



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water STE 300
Wichita KS 67202

ATTN: Jeff Christian

Gerstberger #1-29

29-17s-36w Wichita,KS

Start Date: 2013.09.28 @ 14:38:15

End Date: 2013.09.28 @ 23:01:30

Job Ticket #: 52925 DST #: 1

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

Printed: 2013.10.04 @ 11:28:31



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Company

29-17s-36w Wichita, KS

250 N Water STE 300
Wichita KS 67202

Gerstberger #1-29

Job Ticket: 52925

DST#: 1

ATTN: Jeff Christian

Test Start: 2013.09.28 @ 14:38:15

GENERAL INFORMATION:

Formation: **LKC E-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:49:00

Time Test Ended: 23:01:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 65

Interval: 4057.00 ft (KB) To 4090.00 ft (KB) (TVD)

Reference Elevations: 3298.00 ft (KB)

Total Depth: 4090.00 ft (KB) (TVD)

3287.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8846 Outside

Press @ Run Depth: 195.31 psig @ 4058.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.09.28

End Date: 2013.09.28

Last Calib.: 2013.09.28

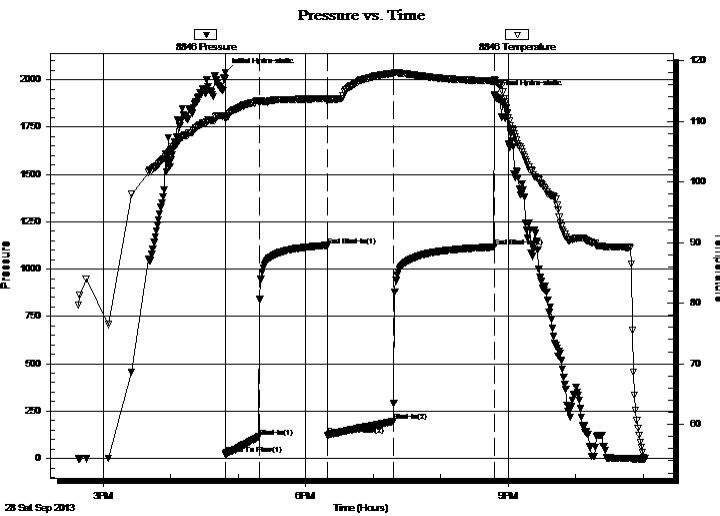
Start Time: 14:38:15

End Time: 23:01:30

Time On Btm: 2013.09.28 @ 16:48:45

Time Off Btm: 2013.09.28 @ 20:48:00

TEST COMMENT: IF: Built to 7" blow
IS: No return blow
FF: BOB in 55 min.
FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2039.13	110.91	Initial Hydro-static
1	22.45	110.40	Open To Flow (1)
30	114.00	113.28	Shut-In(1)
91	1125.03	113.74	End Shut-In(1)
91	121.08	113.22	Open To Flow (2)
150	195.31	117.91	Shut-In(2)
239	1116.45	116.64	End Shut-In(2)
240	1920.20	116.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
237.00	mcsw 10%m 90%sw	1.17
161.00	mud 100%m	1.93

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

29-17s-36w Wichita, KS

250 N Water STE 300
Wichita KS 67202

Gerstberger #1-29

Job Ticket: 52925

DST#: 1

ATTN: Jeff Christian

Test Start: 2013.09.28 @ 14:38:15

Tool Information

Drill Pipe:	Length: 3768.00 ft	Diameter: 3.80 inches	Volume: 52.86 bbl	Tool Weight:	1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 273.00 ft	Diameter: 2.25 inches	Volume: 1.34 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 54.20 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	62000.00 lb
Depth to Top Packer:	4057.00 ft			Final	64000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	33.00 ft				
Tool Length:	61.00 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			4030.00	
Shut In Tool	5.00			4035.00	
Hydraulic tool	5.00			4040.00	
Jars	5.00			4045.00	
Safety Joint	3.00			4048.00	
Packer	5.00			4053.00	28.00 Bottom Of Top Packer
Packer	4.00			4057.00	
Stubb	1.00			4058.00	
Recorder	0.00	8737	Inside	4058.00	
Recorder	0.00	8846	Outside	4058.00	
Perforations	27.00			4085.00	
Bullnose	5.00			4090.00	33.00 Bottom Packers & Anchor

Total Tool Length: 61.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company
250 N Water STE 300
Wichita KS 67202
ATTN: Jeff Christian

29-17s-36w Wichita,KS
Gerstberger #1-29
Job Ticket: 52925 **DST#: 1**
Test Start: 2013.09.28 @ 14:38:15

