



# Mudgrove

Petroleum Geology  
212 Main Street, Claflin KS

## GEOLOGIST'S REPORT

### DRILLING TIME AND SAMPLE LOG

COMPANY Fossil Energy, LLC.

LEASE Vanover #1

FIELD Jennings

LOCATION SE-NW-NE-NW (400' FNL & 1937' FWL)

SEC 23 TWSP 4S RGE 27W

COUNTY Decatur STATE Kansas

CONTRACTOR Southwind Drilling Co. (Rig #3)

SPUD 2-09-2019 COMP 2-17-2019

RTD 3680' LTD -none-

MUD UP 3000' TYPE MUD Chemical

#### ELEVATIONS

KB 2577'

DF \_\_\_\_\_

GL 2569'

Measurements Are All  
From KB

#### CASING

SURFACE 8 5/8" @ 288'

PRODUCTION None

#### ELECTRICAL SURVEYS

**None**

SAMPLES SAVED FROM 3100' TO RTD

DRILLING TIME KEPT FROM 3100' TO RTD

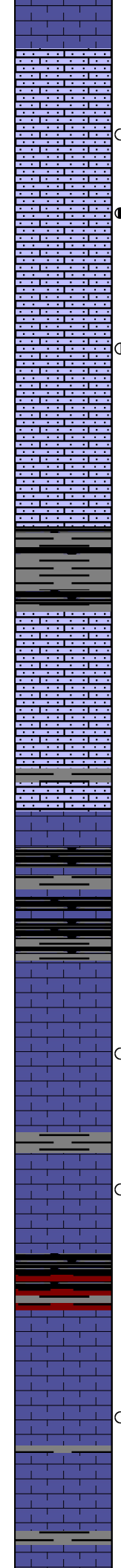
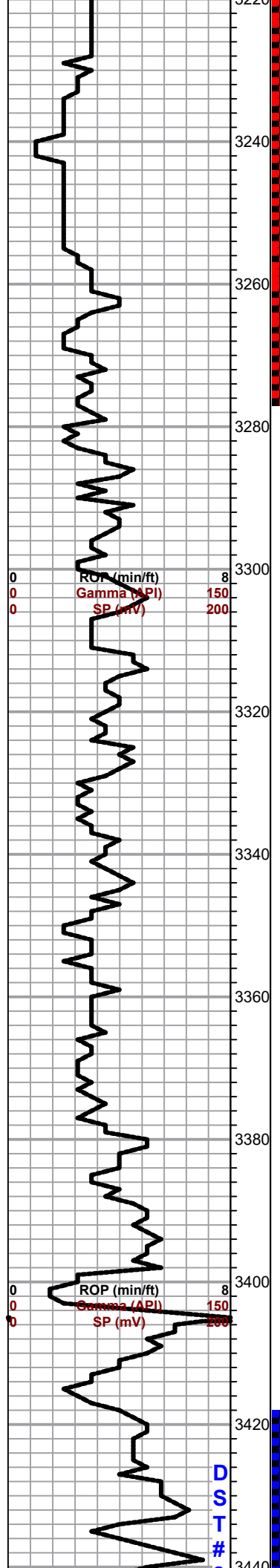
SAMPLES EXAMINED FROM 3100' TO RTD

GEOLOGICAL SUPERVISION FROM 3100' TO RTD

GEOLOGIST ON WELL Wyatt Urban

FORMATION TOPS	LOG	SAMPLES													
Anhydrite		2177 (460)	<table border="1"> <tr><td>X</td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td>23</td><td></td></tr> <tr><td></td><td></td><td></td></tr> </table>	X							23				
X															
	23														
B. Anhydrite		2136 (441)													
Topeka		3356 (-779)													
Heebner		3470 (-893)													
Toronto		3504 (-927)													
Lansing		3512 (-935)													





(dead) , nsfo, no odor

LS, tan, buff, suc./ dol. good p.p. porosity, dk brn stain, dk brown spty sfo, no odor

LS, tan, white, dol. fair-god scattered vuggy type porosity, dk brn stain, sfo, faint-fair odor

LS, white, cream, dol., in pts , few ool, fair vuggy p.p. type porosity, tr. spty sfo, tr. brn /golden brn stain on few, decrease show & loss of odor in 40 min cfs sample.

LS, gry, cream, tan, fxl, dense, poor vis porosity, no shows.

Tr. dk gry/ blk carb sh., abd. pyrite.

LS, tan, sandy, gran. foss, good inner porosity, fair vuggy type porosity, no shows.

Sh, maroon, gry, dk gry sh. a/a, tr. sdy gry, f. grain, tr. blk carb. sh. pyrite. sd. gry . f. grain, well sorted, no show

**Topeka 3356.0 (779.0)**

LS, cream, poor vis.. porosity, p.p. dense chalky, dk blk stain, v. heavy blk flakey (viscous )SFO ( most dead in app). no odor

LS, cream, poor vis porosity, dense, chalky, dk blk stain, v. heavy , blk flakey sfo, no odor , abd. pyrite. LS, tan, cream, foss, dense, chalky, no shows.

