



DRILL STEM TEST REPORT

Prepared For: **John O. Farmer, Inc.**

PO Box 352
Russel, KS 67665-2635

ATTN: John Farmer/Austin K

Preston Unit A #1

24-15S-11E Lyon, KS

Start Date: 2018.04.18 @ 06:20:00

End Date: 2018.04.18 @ 10:38:20

Job Ticket #: 63384 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.04.20 @ 10:15:51

John O. Farmer, Inc. 24-15S-11E Lyon, KS Preston Unit A #1 DST # 1 Viola 2018.04.18



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O. Farmer, Inc.

24-15S-11E Lyon, KS

PO Box 352
Russel, KS 67665-2635

Preston Unit A #1

Job Ticket: 63384

DST#: 1

ATTN: John Farmer/Austin K

Test Start: 2018.04.18 @ 06:20:00

GENERAL INFORMATION:

Formation: **Viola**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:30:40

Time Test Ended: 10:38:20

Test Type: Conventional Bottom Hole (Initial)

Tester: Jimmy Ricketts

Unit No: 80

Interval: 2818.00 ft (KB) To 2870.00 ft (KB) (TVD)

Reference Elevations: 1280.00 ft (KB)

Total Depth: 2870.00 ft (KB) (TVD)

1272.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8369 Outside

Press@RunDepth: 603.79 psig @ 2819.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.04.18

End Date:

2018.04.18

Last Calib.:

2018.04.18

Start Time: 06:20:01

End Time:

10:38:20

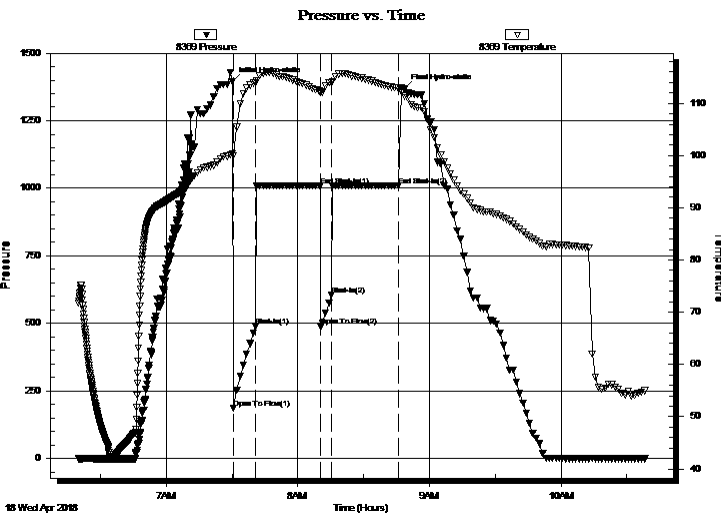
Time On Btm:

2018.04.18 @ 07:30:10

Time Off Btm:

2018.04.18 @ 08:48:40

TEST COMMENT: IF - Weak blow building to strong blow in 1 minute
FF - Strong blow throughout final flow period.



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1394.86 | 100.28 | Initial Hydro-static |
| 1 | 185.66 | 100.02 | Open To Flow (1) |
| 11 | 488.71 | 114.01 | Shut-In(1) |
| 41 | 1009.71 | 112.29 | End Shut-In(1) |
| 41 | 488.58 | 112.00 | Open To Flow (2) |
| 46 | 603.79 | 114.02 | Shut-In(2) |
| 76 | 1009.80 | 112.89 | End Shut-In(2) |
| 79 | 1367.06 | 111.41 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------------------|--------------|
| 1000.00 | Water 100% W | 13.03 |
| 200.00 | Heavy mud cut w ater 56% W & 44% M | 2.81 |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer, Inc.

