



# Mudgrouve

Petroleum Geology  
212 Main Street, Claflin KS

## GEOLOGIST'S REPORT

### DRILLING TIME AND SAMPLE LOG

COMPANY Mai Oil Operations, Inc.

LEASE Richards #15

FIELD Mendota

LOCATION SW-NE-SW-SE(680' FSL& 1915' FEL)

SEC 6 TWSP 11S RGE 20W

COUNTY Ellis STATE Kansas

#### ELEVATIONS

KB 2098'

DF \_\_\_\_\_

GL 2090'

Measurements Are All  
From KB

CONTRACTOR Southwind Drilling, inc. ( Rig # 3)

SPUD 1/12/2018 COMP 1/22/2018

RTD 3770' LTD 3770'

MUD UP 2900' TYPE MUD Chemical

#### CASING

SURFACE 8 5/8"@1'

PRODUCTION 5 1/2" @3768'

#### ELECTRICAL SURVEYS

ELI Wireline ;  
DIL, Micro, CDL/CNL

SAMPLES SAVED FROM \_\_\_\_\_ 3000'

TO RTD

DRILLING TIME KEPT FROM \_\_\_\_\_ 3000'

TO RTD

SAMPLES EXAMINED FROM \_\_\_\_\_ 3000'

TO RTD

GEOLOGICAL SUPERVISION FROM 3040'

TO RTD

GEOLOGIST ON WELL Wyatt Urban

FORMATION TOPS	LOG		<del>SAMPLES</del>
Anhydrite	1558	+540	Congl. 3655 (-1556)
B. Anhydrite	1609	+489	Arbuckle 3703 (-1605)
Topeka	3140	(-1042)	RTD 3770 (-1672)
King Hill	3228	(-1190)	LTD 3770 (-1672)
Queen Hill	3288	(-1190)	


Lansing	3388	(-1290)				
Base KC	3622	(-1524)			X	
Marmaton	3630	(-1532)				

