

DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Comp.**

1700 N Waterfront PKWY
B 1200
Wichita, KS 67206

ATTN: Phil Askey

Porky #1-32

32-17s-45w Kiowa,CO

Start Date: 2013.09.27 @ 20:45:53

End Date: 2013.09.28 @ 05:25:32

Job Ticket #: 54637 DST #: 1

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

Printed: 2013.10.03 @ 13:43:05



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Mull Drilling Comp.

32-17s-45w Kiowa, CO

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

Porky #1-32

Job Ticket: 54637

DST#: 1

Test Start: 2013.09.27 @ 20:45:53

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:28:48

Time Test Ended: 05:25:32

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane McBride

Unit No: 55

Interval: 4168.00 ft (KB) To 4250.00 ft (KB) (TVD)

Reference Elevations: 3990.00 ft (KB)

Total Depth: 4250.00 ft (KB) (TVD)

3979.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8368 Outside

Press @ Run Depth: 99.69 psig @ 4169.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.09.27

End Date:

2013.09.28

Last Calib.: 2013.09.28

Start Time: 20:45:53

End Time:

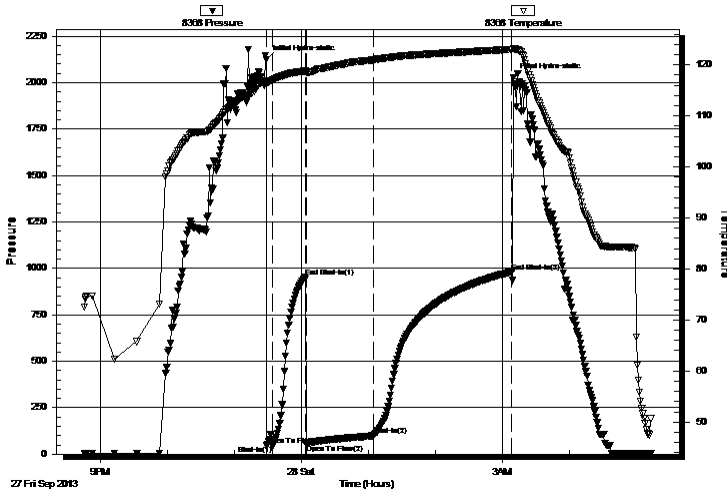
05:12:32

Time On Btm: 2013.09.27 @ 23:28:33

Time Off Btm: 2013.09.28 @ 03:09:32

TEST COMMENT: 3" blow
No return
9 1/2" blow
No return

Pressure vs. Time



PRESSURE SUMMARY

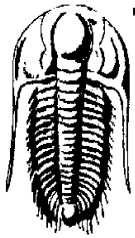
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2122.46 | 116.92 | Initial Hydro-static |
| 1 | 49.25 | 116.19 | Open To Flow (1) |
| 6 | 47.94 | 117.00 | Shut-In(1) |
| 35 | 952.99 | 118.80 | End Shut-In(1) |
| 36 | 52.15 | 118.54 | Open To Flow (2) |
| 96 | 99.69 | 120.98 | Shut-In(2) |
| 220 | 981.95 | 123.03 | End Shut-In(2) |
| 221 | 2026.77 | 123.22 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------------|--------------|
| 150.00 | mud w / oil spots | 0.74 |
| 0.00 | gas ? no odor | 0.00 |
| | | |
| | | |
| | | |

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Mull Drilling Comp.

32-17s-45w Kiowa, CO

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

Porky #1-32

Job Ticket: 54637

DST#: 1

Test Start: 2013.09.27 @ 20:45:53

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:28:48

Time Test Ended: 05:25:32

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane McBride

Unit No: 55

Interval: 4168.00 ft (KB) To 4250.00 ft (KB) (TVD)

Total Depth: 4250.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3990.00 ft (KB)

3979.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 6667 Inside

Press @ Run Depth: psig @ 4169.00 ft (KB)

Start Date: 2013.09.27

End Date:

2013.09.28

Start Time: 20:45:50

End Time:

05:12:13

Capacity: 8000.00 psig

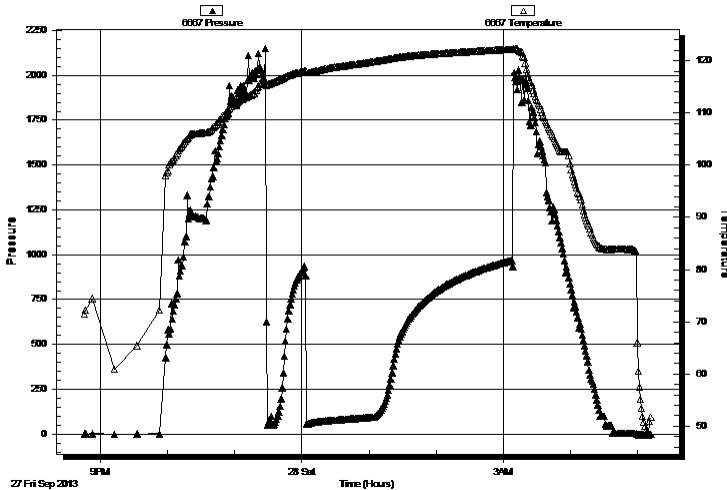
Last Calib.: 2013.09.28

Time On Btm:

Time Off Btm:

TEST COMMENT: 3" blow
No return
9 1/2" blow
No return

Pressure vs. Time



PRESSURE SUMMARY

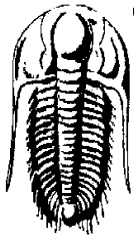
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
|-------------|-----------------|--------------|------------|

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------------|--------------|
| 150.00 | mud w / oil spots | 0.74 |
| 0.00 | gas ? no odor | 0.00 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Comp.

32-17s-45w Kiowa, CO

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

Porky #1-32

Job Ticket: 54637

DST#: 1

Test Start: 2013.09.27 @ 20:45:53

Tool Information

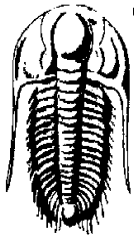
| | | | | | | | | |
|---------------------------|---------|------------|-----------|-------------|---------------|-----------|------------------------|-------------|
| Drill Pipe: | Length: | 3979.00 ft | Diameter: | 3.80 inches | Volume: | 55.81 bbl | Tool Weight: | 1500.00 lb |
| Heavy Wt. Pipe: | Length: | 0.00 ft | Diameter: | 0.00 inches | Volume: | 0.00 bbl | Weight set on Packer: | 25000.00 lb |
| Drill Collar: | Length: | 183.00 ft | Diameter: | 2.25 inches | Volume: | 0.90 bbl | Weight to Pull Loose: | 75000.00 lb |
| | | | | | Total Volume: | 56.71 bbl | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | | 14.00 ft | | | | | String Weight: Initial | 56000.00 lb |
| Depth to Top Packer: | | 4168.00 ft | | | | | Final | 59000.00 lb |
| Depth to Bottom Packer: | | ft | | | | | | |
| Interval between Packers: | | 82.00 ft | | | | | | |
| Tool Length: | | 102.00 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 | | | 4149.00 | |
| Shut In Tool | 5.00 | | | 4154.00 | |
| Hydraulic tool | 5.00 | | | 4159.00 | |
| Packer | 5.00 | | | 4164.00 | 20.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4168.00 | |
| Stubb | 1.00 | | | 4169.00 | |
| Recorder | 0.00 | 6667 | Inside | 4169.00 | |
| Recorder | 0.00 | 8368 | Outside | 4169.00 | |
| Perforations | 11.00 | | | 4180.00 | |
| Change Over Sub | 1.00 | | | 4181.00 | |
| Drill Pipe | 63.00 | | | 4244.00 | |
| Change Over Sub | 1.00 | | | 4245.00 | |
| Bullnose | 5.00 | | | 4250.00 | 82.00 Bottom Packers & Anchor |

Total Tool Length: 102.00



TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Comp.

