



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

Well Name: M&M Exploration, Inc. Z-Bar 4-7  
Location: Section 4-T34S-R15W  
License Number: 15-007-23913 Region: Aetna  
Spud Date: 8/13/12 Drilling Completed: 08/24/12  
Surface Coordinates: 1980'FNL & 2080'FEL, NE/4  
Bottom Hole As above  
Coordinates:  
Ground Elevation (ft): 1,635' K.B. Elevation (ft): 1,647'  
Logged Interval (ft): 3,830' To: 4,950' Total Depth (ft): 4,950'  
Formation: Pennsylvanian & Mississippian  
Type of Drilling Fluid: Chemical

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

#### OPERATOR

Company: M&M Exploration, Inc,  
Address: Attn: Mr Mike Austin  
4257 Main St.  
Westminster, CO 80031

#### GEOLOGIST

Name: Mr. Mike Pollok  
Company: MAP Exploration, Inc.  
Address: P.O. Box 106  
Purcell, OK 73080

#### DSTs

DST #1 4518'-4557'(CORR. DEPTH), 30-60-30-120, IF: WK SURF BLOW, FF: NO BLOW, IH: 2324, IF: 21-28, ISI: 52,FF: 30-37, FSI: 42,FH:2255, BHT: 124, REC.: 2' MUD

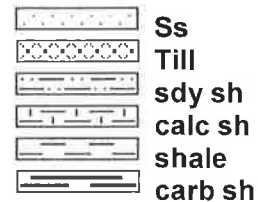
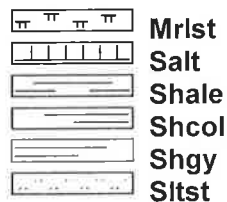
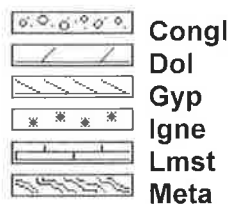
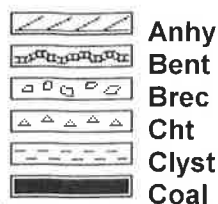
## Comments

