

**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilg Co Inc**

250 N Water Ste 300
Wichita ,Ks 67202

ATTN: Jeff Christian

32-12s-32w Logan,Ks

KWS #2-32

Start Date: 2009.05.12 @ 02:40:15

End Date: 2009.05.12 @ 11:00:24

Job Ticket #: 33348 DST #: 1

**KCC
AUG 08 2009
CONFIDENTIAL**

Murfin Drilg Co Inc

KWS #2-32

32-12s-32w Logan,Ks

DST # 1

B-F

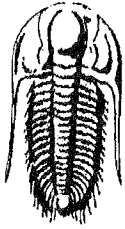
2009.05.12

**RECEIVED
KANSAS CORPORATION COMMISSION
SEP 08 2009
CONSERVATION DIVISION
WICHITA, KS**

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilg Co Inc

KWS #2-32

250 N Water Ste 300
Wichita ,Ks 67202

32-12s-32w Logan,Ks

ATTN: Jeff Christian

Job Ticket: 33348

DST#: 1

Test Start: 2009.05.12 @ 02:40:15

GENERAL INFORMATION:

Formation: **B-F**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 04:44:25

Time Test Ended: 11:00:24

Test Type: **Conventional Bottom Hole**

Tester: **Shane McBride**

Unit No: **40**

Interval: 4084.00 ft (KB) To 4164.00 ft (KB) (TVD)

Total Depth: **4164.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **3080.00 ft (KB)**

3070.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 6667

Inside

Press@RunDepth: **402.08 psig @ 4085.00 ft (KB)**

Start Date: **2009.05.12**

End Date:

2009.05.12

Start Time: **02:40:15**

End Time:

10:43:24

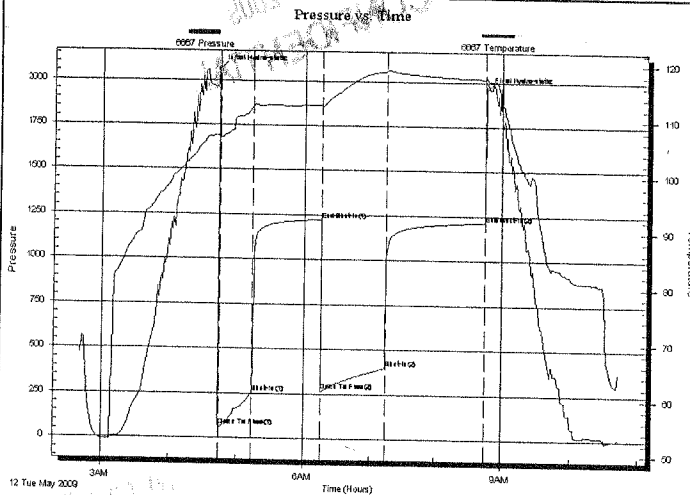
Capacity: **7000.00 psig**

Last Calib.: **2009.05.12**

Time On Btm: **2009.05.12 @ 04:43:40**

Time Off Btm: **2009.05.12 @ 08:46:10**

TEST COMMENT: **B.O.B. in 20 min
No return
B.O.B. in 38 min.
No return**



PRESSURE SUMMARY

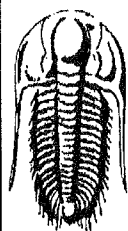
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2062.65 | 107.22 | Initial Hydro-static |
| 1 | 66.58 | 106.86 | Open To Flow (1) |
| 31 | 252.25 | 112.27 | Shut-In(1) |
| 91 | 1224.06 | 112.67 | End Shut-In(1) |
| 92 | 269.75 | 112.40 | Open To Flow (2) |
| 151 | 402.08 | 118.80 | Shut-In(2) |
| 242 | 1214.56 | 117.51 | End Shut-In(2) |
| 243 | 1954.85 | 117.77 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------------|--------------|
| 540.00 | water 100%w | 2.66 |
| 90.00 | s m c w 10%m 90%w | 1.26 |
| 160.00 | m c w 30%m 70%w | 2.24 |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilg Co Inc

KWS #2-32

250 N Water Ste 300
Wichita ,Ks 67202

32-12s-32w Logan,Ks

Job Ticket: 33348

DST#: 1

ATTN: Jeff Christian

Test Start: 2009.05.12 @ 02:40:15

Tool Information

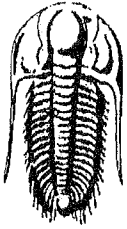
| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3552.00 ft | Diameter: 3.80 inches | Volume: 49.83 bbl | Tool Weight: 1500.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 540.00 ft | Diameter: 2.25 inches | Volume: 2.66 bbl | Weight to Pull Loose: 100000.0 lb |
| | | | <u>Total Volume: 52.49 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 28.00 ft | | | String Weight: Initial 77000.00 lb |
| Depth to Top Packer: | 4084.00 ft | | | Final 83000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 80.00 ft | | | |
| Tool Length: | 100.00 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 | | | 4065.00 | |
| Shut In Tool | 5.00 | | | 4070.00 | |
| Hydraulic tool | 5.00 | | | 4075.00 | |
| Packer | 5.00 | | | 4080.00 | 20.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4084.00 | |
| Stubb | 1.00 | | | 4085.00 | |
| Recorder | 0.00 | 6667 | Inside | 4085.00 | |
| Recorder | 0.00 | 6771 | Outside | 4085.00 | |
| Perforations | 9.00 | | | 4094.00 | |
| Change Over Sub | 1.00 | | | 4095.00 | |
| Drill Pipe | 63.00 | | | 4158.00 | |
| Change Over Sub | 1.00 | | | 4159.00 | |
| Bullnose | 5.00 | | | 4164.00 | 80.00 Bottom Packers & Anchor |