24-15S-11E Lyon, KS

PO Box 352
Russel, KS 67665-2635

Preston Unit A #1

Job Ticket: 63384

DST#: 1

ATTN: John Farmer/Austin K

Test Start: 2018.04.18 @ 06:20:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 2504.00 ft | Diameter: 3.80 inches | Volume: 35.12 bbl | Tool Weight: 1900.00 lb |
| Heavy Wt. Pipe: | Length: 312.00 ft | Diameter: 3.34 inches | Volume: 3.38 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 0.00 ft | Diameter: 2.25 inches | Volume: 0.00 bbl | Weight to Pull Loose: 62000.00 lb |
| | | | <u>Total Volume: 38.50 bbl</u> | Tool Chased 1.00 ft |
| Drill Pipe Above KB: | 18.00 ft | | | String Weight: Initial 48000.00 lb |
| Depth to Top Packer: | 2818.00 ft | | | Final 49000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 52.00 ft | | | |
| Tool Length: | 72.00 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 | | | 2799.00 | |
| Shut In Tool | 5.00 | | | 2804.00 | |
| Hydraulic tool | 5.00 | | | 2809.00 | |
| Packer | 4.00 | | | 2813.00 | 20.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 2818.00 | |
| Stubb | 1.00 | | | 2819.00 | |
| Recorder | 0.00 | 8369 | Outside | 2819.00 | |
| Recorder | 0.00 | 8846 | Inside | 2819.00 | |
| Perforations | 13.00 | | | 2832.00 | |
| Change Over Sub | 1.00 | | | 2833.00 | |
| Blank Spacing | 31.00 | | | 2864.00 | |
| Change Over Sub | 1.00 | | | 2865.00 | |
| Bullnose | 5.00 | | | 2870.00 | 52.00 Bottom Packers & Anchor |

Total Tool Length: 72.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer, Inc.

24-15S-11E Lyon, KS

PO Box 352
Russel, KS 67665-2635

Preston Unit A #1

Job Ticket: 63384

DST#: 1

ATTN: John Farmer/Austin K

Test Start: 2018.04.18 @ 06:20:00

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:

11000 ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 650.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|------------------------------------|---------------|
| 1000.00 | Water 100% W | 13.032 |
| 200.00 | Heavy mud cut w ater 56% W & 44% M | 2.805 |

Total Length: 1200.00 ft

Total Volume: 15.837 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

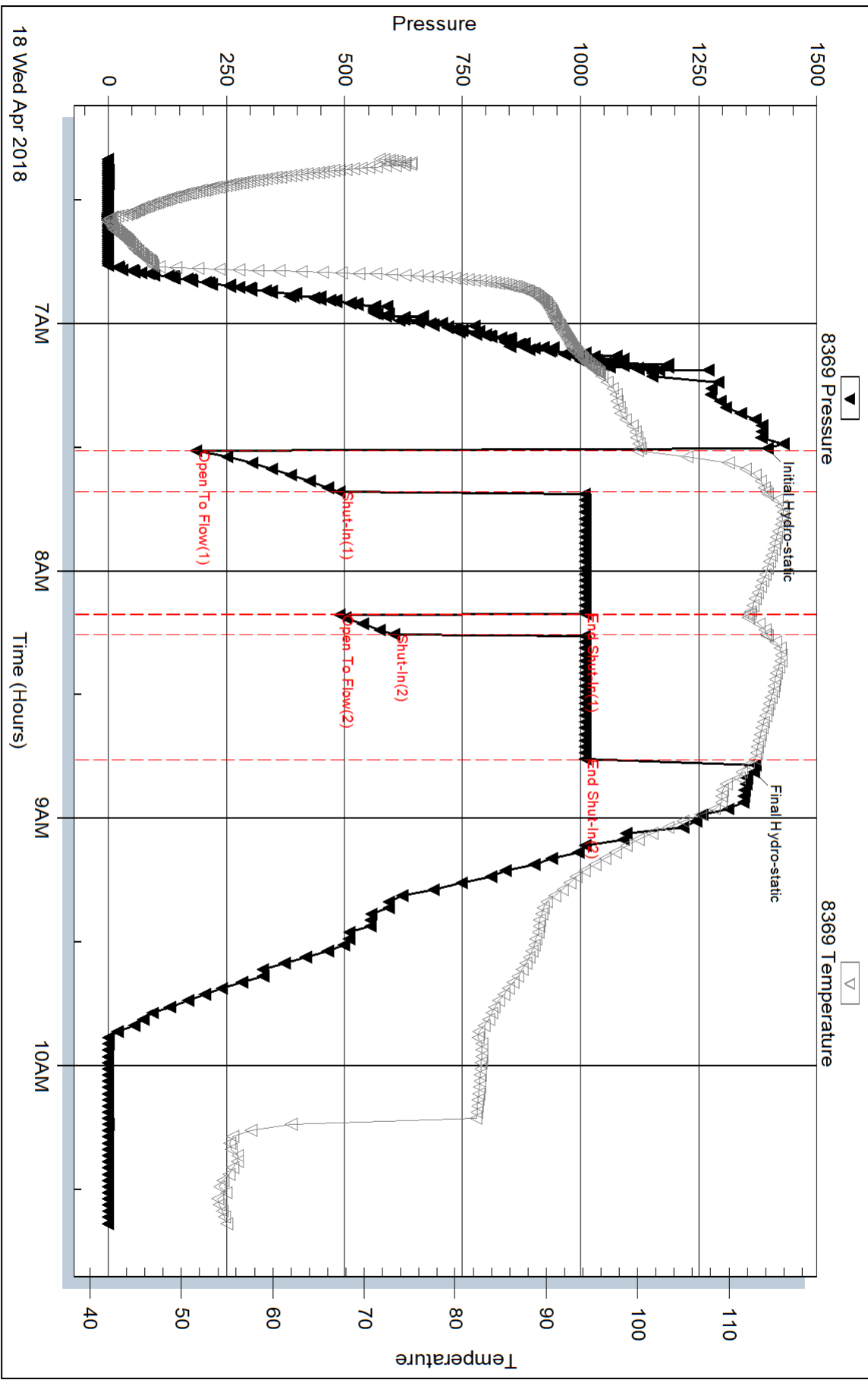
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



