

15-051-25802

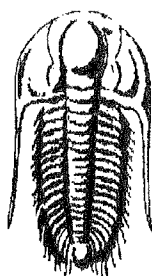
23-12s-16w

IND

CONFIDENTIAL

DEC 08 2008

KOO



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **John O. Farmer**

CONFIDENTIAL Box 352
Russell, KS 67665

DEC 08 2008

ATTN: **KOO** Randy K

23 12s 16w Ellis KS

Dreilling A #1

Start Date: 2008.08.16 @ 01:55:00

End Date: 2008.08.16 @ 08:45:30

Job Ticket #: 32716

DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

John O. Farmer

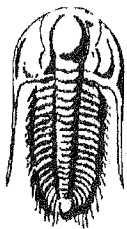
Dreilling A #1

23 12s 16w Ellis KS

DST # 1

LKC "A-C"

2008.08.16



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

John O. Farmer
P.O. Box 352
Russell, KS 67665
ATTN: Randy K

Dreiling A #1

23 12s 16w Ellis KS

Job Ticket: 32716

DST#: 1

Test Start: 2008.08.16 @ 01:55:00

GENERAL INFORMATION:

Formation: **LKC "A-C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:54:00

Time Test Ended: 08:45:30

Test Type: Conventional Bottom Hole

Tester: Kyle Kinderknecht

Unit No: 31

Interval: **3122.00 ft (KB) To 3173.00 ft (KB) (TVD)**

Total Depth: 3173.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1937.00 ft (KB)

1932.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8319 Inside

Press@RunDepth: 96.95 psig @ 3126.00 ft (KB)

Start Date: 2008.08.16

End Date: 2008.08.16

Capacity: 7000.00 psig

Last Calib.: 2008.08.16

Start Time: 01:55:05

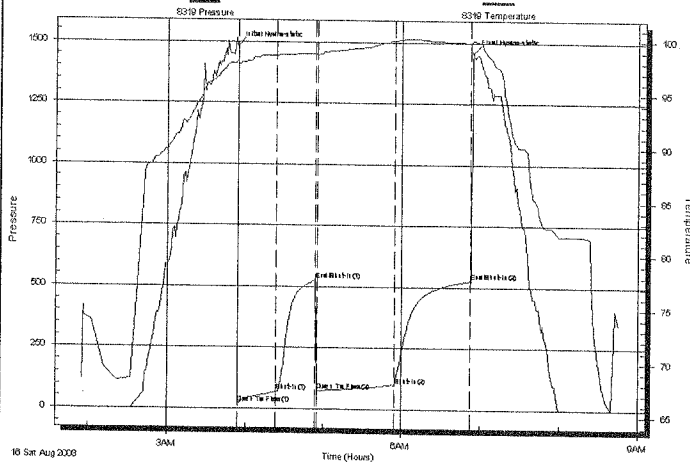
End Time: 08:45:29

Time On Btm: 2008.08.16 @ 03:53:30

Time Off Btm: 2008.08.16 @ 06:54:30

TEST COMMENT: IF Slow building to 3 1/2"
FF 1"

Pressure vs. Time



PRESSURE SUMMARY

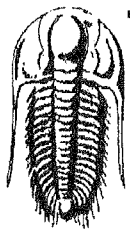
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1484.70	98.15	Initial Hydro-static
1	20.06	97.69	Open To Flow (1)
30	70.56	98.63	Shut-In(1)
61	526.18	98.78	End Shut-In(1)
62	74.96	98.66	Open To Flow (2)
121	96.95	99.99	Shut-In(2)
179	526.35	99.88	End Shut-In(2)
181	1457.82	100.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCW 80%W 20%M	0.59
60.00	GsyOWCM 5%G 5%O 15%W 75%M	0.85
0.00	15' GIP	0.00

