

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

BACH OIL PRODUCTION
WELL: GAFFNEY UNIT#1

LOC.: 920' FNL & 2475' FWL
 SEC. 26-1-19W
 PHILLIPS COUNTY, KANSAS
 API: 15-147-20661-00-00

DRILLING CONTR.: MURFIN RIG #16
 SPUD: 02-28-12 COMP: 03-05-12
 MUD UP: 2950' TYPE MUD: CHEM.
 DRILL TIME: 3000 to' RTD
 RTD: 3840' LTD: 3842'
 SAMPLES SAVED: 3050'-RTD
 GEOLOGIST: ROBERT J. PETERSEN

ELEVATION
 KB: 2170
 GL: 2165
 LOG MEASURED FROM: KB

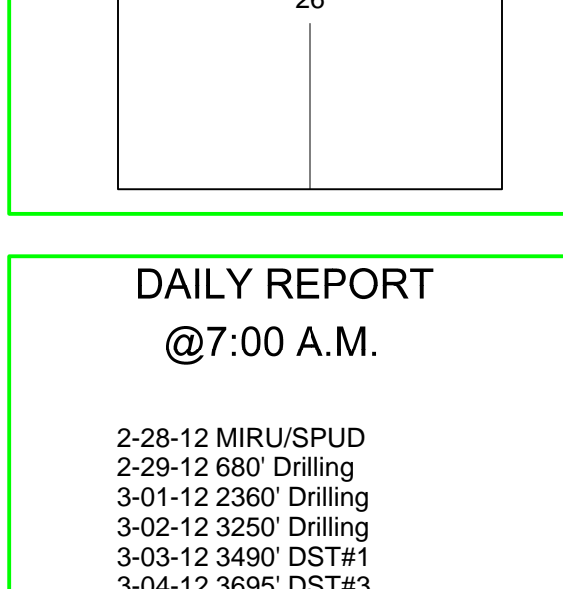
SURFACE CASING
 20# 8 5/8" Casing set @ 229 w/170 SX

PRODUCTION CASING
 N/A D&A

WELL LOG SURVEYS
 DIL/CDL/MICRO

ELECTRIC LOG TOPS

FORMATION	DEPTH	DATUM	POSITION
Stone Corral	1793	+377	-6
Base Stone Corral	1805	+365	+5
Topeka	3134	-964	+6
Heebner	3341	-1171	+12
Toronto	3368	-1198	+10
Lansing	3386	-1216	+10
Base Kansas City	3602	-1432	+12
Arbuckle	3777	-1607	+80



REFERENCE WELL:
 B & R
 E. Richards #1
 NW NW SW
 24-1-19W

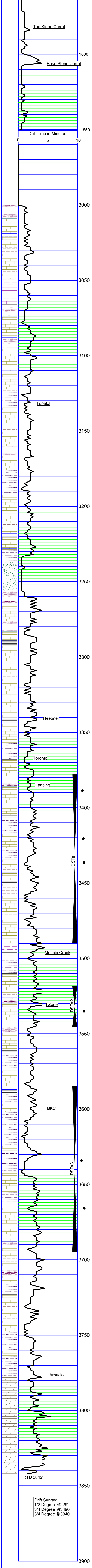
DAILY REPORT
@ 7:00 A.M.

REMARKS AND RECOMMENDATIONS

Due to negative DST results this test was plugged and abandoned.

Respectfully submitted,
Robert J Petersen
 Robert J Petersen

2-28-12 MIRU/SPUD
 2-29-12 680' Drilling
 3-01-12 2360' Drilling
 3-02-12 3250' Drilling
 3-03-12 3490' DST#1
 3-04-12 3695' DST#3
 3-05-12 3840' RTD



SAMPLE DESCRIPTION

LS: Gray/cream, fine crystalline, foss, chalky + SH; Black, carb (3060)

LS: Tan, fine crystalline to dense (3070)

SH; Dark gray (3070)

LS: Gray/tan, fine crystalline to dense, foss + SH; Gray, silty (3080)

LS: Cream/dark gray mottled, mottled, fine crystalline to dense, foss, sl chalky + SH; Gray (3090)

SH; Red, silty, soft (3090)

LS: Cream, fine crystalline, chalky (3090)

LS: Gray/tan, fine crystalline to dense, foss (3100)

SH; Gray, silty (3110)

LS: Gray/tan, dense, foss (3120)