32-17s-45w Kiowa, CO

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

Porky #1-32

Job Ticket: 54637

DST#: 1

Test Start: 2013.09.27 @ 20:45:53

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 7.95 in³

Resistivity: 0.00 ohm.m

Salinity: 3000.00 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:

0 deg API

0 ppm

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------------|---------------|
| 150.00 | mud w / oil spots | 0.738 |
| 0.00 | gas ? no odor | 0.000 |

Total Length: 150.00 ft

Total Volume: 0.738 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

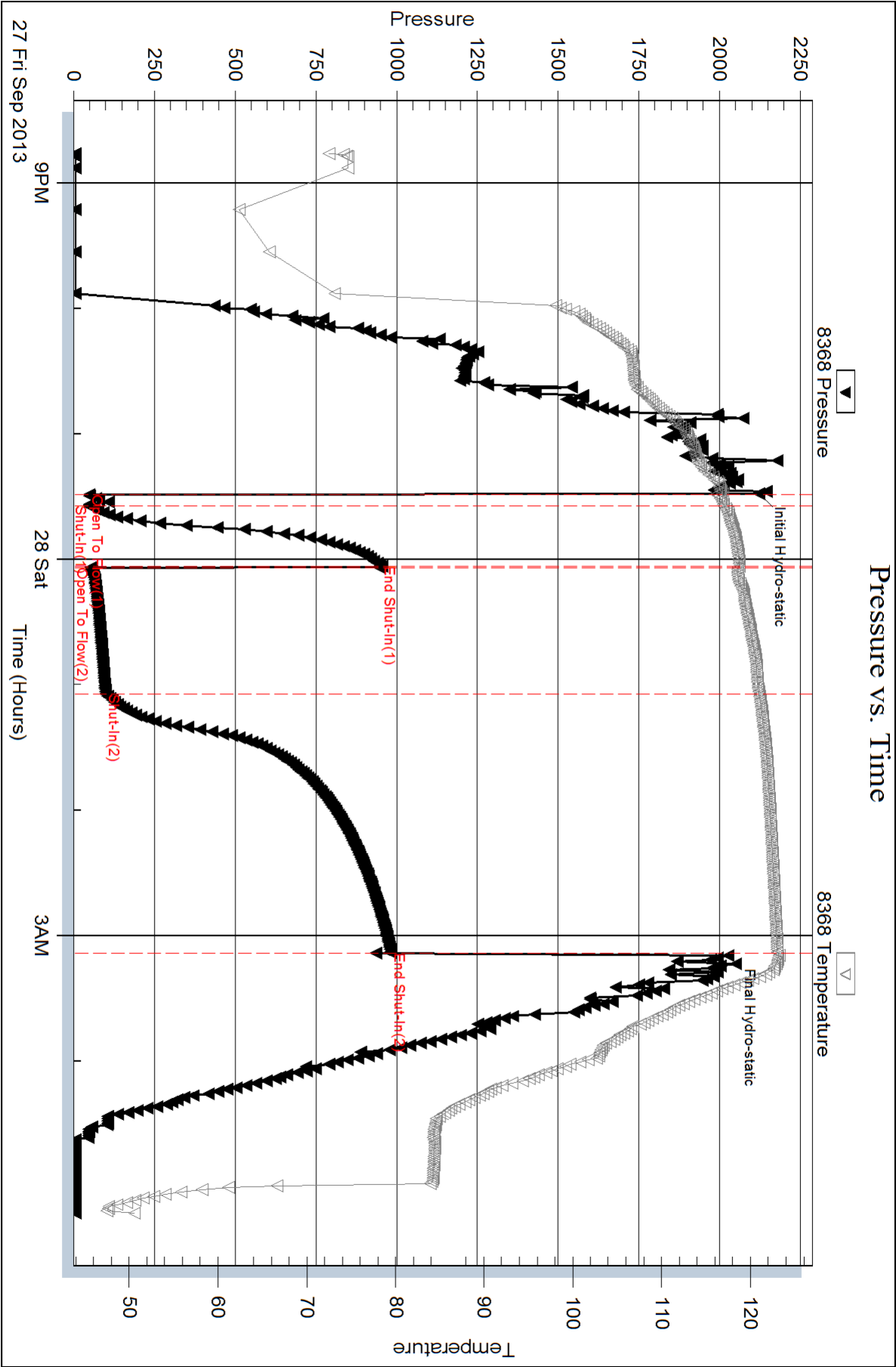
Recovery Comments:

Serial #: 8368

Outside Mull Drilling Comp.

