

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

BACH OIL PRODUCTION

WELL: LUCY #2

LOC.: 2310' FNL & 330' FEL
 SEC. 3-2-19W
 PHILLIPS COUNTY, KANSAS
 API: 15-147-20720-00-00

ELEVATION

KB: 2203
 GL: 2198
 LOG MEASURED
 FROM: KB

SURFACE CASING

20# 8 5/8" Casing set @ 222 w/175 SX

PRODUCTION CASING

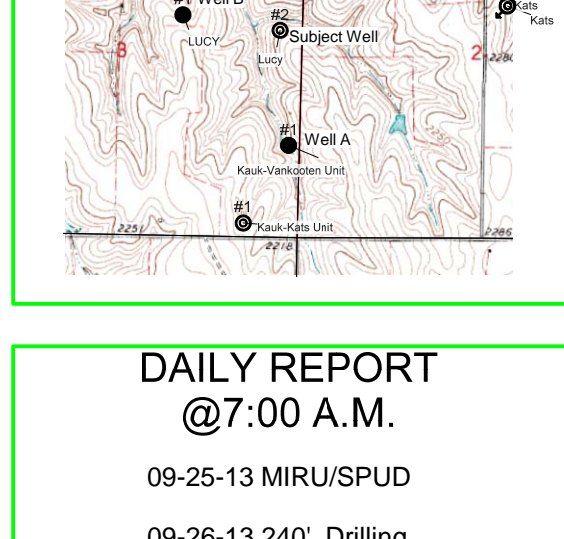
5 1/2" Casing set

WELL LOG SURVEYS

Compensated Density
 Dual Induction
 Micro

ELECTRIC LOG TOPS

FORMATION	DEPTH	DATUM	POS. A	POS. B
Stone Corral	1774	+429	-13	+6
Base Stone Corral	1795	+408	-13	+5
Topeka	3121	-918	-14	+3
Heebner	3333	-1130	+1	-1
Toronto	3360	-1157	-13	Flat
Lansing	3380	-1177	-9	Flat
Muncie Creek	3489	-1286	-11	+1
Stark	3553	-1350	-11	+1
Base Kansas City	3594	-1391	-10	+2
Arbuckle	3716	-1513	+13	N/A



REFERENCE WELL:

Bach KVK #1 SE SE NE SE 3-2-19W	Bach LUCY #1 2100' FNL & 1750' FEL 3-2-19W
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DAILY REPORT

@7:00 A.M.

09-25-13 MIRU/SPUD

09-26-13 2240' Drilling

09-27-13 2215' Drilling

09-28-13 3060' Drilling

09-29-13 3485' Drilling

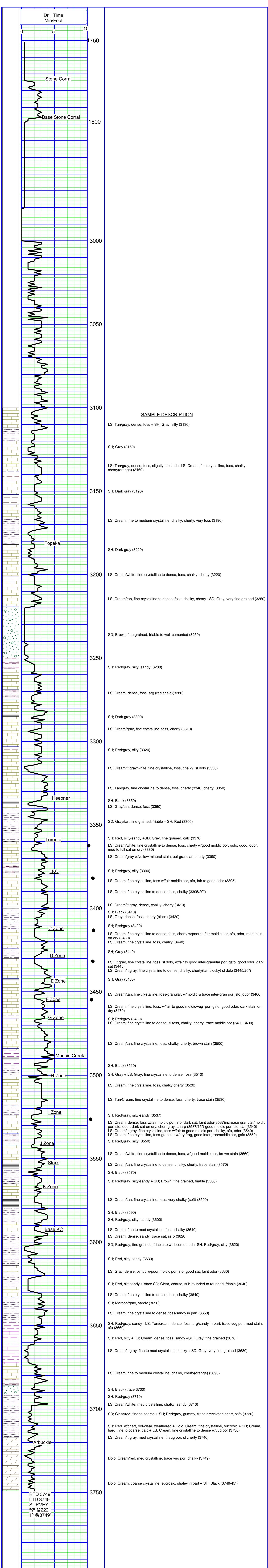
09-30-13 3749' RTD

REMARKS AND RECOMMENDATIONS

Production casing has been run to further test this well.

Respectfully submitted,

Robert J. Petersen
 Robert J. Petersen



SAMPLE DESCRIPTION

LS; Tan/gray, dense, foss + SH; Gray, silty (3130)

SH; Gray (3160)

LS; Tan/gray, dense, foss, slightly mottled + LS; Cream, fine crystalline, foss, chalky, cherty(orange) (3160)

SH; Dark gray (3190)

LS; Cream, fine to medium crystalline, chalky, cherty, very foss (3190)

SH; Dark gray (3220)

LS; Cream/white, fine crystalline to dense, foss, chalky, cherty (3220)

LS; Cream/tan, fine crystalline to dense, foss, chalky, cherty +SD; Gray, very fine grained (3250)

SD; Brown, fine grained, friable to well-cemented (3250)

SH; Red/gray, silty, sandy (3280)

LS; Cream, dense, foss, arg (red shale)(3280)

SH; Dark gray (3300)

LS; Cream/gray, fine crystalline, foss, cherty (3310)

SH; Red/gray, silty (3320)

LS; Cream/lt gray/white, fine crystalline, foss, chalky, sl dolo (3330)

