

15-039-21102

21-3s-27w

IND



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co, Inc.**

250 N Water STE 300
Wichita Ks 67202

CONFIDENTIAL

DEC 08 2009

KCC

ATTN: Jeff Christian

²⁷
21 3s 21w Decatur KS

Stealy #1-21x

Start Date: 2009.08.17 @ 21:17:44

End Date: 2009.08.18 @ 05:36:14

Job Ticket #: 36423

DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

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Murfin Drlg. Co, Inc.

Stealy #1-21x

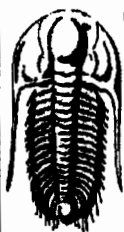
21 3s 21w Decatur KS

DST # 1

Topeka-Toronto

2009.08.17

Ranges is 27w, not 21 as printed



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drig. Co, Inc.

250 N Water STE 300
Wichita Ks 67202

ATTN: Jeff Christian

Stealy #1-21x

²⁷
21 3s 21w Decatur KS

Job Ticket: 36423

DST#: 1

Test Start: 2009.08.17 @ 21:17:44

GENERAL INFORMATION:

Formation: **Topeka-Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:03:14

Time Test Ended: 05:36:14

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 38

Interval: **3476.00 ft (KB) To 3561.00 ft (KB) (TVD)**

Total Depth: 3561.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2624.00 ft (KB)

2619.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8520

Outside

Press@RunDepth: 288.65 psig @ 3480.00 ft (KB)

Start Date: 2009.08.17

End Date:

2009.08.18

Start Time: 21:17:45

End Time:

05:36:14

Capacity: 7000.00 psig

Last Calib.: 2009.08.18

Time On Btm: 2009.08.17 @ 23:02:14

Time Off Btm: 2009.08.18 @ 03:03:59

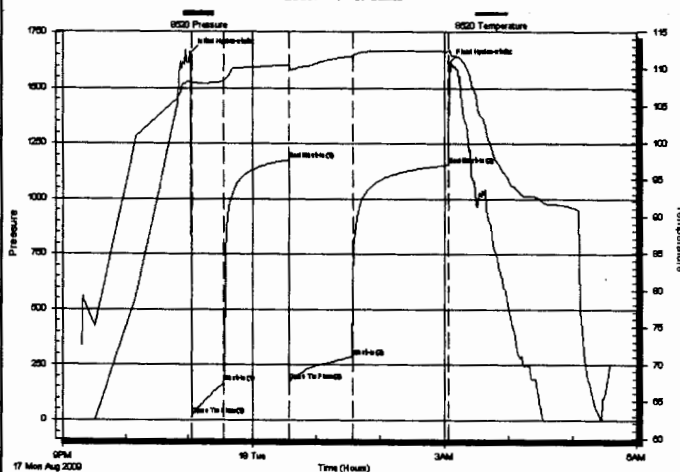
TEST COMMENT: IF- BOB in 29min

ISI-No blow

FF-3.5in blow

FSI-No blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1659.25	108.28	Initial Hydro-static
1	20.26	107.98	Open To Flow (1)
32	169.59	108.29	Shut-In(1)
92	1176.07	110.42	End Shut-In(1)
93	176.50	109.98	Open To Flow (2)
152	288.65	111.65	Shut-In(2)
241	1154.90	112.29	End Shut-In(2)
242	1615.32	112.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCW 80%W 20%M	0.59
120.00	Oil spotted WCM 30%W 70%M	0.59
343.00	OCM 10%O 90%M	2.57
2.00	Free Oil	0.03

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drig. Co, Inc.

250 N Water STE 300
Wichita Ks 67202

ATTN: Jeff Christian

Stealy #1-21x

²⁷
21 3s 21w Decatur KS

Job Ticket: 36423

DST#: 1

Test Start: 2009.08.17 @ 21:17:44

Tool Information

Drill Pipe:	Length: 2979.00 ft	Diameter: 3.80 inches	Volume: 41.79 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 486.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: 74000.00 lb
			Total Volume: - bbl	Tool Chased ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	3476.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.00 ft			
Tool Length:	105.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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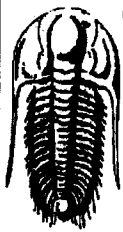
KCC

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3457.00	
Shut In Tool	5.00			3462.00	
Hydraulic tool	5.00			3467.00	
Packer	5.00			3472.00	20.00 Bottom Of Top Packer
Packer	4.00			3476.00	
Stubb	1.00			3477.00	
Perforations	2.00			3479.00	
Change Over Sub	1.00			3480.00	
Recorder	0.00	8372	Inside	3480.00	
Recorder	0.00	8520	Outside	3480.00	
Drill Pipe	62.00			3542.00	
Change Over Sub	1.00			3543.00	
Perforations	15.00			3558.00	
Bullnose	3.00			3561.00	85.00 Bottom Packers & Anchor

Total Tool Length: 105.00

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drig. Co, Inc.