Total Tool Length: 100.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilg Co Inc

KWS #2-32

250 N Water Ste 300
Wichita ,Ks 67202

32-12s-32w Logan,Ks

Job Ticket: 33348

DST#: 1

ATTN: Jeff Christian

Test Start: 2009.05.12 @ 02:40:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

44000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.96 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------------|---------------|
| 540.00 | water 100%w | 2.656 |
| 90.00 | s m c w 10%m 90%w | 1.262 |
| 160.00 | m c w 30%m 70%w | 2.244 |

Total Length: 790.00 ft Total Volume: 6.162 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw .181 @ 61*f =44,000 chlor

Serial #: 6667

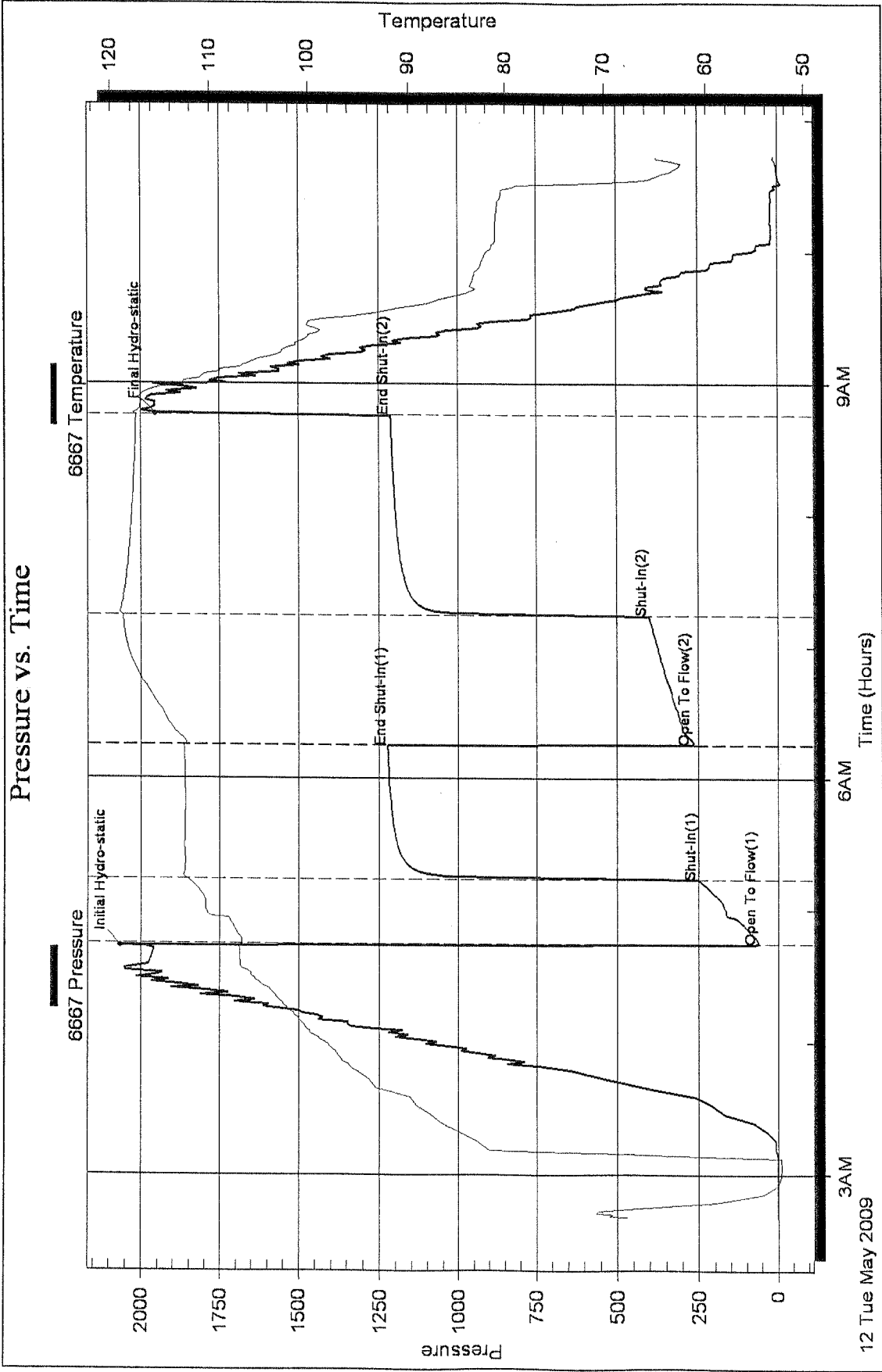
Inside

Murfin Drilg Co Inc

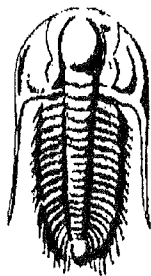
32-12s-32w Logan,Ks

DST Test Number: 1

Pressure vs. Time



12 Tue May 2009
3AM
6AM
9AM



**TRILOBITE
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DRILL STEM TEST REPORT

Prepared For: **Murfin Drilg Co Inc**

250 N Water Ste 300
Wichita ,Ks 67202

ATTN: Jeff Christian

32-12s-32w Logan,Ks

KWS #2-32

Start Date: 2009.05.12 @ 18:50:22

End Date: 2009.05.13 @ 00:35:31

Job Ticket #: 33349 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilg Co Inc

