

**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Great Eastern Energy**

Box 150
Bogue, KS 67625

ATTN: Mike Davignon

1-13s-21w Trego KS

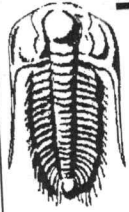
Cromb #1

Start Date: 2001.06.24 @ 16:31:25

End Date: 2001.06.24 @ 21:03:10

Job Ticket #: 15436 DST #: 1

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Great Eastern Energy

Box 150
Bogue, KS 67625

ATTN: Mike Davignon

Cromb #1

1-13s-21w Trego KS

Job Ticket: 15436

DST#: 1

Test Start: 2001.06.24 @ 16:31:25

GENERAL INFORMATION:

Formation: **LKC--C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:20:55
 Time Test Ended: 21:03:10

Test Type: Conventional Bottom Hole
 Tester: John Schmidt
 Unit No: 18

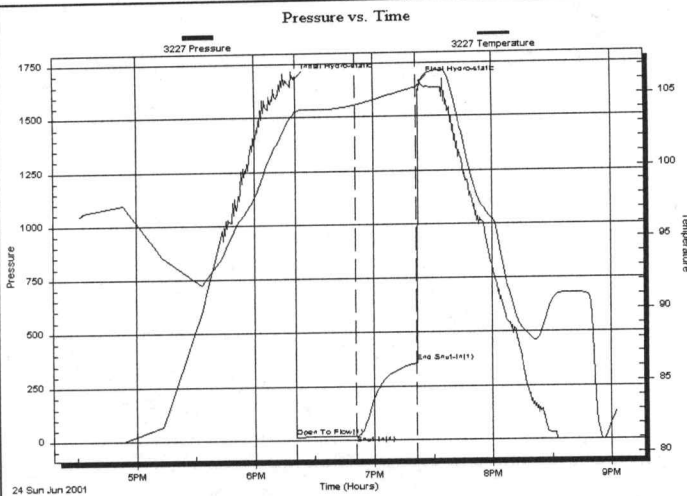
Interval: **3485.00 ft (KB) To 3510.00 ft (KB) (TVD)**
 Total Depth: 3510.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2182.00 ft (KB)
 2177.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: **3227** Inside
 Press@RunDepth: 19.35 psig @ 3487.01 ft (KB)
 Start Date: 2001.06.24 End Date: 2001.06.24
 Start Time: 16:31:27 End Time: 21:03:10

Capacity: 7000.00 psig
 Last Calib.: 2001.01.24
 Time On Btm: 2001.06.24 @ 18:20:40
 Time Off Btm: 2001.06.24 @ 19:23:40

TEST COMMENT: IF-Weak Dead in 5 min.



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1683.56 | 103.90 | Initial Hydro-static |
| 1 | 14.35 | 103.84 | Open To Flow (1) |
| 31 | 19.35 | 104.29 | Shut-In(1) |
| 61 | 356.99 | 105.50 | End Shut-In(1) |
| 63 | 1662.95 | 105.91 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 5.00 | Mud | 0.02 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Great Eastern Energy

