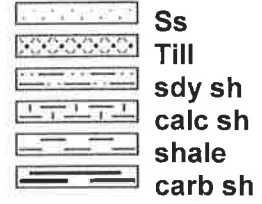
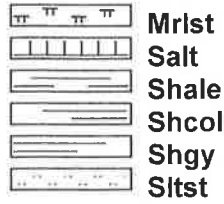
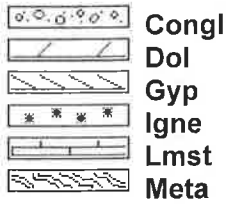
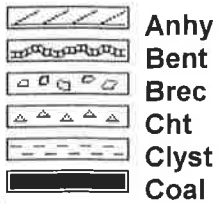




### ROCK TYPES



### ACCESSORIES

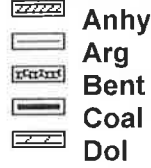
#### MINERAL



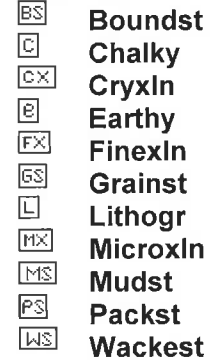
#### FOSSIL



#### STRINGER

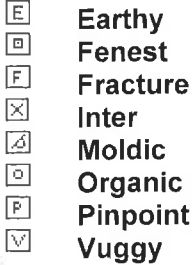


#### TEXTURE



### OTHER SYMBOLS

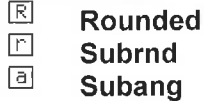
#### POROSITY TYPE



#### SORTING



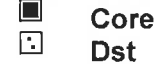
#### ROUNDING



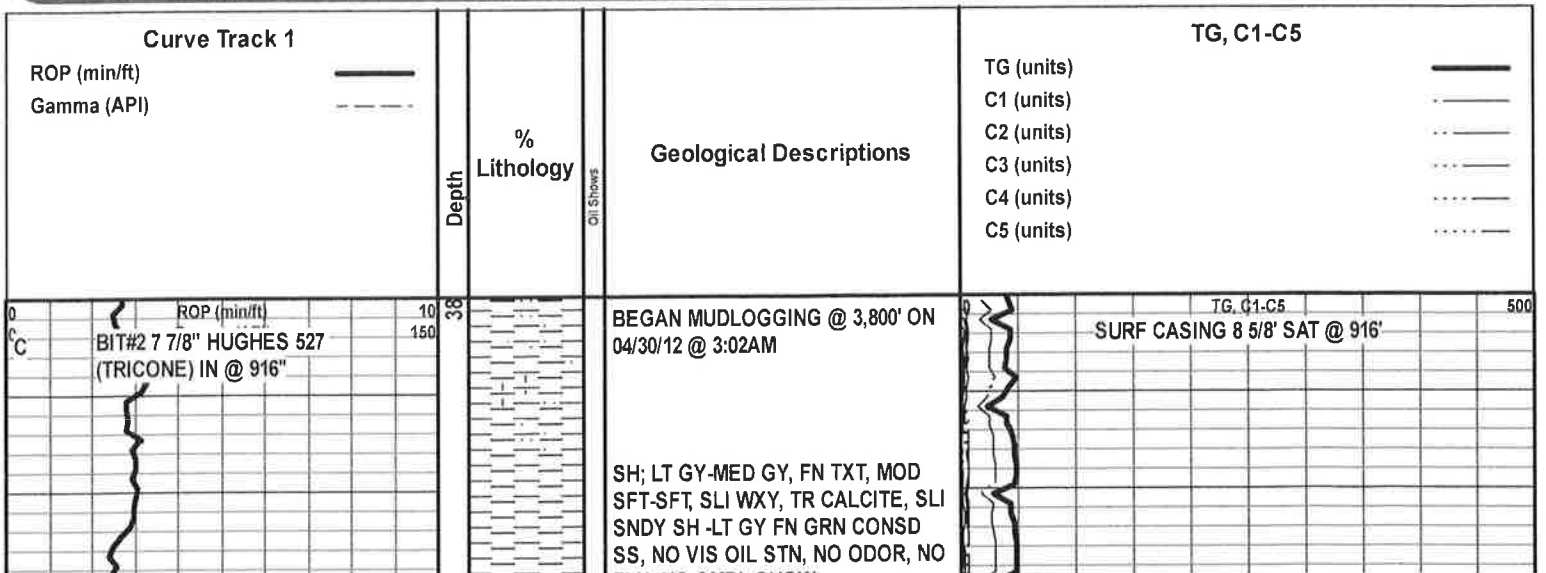
#### OIL SHOWS

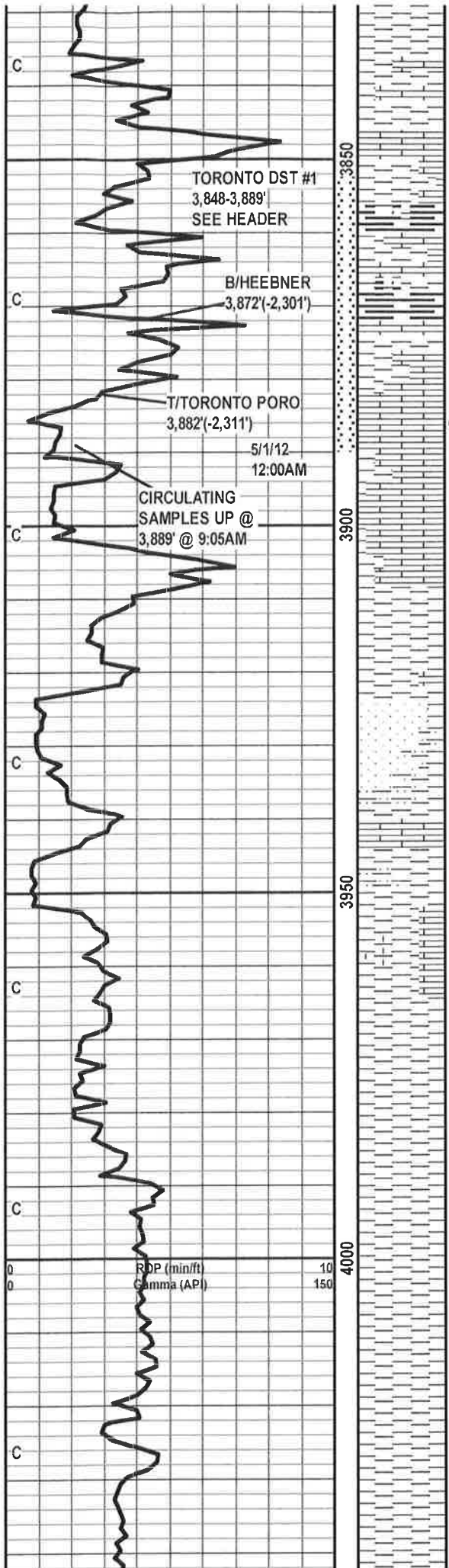


