



DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

Legleiter #1-36

36-15s-19w Ellis KS

Start Date: 2013.03.14 @ 05:29:00

End Date: 2013.03.14 @ 11:39:00

Job Ticket #: 52153 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.20 @ 10:40:53



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc,
250 N. Water STE 300
Wichita KS 67202
ATTN: Rocky Milford

36-15s-19w Ellis KS

Legleiter #1-36

Job Ticket: 52153

DST#: 1

Test Start: 2013.03.14 @ 05:29:00

GENERAL INFORMATION:

Formation: **Toronto - Lansing "B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:13:00

Time Test Ended: 11:39:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 68

Interval: 3233.00 ft (KB) To 3318.00 ft (KB) (TVD)

Total Depth: 3318.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1986.00 ft (KB)

1981.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8679

Inside

Press @ Run Depth: 59.93 psig @ 3303.00 ft (KB)

Start Date: 2013.03.14

End Date:

2013.03.14

Start Time: 05:29:01

End Time:

11:39:00

Capacity: 8000.00 psig

Last Calib.: 2013.03.14

Time On Btm: 2013.03.14 @ 07:12:30

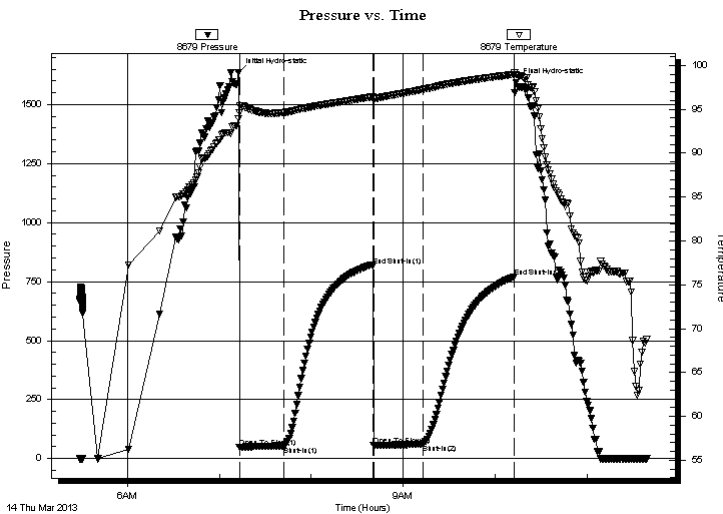
Time Off Btm: 2013.03.14 @ 10:13:30

TEST COMMENT: 30 - IF- 1 3/4" blow

60 - IS- No return

30 - FF- No blow

60 - FS- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1636.25	93.90	Initial Hydro-static
1	47.01	94.64	Open To Flow (1)
30	53.80	94.65	Shut-In(1)
88	816.30	96.42	End Shut-In(1)
88	55.77	96.19	Open To Flow (2)
120	59.93	97.25	Shut-In(2)
180	770.40	98.97	End Shut-In(2)
181	1592.10	98.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud, with spots of oil, 100%M	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc,
250 N. Water STE 300
Wichita KS 67202
ATTN: Rocky Milford

36-15s-19w Ellis KS

Legleiter #1-36

Job Ticket: 52153

DST#: 1

Test Start: 2013.03.14 @ 05:29:00

Tool Information

Drill Pipe:	Length: 3201.00 ft	Diameter: 3.80 inches	Volume: 44.90 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	48000.00 lb
			<u>Total Volume: 45.05 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	43000.00 lb
Depth to Top Packer:	3233.00 ft			Final	43000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	85.00 ft				
Tool Length:	105.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3214.00	
Shut In Tool	5.00			3219.00	
Hydraulic tool	5.00			3224.00	
Packer	4.00			3228.00	20.00 Bottom Of Top Packer
Packer	5.00			3233.00	
Stubb	1.00			3234.00	
Perforations	5.00			3239.00	
Change Over Sub	1.00			3240.00	
Drill Pipe	62.00			3302.00	
Change Over Sub	1.00			3303.00	
Recorder	0.00	6625	Outside	3303.00	
Recorder	0.00	8679	Inside	3303.00	
Perforations	12.00			3315.00	
Bullnose	3.00			3318.00	85.00 Bottom Packers & Anchor

Total Tool Length: 105.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc,
250 N. Water STE 300
Wichita KS 67202
ATTN: Rocky Milford

36-15s-19w Ellis KS
Legleiter #1-36
Job Ticket: 52153 **DST#: 1**
Test Start: 2013.03.14 @ 05:29:00

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: bbl		
Water Loss: 6.39 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 900.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud, w ith spots of oil, 100%M	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8679

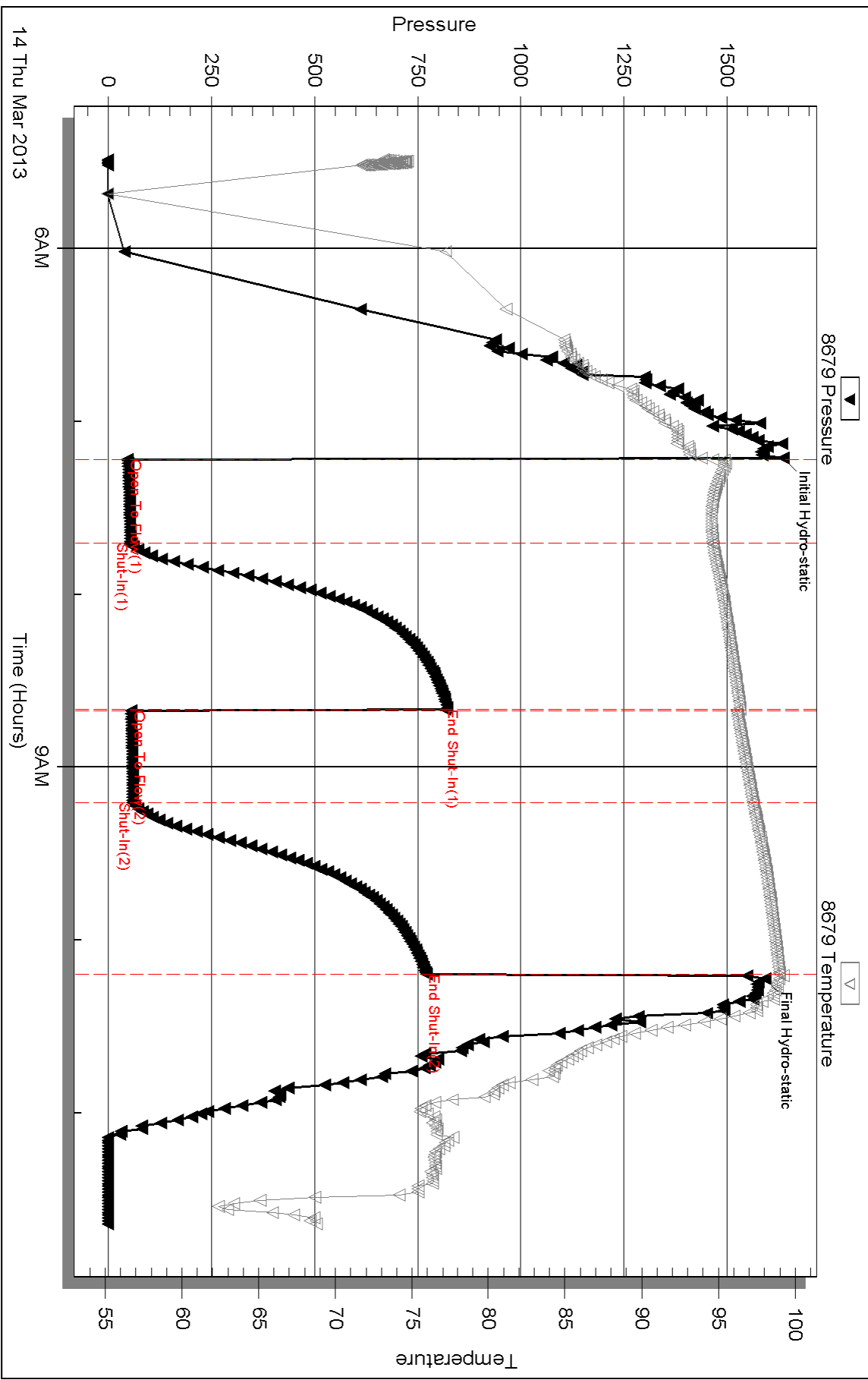
Inside

Murfin Drilling Co. Inc.

