



KANSAS CORPORATION COMMISSION 1060266  
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 # \_\_\_\_\_

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: \_\_\_\_\_



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: <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
-----------------------------------	-----------	---------	-------------	---------------	---------

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <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>	<b>PRODUCTION INTERVAL:</b> _____ _____
--	---	---

Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	Martha Unit 1-23
Doc ID	1060266

Tops

Name	Top	Datum
Anhydrite	992	+911
Base Anhydrite	1024	+879
Topeka	2755	-852
Heebner	3008	-1105
Lansing	3062	-1159
Stark	3263	-1360
Base KC	3320	-1417
Arbuckle	3427	-1524



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Larson Engineering, Inc.  
562 W state Rd 4  
Olmitz KS 67564-8561  
ATTN: Vern Schrag

**Martha Unit #1-23**  
**23/11S/15W-Russell**  
Job Ticket: 42792      **DST#: 1**  
Test Start: 2011.04.13 @ 13:55:07

## GENERAL INFORMATION:

Formation: **LKC B-C**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:24:37  
 Time Test Ended: 19:22:37  
 Interval: **3074.00 ft (KB) To 3135.00 ft (KB) (TVD)**  
 Total Depth: 3135.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Poor  
 Test Type: Conventional Bottom Hole  
 Tester: Dustin Rash  
 Unit No: 54  
 Reference Elevations: 1903.00 ft (KB)  
 1896.00 ft (CF)  
 KB to GR/CF: 7.00 ft

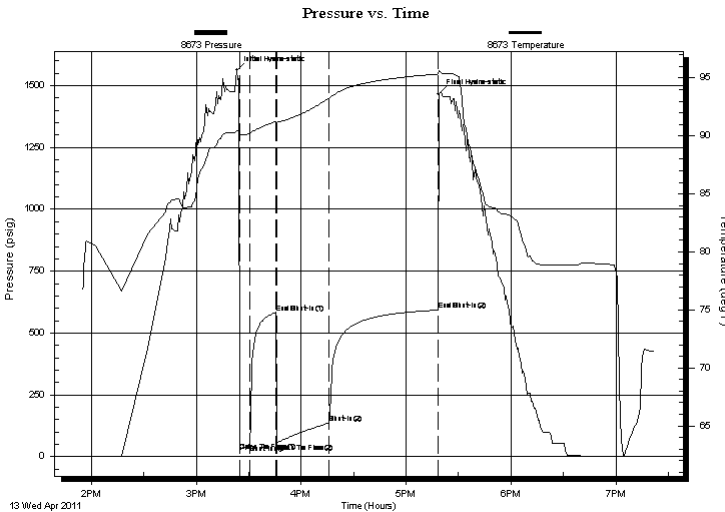
## Serial #: 8673

Inside

Press @ Run Depth: 137.05 psig @ 3109.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2011.04.13      End Date: 2011.04.13      Last Calib.: 2011.04.13  
 Start Time: 13:55:09      End Time: 19:22:37      Time On Btm: 2011.04.13 @ 15:23:22  
 Time Off Btm: 2011.04.13 @ 17:18:52

**TEST COMMENT:** IF-Weak building blow . Built to 4 inches.  
 IS-No Return.  
 FF-Weak building blow . BOB in 30 minutes.  
 FSI-Return @ 4 minutes. Built to 1/2 inch. Died @ 27 minutes.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1561.16	90.44	Initial Hydro-static
2	23.64	89.75	Open To Flow (1)
8	49.65	90.21	Shut-In(1)
23	578.99	91.27	End Shut-In(1)
23	54.95	91.04	Open To Flow (2)
53	137.05	93.25	Shut-In(2)
115	592.80	95.34	End Shut-In(2)
116	1465.48	95.65	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	100%Oil	0.01
248.00	62%Water/35%Mud/3%Oil	1.76

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering, Inc.

**Martha Unit #1-23**

562 W state Rd 4  
Olmitz KS 67564-8561

**23/11S/15W-Russell**

Job Ticket: 42792

**DST#: 1**

ATTN: Vern Schrag

Test Start: 2011.04.13 @ 13:55:07

## 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:

75000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.09 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	100%Oil	0.007
248.00	62%Water/35%Mud/3%Oil	1.756

