



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

Soil #1-17

250 N. Water Suite 300
Wichita, KS 67202

17/10s/34w Thomas KS

Job Ticket: 43781

DST#: 1

ATTN: Tom Funk

Test Start: 2011.08.14 @ 05:43:00

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: 94.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
124.00	SOCM 94%m, 4%g, 2%o	0.610
46.00	Mud w /trace of Oil 100%m	0.226

Total Length: 170.00 ft Total Volume: 0.836 bbl

Num Fluid Samples: 0

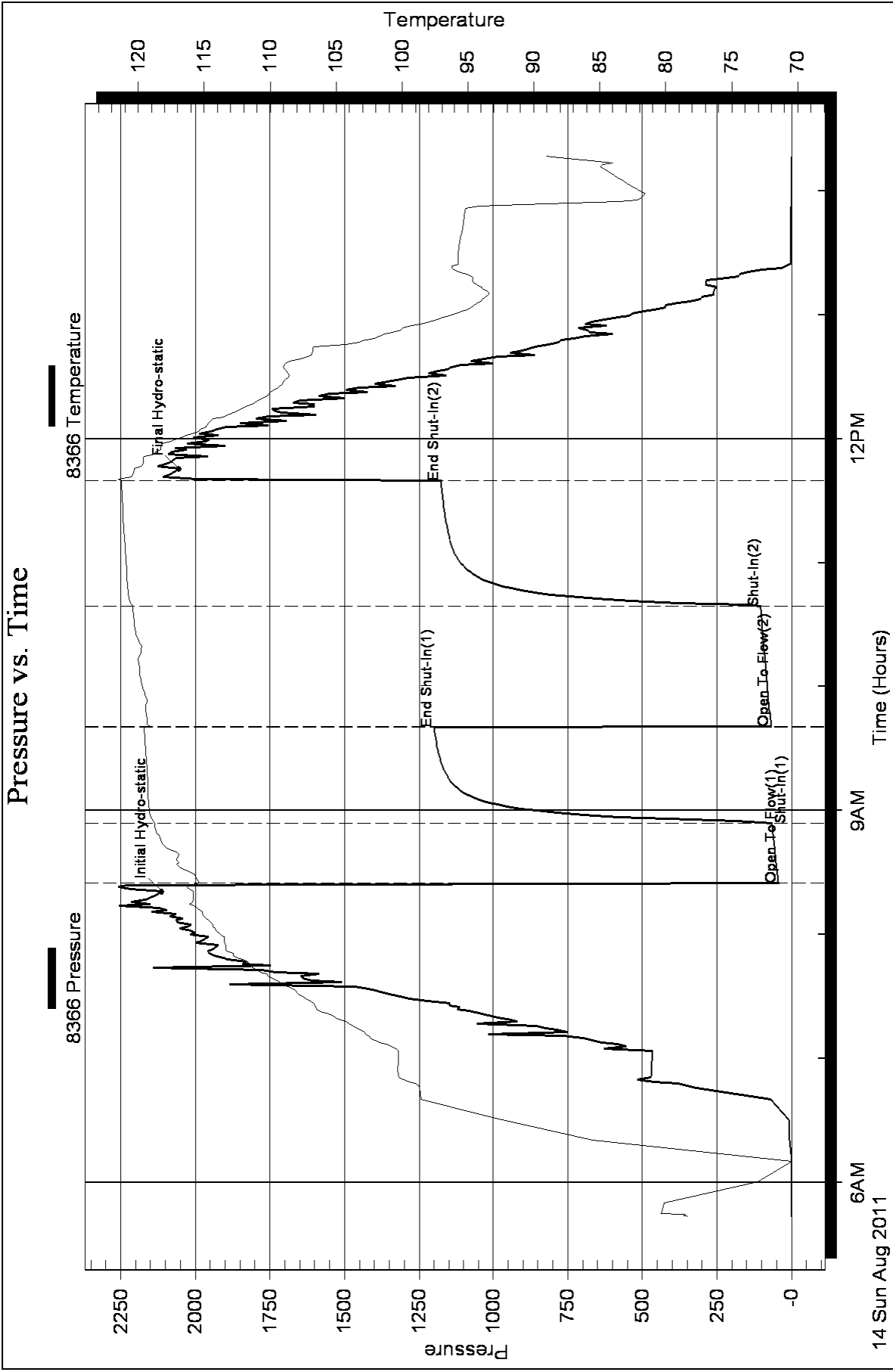
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