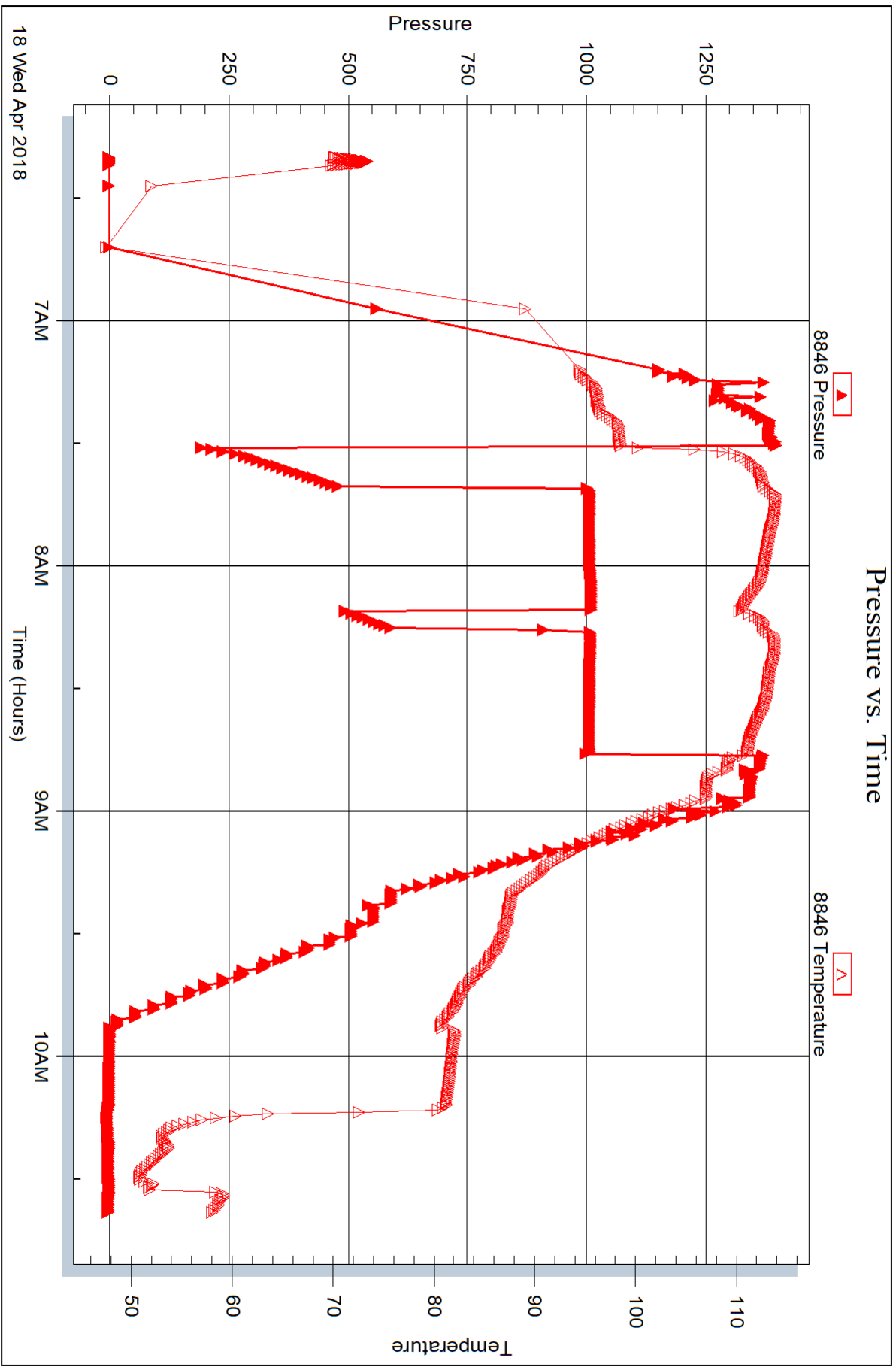
Serial #: 8846

Inside

John O. Farmer, Inc.

Preston Unit A #1

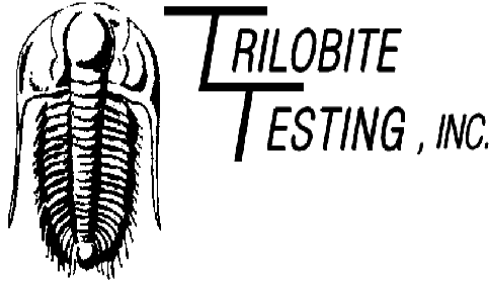
DST Test Number: 1



Triobite Testing, Inc

Ref. No: 63384

Printed: 2018.04.20 @ 10:15:52



DRILL STEM TEST REPORT

Prepared For: **John O. Farmer, Inc.**

PO Box 352
Russel, KS 67665-2635

ATTN: John Farmer/Austin K

Preston Unit A #1

24-15S-11E Lyon, KS

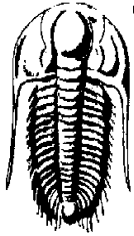