Samples: Southwind Rig#70

Mud-logging unit: #5

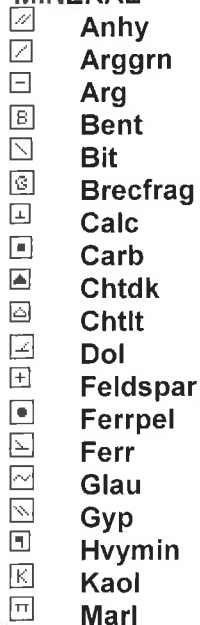
Mud-logger: Beth Brock

## ROCK TYPES

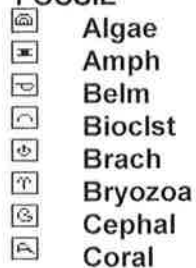


## ACCESSORIES

### MINERAL



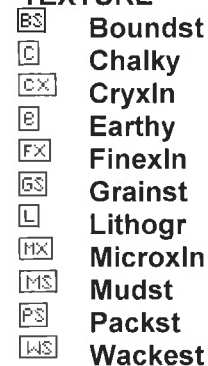
### FOSSIL



### STRINGER



### TEXTURE



## OTHER SYMBOLS

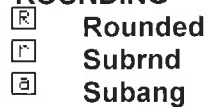
### POROSITY TYPE



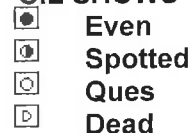
### SORTING



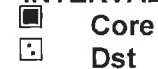
