



Mudgrouse

Petroleum Geology
212 Main Street, Claflin KS

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

| | |
|---|-------------------------------------|
| COMPANY <u>K&N Petroleum, Inc.</u> | ELEVATIONS |
| LEASE <u>Norman Klepper #2-A</u> | KB <u>1836'</u> |
| FIELD <u>HEYEN</u> | DF <u>1834'</u> |
| LOCATION <u>SW-NE-SE-SW (962' FSL& 2259' FWL)</u> | GL <u>1826'</u> |
| SEC <u>17</u> TWSP <u>22S</u> RGE <u>11W</u> | Measurements Are All From <u>KB</u> |
| COUNTY <u>Stafford</u> STATE <u>Kansas</u> | |
| CONTRACTOR <u>Southwind Drilling, inc. (Rig # 1)</u> | CASING |
| SPUD <u>10/08/2019</u> COMP <u>10/17/2019</u> | SURFACE <u>8 5/8"@433'</u> |
| RTD <u>3700'</u> LTD <u>3700'</u> | PRODUCTION <u>None</u> |
| MUD UP <u>2850'</u> TYPE MUD <u>Chemical</u> | ELECTRICAL SURVEYS |
| | ELI WIRELINE |
| | DIL, DUCP, MEL |

SAMPLES SAVED FROM 2900' TO RTD

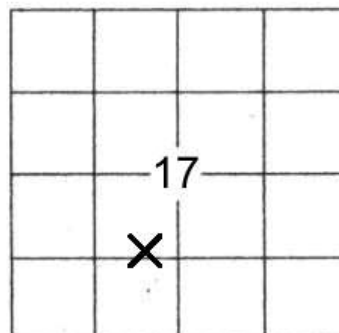
DRILLING TIME KEPT FROM 2900' TO RTD

SAMPLES EXAMINED FROM 2900' TO RTD

GEOLOGICAL SUPERVISION FROM 2960' TO RTD

GEOLOGIST ON WELL Wyatt Urban

| FORMATION TOPS | LOG | | SAMPLES | |
|----------------|------|-------|---------|-------|
| Anhydrite | 574 | +1262 | 568 | +1268 |
| B. Anhydrite | 596 | +1240 | 600 | +1236 |
| Heebner | 3094 | -1258 | 3094 | -1258 |
| Toronto | 3114 | -1278 | 3112 | -1276 |
| Douglas | 3130 | -1294 | 3128 | -1292 |
| Brown Lime | 3229 | -1393 | 3228 | -1392 |
| Lansing | 3254 | -1418 | 3248 | -1412 |
| BKC | 3492 | -1656 | 3492 | -1656 |
| Simpson | 3560 | -1724 | 3563 | -1727 |
| Arbuckle | 3594 | -1758 | 3594 | -1758 |
| LTD /RTD | 3701 | -1865 | 3700 | -1864 |