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer

P.O. Box 352
Russell, KS 67665

ATTN: Randy K

Dreiling A #1

23 12s 16w Ellis KS

Job Ticket: 32716

DST#: 1

Test Start: 2008.08.16 @ 01:55:00

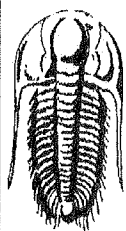
Tool Information

Drill Pipe:	Length: 2995.00 ft	Diameter: 3.82 inches	Volume: 42.46 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 52000.00 lb
			Total Volume: 43.05 bbl	Tool Chased 2.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3122.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	71.00 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			3103.00	
Shut In Tool	5.00			3108.00	
Hydraulic tool	5.00			3113.00	
Packer	4.00			3117.00	20.00 Bottom Of Top Packer
Packer	5.00			3122.00	
Stubb	1.00			3123.00	
Perforations	3.00			3126.00	
Recorder	0.00	8319	Inside	3126.00	
Recorder	0.00	8369	Inside	3126.00	
Change Over Sub	1.00			3127.00	
Blank Spacing	32.00			3159.00	
Change Over Sub	1.00			3160.00	
Perforations	10.00			3170.00	
Bullnose	3.00			3173.00	51.00 Bottom Packers & Anchor

Total Tool Length: 71.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer

Dreiling A #1

P.O. Box 352
Russell, KS 67665

23 12s 16w Ellis KS

Job Ticket: 32716

DST#: 1

ATTN: Randy K

Test Start: 2008.08.16 @ 01:55:00

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:

50000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	MCW 80%W 20%M	0.590
60.00	GsyOWCM 5%G 5%O 15%W 75%M	0.851
0.00	15' GIP	0.000

Total Length: 180.00 ft

Total Volume: 1.441 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

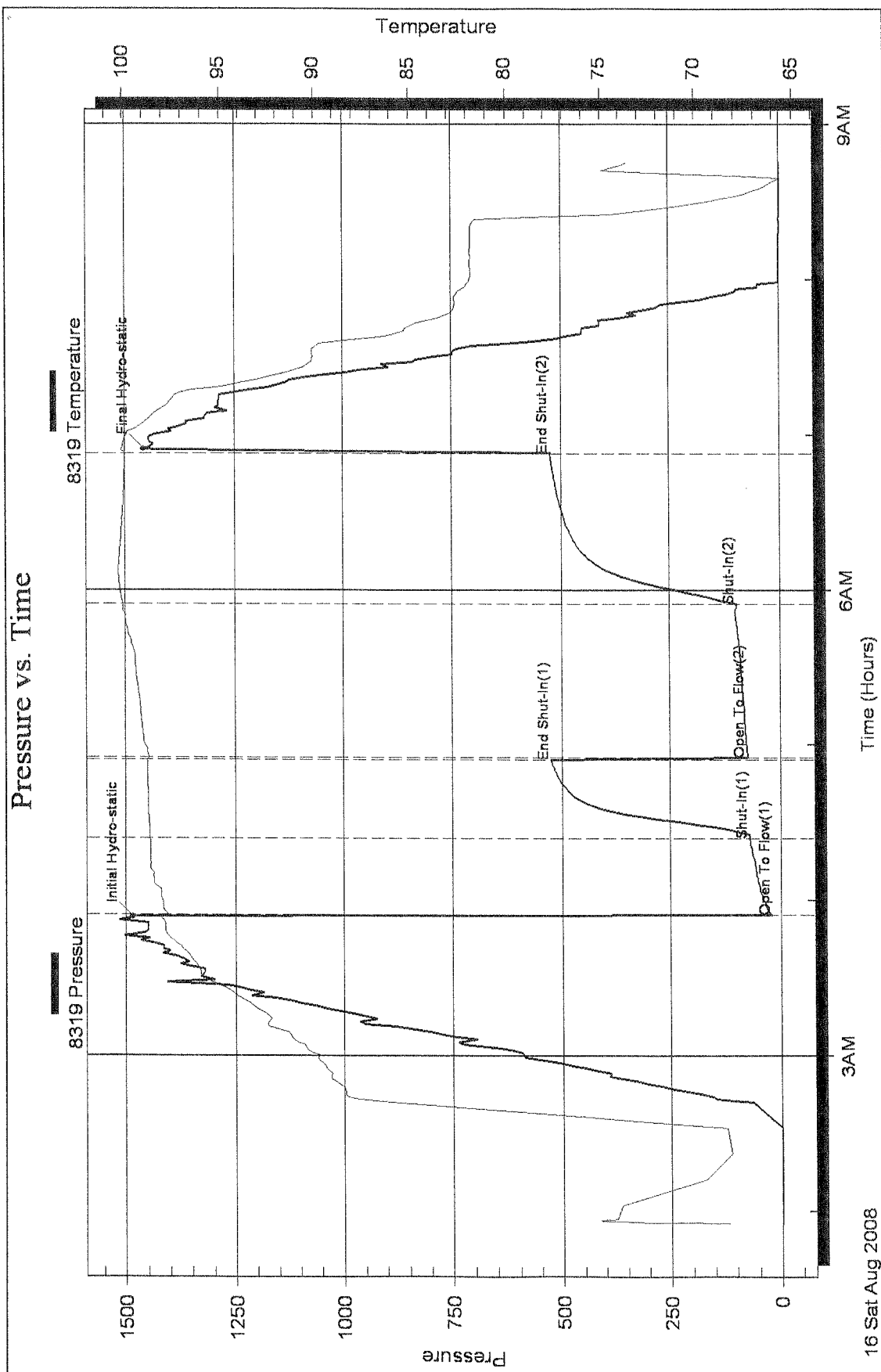
Serial #:

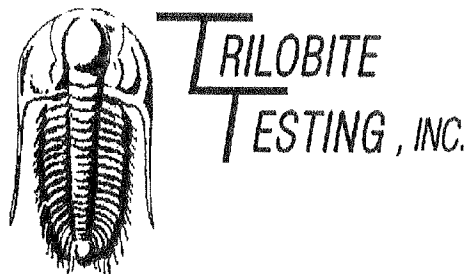
Laboratory Name:

Laboratory Location:

Recovery Comments: rw .14 @ 74 deg.

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **John O. Farmer**

P.O. Box 352
Russell, KS 67665

ATTN: Randy K

23 12s 16w Ellis KS

Dreilling A #1

Start Date: 2008.08.16 @ 16:05:22

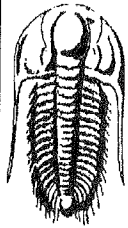
End Date: 2008.08.16 @ 23:39:22

Job Ticket #: 32717 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

John O. Farmer

P.O. Box 352
Russell, KS 67665

ATTN: Randy K

Dreiling A #1

23 12s 16w Ellis KS

Job Ticket: 32717

DST#: 2

Test Start: 2008.08.16 @ 16:05:22

GENERAL INFORMATION:

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

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:48:22

Time Test Ended: 23:39:22

Interval: 3180.00 ft (KB) To 3249.00 ft (KB) (TVD)

Total Depth: 3249.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Kyle Kinderknecht

Unit No: 31

Reference Elevations: 1937.00 ft (KB)

1932.00 ft (CF)

KB to GRVCF: 5.00 ft

Serial #: 8319

Inside

Press@RunDepth: 256.55 psig @ 3217.00 ft (KB)

Start Date: 2008.08.16

End Date:

2008.08.16

Start Time: 16:05:27

End Time:

23:39:21

Capacity: 7000.00 psig

Last Calib.: 2008.08.16

Time On Btm: 2008.08.16 @ 17:47:52

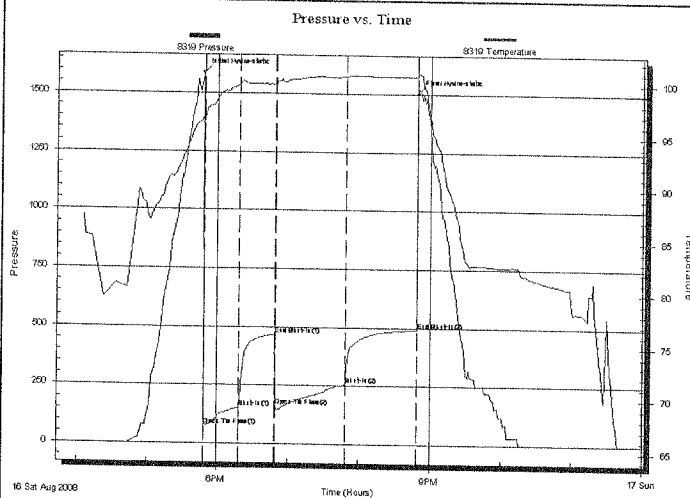
Time Off Btm: 2008.08.16 @ 20:49:21

TEST COMMENT: IF BOB 2 min

ISI 2"