### ROUNDING



### OIL SHOWS

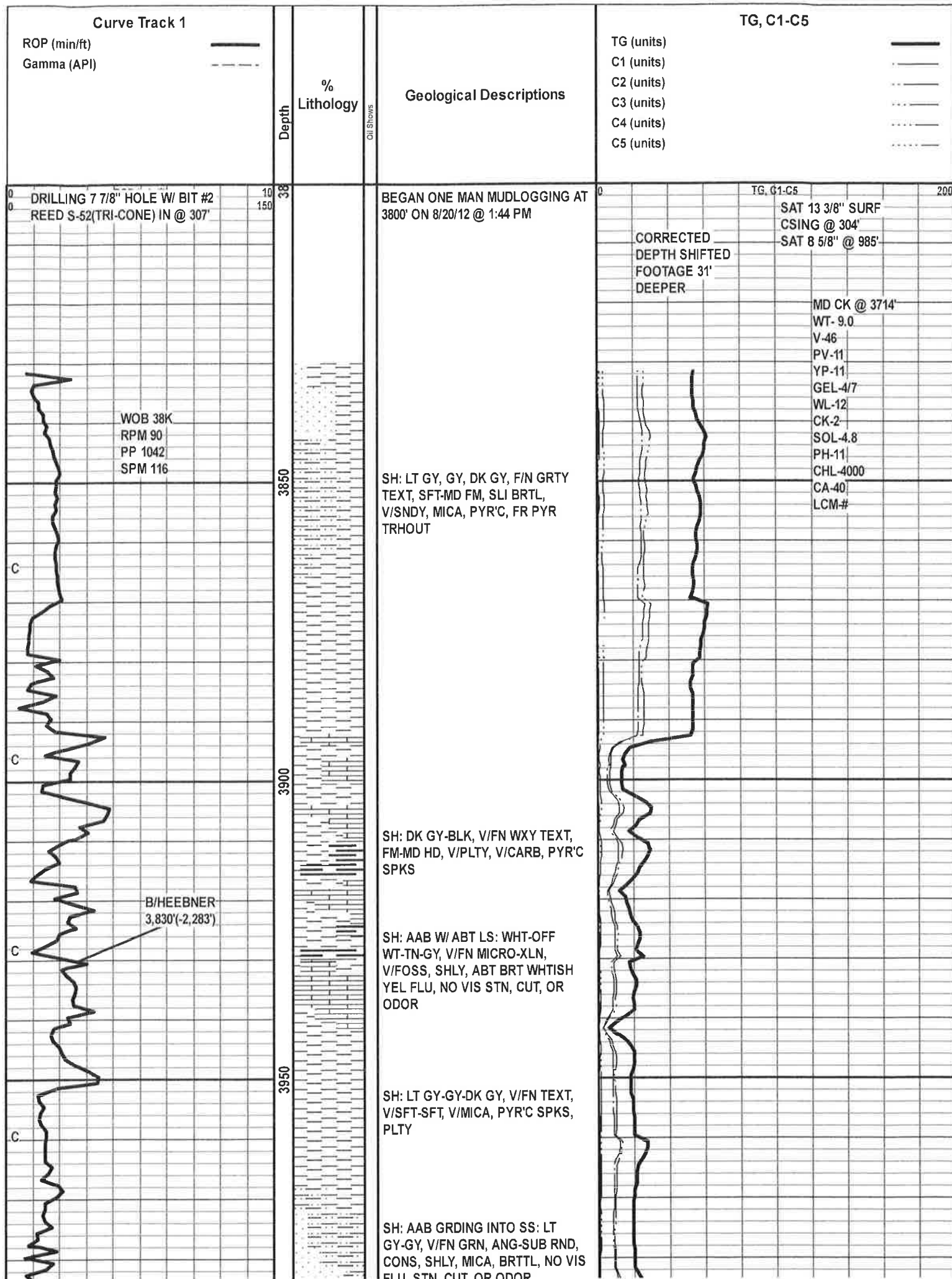


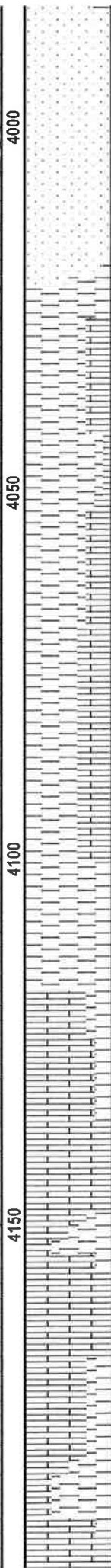
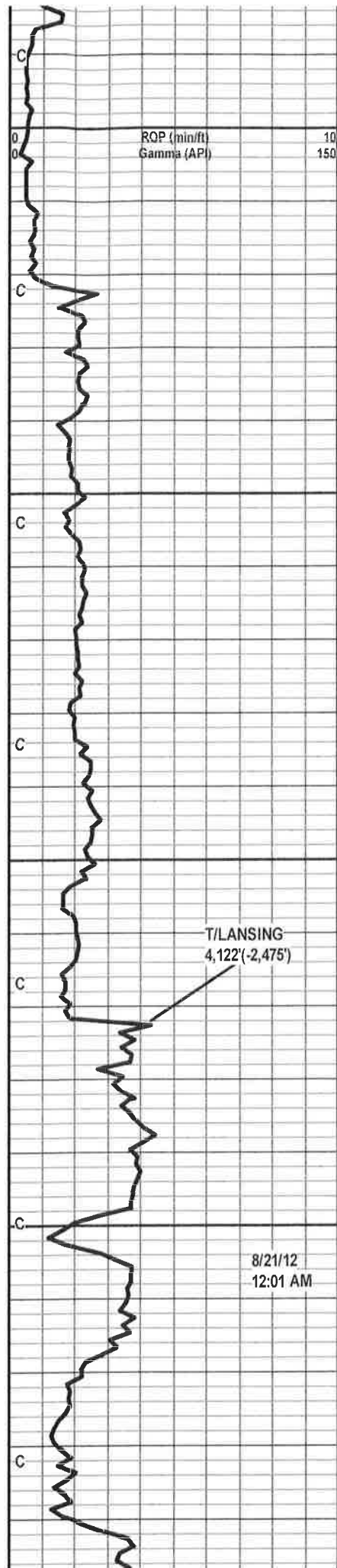
### INTERVALS



### EVENTS







LEG, STR, SON, OR OTHER

SS: LT GY-GY, FN-MD GRN, SUB  
RND-RND, UNIFM, SLI TRNS, GD  
INTER GRN POR, V/BRTL, SLI  
MICA, TR KAOL, NO VIS FLU, STN,  
CUT, OR ODOR

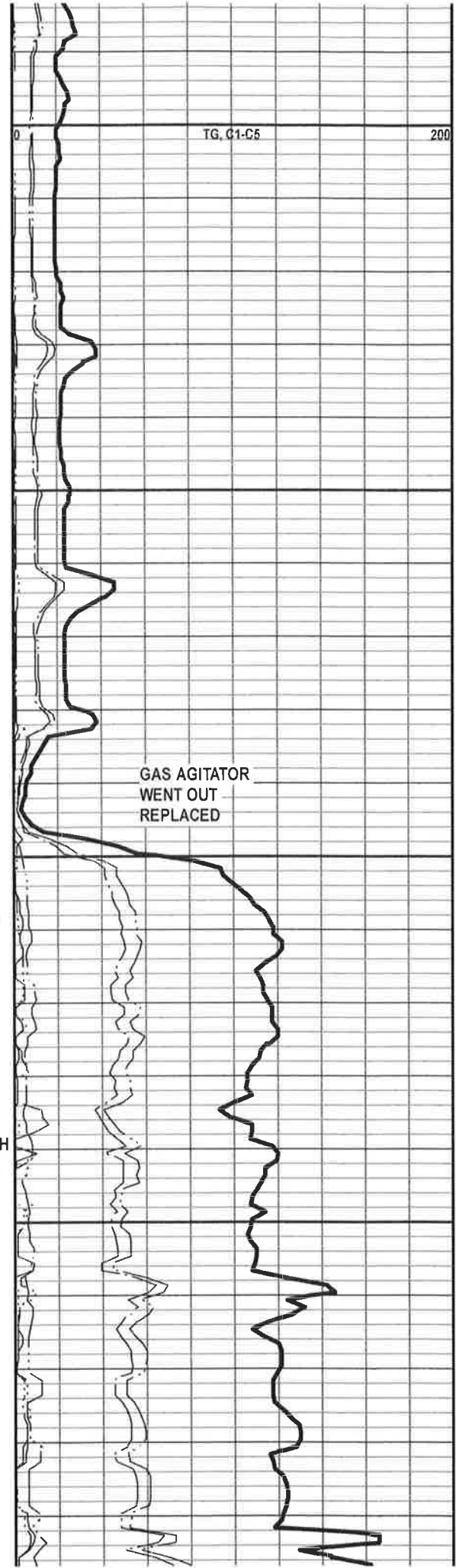
SH: LT GY-GY- DK GY-BRN, V/FN  
TEXT, MD SFT-FM, LMY, FISS, SLI  
MICA, PLTY, SM PYR'C SPKS, FR  
PYR