LEGEND

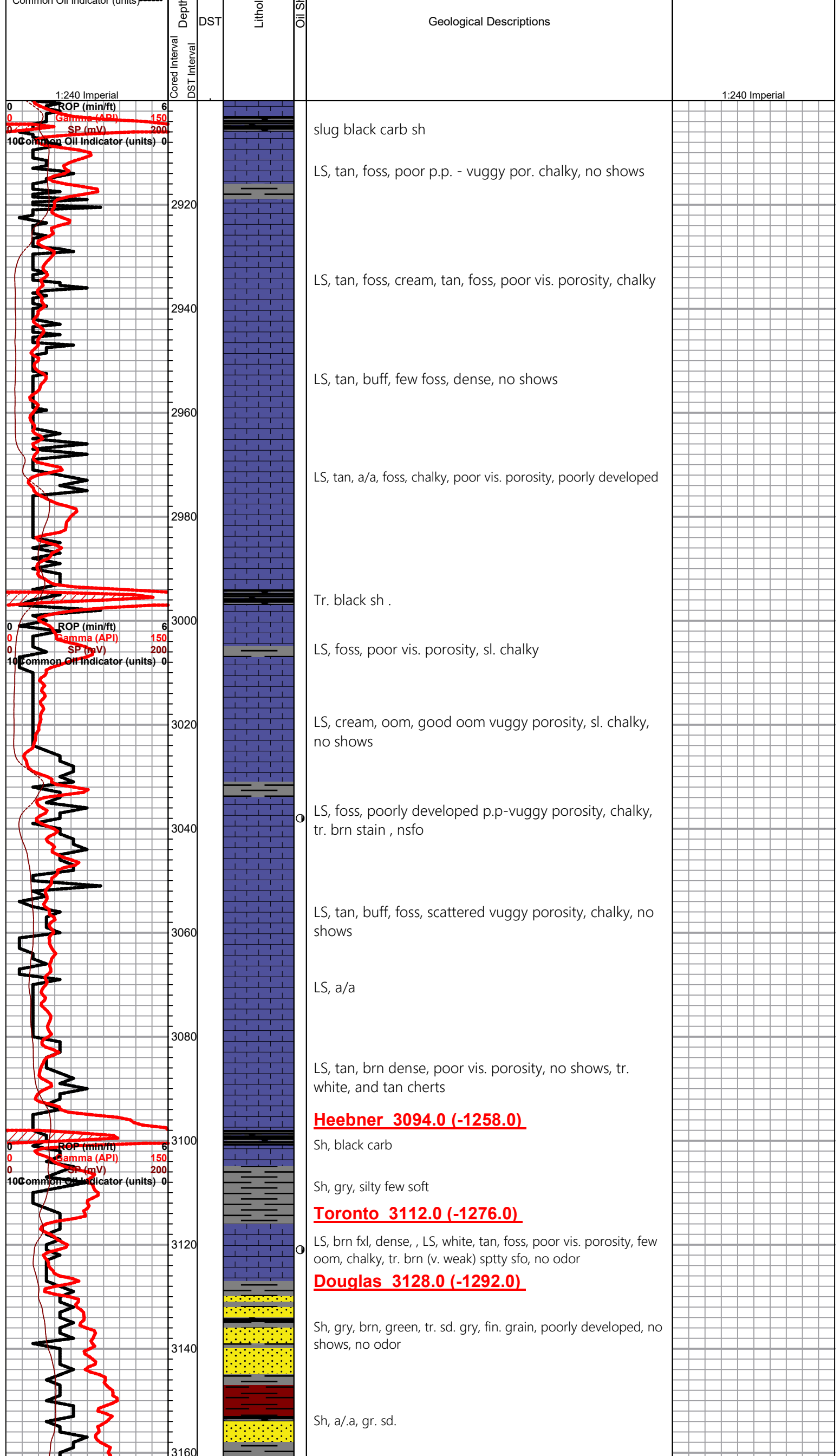
Oil Show

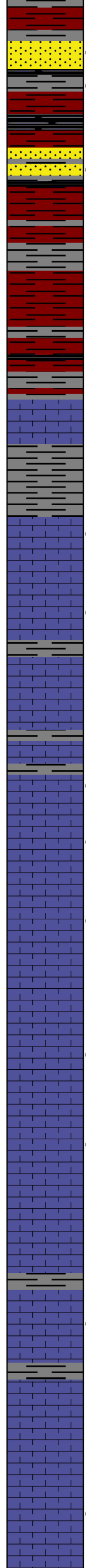
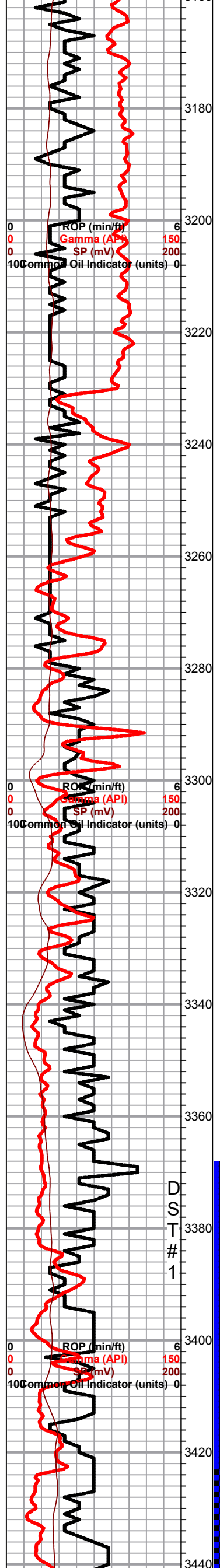
- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Stn
- D Dead Oil Stn
- Fluorescence
- * Gas

