

GEOLOGIC REPORT

DAVID J. GOLDAK

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

Well Name: Bertrand Trust #1-13
Location: Section 13 - T13S - R38W
License Number: API: 15-199-20443
Spud Date: 07 / 20 / 2017
Surface Coordinates: 335' FSL and 1875' FWL
NE - SW - SE - SW
Region: Wallace Co., KS
Drilling Completed: 07 / 25 / 2017
Bottom Hole Coordinates:
Ground Elevation (ft): 3172' K.B. Elevation (ft): 3185'
Logged Interval (ft): 3300' To: 4666' Total Depth (ft): 4666'
Formation: Mississippian - St Louis
Type of Drilling Fluid: Chemical - Mud-Co

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

OPERATOR

Company: Stelbar Oil Corporation
Address: 1625 N. Waterfront Pkwy., Suite 200
Wichita, Kansas 67206-6602

GEOLOGIST

Name: David J. Goldak
Company: D. J. GOLDAK, INC.
Address: 155 N. Market, Suite 710
Wichita, Kansas 67202

General Info

CONTRACTOR: Sterling Drilling, Rig #5

BIT RECORD:

No.	Size	Make	Jets	Out	Feet	Hours
1	12-1/4	JZ-HAOTC	4-16s	315'	315'	3.00
2	7-7/8	JZ-PLT516	5-15s	4666'	4351'	63.50

SURVEYS: 315'-0.25; 4666'-1.00

GENERAL DRILLING & PUMP INFORMATION:

Collars: 18 joints of collars (6.25"x2.25"): 531.65'
Drilling w/ PDC: 14,000-16,000 lbs on bit and 100-110 RPM.
Pumping w/ PDC: 70 S/M; 10.8 B/M; 900-1000 psi at standpipe.

Daily Status

07/20/17 - Spud at 7:15 PM; Set 8-5/8" csg @ 310'
 07/21/17 - 315' WOC; PD @ 4:15 AM
 07/22/17 - 2,110' Drilling; Dispace mud @ 3,572'
 07/23/17 - 3,610' Drilling
 07/24/17 - 4,345' Drilling
 07/25/17 - 4,666' Waiting on loggers





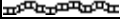



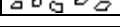
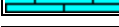
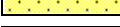



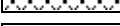
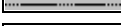
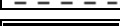
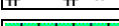

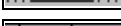






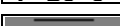



	Log Tops	Sample Tops
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Wabaunsee	3330 (-145)	3335 (-150)
Stotler	3380 (-195)	3384 (-199)
Topeka	3496 (-311)	3501 (-316)
Lecompton	3646 (-461)	3651 (-466)
Heebner	3734 (-549)	3738 (-553)
Lansing	3780 (-595)	3784 (-599)
Muncie Creek	3948 (-763)	3952 (-767)
Stark Sh	4031 (-846)	4036 (-851)
Hushpuckney Sh	4079 (-894)	4084 (-899)
Base of KC	4139 (-954)	4144 (-959)
Marmaton	4152 (-967)	4159 (-974)
Pawnee	4241 (-1056)	4245 (-1060)
Cherokee Sh	4300 (-1115)	4304 (-1119)
Lower Cher Sh	4339 (-1154)	4343 (-1158)
Johnson Zone	4378 (-1193)	4381 (-1196)
Morrow Sh	4473 (-1288)	4477 (-1292)
Mississippian	4576 (-1391)	4581 (-1396)
Total Depth	4662 (-1477)	4666 (-1481)

DSTs

None

ROCK TYPES

 Anhy	 Gyp	 Shgy	 Sandylms
 Bent	 Igne	 Sltst	 Shale
 Brec	 Lmst	 Ss	 Sltstn
 Cht	 Meta	 Till	 Shlyslts
 Clyst	 Mrlst	 Carb sh	 Sltys h
 Coal	 Salt	 Dol	 Lms
 Congl	 Shale	 Dtd	
 Dol	 Shcol	 Gry sh	

ACCESSORIES

- MINERAL**
- [Symbol] Anhy
 - [Symbol] Arggrn
 - [Symbol] Arg
 - [Symbol] Bent
 - [Symbol] Bit
 - [Symbol] Breclrag
 - [Symbol] Calc
 - [Symbol] Carb
 - [Symbol] Chtdk
 - [Symbol] Chtlt
 - [Symbol] Dol
 - [Symbol] Feldspar
 - [Symbol] Ferrpel
 - [Symbol] Ferr
 - [Symbol] Glau
 - [Symbol] Gyp
 - [Symbol] Hvymin
 - [Symbol] Kaol
 - [Symbol] Marl
 - [Symbol] Minxl
 - [Symbol] Nodule
 - [Symbol] Phos
 - [Symbol] Pyr

- [Symbol] Salt
- [Symbol] Sandy
- [Symbol] Silt
- [Symbol] Sil
- [Symbol] Sulphur
- [Symbol] Tuff
- [Symbol] Chlorite
- [Symbol] Dol
- [Symbol] Sand
- [Symbol] Sltly