FF BOB 2min GTS 55 min

FSI BOB 5min



PRESSURE SUMMARY

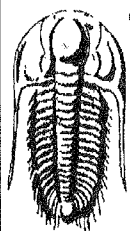
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1587.22	96.78	Initial Hydro-static
1	73.88	96.51	Open To Flow (1)
31	154.11	99.85	Shut-In(1)
61	467.55	99.99	End Shut-In(1)
62	159.47	99.87	Open To Flow (2)
121	256.55	100.76	Shut-In(2)
181	490.35	100.73	End Shut-In(2)
182	1503.92	101.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GsyOMCW 10%g 5%o 45%w 40%m	0.30
250.00	GsyFreeOil 30%g 70%o	2.99
120.00	GIP	1.70
60.00	GsyOM 65%G 20%O 15%M	0.85
75.00	GsyOCM 5%G 15%O 80%M	1.06
0.00	2495' GIP	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

John O. Farmer

Dreiling A #1

P.O. Box 352
Russell, KS 67665

23 12s 16w Ellis KS

ATTN: Randy K

Job Ticket: 32717

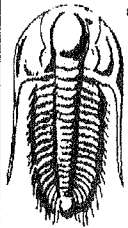
DST#: 2

Test Start: 2008.08.16 @ 16:05:22

Tool Information

Drill Pipe:	Length: 3058.00 ft	Diameter: 3.82 inches	Volume: 43.35 bbl	Tool Weight:	2000.00 lb	
Heavy Wt. Pipe:	Length: ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb	
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	54000.00 lb	
			Total Volume:	43.94 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial	42000.00 lb	
Depth to Top Packer:	3180.00 ft			Final	44000.00 lb	
Depth to Bottom Packer:	ft					
Interval between Packers:	69.00 ft					
Tool Length:	89.00 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			3161.00	
Shut In Tool	5.00			3166.00	
Hydraulic tool	5.00			3171.00	
Packer	4.00			3175.00	20.00 Bottom Of Top Packer
Packer	5.00			3180.00	
Stubb	1.00			3181.00	
Perforations	3.00			3184.00	
Change Over Sub	1.00			3185.00	
Blank Spacing	31.00			3216.00	
Change Over Sub	1.00			3217.00	
Recorder	0.00	8319	Inside	3217.00	
Recorder	0.00	8369	Inside	3217.00	
Perforations	29.00			3246.00	
Bullnose	3.00			3249.00	69.00 Bottom Packers & Anchor
Total Tool Length:		89.00			



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer

Dreiling A #1

P.O. Box 352
Russell, KS 67665

23 12s 16w Ellis KS

Job Ticket: 32717

DST#: 2

ATTN: Randy K

Test Start: 2008.08.16 @ 16:05:22

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

42 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

32000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GsyOMCW 10%g 5%o 45%w 40%m	0.295
250.00	GsyFreeOil 30%g 70%o	2.988
120.00	GIP	1.701
60.00	GsyOM 65%G 20%O 15%M	0.851
75.00	GsyOCM 5%G 15%O 80%M	1.063
0.00	2495' GIP	0.000

