



Weatherford®

Surface Logging Systems

P.O. Box 80531
Midland, Texas 79708
432.687.1823 Main
432.687.1689 Fax

COMPANY: Sandridge Energy

WELL: Turner 3406 5-7H

FIELD: ML

COUNTY: Harper STATE: KS

LOCATION: 250' FSL & 1,980' FEL of Section 7, T34S, R6W

Spud Date: 4/29/13

Started: 4/3/13 At: 3000'

Ended: N/A At: 8973'

Api No.: 15-077-21868-0100

G.L.: 1309'

K.B.: 1327'

Logging Personnel:

Christopher Perry, Chuck Isbon

Andrew Safigan III

Unit No.: 3618

Rig: Lariat #39

Filename: SANDRIDGE_TURNER_3406_5-7H.mlw

Geologist: TAMMY ALCORN

Abbreviations:

NB...New Bit
CO...Circ Out
NR...No Returns
TG...Trip Gas
WOB...Wt on Bit
RPM...Rev/Min
SG...Survey Gas
DST...Drill Stem Test
DS...Directional Survey
CG...Connection gas
LAT...Logged After Trip
PP...Pump Pressure
SPM...Strokes/Min
DTG...Down Time Gas

Mud Data

WT..Weight V..Viscosity
PH..Acidity F..Filtrate
CHL..Chlorides SC..Solids Content

Lithology Symbols:

Anhydrite Salt Granite
Siltstone Chert Sandstone
Dolomite Conglomerate Limestone
Coal Shale Bentonite
Carb Shale Granite Wash Quartz Wash
Red Sh Org Sh Green Sh
Cust Sh1 Cust Sh2 Cust Sh3
Cust Sh4 Cust Sh5 Cust Sh6

Accessories

Glauconite Pyrite Fossils Oolites
Fractures Cement

Gas Chromatograph Analysis:

HW
C1
C2
C3
IC4
NC4
IC5

Drilling Rate

MIN/FT

Vis
Por
Tr /
p
f
g

Lithology

%
Oil
Flu
Cut
Tr /
p f gp fg

Descriptions/Remarks

Total Gas/Chromatograph

NB #3 in @
1355' 8.75"
JZ PLT516SS
W/5X12'S
1.5° MTR
5/3/13

GAMMA

150

3200

UNIT ON LOCATION
4/29/13 BEGIN TWO MAN
LOGGING SERVICE ON
5/3/13 @ 02:45 AM
GAS AND SAMPLES LAGGED
TO DEPTH

9.625" CASING SET @ 784

DRILLING WITH WATER
BASED MUD SYSTEM

SH: LTGY-MEDGY, MEDDKGY-
DKGYBLK IP, OCC RDBRN,
GRN IP, SUBBLKY-BLKY,
SL FRM-SL HD IP, SL
SLTY IP, SL EARTHY TEXT
NCALC

CALIBRATIONS 1% TEST GAS MIX

COLUMN PRESSURE @ 11 PSI

HW=204

C1=103

C2=139

C3=99

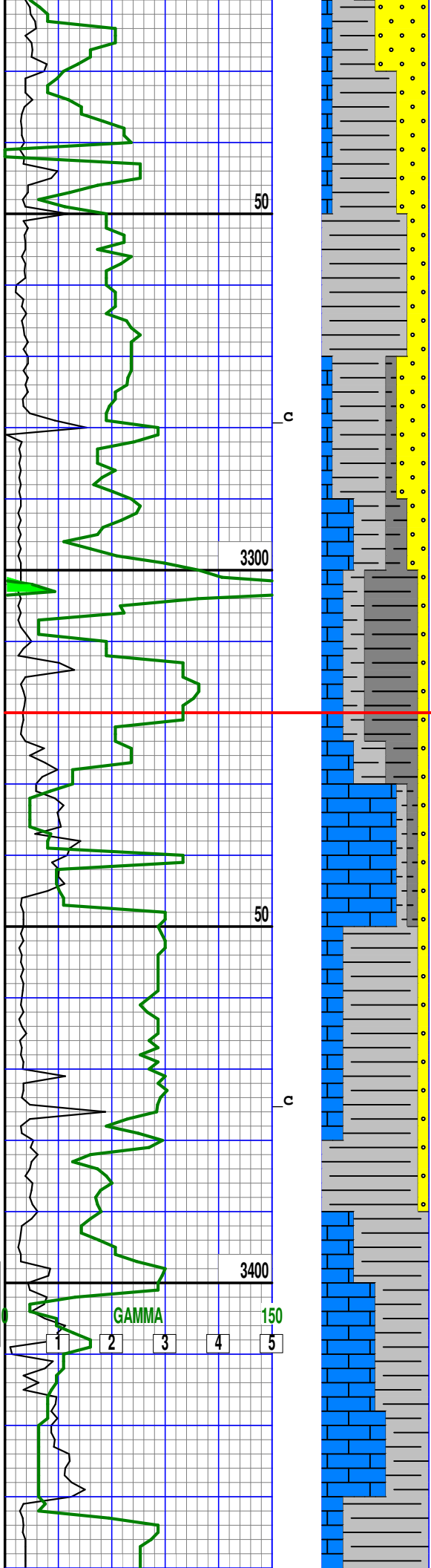
IC4=69

NC4=59

25 50 75 100 125 150 175

25 50 75 100 125 150 175

HW



SS: CLR-TRNSL, WHT-OFFWHT
 OCC LTTN-CRM, FRM-SL HD
 MOD-WL CONS, VF-FGR,
 ANG-SUBRND, SUBSPHER,
 SL FRI IP, SL ARG IP,
 NCALC, NSFOC.

SH: LT-MEDGY, DKGY,
 SLI HD, SUB FIS, SLI
 GRTY, SLI SLTY, N CALC.

SH: MED-DKGY, SLI HD,
 V FRM, SUB FIS-SUB
 BLKY, SLI GRTY, N CALC,
 ASSOC W/ ARGIL SS.

SH: BLK, VDKGY, OCCMEDGY
 IP, OCC VDKGYBLK IP, SL
 FRM-SL HD, SUBBLKY-BLKY
 N-SL CALC IP, SL-V
 CARB IP, SL ERTHY TEXT

BASE HEEBNER SH. @ 3320\'md

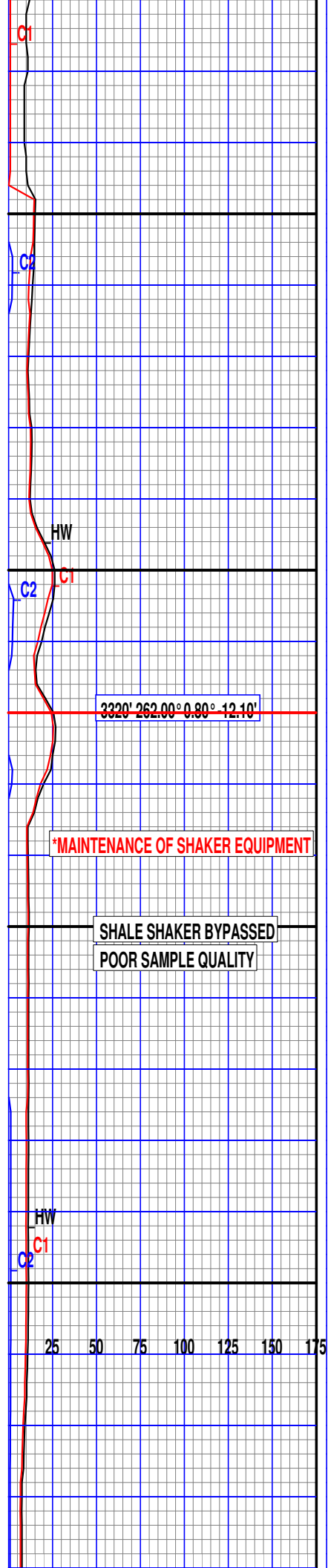
SS: WHT-OFFWHT, CLR-TRNSL
 VFN-FN GRN, MOD SRT, MOD
 -WL CONS, FRM-SL HD, SUB
 ANG-SUBRND, SL ARG,
 NCALC

LS: VLTN-VLTTNGY, OFFWHT
 -CRM IP, MIC-VFN XLN, SL
 FRM-HD, SL CHLKY IP, SL
 ARG IP, MDST-WKST, SUB
 EUHD, NSFOC.

SH: LTGY-MEDGY-DKGYBLK
 IP, OCC BLK, RDBN GRN,
 SUB BLKY-BLKY, SL SLTY
 IP, ERTHY TEXT, N CALC,
 MOD-V CARB IP

LS: OFFWH, BUFF, LTYG,
 SLI HD, WACKSTN-
 PACKSTN, OCC SDY, VFGR
 SLI - N ARGIL, OCC
 LT YEL FLUOR, NO CUT
 NOTED.

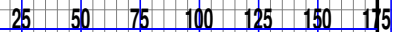
SH: MEDGY, TR LTGY.



WOB 11.4
 RPM 64
 PP 1121
 SPM 109

WT 8.8
 VIS 41

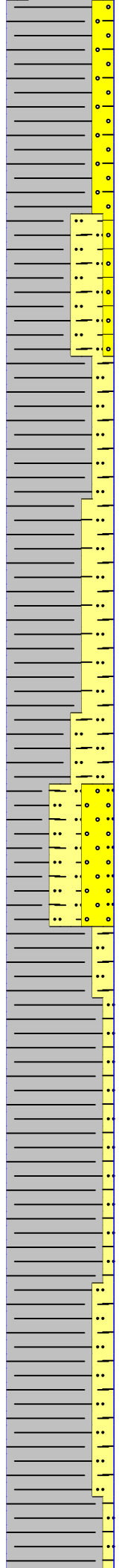
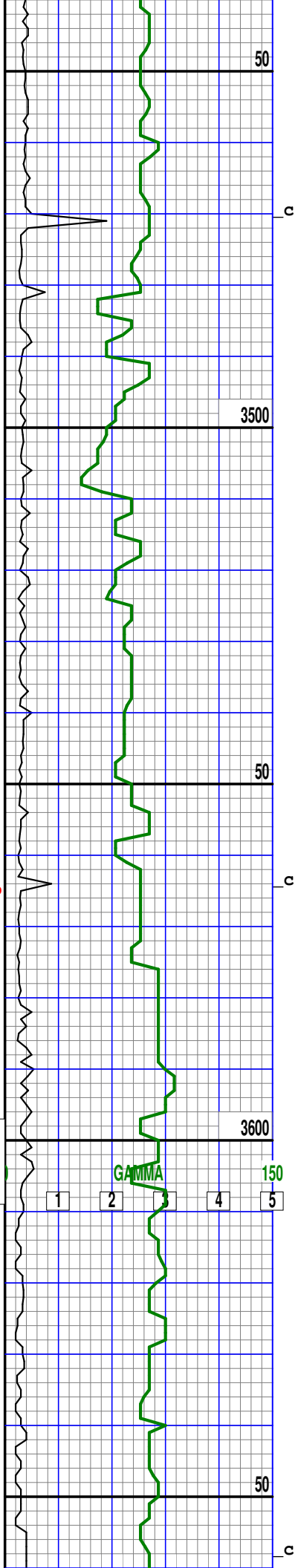
GAMMA



WT 8.8
VIS 41
PH 8.5
CHL 12500
FIL .2/.4
FIL/CK 1
SOL 3.3
YP 13
PV 6

WOB 13
RPM 64
MRPM 128
PP 1530
SPM 140

WT 8.8
VIS 41



SLI HD, SUB FIS,
SLIGHTY N CALC, ASSOC
W/ ARGIL SS & SLTST.

SLTST: LT-MEDGY, SLI
HD, GRTY, SDY, VFGR, MOD-
SLI ARGIL, N CALC,
TR LT YEL FLUOR, NO
CT.

SH: MEDGY, TR LTGY, V
FRM-SLI HD, SUBFIS,
MOD-V GRTY, N CALC,
MOD-SLI SLTY, ASSOC W/
ARGIL SLTST.

SH: MED-LTGY, SLI-MOD
FRM, MOD-SLI GRTY,
MOD-SLI SLTY, OCC SDY,
VFGR, N CALC, ASSOC
W/ ARGIL SLTST.

SS: OFFWH-WH, MOD HD,
F-VFGR, ANG-SUB ANG,
MOD SRT, OCC SLTY,
SLI ARGIL, N-SLI
CALC, NFCOS.

SH: MED-LTGY, SLI-MOD
FRM, MOD-SLI GRTY,
MOD-SLI SLTY, OCC SDY,
VFGR, N CALC, ASSOC
W/ ARGIL SLTST

SH: MED-LTGY, V FRM,
SUB FIS, V GRTY, V-SLI
SLTY, SLI SDY, VFGR,
N CALC, TR DISSEM
CARB MAT, ASSOC W/
ARGIL SLTST.

SH: LT-MEDGY, TR DKGY,
V FRM-SLI HD, FIS,
MOD-SLI GRTY, SLI-MOD
SLTY, N CALC, ASSOC W/
ARGIL SLTST.

SHALE SHAKER BYPASSED

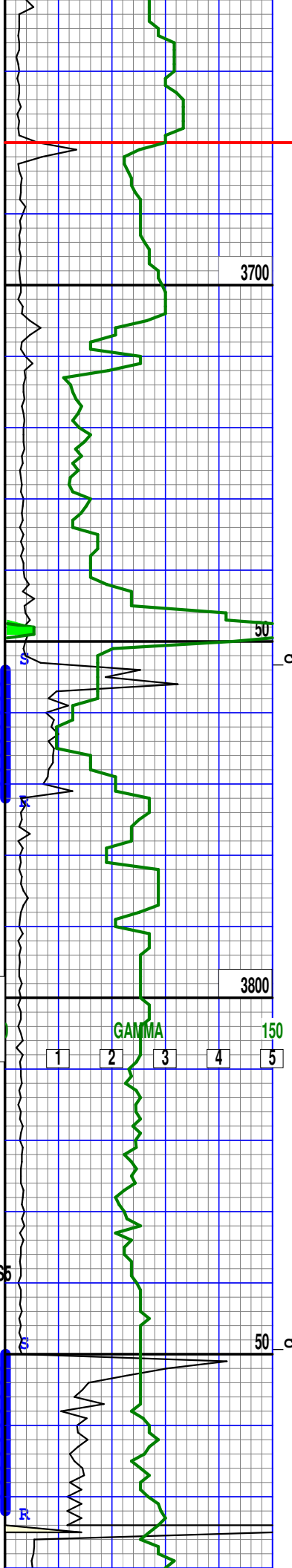
SHALE SHAKER BYPASSED

HW

C1

SHALE SHAKER BACK ON LINE

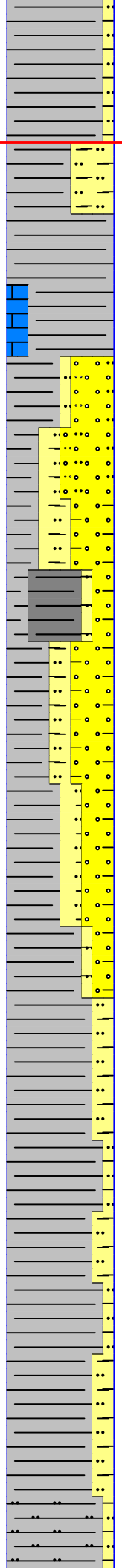
25 50 75 100 125 150 175



WOB 13
RPM 64
MRPM 128
PP 1600
SPM 140

WT 8.8
VIS 41

NB #4 PDC
In @ 3849'
JZ PLS16S6
8.75"
5-12's



LANSING @ 3680'md
SH: MED-LTGY, SUB FIS,
SLI HD, MOD-SLI GRTY,
SLI-MOD SLTY, N CALC,
TR SDY, VFGR, TR ARGIL
SLTST.

SS: LTGY-OFFWH, W CONSL
VF-FGR, ANG-SUB ANG,
MOD-P SRT, V - SLI
SLTY, SLI ARGIL, N CALC
NFSOC, ASSOC W/ SH&
SLTST.

SH: BLK, MEDGY, SLI HD
FIS, SLI GRTY, N-SLI
SLTY, V-N CARB, N CALC.

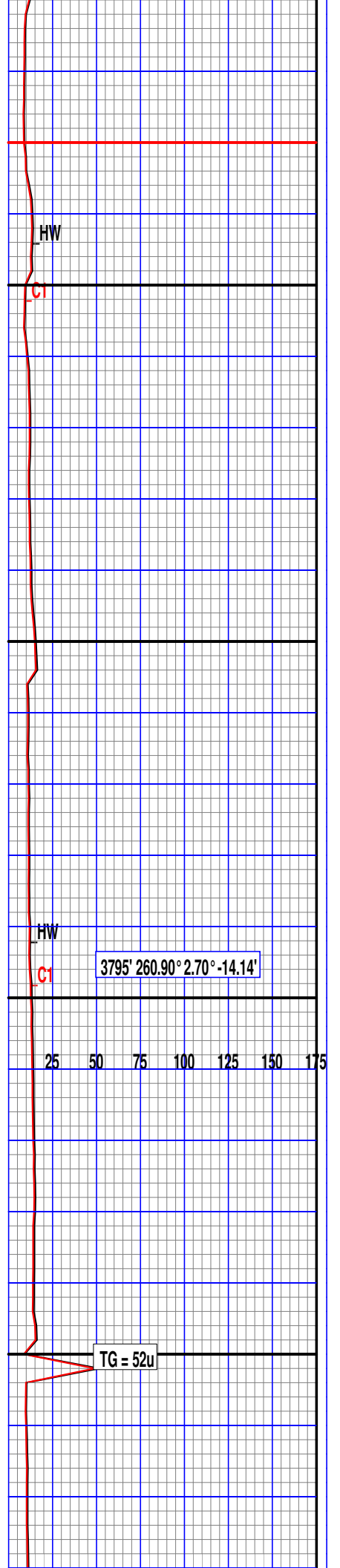
SS: OFFWH, LTGY, SLI
HD-W CONSL, VFGR,
TR FGR, ANG-SUB ANG,
P-MOD SRT, MOD-SLI
ARGIL, MOD SLTY, N
CALC, NFSOC, ASSOC
W/ SH % SLTST.

