



MID CONTINENT WELL LOGGING SERVICE, INC.

CONTINUOUS WELL LOGGING / COMPLETE HYDROCARBON ANALYSIS

2222 WESTPARK DR. STE. A
NORMAN, OK 73069
OFFICE (405) 360-7333
OPERATIONS (405) 590-3655
SALES (405) 203-9989

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

Well Name: Lanie 3408 3-32H
Location: Section 32 T34S R8W SEC. 32
License Number: API# 15-077-21989-0100
Spud Date: 12/17/2013
Surface Coordinates: 390' FSL & 1,720' FEL of SECTION 32, T34S, R8W
Region: Harper Co.
Drilling Completed: 1/6/2014

Bottom Hole 330' FNL & 660' FEL of SECTION 32, T34S, R8W
Coordinates: Logged by Brett Clark/Trey Creasy
Ground Elevation (ft): 1,237' K.B. Elevation (ft): 1,255'
Logged Interval (ft): 3,400' To: 9,301' Total Depth (ft): 9,301'
Formation: Miss Unconformity
Type of Drilling Fluid: Water Based Mud

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Sandridge Energy, INC.
Address: 123 Robert S. Kerr Avenue, Ste. 2430
Oklahoma City, Oklahoma 73102-6406

GEOLOGIST

Name: TAMMY ALCORN
Company: Sandridge Energy, Inc
Address: 123 Robert S. Kerr Avenue, Ste. 2430
Oklahoma City, Oklahoma 73102-6406

Comments

LARIAT DRILLING CO.; LARIAT 40
RIG MANAGERS: PAUL JONES, WILLIAM TUCKER

ARROW DIRECTIONAL AND MWD:
DIRECTIONAL DRILLERS: ROY RAMSEY, JOEY BLAKENEY
MWD ENGINEER: RICHARD BOYANTON, ROBERT HLADIK

AES DRILLING FLUIDS; EDMOND, OK
ENGINEER: JON PEARSON

MID CONTINENT WELL LOGGING SERVICES, INC.; NORMAN OK. LOGGING UNIT #1023
LOGGERS : BRETT CLARK AND TREY CREAMY
Begin logging on 12/21/2013
Finished logging on 1/6/2014 @ MD 9,301'

ROCK TYPES

	Sndylm
	Anhy
	Bent
	Brec
	Cht
	Clyst

	Coal
	Leach
	Congl
	Dol
	Gyp
	Igne

	Lmst
	Meta
	Mrlst
	Salt
	Shale
	Shcol

	Shgy
	Ss
	Till
	Hotsh
	Sltst

ACCESSORIES

MINERAL

	Anhy
	Arggrn
	Arg
	Bent
	Bit
	Brecfrag
	Calc
	Carb
	Chtdk
	Chtlt
	Dol
	Feldspar
	Ferrpel
	Ferr
	Glau
	Gyp
	Hvymin
	Kaol
	Marl

	Minxl
	Nodule
	Phos
	Pyr
	Salt
	Sandy
	Silt
	Sil
	Sulphur
	Tuff

FOSSIL

	Algae
	Amph
	Belm
	Bioclst
	Brach
	Bryozoa
	Cephal
	Coral

	Crin
	Echin
	Fish
	Foram
	Fossil
	Gastro
	Oolite
	Ostra
	Pelec
	Pellet
	Pisolite
	Plant
	Strom

STRINGER

	Anhy
	Arg
	Bent
	Coal
	Dol

	Gyp
	Ls
	Mrst
	Ssstrg
	Sltstrg

TEXTURE

	Boundst
	Chalky
	Cryxln
	Earthy
	Finexln
	Grainst
	Lithogr
	Microxln
	Mudst
	Packst
	Wackest

OTHER SYMBOLS

POROSITY

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy
- New symbol

- New symbol
- Sndylm
- New symbol

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

OIL SHOW

- Even
- Spotted
- Ques

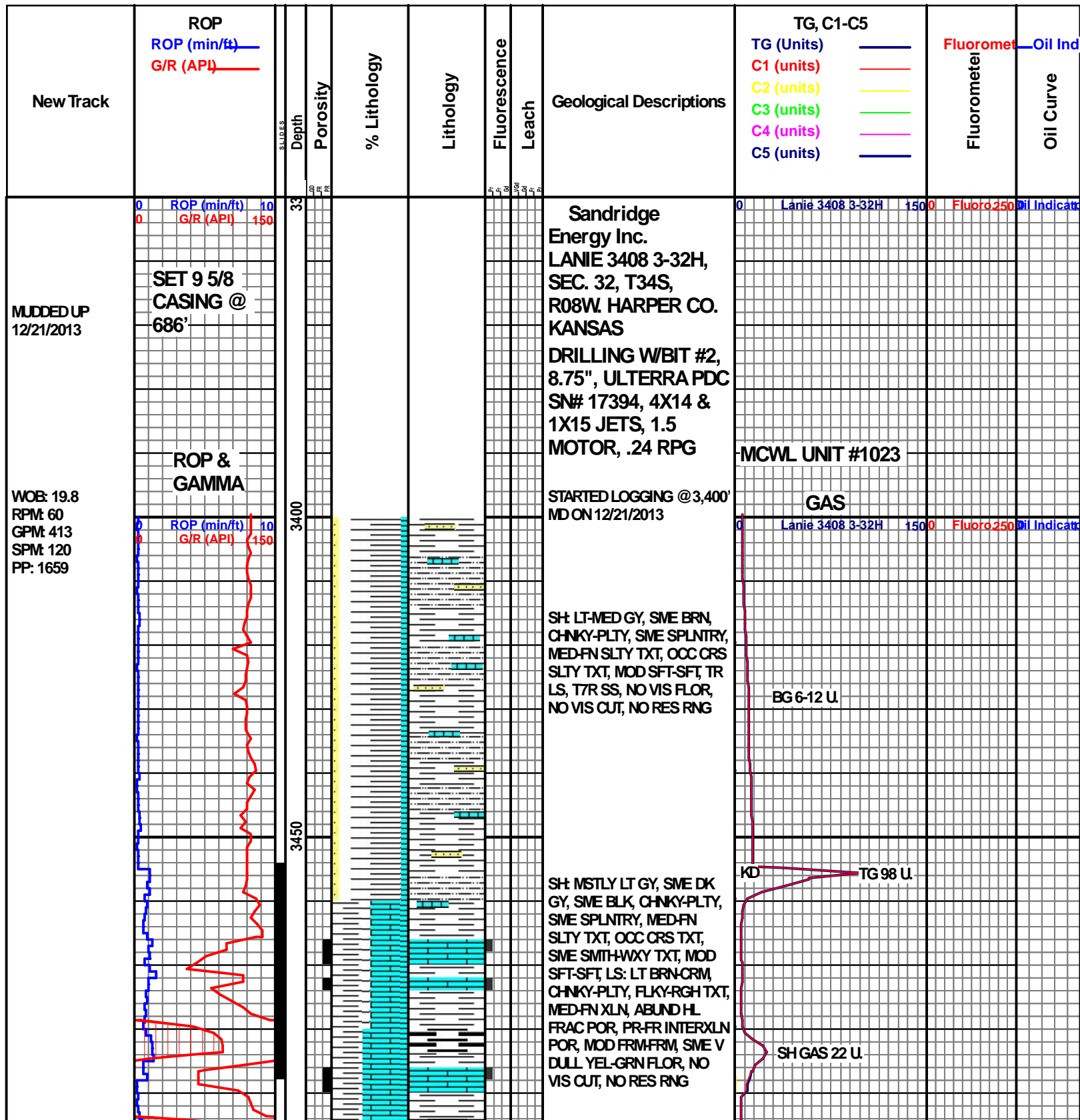
- Dead

INTERVAL

- Core
- Dst

EVENT

- Rft
- Sidewall

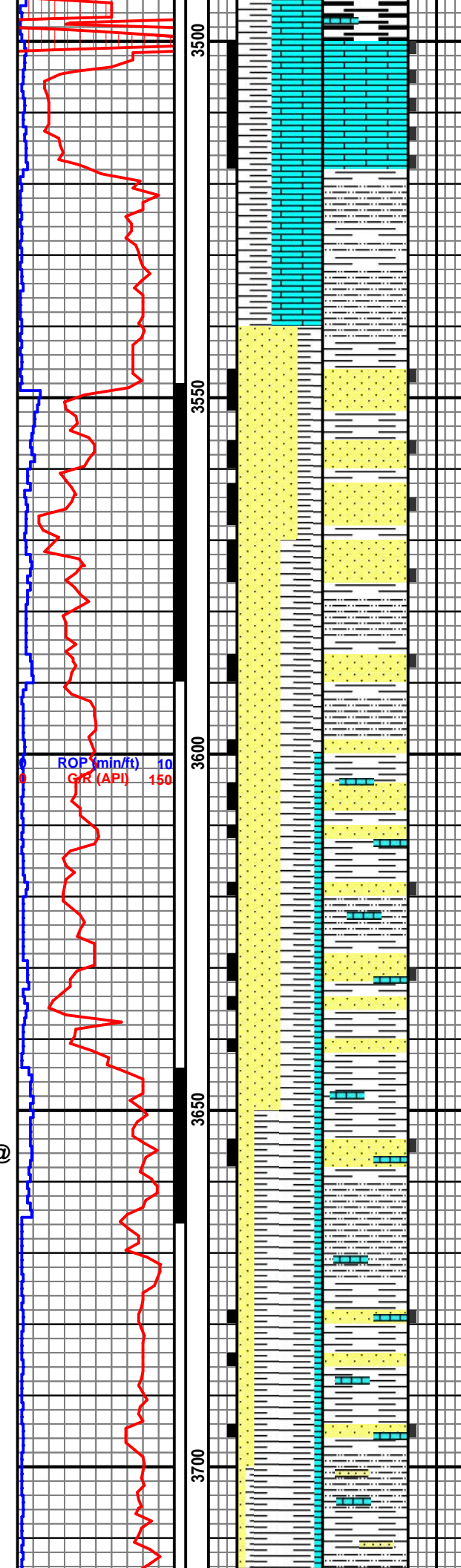


MD 3494 TVD 3483
INC 4.7 AZ 85.2
VS 48.94
WT: 8.9
VIS: 48

WOB: 23.1
RPM: 69
GPM: 413
SPM: 117
PP: 1676

12/22/2013 @
MD 3,653'

WT: 9.0
VIS: 46

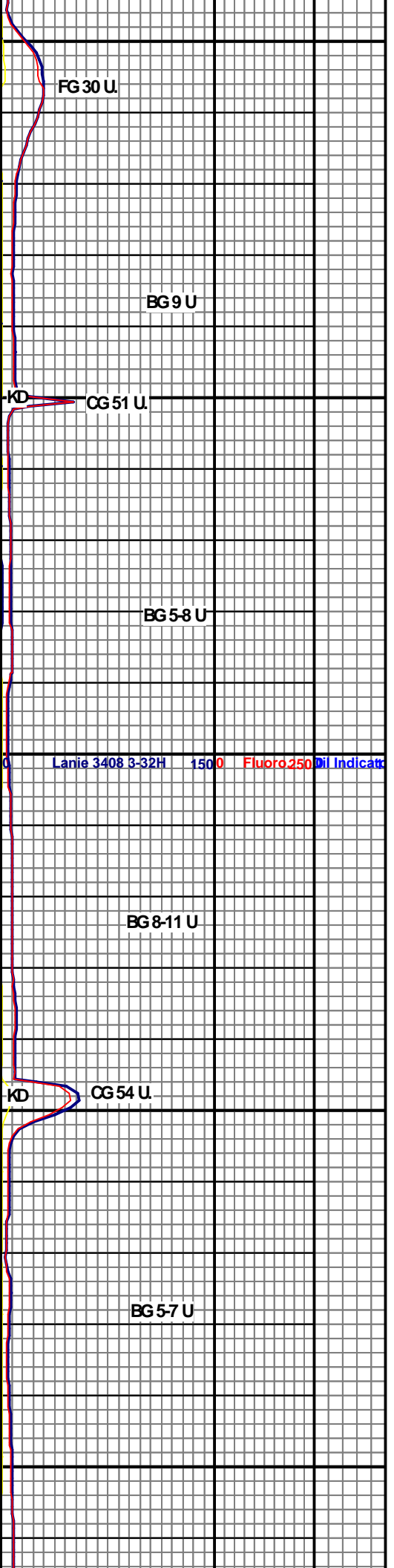


**BASE HEEBNER @
3,501' MD 3,490' TVD
(-2,235')**

SS: MSTLY CLR, OCC OFF
WHT, CRS-MED GRNS, OCC
FN GRNS, MOD-FR SORT,
WELL CEMT, GRN SUPRT,
SME INTERGRN POR, MOD
FRM-FRM, SME BRT, SH:
LT-DK GY, OCC BLK,
CHNKY-PLTY, SME BLKY,
OCC SPLNTRY, MED-FN
SLTY TXT, SME SMTH-WXY
TXT, MOD SFT-SFT, SME
DULL YEL FLOR, NO VIS
CUT, NO RES RNG

SS: MSTLY CLR, OCC OFF
WHT-WHT, CRS-MED GRNS,
OCC FN GRNS, MOD SORT,
WELL CEMT, GRN SUPRT,
SME INTERGRN POR, MOD
FRM-FRM, OCC BRT, SH:
MSTLY LT GY, CHNKY-PLTY,
SME BLKY, FN SLTY TXT,
MICA INCL, MOD SFT-SFT, TR
LS, TR DULL YEL FLOR, NO
VIS CUT, NO RES RNG

SH: MSTLY LT GY, OCC MED
GY, CHNKY-PLTY, MED-FN
SLTY TXT, SME MICA INCL,
MOD SFT-SFT, SS: MSTLY
CLR, OCC OFF WHT,
CRS-MED GRNS, MOD-WELL
SORT, SUBANG, WELL
CEMT, GRN SUPRT, SME
INTERGRN POR, MOD
FRM-FRM, TR LS, TR DULL
YEL FLOR, NO VIS CUT, NO
RES RNG



FG 30 U.

BG 9 U

CG 51 U.

BG 5-8 U

Lanie 3408 3-32H 1500 Fluoro 250 Dil Indicat

BG 8-11 U

CG 54 U.

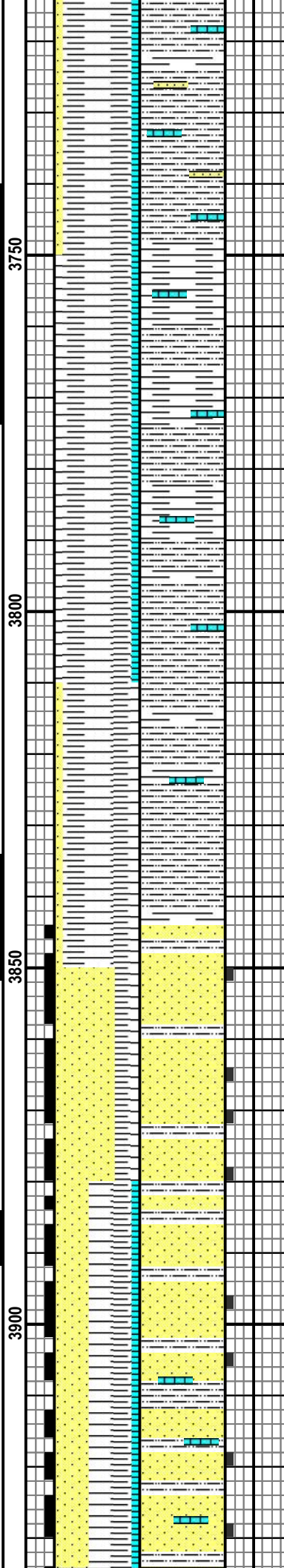
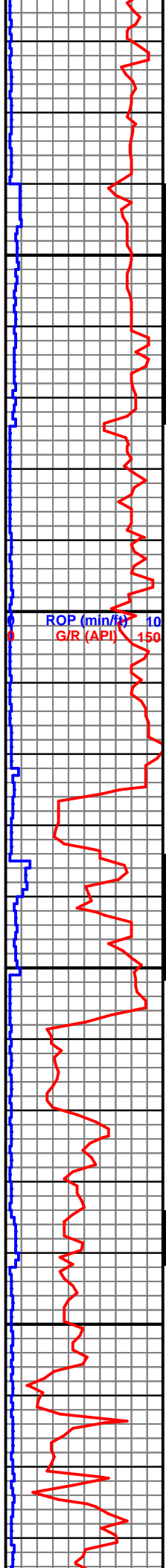
BG 5-7 U

MD 3780 TVD 3767.53
INC 7.2 AZ 84.6
VS 57.54

WOB: 22.7
RPM: 65
GPM: 403
SPM: 115
PP: 1805

WT: 9.2
VIS: 46

MD 3906 TVD 3892.58
INC 6.9 AZ 83.8
VS 62.18



SH: MSTLY LT GY, SME MED GY, CHNKY-PLTY, MED-FN SLTY TXT, SME MCA INCLU, MOD SFT-SFT, TR SS, TR LS, TR DULL YEL FLOR, NO VIS CUT, NO RES RNG

SH: MSTLY MED-DK GY, OCC LT GY, CHNKY-PLTY, OCC BLKY, MED-FN SLTY TXT, MOD SFT-SFT, TR LS, NO VIS FLOR, NO VIS CUT, NO RES RNG

SH: MSTLY LT GY, SME DK GY, MED-FN SLTY TXT, OCC CRS SLTY TXT, MOD SFT-SFT, TR SS, NO VIS FLOR, NO VIS CUT, NO RES RNG

LANSING @ 3,847'
MD, 3,833' TVD,
(-2,578')

SS: LT GY, OCC OFF WHT, SUBANG-SUBRND, MED-FN GRNS, WELL SRT, WELL CEMT, CLAST SUPRT, PR-FR INTERGRN POR, MOD FRM-FRM, SH: LT-DK GY, OCC BLK, MED-FN SLTY TXT, SME SMTH-WXY TXT, MOD SFT-SFT, TR DULL YEL FLOR, NO VIS CUT, NO RES RNG