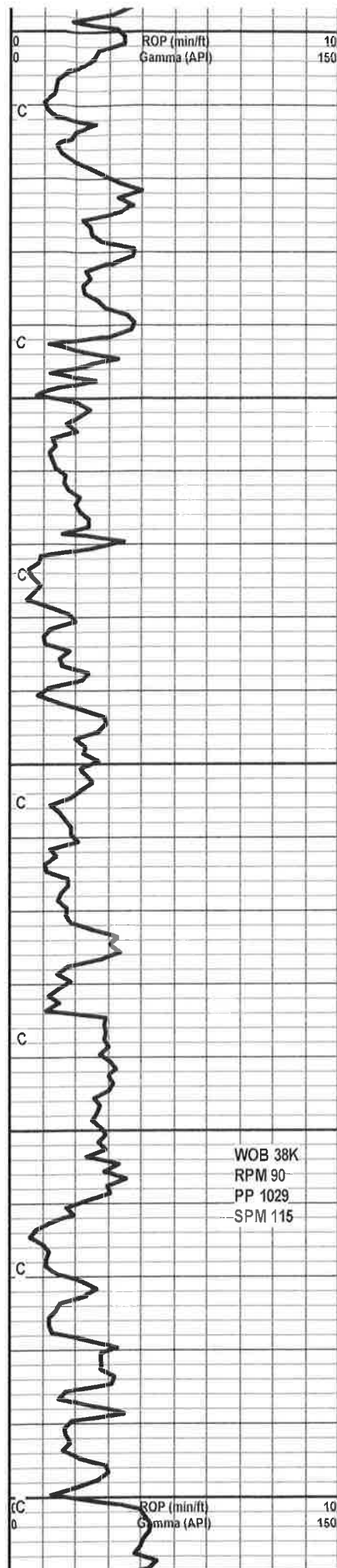
SH: AAB

SH: GY-DK GY-GRN, V/FN TEXT,  
V/SFT-SFT, GLAU'C, MICA, PLTY I.P.

LS: OFF WT-TN-BRN, V/FN  
MICRO-XLN, HD, DNS, V/ARG,  
FOSS, SHLY, CALC, SM DUL BRNSH  
YEL FLU, NO VIS STN, CUT, ODOR

LS: AAB





LS: WT-OFF WT-TN BRN, V/FN  
MICRO-XLN, SLI CHLKY, SM  
P.P.POR, CALC, SM FOSS, ARG,  
ABT BRNSH YEL FLU W/SM BRT  
YEL, NO VIS STN, CUT, OR ODOR

