



WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Conv. to GSW
- Plug Back: _____ Plug Back Total Depth _____
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date Date Reached TD Completion Date or Recompletion Date

API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Letter of Confidentiality Received
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____



1076866

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i> List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
---	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method: Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
-----------------------------------	-----------	---------	-------------	---------------	---------

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
---	--	--



DRILL STEM TEST REPORT

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

PO Box 1366
El Dorado, KS 67042

ATTN: Larry Friend

Sprigg #1-32

32-2s-23w Norton,KS

Start Date: 2011.10.28 @ 12:17:00

End Date: 2011.10.28 @ 17:37:15

Job Ticket #: 43726 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.03.20 @ 16:12:53



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Crawford Oil & Gas Co. LLC

32-2s-23w Norton, KS

PO Box 1366
El Dorado, KS 67042

Sprigg #1-32

Job Ticket: 43726

DST#: 1

ATTN: Larry Friend

Test Start: 2011.10.28 @ 12:17:00

GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:11:00

Time Test Ended: 17:37:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: 3413.00 ft (KB) To 3450.00 ft (KB) (TVD)

Reference Elevations: 2352.00 ft (KB)

Total Depth: 3450.00 ft (KB) (TVD)

2347.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6799 Inside

Press @ Run Depth: 29.50 psig @ 3414.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.10.28 End Date: 2011.10.28

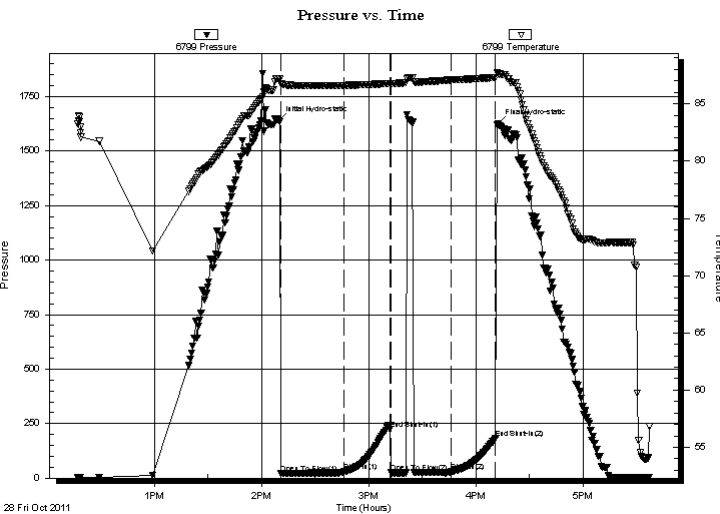
Last Calib.: 2011.10.28

Start Time: 12:17:05 End Time: 17:37:14

Time On Btm: 2011.10.28 @ 14:09:30

Time Off Btm: 2011.10.28 @ 16:12:30

TEST COMMENT: IF- No Blow
IS- No Return
FF- No Blow . Flushed tool at 10 min. No Blow .
FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1640.18	87.19	Initial Hydro-static
2	20.85	86.78	Open To Flow (1)
37	29.83	86.61	Shut-In(1)
63	224.43	86.76	End Shut-In(1)
63	24.66	86.77	Open To Flow (2)
97	29.50	87.08	Shut-In(2)
122	182.51	87.30	End Shut-In(2)
123	1623.81	87.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Crawford Oil & Gas Co. LLC

32-2s-23w Norton,KS

PO Box 1366
El Dorado, KS 67042

Sprigg #1-32

Job Ticket: 43726

DST#: 1

ATTN: Larry Friend

Test Start: 2011.10.28 @ 12:17:00

Tool Information

Drill Pipe:	Length: 3273.00 ft	Diameter: 3.80 inches	Volume: 45.91 bbl	Tool Weight: 2500.00 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: 121.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 46.51 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3413.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	37.00 ft			
Tool Length:	66.00 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			3385.00	
Shut In Tool	5.00			3390.00	
Hydraulic tool	5.00			3395.00	
Jars	5.00			3400.00	
Safety Joint	3.00			3403.00	
Packer	5.00			3408.00	29.00 Bottom Of Top Packer
Packer	5.00			3413.00	
Stubb	1.00			3414.00	
Recorder	0.00	8648	Inside	3414.00	
Recorder	0.00	6799	Inside	3414.00	
Perforations	31.00			3445.00	
Bullnose	5.00			3450.00	37.00 Bottom Packers & Anchor

Total Tool Length: 66.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Crawford Oil & Gas Co. LLC

32-2s-23w Norton, KS

PO Box 1366
El Dorado, KS 67042

Sprigg #1-32

Job Ticket: 43726

DST#: 1

ATTN: Larry Friend

Test Start: 2011.10.28 @ 12:17:00

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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 4.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

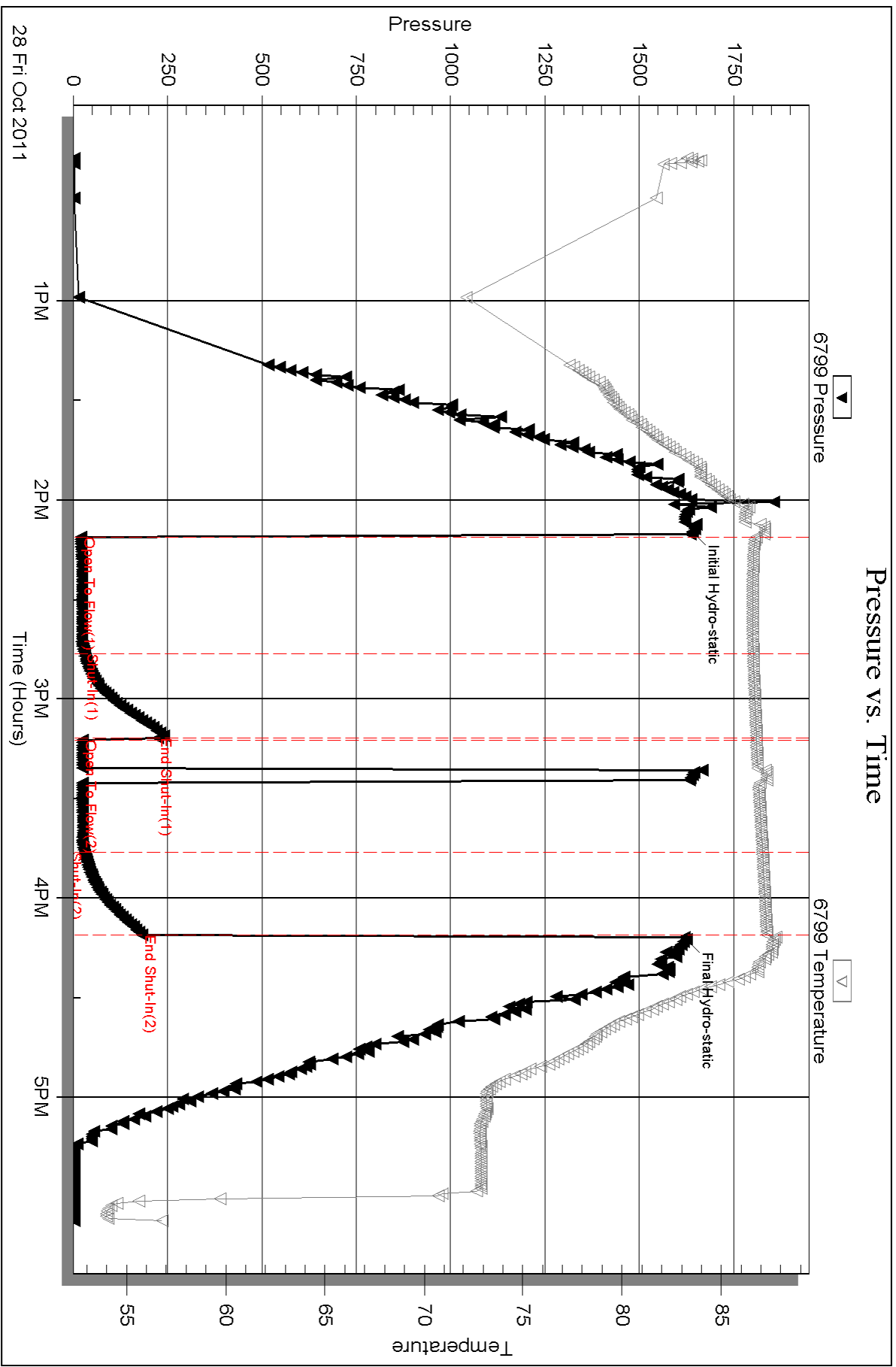
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



