

Geologic Report
Aaron L. Young

Drilling Time and Sample Log

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

Well Name: Leslie #1-13
API: 15-095-22316
Location: Section 13 - T30S - R8W
License Number: 6236
Spud Date: 11/20/2017
Surface Coordinates: 1135' FSL and 330' FEL
Approx. N2 - NE - SE - SE
Region: Kingman Co., KS
Drilling Completed: 11/30/2017
Bottom Hole Coordinates:
Ground Elevation (ft): 1524' K.B. Elevation (ft): 1532'
Logged Interval (ft): 3000' To: 4650' Total Depth (ft): 4650'
Formation: Simpson
Type of Drilling Fluid: Chemical - Mud-Co

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

OPERATOR

Company: MTM Petroleum, Inc.
Address: PO Box 391
Kingman, KS 67068+0391

GEOLOGIST

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

General Info

CONTRACTOR: Duke Drilling, Rig #8

BIT RECORD:

No.	Size	Make	Jets	Out	Feet	Hours
1	12-1/4	JZ RR	18-18-18	223	215	5.25
2	7-7/8	HA23X	15-15-15	4650	4427	140.50

SURVEYS: 223'-1, 1200'-2, 1736'-1, 4272'-1, 4650'-1.75

GENERAL DRILLING AND PUMP INFORMATION:

Drilling with 32,000 - 38,000 lbs. on bit and approx 65-75 RPM.
Running 8 stands of collars; 474'
Pumping approx 500-700 psi at standpipe.

Daily Status

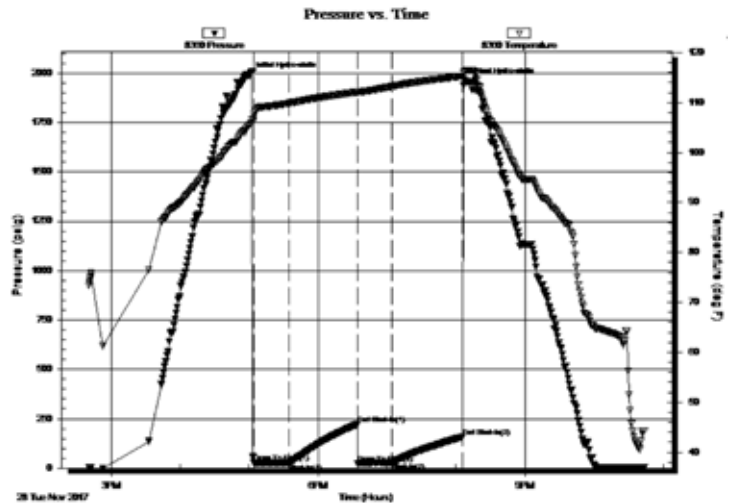
11/21/17 - Spud @ 5:15am, Ran 5 jts of New 8 5/8" 24# surface casing set @ 210', cmt w/ 165 sx 60/40 poz, 2% gel, 3% CC, 1/4# flake. PD @ 7:00am
 11/22/17 - Drilling @ 950'
 11/23/17 - Drilling @ 1745'
 11/24/17 - Drilling @ 2475'
 11/25/17 - Drilling @ 3055'
 11/26/17 - Drilling @ 3590'
 11/27/17 - Drilling @ 3988'
 11/28/17 - DST #1 4225'-4275'
 11/29/17 - Drilling at 4308'
 11/30/17 - RTD @ 4250', plugging well.

DST #1 4225' - 4272'
MISSISSIPPIAN
 30 - 60 - 30 - 60

IF: BOB IN 2 MIN
ISI: NO BLO BACK
FF: WK TO GD BLO BLD 1" TO 7.5"
FSI: NO BLO BACK

REC: 15' mud w/ show of oil
480' GIP

SIP: 221-158# FP: 27-25#, 23-27# HP: 1986-1955#



ROCK TYPES

	Anhy		Gyp		Shgy		Sandylms
	Bent		Igne		Slstst		Shale
	Brec		Lmst		Ss		Slststn
	Cht		Meta		Till		Shlyslts
	Clyst		Mrlst		Carb sh		Sltysh
	Coal		Salt		Dol		Lms
	Congl		Shale		Dtd		
	Dol		Shcol		Gry sh		

ACCESSORIES

MINERAL

- [Symbol] Anhy
- [Symbol] Arggrn
- [Symbol] Arg
- [Symbol] Bent
- [Symbol] Bit
- [Symbol] Breclfrag
- [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] Slty

