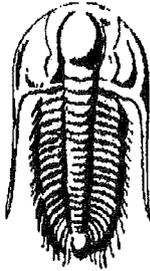


15-179-21227

21-9s-27w

IND



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

250 N. Water
Suite 300
Wichita, KS 67202

ATTN: Brad Rine

21 09 27 Sheridan KS

Alwhit #2-21

Start Date: 2009.04.18 @ 04:40:00

End Date: 2009.04.18 @ 12:49:30

Job Ticket #: 34651 DST #: 1

KANSAS CORPORATION COMMISSION

AUG 14 2009
RECEIVED

KCC
AUG 13 2009
CONFIDENTIAL

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilling Co., Inc.

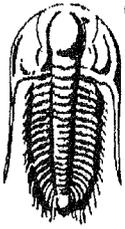
Alwhit #2-21

21 09 27 Sheridan KS

DST # 1

Toronto - LKC "A"

2009.04.18



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Rine

Alwhit #2-21

21 09 27 Sheridan KS

Job Ticket: 34651

DST#: 1

Test Start: 2009.04.18 @ 04:40:00

GENERAL INFORMATION:

Formation: **Toronto - LKC "A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:50:30

Time Test Ended: 12:49:30

Test Type: Conventional Bottom Hole

Tester: James Winder

Unit No: 36

Interval: **3841.00 ft (KB) To 3900.00 ft (KB) (TVD)**

Total Depth: 3900.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2746.00 ft (KB)

2741.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8366

Inside

Press@RunDepth: 99.44 psig @ 3842.00 ft (KB)

Start Date: 2009.04.18

End Date:

2009.04.18

Start Time: 04:40:05

End Time:

12:49:29

Capacity: 7000.00 psig

Last Calib.: 2009.04.18

Time On Btm: 2009.04.18 @ 06:48:00

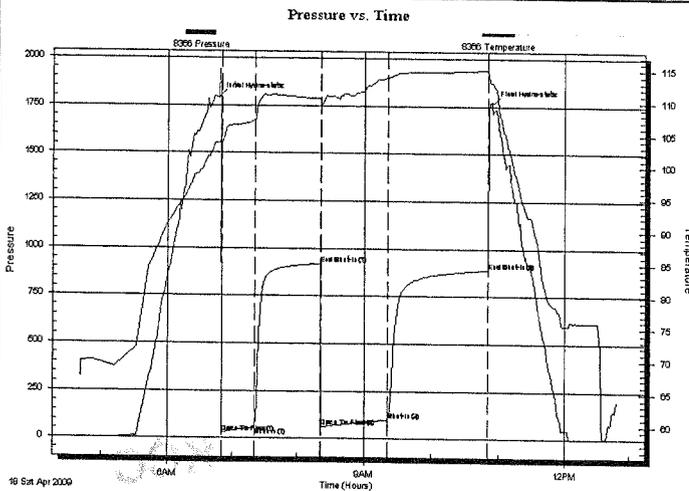
Time Off Btm: 2009.04.18 @ 10:55:00

TEST COMMENT: IF: Blow built to 9"

IS: Bled off, No blow back

FF: Blow built to BOB (12") in 60 min.

FSI: Bled off, No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1794.79	103.54	Initial Hydro-static
3	28.19	103.67	Open To Flow (1)
33	57.25	107.20	Shut-In(1)
93	918.99	110.60	End Shut-In(1)
93	61.03	110.15	Open To Flow (2)
153	99.44	113.83	Shut-In(2)
243	889.08	115.04	End Shut-In(2)
247	1766.84	113.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM 79% _m , 11% _o , 10% _g	0.57
62.00	GOCM 63% _m , 28% _o , 9% _g	0.87
62.00	GMO 49% _o , 43% _m , 8% _g	0.87
15.00	MCO 74% _o , 26% _m	0.21
0.00	GIP = 50'	0.00
0.00	Gravity = 30.8 api @ 46 deg F = 32.2 api	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

Alwhit #2-21

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Rine

21 09 27 Sheridan KS

Job Ticket: 34651

DST#: 1

Test Start: 2009.04.18 @ 04:40:00

Tool Information

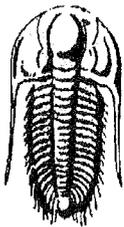
Drill Pipe:	Length: 3791.00 ft	Diameter: 3.80 inches	Volume: 53.18 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 53.33 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3841.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	59.00 ft			
Tool Length:	87.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool slid about 3' to bottom at open

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
S.I. Tool	5.00			3818.00	
HYD S.I. Tool	5.00			3823.00	
Jars	5.00			3828.00	
Safety Joint	3.00			3831.00	
Packer	5.00			3836.00	28.00 Bottom Of Top Packer
Packer	5.00			3841.00	
Stubb	1.00			3842.00	
Recorder	0.00	8366	Inside	3842.00	
Recorder	0.00	8320	Inside	3842.00	
Perforations	17.00			3859.00	
Blank Spacing	33.00			3892.00	
Perforations	5.00			3897.00	
Bullnose	3.00			3900.00	59.00 Bottom Packers & Anchor

Total Tool Length: 87.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

Alwhit #2-21

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Fine

21 09 27 Sheridan KS
Job Ticket: 34651 **DST#: 1**
Test Start: 2009.04.18 @ 04:40:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	32.2 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.58 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 900.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GOCM 79% _m , 11% _o , 10% _g	0.568
62.00	GOCM 63% _m , 28% _o , 9% _g	0.870
62.00	GMO 49% _o , 43% _m , 8% _g	0.870
15.00	MCO 74% _o , 26% _m	0.210
0.00	GIP = 50'	0.000
0.00	Gravity = 30.8 api @ 46 deg F = 32.2 api	0.000