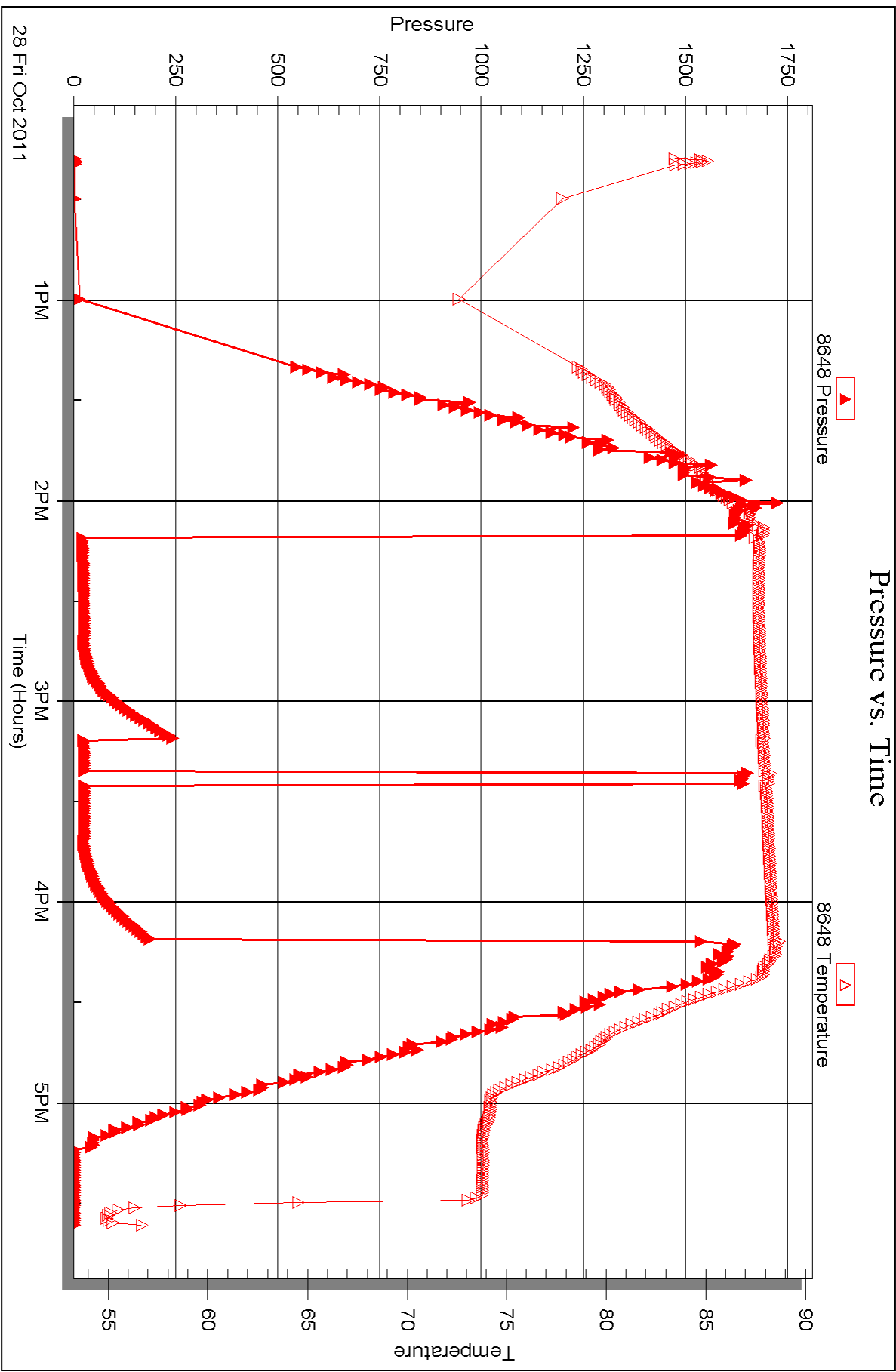
Serial #: 8648

Inside

Crawford Oil & Gas Co. LLC

Sprigg #1-32

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 1366
El Dorado, KS 67042

ATTN: Larry Friend

Sprigg #1-32

32-2s-23w Norton,KS

Start Date: 2011.10.29 @ 02:33:00

End Date: 2011.10.29 @ 08:47:45

Job Ticket #: 43727 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.03.20 @ 16:11:57

Crawford Oil & Gas Co. LLC
32-2s-23w Norton,KS
Sprigg #1-32
DST # 2
LKC "H-K"
2011.10.29



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Crawford Oil & Gas Co. LLC

32-2s-23w Norton, KS

PO Box 1366
El Dorado, KS 67042

Sprigg #1-32

Job Ticket: 43727

DST#: 2

ATTN: Larry Friend

Test Start: 2011.10.29 @ 02:33:00

GENERAL INFORMATION:

Formation: **LKC "H-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:19:30

Time Test Ended: 08:47:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: 3486.00 ft (KB) To 3560.00 ft (KB) (TVD)

Reference Elevations: 2352.00 ft (KB)

Total Depth: 3560.00 ft (KB) (TVD)

2347.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6799 Inside

Press @ Run Depth: 31.75 psig @ 3487.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.10.29 End Date: 2011.10.29

Last Calib.: 2011.10.29

Start Time: 02:33:05 End Time: 08:47:44

Time On Btm: 2011.10.29 @ 04:18:45

Time Off Btm: 2011.10.29 @ 07:21:00

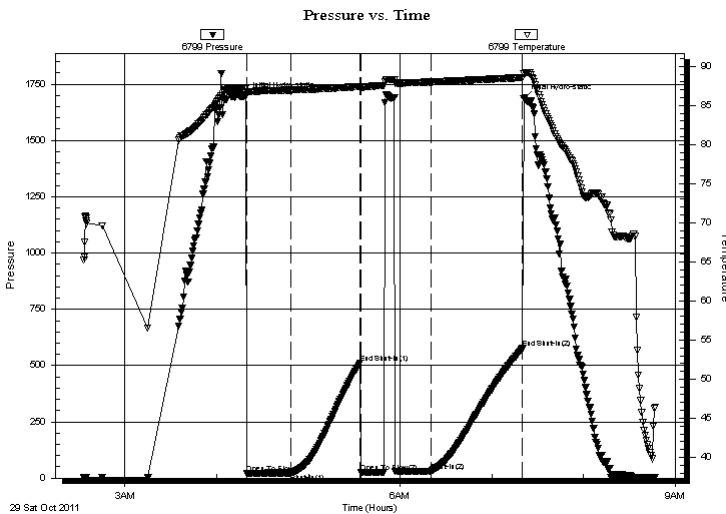
TEST COMMENT: IF- 1/8" Blow built to 3/4"

IS- No Return

FF- No Blow. Flushed tool at 20 min. Surface blow did not build or die

FS- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1694.91	87.14	Initial Hydro-static
1	20.74	86.79	Open To Flow (1)
30	23.43	86.96	Shut-In(1)
75	509.81	87.42	End Shut-In(1)
76	24.84	87.37	Open To Flow (2)
122	31.75	87.99	Shut-In(2)
182	575.97	88.56	End Shut-In(2)
183	1685.59	89.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	Show of oil spots in tool	0.00
10.00	Mud 100M	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Crawford Oil & Gas Co. LLC

32-2s-23w Norton, KS

PO Box 1366
El Dorado, KS 67042

Sprigg #1-32

Job Ticket: 43727

DST#: 2

ATTN: Larry Friend

Test Start: 2011.10.29 @ 02:33:00

Tool Information

Drill Pipe:	Length: 3371.00 ft	Diameter: 3.80 inches	Volume: 47.29 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: 121.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 43000.00 lb
			<u>Total Volume: 47.89 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3486.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	74.00 ft			
Tool Length:	98.00 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			3463.00	
Shut In Tool	5.00			3468.00	
Hydraulic tool	5.00			3473.00	
Safety Joint	3.00			3476.00	
Packer	5.00			3481.00	24.00 Bottom Of Top Packer
Packer	5.00			3486.00	
Stubb	1.00			3487.00	
Recorder	0.00	8648	Inside	3487.00	
Recorder	0.00	6799	Inside	3487.00	
Perforations	35.00			3522.00	
Drill Pipe	31.00			3553.00	
Perforations	2.00			3555.00	
Bullnose	5.00			3560.00	74.00 Bottom Packers & Anchor

Total Tool Length: 98.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Crawford Oil & Gas Co. LLC

32-2s-23w Norton, KS

PO Box 1366
El Dorado, KS 67042

Sprigg #1-32

Job Ticket: 43727

DST#: 2

ATTN: Larry Friend

Test Start: 2011.10.29 @ 02:33:00

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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 4.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	Show of oil spots in tool	0.000
10.00	Mud 100M	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

