



Empirica

Scale: 5" / 100'
Measured Depth Log

Well Name HINER 36NB-23W_Lat_Extraction

Location Sec 36-T06N-R66W

State CO

Country USA

API Number 05-123-37037

Region DJ Basin

Spud Date 7/31/2014

Surface Coordinates N 1,407,447.05'

E 3,217,331.93'

Lat 40°26'57.181" N

Long 104°43'8.710" W

Bottom Hole Coordinates X 3,213,461.47'

Y 1,406,493.17'

Lat 40°26'48.0876"

Long 104°43'58.8792"

Ground Elevation 4661'

Logged Interval 6645'

Formation Niobrara B

Type of Drilling Fluid Water based mud

K.B. Elevation 4677'

Total Depth 11630'

County Weld

Rig Number Xtreme7

AFE # 14-28

Field Wattenberg

Drilling Completed 8/7/2014

Company Extraction Oil & Gas
Address 1888 Sherman S
Denver, CO 802

Name Hana Walidhauss
Company ALS Empirica
Address 6360 W Sam Ho
Suite 100
Houston, TX 770

Logging start date:
Logging end date:
2 man logging service



Operator

Gas

003 Suite 500

Geologist

erova & Edward Knight

uston Pkwy N

041

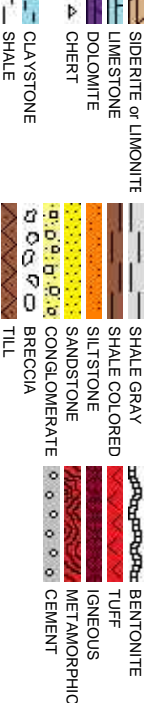
Other

8/2/2014

8/7/2014

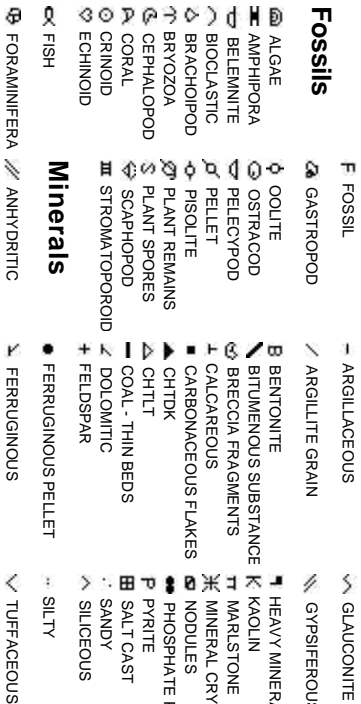
ML-131

Rock Types



Accessories

Fossils



Stringer



Other Symbols

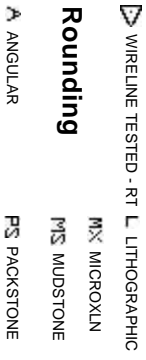
Oil Show



Engineering



Rounding



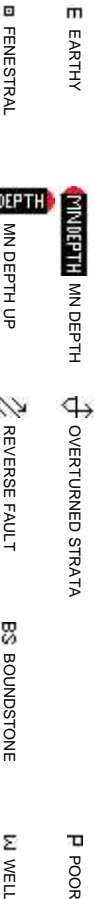
Sorting

M MODERATE

Porosity



Textures



SILTY SHALE



EXTRACTION OIL & GAS

HINER 36NB-23W

ROP

ROP ———
GRC

Base (API/ft)
Gamma Scale = 0 - 250 api
ROP Scale = 0 - 5 min/ft

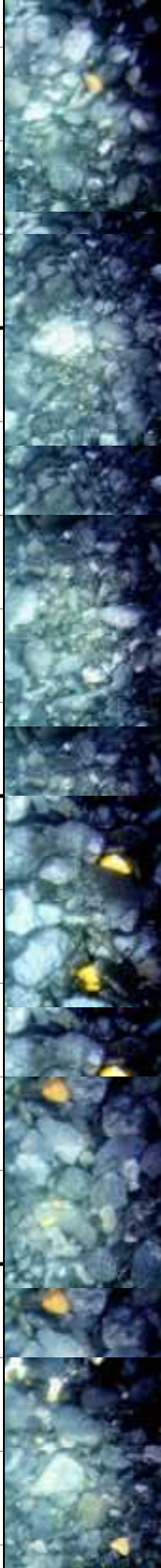
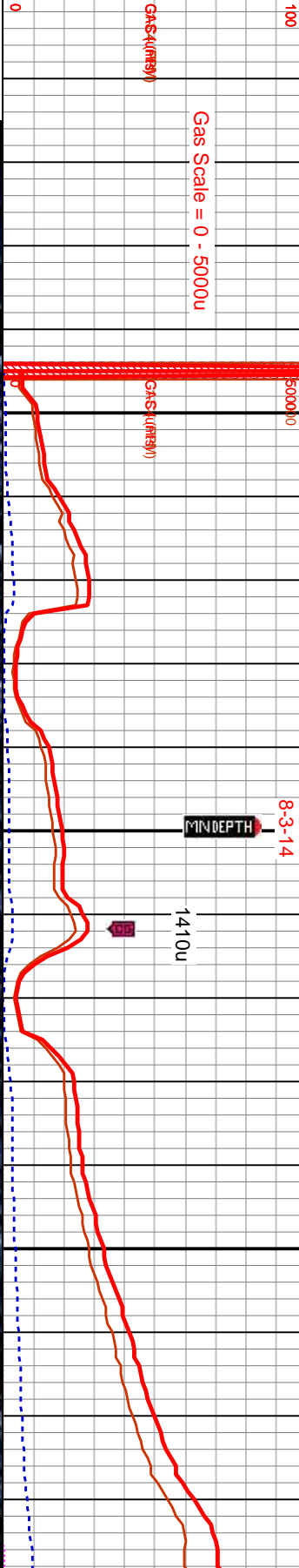
WOB
RPM
PP: 2
SPM

Slide/Rotate

Depth Labels

Total Gas & Chromatograph

GAS ———
C1 ———
C2 ———
C3 ———
C4 ———



Images

MD: 6,641'
Inclination: 1.41°
Azimuth: 187.0°
TVD: 6,466.6'
VS: -543.6°

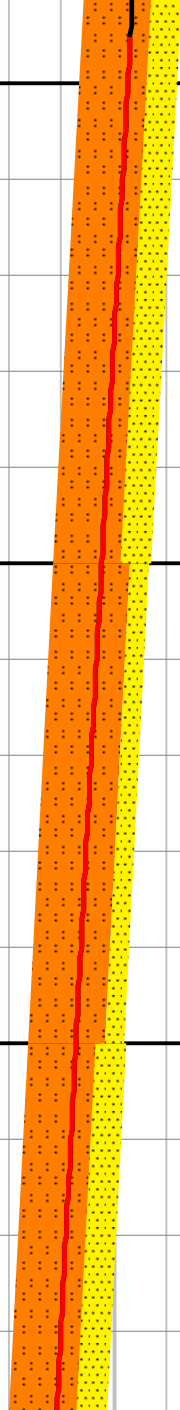
70% SLTST: lt- med gy, pred sb blkly, fri, v
arg, arg- sil cnt, grd to sh, tr dissim pyr;
30% SS: off wht, lt- pred med gy, s&p, frm-
w cons, arg, vf- f gr, sl calc cnt, pred sb
ang gr, mod srt, tr glau, intbd with slst-
lam

80% SLTST: lt- med gy, pred sb blkly, fri, v
arg, arg- sil cnt, grd to sh, tr dissim pyr;
20% SS: off wht, lt- pred med gy, s&p, frm-
w cons, arg, vf- f gr, sl calc cnt, pred sb
ang gr, mod srt, intbd with slst- lam

70% SLTST: lt- med gy, pred sb b blkly, fri, v
arg, arg- sil cnt, grd to sh, tr dissim pyr;
30% SS: off wht, lt- pred med gy, s
w cons, arg, vf- f gr, sl calc cnt, pr
ang gr, mod srt, tr glau, intbd with
lam

Well Bore
TVD ———

TVD (ft)
Hiner 36NB- 23W
Weld Co, CO
Spud date: 7/31/2014
Surface Casing @ 1,230'
2 Manned Logging Continued:
8/03/2014 @ 6,645' MD



MD: 6,735'
Inclination: 12.6°
Azimuth: 251.6°
TVD: 6,568.8°
VS: -532.5°

7000

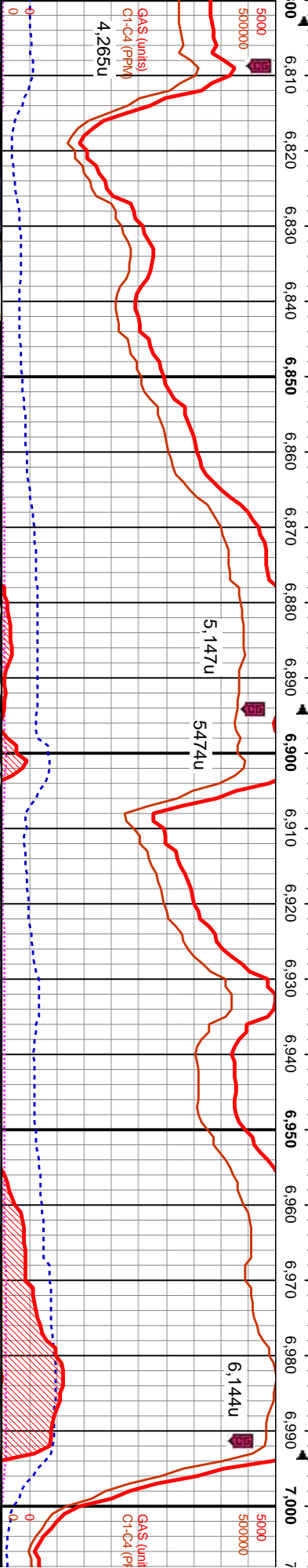
MW: 9.5
VIS: 35

WOB: 35.1 K
RPM: 0
PP: 2681
SPM: 71/71

Sharon Springs @ 6,992 MD 6,780.6 TVD

ROP (in/hr)
GRC (API)

ROP (in/hr)
GRC (API)



GAS (units)
C1-C4 (PPM)
4,265u

5,147u

5474u

6,144u

GAS (units)
C1-C4 (PPM)

6000
60% SLTST: v -arg, lt gy- med gy, lt brn, sb
ply- sb blk, sft, sl calc cntd, tr diss pyf,
grd to sh, intbdd with ss: 30% SH: dk gy- blk,
carb, silty, sl calc- non calc, sft, sb ply, p ind;
10% SS: off wht, lt- med gy, brn, w cons- frm-
hd, s&p, vf- f gr, calc cnt, pred sb ang gr,
mod- w srt

70% SLTST: v -arg, lt gy- med gy, lt brn, sb
ply- sb blk, sft, sl calc cntd, tr diss pyf,
grd to sh, intbdd with ss: 10% SH: dk gy- blk,
carb, silty, sl calc- non calc, sft, sb ply, p ind;
20% SS: off wht, lt- med gy, brn, w cons- frm-
hd, s&p, vf- f gr, calc cnt, pred sb ang gr,
mod- w srt

60% SLTST: v -arg, lt gy- med gy, lt brn, sb
ply- sb blk, sft, sl calc cntd, tr diss pyf,
grd to sh, intbdd with ss: 40% SH: dk gy- blk,
carb, silty, sl calc- non calc, sft, sb ply, p ind

60% SLTST: v -arg, lt gy- med gy, lt brn, sb
ply- sb blk, sft, sl calc cntd, tr diss pyf,
grd to sh, intbdd with ss: 40% SH: dk gy- blk,
carb, silty, sl calc- non calc, sft, sb ply, p ind

