

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

BACH OIL PRODUCTION

WELL: CHRISTENSEN #1

LOC.: 1400' FNL & 1010' FEL
SEC. 12-1-19W
PHILLIPS COUNTY, KANSAS
API: 15-147-20698-00-00

DRILLING CONTR.: MURFIN RIG #8
SPUD: 11-13-12 COMP: 11-18-12
MUD UP: 2837' TYPE MUD: CHEM.
DRILL TIME: 2900' to' RTD
RTD: 3550' LTD: 3556'
SAMPLES SAVED: 2950'-RTD
GEOLOGIST: ROBERT J. PETERSEN

ELEVATION

KB: 2054
GL: 2049
LOG MEASURED FROM: KB

SURFACE CASING

20# 8 5/8 " Casing set @ 210' w/170 SX

PRODUCTION CASING

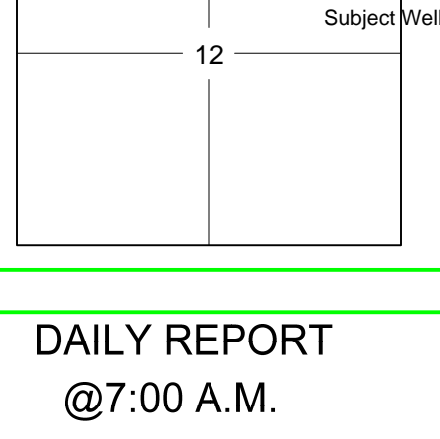
D & A

WELL LOG SURVEYS

DIL/CDL

ELECTRIC LOG TOPS

FORMATION	DEPTH	DATUM	REF
Stone Corral	1688	+366	+2
Base Stone Corral	1710	+344	-2
Topeka	3056	-1002	-9
Heebner	3257	-1203	-11
Toronto	3286	-1232	-10
Lansing	3305	-1251	-11
Muncie Creek	3413	-1359	-8
Stark	3479	-1425	-8
Base Kansas City	3522	-1468	-10



REFERENCE WELL:

Bach
 Charles Unit #1
 193' FNL & 2126' FEL
 7-1-18W

DAILY REPORT

@7:00 A.M.

11-13-12 MIRU/SPUD
 11-14-12 470' Drilling
 11-15-12 2330' Drilling
 11-16-12 3220' Drilling
 11-17-12 3550' TOH for Log

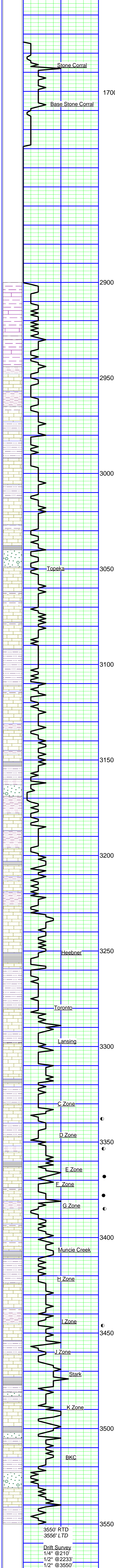
REMARKS AND RECOMMENDATIONS

Due to structural position this test was plugged.

Respectfully submitted,

Robert J. Petersen

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SAMPLE DESCRIPTION

LS: Cream/tan/gray, dense, foss + SH; Gray (2950)

SH: Gray (2960)

LS: Cream, dense, chalky (2960-2970)

SD: Tan/brown (trace 2970)

LS: Cream/white, fine crystalline to dense, foss, chalky (2980)

SH: Gray (2990)

LS: Tan/gray, dense, blocky, sl foss (2990-3000)

SH: Gray (3000)

SH: Red/gray, sandy (3010)

LS: Cream/gray, dense, foss, sl chalky, trace stain (3020)

SH: Gray/dark gray, silty (3030)

LS: Cream/gray, fine crystalline, foss, chalky (3040)

SH: Red/gray (3050)

SH: Dark gray (3060)

LS: Gray/dark gray mottled, dense, foss (3060)

SH: Gray (3070)

LS: Cream/lt gray, fine crystalline to dense, foss, (3060)

SH: Gray (3070)

LS: Cream/lt gray, fine crystalline to dense, foss, granular in part, chalky (3080)

LS: Cream/gray, fine crystalline, foss, granular-brecc, cherty (gray-foss-ang) (3090)

LS: Cream/tan, fine crystalline, foss, chalky, trace stain + SH; Dark gray (3100-3110)

