Enclosure 5: Mudlog

BAKER HUGHES INTEQ

Company : Beach Petroleum
Well : Spikey Beach-1
Interval : 74.00 - 2100.00 meters
Created : 14/Sep/2009 9:03:21 AM

BEACH PETROLEUM

FORMATION EVALUATION LOG

DRILLING PARAM
ROP (m/hr)
200 160 120 80 40
WEIGHT ON BIT (klbf)
10 20 30 40 50
ROP Backup (m/hr)
400 360 320 280 240
0 GAMMA RAY (API) 200

MD meters 1:500

INTERPRETED LITHOLOGY

Oil Show
P F G

LITHOLOGY %

CORE

TOTAL GAS
Total Gas (unit)
0.02 0.2 2 20
0.1 Resistivity Shallow (ohm.m) 1000
0.1 Resistivity Medium (ohm.m) 1000
0.1 Resistivity Deep (ohm.m) 1000

CHROMATOGRAPH
1 Methane ppm 100000
1 Ethane ppm 100000
1 Propane ppm 100000
1 iso-Butane ppm 100000
1 n-Butane ppm 100000
1 iso-Pentane ppm 100000
1 n-Pentane ppm 100000

Calcimetry

Lithology Description

80 90 100 110 120 130 140 150 160 170

NB1: 660mm (26") x 914mm
(36") H/Openner
Make: Hughes
Type: CR1
Jets: 3x20,1x16
Depth In: 95.5m
Depth Out: 155.0m
Drilled: 59.5m in 1.7hrs
Grade: 0-0-NO-A-0-I-NO-TD

5 Sep 09
7 Sep 09

NB2: 445mm (17-1/2")
Make: Hughes
Type: GX-CIV
Jets: 3x18,1x16

All depth measurements in meters referenced from Rotary Table (RT)
RT-MSL: 21.5mMD
Water Depth: 74.0mMD
RT-Seabed: 95.5mMD

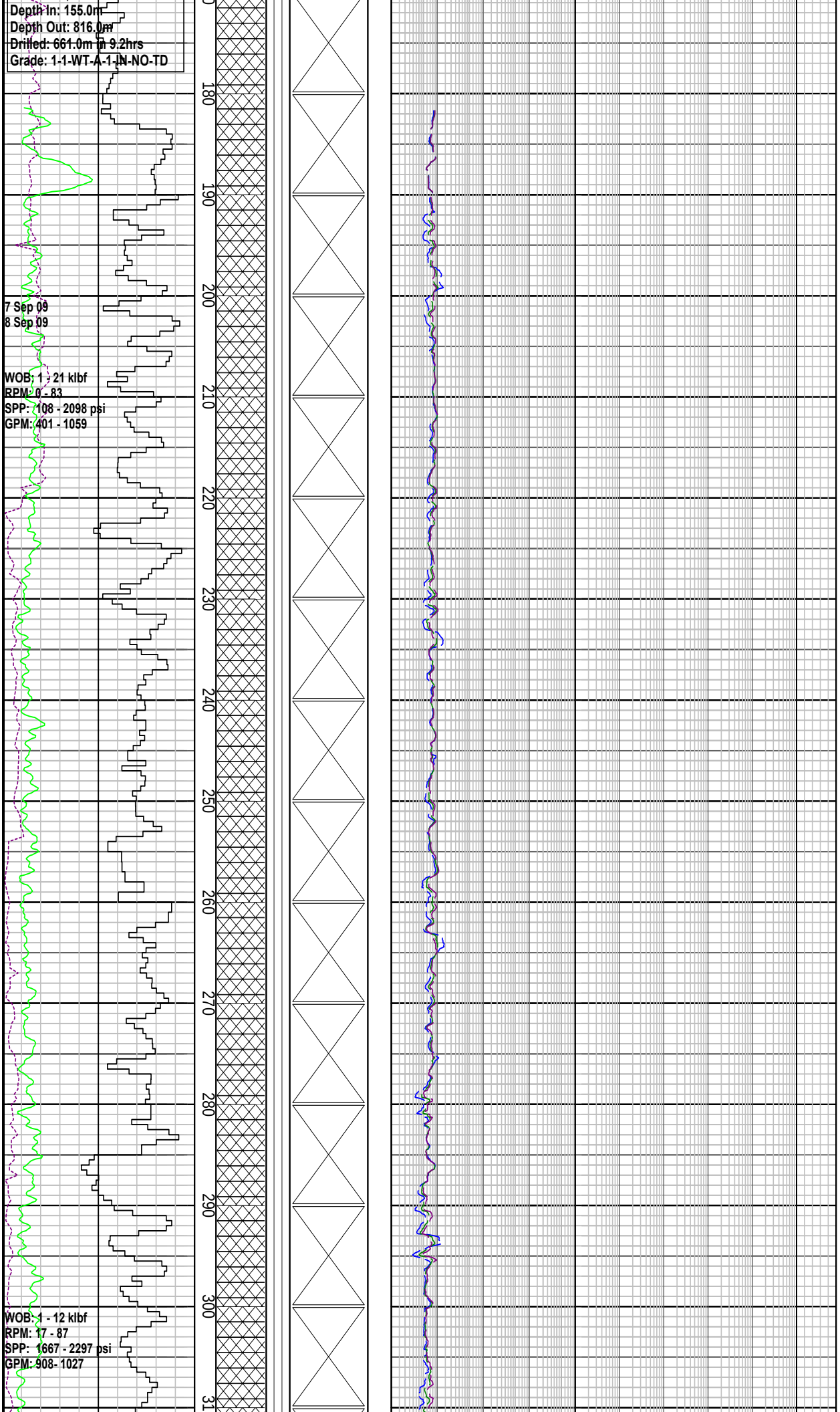
Spud Spikey Beach-1 @ 21:00hrs on 5-Sep-09

Drill 914mm (36") hole with seawater and PHG Sweeps
Returns to Seabed

Type: SW w/PHG
MW: 8.8 ppg FV: 100
PV: - Gel: -
YP: - pH: 9.5

Set 762mm (30") x 508mm (20") casing shoe at 151.4mMDRT

Drill 445mm (17-1/2") hole with seawater and PHG Sweeps
Returns to Seabed



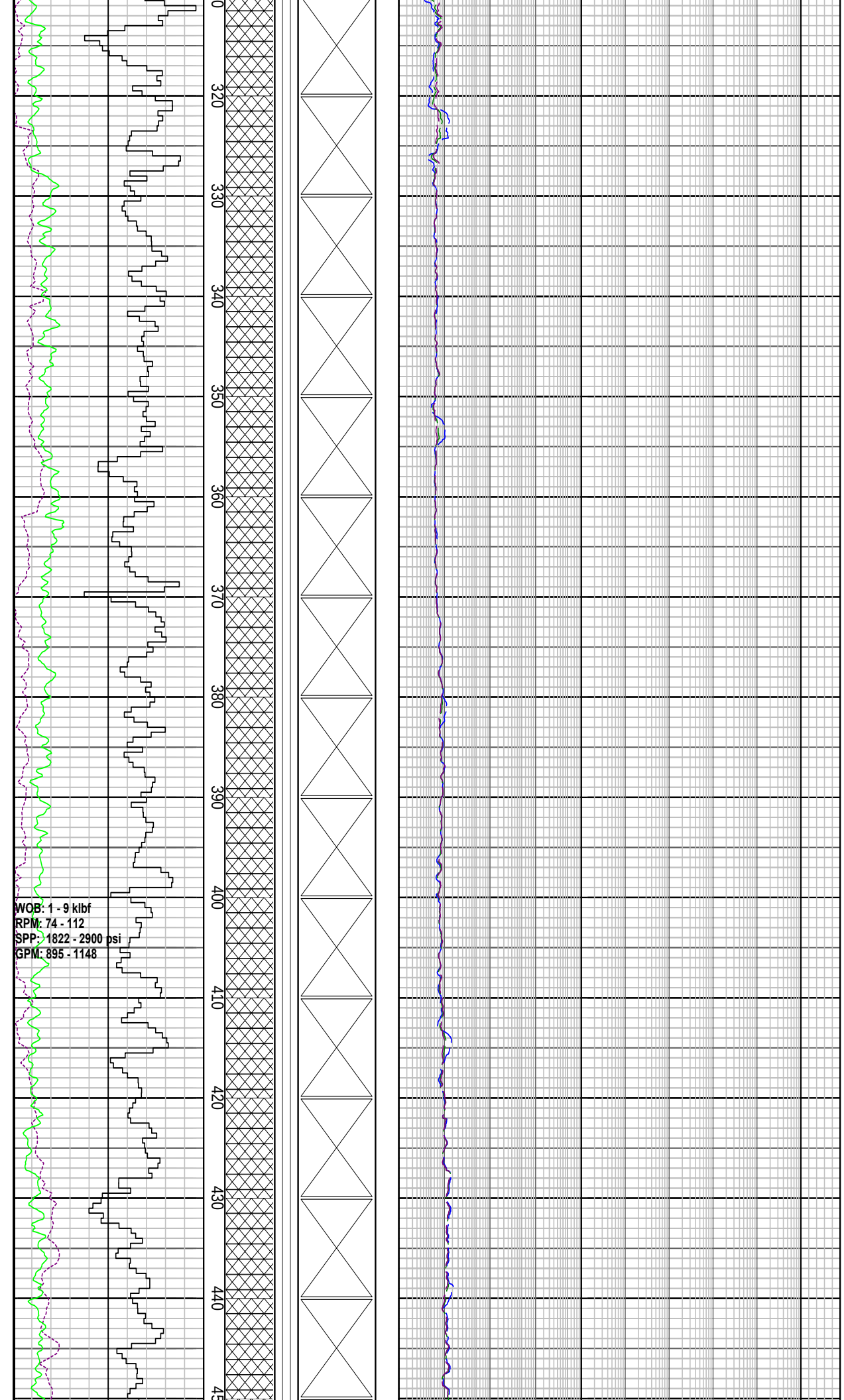
Type: SW w/PHG
MW: 8.8 ppg FV: 100
PV: - Gel: -
YP: - pH: 9.0

