



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hess Oil Company
 PO Box 1009
 McPherson, KS. 67460
 ATTN: Jerry Smith

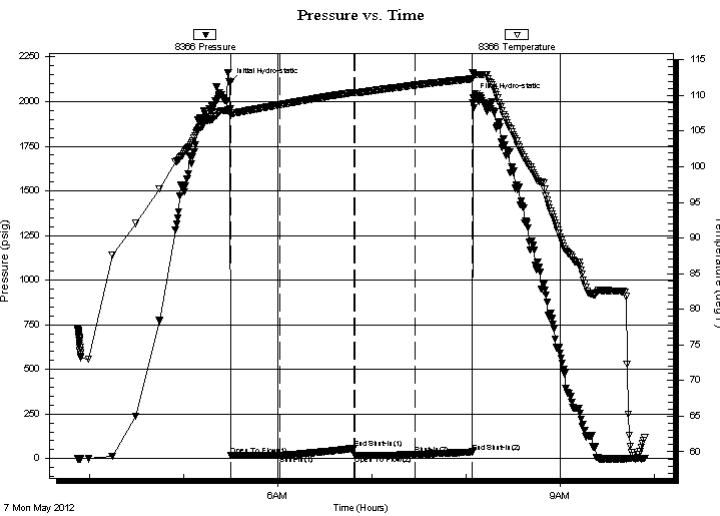
11-16s-21w Ness, KS
Joyce #1
 Job Ticket: 47284 **DST#: 1**
 Test Start: 2012.05.07 @ 03:52:22

GENERAL INFORMATION:

Formation: **Cherokee Sand**
 Deviated: No Whipstock: 0.00 ft (KB)
 Time Tool Opened: 05:29:52
 Time Test Ended: 09:54:07
 Interval: **4142.00 ft (KB) To 4186.00 ft (KB) (TVD)**
 Total Depth: 4186.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jason McLemore
 Unit No: 54
 Reference Elevations: 2317.00 ft (KB)
 2312.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8366 Inside
 Press @ Run Depth: 23.25 psig @ 4181.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.05.07 End Date: 2012.05.07 Last Calib.: 2012.05.07
 Start Time: 03:52:24 End Time: 09:54:07 Time On Btm: 2012.05.07 @ 05:29:37
 Time Off Btm: 2012.05.07 @ 08:04:37

TEST COMMENT: IFP-Weak Surface Blow , Built to 3/8"
 ISI-Dead
 FFP-Dead
 FSI-Dead



PRESSURE SUMMARY

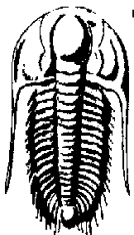
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2108.80 | 108.08 | Initial Hydro-static |
| 1 | 17.55 | 107.29 | Open To Flow (1) |
| 32 | 19.73 | 108.69 | Shut-In(1) |
| 79 | 57.38 | 110.43 | End Shut-In(1) |
| 80 | 18.83 | 110.42 | Open To Flow (2) |
| 118 | 23.25 | 111.45 | Shut-In(2) |
| 155 | 36.95 | 112.34 | End Shut-In(2) |
| 155 | 2021.34 | 113.07 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------|--------------|
| 1.00 | Mud W/Oil Scum | 0.00 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



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11-16s-21w Ness, KS
Joyce #1
 Job Ticket: 47284 **DST#: 1**
 Test Start: 2012.05.07 @ 03:52:22

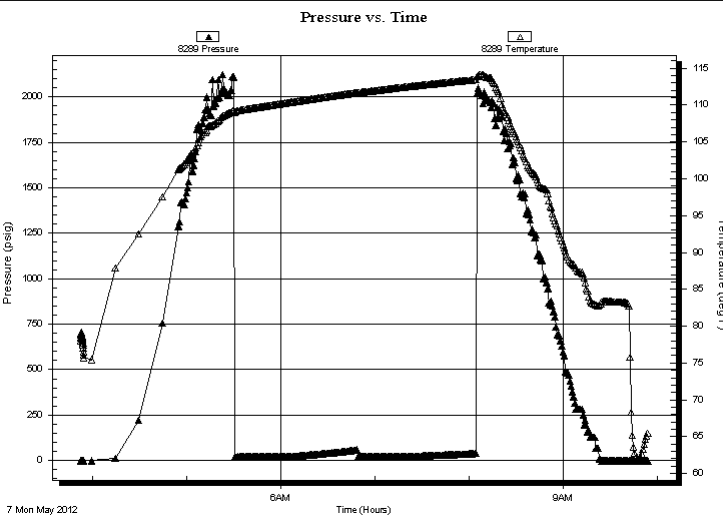
GENERAL INFORMATION:

Formation: **Cherokee Sand**
 Deviated: No Whipstock: 0.00 ft (KB) Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 05:29:52 Tester: Jason McLemore
 Time Test Ended: 09:54:07 Unit No: 54

Interval: 4142.00 ft (KB) To 4186.00 ft (KB) (TVD) Reference Elevations: 2317.00 ft (KB)
 Total Depth: 4186.00 ft (KB) (TVD) 2312.00 ft (CF)
 Hole Diameter: 7.88 inchesHole Condition: Good KB to GR/CF: 5.00 ft

Serial #: 8289 Outside
 Press @RunDepth: psig @ 4181.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.05.07 End Date: 2012.05.07 Last Calib.: 2012.05.07
 Start Time: 03:52:09 End Time: 09:53:52 Time On Btm:
 Time Off Btm:

TEST COMMENT: IFP-Weak Surface Blow , Built to 3/8"
 IS-Dead
 FFP-Dead
 FSI-Dead



PRESSURE SUMMARY

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

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------|--------------|
| 1.00 | Mud W/Oil Scum | 0.00 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hess Oil Company

11-16s-21w Ness, KS

PO Box 1009
McPherson, KS. 67460

Joyce #1

Job Ticket: 47284

DST#: 1

ATTN: Jerry Smith

Test Start: 2012.05.07 @ 03:52:22

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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|----------------|---------------|
| 1.00 | Mud W/Oil Scum | 0.005 |

