



# Musgrove

Petroleum Geology  
212 Main Street, Claflin KS

## NOTES

Company: US Oil Resources LLC.

Lease: Powers # 9D-2-1429

Location: NW-SE-NE-SE (1662' FSL & 398' FEL)

Sec: 2 Twsp: 14S Rge: 29W

County: Gove State: Kansas

Field: Mable Northwest

KB: 2719' GL: 2711'

Contractor: Duke Drilling, Co. (Rig #2)

Spud: 04/23/2017 Comp: 05/3/2017

RTD: 4590' LTD: 4590'

Mud Up: 3452' Type Mud: Chemical

API #: 15-063-22305-00-00

Samples Saved From: 3500' to RTD

Drilling Time Kept From: 3500' to RTD

Samples Examined From: 3500' to RTD

Geological Supervision from: 3500' to RTD

Geologist on Well: Jim Musgrove

Surface Casing: 8 5/8" @ 263'

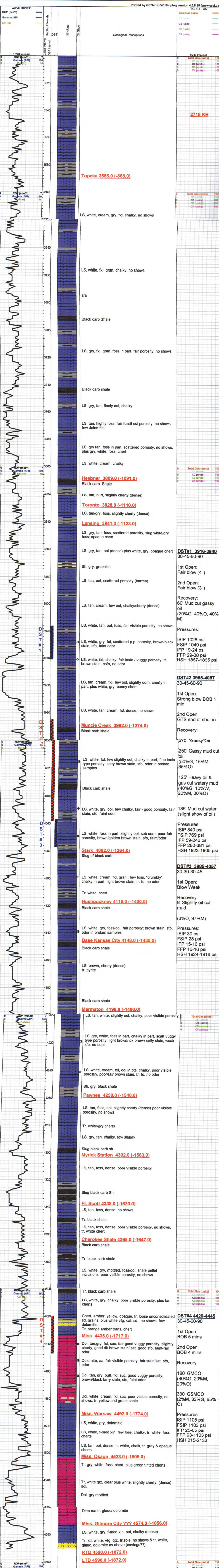
Production Casing: 5 1/2" @ 4588'

Electronic Surveys: Logged by Weatherford: Array Induction Shallow Focused Electric Log, Compact Photo Density Compensated Neutron Micro-Resistivity Log, Compensated Sonic withy Integrated Transit Time & Micro Log

US OIL RESOURCES- POWERS #9D-2-1429







**2718 KB**

Topeka 3586.0 (-868.0)

LS, white, cream, gry, fxl, chalky, no shows

LS, white, fxl, gran. chalky, no shows

a/a

Black carb Shale

LS, gry, fxl, gran. foss in part, fair porosity, no shows

Black carb shale

LS, gry, tan, finely ool, chalky

LS, tan, highly foss, fair fossil cst porosity, no shows, few dolomitic

LS, gry tan, foss in part, scattered porosity, no shows, plus gry, white, foss, chert

LS, white, cream, chalky

Heebner 3809.0 (-1091.0)

Black carb Shale

LS, tan, buff, slightly cherty (dense)

Toronto 3828.0 (-1110.0)

LS, tan/gry, foss, slightly cherty (dense)

Lansing 3841.0 (-1123.0)

LS, gry, tan, foss, scattered porosity, slug white/gry foss; opaque chert

LS, gry, tan, ool (dense) plus white, gry, opaque chert

Sh, gry, greenish

LS, tan, ool, scattered porosity (barren)

LS, tan, cream, few ool; chalky/cherty (dense)

LS, white, tan, ool, foss, fair visible porosity, no shows

LS, white, gry, fxl, scattered p.p. porosity, brown/black stain, sfo, faint odor

LS, white, fxl, chalky, fair inxln / vuggy porosity, tr. brown stain, nsfo, no odor

LS, tan, cream, fxl, few ool, slightly oom, cherty in part, plus white, gry, boney chert

LS, white, tan, cream, fxl, dense, no shows

Muncie Creek 3992.0 (-1274.0)

Black carb shale

LS, white, fxl, few slightly ool, chalky in part, fine inxln type porosity, spotty brown stain, sfo, odor in broken samples

Black carb shale

LS, white, gry, ool, few chalky, fair - good porosity, fair stain, sfo, faint odor

Stark 4082.0 (-1364.0)

Slug of black carb

LS, white, cream, fxl, gran., few foss, "crumbly", chalky in part, light brown stain, tr. fo, no odor

Tr. white, chert

Hushpuckney 4118.0 (-1400.0)

Black carb shale

LS, white, gry, foss/ool, fair porosity; brown stain, sfo, odor in broken samples

Base Kansas City 4148.0 (-1430.0)