Porky #1-32

DST Test Number: 1



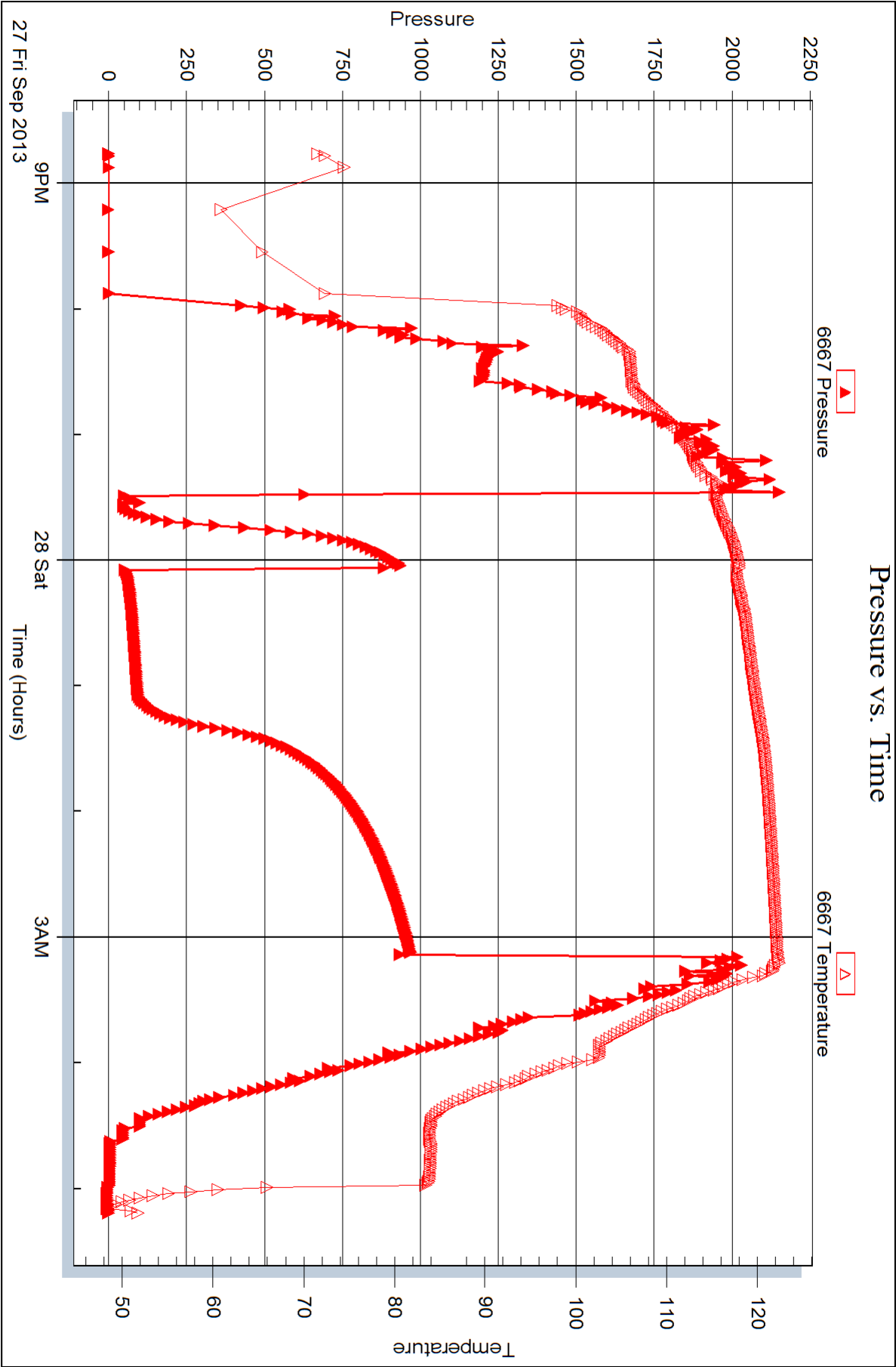
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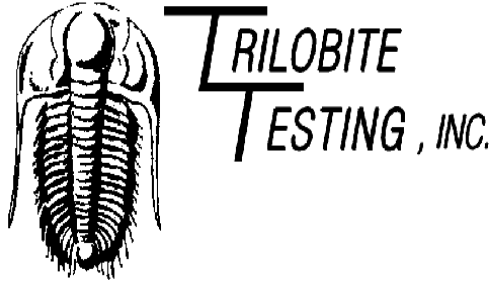
Inside

Mull Drilling Comp.

Porky #1-32

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Comp.**

1700 N Waterfront PKWY
B 1200
Wichita, KS 67206

ATTN: Phil Askey

Porky #1-32

32-17s-45w Kiowa,CO

Start Date: 2013.09.28 @ 15:25:15

End Date: 2013.09.28 @ 22:45:09

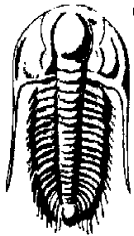
Job Ticket #: 54638 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.03 @ 13:42:35



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Mull Drilling Comp.

32-17s-45w Kiowa, CO

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

Porky #1-32

Job Ticket: 54638

DST#: 2

Test Start: 2013.09.28 @ 15:25:15

GENERAL INFORMATION:

Formation: **Ft Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:07:55

Time Test Ended: 22:45:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

Interval: 4249.00 ft (KB) To 4310.00 ft (KB) (TVD)

Total Depth: 4310.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3990.00 ft (KB)

3979.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8368 Outside

Press @ Run Depth: 177.73 psig @ 4250.00 ft (KB)

Start Date: 2013.09.28

End Date:

2013.09.28

Start Time: 15:25:15

End Time:

22:24:09

Capacity: 8000.00 psig

Last Calib.: 2013.09.28

Time On Btm: 2013.09.28 @ 17:07:25

Time Off Btm: 2013.09.28 @ 20:02:25

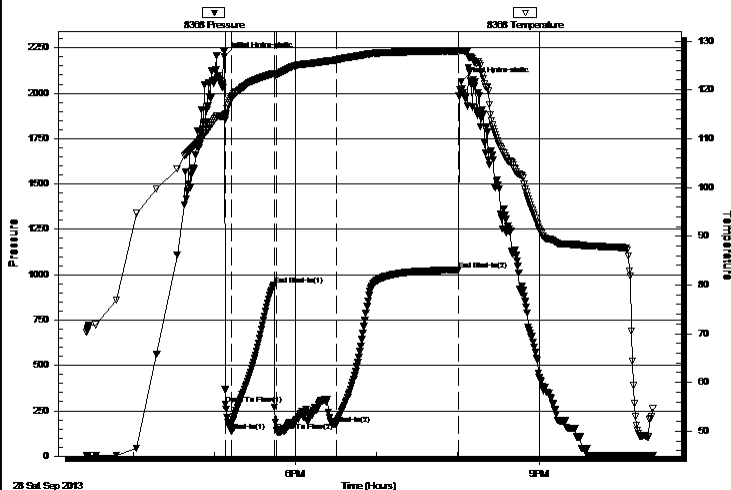
TEST COMMENT: B.O.B. in 1/2 min.

No return

B.O.B. @ open G.T.S. 2 min. into flow, too weak to gauge

Surface return in 10 min. died in 35 min.

Pressure vs. Time



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2200.02 | 114.82 | Initial Hydro-static |
| 1 | 285.86 | 114.39 | Open To Flow (1) |
| 6 | 138.08 | 118.38 | Shut-In (1) |
| 37 | 943.08 | 123.34 | End Shut-In (1) |
| 39 | 139.30 | 123.08 | Open To Flow (2) |
| 83 | 177.73 | 126.09 | Shut-In (2) |
| 173 | 1025.93 | 127.78 | End Shut-In (2) |
| 175 | 2062.51 | 128.09 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------|--------------|
| 120.00 | g s m c o 5m 25o 70g | 0.59 |
| 60.00 | g m c o 10m 40o 50g | 0.30 |
| 60.00 | s o c g m 5o 10g 85m | 0.81 |
| | | |
| | | |
| | | |

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Mull Drilling Comp.