Total Length: 249.00 ft

Total Volume: 1.763 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

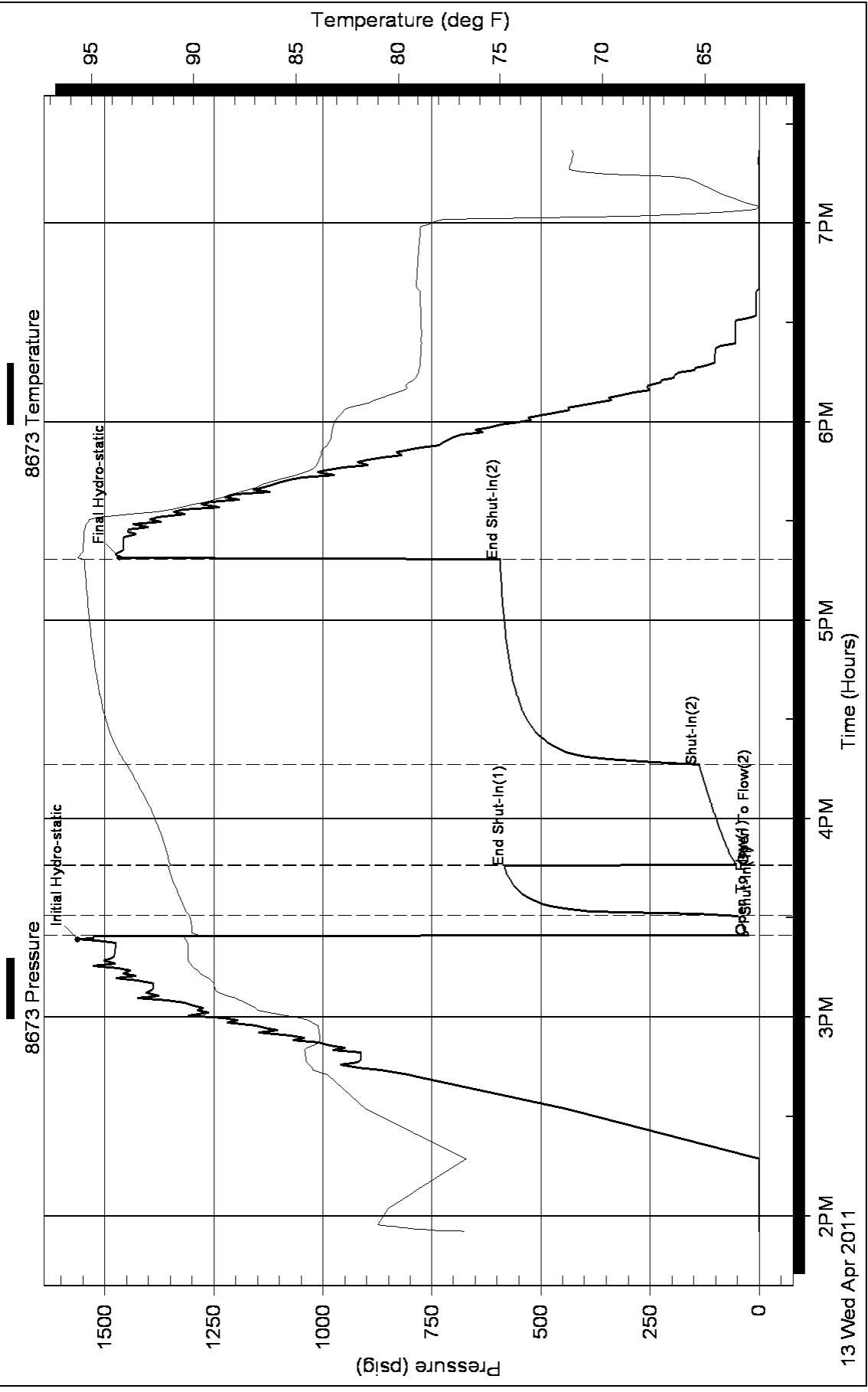
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Larson En6gineering, Inc.

**Marha Unit #1-23**

562 W. State Rd 4  
Olmitz, KS 67564-8561

**23/11S/15W-Russell**

ATTN: Vern Schrag

Job Ticket: 42793

**DST#: 2**

Test Start: 2011.04.14 @ 14:25:42

## GENERAL INFORMATION:

Formation: **LKC J,K,&L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:00:12

Time Test Ended: 19:43:57

Test Type: Conventional Bottom Hole

Tester: Dustin Rash

Unit No: 54

**Interval: 3233.00 ft (KB) To 3316.00 ft (KB) (TVD)**

Reference Elevations: 1903.00 ft (KB)

Total Depth: 3316.00 ft (KB) (TVD)

1898.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 5.00 ft

**Serial #: 8673**

**Inside**

Press @ Run Depth: 53.54 psig @ 3298.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.04.14

End Date:

2011.04.14

Last Calib.: 2011.04.14

Start Time: 14:25:44

End Time:

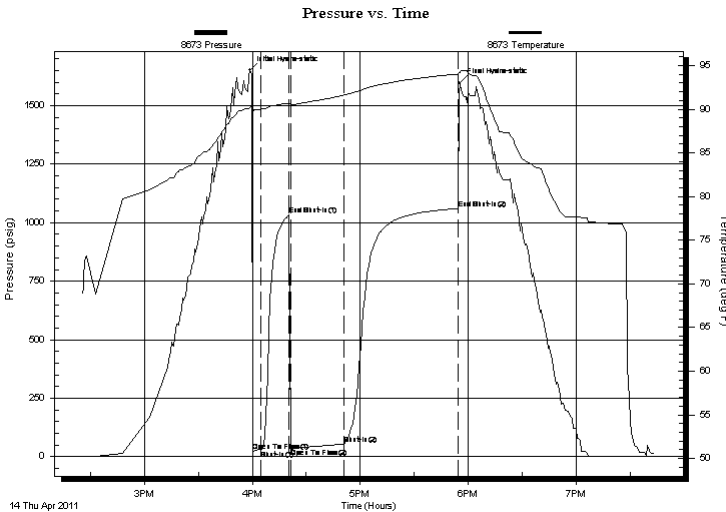
19:43:57

Time On Btm: 2011.04.14 @ 15:58:42

Time Off Btm: 2011.04.14 @ 17:55:27

**TEST COMMENT:** IF-Weak building blow . Built to 2 inches.  
ISI-No Return.  
FF-Weak building blow . Built to 6&1/2 inches.  
FSI-No Return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1650.79	90.20	Initial Hydro-static
2	22.03	89.60	Open To Flow (1)
7	29.43	89.99	Shut-In(1)
22	1033.05	90.72	End Shut-In(1)
23	34.92	90.47	Open To Flow (2)
52	53.54	91.60	Shut-In(2)
116	1060.64	94.03	End Shut-In(2)
117	1598.41	94.23	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
100.00	80%Mud/10%Gas/10%Oil	0.71

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Larson Engineering, Inc.

**Marha Unit #1-23**

562 W. State Rd 4  
Olmitz, KS 67564-8561

**23/11S/15W-Russell**

Job Ticket: 42793

**DST#: 2**

ATTN: Vern Schrag

Test Start: 2011.04.14 @ 14:25:42

## 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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
100.00	80%Mud/10%Gas/10%Oil	0.708

Total Length: 100.00 ft      Total Volume: 0.708 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