Mud and Cushion Information

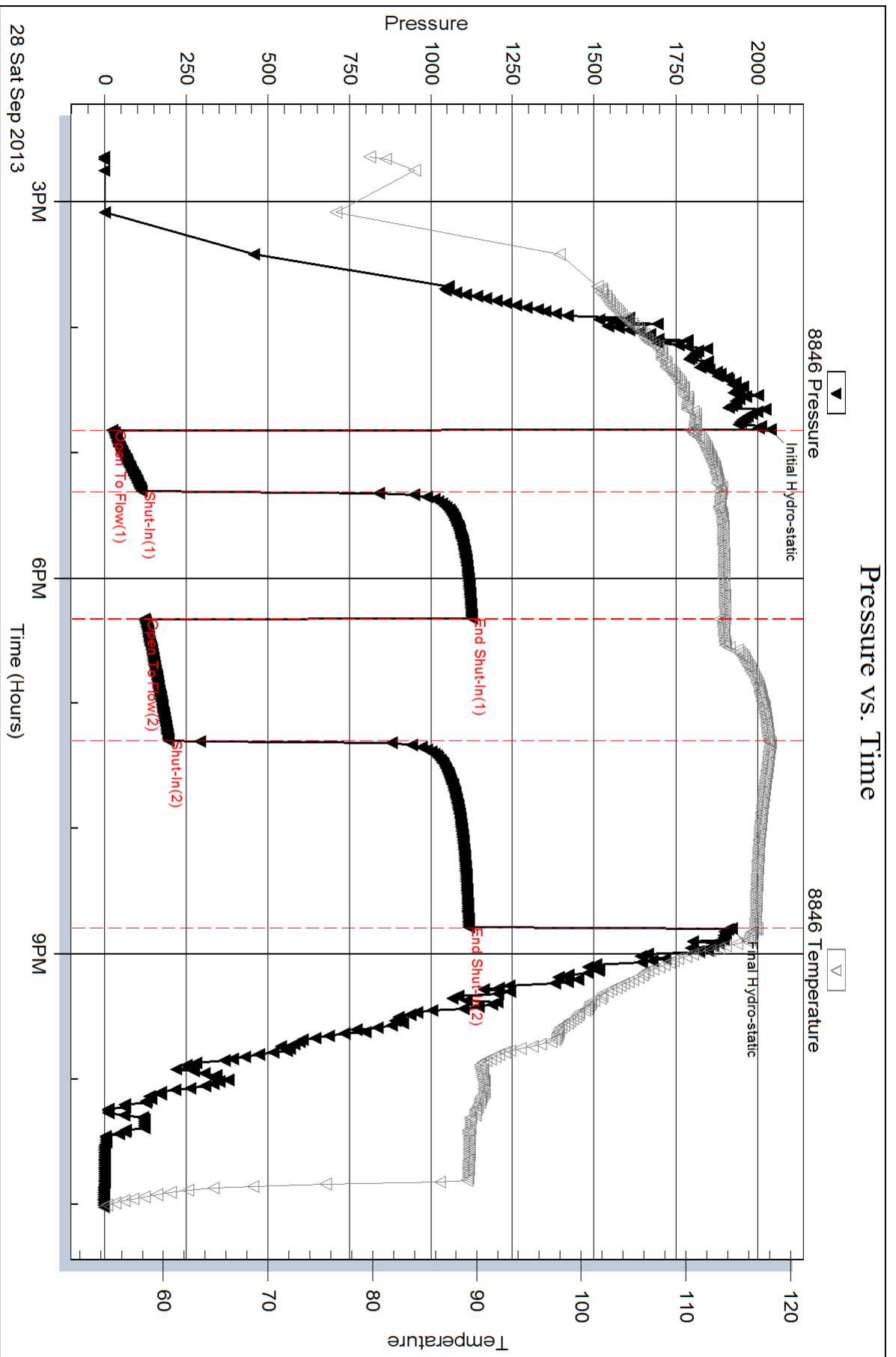
Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 19000 ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.96 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 5700.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
237.00	mcsw 10%m 90%sw	1.166
161.00	mud 100%m	1.930

Total Length: 398.00 ft Total Volume: 3.096 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: RW= .498@ 52.8= 19,000 ppm



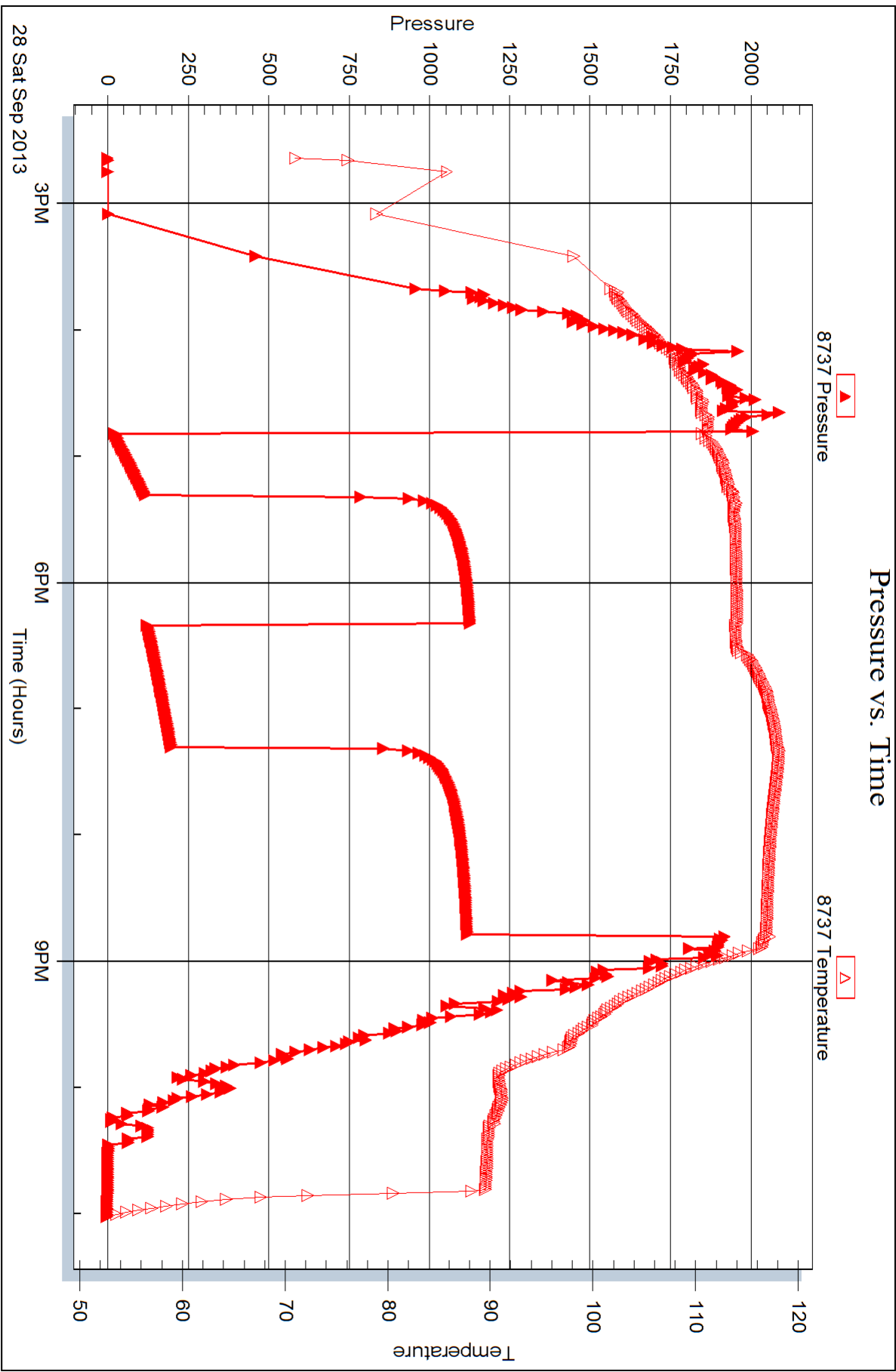
Serial #: 8737

Inside

Murfin Drilling Company

Gerstberger #1-29

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 52925

Printed: 2013.10.04 @ 11:28:33



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water STE 300
Wichita KS 67202