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

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

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

STRINGER

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

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

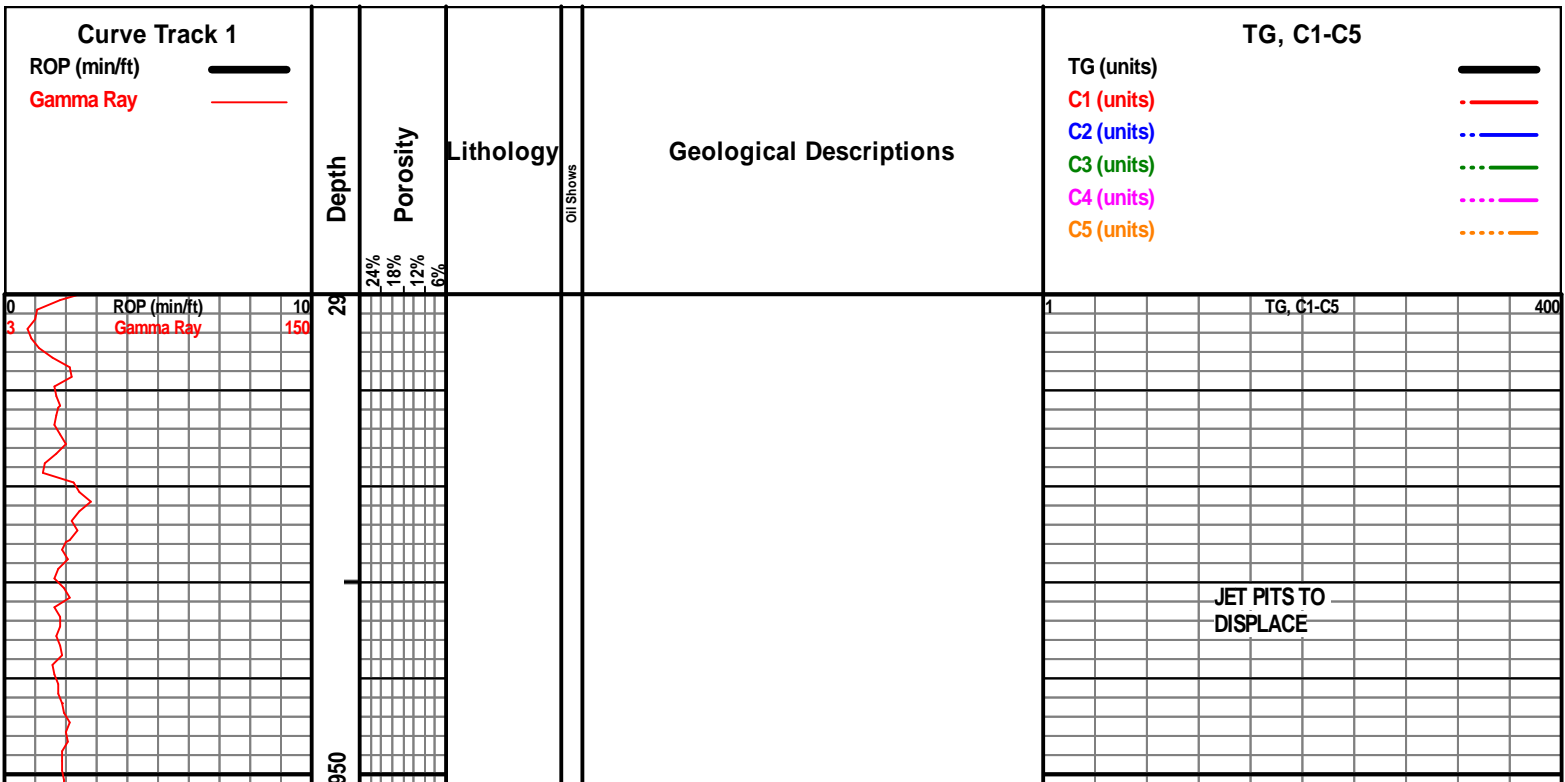
INTERVALS

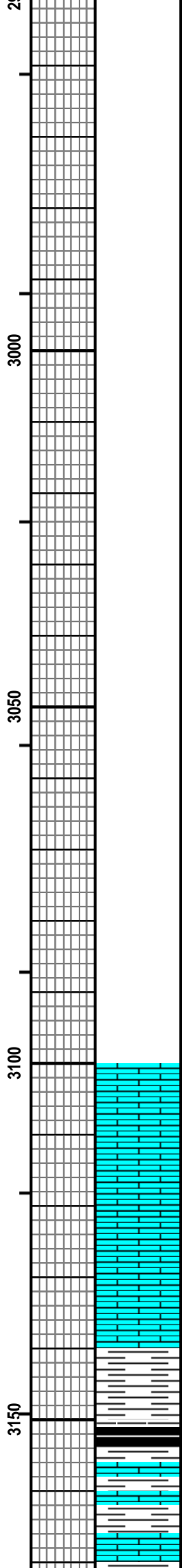
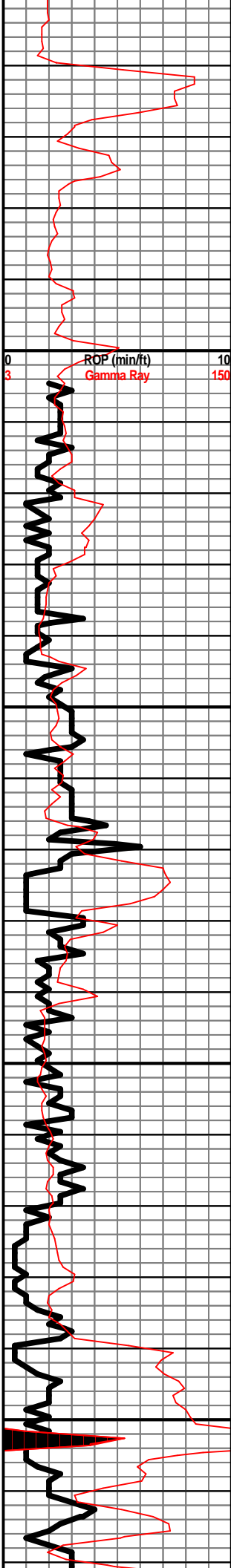
- [Symbol] Core
- [Symbol] Dst

