



Company : Apache Energy Ltd

Well : Wasabi-1

Interval : 66.00 - 1710.39 meters

Created : 25/Feb/2008 8:41:58 AM

INTEQ

FORMATION EVALUATION LOG

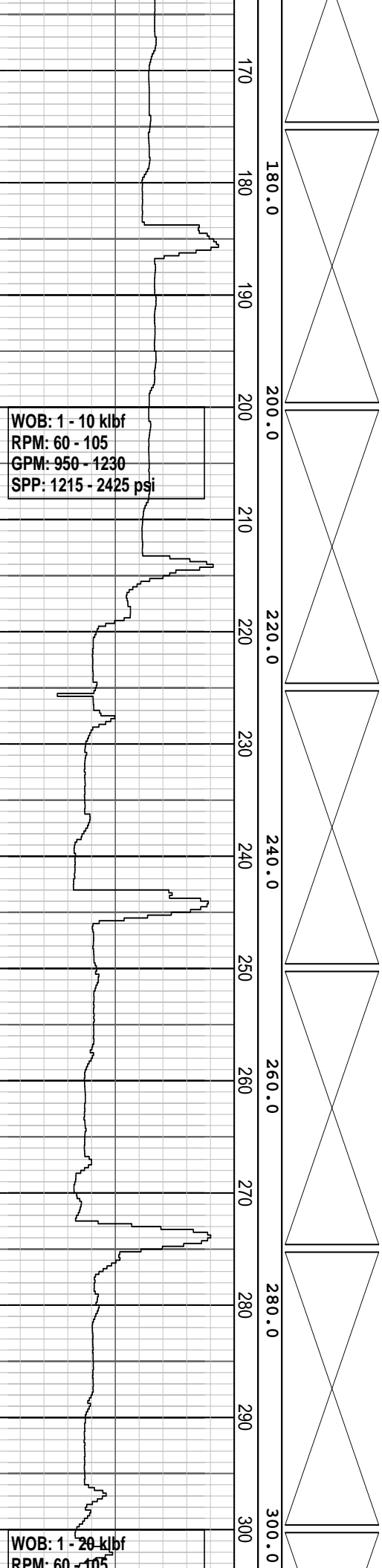
Drilling Rate		MD meters 1:500	TVDRT meters	Cuttings Lithology	Oil Show	Visual Inferred Porosity	Gas Data	Chromatograph Data	Calcmetry	Interpreted Lithology	Lithology Description
ROP (m/hr)	Gas Hydrocarbon Avg %						Methane ppm				
200	0.01	70					0.1	1	100000		<p>Spud well @ 2300 hrs on 14/02/2008</p> <p>MW: 1.06 sg FV: 300 PV: 15 YP: 103 Gel: 80/110/113 pH: 9.2</p>
180	0.1	80	80.0				1	10	100000		
160	1	90	100.0				10	100	100000		<p>Drill with Sea Water and Hi-Vis pills, Returns to Sea bed from 66.0 m to 862.0 m.</p>
140	10	100	120.0				100	1000	100000		
120	100	110	140.0				1000	10000	100000		<p>Survey @ 115.0 mMDRT Inc: 0.14 Azi: 336.08 TVD: 115.45 m</p>
100	1000	120	160.0				10000	100000	100000		
80	10000	130	180.0				100000	1000000	1000000		<p>660 mm (26") Section TD @ 135.0 m on 15/02/08</p>
60	100000	140	200.0				1000000	10000000	10000000		
40	1000000	150	220.0				10000000	100000000	100000000		<p>Survey @ 142.86 mMDRT Inc: 0.18 Azi: 296.21 TVD: 142.86 m</p>
20	10000000	160	240.0				100000000	1000000000	1000000000		
200	100000000	170	260.0				1000000000	10000000000	10000000000		

14/02/2008

NB1: 660 mm (26")
Smith
Type: XR+C
Jets: 4 X 18
Depth In: 66.0 m
Depth out: 135.0 m
Drilled 69.0 m in 2.5 hrs
Grade:
1-1-WT-A-E-I-NO-TD

NB2: 406 mm (16")
Rock Bit
Type: T11GDH
Jets: 3 X 18, 1 X 16
Depth In: 135.0 m
Depth out: 862.0 m
Drilled 727.0 m in 13.9 hrs
Grade:
1-2-WT-A-E-I-NO-TD

15/02/2008



Survey @ 170.39 mMDRT
 Inc: 0.09 Azi: 303.79
 TVD: 170.39 m

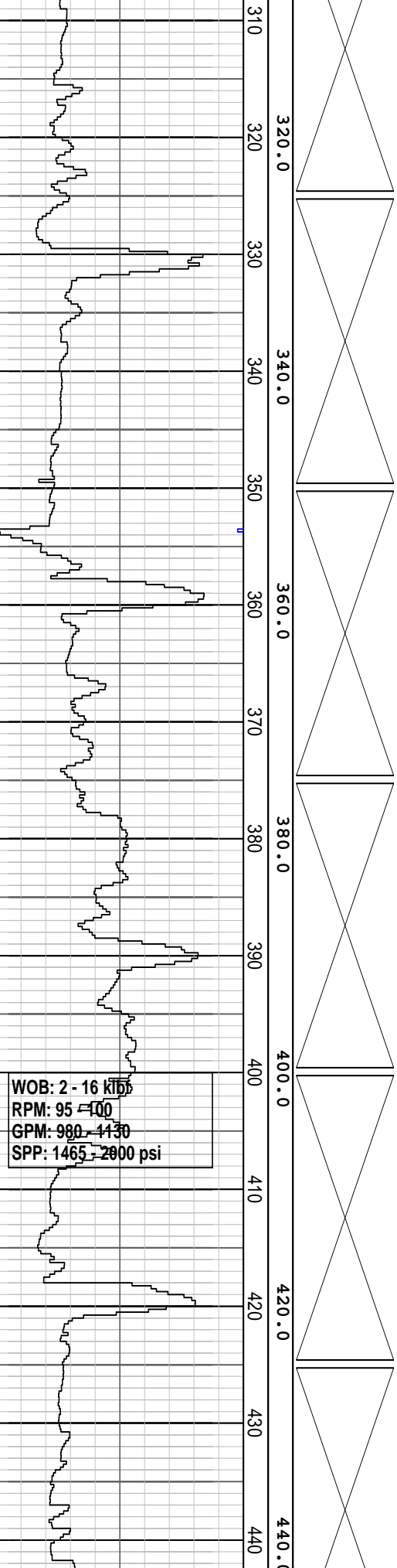
Survey @ 201.95 mMDRT
 Inc: 0.09 Azi: 130.71
 TVD: 201.95 m

Survey @ 229.75 mMDRT
 Inc: 0.10 Azi: 88.12
 TVD: 229.75 m

Drill with Sea Water and
 Hi-Vis pills. Returns to Sea

in 115 pms, returns to sea bed from 66.0 m to 862.0 m.

