

# HORIZONTAL LITHOLOGY STRIP LOG

## WellSight Systems

Scale 1:240 (5"=100') Metric

Measured Depth Log

Well Name: Oil Company et al Foothills 06-06-060-06W6  
Location: 06-06-060-06W06 UWI 100/06-06-060-06W6/0  
License Number: AB-license Region: Foothills  
Spud Date: 1/20/2060 16:30 Drilling Completed: March 13, 2060  
Surface Coordinates: Surf: 82.13m S & 458.8m E of NW corner Sec 06  
ICP: 58.4m N & 584.8m E of SW corner Sec 06  
Bottom Hole Coordinates: FTD: 244.2m S & 801.8m E of NW corner Sec 06  
Ground Elevation (m): 1286.60 K.B. Elevation (m): 1292.10  
Logged Interval (m): 2280 To: 4312MD Total Depth (m): 4312MD  
Formation: Dunvegan C  
Type of Drilling Fluid: Invert oil

Printed by HORIZONTAL.LOG from WellSight Systems 1-800-447-1534 www.WellSight.co

### OPERATOR

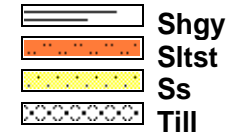
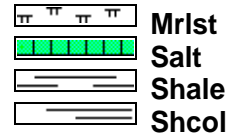
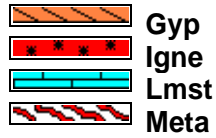
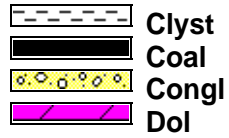
Company: Oil Company  
Address: 800, 555 - 4th Ave. S.W. Calgary, AB T2P 3E7  
0 403.234.7625, www.WellsiteGeologists.com  
C 403.660.9883, info@WellsiteGeologists.com



### GEOLOGIST

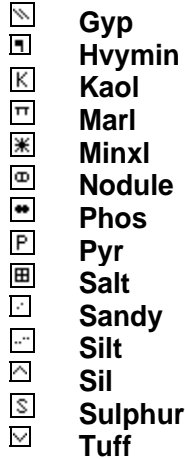
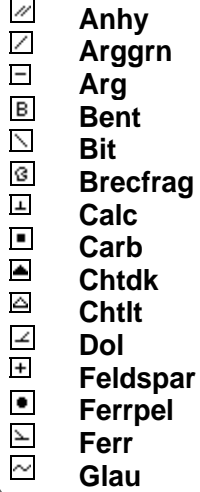
Name: Wellsite Geologist, B.Sc.  
Company: Wellsite Geologists Inc.  
Address: 800, 555 - 4th Ave. S.W. Calgary, AB T2P 3E7  
0 403.234.7625, www.WellsiteGeologists.com  
C 403.660.9883, info@WellsiteGeologists.com

### ROCK TYPES

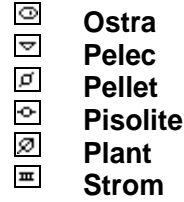
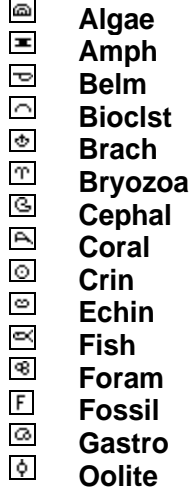


### ACCESSORIES

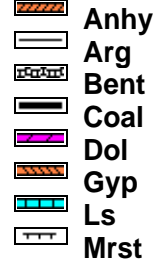
#### MINERAL



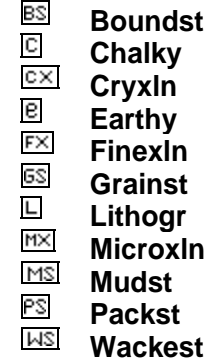
#### FOSSIL



#### STRINGER

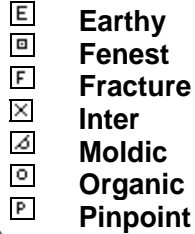


#### TEXTURE



### OTHER SYMBOLS

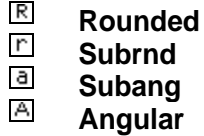
#### POROSITY



#### SORTING



#### ROUNDING



#### OIL SHOW

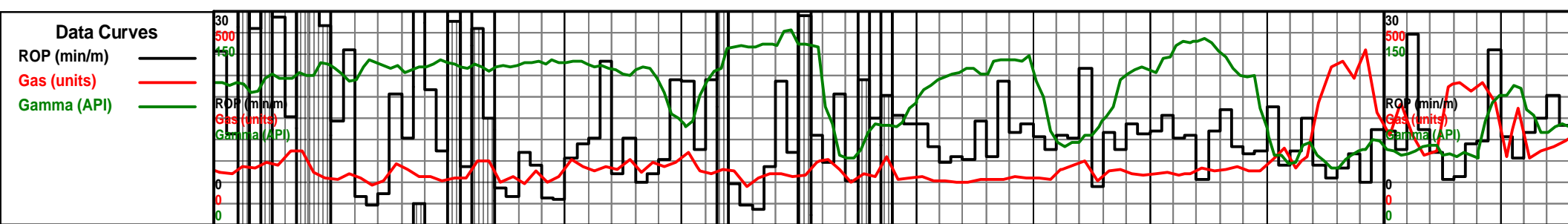


#### INTERVAL

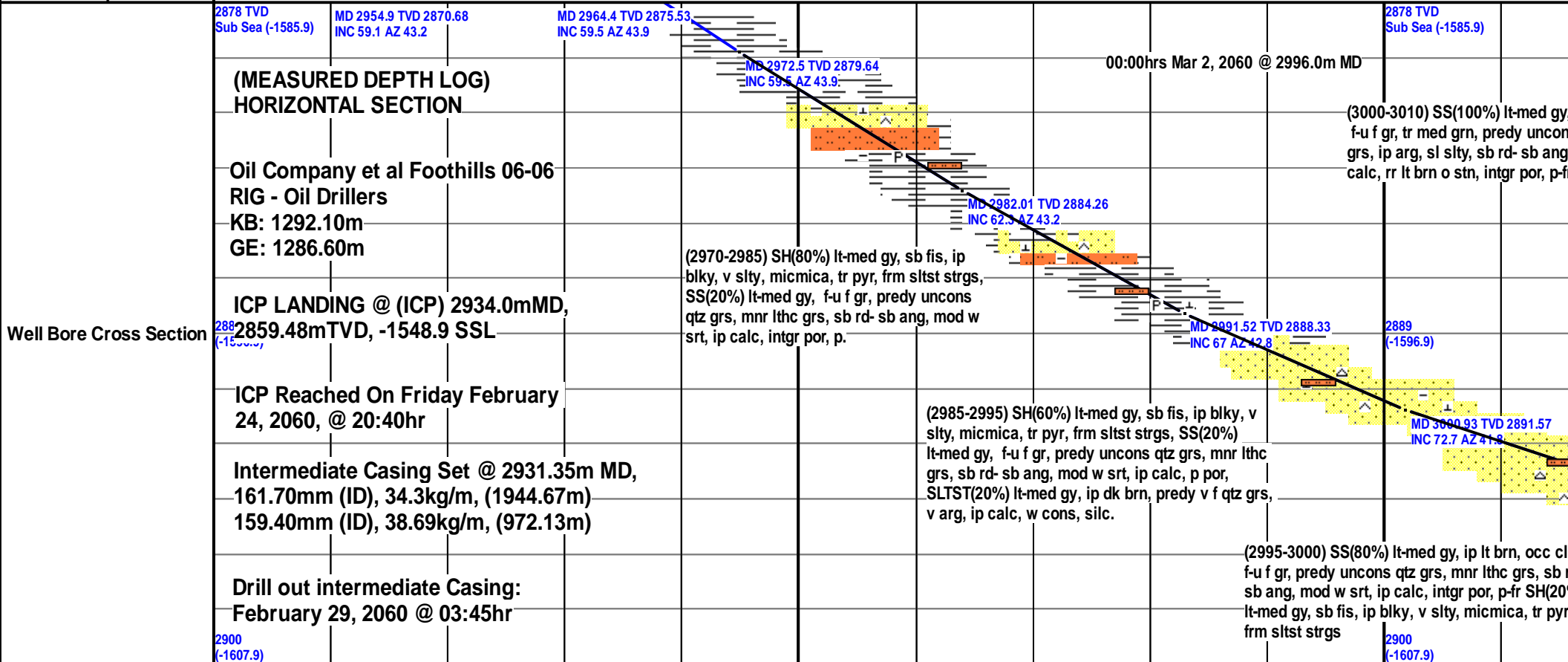


#### EVENT

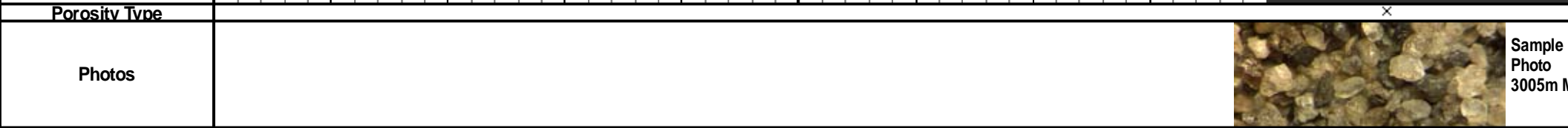




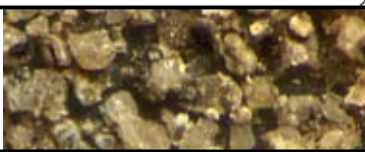
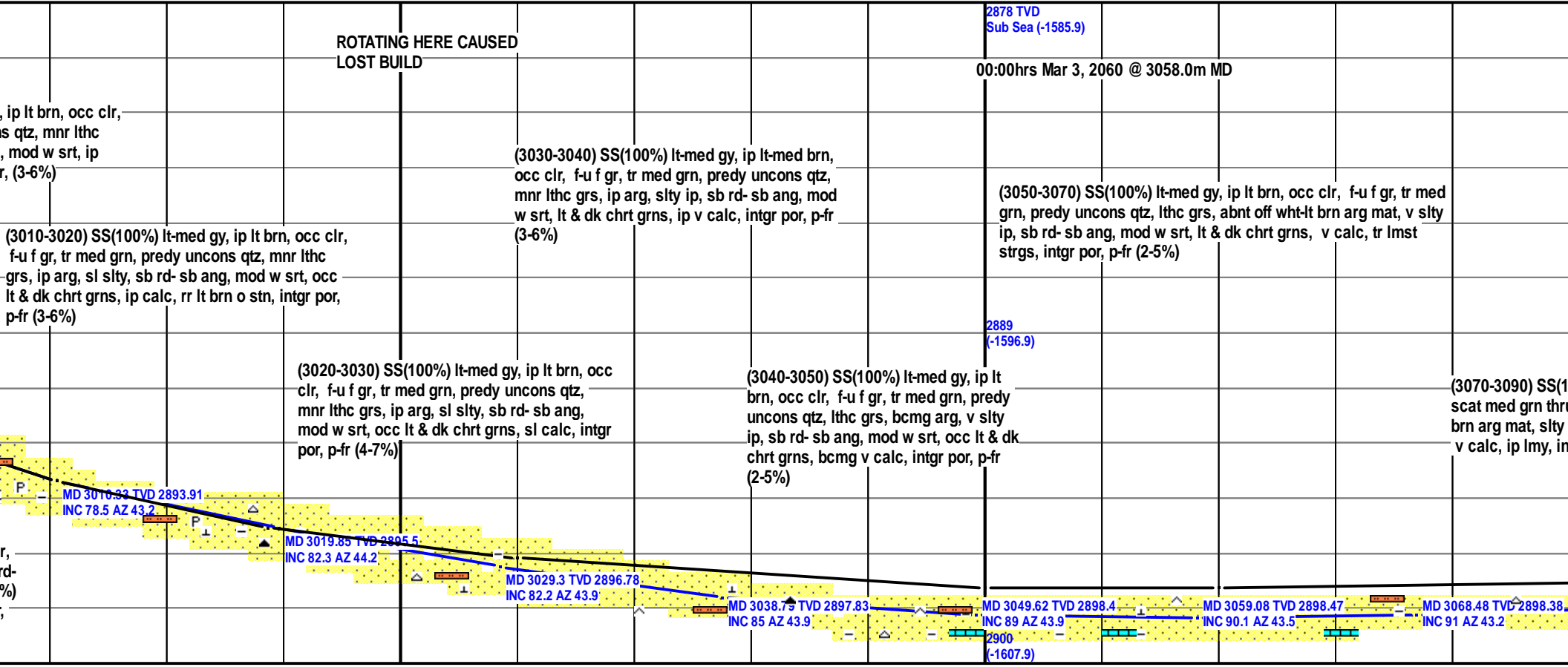
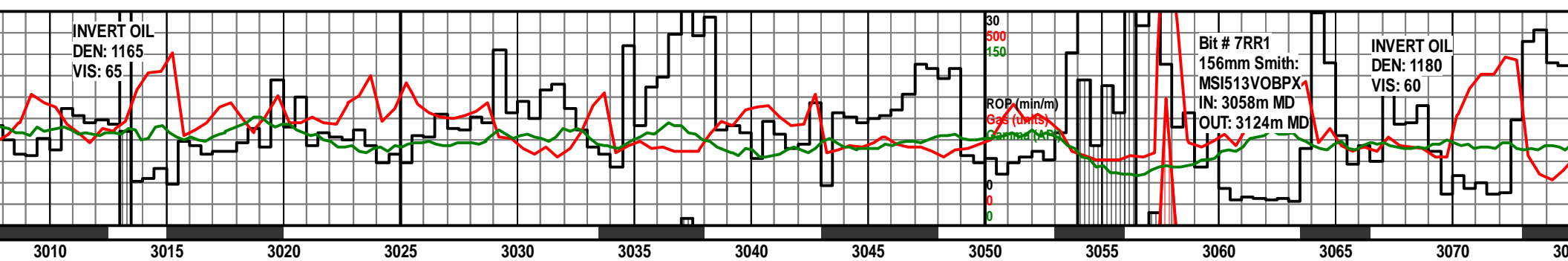
Slide/Rotate Depth



