



MASTERLOG

Schlumberger Cameron Testing Facility

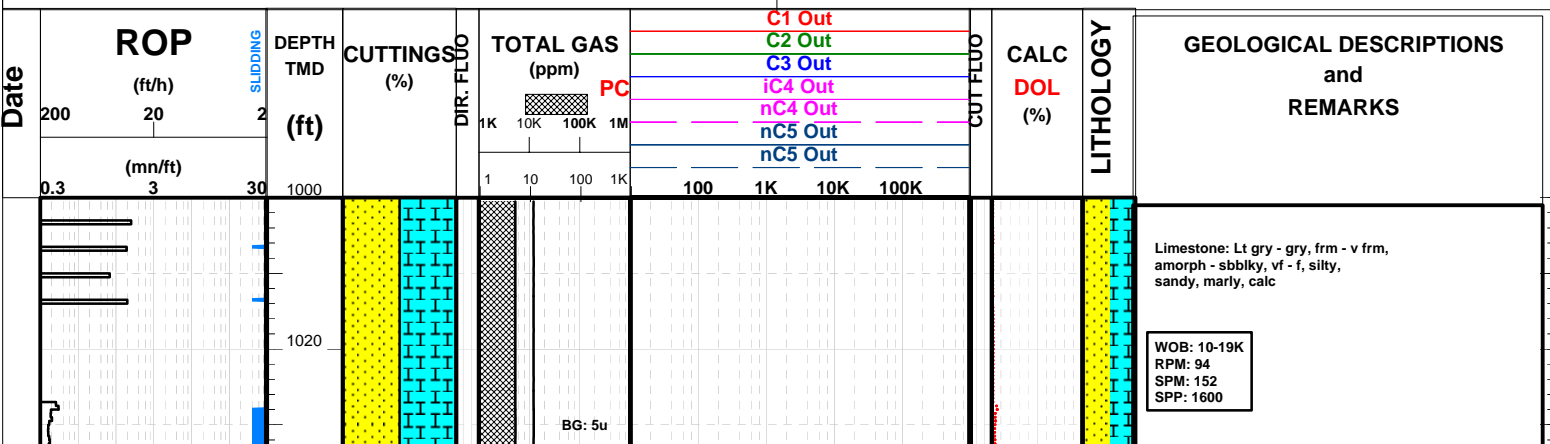


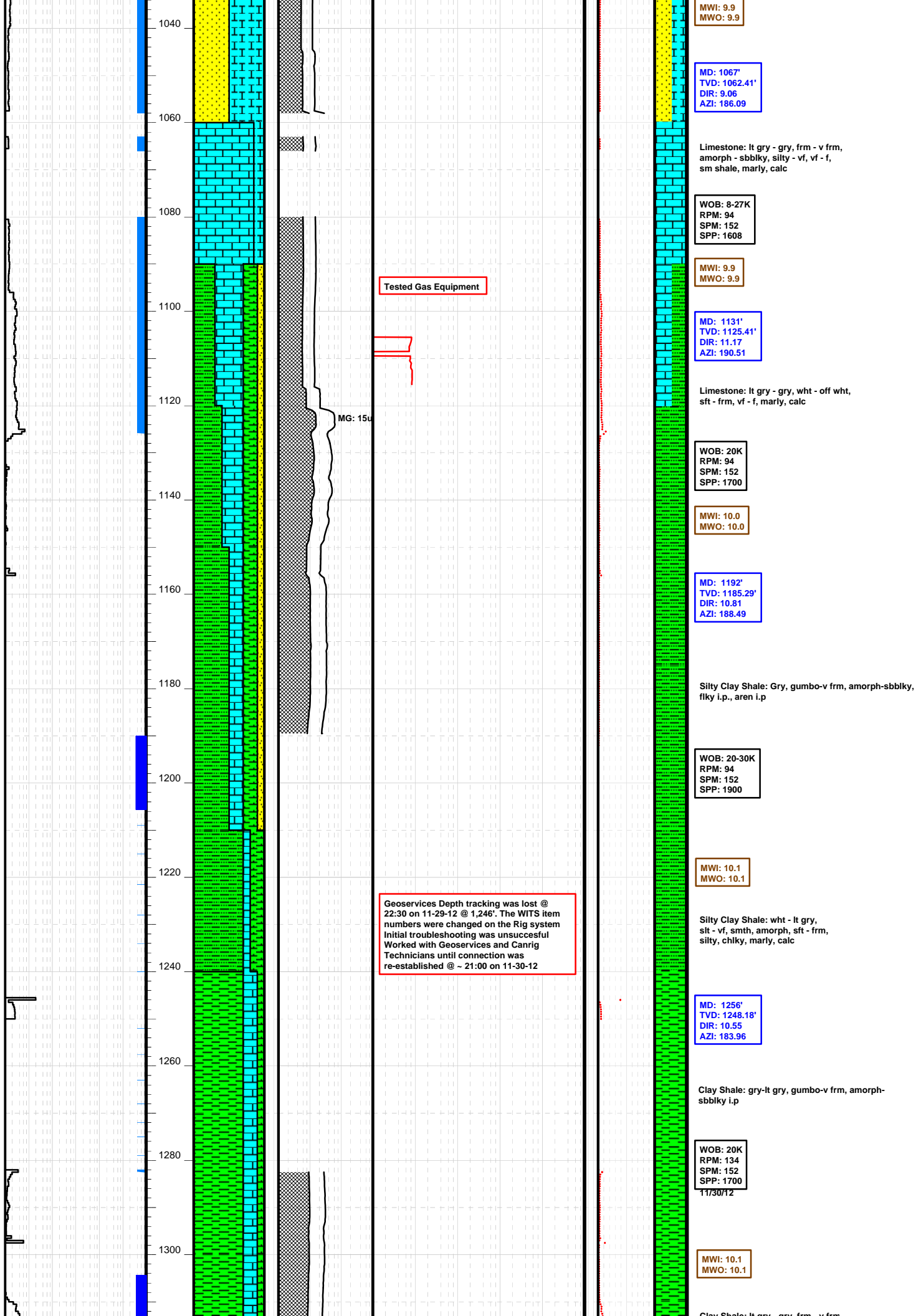
FROM (ft) : 1000 TO (ft) : 5240 SCALE : 1/ 1000