RPM: 95 - 1100
GPM: 970 - 1160
SPP: 1405 - 2050 psi

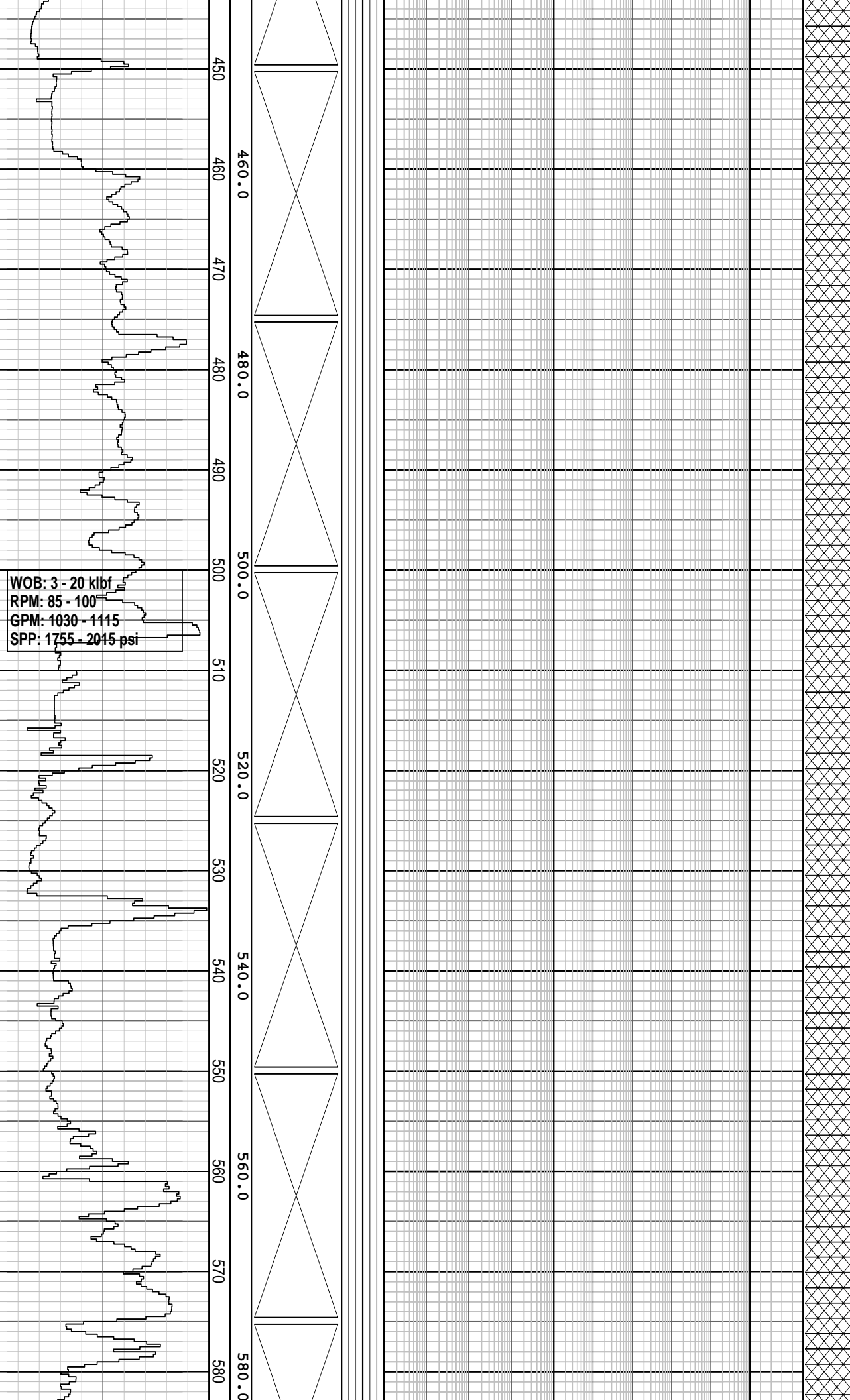


Drill with Sea Water and
Hi-Vis pills, Returns to Sea
bed from 66.0 m to 862.0 m.

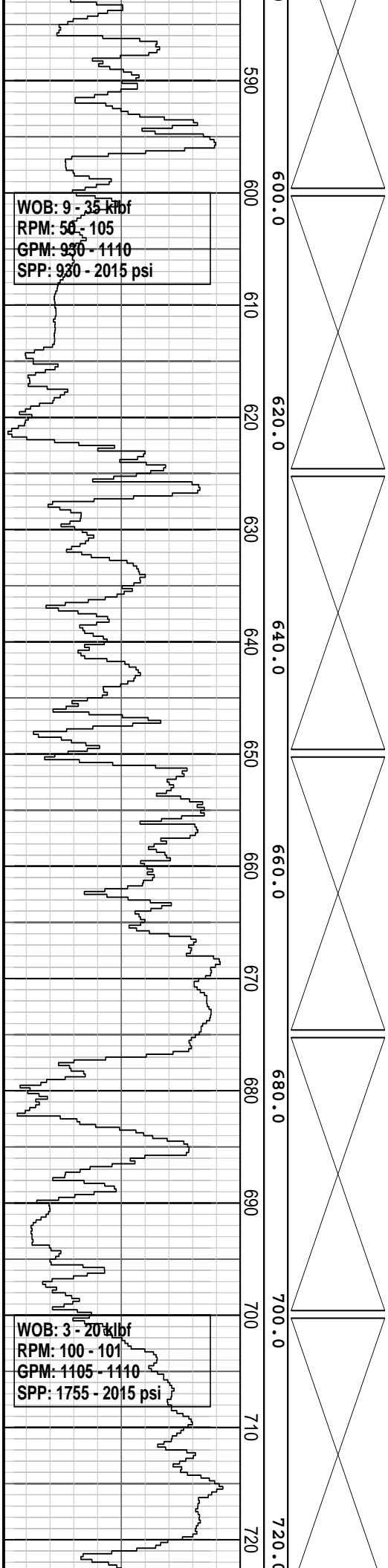
Survey @ 494.63 mMDRT
Inc: 0.28 Azi: 191.25
TVD: 494.63 m