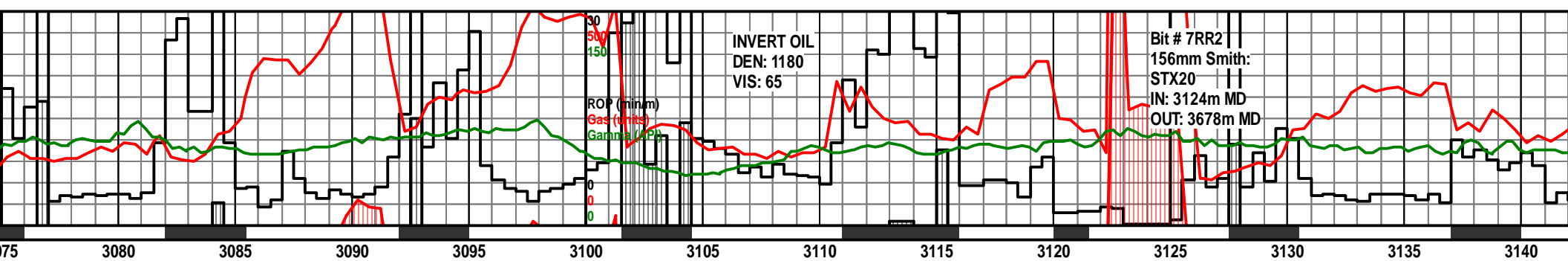
Oil Shows	
Porosity	24% 18% 12% 6%
Porosity Type	



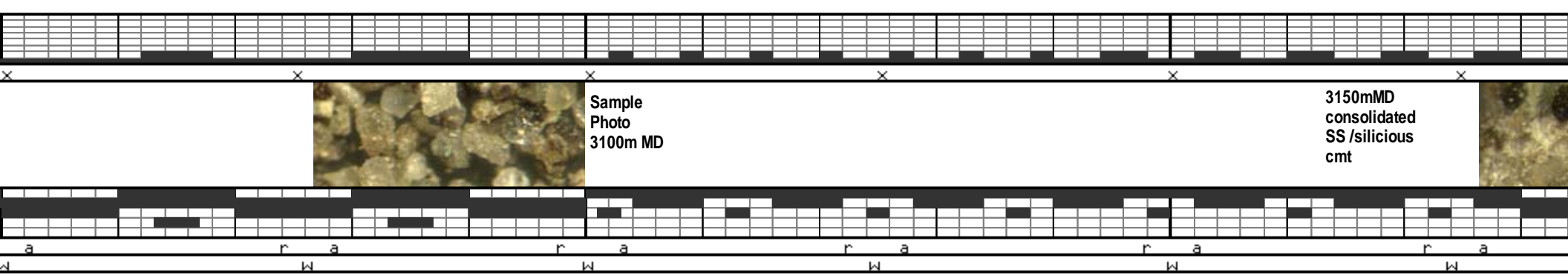
Grain Size	1/16 mm 1/8 mm 1/4 mm 1/2 mm 1 mm
Roundness	
Sortina	

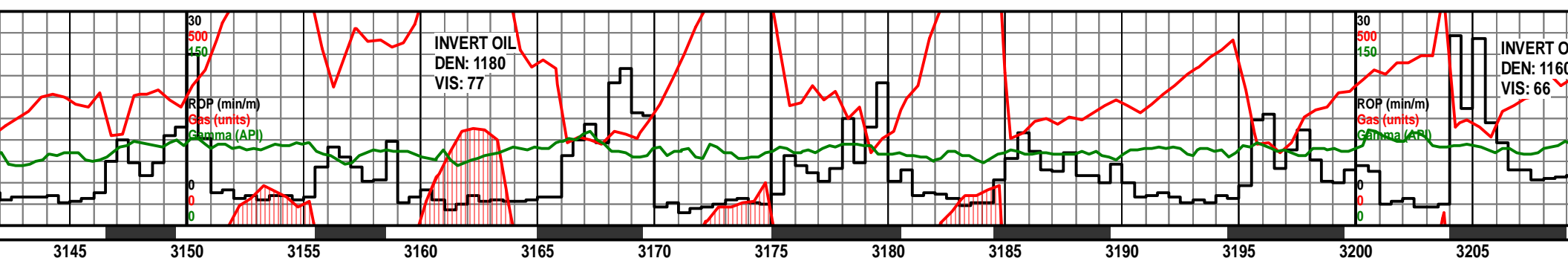


Sample Photo  
3050m MD



<p>2878 TVD Sub Sea (-1585.9)</p> <p>00:00hrs Mar 4, 2060 @ 3101.0m MD</p> <p>(3090-3100) SS(100%) lt-med gy, ip lt brn, scat clr grns, f-u f gr, scat med grn thru, predy uncons qtz, occ lthc grs, abnt off wht-lt brn arg mat, slty ip, sb rd- sb ang, mod w srt, tr lt &amp; dk chrt grns, v calc, ip lmy, intgr por, p-fr (3-6%)</p>	<p>2889 (-1596.9)</p> <p>(3100-3120) SS(100%) lt-med gy, rr lt brn, occ clr, f-u f gr, tr med grn thru, predy uncons, ip lse cons qtz, occ lthc grs, scat off wht phos nod, bcmg slty, ip arg, sil, sb rd- sb ang, mod w srt, tr lt &amp; dk chrt grns, v calc, sl lmy, intgr por, p-fr (2-5%)</p>	<p>00:00hrs Mar 5, 2012 @ 3124.0m MD</p> <p>00:00hrs Mar 6, 2012 @ 3132.0m MD</p> <p>(3120-3140) SS(100%) lt gy, ip lt brn, occ clr, f-u f gr, mnr tr med grn thru, predy uncons, ip cons qtz w cal cmt, occ lthc grs, rr off wht phos nod, ip slty, sl arg, ip sil, sb rd- sb ang, mod w srt, tr lt &amp; dk chrt grns, v calc, intgr por, p-fr (3-5%)</p>	<p>(3140-3150) SS(100%) lt med gy, mnr tr med grn thru, predy uncons, ip lse cons qtz, occ lthc grs, scat off wht phos nod, bcmg slty, ip arg, sil, sb rd- sb ang, mod w srt, tr lt &amp; dk chrt grns, v calc, intgr por, p-fr (3-5%)</p>
<p>MD 3077.79 TVD 2538.15 INC 91.8 AZ 42.5</p> <p>MD 3087.43 TVD 2897.74 INC 93.1 AZ 41.1</p>	<p>MD 3096.88 TVD 2897.22 INC 93.3 AZ 40</p> <p>MD 3106.19 TVD 2896.74 INC 92.6 AZ 38.6</p>	<p>MD 3115.61 TVD 2896.46 INC 91.3 AZ 37.5</p> <p>MD 3122.92 TVD 2896.27 INC 91.3 AZ 35.8</p> <p>MD 3132.35 TVD 2896.13 INC 90.4 AZ 34.4</p>	<p>MD 3141.76 TVD 2896.02 INC 90.4 AZ 34.4</p>
<p>2900 (-1607.9)</p>			

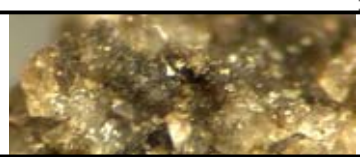




<p>2878 TVD Sub Sea (-1585.9)</p> <p>(3150-3160) SS(100%) lt-med gy, occ clr, ip s&amp;p f-u f gr, mnr tr med grn thru, predy cons-lse cons qtz w sil cmt, occ lthc grs, mnr slty, mnr arg, sb rd- sb ang, mod w srt, tr lt &amp; dk chrt grns, tr glauc, mnr cal, intgr por, p-fr (3-6%)</p> <p>2889 (-1596.9)</p> <p>(100%) lt gy, ip lt brn, occ clr, f-u f grn thru, predy uncons, ip cons qtz lthc grs, rr off wht phos nod, ip slty, rd- sb ang, mod w srt, tr lt &amp; dk c, intgr por, p-fr (3-5%)</p> <p>MD 3144.81 TVD 2896.08 INC 90.3 AZ 32.6</p> <p>MD 3154.95 TVD 2895.95 INC 91.1 AZ 31.9</p> <p>2900 (-1607.9)</p>	<p>(3160-3180) SS(100%) lt-med gy, occ clr, ip brn u f-l med grnd, predy cons-lse cons qtz w sil cmt, ip uncons, occ lthc grs, brnsh gy sltst strgs, ip arg, sb rd- sb ang, mod w srt, tr lt &amp; dk chrt grns, tr glauc, abnt off wht phos nod, mnr tr cal, intgr por, p-fr (3-6%)</p> <p>MD 3161.42 TVD 2895.72 INC 91.7 AZ 31.6</p>	<p>(3180-3200) SS(100%) lt-med gy, ip clr-trans, ip lt brn u f-l med grnd, predy cons-lse cons qtz w sil cmt, ip uncons, occ lthc grs, occ brnsh gy sltst strgs, ip arg, sb rd- sb ang, mod w srt, tr lt &amp; dk chrt grns, tr glauc, scat off wht phos nod, mnr tr cal, intgr por, p-fr (3-6%)</p> <p>MD 3170.8 TVD 2895.5 INC 91 AZ 30.5</p>	<p>MD 3180.41 TVD 2895.33 INC 91 AZ 28.8</p>	<p>MD 3190.04 TVD 2895.26 INC 89.9 AZ 27</p>	<p>2878 TVD Sub Sea (-1585.9)</p> <p>(3200-3220) SS(100%) lt-med gy, cons-lse cons qtz w sil cmt, ip strgs, ip arg, sb rd- sb ang, mod w srt, tr lt &amp; dk chrt grns, tr glauc, scat off wht phos nod, mnr tr cal, intgr por, p-fr (3-6%)</p> <p>2889 (-1596.9)</p> <p>MD 3199.57 TVD 2895.33 INC 89.2 AZ 25.2</p> <p>2900 (-1607.9)</p>
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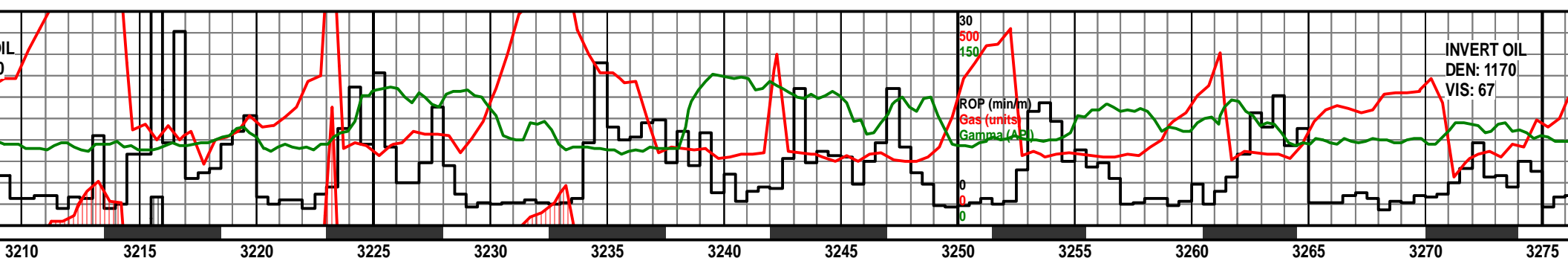