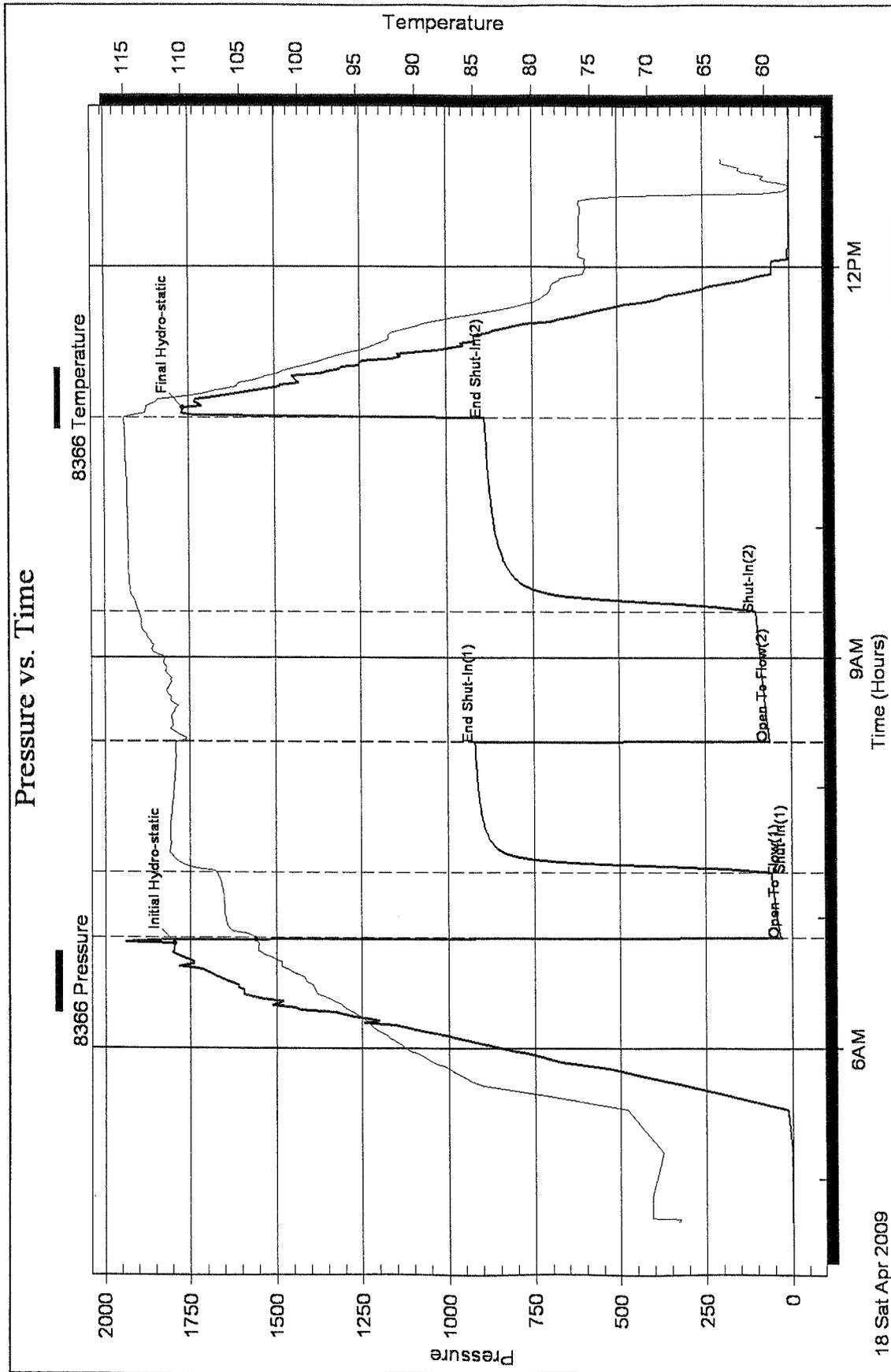
Total Length: 199.00 ft Total Volume: 2.518 bbl

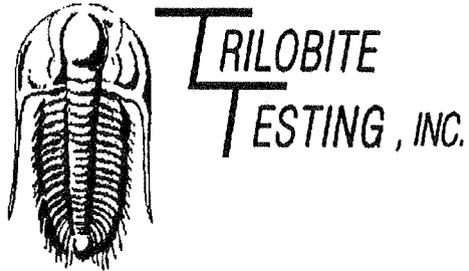
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

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

250 N. Water
Suite 300
Wichita, KS 67202

ATTN: Brad Rine

21 09 27 Sheridan KS

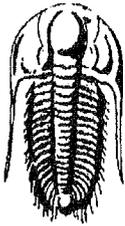
Alwhit #2-21

Start Date: 2009.04.18 @ 20:02:00

End Date: 2009.04.19 @ 03:14:30

Job Ticket #: 34652 DST #: 2

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Rine

Alwhit #2-21

21 09 27 Sheridan KS

Job Ticket: 34652

DST#: 2

Test Start: 2009.04.18 @ 20:02:00

GENERAL INFORMATION:

Formation: **LKC "C - D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:25:30

