

Geologic Report  
**Aaron L. Young**

Drilling Time and Sample Log

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

Well Name: Higgins "K" #3  
API: 15-095-22293  
Location: Section 15 - T30S - R8W  
License Number: 5123  
Spud Date: 1/06/ 2015  
Surface Coordinates: 1320' FNL and 2310' FWL  
Approx. E2 - E2 - NW  
Region: Kingman Co., KS  
Drilling Completed: 1/16/15  
Bottom Hole Coordinates:  
Ground Elevation (ft): 1494' K.B. Elevation (ft): 1504'  
Logged Interval (ft): 3000' To: 4270' Total Depth (ft): 4270'  
Formation: Mississippian  
Type of Drilling Fluid: Chemical - Mud-Co

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+3738

**GEOLOGIST**

Name: Aaron L. Young, M.S.  
Company: Young Consulting LLC  
Address: 100 S Main, Suite 505  
Wichita, Kansas 67202

**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	212	202	6.25
2	7-7/8	HA20JQ	15-15-15	4173	3971	102.00
3	7-7/8	HA30Q	15-15-15	4270	97	4.00

**SURVEYS:** 212'-.75, 716'-1, 1221'-1.25, 1724'-1, 2229'-.75, 2734'-1.25, 4173'-1

**GENERAL DRILLING AND PUMP INFORMATION:**

Drilling with 32,000 - 42,000 lbs. on bit and approx 65-75 RPM.  
Running 9 stands of collars; 519'  
Pumping approx 1100 psi at standpipe.

## Daily Status

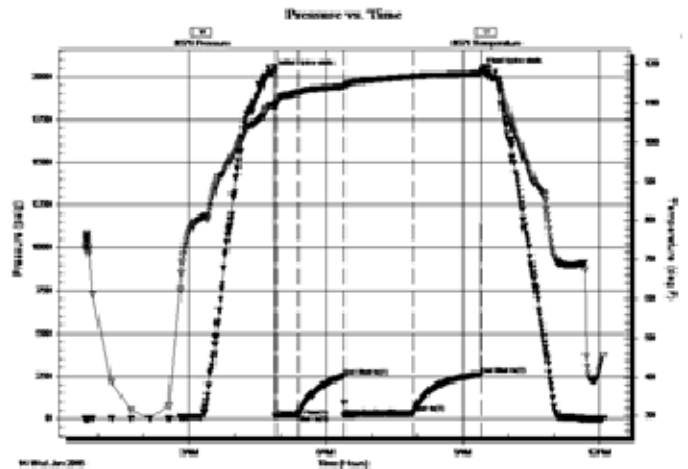
1/06/15 - Spud @ 11:45pm  
 1/07/15 - Drilling @155', Ran 5 jts of New 8 5/8" 28# surface casing set @ 211', cmt w/ 165 sx Class A, 2% gel, 3% CC  
 1/08/15 - Drilling mouse hole  
 1/09/15 - Drilling @ 1221'  
 1/10/15 - Drilling @ 1950'  
 1/11/15 - Drilling @ 3947'  
 1/12/15 - DST #1 4142'-4173'  
 1/13/15 - DST #2 4173'-4193'  
 1/14/15 - TD @ 4270, Logged  
 1/15/15 - Ran 102 jts of New 4 1/2" 10.5# prod casing set @ 4269', cmt w/ 175sx Class A, 10% salt, w/ 5# gil/sx, 30sx in RH, 20sx in MH of 60-40 poz  
 1/16/15 -

