

Geologic Report

Aaron L Young

Drilling Time and Sample Log

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

Well Name: #1 Young "RR"
API: 15-095-22297
Location: 660' FSL & 330' FEL, SECTION 34-27S-5W, E/2 SE SE
License Number: 5123
Spud Date: 08/27/2015
Surface Coordinates: LAT 37.6483486
LONG -97.8456557
Bottom Hole Vertical hole
Coordinates:
Ground Elevation (ft): 1433' K.B. Elevation (ft): 1443'
Logged Interval (ft): 2600' To: 3910' Total Depth (ft): 3910'
Formation: Mississippi
Type of Drilling Fluid: Chemical - MudCo

Region: Kingman County

Drilling Completed: 09/03/2015

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

OPERATOR

Company: Pickrell Drilling Company, Inc.
Address: 100 S. Main Ste 505
Wichita, KS 67202
(316) 262-8427

GEOLOGIST

Name: Aaron Young & John Goldsmith
Company: Young Consulting LLC & John Goldsmith Wellsite Service
Address: 100 S Main Ste 505 427 Roosevelt St
Wichita, KS 67202 Cheney, KS 67025
(316) 772-8744 (316) 640-0236

General Info

Contractor: Pickrell Drilling Rig #1

BIT RECORD:

No.	Size	Make	Jets	Out	Feet	Hours
1	12 1/4"	JZ RR	15-15-15	214'	204'	3.50
2	7 7/8"	JZ HA25L	15-15-15	3835'	3621'	95.75
3	7 7/8"	JZ QX33SU	15-15-15	3910'	75'	3.50

Surveys: 214'-.5, 717'-.75, 1253'-.5, 1759'-.75, 2264'-.5, 2864'-1.25, 3800'-1

GENERAL DRILLING AND PUMP INFORMATION

Drilling with 9 stands of collars 520.05' with 25k - 42k # WOB @ 65-85 RPM w/ 1050 psi @ standpipe

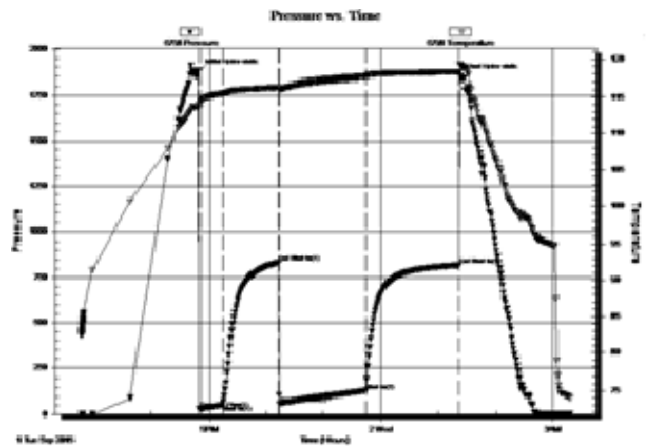
DST #1
 3,754 - 3,800' MISS

IF: BOB in 100 sec
 ISI: Weak blow 1/2" - 3/4"
 FF: BOB in 20 sec. GTS in 80 min.
 FSI: BOB

Rec'd: 135' GCWM (17%G, 23% W, 60% M)
 125' GCMW (4% G, 6% M, 90% W)

GTS: TSTM

SIPs: 836-820 FPs: 30-53#, 62-134# HPs: 1879-1848#



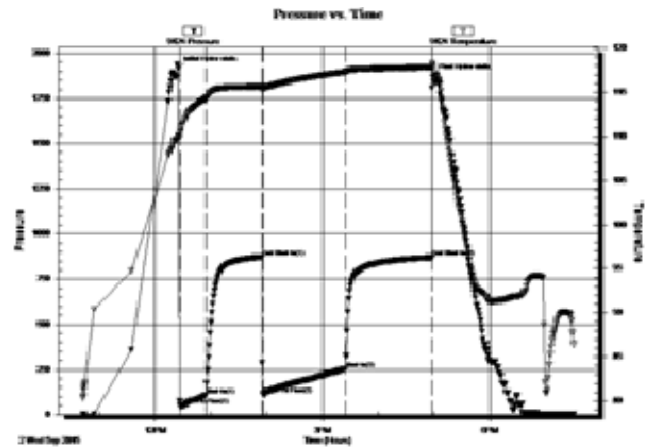
DST #2
 3,800 - 3,834' MISS

IF: BOB in 20 sec, GTS in 23 min
 ISI: Weak blow 1/2" - 1"
 FF: GTS
 FSI: BOB

Rec'd: 95' GOCWM (20%G, 11% O, 25% W, 44% M) 190'
 GM&WCO (50% G, 6% M, 18% W, 32% O), 190' GM&OCW (21%
 G, 10% M, 34% O, 35% W), 190' GOCMW (3% G, 1% O, 3% M,
 93% W)

GTS in 23": 26.81 mcf/d, Max: 28.50 mcf/d, Last: 24.43 mcf/d

SIPs: 873-870# FPs: 51-109#, 113-255#, HPs: 1915-1868#

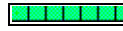
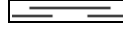
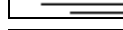