Time Test Ended: 03:14:30

Test Type: Conventional Bottom Hole

Tester: James Winder

Unit No: 36

Interval: **3896.00 ft (KB) To 3936.00 ft (KB) (TVD)**

Reference Elevations: 2746.00 ft (KB)

Total Depth: 3936.00 ft (KB) (TVD)

2741.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8366 Inside

Press@RunDepth: 43.56 psig @ 3897.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2009.04.18

End Date:

2009.04.19

Last Calib.: 2009.04.19

Start Time: 20:02:05

End Time:

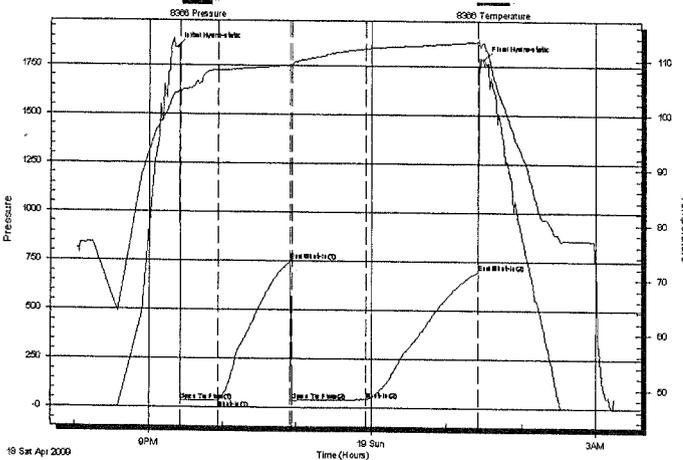
03:14:29

Time On Btm: 2009.04.18 @ 21:23:00

Time Off Btm: 2009.04.19 @ 01:30:00

TEST COMMENT: IF: Blow built to 1"
IS: Bled off, No blow back
FF: Blow built to 1 1/2"
FSI: Bled off, No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1841.98	103.85	Initial Hydro-static
3	32.81	103.92	Open To Flow (1)
34	37.31	108.11	Shut-In(1)
93	749.94	109.01	End Shut-In(1)
94	38.15	108.84	Open To Flow (2)
153	43.56	112.00	Shut-In(2)
242	697.97	113.31	End Shut-In(2)
247	1784.65	113.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM 83% _m , 13% _o , 4% _g	0.57
3.00	GOM 50% _m , 45% _o , 5% _g	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

Alwhit #2-21

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Rine

21 09 27 Sheridan KS

Job Ticket: 34652

DST#: 2

Test Start: 2009.04.18 @ 20:02:00

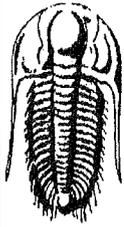
Tool Information

Drill Pipe:	Length: 3851.00 ft	Diameter: 3.80 inches	Volume: 54.02 bbl	Tool Weight: 2000.00 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
		Total Volume: 54.17 bbl		Tool Chased 6.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3896.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	68.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:
Tool slid 5' - 6' to bottom at open

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
S.I. Tool	5.00			3873.00	
HYD S.I. Tool	5.00			3878.00	
Jars	5.00			3883.00	
Safety Joint	3.00			3886.00	
Packer	5.00			3891.00	28.00 Bottom Of Top Packer
Packer	5.00			3896.00	
Stubb	1.00			3897.00	
Recorder	0.00	8366	inside	3897.00	
Recorder	0.00	8320	inside	3897.00	
Perforations	36.00			3933.00	
Bullnose	3.00			3936.00	40.00 Bottom Packers & Anchor
Total Tool Length:	68.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

Alwhit #2-21

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Rine

21 09 27 Sheridan KS

Job Ticket: 34652

DST#: 2

Test Start: 2009.04.18 @ 20:02:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 49.00 sec/qt

Water Loss: 7.18 in³

Resistivity: ohm.m

Salinity: 900.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: ppm

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GOCM 83% _m , 13% _o , 4% _g	0.568
3.00	GOM 50% _m , 45% _o , 5% _g	0.042

Total Length: 63.00 ft Total Volume: 0.610 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