**DST #1: 4,142' - 4,173' Mississippian**  
30" - 60" - 90" - 90"

IF: BOB in 5 1/2min  
 ISI: No blow  
 FF: BOB in 4 1/2min  
 FSI: No blow

**RECOVERY: 720' GIP, 42' GOCM (1% G, 1% O, 98% M)**

**SIP: 250-260; FP: 14-22, 19-32; HP: 2020-2032;**

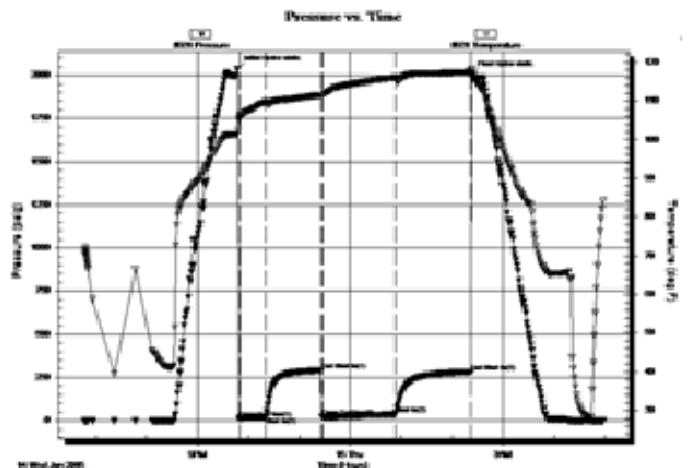


**DST #2 4,173'-4,193' Mississippian**  
30" - 60" - 90" - 90"

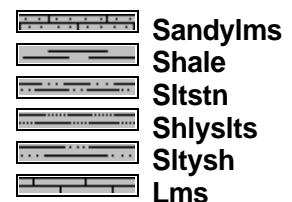
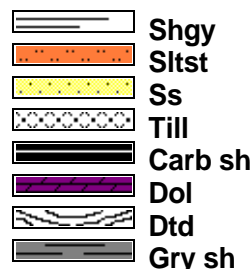
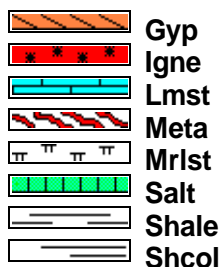
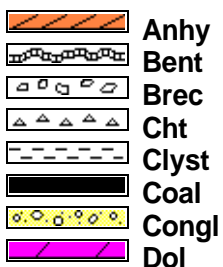
IF: BOB 5min  
 ISI: Weak blow, Surface - 1/4" in 30min  
 FF: BOB immediately  
 FSI: Weak blow, Surface - 1/4" after 60min

**Rec': 1734' GIP, 64' OGWCM (7% G, 3% O, 25% W, 65% M)**

**SIP: 292-283; FP: 13-21, 20-36 HP: 2037-2007**



### ROCK TYPES



### ACCESSORIES

#### MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclfrag
- 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

#### FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram

- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomold

#### STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh

- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

#### TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

### OTHER SYMBOLS

#### POROSITY TYPE

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

#### SORTING

- Well
- Moderate
- Poor

#### ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

#### OIL SHOWS

- Even
- Spotted
- Ques
- Dead
- Gas show

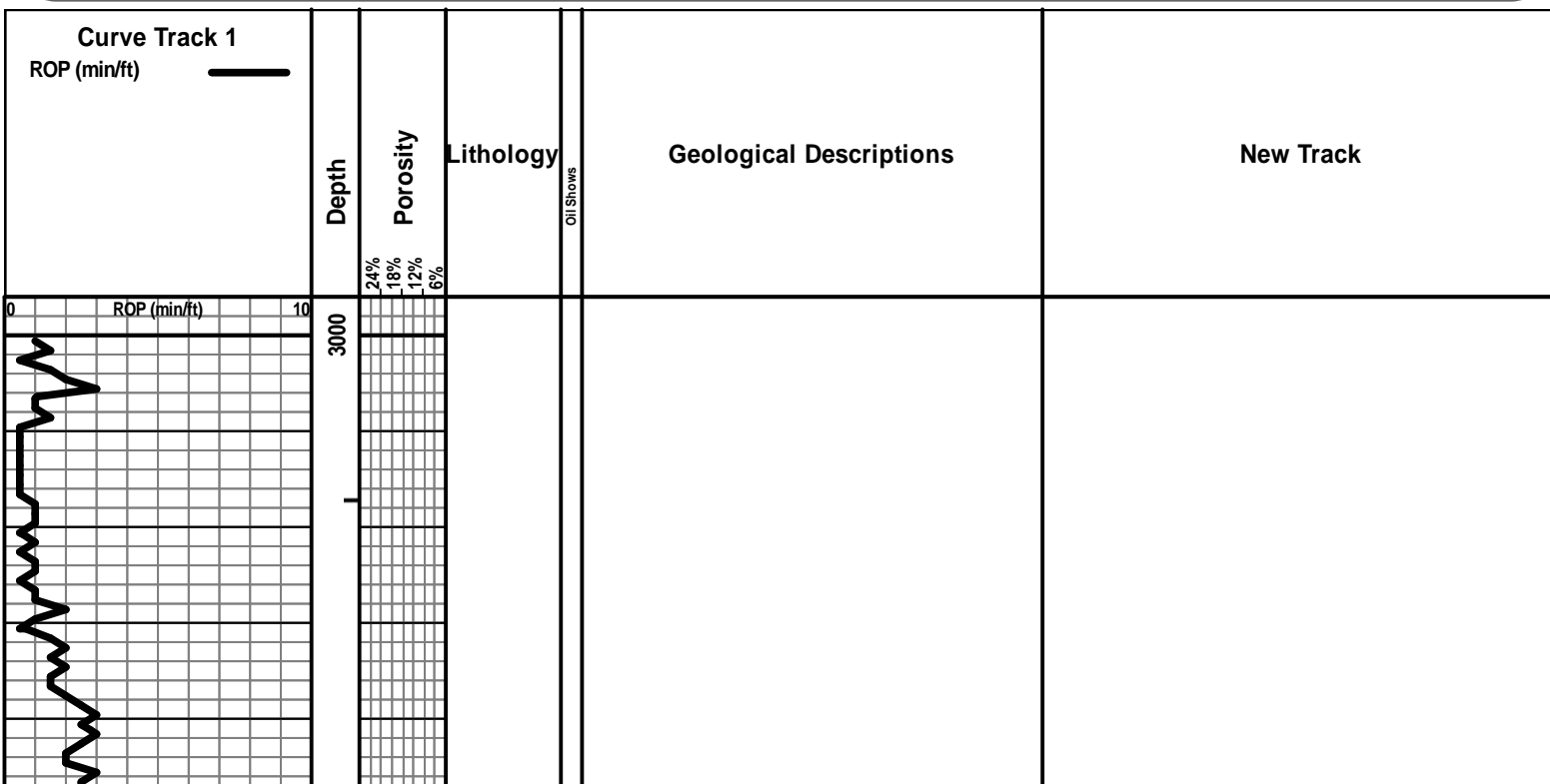
#### INTERVALS

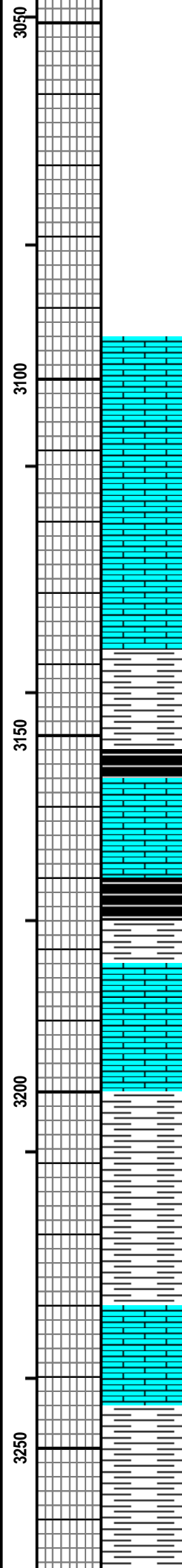
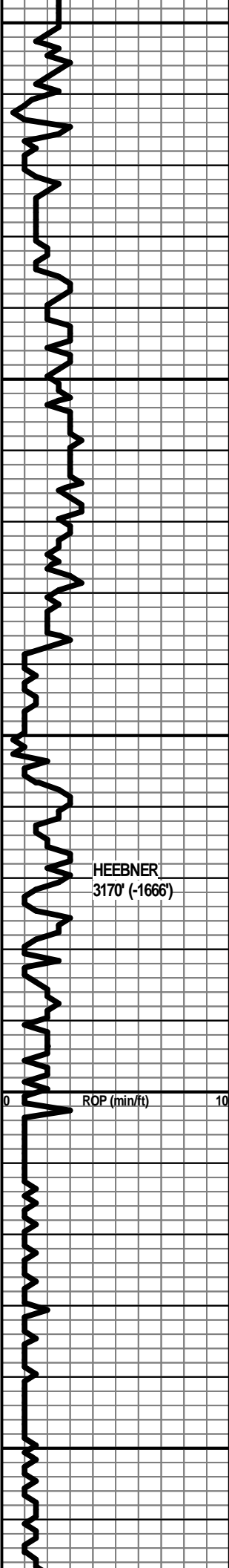
- Core
- Dst

