



Scale: 5" / 100'  
Measured Depth Log

**Well Name** CritterCreek\_278-1527H

**Location** Critter Creek Pad 15-11N-63W

**State** Colorado

**County** Weld

**Country** USA

**Rig Number** Cade 23

**API Number** 05-123-44711

**AFE #** 22017003

**Geographic Region** Rockies

**Field** Hereford

**Surface Coordinates** 40.915953 -104.415617  
SHL 279'FSL & 1,690'FEL, SEC.15

**Bottom Hole Coordinates** BHL 300'FSL & 1,650'FEL, SEC.27

**Ground Elevation** 5,228'

**K.B. Elevation** 5,244'

**Logged Interval** 3000 **To** TBA

**Total Depth** TBA

**Formation** Niobrara B Marl

**Type of Drilling Fluid** OBM

## Operator

**Company** Fifth Creek Energy

**Address** 5251 DTC Parkway, Suite 420  
Greenwood Village, Colorado 80111



## Geologist

**Name** Ben Burke, Aryn Rowe

**Company** Fifth Creek Energy

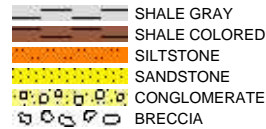
**Address** 5251 DTC Parkway, Suite 420  
Greenwood Village, Colorado 80111



## Zone Color Coding

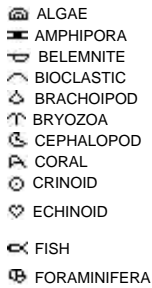
Oil	Condensate	Gas
Note	Core	Pressure
Error	Water	Seal