MW: 1.06 sg FV: 120
PV: 6 YP: 88
Gel: 65/80/90 pH: 9.2

Survey @ 553.43 mMDRT
Inc: 0.48 Azi: 178.29
TVD: 553.43 m



WOB: 3 - 20 klbf
RPM: 85 - 100
GPM: 1030 - 1115
SPP: 1755 - 2015 psi

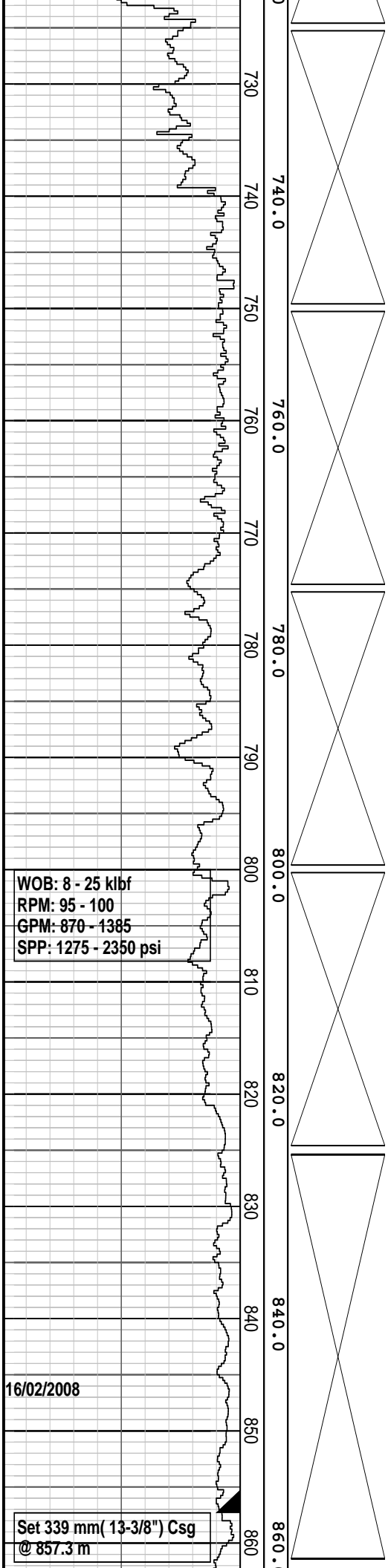


WOB: 9 - 35 kbf
RPM: 50 - 105
GPM: 930 - 1110
SPP: 930 - 2015 psi

WOB: 3 - 20 kbf
RPM: 100 - 101
GPM: 1105 - 1110
SPP: 1755 - 2015 psi

**Drill with Sea Water and
 Hi-Vis pills, Returns to Sea
 bed from 66.0 m to 862.0 m.**

**Survey @ 700.75 mMDRT
 Inc: 0.84 Azi: 171.77
 TVD: 700.75 m**



730

740

750

760

770

780

790

800

810

820

830

840

850

860

740.0

760.0

780.0

800.0

820.0

840.0

860.0

WOB: 8 - 25 kbf
RPM: 95 - 100
GPM: 870 - 1385
SPP: 1275 - 2350 psi

16/02/2008

Set 339 mm (13-3/8") Csg
@ 857.3 m

Survey @ 759.92 mMDRT
Inc: 0.78 Azi: 172.15
TVD: 759.90 m

Survey @ 789.17 mMDRT
Inc: 0.56 Azi: 166.34
TVD: 789.15 m

Survey @ 818.74 mMDRT
Inc: 0.38 Azi: 176.04
TVD: 818.72 m

406 mm (16") Section TD @ 862.0 m on 17/02/08

FIT: EMW = 1.91 sg @ 925 psi

MW: 1.15 sg FV: 90
PV: 18 YP: 24
Gel: 9/11/14 pH: 9.6

CALCARENITE: off wh, lt-med gry, lt brn i/p, aren, abdt micr foss, com v crs arg qtz grs, w/ Fe stng, com pl gy slty mtx, tr nod pyr, mod hd aggs, tr vis por, tr min flour

Survey @ 886.60 mMDRT
Inc: 0.20 Azi: 232.91
TVD: 886.58 m

CALCISILTITE: gy, med dk gy i/p, com arg & gr to calcilutite, mnr vf glauc, sbbkly-blky

CALCILUTITE: lt med gy, off wh-pl gy, tr dk gy, arg, tr micrxln, mnr micr foss, sft-disp, mod hd i/p

CALCARENITE: off wh, lt-med gry, lt brn i/p, aren, abdt micr foss, com v crs arg qtz grs, w/ Fe stng, com slty mtx, tr nod pyr, mod hd aggs, tr vis por, tr min flour

CALCISILTITE: gy, med dk gy i/p, com arg & gr to calcilutite, mnr vf glauc, sbbkly-blky, com abdt micr foss

CALCILUTITE: lt med gy, off wh-pl gy, tr dk gy, arg, tr micrxln, mnr micr foss, sft-disp, mod hd i/p

CALCARENITE: off wh, lt-med gry, lt brn i/p, aren, abdt micr foss, com v crs arg qtz grs, w/ Fe stng, com slty mtx, tr nod pyr, mod hd aggs, tr vis por, tr min flour

CALCISILTITE: gy, med dk gy i/p, com arg & gr to calcilutite, mnr vf glauc, sbbkly-blky

CALCILUTITE: lt med gy, off wh-pl gy, tr dk gy, arg, tr micrxln, mnr micr foss, sft-disp, mod hd i/p

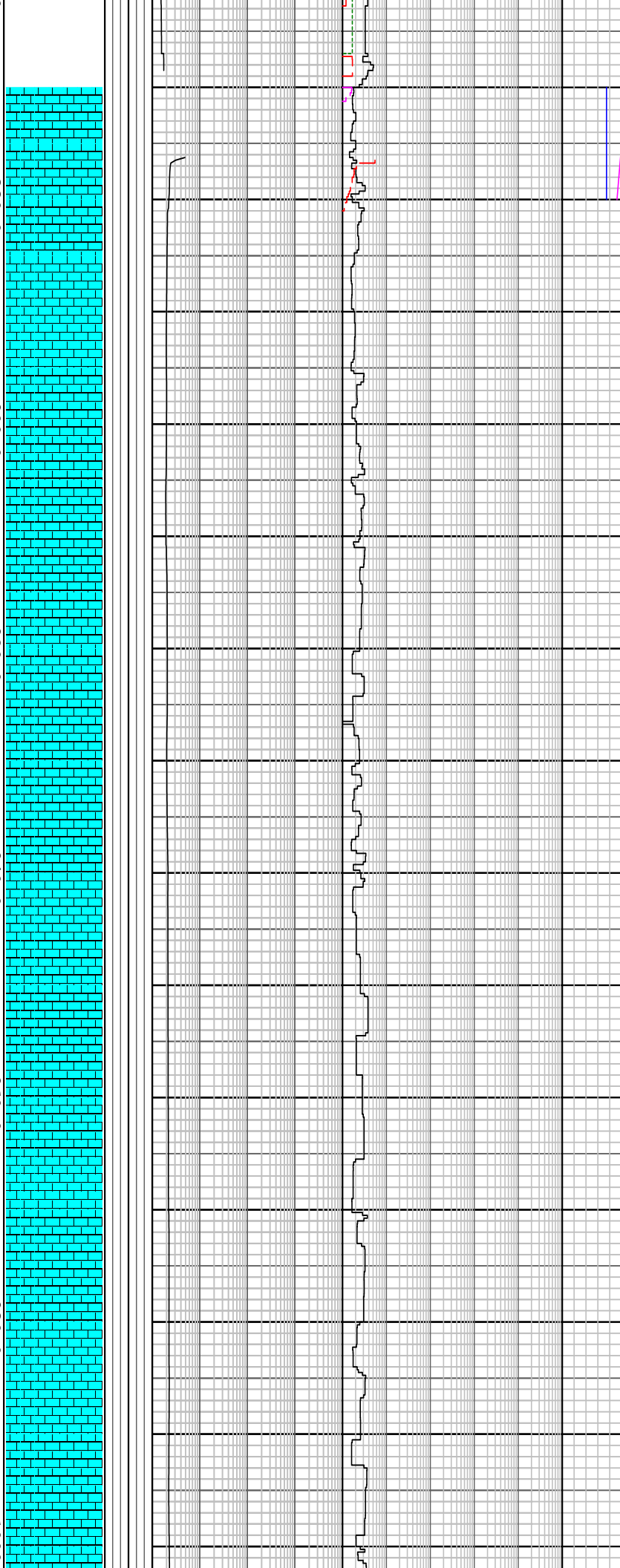
CALCISILTITE: gy, med dk gy i/p, com arg & gr to calcilutite, mnr vf glauc, sbbkly-blky, com abdt micr