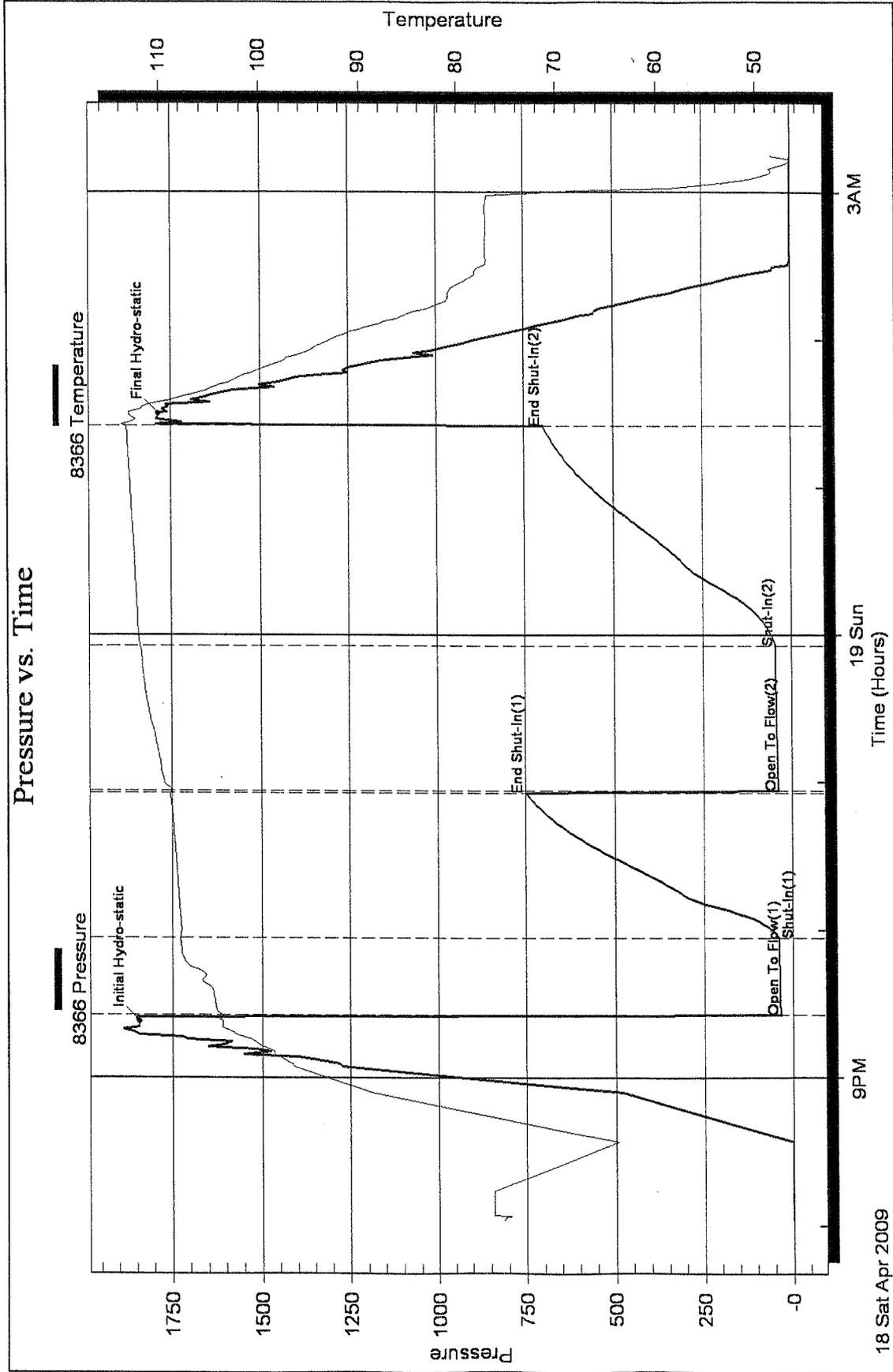
Serial #:

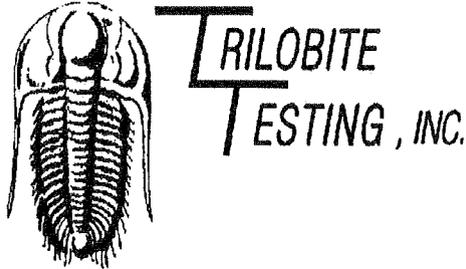
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

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

250 N. Water
Suite 300
Wichita, KS 67202

ATTN: Brad Rine

21 09 27 Sheridan KS

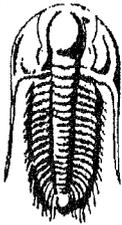
Alwhit #2-21

Start Date: 2009.04.19 @ 10:42:00

End Date: 2009.04.19 @ 18:31:30

Job Ticket #: 34653 DST #: 3

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

Alwhit #2-21

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Rine

21 09 27 Sheridan KS

Job Ticket: 34653 **DST#: 3**

Test Start: 2009.04.19 @ 10:42:00

GENERAL INFORMATION:

Formation: **LKC "E- F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:14:00

Time Test Ended: 18:31:30

Test Type: Conventional Bottom Hole

Tester: James Winder

Unit No: 36

Interval: **3939.00 ft (KB) To 3964.00 ft (KB) (TVD)**

Total Depth: 3964.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2746.00 ft (KB)

2741.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8366

Inside

Press@RunDepth: 421.42 psig @ 3940.00 ft (KB)

Start Date: 2009.04.19

End Date:

2009.04.19

Capacity: 7000.00 psig

Last Calib.: 2009.04.19

Start Time: 10:42:05

End Time:

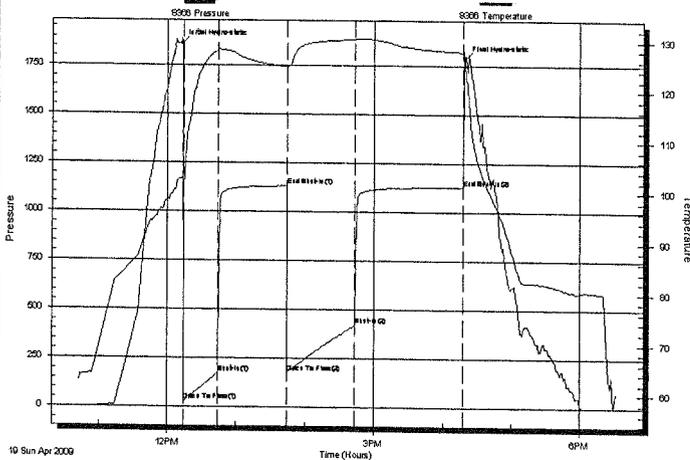
18:31:29

Time On Btm: 2009.04.19 @ 12:12:00

Time Off Btm: 2009.04.19 @ 16:19:30

TEST COMMENT: IF: Blow built to BOB in 9 1/2 min.
IS: Bled off, Weak surface blow back from 7 min. to 43 min.
FF: Blow built to BOB in 11 min.
FSI: Bled off, Blow back built to 1/2" in 45 min., dead in 80 min.