MD: 206.93 INC: 0.26
AZI: 39.46 TVD: 206.93

Drill 445mm (17-1/2") hole with seawater and PHG Sweeps
Returns to Seabed

MD: 294.67 INC: 0.38
AZI: 50.78 TVD: 294.66

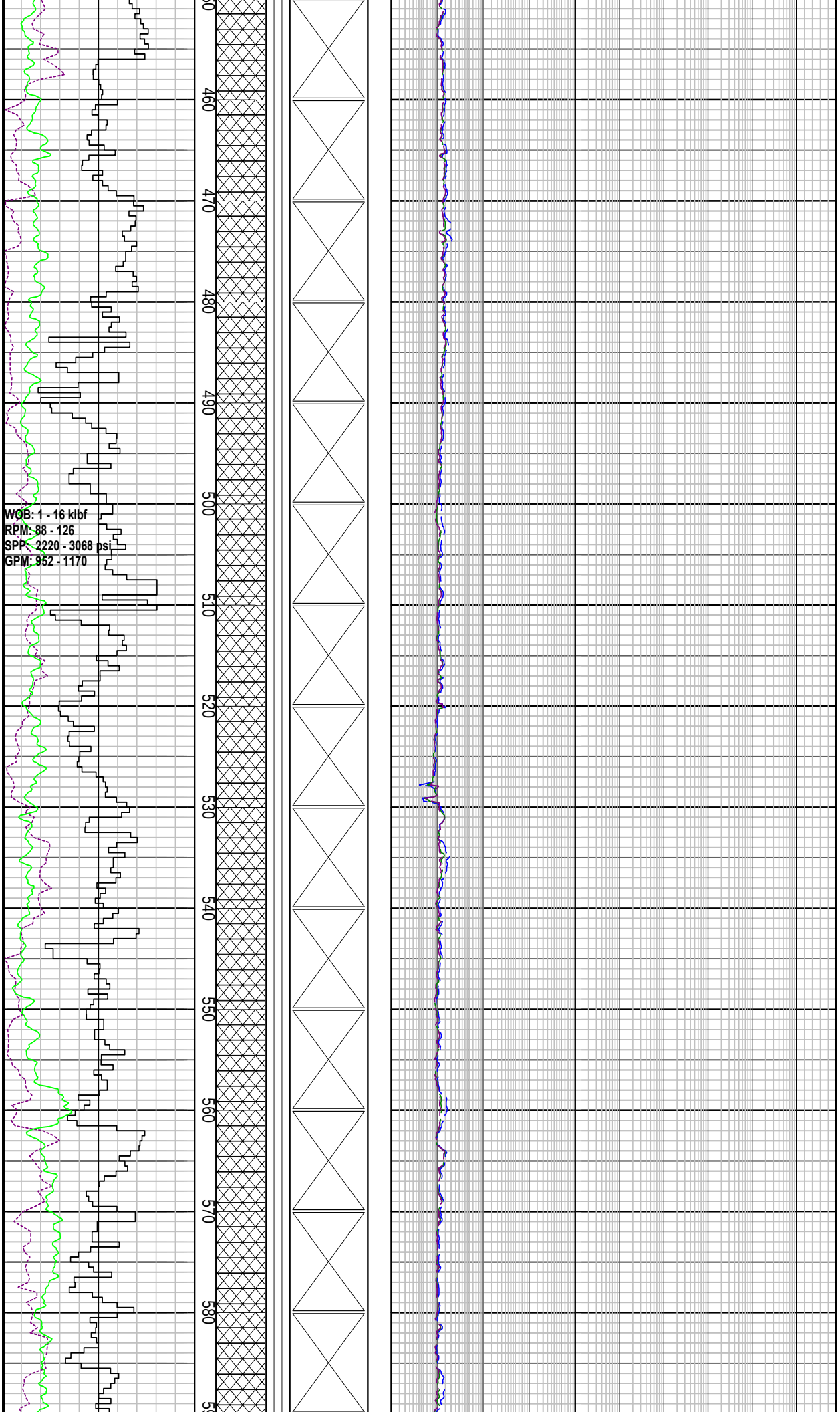
Drill 445mm (17-1/2") hole with seawater and PHG Sweeps
Returns to Seabed



Drill 445mm (17-1/2") hole with seawater and PHG Sweeps
Returns to Seabed

MD: 382.26 INC: 0.19
AZI: 46.93 TVD: 382.26

Drill 445mm (17-1/2") hole with seawater and PHG Sweeps
Returns to Seabed



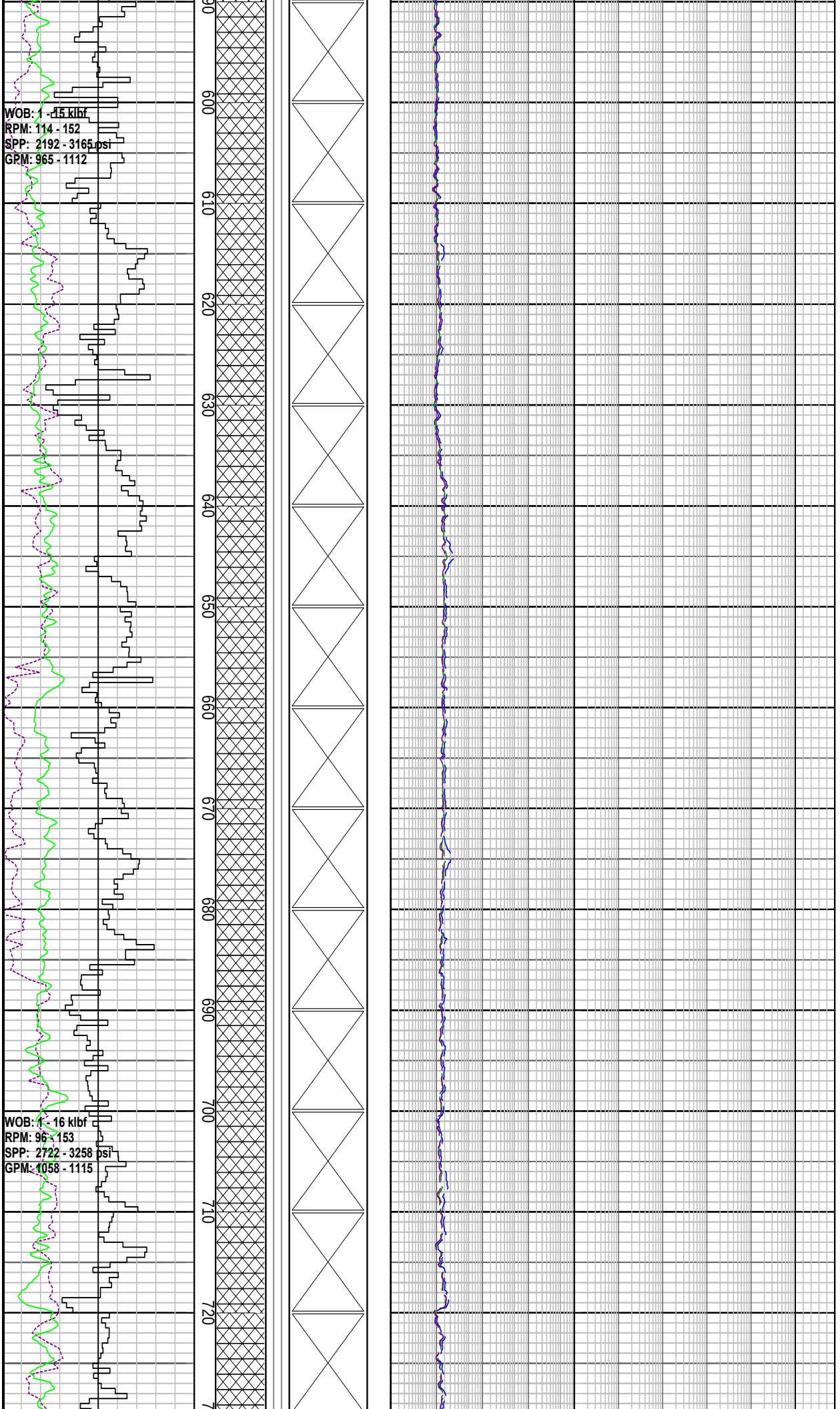
Drill 445mm (17-1/2") hole with seawater and PHG Sweeps
Returns to Seabed