DST

- DST Int
- DST alt
- Core
- tail pipe

| | | | |
|------------------------------|-----|--|--|
| Curve Track #1 | | | |
| ROP (min/ft) | — | | |
| Gamma (API) | — | | |
| SP (mV) | --- | | |
| Common Oil Indicator (units) | | | |





Sh, gry, maroon, black

Tr. gry sd., fine grain, poorly developed, tr. blk / gry stain ,

Sh, gry, green, maroon

Sh, gry, green,, (1) Sd. tan, coarse, poorly sorted, tr. sppty blk stain (caving ??)

Sh, gry, silty, maroon,

Sh, a/a, gry, maroon, soft few greenish,

Brown Lime 3228.0 (-1392.0)

LS, tan, brn fxl, cherty, no shows

Sh, gry soft silty

Lansing 3248.0 (-1412.0)

LS, white, tan, foss, poorly developed porosity, chalky, tr. sppty stain, nsfo

LS, tan, buff foss, poor porosity, chalky, tr. brn stain , nsfo ,

tr. gry silty sh

LS, foss, chalky, no shows,

Sh, gry, silty

LS, tan, buff foss p.p porosity, chalky, tr. brn sppty stain , v. wk. sppty sfo, ft. odor

LS, tan, buff foss, p.p. porosity, chalky, tr. brn sppty stain, v. wk sppty sfo, faint odor

LS, gry, foss, poor p.p. por. dk brn stain, <flakey oil >, sfo, ft. fair odor ???

Tr. white foss chert ,tr. white LS, white, dense poor vis. porosity, no shows

LS, oom, good vuggy oom porosity, v. lt. <flakey>sfo, faint - fair odor

LS, tan foss, poor v. chalky, tr. blk stain , ft. odor abd. blk carb sh.

LS, tan, buff, foss, no shows, no odor

Sh, gry slug

LS, tan, buff, ool, foss, oom, vuggy por., dolomitic, fair inxln porosity, lt. golden brn stain , sppty sfo, fair odor

Sh, brn gry

LS, tan, fxl, dense, few cherty no shows

LS, tan, crm, ool, sl. sparry calc. cement fair inner ool, porosity, dk brn stain , blk sppty sfo, sat. vis. gas bubbles

STRAP 4.15'
STB--- NO
CORRECTION
MADE

DST#1 3366-3476
30-30-30-30

1st Open
weak surface
blow & dead
flushed tool, no
blow returned

Recovery:
10' mud with oil
spts.

Pressures:
IISIP 649 psi
FSIP 376 psi
IFP 10-15 psi
FFP 16-20 psi
HSH 1618-1616
psi

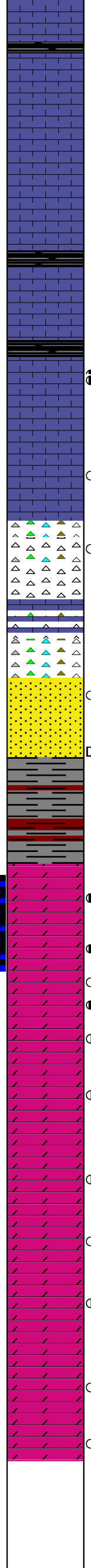
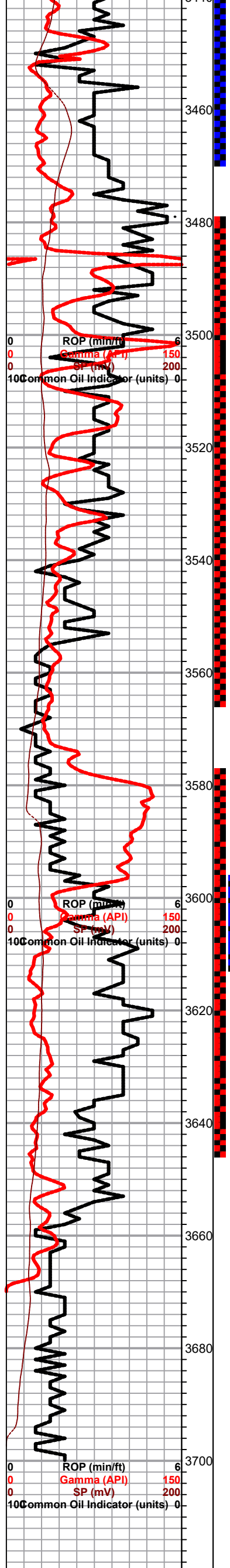
DST # 2 3469-3563
30-30-45-45