- [Symbol] Dst

EVENTS

- [Symbol] Rft
- [Symbol] Sidewall
- [Symbol] Conn





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

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

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

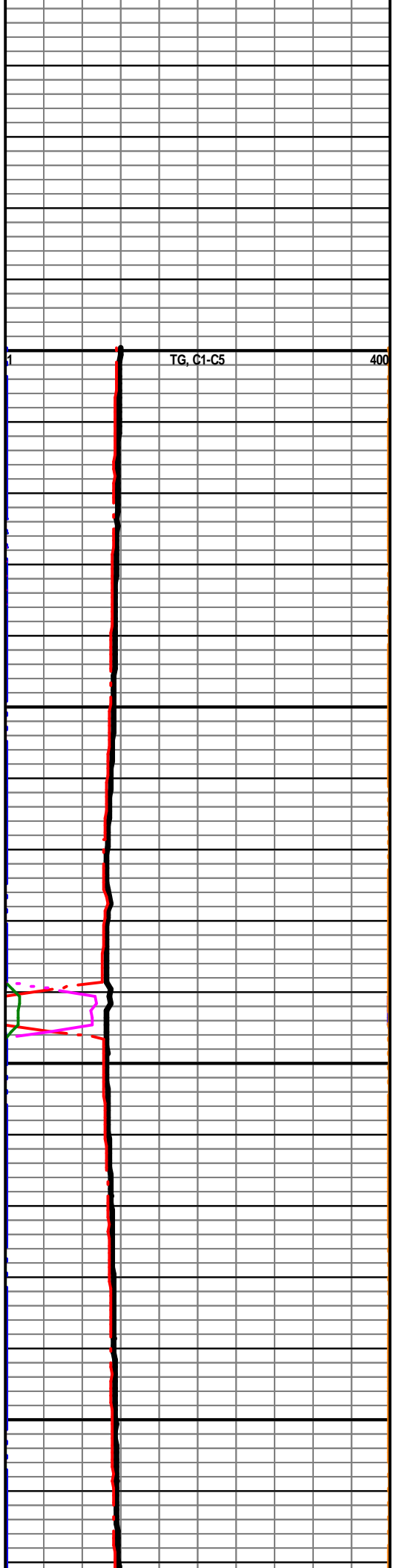
LS - WHT / CRM, VF / F XLN, SUBCHKY / CHKY

SH - GY

SH - BLK, CARB, W/ SH - GY, LMY

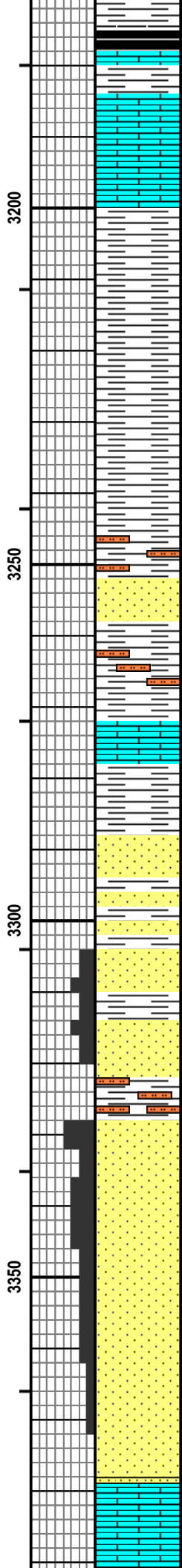
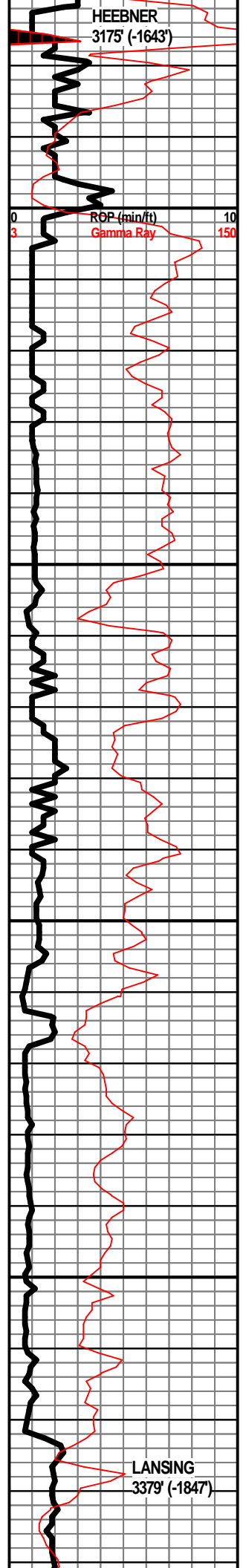
LS - CRM / TAN, F XLN, MOD DNS, W/ SH - GRN / MAR / RD

