



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Ritchie Exploration Inc.

3-18s-33w Scott Co KS

8100 E. 22nd. St.
N #700 Box 783188
Wichita Ks 67278
ATTN: John Goldsmith

L-Bo Land 3 C #1

Job Ticket: 61336

DST#: 1

Test Start: 2017.02.21 @ 22:53:15

GENERAL INFORMATION:

Formation: **C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:51:15
 Time Test Ended: 05:30:30
 Interval: **4020.00 ft (KB) To 4050.00 ft (KB) (TVD)**
 Total Depth: 4050.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Mike Roberts
 Unit No: 81
 Reference Elevations: 3006.00 ft (KB)
 3001.00 ft (CF)
 KB to GR/CF: 5.00 ft

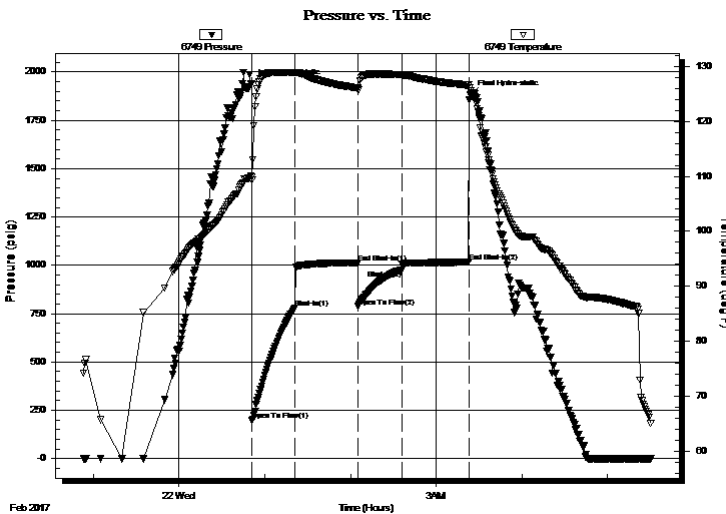
Serial #: 6749

Outside

Press@RunDepth: 977.16 psig @ 4021.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.02.21 End Date: 2017.02.22 Last Calib.: 2017.02.22
 Start Time: 22:53:15 End Time: 05:30:30 Time On Btm: 2017.02.22 @ 00:51:00
 Time Off Btm: 2017.02.22 @ 03:24:00

TEST COMMENT: IF:BOB in 2 min.
 IS:No return blow
 FF:BOB in 2 min.
 FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1939.94	109.81	Initial Hydro-static
1	196.60	109.39	Open To Flow (1)
30	779.24	128.82	Shut-In(1)
74	1013.57	126.04	End Shut-In(1)
75	787.04	125.93	Open To Flow (2)
105	977.16	128.48	Shut-In(2)
152	1015.46	126.57	End Shut-In(2)
153	1882.61	125.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
310.00	w cm 30%w 70%m	3.22
310.00	mcw 10%m 90%w	4.35
1488.00	sw 100%sw	20.87

Gas Rates

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



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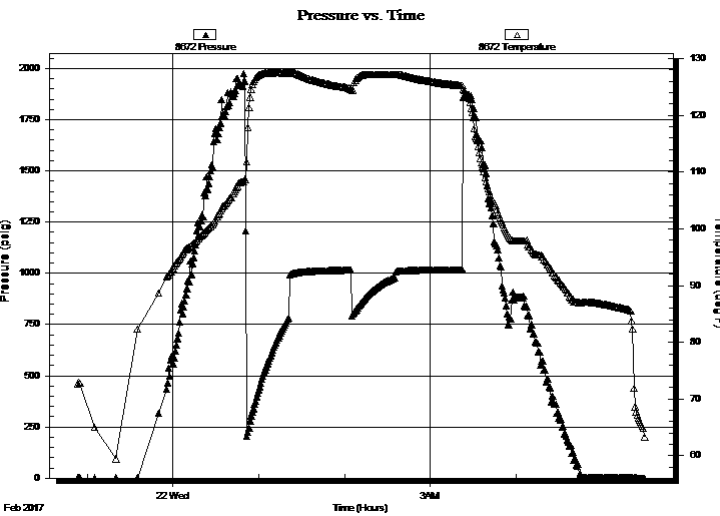
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 Time Test Ended: 05:30:30 Unit No: 81
 Interval: **4020.00 ft (KB) To 4050.00 ft (KB) (TVD)** Reference Elevations: 3006.00 ft (KB)
 Total Depth: 4050.00 ft (KB) (TVD) 3001.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

