



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

Phillips "A" #1-22

22-4s-30w Decatur,KS

Start Date: 2012.10.13 @ 12:50:00

End Date: 2012.10.13 @ 21:11:45

Job Ticket #: 48085 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.10.19 @ 14:24:00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-4s-30w Decatur, KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48085

DST#: 1

ATTN: Rocky Milford

Test Start: 2012.10.13 @ 12:50:00

GENERAL INFORMATION:

Formation: **Lansing A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:10:30

Time Test Ended: 21:11:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Wilbur Steinbeck

Unit No: 43

Interval: 3818.00 ft (KB) To 3850.00 ft (KB) (TVD)

Reference Elevations: 2743.00 ft (KB)

Total Depth: 3850.00 ft (KB) (TVD)

2738.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6799 Inside

Press @ Run Depth: 246.15 psig @ 3819.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.13

End Date:

2012.10.13

Last Calib.: 2012.10.13

Start Time: 12:50:05

End Time:

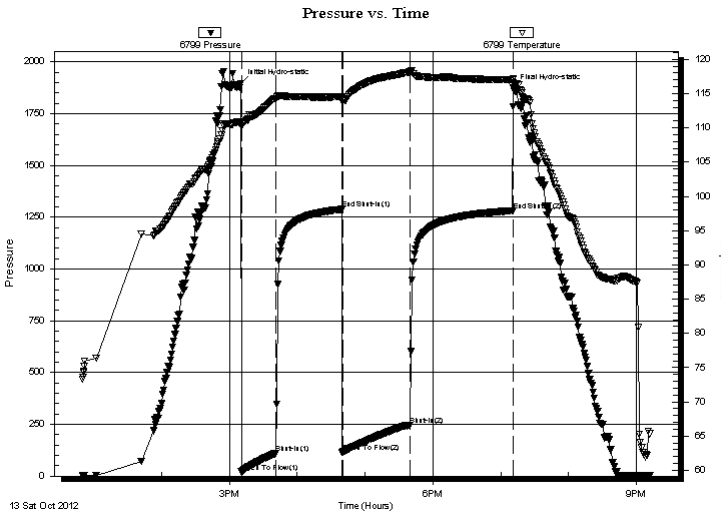
21:11:44

Time On Btm: 2012.10.13 @ 15:10:00

Time Off Btm: 2012.10.13 @ 19:11:00

TEST COMMENT: 30 IF: Built to 7 1/2"
60 IS: No Blow
60 FF: Built to BOB in 58 min
90 FS: No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1895.04	110.88	Initial Hydro-static
1	20.68	110.25	Open To Flow (1)
31	111.09	114.29	Shut-In(1)
90	1288.76	114.52	End Shut-In(1)
90	116.24	114.00	Open To Flow (2)
150	246.15	118.13	Shut-In(2)
241	1282.52	116.99	End Shut-In(2)
241	1873.88	116.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	MW 5%M 95%W	1.18
185.00	MW 10%M 90%W	0.91
70.00	M 100%M	0.44

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.
250 N Water STE 300
Wichita KS 67202
ATTN: Rocky Milford

22-4s-30w Decatur, KS
Phillips "A" #1-22
Job Ticket: 48085 **DST#: 1**
Test Start: 2012.10.13 @ 12:50:00

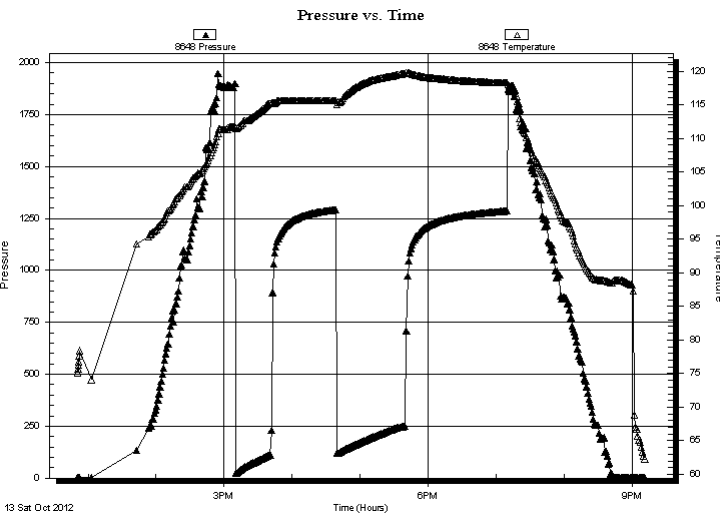
GENERAL INFORMATION:

Formation: **Lansing A**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:10:30
Time Test Ended: 21:11:45
Interval: **3818.00 ft (KB) To 3850.00 ft (KB) (TVD)**
Total Depth: 3850.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)
Tester: Wilbur Steinbeck
Unit No: 43
Reference Elevations: 2743.00 ft (KB)
2738.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8648 Inside
Press @ Run Depth: psig @ 3819.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.10.13 End Date: 2012.10.13 Last Calib.: 1899.12.30
Start Time: 12:50:50 End Time: 21:10:29 Time On Btm:
Time Off Btm:

TEST COMMENT: 30 IF: Built to 7 1/2"
60 IS: No Blow
60 FF: Built to BOB in 58 min
90 FS: No Blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
240.00	MW 5%M 95%W	1.18
185.00	MW 10%M 90%W	0.91
70.00	M 100%M	0.44

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

22-4s-30w Decatur,KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48085

DST#: 1

ATTN: Rocky Milford

Test Start: 2012.10.13 @ 12:50:00

Tool Information

Drill Pipe:	Length: 3335.00 ft	Diameter: 3.80 inches	Volume: 46.78 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 485.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 49.17 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	70000.00 lb
Depth to Top Packer:	3818.00 ft			Final	70000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	32.00 ft				
Tool Length:	61.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3790.00	
Shut In Tool	5.00			3795.00	
Hydraulic tool	5.00			3800.00	
Jars	5.00			3805.00	
Safety Joint	3.00			3808.00	
Packer	5.00			3813.00	29.00 Bottom Of Top Packer
Packer	5.00			3818.00	
Packer - Shale	0.00			3818.00	
Stubb	1.00			3819.00	
Recorder	0.00	8648	Inside	3819.00	
Recorder	0.00	6799	Inside	3819.00	
Perforations	26.00			3845.00	
Bullnose	5.00			3850.00	32.00 Bottom Packers & Anchor

Total Tool Length: 61.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

22-4s-30w Decatur,KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48085

DST#: 1

ATTN: Rocky Milford

Test Start: 2012.10.13 @ 12:50:00

Mud and Cushion Information

Mud Type:		Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	18000 ppm
Viscosity:	57.00 sec/qt	Cushion Volume:	bbbl		
Water Loss:	5.19 in ³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	900.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
240.00	MW 5%M 95%W	1.180
185.00	MW 10%M 90%W	0.910
70.00	M 100%M	0.435

Total Length: 495.00 ft Total Volume: 2.525 bbl

Num Fluid Samples: 0

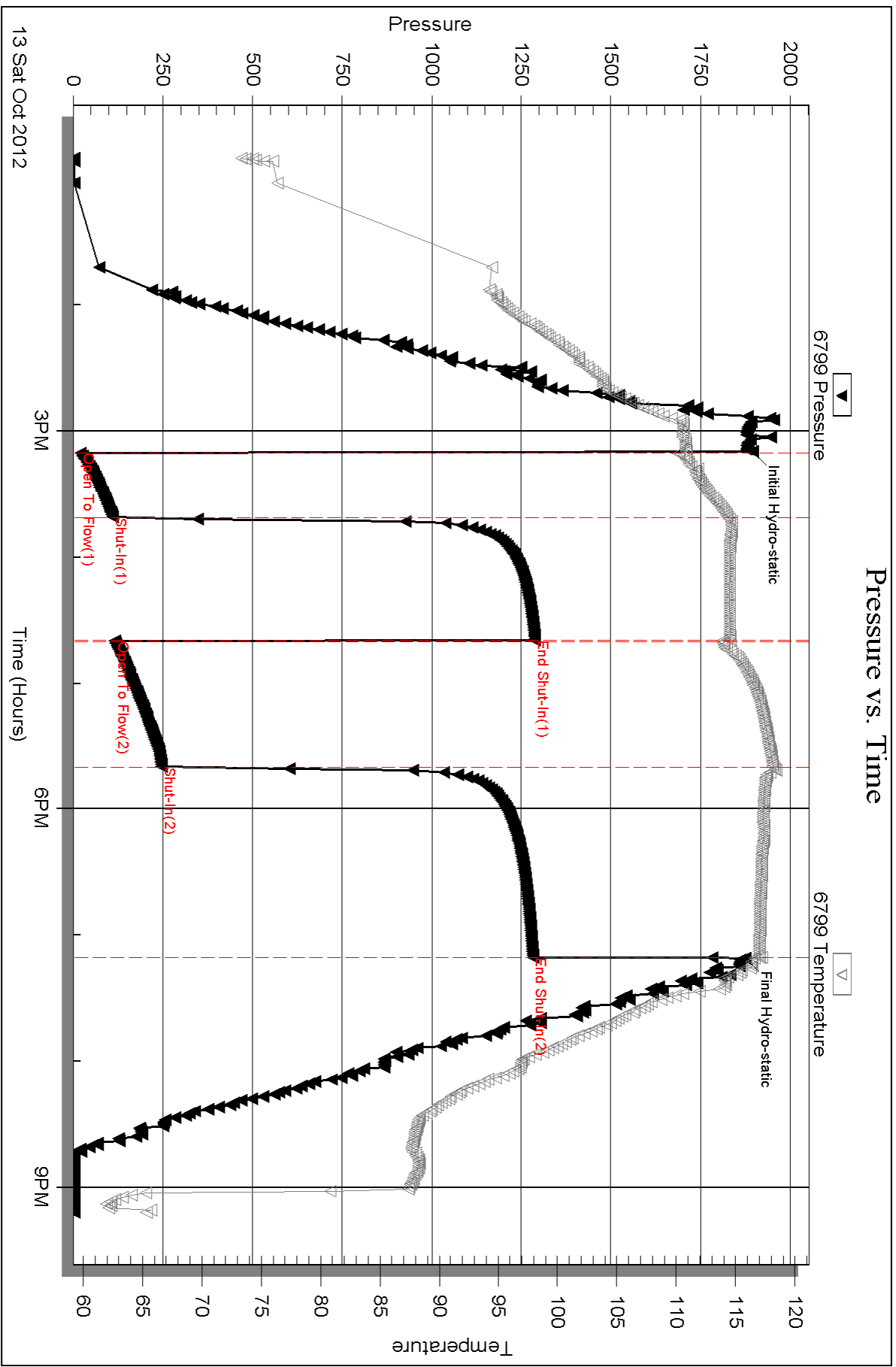
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .393@66.2=18000