LS - TAN / GY, F XLN, MOD DNS / SUBCHKY, W/ SH - GRN / GY



TG, C1-C5

400



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

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

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

SH - LT GY / GRN IN PT

SH - GY / GRN / MAR

SH - GY / GRN / PURP

SH - GY / GRN

SH - GY, SLTLY SILTY IN PT

SS - CLR / GY, BLK SPECS, VF GR, SUB RD, W SRTE, MOD CEM, NO VIS POR, NS, NO ODOR, NO FLUOR, W SH - GY SLTY

SH - LT GY

SH - GRN / GY, W LS - CRM, F XLN, MOD DNS, FOSS IN PT

SH - LT GY / GRN

SS - GY / CLR, VF GR, SUB RND, W SRTE, W CEM, NO VIS POR, NO ODOR, NO FLUOR

SS - CLR / GY, VF / F GR, SUB RND, W SRTE, F INTGR POR, NS, NO ODOR, NO FLUOR

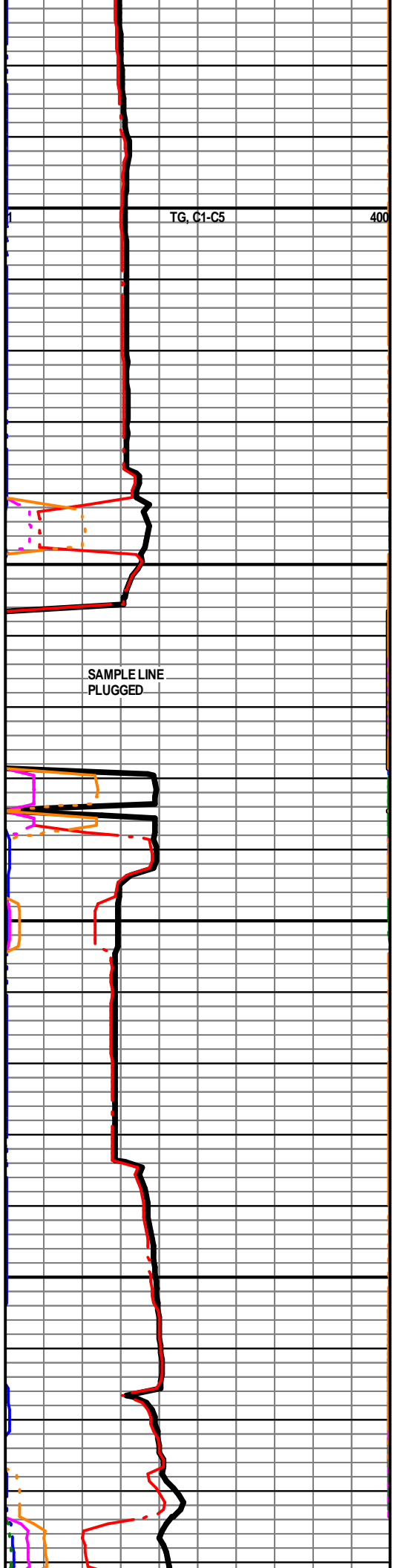
SS - CLR / GY, F GR, SUB RND, W SRTE, F INTGR POR, NS, W SH - LT GY, W SS - VF GR, SUB RND, W SRTE, W CEM

