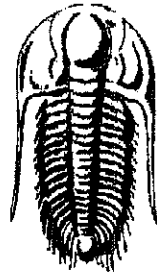


15-051-25834-0000

KOS ✓



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Crawford Oil & Gas Co**

PO Box 1366
El Dorado, Ks 67042

ATTN: Larry Crawford

5 15 19 Ellis KS

Winnie # 1-5

Start Date: 2008.11.09 @ 01:48:21

End Date: 2008.11.09 @ 08:50:51

Job Ticket #: 33665 DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Crawford Oil & Gas Co

Winnie # 1-5

5 15 19 Ellis KS

DST # 1

C-D-E-F-G

2008.11.09



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Crawford Oil & Gas Co

PO Box 1366
El Dorado, Ks 67042

ATTN: Larry Crawford

Winnie # 1-5

5 15 19 Ellis KS

Job Ticket: 33665

DST#: 1

Test Start: 2008.11.09 @ 01:48:21

GENERAL INFORMATION:

Formation: **C-D-E-F-G**

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

Time Tool Opened: 04:02:21

Time Test Ended: 08:50:51

Interval: **3394.00 ft (KB) To 3461.00 ft (KB) (TVD)**

Total Depth: **3461.00 ft (KB) (TVD)**

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

Test Type: **Conventional Bottom Hole**

Tester: **Dan Bangle**

Unit No: **38**

Reference Elevations: **2058.00 ft (KB)**

2053.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8372

Inside

Press@RunDepth: **98.74 psig @ 3397.00 ft (KB)**

Start Date: **2008.11.09**

End Date:

2008.11.09

Capacity: **7000.00 psig**

Start Time: **01:48:22**

End Time:

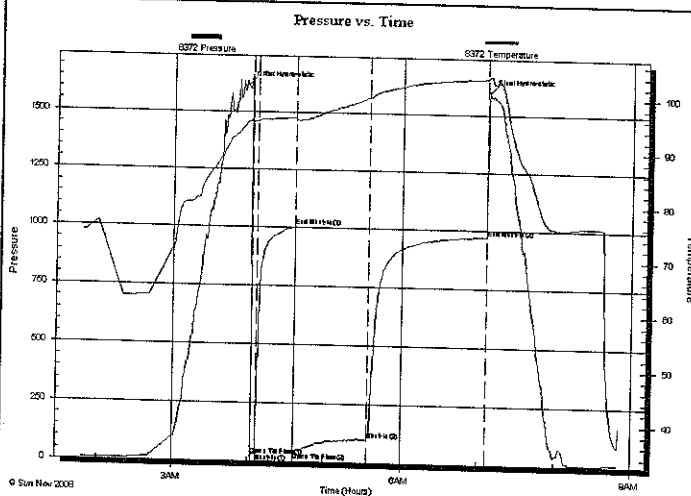
08:50:51

Last Calib.: **2008.11.09**

Time On Btm: **2008.11.09 @ 03:58:21**

Time Off Btm: **2008.11.09 @ 07:07:51**

TEST COMMENT: IF-Weak building to 1"
FF- Weak Building to 2.5"



PRESSURE SUMMARY

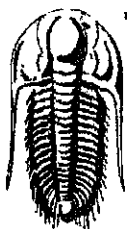
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1615.35	94.93	Initial Hydro-static
4	22.10	94.92	Open To Flow (1)
8	32.79	95.11	Shut-In (1)
38	1004.04	95.87	End Shut-In (1)
38	41.55	95.38	Open To Flow (2)
96	98.74	99.84	Shut-In (2)
188	974.16	103.52	End Shut-In (2)
190	1598.73	103.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
160.00	Sitly OCM w/show of free oil on top	1.11

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Crawford Oil & Gas Co

Winnie # 1-5

PO Box 1366
El Dorado, Ks 67042

5 15 19 Ellis KS

Job Ticket: 33665

DST#: 1

ATTN: Larry Crawford

Test Start: 2008.11.09 @ 01:48:21

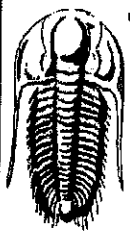
Tool Information

Drill Pipe:	Length: 3261.00 ft	Diameter: 3.80 inches	Volume: 45.74 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:	20000.00 lb
Drill Collar:	Length: 125.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose:	55000.00 lb
		Total Volume:	46.35 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3394.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	67.00 ft				
Tool Length:	91.00 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			3371.00	
Shut In Tool	5.00			3376.00	
Hydraulic tool	5.00			3381.00	
Safety Joint	3.00			3384.00	
Packer	5.00			3389.00	24.00 Bottom Of Top Packer
Packer	5.00			3394.00	
Stubb	1.00			3395.00	
Perforations	1.00			3396.00	
Change Over Sub	1.00			3397.00	
Recorder	0.00	8372	Inside	3397.00	
Recorder	0.00	8368	Outside	3397.00	
Drill Pipe	31.00			3428.00	
Change Over Sub	1.00			3429.00	
Perforations	29.00			3458.00	
Bullnose	3.00			3461.00	67.00 Bottom Packers & Anchor

