

MBC WELL LOGGING LLC

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

Well Name: ROCKING CHAIR RANCH # 4 BLACKSTONE EXPLORATION LLC
 Location: NAVAJO COUNTY, ARIZONIA USA
 Licence Number: Region: WILDCAT
 Spud Date: 4-26-16 Drilling Completed: 5-9-2016
 Surface Coordinates: 1,980'fsl, 1990'fel SEC 21-T14N-R19E
 BLACKSTONE RIG 1 ROGER MARTIN CO-MAN/GEO
 Bottom Hole CASIED HOLE SOLUTIONS E-LOGS HAYES KS
 Coordinates: DIL/CDL/CNL/PE/MEL/SONIC
 Ground Elevation (ft): 5908 K.B. Elevation (ft): 5918
 Logged Interval (ft): 120 To: 1853 Total Depth (ft): E-LOG 1851
 Formation:
 Type of Drilling Fluid: MUD-CO/SERVICE MUDCO TONY MAESTAS, LAMAR CO. (719)336-7006
 Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com






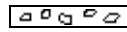




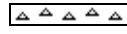
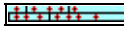


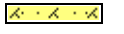






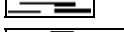

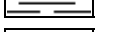












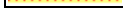

OPERATOR

Company: BLACKSTONE EXPLORATION CO LLC
 Address: PO BOX 940 PH (928)-524-7786
 HOLBROOK, ARIZONIA 86025

MUDLOGGER

Name: AUSTIN GARNER OFF (620)873-2953
 Company: MBC WELL LOGGING LLC
 Address: 21156 RD 22
 MEADE, KANSAS 67864

ROCK TYPES

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

ACCESSORIES

LITHOLOGY

	Anhy
	Brec
	Cht
	Coal
	Congl
	New dolomite
	Dolo new
	Newdolo ls 2
	Ls & ooids
	Oolitic ls -1
	Stgensndy-arkos
	New ls-1
	Carby shale
	Lmy carby sh-3
	Carb sh
	Gyp
	Sltst
	Salt
	Sndy sh--red
	Sndy sh
	Sltst-1
	Sltly-shale
	Lmy ss-1
	Arkosic snd
	Ss
	Grn sh strk

	Lmy sh-2
	Grn mott gy sh
	Shale-1
	Red sh-1
	Stgensndy-arkos
	Sndy ool ls
	Sndy-ls-1
	Calc shale
	Granitewash
	Ls shly-b
	Poor sortd ss
	Snd-ls-sh

FOSSIL

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

	Gastro
	Oolite
	Ostra
	Pelec
	Pellet
	Pisolite
	Plant
	Strom

MINERAL

	Anhy
	Arggrn
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk
	Chtlt
	New dolostringer
	Dol
	Fldspr-1
	Ferrpel
	Ferr
	Glau
	Gyp

	Hvymin
	Kaol
	Marl
	Minxl
	Nodule
	Phos
	Pyr
	Qtz
	New symbol
	Salt
	Sandy
	Silt
	Sil
	Sulphur
	Tuff
	Styolitic
	Slickenside

STRINGER

	Anhy
	Red sh stringer
	Arg
	Bent
	Coal
	Dol
	Gyp
	Oolls-1

	Ls
	Mrst
	Sltstrg
	Ssstrg
	Grn sh strk

TEXTURE

	Boundst
	Chalky
	Cryxln
	Earthy
	Finexln
	Grainst
	Lithogr
	Microxln
	Mudst
	Packst
	Wackest

OIL SHOW

	Even
	Spotted
	Ques
	Dead

Comments

OTHER SYMBOLS

POROSITY

	Earthy
	Fenest
	Fracture
	Inter
	Moldic
	Organic
	Pinpoint
	Vuggy

FOSSIL

	Algae
	Amph
	Belm
	Bioclst

	Brach
	Bryozoa
	Cephal
	Coral
	Crin
	Echin
	Fish
	Foram
	Fossil
	Gastro
	Oolite
	Ostra
	Pelec
	Pellet
	Pisolite