ATTN: Jeff Christian

Gerstberger #1-29

29-17s-36w Wichita,KS

Start Date: 2013.09.30 @ 20:46:15

End Date: 2013.10.01 @ 05:50:00

Job Ticket #: 54676 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.04 @ 11:27:20



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company
 250 N Water STE 300
 Wichita KS 67202
 ATTN: Jeff Christian

29-17s-36w Wichita, KS

Gerstberger #1-29

Job Ticket: 54676

DST#: 2

Test Start: 2013.09.30 @ 20:46:15

GENERAL INFORMATION:

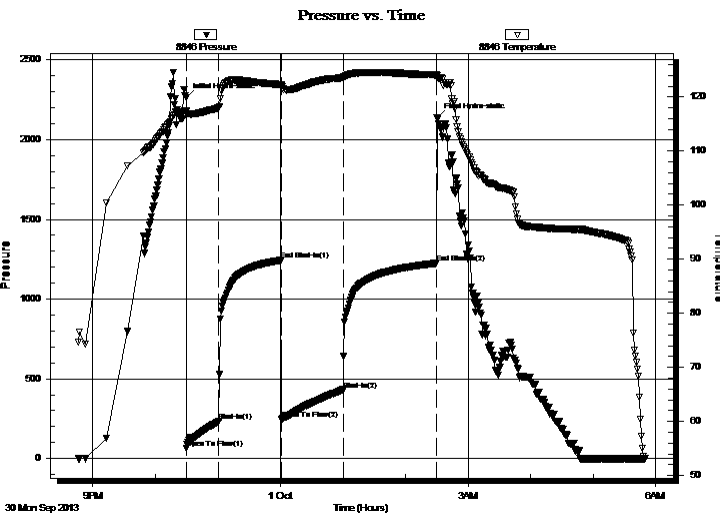
Formation: **Marmaton**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:29:30
 Time Test Ended: 05:50:00
 Interval: **4406.00 ft (KB) To 4453.00 ft (KB) (TVD)**
 Total Depth: 4456.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Mike Roberts
 Unit No: 65
 Reference Elevations: 3298.00 ft (KB)
 3287.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8846

Inside

Press @ Run Depth: 431.39 psig @ 4407.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.09.30 End Date: 2013.10.01 Last Calib.: 2013.10.01
 Start Time: 20:46:15 End Time: 05:50:00 Time On Btm: 2013.09.30 @ 22:29:15
 Time Off Btm: 2013.10.01 @ 02:30:00

TEST COMMENT: IF: BOB in 4 min
 IS: BOB in 45 min
 FF: BOB in 1 min.
 FS: BOB in 41 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2265.83	117.38	Initial Hydro-static
1	62.64	116.91	Open To Flow (1)
32	234.03	118.05	Shut-In(1)
91	1243.38	122.30	End Shut-In(1)
92	246.58	122.06	Open To Flow (2)
151	431.39	123.60	Shut-In(2)
240	1224.54	124.06	End Shut-In(2)
241	2137.81	123.92	Final Hydro-static

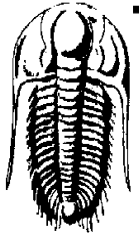
Recovery

Length (ft)	Description	Volume (bbl)
237.00	gcmo 5%g 30%m 65%o	1.17
372.00	mcgo 10%m 30%g 60%o	5.22
496.00	gco 10%g 90%o	6.96
0.00	GIP= 992 feet	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company
250 N Water STE 300
Wichita KS 67202
ATTN: Jeff Christian

29-17s-36w Wichita, KS

Gerstberger #1-29

Job Ticket: 54676

DST#: 2

Test Start: 2013.09.30 @ 20:46:15

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:29:30

Time Test Ended: 05:50:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

Interval: **4406.00 ft (KB) To 4453.00 ft (KB) (TVD)**

Reference Elevations: 3298.00 ft (KB)

Total Depth: 4456.00 ft (KB) (TVD)

3287.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8737 Outside

Press @ RunDepth: psig @ 4407.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.09.30

End Date:

2013.10.01

Last Calib.:

2013.10.01

Start Time: 20:46:15

End Time:

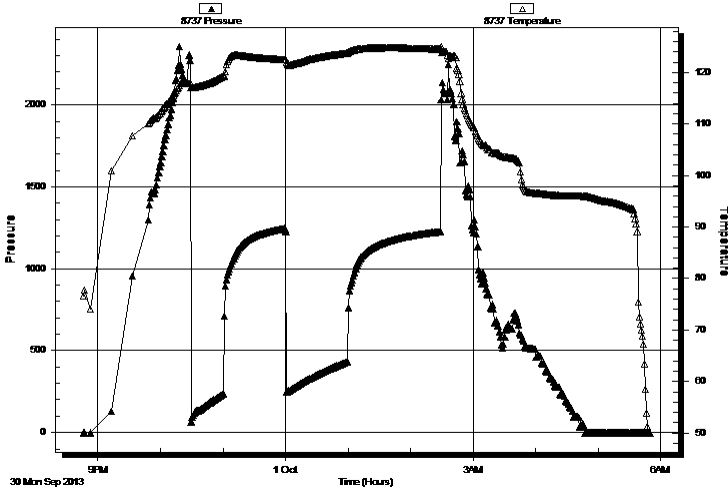
05:50:00

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:BOB in 4 min
IS:BOB in 45 min
FF:BOB in 1 min.
FS:BOB in 41 min.