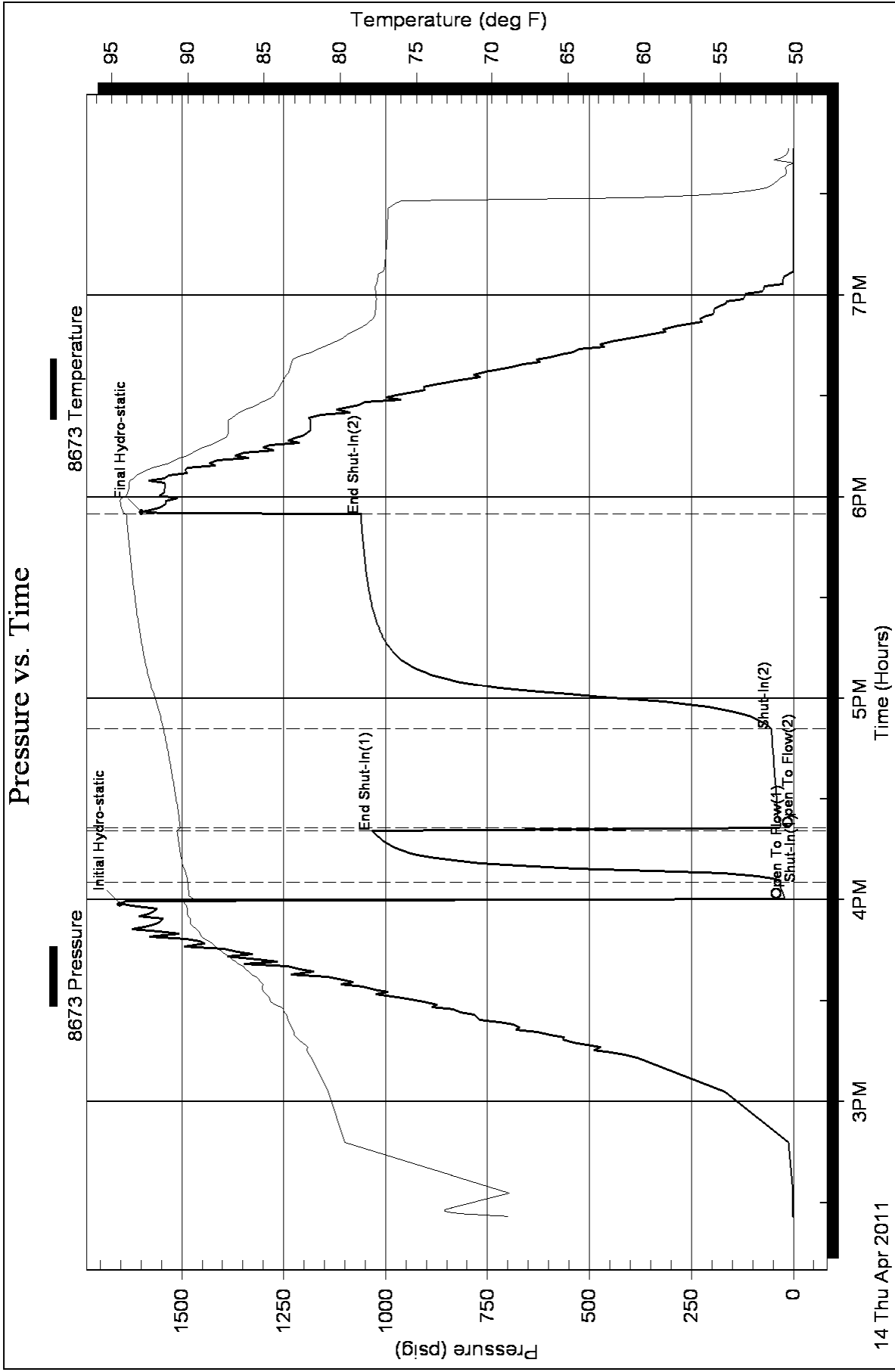
Serial #:

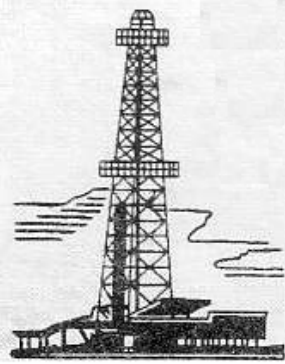
Laboratory Name:

Laboratory Location:

Recovery Comments:







# WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAG  
CONSULTANT GEOLOGIST



Scale 1:240 (5"=100') Imperial

Well Name: MARTHA UNIT #1-23  
Location: NE NW NW SE Sec. 23-11s-15w  
Licence Number: API: 15-167-23694  
Spud Date: Apr. 08, 2011  
Surface Coordinates: 2420' FSL & 2297' FEL

Region: Russel Co., KS  
Drilling Completed: Apr. 15, 2011

Bottom Hole Coordinates:	Vertical Hole
Ground Elevation (ft): 1898'	K.B. Elevation (ft): 1903'
Logged Interval (ft): 2750'	To: RTD Total Depth (ft): 3450'
Formation: Arbuckle	
Type of Drilling Fluid: Chemical Premix (Displaced)	

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

## OPERATOR:

Company: LARSON ENGINEERING, INC.  
Address: 562 West State Road 4  
Olmitz, KS 67564-8561

## DRILLING CONTRACTOR:

Shields Drilling Company, Rig #1

DP 4.5" XH; Kelly + DC: 281.15' (4 stands); Tool Joint 5.5" ; Bit: Reed S-52, 7-7/8", jets 13-13-14; rpm 60; Kelly Bushing 5' above ground level; Tom Engle (tool pusher).

## SURFACE CASING:

Set 8-5/8" casing at 216' (209', 20#)

## CIRCULATION SYSTEM:

Pump: Bethlehem 225, duplex, 6 x 14, 2" rod, 54 spm, SPP: 800 psi; Chemical, premix, displaced at 3600'; MudCo-Service Mud, Gary Schmidtberger.

## GAS DETECTION SYSTEM:

None.

## OPEN HOLE LOGS:

DN (PE), DI (SP), ML: 5" detail RTD-2600; 2" DI to surface casing; No Sonic Log; LogTech-Pioneer Wireline, Hays, KS, B. Becker, Log total depth (3449') was 1' short to rotary total depth (3450').

**DRILL STEM TEST #1:**

Zone: Lansing "B, C, D": Test Interval: 3074-3135' (61' anchor); Blow: weak incr 4" IFP, no RB; weak incr BOB 30 min FFP, 1/2" RB; Time Periods: 5-15-30-60; Recovery: 1' oil (100%), 248' OCMW (3% oil, 35% mud, 62% water, 75k/4k chlorides, Rw 0.088 at 82 F); Pressures: HP: 1561-1465; SIP: 579-593, FP: 24-50, 55-137, BHT: 95 F; dual packers, jars, joints, no collars, 469' weight pipe, Trilobite Testing, Inc., Dustin Rash.