#### INTERVALS



#### EVENTS





FLU, NO SMPL SHOW

SH; MED GY-DK GY-BLK, FN TXT, SFT, WXY, CARB SH, TR CALC SH, OFF WHT-CRM DNS HD LS, NO SMPL SHOW

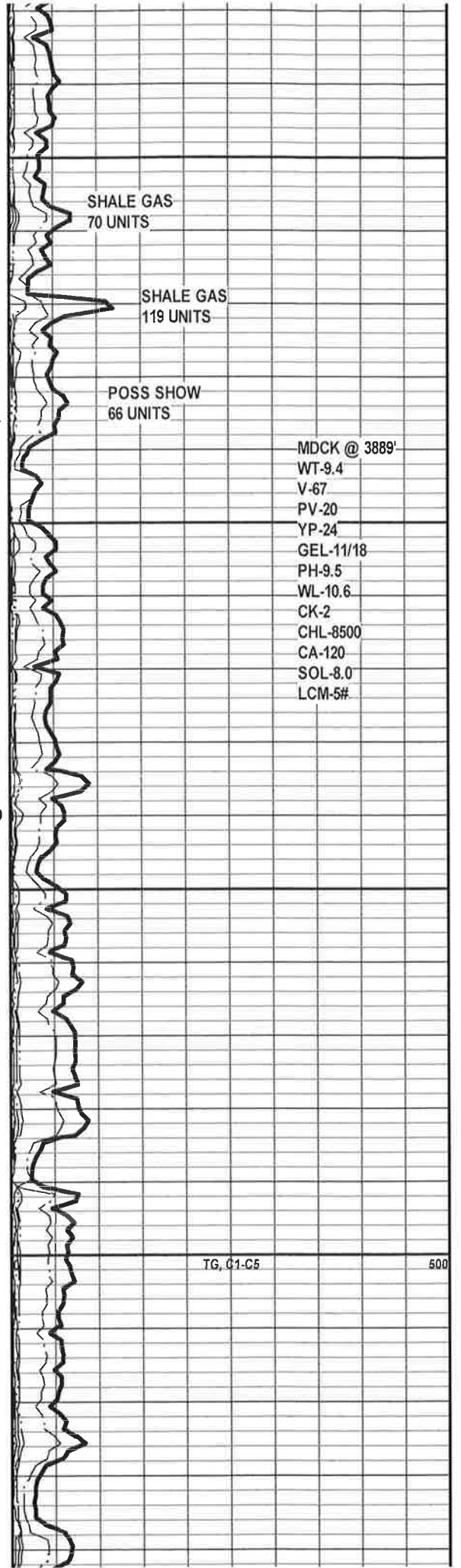
LS; CRM-TN-LT BRN, V/FN XLN-FN XLN, SM DNS HD, SLI ARGL I.P., FOSS, TR KAOL, TR P.P. POR, ABNT OOL'IC POR, V/SLI TR LT BRN OIL STN, YELSH GOLD FLU, V/WK RING CUT, ABNT VIS GAS BUBBLES, NO ODOR

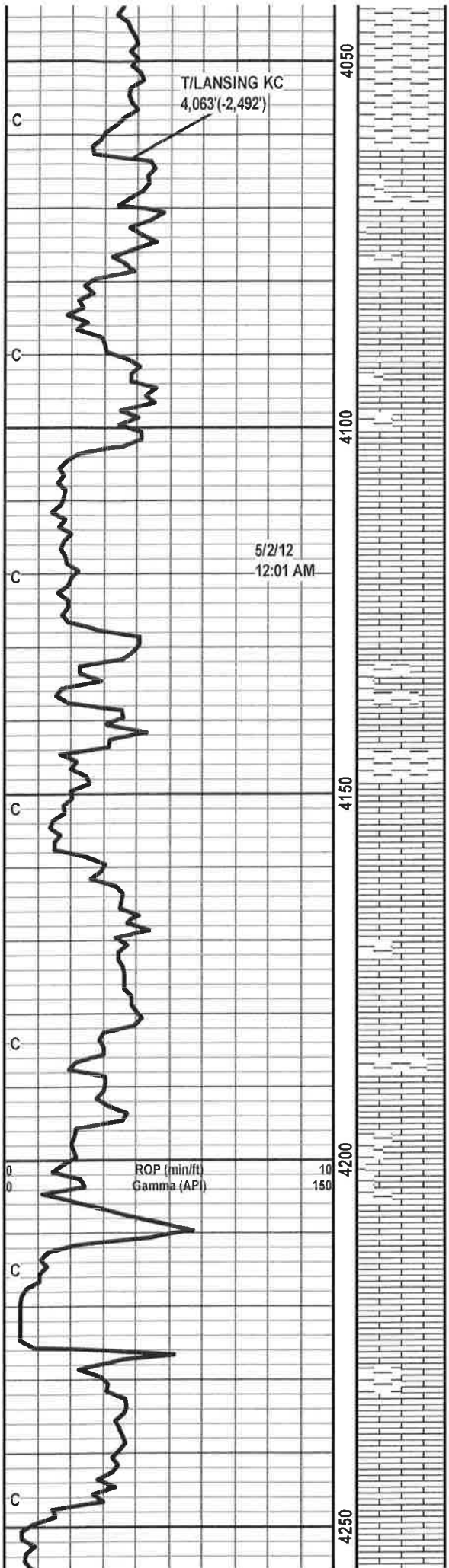
DEVIATION @ 3889' = 1.5°

SS; WHT-OFF WHT-LT GY, FN-MED GRN, CONSD, SUB ANG, V/SHLY-ARGL, TR IMBD GLAUC, GD INTR-GRAN POR, NO VIS OIL STN, BRI MIN FLU, NO CUT OR ODOR, NO SMPL SHOW