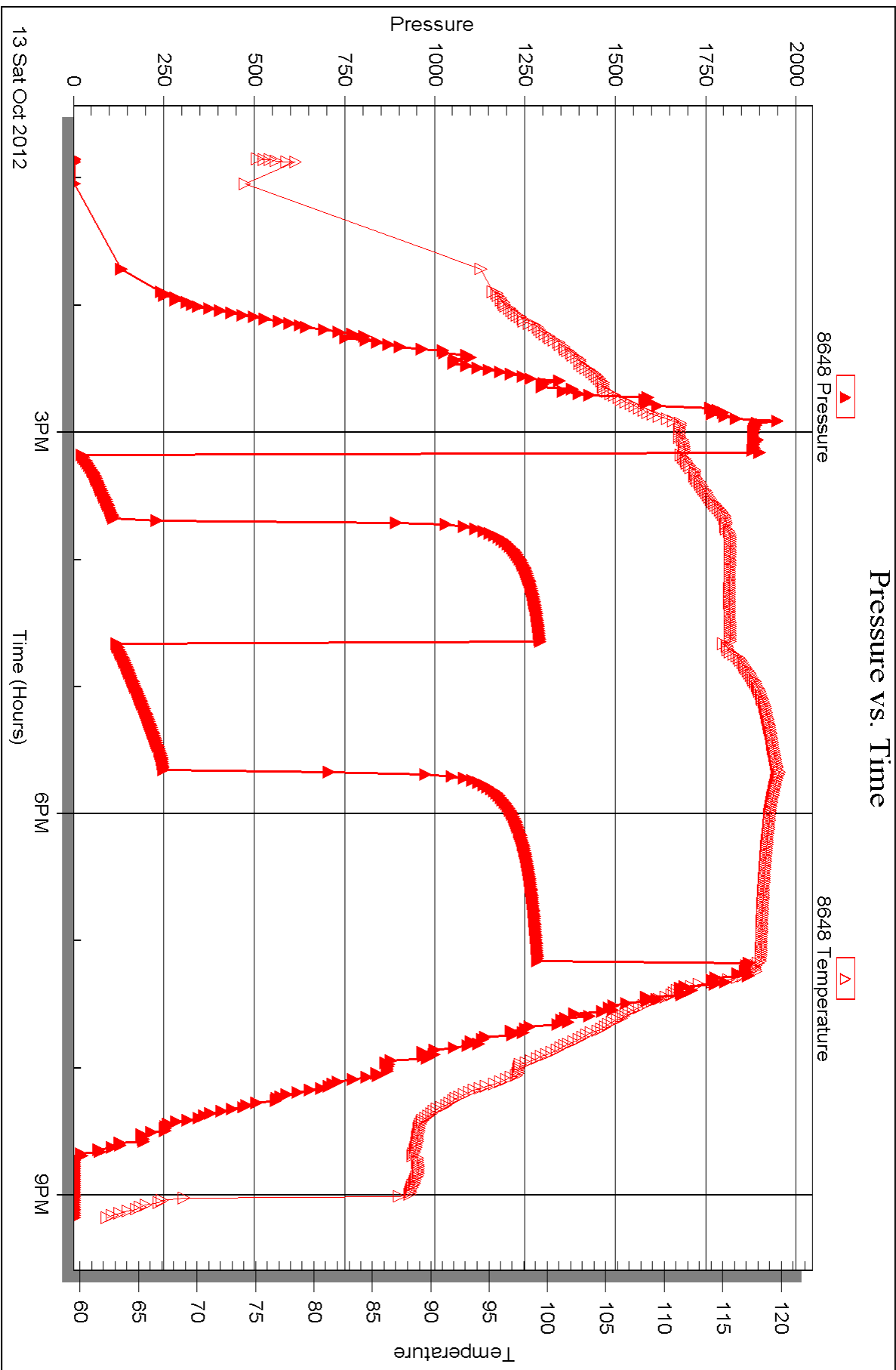
Serial #: 8648

Inside

Murfin Drilling Co.

Phillips "A" #1-22

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

Phillips "A" #1-22

22-4s-30w Decatur,KS

Start Date: 2012.10.14 @ 02:58:00

End Date: 2012.10.14 @ 09:50:15

Job Ticket #: 48086 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.10.19 @ 14:22:43

Murfin Drilling Co. 22-4s-30w Decatur,KS Phillips "A" #1-22 DST # 2 LKC "B" 2012.10.14



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-4s-30w Decatur, KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48086

DST#: 2

ATTN: Rocky Milford

Test Start: 2012.10.14 @ 02:58:00

GENERAL INFORMATION:

Formation: **LKC "B"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:38:30

Time Test Ended: 09:50:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: 3842.00 ft (KB) To 3866.00 ft (KB) (TVD)

Reference Elevations: 2743.00 ft (KB)

Total Depth: 3866.00 ft (KB) (TVD)

2738.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6799

Inside

Press @ Run Depth: 34.69 psig @ 3843.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.14

End Date:

2012.10.14

Last Calib.: 2012.10.14

Start Time: 02:58:05

End Time:

09:50:14

Time On Btm: 2012.10.14 @ 04:37:45

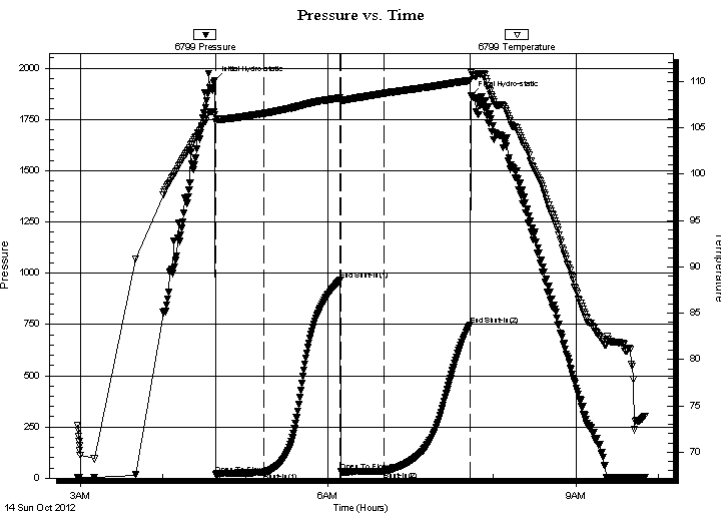
Time Off Btm: 2012.10.14 @ 07:43:45

TEST COMMENT: 30 - IF- 1/4" Blow built to 1"

60 - IS- No Return

30 - FF- No Blow

60 - FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1939.51	106.42	Initial Hydro-static
1	19.22	105.63	Open To Flow (1)
36	26.83	106.55	Shut-In(1)
91	964.61	108.23	End Shut-In(1)
92	31.33	107.97	Open To Flow (2)
123	34.69	108.71	Shut-In(2)
186	745.38	110.10	End Shut-In(2)
186	1867.19	110.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
19.00	OCM 95M 5o	0.09
1.00	Free Oil 100o	0.00

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

250 N Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

22-4s-30w Decatur, KS

Phillips "A" #1-22

Job Ticket: 48086 **DST#: 2**
Test Start: 2012.10.14 @ 02:58:00

GENERAL INFORMATION:

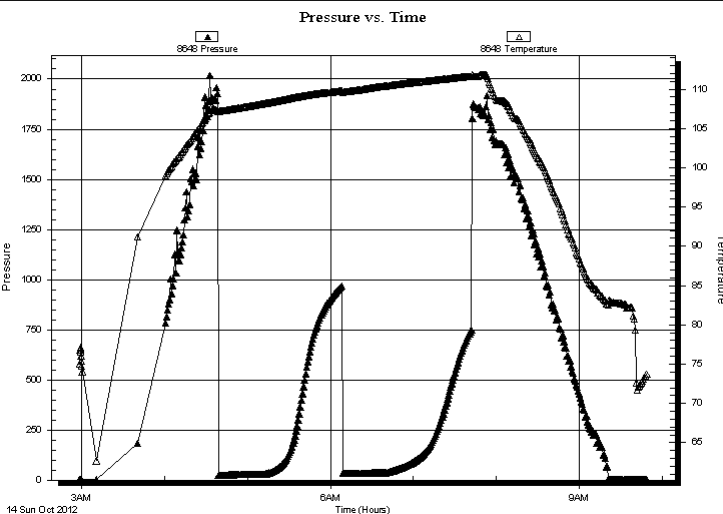
Formation: LKC "B"		Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock:	ft (KB)	Tester: Kevin Mack
Time Tool Opened: 04:38:30		Unit No: 43
Time Test Ended: 09:50:15		
Interval: 3842.00 ft (KB) To 3866.00 ft (KB) (TVD)		Reference Elevations: 2743.00 ft (KB)
Total Depth: 3866.00 ft (KB) (TVD)		2738.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Good	KB to GR/CF: 5.00 ft

Serial #: 8648

Inside

Press @ Run Depth:	psig @	3843.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2012.10.14	End Date:	2012.10.14	Last Calib.:
Start Time:	02:58:35	End Time:	09:49:14	Time On Btm:
				Time Off Btm:

TEST COMMENT: 30 - IF- 1/4" Blow built to 1"
60 - IS- No Return
30 - FF- No Blow
60 - FS- No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
19.00	OCM 95M 5o	0.09
1.00	Free Oil 100o	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

22-4s-30w Decatur,KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48086

DST#: 2

ATTN: Rocky Milford

Test Start: 2012.10.14 @ 02:58:00

Tool Information

Drill Pipe:	Length: 3333.00 ft	Diameter: 3.80 inches	Volume: 46.75 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 485.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 49.14 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3842.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	53.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3814.00	
Shut In Tool	5.00			3819.00	
Hydraulic tool	5.00			3824.00	
Jars	5.00			3829.00	
Safety Joint	3.00			3832.00	
Packer	5.00			3837.00	29.00 Bottom Of Top Packer
Packer	5.00			3842.00	
Stubb	1.00			3843.00	
Recorder	0.00	8648	Inside	3843.00	
Recorder	0.00	6799	Inside	3843.00	
Perforations	18.00			3861.00	
Bullnose	5.00			3866.00	24.00 Bottom Packers & Anchor

Total Tool Length: 53.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

22-4s-30w Decatur,KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48086

DST#: 2

ATTN: Rocky Milford

Test Start: 2012.10.14 @ 02:58:00

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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.09 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
19.00	OCM 95M 5o	0.093
1.00	Free Oil 100o	0.005

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

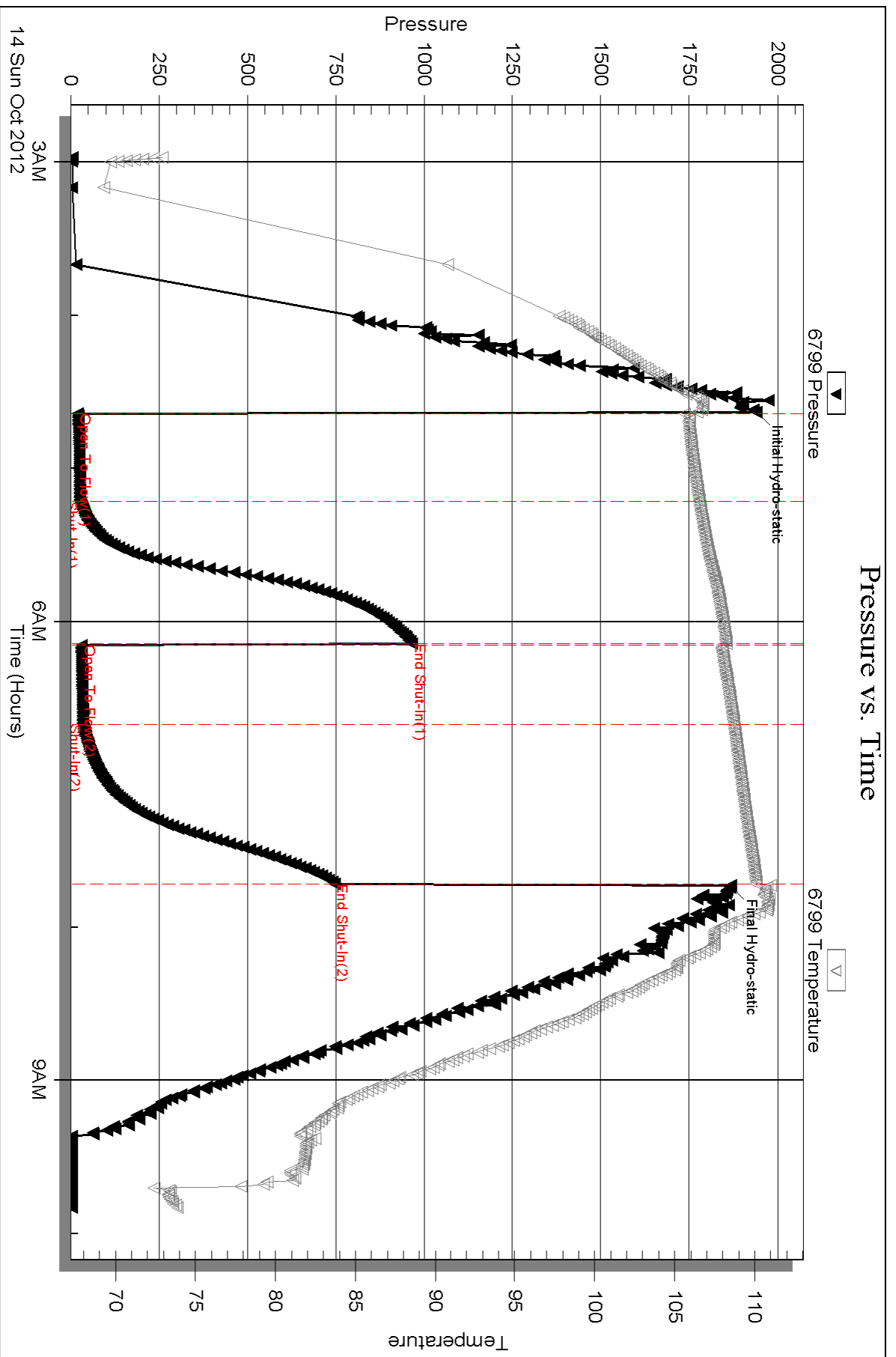
Serial #: 6799

Inside

Murfin Drilling Co.