Start Date: 2018.04.18 @ 22:49:00

End Date: 2018.04.19 @ 03:51:00

Job Ticket #: 63385 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.04.20 @ 10:16:27



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O. Farmer, Inc.
 PO Box 352
 Russel, KS 67665-2635
 ATTN: John Farmer/Austin K

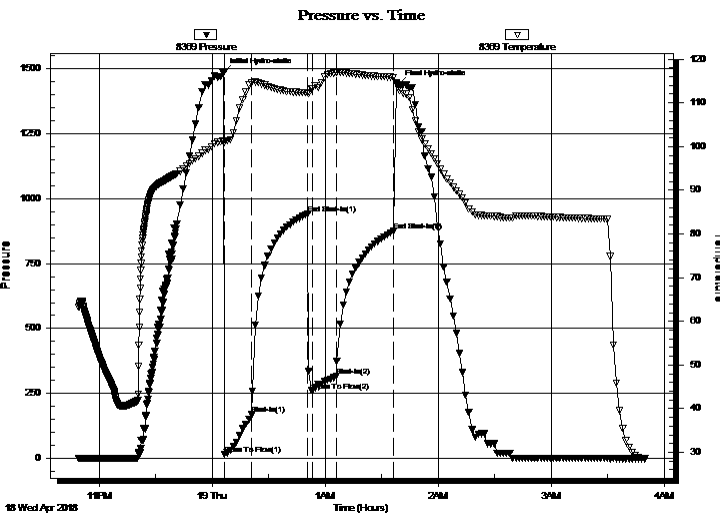
24-15S-11E Lyon, KS
Preston Unit A #1
 Job Ticket: 63385 **DST#: 2**
 Test Start: 2018.04.18 @ 22:49:00