Stealy #1-21x

250 N Water STE 300
Wichita Ks 67202

21 3s 21w Decatur KS

Job Ticket: 36423

DST#: 1

ATTN: Jeff Christian

Test Start: 2009.08.17 @ 21:17:44

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:

28000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	MCW 80%W 20%M	0.590
120.00	Oil spotted WCM 30%W 70%M	0.590
343.00	OCM 10%O 90%M	2.570
2.00	Free Oil	0.028

Total Length: 585.00 ft

Total Volume: 3.778 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

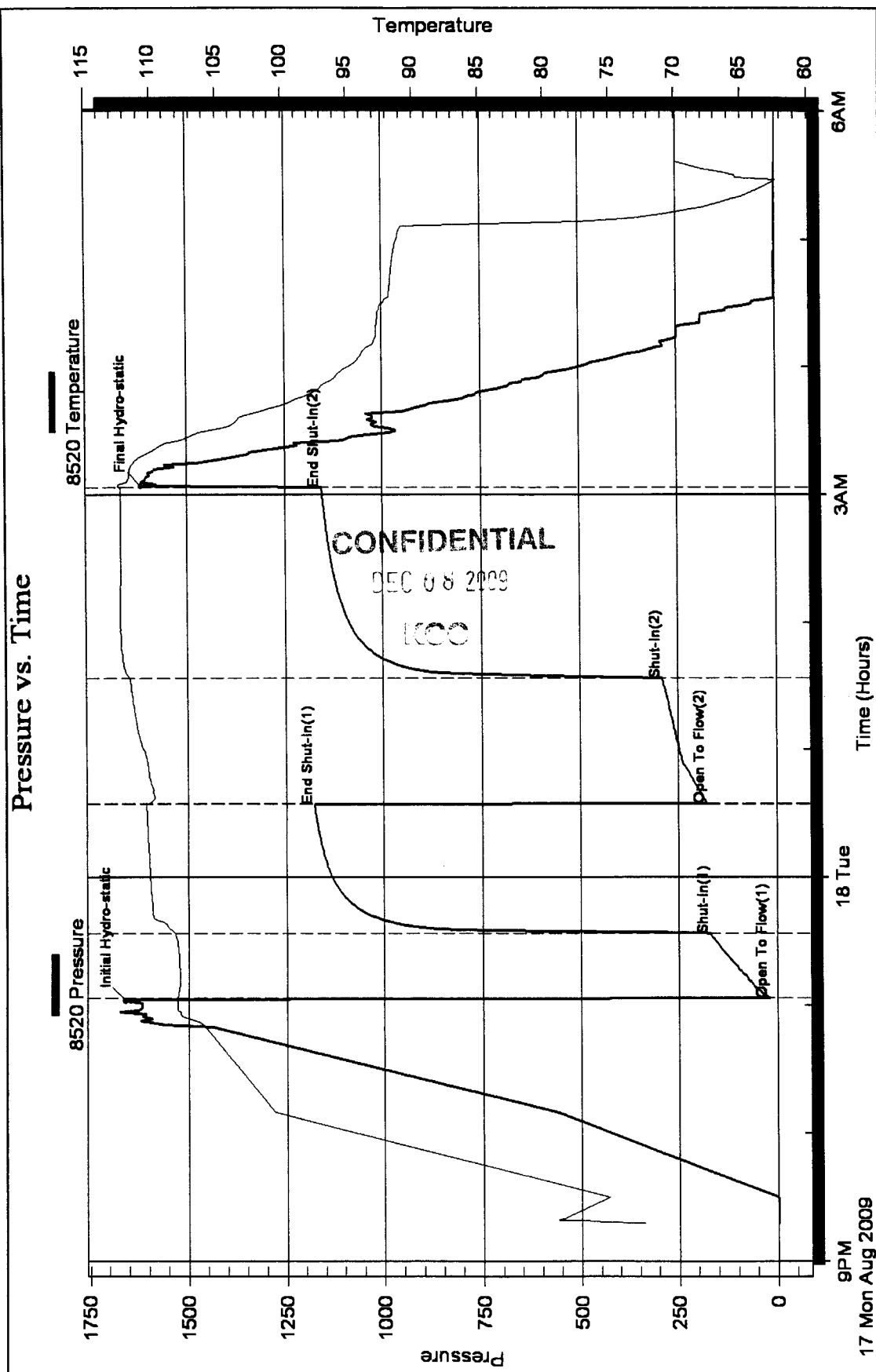
DST Test Number: 1

21 3s 21w Decatur KS

Outside Murfin Drig. Co, Inc.

Serial #: 8520

Pressure vs. Time

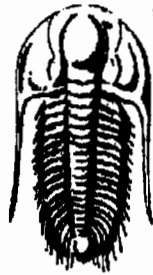


Ref. No: 36423

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Trilobite Testing, Inc



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co, Inc.**

250 N Water STE 300
Wichita Ks 67202

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ATTN: Jeff Christian

21 3s 21w Decatur KS

Stealy #1-21x

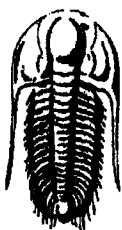
Start Date: 2009.08.18 @ 14:32:40

End Date: 2009.08.18 @ 22:57:10

Job Ticket #: 36424 DST #: 2

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drig. Co, Inc.