Total Tool Length: 91.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Crawford Oil & Gas Co

Winnie # 1-5

PO Box 1366
El Dorado, Ks 67042

5 15 19 Ellis KS

Job Ticket: 33665

DST#: 1

ATTN: Larry Crawford

Test Start: 2008.11.09 @ 01:48:21

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 6.39 in³

Resistivity: ohm.m

Salinity: 900.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
160.00	Silly OCM w/show of free oil on top	1.106

Total Length: 160.00 ft

Total Volume: 1.106 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

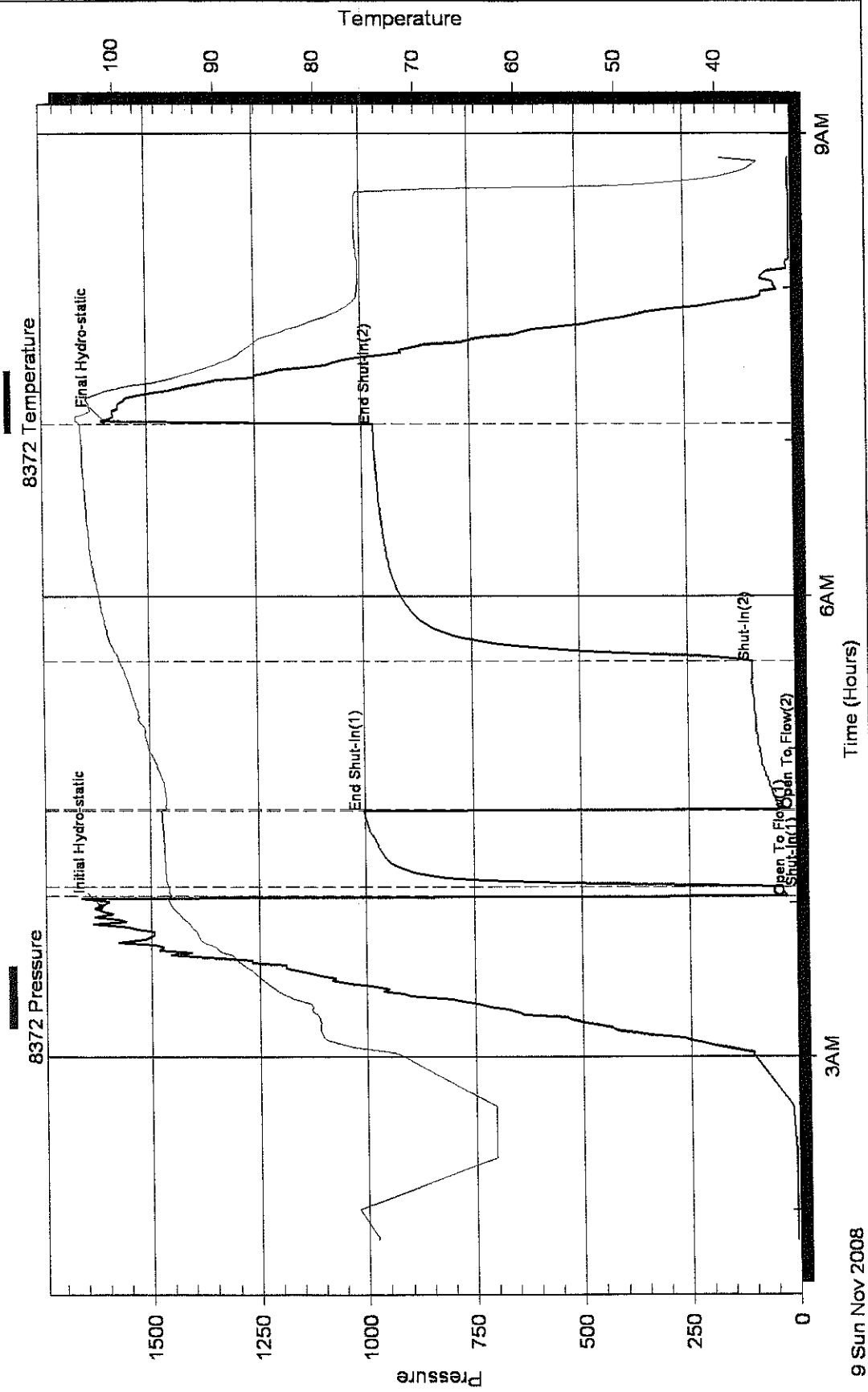
Serial #:

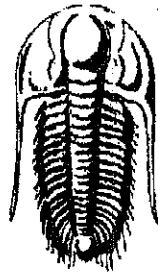
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Crawford Oil & Gas Co**

PO Box 1366
El Dorado, Ks 67042

ATTN: Larry Crawford

5 15 19 Ellis KS

Winnie # 1-5

Start Date: 2008.11.10 @ 01:25:15

End Date: 2008.11.10 @ 08:38:45

Job Ticket #: 33666 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Crawford Oil & Gas Co