SS: LT GY, OCC OFF WHT, SUBANG-SUBRND, MED-FN GRNS, WELL SRT, WELL CEMT, CLAST SUPRT, PR-FR INTERGRN POR, MOD FRM-FRM, SH: LT-DK GY

BG 9-10 U

CG 64 U

BG 6-8 U

BG 10-11 U

CG 66 U

BG 7-12 U

MUDCHK @
3,690'

WT: 9.2
VIS: 42
PV: 14
YP: 10
GEL: 7/22
WI: 5.6

KD

KD

KD

Lanie 3408 3-32H 1500 Fluoro 250 Dil Indicat

MD 3939 TVD 3925.35
INC 6.5 AZ 82.4
VS 63.41

MD 3970 TVD 3956.13
INC 7.1 AZ 77.4
VS 64.78

WOB: 20.5K
RPM: 31
GPM: 385
SPM: 110
PP: 1913

MD 4002 TVD 3987.81
INC 9.2 AZ 75.7
VS 66.71

MD 4034 TVD 4019.29
INC 11.5 AZ 73.8
VS 69.33

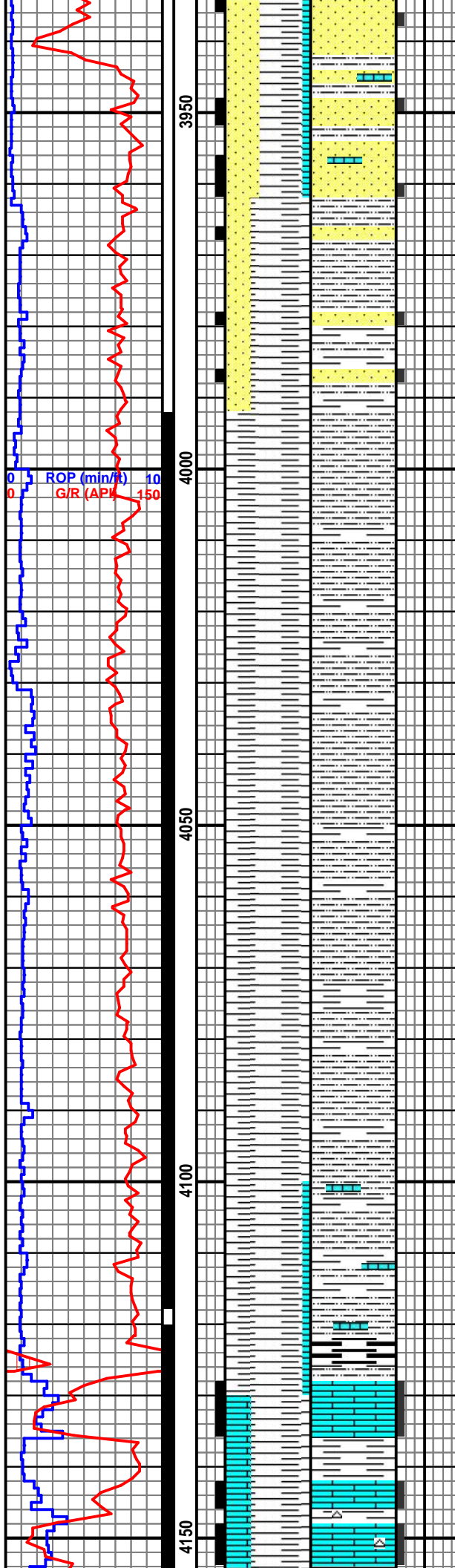
MD 4066 TVD 4050
INC 13.9 AZ 69.6
VS 72.86

WT: 9.2
VIS: 38

MD 4097 TVD 4080
INC 16.6 AZ 62.8
VS 77.62

12/23/2013 @
MD 4,120'

MD 4129 TVD 4110
INC 19.2 AZ 57
VS 84.2



FRM FRM, SFT LT-DK GY,
OCC BLK, MED-FN SLTY TXT,
SME SMTH-WXY TXT, MOD
SFT-SFT, TR DULL YEL
FLOR, NO VIS CUT, NO RES
RNG

T.O.H. TO PICK UP
CURVE ASSEMBLY
AND NEW BIT

N.B. # 3
HALLIBURTON 8.75
PDC MMD55DM
JETS 5X12 S.N.
12306026

MOTOR BEND 2.12°

SH: MSTLY LT-DK GY, SME
BLK, CHNKY-PLTY, MED-FN
SLTY TXT, SME SMTH-WXY
TXT, SME MICROMCA
INCLU, MOD SFT-SFT, NO VIS
FLOR, NO VIS CUT, NO RES
RNG

SH: MSTLY DK GY, OCC
LT-MED GY, CHNKY-PLTY,
MSTLY FN SLTY TXT, OCC
MED SLTY TXT, MOD
SFT-SFT, NO VIS FLOR, NO
VIS CUT, NO RES RNG

SH: MSTLY MED-DK GY, OCC
LT GY, CHNKY-PLTY, MSTLY
FN SLTY TXT, OCC MED
SLTY TXT, MOD SFT-SFT, TR
LS, TR DULL YEL FLOR, NO
VIS CUT, NO RES RNG

COTTAGE GROVE @
4,129' MD, 4,112'
TVD, (-2,857')

CK 2
SOL: 4.7%
OIL: 0/95.3
PH: 10.4
CL: 12,400
CA: 120
LCM:

KD TG 98 U

BG 3-4 U

KD

BG 2-3 U

KD

FG 8 U

ROP (min/ft) 10
G/R (API) 150

Lanie 3408 3-32H 1500 Fluoro 250 Dil Indicat

MD 4161 TVD 4140
INC 21.3 AZ 53.9
VS 92.21

MD 4193 TVD 4170.45
INC 23.6 AZ 53.9
VS 101.26

WOB: 27.0
RPM: 0
GPM: 354
SPM: 101
PP: 1448

MD 4224 TVD 4198.55
INC 26.4 AZ 54.8
VS 110.89

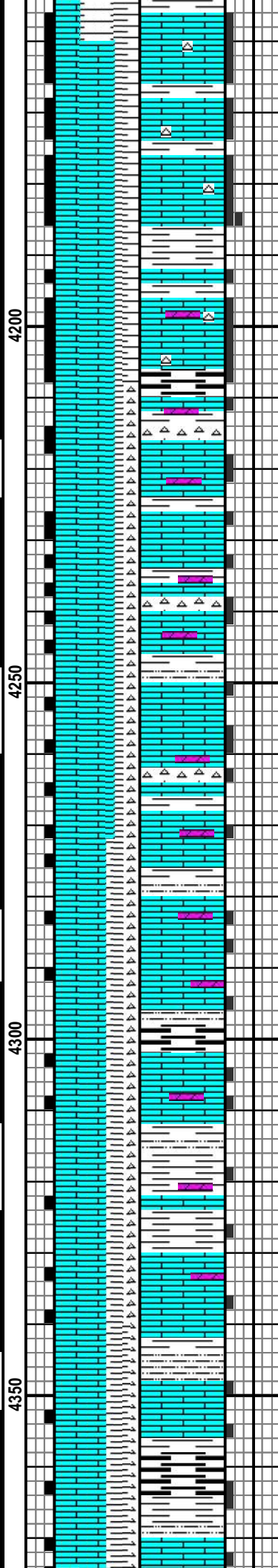
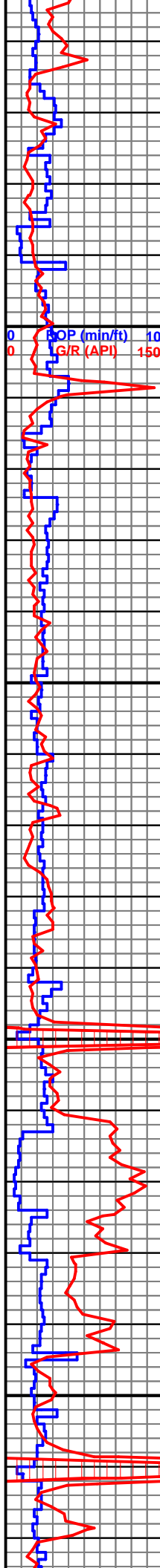
MD 4256 TVD 4226.9
INC 28.8 AZ 54.9
VS 121.7

MD 4288 TVD 4254.64
INC 31 AZ 53.2
VS 133.5

WT: 9.1
VIS: 38

MD 4320 TVD 4281.87
INC 32.4 AZ 52
VS 146.21

MD 4352 TVD 4308.63
INC 34.1 AZ 50.6
VS 159.73



LS: CRM-LT TAN, SME
BRN-LT BRN, TR OFF
WHT-WHT, CHNKY-PLTY,
RGH TXT, SME FLKY TXT,
FN-V FN XLN, SME HL FRAC
POR, PR-FR PR INTERXLN
POR, MOD FRM-FRM, SH:
LT-DK GY, MED-FN SLTY TXT,
MOD SFT-SFT, TR CHT,
ABUND DULL YEL FLOR, NO
VIS CUT, NO RES RNG

LS: PRED CRM-OFF WHT,
SME OFF WHT-V LT TN, SME
WHT, OCC BUFF, PRED
CHNKY, SME PLTY, V FN-FN
XLN, SCAT MD XLN, SNDY,
SCAT SLTY, MOD FRM-FRM,
SCAT SFT-MD, TR HRD, SCAT
DOLO IP, PR INTERXLN POR,
SCAT PP VUG POR, OCC HL
FRAC POR POR, SCAT YEL
FLOR, NO CUT, NO RES
RNG.

LS: PRED CRM-OFF WHT,
SME OFF WHT-V LT TN, SME
WHT, OCC BUFF, PRED
CHNKY, SME PLTY, V FN-FN
XLN, SCAT MD XLN, SNDY,
SCAT SLTY, MOD FRM-FRM,
SCAT SFT-MD, TR HRD, SCAT
DOLO IP, PR INTERXLN POR,
SCAT PP VUG POR, OCC HL
FRAC POR POR, SCAT YEL
FLOR, NO CUT, NO RES
RNG.

LS: PRED CRM-OFF WHT,
SME OFF WHT-WHT, SCAT LT
TN, PRED FRM, SCAT HRD, V
FN XLN, SME CHNKY, OCC
PLTY, TR SMTH, V PR
INTERXLN POR, SH: PRED
MD GRY, SME BLK CARB,
SME GY-LT GY, TR DRK GRY,
PRED FN TXT, SME RGH TXT,

BG 2-4 U.

GAS LINE FROZE,
REPLACED
POLYFLOW TO
TRAP.

Lanie 3408 3-32H 1500 Fluoro 250 Dil Indicat

KD

20 SEC GAS
TEST @
SPLICE 92 U

DTG 29 U

BG 3-5 U

SG 35 U

KD

BG 3-7 U

SG 24 U

MD 4383 TVD 4333.98
INC 36.2 AZ 48.2
VS 173.85

WOB: 30.9
RPM: 0
GPM: 377
SPM: 107
PP: 1279

MD 4415 TVD 4359.48
INC 38.1 AZ 47.3
VS 189.48

MD 4447 TVD 4384.33
INC 40 AZ 46.6
VS 205.94

MD 4479 TVD 4408.44
INC 42.2 AZ 46.4
VS 223.21

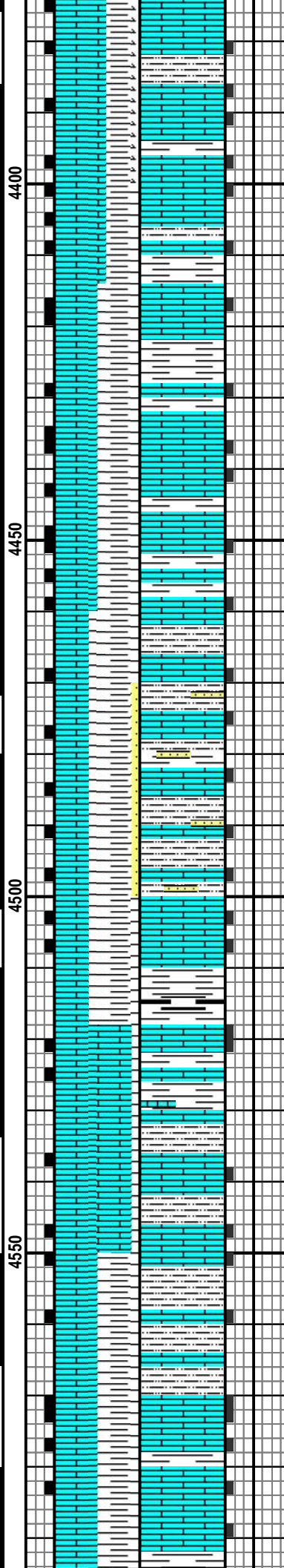
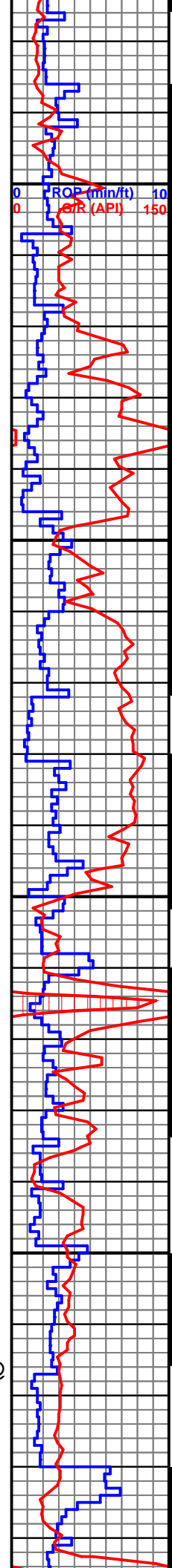
WT: 9.3
VIS: 38

MD 4510 TVD 4431
INC 44.4 AZ 46.8
VS 240.65

MD 4542 TVD 4453.47
INC 46.4 AZ 47.5
VS 259.21

12/24/2013 @
MD 4,645'

MD 4574 TVD 4475.17
INC 48.2 AZ 48.2
VS 278.2



OCC SNDY, TR SLKY TXT,
PRED FRM, SCAT SFT-MD,
TR HRD, SCAT SLTY, TR
CALC, PRED MASS, OCC
PLTY, SCAT BRT YEL FLOR,
NO CUT, NO RES RNG.

LS: PRED CRM-OFF WHT,
SME OFF WHT-WHT, SCAT LT
TN, PRED FRM, SCAT HRD, V
FN XLN, SME CHNKY, OCC
PLTY, TR SMTH, V PR
INTERXLN POR, SH: PRED
MD GRY, SME BLK CARB,
SME GY-LT GY, TR DRK GRY,
PRED FN TXT, SME RGH TXT,
OCC SNDY, TR SLKY TXT,
PRED FRM, SCAT SFT-MD,
TR HRD, SCAT SLTY, TR
CALC, PRED MASS, OCC
PLTY, SCAT DULL YEL FLOR,
NO CUT, NO RES RNG.

LS: CRM-OFF WHT, SME
WHT, OCC LT BRN,
CHNKY-PLTY, RGH-FLKY TXT,
V FN XLN, SME HL FRAC
POR, PR-FR INTERXLN POR,
MOD FRM-FRM, SH: LT-DK
GY, PLTY-BLKY, MED-FN
SLTY TXT, MOD SFT-SFT, TR
SS, PR DULL YEL-GRN
FLOR, NO VIS CUT, NO RES
RNG

OSWEGO @ 4,520'
MD, 4,438' TVD,
(-3,183')

LS: MSTLY CRM-LT TAN,
CHNKY-PLTY, SME SPLNTRY,
RGH TXT, V FN XLN, SME HL
FRAC POR, PR-FR INTERXLN
POR, MOD FRM-FRM, SH:
LT-DK GY, TR BLK,
CHNKY-PLTY, OCC BLKY,
MED-FN SLTY TXT, TR
SMTH-WXY TXT, MOD
SFT-SFT, PR DULL YEL
FLOR, NO VIS CUT, NO RES
RNG

LS: MSTLY CRM, SME LT
TAN, SME OFF WHT,
CHNKY-PLTY, OCC BLKY,
RGH-FLKY TXT, V FN XLN,
SME HL FRAC POR, PR
INTERXLN POR, MOD

MUD CHK @
4,373'
WT: 9.1
VIS: 40
PV: 13
YP: 9
GEL: 5/20
W.L: 6.4
CK: 2
SOL: 4.8%
OIL: 3-32H 1500 Fluoro250 Dil Indicat
PH: 10.8
CL: 18,400
CA: 160
LCM:

BG 3-6 U

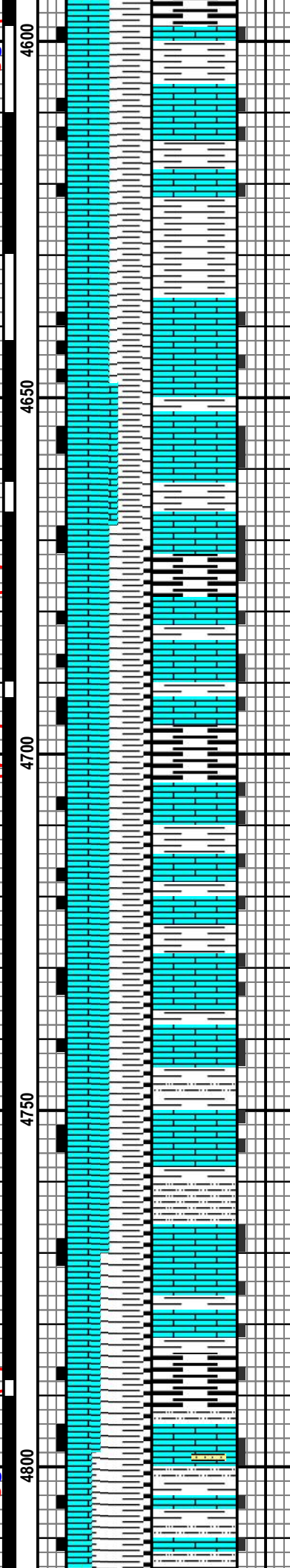
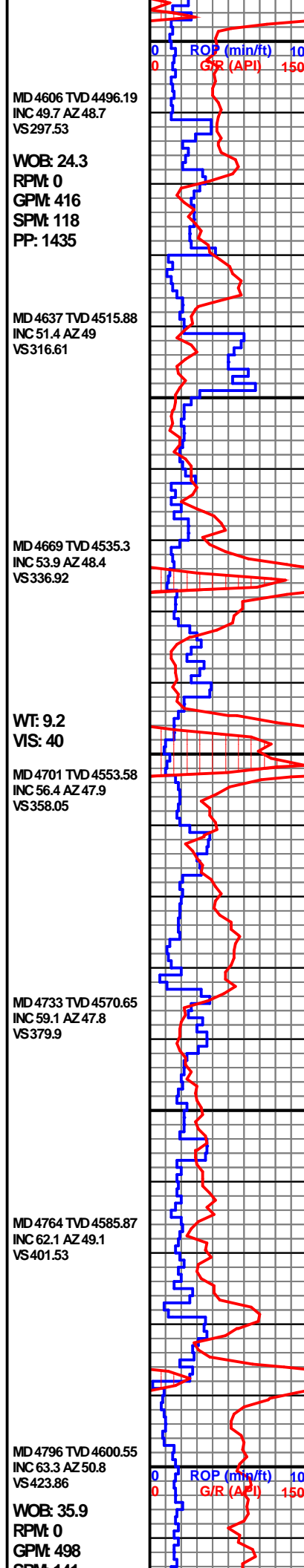
GAS TEST 79 U

BG 2-5 U

BG 2-3 U

KD

KD



FRM FRM, SH LT-DK GY, TR BLK, PLTY-BLKY, SME SPLNTRY, MED-FN SLTY TXT, SME SMTH-WXY TXT, MOD SFT-SFT, PR DULL YEL-GRN FLOR, NO VIS CUT, NO RES RNG

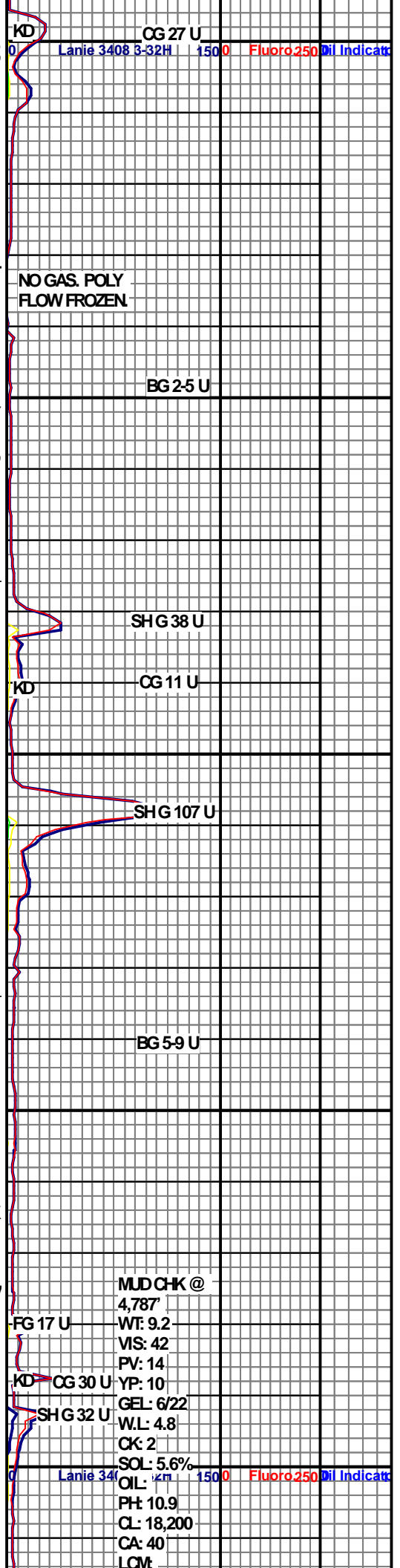
LS: PRED CRM-OFF WHT, SME OFF WHT-WHT, SCAT LT TN, PRED FRM, SCAT HRD, V FN XLN, SME CHNKY, OCC PLTY, TR SMTH, V PR INTERXLN POR, SH: PRED BLK CARB, SME DRK GY, SME GY-LT GY, PRED FN TXT, SME RGH TXT, TR SLKY TXT, PRED FRM, SCAT SFT-MD, TR HRD, SCAT SLTY, GD YEL FLOR,

CHEROKEE @ 4,675
MD 4,539' TVD (-3,284')

SH: PRED BLK CARB, SME MED GY, SME LT GY-GY, SME DRK GY, FN TXT, SME MED TXT, SME SLTY, MOD SFT-SFT, OCC MOD FRM, BLKY, SME PLTY LS: PRED OFF WHT-LT TAN, SME BUFF, OCC LT GY, MSTLY FN XLN, SME MICRO FN XLN, SME SLI SUC, MOD SFT-MOD FRM, OCC SFT, SME BRIT, CHNKY, SME BLKY, OCC PLTY, SME HL FRAC POR, SCAT YEL FLOR, NO CUT, NO RES RNG

VERDIGRIS @ 4,733'
MD 4,570' TVD (-3,315')

SH: PRED DRK GY, SME BLK CARB, SME GY, OCC OK RED DIRT, PRED FN TXT, SME SILKY, OCC WAXY, PRED FRM, SME HRD, OCC V HRD, PRED CALC, SME CARB, OCC SILTY, SCAT SNDY TXT PRED CHNKY, SME BLKY, OCC FLKY, LS: PRED TAN, SME CRME-OFF WHT, SCAT MOTT, PRED FRM, SCAT HRD, TR V HRD, V FN-FN XLN, TR DOLO THRU OUT, PRED CHNKY, SME BLKY, SCAT FLKY, OCC PLTY, TR SMTH, PR INTERXLN POR, SCAT HL FRAC POR, OCC VUG POR,



SPIVE 141
PP: 1516

MD 4828 TVD 4614.42
INC 65.3 AZ 51
VS 446.2

MD 4860 TVD 4626.9
INC 68.8 AZ 51.3
VS 468.95

MD 4891 TVD 4637.4
INC 71.6 AZ 51.8
VS 491.34

WT: 9.2
VIS: 41

MD 4923 TVD 4646.59
INC 75 AZ 52.2
VS 514.71

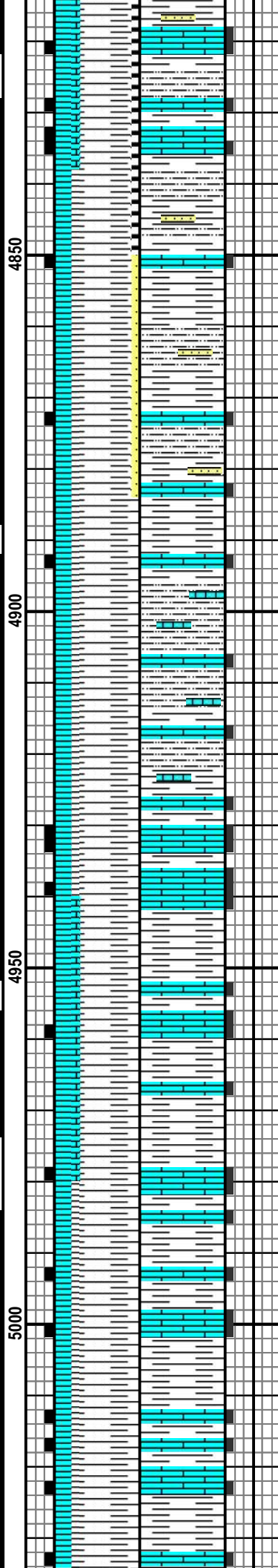
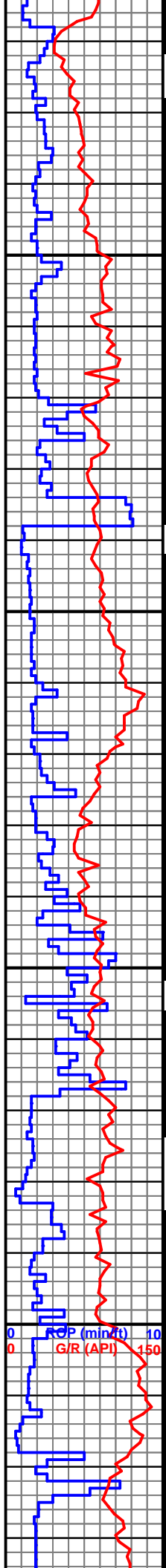
MD 4955 TVD 4653.93
INC 78.5 AZ 52.1
VS 538.41

12/25/2013 @
MD 4,958'

MD 4986 TVD 4659.55
INC 80.6 AZ 50.4
VS 561.92

WOB: 37.4
RPM: 1
GPM: 446
SPM: 126
PP: 1493

MD 5018 TVD 4664.2
INC 82.7 AZ 48.7
VS 586.92



SS STNGRS THRU OUT,
SCAT BRT YEL FLOR, NO
CUT, NO RES RNG.

SH: PRED DRK GY, SME GY,
OCC RED, PRED FN TXT,
SME SILKY, OCC WAXY,
PRED FRM, SME HRD, OCC
V/HRD, PRED CALC, SME
CARB, OCC SILTY, PRED
CHNKY, SME BLKY, OCC
FLKY, NO VIS FLOR, NO CUT,
NO RES RNG

SH: MSTLY LT GY, OCC DK
GY, OCC BLK, CHNKY-PLTY,
SME SPLNTRY-BLKY,
MED-FN SLTY TXT, SME
SMTH-WXY, MOD SFT-SFT,
LS: CRM-OFF WHT, CHNKY,
RGH-FLKY TXT, V FN XLN,
SME HL FRAC POR, PR
INTERXLN POR, MOD
FRM-FRM, TR DULL YEL
FLOR, NO VIS CUT, NO RES
RNG

SH: MSTLY LT GY, SME
MED-DK GY, OCC BLK,
CHNKY-PLTY, SME
SPLNTRY-BLKY, MED-FN
SLTY TXT, OCC CRS, OCC
SMTH-WXY TXT, MOD
SFT-SFT, LS: CRM-LT TAN,
SME OFF WHT, CHNKY-PLTY,
RGH-FLKY TXT, FN-V FN
XLN, SME HL FRAC POR,
PR-FR INTERXLN POR, MOD
FRM-FRM, PR DULL YEL
FLOR, NO VIS CUT, NO RES
RNG

FG 12 U

FG 31 U

KD CG 26 U

BG 3-4 U

BG 3-5 U

KD CG 12 U

FG 70 U

Lanie 3408 3-32H 1500 Fluoro 250 Dil Indicat

TOTCO DOWN NO DATA

TOTCO DOWN NO DATA

MD 5050 TVD 4668.15
INC 83.1 AZ 48.5
VS 612.31

MD 5082 TVD 4671.97
INC 83.2 AZ 48.5
VS 637.75

WT: 9.2
VIS: 41

MD 5114 TVD 4675.73
INC 83.3 AZ 48.5
VS 663.2

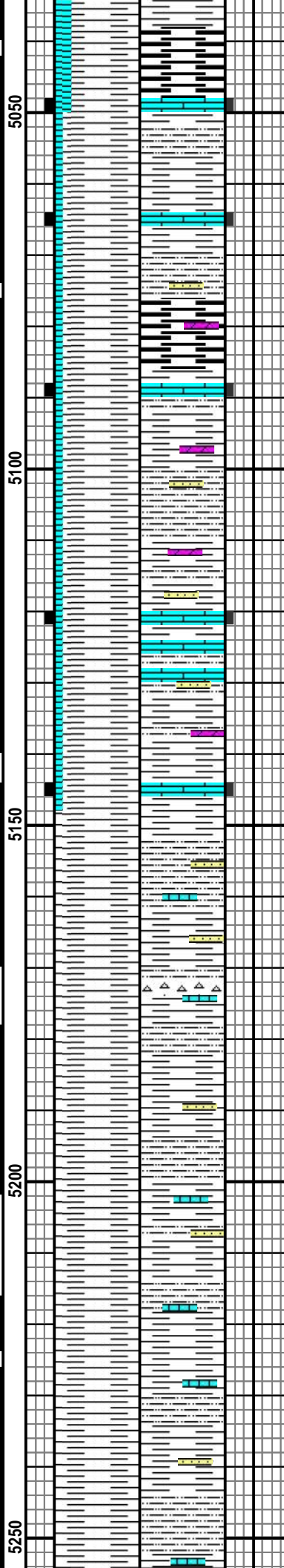
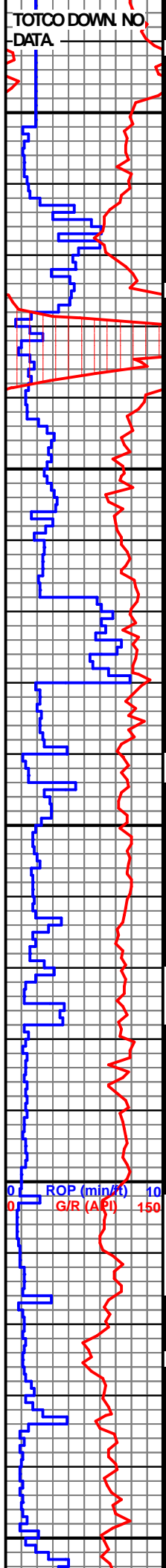
MD 5146 TVD 4679.44
INC 83.4 AZ 48.3
VS 688.68

MD 5177 TVD 4683.27
INC 82.4 AZ 45.7
VS 713.79

WOB: 40
RPM: 0
GPM: 560
SPM: 159
PP: 2121

MD 5209 TVD 4687.64
INC 81.9 AZ 43.6
VS 740.38

MD 5241 TVD 4691.79
INC 83.2 AZ 41
VS 767.69



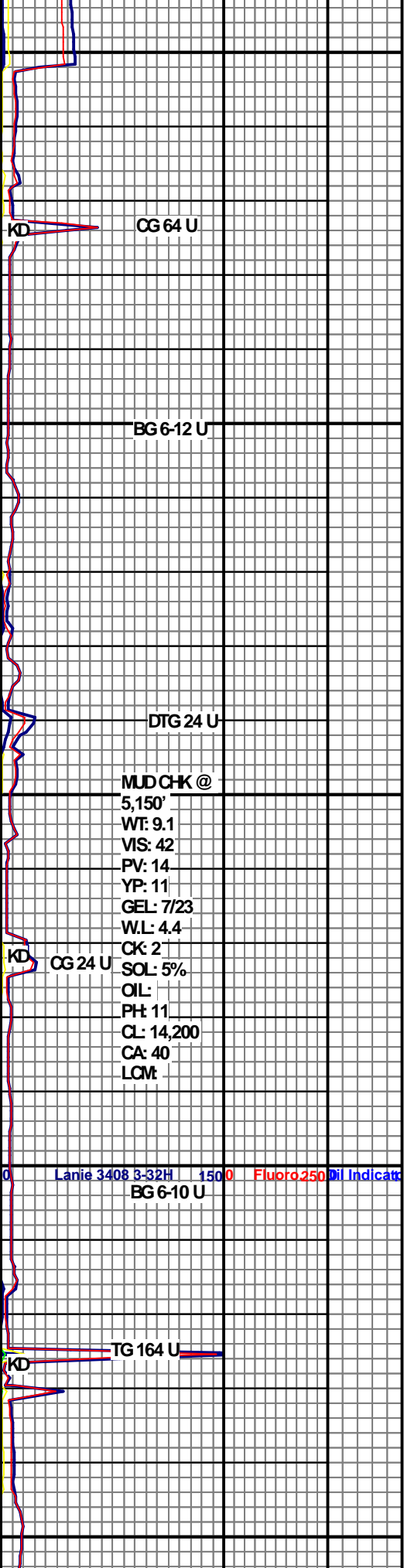
SH: MSTLY LT GY, SME
MED-DK GY, TR BLK,
CHNKY-PLTY, SME SPLNTRY,
MED-FN SLTY TXT, TR SMITH
TXT, MOD SFT-SFT, LS:
CRMLT TAN, SME OFF WHT,
CHNKY-PLTY, RGHFLKY TXT,
FN-V FN XLN, OCC HL FRAC
POR, PR INTERXLN POR,
MOD FRMFRM, PR DULL
YEL-GRN FLOR, NO VIS CUT,
NO RES RNG

SH: MSTLY DRK GY, SME
BLK CARB, SME MED-LT GY,
PRED CHNKY-PLTY, SME
SPLNTRY, OCC FLKY, MSTLY
FN TXT, SME SLTY TXT, TR
SMITH TXT, MOD SFT-SFT, LS:
CRMLT TAN, SME OFF WHT,
CHNKY-PLTY, RGHFLKY TXT,
FN-V FN XLN, OCC HL FRAC
POR, PR INTERXLN POR,
MOD FRMFRM, PR DULL
YEL-GRN FLOR, NO CUT, NO
RES RNG

SH: MSTLY DRK GY, SME
BLK CARB, SME MED-LT GY,
PRED CHNKY-PLTY, SME
SPLNTRY, OCC FLKY, MSTLY
FN TXT, SME SLTY TXT, TR
SMITH TXT, MOD SFT-SFT, SS
STNGRS THRU OUT, NO VIS
FLOR, NO CUT, NO RES RNG

DRILLING WITH BIT
#3. 8.75
HALLIBURTON PDC
MMD55DM JETS
5X12 @ MD 5,223'

TOP DRIVE SENSOR
FAILURE WHILE
WASHING AND
REAMING. ENTERED
SIDE WALL
UNKNOWINGLY.
CREATED NEW
WELL PLAN, AND
DRILLING NEW