250 N Water STE 300
Wichita Ks 67202

ATTN: Jeff Christian

Stealy #1-21x

21 3s 21w Decatur KS

Job Ticket: 36424

DST#: 2

Test Start: 2009.08.18 @ 14:32:40

GENERAL INFORMATION:

Formation: **LKC "A-D"**

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

Time Tool Opened: 16:43:10

Time Test Ended: 22:57:10

Test Type: **Conventional Bottom Hole**

Tester: **Brett Dickinson**

Unit No: **38**

Interval: **3558.00 ft (KB) To 3620.00 ft (KB) (TVD)**

Total Depth: **3620.00 ft (KB) (TVD)**

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

Reference Elevations: **2624.00 ft (KB)**

2619.00 ft (CF)

KB to GR/CF: **5.00 ft**

Serial #: 8520

Outside

Press@RunDepth: **333.68 psig @ 3565.00 ft (KB)**

Start Date: **2009.08.18**

End Date:

2009.08.18

Start Time: **14:32:41**

End Time:

22:57:10

Capacity: **7000.00 psig**

Last Calib.: **2009.08.18**

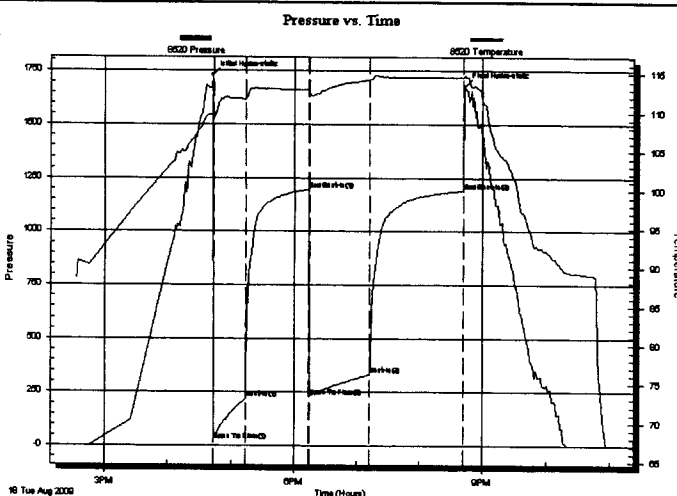
Time On Btrr: **2009.08.18 @ 16:42:10**

Time Off Btrr: **2009.08.18 @ 20:43:25**

TEST COMMENT: **IF- BOB in 17min**

IS- No blow

FF-



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1730.47	109.76	Initial Hydro-static
1	24.82	109.27	Open To Flow (1)
32	219.39	111.75	Shut-In(1)
92	1197.42	112.99	End Shut-In(1)
92	228.79	112.60	Open To Flow (2)
151	333.68	114.20	Shut-In(2)
240	1191.00	114.54	End Shut-In(2)
242	1678.97	114.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
430.00	MCW 90%W 10%M	2.11
60.00	MCW 25%M 75%W	0.33
60.00	Oil scum WCM 65%M 35%W	0.84
120.00	OWCM 5%O 10%W 85%M	1.68
20.00	Free Oil	0.28

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drig. Co, Inc.

Stealy #1-21x

250 N Water STE 300
Wichita Ks 67202

21 3s 21w Decatur KS

Job Ticket: 36424

DST#: 2

ATTN: Jeff Christian

Test Start: 2009.08.18 @ 14:32:40

Tool Information

Drill Pipe:	Length: 3072.00 ft	Diameter: 3.80 inches	Volume: 43.09 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 486.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose:	77000.00 lb
		Total Volume:	- bbl	Tool Chased	ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	65000.00 lb
Depth to Top Packer:	3558.00 ft			Final	69000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	62.00 ft				
Tool Length:	82.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3539.00	
Shut In Tool	5.00			3544.00	
Hydraulic tool	5.00			3549.00	
Packer	5.00			3554.00	20.00 Bottom Of Top Packer
Packer	4.00			3558.00	
Stubb	1.00			3559.00	
Perforations	5.00			3564.00	
Change Over Sub	1.00			3565.00	
Recorder	0.00	8372	Inside	3565.00	
Recorder	0.00	8520	Outside	3565.00	
Drill Pipe	31.00			3596.00	
Change Over Sub	1.00			3597.00	
Perforations	20.00			3617.00	
Bullnose	3.00			3620.00	62.00 Bottom Packers & Anchor

Total Tool Length: 82.00

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drig. Co, Inc.

Stealy #1-21x

250 N Water STE 300
Wichita Ks 67202

21 3s 21w Decatur KS

Job Ticket: 36424

DST#: 2

ATTN: Jeff Christian

Test Start: 2009.08.18 @ 14:32:40

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 54.00 sec/qt

Water Loss: 5.98 in³

Resistivity: ohm.m

Salinity: 700.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

deg API

Water Salinity:

23000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
430.00	MCW 90%W 10%M	2.115
60.00	MCW 25%M 75%W	0.332
60.00	Oil scum WCM 65%M 35%W	0.842
120.00	OWCM 5%O 10%W 85%M	1.683
20.00	Free Oil	0.281

