

**Morning Report Depth/Activity**

10/17/2014, Spud.  
 10/18, drill @ 530'.  
 10/19, drill @ 2345'.  
 10/20, drill @ 3290'.  
 10/21, drill @ 3774'.  
 10/22, DST #1 @ 4060'.  
 10/23, drill @ 4153'.  
 10/24, DST #3 Straddle Test 4292'-4322'; BOH @ 4339'.  
 10/25, drill @ 4444'.  
 10/26, drill @ 4498'.  
 10/27, DST #7 @ 4590'.  
 10/28, DST #8 @ 4710'.  
 10/29, drill @ 4888'.

Mudco Check #1 @ 0'  
 10/17/14, predrilling  
 instructions.

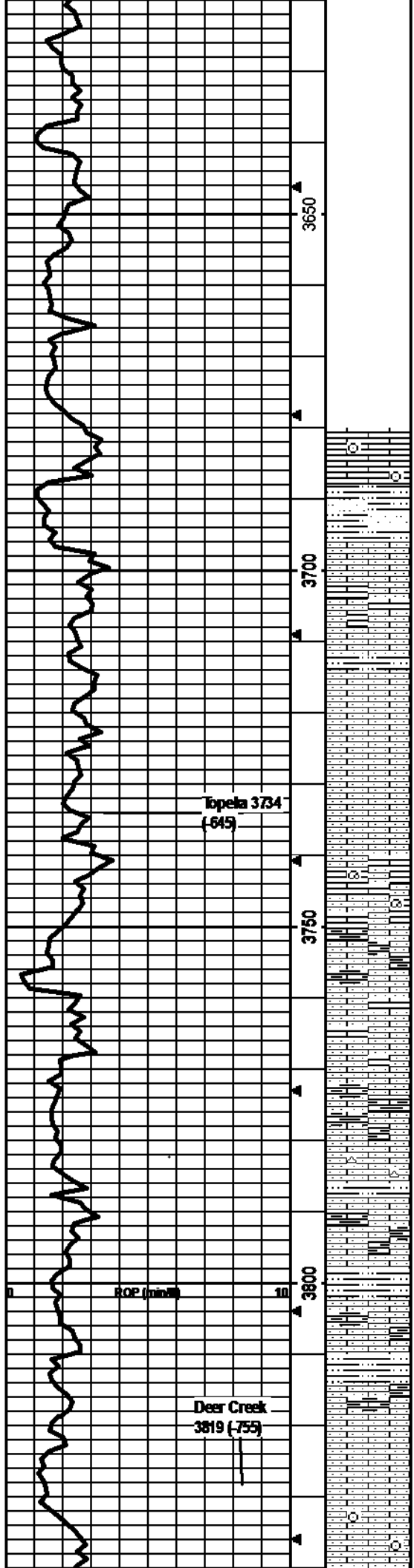
Mudco Check #2 @ 2234'  
 10/19/14 06:45am  
 wt vis pH chl  
 9.7 31 7.0 72000  
 Filt LCM  
 nic 1

Mudco Check #3 @ 3157'  
 10/20/14 06:45am  
 wt vis pH chl  
 9.8 30 7.0 36000  
 Filt LCM  
 nic tr

**Anhydrite: Top @ 2410', Base @ 2429' (based on drill time).**

**Drill cutting samples at 10' intervals start at 3500'.**

**ROP Data begins @ 3500' on 10/20/2014**



LS: wh/crm/lt-med gry, micro-med xtal, foss frags/crin, some chally, ppt-fn in-xtal por, no odor, ns.

SH: med-dk gry, silty/sndy, carb, firm, some brn/gry Sltstn/SS no odor, ns.

LS: lt-med gry, micro-med xtal, foss frags/brac, some silty/sndy, min frac por, no odor, ns.

LS: crm/lt-med gry, micro-med xtal, foss frags, silty, some ppt-fn in-xtal por, no odor, ns. Some SH: med-dk gry, silty, carb, firm, fissile

LS: lt-med gry, micro-med xtal, foss frags, vry silty/sndy, min ppt-fn in-xtal por, no odor, ns.

LS: crm/lt-med gry, micro-med xtal, foss frags, vry silty/sndy, some ppt-fn in-xtal por, no odor, ns.

LS: crm, micro-fn xtal, foss frags/gastro, some silty/sndy, some ppt-fn in-xtal por, no odor, ns.

LS: crm/lt brn, micro-fn xtal, min foss frags, vry silty, some arg, min ppt in-xtal por, no odor, ns.

LS: crm/lt brn/lt gry, micro-fn xtal, min foss frags, some vry silty, some chally, min ppt in-xtal por, no odor, ns.

LS: crm/lt-med gry/lt brn, micro-med xtal, foss frags, vry silty, vry arg, min ppt in-xtal por, no odor, ns.

LS: crm/lt gry/lt brn, micro-med xtal, foss frags, silty/sndy, wh/lt brn chert, some chally, no vis por, no odor, ns. Some SH: med-dk gry, silty, carb, soft-firm, fissile.

