



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N Water STE 300
Wichita KS 67202-1216

ATTN: Tom Funk

Larry #1-20

20-12s-32w Logan,KS

Start Date: 2012.07.24 @ 20:30:00

End Date: 2012.07.25 @ 04:02:30

Job Ticket #: 48335 DST #: 1

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

Printed: 2012.07.31 @ 15:06:31



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

20-12s-32w Logan,KS

250 N Water STE 300
Wichita KS 67202-1216

Larry #1-20

Job Ticket: 48335

DST#: 1

ATTN: Tom Funk

Test Start: 2012.07.24 @ 20:30:00

GENERAL INFORMATION:

Formation: **Kansas City "H,I,J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:06:15

Time Test Ended: 04:02:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jace McKinney

Unit No: 46

Interval: 4208.00 ft (KB) To 4280.00 ft (KB) (TVD)

Reference Elevations: 3065.00 ft (KB)

Total Depth: 4280.00 ft (KB) (TVD)

3054.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 11.00 ft

Serial #: 8675

Inside

Press @ Run Depth: 28.94 psig @ 4209.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.24

End Date:

2012.07.25

Last Calib.: 2012.07.25

Start Time: 20:30:15

End Time:

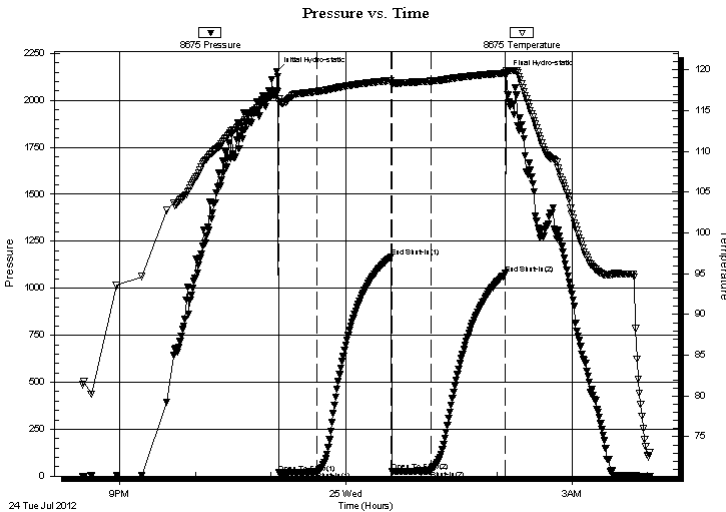
04:02:30

Time On Btm: 2012.07.24 @ 23:05:00

Time Off Btm: 2012.07.25 @ 02:07:45

TEST COMMENT: Built to 1/4" blow
No return blow
No blow
No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2154.86	117.27	Initial Hydro-static
2	16.95	116.08	Open To Flow (1)
32	23.46	117.35	Shut-In(1)
91	1168.84	118.69	End Shut-In(1)
92	24.19	118.20	Open To Flow (2)
123	28.94	118.61	Shut-In(2)
182	1078.71	119.60	End Shut-In(2)
183	2139.37	119.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	100% Mud w with few oil spots	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company Inc.

20-12s-32w Logan,KS

250 N Water STE 300
Wichita KS 67202-1216

Larry #1-20

Job Ticket: 48335

DST#: 1

ATTN: Tom Funk

Test Start: 2012.07.24 @ 20:30:00

Tool Information

Drill Pipe:	Length: 3977.42 ft	Diameter: 3.80 inches	Volume: 55.79 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:	30000.00 lb
Drill Collar:	Length: 233.89 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 56.94 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.31 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4208.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	72.00 ft				
Tool Length:	92.00 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			4189.00	
Shut In Tool	5.00			4194.00	
Hydraulic tool	5.00			4199.00	
Packer	5.00			4204.00	20.00 Bottom Of Top Packer
Packer	4.00			4208.00	
Stubb	1.00			4209.00	
Recorder	0.00	8675	Inside	4209.00	
Recorder	0.00	8650	Outside	4209.00	
Perforations	4.00			4213.00	
Change Over Sub	1.00			4214.00	
Drill Pipe	62.00			4276.00	
Change Over Sub	1.00			4277.00	
Bullnose	3.00			4280.00	72.00 Bottom Packers & Anchor

Total Tool Length: 92.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc.

20-12s-32w Logan,KS

250 N Water STE 300
Wichita KS 67202-1216

Larry #1-20

Job Ticket: 48335

DST#: 1

ATTN: Tom Funk

Test Start: 2012.07.24 @ 20:30:00

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: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	100% Mud with few 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:

Serial #: 8675

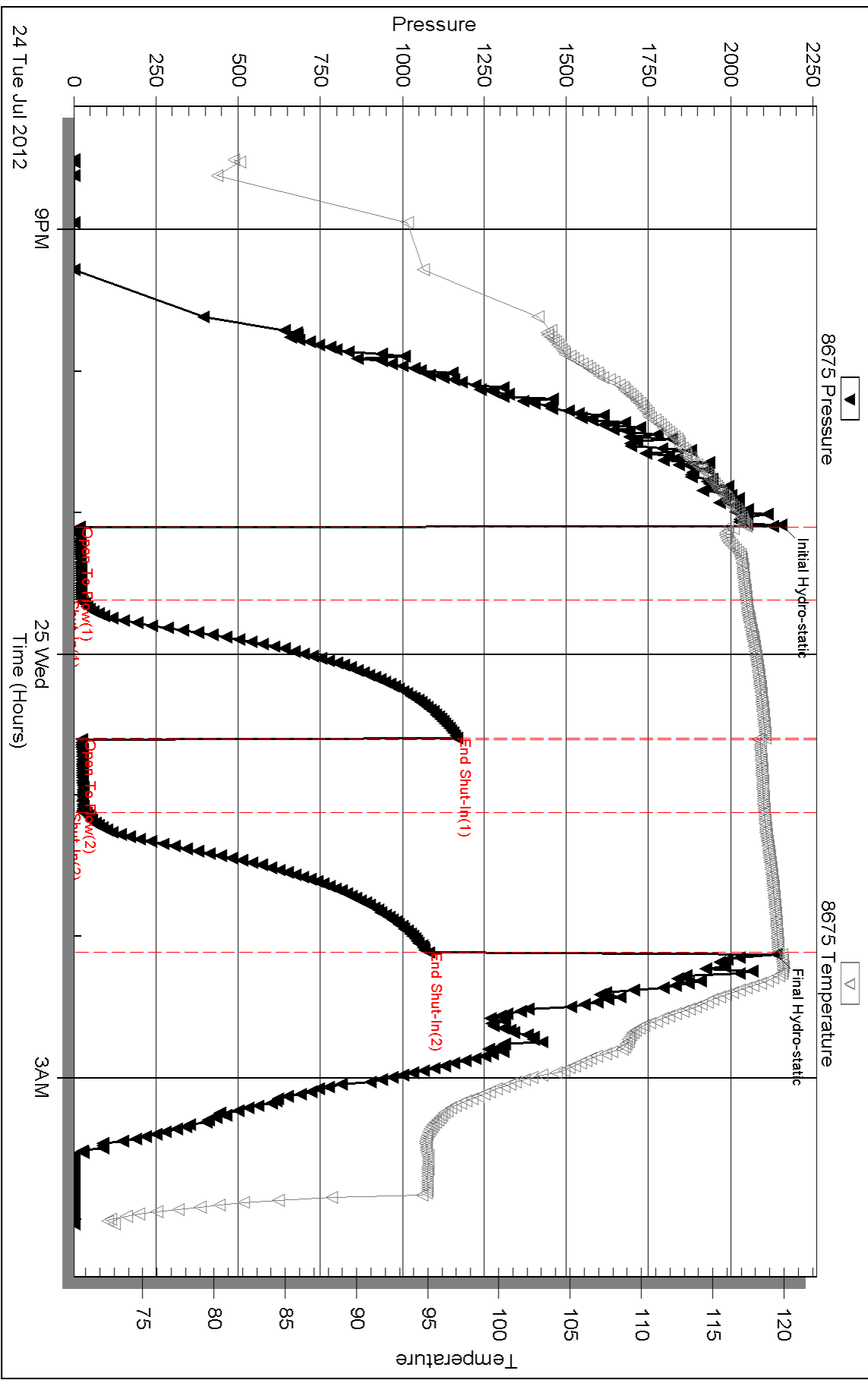
Inside

Murfin Drilling Company Inc.

Larry #1-20

DST Test Number: 1

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 48335

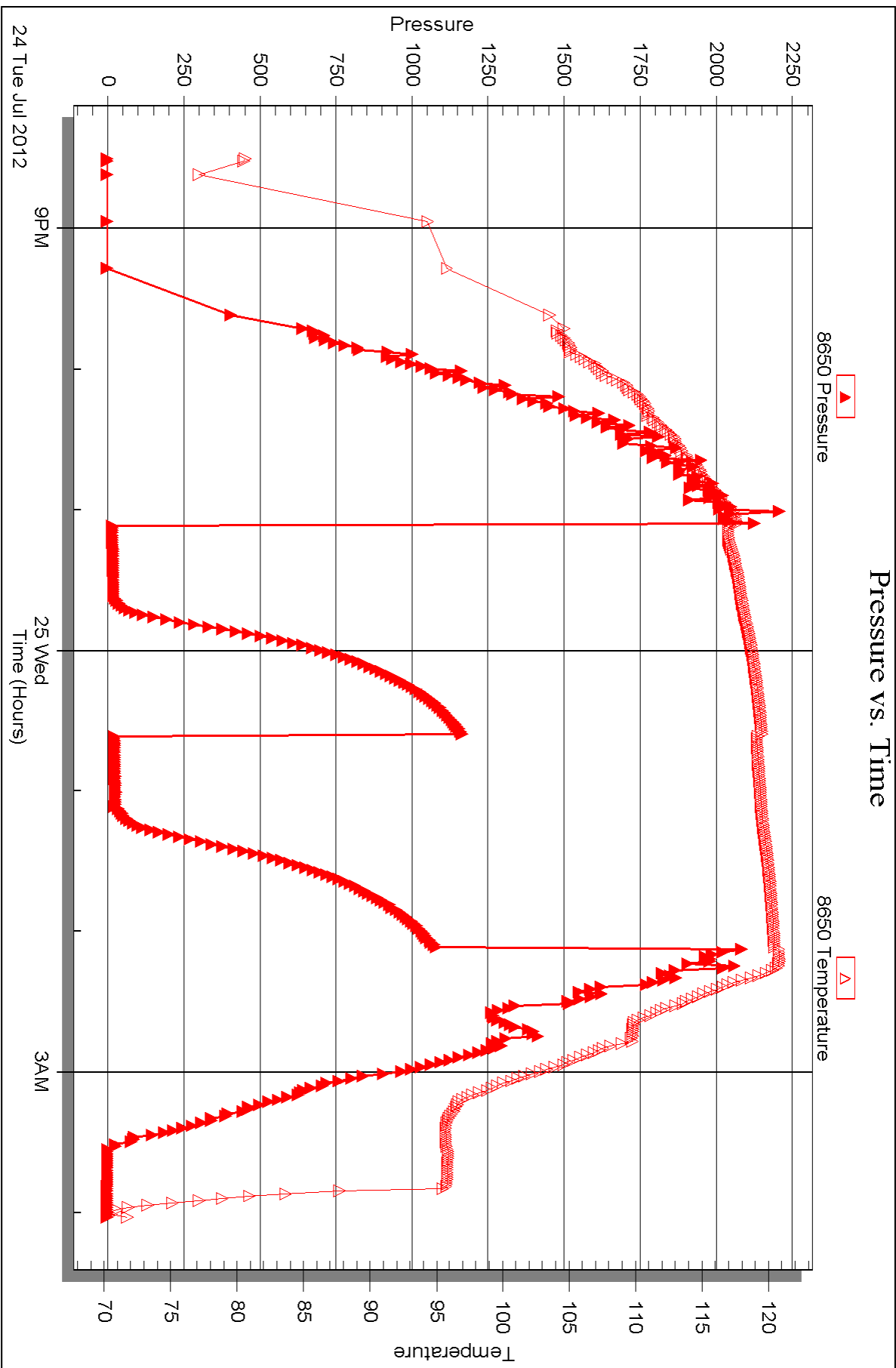
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Serial #: 8650