### LEGEND

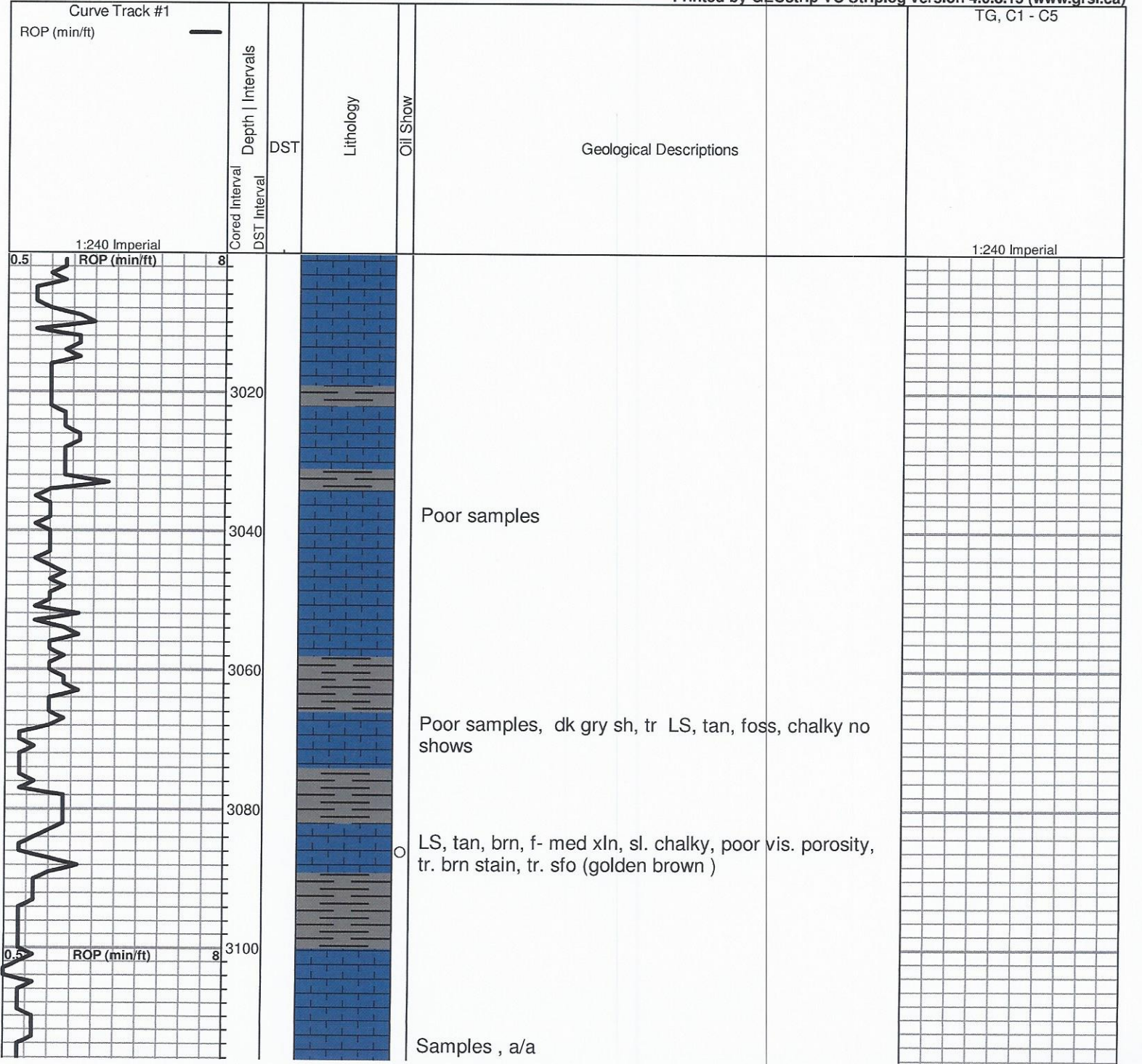
**Oil Show**

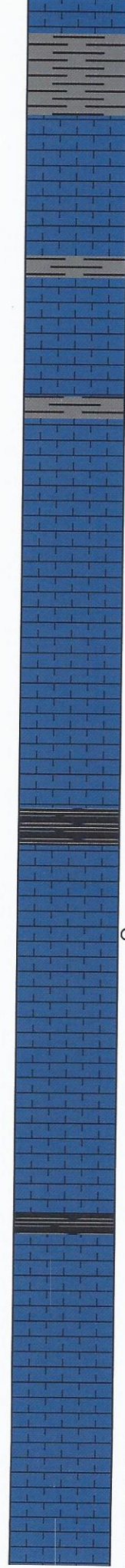
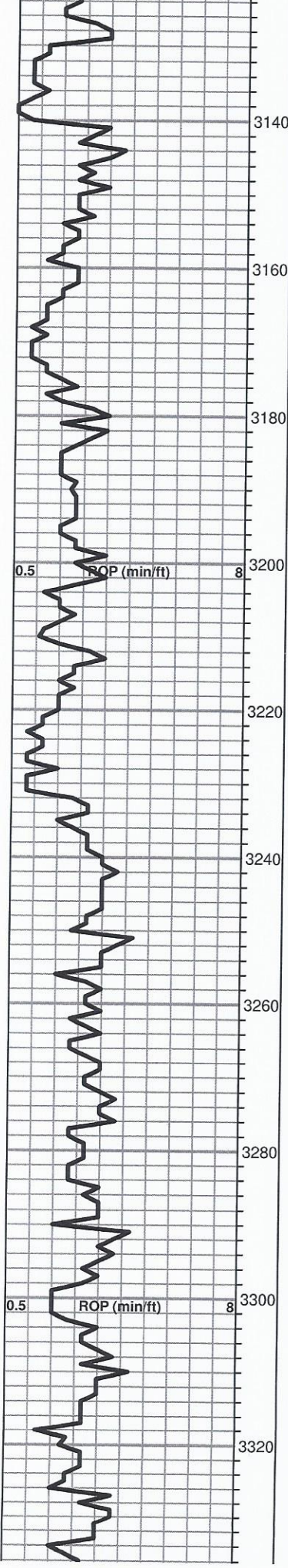
- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Stn
- D Dead Oil Stn
- Fluorescence
- \* Gas

**DST**

- DST Int
- DST alt
- Core
- || tail pipe

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)





Sh, dk gry, tr. sd. f-med grain, sub rounded, good porosity, friable , no shows

**Topeka 3141.0 (-1043.0)**

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

LS, tan, dol. fair inxln porosity, tr. sppty brn stain, tr. sfo ( heavy, viscous), no odor

Sh. gry, silty

LS, white, cream, poor porosity, chalky, no shows

LS, white, scattered p.p porosity, chalky no shows

Sh black carb

LS, tan, cream ,poor scattered p.p. porosity, tr. golden -brn stain, nsfo, no odor

