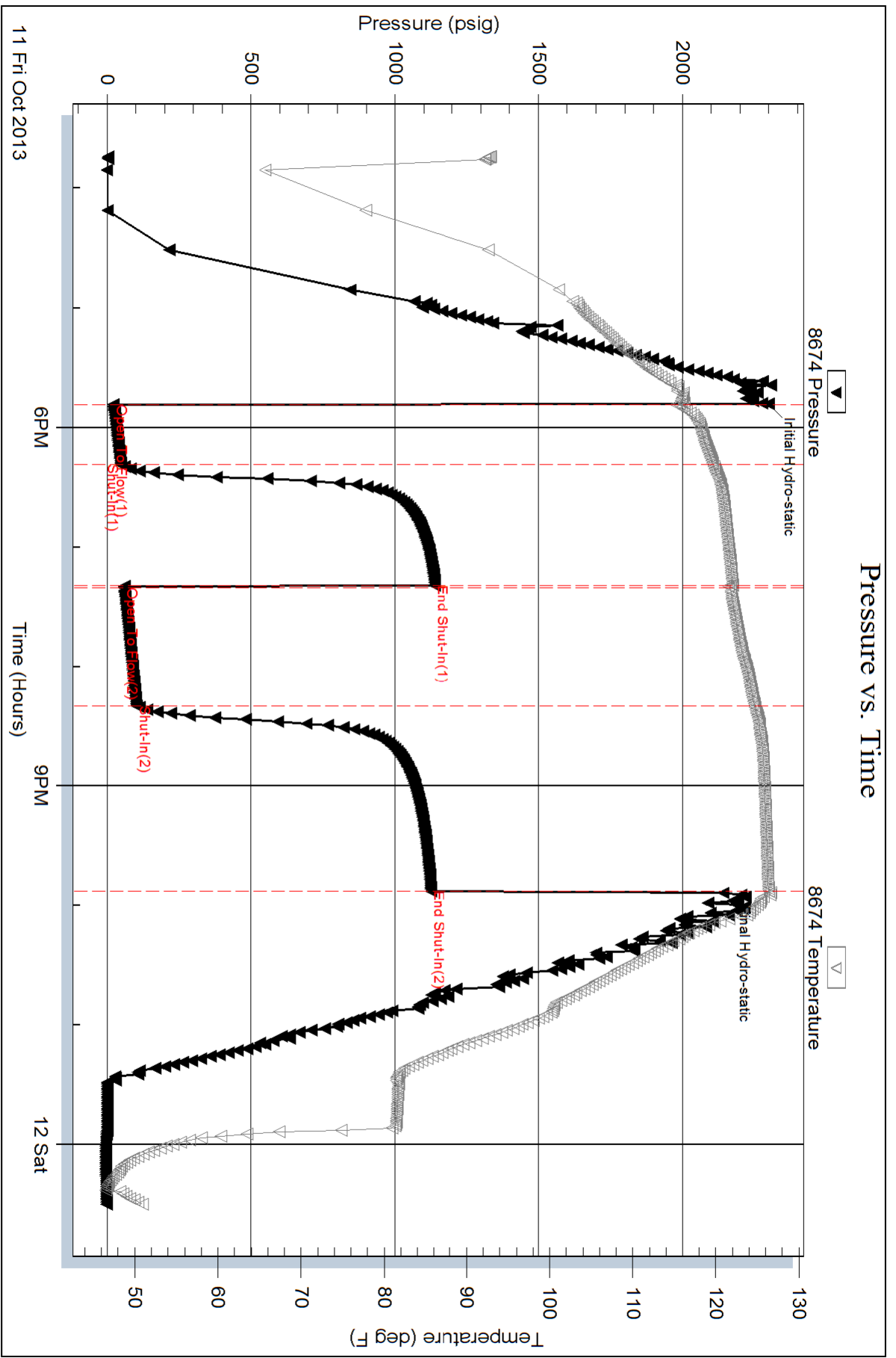
Serial #: 8674

Inside

Murfin Drilling Co. Inc

Abell Ranch #2-25

DST Test Number: 7

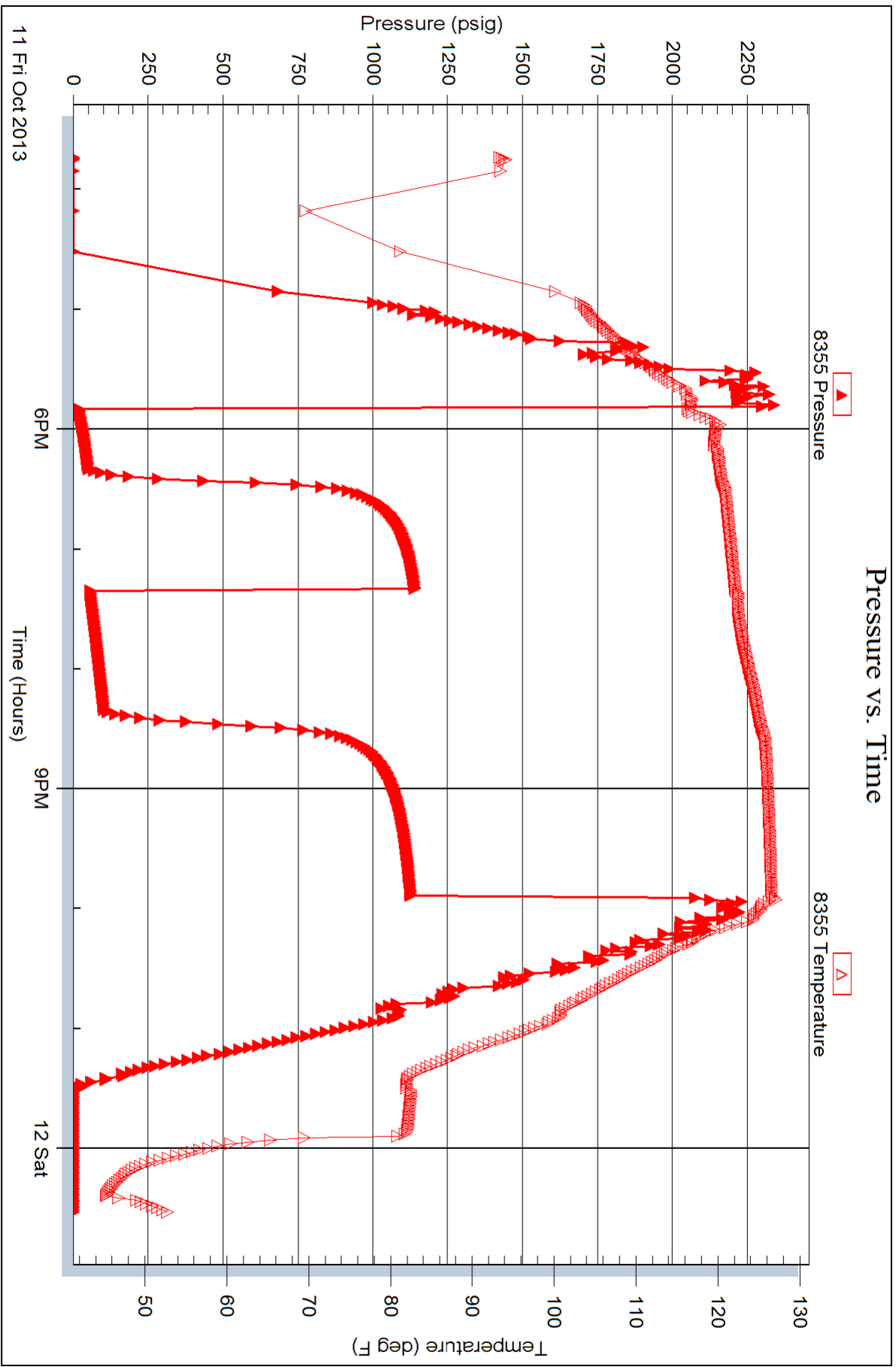


Serial #: 8355

Outside Murfin Drilling Co. Inc

Abell Ranch #2-25

DST Test Number: 7



Trilobite Testing, Inc

Ref. No: 49058

Printed: 2013.10.15 @ 10:28:06



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49052

Well Name & No. Abell Ranch #2-25 Test No. DST #1 Date 10-5-13
 Company Murfin Drilling Co Inc Elevation 2885 KB 2874 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Saman SharifAve Rig Murfin 21
 Location: Sec. 25 Twp. 12s Rge. 31w Co. Gove State KS

Interval Tested 3788-3857 Zone Tested LeCompton
 Anchor Length 69 Drill Pipe Run 3490 Mud Wt. 9.0
 Top Packer Depth 3784 Drill Collars Run 278 Vis 48
 Bottom Packer Depth 3788 Wt. Pipe Run 0 WL 6.8
 Total Depth 3857 Chlorides 1400 ppm System LCM 416
 Blow Description IF- Weak Surface Blow Built to 5"
ISI- No Blow
FF- Weak Surface Blow Built to 7"
FSI- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>72</u>	<u>Mud with a skin of 0.1</u>				
<u>124</u>	<u>OCM</u>		<u>3</u>		<u>97</u>
<u>124</u>	<u>WGOCM</u>	<u>3</u>	<u>3</u>	<u>2</u>	<u>92</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 320 BHT 114 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1882 Test 1150 T-On Location 19:58