70% SLTST: v -arg, lt gy- med gy, lt brn, sb
ply- sb blk, sft, sl calc cntd, tr diss pyf,
grd to sh, intbdd with ss: 40% SH: dk gy- blk,
carb, silty, sl calc- non calc, sft, sb ply, p ind

MD: 6,829'
Inclination: 24.0°
Azimuth: 256.5°
TVD: 6,647.92'
VS: -503.34'

MD: 6,923'
Inclination: 36.4°
Azimuth: 263.9°
TVD: 6,728.95'
VS: -456.51'

MD: 7,018'
Inclination: 2°
Azimuth: 6.79°
TVD: 6,79°
VS: -392.8'

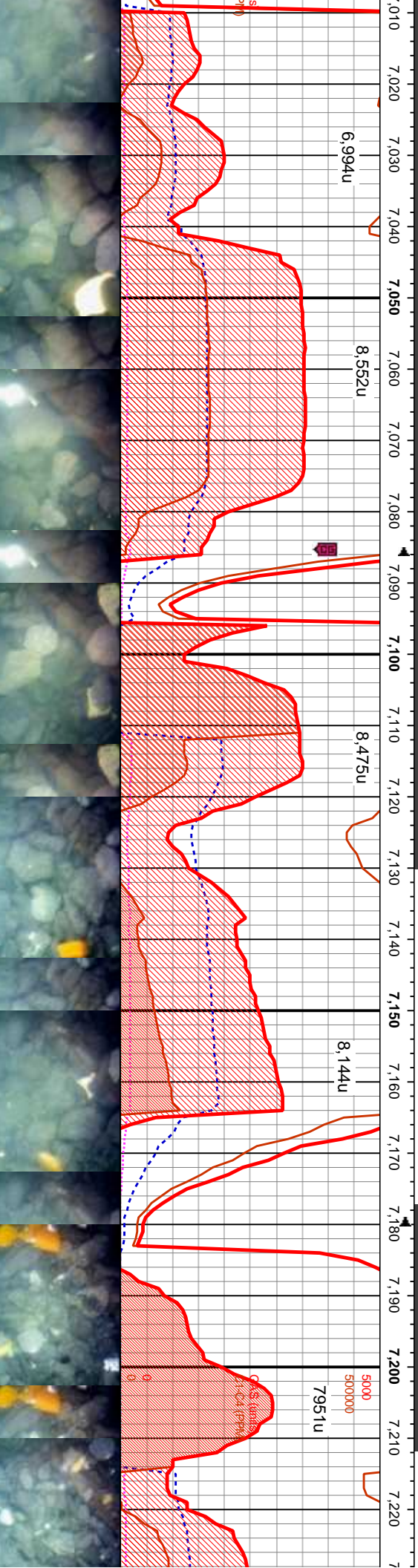
MD: 6,829'
Inclination: 24.0°
Azimuth: 256.5°
TVD: 6,647.92'
VS: -503.34'



WOB: 51.3 K
RPM: 0
PP: 2833
SPM: 71/71

ROP (m/hr)
GRC (API)

Niobrara A @ 7,045 MD 6,814.3 TVD



SLTST: v -arg, lt gy- med gy, lt brn, sb
biky, sft, sl calc cmtd, tr dissim pyr,
h, inbddd with ss: 30% SH: dk gy- blk,
gy, sl calc- non calc, sft, sb pily, p ind

50% SLTST: v -arg, lt gy- med gy, lt brn, sb
pily- sb biky, sft, sl calc cmtd, tr dissim pyr,
grd to sh, inbddd with ss: 20% SH: dk gy- blk,
carb, silty, sl calc- non calc, sft, sb pily, p ind
30% CHK: lt- med gy, lt brn, sft, mot, occ
lam, v calc, pred sb ang- sb biky, crpxln

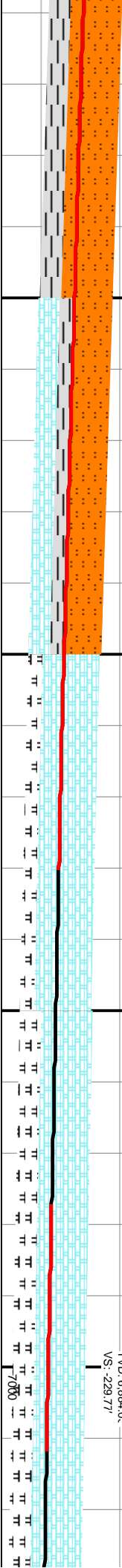
80% CHK: lt- med gy, lt brn, sft, mot, occ
lam, v calc, pred sb ang- sb biky, crpxln;
20% MRLST: med- dk gy, blk- carb, brn, frm,
stri, silty, calc, arg, biky- pily, com dissim pyr;
tr slst

70% CHK: lt- med gy, lt brn, sft, mot, occ
lam, v calc, pred sb ang- sb biky, crpxln;
30% MRLST: med- dk gy, blk- carb, brn, frm,
stri, silty, calc, arg, biky- pily, com dissim pyr;
tr slst

670% CHK: lt- med gy, lt brn, sft, mot, occ
lam, v calc, pred sb ang- sb biky, crpxln;
30% MRLST: med- dk gy, blk- carb, brn, frm,
stri, silty, calc, arg, biky- pily, com dissim pyr;
tr slst

MD: 7,112'
Inclination: 65.07°
Azimuth: 264.77°
TVD: 6,847.92'
VS: -3152e°

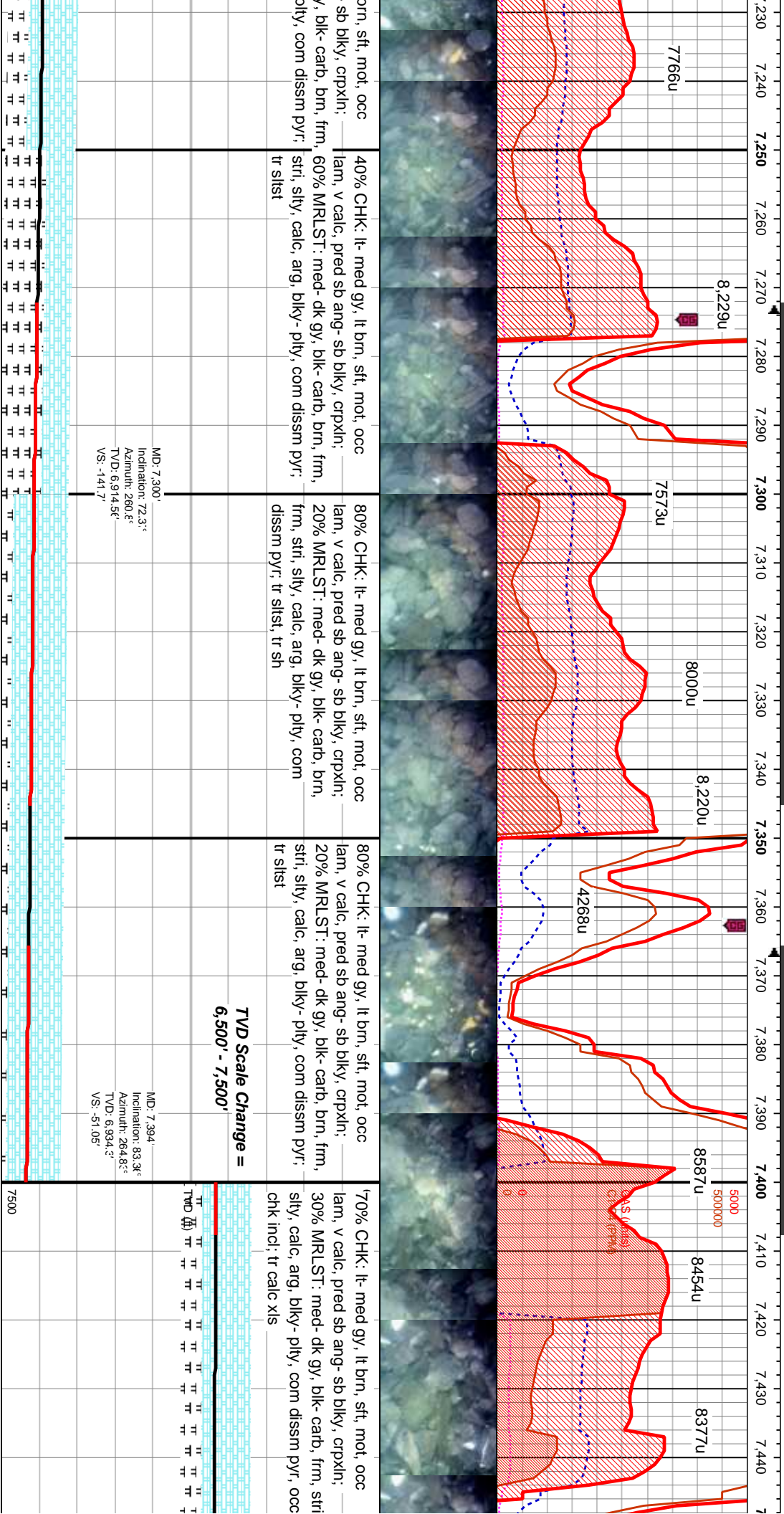
TVD (ft)
MD: 7,206'
Inclination: 69.7°
Azimuth: 262.86°
TVD: 6,884.0°
VS: -229.77°



Niobrara B @ 7.367' MD 6,930.4' TVD

WOB: 62.5 K
RPM: 0
PP: 2858
SPM: 7171

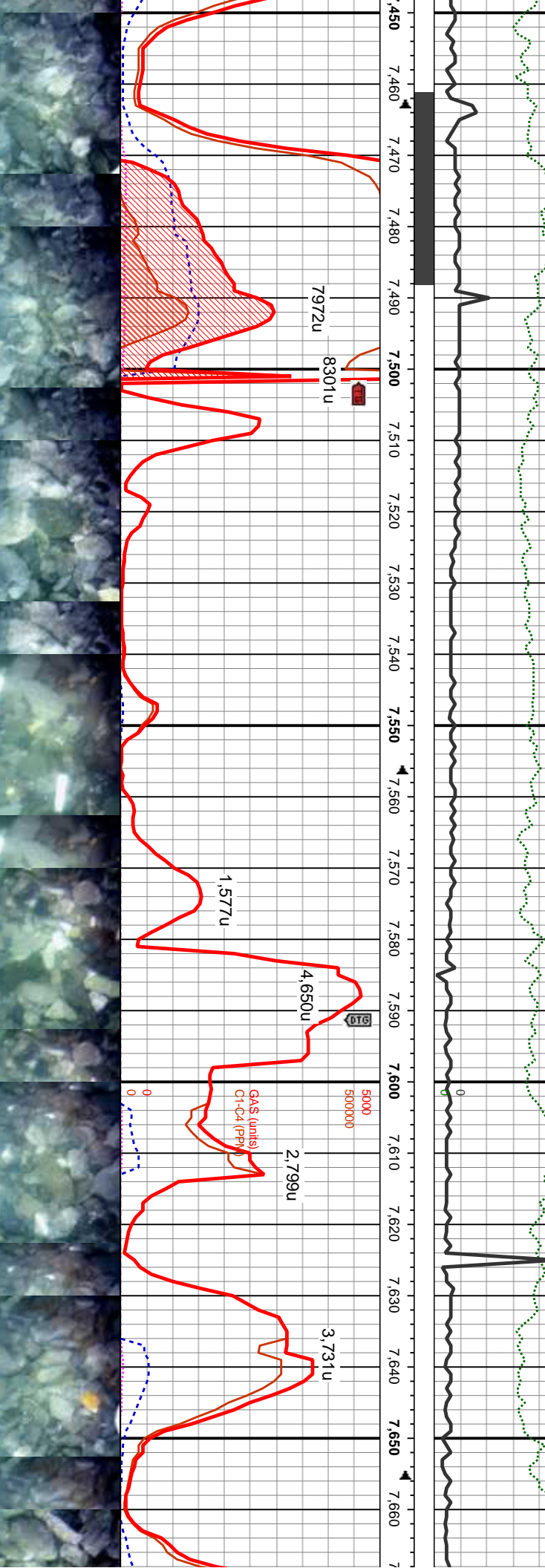
ROP (min/ft)
GRC (API)