Outside Murfin Drilling Company Inc.

Larry #1-20

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N Water STE 300
Wichita KS 67202-1216

ATTN: Tom Funk

Larry #1-20

20-12s-32w Logan,KS

Start Date: 2012.07.25 @ 12:20:00

End Date: 2012.07.25 @ 19:03:45

Job Ticket #: 48336 DST #: 2

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

Printed: 2012.07.31 @ 15:05:25



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

20-12s-32w Logan,KS

250 N Water STE 300
Wichita KS 67202-1216

Larry #1-20

Job Ticket: 48336

DST#: 2

ATTN: Tom Funk

Test Start: 2012.07.25 @ 12:20:00

GENERAL INFORMATION:

Formation: **Kansas City "K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:22:00

Time Test Ended: 19:03:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

Interval: 4286.00 ft (KB) To 4310.00 ft (KB) (TVD)

Reference Elevations: 3065.00 ft (KB)

Total Depth: 4310.00 ft (KB) (TVD)

3054.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 8675

Inside

Press @ Run Depth: 37.26 psig @ 4287.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.25

End Date:

2012.07.25

Last Calib.: 2012.07.25

Start Time: 12:20:15

End Time:

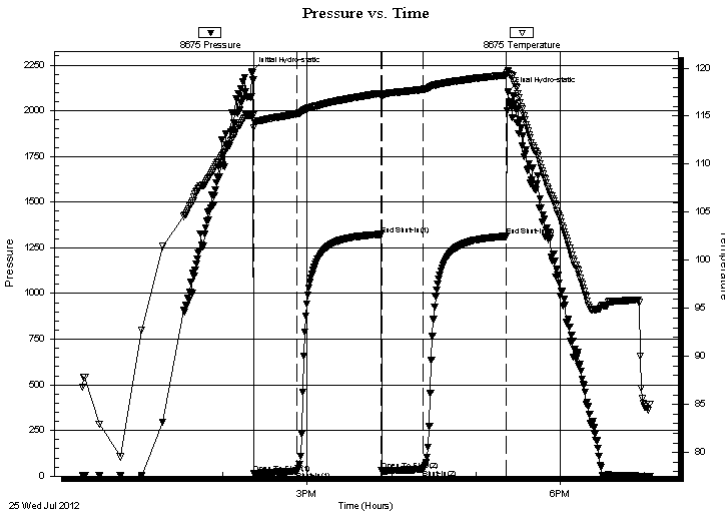
19:03:45

Time On Btm: 2012.07.25 @ 14:20:30

Time Off Btm: 2012.07.25 @ 17:22:45

TEST COMMENT: Built to 1/4" blow
No return blow
No blow
No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2216.44	115.08	Initial Hydro-static
2	14.13	113.82	Open To Flow (1)
32	26.08	115.24	Shut-In(1)
92	1323.86	117.38	End Shut-In(1)
93	29.57	116.97	Open To Flow (2)
122	37.26	117.79	Shut-In(2)
182	1313.66	119.27	End Shut-In(2)
183	2107.32	119.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	100%Mud with few oil spots	0.07

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Company Inc.

20-12s-32w Logan,KS

250 N Water STE 300
Wichita KS 67202-1216

Larry #1-20

Job Ticket: 48336

DST#: 2

ATTN: Tom Funk

Test Start: 2012.07.25 @ 12:20:00

Tool Information

Drill Pipe:	Length: 4039.75 ft	Diameter: 3.80 inches	Volume: 56.67 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:	30000.00 lb
Drill Collar:	Length: 233.89 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 57.82 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	7.64 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4286.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	24.00 ft				
Tool Length:	44.00 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			4267.00	
Shut In Tool	5.00			4272.00	
Hydraulic tool	5.00			4277.00	
Packer	5.00			4282.00	20.00 Bottom Of Top Packer
Packer	4.00			4286.00	
Stubb	1.00			4287.00	
Recorder	0.00	8675	Inside	4287.00	
Recorder	0.00	8650	Outside	4287.00	
Perforations	20.00			4307.00	
Change Over Sub	0.00			4307.00	
Drill Pipe	0.00			4307.00	
Change Over Sub	0.00			4307.00	
Bullnose	3.00			4310.00	24.00 Bottom Packers & Anchor

Total Tool Length: 44.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc.

