

# MBC WELL LOGGING LLC

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

Well Name: KELLS I-1 AFE 55298 MERIT ENERGY  
Well Id: API 15-081-22035-00  
Location: HASKELL COUNTY, KANSAS USA  
License Number: 32446  
Spud Date: 9-28-2017  
Surface Coordinates: 544'fel- 1730'fsl-SEC 18-T30S-R32W  
Bottom Hole Coordinates: HLS-DIL/SP/GR CNL/CAL/PE/BHV SONIC SFC- GR TO SFC'  
Ground Elevation (ft): 3007 K.B. Elevation (ft): 3020  
Logged Interval (ft): 4075 To: 5578 Total Depth (ft): Elog 5582  
Formation: ST LOUIS  
Type of Drilling Fluid: WBM AES HUGO ROSALES (620) 655-4315  
Region: Drilling Completed: 10-01-2017

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

## OPERATOR

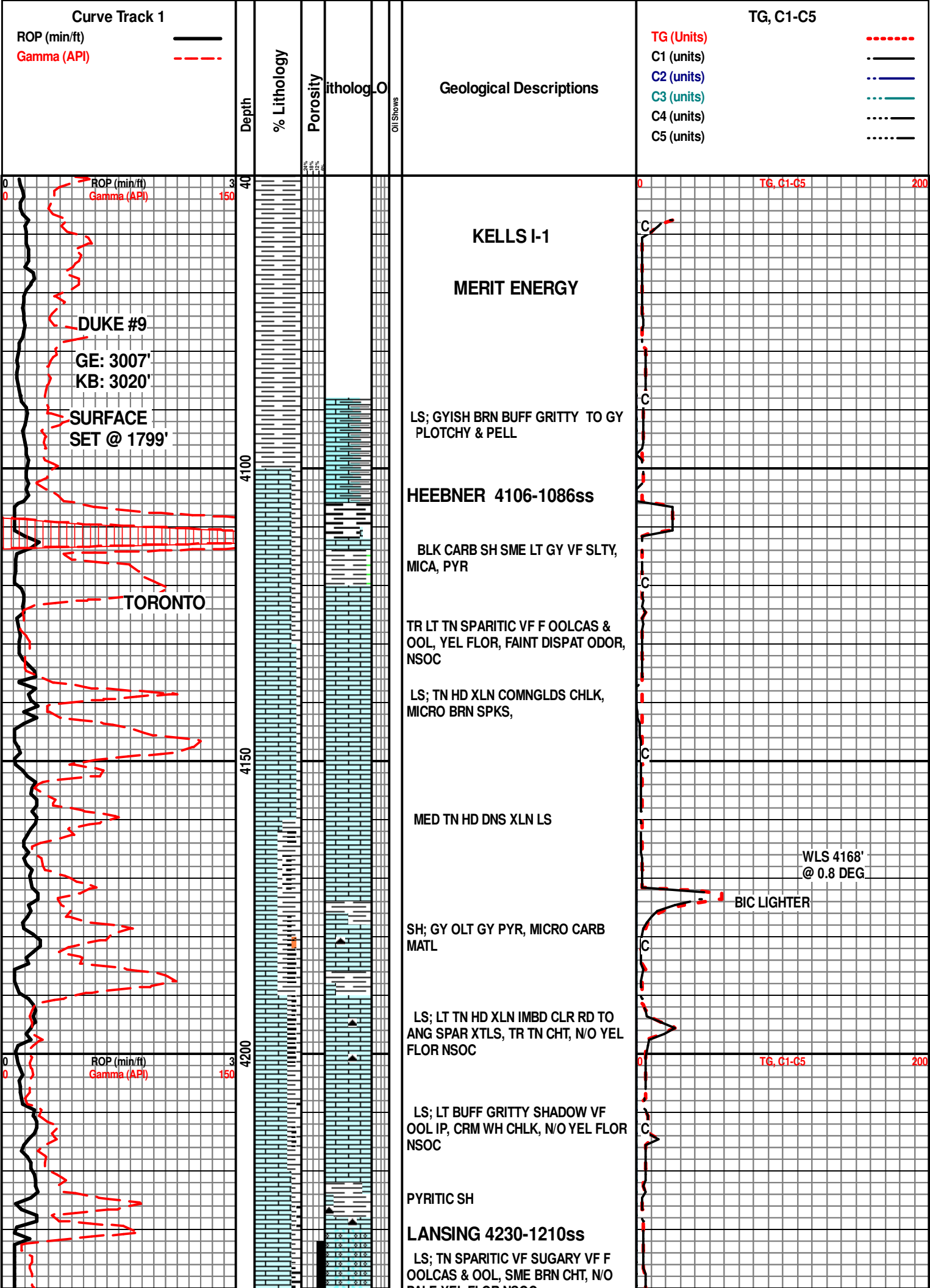
Company: MERIT ENERGY CO LLC  
Address: ATTN MARTIN LANGE GEOLOGY  
13727 NOEL RD STE 1200  
DALLAS, TEXAS 75240