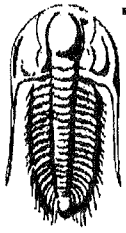
KWS #2-32

32-12s-32w Logan,Ks

DST # 2

H

2009.05.12



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilg Co Inc
250 N Water Ste 300
Wichita ,Ks 67202

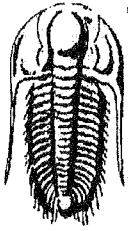
ATTN: Jeff Christian

KWS #2-32
32-12s-32w Logan,Ks
Job Ticket: 33349 **DST#: 2**
Test Start: 2009.05.12 @ 18:50:22

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3652.00 ft | Diameter: 3.80 inches | Volume: 51.23 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: 540.00 ft | Diameter: 2.25 inches | Volume: 2.66 bbl | Weight to Pull Loose: 95000.00 lb |
| | | | Total Volume: 53.89 bbl | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 5.00 ft | | | String Weight: Initial 79000.00 lb |
| Depth to Top Packer: | 4207.00 ft | | | Final 79000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 28.00 ft | | | |
| Tool Length: | 48.00 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 | | | 4188.00 | |
| Shut In Tool | 5.00 | | | 4193.00 | |
| Hydraulic tool | 5.00 | | | 4198.00 | |
| Packer | 5.00 | | | 4203.00 | 20.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4207.00 | |
| Stubb | 1.00 | | | 4208.00 | |
| Recorder | 0.00 | 6667 | Inside | 4208.00 | |
| Recorder | 0.00 | 6771 | Outside | 4208.00 | |
| Perforations | 22.00 | | | 4230.00 | |
| Bullnose | 5.00 | | | 4235.00 | 28.00 Bottom Packers & Anchor |
| Total Tool Length: | 48.00 | | | | |



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FLUID SUMMARY

Murfin Drilg Co Inc

KWS #2-32

250 N Water Ste 300
Wichita ,Ks 67202

32-12s-32w Logan,Ks

Job Ticket: 33349

DST#: 2

ATTN: Jeff Christian

Test Start: 2009.05.12 @ 18:50:22

Mud and Cushion Information

| | | | |
|----------------------------------|----------------------------|-----------------|-----------|
| Mud Type: Gel Chem | Cushion Type: | Oil API: | 0 deg API |
| Mud Weight: 9.00 lb/gal | Cushion Length: ft | Water Salinity: | 0 ppm |
| Viscosity: 56.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 6.36 in ³ | Gas Cushion Type: | | |
| Resistivity: 0.00 ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: 4100.00 ppm | | | |
| Filter Cake: 2.00 inches | | | |

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|----------------------------------|---------------|
| 2.00 | mud 100% m 6" in free oil on top | 0.010 |

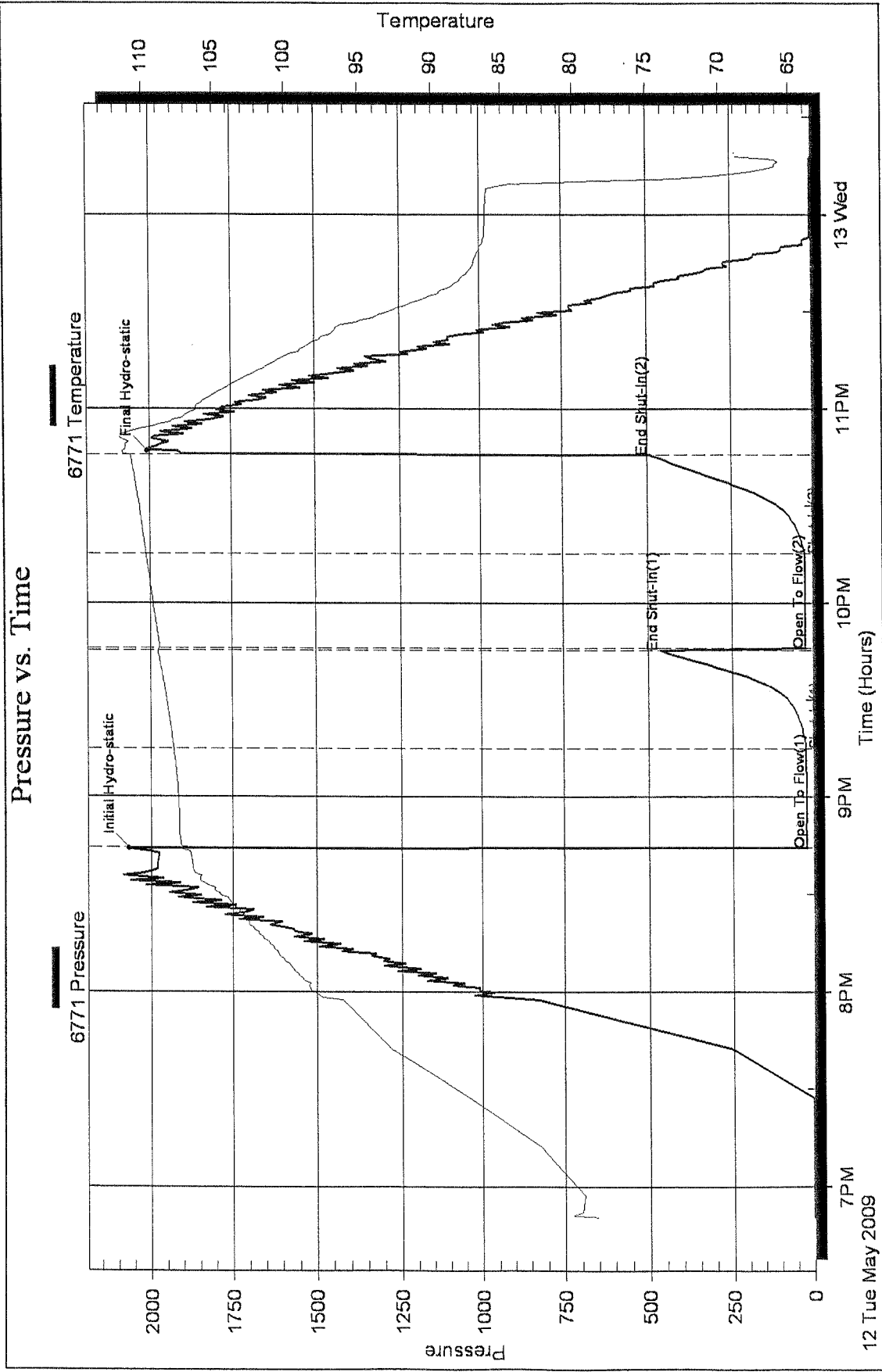
Total Length: 2.00 ft Total Volume: 0.010 bbl