CG 64 U

BG 6-12 U

DTG 24 U

MUD CHK @
5,150'
WT: 9.1
VIS: 42
PV: 14
YP: 11
GEL: 7/23
W.L: 4.4
CK 2
SOL: 5%
OIL:
PH: 11
CL: 14,200
CA: 40
LCM:

CG 24 U

Lanie 3408 3-32H 1500 Fluoro 250 Dil Indicat
BG 6-10 U

TG 164 U

HOLE STARTING @ MD 5,223'

SH: SME LY GY, SME DK GY, SME RED, SME YEL-GRN, SME PRPL, OCC BLK, FN SLTY TXT, OCC SMTH-WXY TXT, MOD SFT-SFT, TR SS, NO VIS FLOR, NO VIS CUT, NO RES RNG

SH: SME RED, SME LT-DK GY, SME BLK, SME YEL-GRN, SME PRPL, TR BRT GRN, MSTLY FN SLTY TXT, SME SMTH-WXY TXT, MOD SFT-SFT, LS: CRMLT TAN, CHNKY, SEMI-SMTH TXT, SME FLKY TXT, V FN XLN, SME HL FRAC POR, PR-FR INTERXLN POR, MOD FRM-FRM, TR CHT, PR-FR DULL-BRT YEL GRN FLOR, NO VIS CUT, NO RES RNG

MISS UNCONFORMITY @ 5,374' MD, 4,701' TVD, (-3,446')

LS: MSTLY LT TAN-CRN, CHNKY-PLTY, SME SPLNTRY, RGH-FLKY TXT, MED-FN XLN, ABUND HL FRAC POR, ABUND PP VUG POR, FR INTERXLN POR, MOD FRM-FRM, CHT: CLR-WHT, SPLNTRY, MICROFN XLN, OCC HL FRAC POR, FRM-HRD, UPHOLE SH, PR DULL YEL FLOR, NO VIS CUT, NO RES RNG

FG 24 U
MUD CHK @ 5,302'
WT: 9.3
VIS: 48
PV: 19
YP: 11
GEL: 9/32
W.L: 4
CK: 2
SOL: 5.8%
OIL:
PH: 10.9
CL: 10,800
CA: 40
LCM:

FG 51 U
FG 162 U

CG 257 U
FG 131 U

MD 5273 TVD 4695.08
INC 85 AZ 38
VS 795.85

WT: 9.1
VIS: 45

MD 5304 TVD 4697.49
INC 86.1 AZ 34.3
VS 823.98

MD 5336 TVD 4699.41
INC 87 AZ 30.6
VS 853.84

MD 5368 TVD 4701.42
INC 85.8 AZ 27.9
VS 884.29

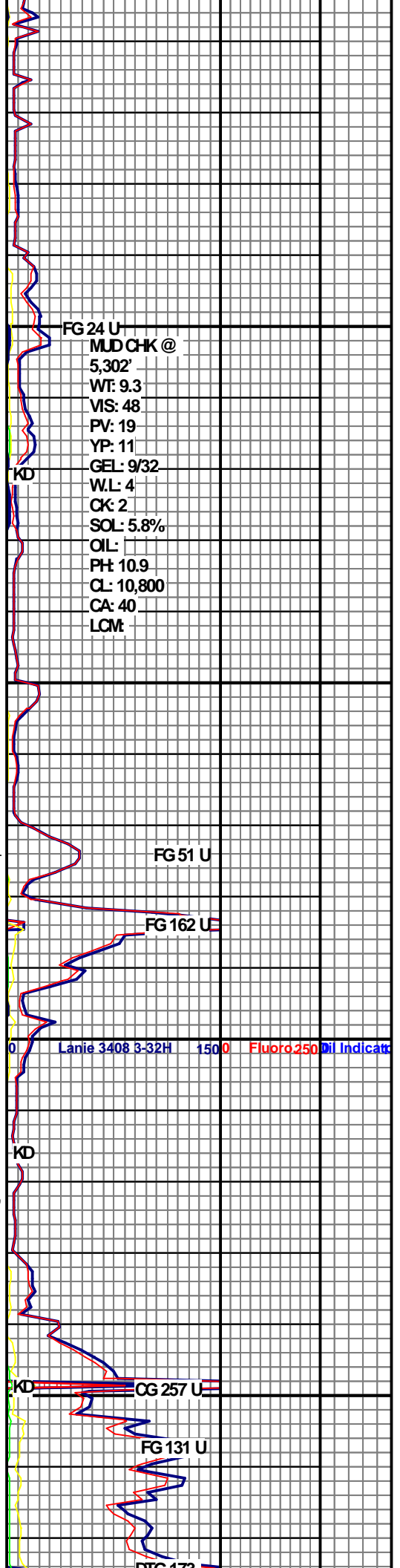
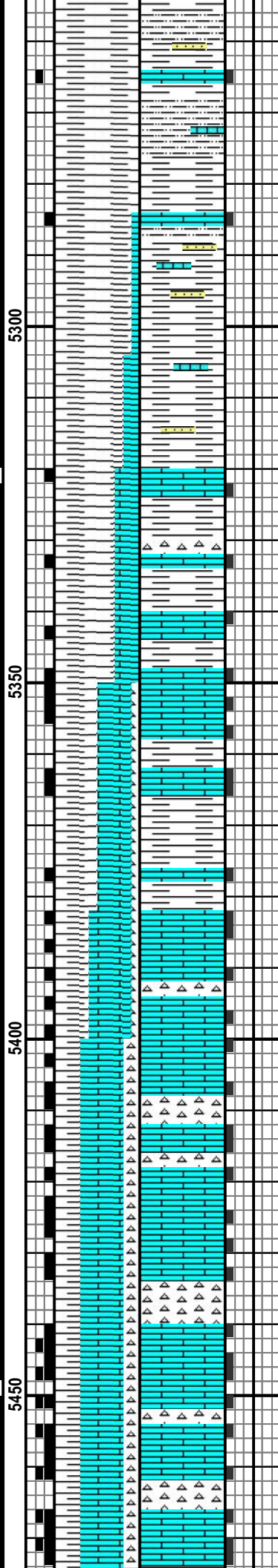
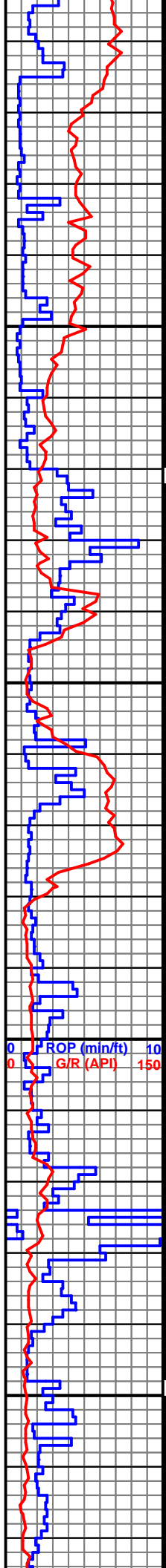
MD 5400 TVD 4703.88
INC 85.4 AZ 25.1
VS 915.13

WOB: 46.8
RPM: 5
GPM: 559
SPM: 159
PP: 2738

MD 5431 TVD 4706.53
INC 84.8 AZ 22.3
VS 945.34

MD 5463 TVD 4709.34
INC 85.1 AZ 19.2
VS 976.81

12/28/2013 @



MD 5495 TVD 4712.05
INC 85.2 AZ 16.6
VS 1008.51

WT: 8.8
VIS: 47

MD 5526 TVD 4714.91
INC 84.2 AZ 13.8
VS 1039.32

MD 5558 TVD 4718.4
INC 83.3 AZ 11
VS 1071.12

MD 5590 TVD 4722.3
INC 82.7 AZ 7.8
VS 1102.85

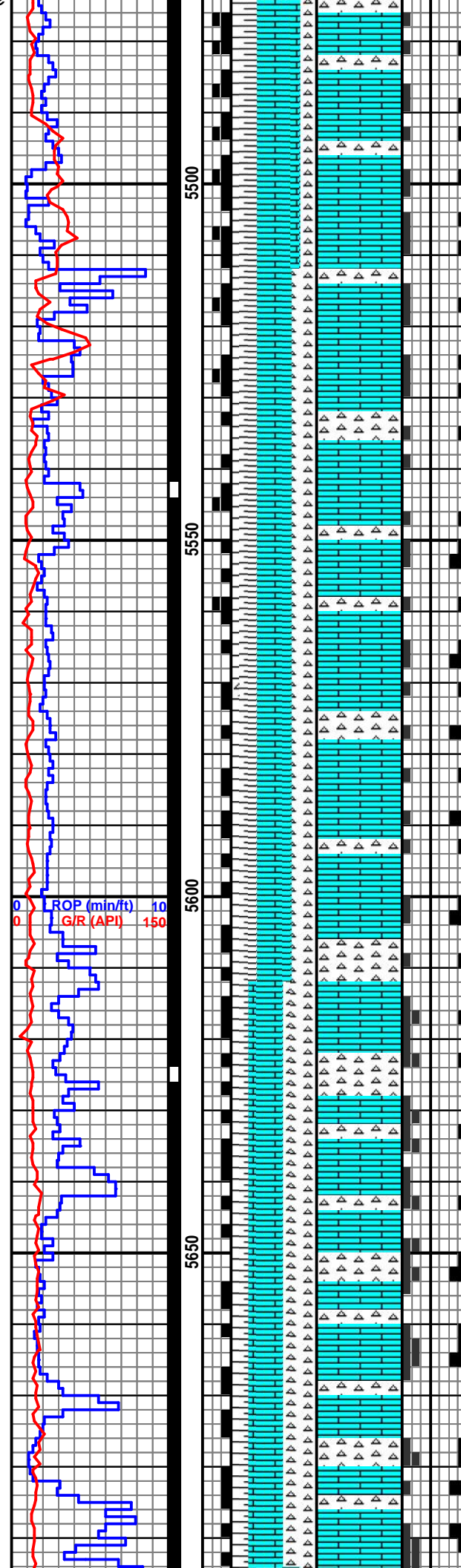
WOB: 46.8
RPM: 5
GPM: 559
SPM: 159
PP: 2738

ROP (min/ft) 10
G/R (API) 150

MD 5622 TVD 4726.34
INC 82.8 AZ 5.4
VS 1134.47

MD 5653 TVD 4730.06
INC 83.4 AZ 2.1
VS 1164.94

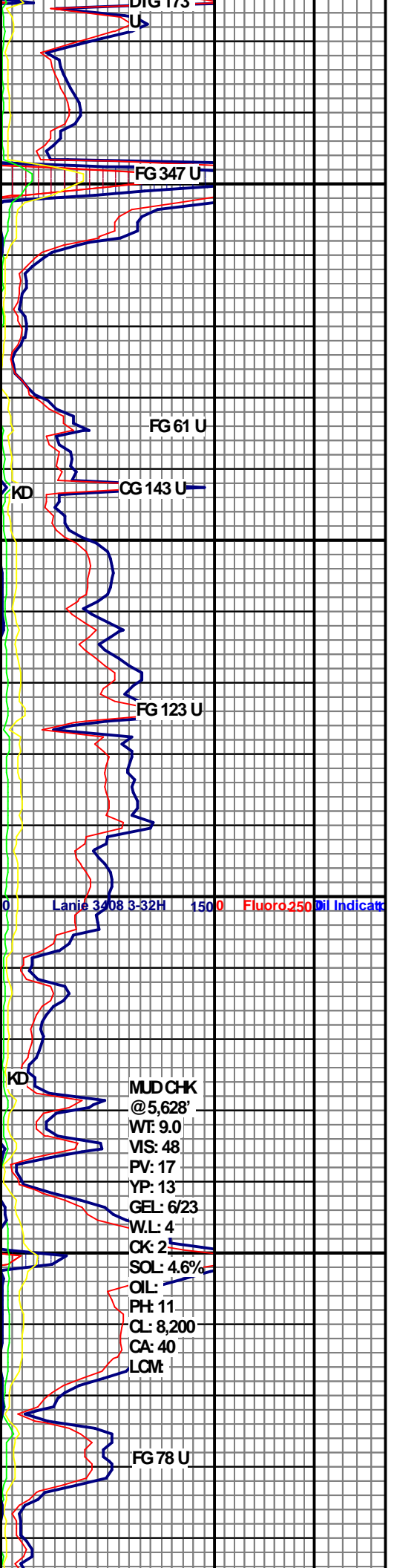
MD 5685 TVD 4733.49
INC 84.3 AZ 3.59
VS 1196.15



LS: MSTLY CRM-OFF WHT,
CHNKY-PLTY, SMESPLNTRY,
RGH-FLKY TXT, MED-FN XLN,
ABUND HL FRAC POR, SME
PP VUG POR, FR INTERXLN
POR, MOD FRM-FRM, TR
CHT, UPHOLE SH, PR DULL
YEL-GRN FLOR, PR MLKY LT
BLU CUT, PR-FR YEL-GRN
CUT, FNT RES RNG.

LS: MSTLY WHT-OFF WHT,
SME CRM, OCC LT TN,
MSTLY MICRO XLN, SME V
FN-FN XLN, PRED MOD FRM-
MOD HRD, SME HRD, PRED
CHNKY-BLKY, FR INTERXLN
POR, SME PP POR, OCC HL
FRAC POR, CHRT: MSTLY
WHT, SME OPQ-TRNSLU,
OCC LT GY, MSTLY V FN
XLN, SME MICRO XLN, PRED
HRD, SME VRY HRD, PRED
ANG-SUB ANG, SCAT BRT
GRN FLOR, FLSH MLKY
BLU-GRN CUT, SLW BRT YEL
RES RNG.

LS: PRED OFF WHT-CRM,
SME OFF WHT-WHT, OCC LT
TN, MSTLY MICRO XLN, SME
V FN-FN XLN, PRED MOD
FRM-MOD HRD, SME HRD,
PRED CHNKY-BLKY, FR
INTERXLN POR, SME PP
POR, OCC HL FRAC POR,
CHRT: MSTLY WHT, SME
OPQ-TRNSLU, OCC LT GY,
MSTLY V FN XLN, SME
MICRO XLN, PRED HRD, SME
VRY HRD, PRED
CHNKY-BLKY, OCC PLTY
ABUND BRT GRN FLOR,
FLSH BLU CUT, SLW BRT
YEL RES RNG



WT: 9.0
VIS: 46

12/29/2013 @
5,731' MD

MD 5730 TVD 4737.57
INC 85.3 AZ 357.7
VS 1239.76

MD 5780 TVD 4741.28
INC 86.2 AZ 357.2
VS 1288.08

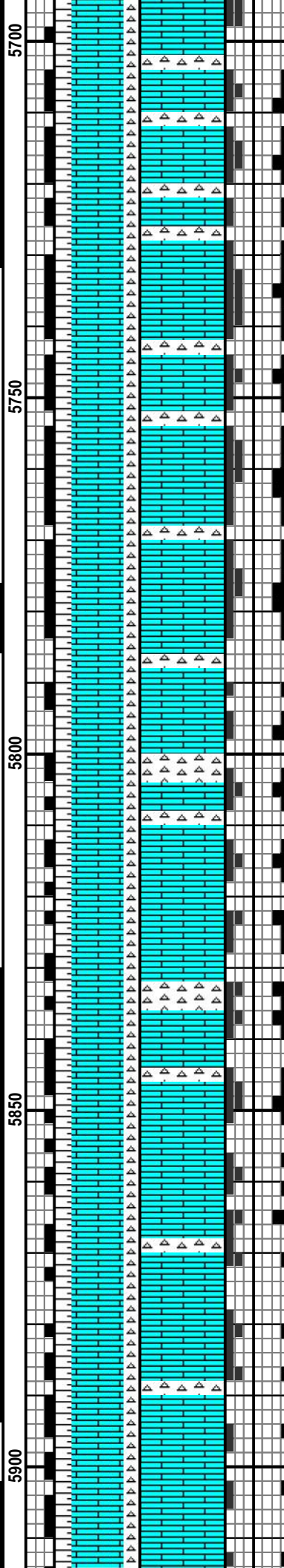
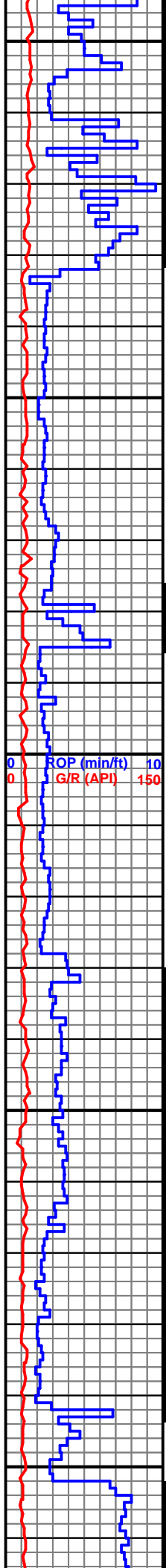
WOB: 23.4
RPM: 27
GPM: 529
SPM: 150
PP: 2888