GENERAL INFORMATION:

Formation: **Simpson Sand**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:06:30
 Time Test Ended: 03:51:00
 Interval: **2970.00 ft (KB) To 2985.00 ft (KB) (TVD)**
 Total Depth: 2985.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jimmy Ricketts
 Unit No: 80
 Reference Elevations: 1280.00 ft (KB)
 1272.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8369 Outside
 Press@RunDepth: 316.45 psig @ 2971.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2018.04.18 End Date: 2018.04.19 Last Calib.: 2018.04.18
 Start Time: 22:49:01 End Time: 03:51:00 Time On Btm: 2018.04.19 @ 00:05:40
 Time Off Btm: 2018.04.19 @ 01:39:00

TEST COMMENT: IF - Weak blow building to strong blow in 10 minutes
 FF - Weak blow building to strong blow in 4 minutes



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1484.03 | 101.17 | Initial Hydro-static |
| 1 | 15.61 | 100.96 | Open To Flow (1) |
| 16 | 168.15 | 114.70 | Shut-In(1) |
| 45 | 940.56 | 112.28 | End Shut-In(1) |
| 48 | 260.38 | 113.32 | Open To Flow (2) |
| 61 | 316.45 | 116.89 | Shut-In(2) |
| 91 | 874.55 | 115.80 | End Shut-In(2) |
| 94 | 1440.45 | 113.19 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------------------|--------------|
| 390.00 | Clean oil 100% O | 4.48 |
| 50.00 | Oil cut mud 13% O 87% M | 0.70 |
| | | |
| | | |
| | | |

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer, Inc.

24-15S-11E Lyon, KS

PO Box 352
Russel, KS 67665-2635

Preston Unit A #1

Job Ticket: 63385

DST#: 2

ATTN: John Farmer/Austin K

Test Start: 2018.04.18 @ 22:49:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 2659.00 ft | Diameter: 3.80 inches | Volume: 37.30 bbl | Tool Weight: 1900.00 lb |
| Heavy Wt. Pipe: | Length: 312.00 ft | Diameter: 3.34 inches | Volume: 3.38 bbl | Weight set on Packer: 22000.00 lb |
| Drill Collar: | Length: 0.00 ft | Diameter: 2.25 inches | Volume: 0.00 bbl | Weight to Pull Loose: 49000.00 lb |
| | | | <u>Total Volume: 40.68 bbl</u> | Tool Chased 1.00 ft |
| Drill Pipe Above KB: | 21.00 ft | | | String Weight: Initial 47000.00 lb |
| Depth to Top Packer: | 2970.00 ft | | | Final 48000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 15.00 ft | | | |
| Tool Length: | 35.00 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 | | | 2951.00 | |
| Shut In Tool | 5.00 | | | 2956.00 | |
| Hydraulic tool | 5.00 | | | 2961.00 | |
| Packer | 4.00 | | | 2965.00 | 20.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 2970.00 | |
| Stubb | 1.00 | | | 2971.00 | |
| Recorder | 0.00 | 8369 | Outside | 2971.00 | |
| Recorder | 0.00 | 8846 | Inside | 2971.00 | |
| Perforations | 9.00 | | | 2980.00 | |
| Bullnose | 5.00 | | | 2985.00 | 15.00 Bottom Packers & Anchor |
| Total Tool Length: | 35.00 | | | | |



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer, Inc.

