



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

Well Name:	M&M Exploration, Inc.	Z-Bar 9-5
Location:	Sec. 9-34S-14W	Barber Co., Kansas
License Number:	15-007-24068	Region: Aetna SE
Spud Date:	10-5-2013	Drilling Completed: 10-13-2013
Surface Coordinates:	1,900' FNL & 350' FWL, NW/4	
Bottom Hole Coordinates:	As Above	
Ground Elevation (ft):	1,656'	K.B. Elevation (ft): 1,666'
Logged Interval (ft):	3,800'	To: 5,200' Total Depth (ft): 5,200'
Formation:	Pennsylvanian, Mississippian, & Ordovician	
Type of Drilling Fluid:	Chemical	

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: M&M Exploration, Inc.
Address: 4257 Main St., #230
Westminster, CO. 80031

GEOLOGIST

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

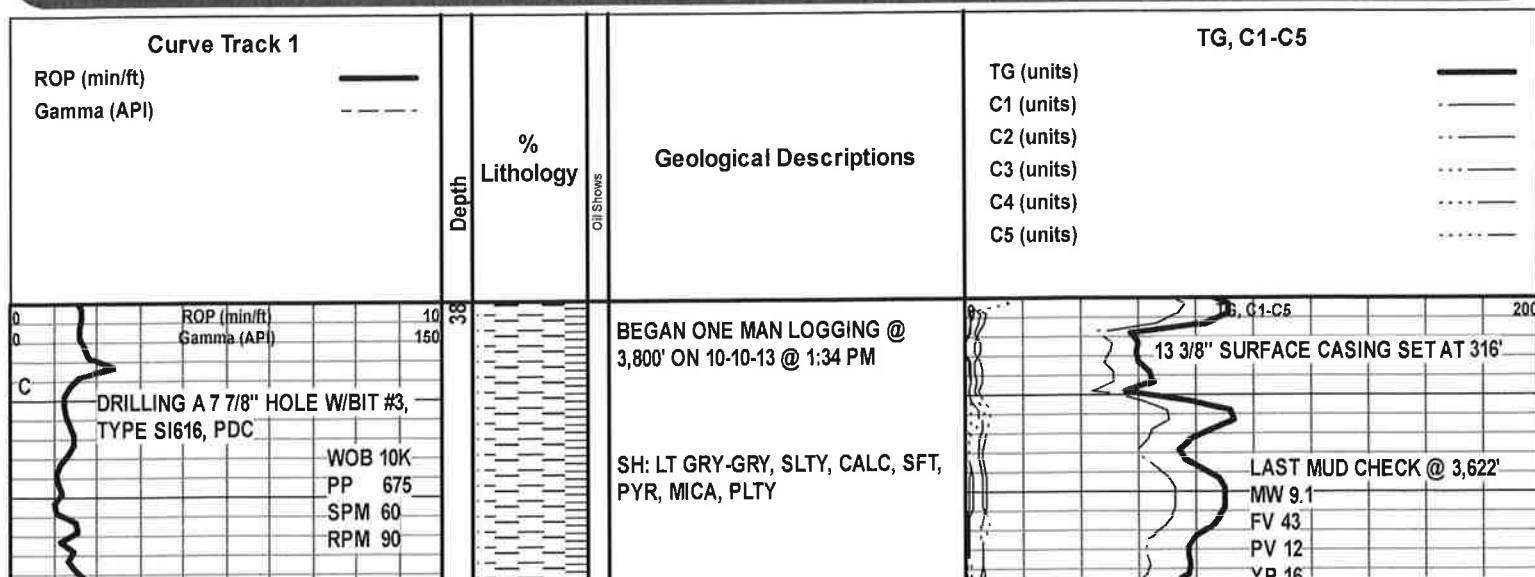
Comments

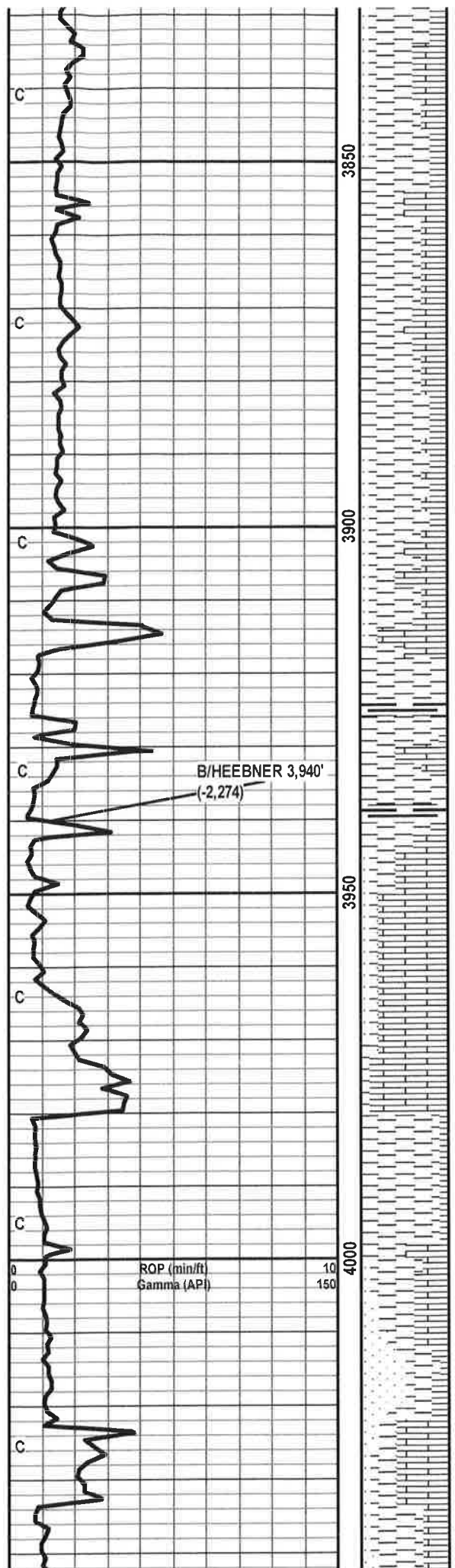
Hardt Drilling, Rig 1 Samples
Mudlogging Unit 1
Mudlogger: Bill Busch