<p>WELL NAME : Slot #2</p> <p>OPERATOR : Schlumberger / Shell COUNTRY : U.S.A BLOCK : Cameron Testing Facility RIG : Nabors Rig F20 Spudded date: 11/16/2012 DATE TD : 12/21/2012 DEPTH REFERENCE RT DATE FORMAT : DD/MM/YY</p>	<p>COORDINATES (ft)</p> <p>LONGITUDE : LATITUDE : UTM X : 3335621.119 UTM Y : 10308504.619 RT-LAT : ROTARY TABLE: 30.6 TOTAL DEPTH : 5213 ft FINAL TVD : N/A</p>	<p>ABBREVIATIONS and UNITS</p> <table style="width: 100%;"> <tr> <td style="width: 50%;"> <p>BG : Background Gas FG : Formation Gas TG : Trip Gas CG : Pipe Connection Gas RG : Recycling Gas POG : Pump Off Gas SWG : Swabbing gas</p> </td> <td style="width: 50%;"> <p>WOB : Weight On Bit (kbls) TDRPM : Rotary Speed Surface(rpm) M.RPM: Mud Motor Rotary Speed (rpm) FLOW : Flow Rate (gpm) SPP : Pump Pressure (psi) TRQ : Rotating Torque (klbs*ft) MW : Mud Weight (ppg) PV : Plastic Viscosity (cP) FV : Funnel Viscosity (s)</p> </td> </tr> </table>	<p>BG : Background Gas FG : Formation Gas TG : Trip Gas CG : Pipe Connection Gas RG : Recycling Gas POG : Pump Off Gas SWG : Swabbing gas</p>	<p>WOB : Weight On Bit (kbls) TDRPM : Rotary Speed Surface(rpm) M.RPM: Mud Motor Rotary Speed (rpm) FLOW : Flow Rate (gpm) SPP : Pump Pressure (psi) TRQ : Rotating Torque (klbs*ft) MW : Mud Weight (ppg) PV : Plastic Viscosity (cP) FV : Funnel Viscosity (s)</p>
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<p>LEGEND and SYMBOLS</p> <table style="width: 100%;"> <tr> <td style="width: 50%; text-align: center;"> Clay-shale </td> <td style="width: 50%; text-align: center;"> Dolomitic clay-shale </td> </tr> <tr> <td style="text-align: center;"> Calcareous clay-shal </td> <td style="text-align: center;"> Marl </td> </tr> <tr> <td style="text-align: center;"> Slaty shale </td> <td style="text-align: center;"> Silty clay-shale </td> </tr> <tr> <td style="text-align: center;"> Limestone </td> <td style="text-align: center;"> Chalk </td> </tr> <tr> <td style="text-align: center;"> Argillaceous limesto </td> <td style="text-align: center;"> Dolomitic limestone </td> </tr> <tr> <td style="text-align: center;"> Fine sand </td> <td style="text-align: center;"> Medium sand </td> </tr> <tr> <td style="text-align: center;"> Coarse sand </td> <td style="text-align: center;"> Fine sandstone </td> </tr> <tr> <td style="text-align: center;"> Medium sandstone </td> <td style="text-align: center;"> Coarse sandstone </td> </tr> </table>	Clay-shale	Dolomitic clay-shale	Calcareous clay-shal	Marl	Slaty shale	Silty clay-shale	Limestone	Chalk	Argillaceous limesto	Dolomitic limestone	Fine sand	Medium sand	Coarse sand	Fine sandstone	Medium sandstone	Coarse sandstone	<p style="text-align: center; font-weight: bold;">Field name: Schlumberger</p>
Clay-shale	Dolomitic clay-shale																
Calcareous clay-shal	Marl																
Slaty shale	Silty clay-shale																
Limestone	Chalk																
Argillaceous limesto	Dolomitic limestone																
Fine sand	Medium sand																
Coarse sand	Fine sandstone																
Medium sandstone	Coarse sandstone																

GAS ANALYSER : Geoservices GFF
 GAS TRAP : GZG
 PICFILE : Masterlog_A4.UPF





Tested Gas Equipment

MG: 15u

Geoservices Depth tracking was lost @ 22:30 on 11-29-12 @ 1,246'. The WITS item numbers were changed on the Rig system Initial troubleshooting was unsuccessful Worked with Geoservices and Canrig Technicians until connection was re-established @ ~ 21:00 on 11-30-12

MWI: 9.9
MWO: 9.9

MD: 1067'
TVD: 1062.41'
DIR: 9.06
AZI: 186.09

WOB: 8-27K
RPM: 94
SPM: 152
SPP: 1608

MWI: 9.9
MWO: 9.9

MD: 1131'
TVD: 1125.41'
DIR: 11.17
AZI: 190.51

Limestone: Lt gry - gry, wht - off wht, sft - frm, vf - f, marly, calc

WOB: 20K
RPM: 94
SPM: 152
SPP: 1700

MWI: 10.0
MWO: 10.0

MD: 1192'
TVD: 1185.29'
DIR: 10.81
AZI: 188.49

Silty Clay Shale: Gry, gumbo-v frm, amorph-sbbiky, flky i.p., aren i.p

WOB: 20-30K
RPM: 94
SPM: 152
SPP: 1900

MWI: 10.1
MWO: 10.1

Silty Clay Shale: wht - lt gry, sit - vf, smth, amorph, sft - frm, silty, chlky, marly, calc

MD: 1256'
TVD: 1248.18'
DIR: 10.55
AZI: 183.96

Clay Shale: gry-lt gry, gumbo-v frm, amorph-sbbiky i.p

WOB: 20K
RPM: 134
SPM: 152
SPP: 1700
11/30/12

MWI: 10.1
MWO: 10.1

Clay Shale: Lt gry - gry, frm - v frm

Clay shale: lt gry - gry, fm - v fm
amorph - sbbkly, marly, calc

MD: 1320'
TVD: 1311.04'
DIR: 11.08
AZI: 183.58

Limestone: wht-lt gry, gumbo-v frm, amorph-sbbkly i.p., mudstn, microxlyn - fxlyn, calc

WOB: 15-25K
RPM: 94
SPM: 152
SPP: 1880

Limestone: wht-lt gry, gry, sft - frm, gumbo - v frm, amorph-sbbkly i.p., mudstne, microxlyn - fxlyn, calc

MWI: 10.2+
MWO: 10.2+

MD: 1447'
TVD: 1435.10'
DIR: 13.01
AZI: 186.26

Limestone: wht-lt gry, gumbo-v frm, amorph-sbbkly i.p., mudstn, microxlyn-fxlyn, calc

WOB: 20K
RPM: 135
SPM: 152
SPP: 1810

MWI: 10.4
MWO: 10.3+

MD: 1511'
TVD: 1497.40'
DIR: 13.45
AZI: 186.88

Limestone: wht-off wht, gumbo-v frm, amorph-sbbkly i.p., mudstn, microxlyn-fxlyn, tr pyr, some sdstn, calc

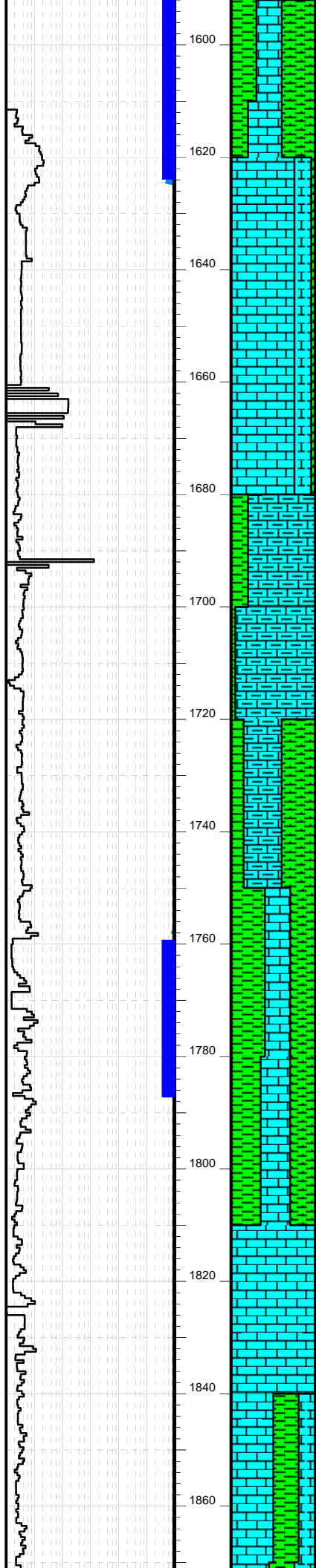
WOB: 20K
RPM: 135
SPM: 152
SPP: 1830

MWI: 10.3
MWO: 10.2

Depth was updated F/1,246' T/1,338', however, data connection was still being assessed by Canrig to our system until ~1,500'

Intermittent connection interruption to Total Gas while Canrig technician worked on WITS connection