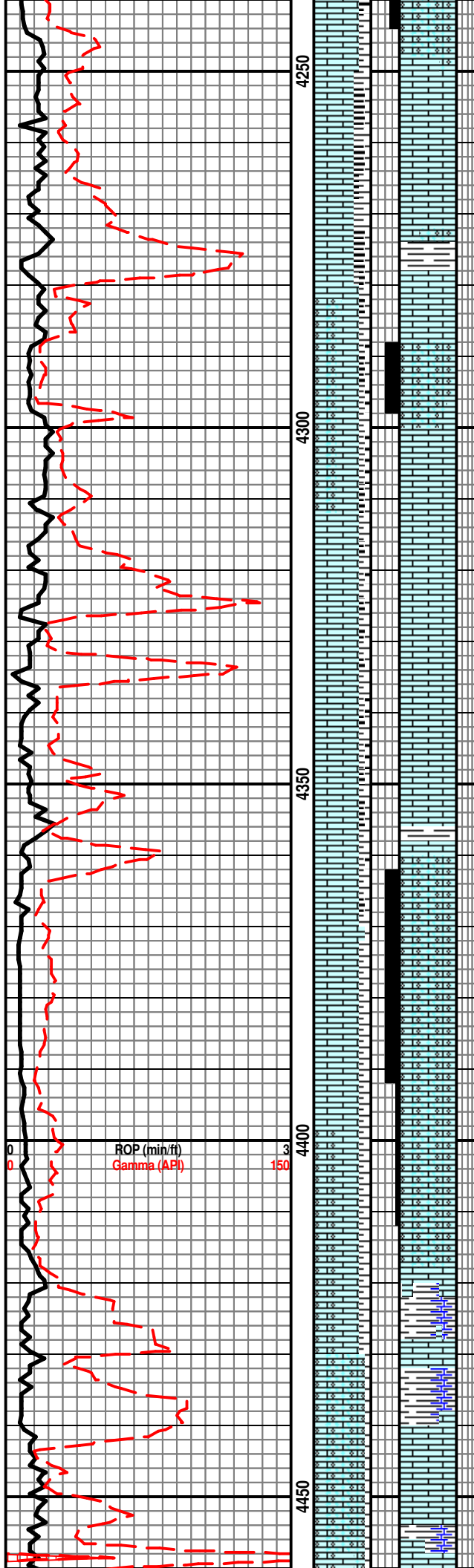
## MUDLOGGER

Name: AUSTIN GARNER // TROY FOWLER  
Company: MBC WELL LOGGING LLC  
Address: 21156 RD 22  
MEADE, KANSAS 67864

## ROCK TYPES

|  |               |  |                 |  |                |  |                 |
|--|---------------|--|-----------------|--|----------------|--|-----------------|
|  | Anhy          |  | Oolitic ls -1   |  | Sndy sh        |  | Red sh-1        |
|  | Brec          |  | Stgensndy-arkos |  | Sltst-1        |  | Stgensndy-arkos |
|  | Cht           |  | New ls-1        |  | Sltly-shale    |  | Sndy ool ls     |
|  | Coal          |  | Carby shale     |  | Lmy ss-1       |  | Sndy-ls-1       |
|  | Congl         |  | Lmy carby sh-3  |  | Arkosic snd    |  | Calc shale      |
|  | Shly dolomite |  | Carb sh         |  | Ss             |  | Granitewash     |
|  | Dolo new      |  | Gyp             |  | Grn sh strk    |  | Ls shly-b       |
|  | New dolomite  |  | Sltst           |  | Grn mott gy sh |  | Poor sortd ss   |
|  | Newdolo ls 2  |  | Salt            |  | Lmy sh-2       |  | Snd-ls-sh       |
|  | Ls & ooids    |  | Sndy sh--red    |  | Shale-1        |  |                 |





PALE YEL FLOR NSOC

LS; LT BUFF HD XLN SME PP VUGS,  
N/O YEL MFNSOC

LS; LT TN HD FLAKEY FRAC XLN SME  
MARLY

LS; GY BRN HD FOSS FRG XLN SHLY  
IP

LS; PALE TN/WH SME SLI GY-OPAQ,  
VF F SME MED-OBLONG OOLCAS, N/O  
MFNSOC

LS; GY BRN HD XLN SHLY IP, PYR,  
INTBD GRN SH N/O WEAK YEL FLOR  
NSOC

LS; CRM /WH GY W/ABDT VF - MED  
GY MATL & PROB FOSS, SHLY, INTBD  
BLK PYR SH, NO SHOW

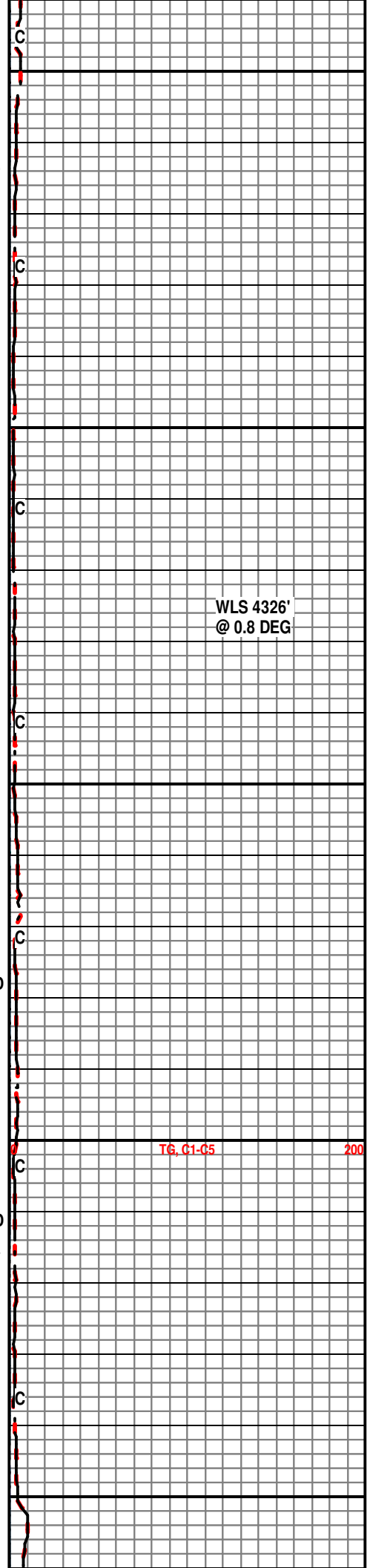
LS; GYISH BUFF HD DNS XLN SHLY  
INTBD GY SH