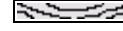
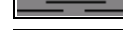


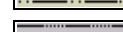

Daily Status






08/26/15 Spud @ 7:45 PM Ran 5 jts of New 8 5/8" 28# surface casing set at 211', cmt w/ 275 sx Class A, 2% gel, 3% CC
 08/27/15 WOC
 08/28/15 Drlg @ 980'
 08/29/15 Drlg @ 1900'
 08/30/15 Drlg @ 2675'
 08/31/15 Drlg @ 3243'
 09/01/15 DST #1: 3754'-3800' (Miss)
 09/02/15 DST #2: 3800'-3834' (Miss)
 09/03/15 TD'd @ 3910', Ran 92 jts. of New 5 1/2" 14# prod. csg. set at 3904', cmt w/ 150 sx 50-50 poz, 30 sx 60-40 poz, 4% gel in RH, LTD is 3910'

ROCK TYPES

 Anhy
 Cht
 Coal
 Congl
 Dol
 Gyp
 Lmst

 Salt
 Shale
 Shcol
 Shgy
 Sltst
 Ss
 Carb sh

 Dol
 Dtd
 Gry sh
 Sandylms
 Shale
 Sltstn
 Shlyslts

 Sltysb
 Sdy dolo
 Silty dolo
 Shy dolo
 Shaly ls

ACCESSORIES

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite

- Plant
- Strom
- Fuss
- Oomold

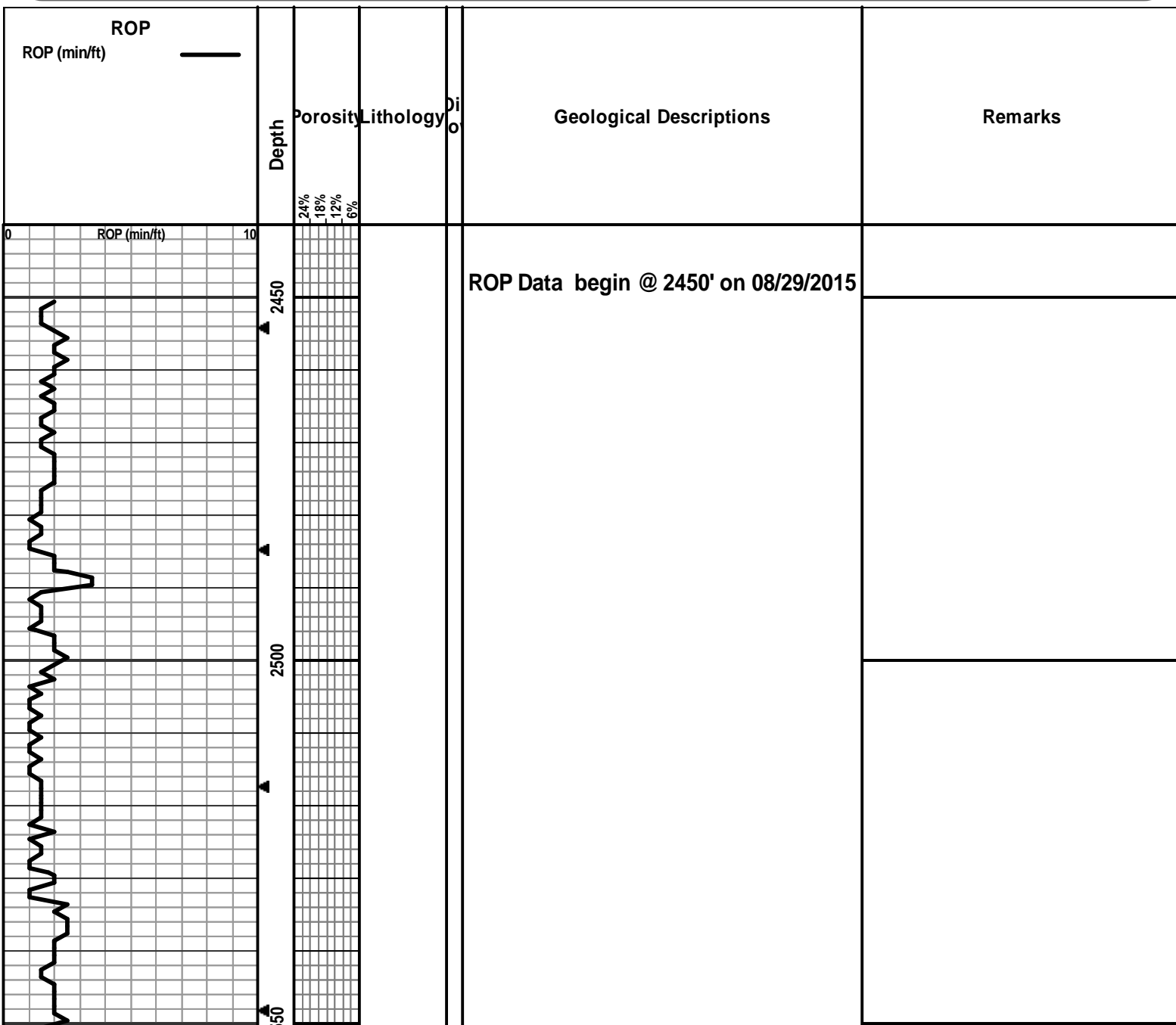
MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr

- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff
- Chlorite
- Dol
- Sand
- Sltly

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh
- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn



Mud-Co Check #4 @
 2575' 08/30/15
 wt vis pH
 9.5 28 7.0
 Filt chlr LCM
 NC 68K 0

Sample began @ 2600' on 08/30/2015

John Goldsmith on location

SH: gry/drk gry/blk, soft, silty, fw carb, fw LS: lt gry, fn xln, sub-chlky, tr-nvp, no cup odr, ns.