	Anhy		Congl		Mrlst		Ss
	Bent		Dol		Salt		Till
	Brec		Gyp		Shale		sdly sh
	Cht		Igne		Shcol		calc sh
	Clyst		Lmst		Shgy		shale
	Coal		Meta		Sltst		carb sh

MINERAL		Anhy		Minxl		Crin		Gyp
	Arggrn		Nodule		Echin		Ls	
	Arg		Phos		Fish		Mrst	
	Bent		Pyr		Foram		Sltstrg	
	Bit		Salt		Fossil		Ssstrg	
	Brecfrag		Sandy		Gastro			
	Calc		Silt		Oolite		TEXTURE	
	Carb		Sil		Ostra			Boundst
	Chtdk		Sulphur		Pelec			Chalky
	Chtlit		Tuff		Pellet			Cryxln
	Dol				Pisolite			Earthy
	Feldspar		FOSSIL		Plant			Finexln
	Ferrpel			Algae	Strom			Grainst
	Ferr			Amph		STRINGER		Lithogr
	Glau			Belm				Microxln
	Gyp			Bioclst				Mudst
	Hvymin			Brach				Packst
	Kaol			Bryozoa				Wackest
	Marl			Cephal				
				Coral				

POROSITY TYPE	SORTING	Angular	INTERVALS
Earthy	Well		Core
Fenest	Moderate	OIL SHOWS	Dst
Fracture	Poor	Even	EVENTS
Inter		Spotted	Rft
Moldic	ROUNDING	Ques	Sidewall
Organic	Rounded	Dead	
Pinpoint	Subrnd		
Vuggy	Subang		





SH: LT GRY-GRY W/SM DRK GRY,
SLTY W/SM FN, CALC, SFTW/SM
FRM, MICA

SH: AAB W/SM FOSS

SH: LT GRY-GRY-LT GRN-BLK,
SLTY-FN, CALC, SFT-FRM, MICA,
FISS-PLTY, CARB

SH: BLK, WXY, FRM-HRD, SL CALC,
BLKY, SL CARB

LS: WHT-CRM-BFF-BRN-GRY,
XLN-MEDW/SM DNS & SUCR,
FRI-BRTL-HRD W/SM SFT, EXCLNT
VUG-GD PP POR, MITTL'D I.P., ARG,
MLD'C, DLL & BRT FLU, NO VIS STN,
CUT, OR ODOR

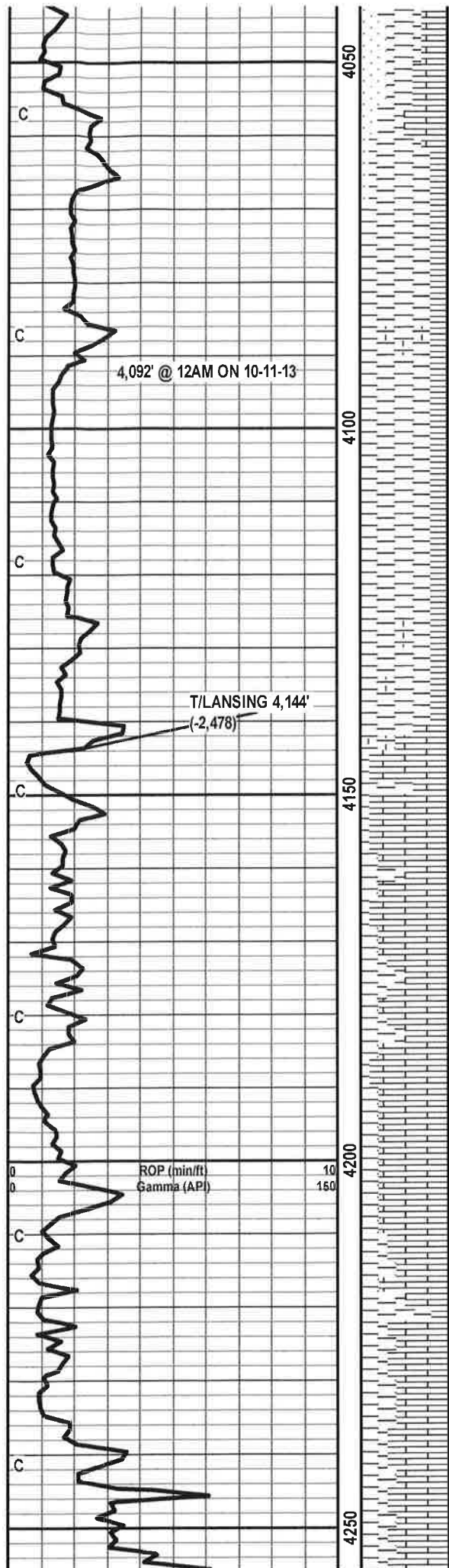
SS: WHT-LT GRY, MED-FN, SUB
RND-SUB ANG, CLR & FROS GRNS,
CONS, CALC, GLAU'C SPKS, MICA,
NO FLU, STN, CUT, OR ODOR