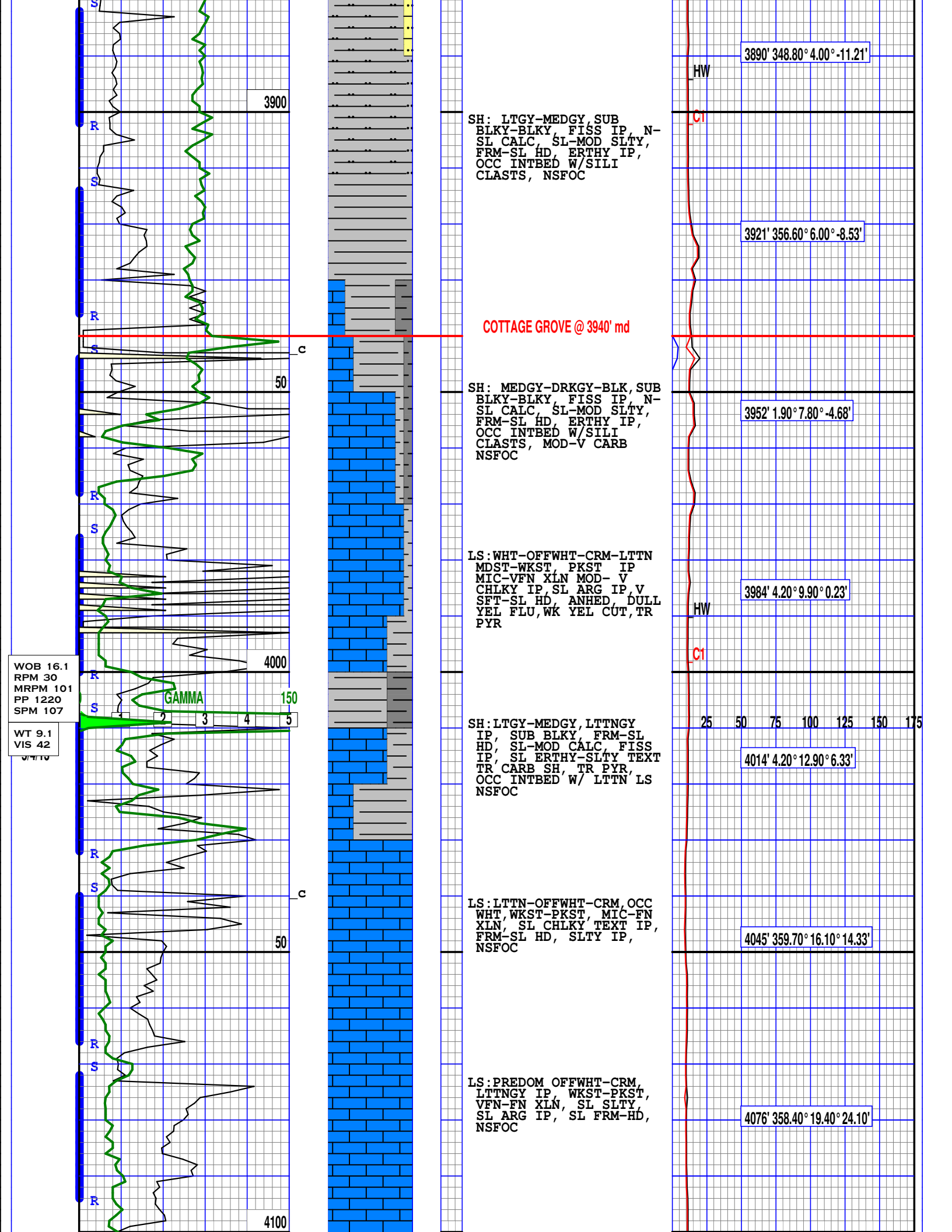
SH: MED-LTGY, SLI HD,
FIS, MOD-SLI GRTY, SLI-
MOD SLTY, N CALC, ASSOC
W/ ARGIL SLTST.

SH: LT-MEDGY, SLI HD,
FIS-SUB BLKY, MOD-SLI
GRTY, SLI SLTY, N CALC,
ASSOC W/ ARGIL SLTST.

POOH FOR CURVE TOOLS

SH: LTGY-MEDGY IP, OCC
RDBRN IP, SUB BLKY, SL
FISS, SL FRM-SL HD, SL
SLTY-ERTHY TEXT, N-SL
CALC, NFSOC





WOB 16.1
RPM 30
MRPM 101
PP 1220
SPM 107

WT 9.1
VIS 42

3900

SH: LTGY-MEDGY SUB
BLKY-BLKY, FISS IP, N-
SL CALC, SL-MOD SLTY,
FRM-SL HD, ERTHY IP,
OCC INTBED W/SILI
CLASTS, NSFOC

3890' 348.80° 4.00° -11.21'

HW

C1

3921' 356.60° 6.00° -8.53'

COTTAGE GROVE @ 3940' md

c

50

SH: MEDGY-DRKGY-BLK, SUB
BLKY-BLKY, FISS IP, N-
SL CALC, SL-MOD SLTY,
FRM-SL HD, ERTHY IP,
OCC INTBED W/SILI
CLASTS, MOD-V CARB
NSFOC

3952' 1.90° 7.80° -4.68'

HW

C1

LS: WHT-OFFWHT-CRM-LTTN
MDST-WKST, PKST IP
MIC-VFN XLN MOD- V
CHLKY IP, SL ARG IP, V
SFT-SL HD, ANHED, DULL
YEL FLU, WK YEL CUT, TR
PYR

3984' 4.20° 9.90° 0.23'

GAMMA 150
1 2 3 4 5

4000

SH: LTGY-MEDGY, LTTNGY
IP, SUB BLKY, FRM-SL
HD, SL-MOD CALC, FISS
IP, SL ERTHY-SLTY TEXT
TR CARB SH, TR PYR,
OCC INTBED W/ LTTN LS
NSFOC

25 50 75 100 125 150 175

4014' 4.20° 12.90° 6.33'

c

50

LS: LTTN-OFFWHT-CRM, OCC
WHT, WKST-PKST, MIC-FN
XLN, SL CHLKY TEXT IP,
FRM-SL HD, SLTY IP,
NSFOC

4045' 359.70° 16.10° 14.33'

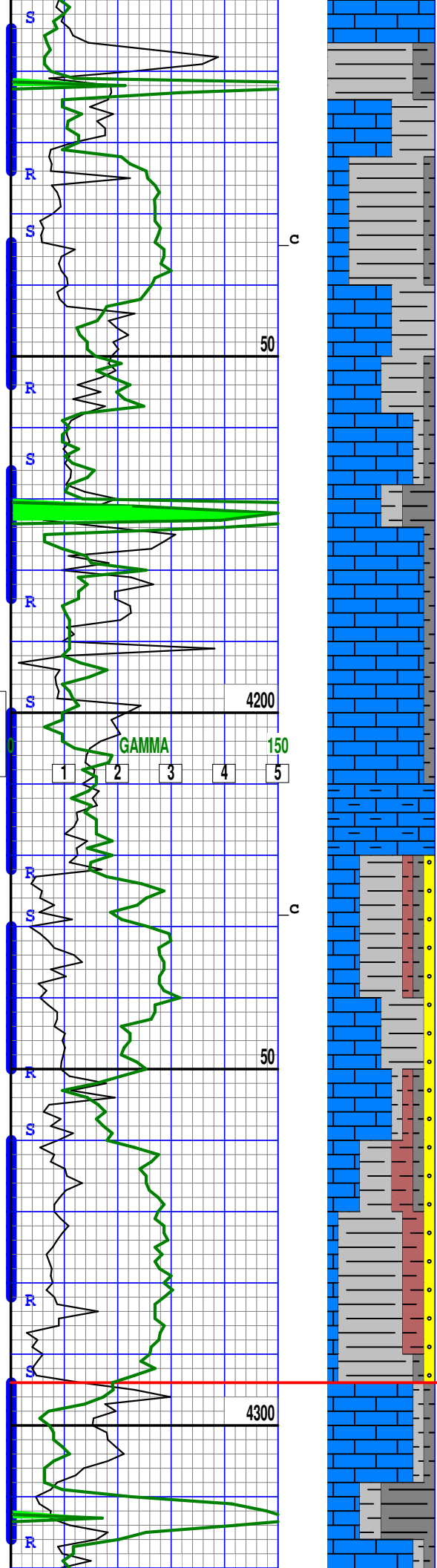
LS: PREDOM OFFWHT-CRM,
LTTNGY IP, WKST-PKST,
VFN-FN XLN, SL SLTY,
SL ARG IP, SL FRM-HD,
NSFOC

4076' 358.40° 19.40° 24.10'

4100

WOB 23.8
RPM S
MRPM 99
PP 1307
SPM 101

WT 9.0
VIS 55



LS: LTNGY-LTTN-CRM,
WKST-PKST, VFN-FN XLN,
SL SLTY IP, SL ARG IP,
FRM-HD, ANHD, NSFOC

4105' 358.00° 22.60° 35.20'

SH: LTGY-MEDGY, SUB BLKY
-BLKY, FISS IP, SFT-SL
FRM, N-SL CALC, SL
SLTY IP, NSFOC

4134' 357.80° 24.70° 48.00'

LS: WHT-OFFWHT-LTNGY-
LTTN, WKST-PKST, VFN-FN
XLN, FRM-SL HD, SL ARG
IP, SL CHLKY IP, OCC
INTBED W/LTGY SH, NSFOC

4163' 356.20° 26.80° 61.91'

LS: WH-OFFWH, LTGY MOD
-SLI HD, VF-CRYPTOXLN,
N-SLI DOL, TR WACKE
STN, N-SLI ARGIL, OCC
LT YEL FLUOR, NO STN,
NO CUT.

4190' 354.60° 29.30° 76.45'

LS: OFF WHT, WHT, LT TN-
TN, CRYP-VY FNXLN, SL DOL
NON ARG, OCC VY FNT LT
GRN FLU, NO CUT, ASSOC. W
LT GY-GY SH

4218' 352.00° 30.80° 92.38'

SH: LTGY-MEDGY RD, SM BLK
FRM-SL HD, CARB IP, BLKY
GRTY TXT, NON-SL CALC,
ASSOC W/OFF WHT LS

4245' 351.70° 32.30° 108.99'

SH: LT REDBRN, LT-MEDGY,
SLI HD-V SFT FIS-
SLI GUMMY, N-SLI GRTY,
N CALC, ASSOC W/ LS.

OSWEGO @ 4294' MD

LS: WH-OFFWH, MOD-SL HD
CRYPTO-MED XLN, TR
WACKEST, N-SLI DOL, N
ARGIL, OCC V LT YEL
FLUOR, NO STN, NO CUT.

4271' 352.70° 34.70° 125.96'

Test Gas @ Shaker

HW

C1

HW

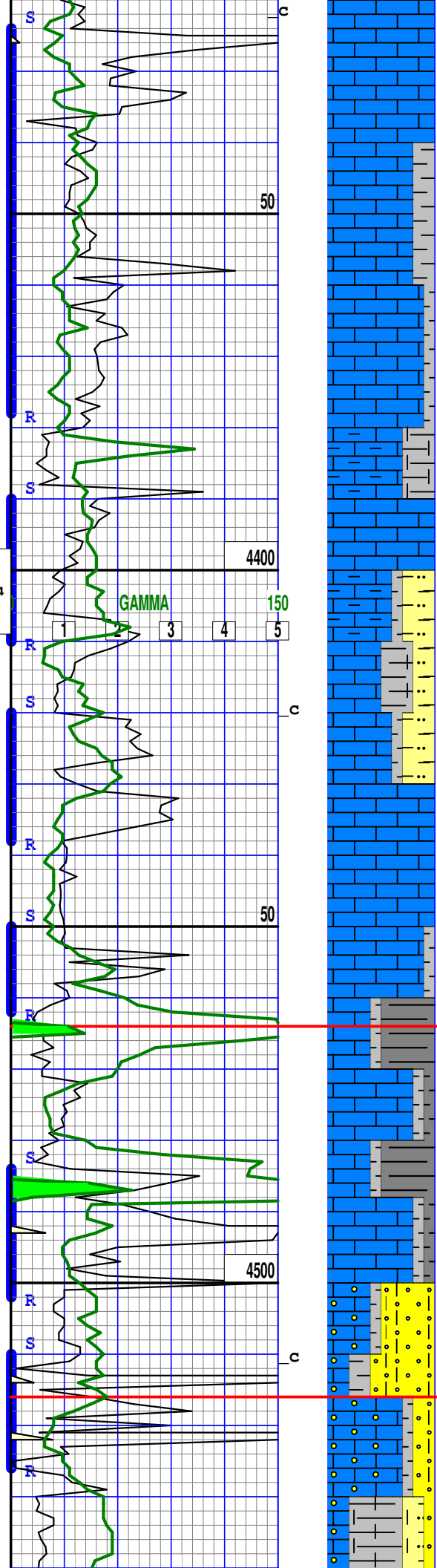
C1

C2

WT 9.1
 VIS 47
 PH 8.5
 CHL 13k
 FIL 5.2
 FIL/CK 2
 SOL 5.6
 YP 17
 PV 12

WOB 22
 RPM SLD
 MRPM 104
 PP 1142
 SPM 108

WT 9
 VIS 48



LS: OFF WHT, TN, MOD-SL HD
 CRYPTO-MED XLN, TR
 WACKEST, N-SLI DOL, N
 ARGIL, NFCOS

4297' 354.20° 38.40° 144.92'

LS: MOTT, TN, OFF WHT, SL HD
 CRYPTO-MED XLN, TR
 WACKEST, N-SLI DOL, N
 ARGIL, NFCOS

4321' 355.40° 42.10° 165.53'

LS: OFFWH, LT-MEDGY, SLI
 -MOD HD, F-CRYPTOXLN,
 SLI-MOD, ARGIL, TR DOL,
 V-MOD SLTY, NFSOC,
 ASSOC W/ ARGIL SLTST.

HW

4344' 356.10° 45.10° 186.86'

SLTST: MED-LTGY, SLI
 HD, GRTY, V-SLI ARGIL,
 V-MOD CALC, ASSOC W/
 LS.

25 50 75 100 125 150 175

4366' 356.40° 47.50° 209.97'

LS: TAN, BUFF, CRM, MOD-
 SLI HD, WACKESTN W/OCC
 CRYPTO-FXLN, N ARGIL,
 OCC LT YEL FLUOR, NO
 STN, NO CUT.

4386' 356.00° 49.40° 233.13'

CHEROKEE @ 4464' md

SH: BLK-BLKGY, SLI HD,
 SUB FIS, ERTHY TEXT, V-
 MOD CARB, SLI CALC,
 NO STN, NO FLUOR, LT YEL
 BRKN WK DIFF CUT.

4407' 356.50° 51.40° 257.75'

LS: TAN, BUFF, CRM, MOD-
 SLI HD, WACKESTN W/OCC
 CRYPTO-FXLN, N ARGIL,
 ASSOC W/CARB BLK SH.
 OCC LT YEL FLUOR, NO
 STN, NO CUT.

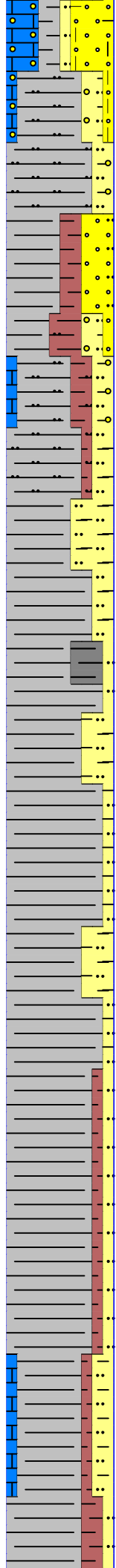
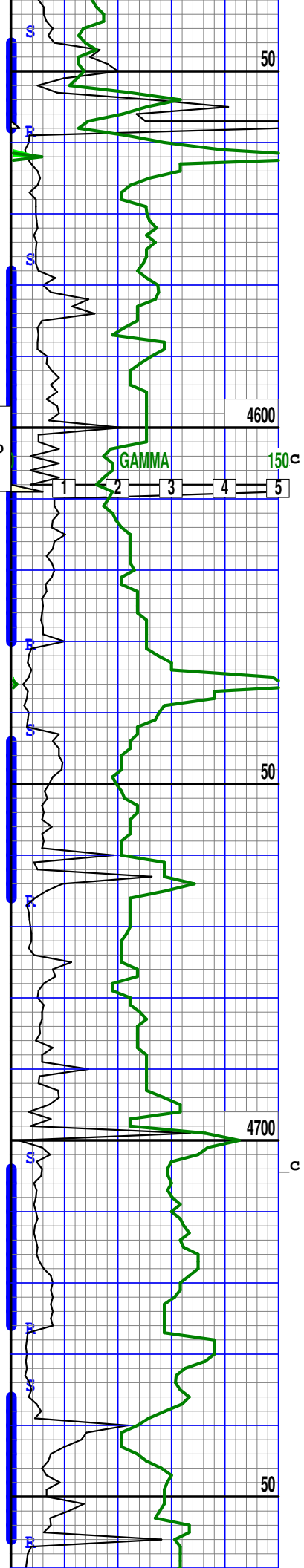
VERDIGRIS @ 4516' md

LS: LTGYBRN, CRM, OFFWH,
 MOD-SLI HD, MICRO-VF
 XLN, V SDY, VFGR, GRDG-
 CALC SS, N ARGIL, OCC
 SLTY, OCC LT YEL FLUOR,
 NO STN, NO CUT, ASSOC
 W/ SH & SLTST.