**DRILL STEM TEST #2:**

Zone: Kans. City "J, K, L": Interval: 3233-3316 (83' anchor); Blow: weak incr 2" IFP, Time Periods: 5-15-30-60; Blow: weak incr 2" IFP, no RB; weak incr 6.5" FFP, no RB; Time Periods: 5-15-30-60; Recovery: 100' SOGCM (10% gas, 10% oil, 80% mud); Pressures: HP: 1651-1598; SIP: 1033-1061; FP: 22-29, 35-54; BHT: 94 F; dual packers, jars, joints, no collars, 469' weight pipe; Trilobite Testing, Inc., Dustin Rash.

**7AM DAILY ACTIVITY:**

04/08: MIRT, SPUD 4:45 pm  
 04/09: WOC 219'  
 04/10: Drilling 1059'  
 04/11: Drilling 1705'  
 04/12: Drilling 2485', call 4:30am 2400'  
 04/13: Drilling 3089'  
 04/14: CFS 3254'  
 04/15: RTD 3450'  
 04/15: Released 2:45 pm

**WELLSITE GEOLOGIST:**

Vern Schrag

ROP ROP (min/ft)	DST	Lithology	Porosity and Show	Depth	Geological Descriptions	TG, C1-C4 / REMARKS
				2700	AHHYDRITE 992 (+911) B/ANHY 1024 (+879)	REFERENCE WELL: MAST DRILLING CO., INC., DEINERT #1, NE NE SE SEC 23-11S-15W  GEO ON LOC ABOUT 2700' 04/12/2011
				2750	TOPEKA 2755 (-852)	

LS: LT-GRAY BRN; VF-XTAL; DENSE; PLATEY-BLOCKY; SLI FOS; NO APPARENT POROSITY; NO SHOWS.

LS: AS ABOVE;

LS: LT BRN, MOTTLED GRAY; VF-XTAL; FOS IN PART; V-TIGHT INT XTAL POR AT BEST; NO FLUOR; ONLY TRC STAIN (DRY); NO OIL SHOW; 2820.

LS: LT-BRN, MOTTLED DK GRAY IN PART; FOS; NO APPARENT POROSITY; NO SHOWS. 2830.

LS: LT-BRN, SLI MOTTLED GRAY IN PART; VF-XTAL; SLI FOS; MOSTLY DENSE; NO APPARENT POROSITY; NO SHOW, 2840.

LS: LT-DK GRAY-BRN, MOTTLED; VF-XTAL; INCLUDES DK GRAY CHERT; NO APPARENT POROSITY; NO FLUOR; NO SHOWS; TRC 2840, INCR 2850.

2800

2850

LS: LT-DK GRAYISH BRN, MOTTLED; VF-XTAL; TIGHT INT XTAL POROSITY; TRC W/STAIN (DRY); NO FLUOR; NO FREE OIL; NO ODOR; 2870.

LS: GRAYISH BRN; VF-XTAL; TRC FINE VUG POR W/STAIN (DRY, 1 PIECE/TRAY); NO FREE OIL, ODOR OR FLUOR; POSSIBLY FLOAT 2890, 2900.

SH: BLACK, CARBON, FEW CHIPS 2900.

LS: LT BRN, SLI MOTTLED GRAY; VF-XTAL; GRANULAR IN PART; SLI FOS; NO APPARENT POROSITY; NO SHOWS

2900

LS: LT BRN; VF XTAL; MOSTLY DENSE, PLATEY; TRC PIN PT POR & TIGHT INT XTAL POR W/ STAIN (DRY); NO OIL SHOW OR ODOR; 2920.

LS: LT BRN; VF-XTAL; TRC W/ VF VUG POROSITY; SPOTTED STAIN; NO OIL OR ODOR; 2930.

LS: LT-BRN; MIC-VF XTAL; CHALKY IN PART; TRC CHERT; TRC TIGHT INT XTAL POR W/STAIN (DRY); NO OIL OR ODOR; 1 CHIP/TRAY 2940, 2950;

SH: MOSTLY DK GRAY, ONLY TRC BLACK;

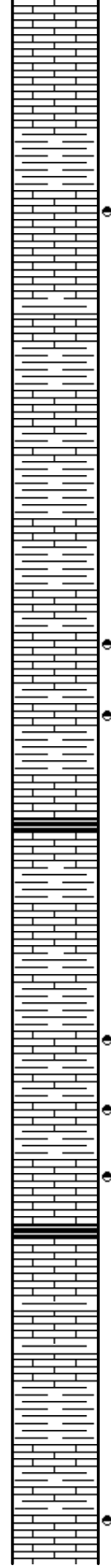
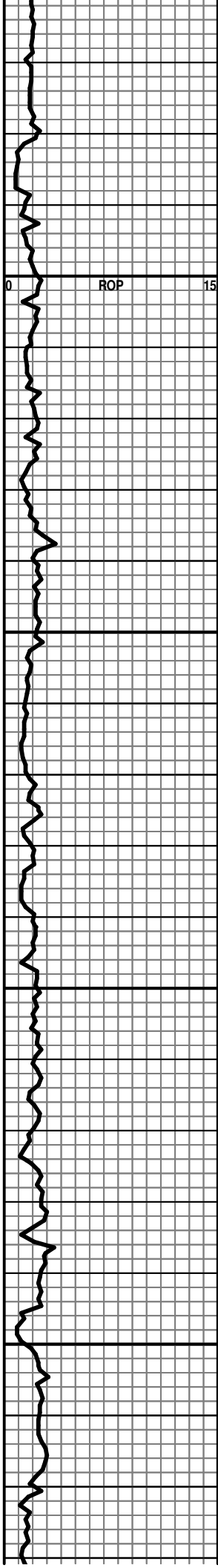
LS: LT BRN, GRAYISH BRN; MIC-VF XTAL; DENSE; ARGILL IN PART; NO APPARENT POROSITY; NO SHOWS;

2950

LS: LT-GRAYISH BRN; MIC-VF XTAL; MOSTLY DENSE; CHALKY IN PART; NO APPARENT POROSITY; NO SHOW;

LS: LT-BRN, MOTTLED DK GRAY IN PART; VF-XTAL; DENSE; NO APPARENT POROSITY; NO SHOWS;

LS: GRAYISH BRN; VF-XTAL; SLI FOS; F-MED VUG POROSITY; DULL FLUOR; TRC SPOTTED STAIN; NO OIL OR ODOR; 2990;



LS: LT-GRAY BRN; VF-XTAL; DENSE; PLATEY-BLOCKY; SLI FOS; NO APPARENT POROSITY; NO SHOWS.