20-12s-32w Logan,KS

250 N Water STE 300
Wichita KS 67202-1216

Larry #1-20

Job Ticket: 48336

DST#: 2

ATTN: Tom Funk

Test Start: 2012.07.25 @ 12:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	100%Mud w ith few oil spots	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

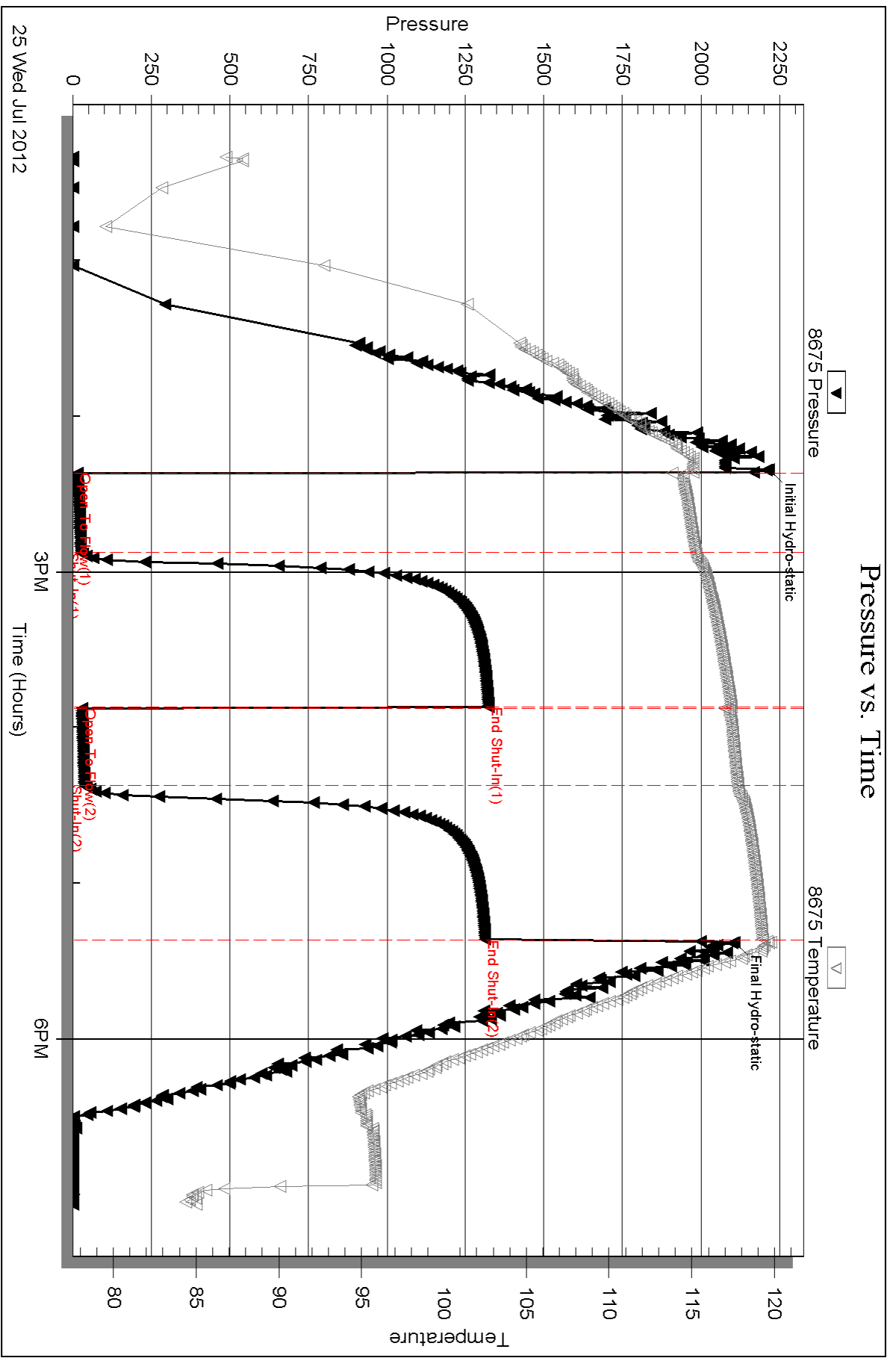
Serial #: 8675

Inside

Murfin Drilling Company Inc.

