



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration

POB 783188
Wichita, KS 67278

ATTN: Mike Engelbrecht

S18-27s-23w Ford,KS

#1 Youngers 18 CD

Job Ticket: 45496

DST#: 1

Test Start: 2011.12.19 @ 11:38:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:01:11

Time Test Ended: 19:46:10

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Smith

Unit No: 37

Interval: 4766.00 ft (KB) To 4788.00 ft (KB) (TVD)

Total Depth: 4788.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2435.00 ft (KB)

2423.00 ft (CF)

KB to GR/CF: 12.00 ft

Serial #: 8018 Inside

Press@RunDepth: 124.19 psig @ 4770.00 ft (KB)

Start Date: 2011.12.19

End Date: 2011.12.19

Start Time: 11:38:02

End Time: 19:46:11

Capacity: 8000.00 psig

Last Calib.: 2011.12.19

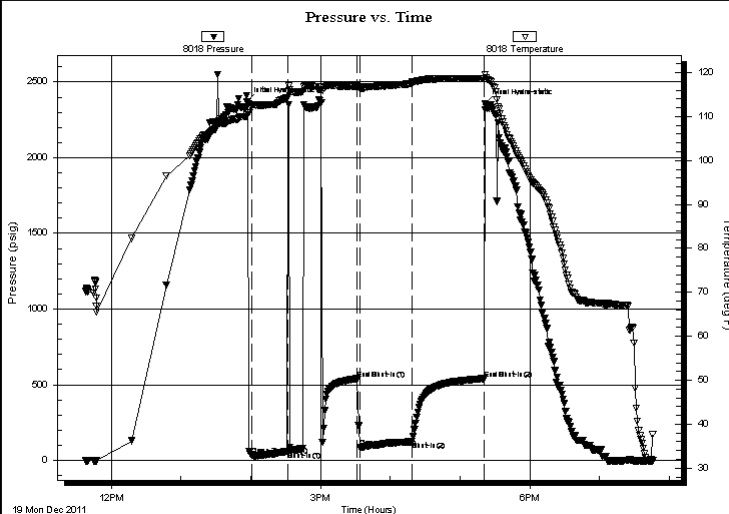
Time On Btm: 2011.12.19 @ 13:57:01

Time Off Btm: 2011.12.19 @ 17:21:31

TEST COMMENT: B.O.B. @ 1 1/2 min. Tool w as flushed at end of blow .
1/4' Return receded to surface return.
B.O.B. @ 2 1/4 min. G.T.S. @ 25 min. Not enough to measure.
10" Return.

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2371.71	110.36	Initial Hydro-static
5	32.75	112.61	Open To Flow (1)
35	59.20	114.22	Shut-In(1)
95	540.58	116.92	End Shut-In(1)
97	87.40	116.38	Open To Flow (2)
142	124.19	117.80	Shut-In(2)
204	540.51	118.65	End Shut-In(2)
205	2356.72	119.58	Final Hydro-static



Recovery

Length (ft)	Description	Volume (bbl)
124.00	GOCM 30g 25o 45m	1.74
170.00	GOCM 40g 20o 40m	2.38

Gas Rates

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

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S18-27s-23w Ford,KS

POB 783188
Wichita, KS 67278

#1 Youngers 18 CD

Job Ticket: 45496

DST#: 1

ATTN: Mike Engelbrecht

Test Start: 2011.12.19 @ 11:38:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	GOCM 30g 25o 45m	1.739
170.00	GOCM 40g 20o 40m	2.385

Total Length: 294.00 ft Total Volume: 4.124 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API: 36 @ 30 Degrees F = 39.