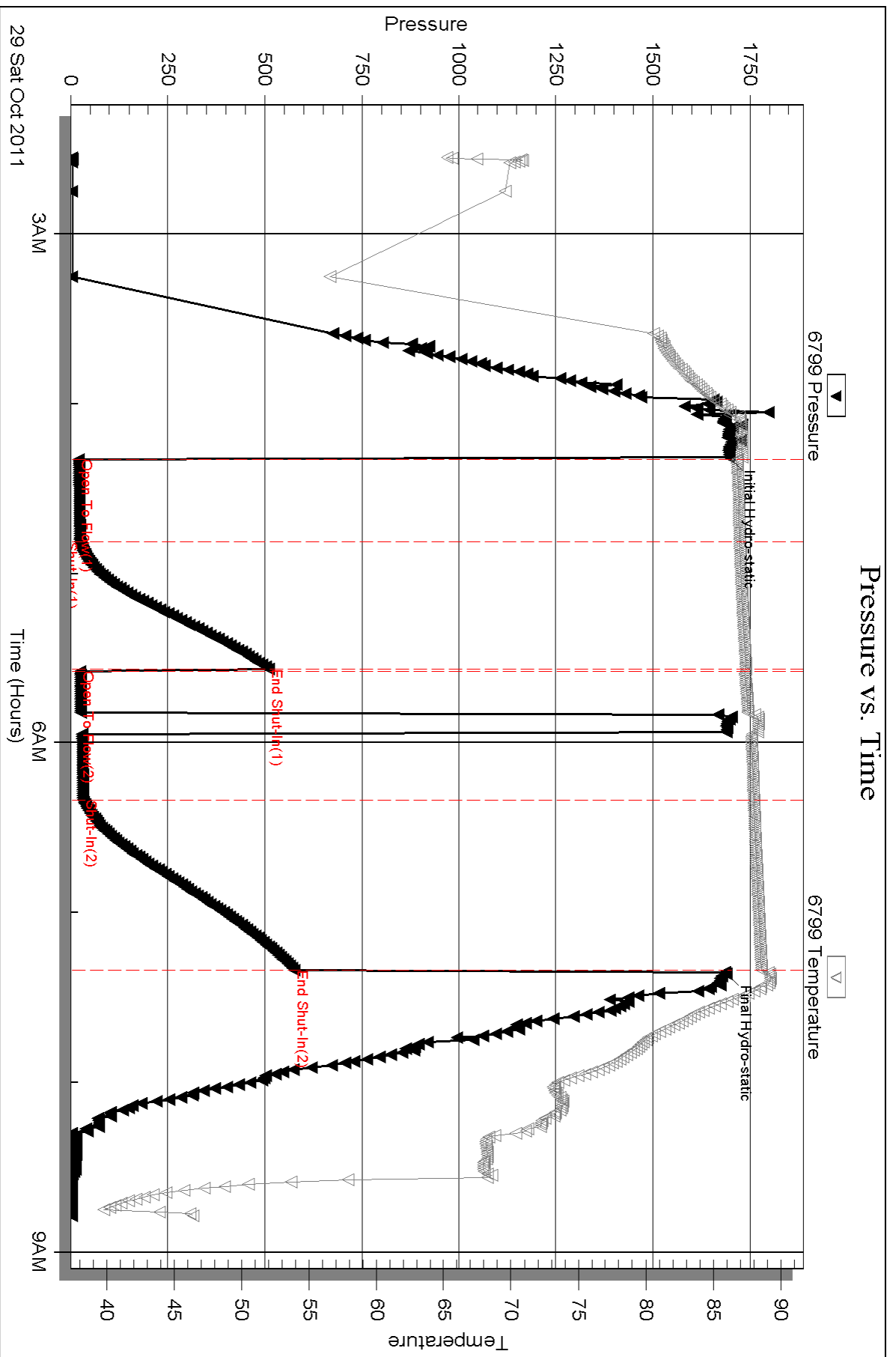
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



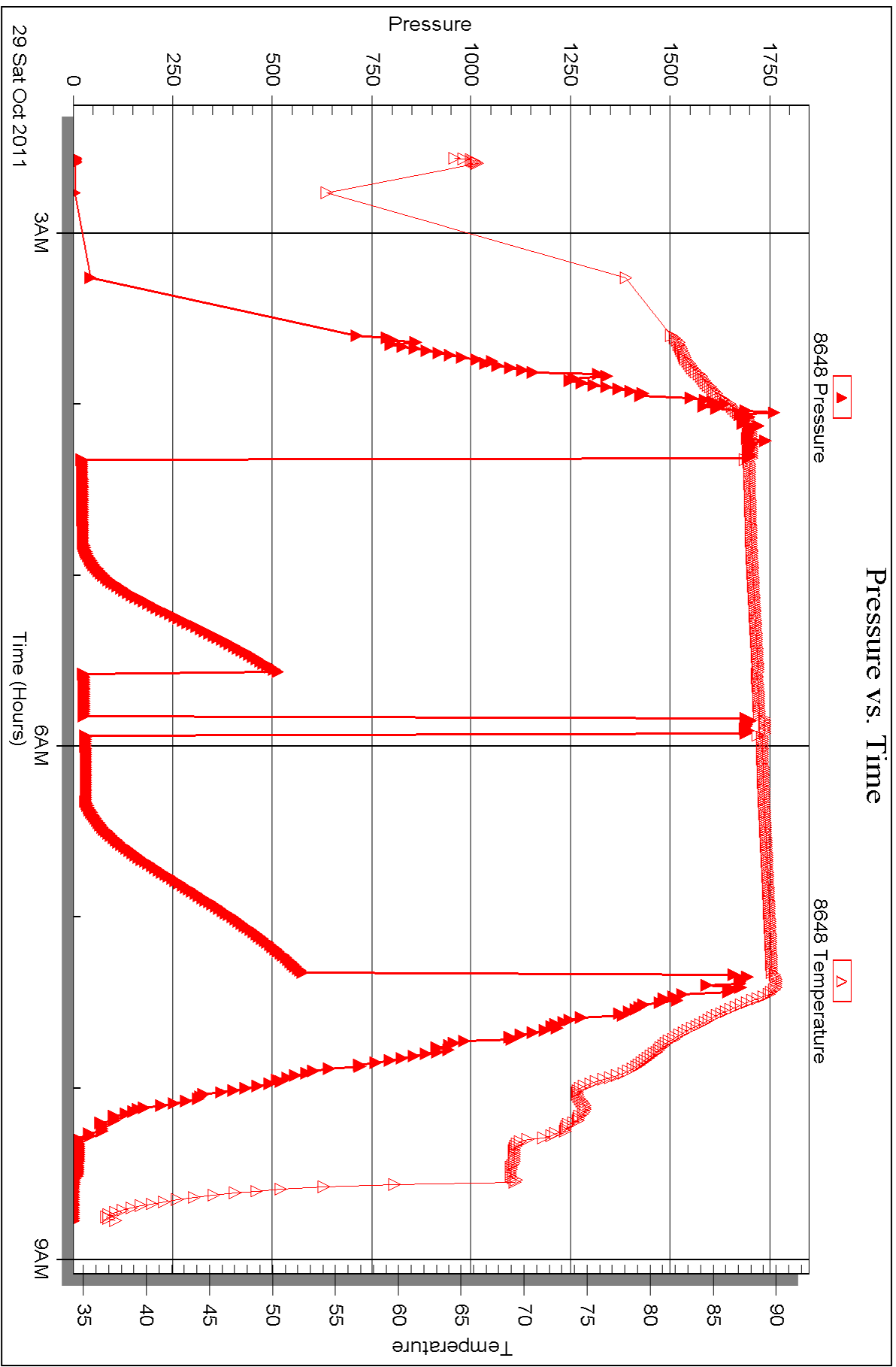
Serial #: 8648

Inside

Crawford Oil & Gas Co. LLC

Spring #1-32

DST Test Number: 2





DRILL STEM TEST REPORT

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

PO Box 1366
El Dorado, KS 67042

ATTN: Larry Friend

Sprigg #1-32

32-2s-23w Norton,KS

Start Date: 2011.10.29 @ 15:57:00

End Date: 2011.10.29 @ 22:18:30

Job Ticket #: 43728 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.03.20 @ 16:11:04



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Crawford Oil & Gas Co. LLC

32-2s-23w Norton, KS

PO Box 1366
El Dorado, KS 67042

Sprigg #1-32

Job Ticket: 43728

DST#: 3

ATTN: Larry Friend

Test Start: 2011.10.29 @ 15:57:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:08:15

Time Test Ended: 22:18:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: 3576.00 ft (KB) To 3621.00 ft (KB) (TVD)

Reference Elevations: 2352.00 ft (KB)

Total Depth: 3621.00 ft (KB) (TVD)

2347.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6799 Inside

Press @ Run Depth: 33.36 psig @ 3577.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.10.29 End Date: 2011.10.29

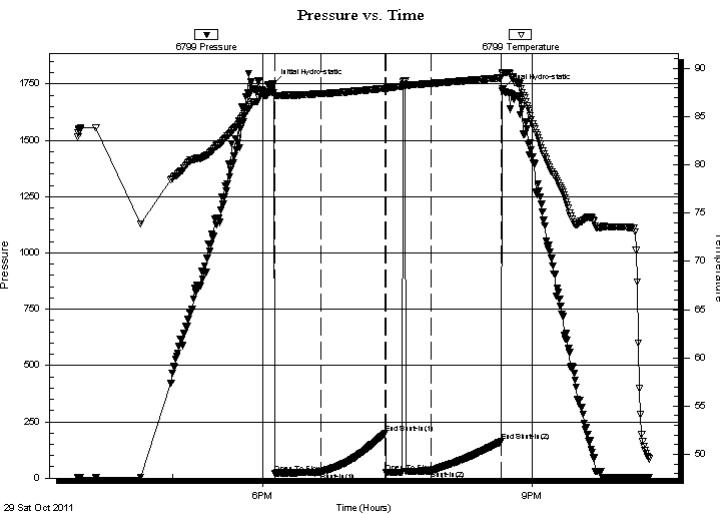
Last Calib.: 2011.10.29

Start Time: 15:57:05 End Time: 22:18:29

Time On Btm: 2011.10.29 @ 18:07:30

Time Off Btm: 2011.10.29 @ 20:40:15

TEST COMMENT: IF- Surface blow built to 1/8"
IS- No Return
FF- No Blow . Flushed tool at 10 min. No Blow
FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1752.46	87.52	Initial Hydro-static
1	22.25	87.16	Open To Flow (1)
32	26.98	87.38	Shut-In(1)
75	199.45	87.94	End Shut-In(1)
75	26.54	87.94	Open To Flow (2)
105	33.36	88.45	Shut-In(2)
152	162.29	89.03	End Shut-In(2)
153	1729.14	89.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OCM 90M 10o	0.05
0.00	Show of free oil in tool	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Crawford Oil & Gas Co. LLC