4426' 356.90° 53.20° 283.04'

WOB 25
RPM SLD
MRPM 100
PP 1229
SPM 104

WT 9.1
VIS 45



SH: MED-LTGY, MEDBRNGY,
MOD-SLI HD, SUB FIS,
V GRTY, V SLTY & SDY,
VFGR, MOD-SLI CALC,
ASSOC W/ ARGIL SLTST.

4445' 357.30° 53.00° 307.82'

SH: MED-LTGY, LTREDBRN,
V FRM, FIS, V GRTY,
V-SLI SLTY, OCC SDY,
VFGR, N-SLI CALC, ASSOC
W/ SLTST & SS.

4464' 357.80° 54.30° 333.58'

SH: MEDGY, LTGY, LTRED
BRN, V FRM, FIS, MOD GRTY,
MOD-SLI SLTY, N CALC,
ASSOC W/ SLTST.

4482' 359.00° 56.60° 359.93'

SH: LT-MEDGY, LTGNGY,
MOD SFT-V FRM, FIS,
GRTY-GUMMY, N-MOD
SLTY, N-SLI CALC, ASSOC
W/ ARGIL SLTST.

4499' 359.90° 58.80° 386.13'

SH: LT-MEDGY, LTGNGY,
LT-MED BRNGY, V SFT-
SLI HD, FIS-GUMMY,
MOD-N SLTY, N CALC,
ASSOC W/ ARGIL SLTST.

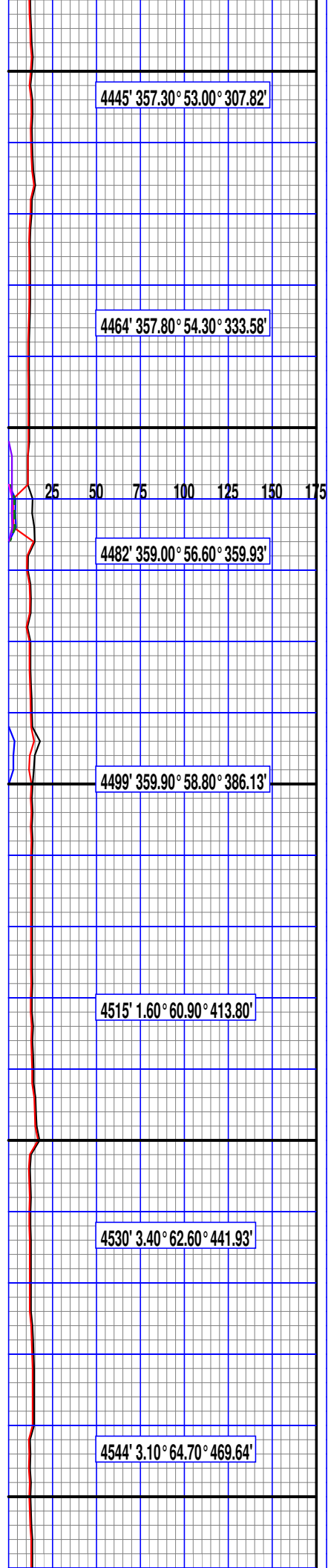
4515' 1.60° 60.90° 413.80'

SH: LTGY-MEDGY, RD-ORG
-RDBRN IP, OCC YLW GRN,
SUB BLKY-BLKY, SL SLTY
-SLTY IP, SL FRM-SL HD
N-SL CALC, NSFOC

4530' 3.40° 62.60° 441.93'

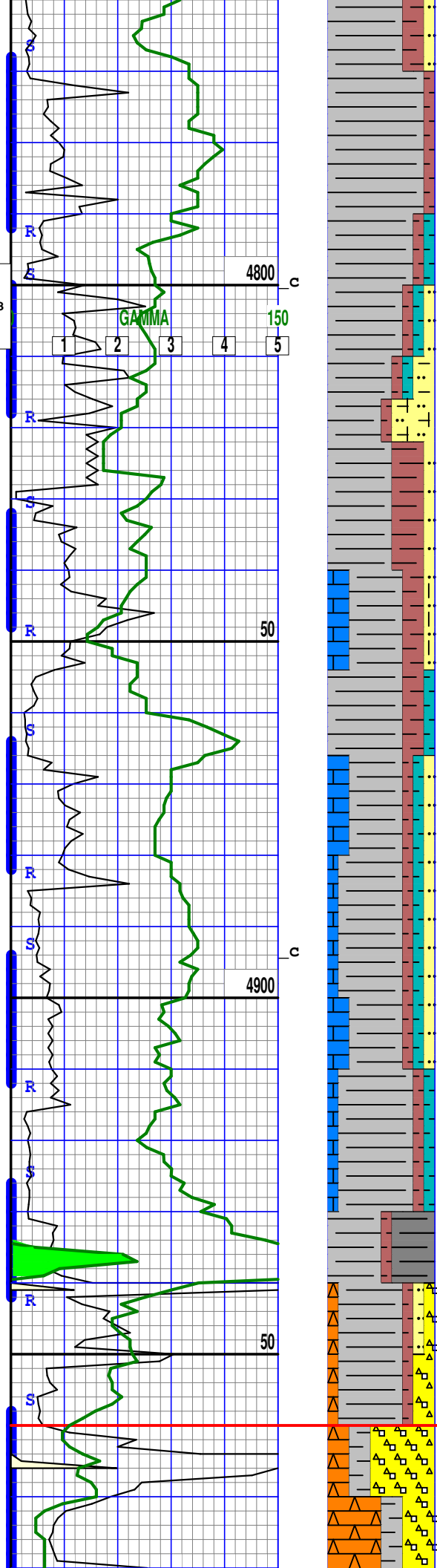
LS: LTTNGY-OFFWHT-CRM
WKST-PKST, VFN-FN XLN,
SL SLTY-ERTHY IP, OCC
CHLKY, SL ARG IP,
NSFOC

4544' 3.10° 64.70° 469.64'



WOB 26.8
RPM SLD
MRPM 103
PP 1230
SPM 108

WT 9.3
VIS 44



SH: PREDOM LTGY-MEDGY,
OCC RDBRN, YLW-YLWGRN
SUB BLKY-BLKY, N-SL
CALC, FRM-SL HD, SL-
MOD SLTY, ERTHY, NSFOC

4557' 1.50° 67.40° 498.84'

SH: LTGY-MEDGY, RDBRN-
YLWBRN-YLW-YLWGRN, SUB
BLKY-BLKY, SFT-SL FRM
BCM AMORPH W/WTR IP,
NCALC, SL SLTY IP, V
ERTHY, NSFOC

4568' 359.30° 70.30° 528.67'

SH: LTGY-MEDGY, RD-RDBRN
BRNORG, YLW-YLWGRN-LTGRN
OCC BRN PRPL-PRPL PNK
SUB BLKY, SL SLTY IP,
N-SL CALC, SFT-SL FRM
NSFOC

LS: LTTN-OFFWHT-CRM,
FRM-SL HD, SL CHLKY IP
WKST-PKST IP, VFN-FN
XLN, SL ARG-SLTY TEXT
TR DOLO, NSFOC

4587' 359.70° 75.30° 588.83'

SH: LTGY-MEDGY, YLW
ORG-YLW GRN, RD BRN-
PRPL BRN, PNK IP, SUB
BLKY-BLKY, SFT-SL FRM,
BCM AMORPH W/WTR IP,
N-SL CALC, PREDOM SH
GRDING TO SLTSTN, NSFOC

4602' 0.20° 77.30° 650.03'

SH: PREDOM LTGY-MEDGY,
RD BRN-LTBN PRPL, PNK
IP, YLW ORG IP, SUB
BLKY, N-SL CALC, SFT-
SL FRM IP, SL SLTY IP
NSFOC

SH: LTGY-MEDGY, BRN RD-
BRN ORG IP, YLWGRN-GRN
SUB BLKY-BLKY, NCALC
SL FRM-FRM, SL SLTY IP
TR-MNR CHT, TR QTZ WASH
NSFOC

MISS. UNCONFORMITY 4960' md

4608' 0.70° 80.20° 681.48'

CHT WASH: BUFF, OFF WH,
TAN, V HD, BRKN FRAG BY
BIT, FREE BRKN QTZ OCC
15% SPT BLK O STN, 25%
LT-MED YEL FLUOR, LT
YEL DIFF-SPOT CUT.

5/5/13

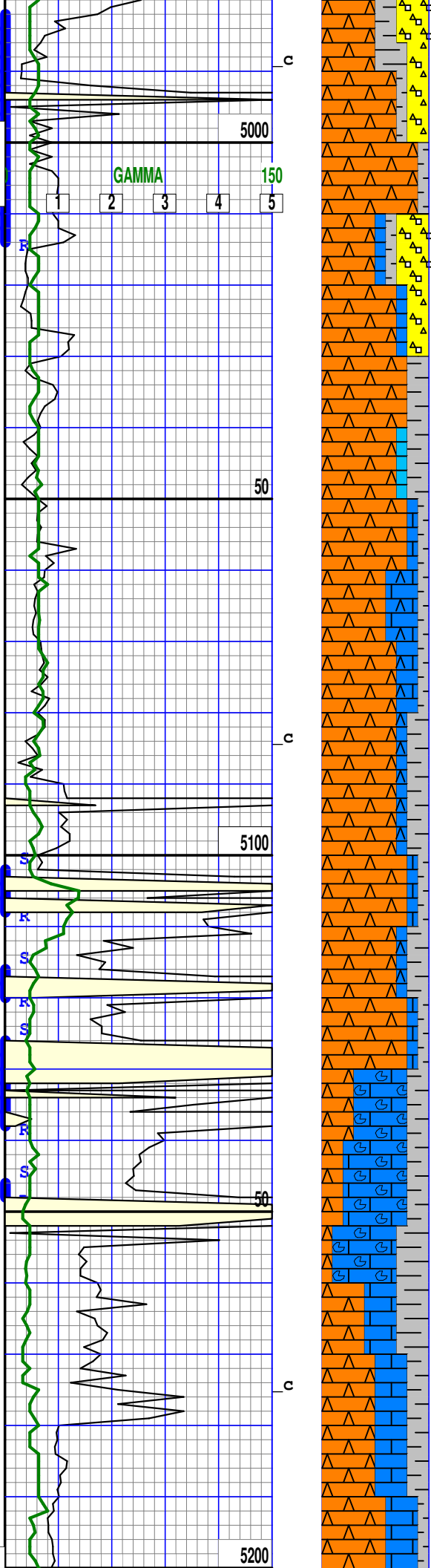
WOB 25.3
RPM SLD
MRPM 135
PP 1441
SPM 142

WT 9.3
VIS 44

WT 9.1
VIS 54
PH 9.5
CHL 11K
FIL 4.4
CK 2
SOL 5.6
YP 20
PV 19

5/6/13
NB #5 PDC
In @ 5152'
Halli 8.75"
MMD55M
5-12'S

WOB 26.9



CHT: WH, OFFWH, TAN, V HD,
ANG, REPLAC RE MIN VF
XLN, 15% BLK O STN SPEC
20% MED YEL FLUOR, OCC
LT YEL STRM CUT.
POS RE SILICIF LS.

CHT: OFFWH, WH, BUFF,
BRKN, ANG, SOME CRYPTO
XLN REPLACED SILIC,
TR SPOTTY BLK STN,
OCC LT YEL FLUOR,
TR LT YEL DIFF CUT.

CHT: TAN, TRANS, OFFWH,
WH V HD, ANG, BRKN, CHT
REPLACED LS, OCC LT
YEL FLUOR, TR SPOTTY
BLK STN, TR LT DUFF CUT

CHT: WH, OFFWH, BUFF,
RR TRANSL, V HD ANG,
OCC REPLACED LS, N-
MOD CALC, OCC LT YEL
FLUOR, OCC SPOTTY BLK
O STN, TR LT YEL
DIFF CUT.

CHT: WH, OFFWH, CRM, BUFF,
V HD ANG, BRKN, SOME
REPLACED LS W/ SILICA,
TR BLK SPOTTY O STN,
OCC LT YEL FLUOR, FR
DIFF LT YEL CUT.

CHT: TAN, TRANS, OFFWH,
WH V HD, ANG, BRKN, CHT
REPLACED LS, OCC LT
YEL FLUOR, TR SPOTTY
BLK STN, TR LT DIFF CUT

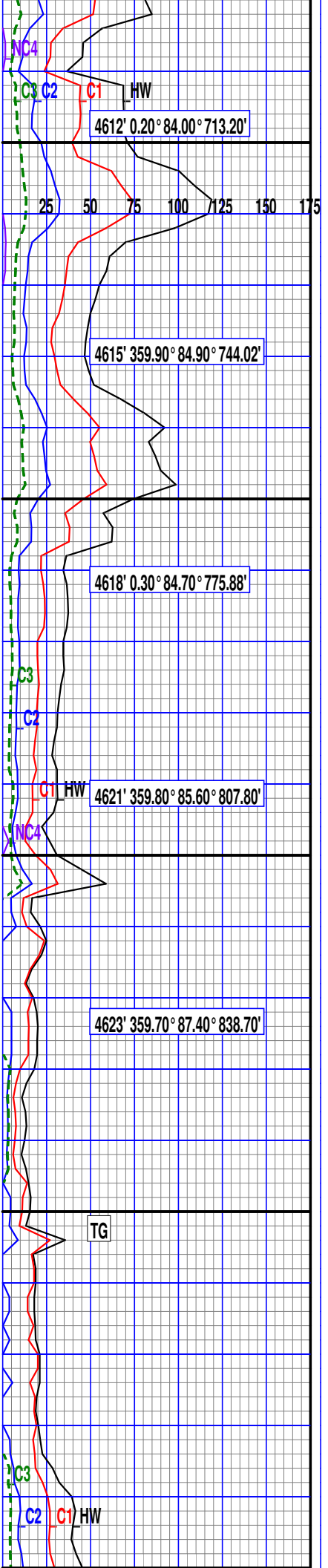
CHT: TAN, TRANS, WHT, OFF
WHT V HD, ANG, BRKN, CHT
REPLACED LS, OCC LT
YEL FLUOR, TR SPOTTY
BLK STN, TR SL BLDNG CUT

LS: ORANG WH, SLI HD,
PACK-WACKESTN, ABNT,
FOS, N ARGIL, NFSOC,
ASSOC W/ CHT, TR BLK
O STN, NO-TR FLUOR, TR
LT YEL RESD CUT.