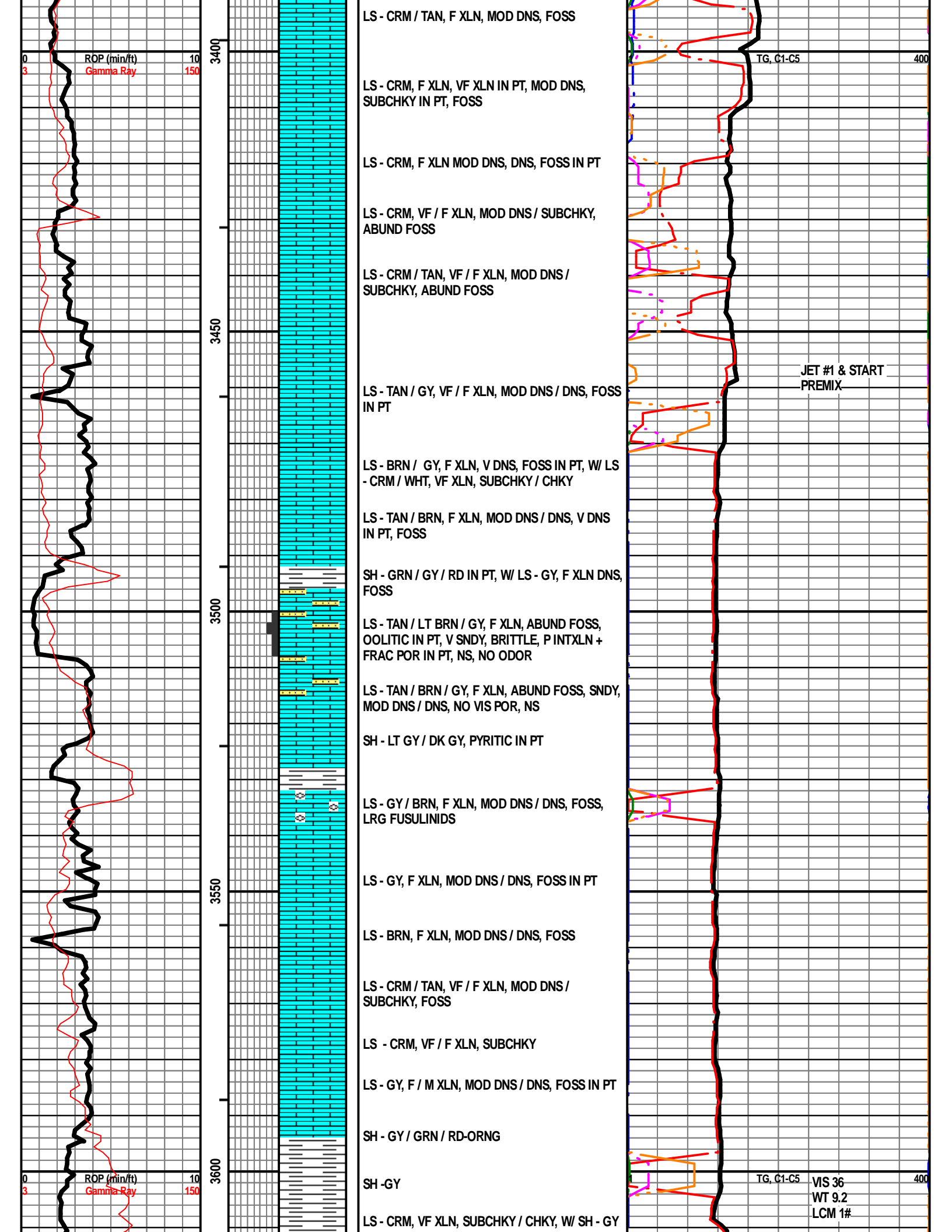
SS - CLR / GY, F GR, SUB RND, W SRTE, F / G INTGR POR, NS, W SH - GY, SLTY

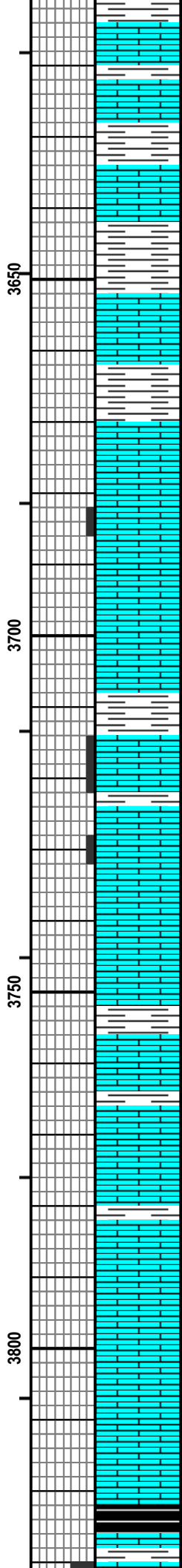
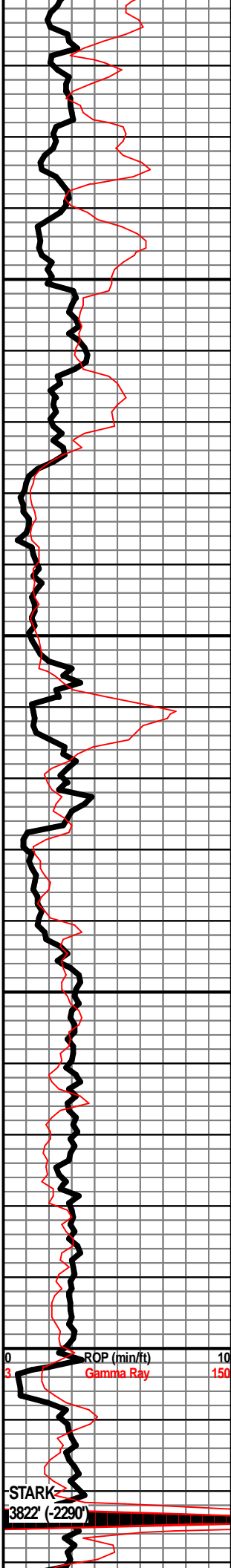
SS - CLR / GY, F GR, SUB RND, W SRTE, F / G INTGR POR, NS, PYRITIC IN PT