Depth was shifted @ 1,552' to 1,612.' This lapse was due to Canrig not sending WITS Data to GN4 system. Tech was called out to fix. System link re-established



BG: 5u

Calibration Gas

Limestone: wht-off wht, gumbo-v frm, amorph-sbbkly i.p., mudstn, microxlyn, marly, calc
 Marl: wht-off wht, Lt gry-gry, amorph-sbbkly, vvf-vf sd g

WOB: 20K
 RPM: 95
 SPM: 152
 SPP: 1890

MWI: 10.4
 MWO: 10.3+

MD: 1638'
 TVD: 1620.66'
 DIR: 14.51
 AZI: 185.92

Limestone: wht-off wht, gumbo-v frm, amorph-sbbkly, crypto-microxlyn

**POOH @ 1,692' to check bit and motor
 The bit was in good shape**

WOB: 15-20K
 RPM: 140
 SPM: 152
 SPP: 2222

MWI 10.4
 MWO 10.2

12/02/12

Limestone: wht-off wht, gumbo-v frm i.p., amorph-occ sbbkly, crypto-micro-fxlyn, sily

WOB: 25K
 RPM: 141
 SPM: 152
 SPP: 1960

MD: 1702'
 TVD: 1682.68'
 DIR: 14.07
 AZI: 186.28

MWI 10.2
 MWO 10.3

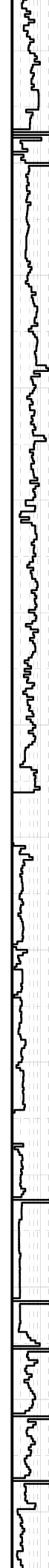
Clay Shale: lt gry - gry, gumbo - v frm, amorph - sbbkly, sily, flky, grty, calc

WOB: 24K
 RPM: 46
 SPM: 152
 SPP: 1923

Limestone: wht-off wht, lt gry - gry, gumbo - v frm, amorph-occ sbbkly, crypto-micro-fxlyn, sily

MWI 10.4
 MWO 10.3+

1880
1900
1920
1940
1960
1980
2000
2020
2040
2060
2080
2100
2120
2140



BG: 5

MG: 44u

BG: 16u

Limestone: wht - lt gry, gumbo-v frm, amorph - sbbilky, crypto-micro-fxlyn, stly, grty, chlky

WOB: 24K
RPM: 45
SPM: 152
SPP: 1849

MWI 10.5
MWO 10.5

MD: 1953
TVD: 1926.07
DIR: 13.98
AZI: 183.80

Marl (Eagleford): (Marbly) Dk gry-gry-off wht, v frm, sbbilky-flky, euh calct, aren

WOB: 30-36K
RPM: 141
SPM: 152
SPP: 2020

MWI 10.4
MWO 10.4

12/03/12

MD: 2016
TVD: 1987.28
DIR: 13.37
AZI: 183.76

Limestone: wht-off wht-lt tn, occ yel, blkly, crypto-fxlyn, dense, silly stly, abun pyr, tr sand

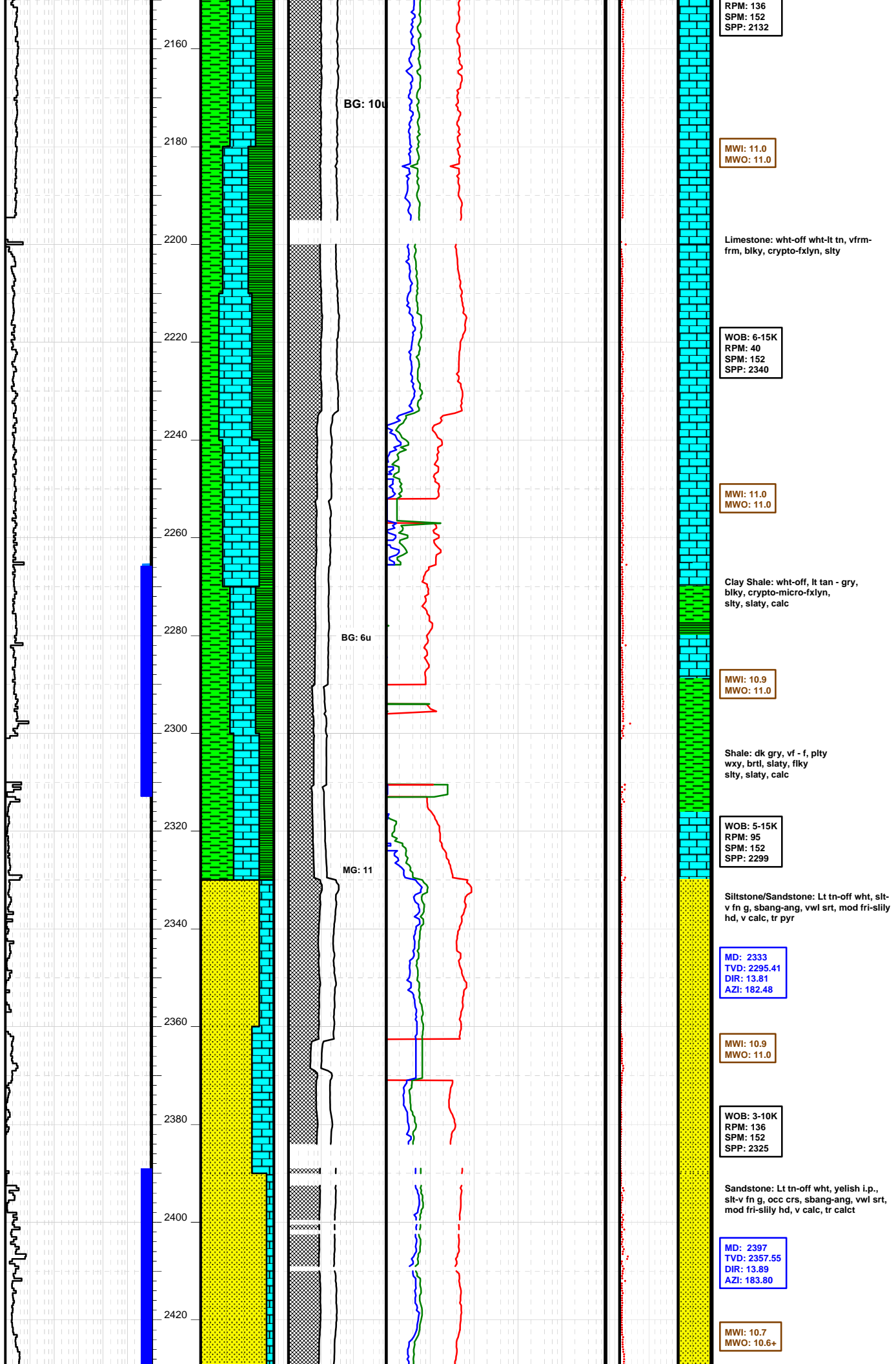
WOB: 28-33K
RPM: 136
SPM: 152
SPP: 2120

MWI: 10.6
MWO: 10.6

Clay Shale: off wht - lt gry, sft - frm, vf - f, limy, calc

Shale: dk gry, vf - f, brittle, splintery, plty, flky, elg, lam, waxy, calc

WOB: 8-25K



RPM: 136
SPM: 152
SPP: 2132

MWI: 11.0
MWO: 11.0

Limestone: wht-off wht-lt tn, vfrm-frm, blkly, crypto-fxlyn, sity

WOB: 6-15K
RPM: 40
SPM: 152
SPP: 2340

MWI: 11.0
MWO: 11.0

Clay Shale: wht-off, lt tan - gry, blkly, crypto-micro-fxlyn, sity, slaty, calc

MWI: 10.9
MWO: 11.0

Shale: dk gry, vf - f, plty wxy, brtl, slaty, flky sity, slaty, calc

WOB: 5-15K
RPM: 95
SPM: 152
SPP: 2299

Siltstone/Sandstone: Lt tn-off wht, slt-v fn g, sbang-ang, vwl srt, mod fri-silly hd, v calc, tr pyr

