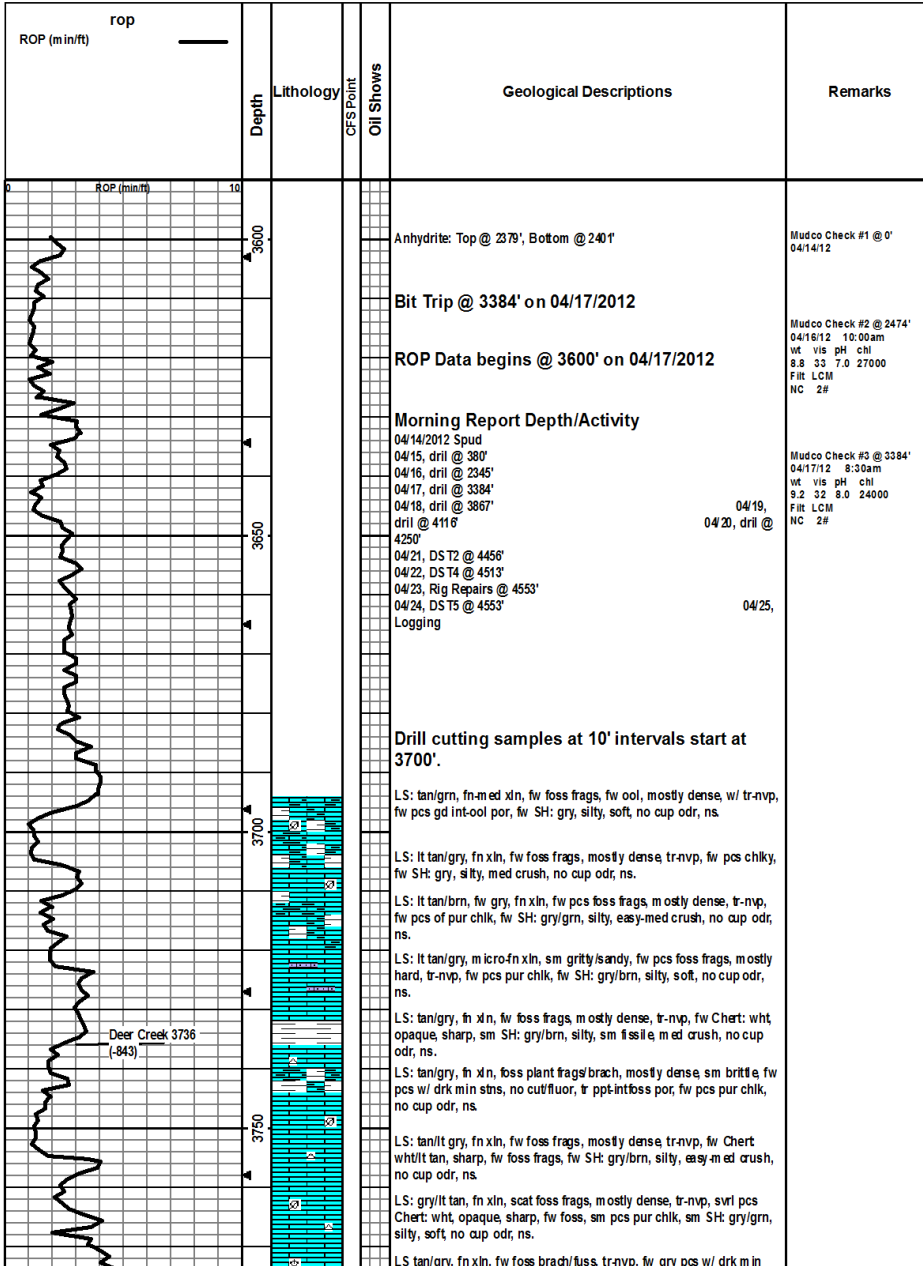
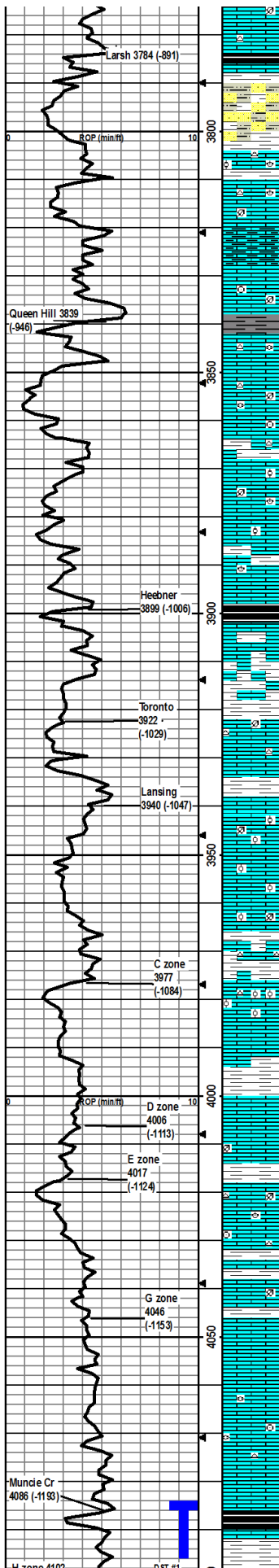


