

KANSAS CORPORATION COMMISSION 1046393
OIL & GAS CONSERVATION DIVISION

Form ACO-1
June 2009

Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 3842
Name: Larson Engineering, Inc. dba Larson Operating Company
Address 1: 562 W STATE RD 4
Address 2: _____
City: OLMITZ State: KS Zip: 67564 + 8561
Contact Person: Thomas Larson
Phone: (620) 653-7368
CONTRACTOR: License # 33935
Name: H. D. Drilling, LLC
Wellsite Geologist: Vernon Schrag
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 #: _____

<u>7/10/2010</u>	<u>7/23/2010</u>	<u>7/23/2010</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-101-22250-00-00

Spot Description: _____

E2 NW NW NE Sec. 23 Twp. 19 S. R. 30 East West

330 Feet from North / South Line of Section

2027 Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: Lane

Lease Name: Anchor Cattle Well #: 1-23

Field Name: Clark

Producing Formation: N/A

Elevation: Ground: 2878 Kelly Bushing: 2885

Total Depth: 4700 Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: 253 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: 23000 ppm Fluid volume: 900 bbls

Dewatering method used: Evaporated

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: 11/05/2010
- Confidential Release Date: 11/04/2012
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: NAOMI JAMES Date: 11/09/2010

Operator Name: Larson Engineering, Inc. dba Larson Operating Company Lease Name: Anchor Cattle Well #: 1-23

Sec. 23 Twp. 19 S. R. 30 East West County: Lane

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.

<p>Drill Stem Tests Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i></p> <p>Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Electric Log Submitted Electronically <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(If no, Submit Copy)</i></p> <p>List All E. Logs Run:</p> <p><small>Dual Induction Dual Comp Porosity Microresistivity</small></p>	<p><input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample</p> <p>Name Top Datum Attached Attached Attached</p>
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CASING RECORD <input type="checkbox"/> New <input checked="" 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
Surface	12.25	8.625	20	253	Class A	175	2% gel, 3% CC

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

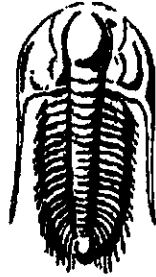
TUBING RECORD:		Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
Date of First, Resumed Production, SWD or ENHR.			Producing Method:		
			<input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____		
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> <i>(Submit ACO-4)</i> <input checked="" type="checkbox"/> Other <i>(Specify)</i> <u>D & A</u>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	Anchor Cattle 1-23
Doc ID	1046393

Tops

Anhydrite	2160	+725
Base Anhydrite	2216	+669
Heebner	3915	-1030
Lansing	3961	-1076
Stark	4239	-1354
Pawnee	4451	-1566
Cherokee Sh	4519	-1634
Mississippi	4579	-1694



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

562 W St Rd 4
Olmitz Ks, 67564

ATTN: Vern Schrag

23 19s 30w Lane, KS

Anchor Cattle1-23

Start Date: 2010.07.19 @ 23:20:03

End Date: 2010.07.20 @ 07:35:48

Job Ticket #: 37371 DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Engineering, Inc.

562 W St Rd 4
Olmitz Ks, 67564

ATTN: Vern Schrag

Anchor Cattle 1-23

23 19s 30w Lane, KS

Job Ticket: 37371

DST#: 1

Test Start: 2010.07.19 @ 23:20:03

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:49:48

Time Test Ended: 07:35:48

Interval: **4325.00 ft (KB) To 4412.00 ft (KB) (TVD)**

Total Depth: **4412.00 ft (KB) (TVD)**

Hole Diameter: **7.78 inches** Hole Condition: Fair

Test Type: **Conventional Bottom Hole**

Tester: **Mike Stemp**

Unit No: **28**

Reference Elevations: **2884.00 ft (KB)**

2878.00 ft (CF)

KB to GR/CF: **6.00 ft**

Serial #: 8677

Inside

Press@RunDepth: **851.90 psig @ 4327.00 ft (KB)**

Start Date: **2010.07.19**

End Date: **2010.07.20**

Start Time: **23:20:04**

End Time: **07:35:48**

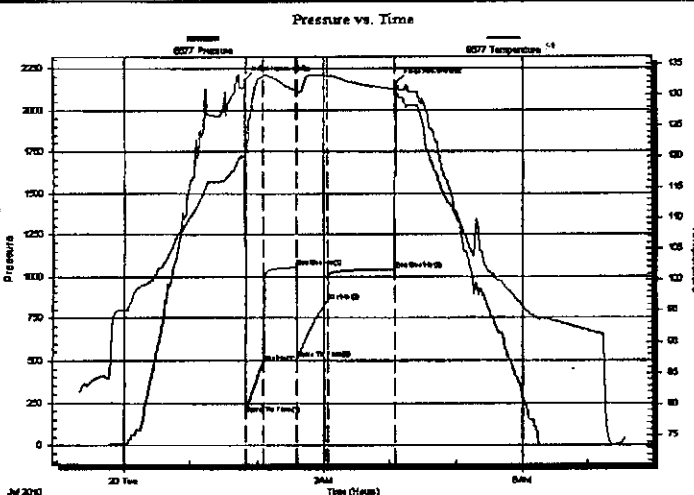
Capacity: **8000.00 psig**

Last Calib.: **2010.07.20**

Time On Btm: **2010.07.20 @ 01:48:33**

Time Off Btm: **2010.07.20 @ 04:06:03**

TEST COMMENT: IF- BOB in 1.5 min
IS- No blow back
FF- BOB in 5 min
FSI- No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2180.44	120.12	Initial Hydro-static
2	184.41	120.46	Open To Flow (1)
17	491.76	133.01	Shut-In(1)
47	1056.15	130.80	End Shut-In(1)
48	509.41	130.56	Open To Flow (2)
75	851.90	133.13	Shut-In(2)
137	1042.20	130.84	End Shut-In(2)
138	2163.99	131.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2180.00	100% Water	29.06
2.00	100% Oil	0.03

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

Anchor Cattle 1-23

562 W St Rd 4
Olmitz Ks, 67564

23 19s 30w Lane, KS

Job Ticket: 37371

DST#: 1

ATTN: Vern Schrag

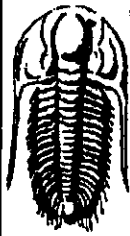
Test Start: 2010.07.19 @ 23:20:03

Tool Information

Drill Pipe:	Length: 4156.00 ft	Diameter: 3.80 inches	Volume: 58.30 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: 167.00 ft	Diameter: 2.25 inches	Volume: 0.82 bbl	Weight to Pull Loose: 60000.00 lb
		Total Volume:	59.12 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4325.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	87.00 ft			
Tool Length:	114.00 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			4299.00	
Shut In Tool	5.00			4304.00	
Hydraulic tool	5.00			4309.00	
Jars	5.00			4314.00	
Safety Joint	2.00			4316.00	
Packer	5.00		Fluid	4321.00	27.00 Bottom Of Top Packer
Packer	4.00			4325.00	
Stubb	1.00			4326.00	
Perforations	1.00			4327.00	
Recorder	0.00	8677	inside	4327.00	
Recorder	0.00	8678	inside	4327.00	
Perforations	18.00			4345.00	
Change Over Sub	1.00			4346.00	
Drill Pipe	62.00			4408.00	
Change Over Sub	1.00			4409.00	
Bullnose	3.00			4412.00	87.00 Bottom Packers & Anchor
Total Tool Length:	114.00				