NB3: 308 mm (12 1/4")
Smith
Serial: SCC985
Type: PDC Fixed Cutter
Jets: 6 X18,
Depth In: 862.0 m
Depth out: xxx.0 m
Drilled xxx.0 m in xxx hrs
Grade:
1-2-WT-A-E-I-NO-TD

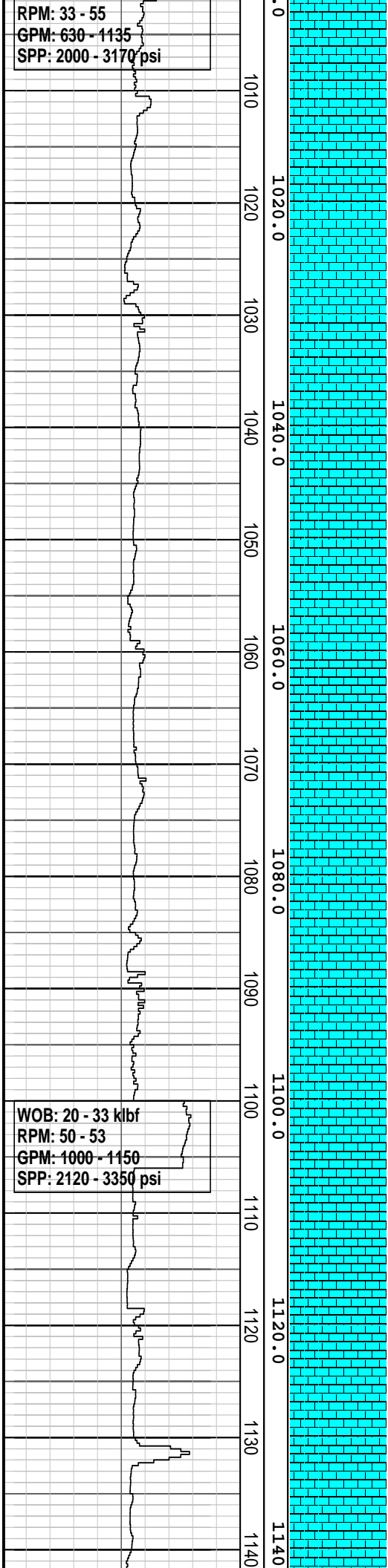
WOB: 5 - 25 klf
RPM: 28 - 100
GPM: 633 - 1150
SPP: 1020 - 2226 psi

WOB: 8 - 33 klf

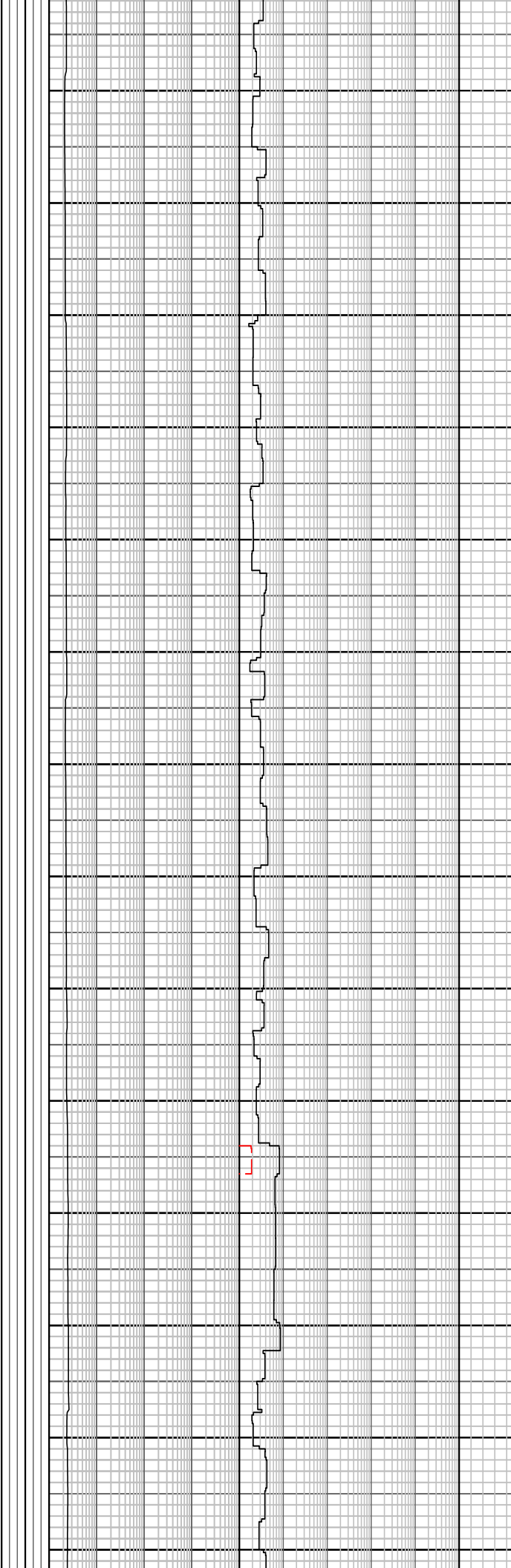
0
870
880.0
890
900.0
910
920.0
930
940.0
950
960.0
970
980.0
990
1000



RPM: 33 - 55
GPM: 630 - 1135
SPP: 2000 - 3170 psi



WOB: 20 - 33 klbf
RPM: 50 - 53
GPM: 1000 - 1150
SPP: 2120 - 3350 psi



sbbky-blky, com abdt micr foss

CALCILUTITE: lt med gy, off wh-pl gy, tr dk gy, arg, tr micrxln, mnr micr foss, sft-disp, mod hd i/p

