



Musgrove

PETROLEUM CORPORATION
Claflin, Kansas

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY <u>RJM CO.</u>	ELEVATIONS
LEASE <u>AMES UNIT #15</u>	KB <u>1753'</u>
FIELD <u>AMES</u>	DF _____
LOCATION <u>NW-SE-NE-NE</u>	GL <u>1743'</u>
SEC <u>35</u> TWSP <u>18S</u> RGE <u>11W</u>	Measurements Are All From <u>KB</u>
COUNTY <u>Barton</u> STATE <u>Kansas</u>	
CONTRACTOR <u>Southwind Drilling co. (Rig #3)</u>	CASING
SPUD <u>8/08/2019</u> COMP <u>08/17/2019</u>	SURFACE <u>8 5/8" @ 432'</u>
RTD <u>3295'</u> LTD <u>3293'</u>	PRODUCTION <u>5 1/2" @ 3282'</u>
MUD UP <u>2600'</u> TYPE MUD <u>Chemical</u>	ELECTRICAL SURVEYS Pioneer Energy; Services DUCPL, DIL/MEL

SAMPLES SAVED FROM 2600' TO RTD

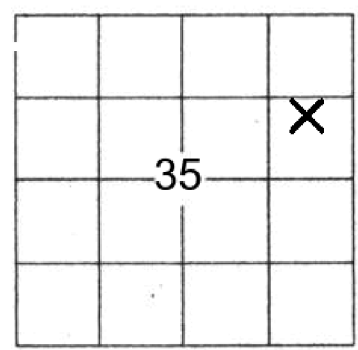
DRILLING TIME KEPT FROM 2600' TO RTD

SAMPLES EXAMINED FROM 2700' TO RTD

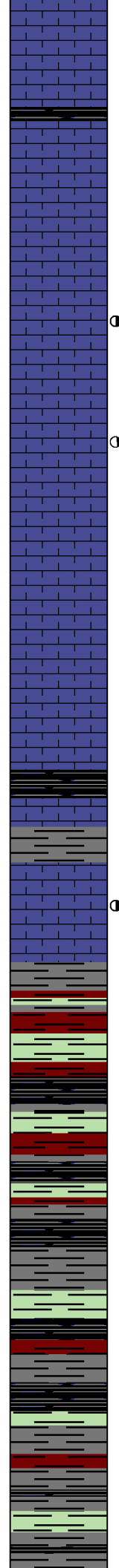
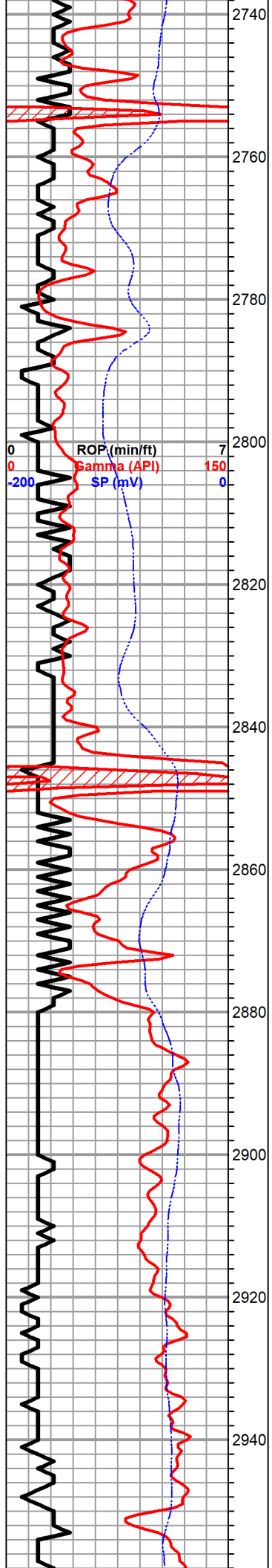
GEOLOGICAL SUPERVISION FROM 2720' TO RTD