- FOSSIL**
- [Symbol] Algae
 - [Symbol] Amph
 - [Symbol] Belm
 - [Symbol] Bioclst
 - [Symbol] Brach
 - [Symbol] Bryozoa
 - [Symbol] Cephal
 - [Symbol] Coral
 - [Symbol] Crin
 - [Symbol] Echin
 - [Symbol] Fish
 - [Symbol] Foram

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

- STRINGER**
- [Symbol] Anhy
 - [Symbol] Arg
 - [Symbol] Bent
 - [Symbol] Coal
 - [Symbol] Dol
 - [Symbol] Gyp
 - [Symbol] Ls
 - [Symbol] Mrst
 - [Symbol] Sltstrg
 - [Symbol] Ssstrg
 - [Symbol] Carbsh

- [Symbol] Clystn
- [Symbol] Dol
- [Symbol] Grysh
- [Symbol] Gryslt
- [Symbol] Lms
- [Symbol] Sandylms
- [Symbol] Sh
- [Symbol] Sltstn

- TEXTURE**
- [Symbol] Boundst
 - [Symbol] Chalky
 - [Symbol] Cryxln
 - [Symbol] Earthy
 - [Symbol] Finexln
 - [Symbol] Grainst
 - [Symbol] Lithogr
 - [Symbol] Microxln
 - [Symbol] Mudst
 - [Symbol] Packst
 - [Symbol] Wackest

OTHER SYMBOLS

- POROSITY TYPE**
- [Symbol] Earthy
 - [Symbol] Fenest
 - [Symbol] Fracture
 - [Symbol] Inter
 - [Symbol] Moldic
 - [Symbol] Organic
 - [Symbol] Pinpoint
 - [Symbol] Vuggy

- SORTING**
- [Symbol] Well
 - [Symbol] Moderate
 - [Symbol] Poor

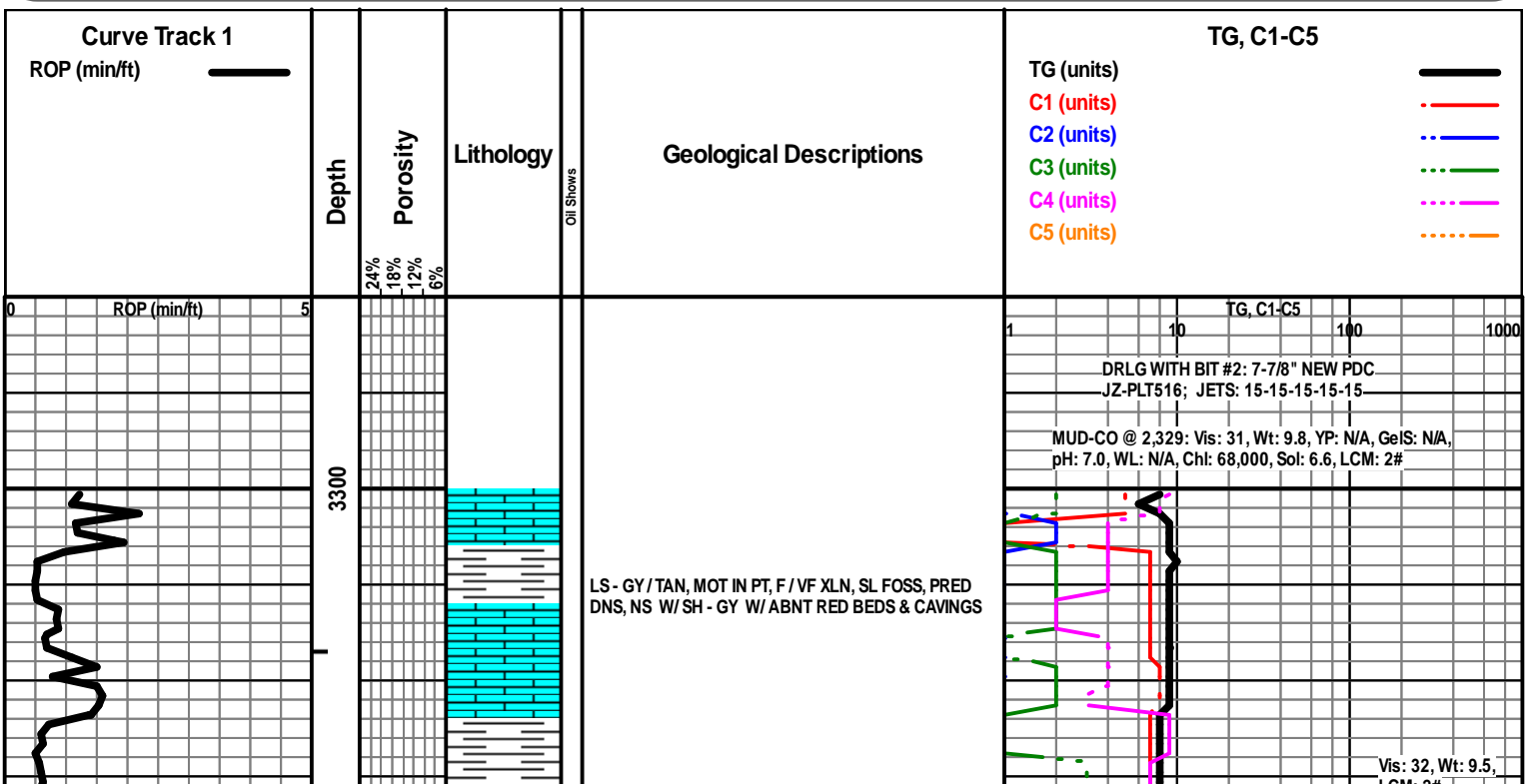
- ROUNDING**
- [Symbol] Rounded
 - [Symbol] Subrnd
 - [Symbol] Subang
 - [Symbol] Angular