Phillips "A" #1-22

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 48086

Printed: 2012.10.19 @ 14:22:47

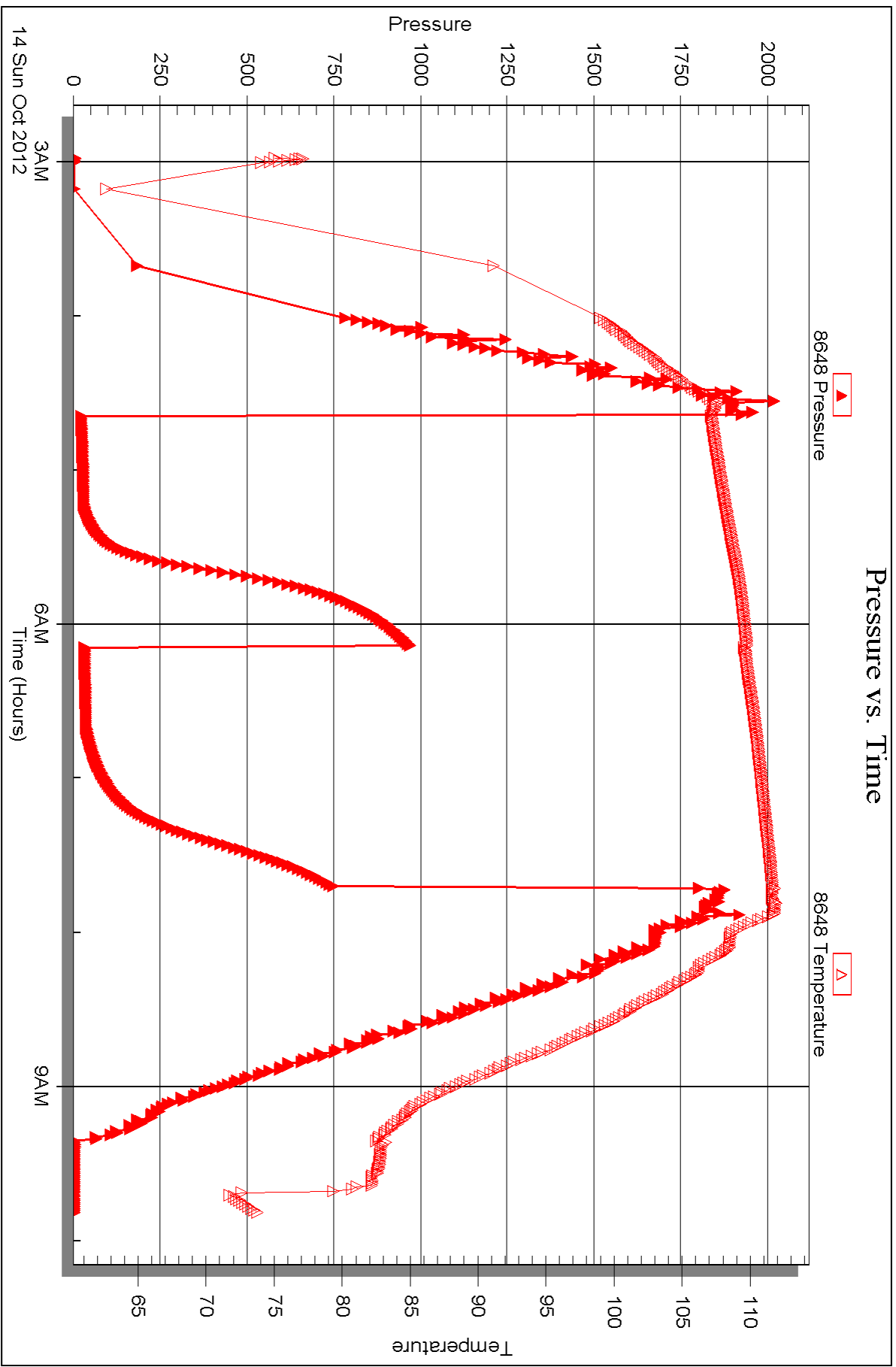
Serial #: 8648

Inside

Murfin Drilling Co.

Phillips "A" #1-22

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

Phillips "A" #1-22

22-4s-30w Decatur,KS

Start Date: 2012.10.14 @ 17:50:00

End Date: 2012.10.15 @ 02:08:15

Job Ticket #: 48087 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.10.19 @ 14:21:54



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-4s-30w Decatur, KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48087

DST#: 3

ATTN: Rocky Milford

Test Start: 2012.10.14 @ 17:50:00

GENERAL INFORMATION:

Formation: **LKC "F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:32:45

Time Test Ended: 02:08:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: 3879.00 ft (KB) To 3903.00 ft (KB) (TVD)

Reference Elevations: 2743.00 ft (KB)

Total Depth: 3903.00 ft (KB) (TVD)

2738.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6799

Inside

Press @ Run Depth: 267.89 psig @ 3880.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.14

End Date:

2012.10.15

Last Calib.: 2012.10.15

Start Time: 17:50:05

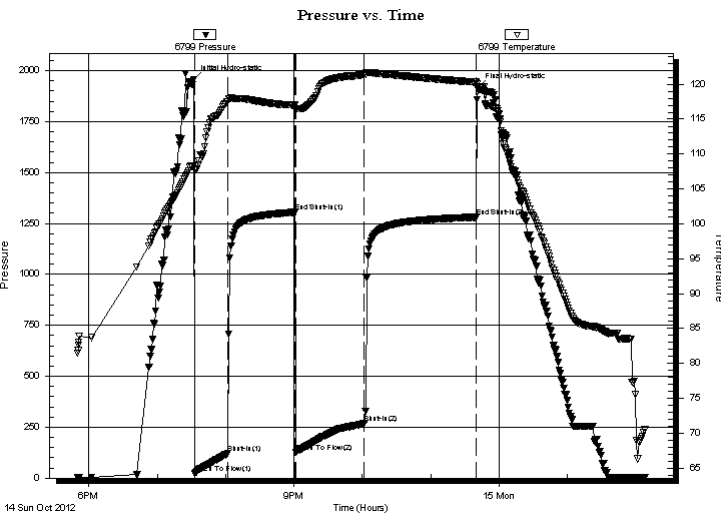
End Time:

02:08:14

Time On Btm: 2012.10.14 @ 19:31:45

Time Off Btm: 2012.10.14 @ 23:41:45

TEST COMMENT: 30 - IF- Surface Blow built to 9 3/4"
60 - IS- No Return
60 - FF- Surface Bow started at 3 min. Built to BoB in 45 min.
90 - FS- No Return



PRESSURE SUMMARY

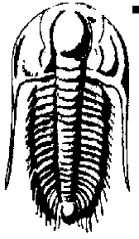
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1956.42	108.28	Initial Hydro-static
1	22.29	107.71	Open To Flow (1)
30	121.55	117.54	Shut-In(1)
89	1304.94	117.00	End Shut-In(1)
90	127.08	116.50	Open To Flow (2)
150	267.89	121.38	Shut-In(2)
248	1280.66	120.30	End Shut-In(2)
250	1918.43	119.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100M	0.02
300.00	Muddy Water 5M 95W	1.48
220.00	Muddy Water 30M 70W	1.45

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-4s-30w Decatur, KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48087

DST#: 3

ATTN: Rocky Milford

Test Start: 2012.10.14 @ 17:50:00

GENERAL INFORMATION:

Formation: **LKC "F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:32:45

Time Test Ended: 02:08:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: **3879.00 ft (KB) To 3903.00 ft (KB) (TVD)**

Reference Elevations: 2743.00 ft (KB)

Total Depth: 3903.00 ft (KB) (TVD)

2738.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: **8648** Inside

Press @ RunDepth: psig @ 3880.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.14

End Date:

2012.10.15

Last Calib.:

2012.10.15

Start Time: 17:50:35

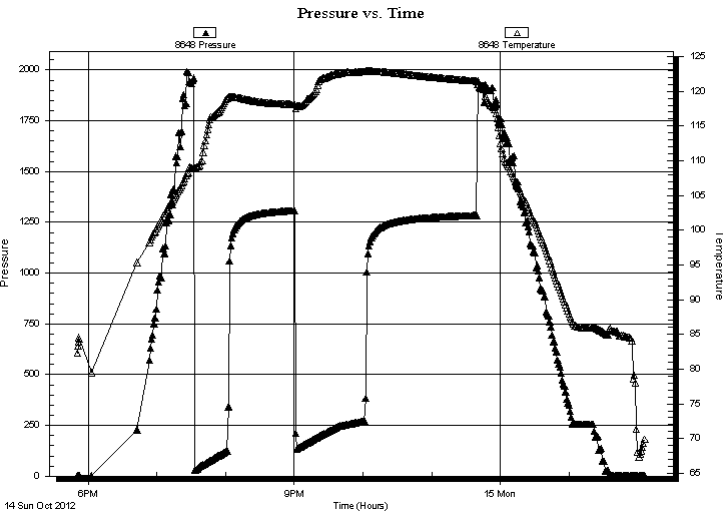
End Time:

02:06:59

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF- Surface Blow built to 9 3/4"
60 - IS- No Return
60 - FF- Surface Bow started at 3 min. Built to BoB in 45 min.
90 - FS- No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100M	0.02
300.00	Muddy Water 5M 95W	1.48
220.00	Muddy Water 30M 70W	1.45

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

22-4s-30w Decatur,KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48087

DST#: 3

ATTN: Rocky Milford

Test Start: 2012.10.14 @ 17:50:00

Tool Information

Drill Pipe:	Length: 3390.00 ft	Diameter: 3.80 inches	Volume: 47.55 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 485.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 49.94 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	3879.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	53.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3851.00	
Shut In Tool	5.00			3856.00	
Hydraulic tool	5.00			3861.00	
Jars	5.00			3866.00	
Safety Joint	3.00			3869.00	
Packer	5.00			3874.00	29.00 Bottom Of Top Packer
Packer	5.00			3879.00	
Stubb	1.00			3880.00	
Recorder	0.00	8648	Inside	3880.00	
Recorder	0.00	6799	Inside	3880.00	
Perforations	18.00			3898.00	
Bullnose	5.00			3903.00	24.00 Bottom Packers & Anchor

Total Tool Length: 53.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

22-4s-30w Decatur,KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48087

DST#: 3

ATTN: Rocky Milford

Test Start: 2012.10.14 @ 17:50:00

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
5.00	Mud 100M	0.025
300.00	Muddy Water 5M 95W	1.475
220.00	Muddy Water 30M 70W	1.446

Total Length: 525.00 ft Total Volume: 2.946 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