- Dst

#### EVENTS

- Rft
- Sidewall
- Conn





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

WT 8.7  
VIS 60

LS - CRM, VF XLN, SUBCHKY / CHKY

SH - GRN / GY

SH - GRN / GY, SOFT

SH - BLK, MOD CARB

LS - TAN / GY, VF / F XLN, SUBCHKY, FOSS

SH - BLK, CARB

WT 8.7  
VIS 57

LS - CRM, VF / F XLN, MOD DNS

LS - TAN / LT BRN, F XLN, DNS

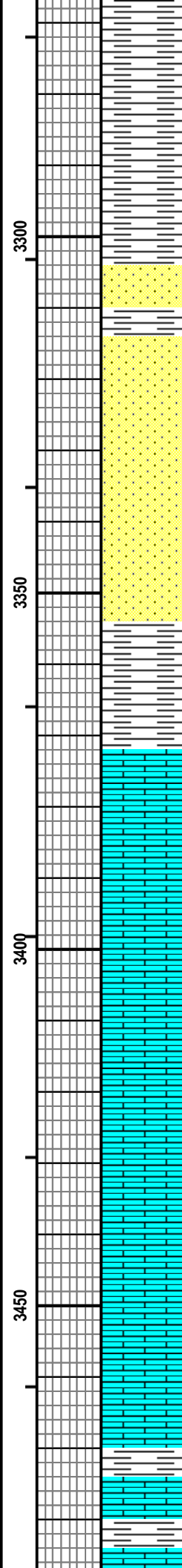
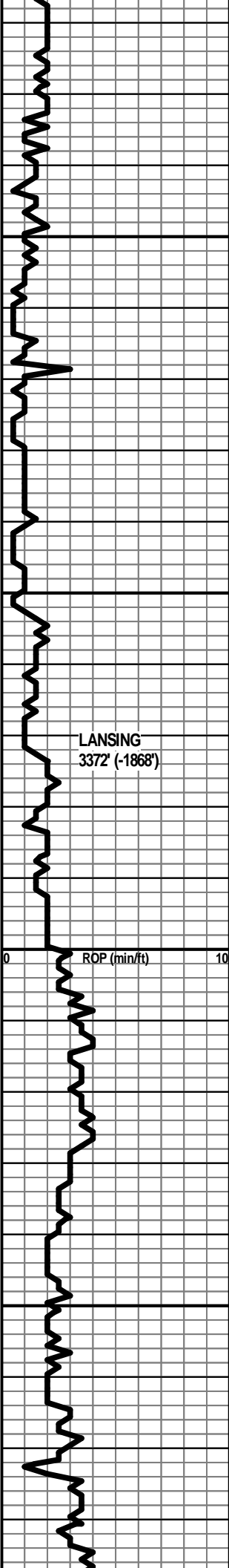
SH - LT GY

