

Geologic Report  
**Aaron L. Young**

Drilling Time and Sample Log

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

Well Name: JR Ranch #1  
API: 15-197-20309  
Location: Section 24 - T14S - R11E  
License Number: 34996  
Spud Date: 05/08/2019  
Surface Coordinates: 840' FNL and 2230' FWL

Region: Wabaunsee Co., KS  
Drilling Completed: 05/14/2019

Bottom Hole  
Coordinates:  
Ground Elevation (ft): 1395'      K.B. Elevation (ft): 1404'  
Logged Interval (ft): 1500'      To: 3280'      Total Depth (ft): 3280'  
Formation: Arbuckle  
Type of Drilling Fluid: Chemical - Fud Mud

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

**OPERATOR**

Company: Stewart Producers, Inc  
Address: PO Box 546  
Mt. Vernon, IL 62864

**GEOLOGIST**

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

**General Info**

**CONTRACTOR: C & G Drilling, Rig #2**

**BIT RECORD:**

No.	Size	Make	Jets	Out	Feet	Hours
1	12-1/4	Atlas 616 PDC	6x18's	315	315	2.0
2	7-7/8	Atlas 616 PDC	6x18's	3280	2965	64.0

**GENERAL DRILLING AND PUMP INFORMATION:**

Drilling with 8,000 lbs. on bit and approx 110 RPM.  
Running 4 stands of collars; 245'  
Pumping approx 500-600 psi at standpipe @ 60 SPM

## Daily Status

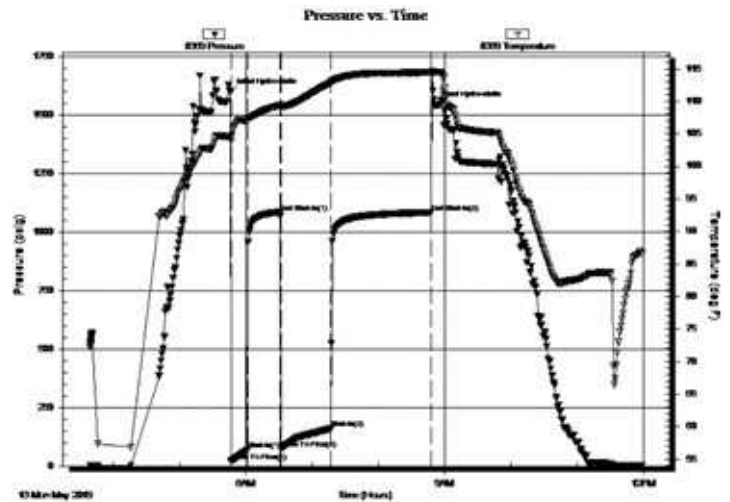
5/8/19 C&G Drilling finished moving in and rigging up. Drilled rathole, starting on surface @11:00am.  
 5/9/19 Drilling at 430' @ 8:15am. Drilled 315' 12-1/4" hole. Ran 300.14" of 8-5/8" surface casing. Pumped 180 sks cement. 3% calcium 2%gel. Circulated cement into pits. Plug down @9:30pm,(5/8/19). Break out nipple up drill mouse hole.  
 5/10/19 Drilling @ 1503' @ 7:30am. Lost circulation @ 1390, got it back, ran bit trip to clean out LCM.  
 5/11/19 Drilling @ 2500' @ 12:30pm. Bit plugged off again during the day, yesterday. Had to pull bit, clean and resume drilling. Penetration rate, sample tops and correlation much improved.  
 5/12/19 Drilling at 2960', evaluating Hunton.  
 5/13/19 TD 3217. Going back into hole following DST#1 (Simpson Dolomite). Simpson sand next target formation. Very poor show in Hunton. No shows in Viola.  
 DST#1 3202-3217 Rec. 340' very slightly oil spotted muddy water.  
 IFP: 21 - 70#, ISIP 1086#, FFP 76-161#, FSIP 1084#  
 5/14/19 TD 3280. TOH for log. Plugged w/ 15 sks @ 3130' Simpson, 15 sks @ 3020' Viola, 15 sks @ 2890' Hunton, 15 sks @ 2440' Miss, 25 sks @ 1535' KC, 35sks @ 350', 25 sks @ 60', 30 sks in rathole, & 20 sks in

### DST #1 SIMPSON DOLOMITE 3202' - 3217'

IF: Weak blow built to 6 inches  
 ISL: No blowback  
 FF: No blow built to 13 inches  
 FSI: No blowback

Rec'd: 340' OSSMCW (Tr O, 89% W, 11% M)