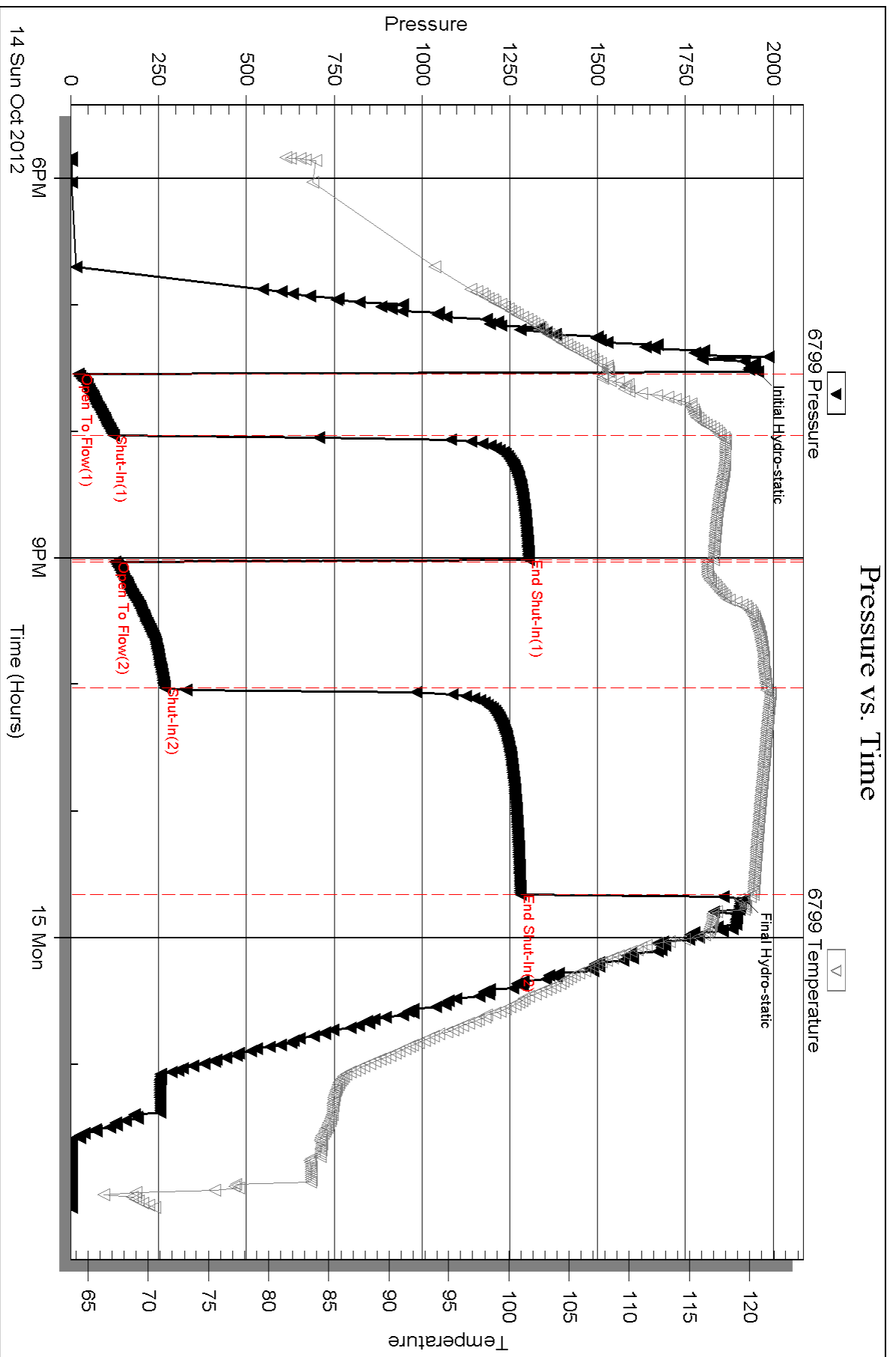
Serial #: 6799

Inside

Murfin Drilling Co.

Phillips "A" #1-22

DST Test Number: 3



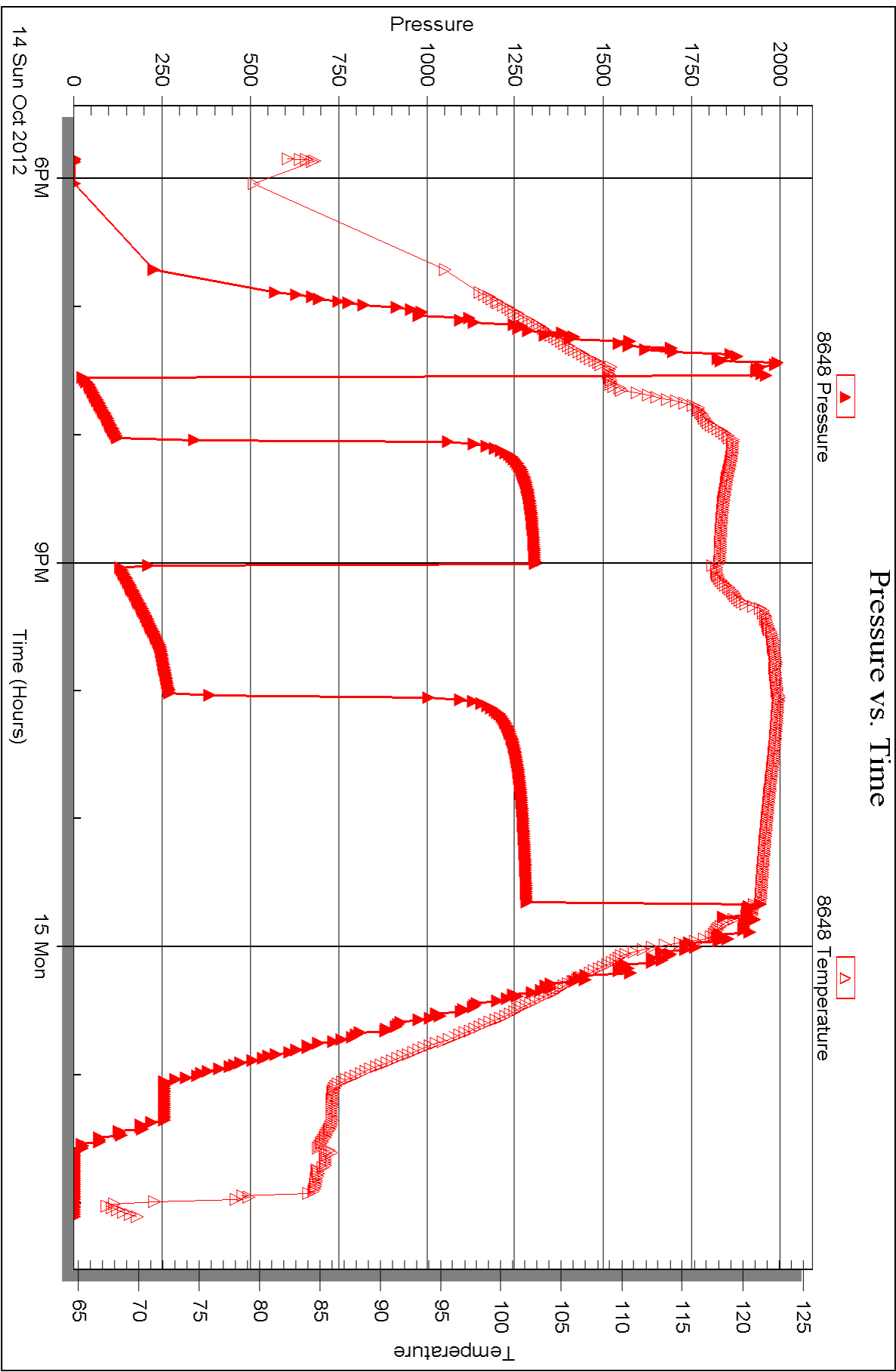
Serial #: 8648

Inside

Murfin Drilling Co.

Phillips "A" #1-22

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

Phillips "A" #1-22

22-4s-30w Decatur,KS

Start Date: 2012.10.15 @ 12:08:00

End Date: 2012.10.15 @ 18:43:30

Job Ticket #: 48088 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.10.19 @ 14:17:11

Murfin Drilling Co. 22-4s-30w Decatur,KS Phillips "A" #1-22 DST # 4 LKC "H" 2012.10.15



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-4s-30w Decatur, KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48088

DST#: 4

ATTN: Rocky Milford

Test Start: 2012.10.15 @ 12:08:00

GENERAL INFORMATION:

Formation: **LKC "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:59:00

Time Test Ended: 18:43:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: 3919.00 ft (KB) To 3952.00 ft (KB) (TVD)

Reference Elevations: 2743.00 ft (KB)

Total Depth: 3952.00 ft (KB) (TVD)

2738.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8648

Inside

Press @ Run Depth: 23.59 psig @ 3920.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.15

End Date:

2012.10.15

Last Calib.:

2012.10.15

Start Time: 12:08:05

End Time:

18:43:29

Time On Btm:

2012.10.15 @ 13:58:15

Time Off Btm:

2012.10.15 @ 17:02:00

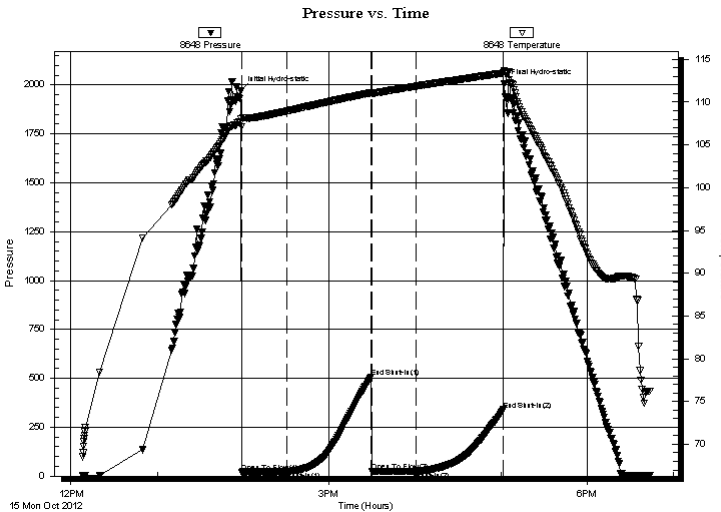
TEST COMMENT: 30 - IF- Surface Blow did not build or die

60 - IS- No Return

30 - FF- No Blow

60 - FS- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1969.34	107.99	Initial Hydro-static
1	20.24	107.09	Open To Flow (1)
33	22.42	108.96	Shut-In(1)
91	506.32	111.08	End Shut-In(1)
92	23.28	110.96	Open To Flow (2)
123	23.59	111.85	Shut-In(2)
183	339.21	113.39	End Shut-In(2)
184	2006.50	113.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100M (oil spots)	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

22-4s-30w Decatur, KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48088

DST#: 4

ATTN: Rocky Milford

Test Start: 2012.10.15 @ 12:08:00

Tool Information

Drill Pipe:	Length: 3430.00 ft	Diameter: 3.80 inches	Volume: 48.11 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 485.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: 78000.00 lb
			<u>Total Volume: 50.50 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	3919.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3891.00	
Shut In Tool	5.00			3896.00	
Hydraulic tool	5.00			3901.00	
Jars	5.00			3906.00	
Safety Joint	3.00			3909.00	
Packer	5.00			3914.00	29.00 Bottom Of Top Packer
Packer	5.00			3919.00	
Stubb	1.00			3920.00	
Recorder	0.00	8648	Inside	3920.00	
Recorder	0.00	6799	Inside	3920.00	
Perforations	27.00			3947.00	
Bullnose	5.00			3952.00	33.00 Bottom Packers & Anchor

Total Tool Length: 62.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

22-4s-30w Decatur,KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48088

DST#: 4

ATTN: Rocky Milford

Test Start: 2012.10.15 @ 12:08:00

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OSM 100M (oil spots)	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8648