32-2s-23w Norton, KS

PO Box 1366
El Dorado, KS 67042

Sprigg #1-32

Job Ticket: 43728

DST#: 3

ATTN: Larry Friend

Test Start: 2011.10.29 @ 15:57:00

Tool Information

Drill Pipe:	Length: 3461.00 ft	Diameter: 3.80 inches	Volume: 48.55 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: 121.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 49.15 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3576.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	69.00 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			3553.00	
Shut In Tool	5.00			3558.00	
Hydraulic tool	5.00			3563.00	
Safety Joint	3.00			3566.00	
Packer	5.00			3571.00	24.00 Bottom Of Top Packer
Packer	5.00			3576.00	
Stubb	1.00			3577.00	
Recorder	0.00	8648	Inside	3577.00	
Recorder	0.00	6799	Inside	3577.00	
Perforations	39.00			3616.00	
Bullnose	5.00			3621.00	45.00 Bottom Packers & Anchor

Total Tool Length: 69.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Crawford Oil & Gas Co. LLC

32-2s-23w Norton, KS

PO Box 1366
El Dorado, KS 67042

Sprigg #1-32

Job Ticket: 43728

DST#: 3

ATTN: Larry Friend

Test Start: 2011.10.29 @ 15:57:00

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: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 4.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OCM 90M 10o	0.049
0.00	Show of free oil in tool	0.000

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

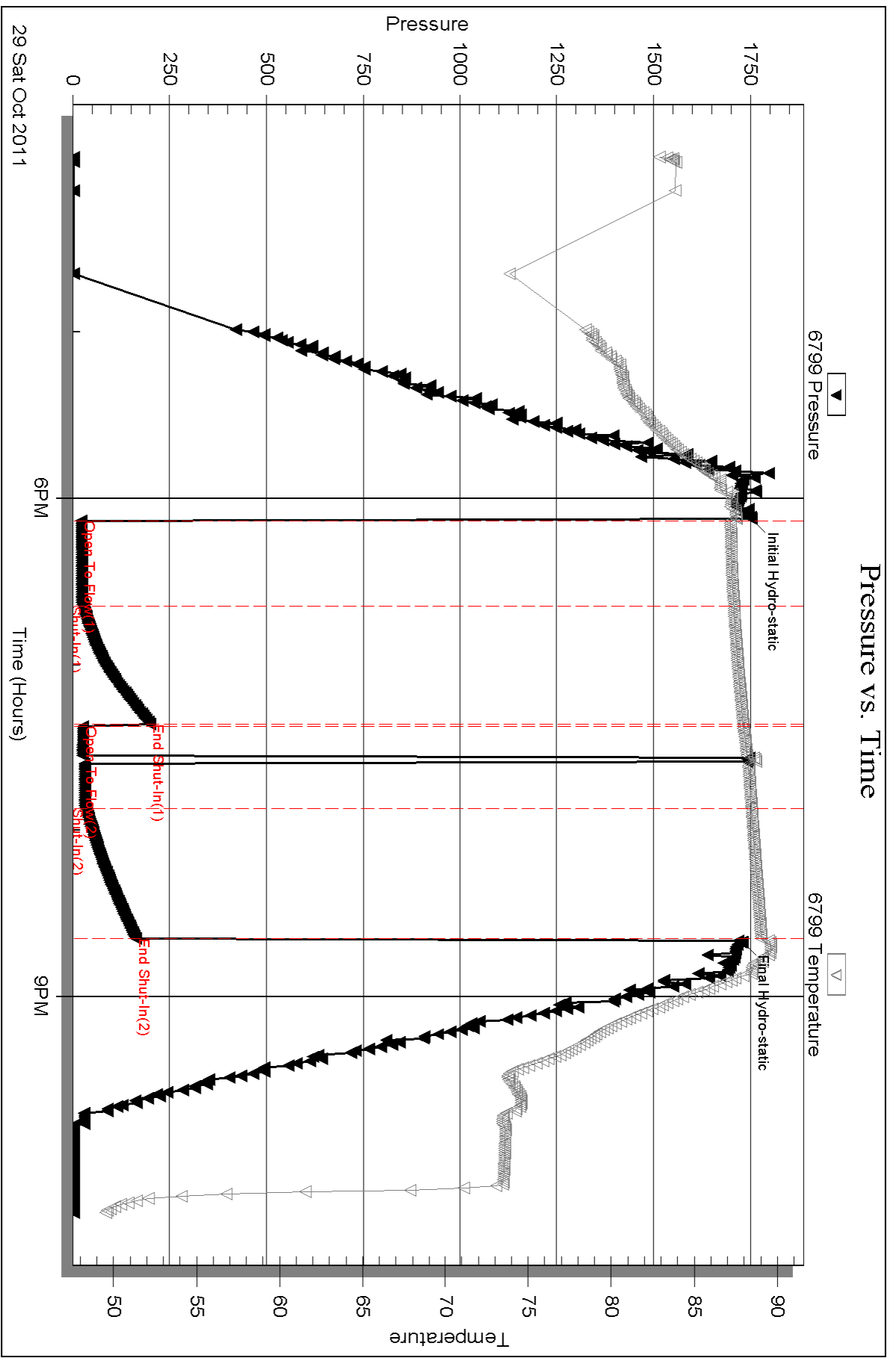
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



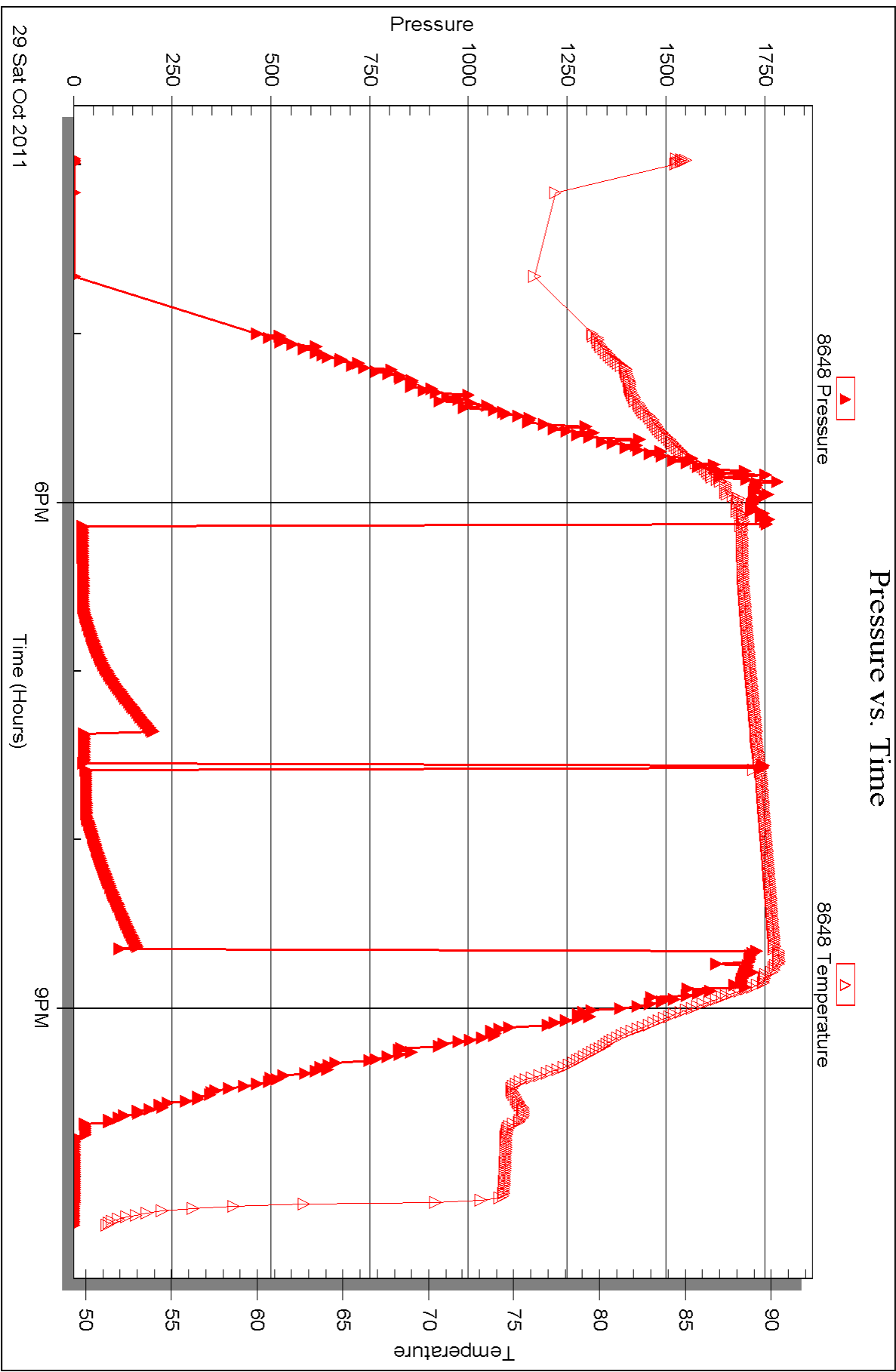
Serial #: 8648

Inside

Crawford Oil & Gas Co. LLC

Spring #1-32

DST Test Number: 3





DRILL STEM TEST REPORT

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

PO Box 1366
El Dorado, KS 67042

ATTN: Larry Friend

Sprigg #1-32

32-2s-23w Norton,KS

Start Date: 2011.10.30 @ 04:50:00

End Date: 2011.10.30 @ 11:35:15

Job Ticket #: 43729 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.03.20 @ 16:09:10



