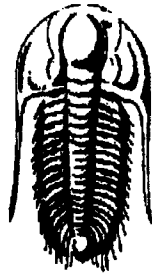


15-171-20727

18-19s-31w



**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **FIML**

410 17th St, Ste 900  
Denver, CO 80802

**CONFIDENTIAL**

NOV 02 2009

**KCC**

ATTN: Jim Musgrove

**18-19s-31w Scott KS**

**Dearden 7B-18R-1931**

Start Date: 2009.08.22 @ 16:03:05

End Date: 2009.08.23 @ 01:54:45

Job Ticket #: 35357

DST #: 1

RECEIVED  
NOV 05 2009  
KCC WICHITA

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

FIML

Dearden 7B-18R-1931

18-19s-31w Scott KS

DST # 1

Pleasanton

2009.08.22



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

FIML

410 17th St, Ste 900  
Denver, CO 80802

ATTN: Jim Musgrove

Dearden 7B-18R-1931

18-19s-31w Scott KS

Job Ticket: 35357

DST#: 1

Test Start: 2009.08.22 @ 16:03:05

### GENERAL INFORMATION:

Formation: Pleasanton

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:32:30

Time Test Ended: 01:54:45

Test Type: Conventional Bottom Hole

Tester: Brandon Domsch

Unit No: 48

Interval: 4318.00 ft (KB) To 4364.00 ft (KB) (TVD)

Total Depth: 4364.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2984.00 ft (KB)

2971.00 ft (CF)

KB to GR/CF: 13.00 ft

Serial #: 8322

Inside

Press@RunDepth: 93.04 psig @ 4319.00 ft (KB)

Start Date: 2009.08.22

End Date:

2009.08.23

Start Time: 16:03:05

End Time:

01:54:45

Capacity: 7000.00 psig

Last Calib.: 2009.08.23

Time On Btm: 2009.08.22 @ 19:30:30

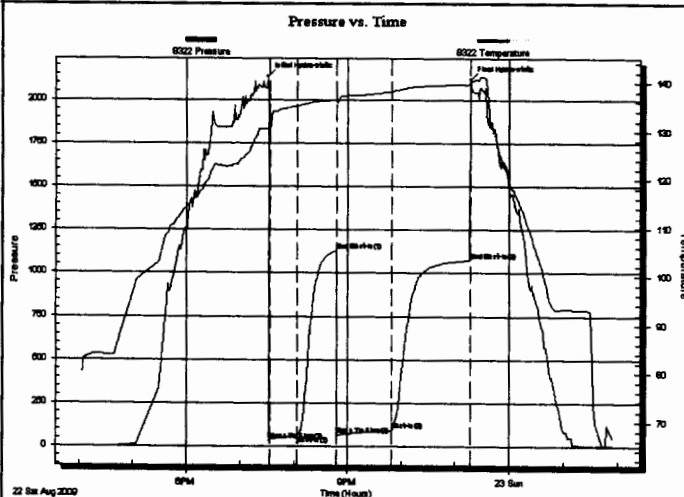
Time Off Btm: 2009.08.22 @ 23:16:59

TEST COMMENT: IF: BOB in 17 1/2 mins.

IS: Built to 1 1/4 inch died in 28 mins.

FF: BOB in 16 mins.

FS: Built to 1 inch died in 25 mins.



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2131.71         | 130.54       | Initial Hydro-static |
| 2           | 35.56           | 129.72       | Open To Flow (1)     |
| 34          | 63.23           | 135.30       | Shut-In (1)          |
| 77          | 1127.22         | 136.48       | End Shut-In (1)      |
| 77          | 69.85           | 136.21       | Open To Flow (2)     |
| 139         | 93.04           | 138.21       | Shut-In (2)          |
| 226         | 1074.05         | 139.73       | End Shut-In (2)      |
| 227         | 2115.21         | 140.20       | Final Hydro-static   |

### Recovery

| Length (ft) | Description             | Volume (bbl) |
|-------------|-------------------------|--------------|
| 60.00       | SOCM 10%o 90%o m        | 0.30         |
| 60.00       | OCM 30%o 70%o m         | 0.81         |
| 30.00       | HO&GCM 10%g 50%o 40%o m | 0.42         |
| 0.00        | GIP = 120 FT            | 0.00         |
| 0.00        | API = N/A               | 0.00         |