LS: Gray, dense, foss, cherty (3130)

SH; Black (3140)

LS: Cream/gray, fine crystalline to dense, hard, fossil mottled (3150)

LS: Cream/gray, dense, cherty, chalky (3160)

LS: Dark gray, dense, foss (3170)

SH; Black (3170)

LS: Cream/lt gray, fine crystalline to dense, foss, chalky, cherty (3180)

LS: Cream, fine crystalline, foss, chalky, cherty (blocky-white-foss) trace stain (3190)

SH; Gray, sandy (3200)

LS: Cream/tan, fine crystalline, foss, trace stain-dead flaky (3200)

SH; Gray (3210)

LS: Cream/lt gray, fine crystalline to dense, foss, chalky, trace stain (3220)

LS: Cream, fine crystalline, foss w/poro moldic por, trace stain, cherty (3230)

LS: Cream/lt gray, fine crystalline to dense, chalky (3240)

SH; Red/gray (3260)

SH; Red/maroon, sandy (3280)

SH; Red, silty (3290)

LS: Cream/lt gray, fine crystalline, foss, chalky (3290)

SH; Red (3300)

LS: Cream/lt gray, fine crystalline, foss, chalky, cherty (3303 15')

SH; Black (trace 3310)

LS: Cream/lt gray, fine crystalline, foss, trace vug por, trace stain (3310)

SH; Red/gray (3330)

LS: Cream, fine crystalline, foss, subgranular, chalky-soft white, cherty (3340)

LS: Cream/lt gray, fine crystalline to dense, chalky + SH; gray (3350)

LS: Cream/lt gray, fine crystalline, foss, chalky (3360)

SH; Black (flood 3360)

LS: Tan/gray, dense, foss, sl mottled, hard, cherty (3370)

SH; Gray, silty (3370)

SS: Tan/gray, fine grained, silty + SH; Red/gray (3380)

LS: Cream/tan, fine crystalline, foss-granular w/trace intergran por, cherty+ LS; Tan, dolomitic, chalky (3380/15')

LS: Cream w/yellow mineral stain, fine crystalline, foss, subgranular, chalky (3380/20')

SH; Red/gray, sandy (3390-3395)

SH; Red, silty (3395/15')

LS: Cream, fine crystalline, ool, granular, fair to good intergran & moldic por, sfo, light brown stain on dry (3395/15')

LS: Lt gray/cream, fine crystalline, foss, chalky (95/30')

LS: Lt gray, dense, cherty (3410)

LS: cream, fine fine crystalline, foss, chalky (3420)

SH; Black (trace 3420)

SH; Red/maroon/green, silty-sandy (3430)

LS: Cream, fine crystalline, foss, subgran, trace poor moldic por, some coarse crystalline calc regrowth, ssfo (3430)

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

SH; Red, silty-sandy (3450)

LS: Cream, fine crystalline, foss-granular, very cherty w/poor intergran por, ssfo (black) sl dolo (3450)

LS: Cream, fine crystalline, chalky, sl dolo, trace stain, abundant chert(blocky translucent gray)(3460)

SH; Black (3470)

SH; Red/gray, silty (3470)

LS: Cream, fine crystalline, sl foss, chalky-soft, trace ppt por, ssfo, no odOr(3480)

SH; Maroon/gray, silty-gummy (3490)

LS: Cream/tan, fine crystalline, sl foss, dolomitic (3490/20')

LS: Cream/lt gray, fine crystalline to dense, chalky (3490/40')

LS: Gray, fine crystalline to dense, foss, sl cherty, tr edge stain (3510)

SH; Black (3510)

SH; Maroon/gray (3520)

LS: Cream/gray, fine crystalline, foss, subgranular, sl dolo, cherty (3530)

SH; Gray/dark gray (3540)

SH; Maroon, silty (3545)

LS: Cream/lt gray, fine crystalline to dense, sl foss, trace moldic por, sfo, dark sat on dry (3545/20')

LS: Cream, fine crystalline to dense, foss-granular, w/fair intergran/vug por, sfo, odor dark sat on dry (3545/20')

LS: Lt gray, fine crystalline, foss, granular, varigated/poorly sorted, sl brecciated, w/fair intergran/moldic por, sfo, odr (3545/60')

SH; Maroon/gray (3550-3560)

LS: Cream/tan, fine crystalline, sl dolo, chalky (3570)

trace ppt por, light stain (3580)

