



DRILL STEM TEST REPORT

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

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206

ATTN: Phil Askey

APC - Wayne #1-35

35-16s-45w Cheyenne,CO

Start Date: 2013.12.03 @ 21:28:00

End Date: 2013.12.04 @ 08:32:55

Job Ticket #: 53290 DST #: 1

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

Printed: 2013.12.13 @ 09:28:41



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Mull Drilling Co. Inc

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206
ATTN: Phil Askey

35-16s-45w Cheyenne, CO

APC - Wayne #1-35

Job Ticket: 53290

DST#: 1

Test Start: 2013.12.03 @ 21:28:00

GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:12:40

Time Test Ended: 08:32:55

Test Type: Conventional Bottom Hole (Initial)

Tester: Will MacLean

Unit No: 58

Interval: 4394.00 ft (KB) To 4425.00 ft (KB) (TVD)

Total Depth: 4425.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 4266.00 ft (KB)

4255.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8674 Inside

Press@RunDepth: 934.66 psig @ 4395.00 ft (KB)

Start Date: 2013.12.03

End Date:

2013.12.04

Start Time: 21:28:00

End Time:

08:32:55

Capacity: 8000.00 psig

Last Calib.: 2013.12.04

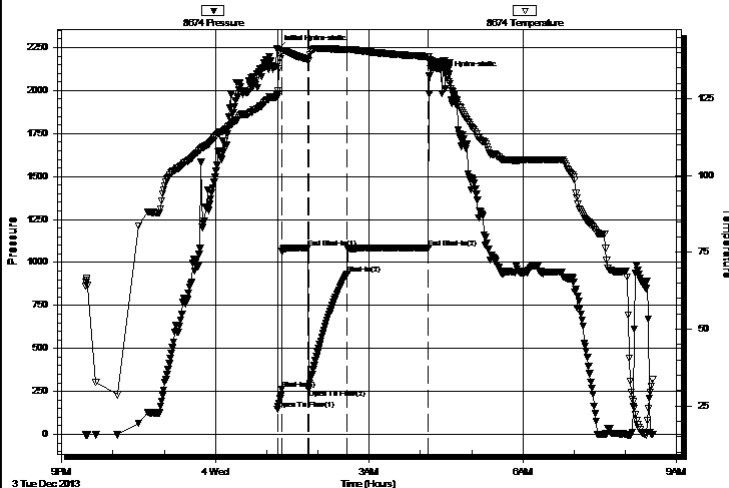
Time On Btm: 2013.12.04 @ 01:12:25

Time Off Btm: 2013.12.04 @ 04:10:24

TEST COMMENT: IF- Surface Blow Built to BOB in 2 1/2 min
IS- Weak Surface Blow
FF- Surface Blow Built to BOB in 2 3/4 min
FS- No Blow

We had over 30ppm of H2S Gas on the 1st 15' of Fluid dumped
3 more then Dropped the Bar and Pumped it Down circulated it
out to the reserve pit

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2237.41	126.39	Initial Hydro-static
1	146.72	125.57	Open To Flow (1)
6	260.82	140.25	Shut-In(1)
37	1085.35	137.80	End Shut-In(1)
37	263.56	137.37	Open To Flow (2)
82	934.66	140.88	Shut-In(2)
177	1085.58	138.69	End Shut-In(2)
178	2085.10	137.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
122.00	WCM 40%w 60% m	0.60
1735.00	MCW	23.77
62.00	WCM 32%w 68% m over 40 ppm of h2s	20.87
139.00	WCM 14%w 86% m 30 ppm of h2s	1.95

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TESTING, INC.

DRILL STEM TEST REPORT

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1700 N. Waterfront
PKWY B #1200
Wichita KS 67206
ATTN: Phil Askey

35-16s-45w Cheyenne, CO

APC - Wayne #1-35

Job Ticket: 53290

DST#: 1

Test Start: 2013.12.03 @ 21:28:00

GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:12:40

Time Test Ended: 08:32:55

Test Type: Conventional Bottom Hole (Initial)

Tester: Will MacLean

Unit No: 58

Interval: 4394.00 ft (KB) To 4425.00 ft (KB) (TVD)

Total Depth: 4425.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 4266.00 ft (KB)

4255.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8355 Outside

Press@RunDepth: psig @ 4395.00 ft (KB)

Start Date: 2013.12.03

End Date:

2013.12.04

Start Time: 21:28:05

End Time:

08:35:00

Capacity: 8000.00 psig

Last Calib.: 2013.12.04

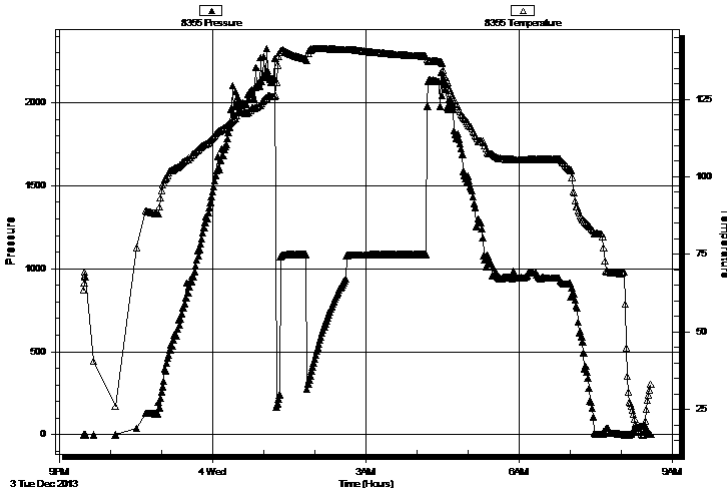
Time On Btm:

Time Off Btm:

TEST COMMENT: IF- Surface Blow Built to BOB in 2 1/2 min
IS- Weak Surface Blow
FF- Surface Blow Built to BOB in 2 3/4 min
FS- No Blow

We had over 30ppm of H2S Gas on the 1st 15' of Fluid dumped
3 more then Dropped the Bar and Pumped it Down circulated it
out to the reserve pit

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
122.00	WCM 40%w 60% m	0.60
1735.00	MCW	23.77
62.00	WCM 32%w 68% m over 40 ppm of h2s	0.87
139.00	WCM 14%w 86% m 30 ppm of h2s	1.95

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co. Inc

35-16s-45w Cheyenne, CO

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206
ATTN: Phil Askey

APC - Wayne #1-35

Job Ticket: 53290

DST#: 1

Test Start: 2013.12.03 @ 21:28:00

Tool Information

Drill Pipe:	Length:	4200.00 ft	Diameter:	3.80 inches	Volume:	58.91 bbl	Tool Weight:	1500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	184.00 ft	Diameter:	2.25 inches	Volume:	0.90 bbl	Weight to Pull Loose:	16000.00 lb
					Total Volume:	59.81 bbl	Tool Chased	ft
Drill Pipe Above KB:		10.00 ft					String Weight: Initial	62000.00 lb
Depth to Top Packer:		4394.00 ft					Final	70000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		31.00 ft						
Tool Length:		51.00 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			4375.00	
Shut In Tool	5.00			4380.00	
Hydraulic tool	5.00			4385.00	
Packer	5.00			4390.00	20.00 Bottom Of Top Packer
Packer	4.00			4394.00	
Stubb	1.00			4395.00	
Recorder	0.00	8355	Outside	4395.00	
Recorder	0.00	8674	Inside	4395.00	
Perforations	25.00			4420.00	
Bullnose	5.00			4425.00	31.00 Bottom Packers & Anchor
Total Tool Length:	51.00				