Soil #1-17
17/10s/34w Thomas KS
Job Ticket: 43782 **DST#: 2**
Test Start: 2011.08.14 @ 21:23:00

GENERAL INFORMATION:

Formation: **LKC "K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:06:30
Time Test Ended: 06:29:30
Interval: **4386.00 ft (KB) To 4415.00 ft (KB) (TVD)**
Total Depth: 4415.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole
Tester: James Winder
Unit No: 46
Reference Elevations: 3237.00 ft (KB)
3226.00 ft (CF)
KB to GR/CF: 11.00 ft

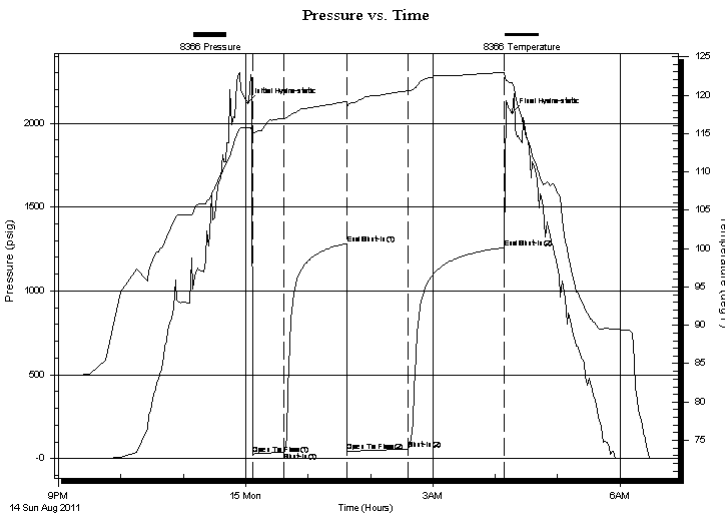
Serial #: 8366

Inside

Press @ Run Depth: 57.23 psig @ 4387.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.08.14 End Date: 2011.08.15 Last Calib.: 2011.08.15
Start Time: 21:23:05 End Time: 06:29:30 Time On Btm: 2011.08.15 @ 00:02:00
Time Off Btm: 2011.08.15 @ 04:16:30

TEST COMMENT: 30 - IF: Blow built to just over 1"
60 - IS: No blow back
60 - FF: Blow started at 20 min., built to 3/4"
90 - FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2122.32	115.78	Initial Hydro-static
5	28.02	115.02	Open To Flow (1)
35	39.99	116.91	Shut-In(1)
95	1282.01	119.17	End Shut-In(1)
96	42.79	118.45	Open To Flow (2)
155	57.23	120.58	Shut-In(2)
247	1257.57	122.96	End Shut-In(2)
255	2060.21	121.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	SOCM 87% <i>m</i> , 7% <i>o</i> , 5% <i>g</i>	0.30
15.00	OCM 67% <i>m</i> , 31% <i>o</i> , 2% <i>g</i>	0.07
0.00	Pit Mud = 93% <i>m</i> , 7% <i>o</i>	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

Soil #1-17

250 N. Water Suite 300
Wichita, KS 67202

17/10s/34w Thomas KS

Job Ticket: 43782

DST#: 2

ATTN: Tom Funk

Test Start: 2011.08.14 @ 21:23:00

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: 80.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	SOCM 87% <i>m</i> , 7% <i>o</i> , 5% <i>g</i>	0.305
15.00	OCM 67% <i>m</i> , 31% <i>o</i> , 2% <i>g</i>	0.074
0.00	Pit Mud = 93% <i>m</i> , 7% <i>o</i>	0.000