SH; LT GY-MED GY, FN-V/FN TXT, SFT-MOD SFT, PRED PLTY-BLKY, SLI CALC SH, TR OFF WHT-CRM DNS HD LS, SCAT SS FROM UPHOLE, NO OIL STN, NO SMPL SHOW

SH; AAB



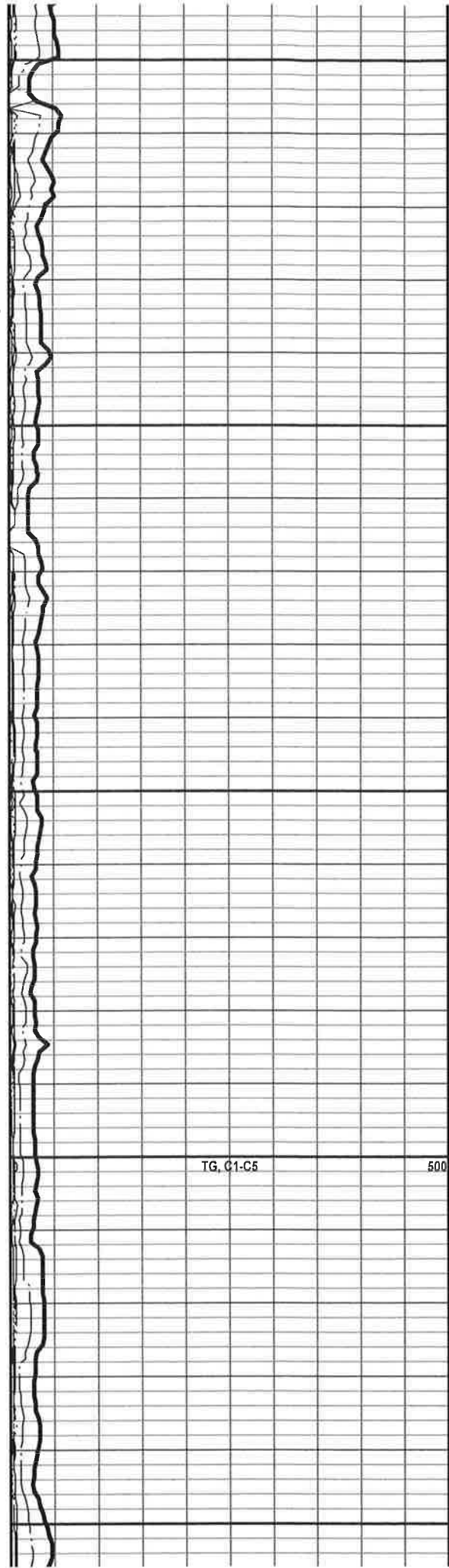


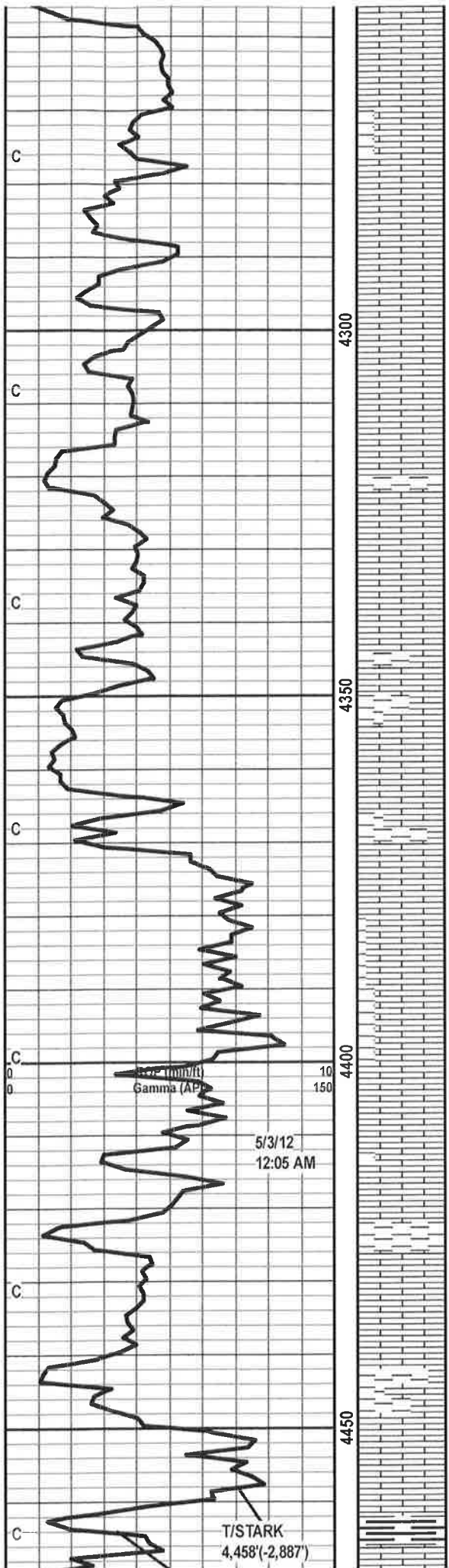
LS; CRM-TN-OFF WHT-LT GY,  
 FN-V/FN XLN, MOD HD-DNS HD  
 BRTTL, SM SLI SUC TXT, SLI CHKY  
 I.P., ABNT ARGL-SHLY  
 THROUGHOUT, V/PYR'IC, TR  
 CALCITE, BRI MIN FLU, FR-GD  
 INTR-XLN POR, TR P.P. POR, NO VIS  
 OIL STN, NO CUT OR ODOR, NO  
 SHOW