GEL 8/15
WL 13.9
CK 2/32
SLD 5.2
pH 10.0
CHL 5500
CA 180
LCM 0

SHALE GAS 176u

TG, Q1-C5

200



SS: AAB W/ SM LS: OFF
WHT-CRM-BRN-GRY,
MED-SUCR-MLD'C, BRTL-HRD, ARG,
MTTL'D, FOSS, VUG-GD PP POR,
BRT FLU, NO VIS STN, CUT, OR
ODOR

SH: LT GRY-GRY-BLK W/TR GRN,
FN-SLTY, CALC I.P., SFT-MOD FRM
W/SM BRTL, PYR, MICA, PLTY-BLKY

SH: AAB W/SM FISS & CARB

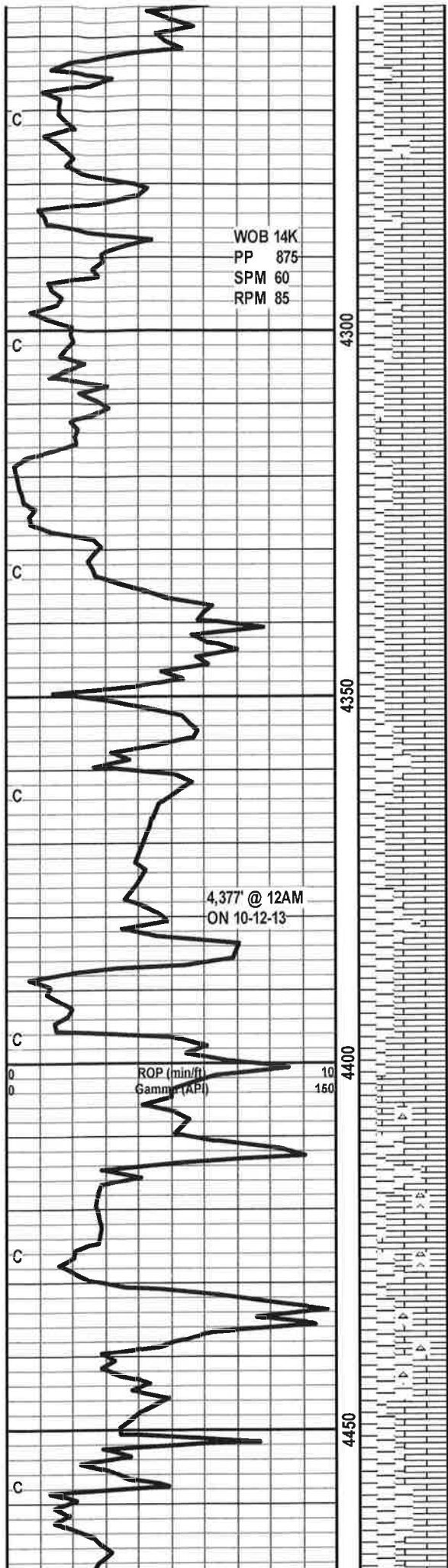
LS: WHT-OFF WHT-CRM-BRN-BFF-LT
GRY, MED W/TR XLN-CHKY,
SFT-BRTL-HRD, ARG & MTTL'D I.P.,
GD PP POR, DLL W/SM BRT FLU,
NO VIS STN CUT, OR ODOR

LS: AAB W/SM FOSS & PYR

LS: WHT-BFF W/SM LT GRY,
MED-DNS-CHKY W/TR SUCR,
BRTL-HRD-SFT, TR MLD'C, TR ARG,
PP W/ TR VUG POR, DLL FLU, NO
VIS STN, CUT, OR ODOR

TG, C1-C5

200



LS: WHT-CRM-BFF-BRN, XLN-DNS
W/SM MED & TR CHKY, HRD-BRTL
W/TR SFT, SM ARG, PYR, FOSS, SM
PP W/TR FRACPOR, DLL FLU, NO
VIS STN, CUT, OR ODOR

