

# GEOLOGIST'S REPORT

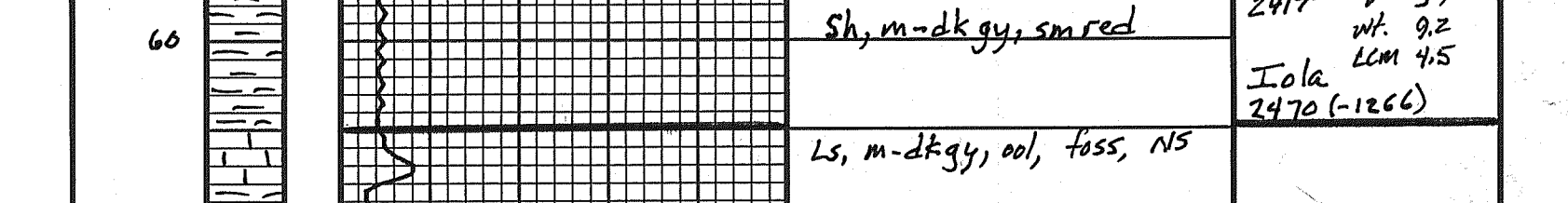
DRILLING TIME AND SAMPLE LOG

COMPANY	Range Oil Co., Inc.	ELEVATIONS	
LEASE	Meadows B #7	KB	1201'
FIELD		DF	
LOCATION	150' ENL & 1750' FWL, NW 1/4	CI	1195'
SEC	22	TMP	33
ROF	4E	MEASUREMENTS ARE ALL	
COUNTY	Cowley	STATE	KS
CONTRACTOR	C&A Drilling, Inc.	CRSING	
SPUD	12-9-14	COMP	12-15-14
RTD	3515'	LTD	3518'
MUD UP	2400'	TYPE MUD	Chem.
SAMPLES SAVED FROM	2400'	TO	RTD
DRILLING TIME KEPT FROM	2400'	TO	RTD
SAMPLES EXAMINED FROM	2400'	TO	RTD
GEOLOGICAL SUPERVISION FROM	2400'	TO	RTD
GEOLOGIST ON WELL	Ken Wallace		

REMARKS: Gas detector on location from 2400' to RTD. Production casing set to further evaluate Miss! Ken Wallace

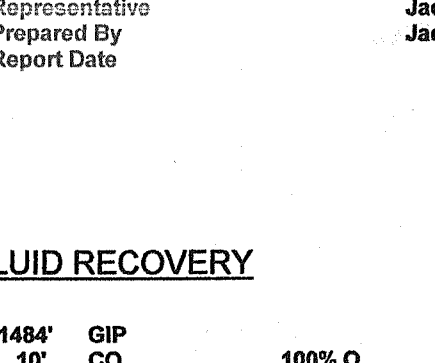
12-8-14 MFRU  
 12-9-14 8AM - prep to drill  
 12-10-14 7AM - Drilling @ 535' 1/4 @ 212' & 527'  
 12-11-14 8AM - Drilling @ 2417, making Bit Trip: 349', A 1630' 2417'  
 12-12-14 8AM - Drilling @ 2417, 1028' 2449'  
 12-13-14 8AM - Drilling @ 2417, Running DST #1  
 12-14-14 7:45AM - Drilling @ 2417  
 12-15-14 8AM - RTD 3515', Rear Pumper 2-logs  
 12-16-14 7AM - RTD 3515', set 5 1/2" casing @ 3509'

## LEGEND



SCALE " = 100'