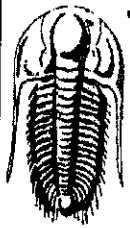
Winnie # 1-5

5 15 19 Ellis KS

DST # 2

Arbuckle

2008.11.10



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Crawford Oil & Gas Co

PO Box 1366
El Dorado, Ks 67042

ATTN: Larry Crawford

Winnie # 1-5

5 15 19 Ellis KS

Job Ticket: 33666

DST#: 2

Test Start: 2008.11.10 @ 01:25:15

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:49:15

Time Test Ended: 08:38:45

Interval: **3685.00 ft (KB) To 3698.00 ft (KB) (TVD)**

Total Depth: 3698.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 38

Reference Elevations: 2058.00 ft (KB)

2053.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8372

Inside

Press@RunDepth: 82.62 psig @ 3686.00 ft (KB)

Start Date: 2008.11.10

End Date:

2008.11.10

Capacity: 7000.00 psig

Last Calib.: 2008.11.10

Start Time: 01:25:16

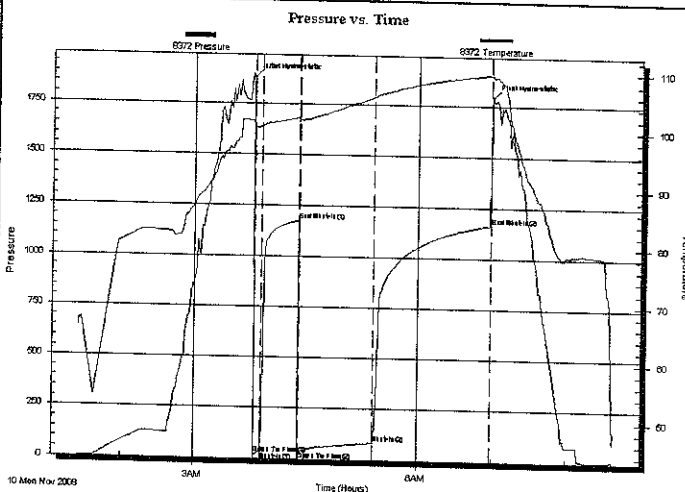
End Time:

08:38:45

Time On Btm: 2008.11.10 @ 03:48:15

Time Off Btm: 2008.11.10 @ 06:59:45

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



PRESSURE SUMMARY

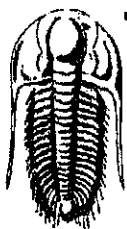
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1875.59	101.25	Initial Hydro-static
1	23.96	100.48	Open To Flow (1)
6	32.45	100.49	Shut-In(1)
36	1174.69	102.05	End Shut-In(1)
37	36.31	101.66	Open To Flow (2)
97	82.62	105.78	Shut-In(2)
190	1160.51	109.75	End Shut-In(2)
192	1792.43	109.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	MCO 70%o 30%rm	0.10
155.00	CO	1.22
0.00	125 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

Crawford Oil & Gas Co

Winnie # 1-5

PO Box 1366
El Dorado, Ks 67042

5 15 19 Ellis KS

Job Ticket: 33666

DST#: 2

ATTN: Larry Crawford

Test Start: 2008.11.10 @ 01:25:15

Tool Information

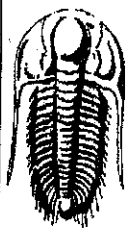
Drill Pipe:	Length: 3542.00 ft	Diameter: 3.80 inches	Volume: 49.68 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 125.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose:	55000.00 lb
		Total Volume:	50.29 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	3685.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	13.00 ft				
Tool Length:	37.00 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			3662.00	
Shut In Tool	5.00			3667.00	
Hydraulic tool	5.00			3672.00	
Safety Joint	3.00			3675.00	
Packer	5.00			3680.00	24.00 Bottom Of Top Packer
Packer	5.00			3685.00	
Stubb	1.00			3686.00	
Recorder	0.00	8372	Inside	3686.00	
Recorder	0.00	8368	Outside	3686.00	
Perforations	9.00			3695.00	
Bullnose	3.00			3698.00	13.00 Bottom Packers & Anchor

Total Tool Length: 37.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Crawford Oil & Gas Co

Winnie # 1-5

PO Box 1366
El Dorado, Ks 67042

5 15 19 Ellis KS

Job Ticket: 33666

DST#: 2

ATTN: Larry Crawford

Test Start: 2008.11.10 @ 01:25:15

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 53.00 sec/qt

Water Loss: 6.79 in³

Resistivity: ohm.m

Salinity: 900.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbf

psig

Oil API:

Water Salinity:

30 deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
20.00	MCO 70%o 30%rn	0.098
155.00	CO	1.218
0.00	125 GIP	0.000

Total Length: 175.00 ft

Total Volume: 1.316 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