Black carb shale

LS, brown, cherty (dense)  
tr. pyrite

Black carb shale

Marmaton 4198.0 (-1480.0)

LS, tan, white, slightly ool, chalky, poor visible porosity

LS, gry, white, foss in part, chalky in part, scatt vuggy type porosity, light brown/ dk brown spity stain, weak sfo, no odor

LS, white, cream, fxl, ool in pts, chalky, poor visible porosity, poor/fair brown stain, tr. fo, no odor

Sh, gry, black shale

Pawnee 4258.0 (-1540.0)

LS, tan, foss, ool, slightly cherty (dense) poor visible porosity, no shows

Tr. white/gry cherts

LS, gry, tan, chalky, few shaley

Slug black carb sh

Myrick Station 4302.0 (-1583.0)

LS, tan, foss, dense, poor visible porosity

Slug black carb Sh

Ft. Scott 4338.0 (-1620.0)

LS, tan, foss, dense, no shows

Tr. black shale

LS, tan, foss, dense, poor visible porosity, no shows, tr. white chert

Cherokee Shale 4365.0 (-1647.0)

Black carb shale

Tr. black carb shale

LS, white, gry, mottled, foss/ool, shale pellet inclusions, poor visible porosity, no shows

Tr. black carb shale

LS, white, gry, chalky, poor visible porosity, plus tan cherts

Chert, amber, yellow, opaque, tr. loose unconsolidated sd. grains, plus white vfg, cal. sd, no shows, few dolomitic.

Tr. orange amber trans. chert

Miss 4435.0 (-1717.0)

Dol. tan, gry, fxl, suc. fair-good vuggy porosity, slightly cherty, good dk brown stain/ sat. good sfo, faint-fair odor

Dolomite, aa, fair visible porosity, fair stain/sat. sfo, odor

Dol. tan, gry, buff, fxl, suc. good vuggy porosity, brown/black tarry stain, sfo, faint odor

Dol. white, cream, fxl, suc. poor visible porosity, no shows, tr. yellow and green shale

Miss. Warsaw 4492.0 (-1774.0)

LS, white, gry, dolomitic

LS, white, f-med xln, few foss, chalky, tr. white, foss cherts

LS, tan, ool, dense, tr. white, chalk, tr. gray & opaque cherts

Miss. Osage 4523.0 (-1805.0)

Tr. gry, white, foss, chert, plus green tinted cherts

Tr. white qtz, clear plus white, slightly cherty, (dense) dol.

Dol. gry mottled

Ditto a/a tr. glauc/ dolomite

Miss. Gilmore City ??? 4574.0 (-1856.0)

LS, white, gry, f-med xln, ool, chalky (dense)

Tr. sd, white, vfg, qtz, friable, no shows & tr. white, glauc. dolomite as above (cavings??)

RTD 4590.0 (-1872.0)

LTD 4590.0 (-1872.0)

**DST#1 3916-3940**  
30-45-60-90

1st Open:  
Fair blow (4")

2nd Open:  
Fair blow (3")

Recovery:  
60' Mud cut gassy oil  
(20%G, 40%O, 40% M)

Pressures:  
ISIP 1026 psi  
FSIP 1049 psi  
IFP 19-24 psi  
FFP 29-38 psi  
HSH 1867-1865 psi

**DST#2 3985-4057**  
30-45-60-90

1st Open:  
Strong blow BOB 1 min

2nd Open:  
GTS end of shut in

Recovery:  
370' Gassy Oil

250' Gassy mud cut oil  
(50%G, 15%M, 35%O)

125' Heavy oil & gas cut watery mud  
(40%G, 10%W, 20%M, 30%O)

185' Mud cut water  
(slight show of oil)

Pressures:  
ISIP 840 psi  
FSIP 769 psi  
IFP 59-246 psi  
FFP 260-381 psi  
HSH 1923-1905 psi

**DST#3 3985-4057**  
30-30-30-45

1st Open:  
Blow Weak

Recovery:  
8' Slightly oil cut mud  
(3%O, 97%M)

Pressures:  
ISIP 30 psi  
FSIP 28 psi  
IFP 15-16 psi  
FFP 16-16 psi  
HSH 1924-1916 psi

**DST#4 4420-4445**  
30-45-60-90

1st Open:  
BOB 5 mins

2nd Open:  
BOB 4 mins

Recovery:

180' GMCO  
(40%G, 20%M, 20%O)

330' GSMCO  
(2%M, 33%G, 65% O)

Pressures:  
ISIP 1105 psi  
FSIP 1103 psi  
IFP 25-85 psi  
FFP 93-1103 psi  
HSH 215-2133