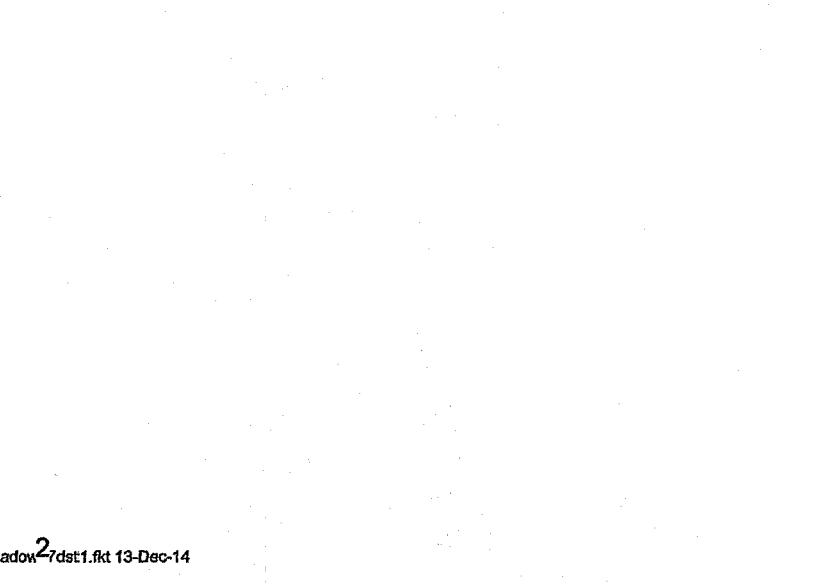
DEPTH	DRILLING TIME - Minutes Per Foot Rate of Penetration Decreases	SAMPLE DESCRIPTIONS	REMARKS
2450		Sh, m-dk gy, sm red	Twister Mud 2417' v 34 wt. 9.2 lcm 4.5 Iola 2470 (-1266)
60		Ls, m-dk gy, ool, foss, NS	
80		sh, gy	Layton 2486 (-1282)
2500		SS, lt gy, fgd, well sorted, p. cent (calc), s&p tex, NS	
20		AA, more fine gr	
40		sh, gy, sm red	
60		sh, gy, slty, mica, laminte	
80		ss/slat, gy, laminte, org/ mica	
2600		SS, lt gy, f-mgd, frnd, p. cent, well cent (calc), s&p tex, NS	
20		sh, dk gy	Kansas City 2624 (-1420)
40		Ls, mgy-brn, mxln, ool, foss, NS	
60		Ls, lt gy-tan, fxl, sl ool/ foss, cky, NS	
80		SS, lt gy, fgd, nsrtld/frnd, well cent (calc), NS	
2700		AA, more fine gr	
20		Ls, tan-brn, f-mxln, sl ool, foss, cky, NS	
40		Ls, tan-offwh, fxl, foss v cky, dtg, NS	
60		Ls, dk gy, fxl, dse, cky, argl, sl dtg, NS	
80		sh, dk gy, sm red/brn	
2800		Ls, dk gy, ool, v foss, NS	
20		sh, gy-dk gy	
40		Ls, lt gy-tan, fxl, sl foss, cky, NS	
60		Ls, tan-brn, fxl, sl foss, cky, NS	
80		sh, dk gy-bl	B/Kansas City 2779 (-1575)
2900		Ls, offwh, fxl, glauc, sl ool/ foss, NS	
20		slst, lt grn/gy, sm sh (grn, gy, red)	
40		AA, sm vly fgd ss, NS	
60		sh/slt, lt gy, sm red	
80		AA, sm bl organic matter	
3000		sh, gy, pyr	Mamaton 2860 (-1656)
20		Ls, tan, fxl, sl ool, foss, cky, NS	
40		sh, dk gy	
60		Ls, tan, fxl, v foss, sl ool, fr odor, tr FL (c10%), NUØ, NSFO	Twister Mud 2920' v 37 wt. 9.3 lcm 5
80		Ls, lt gy, sm tan, tan-grnt, bss, fr odor, tr FL (c10%), NUØ, NSFO	
3100		sh, bl	
20		Ls, offwh-lt gy, fxl, sl foss, cky, sl odor, tr FL (c10%), NUØ, NSFO	Cherokee 2971 (-1787)
40		Ls, brn-tan, fxl, cky, sl FL (c30%), gd odor, NUØ, NS	
60		Ls, tan, fxl, fodor, nud, NS sl FL (39%)	
80		SS, lt gy, v fgd, frsrtld/frnd, well cent (calc), NS	
3200		slst, orgy, mica, pyr	
20		sh, gy, grn & slst	
40		sh, gy, pyr	
60		Ls, gy, fxl, argl, cky	
80		sh, gy, sm red	
3300		sh, b (coal)	
20		sh, gy	
40		sh, b	
60		sh, gy, sm red	
80		SS, gy, v fgd, frnd/srtld, NS	
3400		sh, red, sm gy	Bartlesville Sd 3156 (-1952)
20		SS, lt gy, f-vly fgd, frnd frsrtld, well cent (calc), sl glauc, NS	Twister Mud 3177' v 51 wt. 9.2 lcm 3.5
40		sh, b, dk gy	Miss Ct 3193 (-1989)