MD: 468.33 INC: 0.04
AZI: 58.55 TVD: 468.33

Drill 445mm (17-1/2") hole with seawater and PHG Sweeps
Returns to Seabed

Drill 445mm (17-1/2") hole with seawater and PHG Sweeps
Returns to Seabed

MD: 556.06 INC: 0.15
AZI: 271.41 TVD: 556.06



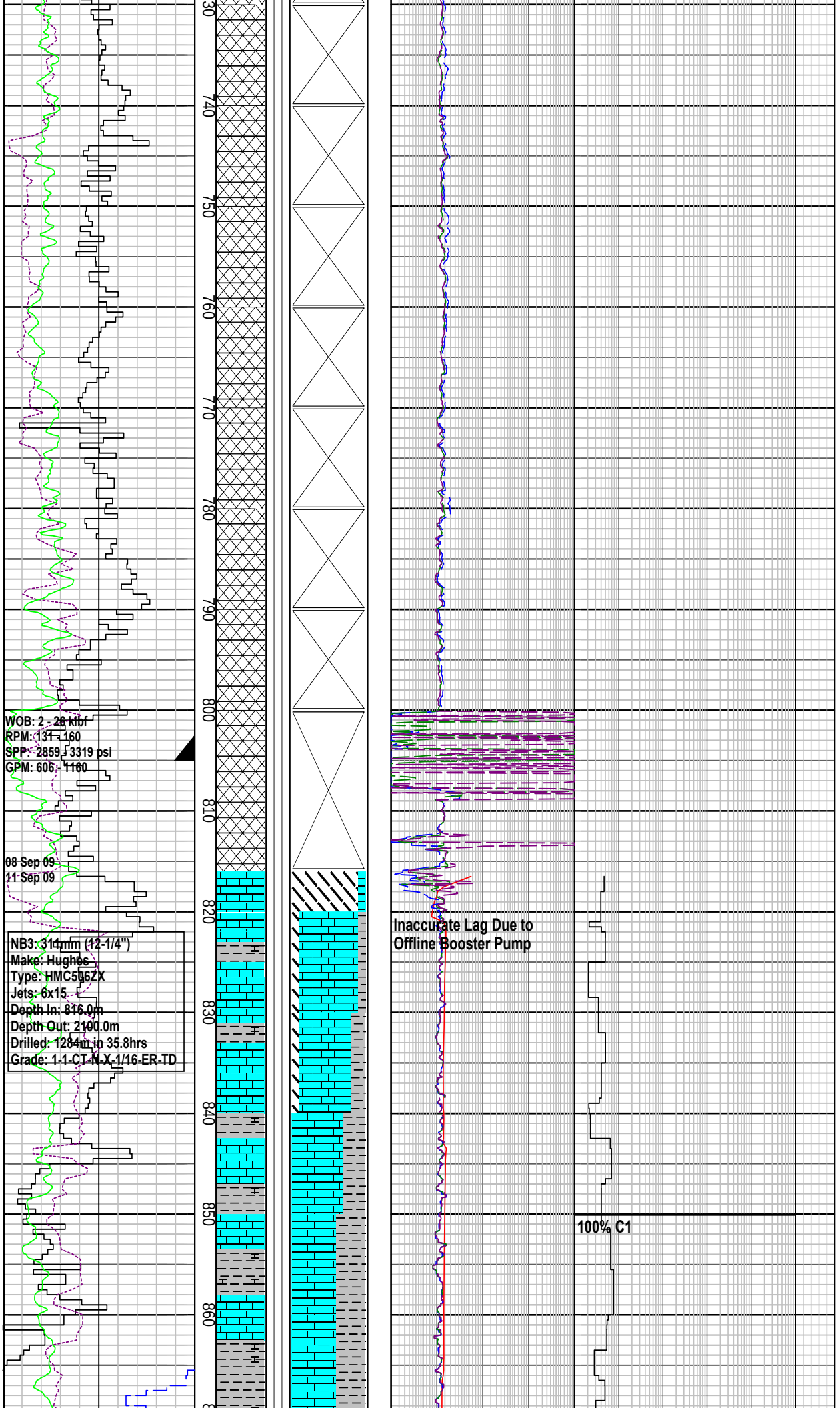
Drill 445mm (17-1/2") hole with seawater and PHG Sweeps
Returns to Seabed

MD: 642.56 INC: 0.27
AZI: 259.95 TVD: 642.56

Drill 445mm (17-1/2") hole with seawater and PHG Sweeps
Returns to Seabed

Drill 445mm (17-1/2") hole with seawater and PHG Sweeps
Returns to Seabed

MD: 727.80 INC: 0.26



AZI: 253.63 TVD: 727.80

Drill 445mm (17-1/2") hole with seawater and PHG Sweeps
Returns to Seabed

MD: 786.24 INC: 0.17
AZI: 243.78 TVD: 786.23

Set 340mm (13-3/8") casing shoe at 805.8mMDRT

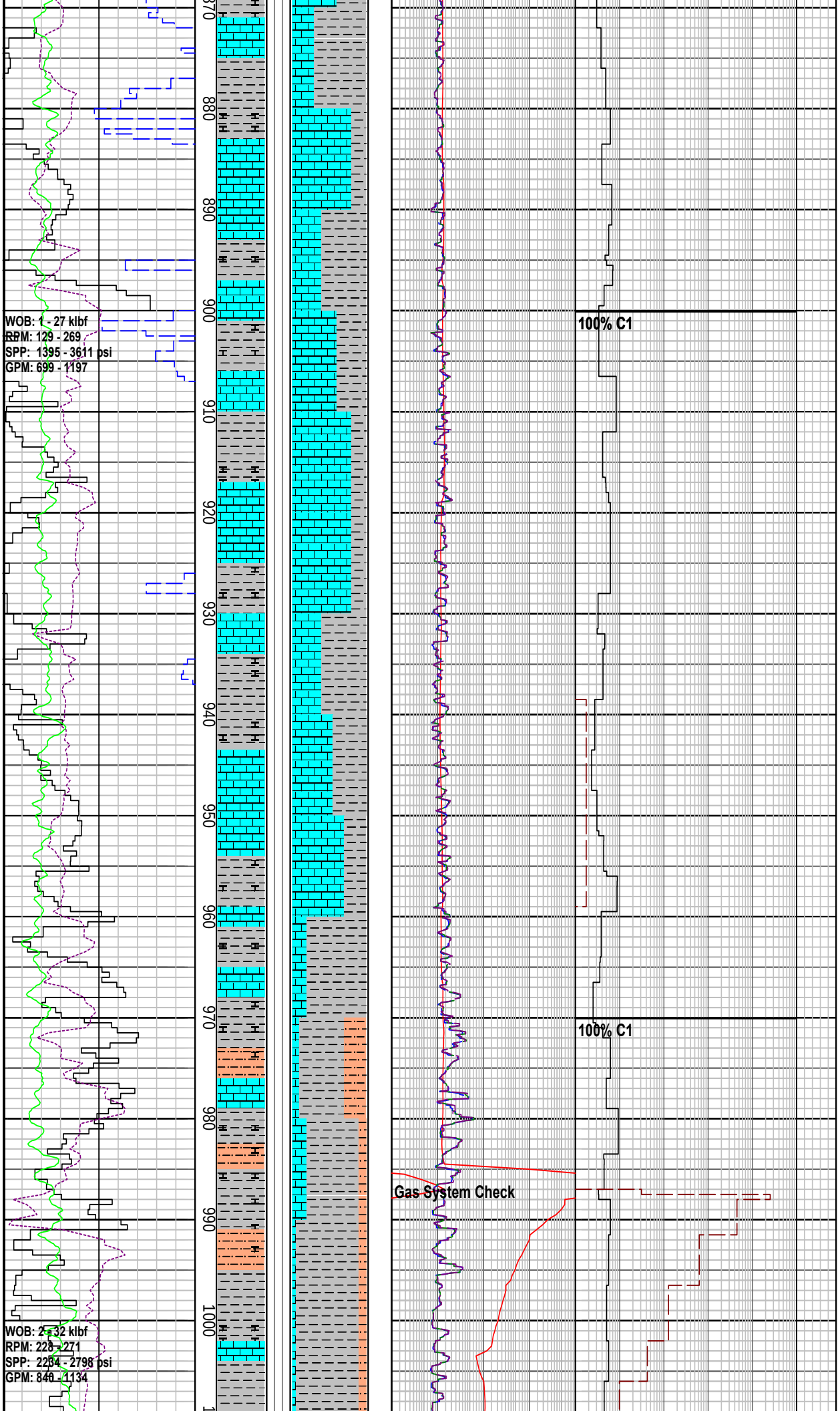
LOT @ 805.74m with 9.0 ppg
EMW: 12.34 ppg @ 460.0 psi

MD: 803.80 INC: 0.17
AZI: 265.12 TVD: 803.80

CALCARENITE: lt gy-wh, lt bl gy, abdt foss, com vf-f qtz gr, r sid, frm-mod hd, sbblky-blky

CALCAREOUS CLAYSTONE: lt-m gy, m dk gy, lt olv gy-lt brn gy, sli aren, tr carb spks, r vf glauc gr, sft-frm, sbblky-blky

CALCARENITE: lt gy-wh, lt bl gy, abdt foss, com vf-f qtz gr, r sid, frm-mod hd, sbblky-blky



sbblky-blky

MD: 879.04 INC: 0.43
AZI: 77.12 TVD: 879.04

CALCAREOUS CLAYSTONE: lt-m gy, m dk gy, lt olv gy-lt brn gy, sli aren, tr carb spks, r vf glauc gr, frm-mod hd, sbblky-blky

CALCARENITE: lt-m gy, lt bl gy-wh, lt brn gy, com vf qtz grn, com foss frag, tr carb spks, fri, sbblky-blky

CALCAREOUS CLAYSTONE: lt-m gy, lt brn-brn gy, lt-m olv gy, m dk gy, com foss frag, tr carb spks & mic lam, tr vf glauc gr, frm-mod hd, sbblky-blky

CALCARENITE: lt-m gy, lt bl gy-wh, lt brn gy, com vf qtz gr, com foss frag, tr carb spks, frm, sbblky-blky

