



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.
 250 N. Water Suite 300
 Wichita, KS 67202
 ATTN: Jeff Christian

Bixenman #1-23
23/9s/30w Sheridan K
 Job Ticket: 042925 **DST#: 1**
 Test Start: 2011.08.03 @ 06:19:00

GENERAL INFORMATION:

Formation: **LKC "B - D"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:45:00
 Time Test Ended: 14:49:30
 Interval: **4005.00 ft (KB) To 4040.00 ft (KB) (TVD)**
 Total Depth: 4040.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: James Winder
 Unit No: 46
 Reference Elevations: 2914.00 ft (KB)
 2909.00 ft (CF)
 KB to GR/CF: 5.00 ft

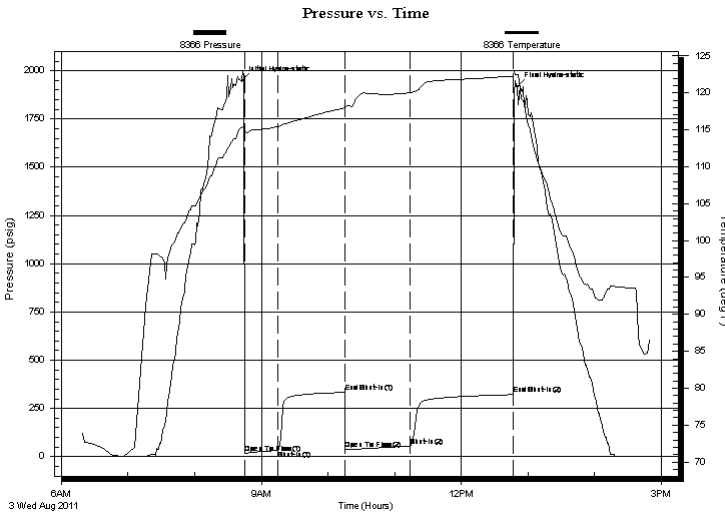
Serial #: 8366

Inside

Press @ Run Depth: 55.07 psig @ 4006.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.08.03 End Date: 2011.08.03 Last Calib.: 2011.08.03
 Start Time: 06:19:05 End Time: 14:49:29 Time On Btm: 2011.08.03 @ 08:42:30
 Time Off Btm: 2011.08.03 @ 12:50:30

TEST COMMENT: IF: Blow built to 1 3/4" in 30 min.
 IS: No blow back
 FF: Blow started at 4 3/4 min., built to 1 1/4" in 60 min.
 FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1948.24	115.26	Initial Hydro-static
3	18.08	114.82	Open To Flow (1)
33	32.55	115.46	Shut-In(1)
93	333.29	117.98	End Shut-In(1)
93	35.93	117.98	Open To Flow (2)
152	55.07	120.04	Shut-In(2)
245	322.05	122.27	End Shut-In(2)
248	1915.87	122.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	SOWCM 85% m, 11% w, 3% o, 1% g	0.30
20.00	SOCM 91% m, 4% o, 5% g	0.10
0.00	GIP = 40'	0.00

Gas Rates

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



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FLUID SUMMARY

Murfin Drilling Co., Inc.

Bixenman #1-23

250 N. Water Suite 300
Wichita, KS 67202

23/9s/30w Sheridan K

Job Ticket: 042925

DST#: 1

ATTN: Jeff Christian

Test Start: 2011.08.03 @ 06:19:00

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: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 4.80 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2500.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	SOWCM 85% <i>m</i> , 11% <i>w</i> , 3% <i>o</i> , 1% <i>g</i>	0.295
20.00	SOCM 91% <i>m</i> , 4% <i>o</i> , 5% <i>g</i>	0.098
0.00	GIP = 40'	0.000