SH: gry/grn/brn, silty, soft, fw blk/carb, no cup odr, ns.

SH: gry/grn/blk, silty, soft, fw carb, fw fissile, no cup odr, ns.

SH: gry/grn/blk, silty, soft, many fissile, fw LS: lt tan/crm, fn xln, mostly brittle, tr-nvp, no cup odr, ns.

LS: lt tan/lt gry, slght mott, fn xln, sm foss, many brittle, sub-chlky, tr-nvp, abund SH: gry/grn, silty, soft, no cup odr, ns.

LS: lt tan/lt gry, slght mott, fn xln, many foss, mostly brittle, chlky in prt, tr-nvp, abund SH: gry/grn/blk, silty, no cup odr, ns.

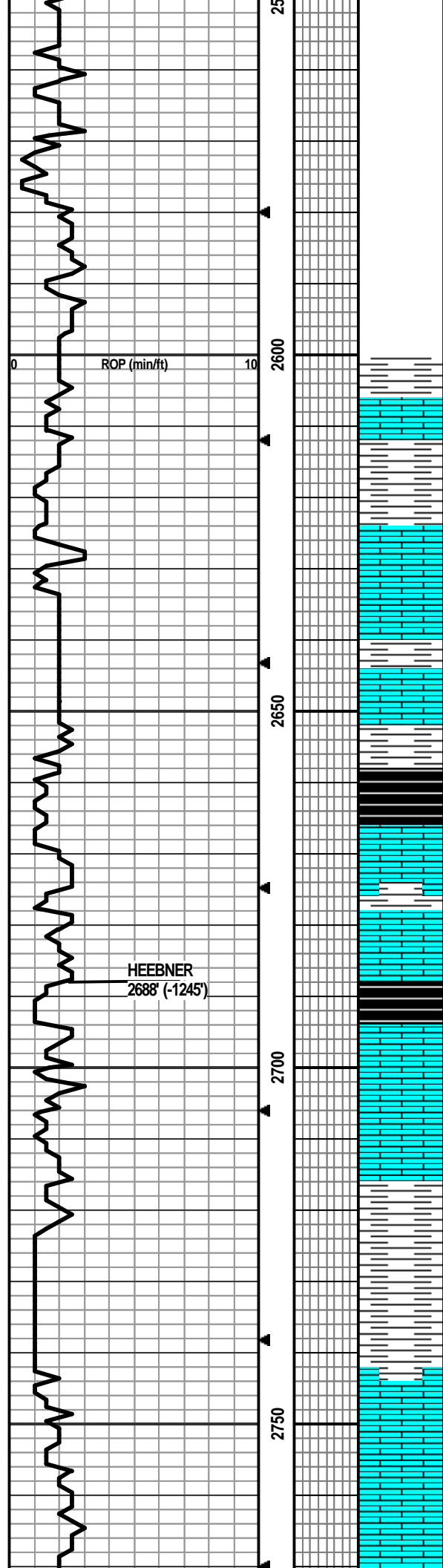
Mud Displacement @ 2706'

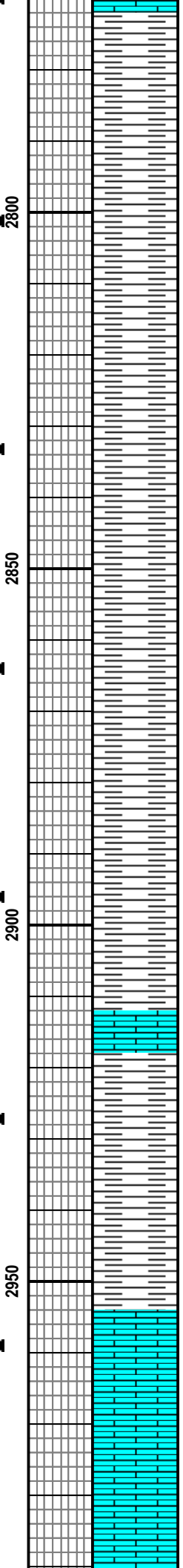
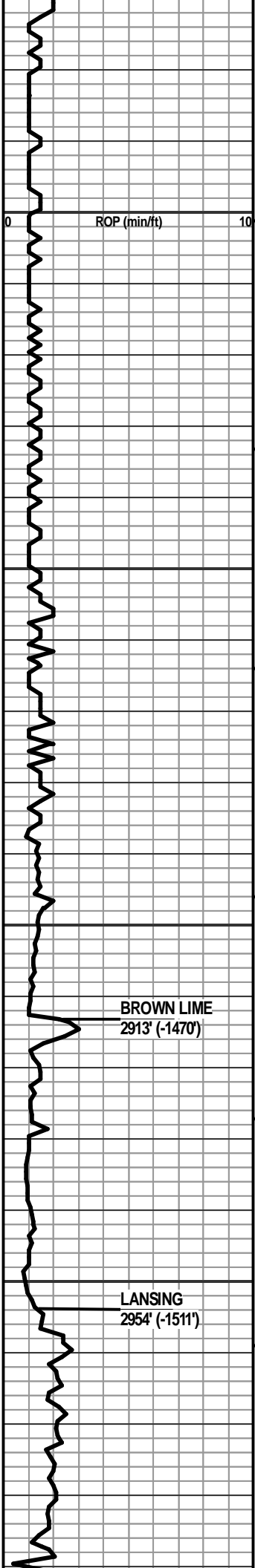
SH: gry/grn, silty, soft, fw friable, fw blk/carb, fw LS: lt tan/crm, fn xln, mostly brittle, fw foss, tr-nvp, no cup odr ns.