LS: lt brn/lt gry, micro-med xtal, foss frags, vry silty, arg, min ppt in-xtal por, no odor, ns. Some SH: med-dk gry, vry silty/sndy, carb, firm, fissile

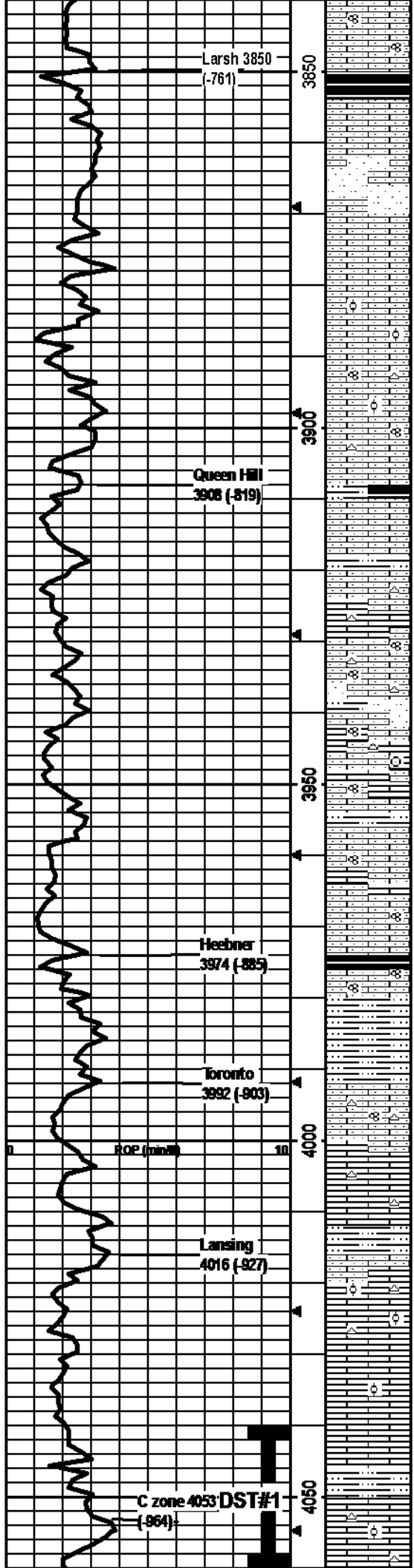
LS: lt brn/lt-med gry, micro-med xtal, foss frags, vry silty/sndy, some vry arg, some chally, some in-med in-xtal por, no odor, ns.

LS: lt brn/lt-med gry, micro-med xtal, vry silty/sndy, some arg, some chally, some ppt-fn in-xtal por, no odor, ns. SH: med-dk gry, silty, carb, firm fissile.

LS: crm/lt brn, micro-med xtal, foss frags, silty/sndy, some ppt-fn in-xtal por, no odor, ns.

LS: crm/lt brn/min lt gry, micro-fn xtal, foss frags/crin, silty/sndy, min ppt in-xtal por, no odor, ns.

Mudco Check #4 @ 3781'  
 10/21/14 07:00am  
 wt vis pH ch  
 8.8 52 10.5 3600  
 Fil: LCM  
 7.2 2



LS: lt brn/lt gry, micro-med xtal, foss frags/fusln, silty/sndy, some ppt-fn in-xtal por, no odor, ns.

SH: dk gry/blk, slt carb, firm, fissile, no odor, ns.

LS: lt-med brn/lt gry, micro-med xtal, foss frags, silty/sndy, some chalky, some ppt in-xtal por, no odor, ns.

LS as above w/Sltstn/SS: lt gry, pred qtz, some gl'ac, carb, hard, friable, no odor, ns

LS: lt-med brn/gry, micro-fn xtal, some foss frags, silty/sndy, some ppt in-xtal por, no odor, ns.

LS: crm/lt brn, micro-med xtal, foss frags/ool, silty/sndy, some chalky, some ppt-fn in-xtal por, no odor, ns.

LS: crm/lt gry-brn, micro-fn xtal, foss frags/fusln/min ool, silty/sndy, some wht/lt brn chert, some ppt-fn in-xtal por, no odor, ns.

SH: med-dk gry, carb, silty, soft-firm, fissile, no odor, ns.

LS: crm/lt brn, micro-fn xtal, some foss frags, vry silty/sndy, some ppt in-xtal por, no odor, ns.

SH: med-dk gry, silty, carb, firm, fissile, no odor, ns.

LS: crm/lt brn, micro-fn xtal, foss frags, some silty/sndy, some wht/lt brn chert, some ppt-fn in-xtal por, no odor, ns.

LS: crm/lt brn, micro-fn xtal, foss frags/fusln, silty/sndy, wht/lt gry chert, min ppt in-xtal/frac por, no odor, ns.

SH: lt-dk gry, vry silty/sndy/some lt gry Sltstn/SS, firm, fissile, no odor, ns.

LS: crm/lt gry-brn w/some gry inclus, fn-med xtal, foss frags/fusln/crin, some silty/sndy, some chalky, lt gry chert, ppt in-xtal por, 1 pce w/sfo, yel flor, no odor, ssfo.

LS: crm/lt gry, micro-med xtal, foss frags/fusln, some silty/sndy, some arg, some chalky, 8 pcs w/ppt-fn in-xtal por w/sfo, yel flor, no odor, ssfo. Some med-dk gry silty SH.

LS: lt-med brn w/some gry incs, micro-med xtal, foss frags/fusln, some silty/sndy, some chalky, ppt-fn in-xtal por, 1 pce w/sfo, yel flor, no odor, ssfo.

SH: dk gry/blk, slt carb, silty, firm, fissile, no odor, ns.

LS: lt-med brn/lt gry, micro-med xtal, foss frags/fusln, silty/sndy, some fn-med in-xtal por, no odor, ns.

SH: med-dk gry/blk/dk brn, carb, vry silty/sndy, soft-firm, fissile, no odor, ns.

LS: crm/lt-med brn/gry, micro-med xtal, foss frags/fusln, vry silty/sndy, wht/lt brn chert, some chalky, some ppt-fn in-xtal/frac por, no odor, ns.

LS: crm, micro-fn xtal, foss frags, min chalky, wht/crm chert, some frac por, no odor, ns.

SH: lt-med gry, carb, vry silty, firm-hard, fissile w/some friable, no odor, ns.