Legleiter #1-36

DST Test Number: 1

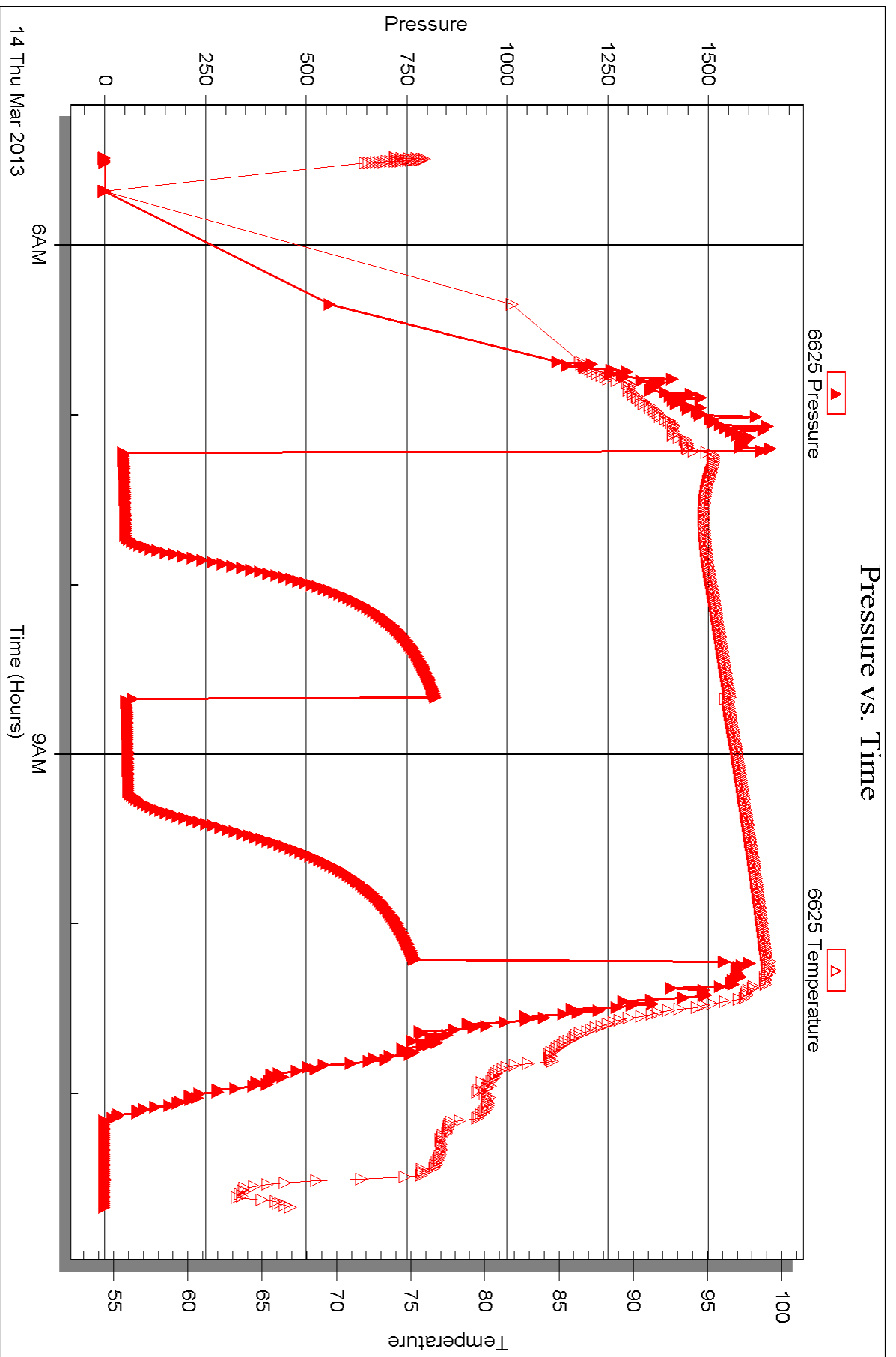
Pressure vs. Time



Triobite Testing, Inc

Ref. No: 52153

Printed: 2013.03.20 @ 10:40:55





DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

Legleiter #1-36

36-15s-19w Ellis KS

Start Date: 2013.03.14 @ 19:30:00

End Date: 2013.03.15 @ 03:24:30

Job Ticket #: 52154 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.20 @ 10:40:17



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc,
250 N. Water STE 300
Wichita KS 67202
ATTN: Rocky Milford

36-15s-19w Ellis KS

Legleiter #1-36

Job Ticket: 52154

DST#: 2

Test Start: 2013.03.14 @ 19:30:00

GENERAL INFORMATION:

Formation: **LKC "D-F"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 21:14:00
 Tester: Cody Bloedorn
 Time Test Ended: 03:24:30
 Unit No: 68
 Interval: **3316.00 ft (KB) To 3366.00 ft (KB) (TVD)**
 Reference Elevations: 1986.00 ft (KB)
 Total Depth: 3318.00 ft (KB) (TVD) 1981.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

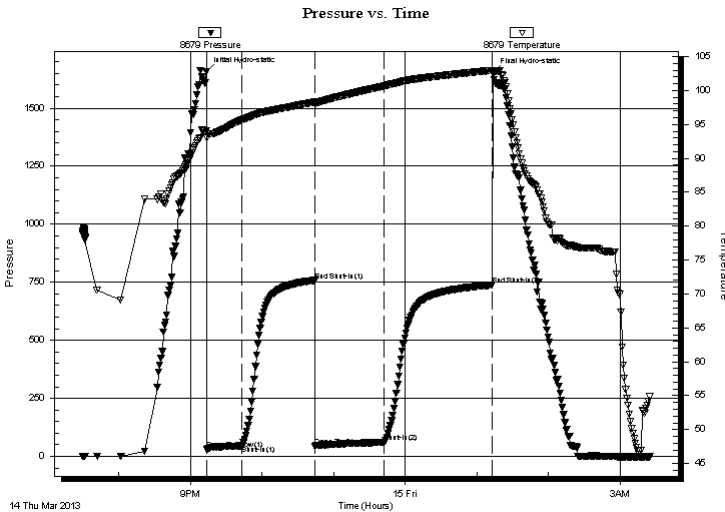
Serial #: 8679

Inside

Press @ Run Depth: 60.99 psig @ 3355.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.03.14 End Date: 2013.03.15 Last Calib.: 2013.03.15
 Start Time: 19:30:01 End Time: 03:24:30 Time On Btm: 2013.03.14 @ 21:13:30
 Time Off Btm: 2013.03.15 @ 01:13:30

TEST COMMENT: 30 - IF- 6 1/2" blow
 60 - IS- No return
 60 - FF- B.O.B. in 17 Minutes
 90 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1657.80	94.04	Initial Hydro-static
1	31.75	92.98	Open To Flow (1)
30	45.60	95.68	Shut-In(1)
91	757.83	98.29	End Shut-In(1)
91	44.07	98.02	Open To Flow (2)
149	60.99	100.67	Shut-In(2)
239	738.08	102.97	End Shut-In(2)
240	1654.45	102.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	OCM, 20%O, 80%M	0.59
15.00	MCO, 40%M, 60%O	0.21
2.00	Free Oil, 100%O	0.03
0.00	294' of G.I.P.	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc,
250 N. Water STE 300
Wichita KS 67202
ATTN: Rocky Milford

36-15s-19w Ellis KS

Legleiter #1-36

Job Ticket: 52154

DST#: 2

Test Start: 2013.03.14 @ 19:30:00

GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:14:00

Time Test Ended: 03:24:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 68

Interval: 3316.00 ft (KB) To 3366.00 ft (KB) (TVD)

Reference Elevations: 1986.00 ft (KB)

Total Depth: 3318.00 ft (KB) (TVD)

1981.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: psig @ 3355.00 ft (KB)

Start Date: 2013.03.14

End Date:

2013.03.15

Capacity: 8000.00 psig

Last Calib.:

2013.03.15

Start Time: 19:30:01

End Time:

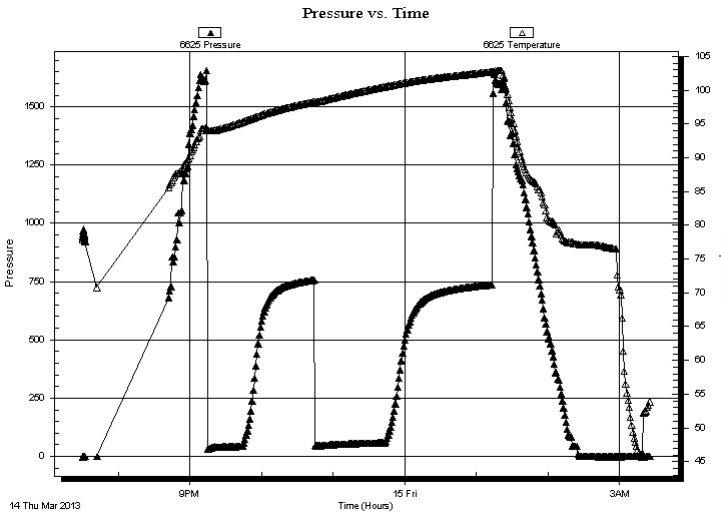
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Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF- 6 1/2" blow
60 - IS- No return
60 - FF- B.O.B. in 17 Minutes
90 - FS- No return

PRESSURE SUMMARY



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

Length (ft)	Description	Volume (bbl)
62.00	OCM, 20%O, 80%M	0.59
15.00	MCO, 40%M, 60%O	0.21
2.00	Free Oil, 100%O	0.03
0.00	294' of G.I.P.	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc,
250 N. Water STE 300
Wichita KS 67202
ATTN: Rocky Milford

36-15s-19w Ellis KS

Legleiter #1-36

Job Ticket: 52154

DST#: 2

Test Start: 2013.03.14 @ 19:30:00

Tool Information

Drill Pipe:	Length: 3295.00 ft	Diameter: 3.80 inches	Volume: 46.22 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	48000.00 lb
			<u>Total Volume: 46.37 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	45000.00 lb
Depth to Top Packer:	3316.00 ft			Final	45000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	50.00 ft				
Tool Length:	70.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3297.00	
Shut In Tool	5.00			3302.00	
Hydraulic tool	5.00			3307.00	
Packer	4.00			3311.00	20.00 Bottom Of Top Packer
Packer	5.00			3316.00	
Stubb	1.00			3317.00	
Perforations	5.00			3322.00	
Change Over Sub	1.00			3323.00	
Drill Pipe	31.00			3354.00	
Change Over Sub	1.00			3355.00	
Recorder	0.00	6625	Outside	3355.00	
Recorder	0.00	8679	Inside	3355.00	
Perforations	8.00			3363.00	
Bullnose	3.00			3366.00	50.00 Bottom Packers & Anchor

Total Tool Length: 70.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc,
250 N. Water STE 300
Wichita KS 67202
ATTN: Rocky Milford

36-15s-19w Ellis KS
Legleiter #1-36
Job Ticket: 52154 **DST#: 2**
Test Start: 2013.03.14 @ 19:30:00

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: bbl		
Water Loss: 6.38 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 900.00 ppm			
Filter Cake: inches			