Mostly SH: gry/grn/brn, silty, soft, fw waxy like, fw fissile, no cup odr, ns.

LS: tan/lt gry, slght mott, fn xln, mostly dense, sm foss in prt, fw sub-chlky, tr-nvp, abund SH: gry/brn, silty, sm soft, no cup odr, ns.

WT 8.8
 VIS 48
 LCM





LS: crm/lt tan, mostly sing, fn xln, sm foss in prt, mostly brittle, sub-chlky, sm dense, tr-nvp, svrl SH: gry/grn, silty, sm soft, no cup odr, ns.

SH: gry/drk gry/brn, silty, soft, fw waxy, fw LS: crm/lt gry, sing, fn xln, brittle, tr-nvp, no cup odr, ns.

SH: gry/grn/blu, silty, soft, sm waxy, no cup odr, ns.

SH: gry/blu/grn, silty, soft, fw waxy, fw fissile, no cup odr, ns.

SH: gry/blu, silty, sm soft, fw gritty/grainy, fw fissile, no cup odr, ns.

SH: gry/lt gry, silty, soft, fw waxy, sm friable, fw gritty/grainy, no cup odr, ns.

SH: gry/grn, silty, sm soft, fw waxy, sm med crush, no cup odr, ns.

SH: gry/drk gry, silty, soft, fw friable, fw gritty/hard, no cup odr, ns.

SH: gry/grn/brn, silty, soft, fw waxy, v fw gritty/firm, tr-nvp, no cup odr, ns.

SH: gry/drk gry, silty, soft, fw gritty/firm, tr-nvp, no cup odr, ns.

SH: gry/grn/drk gry, silty, soft, fw waxy, fw gritty, tr-nvp, no cup odr, ns.

SH: gry/drk gry, silty, sm soft, fw gritty, no cup odr, ns.

SH: gry/drk gry, silty, sm soft, fw StStn: gritty/grainy, firm, tr-nvp, no cup odr, ns.

LS: gry/lt brn, fn xln, dense, sm hard, sub-chlky in prt, tr-nvp, abund SH: gry/drk gry, silty, no cup odr, ns.

SH: gry/drk gry, silty, soft, fw LS: gry/lt brn, mott in prt, fn xln, sm foss, fw hard, sub-chlky, tr-? intxln por in 2-3 pcs, no cup odr, ns.

SH: gry, silty, soft, fw waxy, friable, fw LS: tan/lt brn, slight mott, fn xln, fw foss frags, mostly dense, sm firm, tr-nvp, no cup odr, ns.

LS: gry/lt gry, silty, soft, fw waxy like, fw friable, no cup odr, ns.

SH: gry/lt gry, silty, soft, fw friable, fw LS: gry/tan, slight mott, fn xln, sm foss in prt, fw firm, tr-nvp, no cup odr, ns.

LS: lt brn/lt gry, mott in prt, fn xln, fw foss in prt, sm dense, fw firm, sm brittle, tr-nvp, svrl SH: gry, silty, no cup odr, ns.

LS: lt brn/tan, mott, fn-crs xln, fw foss frags, mostly firm, sm 2nd rxln, slight scat vug por in prt, abund SH: gry, silty, no cup odr, ns.

LS: gry/tan/lt brn, slight mott, fn xln, v fw foss frags, mostly dense, many firm, fw flakey/mealy, tr-nvp, sm SH: gry, silty, no cup odr, ns.

