



Scale: 5" / 100'
Measured Depth Log

Well Name SHOOK 3-10-4NBH_VERT_CURVE

Location SECTION 3 T1S R67W

State COLORADO

County ADAMS

Country USA

Rig Number ENSIGN 145

API Number 05-001-09976

AFE # 1700015

Geographic Region DJ BASIN

Field WATTENBERG

Spud Date 4/19/2017

Drilling Completed 7/15/2017

Surface Coordinates Section 3, 2058' FSL x 2109' FEL
39.99222, -104.8737

Bottom Hole Coordinates Section 3, 701' FSL x 791' FEL

Ground Elevation 5098'

K.B. Elevation 5111'

Logged Interval 1807' **To** 8150'

Total Depth 6343'

Formation QUATERNARY SANDS to NIOBRARA B CHALK

Type of Drilling Fluid OBM - OIL BASED MUD

Operator

Company Petro Share

Address 7200 S Alton Way
Englewood, CO 80112



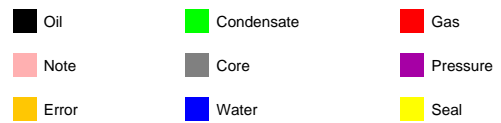
Geologist

Zone Color Coding

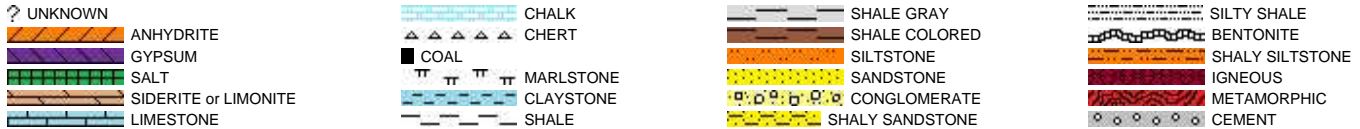
Name JOEY LUCE, SAGE BETTS

Company TERRA GUIDANCE

Address 1298 O Road
Loma CO 81524
(970) 260-5408

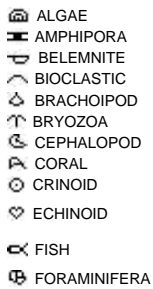


Rock Types



Accessories

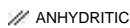
Fossils



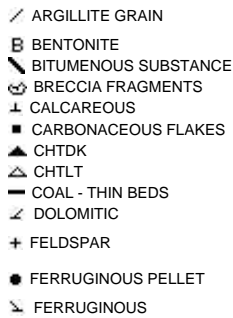
Fossil



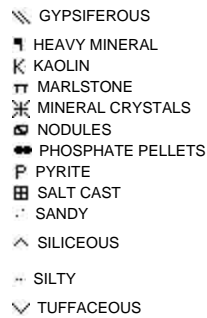
Minerals



ARGILLACEOUS



GLAUCONITE

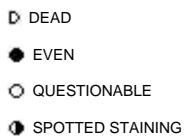


Stringer



Other Symbols

Oil Show



Porosity

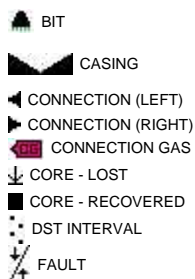


ORGANIC

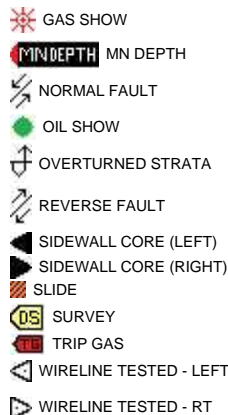
PINPOINT

VUGGY

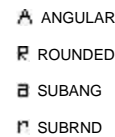
Engineering



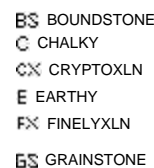
FORMATION TOP



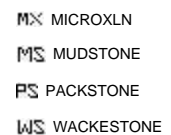
Rounding