Larry #1-20

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 48336

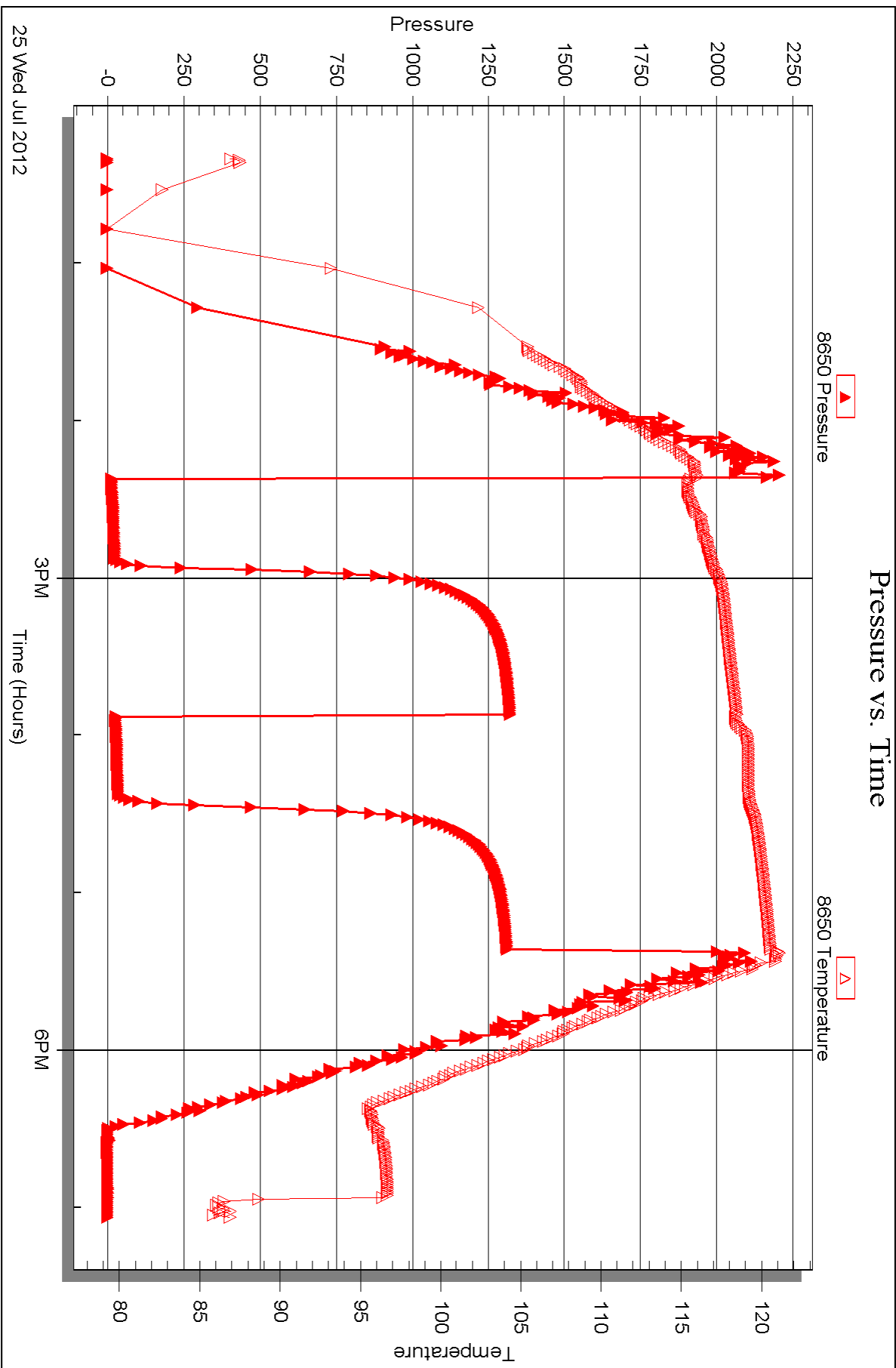
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Serial #: 8650

Outside Murfin Drilling Company Inc.

Larry #1-20

DST Test Number: 2



25 Wed Jul 2012



DRILL STEM TEST REPORT

Prepared For: **Murfin Drilling Company Inc.**

250 N Water STE 300
Wichita KS 67202-1216

ATTN: Tom Funk

Larry #1-20

20-12s-32w Logan,KS

Start Date: 2012.07.27 @ 01:00:00

End Date: 2012.07.27 @ 09:35:15

Job Ticket #: 48337 DST #: 3

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

Printed: 2012.07.31 @ 14:47:51



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilling Company Inc.

20-12s-32w Logan,KS

250 N Water STE 300
Wichita KS 67202-1216

Larry #1-20

Job Ticket: 48337

DST#: 3

ATTN: Tom Funk

Test Start: 2012.07.27 @ 01:00:00

GENERAL INFORMATION:

Formation: **Johnson Zone**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:39:15

Time Test Ended: 09:35:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

Interval: 4571.00 ft (KB) To 4639.00 ft (KB) (TVD)

Reference Elevations: 3065.00 ft (KB)

Total Depth: 4639.00 ft (KB) (TVD)

3054.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 11.00 ft

Serial #: 8675

Inside

Press @ Run Depth: 381.67 psig @ 4572.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.27