LS: crm/lt gry, micro-med xtal, foss frags/ool, some silty/sndy, some chalky, some crm chert, some ppt-fn in-xtal por, no odor, ns.

LS: crm, micro-fn xtal, foss frags/few ool, some chalky, min ppt in-xtal/frac por, no odor, ns.

LS: crm, micro-fn xtal, foss frags/min ool, some chalky, min ppt in-xtal por, no odor, ns.

SH: med-dk gry, vry silty/sndy, carb, some friable, firm, no odor, ns.

LS: crm/lt-med brn/gry, micro-med xtal, some foss frags w/few ool pcs, some gry chert, min ppt-med in-xtal por, no odor, ns. 60 min smpl had 15 pcs w/ppt-fn in-xtal por, w/sfo, cup odor, yel flor, gsfo.

CF 5 @ 4000'  
30"/60"

Mudco Check #5 @ 4060'  
10/22/14 06:45am  
wt vis pH chl  
9.2 64 9.5 4500  
F# LCM  
8.0 2

DST1) 4040-4060

Lansing C-zone  
30303030

1st) Surface blow dead in 20 min, no BB.

2nd) No blow, no BB.

FP 4-8#

ISP 1063#

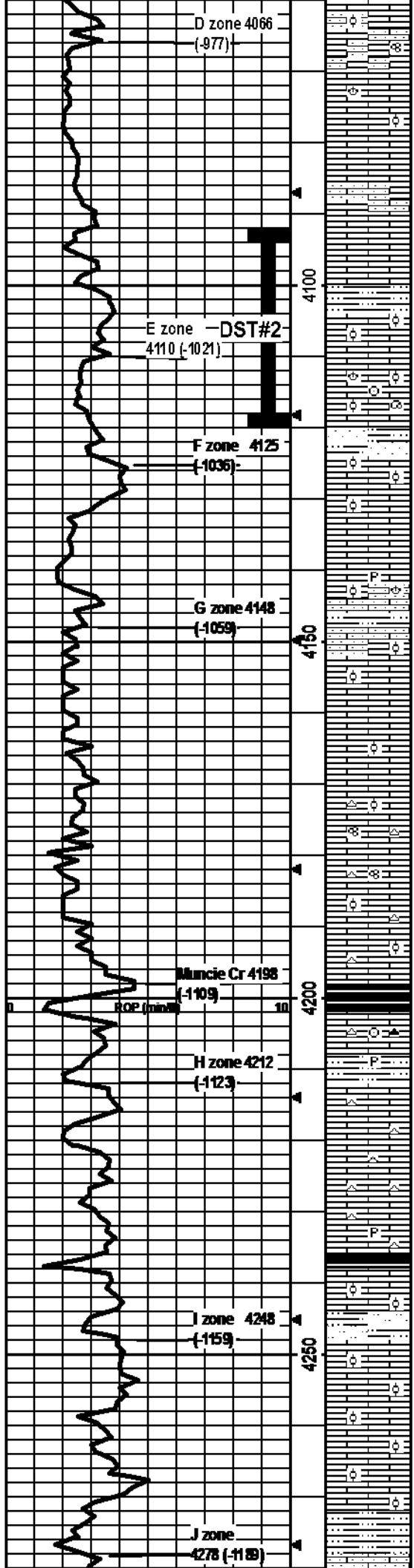
FFP 8-9#

FSP 1038#

HP 1917-1915#

Recrd: 5' oil spotted mud.

CF 5 @ 4060'



D zone 4066  
(-877)

E zone -DST#2  
4110 (-1021)

F zone 4125  
(-1036)

G zone 4148  
(-1059)

Muncie Cr 4198  
(-1109)

H zone 4212  
(-1123)

I zone 4248  
(-1159)

J zone 4278  
(-1189)

LS: crm/lt brn/lt gry, micro-fn xtal, foss frags/fusl n/ool, some silty/sndy, some chalky, some ppt in-xtal/frac por, no odor, ns.

LS: crm w/min lt brn, micro-fn xtal, foss frags/brac/ool, chalky, some ppt in-xtal por, no odor, 1 pce w/sfo w/ppt-fn in-xtal por, yel flor, ssfo.

LS: crm/lt brn/lt gry, micro-med xtal, foss frags, chalky, some silty/sndy, some frac por, no odor, ns.

LS: crm/lt brn/lt-med gry, micro-med xtal, foss frags, some chalky, min frac por, no odor, ns.

SH: med-dk gry, vry silty, carb, soft-firm, fissile.  
LS: crm/lt-med brn/lt gry, micro-fn xtal, foss frags w/some ool pcs, min chalky, 18 pcs w/ppt-fn w/min med in-xtal/in-ool por w/sfo, yel flor/cut, gd cup odor, g sfo.

LS: crm/lt brn, micro-med xtal, foss frags/ool/crin/gas/brac, some chalky pcs, 23 pcs in 30 min and 32 in 60 min smpls w/ppt-fn in-xtal/in-ool por w/sfo, sty cup odor, yel flor/cut, g sfo.

SH: med-dk gry/blk, slt carb, silty, some pyritic, soft-firm, fissile. Some SS: lt gry, vfr, sr-w, friable, hard.

LS: crm/lt brn/lt gry, micro-med xtal, foss frags/ool, 12 pcs w/ppt-fn in-xtal/in-ool por, gd cup odor, yel flor, g sfo.

LS: crm, micro-fn xtal, foss frags/min dense ool, some wht chalky pcs, some frac por, 2 ool pcs in both 30 & 60 min smpls w/in-xtal por w/sfo, yel flor, no odor in 30 min slt odor in 60 min, ssfo.

LS: crm/lt brn, micro-fn xtal, some foss frags/brac/ool, some silty/sndy, some chalky, some pyritic, min frac por, no odor, ns.