LS: OFF WHT-CRM-BFF-BRN-LT GRY,
DNS-XLN-SUCR W/SM MLD'C & TR
CHKY, HRD W/SM BRTL & TR SFT,
SM ARG, FOSS, PYR, PP W/TR VUG
POROSITY, DLL FLU, NO VIS STN,
CUT, OR ODOR

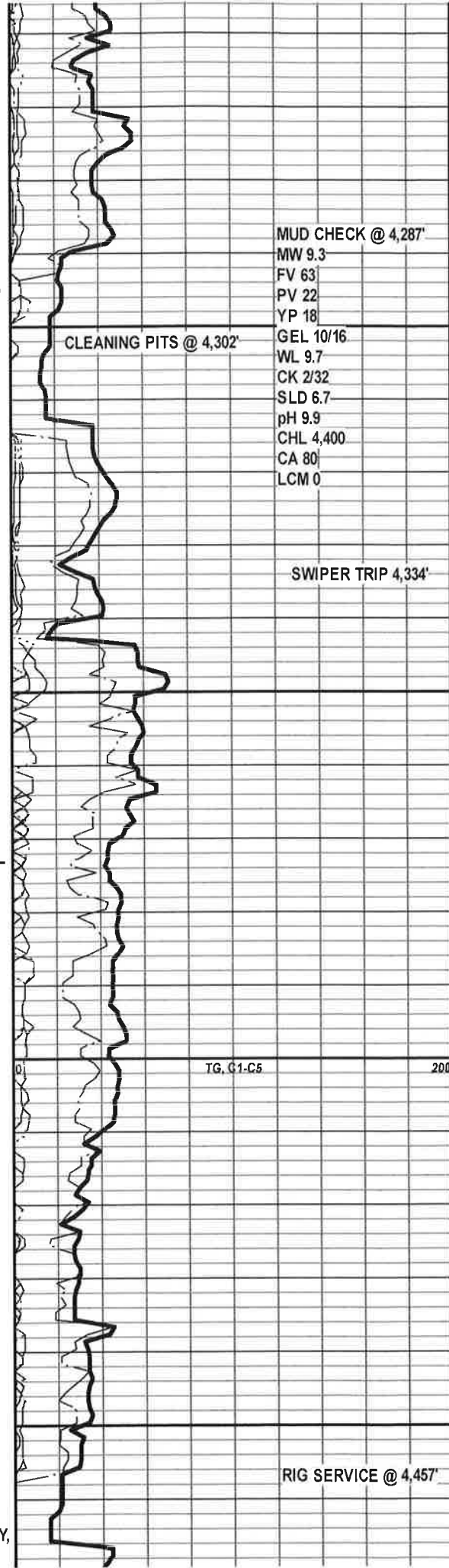
LS: OFF WHT-WHT-BFF W/SM GRY,
MED-DNS W/SM XLN, HRD-BRTL,
CHRT, PYR, SM ARG, SL CHKY I.P.,
PR PP W/SM FRAC POR, SM DLL
FLU, NO VIS STN, CUT, OR ODOR

LS: CRM-BFF-BRN-LT GRY,
MED-XLN-DNS, HRD-BRTL, ARG I.P.,
FOSS, PYR, CHKY I.P., PP POR, DLL
FLU, NO VIS STN, CUT, OR ODOR

LS: AAB

LS: CRM-BFF-BRN-LT GRY,
MED-FN-DNS-CHKY, HRD-BRTL
W/SM SFT, PYR, CHRT, ARG I.P.,
PP-FRAC POR, DLL FLU, NO VIS
STN, CUT, OR ODOR

SH: LT GRY-GRY-BLK, FN-SLT-Y-WXY,
CALC, SFT-FRM-HRD-BRTL, MICA,



MUD CHECK @ 4,287'