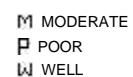
Textures



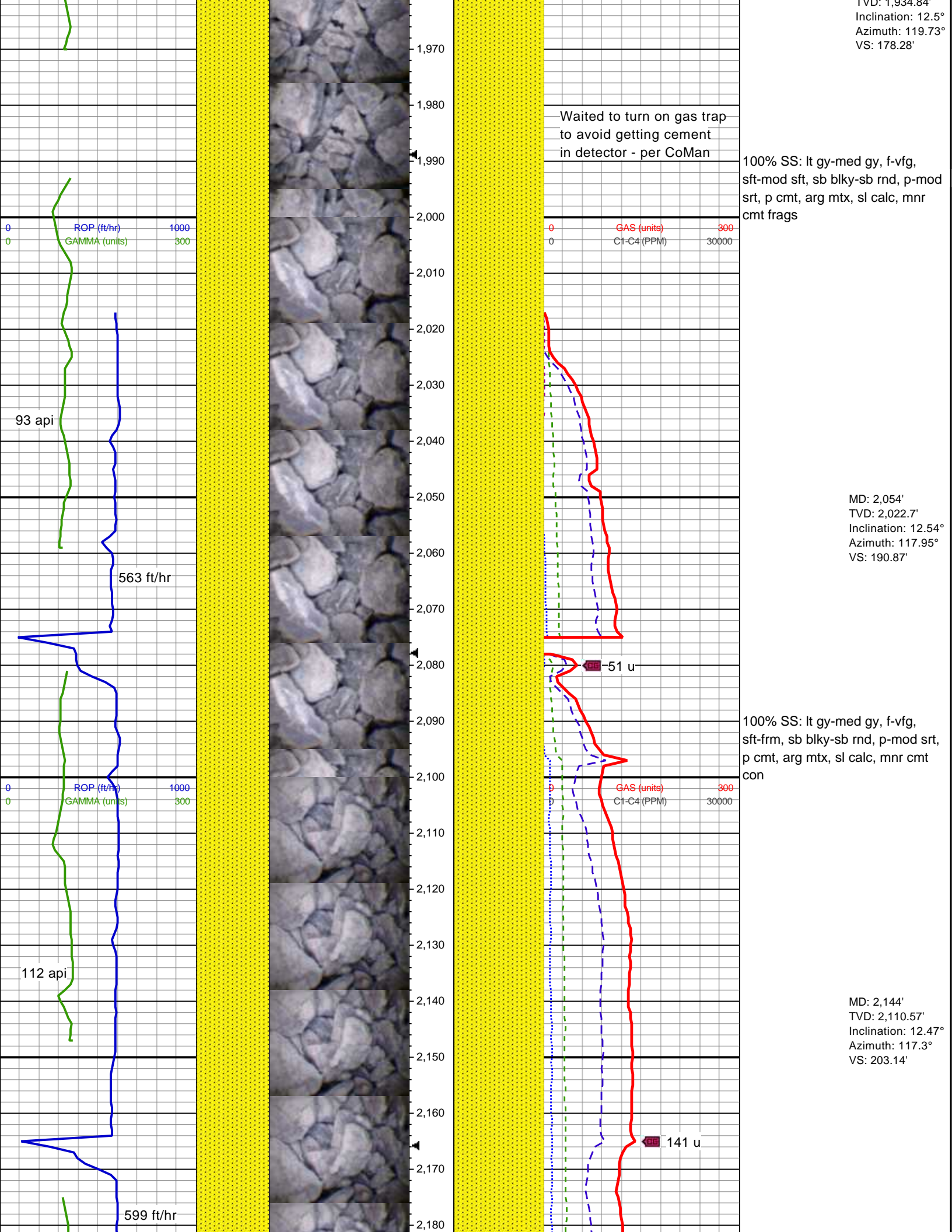
LITHOGRAPHIC

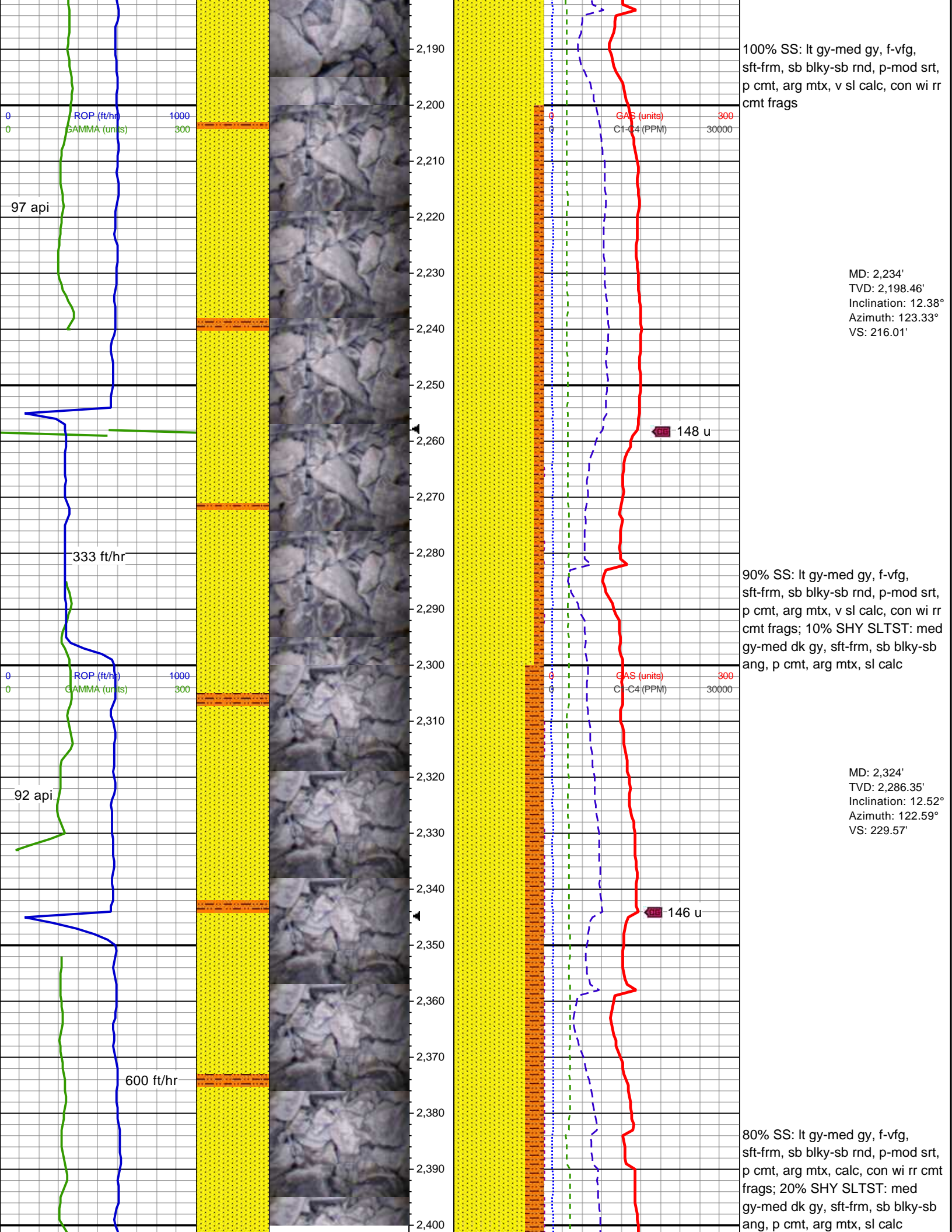


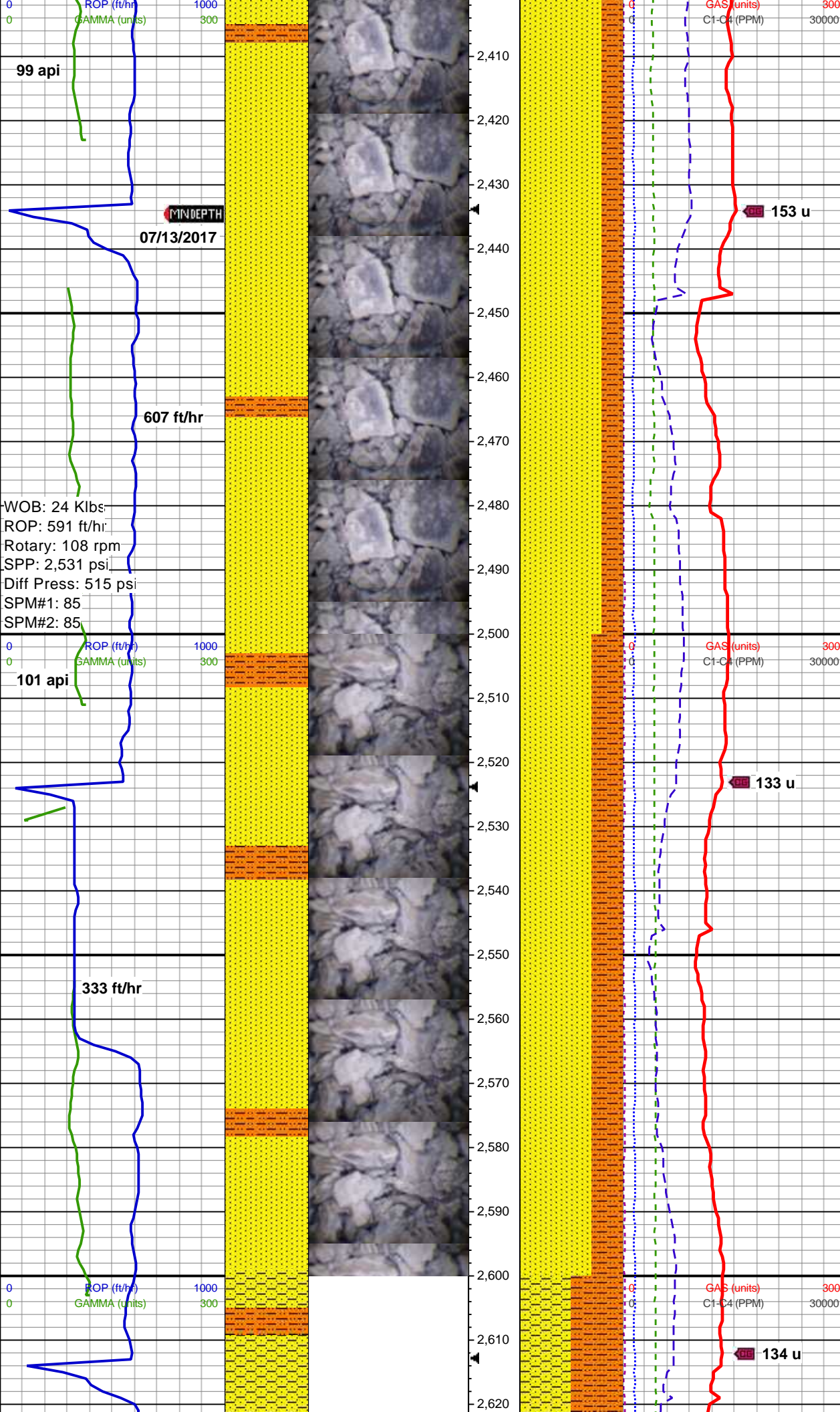
Sorting



<div> <div>ROP</div> <div>ROP</div> <div>GAMMA</div> </div>		Interp Lith	Images	Depth Labels	% Lith	<div>Total Gas & Chromatograph</div> <div> <div>GAS</div> <div>C1</div> <div>C2</div> <div>C3</div> <div>C4</div> </div>	Lithology Descriptions
<div> <div>Gaps in Gamma Data due to Rapid Drilling Rate</div> <div> <div>ROP scale: 0-1000 ft/hr</div> <div>Gamma scale: 0-300 api</div> </div> <div> <div>0</div> <div>ROP (ft/hr)</div> <div>1000</div> <div>0</div> <div>GAMMA (units)</div> <div>300</div> </div> <div> <div>Bit #: 2</div> <div>Type: BHI AT505F</div> <div>Size: 