Total Length: 565.00 ft

Total Volume: 6.898 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

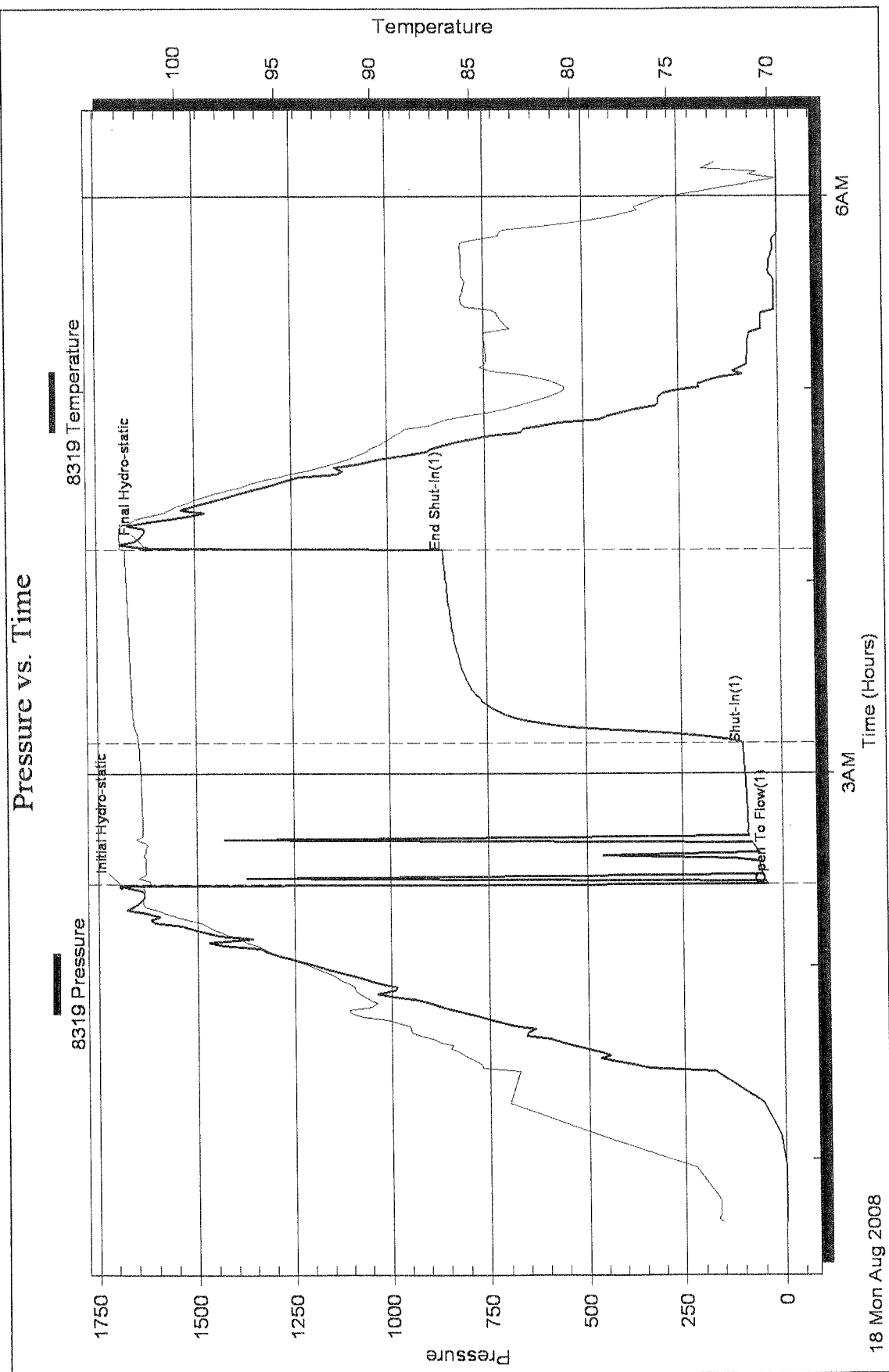
Serial #:

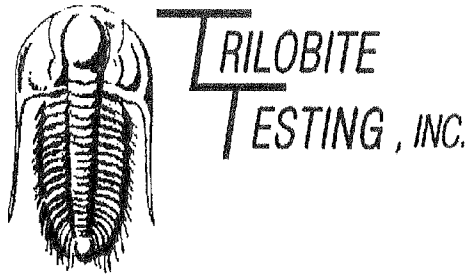
Laboratory Name:

Laboratory Location:

Recovery Comments: RW .23 @ 70 DEG.

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **John O. Farmer**

P.O. Box 352
Russell. KS 67665

ATTN: Randy K

23 12s 16w Ellis KS

Dreiling A #1

Start Date: 2008.08.18 @ 00:40:26

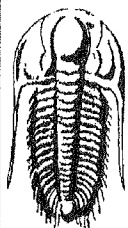
End Date: 2008.08.18 @ 06:10:26

Job Ticket #: 32718 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

John O. Farmer
P.O. Box 352
Russell, KS 67665
ATTN: Randy K

Dreiling A #1

23 12s 16w Ellis KS

Job Ticket: 32718

DST#: 3

Test Start: 2008.08.18 @ 00:40:26

GENERAL INFORMATION:

Formation: **Arb**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:25:26

Time Test Ended: 06:10:26

Test Type: Conventional Straddle

Tester: Kyle Kinderknecht

Unit No: 31

Interval: 3383.00 ft (KB) To 3435.00 ft (KB) (TVD)

Total Depth: 3476.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1937.00 ft (KB)