MW 9.3

FV 63

PV 22

YP 18

GEL 10/16

WL 9.7

CK 2/32

SLD 6.7

pH 9.9

CHL 4,400

CA 80

LCM 0

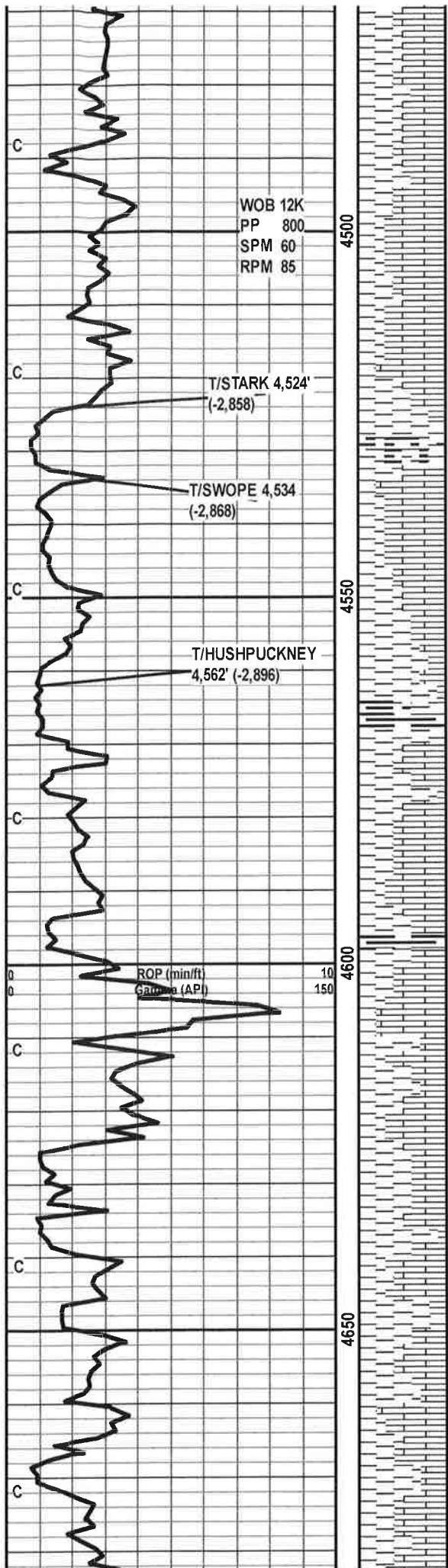
CLEANING PITS @ 4,302'

SWIPER TRIP 4,334'

TG, C1-C5

200

RIG SERVICE @ 4,457'



CHRT, CARB, BLKY-FISS-SPL

LS: CRM-BF-BRN W/SM WHT,
SUCR-MED W/SM XLN,
HRD-BRTL-MOD FRI, ARG, FOSS, SL
DOLO'C I.P., EXCLNT PP-INTR XLN
W/SM FRAC POR, DLL FLU, NO VIS
STN, CUT, OR ODOR

SH: BLK, WXY-FN, HRD, CARB,
BLKY-SPL

LS: BFF-BRN-DRK BRN W/SM CRM,
FN-MED-SUCR, FRM-FRI-BRTL, SL
CHKY, DLL FLU, NO VIS STN, CUT,
OR ODOR

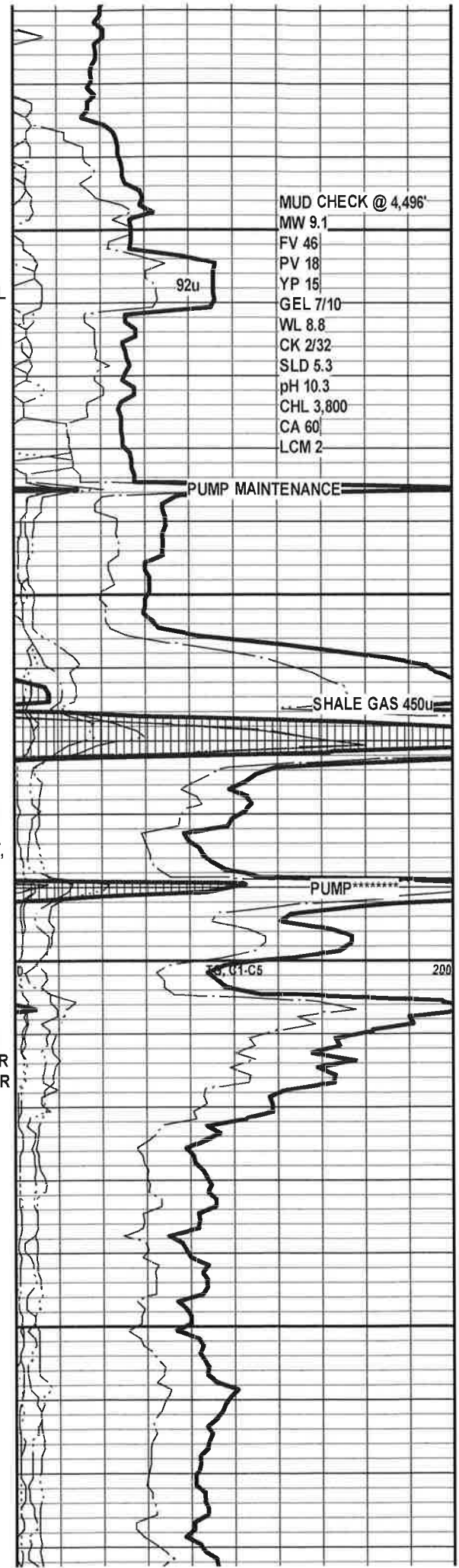
SH: BLK-DRK GRY, WXY-FN, HRD,
CARB, PLTY-BLKY