Pressure vs. Time



PRESSURE SUMMARY

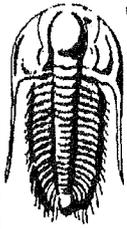
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1860.27	102.64	Initial Hydro-static
2	28.93	101.69	Open To Flow (1)
32	173.58	128.11	Shut-In(1)
92	1131.97	125.00	End Shut-In(1)
93	179.36	124.70	Open To Flow (2)
152	421.42	130.31	Shut-In(2)
246	1130.75	127.85	End Shut-In(2)
248	1787.03	126.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	SGO MCW 67%w, 27%m, 3%o, 3%g	0.57
436.00	Water 97%w, 3%m	6.12
367.00	SGO MCW 70%w, 20%m, 6%o, 4%g	5.15
25.00	CO 95%o, 2%g, 3%m	0.35
0.00	GIP = 45'	0.00
0.00	Gravity = 31.6 api Chlorides = 68,000 pp	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

Alwhit #2-21

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Rine

21 09 27 Sheridan KS

Job Ticket: 34653

DST#: 3

Test Start: 2009.04.19 @ 10:42:00

Tool Information

Drill Pipe:	Length: 3914.00 ft	Diameter: 3.80 inches	Volume: 54.90 bbl	Tool Weight: 2000.00 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
		Total Volume: 55.05 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3939.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 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
S.I. Tool	5.00			3916.00	
HYD S.I. Tool	5.00			3921.00	
Jars	5.00			3926.00	
Safety Joint	3.00			3929.00	
Packer	5.00			3934.00	28.00 Bottom Of Top Packer
Packer	5.00			3939.00	
Stubb	1.00			3940.00	
Recorder	0.00	8366	Inside	3940.00	
Recorder	0.00	8320	Inside	3940.00	
Perforations	21.00			3961.00	
3901	3.00			3964.00	25.00 Bottom Packers & Anchor
Total Tool Length:	53.00				



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

Alwhit #2-21

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Rine

21 09 27 Sheridan KS

Job Ticket: 34653 **DST#: 3**

Test Start: 2009.04.19 @ 10:42:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 31.6 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 68000 ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.57 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 900.00 ppm		
Filter Cake: 2.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	SGO MCW 67%w , 27%m, 3%o, 3%g	0.568
436.00	Water 97%w , 3%m	6.116
367.00	SGO MCW 70%w , 20%m, 6%o, 4%g	5.148
25.00	CO 95%o, 2%g, 3%m	0.351
0.00	GIP = 45'	0.000
0.00	Gravity = 31.6 api Chlorides = 68,000 pp	0.000

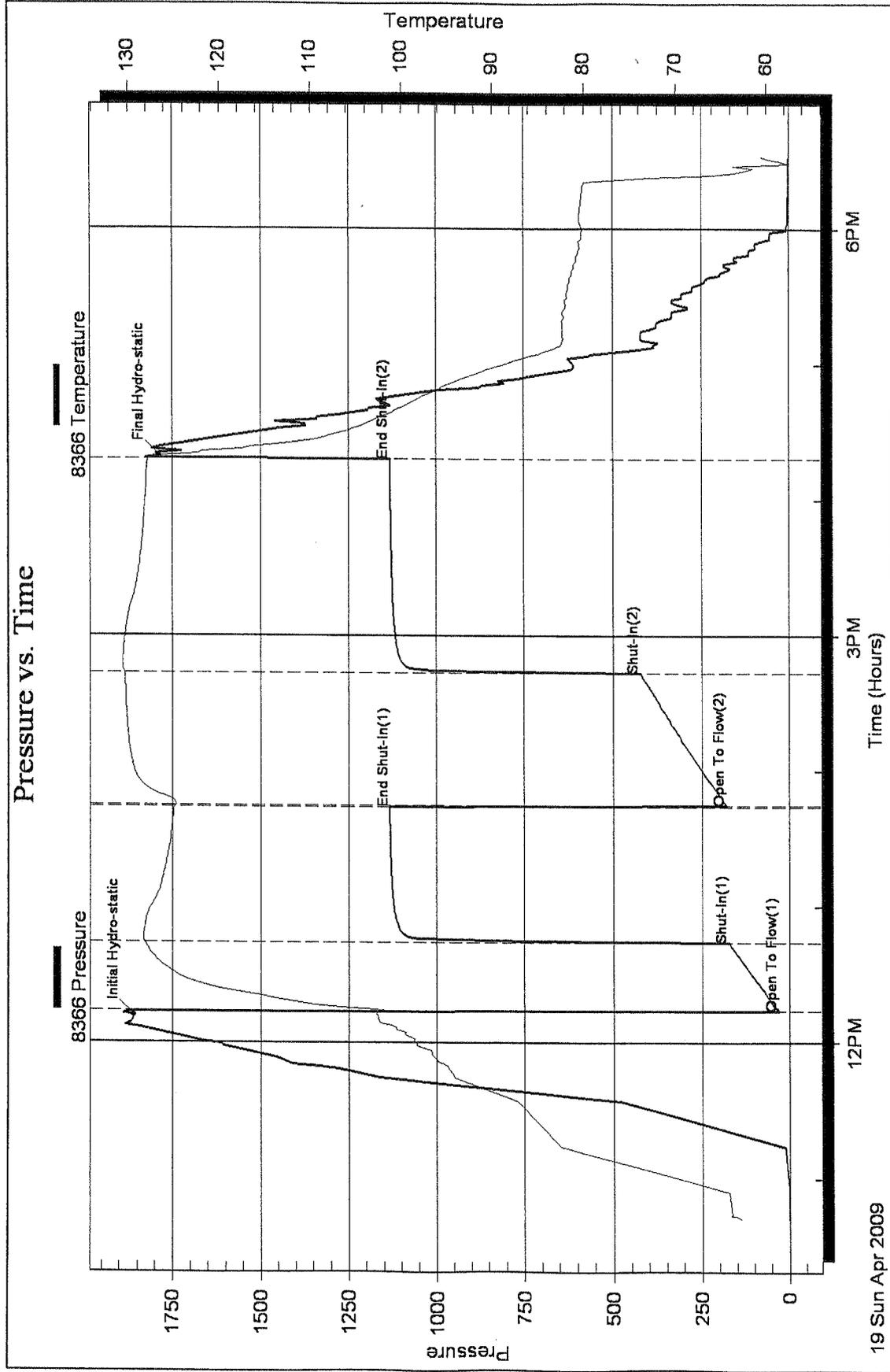
Total Length: 888.00 ft Total Volume: 12.183 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Gravity = 32.6 api @ 70 deg F
Corrected Gravity = 31.6 api