LS cream, gry, fxl, dense, cherty, nsfo, no odor

LS, a/a tr. white, tan chert

Sh, black carb

LS, cream, white, poor vis. porosity, chalky, no shows

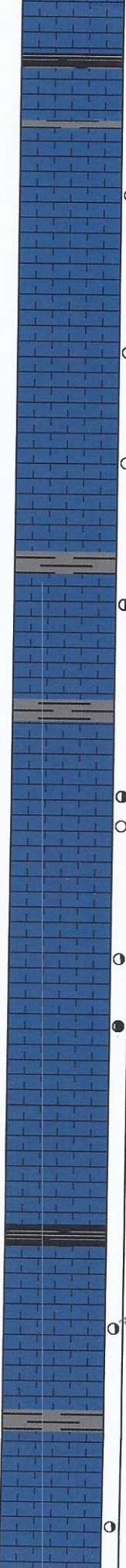
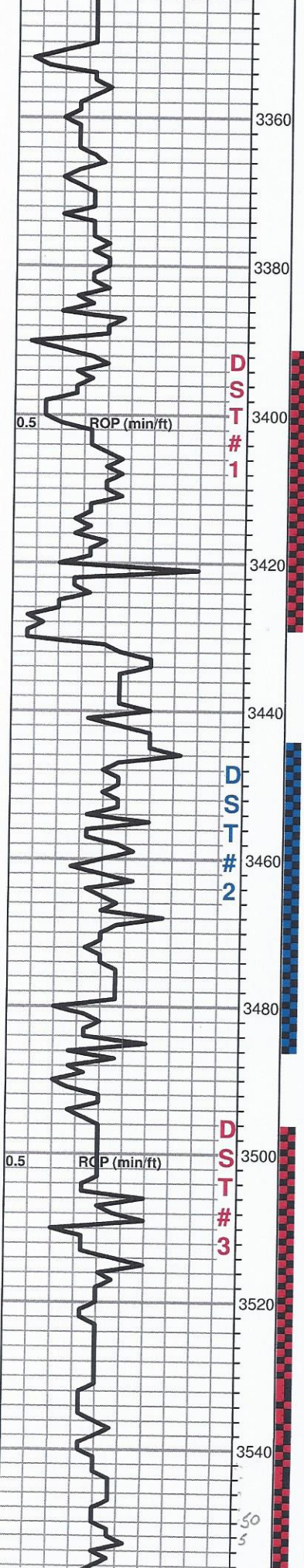
LS, tan, fxl, dense, poor vis. porosity, cherts, tan/ brn / cream

**DST#1 3395-3430**  
**30-30-45-45**

**1st Open**  
**BOB 11 mins.**

**1st Close:**  
**1.5" return**

**2nd Open:**  
**BOB 15mins**



**Heebner 3350.0 (-1252.0)**

Sh, black carb  
Tr. LS, brn fxl, dense, poor vis. porosity, cherty

**Toronto 3366.0 (-1268.0)**

○ LS, cream, gry, poor porosity, chalky, tr. brn stain, nsfo, no odor

**Lansing 3382.0 (-1284.0)**

○ LS, white, f-med xln, foss, ool, poor vis. porosity, tr. brn stain, nsfo, no odor, tr. white, boney chert

○ LS, white, cream, few foss, poor - fair vis. porosity, sl. cherty inpts, tr. brn stain, nsfo,

● LS, a/a, scattered vis.p.p type porosity, chalky, brn lt. brn stain, sfo, odor ??

Slg gry, silty sh.

○ LS, tan, cream, poor scattered p.p. porosity, tr. sfo, ??? odor

○ LS, dolomitic, tan, buff, poor vis. porosity, chalky, no shows

○ LS, tan cream, ool, poorly developed ool. porosity, lt. sfo, odor

● LS, tan, brn fxl, fair p.p. type porosity, foss, dk brn stain, dark brn sfo, odor

○ LS, white, cream, pr. scattered vuggy porosity, chalky, no shows, well developed ool poor porosity, no show no odor

Sh black carb, abd. sh gry silty

○ LS, tan, buff, scattered p.p., vuggy porosity, golden brn sppty stain, sfo, fair odor, tr. pyrite

LS, a/a/, + white boney chert, inc. pyrite inclus. poor black stain, nsfo,

○ LS, tan, off white, scattered vuggy porosity, Lt. golden brn stain. lt brn sfo. odor

**Recovery:**

243' GIP

67' MCWO  
(5%M, 15%W, 80%O)

248' OCMW  
(5%O, 5%M, 90%W)

67' MCWO  
(5%M, 15%W, 80%O)