SH - GY / LT GRN, LMY, SLTY

LS - CRM, F XLN, DNS, ABUND FOSS

WT 8.8  
VIS 57

SH - LT GY, SLTY



SH - GRN / GY / RD

SH - GY

SS - CLR, FN GR, P SRTD, GLAUC IN PT

SS - CLR / GY, SHLY IN PT, FN GR, P SRTD, GLAUC

SS - CLR / GY, FN GR, P SRTD GLAUC

SH - GY

LS - CRM / TAN, F XLN, DNS, ABUND FOSS, W LS - CRM / WHT, VF XLN, CHKY

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

LS - GY, F XLN, DNS, FOSS IN PT

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

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

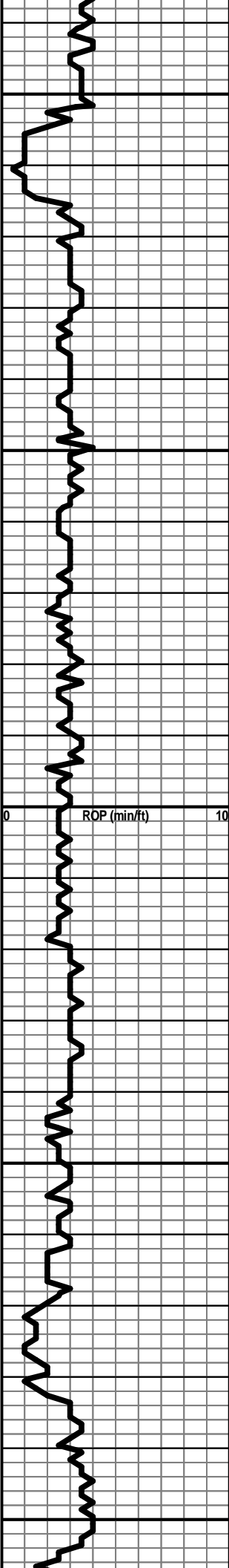
SH - GRN / GY, W LS - CRM / TAN, VF / F XLN, P INTXLN + VUG POR, NS, NO ODOR

WT 9.0  
VIS 60

WT 8.9  
VIS 55

LANSING  
3372' (-1868')

ROP (min/ft)



3500  
3550  
3600  
3650  
3700

LS - TAN, F XLN, DNS

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

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

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

SH - GRN / GY

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

SH - GY / GRN / RD

SH - LT GRN / RD / GY

SH - RD / GRN / GY

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

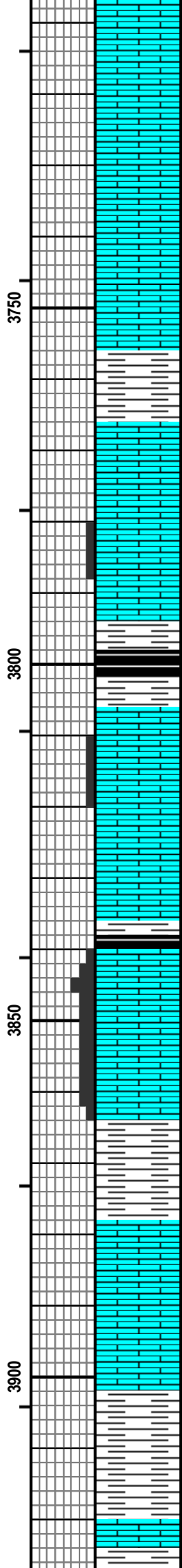
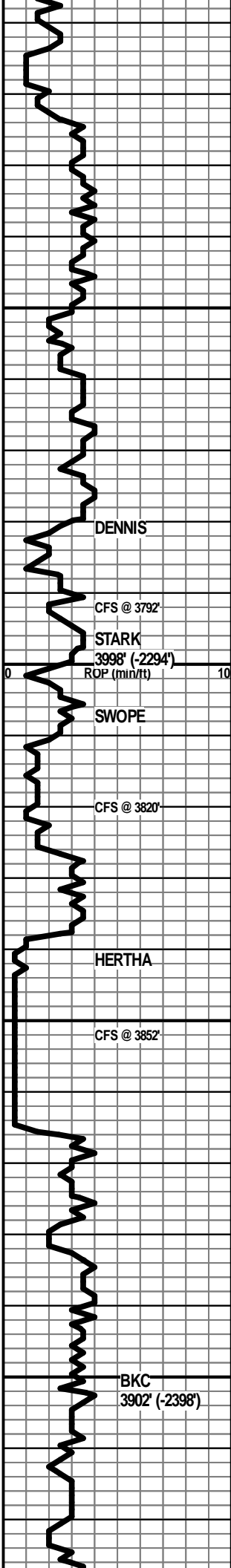
LS - WHT / CRM , VF / F XLN, SUBCHKY / CHKY

