



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Red Oak Energy, Inc.

S2-12s-32w Logan/KS

7701 E Kellog Dr.
STE 710
Wichita, KS 67207
ATTN: Sean Deenihan

Mathers #1-2

Job Ticket: 61556

DST#: 1

Test Start: 2015.01.26 @ 06:52:00

GENERAL INFORMATION:

Formation: **Lansing 'H,I'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:58:10

Time Test Ended: 12:52:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Smith

Unit No: 61

Interval: 4190.00 ft (KB) To 4252.00 ft (KB) (TVD)

Total Depth: 4252.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3000.00 ft (KB)

2989.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8357

Inside

Press@RunDepth: 55.85 psig @ 4192.00 ft (KB)

Start Date: 2015.01.26

End Date: 2015.01.26

Start Time: 06:52:02

End Time: 12:52:30

Capacity: 8000.00 psig

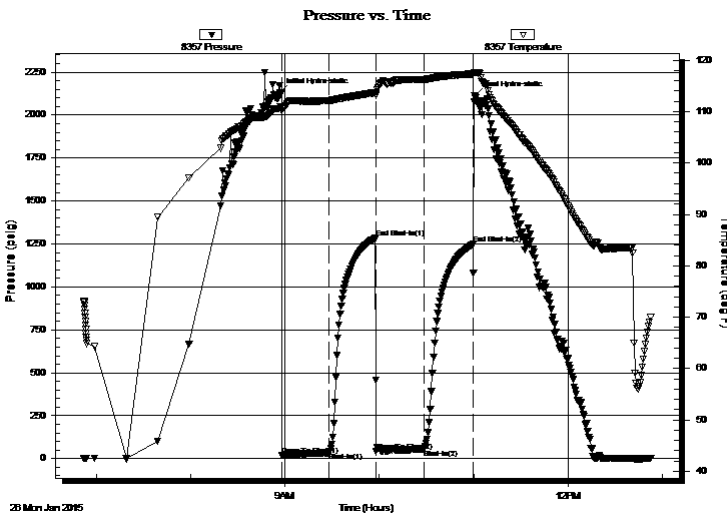
Last Calib.: 2015.01.26

Time On Btm: 2015.01.26 @ 08:56:40

Time Off Btm: 2015.01.26 @ 11:00:30

TEST COMMENT: 30- 3/4" Blow .
30- No return.
30- Surface blow .
30- No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2131.69	110.65	Initial Hydro-static
2	20.31	110.16	Open To Flow (1)
32	35.87	112.16	Shut-In(1)
61	1284.02	113.68	End Shut-In(1)
62	44.57	113.41	Open To Flow (2)
92	55.85	116.26	Shut-In(2)
123	1248.10	117.33	End Shut-In(2)
124	2110.68	117.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	OSM 100m	0.44

Gas Rates

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



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Mathers #1-2

STE 710

Job Ticket: 61556

DST#: 1

Wichita, KS 67207

ATTN: Sean Deenihan

Test Start: 2015.01.26 @ 06:52:00

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:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.60 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	OSM 100m	0.443