	Plant
	Strom

STRINGER

	Anhy
	Red sh stringer
	Arg
	Bent
	Coal
	Dol
	Gyp
	Oolls-1
	Mrst
	Sltstrg

	Ssstrg
	Grn sh strk

OIL SHOW

	Even
	Spotted
	Ques
	Dead

SORTING

	Well
	Moderate
	Poor

ROUNDING

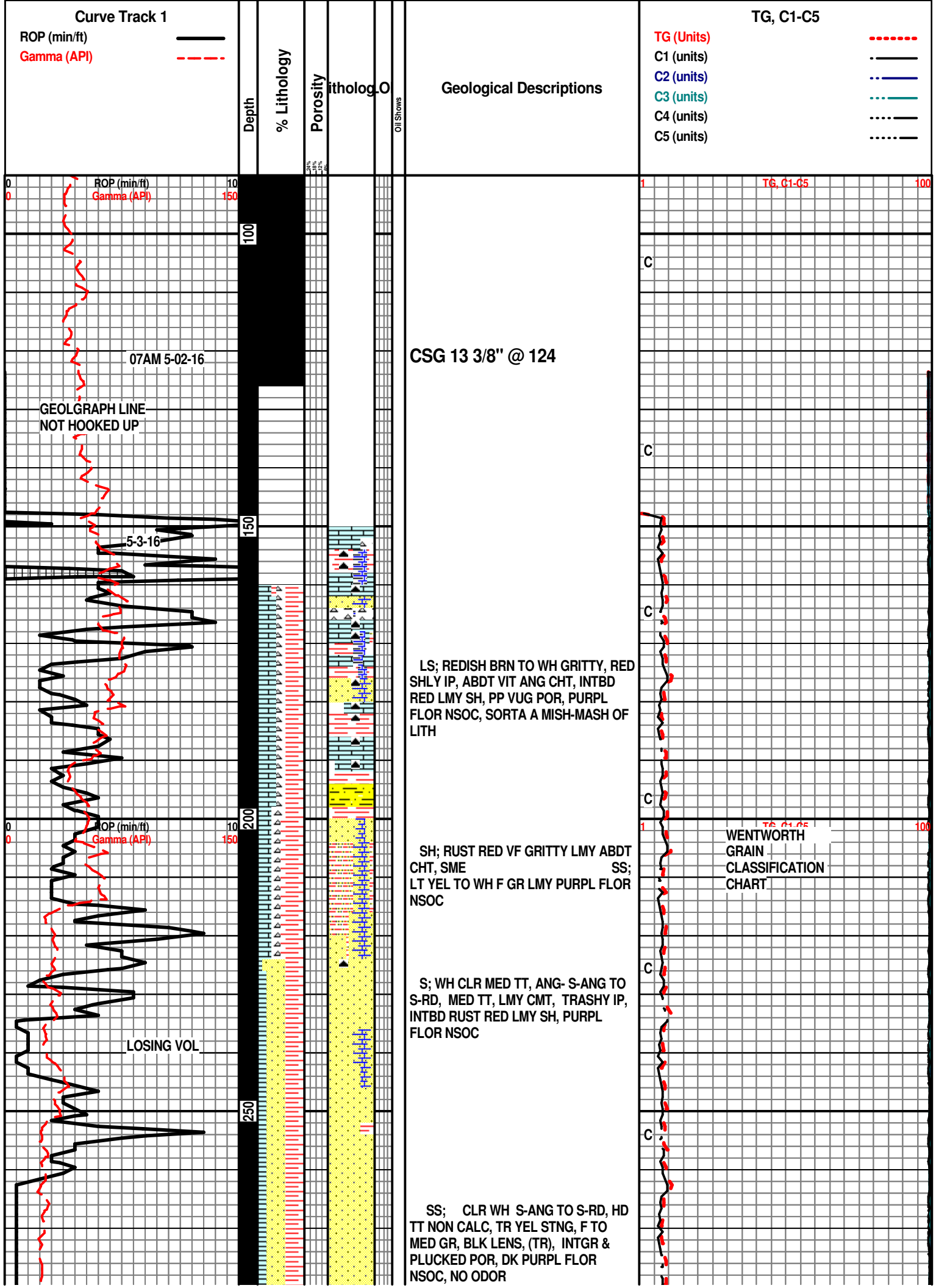
	Rounded
	Subrnd
	Subang
	Angular

INTERVAL

	Core
	Dst

EVENT

	Rft
	Sidewall



Curve Track 1

ROP (min/ft) ———
 Gamma (API) - - - -

TG, C1-C5

TG (Units)
 C1 (units) ———
 C2 (units) - - - -
 C3 (units)
 C4 (units)
 C5 (units)
 TG, C1-C5

Depth
 % Lithology
 Porosity
 Litholog-O
 Oil Shows

Geological Descriptions

CSG 13 3/8" @ 124

GEOLGRAPH LINE
 NOT HOOKED UP

07AM 5-02-16

5-3-16

LOSING VOL

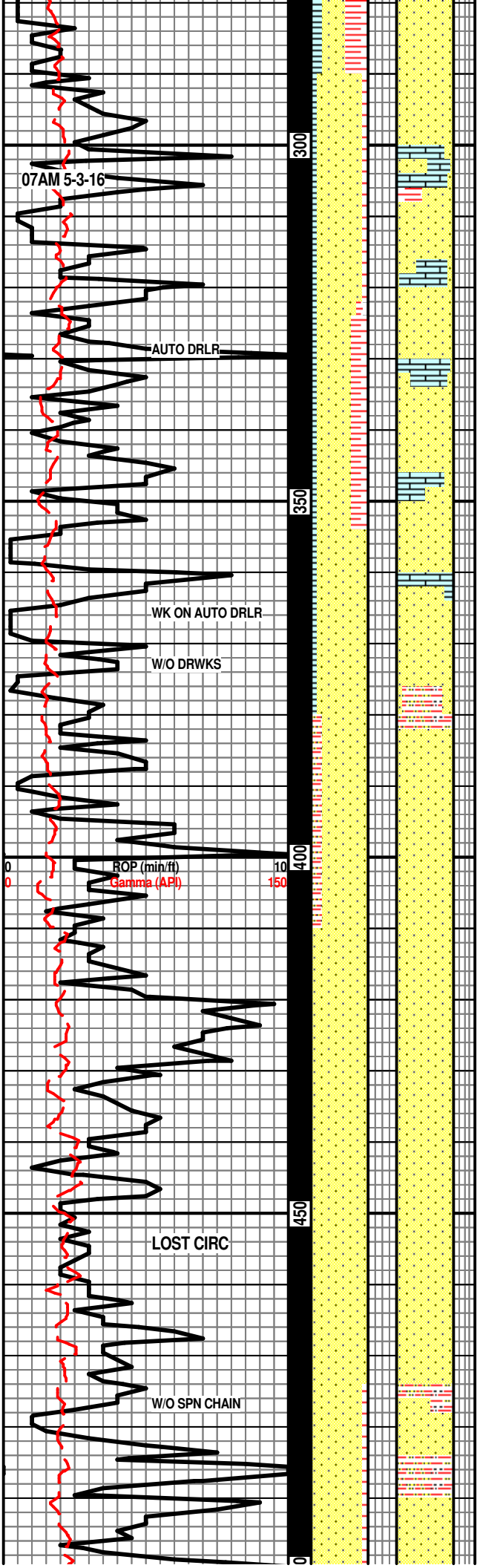
LS; REDISH BRN TO WH GRITTY, RED SHLY IP, ABDT VIT ANG CHT, INTBD RED LMY SH, PP VUG POR, PURPL FLOR NSOC, SORTA A MISH-MASH OF LITH

SH; RUST RED VF GRITTY LMY ABDT CHT, SME SS; LT YEL TO WH F GR LMY PURPL FLOR NSOC

S; WH CLR MED TT, ANG- S-ANG TO S-RD, MED TT, LMY CMT, TRASHY IP, INTBD RUST RED LMY SH, PURPL FLOR NSOC

SS; CLR WH S-ANG TO S-RD, HD TT NON CALC, TR YEL STNG, F TO MED GR, BLK LENS, (TR), INTGR & PLUCKED POR, DK PURPL FLOR NSOC, NO ODOR

