

# CLIFF OTTAWAY

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## GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY <u>PIONEER RESOURCES</u> LEASE <u>FOUNDATION No 1</u> FIELD _____ LOCATION <u>W/2 SE NE NE</u> SEC <u>3</u> TWSP <u>5s</u> RGE <u>18W</u> COUNTY <u>PHILLIPS</u> STATE <u>KANSAS</u>	ELEVATIONS KB <u>1913'</u> DF <u>1911'</u> GL <u>1905'</u> Measurements Are All From <u>K.B.</u>
CONTRACTOR <u>DISCOVERY DRILLING #1</u> SPUD <u>4-26-12</u> COMP <u>5-1-12</u> RTD <u>3400'</u> LTD <u>3400'</u> MUD UP <u>2800'</u> TYPE MUD <u>CHEMICAL</u>	CASING SURFACE <u>898 @ 222' w/ 150'</u> PRODUCTION <u>43 @ 3395' w/</u> ELECTRICAL SURVEYS <u>CDL/CNL, OIL</u> <u>SONIC/MEL</u>

### FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION		
				A	B	C
<u>ANHYDRITE</u>	<u>1343</u>	<u>1342</u>	<u>+571</u>	<u>+570</u>	<u>+559</u>	
<u>TOPEKA</u>	<u>2850</u>	<u>2850</u>	<u>-937</u>	<u>-935</u>	<u>-937</u>	
<u>HEEBNER</u>	<u>3051</u>	<u>3050</u>	<u>-1137</u>	<u>-1138</u>	<u>-1138</u>	
<u>TORONTO</u>	<u>3078</u>	<u>3080</u>	<u>-1167</u>	<u>-1162</u>		
<u>LANSING-KC</u>	<u>3093</u>	<u>3093</u>	<u>-1180</u>	<u>-1179</u>	<u>-1181</u>	
<u>BASE-K.C.</u>	<u>3321</u>	<u>3320</u>	<u>-1407</u>	<u>-1405</u>	<u>-1405</u>	
<u>R.T.D.</u>		<u>3400</u>	<u>-1487</u>	<u>-1600</u>	<u>-1448</u>	
<u>L.T.D.</u>		<u>3400</u>	<u>-1487</u>			

### REFERENCE WELLS FOR STRUCTURE

- A OZARK ENTERPRISES ARMSTRONG #2 C N/2 NE 3-6
- B OZARK ENTERPRISES ARMSTRONG #1 NW-NE NW
- C 3-5-18