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DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co. Inc

35-16s-45w Cheyenne, CO

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206
ATTN: Phil Askey

APC - Wayne #1-35

Job Ticket: 53290

DST#: 1

Test Start: 2013.12.03 @ 21:28:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 58.00 sec/qt

Water Loss: 10.37 in³

Resistivity: ohm.m

Salinity: 4800.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

deg API

Water Salinity: 15000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
122.00	WCM 40%w 60%m	0.600
1735.00	MCW	23.773
62.00	WCM 32%w 68%m over 40 ppm of h2s	0.870
139.00	WCM 14%w 86%m 30 ppm of h2s	1.950

Total Length: 2058.00 ft Total Volume: 27.193 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW is 1.492 @ 21f = 15000

Serial #: 8674

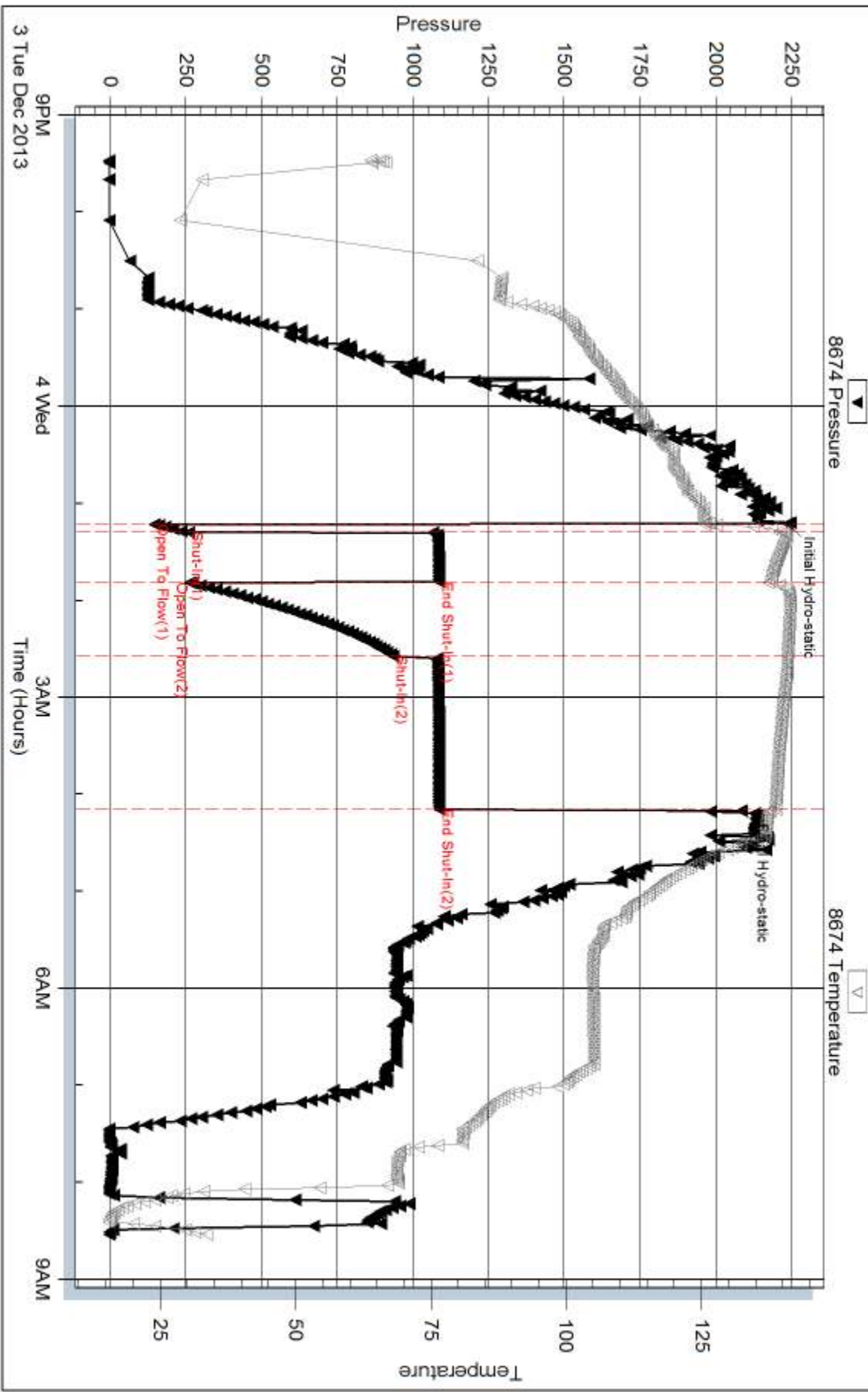
Inside

Mull Drilling Co. Inc

APC - Wayne #1-35

DST Test Number: 1

Pressure vs. Time

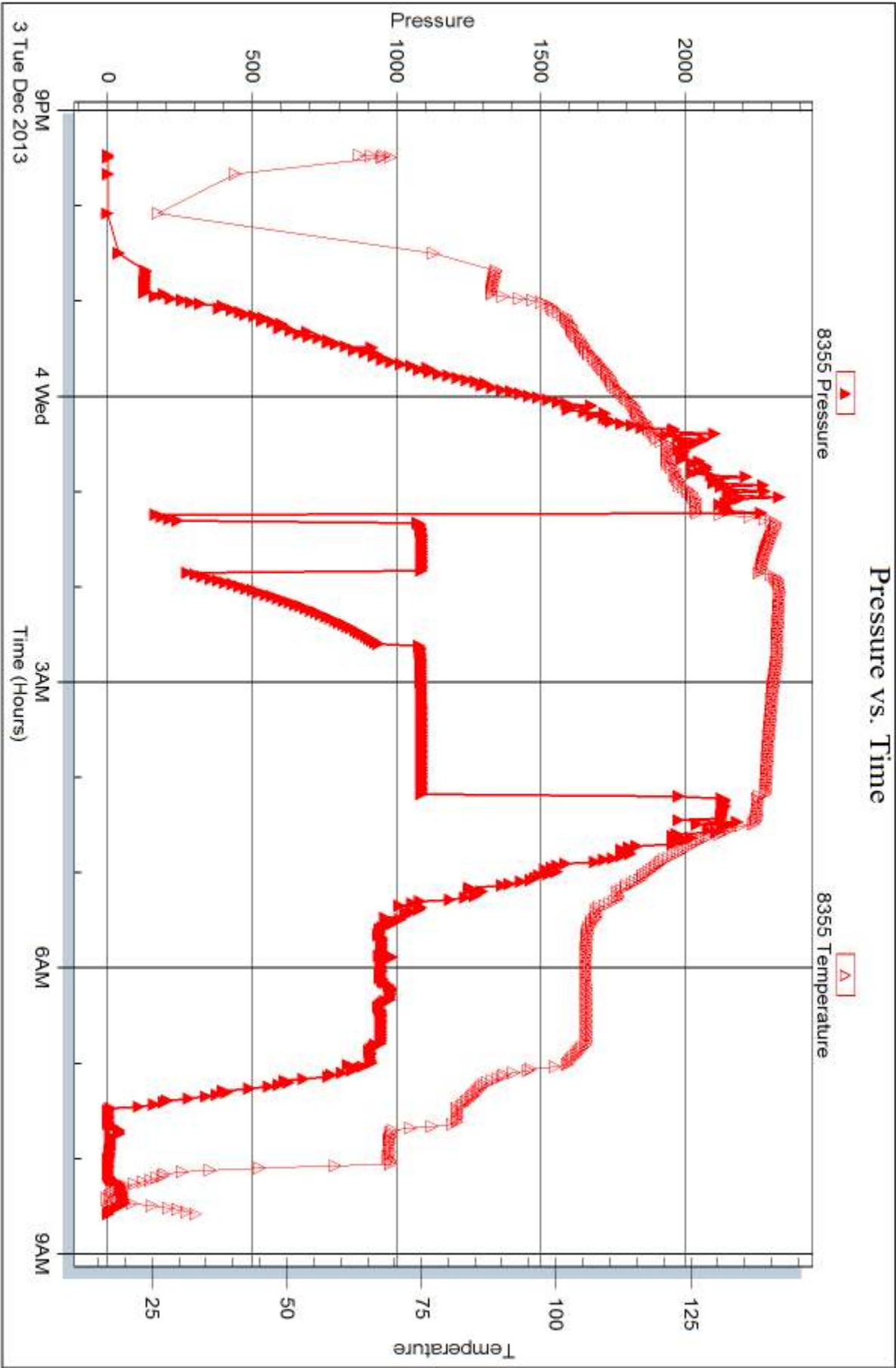


Serial #: 8355

Outside Mull Drilling Co. Inc

APC - Wayne #1-35

DST Test Number: 1





DRILL STEM TEST REPORT

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

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206

ATTN: Phil Askey

APC - Wayne #1-35

35-16s-45w Cheyenne,CO

Start Date: 2013.12.05 @ 11:36:00

End Date: 2013.12.05 @ 22:09:30

Job Ticket #: 53292 DST #: 2

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

Printed: 2013.12.13 @ 09:28:09



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Mull Drilling Co. Inc

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206
ATTN: Phil Askey

35-16s-45w Cheyenne, CO

APC - Wayne #1-35

Job Ticket: 53292

DST#: 2

Test Start: 2013.12.05 @ 11:36:00

GENERAL INFORMATION:

Formation: **Marmanton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:34:30

Time Test Ended: 22:09:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4557.00 ft (KB) To 4620.00 ft (KB) (TVD)

Total Depth: 4425.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 4266.00 ft (KB)