MD: 2333
TVD: 2295.41
DIR: 13.81
AZI: 182.48

MWI: 10.9
MWO: 11.0

WOB: 3-10K
RPM: 136
SPM: 152
SPP: 2325

Sandstone: Lt tn-off wht, yelish i.p., slt-v fn g, occ crs, sbang-ang, vwl srt, mod fri-silly hd, v calc, tr calct

MD: 2397
TVD: 2357.55
DIR: 13.89
AZI: 183.80

MWI: 10.7
MWO: 10.6+

2440
2460
2480
2500
2520
2540
2560
2580
2600
2620
2640
2660
2680
2700

WOB: 10-15K
RPM: 95
SPM: 152
SPP: 2175

Limestone: wht - off wht-lt tn, vfrm-frm, blkly, crypto-fxlyn, sdy i.p., tr pyr

MD: 2460
TVD: 2418.7
DIR: 13.89
AZI: 186.52

WOB: 8-15K
RPM: 136
SPM: 152
SPP: 2275

12/04/12

MWI: 10.5+
MWO: 10.5+

Limestone: lt tn-lt grysh tn, vfrm-sllily hd i.p., blkly, crypto-fxlyn, sdy i.p

WOB: 5-18K
RPM: 95
SPM: 152
SPP: 2050

MWI: 10.5+
MWO: 10.5+

MD: 2651
TVD: 2603.76
DIR: 14.68
AZI: 183.23

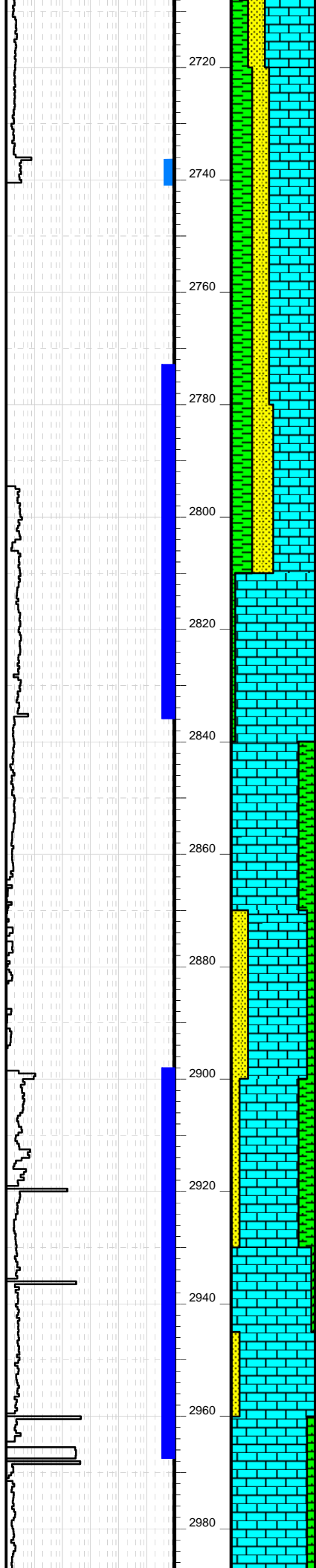
BG: 10u

Limestone: lt tn-lt grysh tn, vfrm - frm blkly, plty, crypto-fxlyn, sdy, calc

MWI: 10.5
MWO: 10.6

Sandstone: Lt tn-off wht, yelish, slit-v fn g, occ crs, sbang-ang, vwl srt, mod fri-sllily hd, v calc, tr calct

WOB: 12-18K
RPM: 95



Lost WITS Acquisition

BG: 10u

BG: 8

SPM: 152
SPP: 2300

Shale: lt gry - gry, gry - med gry,
frm - v frm, brit, pty, lam,
vit, pyr, calc

MD: 2777
TVD: 2725.81
DIR: 14.42
AZI: 183.14

Limestone: lt gry - gry, off wht,
slt-vf grains, blkly - sbbkly
vis por, trc pyr, sity

MWI: 10.4
MWO: 10.4

WOB: 5-15K
RPM: 136
SPM: 152
SPP: 2300

Limestone: off wht w/ lt gry mott,
crypto-microxlyn, blkly - sbbkly,
vis por i.p., sity

MD: 2841
TVD: 2787.65
DIR: 15.39
AZI: 184.19

MWI: 10.5
MWO: 10.5

WOB: 8-10K
RPM: 136
SPM: 152
SPP: 2325

Limestone: off wht w/ lt gry mott-lt tn
i.p., crypto-v fxlyn, blkly - sbbkly,
sity i.p., sdy i.p

MD: 2905
TVD: 2849.37
DIR: 15.30
AZI: 184.02

12/05/12

MWI: 10.5
MWO: 10.5

WOB: 5-20K
RPM: 95
SPM: 152
SPP: 2285

3000
3020
3040
3060
3080
3100
3120
3140
3160
3180
3200
3220
3240
3260

BG: 10u

BG: 9u

Tested Gas Equipment

Limestone: tn-off wht w/ lt gry mott, lt gry i.p., crypto-fxlyn, blkly-sbbkly, sity i.p., sdy i.p

MD: 2969
TVD: 2910.98
DIR: 16.09
AZI: 183.25

MWI: 10.5
MWO: 10.5

WOB: 5-15K
RPM: 133
SPM: 152
SPP: 2325

Limestone: tn-off wht w/ lt gry mott, lt gry i.p., crypto-fxlyn, blkly-sbbkly, sity i.p., sdy i.p

MWI: 10.4
MWO: 10.4

WOB: 5-20K
RPM: 138
SPM: 152
SPP: 2376

Limestone: tn-off wht w/ lt gry mott, lt gry i.p., crypto-fxlyn, blkly-sbbkly, sity i.p., sdy i.p

Shale: lt - gry, gry - md gry, sft - frm, brit, sl trace, splty, fis, elg, smth, grty, silky, dull, calc

WOB: 5-15K
RPM: 145
SPM: 152
SPP: 2610

MWI: 10.6
MWO: 10.6

Limestone: tn-off wht w/ lt gry mott, lt gry i.p., slily-mod hd, hd i.p., crypto-fxlyn, blkly-sblky, sity i.p., sdy i.p