LS: Cream/gray/tan, fine crystalline, foss. Chalky + SH; Red/gray (3120)

SH: Red/gray, silty-sandy (3130)

LS: Gray, fine crystalline, chalky (3130)

LS: Cream, fine to med crystalline, foss, chalky, cherty (3140)

SH: Red/gray (3150)

LS: Cream/gray, fine crystalline, foss w/chert inclusions, chalky (3150)

LS: Cream, fine crystalline, fossm chalk y (3160-3170)

SH: Black (3180)

SD: Tan/gray, fine grained, calc (3190)

SH: Red/gray, silty (3200)

LS: Cream, fine crystalline, foss, chalky (3200)

SH: Black (3220)

LS: Cream/tan, fine crystalline, foss, granular, cherty (3220)

LS: Cream/gray, fine crystalline to dense, sl foss, chalky + SH; Red (3230)

SH: Red/gray (3240)

LS: Cream/ltgray, fine crystalline, foss, sl dolo, chalky (3240)

LS: Cream/gray, fine crystalline to dense (3250)

Cherty (3260-3270)

SH: Black (3270)

LS: Gray, fine crystalline, to dense, sl foss, hard (3280)

SH: Red (3280)

SH: Red, silty w/calc nods (3290)

LS: Cream/white, fine crystalline, chalky, sl cherty (orange) (3295)

LS: Lt gray, fine crystalline to dense, sl dolo, cherty (3300)

SH: Red, silty-sandy (3310)

LS: Cream, fine crystalline, foss-granular chalky-soft (3315)

LS: Lt gray, fine crystalline to dense, foss, chalky, sl dolo (3320-3330)

SH: Black (3330)

LS: Gray, fine crystalline to dense, foss (3330)

SH: Red (3335)

SH: Red/gray + LS: Gray, dense + SD; Gray, fine grained, friable to well cem (3340)

LS: Cream, fine crystalline, foss, sl chalky (flood 3340)

LS: Cream, lt gray, fine crystalline to dense, foss, cherty trace moldic por, vssfo (45/15")

SH: Red (3350)

LS: Cream/gray, fine to medium crystalline, foss, granular w/trace poor moldic por, sfo (3360)

LS: Cream, fine crystalline foss, chalky-cherty (3370)

SH: Black (trace 3370/incr 72/20")

SH: Red (3372/20")

LS: Cream, fine crystalline, foss-granular w/moldic por, sfo, dor, (72/20") increase granular w/inter-gran por, increase sfo, odor, sat on dry (72/40")

SH: Red/gray (3372/40")

LS: Cream/lt gray, fine to med crystalline, foss w/intergran/intercrystalline por, chalky-cherty, sfo, odor, med to dark sat on dry (3380-90)

LS: Cream, fine crystalline, foss, chalky, trace moldic por, sfo, stain (3400)

LS: Cream, fine crystalline, foss-granular w/fair inter-gran por + LS; Tan, dense (3410)

LS: Cream, fine crystalline to dense, chalky (3420)

SH: Black (3420)

SH: Red/gray, silty-sandy (3430)

SH: Maroon/gray, silty (3440)

LS: Cream/lt gray, fine crystalline to dense, sl dolo, chalky (3440)

LS: Cream/tan, fine crystalline, chalky, trace moldic por, trace stain (3450)

SH: Black (3450)

SH: Maroon/gray, silty (3460)

LS: Cream, fine crystalline to dense, foss-granular w/fair intergran & moldic por, sfo (3460-70)

SH: Maroon/gray (3470)

LS: Cream, fine crystalline to dense, foss, trace moldic por, sso (3476/20")

SH: Black (trace 3476/40" increase 60")

SH: Red/gray, sandy (3490)

SH: Maroon/gray (3500)

LS: Cream, fine crystalline, chalky, sl dolo (3500-3510)

SH: Black (3520)

SH: Red/gray, silty-sandy (3520)

LS: Cream/lt gray, fine crystalline, w/trace yellow min stain (3520-30)

LS: Cream, fine crystalline, ool-gran, hard (3540)

SH: Red/gray, silty trace SD; Clear-coarse, subrounded (3540)

SH: Red/brown, sandy + SD; Gray, fine grained, friable (3550)

LS: Cream, fine crystalline, foss, chalky (3550)

LS: Cream, fine crystalline, foss-granular, hard (3550/15")

SH: Dark gray + SH; Red/gray, silty (3550/15")

Short trip @3242' to collars Strap 1.76 STB

Sample tops are approximately 5 to 6 feet high to E-log tops.