4255.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8674 Inside

Press@RunDepth: 142.87 psig @ 4558.00 ft (KB)

Start Date: 2013.12.05

End Date:

2013.12.05

Start Time: 11:36:05

End Time:

22:09:30

Capacity: 8000.00 psig

Last Calib.: 2013.12.05

Time On Btm: 2013.12.05 @ 14:34:15

Time Off Btm: 2013.12.05 @ 17:30:30

TEST COMMENT: IF- Surface Blow Built to BOB in 1 3/4min

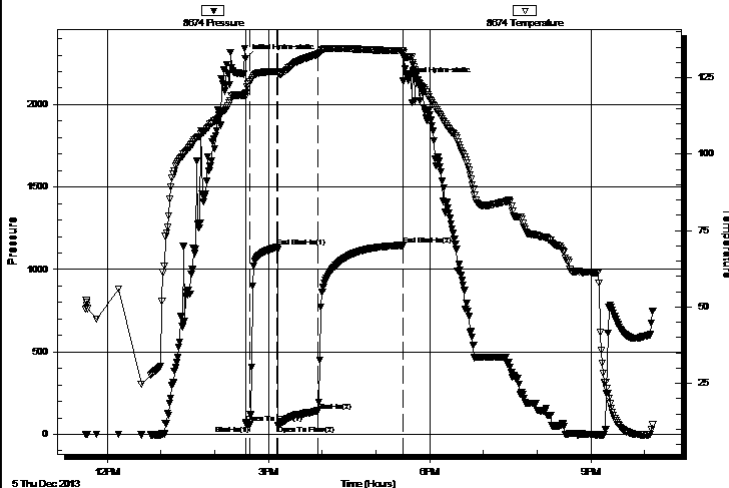
5ppm of h2s at stand 58

IS- No Blow

FF- Surface Blow Built to BOB 1 1/2min Gas to Surface in 30min to Weak to Guage

FS- Weak Surface Blow Built to BOB in 4 1/2min

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2279.04	119.79	Initial Hydro-static
1	64.67	118.85	Open To Flow (1)
6	55.51	123.71	Shut-In(1)
36	1134.47	127.10	End Shut-In(1)
37	53.25	126.52	Open To Flow (2)
82	142.87	132.82	Shut-In(2)
176	1146.36	133.75	End Shut-In(2)
177	2142.30	133.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	OGCM 9%oil 30%g 61%m	0.93
124.00	GOCM 15%g 18%oil 67%m	1.74
82.00	GOCM 16%g 29%oil 55%m	1.15
0.00	4072' of GIP	0.00

Gas Rates

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



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TESTING, INC.

DRILL STEM TEST REPORT

Mull Drilling Co. Inc

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206
ATTN: Phil Askey

35-16s-45w Cheyenne, CO

APC - Wayne #1-35

Job Ticket: 53292

DST#: 2

Test Start: 2013.12.05 @ 11:36:00

GENERAL INFORMATION:

Formation: **Marmanton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:34:30

Time Test Ended: 22:09:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 58

Interval: 4557.00 ft (KB) To 4620.00 ft (KB) (TVD)

Total Depth: 4425.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 4266.00 ft (KB)

4255.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8355 Outside

Press@RunDepth: psig @ 4558.00 ft (KB)

Start Date: 2013.12.05

End Date:

2013.12.05

Start Time: 11:36:05

End Time:

22:11:30

Capacity: 8000.00 psig

Last Calib.: 2013.12.05

Time On Btm:

Time Off Btm:

TEST COMMENT: IF- Surface Blow Built to BOB in 1 3/4min

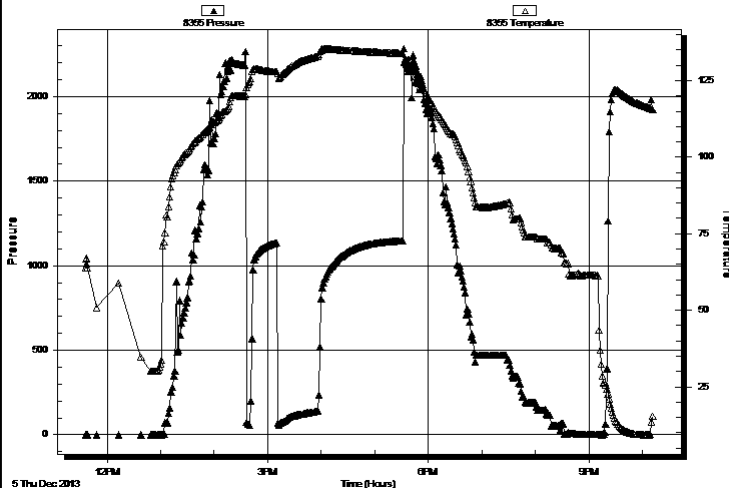
5ppm of h2s at stand 58

IS- No Blow

FF- Surface Blow Built to BOB 1 1/2min Gas to Surface in 30min to Weak to Guage

FS- Weak Surface Blow Built to BOB in 4 1/2min

Pressure vs. Time



PRESSURE SUMMARY

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

Length (ft)	Description	Volume (bbl)
186.00	OGCM 9%oil 30%g 61%m	0.93
124.00	GOCM 15%g 18%oil 67%m	1.74
82.00	GOCM 16%g 29%oil 55%m	1.15
0.00	4072' of GIP	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

Mull Drilling Co. Inc

35-16s-45w Cheyenne, CO

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206
ATTN: Phil Askey

APC - Wayne #1-35

Job Ticket: 53292

DST#: 2

Test Start: 2013.12.05 @ 11:36:00

Tool Information

Drill Pipe:	Length:	4385.00 ft	Diameter:	3.80 inches	Volume:	61.51 bbl	Tool Weight:	1500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	184.00 ft	Diameter:	2.25 inches	Volume:	0.90 bbl	Weight to Pull Loose:	28000.00 lb
					Total Volume:	62.41 bbl	Tool Chased	ft
Drill Pipe Above KB:	32.00 ft					String Weight: Initial	64000.00 lb	
Depth to Top Packer:	4557.00 ft					Final	64000.00 lb	
Depth to Bottom Packer:	ft							
Interval between Packers:	63.00 ft							
Tool Length:	83.00 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			4538.00	
Shut In Tool	5.00			4543.00	
Hydraulic tool	5.00			4548.00	
Packer	5.00			4553.00	20.00 Bottom Of Top Packer
Packer	4.00			4557.00	
Stubb	1.00			4558.00	
Recorder	0.00	8355	Outside	4558.00	
Recorder	0.00	8674	Inside	4558.00	
Perforations	23.00			4581.00	
Change Over Sub	1.00			4582.00	
Drill Pipe	32.00			4614.00	
Change Over Sub	1.00			4615.00	
Bullnose	5.00			4620.00	63.00 Bottom Packers & Anchor

Total Tool Length: 83.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co. Inc

35-16s-45w Cheyenne, CO

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206
ATTN: Phil Askey

APC - Wayne #1-35

Job Ticket: 53292

DST#: 2

Test Start: 2013.12.05 @ 11:36:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 7.97 in³

Resistivity: ohm.m

Salinity: 4800.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	OGCM 9%oil 30%g 61%m	0.933
124.00	GOCM 15%g 18%oil 67%m	1.739
82.00	GOCM 16%g 29%oil 55%m	1.150
0.00	4072' of GIP	0.000