### Gas Rates

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



**TRILOBITE**  
**TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FML

410 17th St, Ste 900  
Denver, CO 80802

ATTN: Jim Musgrove

**Dearden 7B-18R-1931**

**18-19s-31w Scott KS**

Job Ticket: 35357

DST#: 1

Test Start: 2009.08.22 @ 16:03:05

### Tool Information

|                           |                    |                         |                   |                                    |
|---------------------------|--------------------|-------------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 4257.00 ft | Diameter: 3.80 inches   | Volume: 59.71 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: 63.00 ft   | Diameter: 2.25 inches   | Volume: 0.31 bbl  | Weight to Pull Loose: 65000.00 lb  |
|                           |                    | Total Volume: 60.02 bbl |                   | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 30.00 ft           |                         |                   | String Weight: Initial 46000.00 lb |
| Depth to Top Packer:      | 4318.00 ft         |                         |                   | Final 47000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                         |                   |                                    |
| Interval between Packers: | 46.00 ft           |                         |                   |                                    |
| Tool Length:              | 74.00 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  |      |        | 4291.00 |                               |
| Shut In Tool    | 5.00  |      |        | 4296.00 |                               |
| Hydraulic tool  | 5.00  |      |        | 4301.00 |                               |
| Jars            | 5.00  |      |        | 4306.00 |                               |
| Safety Joint    | 3.00  |      |        | 4309.00 |                               |
| Packer          | 5.00  |      |        | 4314.00 | 28.00 Bottom Of Top Packer    |
| Packer          | 4.00  |      |        | 4318.00 |                               |
| Stubb           | 1.00  |      |        | 4319.00 |                               |
| Recorder        | 0.00  | 8322 | Inside | 4319.00 |                               |
| Recorder        | 0.00  | 6741 | Inside | 4319.00 |                               |
| Perforations    | 7.00  |      |        | 4326.00 |                               |
| Change Over Sub | 1.00  |      |        | 4327.00 |                               |
| Drill Pipe      | 31.00 |      |        | 4358.00 |                               |
| Change Over Sub | 1.00  |      |        | 4359.00 |                               |
| Bullnose        | 5.00  |      |        | 4364.00 | 46.00 Bottom Packers & Anchor |

**Total Tool Length: 74.00**



**TRILOBITE**  
**TESTING, INC**

## DRILL STEM TEST REPORT

### FLUID SUMMARY

FIML

Dearden 7B-18R-1931

410 17th St, Ste 900  
Denver, CO 80802

18-19s-31w Scott KS

ATTN: Jim Musgrove

Job Ticket: 35357

DST#: 1

Test Start: 2009.08.22 @ 16:03:05

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 7.18 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 1900.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description           | Volume<br>bbl |
|--------------|-----------------------|---------------|
| 60.00        | SOCM 10%o 90%m        | 0.295         |
| 60.00        | OCM 30%o 70%m         | 0.814         |
| 30.00        | HO&GCM 10%g 50%o 40%m | 0.421         |
| 0.00         | GIP = 120 FT          | 0.000         |
| 0.00         | API = NA              | 0.000         |