POOH FOR BIT #5 @ 5152'

LS: LITN ORG-OFFWHT, CRM
WKST-PKST, VFN-FN XLN,
TR FOSS FRAG, SFT-SL
HD IP, SL CHLKY IP,
OCC ASSOC W/CHT WASH
NSFOC

LS: VLTBN ORG-LITN
ORG, OFFWHT-CRM, WKST-
PKST, VFN-FN XLN, TR-
MNR FOSS FRAG, SLI DOL



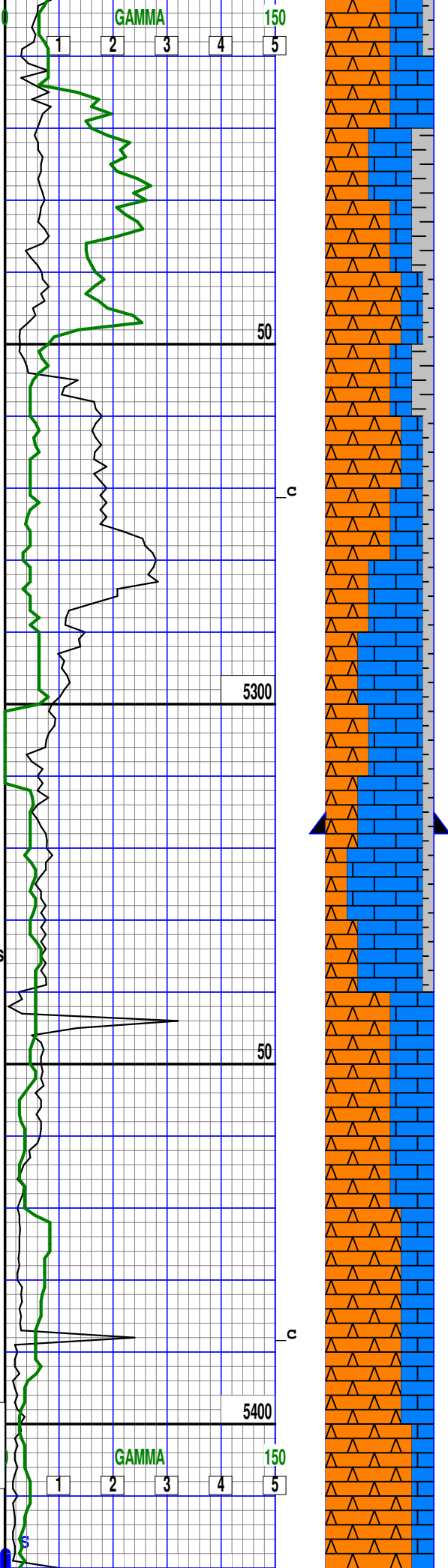
SIPW 46221 3
 GAMMA 150
 1 2 3 4 5

WT 9.2
 VIS 63
 PH 9
 CHL 9500
 FIL 5.2
 FIL/CK 2
 SOL 6.3
 YP 34
 PV 21

NB#6 PDC
 @ 5340'
 Halli 6.125"
 MM54DM
 3-14s 2-12's
 1.5° MTR

WOB 3
 RPM 65
 MRPM 166
 PP 925
 SPM 80

WT 8.4
 VIS 28



IP, SL CHLKY IP, FRM-
 SL HD ASSOC W/ CHT
 TR BLK O STN, NO FLUOR
 RR TR LT YEL RESD CUT.

CHT: WH-OFF WH TAN,
 V HD, BRKN, ANG, RR
 FOS REPLACED, ASSOC
 W/ CRM COLOR LS, NFSOC

CHT: OFF WH, WH TAN,
 V HD, BRKN, ANG, RR FOS
 REPLACED, ASSOC W/CRM
 COLOR LS, 5% TR OF LT
 YEL FLU, SCAT SH
 CAVINGS

LS: OFF WH, CRM WH TNWHT
 ORG, WCKSTN-PCKSTN, GRNST
 IP, VFN-FN XLN, SLI DOL
 IP, SL CHLKY IP, SL FRM-
 FRM, TR SPT YELL FLU, NO
 CUT, FNT BRN STN ASSOC
 W/CHT, SCAT SH CAVINGS
 PRES IN SMPLE

CHT: WHT, OFF WHT, CRM WH
 V HD BRKN, ANG, RR FOS
 REPLACED, ASSOC W/ORG WH
 COLOR LS, TR BR GRN FLU,
 NO CUT OR STN

LS: TN, OFF WHT, CRM WHT
 ORG WHT, GRNSTN, SM WCKST
 PCKSTN, VFN-FN XLN, SLI
 DOL IP, FRM-SL HD, OCC TR
 BR YELL FLU, NO CUT OR
 STN, ASSOS W/WHT CHT

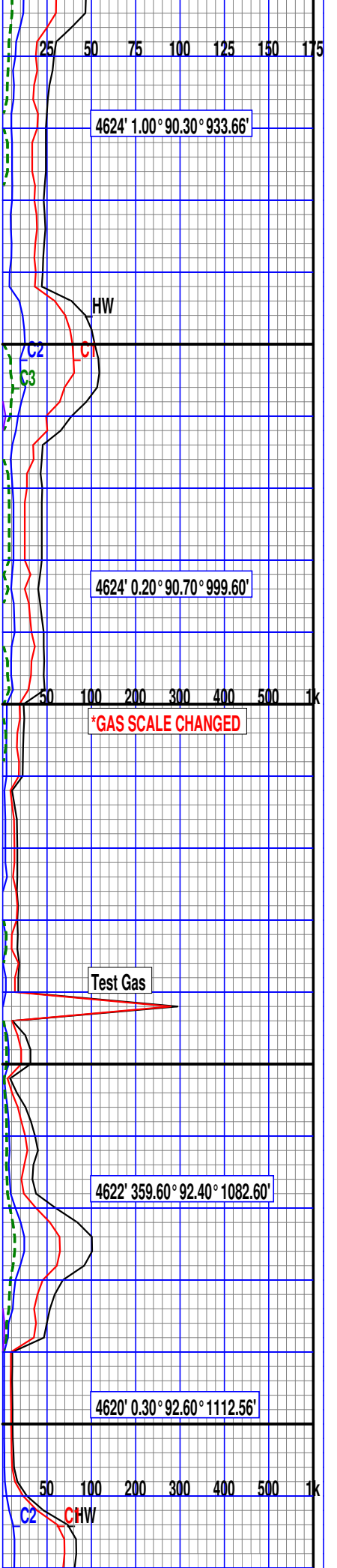
 7" CASING SHOE @ 5317'

 DISPLACED 9.4 PPG MUD
 WITH 8.4 PPG FRESH WATER

CHT: WHT, OFF WHT, CRM WH
 V HD BRKN, ANG, ASSOC
 W/OFF WH LS, NFCOS

CHT: WHT, OFF WHT, CRM WH
 V HD BRKN, ANG, ASSOC
 W/OFF WH LS, TR BR GRN
 FLU, SL BLMNG CUT, NO STN

CHT: WHT, CRM WH VY HD
 BRKN ANG, ASSOC W/OFF WH
 LS, 20% FLU, CRUSH CUT, NO
 STN

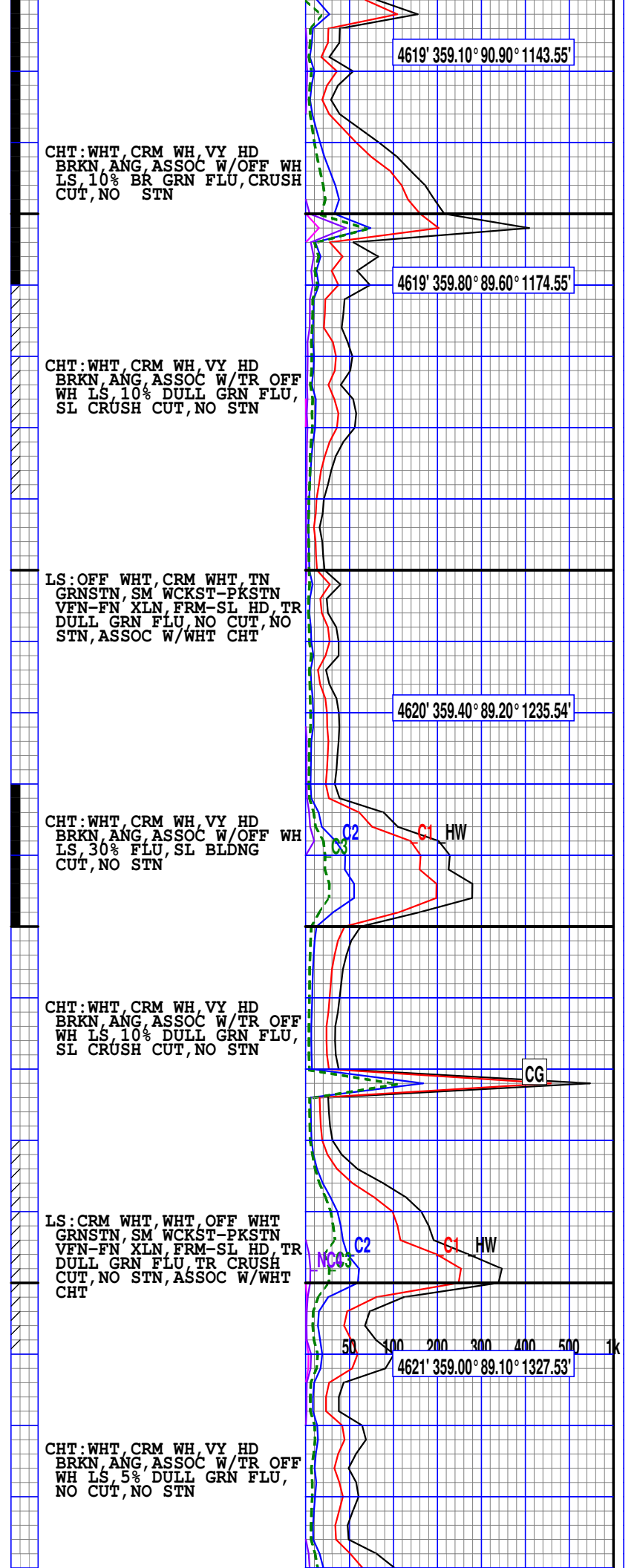
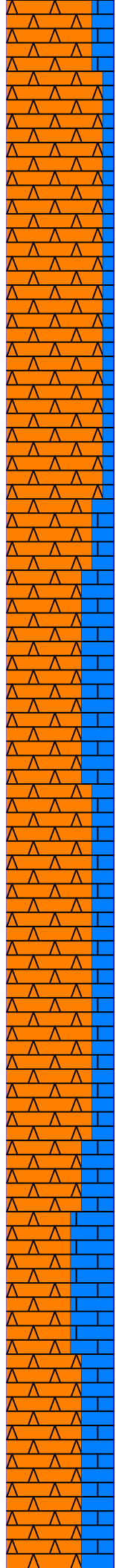
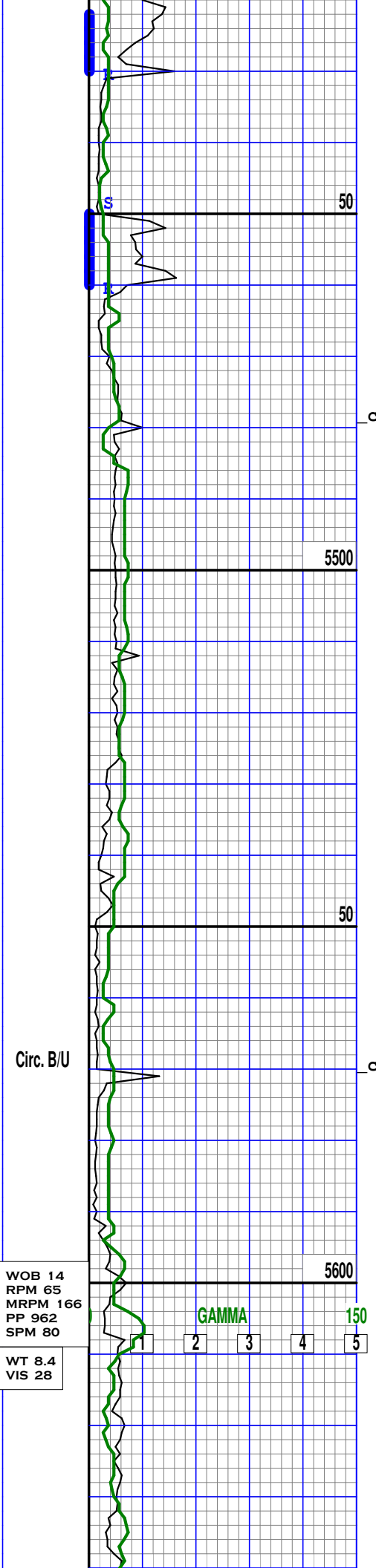


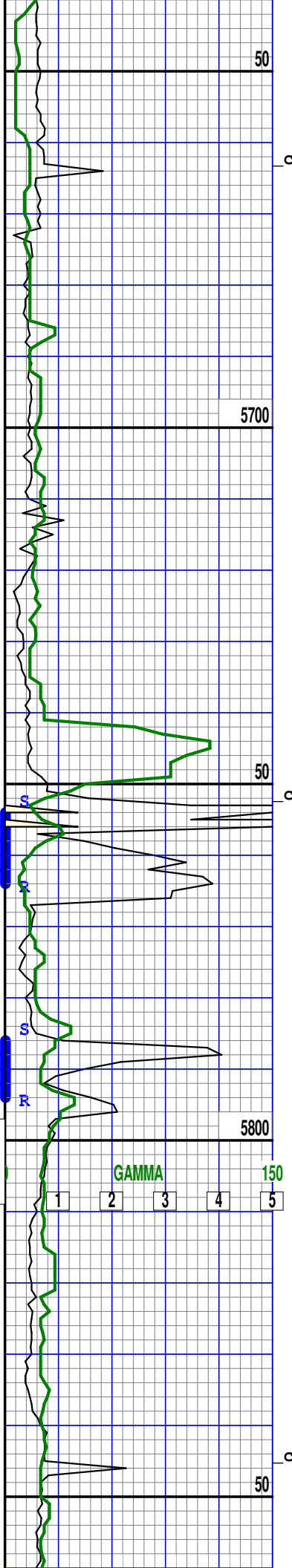
*GAS SCALE CHANGED

Test Gas

4622' 359.60° 92.40° 1082.60'

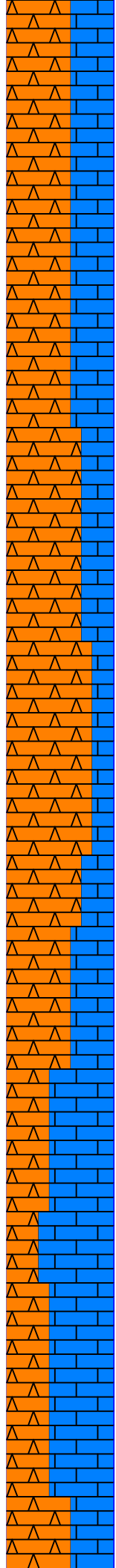
4620' 0.30° 92.60° 1112.56'





WOB 16.8
RPM 63
MRPM 166
PP 1122
SPM 79

WT 8.4
VIS 28



LS: WHT, WHT, OFF WHT, TN
GRNSTN, SM, WCKST-PKSTN
VFN-FN XLN, FRM-SL HD, TR
DULL GRN FLU, TR CRUSH
CUT, NO STN, ASSOC W/WHT
CHT

CHT: PREDOM WHT-OFFWHT
BUFF-CRM IP, HD-V HD,
CHT SIZE GRNS, MASS,
ANG-V ANG, SME OIL
STAIN PRES, TR PR MLKY
BLU CUT, NO FLU

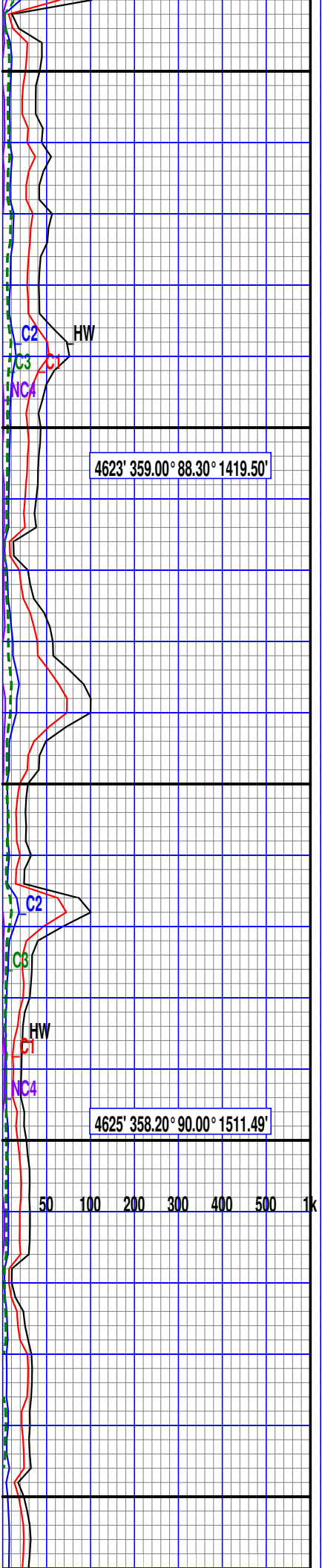
LS: LTTNBN-LTTNORG-CRM
OFFWHT IP, WKST-PKST,
GRNST IP, SL ERTHY TEX
VFN-FN XLN, ASSOC W/
SILI CLASTS, RR FOSS
REPLACEMENT W/CHT
TR-PR SLOW MILKY BLU
STRMING CUT