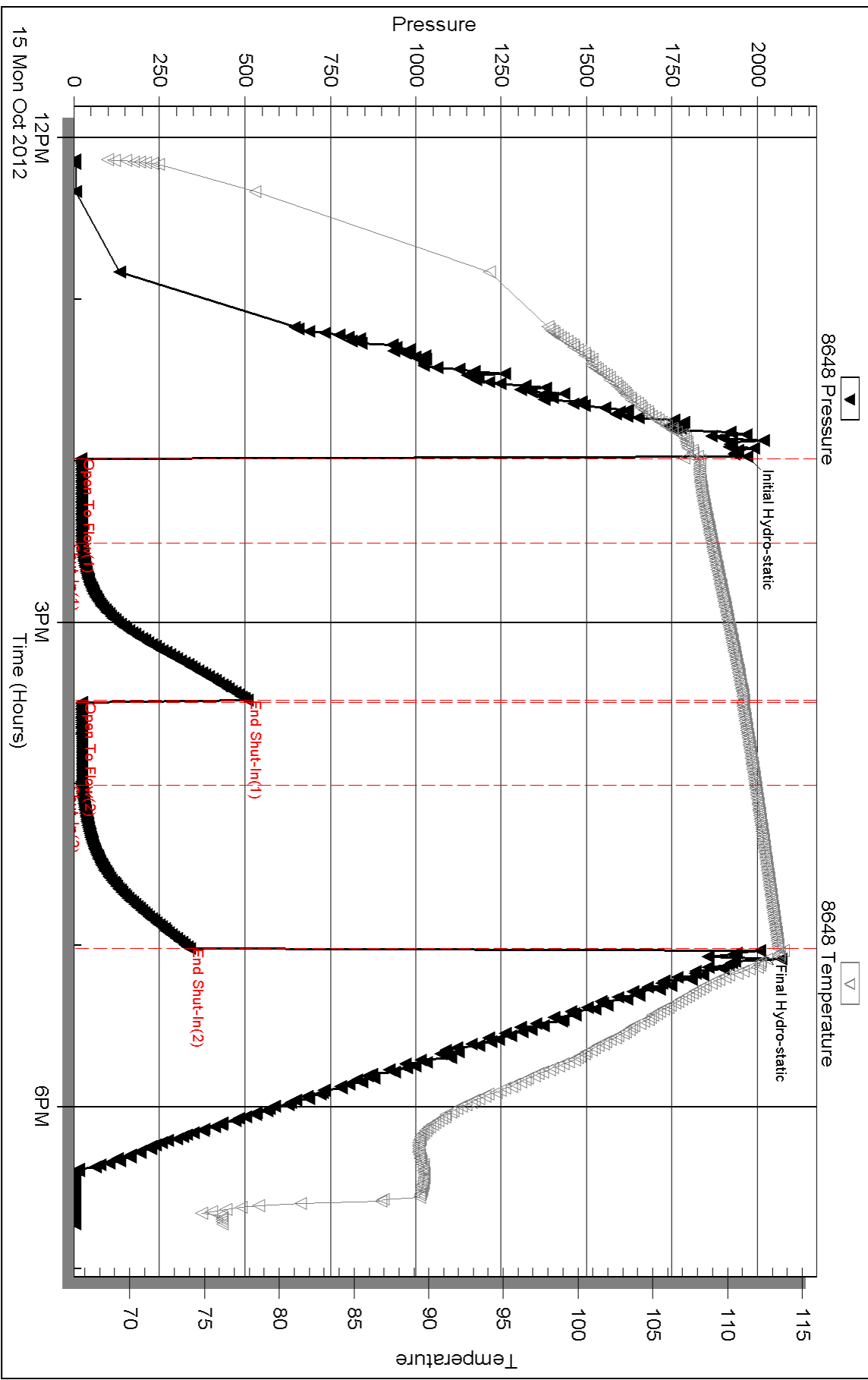
Inside

Murfin Drilling Co.

Phillips "A" #1-22

DST Test Number: 4

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 48088

Printed: 2012.10.19 @ 14:17:15

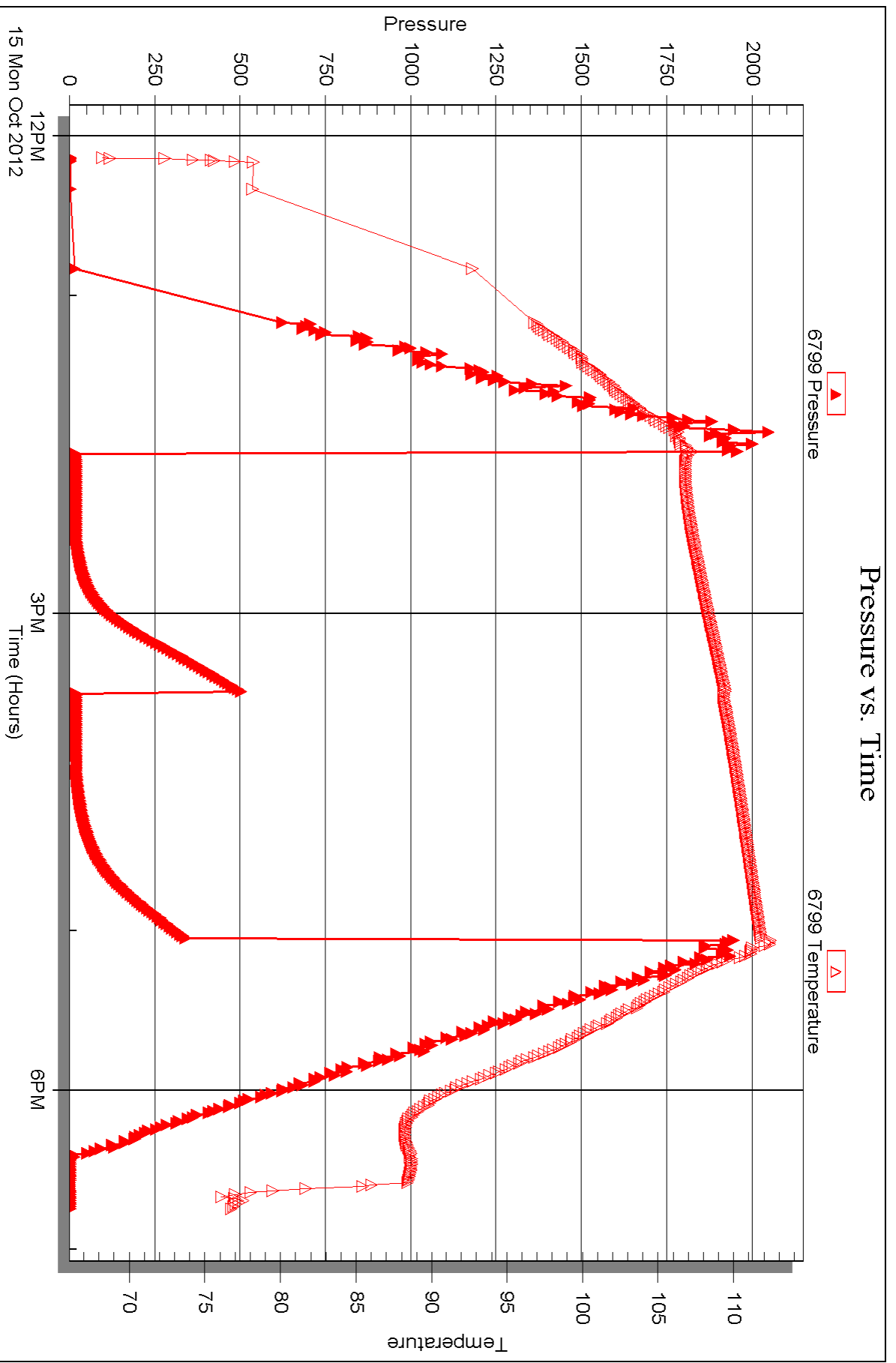
Serial #: 6799

Inside

Murfin Drilling Co.

Phillips "A" #1-22

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

Phillips "A" #1-22

22-4s-30w Decatur,KS

Start Date: 2012.10.16 @ 06:00:00

End Date: 2012.10.16 @ 14:12:30

Job Ticket #: 48089 DST #: 5

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.10.19 @ 14:16:05



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-4s-30w Decatur, KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48089

DST#: 5

ATTN: Rocky Milford

Test Start: 2012.10.16 @ 06:00:00

GENERAL INFORMATION:

Formation: **LKC "J-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:02:45

Time Test Ended: 14:12:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: 3947.00 ft (KB) To 4016.00 ft (KB) (TVD)

Reference Elevations: 2743.00 ft (KB)

Total Depth: 4016.00 ft (KB) (TVD)

2738.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6799 Inside

Press @ Run Depth: 53.58 psig @ 3948.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.16

End Date: 2012.10.16

Last Calib.: 2012.10.16

Start Time: 06:00:05

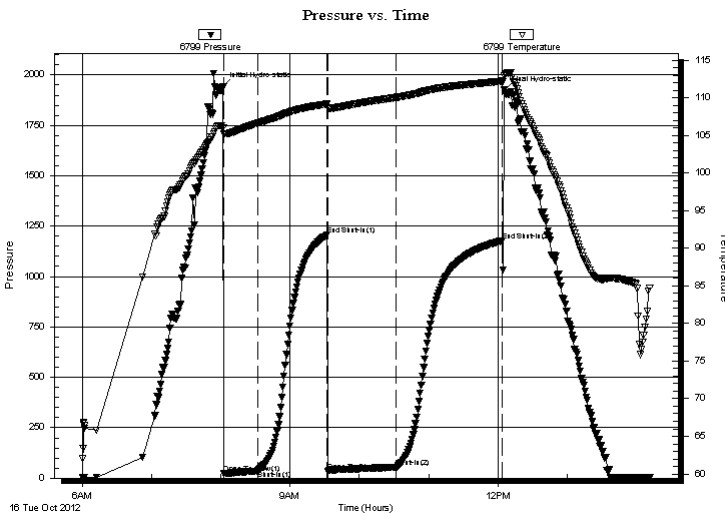
End Time: 14:12:29

Time On Btm: 2012.10.16 @ 08:01:45

Time Off Btm: 2012.10.16 @ 12:05:45

TEST COMMENT: 30 - IF- 1/2" Blow built to 2 1/2"
60 - IS- No Return
60 - FF- 1" Blow built to 1 1/4". Then died back to Surface Blow
90 - FS- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1941.55	106.02	Initial Hydro-static
1	22.35	105.27	Open To Flow (1)
30	37.73	106.64	Shut-In(1)
90	1205.98	109.19	End Shut-In(1)
91	34.82	108.67	Open To Flow (2)
150	53.58	110.06	Shut-In(2)
242	1178.30	112.22	End Shut-In(2)
244	1924.14	112.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
89.00	OCM 50o 50M	0.44
1.00	Free Oil 100o	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-4s-30w Decatur, KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

ATTN: Rocky Milford

Job Ticket: 48089

DST#: 5

Test Start: 2012.10.16 @ 06:00:00

GENERAL INFORMATION:

Formation: **LKC "J-K"**

Deviated: **No Whipstock:** ft (KB)

Time Tool Opened: 08:02:45

Time Test Ended: 14:12:30

Test Type: **Conventional Bottom Hole (Initial)**

Tester: **Kevin Mack**

Unit No: **43**

Interval: 3947.00 ft (KB) To 4016.00 ft (KB) (TVD)

Reference Elevations: 2743.00 ft (KB)

Total Depth: 4016.00 ft (KB) (TVD)

2738.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: **Good**

KB to GR/CF: 5.00 ft

Serial #: 8648

Inside

Press @ Run Depth: psig @ 3948.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.16

End Date:

2012.10.16

Last Calib.:

2012.10.16

Start Time: 06:00:05

End Time:

14:10:44

Time On Btm:

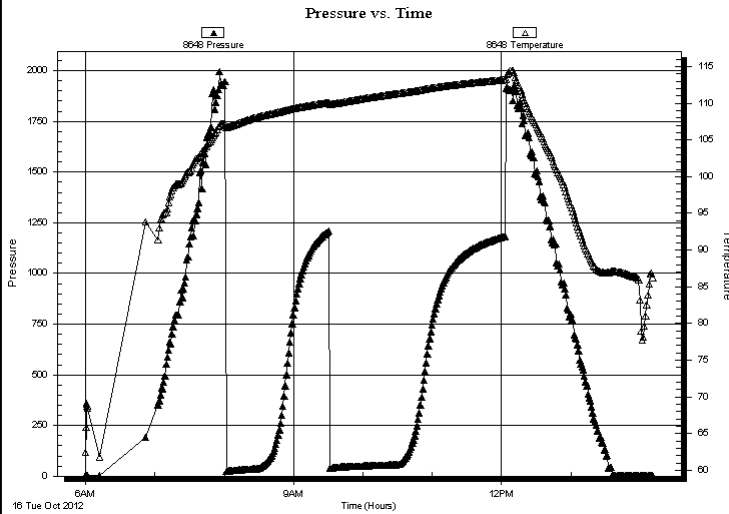
Time Off Btm:

TEST COMMENT: 30 - IF- 1/2" Blow built to 2 1/2"