**Pressures:**

ISIP 650 psi  
FSIP 643 psi  
IFP 17-85 psi  
FFP 89-161 psi  
HSH 1671-1641 psi

**DST#2 3444-3486**  
30-30-30

**1st open:**

Weak 2" blow

**2nd Open:**

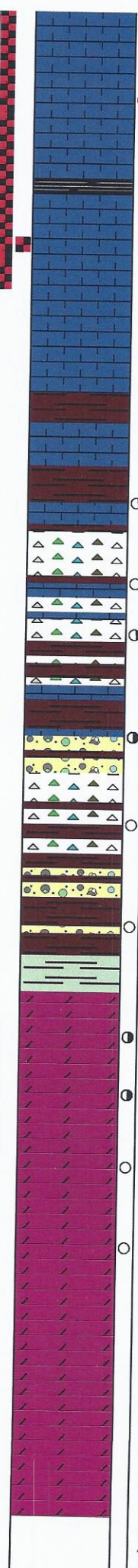
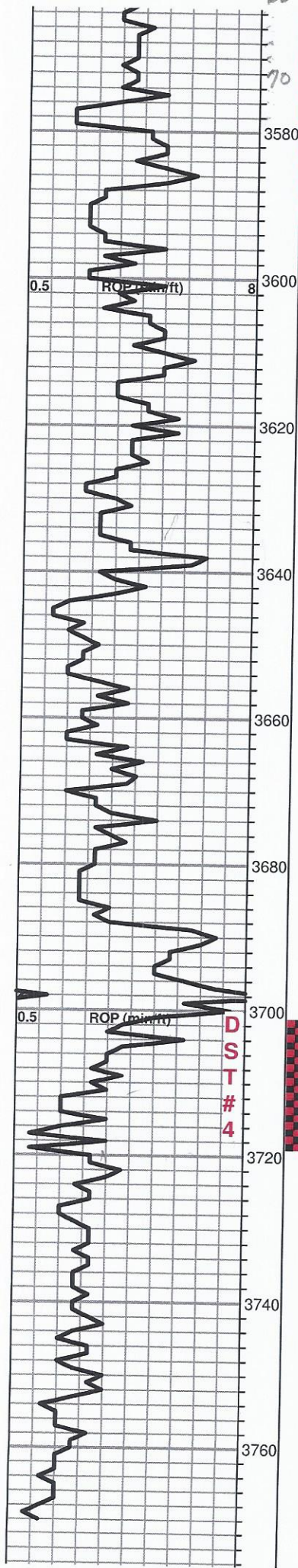
Dead, Flushed tool surface blow 2 mins. dead : pulled test

**Recovery:**

8' Drilling Mud

**Pressures:**

ISIP 457 psi  
IFP 11-13 psi  
FFP 13-15 psi  
HSH 1685-70 psi



LS, tan, cream, scattered vuggy type porosity, lt. golden br stain, sfo, fair odor

LS, a/a, sl. dolomitic, scattered p.p. porosity, brn stain/sat. , vis. gas bubbles in few

Sh, black carb

LS, tan, fxl, dense, cherty, tr. lt. spty brn stn/sat., Spty sfo, ??? odor

Sh, maroong, gray, soft tr. chert white, boney,+ LS, tan, buff, poor scattered porosity, no shows

**BKC 3620.0 (-1522.0)**

Sh,maroon, tr. grreen sh. nsfo

Sh, maroon, green, soft, tr. white, tan, chert, poor scattered porosity, spty sfo, no odor

**Marmaton 3630.0 (-1532.0)**

Tan, brn, white, cherts tr. spty sfo, no odor

Sh, a/a, w/ tr. cherts

**Conglomerate 3652.0 (-1554.0)**

Cherts, tan, crm, opaque, tr. sd. f- med. grain, poorly sorted, tr. blk stain, sfo (v. wk) , ??? odor

Sh, maroon blocky/ waxey, banded color, + Chert white, boney, scattered vuggy type porosity, tr. blk stain, nsfo , no odor

Sh,/a , white, yellowish ,cherty , (trip)?? scattered vuggy porosity, nsfo, no odor inc. cherts

Slug of soft aqua green sh.

**Arbuckle 3698.0 (-1600.0)**

Dol. tan, brn med xln, sdy, sptt sfo, faint odor

Dol. tan, buff, med xln, suc. good inxln porosity, sfo, odor , blk stain

Dol. tan, fxl, dense, poor vis. porosity brn stain, spty sfo.

Dol. tan,buff, f-medxln , good ln-xln porosity, tr. pyrite blk stain tr. spty sfo, odor

Dol. white, tan fxl, dense, poor vis. porosity, tr. white, chalk, tr. tan orange, red cherts, no shows

Dol. white, suc. med xln, poor vis. porosity, no shows no odor

Dol white, tan, fxl, few suc. fair inner xln porosity, tr. brn stain, nsfo , no odo

**LTD 3770.0 (-1672.0)**

**DTD 3770.0 (-1672.0)**

**1st Open:**  
Fair build to 6.5"

**2nd Open:**  
Blow built to 8.5"

**Recovery:**  
62' OCM  
(20%O, 60%M)

**Pressures:**  
ISIP 917 psi  
FSIP 845psi  
IFP 14-26 psi  
FFP 30-40 psi  
HSH 1702-1698 psi

**DST#4 3701-3720**  
**30-30-45-45**

**1st Open:**  
BOB 20 mins.

**2nd Open:**  
BOB 35 Mins.

**Recovery:**  
5' Clean Oil

**230' Muddy Water**  
w/ skim of oil  
(15%M , 85%W)

**Pressures:**  
ISIP 935 psi  
FSIP 875 psi  
IFP 16-64 psi  
FFP 67-119 psi  
HSH 1807-1803 psi