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Crawford Oil & Gas Co. LLC

32-2s-23w Norton, KS

PO Box 1366
El Dorado, KS 67042

Sprigg #1-32

Job Ticket: 43729

DST#: 4

ATTN: Larry Friend

Test Start: 2011.10.30 @ 04:50:00

GENERAL INFORMATION:

Formation: **Arbuckle / Granite**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:06:30

Time Test Ended: 11:35:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 43

Interval: 3576.00 ft (KB) To 3639.00 ft (KB) (TVD)

Reference Elevations: 2352.00 ft (KB)

Total Depth: 3639.00 ft (KB) (TVD)

2347.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6799 Inside

Press @ Run Depth: 334.86 psig @ 3577.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.10.30

End Date:

2011.10.30

Last Calib.: 2011.10.30

Start Time: 04:50:05

End Time:

11:35:14

Time On Btm: 2011.10.30 @ 07:05:45

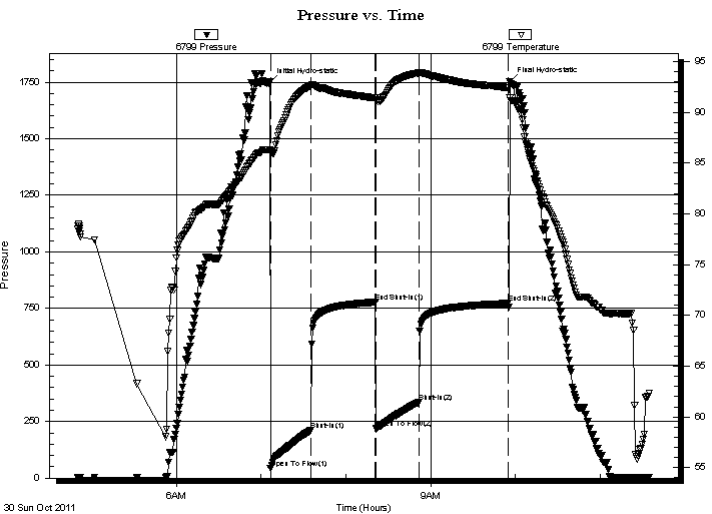
Time Off Btm: 2011.10.30 @ 09:56:00

TEST COMMENT: IF- BoB in 5 1/2 min.

IS- No Return

FF- BoB in 10 min.

FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1750.12	86.30	Initial Hydro-static
1	43.61	86.05	Open To Flow (1)
30	211.49	92.63	Shut-In(1)
75	778.09	91.41	End Shut-In(1)
76	218.67	91.27	Open To Flow (2)
106	334.86	93.85	Shut-In(2)
169	772.47	92.43	End Shut-In(2)
171	1753.17	91.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Heavy Mud	0.02
455.00	MW 10M 90W	5.33
350.00	MW 30M 70W	4.91
40.00	WM 60M 40W	0.56
0.00	Show of oil at first wet connection	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Crawford Oil & Gas Co. LLC

32-2s-23w Norton, KS

PO Box 1366
El Dorado, KS 67042

Sprigg #1-32

Job Ticket: 43729

DST#: 4

ATTN: Larry Friend

Test Start: 2011.10.30 @ 04:50:00

Tool Information

Drill Pipe:	Length: 3456.00 ft	Diameter: 3.80 inches	Volume: 48.48 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: 121.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 57000.00 lb
			<u>Total Volume: 49.08 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3576.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	63.00 ft			
Tool Length:	87.00 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			3553.00	
Shut In Tool	5.00			3558.00	
Hydraulic tool	5.00			3563.00	
Safety Joint	3.00			3566.00	
Packer	5.00			3571.00	24.00 Bottom Of Top Packer
Packer	5.00			3576.00	
Stubb	1.00			3577.00	
Recorder	0.00	8648	Inside	3577.00	
Recorder	0.00	6799	Inside	3577.00	
Perforations	26.00			3603.00	
Drill Pipe	31.00			3634.00	
Bullnose	5.00			3639.00	63.00 Bottom Packers & Anchor

Total Tool Length: 87.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Crawford Oil & Gas Co. LLC

32-2s-23w Norton, KS

PO Box 1366
El Dorado, KS 67042

Sprigg #1-32

Job Ticket: 43729

DST#: 4

ATTN: Larry Friend

Test Start: 2011.10.30 @ 04:50:00

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:

13000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 4.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Heavy Mud	0.025
455.00	MW 10M 90W	5.326
350.00	MW 30M 70W	4.910
40.00	WM 60M 40W	0.561
0.00	Show of oil at first wet connection	0.000

Total Length: 850.00 ft Total Volume: 10.822 bbl

Num Fluid Samples: 0

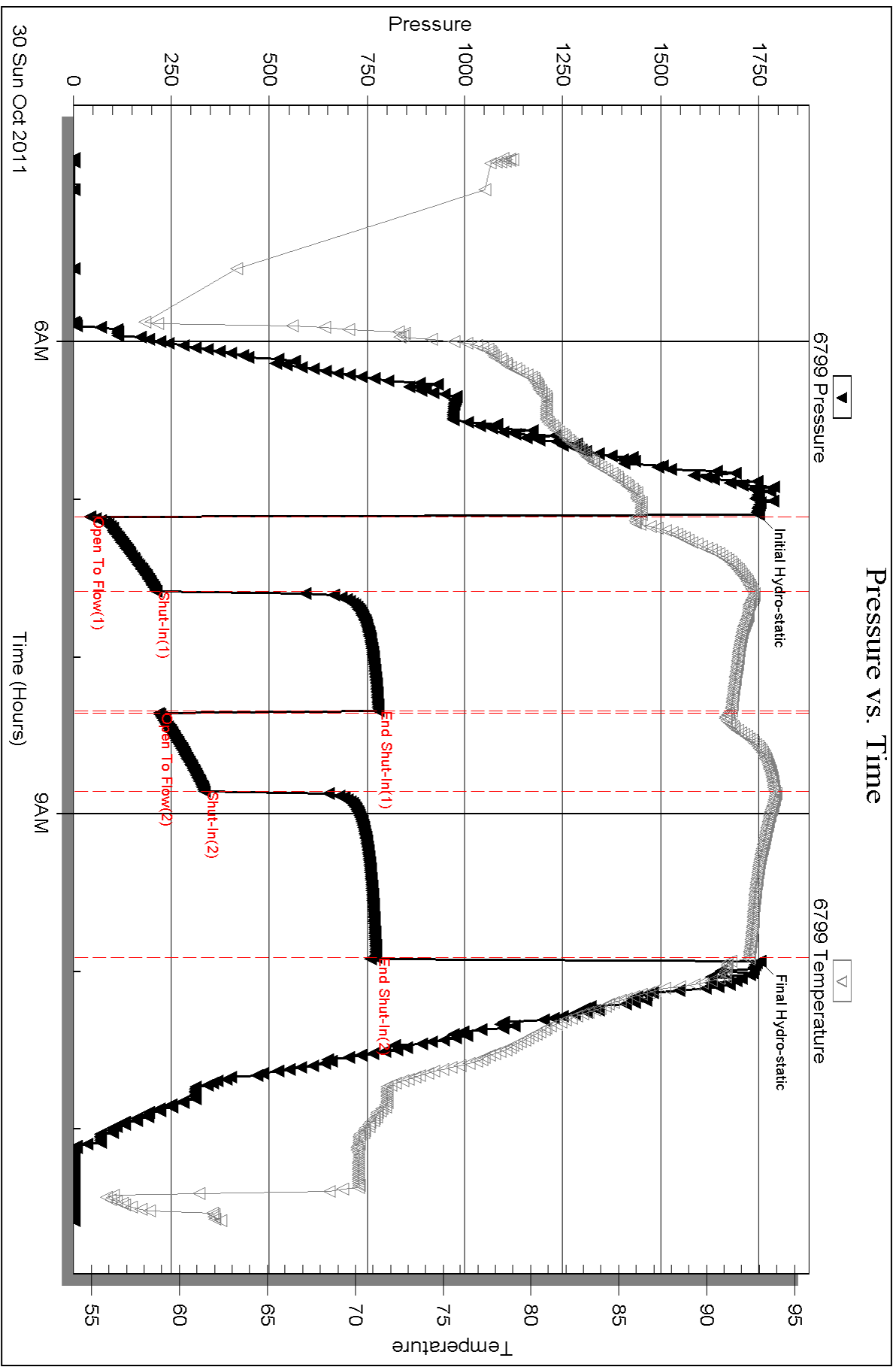
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .59@60deg=13000 ppm