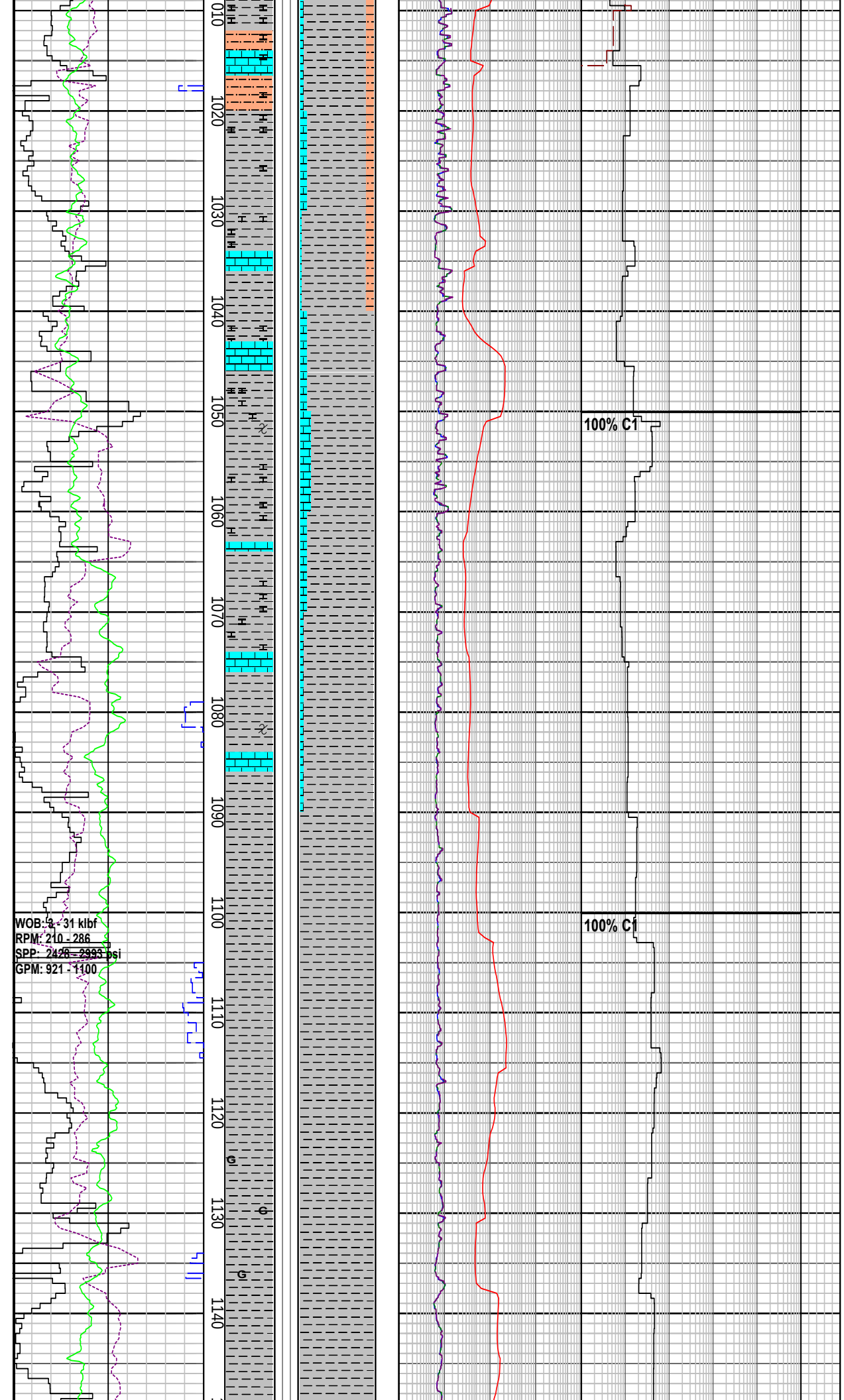
CALCAREOUS CLAYSTONE: lt-m gy, lt brn-brn gy, lt-m olv gy, m dk gy, com foss frag, tr carb spks & mic lam, tr vf glauc gr, frm-mod hd, sbblky-blky

CALCAREOUS SILTSTONE: m-dk gy, m olv gy, m brn gy, arg, grd to aren CLYST, tr-com foss frag, tr carb spks, tr glauc, frm, sbblky-blky

CALCAREOUS CLAYSTONE: lt-m gy, lt brn-brn gy, lt-m olv gy, m dk gy, tr carb spks & mic lam, tr vf glauc gr, tr foss frag, frm-mod hd, blky

MD: 990.83 INC: 0.34
AZI: 90.11 TVD: 990.83

CALCARENITE: lt-m gy, lt bl gy-wh, lt brn gy, com vf qtz gr, com foss frag, tr carb spks, frm, sbblky-blky



CALCAREOUS SILTSTONE: m-dk gy, m olv gy, m brn gy, arg, grd to aren CLYST, tr-com foss frag, tr carb spks, tr glauc, frm, sbblky-blky

CALCAREOUS CLAYSTONE: lt-m gy, lt brn-brn gy, lt-m olv gy, m dk gy, tr carb spks & mic lam, tr vf glauc gr, tr foss frag, frm-mod hd, blky

CALCARENITE: lt-m gy, lt bl gy-wh, lt brn gy, com vf qtz gr, com foss frag, tr carb spks, frm, sbblky-blky

MD: 1078.27 INC: 0.31
AZI: 90.35 TVD: 1078.26

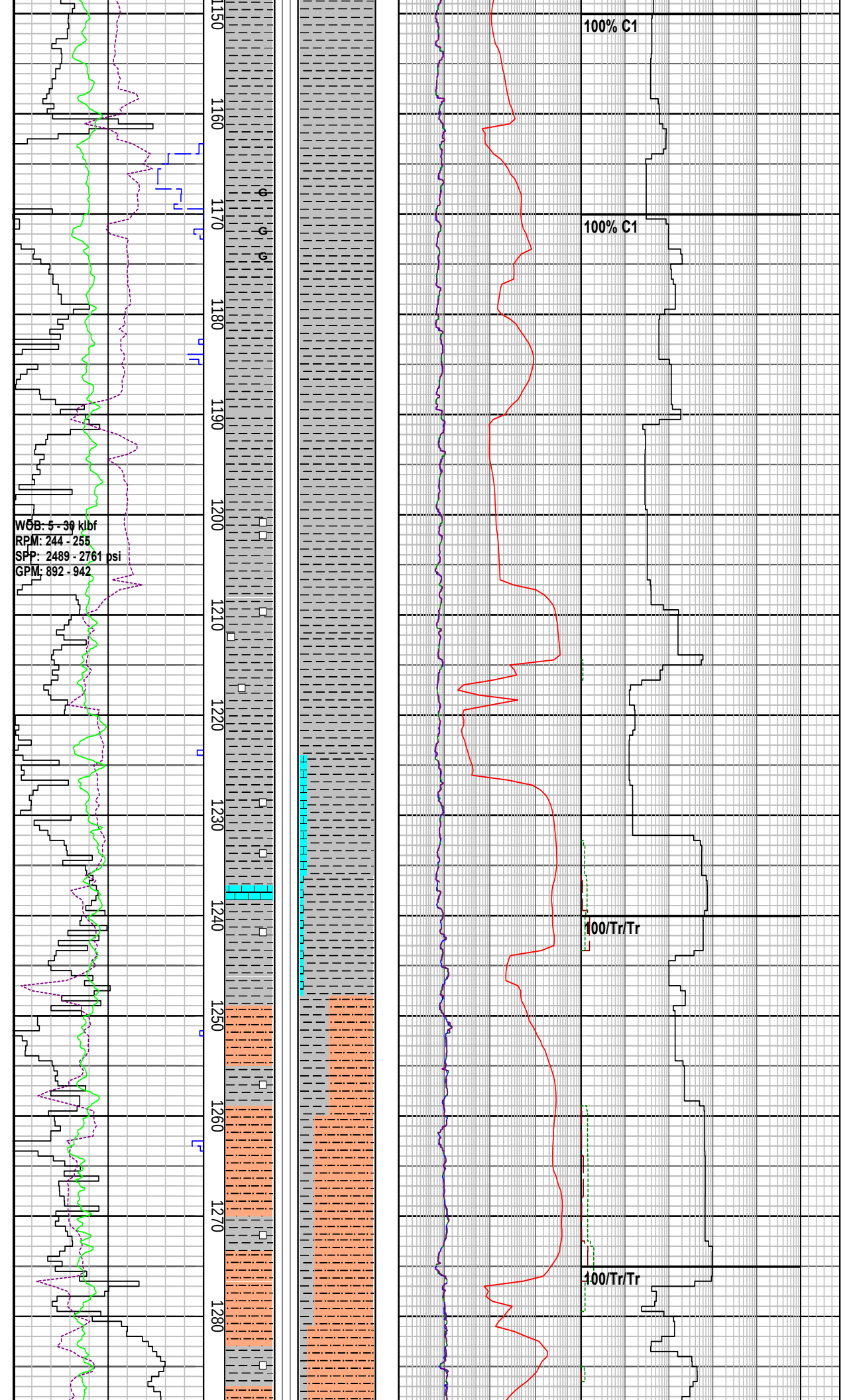
CLAYSTONE: lt-m gy, lt brn-brn gy, lt-m olv gy, m dk gy, mod-strg calc, tr carb spks & mic lam, tr dissem pyr, tr vf glauc gr, tr foss frag, r micmic, frm-mod hd, sbblky-blky

CLAYSTONE: lt-m gy, lt brn-brn gy, m olv gy, m dk gy, calc, tr carb spks & mic lam, tr dissem & nod pyr, tr vf glauc gr, tr foss frag, r micmic, frm-mod hd, sbblky-blky

MD: 1106.44 INC: 0.42
AZI: 79.90 TVD: 1106.43

CLAYSTONE: lt-m gy, lt brn-brn gy, lt-m olv gy, m dk gy, mod-strg calc, tr carb spks & mic lam, tr dissem pyr, tr vf glauc gr, tr foss frag, r micmic, frm-mod hd, sbblky-blky