Total Length: 392.00 ft

Total Volume: 3.822 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8674

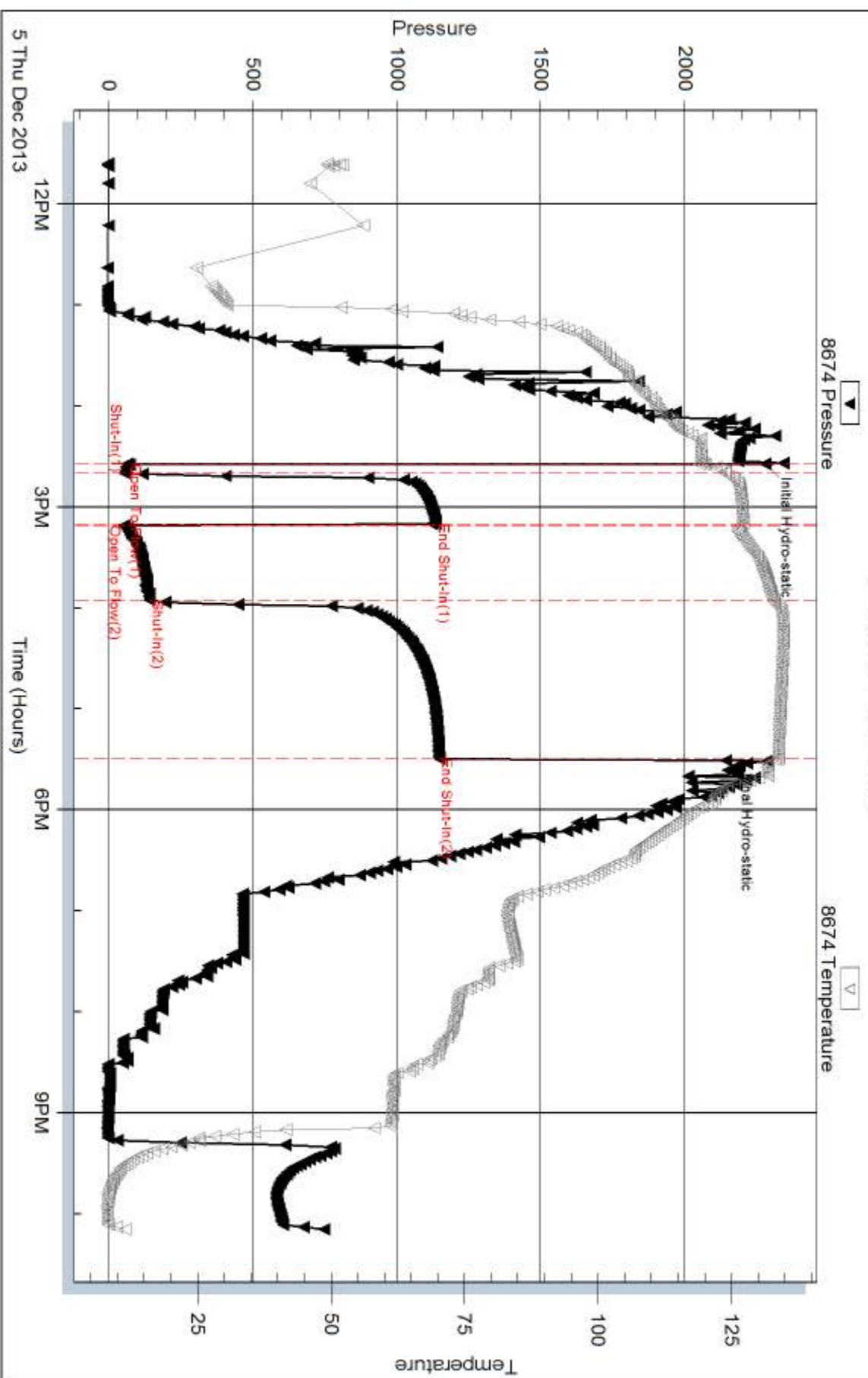
Inside

Mull Drilling Co. Inc

APC - Wayne #1-35

DST Test Number: 2

Pressure vs. Time

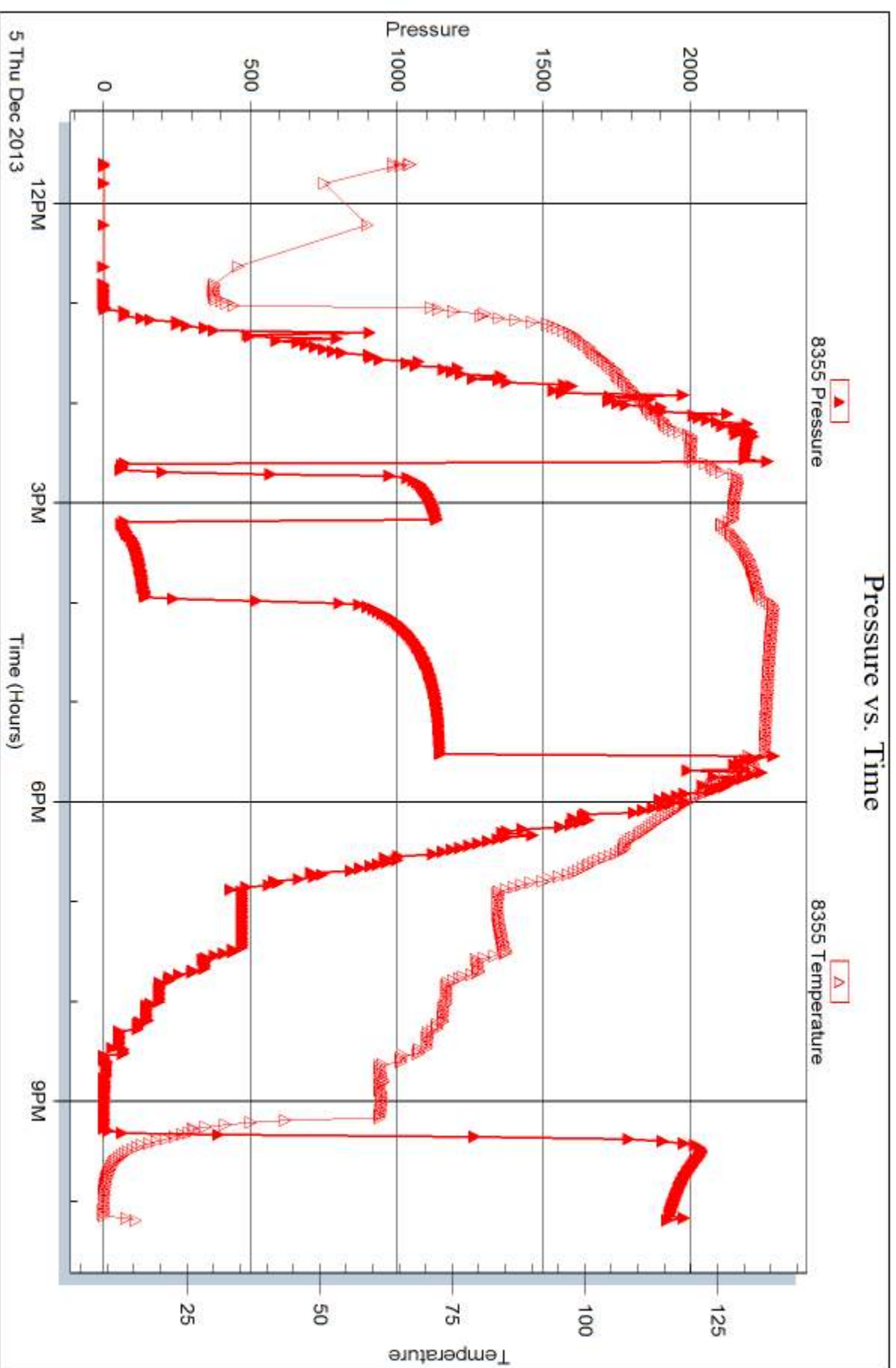


Serial #: 8355

Outside Mull Drilling Co. Inc

APC - Wayne #1-35

DST Test Number: 2





DRILL STEM TEST REPORT

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

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206

ATTN: Phil Askey

APC - Wayne #1-35

35-16s-45w Cheyenne,CO

Start Date: 2013.12.09 @ 07:18:00

End Date: 2013.12.09 @ 20:42:49

Job Ticket #: 55559 DST #: 3

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

Printed: 2013.12.13 @ 09:26:45



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Mull Drilling Co. Inc

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206
ATTN: Phil Askey

35-16s-45w Cheyenne, CO

APC - Wayne #1-35

Job Ticket: 55559

DST#: 3

Test Start: 2013.12.09 @ 07:18:00

GENERAL INFORMATION:

Formation: **Spergen**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:45:39

Time Test Ended: 20:42:49

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: 5238.00 ft (KB) To 5345.00 ft (KB) (TVD)

Total Depth: 5345.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 4266.00 ft (KB)

4255.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 6751 Outside

Press@RunDepth: 25.37 psig @ 5240.00 ft (KB)

Start Date: 2013.12.09

End Date:

2013.12.09

Start Time: 07:18:02

End Time:

20:42:49

Capacity: 8000.00 psig

Last Calib.: 2013.12.09

Time On Btm: 2013.12.09 @ 15:44:09

Time Off Btm: 2013.12.09 @ 17:54:30

TEST COMMENT: Weak blow died @ 3 min. Pressure chart show s sliding but weight indicator did not show anything.

No return.

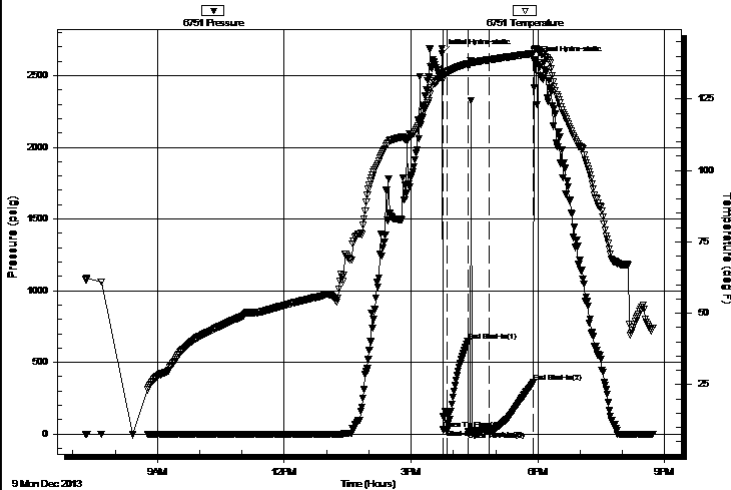
No blow , flushed tool, no blow .