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

Anchor Cattle 1-23

562 W St Rd 4
Olmitz Ks, 67564

23 19s 30w Lane, KS

Job Ticket: 37371

DST#: 1

ATTN: Vern Schrag

Test Start: 2010.07.19 @ 23:20:03

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:

48000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.34 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2180.00	100% Water	29.058
2.00	100% Oil	0.028

Total Length: 2182.00 ft Total Volume: 29.086 bbl

Num Fluid Samples: 0

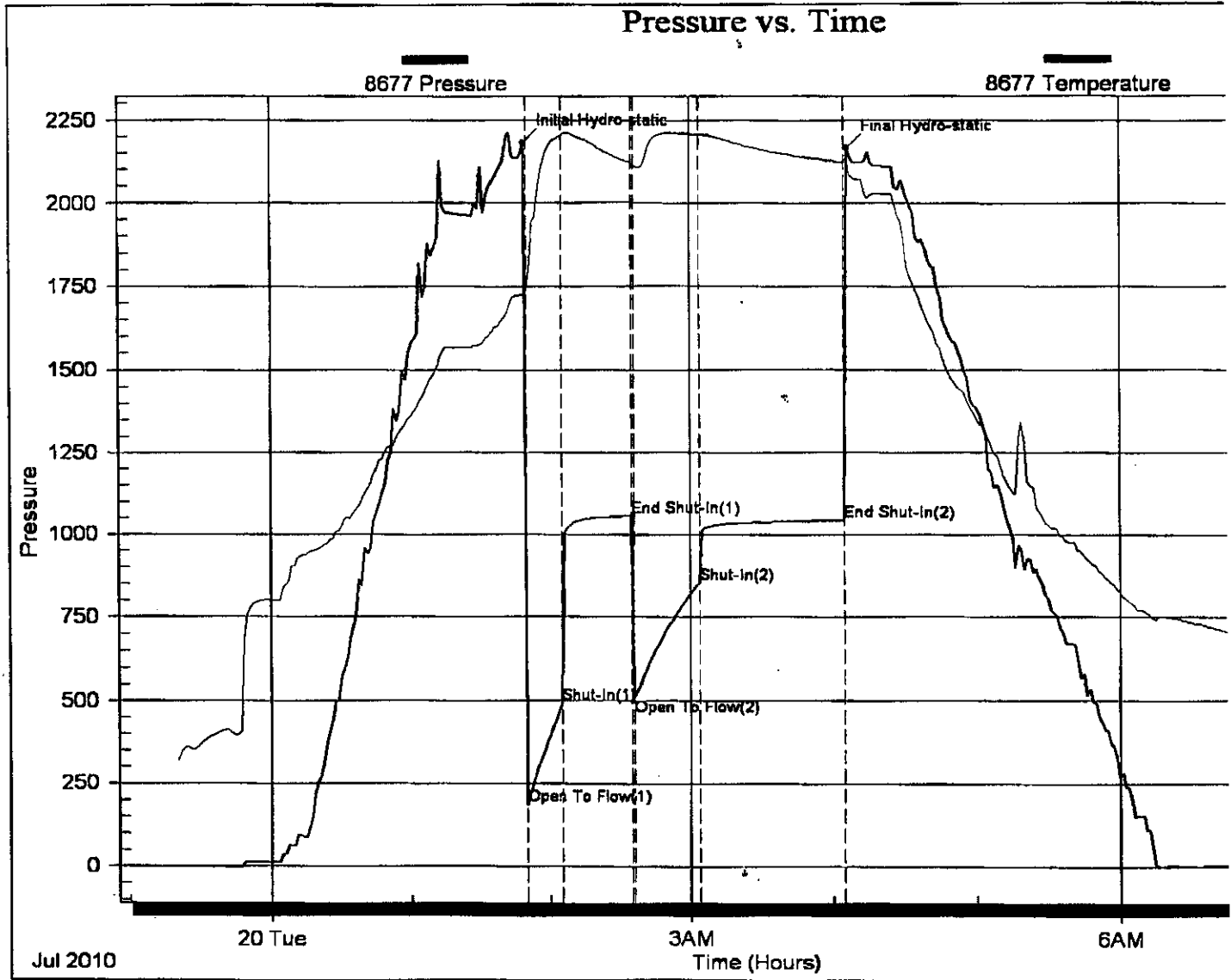
Num Gas Bombs: 0

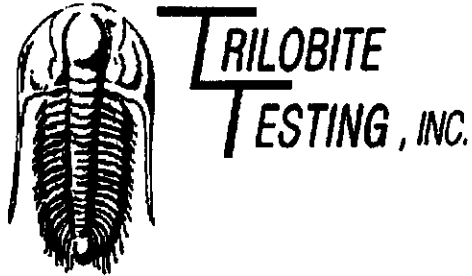
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

562 W St Rd 4
Olmits Ks, 67564

ATTN: Vern Schrag

23 19s 30w Lane, KS

Anchor Cattle1-23

Start Date: 2010.07.21 @ 03:36:42

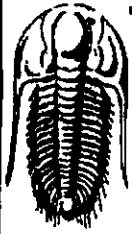
End Date: 2010.07.21 @ 09:28:27

Job Ticket #: 37372 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

Larson Engineering, Inc.

Anchor Cattle1-23

562 W St Rd 4
Olmitz Ks, 67564

23 19s 30w Lane, KS

Job Ticket: 37372

DST#: 2

ATTN: Vern Schrag

Test Start: 2010.07.21 @ 03:36:42

GENERAL INFORMATION:

Formation: **Pawnee**

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

Time Tool Opened: 05:56:57

Time Test Ended: 09:28:27

Test Type: **Conventional Bottom Hole**

Tester: **Mike Slemp**

Unit No: **28**

Interval: **4449.00 ft (KB) To 4525.00 ft (KB) (TVD)**

Total Depth: **4525.00 ft (KB) (TVD)**

Hole Diameter: **7.78 inches** Hole Condition: **Fair**

Reference Elevations: **2884.00 ft (KB)**

2878.00 ft (CF)

KB to GR/CF: **6.00 ft**

Serial #: 8677

Inside

Press@RunDepth: **25.63 psig @ 4451.00 ft (KB)**

Start Date: **2010.07.21**

End Date:

2010.07.21

Capacity: **8000.00 psig**

Last Calib.: **2010.07.21**

Start Time: **03:36:43**

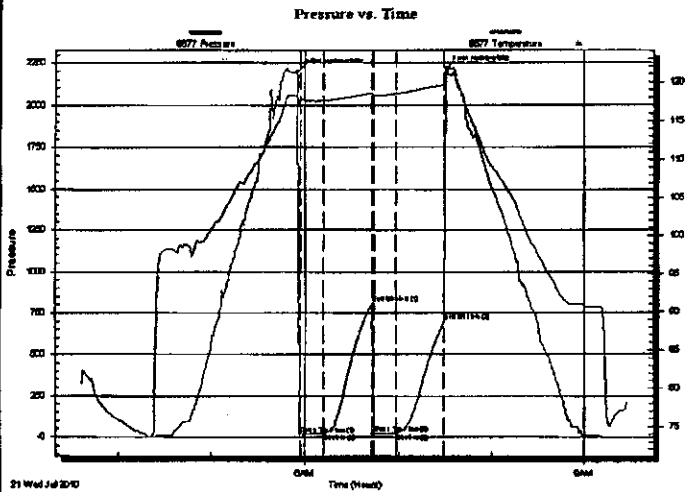
End Time:

09:28:27

Time On Btm: **2010.07.21 @ 05:54:57**

Time Off Btm: **2010.07.21 @ 07:29:57**

TEST COMMENT: IF- Surface blow died after 10 min
IS- No blow back
FF- No blow
FS- No blow back



PRESSURE SUMMARY

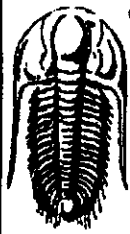
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2197.99	118.43	Initial Hydro-static
2	21.23	117.82	Open To Flow (1)
17	23.08	117.63	Shut-in(1)
48	808.16	118.57	End Shut-in(1)
49	24.71	118.30	Open To Flow (2)
63	25.63	118.50	Shut-in(2)
94	697.84	119.68	End Shut-in(2)
95	2213.35	121.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

Anchor Cattle 1-23

562 W St Rd 4
Olmütz Ks, 67564

23 19s 30w Lane, KS

Job Ticket: 37372

DST#: 2

ATTN: Vern Schrag

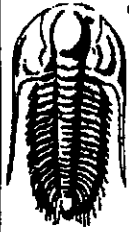
Test Start: 2010.07.21 @ 03:36:42

Tool Information

Drill Pipe:	Length: 4274.00 ft	Diameter: 3.80 inches	Volume: 59.95 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: 168.00 ft	Diameter: 2.25 inches	Volume: 0.83 bbl	Weight to Pull Loose: 60000.00 lb
		Total Volume: 60.78 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4449.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	76.00 ft			
Tool Length:	103.00 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			4423.00	
Shut In Tool	5.00			4428.00	
Hydraulic tool	5.00			4433.00	
Jars	5.00			4438.00	
Safety Joint	2.00			4440.00	
Packer	5.00		Fluid	4445.00	27.00 Bottom Of Top Packer
Packer	4.00			4449.00	
Stubb	1.00			4450.00	
Perforations	1.00			4451.00	
Recorder	0.00	8677	Inside	4451.00	
Recorder	0.00	8678	Inside	4451.00	
Perforations	7.00			4458.00	
Change Over Sub	1.00			4459.00	
Drill Pipe	62.00			4521.00	
Change Over Sub	1.00			4522.00	
Bullnose	3.00			4525.00	76.00 Bottom Packers & Anchor
Total Tool Length:	103.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

Anchor Cattle 1-23

562 W St Rd 4
Olmitz Ks, 67564

23 19s 30w Lane, KS

Job Ticket: 37372

DST#: 2

ATTN: Vern Schrag

Test Start: 2010.07.21 @ 03:36:42

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: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.96 in³

Gas Cushion Type:

Gas Cushion Pressure:

psig

Resistivity: ohm.m

Salinity: 3500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl

Total Length: ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

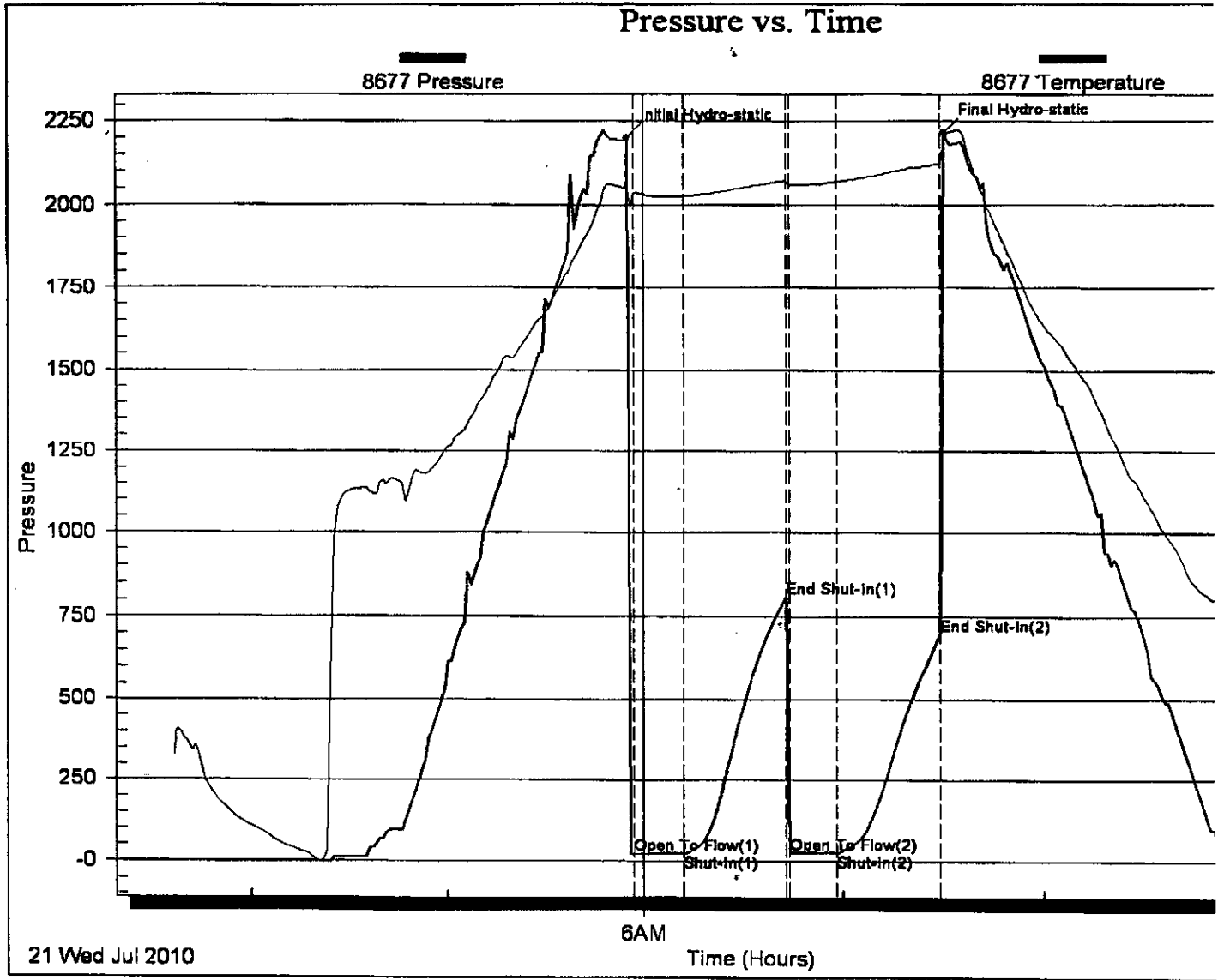
Num Gas Bombs: 0

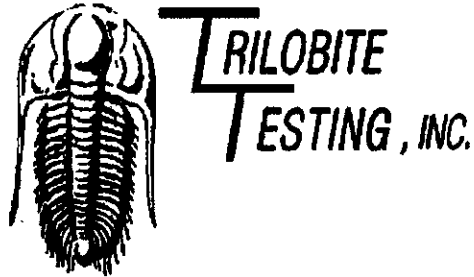
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

562 W St Rd 4
Olmitz Ks, 67564

ATTN: Vern Schrag

23 19s 30w Lane, KS

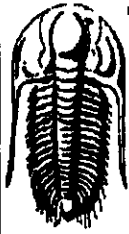
Anchor Cattle1-23

Start Date: 2010.07.21 @ 20:06:32

End Date: 2010.07.22 @ 03:25:32

Job Ticket #: 37373 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

Larson Engineering, Inc.