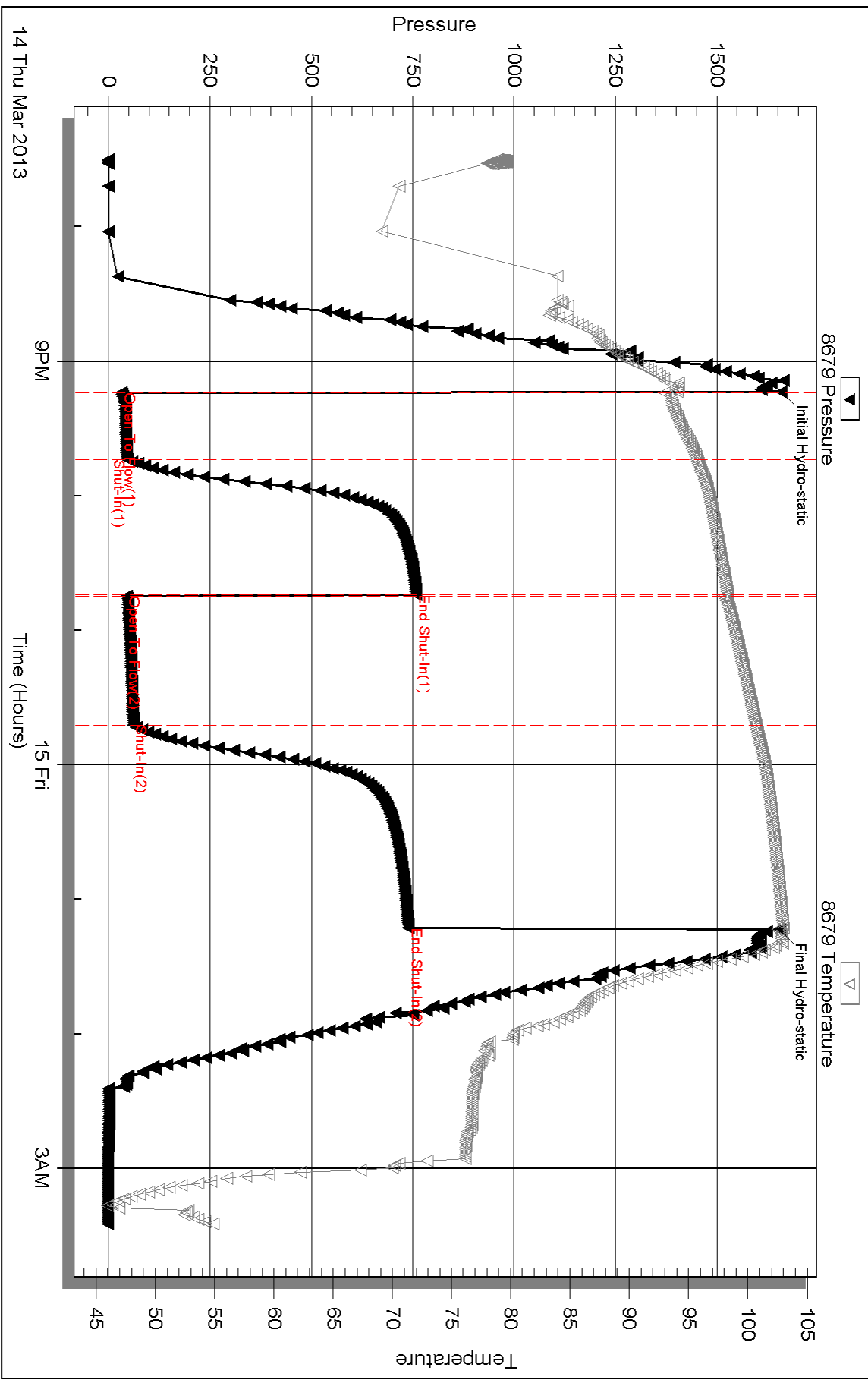
Recovery Information

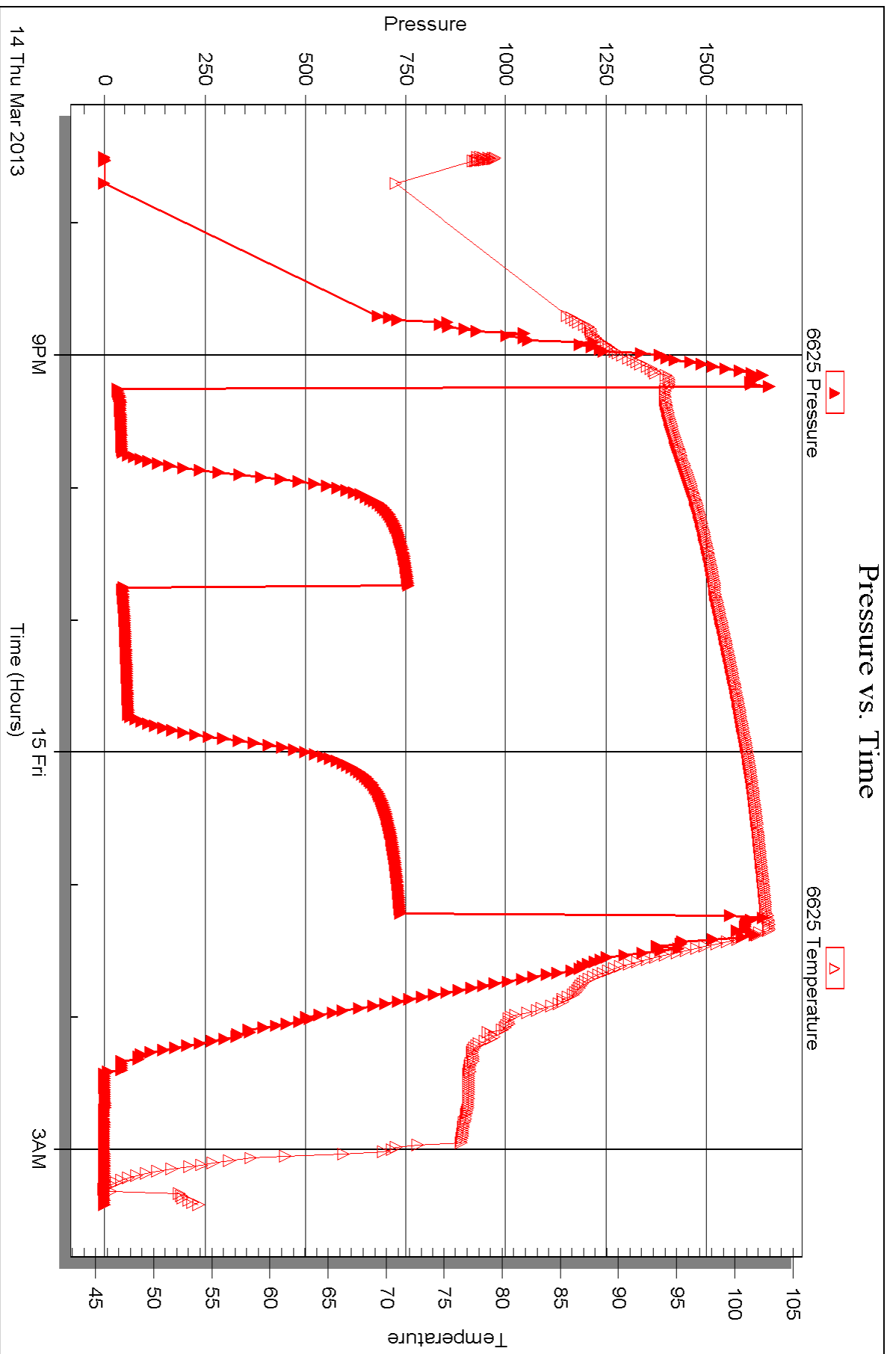
Recovery Table

Length ft	Description	Volume bbl
62.00	OCM, 20%O, 80%M	0.587
15.00	MCO, 40%M, 60%O	0.210
2.00	Free Oil, 100%O	0.028
0.00	294' of G.I.P.	0.000

Total Length: 79.00 ft Total Volume: 0.825 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

Legleiter #1-36

36-15s-19w Ellis KS

Start Date: 2013.03.15 @ 17:16:00

End Date: 2013.03.15 @ 23:49:00

Job Ticket #: 52155 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.20 @ 10:39:29



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc,
250 N. Water STE 300
Wichita KS 67202
ATTN: Rocky Milford

36-15s-19w Ellis KS

Legleiter #1-36

Job Ticket: 52155

DST#: 3

Test Start: 2013.03.15 @ 17:16:00

GENERAL INFORMATION:

Formation: **LKC "H-K"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 19:05:30
 Tester: Cody Bloedorn
 Time Test Ended: 23:49:00
 Unit No: 68
 Interval: **3405.00 ft (KB) To 3500.00 ft (KB) (TVD)**
 Reference Elevations: 1986.00 ft (KB)
 Total Depth: 3500.00 ft (KB) (TVD)
 1981.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

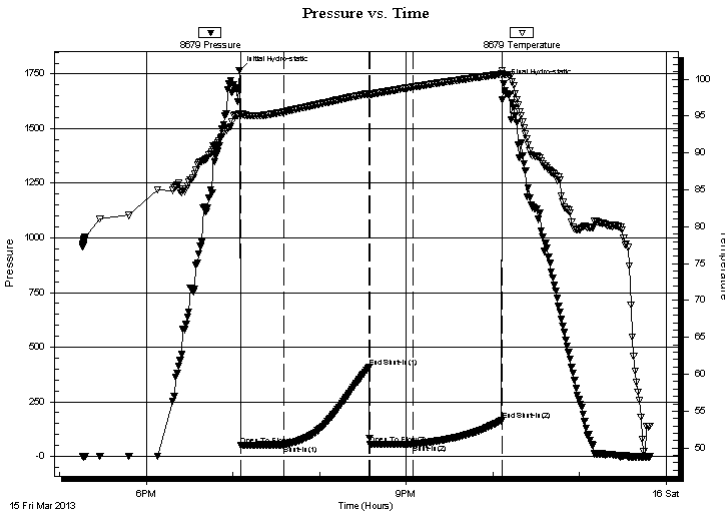
Serial #: 8679

Inside

Press @ Run Depth: 57.07 psig @ 3475.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.03.15 End Date: 2013.03.15 Last Calib.: 2013.03.15
 Start Time: 17:16:01 End Time: 23:49:00 Time On Btm: 2013.03.15 @ 19:04:30
 Time Off Btm: 2013.03.15 @ 22:07:30

TEST COMMENT: 30 - IF- 1/2" blow in 8 Minutes. Died back to a surface blow
 60 - IS- No return
 30 - FF- No blow
 60 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1766.37	95.35	Initial Hydro-static
1	49.19	95.11	Open To Flow (1)
31	53.36	95.57	Shut-In(1)
90	406.86	98.06	End Shut-In(1)
91	54.92	97.94	Open To Flow (2)
120	57.07	98.93	Shut-In(2)
182	166.03	100.70	End Shut-In(2)
183	1706.29	100.60	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud, with show of oil, 100%M	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc,

36-15s-19w Ellis KS

250 N. Water STE 300
Wichita KS 67202

Legleiter #1-36

Job Ticket: 52155

DST#: 3

ATTN: Rocky Milford

Test Start: 2013.03.15 @ 17:16:00

GENERAL INFORMATION:

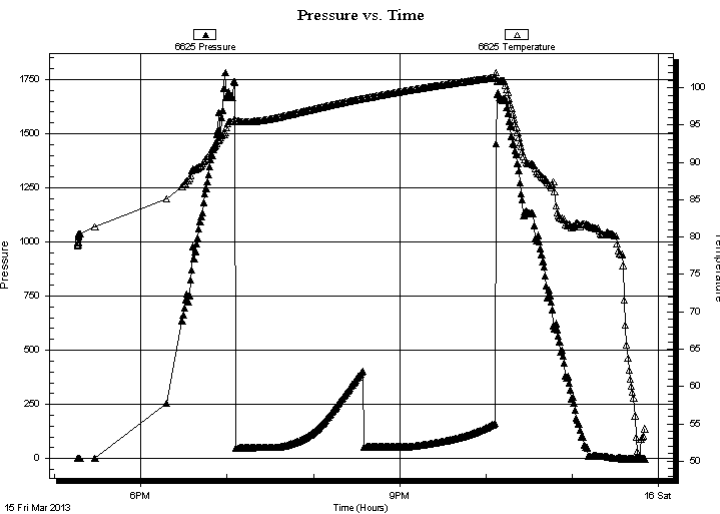
Formation: **LKC "H-K"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:05:30
 Time Test Ended: 23:49:00
 Interval: **3405.00 ft (KB) To 3500.00 ft (KB) (TVD)**
 Total Depth: 3500.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)
 Tester: Cody Bloedorn
 Unit No: 68
 Reference Elevations: 1986.00 ft (KB)
 1981.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: psig @ 3475.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.03.15 End Date: 2013.03.15 Last Calib.: 2013.03.15
 Start Time: 17:16:01 End Time: 23:50:30 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30 - IF- 1/2" blow in 8 Minutes. Died back to a surface blow
 60 - IS- No return
 30 - FF- No blow
 60 - FS- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud, with show of oil, 100%M	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co. Inc,
250 N. Water STE 300
Wichita KS 67202
ATTN: Rocky Milford