Survey @ 1034.55 mMDRT
Inc: 0.55 Azi: 198.33
TVD: 1034.52 m

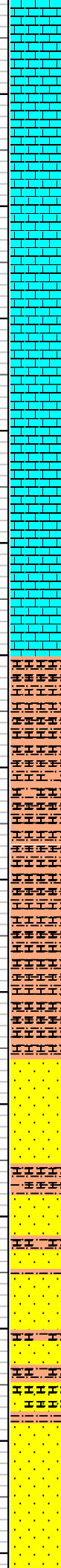
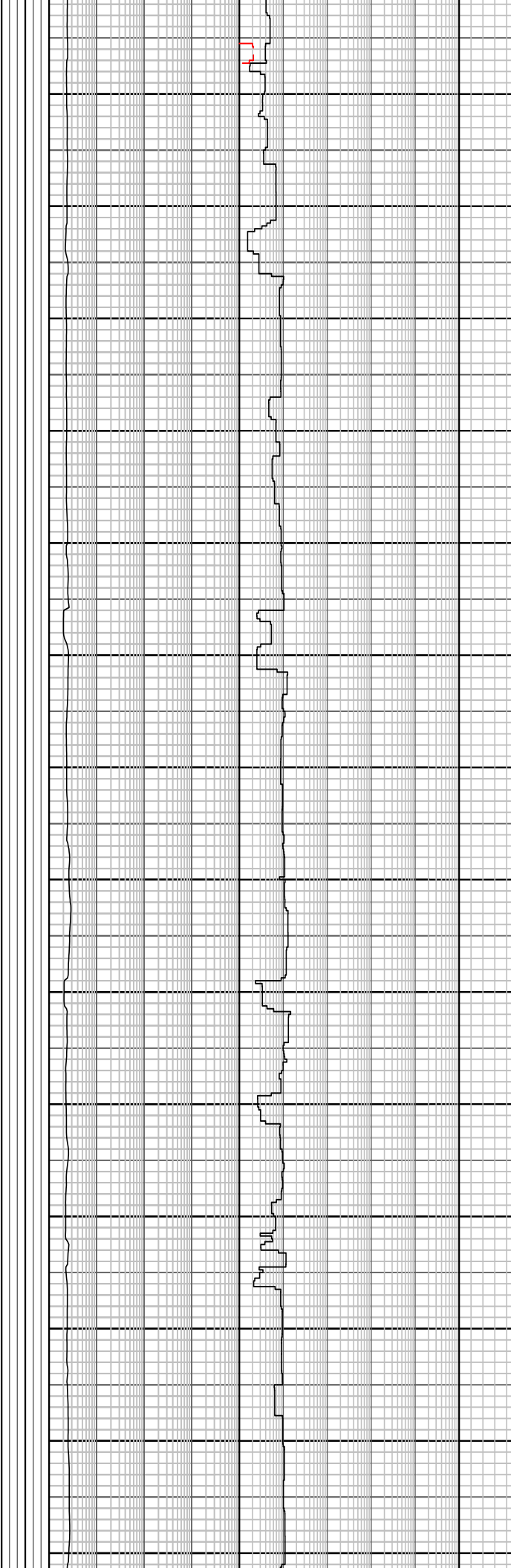
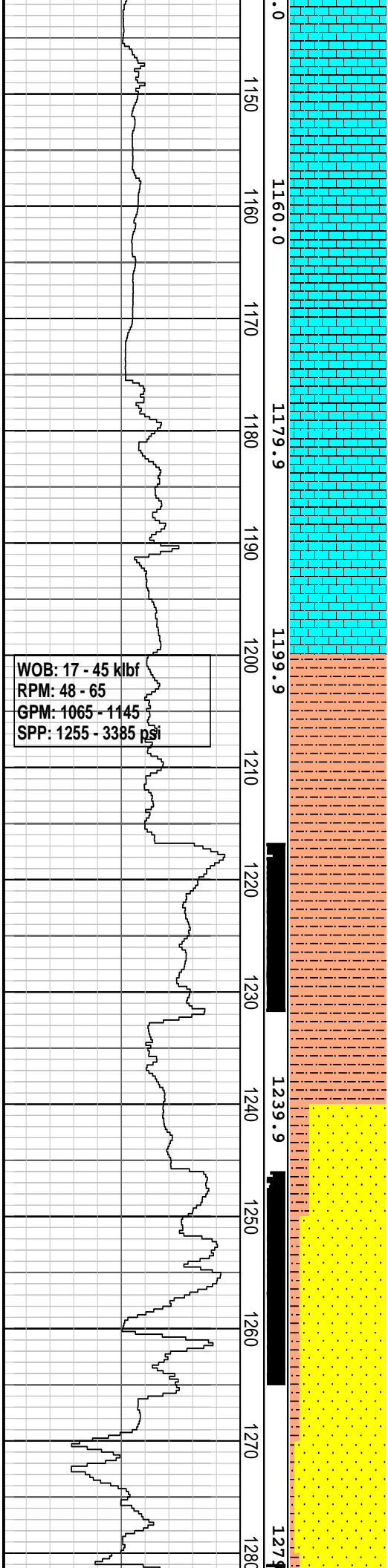
CALCISILTITE: gy, med dk gy i/p, com arg & gr to calcilutite, mnr vf glauc, sbbky-blky, com abdt micr foss

CALCILUTITE: lt med gy, off wh-pl gy, tr dk gy, arg, tr micrxln, mnr micr foss, sft-disp, mod hd i/p

CALCISILTITE: gy, med dk gy i/p, com arg & gr to calcilutite, mnr vf glauc, sbbky-blky, com abdt micr foss

CALCILUTITE: lt med gy, off wh-pl gy, tr dk gy, arg, tr micrxln, mnr micr foss, sft-disp, mod hd i/p

CALCISILTITE: gy, med dk gy i/p, com arg & gr to calcilutite, mnr vf glauc, sbbky-blky, com abdt micr foss



CALCILUTITE: lt med gy, off wh-pl gy, tr dk gy, arg, tr micrxln, mnr micr foss, sft-disp, mod hd i/p

CALCISILTITE: gy, med dk gy i/p, com arg & gr to calcilutite, mnr vf glauc, sbbiky-blky, com abdt micr foss

CALCILUTITE: lt med gy, off wh-pl gy, tr dk gy, arg, tr micrxln, mnr micr foss, sft-disp, mod hd i/p

CALCAREOUS SILTSTONE: pl-med gy, v arg & comly grdng-calc clyst, min calc frag, frm-mod hd, sbbiky-blky