- OIL SHOWS**
- [Symbol] Even
 - [Symbol] Spotted
 - [Symbol] Ques
 - [Symbol] Dead
 - [Symbol] Gas show

- INTERVALS**
- [Symbol] Core
 - [Symbol] Dst

- [Symbol] Dst_1_t
- [Symbol] Dst_1_b
- [Symbol] Dst

- EVENTS**
- [Symbol] Rft
 - [Symbol] Sidewall
 - [Symbol] Conn



WABAUNSEE
3335 (-150)

SH - GY W/LS - TAN / CRM, VF / F XLN, AREN IN PT,
SCAT FOSS, PRED DNS, NS

LCM: 2#

LS - TAN / CRM / SCAT GY, VF / F XLN, SIM TO ABOVE,
NS W/ ABNT RED BEDS & CAVINGS

PRED SH - GY, SLTY IN PT

STOTLER
3384 (-199)

LS - GY / TAN / SCAT BRN, MOT IN PT, VF / F XLN, SCAT
FOSS, PRED DNS, NS W/ ABNT RED BEDS & CAVINGS

LS - TAN / GY / SCAT CRM, MOT IN PT, VF / F XLN, FOSS
IN PT, PRED SN, NS W/ SH - GY

LS - GY / TAN, F / VF XLN, SCAT FOSS, PRED DNS, NS
W/ SH - GY W/ MOD AMT RED BEDS & CAVINGS

LS - V SIM TO ABOVE, PRED DNS, NS

LS - CRM / TAN, F / VF XLN, SCAT REXLN CALC, FOSS
IN PT, SL OOL, SCAT P / F INTXLN + VUG POR, NS

LS - TAN / GY, VF / F XLN, SL FOSS, PRED DNS, NS W/
SH - GY W/ MOD RED BEDS & CAVINGS

TOPEKA
3501 (-316)

