



# Knoche Trust 2408 31-1 (SWD)

## Nabors 102

SHL							Well Information				
State Plane NAD 27 (Kansas South)							SITP:	1000 psi	Network #:		30179229
Section	31	T	24	R	8	X	2,075,300.86	Y	458,514.330	FTP:	5000 psi
County	Reno	State	Kansas	LAT	37° 55' 32.29"	LONG	98° 14' 20.18"	BHT:	145 °F	API #:	15-155-21610-00-00
BHL							H2S:	No	Lease:		Knoche Trust 2408
Section	31	T	24	R	8	X	2,075,300.86	Y	458,514.33	CO2:	No
County	Reno	State	Kansas	LAT	37° 55' 32.29"	LONG	98° 14' 20.18"	Well Life:	25 yrs	Permit TD:	5088
							RKB   GROUND ELEV.:	31.70'	1643.0'		

Directional	Formation	MD	TVD
	<b>Water Table</b>	<b>200</b>	<b>200</b>
<b>No dir. work in Surf. Hole</b>			
	<b>Surface Casing point</b>	<b>345</b>	<b>345</b>
	Hutchinson Salt Top	884	884
	Hutchinson Salt Base	1,277	1,277
	<b>Nolas Limestone</b>	<b>1,400</b>	<b>1,400</b>
	Fort Riley	1,579	1,579
	Onaga	2,198	2,198
	Topeka	2,723	2,723
	Heebner B	3,121	3,121
	Lansing-KC Group	3,310	3,310
	Marmaton A	3,589	3,589
	Hushpuckney Shale	3,627	3,627
	Marmaton B	3,699	3,699
	Cherokee Group	3,782	3,782
	Basal Penn. Congl.		
	Top of Mississippi	3,838	3,838
	Northview		
	Compton		
	Kinderhook Shale	3,926	3,926
	Pre Woodford Unc.	4,162	4,162
	Viola Limestone	4,183	4,183
	Simpson		
	Simpson Shale	4,248	4,248
	<b>Arbuckle</b>	<b>4,288</b>	<b>4,288</b>
	<b>Intermediate Casing point</b>	<b>4,286</b>	<b>4,286</b>

**TOC (Surf): Surface**  
**12-1/4" Hole**  
 Top of tail: Surface  
 Tail 14.8 ppg  
**100% excess in OH**  
**9-5/8" 36# K55 STC**  
 Max. Sfc. Csg. Depth = 784 ft MD ~100 ft above Salt Zone  
 FIT = 13.5 ppg

**TOC at 900'**  
 Lead : 12.4 ppg slurry  
**30% excess in OH**

**8-3/4" Hole**

**Loss Zones seen ~100' below Miss. Lime top at recent offsets wells**

**Top of tail: 3786 ft MD**  
 Tail 14.8 ppg  
**30% excess in OH**  
**7" 23# L80 LTC**

**Top of tail: 3786 ft MD**  
 Tail 14.8 ppg  
**30% excess in OH**  
**7" 23# L80 LTC**

**BHST @ ~140 deg F**  
 FIT 10 ppg

**6-1/8" Hole**

**Drill with saltwater from intermediate section**  
 Follow Mud Plan to deal with expected losses  
 MW 8.4 ppg

**Mud Program**  
 Fresh Water / Spud Mud  
 MW: < 9 ppg

Fresh Water  
**w/ gel sweeps**  
 MW < 9, high Cl

Salt water  
**w/ gel sweeps**  
 Dilute as required

At 1777' Displace to:  
 LSND (GelLig WBM)  
 MW: 8.9 - 9.0 ppg

@ 1st sign of losses  
 background LCM 3-3-3  
 3 ppb fine +  
 3 ppb medium +  
 3 ppb coarse

**OH Wireline Logs:**  
**Run #1:** Quad Combo, GEMS, FMI (Borehole Image)  
**Run #2:** NMR

**Evaluation**  
 Log Mud Gas to TD  
**Mud Log**  
 Samples every 40'

From	To	Footage
0'	345'	345'

Cuttings samples every 20'  
 Minimum 3 samples / hour

**MWD:**  
 GR Only

**Mud log**  
 Surf Csg - 100' above Miss  
 Samples every 40'  
 100' above Miss - Int Csg  
 Samples every 20'  
 Mimimum 3 samples/hr

Uncertainty is "+ or - 100'  
 Goal is to set shoe 20' into Arbuckle

**TD will be based on opening up sufficient hole to provide good injection zone. Plan for 800'**

TD is 900' below Arbuckle top  
**Actual TD 4,982**  
 Permit depth **5,088**

Trip to L/D Mud Motor @ 3700'  
 Control Drill @ 10fph f/ 3800'  
 Coring Starts @ 3838'  
 Top of Miss. Lime Coring Interval ~90'