SIP: 1086-1084#  
 FP: 21-70#, 76-161#  
 HP: 1598-1545#



### ROCK TYPES

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

### ACCESSORIES

#### 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
- Slty

#### 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
- Slststrg
- Ssstrg
- Carbsh



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

#### 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

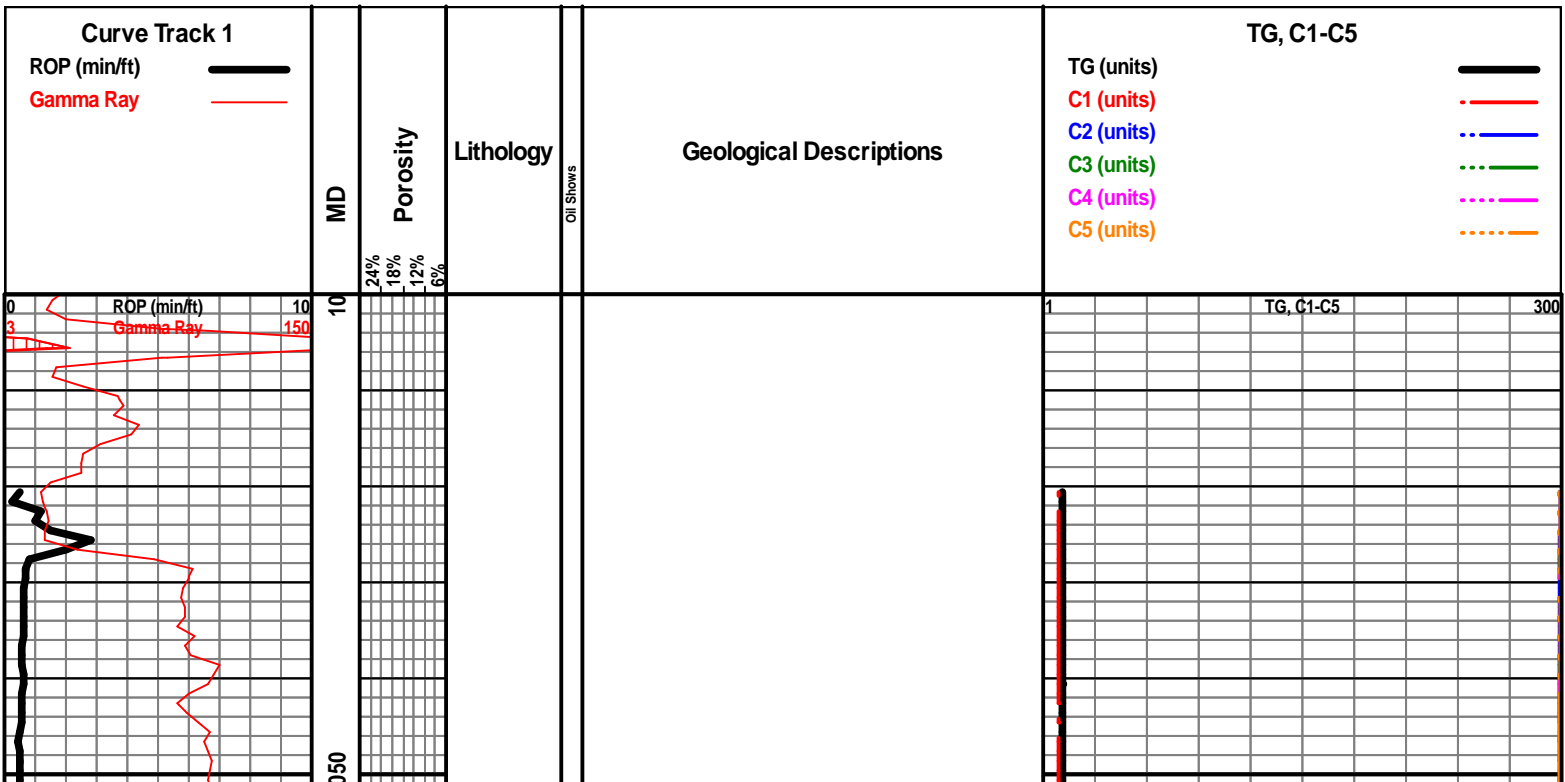
- Core
- Dst

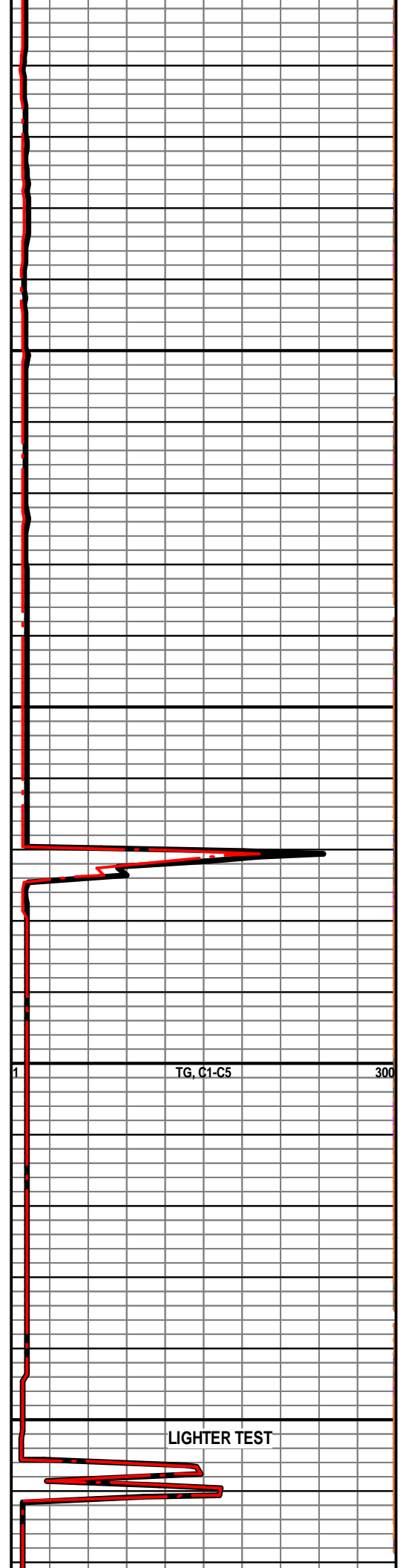
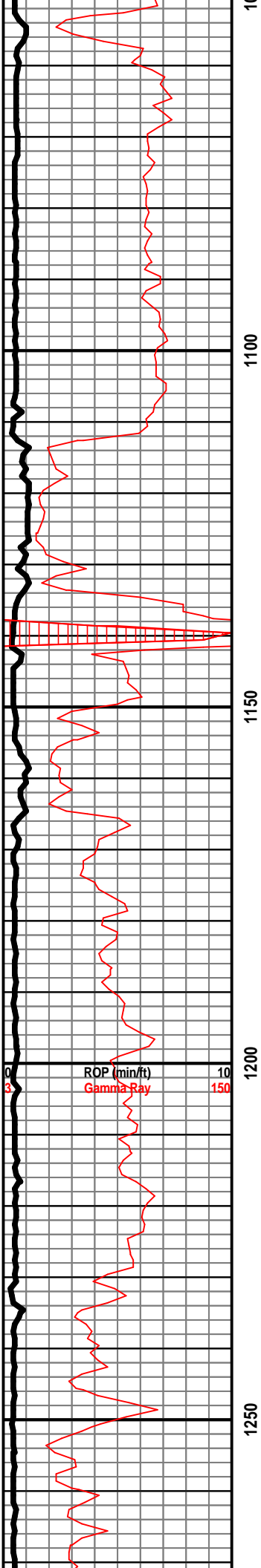