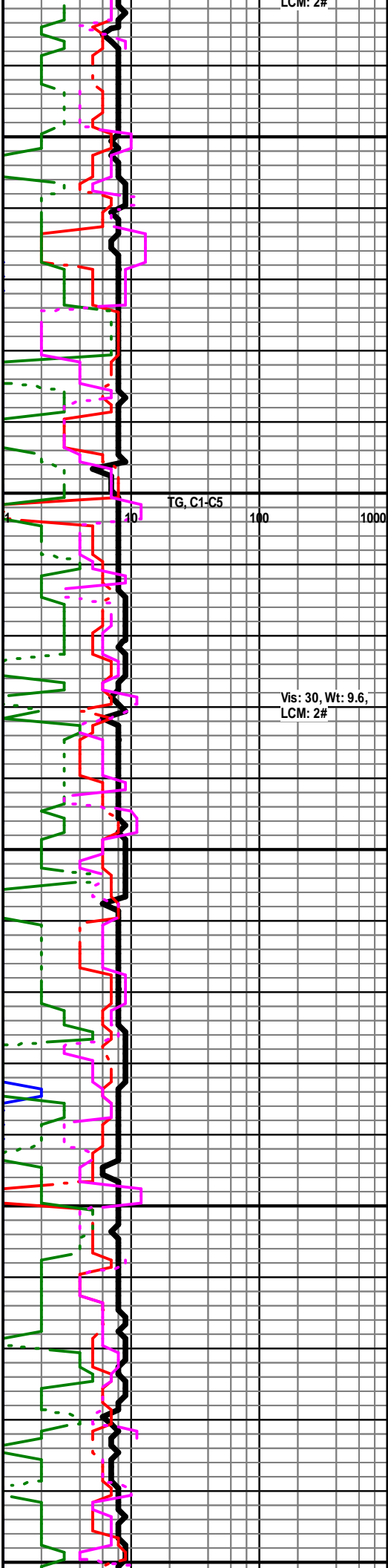
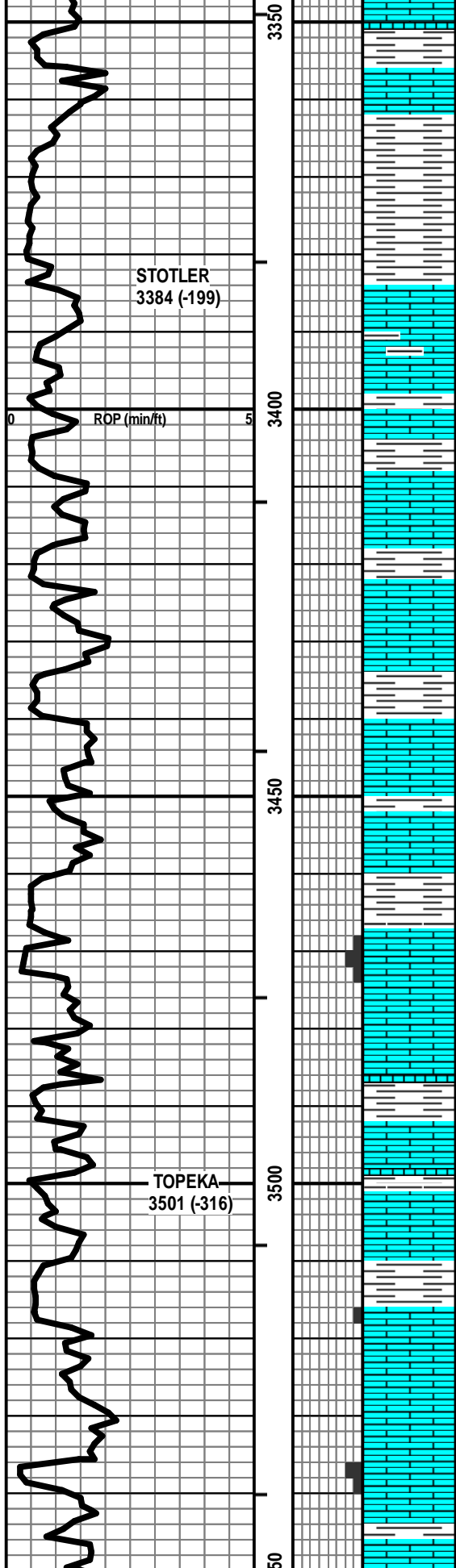
LS - TAN / CRM / BRN, F / VF XLN, OOL + FOSS IN PT,
SCAT P INTXLN + PPT POR, PRED DNS, NS

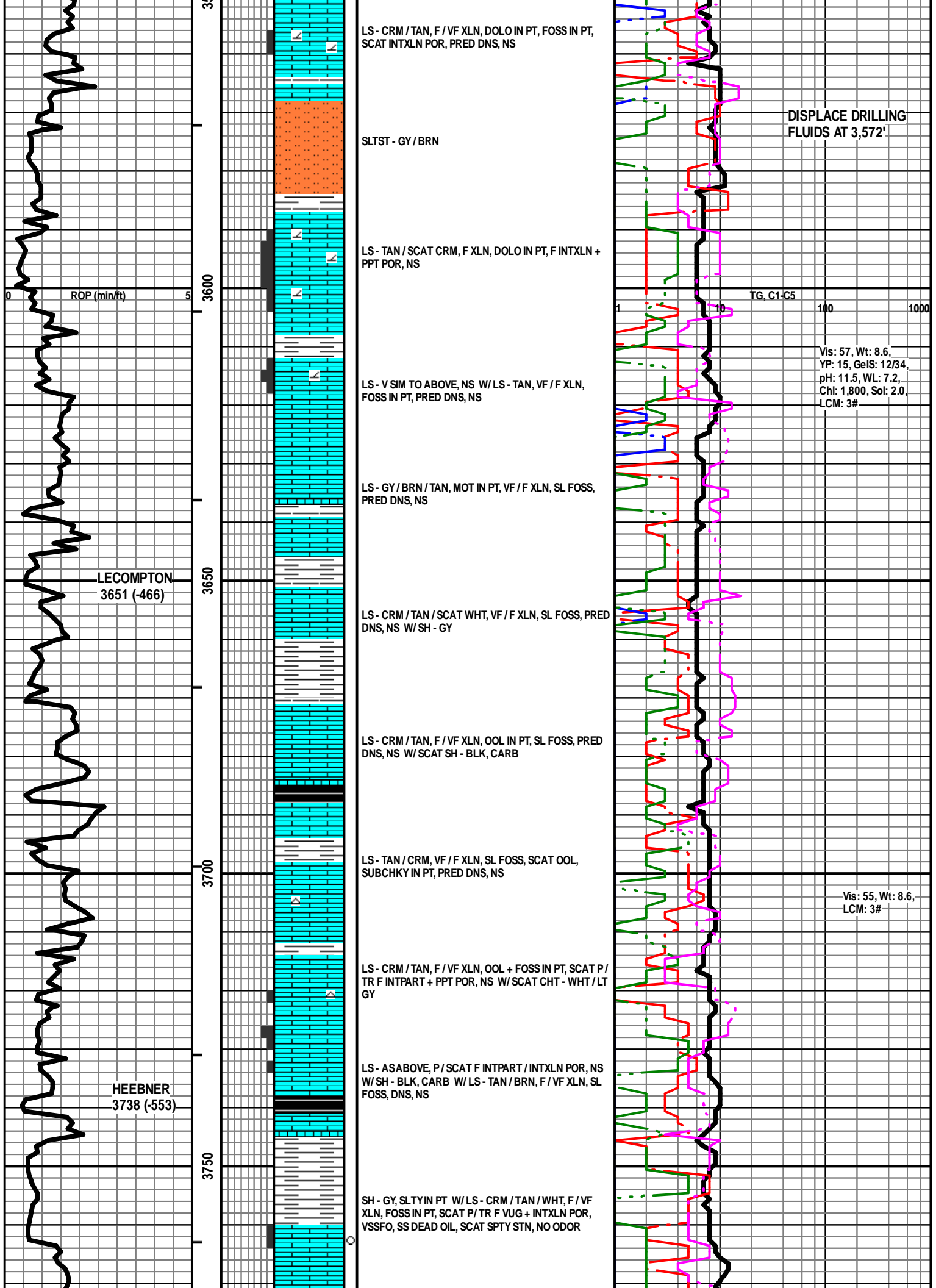
LS - TAN / CRM / WHT, F / VF XLN, SCAT REXLN CALC,
FOSS + OOL IN PT, SCAT P / TR F INTXLN POR, TR VUG
POR, PRED DNS, TR DEAD OIL STN, NSFO, NO ODOR