Total Length: 80.00 ft Total Volume: 0.393 bbl

Num Fluid Samples: 0

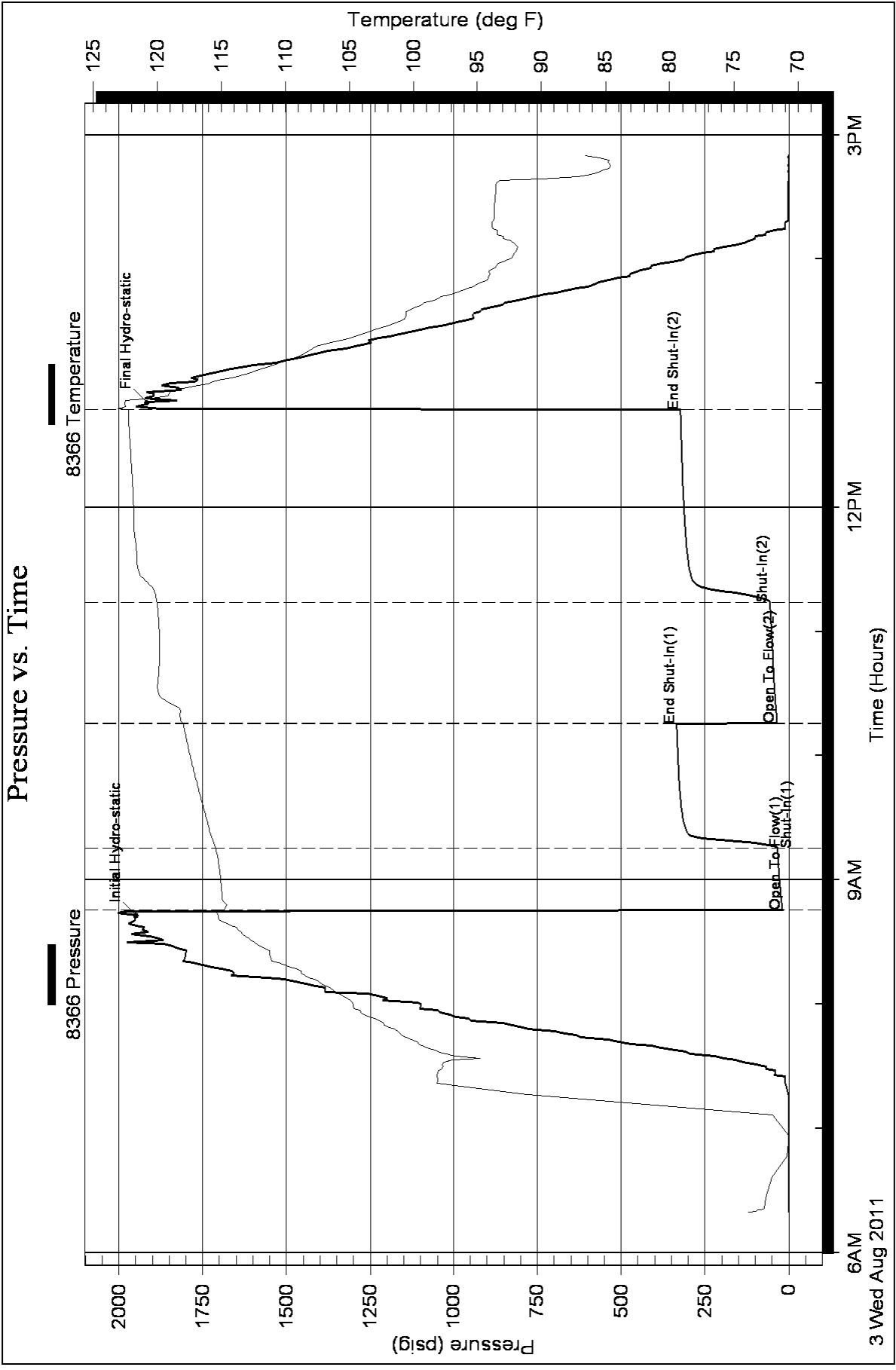
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Mud at flow line checked : (2 samples) 90%*m*, 5%*o*, 5%*g* & 95%*m*, 4%*o*, 1%*g*
before dumping fluid





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250 N. Water Suite 300
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ATTN: Jeff Christian

Bixenman #1-23
23/9s/30w Sheridan K
Job Ticket: 43776 **DST#: 2**
Test Start: 2011.08.03 @ 23:47:00

GENERAL INFORMATION:

Formation: **LKC "E - F"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:49:00
 Time Test Ended: 07:54:00
 Interval: **4050.00 ft (KB) To 4076.00 ft (KB) (TVD)**
 Total Depth: 4076.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: James Winder
 Unit No: 46
 Reference Elevations: 2914.00 ft (KB)
 2909.00 ft (CF)
 KB to GR/CF: 5.00 ft

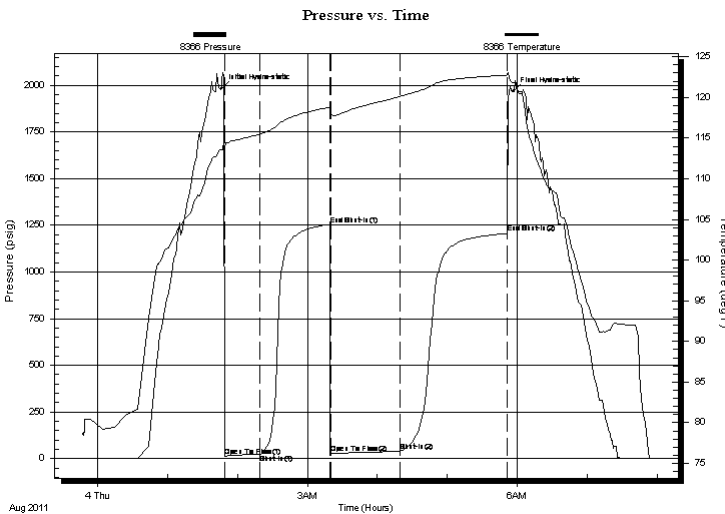
Serial #: 8366

Inside

Press @ Run Depth: 38.87 psig @ 4051.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.08.03 End Date: 2011.08.04 Last Calib.: 2011.08.04
 Start Time: 23:47:05 End Time: 07:53:59 Time On Btm: 2011.08.04 @ 01:46:00
 Time Off Btm: 2011.08.04 @ 05:56:30

TEST COMMENT: IF: Blow built to 2 1/2" in 30 min.
 IS: No blow back
 FF: Blow built to 2" in 60 min.
 FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1980.64	113.51	Initial Hydro-static
3	14.42	113.69	Open To Flow (1)
33	24.88	115.49	Shut-In(1)
93	1254.67	118.80	End Shut-In(1)
94	27.14	118.09	Open To Flow (2)
153	38.87	120.11	Shut-In(2)
246	1207.02	122.76	End Shut-In(2)
251	1966.61	121.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
53.00	WOCM 69% _m , 18% _o , 11% _w , 2% _g	0.26
5.00	CO 96% _o , 2% _g , 2% _m	0.02

Gas Rates

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



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FLUID SUMMARY

Murfin Drilling Co., Inc.

Bixenman #1-23

250 N. Water Suite 300
Wichita, KS 67202

23/9s/30w Sheridan K

Job Ticket: 43776

DST#: 2

ATTN: Jeff Christian

Test Start: 2011.08.03 @ 23:47:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

35.8 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 4.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
53.00	WOCM 69% <i>m</i> , 18% <i>o</i> , 11% <i>w</i> , 2% <i>g</i>	0.261
5.00	CO 96% <i>o</i> , 2% <i>g</i> , 2% <i>m</i>	0.025

Total Length: 58.00 ft Total Volume: 0.286 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