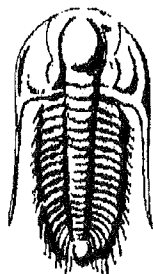
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time





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Prepared For: **Murfin Drilg Co Inc**

250 N Water Ste 300
Wichita ,Ks 67202

ATTN: Jeff Christian

32-12s-32w Logan,Ks

KWS #2-32

Start Date: 2009.05.13 @ 11:25:34

End Date: 2009.05.13 @ 17:44:58

Job Ticket #: 33350 DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilg Co Inc

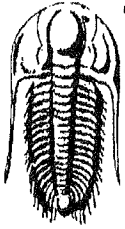
KWS #2-32

32-12s-32w Logan,Ks

DST # 3

I-K

2009.05.13



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DRILL STEM TEST REPORT

Murfin Drilg Co Inc
250 N Water Ste 300
Wichita ,Ks 67202
ATTN: Jeff Christian

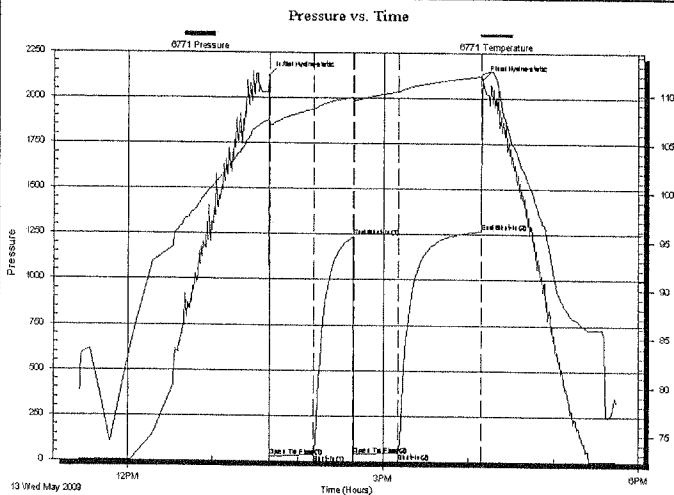
KWS #2-32
32-12s-32w Logan,Ks
Job Ticket: 33350 **DST#: 3**
Test Start: 2009.05.13 @ 11:25:34

GENERAL INFORMATION:

Formation: **I-K**
Deviated: **No** Whipstock: **ft (KB)**
Time Tool Opened: 13:39:59
Time Test Ended: 17:44:58
Test Type: **Conventional Bottom Hole**
Tester: **Shane McBride**
Unit No: **40**
Interval: **4239.00 ft (KB) To 4320.00 ft (KB) (TVD)**
Total Depth: **4320.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Fair**
Reference Elevations: **3080.00 ft (KB)**
3070.00 ft (CF)
KB to GRVCF: **10.00 ft**

Serial #: 6771 **Outside**
Press@RunDepth: **48.50 psig @ 4240.00 ft (KB)**
Start Date: **2009.05.13** End Date: **2009.05.13**
Start Time: **11:25:34** End Time: **17:44:58**
Capacity: **7000.00 psig**
Last Calib.: **2009.05.13**
Time On Btm: **2009.05.13 @ 13:39:29**
Time Off Btm: **2009.05.13 @ 16:09:44**

