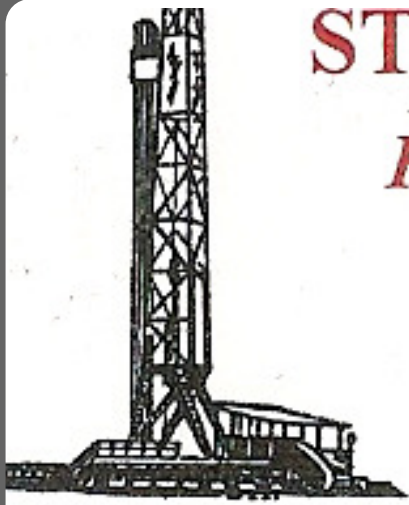


STEVEN P. MURPHY, P.G.

Petroleum Geologist (KS #228)



Cell 620.639.3030

Fax 785.387.2400

RR#1, Box 69

Otis, Kansas 67565

geomurphy@gbta.net

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: Schonthaler #4
API: 15-051-26683-00-00

Location: Ellis County

License Number: 34099

Spud Date: 4/23/2014

Region: Kansas

Drilling Completed: 5/01/2014

Surface Coordinates: 1813' FNL & 390' FWL (Approx. SE-NW-SW-NW)
Section 30-T11S-R19W

Bottom Hole Coordinates: Same as above (Vertical well w/min deviation)

Ground Elevation (ft): 2035'

K.B. Elevation (ft): 2041'

Logged Interval (ft): 2950 To: TD

Total Depth (ft): LTD - 3692'

Formation: Topeka through Arbuckle

Type of Drilling Fluid: Mud-Co/Service Mud. Inc.

Printed by STRIP.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Richland Oil Investments, LLC
Address: 608 E. 1st St
P.O. BOX 166
Palco, KS 67657

GEOLOGIST

Name: Steven P. Murphy, PG (KS License #228) & Anthony Luna
Company: Consulting Petroleum Geologist
Address: 3365 CR 390
Otis, KS 67565

LogTops (Datum)

Open-hole logging was performed by Pioneer Log-Tech. The following are formation tops w/associated datums:

Anhydrite Top -1406 (+635)
Anhydrite Base - 1456 (+685)
Topeka - 3057 (-1016)
Heebner - 3275 (-1234)
Toronto -3298 (-1257)
Lansing - 3315 (-1274)
Muncie Creek - 3436 (-1395)
Stark - 3501 (-1460)
Base KC - 3556 (-1515)
Arbuckle - 3625 (-1584)

DSTs

Drillstem testing was performed by Trilobite Testing (Hays shop):

DST #1 3318-3380 LKC ("ABCD")
 30:45:30:60
 IF: Blow built to 6-3/4", no return
 FF: Blow built to 4-1/2", no return
 Recovery: 95' OCM (20%O, 80%M)
 IHP: 1639 FHP: 1613
 IFP: 42-69 ISIP: 311
 FFP: 62-81 FSIP: 267
 BHT - 107 F

DST #2 3376-3396 LKC ("EF")
 30:30:30:30
 IF: Blow built to 1", no return
 FF: Blow built to 3-1/2", no return
 Recovery: 25' SOSM (1%O, 99%M)
 IHP: 1649 FHP: 1646
 IFP: 18-15 ISIP: 45
 FFP: 21-21 FSIP: 52
 BHT - 103 F


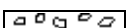












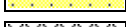


DST #3 3450-3524 LKC "HIJK"
 30:45:30:60
 IF: BOB in 10", built to 1-1/4"
 FF: BOB in 6", built to 3-1/2"
 Recovery: 189' GIP (100%G), 126' CO (100%O), 63' SGWCOM (5%G, 35%O, 15%W, 45%M)
 IHP: 1744 FHP: 1680
 IFP: 58-104 ISIP: 395
 FFP: 88-125 FSIP: 388
 BHT - 105 F

DST #4 3612-3628 (Arbuckle)
 30:45:30:60
 IF: BOB in 10", no return
 FF: BOB in 17", no return
 Recovery: 63' GIP (100%G), 5' CO (100%O), 126' SMCOW (30%O, 60%W, 10%M), 121' SOCMW (10%O, 70%W, 20%M), 63' SOSW (1%O, 99%W)
 IHP: 1784 FHP: 1704
 IFP: 25-112 ISIP: 1175
 FFP: 108-173 FSIP: 1176
 BHT - 113 F
 Chlorides - 40,000

COMMENTS

Based on the results of DSTs and log & sample analysis, 5-1/2" casing was set for production.

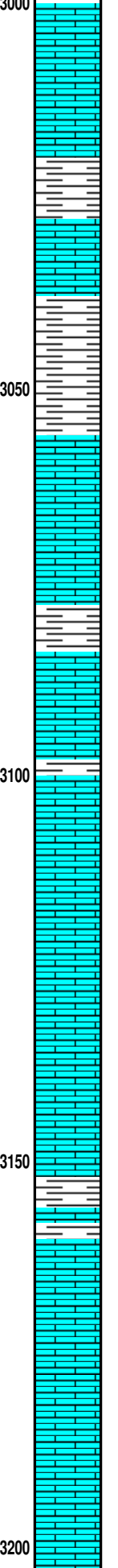
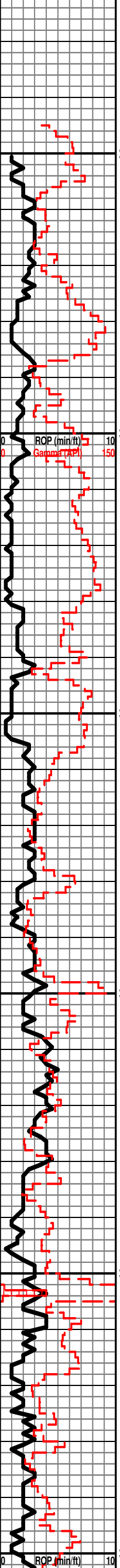
ROCK TYPES