MD: 1135.98 INC: 0.37
AZI: 78.73 TVD: 1135.97



CLAYSTONE: lt-m gy, lt brn-brn gy, lt-m olv gy, m dk gy, mod-strg calc, tr carb spks & mic lam, tr dissem pyr, tr vf glauc gr, tr foss frag, r micmic, frm-mod hd, sbblky-blky

MD: 1164.94 INC: 0.40
AZI: 84.09 TVD: 1164.93

CLAYSTONE: lt-m gy, lt brn-brn gy, lt-m olv gy, m dk gy, mod-strg calc, tr carb spks & mic lam, tr dissem pyr, tr vf glauc gr, tr foss frag, r micmic, frm-mod hd, sbblky-blky

MD: 1191.86 INC: 0.35
AZI: 86.03 TVD: 1191.85

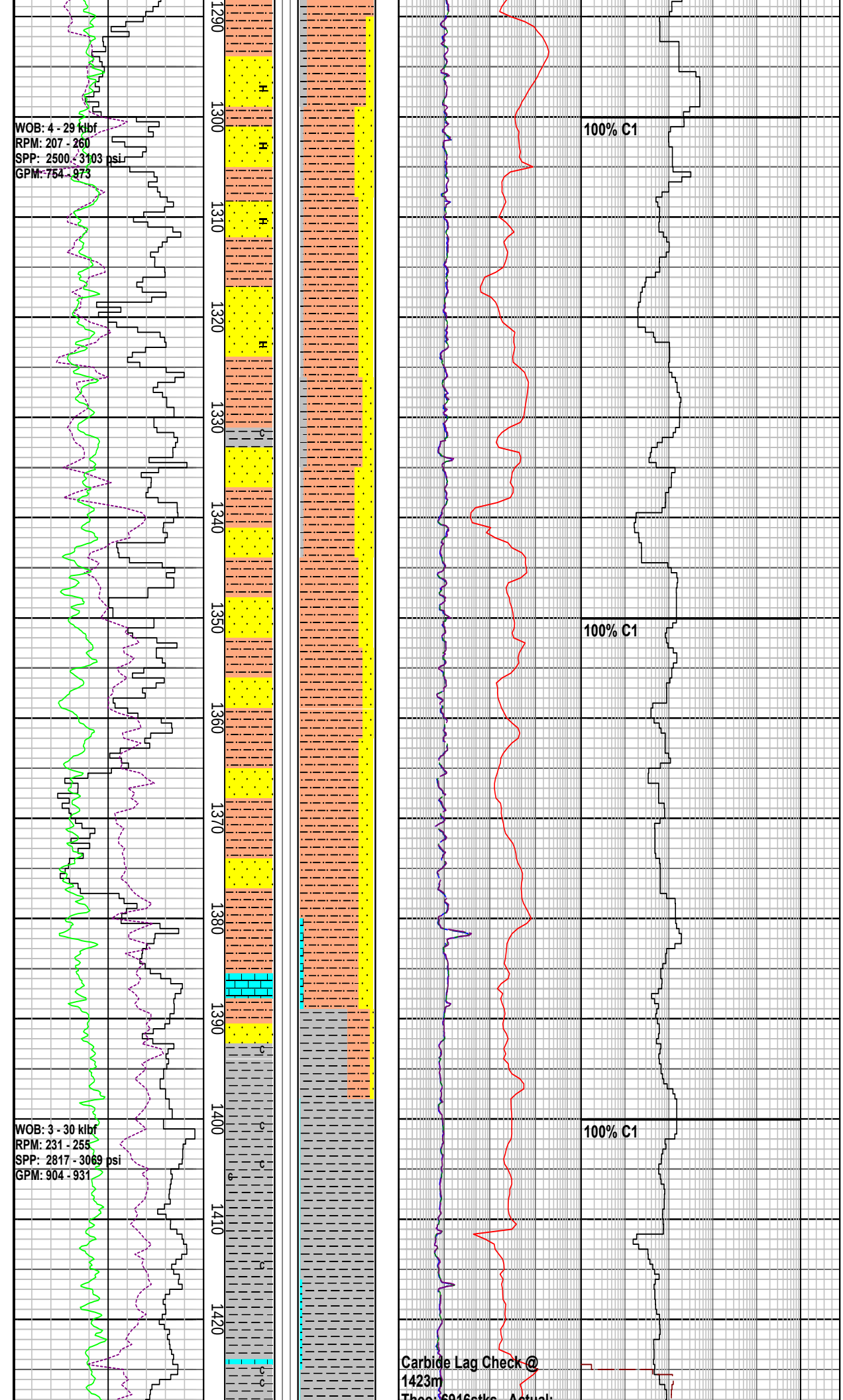
CLAYSTONE: lt-m gy, lt brn-brn gy, lt-m olv gy, m dk gy, calc, tr carb spks & mic lam, com dissem & nod pyr, tr vf glauc gr, tr foss frag, r micmic, frm-mod hd, sbblky-blky

MD: 1221.27 INC: 0.44
AZI: 97.02 TVD: 1221.20

CALCARENITE: lt brn-lt brn gy, bu, com vf qtz gr, tr foss frag, mod hd-hd, blky

SILTSTONE: lt-m brn, lt-m brn gy, com vf sd gr, n-wk calc, tr-com micmic & glauc, tr dissem pyr, tr carb spks, sft-frm, sbblky-blky, grd to vf SST

CLAYSTONE: lt-m gy, lt brn-brn gy, lt-m olv gy, m dk gy, calc, tr carb spks & mic lam, com dissem & nod pyr, tr vf glauc gr, tr foss frag, r micmic, frm-mod hd, sbblky-blky



SANDSTONE: lt brn-brn gy, clr-trnsl, vf gr, mod srtd, sbang-sbrndd, mod sil cmt, mod- strg calc (dol) cmt, com-abd arg-slty mtrx, i/p grd to sd SLTST, tr carb spks & glauc, tr sid, fri-mod hd, v p inf por, n fluor

SILTSTONE: lt-m brn, lt-m brn gy, com vf sd gr, n-wk calc, tr-com micmic & glauc, tr dissem pyr, tr carb spks, sft-frm, sbblky-blky, grd to vf SST

CLAYSTONE: m-dk brn gy, m olv gy, wk-mod calc, tr-com nod pyr, com carb spks, tr micmic & glauc, frm-mod hd, sbblky-blky

MD: 1338.66 INC: 0.51
AZI: 93.25 TVD: 1338.64

SILTSTONE: lt-m brn, lt-m brn gy, com vf sd gr, n-wk calc, tr-com micmic & glauc, tr dissem & nod pyr, tr carb spks, sft-frm, sbblky-blky, grd to vf SST

SANDSTONE: lt brn-brn gy, clr-trnsl, vf-f gr, mod-wl srtd, sbang-sbrndd, mod sil cmt, r agg w/ mod-strg calc (dol) cmt, com-abd arg-slty mtrx, i/p grd to sd SLTST, tr carb spks & glauc, tr sid, fri-mod hd, v p inf por, n fluor

MD: 1367.75 INC: 0.54
AZI: 94.83 TVD: 1367.73

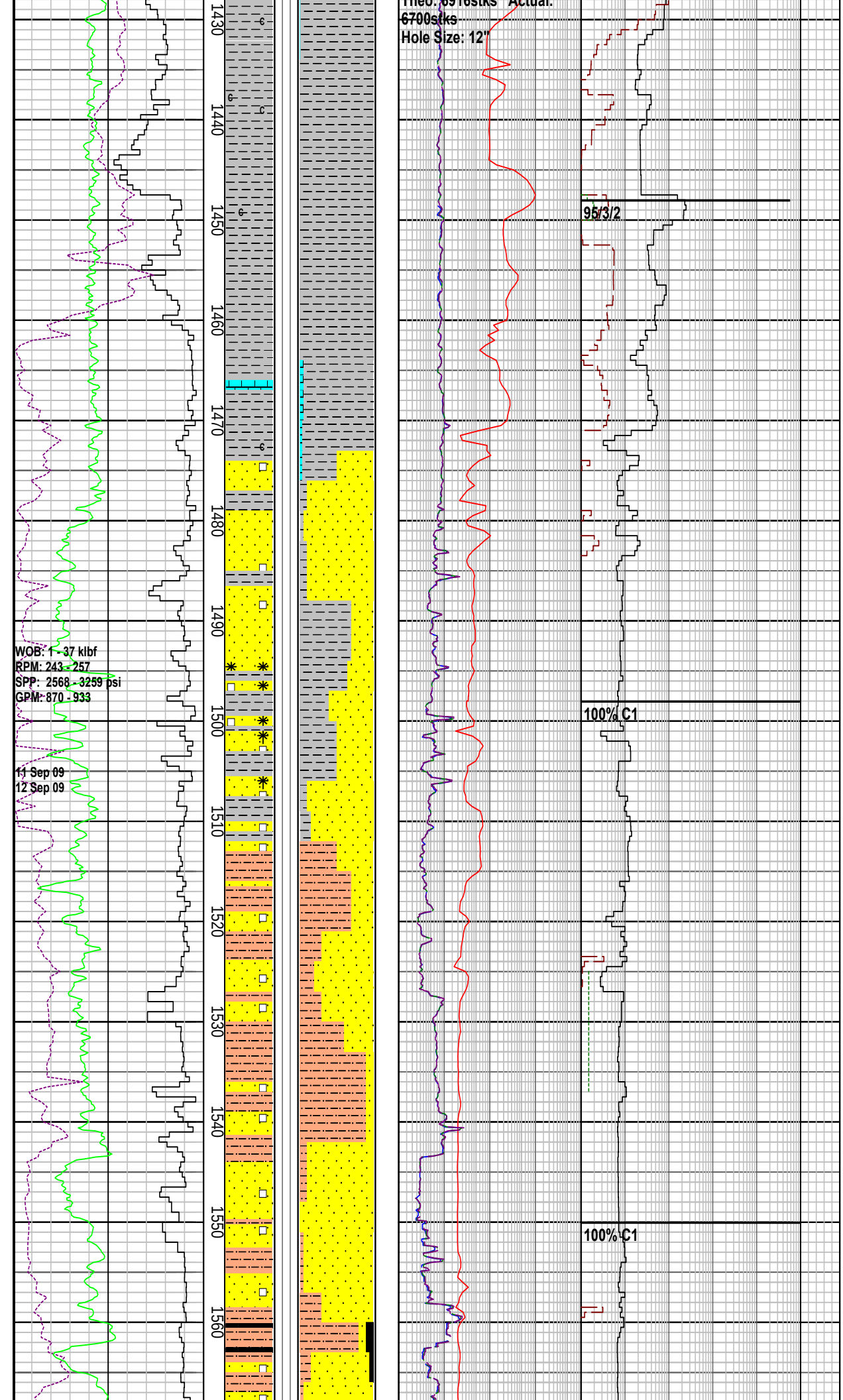
SILTSTONE: lt-m brn, m-dk brn gy, com vf sd gr, n-mod calc, tr-com micmic & glauc, tr dissem & nod pyr, r-mnr carb mat, sft-frm, sbblky-blky, grd to vf SST