Total Length: 1.00 ft Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

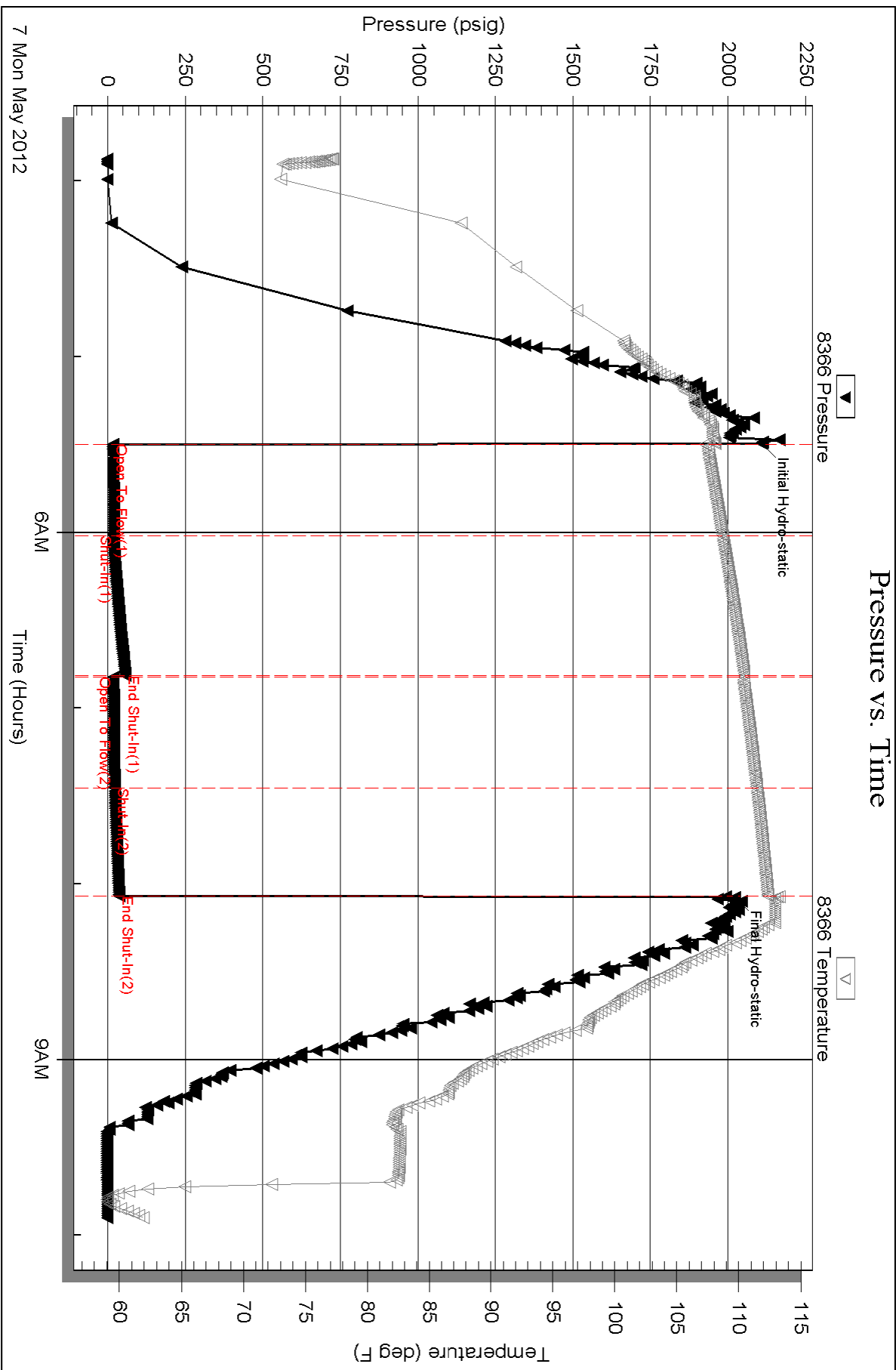
Serial #: 8366

Inside

Hess Oil Company

Joyce #1

DST Test Number: 1

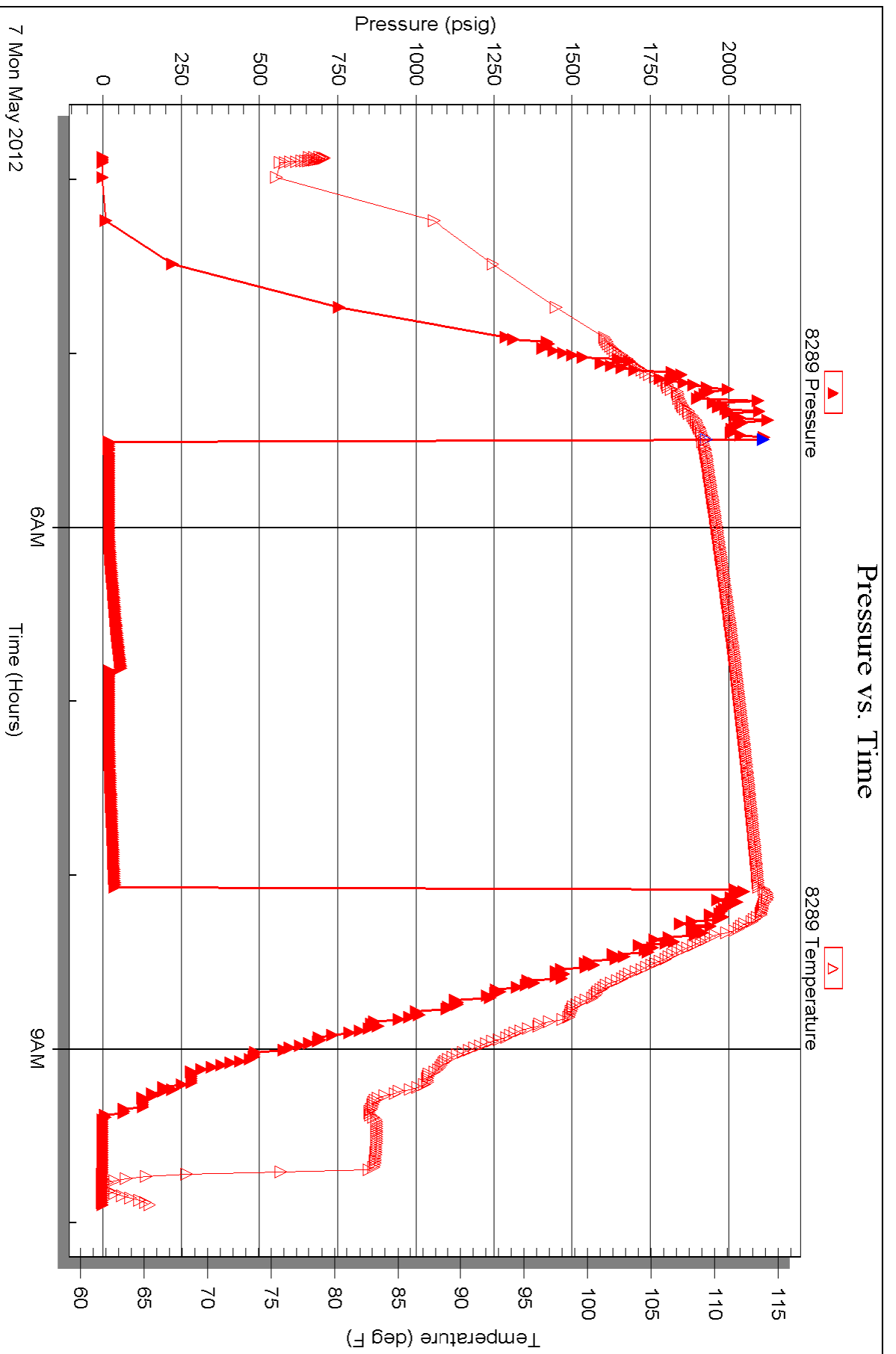


Serial #: 8289

Outside Hess Oil Company

Joyce #1

DST Test Number: 1





**TRILOBITE
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DRILL STEM TEST REPORT

Hess Oil Company
PO Box 1009
McPherson, KS. 67460
ATTN: Jerry Smith

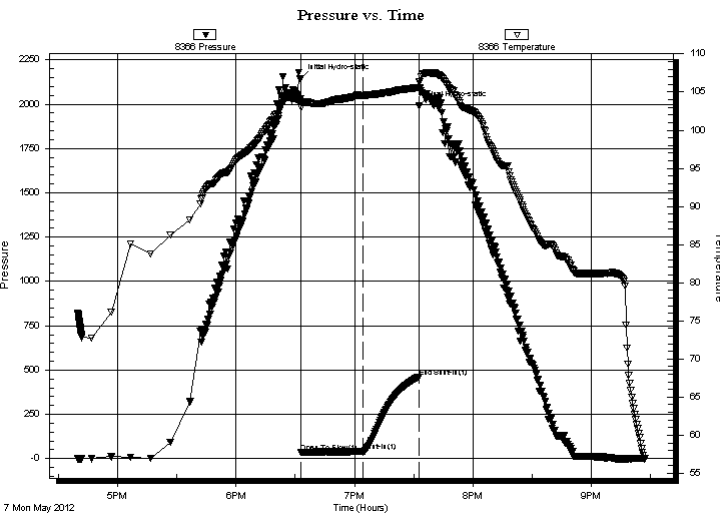
11-16s-21w-Ness
Joyce #1
Job Ticket: 47285 **DST#: 2**
Test Start: 2012.05.07 @ 16:39:28

GENERAL INFORMATION:

Formation: **Cherokee Sand**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 18:32:58
Time Test Ended: 21:27:28
Interval: **4142.00 ft (KB) To 4196.00 ft (KB) (TVD)**
Total Depth: 4196.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Reset)
Tester: Jason McLemore
Unit No: 54
Reference Elevations: 2317.00 ft (KB)
2312.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8366 Inside
Press @ Run Depth: 39.89 psig @ 4181.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.05.07 End Date: 2012.05.07 Last Calib.: 2012.05.07
Start Time: 16:39:30 End Time: 21:27:28 Time On Btm: 2012.05.07 @ 18:32:43
Time Off Btm: 2012.05.07 @ 19:32:43

TEST COMMENT: IFP-Weak Intermittant Surface Blow
ISI-Dead



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2143.07 | 104.16 | Initial Hydro-static |
| 1 | 34.43 | 103.04 | Open To Flow (1) |
| 32 | 39.89 | 104.54 | Shut-In(1) |
| 60 | 461.05 | 105.60 | End Shut-In(1) |
| 60 | 1989.36 | 106.37 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------|--------------|
| 8.00 | Drilling Mud | 0.04 |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



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DRILL STEM TEST REPORT

FLUID SUMMARY

Hess Oil Company
PO Box 1009
McPherson, KS. 67460
ATTN: Jerry Smith

11-16s-21w-Ness
Joyce #1
Job Ticket: 47285 **DST#: 2**
Test Start: 2012.05.07 @ 16:39:28