TEST COMMENT: Weak blow died in 5 min.
No return
No blow
No return



PRESSURE SUMMARY

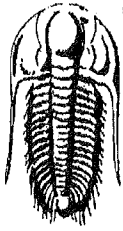
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2121.80 | 107.46 | Initial Hydro-static |
| 1 | 22.94 | 106.91 | Open To Flow (1) |
| 32 | 35.98 | 108.58 | Shut-In(1) |
| 60 | 1236.06 | 109.84 | End Shut-In(1) |
| 60 | 38.54 | 109.15 | Open To Flow (2) |
| 91 | 48.50 | 110.41 | Shut-In(2) |
| 150 | 1268.39 | 112.01 | End Shut-In(2) |
| 151 | 2107.45 | 112.27 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-----------------------|--------------|
| 5.00 | mud 100% _m | 0.02 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilg Co Inc
250 N Water Ste 300
Wichita ,Ks 67202
ATTN: Jeff Christian

KWS #2-32
32-12s-32w Logan,Ks
Job Ticket: 33350 **DST#: 3**
Test Start: 2009.05.13 @ 11:25:34

Tool Information

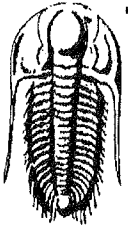
| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3710.00 ft | Diameter: 3.80 inches | Volume: 52.04 bbl | Tool Weight: 1500.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 540.00 ft | Diameter: 2.25 inches | Volume: 2.66 bbl | Weight to Pull Loose: 95000.00 lb |
| | | | <u>Total Volume: 54.70 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 31.00 ft | | | String Weight: Initial 78000.00 lb |
| Depth to Top Packer: | 4239.00 ft | | | Final 78000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 81.00 ft | | | |
| Tool Length: | 101.00 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 | | | 4220.00 | |
| Shut In Tool | 5.00 | | | 4225.00 | |
| Hydraulic tool | 5.00 | | | 4230.00 | |
| Packer | 5.00 | | | 4235.00 | 20.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4239.00 | |
| Stubb | 1.00 | | | 4240.00 | |
| Recorder | 0.00 | 6667 | Inside | 4240.00 | |
| Recorder | 0.00 | 6771 | Outside | 4240.00 | |
| Perforations | 10.00 | | | 4250.00 | |
| Change Over Sub | 1.00 | | | 4251.00 | |
| Drill Pipe | 63.00 | | | 4314.00 | |
| Change Over Sub | 1.00 | | | 4315.00 | |
| Bullnose | 5.00 | | | 4320.00 | 81.00 Bottom Packers & Anchor |

Total Tool Length: 101.00



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KWS #2-32

250 N Water Ste 300
Wichita ,Ks 67202

32-12s-32w Logan,Ks

Job Ticket: 33350

DST#: 3

ATTN: Jeff Christian

Test Start: 2009.05.13 @ 11:25:34

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 58.06 sec/qt

Cushion Volume:

bbl

Water Loss: 5.97 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-----------------------|---------------|
| 5.00 | mud 100% _m | 0.025 |

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

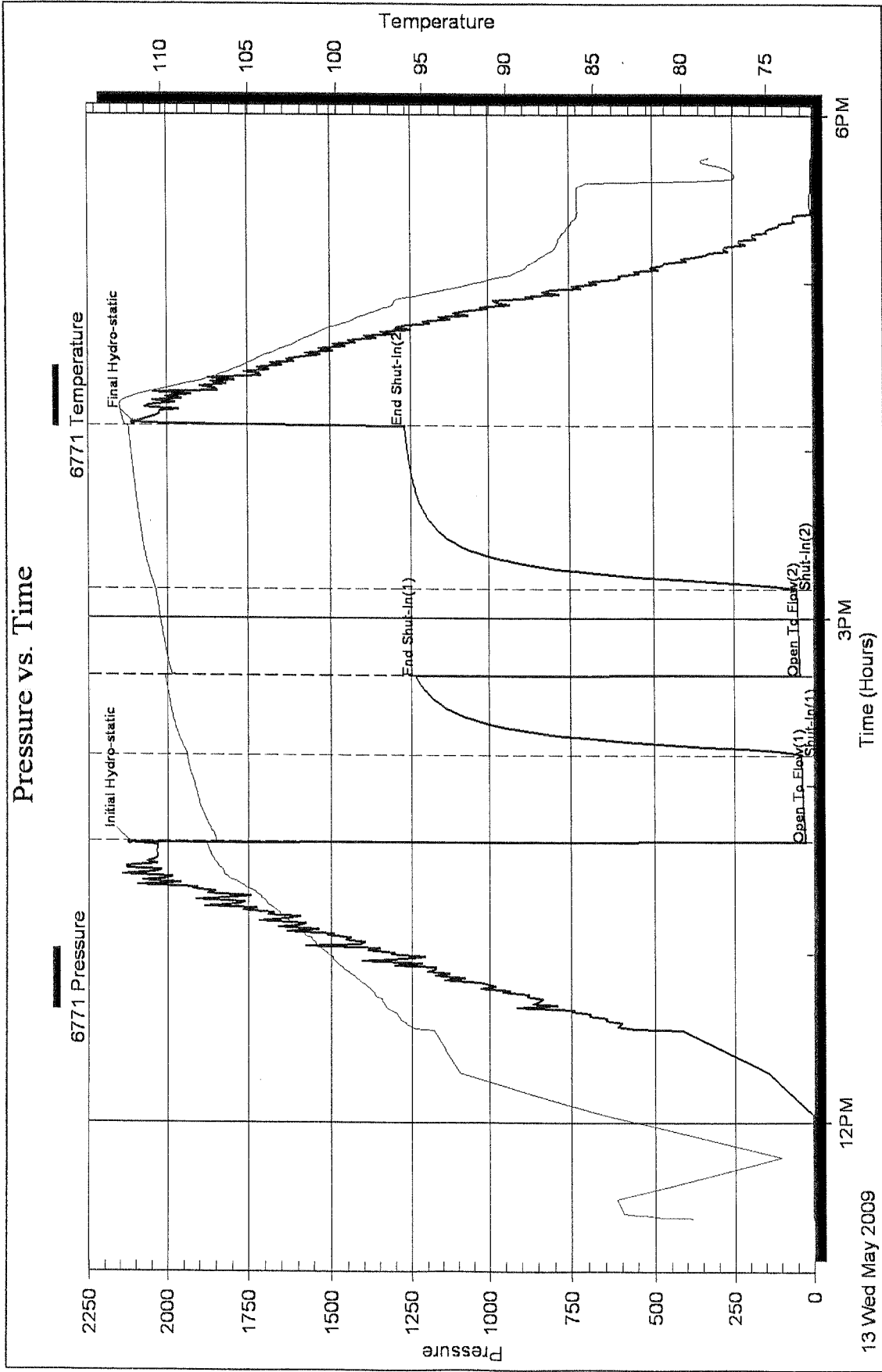
Serial #:

Laboratory Name:

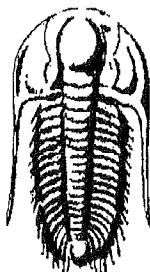
Laboratory Location:

Recovery Comments:

Pressure vs. Time



13 Wed May 2009



**TRILOBITE
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250 N Water Ste 300
Wichita ,Ks 67202

ATTN: Jeff Christian

32-12s-32w Logan,Ks

KWS #2-32

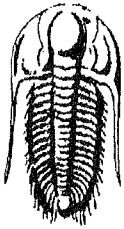
Start Date: 2009.05.14 @ 15:25:06

End Date: 2009.05.14 @ 00:20:00

Job Ticket #: 34751 DST #: 4

RECEIVED
KANSAS CORPORATION COMMISSION
SEP 08 2009
CONSERVATION DIVISION
WICHITA, KS

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Murfin Drilg Co Inc
 250 N Water Ste 300
 Wichita ,Ks 67202
 ATTN: Jeff Christian

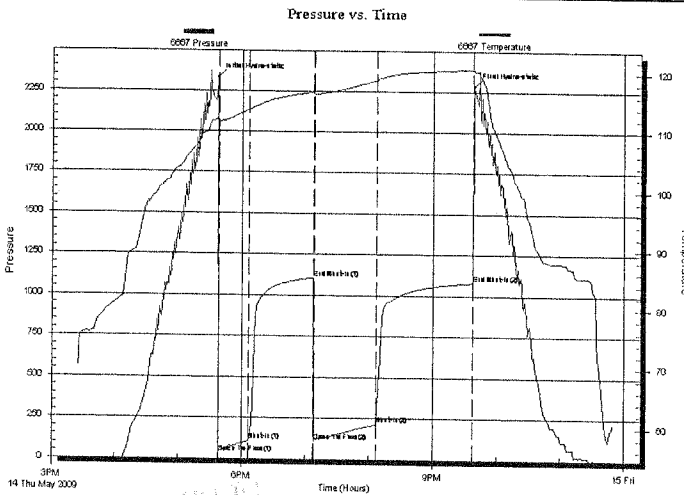
KWS #2-32
32-12s-32w Logan,Ks
 Job Ticket: 34751 **DST#: 4**
 Test Start: 2009.05.14 @ 15:25:06

GENERAL INFORMATION:

Formation: **Pawnee , FtScott**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 17:38:31
 Time Test Ended: 00:20:00
 Interval: **4478.00 ft (KB) To 4570.00 ft (KB) (TVD)**
 Total Depth: 4570.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: Shane McBride
 Unit No: 40
 Reference Elevations: 3080.00 ft (KB)
 3070.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 6667 Inside
 Press@RunDepth: 214.76 psig @ 4479.00 ft (KB)
 Start Date: 2009.05.14 End Date: 2009.05.14
 Start Time: 15:25:06 End Time: 23:50:00
 Capacity: 7000.00 psig
 Last Calib.: 2009.05.15
 Time On Btm: 2009.05.14 @ 17:38:01
 Time Off Btm: 2009.05.14 @ 21:38:16

TEST COMMENT: 1/4" in blow built to 10" in
 No return
 B.O.B. in 25 min.
 1 1/2" in return blow



PRESSURE SUMMARY

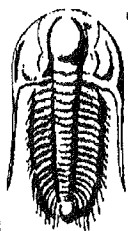
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2330.12 | 112.40 | Initial Hydro-static |
| 1 | 31.92 | 111.89 | Open To Flow (1) |
| 29 | 109.51 | 113.73 | Shut-In(1) |
| 89 | 1107.02 | 116.77 | End Shut-In(1) |
| 90 | 109.94 | 116.42 | Open To Flow (2) |
| 149 | 214.76 | 118.82 | Shut-In(2) |
| 239 | 1080.36 | 120.69 | End Shut-In(2) |
| 241 | 2281.85 | 120.43 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--------------------------|--------------|
| 90.00 | c g o 5%g 95%o | 0.44 |
| 95.00 | s m c g o 10%m 15%g 75%o | 0.47 |
| 95.00 | g m c o 15%g 30%m 55%o | 0.47 |
| 160.00 | g o c m 30%g 20%o 50%m | 0.79 |
| 0.00 | 90' weak gas in pipe | 0.00 |