MD 5825 TVD 4743.94
INC 87 AZ 356.9
VS 1331.54

MD 5844 TVD 4744.87
INC 87.4 AZ 356.9
VS 1349.89

MD 5876 TVD 4746.24
INC 87.7 AZ 356.9
VS 1380.8

WT: 8.9
VIS: 59

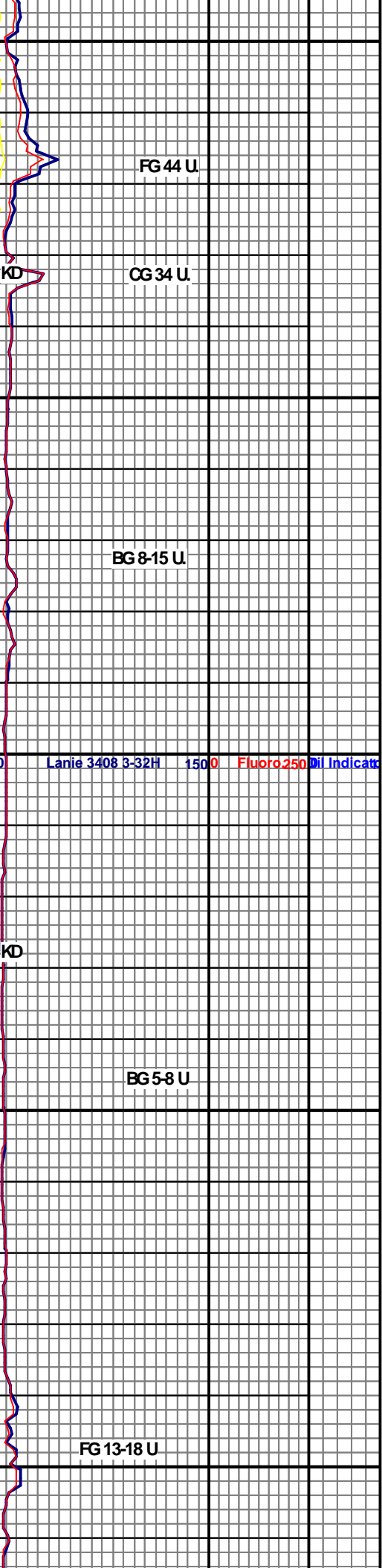


LS: MSTLY CRM, OCC LT
TAN-OFF WHT, CHNKY-PLTY,
SME SPLNTRY, FN V FN XLN,
OCC HL FRAC POR, PR
INTERXLN POR, MOD
FRM-FRM, CRT: WHT-CLR,
SME V LT GY, SPLNTRY,
MICROFN XLN, OCC HL
FRAC POR, FRM-HRD,
UPHOLE SH, PR-FR DULL
YEL-GRN FLOR, PR MLKY LT
BLU CUT, PR YEL-GRN RES
RNG

LS: PRED CRM-OFF WHT,
SME OFF WHT-WHT, OCC LT
TN, MSTLY MICRO XLN, SME
V FN- FN XLN, PRED MOD
FRM- MOD HRD, SME HRD,
PRED CHNKY- BLKY, FR
INTERXLN POR, SME PP
POR, OCC HL FRAC POR,
CRT: MSTLY WHT, SME
OPQ- TRNSLU, OCC LT GY,
MSTLY V FN XLN, SME
MICRO XLN, PRED HRD, SME
VRY HRD, PRED
CHNKY-BLKY, OCC PLTY
BRT YEL FLOR, FLSH
BLU-GRN CUT, SLW BRT YEL
RES RNG

LS: PRED OFF WHT-CRM,
SME OFF WHT-WHT, OCC LT
TN, MSTLY MICRO XLN, SME
V FN- FN XLN, PRED MOD
FRM- MOD HRD, SME HRD,
PRED CHNKY- BLKY, FR
INTERXLN POR, SME PP
POR, OCC HL FRAC POR,
CRT: MSTLY WHT, SME
OPQ- TRNSLU, OCC LT GY,
MSTLY V FN XLN, SME
MICRO XLN, PRED HRD, SME
VRY HRD, PRED
CHNKY-BLKY, OCC PLTY
SCAT DULL YEL FLOR, SLW
MLKY BLU CUT, FNT RES
RNG.

LS: PRED CRM, SME OFF
WHT, SME BLUF, SME OFF



FG 44 U

CG 34 U

BG 8-15 U

Lanie 3408 3-32H 1500 Fluoro 250 Dil Indicat

BG 5-8 U

FG 13-18 U

MD 5916 TVD 4747.43
INC 88.9 AZ 356.3
VS 1419.4

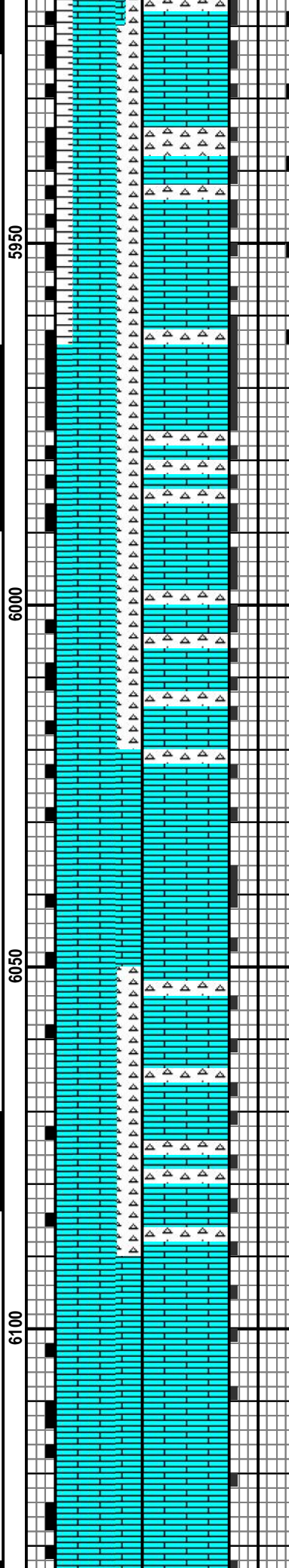
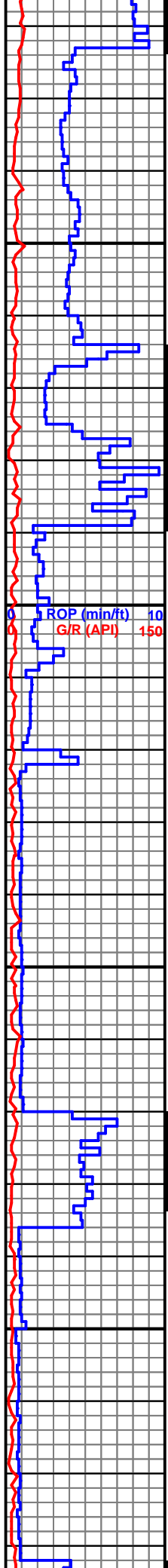
12/30/2013 -
1/1/2014

WOB: 16.9K
RPM: 60
GPM: 322
SPM: 91
PP: 2281

MD 6014 TVD 4747.6
INC 90.9 AZ 355.6
VS 1513.72

MD 6045 TVD 4747.11
INC 90.9 AZ 355.5
VS 1543.49

WT: 8.7
VIS: 31



WHT-WHT, OCC LT TN,
MSTLY MICRO XLN, SVE V
FN-FN XLN, PRED MOD FRM-
MOD HRD, SVE HRD, PRED
CHNKY-BLKY, FR INTERXLN
POR, SVE PP POR, OCC HL
FRAC POR, CHRT: PRED
WHT-OFF WHT, SVE OPQ-
TRNSLU, OCC LT GY, MSTLY
V FN XLN, SVE MICRO XLN,
PRED HRD, SVE VRY HRD,
PRED CHNKY-BLKY, OCC
PLTY, SCAT DULL YEL FLOR,
SLW MLKY CUT, FNT RES
RNG

DRILLER TD FOR
CASING @ MD 5'964'

DRILLING WITH BIT
#5. 6.125 BAKER
PDC SN# 7145379
JETS 6X12 @ MD
5,964'

LS: LT TAN-CRM,
CHNKY-PLTY, SVE
SPLNTRY-BLKY, FLKY-SMTH
TXT, V FN XLN, OCC HL
FRAC POR, OCC PP VUG
POR, PR INTERXLN POR,
MOD FRM-FRM, CHT: OFF
WHT-CLR, PLTY-SPLNTRY,
SMTH TXT MICROFN XLN,
FRM-HRD, V PR DULL YEL
FLOR, NO VIS CUT, NO RES
RNG, V PR FLUORO

LS: LT TAN-CRM,
CHNKY-PTLY, SVE SPLNTRY,
FLKY-SMTH TXT, V FN XLN,
SVE HL FRAC POR, OCC PP
VUG POR, PR INTERXLN
POR, MOD FRM-FRM, CHT:
OFF WHT-CLR, OCC LY GY,
SMTH TXT, MICROFN XLN,
OCC HL FRAC POR,
FRM-HRD, PR DULL YEL
FLOR, NO VIS CUT, NO RES
RNG, V PR FLUORO

KD	CG 11 U
	BG 2 U.
KD	BG 2-5 U.
	BG 2-4 U.
KD	BG 3-4 U.
	MUDCHK @ 6,135' WT: 8.7 VIS: 29 PV: 1

Lanie 3408 3-32H 1500 Fluoro250 Dil Indicat

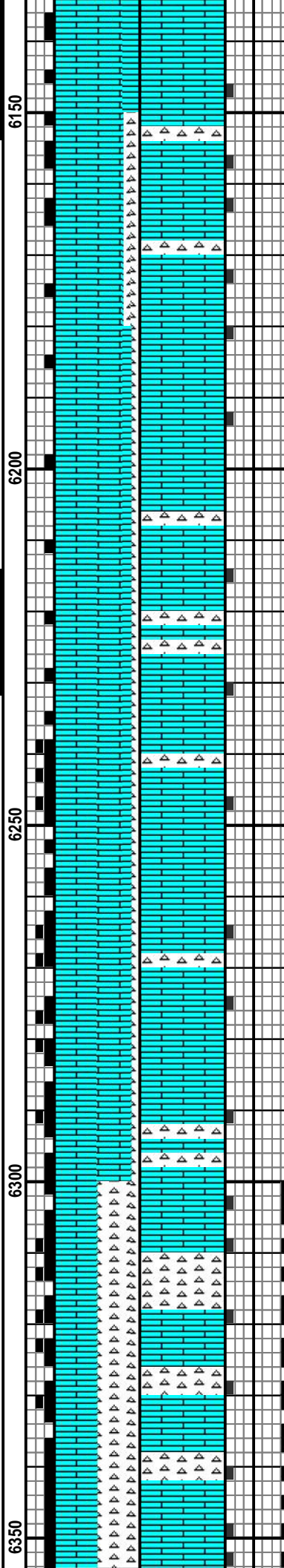
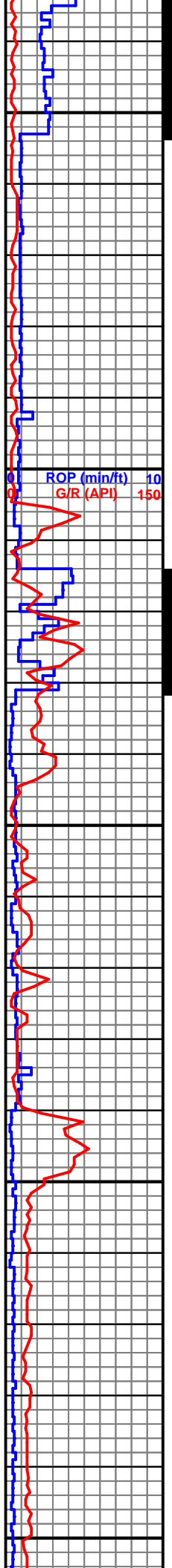
MD 6137 TVD 4744.38
INC 92.5 AZ 356.5
VS 1632.02

WOB: 20.5K
RPM: 74
GPM: 289
SPM: 82
PP: 2855

MD 6230 TVD 4739.68
INC 93.3 AZ 357.2
VS 1721.79

WT: 8.7
VIS: 30

MD 6323 TVD 4733.43
INC 94.4 AZ 357.7
VS 1811.73



LS: MSTLY LT TAN-CRM, OCC OFF WHT, CHNKY-PLTY, SME SPLNTRY, FLKY-SMTH TXT, V FN XLN, OCC HL FRAC POR, OCC PP VUG POR, PR INTERXLN POR, MOD FRM-FRM, CHT: WHT-CLR, CHNKY-SPLNTRY, MICROFN XLN, SMTH TXT, FRM-HRD, V PR DULL YEL FLOR, NO VIS CUT, NO RES RNG, V PR FLUORO

LS: LT TAN-CRM, CHNKY-PLTY, SME SPLNTRY, SMTH TXT, SME FLKY TXT, V FN XLN, OCC HL FRAC POR, OCC PP VUG POR, PR INTERXLN POR, MOD FRM-FRM, V PR DULL YEL FLOR, NO VIS CUT, NO RES RNG, V FNT FLUORO

LS: LT TAN-CRM, OCC OFF WHT, OCC LT GY, CHNKY-SPLNTRY, FLKY-RGH TXT, FN-V FN XLN, OCC HL FRAC POR, PR INTERXLN POR, MOD FRM-FRM, PR DULL YEL FLOR, NO VIS CUT, V FNT RES RNG, V FNT-FR FLUORO

LS: LT TAN-CRM, CHNKY-SPLNTRY, FLKY-RGH TXT, FN-V FN XLN, SME HL FRAC POR, OCC PP VUG POR, PR INTERXLN POR, MOD FRM-FRM, CHT: MSTLY WHT, SME CLR, OCC LT GY, CHNKY-SPLNTRY, SMTH TXT, MICROFN XLN, FRM-HRD, PR DULL YEL-GRN FLOR, PR MLKY LT BLU CUT, PR-FR YEL-GRN RES RNG,

YP: 1/
GEL: 1/1
W.L: 38
CK: 2
SOL: 2.2%
OIL:
PH: 10.8
CL: 3,400
CA: 240
LCM:

BG 3-4 U.

KD

Lanie 3408 3-32H 1500 Fluoro 250 Dil Indicat

FG 21 U.

FG 25 U.

KD

CG 53 U.

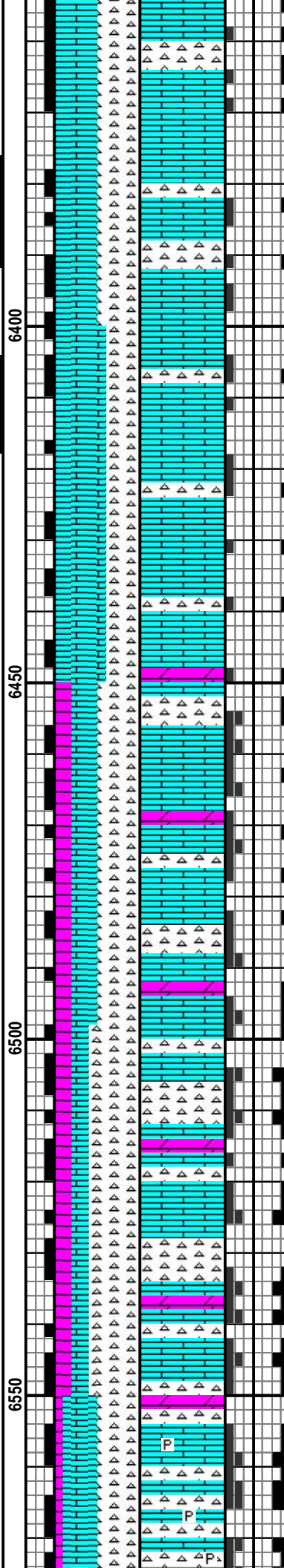
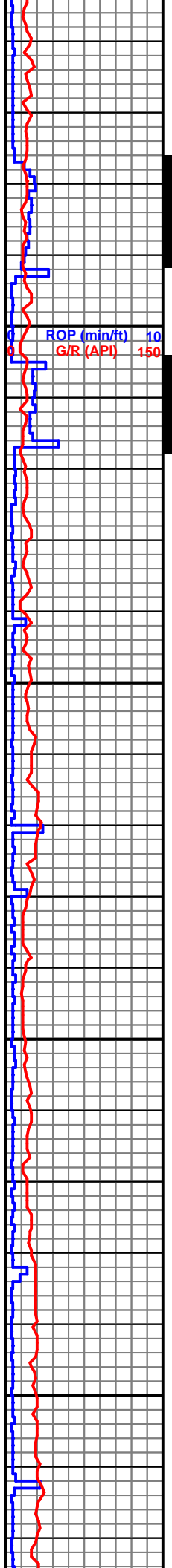
FG 104 U.