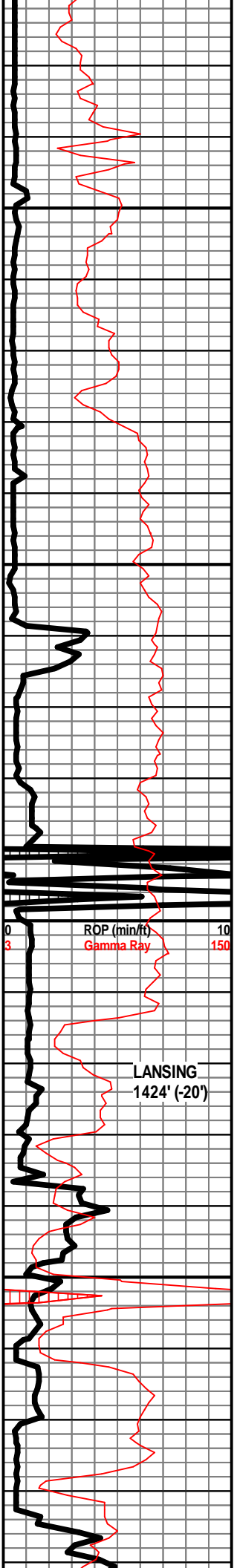
Dst

#### EVENTS

- Rft
- Sidewall
- Conn





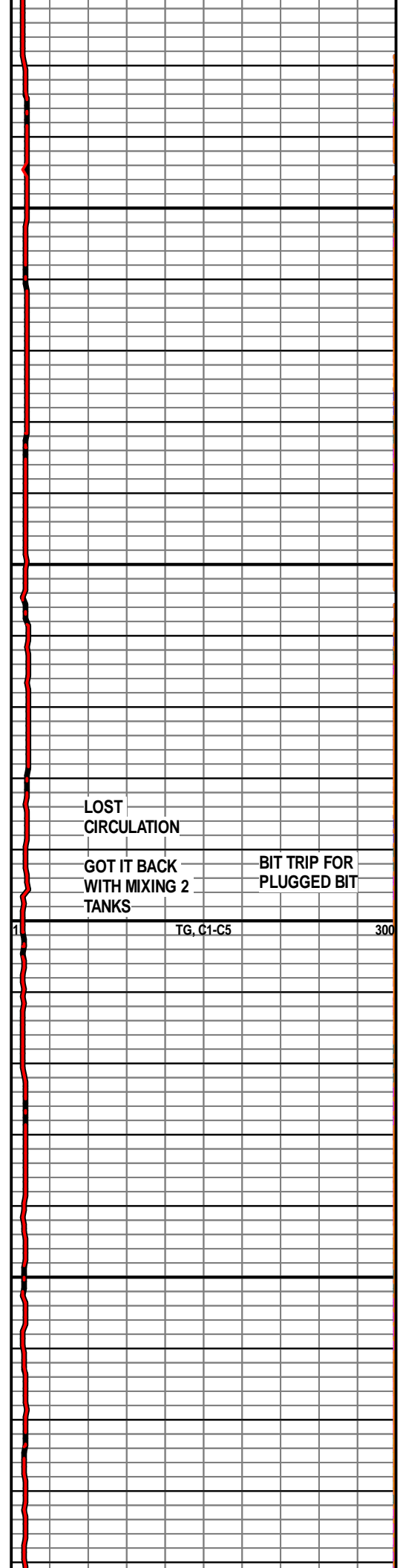


1300

1350

1400

1450



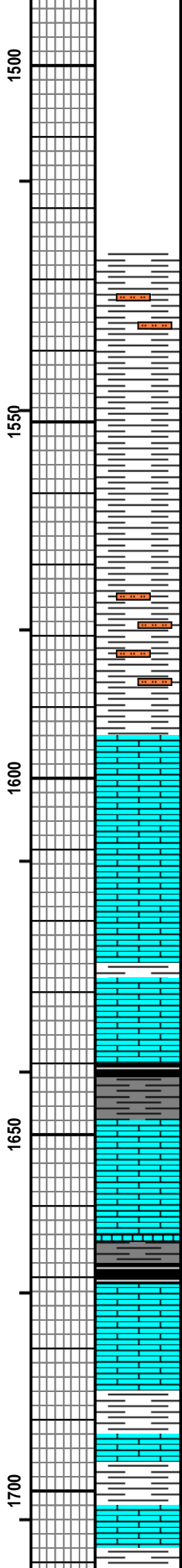
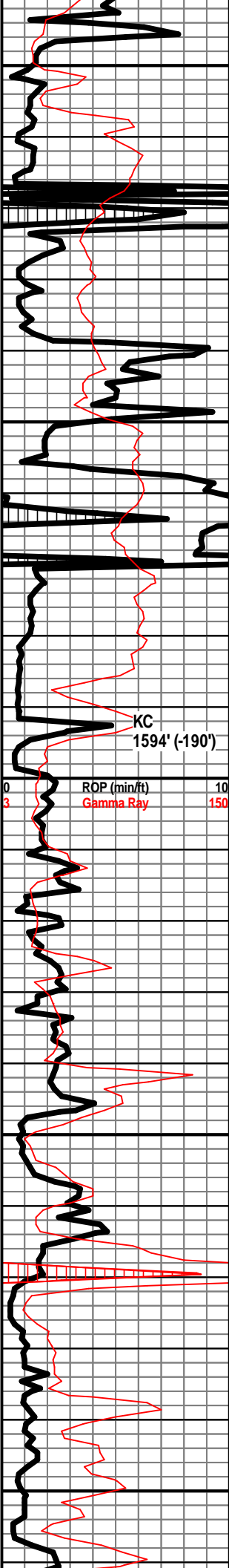
LOST CIRCULATION