SS - CLR / GY, VF / F GR, SUB RND, W STRED, P / F INTGR POR, NS

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







LS - GY / TAN, M XLN, DNS, FOSS, W/ SH - GY

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

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

LS - DK GY / BRN, F XLN, DNS, FOSS IN PT

SH - LT GRN / GY, W/ LS - TAN / GY, VF XLN, MOD DNS / SUBCHKY

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

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

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

LS - CRM, VF / F XLN, MOD DNS, P INTXLN POR IN PT, NSFO, SLT OIL SHEEN WHEN BROKEN, NO ODOR, SLT YEL-GRN FLUOR IN PT

LS - CRM, VF / F XLN, MOD DNS, P INTXLN POR IN PT, NSFO, SLT OIL SHEEN WHEN BROKEN, SHO OF GAS BUBB, SLT ODOR, F YEL-GRN FLUOR

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

LS - CRM, VF XLN, MOD DNS / SUBCHKY

SH - RD / GRN / GY

LS - LT BRN, VF / F XLN, MOD DNS, W/ SH - GY / GRN / RD

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

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

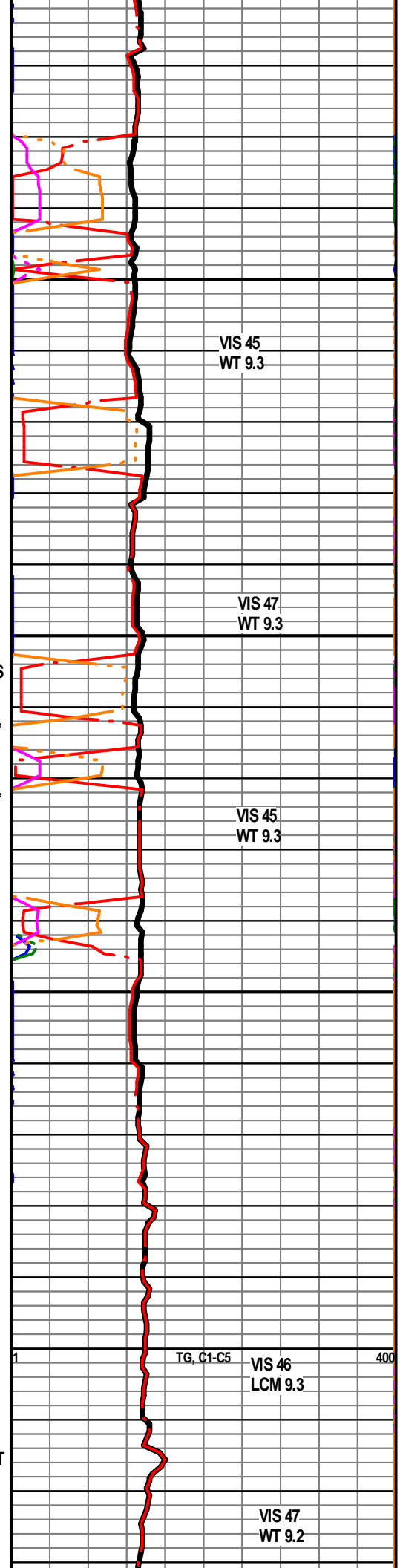
LS - CRM / TAN, VF / F XLN, MOD DNS / DNS, SUBCHKY IN PT

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

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

SH - BLK, CARB, PYRITIC IN PT

SH - LT GY



VIS 45
WT 9.3

VIS 47
WT 9.3

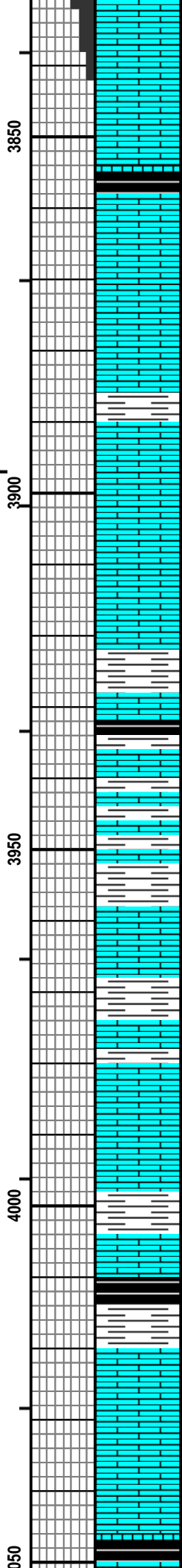
VIS 45
WT 9.3

TG, C1-C5 VIS 46
LCM 9.3

VIS 47
WT 9.2

ROP (min/ft) 10
Gamma Ray 150

STARK
3822' (-2290')