SH: lt-dk gry/gry-brn/lt green-gry, vry silty, carb, soft-firm, fissile.

LS: crm/lt brn, micro-med xtal, foss frags/ool, some silty/sndy, some chalky, min ppt-fn in-xtal por, no odor, ns.

LS: wht/crm/lt gry, micro-fn w/some opaque crs xtal s w/lea, min foss frags/ool, min ppt in-xtal/frac por, no odor, ns.

LS: crm/lt brn/min lt gry, micro-fn xtal, min foss frags/ool/fusl, wht/crm/lt gry chert, min in-foss/frac por, 1 ool pce w/sfo, no odor, ssfo.

LS: as above w/min ppt-med por, 1 ool pce w/sfo poss from above, no odor, ssfo.

LS: crm/lt brn/lt gry, micro-med xtal, some foss frags/ool, some crm/lt gry chert, some frac por, no odor, ns.

SH: dk gry/blk, silty, slt carb, firm, fissile.

LS: lt-med brn/med-dk gry, micro-med xtal, foss frags/min, dk gry/lt brn/lt gry lt brn chert, 8 pcs w/ppt-fn in-xtal/frac por w/sfo, slt odor, yel flor/cut, sfo.

SH: lt-dk gry, silty, slt carb, slt pyritic, firm, fissile.

LS: crm/lt gry, micro-fn xtal, min foss frags, some chalky, some wht/lt gry chert, min ppt in-xtal por, 1 pce w/ppt-fn in-xtal por w/sfo, yel flor/cut, slt crush odor, ssfo.

LS: crm/lt gry, micro-med xtal, foss frags, some chalky, wht/lt gry chert, min ppt-med in-xtal por, no odor, ns.

LS: crm/lt-med brn/lt gry, micro-med xtal, foss frags, wht/lt gry chert, some pyritic, min frac por, no odor, ns.

SH: blk, silty, slt carb, firm, fissile.

LS: crm/lt-med brn/med-dk gry, micro-med xtal, foss frags/ool, some frac por, no odor, ns.

SH: lt-med gry, vry silty, carb, soft-firm, some slt br: lt gry, pred qtz, arg, friable, no odor, ns.

LS: crm/lt-med brn/gry, micro-med xtal, foss frags/ool, some frac por, no odor, ns.

LS: crm/lt-med brn, micro-med xtal, foss frags/ool, some chalky, no odor, ns.

SH: med-dk gry/blk/lt green-gry, silty, some carb, soft-firm, fissile, no odor, ns.

30"/60"

DST2) 4092-4120  
Lansing E-zone

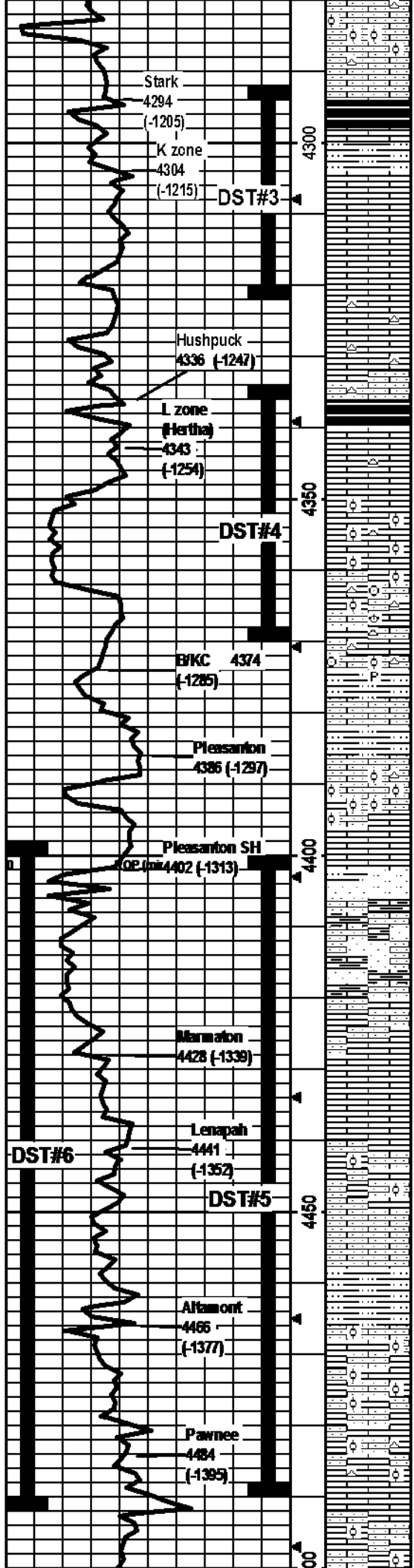
30/4-5/6 0/90  
1st) Surface blow increased to 3.5", no BB.  
2nd) Surface blow increased to 6.25", no BB.  
IFP 7-27#  
ISIP 1052#  
FFP 29-69#  
F SIP 1044#  
HP 2020-2015#  
Recvd: 125' SMCW.

CF S @ 4120'  
30"/60"

CF S @ 4140'  
30"/60"

Mudco Check #6 @ 4162'  
10/23/14 07:20am  
wt vis pH ch  
9.1 57 9.0 7000  
Fik LCM  
8.8 1

CF S @ 4230'  
30"/60"



LS: wht/crm/lt-med brn/lt gry, mi cro-med xtal, foss frags/abund ool pcs, some silty/sndy, some chalky, min wht chert, med-crs oo-castic/fn-med in-xtal por, no odor, ns.