LS; WHT-OFF WHT-CRM-TN, V/FN  
 XLN, MOD HD, SM DNS BRTTL, TR  
 PYR, ARGL-SHLY, GD INTR-XLN  
 POR, NO OIL STN, MIN FLU, NO  
 CUT, NO SMPL SHOW

LS; AAB, W/TR FRESH OPQ-MLKY  
 CHT, NO VIS SMPL SHOW

LS; WHT-OFF WHT-CRM-TN-LT BRN,  
 V/FN XLN, PRED DNS HD BRTTL,  
 FREE PYR, TR FOSS, SCAT  
 OOMOL'IC POR, V/SLI TR DOS, NO  
 ODOR, BRI YEL-WHT MIN FLU, NO  
 VIS SMPL SHOW





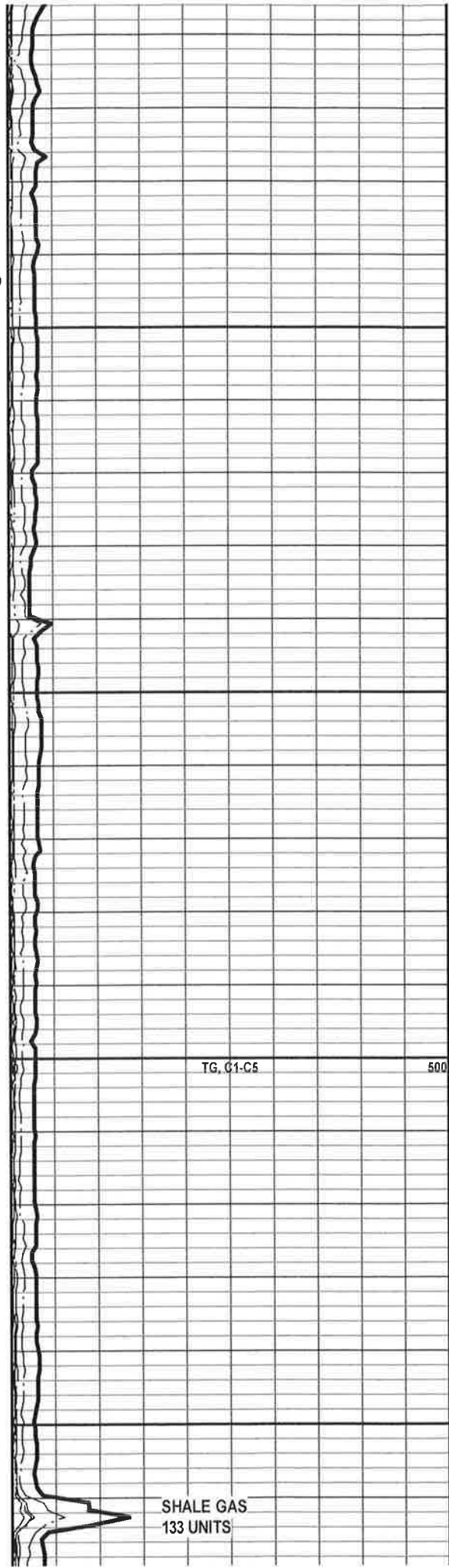
LS; OFF WHT-WHT-CRM, FN-V/FN  
 XLN, MOD HD-DNS HD BRTTL, SM  
 SLI CHKY, SLI ARGL-SHLY I.P.,  
 V/FNLY MICA, FR INTR-XLN POR, NO  
 OIL STN, NO CUT OR ODOR, NO  
 SHOW

LS; AAB

LS; WHT-OFF WHT-LT GY, FN-V/FN  
 XLN, MOD HD-HD, SLI PYR'IC-FREE  
 PYR, TR FOSS, TR ASPHALT STN,  
 ARGL-SHLY I.P., BRI MIN FLU, NO  
 CUT OR ODOR, NO SHOW

LS; AAB, NO VIS SMPL SHOW

SH; DK GY-BLK, FN-V/FN TXT, SFT,  
 SLI WXY, PRED BLK CARB SH, LS  
 AAB



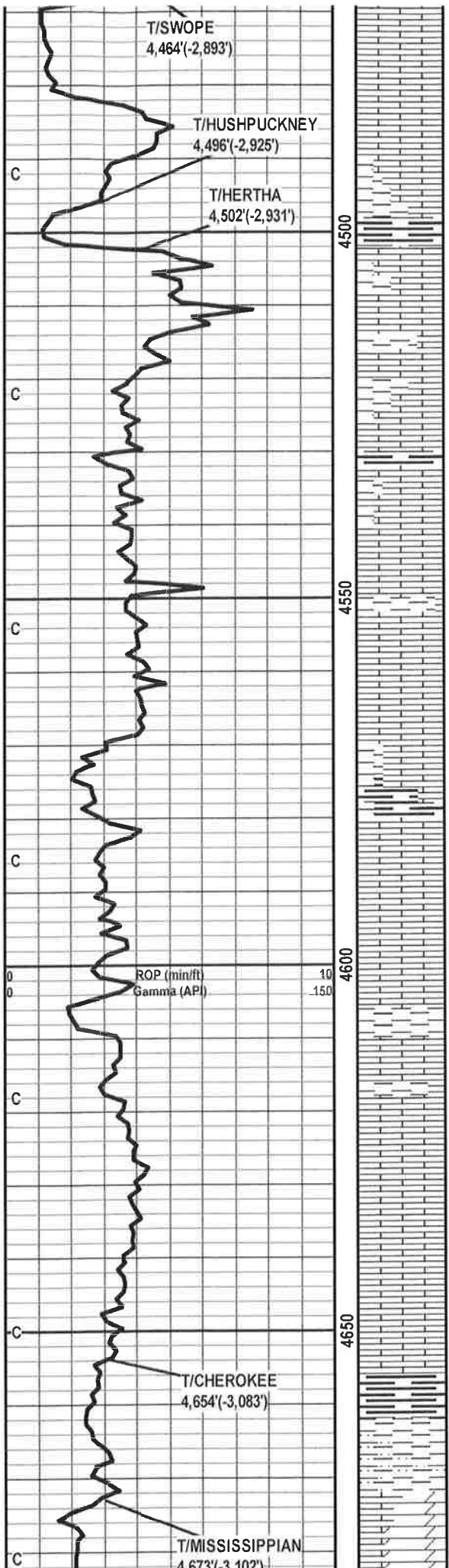
TG, G1-C5

500

SHALE GAS  
 133 UNITS

T/STARK  
 4,458'(-2,887')