 Anhy  Bent  Brec  Cht  Clyst	 Coal  Congl  Dol  Gyp  Igne	 Lmst  Meta  Mrlst  Salt  Shale	 Shcol  Shgy  Slstst  Ss  Till
---	---	--	---

OTHER SYMBOLS

OIL SHOW  Even  Spotted  Ques	 Dead  Gas	INTERVAL  Core  Dst	EVENT  Conn  Rft  Sidewall
--	---	--	---

Curve Track 1 ROP (min/ft) ——— Gamma (API) - - -	Depth	Lithology	Oil Shows	Geological Descriptions	REMARKS
0 ROP (min/ft) 10 0 Gamma (API) 150					Sample Tops (Datums) Anhydrite Top: 1406 (+635) Anhydrite Base: 1456 (+685)



ROP (min/ft) 10
Gamma Ray 150

LS: wht-tan, fxlIn, sl chalky, NS

LS wht-tan-gry, vfxIn, NS

SH: gry-brn

LS: wht-tan-gry, vfxIn, NS

SH: gry-grn

SH: same as above

LS: wht-tan-gry, vfxIn, sl ool, sl fos, NS

LS: wht-tan-gry, vfxIn, sl ool, NS

LS: wht-crm-gry, vfxIn, NS

SH: gry-grn

LS: wht-tan-gry, vfxIn, sl chalky, NS

LS: wht-tan-gry, vfxIn, sl cherty, sl fos, NS

SH: gry-grn

LS: wht-crm-gry, vfxIn, sl fos, NS

LS: wht-tan-gry, vfxIn, sl cherty, sl ool, sl fos, NS

LS: wht-crm-gry, vfxIn, sl cherty, sl ool, NS

LS: wht-tan-gry, vfxIn, sl cherty, sl fos, NS

SH: blk, carb

SH: gry-grn

LS: wht-tan-gry, vfxIn, sl cherty, NS

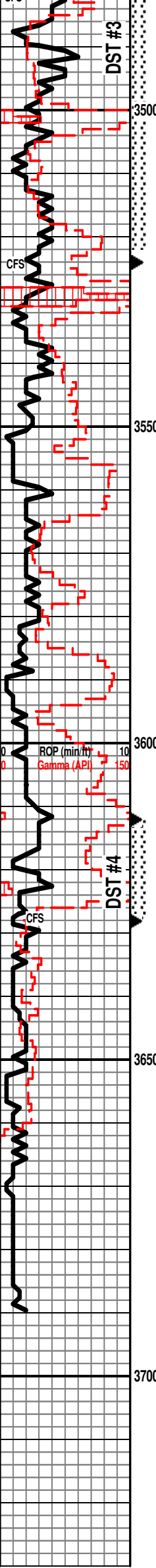
LS: same as above

bad sample (hole in drill pipe)

LS: wht-tan-gry, vfxIn, sl cherty, sl fos, NS

Topeka 3055 (-1014)

IFP: 58-104 ISIP: 395
FFP: 88-125 FSIP: 388
BHT - 105 F



SH: gry-grn-brn
LS: wht-tan-gry, vfxln, sl fos, pr intr-ool por, tr fo on brk (gsy), sl odor
SH: blk, carb
LS: wht-tan-gry, vfxln, pr intr-ool por, sl vug, tr fo on brk, sl odor
LS: wht-tan-gry, fxlIn, fr intr-ool por, sl vug, tr fo on brk, gd odor
SH: blk
LS: wht-tan-gry, vfxln, sl cherty, sl ool, NS
LS: same as above
SH: gry-grn-brn, wash red
LS: wht-tan-gry, vfxln, sl ool, NS
LS: wht-tan-gry, vfxln, sl cherty, sl ool, wash red, NS
SH: gry-grn-brn-red, wash red
LS: wht-tan-gry, vfxln, sl cherty, sl ool, wash red, NS
SH: gry-grn-brn, wash red
LS: wht-tan-gry, vfxln, cherty, sl ool, wash red, NS
LS: wht-tan-gry, vfxln, cherty, wash red, NS
SH: turq
Sst: clr, med grn, lite, NS
Dol: wht-tan, sucrosic & rhombic, gd intr-xln & vug por, ssfo, fr odor
Dol: wht, sucrosic & rhombic, fr intr-xln por, spotty stn, sl odor
Dol: wht-gry, sucrosic & rhombic, fr intr-xln por, tr fo on brk, fr odor
Dol: wht-gry, sucrosic & rhombic, fr intr-xln por, vssfo on brk, gd odor
Dol: wht-gry, sucrosic & rhombic, fr intr-xln por, spotty stn, fr odor
Dol: same as above
RTD - 3690'
LTD - 3692'

Stark 3498 (-1457)

BKC 3540 (-1499)

Arbuckle 3623 (-1582)

Survery @ 3628' 1-1/4

DST #4 3612-3628 (Arbuckle)
30:45:30:60
IF: BOB in 10", no return
FF: BOB in 17", no return
Recovery: 63' GIP (100%G), 5' CO (100%O),
126' SMCOW (30%O, 60%W, 10%M), 121'
SOCMW (10%O, 70%W, 20%M), 63' SOSW
(1%O, 99%W)
IHP: 1784 FHP: 1704
IFP: 25-112 ISIP: 1175
FFP: 108-173 FSIP: 1176
BHT - 113 F
Chlorides - 40,000