36-15s-19w Ellis KS
Legleiter #1-36
Job Ticket: 52155 **DST#: 3**
Test Start: 2013.03.15 @ 17:16:00

Tool Information

Drill Pipe:	Length: 3360.00 ft	Diameter: 3.80 inches	Volume: 47.13 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	49000.00 lb
			<u>Total Volume: 47.28 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial	45000.00 lb
Depth to Top Packer:	3405.00 ft			Final	45000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	95.00 ft				
Tool Length:	115.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3386.00	
Shut In Tool	5.00			3391.00	
Hydraulic tool	5.00			3396.00	
Packer	4.00			3400.00	20.00 Bottom Of Top Packer
Packer	5.00			3405.00	
Stubb	1.00			3406.00	
Perforations	5.00			3411.00	
Change Over Sub	1.00			3412.00	
Drill Pipe	62.00			3474.00	
Change Over Sub	1.00			3475.00	
Recorder	0.00	6625	Outside	3475.00	
Recorder	0.00	8679	Inside	3475.00	
Perforations	22.00			3497.00	
Bullnose	3.00			3500.00	95.00 Bottom Packers & Anchor

Total Tool Length: 115.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc,
250 N. Water STE 300
Wichita KS 67202
ATTN: Rocky Milford

36-15s-19w Ellis KS
Legleiter #1-36
Job Ticket: 52155 **DST#: 3**
Test Start: 2013.03.15 @ 17:16:00

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: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

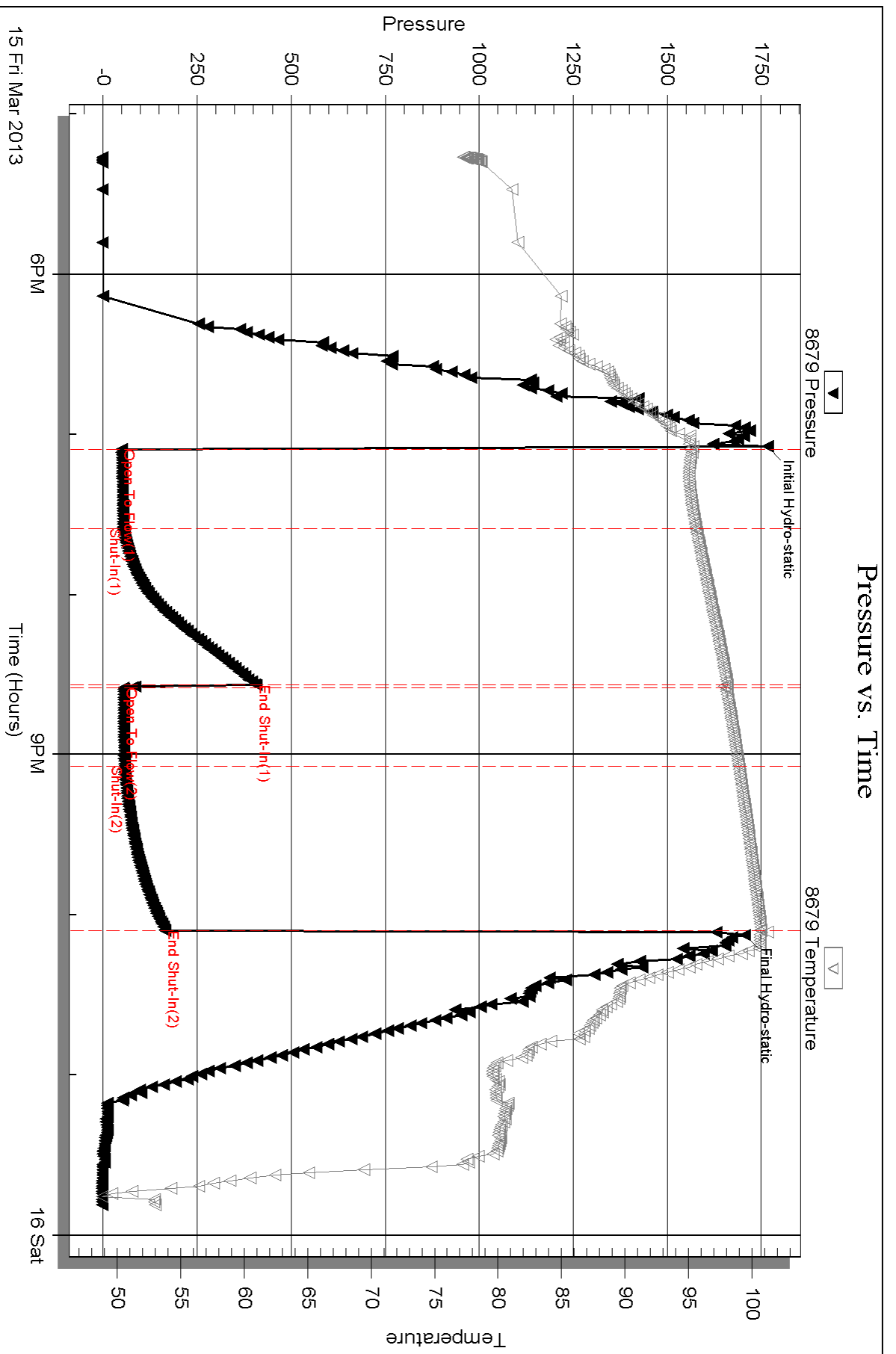
Length ft	Description	Volume bbl
10.00	Mud, w ith show of oil, 100%M	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