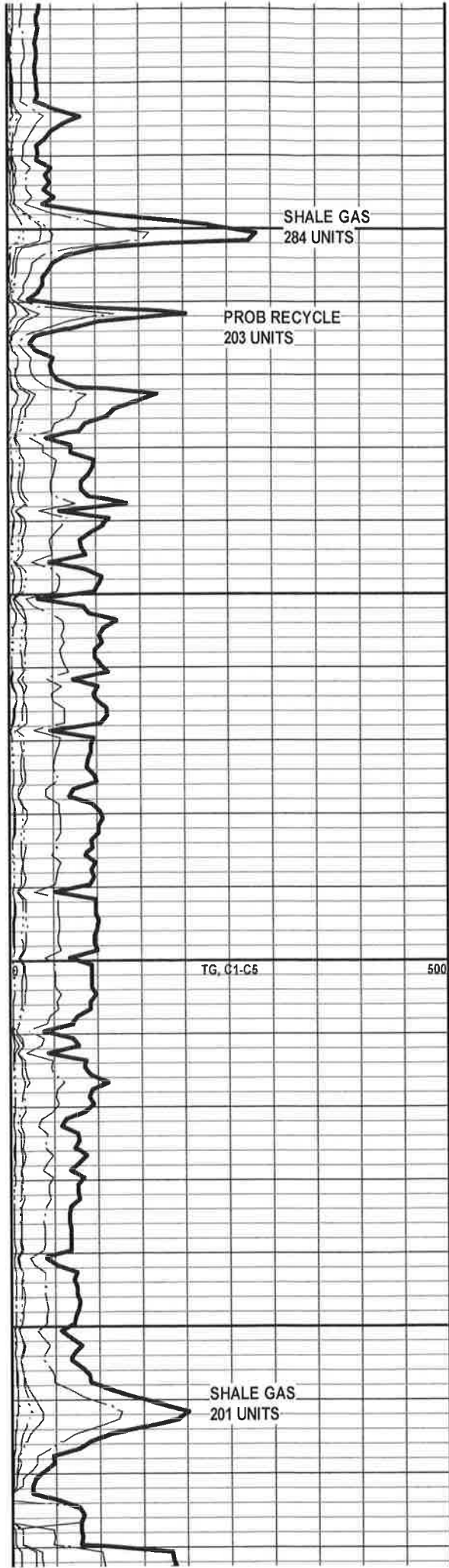
LS; CRM-TN-WHT-LT BRN, V/FN XLN, SM MICRO XLN, PRED DNS BR TTL  
 LS, SLI PYR'IC I.P., SCAT CARB SH, SM FR INTR-XLN POR, NO VIS OIL STN, NO SMPL SHOW

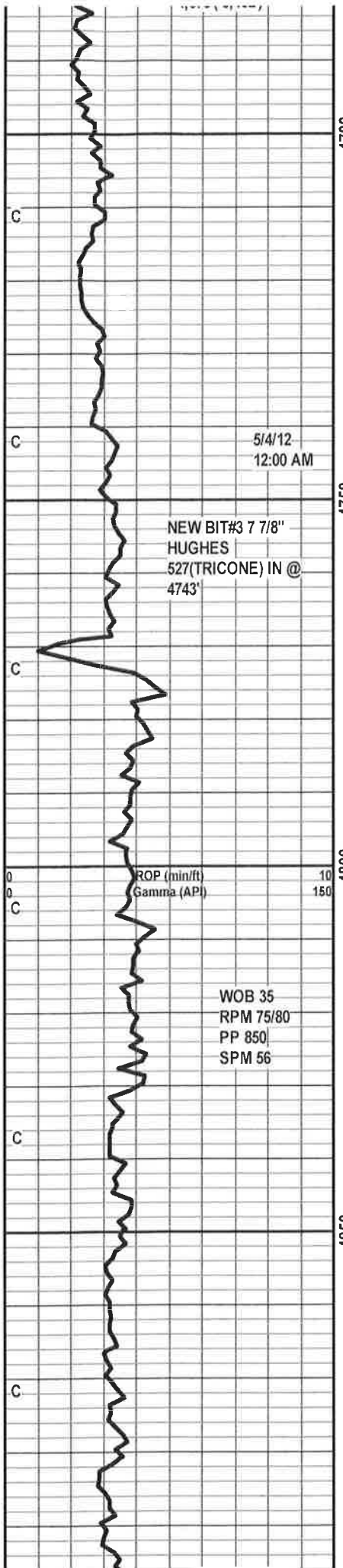
LS; OFF WHT-CRM-TN-LT BRN, V/FN XLN-FN XLN, PRED DNS HD BR TTL, SM SLI SUC TXT, FR-GD P.P. POR, V/SLI TR DOS, TR BRI YEL MIN FLU, NO VIS CUT, NO ODOR

LS; CRM-TN-OFF WHT-LT GY, FN-V/FN XLN, PRED DNS HD BR TTL, SM FREE PYR, TR GLAUC, TR FOSS, SLI ARGL-SHLY I.P., DK GY-BLK-GRN CARB SH, NO VIS OIL STN, BRI YEL MIN FLU, NO CUT, NO ODOR, NO SMPL SHOW

LS; AAB, NO VIS SMPL SHOW

SH; MED GY-DK GY-BLK, V/FN TXT, SFT-MOD SFT, SM SLI CALC, PRED BLK CARB SH, LS AAB, NO VIS SMPL SHOW





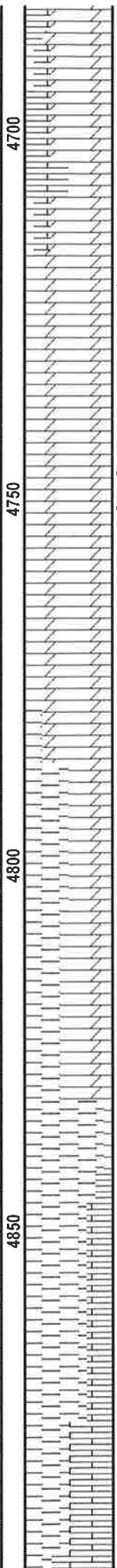
5/4/12  
12:00 AM

NEW BIT#3 7 7/8"  
HUGHES  
527(TRICONE) IN @  
4743'