Pressure vs. Time

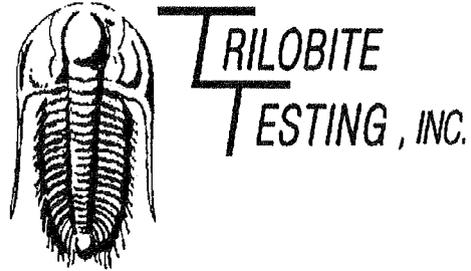


19 Sun Apr 2009

12PM

3PM

6PM



DRILL STEM TEST REPORT

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

250 N. Water
Suite 300
Wichita, KS 67202

ATTN: Brad Rine

21 09 27 Sheridan KS

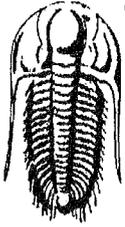
Alwhit #2-21

Start Date: 2009.04.20 @ 08:00:00

End Date: 2009.04.20 @ 14:10:00

Job Ticket #: 34654 DST #: 4

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Rine

Alwhit #2-21

21 09 27 Sheridan KS

Job Ticket: 34654 DST#: 4

Test Start: 2009.04.20 @ 08:00:00

GENERAL INFORMATION:

Formation: **LKC "I - J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:25:30

Time Test Ended: 14:10:00

Test Type: Conventional Bottom Hole

Tester: James Winder

Unit No: 36

Interval: **4026.00 ft (KB) To 4073.00 ft (KB) (TVD)**

Total Depth: 4073.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2746.00 ft (KB)

2741.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8366 Inside

Press@RunDepth: 25.84 psig @ 4027.00 ft (KB)

Start Date: 2009.04.20

End Date: 2009.04.20

Capacity: 7000.00 psig

Last Calib.: 2009.04.20

Start Time: 08:00:05

End Time: 14:09:59

Time On Btm: 2009.04.20 @ 09:23:00

Time Off Btm: 2009.04.20 @ 12:30:30

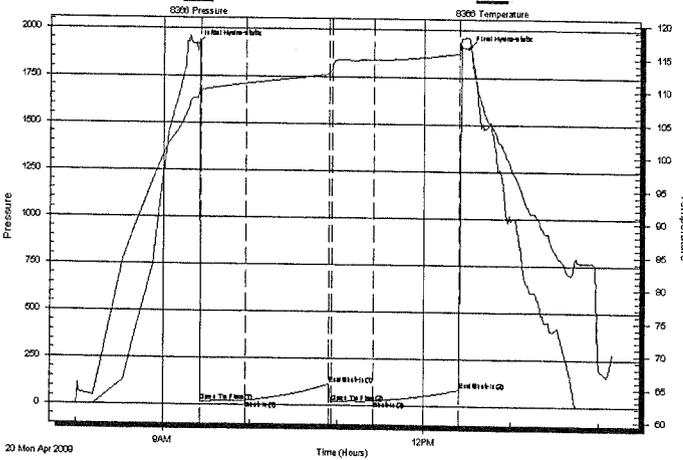
TEST COMMENT: IF: Blow built to 3/4" in 10 min., down to 1/2" at close

IS: Bled off, No blow back

FF: No blow

FSI: No blow back

Pressure vs. Time



PRESSURE SUMMARY

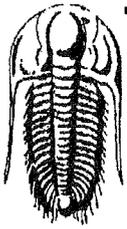
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1916.89	108.79	Initial Hydro-static
3	17.78	109.82	Open To Flow (1)
34	23.05	110.95	Shut-In (1)
92	116.21	112.46	End Shut-In (1)
93	20.11	113.18	Open To Flow (2)
123	25.84	114.61	Shut-In (2)
182	89.38	115.73	End Shut-In (2)
188	1902.87	118.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud w/oil spots 97% m, 3% o	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

Alwhit #2-21

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Rine

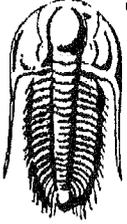
21 09 27 Sheridan KS
Job Ticket: 34654 **DST#: 4**
Test Start: 2009.04.20 @ 08:00:00