60 - IS- No Return

60 - FF- 1" Blow built to 1 1/4". Then died back to Surface Blow

90 - FS- No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
89.00	OCM 50o 50M	0.44
1.00	Free Oil 100o	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

22-4s-30w Decatur,KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48089

DST#: 5

ATTN: Rocky Milford

Test Start: 2012.10.16 @ 06:00:00

Tool Information

Drill Pipe:	Length: 3453.00 ft	Diameter: 3.80 inches	Volume: 48.44 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 485.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 50.83 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	3947.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	69.00 ft			
Tool Length:	98.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3919.00	
Shut In Tool	5.00			3924.00	
Hydraulic tool	5.00			3929.00	
Jars	5.00			3934.00	
Safety Joint	3.00			3937.00	
Packer	5.00			3942.00	29.00 Bottom Of Top Packer
Packer	5.00			3947.00	
Stubb	1.00			3948.00	
Recorder	0.00	8648	Inside	3948.00	
Recorder	0.00	6799	Inside	3948.00	
Perforations	1.00			3949.00	
Change Over Sub	1.00			3950.00	
Drill Pipe	62.00			4012.00	
Change Over Sub	1.00			4013.00	
Bullnose	3.00			4016.00	69.00 Bottom Packers & Anchor

Total Tool Length: 98.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

22-4s-30w Decatur,KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48089

DST#: 5

ATTN: Rocky Milford

Test Start: 2012.10.16 @ 06:00:00

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: 56.00 sec/qt

Cushion Volume:

bbf

Water Loss: 5.59 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
89.00	OCM 50o 50M	0.438
1.00	Free Oil 100o	0.005

Total Length: 90.00 ft Total Volume: 0.443 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

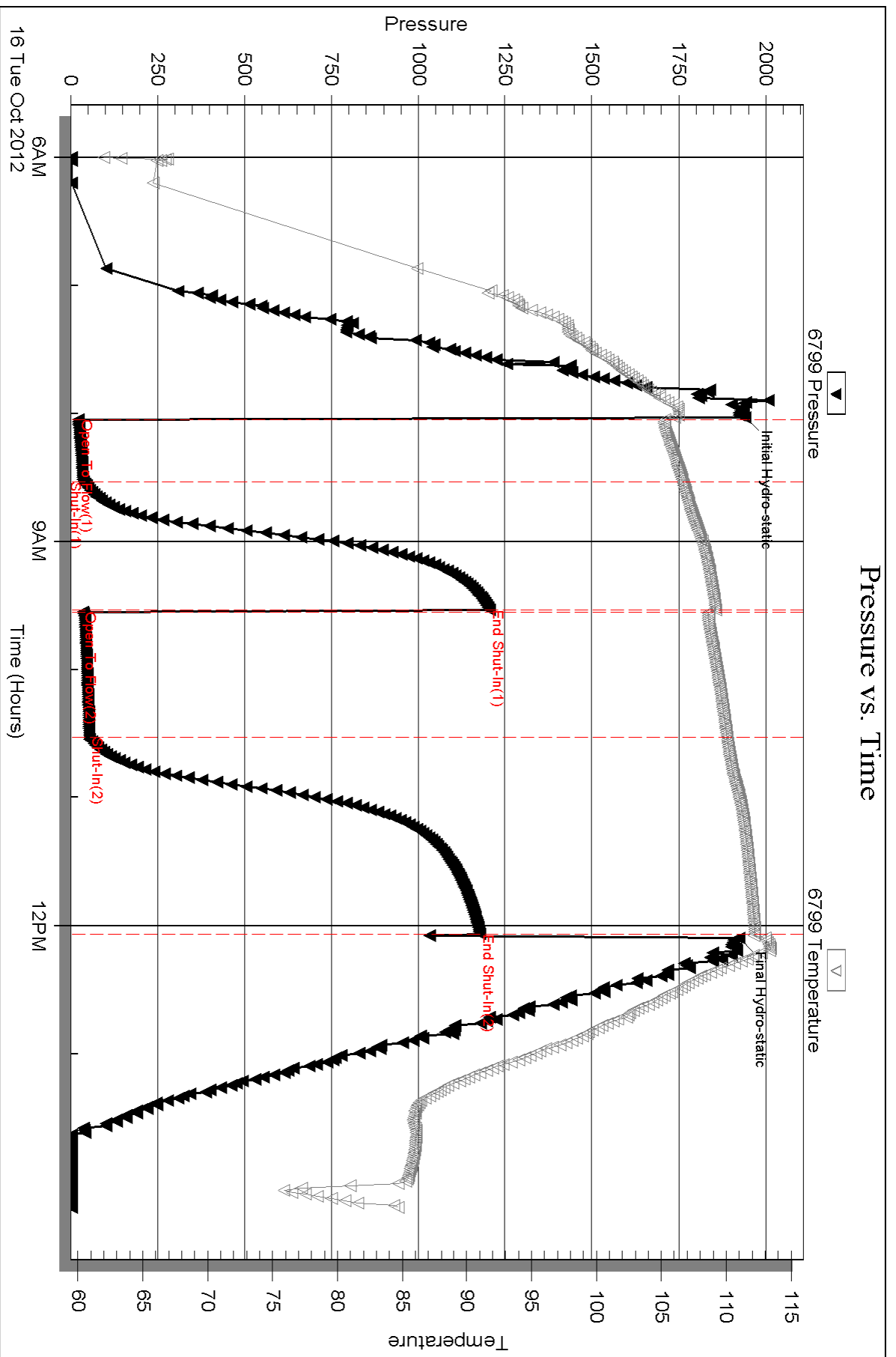
Serial #: 6799

Inside

Murfin Drilling Co.

Phillips "A" #1-22

DST Test Number: 5



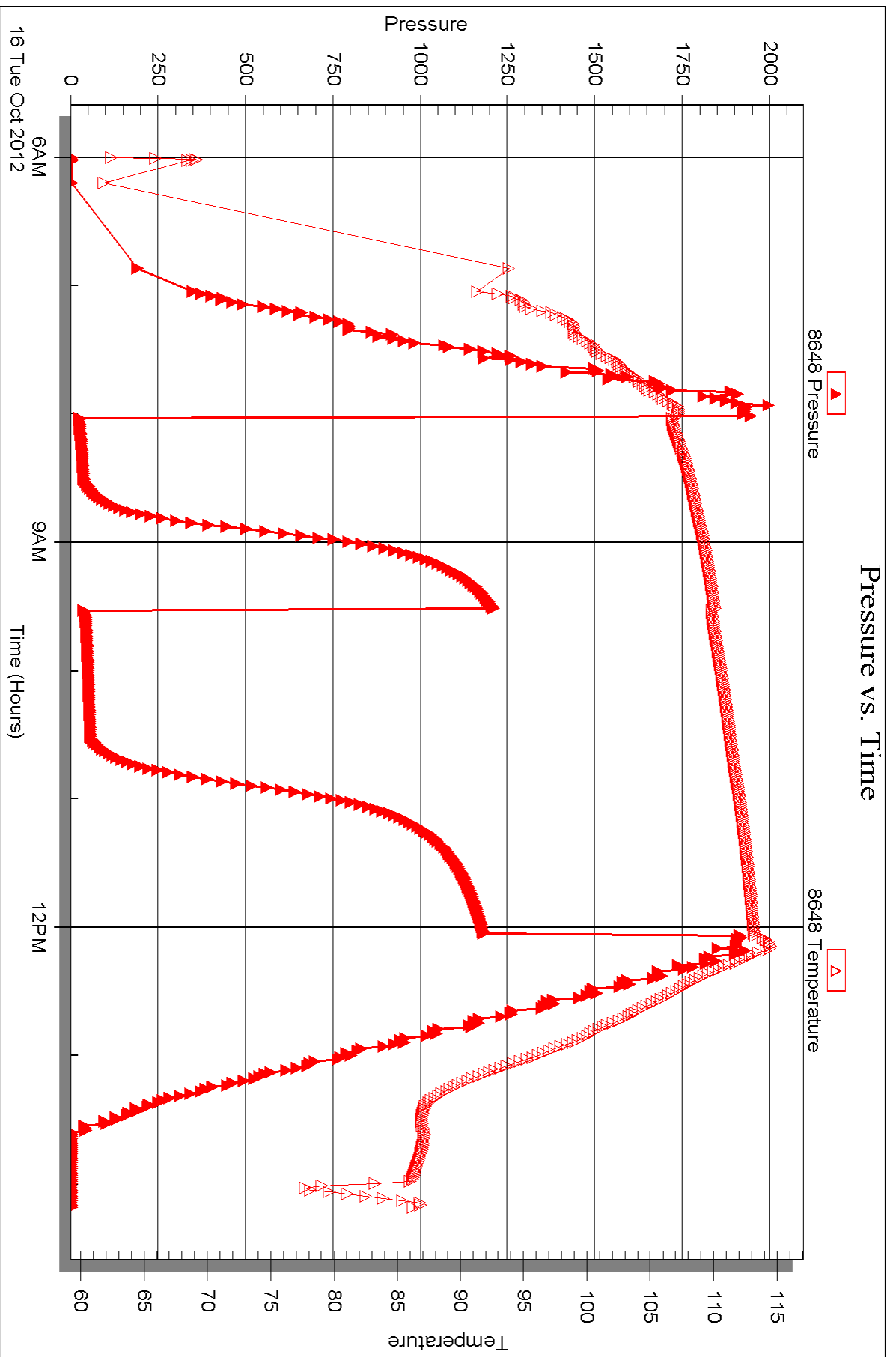
Serial #: 8648

Inside

Murfin Drilling Co.

Phillips "A" #1-22

DST Test Number: 5





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Co.**

250 N Water STE 300
Wichita KS 67202

ATTN: Rocky Milford

Phillips "A" #1-22

22-4s-30w Decatur,KS

Start Date: 2012.10.17 @ 17:20:00

End Date: 2012.10.18 @ 00:33:30

Job Ticket #: 48090 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.10.19 @ 14:05:25

Murfin Drilling Co.
22-4s-30w Decatur,KS
Phillips "A" #1-22
DST # 6
Cherokee Sand
2012.10.17



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-4s-30w Decatur, KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48090

DST#: 6

ATTN: Rocky Milford

Test Start: 2012.10.17 @ 17:20:00

GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:03:45

Time Test Ended: 00:33:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: 4225.00 ft (KB) To 4252.00 ft (KB) (TVD)

Reference Elevations: 2743.00 ft (KB)

Total Depth: 4252.00 ft (KB) (TVD)

2738.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6799 Inside

Press @ Run Depth: 43.50 psig @ 4226.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.17

End Date:

2012.10.18

Last Calib.:

2012.10.18

Start Time: 17:20:05

End Time:

00:33:29

Time On Btm:

2012.10.17 @ 19:02:45

Time Off Btm:

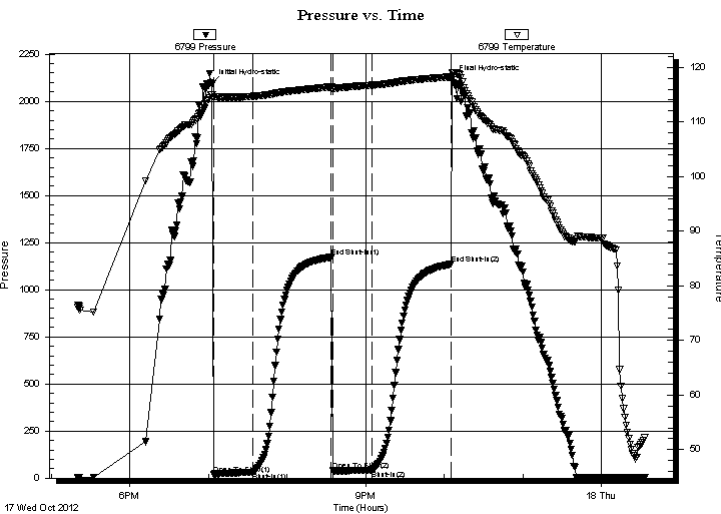
2012.10.17 @ 22:05:45

TEST COMMENT: 30 - IF- Surface Blow built to 1 3/4"

60 - IS- No Return

30 - FF- No Blow

60 - FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2092.25	115.03	Initial Hydro-static
1	21.30	114.40	Open To Flow (1)
31	31.63	114.69	Shut-In(1)
91	1173.05	116.43	End Shut-In(1)
92	39.62	115.97	Open To Flow (2)
122	43.50	116.73	Shut-In(2)
182	1135.42	118.24	End Shut-In(2)
183	2114.16	118.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	OCM 40o 60M	0.25
10.00	Free Oil	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co.