CLAYSTONE: pl brn, non-sli calc, tr carb spks, tr nod pyr, sft-frm, disp i/p, sbblky-blky

CLAYSTONE: dk gy, brnsh gy-brnsh blk, non-sli calc, carb, r dissem vf pyr, tr nod pyr, r micmic, sft-frm, sbblky-sb fis

CLAYSTONE: v lt gy-lt gy, lt brnsh gy, grd to SLTST, non-mod calc, sft-frm, sbblky -blky

LIMESTONE: lt brn-mod brn, tr blsh gy, pred micxln, tr biocl, sd i/p, dol i/p, ang



ctgs, mod hd-hd

CLAYSTONE: dk gy, brnsh gy-brnsh blk, non-sli calc, carb, rr dissem vf pyr, tr nod pyr, r micmic, sft-frm, sbblky-sbfis

CLAYSTONE: brnsh gy-brnsh blk, n-sli calc, carb, r dissem vf pyr, tr nod pyr, r micmic, sft-frm, sbblky-sbfis

MD: 1456.65 INC: 0.52
AZI: 105.25 TVD: 1456.63

LIMESTONE: wh, lt brnsh gy-brnsh gy, micr, arg i/p & grd MARL, sft-mod hd, plty-splin

SANDSTONE: trnsl, trnsp, mnr lt brnsh gy-brnsh gy agg, vf-f, mod-wl srt, sbang-sbrndd, wk-mod sil cmt, mnr-abd calc arg mtrx, tr carb mat, tr dk lth, p-fr vis por, gd inf por, n fluor

CLAYSTONE: olv gy, brnsh gy, sli calc, r micmic, r vf qtz, tr carb mat, tr vf dissem pyr, sft, amor-sbblky

Type: KCL/Klastop/Polymer
MW: 9.4 ppg FV: 62
PV: 16 Gel: 8/11/15
YP: 30 pH: 9.5
Cl: 50000

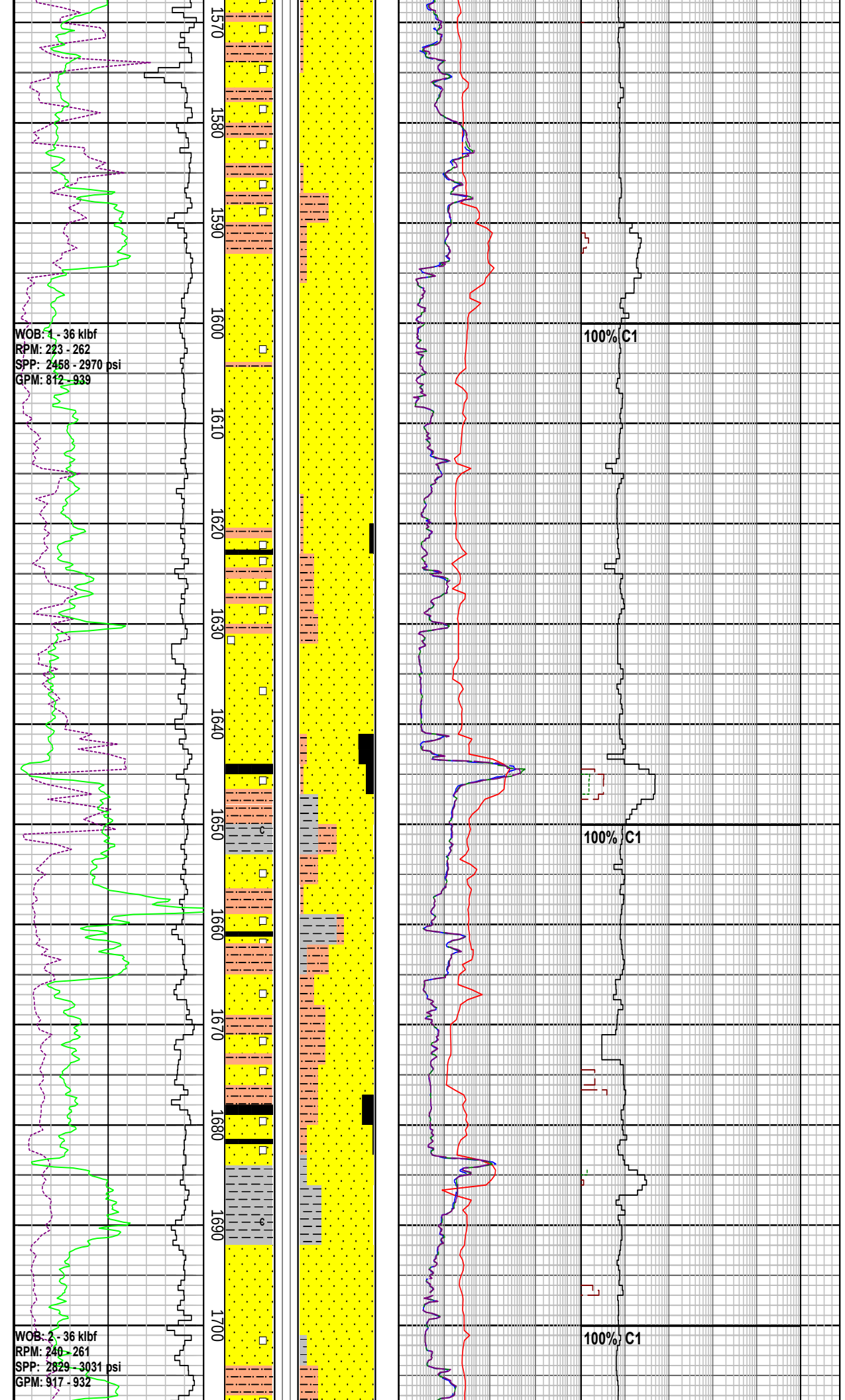
SILTSTONE: olv gy, brnsh gy, sli calc, r micmic, r vf qtz, tr carb lam & mat, tr vf dissem pyr, sft, amor-sbblky, grd to vf SST

SANDSTONE: lt gy, lt olv gy, mod yelsh gn, trnsl, trnsp, vf-f, mod-wl srt, sbang-sbrndd, sil cmt, tr arg mtrx, tr carb spks, r vf glauc, grd to SLTST, lse-fri, fr vis por, gd inf, n fluor

MD: 1530.18 INC: 0.55
AZI: 90.58 TVD: 1530.15

SILTSTONE: olv gy, lt brnsh gy, sli calc, r micmic, tr carb lam & mat, tr nod pyr, tr crs embd qtz gr, tr blk c frag & lam, sft-frm, sbblky, grd to intrlam vf SST

COAL: blk, brnsh blk, ea-sbvit, r vit, lig, sft-brit, ang, grd to carb CLYST



SANDSTONE: trnsl, trnsp, vf-m, mod srt, sbang-sbrndd, tr sil cmt, tr loc pyr cmt, tr agg w/ com brn arg mtrx, tr mic, tr C frag, lse-tr fri, gd inf por, fr vis por, n fluor

SILTSTONE: dk brn-brn gy, dk gy-gy blk, dk olv gy, carb, com dissem pyr, tr micmic, mod hd, sbfis-sbblky, com lge splin cvg @ shaker

MD: 1596.34 INC: 0.49
AZI: 77.67 TVD: 1596.31

SANDSTONE: trnsl, trnsp, lt gy, vf-f, r m, mod-wl srt, sbang-sbrndd, sil cmt, loc pyr cmt, r wh cl mtrx, tr carb spks, tr mic, pred lse, r fri, gd inf por, fr-gd vis por, n fluor

COAL: blk-gy blk, dk brn, dl-ea lstr, i/p sbvit, sbblky-sbconch

MD: 1625.50 INC: 0.49
AZI: 69.82 TVD: 1625.47

SANDSTONE: clr-trnsl, mnr op gr, f-crs gr, pred m gr, mod srt, ang-sbrndd, wk-mod sil cmt, r pyr cmt, r lt gy-wh arg-slt mtrx, tr-r nod pyr, tr lith, com qtz ovgth, lse, tr mod hd agg, fr-p vis & inf por, n fluor

COAL: blk, brnsh blk, sbvit, r vit, sft-brit amor-sbblky, sbconch

CLAYSTONE: lt brn-bu, v lt gy-v pl or, sli aren i/p, tr micmic, sft-frm, sbblky-blky