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilg Co Inc

KWS #2-32

250 N Water Ste 300
Wichita ,Ks 67202

32-12s-32w Logan,Ks

Job Ticket: 34751

DST#: 4

ATTN: Jeff Christian

Test Start: 2009.05.14 @ 15:25:06

Tool Information

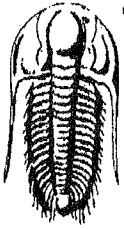
| | | | | |
|----------------------------|--------------------|-----------------------|-------------------------|------------------------------------|
| Drill Pipe: | Length: 3938.00 ft | Diameter: 3.80 inches | Volume: 55.24 bbl | Tool Weight: 1500.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 540.00 ft | Diameter: 2.25 inches | Volume: 2.66 bbl | Weight to Pull Loose: 100000.0 lb |
| | | | Total Volume: 57.90 bbl | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 20.00 ft | | | String Weight: Initial 80000.00 lb |
| Depth to Top Packer: | 4478.00 ft | | | Final 81000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval betw een Packers: | 92.00 ft | | | |
| Tool Length: | 112.00 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 | | | 4459.00 | |
| Shut In Tool | 5.00 | | | 4464.00 | |
| Hydraulic tool | 5.00 | | | 4469.00 | |
| Packer | 5.00 | | | 4474.00 | 20.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4478.00 | |
| Stubb | 1.00 | | | 4479.00 | |
| Recorder | 0.00 | 6667 | Inside | 4479.00 | |
| Recorder | 0.00 | 6771 | Outside | 4479.00 | |
| Perforations | 21.00 | | | 4500.00 | |
| Change Over Sub | 1.00 | | | 4501.00 | |
| Drill Pipe | 63.00 | | | 4564.00 | |
| Change Over Sub | 1.00 | | | 4565.00 | |
| Bullnose | 5.00 | | | 4570.00 | 92.00 Bottom Packers & Anchor |

Total Tool Length: 112.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilg Co Inc

KWS #2-32

250 N Water Ste 300
Wichita ,Ks 67202

32-12s-32w Logan,Ks

Job Ticket: 34751

DST#: 4

ATTN: Jeff Christian

Test Start: 2009.05.14 @ 15:25:06

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

27 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

90 ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|--------------------------|---------------|
| 90.00 | c g o 5%g 95%o | 0.443 |
| 95.00 | s m c g o 10%m 15%g 75%o | 0.467 |
| 95.00 | g m c o 15%g 30%m 55%o | 0.467 |
| 160.00 | g o c m 30%g 20%o 50%m | 0.787 |
| 0.00 | 90' weak gas in pipe | 0.000 |

Total Length: 440.00 ft

Total Volume:

2.164 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6667

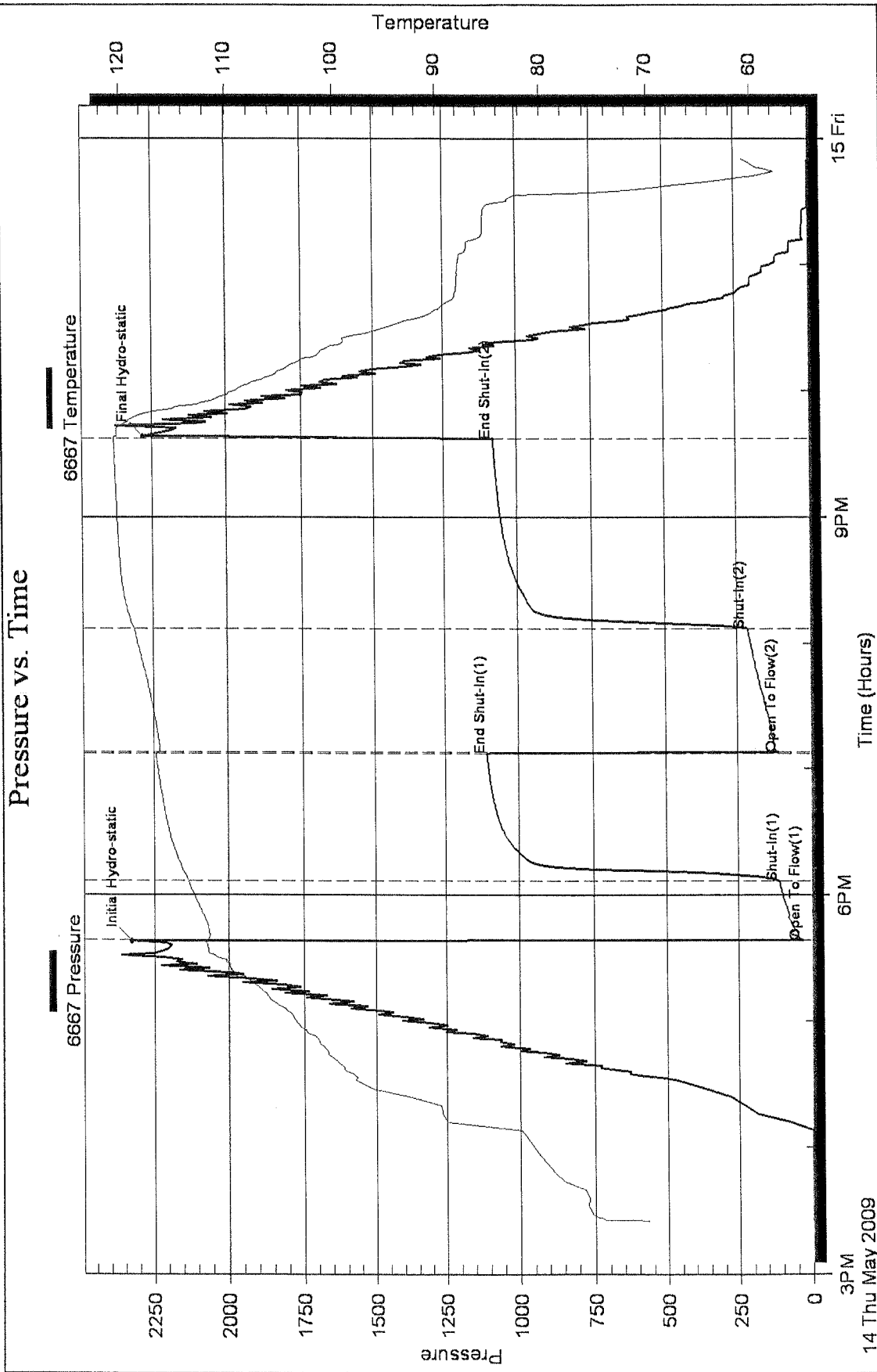
Inside

Murfin Drilg Co Inc

32-12s-32w Logan, Ks

DST Test Number: 4

Pressure vs. Time

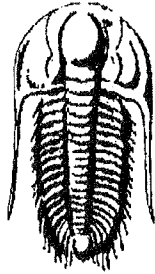


3PM
14 Thu May 2009

6PM

9PM

15 Fri



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilg Co Inc**

250 N Water Ste 300
Wichita ,Ks 67202

ATTN: Jeff Christian

32-12s-32w Logan,Ks

KWS #2-32

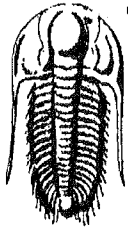
Start Date: 2009.05.15 @ 10:00:05

End Date: 2009.05.15 @ 19:05:45

Job Ticket #: 34752 DST #: 5

RECEIVED
KANSAS CORPORATION COMMISSION
SEP 08 2009
CONSERVATION DIVISION
WICHITA, KS

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilg Co Inc

KWS #2-32

250 N Water Ste 300
Wichita ,Ks 67202

32-12s-32w Logan,Ks

Job Ticket: 34752

DST#: 5

ATTN: Jeff Christian

Test Start: 2009.05.15 @ 10:00:05

Tool Information

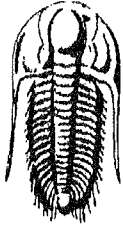
| | | | | |
|----------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4032.00 ft | Diameter: 3.80 inches | Volume: 56.56 bbl | Tool Weight: 1500.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 540.00 ft | Diameter: 2.25 inches | Volume: 2.66 bbl | Weight to Pull Loose: 100000.0 lb |
| | | | <u>Total Volume: 59.22 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 20.00 ft | | | String Weight: Initial 80000.00 lb |
| Depth to Top Packer: | 4572.00 ft | | | Final 83000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval betw een Packers: | 68.00 ft | | | |
| Tool Length: | 88.00 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 | | | 4553.00 | |
| Shut In Tool | 5.00 | | | 4558.00 | |
| Hydraulic tool | 5.00 | | | 4563.00 | |
| Packer | 5.00 | | | 4568.00 | 20.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 4572.00 | |
| Stubb | 1.00 | | | 4573.00 | |
| Recorder | 0.00 | 6667 | Inside | 4573.00 | |
| Recorder | 0.00 | 6771 | Outside | 4573.00 | |
| Perforations | 29.00 | | | 4602.00 | |
| Change Over Sub | 1.00 | | | 4603.00 | |
| Drill Pipe | 31.00 | | | 4634.00 | |
| Change Over Sub | 1.00 | | | 4635.00 | |
| Bullnose | 5.00 | | | 4640.00 | 68.00 Bottom Packers & Anchor |

Total Tool Length: 88.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilg Co Inc

KWS #2-32

250 N Water Ste 300
Wichita ,Ks 67202

32-12s-32w Logan, Ks

ATTN: Jeff Christian

Job Ticket: 34752

DST#: 5

Test Start: 2009.05.15 @ 10:00:05

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 64.00 sec/qt

Water Loss: 6.79 in³

Resistivity: 0.00 ohm.m

Salinity: 5900.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

25 deg API

Water Salinity:

0 ppm

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|------------------------------------------|---------------|
| 95.00 | m c g o 30% m 25% g 45% o under circ sub | 0.467 |
| 635.00 | c g o 20% g 80% o reversed out | 4.854 |
| 100.00 | c g o 20% g 80% o | 1.403 |

Total Length: 830.00 ft

Total Volume: 6.724 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