Total Length: 90.00 ft Total Volume: 0.443 bbl

Num Fluid Samples: 0

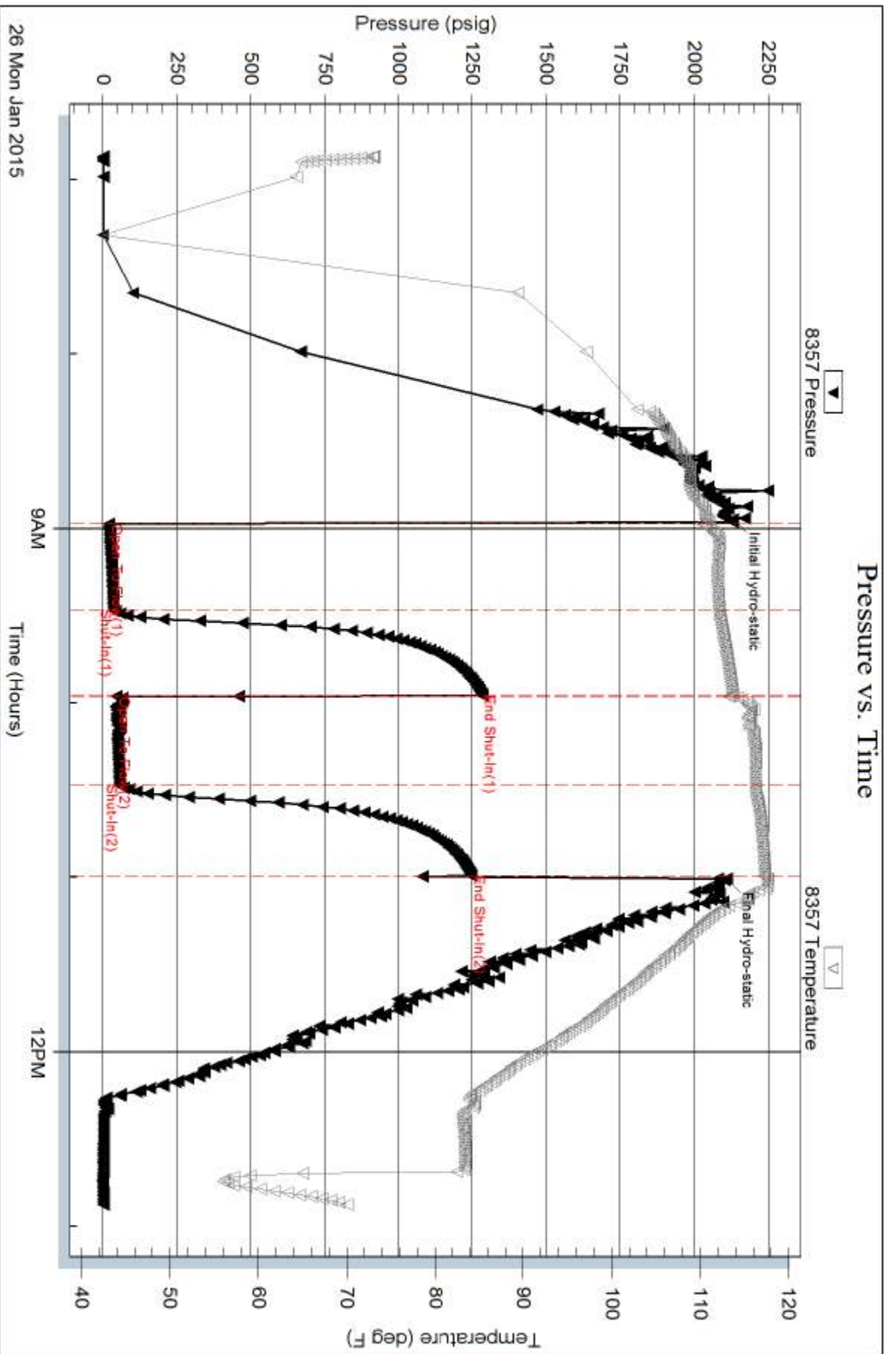
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





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ATTN: Sean Deenihan

Mathers #1-2

Job Ticket: 61557

DST#: 2

Test Start: 2015.01.26 @ 22:23:00

GENERAL INFORMATION:

Formation: **Lansing 'K'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:10:30

Time Test Ended: 03:29:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 61

Interval: 4256.00 ft (KB) To 4288.00 ft (KB) (TVD)

Reference Elevations: 3000.00 ft (KB)

Total Depth: 4288.00 ft (KB) (TVD)

2989.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8357

Inside

Press @ Run Depth: 26.74 psig @ 4260.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.26

End Date:

2015.01.27

Last Calib.:

2015.01.27

Start Time: 22:23:02

End Time:

03:29:40

Time On Btm:

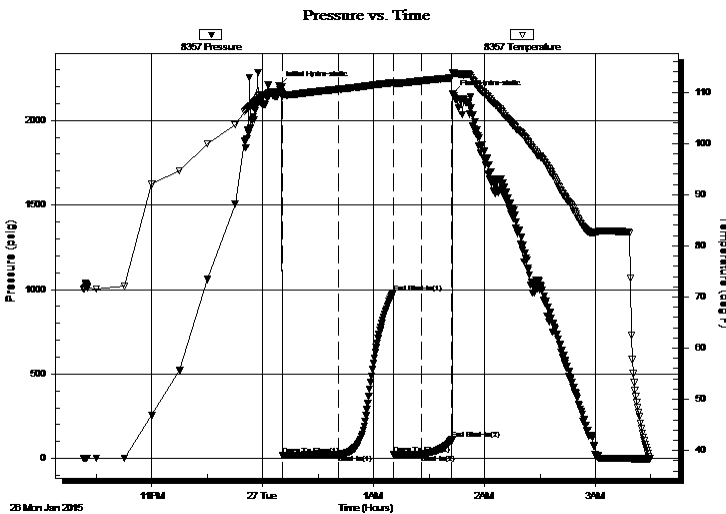
2015.01.27 @ 00:08:50

Time Off Btm:

2015.01.27 @ 01:42:50

TEST COMMENT: 30- 1/2" Blow .
30- No return.
15- No blow .
15- No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2206.56	110.14	Initial Hydro-static
2	20.95	109.13	Open To Flow (1)
33	25.48	110.59	Shut-In(1)
62	978.89	111.87	End Shut-In(1)
62	26.25	111.64	Open To Flow (2)
78	26.74	112.24	Shut-In(2)
94	113.82	112.82	End Shut-In(2)
94	2155.50	113.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	API: @ Degrees F =	0.00
0.00	RW: @ Degrees F = PPM	0.00
15.00	VSOCM 1o 99m	0.07

Gas Rates

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

* Recovery from multiple tests



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FLUID SUMMARY

Red Oak Energy, Inc.

S2-12s-32w Logan/KS

7701 E Kellog Dr.

Mathers #1-2

STE 710

Job Ticket: 61557

DST#: 2

Wichita, KS 67207

ATTN: Sean Deenihan

Test Start: 2015.01.26 @ 22:23:00

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:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	API: @ Degrees F =	0.000
0.00	RW: @ Degrees F = PPM	0.000
15.00	VSOCM 1o 99m	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

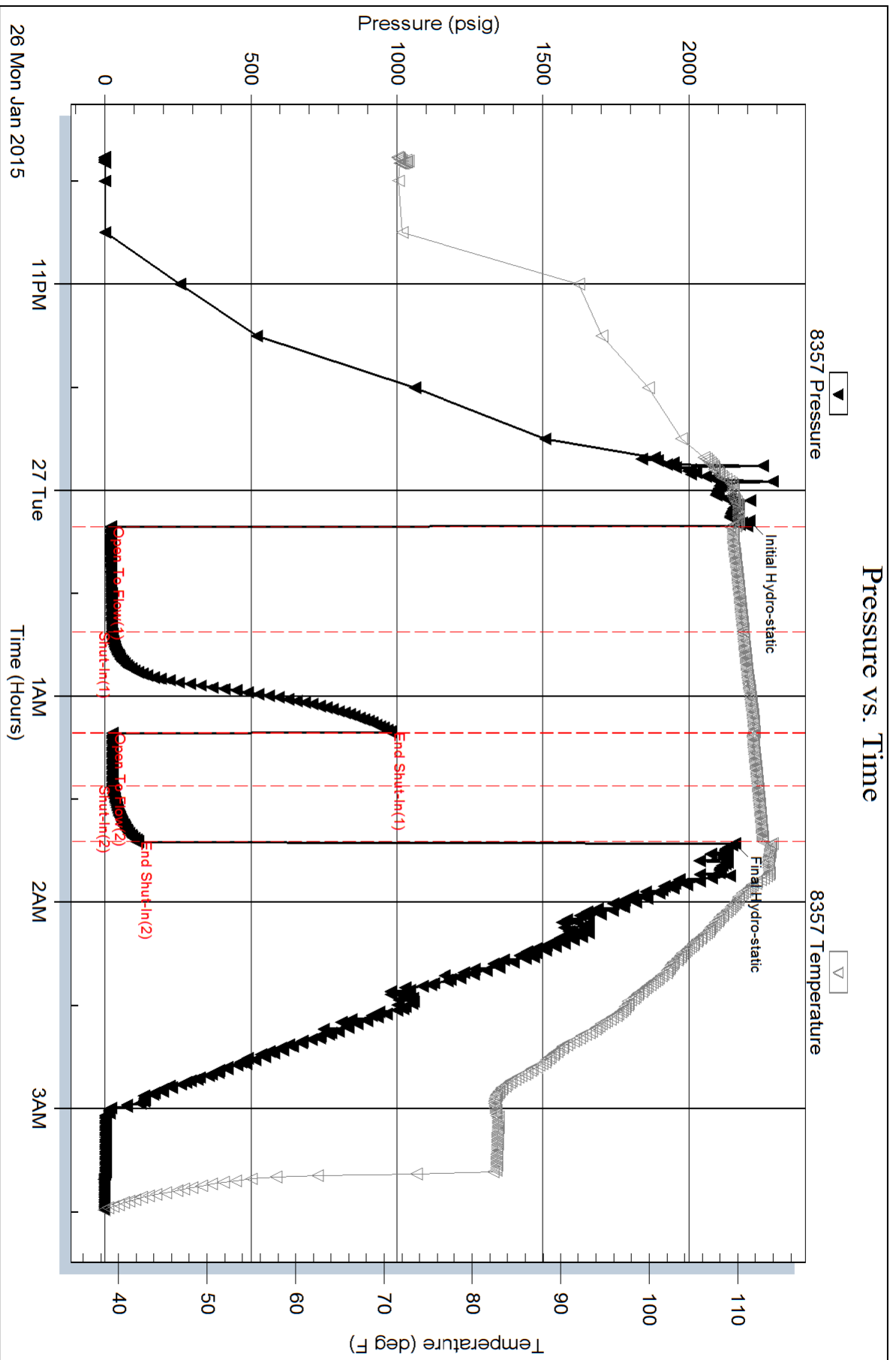
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