TG, C1-C5

Vis: 30, Wt: 9.6,
LCM: 2#

ROP (min/ft)





LS - CRM / TAN, F / VF XLN, DOLO IN PT, FOSS IN PT, SCAT INTXLN POR, PRED DNS, NS

SLTST - GY / BRN

LS - TAN / SCAT CRM, F XLN, DOLO IN PT, F INTXLN + PPT POR, NS

LS - V SIM TO ABOVE, NS W/LS - TAN, VF / F XLN, FOSS IN PT, PRED DNS, NS

LS - GY / BRN / TAN, MOT IN PT, VF / F XLN, SL FOSS, PRED DNS, NS

LS - CRM / TAN / SCAT WHT, VF / F XLN, SL FOSS, PRED DNS, NS W/SH - GY

LS - CRM / TAN, F / VF XLN, OOL IN PT, SL FOSS, PRED DNS, NS W/SCAT SH - BLK, CARB

LS - TAN / CRM, VF / F XLN, SL FOSS, SCAT OOL, SUBCHKY IN PT, PRED DNS, NS

LS - CRM / TAN, F / VF XLN, OOL + FOSS IN PT, SCAT P / TR F INTPART + PPT POR, NS W/SCAT CHT - WHT / LT GY

LS - ASABOVE, P / SCAT F INTPART / INTXLN POR, NS W/SH - BLK, CARB W/LS - TAN / BRN, F / VF XLN, SL FOSS, DNS, NS

SH - GY, SLTY IN PT W/LS - CRM / TAN / WHT, F / VF XLN, FOSS IN PT, SCAT P / TR F VUG + INTXLN POR, VSSFO, SS DEAD OIL, SCAT SPTY STN, NO ODOR

DISPLACE DRILLING FLUIDS AT 3,572'

TG, C1-C5

Vis: 57, Wt: 8.6,
YP: 15, GeIS: 12/34,
pH: 11.5, WL: 7.2,
Chl: 1,800, Sol: 2.0,
LCM: 3#

Vis: 55, Wt: 8.6,
LCM: 3#

LECOMPTON
3651 (-466)

HEEBNER
3738 (-553)

ROP (min/ft)

3600

3650

3700

3750

1

10

100

1000

LANSING
3784 (-599)

LS - CRM / TAN / WHT, F / VF XLN, FOSS IN PT,
SUBCHKY IN PT, PRED DNS, NS

LS - CRM / TAN, F / VF XLN, OOL IN PT, SL FOSS, F / G
OOM POR, F INTXLN POR, NS W/ SUBCHKY IN PT /
DNS

Vis: 50, Wt: 8.6,
LCM: 3#

LS - ASABOVE, PRED SUBCHKY / DNS, NS W/ SH - GY /
RED / GRN

LS - CRM / TAN, VF / F XLN, OOL IN PT, SCAT P / TR F
VUG + INTXLN POR, PRED DNS, NS

LS - TAN / CRM, F / VF XLN, OOL IN PT, SL FOSS, SCAT
P / F VUG POR, TR INTOOL POR, NS

LS - V SIM TO ABOVE, SCAT REXLN CALC, SCAT POR,
NS

LS - TAN / CRM / SCAT BRN, VF / F XLN, SL FOSS, PRED
DNS, NS W/ SCAT CHT - WHT / CRM W/ SH - GY / BLK

LS - TAN / BRN / SCAT CRM, F / VF XLN, OOL + FOSS IN
PT, P / G VUG + PPT POR, NS

Vis: 58, Wt: 8.7,
LCM: 3#

LS - TAN / BRN / GY, F / VF XLN, OOL + FOSS IN PT,
PRED DNS, NS

LS - TAN / CRM, F / VF XLN, SCAT REXLN CALC, OOL IN
PT, F / G VUG + INTXLN POR, NS

MUNCIE CK
3952 (-767)