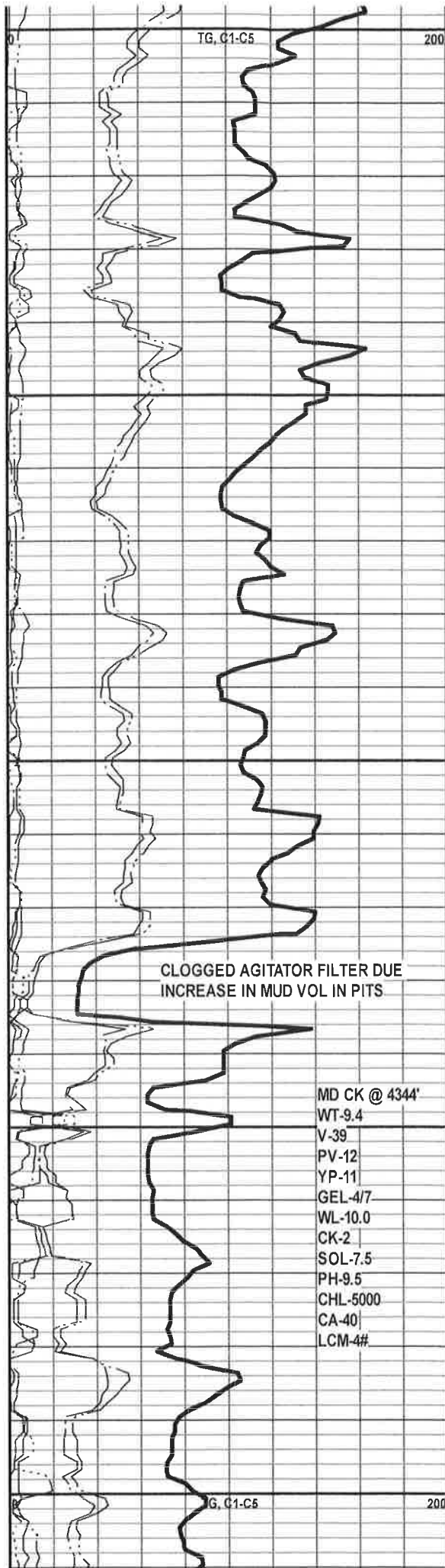
LS: AAB GRDNG INTO LS:  
TN-BRN-DK BRN, MICRO-XLN, SLI  
DNS, GD P.P.POR, OOL'C, ARG, SLI  
FOSS, V/BRT YEL FLU, NO VIS STN,  
CUT, OR ODOR

LS: AAB

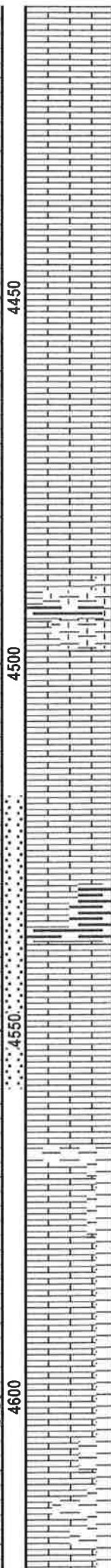
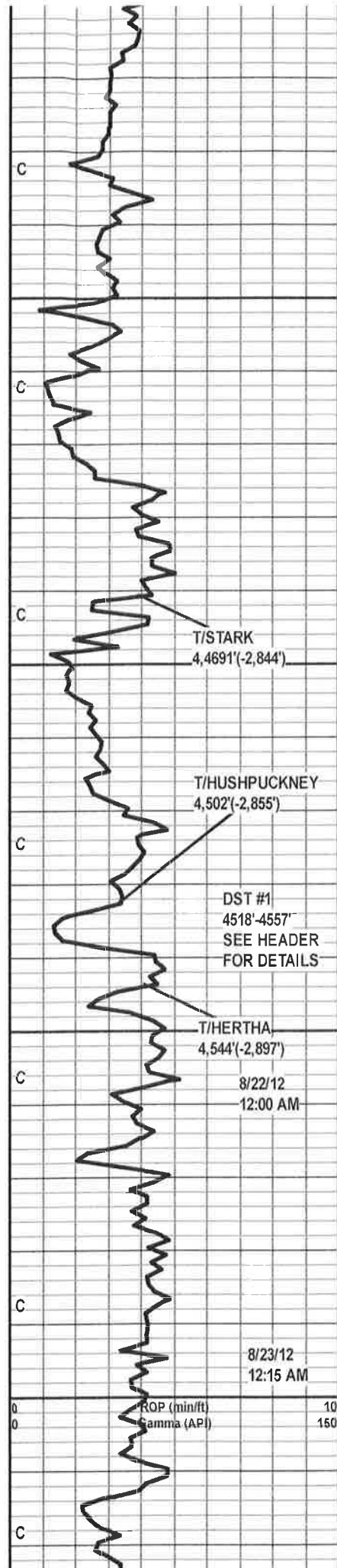
LS: WHT-OFF WT-TN-BRN, SLI DNS,  
MICRO-XLN W/ SM INTER-XLN, GD  
P.P.POR, ARG, SLI FOSS, DUL  
BRNSH-YEL FLU, NO VIS STN, CUT  
OR ODOR