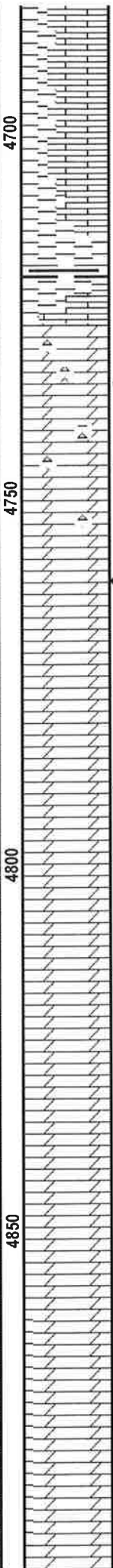
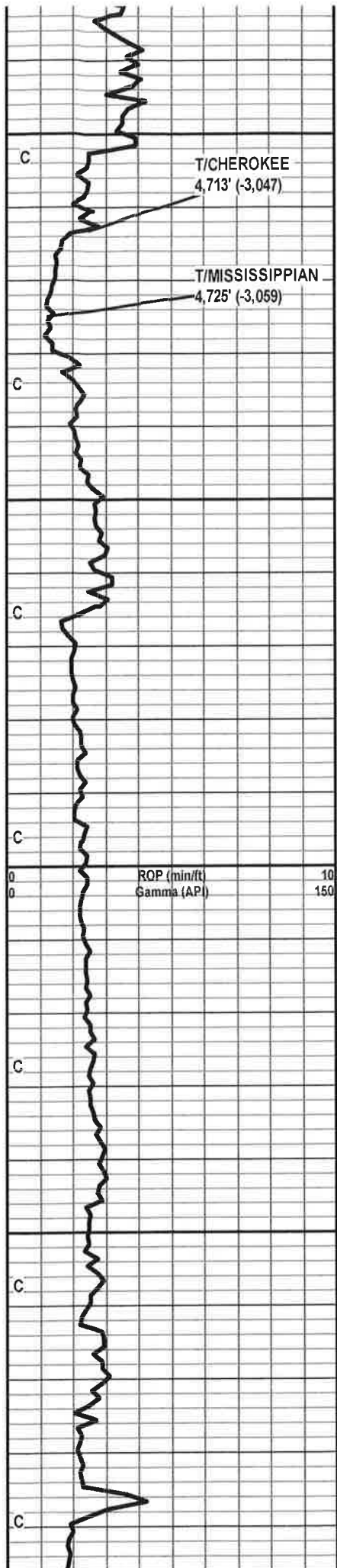
LS: TR WHT-CRM-LT BRN-DRK BRN,
XLN-SUCR-MED W/SM FN,
FRI-BRTL-HRD,CHRT, FOSS, ERTHY,
GD PP-INT XLN-FRAC POR, DLL
W/TR BRT FLU, NO VIS STN, CUT,
OR ODOR

LS: CRM-BRN-LT GRY, XLN-FN-MED
W/TR SUCR, HRD-BRTL, ARG I.P., TR
DOLO'C, CHRT, PP-FRAC W/TR INTR
XLN POR, DLL FLU, NO VIS STN,
CUT, OR ODOR

LS: CRM-BFF-BRN-GRY,
XLN-FN-DNS, HRD-BRTL, ARG,
CHRT, FOSS, PR PP W/SM FRAC
POR, DLL FLU, NO VIS STN, CUT,
OR ODOR

LS: AAB





SH: BLK-GRY-LT GRN,
WXY-SLTY-FN, CALC, SFT-FRM-HRD,
CARB, GLAU'C I.P.

DOLO: BFF-BRN-DRK BRN-LT GRN,
SUCR-MED, HRD-BRTL, CHRT, LMY,
TR FOSS, GD PP-INTR XLN POR,
BRT FLU, BRN STN, GD STRMG CUT,
GD ODOR

DOLO: BRN-BFF-CRM-ABNDT LT
GRN, SUCR-MED-FN, BRTL-HRD
W/SM MOD FRM & TR FRI, LMY I.P.,
CHRT, BRT FLU, BRN STN, FLSH
CUT, STRONG OIL ODOR