Serial #: 8672 Inside
 Press@RunDepth: psig @ 4021.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.02.21 End Date: 2017.02.22 Last Calib.: 2017.02.22
 Start Time: 22:53:15 End Time: 05:30:15 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF:BOB in 2 min.
 IS:No return blow
 FF:BOB in 2 min.
 FS:No return blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
310.00	w cm 30%w 70%m	3.22
310.00	mcw 10%m 90%w	4.35
1488.00	sw 100%sw	20.87

Gas Rates

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



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DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

3-18s-33w Scott Co KS

8100 E. 22nd. St.
N #700 Box 783188
Wichita Ks 67278

L-Bo Land 3 C #1

Job Ticket: 61336

DST#: 1

ATTN: John Goldsmith

Test Start: 2017.02.21 @ 22:53:15

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:

19000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
310.00	w cm 30%w 70%m	3.219
310.00	mcw 10%m 90%w	4.348
1488.00	sw 100%sw	20.873

Total Length: 2108.00 ft Total Volume: 28.440 bbl

Num Fluid Samples: 0

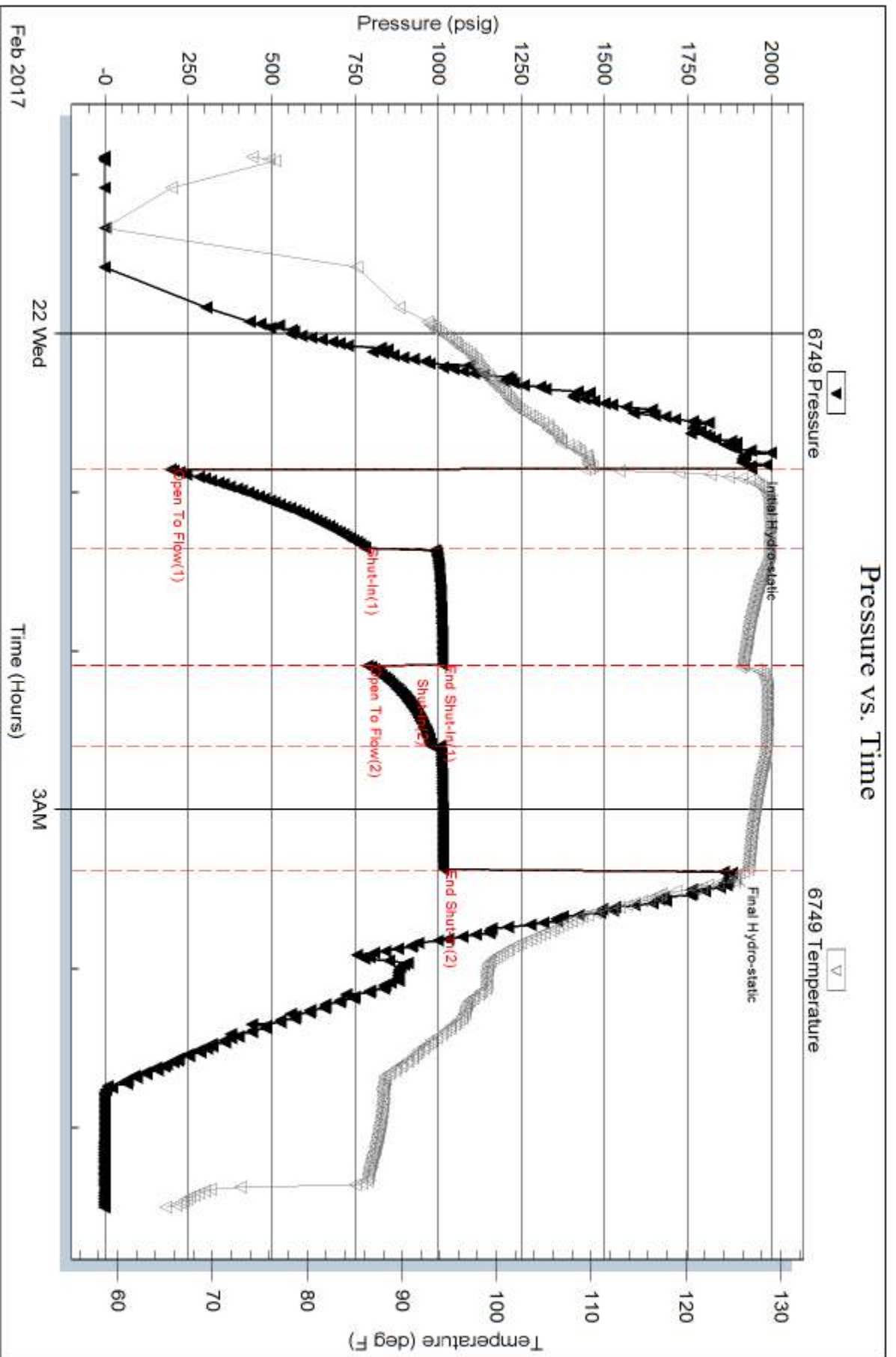
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .458@53.6=19,000 ppm