32-17s-45w Kiowa, CO

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

Porky #1-32

Job Ticket: 54638

DST#: 2

Test Start: 2013.09.28 @ 15:25:15

GENERAL INFORMATION:

Formation: **Ft Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:07:55

Time Test Ended: 22:45:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

Interval: 4249.00 ft (KB) To 4310.00 ft (KB) (TVD)

Total Depth: 4310.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3990.00 ft (KB)

3979.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 6667 Inside

Press @ Run Depth: psig @ 4250.00 ft (KB)

Start Date: 2013.09.28

End Date:

2013.09.28

Start Time: 15:34:29

End Time:

22:23:23

Capacity: 8000.00 psig

Last Calib.: 2013.09.28

Time On Btm:

Time Off Btm:

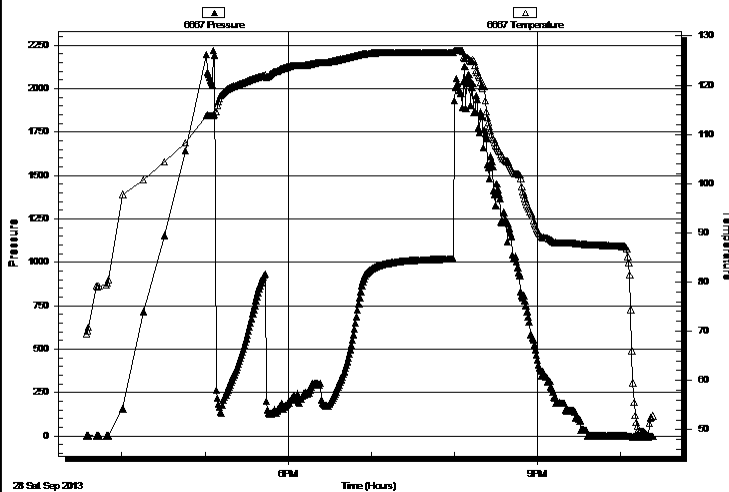
TEST COMMENT: B.O.B. in 1/2 min.

No return

B.O.B. @ open G.T.S. 2 min. into flow, too weak to gauge

Surface return in 10 min. died in 35 min.

Pressure vs. Time



PRESSURE SUMMARY

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

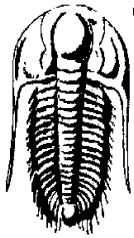
Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------|--------------|
| 120.00 | g s m c o 5m 25o 70g | 0.59 |
| 60.00 | g m c o 10m 40o 50g | 0.30 |
| 60.00 | s o c g m 5o 10g 85m | 0.81 |
| | | |
| | | |
| | | |

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 Comp.

32-17s-45w Kiowa, CO

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

Porky #1-32

Job Ticket: 54638

DST#: 2

Test Start: 2013.09.28 @ 15:25:15

Tool Information

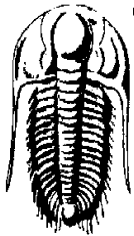
| | | | | | |
|---------------------------|--------------------|-----------------------|-------------------|------------------------|-------------|
| Drill Pipe: | Length: 4074.00 ft | Diameter: 3.80 inches | Volume: 57.15 bbl | Tool Weight: | 1500.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: | 25000.00 lb |
| Drill Collar: | Length: 183.00 ft | Diameter: 2.25 inches | Volume: 0.90 bbl | Weight to Pull Loose: | 80000.00 lb |
| | | Total Volume: | 58.05 bbl | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | 28.00 ft | | | String Weight: Initial | 58000.00 lb |
| Depth to Top Packer: | 4249.00 ft | | | Final | 58000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 61.00 ft | | | | |
| Tool Length: | 81.00 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 | | | 4230.00 | |
| Shut In Tool | 5.00 | | | 4235.00 | |
| Hydraulic tool | 5.00 | | | 4240.00 | |
| Packer | 5.00 | | | 4245.00 | 20.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4249.00 | |
| Stubb | 1.00 | | | 4250.00 | |
| Recorder | 0.00 | 6667 | Inside | 4250.00 | |
| Recorder | 0.00 | 8368 | Outside | 4250.00 | |
| Perforations | 21.00 | | | 4271.00 | |
| Change Over Sub | 1.00 | | | 4272.00 | |
| Drill Pipe | 32.00 | | | 4304.00 | |
| Change Over Sub | 1.00 | | | 4305.00 | |
| Bullnose | 5.00 | | | 4310.00 | 61.00 Bottom Packers & Anchor |

Total Tool Length: 81.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Comp.

32-17s-45w Kiowa, CO

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

Porky #1-32

Job Ticket: 54638

DST#: 2

Test Start: 2013.09.28 @ 15:25:15

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 54.00 sec/qt

Water Loss: 8.76 in³

Resistivity: 0.00 ohm.m

Salinity: 3300.00 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:

0 deg API

0 ppm

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|----------------------|---------------|
| 120.00 | g s m c o 5m 25o 70g | 0.590 |
| 60.00 | g m c o 10m 40o 50g | 0.295 |
| 60.00 | s o c g m 5o 10g 85m | 0.814 |

Total Length: 240.00 ft

Total Volume: 1.699 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

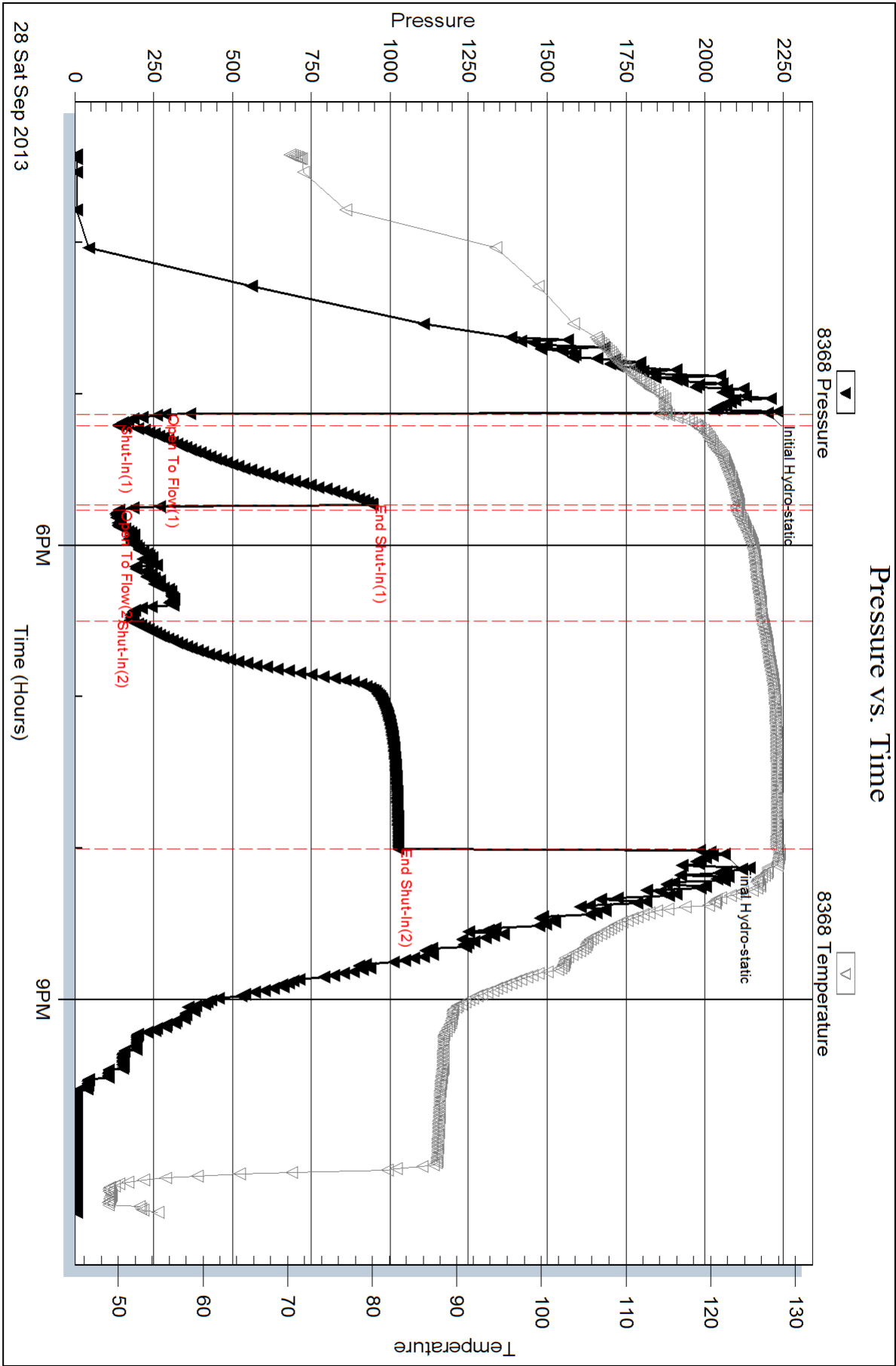
Recovery Comments:

Serial #: 8368

Outside Mull Drilling Comp.

Porky #1-32

DST Test Number: 2



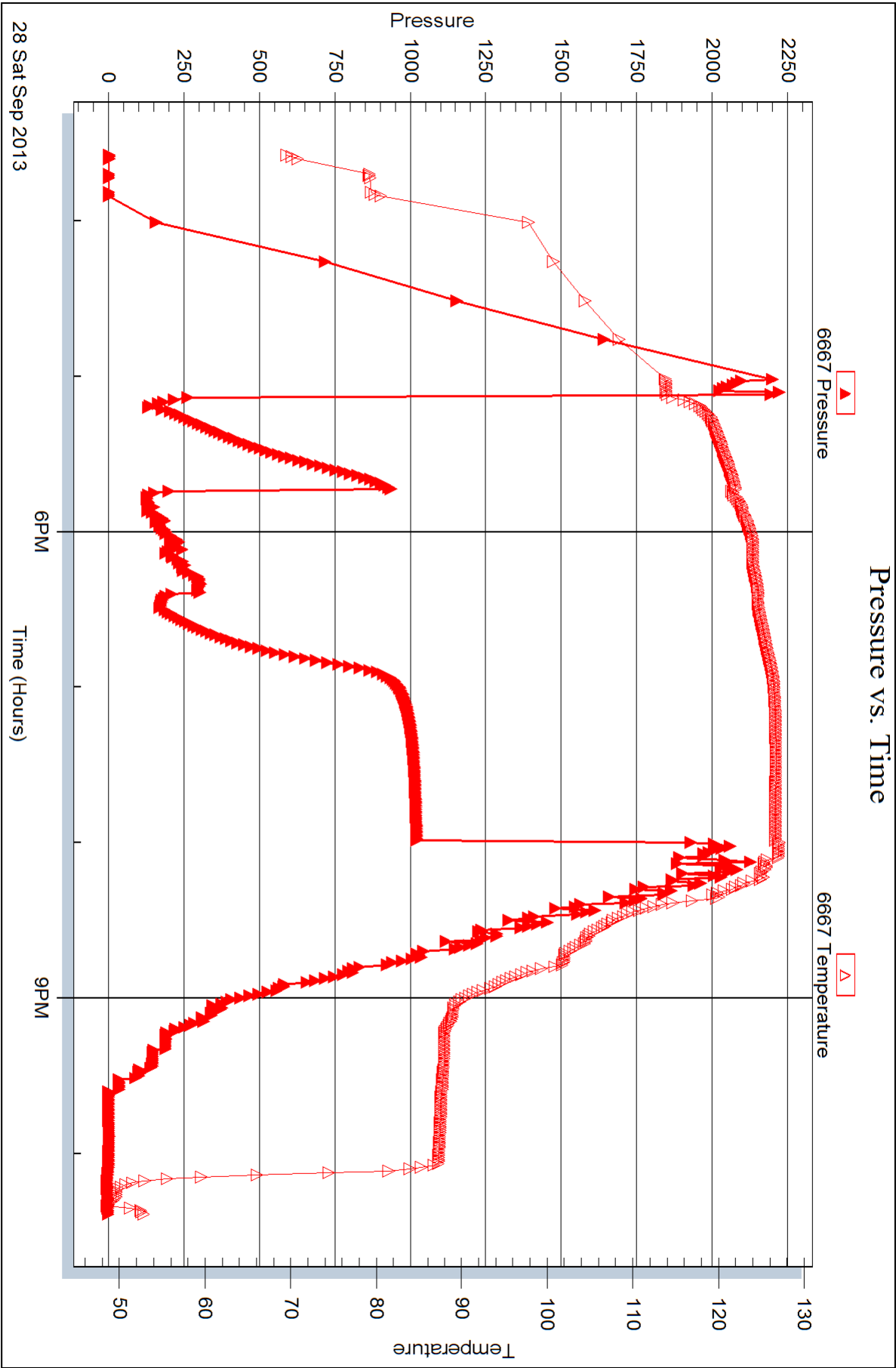
Serial #: 6667

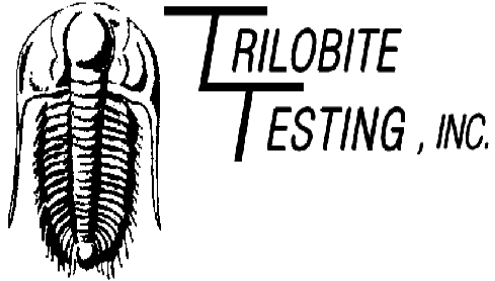
Inside

Mull Drilling Comp.

PorKy #1-32

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Comp.**

1700 N Waterfront PKWY
B 1200
Wichita, KS 67206

ATTN: Phil Askey

Porky #1-32

32-17s-45w Kiowa,CO

Start Date: 2013.10.02 @ 01:36:15

End Date: 2013.10.02 @ 09:17:45

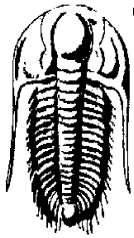
Job Ticket #: 54945 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.03 @ 13:41:53



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Mull Drilling Comp.