Bit #: 3
Type: REED SKH519MC1
Size: 8.75
Depth In: 7,555'
S/N: A176720

WOB: 18.1 K
RPM: 48
PP: 2809
SPM: 121

ROP (m/h)
GRC (MPa)



90% CHK: lt- med gy, lt brn, sft, mot, occ
lam, v calc, pred sb ang- sb blk, crpxln;
10% MRLST: med- dk gy, blk- carb, frm, stri,
silty, calc, arg, blk- pty, com dissim pyr, occ
chk incl; tr calc xls; tr pyr

90% CHK: lt- med gy, lt brn, sft, mot, occ
lam, v calc, pred sb ang- sb blk, crpxln;
10% MRLST: med- dk gy, blk- carb, frm,
stri, silty, calc, arg, blk- pty, com dissim
pyr, occ chk incl; tr calc xls; tr pyr; tr slst

MD: 7,591'
Inclination: 92.7°
Azimuth: 265.0°
TVD: 6,938.32'
VS: 142.3°

6500

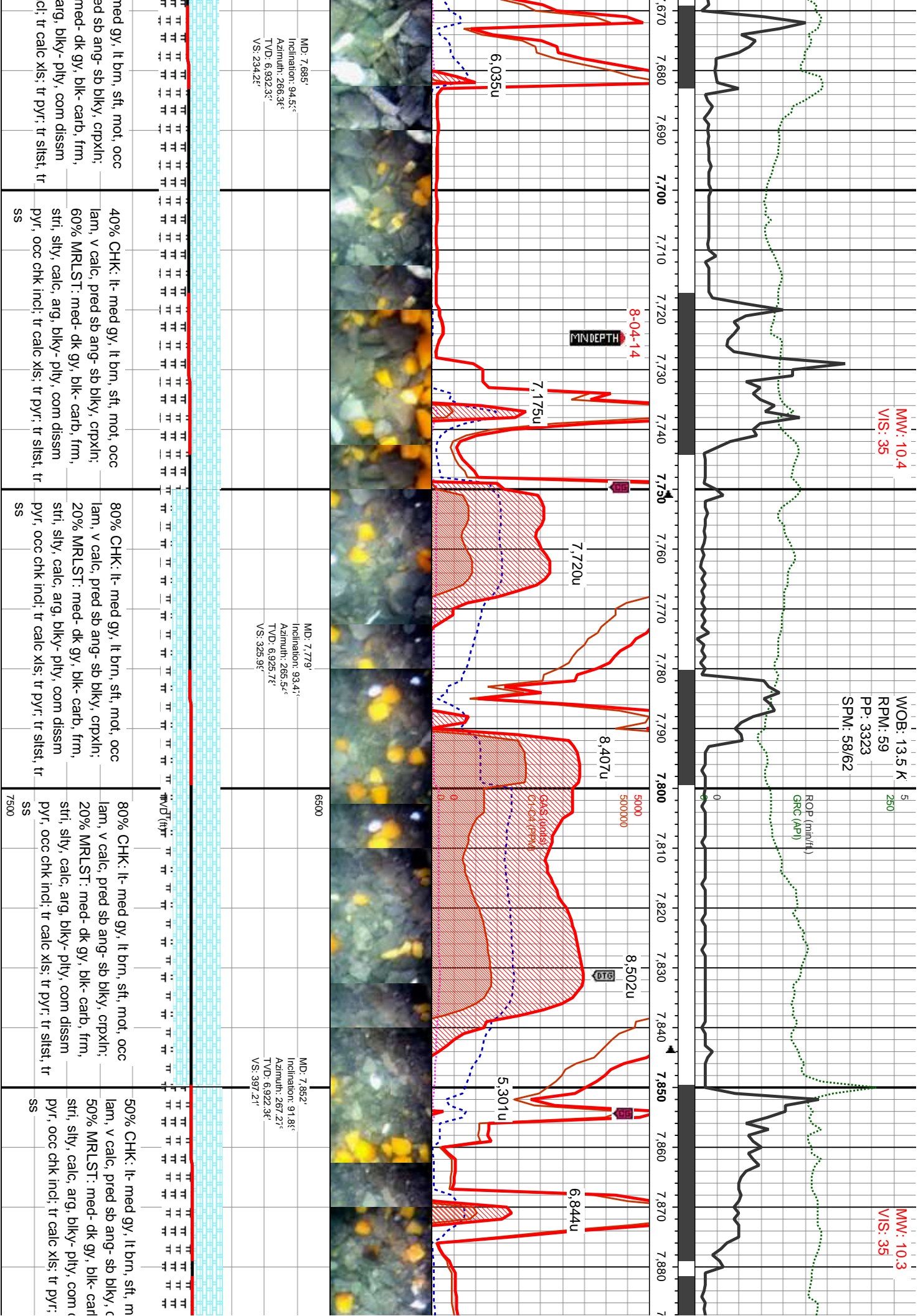
MD: 7,491'
Inclination: 89.5°
Azimuth: 264.1°
TVD: 6,940.32'
VS: 44.1°