Total Length: 77.00 ft Total Volume: 0.379 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

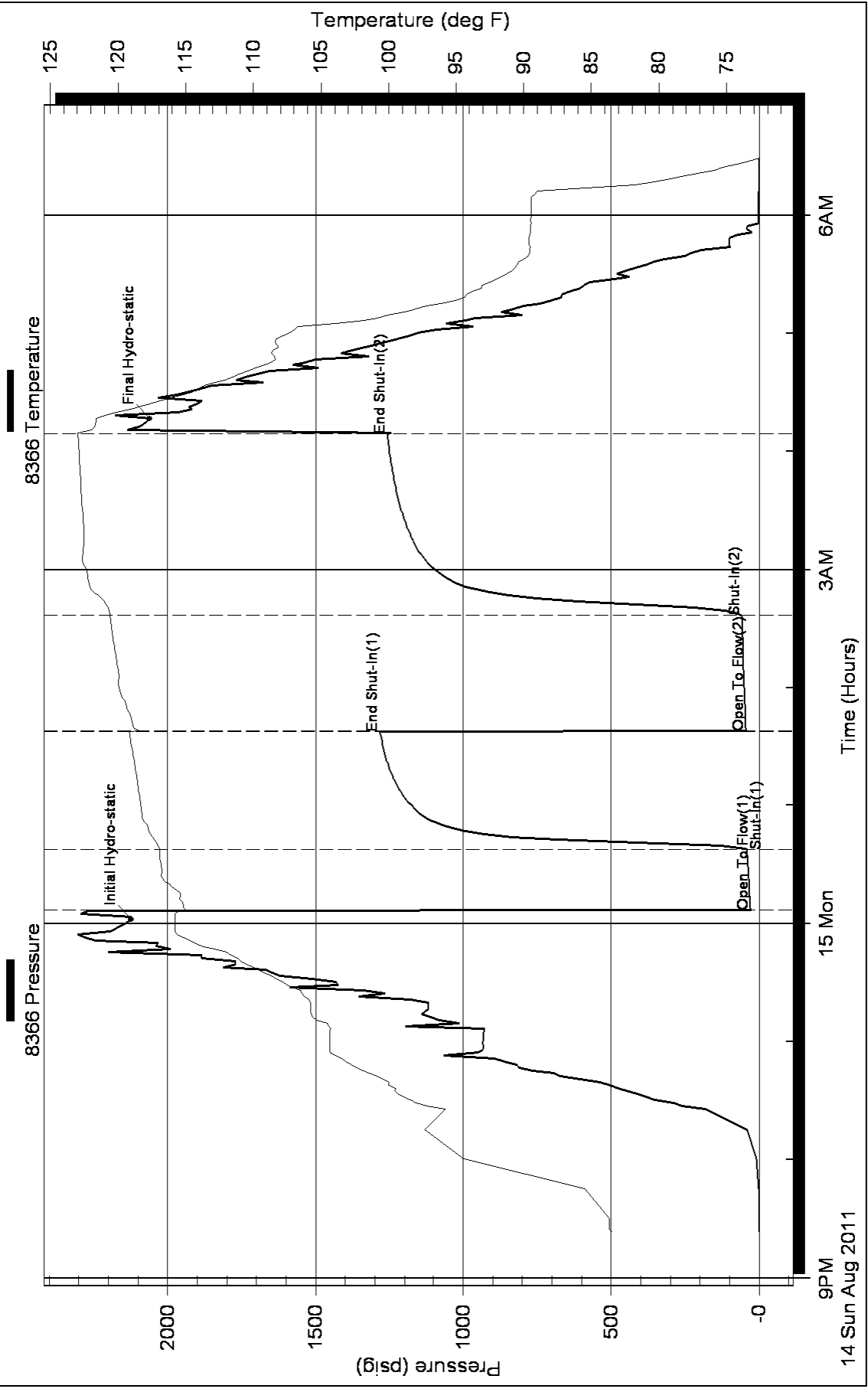
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