LS; LT BUFF, SAPRITIC VF F SME MED  
OOLCAS ,& OOL, THIN RIM COAT,  
CHLK IN MOLDS IP, ABDT CRM WH  
CHLK, SME WH CHLK W/VF OOL, N/O  
GOLD MFNSOC

LS; GYISH TN BRN, SPARITIC P/SRTD  
VF TO MED OOLCAS & SME OOL,  
FREE CRIN, SME SHLY OOL, INTBD GY  
LMY SH, N/O, GOLD MFNSOC

SH; GY MMED GY RGH TXT , SME  
FOSS FRGS, LMY

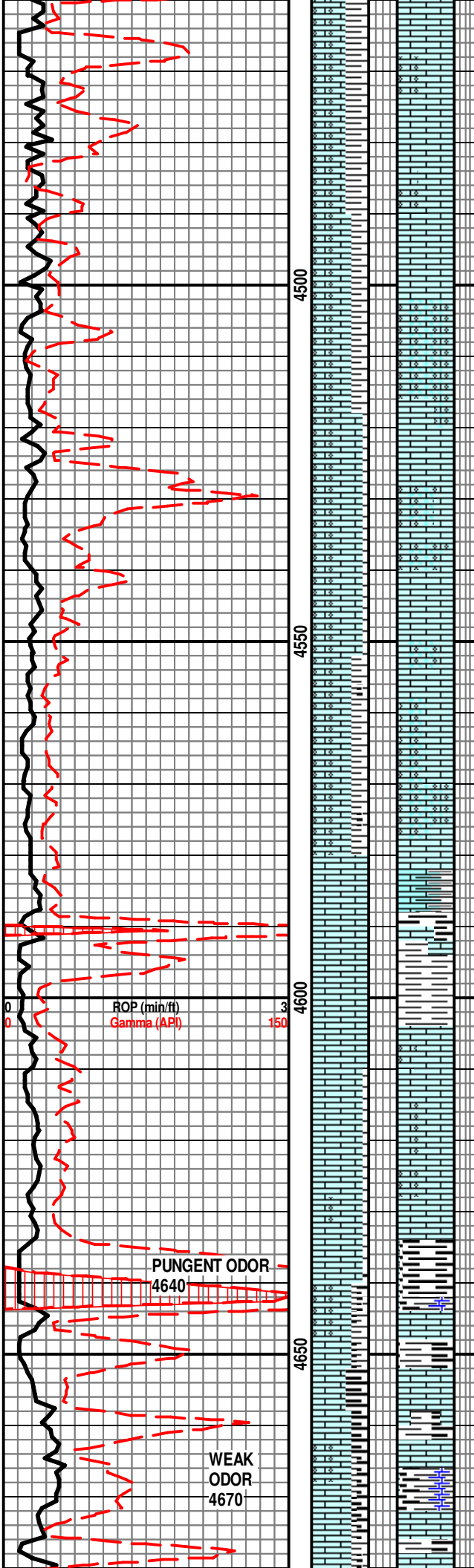
TN HD DNS XLN SME GYISH WH  
CHLLKY W/VF OOL NO SHOW