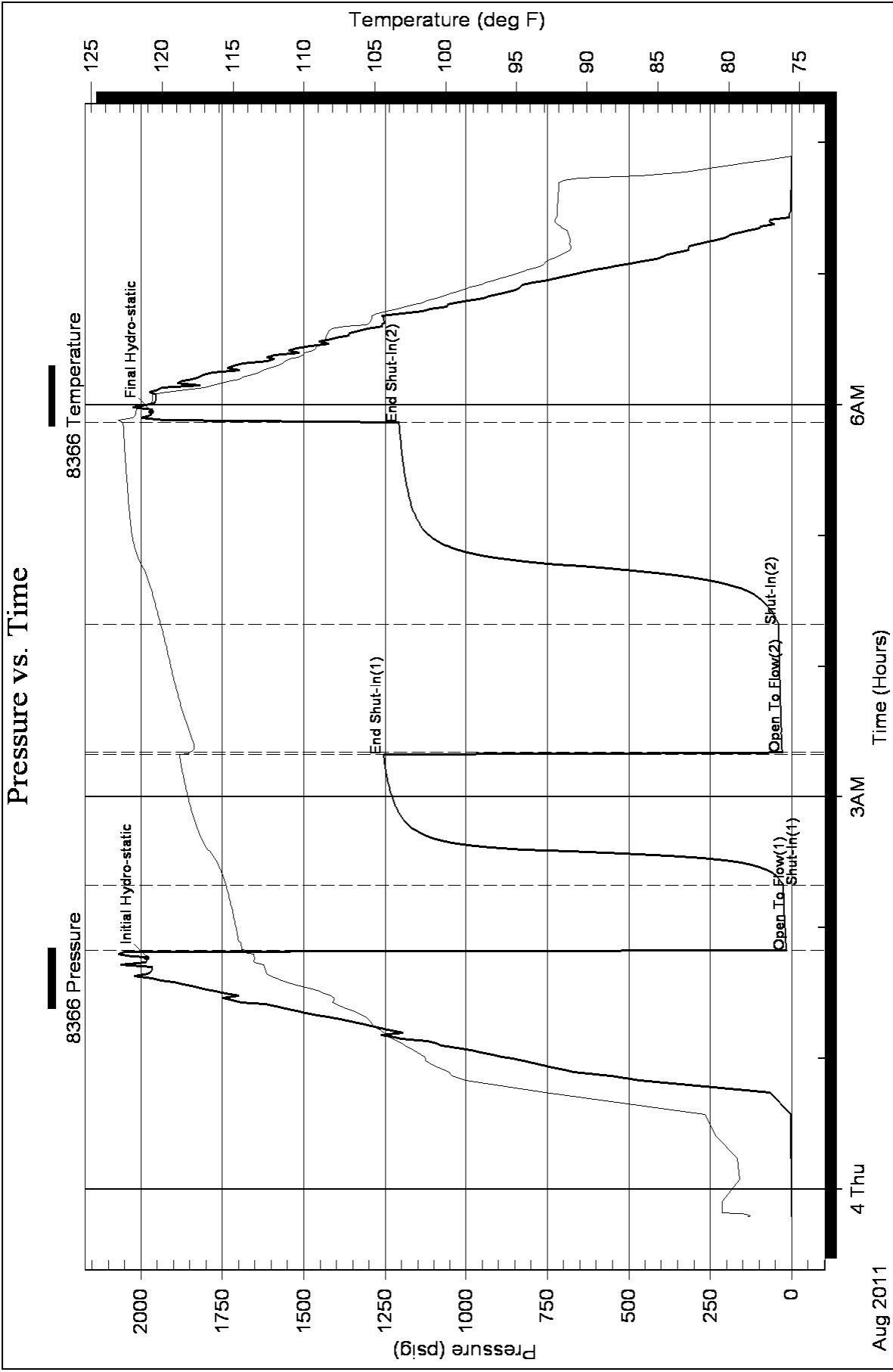
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity = 37.4 api @ 76 deg F

Corrected Gravity = 35.8 api





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Bixenman #1-23
23/9s/30w Sheridan K
 Job Ticket: 43777 **DST#: 3**
 Test Start: 2011.08.04 @ 18:26:00

GENERAL INFORMATION:

Formation: **LKC "H"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:54:00
 Time Test Ended: 02:12:30
 Interval: **4107.00 ft (KB) To 4136.00 ft (KB) (TVD)**
 Total Depth: 4136.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: James Winder
 Unit No: 36
 Reference Elevations: 2914.00 ft (KB)
 2909.00 ft (CF)
 KB to GR/CF: 5.00 ft