GOT IT BACK WITH MIXING 2 TANKS

BIT TRIP FOR PLUGGED BIT

TG, C1-C5

300



SH - LT GY / GY, PRED V SOFT, MOD DNS IN PT, SLTY IN PT, PYRITIC IN PT

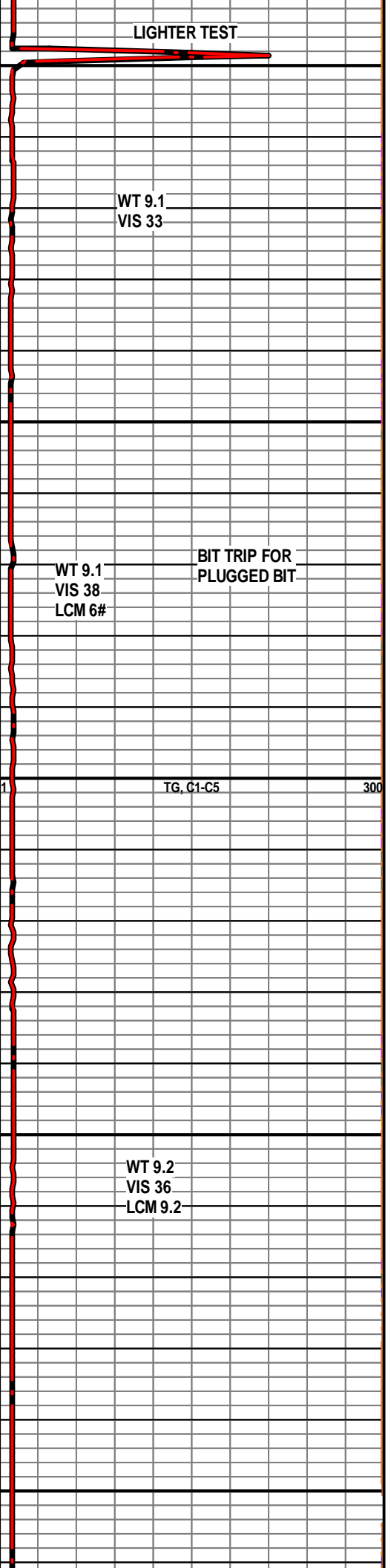
SH - GY / GRN, RD / YEL IN PT

LS - CRM / WHT, F / VF XLN, MOD DNS / SUBCKY, CHKY IN PT, W/ SH - LT GY / GY, SLTY

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

SH - DK GY / BLK, SLI CARB IN PT, W/ LS - TAN / GY, VF / F XLN, MOD DNS / DNS, FEW PIECES CHKY, FOSS IN PT

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



LIGHTER TEST

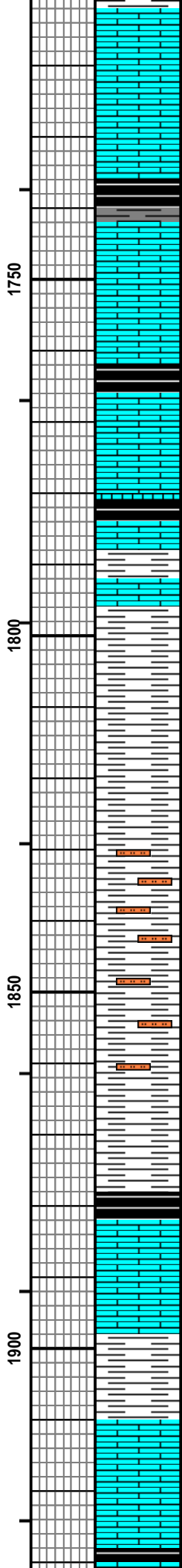
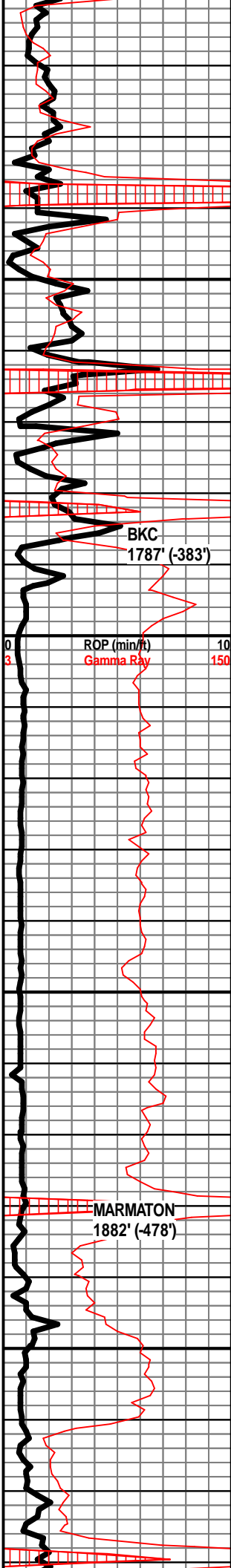
WT 9.1  
VIS 33

WT 9.1  
VIS 38  
LCM 6#

BIT TRIP FOR  
PLUGGED BIT

TG, C1-C5

WT 9.2  
VIS 36  
LCM 9.2



LS - WHT / CRM, VF / F XLN, PRED SUBCHKY / MOD DNS, CHKY IN FEW PIECES, W/ SH - GY

LS - WHT / CRM / TAN / GY, VF / F XLN, PRED SUBCHKY / MOD DNS, CHKY IN PT, W/ SH - BLK, CARB

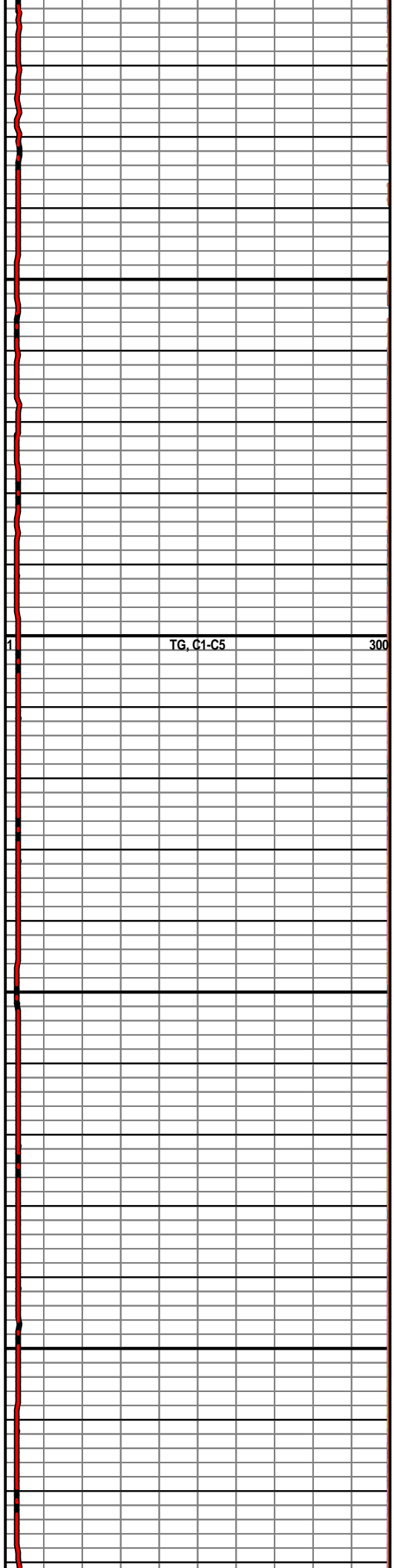
SH - BLK, CARB, W/ SH - GRN / GY, W/ LS - CRM / TAN, VF XLN, SUBCHKY, W/ SCAT PYRITE

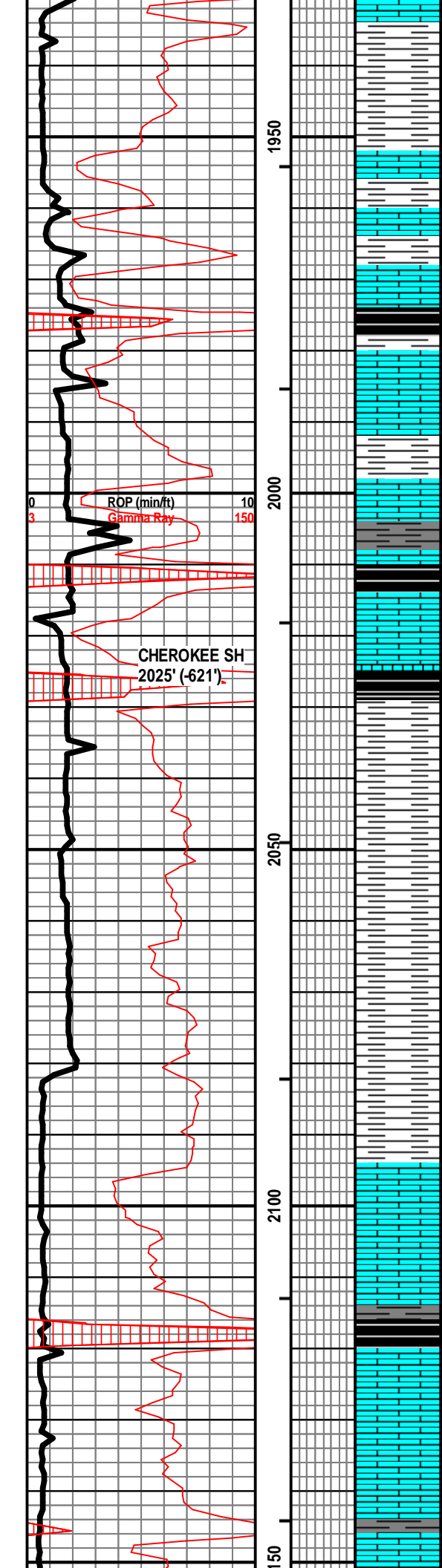
LS - TAN, F XLN, MOD DNS / DNS, FOSS, W/ SH - GRN / GY, ABUND SCAT PYRITE