## Rock Types



## Accessories

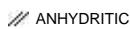
### Fossils



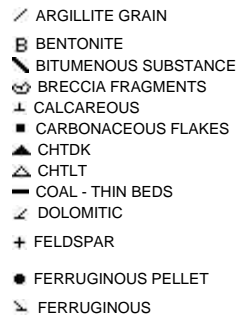
### Fossil



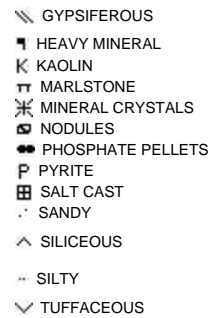
### Minerals



### Argillaceous



### Glauconite

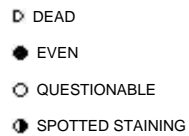


### Stringer



## Other Symbols

### Oil Show



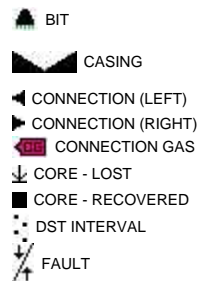
### Porosity



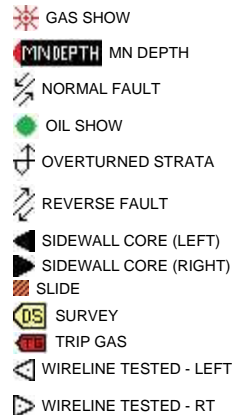
### Organic



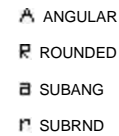
### Engineering



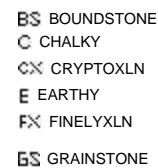
### Formation Top



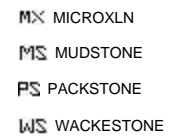
### Rounding



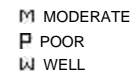
### Textures

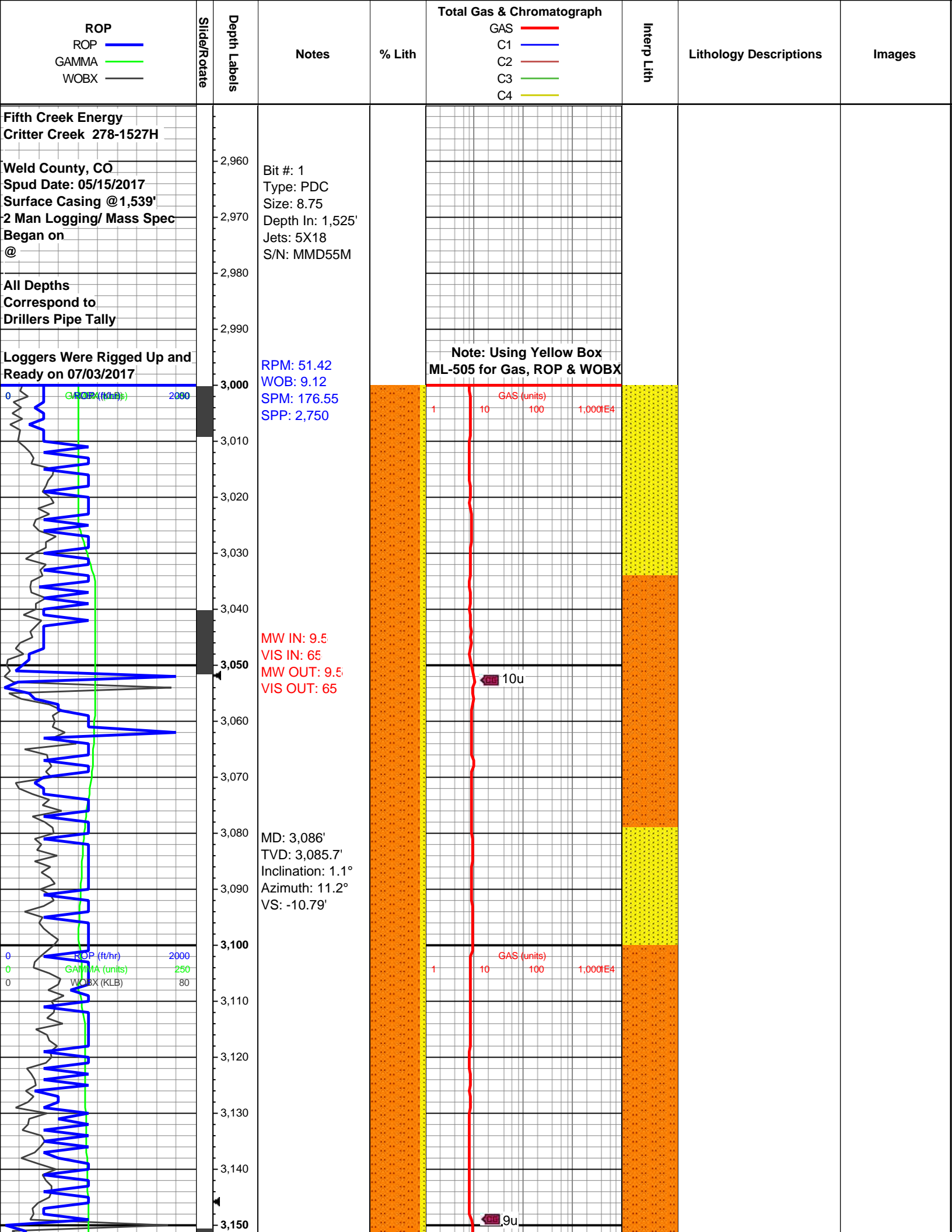


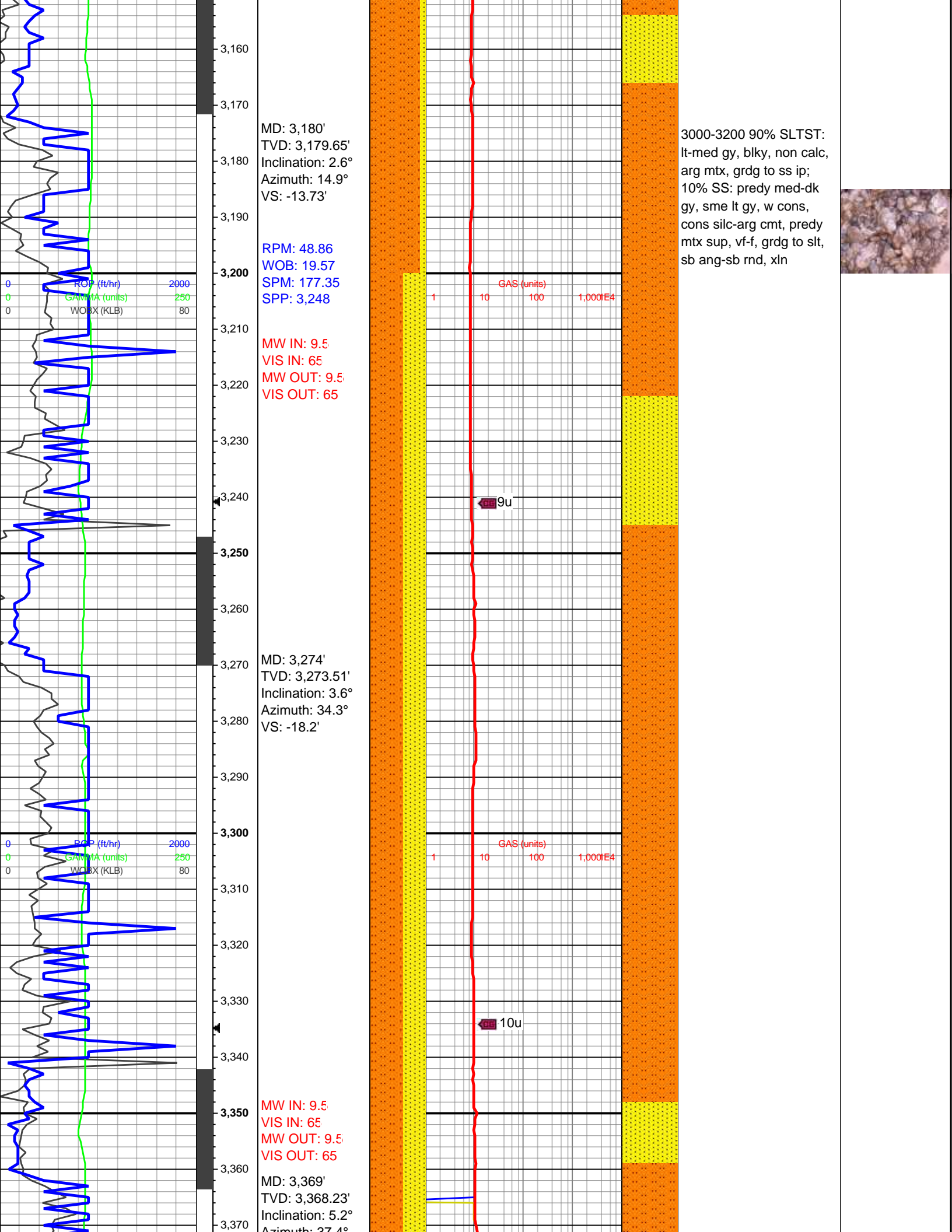
### Lithographic



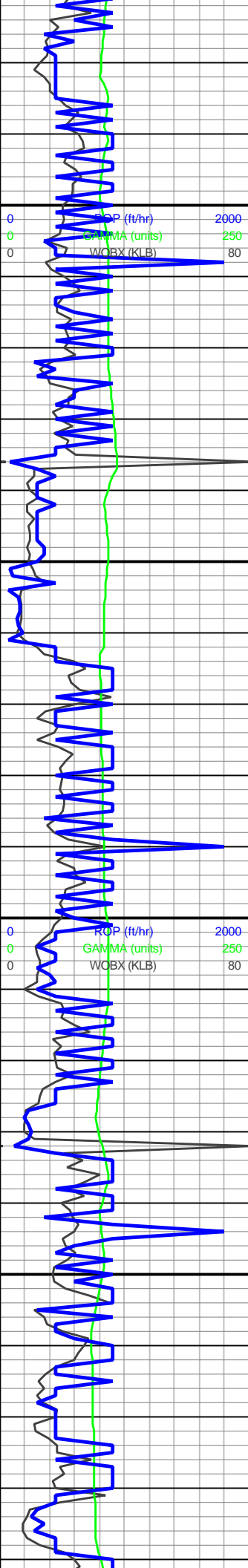
### Sorting











Azimuth: 37.4°  
VS: -24.03'

RPM: 60.3  
WOB: 16.8  
SPM: 177.63  
SPP: 2,813

MD: 3,463'  
TVD: 3,461.76'  
Inclination: 6.3°  
Azimuth: 30.4°  
VS: -31.79'

MW IN: 9.5  
VIS IN: 65  
MW OUT: 9.5  
VIS OUT: 65

MD: 3,558'  
TVD: 3,556.19'  
Inclination: 6.2°  
Azimuth: 27.6°  
VS: -40.77'

GAS (units)  
1 10 100 1,000E4

11u

GAS (units)  
1 10 100 1,000E4

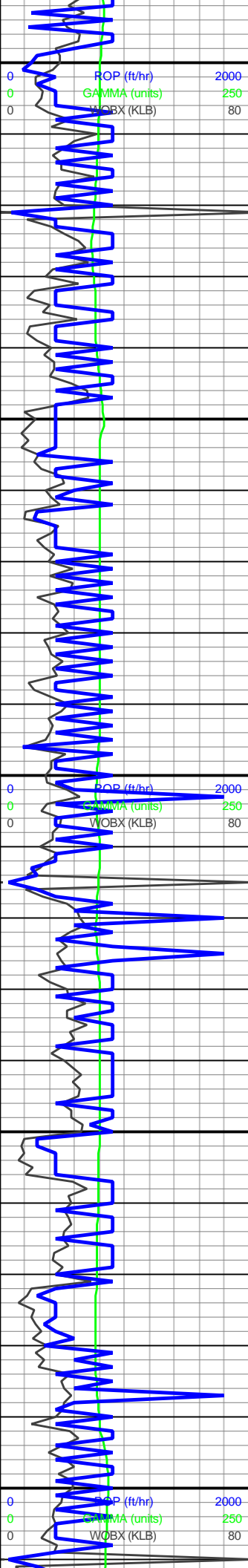
12u

3200-3400 60% SLTST:  
lt-med gy, blk, non calc,  
arg mtx, grdg to ss ip;  
40% SS: predy med-dk  
gy, sme lt gy, w cons,  
cons silc-arg cmt, predy  
mtx sup, vf-f, grdg to slt,  
sb ang-sb rnd, xln



3400-3600 85% SS:  
predy med-dk gy, sme lt  
gy, w cons, cons silc-arg  
cmt, predy mtx sup, vf-f,  
grdg to slt, sb ang-sb  
rnd, xln





3,600  
3,610  
3,620  
3,630  
3,640  
3,650  
3,660  
3,670  
3,680  
3,690  
3,700  
3,710  
3,720  
3,730  
3,740  
3,750  
3,760  
3,770  
3,780  
3,790  
3,800  
3,810

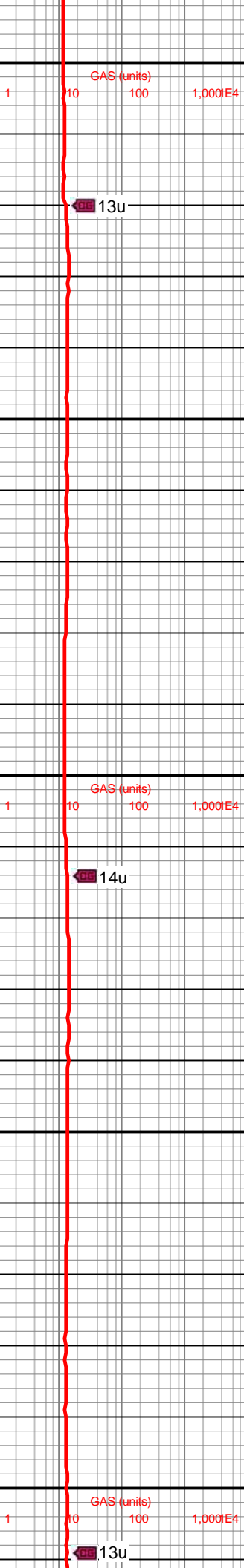
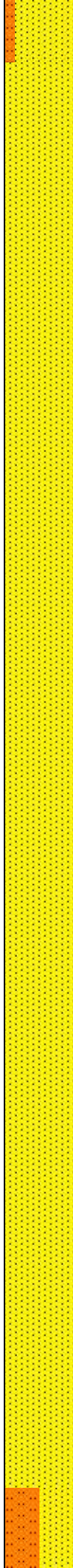
RPM: 60.71  
WOB: 25.32  
SPM: 176.18  
SPP: 3,189

MW IN: 9.5  
VIS IN: 65  
MW OUT: 9.5  
VIS OUT: 65

MD: 3,653'  
TVD: 3,650.62'  
Inclination: 6.4°  
Azimuth: 27.2°  
VS: -49.96'

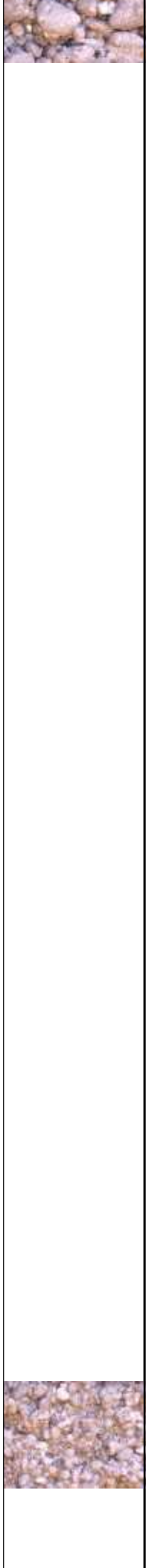
MD: 3,748'  
TVD: 3,745.01'  
Inclination: 6.6°  
Azimuth: 26.7°  
VS: -59.49'