562 W St Rd 4
Olmitz Ks, 67564

ATTN: Vern Schrag

Anchor Cattle 1-23

23 19s 30w Lane, KS

Job Ticket: 37373

DST#: 3

Test Start: 2010.07.21 @ 20:06:32

GENERAL INFORMATION:

Formation: **Cherokee**

Devlated: No Whipstock: ft (KB)

Time Tool Opened: 22:51:47

Time Test Ended: 03:25:32

Test Type: Conventional Bottom Hole

Tester: Mike Slemp

Unit No: 28

Interval: 4518.00 ft (KB) To 4575.00 ft (KB) (TVD)

Total Depth: 4575.00 ft (KB) (TVD)

Hole Diameter: 7.78 inches Hole Condition: Fair

Reference Elevations: 2884.00 ft (KB)

2878.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: **8677**

Inside

Press@RunDepth: 31.93 psig @ 4520.00 ft (KB)

Start Date: 2010.07.21

End Date:

2010.07.22

Start Time: 20:06:33

End Time:

03:25:32

Capacity: 8000.00 psig

Last Calib.: 2010.07.22

Time On Btm: 2010.07.21 @ 22:49:47

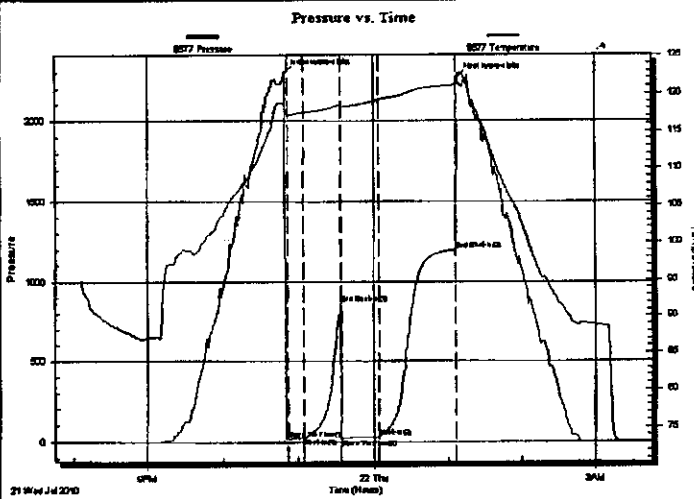
Time Off Btm: 2010.07.22 @ 01:07:17

TEST COMMENT: IF- Weak surface blow, 1/2 inch in 15 min

IS- No blow back

FF- Weak blow 2 inches in 30 min

FSI- No blow back



PRESSURE SUMMARY

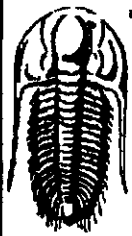
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2294.16	118.37	Initial Hydro-static
2	19.82	117.22	Open To Flow (1)
15	22.15	117.45	Shut-In(1)
44	864.72	118.49	End Shut-In(1)
45	21.09	118.23	Open To Flow (2)
74	31.93	119.15	Shut-In(2)
136	1200.74	121.11	End Shut-In(2)
138	2261.52	122.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	50%oil 50% mud	0.10

Gas Rates

	Choke (Inches)	Pressure (psig)	Gas Rate (Mc/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

Anchor Cattle 1-23

562 W St Rd 4
Olmritz Ks, 67564

23 19s 30w Lane, KS

Job Ticket: 37373

DST#: 3

ATTN: Vern Schrag

Test Start: 2010.07.21 @ 20:06:32

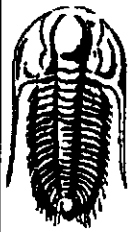
Tool information

Drill Pipe:	Length: 4338.00 ft	Diameter: 3.80 inches	Volume: 60.85 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: 168.00 ft	Diameter: 2.25 inches	Volume: 0.83 bbl	Weight to Pull Loose:	60000.00 lb
		Total Volume:	61.68 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	4518.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	57.00 ft				
Tool Length:	84.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4492.00	
Shut In Tool	5.00			4497.00	
Hydraulic tool	5.00			4502.00	
Jars	5.00			4507.00	
Safety Joint	2.00			4509.00	
Packer	5.00		Fluid	4514.00	27.00 Bottom Of Top Packer
Packer	4.00			4518.00	
Stubb	1.00			4519.00	
Perforations	1.00			4520.00	
Recorder	0.00	8677	Inside	4520.00	
Recorder	0.00	8678	Inside	4520.00	
Perforations	19.00			4539.00	
Change Over Sub	1.00			4540.00	
Drill Pipe	31.00			4571.00	
Change Over Sub	1.00			4572.00	
Bullnose	3.00			4575.00	57.00 Bottom Packers & Anchor
Total Tool Length:	84.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

Anchor Cattle 1-23

562 W St Rd 4
Otritz Ks, 67564

23 19s 30w Lane, KS

Job Ticket: 37373

DST#: 3

ATTN: Vern Schrag

Test Start: 2010.07.21 @ 20:06:32

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil APt	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.96 in*	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3500.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	50%oil 50%mud	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