Toronto	3922'	-1029	3926'	-1033
Lansing	3940'	-1047	3946'	-1053
Muncie Creek Shale	4086'	-1193	4089'	-1196
Stark Shale	4174'	-1281	4177'	-1284
Hushpuckney Shale	4211'	-1318	4213'	-1320
Marmaton	4279'	-1386	4282'	-1389
Upper Fort Scott	4376'	-1483	4381'	-1488
Little Osage Shale	4398'	-1505	4400'	-1507
Excello Shale	4424'	-1531	4428'	-1535
Johnson Zone	4498'	-1605	4501'	-1608
Morrow	4518'	-1625	4521'	-1628
Mississippian	4543'	-1650	4547'	-1654
RTD	4640'	-1747		
LTD			4644'	-1751





stn, no cut/fluor, svrl Chert: wht opaque foss sharp, svrl SH: gry/grn/brn, silty, soft, no cup odr, ns.

LS: tan, fn xln, mostly dense, sm hard, tr-nvp, svrl Chert: gry/wht, sharp, fw SH: gry/grn/blk, silty, easy-med crush, fw carb, no cup odr, ns.

SS: gry/brn, vfn grn, silty, arg, easy crush, ppt int-grn por, sm SltStn: brn, silty, muddy, very soft, fw SH: gry/grn, silty, sm waxy, med crush, no cup odr, ns.

LS: gry/tan, fn xln, foss brach/crin, fw ool, tr-nvp, fw Chert: gry/wht, semi-trans, sharp, foss, fw SH: gry/grn, silty, sm waxy, med crush, no cup odr, ns, muddy dirty smpl.

LS: tan, fn xln, foss brach/crin/abund frags, mostly uniform, tr-nvp, fw pcs pur chlk, fw Chert: wht, opaque, foss, sharp, no cup odr, ns.

LS: tan/lt gry, fn xln, sm foss brach/frags, sm pcs dense/hard, tr-nvp, fw SH: gry/brn, silty, sm fissile, easy-med crush, no cup odr, ns.

LS: gry/tan, fn-med xln, sm foss crin/frags, sm pcs hard, tr-nvp, fw SH: drk gry/grn, silty, sm waxy, easy-med crush, no cup odr, ns.

LS: tan/lt gry, fn xln, foss brach/fuss, tr-nvp, fw pcs chlk, fw Chert: wht, opaque, foss, sharp, sm SH: gry/grn/drk gry, silty, fw fissile, easy-med crush, no cup odr, ns.

LS: tan, micro-fn xln, rare foss frags, mostly dense, tr-nvp, fw Chert: wht/grn, foss, sharp, sm SH: gry/grn, silty, sm waxy, easy-med crush, no cup odr, ns.

LS: tan/lt tan, fn xln, foss fuss/crin/frags, rare scat pr int-foss por, fw Chert: wht, opaque, sm SH: gry/grn/drk gry, silty, sm fissile, easy-med crush, no cup odr, ns.

LS: gry/tan, fn-med xln, fw foss brach/frags, sm ool, mostly hard, tr-nvp, fw pcs of chlk, fw SH: gry/grn, silty, easy-med crush, no cup odr, ns.

LS: gry/tan, fn xln, sm foss brach/ool, fw hard, mostly brittle, w/ sm chiky, tr-nvp, fw SH: gry/brn, silty, med crush, sm fissile, no cup odr, ns.

LS: tan/lt gry, fn xln, fw foss frags, mostly brittle sm chiky, tr-nvp, abund SH: gry/grn/blk, silty, sm fissile sm carb, no cup odr, ns.

LS: tan/gry, fn xln, fw foss frags, fw ool, sm brittle, chiky, tr-nvp, sm SH: gry/brn/blk, silty, sm soft fw carb, no cup odr, ns.

LS: lt tan/lt gry, fn xln, fw foss brach/ool, fw brittle sm chiky, scat pr int-xln por, 1-2 pcs w/ drk stn, no cut/fluor, abund SH: gry/grn/brn, silty, soft, no cup odr, smpl muddy/dirty.

LS: lt tan/lt gry, fn xln, fw foss frags, sm brittle sm chiky, scat pr int-xln por, fw pcs Chert: wht, opaque, foss, sharp, svrl SH: gry/brn/brn, silty, med crush, no cup odr, ns.

LS: lt tan, fn-med xln, sm brittle, fw chiky, scat pr int-xln por, fw SH: gry/brn/brn, silty, med crush, no cup odr, ns.

LS: lt tan/gry, fn-med xln, sm foss, mostly brittle fw hard, tr-nvp, sm SH: gry/grn/brn, silty, sm waxy, easy-med crush, no cup odr, ns.

LS: tan/gry, fn xln, fw foss frags, sm vry ool, mostly brittle rare pr int-ool por, svrl SH: gry/grn/brn, silty, sm fissile, easy-med crush, no cup odr, ns.

LS: tan, fn-crs xln, sm vry ool, mostly brittle, sm chiky, rare pr int-ool por, sm SH: gry/grn/brn, silty, sm fissile, easy-med crush, no cup odr, ns.

LS: tan/gry, fn xln, sm vry ool, sm foss frags, mostly brittle, fw pcs pur chlk, abund SH: gry/brn/brn, silty, sm fissile easy-med crush, no cup odr, ns.

LS: tan, fn xln, sm vry ool, sm scat foss, rare scat int-foss/int-ool por, fw Chert: wht, opaque, foss, sharp, mostly SH: gry/grn/brn, silty, fissile, med crush, no cup odr, ns.

LS: tan, fn xln, mostly ool, mostly dense matrix, rare scat int-ool por, abund SH: gry/grn/brn, silty, sm fissile easy-med crush, no cup odr, ns.

LS: lt tan, fn xln, fw ool, mostly dense/brittle, sm chiky, tr-nvp, 1-2 pcs LS: lt tan, fn xln, brittle, w/ pr vug por in 2nd rdn facies, vry lght stns, does not cut most likely from "C" above, abund SH: gry/grn/brn, silty, sm fissile, med crush, no cup odr, ns.

LS: lt tan, fn xln, mostly dense/brittle, mostly tr-nvp, 1-2 pcs w/ gd scat vug por with lght brn stn, wk cut, no cup odr, ns, abund SH: lke disc above.

LS: lt tan/gry, fn-crs xln, sm foss, mostly dense/brittle mostly tr-nvp, fw pcs w/ pr-fr int-xln por/ppt por, w/ lght stns, wk cut vsslo, fw Chert: wht, opaque, foss, sm SH: gry/brn/brn, silty, no cup odr.

LS: tan, fn xln, fw foss brach/crin/frags, mostly dense, fw chiky, tr-nvp, fw Chert: wht, opaque, foss, sharp, fw SH: gry/brn/brn, silty, fw waxy, no cup odr, ns.

LS: lt tan, micro-fn xln, fw foss, mostly dense, sm brittle, sm chiky, tr-nvp, sm SH: gry/grn, silty, easy-med crush, no cup odr, ns.

LS: lt tan/lt gry, fn-med xln, dense, brittle mostly uniform, sm chiky, tr-nvp, fw SH: brn/gry/grn, silty, sm fissile, med crush, fw waxy, no cup odr, ns.

LS: lt tan/crm, fn xln, dense, mostly brittle, mostly uniform, fw chiky, tr-nvp, fw SH: grn/gry/brn, silty, sm fissile easy-med crush, no cup odr, ns.

LS: crm/lt tan, micro-fn xln, fw foss crin/fuss, dense, mostly brittle, mostly uniform, fw pcs pur chlk, tr-nvp, fw SH: gry/brn/brn, silty, med crush, no cup odr, ns.

LS: gry/lt tan, fn-med xln, fw pcs flakey/mealy, mostly dense, mostly uniform, tr-nvp, fw Chert: gry, smokey trans, foss, sharp, no cup odr, ns.