Total Length: 690.00 ft

Total Volume: 5.253 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

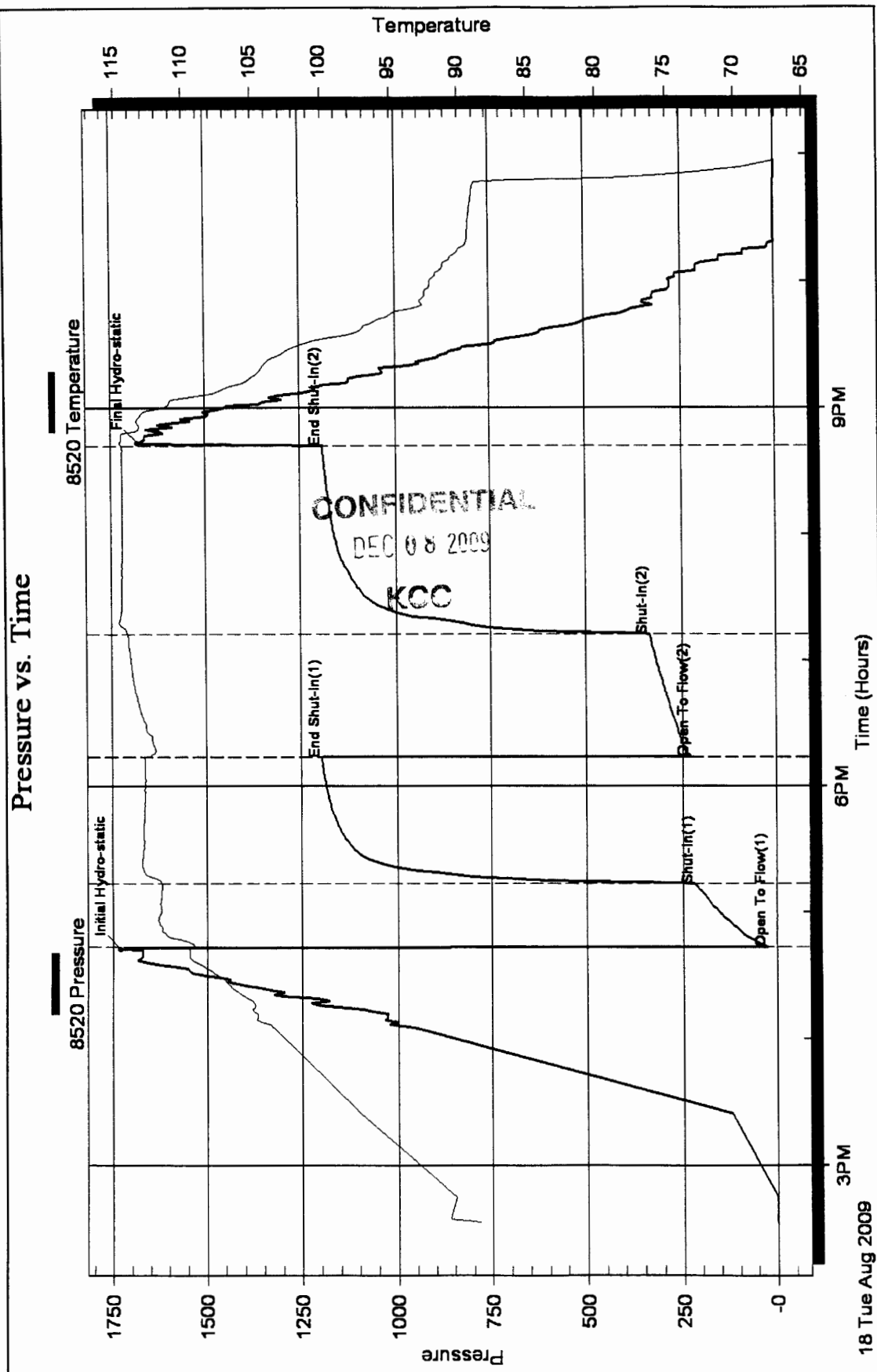
Serial #:

Laboratory Name:

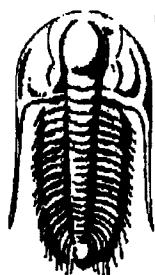
Laboratory Location:

Recovery Comments:

Pressure vs. Time



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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co, Inc.**

250 N Water STE 300
Wichita Ks 67202

CONFIDENTIAL

DEC 08 2009

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ATTN: Jeff Christian

21 3s 21w Decatur KS

Stealy #1-21x

Start Date: 2009.08.19 @ 06:51:33

End Date: 2009.08.19 @ 15:04:03

Job Ticket #: 36425

DST #: 3

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drig. Co, Inc.

250 N Water STE 300
Wichita Ks 67202

ATTN: Jeff Christian

Stealy #1-21x

21 3s 21w Decatur KS

Job Ticket: 36425

DST#: 3

Test Start: 2009.08.19 @ 06:51:33

GENERAL INFORMATION:

Formation: **LKC "F-G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:36:48

Time Test Ended: 15:04:03

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 38

Interval: **3612.00 ft (KB) To 3661.00 ft (KB) (TVD)**

Total Depth: 3661.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2624.00 ft (KB)

2619.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8520 Outside

Press@RunDepth: 323.80 psig @ 3624.00 ft (KB)

Start Date: 2009.08.19

End Date:

2009.08.19

Start Time: 06:51:34

End Time:

15:04:03

Capacity: 7000.00 psig

Last Calib.: 2009.08.19

Time On Btm: 2009.08.19 @ 08:36:03

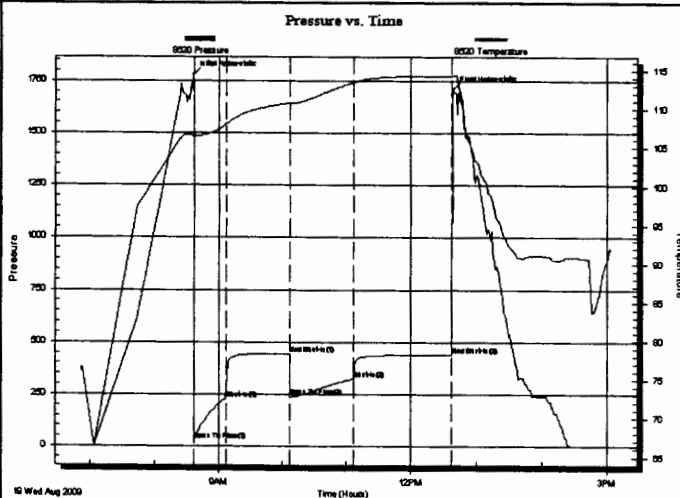
Time Off Btm: 2009.08.19 @ 12:38:33

TEST COMMENT: IF-BOB in 10min

IS- 2.5in blow died back to 2in

FF-BOB in 31min

FS-1.5in blow died



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1777.22	106.52	Initial Hydro-static
1	29.24	106.18	Open To Flow (1)
31	225.84	108.02	Shut-In (1)
91	445.37	110.79	End Shut-In (1)
91	239.23	110.74	Open To Flow (2)
151	323.80	113.46	Shut-In (2)
242	440.28	114.27	End Shut-In (2)
243	1708.11	114.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	Oil Scum MCW 70%W 30%M	1.18
250.00	OCM 10%O 90%M	1.27
210.00	Free Oil 5%G 95%O	2.95
0.00	GIP 410ft	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drig. Co, Inc.

Stealy #1-21x

250 N Water STE 300
Wichita Ks 67202

21 3s 21w Decatur KS

Job Ticket: 36425

DST#: 3

ATTN: Jeff Christian

Test Start: 2009.08.19 @ 06:51:33

Tool Information

Drill Pipe:	Length: 3134.00 ft	Diameter: 3.80 inches	Volume: 43.96 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 486.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: 76000.00 lb
		Total Volume:	- bbl	Tool Chased ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 67000.00 lb
Depth to Top Packer:	3612.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	49.00 ft			
Tool Length:	69.00 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			3593.00	
Shut In Tool	5.00			3598.00	
Hydraulic tool	5.00			3603.00	
Packer	5.00			3608.00	20.00 Bottom Of Top Packer
Packer	4.00			3612.00	
Stubb	1.00			3613.00	
Perforations	10.00			3623.00	
Change Over Sub	1.00			3624.00	
Recorder	0.00	8372	Inside	3624.00	
Recorder	0.00	8520	Outside	3624.00	
Drill Pipe	31.00			3655.00	
Change Over Sub	1.00			3656.00	
Perforations	2.00			3658.00	
Bullnose	3.00			3661.00	49.00 Bottom Packers & Anchor

Total Tool Length: 69.00

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TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drig. Co, Inc.

Stealy #1-21x

250 N Water STE 300
Wichita Ks 67202

21 3s 21w Decatur KS

Job Ticket: 36425

DST#: 3

ATTN: Jeff Christian

Test Start: 2009.08.19 @ 06:51:33

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:

27000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
240.00	Oil Scum MCW 70%W 30%M	1.180
250.00	OCM 10%O 90%M	1.266
210.00	Free Oil 5%G 95%O	2.946
0.00	GIP 410ft	0.000

Total Length: 700.00 ft

Total Volume: 5.392 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

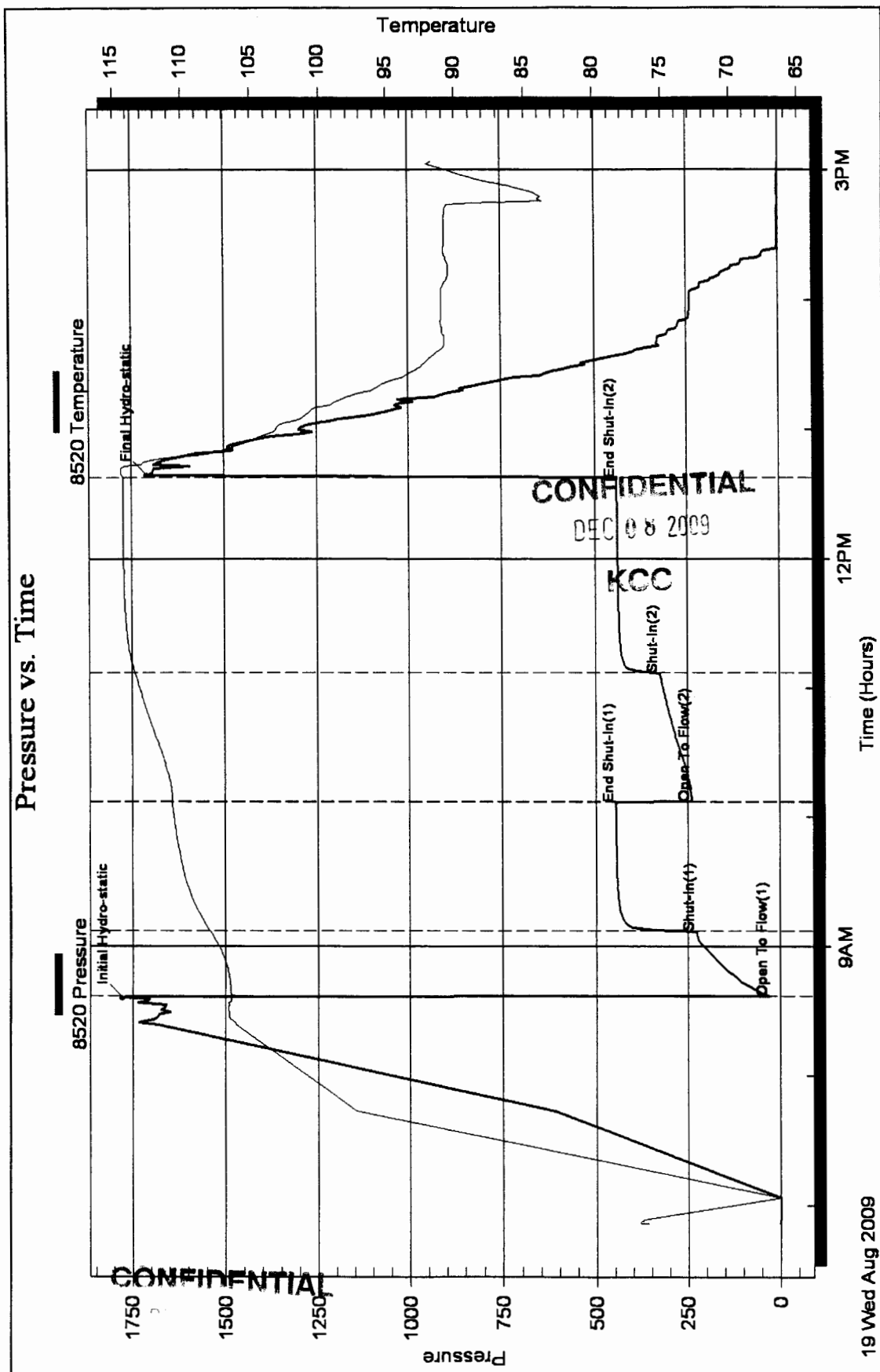
Serial #:

Laboratory Name:

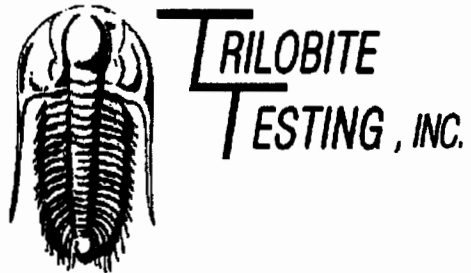
Laboratory Location:

Recovery Comments:

Pressure vs. Time



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DRILL STEM TEST REPORT

Prepared For: **Murfin Drlg. Co, Inc.**

250 N Water STE 300
Wichita Ks 67202

ATTN: Jeff Christian

21 3s 21w Decatur KS

Stealy #1-21x

Start Date: 2009.08.20 @ 00:22:31

End Date: 2009.08.20 @ 08:42:46

Job Ticket #: 35451 DST #: 4

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Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drig. Co, Inc.

250 N Water STE 300
Wichita Ks 67202

ATTN: Jeff Christian

Stealy #1-21x

21 3s 21w Decatur KS

Job Ticket: 35451

DST#:4

Test Start: 2009.08.20 @ 00:22:31

GENERAL INFORMATION:

Formation: **LKC" H-J"**

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

Time Tool Opened: 02:09:31

Time Test Ended: 08:42:46

Test Type: **Conventional Bottom Hole**

Tester: **Brett Dickinson**

Unit No: **38**

Interval: **3658.00 ft (KB) To 3726.00 ft (KB) (TVD)**

Total Depth: **3726.00 ft (KB) (TVD)**

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

Reference Elevations: **2624.00 ft (KB)**

2619.00 ft (CF)

KB to GRVCF: **5.00 ft**

Serial #: 8520

Outside

Press@RunDepth: **865.22 psig @ 3670.00 ft (KB)**

Start Date: **2009.08.20**

End Date:

2009.08.20

Capacity: **7000.00 psig**

Last Calib.: **2009.08.20**

Start Time: **00:22:32**

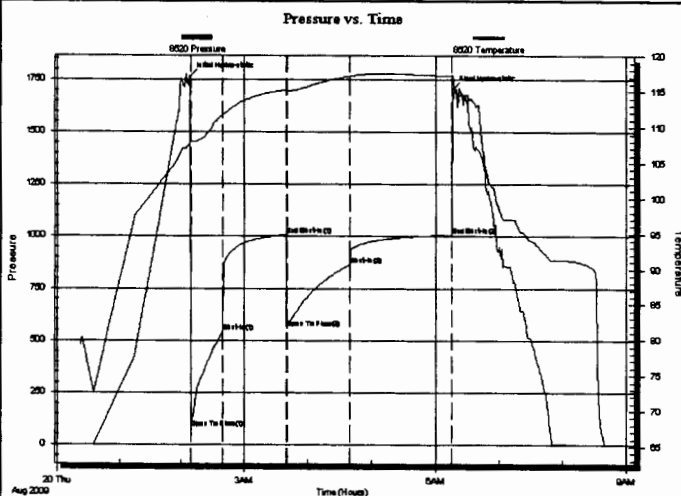
End Time:

08:42:46

Time On Btrr: **2009.08.20 @ 02:08:31**

Time Off Btrr: **2009.08.20 @ 06:15:46**

TEST COMMENT: IF-BOB in 3min
ISI-Very weak surface blow died in 43min
FF-BOB in 5min
FSI- No blow



PRESSURE SUMMARY

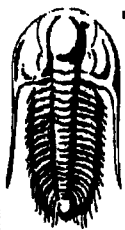
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1763.20	107.74	Initial Hydro-static
1	80.87	107.93	Open To Flow (1)
31	539.32	111.67	Shut-In (1)
91	1008.29	115.18	End Shut-In (1)
92	560.34	115.05	Open To Flow (2)
151	865.22	117.13	Shut-In (2)
246	1008.40	117.16	End Shut-In (2)
248	1705.85	117.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1724.00	Water	19.76
60.00	MCW 10%M 90%W	0.84
1.00	Free Oil	0.01

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drig. Co, Inc.