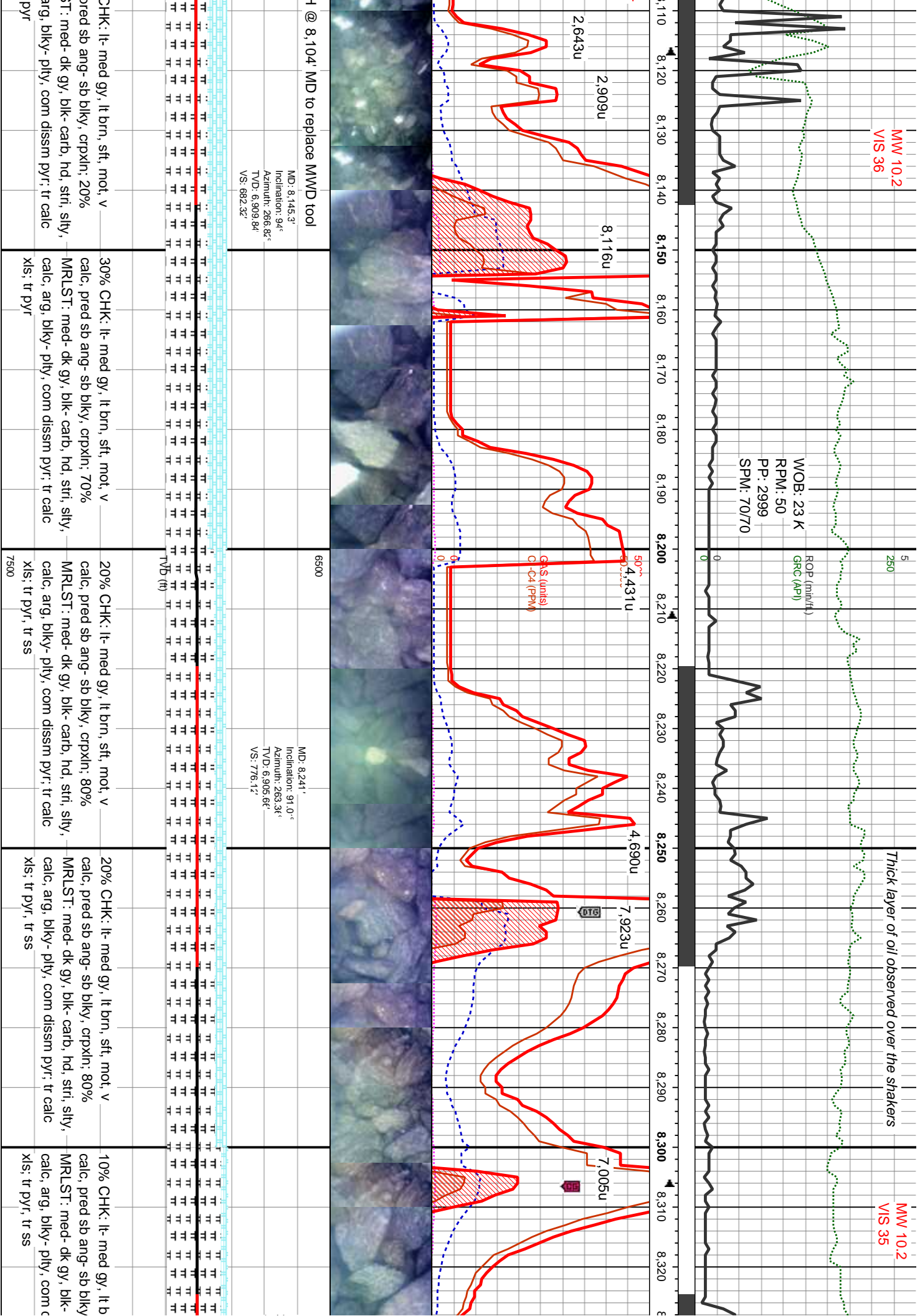
TOOH to replace bit & motor @ 7,555' MD

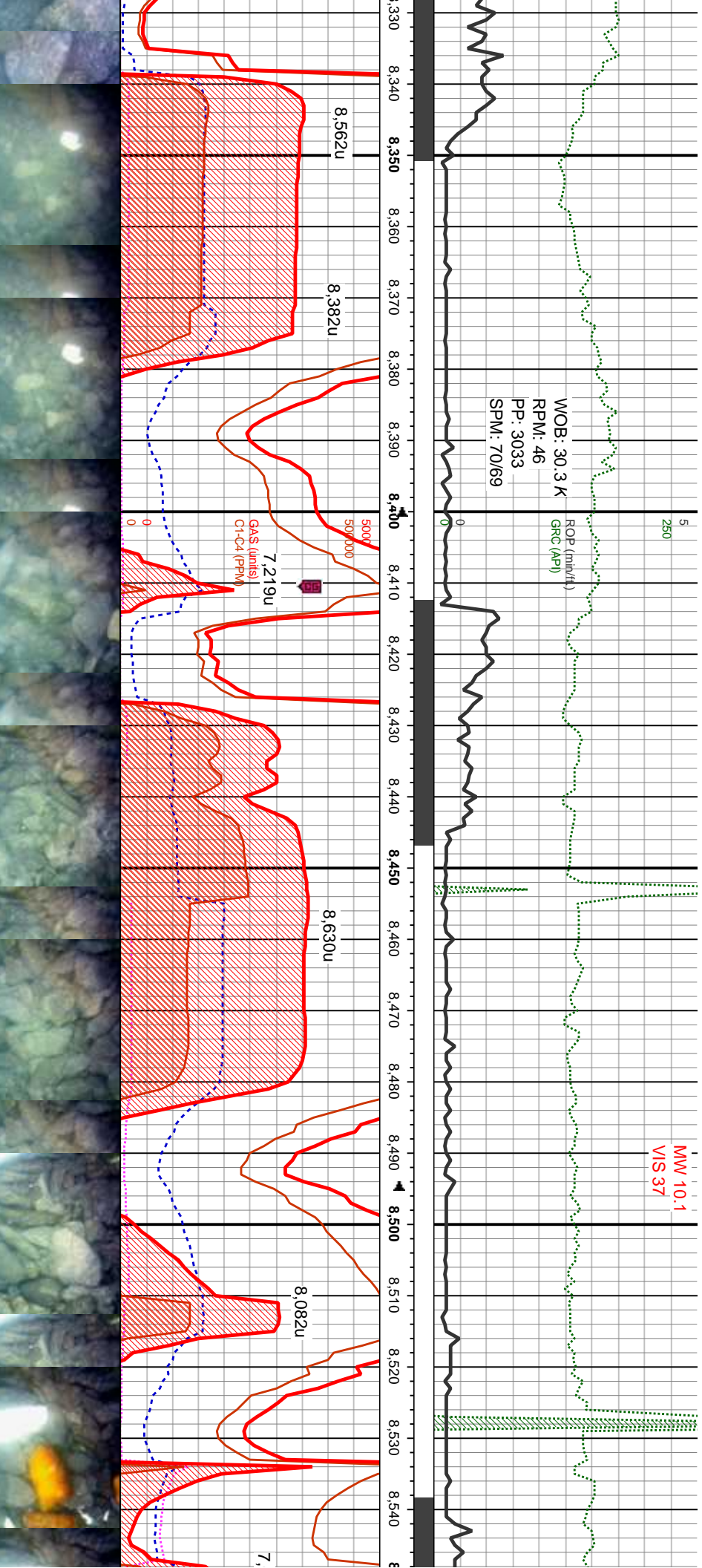
60% CHK: lt- med gy, lt brn, sft, mot, occ
lam, v calc, pred sb ang- sb blk, crpxln;
40% MRLST: med- dk gy, blk- carb, frm,
stri, silty, calc, arg, blk- pty, com dissim
pyr, occ chk incl; tr calc xls; tr pyr; tr slst, tr
SS

60% CHK: lt- med gy, lt brn, sft, mot, occ
lam, v calc, pred sb ang- sb blk, crpxln;
40% MRLST: med- dk gy, blk- carb, frm,
stri, silty, calc, arg, blk- pty, com dissim
pyr, occ chk incl; tr calc xls; tr pyr; tr slst, tr
SS

50% CHK: lt- med gy, lt brn, sft, mot, occ
lam, v calc, pred sb ang- sb blk, crpxln;
50% MRLST: med- dk gy, blk- carb, frm,
stri, silty, calc, arg, blk- pty, com dissim
pyr, occ chk incl; tr calc xls; tr pyr; tr slst, tr
SS

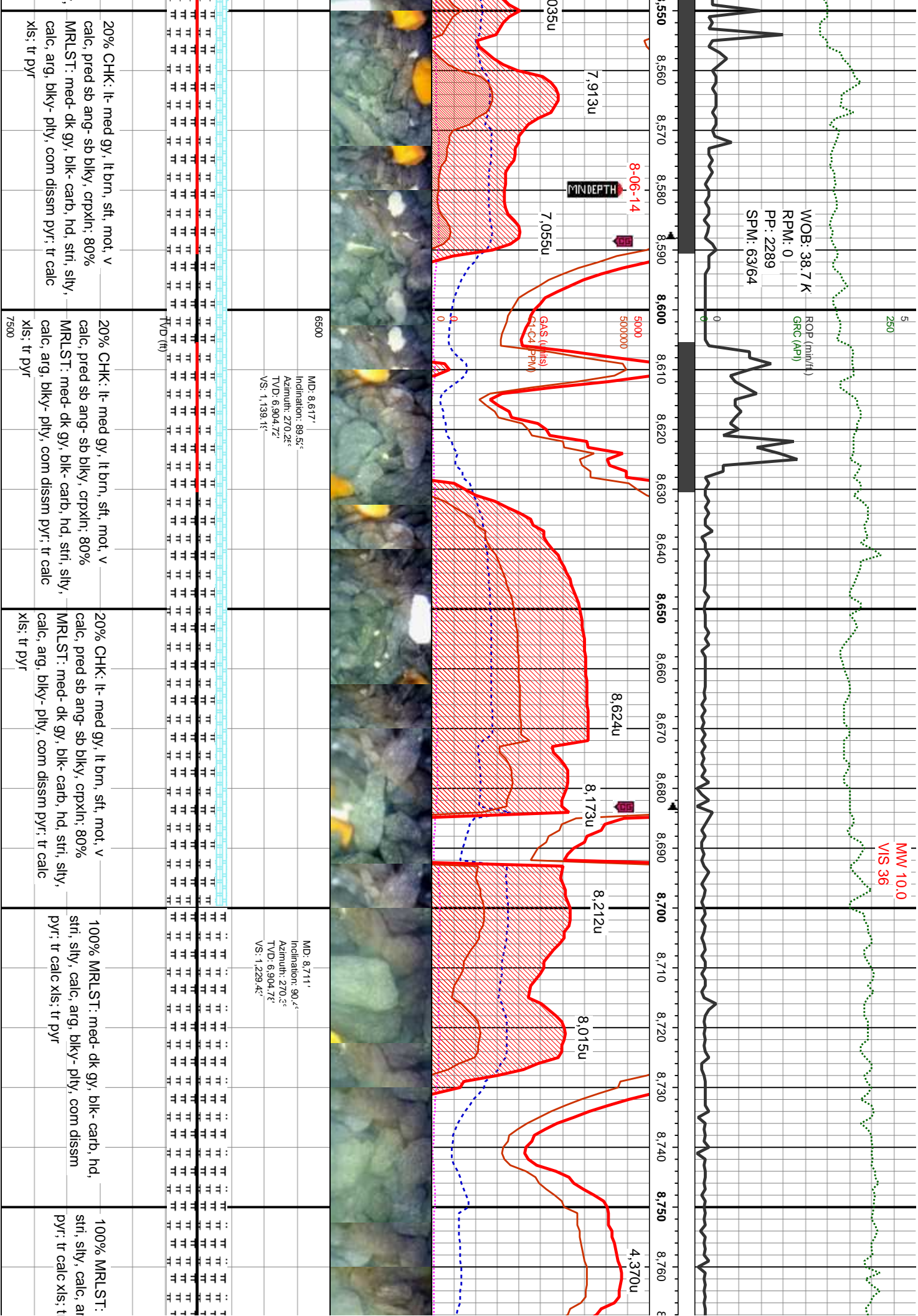






MD: 8.335° Inclination: 88.0° Azimuth: 264.6° TVD: 6,906.4ft VS: 868.6ft	MD: 8.429° Inclination: 89.4° Azimuth: 270.0° TVD: 6,908.5ft VS: 960.0ft	MD: 8.523° Inclination: 92.8° Azimuth: 273.0° TVD: 6,906.6ft VS: 1,049.6ft
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10% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln; 90% MRLST: med- dk gy, blk- carb, hd, stri, slty, calc, arg, blk- ply, com dissn pyr; tr calc xls; tr pyr	20% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln; 80% MRLST: med- dk gy, blk- carb, hd, stri, slty, calc, arg, blk- ply, com dissn pyr; tr calc xls; tr pyr, tr ss	10% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln; 90% MRLST: med- dk gy, blk- carb, hd, stri, slty, calc, arg, blk- ply, com dissn pyr; tr calc xls; tr pyr	30% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln; 70% MRLST: med- dk gy, blk- carb, hd, stri, slty, calc, arg, blk- ply, com dissn pyr; tr calc xls; tr pyr
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B: 26.3 K
M: 66
3166
A: 70/70

5
250

WOB: 19 K
RPM: 67
PP: 3104
SPM: 71/71

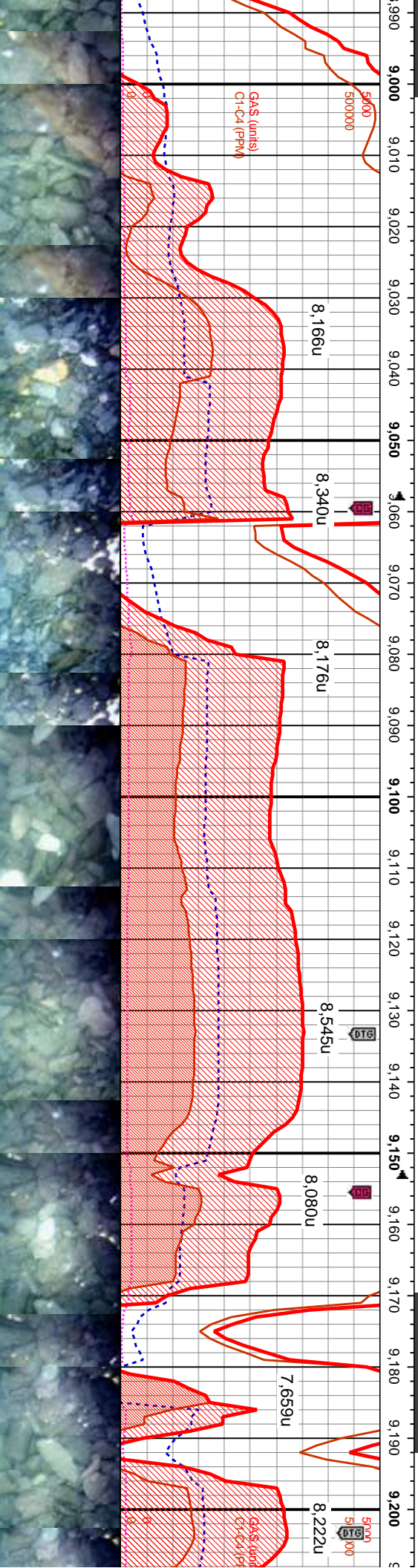
5
250

ROP (in./ft)
GRC (API)

ROP (in./ft)
GRC (API)

MW 10.0
VIS 37

Brownish Oil observed over the shakers



MD: 9.993'
Inclination: 87.9°
Muth: 269.0°
D: 6.909.91'
VS: 1.500.8°

6500

MD: 9.087'
Inclination: 89.0°
Azimuth: 269.5°
TVD: 6.912.3°
VS: 1.591.5°

6500

MD: 9.181'
Inclination: 91.1°
Azimuth: 268.8°
TVD: 6.912.2°
VS: 1.682.2°

6500

30% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln: 70% MRLST: med- dk gy, blk- carb, hd, stri, sily, calc, arg, blk- ply, com dissim pyr; tr calc xls; tr pyr	20% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln: 80% MRLST: med- dk gy, blk- carb, hd, stri, sily, calc, arg, blk- ply, com dissim pyr; tr calc xls; tr pyr	50% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln: 50% MRLST: med- dk gy, blk- carb, hd, stri, sily, calc, arg, blk- ply, com dissim pyr; tr calc xls; tr pyr	90% CHK: lt- med gy, lt brn, frm, mot, v calc, pred sb ang- sb blk, crpxln: 10% MRLST: med- dk gy, blk- carb, hd, stri, v sily, calc, arg, blk- ply, com dissim pyr; occ calc xls; tr pyr
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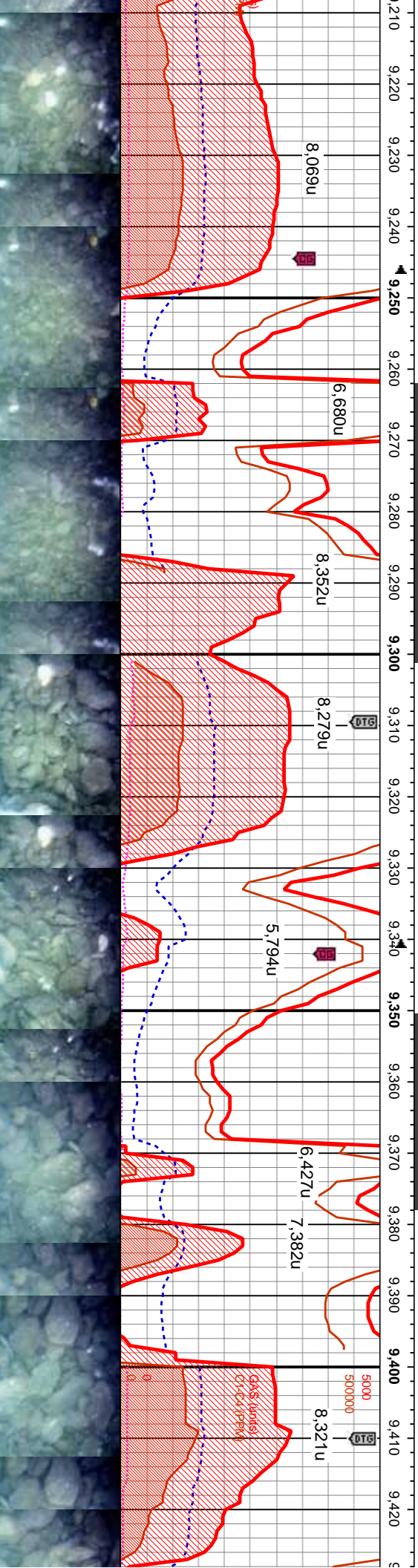
MW 10.1
VIS 38

