



**MIDWEST SURVEYS**  
 LOGGING - PERFORATING - CONSULTING SERVICES  
 P.O. Box 68, Osawatomie, KS 66064  
 913 / 755 - 2128

**GAMMA RAY / NEUTRON / CCL**

File No. \_\_\_\_\_

Company **A&L Energy Operations, LLC**

Well **Thoren No. - 121**

Field **Little Wakarusa**

County **Douglas** State **Kansas**

Location **695' FNL & 1695' FEL**

**NW-SE-NW-NE**

Other Services **Perforate**

Sec. **6** Typ. **14s** Eye **22e** Elevation **N/A**

Perforant Depth **GL** K.B. **NA**

Log Measured From **GL** D.F. **NA**

Drilling Measured From **GL** G.L. **NA**

Date **08-16-2013**

Run Number **One**

Depth Drier **742.0**

Depth Logger **729.7**

Bottom Logged Interval **728.7**

Top Log Interval **20.0**

Fluid Level **Full**

Type Fluid **Water**

Density / Viscosity **NA**

Salinity - PPM Cl **NA**

Max. Recorded Temp **NA**

Estimated Cement Top **0.0**

Equipment No. **107** Location **Osawatomie**

Recorded By **Steve Wandsch**

Witnessed By **Jerald Hoem**

BORE-HOLE RECORD				CASING RECORD			
RUN	BIT	FROM	TO	SIZE	WGT.	FROM	TO
One	9.875"	0.0	40.0	7.00"	17.0#	0.0	40.0
Two	6.125"	40.0	742.0	2.875"	6.5#	0.0	733.75

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

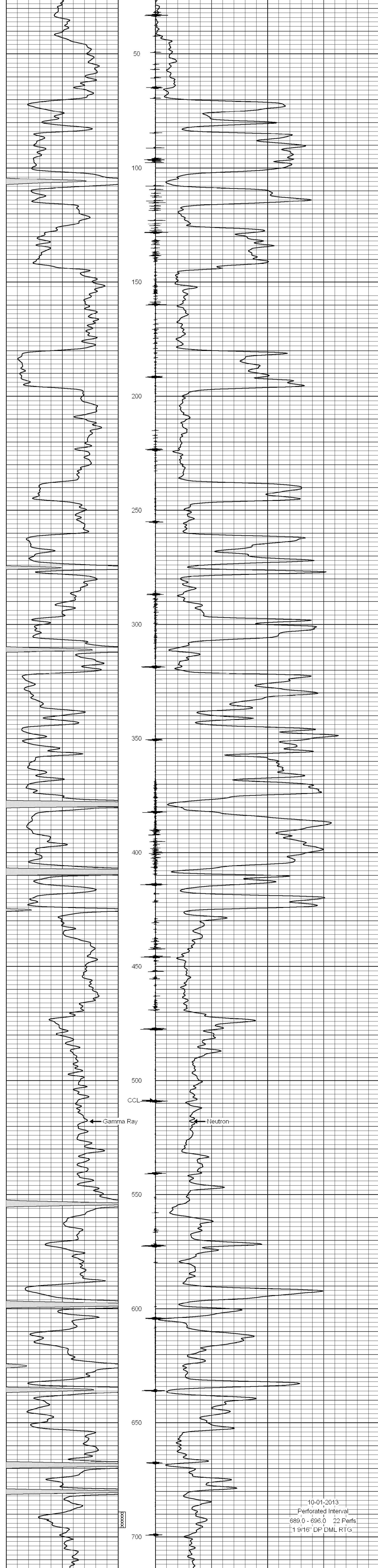
Comments

Drilling Contractor :  
 McGown Drilling, Inc  
 Rig - 2

The well has a bent joint of pipe could not get a 2" perf gun to go down.  
 Shot a 1 9/16" perf gun.

Database File: thoren121.db  
 Dataset Pathname: pass1  
 Presentation Format: gr-n-ccl  
 Dataset Creation: Fri Aug 16 15:07:01 2013 by Log SCH 111116  
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (cps)	150	-1 CCL 1	10	Neutron (cps)	2100
150	Gamma Ray (cps)	300				



10-01-2013  
 Perforated Interval  
 689.0 - 696.0 22 Perfs  
 1 9/16" DP DML RTG

0	Gamma Ray (cps)	150	-1 CCL 1	10	Neutron (cps)	2100
150	Gamma Ray (cps)	300				