Stealy #1-21x

250 N Water STE 300
Wichita Ks 67202

21 3s 21w Decatur KS

Job Ticket: 35451

DST#: 4

ATTN: Jeff Christian

Test Start: 2009.08.20 @ 00:22:31

Tool Information

Drill Pipe:	Length: 3165.00 ft	Diameter: 3.80 inches	Volume: 44.40 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 486.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: 82000.00 lb
			Total Volume: - bbl	Tool Chased ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	3658.00 ft			Final 78000.00 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
Change Over Sub	1.00			3639.00	
Shut In Tool	5.00			3644.00	
Hydraulic tool	5.00			3649.00	
Packer	5.00			3654.00	20.00 Bottom Of Top Packer
Packer	4.00			3658.00	
Stubb	1.00			3659.00	
Perforations	10.00			3669.00	
Change Over Sub	1.00			3670.00	
Recorder	0.00	8372	Inside	3670.00	
Recorder	0.00	8520	Outside	3670.00	
Drill Pipe	30.00			3700.00	
Change Over Sub	1.00			3701.00	
Perforations	22.00			3723.00	
Bullnose	3.00			3726.00	68.00 Bottom Packers & Anchor

Total Tool Length: 88.00

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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drig. Co, Inc.

Stealy #1-21x

250 N Water STE 300
Wichita Ks 67202

21 3s 21w Decatur KS

Job Ticket: 35451

DST#: 4

ATTN: Jeff Christian

Test Start: 2009.08.20 @ 00:22:31

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 47.00 sec/qt

Water Loss: 5.98 in³

Resistivity: ohm.m

Salinity: 700.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

deg API

Water Salinity: 58000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1724.00	Water	19.756
60.00	MCW 10%M 90%W	0.842
1.00	Free Oil	0.014

Total Length: 1785.00 ft

Total Volume: 20.612 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

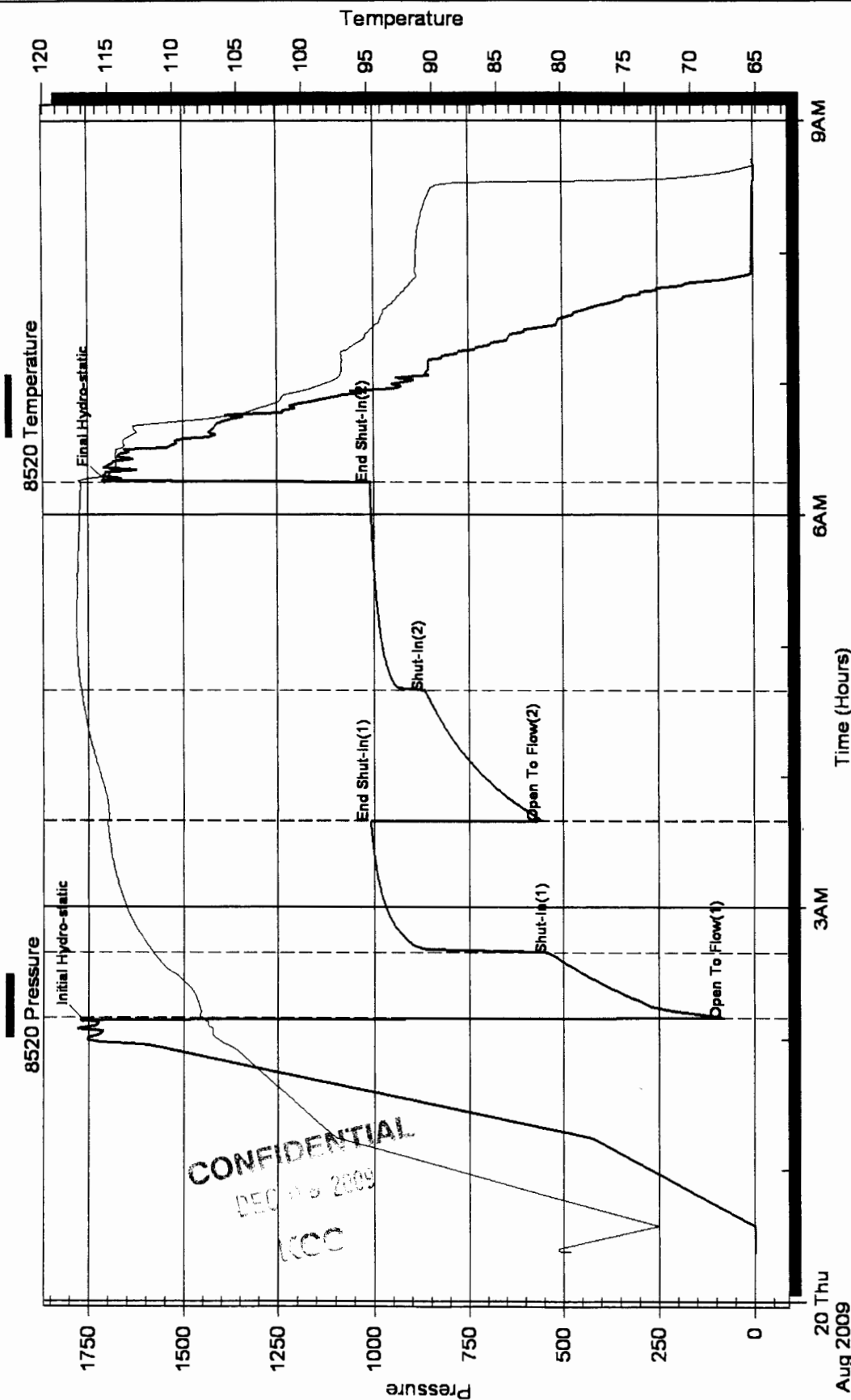
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Murfin Drilg. Co, Inc.**

