

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

**Well Name:** Willie Z-1  
**API:** 15-109-21460  
**Location:** SW-NE-SE-NE of Section 36-11s-33w - Logan County, KS  
**License Number:** KCC Licence#: 34917  
**Region:** Loganberry North  
**Spud Date:** 4/26/2016  
**Drilling Completed:** 5/04/2016  
**Surface Coordinates:** 1870' FNL & 535' FEL  
**of Section 36-11s-33w**  
**Bottom Hole:** Same as Surface Coordinates  
**Coordinates:**  
**Ground Elevation (ft):** 3080' **K.B. Elevation (ft):** 3090'  
**Logged Interval (ft):** 200' **To:** 4734' **Total Depth (ft):** 4734'  
**Formation:** Mississippian @ Total Depth  
**Type of Drilling Fluid:** Kansas Drilling Technologies (Chemical Drispac)  
 Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

**OPERATOR**

**Company:** Bickle Energies, LLC  
**Address:** Attn: Matt Bickle  
 P.O. BOX 816  
 HAYS, KS 67601

**GEOLOGIST**

**Name:** Garett Dinkel, Eli Felts, Consulting Petroleum Geologists, Cole Robben, Geo-Tech  
**Company:** PETERRA Energy Services  
**Address:** 110 South Main, Suite #510  
 Wichita, KS 67202  
**Phone:** (316) 269-2015

**Drilling Report**

Southwind Rig 8 MIRU 4/26/2016

Ran (6) jts. of new 23# 8.625" casing, tallied @ 230.67" Set @ 242.67"  
 Cemented w/ 170 sxs of 80/20 3% cc 2% gel. cement circulated to surface. Quality Cement ticket # 1958. Plug down @ 11:30 pm, 4/26/16

- 4/27: Drilling, 242' - 1963'
- 4/28: Drilling, 1963' - 3035'
- 4/29: Drilling, 3035' - 3608'
- 4/30: Drilling, 3608' - 4060'
- 5/01: Drilling, 4060' - 4170' & DST #1
- 5/02: Drilling, 4170' - 4540'
- 5/03: Drilling, 4540' - 4730' RTD
- 5/04: Logging, Plug well, LDDP
- 5/05: Tear Down

**Comments**

After evaluating the Willie Z-1 rock samples, drill stem testing the Lansing "E" zone, and evaluation of the electronic logs, favorable results were not acquired. It was decided by all parties involved to plug and abandon the test.

Peterrally Submitted,

PETERRA Energy Services  
 Eli J. Felts & Garett Dinkel, Petroleum Geologists

**ROCK TYPES**

- Anhy
- Coal
- Lmst
- Shcol
- Bent
- Congl
- Meta
- Shgy
- Brec
- Dol
- Mrst
- Shst
- Cht
- Gyp
- Salt
- Ss
- Clyst
- Igne
- Shale
- Till

**DRILL STEM TEST REPORT**

Bickle Energies, LLC 36 11s 33w Logan KS  
 Willie Z #1  
 Job Ticket #6463 DST# 1  
 ATTN: Carol Diney/ Eli Felts Test Start: 2016.05.01 @ 17:04:00

Serial #: 8365  
 Ins. size: 4141.00 ft (KB)  
 Capacity: 6000.00 psig  
 Press @ Run Depth: 709.96 psig @ 2016.05.02  
 Lost Casing: 2016.05.02  
 Start Time: 17:04:05 End Time: 03:08:30  
 Time On Bit: 2016.05.01 @ 19:19:16  
 Time Off Bit: 2016.05.02 @ 02:23:30

**GENERAL INFORMATION:**

Formation: LKC E  
 Deviated: No Whalstock ft (KB)  
 Time Tool Opened: 21:54:00  
 Test Type: Conventional Bottom Hole (Hole)  
 Tester: Bradley Walter  
 Unit No: 69  
 Interval: 4140.00 ft (KB) To 4165.00 ft (KB) (TVD)  
 Reference Elevations: 3090.00 ft (KB)  
 Total Depth: 4165.00 ft (KB) (TVD)  
 Hole Diameter: 7.68 inches Hole Condition: Good  
 KB to GRIPC: 10.00 ft

**TEST COMMENT:** F: 808 @ 3 min.  
 SB No return  
 FC: 808 @ 4 min.  
 FSI No return

**PRESSURE SUMMARY**

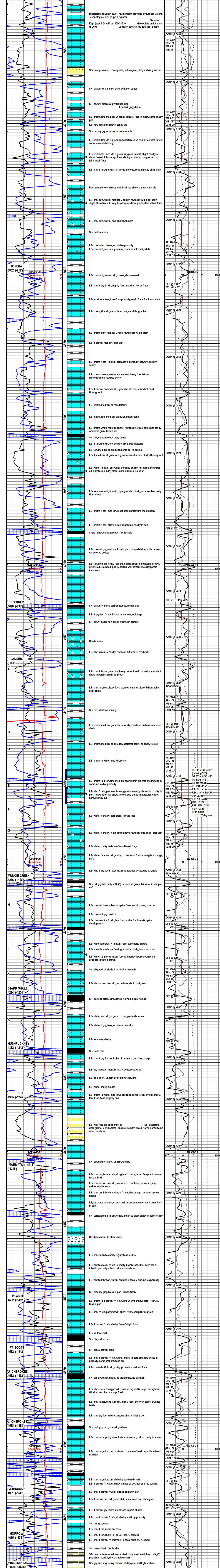
Time (Min)	Pressure (psig)	Temp (deg F)	Annotation
0	2030.69	105.52	Initial Hydro-static
1	78.04	105.02	Open to Flow (1)
34	432.05	123.16	Shut-in(1)
17	1216.66	121.40	End Shut-in(1)
76	452.68	120.93	Open to Flow (2)
107	709.96	122.90	Shut-in(2)
155	1214.43	121.74	End Shut-in(2)
157	1598.16	120.59	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
1480.00	smow sm95w (oil spots on top of in tool)	20.76

**Gas Rates**

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



RTD 4730' (-1640')  
 LTD 4734' (-1644')