WENTWORTH
 GRAIN
 CLASSIFICATION
 CHART



SS; OPAQ TO OFF WH, CLR, S-RD,
 HDTT TO FRI, ABDT FREE QTZ, PURPL
 FOR NSOC

TR PALE ORNG HD DNS XLN LS
 PURPL FLOR NSOC

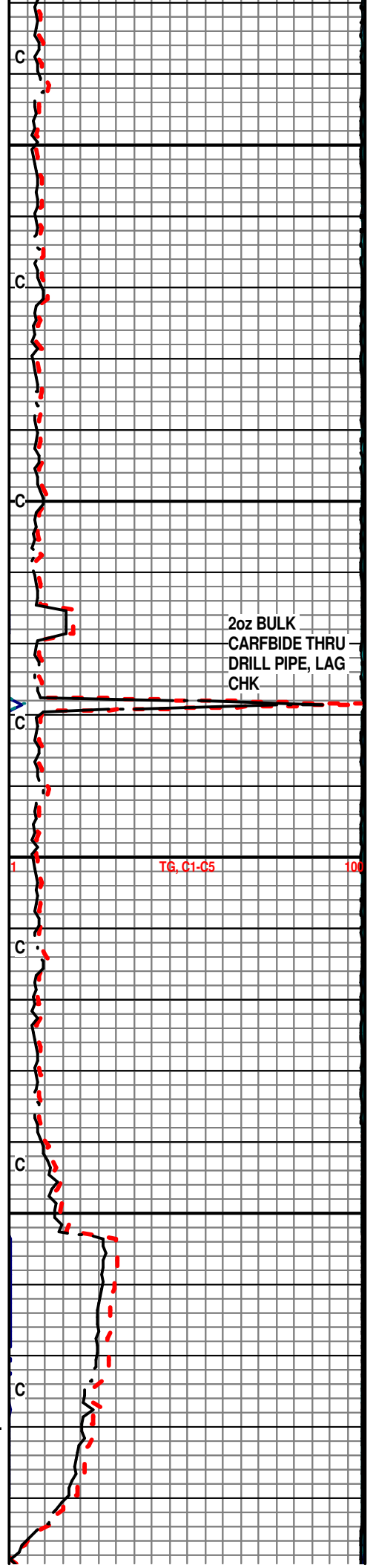
SS; AAB

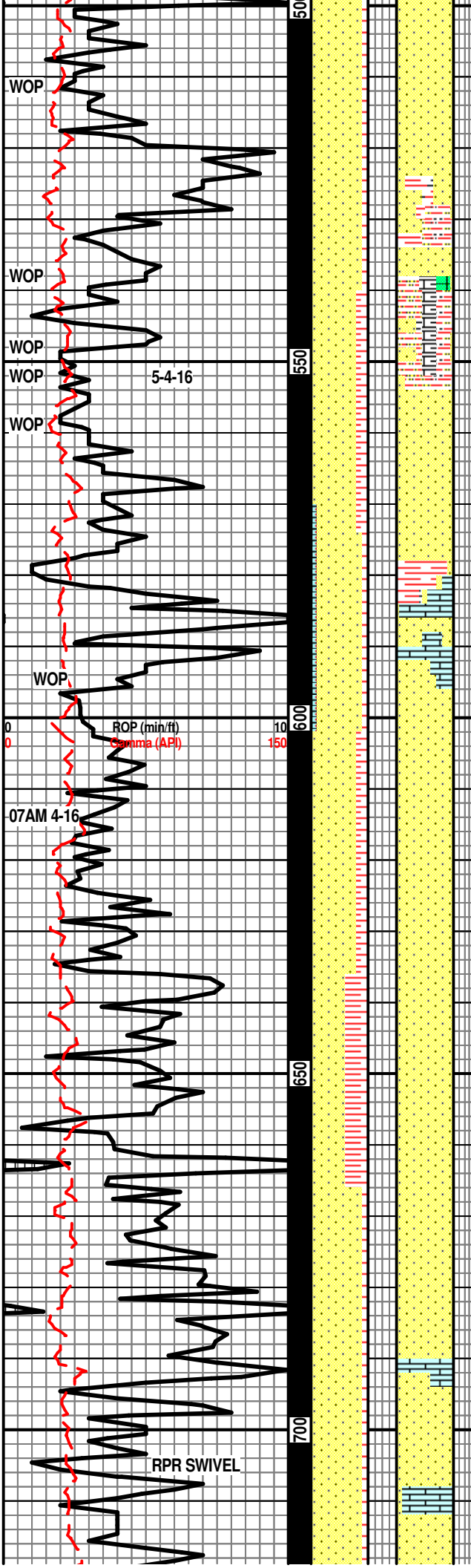
TR LT RED /ORNG, HD TT VF GR

S; OFF WH, FRI TO MED TT, S-RD,
 NON CALC, SILIC CMT, ABDT FREE
 QTZ, PURPL FLOR NSOC

SS; OFF WH, SME ORNG/YEL TINT,
 RUST, HDTT, VF GR SHLY IP, ABDT
 FREE WH CLR QTZ, PURPL FLOR
 NSOC

RUST DK RED TO SLI ORNG, TR
 PURPL, HD TT VF-F GR SLTST, V/SHLY.
 NO SHOW





