

# CLIFF OTTAWAY

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## GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY <u>PIONEER RESOURCES</u> LEASE <u>FOUNDATION No 2</u> FIELD _____ LOCATION <u>335' FNL &amp; 2310' FEL</u> SEC <u>3</u> TWSP <u>5</u> RGE <u>18</u> COUNTY <u>PHILLIPS</u> STATE <u>KANSAS</u>	ELEVATIONS KB <u>1873'</u> DF <u>1871'</u> GL <u>1865'</u> Measurements Are All From <u>K.B.</u>
CONTRACTOR <u>DISCOVERY DRG RIG 2</u> SPUD <u>11-23-12</u> COMP <u>11-28-12</u> RTD <u>3340'</u> LTD <u>3342'</u> MUD UP <u>2700'</u> TYPE MUD <u>CHEMICAL</u>	CASING SURFACE <u>8" @ 220 w/150</u> PRODUCTION <u>D+A</u> ELECTRICAL SURVEYS <u>CDL/CNL</u> <u>DIL</u>

### FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION		
				A	B	C
ANHYDRITE	1328	1330	+543	+570	+559	
TOPEKA	2807	2810	-937	-935	-937	
HEEBNER	3010	3012	-1139	-1138	-1138	
TORONTO	3038	3040	-1167	-1162		
LANSING-KC.	3052	3054	-1181	-1179	-1181	
BASE-KC.	3277	3278	-1405	-1405	-1405	
RTD.		3340	-1467	-1471	-1417	
L.T.D.		3342	-1469			

### REFERENCE WELLS FOR STRUCTURE

- A OZARK ENTERPRISES ARMSTRONG No 2 C-No NE 3-5
- B OZARK ENTERPRISES ARMSTRONG No 1 NW-NE-NW 3-5
- C \_\_\_\_\_