LS: lt tan, fn-med xln, mostly dense, fw brittle, tr-nvp, mostly SH: gry/grn/blk, silty, sm fissile sm carb, med crush, no cup odr, ns.

LS: gry/tan, fn-crs xln, mostly hard, sm flakey/mealy, tr-nvp, sm pcs w/ drk m in stns, no cut/fluor, abund SH: gry/grn/blk, silty, sm fissile, med crush, no cup odr, ns.

Mudco Check #4 @ 3872'
04/18/12 7:30am
WF VIS pH CHL
8.9 54 10.0 2000
FIT LCM
6.4 4#

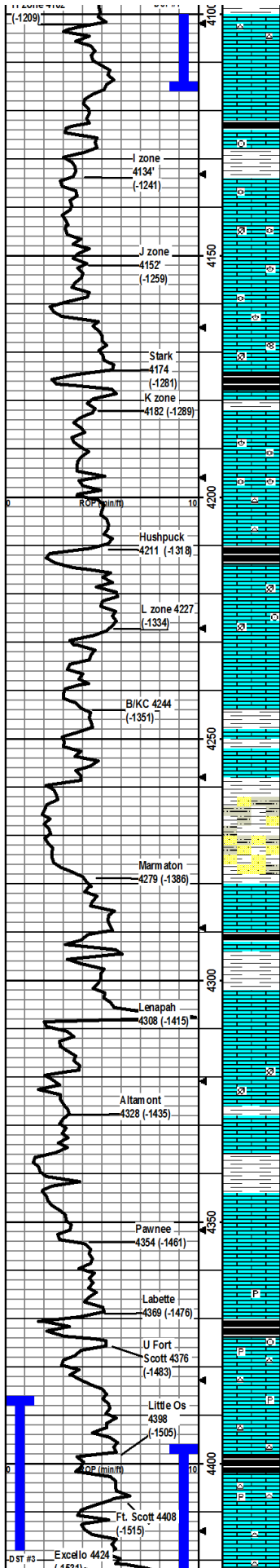
CF 3 @ 3867'
30°/60°

CF 3 @ 3935'
30°/60°

CF 3 @ 3990'
30°/60°

CF 3 @ 4025'
30°/60°

DST1) 4084-4116
20445000
1st) WK Surface built to 6"
2nd) WK Surface built to 9"
IFP 25-80#
ISP 230#
FFP 23-14# F SP
230#
HP 2031-1966#



LS: lt tan, micro-fn xln, mostly dense, scat tr vug por, patchy stns in vugs w/ light filmy oil, dul yel fluor, stream cut pal blu, vsfo, sm Chert: gry/wht, semi trans, sharp, fr cup odr.

LS: lt tan/crm/lt gry, micro-fn xln, dense, mostly hard, fw pcs flakey/mealy, tr-nvp, sm Chert: wht opaque, foss, sharp, faint cup odr, 1 pcs w/ sho like disc above.

SH: gry/grn/brn, silty, easy-med crush.

LS: tan/grn, fn-med xln, foss crin/frags, mostly dense, sm hard, fw chiky, tr-nvp, abund SH: gry/brn, silty, med crush, fw fissile, no cup odr, ns.

LS: tan, fn xln, fw foss fust/frags, sm hard, fw flakey/mealy, tr-nvp, sm SH: gry/grn/brn, silty, sm waxy, med crush, no cup odr, ns.

LS: tan/lt tan, fn xln, foss fust/brach/frags, fw ool, sm brittle, scat vug int-foss por, patchy stning, dul yel fluor, cut pal blu, vsfo 1-2 pcs/try, v faint cup odr.

LS: crm/lt tan, fn xln, mostly dense/brittle, sm chiky, fw hard, tr-nvp, fw SH: gry/grn, silty, easy-med crush, no cup odr, ns.

LS: lt tan, fn xln, profus foss fust/brach/frags, svrl ool, mostly brittle, fr-gd int-foss/ool por, 4-5 pcs/try w/ scat dul yel fluor, cut pal blu, sfo, gd sulfur cup odr, no much hydrocarbon odr.

LS: tan/gry, fn xln, foss frags/bram, mostly hard, sm flakey/mealy, tr-nvp, abund SH: blk/gray/brn, silty, sm fissile, mostly carb, med crush, no cup odr, ns.