SH; Black (3580)

SH; Red/gray (3580)

LS: Cream, fine crystalline, sl foss, sl dolo, hard, subchalky (3590)

LS: Cream, fine crystalline, ool-granular, sl dolo + LS; Lt gray, fine crystalline (3600)

SH; Black (3610)

LS: Gray, dense (3610)

SH; Red/gray, silty (3610)

LS: Cream/lt gray, fine crystalline, ool, chalky (3620)

LS: Gray, fine crystalline to dense, hard, trace stain (3630)

SH; Red/gray, silty -sandy (3630)

SH; Red, calc, very sandy w/hard SS nods (3640)

LS: Lt gray, fine crystalline, sl foss, hard (3640)

SH; Red/gray + SS; Gray, very fine grained, friable to well-cem, vsso + LS; Gray, fine crystalline, sandy (3650)

SH; Dark brown hard (3660)

LS: Cream, fine grained, calc, purple mineral stain + LS; Cream w/purple min stain, sandy w/trace frac por, trace dead stain (3660)

SH; Maroon/gray, sandy + SH; Green + SS; Gray, hard, calc (3670)

LS: Cream, fine crystalline to dense, foss, cherty w/poor moldic por, trace stain, ssfo dark stain on dry + SS; Gray, very fine grained, friable + Chert, sandy texture, gray, light stain -bright fl (3680)

LS: Cream, fine crystalline to dense, + SS; Gray/cream, fine grained, hard + SH; Red/gray (3695)

LS: Gray, dense, block, foss, brecciated w/shale inclusion + increase Red/gray shale (3695/20')

LS: Cream, fine crystalline, sandy, chalky + Chert; Gray, sandy, hard (3695/40')

LS: Cream/lt gray, fine to medium crystalline, ool, trace stain (3710)

SH; Red, silty-sandy + SH; Black (trace) (3720)

LS: Cream/gray, medium crystalline, ool, chalky (3720-3730)

trace Chert; Gray w/dead stain + SH; Red/gray (3730)

Sand; Clear, well-rounded, medium grained, few clusters, SS; Hard, + SH; Gray, gummy, trace Chert; Gray-slightly pitted/blue-gray-foss (3740)

Sand; Clear, Red, very shaley + LS; Gray/tan, dense, trace chert, trace SH; Olive green/black (3750)

Cgl; Red/Shaley w/Chert; Olive/yellow, angular + SS; Clear coarse grained+ LS; Cream/lt gray, dense, weathered hematite nods (3760)

SH; Olive/maroon/red + Chert; White/cream, angular, t+ Chert; White, blocky, trace oolitic chert (arb) trace Qtzite: red, abundant hematite nods (3770)

Sand; Yellow/red, mineral stain, coarse, subangular to subrounded, poorly sorted, well-cem + SH; Olive/yellow, hard+ Chert + dense LS (3780)

Sand; Olive/red min stained, coarse, hard + Chert; Yellow/red, ool, trace dolo, abundant SH; Olive/gray, play to hard (3790)

Dolo; Red, ool, cherty w/trace moldic por (barren) + Dolo; Cream, medium crystalline, hard + SH; Red, hard (3800)

Dolo; Light gray/pink, fine to coarse crystalline + dense dolo (3810)

Dolo; Gray, fine to medium crystalline + dense, trace glauc, barren vug por + SH; Black (3820)

Dolo; Light gray/light tan, fine to coarse crystalline, sucrosic w/trace barren vug por, chalky (3830)

Dolo; gray, fine to coarse crystalline, trace barren vug por (3842)

Dolo; Cream/lt gray, coarse crystalline, chalky, vug por barren (3742/30')

Dolo; Gray/pink, coarse crystalline, vug por(barren) sl glauc (3842/60')

DST #1
 3378-3490
 45-45-60"
 IF: 1/4" built to 41/2"
 FF: Surface blow built to 4"
 Recovered: 10' MCO
 SIP: 965-903#
 FP: 19-22/23-24#

DST #2
 3518-3545
 60-45-30-45"
 IF: Weak built to 1"
 FF: None
 Recovered: 10' MCO
 SIP: 965-903#
 FP: 19-22/23-24#

DST #3
 3585-3695'
 45-45-60"
 IF: 1/2" built to 6 1/2"
 FF: Surface blow built to 5 1/4"
 SIP: 1148-1150#
 FP: 26-54/57-77#