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

WT 9.0  
VIS 55

WT 9.5  
VIS 54

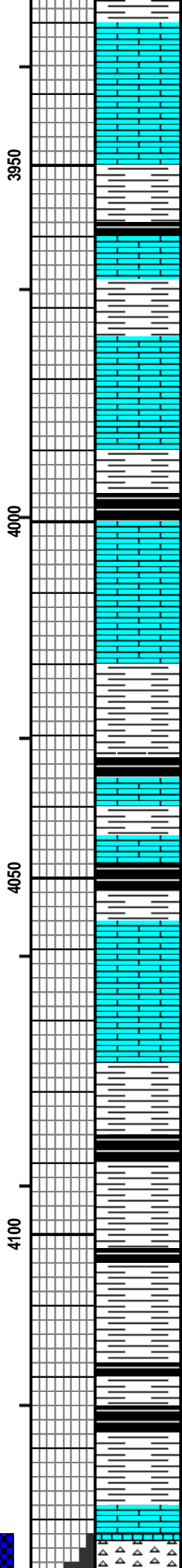
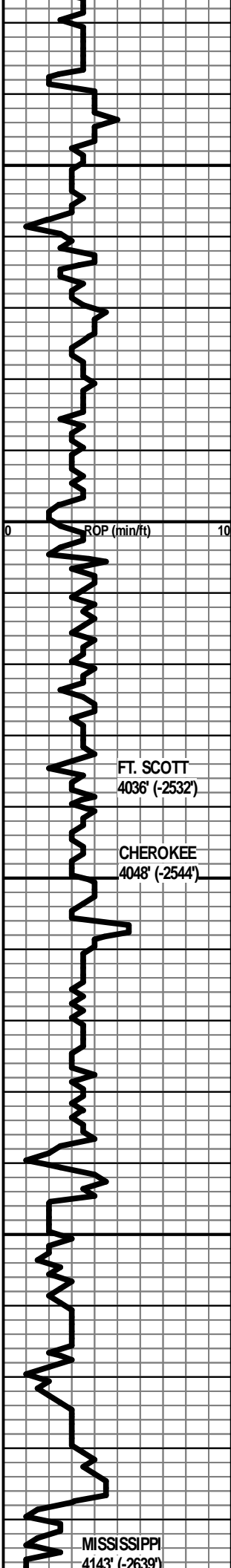
WT 9.2  
VIS 45



LS - CRM / TAN, VF / F XLN, MOD DNS / SUBCHKY  
  
 LS - CRM / TAN / LT BRN, VF / F XLN, SUBCHKY / MOD DNS  
  
 LS - TAN, F XLN, DNS  
  
 SH - RD / GRN / GY  
  
 LS - CRM, VF / F XLN, P INTXLN POR IN PT, NS, NO ODOR  
  
 SH - DK GRN  
 SH - BLK, CARB  
 LS - TAN, F XLN, DNS, NS  
 LS - CRM / TAN, VF / F XLN, PRED SUBCHKY / DNS, P INTXLN POR IN PT, NS  
  
 SH - GY  
 SH - BLK, SLI CARB  
 LS - TAN / BRN, F XLN, P / F OOLMOLDIC POR, P / F INTXLN POR IN PT, NS, NO ODOR  
  
 SH - LT GY / LT GRN  
  
 LS - GY, VF / F XLN, SUBCHKY / MOD DNS  
  
 SH - LT GY / LT GRN  
  
 SH - GRN / GY  
  
 SH - GY, SOFT. W/LS - CRM, VF XLN, SUBCHKY, SHLY IN PT

WT 9.2  
VIS 45

WT 9.3  
VIS 48



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

SH - GY

SH - BLK, CARB

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

SH - GRN / RD

LS - CRM, VF / F XLN, MOD DNS

SH - GY

SH - BLK, CARB

LS - CRM / TAN, F XLN, DNS

SH - GY, SOFT

SH - BLK, CARB

SH - RD

LS - TAN, F XLN, DNS

SH - BLK, CARB

LS - TAN / GY, F XLN, DNS

SH - GY

SH - BLK, CARB

SH - GY, SLTY IN PT

SH - GRN / GY

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

CHT - OFF WHT, WEATH, F / G TRIP POR, FSFO, GS GAS

WT 9.2  
VIS 49

WT 9.6  
VIS 50  
LCM 1/4#

DST #1  
MISSISSIPPIAN  
4142'-4173'  
30"-60"-90"-90"

IF: BOB in 5 1/2min  
ISI: No blow  
FF: BOB in 4 1/2min  
FSI: No blow

Rec': 720' GIP, 42' G0CM (1% G, 1% O, 98% M)