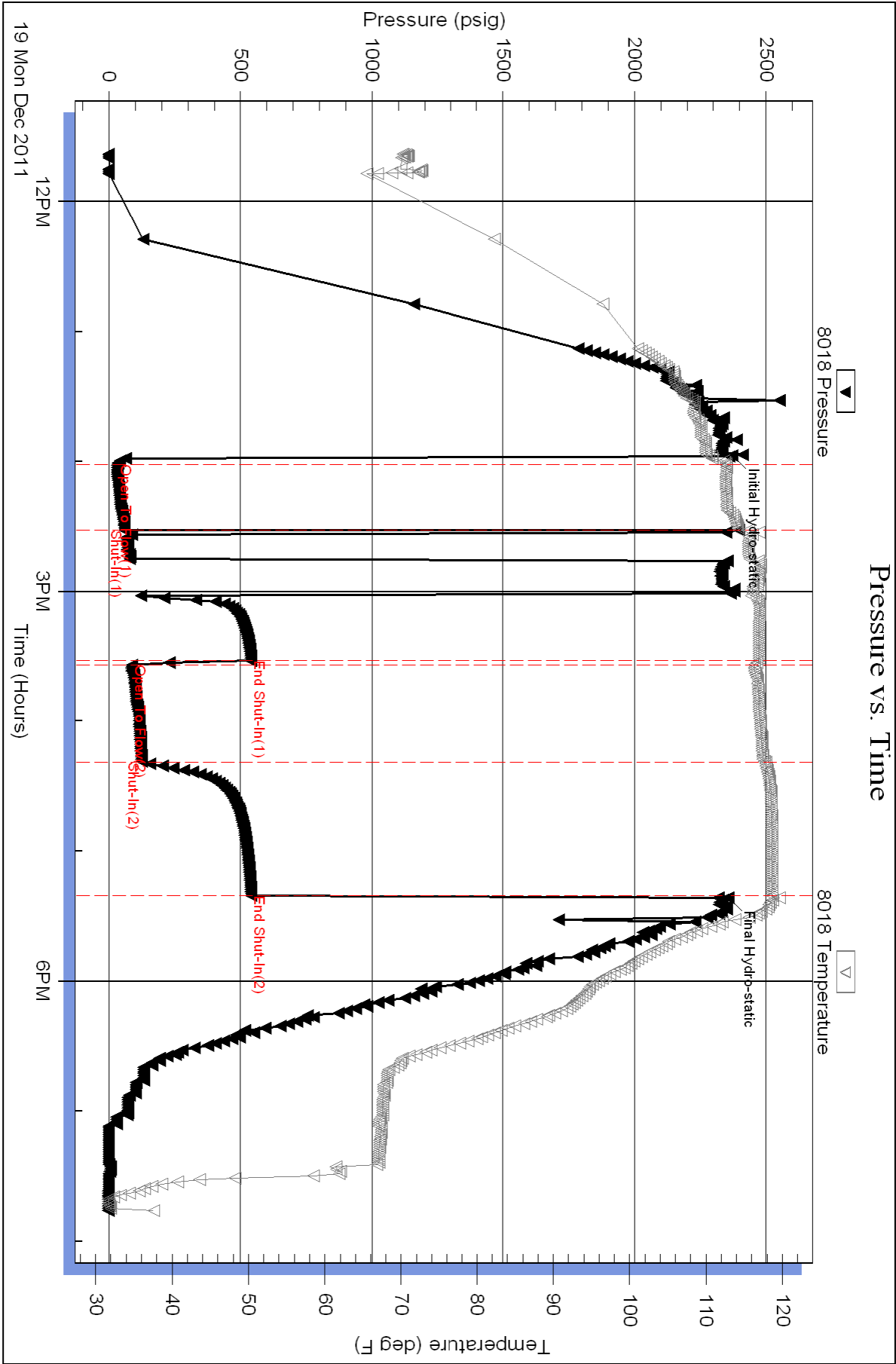
Serial #: 8018

Inside

Ritchie Exploration

#1 Youngers 18 CD

DST Test Number: 1





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Ritchie Exploration

POB 783188
Wichita, KS 67278

ATTN: Mike Engelbrecht

S18-27s-23w Ford,KS

#1 Youngers 18 CD

Job Ticket: 45375

DST#: 2

Test Start: 2011.12.28 @ 09:34:00

GENERAL INFORMATION:

Formation: **Morrow**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:13:15

Time Test Ended: 17:30:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 40

Interval: 4862.00 ft (KB) To 4940.00 ft (KB) (TVD)

Total Depth: 4788.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2435.00 ft (KB)

2423.00 ft (CF)

KB to GR/CF: 12.00 ft

Serial #: 8652 Inside

Press@RunDepth: 20.41 psig @ 4863.00 ft (KB)

Start Date: 2011.12.28

End Date:

2011.12.28

Start Time: 09:34:05

End Time:

17:30:29

Capacity: 8000.00 psig

Last Calib.: 2011.12.28

Time On Btm: 2011.12.28 @ 12:12:30

Time Off Btm: 2011.12.28 @ 15:17:45

TEST COMMENT: IF: BOB @ 8 1/2 min.
IS: No return.
FF: BOB @ 5 seconds.
FS: No return.

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2430.88	103.21	Initial Hydro-static
1	23.55	104.86	Open To Flow (1)
30	20.19	108.83	Shut-In(1)
76	470.30	113.05	End Shut-In(1)
76	17.96	111.19	Open To Flow (2)
123	20.41	111.77	Shut-In(2)
185	719.44	116.38	End Shut-In(2)
186	2401.95	117.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	mud 100m	0.21
0.00	945' slight gassy oder	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



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FLUID SUMMARY

Ritchie Exploration

S18-27s-23w Ford,KS

POB 783188
Wichita, KS 67278

#1 Youngers 18 CD

Job Ticket: 45375

DST#: 2

ATTN: Mike Engelbrecht

Test Start: 2011.12.28 @ 09:34:00

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: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	mud 100m	0.210
0.00	945' slight gassy oder	0.000

Total Length: 15.00 ft

Total Volume: 0.210 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: inert gas