Total Length: 150.00 ft

Total Volume: 1.530 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

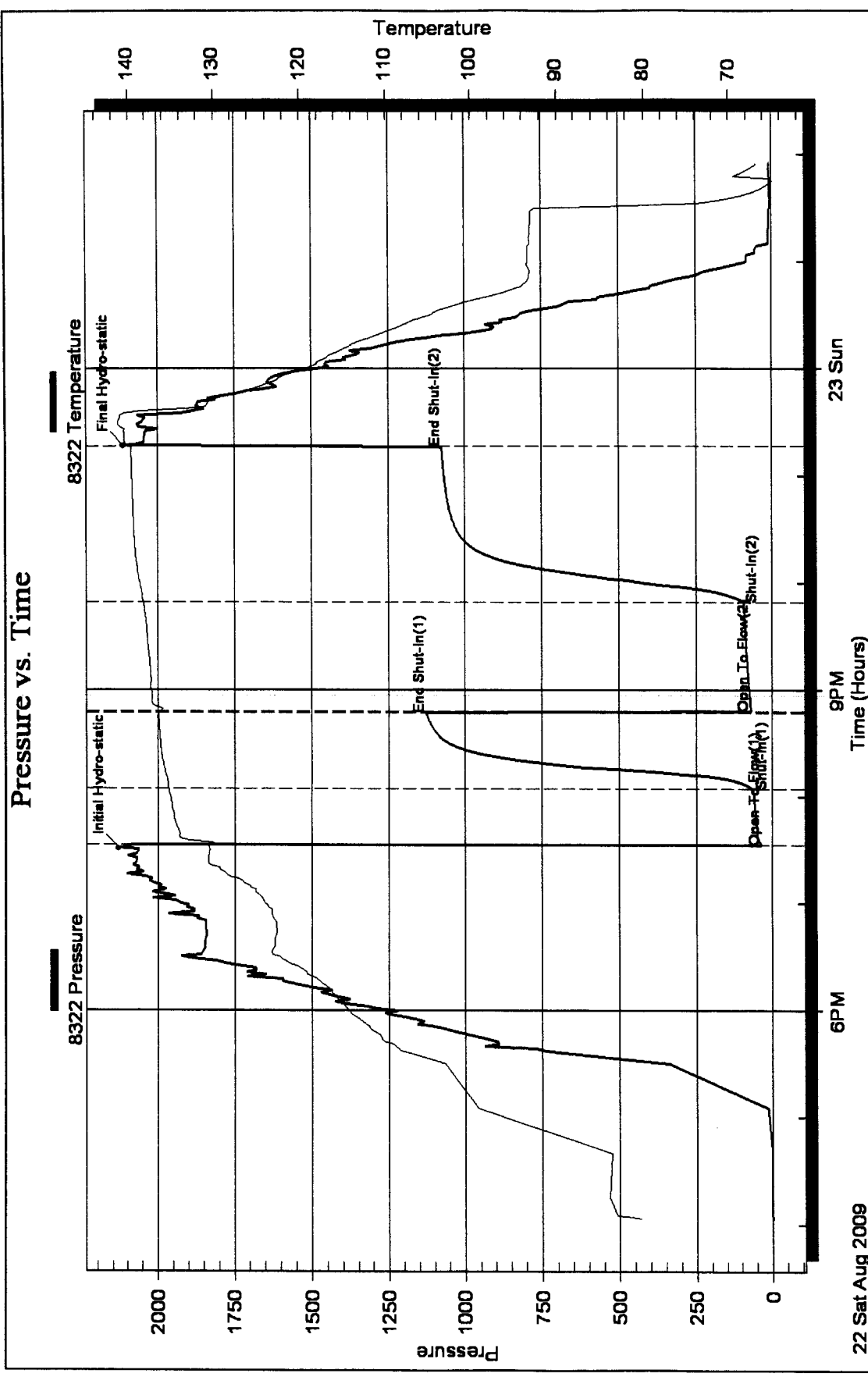
Serial #: 8322

Inside FIML

18-19s-31w Scott KS

DST Test Number: 1

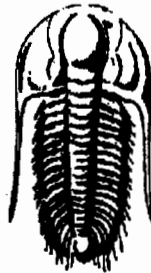
# Pressure vs. Time



Ref. No: 35357

Trilobite Testing, Inc

Printed: 2009.09.01 @ 12:46:50 Page 5



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**CONFIDENTIAL**

NOV 02 2009

**KCC**

Prepared For: **FIML**

410 17th St, Ste 900  
Denver, CO 80802

ATTN: Jim Musgrove

**18-19s-31w Scott KS**

**Dearden 7B-18R-1931**

Start Date: 2009.08.23 @ 12:20:05

End Date: 2009.08.23 @ 21:49:00

Job Ticket #: 35358      DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE**  
**TESTING, INC**

## DRILL STEM TEST REPORT

FIML

410 17th St, Ste 900  
Denver, CO 80802

ATTN: Jim Musgrove

Dearden 7B-18R-1931

18-19s-31w Scott KS

Job Ticket: 35358

DST#: 2

Test Start: 2009.08.23 @ 12:20:05

### GENERAL INFORMATION:

Formation: Altamont A&B

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:57:30

Time Test Ended: 21:49:00

Interval: 4371.00 ft (KB) To 4416.00 ft (KB) (TVD)

Total Depth: 4416.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole

Tester: Brandon Domsch

Unit No: 48

Reference Elevations: 2984.00 ft (KB)

2971.00 ft (CF)

KB to GR/CF: 13.00 ft

Serial #: 8322 Inside

Press@RunDepth: 77.06 psig @ 4372.00 ft (KB)

Start Date: 2009.08.23

End Date: 2009.08.23

Start Time: 12:20:05

End Time: 21:49:00

Capacity: 7000.00 psig

Last Calib.: 2009.08.23

Time On Btm: 2009.08.23 @ 14:57:00

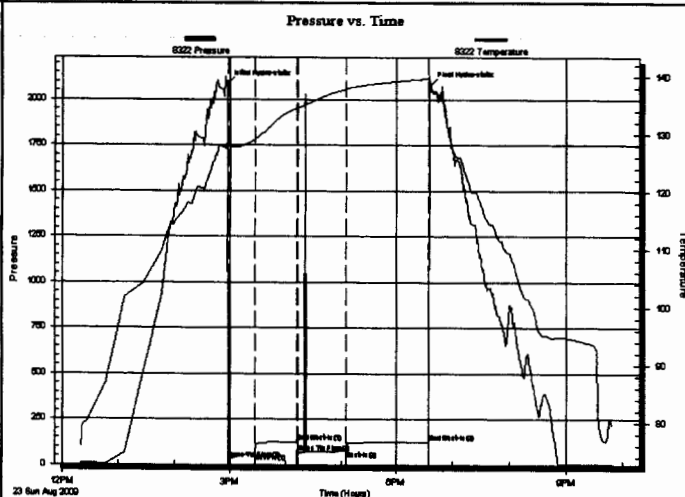
Time Off Btm: 2009.08.23 @ 18:36:45

TEST COMMENT: IF: Built to 5 inches.