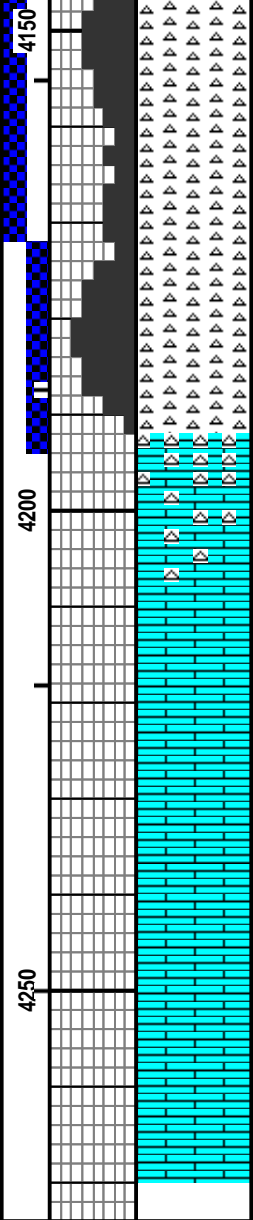
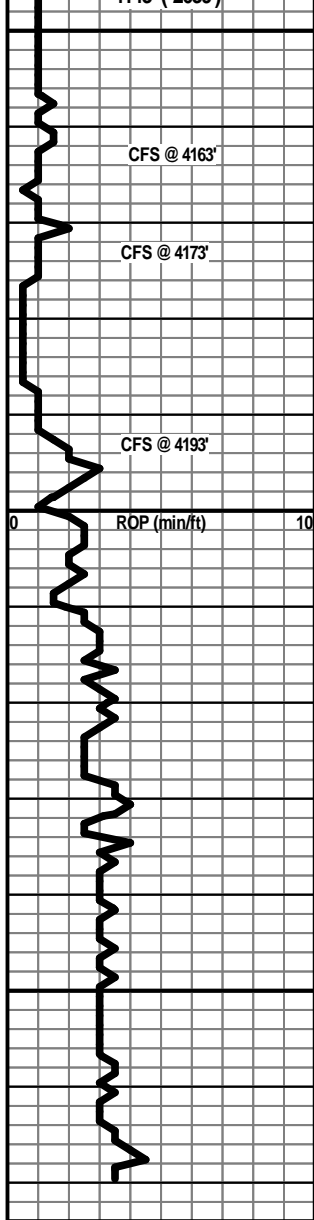
IH: 2020#  
IF: 14#-22#  
ISI: 250#  
FF: 19#-32#  
FSI: 260#  
FH: 2032#

FT. SCOTT  
4036' (-2532')

CHEROKEE  
4048' (-2544')

MISSISSIPPI  
4143' (-2639')





BUBB, F ODOR, G YEL FLUOR, W SCAT CHT - WHT, FRSH, DNS

● CHT - WHT, 50% FRSH, DNS, 50% WEATH, G TRIP POR, VGS GAS BUBB, GSFO, G ODOR, G YEL-GRN FLUOR

● CHT - WHT, 60% FRSH, DNS, 40% WEATH, G TRIP POR, GSFO, GS GAS BUBB, G ODOR, G YEL-GRN FLUOR

● CHT - WHT, 60% FRSH, DNS, 40% WEATH, G TRIP POR, VGSFO, GS GAS BUBB, G ODOR, G YEL-GRN FLUOR

CHT - WHT / OFF WHT, FRSH, DNS

LS - CRM, VF / F XLN, SUBCHKY / MOD DNS, NS, NO ODOR, CHTY

LS - CRM / TAN, VF / F XLN, SUBCHKY / MOD DNS, NS, NO ODOR, CHTY

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

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

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

**RTD 4270'**

Strap 4190.33  
Board 4187.33  
Strap 3.00 long

WT 9.3  
VIS 48  
LCM 1#

DST #2  
MISSISSIPPIAN  
4173'-4193'  
30"-60"-90"-90"

IF: BOB in 5min  
ISI: Weak blow, Surface - 1/4" in 30min  
FF: BOB immediately  
FSI: Weak blow, Surface - 1/4" after 60min

Rec: 1734' GIP, 64' OGWCM (7% G, 3% O, 25% W, 65% M)

IH: 2037#  
IF: 13#-21#  
ISI: 292#  
FF: 20#-36#  
FSI: 283#  
FH: 2007#

WT 9.3  
VIS 56