22-4s-30w Decatur, KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48090

DST#: 6

ATTN: Rocky Milford

Test Start: 2012.10.17 @ 17:20:00

GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:03:45

Time Test Ended: 00:33:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: 4225.00 ft (KB) To 4252.00 ft (KB) (TVD)

Reference Elevations: 2743.00 ft (KB)

Total Depth: 4252.00 ft (KB) (TVD)

2738.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8648 Inside

Press @ RunDepth: psig @ 4226.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.17

End Date:

2012.10.18

Last Calib.:

2012.10.18

Start Time: 17:20:35

End Time:

00:32:29

Time On Btm:

Time Off Btm:

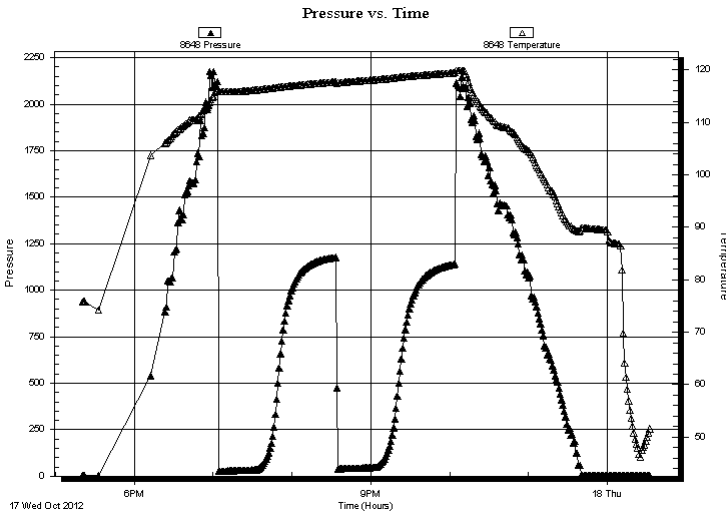
TEST COMMENT: 30 - IF- Surface Blow built to 1 3/4"

60 - IS- No Return

30 - FF- No Blow

60 - FS- No Return

PRESSURE SUMMARY



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

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
50.00	OCM 40o 60M	0.25
10.00	Free Oil	0.05

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co.

22-4s-30w Decatur,KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48090

DST#: 6

ATTN: Rocky Milford

Test Start: 2012.10.17 @ 17:20:00

Tool Information

Drill Pipe:	Length: 3736.00 ft	Diameter: 3.80 inches	Volume: 52.41 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 485.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 54.80 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4225.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4197.00	
Shut In Tool	5.00			4202.00	
Hydraulic tool	5.00			4207.00	
Jars	5.00			4212.00	
Safety Joint	3.00			4215.00	
Packer	5.00			4220.00	29.00 Bottom Of Top Packer
Packer	5.00			4225.00	
Stubb	1.00			4226.00	
Recorder	0.00	8648	Inside	4226.00	
Recorder	0.00	6799	Inside	4226.00	
Perforations	21.00			4247.00	
Bullnose	5.00			4252.00	27.00 Bottom Packers & Anchor

Total Tool Length: 56.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co.

22-4s-30w Decatur,KS

250 N Water STE 300
Wichita KS 67202

Phillips "A" #1-22

Job Ticket: 48090

DST#: 6

ATTN: Rocky Milford

Test Start: 2012.10.17 @ 17:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

20 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 4.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
50.00	OCM 40o 60M	0.246
10.00	Free Oil	0.049

Total Length: 60.00 ft Total Volume: 0.295 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API 22 @ 80 deg. = 20 cor.

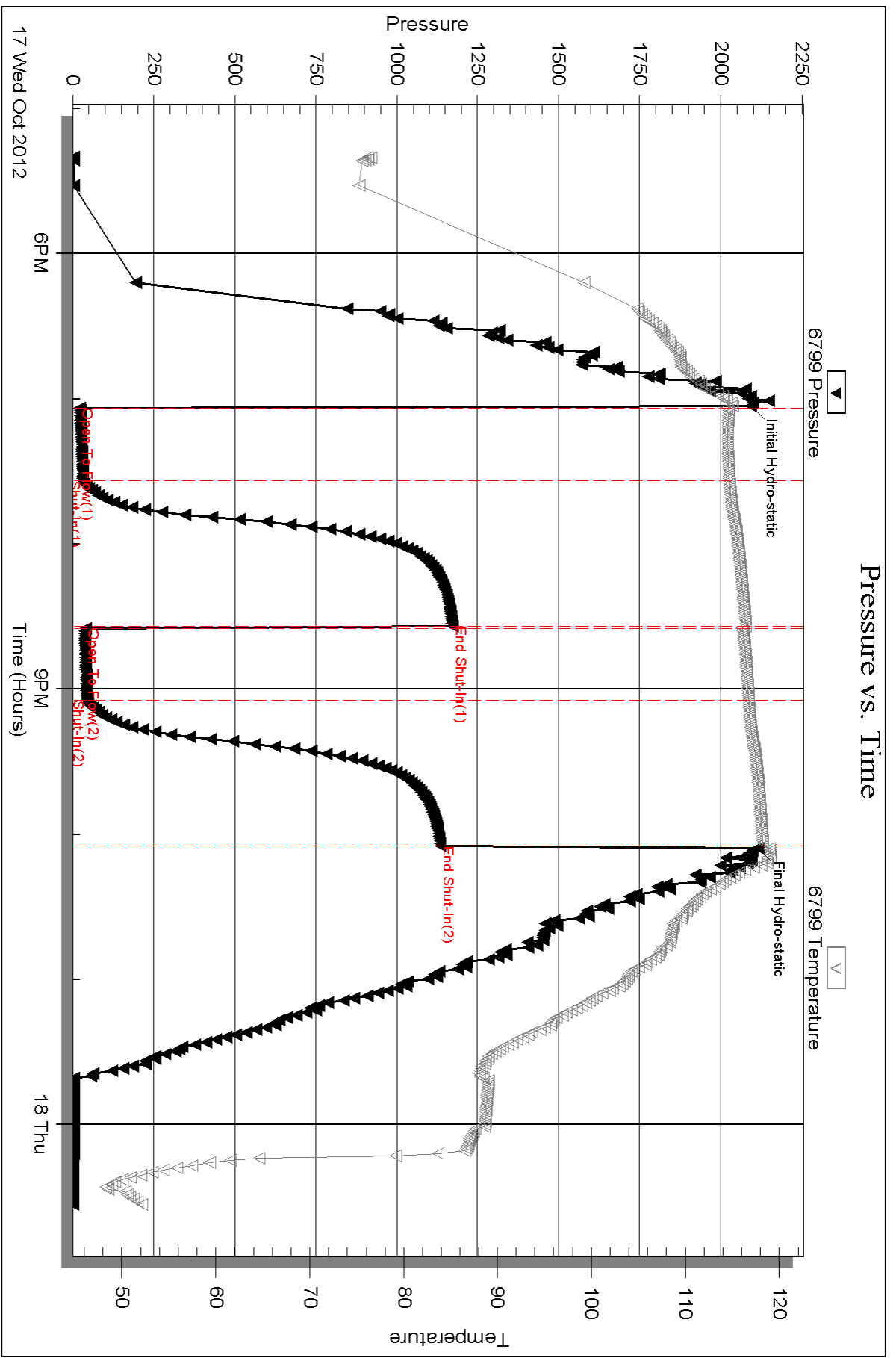
Serial #: 6799

Inside

Murfin Drilling Co.

Phillips "A" #1-22

DST Test Number: 6



Triobite Testing, Inc

Ref. No: 48090

Printed: 2012.10.19 @ 14:05:34

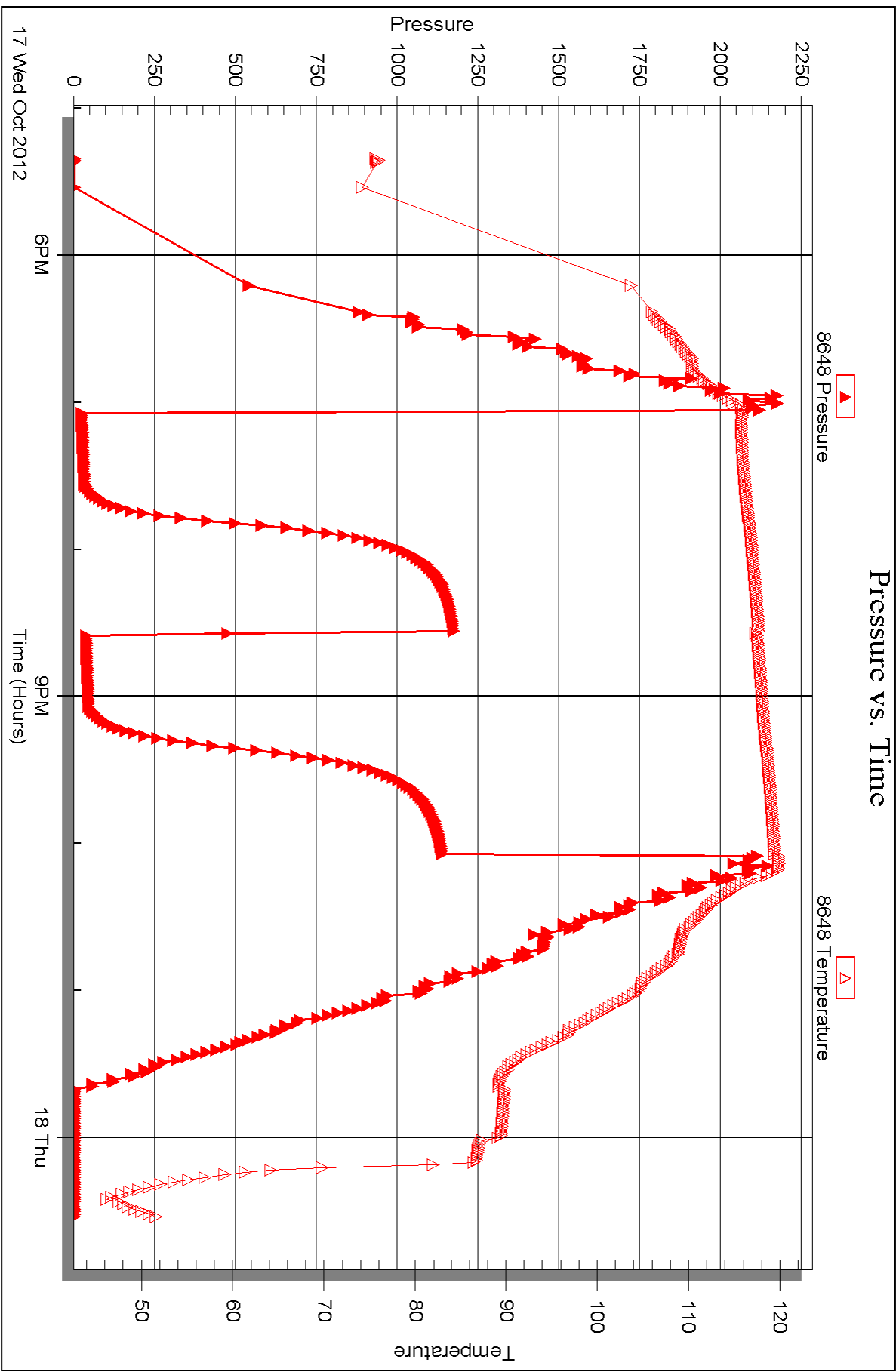
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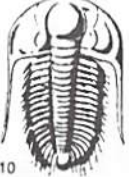
Inside

Murfin Drilling Co.