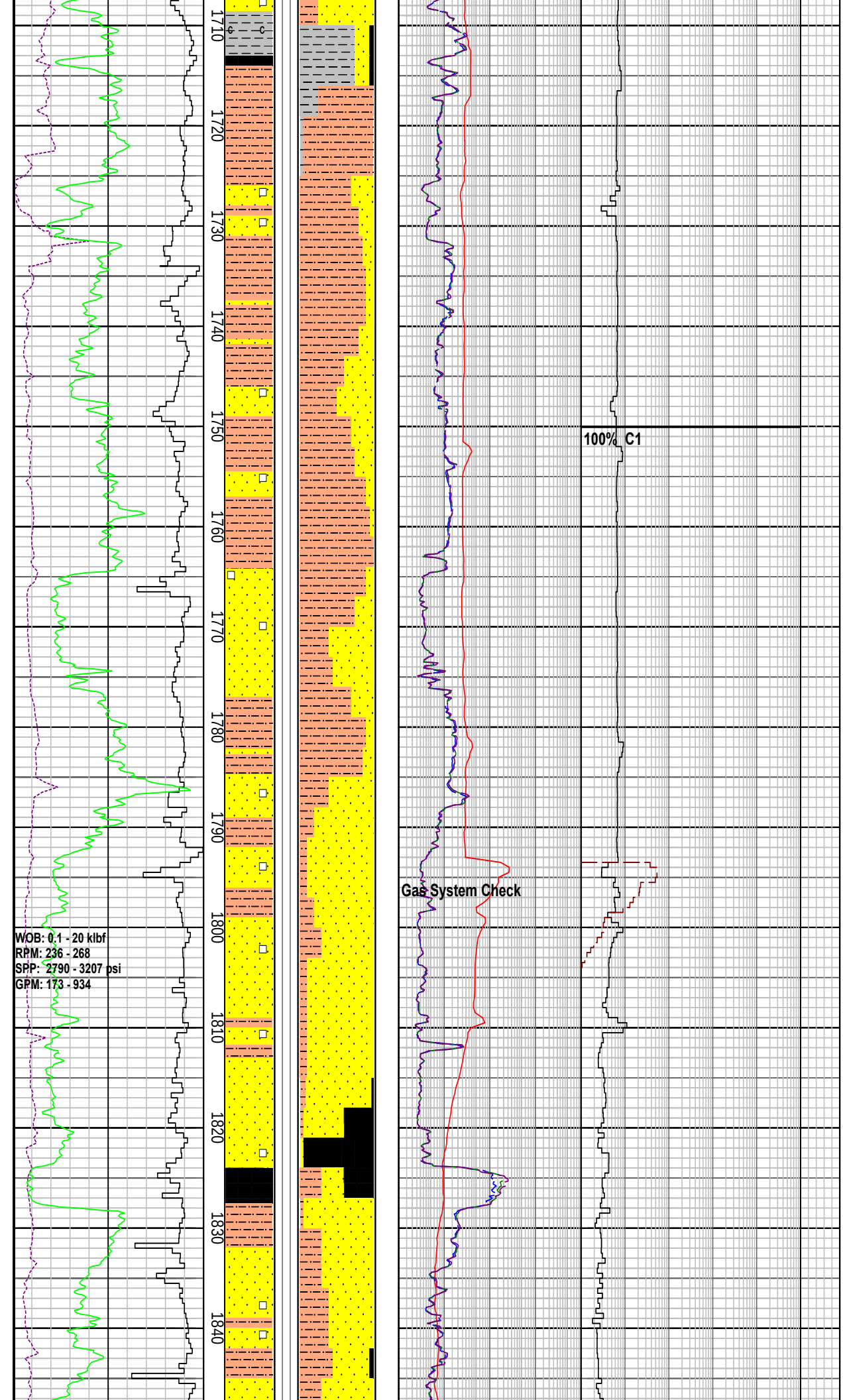
SILTSTONE: m brn-brn gy, lt-m olv gy, sandy & i/p grd to vf SST, tr com dissem & nod pyr, tr carb spks, com micmic, sft-frm, sbblky-blky

SANDSTONE: clr-trnsl, f-crs gr, pred m gr, p srt, sbang-sbrndd, wk-mod sil cmt, tr pyr cmt, com wh arg-slt mtrx, com nod pyr, tr lit & carb mat, lse, mnr fri agg, p inf por, n fluor

MD: 1682.67 INC: 0.41
AZI: 85.01 TVD: 1682.63

CARBONACEOUS CLAYSTONE: dk brn-dk brn gy, dk gy-gy blk, dk olv gy, tr-com dissem pyr, com micmic, mod hd, sbfis-sbblky

SANDSTONE: clr-trnsl, f-crs gr, pred f-m gr, p srt, sbang-sbrndd, mod sil cmt, tr pyr cmt, com-abd wh arg-slt mtrx, com nod pyr, tr lit & carb mat, lse, mnr fri agg, p inf por, n fluor



CARBONACEOUS CLAYSTONE: blk-gy blk, dk olv gy, grg to C, tr micmic, tr dissem pyr vn, frm-mod hd, sbblky-blky

COAL: blk-gy blk, dk brn , dl-ea lstr, i/p sbvit, ang-sbconch frac

SILTSTONE: m brn gy, m olv gy, m-dk gy, sd & i/p grd to vf SST, tr-com dissem & nod pyr, tr carb spks, com micmic, sft-frm, sbblky-blky

SANDSTONE: clr-trnsl, f-m gr, com m-crs gr, p srt, sbang-sbrndd, wk sil cmt, mnr pyr cmt, com-abd wh slt mtrx, com dissem & nod pyr, tr carb spks, r lit, pred lse, mnr fri agg, p inf & vis por, n fluor

SILTSTONE: m-dk brn gy, m olv gy, m-dk gy, sd & i/p grd to vf SST, carb, tr-com dissem & nod pyr, com micmic, frm-mod hd, i/p v hd, sbblky-blky

MD: 1767.94 INC: 0.46
AZI: 80.24 TVD: 1767.90

SANDSTONE: clr-trnsl, f-m gr, mod srt, sbang-sbrndd, wk sil cmt, com arg-slt mtrx, com nod pyr, tr carb spks, r lit, lse, mnr mod hd-hd agg, p inf & vis por, n fluor

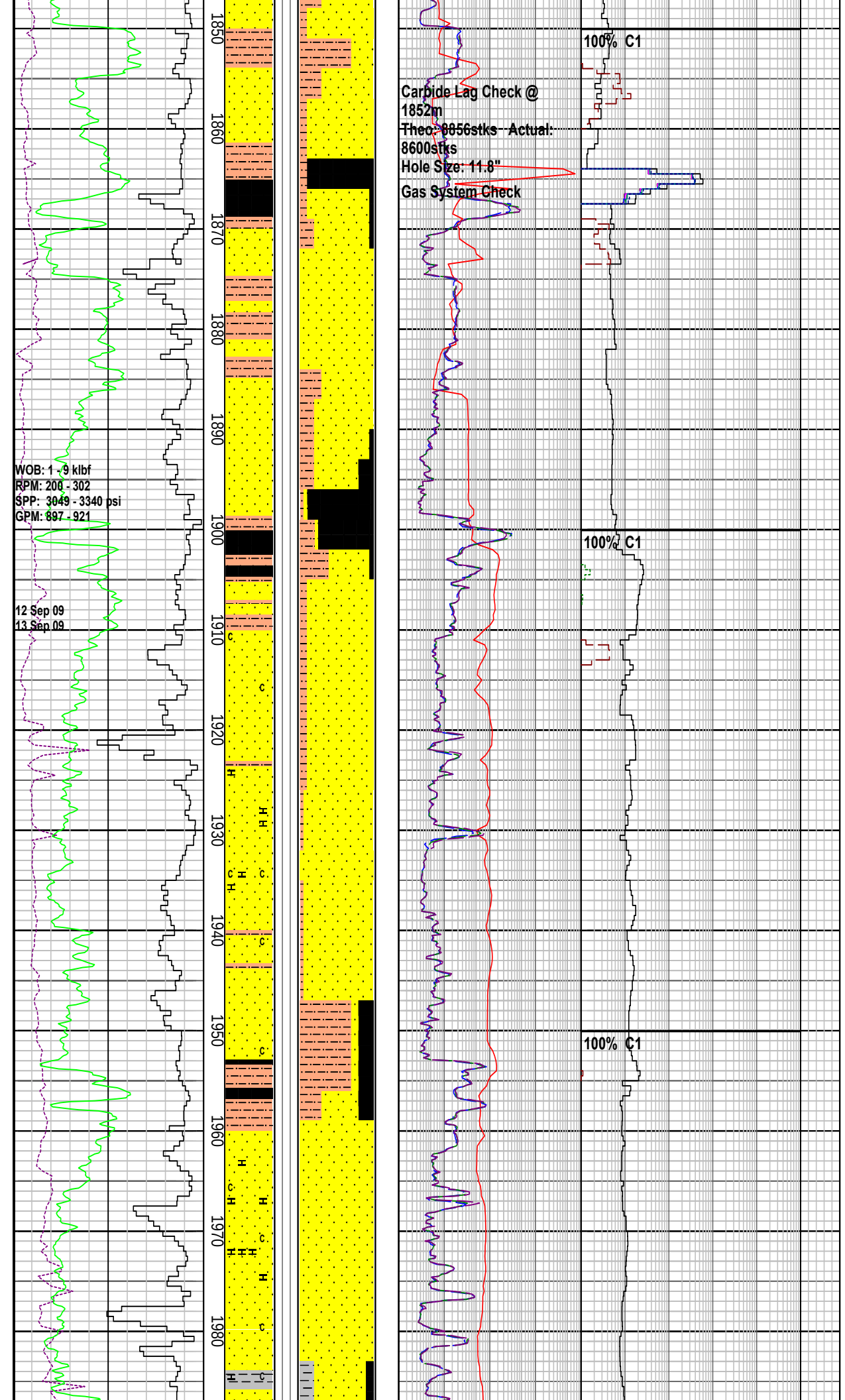
SILTSTONE: dk brn gy, m-dk gy, sd & i/p grd to vf SST, carb, tr-com dissem & nod pyr, com micmic, frm-mod hd, i/p v hd, sbblky-blky