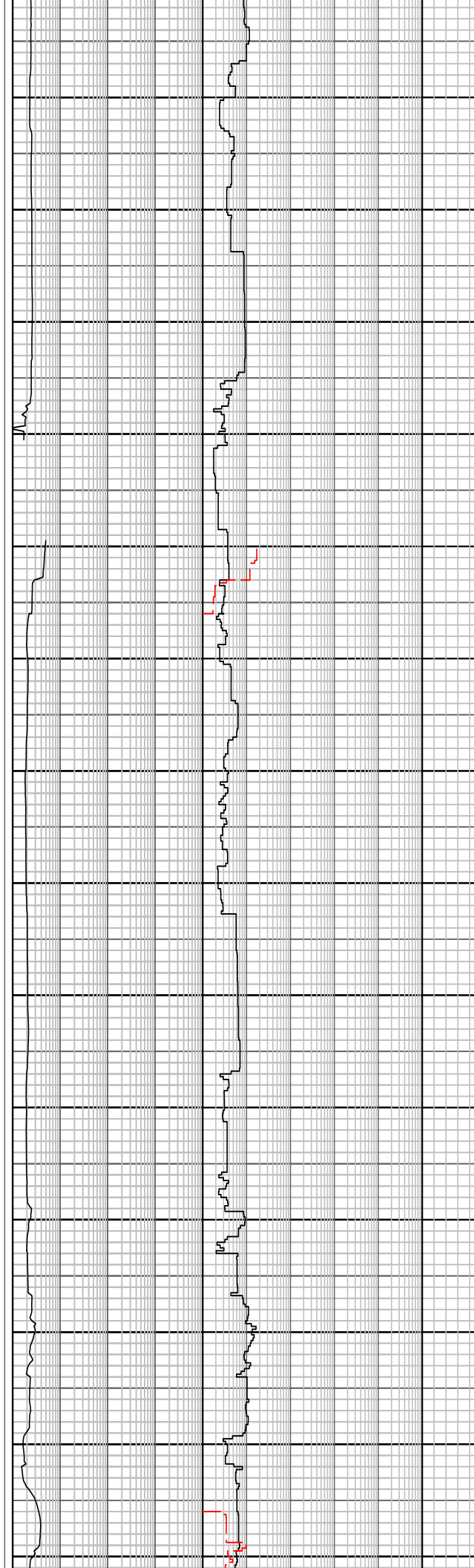
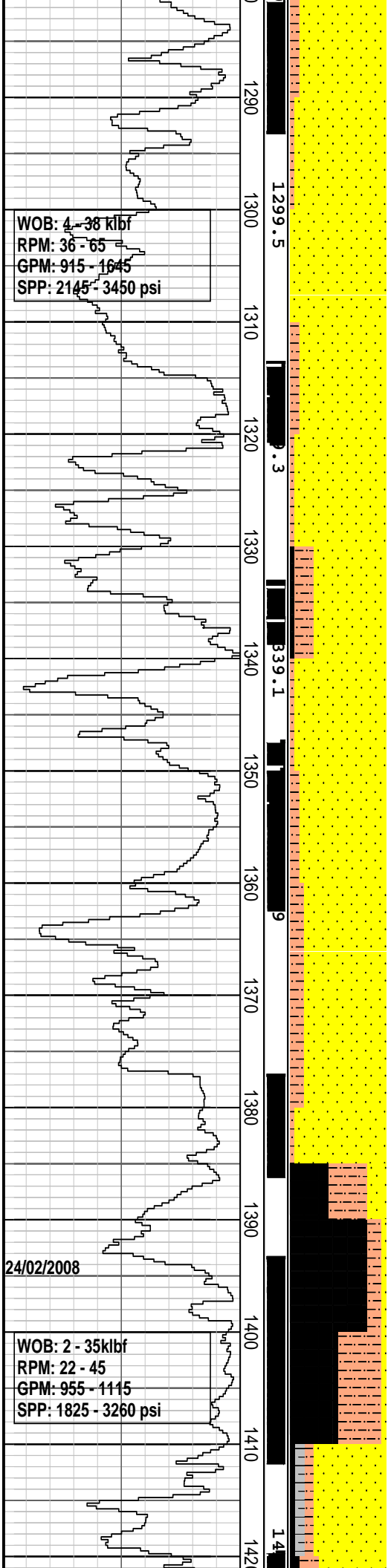
CALCAREOUS SILTSTONE: pl-med gy, v arg & comly grdng-calc clyst, min calc frag, frm-mod hd, sbbiky-blky

Survey @ 1239.98 mMDRT
 Inc: 3.38 Azi: 334.13
 TVD: 1239.85 m

CALCAREOUS SANDSTONE: pl brn, lt gy brn, trnsl i/p, v f-crs, dom v f-f, pr-mod srt, sbang-sbrnd, loc ang crs grs, com strng calc cmt, com pl gy arg mtx & loc grdng-aren sltst, com carb specks, loc com v f glauc, min dissemin & nod pyr, gen lse grs, v hd aggs, pr vis por.

Survey @ 1270.01 mMDRT
 Inc: 6.32 Azi: 334.23
 TVD: 1269.77 m

CALCAREOUS SANDSTONE: med gy, occ off wh-pl arg, v



med gy, occ on w/ pr grt, v
 f-crs, dom med, prly srt,
 ang-sbrnd, min mod strng
 calc cmt, loc com lt brn gy
 arg mtx, com-abdt disse
 pyr, com glauc, gen lse grs, v
 hd aggs, pr-fr vis por, fr-gd
 inf por

SANDSTONE: clr-trnsl, pl brn,
 f-crs, pr srt, ang-sr, tr wk calc
 cmt, loc med brn, arg mtx,
 com Fe stng, com carb frags,
 occ nod pry, gen lse grs, gd
 ris and inf pur, no flour

SILTSTONE: lt med gy, lt
 brnsh gy, arg & loc grndg to
 clyst, occ liths & carb spks,
 tr nod pyr, tr micmic, mnr
 calc mtx, frm-hd, sbfiss-blky

Survey @ 1328.72 mMDRT
 Inc: 8.15 Azi: 333.6
 TVD: 1327.95 m

SANDSTONE: clr-trnsl,
 pl-med brn gy, vf-crs, pr srt,
 ang-sbang, mnr wk calc cmt,
 com lt brn gy arg mtx w/ f grs
 & grd aren SLTST, com carb
 spks, lse, mod hd aggs, pr
 vis por
SILTSTONE: med-dk gy, lt gy
 i/p, arg, com carb mat, lse
 aren & grndg to vf sst, mnr
 mic flks, mod hd-hd,
 sbblky-sbfiss, com abdt carb
 mat

Survey @ 1358.00 mMDRT
 Inc: 9.08 Azi: 336.28
 TVD: 1356.9 m

SANDSTONE: clr-trnsl,
 pl-med brn gy, vf-crs, pr srt,
 ang-sbang, mnr wk calc cmt,
 com lt brn gy arg mtx w/ f grs
 & grd aren SLTST, com carb
 spks, lse, mod hd aggs, pr
 vis por