Phillips "A" #1-22

DST Test Number: 6





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48085

Well Name & No. Phillips A #1-22 Test No. 1 Date 10-13-12
 Company Murfin Drilling Elevation 2738 KB 2743 GL
 Address 250 NWATER STE 300 Wichita Ks 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin Rig 3
 Location: Sec. 22 Twp. 4s Rge. 30w Co. Decatur State KS

Interval Tested 3818 3850 Zone Tested Lansing A
 Anchor Length 32 Drill Pipe Run 3335 Mud Wt. 9.1
 Top Packer Depth 3813 Drill Collars Run 485 Vis 57
 Bottom Packer Depth 3818 Wt. Pipe Run 0 WL 52
 Total Depth 3850 Chlorides 900 ppm System LCM

Blow Description IF; Built to 7'1/2"
ISI; No Blow
FF; Built to B.O.B. in 58 min
FSI; No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>M</u>			<u>100</u>	
<u>185</u>	<u>MW</u>		<u>90</u>	<u>10</u>	
<u>240</u>	<u>MW</u>		<u>95</u>	<u>5</u>	

Rec Total 495 BHT 117 Gravity API RW .393 @ 66.2 °F Chlorides 18000 ppm

(A) Initial Hydrostatic 1815 Test 1150 T-On Location 11:45
 (B) First Initial Flow 21 Jars 250 T-Started 12:50
 (C) First Final Flow 111 Safety Joint 75 T-Open 15:10
 (D) Initial Shut-In 1289 Circ Sub N/C T-Pulled 19:10
 (E) Second Initial Flow 116 Hourly Standby _____ T-Out 21:11
 (F) Second Final Flow 146 Mileage ~~200~~ 50 RT 77.50 Comments _____
 (G) Final Shut-In 1283 Sampler _____
 (H) Final Hydrostatic 1874 Straddle _____ Ruined Shale Packer _____
 Shale Packer 250 Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1802.50
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 90 Sub Total 1802.50

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48086

Well Name & No. Phillips A # 1-22 Test No. 2 Date 10-14-12
 Company Murkin Drilling Co., Inc. Elevation ~~2738~~ 2738 GL
 Address 250 N Water STE # 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murkin #3
 Location: Sec. 22 Twp. 4S Rge. 30 W Co. Decatur State KS

Interval Tested 3842-3866 Zone Tested LKC "B"
 Anchor Length 24' Drill Pipe Run 3333 Mud Wt. 9.1
 Top Packer Depth 3838 Drill Collars Run 485' Vis 57
 Bottom Packer Depth 3842 Wt. Pipe Run Ø WL 5.2
 Total Depth 3866 Chlorides 9000 ppm System LCM 1#

Blow Description IF- 1/4" Blow built to 1"
IS- NO Return
FF- NO Blow
FS- NO Return

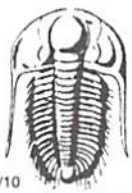
Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Free Oil</u>	<u>1000</u>			
<u>19</u>	<u>OCM</u>	<u>5</u>		<u>95</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT 110 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	<u>1939</u>	<input checked="" type="checkbox"/> Test	<u>1150</u>	T-On Location	<u>2:45 AM</u>
(B) First Initial Flow	<u>19</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u>2:58 AM</u>
(C) First Final Flow	<u>26</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>4:38 AM</u>
(D) Initial Shut-In	<u>964</u>	<input checked="" type="checkbox"/> Circ Sub	<u>N/C</u>	T-Pulled	<u>7:38 AM</u>
(E) Second Initial Flow	<u>31</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>9:49 AM</u>
(F) Second Final Flow	<u>34</u>	<input checked="" type="checkbox"/> Mileage	<u>50 RT</u> 77.50	Comments	
(G) Final Shut-In	<u>745</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>1867</u>	<input type="checkbox"/> Straddle		<input type="checkbox"/> Ruined Shale Packer	
Initial Open	<u>30</u>	<input checked="" type="checkbox"/> Shale Packer	<u>250</u>	<input type="checkbox"/> Ruined Packer	
Initial Shut-In	<u>60</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Extra Copies	
Final Flow	<u>30</u>	<input type="checkbox"/> Extra Recorder		Sub Total	<u>0</u>
Final Shut-In	<u>60</u>	<input type="checkbox"/> Day Standby		Total	<u>1802.50</u>
		<input type="checkbox"/> Accessibility		MP/DST Disc't	
		Sub Total	<u>1802.50</u>		

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48087

Well Name & No. Phillips A #22 Test No. 3 Date 10-14-12
 Company Murfin Drilling Co., Inc Elevation 2743 KB 2738 GL
 Address 250 N Water STE #3000 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #3
 Location: Sec. 22 Twp. 4S Rge. 30W Co. Decatur State KS

Interval Tested 3879-3903 Zone Tested LKC "F"
 Anchor Length 24' Drill Pipe Run 3390 Mud Wt. 9.3
 Top Packer Depth 3875 Drill Collars Run 485 Vis 57
 Bottom Packer Depth 3879 Wt. Pipe Run 0 WL 5.6
 Total Depth 3903 Chlorides 4,5000 ppm System LCM 1.5#

Blow Description IF - Surface Blow built to 9 3/4"
IS - NO Return
FF - Surface Blow Started at 3 min. Built to Bob in 45 min.
FS - NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>220</u>	<u>Muddy water</u>		<u>70</u>	<u>30</u>	
<u>300</u>	<u>Muddy water</u>		<u>95</u>	<u>5</u>	
<u>5</u>	<u>Mud (heavy)</u>			<u>100</u>	

Rec Total 525 BHT 120 Gravity - API RW .78 @ 75 ° F Chlorides 8,000 ppm

(A) Initial Hydrostatic <u>1956</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>5:30 PM</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>5:50 PM</u>
(C) First Final Flow <u>121</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>7:32 PM</u>
(D) Initial Shut-In <u>1304</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>11:32 PM</u>
(E) Second Initial Flow <u>127</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>2:07 AM</u>
(F) Second Final Flow <u>267</u>	<input checked="" type="checkbox"/> Mileage <u>50RT</u> <u>77.50</u>	Comments
(G) Final Shut-In <u>1280</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1918</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Total <u>1552.50</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1552.50</u>	

Approved By _____ Our Representative

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48088

Well Name & No. Phillips A#1-22 Test No. 84 Date 10-15-12
 Company Murfin Drilling Co., Inc. Elevation 2743 KB 2738 GL
 Address 250 N Water STE #3000 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #3
 Location: Sec. 22 Twp. 4S Rge. 30W Co. Decatur State KS

Interval Tested 3919-3952 Zone Tested LKC "H"
 Anchor Length 33' Drill Pipe Run 3430 Mud Wt. 9.3
 Top Packer Depth 3915 Drill Collars Run 485 Vis 51
 Bottom Packer Depth 3919 Wt. Pipe Run Ø WL 5.6
 Total Depth 3952 Chlorides 1,500 ppm System LCM 1.5*

Blow Description IF- Surface Blow did not build or die
IS- No Return
FF- NO Blow
FS- NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>OSM</u>	<u>Spots</u>		<u>1000</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

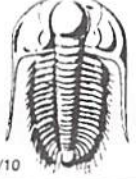
Rec Total 5 BHT 113 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	<u>1969</u>	<input checked="" type="checkbox"/> Test	<u>1150</u>	T-On Location	<u>11:30 AM</u>
(B) First Initial Flow	<u>20</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u>12:00 PM</u>
(C) First Final Flow	<u>22</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>2:00 PM</u>
(D) Initial Shut-In	<u>506</u>	<input checked="" type="checkbox"/> Circ Sub	<u>NIC</u>	T-Pulled	<u>5:00 PM</u>
(E) Second Initial Flow	<u>23</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>6:45 PM</u>
(F) Second Final Flow	<u>23</u>	<input checked="" type="checkbox"/> Mileage	<u>50 RT</u> 77.50	Comments	
(G) Final Shut-In	<u>339</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>2006</u>	<input type="checkbox"/> Straddle		<input type="checkbox"/> Ruined Shale Packer	

Initial Open	<u>30</u>	<input type="checkbox"/> Shale Packer		<input type="checkbox"/> Ruined Packer	
Initial Shut-In	<u>60</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Extra Copies	
Final Flow	<u>30</u>	<input type="checkbox"/> Extra Recorder		Sub Total	<u>0</u>
Final Shut-In	<u>60</u>	<input type="checkbox"/> Day Standby		Total	<u>1552.50</u>
		<input type="checkbox"/> Accessibility		MP/DST Disc't	
		Sub Total	<u>1552.50</u>		

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

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Test Ticket

NO. 48089

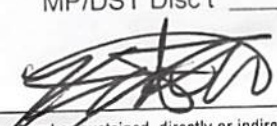
Well Name & No. Phillips A #1-22 Test No. 5 Date 10-16-12
 Company Murray Drilling Co., Inc. Elevation 2743 KB 2738 GL
 Address 250 N Water STE #3000 Wichita, KS 67202
 Co. Rep / Geo. Rocky Miford Rig Murray #3
 Location: Sec. 22 Twp. 4S Rge. 30W Co. Decatur State KS

Interval Tested 3947-4016 Zone Tested LKC "J-K"
 Anchor Length 69' Drill Pipe Run 3453 Mud Wt. 9.2
 Top Packer Depth 3943 Drill Collars Run 485 Vis SB
 Bottom Packer Depth 3947 Wt. Pipe Run 0 WL 56
 Total Depth 4016 Chlorides 1500 ppm System LCM 2#

Blow Description IF- 1/2" Blow built to 2 1/2"
IS- NO Return
FF- 1" Blow built to 1 1/4". Then died back to Surface Blow.
FS- NO Return

Sec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Free Oil</u>	<u>100</u>			
<u>89</u>	<u>OCM</u>	<u>50</u>		<u>50</u>	

Rec Total 908 BHT 112 Gravity - API RW - @ - ° F Chlorides - ppm
 A) Initial Hydrostatic 1941 Test 1250 T-On Location 5:50 AM
 B) First Initial Flow 22 Jars 250 T-Started 6:00 AM
 C) First Final Flow 37 Safety Joint 75 T-Open 8:02 AM
 D) Initial Shut-In 1205 Circ Sub N/C T-Pulled 12:02 PM
 E) Second Initial Flow 34 Hourly Standby _____ T-Out 2:12 PM
 F) Second Final Flow 53 Mileage 50 RT 77.50 Comments _____
 G) Final Shut-In 1178 Sampler _____
 H) Final Hydrostatic 1924 Straddle _____
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1652.50
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1652.50

Approved By _____ Our Representative 
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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48090

Well Name & No. Phillips A #1-22 Test No. 6 Date 10-17-12
 Company Murfin Drilling Co., Inc Elevation 2743 KB 2738 GL
 Address 250 N Water STE # 300 Wichita, KS 67202
 Co. Rep / Geo. Rocky Milford Rig Murfin #3
 Location: Sec. 22 Twp. 4S Rge. 30 W Co. Decatur State KS

Interval Tested 4225-4252 Zone Tested Cherokee Sand
 Anchor Length 27' Drill Pipe Run 3736 Mud Wt. 9.1
 Top Packer Depth 4221 Drill Collars Run 485 Vis 56
 Bottom Packer Depth 4225 Wt. Pipe Run Ø WL 4.8
 Total Depth 4252 Chlorides 1200 ppm System LCM 2#

Blow Description IF- Surface Blow built to 1 3/4"
IS- No Return
FF- No Blow
FS- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>108</u>	<u>Free oil</u>	<u>100</u>			
<u>50</u>	<u>OCM</u>	<u>40</u>		<u>60</u>	

Rec Total 60' BHT 118 Gravity 20 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>2092</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>4:45 PM</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>5:20 PM</u>
(C) First Final Flow <u>31</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>7:04 PM</u>
(D) Initial Shut-In <u>1173</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>10:04 PM</u>
(E) Second Initial Flow <u>39</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>12:33 AM</u>
(F) Second Final Flow <u>43</u>	<input checked="" type="checkbox"/> Mileage <u>50 RT X2</u> 150	Comments
(G) Final Shut-In <u>1135</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2114</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>83.33</u>
Final Shut-In <u>60</u>	<input checked="" type="checkbox"/> Day Standby <u>X2 hrs</u> 2.5hrs	Total <u>1808.33</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1725</u>	

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