WOB: 19.6
 RPM: 77
 GPM: 300
 SPM: 85
 PP: 2836

MD 6414 TVD 4728.91
 INC 91.3 AZ 356.9
 VS 1899.75

WT: 8.7
 VIS: 30

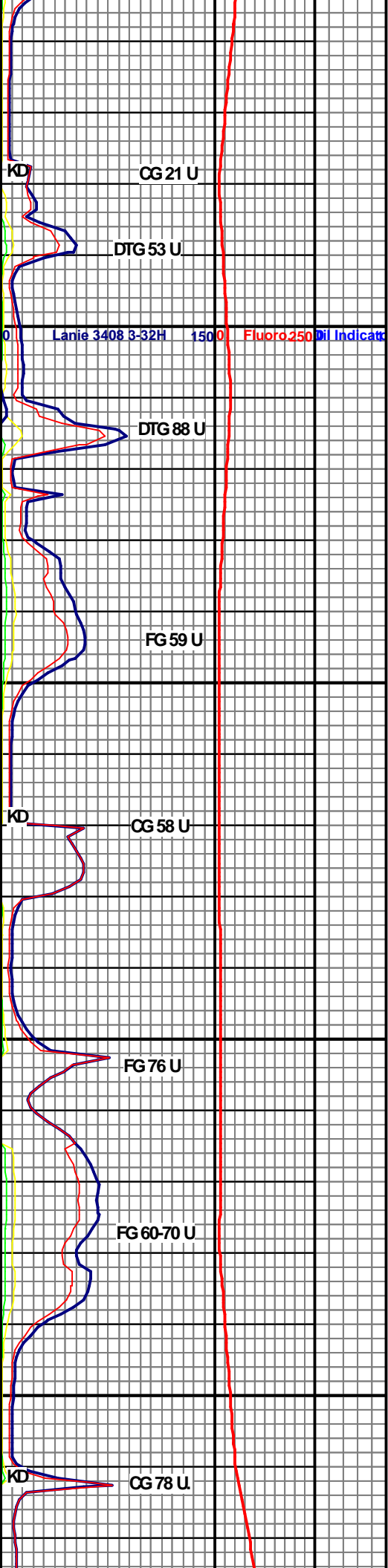
MD 6507 TVD 4726.47
 INC 91.7 AZ 356.2
 VS 1989.48



LS: MSTLY OFF WHT-LT TAN,
 OCC CRM, OCC LT GY,
 CHNKY-PLTY, SPLNTRY,
 FLKY-RGH TXT, FN-V FN XLN,
 OCC HL FRAC POR, PR
 INTERXLN POR, MOD
 FRMFRM, CHT: MSTLY OFF
 WHT-CLR, SVE LT GY,
 PLTY-SPLNTRY, SMTH TXT,
 MICROFN XLN, TR HL FRAC
 POR, FRMHRD, PR DULL
 YEL FLOR, PR MLKY LT BLU
 CUT, PR DULL YEL-GRN RES
 RNG, V FNT FLUORO

LS: PRED CRM, SVE OFF
 WHT, SVE BUFF, SVE OFF
 WHT-WHT, OCC LT TN,
 MSTLY MICRO XLN, SVE V
 FN- FN XLN, PRED MOD FRM-
 MOD HRD, SVE HRD, PRED
 CHNKY- BLKY, FR INTERXLN
 POR, SVE PP POR, OCC HL
 FRAC POR, CHT: PRED
 WHT-OFF WHT, SVE OPQ-
 TRNSLU, OCC LT GY, MSTLY
 V FN XLN, SVE MICRO XLN,
 PRED HRD, SVE VRY HRD,
 PRED CHNKY-BLKY, OCC
 PLTY, SCAT DULL YEL FLOR,
 SLW MLKY CUT, FNT RES
 RNG, V FNT-FNT FLUORO

LS: MSTLY OFF WHT-WHT,
 OCC CRM-LT TAN,
 CHNKY-PLTY, SVE SPLNTRY,
 RGH TXT, SVE FLKY TXT,
 FN-V FN XLN, SVE HL FRAC
 POR, PR INTERXLN POR,
 MOD FRMFRM, CHT: OFF
 WHT-CLR, SVE LT GY-DK GY,
 OCC BLK, SPLNTRY, SMTH
 TXT, MICROFN XLN,
 FRMHRD, DOL: LT TAN-OFF
 WHT, CHNKY-PLTY, RGH TXT,
 SVE FLKY TXT, FN XLN, SVE
 HL FRAC POR, MOD
 FRMFRM, PR-FR DULL YEL
 FLOR, PR MLKY LT BLU CUT,
 PR DULL YEL RES RNG, V
 FNT FLUORO



Lanie 3408 3-32H 1500 Fluoro250 Dil Indicat

WOB: 19.3
RPM: 52
GPM: 298
SPM: 85
PP: 2873

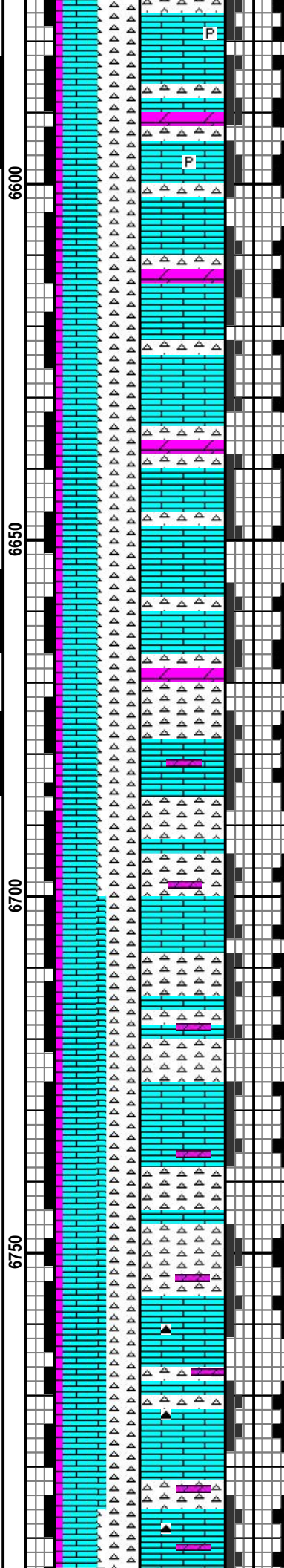
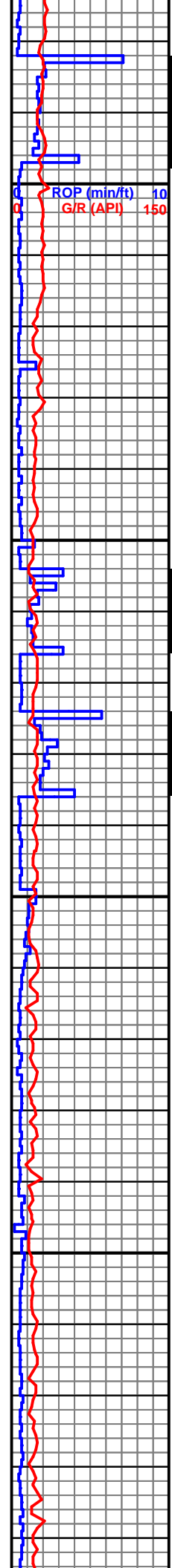
MD 6598 TVD 4724.25
INC 91.1 AZ 356
VS 2077.1

MD 6690 TVD 4723.53
INC 89.8 AZ 357.5
VS 2165.98

WT: 8.7
VIS: 31

MD 6783 TVD 4723.45
INC 90.3 AZ 357.8
VS 2256.2

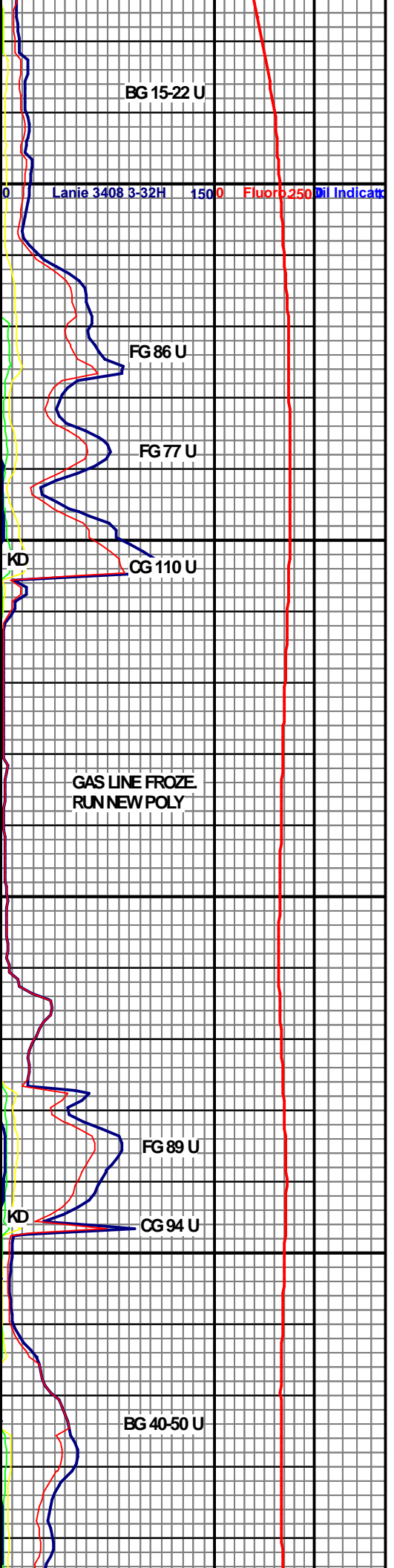
WOB: 19.7



CHRT: MSTLY OPQ- TRNSLU, SVE LT GY- LT BRW, PRED HRD, MICRO XLN, SVE VRY FN XLN, MSTLY CHNKY, PLTY, SVE BLKY LS: PRED LT TN- TN, SVE OFF WHI-CRM, MICRO XLN, SVE VRY FN XLN, TR HL FRAC POR, BLKY, MOD FRM- FRM, SVE MOD HRD, DOLO: PRED LT TN-OFF WHT, SVE OFF WHT-WHT, SVE CRM, SVE TN, PRED MICRO FN XLN, SVE V FN XLN, MSTLY HRD, SVE MOD HRD-FRM, OCC V HRD, PRED PLTY, INTERXLN POR, SVE HL FRAC POR, OCC VUG POR, ABUNDT YEL FLOR, FLSH BRT BLU CUT, SLW MLKY GRN RES RNG. OIL STAINING PRESENT, FR-GD FLR

LS: MSTLY OFF WHT-WHT, OCC LT GY, OCC CRM, CHNKY-SPLNTRY, RGH-FLKY TXT, FN-V FN XLN, SVE HL FRAC POR, PR INTERXLN POR, MOD FRM-FRM, CHT: OFF WHT-CLR, SVE LT-DK GY, OCC BLK, PLTY-SPLNTRY, SMTH TXT, MICROFN XLN, FRM-HRD, PR-FR DULL YEL-GRN FLOR, PR-FR MLKY LT BLU CUT, FR YEL RES RNG, V GD FLURO

CHRT: PRED TRNSLU, SVE OPQ, SVE LT GY- LT BRW, PRED HRD, MICRO XLN, SVE VRY FN XLN, MSTLY CHNKY, PLTY, SVE BLKY LS: PRED LT TN- TN, SVE OFF WHI-CRM, MICRO XLN, SVE VRY FN XLN, TR HL FRAC POR, BLKY, MOD FRM- FRM, SVE MOD HRD, DOLO PRESNT, ABUNDT YEL FLOR, FLSH MLKY GRN CUT, MLKY BLU RES RNG. OIL STAINING PRESENT



WOB: 18.7
RPM: 75
GPM: 368
SPM: 105
PP: 2835

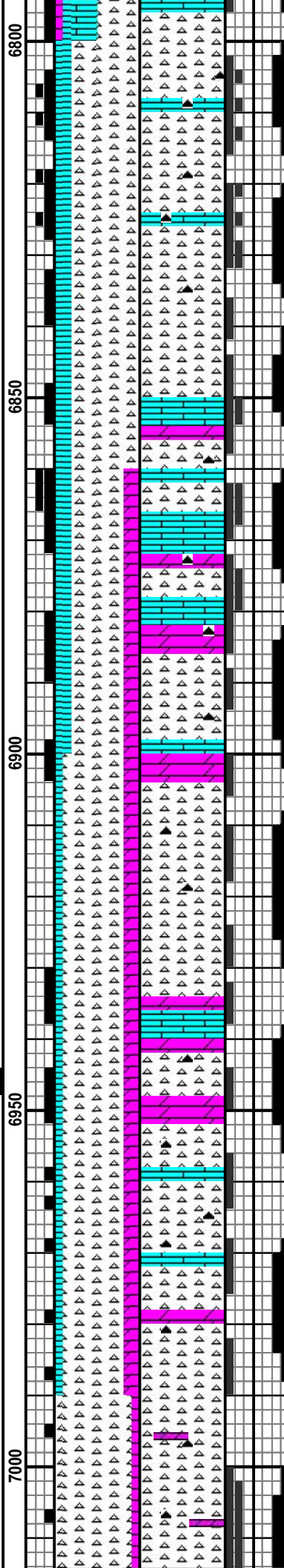
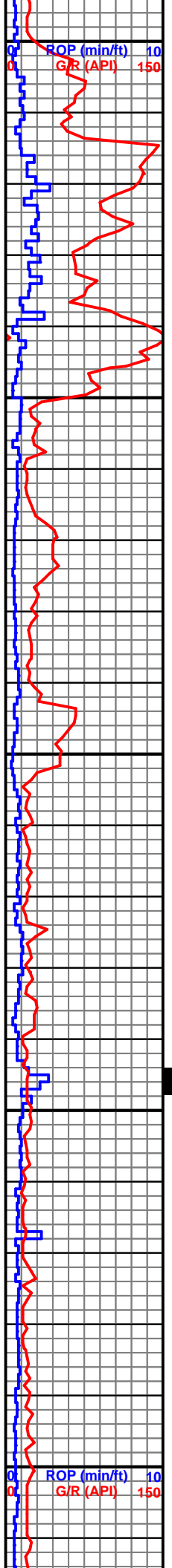
1/3/2014 @
MD 6,835'

MD 6878 TVD 4724.28
INC 88.7 AZ 357.7
VS 2348.39

WT: 8.7
VIS: 31

MD 6974 TVD 4726.79
INC 88.3 AZ 356.4
VS 2441.24

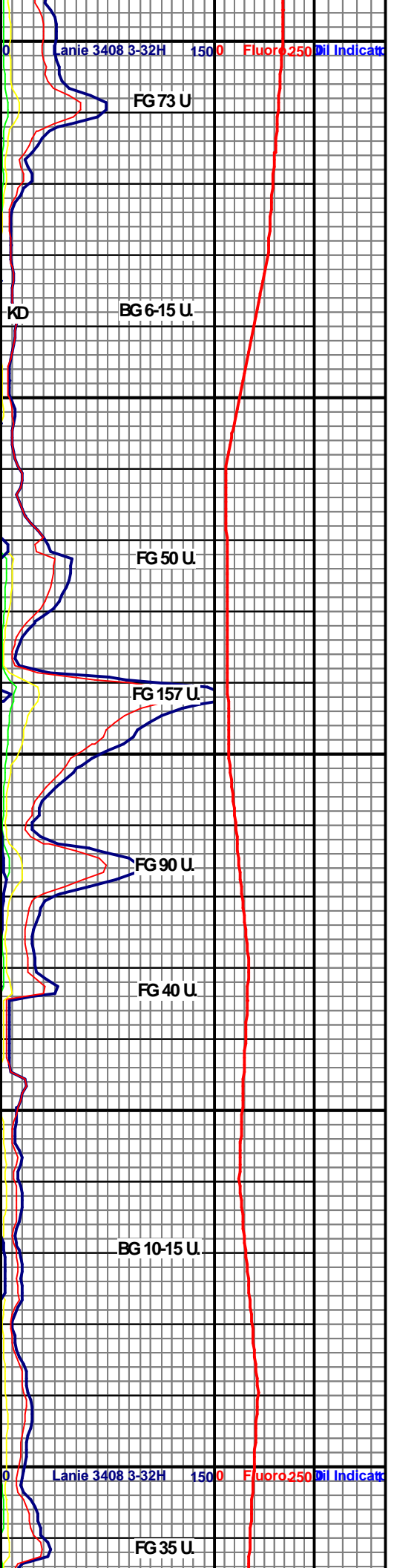
WOB: 21.4K
RPM: 65
GPM: 367
SPM: 104
PP: 2633

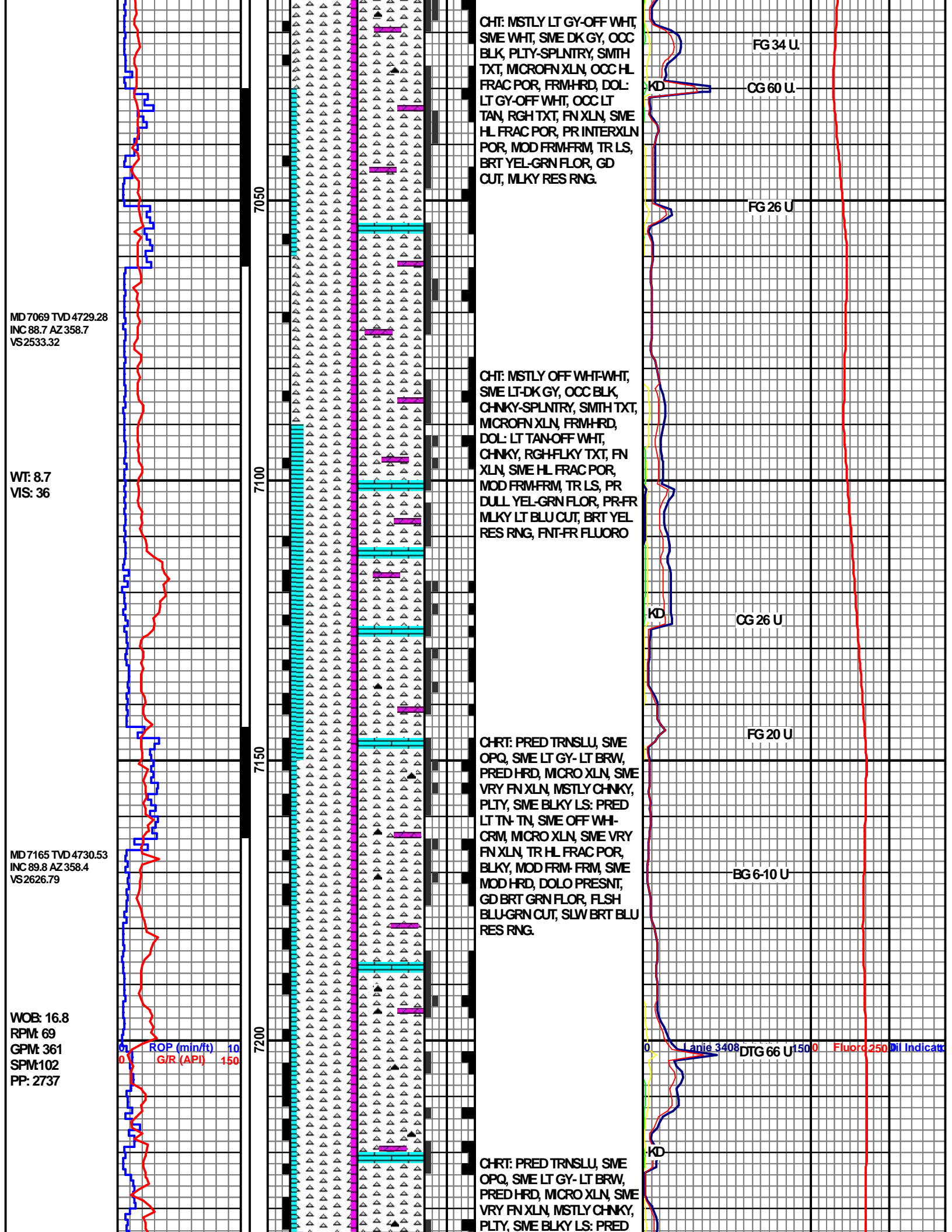


LS: MSTLY OFF WHT-LT TAN,
CHNKY-PLTY, RGH-FLKY TXT,
FN-V FN XLN, SVE HL FRAC
POR, PR-FR INTERXLN POR,
MOD FRM-FRM, CHT: MSTLY
CLR, OCC LT-DK GY, OCC
BLK, OCC CLR,
SPLNTRY-PLTY, SMTH TXT,
MICROFN XLN, TR HL FRAC
POR, FRM-HRD, TR DOL,
PR-FR DULL YEL-GRN FLOR,
PR-FR MLKY LT BLU CUT, FR
YEL-GRN RES RNG, V GD
FLUORO

CHRT: PRED TRNSLU, SVE
OPQ, SVE LT GY- LT BRW,
PRED HRD, MICRO XLN, SVE
VRY FN XLN, MSTLY CHNKY,
PLTY, SVE BLKY LS: PRED
LT TN- TN, SVE OFF WHI-
CRM, MICRO XLN, SVE VRY
FN XLN, TR HL FRAC POR,
BLKY, MOD FRM- FRM, SVE
MOD HRD, DOLO PRESENT,
ABUNDT YEL FLOR, FLSH
GRN-BLU CUT, MLKY GRN
RES RNG. OIL STAINING
PRESENT

CHT: MSTLY LT GY-OFF WHT,
OCC DK GY, OCC CLR,
PLTY-SPLNTRY, MICROFN
XLN, OCC HL FRAC POR,
FRM-HRD, DOL: LT TAN-LT
GY, OCC LT BRN,
CHNKY-PLTY, SVE SPLNTRY,
RGH TXT, SVE FLKY TXT,
MSTLY FN XLN, SVE HL
FRAC POR, SVE PP VUG
POR, MOD FRM-FRM, TR LS,
BRT GRN FLOR, GD CUT,
MLKY RES RNG.