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Mathers #1-2

Job Ticket: 61558

DST#: 3

Test Start: 2015.01.28 @ 00:18:00

GENERAL INFORMATION:

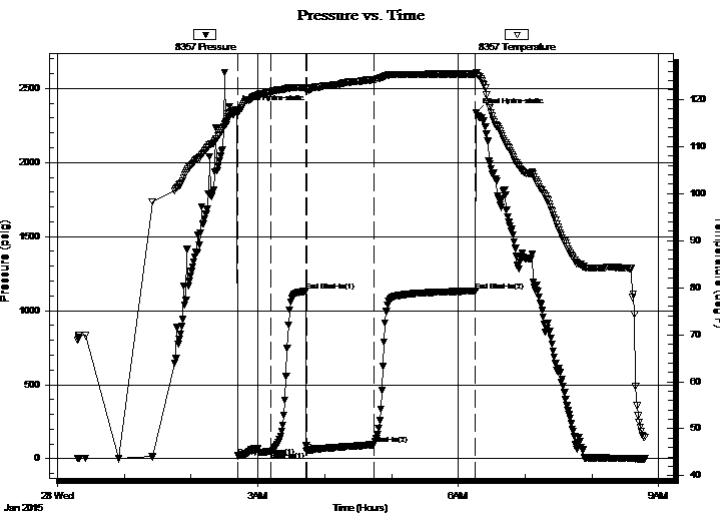
Formation: **Johnson**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 02:41:40
 Tester: Chuck Smith
 Time Test Ended: 08:47:50
 Unit No: 61
 Interval: **4538.00 ft (KB) To 4596.00 ft (KB) (TVD)**
 Reference Elevations: 3000.00 ft (KB)
 Total Depth: 4596.00 ft (KB) (TVD)
 2989.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 11.00 ft

Serial #: 8357

Inside

Press@RunDepth: 95.73 psig @ 4540.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.01.28 End Date: 2015.01.28 Last Calib.: 2015.01.28
 Start Time: 00:18:02 End Time: 08:47:50 Time On Btm: 2015.01.28 @ 02:39:50
 Time Off Btm: 2015.01.28 @ 06:16:10

TEST COMMENT: 30- 4 1/2" Blow .
 30- No return.
 60- B.O.B. @ 48 min.
 90- 1/4" Return died @ 25 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2355.65	117.67	Initial Hydro-static
2	19.90	117.00	Open To Flow (1)
32	50.39	121.62	Shut-In(1)
64	1132.32	122.49	End Shut-In(1)
64	52.63	122.17	Open To Flow (2)
125	95.73	124.19	Shut-In(2)
216	1133.20	125.42	End Shut-In(2)
217	2334.67	125.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GMCO 20g 40m 40o	0.59
60.00	GMCO 10g 30m 60o	0.30
20.00	GO 5g 95o	0.10
0.00	100' Weak GIP	0.00

* Recovery from multiple tests

Gas Rates

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



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Job Ticket: 61558

DST#: 3

ATTN: Sean Deenihan

Test Start: 2015.01.28 @ 00:18:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

26 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	GMCO 20g 40m 40o	0.590
60.00	GMCO 10g 30m 60o	0.295
20.00	GO 5g 95o	0.098
0.00	100' Weak GIP	0.000

Total Length: 200.00 ft Total Volume: 0.983 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API: 25 @ 50 Degrees F = 26.