24-15S-11E Lyon, KS

PO Box 352
Russel, KS 67665-2635

Preston Unit A #1

Job Ticket: 63385

DST#: 2

ATTN: John Farmer/Austin K

Test Start: 2018.04.18 @ 22:49:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

14 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 730.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------------------|---------------|
| 390.00 | Clean oil 100% O | 4.475 |
| 50.00 | Oil cut mud 13% O 87% M | 0.701 |

Total Length: 440.00 ft

Total Volume: 5.176 bbl

Num Fluid Samples: 0

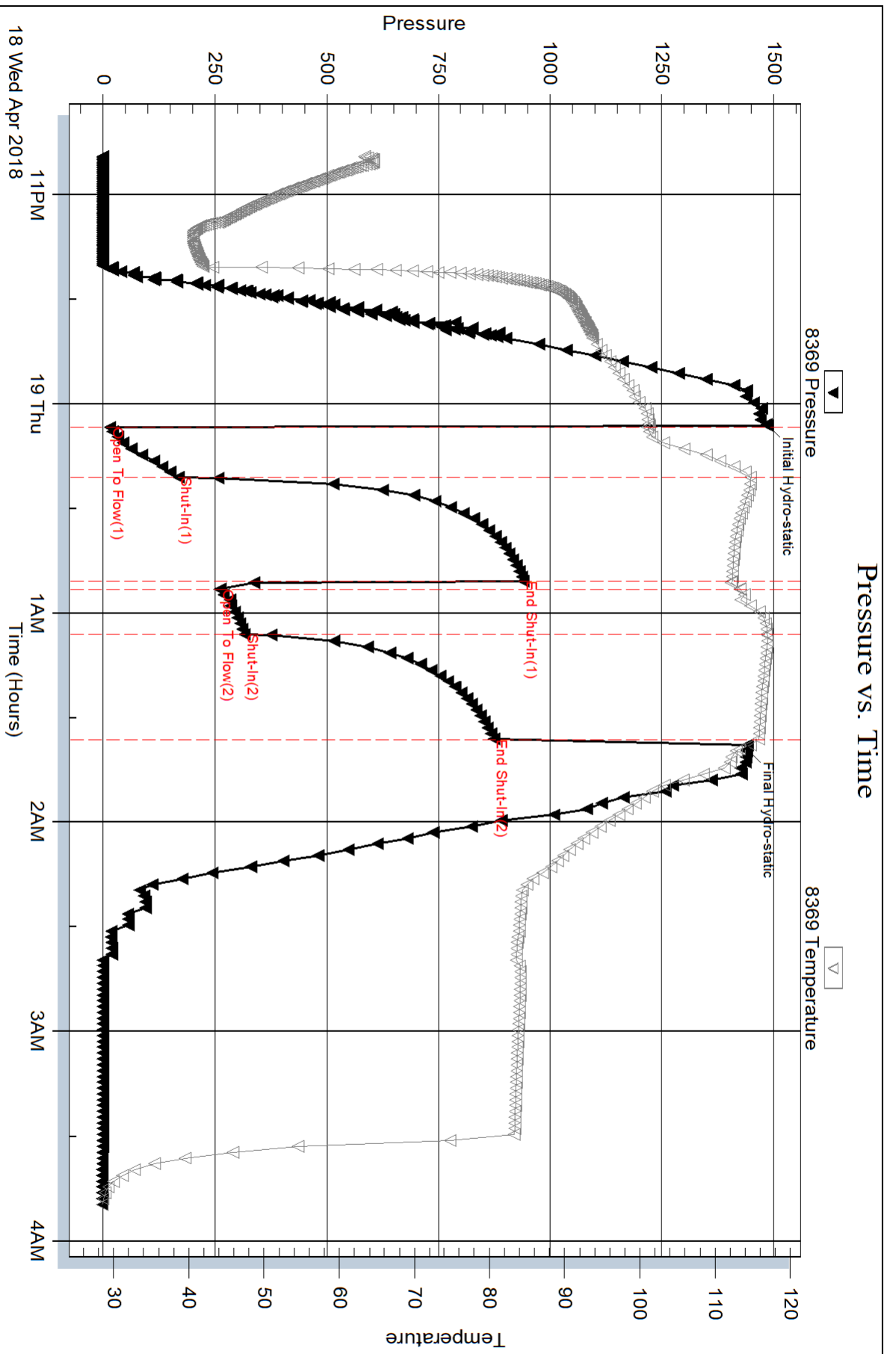
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