SH - GY, SLTY, W/ SCAT PYRITE

SH - GRN / GRN IN PT, SLTY IN PT

LS - CRM / TAN, VF / F XLN, SUBCHKY / MOD DNS, W/ SH - GRN, W/ SH - BLK, V SLI CARB





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

SH - BLK, CARB, W/ LS - CRM / TAN, V XLN, MOD DNS / DNS, W/ ABUND SH - GY

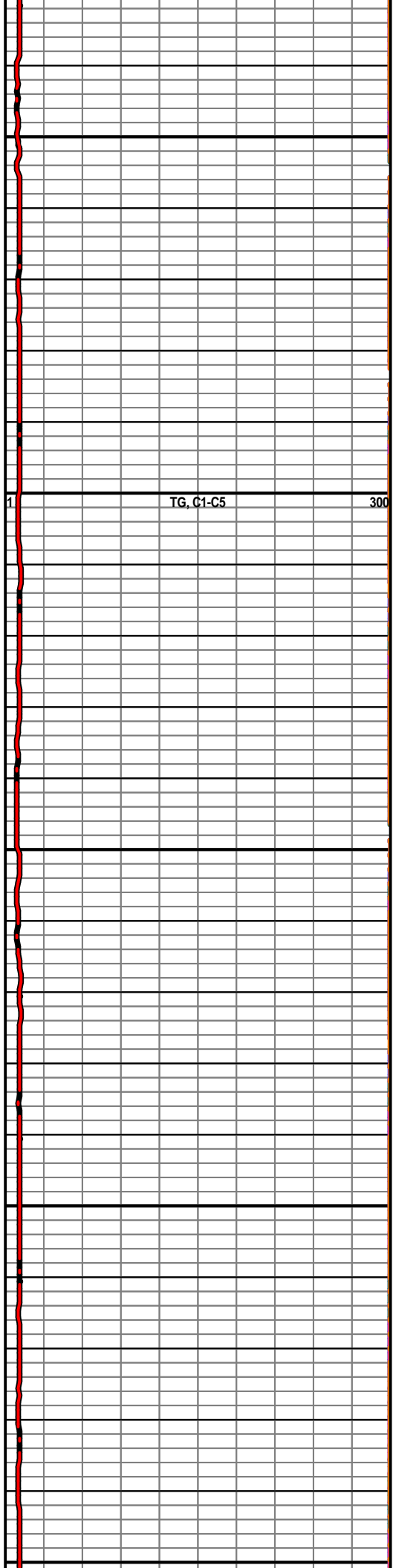
LS - TAN / LT GY / CRM, F XLN, MOD DNS / DNS, W/ SH - DK GY / GY, W/ SCAT PYRITE