250 N Water STE 300
Wichita Ks 67202

ATTN: Jeff Christian

21 3s 21w Decatur KS

Stealy #1-21x

Start Date: 2009.08.20 @ 16:19:22

End Date: 2009.08.20 @ 22:21:07

Job Ticket #: 35452

DST #: 5

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KCC Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Murfin Drilg. Co, Inc.

250 N Water STE 300
Wichita Ks 67202

ATTN: Jeff Christian

Stealy #1-21x

21 3s 21w Decatur KS

Job Ticket: 35452

DST#: 5

Test Start: 2009.08.20 @ 16:19:22

GENERAL INFORMATION:

Formation: **LKC "K,L"**

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

Time Tool Opened: 18:26:52

Time Test Ended: 22:21:07

Test Type: **Conventional Bottom Hole**

Tester: **Brett Dickinson**

Unit No: **38**

Interval: **3720.00 ft (KB) To 3774.00 ft (KB) (TVD)**

Total Depth: **3774.00 ft (KB) (TVD)**

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

Reference Elevations: **2624.00 ft (KB)**

2619.00 ft (CF)

KB to GR/CF: **5.00 ft**

Serial #: 8520

Outside

Press@RunDepth: **21.82 psig @ 3724.00 ft (KB)**

Start Date: **2009.08.20**

End Date:

2009.08.20

Capacity: **7000.00 psig**

Last Calib.: **2009.08.20**

Start Time: **16:19:23**

End Time:

22:21:07

Time On Btm: **2009.08.20 @ 18:24:37**

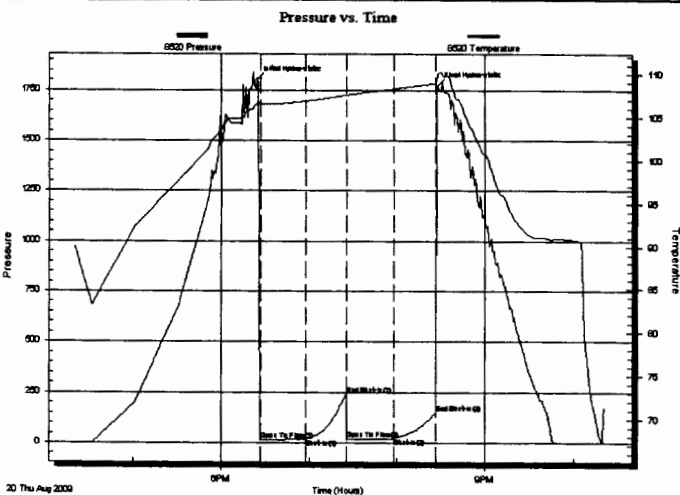
Time Off Btm: **2009.08.20 @ 20:28:07**

TEST COMMENT: IF- 1/4in blow died in 9min

ISI-No blow

FF-No blow

FSI-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1802.73	106.53	Initial Hydro-static
3	14.86	106.64	Open To Flow (1)
33	18.95	106.89	Shut-In (1)
61	240.56	107.60	End Shut-In (1)
62	18.10	107.53	Open To Flow (2)
94	21.82	108.33	Shut-In (2)
123	148.85	108.97	End Shut-In (2)
124	1770.32	109.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02
		0.01

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drig. Co, Inc.

Stealy #1-21x

250 N Water STE 300
Wichita Ks 67202

21 3s 21w Decatur KS

Job Ticket: 35452

DST#: 5

ATTN: Jeff Christian

Test Start: 2009.08.20 @ 16:19:22

Tool Information

Drill Pipe:	Length: 3226.00 ft	Diameter: 3.80 inches	Volume: 45.25 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 486.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: 70000.00 lb
		Total Volume:	- bbl	Tool Chased ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 67000.00 lb
Depth to Top Packer:	3720.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	54.00 ft			
Tool Length:	74.00 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			3701.00	
Shut In Tool	5.00			3706.00	
Hydraulic tool	5.00			3711.00	
Packer	5.00			3716.00	20.00 Bottom Of Top Packer
Packer	4.00			3720.00	
Stubb	1.00			3721.00	
Perforations	2.00			3723.00	
Change Over Sub	1.00			3724.00	
Recorder	0.00	8372	Inside	3724.00	
Recorder	0.00	8520	Outside	3724.00	
Drill Pipe	31.00			3755.00	
Change Over Sub	1.00			3756.00	
Perforations	15.00			3771.00	
Bullnose	3.00			3774.00	54.00 Bottom Packers & Anchor

Total Tool Length: 74.00

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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drig. Co, Inc.

Stealy #1-21x

250 N Water STE 300
Wichita Ks 67202

21 3s 21w Decatur KS

Job Ticket: 35452

DST#: 5

ATTN: Jeff Christian

Test Start: 2009.08.20 @ 16:19:22

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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud	0.025
		0.010

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:

