



INTEQ

Company : Apache

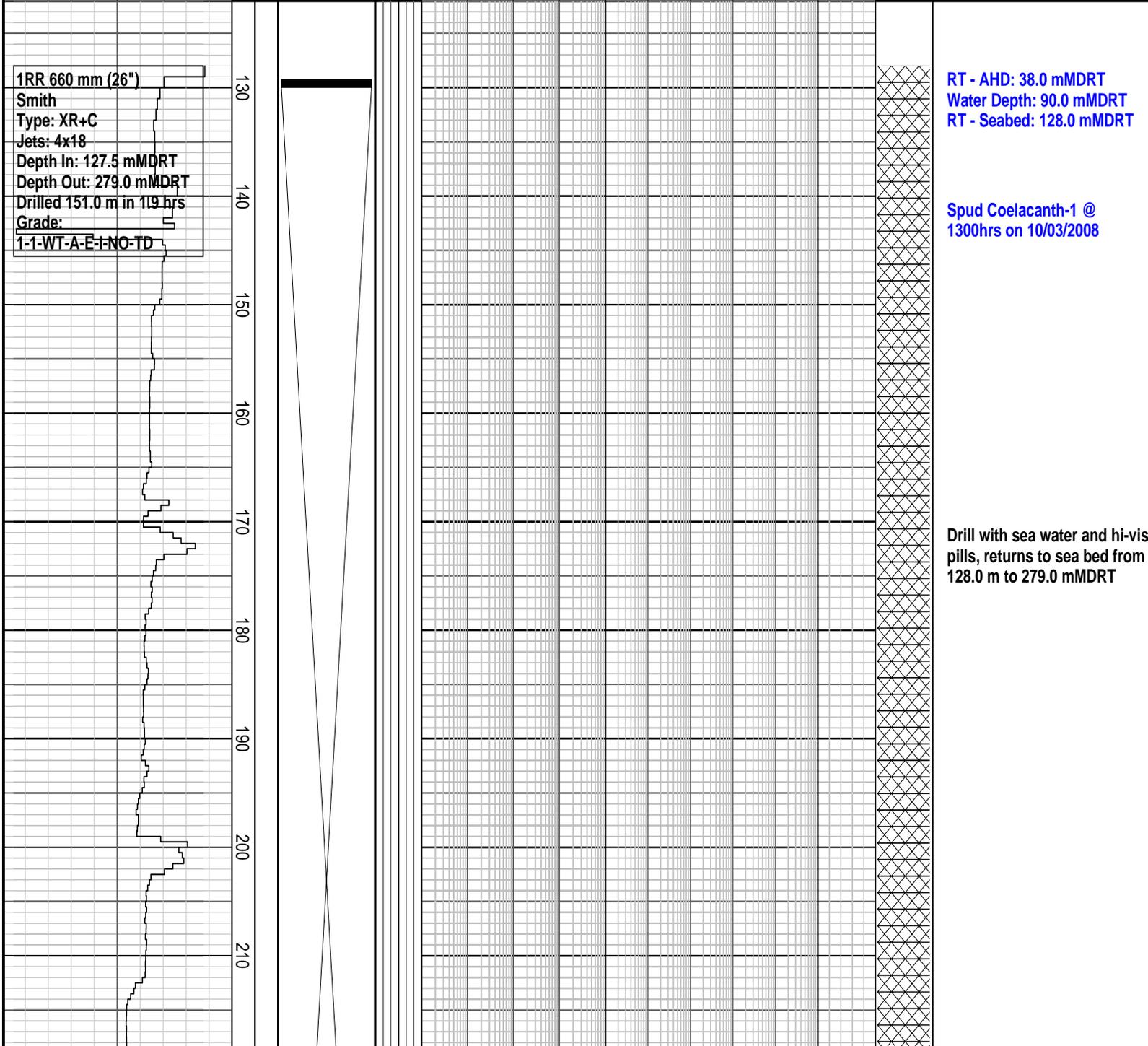
Well : Coelacanth-1

Interval : 122.00 - 2427.91 meters

Created : 20/Mar/2008 6:55:54 AM

FORMATION EVALUATION LOG

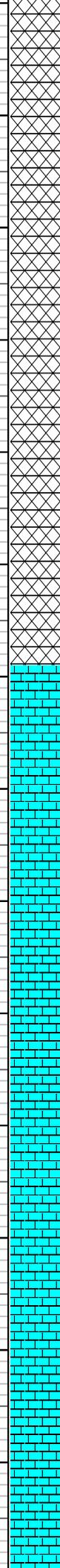
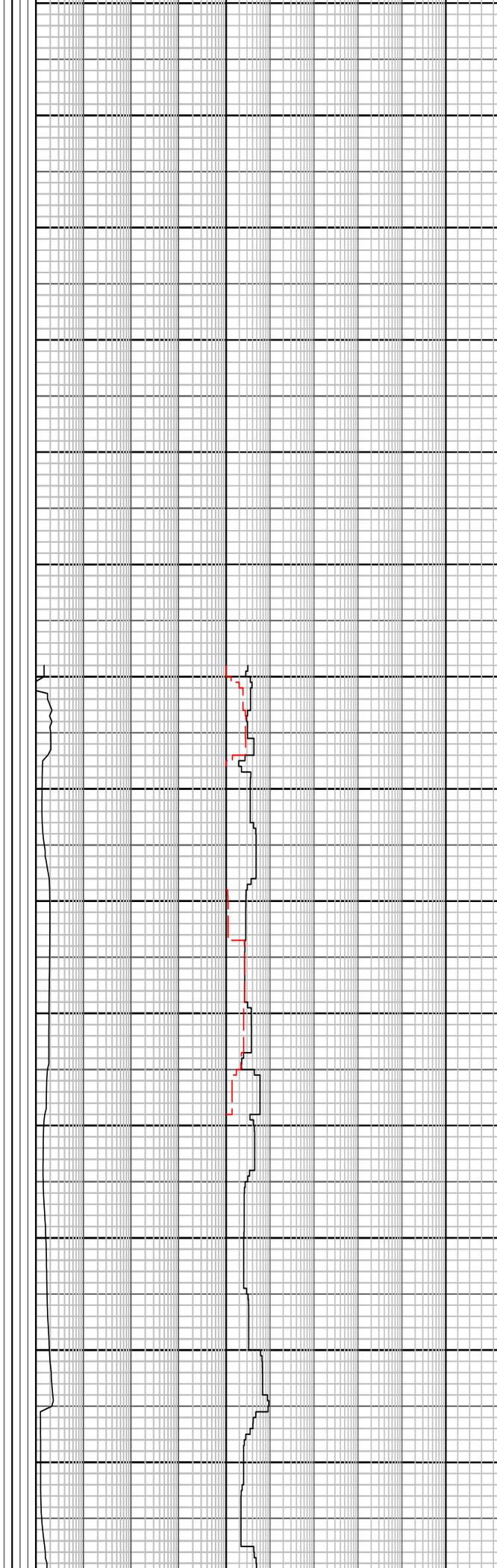
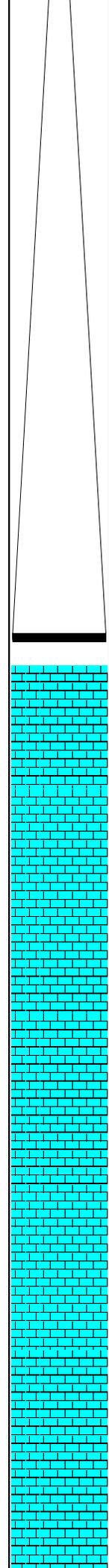
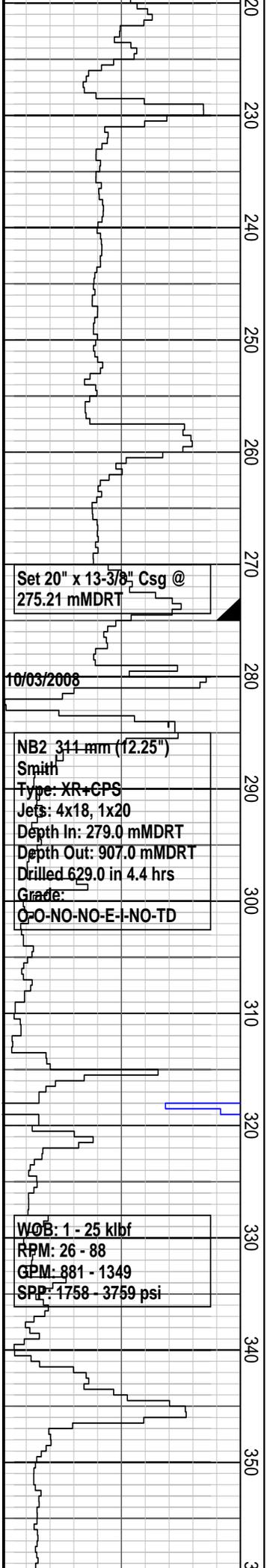
Drilling Rate		MD meters 1:500	TVDRT meters	Cuttings Lithology	Oil Show	Visual Inferred Porosity	Gas Data		Chromatograph Data		Calcmetry	Interpreted Lithology	Lithology Description
ROP (m/hr)	ROP (m/hr)						Gas Hydrocarbon Avg %	Methane ppm					
200	20						0.01	0.1	1	10			
180	40						0.001	Resistivity Shall	10	1	Ethane ppm	100000	
160	60							Ohm.m	1	1	Propane ppm	100000	
140	80							Resistivity Deep	10	1	iso-Butane ppm	100000	
120	100							OHMM		1	n-Butane ppm	100000	
100	120									1	iso-Pentane ppm	100000	
80	140									1	n-Pentane ppm	100000	
60	160												
40	180												
20	200												



Drill with sea water and hi-vis pills, returns to sea bed from 128.0 m to 279.0 mMDRT

MW: 1.06 sg FV: 140
PV : 13 YP: 56
Gels: 44/48/- pH: 9.15

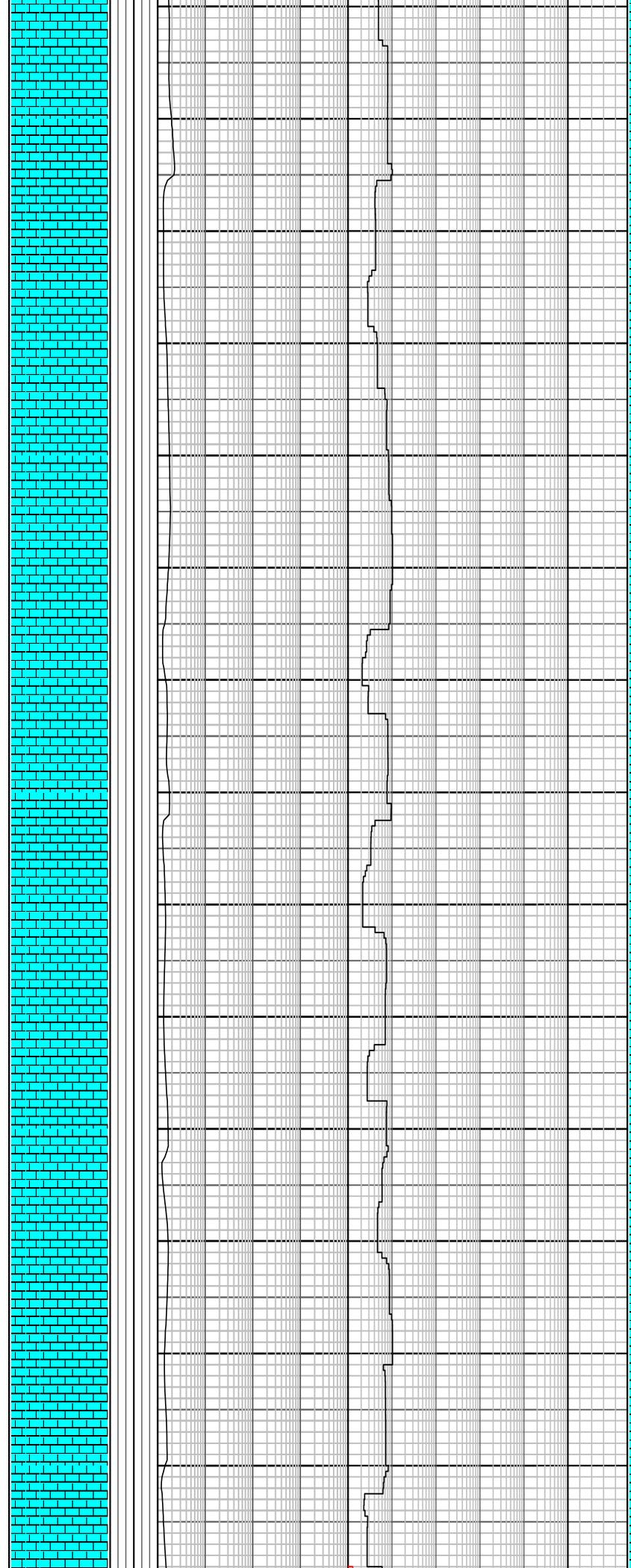
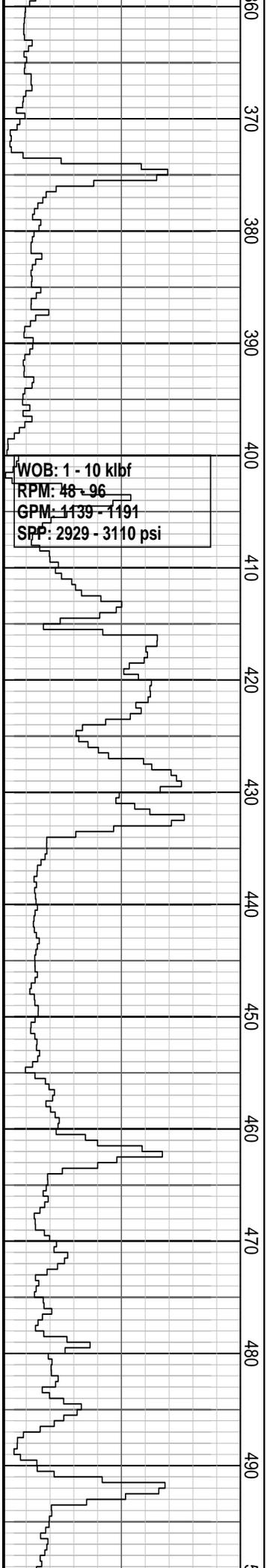
660 mm (26") Section TD @ 279.0 mMDRT on 10/03/2008



CALCARENITE: lt-m gy, lt-m bl gy, lt olv gy, tr carb spks, com foss frag, tr v f qtz grs, mod hd-hd, sbblky-blky

CALCISILITE: wh-lt gy, com lt-m gry, com foss, mod hd-hd, sbblky-blky

CALCILUTITE: v lt gy-lt gy, lt bl gy, off wh, mnr lt-m gy, lt brn gy, com foss, tr-rr f qtz grs, frm-mod hd, sbblky-blky



CALCARENITE: lt-m gy, lt olv gy, mn r m gy, com foss frags, mod hd-hd, sbblky-blky

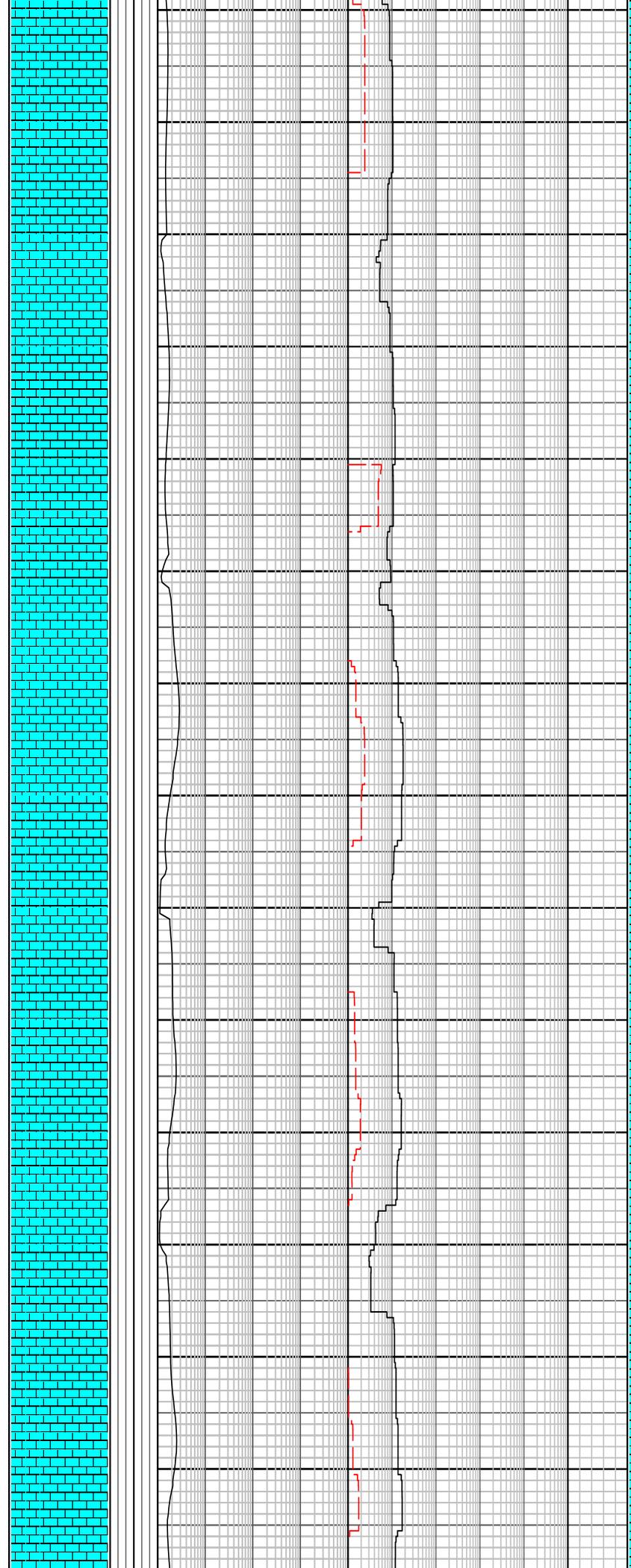
CALCILUTITE: v lt gy-lt gy, lt bl gy, off wh, mn r lt-m gy, lt brn gy, com foss, tr- rr f qtz grs, frm-mod hd, sbblky-blky

CALCARENITE: lt-m gy, lt olv gy, mn r m gy, com foss frags, mod hd-hd, sbblky-blky

WOB: 4 - 18 klbf
RPM: 96 - 120
GPM: 1163 - 1191
SPP: 3041 - 3599 psi

WOB: 7 - 28 klbf
RPM: 112 - 121
GPM: 1166 - 1168
SPP: 2885 - 3737 psi

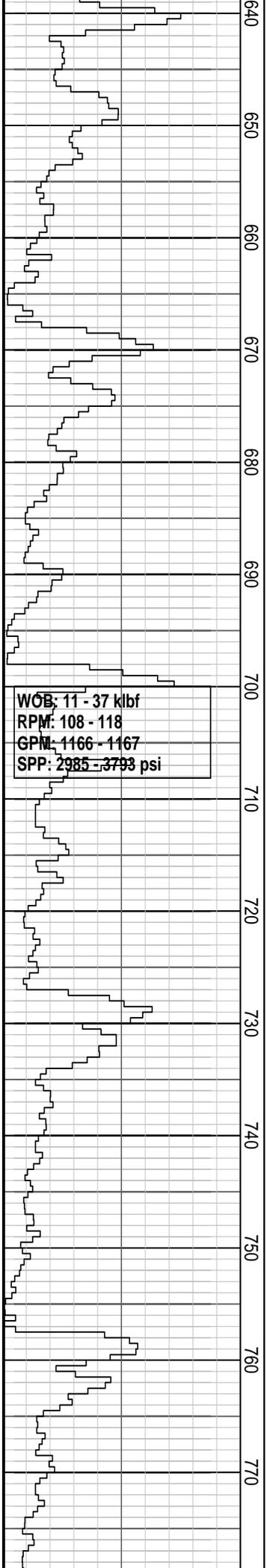
500
510
520
530
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620
630



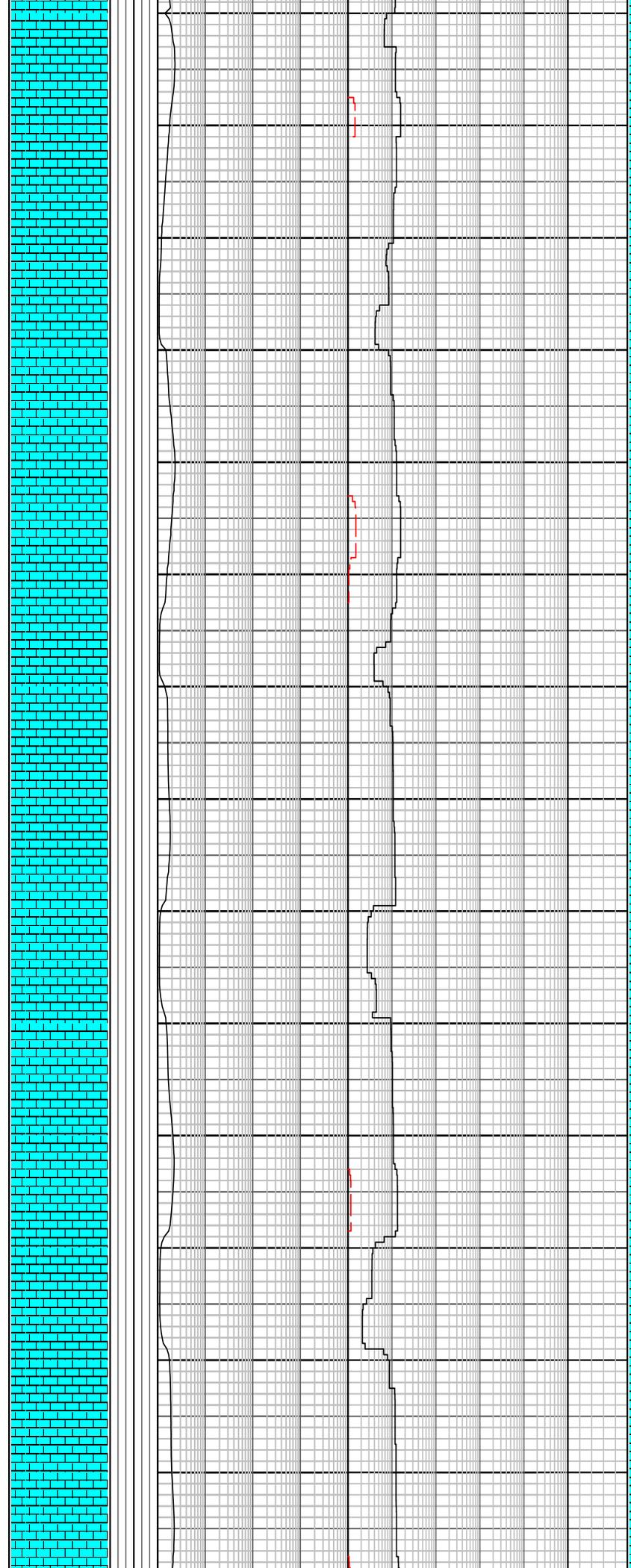
CALCARENITE: lt-m gy, lt olv gy, mnr m gy, com foss frags, mod hd-hd, sbbkly-blky

CALCARENITE: lt-m gy, lt olv gy, mnr m gy, com foss frags, mod hd-hd, sbbkly-blky

CALCARENITE: lt-m gy, lt-m olv, lt brn gy, tr com foss frags, com fn-m qtz grs, mod hd, sbbkly-blky



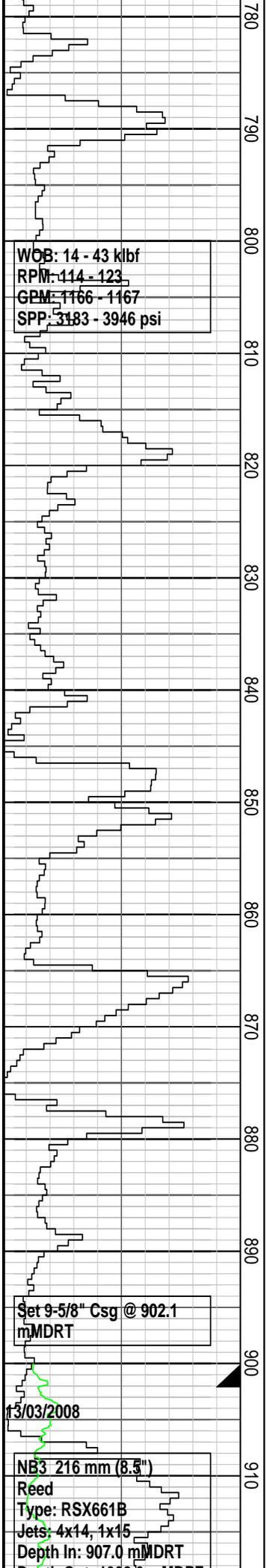
WOB: 11 - 37 kilbf
RPM: 108 - 118
GPM: 1166 - 1167
SPP: 2985 - 3793 psi



CALCARENITE: lt-m gy, lt-m olv, lt brn gy, tr com foss frags, com fn-m qtz grs, mod hd, sbbiky-blky

CALCARENITE : lt-m gy, lt bl gy, mnr m dk gy, com v fn-fn qtz grs, com foss frags, mod hd-hd, sbbiky-blky

CALCARENITE : lt-m gy, pred m gy, lt bl gy, mnr m dk gy, com v fn-fn qtz grs, com foss frags, mod hd-hd, sbbiky-blky



WOB: 14 - 43 kilbf
 RPM: 114 - 123
 GPM: 1166 - 1167
 SPP: 3183 - 3946 psi

Set 9-5/8" Csg @ 902.1 mMDRT

13/03/2008

NB3 216 mm (8.5")
 Reed
 Type: RSX661B
 Jets: 4x14, 1x15
 Depth In: 907.0 mMDRT

CALCARENITE : lt-m gy, pred m gy, lt bl gy, mnr m dk gy, com v fn-fn qtz grs, com foss frags, mod hd-hd, sbbiky-blky

MW: 1.15 sg FV: 43
 PV : 9 YP: 11
 Gels: 4/9/- pH: 8.00

CALCARENITE : lt-m gy, pred m gy, lt bl gy, mnr m dk gy, com v fn-fn qtz grs, com foss frags, mod hd-hd, sbbiky-blky

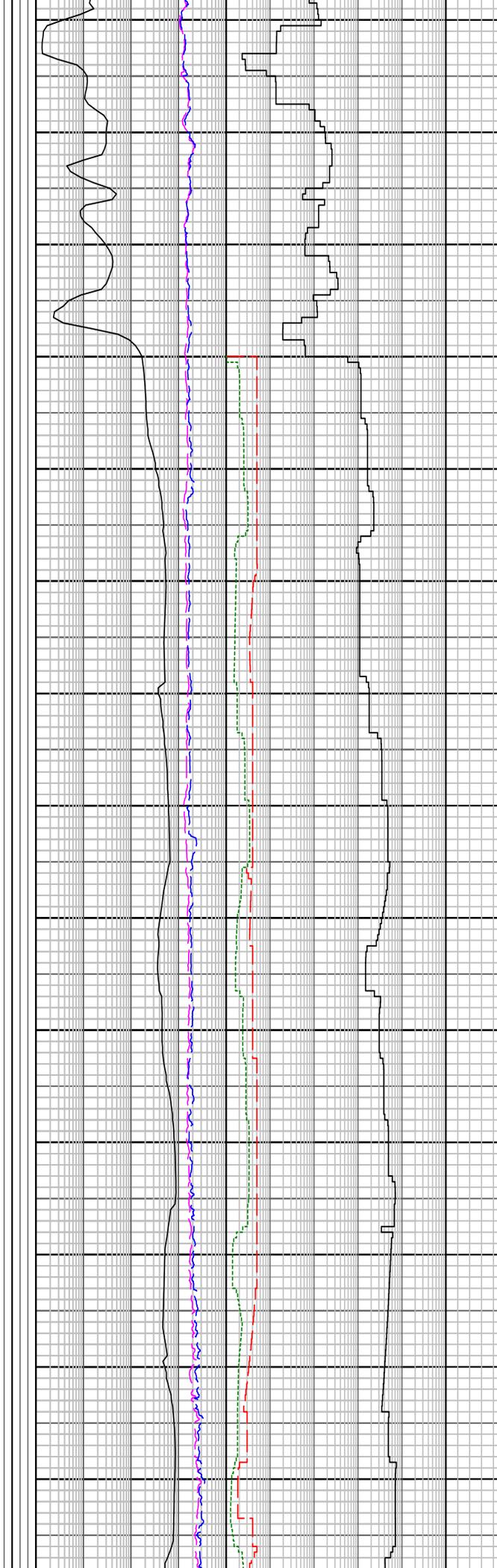
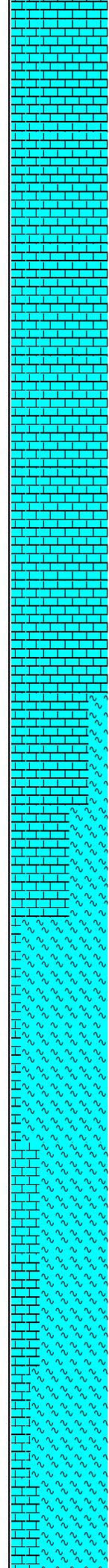
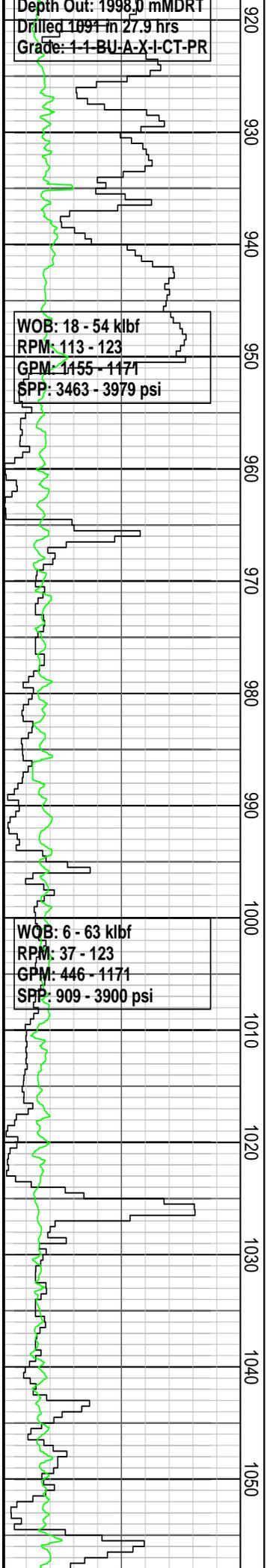
CALCARENITE : lt-m gy, pred m gy, lt bl gy, mnr m dk gy, com v fn-fn qtz grs, com foss frags, mod hd-hd, sbbiky-blky

311 mm (12.25") Section TD @ 907.0 mMDRT on 13/03/2008

Depth Out: 1998.0 mMDR1
Drilled 1891 in 27.9 hrs
Grade: 1-1-BU-A-X-I-CT-PR

WOB: 18 - 54 kilbf
RPM: 113 - 123
GPM: 1155 - 1171
SPP: 3463 - 3979 psi

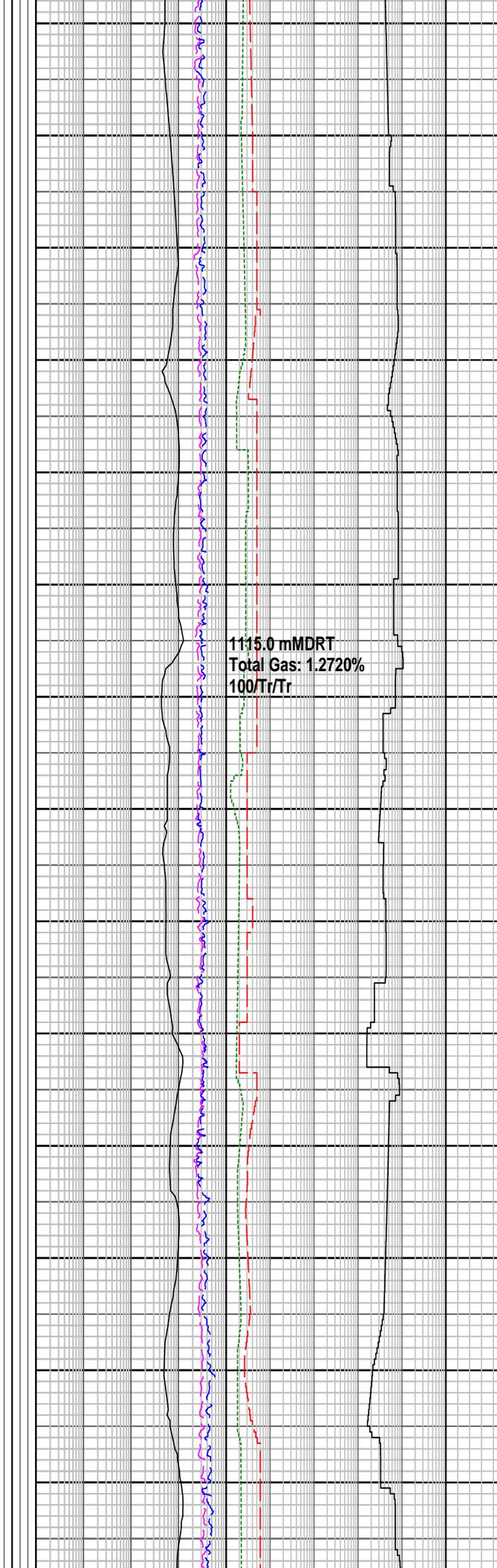
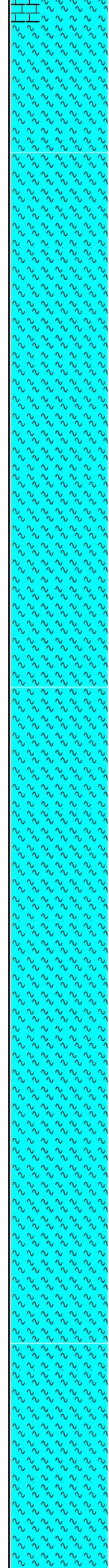
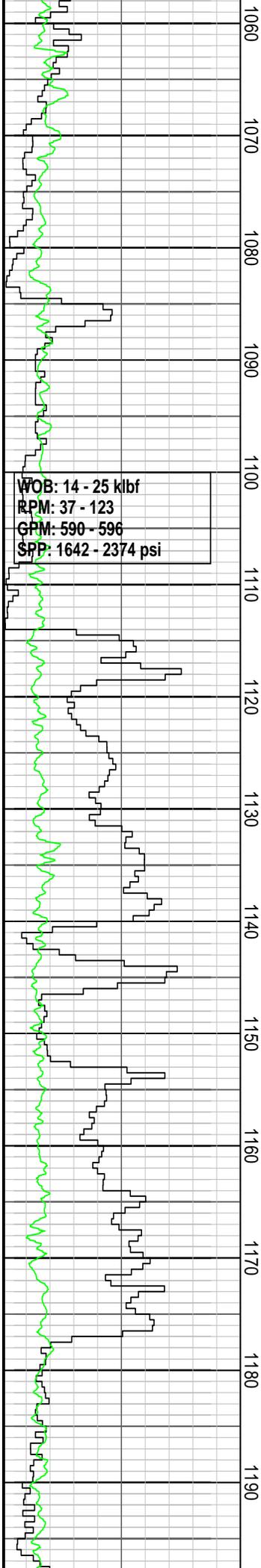
WOB: 6 - 63 kilbf
RPM: 37 - 123
GPM: 446 - 1171
SPP: 909 - 3900 psi



CALCARENITE : lt-m gy, pred m gy, lt bl gy, mnr m dk gy, com v fn-fn qtz grs, com foss frags, mod hd-hd, sbbiky-blky

MARL : lt gy-lt gnsh gy, lt brnsh gy-off wh, tr glauc grs, tr carb spks & micr lam, tr v fn qtz & calc grs, sft-disp, amor-sbbiky

CALCARENITE : lt-m gy, pred m gy, lt bl gy, mnr m dk gy, com v fn-fn qtz grs, com foss frags, mod hd-hd, sbbiky-blky



MARL: lt gy-lt gnsh gy, lt brnsh gy-off wh, tr glauc grs, tr carb spks & micr lam, tr v fn qtz & calc grs, sft-disp, amor-sbbkly

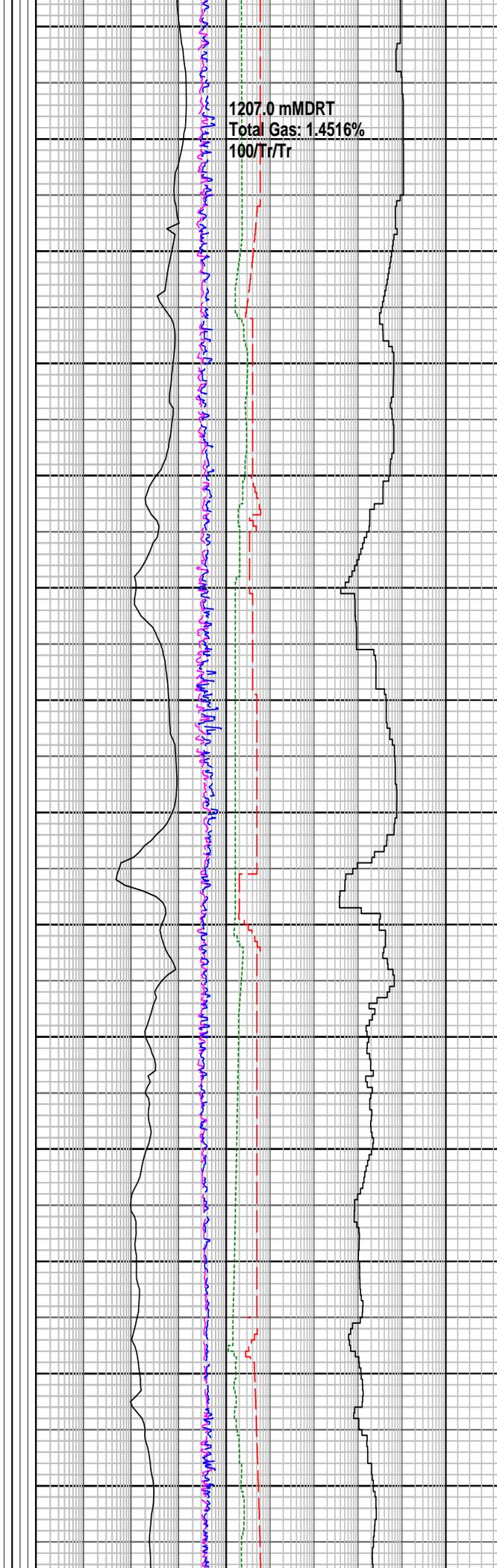
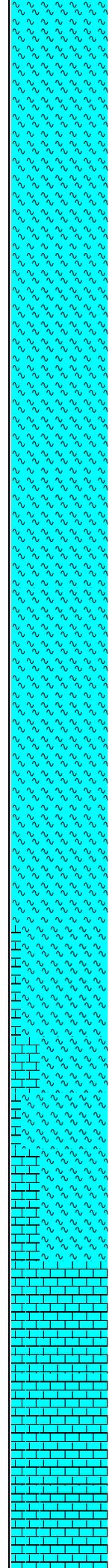
MARL: lt gy-lt gnsh gy, lt brnsh gy-off wh, tr glauc grs, tr carb spks & micr lam, tr v fn qtz & calc grs, sft-disp, amor-sbbkly

MARL: lt gy-lt gnsh gy, lt brnsh gy-off wh, tr glauc grs, tr carb spks & micr lam, tr v fn qtz & calc grs, sft-disp, amor-sbbkly

WOB: 10 - 27 klbf
RPM: 99 - 144
GPM: 440 - 674
SPP: #389 - 2575 psi

WOB: 15 - 49 klbf
RPM: 105 - 144
GPM: 576 - 696
SPP: 1464 - 3880 psi

1200
1210
1220
1230
1240
1250
1260
1270
1280
1290
1300
1310
1320
1330

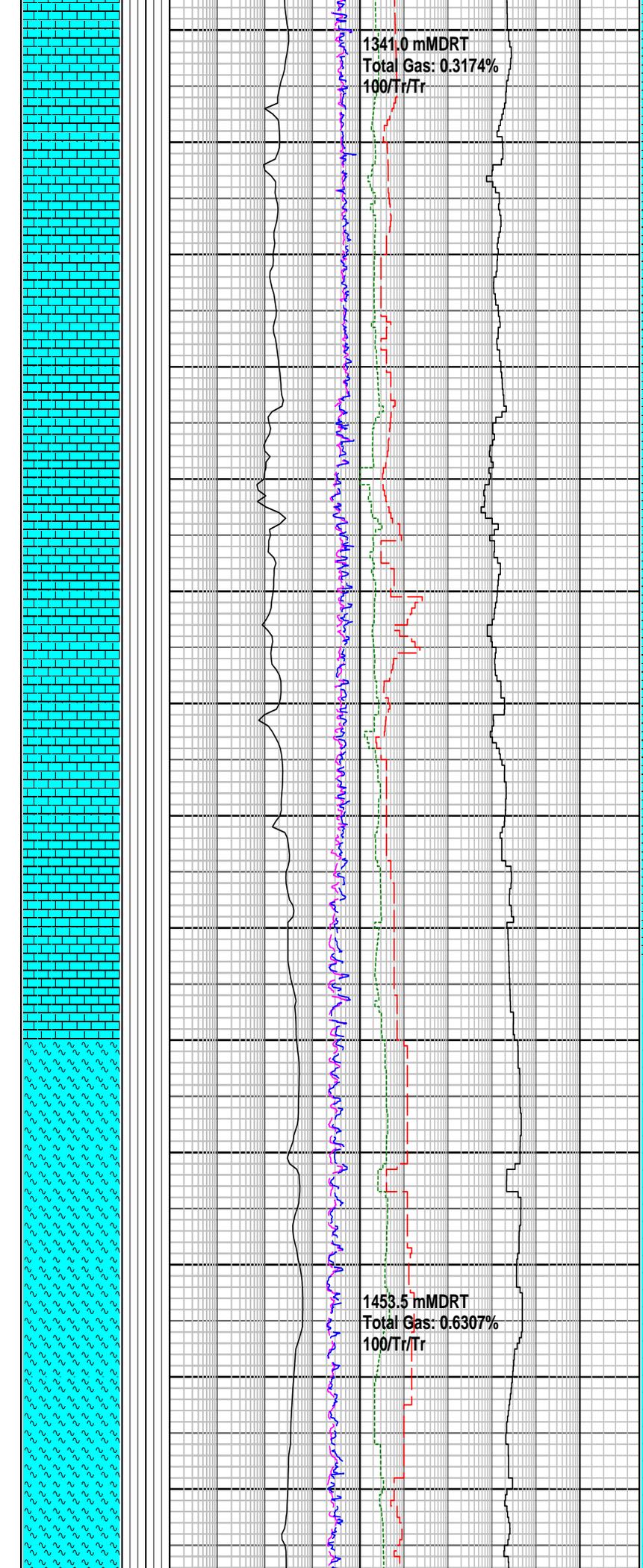
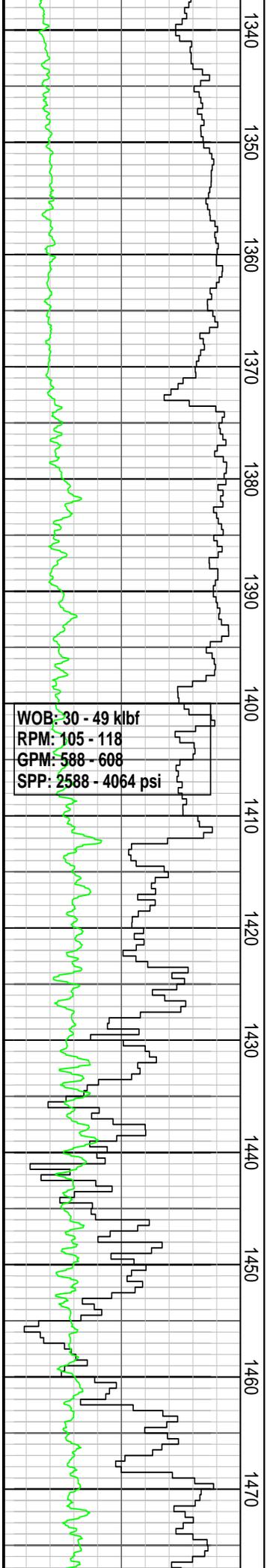


MARL: lt gy-lt gnsh gy, lt brnsh gy-off wh, tr glauc grs, tr carb spks & micr lam, tr v fn qtz & calc grs, sft-disp, amor-sbblky

MARL: lt gy-lt gnsh gy, lt brnsh gy-off wh, tr glauc grs, tr carb spks & micr lam, tr v fn qtz & calc grs, sft-disp, amor-sbblky

MARL: lt gy-lt gnsh gy, lt brnsh gy-off wh, tr glauc grs, tr carb spks & micr lam, tr v fn qtz & calc grs, sft-disp, amor-sbblky

MW: 1.14 sg FV: 58
PV : 17 YP: 25
Gels: 10/12/15 pH: 8.90



1341.0 mMDRT
 Total Gas: 0.3174%
 100/Tr/Tr

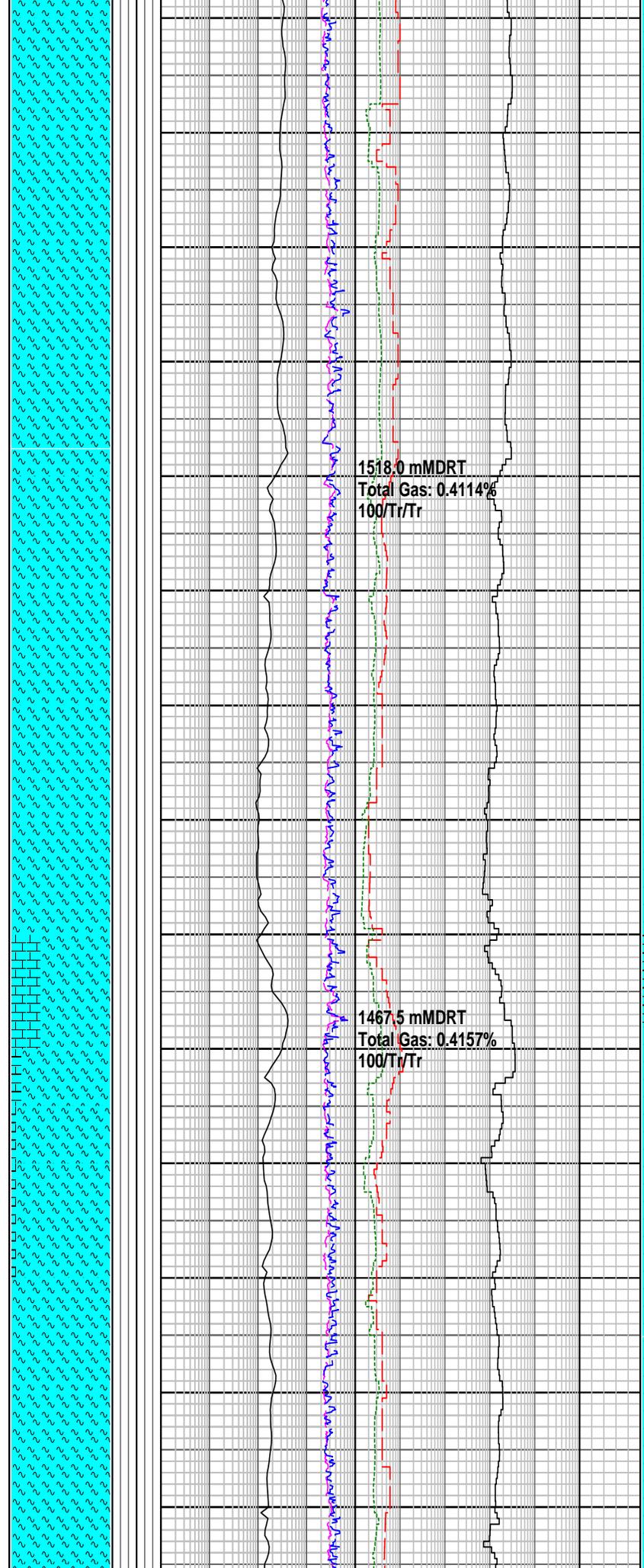
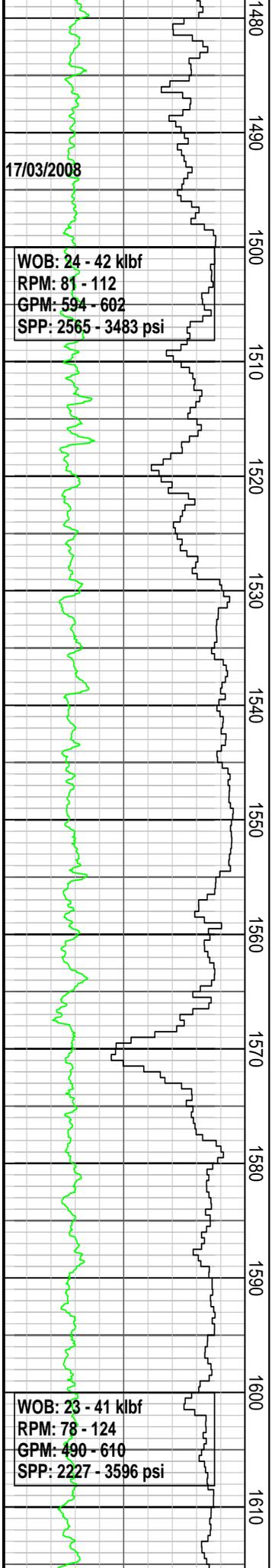
1453.5 mMDRT
 Total Gas: 0.6307%
 100/Tr/Tr

CALCILUTITE: pl gy, off wh-pl gy, lt-m brn gy, com carb spks, abd arg, mod hd-disp, sbbiky

Carbide Run @ 1381mMDRT
 Theo: 2070stks.
 Actual: 2380stks
 Hole washout = 15.0%

CALCARENITE: pl gy, off wh-pl gy, lt-m brn gy, com fn-crs rnd qtz grs, abd arg, com carb spks, mod hd, disp, sbbiky

CALCILUTITE: pl-m gy, off wh-pl gy, lt-m brn gy, com carb lam & spks, abd arg, mnr sph qtz grs, mod hd-hd, disp i/p, sbbiky

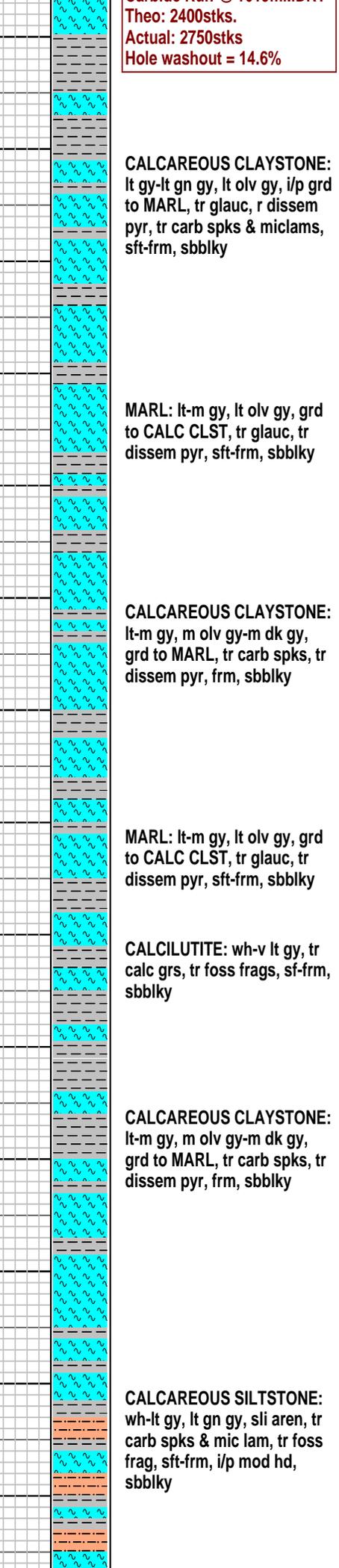
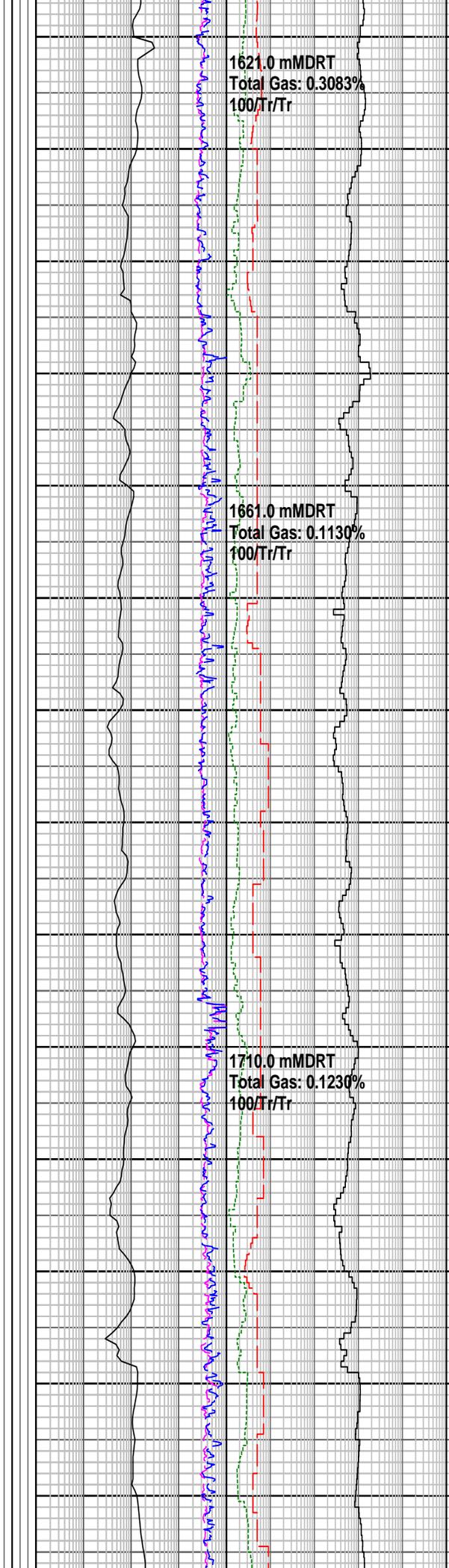
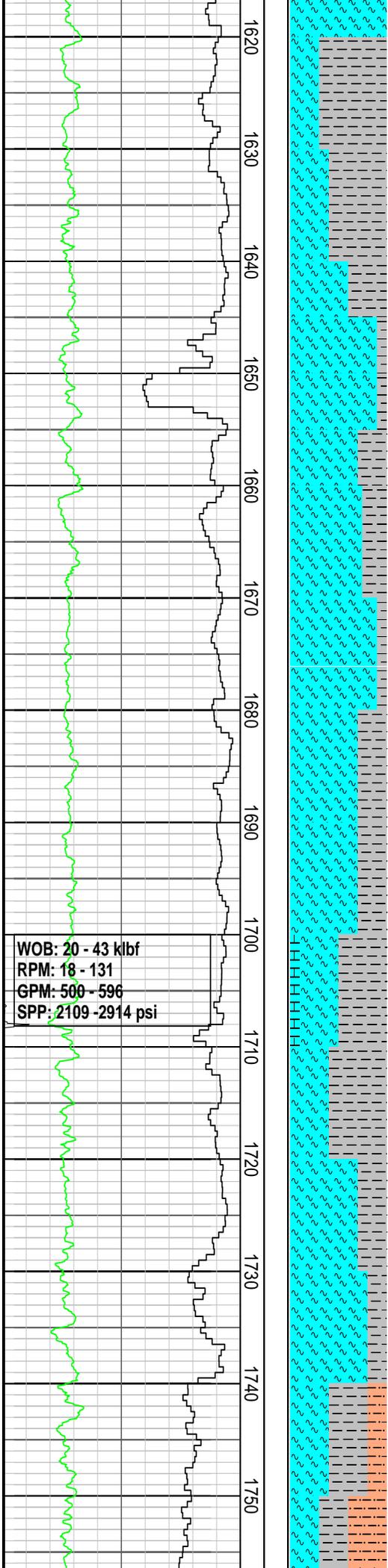


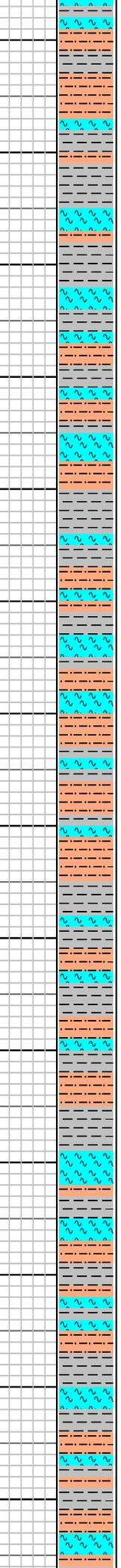
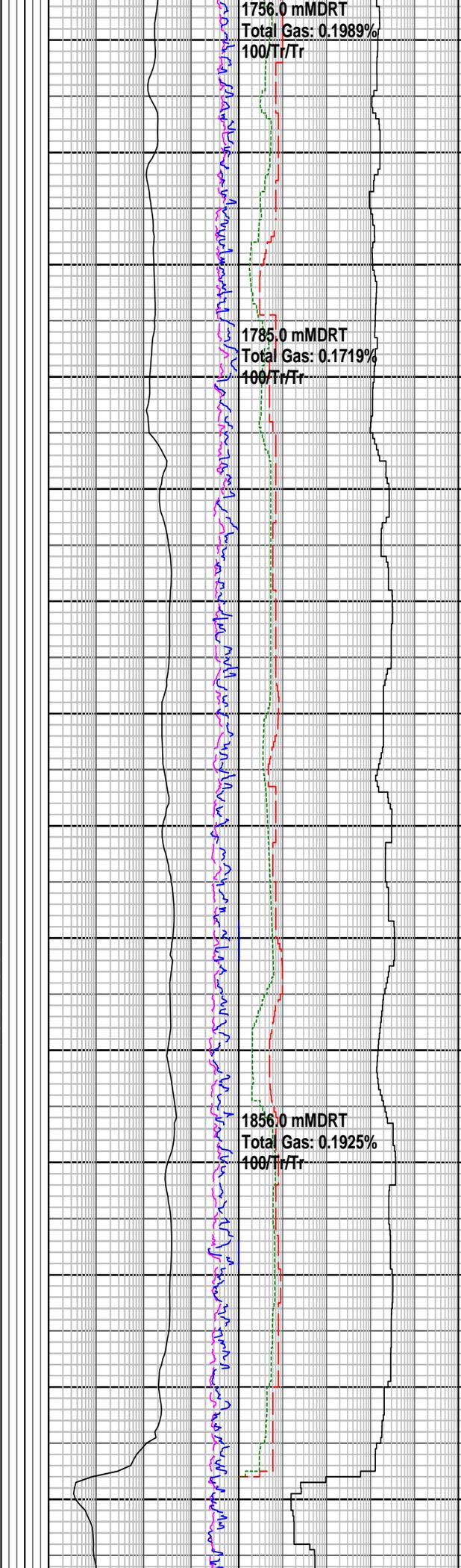
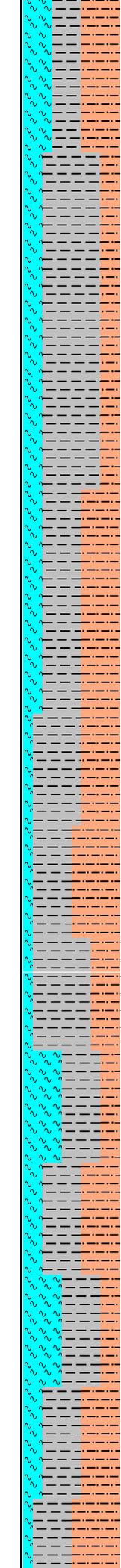
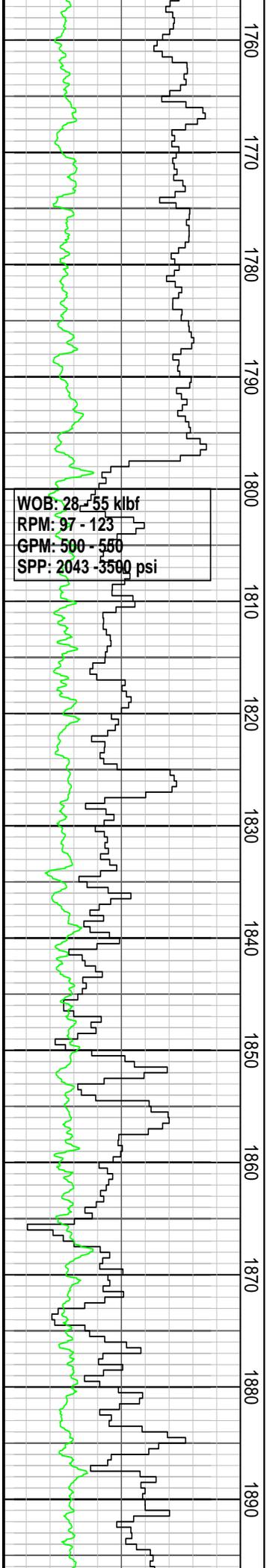
MARL: lt-m gy, m brnsh gy, off wh, abd arg mat, com carb lam & spks, occ lit, mnr fn-med sph qtz grs, loc slit lam & grd to CALCISILTITE, mod hd-hd, sbbkly-blky, disp i/p

MARL: pl-med gy, lt brn gy, trnsl i/p, com fn-crs ang-sph qtz grs, com microfos, abd arg mat, mnr-loc com carb lam & spks, mnr nod pyr, frm-hd, sbbkly

MARL: pl-m gy, m brn gy, com ool, com microfos, mnr carb spks, occ nod & dissem pyr, frm-mod hd, sbbkly

Carbide Run @ 1619mMDRT



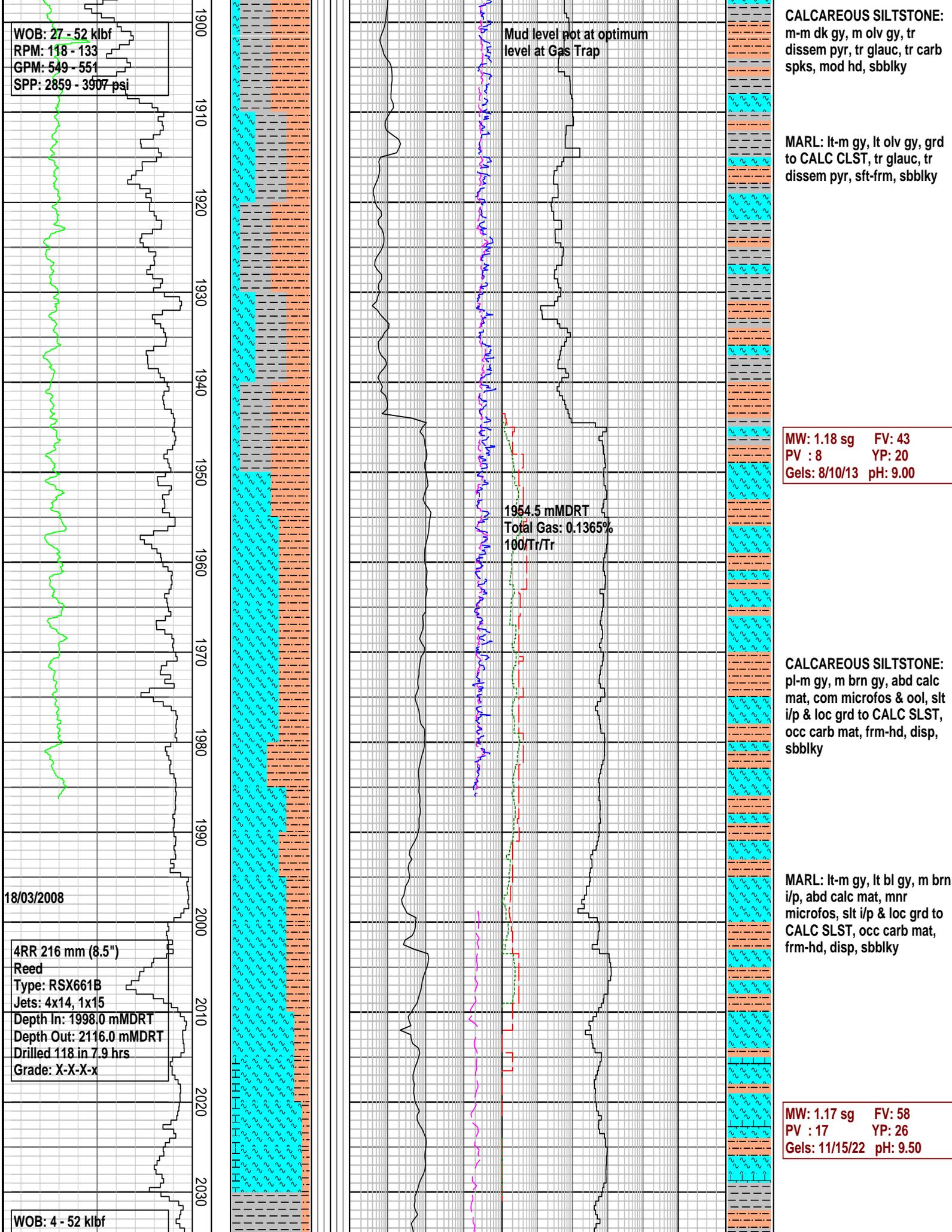


CALCAREOUS SILTSTONE:
 m gy-m gn gy, m olv gy, aren
 grd calc to SLST, tr carb
 spks, tr glauc, frm-mod hd,
 sbbkly-blky

CALCAREOUS CLAYSTONE:
 lt-m gy, m olv gy-dk gy, grd
 to MARL i/p, tr carb spks, tr
 dissem pyr, tr glauc, frm-mod
 hd, sbbkly

CALCAREOUS SILTSTONE:
 m-dk gy, m olv gy tr dissem
 pyr, tr carb spks, mod hd-hd
 sbbkly-blky, i/p sb fis.

CALCAREOUS CLAYSTONE:
 lt-m gy, m olv gy-dk gy, grd
 to MARL i/p, tr carb spks
 micr lam, tr dissem pyr, tr
 glauc, frm-mod hd, sbbkly



WOB: 27 - 52 kJbf
 RPM: 118 - 133
 GPM: 549 - 551
 SPP: 2859 - 3907 psi

Mud level pot at optimum level at Gas Trap

CALCAREOUS SILTSTONE:
 m-m dk gy, m olv gy, tr dissem pyr, tr glauc, tr carb spks, mod hd, sbblyk

MARL: lt-m gy, lt olv gy, grd to CALC CLST, tr glauc, tr dissem pyr, sft frm, sbblyk

MW: 1.18 sg FV: 43
 PV : 8 YP: 20
 Gels: 8/10/13 pH: 9.00

1954.5 mMDRT
 Total Gas: 0.1365%
 100/Tr/Tr

CALCAREOUS SILTSTONE:
 pl-m gy, m brn gy, abd calc mat, com microfos & ool, slt i/p & loc grd to CALC SLST, occ carb mat, frm-hd, disp, sbblyk

18/03/2008

4RR 216 mm (8.5")
 Reed
 Type: RSX661B
 Jets: 4x14, 1x15
 Depth In: 1998.0 mMDRT
 Depth Out: 2116.0 mMDRT
 Drilled 118 in 7.9 hrs
 Grade: X-X-X-x

MARL: lt-m gy, lt bl gy, m brn i/p, abd calc mat, mnr microfos, slt i/p & loc grd to CALC SLST, occ carb mat, frm-hd, disp, sbblyk

MW: 1.17 sg FV: 58
 PV : 17 YP: 26
 Gels: 11/15/22 pH: 9.50

WOB: 4 - 52 kJbf
 RPM: 47 - 123

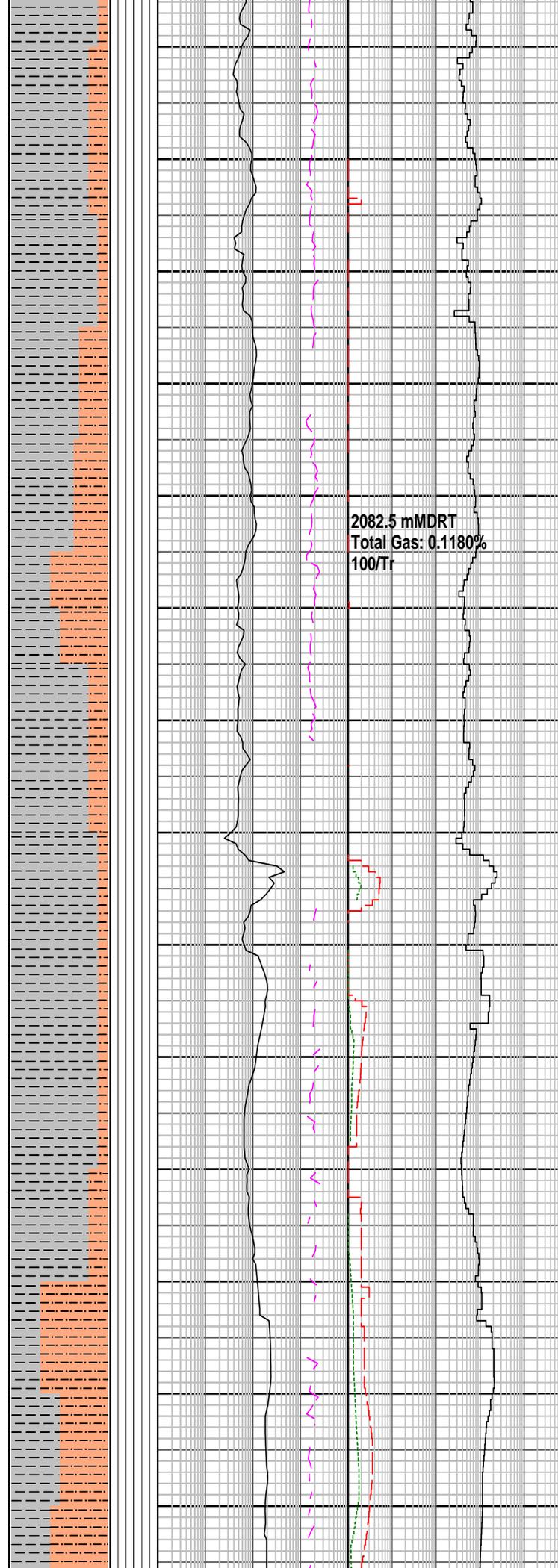
GPM: 501 - 602
SPP: 2157 - 3842 psi

16/03/2008

WOB: 18 - 46 kJbf
RPM: 98 - 160
GPM: 613 - 707
SPP: 2894 - 4061 psi

NB5 216 mm (8.5")
Reed
Type: RSX519MA6
Jets: 3x11, 5x14
Depth In: 2116.0 mMDRT
Depth Out: xxxx mMDRT
Drilled xxx in x.x hrs
Grade: X-X-X-x

2040
2050
2060
2070
2080
2090
2100
2110
2120
2130
2140
2150
2160
2170



2082.5 mMDRT
Total Gas: 0.1180%
100/Tr

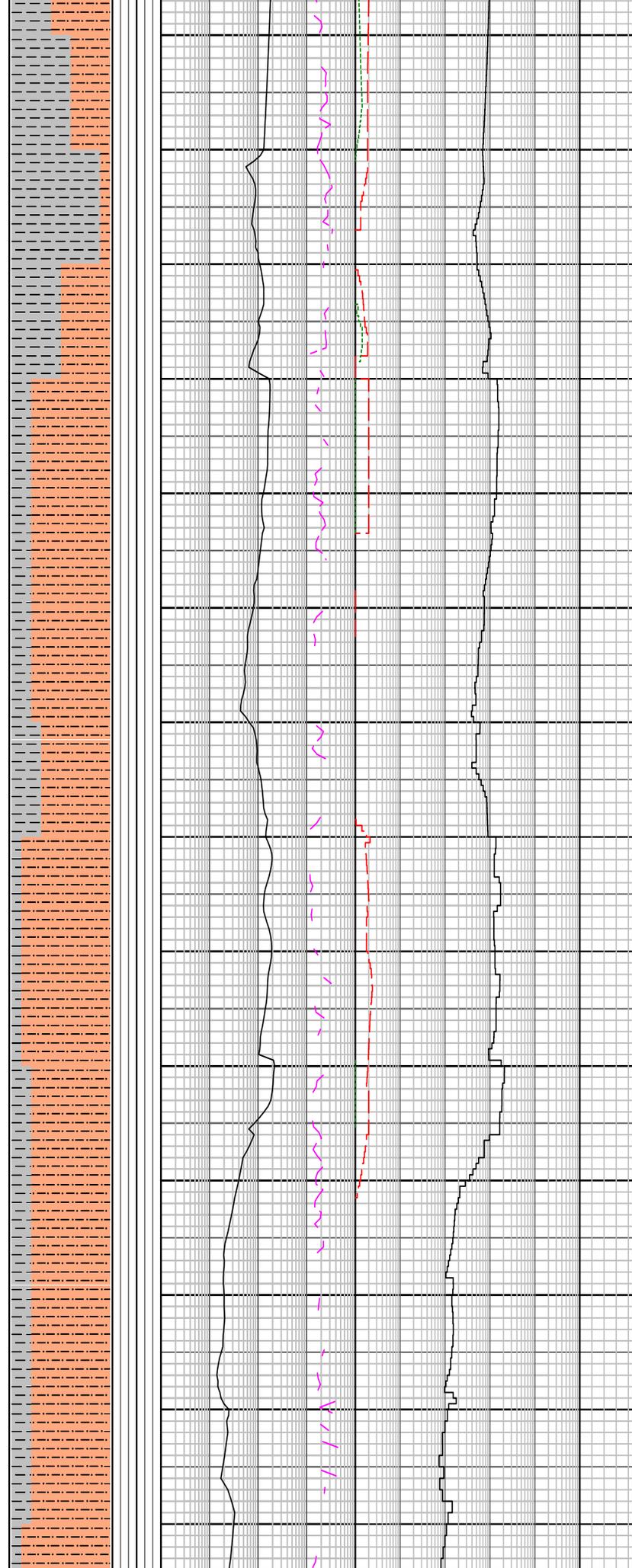
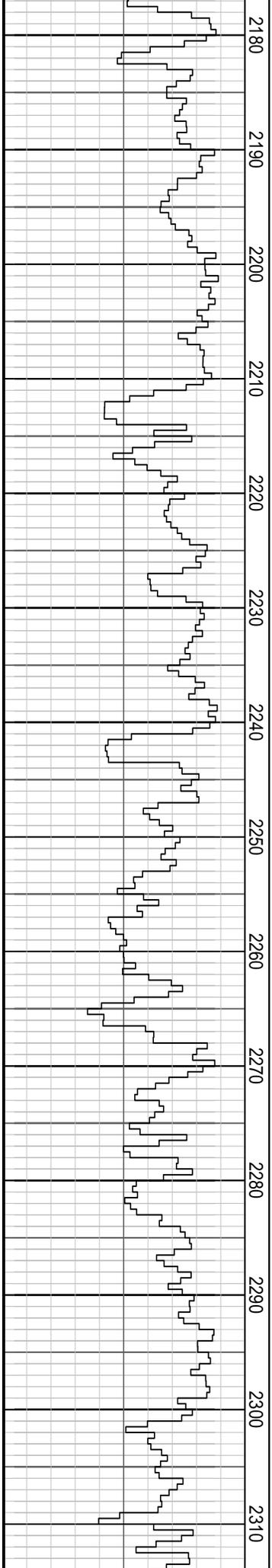
CALCAREOUS SILTSTONE:
pl-m gy, dk gy i/p, m brn gy,
com calc frag, tr microfoss,
com arg & grd to CALC
CLST, com nod pyr, mod
hd-hd, v hd w/- dk gy, sbbkly

CALCAREOUS CLAYSTONE:
pl-m gy, pl-m brn gy, com
calc frag, com microfoss, mnr
nod pyr, occ carb spks, mod
hd-hd, disp, sbbkly

CALCAREOUS SILTSTONE:
pl-m gy, m brn gy, occ dk gy,
v arg & com grd to CALC
CLST, tr microfoss, com v
fn-crs trnsf calc frag, com
nod & disse pyr, mod
hd-hd, v hd w/- dk gy, sbbkly

CALCAREOUS CLAYSTONE:
pl-lt gy, lt brn gy, occ m brn
gy, com-abdn calc frags, tr
micro foss, occ ool, tr v fn
qtz grns, mnr-loc com carbs
lam & spks, occ nod &
disse pyr, frm-mod
frm-mod hd, sbbkly-blky,
disp i/p

CALCAREOUS CLAYSTONE:
pl-lt gy, lt brn gy, occ m brn
gy, com-abdn calc frags, tr
micro foss, occ ool, tr v fn
qtz grns, mnr-loc com carbs
lam & spks, occ nod disse
pyr, frm-mod hd,
disp i/p



CALCAREOUS SILTSTONE:
 m-dk gy, lt brn gy, arg & loc
 grd to CALC CLST, com nod
 & disse pyr, com micro foss
 & ool, com fn-m calc frag,
 occ carb mat, mod hd-hd, v
 hd i/p, sb fiss-sbbl

CALCAREOUS CLAYSTONE:
 pl-lt gy, lt brn gy, occ m brn
 gy, com-abd calc frags, tr
 micro foss, occ ool, tr v fn
 qtz grns, mnr-loc com carbs
 lam & spks, occ nod disse
 pyr, frm-mod hd,

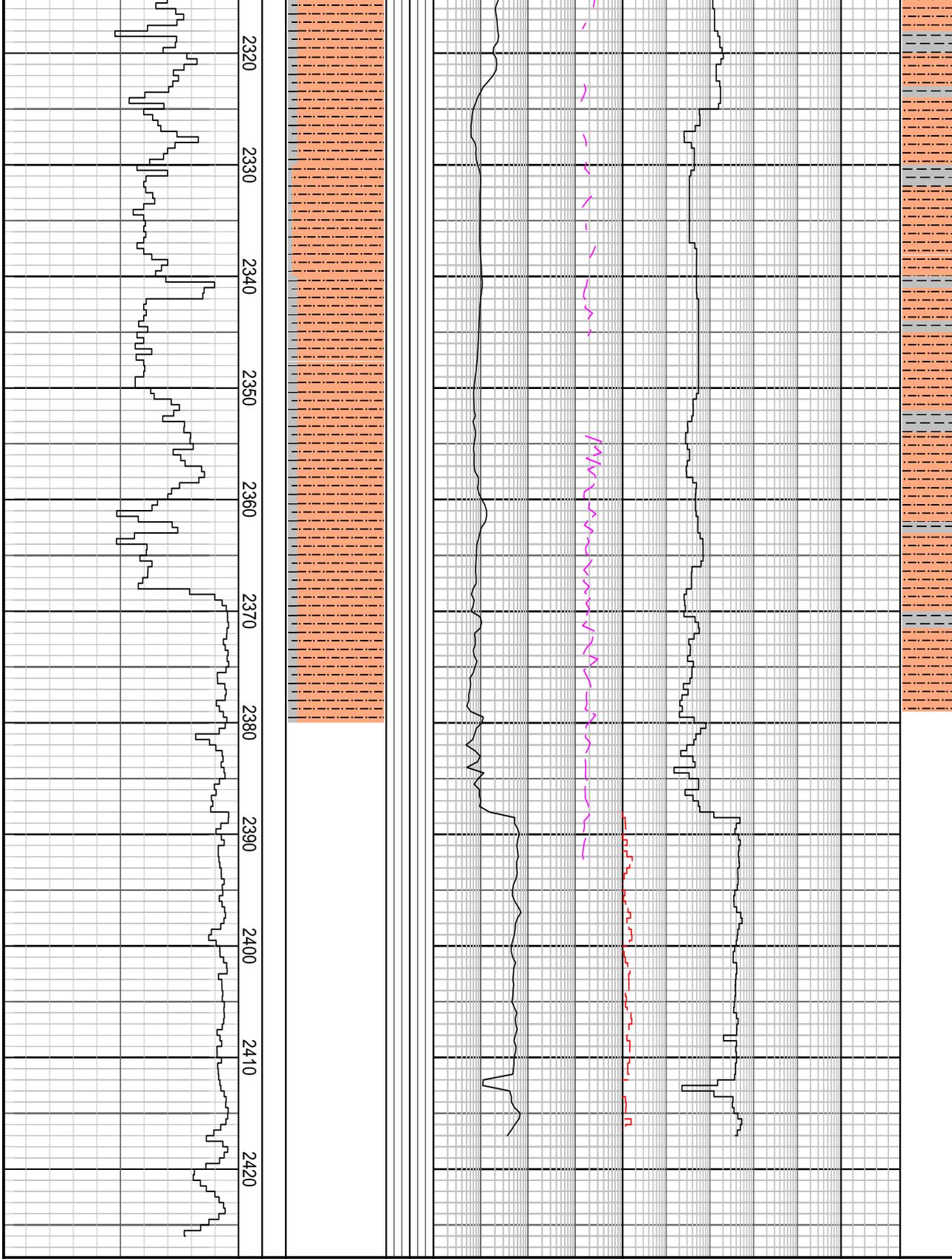
CALCAREOUS SILTSTONE:
 m-dk gy, lt brn gy, arg & loc
 grd to CALC CLST, com nod
 & disse pyr, com micro
 foss & ool, com fn-m calc
 frag, occ carb mat, mod
 hd-hd, v hd i/p, sbfiss-sbbl

CALCAREOUS CLAYSTONE:
 off wh-pl gy, pl-lt gy, lt brn
 gy, mnr calc frag, tr
 microfoss, mnr carb lam &
 spks, tr nod & disse pyr,
 com slt lam & loc grd to
 CLAC SLST, frm, sbblky, dis

CALCAREOUS SILTSTONE:
 m-dk gy, dom med gy, tr m bl
 gy, arg & loc grd to CALC
 CLST, com nod pyr, tr
 microfoss, occ fn-m calc
 frag, tr carb mat, tr micr mic,
 mod hd-hd, v hd i/p, fis

Carbide Run @ 2298mMDRT
 Theo: 3330stks.
 Actual: 3770stks
 Hole washout = 9.3%

CALCAREOUS CLAYSTONE:
 off wh-pl gy, pl-lt gy, lt brn
 gy, mnr calc frag, tr
 microfoss, mnr carb lam &



microfoss, mnr carb lam & spks, tr nod & dissem pyr, com slt lam & loc grd to CLAC SLST, frm, sbblky, dis

CALCAREOUS SILTSTONE:
m dk gy, dom m gy, tr m brn gy, arg & loc grd to CALC CLST, com nod & dissem pyr, com microfoss, com-abd fn-med trnsl calc frag, tr carb mat, tr micr mic, mo

CALCAREOUS CLAYSTONE:
off wh-pl gy, pl-lt gy, lt brn gy, mnr calc frag, tr microfoss, mnr carb lam & spks, tr nod & dissem pyr, com slt lam & grd to CALC SLTST, frm, sbblky, disp i

CALCAREOUS SILTSTONE:
lt-m gy, m-dk gy, tr m bl gy, com arg & loc grd to CALC CLST, mnr nod & dissem pyr, com microfoss, com-abd fn-med trnsl calc frag, tr carb mat, tr micr mic, m disp i/p

FORMATION EVALUATION LOG

Drilling Rate		Gas Data		Chromatograph Data		Calcmetry	Interpreted Lithology	Lithology Description
ROP (m/hr)	ROP (m/hr)	Gas Hydrocarbon Avg %	Resistivity Shall	Methane ppm	Ethane ppm			
200	220	0.01	10	1	100000			
180	240	0.001	10	1	100000			
160	260	Ohm.m	1	1	100000			
140	280	Resistivity Deep	10	1	100000			
120	300	OHMM	1	1	100000			
100	320		1	1	100000			
80	340		1	1	100000			
60	360		1	1	100000			
40	380		1	1	100000			
20	400		1	1	100000			
MD meters 1:500		Visual Inferred Porosity		n-Butane ppm				
TVDR meters		Oil Show		iso-Pentane ppm				
Cuttings Lithology		PFG		n-Pentane ppm				
Gamma Ray		PFG						
GAPI								