Mud and Cushion Information

| | | | |
|-----------------------------------|----------------------------|-----------------|---------|
| Mud Type: Gel Chem | Cushion Type: | Oil API: | deg API |
| Mud Weight: 10.00 lb/gal | Cushion Length: ft | Water Salinity: | ppm |
| Viscosity: 44.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 10.39 in ³ | Gas Cushion Type: | | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: 5500.00 ppm | | | |
| Filter Cake: inches | | | |

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|--------------|---------------|
| 8.00 | Drilling Mud | 0.039 |

Total Length: 8.00 ft Total Volume: 0.039 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 8366

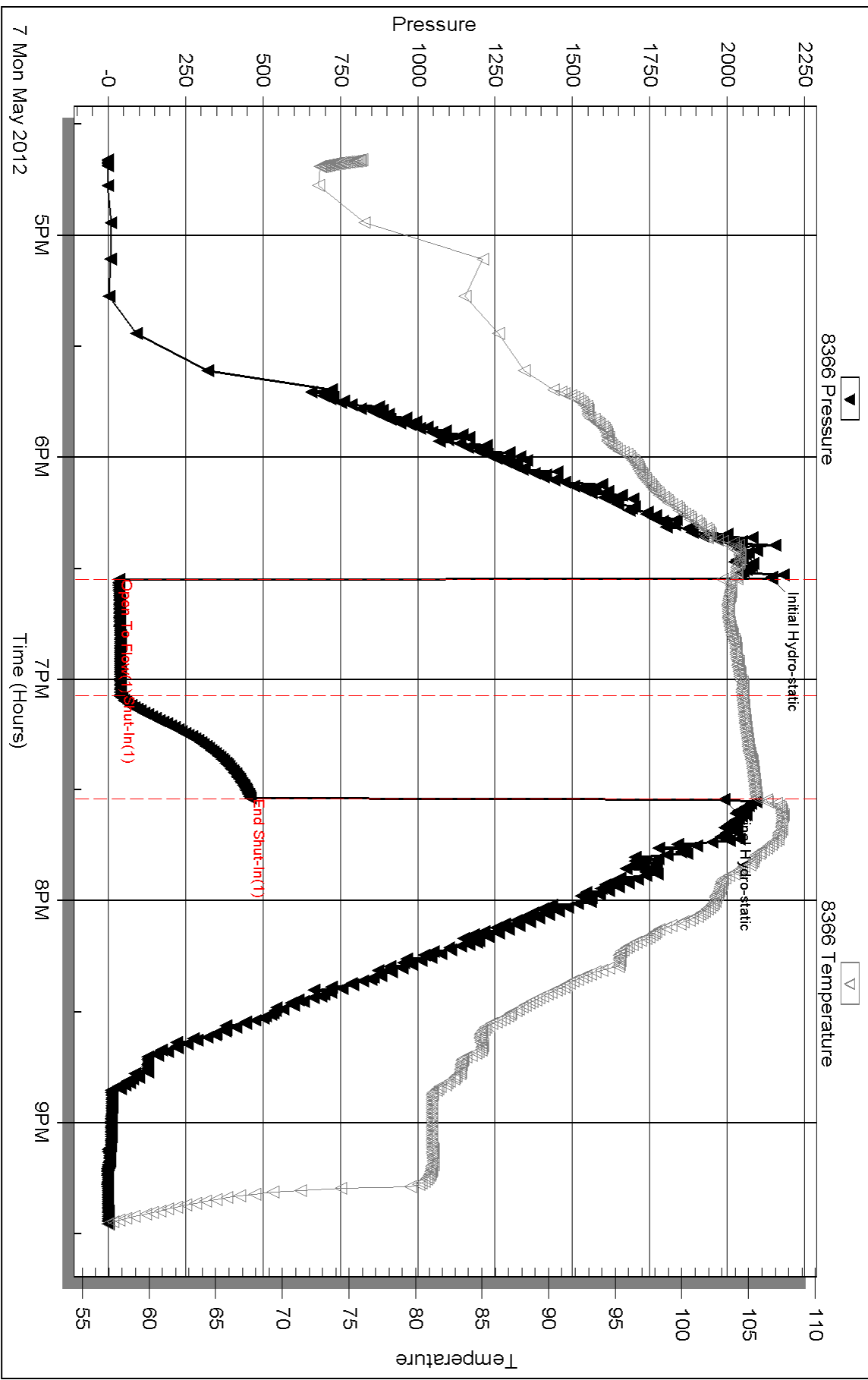
Inside

Hess Oil Company

Joyce #1

DST Test Number: 2

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 47285

Printed: 2012.05.08 @ 07:52:23



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hess Oil Company
 PO Box 1009
 McPherson, KS. 67460
 ATTN: Jerry Smith