ROP (min/ft)  
Gamma (API)

10  
150

WOB 35  
RPM 75/80  
PP 850  
SPM 56



DOLO; CRM-TN-LT BRN, V/FN XLN,  
SM MICRO XLN, V/SUC TXT, SLI  
MOTT I.P., TR FRESH MLKY-OPQ  
CHT, TR FREE PYR, GLAUC'IC,  
FR-GD INTR-XLN POR, GD P.P. POR,  
SCAT LT BRN OIL STN, DULL  
YEL-GOLD FLU, FR STRMNG CUT,  
FR-WK ODOR

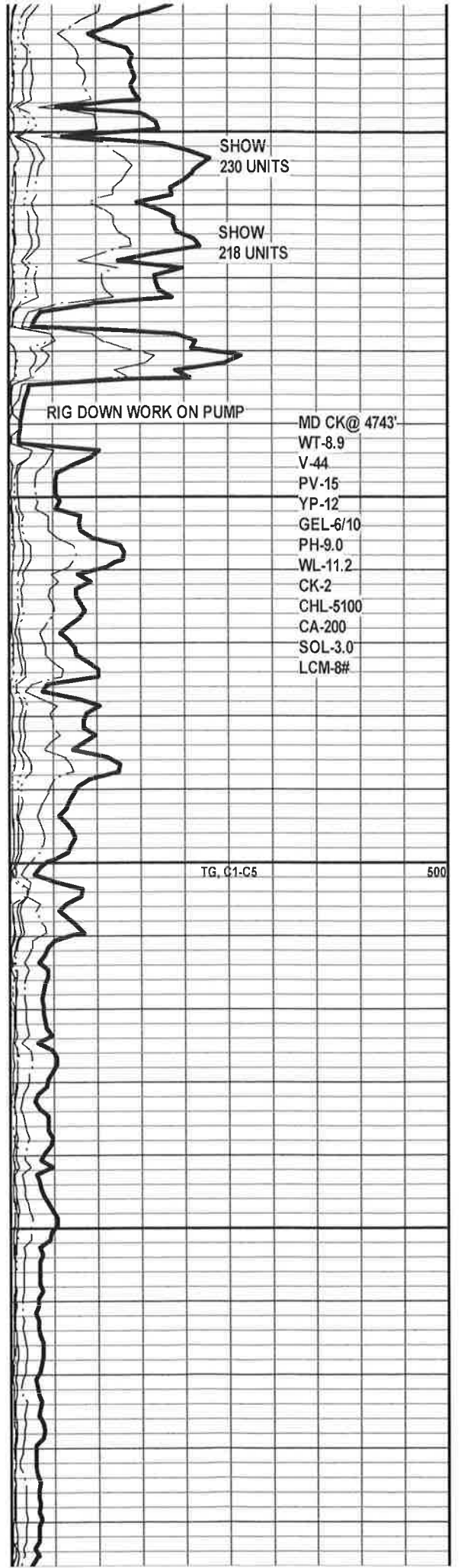
DOLO: AAB W/ ABT WHT-GRN-OPA,  
FRSH, DOLO'C I.P. CHT, V/GD FLU,  
SM STNING, STRNG ODOR, GD  
STRMING CUT

DOLO: OFF WT-TN-GRN-GRY, V/FN  
MICRO-XLN, HD, DNS, TR P.P.POR,  
GLAUC I.P., SLI ARG, NO VIS STN,  
CUT, OR ODOR

DOLO: AAB

SH: LTGY-GY-GRN, V/FN TEXT, MD  
FM-HD, V/GLAU'C, LMY I.P., PYR'C  
SPKS THROUT, ABT FR PYR, FISS

SH: AAB



SHOW  
230 UNITS

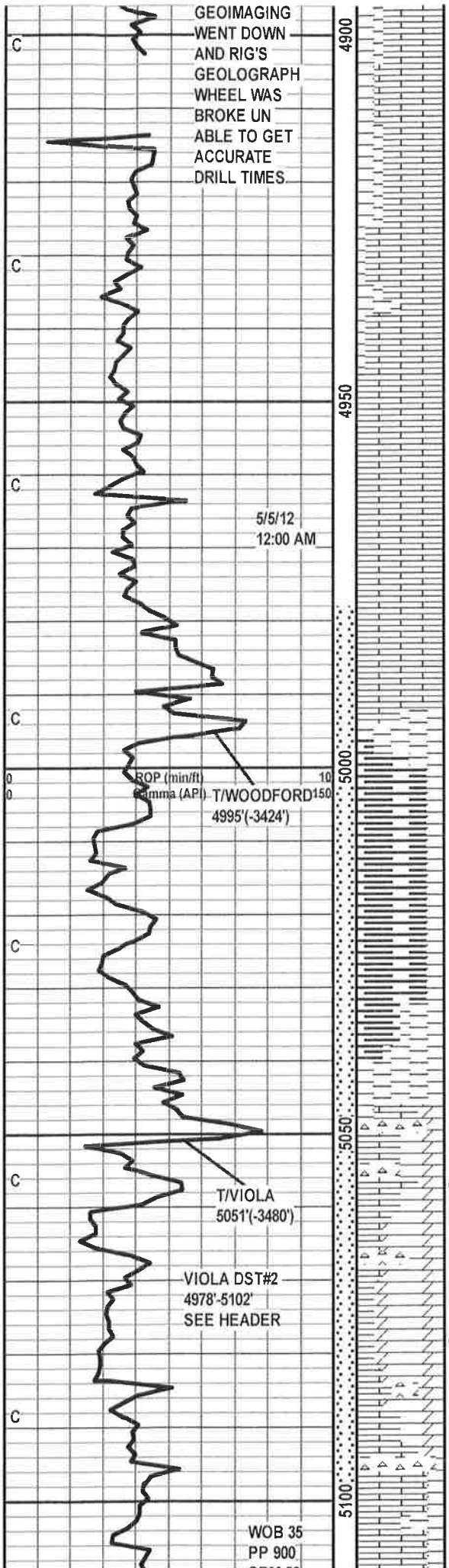
SHOW  
218 UNITS

RIG DOWN WORK ON PUMP

MD CK@ 4743'  
WT-8.9  
V-44  
PV-15  
YP-12  
GEL-6/10  
PH-9.0  
WL-11.2  
CK-2  
CHL-5100  
CA-200  
SOL-3.0  
LCM-8#

TG, C1-C5

500



GEOIMAGING  
WENT DOWN  
AND RIG'S  
GEOLOGRAPH  
WHEEL WAS  
BROKE UN  
ABLE TO GET  
ACCURATE  
DRILL TIMES.