End Date: 2012.07.27

Last Calib.: 2012.07.27

Start Time: 01:00:15

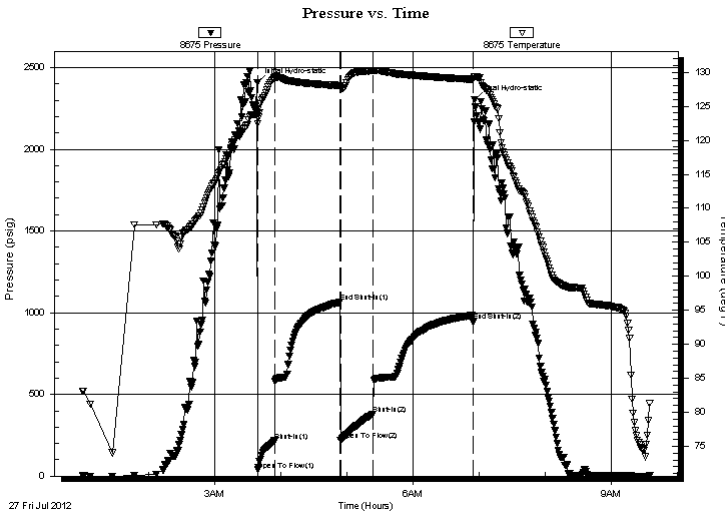
End Time: 09:35:15

Time On Btm: 2012.07.27 @ 03:38:45

Time Off Btm: 2012.07.27 @ 06:56:00

TEST COMMENT: B.O.B. in 6 1/2 min.
Bled off for 5 min. No return blow
B.O.B. in 9 1/2 min.
Bled off for 5 min. Built to 1/4" return blow . Died in 75 min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2408.45	123.86	Initial Hydro-static
1	37.90	122.40	Open To Flow (1)
16	215.30	129.19	Shut-In(1)
76	1064.25	128.06	End Shut-In(1)
76	218.56	127.61	Open To Flow (2)
106	381.67	130.21	Shut-In(2)
197	946.53	128.96	End Shut-In(2)
198	2303.61	129.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
233.00	100% Water	1.15
252.00	mcw 20%M 80%W	3.53
252.00	ocmw 10%O 30%M 60%W	3.53
63.00	mcow 20%M 30%O 50%W	0.88
0.00	118 Gas In Pipe	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 Inc.

20-12s-32w Logan,KS

250 N Water STE 300
Wichita KS 67202-1216

Larry #1-20

Job Ticket: 48337

DST#: 3

ATTN: Tom Funk

Test Start: 2012.07.27 @ 01:00:00

Tool Information

Drill Pipe:	Length: 4353.22 ft	Diameter: 3.80 inches	Volume: 61.06 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: 30000.00 lb
Drill Collar:	Length: 233.89 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 62.21 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	36.11 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4571.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	88.00 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			4552.00	
Shut In Tool	5.00			4557.00	
Hydraulic tool	5.00			4562.00	
Packer	5.00			4567.00	20.00 Bottom Of Top Packer
Packer	4.00			4571.00	
Stubb	1.00			4572.00	
Recorder	0.00	8675	Inside	4572.00	
Recorder	0.00	8650	Outside	4572.00	
Perforations	31.00			4603.00	
Change Over Sub	1.00			4604.00	
Drill Pipe	31.00			4635.00	
Change Over Sub	1.00			4636.00	
Bullnose	3.00			4639.00	68.00 Bottom Packers & Anchor

Total Tool Length: 88.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Company Inc.

20-12s-32w Logan,KS

250 N Water STE 300
Wichita KS 67202-1216

Larry #1-20

Job Ticket: 48337

DST#: 3

ATTN: Tom Funk

Test Start: 2012.07.27 @ 01:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

29 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2300.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
233.00	100% Water	1.146
252.00	mcw 20%M 80%W	3.527
252.00	ocmw 10%O 30%M 60%W	3.535
63.00	mcow 20%M 30%O 50%W	0.884
0.00	118 Gas In Pipe	0.000

Total Length: 800.00 ft Total Volume: 9.092 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API: 31 @ 90 = 29