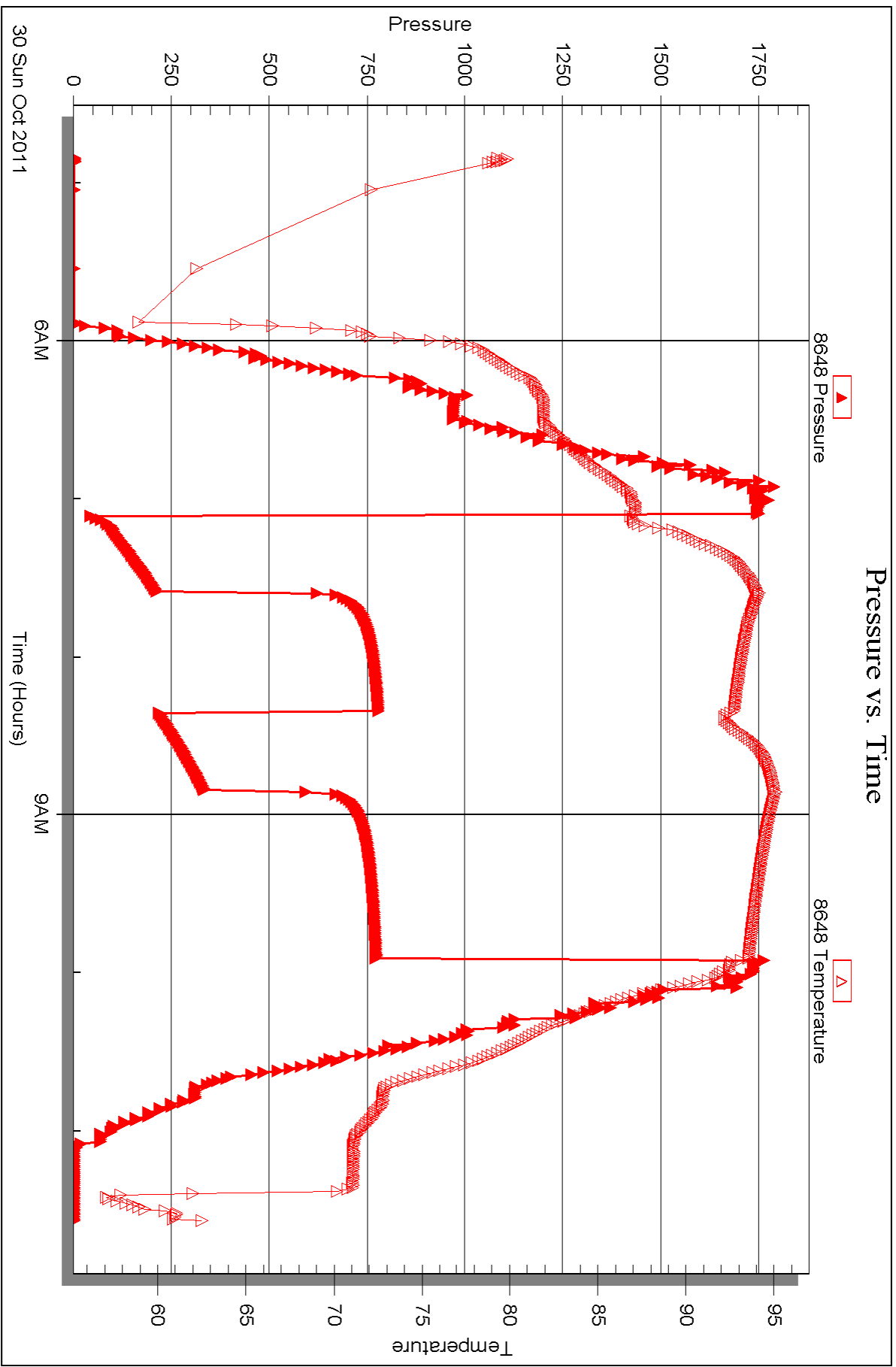
Serial #: 8648

Inside

Crawford Oil & Gas Co. LLC

Sprigg #1-32

DST Test Number: 4



Notice: Fill out COMPLETELY and return to Conservation Division at the address below within 60 days from plugging date.

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION
WELL PLUGGING RECORD
K.A.R. 82-3-117

Form CP-4
March 2009
Type or Print on this Form
Form must be Signed
All blanks must be Filled

OPERATOR: License #: 5455
Name: Crawford Oil & Gas Co, LLC
Address 1: PO Box 1366
Address 2: 1780 Jason Dr
City: El Dorado State: KS Zip: 67042 +
Contact Person: Larry Dale Crawford
Phone: (316) 377-3373
Type of Well: (Check one) Oil Well Gas Well OG DSA Cathodic
 Water Supply Well Other: _____ SWD Permit #: _____
 ENHR Permit #: _____ Gas Storage Permit #: _____
Is ACO-1 filed? Yes No If not, is well log attached? Yes No
Producing Formation(s): List All (if needed attach another sheet)
_____ Depth to Top: _____ Bottom: _____ T.D. _____
_____ Depth to Top: _____ Bottom: _____ T.D. _____
_____ Depth to Top: _____ Bottom: _____ T.D. _____

API No. 15 - 137-20588-00-00
Spot Description: _____
SW NW NE SE Sec. 32 Twp. 2 S. R. 23 East West
2,265 Feet from North / South Line of Section
1,168 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Norton
Lease Name: Sprigg Well #: 1-32
Date Well Completed: 10/30/11
The plugging proposal was approved on: 10/27/11 (Date)
by: David Wann (KCC District Agent's Name)
Plugging Commenced: 10/30/11 @ 3:15 pm
Plugging Completed: 10/30/11 @ 7:15 pm

Show depth and thickness of all water, oil and gas formations.

Oil, Gas or Water Records		Casing Record (Surface, Conductor & Production)			
Formation	Content	Casing	Size	Setting Depth	Pulled Out
		Surface	8 5/8	210'	None

Describe in detail the manner in which the well is plugged, indicating where the mud fluid was placed and the method or methods used in introducing it into the hole. If cement or other plugs were used, state the character of same depth placed from (bottom) to (top) for each plug set.

Commenced cementing 10/30/11 @ 3:15 pm. 1st plug: 25sx @ 3593', 2nd plug: 25sx @ 1930', 3rd plug: 100sx @ 1250', 4th plug: 40sx @ 270', 5th plug: 10sx @ 40', 30sx in the rathole. Cemented with 60/40 poz - 4% gel - 1/4# per sx flo-seal. Drilling mud was placed between all stages. Plugging complete 10/30/11 @ 7:15 pm, by Consolidated.

Plugging Contractor License #: 33575 Name: WW Drilling, LLC
Address 1: 233 S. 4th Street Address 2: PO Box 307
City: WaKeeney State: KS Zip: 67672 +
Phone: (785) 743-6774
Name of Party Responsible for Plugging Fees: Crawford Oil & Gas Co, LLC
State of Kansas County: _____, SS.

(Print Name) Employee of Operator or Operator on above-described well,

being first duly sworn on oath, says: That I have knowledge of the facts statements, and matters herein contained, and the log of the above-described well is as filed, and the same are true and correct, so help me God.

Signature: _____

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
10-25-11		Spring 1-32	32	2	23	Norton

CUSTOMER	TRUCK #	DRIVER	TRUCK #	DRIVER
Crawford Oil & Gas Company LLC Mailing Address	463	Josh G		
	439	Colin D		

JOB TYPE surface HOLE SIZE 12 1/4 HOLE DEPTH 221' CASING SIZE & WEIGHT 3 1/8
 CASING DEPTH 220' DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 14.7 SLURRY VOL 1.36 WATER gal/sk 6.5 CEMENT LEFT in CASING 15'
 DISPLACEMENT 13.0 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting on w.w #6 Rig up + circulate
Mix 165sks class A 39oz 2 9oz, Displace 13 #4Ls
and shut in. Cement did circulate Approx 4 Bbls to bit

Thanks Fuzz
+ crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
54015	1	PUMP CHARGE	1025 ⁰⁰	1025 ⁰⁰
5406	65 miles	MILEAGE	5 ⁰⁰	325 ⁰⁰
5407A	7.76 Tow	Tow Mileage Delivery	1 ⁰⁰	796 ⁹⁵
11045	165 sks	Class 'A' cement	16 ⁸⁰	2772 ⁰⁰
1102	465 #	Calcium Chloride	.84	390 ⁶⁰
1112B	310 #	Bentonite (Gel)	.24	744 ⁰⁰
		sub total		5383 ⁹⁵
		less 10% discount		538 ³⁹
				4845 ⁵⁶
		SALES TAX		
		ESTIMATED TOTAL		

Rowin 3737 AUTHORIZATION Maul Bessie TITLE Pusher DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form

PO Box 884, Chanute, KS 66720
 620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
10-30-11	2157	Springg 1-32	3 2	2	23	KS Norton
CUSTOMER			TRUCK #			
Crawford Oil 4695			399			
MAILING ADDRESS			DRIVER			
			566			
CITY			STATE			
			ZIP CODE			

JOB TYPE <u>PTA</u>	HOLE SIZE <u>7 7/8</u>	HOLE DEPTH <u>3639</u>	CASING SIZE & WEIGHT
CASING DEPTH	DRILL PIPE	TUBING	OTHER
SLURRY WEIGHT	SLURRY VOL	WATER gal/sk	CEMENT LEFT in CASING
DISPLACEMENT	DISPLACEMENT PSI	MIX PSI	RATE