WLS 4326'  
@ 0.8 DEG

TG, C1-C5

200



LS; TN HD CRYP XLN, IP, TO GYISH  
CRM CHLKY, VFOOL, SHADOW FOSS  
FGS, TR LAM GRN CLAY, N/O, WEAK  
YEL FLOR NSWOC

LS; LT TN BRN, WEATHD APPR, VF F  
OOL, TR BRN F-OOL ION CHLKY  
MASTRIX, ASBDT CHLK, N/O YEL  
MFNSOC

LS; LT TN BRN  
BIOSPARTIC//VFOOL//OOLCAS, THIN  
RIM COAT, ABDT CHOLK, N/O YEL  
MFNSOC

LT GY TN HD DNS XLN SME SHLY

**STARK 4588-1568ss**

TR BLK CARBYSH

LS; LT BRN VF F OOL & DETRIT, CRM  
WH CHLK, PUNGENT SOUR ODOR, NO  
FREE OIL NO GAS BUBLS, DULL GOLD  
FLOR, NSOC

**HUSH SH 4634' / -1614'**

SH- DRK GY BLK, FRM BRITT, CARB

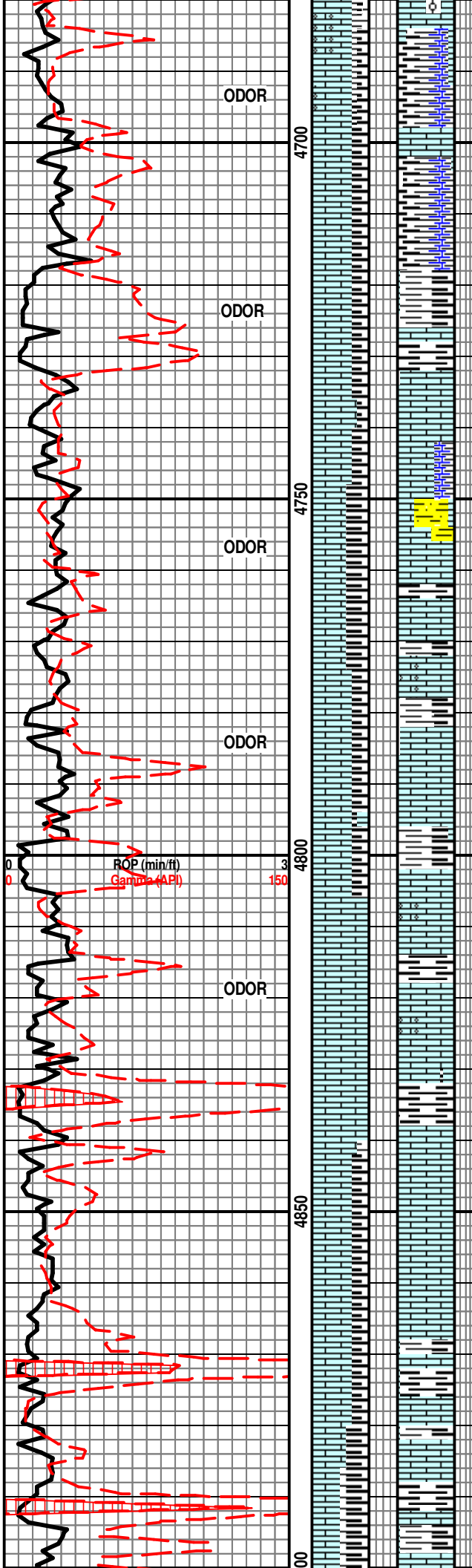
LS- OFF WHT LT GY TO TN, HRD DNS  
TO BRITT, SUB-CHLKY, LT GLD FLO,  
NO VIS POR, NO VIS CUT OR SHOW

INCRS C2

WLS 4484'  
@ 0.9 DEG

4687  
WT 9.31  
VIS 55  
PV 19  
YP 18  
GEL 8/24  
PH 10.5  
ALKFIL 0.3/1.4  
CHL 1,200  
CAL 80  
SOL 5.6  
LCM 4  
LAG 18 MINS

WLS 4641'  
@ 1.2DEG



LS- OFF WHT CRM TO LT TN, HRD DNS TO BRITT, F-XLN TO SPARRY, SUB-SUCRO TO CHLKY, F/TRS OF OOL, DLL YEL FLO THRU, POSS PR SCATT OOLICASTIC POR IP, WEAK MILKY BLUE FLUSH CUT IN ONE PIECE W/ GLD FLO, WEAK GAS ODOR

### PLSNT SH

SH- DRK GY BLK, FRM BRITT, GRNY BLKY, CARB, FAIR ODOR IN SAMPLE

### MARMATON 4732-1712ss

LS- GY OFF WHT TO LT TN TO SLI MOTT, HRD DNS TO BRITT, SUB-SUCRO TO CHLKY, F/TRS OF OOL, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW

SST- BLUISH GY, VVF GRNS, FRI, RNDED CUTTINGS

LS- GY OFF WHT TO MOTT, HRD DNS TO BRITT, F-XLN TO SPAR INCL, CHLKY IP, TRS OF OOL, DLL YEL TO SPOTTY GLD FLO, POSS PR OOLICASTIC POR, VIS CUT OR SHOW, PERSISTANT ODOR

LS- CRM OFF WHT TO TN, HRD DNS TO BRITT, F-XLN, SUB-SUCRO TO CHLKY IP, TRS OF OOL, DLL YEL MIN FLO THRU, POSS PR OOLICATIC POR IP, NO VIS CUT OR SHOW