Cromb #1

Box 150
Bogue, KS 67625

1-13s-21w Trego KS

Job Ticket: 15436

DST#: 1

ATTN: Mike Davignon

Test Start: 2001.06.24 @ 16:31:25

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3351.00 ft | Diameter: 3.80 inches | Volume: 47.01 bbl | Tool Weight: 2500.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 2.70 inches | Volume: 0.00 bbl | Weight set on Packer: 20000.00 lb |
| Drill Collar: | Length: 120.00 ft | Diameter: 2.25 inches | Volume: 0.59 bbl | Weight to Pull Loose: 58000.00 lb |
| | | | <u>Total Volume: 47.60 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 6.00 ft | | | String Weight: Initial 51000.00 lb |
| Depth to Top Packer: | 3485.00 ft | | | Final 51000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 25.02 ft | | | |
| Tool Length: | 45.02 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|-------------------------------|
| C.O. Sub | 1.00 | | | 3466.00 | |
| S.I. Tool | 5.00 | | | 3471.00 | |
| HMV | 5.00 | | | 3476.00 | |
| Packer | 4.00 | | | 3480.00 | 20.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3485.00 | |
| Stubb | 1.00 | | | 3486.00 | |
| Perforations | 1.00 | | | 3487.00 | |
| Recorder | 0.01 | 3227 | Inside | 3487.01 | |
| Perforations | 20.00 | | | 3507.01 | |
| Recorder | 0.01 | 13308 | Outside | 3507.02 | |
| Bullnose | 3.00 | | | 3510.02 | 25.02 Bottom Packers & Anchor |

Total Tool Length: 45.02



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Great Eastern Energy

Cromb #1

Box 150
Bogue, KS 67625

1-13s-21w Trego KS

Job Ticket: 15436

DST#: 1

ATTN: Mike Davignon

Test Start: 2001.06.24 @ 16:31:25

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: 47.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 7.97 in ³ | Gas Cushion Type: | | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: ppm | | | |
| Filter Cake: inches | | | |

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------|---------------|
| 5.00 | Mud | 0.025 |