DOLO: ABNDT LT GRN W/SM
BRN-BFF-CRM, FN-SUCR, HRD-BRTL,
DLL W/ SM BT FLU, GD STRMG CUT,
BRN STN, GD ODOR

DOLO: AAB W/FR ODOR & SLW
STRMG CUT

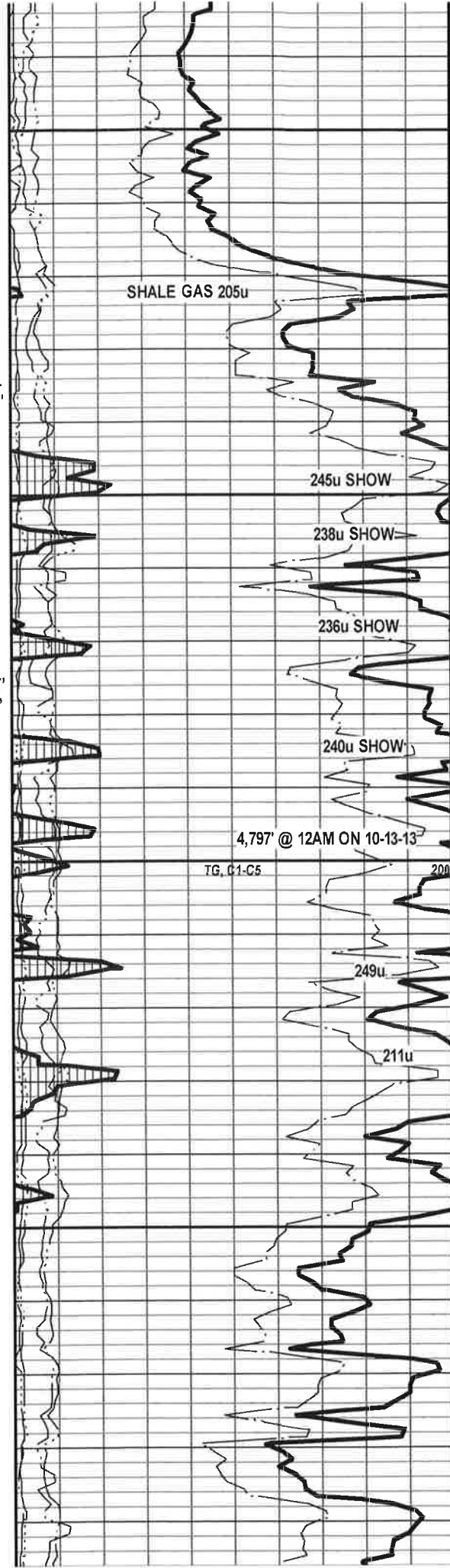
DOLO: GRY-GRN GRY W/SM BRN,
FN W/ SM SUCR, HRD-BRTL, PP
POR, DLL W/TR BRT FLU, SM BRN
STN, SLW RNG CUT, V/FNT ODOR