60		3203 15" - 4" v.c (wh, h, pink), weath, gd ppt, gd FL (60%), gd odor, 30" AA, sm tan, 60% FL 3216 15" (wh, tan), weath, gd ppt & 30" AA, much gas bubbles	Miss Lm 3217 (-2015)
80		Ls, tan, fxl, grantr, Δ (Arab), nud, NS, sl odor, No cut	
3500		Ls, AA, no D, no odor, NFL, no cut	
20		Ls, m tan, fxl, nud, NFL, no odor, no cut	Twister Mud 3246' v 42 wt. 9.2 lcm 3.5
40		Ls, AA, no cut	
60		Ls, dk gy, sm tan, fxl, dse, sl cky, NFL, no odor, tr cut	
80		Ls, dk brn, fxl, sl foss, sl Δ, No odor, NFL, no cut	
3600		Ls, AA, no cut	
20		AA, no cut	
40		Ls, dk brn, fxl, sl Δ, No odor, NFL, sl cut	
60		AA, sl cky, sl cut, no FL	
80		AA, no cut	
3700		Ls, dk brn, fxl, dtg, no odor, NFL, sl cut	
20		Ls, dk brn, fxl, cky, dtg, No odor, NFL, fr cut	
40		AA, fr cut	
60		AA, tr cut	Twister Mud 3380' v 45 wt. 9.3 lcm 4
80		Ls, md brn, fxl, silc strks, sl dtg, no odor, tr FL (c10%), gd cut	
3800		Ls, dk brn, fxl, sm tan, fr cut	
20		AA, banded (H/dk), sl Δ, tr FL, fr cut	
40		Ls, md brn-brn, fxl, sl Δ, tr FL, fr cut	
60		Ls, brn, fxl, sl Δ, tr FL, fr-gd cut	
80		AA, fr cut	
3900		sh, dk gy, stratified	
20		Ls, md brn, fxl, glauc, tr FL fr cut, sl Δ	
40		Ls, v dk brn, glauc, fxl, dull FL (70%), sl foss, gd cut	
60		AA, (c30%) dull FL, gd cut	
80		sh, gy	
4000		Ls, wh, md xln, much calc xlys, NUØ, pyr, NO FL, No cut	
20		3515 15/30" AA	



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### General Information

Company Name: Range Oil Corp  
 Well Name: John Washburn Meadows B #7  
 Unique Well ID: DST#1 Miss 3198-3216'  
 Surface Location: SEC 22-33S-4E Cowley County  
 Field: Possey NE  
 Well Type: Vertical  
 Formation: DST#1 Miss 3198-3216'  
 Well Fluid Type: Oil  
 Test Purpose (AEUB): Initial Test  
 Start Test Date: 2014/12/13  
 Start Test Time: 04:30:00  
 Final Test Date: 2014/12/13  
 Final Test Time: 13:50:00  
 Job Number: 50527  
 Prepared By: Jacob McCallie  
 Report Date: 2014/12/13



### FLUID RECOVERY

1484' GIP 100% O Gravity: 41 @ 60 degrees F  
 30' CO 84% O 16% M  
 120' SLWCOCM 35% O 16% W 60% M  
 120' SLWCW 85% W 16% M  
 280' TOTAL FLUID

PH: 7  
 RHW: 18 @ 54 degrees  
 Chlorides: 59,000 ppm

TOOL SAMPLE:  
 73% O 22% W 5% M