 (B) First Initial Flow 30 Jars 250 T-Started 21:26
 (C) First Final Flow 89 Safety Joint 75 T-Open 23:23
 (D) Initial Shut-In 1206 Circ Sub N/C T-Pulled 3:25
 (E) Second Initial Flow 103 Hourly Standby _____ T-Out 5:33
 (F) Second Final Flow 176 Mileage 88 RIT 136.40 Comments _____
 (G) Final Shut-In 1192 Sampler _____
 (H) Final Hydrostatic 1785 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer 320
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1931.40
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 90 Sub Total 1611.40

Approved By _____ Our Representative Will Mas

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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49053

Well Name & No. Abell Ranch #2-25 Test No. DST #2 Date 10-6-13
 Company Murfin Drilling Co. Inc Elevation 2885 KB 2874 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin Rig 21
 Location: Sec. 25 Twp. 12S Rge. 31W Co. Gove State KS

Interval Tested 3896-3990 Zone Tested Toronto / LRC "A-B"
 Anchor Length 94 Drill Pipe Run _____ Mud Wt. 9.0
 Top Packer Depth 3892 Drill Collars Run 278 Vis 45
 Bottom Packer Depth 3896 Wt. Pipe Run 0 WL 6.0
 Total Depth 3990 Chlorides 1800 ppm System LCM 416

Blow Description IF- Weak Surface Blow Built to 1 1/2"
ISI- No Blow
FF- Weak Surface Blow Built to 1/4"
FSI- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>124</u>	<u>Mud a Few Oil Spots in Tool</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 114 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1933</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>18:30</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>18:58</u>
(C) First Final Flow <u>48</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>20:46</u>
(D) Initial Shut-In <u>1181</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>23:49</u>
(E) Second Initial Flow <u>57</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1:47</u>
(F) Second Final Flow <u>83</u>	<input checked="" type="checkbox"/> Mileage <u>88 RIT</u> 136.40	Comments _____
(G) Final Shut-In <u>1165</u>	<input type="checkbox"/> Sampler _____	<input type="checkbox"/> Ruined Shale Packer _____
(H) Final Hydrostatic <u>1834</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Packer _____

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

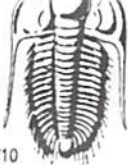
Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Sub Total 1611.40

Sub Total _____
 Total 1611.40
 MP/DST Disc't _____

Approved By _____ Our Representative Neil M...