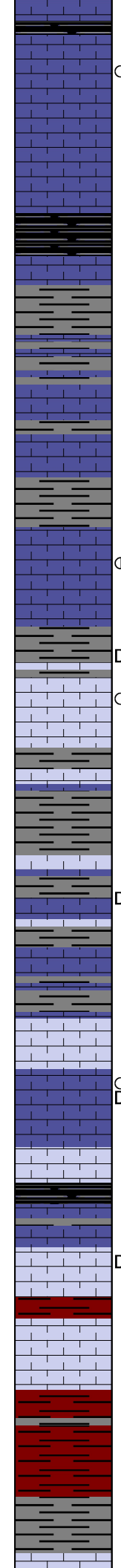
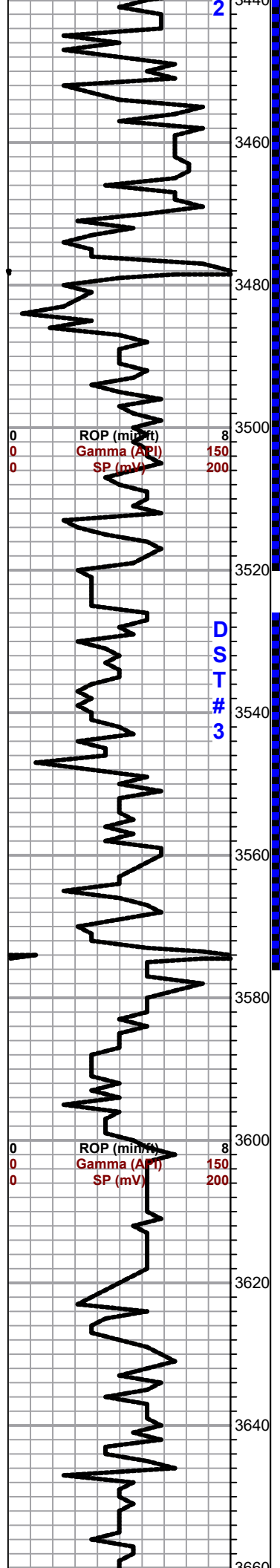
Sh, black carb

Slug maroon, soft sh. tr. sd. aa/ no shows

LS, tan, cream, scattered vuggy, type porosity, tr. blk spty, sfo, most dead in app. pyrite, slug blk sh.

**Recovery:**  
80' Oil Spotted Mud

**Pressures:**  
ISIP 942 psi  
FSIP 910 psi  
IFP 15-22 psi  
FFP 23-33 psi  
HSH 1515-1511 psi



Slug black carb

○ LS, cream, tan, foss, scattered vuggy porosity, dk blk blk stain, (tarry, viscous) sfo, wk sat./sfo

LS, tan, buff, fxl, dense, poor vis. porosity, cherty, no shows

**Heebner 3470.0 (-893.0)**

Slug black carb sh.

Sh,gry, soft gry mushy

**Toronto 3504.0 (-927.0)**

LS, white, fxl, dense poor vis porosity, cherty no shows,

**Lansing 3512.0 (-935.0)**

● LS, white, boney, cherty, scattered vuggy type porosity, tr. brn stain, spty blk sfo, ??? odor

D LS, tan, cream, fxln, v. chalky, poorly developed scattered vuggy/p.p. type porosity, Lt. golden brn stain,v. wk golden brn spty sfo, dead flakey sfo, ??? odor . (no sfo in CFS samples)

Sh, gry, silty

D LS, tan poorly developed vuggy type porosity, dk/ blk spty sfo, fair odor in broken sample. majority of dead sfo

Sh. gry, silty

○ D LS, tan, cream, oom poor developed porosity, chalky, tr. brn - blk stain??? nsfo no odor

Slug black carb

D LS, white, dol./ gran. suc. nsfo, dk, brn viscous - flakey spots dead oil, nsfo, no odor

Abd. slug soft maroon sh .

Abd. sh. gry, maroon, silty soft

Abd. soft gry & maroon shale. tr. LS. white. fxl. tr. blk

**DST # 2 3419-3520**

**1st Open:**  
**BOB 2 min 15 sec.**

**2nd Open:**  
**3 min. 20 sec. no return**

**Recovery :**  
**1000' HMCW**

**Pressures:**  
**ISIP 947 psi**  
**FSIP 883 psi**  
**IFP 42 -321 psi**  
**FFP 320-489 psi**  
**HSR 1662-1651 psi**

**DST#3 3525-3575**  
**30-45-45-60**

**1st Open:**  
Fair build 12.5"

**2nd Open:**  
Fair build 13.5"

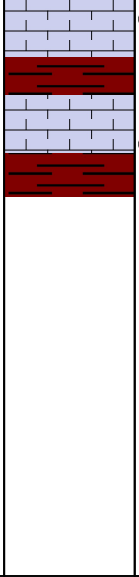
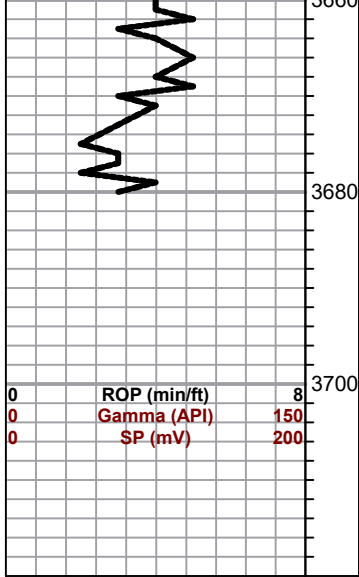
**Recovery:**  
55' SLOCHMCW

63' MCW tr. O

63' SLMCW tr. O

63' SLMCW tr. O

**Pressures:**  
**ISIP 775 psi**  
**FSIP 754 psi**  
**IFP 20 - 72 psi**  
**FFP 75-129 psi**  
**HSR 1681-1681 psi**



stain, tr. spty (visc./ tarry) sfo, odor ???

LS, white,fx, dol. poor - fair scattered porosity, chalky,  
tr. gry stain, tr. sfo, v. wk odor, slug maroon sh.

**RTD 3680.0 (-1103.0)**