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 3227

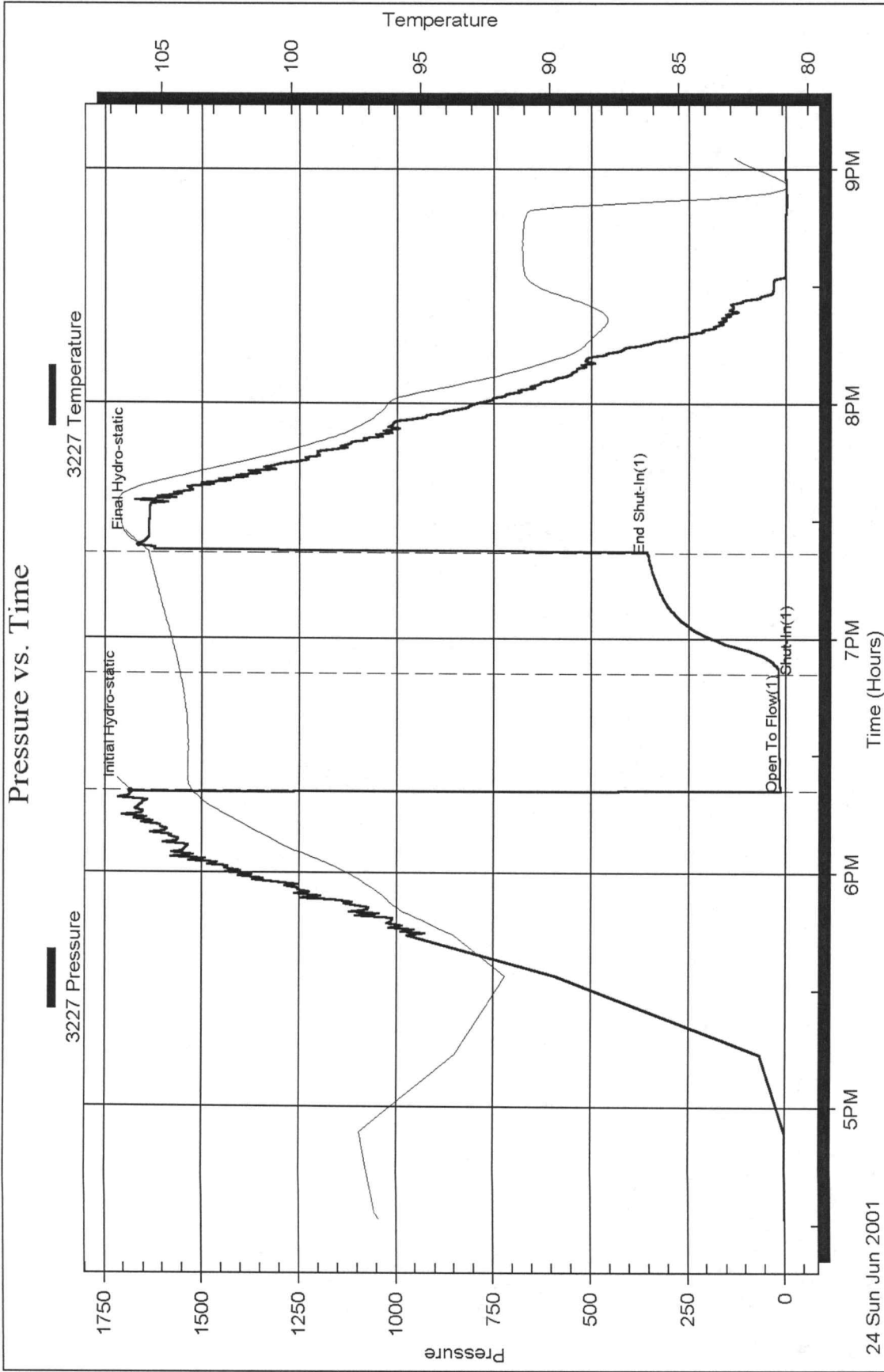
Inside

Great Eastern Energy

1-13s-21w Trego KS

DST Test Number: 1

Pressure vs. Time





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Great Eastern Energy**

Box 150
Bogue, KS 67625

ATTN: Mike Davignon

1-13s-21w Trego KS

Cromb #1

Start Date: 2001.06.25 @ 20:36:46

End Date: 2001.06.26 @ 00:53:16

Job Ticket #: 15437 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Great Eastern Energy

Cromb #1

1-13s-21w Trego KS

DST # 2

Marmaton

2001.06.25



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Great Eastern Energy

Cromb #1

Box 150
Bogue, KS 67625

1-13s-21w Trego KS

ATTN: Mike Davignon

Job Ticket: 15437 **DST#: 2**

Test Start: 2001.06.25 @ 20:36:46

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:17:16

Time Test Ended: 00:53:16

Test Type: Conventional Bottom Hole

Tester: John Schmidt

Unit No: 18

Interval: **3750.00 ft (KB) To 3790.00 ft (KB) (TVD)**

Total Depth: 3790.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2182.00 ft (KB)

2177.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 3227 Inside

Press@RunDepth: 27.34 psig @ 3752.01 ft (KB)

Start Date: 2001.06.25 End Date: 2001.06.26

Start Time: 20:36:48 End Time: 00:53:16

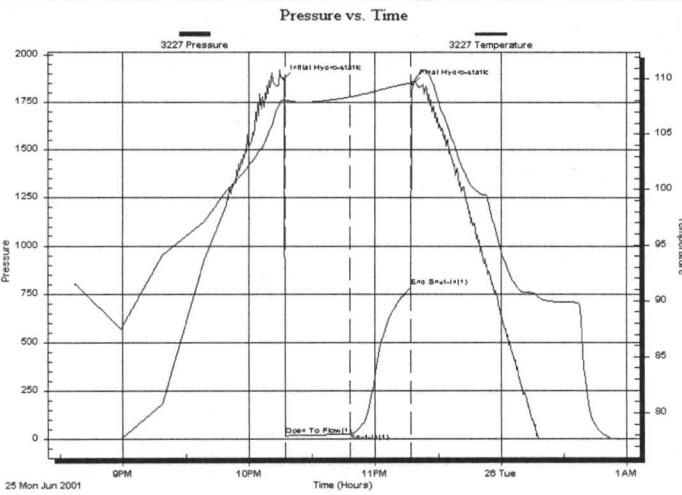
Capacity: 7000.00 psig

Last Calib.: 2001.01.24

Time On Btm: 2001.06.25 @ 22:16:31

Time Off Btm: 2001.06.25 @ 23:18:01

TEST COMMENT: IF-Weak Dead in 25 min.