LS - TAN / GY, MOT IN PT, VF / F XLN, SL OOL, PRED
DNS, NS W/ SH - GY / BLK

LS - CRM / TAN, VF / F XLN, SCAT OOL, SCAT P INTXLN
POR, PRED DNS, NS W/ CHT - LT GY / WHT

A

0

ROP (min/ft)

5

3800

B

3850

C

D

3900

E / F

3950

G

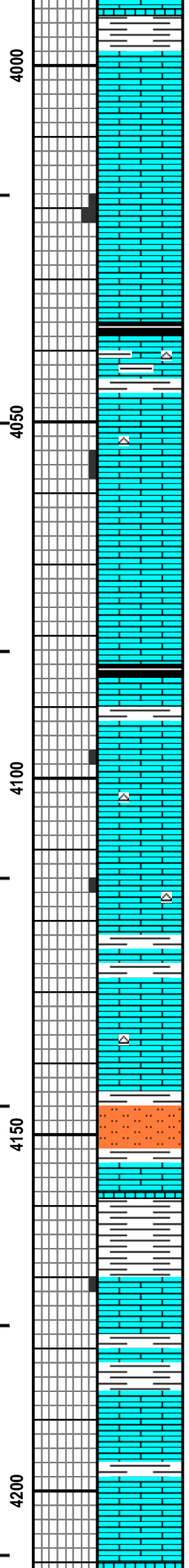
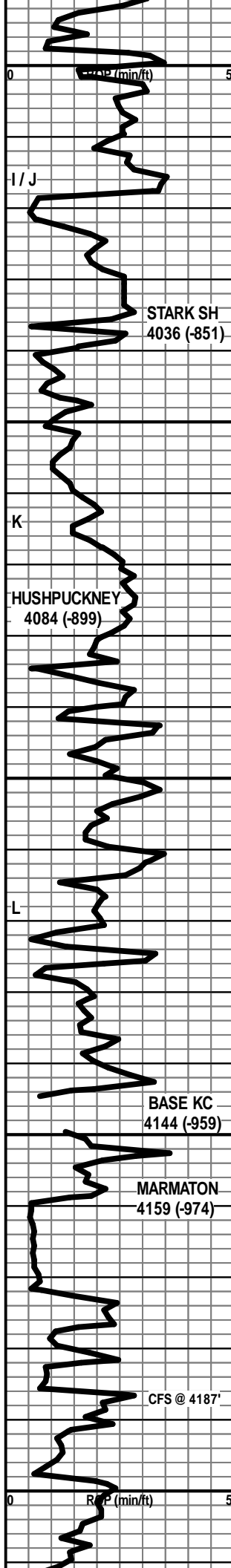
H