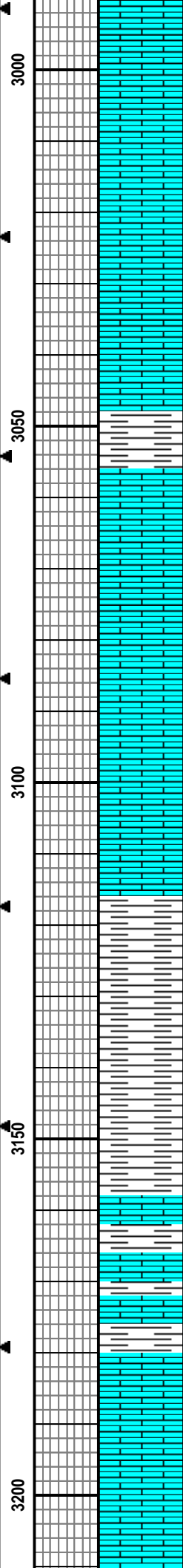
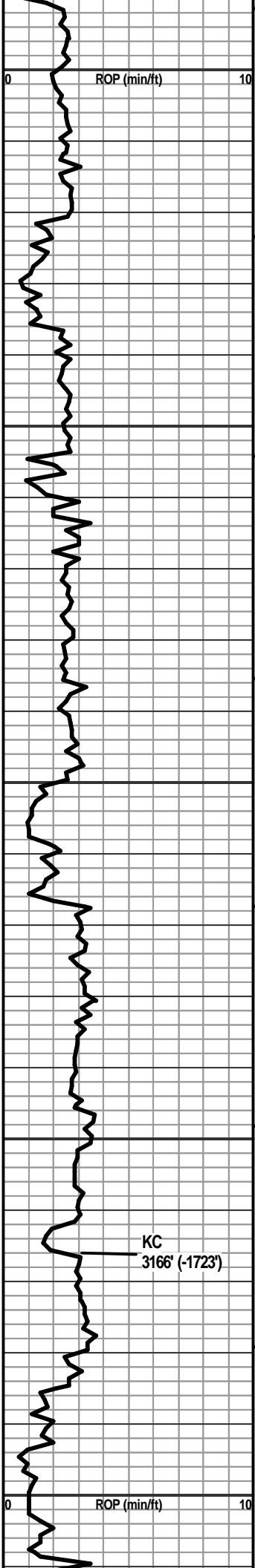
Began catching 10ft Samples

WT 8.8
VIS 40
LCM TRC

WT 8.9
VIS 50
LCM TRC

BROWN LIME
2913' (-1470')

LANSING
2954' (-1511')



LS - CRM / TAN, VF / F XLN, SUBCHKY, FOSS IN PT

LS - CRM / TAN, VF XLN, SUBCHKY / CHKY, FOSS IN PT

LS - CRM / TAN, VF XLN, SUBCHKY, STYLOLITIZED IN PT, FOSS IN PT

LS - TAN / GY, F XLN, DNS, SPECKLED IN PT, FOSS IN PT

LS - CRM / TAN, VF / F XLN, F INTXLN POR, NS, NO ODOR, ABUND FOSS

LS - TAN / BRN, F XLN, V DNS, FOSS IN PT

LS - TAN / LT GY, F XLN, DNS, FOSS IN PT

SH - GY, BRITTLE, WAXY IN PT

LS - GY / TAN, VF / F XLN, MOD DNS, FOSS IN PT

LS - TAN, F XLN, DNS, COMPLETELY OOLITIC, FOSS IN PT, NO POR

LS - TAN / BRN, F XLN, V DNS, FOSS (FUSIL)

SH - RD / GRN / GY

LS - CRM / TAN, VF / F XLN, PRED SUBCHKY, CHKY IN PT, FOSS IN PT

SH - LT GY / DY GY, BRITTLE

SH - GY, SOFT, SLTY IN PT

SH - GRN / LT GY, FOSS IN PT

LS - CRM / TAN, VF / F XLN, FOSS, OOL IN PT

SH - GY

LS - TAN / GY, F XLN, DNS, FOSS

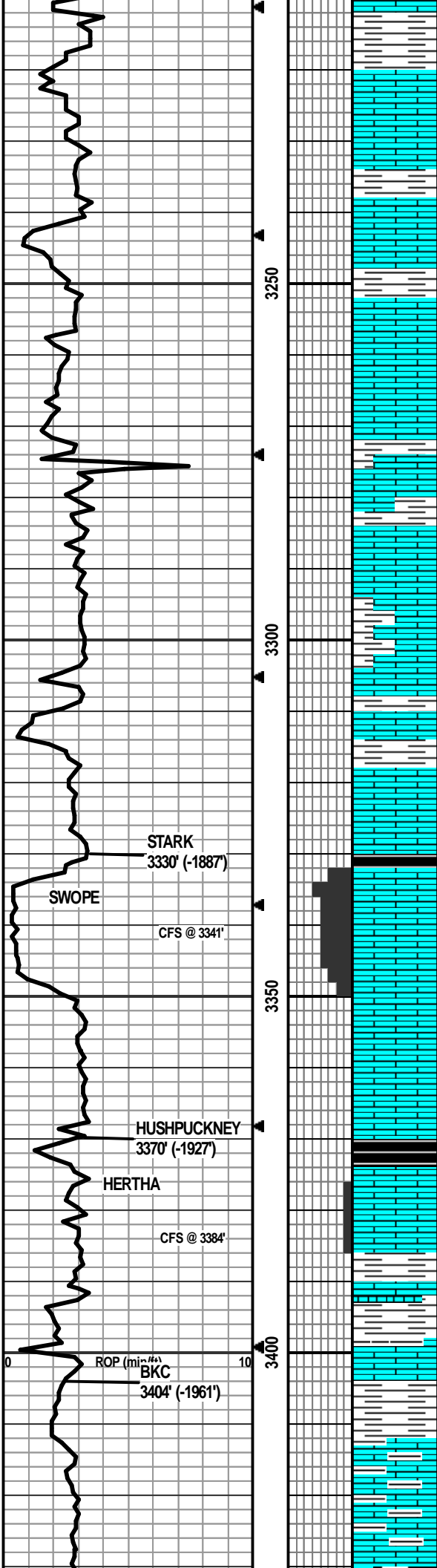
SH - LT GY / DK GY / GRN IN PT, W/ LS - GY, F XLN, DNS, FOSS