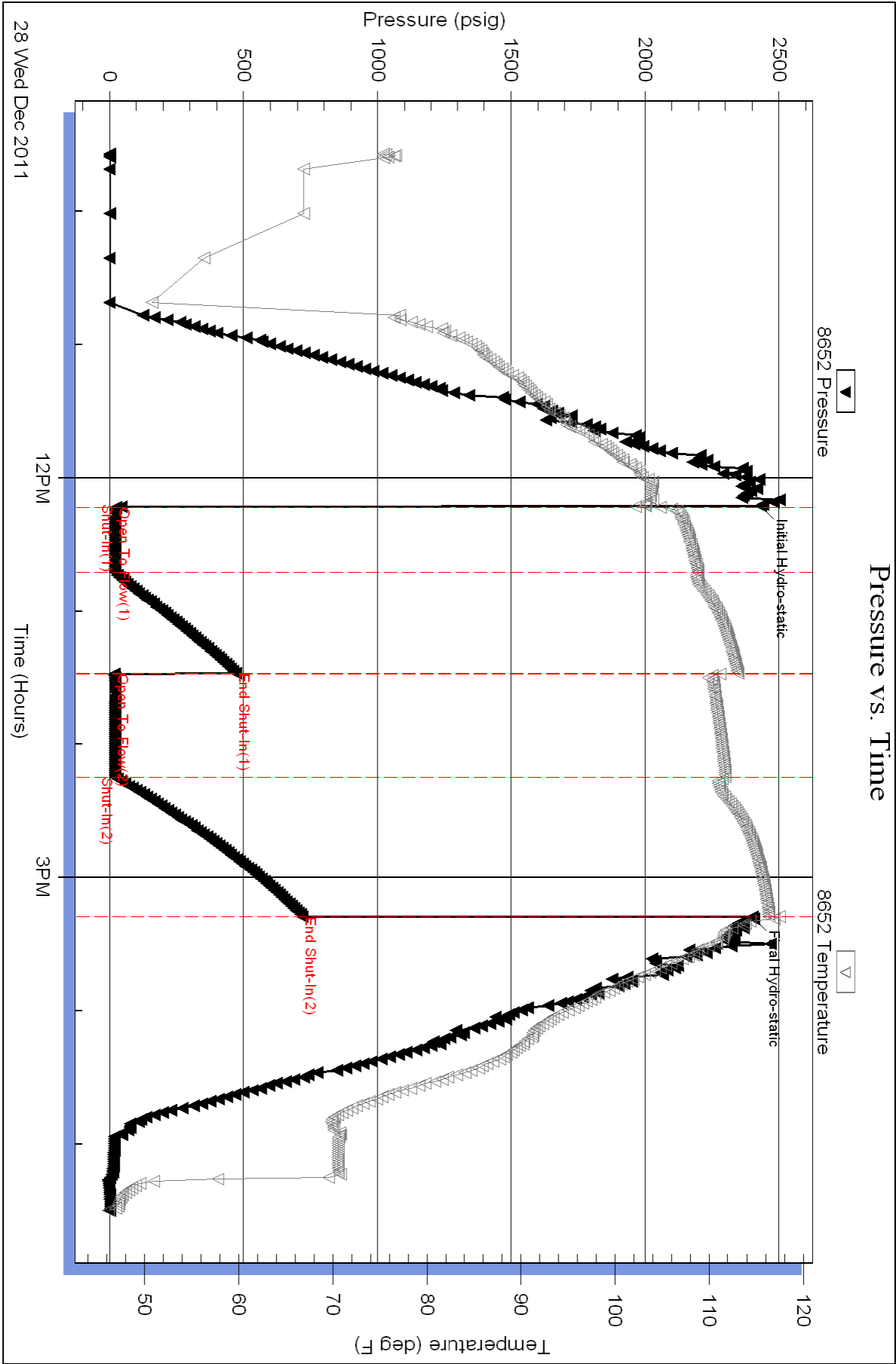
Serial #: 8652

Inside

Ritchie Exploration

#1 Youngers 18 CD

DST Test Number: 2



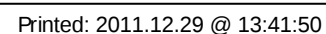


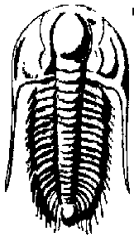
Test Start: 2011.12.29 @ 03:09:00

KB to GR/CF: 12.00 ft

Time Off Btm: 2011.12.29 @ 08:30:30

No return.





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FLUID SUMMARY

Ritchie Exploration

S18-27s-23w Ford,KS

POB 783188
Wichita, KS 67278

#1 Youngers 18 CD

Job Ticket: 44401

DST#: 3

ATTN: Mike Engelbrecht

Test Start: 2011.12.29 @ 03:09:00

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:

31000 ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	mud 100m	0.982
60.00	w cm 20w 80m (oil spots)	0.842
0.00	inert gas	0.000

Total Length: 130.00 ft

Total Volume: 1.824 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw is .255 @ 63f = 31000ppm

Serial #: 8360

Outside Ritchie Exploration

#1 Youngers 18 CD

DST Test Number: 3