LS: AS ABOVE;

LS: LT BRN, MOTTLED GRAY; VF-XTAL; FOS IN PART; V-TIGHT INT XTAL POR AT BEST; NO FLUOR; ONLY TRC STAIN (DRY); NO OIL SHOW; 2820.

LS: LT-BRN, MOTTLED DK GRAY IN PART; FOS; NO APPARENT POROSITY; NO SHOWS. 2830.

LS: LT-BRN, SLI MOTTLED GRAY IN PART; VF-XTAL; SLI FOS; MOSTLY DENSE; NO APPARENT POROSITY; NO SHOW, 2840.

LS: LT-DK GRAY-BRN, MOTTLED; VF-XTAL; INCLUDES DK GRAY CHERT; NO APPARENT POROSITY; NO FLUOR; NO SHOWS; TRC 2840, INCR 2850.

LS: LT-DK GRAYISH BRN, MOTTLED; VF-XTAL; TIGHT INT XTAL POROSITY; TRC W/STAIN (DRY); NO FLUOR; NO FREE OIL; NO ODOR; 2870.

LS: GRAYISH BRN; VF-XTAL; TRC FINE VUG POR W/STAIN (DRY, 1 PIECE/TRAY); NO FREE OIL, ODOR OR FLUOR; POSSIBLY FLOAT 2890, 2900.

SH: BLACK, CARBON, FEW CHIPS 2900.

LS: LT BRN, SLI MOTTLED GRAY; VF-XTAL; GRANULAR IN PART; SLI FOS; NO APPARENT POROSITY; NO SHOWS

LS: LT BRN; VF XTAL; MOSTLY DENSE, PLATEY; TRC PIN PT POR & TIGHT INT XTAL POR W/ STAIN (DRY); NO OIL SHOW OR ODOR; 2920.

LS: LT BRN; VF-XTAL; TRC W/ VF VUG POROSITY; SPOTTED STAIN; NO OIL OR ODOR; 2930.

LS: LT-BRN; MIC-VF XTAL; CHALKY IN PART; TRC CHERT; TRC TIGHT INT XTAL POR W/STAIN (DRY); NO OIL OR ODOR; 1 CHIP/TRAY 2940, 2950;

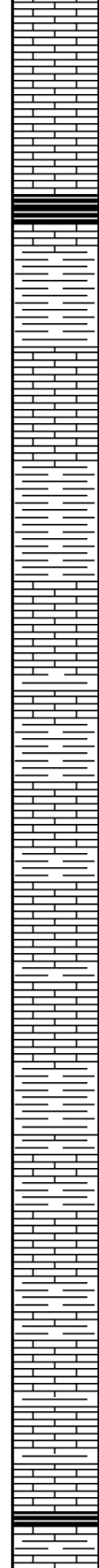
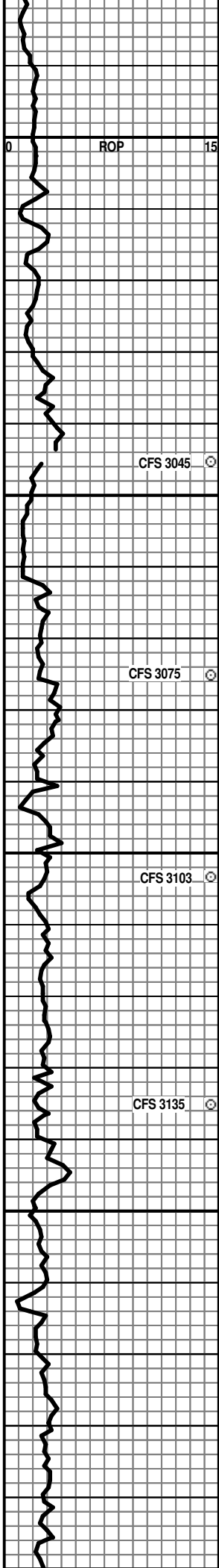
SH: MOSTLY DK GRAY, ONLY TRC BLACK;

LS: LT BRN, GRAYISH BRN; MIC-VF XTAL; DENSE; ARGILL IN PART; NO APPARENT POROSITY; NO SHOWS;

LS: LT-GRAYISH BRN; MIC-VF XTAL; MOSTLY DENSE; CHALKY IN PART; NO APPARENT POROSITY; NO SHOW;

LS: LT-BRN, MOTTLED DK GRAY IN PART; VF-XTAL; DENSE; NO APPARENT POROSITY; NO SHOWS;

LS: GRAYISH BRN; VF-XTAL; SLI FOS; F-MED VUG POROSITY; DULL FLUOR; TRC SPOTTED STAIN; NO OIL OR ODOR; 2990;



3000  
3050  
3100  
3150  
:00

LS: AS ABOVE;

LS: LT-BRN; MIC-VF XTAL; CHALKY IN PART; NO APPARENT POROSITY; NO SHOWS.