11-16s-21w-Ness
Joyce #1
 Job Ticket: 47286 **DST#: 3**
 Test Start: 2012.05.08 @ 06:40:28

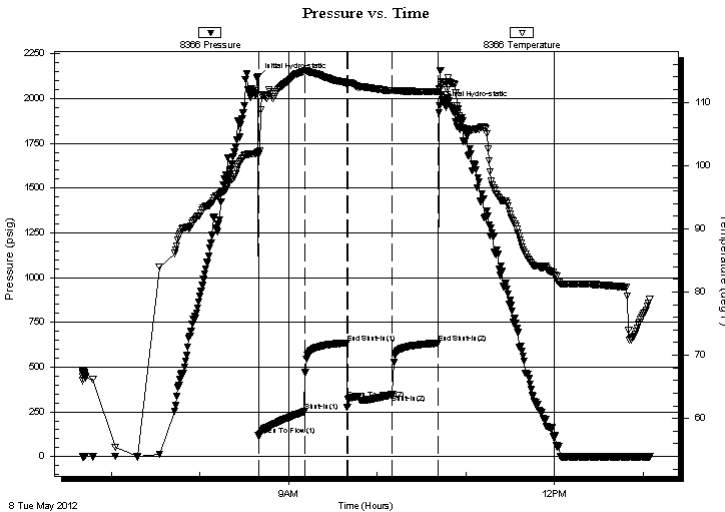
GENERAL INFORMATION:

Formation: **Cherokee Sand**
 Deviated: No Whipstock: 0.00 ft (KB)
 Time Tool Opened: 08:39:28
 Time Test Ended: 13:04:43
 Interval: **4140.00 ft (KB) To 4227.00 ft (KB) (TVD)**
 Total Depth: 4227.00 ft (KB) (TVD)
 Hole Diameter: 7.80 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jason McLemore
 Unit No: 54
 Reference Elevations: 2317.00 ft (KB)
 2312.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8366 Inside
 Press @ Run Depth: 346.51 psig @ 4209.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.05.08 End Date: 2012.05.08 Last Calib.: 2012.05.08
 Start Time: 06:40:30 End Time: 13:04:43 Time On Btm: 2012.05.08 @ 08:38:58
 Time Off Btm: 2012.05.08 @ 10:42:13

TEST COMMENT: IFP-Strong, BOB in 3 Min.
 ISI-Dead
 FFP-Good Blow, Built to 10"
 FSI-Dead

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2119.45 | 102.17 | Initial Hydro-static |
| 1 | 119.54 | 101.66 | Open To Flow (1) |
| 32 | 251.27 | 114.89 | Shut-In(1) |
| 61 | 635.37 | 113.06 | End Shut-In(1) |
| 61 | 318.09 | 112.97 | Open To Flow (2) |
| 92 | 346.51 | 111.78 | Shut-In(2) |
| 123 | 633.94 | 111.66 | End Shut-In(2) |
| 124 | 1962.65 | 112.00 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 660.00 | Muddy Water | 7.07 |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



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Hess Oil Company
PO Box 1009
McPherson, KS. 67460
ATTN: Jerry Smith

11-16s-21w-Ness
Joyce #1
Job Ticket: 47286 **DST#: 3**
Test Start: 2012.05.08 @ 06:40:28

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: | 24000 ppm |
| Viscosity: 49.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 9.97 in ³ | Gas Cushion Type: | | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: 5200.00 ppm | | | |
| Filter Cake: inches | | | |

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------|---------------|
| 660.00 | Muddy Water | 7.072 |

Total Length: 660.00 ft Total Volume: 7.072 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8366

Inside

Hess Oil Company

Joyce #1

DST Test Number: 3