OFF WH, CLR, SLI ROSE TINT, FRI, F-GR, F S-RD-RD, OCC S-ANG, SILIC CMT PURPL FLOR NSOC

SS; LT ORNG TO PURPL, SME RUST RED, MED TO HDDTT, NSILIC CMT, NFSOC

SH; RED BRN RUST, SLTY LMY, SMR SMO NON-CALC

SS; WH, YEL TINT IP, MED TT ABDT FREE QTZ, DK PURPL FLOR NSOC

RED SH

LS; YEL HD DNS ERTY

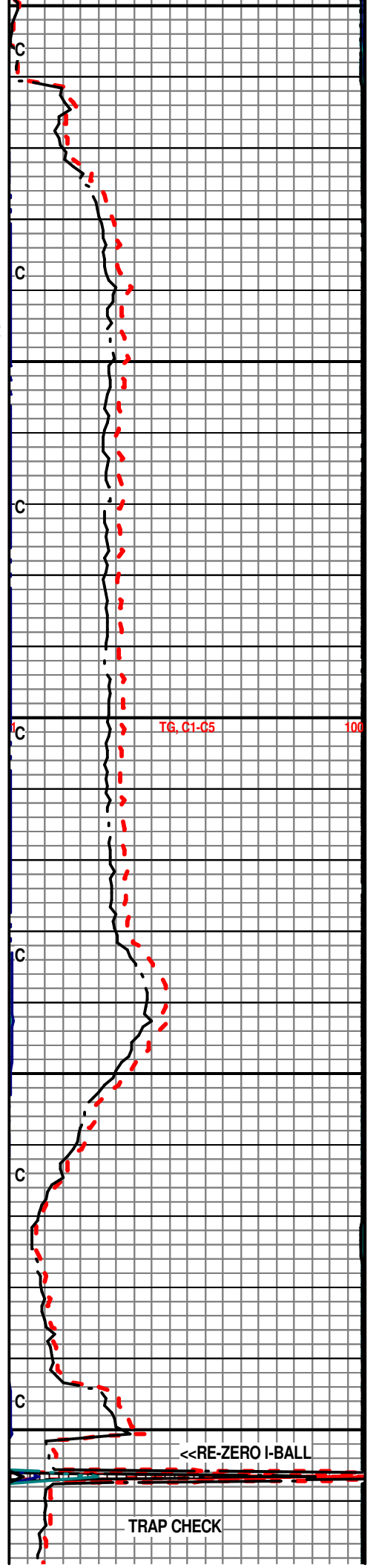
SS; WH OFF WH, CLR, F TO LWR MED GR, MED TT ABDT FREE OPAQ ELIP TO RD S-RD QTZ, PURPL FLOR NSOC

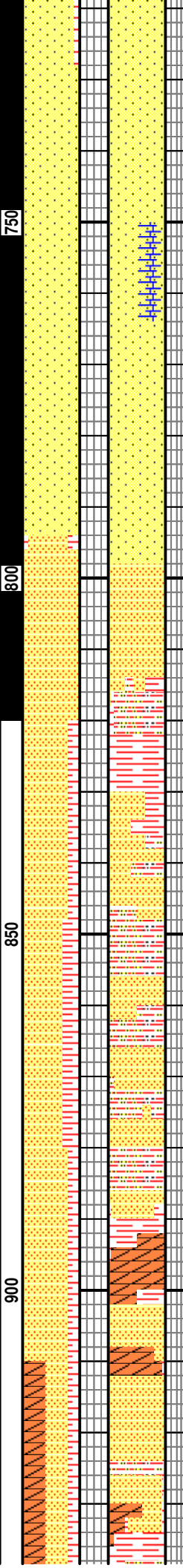
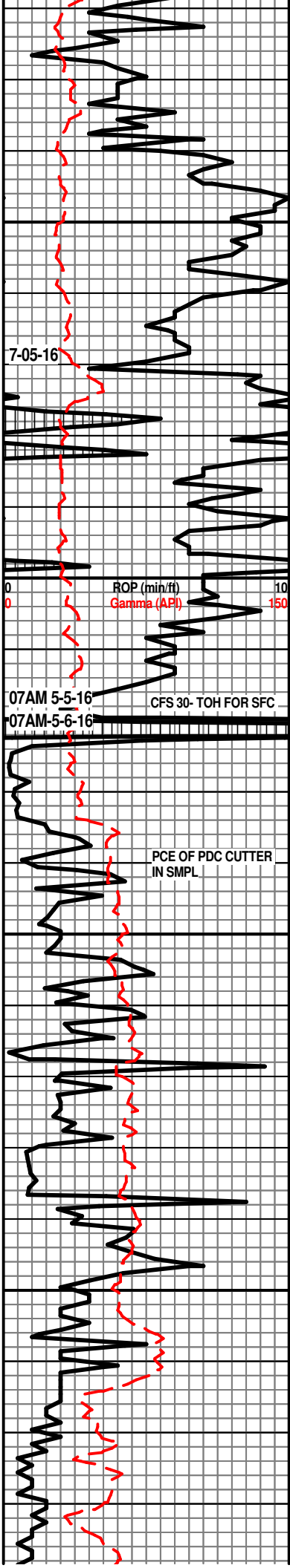
SS OFF WH, WH CLR HD TT, ABDTY FREE QTZ, PURPL FLOR NSOC