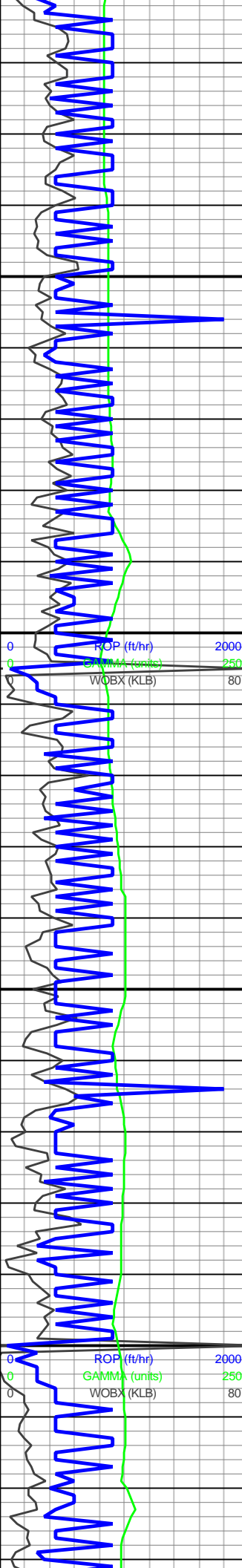
RPM: 60.43  
WOB: 20.67  
SPM: 177.76  
SPP: 3,265



rd, xln; 15% SLTST:  
lt-med gy, blk, non calc,  
arg mtx, grdg to ss ip

3600-3800 100% SS:  
predy med-dk gy, sme lt  
gy, w cons, cons silc-arg  
cmt, predy mtx sup, vf-f,  
grdg to slit, sb ang-sb  
rnd, xln; tr SLTST





3,820  
3,830  
3,840  
3,850  
3,860  
3,870  
3,880  
3,890  
3,900  
3,910  
3,920  
3,930  
3,940  
3,950  
3,960  
3,970  
3,980  
3,990  
4,000  
4,010  
4,020  
4,030

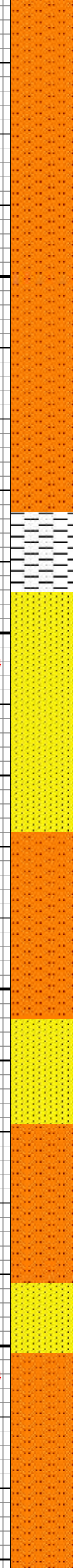
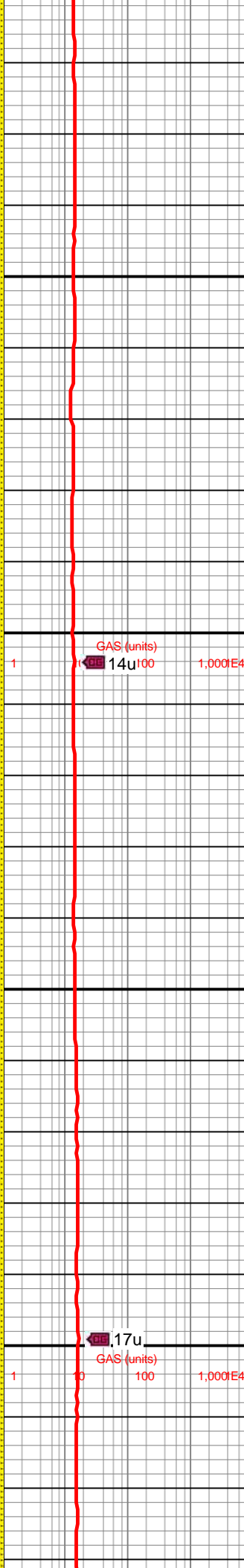
MD: 3,843'  
TVD: 3,839.38'  
Inclination: 6.6°  
Azimuth: 26.7°  
VS: -69.18'

MW IN: 9.1  
VIS IN: 65  
MW OUT: 9.1  
VIS OUT: 65

MD: 3,939'  
TVD: 3,934.79'  
Inclination: 6.1°  
Azimuth: 29°  
VS: -78.51'

RPM: 60.35  
WOB: 0  
SPM: 177.71  
SPP: 2,808

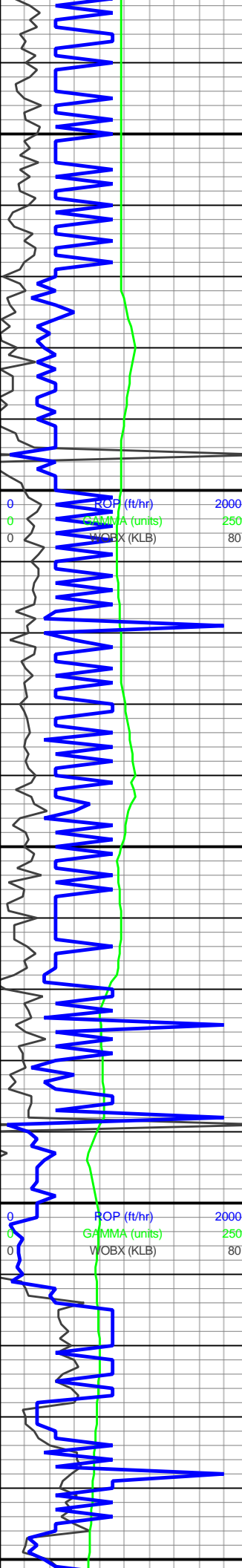
MW IN: 9.1  
VIS IN: 65  
MW OUT: 9.1  
VIS OUT: 65



3800-4000 50% SS:  
predy med-dk gy, sme lt  
gy, w cons, cons silc-arg  
cmt, predy mtx sup, vf-f,  
grdg to slt, sb ang-sb  
rnd, xln; 50% SLTST:  
lt-med gy, blk, non calc,  
arg mtx, grdg to ss ip; tr  
SH







MD: 4,033'  
TVD: 4,028.28'  
Inclination: 5.8°  
Azimuth: 23.2°  
VS: -87.18'

MD: 4,128'  
TVD: 4,122.84'  
Inclination: 5.3°  
Azimuth: 24.2°  
VS: -95.55'

RPM: 58.99  
WOB: 1.78  
SPM: 177.6  
SPP: 3,112

MD: 4,222'  
TVD: 4,216.41'  
Inclination: 5.7°  
Azimuth: 29.5°  
VS: -103.52'

MW IN: 9.1  
VIS IN: 64  
MW OUT: 9.1  
VIS OUT: 64



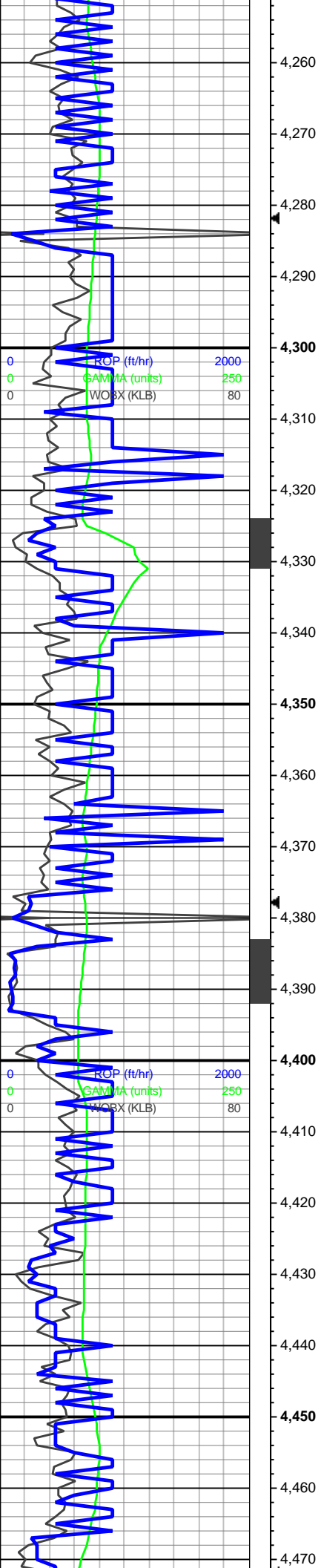
17u

16u

4000-4200 80% SLTST:  
lt-med gy, blk, non calc,  
arg mtx, grdg to ss ip;  
20% SS: predy med-dk  
gy, sme lt gy, w cons,  
cons silc-arg cmt, predy  
mtx sup, vf-f, grdg to slt,  
sb ang-sb rnd, xln







MD: 4,317'  
TVD: 4,310.95'  
Inclination: 5.6°  
Azimuth: 26.9°  
VS: -111.7'

MW IN: 9.2  
VIS IN: 64  
MW OUT: 9.2  
VIS OUT: 64

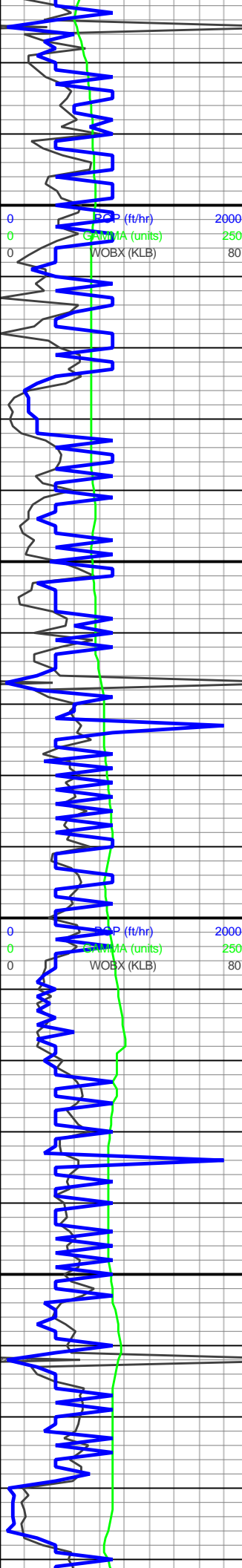
RPM: 60.26  
WOB: 5.24  
SPM: 176.91  
SPP: 3,168

MD: 4,412'  
TVD: 4,405.45'  
Inclination: 6.1°  
Azimuth: 28.8°  
VS: -120.2'