LS: OFF WT-TN-BRN-GY, V/FN  
MICRO-XLN, HD, DNS, ARG, SHLY  
I.P., FOSS, NO VIS FLU, CUT, OR  
ODOR

LS: AAB W/ ABT SH: GY-DK GY,  
V/FN TEXT, MD FM-HD, LMY I.P.,  
FISS, SM MICA SPKS







LS: OFF WT-TN-BRN, V/FN  
MICRO-XLN, HD, DNS, ARG, FOSS,  
NO VIS FLU, STN, CUT, OR ODOR

LS: TN-BRN-DK BRN, MICRO-XLN,  
SLI DNS, SM GD P.P.POR, V/ARG,  
CALC, ABT YEL FLU, TR DOS, NO  
CUT, OR ODOR

SH: DK GY-BLK, V/FN WXY SHNY  
TEXT, MD FM-HD, CARB, PYR'C  
SPKS, FISS CALC

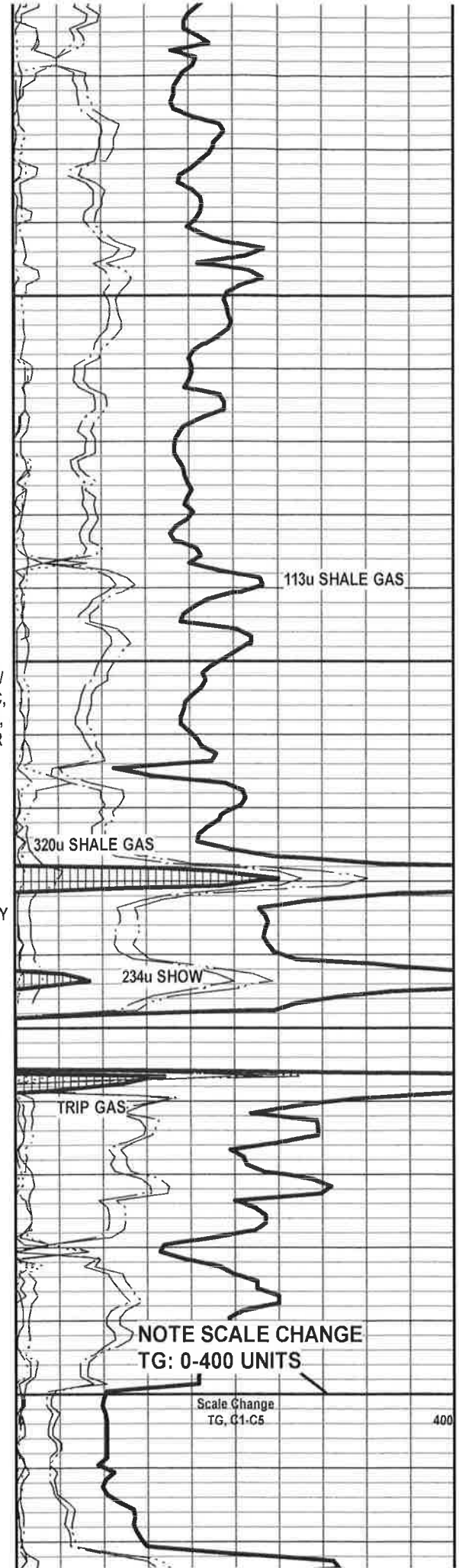
LS: OFF WT-TN-BRN, MICRO-XLN W/  
SM INTER-XLN, SLI OOL'C, SLI SUC,  
GD P.P.POR W/ SM INTER-XLN POR,  
ABT YEL FLU, TR DOS, NO CUT, OR  
ODOR