### BANDERA SH 4832' / -1812'

SH- DRK GY BLK TO GRNISH, CARB, CALC IP

### PAWNEE 4838' / -1318'

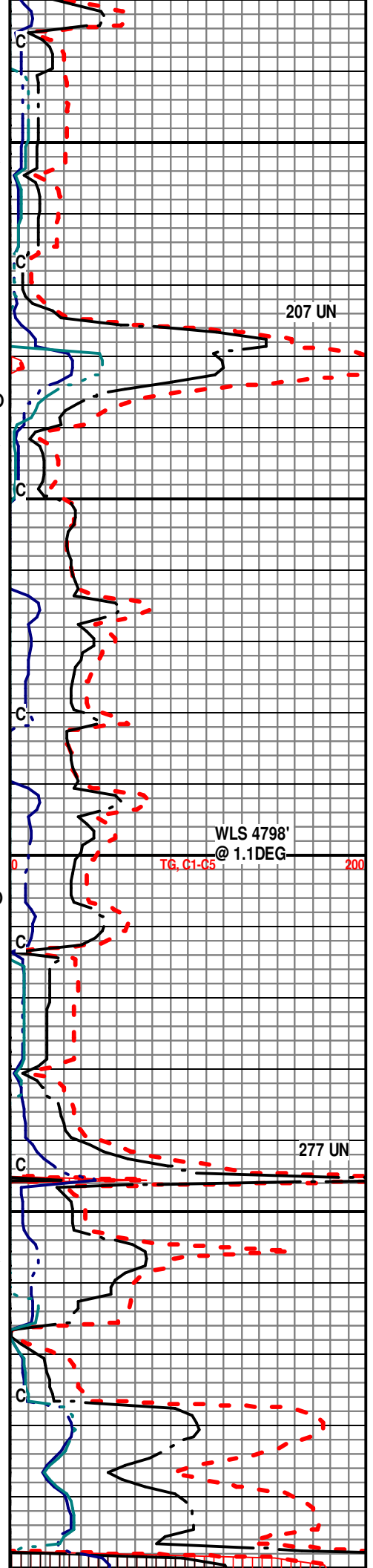
LS- GY DRK GY OFF WHT TO TN, HRD DNS TO BRITT, F/VF-XLN, SUB-CHLKY, TRS OF GY DRK GY CHRT, V/DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW

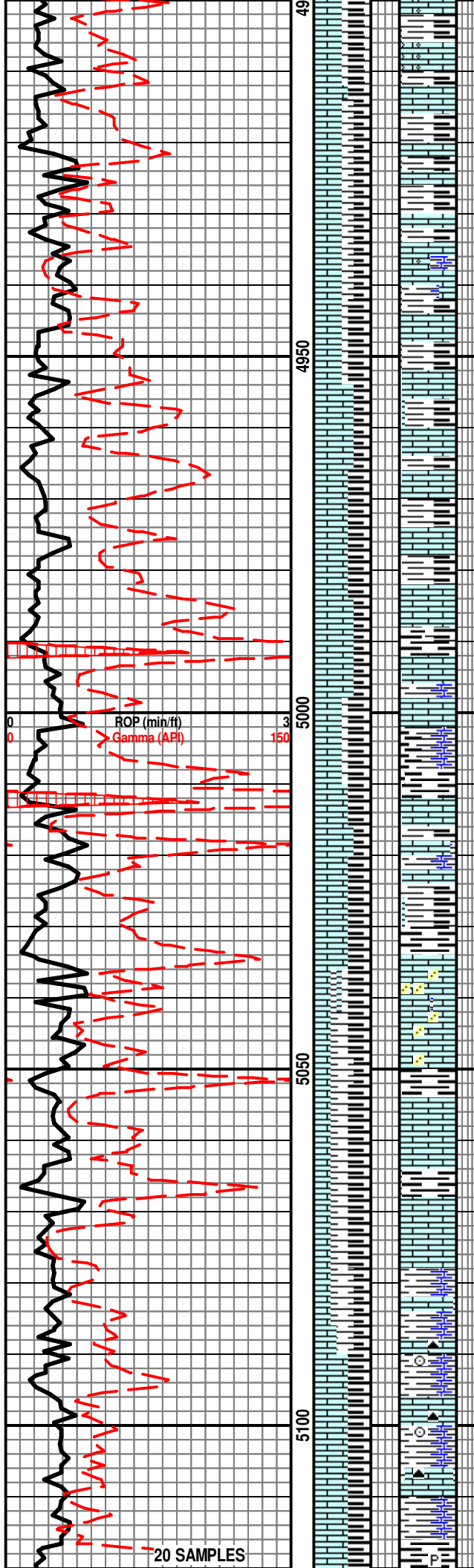
### LABETTE 4871' / -1851'

LS- CRM OFF WHT GY LT TN TO MOTT, HRD DNS TO BRITT, F-XLN, CHLKY IP, F/TRS OF FOSS FRAGS, DLL YEL FLO, NO VIS POR, NO VIS CU OR SHOW

### CHEROKEE 4887' / -1867'

SH- GY DRK GY TO BLK, CARB





INTERBD LS & SH- SH GY DRK GY TO BLK, CARBY, SME FOSS FRAGS CRINOIDS, LS- GY OFF WHT TN TO MOTT, TRS OF OOL SME SHADOW, TRS OF TN CHRT, V/DLL YEL FLO, POSS V/PR OOLICASTIC POR, NO VIS CUT OR SHOW, NO ODOR

LS- GY OFF WHT TO LT TN, HRD DNS TO BRITT, F-XLN, SUCRO TO CHLKY, TRS OF OOL IP, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW

LS- CRM OFF WHT GY TO MOTT, HR D DNS TO BRITT, F-XLN, SUB-CHLKY, TRS OF FOSS FRAGS CORAL, GRNY IP, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW

SH- GY DRK GY TO BLK, FRM BRITT, BLKY, GRNY/CALC, CARB

LS- CRM OFF WHT TN TO MOTT, HRD BRITT, F-XLN TO SLI RE-XLN, CHLKY IP, TRS OF FOSS FRAGS, TN GY CHRT IP, V/DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW

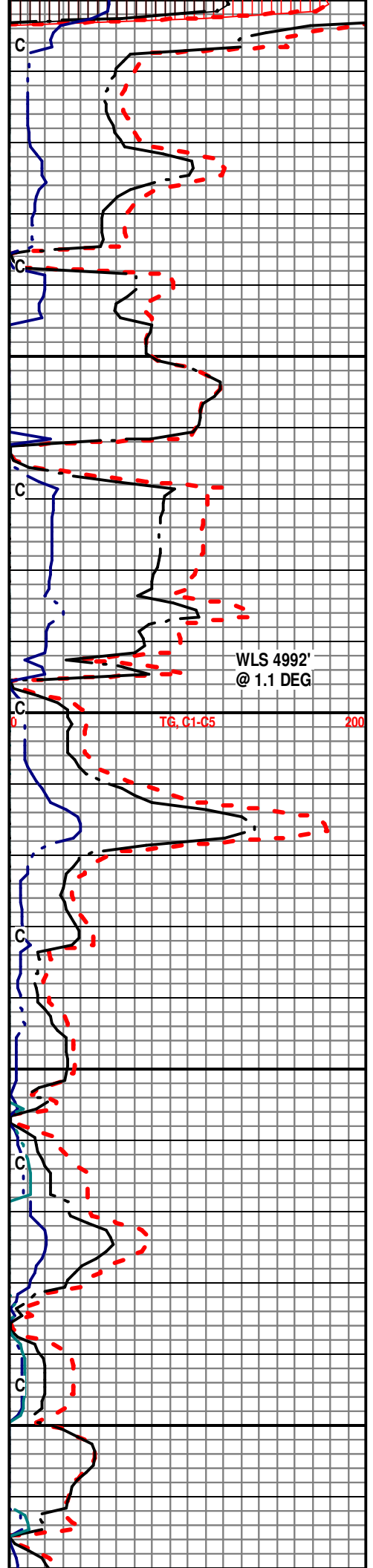
LS- TN GY BUFF TO OFF WHT MOTT, HRD DNS TO BRITT, SUCRO TO CHLKY, SNDY TO AHREN IP POSS STRNGS, DLL YEL MIN FLO, POSS PR INTER-GRN POR, NO VIS CUT OR SHOW

LS- CRM OFF WHT LT GY TO MOTT, HRD DNS TO BRITT, F-XLN, SUB-CHLKY, LAMN TO DISS BLK SH IP, V/DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW

SHLY LS- GY TN OFF WHT BUFF TO MOTT, HRD DNS TO BRITT, F-XLN, CHLKY, IMBD TO DISS GY TO BLK SH, F/FOSS FRAGS, DLL TRS OF DRK TN CHRT, V/DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW

ATOKA 5111' / -

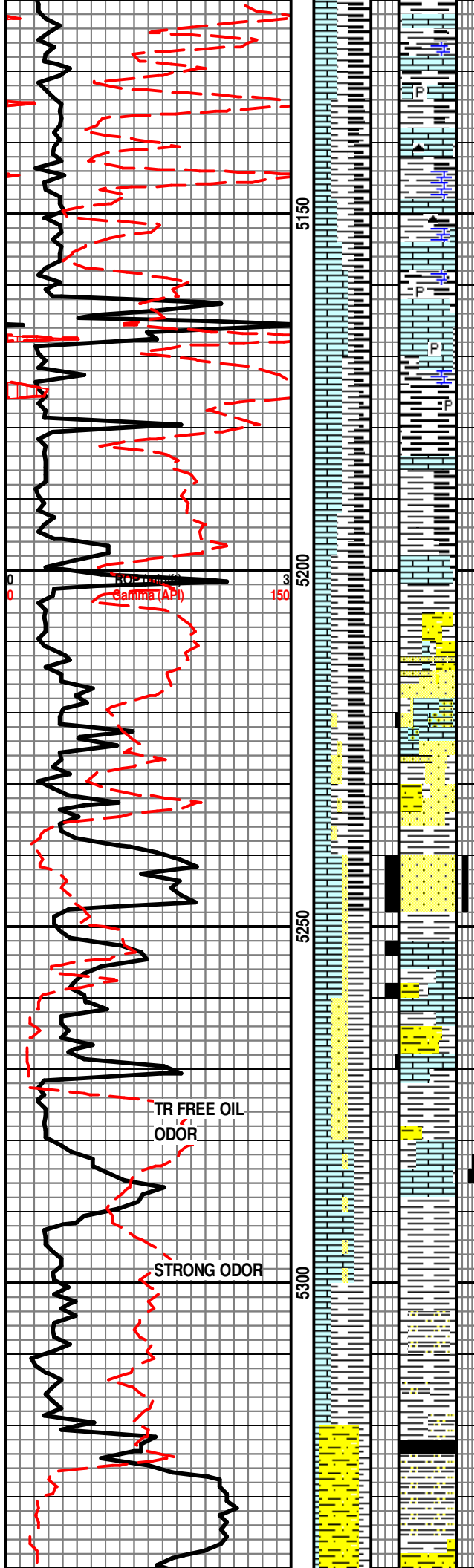
SH- GY DRK GY TO BLK, CARB, TRS



WLS 4992' @ 1.1 DEG

TG, C1-C5

200



SH- GY DRK GY TO BLK, FRM  
DNS OF PYR, CALC IP

LS- CRM OFF WHT TN TO LT GY, HRD  
DNS TO BRITT, F=XLN, CHLKY IP, TRS  
OF FOSS FRAGS, TRS OF TN CHRT,  
V/DLL YEL FLO, NO VIS POR, NO VIS C  
OR SHOW