LS - CRM / TAN, VF / F XLN, MOD DNS / SUBCHKY, P / F INTXLN POR IN PT, NS, NO ODOR, G YEL-GRN FLUOR IN PT

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

SH - BLK, CARB, W/LS - CRM / TAN, VF / F XLN, MOD DNS / DNS, SUBCHKY IN PT, STYLOLITIZED IN PT

LS - CRM / TAN / LT GY IN PT, F XLN, MOD DNS / DNS, FOSS IN PT, NS, NO ODOR

LS - TAN / GY, F XLN, F / G INTXLN POR, NS, NO ODOR, F MINERAL FLUOR, FOSS, OOLITIC IN PT

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

SH - GY, BRN IN PT, W/LS - CRM, VF / F XLN, MOD DNS / SUBCHKY, FOSS IN PT

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

SH - GY / GRN, W/LS - CRM, VF / F XLN, MOD DNS / SUBCHKY, FOSS

LS - TAN / GY, F XLN, MOD DNS / DNS, SUBCHKY IN PT, W/SH - GY

SH - BLK, CARB, W/SH - GY / GRN

LS - TAN, F / M XLN, DNS, W/SH - GRN / GY / MAR

SH - GRN / GY, W/LS - GY, F / M XLN, DNS

LS - TAN / GY, F XLN, MOD DNS / DNS, W/SH - GRN / GY

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

LS - CRM / TAN, VF / F XLN, SUBCHKY / CHKY IN PT, W/SH - PRED GRN / GY IN PT

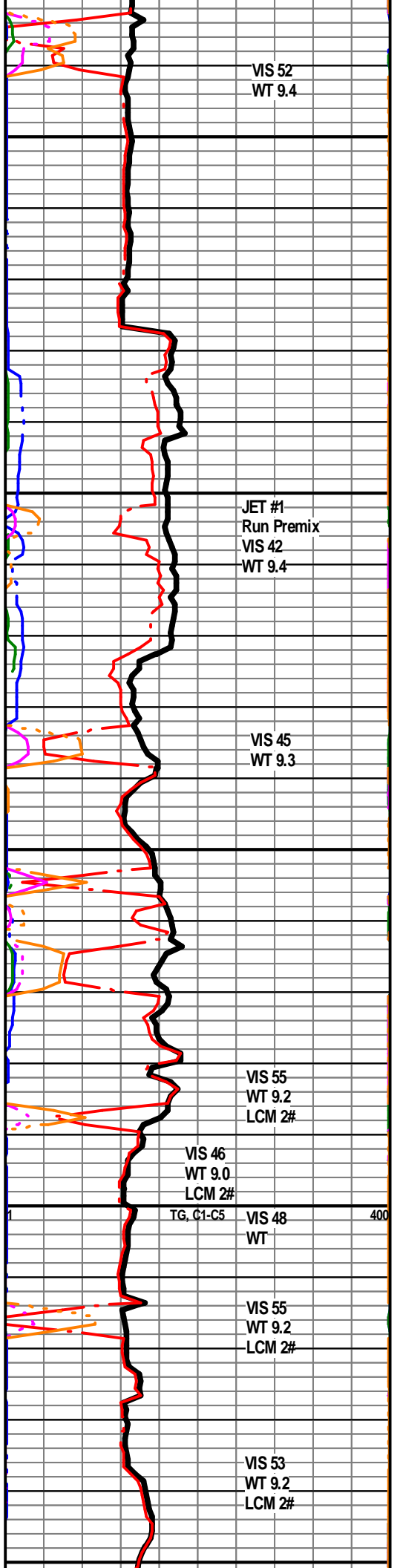
LS - CRM / TAN, F / M XLN, MOD DNS / DNS, FOSS IN PT, W/SH - GRN

SH - BLK, CARB, W/SH - GY, W/LS - DK GY, M XLN, DNS

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

LS - CRM / TAN, F XLN, MOD DNS / DNS, OOL & ABUND FOSS IN PT, CEM W/ CALCTE CEM

SH - DK GY / BLK, PYRITIC IN PT, W/LS - GY, F XLN, DNS



CHEROKEE
4062' (-2530')

MISSISSIPPI
4158' (-2626')

CFS @ 4185'

R₀₋₂ (min/ft)
Gamma Ray

4100

4150

4200

4250

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

SH - BLK, SLI CARB, W SH - GRN / GY, W / LS - CRM, F XLN, DNS, ABUND FOSS

LS - CRM, F XLN, DNS, ABUND FOSS, CALCITE CEM IN PT, W SH - GRN / GY

LS - PRED GY / TAN IN PT, F / M XLN, V DNS, FOSS IN PT

LS - CRM, VF XLN, MOD DNS / SUBCHKY, W SH - GRN - GY

SH - BLK, CARB, W SH - TURQ / GRN / PURP, LS - GY, VF / F XLN, MOD DNS / DNS

SH - BLK, CARB, W LS - WHT / CRM, VF XLN, SUBCHKY / CHKY, W SH - GRN / GY / PURP

SH - GRN / GY / PURP / MAR / YEL

SH - BLK, CARB, W SH - GRN / GY / PURP / MAR / YEL

SH - YEL & GY, V SLTY & SNDY

CHT - WHT / CRM, SLI DOLOMITIC, 90% FRSH, FEW PIECES WITH P / F WEATH POR, SLI OIL SHEEN IN ONE PIECE, NSFO, NO ODOR, SLI EDGE STN IN PT