4200-4400 70% SS:  
predy med-dk gy, sme lt  
gy, w cons, cons silc-arg  
cmt, predy mtz sup, vf-f,  
grdg to slt, sb ang-sb  
rnd, xln; 30% SLTST:  
lt-med gy, blk, non calc,  
arg mtz, grdg to ss ip





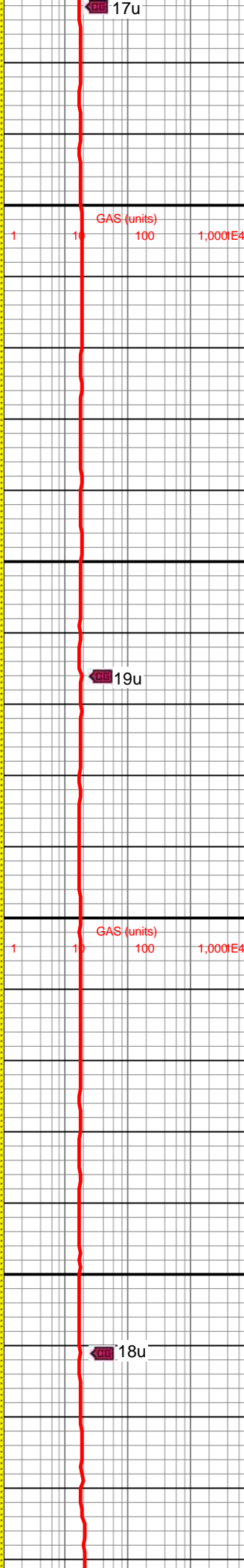
4,480  
4,490  
4,500  
4,510  
4,520  
4,530  
4,540  
4,550  
4,560  
4,570  
4,580  
4,590  
4,600  
4,610  
4,620  
4,630  
4,640  
4,650  
4,660  
4,670  
4,680  
4,690

MD: 4,507'  
TVD: 4,499.89'  
Inclination: 6.3°  
Azimuth: 29.5°  
VS: -129.1'

MW IN: 9.2  
VIS IN: 64  
MW OUT: 9.2  
VIS OUT: 64

RPM: 59.69  
WOB: 20.84  
SPM: 175.9  
SPP: 3,606

MD: 4,602'  
TVD: 4,594.33'  
Inclination: 6.2°  
Azimuth: 28.1°  
VS: -138.09'



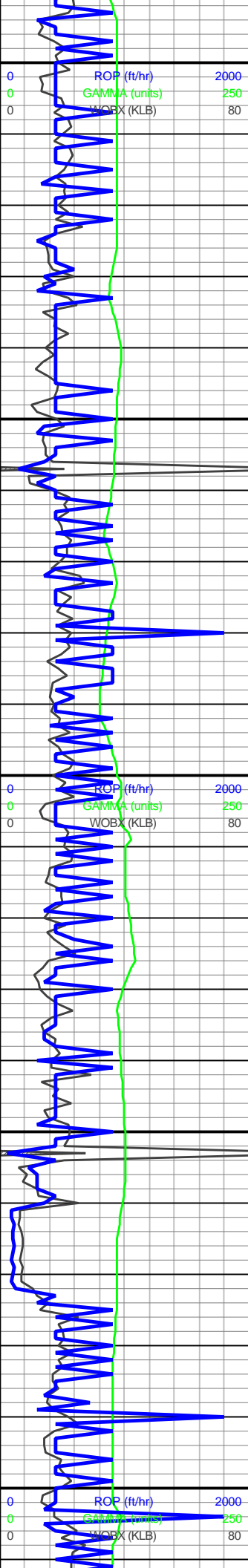
17u

19u

18u

4400-4600 80% SS:  
predy med-dk gy, sme lt  
gy, w cons, cons silc-arg  
cmt, predy mtx sup, vf-f,  
grdg to slt, sb ang-sb  
rnd, xln; 20% SLTST:  
lt-med gy, blk, non calc,  
arg mtx, grdg to ss ip





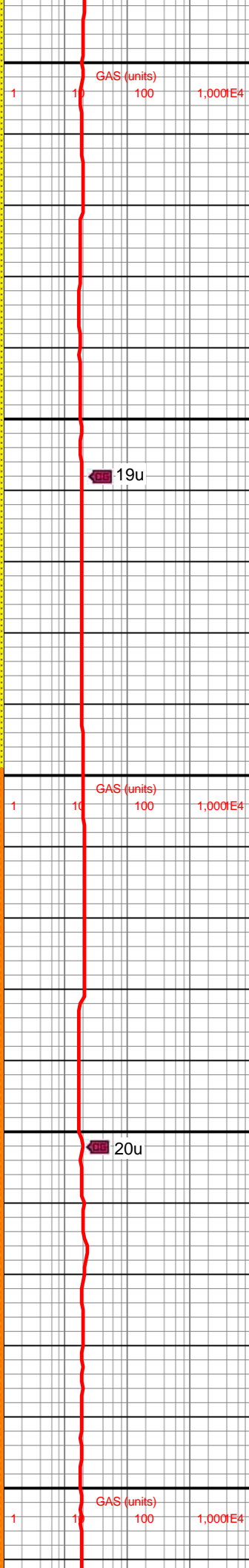
MD: 4,698'  
TVD: 4,689.83'  
Inclination: 5.5°  
Azimuth: 30.7°  
VS: -146.56'

MD: 4,792'  
TVD: 4,783.41'  
Inclination: 5.4°  
Azimuth: 29.9°  
VS: -154.21'

MD: 4,887'  
TVD: 4,878.1'  
Inclination: 3.7°  
Azimuth: 33°  
VS: -160.61'

MW IN: 9.25  
VIS IN: 64  
MW OUT: 9.25  
VIS OUT: 64

RPM: 60.17  
WOB: 22.53  
SPM: 176.42  
SPP: 3,735



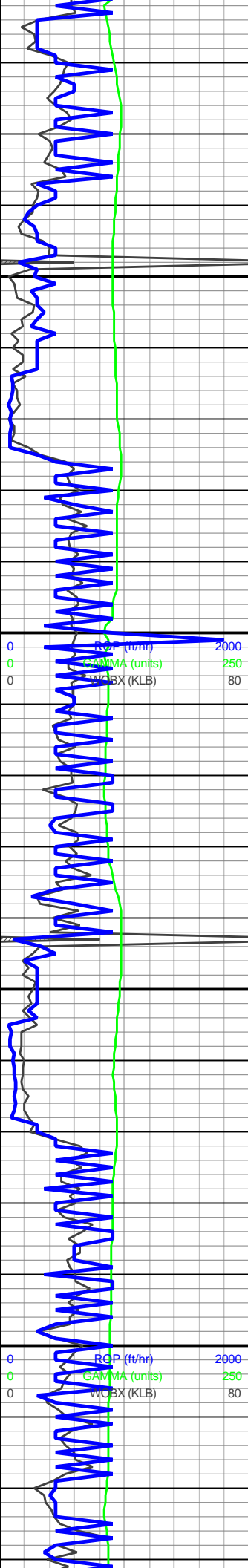
19u

20u

4600-4800 60% SLTST:  
lt-med gy, blk, non calc,  
arg mtx, grdg to ss ip;  
40% SS: predy med-dk  
gy, sme lt gy, w cons,  
cons silc-arg cmt, predy  
mtx sup, vf-f, grdg to slt,  
sb ang-sb rnd, xln







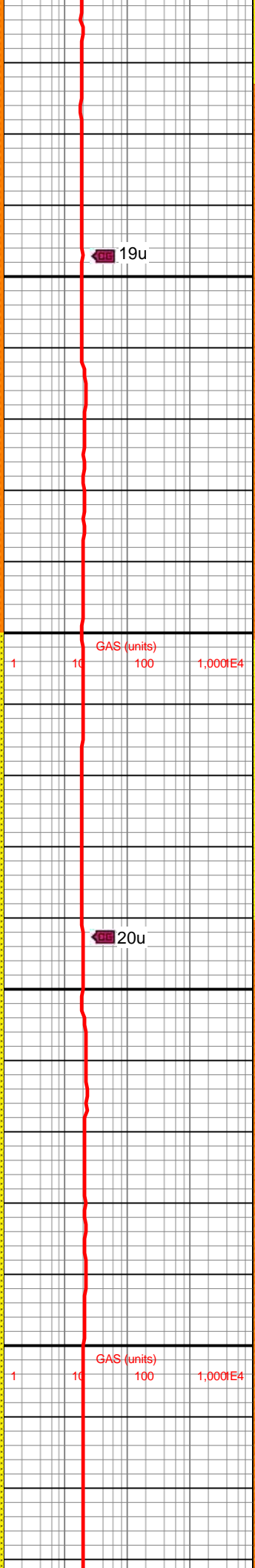
4,920  
4,930  
4,940  
4,950  
4,960  
4,970  
4,980  
4,990  
5,000  
5,010  
5,020  
5,030  
5,040  
5,050  
5,060  
5,070  
5,080  
5,090  
5,100  
5,110  
5,120  
5,130

MW IN: 9.3  
VIS IN: 66  
MW OUT: 9.3  
VIS OUT: 66

MD: 4,983'  
TVD: 4,973.93'  
Inclination: 3.1°  
Azimuth: 30.7°  
VS: -165.4'