1

TG, C1-C5

100

1000



LS - TAN / BRN / GY, MOT IN PT, VF / F XLN, SL FOSS,
PRED DNS, NS W/ SH - GY

LS - TAN / CRM, F / VF XLN, SL FOSS, SCAT P / F INTXLN
+ VUG POR, PRED DNS, NS

LS - TAN / CRM / SCAT BRN, MOT IN PT, VF / F XLN, SL
FOSS, PRED DNS, NS W/ SCAT CHT - LT GY / WHT W/
SCAT SH - BLK, CARB

LS - CRM / TAN, F / VF XLN, SCAT REXLN CALC, FOSS
IN PT, SCAT OOL, SCAT P INTXLN POR, TR P VUG POR,
PRED DNS, NS

LS - AS ABOVE, PRED DNS, NS W/ LS - TAN / BRN,
MOT IN PT, F XLN, SCAT OOL, DNS, NS W/ SCAT SH -
BLK, CARB

LS - CRM / TAN / SCAT GY, VF / F XLN, SL FOSS, TR P
INTXLN POR, CHKY IN PT / DNS, NS W/ SCAT CHT - LT
GY

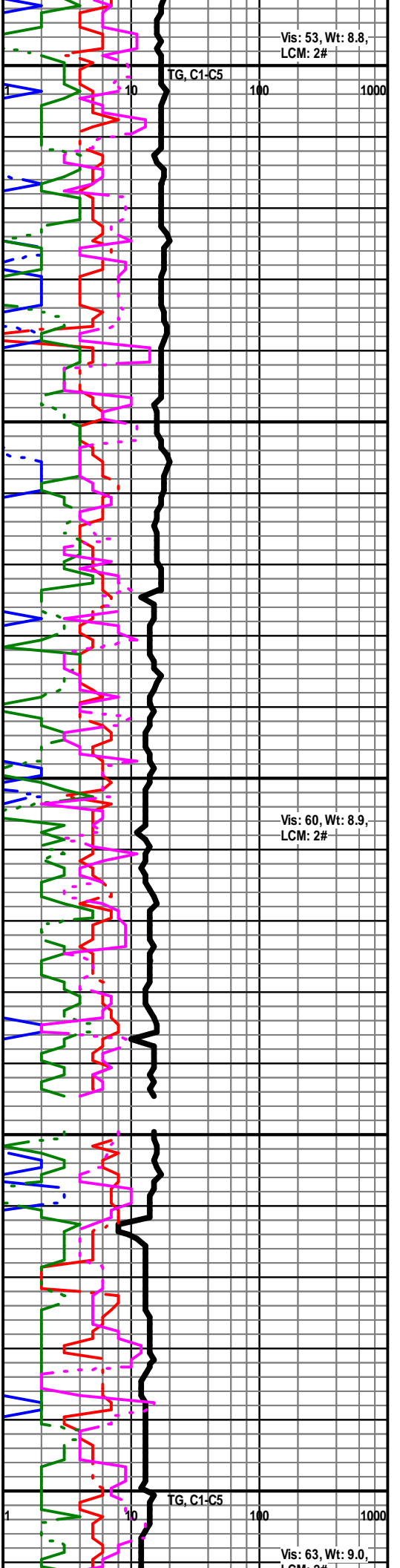
LS - CRM / TAN, VF / F XLN, OOL IN PT, TR P VUG POR,
SUBCHKY IN PT, PRED DNS, NS W/ SCAT CHT - LT GY

LS - V SIM TO ABOVE, CHKY IN PT, PRED DNS, NS W/
SCAT CHT - LT GY W/ SLTST - LT / MED GY

SLTST - LT / MED GY W/ LS - TAN / BRN, F / VF XLN, SL
FOSS, PRED DNS, NS W/ SH - GY

LS - CRM / TAN, F XLN, SCAT REXLN CALC, SL FOSS,
SCAT INTXLN POR, PRED DNS, NS W/ SH - GY / GRN

LS - TAN / CRM / GY / SCAT BRN, F / VF XLN, SL FOSS,
PRED DNS, NS W/ SH - GY



Vis: 53, Wt: 8.8,
LCM: 2#

Vis: 60, Wt: 8.9,
LCM: 2#

Vis: 63, Wt: 9.0,
LCM: 2#

ABNT SH - GY W/LS - TAN / BRN / GY, VF / F XLN,
ARGIL IN PT, PRED DNS, NS

LS - TAN / GY, VF / F XLN, SL FOSS, TR P INTXLN POR,
PRED DNS, NS W/LS - TAN / BRN / SCAT GY, MOT IN
PT, F / VF XLN, SL OOL, PRED DNS, NS W/SCAT SH -
GY / BLK, CARB IN PT

LS - BRN / GY / SCAT TAN, VF / F XLN, SCAT FOSS,
PRED DNS, NS

LS - V SIM TO ABOVE, NS W/SCAT CHT - TAN / GY W/
SCAT SH - BLK, CARB

LS - TAN / BRN / SCAT CRM, VF / F XLN, OOL + FOSS IN
PT, SCAT CHKY, PRED DNS, NS W/CHT - GY / TAN /
WHT W/SH - BLK, CARB

LS - TAN / CRM / BRN, VF / F XLN, SCAT REXLN CALC,
OOL + FOSS IN PT, TR P INTXLN POR, PRED DNS, NS
W/SCAT CHT - LT GY / WHT W/SH - GY / BLK

LS - TAN / BRN / SCAT CRM, MOT IN PT, F / VF XLN, SL
FOSS, PRED DNS, NS W/SCAT CHT - LT GY / TAN W/
SH - GY / BLK

LS - TAN / BRN / SCAT GY, MOT IN PT, VF / F XLN, SL
FOSS, SUBCHKY IN PT, PRED DNS, NS W/SH - GY /
BLK

LS - TAN / BRN, VF / F XLN, SCAT OOL, SUBCHKY IN PT,
PRED DNS, NS W/SCAT CHT - GY / BRN W/SH - GY

LS - TAN / BRN, F / VF XLN, OOL IN PT, PRED DNS, NS
W/SCAT CHT - GY / TAN W/SH - GY

PAWNEE
4245 (-1060)

CHEROKEE
4304 (-1119)