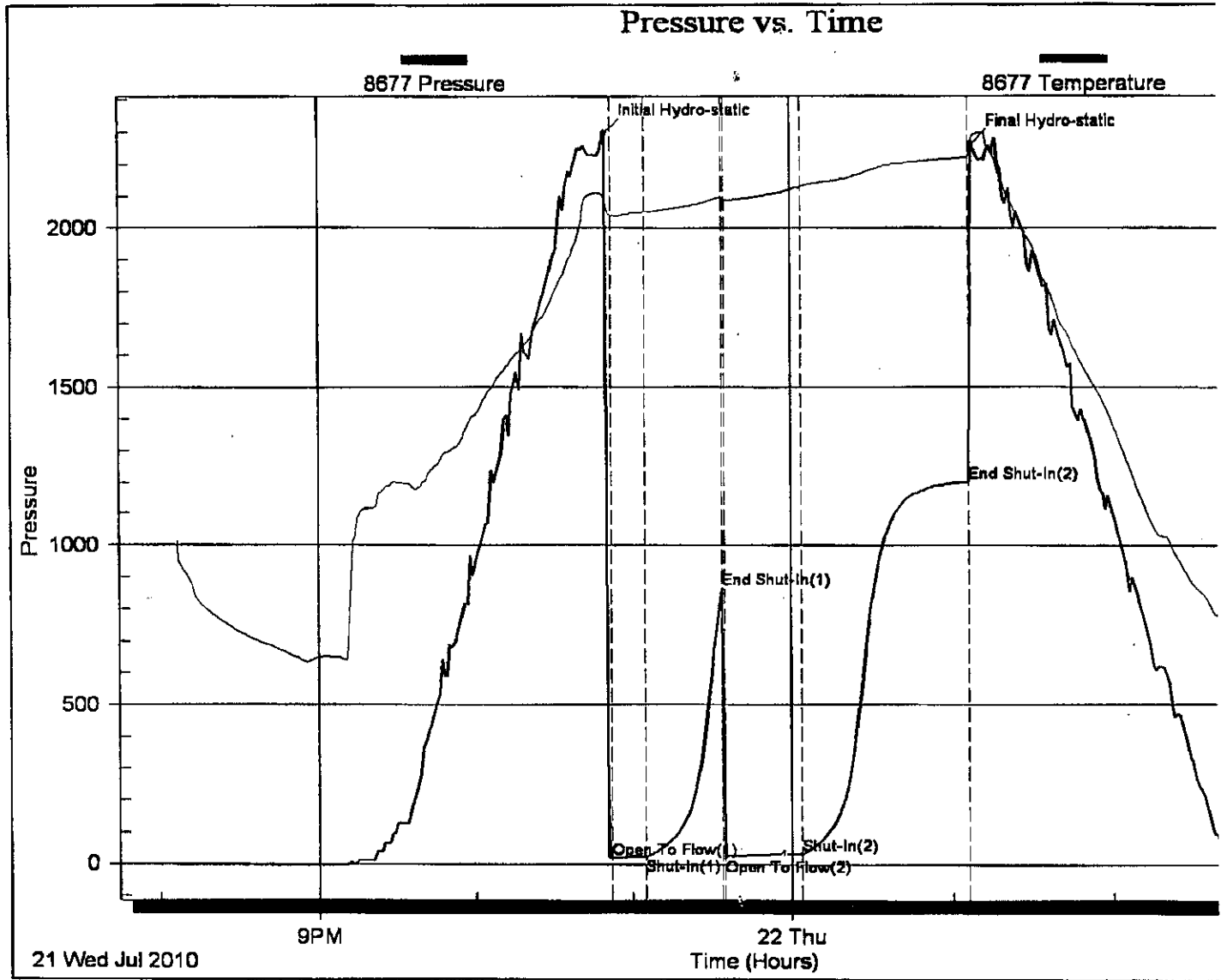
Num Gas Bombs: 0

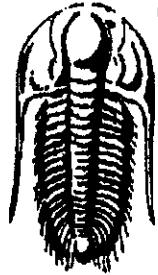
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

562 W St Rd 4
Olmits Ks, 67564

ATTN: Vern Schrag

23 19s 30w Lane, KS

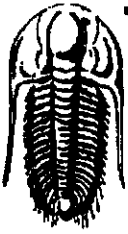
Anchor Cattle1-23

Start Date: 2010.07.23 @ 09:49:00

End Date: 2010.07.23 @ 14:59:08

Job Ticket #: 39577 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

Larson Engineering, Inc.

562 W St Rd 4
Olmitz Ks, 67564

ATTN: Vern Schrag

Anchor Cattle1-23

23 19s 30w Lane, KS

Job Ticket: 39577

DST#: 4

Test Start: 2010.07.23 @ 09:49:00

GENERAL INFORMATION:

Formation: **Marmaton**

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

Time Tool Opened: 11:53:00

Time Test Ended: 14:59:08

Test Type: **Conventional Straddle**

Tester: **Chuck Smith**

Unit No: **37**

Interval: **4386.00 ft (KB) To 4429.00 ft (KB) (TVD)**

Total Depth: **4700.00 ft (KB) (TVD)**

Hole Diameter: **7.78 inches** Hole Condition: **Good**

Reference Elevations: **2884.00 ft (KB)**

2878.00 ft (CF)

KB to GR/CF: **6.00 ft**

Serial #: 8018

Inside

Press@RunDepth: **psig @ 4388.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2010.07.23** End Date: **2010.07.23**

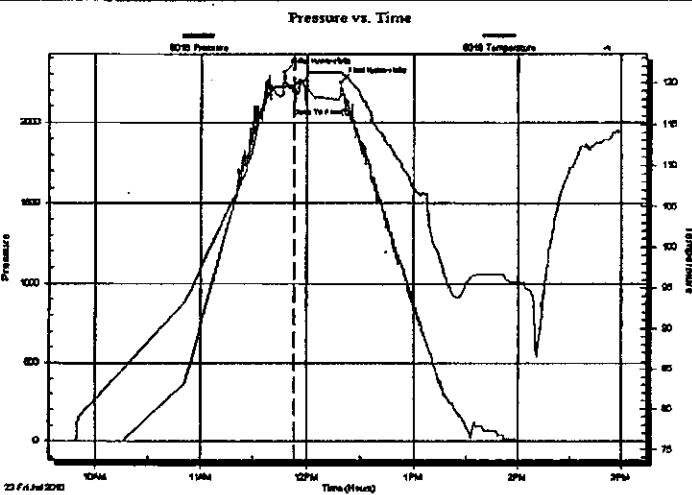
Last Calib.: **2010.07.23**

Start Time: **09:49:05** End Time: **14:59:07**

Time On Btm: **2010.07.23 @ 11:47:00**

Time Off Btm: **2010.07.23 @ 12:18:52**

TEST COMMENT: IF: Packer seat failed, reset tool, packer seat failed, pulled tool.



PRESSURE SUMMARY

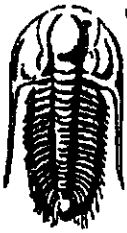
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2313.23	119.56	Initial Hydro-static
6	2037.14	119.60	Open To Flow (1)
32	2250.82	121.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
210.00	100%M	1.70

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

Anchor Cattle 1-23

562 W St Rd 4
Olmütz Ks, 67564

23 19s 30w Lane, KS

Job Ticket: 39577

DST#: 4

ATTN: Vern Schrag

Test Start: 2010.07.23 @ 09:49:00

Tool Information

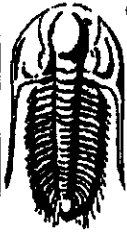
Drill Pipe:	Length: 4245.00 ft	Diameter: 3.80 inches	Volume: 59.55 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 137.00 ft	Diameter: 2.25 inches	Volume: 0.67 bbl	Weight to Pull Loose:	60000.00 lb
			Total Volume: 60.22 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.50 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4386.00 ft			Final	61000.00 lb
Depth to Bottom Packer:	4429.00 ft				
Interval between Packers:	43.00 ft				
Tool Length:	342.50 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			4359.50		
Shut In Tool	5.00			4364.50		
Hydraulic tool	5.00			4369.50		
Jars	5.00			4374.50		
Safety Joint	2.50			4377.00		
Packer	5.00			4382.00	27.50	Bottom Of Top Packer
Packer	4.00			4386.00		
Stubb	1.00			4387.00		
Perforations	1.00			4388.00		
Recorder	0.00	8018	Inside	4388.00		
Recorder	0.00	8357	Outside	4388.00		
Change Over Sub	1.00			4389.00		
Drill Pipe	30.00			4419.00		
Change Over Sub	1.00			4420.00		
Perforations	5.00			4425.00		
Blank Off Sub	1.00			4426.00		
top of s pack	3.00			4429.00	43.00	Tool Interval
Packer	1.00			4430.00		
Stubb	1.00			4431.00		
Perforations	21.00			4452.00		
Recorder	0.00	6751	Outside	4452.00		
Change Over Sub	1.00			4453.00		
Drill Pipe	244.00			4697.00		
Change Over Sub	1.00			4698.00		
Bullnose	3.00			4701.00	272.00	Bottom Packers & Anchor