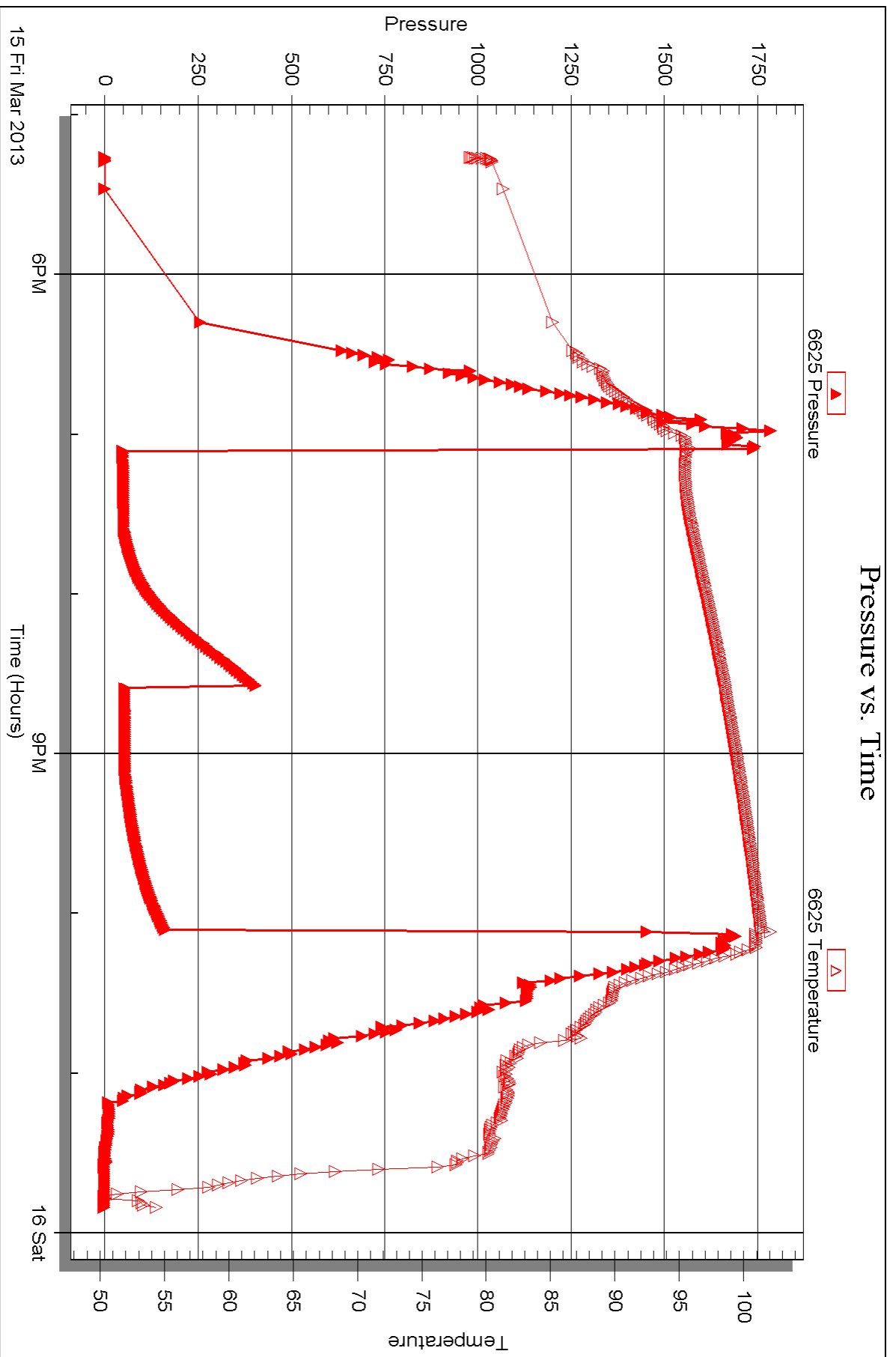


Serial #: 6625

Outside Murfin Drilling Co. Inc.

Legleiter #1-36

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 52155

Printed: 2013.03.20 @ 10:39:32



DRILL STEM TEST REPORT

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

250 N. Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

Legleiter #1-36

36-15s-19w Ellis KS

Start Date: 2013.03.16 @ 09:56:00

End Date: 2013.03.16 @ 17:00:00

Job Ticket #: 52156 DST #: 4

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

Printed: 2013.03.20 @ 10:38:49



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc,
 250 N. Water STE 300
 Wichita KS 67202
 ATTN: Rocky Milford

36-15s-19w Ellis KS

Legleiter #1-36

Job Ticket: 52156

DST#: 4

Test Start: 2013.03.16 @ 09:56:00

GENERAL INFORMATION:

Formation: **Conglomerate Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:49:30

Time Test Ended: 17:00:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 68

Interval: 3563.00 ft (KB) To 3590.00 ft (KB) (TVD)

Total Depth: 3590.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1986.00 ft (KB)

1981.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8679

Inside

Press @ Run Depth: 1132.22 psig @ 3564.00 ft (KB)

Start Date: 2013.03.16

End Date:

2013.03.16

Start Time: 09:56:01

End Time:

17:00:00

Capacity: 8000.00 psig

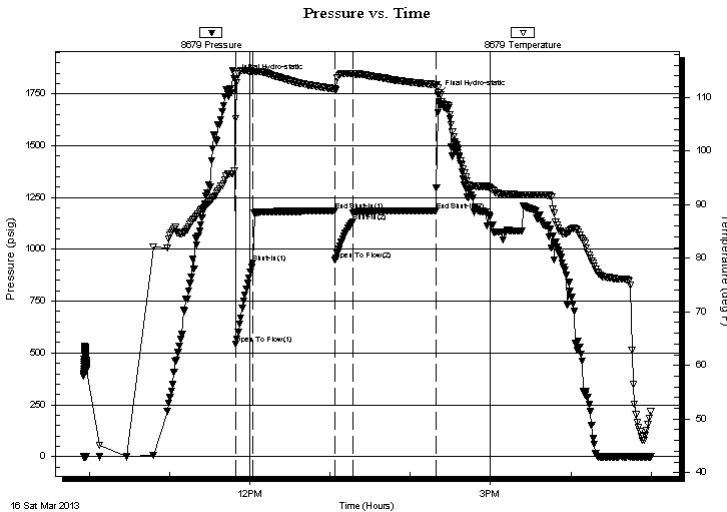
Last Calib.: 2013.03.16

Time On Btm: 2013.03.16 @ 11:48:30

Time Off Btm: 2013.03.16 @ 14:21:00

TEST COMMENT: 15 - IF- B.O.B. in 30 Seconds.
 60 - IS- No return
 15 - FF- B.O.B. in 30 Seconds
 60 - FS- No return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1825.05	96.29	Initial Hydro-static
1	543.76	106.07	Open To Flow (1)
14	936.12	114.80	Shut-In(1)
75	1185.12	111.56	End Shut-In(1)
76	950.19	111.37	Open To Flow (2)
89	1132.22	114.38	Shut-In(2)
151	1185.52	112.37	End Shut-In(2)
153	1748.60	110.81	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	MW, 40%M, 60%W	1.46
2223.00	MW	31.18
248.00	GWM, 5%G,5%W, 90%M	3.48

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co. Inc,
250 N. Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

36-15s-19w Ellis KS

Legleiter #1-36

Job Ticket: 52156

DST#: 4

Test Start: 2013.03.16 @ 09:56:00

GENERAL INFORMATION:

Formation: **Conglomerate Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:49:30

Time Test Ended: 17:00:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 68

Interval: 3563.00 ft (KB) To 3590.00 ft (KB) (TVD)

Reference Elevations: 1986.00 ft (KB)

Total Depth: 3590.00 ft (KB) (TVD)

1981.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6625

Outside

Press @ RunDepth: psig @ 3564.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.16

End Date:

2013.03.16

Last Calib.:

2013.03.16

Start Time: 09:56:01

End Time:

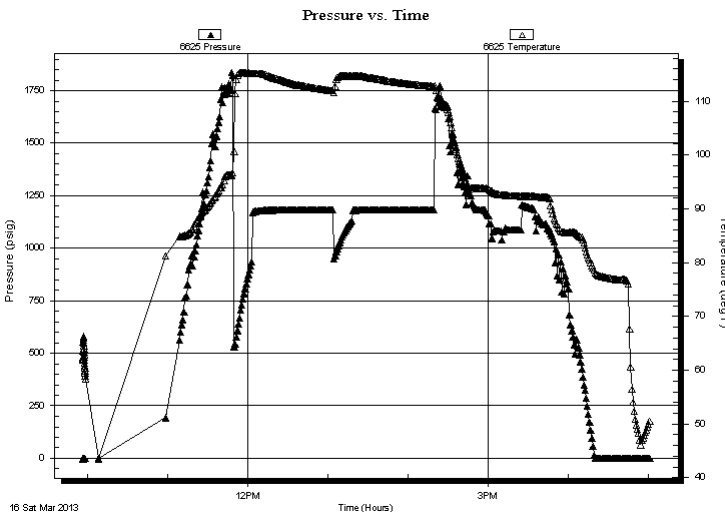
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Time On Btm:

Time Off Btm:

TEST COMMENT: 15 - IF- B.O.B. in 30 Seconds.
60 - IS- No return
15 - FF- B.O.B. in 30 Seconds
60 - FS- No return

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
124.00	MW, 40%M, 60%W	1.46
2223.00	MW	31.18
248.00	GWM, 5%G,5%W, 90%M	3.48

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,
250 N. Water STE 300
Wichita KS 67202
ATTN: Rocky Milford

36-15s-19w Ellis KS
Legleiter #1-36
Job Ticket: 52156 **DST#: 4**
Test Start: 2013.03.16 @ 09:56:00

Tool Information

Drill Pipe:	Length: 3517.00 ft	Diameter: 3.80 inches	Volume: 49.33 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 56000.00 lb
			<u>Total Volume: 49.48 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3563.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3544.00	
Shut In Tool	5.00			3549.00	
Hydraulic tool	5.00			3554.00	
Packer	4.00			3558.00	20.00 Bottom Of Top Packer
Packer	5.00			3563.00	
Stubb	1.00			3564.00	
Recorder	0.00	6625	Outside	3564.00	
Recorder	0.00	8679	Inside	3564.00	
Perforations	23.00			3587.00	
Bullnose	3.00			3590.00	27.00 Bottom Packers & Anchor
Total Tool Length:	47.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co. Inc,
250 N. Water STE 300
Wichita KS 67202
ATTN: Rocky Milford