5/5/12  
12:00 AM

ROP (min/ft)  
Gamma (API) T/WOODFORD150  
4995'(-3424')

T/VIOLA  
5051'(-3480')

VIOLA DST#2  
4978'-5102'  
SEE HEADER

WOB 35  
PP 900

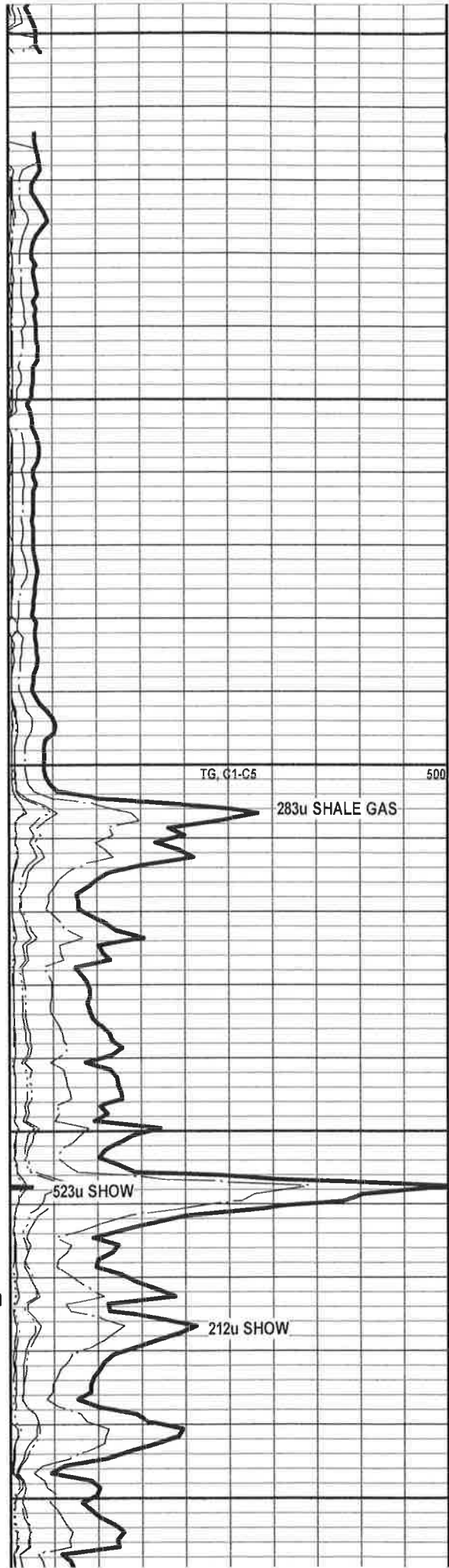
LS: OFF WT-TN-LT GY, V/FN  
MICRO-XLN, HD DNS, TR P.P.POR,  
SHLY, SLI ARG, NO VIS FLU, STN,  
CALC, CUT, OR ODOR

LS: WT- OFF WT-TN-BRN, V/FN  
MICRO-XLN, DNS, HD, SM P.P.POR,  
ARG, CALC, SM V/DUL YEL FLU, NO  
VIS STN, CUT, OR ODOR

SH: DK GY- BLK-DK BRN, V/FN-FN  
TEXT, MD FM, PLTY, SLI CALC, SLI  
PYR'C, RDSH-BRN STRKING, SPKLD  
ORN FLU

LS: OFF WT-TN-BRN, V/FN-FN XLN,  
HD, DNS, TR P.P.POR, V/DOLO'C,  
SLI CHTY, W SM OPA, WHT FRSH  
CHT, CALC, ARG, FOSS, NO VIS  
FLU, STN, CUT, OR ODOR