SS; LT FYEL TINT OFF WH, HD TT, F GR, SCATT BLK SPKS, PROB TRACE BLK D.O.S. PURPL FLOR NSOC

TOH BIT 696', BIT # 3- 12.25 PDC

LS; OFF WH SFT-CHLKY W/QTZ, TR FLAT ANG CHT, PYR, SS; AAB, DK PURPL FLOR NSOC





SS; LT REDISH, YEL, SILIC CMT, SME ORNG HD TT, F-GR FREE QTZ, TR WH CHLKY LS, PURPL FLOR NSOC

SS; YEL, ORNG REDISH, HD TT, LMY CMT, SCATT PROB D.O.S. RED ORNG SFT LS W/QTZ, PURPL FLOR NSOC

SS; REDISH BRN, YEL, HD TT SILIC CMT, NFSOC

ARKOSIC VF GR SS, HD TT, SME TR LMY CMT

85/8" SFC

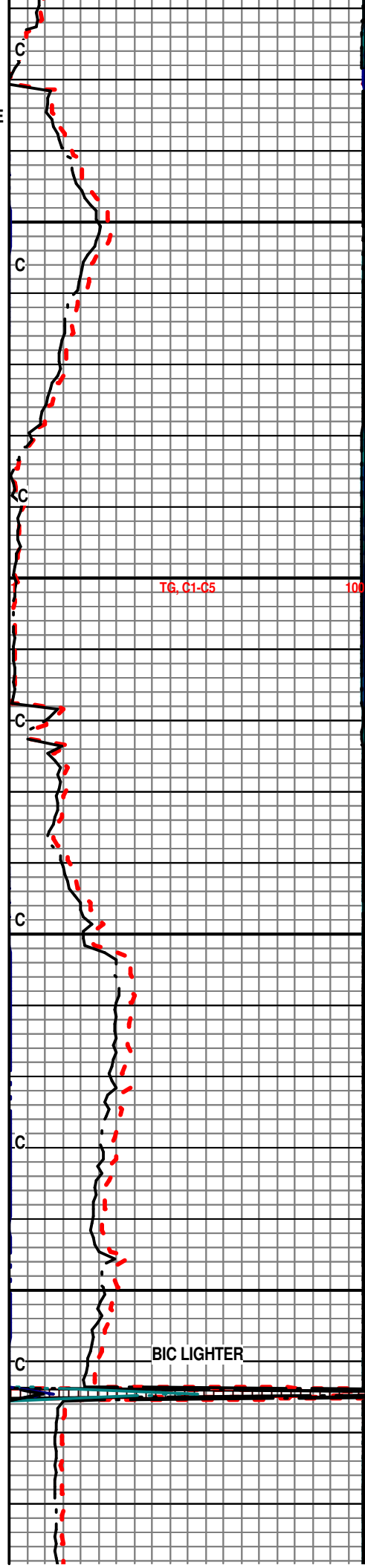
SH RED SFT, INCRS SLTY SNDY

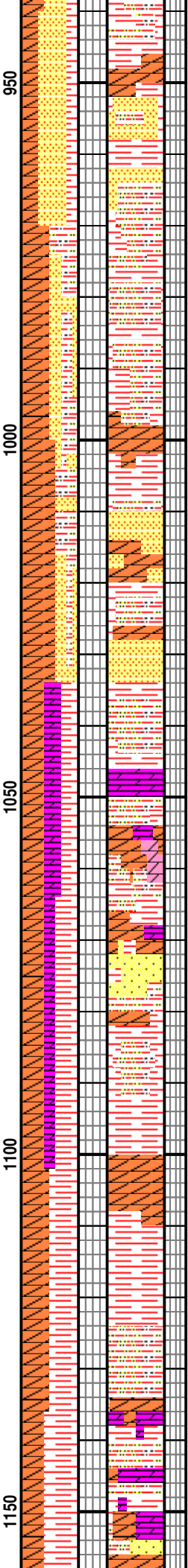
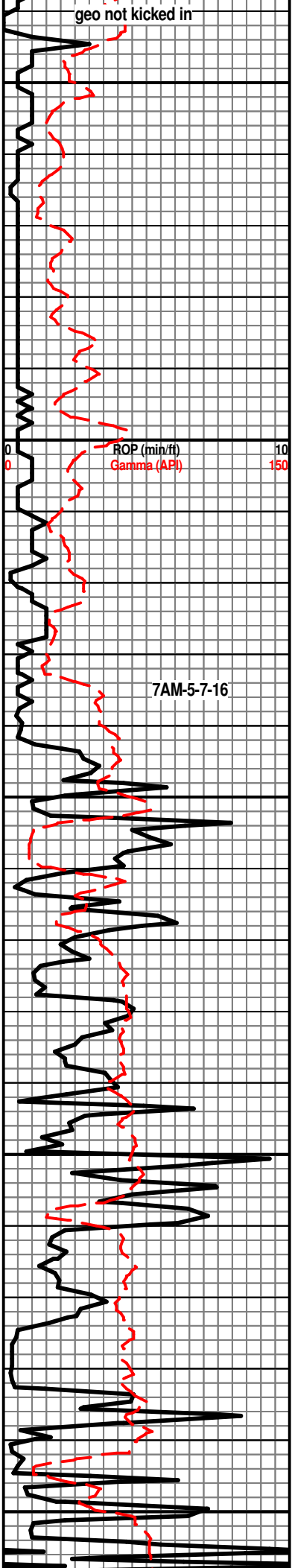
ARKOS. SS, HD TT SME VF LT ORNG, TINT F GR INTBD RED SH

SH; RED BRN SLTY

ANHY WH OPAQ, FRAC HS XLN, ABD SFT WH TALC ANHY, TR ORNG,

ARKOS VF GR BRTL TO FRM F GR SS, INCRS V/SHLY NFSOC





ANHY BRTL LT ORNG (TRACE)
ABDT WH SFT AS TALC POWDER

SH RED BRN SLTY SNDY

ANHY WH OPAQ, FRAC COMNGLD
SFT & XLN,

repair swivel packing replace wash
pipe-- go thru pump, mud consistency of
coolwhip

VIS HUMP, MUD AERATED CUT TO 8.6, PULL
MUD STRAIGHT FROM PRE-MIX, NO DIFF.
REPLACE GLAND PACKING, RUN PREMIX,
PROBLEM SOLVED