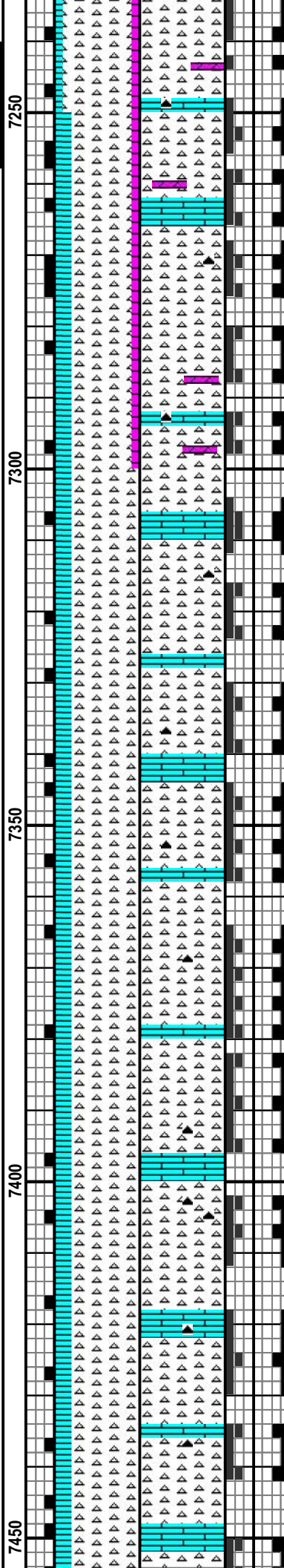
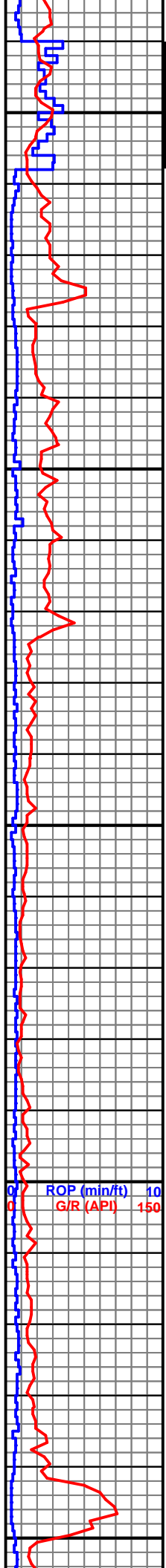
MD 7260 TVD 4729.62
INC 91.3 AZ 358.4
VS 2719.24

WT: 9.0
VIS: 33

MD 7356 TVD 4727.27
INC 91.5 AZ 358.8
VS 2812.71

WOB: 22.7
RPM: 74
GPM: 369
SPM: 105
PP: 2943

MD 7451 TVD 4723.63



LT TN- TN, SME OFF WH-
CRM, MICRO XLN, SME VRY
FN XLN, TR HL FRAC POR,
BLKY, MOD FRM- FRM, SME
MOD HRD, DOLO PRESENT,
GD BRT GRN FLOR, BRT BLU
CUT, SLW MLKY RES RNG.

CHRT: MSTLY
OPQ-TRANSLU, SME
WHT-OFF WHT, SME LT GY-
LT BRW, PRED HRD, SME
MOD HRD-FRM, MICRO XLN,
SME V FN XLN, MSTLY
CHNKY, SCAT PLTY, SME
BLKY, OCC FLKY LS: PRED
LT TN- TN, SME WHT, SME
OFF WHT- CRM, MICRO XLN,
SME V FN XLN, VUG POR,
SME PP POR, TR HL FRAC
POR, PRED CHNKY, SME
PLTY, MOD FRM- FRM, SME
MOD HRD, GD BRT GRN- BRT
YEL FLOR, FLSH BRT
BLU-GRN CUT, BRT BLU RES
RNG.

CHRT: PRED OFF WHT-CRM,
SME OPQ-TRANSLU, SME LT
GY- LT BRW, PRED HRD,
SME MOD HRD-FRM, MICRO
XLN, SME V FN XLN, MSTLY
CHNKY, SCAT PLTY, SME
BLKY, OCC FLKY LS: PRED
LT TN-TN, SME WHT, SME
OFF WHT- CRM, MICRO XLN,
SME V FN XLN, VUG POR,
SME PP POR, TR HL FRAC
POR, PRED CHNKY, SME
PLTY, MOD FRM- FRM, SME
MOD HRD, GD BRT GRN-BRT
YEL FLOR, FLSH MLKY GRN
CUT, SLW MLKY GRN RES
RNG.

CHRT: PRED CRM, SME OFF
WHT, SME WHT, SME

BG 5-10 U

DTG 93 U

FG 36 U

CG 40 U

MUD CHK @
7,410'
WT: 9.0
VIS: 30
PV: 2
YP: 2
GEL: 1/3
W.L: 60
CK: 2
SOL: 3.3%
OIL:
PH: 10.4
CL: 2,600
CA: 120
LCM:

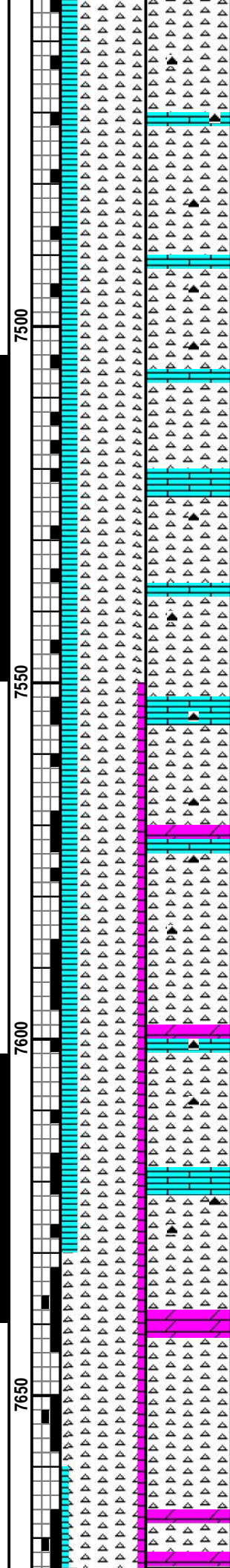
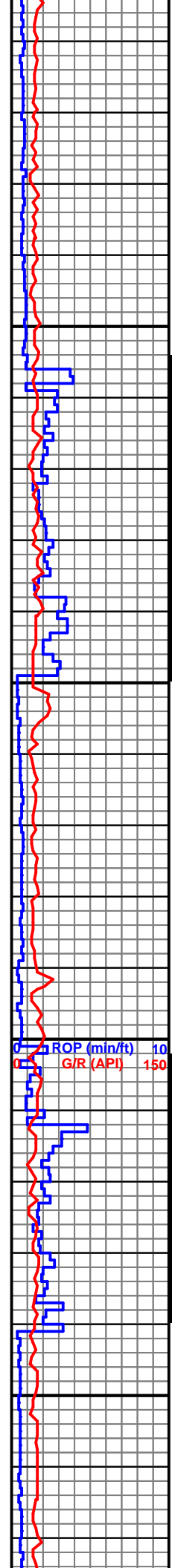
Lanie 3408 3-32H 1500 Fluoro 250 Dil Indicat

WT: 9.0
VIS: 32

MD 7547 TVD 4719.86
INC 91.6 AZ 0.3
VS 2999.8

WOB: 21.2
RPM: 73
GPM: 299
SPM: 85
PP: 2987

MD 7642 TVD 4718.03
INC 90.6 AZ 357.7
VS 3092.45

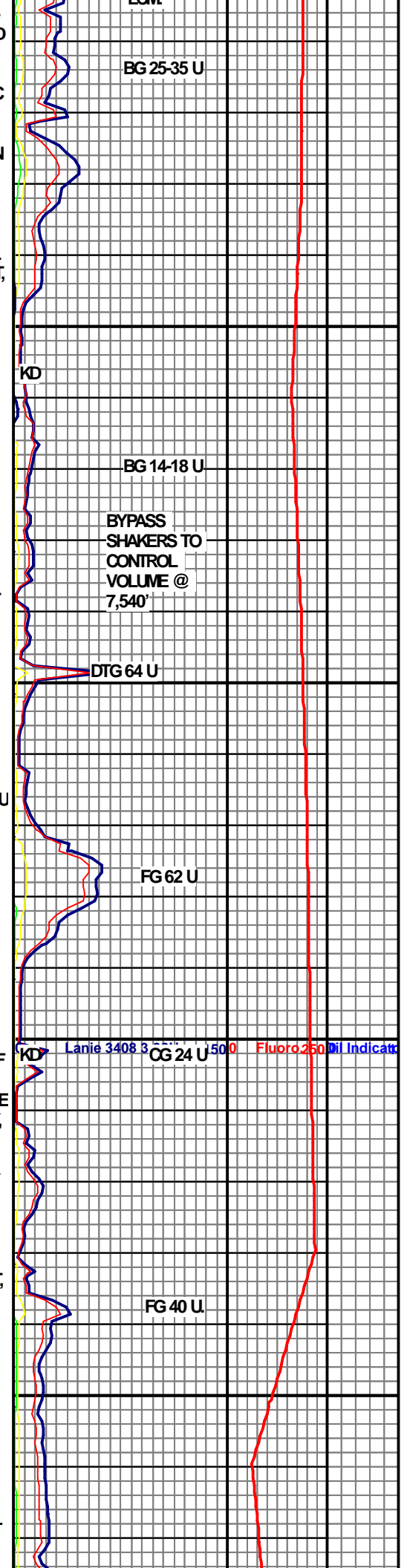


OPQ-TRANSLU, SME LT GY-
LT TN, PRED HRD, SME MOD
HRD-FRM, MICRO XLN, SME
V FN XLN, MSTLY CHNKY,
SCAT PLTY, SME BLKY, OCC
FLKY LS: PRED LT TN-TN,
SME WHT, SME OFF WHT-
CRM, MICRO XLN, SME V FN
XLN, VUG POR, SME PP
POR, TR HL FRAC POR,
PRED CHNKY, SME PLTY,
MOD FRM- FRM, SME MOD
HRD, GD BRT GRN-BRT YEL
FLOR, FLSH MLKY GRN CUT,
SLW MLKY GRN RES RNG.

CHRT: PRED CRM-OFF WHT,
TRNSLU, SME OPQ, SME LT
GY- LT BRW, PRED HRD,
MICRO XLN, SME VRY FN
XLN, MSTLY CHNKY, PLTY,
SME BLKY LS: PRED LT TN-
TN, SME OFF WHI- CRM,
MICRO XLN, SME VRY FN
XLN, TR HL FRAC POR,
BLKY, MOD FRM- FRM, SME
MOD HRD, DOLO PRESNT,
GD BRT GRN FLOR, BRT BLU
CUT, SLW MLKY RES RNG

CHRT: PRED BRWN-LT GY,
SME DRK GY, SME CRM-OFF
WHT, TRNSLU, SME OPQ,
PRED HRD, MICRO XLN, SME
VRY FN XLN, MSTLY CHNKY,
PLTY, SME BLKY LS: PRED
LT TN- TN, SME OFF WHI-
CRM, MICRO XLN, SME VRY
FN XLN, TR HL FRAC POR,
BLKY, MOD FRM- FRM, SME
MOD HRD, DOLO PRESNT,
ABUNDT BRT YEL-
FLOR, FR MLKY LT BLU CUT,
PR-FR YEL-GRN RES RNG

CHT: MSTLY LT GY, OCC DK
GY, SME OFF WHT-WHT, TR
CLR, PLTY-SPLNTRY, SMTH
TXT, MICROFN XLN, OCC HL
FRAC POR, MOD FRM-FRM,
DOL: LT GY-DK GY,



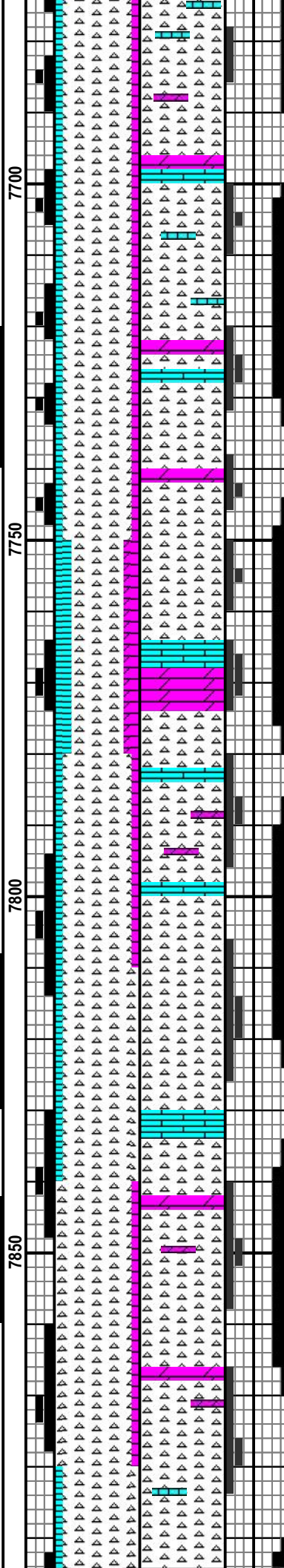
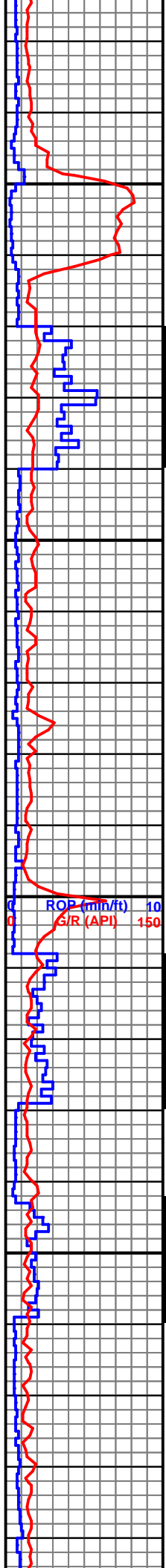
WT: 8.8
VIS: 30

MD 7738 TVD 4716.78
INC 90.9 AZ 357.8
VS 3185.61

WOB: 11.8K
RPM: 75
GPM: 348
SPM: 99
PP: 2924

MD 7833 TVD 4715.62
INC 90.5 AZ 356.7
VS 3277.6

1/4/2014 @
7,843' MD



CHNKY-PLTY, RGH TXT, SME
FLKY TXT, FN XLN, SME HL
FRAC POR, PR-FR INTERXLN
POR, MOD FRM-FRM, PR
DULL YEL-GRN FLO, FR
MLKY LT BLU CUT, FR BRT
YEL RES RNG

CHT: MSTLY LT GY, SME DK
GY, OCC BLK, SME OFF
WHT-WHT, TR CLR,
CHNKY-SPLNTRY, MICROFN
XLN, RGH TXT, SME SMTH
TXT, OCC HL FRAC POR,
MOD FRM-FRM, TR LS, TR
DOL, PR-FR DULL YEL FLO,
FR MLKY LY BLU CUT, BRT
YEL-GRN RES RNG

CHT: MSTLY LT GY, OCC
CLR, OCC DK GY-BLK,
CHNKY-PLTY, SME SPLNTRY,
SMTH TXT, OCC RGH TXT,
MICROFN XLN, SME HL
FRAC POR, MOD FRM-FRM,
DOL: LT GY-LT BRN,
CHNKY-PLTY, RGH-FLKY TXT,
FN XLN, SME HL FRAC POR,
PR-FR INTERXLN POR, MOD
FRM-FRM, LS: LT CRM-CRM,
OCC LT BRN, CHNKY-PLTY,
FLKY-SMTH TXT, FN-V FN
XLN, SME HL FRAC POR, PR
INTERXLN POR, MOD
SFT-MOD FRM, PR-FR DULL
YEL FLO, FR MLKY LT BLU
CUT, BRT THK YEL RES RNG

CHT: MSTLY LT GY, OCC DK
GY-BLK, OCC OFF WHT-WHT,
TR CLR, CHNKY-SPLNTRY,
SMTH TXT, OCC RGH TXT,
MICROFN XLN, SME HL
FRAC POR, MOD FRM-FRM,
TR DOL, TR LS, PR-FR DULL
YEL-GRN FLO, TR BRT
YEL-GRN FLO, PR-FR MLKY
LT BLU CUT, FR BRT THK
YEL-GRN RES RNG

FG 35 U.