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

32-17s-45w Kiowa, CO

Porky #1-32

Job Ticket: 54945

DST#: 3

Test Start: 2013.10.02 @ 01:36:15

GENERAL INFORMATION:

Formation: **Miss St Louis Sperge**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:48:45

Time Test Ended: 09:17:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 60

Interval: 4942.00 ft (KB) To 5060.00 ft (KB) (TVD)

Total Depth: 5060.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3990.00 ft (KB)

3979.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8373 Inside

Press @ Run Depth: 227.44 psig @ 4943.00 ft (KB)

Start Date: 2013.10.02

End Date:

2013.10.02

Start Time: 01:36:20

End Time:

09:17:44

Capacity: 8000.00 psig

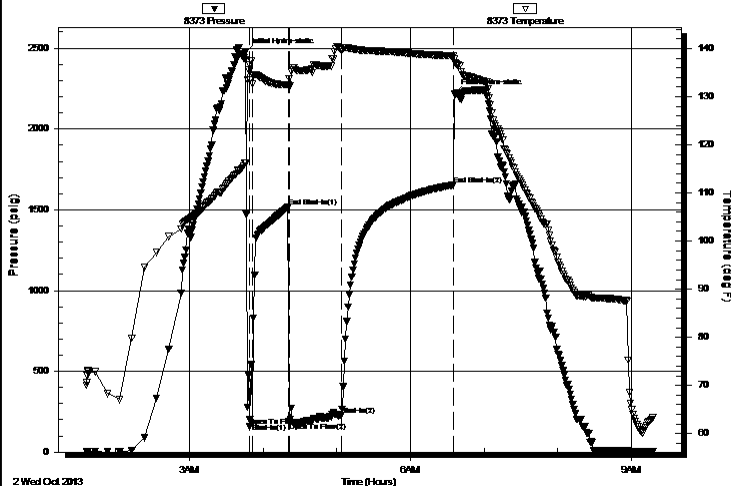
Last Calib.: 2013.10.02

Time On Btm: 2013.10.02 @ 03:45:45

Time Off Btm: 2013.10.02 @ 06:35:45

TEST COMMENT: IF: BOB in 1 min.
IS: No return.
FF: BOB in 9 min.
FS: No return. LMC 10# dont think pill worked.

Pressure vs. Time



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2475.85 | 116.28 | Initial Hydro-static |
| 3 | 157.23 | 136.55 | Open To Flow (1) |
| 6 | 175.62 | 132.58 | Shut-In(1) |
| 35 | 1516.49 | 132.51 | End Shut-In(1) |
| 36 | 182.74 | 132.05 | Open To Flow (2) |
| 78 | 227.44 | 139.67 | Shut-In(2) |
| 170 | 1652.41 | 138.46 | End Shut-In(2) |
| 170 | 2216.49 | 137.79 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------------------|--------------|
| 186.00 | wcmshow of oil 5%w 95%m | 0.94 |
| 310.00 | gm 5%g 95%m | 4.35 |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

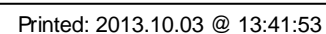
| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|--|----------------|-----------------|------------------|
|--|----------------|-----------------|------------------|



Test Start: 2013.10.02 @ 01:36:15

KB to GR/CF: 11.00 ft

FS: No return. LMC 10# dont think pill w orked.





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Comp.

32-17s-45w Kiowa, CO

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

Porky #1-32

Job Ticket: 54945

DST#: 3

Test Start: 2013.10.02 @ 01:36:15

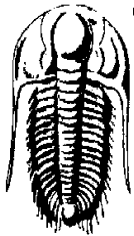
Tool Information

| | | | | | | | | |
|---------------------------|------------|------------|-------------|-------------|---------------|------------------------|-----------------------|-------------|
| Drill Pipe: | Length: | 4766.00 ft | Diameter: | 3.80 inches | Volume: | 66.85 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: | 30000.00 lb |
| Drill Collar: | Length: | 183.00 ft | Diameter: | 2.25 inches | Volume: | 0.90 bbl | Weight to Pull Loose: | 80000.00 lb |
| | | | | | Total Volume: | 67.75 bbl | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | 27.00 ft | | | | | String Weight: Initial | 66000.00 lb | |
| Depth to Top Packer: | 4942.00 ft | | | | | Final | 74000.00 lb | |
| Depth to Bottom Packer: | ft | | | | | | | |
| Interval between Packers: | 118.00 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 |
|------------------|-------------|------------|----------|------------|----------------|
|------------------|-------------|------------|----------|------------|----------------|

| | | | | | |
|-----------------|-------|------|---------|---------|--------------------------------|
| Stubb | 1.00 | | | 4923.00 | |
| Shut In Tool | 5.00 | | | 4928.00 | |
| Hydraulic tool | 5.00 | | | 4933.00 | |
| Packer | 5.00 | | | 4938.00 | 20.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4942.00 | |
| Stubb | 1.00 | | | 4943.00 | |
| Recorder | 0.00 | 8373 | Inside | 4943.00 | |
| Recorder | 0.00 | 8356 | Outside | 4943.00 | |
| Perforations | 15.00 | | | 4958.00 | |
| Change Over Sub | 1.00 | | | 4959.00 | |
| Drill Pipe | 95.00 | | | 5054.00 | |
| Change Over Sub | 1.00 | | | 5055.00 | |
| Bullnose | 5.00 | | | 5060.00 | 118.00 Bottom Packers & Anchor |

Total Tool Length: 138.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Comp.

32-17s-45w Kiowa, CO

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

Porky #1-32

Job Ticket: 54945

DST#: 3

Test Start: 2013.10.02 @ 01:36:15

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 6.39 in³

Resistivity: 0.00 ohm.m

Salinity: 3000.00 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:

0 deg API

0 ppm

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|---------------------------|---------------|
| 186.00 | w cm show of oil 5%w 95%m | 0.942 |
| 310.00 | gm 5%g 95%m | 4.348 |