1st Open:
weak 1" blow

Recovery:
10' mud

D
S
T

1



Slug black carb Sh

LS, white, foss, ool, poor p.p.-vuggy type porosity, sl. chalky, tr. pyrite

LS, tan, fxl, chert, n/ sfo, ls. white, foss, dense, chalky

Sh, gry, maroon, tr. pyrite

Sh, maroon green silty , pyrite,
tr. LS, tan, brn scattered p.p. porosity, sfo, faint odor

LS, a/a, tr. black stain , v. chalky, tr. blk carb tr. maroon tinted LS, dense, poor vis. porosity, no shows

LS, tan, white, chert ft. white, blk stain , sfo, faint odor

Tr. LS, tan, buff, cherty, no shows

Simpson Sd. 3560.0 (-1724.0)

Tr. sd, gry, med grain , well sorted , poor vuggy porosity, dense, tr. blk stain , nsfo , no odor

Sd. tan, gry, med grain , poorly sorted, mica, lt. blk stain , blk spty (dead flakey) sfo, ??? odor in broken samples.

Sh, waxy, maroon
Sh, maroon, gry, green , waxy

<Tr. dol, in 60" sample >

Arbuckle 3594.0 (-1758.0)

Dol. tan, dense, fxl, tr. blk stain , tr. spty sfo, faint - fair odor

Dol. tan, med lg. xln , good brn spty sfo, odor tr. brn stain

Dol, tan, med - Lg, xln, good brn spty sfo, odor tr. brn stain

Dol, tan, suc. fair inxln porosity sparry calc. cement (frosted) , lt. brn stain , sfo, <spty> vis. gas on few

Dol., dol, white, crm, coarse med xln, fair inxln porosity, tr. brn stain , spty sfo, odor, tr. pyrite

Dol. white, crm, coarse suc. dol. fair inxln porosity, tr. brn stain , spty sfo, odor , tr. pyrite

Dol. white, fxl, poor porosity, tr. blk stain , nsfo, odor

Dol, suc, fair porosity, inxln lt. brn / blk stain sfo, sat., sulfuric odor in samples

Dol, white, dense, poor porosity, cherty in pts, nsfo, faint odor,

Dol, white, suc. fair inxln porosity , inxln lt. brn / blk stain sfo, sat (weak) faint odor tr. pyrite

Dol, white, fxl, dense, cherty, tr. white gry cherts, tr. vuggy white, dol. no sfo, strong sulfuric odor

DST#3 3593-3612
Packers Unseated after 2nd Open: MISS RUN

1st Open:
BOB 1 min.

2nd Open:
BOB 2 min.

Recovery:
950' gip
125' SLO&GCM
(30%G, 15%O, 55%M)

575' SLOCM
(2%O, 98%M)

Pressures:
ISIP 228 psi
FSIP 0 psi
IFP 23-35 psi
FFP 0
HSH 1757-1713 psi

DST # 4 3578-3622
30-45-45-60

1st Open:
BOB 15 mins.
no return

2nd Open:
BOB 1 min.
no return

Recovery:
540' GIP

124' HO&GCWM
(55%G, 35%O, 5%W, 5%M)

Pressures:
ISIP 279 psi
FSIP 395 psi
IFP 23-65 psi
FFP 72-100 psi
HSH 17681684 psi

DST #5 3578-3645
MISRUN

150l mud

RTD 3700.0 (-1864.0)
LTD 3701.0 (-1865.0)

3720

3740

150 mud