Brownish Oil observed over the shakers

MW 10.2
VIS 38

WOB: 18 K
RPM: 67
PP: 3197
SPM: 6973

ROP (min/ft)
GRC (API)



MD: 9,275'
Inclination: 89.9°
Azimuth: 268.7°
TVD: 6,911.3'
VS: 1.773.1°

MD: 9,369'
Inclination: 84.7°
Azimuth: 271.6°
TVD: 6,915.6'
VS: 1.863.2°

6500

CHK: lt- med gy, lt brn, fri, mot, v calc,
b ang- sb blk- cpn: 10% MRLST:
gy, blk- carb, frm, stri, v silty, calc,
pyr- ply, com dissim pyr, occ calc xls;

80% CHK: lt- med gy, lt brn, fri, mot, v calc,
pred sb ang- sb blk- cpn: 20% MRLST:
med- dk gy, blk- carb, frm, stri, v silty, calc,
arg, blk- ply, com dissim pyr, tr calc xls; tr
pyr, tr lt gy siltst

70% CHK: lt- med gy, lt brn, fri- sft, mot, v
calc, pred sb ang- sb blk- cpn: 30%
MRLST: med- dk gy, blk- carb, frm, stri, v
silty, calc, arg, blk- ply, com dissim pyr, tr
calc xls; tr pyr, tr lt gy siltst

50% CHK: lt- med gy, lt brn, fri- sft, mot, v
calc, pred sb ang- sb blk- cpn: 50%
MRLST: med- dk gy, blk- carb, frm, stri, v
silty, calc, arg, blk- ply, com dissim pyr, tr
calc xls; tr pyr

50% CHK: lt- med gy, lt brn, fri- sft, mot, v
calc, pred sb ang- sb blk- cpn: 50%
MRLST: med- dk gy, blk- carb, frm, stri, v
silty, calc, arg, blk- ply, com dissim pyr, tr
calc xls; tr pyr

7500

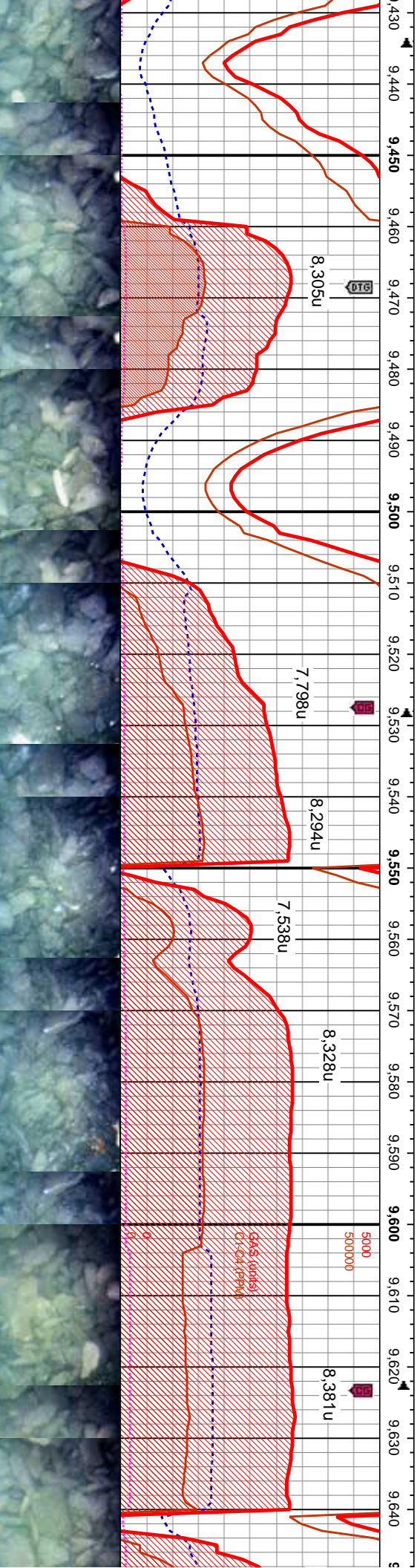
Brownish-Black- Oil over the shakers

MW 10
VIS 38

WOB: 20 K
RPM: 68
PP: 3286
SPM: 69/73

ROP (min/ft)
GRC (API)

MW 10.1
VIS 39



MD: 9.463'
Inclination: 84.9°
Azimuth: 272.7°
TVD: 6.924.1'
VS: 1.95224'

MD: 9.557'
Inclination: 88.3°
Azimuth: 272.5°
TVD: 6.929.58'
VS: 2.041.11'

6500

MD: 9.6
Inclination:
Azimuth:
TVD: 6
VS: 2.1

frn, fri- sft, mot, v
/ , crpxln; 50%
carb, frm, stri, v
com dissim pyr; tr

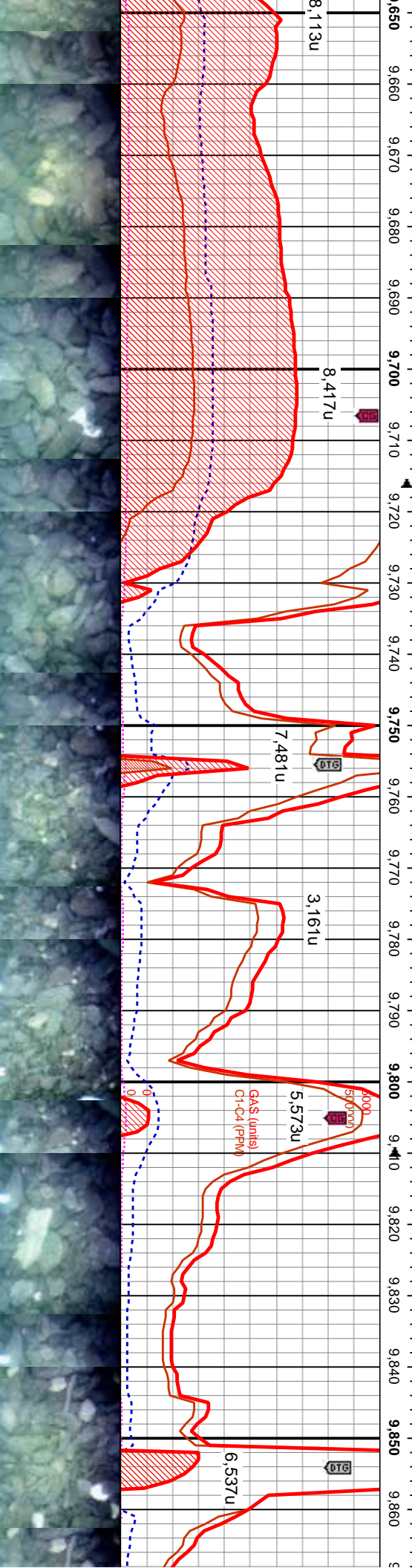
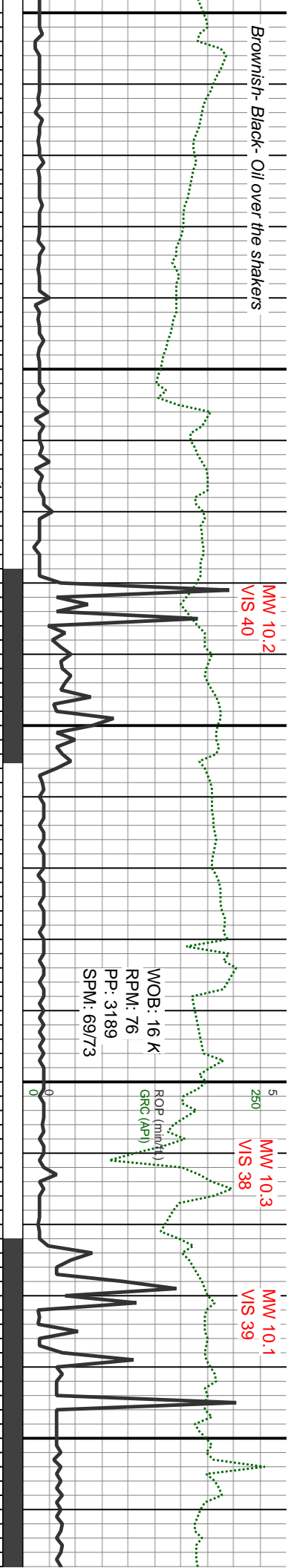
50% CHK: lt- med gy, lt brn, fri- sft, mot, v
calc, pred sb ang- sb blk, crpxln; 50%
MRLST: med- dk gy, blk- carb, frm, stri, v
sily, calc, arg, blk- pty, com dissim pyr; tr
calc xls; tr pyr

70% CHK: lt- med gy, lt brn, fri- sft, mot, v
calc, pred sb ang- sb blk, crpxln; 30%
MRLST: med- dk gy, blk- carb, frm, stri, v
sily, calc, arg, blk- pty, com dissim pyr; tr
calc xls; tr pyr