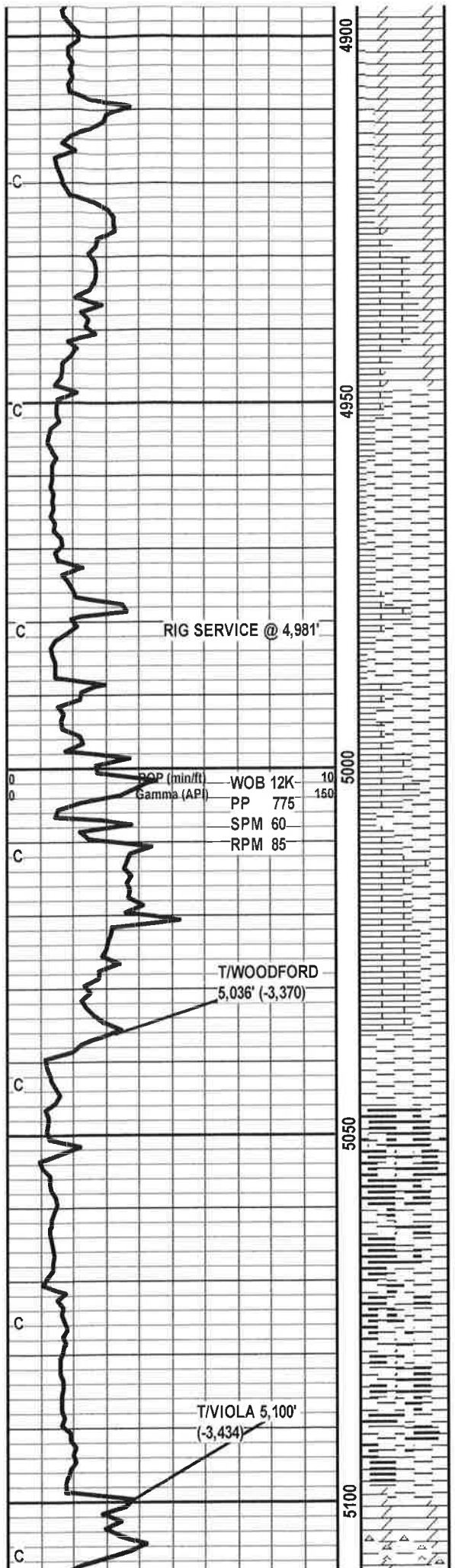
DOLO: AAB W/TR BRN

DOLO: LT GRY-GRY, FN-SUCR,
HRD-BRTL, NO FLU, NO VIS STN,
CUT, OR ODOR

DOLO: AAB

DOLO: AAB W/TR SH: LT GRY-GRY,
FN, FRM-HRD, CALC, PYR, SPL





DOLO: LT GRY-LT GRN GRY,
V/FN-FN, BRTL-FRM W/TR FRI,
GLAU'C SPKS, TR CHRT, PP-INTR
XLN POR, NO FLU, STN, CUT, OR
ODOR

LS: BRN-RED BRN, V/FN-FN-MED,
HRD-BRTL, DOLO'C, PR PP W/TR
FRAC POR, NO FLU, STN, CUT, OR
ODOR

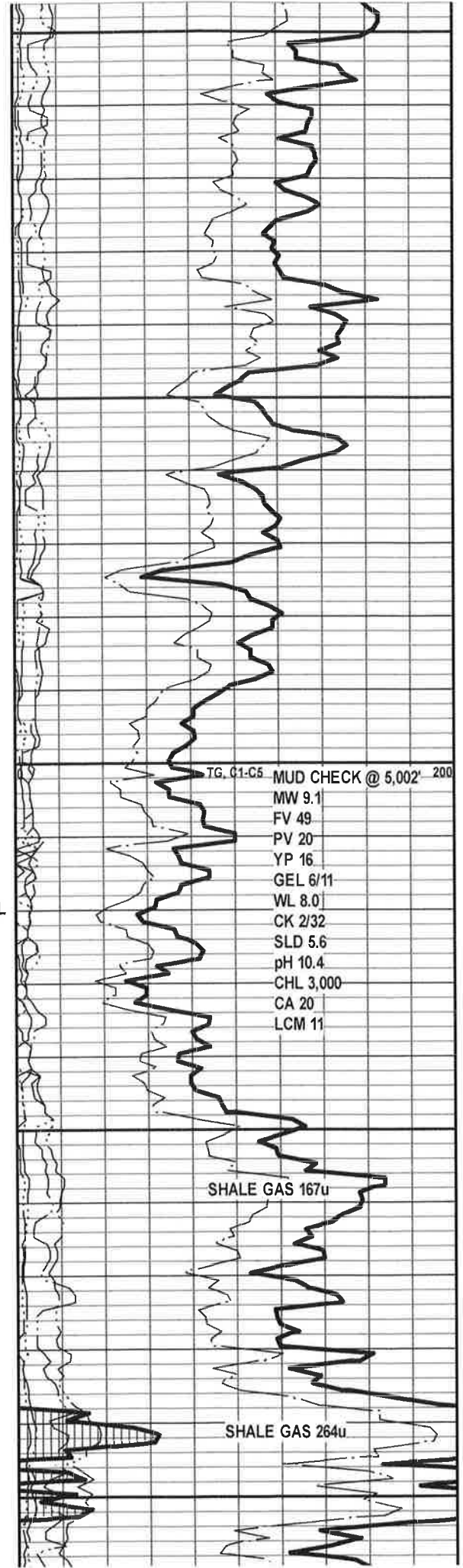
SH: GRY-DRK GRN GRY, FN-SLT,
SFT-FRM-HRD, V/CALC, PLTY-SL
BLKY

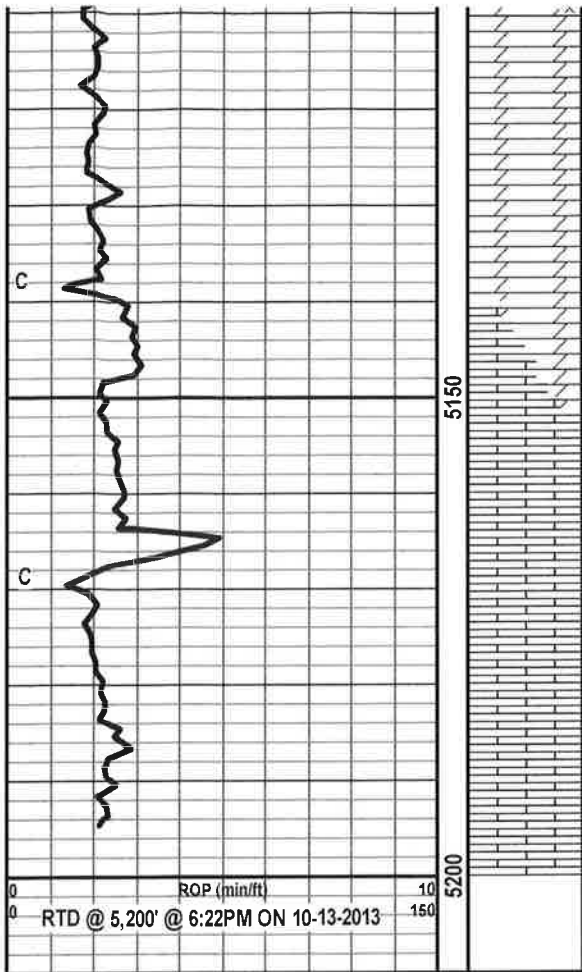
SH: AAB

LS: CRM-OFF WHT-BFF-GRY,
XLN-DNS-FN W/TR CHKY, HRD-BRTL
WSM SFT, ARG, PYR, PR PP W/SM
FRAC POR, NO FLU, STN, CUT, OR
ODOR

SH: DRK GRY-BRN-BLK,
WXY-FN-SLT, BRTL-HRD, CALC,
MICA I.P., PTY-BLKY, CARB

SH: AAB





DOLO: CRM-BRN-DRK BRK-OFF
WHT-GRY, FN-MED-SUCR,
FRM-HRD-BRTL W/TR SFT, V/LMY,
PP POR, SM DLL FLU, NO VIS STN,
CUT, OR ODOR

LS: WHT-CRM-GRY-BRN-BFF,
CHKY-FN-MED-SUCR, ARG, DOLO'C
I.P., PP-INTR XLN POR,

LS: AAB W/ SM FRI & ERTY

SHORT TRIP TO 4,334', CIRC 45
MINS, TOH FOR E-LOGS