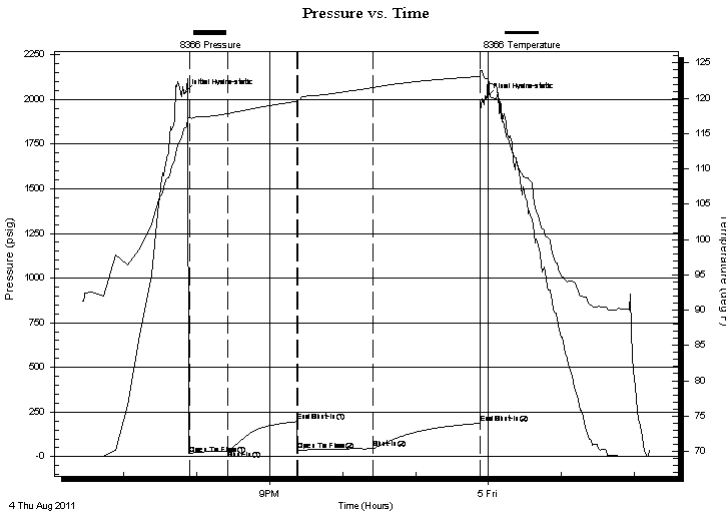
Serial #: 8366

Inside

Press @ Run Depth: 44.66 psig @ 4108.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.08.04 End Date: 2011.08.05 Last Calib.: 2011.08.05
 Start Time: 18:26:05 End Time: 02:12:29 Time On Btm: 2011.08.04 @ 19:50:00
 Time Off Btm: 2011.08.04 @ 23:58:00

TEST COMMENT: IF: Blow built to 3 1/2" in 30 min.
 IS: No blow back
 FF: Blow built to 2 1/4" in 60 min.
 FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2035.63	115.80	Initial Hydro-static
4	16.14	117.23	Open To Flow (1)
35	33.31	117.80	Shut-In(1)
93	196.72	119.56	End Shut-In(1)
94	35.21	119.60	Open To Flow (2)
155	44.66	121.50	Shut-In(2)
243	186.89	123.11	End Shut-In(2)
248	2008.65	122.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	WOCM 75%o, 11%g, 8%o, 6%w	0.30
1.00	CO 97%o, 2%m, 1%g	0.00

Gas Rates

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



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ATTN: Jeff Christian

Bixenman #1-23
23/9s/30w Sheridan K
Job Ticket: 43777 **DST#: 3**
Test Start: 2011.08.04 @ 18:26:00

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: 67.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.19 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2500.00 ppm			
Filter Cake: 2.00 inches			