LS - CRM / TAN, F XLN, DNS, FOSS

LS - CRM / TAN, VF XLN, SUBCHKY

LS - WHT / CRM, VF XLN, CHKY / SUBCHKY

WT 8.9 VIS 46 LCM TRC	Aaron Young now on location
WT 9.0 VIS 45	



LS - CRM, VF XLN, SUBCHKY

SH - GY / GRN / RD IN PT, BRITTLE, RD IS EARTHY

LS - TAN, F XLN, DNS, FOSS

SH - GRN / GY / RD

LS - CRM, VF / F XLN, P INTXLN POR, ABUND FOSS, NSFO, SLI ODOR, W/ SH - GRN / GY RD

LS - CRM / TAN, VF / F XLN, MOD DNS / DNS, FOSS

SH - GRN, W/ LS - CRM / TAN, F XLN, DNS, FOSS

LS - TAN / BRN / GY IN PT, F XLN, DNS, FOSS, W/ SH - GRN / GY

LS - CRM / TAN, VF / FXLN, MOD DNS / SUBCHKY, W/ SH GY

SH - GY, SOFT, W/ LS - CRM / TAN, VF / F XLN, SUBCHKY

LS - TAN / LT BRN, F XLN, MOD DNS, FOSS

LS - TAN / BRN, F XLN, OOL, ABUND FOSS, LRG FUSILINIDS

LS - BRN, F XLN, ABUND OOL, FOSS, G OOLITIC POR, P VIS PERM, NS, NO ODOR, G YEL-GRN FLUOR

LS - BRN, F XLN, OOLITIC, FOSS, P OOLMOLDIC POR IN PT, PRED DNS, NS, NO ODOR

SH - BLK, V CARB

LS - TAN / BRN, F XLN, OOLITIC, FOSS, P / FOOLMOLDIC POR, NS, NO ODOR, F YEL-GRN FLUOR

LS - CRM / TAN, F XLN, SLI OOLITIC, P OOLMOLDIC POR, PRED DNS, NS, NO DOOR,

SH - LT GY, V BRITTLE, SOFT

SH - GRN / GY/ RD IN PT, WAXY IN PT, W/ LS - TAN, F XLN, DNS

SH - LT GY / DK GY, BRITTLE, SOFT, W/ LS - CRM, VF / F XLN, SUBCHKY

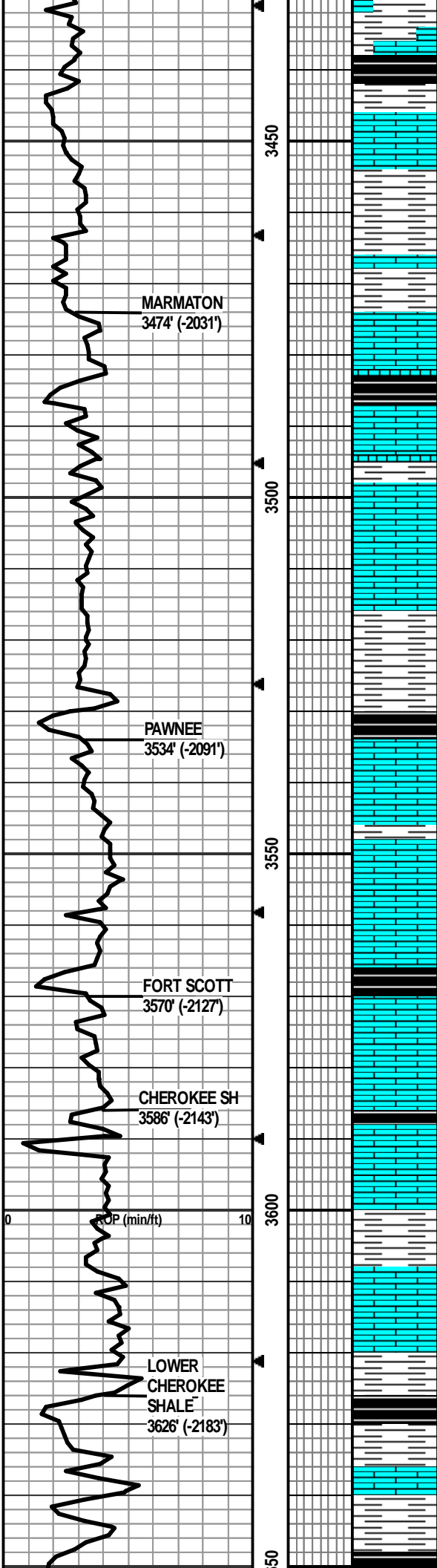
LS - GY, V SHLY, VF / F XLN, BRITTLE