LS - CRM / TAN, F XLN, MOD DNS / SUBCHKY, CHKY IN PT, FOSS, NO VIS POR, NO ODOR, F MINERAL FLUOR, W CHT IN PT - CRM / TAN, FRSH

LS - CRM, F XLN, MOD DNS / DNS, FOSS, SLI DOLOMITIC IN PT, NO VIS POR, NS, NO ODOR, G MINERAL FLUOR, W CHT IN PT - CRM, FRSH

LS - WHT / CRM, F XLN, MOD ,FOSS, NS, NO ODOR, W CHT IN PT - TAN / GY, FRSH

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

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

LS - CRM / TAN, F XLN, MOD DNS / DNS, FOSS, NO VIS POR, SLI EDG STN, NO ODOR, F MINERAL FLUOR

LS - CRM / WHT, VF / F XLN, DOLOMITIC IN PT, 50% SUBCHKY / CHKY, P / F INTXLN POR, GSFO WHEN BROKEN, 50% F / G INTXLN POR, FSFO, SUCROSIC IN PT, SHOW OF GAS THROUGHOUT

LS - CRM, F XLN, MOD DNS / DNS, SUBCHKY IN PT, NO VIS POR, NS, NO ODOR

VIS 50
WT 9.1
LCM 2#

JET #2 ADD PREMIX

VIS 51
WT 9.2
LCM 2#

VIS 63
WT 9.1
LCM 3#

VIS 62
WT 9.1
LCM 3#

VIS 61
WT 9.1
LCM 3#

VIS 57
WT 9.1
LCM 3#

VIS 51
WT 9.1
LCM 3#

VIS 57
WT 9.1
LCM 4#

LOST CIRCULATION, LOST EST 100 BBL

DST #1
4225' - 4272'
MISSISSIPPIAN
30 - 60 - 30 - 60

IF: BOB IN 2 MIN
ISI: NO BLO BACK
FF: WK to GD BLOW BLD
1" TO 7.5"
FSI: NO BLO BACK

VIS 45
WT 8.9
LCM 3#

REC: 15' mud w/ show of oil
480' GIP

CFS @ 4272'

SIP: 221-158#
FP: 27-25#, 23-27#
HP: 1986-1955#

POOR SAMPLE
QUALITY

LS - CRM / TAN, VF / F XLN, MOD DNS /
SUBHCHKY IN PT, NS

VIS 38
WT 8.7
LCM 3#

LS - CRM / TAN, LT BRN IN PT, VF / F XLN, PRED
SUBCHKY, MOD DNS IN PT, FOSS IN PT

4300

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

VIS 38
WT 8.7
LCM 3#

SH - GY

SH - GY

LS - CRM / GY, VF / F XLN, PRED MOD DNS,
ABUND FOSS, SUBCHKY / CHKY IN PT

VIS 38
WT 8.7
LCM 6#

LS - CRM / TAN, F XLN, MOD DNS, BRITTLE,
ABUND FOSS, W/ CHT IN PT, WHT, FRSH

VIS 37
WT 8.7
LCM 6#

ADD PREMIX

4350

LS - CRM / RDISH-BRN, F XLN, SHLY, W/
RDISH-BRN SH, BRITTLE IN PT, FOSS, W/ CHT -
WHT, FRSH

VIS 35
WT 8.9
LCM 8#

LS - CRM, F XLN, MOD DNS, W/ CHT - WHT, FRSH

VIS 40
WT 8.8
LCM 7#

LS - TAN / GY, F XLN, MOD DNS, SHLY IN PT -
GRN / GY SH

ADD PREMIX

SH - GRN / GY

4400

LS - TAN / GY, F XLN, MOD DNS, SHLY IN PT -
GRN / GY, W/ CHT - WHT, FRSH

0
3
POP (min/ft)
Gamma Ray
10
150

1
TG, C1-C5
400

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

VIS 40
WT 8.9
LCM 8#

LS - TAN / GY, F XLN, MOD DNS / DNS, FOSS, W/
CHT IN PT - WHT, FRSH

ADD PREMIX

SH - GY / GRN

4450

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

VIS 45
WT 8.9
LCM 7#

SAMPLE QUALITY VERY POOR

ADD PREMIX

KINDERHOOK SH
4471' (-2939')

SH - LT GY / DK GY, PYRITIC IN PT

VIS 43
WT 8.9
LCM 8#

SH - LT GY / DK GY