Sample Photo  
3150m MD



3200mMD/  
consolidated  
SS intgran  
porosity



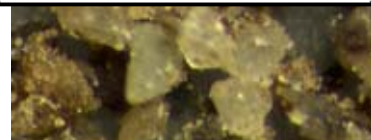


INVERT OIL  
DEN: 1170  
VIS: 67

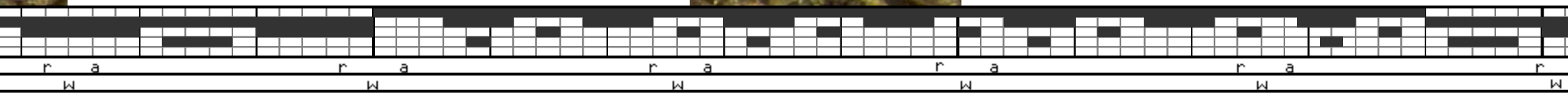
<p>(3220-3230) SS(100%) lt-med gy, ip clr, ip lt brn u f-l med grnd, predy cons-lse cons qtz w sil cmt, ip uncon, occ lthc grs, mnr brnsh gy slst strgs, ip arg, sb rd- sb ang, mod w srt, tr lt &amp; dk chrt grns, tr glauc, rr phos nod, abnt sh strgs, mnr tr cal, intgr por, p-fr (3-5%)</p>	<p>(3220-3230) SS(100%) lt-med gy, ip clr, ip lt brn u f-l med grnd, predy cons-lse cons qtz w sil cmt, ip uncon, occ lthc grs, mnr brnsh gy slst strgs, ip arg, sb rd- sb ang, mod w srt, tr lt &amp; dk chrt grns, tr glauc, rr phos nod, abnt sh strgs, mnr tr cal, intgr por, p-fr (3-5%)</p>	<p>(3230-3250) SS(70%) lt-med gy, ip clr-trans, ip lt brn u f-l med grnd, predy cons-lse cons qtz w sil cmt, ip uncon, occ lthc grs, occ brnsh gy slst strgs, ip arg, sb rd- sb ang, mod w srt, tr lt &amp; dk chrt grns, tr glauc, scat off wht phos nod, mnr tr cal, intgr por, p-fr (2-4%), SH(30%) med gy, sb fis, ip blk, v slty, micmica, sft-med, v arg, sil.</p>	<p>(3250-3260) SS(80%) lt-med gy, clr-trans, ip lt brn u f-l med grnd, predy cons, occ lse cons qtz w sil cmt, ip uncon, occ lthc grs, occ brnsh gy slst strgs, v arg, sb rd- sb ang, mod w srt, tr lt &amp; dk chrt grns, tr pyr, abnt off wht phos nod, mnr tr cal, intgr por, p-fr (2-5%), SH(20%) med gy, sb fis, ip blk, v slty, micmica, sft-med, v arg, sil.</p>	<p>(3260-3270) SS(90%) clr-trans, ip cons s&amp;p, u f-l med grnd qtz, predy lse cons w sil cmt, abnt uncon grns, sb rd- sb ang, mod w srt, occ lthc grs, sl slty, mnr arg mat, tr lt &amp; dk chrt grns, tr pyr, tr off wht phos nod, mnr tr cal, intgr por, p-fr (3-5%), SH(10%) med gy, sb fis, ip blk, v slty, micmica, sft-med, v arg, sil.</p>	<p>(3270-3290) SS(100%) med grnd qtz, lse cmt, ip uncon, occ lthc grs, mnr brnsh gy slst strgs, ip arg, sb rd- sb ang, mod w srt, tr lt &amp; dk chrt grns, tr glauc, rr phos nod, abnt sh strgs, mnr tr cal, intgr por, p-fr (3-5%)</p>
<p>2878 TVD Sub Sea (-1585.9)</p>					
<p>2900 (-1607.9)</p>					
<p>MD 3209.07 TVD 2895.46 INC 89.2 AZ 23.5</p>	<p>MD 3218.57 TVD 2895.52 INC 90.1 AZ 22.1</p>	<p>MD 3228.03 TVD 2895.55 INC 89.6 AZ 20</p>	<p>MD 3237.49 TVD 2895.61 INC 89.6 AZ 17.5</p>	<p>MD 3246.86 TVD 2895.64 INC 90.1 AZ 15.7</p>	<p>MD 3256.36 TVD 2895.58 INC 90.6 AZ 14.3</p>
<p>MD 3265.85 TVD 2895.48 INC 90.6 AZ 13.6</p>					

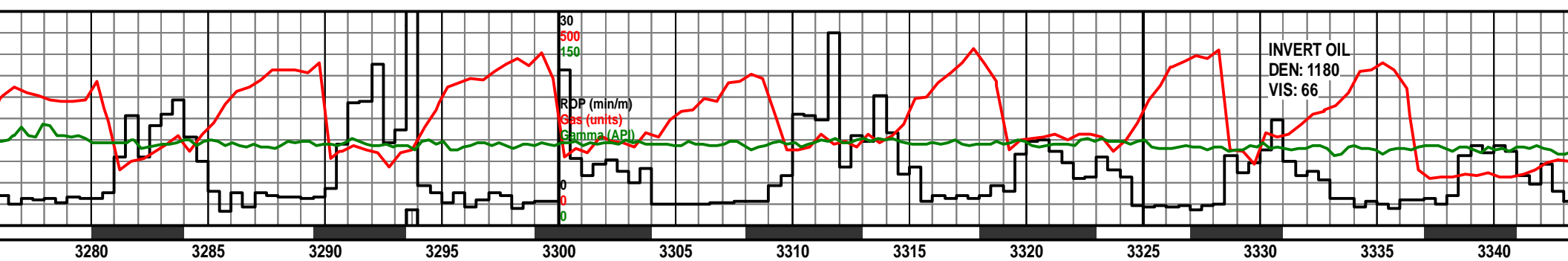


3200m MD  
unconsolidate  
quartz grains



Sample  
Photo  
3250m MD





00:00hrs Mar 7, 2060 @ 3292.0m MD

2878 TVD  
Sub Sea (-1585.9)

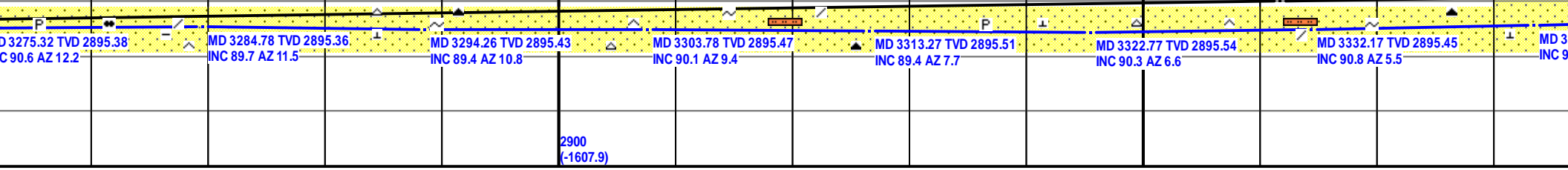
(3275-3290) SS(100%) clr-trans, lt gy - lt brn, ip cons s&p, u f-l med grnd qtz, lse cons w sil cmt, predy uncongs grns, sb rd- sb ang, w srt, mnr arg mat, tr lt & dk chrt grns, tr pyr, rr off cal, intgr por, p-fr (3-6%)

(3300-3320) SS(100%) clr-trans, lt gy - lt brn, ip cons s&p, u f-l med grnd qtz, lse cons w sil cmt, predy uncongs grns, sb rd- sb ang, w srt, mnr slt, mnr arg mat, tr lt & dk chrt grns, tr pyr, tr glauc, mnr tr cal, intgr por, p-fr (4-6%)

(3340-3350) SS(100%) clr-trans, lt gy - lt brn, ip cons s&p, u f-l med grnd qtz, lse cons w sil cmt, predy uncongs grns, sb rd- sb ang, w srt, mnr arg mat, tr lt & dk chrt grns, tr pyr, tr glauc, mnr tr cal, intgr por, p-fr (3-5%)

(3290-3300) SS(100%) clr-trans, lt gy - lt brn, ip cons s&p, u f-l med grnd qtz, lse cons w sil cmt, predy uncongs grns, sb rd- sb ang, w srt, sl slty, mnr arg mat, tr lt & dk chrt grns, tr pyr, tr glauc, mnr tr cal, intgr por, p-fr (3-6%)

(3320-3340) SS(100%) clr-trans, lt gy - lt brn, ip cons s&p, u f-l med grnd qtz, lse cons w sil cmt, predy uncongs grns, sb rd- sb ang, w srt, mnr slt, mnr lt gy arg mat, tr lt & dk chrt grns, sil, tr pyr, tr glauc, rr cal, intgr por, p-fr (3-5%)



2900  
(-1607.9)

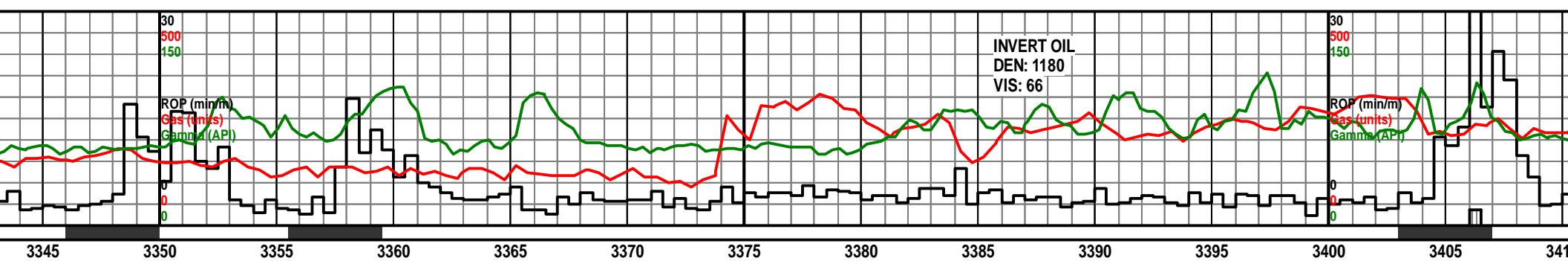
3300m MD  
consolidated  
SS  
submersed in  
HCL



3300m MD  
uncons U.  
fine to L med  
grained

3360m MD  
Silty s  
string





2878 TVD  
Sub Sea (-1585.9)  
GAS DETECTOR MALFUCTION FROM 3336m TO 3374m MD

2878 TVD  
Sub Sea (-1585.9)

S(100%) clr-trans, lt gy - lt brn, ip  
l med grnd qtz, lse cons w sil cmt,  
grns, sb rd- sb ang, w srt, mnr slt,  
mat, tr lt & dk chrt grns, sil, tr pyr, tr  
intgr por, p-fr (3-5%)

(3370-3380) SS(100%) lt gy-lt brn, ip cons  
clr-trans s&p qtz, u f-l med grnd, occ cons  
frags w sil cmt, predy scat unconcs grns, sb rd-  
sb ang, w srt, mnr sil sltst strgs, arg ip, tr lt &  
dk chrt grns, tr pyr, tr glauc, rr cal, intgr por,  
p-fr (3-5%)

(3400-3420) SS(90%) lt-med gy ip b  
frags w sil cmt, predy scat unconcs  
dk chrt grns, sltst strgs, mnr tr pyr,  
(2-4%) SH(10%) lt gysh brn, sb fis,  
sft-med, v arg.

2(3350-3370) SS(80%) lt gy-lt brn, ip cons clr-trans s&p qtz, u f-l  
med grnd, occ cons frags w sil cmt, predy scat unconcs grns, sb  
rd- sb ang, w srt, abnt sil slt, v arg ip, tr lt & dk chrt grns, tr pyr, tr  
glauc, rr cal, intgr por, p (2-4%) SH(20%) lt gysh brn, sb fis, ip  
blky, v slty, mnr micmica, sft-med, v arg.

(3380-3400) SS(90%) med gy-med brn, ip cons, u f-l med grnd, occ  
cons frags w sil cmt, predy scat unconcs grns, sb rd- sb ang, w srt,  
abnt amt arg mat, incrg amnts v f sil grns, tr lt & dk chrt grns, tr  
pyr, tr glauc, rr cal, intgr por, p-fr (2-5%) SH(10%) lt gysh brn, sb  
fis, ip blky, v slty, mnr micmica, sft-med, v arg.