SH - GY / DK GY / BLK, CARB

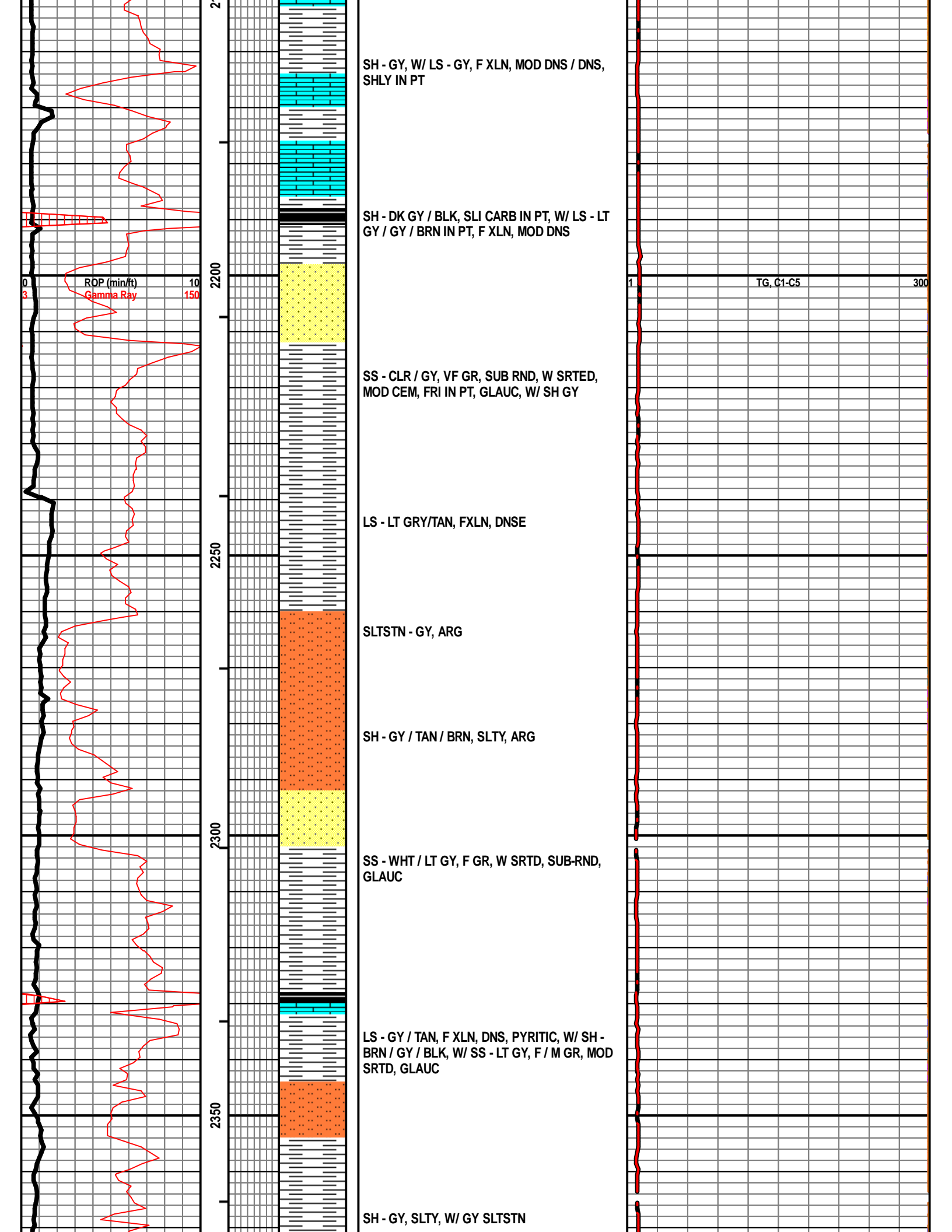
SH - LT GY / GY, SCAT PYRITE

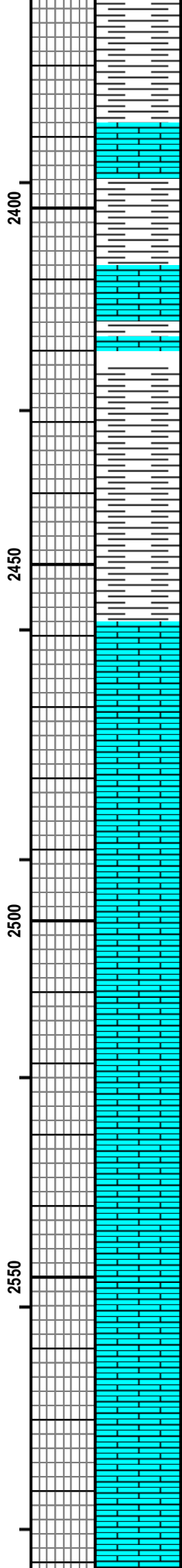
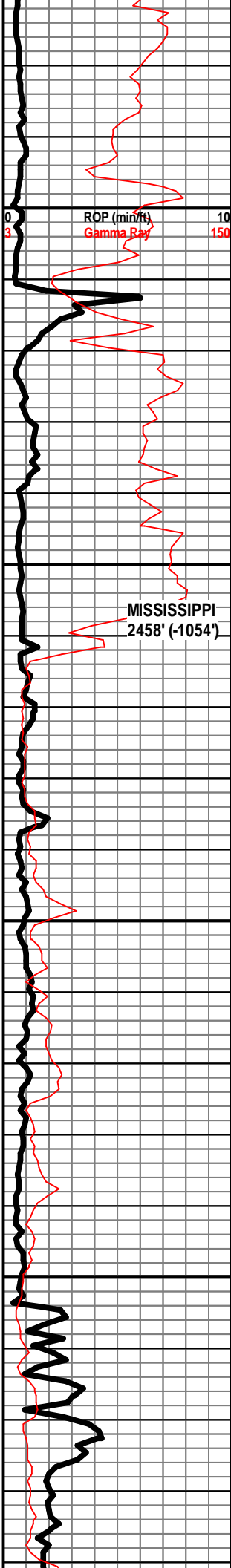
SH - LT GY / GY, W/ LS - TAN / LT BRN, F XLN, MOD DNS / DNS

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









LS - LT GY / LT GRN, SLTY, ARG, W/ LS - TAN / LT BRN, F XLN, DNS

SH - BLK, CARB, W/ SH - GY / BRN, SLTY, W/ PYRITE

LS - CRM / TAN, F / M XLN, W/ SH - BLK, CARB, W/ SH - GY / BRN, SLTY, W/ PYRITE

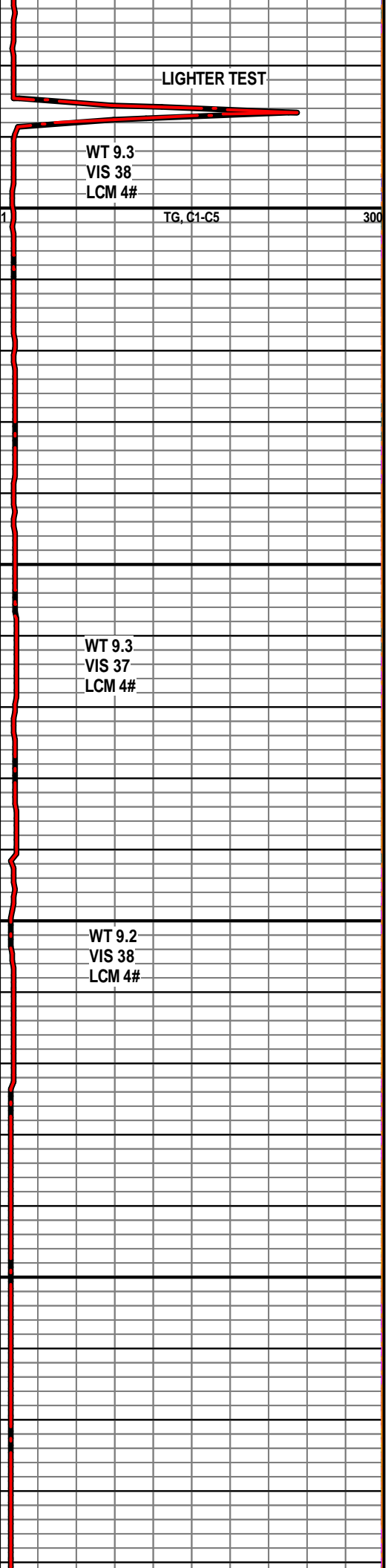
LS- CRM TO LT TAN FN TO MED XLN POOR TO FR INTXLN AND VUG POR

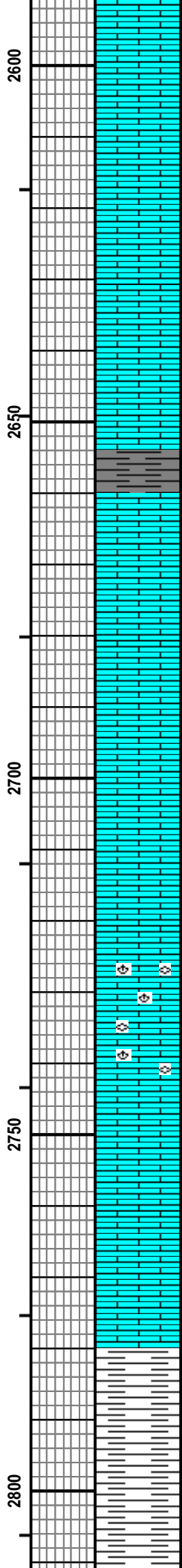
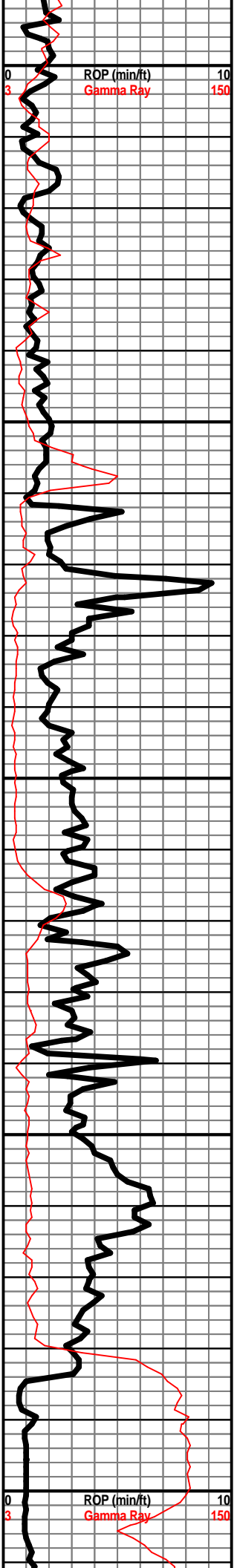
LS- CRM TO LT TAN FN TO MED XLN POOR TO FR INTXLN AND VUG POR