Tool Information

Drill Pipe:	Length: 3975.00 ft	Diameter: 3.80 inches	Volume: 55.76 bbl	Tool Weight: 2000.00 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
		<u>Total Volume:</u>	<u>55.91 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	4026.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	47.00 ft			
Tool Length:	75.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
S.I. Tool	5.00			4003.00	
HYD S.I. Tool	5.00			4008.00	
Jars	5.00			4013.00	
Safety Joint	3.00			4016.00	
Packer	5.00			4021.00	28.00 Bottom Of Top Packer
Packer	5.00			4026.00	
Stubb	1.00			4027.00	
Recorder	0.00	8366	Inside	4027.00	
Recorder	0.00	8320	Inside	4027.00	
Perforations	10.00			4037.00	
Blank Spacing	33.00			4070.00	
Bullnose	3.00			4073.00	47.00 Bottom Packers & Anchor
Total Tool Length:	75.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Murfin Drilling Co., Inc.

Alwhit #2-21

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Rine

21 09 27 Sheridan KS
Job Ticket: 34654 **DST#: 4**
Test Start: 2009.04.20 @ 08:00:00

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: bbl		
Water Loss: 6.39 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1100.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

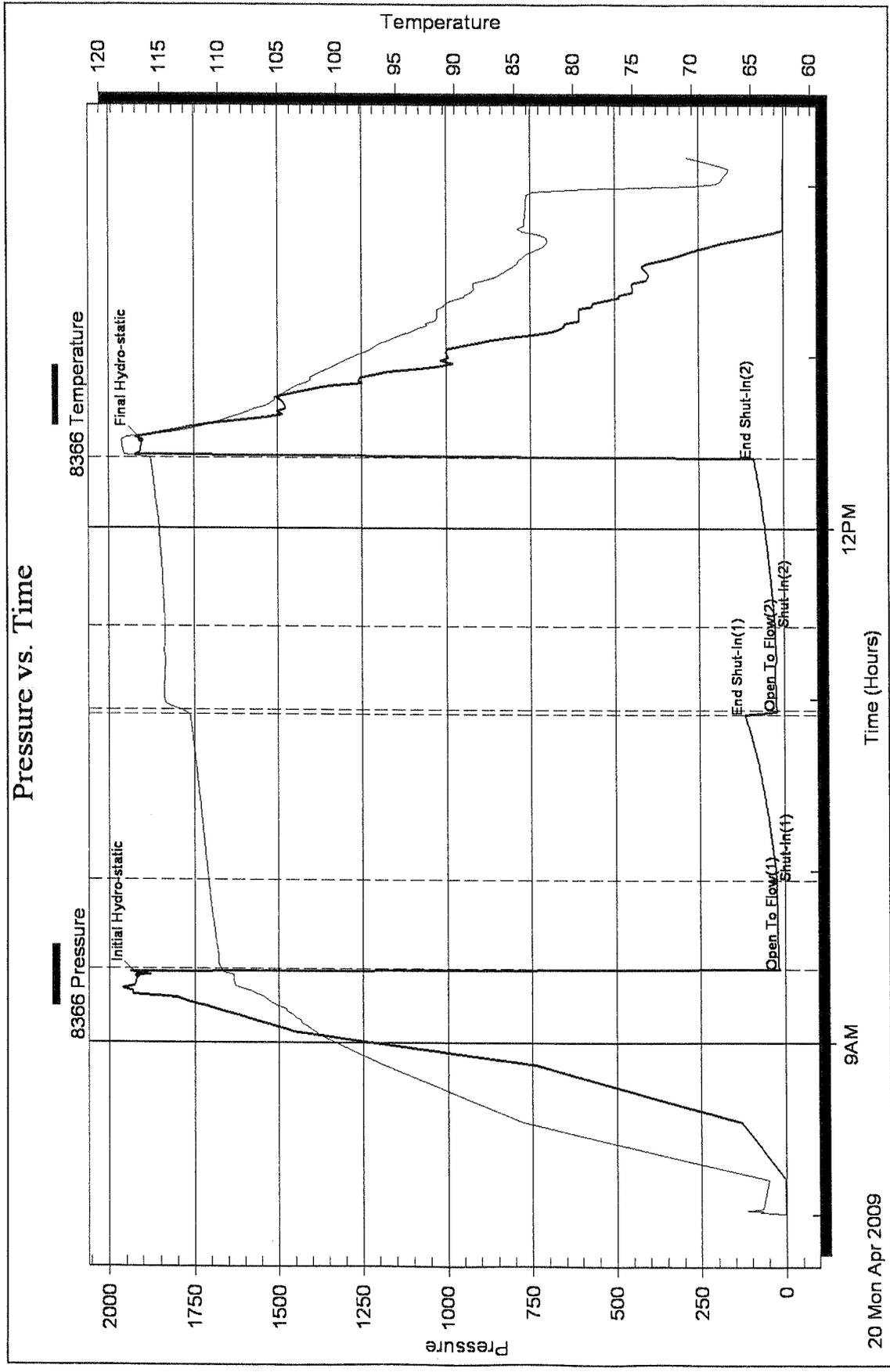
Length ft	Description	Volume bbl
20.00	Mud w/oil spots 97% _m , 3% _o	0.098

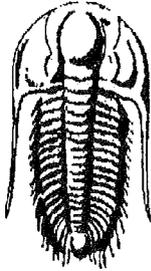
Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

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

250 N. Water
Suite 300
Wichita, KS 67202

ATTN: Brad Rine

21 09 27 Sheridan KS

Alwhit #2-21

Start Date: 2009.04.21 @ 19:22:00

End Date: 2009.04.22 @ 03:35:30

Job Ticket #: 34655 DST #: 5

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Murfin Drilling Co., Inc.