DOLO; DK BRN TN HD V/SHLY
COMNGLD W/ ANHY IP, BLK FLOR
NSOC

ANHY TN TO OPAQ XLN

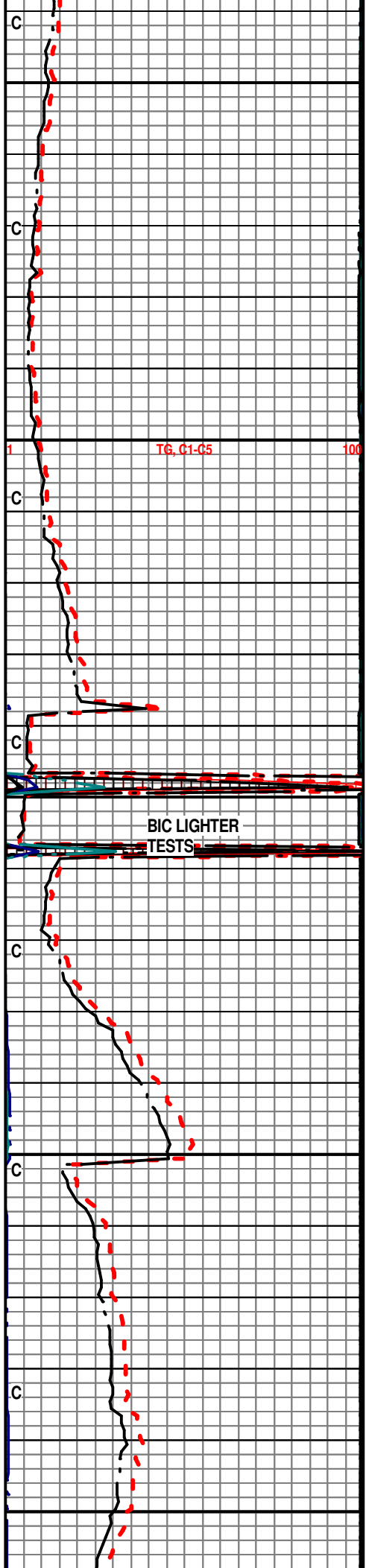
SS; ORNG RED F GR MED TT, SHLY
NFSOC

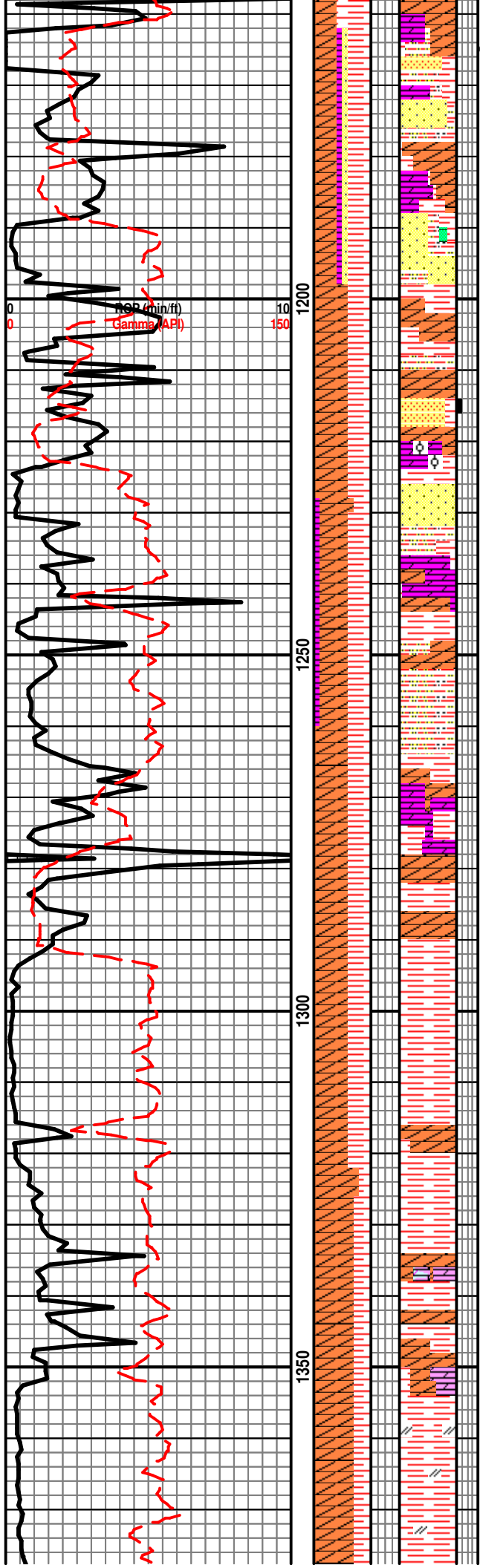
SH; BRICK RED SLTY SNDY GRDS TO
SHLY F-GR SS NFSOC

SLTST; RED ORNG VF GR, FRI TO HD
TT, V/SHLY NSOC

ANHY; GY TN WH HD XL INTBD BRICK
RED V/SHLY SS & SLTST NFSOC

TR BRN ERTY SHLY DOLO, PRED





ANHY WH TN SFT COMNGLD XLN, TR SALT

SS; LT ORNG TO MOTT WH FRI TO HD TT VF F GR, FREE F-RD, S-RD QTZ, NFSOC

ANHY WH OFF WH SLI ORNG IP, SME SALT MOLD

DOLO; MED BRN ERTY IMBD ANYH NOD, TR VF GRITTY W/SHADOW VF OOL WEAK FAINT GOLD MIN FLOR NFSOC

SS RED BRN ORNG FRI TO HD TT, BLK MIN SPKS, NFSOC

SH; TR LT GY DOLOMITIC, PRED RED BRN VF GR V/SHLY SLTST & SS NFSOC

SS; HD ORNG TO REDISH VF F GR V/SHLY, GRDS TO SLTY SNDY SH NFSOC

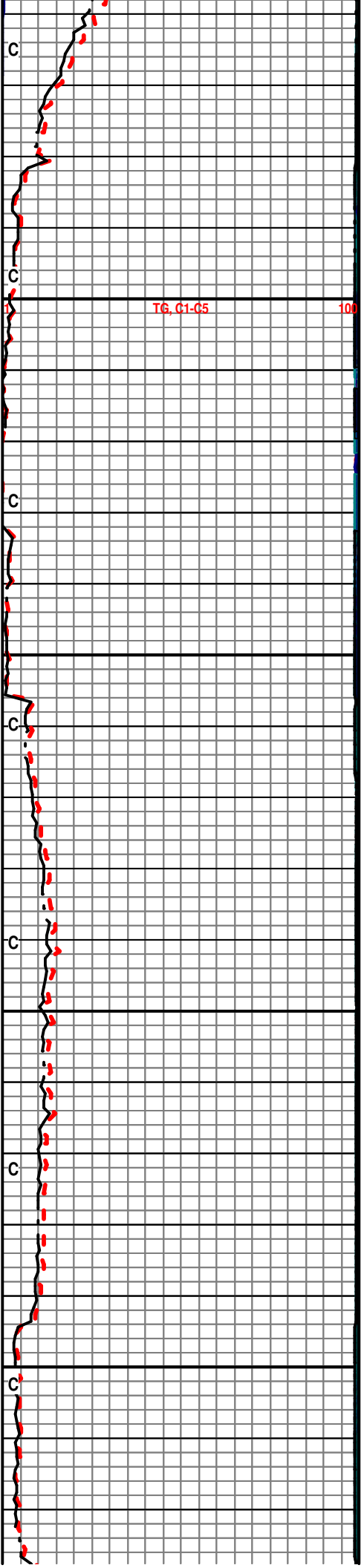
ANHY OFF WH SLI TN TINT IP, SME GY TO BRN ERTY DOLO W/ANHY PCES, MFNSOC