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
237.00	gcmo 5%g 30%m 65%o	1.17
372.00	mcgo 10%m 30%g 60%o	5.22
496.00	gco 10%g 90%o	6.96
0.00	GIP= 992 feet	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

29-17s-36w Wichita, KS

250 N Water STE 300
Wichita KS 67202

Gerstberger #1-29

Job Ticket: 54676

DST#: 2

ATTN: Jeff Christian

Test Start: 2013.09.30 @ 20:46:15

Tool Information

Drill Pipe:	Length: 4162.00 ft	Diameter: 3.80 inches	Volume: 58.38 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 237.00 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 59.55 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4406.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	76.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

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

Change Over Sub	1.00			4378.00	
Shut In Tool	5.00			4383.00	
Hydraulic tool	5.00			4388.00	
Jars	5.00			4393.00	
Safety Joint	3.00			4396.00	
Packer	5.00			4401.00	29.00 Bottom Of Top Packer
Packer	5.00			4406.00	
Stubb	1.00			4407.00	
Recorder	0.00	8846	Inside	4407.00	
Recorder	0.00	8737	Outside	4407.00	
Perforations	2.00			4409.00	
Change Over Sub	1.00			4410.00	
Drill Pipe	32.00			4442.00	
Change Over Sub	1.00			4443.00	
Perforations	5.00			4448.00	
Bullnose	5.00			4453.00	47.00 Bottom Packers & Anchor
Total Tool Length:	76.00				



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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

29-17s-36w Wichita, KS

250 N Water STE 300
Wichita KS 67202

Gerstberger #1-29

Job Ticket: 54676

DST#: 2

ATTN: Jeff Christian

Test Start: 2013.09.30 @ 20:46:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.76 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 11600.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
237.00	gcmo 5%g 30%m 65%o	1.166
372.00	mcgo 10%m 30%g 60%o	5.218
496.00	gco 10%g 90%o	6.958
0.00	GIP= 992 feet	0.000

Total Length: 1105.00 ft Total Volume: 13.342 bbl

Num Fluid Samples: 0

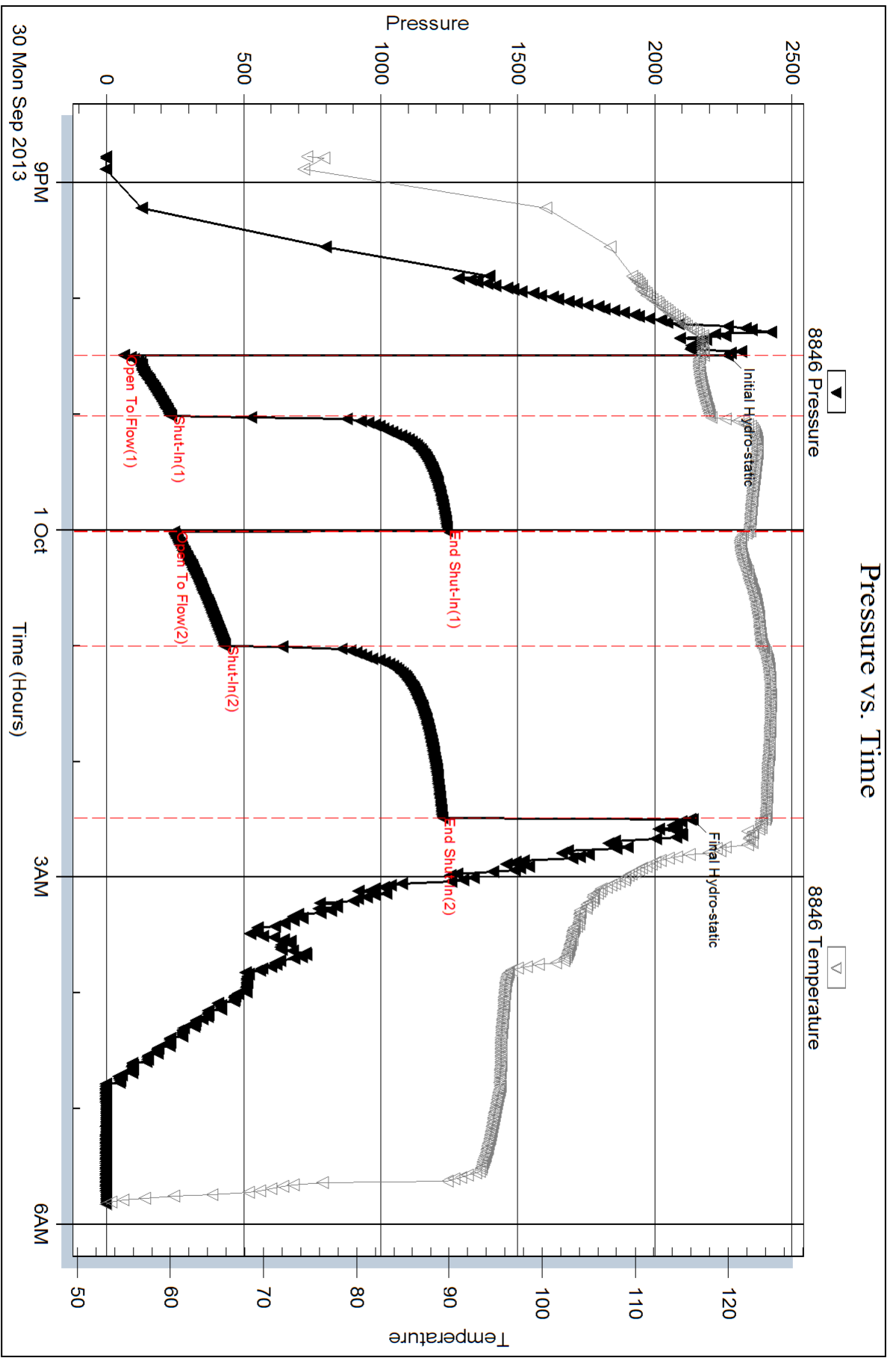
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API= 33@ 50 corrected to 33@ 60