8.5"</div> <div>Depth In: 1,807'</div> <div>Jets: 5x15</div> <div>S/N: 7160995</div> </div> <div>84 api</div> </div>				<div>1,770</div> <div>1,780</div> <div>1,790</div> <div>1,800</div> <div>1,810</div> <div>1,820</div> <div>1,830</div> <div>1,840</div> <div>1,850</div> <div>1,860</div> <div>1,870</div> <div>1,880</div> <div>1,890</div> <div>1,900</div> <div>1,910</div> <div>1,920</div> <div>1,930</div> <div>1,940</div> <div>1,950</div> <div>1,960</div>		<div>100' Samples Collected Until KOP</div> <div> <div>Gas scale: 0-300 units</div> <div> <div>0</div> <div>GAS (units)</div> <div>300</div> <div>0</div> <div>C1-C4 (PPM)</div> <div>30000</div> </div> </div>	<div> <div>Wellsite Geology services provided by Terra Guidance, LLC.</div> <div>Terra Guidance two person mudlogging team on site: 07/11/2017,</div> <div>Begin logging 1807' MD, 21:00 MDT, 07/12/2017</div> <div>Gas detection: Pason.</div> <div>Rig: Ensign 145</div> <div>Sample/description interval: 100' in Vert, 50' in Curve.</div> <div>Begin sample logging out of Surface Casing</div> </div> <div> <div>MW 9.5 / VIS 46 IN</div> <div>MW 9.5 / VIS 46 OUT</div> </div> <div> <div>MD: 1,874'</div> <div>TVD: 1,846.88'</div> <div>Inclination: 11.97°</div> <div>Azimuth: 113.1°</div> <div>VS: 166.58'</div> </div> <div> <div>100% SS: lt-med gy, gy, f-vfg, mod sft-sft, sb blk, sr-sb ang, p-mod srt, p cmt, arg mtx, sl calc</div> </div> <div> <div>MW 9.5 / VIS 47 IN</div> <div>MW 9.5 / VIS 46 OUT</div> </div> <div> <div>MD: 1,964'</div> <div>TVD: 1,881.84'</div> </div>