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1870.83 | 108.12 | Initial Hydro-static |
| 1 | 17.67 | 108.04 | Open To Flow (1) |
| 32 | 27.34 | 108.37 | Shut-In(1) |
| 61 | 782.03 | 109.64 | End Shut-In(1) |
| 62 | 1846.52 | 109.75 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-----------------|--------------|
| 1.00 | free oil | 0.00 |
| 5.00 | mud W-oil spots | 0.02 |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Great Eastern Energy

Cromb #1

Box 150
Bogue, KS 67625

1-13s-21w Trego KS

Job Ticket: 15437

DST#: 2

ATTN: Mike Davignon

Test Start: 2001.06.25 @ 20:36:46

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3632.00 ft | Diameter: 3.80 inches | Volume: 50.95 bbl | Tool Weight: 3000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 2.70 inches | Volume: 0.00 bbl | Weight set on Packer: 20000.00 lb |
| Drill Collar: | Length: 120.00 ft | Diameter: 2.25 inches | Volume: 0.59 bbl | Weight to Pull Loose: 56000.00 lb |
| | | | <u>Total Volume: 51.54 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 22.00 ft | | | String Weight: Initial 54000.00 lb |
| Depth to Top Packer: | 3750.00 ft | | | Final 54000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 40.02 ft | | | |
| Tool Length: | 60.02 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|-------------------------------|
| C.O. Sub | 1.00 | | | 3731.00 | |
| S.I. Tool | 5.00 | | | 3736.00 | |
| HMV | 5.00 | | | 3741.00 | |
| Packer | 4.00 | | | 3745.00 | 20.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3750.00 | |
| Stubb | 1.00 | | | 3751.00 | |
| Perforations | 1.00 | | | 3752.00 | |
| Recorder | 0.01 | 3227 | Inside | 3752.01 | |
| Perforations | 35.00 | | | 3787.01 | |
| Recorder | 0.01 | 13308 | Outside | 3787.02 | |
| Bullnose | 3.00 | | | 3790.02 | 40.02 Bottom Packers & Anchor |

Total Tool Length: 60.02



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Great Eastern Energy

Cromb #1

Box 150
Bogue, KS 67625

1-13s-21w Trego KS

Job Ticket: 15437

DST#: 2

ATTN: Mike Davignon

Test Start: 2001.06.25 @ 20:36:46

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: 47.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 8.37 in ³ | Gas Cushion Type: | | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: ppm | | | |
| Filter Cake: inches | | | |

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-----------------|---------------|
| 1.00 | free oil | 0.005 |
| 5.00 | mud W-oil spots | 0.025 |

Total Length: 6.00 ft Total Volume: 0.030 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 3227