SANDSTONE: v lt gy-wh, lt gy, clr-trnsl, vf-f gr, r m gr, mod srt, sbang-sbrndd, wk sil cmt, com-abd arg-slt mtrx, grd to sd SLTST, tr nod pyr & pyr cmt, tr carb spks, r lit, lse, mnr mod hd-hd agg, p inf & vis por, n fluor

COAL: blk-brnsh blk, ea-sbvit lstr, ang-sbconch frac, grd to CARB SH

SILTSTONE: pl brn, arg, sandy & i/p grd to vf SST, tr carb spks, com micmic, sft-frm, sbblky-blky

SANDSTONE: trnsl, trnsp, v lt gy, vf-f, wl srt, sbang-sbrndd, wk sil cmt, loc pyr cmt, abd wh cl mtrx, r carb mat, t



nod pyr, grd to sd SLTST, pred lse, p vis por, n fluor

MD: 1858.33 INC: 0.33
AZI: 65.19 TVD: 1858.29

COAL: blk, occ brnsh blk, sbvit, mnr ea, frm, brit i/p, sbconch-ang frac

Type: KCL/Klastop/Polymer
MW: 10 ppg FV: 61
PV: 17 Gel: 10/14/20
YP: 36 pH: 9.5
Cl: 50000

SILTSTONE: lt brnsh gy, lt olv gy, mnr carb mat, r micmic, wk Dol i/p, frm, sbblky-blky

COAL: blk, occ brnsh blk, sbvit, mnr ea, frm, brit i/p, sbconch-ang frac

MD: 1913.35 INC: 0.48
AZI: 64.16 TVD: 1913.31

SANDSTONE: trnsl, trnsp, v lt gy-lt gy, lt olv gy, vf-f, wl srt, sbrndd, mnr agg w/ sil cmt, tr-abd wh arg mtrx, sli calc i/p, tr dk lit, tr carb mat, pred lse, mnr fri-mod hd, gd inf por, n fluor

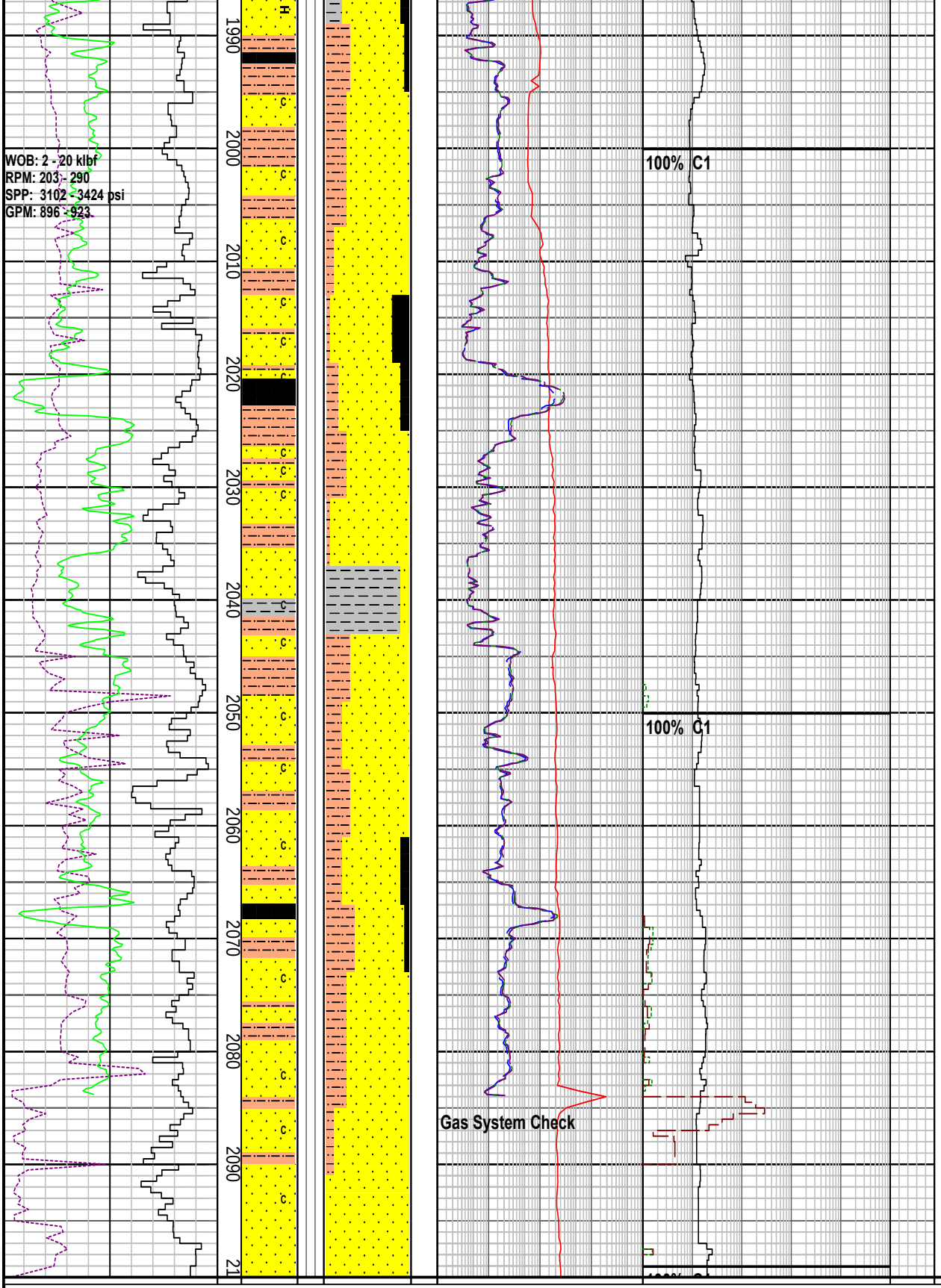
MD: 1941.91 INC: 0.47
AZI: 69.15 TVD: 1941.87

SILTSTONE: brnsh gy-brnsh blk, lt olv gy-olv gy, aren, carb, loc com-abd carb & C lam, r micmic, sft-frm, sbblky-fis

COAL: blk, occ brnsh blk, sbvit, mnr ea, frm, brit i/p, sbconch-ang frac, grd to CARB CLYST

SANDSTONE: trnsl, trnsp, v lt gy-lt gy, lt olv gy, vf-f, wl srt, sbrndd, mnr agg w/ sil cmt, tr-abd wh arg mtrx, sli calc i/p, tr dk lit, tr carb mat, pred lse, mnr fri-mod hd, gd inf por, n fluor

CARBONACEOUS CLAYSTONE: brnsh



gy-brnsh blk, aren, abd carb lam, sft-frm, sbblky-fis

SILTSTONE: lt brnsh gy, lt olv gy, aren, com vf sd gr, tr micmic, r carb mat, sft, disp, amor-sbblky, grd to vf slt SST

SANDSTONE: v lt gy-lt gy, lt brn gy, clr-trnsl, vf-f gr,mnr m gr, p srt, sbang-rndd, mod sil cmt qtz ovgth, com arg-slt mtrx, tr carb spks, tr lit, mnr mod hd agg, pred lse, n fluor

MD: 2028.47 INC: 0.60
AZI: 92.17 TVD: 2028.43

MD: 2038.95 INC: 0.67
AZI: 89.98 TVD: 2038.91

CARBONACEOUS CLAYSTONE: dk gy-gy blk, dk olv gy, grd to arg C i/p, tr micmic, frm-mod hd, sbblky-blky

SILTSTONE: m brn-brn gy, m dk brn, sd i/p, grd to vf slt SST, carb i/p, com micmic, frm-i/p mod hd, sbblky-blky

COAL: blk, sbvit-vit, ea i/p, frm, arg & grd to CARB CLYST i/p, mod hd, unevn-ang frac

MD: 2076.18 INC: 0.73
AZI: 87.08 TVD: 2076.13

SANDSTONE: clr-trnsl, vf-f, pred f gr, mnr m gr, mod srt, sbang-sbrndd, wk sil cmt, com wh arg-slt mtrx, tr carb spks, tr lit, n fluor

Spikey Beach-1 reached TD of

FORMATION EVALUATION LOG

DRILLING PARAM
ROP (m/hr)
200 160 120 80 40
WEIGHT ON BIT (klbf)
10 20 30 40 50
ROP Backup (m/hr)
400 360 320 280 240
GAMMA RAY (API)
0 200

MD meters 1:500

INTERPRETED LITHOLOGY

Oil Show
P F G

LITHOLOGY %

CORE

TOTAL GAS
Total Gas (unit)
0.02 0.2 2 20
Resistivity Shallow (ohm.m) 0.1 1000
Resistivity Medium (ohm.m) 0.1 1000
Resistivity Deep (ohm.m) 0.1 1000

CHROMATOGRAPH
Methane ppm 1 100000
Ethane ppm 1 100000
Propane ppm 1 100000
iso-Butane ppm 1 100000
n-Butane ppm 1 100000
iso-Pentane ppm 1 100000
n-Pentane ppm

Calcimetry

Lithology Description

							1	n-Pentane ppm	100000	