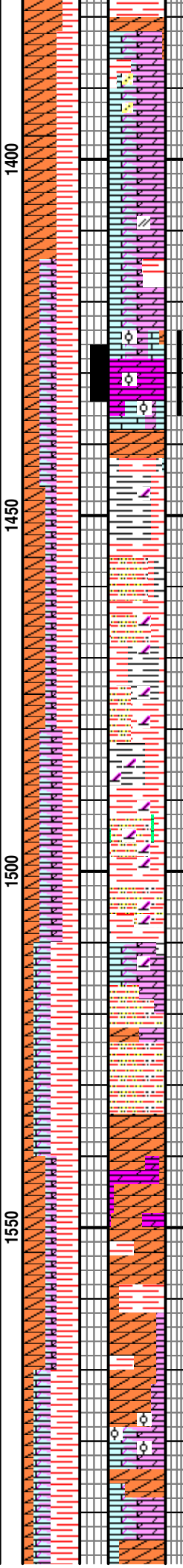
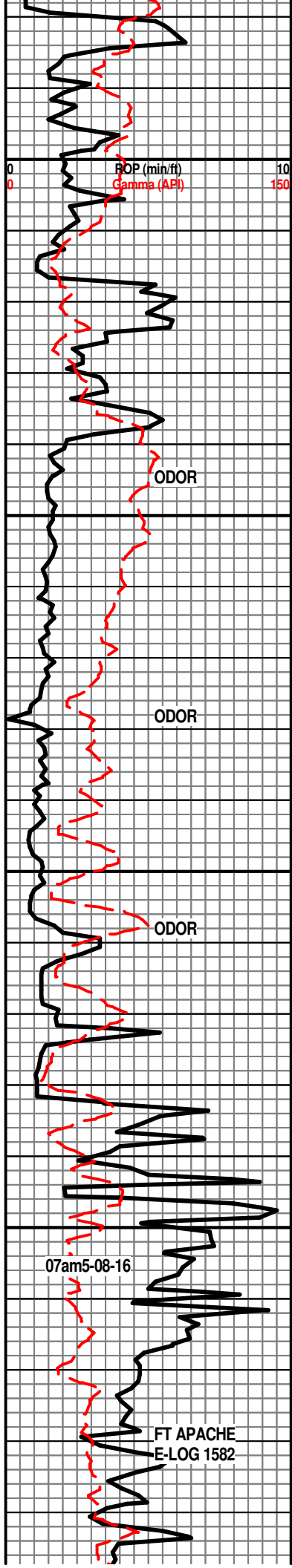
SH RED ORNG, SLTY SNDY TO SMO

ANHY GY TN XLN TO VF GRITTY TR DOLOMITIC

SH BRICK RED HD ANHYDRITIC IP, SME SNDY

RUST RED SFT SH, SME SLTY SNDY





ANHY OFF WH OPAQL GY SLI TN HD
DNS

LS & DOLOMITIC LS; LS= DK BRN TN
DNS ERTY VF XTL, W/TRACE FOSS,
SME SHADOW OOL, %5 INSOLULB
PART, SME LT TN DOLOM, VF SUGARY
PP VUGS & SHADOW VF OOL, FAIR
ODOR, DISTILLATE, FAINT DULL
GOLD FLOR, GAS BUBLS FR RING
CUT