WOB: 12-15K
RPM: 138
SPM: 152
SPP: 2690

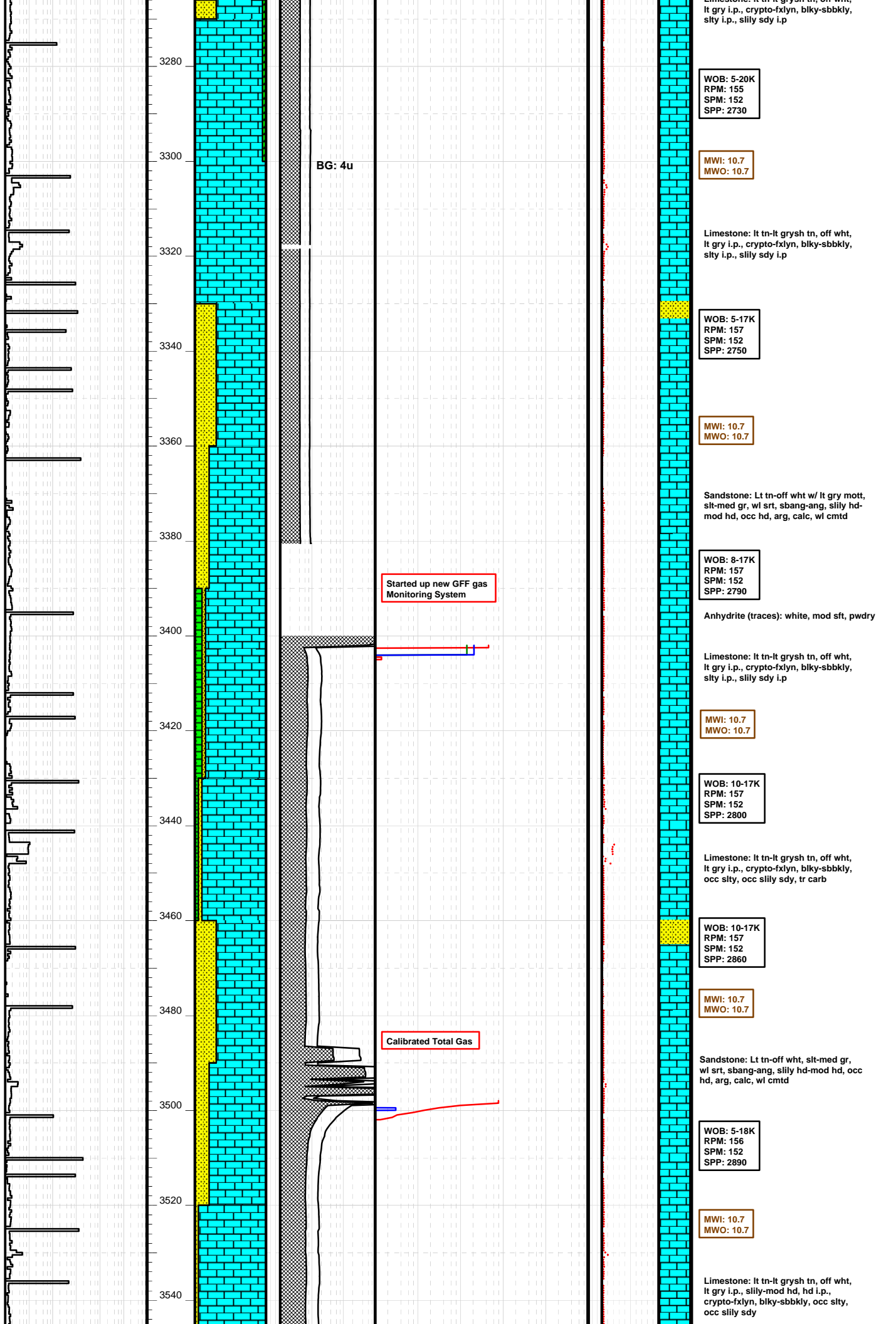
MWI: 10.6
MWO: 10.6

Limestone: tn-off wht w/ lt gry mott, lt gry i.p., slily-mod hd, hd i.p., crypto-fxlyn, blkly-sblky, sity i.p., sdy i.p

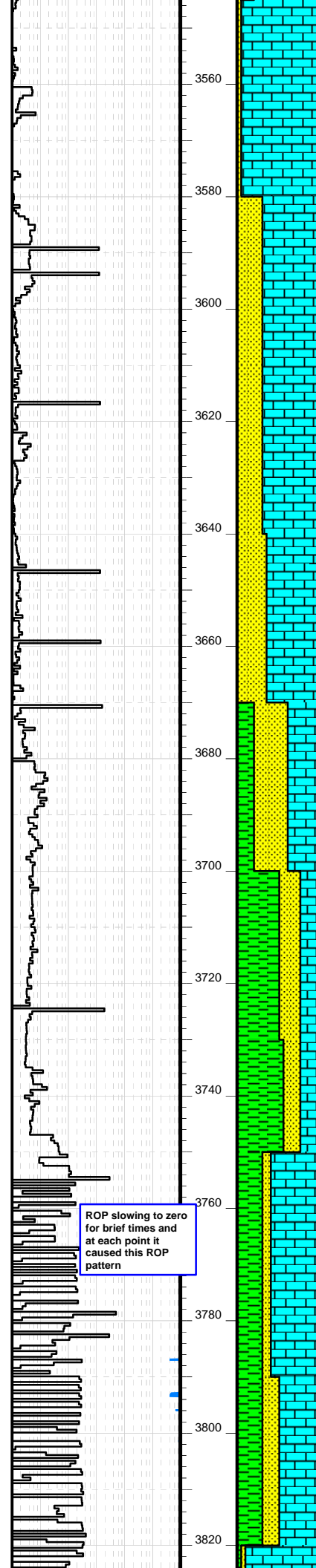
WOB: 5-15K
RPM: 145
SPM: 152
SPP: 2676

MWI: 10.7
MWO: 10.7

Limestone: lt to lt crush tn-off wht



3560
3580
3600
3620
3640
3660
3680
3700
3720
3740
3760
3780
3800
3820



BG: 6u

BG: 6u

BG: 5u

Gas Calibration

ROP slowing to zero for brief times and at each point it caused this ROP pattern

12/07/12

WOB: 3-16K
RPM: 156
SPM: 152
SPP: 2910

MWI: 10.7
MWO: 10.7

Sandstone: off wht-clr-lt gry, slt-med gr, occ crs gr, wl srt, sbang-ang, slily hd-mod hd, occ hd, arg, calc, wl cmtd, some anhydrite

WOB: 3-20K
RPM: 156
SPM: 144
SPP: 2700

MWI: 10.7
MWO: 10.7

Limestone: lt tn-lt grysh tn, off wht, lt gry i.p., slily-mod hd, hd i.p., crypto-fxlyn, blk-sbbkly, occ stly, occ slily sdy

WOB: 12-20K
RPM: 146
SPM: 144
SPP: 2600

MWI: 10.7
MWO: 10.7

Shale: gry, slily frm-frm, occ mod hd, flky, occ blk, stly, occ sdy, calc

WOB: 15-30K
RPM: 141
SPM: 146
SPP: 2580

MWI: 10.7
MWO: 10.7

12/08/12 POOH @ 3,750' MD @ 16:00

1/3" metal piece in sample @ B/U

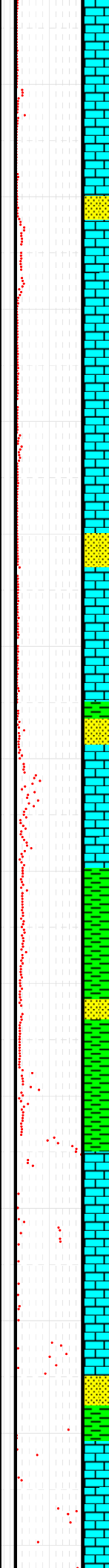
Limestone: lt tn-off wht-lt gry, v frm-slily hd, crypto-fxlyn i.p., blk-sbbkly, sdy i.p., tr pyr