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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49054

Well Name & No. Abell Ranch #2-25 Test No. DST #3 Date 10-7-13
 Company Martin Drilling Co. Inc Elevation 2885 KB 2874 GL _____
 Address 250 N. Water Ste. 300 Wichita KS 67202
 Co. Rep / Geo. Saman ShairFaie Rig Martin Rg #21
 Location: Sec. 25 Twp. 12s Rge. 31w Co. Gove State KS

Interval Tested 3990-4041 Zone Tested LRC D-F
 Anchor Length 51 Drill Pipe Run 3710 Mud Wt. 9.0
 Top Packer Depth 3986 Drill Collars Run 278 Vis 45
 Bottom Packer Depth 3990 Wt. Pipe Run 0 WL 6.0
 Total Depth 4041 Chlorides 1800 ppm System LCM 416

Blow Description IF - Weak Surface Blow 1/4"
ISI - No Blow
FF - No Blow
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud with oil spots</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 116 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

- (A) Initial Hydrostatic 2013
- (B) First Initial Flow 20
- (C) First Final Flow 23
- (D) Initial Shut-In 1094
- (E) Second Initial Flow 25
- (F) Second Final Flow 28
- (G) Final Shut-In 882
- (H) Final Hydrostatic 1892

- Test 1250
- Jars 250
- Safety Joint 75
- Circ Sub N/C
- Hourly Standby _____
- Mileage 88 RIT 136.40
- Sampler _____
- Straddle _____
- Shale Packer _____
- Extra Packer _____
- Extra Recorder _____
- Day Standby _____
- Accessibility _____

- T-On Location 10:36
- T-Started 10:56
- T-Open 12:44
- T-Pulled 15:48
- T-Out 17:46

Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1711.40
 MP/DST Disc't _____

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

Sub Total 1711.40

Approved By _____ Our Representative Will Madsen

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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49055

Well Name & No. Abell Ranch #2-25 Test No. DST #4 Date 10-8-13
 Company Murfin Drilling Co Inc Elevation 2885 KB 2874 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin Rig #21
 Location: Sec. 25 Twp. 12s Rge. 31w Co. Cove State KS

Interval Tested 4080-4190 Zone Tested LRC "H-K"
 Anchor Length 110 Drill Pipe Run 3804 Mud Wt. 9.3
 Top Packer Depth 4076 Drill Collars Run 278 Vis 70
 Bottom Packer Depth 4080 Wt. Pipe Run 0 WL 6.4
 Total Depth 4190 Chlorides 2000 ppm System LCM 516
 Blow Description IF - Weak Surface Blow Built to BOB in 21 1/2 min
ISI - No Blow
FF - Weak Surface Blow Built to BOB in 28 min
FSI - Weak Surface Blow in 24 min Built to 2"

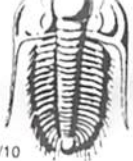
Rec	Feet of	%gas	%oil	%water	%mud
93	OGCM	5	3	92	
124	OMCG	55	11	34	
124	WOGCM	15	5	77	
186	OGWCM	12	4	62	
	403' of GIP				

Rec Total 527 BHT 121 Gravity API RW, 143 @ 67 °F Chlorides 54000 ppm
 (A) Initial Hydrostatic 2034 Test 1250 T-On Location 12:50
 (B) First Initial Flow 31 Jars 250 T-Started 13:06
 (C) First Final Flow 163 Safety Joint 75 T-Open 15:07
 (D) Initial Shut-In 1251 Circ Sub NIC T-Pulled 19:12
 (E) Second Initial Flow 175 Hourly Standby T-Out 21:36
 (F) Second Final Flow 260 Mileage 88 R/T 136.40 Comments _____
 (G) Final Shut-In 1239 Sampler _____
 (H) Final Hydrostatic 1934 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1711.40
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1711.40