MW 9.5 / VIS 46 IN
MW 9.5 / VIS 46 OUT

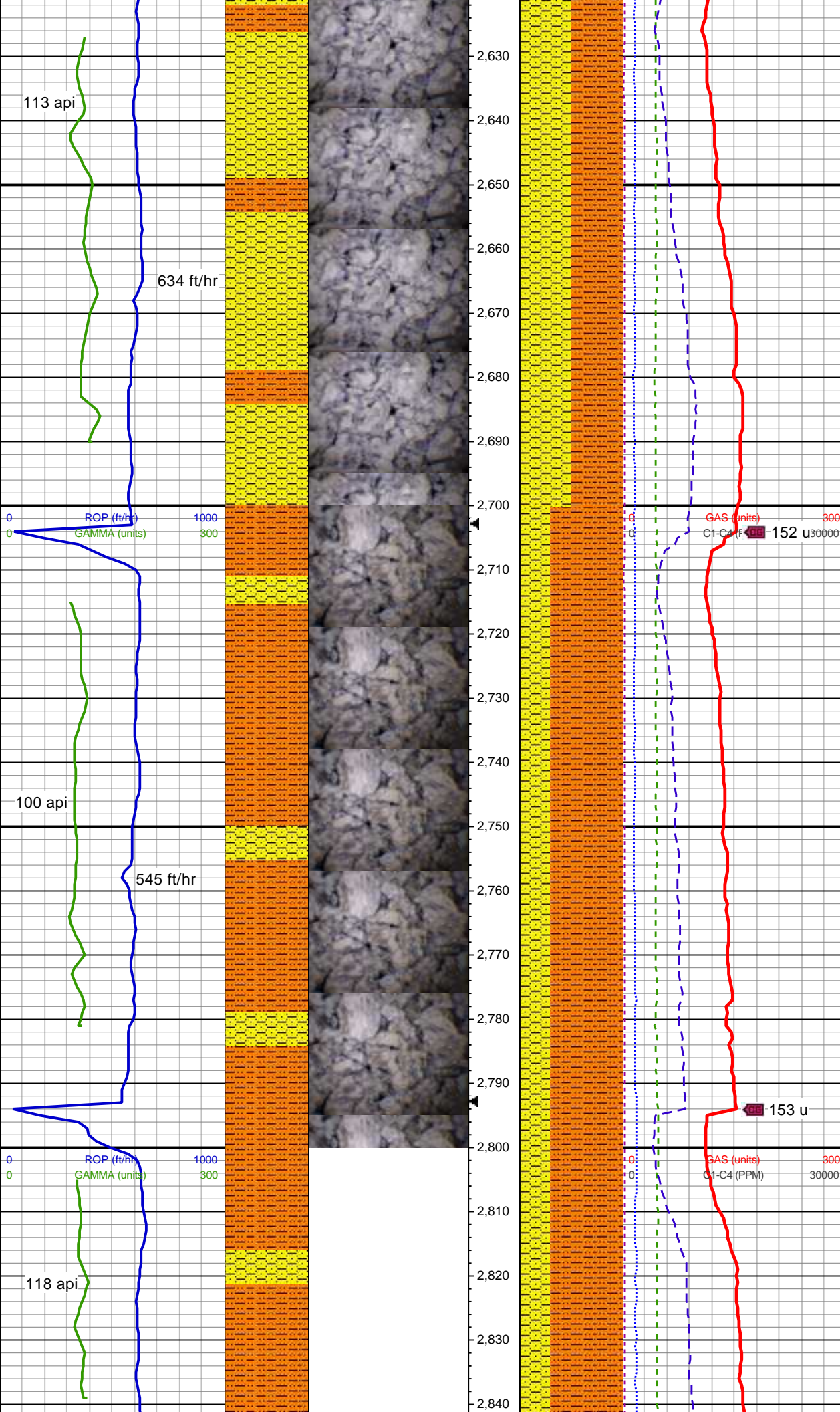
MD: 2,414'
TVD: 2,374.22'
Inclination: 12.46°
Azimuth: 120.08°
VS: 242.77'

80% SS: lt gy-med gy, vf-f gr,
sft frm, sb blk-y-sb ang, p-mod srt,
p cmt, arg mtx, calc; 20% SHY
SLTST: med gy-med dk gy,
sft frm, sb blk-y-sb ang, p cmt, arg
mtx, sl calc, con wi rr cmt frags

MD: 2,504'
TVD: 2,462.09'
Inclination: 12.52°
Azimuth: 122.97°
VS: 256.02'

70% SS: lt gy-med gy, vf gr,
sft frm, sb blk-y-sb ang, p-mod srt,
p cmt, arg mtx, calc; 30% SHY
SLTST: med gy-med dk gy,
sft frm, sb blk-y-sb ang, p cmt, arg
mtx, sl calc

MD: 2,594'
TVD: 2,549.97'
Inclination: 12.41°
Azimuth: 120.17°
VS: 269.26'