LMY SH- GY DRK GY TO BLK, FRM  
BRITT, TRS OF CALC, TRS OF PYR,  
CARBY, TRS OF FOSS FRAGS, SME  
REWORKED CONGLOMERITIC LS IP,  
RATTY  
MORROW 5161' / -

SH- DRK GY BLK, CARB, TRS OF PYR

SH; GY SDK GY, SME GRN, TR BRN  
HD DNS, MICA, PYR, FREE PYR, POSS  
PT BAR MATL

TR (1)BRN DK BRN FOSS FRAGMTL,  
INTR FOSS POR, YEL FLOR, POSS  
ODOR, BRN SNTG, MILKY BLU FAST  
CUT, STRMG

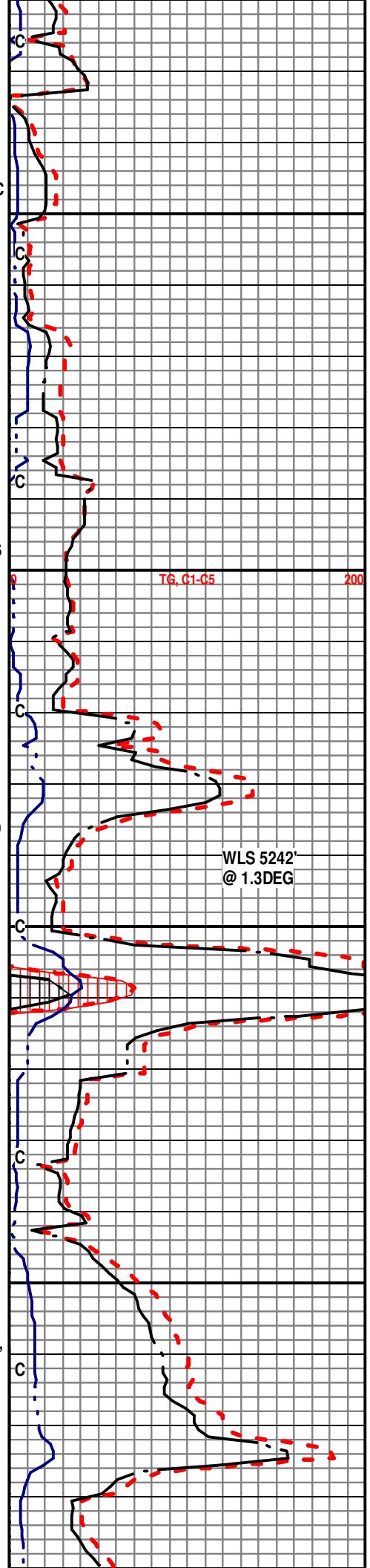
SS; BLK SME V/DK BRN, VF GR, MED  
TO TITE, SHLY, GLAU, TR CHOR, TR  
PYR, TR FREE DK BRN OIL, NO GAS  
BUBLS, ODOR, FAINT GOLD SME  
BRITE YELWH (2%), WEAK MILKY  
STRMG

LS; TN, SPAR CMNTED VF F FOSS  
FRGS & PCES, THE SLI WEATHD  
MATRIX, PP DK BRN SME BLK STNG  
SME OVERALL BRN STNG, AMBER TO  
WEAK GOLD FLOR, STRONG ODOR,  
FLASH MILKY STRMG CUT

GY TINT F FRGMTL LS, SME GAS  
BUBL SME BRN STNG, DULL YEL  
FLOR, FLASH SLO MILKY CUT

SH; GY DK GY W/CARB MATL & LENS,  
SME HD RGH TXT, PYR, FREE PYR,  
SME VF SLTY SNDY

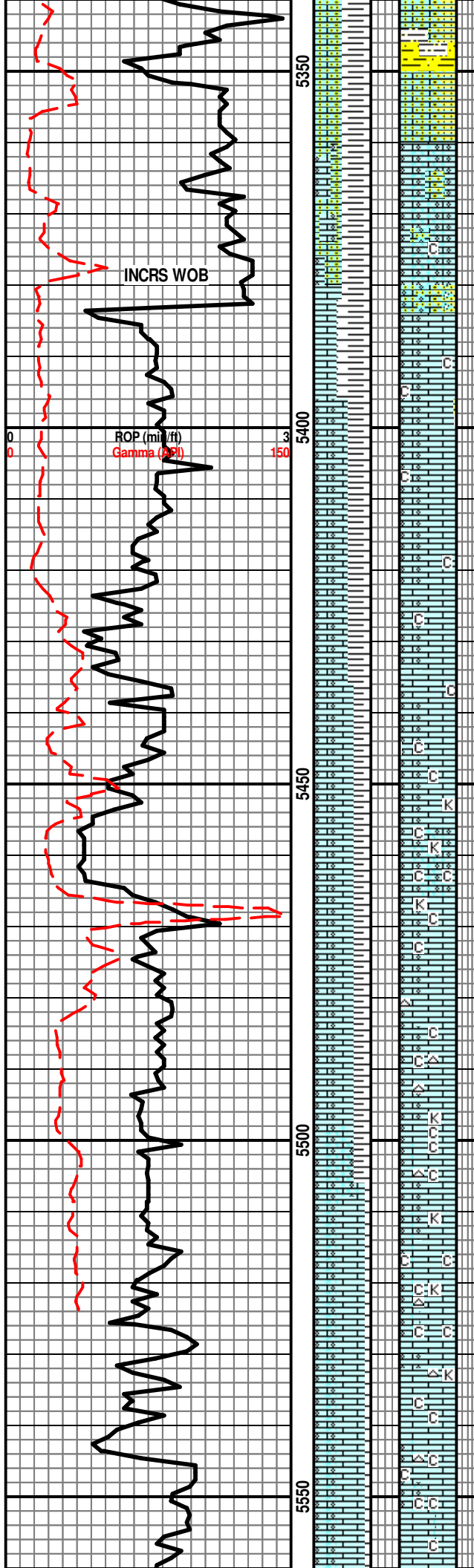
SLTST/SS; LT GY VF F GR, SHAL  
MATRIX, PYR CARB MATL & LENS,  
FREE PYR, TR PYRITIC COAL INTBD  
SH