Total Tool Length: 342.50



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

Anchor Cattle 1-23

562 W St Rd 4
Olmütz Ks, 67564

23 19s 30w Lane, KS

Job Ticket: 39577

DST#: 4

ATTN: Vern Schrag

Test Start: 2010.07.23 @ 09:49:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3500.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
210.00	100%M	1.698

Total Length: 210.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

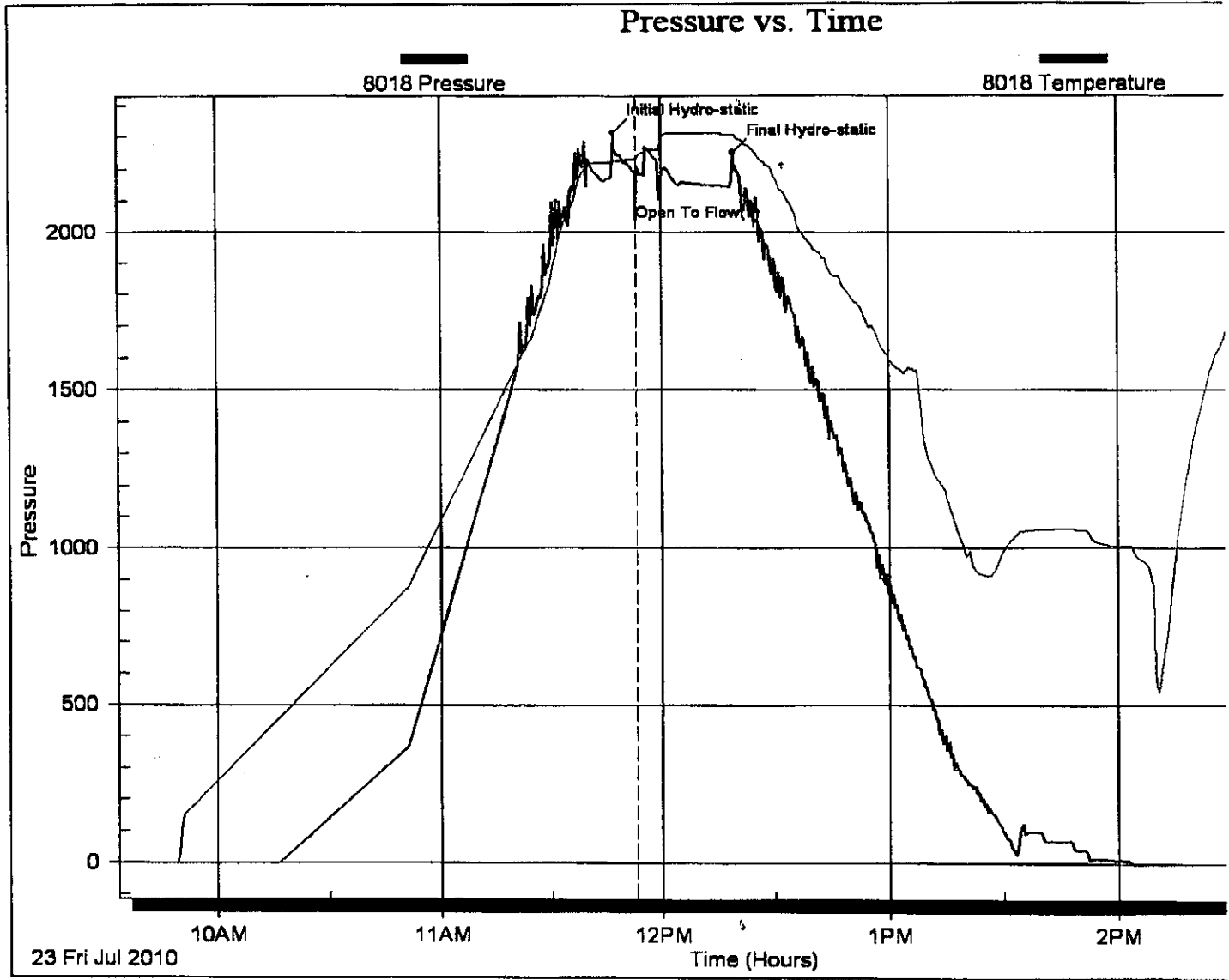
Num Gas Bombs: 0

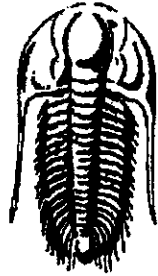
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Engineering, Inc.**

562 W St Rd 4
Olmitz Ks, 67564

ATTN: Vern Schrag

23 19s 30w Lane, KS

Anchor Cattle1-23

Start Date: 2010.07.23 @ 20:59:00

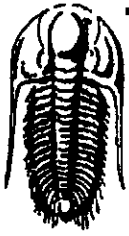
End Date: 2010.07.24 @ 05:03:39

Job Ticket #: 39578 DST #: 5

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRIOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Engineering, Inc.

562 W St Rd 4
Olmritz Ks, 67564

ATTN: Vern Schrag

Anchor Cattle1-23

23 19s 30w Lane, KS

Job Ticket: 39578

DST#: 5

Test Start: 2010.07.23 @ 20:59:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:43:20

Time Test Ended: 05:03:39

Test Type: Conventional Straddle

Tester: Chuck Smith

Unit No: 37

Interval: **4342.00 ft (KB) To 4436.00 ft (KB) (TVD)**

Total Depth: 4700.00 ft (KB) (TVD)

Hole Diameter: 7.78 inches Hole Condition: Good

Reference Elevations: 2884.00 ft (KB)

2878.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: **8357**

Outside

Press@RunDepth: 422.54 psig @ 4452.00 ft (KB)

Start Date: 2010.07.23

End Date:

2010.07.24

Start Time: 20:59:05

End Time:

05:03:40

Capacity: 8000.00 psig

Last Calib.: 2010.07.24

Time On Btm: 2010.07.23 @ 23:38:40

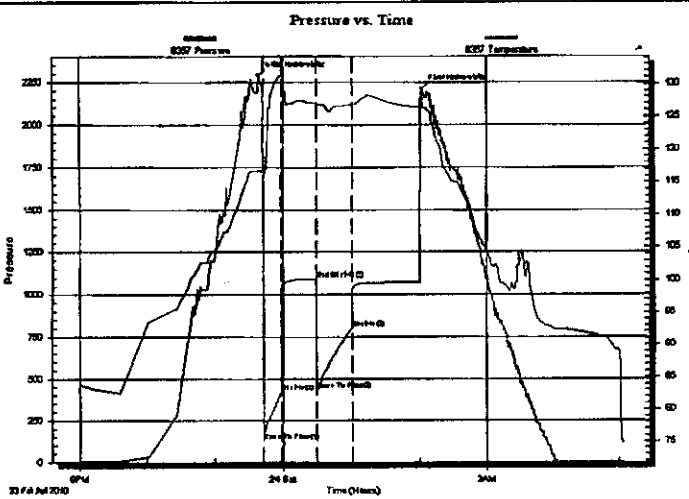
Time Off Btm: 2010.07.24 @ 02:02:09

TEST COMMENT: IF: B.O.B. @ 3 min.