LS - GY, V SHLY, VF / F XLN, BRITTLE

Mud-Co Check #5 @
3260' 08/31/15

wt	vis	pH	9.4
48	11.0		
Filt	chr	LCM	
9.0	6,000	0	

WT 9.5
VIS 51



SH - GY, DNS

SH - GY, LMY, BRITTLE

SH - BLK, CARB

LS - TAN / LT BRN, F XLN, DNS, FOSS, W/ SH - GRN / GY

SH - GY, BRITTLE, WAXY IN PT

SH - LT GRN / LT GY, W/ LS - WHT / CRM, VF XLN, CHKY

SH - LT GRN, SOFT / MOD DNS

SH - BLK, CARB

LS - CRM / TAN, VF / F XLN, MOD DNS / DNS, W/ SH - MAR / GRN

LS - CRM / TAN, F XLN, DNS, FOSS (FUSIL))

SH - GRN / MAR, SOFT, W/ LS - GY, F XLN, DNS, FOSS IN PT

SH - GY / GRN / MAR, W/ LS - CRM, VF / F XLN, SUBCHKY

SH - BLK, CARB

LS - TAN / CRM / WHT, VF XLN, SUBCHKY / CHKY

LS - TAN, F XLN, DNS, CALCITE FILLED FRACTURES, W/ SH - GRN

LS - CRM / TAN, VF / F XLN, MOD DNS / DNS, FOSS, PYRITIC IN PT

SH - BLK, CARB, W/ LS - TAN, F XLN, V DNS, FOSS

LS - GY, F XLN, V DNS, MOD DNS IN PT, W/ SH - GRN / RD / GY

SH - BLK, CARB, W/ LS - GY / TAN, F XLN, DNS, FOSS

LS - CRM / TAN, VF / F XLN, MOD DNS / DNS, FOSS

SH - LT GRN / DK GRN / GY, WAXY IN PT

LS - CRM / TAN, F XLN, DNS

SH - GRN / GY

SH - DK GY / BLK, SLI CARB

SH - GY / GRN & RD IN PT, W/ LS - CRM, VF / F XLN, SUBCHKY / MOD DNS

SH - GY / GRN / MAR IN PT, PYRITIC IN PT

WT 9.3
VIS 55

WT 9.5
VIS 54

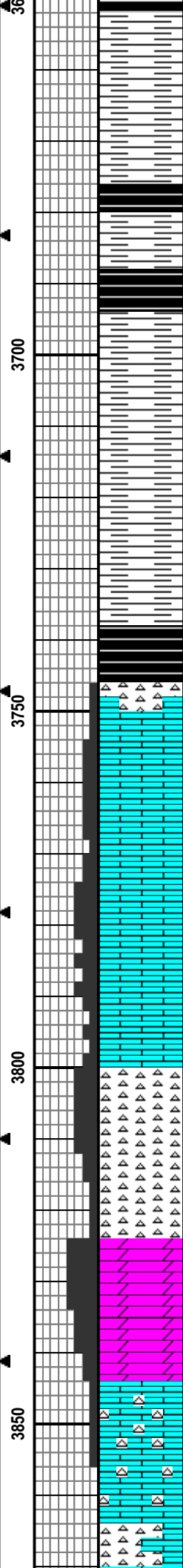
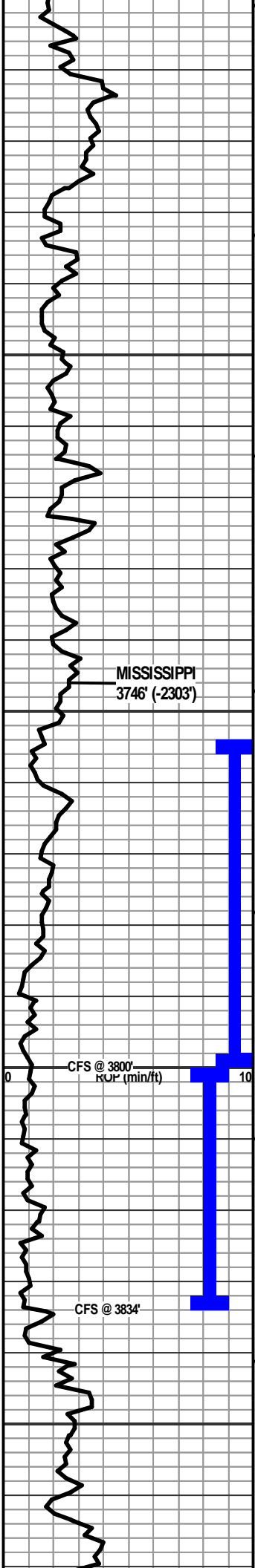
WT 9.5
VIS 51