Soil #1-17

250 N. Water Suite 300
Wichita, KS 67202

17/10s/34w Thomas KS

Job Ticket: 43783

DST#: 3

ATTN: Tom Funk

Test Start: 2011.08.16 @ 01:52:00

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: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.60 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
45.00	Mud w /trace of oil 100%m	0.221
0.00	PIT MUD = Mud w /trace of oil	0.000

Total Length: 45.00 ft Total Volume: 0.221 bbl

Num Fluid Samples: 0

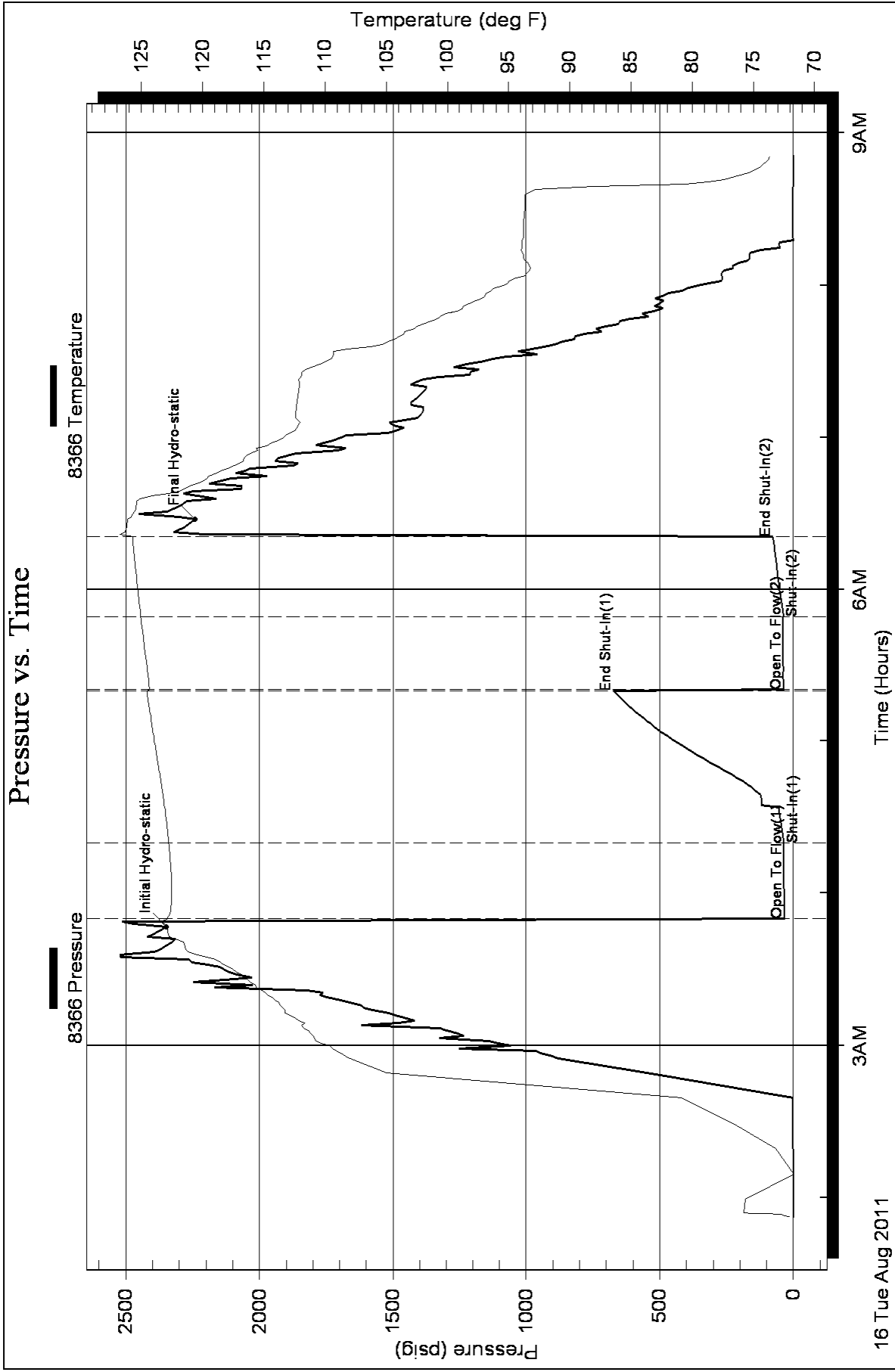
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