**HEEBNER 3008 (-1105)**  
SH: BLACK; CARBON; GOOD REP 3030 SAMP.  
LS: LT-BRN W/ DK BRN SPECKS; VF-XTAL; SOME W/ BLACK SH CONTACT; NO SHOWS;  
SH: GRAYS, GREEN; SOME SOFT GREEN MARL; TRC GREENISH SILTST;

**TORONTO 3029 (-1126)**  
LS: WHITE, LT BRN; VF-XTAL; MOSTLY DENSE; FEW CHIPS W/VUG POR & SPOTTED DK BRN STAIN (DRY), NO FREE OIL OR ODOR; ONLY EVEN YEL MINERAL FLUOR IN PART; TRC 3045, INCR TO < 1% 30 MIN;  
SH: GREEN, GRAY; SOFT, MARLY IN PART;

**LANSING 3062 (-1159)**  
LS: WHITE, LT BRN; VF-XTAL; GRANULAR; TRC TIGHT INT XTAL POR, EVEN YEL FLUOR; V-SLI SHOW OIL; NO ODOR; TRC VUG W/ MD BRN STAIN (DRY), <1% 30 MIN;  
LS: LT BRN; VF-XTAL; GRANULAR IN PART; NO APPARENT POROSITY; NO SHOWS.  
SH: GRAY; W/ LIME FOSSILS (CRINOIDS);  
LS: LT-BRN; VF-XTAL; FEW PIECES VUG POR & TRC OOM POR W/ MED BRN STAIN; NO FREE OIL; NO ODOR; ONLY DULL FLUOR; 3103-30 MIN

**CIRC 75 MIN BEFORE T.O.H.**

**DST #1: 3074-3135: WEAK BLOW 4" IFP, BOB 30 MIN FFP; WEAK RB; 5-15-30-60; 1' OIL, 248' OCMW; SIP: 579-593; FP: 24-50, 55-137.**

**CIRC 30 MIN BEFORE DRILLING AHEAD.**

LS: LT-BRN; VF-XTAL; SCATTERED VUGULAR POROSITY W/ MED BRN STAIN & BRIGHT YEL FLUOR; CRUSH SHOW LT BRN OIL; FAINT ODOR; 3130, INCR 3135 TO 10%;

LS: WHITE, LT BRN; MIC-VF XTAL; DENSE TO CHALKY IN PART; POOR APPARENT POROSITY; DULL FLUOR; NO SHOWS.

SH: GRAY, MAROON;

LS: LT-GRAY; MIC-VF XTAL; DENSE; TRC MAROON SH CONTACT; NO APPARENT POROSITY; NO SHOWS.

LS: WHITE, LT GRAY; MIC-VF XTAL; SLI FOS; TRC CHERT; SCAT VUG POR; NO SHOWS;

SH: GRAYS;

LS: WHITE, LT GRAY; MIC-VF XTAL; MINOR CHERT; CHALKY IN PART; NO APPARENT POROSITY; NO SHOWS.

LS: GRAY; MIC-VF XTAL; FOS; SHALEY; NO APPARENT POROSITY; NO SHOWS;

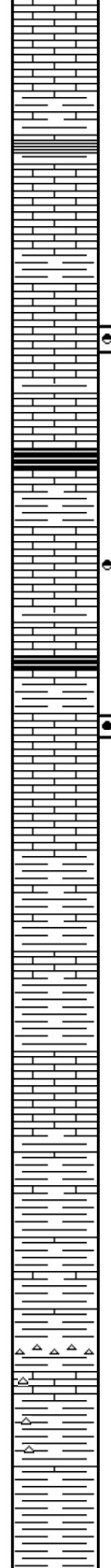
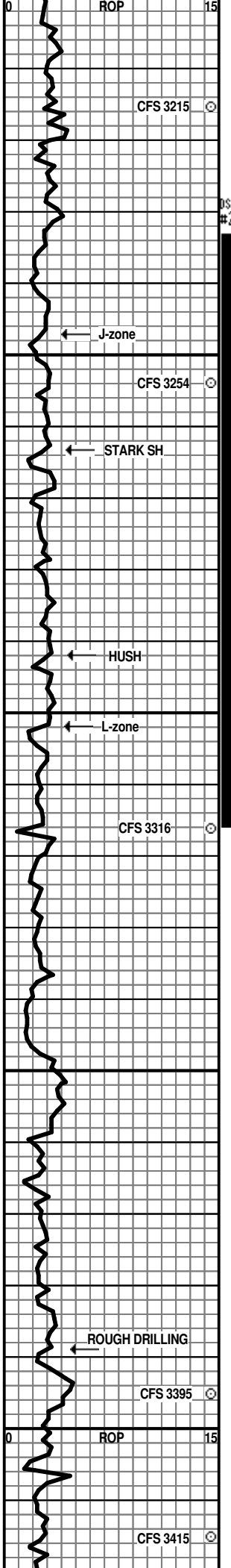
LS: WHITE, LT GRAY; MIC-VF XTAL; CHALKY IN PART; NO APPARENT POROSITY; NO SHOWS;

**MUNCIE CREEK 3191 (-1288)**  
SH: BLACK; CARBON; FEW PIECES 3215 STOP.  
LS: MED GRAYISH BRN; VF-XTAL; SLI FOS; NO APPARENT

SHORT-TRIP 15 STANDS AT 3045, CIRC 30 MIN BEFORE DRILLING AHEAD;

STRAP: 3129.02, BOARD: 3130.69, STRAP SHORT 1.67'

CIRC 30 MIN BEFORE DRILLING AHEAD.



3250  
3300  
3350  
3400

POROSITY; NO SHOWS;  
SH: TRC BLACK; GRAY, MAROON, GREENISH; MARLY; 60 MIN;  
SH: DARK GRAY;

LS: WHITE, LT GRAY; MIC-VF XTAL; CHALKY IN PART; TRC  
CHERT; SPOTTED YELLOW FLUOR INDICATES ISOLATED FINE  
VUGS W/ SPOTTED STAIN; NO OIL OR ODOR; ONLY FEW PIECES;  
3250;

LS: WHITE, LT GRAYISH BRN; MIC-VF XTAL; DENSE; SLI  
CHALKY IN PART; NO APPARENT POROSITY; NO SHOWS;

LS: MED GRAYISH BRN; VF-XTAL; GRANULAR; TIGHT INT  
GRANULAR POROSITY; EVEN YELLOW FLUOR; SPOTTED STAIN;  
NO OIL OR ODOR; 30 MIN; SLI INCR TO <1% 60 MIN. EVEN STAIN  
(DRY);

**STARK 3263 (-1360)**

SH: BLACK; CARBON; FEW PIECES 3280.  
LS: GRAYISH BRN, SLI MOTTLED; VF-XTAL; DENSE; NO  
APPARENT POROSITY; NO SHOWS.  
SH: GRAY, GREEN

LS: LT GRAYISH BRN, WHITE; MIC-VF XTAL; MOSTLY DENSE;  
SLI CHALKY IN PART; SLI GRANULAR IN PART; TRC VUG  
POROSITY W/SPOTTED STAIN; NO OIL OR ODOR; 3290.