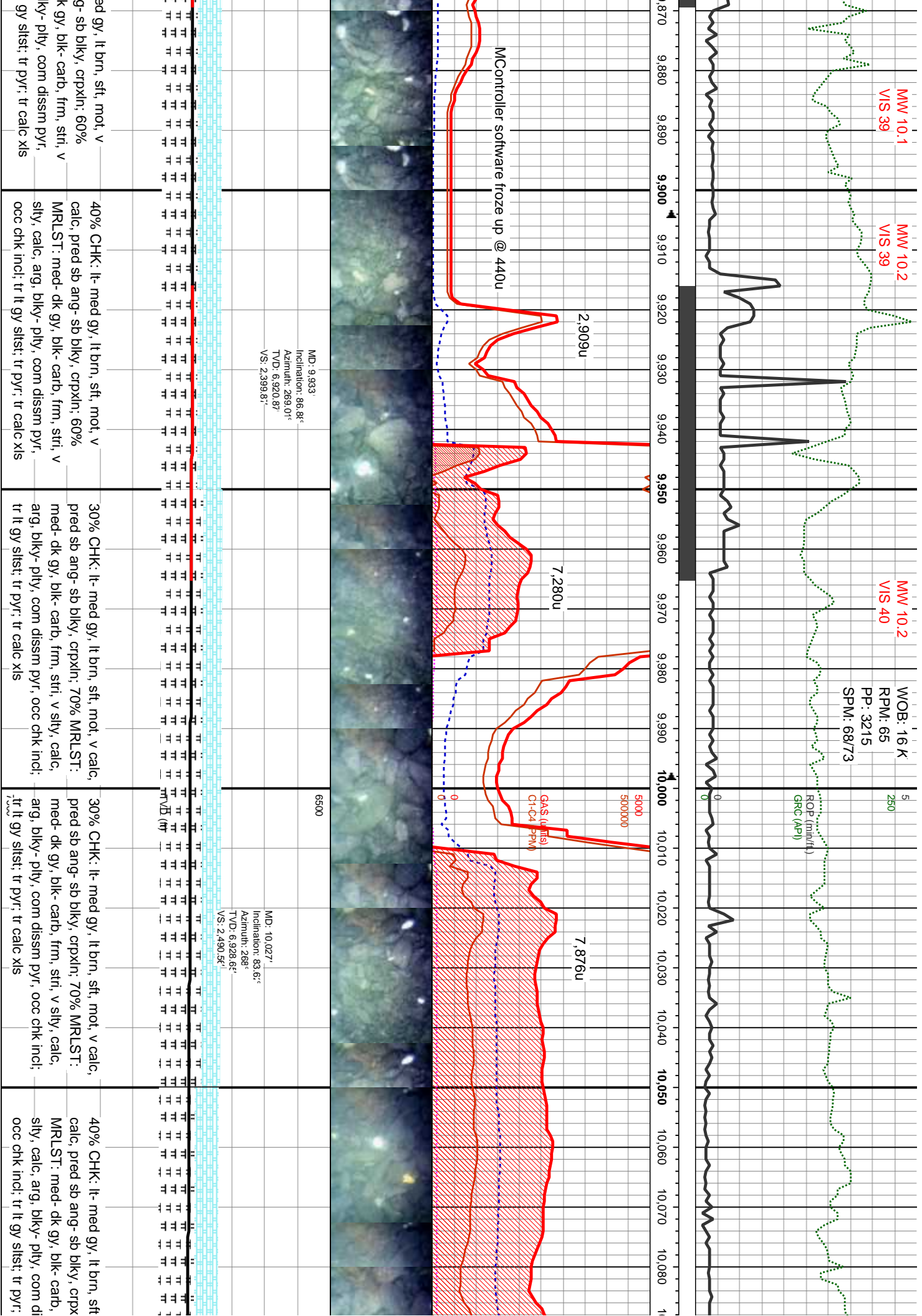
70% CHK: lt- med gy, lt brn, fri- sft, mot, v
calc, pred sb ang- sb blk, crpxln; 30%
MRLST: med- dk gy, blk- carb, frm, stri, v
sily, calc, arg, blk- pty, com dissim pyr; tr
calc xls; tr pyr

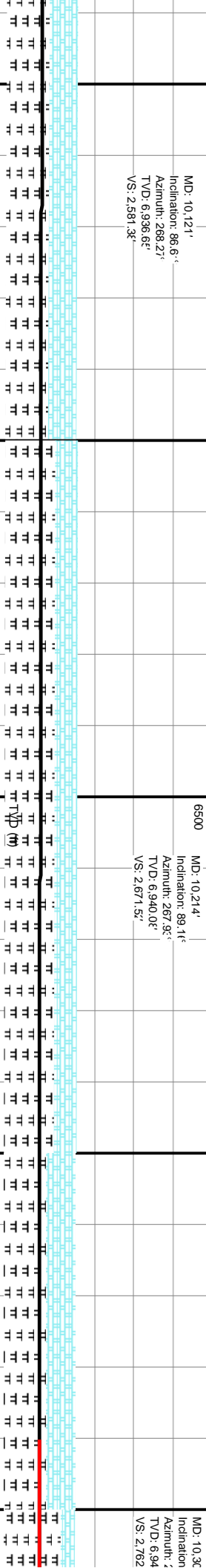
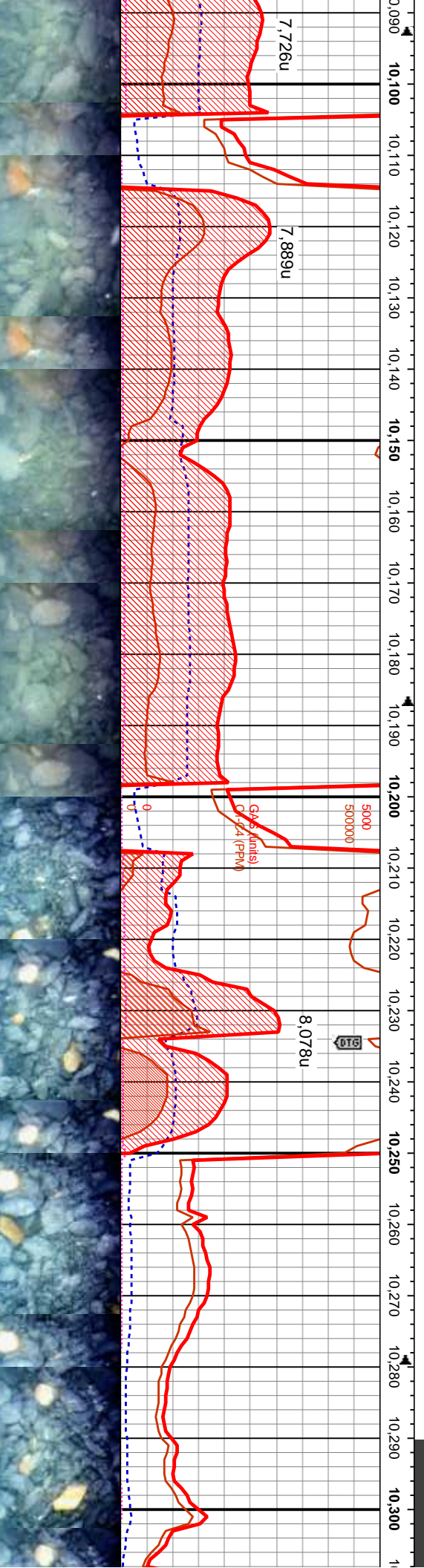
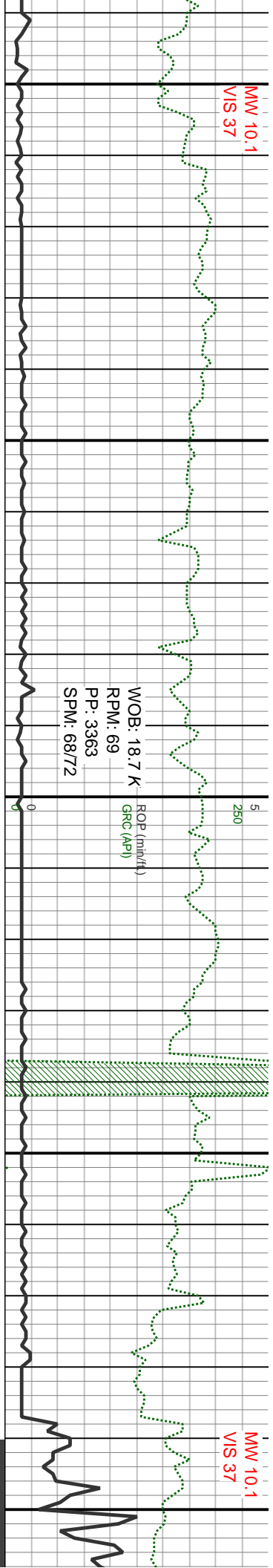
50% CHK: lt- med gy, lt brn, fri- sft, mot, v
calc, pred sb ang- sb blk, crpxln; 50%
MRLST: med- dk gy, blk- carb, frm, stri, v
sily, calc, arg, blk- pty, com dissim pyr; tr
calc xls; tr pyr

Brownish-Black- Oil over the shakers

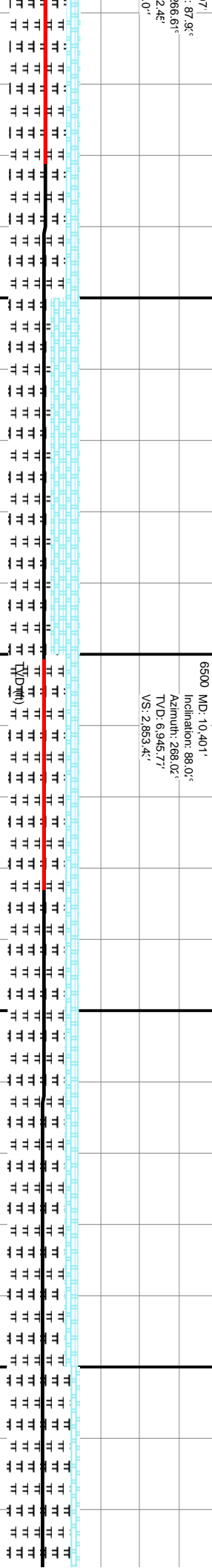
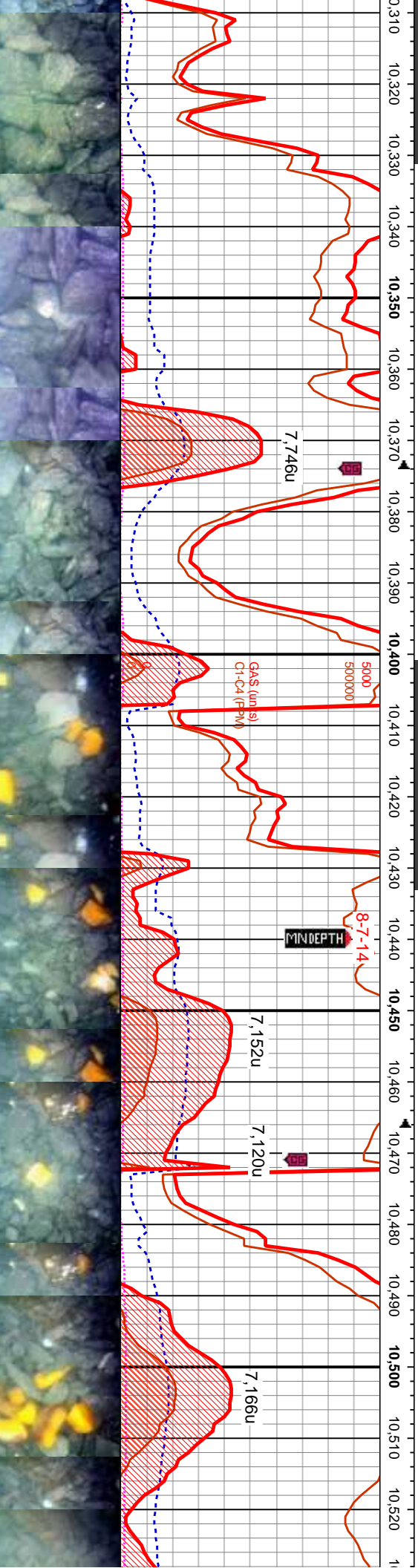
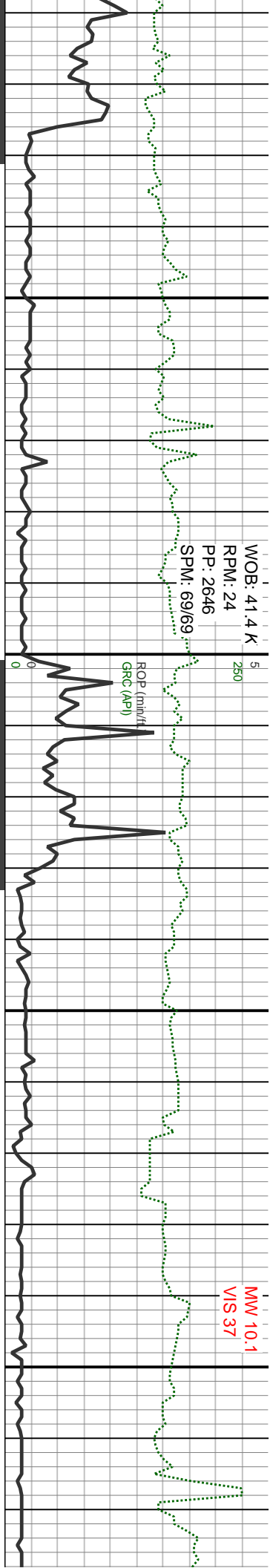