No return.

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2653.66	133.04	Initial Hydro-static
2	30.06	131.74	Open To Flow (1)
7	34.40	134.35	Shut-In(1)
37	647.35	137.42	End Shut-In(1)
37	18.30	137.00	Open To Flow (2)
68	25.37	138.76	Shut-In(2)
130	358.62	140.98	End Shut-In(2)
131	2601.27	141.97	Final Hydro-static

Pressure vs. Time



Recovery

Length (ft)	Description	Volume (bbl)
10.00	M 100m	0.05

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

Mull Drilling Co. Inc

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206
ATTN: Phil Askey

35-16s-45w Cheyenne, CO

APC - Wayne #1-35

Job Ticket: 55559

DST#: 3

Test Start: 2013.12.09 @ 07:18:00

GENERAL INFORMATION:

Formation: **Spergen**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:45:39

Time Test Ended: 20:42:49

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

Interval: 5238.00 ft (KB) To 5345.00 ft (KB) (TVD)

Total Depth: 5345.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 4266.00 ft (KB)

4255.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8357 Inside

Press@RunDepth: psig @ 5240.00 ft (KB)

Start Date: 2013.12.09

End Date:

2013.12.09

Start Time: 07:17:59

End Time:

20:43:54

Capacity: 8000.00 psig

Last Calib.: 2013.12.09

Time On Btm:

Time Off Btm:

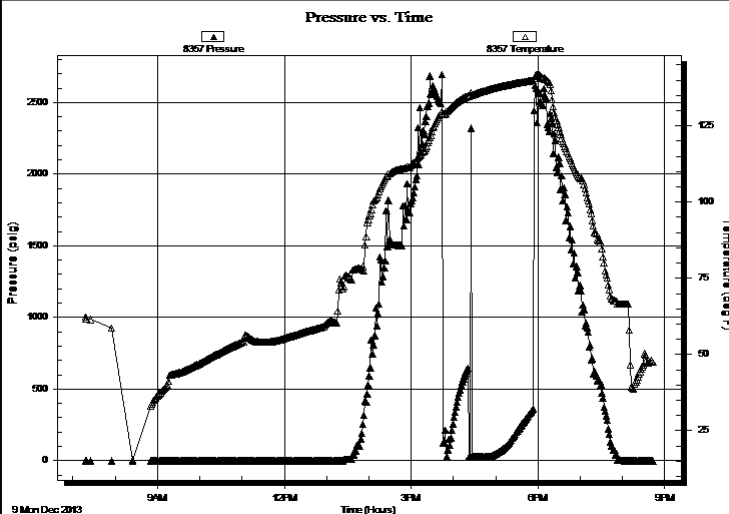
TEST COMMENT: Weak blow died @ 3 min. Pressure chart show s sliding but weight indicator did not show anything.

No return.

No blow , flushed tool, no blow .

No return.

PRESSURE SUMMARY



Time
(Min.)

Pressure
(psig)

Temp
(deg F)

Annotation

Recovery

Length (ft)	Description	Volume (bbl)
10.00	M 100m	0.05

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co. Inc

35-16s-45w Cheyenne, CO

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206
ATTN: Phil Askey

APC - Wayne #1-35

Job Ticket: 55559

DST#: 3

Test Start: 2013.12.09 @ 07:18:00

Tool Information

Drill Pipe:	Length:	5050.00 ft	Diameter:	3.80 inches	Volume:	70.84 bbl	Tool Weight:	1500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	184.00 ft	Diameter:	2.25 inches	Volume:	0.90 bbl	Weight to Pull Loose:	80000.00 lb
					Total Volume:	71.74 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		16.00 ft					String Weight: Initial	70000.00 lb
Depth to Top Packer:		5238.00 ft					Final	70000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		107.00 ft						
Tool Length:		127.00 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			5219.00	
Shut In Tool	5.00			5224.00	
Hydraulic tool	5.00			5229.00	
Packer	5.00			5234.00	20.00 Bottom Of Top Packer
Packer	4.00			5238.00	
Stubb	1.00			5239.00	
Perforations	1.00			5240.00	
Recorder	0.00	8357	Inside	5240.00	
Recorder	0.00	6751	Outside	5240.00	
Perforations	8.00			5248.00	
Change Over Sub	1.00			5249.00	
Drill Pipe	92.00			5341.00	
Bullnose	1.00			5342.00	
Bullnose	3.00			5345.00	107.00 Bottom Packers & Anchor

Total Tool Length: 127.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co. Inc

35-16s-45w Cheyenne, CO

1700 N. Waterfront
PKWY B #1200
Wichita KS 67206
ATTN: Phil Askey

APC - Wayne #1-35

Job Ticket: 55559

DST#: 3

Test Start: 2013.12.09 @ 07:18:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 55.00 sec/qt

Water Loss: 6.39 in³

Resistivity: ohm.m

Salinity: 3100.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	M 100m	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:

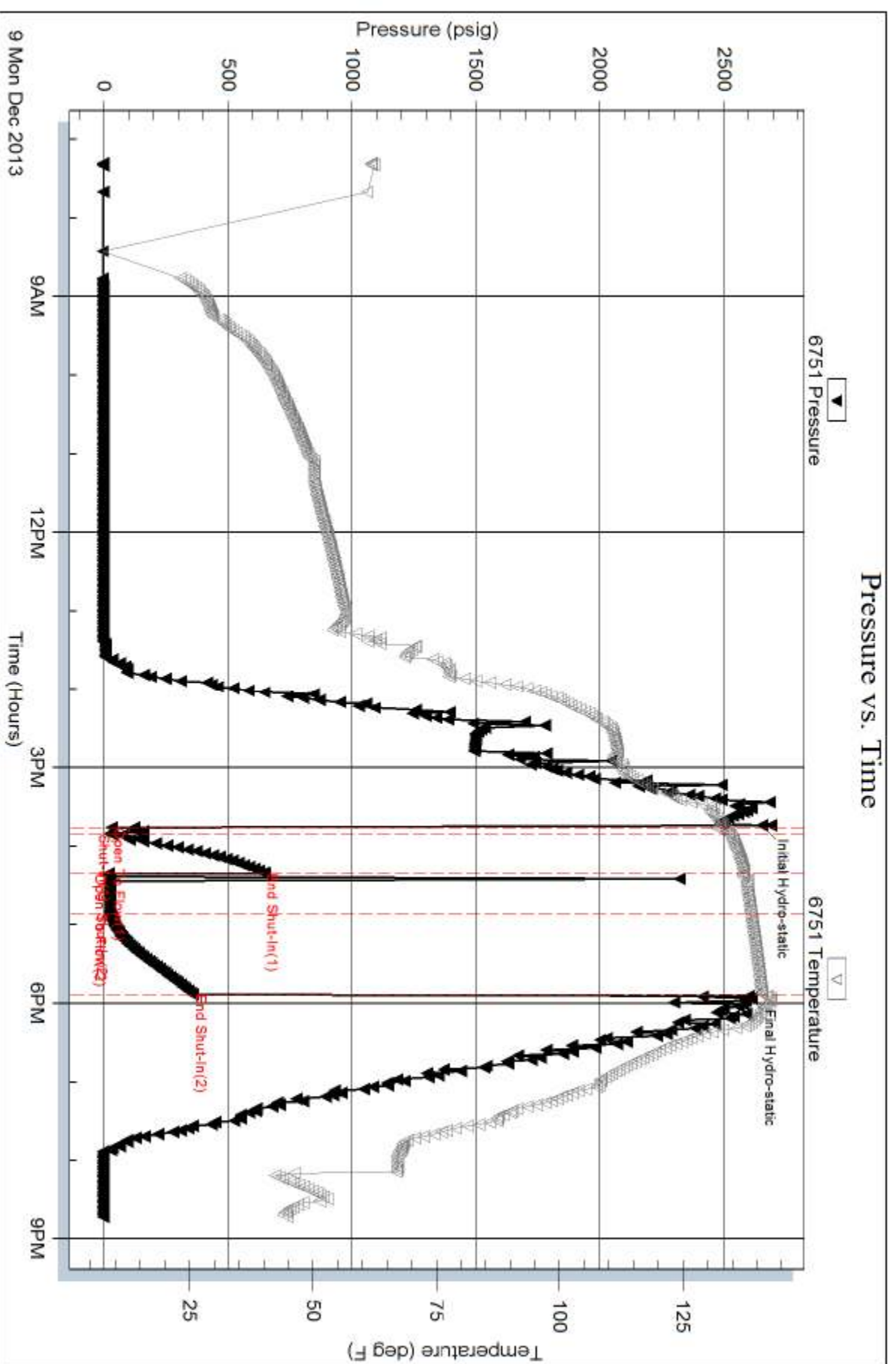
Recovery Comments:

Serial #: 6751

Outside Mull Drilling Co. Inc

APC - Wayne #1-35

DST Test Number: 3



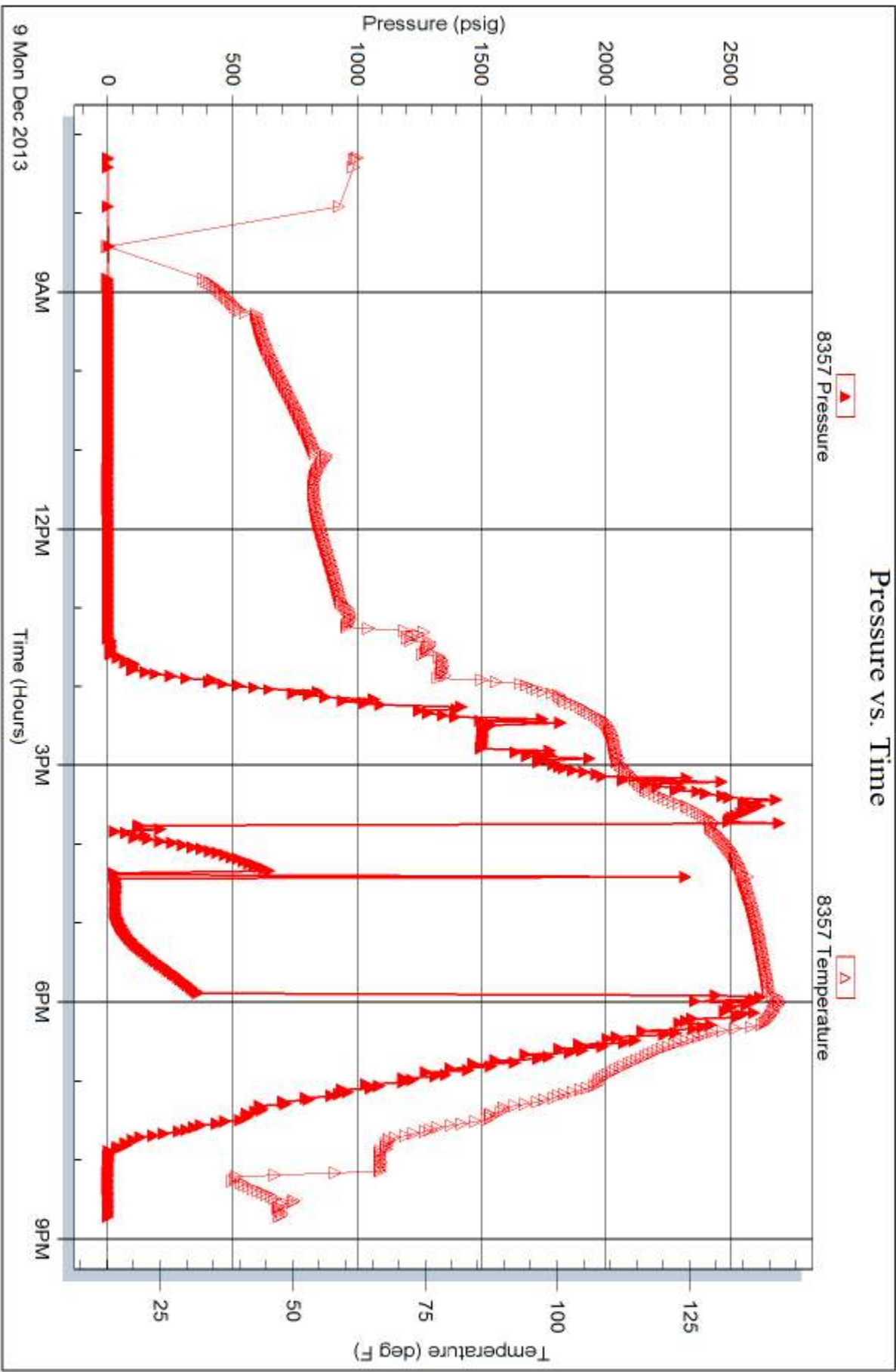
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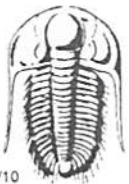
Inside

Mull Drilling Co. Inc

APC - Wayne #1-35

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53290

Well Name & No. APC - Wayne #1-35 Test No. DST #1 Date 12-3-13
 Company Mull Drilling Co. Inc Elevation 4266 KB 4255 GL
 Address 1700 N. Waterfront PRWY B #1200 Wichita KS 67206
 Co. Rep / Geo. Phil Askey Rig Martin 20
 Location: Sec. 35 Twp. 16s Rge. 45W Co. Cheyenne State CO