36-15s-19w Ellis KS
Legleiter #1-36
Job Ticket: 52156 **DST#: 4**
Test Start: 2013.03.16 @ 09:56:00

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:	35000 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

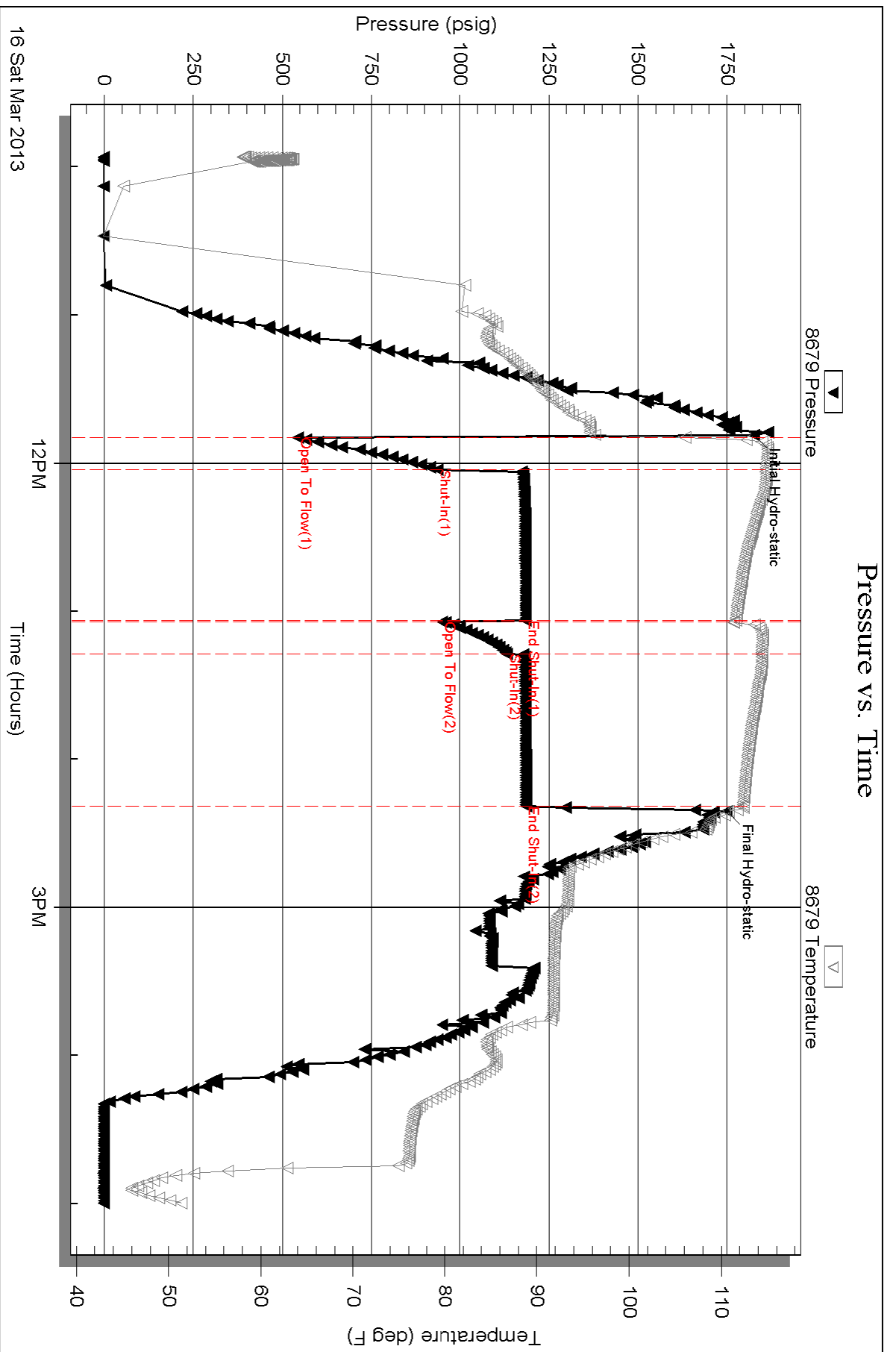
Length ft	Description	Volume bbl
124.00	MW, 40%M, 60%W	1.457
2223.00	MW	31.183
248.00	GWM, 5%G,5%W, 90%M	3.479

Total Length: 2595.00 ft Total Volume: 36.119 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: .35 @ 40 Degrees = 35000 Salinity

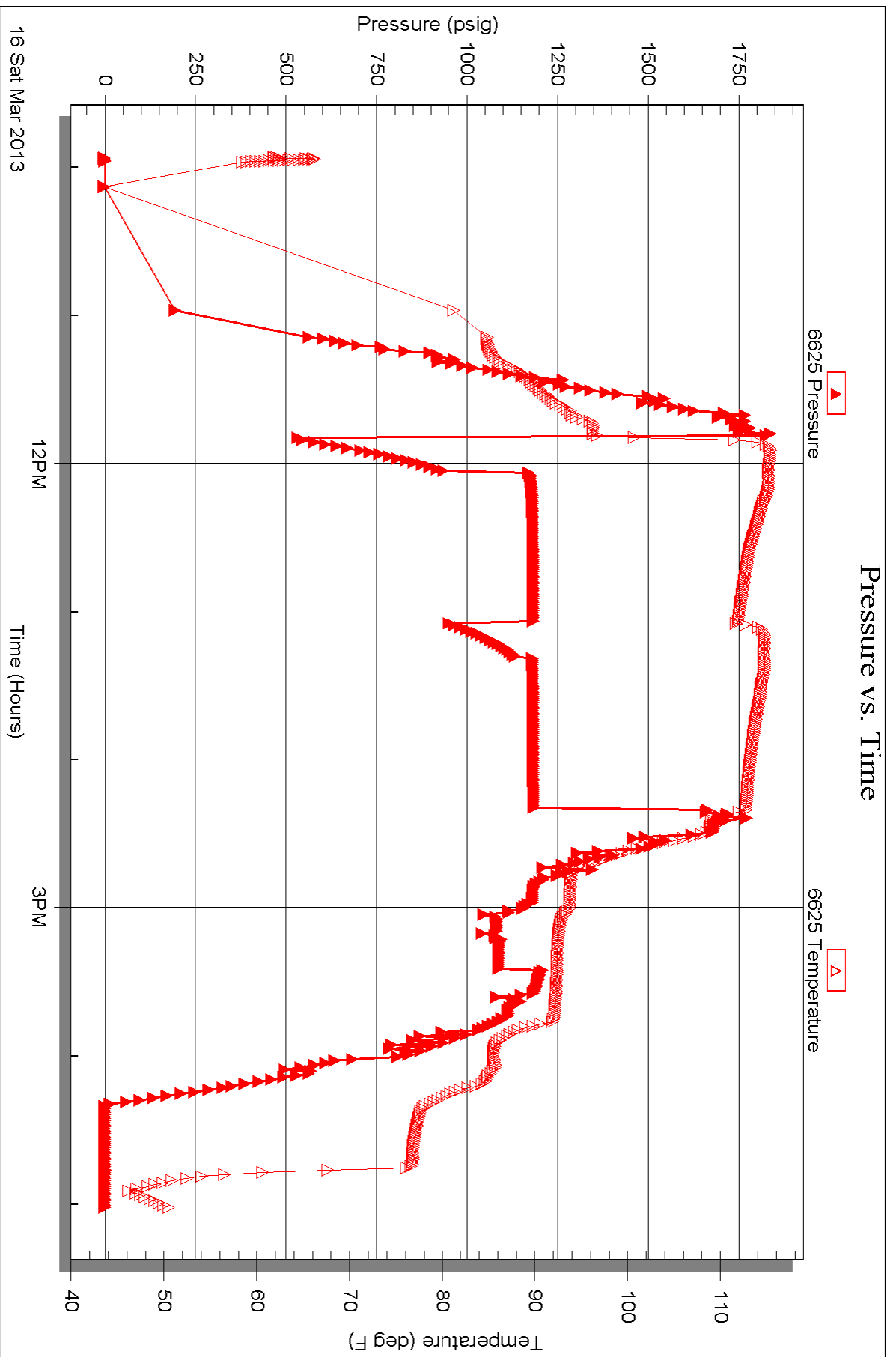


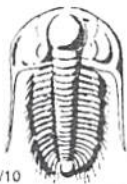
Serial #: 6625

Outside Murfin Drilling Co. Inc.