WT 9.7
VIS 51

STARTED PREMIX

Mud-Co Check #6 @
2647' 09/31/15

wt	vis	pH
9.7	48	10.0



SH - BLK, SLI CARB, W/ SH - GY / GRN / MAR / RD

SH - PRED LT GY, GRN IN PT, GY IS PYRITIC IN PT

SH - LT GRN / LT GY

SH - BLK, SLI CARB, W/ LS - TAN F XLN , DNS, W/ SH - LT GRN / GY / YEL IN PT

SH - BLK, SLI CARB, W/ SH - LT GRN / GY / YEL & MAR IN PT

SH - PRED GY, GRN / MAR / RD IN PT

SH - GRN / GY / PURP IN PT

SH - GRN / LT GY / YEL / MAR IN PT

SH - GRN / RD / YEL / GY

SH - BLK, SLI CARB, W/ SH - YEL / GRN / MAR / PURP, W/ CHT - OFF WHT, OPAQ, DNS, NS, NO ODOR

CHT - OFF WHT / TAN, PRED FRSH, DNS, SLI WEATH IN PT, F / GWEATH PP POR IN PT, NSFO, NO ODOR, NO FLUOR

LS - CRM / TAN, F XLN, PRED DNS, P INTXLN POR IN PT, NS, NO ODOR, NO FLUOR

LS - CRM / TAN, F XLN, P / F INTXLN POR, NS, NO ODOR, NO FLUOR

LS - CRM, VF / F XLN, SILICIOUS, F INTXLN POR, SSFO, LT BRN WATERY OIL, G SHO OF GAS, G ODOR, G YEL-GRN FLUOR

LS - CRM / OFF WHT, F XLN, V SILICIOUS, F / G INTXLN POR, VUG POR IN PT, FSFO, LT BRN OIL, G ODOR, SHO OF GAS, G YEL-GRN FLUOR

LS - CRM / OFF WHT, F XLN, V SILICIOUS, P / F INTXLN POR, NSFO, SLI STN, SLI YEL-GRN FLUOR, SLI ODOR

CHT - OFF WHT, OPAQ, WEATH, F / G PPPOR, FSFO, G SHO OF GAS, SLI ODOR, G FLUOR

CHT - OFF WHT, OPAQ, FRSH, NSFO, SLI STN IN PT, NO FLUOR,

DOLO - TAN / BRN, VF / F XLN, SUC, G INTXLN POR, VUG POR IN PT, FSFO, VG SHO OF GAS, ABUND OIL SHEEN, G ODOR UPON CRUSH, G YEL-GRN FLUOR

DOLO - TAN / BRN, VF / F XLN, SUC IN PT, G INTXLN POR, FSFO, NS OF GAS, ABUND OIL SHEEN, G YEL-GRN FLUOR

LS - OFF-WHT / CRM / TAN, F XLN, PRED DNS / SUBCHKY IN PT, PINTXLN POR IN PT, NS, NO ODOR, V CHTY

LS - WHT / CRM / TAN, VF / F XLN, CHKY / SUBCHKY / MOD DNS, CHTY

SH - MAR / YEL / DK GRN / GY, W/ LS - CRM, VF / F XLN, MOD DNS / SUBCHKY IN PT, CHTY, NS

Filt chlr LCM
9.0 5K 0

WT 9.5
VIS 61
LCM 1/2#

DST #1
3,754 - 3,800' MISS

IF: BOB in 100 sec
ISI: Weak blow 1/2" - 3/4"
FF: BOB in 20 sec. GTS in 80 min.
FSI: BOB

Rec'd: 135' GCWM (17%G, 23% W, 60% M),
125' GCMW (4% G, 6% M, 90% W)

GST: TSTM

IH: 1879#
IF: 30-53#
ISI: 836#
FF: 62-134#
FSI: 820#
FH: 1848#

Mud-Co Check #7 @
3810' 09/02/15
wt vis pH
9.4+ 49 10.0
Filt chlr LCM
9.0 4.5K 2#

DST #2
3,800 - 3,834' MISS

IF: BOB in 20 sec, GTS in 23 min
ISI: Weak blow 1/2" - 1"
FF: GTS
FSI: BOB

Rec'd: 95' GOCWM (20%G, 11% O, 25% W, 44% M) 190' GM&WCO (50% G, 6% M, 18% W, 32% O), 190' GM&OCW (21% G, 10% M, 34% O, 35% W), 190' GOCMW (3% G, 1% O, 3% M, 93% W)

GTS: 23" - 26.81 mcf/d
Max: 28.40 mcf/d
Last: 24.43 mcf/d

IH: 1915#
IF: 51-109#
ISI: 873#
FF: 113-255#
FSI: 870#

FD: 0107

FH: 1868#

LS - OFF WHT / CRM, F XLN, V CHTY, SUBCHKY, W/ CHT
- LT GY, OPAQ, DNS, LMY, FOSS

LS - CRM / TAN / GY, VF / F XLN, SUBCHKY / DNS, W/
CHT - GY, OPAQ, DNS, LMY, ABUND FOSS

LS - CRM / TAN, VF / F XLN, SUBCHKY / DNS, CHTY

LS - CRM, VF / F XLN, DNS, W/ CHT - WHT / GY, SLI
TRANSLCNT, LMY, FOSS

RTD 3910'

LTD 3910'

3900