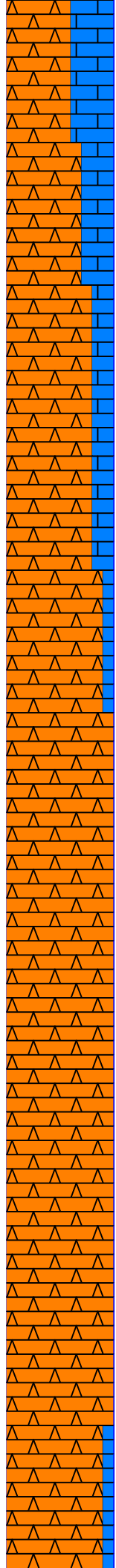
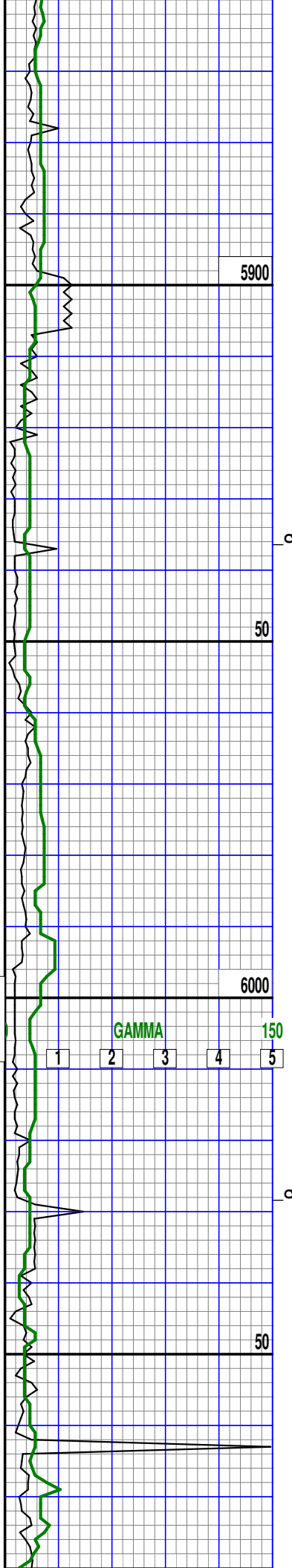
CHT: PREDOM WHT-OFFWHT,
OCC TRNSL-OFFWHT, HD-V
HD, ANG-V ANG, MASS
CHT SIZE GRNS, BRKN
CHT, 5-10% OIL STN,
TR SLOW MLKY BLU CUT
TR DULL YLW FLUOR

LS: OFFWHT-LTTNBN-LTTN
ORG, WKST-PKST, VFN-FN
XLN, OCC REPLACED W/
CHT, SL ERTHY TEXT, TR
OIL STN ASSOC W/CHT,
NO FLU OR CUT

CHT: PREDOM WHT-OFFWHT
OCC TRNSL, V HD, TR
MIC FOSS REPLACEMENT,
MASS, V ANG-ANG, OCC
INTBED W/LTTN LS CLAST
5-10% OIL STN, FST
STRMNG MLKY BLU CUT,
TR DLL YLW FLUOR

LS: OFFWHT-LTTNBN-LTTN
ORG, WKST-PKST, VFN-FN
XLN, SL ERTHY TEXT IP
INTBD W/WHT CHT IP,
BRKN CHT FRAG ASSOC





CHT: WHT-OFFWHT, CRM IP,
 V HD, V ANG-ANG, MASS
 TEXT & GRN SIZE, OCC
 OOLITIC, BRKN, TR MIC
 FOSS REPLACED W/CHT,
 NSFOC

4624' 357.50° 90.90° 1602.45'

LS: LTTNBN-LTTNORG-CRM
 OFFWHT IP, WKST-PKST
 GRNST IP, SL ERTHY TEX
 VFN-FN XLN, ASSOC W/
 SILI CLASTS, RR FOSS
 REPLACEMENT W/CHT
 TR-PR FST MILKY BLU
 STRMING CUT

CHT: PREDOM WHT-OFFWHT,
 OCC TRNSL-OFFWHT, HD-V
 HD, ANG-V ANG, MASS
 CHT SIZE GRNS, BRKN
 CHT, 5-10% OIL STN,
 TR SLOW MLKY BLU CUT
 TR DULL YLW FLUOR

CHT: PREDOM WHT, CRM-LT
 TN IP, HD-V HD, MASS,
 MOD-V ANG, OCC ASSOC
 W/LTTNORG LS, BRKN
 TR MIC FOSS FRAG RPLCD
 W/CHT, NSFOC

4623' 357.90° 90.30° 1694.42'

CHT: PREDOM WHT, OCC
 CRM-LTTN, HD-V HD,
 MASS, ANG-V ANG, BRKN
 CHT, OCC INTBED W/LTTN
 LS CLASTS, 5-10% DLL
 YLW FLUOR, FST BLEEDIN
 CUT, MLKY BLU COLOR, TR
 LTGRN RES RING

NC4
 C3
 C2
 C1
 CG
 HW

CHT: WHT-OFFWHT, CRM IP
 V HD, V ANG-ANG, MASS
 TEXT & GRN SIZE, OCC
 OOLITIC, BRKN, TR MIC
 FOSS REPLACED W/CHT,
 NSFOC

CHT: PREDOM WHT-OFFWHT,
 OCC TRNSL-OFFWHT, HD-V
 HD, ANG-V ANG, MASS
 CHT SIZE GRNS, BRKN
 CHT, 5-10% OIL STN,
 TR SLOW STRMING MLKY
 BLU CUT, TR DULL YLW
 FLUOR

4623' 358.60° 90.20° 1789.40'

WOB 17.4
 RPM 65
 MRPM 179
 PP 888
 SPM 80
 WT 8.4
 VIS 28

5/9/13

6100

LS: LTTNBN-LTTNORG-CRM
OFFWHT IP, WKST-PKST
GRNST IP, SL ERTHY TEX
VFN-FN XLN, ASSOC W/
SILI CLASTS, RR FOSS
REPLACEMENT W/CHT
NSFOC

CHT: PREDOM WHT CRM-LT
TN IP, HD-V HD, MASS,
MOD-V ANG, OCC ASSOC
W/LTTNORG LS, BRKN
TR MIC FOSS FRAG RPLCD
W/CHT, <5% OIL STN IN
CUT, FST MLKY BLU STRM
CUT, DL YLW/GRN RES
RING, DLL YLW FLUOR

50

CHT: WHT-OFFWHT CRM IP,
V HD, V ANG-ANG, MASS
TEXT & GRN SIZE, OCC
OOLITIC, BRKN, TR MIC
FOSS REPLACED W/CHT,
NSFOC

4624' 358.20° 91.70° 1884.40'

6200

LS: LTTNBN-LTTNORG IP,
CRM-BUFF IP, WKST-PKST,
GRNST IP, FRM-SL HD,
MOD ERTHY TEXT, TR MIC
FOSS REPLACED BY CHT,
TR OIL STN ASSOC W/CHT
NSFOC IN LS

WOB 16.8
RPM 65
MRPM 164
PP 820
SPM 79

GAMMA

150

1 2 3 4 5

CHT: WHT-OFFWHT CRM IP,
V HD, V ANG-ANG, MASS
TEXT & GRN SIZE, OCC
OOLITIC, BRKN, TR MIC
FOSS REPLACED W/CHT,
NSFOC

CHT: PREDOM WHT-OFFWHT,
OCC TRNSL-OFFWHT HD-V
HD, ANG-V ANG, MASS
CHT SIZE GRNS, BRKN
CHT, 5-10% OIL STN,
TR DLL YLW FLUOR, NO CUT

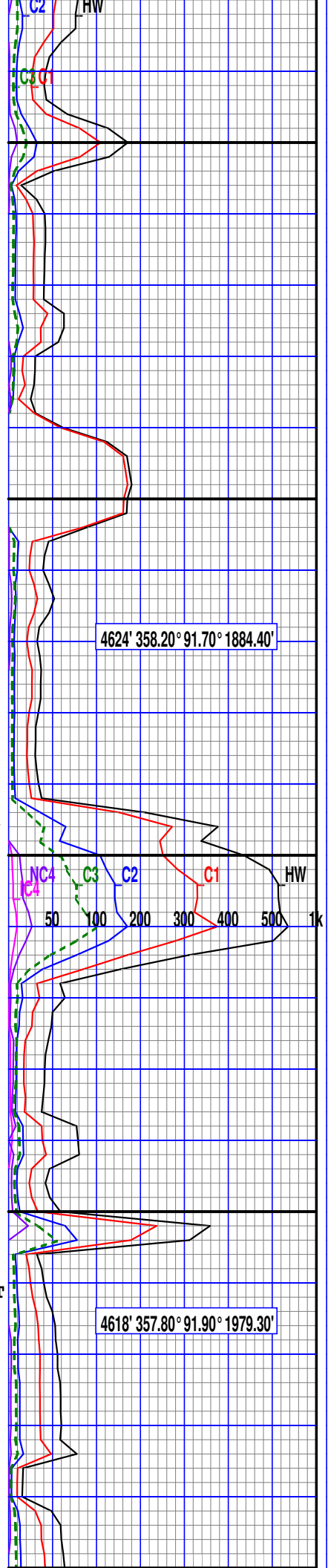
50

4618' 357.80° 91.90° 1979.30'

6300

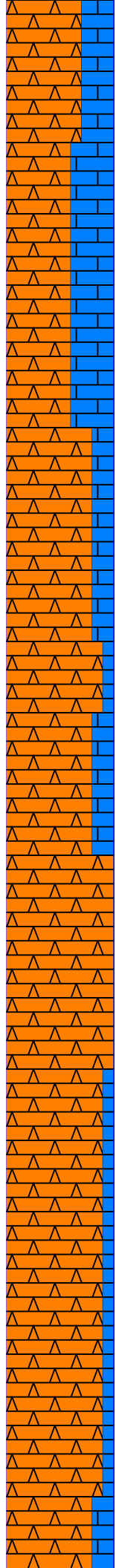
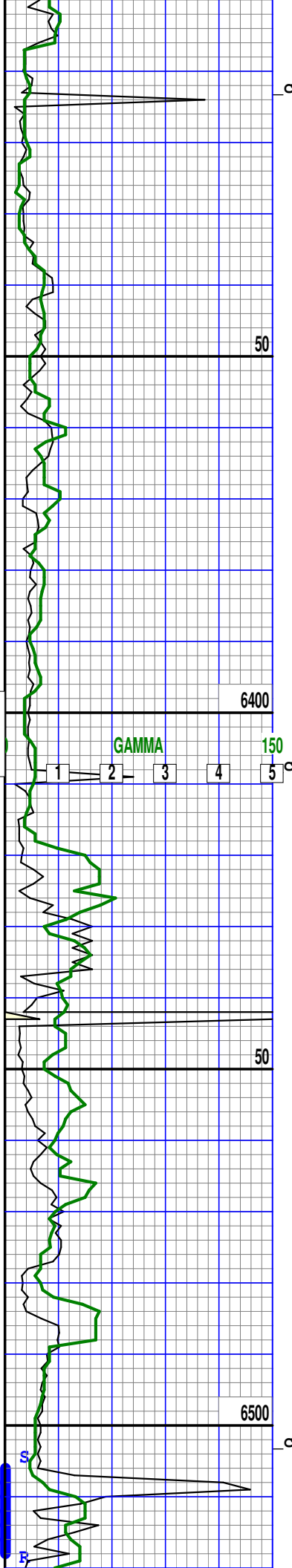
LS: LTTNBN-LTTNORG-CRM
OFFWHT IP, WKST-PKST
GRNST IP, SL ERTHY TEX
VFN-FN XLN, ASSOC W/
SILI CLASTS, RR FOSS
REPLACEMENT W/CHT
NSFOC

WT 8.4
VIS 28



WOB 17.6
RPM 65
MRPM 160
PP 1094
SPM 77

WT 8.4
VIS 28



CHT: PREDOM WHT-OFFWHT,
OCC TRNSL-OFFWHT, HD-V
HD, ANG-V ANG, MASS
CHT SIZE GRNS, BRKN
CHT 5-10% OIL STN,
TR SLOW STRMING MLKY
BLU CUT, TR DULL YLW
FLUOR

CHT: PREDOM WHT-OFFWHT,
OCC TRNSL-OFFWHT, HD-V
HD, ANG-V ANG, MASS
CHT SIZE GRNS, BRKN
CHT 5-10% OIL STN,
TR DLL YLW FLUOR, NO CUT

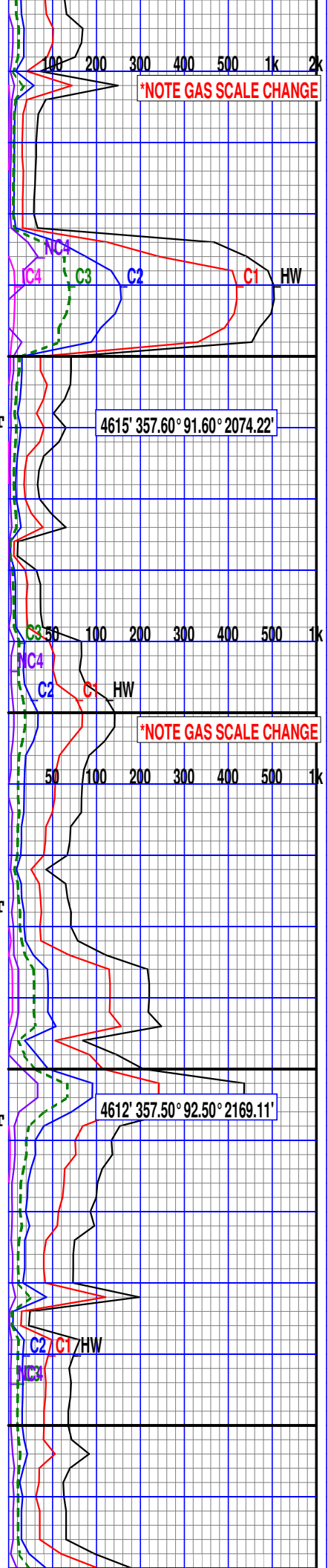
LS: LTTNBN-LTBNORG IP,
CRM-BUFF IP, WKST-PKST
GRNST IP, SL ERTHY TEX
VFN-FN XLN, TR MIC FOS
REPLACED W/CHT, TR OIL
STN ASSOC W/CHT, NSFOC

CHT: PREDOM WHT-OFFWHT,
OCC TRNSL-OFFWHT, HD-V
HD, ANG-V ANG, MASS
CHT SIZE GRNS, BRKN
CHT 5-10% OIL STN,
TR DLL YLW FLUOR, NO CUT

CHT: PREDOM WHT-OFFWHT,
OCC TRNSL-OFFWHT, HD-V
HD, ANG-V ANG, MASS
CHT SIZE GRNS, BRKN
CHT 5-10% OIL STN,
TR DLL YLW FLUOR, NO CUT

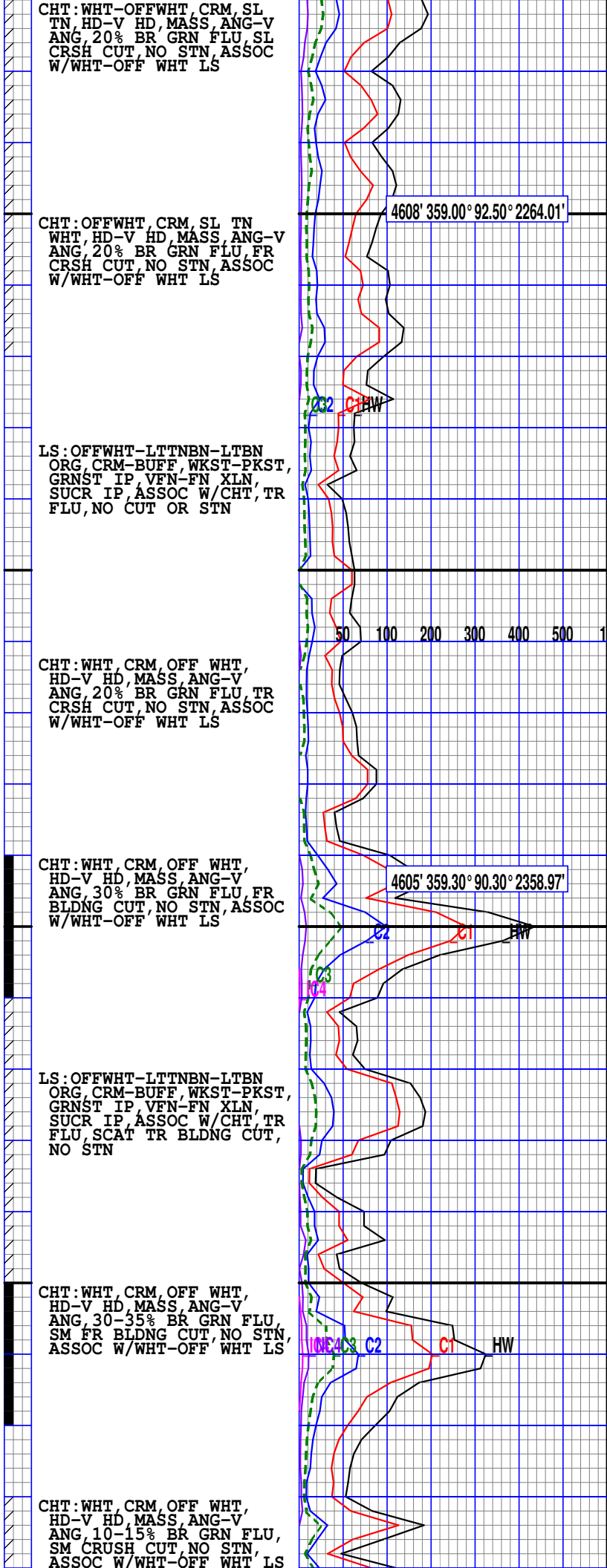
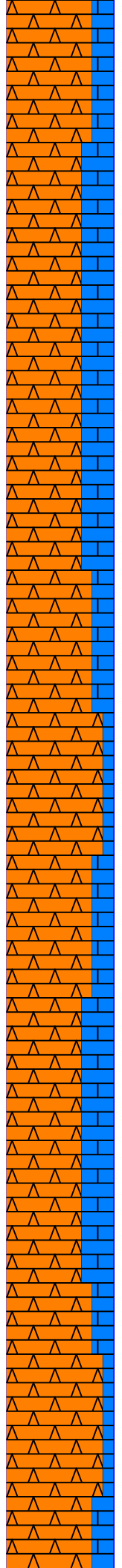
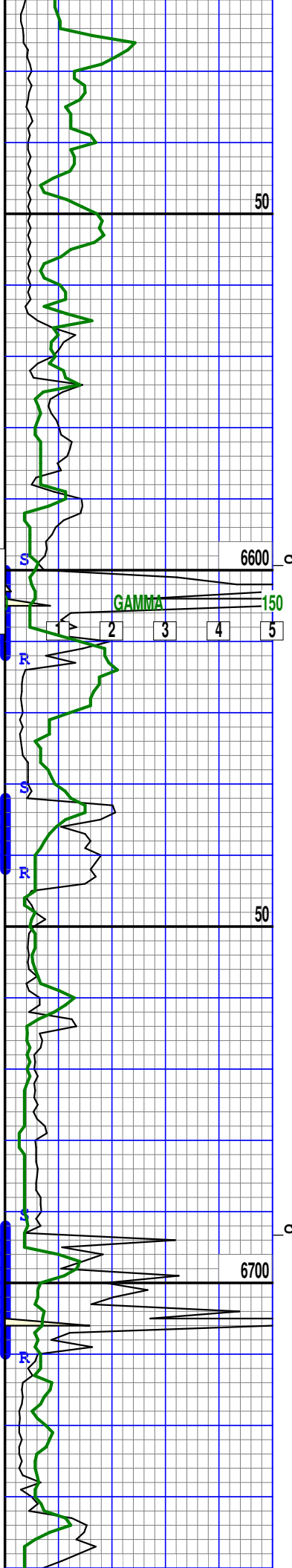
CHT: PREDOM WHT-OFFWHT,
LTTN-CRM-BUFF IP, HD-V
V HD, MASS, ANG-V ANG
OCC INTBED W/LTTNBN LS
SME OIL STN, TR DLL YLW
FLUOR, PR FST MLKY BLU
CUT