RPM: 62.87  
WOB: 21.75  
SPM: 175.53  
SPP: 3,754

MD: 5,077'  
TVD: 5,067.84'  
Inclination: 1.9°  
Azimuth: 3.1°  
VS: -169.12'



4800-5000 100% SLTST:  
lt-med gy, blk, non calc,  
arg mtx, grdg to ss ip; tr  
SS





5,140  
5,150  
5,160  
5,170  
5,180  
5,190  
5,200  
5,210  
5,220  
5,230  
5,240  
5,250  
5,260  
5,270  
5,280  
5,290  
5,300  
5,310  
5,320  
5,330  
5,340  
5,350

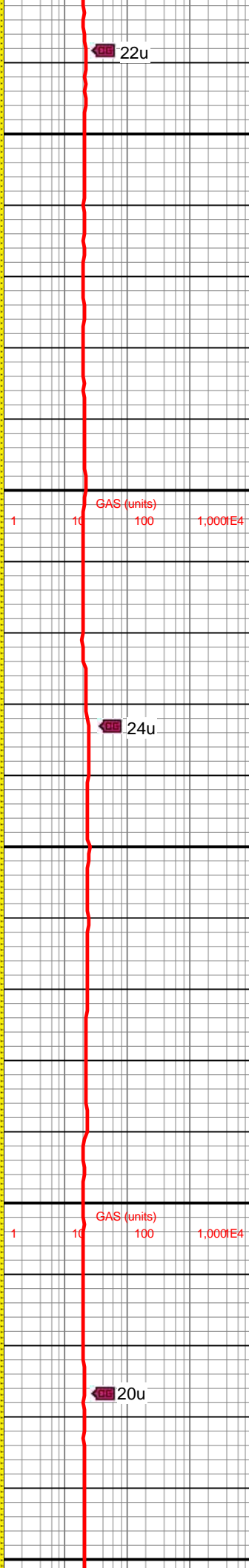
MD: 5,172'  
TVD: 5,162.79'  
Inclination: 1.9°  
Azimuth: 4.2°  
VS: -172.26'

MW IN: 9.3  
VIS IN: 64  
MW OUT: 9.3  
VIS OUT: 64

RPM: 60.94  
WOB: 9.1  
SPM: 175.41  
SPP: 3,638

MD: 5,267'  
TVD: 5,257.77'  
Inclination: 0.6°  
Azimuth: 333.6°  
VS: -174.28'

MW IN: 9.3  
VIS IN: 64  
MW OUT: 9.3  
VIS OUT: 64



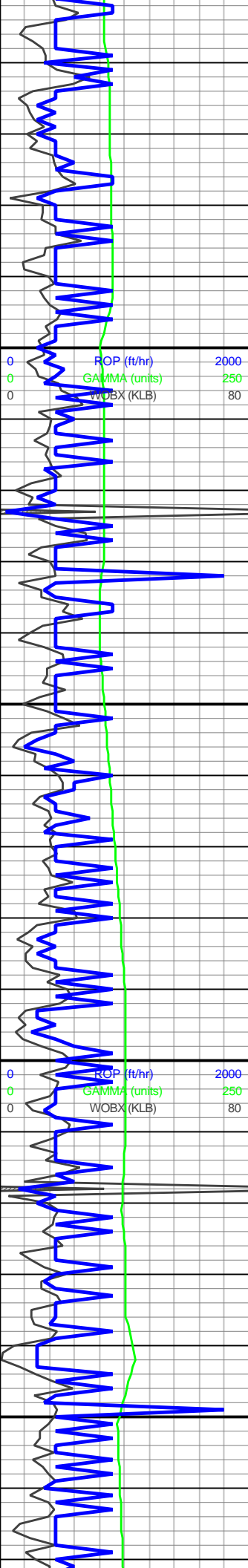
22u

24u

20u

5000-5200 60% SLTST:  
lt-med gy, blk, non calc,  
arg mtx, grdg to ss ip;  
40% SS: predy med-dk  
gy, sme lt gy, w cons,  
cons silc-arg cmt, predy  
mtx sup, vf-f, grdg to slt,  
sb ang-sb rnd, xln





MD: 5,362'  
TVD: 5,352.76'  
Inclination: 0.6°  
Azimuth: 299.7°  
VS: -174.98'

RPM: 60  
WOB: 7.85  
SPM: 175.19  
SPP: 3,794

MD: 5,457'  
TVD: 5,447.76'  
Inclination: 0.5°  
Azimuth: 321.1°  
VS: -175.56'

MD: 5,551'  
TVD: 5,541.76'  
Inclination: 0.4°  
Azimuth: 15.6°  
VS: -176.2'

GAS (units)  
1 10 100 1,000E4

25u

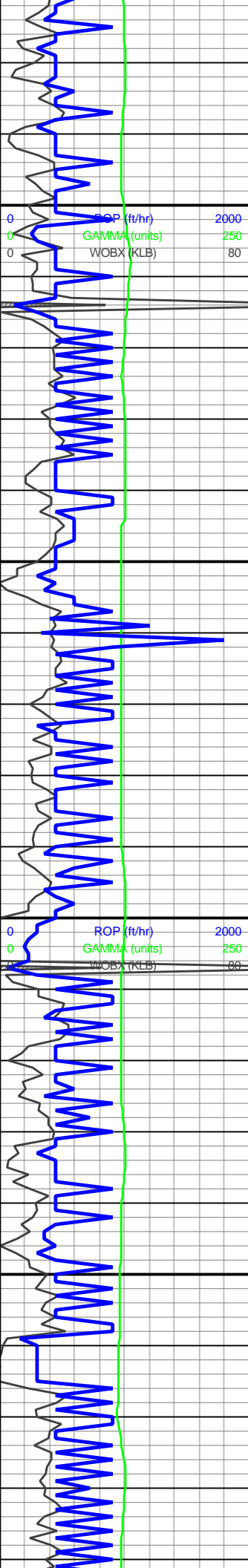
GAS (units)  
1 10 100 1,000E4

26u

5200-5400 80% SLTST:  
lt-med gy, blk, non calc,  
arg mtx, grdg to ss ip;  
20% SS: predy med-dk  
gy, sme lt gy, w cons,  
cons silc-arg cmt, predy  
mtx sup, vf-f, grdg to slt,  
sb ang-sb rnd, xln







5,580  
5,590  
5,600  
5,610  
5,620  
5,630  
5,640  
5,650  
5,660  
5,670  
5,680  
5,690  
5,700  
5,710  
5,720  
5,730  
5,740  
5,750  
5,760  
5,770  
5,780  
5,790

RPM: 61.15  
WOB: 6.45  
SPM: 175.24  
SPP: 3,928.29

MD: 5,646'  
TVD: 5,636.75'  
Inclination: 0.4°  
Azimuth: 34.3°  
VS: -176.79'

MD: 5,741'  
TVD: 5,731.75'  
Inclination: 0.5°  
Azimuth: 19.8°  
VS: -177.45'

MW IN: 9.26  
VIS IN: 69  
MW OUT: 9.26  
VIS OUT: 69

1 10 100 1,000E4

GAS (units)

24u

1 10 100 1,000E4

GAS (units)

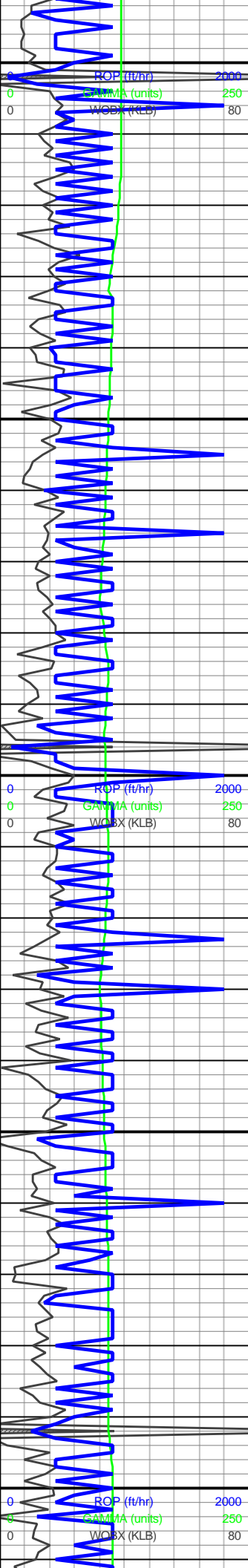
26u

5400-5600 75% SLTST:  
lt-med gy, blk, non calc,  
arg mtx, grdg to ss ip;  
25% SS: predy med-dk  
gy, sme lt gy, w cons,  
cons silc-arg cmt, predy  
mtx sup, vf-f, grdg to slt,  
sb ang-sb rnd, xln



5600-5800 70% SLTY  
SH: md-dk gy, sb  
pity-sbtab, frm-hd, slty-sl  
abrsv, 30% SLTST:





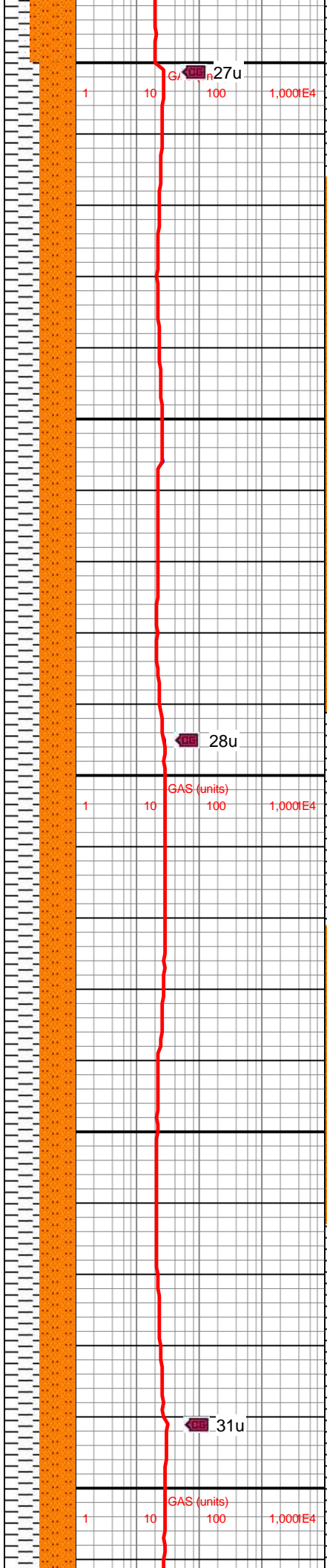
RPM: 60.06  
WOB: 14.83  
SPM: 174.43  
SPP: 4,082.4

MD: 5,836'  
TVD: 5,826.75'  
Inclination: 0.5°  
Azimuth: 39.9°  
VS: -178.15'

MW IN: 9.26  
VIS IN: 69  
MW OUT: 9.26  
VIS OUT: 69

MD: 5,930'  
TVD: 5,920.75'  
Inclination: 0.3°  
Azimuth: 181°  
VS: -178.21'

RPM: 60.61  
WOB: 17.05  
SPM: 172.87  
SPP: 4,166.62



lt-med gy, blk, non calc,  
arg mtx, grdg to ss ip;

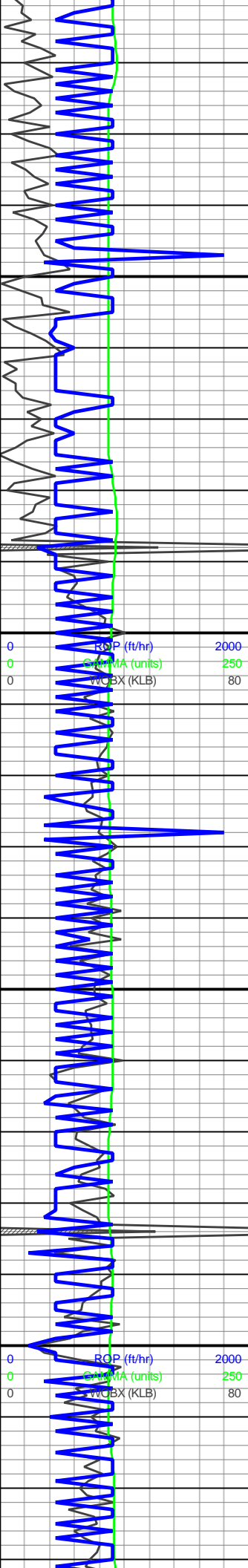
27u

28u

31u

5800-6000 100% SLTY  
SH: md-dk gy, sb  
pity-sbt, frm-hd, slty-sl  
abrs, grdg to sltst





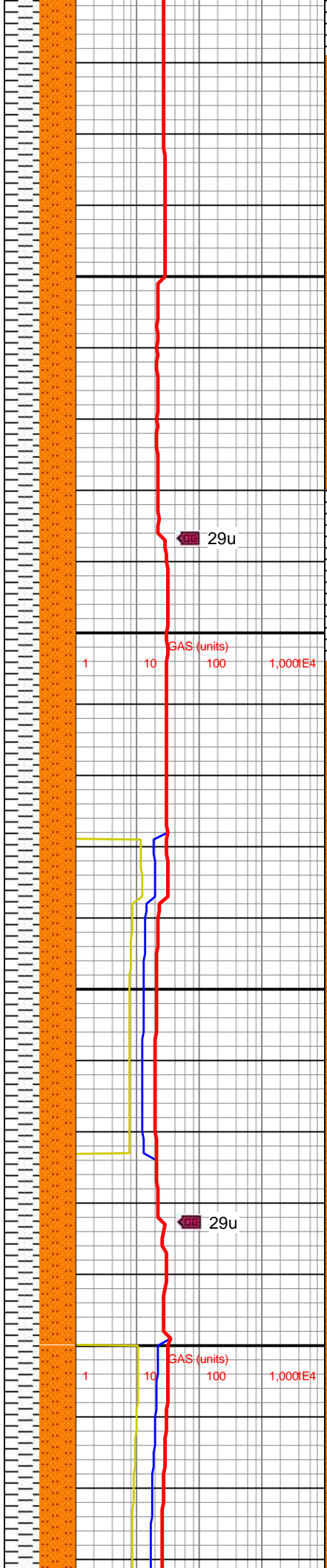
MD: 6,025'  
TVD: 6,015.75'  
Inclination: 0°  
Azimuth: 228.3°  
VS: -177.97'

MD: 6,120'  
TVD: 6,110.75'  
Inclination: 0.4°  
Azimuth: 2.1°  
VS: -178.3'

MW IN: 9.26  
VIS IN: 69  
MW OUT: 9.26  
VIS OUT: 69

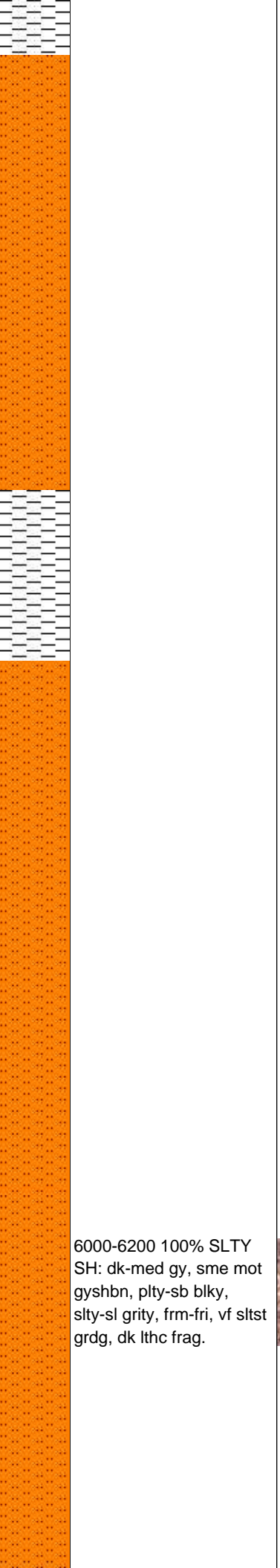
RPM: 42.75  
WOB: 2.91  
SPM: 173.03  
SPP: 3,386.82

MD: 6,214'  
TVD: 6,204.74'  
Inclination: 0.5°  
Azimuth: 60.4°  
VS: -178.82'



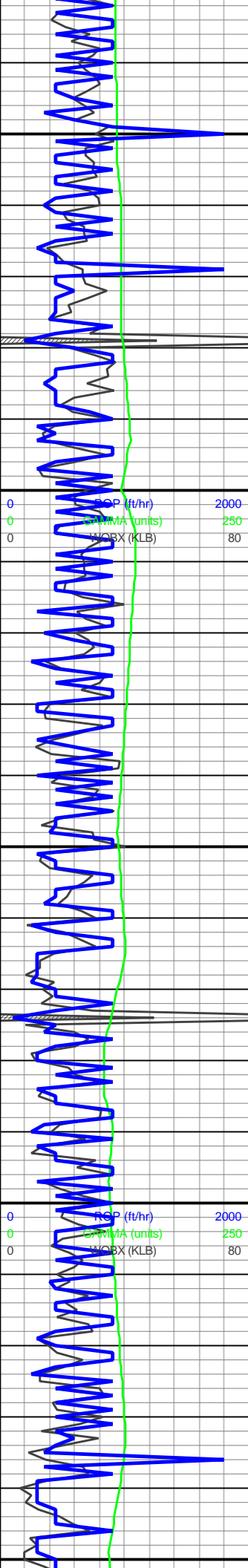
29u

29u



6000-6200 100% SLTY  
SH: dk-med gy, sme mot  
gyshbn, plty-sb blk,  
sly-sl grity, frm-fri, vf sltst  
grdg, dk lthc frag.