RW: .10 @ 90 = 60,000

Serial #: 8675

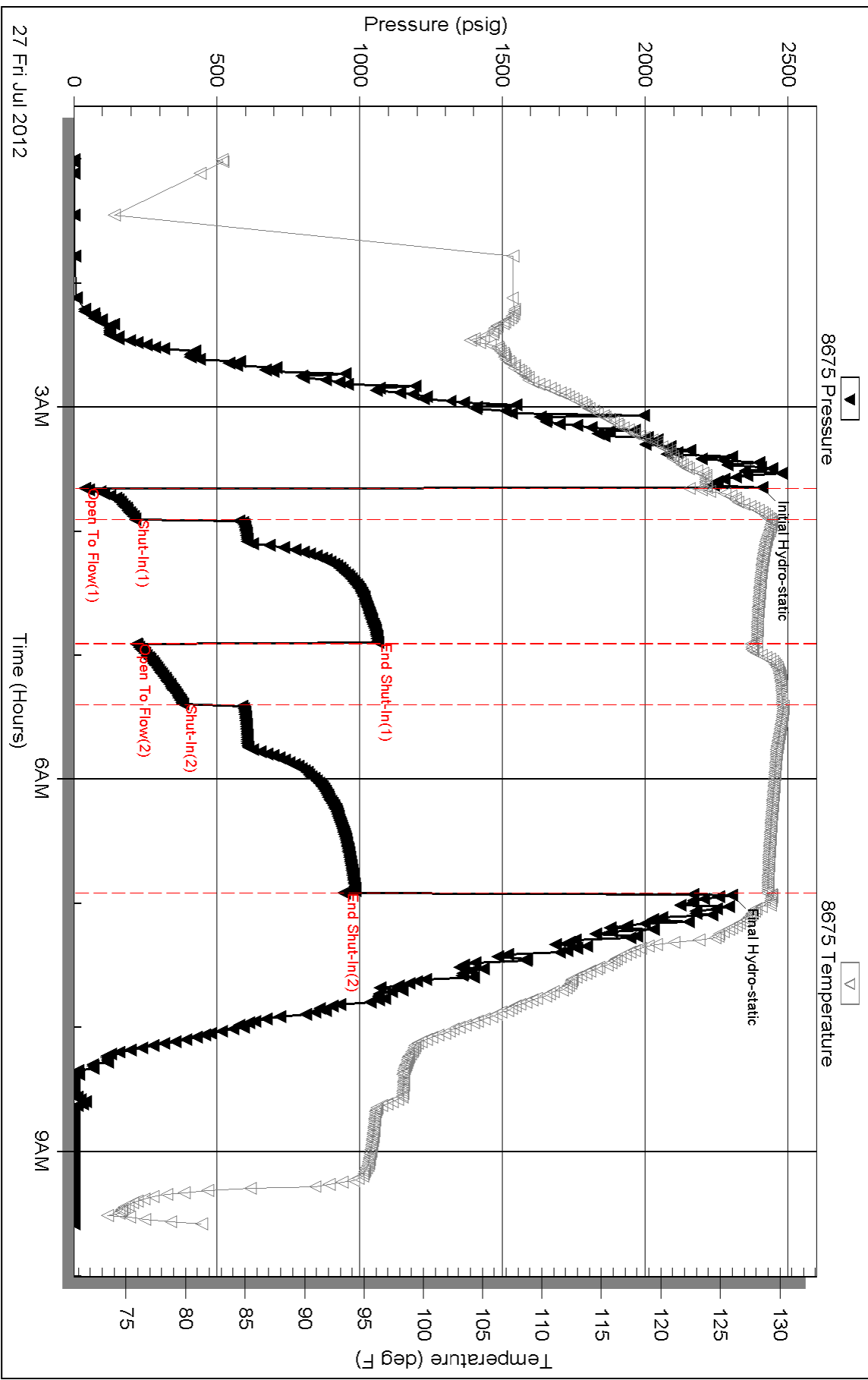
Inside

Murfin Drilling Company Inc.

Larry #1-20

DST Test Number: 3

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 48337

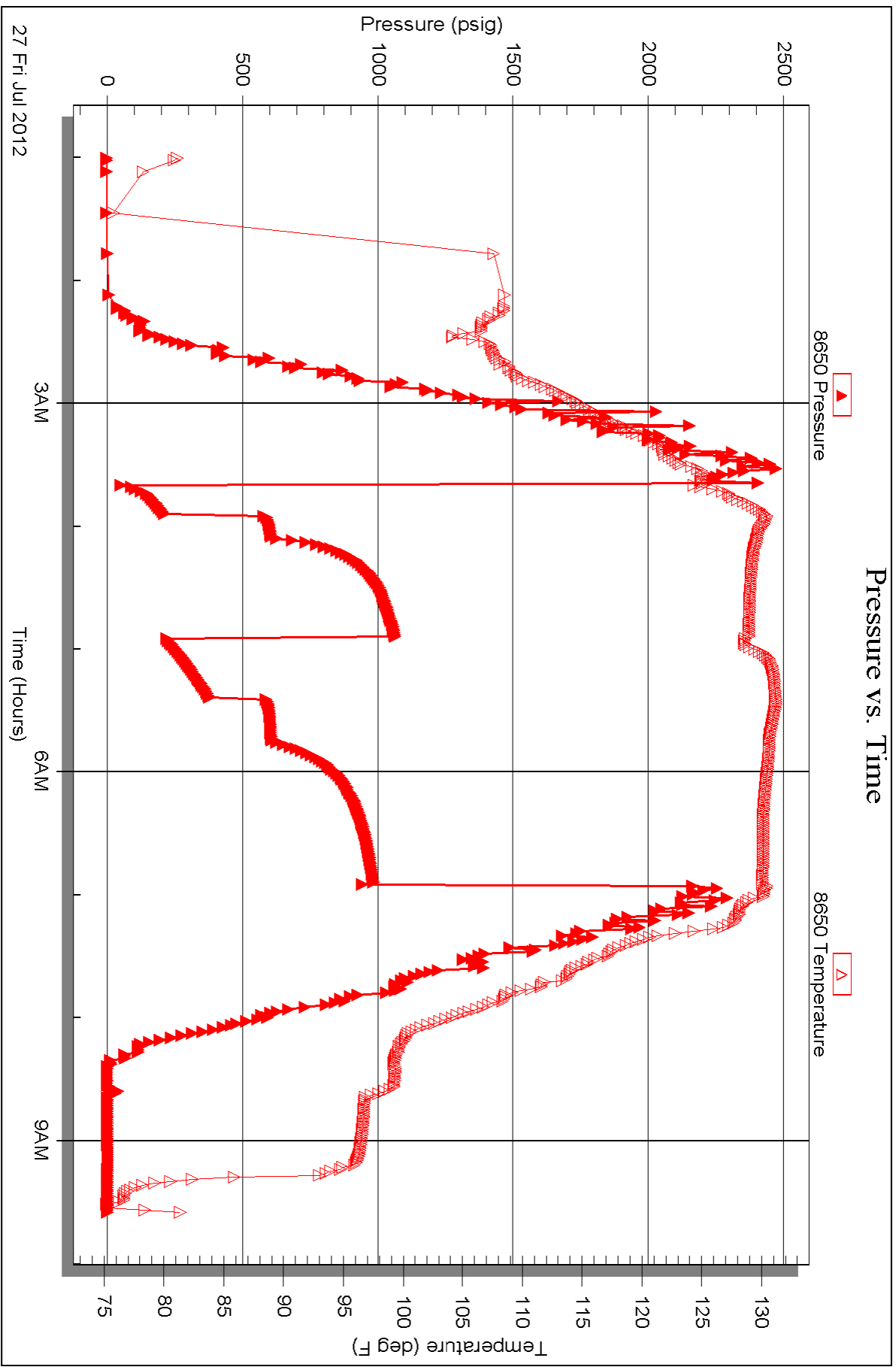
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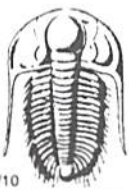
Serial #: 8650

Outside Murfin Drilling Company Inc.