LS: OFFWHT-LTTNBN-LTBN
ORG, CRM-BUFF, WKST-
PKST, GRNST IP, VFN-FN
XLN, SUCR IP, TR MIC
FOS REPLACED W/CHT,
NSFOC



WOB 45
RPM SLD
MRPM 177
PP 905
SPM 84

WT 8.4
VIS 28



CHT: WHT-OFFWHT CRM, SL TN
HD-V HD, MASS, ANG-V
ANG, 20% BR GRN FLU, SL
CRSH CUT, NO STN, ASSOC
W/WHT-OFF WHT LS

4608' 359.00° 92.50° 2264.01'

CHT: OFFWHT, CRM, SL TN
WHT, HD-V HD, MASS, ANG-V
ANG, 20% BR GRN FLU, FR
CRSH CUT, NO STN, ASSOC
W/WHT-OFF WHT LS

LS: OFFWHT-LTTNBN-LTBN
ORG, CRM-BUFF, WKST-PKST,
GRNST IP, VFN-FN XLN,
SUCR IP, ASSOC W/CHT, TR
FLU, NO CUT OR STN

CHT: WHT, CRM, OFF WHT,
HD-V HD, MASS, ANG-V,
ANG, 20% BR GRN FLU, TR
CRSH CUT, NO STN, ASSOC
W/WHT-OFF WHT LS

4605' 359.30° 90.30° 2358.97'

CHT: WHT, CRM, OFF WHT,
HD-V HD, MASS, ANG-V,
ANG, 30% BR GRN FLU, FR
BLDNG CUT, NO STN, ASSOC
W/WHT-OFF WHT LS

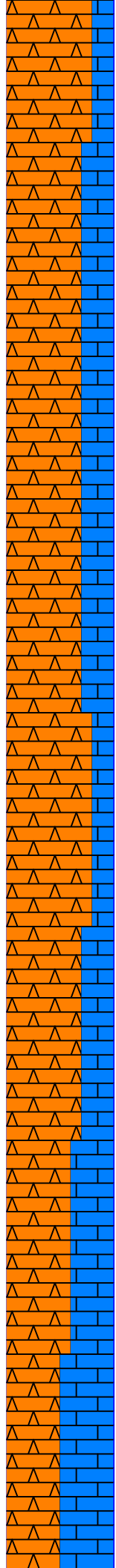
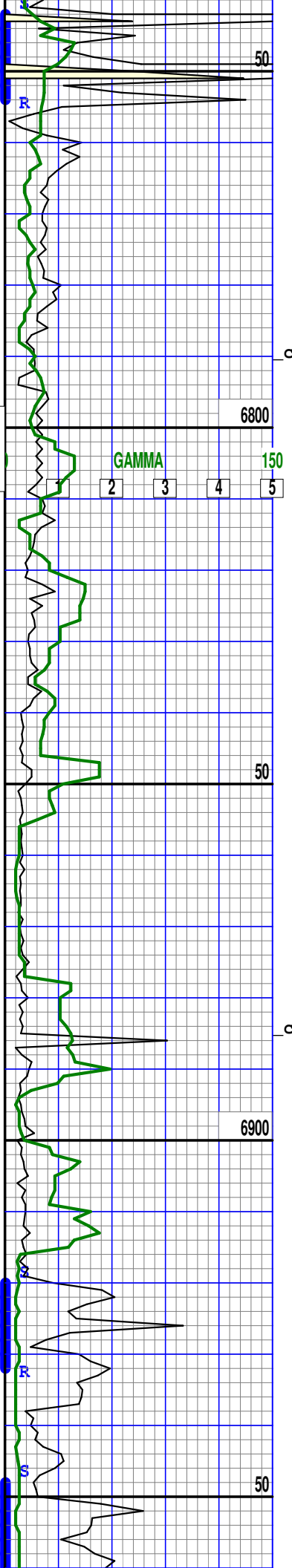
LS: OFFWHT-LTTNBN-LTBN
ORG, CRM-BUFF, WKST-PKST,
GRNST IP, VFN-FN XLN,
SUCR IP, ASSOC W/CHT, TR
FLU, SCAT TR BLDNG CUT,
NO STN

CHT: WHT, CRM, OFF WHT,
HD-V HD, MASS, ANG-V,
ANG, 30-35% BR GRN FLU,
SM FR BLDNG CUT, NO STN,
ASSOC W/WHT-OFF WHT LS

CHT: WHT, CRM, OFF WHT,
HD-V HD, MASS, ANG-V,
ANG, 10-15% BR GRN FLU,
SM CRUSH CUT, NO STN,
ASSOC W/WHT-OFF WHT LS

WOB 18
RPM 70
MRPM 171
PP 1008
SPM 84

WT 8.4
VIS 28



CHT: WHT, CRM, OFF WHT,
HD-V HD, MASS, ANG-V,
ANG, 20-30% BR GRN FLU,
SCAT BLK STN PRES ON
SMPL, BLMNG CUT PRES,
BR YELL RES RING PRES
SM BRN STN, ASSOC W/OFF
WHT-TN LS

LS: LTTNBN-LTBN, OFFWHT
ORG, CRM-BUFF, WKST-PKST,
GRNST IP, VFN-FN XLN,
SUCR IP, ASSOC W/CHT, TR
FLU, TR CRUSH CUT, NO STN

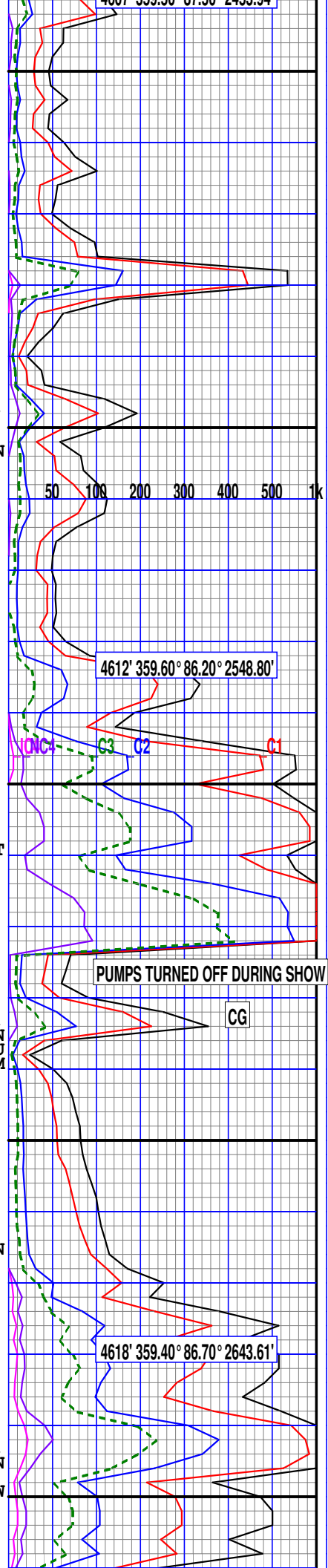
CHT: OPAO, TRNSL, OFF WHT,
HD-V HD, MASS, ANG-V
ANG, 10-15% BR GRN & TR
ORG FLU, SL CRSH CUT, NO
STN

CHT: WHT, CRM, OFF WHT,
SCAT OPAO, SM TRNSL,
HD-V HD, MASS, ANG-V
ANG, 20-30% BR GRN &
ORG FLU, SCAT BLK STN
PRES ON SMPL, BLMNG CUT
PRES BR YELL RES RING
PRES SM BRN STN, ASSOC
W/OFF WHT-TN LS

LS: LTTNBN-LTBN, OFFWHT
ORG, CRM-BUFF, WKST-PKST,
GRNST IP, TR FOSS, VFN-FN
XLN, SUCR IP, SCAT TR FLU
BR GRN & TR ORG, SL STRM
CUT, NO STN

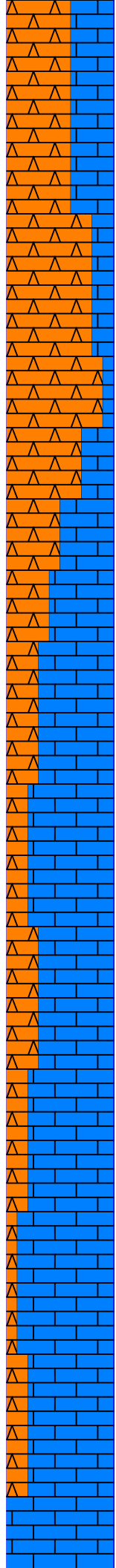
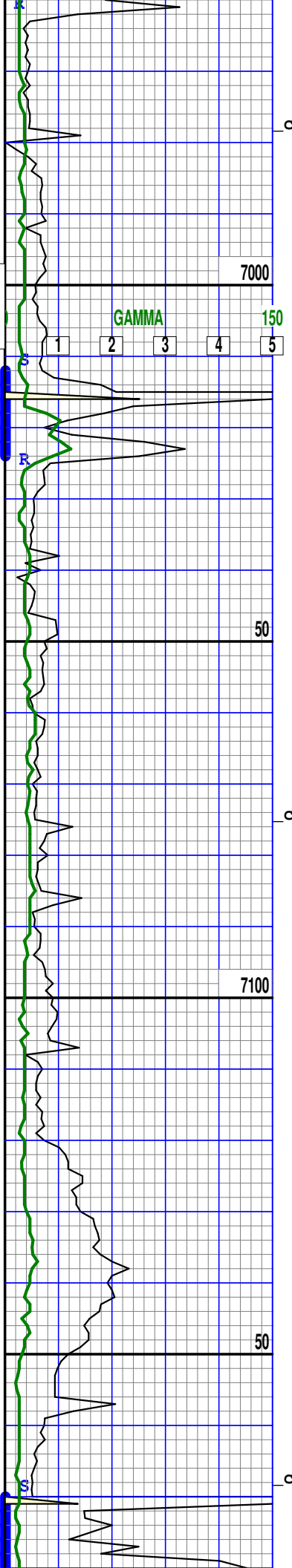
CHT: OFF WHT, WHT, CRM,
SM TRNSL, HD-VY HD, MASS
ANG-V ANG, 15-20% BR GRN
FLU, SL BLDNG CUT, NO
STN

LS: WHT, OFF WHT, CRM, OPAO
CRM-BUFF, PCKSTN-GRNSTN,
VY HD, SL SUC, FN-MED XLN
10-20% BR GRN FLU, SL
CRSH CUT, NO STN, ASSOC W
BRK WHT CHT



WOB 20
RPM 70
MRPM 187
PP 980
SPM 92

WT 8.4
VIS 28



CHT: OFF WHT, WHT, CRM,
HD-VY HD, MASS, ANG-VY
ANG, 5% BR GRN FLU, NO
CUT OR STN, ASSOC W/WHT
LS

CHT: WHT, OFF WHT, CRM,
HD-VY HD, MASS, ANG-VY
ANG, SHRP, FOSS PRES, 5%
BR GRN FLU, NO CUT OR
STN, ASSOC W/WHT LS

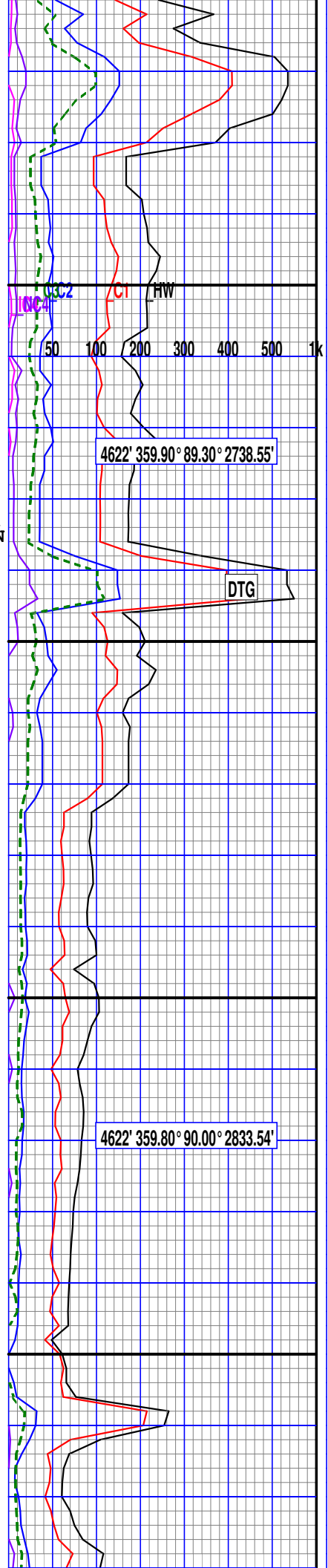
LS: WHT, OFF WHT, OPAO
CRM-BUFF, PCKSTN-GRNSTN,
VY HD, SL SUC, FN-MED XLN
10-20% BR GRN FLU, NO
CUT, NO STN, ASSOC W
BRKN WHT CHT

LS: OFFWHT-LTTNBN-LTTN
CRM-BUFF IP, WKST-PKST
OCC GRNST IP, FRM-SL
HD, SL ERTHY TEXT,
SUCR IP, TR MIC FOSS
OCC REPLACED BY CHT,
NSFOC

CHT: PREDOM WHT-OFFWHT
LTTN-BUFF IP, V HD, V
ANG, BRKN CHT FRAG,
SME OIL STN <5%, NO
FLUOR OR CUT

LS: LTTNBN-LTTNGY, OFF
WHT-WHT IP, CRM-BUFF
WKST-PKST, GRNST IP,
SL CHLKY-ERTHY TEXT,
VFN-FN XLN, OCC INTBED
W/PREDOM WHT CHT, NSFOC

LS: PREDOM WHT-OFFWHT
LTTNGY-LTTNBN IP, SL
FRM-SL HD, OCC ASSOC
W/CHT INCL, SL CHLKY-
ERTHY TEXT IP, NSFOC

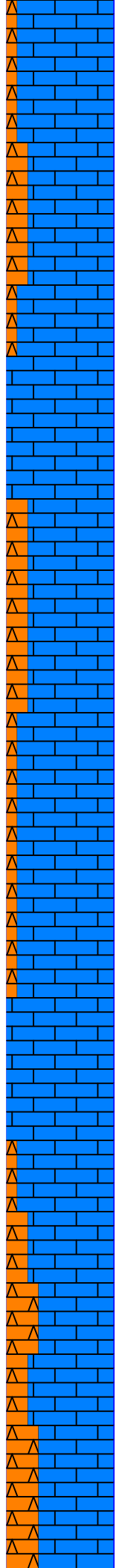
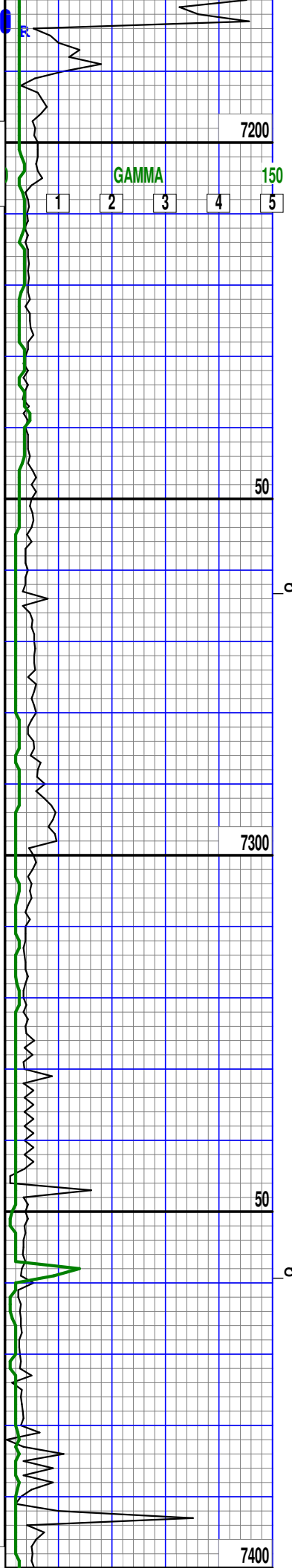