SH: dk gry/blk, slit carb, firm, fissile.  
LS: lt brn, micro-fn xtal, some foss frags, 1 pce w/ppt-med in-xtal por w/sfo, yel flor, slit crush odor, ssfo.  
SH: lt-med gry/lt green-gry, v ry silty, carb, slit pyritic, soft-firm, fissile.  
LS: wht/crm/lt gry, micro-fn xtal, some foss frags, min chalky, 20 pcs w/ppt-med in-xtal por w/sfo, yel flor, slit odor, gsfo.

LS: crm/lt brn, micro-fn xtal, some foss frags, some chalky, 9 pcs w/ppt-med in-xtal por w/sfo, yel flor, slit odor, sfo.  
LS: crm/lt brn/lt gry, micro-fn xtal, min foss frags, some chalky, wht/crm/lt brn chert, 4 pcs w/ppt-med in-xtal por w/sfo, yel flor, crush odor, sfo.  
LS: crm/lt brn/lt gry, micro-fn xtal, some foss frags, silty/sndy, wht/crm/lt brn chert, 8 pcs in 30 min snpl w/ppt-med in-xtal por w/sfo, yel flor, crush odor, sfo.

SH: blk, carb, firm, fissile.  
LS: crm/lt-med brn, micro-fn xtal, foss frags, some chalky, min wht chert, 15 pcs w/ppt-med in-xtal por w/sfo, dul yel flor/cut, gd odor, sfo.  
LS: crm/lt-med brn/lt-med gry, micro-med xtal, foss frags/ool, abund chalky pcs, min wht chert, 7 pcs w/ppt-med in-xtal/fin-ool por, dul yel flor, slit cup odor, sfo.

LS: crm/lt brn/lt gry, micro-med xtal, foss frags/in frac/ool, some silty/sndy, some chalky, wht/lt brn/lt gry chert, ppt-med in-xtal/in-ool por and some med-crs oo-castic por, 1 ool pcs in 30 min snpl w/ppt-med in-ool por w/sfo, slit crush odor, ssfo.  
LS: crm/lt brn/lt gry, micro-med xtal, foss frags/in min ool pcs, some silty/sndy, some chalky, min ppt-med in-xtal por, 2 pcs w/ppt-med in-xtal por w/sfo, dul yel flor, no odor, ssfo.  
SH: lt-dk gry/red brn, slit carb, silty, slit pyritic, soft-firm, fissile

SH: lt-med gry, v ry silty, carb, soft-firm.  
LS: crm/lt-med brn, micro-fn xtal, foss frags/some ool pcs, some silty/sndy, some lt gry chert, some frac por, no odor, ns.  
LS: wht/crm/lt gry/lt brn, micro-fn xtal w/some med 2ndry xtal, foss frags/abund ool, some silty/sndy, min ppt-med in-xtal/in-ool oo-castic por, 1 ool pcs w/ppt-fn in-ool por w/sfo, slit crush odor, ssfo.

SH: lt-med gry, v ry silty/sndy, carb, soft-hard; Sltstn/SS: lt gry/lt brn, vf-4, pred qtz, carb, hard, friable, no odor, ns.  
LS: lt-med brn/lt gry, micro-med, foss frags, v ry silty/sndy, arg, min ppt-fn in-xtal por, 1 pcs w/sfo, dul yel flor, no odor, ssfo.  
LS/SHSS mix as above, 1 pce of LS w/ppt in-xtal por w/sfo, crush odor, ssfo.

LS: crm/lt brn, micro-fn xtal, foss frags, some silty/sndy, some chalky, 36 pcs w/ppt-fn in-xtal por w/sfo, dul yel flor, slit crush odor, gsfo.  
LS: crm/lt brn, micro-fn xtal, some foss frags, some chalky, 29 pcs w/ppt in-xtal/frac por w/sfo, dul yel flor, slit crush odor, gsfo. Some SH: lt-med gry/red brn, v ry silty, slit carb, firm, fissile.

LS: crm/lt-med brn/lt gry, micro-med xtal, foss frags/ool, some chalky, some silty/sndy, 7 pcs w/ppt-fn in-xtal/frac por w/sfo, dul yel flor, slit crush odor, sfo.  
LS: crm/lt brn/lt gry, micro-fn xtal, some foss frags, v ry silty/sndy, some frac por, no odor, ns. Some lt-med gry v ry silty firm SH.

SH: lt-med gry/red brn, silty, carb, soft  
LS: crm/lt brn, micro-med xtal, foss frags/ool, some silty/sndy, 22 pcs w/ppt-med in-xtal por w/sfo or staining, gd odor, yel flor, gsfo.  
LS: crm/lt brn, micro-med xtal, foss frags/ool some silty/sndy, 2 pcs w/ppt-med in-xtal por w/sfo/staining, slit odor, yel flor, sfo.

LS: crm/lt gry/lt brn, micro-med xtal, foss frags/some ool pcs, some silty/sndy, lt gry chert, min frac por, no odor, ns.  
LS: crm/lt brn, micro-med xtal, foss frags/some dense ool, min chalky, some silty/sndy, min ppt-fn in-xtal/frac por, no odor, ns.

CF 5 @ 4290'  
30"/60"

**DST3) 4292-4322**  
**Lansing K-zone**  
**Straddle Test;**  
**BOH @ 4339**  
30/15/15/15  
1st) Surface blow increased to 1/4" in 10 min and died in 26 min; no BB.  
2nd) No blow; no BB.  
IFP 5-9#  
ISIP 871#  
FFP 9-10#  
FSP 815#  
HP 2062-2057#  
Recvd: 6' mud.

CF 5 @ 4339'  
30"/60"

**DST4) 4334-4371**  
**Lansing L-zone**  
30453090  
1st) Strong blow @ BOB in 2 min; no BB.  
2nd) Strong blow @ BOB in 2.75 min; no BB.  
FFP 97-617#  
ISIP 1124#  
FFP 598-901#  
FSP 1127#  
HP 2075-2071#  
Recrd: 1980' water.