80% CHK: lt- med gy, lt brn, fri- sft, mot, v calc, pred sb ang- sb blk, crpxln; 20% MRLST: med- dk gy, blk- carb, frm, stri, v sily, calc, arg, blk- pily, com dissim pyr, tr calc xls	40% CHK: lt- med gy, lt brn, fri- sft, mot, v calc, pred sb ang- sb blk, crpxln; 60% MRLST: med- dk gy, blk- carb, frm, stri, v sily, calc, arg, blk- pily, com dissim pyr, tr calc xls	50% CHK: lt- med gy, lt brn, fri- sft, mot, v calc, pred sb ang- sb blk, crpxln; 50% MRLST: med- dk gy, blk- carb, frm, stri, v sily, calc, arg, blk- pily, com dissim pyr	40% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln; 60% MRLST: med- dk gy, blk- carb, frm, stri, v sily, calc, arg, blk- pily, com dissim pyr, tr occ chk inci; tr lt gy slst, tr pyr	40% CHK: lt- m calc, pred sb an MRLST: med- d sily, calc, arg, b occ chk inci; tr lt
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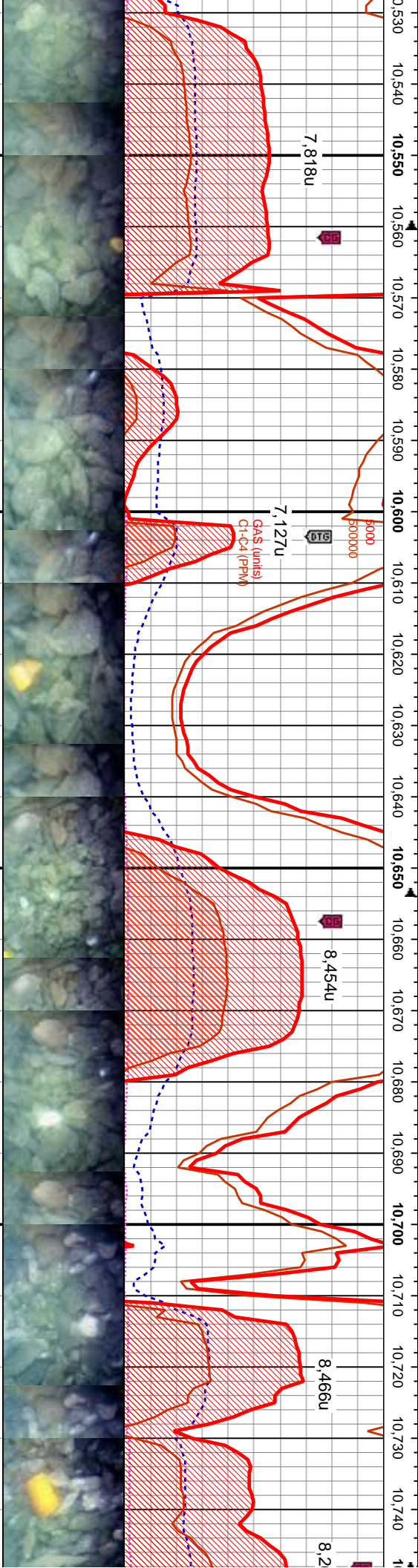
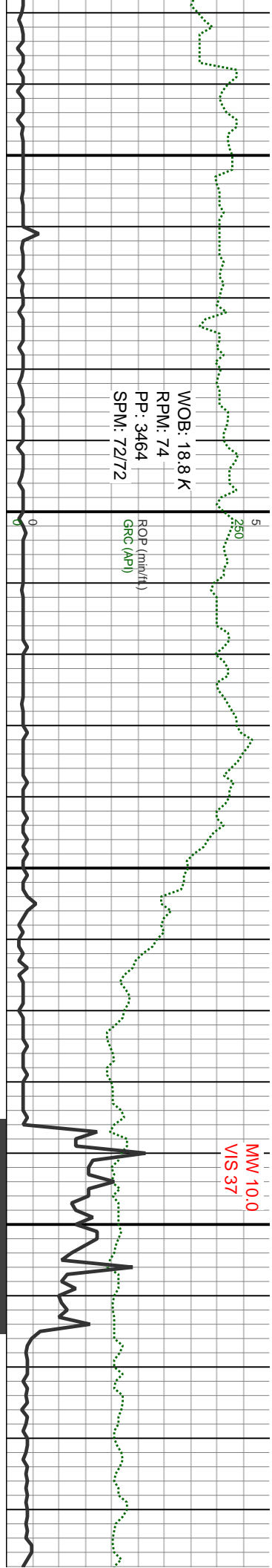


mot, v in; 60% frm, stri, v dissm pyr, tr calc xls	40% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk- crpxln; 60% MRLST: med- dk gy, blk- carb, frm, stri, v silty, calc, arg, blk- ply, com dissm pyr, occ chk incl; tr lt gy slstst; tr pyr; tr calc xls	30% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk- crpxln; 70% MRLST: med- dk gy, blk- carb, frm, stri, v silty, calc, arg, blk- ply, com dissm pyr, occ chk incl; tr lt gy slstst; tr pyr; tr calc xls	30% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk- crpxln; 70% MRLST: med- dk gy, blk- carb, frm, stri, v silty, calc, arg, blk- ply, com dissm pyr, occ chk incl; tr lt gy slstst; tr pyr; tr calc xls	40% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk- crpxln; 60% MRLST: med- dk gy, blk- carb, frm, stri, v silty, calc, arg, blk- ply, com dissm pyr, occ chk incl; tr lt gy slstst; tr pyr; tr calc xls
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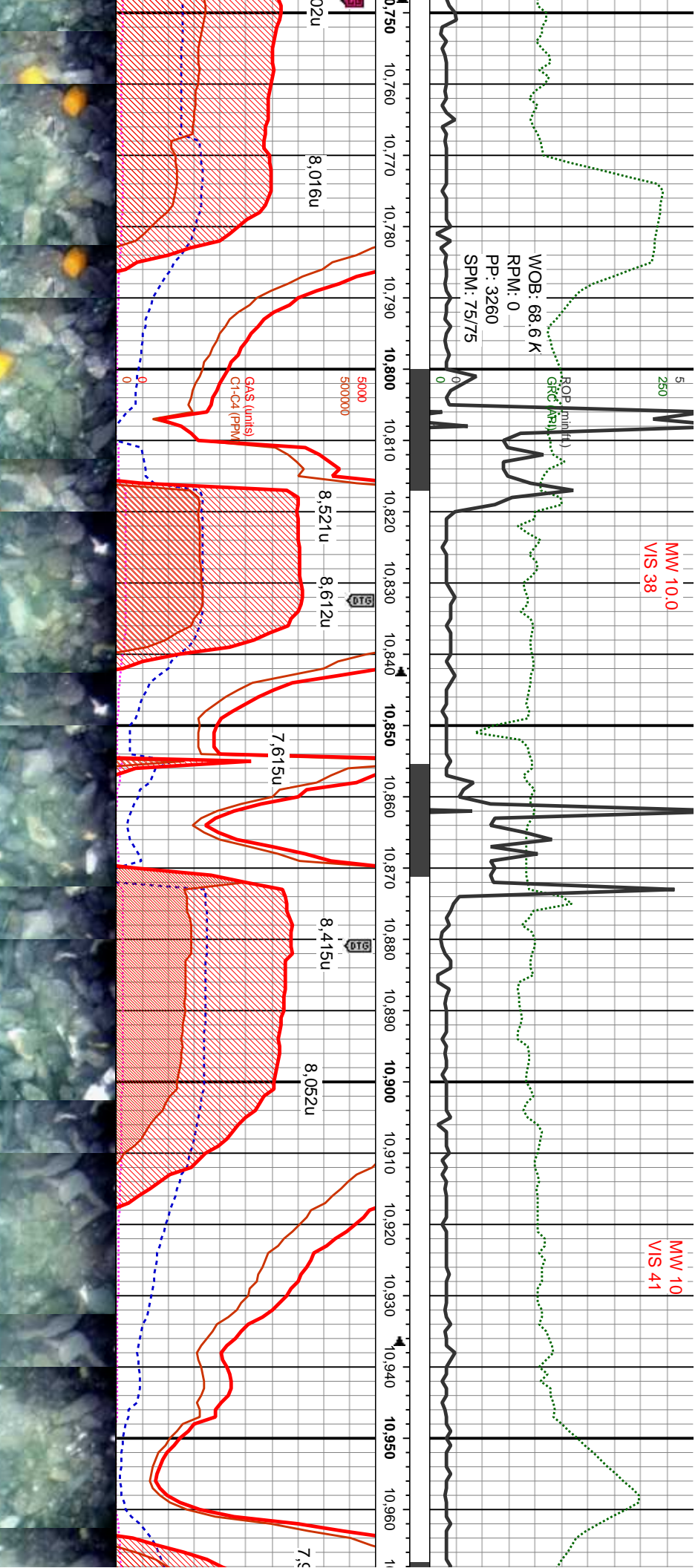


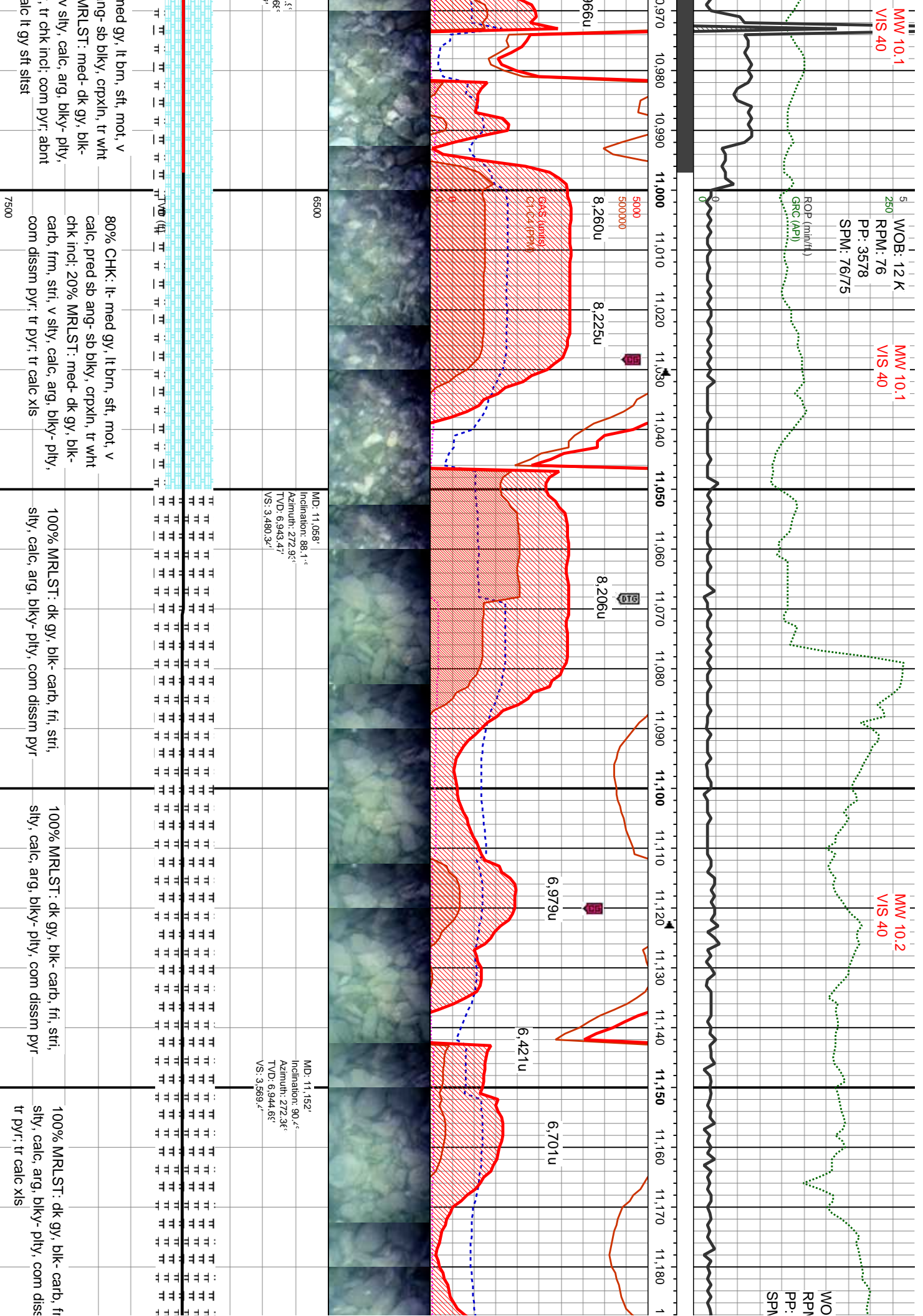
CHK: lt- med gy, lt brn, sft, mot, v pred sb ang- sb blk, crpxln: 80% ST: med- dk gy, blk- carb, frm, stri, v calc, arg, blk- ply, com dissim pyr, chk incl: tr lt gy slst; tr pyr; tr calc xls	40% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln: 60% MRLST: med- dk gy, blk- carb, frm, stri, v sily, calc, arg, blk- ply, com dissim pyr, occ chk incl: tr lt gy slst; tr pyr; tr calc xls	20% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln: 80% MRLST: med- dk gy, blk- carb, frm, stri, v sily, calc, arg, blk- ply, com dissim pyr, occ chk incl: tr lt gy slst; tr pyr; tr calc xls	20% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln: 80% MRLST: med- dk gy, blk- carb, frm, stri, v sily, calc, arg, blk- ply, com dissim pyr, occ chk incl: tr lt gy slst; tr pyr; tr calc xls	10% CHK: lt- med gy, lt calc, pred sb ang- sb bl MRLST: med- dk gy, bl sily, calc, arg, blk- ply occ chk incl: tr lt gy slst
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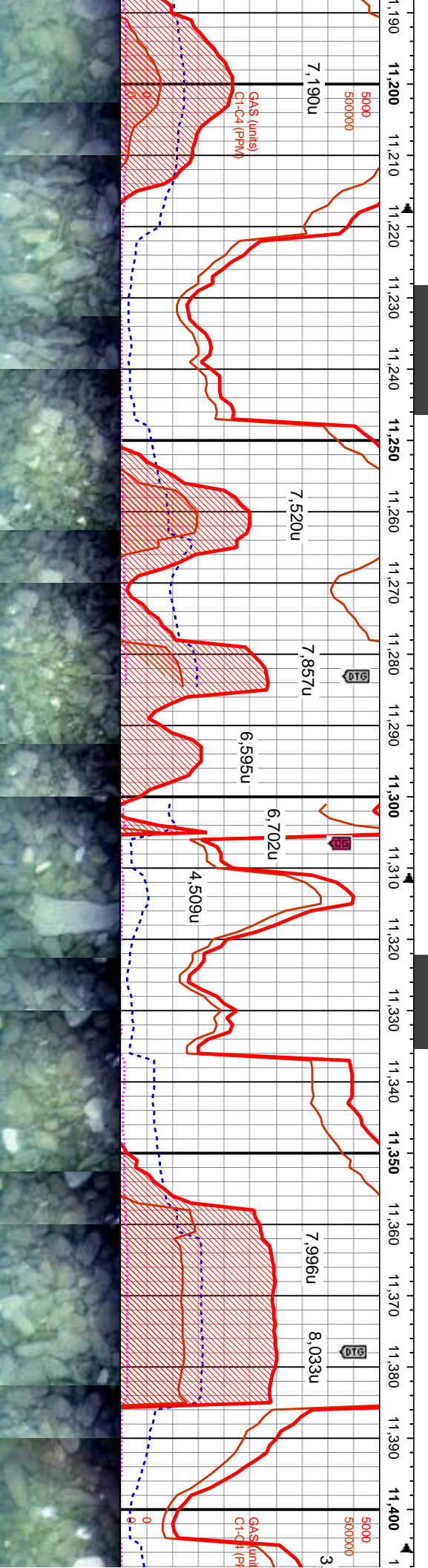
6500 MD: 10,401'
Inclination: 88.0°
Azimuth: 288.0°
TVD: 6,945.77'
VS: 2,853.4'

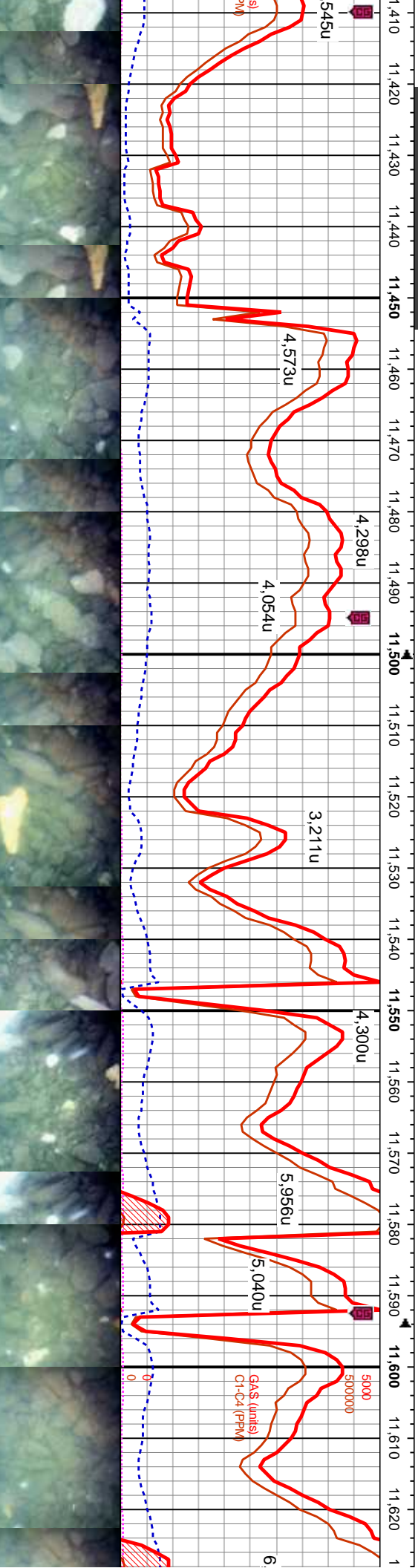
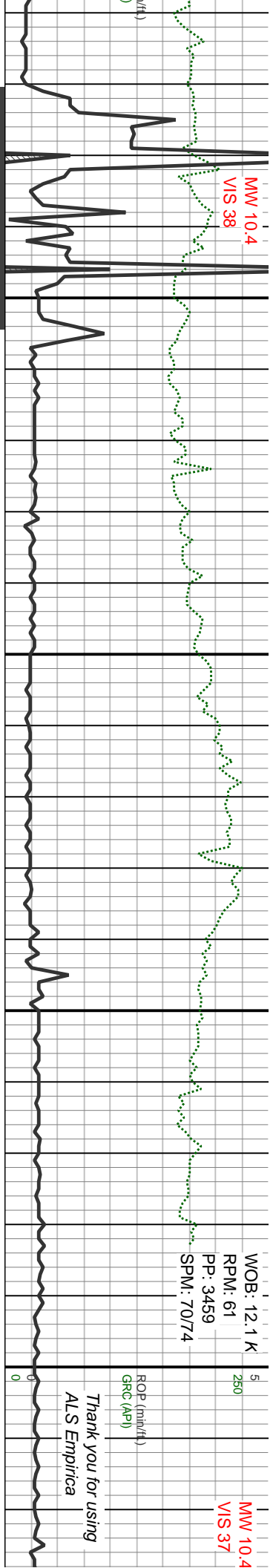


<p>MD: 10,589' Inclination: 90.8° Azimuth: 271.1° TVD: 6,950.3' VS: 3,033.7'</p>	<p>6500</p>	<p>MD: 10,683' Inclination: 92.9° Azimuth: 270.7° TVD: 6,947.2' VS: 3,123.6'</p>	
<p>brn, sft, mot, v xy, crpxln; 90% c-carb, frm, stri, v com dissn pyr, ; tr pyr; tr calc xls</p>	<p>10% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln; 90% MRLST: med- dk gy, blk- carb, frm, stri, v silty, calc, arg, blk- pty, com dissn pyr, occ chk incl; tr lt gy slst; tr pyr; tr calc xls</p>	<p>30% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln; 70% MRLST: med- dk gy, blk- carb, frm, stri, v silty, calc, arg, blk- pty, com dissn pyr, occ chk incl; tr lt gy slst; tr pyr; tr calc xls</p>	<p>80% CHK: lt- med gy, lt brn, sft, mot, v calc, pred sb ang- sb blk, crpxln; 20% MRLST: med- dk gy, blk- carb, frm, stri, v silty, calc, arg, blk- pty, com dissn pyr, occ chk incl; tr lt gy slst; tr pyr; tr calc xls</p>









MD: 11,565' Inclination: 97.6° Azimuth: 272.9° TVD: 6,920.21' VS: 3,960.8'		Drilling completed @ 11,630' MD 8		Proj	
MRSLT: dk gy, blk-carb, fri, stri, calc, arg, blk-pty, com diss pyr; tr calc xls; tr lt gy slst	100% MRSLT: dk gy, blk-carb, fri, stri, sly, calc, arg, blk-pty, com diss pyr; tr pyr; tr calc xls; tr lt gy slst	100% MRSLT: dk gy, blk-carb, fri, stri, sly, calc, arg, blk-pty, com diss pyr; tr pyr; tr calc xls; tr lt gy slst	100% MRSLT: dk gy, blk-carb, fri, stri, sly, calc, arg, blk-pty, com diss pyr; tr pyr; tr calc xls; tr lt gy slst	100% MRSLT: dk gy, blk-carb, fri, stri, sly, calc, arg, blk-pty, com diss pyr; tr pyr; tr calc xls; tr lt gy slst	100% MRSLT: dk gy, blk-carb, fri, stri, calc, arg, blk-pty, com diss pyr; xls; tr lt gy slst
6500		7500			