 REMARKS: safety Meeting, Rigged up on WWD drilling rig # 6,
mixed cement plugs and displaced down, Rigged down & left
location.
25 sks @ 3550
25 sks @ 1930
10 sks @ 1250
40 sks @ 270
10 sks @ 40
30 sks RH

Thank You
Rolly Gabel

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5405N	1	PUMP CHARGE	1250 ⁰⁰	1250 ⁰⁰
5410b	65 mi.	MILEAGE	5 ⁰⁰	325 ⁰⁰
5407A	9.89	Ton mileage delivery	105 ⁰⁰	1015 ⁰⁰
1104S	230 sks	60/140 Poz	14 ³⁰	3300 ³⁰
1118B	791 #	Bentonite	24	189 ³⁰
1107	57 1/2 #	F10-5091	260	152 ²⁵
				6234 ⁰⁰
				6234 ⁰⁰
				5610 ⁰⁰
			SALES TAX	
			ESTIMATED TOTAL	

 AUTHORIZATION [Signature] TITLE _____ DATE 10-30-11

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

GEOLOGICAL REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY CRAWFORD OIL & GAS CO., LLC

LEASE SPRING 1-32

FIELD _____

LOCATION 2265 FSL + 1168 FEL

SEC 32 TWP 2 50. RGE 23W.

COUNTY NOBLET STATE KS

CONTRACTOR AND DRILLING, RIG #6

SPUD 10/25/11 COIN 10/30/11

RTO 3639 LTD NONE

KUD UP CHEMICAL TYPE MUD _____

SAVINGS SAVED FROM 3100 TO TD

DRILLING TIME KEPT FROM 3000 TO TD

SAMPLES EXAMINED FROM 3100 TO TD

GEOLOGICAL SUPERVISION FROM 3250 TO TD

GEOLOGIST ON WELL LARRY P. FRIEND

FORMATION TOPS LOG SAMPLES

FORMATION TOPS	LOG	SAMPLES
STONE CORRAL		1920 (+432)
BASE J.C.		1951 (+400)
HEBNER		3359 (-1007)
LANISING		3403 (-1051)
ARC		3579 (-1227)
ARBUCKLE		3613 (-1261)
GRANITE		3635 (-1283)

ELEVATIONS

KB 2352

DF _____

GL 2347

Measurements Are All From KB

CASING SURFACE 8 5/8" @ 219'

PRODUCTION NONE

ELECTRICAL SURVEYS NONE

REMARKS

DUE TO POOR ZONE DEVELOPMENT IN THE LKC AND NEGATIVE DST RESULTS, IT WAS DECIDED TO PLUG AND ABANDON THIS WELL.

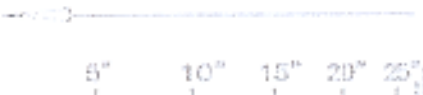
Larry P. Friend

LEGEND



SCALE " = 100'

DRILLING TIME IN MINUTES PER FOOT
Rate of Penetration Indicator



LITHOLOGY

SAMPLE DESCRIPTIONS

REMARKS

DEPTH
1900

STONE CORRAL
1920 (+432)

7:00 Am DEPTHS:
10/25: SPUD
10/26: 1000'
10/27: 2774'
10/28: 3450'
10/29: 3560'
10/30: 3639' - RELEASED
RIG @ 9:15 PM

STONE CORRAL
1920 (+432)

BASE
1951 (+401)

7:00 Am DEPTHS:

10/25: SPUD
10/26: 1000'
10/27: 2774'
10/28: 3450'
10/29: 3560'
10/30: 3639' - RELEASED
RIG @ 9:15 PM.

DEV. SURVEYS:

1/4° @ 220'
1/4° @ 3450'

3000

3050

3100

3150

20:
LS. GRAY-TAN FXLN, SOME SL.
GLAUCONITIC, FR. FR. XLN. p
NS.

40:
SOME LS. TAN FXLN W/ FR.
Foss. CAST. - VAG. p; NS.

60:
LS. BRN VFXLN, SLI. Foss.
DSE; FR. CHERT, TAN; NS.

80: LS. BRN, FXLN, SOME
SILTY, FR. p; NS.

100: MOSTLY LS. BRN, VFXLN,
DSE, NS.

3200
3250
3300
3350
3400



100: MOSTLY LS. BRN, VFXLN, DSE, NS.

20: LS. TAN-BRN V-F-FXLN SLI FOSS, DSE, SOME SHALE GRN, RED; NS.

40: MAROON SHALE + SA. FINE, LAY SILTSTN.

60: LS. TAN CHERTY HARD AND GRN CHLKY LS; NS.

70: LS. BRN FXLN APPEARS SILTY DSE: SA. FINE, LS. TAN, V. FOSS; W/FR. GD. INTER-FOSS ϕ ; NS.

80: TR. LS. TAN V. FOSS. W/FR. XLN - PPT. ϕ ; NS.

90: LS. TAN FXLN, SLI FOSS., FR. XLN. ϕ ; NS.

SHALE BLK. CARB. AND LS. GRN, SILTY.

LS. BRN V. FOSS. PR. FR. XLN ϕ . SHALE V. COLORED, SLI. SILTY; NS.

20: LS. TAN FXLN V. FOSS - MICRO-ODOLITIC W/FR. GD. XLN. ϕ ; NS.

LS. TAN-BRN, SLI. FOSS TO MICRO-ODOL. W/FR. FR. XLN IS SOME SHALE, MAROON, BRN; NS.

LS. CRIM-TAN FXLN FOSS - MICRO-ODOLITIC W/FR. TR. GD. XLN - INTER-ODOL. ϕ ; NS.

LS. TAN-BRN FXLN, SLI. FOSS. PR. VIB. ϕ TO SOME SLI. CHLKY; NS.

SHALE, BLK, CARB.

LS. GRN-BRN, FXLN W/FR. NS. ϕ ; NS.

SOFT GRN LAY SHALE + GRN LAY SILTSTN.

LS. CRM. ODOLITIC SLI. CHLKY, W/FR. INTER-ODOL. - PPT. ϕ , TR. PR. SPTY BRN. STN, USSED, NO ODOOR.

LS. TAN-BRN V-F-FXLN, V. SLI. FOSS, DSE: TR. LS. V. ODOL. SLI. CHLKY W/FR. INTER-ODOL. ϕ , SPTY BRN STN, USSED + G.; NO ODOOR.

SHALE GRN GRN MAROON: TR. GRN SPLY DST. + TAN LAY. SILTSTN.

LS. TAN V. ODOL. PR. ϕ STILL CP

HEEBNER SH.
3359 (-1007)

LANSING
3403 (-1051)



DST #1
3413 - 3450
TIMES: 30-30-30-30
IF: NO BLOW.
FF: NO BLOW FLUSHED TOOL
NO HELP.
REC: 5' DM NS.
IFP: 20-29 #

3400
3450
3500
3550
3600

LANSING

3403 (-1051)

"D"

"H"

"K"

BKC

3579 (-1227)

ARBUCKLE

3613 (-1261)

GRANITE

3635 (-1283)

RTD 3639 (-1287)

NO LOG



NO ODOOR.

LS. TAN-BRN VF-XLN, V-SLI, FOS, DSE, TR. LS. V. OOL, SLI, CALKY W/ V. INTER-DOL. & SPTY BRN STN, VSSFO + G.; NO ODOOR.

SHALE GRAY GRN, MAROON, TR. GRV, SHLY SST. + TAN LAY. SILTSTN.

LS. TAN V. OOL, PR. D. STILL CP PES OOL, LS. AS ABU W/ PR. & VSSFO + G.

- TR. LS. GRN, V. OOL W/ PR. INTER-DOL. & DR. STICKY OIL, RESIDUE, SSG; NO ODOOR.

LS. TAN - VELL BRN FXLN, V. OOL, SOME SLI, CALKY, PR. FR. XLN & 1 PC. W/ TR. LIVE STN + TR. FB. IN PR. INTER-DOL. & NO ODOOR.

SHALE, MAROON, GRN.

90: LS. GRN-BRN FXLN, SOME V. OOLITIC W/ FN-CSE BOLITES PR. VIS. & TO SOME SLI. CALKY; NS.

CHERT, BRN, SHARP; LS. BRN VF-XLN, DSE; NS.

10: LT. GRV, STICKY CLAY; TR. LS. TAN-BRN V. OOL - 1 PC. W/ PR. TR. OOLITIC TO INTER-DOL. & TR. LIVE SPTY. STN, VSSG; NO ODOOR.

TR. LS. GRN-TAN OOL-FOSS SLI, CALKY W/ FR. IPT-VAG-XLN & SFO + TOTAL LT-MO. BRN SAT STN, NO ODOOR.

- LS. BRN VF-XLN, DSE TO SOME SLI, CALKY; NS.

SHALE MAROON, GRV, SOFT + STICKY.

FLOOD LS. GRN-BRN VF-FXLN SU. OOL W/ PR. SCAT. FOSS, CAST TO INTER-DOL. IPT-VAG & 26 SPTY, RESID STICKY STN; TR. FO, NO ODOOR.