CF 5 @ 4371'  
30"/60"

**Mudco Check #7 @ 4370'**  
10/24/14 09:00am  
wt vis pH chl  
9.2 54 9.0 7400  
Fit LCM  
8.8 1

CF 5 @ 4400'  
30"/60"

**Mudco Check #8 @ 4440'**  
10/25/14 07:00am  
wt vis pH chl  
9.1 50 10.0 8000  
Fit LCM  
8.8 1

CF 5 @ 4440'  
30"/60"

CF 5 @ 4450'  
30"/60"

CF 5 @ 4460'  
30"/60"

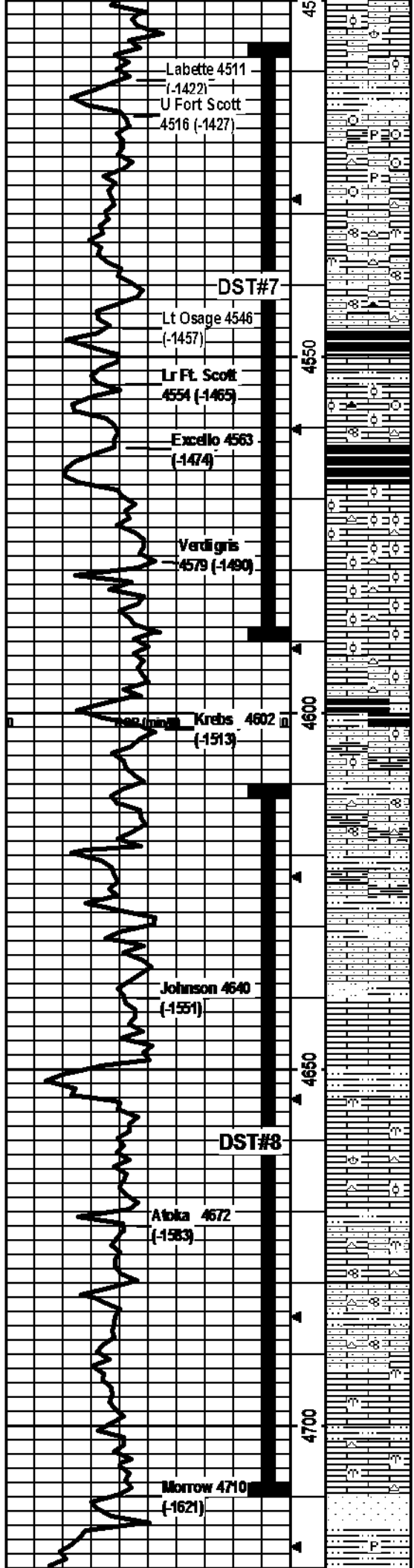
CF 5 @ 4470'  
30"/60"

CF 5 @ 4480'  
30"/60"

CF 5 @ 4490'  
30"/60"

**Mudco Check #9 @ 4497'**  
10/26/14 07:00am  
wt vis pH chl  
9.1 65 9.5 9000  
Fit LCM  
9.6 1

**DST5) 4400-4490**



LS: crm/lt-med brn, micro-med xtal, foss frags/brac/dense ool, some vry silty/sndy, some e chalky, min ppt in-xtal/frac por, 1 pce w/ppt in-xtal por w/sfo, no odor, ssfo.

SH: lt-dk gry/bk, some vry silty, carb, firm fissile; some SS: lt gry, f-m, sr-wr, pred qtz, hard, friable; no odor, ns.

LS: lt-med brn, micro-med xtal w/some crs 2ndry xtal, foss frags/crn, some silty/sndy, some arg, min pyritic, some frac por, no odor, ns.

LS: crm/lt-med brn/lt gry, micro-med xtal, foss frags/crn, some silty/sndy, some chalky, min pyritic, wht/lt brn/lt gry chert, some frac por, no odor, ns.

LS: crm/lt-med brn, micro-med xtal, foss frags/bryzn/fusln, some silty/sndy, some chalky, wht/lt gry/lt brn chert, 15 pcs w/ppt-fn in-xtal/in-foss por, yel flor, gd odor, gsfo.

LS: crm/lt brn/lt gry-brn, micro-med xtal w/some 2ndry xtal, foss frags/fusln, some silty/sndy, crm/lt gry/lt brn chert, some frac por, 3 pcs w/ppt-fn in-xtal/in-foss por w/sfo, yel flor, no odor, sfo.

SH: dk gry/bk, carb, silty, firm-vry firm fissile.

SH: med-dk gry, silty, carb, firm, fissile.

LS: crm/lt brn/lt gry, micro-med xtal, foss frags/fusln in ool, some chalky, crm/lt brn chert, 17 ool pcs w/ppt-med in-xtal-in-ool por w/sfo, yel flor/cut, st odor, gsfo.

SH: dk gry/bk, silt carb, firm-hard, fissile. LS from above: w/14 ool pcs w/sfo, gd odor.

LS: crm/lt-med brn/min lt gry, micro-med xtal, foss frags/ool, some chalky, some wht/lt-med brn chert, 21 pcs w/ppt-fn in-xtal-in-ool por w/sfo or staining, yel flor/cut, gd odor, gsfo.

LS: as above, w/lighter ppt in-xtal-in-ool por, 15 pcs w/sfo or staining, gd odor, gsfo.

LS: crm/lt-med brn/lt gry, micro-in xtal, foss frags/some ool, some chalky, some e silty/sndy, lt gry/brn chert, 4 pcs w/ppt-fn in-xtal-in-ool por w/sfo, dul yel flor, no odor, sfo.