**HUSHPUCKNEY 3292 (-1389)**

SH: BLACK; CARBON;  
LS: LT-BRN, LT GRAY; VF-XTAL; TRC VERY FINELY OOMOLDIC  
W/ MED BRN STAIN; V-SLI SHOW OIL; NO ODOR; 3316-30 MIN.

LS: LT GRAY, WHITE; MIC -VF XTAL; DENSE TO CHALKY IN  
PART; NO APPARENT POROSITY; NO SHOWS.

**B/ KANS. CITY 3320 (-1417)**

SH: GRAY; PYRITIC; INCLUDES LIME SHELLS & NACREUM;  
SOFT & MARLY IN PART;  
SH: MOSTLY YELLOW, MOTTLED BRICK RED; MARLY; MIXED W/  
NUMEROUS WHITE LS WITH MUCH RED & YEL SH CONTACT;  
CONSPICIOUS; DISTINCT; GOOD REP 3350 SAMPLE;

SH: INCR BRICK RED SH & WHITE, CHALKY LS W/ RED SH  
CONTACTS; 3360.

LS: WHITE, GRAY; MIC-VF XTAL; GRAN IN PART; ROUGH;  
CONTACTING RED SHALE; SHALEY IN PART; NO APPARENT  
POROSITY; NO SHOWS;

SH: RED; CHALKY; MARLY; W/WEATHERED LS & TRC  
VARI-COLOR CHERT;

SH: AS ABOVE;

SH: YELLOW;  
CHERT: VARI-COLOR; ANGULAR; OPAQ; MIXED WITH WHITE  
LS; NO VISIBLE POROSITY; NO SHOWS;

**SIMPSON SH 3397 (-1494)**

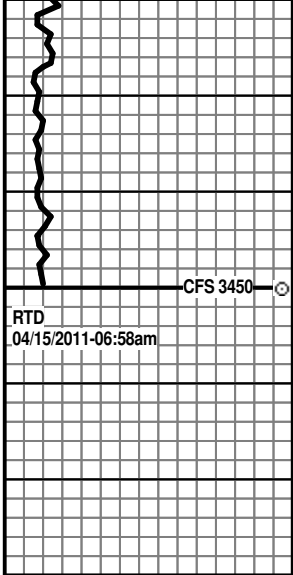
SH: RED & GREEN, MOTTLED IN PART; BLOCKY; STARTS  
3415-30 MIN.

SH: AS ABOVE;

CIRC 60 MIN BEFORE T.O.H.; PULLED TIGHT; SHORT  
TRIP; CIRC 60 MIN BEFORE T.O.H.

DST #2: 3233-3316: WEAK INCR 2" IFP; 5-15-30-60:  
100' SOGCM; SIP: 1033-1061; FP: 22-29, 35-54

CIRC 30 MIN BEFORE DRILLING.



3450

**ARBUCKLE 3427 (-1524)**  
DOLOMITE: LT-BRN; F-M XTAL; HARD; POOR-FAIR INT XTAL AND SCATTERED FINE VUG POR, PROB REMNANT OOM; SCATTERED VUGS EXHIBIT PIN-PT ASPHALTIC STAIN; NO ODOR, NO FREE OIL; ONLY VERY DULL MINERAL FLUOR; STARTS 3450 STOP SAMPLE. INCR CIRC SAMPLES;  
  
DOL: AS ABOVE;  
  
ROTARY TOTAL DEPTH 3450 (-1547)

CIRC 90 MIN AT RTD BEFORE T.O.H.  
LOT-TECH LTD 3449.

# ALLIED CEMENTING CO., LLC. 036470

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:  
Russell Ks.

DATE <u>4-9-2011</u>	SEC. <u>23</u>	TWP. <u>11 S</u>	RANGE <u>15 W</u>	CALLED OUT	ON LOCATION	JOB START <u>2:30 AM</u>	JOB FINISH <u>3:00 AM</u>
LEASE <u>MARTHA UNIT</u>		WELL # <u>1-23</u>		LOCATION <u>Gorham Ks. 1E 10 1/2 N 1/2 E</u>		COUNTY <u>Russell</u>	STATE <u>KANSAS</u>
OLD OR <input checked="" type="radio"/> NEW (Circle one)				<u>2 N 1/2 E 1/2 N INTO</u>			

CONTRACTOR SHIELDS D&G. Rig #1

TYPE OF JOB Cement SURFACE

HOLE SIZE 12 1/4 T.D. 219'

CASING SIZE 8 5/8 New DEPTH ~~200~~ 216

TUBING SIZE # CSG DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX 250 # MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15'

PERFS.

DISPLACEMENT 13' / BBL

OWNER

CEMENT AMOUNT ORDERED 150 SX Comm.