LS: tan/gry, sm ool, fn-crs xln, foss brach/fuss, sm ool, 2-3 pcs/try w/ crs fr inbdn por, scat dul yel fluor, stream cut pal wht/blu, gd sulfuric cup odr, vsfo, abund SH: blk/gry, carb.

LS: tan/lt gry, fn xln, foss brach/fuss/crin, 1-2 pcs w/ fr intxln por w/ sho as disc above, fw SH: gry/grn, silty, easy-med crush, fr gd sulfuric cup odr, vsfo.

LS: gry/tan, fn xln, sm flakey/mealy, mostly dense/hard, tr-nvp, fw Chert: wht/gry, sharp, fw SH: gry/grn, silty, no cup odr, ns.

LS: much like disc above, abund SH: gry/grn/blk, silty, med crush, mostly carb, no cup odr, ns.

LS: tan/gry, sm ool, fn xln, sm foss frags, sm flakey/mealy, mostly dense/hard, tr-nvp, abund SH: gry/drk gry, silty, sm waxy, med crush, no cup odr, ns.

LS: tan/gry, fn xln, foss brach/crin/frags, mostly dense, sm brittle, sm chiky, sm patchy stns w/ drk dead oil, 2-3 pcs/try, dul yel fluor, nso, no cup odr, ns.

LS: lt tan/gry, fn xln, sm foss brach/frags, mostly dense/hard, fw chiky, tr-nvp, sm SH: gry/grn/brn, silty, sm waxy, easy-med crush, no cup odr, ns.

LS: lt tan/gry, fn-med xln, fw foss frags, mostly dense, sm chiky, tr-nvp, svrl SH: gry/brn, silty, easy-med crush, no cup odr, ns.

LS: gry/lt tan, fn-crs xln, fw foss brach/frags, mostly dense, sm chiky, tr-nvp, svrl SH: gry/grn/brn, silty, sm waxy, easy-med crush, no cup odr, ns.

SitStn: blu/gry, silty, arg, muddy, v soft, tr-nvp, sm SH: gry/drk gry, silty, soft, fw LS: tan, fn xln, sm ool, mostly dense, sm hard, tr-nvp, fw SH: gry, silty, no cup odr, ns.

SS: gry, vln grn, silty, arg, med crush, tr-nvp, sm SitStn: blu/gry, silty, muddy, v soft, sm SH: gry/grn, silty, sm waxy, easy-med crush, no cup odr, ns.

LS: lt gry/tan, fn xln, mostly dense, sm hard, fw chiky, fw pcs flakey/mealy, tr-nvp, fw pos of pur chl, no cup odr, ns.

LS: gry/tan, fn xln, mostly dense, mostly hard, fw pcs chiky/brittle, tr-nvp, abund SH: gry/grn/brn, silty, sm waxy, fw carb, easy-med crush, no cup odr, ns.

LS: tan/gry, sm ool, mostly dense, sm hard, sm flakey/mealy, tr-nvp, sm SH: gry/grn/brn, silty, easy-med crush, no cup odr, ns, sampl muddy/dirty.

LS: gry/tan/brn, sm ool, fn-crs xln, mostly dense, sm hard, sm flakey/mealy, scat pr intxln por, abund SH: gry/brn, silty, med crush, no cup odr, ns.

LS: tan/gry/brn, fn-crs xln, fw foss frags, sm ool, mostly dense, mostly hard, scat pr intxln por, abund SH: brn/grn/gry, silty, sm waxy, easy-med crush, no cup odr, ns.

SH: gry/grn/brn, silty, sm fissile, fw waxy, easy-med crush, fw LS: tan, fn xln, mostly dense, fw hard, sm brittle, scat pr intxln por, no cup odr, ns.

SH: gry/grn/brn, silty, fw fissile, sm waxy, easy-med crush, fw LS: gry/tan, fn xln, mostly dense, sm brittle, tr-nvp, no cup odr, ns.

LS: lt tan, fn xln, foss brach/crin/frags, mostly dense, mostly brittle, tr-nvp, sm SH: gry/brn/grn, silty, easy-med crush, no cup odr, ns.

LS: crm/lt-med gry, micro-fn xtal, min foss frags, some vry silty, stly pyritic, min frac por, no odor, ns.

SH: dk gry/blk, carb, firm, brittle, fissile.

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

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

LS: crm-brn, micro-fn xtal, min foss frags, wht/brn chert, no vis por, no odor, ns.