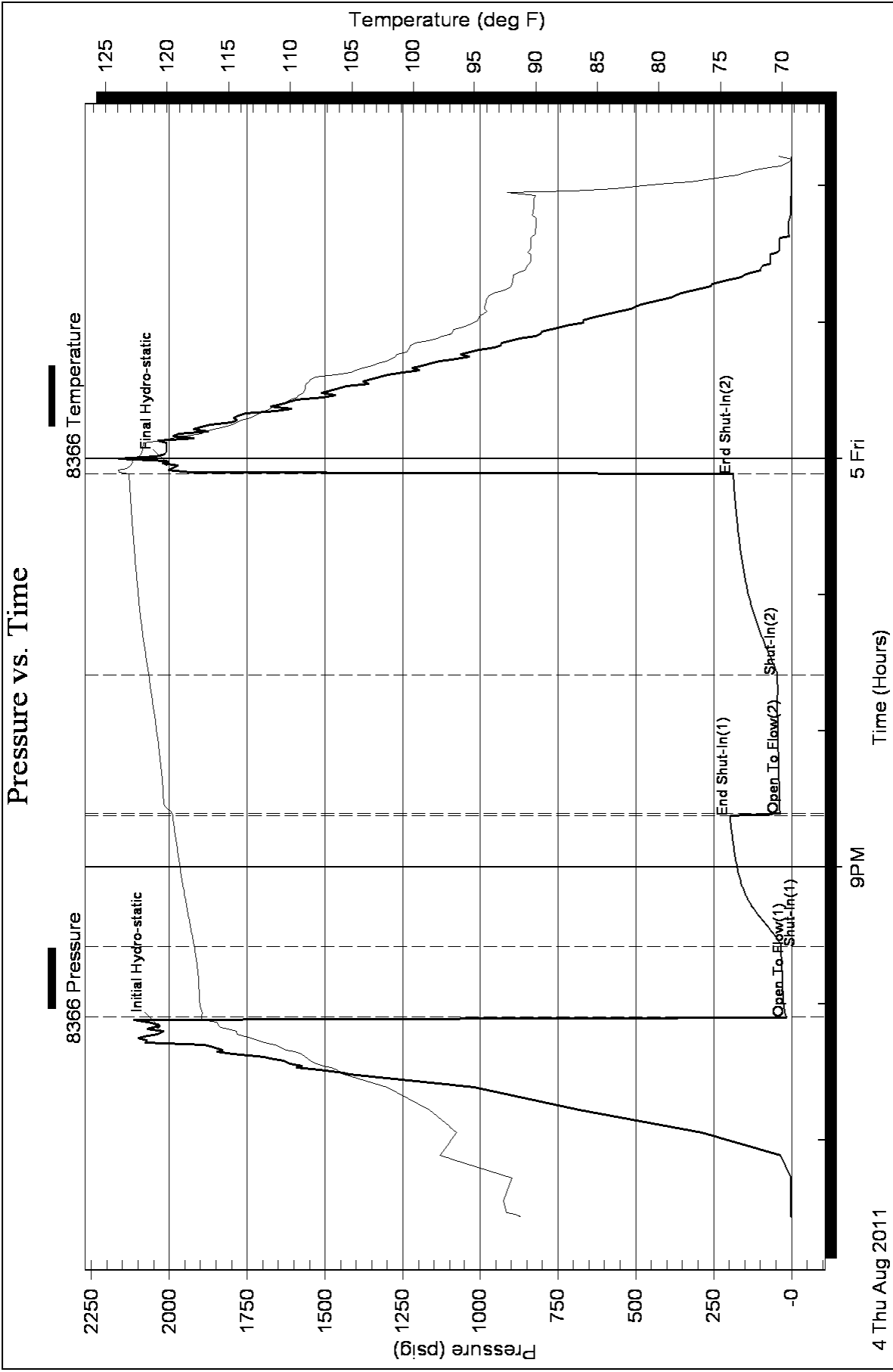
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	WOCM 75% <i>m</i> , 11% <i>g</i> , 8% <i>o</i> , 6% <i>w</i>	0.295
1.00	CO 97% <i>o</i> , 2% <i>m</i> , 1% <i>g</i>	0.005

Total Length: 61.00 ft Total Volume: 0.300 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time





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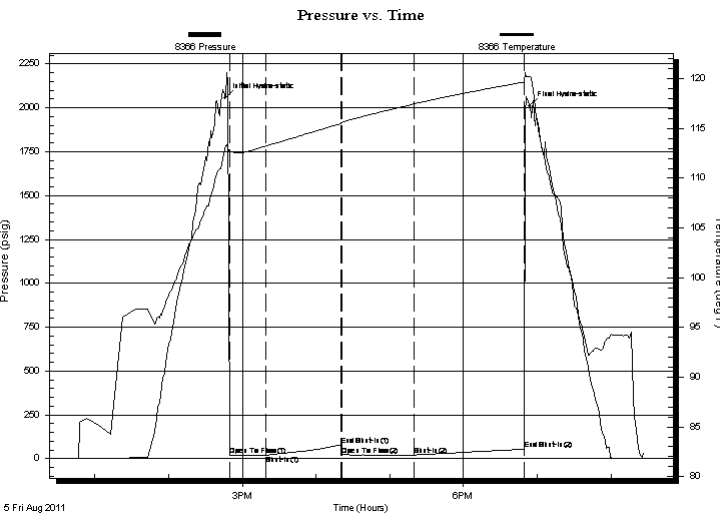
Bixenman #1-23
23/9s/30w Sheridan K
Job Ticket: 43778 **DST#: 4**
Test Start: 2011.08.05 @ 12:46:00

GENERAL INFORMATION:

Formation: **LKC "I - J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:49:30
Time Test Ended: 20:28:00
Interval: **4136.00 ft (KB) To 4192.00 ft (KB) (TVD)**
Total Depth: 4192.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole
Tester: James Winder
Unit No: 46
Reference Elevations: 2914.00 ft (KB)
2909.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8366 Inside
Press @ Run Depth: 22.12 psig @ 4137.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.08.05 End Date: 2011.08.05 Last Calib.: 2011.08.05
Start Time: 12:46:05 End Time: 20:27:59 Time On Btm: 2011.08.05 @ 14:46:30
Time Off Btm: 2011.08.05 @ 18:54:00