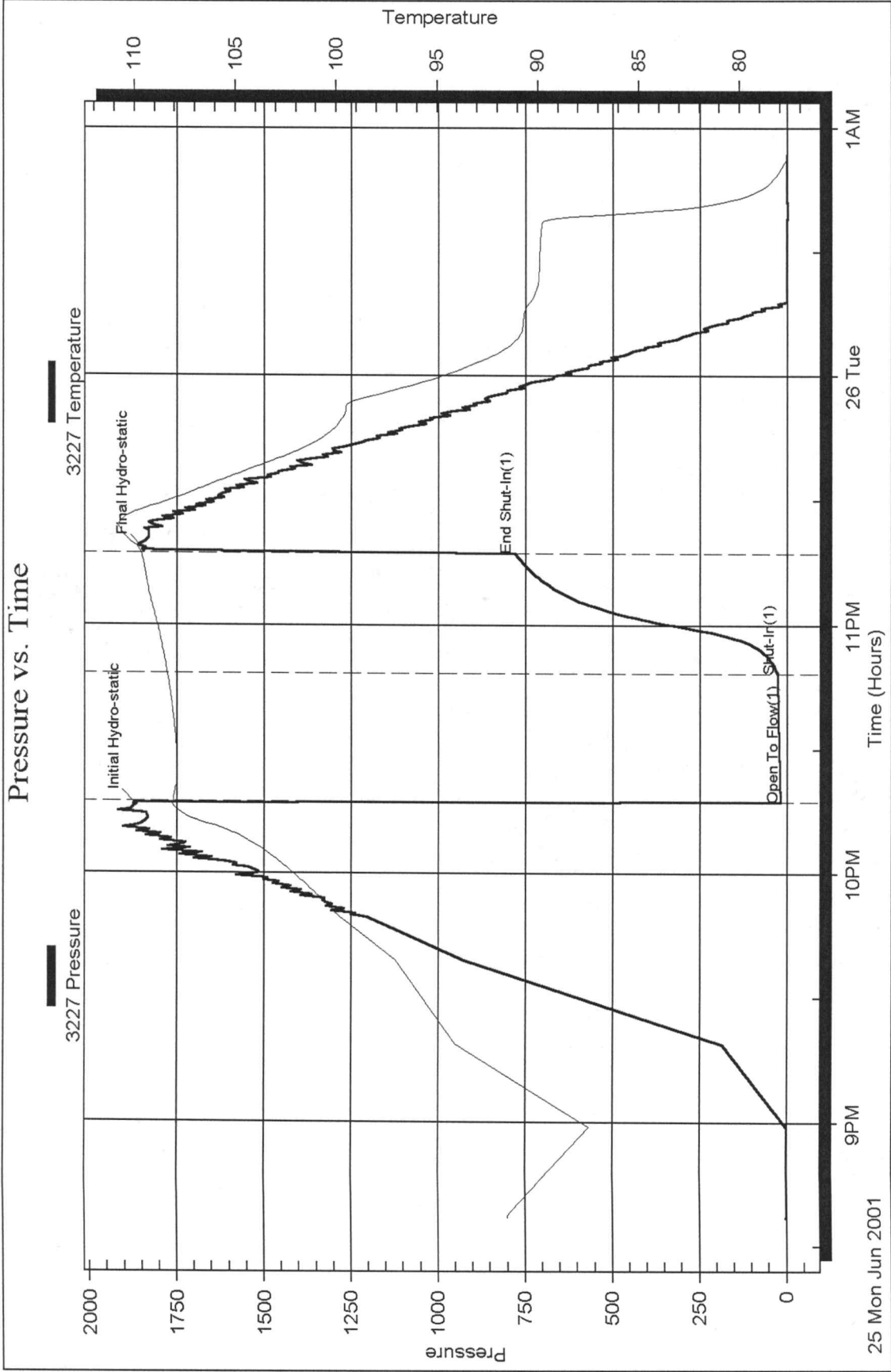
Inside

Great Eastern Energy

1-13s-21w Trego KS

DST Test Number: 2

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Great Eastern Energy**

Box 150
Bogue, KS 67625

ATTN: Mike Davignon

1-13s-21w Trego KS

Cromb #1

Start Date: 2001.06.26 @ 08:36:38

End Date: 2001.06.26 @ 15:46:38

Job Ticket #: 15438 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Great Eastern Energy

Cromb #1

1-13s-21w Trego KS

DST # 3

Cong. Sand

2001.06.26



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Great Eastern Energy

Cromb #1

Box 150
Bogue, KS 67625

1-13s-21w Trego KS

Job Ticket: 15438

DST#: 3

ATTN: Mike Davignon

Test Start: 2001.06.26 @ 08:36:38

GENERAL INFORMATION:

Formation: **Cong.Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:17:53

Time Test Ended: 15:46:38

Test Type: Conventional Bottom Hole

Tester: John Schmidt

Unit No: 18

Interval: **3793.00 ft (KB) To 3818.00 ft (KB) (TVD)**

Reference Elevations: 2182.00 ft (KB)

Total Depth: 3510.00 ft (KB) (TVD)

2177.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 3227 Inside

Press@RunDepth: 78.19 psig @ 3795.01 ft (KB)

Capacity: 7000.00 psig

Start Date: 2001.06.26

End Date:

2001.06.26

Last Calib.: 2001.01.24

Start Time: 08:36:40

End Time:

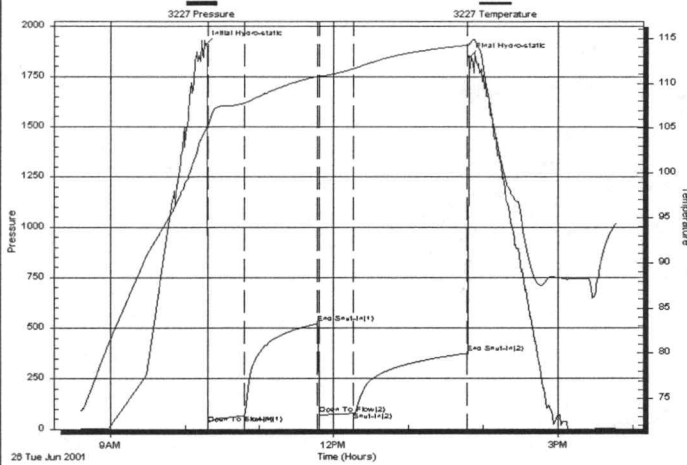
15:46:38

Time On Btm: 2001.06.26 @ 10:16:08

Time Off Btm: 2001.06.26 @ 13:48:23

TEST COMMENT: IF-Good B.O.B.in 28 min. IS- no blow
FF-Fair 4" in FSI-no blow

Pressure vs. Time



PRESSURE SUMMARY

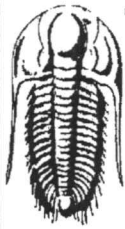
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1906.56 | 104.81 | Initial Hydro-static |
| 2 | 24.32 | 105.26 | Open To Flow (1) |
| 32 | 66.28 | 107.83 | Shut-In(1) |
| 91 | 522.02 | 110.79 | End Shut-In(1) |
| 93 | 72.46 | 110.77 | Open To Flow (2) |
| 120 | 78.19 | 111.60 | Shut-In(2) |
| 211 | 374.05 | 114.24 | End Shut-In(2) |
| 213 | 1845.15 | 114.43 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-----------------------|--------------|
| 100.00 | GMCO 10% g 60% o 30%m | 0.49 |
| 70.00 | Gassy free oil | 0.80 |
| 70.00 | GIP | 0.98 |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Great Eastern Energy

Cromb #1

Box 150
Bogue, KS 67625

1-13s-21w Trego KS

Job Ticket: 15438

DST#: 3

ATTN: Mike Davignon

Test Start: 2001.06.26 @ 08:36:38

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3663.00 ft | Diameter: 3.80 inches | Volume: 51.38 bbl | Tool Weight: 25000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 2.70 inches | Volume: 0.00 bbl | Weight set on Packer: 20000.00 lb |
| Drill Collar: | Length: 120.00 ft | Diameter: 2.25 inches | Volume: 0.59 bbl | Weight to Pull Loose: 57000.00 lb |
| | | | <u>Total Volume: 51.97 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 10.00 ft | | | String Weight: Initial 52000.00 lb |
| Depth to Top Packer: | 3793.00 ft | | | Final 52000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 25.02 ft | | | |
| Tool Length: | 45.02 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|-------------------------------|
| C.O. Sub | 1.00 | | | 3774.00 | |
| S.I. Tool | 5.00 | | | 3779.00 | |
| HMV | 5.00 | | | 3784.00 | |
| Packer | 4.00 | | | 3788.00 | 20.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3793.00 | |
| Stubb | 1.00 | | | 3794.00 | |
| Perforations | 1.00 | | | 3795.00 | |
| Recorder | 0.01 | 3227 | Inside | 3795.01 | |
| Perforations | 20.00 | | | 3815.01 | |
| Recorder | 0.01 | 13308 | Outside | 3815.02 | |
| Bullnose | 3.00 | | | 3818.02 | 25.02 Bottom Packers & Anchor |