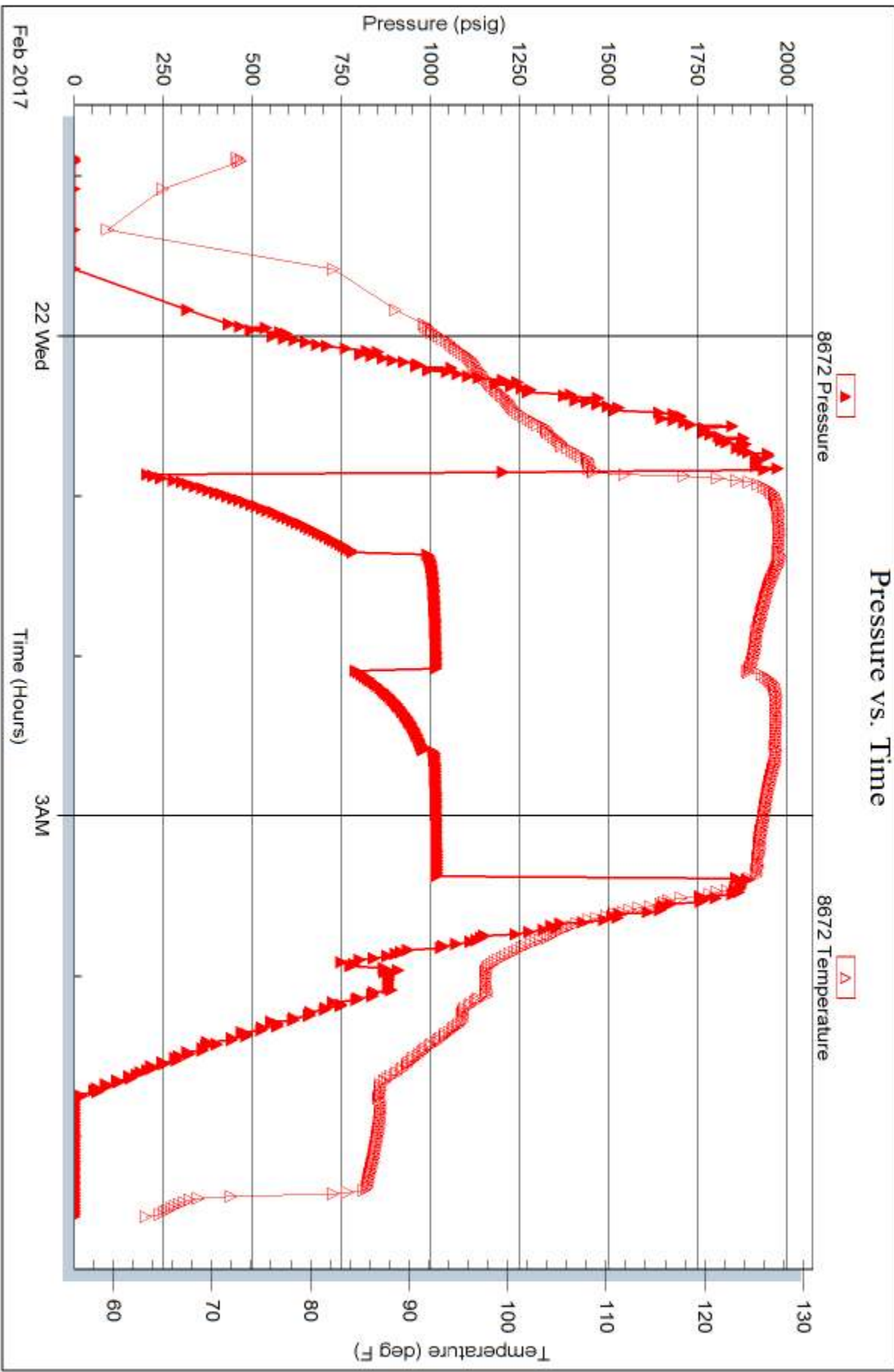
Serial #: 8672

Inside

Ritchie Exploration Inc.

L-Bo Land 3 C#1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 61336

Printed: 2017.02.22 @ 07:09:25