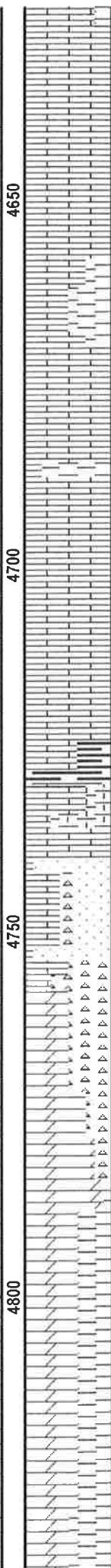
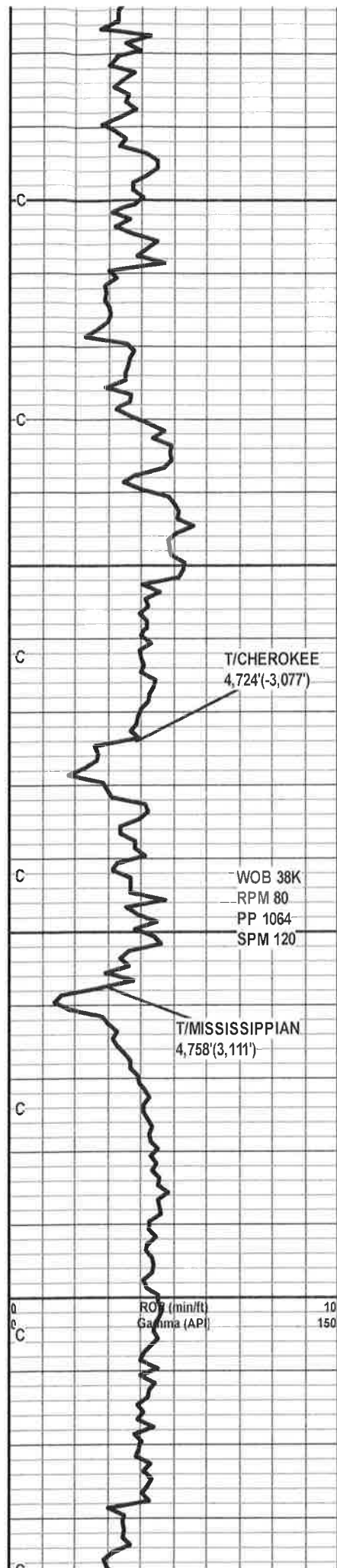
SH: DK GY, BLK, V/FN WXY TEXT,  
MD FM-HD, V/CARB, FISS, VIS GSSY  
BBLES, PYR'C SPKS

LS: OFF WT-TN-BRN-DK BRN,  
MICRO-XLN, SLI SUC, GD P.P.POR,  
SLI MOTT, ABT DUL YEL FLU, W/  
SM BRT YEL FLU, SLI ODOR, TR  
DOS, NO VIS CUT