Total Length: 496.00 ft

Total Volume: 5.290 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

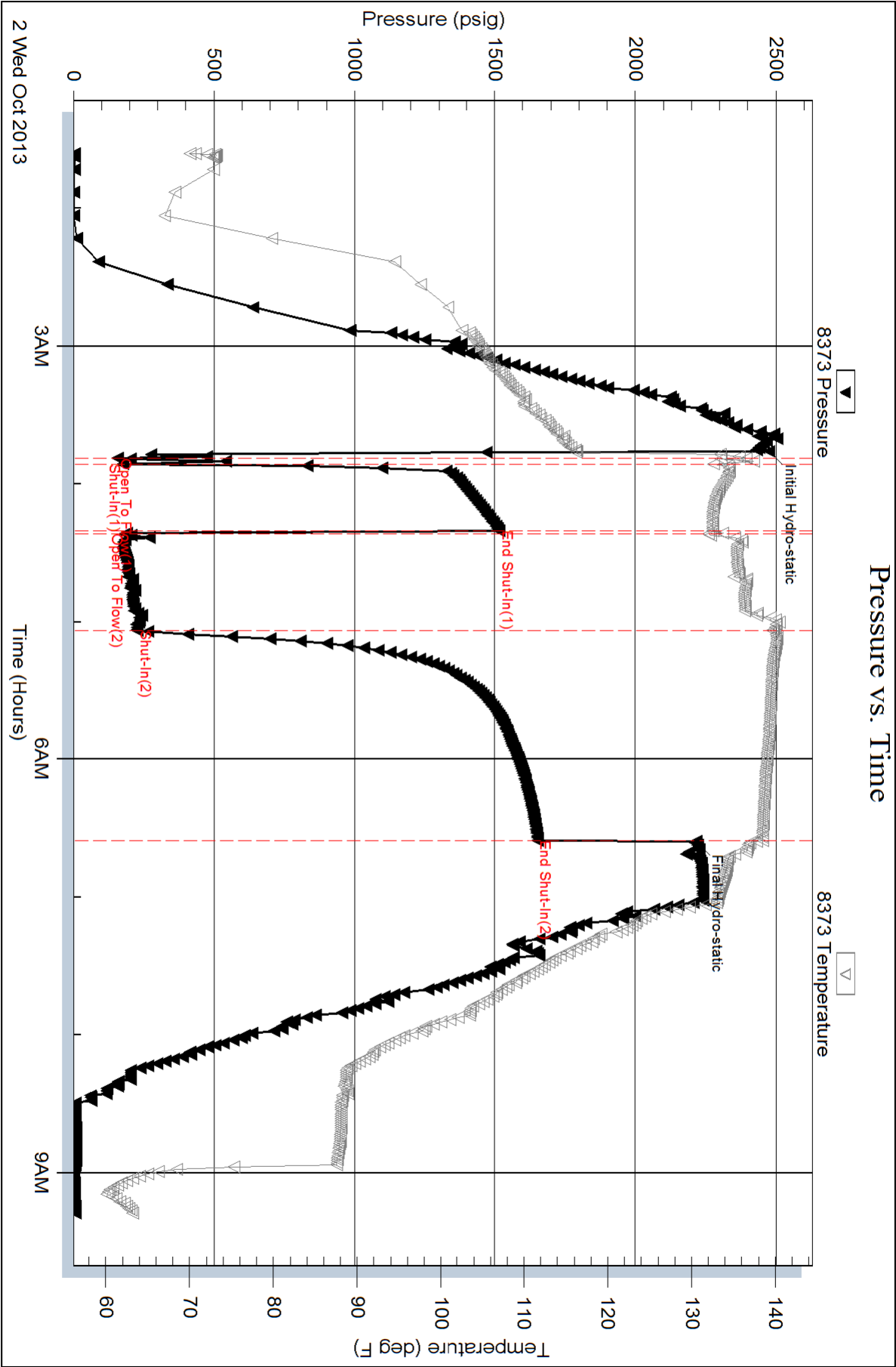
Serial #: 8373

Inside

Mull Drilling Comp.

Porky #1-32

DST Test Number: 3

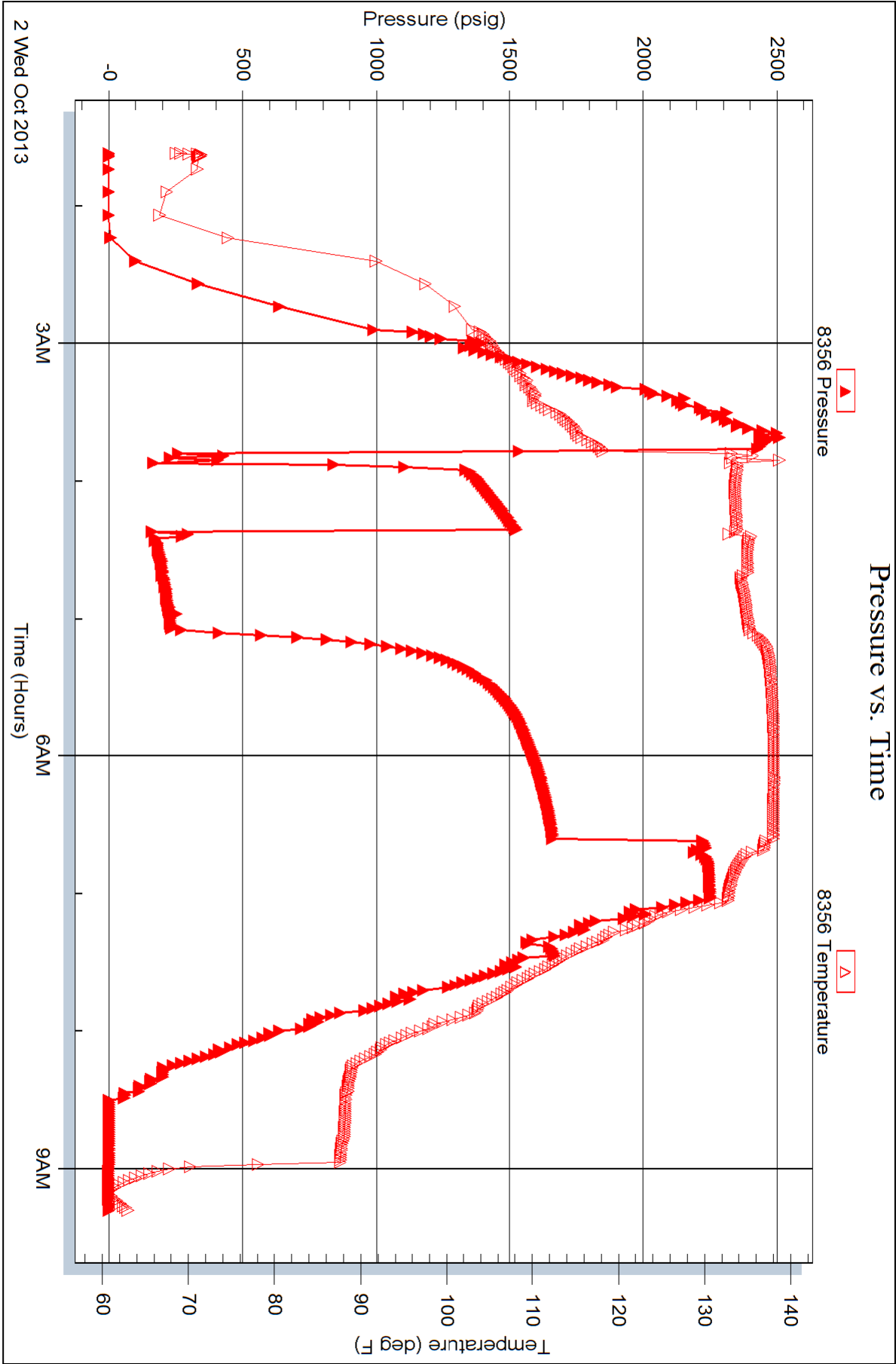


Serial #: 8356

Outside Mull Drilling Comp.