SH: blk, carb, firm, fissile.

LS: crm-lt brn, micro-fn xtal, foss frags, wht/lt brn chert, stly pyritic, no odor, mostly dense 2 tray pcs w/ fn-med in-xtal por w/ sho, yel floriyel cut, sfo.

LS: crm/lt gry, micro-fn xtal, foss frags, some wht chert, mostly dense w/ 3 tray pos w/ fn-med in-xtal por w/ sho, yel floriyel cut, sty cup odr, sfo.

Recvd: 30' GP, 10' CFO, 20' Mud, 62' WCM, 121' MCW

CFS @ 411' 30" 60"

Mudco Check #5 @ 4116' 04/19/12 7:30am wt vis pH chl 9.1 57 10.5 2500 Filt LCM 6.4 6#

CFS @ 4165' 30" 60"

CFS @ 4214' 30" 60"

Mudco Check #6 @ 4260' 04/20/12 9:15am wt vis pH chl 9.2 74 11.0 2800 Filt LCM 6.8 5#

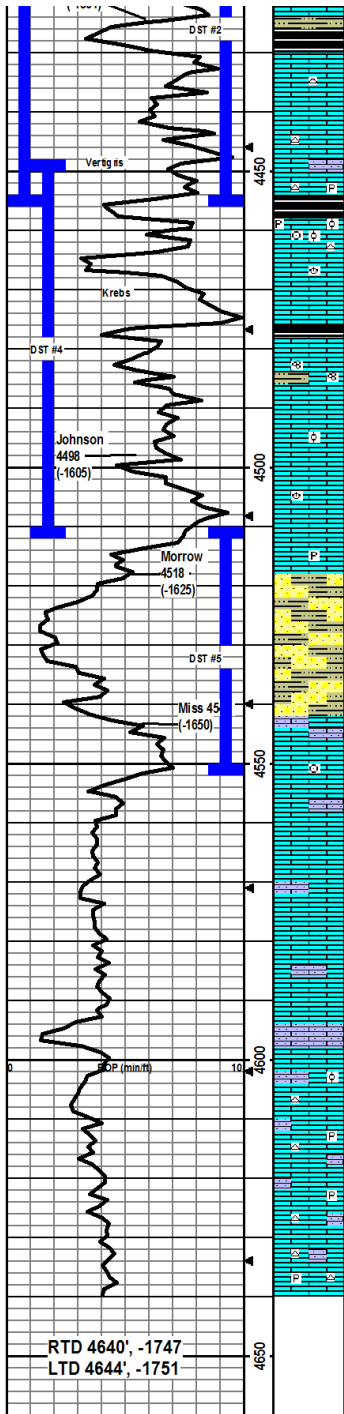
7" & 10" ft the brakes on rig were on and the bit was slowed down by accident.

Sample Returns were not good, mainly shale.

JG
KM

DST2) 4395-4456
PACKER FAILURE upon attempting to seat packer; made two attempts. Upon removal lower packer was split. Tester said tear was caused by mud pressure.

DST3) 4385-4456
30303030
1st) 1/4" built to 1", no BB;
2nd) No blow, no BB;
IFP 39-43#
ISP 435#
FFP 44-45# F SIP



SH: med-dk gry/blk, some vry silty, some e qtz sand clusters, blk is sty carb, soft to firm/brittle.

LS: crm/lt-med brn, micro-fn xtal, min foss frags, min in wht chert, no vis por, no odor, ns.

LS: crm/lt brn/gryish brn, micro-fn xtal, min in foss frags, some vry silty/sdy, m in wht flt brn chert, no vis por, no odor, ns.

LS: crmit-med brnlt gry, micro-fn xtal, min foss frags, some pyritc, min lt gry chert, no vis por, no odor, ns.

SH: blk carb, firm, fissile.

LS: crmit-dk brn/gry, foss frags min crin a bund ool, wht/lt brn cherts some sty pyritc, min ppt-fn por, strg odor, 1 tray pce wdk brn thick fo in vug in-xtal por, yel flr, sfo.

LS: crmit-dk brn, micro-fn xtal, foss frags/brac, ppt-med in-xtal/frac por, strg odor, yel flr, apprx 30t tray pcs wifo, vgsfo.

LS: crm/dk brn, micro-fn xtal, foss frags, ppt-vug in-xtal por, strg odor, apprx 25 tray pcs w/yel flr wifo, vgsfo.