LS: WT-TN-GY-BRN, V/FN  
MICRO-XLN, HD DNS, TR P.P.POR,  
FOSS, ARG, SHLY, SM BRT YEL  
FLU, NO VIS STN, CUT, OR ODOR

LS: AAB





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

LS: WT-OFF WHT-TN, V/FN  
MICRO-XLN, SM DNS, SLI CHLKY,  
SM P.P.POR, ARG, CALC, BRT YEL  
FLU, NO VIS STN, CUT, OR ODOR

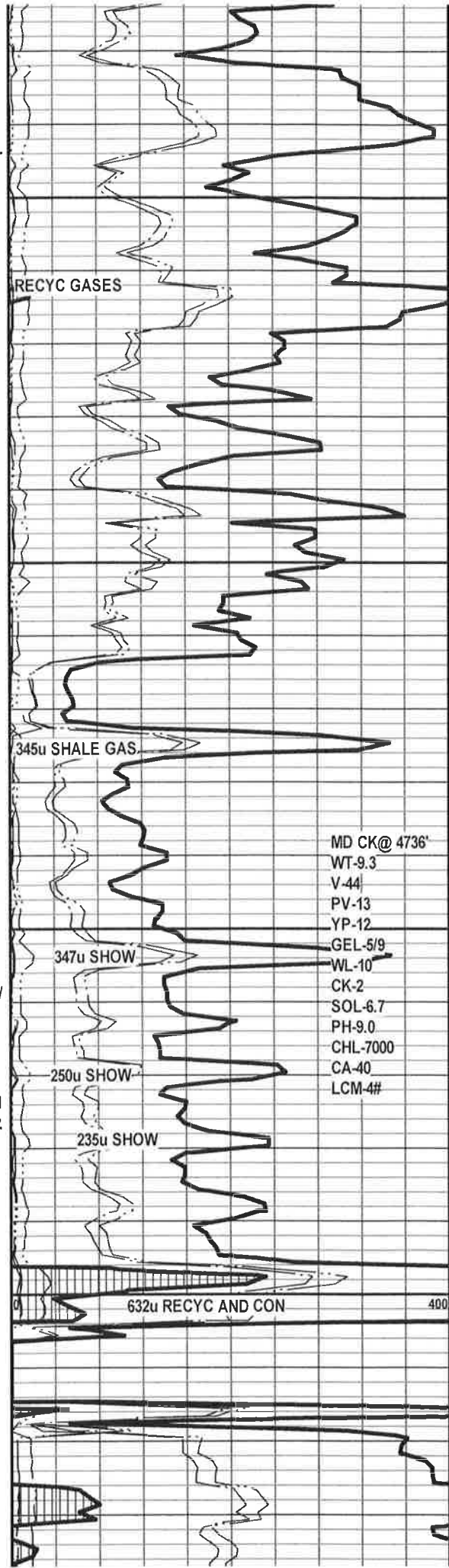
SH: GY-DK GY-BLK, V/FN WXY  
TEXT, MD SFT-FM, PLTY, PYR'C  
SPKS, CARB

CONGL: WT-TN WTHD LS, TN-DK  
BRN FRSH CHT, W/ SS: WT-TN-GY-  
FN-MD GRN, SUBRND-RND, V/SUC,  
V/GD INTER-XLN POR, UNI, ASPHLT  
STNW/SM LOS, YEL FLU, SLW  
STRMING CUT

CHT: TN-BRN-DK BRN-GRN, FRSH W/  
SM TRIPOL'C, P.P.POR, SM  
FRAC, DOLO'C ABT DK OIL STNNG,  
ABT DUL YEL FLU, GD STRMING  
CUT, SLI ODOR

DOLO: TN-BRN-DK BRN, MICRO-XLN  
W/ INTER-XLN, HD, V/SUC, V/GD P.P.  
AND INTER-XLN POR, CHTY, ABT  
YEL FLU, EXC DK STNNG, AND GD  
STRMING CUT

DOLO: LT GY-GY-DK GY, V/FN  
MICRO-XLN, HD, DNS, TR P.P.POR,  
NO VIS STN, CUT, OR ODOR



MD CK@ 4736'  
WT-9.3  
V-44  
PV-13  
YP-12  
GEL-5/9  
WL-10  
CK-2  
SOL-6.7  
PH-9.0  
CHL-7000  
CA-40  
LCM-4#

DOLO; AAB, W/LT GY-MED GY FN  
TXT, PLTY-BLKY, SFT SH

DOLO; LT GY-MED GY, V/FN XLN,  
MOD HD-DNS HD BRTTL, SLI  
ARGL-SHLY THROUGHOUT, SCAT  
CALCITE, NO OIL STN, NO SMPL  
SHOW

TD @ 4,950'  
15 STAND SHORT TRIP  
LDDP  
RUN E-LOGS

WORKING ON  
DRAWWORKS

WELDED DOUBLE  
CLUTCH  
SOLID--BACK TO  
DRILLING @ 5:15AM  
ON 08/24/12

CLUTCH ON  
DRAWWORKS  
EXPLODED @ 4,868'  
ON 08/23/12 @  
8:15PM

R.T.D. @ 4,950' @ 08/24/12 @ 12:50PM