

STEVEN P. MURPHY, P.G.

Petroleum Geologist (KS #228)

RR#1, Box 69

Otis, Kansas 67565

geomurphy@gbta.net

Cell 620.639.3030

Fax 785.387.2400

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

**Well Name: Moore #22-3
API: 15-109-21594-00-00**

Location: Logan County

License Number: 34099

Spud Date: 7/23/2019

**Surface Coordinates: 2270' FSL & 1200' FWL (SE NE NW SW)
Section 22-T12S-R33W**

Bottom Hole Same as above, vertical well

Coordinates:

Ground Elevation (ft): 3098'

K.B. Elevation (ft): 3108'

Logged Interval (ft): 3700'

To: 4780'

Total Depth (ft): 4778' KB

Formation: Topeka through Mississippian

Type of Drilling Fluid: Chemical

Region: Kansas

Drilling Completed: 08/01/2019

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

OPERATOR

**Company: Richland Oil Investments, LLC
Address: P.O. Box 166
Palco, KS 67657-0166**

GEOLOGIST

**Name: Steven P. Murphy, PG
Company: Consulting Petroleum Geologist
Address: 2501 Zarah Drive
Great Bend, KS 67530**

LogTops (Datum)

**Anhydrite Top - 2590 (+518)
Anhydrite Base - 2612 (+496)
Heebner - 4012 (-904)
Toronto - 4036 (-928)
Lansing - 4056 (-948)
Muncie Creek - 4203 (-1095)
Stark - 4283 (-1175)
Hushpuckney - 4319 (-1211)
BKC - 4341 (-1233)
Marmaton - 4356 (-1248)
Pawnee - 4476 (-1368)
Myrick Station - 4518 (-1410)
Ft. Scott - 4535 (-1427)
Cherokee - 4562 (-1454)
Johnson Zone - 4606 (-1498)
Morrow Sh - 4644 (-1536)
Morrow Sst - 4658 (-1550)
Mississippian - 4702 (-1594)**

DSTs

Drillstem testing was performed by Mike Roberts with Trilobite Testing (Scott City shop):

DST #1 4604-4650 (Johnson Zone)

30:30:30:30

Rec: 5' SOCM (5%O, 90%M)

IHP: 2385 FHP: 2426

IFP: 33-34 ISIP: 66

FFP: 36-35 FSIP: 47

BHT - 120

DST #2 4644-4680 (Morrow Sst)

30:45:30:60

Rec: 30'SOCM (5%O, 95%M)

IHP: 2273 FHP:2373

IFP: 19-23 ISIP: 586




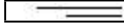
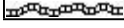
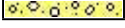


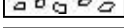
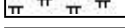




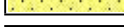
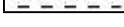

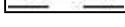
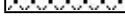
FFP: 26-24 FSIP: 181

BHT - 118


COMMENTS

Based on sample & log analysis and DST results, it was recommended that this well be plugged.

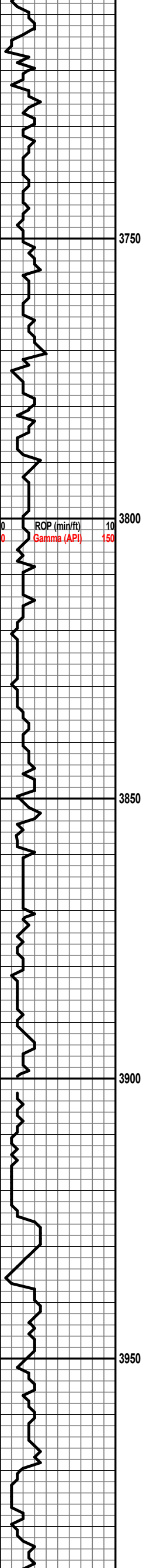
ROCK TYPES

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

OTHER SYMBOLS

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

	MD	Lithology	Oil Shows	Geological Descriptions	REMARKS
<p>Curve Track 1</p> <p>ROP (min/ft) ———</p> <p>Gamma (API) ———</p>	<p>3650</p> <p>3700</p>				<p>Southwind Rig #8</p> <p>Toolpusher - Doug Roberts</p> <p>MIRU 7/23/2019</p>