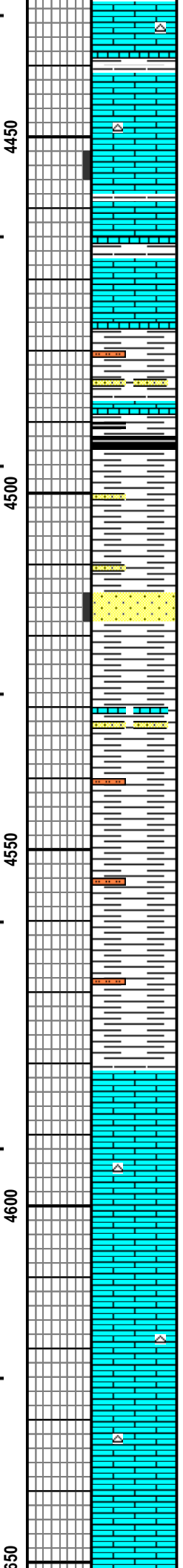
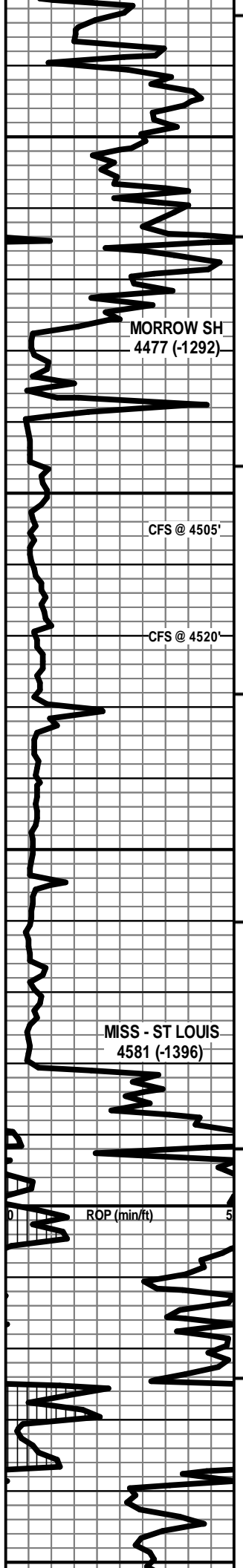
JOHNSON ZN
4381 (-1196)

Por (min/ft)

Vis: 60, Wt: 9.0,
LCM: 2#

TG, C-5

Temp: 22, Cels: 70.37,
pH: 10.5, WL: 8.0,
Chl: 4,000, Sol: 7.0,
LCM: 2#



LS - TAN / CRM / BRN / GY, MOT IN PT, F / VF XLN, OOL
IN PT, SL FOSS, SUBCHKY IN PT, PRED DNS, NS W/
SCAT CHT - GY / TAN

LS - TAN / CRM / BRN, F / VF XLN, OOL + FOSS IN PT,
SCAT P VUG + MOLDIC POR, PRED DNS, NS

LS - TAN / CRM / BRN, MOT IN PT, VF / F XLN, OOL +
FOSS IN PT, SUBCHKY IN PT, PRED DNS, NS

SH - GY / BLK, CALC IN PT, CARB IN PT W/ SCAT
SLTST - GY / GRN W/ SCAT SS - LT GY, VF / F GR, FW
SRTD, SA / SR, V CALC IN PT, P / NO VIS POR, NS

PRED SH - GY / BLK W/ TR DIRTY SS, CLAYEY IN PT

SH - GY / SCAT BLK W/ SS - LT GY, PRED VF / SCAT F
GR, FW SRTD, SA / SR, SIL CEM, TR GLAUC, ARGIL IN
PT, P / TR F POR, NS

SH - GY W/ MOD AMT SS - AS ABOVE, NS

PRED SH - GY, SLTY IN PT W/ SCAT SS - AS ABOVE, NS
W/ SCAT LS - BRN / GY, MOT, VF XLN, DNS, NS

PRED SH - GY, SLTY IN PT

PRED SH - GY, SLTY IN PT

LS - CRM / TAN, VF / F XLN, SL OOL, PRED DNS, NS W/
TR CHT - LT GY

LS - CRM / TAN, VF / F XLN, OOL IN PT, PRED DNS, NS
W/ TR CHT

LS - CRM / TAN, VF / F XLN, SCAT CRYPTO XLN, OOL IN
PT, PRED DNS, NS W/ SCAT CHT

LS - CRM / TAN, VF / F XLN, SCAT CRYPTO XLN, OOL IN
PT, PRED DNS, NS W/ SCAT CHT

MORROW SH
4477 (-1292)

CFS @ 4505'

CFS @ 4520'

MISS - ST LOUIS
4581 (-1396)

ROP (min/ft)

Vis: 58, Wt: 9.3,
LCM: 2#

TG, C1-C5

Vis: 58, Wt: 9.3,
LCM: 3#

LS - CRM / TAN, VF / F XLN, SCAT CRYPTO XLN, OOL IN
PT, TR P INTOOL POR / MOD CHKY, PRED DNS, NS W/
SCAT CHT

TOTAL DEPTH 4666 (-1481)