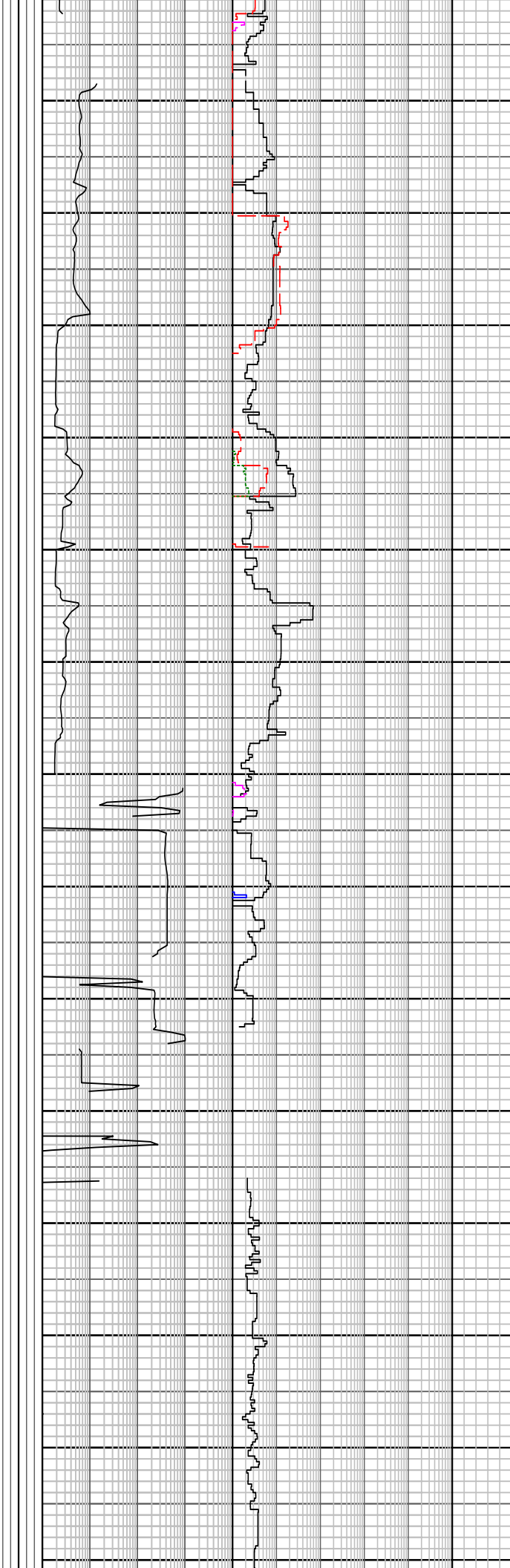
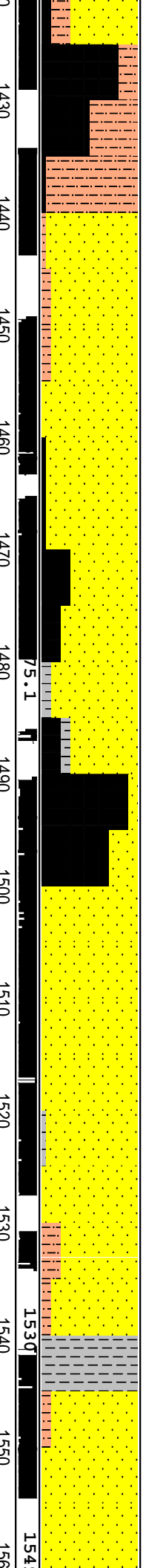
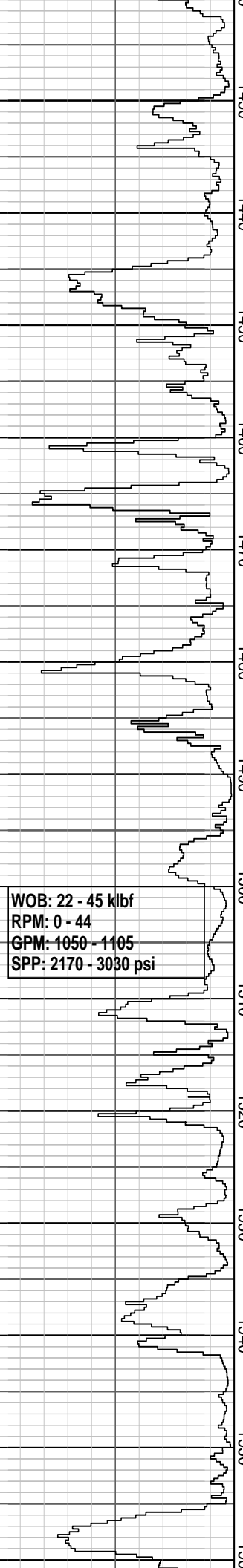
COAL: dk gy-blk, sbvit-vit,
 com slty lams & grndg to
 CARB SLTST, frm-mod hd,
 sbfiss-sbblky

Survey @ 1388.32 mMDRT
 Inc: 11.22 Azi: 337.32
 TVD: 1386.74 m

SILTSTONE: med-dk gy, lt gy
 i/p, arg, com carb mat, lse
 aren & grndg to vf sst, mnr
 mic flks, mod hd-hd,
 sbblky-sbfiss, com abdt carb
 mat

COAL: dk gy-blk, sbvit-vit,
 com slty lams & grndg to
 CARB SLTST, frm-mod hd,
 sbfiss-sbblky

SANDSTONE: lt gysh brn,
 trnsl, f-crs, pr srt,



sbang-sbrnd, mnr nod calc
 cmt, mnr nod pyr, gen lse
 grs, fr-gd inf por, no flour

SILTSTONE: dk brnsh gy, dk
 gy, arg, abdt carb mat &
 lams, com grdng to COAL,
 hd-v hd, sbfiss

COAL: dk gy-blk, sbvit-vit,
 com slty lams & grdng to
 CARB SLTST, frm-mod hd,
 sbfiss-sbblky

SANDSTONE: clr-trnsl, frstd,
 Fe stng, med-v crs, gen wl
 srt, ang-sbang, abdt clr qtz
 grs, gd vis por, gd inf por, no
 flour

Survey @ 1447.39 mMDRT
 Inc: 16.50 Azi: 340.87
 TVD: 1444.1 m

COAL: hd, blk, conch frac
 i/p

Survey @ 1476.79 mMDRT
 Inc: 18.71 Azi: 341.36
 TVD: 1472.2 m

CLAYSTONE: lt bl gy-m bl gy,
 frm-mod hd, blk, mod calc

Survey @ 1506.0 mMDRT
 Inc: 21.47 Azi: 336.96
 TVD: 1499.6 m

SANDSTONE: clr, transp, vf-f
 gr, dom f, wl srt,
 sbang-sbrnd, dom sbang,
 sph, rr nod pyr, no show