LS; Tan/gray, fine crystalline to dense, foss, cherty (3340) cherty (3350)

SH; Black (3350)

LS; Gray/tan, dense, foss (3360)

SD; Gray/tan, fine grained, friable + SH; Red (3360)

SH; Red, silty-sandy +SD; Gray, fine grained, calc (3370)

LS; Cream/white, fine crystalline to dense, foss, cherty w/good moldic por, gsfo, good, odor, med to full sat on dry (3430)

LS; Cream/gray w/yellow mineral stain, ool-granular, cherty (3390)

SH; Red/gray, silty (3390)

LS; Cream, fine crystalline, foss w/fair moldic por, sfo, fair to good odor (3395)

LS; Cream, fine crystalline to dense, foss, chalky (3395/20')

LS; Cream/lt gray, dense, chalky, cherty (3410)

SH; Black (3410)

LS; Gray, dense, foss, cherty (black) (3420)

SH; Red/gray (3420)

LS; Cream, fine crystalline to dense, foss, cherty w/poor to fair moldic por, sfo, odor, med stain, on dry (3430)

LS; Cream, fine crystalline, foss, chalky (3440)

SH; Gray (3440)

LS; Lt gray, fine crystalline, foss, sl dolo, w/fair to good inter-granular por, gsfo, good odor, dark sat (3445)

LS; Cream/lt gray, fine crystalline to dense, chalky, cherty(tan blocky) sl dolo (3445/20')

SH; Gray (3460)

LS; Cream/tan, fine crystalline, foss-granular, w/moldic & trace inter-gran por, sfo, odor (3460)

LS; Cream, fine crystalline, foss, w/fair to good moldic/vug por, gsfo, good odor, dark stain on dry (3470)

SH; Red/gray (3480)

LS; Cream; fine crystalline to dense, sl foss, chalky, cherty, trace moldic por (3480-3490)

LS; Cream/tan, fine crystalline, foss, chalky, cherty, brown stain (3500)

SH; Black (3510)

SH; Gray + LS; Gray, fine crystalline to dense, foss (3510)

LS; Cream, fine crystalline, foss, chalky cherty (3520)

LS; Tan/Cream, fine crystalline to dense, foss, cherty, trace stain (3530)

SH; Red/gray, silty-sandy (3537)

LS; Cream, dense, foss w/fair moldic por, sfo, dark sat, faint odor(3537)increase granular/moldic por, sfo, odor, dark sat on dry, chert gray, sharp (3537/15') good moldic por, sfo, sat (3540)

LS; Cream/lt gray, fine crystalline, foss w/fair to good moldic por, chalky, sfo, odor (3540)

LS; Cream, fine crystalline, foss-granular w/bry frag, good intergran/moldic por, gsfo (3550)

SH; Red,gray, silty (3550)

LS; Cream/white, fine crystalline to dense, foss, w/good moldic por, brown stain (3560)

LS; Cream/tan, fine crystalline to dense, chalky, cherty, trace stain (3570)

SH; Black (3570)

SH; Red/gray, silty-sandy + SD; Brown, fine grained, friable (3580)

LS; Cream/tan, fine crystalline, foss, very chalky (soft) (3590)

SH; Black (3590)

SH; Red/gray, silty, sandy (3600)

LS; Cream, fine to med crystalline, foss, chalky (3610)

LS; Cream, dense, sandy, trace sat, ssfo (3620)

SD; Red/gray, fine grained, friable to well-cemented + SH; Red/gray, silty (3620)

SH; Red, silty-sandy (3630)

LS; Gray, dense, pyritic w/poor moldic por, sfo, good sat, faint odor (3630)

SH; Red, silt-sandy + trace SD; Clear, coarse, sub rounded to rounded, friable (3640)

LS; Cream, fine crystalline to dense, foss, chalky (3640)

SH; Maroon/gray, sandy (3650)

LS; Cream, fine crystalline to dense, foss/sandy in part (3650)

SH; Red/gray, sandy +LS; Tan/cream, dense, foss, arg/sandy in part, trace vug por, med stain, sfo (3660)

SH; Red, silty + LS; Cream, dense, foss, sandy +SD; Gray, fine grained (3670)

LS; Cream/lt gray, fine to med crystalline, chalky + SD; Gray, very fine grained (3680)

LS; Cream, fine to medium crystalline, chalky, cherty(orange) (3690)

SH; Black (trace 3700)

SH; Red/gray (3710)

LS; Cream/white, med crystalline, chalky, sandy (3710)

SD; Clear/red, fine to coarse + SH; Red/gray, gummy, trace brecciated chert, ssfo (3720)

SH; Red w/chert, ool-clear, weathered + Dolo, Cream, fine crystalline, sucrosic + SD; Cream, hard, fine to coarse, calc + LS; Cream, fine crystalline to dense w/vug por (3730)

LS; Cream/lt gray, med crystalline, tr vug por, sl cherty (3740)

Dolo; Cream/red, med crystalline, trace vug por, chalky (3749)

Dolo; Cream, coarse crystalline, sucrosic, shaley in part + SH; Black (3749/45')

RTD 3749'
 LTD 3749'
 SURVEY:
 3/4" @222'
 1" @3749'