LS - CRM FXLN, OOL IN PART, FN GR, SCAT GRN ARG NOD

LS - AS AB

LS-CRM, FN-MED XLN, DNSE TO POOR INTXLN POR





LS CRM-LT TAN,FXLN,DNSE, W/CHT WH - GRY,  
LT GRN SH IN PART

LS, AS AB

LS, AS AB W/ GRY, GRN AND BLK SH

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

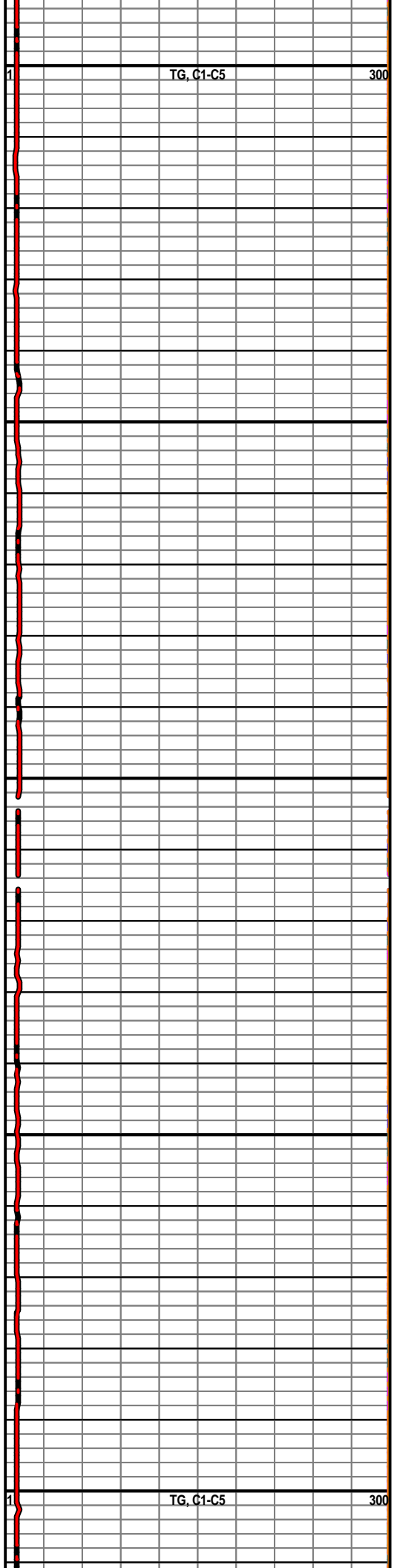
LS - LT GY / TAN, VF XLN, MOD DNS, FOSS,  
FUSILINIDS, BRACHS

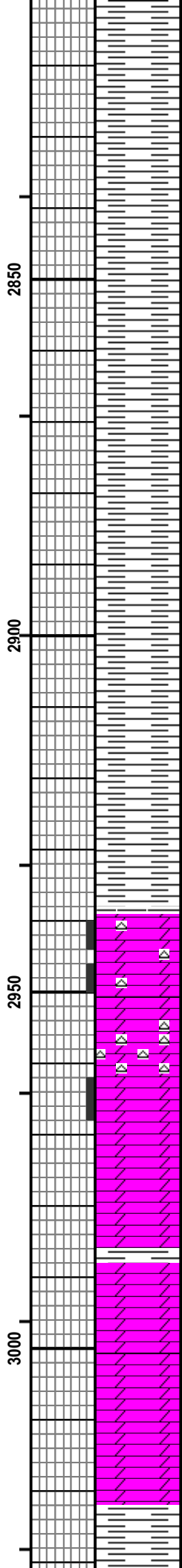
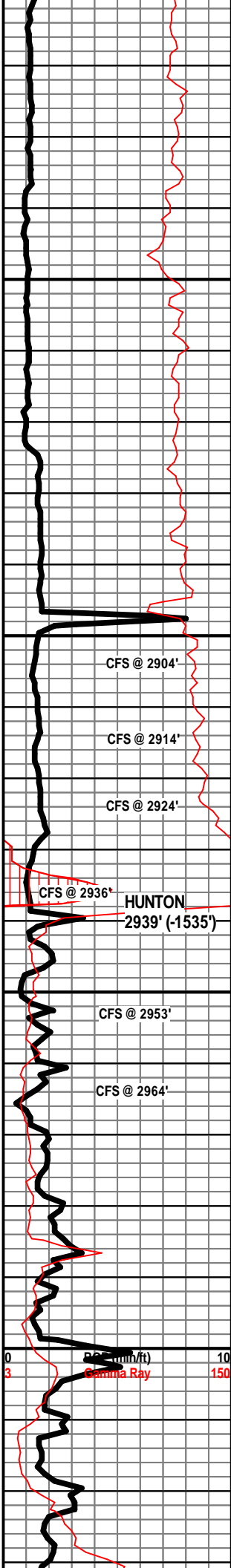
LS - CRM / TAN / LT GY, VF XLN, SUBCHKY /  
CHKY

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

SH - GRN / GY

SH - GRN / GY / BLK, FOSS IN BLK PIECES,  
PYRITIC





SH - LT GRN / LT GY

SH - PRED LT GY, LT GRN IN PT

SH - LT GY / BLK

SH - GY / BLK, PYRITIC IN PT, SCAT PYRITE

SH - GY / BLK, PYRITIC

DOLO - LT GY, F / M XLN, PRED DNS, LIKELY FRACT POR, NO VIS INTERXLN POR, SSFO, SHOW IN 4 PIECES, TARRY OIL, SLI ODOR, DULL MINERAL FLUOR IN PT, W/ SCAT CHT - TAN / GY, FRSH, SLI TRANSLUCNT

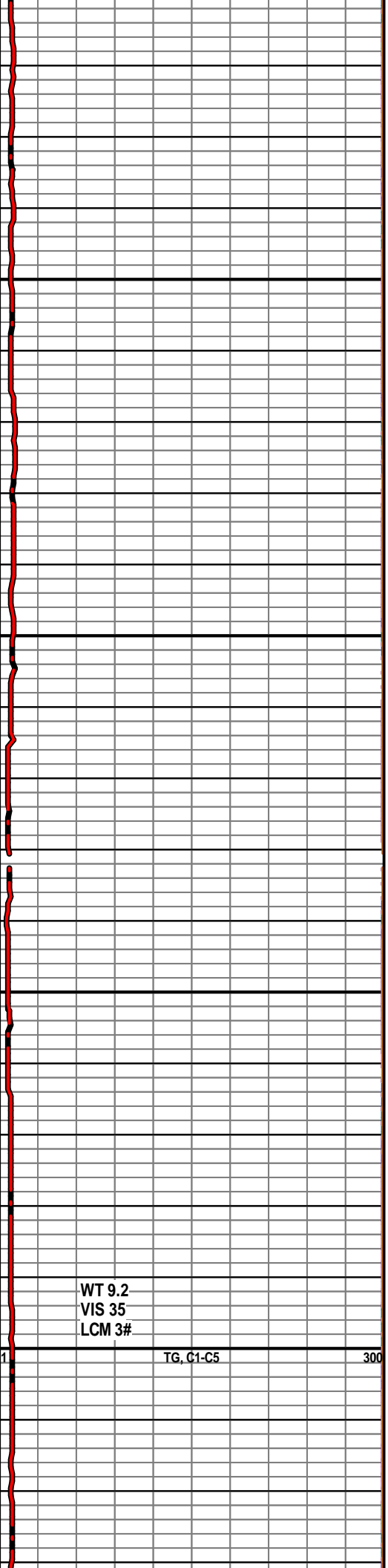
DOLO - GY, F XLN, DNS, NO VIS POR, NS, W/ ABUND CHT - WHT / GY / TAN, FRSH, PRED OPAQ, TRANSLUCNT IN PT