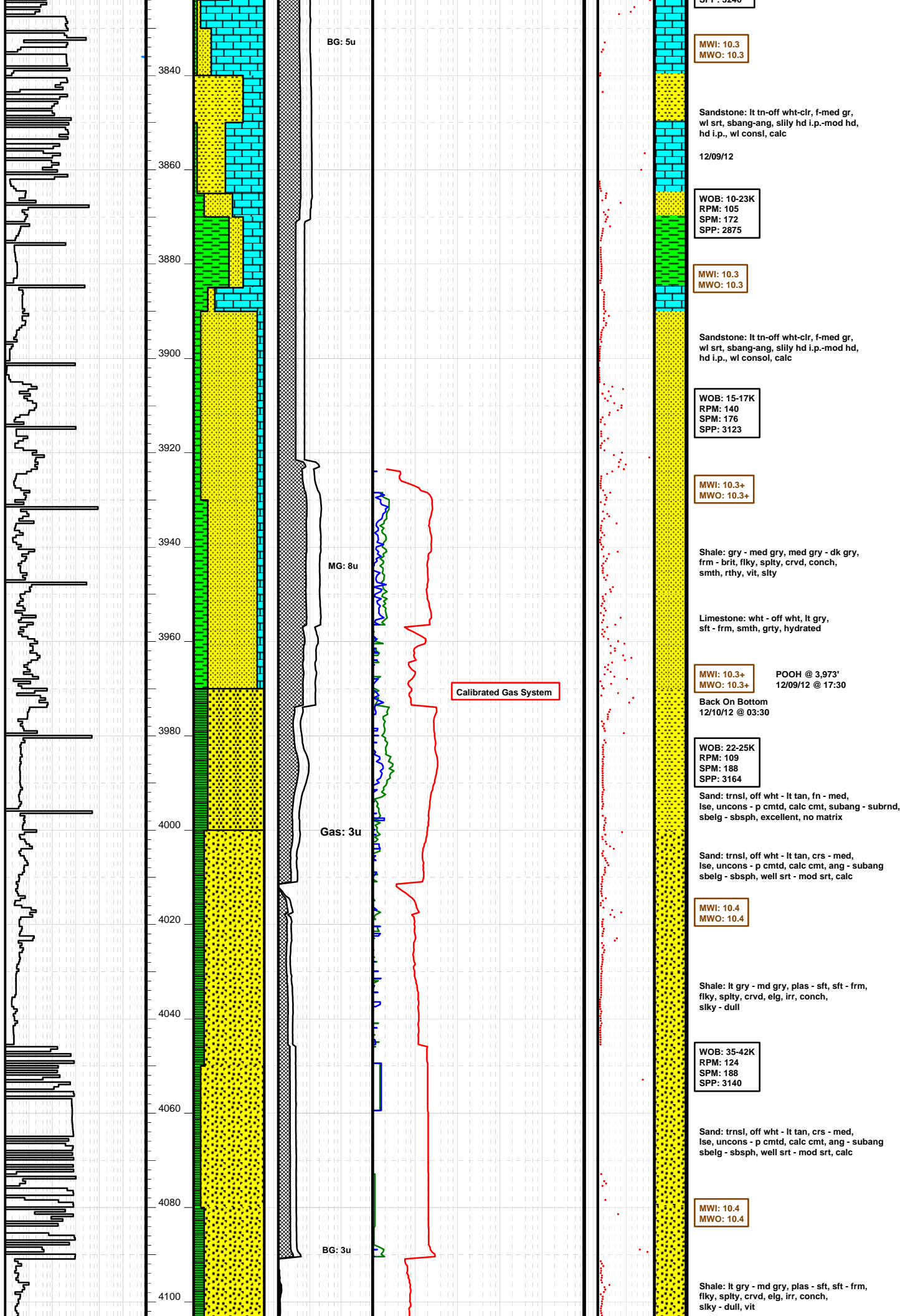
WOB: 10-17K
RPM: 110
SPM: 184
SPP: 3230

MWI: 10.3
MWO: 10.3

Shale: lt gry-gry, frm-v frm, occ slily hd, flky, occ sbbkly, stly, sdy i.p., tr pyr

WOB: 5-20K
RPM: 120
SPM: 184
SPP: 3240





4120
4140
4160
4180
4200
4220
4240
4260
4280
4300
4320
4340
4360
4380

BG: 1u

MG: 3u

BG: 2u

BG: 2u

Sand: trnsl, off wht - lt tan, crs - med, lse, uncons - p cmt, calc cmt, ang - subang sbelg - sbsph, well srt - mod srt, calc

WOB: 20-35K
RPM: 100
SPM: 188
SPP: 3150

Shale: gry, v frm-mod hp i.p., flky-spty, blkly i.p., smth, stly, silly calc i.p

Sand: trnsl, off wht-lt gry, f-crs, mod hd-hd i.p., disagg-wl cmt, sil-calc cmt, sbang-rnd, sbelg-sbsph-sph, wl-mod srt, occ chert

WOB: 15-35K
RPM: 118
SPM: 188
SPP: 3180

MWI: 10.3
MWO: 10.3

12/11/12

Sand: clr, trnsl, f-crs g, mod hd-hd i.p., disagg-wl cmt, sil cmt, sbang-sbrnd, rnd i.p., sbsph-sph, sbelg i.p., wl-mod srt

WOB: 20-40K
RPM: 117
SPM: 188
SPP: 3175

MWI: 10.2+
MWO: 10.3

Sand: clr, trnsl, f - med g, crs g i.p., mod hd - hd i.p., disagg - wl cmt, sil cmt, sbang - sbrnd, rnd i.p., sbsph - sph, wl - mod srt

WOB: 20-30K
RPM: 120
SPM: 188
SPP: 3185

Sand: clr, trnsl, rose, f-med g, med - crs g, mod hd - hd, disagg - wl cmt, sil cmt, sbang - ang , rnd i.p., sbsph - sph, wl - mod srt, calc