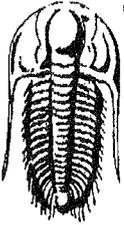
Alwhit #2-21

21 09 27 Sheridan KS

DST # 5

Cherokee

2009.04.21



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Murfin Drilling Co., Inc.

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Rine

Alwhit #2-21

21 09 27 Sheridan KS

Job Ticket: 34655

DST#: 5

Test Start: 2009.04.21 @ 19:22:00

GENERAL INFORMATION:

Formation: **Cherokee**

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

Time Tool Opened: 21:38:00

Time Test Ended: 03:35:30

Test Type: **Conventional Bottom Hole**

Tester: **James Winder**

Unit No: **36**

Interval: **4350.00 ft (KB) To 4400.00 ft (KB) (TVD)**

Total Depth: **4400.00 ft (KB) (TVD)**

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

Reference Elevations: **2746.00 ft (KB)**

2741.00 ft (CF)

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

Serial #: 8366

Inside

Press@RunDepth: **115.13 psig @ 4351.00 ft (KB)**

Start Date: **2009.04.21**

End Date:

2009.04.22

Capacity: **7000.00 psig**

Last Calib.: **2009.04.22**

Start Time: **19:22:05**

End Time:

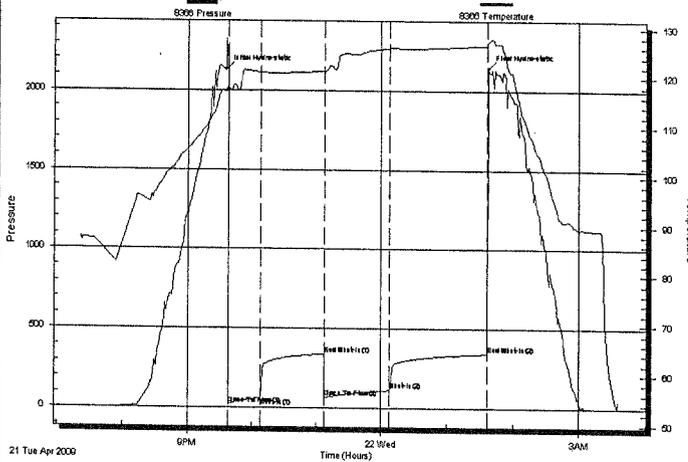
03:35:29

Time On Btm: **2009.04.21 @ 21:36:00**

Time Off Btm: **2009.04.22 @ 01:37:59**

TEST COMMENT: IF: Blow built to 3"
IS: Bled off, No blow back
FF: At 30 min. blow started and built to 1/2"
FS: Bled off, No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2129.88	117.22	Initial Hydro-static
2	21.42	117.73	Open To Flow (1)
32	64.98	121.04	Shut-In(1)
92	341.83	121.32	End Shut-In(1)
92	68.75	121.17	Open To Flow (2)
152	115.13	125.97	Shut-In(2)
241	344.83	126.58	End Shut-In(2)
242	2140.42	127.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
65.00	WCM 63% _m , 37% _w	0.32
125.00	Mud 100%	0.61
0.00	RW = .381 @ 52.5 deg F	0.00
0.00	Chlorides = 24,000 ppm	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Murfin Drilling Co., Inc.

Alwhit #2-21

250 N. Water
Suite 300
Wichita, KS 67202
ATTN: Brad Rine

21 09 27 Sheridan KS
Job Ticket: 34655 **DST#: 5**
Test Start: 2009.04.21 @ 19:22:00

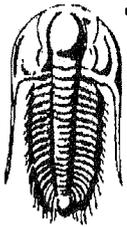
Tool Information

Drill Pipe:	Length: 4071.00 ft	Diameter: 3.80 inches	Volume: 57.11 bbl	Tool Weight: 2000.00 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: 270.00 ft	Diameter: 2.25 inches	Volume: 1.33 bbl	Weight to Pull Loose: 96000.00 lb
			<u>Total Volume: 58.44 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4350.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
S.I. Tool	5.00			4327.00	
HYD S.I. Tool	5.00			4332.00	
Jars	5.00			4337.00	
Safety Joint	3.00			4340.00	
Packer	5.00			4345.00	28.00 Bottom Of Top Packer
Packer	5.00			4350.00	
Stubb	1.00			4351.00	
Recorder	0.00	8366	Inside	4351.00	
Recorder	0.00	8320	Inside	4351.00	
Perforations	10.00			4361.00	
Blank Spacing	33.00			4394.00	
Perforations	3.00			4397.00	
Bullnose	3.00			4400.00	50.00 Bottom Packers & Anchor

Total Tool Length: 78.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

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

Alwhit #2-21
21 09 27 Sheridan KS
Job Ticket: 34655 **DST#: 5**
Test Start: 2009.04.21 @ 19:22:00

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: 24000 ppm	
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.99 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1600.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	WCM 63% _m , 37% _w	0.320
125.00	Mud 100%	0.615
0.00	RW = .381 @ 52.5 deg F	0.000
0.00	Chlorides = 24,000 ppm	0.000

Total Length: 190.00 ft Total Volume: 0.935 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Pressure vs. Time