MD 3341.69 TVD 2895.29 INC 91.1 AZ 4.8	MD 3351.24 TVD 2895.11 INC 91.1 AZ 2.7	MD 3360.74 TVD 2894.92 INC 91.1 AZ 1.3	MD 3370.07 TVD 2894.74 INC 91.1 AZ 1.3	MD 3379.57 TVD 2894.57 INC 91 AZ 1.7	MD 3388.97 TVD 2894.42 INC 90.8 AZ 1.7	MD 3398.51 TVD 2894.26 INC 91.1 AZ 2.7	MD 3407.11 TVD 2894.11 INC 90.4 AZ 1.7
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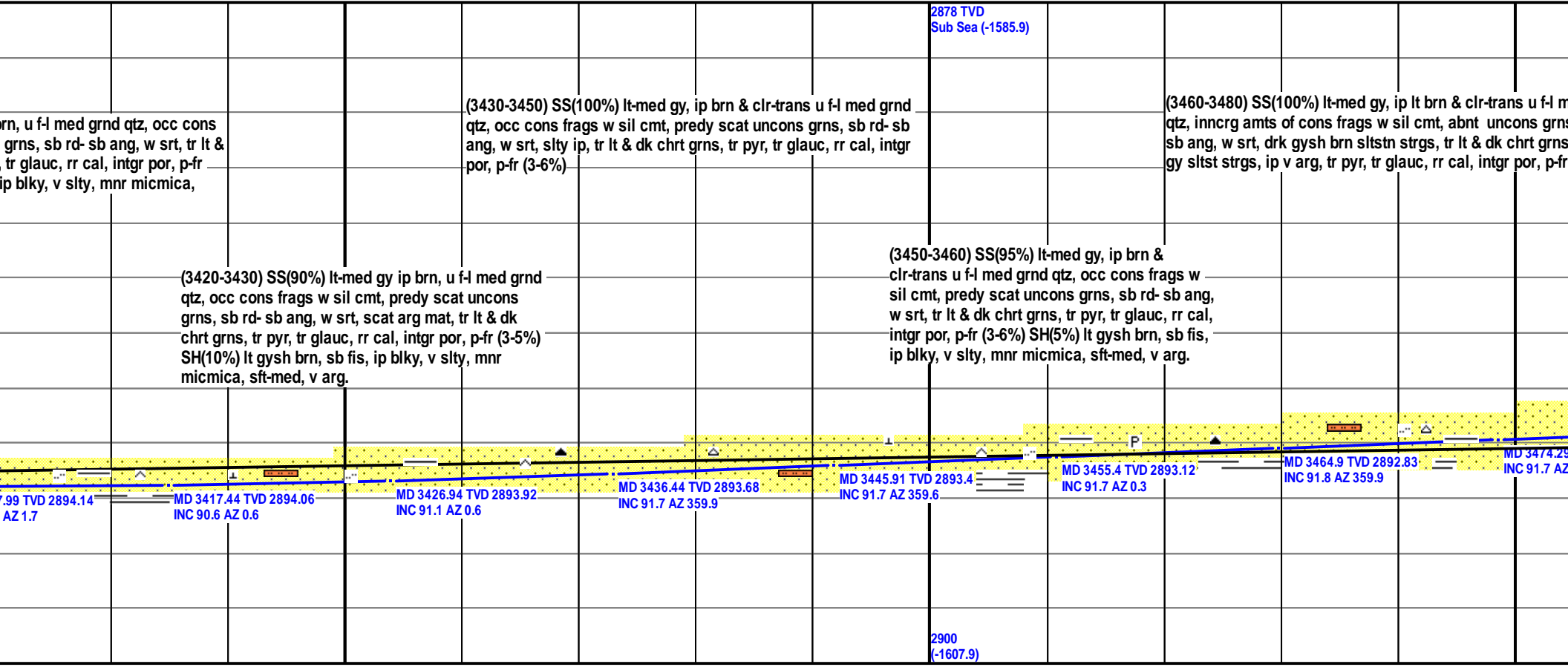
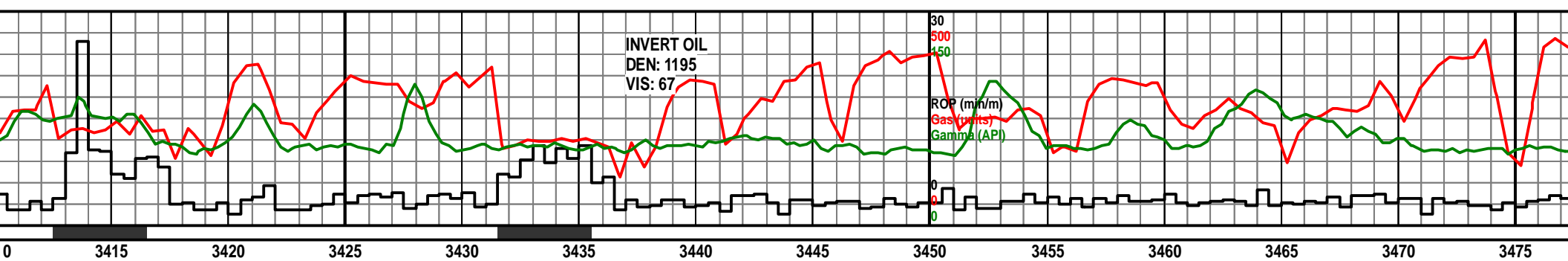
2900  
(-1607.9)

2900  
(-1607.9)

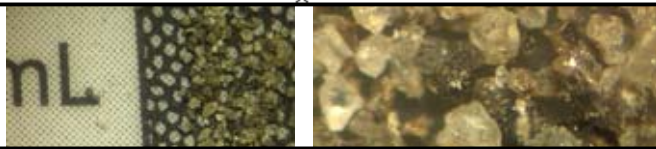


3360m MD  
consolidated  
SS

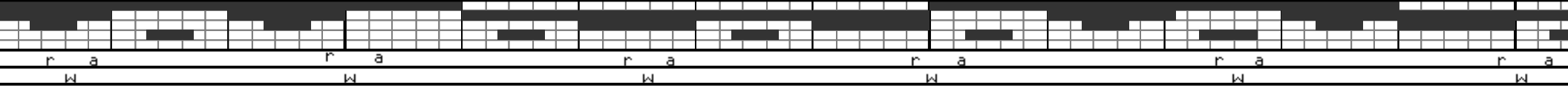
3400m MD  
SS and SH  
mix

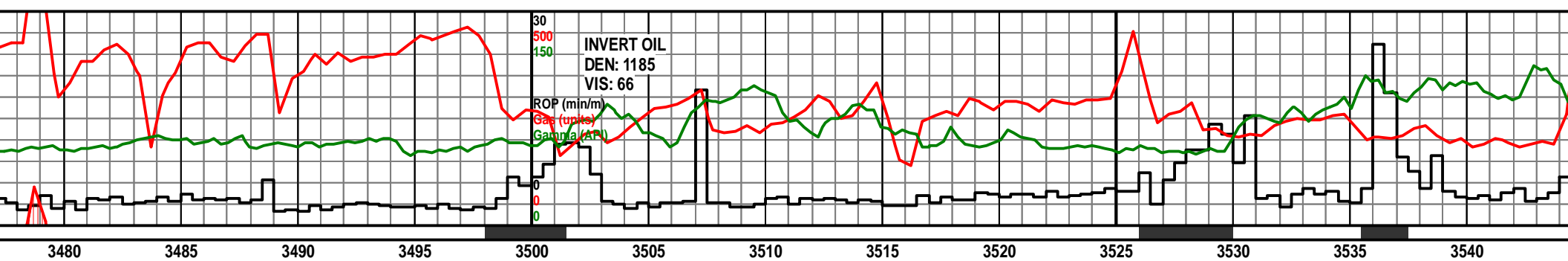


3450mMD  
uncons SS  
chart show  
U.F to L.M  
grained

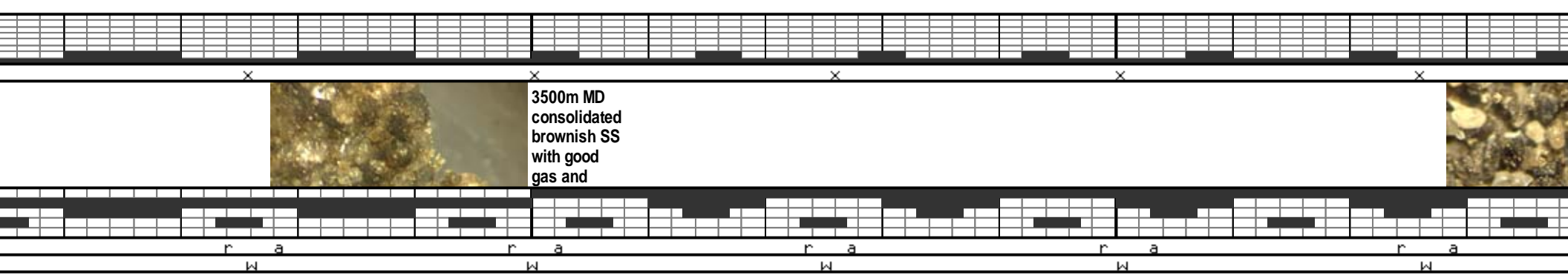


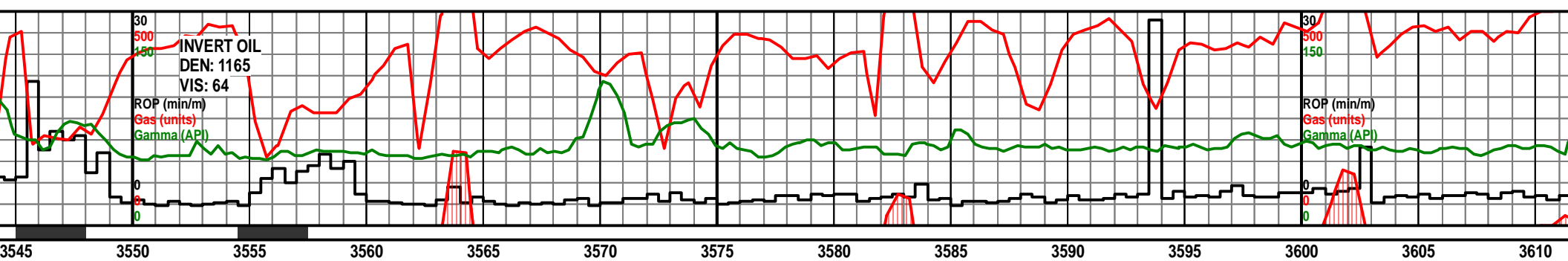
Sample  
Photo  
3450m MD  
unconsolidate





Depth (MD)	Description
2878 TVD Sub Sea (-1585.9)	00:00hrs Mar 8, 2060 @ 3508.0m MD
3480-3500	SS(100%) lt-med gysh brn u f-l med grnd qtz, abnt amts of cons frags w sil cmt, scat uncongs grns, sb rd- sb ang, w srt, med gysh brn sltstn strgs, tr lt & dk chrt grns, mnr tr pyr, tr glauc, rr cal, sl arg ip, intgr por, p-fr (3-6%)
3500-3520	SS(85%) lt-med gysh brn u f-l med grnd qtz, occ cons frags w sil cmt, predy scat uncongs grns, sb rd- sb ang, w srt, tr lt & dk chrt grns, tr pyr, tr glauc, rr cal, intgr por, p (2-5%) SH(15%) lt gysh brn, sb fis, ip blkly, v slty, mnr micmica, sft-med, v arg.
3520-3540	SS(80%) med gysh brn u f-l med grnd qtz, occ cons frags w sil cmt, predy scat uncongs grns, sb rd- sb ang, w srt, tr lt & dk chrt grns, bcmg v arg, tr pyr, tr glauc, rr cal, intgr por, p (2-4%) SH(20%) lt-med gysh brn, sb fis, sl blkly, v slty, sft-med, v arg.
3540-3560	SS(10%) lt-med gysh brn u f-l med grnd qtz, occ cons frags w sil cmt, predy scat uncongs grns, sb rd- sb ang, w srt, tr lt & dk chrt grns, mnr tr pyr, tr glauc, rr cal, intgr por, p (2-5%) SH(15%) lt gysh brn, sb fis, ip blkly, v slty, mnr micmica, sft-med, v arg.





INVERT OIL  
 DEN: 1165  
 VIS: 64  
 ROP (min/m)  
 Gas (units)  
 Gamma (API)

ROP (min/m)  
 Gas (units)  
 Gamma (API)

2878 TVD Sub Sea (-1585.9)

(3545-3560) SS(90%) lt-med gysh brn u f-l med grnd qtz, occ cons frags w sil cmt, predy scat uncons grns, sb rd- sb ang, w srt, tr lt & dk chrt grns, ip arg, tr pyr, tr glauc, rr cal, intgr por, p (2-5%) gylsh brn, sb fis, sl blkly, v slty, sft-med, v arg.

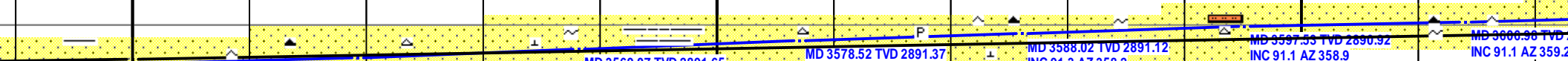
(3580-3600) SS(100%) lt gy-lt brn u f-l med grnd qtz, occ cons frags w sil cmt, predy scat uncons grns, sb rd- sb ang, w srt, tr lt & dk chrt grns, sl arg, slty ip, tr pyr, tr glauc, rr cal, intgr por, p-fr (3-6%)

(3560-3580) SS(95%) lt gylsh brn u f-l med grnd qtz, occ cons frags w sil cmt, predy scat uncons grns, sb rd- sb ang, w srt, tr lt & dk chrt grns, ip arg, tr pyr, tr glauc, rr cal, intgr por, p (3-5%) SH(5%) lt gylsh brn, sb fis, sl blkly, v slty, sft-med, v arg.

(3600-3620) SS(100%) lt gy-lt brn u f-l med grnd qtz, occ cons frags w sil cmt, predy scat uncons grns, sb rd- sb ang, w srt, tr lt & dk chrt grns, mnr arg mat, rr sltst intgr por, p-fr (4-7%)

2889 (-1596.9)

2889 (-1596.9)



MD 2892.2 TVD 2892.12 INC 90.6 AZ 358.9  
 MD 3559.61 TVD 2891.93 INC 91.7 AZ 358.9  
 MD 3569.07 TVD 2891.65 INC 91.7 AZ 359.2  
 MD 3578.52 TVD 2891.37 INC 91.7 AZ 358.2  
 MD 3588.02 TVD 2891.12 INC 91.3 AZ 358.2  
 MD 3597.55 TVD 2890.92 INC 91.1 AZ 358.9  
 MD 3606.98 TVD 2890.72 INC 91.1 AZ 359.2

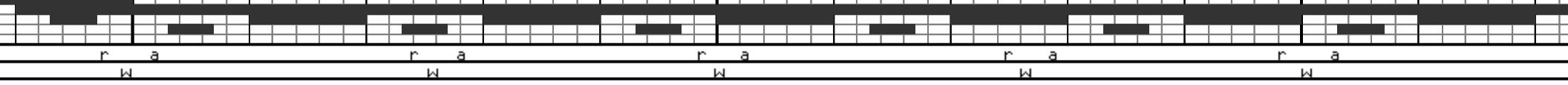
2900 (-1607.9)

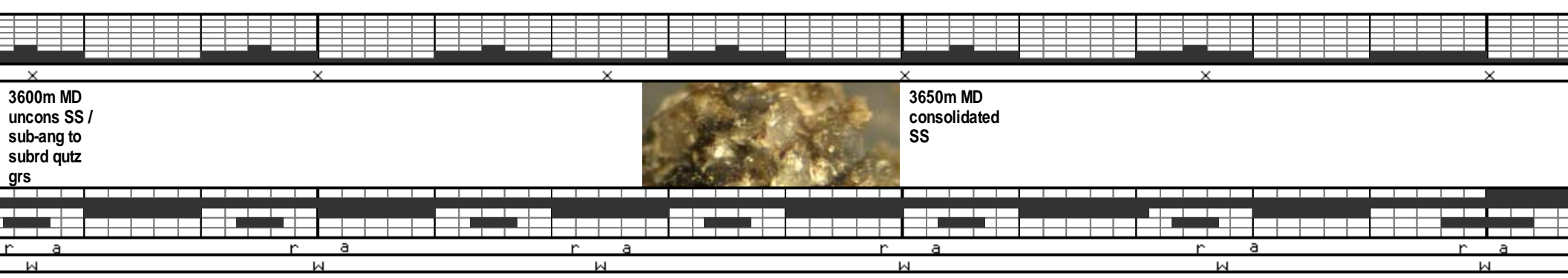
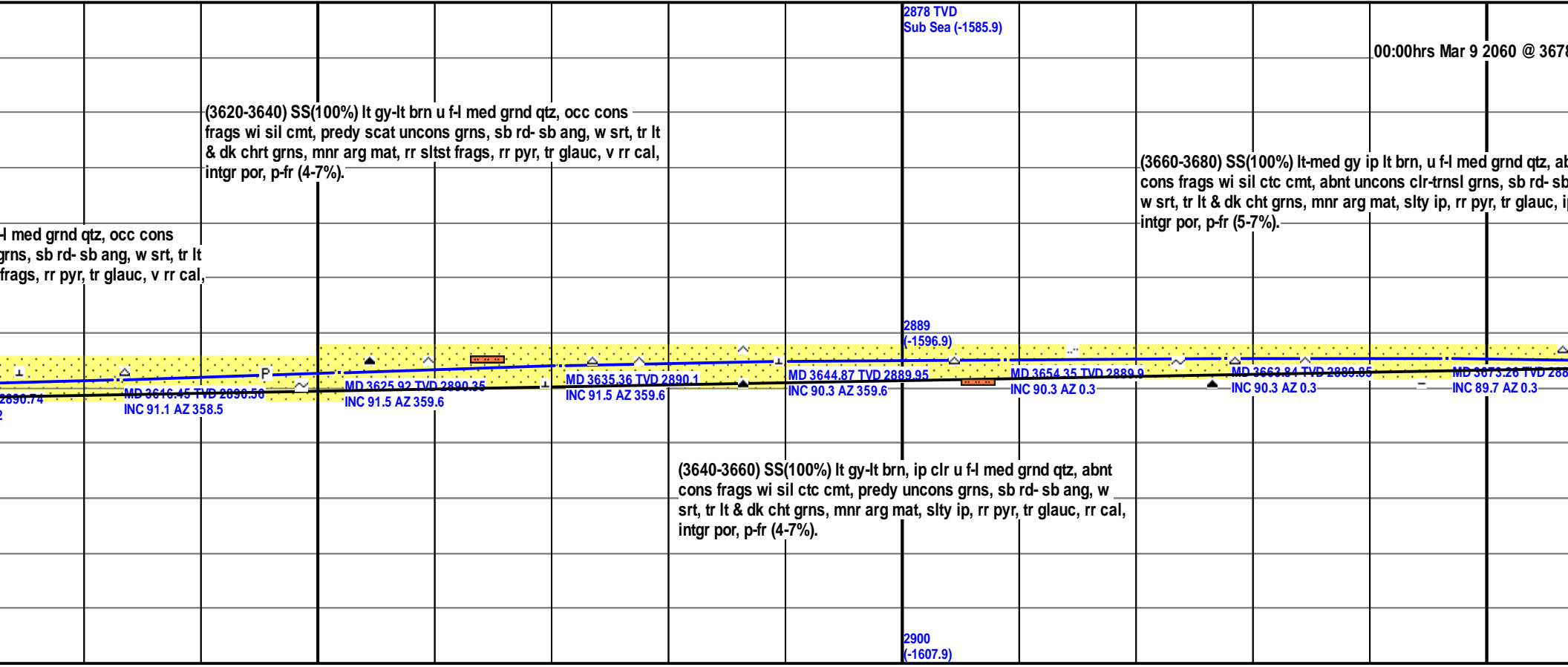
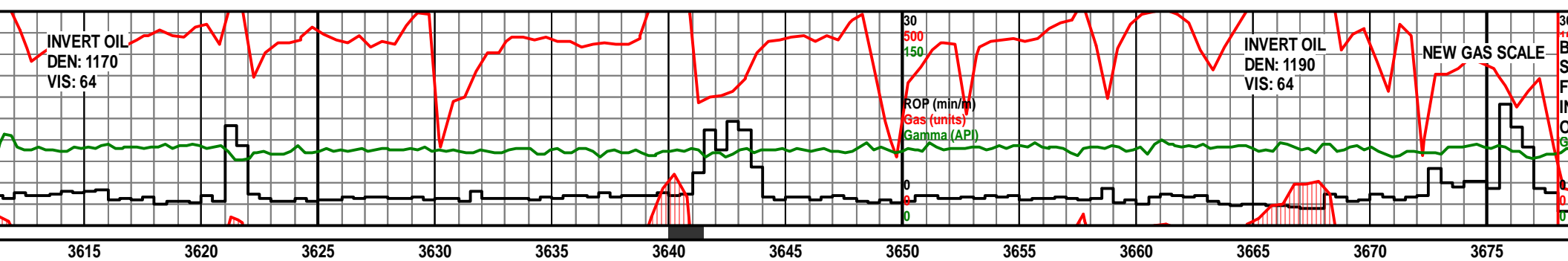
2900 (-1607.9)

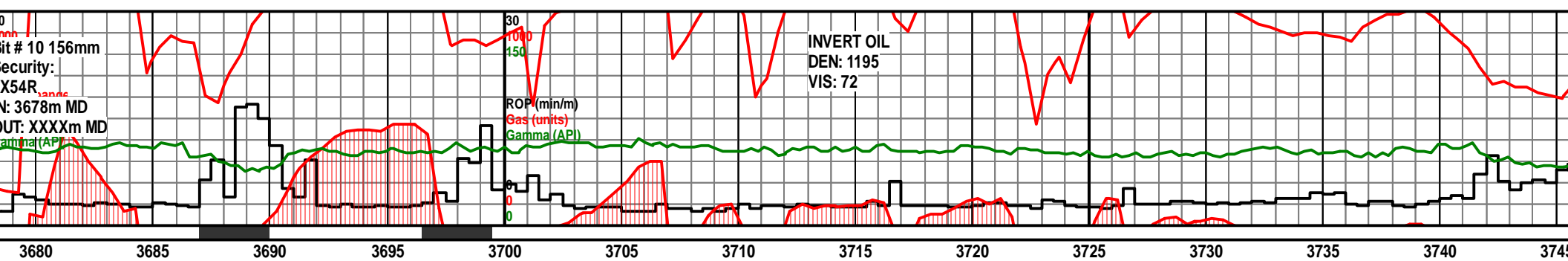


3550m MD unconsolidate SS and silty Shale mix

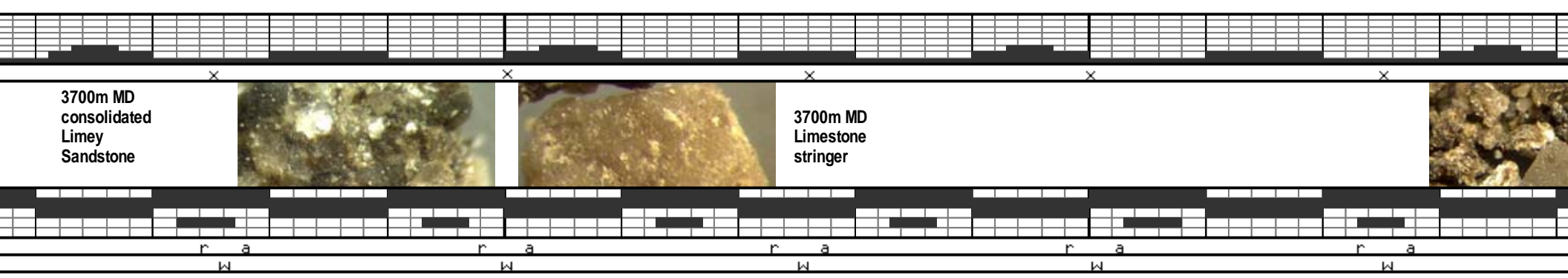
3600m MD loosely consolidated SS with contact silica

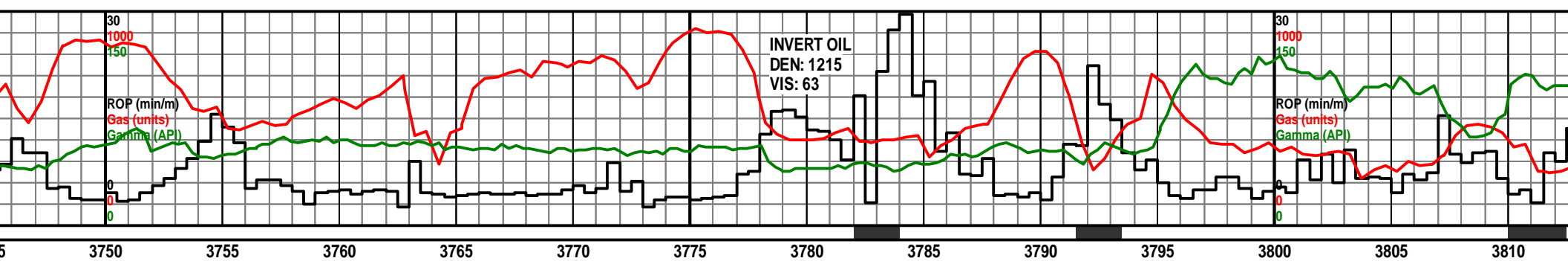






<p>3680-3690 MD</p> <p>(3680-3700) SS(100%) lt-med gy ip lt brn, u f-l med grnd qtz, abnt cons frags wi sil ctc cmt, abnt unconcs clr-trnsl grns, sb rd- sb ang, w srt, tr lt &amp; dk cht grns, mnr arg mat, slty ip, rr pyr, rr off wht phos nod, tr glauc, bcmg v calc, lmst strgs, intgr por, p-fr (5-7%).</p>	<p>2878 TVD Sub Sea (-1585.9)</p> <p>(3700-3720) SS(100%) lt-med gy ip lt brn, u f-l med grnd qtz, abnt cons frags wi sil ctc cmt, abnt unconcs clr-trnsl grns, sb rd- sb ang, w srt, tr lt &amp; dk cht grns, mnr arg mat, lt brn sltst strgs, trs of glauc, v calc, ip lmy, intgr por, p-fr (4-7%).</p>	<p>(3720-3740) SS(100%) lt-med gy ip lt brn, u f-l med grnd qtz, abnt cons frags wi sil ctc cmt &amp; cal cmt, abnt unconcs clr-trnsl grns, sb rd- sb ang, w srt, tr lt &amp; dk cht grns, dk arg mat, lt brn sltst strgs, trs of glauc, v calc, ip lmy, intgr por, p-fr (3-6%).</p> <p>(3740-3750) SS(100%) lt-med gy ip lt brn, u f-l med grnd qtz, abnt cons frags wi sil ctc cmt, abnt unconcs clr-trnsl grns, sb rd- sb ang, w srt, tr lt &amp; dk cht grns, mnr arg mat, lt brn sltst strgs, trs of glauc, v calc, ip lmy, intgr por, p-fr (4-7%).</p>
<p>MD 3682.72 TVD 2889.96 INC 89 AZ 359.6</p> <p>MD 3692.22 TVD 2890.02 INC 90.3 AZ 358.9</p>	<p>2889 (-1596.9)</p> <p>MD 3701.72 TVD 2889.85 INC 91.7 AZ 358.2</p> <p>2900 (-1607.9)</p>	<p>MD 3711.2 TVD 2889.58 INC 91.5 AZ 358.2</p> <p>MD 3720.68 TVD 2889.35 INC 91.3 AZ 358.2</p> <p>MD 3730.15 TVD 2889.16 INC 91 AZ 358.2</p> <p>MD 3739.63 TVD 2889.0 INC 90.6 AZ 358.2</p>



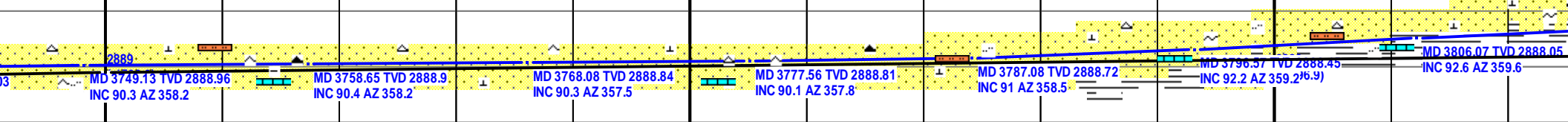


2878 TVD Sub Sea (-1585.9) 00:00hrs Mar 10 2012 @ 3769.0m MD 2878 TVD Sub Sea (-1585.9)

(3750-3770) SS(100%) med gy- brn, u-f-l med grnd qtz, abnt cons frags wi sil ctc cmt & cal cmt, abnt uncons clr-trnsl grns, sb rd- sb ang, w srt, tr lt & dk cht grns, dk arg mat, brn sltst strgs, becmg v silc, mnr trs of glauc, v calc, lmy, intrgr por, p-fr (3-6%).