Total Tool Length: 45.02



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Great Eastern Energy

Cromb #1

Box 150
Bogue, KS 67625

1-13s-21w Trego KS

Job Ticket: 15438

DST#: 3

ATTN: Mike Davignon

Test Start: 2001.06.26 @ 08:36:38

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

46 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-----------------------|---------------|
| 100.00 | GMCO 10% g 60% o 30%m | 0.492 |
| 70.00 | Gassy free oil | 0.800 |
| 70.00 | GIP | 0.982 |

Total Length: 240.00 ft Total Volume: 2.274 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

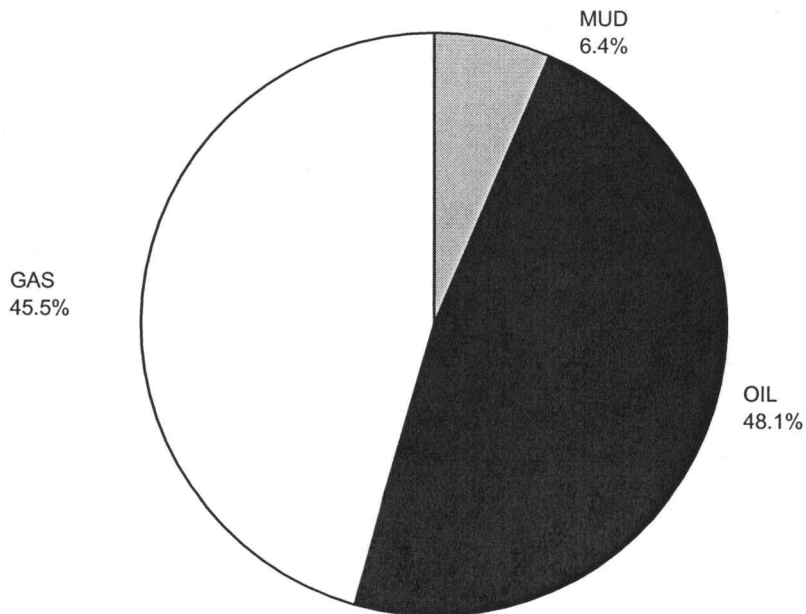
CALCULATED RECOVERY ANALYSIS

DST 3

TICKET 15438

| SAMPLE # | TOTAL FEET | GAS | | OIL | | WATER | | MUD | | |
|----------|------------|-----|------|-----|------|-------|------|-----|------|----|
| | | % | FEET | % | FEET | % | FEET | % | FEET | |
| DRILL | 1 | 70 | 100 | 70 | 0 | 0 | 0 | 0 | 0 | 0 |
| PIPE | 2 | 50 | 0 | 0 | 100 | 50 | 0 | 0 | 0 | 0 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WEIGHT | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PIPE | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| DRILL | 1 | 20 | 0 | 0 | 100 | 20 | 0 | 0 | 0 | 0 |
| COLLARS | 2 | 100 | 10 | 10 | 60 | 60 | 0 | 0 | 30 | 30 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | | 240 | 0 | 80 | 0 | 130 | 0 | 0 | 0 | 30 |

BBL OIL= 1.1022 * HRS OPEN 1 = BBL/DAY 26.4528
 BBL WATER= 0 * = 0
 BBL MUD= 0.1467
 BBL GAS = 1.0443



Pressure vs. Time