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

Approved By _____ Our Representative Will Magr

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TRIBOLITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49056

Well Name & No. Abell Ranch Test No. DST #5 Date 10-9-13
 Company Martin Drilling Co Inc Elevation 2885 KB 2874 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Saman ShairFaire Rig Martin Rigs #21
 Location: Sec. 25 Twp. 25 Rge. 31w Co. Cove State KS

Interval Tested 4196 - 4235 Zone Tested LRC "L" / X Line
 Anchor Length 39 Drill Pipe Run 3898 Mud Wt. 9.3
 Top Packer Depth 4192 Drill Collars Run 278 Vis 70
 Bottom Packer Depth 4196 Wt. Pipe Run 0 WL 6.4
 Total Depth 4235 Chlorides 2000 ppm System LCM 516

Blow Description IF- Wear Surface Blow Built to BOB in 24 1/4 min
ISI- No Blow
FF- Wear Surface Blow Built to BOB in 34 min
FSI- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>77</u>	<u>WCM</u>			<u>18</u>	<u>82</u>
<u>62</u>	<u>MCW WCM</u>			<u>52</u>	<u>49</u>
<u>186</u>	<u>MCW</u>			<u>52</u>	<u>49</u>
<u>248</u>	<u>MCW</u> Few oil spots in Tool			<u>66</u>	<u>34</u>
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 573 BHT 125 Gravity _____ API RW 104 @ 83 °F Chlorides 59000 ppm

(A) Initial Hydrostatic 2106 Test 1250 T-On Location 5:48
 (B) First Initial Flow 24 Jars 250 T-Started 6:10
 (C) First Final Flow 170 Safety Joint 75 T-Open 7:54
 (D) Initial Shut-In 1183 Circ Sub NIC T-Pulled 11:56
 (E) Second Initial Flow 174 Hourly Standby _____ T-Out 14:10
 (F) Second Final Flow 283 Mileage 88 R/T 136.40
 (G) Final Shut-In 1166 Sampler _____
 (H) Final Hydrostatic 2042 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

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

Sub Total 1711.40

Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1711.40
 MP/DST Disc't _____

Approved By _____ Our Representative Will Mu

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49057

Well Name & No. Abell Ranch #2-25 Test No. DST #6 Date 10-10-13
 Company Murfin Drilling Co Inc Elevation 2885 KB 2874 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin R.s #21
 Location: Sec. 25 Twp. 12S Rge. 31W Co. Grove State KS

Interval Tested 4365 - 4500 Zone Tested L Pawnee - Johnson
 Anchor Length 135 Drill Pipe Run 4085 Mud Wt. 9.1
 Top Packer Depth 4361 Drill Collars Run 278 Vis 58
 Bottom Packer Depth 4365 Wt. Pipe Run 0 WL 6.8
 Total Depth 4500 Chlorides 2100 ppm System LCM 516

Blow Description IF- Surface Blow Built to BOB in 2 1/4 min
ISF- Weak Surface Blow Built to BOB in 3 1/2 min (Gas to Surface in 40 min)
FF- Surface Blow Built to BOB in 2 3/4 min
FSI- Surface Blow Built to BOB in 2 1/2 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>268</u>	<u>G-O</u>	<u>22</u>	<u>78</u>		
<u>682</u>	<u>MG-CO</u>	<u>39</u>	<u>58</u>		<u>3</u>
<u>248</u>	<u>MG-CO</u>	<u>27</u>	<u>61</u>		<u>12</u>
<u>372</u>	<u>MG-CO</u>	<u>36</u>	<u>45</u>		<u>19</u>
<u>620</u>	<u>MG-MCO</u>	<u>26</u>	<u>37</u>	<u>3</u>	<u>34</u>