MWI: 10.4
MWO: 10.4

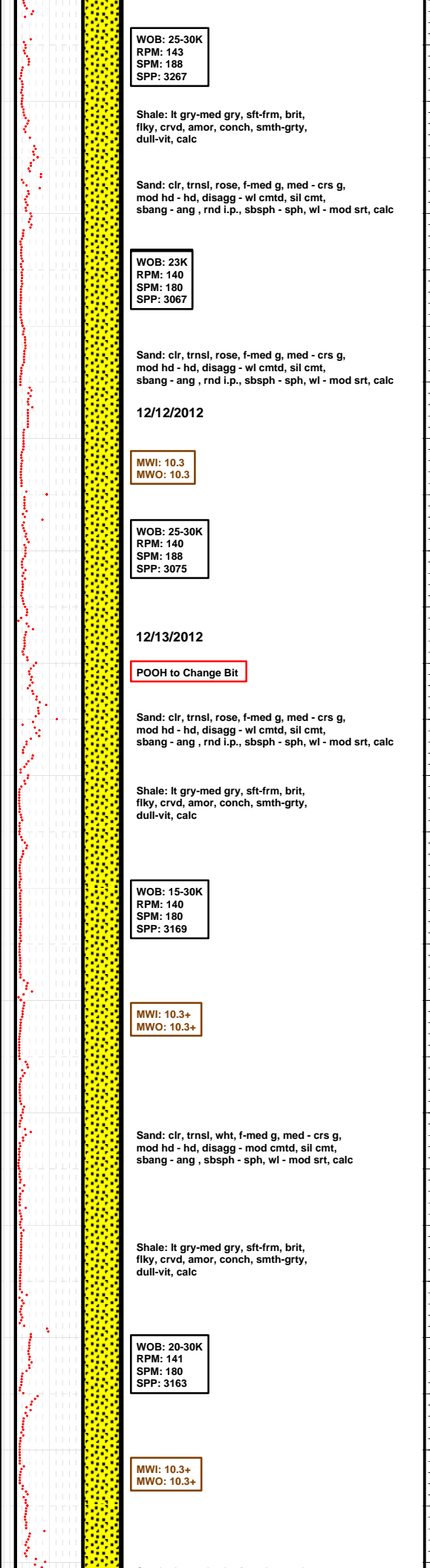
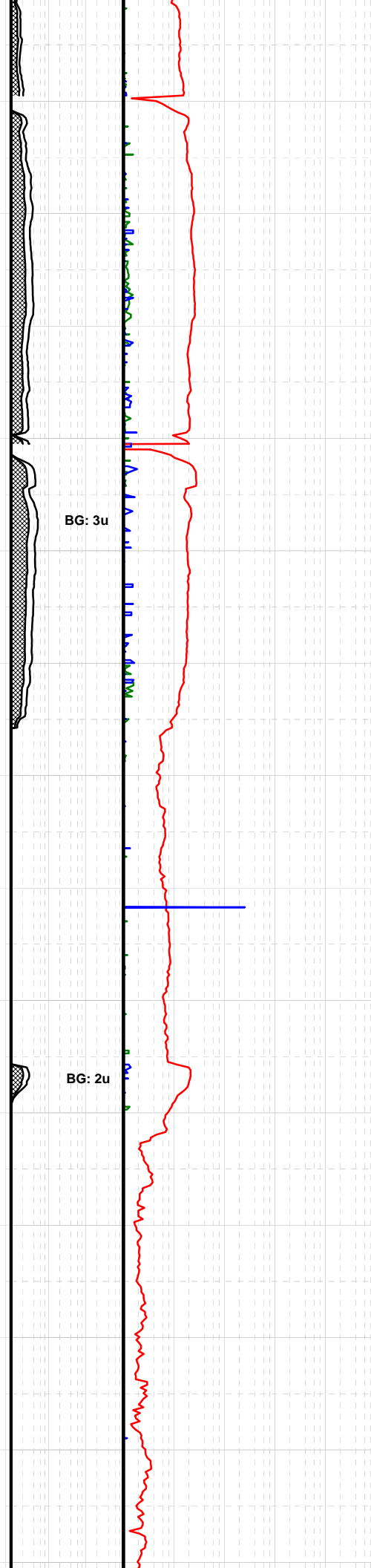
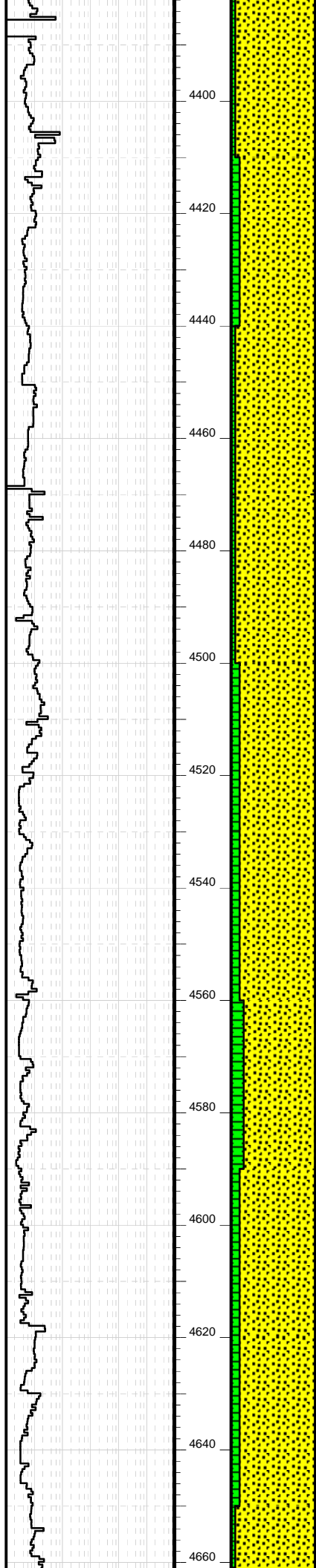
Shale: lt gry-med gry, sft-frm, brit, flky, crvd, amor, conch, smth-grty, dull-vit, calc

WOB: 15-25K
RPM: 143
SPM: 188
SPP: 3252

Sand: clr, trnsl, rose, f-med g, med - crs g, mod hd - hd, disagg - wl cmt, sil cmt, sbang - ang , rnd i.p., sbsph - sph, wl - mod srt, calc

Shale: lt gry-med gry, sft-frm, brit, flky, crvd, amor, conch, smth-grty, dull-vit, calc

MWI: 10.4
MWO: 10.4



WOB: 25-30K
RPM: 143
SPM: 188
SPP: 3267

Shale: lt gry-med gry, sft-frm, brit, flky, crvd, amor, conch, smth-grty, dull-vit, calc

Sand: clr, trnsl, rose, f-med g, med - crs g, mod hd - hd, disagg - wl cmt, sil cmt, sbang - ang, rnd i.p., sbsph - sph, wl - mod srt, calc

WOB: 23K
RPM: 140
SPM: 180
SPP: 3067

Sand: clr, trnsl, rose, f-med g, med - crs g, mod hd - hd, disagg - wl cmt, sil cmt, sbang - ang, rnd i.p., sbsph - sph, wl - mod srt, calc

12/12/2012

MWI: 10.3
MWO: 10.3

WOB: 25-30K
RPM: 140
SPM: 188
SPP: 3075

12/13/2012

POOH to Change Bit

Sand: clr, trnsl, rose, f-med g, med - crs g, mod hd - hd, disagg - wl cmt, sil cmt, sbang - ang, rnd i.p., sbsph - sph, wl - mod srt, calc

Shale: lt gry-med gry, sft-frm, brit, flky, crvd, amor, conch, smth-grty, dull-vit, calc

WOB: 15-30K
RPM: 140
SPM: 180
SPP: 3169

MWI: 10.3+
MWO: 10.3+

Sand: clr, trnsl, wht, f-med g, med - crs g, mod hd - hd, disagg - mod cmt, sil cmt, sbang - ang, sbsph - sph, wl - mod srt, calc

Shale: lt gry-med gry, sft-frm, brit, flky, crvd, amor, conch, smth-grty, dull-vit, calc

WOB: 20-30K
RPM: 141
SPM: 180
SPP: 3163

MWI: 10.3+
MWO: 10.3+

Sand: clr, trnsl, wht, f-med g, med - crs g,
mod hd - hd, disag - mod cmt, sil cmt,
sbang - ang, sbsph - sph, wl - mod srt, calc

Shale: lt gry-med gry, sft frm, brit,
flky, crvd, amor, conch, smth-grty,
dull-vit, calc

WOB: 10-15K
RPM: 120
SPM: 100
SPP: 1218

Shale: lt gry-med gry, sft frm, brit,
flky, crvd, amor, conch, smth-grty,
dull-vit, calc

Sand: clr, trnsl, wht, f-med g, med - crs g,
mod hd - hd, disag - mod cmt, sil cmt,
sbang - ang, sbsph - sph, wl - mod srt, calc
tr shale

12/14/2012

MWI: 10.3+
MWO: 10.3+

Sandstone: off wht - lt tan, f - med, med - crs,
lse, uncon, pr matrix, subang - ang,
sudrnd - rnd, wl - mod srt, ch, xlnt, no cmt

WOB: 9-12K
RPM: 120
SPM: 100
SPP: 1199

MWI: 10.3+
MWO: 10.3+

12/15/2012 - 12/16/2012

Shale: lt gry-med gry, sft frm, brit,
flky, crvd, amor, conch, smth-grty,
dull-vit, calc