DOLO - GY, F XLN, MOD DNS, P INTERXLN & VUG POR IN PT, NS

DOLO - GY, F / M XLN, MOD DNS, W/ SH - GY / GRN

DOLO - WHT, V CHKY, W/ SH - LT GY / LT GRN

SH - GY, DOLOMITIC IN PT

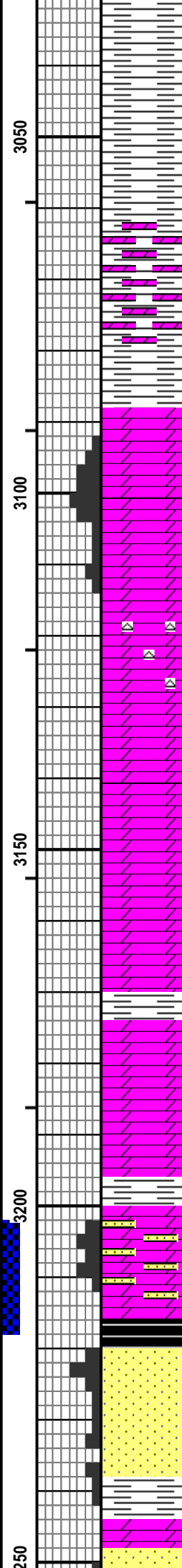
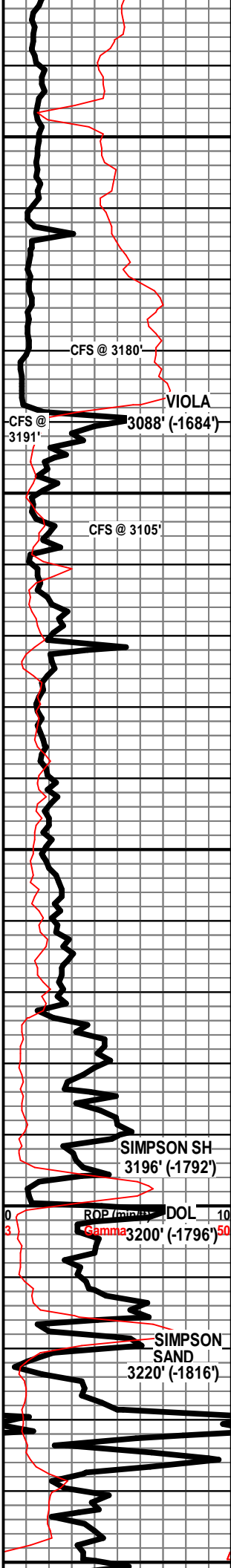


WT 9.2  
VIS 35  
LCM 3#

TG, C1-C5

0 10  
3 Gamma Ray 150

300



SH - LT GY, SLI DOLOMITIC

SH - LT GY / GY, SLI DOLOMITIC

DOLOMITIC SH - BRN / GY, F CUP ODOR, NO VIS POR, NSFO

SH - GY, SLI DOLOMITIC

DOLO - GY / TAN, F / M XLN, RHOMBIC IN PT, F / G INTERXLN POR, NS, NO ODOR, NO FLUOR

DOLO - LT GY / GY, F / M XLN, MOD DNS, F POR IN PT, NS

DOLO - TAN, F XLN, MOD DNS, NS, W/ SCAT CHT - TAN, FRSH, OPAQ

DOLO - TAN, F XLN, MOD DNS / DNS

DOLO - TAN / BRN, F XLN, MOD DNS

DOLO - BRN, F / M XLN, MOD DNS / DNS, W/ SH - GRN / GY BLK

SH - GRN / GY

DOLO - GY, F XLN, V SNDY, P / F INTERXLN & INTERGR POR, SSFO, HEAVY BLK OIL, G CUP ODOR, NO FLUOR

DOLO - DK GY, SNDY, NO VIS POR, NS, W/ SH - BLK, SLI CARB

SS - WHT / CLR, F GR, SUB-RND, PRED MOD CEM, FRI IN PT, F / G INTERGR POR, PRED BARREN, SSFO IN PT, TARRY OIL, F ODOR, NO FLUOR

SS - CLR / WHT, F GR, SUB-RND, W SRTD, W CEM, DNS, P INTERGR POR IN PT, SSFO IN FEW PIECES, ABUND OF DEAD OIL FLAKES, F ODOR, NO FLUOR

SS - GY / BRN / CLR IN PT, F GR, SUB-RND, W SRTD, MOD CEM, P INTERGR POR, PYRITIC IN PT

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

WT 8.3  
VIS 42  
LCM 4#

DST #1 SIMPSON DOLOMITE  
3202' - 3217'

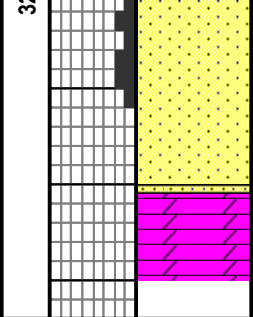
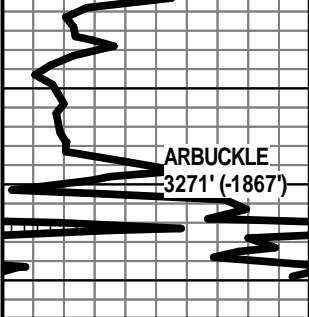
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SIP: 1086-1084#  
FP: 21-70#, 76-161#  
HP: 1598-1545#

TG, C1-C5 300

WT 9.2  
VIS 49  
LCM 5#



SS - WHT / GY, VF GR, W SRTD, MOD CEM, F  
POR, NS, SCAT GRN SPECS, PYRITIC, ARG IN  
PT

SS - TAN, VF / F GR, SUB-ANG, MOD SRTD, W  
CEM, DNS, NO VIS POR, NS

DOLO - TAN / LT BRN, F / M XLN, V DNS

**RTD      3280'**