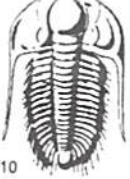
Rec Total 2190 BHT 130 Gravity 38 API RW @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2209</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>16:34</u>
(B) First Initial Flow <u>118</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>19:24</u>
(C) First Final Flow <u>425</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>22:33</u>
(D) Initial Shut-In <u>1125</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>2:34</u>
(E) Second Initial Flow <u>438</u>	<input checked="" type="checkbox"/> Hourly Standby <u>3.5h 350</u>	T-Out <u>7:14</u>
(F) Second Final Flow <u>799</u>	<input checked="" type="checkbox"/> Mileage <u>88 RIT 136.40</u>	Comments <u>short tripped</u>
(G) Final Shut-In <u>1116</u>	<input type="checkbox"/> Sampler _____	<u>API is 36 @ 40F = 38</u>
(H) Final Hydrostatic <u>2140</u>	<input type="checkbox"/> Straddle _____	<u>2062' of G-IP</u>

<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
<input type="checkbox"/> Extra Recorder _____	Sub Total <u>75</u>
<input type="checkbox"/> Day Standby <u>1d 2.25h</u>	Total <u>2136.40</u>
<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
Sub Total <u>2061.40</u>	

Approved By _____

Our Representative Will Mae



TRIBOLITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49058

Well Name & No. Abell Ranch # 2-25 Test No. DST #7 Date 10-11-13
 Company Murfin Drilling Co. Inc Elevation 2885 KB 2874 GL
 Address 250 N. Water Ste 300 Wichita KS 67202
 Co. Rep / Geo. Saman Sharifaie Rig Murfin Rig #21
 Location: Sec. 25 Twp. 12S Rge. 31W Co. Gove State KS

Interval Tested 4512 - 4530 Zone Tested Mississippi
 Anchor Length 18 Drill Pipe Run 4214 Mud Wt. 9.3
 Top Packer Depth 4508 Drill Collars Run 278 Vis 75
 Bottom Packer Depth 4512 Wt. Pipe Run 0 WL 6.4
 Total Depth 4530 Chlorides 2600 ppm System LCM 616
 Blow Description IF- Weak Surface Blow Built to 3"
ISI- No Blow
FF-

FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>G-OCM</u>	<u>3</u>	<u>39</u>	<u>58</u>	<u></u>
<u>62</u>	<u>G-MCO</u>	<u>24</u>	<u>41</u>	<u>35</u>	<u></u>
<u>62</u>	<u>WG-MCO</u>	<u>20</u>	<u>49</u>	<u>2</u>	<u>29</u>
<u>62</u>	<u>WG-OCM</u>	<u>14</u>	<u>18</u>	<u>4</u>	<u>64</u>
<u>Rec</u>	<u>Feet of</u>	<u>%gas</u>	<u>%oil</u>	<u>%water</u>	<u>%mud</u>
	<u>181' of G-IP</u>				
<u>Rec Total</u>	<u>191</u>	<u>BHT</u>	<u>128</u>	<u>Gravity</u>	<u>API RW</u>
				<u>@</u>	<u>° F Chlorides</u>
					<u>ppm</u>

(A) Initial Hydrostatic 2299 Test 1250 T-On Location 15:14
 (B) First Initial Flow 22 Jars 250 T-Started 15:44
 (C) First Final Flow 47 Safety Joint 75 T-Open 17:48
 (D) Initial Shut-In 1138 Circ Sub NIC T-Pulled _____
 (E) Second Initial Flow 58 Hourly Standby _____ T-Out 00:30
 (F) Second Final Flow 102 Mileage 88 RIT 136.40 Comments _____
 (G) Final Shut-In 1124 Sampler _____
 (H) Final Hydrostatic 2141 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1711.40
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1711.40

Approved By _____

Our Representative Will Mes

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