Legleiter #1-36

DST Test Number: 4





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52153

Well Name & No. Legleiter 1-36 Test No. 1 Date 3-14-13
 Company Murfin Drilling Co INC Elevation 1986 KB 1981 GL
 Address 250 N water STE 300, Wichita KS, 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin 16
 Location: Sec. 36 Twp. 15s Rge. 19w Co. Ellis State KS

Interval Tested 3233-3318 Zone Tested Toronto-Lansing "B"
 Anchor Length 85' Drill Pipe Run 3201 Mud Wt. 9.0
 Top Packer Depth 3228 Drill Collars Run 31 Vis 56
 Bottom Packer Depth 3233 Wt. Pipe Run — WL 6.4
 Total Depth 3318 Chlorides 900 ppm System LCM —

Blow Description IF-1.75" blow
ISI- No return
FF- No blow
FSI- No return

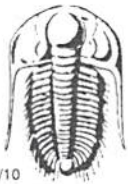
Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud with oil spots</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15' BHT 98° Gravity — API RW — @ —° F Chlorides — ppm
 (A) Initial Hydrostatic 1636 Test 1150 T-On Location 4:28am
 (B) First Initial Flow 47 Jars — T-Started 5:29am
 (C) First Final Flow 53 Safety Joint — T-Open 7:13am
 (D) Initial Shut-In 816 Circ Sub — T-Pulled 10:13am
 (E) Second Initial Flow 55 Hourly Standby — T-Out 11:40am
 (F) Second Final Flow 59 Mileage 38 RT 58.90
 (G) Final Shut-In 770 Sampler —
 (H) Final Hydrostatic 1592 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Extra Recorder —
 Day Standby —
 Accessibility —

Initial Open 30
 Initial Shut-In 60
 Final Flow 30
 Final Shut-In 60
 Sub Total 1208.90
 Total 1208.90
 MP/DST Disc't —

Approved By _____ Our Representative Cody Bles

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. 52154

4/10

Well Name & No. ~~2001~~ Legleiter 1-36 Test No. 2 Date 3-14-13
 Company Murfin Drilling Co, INC Elevation 1986 KB 1981 GL
 Address 250 N. Water STE 300, Wichita KS, 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin 16
 Location: Sec. 36 Twp. 15S Rge. 19W Co. Ellis State KS

Interval Tested 3316 - 3366 Zone Tested Lansing "D-F"
 Anchor Length 50' Drill Pipe Run 3295' Mud Wt. 9.0
 Top Packer Depth 3311 Drill Collars Run 31' Vis 56
 Bottom Packer Depth 3316 Wt. Pipe Run — WL 6.4
 Total Depth 3366 Chlorides 900 ppm System LCM —

Blow Description IF- 6.5" blow
 ISI- No return
 FF- B.O.B. in 17 Minutes
 FSI- No return.

Rec	Feet of	%gas	%oil	%water	%mud
62	OCM	20		80	
15	MCO	60		40	
2	Free oil	100			
	294' of G.I.P.				

Rec Total 77 BHT 102° Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic 1657 Test 1150 T-On Location 7:15 pm
 (B) First Initial Flow 31 Jars T-Started 7:30 pm
 (C) First Final Flow 45 Safety Joint T-Open 9:15 pm
 (D) Initial Shut-In 757 Circ Sub T-Pulled 1:15 am
 (E) Second Initial Flow 44 Hourly Standby T-Out 3:27 am
 (F) Second Final Flow 60 Mileage 38 RT 58.90
 (G) Final Shut-In 738 Sampler
 (H) Final Hydrostatic 1654 Straddle Ruined Shale Packer

Initial Open 30 Shale Packer Ruined Packer
 Initial Shut-In 60 Extra Packer Extra Copies
 Final Flow 60 Extra Recorder Sub Total 0
 Final Shut-In 90 Day Standby Total 1208.90
 Accessibility MP/DST Disc't
 Sub Total 1208.90

Approved By _____ Our Representative Cody Blay

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52155

Well Name & No. Legleiter 1-36 Test No. 3 Date 3-15-13
 Company Murfin Drilling Co Inc Elevation 1986 KB 1981 GL
 Address 250 N. Water STE 300, Wichita KS, 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin 16
 Location: Sec. 36 Twp. 15s Rge. 19w Co. Ellis State KS

Interval Tested 3405 - 3500 Zone Tested Lansing "H-K"
 Anchor Length 95' Drill Pipe Run 3360 Mud Wt. 8.9
 Top Packer Depth 3400 Drill Collars Run 31' Vis 54
 Bottom Packer Depth 3405 Wt. Pipe Run — WL 6.8
 Total Depth 3500 Chlorides 1,000 ppm System LCM —

Blow Description IF - 1/2" blow in 8 Minutes. Died back to surface blow
ISI - No return
FF - No blow
FSI - No return

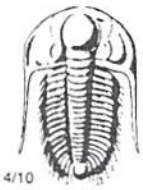
Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud, with show of oil</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10' BHT 100° Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic <u>1766</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>3:47pm</u>
(B) First Initial Flow <u>49</u>	<input type="checkbox"/> Jars	T-Started <u>5:16pm</u>
(C) First Final Flow <u>53</u>	<input type="checkbox"/> Safety Joint	T-Open <u>7:06pm</u>
(D) Initial Shut-In <u>406</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>10:06pm</u>
(E) Second Initial Flow <u>54</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>11:51pm</u>
(F) Second Final Flow <u>57</u>	<input checked="" type="checkbox"/> Mileage <u>38 RT</u> 58.90	Comments
(G) Final Shut-In <u>166</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1706</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>30</u>	<input type="checkbox"/> Day Standby	Total <u>1208.90</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1208.90</u>	

Approved By _____ Our Representative Cody Bleedorn

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52156

Well Name & No. Legleiter 1-36 Test No. 4 Date 3-16-13
 Company Murfin Drilling Co Inc Elevation 1986 KB 1981 GL
 Address 250 N. Water STE 300, Wichita KS, 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin 16
 Location: Sec. 36 Twp. 15s Rge. 19w Co. Ellis State KS

Interval Tested 3563 - 3590 Zone Tested CGI sand
 Anchor Length 27' Drill Pipe Run 3517' Mud Wt. 9.2
 Top Packer Depth 3558 Drill Collars Run 31' Vis 56
 Bottom Packer Depth 3563 Wt. Pipe Run — WL 6.8
 Total Depth 3590 Chlorides 4,000 ppm System LCM —
 Blow Description IF - B.O.B. in 30 seconds
ISI - No return
FF - B.O.B. in 30 seconds
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
124'	MW				
124'	MW			60%	40%
2223'					
248'	GWM	5%		5%	90%

Rec Total 2595' BHT 112° Gravity — API RW .35 @ 40° F Chlorides 35,000 ppm

(A) Initial Hydrostatic <u>1825</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>9:45am</u>
(B) First Initial Flow <u>543</u>	<input type="checkbox"/> Jars	T-Started <u>9:56am</u>
(C) First Final Flow <u>936</u>	<input type="checkbox"/> Safety Joint	T-Open <u>11:49am</u>
(D) Initial Shut-In <u>1185</u>	<input checked="" type="checkbox"/> Circ Sub <u>Dropped bar 50</u>	T-Pulled <u>2:19pm</u>
(E) Second Initial Flow <u>950</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>5:01pm</u>
(F) Second Final Flow <u>1132</u>	<input checked="" type="checkbox"/> Mileage <u>38RT 58.90</u>	Comments
(G) Final Shut-In <u>1185</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1748</u>	<input type="checkbox"/> Straddle	
	<input type="checkbox"/> Shale Packer	
	<input type="checkbox"/> Extra Packer	
	<input type="checkbox"/> Extra Recorder	
	<input type="checkbox"/> Day Standby	
	<input type="checkbox"/> Accessibility	
Initial Open <u>15</u>	Sub Total <u>1258.90</u>	
Initial Shut-In <u>60</u>		
Final Flow <u>15</u>		
Final Shut-In <u>60</u>		

Approved By _____ Our Representative Cody Bluff

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