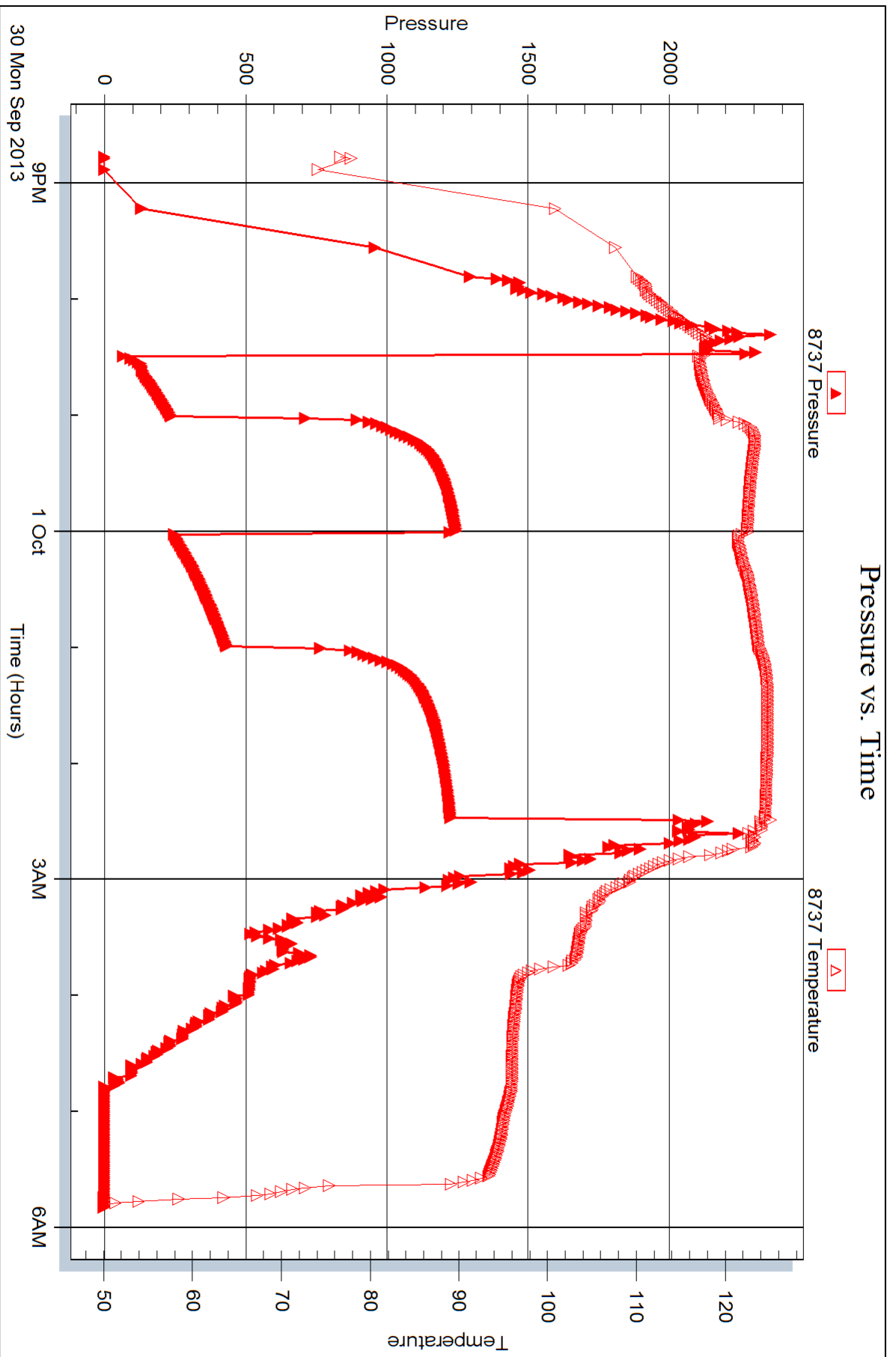


Serial #: 8737

Outside Murfin Drilling Company

Gerstberger #1-29

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company**

250 N Water STE 300
Wichita KS 67202

ATTN: Jeff Christian

Gerstberger #1-29

29-17s-36w Wichita,KS

Start Date: 2013.10.01 @ 23:18:15

End Date: 2013.10.02 @ 06:48:45

Job Ticket #: 54677 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.04 @ 11:26:43

Murfin Drilling Company

29-17s-36w Wichita,KS

Gerstberger #1-29

DST # 3

Pawnee-Lower Pawnee

2013.10.01



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company
 250 N Water STE 300
 Wichita KS 67202
 ATTN: Jeff Christian

29-17s-36w Wichita, KS

Gerstberger #1-29

Job Ticket: 54677

DST#: 3

Test Start: 2013.10.01 @ 23:18:15

GENERAL INFORMATION:

Formation: **Pawnee-Lower Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:28:45

Time Test Ended: 06:48:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

Interval: **4482.00 ft (KB) To 4535.00 ft (KB) (TVD)**

Reference Elevations: 3298.00 ft (KB)

Total Depth: 4435.00 ft (KB) (TVD)

3287.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8846

Inside

Press @ Run Depth: 45.05 psig @ 4483.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.01

End Date:

2013.10.02

Last Calib.: 2013.10.02

Start Time: 23:18:15

End Time:

06:48:45

Time On Btm: 2013.10.02 @ 01:28:30

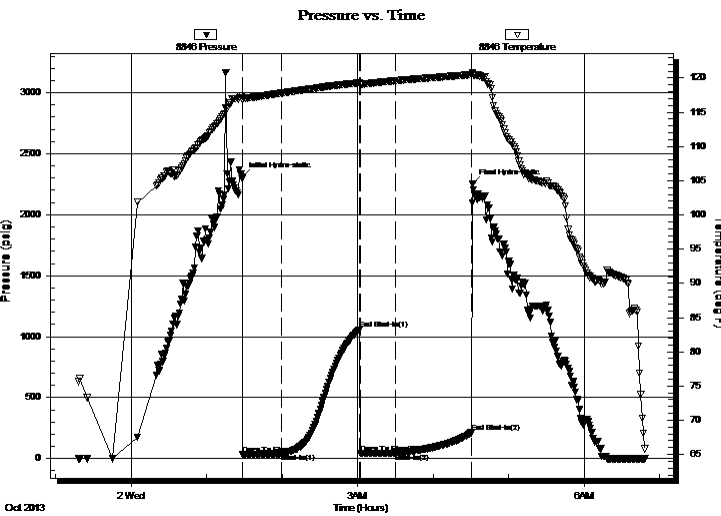
Time Off Btm: 2013.10.02 @ 04:31:30

TEST COMMENT: IF: Built to weak surface blow and died in 23 min.