LS: cm-tan-gry, fxl, sl foss, dense NS

LS: as above

LS: as above w/blk-gry SH

LS: cm-tan, fxl, dense, chalky, NS

SH: red-gry-gm-blk

SH: as above

LS: cm-gry, mottled, NS (abund SH as above)

Sample not caught

LS: cm-tan, fxl, mostly dense, chalky, NS

LS: tan-gry, vfxl, chalky, dense, NS

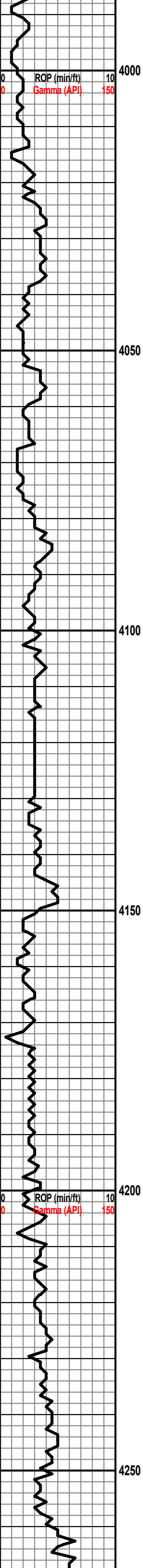
LS: cm-tan-bm, vfxl, dense, sl foss, NS

CFS 30 min @ 3900'

TOH to repair mud pump @ 3900'.

Strap @ 3900' found a 3' mistake long on the board, corrected it was still long 1.48'. Added 4' to this chart.

Deviation Survey @ 3900' - 1/4 degree



SH: blk

LS: cm-tan-gry, fxin, chalky, dense, NS

LS: blk, carb

SH: red-blk, gry, gm

LS: cm-tan, vfxln, foss, dense, NS

SH: gry-red-blk-gm

SH: as above

● LS: cm-tan-gry, fxin, foss, dense, tr blk stn, no odor, NSFO

SH: gry-gm

● LS: wht-tan-gry, fxin, sl foss, dense, tr blk stn, no odor NSFO

SH: blk-bm-gry

● LS: wht-tan-gry, fxin, chalky, sl ool, dense, spotty blk stn, sl odor, NSFO

LS: wht-tan-gry, vfxln, dense, chalky, NS

LS: as above

SH: gm-blk-gry

LS: wht-tan, vfxln, sl foss, oolitic, sl chalky, dense, NS

● LS: as above w/tr lite stn

LS: cm-tan-gry, vfxln, dense, NS (?sl odor)

SH: blk-gry

● LS: wht-tan-gry, fxin, oolitic, dense, tr fo/stn, sl odor

LS: wht-tan-gry, vfxln, dense, NS

LS: as above

SH: blk, carb

SH: blk-gry-gm

LS: wht-gry-bm, vfxln, dense, NS

LS: as above, slight odor

SH: blk-gry-gm

LS: cm-tan-bm, vfxln, cherty, dense, NS (sl odor)

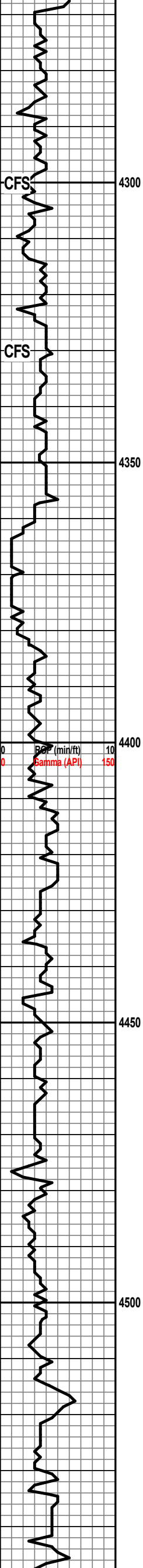
SH: bm-gry-gm-blk

HEEBNER 4014 (-906)

TORONTO 4038 (-930)

LANSING 4059 (-951)

MUNCIE CREEK 4206 (-1098)



① LS: cm-tan-bm, vfxln, dense, tr dk str, sl odor, NSFO

SH: blk, carb

STARK 4286 (-1178)