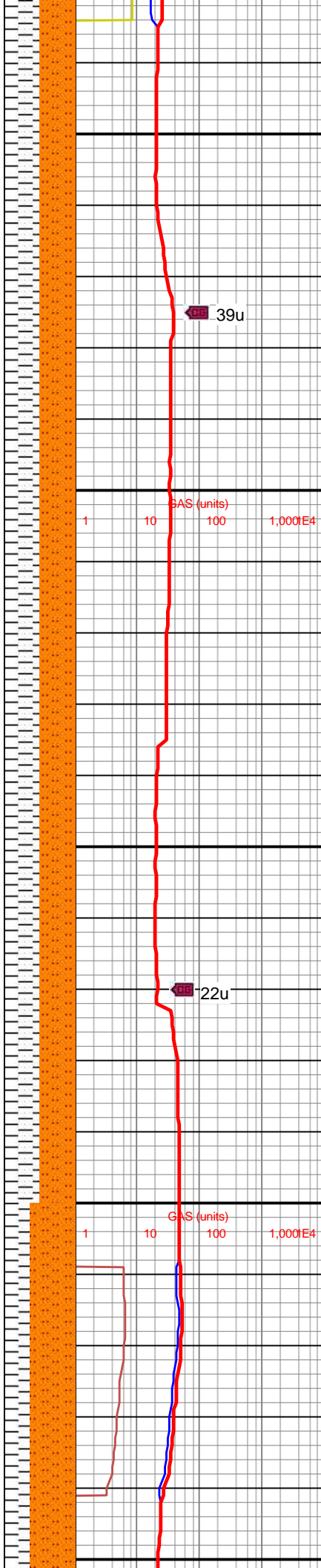
6,240  
6,250  
6,260  
6,270  
6,280  
6,290  
6,300  
6,310  
6,320  
6,330  
6,340  
6,350  
6,360  
6,370  
6,380  
6,390  
6,400  
6,410  
6,420  
6,430  
6,440  
6,450

MD: 6,309'  
TVD: 6,299.74'  
Inclination: 0.4°  
Azimuth: 36.9°  
VS: -179.28'

RPM: 60.56  
WOB: 19.69  
SPM: 173.67  
SPP: 4,529.35

MD: 6,404'  
TVD: 6,394.74'  
Inclination: 0.4°  
Azimuth: 35.1°  
VS: -179.83'

MW IN: 9.3  
VIS IN: 68  
MW OUT: 9.3  
VIS OUT: 68

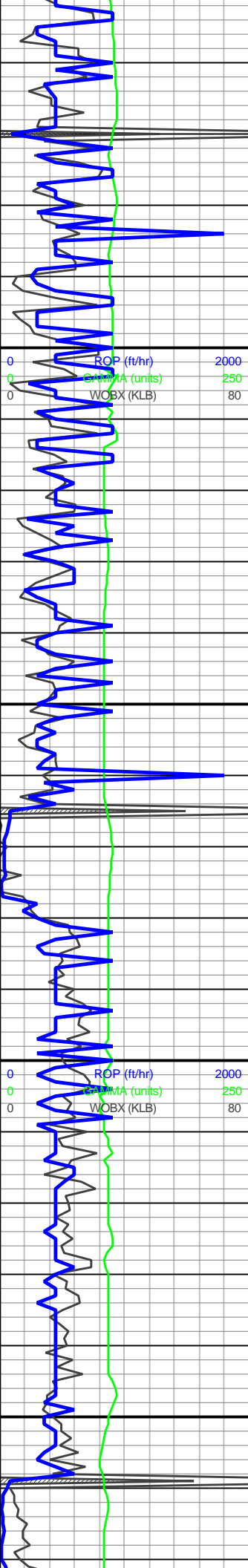


39u

22u

6200-6400 100% SLTY  
SH: dk-med gy, sme mot  
gyshbn, plty-sb blk,  
sly-sl grity, frm-fri, vf sltst  
grdg, dk lthc frag.





6,460  
6,470  
6,480  
6,490  
6,500  
6,510  
6,520  
6,530  
6,540  
6,550  
6,560  
6,570  
6,580  
6,590  
6,600  
6,610  
6,620  
6,630  
6,640  
6,650  
6,660  
6,670

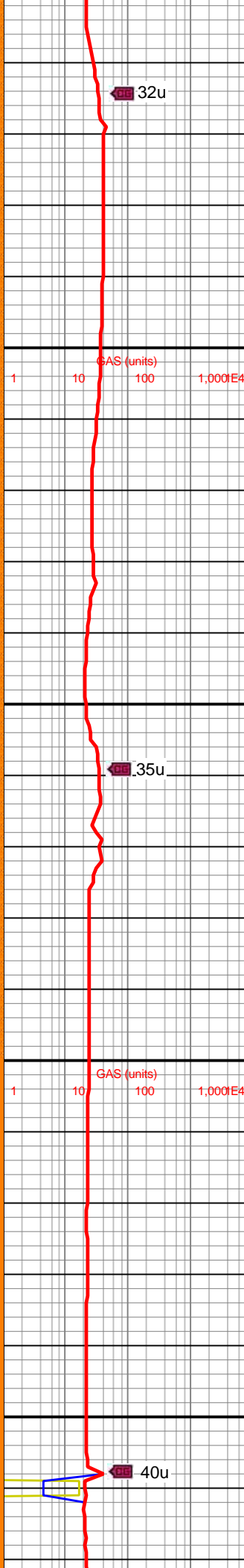
MD: 6,498'  
TVD: 6,488.74'  
Inclination: 0.4°  
Azimuth: 27.6°  
VS: -180.39'

MW IN: 9.3  
VIS IN: 68  
MW OUT: 9.3  
VIS OUT: 68

MD: 6,593'  
TVD: 6,583.73'  
Inclination: 0.8°  
Azimuth: 13.5°  
VS: -181.32'

RPM: 60.55  
WOB: 20.16  
SPM: 171.57  
SPP: 4,107.37

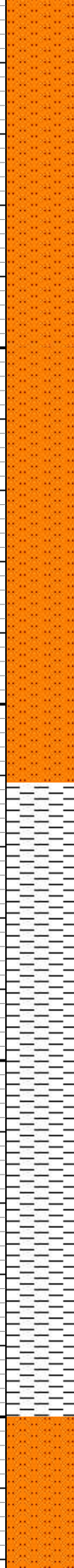
MW IN: 9.3  
VIS IN: 62  
MW OUT: 9.3  
VIS OUT: 62