CG 29 U.

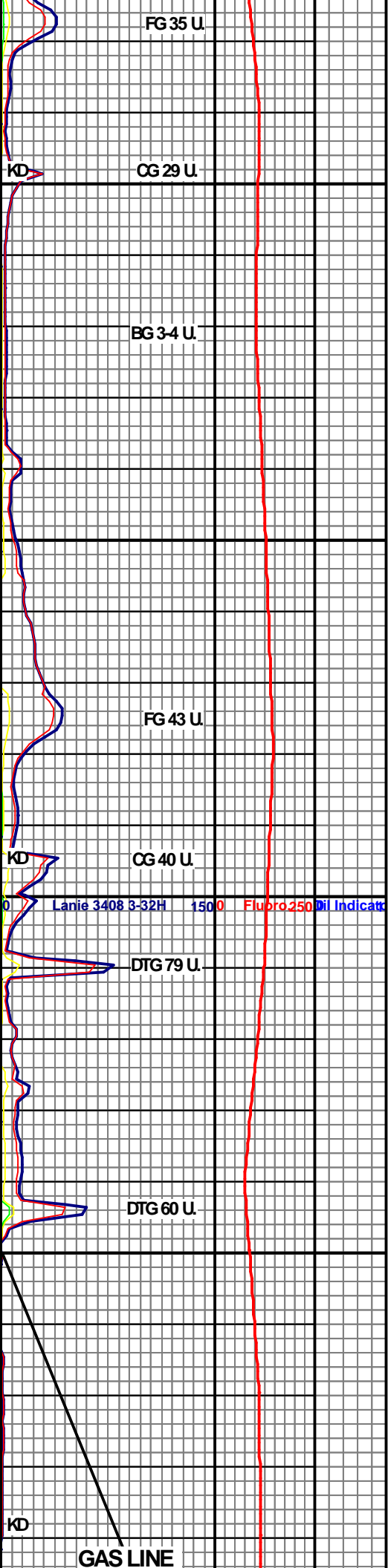
BG 3-4 U.

FG 43 U.

CG 40 U.

DTG 79 U.

DTG 60 U.



KD
GAS LINE

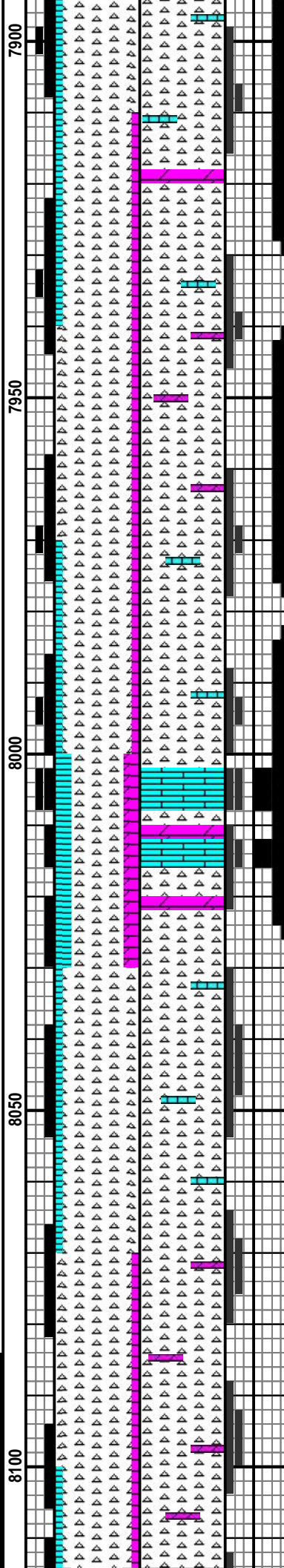
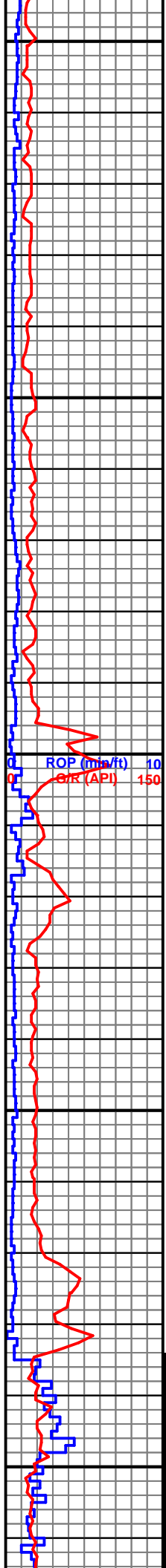
WT: 8.8
VIS: 30

MD 7929 TVD 4715.03
INC 90.2 AZ 354.9
VS 3369.92

WOB: 20.9K
RPM: 72
GPM: 361
SPM: 103
PP: 3002

MD 8025 TVD 4718.04
INC 86.2 AZ 353.2
VS 3461.33

WT: 8.8
VIS: 32



CHT: LT-DK GY, OCC BLK,
OCC WHT-WHT, TR LT BRN,
CHNKY-SPLNTRY, SMTH TXT,
OCC RGH TXT, MICROFN
XLN, SVE HL FRAC POR,
MOD FRM-FRM, DOL: LT
TAN-LT BRN, SVE CRM, TR
OFF WHT, CHNKY-PLTY,
RGH-FLKY TXT, FN XLN,
ABUND HL FRAC POR, PR-FR
INTERXLN POR, MOD
SFT-MOD FRM, TR LS, PR-FR
DULL YEL-GRN FLOR, TR
BRT YEL-GRN FLOR, FR
MLKY LT BLU CUT, BRT THK
YEL-GRN RES RNG

CHT: MSTLY LT-DK GY, SVE
OFF WHT-WHT, OCC CLR,
OCC BLK, TR LT BRN,
CHNKY-SPLNTRY, SVE PLTY,
MSTLY SMTH TXT, OCC RGH
TXT, MICROFN XLN, SVE HL
FRAC POR, MOD FRM-FRM,
LS: MSTLY OFF WHT-WHT,
OCC LT TAN-LT CRM,
CHNKY-SPLNTRY, RGH-FLKY
TXT, FN-V FN XLN, OCC HL
FRAC POR, OCC PP VUG
POR, PR-FR INTERXLN POR,
MOD SFT-MOD FRM, DOL:
MSTLY LT TAN-LT GY, OCC
OFF WHT, CHNKY-PLTY,
RGH-FLKY TXT, FN XLN, SVE
HL FRAC POR, PR INTERXLN
POR, MOD FRM, FR DULL
YEL-GRN FLOR, PR-FR MLKY
LT BLU CUT, BRT THK YEL
RES RNG

CHT: MSTLY LT-DK GY, OCC
BLK, OCC WHT, SVE CLR,
PLTY-SPLNTRY, SVE SMTH
TXT, SVE GRAN TXT,
MICROFN XLN, ABUND HL
FRAC POR, MOD FRM-FRM,
TR DOL, PR-FR DULL
YEL-GRN FLOR

CUT. RE-RAN
GAS LINE



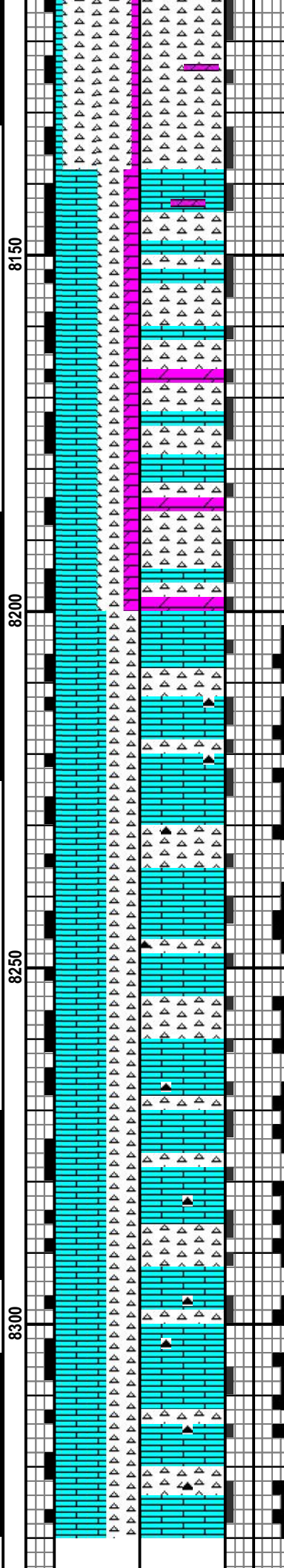
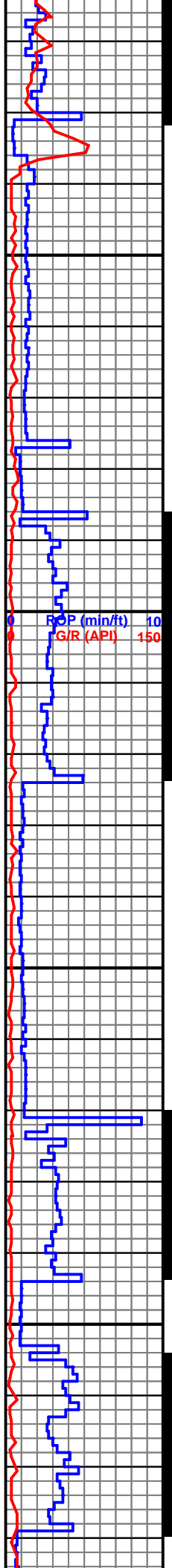
MD8120 TVD 4723.6
INC 87.1 AZ 355
VS3551.73

WOB: 45.8
RPM: 0
GPM: 296
SPM: 84
PP: 3219

MD8216 TVD 4728.12
INC 87.5 AZ 355.8
VS3643.77

WT: 8.3
VIS: 31

MD8312 TVD 4730.97
INC 89.1 AZ 357.5
VS3736.43



CHRT: PRED WHT-OFF WHT,
SME OPQ-TRANSLU, SME
CRM, SME LT GY- LT BRW,
PRED HRD, SME MOD
HRD-FRM, MICRO XLN, SME
V FN XLN, MSTLY CHNKY,
SCAT PLTY, SME BLKY, OCC
FLKY LS: PRED LT TN-TN,
SME WHT, SME OFF WHT-
CRM, MICRO XLN, SME V FN
XLN, VUG POR, SME PP
POR, TR HL FRAC POR,
PRED CHNKY, SME PLTY,
MOD FRM- FRM, SME MOD
HRD, DOLO: PRED WHT-OFF
WHT, SME V LT TN, PRED
MICRO XLN, SME V FN XLN,
VUG POR, SME INTERXLN
POR, MOD FRM-FRM, SCAT
GRN-BRT YEL FLOR,

LS: PRED WHT, SME OFF
WHT-CRM, SME TN-LT TN,
SCAT DRK BRWN-DRK GY,
PRED HRD, SCAT V HRD,
SME FN XLN, OCC DNSE
XLN, PRED CHNKY, SCAT
BLCKY, TR PLTY, PR
INTERXLN POR, SCAT PP
VUG POR, TR HL FRAC POR,
CHRT: PRED OPQ-TRANSLU,
SME WHT-OFF WHT, SME
CRM, PRED V FN XLN, SME
MICRO FN XLN, PRED
CHNKY, SME BLKY, OCC
PTLY, PRED V FRM, SME
HRD, PRED VUG POR, SME
PP POR, OCC MICRO VUG
POR, SCAT BRT YEL FLOR,
SLW MLKY BLU CUT, FLSH
BRT GRN RES RNG.

FG 64 U

BG 6-7 U

BG 4-5 U

Lanie 3408 3-32H 1500 Fluoro250 Dil Indicat

20 SEC GAS TEST
@ TRAP 91 U

MUD CHK
@8,250'
WT: 8.8
VIS: 30
PV: 2
YP: 2
GEL: 1/3
W.L: 60
CK: 2
SOL: 2.3%
OIL:
PH: 9.8
CL: 3,200
CA: 120
LCM:

LOST ALL

LOST ALL
RETURNS
NO SAMPLE

20 SEC GAS TEST
@ TRAP 83 U

KD

0 Lanie 3408 3-32H 1500 Fluoro250 Dil Indicat

LOST ALL
RETURNS
NO SAMPLE

KD

RETURNS
PARTIALLY
ACHIEVED @ 8,508'
MD, 3:43 AM
NO SAMPLE
AVAILABLE

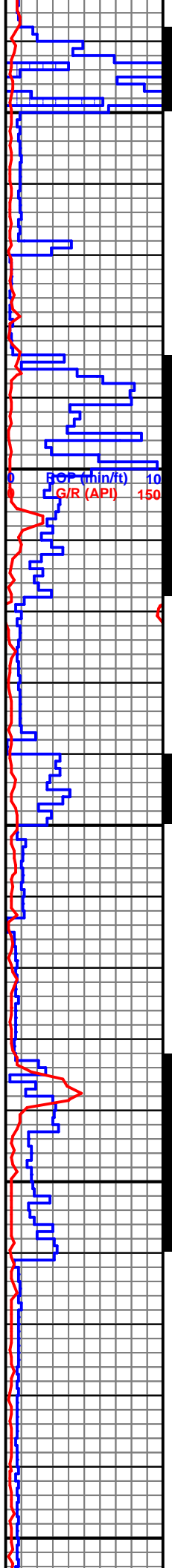
WOB: 49.2K
RPM: 4
GPM: 243
SPM: 69
PP: 2302

MD 8408 TVD 4730.63
INC 91.3 AZ 358.2
VS 3829.63

1/5/2014 @
8,448' MD

IN WT: 8.7
IN VIS: 30

MD 8504 TVD 4727.95
INC 91.9 AZ 357.5
VS 3922.8



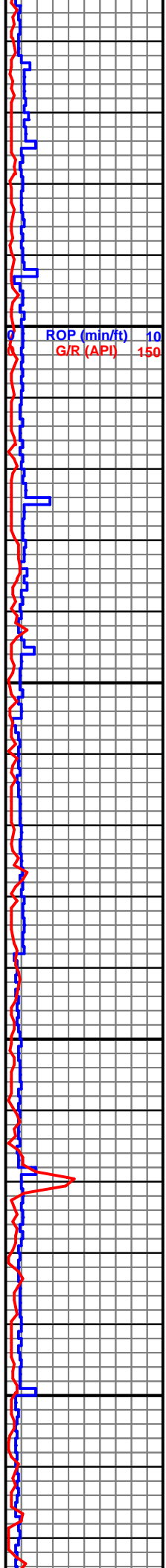
8350
8400
8450
8500
8550

WOB: 22.4
RPM: 69
GPM: 268
SPM: 76
PP: 2991

MD 8599 TVD 4724.72
INC 92 AZ 357.4
VS 4014.82

MD 8695 TVD 4721.87
INC 91.4 AZ 357.2
VS 4107.77

IN WT: 8.5
IN VIS: 29



ROP (min/ft) 10
G/R (API) 150

8600

8650

8700

8750

LOST ALL
RETURNS
NO SAMPLE

LOST ALL
RETURNS
NO SAMPLE

LOST ALL
RETURNS
NO SAMPLE

KD

KD

KD

20 SEC GAS TEST
@ TRAP 68 U

Lanie 3408 3-32H 1500 Fluoro 250 Dil Indicat

MD8790 TVD 4719.22
INC 91.8 AZ 357.5
VS4199.77

WOB: 28.1
RPM: 60
GPM: 261
SPM: 75
PP: 2847

ROP (min/ft) 10
G/R (API) 150

8800

8850

8900

8950

MD 8886 TVD 4718.21
INC 89.4 AZ 354.4
VS4292.14

IN WT: 8.8
IN VIS: 29

MD 8981 TVD 4718.96
INC 89.7 AZ 355.1
VS4383.01

LOST ALL
RETURNS
NO SAMPLE

LOST ALL
RETURNS
NO SAMPLE

Lanie 3408 3-32H 1500 Fluoro250 Dil Indicat

20 SEC GAS TEST
@ TRAP 66 U
MUD CHK
@ 8,800'
WT: 8.5
VIS: 28
PV: 1
YP: 1
GEL: 1/1
W.L: 60
CK: 2
SOL: 1%
OIL:
PH: 9.2
CL: 1,200
CA: 80
LCM:

KD

KD

25 SEC GAS TEST
@ TRAP 90 U

WOB: 25.7
RPM: 65
GPM: 260
SPM: 74
PP: 2987

ROP (min/ft) 10
G/R (API) 150

MD9077 TVD 4719.04
INC 90.2 AZ 355.6
VS4475.12

1/6/2014 @
MD 9,164'

MD9172 TVD 4718.3
INC 90.7 AZ 355.5
VS4566.37

ROP (min/ft) 10
G/R (API) 150

9000
9050
9100
9150
9200

LOST ALL
RETURNS
NO SAMPLE

LOST ALL
RETURNS
NO SAMPLE

KD

KD

Lanie 3408 3-32H 1500 Fluoro250 Dil Indicat

Lanie 3408 3-32H 1500 Fluoro250 Dil Indicat

MD 9246 TVD 4717.46
INC 90.6 AZ 355.6
VS 4637.45

MD 9301 TVD 4716.88
INC 90.6 AZ 355.6
VS 4690.29

ROP &
GAMMA

9250

9300

50

LOST ALL
RETURNS
NO SAMPLE

DRILLER'S TD @
9,301' MD ON
1/6/2014

Sandridge
Energy Inc.
LANIE 3408 3-32H
330' FNL & 660' FEL
OF SEC. 32, T34S,
R08W. HARPER CO.
KANSAS

KD

MCWL UNIT #1023