WOB 15.2
RPM 61
MRPM 173
PP 1112
SPM 82

WT 8.4
VIS 28

5/10/13

WOB 19.6



CHT: WHT-OFFWHT-BUFF
CRM IP, V HD, V ANG-
ANG, OCC INTBED W/WHT
LS INCL, TR OIL STN,
NO CUT OR FLUOR

LS: PREDOM LTTN-WHT,
CRM-BUFF-LTTNBN IP,
SL FRM-SL HD, SL CHLKY
IP, SL ERTHY IP, WKST-
PKST, GRNST IP, TR DLL
YLW FLUOR, NO STN, SLO
MLKY BLU BLEEDING CUT

CHT: PREDOM WHT-OFFWHT,
V HD, ANG-V ANG, MASS,
TR CALC INCL, 10-15%
OIL STN ASSOC W/CHT,
TR DLL YLW FLUOR,
TR-PR SLOW MLKY BLU
STRMNG CUT

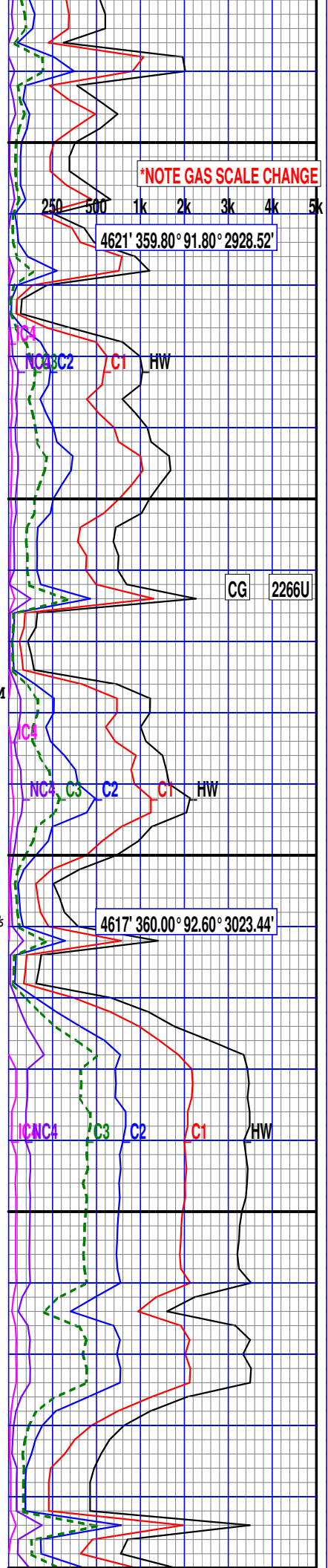
LS: PREDOM WHT-OFFWHT,
LTTNBN-LTTNGY IP, WKST
-PKST, GRNST IP, SL FRM
-SL HD, CHLKY IP, MIC-
VFN XLN, NSFOC

CHT: PREDOM WHT-OFFWHT
TR GRN SPECS, V HD,
ANG-V ANG, MASS, OCC
INTBED W/LS INCL, 5-10%
OIL STN, FST MLKY BLU
CUT FLLWD BY LTYLW
BLEEDNG CUT, 20% DLL
YLW FLUOR

LS: LTTNBN-LTTNGY, OFF
WHT-WHT IP, CRM-BUFF
WKST-PKST, GRNST IP,
SL CHLKY-ERTHY TEXT,
VFN-FN XLN, OCC INTBED
W/PREDOM WHT CHT, TR
MLKY BLU CUT, DL YLW/
GRN FLUOR

CHT: PREDOM WHT-OFFWHT
LTTN-BUFF IP, V HD, V
ANG, BRKN CHT FRAG,
SME OIL STN 5-10%, TR
DLL YLW FLUOR, FST MLKY
BLU BLOOM CUT FLLWD BY
SLO YLW/GRN STRMNG CUT

LS: LTTNBN-LTTNGY, OFF
WHT-WHT IP, CRM-BUFF



*NOTE GAS SCALE CHANGE

4621' 359.80° 91.80° 2928.52'

CG 2266U

4617' 360.00° 92.60° 3023.44'

GAMMA

150

1 2 3 4 5

WKST-PKST, GRNST IP,
SL CHLKY-ERTHY TEXT,
VFN-FN XLN, OCC INTBED
W/PREDOM WHT CHT, <10%
LTYLW FLUOR, SLOW STRMN
LTYLW/GRN CUT

4612' 359.30° 93.00° 3118.33'

250 500 1k 2k 3k 4k 5k

CHT: PREDOM WHT, V HD,
ANG MASS, TR' CALC,
INCL, <10% OIL STNS
TR LTYLW FLUOR, DLL SLO
MLKY BLU STRMRG CUT

LS: WHT-OFFWHT-CRM, LTTN
-LTTNBN-LTTNGY, SL FRM
-SL HD, OCC ASSOC W/
CHT INCL, WKST-PKST
GRNST IP, SL CHLKY IP,
TR DLL YLW FLUOR, NO
VIS STN OR CUT

50

S

c

R

7500

4609' 0.30° 91.00° 3213.26'

CHT: WHT, CRM, OFF WHT,
HD-V HD MASS, ANG-V,
ANG, 5-10% BR GRN FLU TR
CRSH CUT, NO STN, ASSOC
W/WHT-OFF WHT LS

CHT: OFF WHT, WHT, CRM,
HD-V HD MASS, ANG-V,
ANG, 5-10% BR GRN FLU TR
CRSH CUT, NO STN, ASSOC
W/WHT-OFF WHT LS

50

S

c

R

7600

4609' 0.40° 89.00° 3308.24'

CHT: CRM, OFF WHT, WHT,
HD-V HD MASS, ANG-V,
ANG, 5-10% BR GRN FLU TR
CRSH CUT, NO STN, ASSOC
W/WHT-OFF WHT LS

CHT: OFFWHT, CRM, SL TN
WHT, HD-V HD MASS, ANG-V,
ANG, 20% BR GRN FLU, TR
CRSH CUT, NO STN, ASSOC
W/WHT-OFF WHT LS

250 500 1k 2k 3k 4k 5k

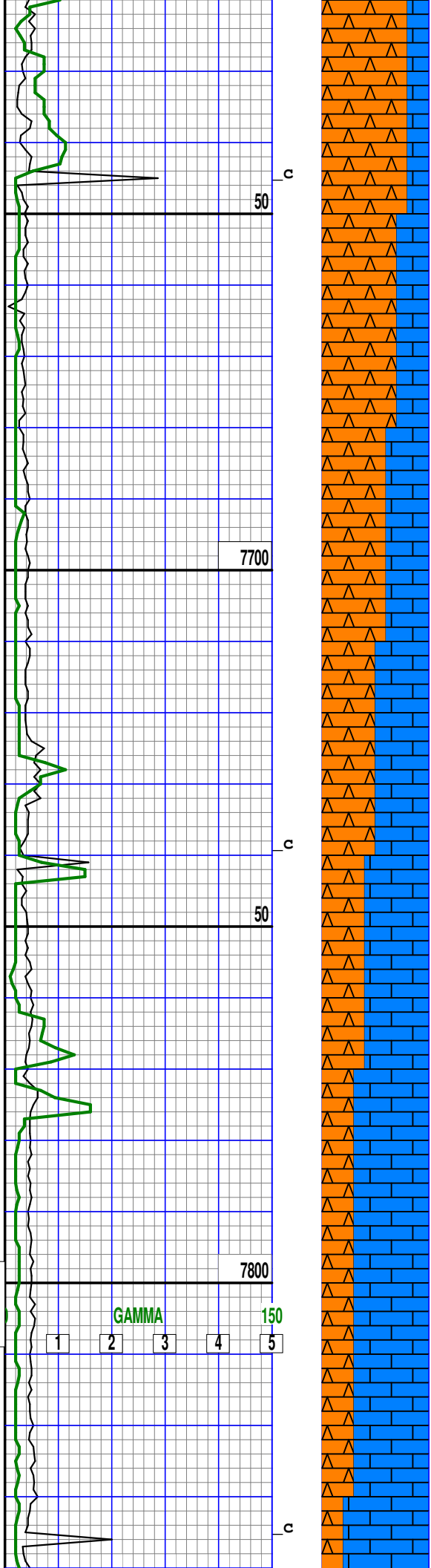
GAMMA

150

2 3 4 5

WOB 20
RPM 60
MRPM 152
PP 1100
SPM 74

WT 8.4
VIS 28



CHT: WHT, CRM, SL TN, OFF-
 WHT, HD-V HD, MASS, ANG-V
 ANG, 20% BR, GRN FLU, TR
 CRSH CUT, NO STN, ASSOC
 W/WHT-OFF WHT LS

LS: WHT, OFF WHT TN
 GRNSTN, SM WCKST-PKSTN
 VFN-FN XLN, FRM-SL HD
 20-30% BR, GRN FLU, FR
 BLMNG CUT, BRN STN,
 ASSOC W/WHT CHT

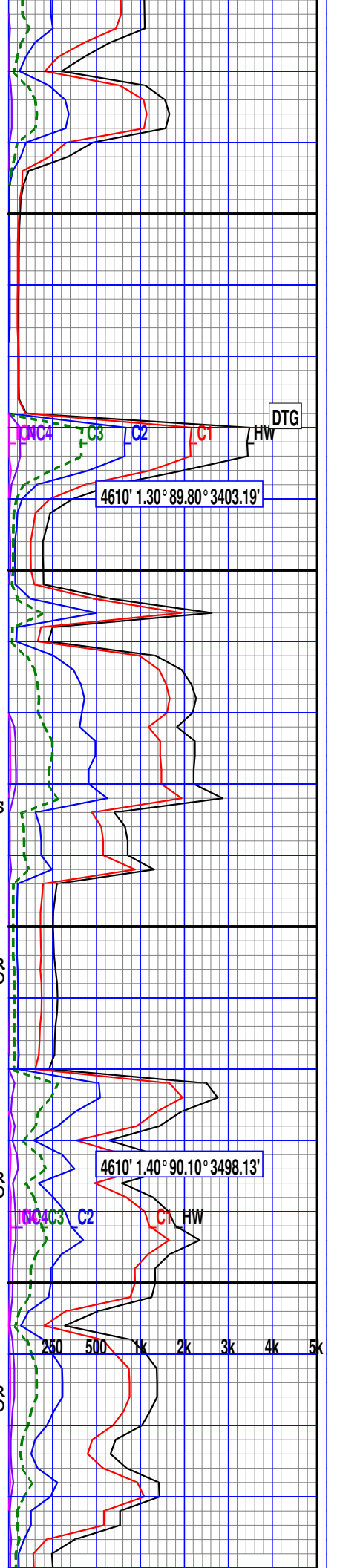
CHT: WHT, CRM, SL TN, OFF-
 WHT, HD-V HD, MASS, ANG-V
 ANG, 20-25% BR, GRN FLU,
 SL STRM CUT, NO STN,
 ASSOC W/WHT-OFF WHT LS

LS: WHT, OFF WHT TN
 GRNSTN, SM WCKST-PKSTN
 VFN-FN XLN, FRM-SL HD
 30% BR, GRN FLU, FR
 BLMNG CUT, NO STN,
 ASSOC W/WHT CHT, OIL
 SHEEN PRESENT @ SHAKERS

LS: WHT, OFF WHT TN
 GRNSTN, PKSTN, VFN-FN
 XLN, FRM-SL HD, 20-30% BR
 GRN FLU, FR BLMNG CUT, NO
 STN, ASSOC W/WHT CHT, SL
 OIL SHEEN PRESENT @
 SHAKERS

LS: WHT, OFF WHT, SCAT TN
 GRNSTN, PKSTN, VFN-FN
 XLN, FRM-SL HD, 20-30% BR
 GRN FLU, FR BLMNG CUT, NO
 STN, ASSOC W/WHT CHT

LS: WHT, OFF WHT, SCAT TN
 GRNSTN, PKSTN, VFN-FN
 XLN, FRM-SL HD, 20-25% BR
 GRN FLU, FR BLMNG CUT, NO
 STN, SCAT SHRP BRKN WHT
 CHRT PRES



WOB 18
 RPM 67
 MRPM 154
 PP 1123
 SPM 76

WT 8.4
 VIS 28

GAMMA



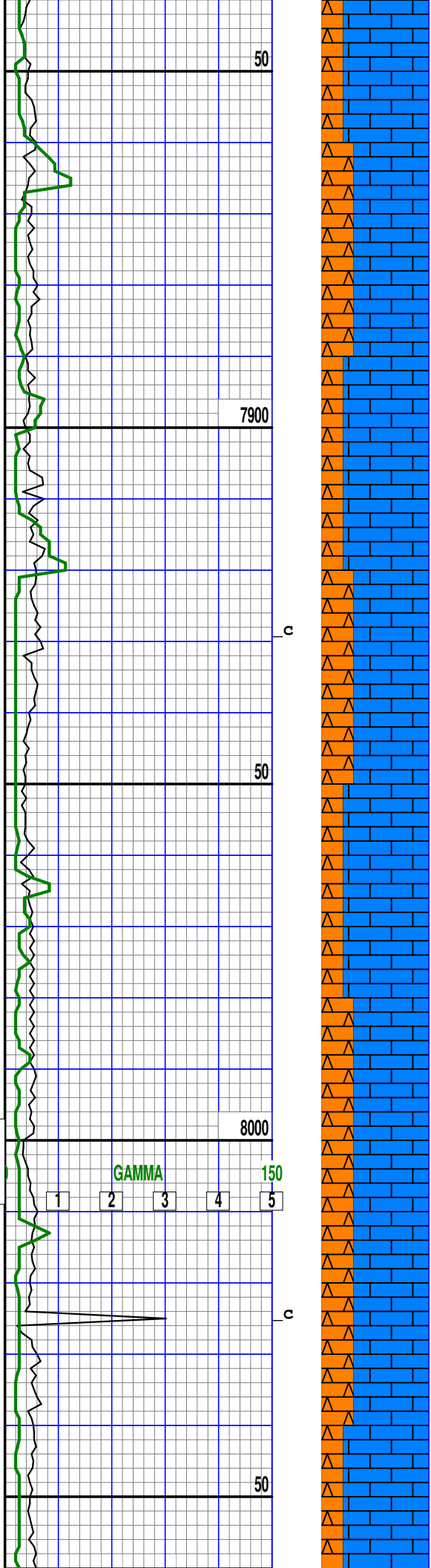
7800

150

50

7700

50



WOB 16
RPM 73
MRPM 177
PP 1224
SPM 85

WT 8.4
VIS 28

GAMMA

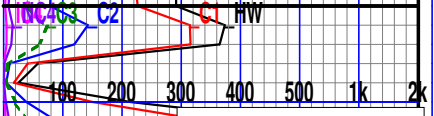
1 2 3 4 5

CHT: WHT, CRM, SL TN, OFF-
WHT, HD-V HD, MASS, ANG-V
ANG, 20-25% BR GRN FLU,
SL STRM CUT, NO STN,
ASSOC W/WHT-OFF WHT LS

LS: WHT, OFF WHT, SCAT TN
GRNSTN, PKSTN, VFN-FN
XLN, FRM-SL HD, 15-20% BR
GRN FLU, PR STR CUT, NO
STN, SCAT SHRP BRKN WHT
CHRT PRES

4610' 1.00° 89.90° 3593.08'