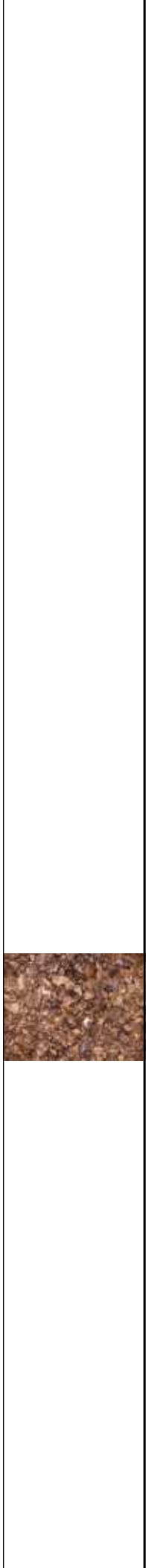
32u

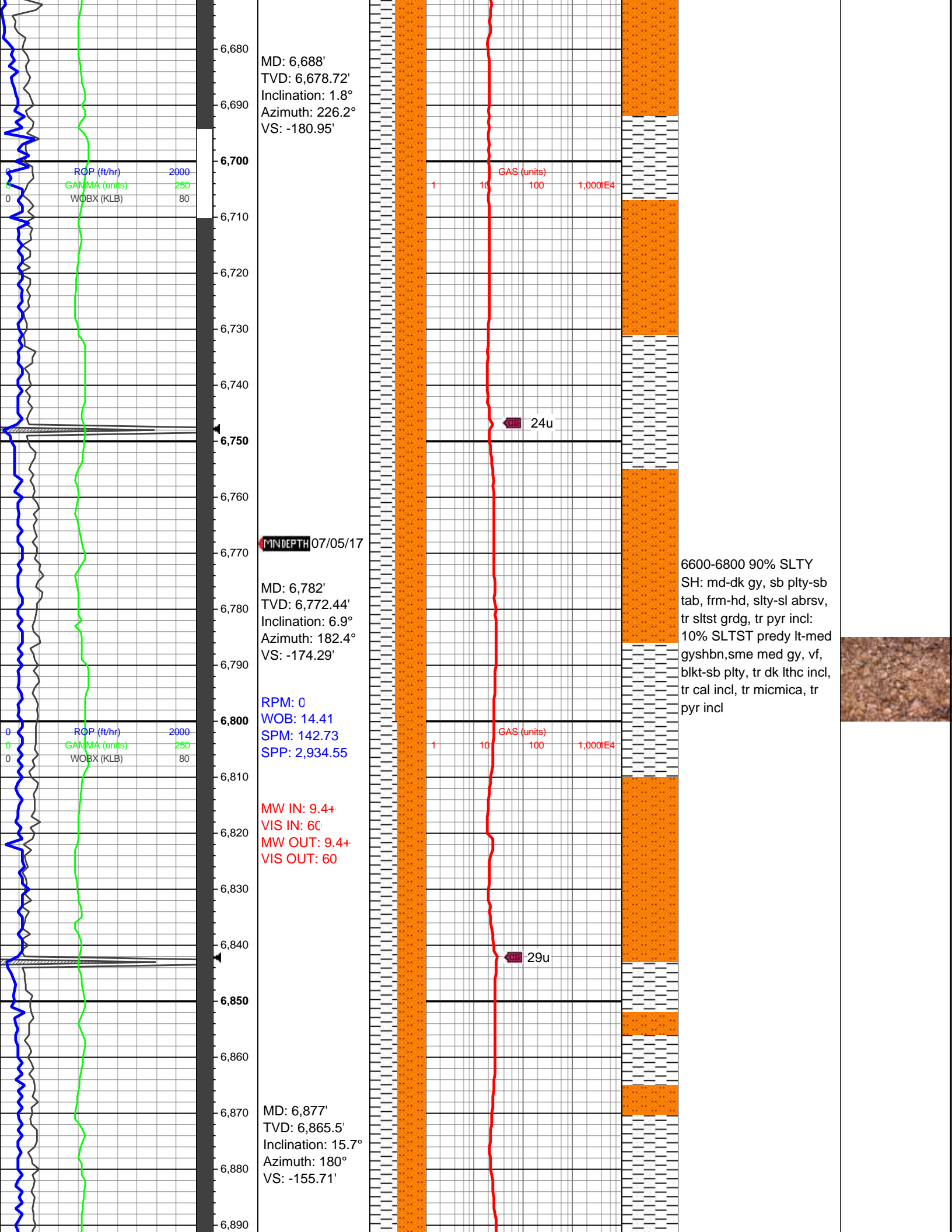
35u

40u

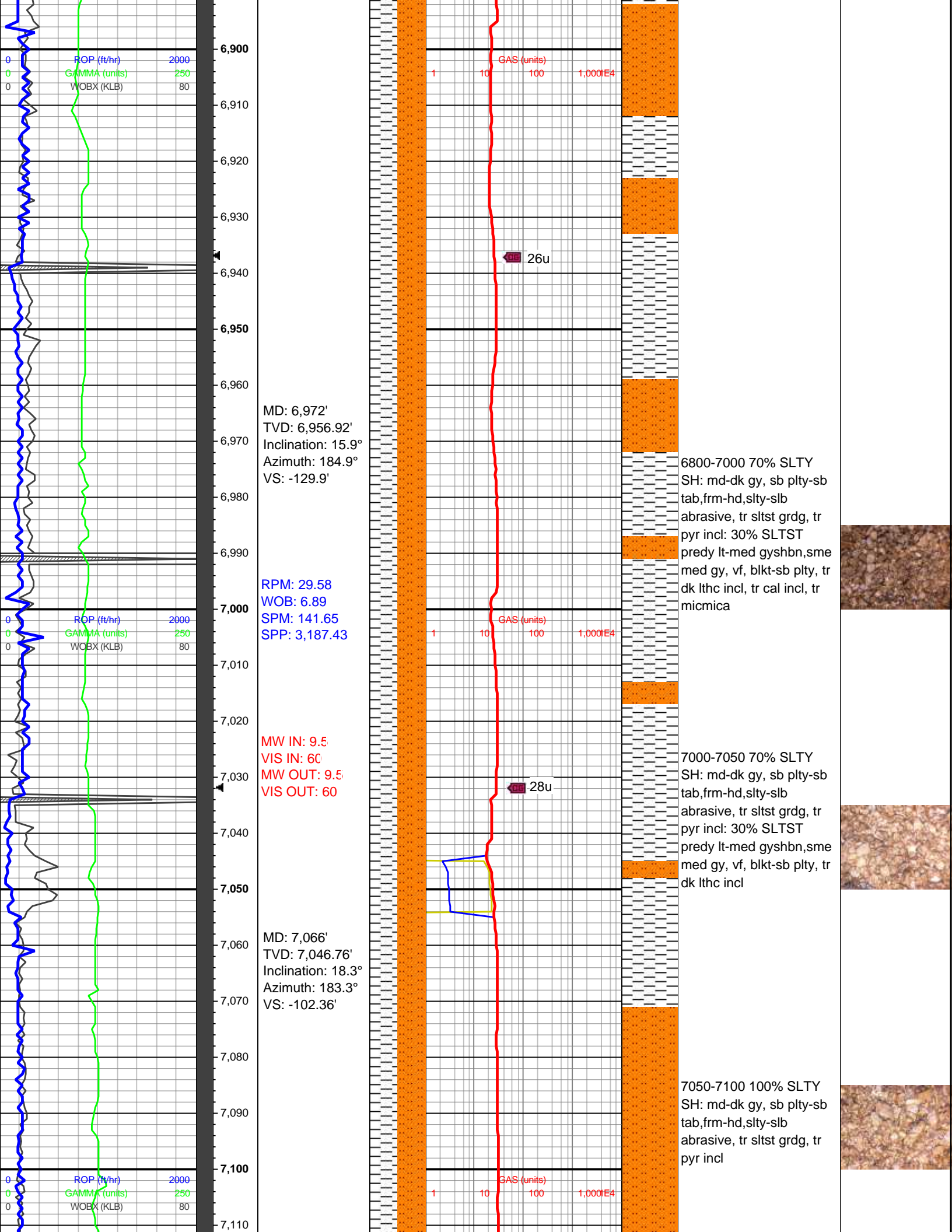


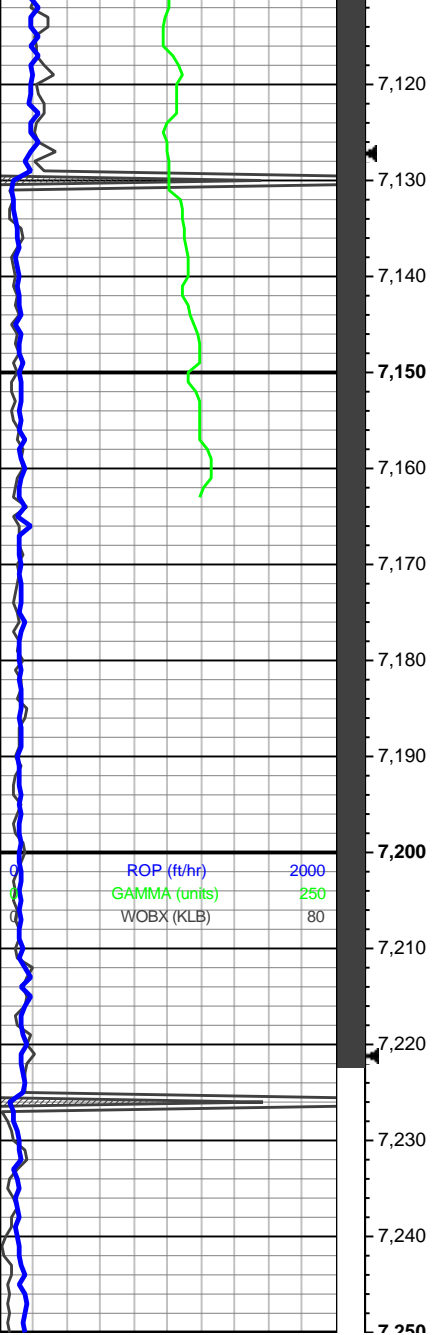
6400-6600 70% SLTY  
SH: md-dk gy, sb  
plty-sbtab, frm-hd, slty-sl  
abrsv, tr sltst grd, tr pyr  
incl: 30% SLTST predy  
lt-med gyshbn, sme med  
gy, vf, blkt-sb plty, tr cal  
incl



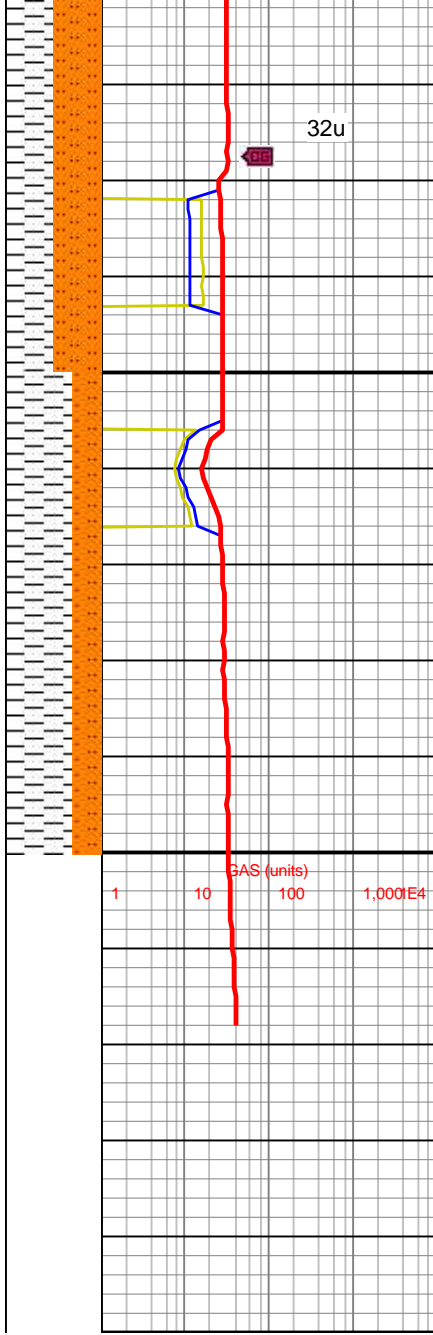








MD: 7,161'  
TVD: 7,134.14'  
Inclination: 27.6°  
Azimuth: 185.4°  
VS: -65.52'



32u

32u

7100-7150 100% SLTY  
SH: md-dk gy, sb plty-sb  
tab,frm-hd,slty-slb  
abrasive, tr sltst grdg, tr  
pyr incl

7150-7200 70% SH:  
med-dk gy, fm-sft, plty-sb  
blky, v arg, non clac, slty  
ip; 30% SLTY SH; dk gy,  
frm, grty tex, non calc