IS: No return.

FF: B.O.B. @ 3 1/2 min.

FSt: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2290.63	116.74	Initial Hydro-static
5	131.84	116.15	Open To Flow (1)
20	422.54	131.30	Shut-In(1)
51	1093.03	127.00	End Shut-In(1)
51	433.28	126.73	Open To Flow (2)
81	800.55	126.81	Shut-In(2)
144	2210.97	126.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
726.00	GOSMW 5%G 10%M 85%W	8.94
310.00	GOCMW 15%G 1%O 30%M 54%W	4.35
496.00	OSMW 30%M 70%W	6.96
124.00	M 100%M	1.74
0.00	RW: .210 @ 75 Degrees F = 30000 PPM	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcfd)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Engineering, Inc.

Anchor Cattle-1-23

562 W St Rd 4
Olmitz Ks, 67564

23 19s 30w Lane, KS

Job Ticket: 39578

DST#: 6

ATTN: Vern Schrag

Test Start: 2010.07.23 @ 20:59:00

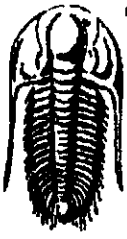
Tool Information

Drill Pipe:	Length: 4183.00 ft	Diameter: 3.80 inches	Volume: 58.68 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: 30000.00 lb
Drill Collar:	Length: 137.00 ft	Diameter: 2.25 inches	Volume: 0.67 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 59.35 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.50 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4342.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	4436.00 ft			
Interval between Packers:	94.00 ft			
Tool Length:	386.50 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			4315.50	
Shut In Tool	5.00			4320.50	
Hydraulic tool	5.00			4325.50	
Jars	5.00			4330.50	
Safety Joint	2.50			4333.00	
Packer	5.00			4338.00	27.50 Bottom Of Top Packer
Packer	4.00			4342.00	
Stubb	1.00			4343.00	
Perforations	7.00			4350.00	
Recorder	0.00	8018	Inside	4350.00	
Recorder	0.00	6751	Inside	4350.00	
Change Over Sub	1.00			4351.00	
Drill Pipe	61.00			4412.00	
Change Over Sub	1.00			4413.00	
Perforations	19.00			4432.00	
Blank Off Sub	1.00			4433.00	
top of s pack	3.00			4436.00	94.00 Tool Interval
Packer	1.00			4437.00	
Stubb	1.00			4438.00	
Perforations	14.00			4452.00	
Recorder	0.00	8357	Outside	4452.00	
Change Over Sub	1.00			4453.00	
Drill Pipe	244.00			4697.00	
Change Over Sub	1.00			4698.00	
Bullnose	3.00			4701.00	265.00 Bottom Packers & Anchor

Total Tool Length: 386.50



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Engineering, Inc.

Anchor Cattle1-23

562 W St Rd 4
Olmitz Ks, 67564

23 19s 30w Lane, KS

Job Ticket: 39578

DST#: 5

ATTN: Vern Schrag

Test Start: 2010.07.23 @ 20:59:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

30000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Gas Cushion Pressure:

psig

Resistivity: 0.00 ohm.m

Salinity: 3500.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
726.00	GOSMV 5%G 10%M 85%W	8.936
310.00	GOCMV 15%G 1%O 30%M 54%W	4.348
496.00	OSMV 30%M 70%W	6.958
124.00	M 100%M	1.739
0.00	RW: .210 @ 75 Degrees F = 30000 PPM	0.000