Larry #1-20

DST Test Number: 3





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48335

Well Name & No. Larry 1-20 Test No. 1 Date 7/24/12 7/25/12
 Company Martin Drilling Company Inc Elevation 3065 KB 3054 GL
 Address 250 N Water STE 300 Wichita KS 67202-1216
 Co. Rep / Geo. Tom Funk Rig Martin 22
 Location: Sec. 20 Twp. 12s Rge. 32w Co. Logan State KS

Interval Tested 4208 - 4280 Zone Tested Kansas City "H, I, J"
 Anchor Length 72 Drill Pipe Run 3977.42 Mud Wt. 9.2
 Top Packer Depth 4204 Drill Collars Run 233.89 Vis 52
 Bottom Packer Depth 4208 Wt. Pipe Run _____ WL 7.2
 Total Depth 4280 Chlorides 2,000 ppm System LCM 6
 Blow Description Built to 1/4" below
No return below
No below
No return below

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mad with few oil spots</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

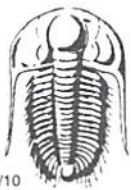
Rec Total 10 BHT 120 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2,155 Test 1250 T-On Location 19:15
 (B) First Initial Flow 17 Jars _____ T-Started 20:30
 (C) First Final Flow 23 Safety Joint _____ T-Open 23:06
 (D) Initial Shut-In 1,169 Circ Sub N/C T-Pulled 2:06
 (E) Second Initial Flow 24 Hourly Standby _____ T-Out 4:03
 (F) Second Final Flow 29 Mileage 86RT 133.30 Comments _____
 (G) Final Shut-In 1,079 Sampler _____
 (H) Final Hydrostatic 2,139 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1383.30
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1383.30

Initial Open 30
 Initial Shut-In 60
 Final Flow 30
 Final Shut-In 60

Approved By [Signature] Our Representative [Signature]

Triobite 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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48336

Well Name & No. Larry 1-20 Test No. 2 Date 7/25/12
 Company Martin Drilling Company Inc. Elevation 3065 KB 3054 GL
 Address 250 N Water STE 300 Wichita KS 67202-1216
 Co. Rep / Geo. Tom Funk Rig Martin 22
 Location: Sec. 20 Twp. 12s Rge. 32w Co. Logan State KS

Interval Tested 4286 - 4310 Zone Tested Kansas City "K"
 Anchor Length 24 Drill Pipe Run 4039.75 Mud Wt. 9.5
 Top Packer Depth 4282 Drill Collars Run 233.89 Vis 52
 Bottom Packer Depth 4286 Wt. Pipe Run _____ WL 8.0
 Total Depth 4310 Chlorides 2,000 ppm System LCM 4#

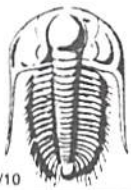
Blow Description Built to 1/4 blow
No Return below
No blow
No return below

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud with oil spots</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15 BHT 119 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2216 Test 1250 T-On Location 11:45
 (B) First Initial Flow 14 Jars T-Started 12:20
 (C) First Final Flow 26 Safety Joint T-Open 14:22
 (D) Initial Shut-In 1,324 Circ Sub N/C T-Pulled 17:2
 (E) Second Initial Flow 30 Hourly Standby T-Out 19:03
 (F) Second Final Flow 37 Mileage 86 RT 133.30 Comments _____
 (G) Final Shut-In 1,312 Sampler _____
 (H) Final Hydrostatic 2,107 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 1383.30
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1383.30

Approved By _____ Our Representative _____
 Trilobite Testing Inc. shall not be liable for damages 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.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48337

Well Name & No. harry 1-20 Test No. 3 Date 7/27/12
 Company Martin Drilling Company Inc Elevation 3065 KB 3054 GL
 Address 250 W Water STE 300 Wichita KS 67202-1216
 Co. Rep / Geo. Tom Funk Rig Martin 22
 Location: Sec. 20 Twp. 12s Rge. 32w Co. Logan State KS

Interval Tested 4571 - 4639 Zone Tested Johnson Zone
 Anchor Length 68 Drill Pipe Run 4353.22 Mud Wt. 9.3
 Top Packer Depth 4567 Drill Collars Run 233.89 Vis 57
 Bottom Packer Depth 4571 Wt. Pipe Run _____ WL 8.0
 Total Depth 4639 Chlorides 2,300 ppm System LCM 7#

Blow Description B.O.B. in 1 1/2 min.
Bled off for 5 min. No return below
B.O.B. in 9 1/2 min.
Bled off for 5 min. Built to 1/4" return below. Died for 75 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>0</u>	<u>118' Gas In Pipe</u>				
<u>63</u>	<u>mcow</u>	<u>30</u>	<u>50</u>	<u>20</u>	
<u>252</u>	<u>OCMW</u>	<u>10</u>	<u>60</u>	<u>30</u>	
<u>252</u>	<u>mcw</u>		<u>80</u>	<u>20</u>	
<u>233</u>	<u>w</u>		<u>100</u>		

Rec Total 800 BHT 129 Gravity 29 API RW 10 @ 90 °F Chlorides 10,000 ppm
 Test 1250 T-On Location 00:10
 Jars T-Started 1:00
 Safety Joint T-Open 3:38
 Circ Sub N/C T-Pulled 6:55
 Hourly Standby 5hrs T-Out 9:35
 Mileage BLRT x 2 266.60 Comments _____
 Sampler _____
 Straddle _____
 Shale Packer _____
 Ruined Packer 320
 Extra Packer _____
 Extra Recorder _____
 Day Standby 1d 5h
 Accessibility _____
 Sub Total 1516.60

Initial Open 15
 Initial Shut-In 60
 Final Flow 30
 Final Shut-In 90

Sub Total 166.67 + 320
 Total 2003.27
 MP/DST Disc't _____

Approved By [Signature] Our Representative [Signature]

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.