SH: lt-dk gry/bk, some silty, silt carb, fissile.

LS: crm/lt-med brn/lt gry, micro-med xtal, foss frags/few ool pcs, some vry silty/sndy, arg, some chalky, frac por, no odor, ns.

LS: crm/lt-med brn/lt-dk gry, foss frags/fusln, some vry silty/sndy, arg, some chalky, some brn chert, some frac por, 1 pcs w/ppt-fn in-xtal por w/sfo, dul yel flor, no odor, sfo. SH: lt-med gry/lt gry-brn, vry silty, carb, soft-firm.

LS: lt-med brn/lt gry-brn, micro-in xtal, foss frags, silty/sndy, some arg, 4 pcs w/ppt-fn in-xtal por w/sfo or staining, dul yel flor, no odor, sfo. SH: brn/lt gry-brn/lt gry, silty, carb, soft-firm.

LS: crm/lt-med brn/lt gry-brn, micro-med xtal, foss frags, some silty/sndy, some frac por, no odor, ns. SH: lt-dk gry, vry silty, carb, soft-firm, some silt in: lt gry, pred qtz, no odor, ns.

LS: crm/lt-med brn, micro-in xtal, foss frags, some chalky, 24 pcs w/ppt-med in-xtal/frac por w/sfo or staining, dul yel flor, gd odor, gsfo.

SH: lt-dk gry, silt carb, silty, firm, fissile.

LS: crm/lt-med brn, micro-med xtal w/some crs 2ndry xtal, foss frags/bryzn, approx 10-15% of smpl w/ppt-med in-xtal por w/sfo, yel flor, sty odor, vgsfo.

LS: lt-med brn, micro-med xtal, foss frags/brac/some ool, crm/lt brn chert, 23 pcs w/ppt-med in-xtal por w/sfo, yel flor, gd odor, gsfo.

SH: lt-dk gry, carb, vry silty/sndy, firm, fissile.

LS: crm/lt-med brn, micro-med xtal, foss frags/bryzn/fusln, some silty, crm/lt brn chert, 19 pcs w/ppt-med in-xtal por w/sfo, yel flor, gd odor, gsfo.

LS: wht/crm/lt brn, micro-in xtal, foss frags/bryzn, some silty, some chalky, lt-dk brn chert, approx 10-15% of smpl w/ppt-med in-xtal por w/sfo, yel flor, sty odor, gsfo. SH: med-dk gry/lt green-gry, carb, firm.

LS: crm/lt brn, micro-in xtal, foss frags/bryzn, 27 pcs w/ppt-fn w/min med in-xtal por w/sfo, yel flor, sty odor, gsfo. Flood of med-dk gry/red brn silty SH.

LS: crm/lt brn, micro-in xtal, foss frags/bryzn, some e chalky, lt brn chert, 26 pcs w/ppt-med in-xtal-in-foss por, yel flor, sty odor, gsfo.

SH: lt-dk gry/bk/lt brn, some vry silty, carb, some pyritic, soft-hard; SS: wht/lt gry/opaque, v-f, sr-wr, soft-hard, friable, ns. Some LS w/sfo from above.

Pleasanton SH thru Pawnee  
304/560/90  
1st) Blow @ BOB in 6 min; BB increased to 8".  
2nd) Blow @ BOB in 7 min; BB @ BOB in 60 min.  
IFP 23-165#  
ISIP 1044#  
FFP 172-330#  
FSP 823#  
HP 2152-2145#  
Recvd: 60' Oil, 250' GCMO (45% O, 40% M, 15% G), 500' GIP.

CF 5 @ 4540'  
30"/60"

DST6) 4398-4492 Pleasanton SH thru Pawnee Straddle Test BOH @ 4540  
304/560/90  
1st) Blow @ BOB in 9.5 min; BB increased to 1".  
2nd) Blow @ BOB in 11 min; BB @ increased to 8.5".  
IFP 13-121#  
ISIP 764#  
FFP 126-234#  
FSP 620#  
HP 2144-2126#  
Recrd: 180' Oil, 400' GCMO (60% O, 25% M, 15% G), 190' GP.

CF 5 @ 4590'  
30"/60"

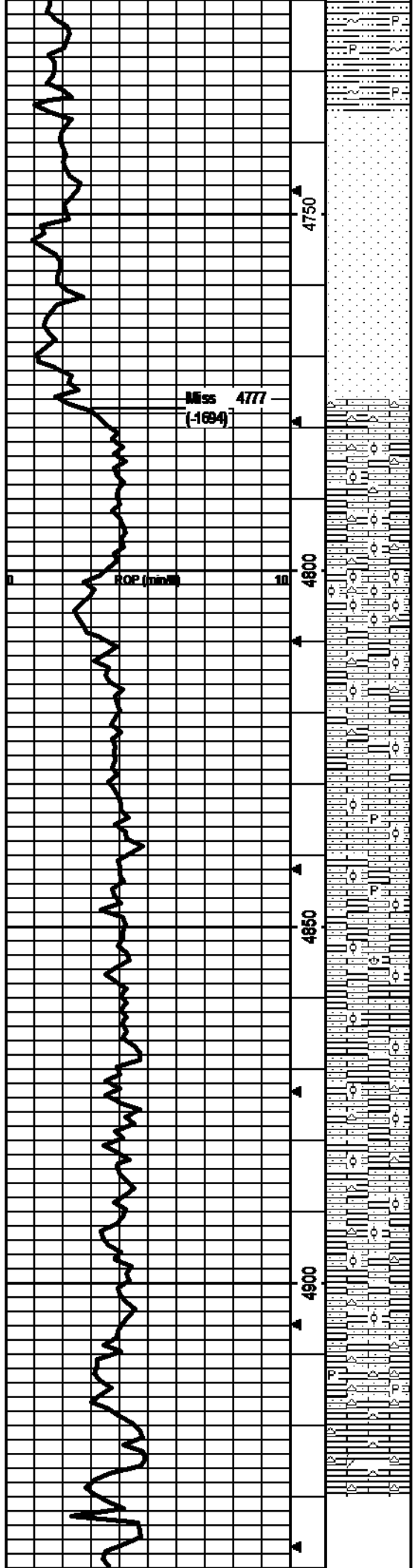
Mudco Check #10 @ 4590'  
10/27/14 08:50am  
wt vis pH chl  
9.0 63 10.0 6500  
Fit: LCM  
8.8 1