GEOLOGIST ON WELL Jim Musgrove

FORMATION TOPS	LOG	SAMPLES
Anhydrite	508 (+1245)	RTD <u>3295 (-1542)</u>
B. Anhydrite	532 (+1221)	LTD <u>3293 (-1540)</u>
Topeka	2581 (-828)	
Heebner	2844 (-1091)	
Toronto	2860 (-1107)	
Brown Lime	2959 (-1206)	
Lansing	2976 (-1223)	
BKC	3231 (-1478)	
Conglomerate	3245 (-1492)	
Arbuckle	3280 (-1527)	



ROCK TYPES



Tr. black carb Sh

LS, white, gry, fxl, few foss, chalky, ??? brown stain , nsfo no odor

LS, white, gry foss, gran, in pt, crumbly scatt. porosity, brn/ blk stain, tr. fo, no odor

LS, a/a

LS white, gry, fxl, few foss, chalky, no shows

HEEBNER 2845.0 -1092.0

Sh, black carb

TORONTO 2862.0 -1109.0

LS, tan, foss, chalky, tr. spty stain , nsfo , no odor

DOUGLAS 2877.0 -1124.0

Sh, gry, greenish,

Sh, gry, gryish green silty mica sd.

Sh, a/a, + v.c. silty

ditto

Sh, gry, lime green silty sh.

0.2 Deep Induction (ohmm) 2000
 30 Neutron (pu) -10
 30 Limestone Neutron Por (pu) -10
 30 Density -10

DST #1 2963-3061
 45-45-60-60

1st Open:
 Strong
 (BOB 5 mins.)
 GTS Final shut in
 TSTM

Recovery:
 2835' GIP

BROWN LIME 2961.0 -1208.0

LS, tan, fxl, slightly cherty, poor vis. porosity

Sh, gry / gryish green soft sh.

LANSING 2978.0 -1225.0

● LS, white, gry, chalky, foss, in pts. tr. brn stain , nsfo, no odor

● LS, white gry, sub oom chalky, brn/ gry stain , tr. fo no odor

dk blk / gry

● LS cream, white, foss in pt, in pt, chalky, blk stain , nsfo

Sh, gry, LS, a/a,

● LS, tan, ool, chalky, gry - brn stain , tr. fo , no odor

● LS, tan, oom slightly chalky, scattered porosity, brown stain , sfo ??? odor

LS, tan, brn, fxl, chalky, -->cherty, (dense)

Sh, black carb

● LS, white, cream, oom, good oom porosity, tr. golden brn stain , tr. sfo ??? odor

● LS, white, cream, ool, oom fair porosity, sptty stain , sfo, fair odor (3150' sample)

● LS, tan, oom, fr-good oom porosity, brown / golden grown stn, sfo, ft/ fr. odor

-111' slightly oil & gas cut mud (5%G, 2%O, 93%M)

Pressures:

ISIP 532 psi
FSIP 662 psi
IFP 14-38 psi
FFP 45-61 psi
HSH 1378-1370 psi

0.2 Deep Induction (ohmm) 2000
30 Neutron (pu) -10
30 Limestone Neutron Por (pu) -10
30 Density -10

DST#2 3062-3074

1st Open :

weak

Recovery:

84' GIP
42' slocm
(3%O, 97%M)

Pressures:

ISIP 390 psi
FSIP 356 psi
IFP 12-19 psi
FFP 20-26 psi
HSH 1412-1411 psi

DST#3 3103-3203

45-45-45-45

1st Open:

Blow Strong,
GTS 45 mins. into final flow

Recovery:

10' SL. OCM
(7%O, 93%M)

126' HO&GCM
(10%g, 30%O, 60%M)

DST# 1

7

3000

3020

3040

3060

3080

3100

3120

3140

3160

0
0
-200
ROP (min/ft)
Gamma (API)
SP (mV)

'H' -1365

'I' -1381

'J' -1399