TEST COMMENT: IF: Blow built to 1 1/4" in 30 min.
IS: Weak surface blow back for a couple min. about 20 min. into close
FF: Blow built to 1/2" in 60 min.
FS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2057.51	113.20	Initial Hydro-static
3	18.17	112.61	Open To Flow (1)
33	21.33	113.22	Shut-In(1)
94	79.74	115.48	End Shut-In(1)
95	22.92	115.61	Open To Flow (2)
154	22.12	117.47	Shut-In(2)
243	56.69	119.67	End Shut-In(2)
248	2010.92	120.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	SOCM 99% m, 1% o	0.15

Gas Rates

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



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ATTN: Jeff Christian

Bixenman #1-23
23/9s/30w Sheridan K
Job Ticket: 43778 **DST#: 4**
Test Start: 2011.08.05 @ 12:46:00

Mud and Cushion Information

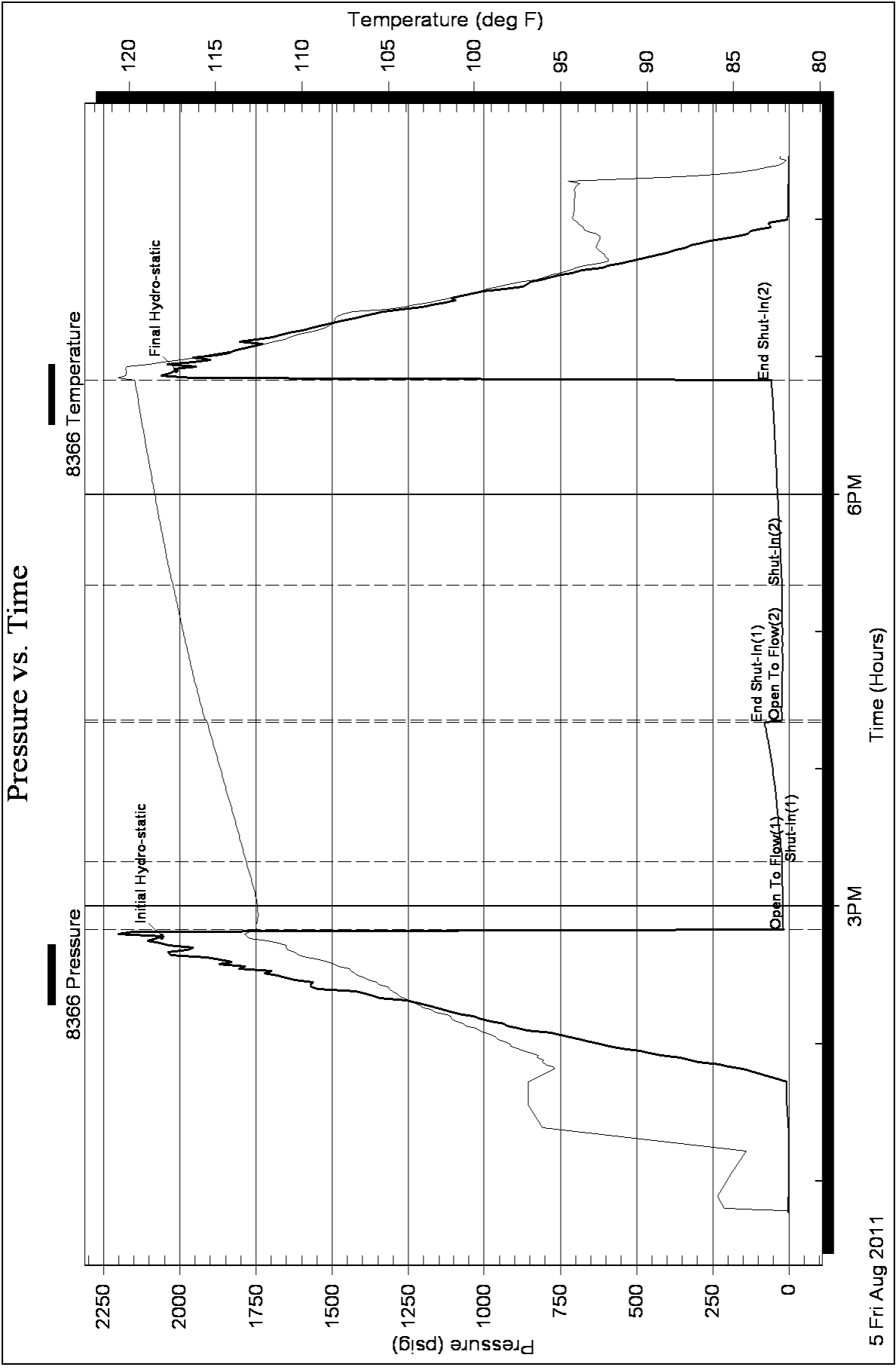
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 74.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.00 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2500.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	SOCM 99% _m , 1% _o	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:





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ATTN: Jeff Christian

Bixenman #1-23
23/9s/30w Sheridan K
Job Ticket: 43753 **DST#: 5**
Test Start: 2011.08.06 @ 16:31:00

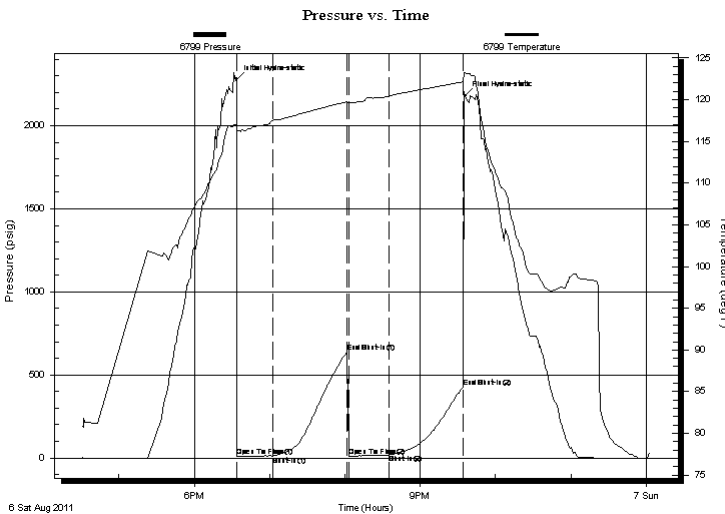
GENERAL INFORMATION:

Formation: **Pawnee - Ft. Scott**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:33:45
 Time Test Ended: 00:02:45
 Interval: **4366.00 ft (KB) To 4452.00 ft (KB) (TVD)**
 Total Depth: 4452.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Kevin Mack
 Unit No: 43
 Reference Elevations: 2914.00 ft (KB)
 2909.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 6799 Inside
 Press @ Run Depth: 19.23 psig @ 4367.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.08.06 End Date: 2011.08.07 Last Calib.: 2011.08.07
 Start Time: 16:31:05 End Time: 00:02:44 Time On Btm: 2011.08.06 @ 18:33:30
 Time Off Btm: 2011.08.06 @ 21:35:45

TEST COMMENT: IF: Surface Blow built to 1/8"
 IS: No Return
 FF: No Blow
 FS: No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2278.35	117.07	Initial Hydro-static
1	7.95	116.44	Open To Flow (1)
30	12.26	117.47	Shut-In(1)
89	638.85	119.76	End Shut-In(1)
90	11.60	119.55	Open To Flow (2)
122	19.23	120.44	Shut-In(2)
181	426.43	122.14	End Shut-In(2)
183	2181.09	123.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM 100M (oil spots)	0.05

Gas Rates

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



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FLUID SUMMARY

Murfin Drilling Co., Inc.

Bixenman #1-23

250 N. Water Suite 300
Wichita, KS 67202

23/9s/30w Sheridan K

Job Ticket: 43753

DST#: 5

ATTN: Jeff Christian

Test Start: 2011.08.06 @ 16:31:00

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: 84.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.20 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OSM 100M (oil spots)	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