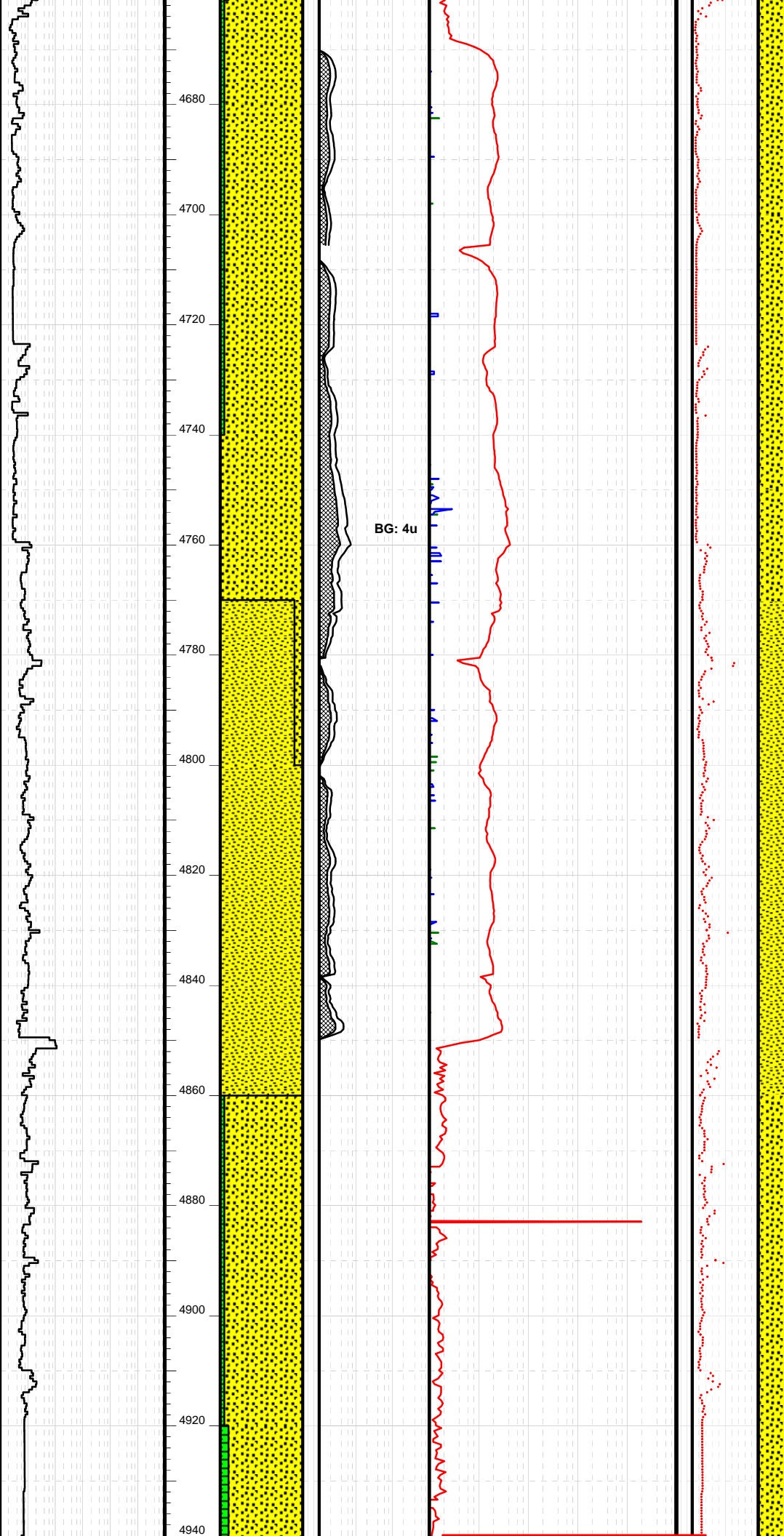
Sandstone: off wht - lt tan, f - med, med - crs,
lse, uncon, pr matrix, subang - ang,
sudrnd - rnd, wl - mod srt, ch, xlnt, no cmt

WOB: 10K²
RPM: 137
SPM: 180
SPP: 2719

MWI: 10.3
MWO: 10.2

4680
4700
4720
4740
4760
4780
4800
4820
4840
4860
4880
4900
4920
4940

BG: 4u



METHANE 100% Injection at Degasser in Possum Belly

Performed Total Gas Calibration

MWO: 10.3

WOB: 12-14K
RPM: 150
SPM: 160
SPP: 2740

Sandstone: wht, off wht - lt tan, f - med, med - crs, lse, uncons, subang - ang, sudrnd - rnd, pr - mod srt, chrt, pr cmt

Shale: lt gry-med gry, sft frm, brit, flky, crvd, amor, conch, smth-grty, dull-vit, calc

MWI: 10.2
MWO: 10.1

WOB: 15-20K
RPM: 140
SPM: 176
SPP: 2720

12/18/2012

Sandstone: red, off wht, f-med, cons, subrnd - subang, mod - wel srt, hrd, cmt

Shale: lt - med gry, sft - frm, flky - plty, grty, rthy, sdy

Fine Sand: wht - off wht, trans, vf - f, lse uncons, subang - subrnd, wl srt, no cmt

MWI: 10.2+
MWO: 10.2+

WOB: 15-20K
RPM: 154
SPM: 180
SPP: 2849

Shale: lt - drk gry, sft - frm, flky - plty, grty, rthy, sdy

Fine Sand: wht - off wht, trans, vf - f, lse uncons, subang - subrnd, wl srt, no cmt

12/19/2012

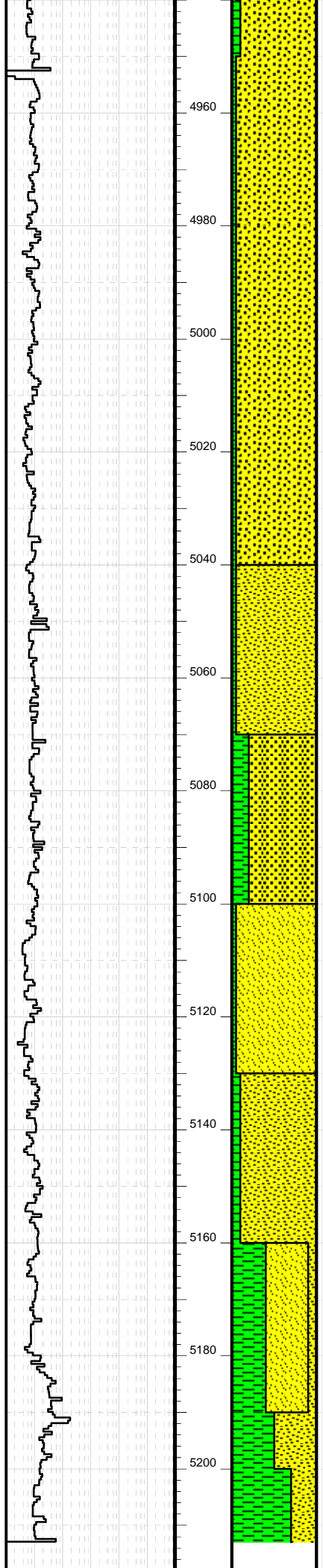
Sand: wht - off wht, lt tan, brn, med - crs, uncons, lse, ang-subang, rnd - subrnd, no cmt, slit calc

Shale: off wht - tan, lt gry - med gry, i.p. red, sft - frm, brit, flky, plty, sublky - blk, elg, i.p. small, larger pieces bigger than a penny, smth, v sli calc, sdy

MWO: 10.2+

4960
4980
5000
5020
5040
5060
5080
5100
5120
5140
5160
5180
5200
5220

Total Gas BG: 0
C1's Have Been
Very Minial



5220

Total Depth Logged

MWO: 10.2+

WOB: 21-25K
RPM: 154
SPM: 160
SPP: 2850

5240