2% Gel

3% CC

COMMON	<u>150</u>	@	<u>16.25</u>	<u>2437.50</u>
POZMIX		@		
GEL	<u>3</u>	@	<u>21.25</u>	<u>63.75</u>
CHLORIDE	<u>5</u>	@	<u>58.20</u>	<u>291.00</u>
ASC		@		
		@		
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>158</u>	@	<u>2.25</u>	<u>355.50</u>
MILEAGE	<u>11/16</u>			<u>260.70</u>
TOTAL				<u>3408.45</u>

REMARKS:

Ran 5 JTS USED 20 # 8 5/8 CSG,  
Set @ 216 Cement w/  
150 SX Comm 2+3. Release Plug  
& Dis-PLACE BBL H2O. Shut  
IN @ 250 # PST.  
Cement DID Circulate  
TO SURFACE.  
THANK'S

SERVICE

DEPTH OF JOB				
PUMP TRUCK CHARGE				<u>1125.00</u>
EXTRA FOOTAGE		@		
MILEAGE	<u>30</u>	@	<u>7.00</u>	<u>210.00</u>
MANIFOLD		@		
		@		
	<u>LUN 30</u>	@	<u>4.00</u>	<u>120.00</u>
TOTAL				<u>1455.00</u>

CHARGE TO: LARSON Operating Company

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

<u>8 5/8 WOODEN WIPER PLUG</u>	<u>79.00</u>
	@
	@
	@
	@
	@
TOTAL <u>79.00</u>	

To Allied Cementing Co., LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES 4708.45

DISCOUNT 20% IF PAID IN 30 DAYS

PRINTED NAME Thomas Engel

SIGNATURE (Thomas) Engel





PO BOX 31 Russell, KS 67665

# INVOICE

Invoice Number: 126923

Invoice Date: Apr 16, 2011

Page: 1

*Drc*

Voice: (785) 483-3887

Fax: (785) 483-5566

<b>Bill To:</b>
Larson Engineering, Inc. 562 W. State RD #4 Olmits, KS 67564-8561

Federal Tax I.D.#: 20-5975804

Customer ID	Well Name# or Customer P.O.	Payment Terms	
Lars	Martha Unit #1-23	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS2-03	Russell	Apr 16, 2011	5/16/11

Quantity	Item	Description	Unit Price	Amount
135.00	MAT	Class A Common	16.25	2,193.75
90.00	MAT	Pozmix	8.50	765.00
8.00	MAT	Gel	21.25	170.00
56.00	MAT	Flo Seal	2.70	151.20
233.00	SER	Handling	2.25	524.25
15.00	SER	Mileage 233 sx @ .11 per sk per mi	25.63	384.45
1.00	SER	Plug to Abandon	1,250.00	1,250.00
30.00	SER	Pump truck Mileage	7.00	210.00
30.00	SER	Light Vehicle Mileage	4.00	120.00
1.00	EQP	4.5 Dry Hole Plug	64.00	64.00
1.00	CEMENTER	Shane Poche		
1.00	CEMENTER	Heath Long		
1.00	OPER ASSIST	Tony Pfannenstiel		
1.00	OPER ASSIST	Nick Williams		

*9264 cost to plug*

PAID MAY 11 2011  
19324

Subtotal	5,832.65
Sales Tax	484.11
Total Invoice Amount	6,316.76
Payment/Credit Applied	
<b>TOTAL</b>	<b>6,316.76</b>

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF

\$ 1166.53

ONLY IF PAID ON OR BEFORE  
May 11, 2011

*1166.53*

*5150.23*



# ALLIED CEMENTING CO., LLC. 039589

Federal Tax I.D.# 20-5975804

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

SERVICE POINT  
Russell

DATE <u>4/16/11</u>	SEC. <u>23</u>	TWP. <u>11</u>	RANGE <u>15</u>	CALLED OUT	ON LOCATION	JOB START <u>12:00A</u>	JOB FINISH <u>1:00A</u>
LEASE <u>Martha</u>		WELL # <u>1-23</u>	LOCATION <u>Gorham 1E GN 3/4 E</u>		COUNTY <u>Russell</u>	STATE <u>K</u>	
<input checked="" type="radio"/> OLD OR NEW (Circle one)			<u>3N 1/2 W Ninto</u>				

CONTRACTOR Shields Drilling Rig #1 OWNER \_\_\_\_\_

TYPE OF JOB PTA

HOLE SIZE 7 7/8 T.D. 3450

CASING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE 4 1/2 DEPTH 3407

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. \_\_\_\_\_

PERFS. \_\_\_\_\_

DISPLACEMENT \_\_\_\_\_

CEMENT AMOUNT ORDERED 225 60% 42601

1/4 # Flo Seal

COMMON	<u>135</u>	@	<u>16.25</u>	<u>2193.75</u>
POZMIX	<u>90</u>	@	<u>8.50</u>	<u>765.00</u>
GEL	<u>8</u>	@	<u>21.25</u>	<u>170.00</u>
CHLORIDE		@		
ASC		@		

**EQUIPMENT**

PUMP TRUCK CEMENTER Shane, Heath

# 409 HELPER Tony

BULK TRUCK DRIVER Nick

# 378 DRIVER \_\_\_\_\_

BULK TRUCK DRIVER \_\_\_\_\_

# \_\_\_\_\_ DRIVER \_\_\_\_\_

<u>Flo Seal 56 #</u>	@	<u>2.70</u>	<u>151.20</u>
	@		
	@		
	@		
	@		
	@		

HANDLING 233 @ 2.25 524.25

MILEAGE 11.56/mile 384.45

TOTAL 4188.65

**REMARKS:**

3407' 25 sks

1000' 25 sks

600' 120 sks

10' 10 sks

Rat Hole 30 sks

Mouse Hole 15 sks

**SERVICE**

DEPTH OF JOB \_\_\_\_\_

PUMP TRUCK CHARGE \_\_\_\_\_ 1250.00

EXTRA FOOTAGE @ \_\_\_\_\_

MILEAGE 30 @ 7.00 210.00

MANIFOLD @ \_\_\_\_\_

LUM 30 @ 4.00 120.00

TOTAL 1580.00

CHARGE TO: Carson Operating

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**PLUG & FLOAT EQUIPMENT**

<u>Dry Hole Plug</u>	@		
	@		<u>64.00</u>
	@		
	@		

TOTAL 64.00

To Allied Cementing Co., LLC,

You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES \_\_\_\_\_

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

PRINTED NAME Thomas Engel

SIGNATURE Thomas Engel

Thanks!

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Ward Loyd, Commissioner  
Thomas E. Wright, Commissioner

Sam Brownback, Governor

August 05, 2011

Thomas Larson  
Larson Engineering, Inc. dba Larson Operating  
Company  
562 W STATE RD 4  
OLMITZ, KS 67564-8561

Re: ACO1  
API 15-167-23694-00-00  
Martha Unit 1-23  
SE/4 Sec.23-11S-15W  
Russell County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Thomas Larson