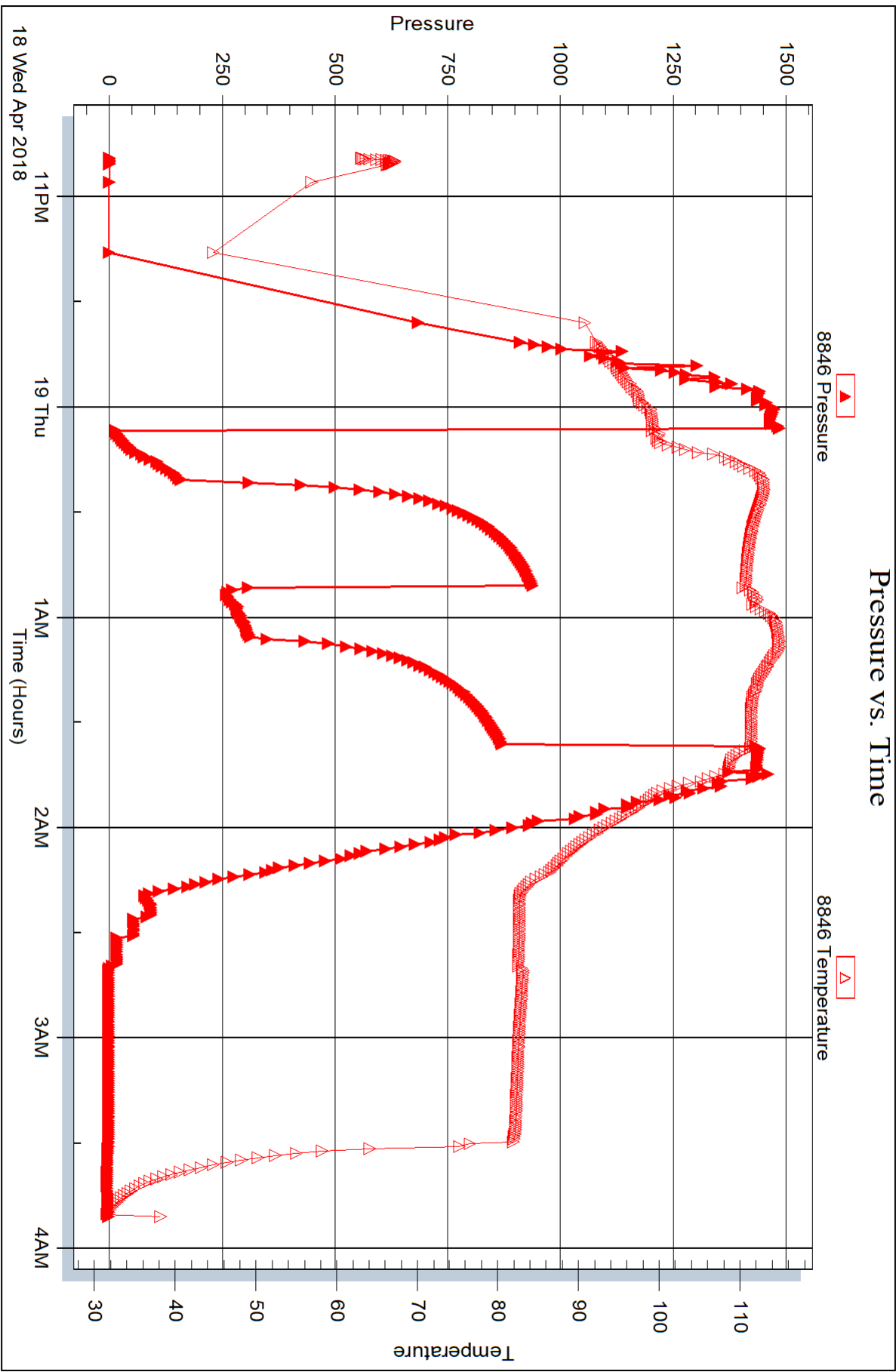
Serial #: 8846

Inside

John O. Farmer, Inc.