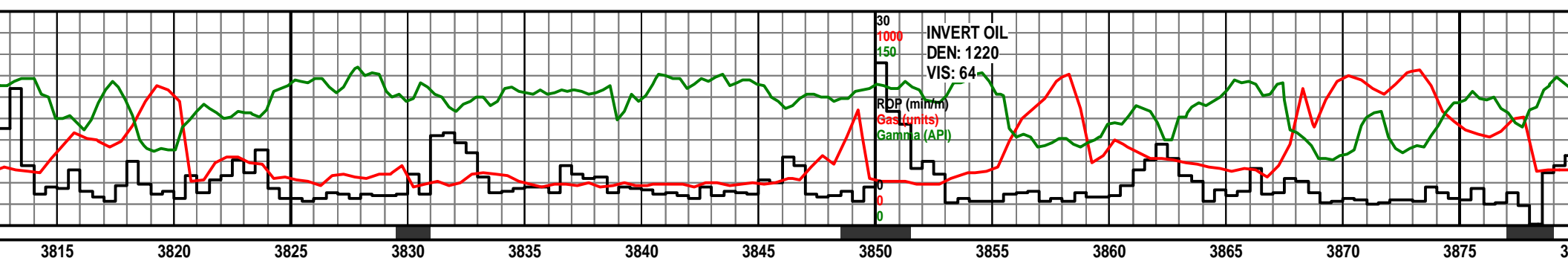
(3770-3790) SS(100%) lt-med gy, lt brn, u-f-l med grnd qtz, abnt cons frags wi sil ctc cmt & cal cmt, abnt uncons clr-trnsl grns, sb rd- sb ang, w srt, tr lt & dk cht grns, incg amt of ohh wht arg mat, lt brn sltst strgs, v silc, mnr trs of glauc, v calc, lmy, intrgr por, p-fr (3-6%).

(3800-3820) SS(70%) lt-med gysh brn u-f-l med grnd qtz, abnt cons frags wi sil ctc cmt & cal cmt, abnt uncons clr-trnsl grns, sb rd- sb ang, w srt, tr lt & dk cht grns, bcmg v arg, mnr trs pyr, tr glauc, v calc, intrgr por, p (3-5%) SH(30%) lt gy wi off wht arg lamn, s v arg.



(3790-3800) SS(85%) lt-med gysh brn u-f-l med grnd qtz, occ cons frags wi sil cmt & calc cmt, predy scat uncons grns, sb rd- sb ang, w srt, tr lt & dk cht grns, bcmg v arg, mnr trs pyr, tr glauc, v calc, intrgr por, p (3-5%) SH(15%) lt gysh brn, sb fis, sl blk, v slty, sft-med, v arg.

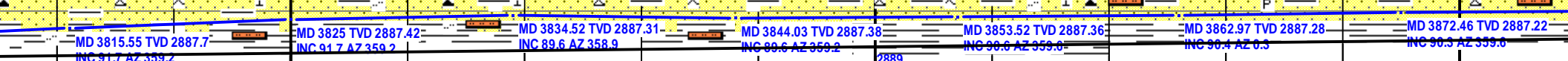




3815 3820 3825 3830 3835 3840 3845 3850 3855 3860 3865 3870 3875 3

med grnd qtz, occ cons frags grns, sb rd- sb ang, w srt, tr lt glauc, v calc, intgr por, p sb fis, sl blk, v slty, sft-med,

(3840-3860) SS(70%) lt-med gysh brn u-f-l med grnd s&p qtz, occ cons frags wi sil cmt & mnr calc cmt, abnt scat uncons grns, sb rd- sb ang, w srt, tr lt & dk chrt grns, v arg, mnr trs pyr, tr glauc, ip calc, intgr por, p (2-5%) SH(30%) lt gy, micmica, sb fis, sl blk, v slty, sft-med, v arg.



2878 TVD Sub Sea (-1585.9)

(3820-3840) SS(70%) lt-med gysh brn u-f-l med grnd qtz, occ cons frags wi sil cmt & calc cmt, abnt scat uncons grns, sb rd- sb ang, w srt, tr lt & dk chrt grns, v arg, ip silc, mnr trs pyr, tr glauc, v calc, intgr por, p (2-4%) SH(25%) lt gy, micmica sb fis, sl blk, v slty, sft-med, v arg.

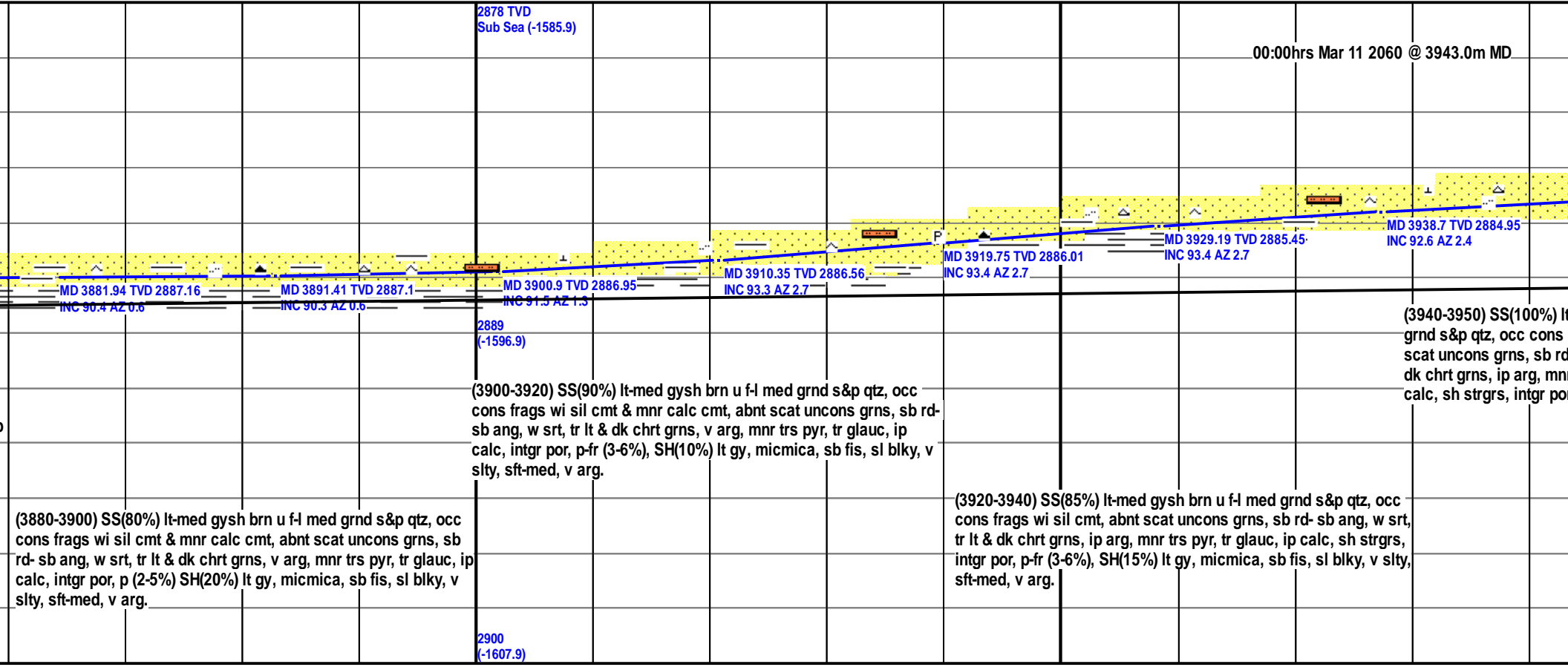
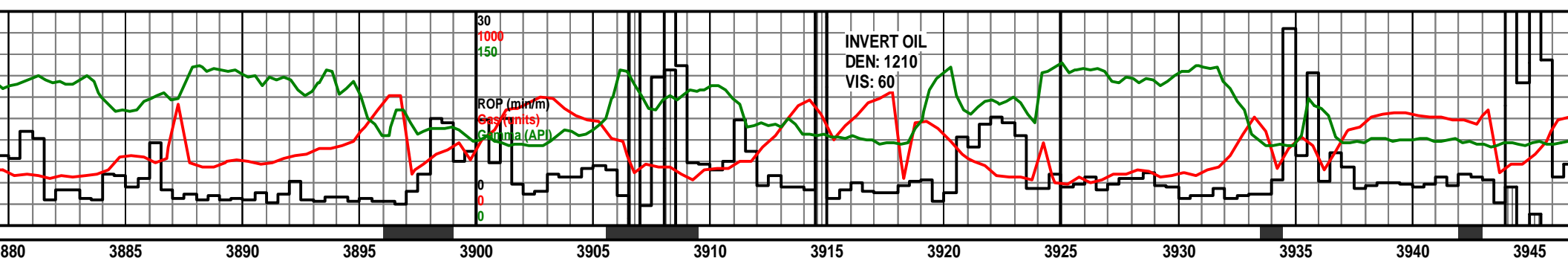
(3860-3880) SS(75%) lt-med gysh brn u-f-l med grnd s&p qtz, occ cons frags wi sil cmt & mnr calc cmt, abnt scat uncons grns, sb rd- sb ang, w srt, tr lt & dk chrt grns, v arg, mnr trs pyr, tr glauc, ip calc, intgr por, p (2-5%) SH(25%) lt gy, micmica, sb fis, sl blk, v slty, sft-med, v arg.

2889 (-1596.9)

2900 (-1607.9)





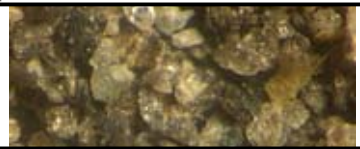


(3880-3900) SS(80%) lt-med gysh brn u f-l med grnd s&p qtz, occ cons frags wi sil cmt & mnr calc cmt, abnt scat uncons grns, sb rd-sb ang, w srt, tr lt & dk chrt grns, v arg, mnr trs pyr, tr glauc, ip calc, intgr por, p (2-5%) SH(20%) lt gy, micmica, sb fis, sl blk, v slty, sft-med, v arg.

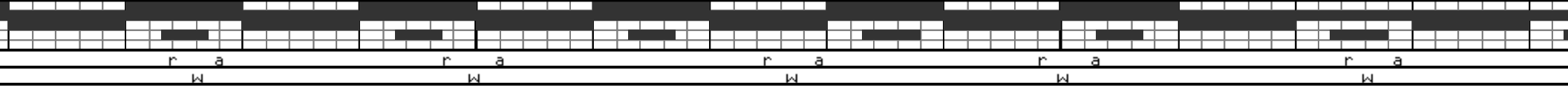
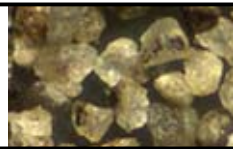
(3900-3920) SS(90%) lt-med gysh brn u f-l med grnd s&p qtz, occ cons frags wi sil cmt & mnr calc cmt, abnt scat uncons grns, sb rd-sb ang, w srt, tr lt & dk chrt grns, v arg, mnr trs pyr, tr glauc, ip calc, intgr por, p-fr (3-6%), SH(10%) lt gy, micmica, sb fis, sl blk, v slty, sft-med, v arg.

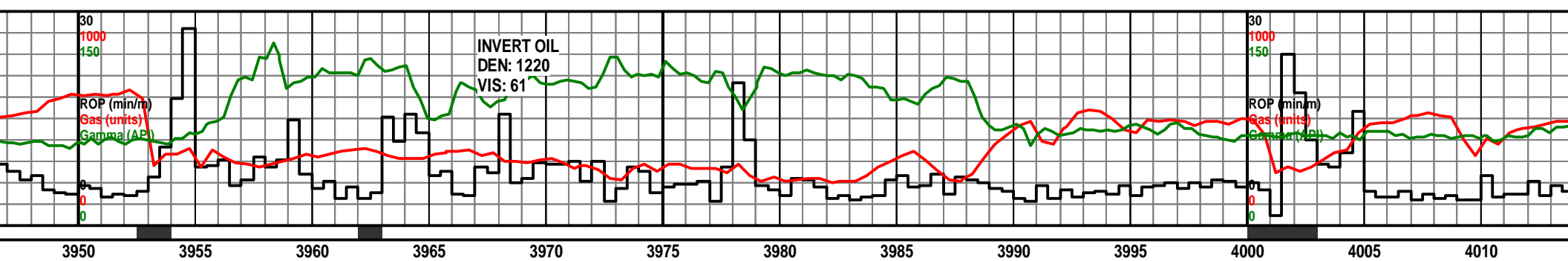
(3920-3940) SS(85%) lt-med gysh brn u f-l med grnd s&p qtz, occ cons frags wi sil cmt, abnt scat uncons grns, sb rd-sb ang, w srt, tr lt & dk chrt grns, ip arg, mnr trs pyr, tr glauc, ip calc, sh strgrs, intgr por, p-fr (3-6%), SH(15%) lt gy, micmica, sb fis, sl blk, v slty, sft-med, v arg.