Survey @ 1535.79 mMDRT
 Inc: 23.81 Azi: 336.52
 TVD: 1527.02 m

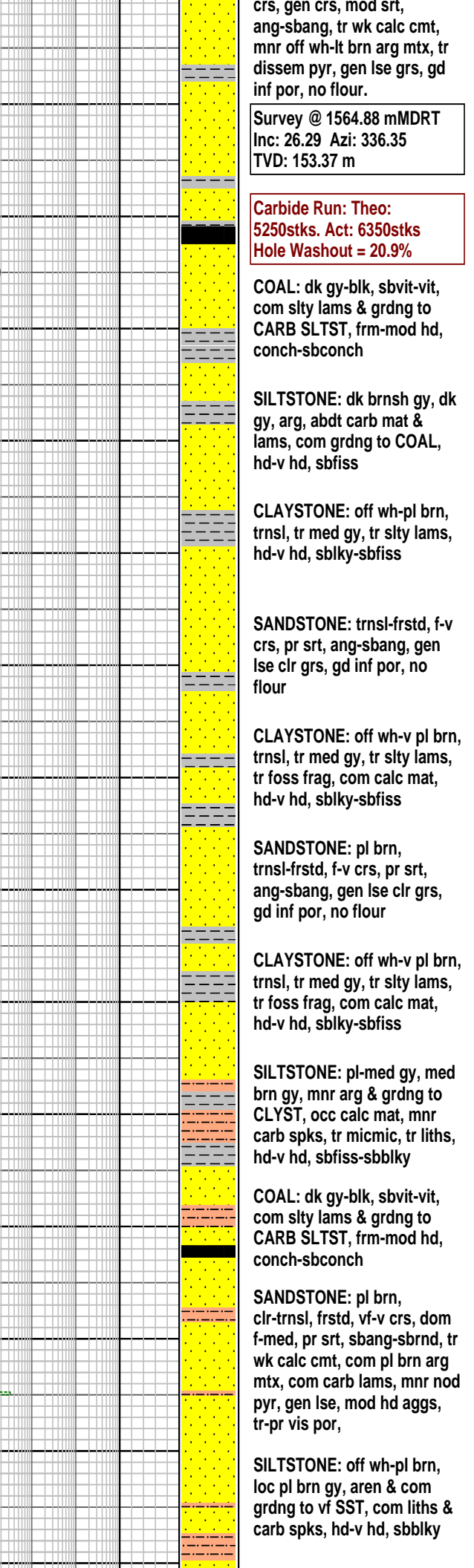
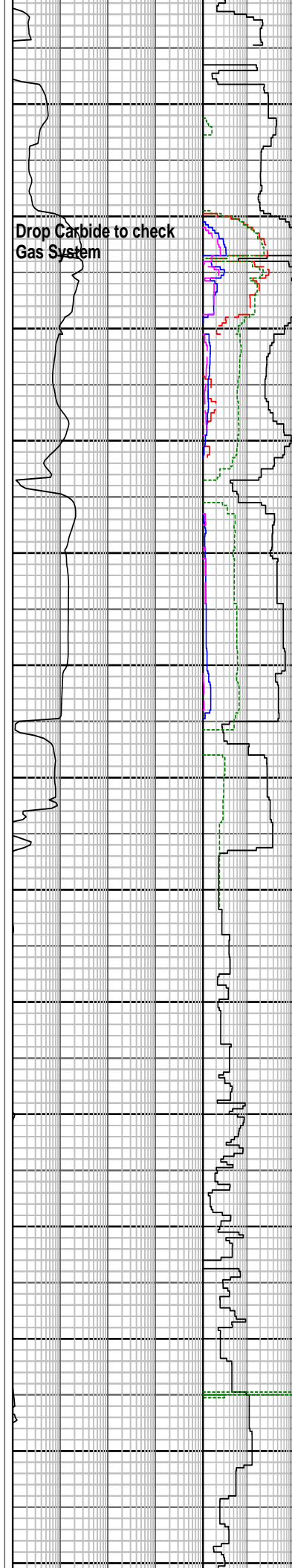
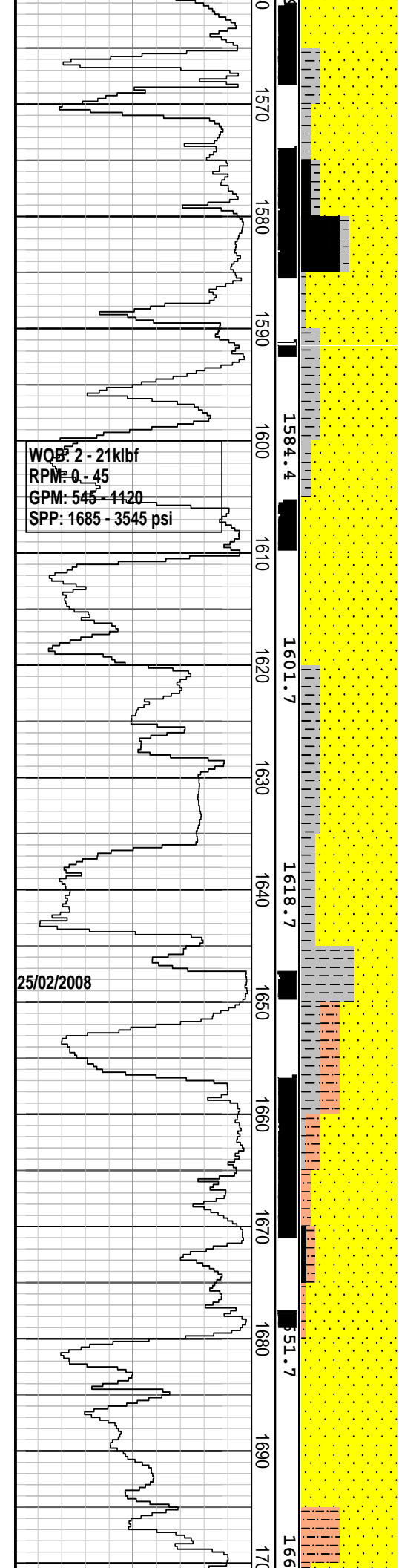
CLAYSTONE: lt ol gy-lt brn
 gy, sft, sbblky, sli calc

SILTSTONE: dk brnsh gy, dk
 gy, arg, abdt carb mat &
 lams, com grdng to COAL,
 hd-v hd, sbfiss

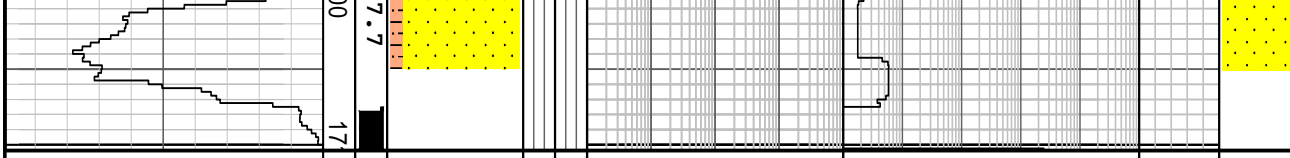
SANDSTONE: wh, transl,
 clrless, lse, f-v crs, pred v
 crs, wl srt, sbrnd-rnd, dom
 sbrnd, sph, no show

CLAYSTONE: off wh-v dk gy,
 med brn, org brn, v dk brn
 gry, tr aren i/p, tr calc mtx,
 com carb mat, grdng to
 CARB CLYST, frm-hd, disp,
 sbblky, sbfiss i/p

SANDSTONE: trnsl-frstd, vf-v



1584.4
 1601.7
 1618.7
 151.7
 166



FORMATION EVALUATION LOG

Drilling Rate	MD	TV/DRT	Cuttings Lithology	Oil Show	Visual Inferred Porosity	Gas Data	Chromatograph Data	Calciemetry	Interpreted Lithology	Lithology Description
ROP (m/hr) 200 180 160 140 120 100 80 60 40 20 ROP (m/hr) 400 380 360 340 320 300 280 260 240 220	MD meters 1:500	TV/DRT meters		Oil Show P F G	Visual Inferred Porosity P F G	Gas Hydrocarbon Avg % 0.01 0.1 1 10	Methane ppm 100000 Ethane ppm 100000 Propane ppm 100000 iso-Butane ppm 100000 n-Butane ppm 100000 iso-Pentane ppm 100000 n-Pentane ppm	CaCO3 % MgCO3 %		