Porky #1-32

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54637

Well Name & No. Forky #1-32 Test No. #1 Date 9/27/13
 Company Mullikin Camp. Elevation 3990 KB 3970 GL
 Address 1700 N. W. 1st St. Front PKWY, B#1200 Wichita, KS 67206
 Co. Rep / Geo. Phil Askey Rig Martin #20
 Location: Sec. 32 Twp. 17S Rge. 45W Co. Kiowa State Ks

Interval Tested 4168 4250 Zone Tested Mammaton
 Anchor Length 82 Drill Pipe Run 3979' Mud Wt. 9.2
 Top Packer Depth 4163 Drill Collars Run 183' Vis 5/6
 Bottom Packer Depth 4168 Wt. Pipe Run WL 8.0
 Total Depth 4250 Chlorides 3000 ppm System LCM #4

Blow Description 3" in. blow
No return.
9 1/2" in. blow
No return.

| Rec | Feet of | %gas | %oil | %water | %mud |
|-------------|------------------------|--------------|------|------------|------|
| <u>150'</u> | <u>Mud w/oil spots</u> | <u>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 | Feet of | %gas | %oil | %water | %mud |

Rec Total 150' BHT 123° Gravity API RW @ ° F Chlorides ppm

| | | |
|-------------------------------------|--|----------------------------|
| (A) Initial Hydrostatic <u>2122</u> | <input checked="" type="checkbox"/> Test <u>1450</u> | T-On Location <u>19:30</u> |
| (B) First Initial Flow <u>49</u> | <input type="checkbox"/> Jars <u> </u> | T-Started <u>20:45</u> |
| (C) First Final Flow <u>47</u> | <input type="checkbox"/> Safety Joint <u> </u> | T-Open <u>11:30</u> |
| (D) Initial Shut-In <u>952</u> | <input checked="" type="checkbox"/> Circ Sub <u>N/C</u> | T-Pulled <u>03:05</u> |
| (E) Second Initial Flow <u>52</u> | <input type="checkbox"/> Hourly Standby <u> </u> | T-Out <u>05:25</u> |
| (F) Second Final Flow <u>99</u> | <input checked="" type="checkbox"/> Mileage <u>186 RT</u> 288.30 | Comments <u> </u> |
| (G) Final Shut-In <u>981</u> | <input type="checkbox"/> Sampler <u> </u> | |
| (H) Final Hydrostatic <u>2026</u> | <input type="checkbox"/> Straddle <u> </u> | |

| | | |
|---------------------------|---|--|
| Initial Open <u>5</u> | <input type="checkbox"/> Shale Packer <u> </u> | <input type="checkbox"/> Ruined Shale Packer <u> </u> |
| Initial Shut-In <u>30</u> | <input type="checkbox"/> Extra Packer <u> </u> | <input type="checkbox"/> Ruined Packer <u> </u> |
| Final Flow <u>60</u> | <input type="checkbox"/> Extra Recorder <u> </u> | Sub Total <u>0</u> |
| Final Shut-In <u>120</u> | <input type="checkbox"/> Day Standby <u> </u> | Total <u>1738.30</u> |
| | <input type="checkbox"/> Accessibility <u> </u> | MP/DST Disc't <u> </u> |
| | Sub Total <u>1738.30</u> | |

Approved By Phil Askey Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54638

Well Name & No. Porty #1-32 Test No. #2 Date 9/28/13
Company Mull Drilling Corp Elevation 3990 KB 3979 GL
Address 1200 N. W. 1st St. Hays, KS 67801
Co. Rep / Geo. Phil Askey Rig Martin #20
Location: Sec. 32 Twp. 17S Rge. 45W Co. Kansas State Ko

Interval Tested 4249 4310 Zone Tested _____
Anchor Length 61 Drill Pipe Run 4074 Mud Wt. 9.2
Top Packer Depth 4244 Drill Collars Run 183 Vis 54
Bottom Packer Depth 4249 Wt. Pipe Run _____ WL 8.8
Total Depth 4310 Chlorides 3300 ppm System LCM #4
Blow Description BOB in 1/2 min

No return
BOB @ open G.T.S. in 2 min (to weak to gauge)
Surface return in 10 min died in 35 min

| Rec | Feet of | %gas | %oil | %water | %mud |
|------------|---------------|-----------|-----------|-----------|------|
| <u>60</u> | <u>Soc gm</u> | <u>10</u> | <u>5</u> | <u>85</u> | |
| <u>60</u> | <u>gmco</u> | <u>50</u> | <u>40</u> | <u>10</u> | |
| <u>120</u> | <u>gsmco</u> | <u>70</u> | <u>25</u> | <u>5</u> | |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 240 BHT 128° Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm
(A) Initial Hydrostatic 2200 ☒ Test 1450 T-On Location 14:20
(B) First Initial Flow 285 ☐ Jars T-Started 15:25
(C) First Final Flow 138 ☐ Safety Joint T-Open 17:10
(D) Initial Shut-In 943 ☒ Circ Sub N/C T-Pulled 20:00
(E) Second Initial Flow 139 ☐ Hourly Standby T-Out _____
(F) Second Final Flow 177 ☒ Mileage 288.30 Comments _____
(G) Final Shut-In 1025 ☐ Sampler _____
(H) Final Hydrostatic 2062 ☐ Straddle _____

Initial Open 5 ☐ Shale Packer ☐ Ruined Shale Packer
Initial Shut-In 30 ☐ Shale Packer ☐ Ruined Packer
Final Flow 45 ☐ Extra Packer ☐ Extra Copies
Final Shut-In 90 ☐ Extra Recorder Sub Total 0
☐ Day Standby Total 1738.30
☐ Accessibility MP/DST Disc't _____
Sub Total 1738.30

Approved By

Our Representative

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54945

Well Name & No. Porky #1-32 Test No. 3 Date 10-2-13
Company Mull Drilling Company Elevation 3990 KB 3979 GL
Address _____
Co. Rep / Geo. Phil Askey Rig Murphy 20
Location: Sec. 32 Twp. 17S Rge. 4SW Co. KIOWA State CO

Interval Tested 4942 5060 Zone Tested M. 55 St. Louis & Spergen
Anchor Length 118 Drill Pipe Run 4766 Mud Wt. 9.6
Top Packer Depth 4937 Drill Collars Run 183 Vis 50
Bottom Packer Depth 4942 Wt. Pipe Run _____ WL 6.4
Total Depth 5060 Chlorides 3000 ppm System LCM 10 to high
Blow Description IF: BOB in 1 min.
FS! No.
FF: BOB in 9 min.
FS!

| Rec | Feet of | %gas | %oil | %water | %mud |
|------------|------------------------|----------|----------|-----------|------|
| <u>310</u> | <u>gm</u> | <u>5</u> | | <u>95</u> | |
| <u>186</u> | <u>wcm show of oil</u> | | <u>5</u> | <u>95</u> | |
| | | | | | |
| | | | | | |
| | | | | | |

Rec Total 496 BHT 138 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
(A) Initial Hydrostatic 2475 ☒ Test 1550 T-On Location 00:15
(B) First Initial Flow 157 ☐ Jars _____ T-Started 1:36
(C) First Final Flow 175 ☐ Safety Joint _____ T-Open 3:45
(D) Initial Shut-In 1516 ☒ Circ Sub NIC T-Pulled 6:35
(E) Second Initial Flow 182 ☐ Hourly Standby _____ T-Out 9:20
(F) Second Final Flow 227 ☒ Mileage 184 X 2 576.60 Comments loaded tools 10/3 12:15
(G) Final Shut-In 1652 ☐ Sampler _____
(H) Final Hydrostatic 2216 ☐ Straddle _____

Initial Open 5 ☐ Shale Packer _____ ☐ Ruined Shale Packer _____
Initial Shut-In 30 ☐ Extra Packer _____ ☐ Ruined Packer _____
Final Flow 45 ☐ Extra Recorder _____ Sub Total 0
Final Shut-In 90 ☐ Day Standby _____ Total 2126.60
☐ Accessibility _____ MP/DST Disc't _____
Sub Total 2126.60

Approved By Phil Askey Our Representative _____
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