(3940-3950) SS(100%) lt-med gysh brn u f-l med grnd s&p qtz, occ cons frags wi sil cmt, abnt scat uncons grns, sb rd-sb ang, w srt, tr lt & dk chrt grns, ip arg, mnr trs pyr, tr glauc, ip calc, sh strgrs, intgr por.



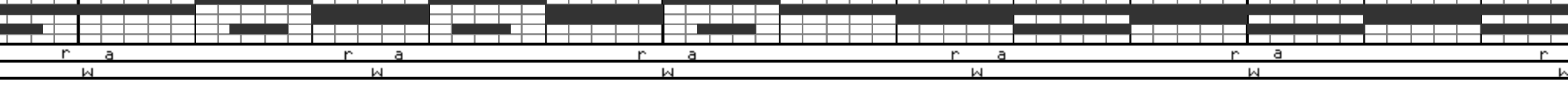
3910m MD unconsolidate quartz grains with silty shale

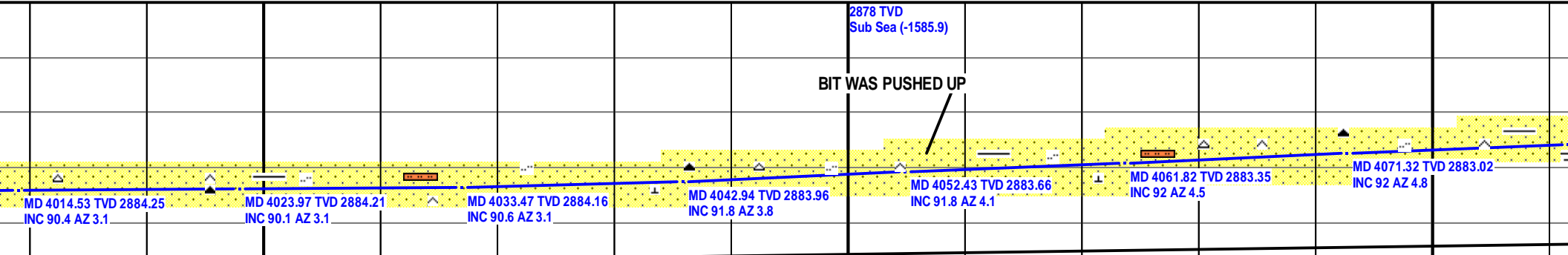
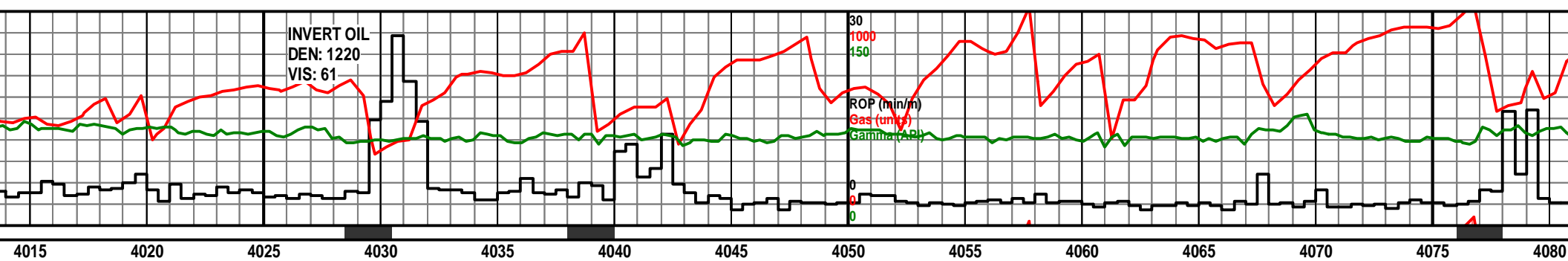




2878 TVD Sub Sea (-1585.9)								2878 TVD Sub Sea (-1585.9)		
MD 3948.22 TVD 2884.59 INC 91.8 AZ 3.4	MD 3957.66 TVD 2884.35 INC 91.1 AZ 3.1	MD 3967.16 TVD 2884.23 INC 90.3 AZ 2.7	MD 3976.65 TVD 2884.23 INC 89.7 AZ 1.7	MD 3986.14 TVD 2884.29 INC 89.6 AZ 2.4	MD 3995.54 TVD 2884.35 INC 89.6 AZ 1.7	MD 4005.04 TVD 2884.34 INC 90.6 AZ 2.7				

<p>gish brn u f-l med frags wi sil cmt, abnt l-sb ang, w srt, tr lt &amp; r trs pyr, tr glauc, ip r, p-fr (3-6%)</p>	<p>(3960-3980) SS(70%) lt-med gish brn u f-l med grnd s&amp;p qtz, predy cons frags wi sil cmt, scat unconcs grns, sb rd-sb ang, w srt, tr lt &amp; dk chrt grns, ip arg, mnr trs pyr, tr glauc, ip calc, sh strgrs, intgr por, p-fr (2-4%), SH(30%) lt-med gy, micmica, sb fis, sl blk, tr kaol, v slty, sft-med, v arg.</p>	<p>(3980-3990) SS(80%) lt-med gish brn u f-l med grnd s&amp;p qtz, predy cons frags wi sil cmt, scat unconcs grns, sb rd-sb ang, w srt, tr lt &amp; dk chrt grns, ip arg, mnr trs pyr, tr glauc, ip calc, sh strgrs, intgr por, p-fr (2-4%), SH(20%) lt-med gy, micmica, sb fis, sl blk, tr kaol, v slty, sft-med, v arg.</p>	<p>(3990-4000) SS(95%) lt-med gish brn u f-l med grnd s&amp;p qtz, predy cons frags wi sil cmt, scat unconcs grns, sb rd-sb ang, w srt, tr lt &amp; dk chrt grns, ip arg, mnr trs pyr, tr glauc, ip calc, sh strgrs, intgr por, p-fr (3-6%), SH(5%) lt-med gy, micmica, sb fis, sl blk, tr kaol, v slty, sft-med, v arg.</p>	<p>(4000-4020) SS(100%) lt gish l cons frags wi sil cmt, predy ur tr lt &amp; dk chrt grns, sl arg, sl intgr por, fr (5-8%)</p>
2900 (-1607.9)				2900 (-1607.9)





(4020-4040) SS(95%) Lt gysh brn u f-l med grnd s&p qtz, mnr cons frags wi sil cmt, predy uncongs grns, sb rd- sb ang, w srt, tr lt & dk chrt grns, sl arg, sl slty, mnr trs pyr, tr glauc, ip calc, intgr por, fr (5-8%), SH(5%) lt-med gy, micmica, sb fis, sl blkly, tr kaol, v slty, sft-med, v arg.

(4060-4080) SS(100%) Lt gysh brn u f-l med grnd s&p qtz, occ cons frags wi sil cmt, abnt uncongs grns, sb rd- sb ang, w srt, trs lt & dk chrt grns, sl arg, sl slty, mnr trs pyr, trs glauc, sl calc, intgr por, fr (5-8%)

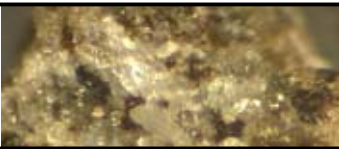
(4040-4060) SS(100%) Lt gysh brn u f-l med grnd s&p qtz, predy cons frags wi sil cmt, abnt uncongs grns, sb rd- sb ang, w srt, trs lt & dk chrt grns, sl arg, sl slty, mnr trs pyr, trs glauc, sl calc, intgr por, fr (4-7%)

brn u f-l med grnd s&p qtz, mnr uncongs grns, sb rd- sb ang, w srt, slty, mnr trs pyr, tr glauc, ip calc,

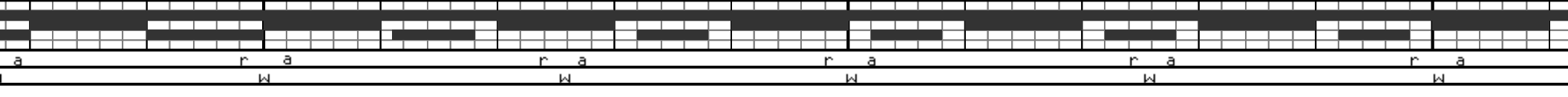
(4080- clr-trn uncongs grns, trs glauc, SH(10% v slty,

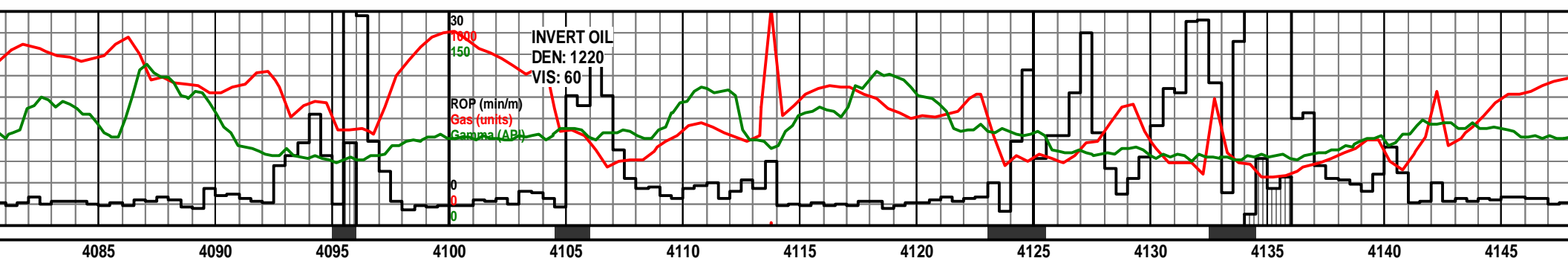


4020m MD unconsolidate quartz grains



4050m MD consolidated quartz grains





MD	TVD	INC	AZ
4080.81	2882.73	91.5	4.5
4090.21	2882.51	91.1	4.1
4099.72	2882.33	91.1	3.4
4109.17	2882.12	91.5	4.1
4118.65	2881.87	91.5	4.1
4128.13	2881.68	90.8	2.4
4137.62	2881.56	90.6	2

2878 TVD  
Sub Sea (-1585.9)

00:00hrs Mar 12, 2060 @ 4103.0m MD

2900  
(-1607.9)

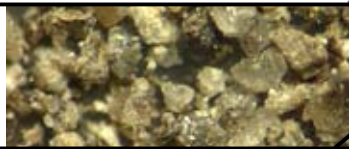
(4090-4110) SS(100%) lt gysh brn u f-l med grnd clr-trnsl qtz, occ cons frags wi sil cmt, predy uncons grns, sb rd- sb ang, w srt, trs lt & dk chrt grns, off wht arg mat, sltst strgs, mnr trs pyr, mnr trs glauc, ip calc, silc, intgr por, fr (4-7%)

(4120-4140) SS(100%) lt gysh brn u f-l med grnd clr-trnsl qtz, predy cons frags wi cal cmt, occ uncons grns, sb rd- sb ang, w srt, trs lt & dk chrt grns, off wht arg mat, sltst strgs, silc, mnr trs pyr, mnr trs glauc, icrg amnt calc, intgr por, fr (2-5%)

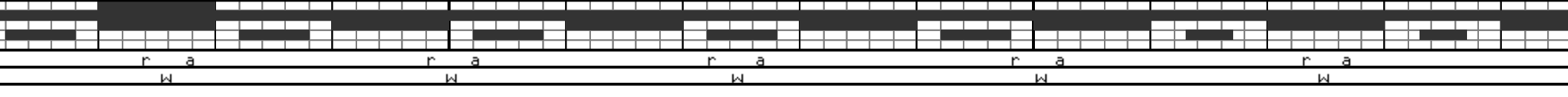
(4090) SS(90%) lt gysh brn u f-l med grnd sl qtz, occ cons frags wi sil cmt, predy s grns, sb rd- sb ang, w srt, trs lt & dk chrt incrg arg mat, sl slty, mnr trs pyr, silc, mnr uc, incrg amnt of cal, intgr por, fr (5-8%)  
(%) lt-med gy, micmica, sb fis, sl blk, tr kaol, sft-med, v arg.