IS: No return blow

FF: No blow

FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2306.52	117.40	Initial Hydro-static
1	35.32	116.81	Open To Flow (1)
32	39.96	117.81	Shut-In(1)
93	1058.30	119.30	End Shut-In(1)
94	42.54	119.13	Open To Flow (2)
122	45.05	119.60	Shut-In(2)
183	214.09	120.49	End Shut-In(2)
183	2254.51	120.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	ocm 3%o 97%m	0.05

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company

29-17s-36w Wichita, KS

250 N Water STE 300
Wichita KS 67202

Gerstberger #1-29

ATTN: Jeff Christian

Job Ticket: 54677

DST#: 3

Test Start: 2013.10.01 @ 23:18:15

GENERAL INFORMATION:

Formation: **Pawnee-Lower Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:28:45

Time Test Ended: 06:48:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

Interval: **4482.00 ft (KB) To 4535.00 ft (KB) (TVD)**

Reference Elevations: 3298.00 ft (KB)

Total Depth: 4435.00 ft (KB) (TVD)

3287.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: **8737** Outside

Press @ Run Depth: psig @ 4483.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.01

End Date:

2013.10.02

Last Calib.:

2013.10.02

Start Time: 23:18:15

End Time:

06:48:45

Time On Btm:

Time Off Btm:

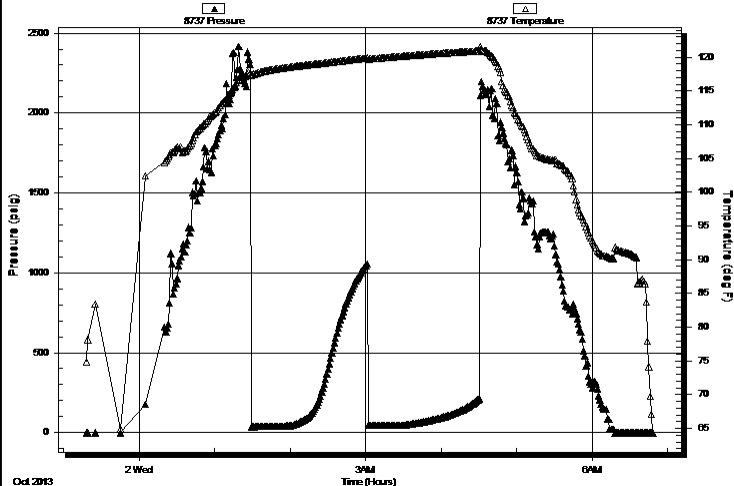
TEST COMMENT: IF: Built to weak surface blow and died in 23 min.

IS: No return blow

FF: No blow

FS: No return blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	ocm 3%o 97%m	0.05

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company

29-17s-36w Wichita, KS

250 N Water STE 300
Wichita KS 67202

Gerstberger #1-29

Job Ticket: 54677

DST#: 3

ATTN: Jeff Christian

Test Start: 2013.10.01 @ 23:18:15

Tool Information

Drill Pipe:	Length: 4229.00 ft	Diameter: 3.80 inches	Volume: 59.32 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 237.00 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 60.49 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4482.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	53.00 ft			
Tool Length:	82.00 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			4454.00	
Shut In Tool	5.00			4459.00	
Hydraulic tool	5.00			4464.00	
Jars	5.00			4469.00	
Safety Joint	3.00			4472.00	
Packer	5.00			4477.00	29.00 Bottom Of Top Packer
Packer	5.00			4482.00	
Stubb	1.00			4483.00	
Recorder	0.00	8846	Inside	4483.00	
Recorder	0.00	8737	Outside	4483.00	
Perforations	3.00			4486.00	
Change Over Sub	1.00			4487.00	
Drill Pipe	32.00			4519.00	
Change Over Sub	1.00			4520.00	
Perforations	10.00			4530.00	
Bullnose	5.00			4535.00	53.00 Bottom Packers & Anchor
Total Tool Length:	82.00				



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TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company

29-17s-36w Wichita, KS

250 N Water STE 300
Wichita KS 67202

Gerstberger #1-29

Job Ticket: 54677

DST#: 3

ATTN: Jeff Christian

Test Start: 2013.10.01 @ 23:18:15

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: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.17 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 11000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	ocm 3%o 97%m	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:

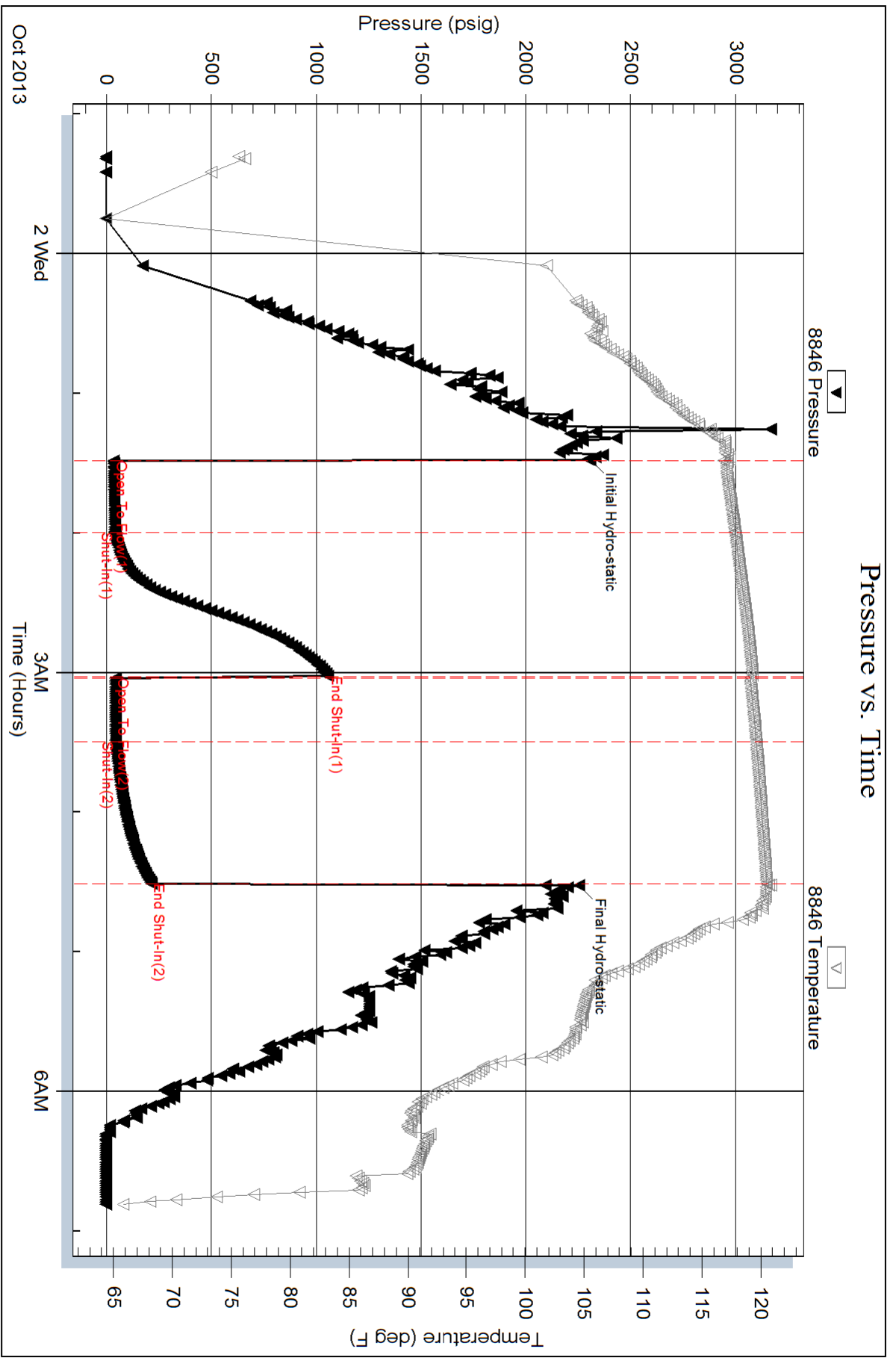
Serial #: 8846

Inside

Murfin Drilling Company

Gerstberger #1-29

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 54677

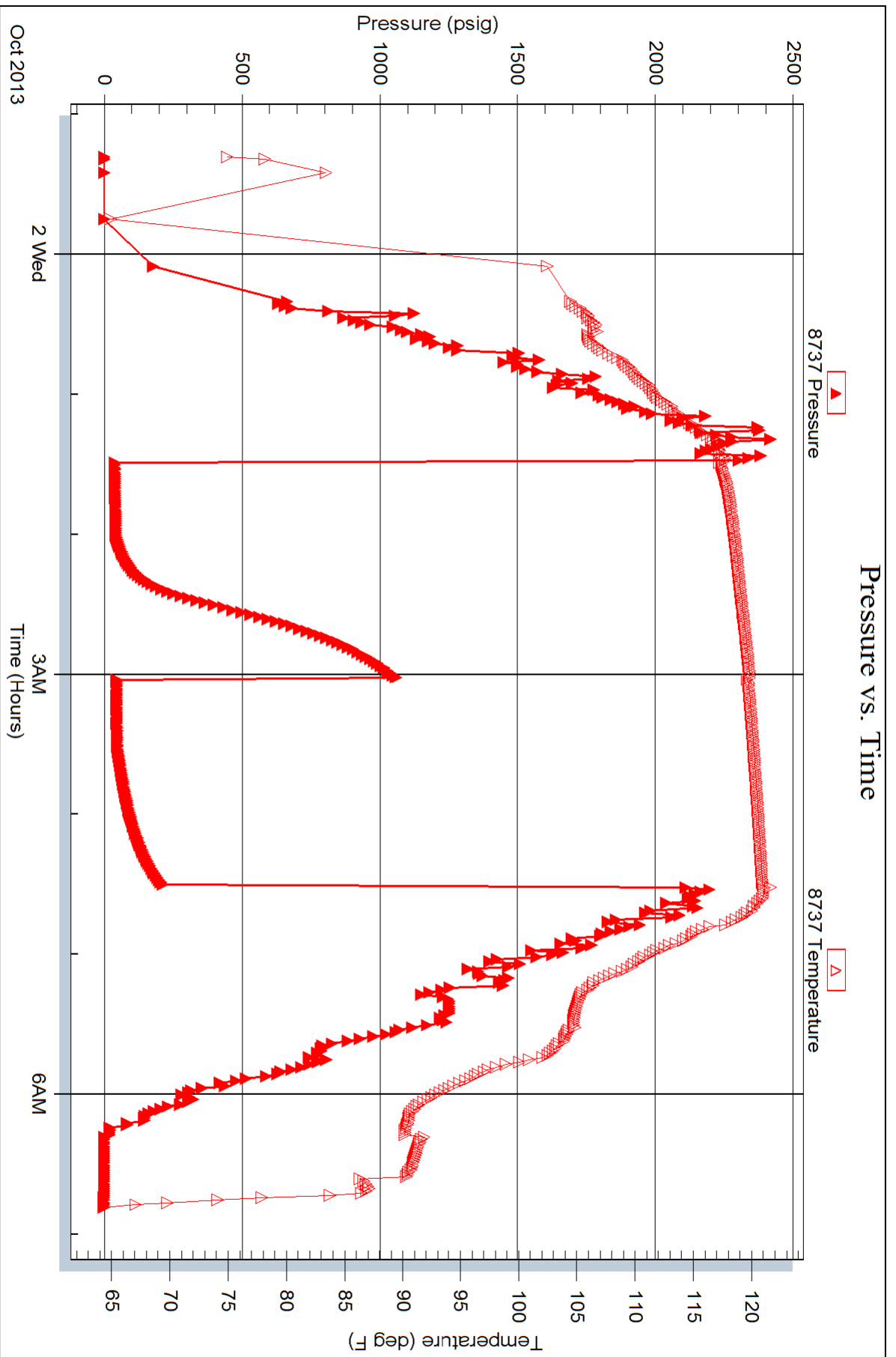
Printed: 2013.10.04 @ 11:26:44

Serial #: 8737

Outside Murfin Drilling Company

Gerstberger #1-29

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

785-650-5123

Mike ROBERTS

Test Ticket

NO. 52925

4/10

Well Name & No. Gerstberger #1-29 Test No. 1 Date 9-28-13
 Company Martin Drilling Co. Elevation 3298 KB 3287 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Jeff Christian Rig Martin 22
 Location: Sec. 29 Twp. 17S Rge. 36W Co. Wichita State KS