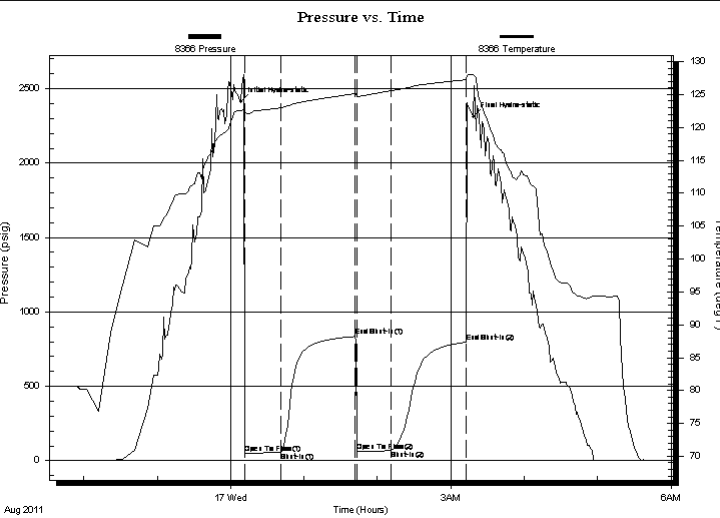
Soil #1-17
17/10s/34w Thomas KS
 Job Ticket: 43784 **DST#: 4**
 Test Start: 2011.08.16 @ 21:55:00

GENERAL INFORMATION:

Formation: **Johnson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:11:30
 Time Test Ended: 05:38:30
 Interval: **4690.00 ft (KB) To 4745.00 ft (KB) (TVD)**
 Total Depth: 4745.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: James Winder
 Unit No: 46
 Reference Elevations: 3237.00 ft (KB)
 3226.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8366 Inside
 Press @ Run Depth: 68.06 psig @ 4691.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.08.16 End Date: 2011.08.17 Last Calib.: 2011.08.17
 Start Time: 21:55:05 End Time: 05:38:29 Time On Btm: 2011.08.17 @ 00:08:30
 Time Off Btm: 2011.08.17 @ 03:18:30

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



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2412.05	122.52	Initial Hydro-static
3	47.17	122.02	Open To Flow (1)
33	58.77	123.02	Shut-In(1)
94	834.72	125.14	End Shut-In(1)
95	64.39	124.83	Open To Flow (2)
123	68.06	125.59	Shut-In(2)
184	796.72	127.25	End Shut-In(2)
190	2310.27	128.01	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
62.00	OCM 73% _m , 21% _o , 6% _g	0.30
30.00	GMCO 58% _o , 32% _m , 10% _g	0.15

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

Soil #1-17

250 N. Water Suite 300
Wichita, KS 67202

17/10s/34w Thomas KS

Job Ticket: 43784

DST#: 4

ATTN: Tom Funk

Test Start: 2011.08.16 @ 21:55:00

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:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	OCM 73% <i>m</i> , 21% <i>o</i> , 6% <i>g</i>	0.305
30.00	GMCO 58% <i>o</i> , 32% <i>m</i> , 10% <i>g</i>	0.148

Total Length: 92.00 ft Total Volume: 0.453 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