Total Length: 1656.00 ft

Total Volume: 21.981 bbl

Num Fluid Samples: 0

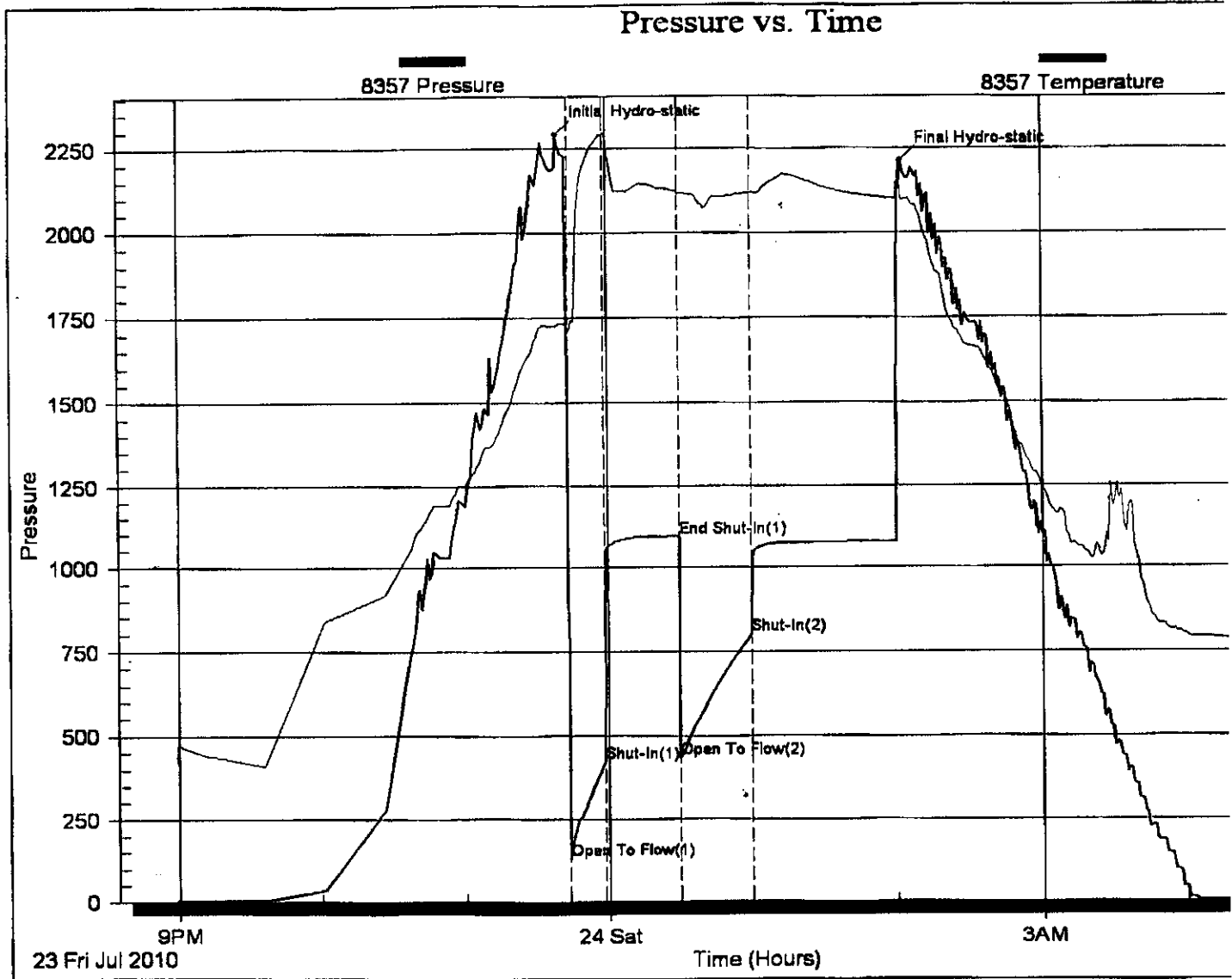
Num Gas Bombs: 0

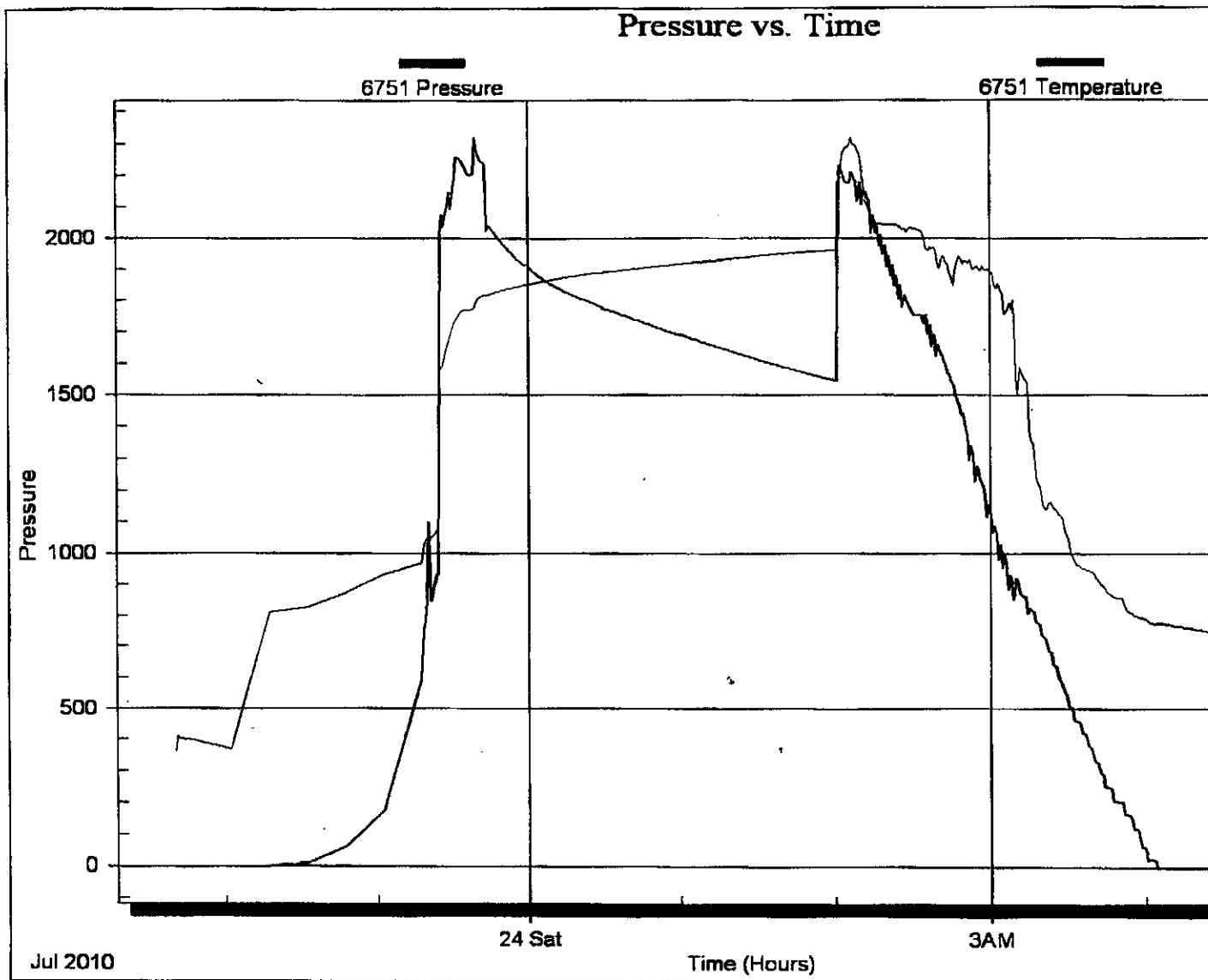
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





ALLIED CEMENTING CO., LLC. 036724

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Great Bend W

DATE <u>7-10-10</u>	SEC. <u>23</u>	TWP. <u>19S</u>	RANGE <u>30W</u>	CALLED OUT	ON LOCATION	JOB START <u>1100</u>	JOB FINISH <u>1130</u>
LEASE <u>Anchor</u>	WELL # <u>123</u>	LOCATION <u>Amy 1 west</u>			COUNTY <u>hove</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)		<u>6 South 1/2 East Bond 120</u>					

CONTRACTOR H-O Rig 3

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 256

CASING SIZE 8 5/8 DEPTH 253

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15

PERFS.

DISPLACEMENT 15 BBls

OWNER

CEMENT

AMOUNT ORDERED 175 class A

3% cc 2% gel

COMMON	<u>175</u>	@	<u>13.50</u>	<u>2362.50</u>
POZMIX		@		
GEL	<u>7</u>	@	<u>20.25</u>	<u>81.00</u>
CHLORIDE	<u>6</u>	@	<u>51.50</u>	<u>309.00</u>
ASC		@		
		@		
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>175</u>	@	<u>2.25</u>	<u>393.75</u>
MILEAGE	<u>175 x 44 x .10</u>			<u>770.00</u>
TOTAL				<u>3916.25</u>

REMARKS:

Pipe on Bottom
Pressure circulation with
Rig mud shut down
Hook up to cement line
Mix 175 class A 3% cc
2% gel Dis 15 BBls
Freshwater cement did
circulate wash up Rig Down

SERVICE

DEPTH OF JOB	<u>253</u>	@		
PUMP TRUCK CHARGE				<u>990.00</u>
EXTRA FOOTAGE		@		
MILEAGE	<u>44</u>	@	<u>7.00</u>	<u>308.00</u>
MANIFOLD		@		
		@		
		@		

CHARGE TO: hanson Engineering

STREET _____

CITY _____ STATE _____ ZIP _____

TOTAL 1298.00

PLUG & FLOAT EQUIPMENT

	@		
	@		
	@		