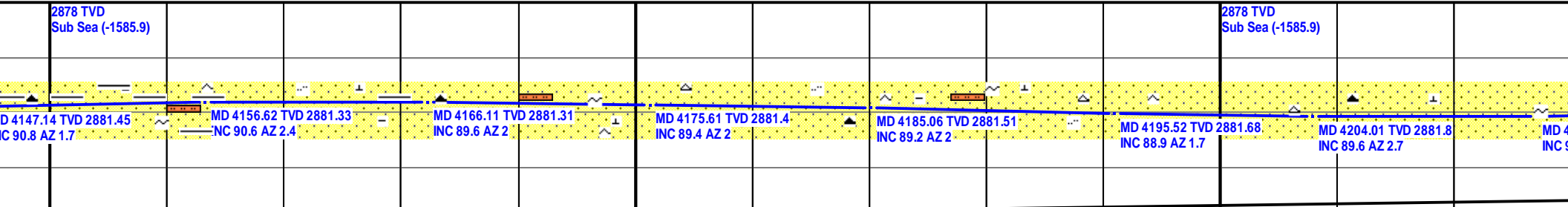
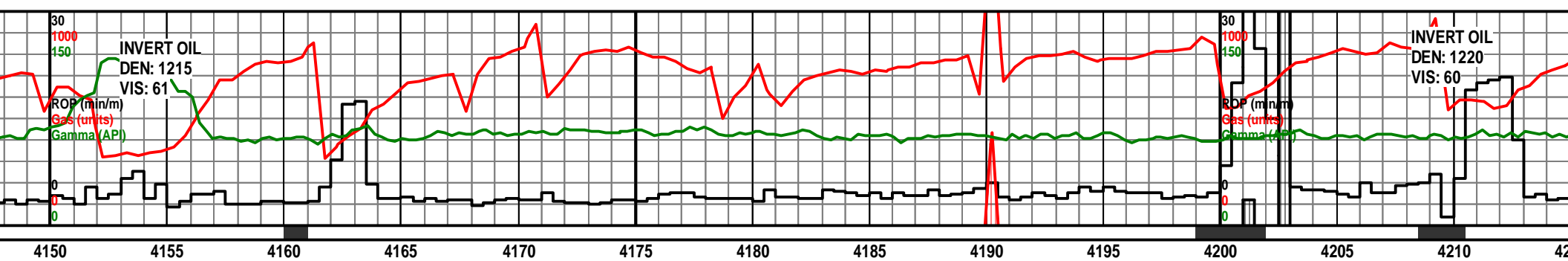
(4010-4020) SS(85%) lt gysh brn u f-l med grnd clr-trnsl qtz, occ cons frags wi sil cmt, predy uncons grns, sb rd- sb ang, w srt, trs lt & dk chrt grns, incrg arg mat, sl slty, mnr trs pyr, silc, mnr trs glauc, incrg amnt of cal, intgr por, fr (5-8%) SH(15%) lt-med gy, micmica, sb fis, sl blk, tr kaol, v slty, sft-med, v arg.

(4140-4160) SS(100%) lt g qtz, occ cons frags wi cal w srt, trs lt & dk chrt grns, pyr, mnr trs glauc, icrg an



4100m MD unconsolidate quartz grains with





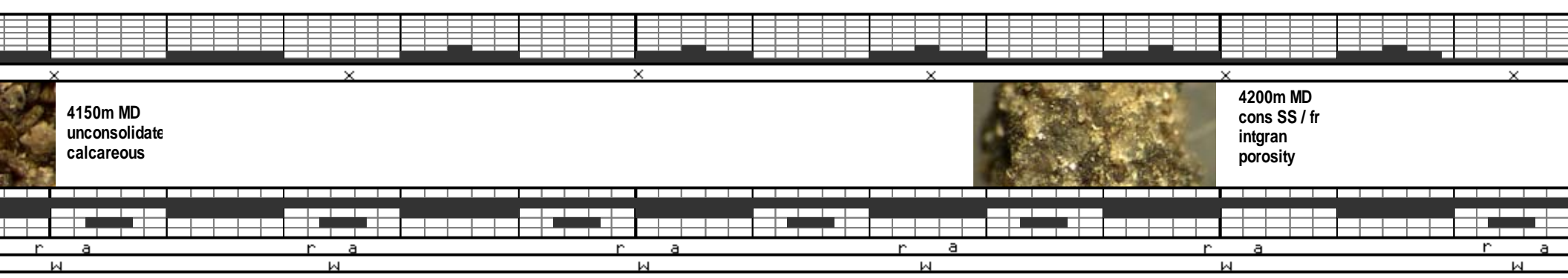
2889  
(-1596.9)

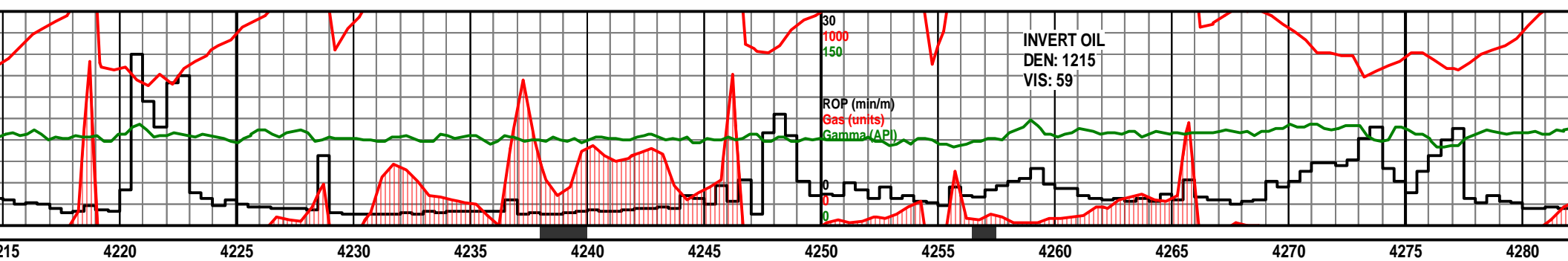
(4160-4180) SS(100%) lt gysh brn, u f-l med grnd clr-trnsl qtz, predy cons frags wi silc cmt, abnt unconc grns, sb rd- sb ang, w srt, trs lt & dk chrt grns, sltst strgs, mnr trs pyr, mnr trs glauc, ip calc, intgr por, fr (4-7%)

(4180-4200) SS(100%) lt gysh brn, u f-l med grnd clr-trnsl qtz, predy cons frags wi silc cmt, abnt unconc grns, sb rd- sb ang, w srt, trs lt & dk chrt grns, sltst strgs, mnr trs pyr, mnr trs glauc, ip calc, intgr por, fr (4-7%)

(4200-4220) SS(100%) lt gy-lt brn, u f-l med grnd clr-trnsl qtz, predy cons frags wi silc cmt, abnt unconc grns, sb rd- sb ang, w srt, trs lt & dk chrt grns, mnr sltst strgs, mnr trs glauc, mnr trs calc, intgr por, fr (5-7%)

2900  
(-1607.9)

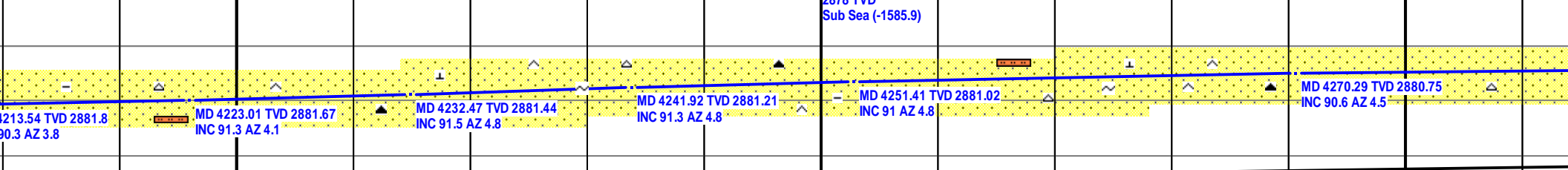




INVERT OIL  
DEN: 1215  
VIS: 59

ROP (min/m)  
Gas (units)  
Gamma (API)

4215 4220 4225 4230 4235 4240 4245 4250 4255 4260 4265 4270 4275 4280



2878 TVD  
Sub Sea (-1585.9)

MD 4213.54 TVD 2881.8  
INC 90.3 AZ 3.8

MD 4223.01 TVD 2881.67  
INC 91.3 AZ 4.1

MD 4232.47 TVD 2881.44  
INC 91.5 AZ 4.8

MD 4241.92 TVD 2881.21  
INC 91.3 AZ 4.8

MD 4251.41 TVD 2881.02  
INC 91 AZ 4.8

MD 4270.29 TVD 2880.75  
INC 90.6 AZ 4.5

clr-trnsl qtz,  
s grns, sb rd- sb  
mnr tr pyr, trs

(4240-4260) SS(100%) lt gy-lt brn, u-f-l med grnd clr-trnsl qtz,  
predy cons wi silc cmt mnr calc cmt, abnt uncongs grns, sb rd- sb  
ang, w srt, trs lt & dk chrt grns, mnr sltst strgs, mnr arg grns,  
silic, mnr tr pyr, trs glauc, mnr trs calc, intgr por, fr (5-7%)

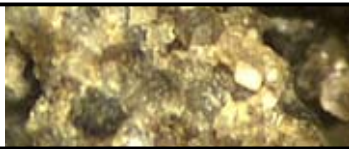
(4280-  
cons  
w srt,  
tr pyr,

(4220-4240) SS(100%) lt gy-lt brn, u-f-l med grnd clr-trnsl qtz, predy  
cons wi silc cmt mnr calc cmt, abnt uncongs grns, sb rd- sb ang, w  
srt, trs lt & dk chrt grns, mnr sltst strgs, mnr tr pyr, trs glauc, mnr  
trs calc, intgr por, fr (5-8%)

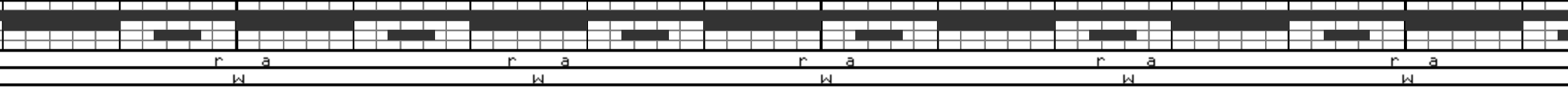
(4260-4280) SS(100%) lt gy-lt brn, u-f-l med grnd clr-trnsl qtz, occ  
cons wi silc cmt mnr calc cmt, predy uncongs grns, sb rd- sb ang,  
w srt, trs lt & dk chrt grns, mnr sltst strgs, mnr arg grns, silic, mnr  
tr pyr, trs glauc, mnr trs calc, intgr por, fr (5-8%)

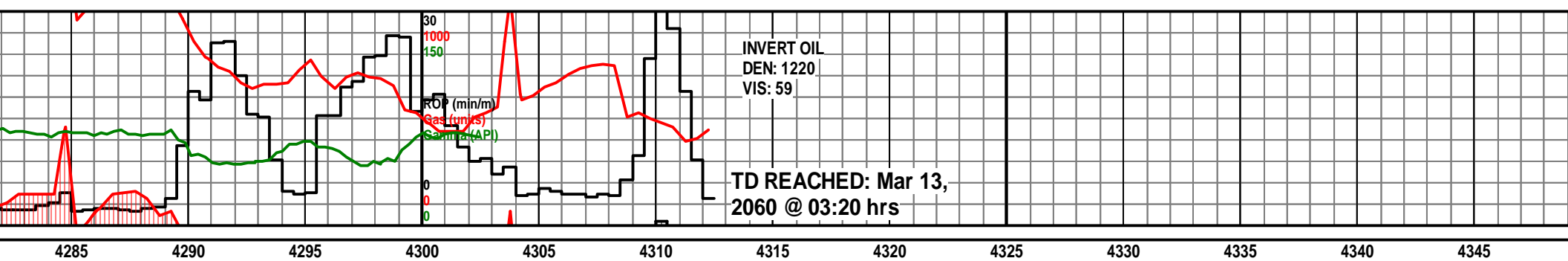
2900  
(-1607.9)

4250m MD  
lsely cons  
SS / sils  
cement



4250mMD  
uncons U. F  
to M gred  
quartz Ss





MD	TVD	INC	AZ
4289.29	2880.59	90.4	4.1
4298	2880.58	89.7	4.1
4312	2880.79	88.57	4.1

00:00hrs Mar 13, 2012 @ 4297.0m MD

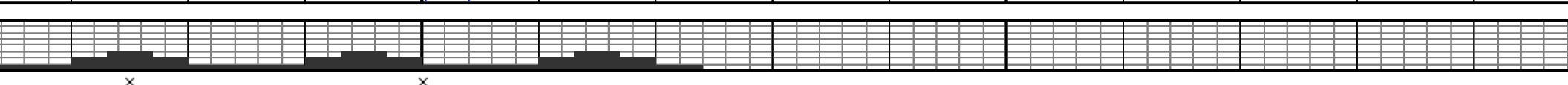
2878 TVD  
Sub Sea (-1585.9)

**TARGET TD @ 4349.20m MD  
2883.10m TVD, -1591.00 SSL**

**ACTUAL TD @ 4312.77m MD  
2880.79m TVD, -1588.69 SSL**

4300) SS(100%) lt gy-lt brn, u f-l med grnd clr-trnsl qtz, occ wi silic cmt mnr calc cmt, predy uncongs grns, sb rd- sb ang, trs lt & dk chrt grns, mnr sltst strgs, mnr arg grns, silic, mnr trs glauc, mnr trs calc, intgr por, fr (5-8%)

(4300-4312) SS(100%) lt gy-lt brn, u f-l med grnd clr-trnsl qtz, occ cons wi silic cmt mnr calc cmt, predy uncongs grns, sb rd- sb ang, w srt, trs lt & dk chrt grns, mnr sltst strgs, mnr arg grns, silic, mnr tr pyr, trs glauc, mnr trs calc, intgr por, fr (5-8%)



4312m MD  
unconsolidate  
SS, LAST  
SAMPLE