LT GY DOLOMITIC SH W/MICA

SS; V/LT ORNG, TO REDISH, VF-F
GR, RED SHLY, GRDS TO SLTST,
NFSOC

SH BRICK RED SMO IP, SME SLTY
SNDY W/ANHY FRGS

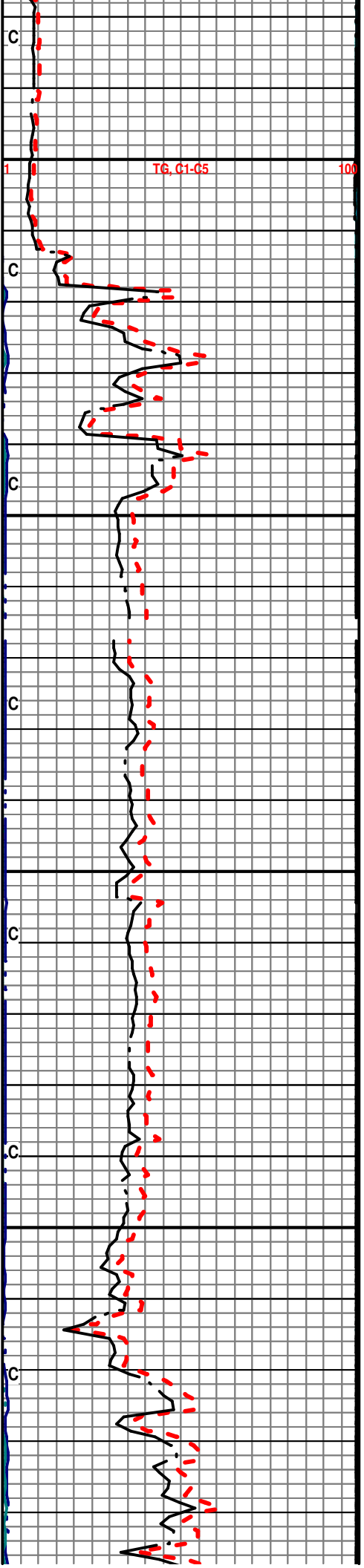
B RICK RED SLTY SNDY SH W/IMB D
WH ANHY

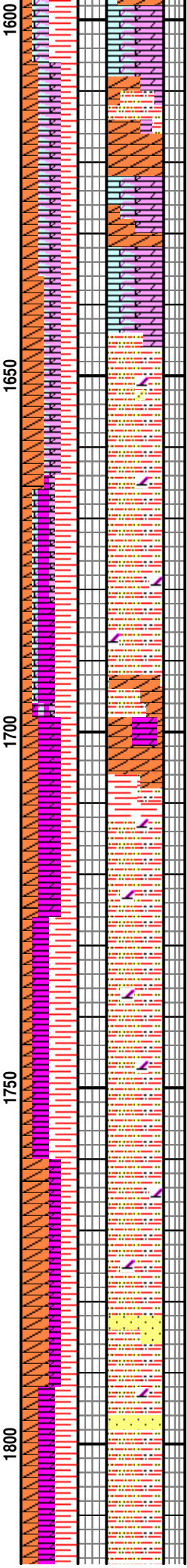
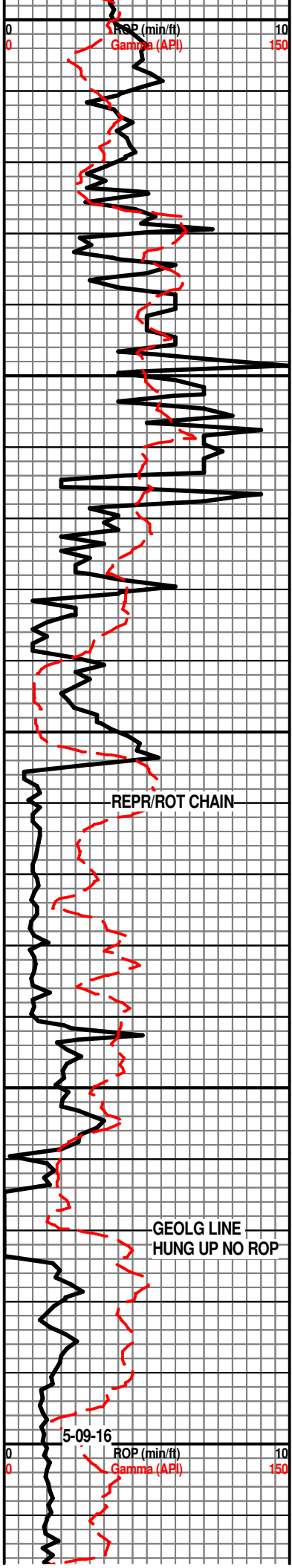
DOLO; & DOLO/LS, LT GY, BRN RGH
TXT, TRACE/FOSS, SHLY, NO ODOR,
SCATT FAINT GOLD MIN FLOR NSOC

ANHY TN GY SME SLI ORNG TINT,
HD DNS FRAC XLN, DOLOMITIC IP &
COMNGLD DOLO SME SALT MOLD NO
SHOW

LS; SME GY PRED DK BRN TO TN
W/TRACE/FOSS, SME SHDW VF OOL,
SHLY, NO SHOW

DOLO & DOLO/LS, BRN DK BRN VF
GRITTY, SHLY ABDT RED SH NO
SHOW, NO ODOR





LS; BRN VF GRNY V/SHLY, GRDS TO DOLO/LS, FAINT SHDW VF OOL, SME PYR, SCATT FAINT GOLD FLOR, SCATT FAINT GOLD FLOR, NO ODOR, NSOC

DOLO; TN BRN VF GRITTY, BRN SHLY, MICRO SHDW OOL, DK BRN CARB MATL, NO ODOR, FAINT GOLD FLOR, GAS BUBLS ON CRUSH, NO CUT

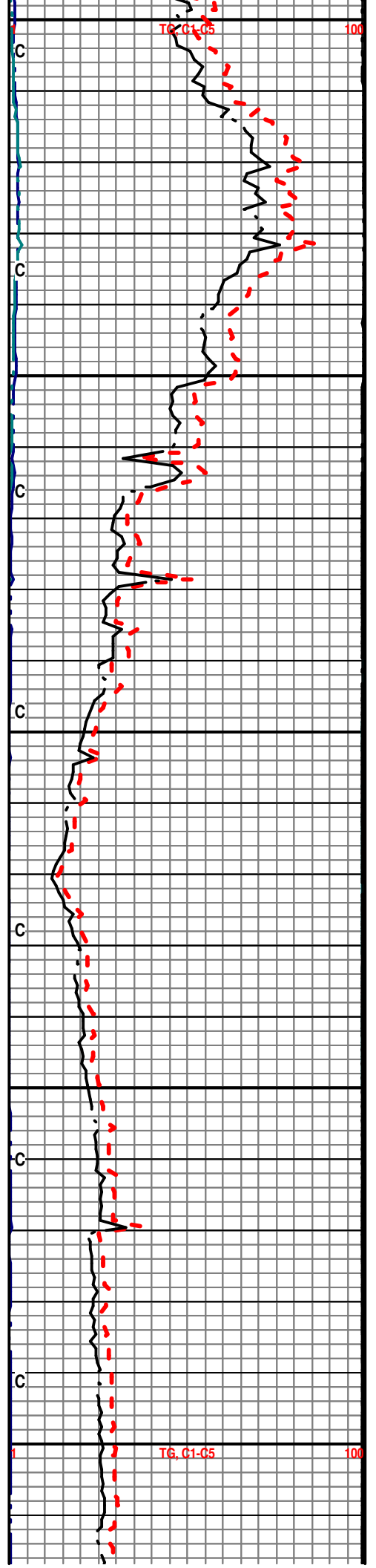
RED TO BRN SME ALT GY SLTY SNDY DOLOMITIC IP SH

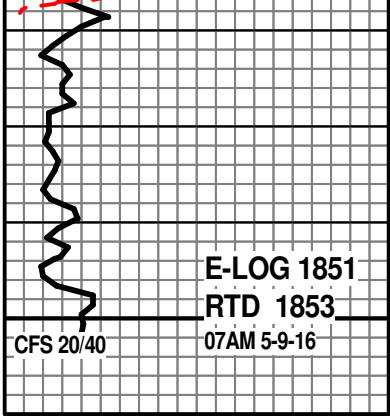
ANHY; TN WH MOTT WH HD DNS

SH; GY SLI GY GRN, DOLOMITIC IP, ABDT RED SLTY SNDY SH GRDS TO SLTST

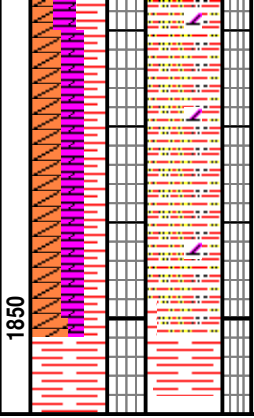
SH; BRICK RED SLTY DOLOMITIC SME RED/WG MOTT VF GR SS & SLTST, V/SHLY

TRACE SS; LT ORNG, F GR, FRI, TO MED TT V/ SHLY NO SHOW





E-LOG 1851
RTD 1853
07AM 5-9-16



ORNG TO RED SHLY VF GR SLTST &
SS, ABDT RED SH NO SHOW

THANKS FOR USING
MBC WELL LOGGING
AUSTIN & MARLA GARNER