LS: wht-tan-gry, vfxln, dense, sl odor, NSFO

SH: blk-gry

LS: wht-gry, vfxln, dense, fr odor, NSFO

SH: blk, gry

HUSHPUCKNEY 4322 (-1214)

LS: cm-tan-gry, vfxln, dense, chalky, NS

LS: as above

BKC 4357 (-1249)

SH: blk-gry gm

SH: as above

SH: as above

MARMATON 4387 (-1279)

① LS: cm-tan-bm, fxl, dense, chalky, tr fo, sl odor

LS: tan-gry-bm, vfxln, dense, NS

SH: gry-gm-blk

LS: wht-gry-tan, vfxln, dense, NS (abund multi-colored shales & sand/silt)

LS-SH & Sst/siltstone as above

As above

SH: blk-gry-gm with LS: as above

LS: wht-cm-gry, vfxln, dense, NS

SH: blk, carb

PAWNEE 4479 (-1371)

LS: wht-tan, dense, cherty, NS

LS: as above

LS: cm-tan-gry, vfxln, chalky, cherty, dense, NS

SH: blk

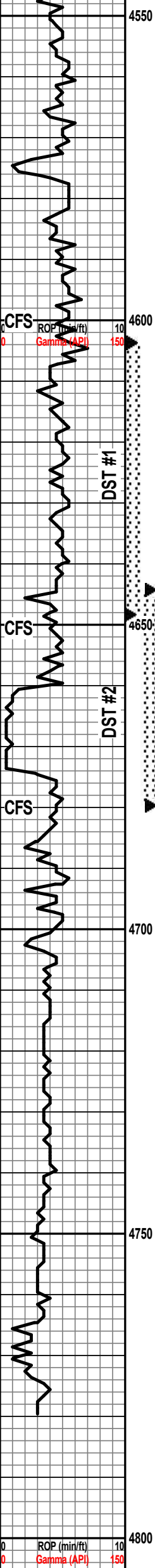
MYRICK STATION 4519 (-1411)

LS: tan-gry-bm, vfxln, dense, cherty, NS (slight odor)

SH: blk

FT SCOTT 4534 (-1426)

① LS: wht-tan-bm, vfxln, dense, ssfo, sl odor



LS: as above w/minor chert

SH: blk, carb

SH: as above

LS: cm-tan-bm, vfxln, dense, NS

LS: as above

SH: blk, carb

SH: blk-gry-gm

LS: cm-tan-gry, fxl, ssfo, fr ppt por, fr odor

LS: as above

LS: as above, gd ppt por, fr gd sfo, str odor

LS: as above

SH: blk-gry-gm

Sst: cl clusters, fine-med gm, sub-rd, friable to firm, sl-fr sfo, fr odor

LS: cm-tan-bm, vfxln, sandy inclusions, cherty, much multi-col shales, NS

LS: cm-tan-gry, vfxln, dense, abund chert, abund multic. shales

LS & SH: as above

LS: wht-tan-bm, vfxln, dense, chalky, cherty, mixed sandy clusters

LS & SST: as above

as above

as above

as above

LS: wht-tan, fxl, chalky, mixed sandy clusters

CHEROKEE 4565 (-1557)

Short trip 16 stands @ 4600'

JOHNSON ZONE 4611 (-1503)

DST #1 4604-4650 (Johnson Zone)
 30:30:30:30
 Rec: 5' SOCM (5%O, 90%M)
 IHP: 2385 FHP: 2426
 IFP: 33-34 ISIP: 66
 FFP: 36-35 FSIP: 47
 BHT - 120

Deviation Survey @ 4650' - 1 degree

MORROW SH 4655 (-1547)

MORROW SST (4660 (-1552)

DST #2 4644-4680 (Morrow Sst)
 30:45:30:60
 Rec: 30' SOCM (5%O, 95%M)
 IHP: 2273 FHP: 2373
 IFP: 19-23 ISIP: 586
 FFP: 26-24 FSIP: 181
 BHT - 118

MISSISSIPPIAN 4704 (-1596)

RTD - 4780'
 LTD - 4778'