Interval Tested 4394-4425 Zone Tested LRC J
 Anchor Length 31 Drill Pipe Run 4200 Mud Wt. 9.2
 Top Packer Depth 4390 Drill Collars Run 184 Vis 58
 Bottom Packer Depth 4394 Wt. Pipe Run 0 WL 10.4
 Total Depth 4425 Chlorides 4800 ppm System LCM 416

Blow Description IF- Surface Blow Built to BOB in 2 1/2 min
ISI- Weak Surface Blow
FF- Surface Blow Built to BOB in 2 3/4 min
FST- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>139</u>	<u>WCM</u>	<u>30ppm 1723</u>	<u>14</u>	<u>86</u>	
<u>62</u>	<u>WCM</u>		<u>32</u>	<u>68</u>	
<u>1735</u>	<u>MCW</u>				
<u>122</u>	<u>WCM</u>		<u>40</u>	<u>60</u>	

Rec Total 2058 BHT 138 Gravity 1.492 @ 21 °F Chlorides 15,000 ppm
 (A) Initial Hydrostatic 2237 ☒ Test 1450 T-On Location 18:50
 (B) First Initial Flow 146 ☐ Jars 21:28
 (C) First Final Flow 260 ☐ Safety Joint 1:12
 (D) Initial Shut-In 1085 ☒ Circ Sub Dropped Bar 50 T-Pulled 4:10
 (E) Second Initial Flow 263 ☒ Hourly Standby 2.75h 275 T-Out 8:32
 (F) Second Final Flow 934 ☒ Mileage 198 RIT 306.90
 (G) Final Shut-In 1085 ☐ Sampler
 (H) Final Hydrostatic 2085 ☐ Straddle ☐ Ruined Shale Packer

Initial Open 5 ☐ Shale Packer ☐ Ruined Packer
 Initial Shut-In 30 ☐ Extra Packer ☐ Extra Copies
 Final Flow 45 ☐ Extra Recorder Sub Total 0
 Final Shut-In 90 ☐ Day Standby Total 2081.90
☐ Accessibility MP/DST Disc't

Sub Total 2081.90
 Approved By Phil Askey Our Representative Kell M...

Trilobite Testing Inc. shall not be liable for damaged or 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. 53292

Well Name & No. APC-Wayne #1-35 Test No. DST #2 Date 12-5-13
 Company Mull Drilling Co. Inc Elevation 4266 KB 4255 GL
 Address 1700 N. Waterfront PRWY B#1200 Wichita KS 67206
 Co. Rep / Geo. Phil Askey Rig Martin 20
 Location: Sec. 35 Twp. 16S Rge. 45W Co. Cheyenne State CO

Interval Tested 4557-4620 Zone Tested Marmanton
 Anchor Length 63 Drill Pipe Run 4385 Mud Wt. 9.3
 Top Packer Depth 4553 Drill Collars Run 184 Vis 56
 Bottom Packer Depth 4557 Wt. Pipe Run 0 WL 8.0
 Total Depth 4620 Chlorides 4800 ppm System LCM 616

Blow Description IF-Surface Blow Built to BOB in 1 3/4 min
ISI-No Blow
FF-Surface Blow Built to BOB in 1 1/2 min Gasto Surface in 30 min
FST-Weak Surface Blow Built to BOB in 4 1/2 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>82</u>	<u>6-0 CM</u>	<u>16</u>	<u>29</u>	<u>35</u>	<u></u>
<u>124</u>	<u>6-0 CM</u>	<u>15</u>	<u>18</u>	<u>67</u>	<u></u>
<u>186</u>	<u>0-0 CM</u>	<u>30</u>	<u>9</u>	<u>61</u>	<u></u>
Rec	Feet of <u>4072' of GIP</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 392 BHT 132 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
 (A) Initial Hydrostatic 2279 ☒ Test 1450 T-On Location 11:10
 (B) First Initial Flow 64 ☐ Jars _____ T-Started 11:36
 (C) First Final Flow 55 ☐ Safety Joint _____ T-Open 14:34
 (D) Initial Shut-In 1134 ☒ Circ Sub N/C T-Pulled 17:30
 (E) Second Initial Flow 53 ☒ Hourly Standby 1h 100 T-Out 22:09
 (F) Second Final Flow 142 ☒ Mileage 198 306.90 Comments _____
 (G) Final Shut-In 1146 ☐ Sampler _____
 (H) Final Hydrostatic 2142 ☐ Straddle _____

Initial Open 5 ☐ Shale Packer _____
 Initial Shut-In 30 ☐ Extra Packer _____
 Final Flow 45 ☐ Extra Recorder _____
 Final Shut-In 90 ☐ Day Standby _____
 Sub Total 1856.90 ☐ Accessibility _____
 Sub Total 1856.90

Approved By Phil Askey Our Representative Wich man
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55559**

Well Name & No. APC-Wayne #1-35 Test No. 3 Date 12-9-13
 Company Mull Drilling Co., Inc. Elevation 4266 KB 425.5 GL
 Address 1700 N. Waterfront Pkwy. B#1200 Wichita, KS 67206
 Co. Rep / Geo. Phil Askey Rig MDC #20
 Location: Sec. 3.5 Twp. 16s Rge. 45w Co. Cheyenne State CO

Interval Tested 5238-5345 Zone Tested Spergen
 Anchor Length 10'7 Drill Pipe Run 5050 Mud Wt. 9.1
 Top Packer Depth 5234 Drill Collars Run 184 Vis 55
 Bottom Packer Depth 5238 Wt. Pipe Run 0 WL 6.4
 Total Depth 5345 Chlorides 3100 ppm System LCM 7⁺
 Blow Description Weak blow died @ 3 min. Pressure chart shows tool sliding / opening but weight
No return. indicator showed nothing.
No blow, flushed tool, no blow.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>10</u>	Feet of <u>M</u>	%gas	%oil	%water <u>100</u>	%mud
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 141 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2654 ☒ Test 1550 T-On Location 6:00
 (B) First Initial Flow 30 ☐ Jars — T-Started 7:18
 (C) First Final Flow 34 ☐ Safety Joint — T-Open 15:46
 (D) Initial Shut-In 647 ☒ Circ Sub — T-Pulled 17:54
 (E) Second Initial Flow 18 ☐ Hourly Standby 3.25h 325 T-Out 20:43
 (F) Second Final Flow 25 ☒ Mileage 198 RT 306.90 Comments —
 (G) Final Shut-In 359 ☐ Sampler —
 (H) Final Hydrostatic 2601 ☐ Straddle — ☐ Ruined Shale Packer —
☐ Shale Packer — ☐ Ruined Packer —

Initial Open 5 ☐ Extra Packer — ☐ Extra Copies —
 Initial Shut-In 30 ☐ Extra Recorder — Sub Total 0
 Final Flow 30 ☐ Day Standby — Total 2181.90
 Final Shut-In 60 ☐ Accessibility — MP/DST Disc't —

Sub Total 2181.90

Approved By Phil Askey

Our Representative Chuck Smith

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