TG, C1-C5

200

WLS 5242'  
@ 1.3DEG



LS; WH OFF WH CRM AREN TR W/VF  
OOL, NO SHOW

LS; CRM WH CHLKY VF F OOL, TR  
SPAR CMTE OOL W/SME FOSS  
SHLTR, GOLD MFNSOC N/O

OOL LS- CRM OFF WHT, HRD BRITT,  
VF-GRN OOL, SUB-SUCRO TO CHLKY,  
V/DLL BLUISH FLO, PR INTERGRN  
POR, NO VIS CUT OR SHOW

OOL LS- CRM OFF WHT LT TN, HRD  
BRITT, VF-GRN OOL W/SORTD, CHLKY,  
DLL BLUISH FLO, INCR LS CONTENT,  
POSS PR INTERGRN POR, NO VIS CUT  
OR SHOW

NOTE SAMPLES ARE FAIRLY GROUND  
UP

OOL LS- CRM OFF WHT LT TN, HRD  
BRITT, F/VF-GRN OOL PR SORTED  
SME SHADOW, V/CHLKY, TRS OF  
KAOL, WEATHERD, DLL BLUISH TO  
DLL YEL FLO, PR INTER-GRN POR, NO  
VIS CUT OR SHOW

**ST LOUIS 5464' / -2444'**

OOL LS- CRM OFF WHT LT TN, HRD  
BRITT, F/VF-GRN OOL TO LS GRNS, PR  
SORTED OOL, V/CHLKY, TRS OF OFF  
WHT OPAQ CHRT, INCR LS CONTENT,  
DLL YEL MIN FLO, PR INTER-GRN POR,  
NO VIS CUT OR SHOW

LS- CRM OFF WHT LT TN, HRD BRITT,  
VF-XLN, SME PR SORTED SCATT OOL,  
V/CHLKY, TRS OF OFF WHT OPAQ  
CHRT, POSS WEATHERED, DLL YEL  
TO SPOTTY YEL MIN FLO, PR  
INTER-GRN POR TO NO VIS POR, NO  
VIS CUT OR SHOW

LS- CRM OFF WHT LT TN, HRD BRITT,  
VF-XLN, F/ PR SORTED SCATT OOL,  
V/CHLKY, WEATHERED, DLL YEL TO  
SPOTTY YEL MIN FLO, NO VIS POR,  
NO VIS CUT OR SHOW

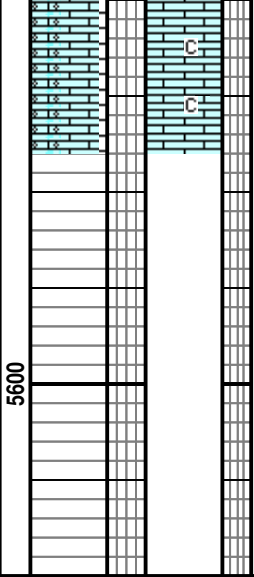
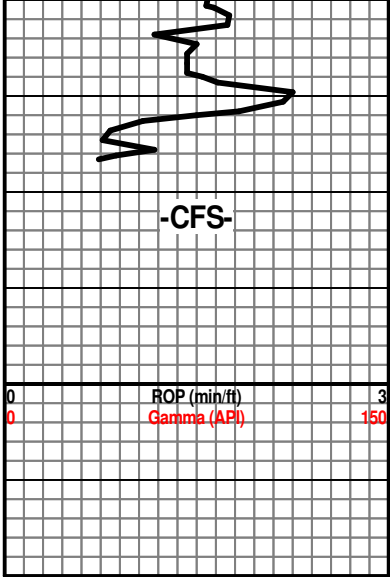
LS- CRM LT TN TO BLUE, HRD BRITT

WLS 5388'  
@ 0.9 DEG

TG, C1-C5

200

WLS 5534'  
@ 0.7 DEG



LS- CRM LT TN TO BUFF, HRD BRIT, F-XLN, CHLKY, LOOKS WEATHERD, DLL YEL MIN FLO, NO VIS POR, NO VIS CUT OR SHOW, NO ODOR

RTD 5578' @ 04:25 AM 10/01/17

THANK YOU FOR USING  
MBC WELL LOGGING  
AUSTIN & MARLA GARNER  
TROY FOWLER

