

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

<p>COMPANY: <u>Range Oil Co., Inc.</u></p> <p>LEASE: <u>Madden 'A' Unit #2</u></p> <p>FIELD: <u>250' FUL + 270' FUL</u></p> <p>LOCATION: <u>31 TWP 19S R6E 6E</u></p> <p>SIC: <u>131</u> STATE: <u>KS</u></p> <p>COUNTY: <u>Cherokee</u></p> <p>CONTRACTOR: <u>C & G Drilling Co., Rig #1</u></p> <p>SPUD: <u>4-13-15</u> COMP: <u>4-7-15</u></p> <p>RTD: <u>2280'</u> LTD: <u>2278'</u></p> <p>MUD UP: <u>1500'</u> TYPE MUD: <u>Clay</u></p>	<p>ELEVATIONS</p> <p>KB: <u>1450'</u></p> <p>DF: <u>1453'</u></p> <p>GL: <u>1453'</u></p> <p>Measurements are All From <u>KB</u></p> <p>CONSIDERING <u>Production casing was set to further evaluate Viola.</u></p> <p>PRODUCTION LOG: <u>2278' / 2280'</u></p> <p>ELECTRICAL SURVEYS: <u>500' Micro</u></p>
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SAMPLES SAVED FROM: <u>1580</u>	TO: <u>TD</u>
DRILLING TIME KEPT FROM: <u>1520</u>	TO: <u>TD</u>
SAMPLES EXAMINED FROM: <u>1580</u>	TO: <u>TD</u>
GEOLOGICAL SUPERVISION FROM: <u>1580</u>	TO: <u>TD</u>

GEOLOGIST ON WELL: Ken Wallace

FORMATION TOPS: _____ LOG _____ SAMPLES _____

L. (1942-1943)	(1942-1943)	(1942-1943)
B/KC (1943-1944)	(1943-1944)	(1943-1944)
Cherokee Sh. (1944-1945)	(1944-1945)	(1944-1945)
Cherokee Sd. (1945-1946)	(1945-1946)	(1945-1946)
Viola (1946-1947)	(1946-1947)	(1946-1947)
Stark Sh. (1947-1948)	(1947-1948)	(1947-1948)
Cherokee Sd. (1948-1949)	(1948-1949)	(1948-1949)
Viola (1949-1950)	(1949-1950)	(1949-1950)
LTD (1950-1951)	(1950-1951)	(1950-1951)

REMARKS: Production casing was set to further evaluate Viola.

Ken Wallace

4-11-15 MIST
 4-13-15 10am started drilling surface hole; 529'-1/4"
 4-14-15 7am - drilling @ 1150', set surface casing at 205'
 4-15-15 9:40am - drilling at 1949'; @ 1149 ± 1490'
 4-16-15 8 am - PTD 2179'; Ken DST #1
 4-17-15 10:30am - RTD 2280'; Ken e-logs & DST #2 set 5 1/2" casing @ 2278'. PD @ 10:21 am.

LEGEND

Anhydrite	Salt	Sandstone	Shale	Carb sh	Limestone	Ool. Lime	Chert	Dolomite

SCALE " = 100'