IS: No return.

FF: Built to 1/2 inch, flushed @ 8 mins, built to 1 1/2 inches.

FS: No return.



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2083.86         | 128.47       | Initial Hydro-static |
| 1           | 30.26           | 128.02       | Open To Flow (1)     |
| 30          | 64.34           | 129.13       | Shut-In(1)           |
| 76          | 126.68          | 134.56       | End Shut-In(1)       |
| 76          | 66.72           | 134.58       | Open To Flow (2)     |
| 129         | 77.06           | 137.79       | Shut-In(2)           |
| 218         | 123.87          | 139.65       | End Shut-In(2)       |
| 220         | 2076.46         | 138.08       | Final Hydro-static   |

### Recovery

| Length (ft) | Description   | Volume (bbl) |
|-------------|---------------|--------------|
| 60.00       | WCM 10%w 90%o | 0.30         |
| 50.00       | SWCM 5%w 95%o | 0.67         |
| 10.00       | SOCM 3%o 97%o | 0.14         |
| 0.00        | GIP = 0       | 0.00         |
|             |               |              |
|             |               |              |

### Gas Rates

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



**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

FML

Dearden 7B-18R-1931

410 17th St, Ste 900  
Denver, CO 80802

18-19s-31w Scott KS

Job Ticket: 35358

DST#: 2

ATTN: Jim Musgrove

Test Start: 2009.08.23 @ 12:20:05

### Tool Information

|                           |                    |                         |                   |                                    |
|---------------------------|--------------------|-------------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 4290.00 ft | Diameter: 3.80 inches   | Volume: 60.18 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: 63.00 ft   | Diameter: 2.25 inches   | Volume: 0.31 bbl  | Weight to Pull Loose: 60000.00 lb  |
|                           |                    | Total Volume: 60.49 bbl |                   | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 10.00 ft           |                         |                   | String Weight: Initial 47000.00 lb |
| Depth to Top Packer:      | 4371.00 ft         |                         |                   | Final 47000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                         |                   |                                    |
| Interval between Packers: | 45.00 ft           |                         |                   |                                    |
| Tool Length:              | 73.00 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        |            |          | 4344.00    |                               |
| Shut In Tool     | 5.00        |            |          | 4349.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 4354.00    |                               |
| Jars             | 5.00        |            |          | 4359.00    |                               |
| Safety Joint     | 3.00        |            |          | 4362.00    |                               |
| Packer           | 5.00        |            |          | 4367.00    | 28.00 Bottom Of Top Packer    |
| Packer           | 4.00        |            |          | 4371.00    |                               |
| Stubb            | 1.00        |            |          | 4372.00    |                               |
| Recorder         | 0.00        | 8322       | Inside   | 4372.00    |                               |
| Recorder         | 0.00        | 6741       | Inside   | 4372.00    |                               |
| Perforations     | 6.00        |            |          | 4378.00    |                               |
| Change Over Sub  | 1.00        |            |          | 4379.00    |                               |
| Drill Pipe       | 31.00       |            |          | 4410.00    |                               |
| Change Over Sub  | 1.00        |            |          | 4411.00    |                               |
| Bullnose         | 5.00        |            |          | 4416.00    | 45.00 Bottom Packers & Anchor |

**Total Tool Length: 73.00**



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

### FLUID SUMMARY

FML

410 17th St, Ste 900  
Denver, CO 80802

ATTN: Jim Musgrove

Dearden 7B-18R-1931

18-19s-31w Scott KS

Job Ticket: 35358

DST#: 2

Test Start: 2009.08.23 @ 12:20:05

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 7.17 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 1900.00 ppm

Filter Cake: 2.00 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<br>ft | Description   | Volume<br>bbl |
|--------------|---------------|---------------|
| 60.00        | WCM 10%w 90%m | 0.295         |
| 50.00        | SWCM 5%w 95%m | 0.674         |
| 10.00        | SOCM 3%o 97%m | 0.140         |
| 0.00         | GIP = 0       | 0.000         |

Total Length: 120.00 ft

Total Volume: 1.109 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8322

Inside FIM

18-19s-31w Scott KS

DST Test Number: 2