DST7) 4506-4590 Upper Ft Scott thru Verdigris  
301/515/15  
1st) Surface blow increased to 1/2" in 10 min and died; no BB.  
2nd) No blow; no BB.  
IFP 7-9#  
ISIP 103#  
FFP 8-9#  
FSP 70#  
HP 2136-2134#  
Recrd: 5' OSM.

DST8) 4610-4710 Krebs thru Atoka  
304/560/90  
1st) Surface blow increased to 1.75"; no BB.  
2nd) Surface blow increased to 1.75"; no BB.  
IFP 8-12#  
ISIP 102#  
FFP 11-45#  
FSP 95#  
HP 2208-2207#  
Recrd: 20' SOCM (5% O, 95% M).

CF 5 @ 4710'  
30"/60"

Mudco Check #11 @ 4710'  
10/28/14 07:50am  
wt vis pH chl  
9.0 75 10.0 6000



LS: lt-dk gry/brn/lt green-gry/lt mustard yel, some vry silty, glauc, pyritic, some carb, soft-firm, fissile, some SS as above, no odor, ns.

SH: as above, no odor, ns.

SS: wht/lt gry, opaque v-f, sr-wr, pred qtz, carb matrix, hard, friable, in-par por, no odor, ns.

SS: wht/lt gry/lt blue-green, f-vf, wr, pred qtz, glauc, some carb matrix/some arg, hard, most friable, in-par por, no odor, ns.

SS: as above, no odor, ns.

SS: wht/lt blue-green, f-m, sr-wr, pred qtz, min glauc, some vry arg, carb matrix, hard, friable, some in-par por; no odor, ns.

SS: same as above, no odor, ns.

LS: wht/crm/lt brn, micro-fn xtal, some vry sndy, some vry chalky, abund wht/lt brn/lt orange chert, 7 lt brn micro-xtal pcs w/ppt-crs in-xtal por w/slo, dul yel flor, no odor, sfo.

LS: wht/crm/lt brn/lt gry, micro-fn xtal, some dense ool pcs, some vry sndy, some vry chalky, lt-med brn/lt orange chert, some frac por; 2 pcs wht-in-crs in-xtal por w/slo, dul yel flor, no odor, sfo.

LS: crm/lt gry/lt gry-brn, micro-fn xtal, some dense ool pcs, some vry sndy, some chalky, some crm/lt brn/lt orange chert, some frac por; 2 pcs wht-in-med in-xtal por w/slo (poss from above), no odor, ns.

LS: wht/crm/lt brn, micro-med xtal, foss frags/abund dense ool pcs, some vry sndy, some vry chalky, abund wht chalky pcs, wht/crm chert, some frac por, no odor, ns.

LS: wht/crm/lt brn, micro-med xtal, some dense ool pcs, some vry sndy, some vry chalky, wht/lt brn/lt orange chert, min ppt-fn in-xtal/frac por, no odor, ns.

LS: crm/lt gry-brn, micro-med xtal, min ool, some vry sndy, some vry chalky, lt gry opaque chert, frac por, no odor, ns.

LS: wht/crm, micro-med xtal, ool, vry sndy, vry chalky, min pyritic, min frac por, no odor, ns.

LS: wht/crm/lt brn, micro-med xtal, ool, some vry sndy, some vry chalky, min frac por, no odor, ns.

LS: wht/crm/lt brn, micro-med xtal, some foss frags/frac/ool, some vry sndy, some chalky, some frac por; no odor, ns.

LS: crm/lt brn, micro-med xtal, min foss frags/ool, some vry sndy, min chalky, min frac por; no odor, ns.

LS: crm/lt-med brn w/min dk brn, micro-med xtal, min foss frags/ool, some sndy, min chalky, some crm/lt gry chert, min frac por; no odor, ns.

LS: crm/lt-med brn w/min dk brn, micro-fn xtal, min foss frags/some ool, some sndy, some crm/lt gry chert, min frac por; 1 pce wht staining in frac seam, yel flor; no cut, no odor, nsfo.

LS: crm/lt-med brn, micro-fn xtal, some ool, some sndy, some chalky, wht/lt gry chert, min frac por, no odor, ns.

LS: wht/crm/lt-med brn/lt gry brn, micro-fn xtal, min ool, min sndy, some wht/lt gry chert, min frac por, no odor, ns.

LS: crm/lt gry/lt brn, micro-fn xtal, some sndy, some pyritic, abund wht/crm/lt gry/lt brn chert, frac por, no odor, ns.

LS: lt gry-brn/lt-med brn, micro-med xtal, min abund ool pcs, grainy, some chalky, abund wht/lt gry chert, few pcs of wht-gry/lt brn Dolo, some frac por; 2 ool pcs w/ppt-fn in-xtal-in-oo por w/slo, dul yel flor, no odor, sfo.

9.0 58 10.0 6800  
Filt LCM  
8.8 2

CF S @ 4730'  
30"60"

CF S @ 4750'  
30"60"

CF S @ 4800'  
30"60"

CF S @ 4912'  
30"60"