1932.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8319 Inside

Press@RunDepth: 95.52 psig @ 3420.00 ft (KB)

Start Date: 2008.08.18

End Date:

2008.08.18

Start Time: 00:40:31

End Time:

06:10:25

Capacity: 7000.00 psig

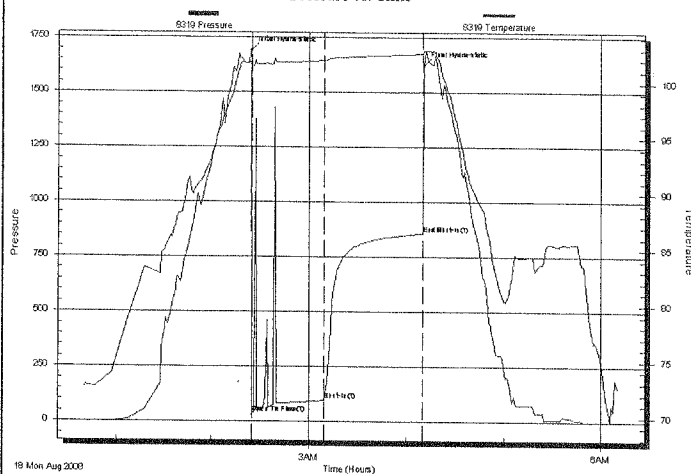
Last Calib.: 2008.08.18

Time On Btm: 2008.08.18 @ 02:24:56

Time Off Btm: 2008.08.18 @ 04:10:26

TEST COMMENT: IF 8 1/2"
ISI No blow

Pressure vs. Time



PRESSURE SUMMARY

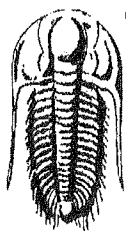
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1688.98	101.87	Initial Hydro-static
1	35.75	101.43	Open To Flow (1)
45	95.52	102.02	Shut-In(1)
105	857.16	102.63	End Shut-In(1)
106	1621.97	102.91	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
165.00	HOCM 50%O 50%M	1.23

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer

Dreiling A #1

P.O. Box 352
Russell, KS 67665

23 12s 16w Ellis KS

Job Ticket: 32718

DST#: 3

ATTN: Randy K

Test Start: 2008.08.18 @ 00:40:26

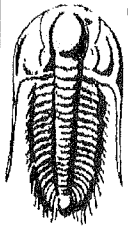
Tool Information

Drill Pipe:	Length: 3276.00 ft	Diameter: 3.82 inches	Volume: 46.44 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	50000.00 lb
		Total Volume:	47.03 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial	43000.00 lb
Depth to Top Packer:	3383.00 ft			Final	45000.00 lb
Depth to Bottom Packer:	3435.00 ft				
Interval between Packers:	52.00 ft				
Tool Length:	112.00 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			3364.00	
Shut In Tool	5.00			3369.00	
Hydraulic tool	5.00			3374.00	
Packer	4.00			3378.00	20.00 Bottom Of Top Packer
Packer	5.00			3383.00	
Stubb	1.00			3384.00	
Perforations	3.00			3387.00	
Change Over Sub	1.00			3388.00	
Blank Spacing	31.00			3419.00	
Change Over Sub	1.00			3420.00	
Recorder	0.00	8319	Inside	3420.00	
Perforations	11.00			3431.00	
Recorder	0.00	13308	Outside	3431.00	
Blank Off Sub	1.00			3432.00	
Blank Spacing	3.00			3435.00	52.00 Tool Interval
Packer	0.00			3435.00	
Stubb	1.00			3436.00	
Perforations	4.00			3440.00	
Change Over Sub	1.00			3441.00	
Recorder	0.00	8369	Below	3441.00	
Blank Spacing	31.00			3472.00	
Bullnose	3.00			3475.00	40.00 Bottom Packers & Anchor

Total Tool Length: 112.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer

Dreiling A #1

P.O. Box 352
Russell, KS 67665

23 12s 16w Ellis KS

Job Ticket: 32718

DST#: 3

ATTN: Randy K

Test Start: 2008.08.18 @ 00:40:26

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 8.78 in³

Resistivity: ohm.m

Salinity: 5000.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

24 deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
165.00	HOCM 50%O 50%M	1.228

Total Length: 165.00 ft

Total Volume: 1.228 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