DOLO: WT-OFF WT-TN-BRN, V/FN-FN  
XLN, SUC, V/GD P.P.POR, LMY I.P.,  
ARG, TR FRSH CHT, NO VIS STN,  
CUT, OR ODOR



TG, C1-C5

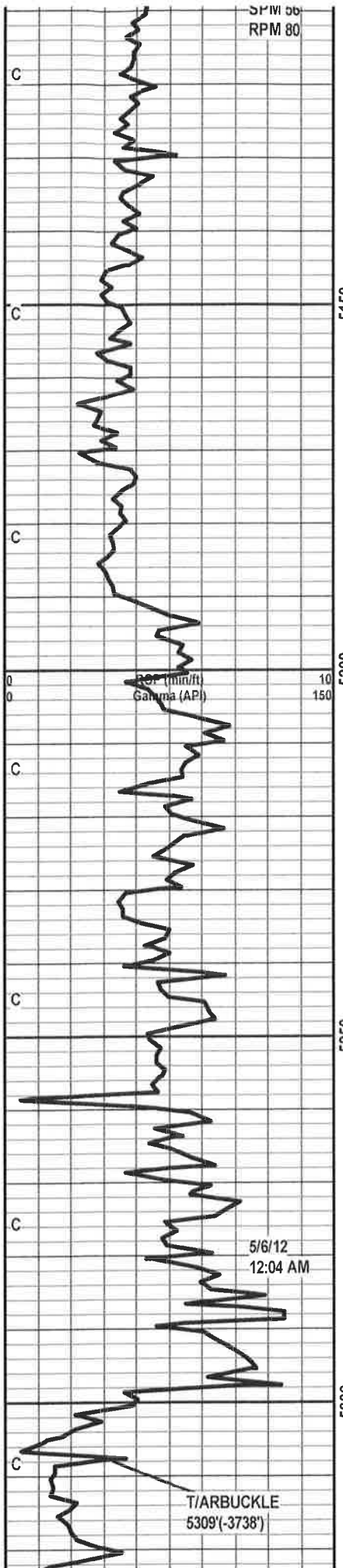
283u SHALE GAS

523u SHOW

212u SHOW



SPW 56  
RPM 80



LS: WT-OFF WT-TN-LT GY, V/FN  
MICRO-XLN, CHLKY, DNS, SLI SHLY,  
ARG, SM GLAU'C, NO VIS STN, CUT,  
OR ODOR

LS: AAB W/ ABNT OFF WT-GRY-TN  
FRSH CHT, FRCTRD I.P., NO VIS  
STAIN OR CUT, WK-GD ODOR

DOLO: OFF WT-TN-BRN, FN XLN ,  
SLI SUC, GD P.P.POR, SLI LMY,  
CHTY, SLI ARG, NO VIS STN, CUT,  
OR ODOR

SH: DK GY-GRN-DK GRN, V/FN  
TEXT, WXY, MD FM-HD, SLI LMY,  
PLTY

SS: CLR-BRN-GY, MD-LG GRND, SB  
ANG-RND, CONS, SHLY, SM DOS,  
PYR'C SPKS, NO VIS FLU, CUT, OR  
ODOR

SH: DK GY-GRN-DK GRN, V/FN-FN  
TEXT, MD FM-HD, V/PLTY, WXY,  
PYR'C

SS: CLR-WHT-OFF WT-GRN-GRY,  
FN-MD GRND, CONS, SUB RND, SLI  
SRTD, SLI SHLY, GLAU'C, PYR'C  
THRUOUT, TR BRT YEL FLU, NO VIS  
STN, CUT, OR ODR

DOLO: OFF WT-TN-BRN, MICRO-XLN  
W/ SM INTER-XLN, SUC, SLI FRI,  
ABT P.P.POR, SM GLAU'C SPKS,  
ARG, SM BRT YEL FLU, V/SLW RNG

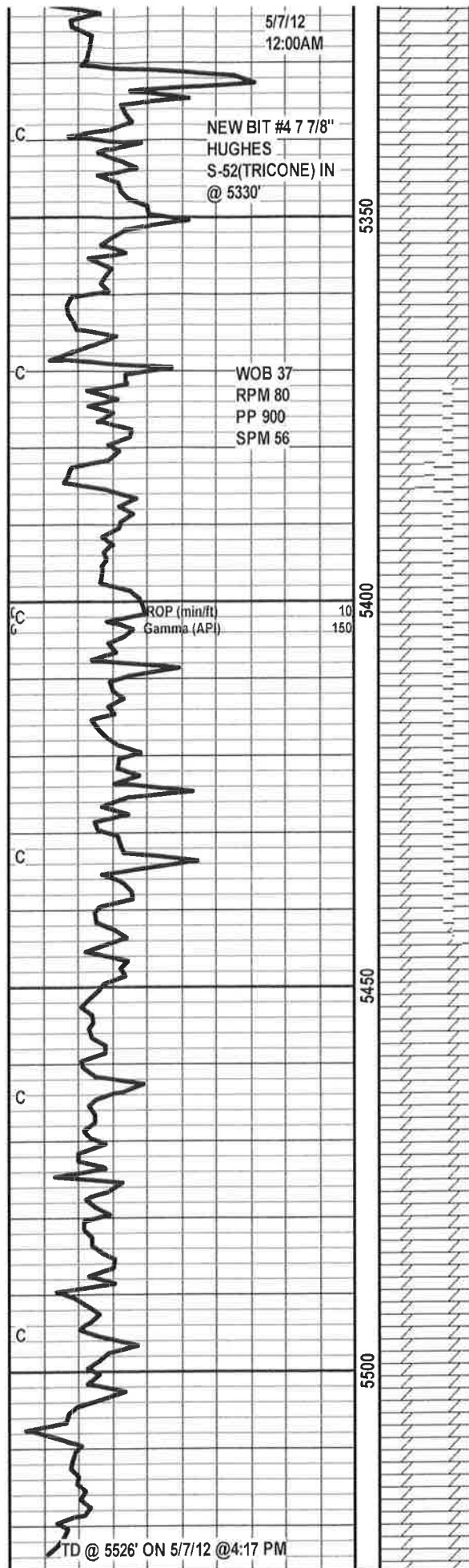
MD CK @ 5127'  
WT-8.8  
V-48  
PV-16  
YP-12  
GEL-6/12  
PH-9.0  
WL-10.8  
CK-2  
CHL-5000  
CA-140  
SOL-3.3  
LCM-10#

POSS SHOW

TG, C1-C5

500

CIRC FOR  
SAMPLES



CUT, NO VIS STN, CUT, OR ODOR

SHORT TRIP TO 4743', CIRC 1 1/2 HR, DROP SURVEY, TOH FOR E-LOGS @ 5330'

DEVIATION @ 5330' = 3/4"

DOLO: OFF WT-TN, MICRO-XLN W/ SM INTER-XLN, FRI, SUC, ARG, GD P.P.POR, SM PYR'C SPKS, SLI SHLY, V/BRT YEL FLU, NO VIS STN, CUT, OR ODOR

DOLO: OFF WT-TN-BRN-GY, MICRO-XLN, HRD, DNS, SM P.P.POR, SHLY, ARG, SLI PYR'C V/DUL YEL FLU, NO VIS STN, CUT, OR ODOR

DOLO: AAB

DOLO: OFF WT-TN-BRN, MICRO TO INTER-XLN, FRI, SLI SUC, V/GD P.P.POR W/ TR VUG, ARG, DUL GRNSH YEL FLU, NO VIS STN, CUT, OR ODOR

DOLO: WT-TN-BRN, V/FN MICRO-XLN, HD, DNS, SLI FOSS, V/DUL BRNSH FLU, NO VIS STN, CUT, OR ODOR

SHORT TRIP TO 5330', CIRC 1 1/2 HR, TOHLDP