Interval Tested 4057-4090 Zone Tested ~~3768~~ E-F
 Anchor Length 33 Drill Pipe Run 3768 Mud Wt. 8.8
 Top Packer Depth 4053 Drill Collars Run ~~237~~ 237 Vis 52
 Bottom Packer Depth 4057 Wt. Pipe Run 0 WL 6.0
 Total Depth 4090 Chlorides 5700 ppm System LCM 9
 Blow Description IF: Built to 7"
FS: NO Return Blow
FF: BOB in 55 Min
FS: NO Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>161</u>	<u>MD</u>			<u>100</u>	
<u>237</u>	<u>MCSW</u>		<u>90</u>	<u>70</u>	

Rec Total 398 BHT 116 Gravity — API RW .498@ 52.8° F Chlorides 19000 ppm

(A) Initial Hydrostatic <u>2039</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>12:38</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>14:38</u>
(C) First Final Flow <u>114</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>16:48</u>
(D) Initial Shut-In <u>1125</u>	<input checked="" type="checkbox"/> Circ Sub	T-Pulled <u>20:48</u>
(E) Second Initial Flow <u>121</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>23:01</u>
(F) Second Final Flow <u>195</u>	<input checked="" type="checkbox"/> Mileage <u>54 RT</u> 83.70	Comments
(G) Final Shut-In <u>1116</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1920</u>	<input type="checkbox"/> Straddle	
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
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>1658.70</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1658.70</u>	

Approved By Jeff Christian Our Representative Mike Roberts

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **54676**

Well Name & No. Gierstberger # 1-29 Test No. 2 Date 9-30-13
 Company Murfin Drilling Co. Elevation 3298 KB 3287 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin 22
 Location: Sec. 29 Twp. 17S Rge. 36W Co. Wichita State KS

Interval Tested 4406-4453 Zone Tested Marmaton
 Anchor Length 4402 47 Drill Pipe Run 4162 Mud Wt. 9.2
 Top Packer Depth 4406 4402 Drill Collars Run 237 Vis 54
 Bottom Packer Depth 4453 4406 Wt. Pipe Run 6 WL 9.2
 Total Depth 4453 Chlorides 11,600 ppm System LCM 8
 Blow Description IF: BOB in 4 Min
IS: BOB in 45 Min
FF: BOB in 1 Min
FS: BOB in 41 Min

Rec	Feet of	%gas	%oil	%water	%mud
<u>0</u>	<u>GIP = 992'</u>	<u>100</u>			
<u>496</u>	<u>MC 90</u>	<u>10</u>	<u>90</u>		
<u>372</u>	<u>MC 90</u>	<u>30</u>	<u>60</u>		<u>10</u>
<u>237</u>	<u>GC 90</u>	<u>5</u>	<u>65</u>		<u>30</u>

Rec Total 1105 BHT 125 Gravity 32 API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic <u>2265</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>20:30</u>
(B) First Initial Flow <u>62</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>20:46</u>
(C) First Final Flow <u>234</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>22:30</u>
(D) Initial Shut-In <u>1243</u>	<input checked="" type="checkbox"/> Circ Sub <u>NC</u>	T-Pulled <u>02:30</u>
(E) Second Initial Flow <u>246</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>05:50</u>
(F) Second Final Flow <u>431</u>	<input checked="" type="checkbox"/> Mileage <u>54 RT</u> 83.70	Comments
(G) Final Shut-In <u>1224</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2137</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>716.67</u>
Final Shut-In <u>90</u>	<input checked="" type="checkbox"/> Day Standby <u>1d 21.5h</u>	Total <u>2375.37</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1658.70</u>	

Approved By Jeff Christian Our Representative Mike Roberts
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54677

Well Name & No. Gerstberger #1-29 Test No. 3 Date 10-1-13
 Company Murfin Drilling Co Elevation 3298 KB 3287 GL
 Address 250 N. Water STE 300 Wichita KS 67202
 Co. Rep / Geo. Jeff Christian Rig Murfin 22
 Location: Sec. 29 Twp. 17S Rge. 36W Co. Wichita State KS

Interval Tested 4482-4535 Zone Tested Pawnee - Lower Pawnee
 Anchor Length 53 Drill Pipe Run 4229 Mud Wt. 9.1
 Top Packer Depth 4478 Drill Collars Run 237 Vis 46
 Bottom Packer Depth 4482 Wt. Pipe Run 0 WL 9.2
 Total Depth 4535 Chlorides 11,000 ppm System LCM 8
 Blow Description IF: Built to weak surface Blow & Dried in 23 Min
IS: No Return Blow
FF: No Blow
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>OCM</u>		<u>3</u>	<u>97</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 10 BHT 122 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2306</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>22:20</u>
(B) First Initial Flow <u>35</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>23:18</u>
(C) First Final Flow <u>39</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>04:30</u>
(D) Initial Shut-In <u>1058</u>	<input checked="" type="checkbox"/> Circ Sub <u>NC</u>	T-Pulled <u>04:30</u>
(E) Second Initial Flow <u>42</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>06:48</u>
(F) Second Final Flow <u>45</u>	<input checked="" type="checkbox"/> Mileage <u>54 RT</u> <u>167.40</u>	Comments <u>late loaded</u>
(G) Final Shut-In <u>214</u>	<input type="checkbox"/> Sampler	<u>tools at 9:00 AM</u>
(H) Final Hydrostatic <u>2254</u>	<input type="checkbox"/> Straddle	<u>on 10-4-13</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>1600</u>
Final Shut-In <u>100</u>	<input checked="" type="checkbox"/> Day Standby <u>1d 26.25h</u>	Total <u>3342.40</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>1742.40</u>	

Approved By Jeff Christian Our Representative Mike Robert

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