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

LS: crm/lt gry/lt-med brn, micro-fn xtal, foss frags/fusin, some lt gry/dk gryish brn soft-firm silty SH, some ppt-fn in-xtal por, slit odor, 4 tray pcs w/yel flr wifo, sfo.

LS: crm/lt brn/lt gry, micro-fn xtal, foss frags/min ool, ppt-vug in-xtal por, strg odor, yel flr, apprx 10% of tray w/sfo, vgsfo.

LS: crm/lt brn, micro-fn xtal, foss frags/brac, ppt-vug por, strg odor, yel flr, apprx 10% of tray w/sfo, fo in tray, vgsfo.

LS: crm/lt brn, gryish brn, micro-fn xtal, foss frags, some sty pyritc, some ppt-vug por, strg odor, yel flr/yel cut, 10 tray pcs w/dk brn thk oil, sfo.

SS/SH mix: SH is lt-dk gry/brn, soft-firm, some vry silty; SS is gry, pred qtz, fn-med grd, well sorted, friable, sr-wr, no eff, strg odor, numerous pcs w/dk brn/blk thk oil, cuts yel, sfo.

SS/SH mix as above: SS is wht/gry/greenish gry, cont show dk brn/blk fo.

LS: crm/lt-med brn, micro-med xtal, min foss frag/crin, some vry sandy, min ppt-fn in-xtal/frac por, 4 pcs w/dk brn fo in 4553 60" smpl, yel flr, slit odor, ns.

LS: crm/lt brn/gry, micro-fn xtal, some e foss frags, some silty, m in frac por, no odor, ns.

LS: lt gryish brn, micro xtal, no vis foss, m in frac por, no odor, ns.

LS: crm/lt gryish brn, micro-fn xtal, some silty, m in frac por, no odor, ns.

LS: crm/lt brn/gryish brn, micro-fn xtal, some vry silty/sndy, mostly dense w/3 tray pcs w/ppt-med in-xtal por w/sfo, no odor, yel flr/out, sfo.

LS: wht/crm/lt brn, micro-fn xtal, vry silty/sndy, some chaly, easily crushed, no vis por, no odor, ns.

LS: crm/lt brn/lt gryish brn, micro-fn xtal, some vry silty/sndy, some wht/lt gry chert, min dense ool pcs, no vis por, no odor, ns.

LS: wht/crm/lt-med brn, gryish brn, micro-fn xtal, some vry silty/sndy, min wht chert, sty pyritc, no vis por, no odor, ns.

LS: lt-med brn, micro-fn xtal, some silty/sndy, sty pyritc, some e wht chert, no vis por, no odor, ns.

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

202#
HP 2320-2184#
Recvd: 10' Mud.

Mudco Check #7 @ 4456'
0421/12, 9:00am
wt vis pH chl
9.3 57 11.0 3000
Filt LCM
7.2 4#

CFS @ 4456'
30°/60"

DST4) 4448-4513
30454860
1st) BOB in 3 min, BB built to wk surface blowed in 10 min;
2nd) BOB in 3 min, no BB;
IFP 120-427# F SIP
ISP 1092#
FFP 432-700#
HP 2260-2170#
Recvd: 12' GIP, 1299' WCM, 121' W

Mudco Check #8 @ 4513'
0422/12, 10:00am
wt vis pH chl
9.3 64 10.5 2500
Filt LCM
8.0 4#

CFS @ 4513'
30°/60"

Mudco Check #9 @ 4553'
0423/12, 08:33am
wt vis pH chl
9.4 57 10.0 3000
Filt LCM
8.8 4#

CFS @ 4553'
30°/60"

NOTE: Drilling rig was out of commission from the evening of 04/22 thru the evening of 4/23 due to replacement of rig engine transmission torque converter, intercooler and turbo charger.

DST5) 4510-4553
30455075
1st) built to 1" blow, no BB;
2nd) built to weak surface blow, no BB;
IFP 26-40# F SIP
ISP 1111#
FFP 41-58#
1097#
HP 2331-2176#
Recvd: 70' W

CFS @ 4608'
30°/60"

Mudco Check #10 @ 4553'
0424/12, 09:10am
wt vis pH chl
9.3 56 10.0 4400
Filt LCM
8.0 4#

CFS @ 4640', TD,
30°/60', total 1.5 hr