Preston Unit A #1

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63384

Well Name & No. Preston Unit A #1 Test No. 1 Date 4-18-18
 Company John O. Farmer, Inc Elevation 1280 KB 1272 GL
 Address 370 West Wichita Ave. P.O. Box 352 Russel, KS. 67665-2635
 Co. Rep / Geo. John Farmer / Austin Klaus Rig Discovery #2
 Location: Sec. 24 Twp 15 S Rge. 11 E Co. Lyon State KS

Interval Tested 2818 - 2870 Zone Tested Viola
 Anchor Length 52' Drill Pipe Run ~~2504~~ 2504 Mud Wt. 9.1
 Top Packer Depth 2813 Drill Collars Run 0 Vis 46
 Bottom Packer Depth 2818 Wt. Pipe Run 312 WL 8.0
 Total Depth 2870 Chlorides 650 ppm System LCM
 Blow Description FF - weak blow building to strong blow 1 min. into IFFP
FF - Strong blow throughout FFP

| Rec | Feet of | %gas | %oil | %water | %mud |
|-------------|----------------------------|------|------|------------|-----------|
| <u>1000</u> | <u>Clean water</u> | | | <u>100</u> | |
| <u>200</u> | <u>Heavy mud cut water</u> | | | <u>56</u> | <u>44</u> |
| | | | | | |
| | | | | | |

Rec Total 1200 BHT 114 Gravity API RW 0.645 @ 58.7 °F Chlorides 11000 ppm
 Test 1050 T-On Location 0530
 Jars _____ T-Started 0620
 Safety Joint _____ T-Open 0731
 Circ Sub _____ T-Pulled 0846
 Hourly Standby _____ T-Out 1020
 Mileage 236 RT 236 Comments _____
 Sampler _____
 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1286

Initial Open 10
 Initial Shut-In 30
 Final Flow 5
 Final Shut-In 30

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1286
 MP/DST Disc't _____

Approved By _____ Our Representative Jimmy R. Bell

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63385

Well Name & No. Preston Unit A #1 Test No. 2 Date 4-19-18
 Company John O. Farmer, Inc. Elevation 1280 KB 1272 GL
 Address P.O. Box 352, Russell, KS 67665-2635
 Co. Rep / Geo. John Farmer / Austin Klaus Rig Discovery Drilling #2
 Location: Sec. 24 Twp 15 S Rge. 11 E Co. Lyon State KS

Interval Tested 2970 - 2985 Zone Tested Simpson Sand
 Anchor Length 15' Drill Pipe Run 2659 Mud Wt. 9.3
 Top Packer Depth 2965 Drill Collars Run 0 Vis 58
 Bottom Packer Depth 2970 Wt. Pipe Run 312 WL 8.8
 Total Depth 2985 Chlorides 730 ppm System LCM

Blow Description IF- weak blow building to strong blow 10 mins into EFP
FF- weak blow building to strong blow 4 mins into FFP

| Rec | Feet of | %gas | %oil | %water | %mud |
|------------|--------------------|------|------------|--------|-----------|
| <u>390</u> | <u>clean oil</u> | | <u>100</u> | | |
| <u>50</u> | <u>oil cut mud</u> | | <u>13</u> | | <u>87</u> |
| | | | | | |
| | | | | | |
| | | | | | |

Rec Total 440 BHT 117 Gravity 14 API RW @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1484 Test 1050 T-On Location 2200
 (B) First Initial Flow 16 Jars _____ T-Started 2249
 (C) First Final Flow 168 Safety Joint _____ T-Open 1206
 (D) Initial Shut-In 941 Circ Sub _____ T-Pulled 0136
 (E) Second Initial Flow 260 Hourly Standby _____ T-Out 0320
 (F) Second Final Flow 316 Mileage 396rt RT60 Comments _____
 (G) Final Shut-In 875 Sampler _____
 (H) Final Hydrostatic 1440 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1446
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1446

Initial Open 15
 Initial Shut-In 30
 Final Flow 15
 Final Shut-In 30

Approved By _____ Our Representative Jimmy Roberts

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.