LS: OFF WHT, WHT, TN
GRNSTN, PKSTN, VFN-FN
XLN, FRM-SL HD, 5-10% BR
GRN FLU, SL STR CUT, NO
STN, ASSOC W/WHT CHRT



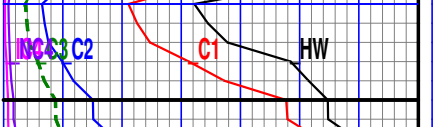
NOTE GAS SCALE CHANGE

CHT: WHT, CRM, SL TN, OFF-
WHT, HD-V HD, MASS, ANG-V
ANG, 5-15% BR GRN FLU,
SL STRM CUT, NO STN,
ASSOC W/WHT-OFF WHT LS

LS: WHT, OFF WHT, TN
GRNSTN, PKSTN, VFN-FN
XLN, FRM-SL HD, 15-20% BR
GRN FLU, SL STR CUT, NO
STN, ASSOC W/WHT CHRT

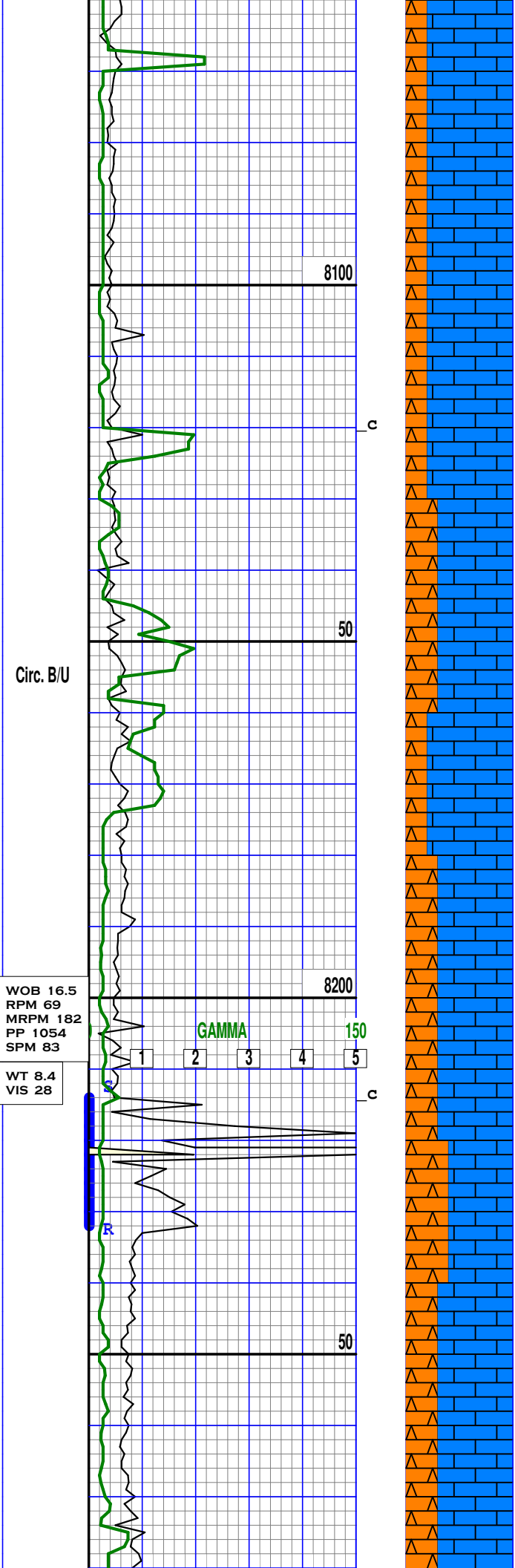
4610' 0.20° 90.40° 3688.05'

LS: WHT, OFF WHT, TN, OPAQ
GRNSTN, PKSTN, VFN-FN
XLN, FRM-SL HD, 20-25% BR
GRN FLU, FLSH CUT, FNT
BRN STN, ASSOC W/WHT
CHRT



CHT: WHT, CRM, SL TN, OFF-
WHT, HD-V HD, MASS, ANG-V
ANG, 15-20% BR GRN FLU,
SLOW BLMNG CUT, NO STN,
ASSOC W/WHT-OFF WHT LS

LS: WHT, TN, OPAQ, OFF WHT
GRNSTN, PKSTN, VFN-FN
XLN, FRM-SL HD, 15-20% BR
GRN FLU, SLOW BLMNG CUT,
NO STN, ASSOC W/WHT CHRT



LS: OPAQ, OFF WHT, TN, WHT
GRNSTN, PKSTN, VFN-FN
XLN, FRM-SL HD, 15-20% BR
GRN FLU, SLOW BLMNG CUT
NO STN, ASSOC W/WHT CHRT

4609' 359.80° 90.90° 3782.04'

YONC C3 C2 C1

LS: TN, OPAQ, OFF WHT-WHT
GRNSTN, PKSTN, VFN-FN
XLN, FRM-SL HD, 10-15% BR
GRN FLU, SL CRSH CUT
NO STN, ASSOC W/WHT CHRT

CHT: WHT, CRM, SL, TN, OFF-
WHT, HD-V HD, MASS, ANG-V
ANG, 20-25% BR, GRN FLU,
FLSH CUT, YELL RES RNG,
ASSOC W/WHT-OFF WHT LS

4607' 359.70° 91.30° 3877.01'

LS: PREDOM LTTNEN-OFF
WHT, WHT-CRM IP, FRM-
SL HD, WKST-PKST, MIC-
VFN XLN, SL CHLKY TEXT
TR DLL YLW FLUOR, NO
VIS STAIN OR CUT ASSOC

CHT: PREDOM WHT, TRNSL
-LTTN IP, V HD, ANG-V
ANG, MASS, TR CALC
INCL, TR DLL YLW FLUOR
<5% OIL STNS, TR-PR
MLKY BLU FST BLOOM CUT

100 200 300 400 500 1k 2k

LS: PREDOM OFFWHT-LTTN
BN, CRM-BUFF IP, FRM-
SL HD, WKST-PKST, SME
CHT REPLACEMENT, TR
MIC FOSS, NSFOC

4606' 359.40° 90.30° 3972.00'

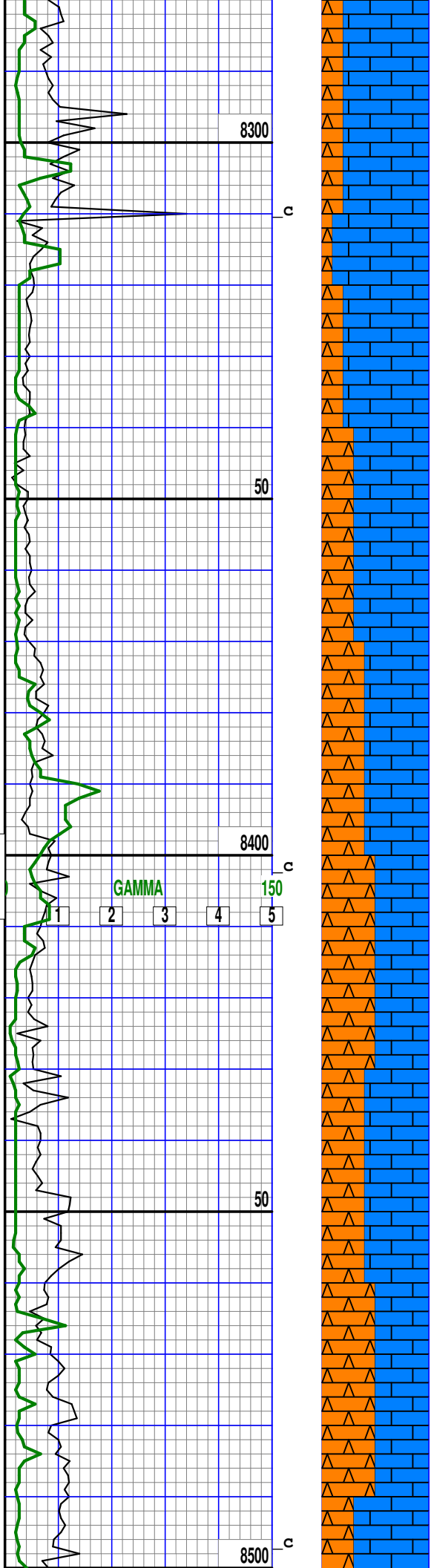
CHT: PREDOM WHT, LTTN-
OFFWHT-CRM IP, V HD,
ANG-V ANG, MASS, TR
CALC INCL, TR OIL STNS
DLL LT YLW FLUOR, TR
SLO MLKY STRMNG CUT

*MAINTENANCE AND REPAIR OF SHALE SHAKERS

WOB 17.4
RPM 68
MRPM 194
PP 1153
SPM 94

WT 8.4
VIS 28

5/11/13



LS: WHT-OFFWHT-LTTNGY-LTTNBN, WKST-PKST, OCC GRNST, TR MIC FOSS, SL ERTHY TEXT, SME CHT INCL IP, NSFOC

CHT: PREDOM WHT, OFFWHT -CRM-BUFF IP, V HD, V ANG, 5-10% OIL STAINS ON CHT GRNS, MASS, TR DLL YLW FLUOR, FST MLKY BLU BLOOM FLLWD BY SLOW LTYLW/GRN STRMNG CUT

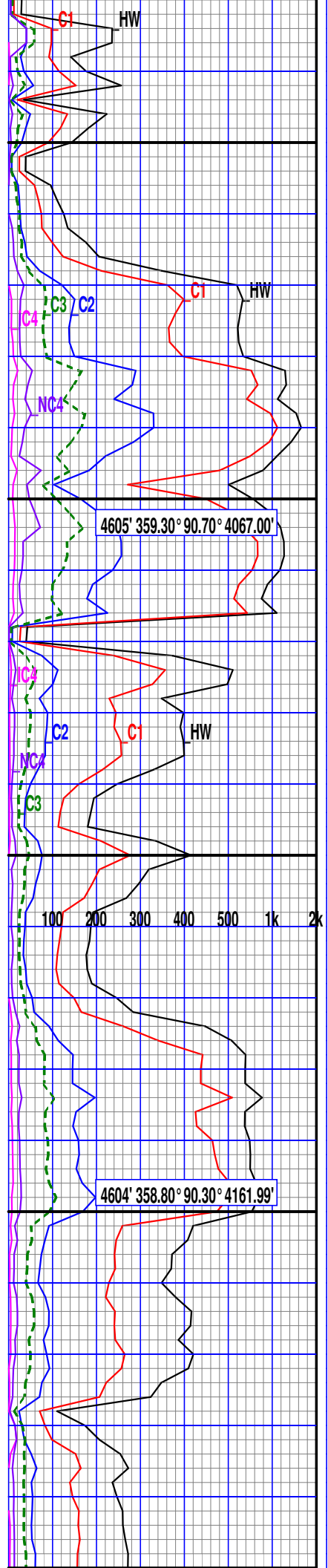
LS: PREDOM LTTNBN-OFF WHT, WHT-CRM IP, FRM-SL HD, WKST-PKST, MIC-VFN XLN, SL CHLKY TEXT TR DLL YLW FLUOR, PR SLOW MLKY BLU BLOOM

CHT: PREDOM OFFWHT-WHT, OCC LTTNGY-CRM, V HD, V ANG, MASS, TR CALC INCL, SME OIL STN <5%, TR DLL YLW FLUOR, TR SLOW LTGRN/YLW STRMNG CUT

LS: PREDOM WHT-OFFWHT-CRM-BUFF, LTTNGY-LTTNBN FRM-SL HD, MIC-VFN XLN TR-MNR CHT INCL, WKST-PKST, NO VIS OI STNS TR LT YLW FLUOR, TR SLOW MLKY BLU BLEEDNG CUT

CHT: PREDOM WHT, LTTN-OFFWHT-CRM IP, V HD, ANG-V ANG, MASS, TR CALC INCL, TR OIL STNS DLL LT YLW FLUOR, TR SLO MLKY STRMNG CUT

LS: WHT-OFFWHT-LTTNGY-LTTNBN, WKST-PKST, OCC GRNST, TR MIC FOSS, SL ERTHY TEXT, SME CHT INCL IP, NSFOC



WOB 18.6
RPM 70
MRPM 169
PP 1236
SPM 82
WT 8.4
VIS 28

GAMMA

1 2 3 4 5

50

8600

150

50

8700

CHT: PREDOM WHT, OFFWHT
-CRM-BUFF IP, V HD, V
ANG 5-10% OIL STAINS
ON CHT GRNS, MASS, TR
DLL YLW FLUOR, FST
MLKY BLU BLOOM FLLWD
BY SLOW LTYLW/GRN
STRMNG CUT

4605' 357.80° 89.00° 4256.97'

LS: PREDOM LTTNBN-OFF
WHT, WHT-CRM IP, FRM-
SL HD, WKST-PKST, MIC-
VFN XLN, SL CHLKY TEXT
TR DLL YLW FLUOR, PR
SLOW MLKY BLU BLOOM

C2 C1 HW
C3 NC4

CHT: PREDOM WHT-OFFWHT
V HD, V ANG, TR CALC
INCL, 5-10% OIL STNS,
MASS, TR DLL FLUOR, TR
FST MLKY BLU BLOOM CUT

100 200 300 400 500 1k 2k

LS: PREDOM WHT-OFFWHT-
CRM-BUFF, LTTNGY-LTTNBN
FRM-SL HD, MIC-VFN XLN
TR-MNR CHT INCL, WKST-
PKST, NO VIS OI STNS
TR LT YLW FLUOR, TR
SLOW MLKY BLU BLEEDNG
CUT

4606' 357.50° 89.30° 4351.90'

CHT: PREDOM WHT, LTTN-
OFFWHT-CRM IP, V HD,
ANG-V ANG, MASS, TR,
CALC INCL, TR OIL STNS
DLL LT YLW FLUOR, TR
SLO MLKY STRMNG CUT

LS: PREDOM OFFWHT-WHT,
LTTN-LTTNBN IP, SL FRM
-SL HD, TR CHT INCL,
MIC-VFN XLN, SL ERTHY
TEXT IP, WKST-PKST,
GRNST IP, NSFOC

CHT: PREDOM WHT, TRNSL
-OFFWHT IP, V HD, ANG-
V ANG, TR CALC INCL,
TR OIL STNS PRES, TR
DLL YLW FLUOR, TR FST

MLKY BLU BLOOM CUT

4606' 357.10° 90.20° 4446.87'

LS: LTTNBN-LTTNGY-OFFWHT
-WHT, SL FRM-SL HD, MIC
-VFN XLN, SME CHT ASSOC
W/LS, SL CHLKY IP, TR
LT YLW/GRN FLUOR, TR-PR
MLKY BLU STRMNG CUT

CHT: PREDOM WHT, OFFWHT
IP, V HD, V ANG, MASS,
TR CALC INCL, SMTH, TR
OIL STNS, TR DLL LT YLW
FLUOR, SLO STRMNG MLKY
BLU CUT

LS: PREDOM WHT-OFFWHT-
CRM-BUFF, LTTNGY-LTTNBN
FRM-SL HD, MIC-VFN XLN
TR-MNR CHT INCL, WKST-
PKST, NO VIS OI STNS
TR LT YLW FLUOR, TR
SLOW MLKY BLU BLEEDNG
CUT

4605' 357.10° 91.70° 4541.78'

CHT: PREDOM WHT, LTTN-
OFFWHT-CRM IP, V HD,
ANG-V ANG, MASS, TR
CALC INCL, TR OIL STNS
DLL LT YLW FLUOR, TR
SLO MLKY STRMNG CUT

LS: PREDOM WHT-LTTNBN,
OFFWHT-CRM-BUFF, FRM-
SL HD, MIC-VFN XLN, SL
CHLKY TEXT, WKST-PKST,
TR CHT INCLS, TR LT
YLW FLUOR, <5% OIL STN
TR-PR FST MLKY BLU
BLOOM CUT

CHT: PREDOM WHT-OFFWHT
BUFF-CRM IP, V HD, ANG
-V ANG, MASS, TR CALC
INCLS, 5-10% OIL STNS,
TR LT YLW/GRN FLUOR,
TR SLOW STRMNG MLKY
BLU CUT

4601' 357.80° 93.30° 4601.20'

LS: PREDOM WHT-OFFWHT-
CRM-BUFF, LTTNGY-LTTNBN
FRM-SL HD, MIC-VFN XLN
TR-MNR CHT INCL, WKST-
PKST, NO VIS OI STNS

WOB 16.8
RPM 69
MRPM 101
PP 1201
SPM 84

WT 8.4
VIS 28

GAMMA

1 2 3 4 5

50

8800

150

50

8900

c

c

NCA

C3 C2

C1

HW

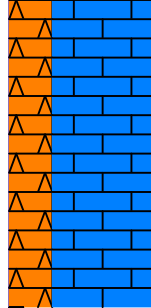
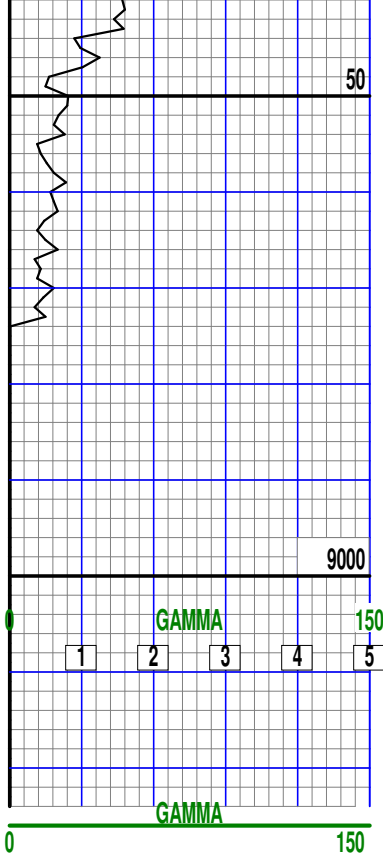
100 200 300 400 500 1k 2k

C2 C1

HW

NCA

C3



TR LT YLW FLUOR, TR
SLOW MLKY BLU BLEEDNG
CUT

CHT: PREDOM WHT, LTN-
OFFWHT-CRM IP, V HD,
ANG-V ANG, MASS, TR
CALC INCL, TR OIL STNS
DLL LT YLW FLUOR, TR
SLO MLKY STRMNG CUT

TD @ 07:00 AM CST ON
05/11/13. DRILLERS TD
AT 8973' POOH FOR OPEN
HOLE LOGS AND TO RUN
PRODUCTION CASING