LS. GRN-TAN VF-FXLN FOSS W/ PR. FOSS, CAST. & DR. BRN SPTY OIL STN, SSG-TR. STICKY, FSG, NO ODOOR.

- LS. TAN-BRN VF-XLN DSE TO SOME GRN, SLI, CALKY; NS.

SHALE MAROON, GRV, TR. COAL, BRN, SLI, LMY SILTSTN.

LS. V. OOL W/ FN-MO. BOLITES PR. FR. XLN & SOME MAROON SHALE STAINING; TR. LS. AS ABU W/ OIL SHOW.

MAROON SHALE GRN, SILTY SH; TR. OOL, CHERT.

AS ABU

18-21: TAN DOL. SST W/ FN-CSE SD. GRNS IN MO. XLN DOL. TO SLI. SDY OF NON-SDY DOL. MO-CSE XLN W/ PR. LIT. FR. XLN - VAG. & BOTH W/ V. GLAUCONITIC & SLI. PYROITIC W/ GLAUC. FIL. IN SOME OF PORE SPACE PR. FR. DR. SPTY OIL STN ASSOC. W/ POROSITY, FSG, SOME BLEEDING, SSG; GOOD ODOOR.

21-26: SOFT GRN-LT. GRN SILTY CLAY; GRN-LT. GRN DOL. SST. SLI, CALKY, TITE W/ SFO + SPTY STN. ALSO SOME GLAUCONITIC DOL. SST TO SDY. DOL. AS ABU. W/ PR. TR. FR. & FSG; FEW PGS CSE ANG RTZ; GD ODOOR.

26-35: TAN-LT. GRN GLAUCONITIC SU. PYROITIC DOL. SST. TO SLI. SDY DOL. FN-MO. GRN B. SD + FN-CSE XLN DOL. PR. LIT. FR. XLN + INTER-DOL. & SCAT. BLK. RESID. OIL STN. S-ESTED SLI-FR. ODOOR; ALSO TAN-PINK GRANITE, SOME W/ SCAT. BLK. RESID. OIL STN, SSG, FR. FURSH CNT; SA. AMT. CSE LOOSE RTZ GRNS.

35-39: RED GRANITE, TITE; NS.

DST #1
3413 - 3450
TIMES: 30-30-30-30
IF: NO BLOW.
FF: NO BLOW FLUSHED TOOL
NO HELP.
REC: 5' DM NS.
IFP: 20-29 #
FFP: 24-29 #
SIP: 224-182 #
TEMP: 87° (?)

PIPE STRAP @ 3450!
2.20' SHORT TO BOARD.

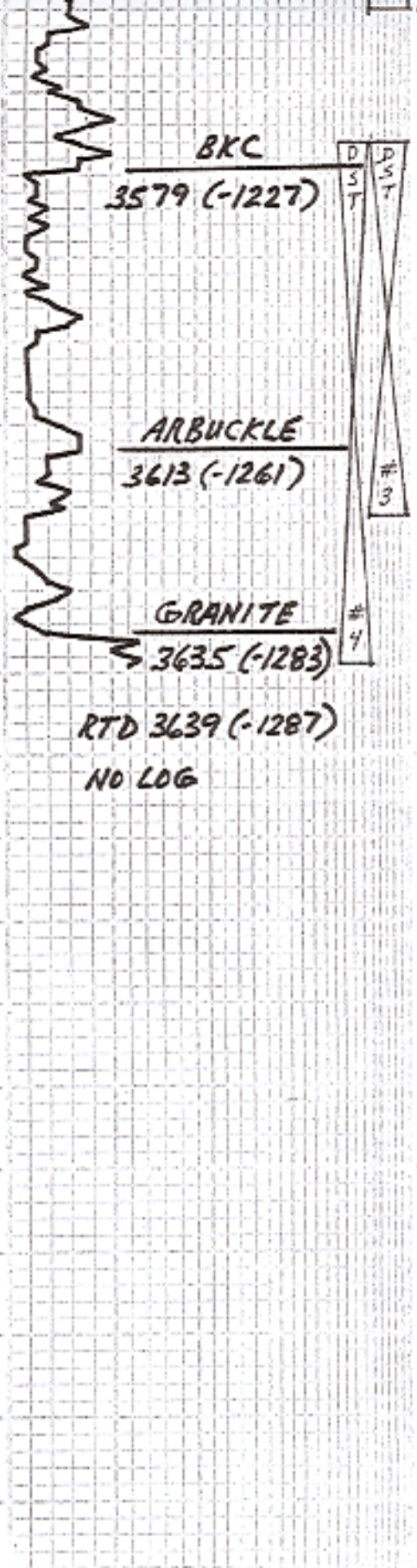
MUD @ 3450:
VIS: 49
WT: 9.0
FLT: 4.8
CHLOR: 1400
LCM: 1 #
PH: 10.5
YP: 20

DST #2
3486 - 3560
TIMES: 30-45-45-60
IF: BLOW BUILT 1/8" TO 3/4"
FF: NO BLOW, FLUSHED
TOOL @ 20" - REC. SURFACE
BLOW THAT REMAINED.
REC: 10' DRLG. MUD W/
SPOTS OIL IN TOOL.
IFP: 20-23 #
FFP: 24-31 #
SIP: 509-575 #
TEMP: 89°

DST #3
3576 - 3621
TIMES: 30-45-30-45
IF: SURF. BLOW BUILT TO 1/8"
FF: NO BLOW FLUSHED TOOL,
NO HELP.
REC: 10' OCM (10% OIL)
IFP: 22-26 #
FFP: 26-33 #
SIP: 199-162 #
TEMP: 89° F.

DST #4
3576 - 3639
TIMES: 30-45-30-60
IF: BLOW OFF BTM 5 1/2"
FF: BLOW OFF BTM 10"
NO RETURN BLOW.
REC: 0.5' TOTAL FLUID:

3600



SHALE, MAROON, GRAY, TR. COAL, BRN, SLT. LAM. SILTSTN.
 LS, V. COAL, w/ FN-MD. OOLITES PR. FR. XLN. SOME MAROON SHALE STAINING, TR. LS AS ABV. w/ OR. STAINING.
 MAROON SHALE, GRN, SILTY SH, TR. CRG. CHERT.
 AS ABV.
 13-21:
 TAN DOL. SST w/ FN-CSE SD. GRNS. IN MD. XLN DOL. TO SLT. SDY OF NPN-SDX DOL. MD-CSE XLN w/ FR-LIT. FR XLN - V. COAL, BOTH w/ V. GLAUCONITIC + SLT. PYRITIC w/ GLAUC. FIL. IN SOME OF PORE SPACE. PR-FR. DR. SPTY OIL STN. ASSOC. w/ POROSITY, ESFO, SOME BLEEDING, 55G, GOOD ODR.
 21-26:
 SOFT GRN-LT. GRN SILTY CLAY - FRM-LT. GRN DOL. SST. SLT. CALXY TITE w/ SFO + SPTY STN. ALSO SOME GLAUCONITIC DOL. SST TO SDY. DOL AS ABV. w/ PR-TR. FR. + ESFO, FEW BS CSE ANG RTZ, GD ODR.
 26-35:
 TAN-LT. GRN. GLAUCONITIC SLT. PYRITIC DOL. SST. TO SLT. SDY DOL. FN-MD. GRN B. SD. + FN-CSE XLN DOL. PR-LIT. FR. XLN. INTER. GRN. & SCAT. BLK. RESID. OIL STN. 5-ESFO. SLT-FR. ODR. ALSO TAN. PINK GRANITE SOME w/ SCAT. BLK. RESID. OIL STN. SFO, FR. FLUSH CUT. ST. AMT. CSE. LOOSE RTZ GRNS.
 35-39:
 RED GRANITE, TITE, NS.

3576 - 3621
 TIMES: 30-45-30-45
 IF: SURF. BLOW BUILT TO 1/8"
 FF: NO BLOW FLUSHED TOOL, NO HELP.
 REC: 10' OCM (10% OIL).
 1FP: 22-26 #
 FFP: 26-33 #
 SIP: 199-162 #
 TEMP: 89° F.

DST #4
 3576 - 3639
 TIMES: 30-45-30-60
 IF: BLOW OFF BTM 5 1/2"
 FF: BLOW OFF BTM 10"
 NO RETURN BLOW.
 REC: 850' TOTAL FLUID:
 40' WCM (40% W.)
 350' MW (70% W.)
 455' MW (90% W.)
 5' HVY. MUD, NS.
 CHLOR: 13,000 PPM
 SYSTEM: 1,300 PPM
 RW: .59 @ 60° F.
 1FP: 43-211 #
 FFP: 218-334 #
 SIP: 778-772 #
 TEMP: 92° F.

MUD @ 3639':
 VIS: 55
 WT: 9.3
 FILT. 6.4
 CHLOR: 1900
 LCM: 3 #
 PH: 9.5
 YP: 23

DEPTH	DRILLING TIME Minutes/Pool	SAMPLE DESCRIPTIONS	REMARKS
	Rate of Penetration In/hr		

COMPANY CRAWFORD OIL + GAS CO., LLC
 LEASE SPRIGG 1-32 ELEVATION: 2352 KB
 LOCATION 2265 FSL 1168 FEL SEC 32 TWP 250 R16 23W
 COUNTY NORTON STATE KS