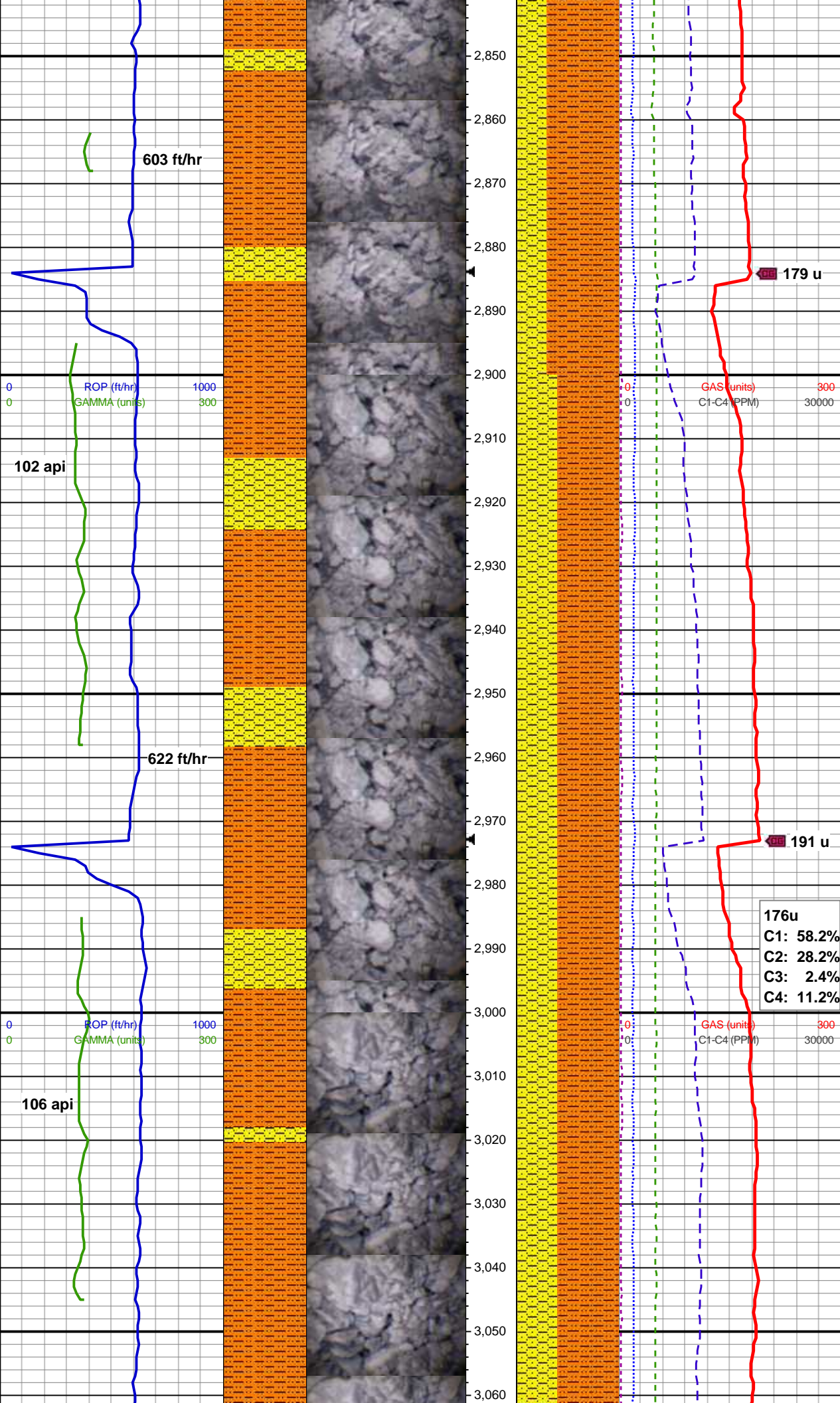


MD: 2,683'
TVD: 2,636.88'
Inclination: 12.48°
Azimuth: 123.19°
VS: 282.35'

50% SHY SS: med gy, vf gr,
sft-frm, blk-y-sb ang, p-mod srt, p
cmt, arg mtx, sl calc; 50% SHY
SLTST: med gy-med dk gy,
sft-frm, sb blk-y-sb ang, p cmt, arg
mtx, sl calc

MD: 2,773'
TVD: 2,724.74'
Inclination: 12.56°
Azimuth: 118.74°
VS: 295.49'

70% SHY SS: med gy, vf gr,
sft-frm, blk-y-sb ang, p-mod srt, p
cmt, arg mtx, calc; 30% SHY
SLTST: med gy-med dk gy,
sft-frm, sb blk-y-sb ang, p cmt, arg
mtx, sl calc



MD: 2,863'
TVD: 2,812.62'
Inclination: 12.39°
Azimuth: 123.79°
VS: 308.64'

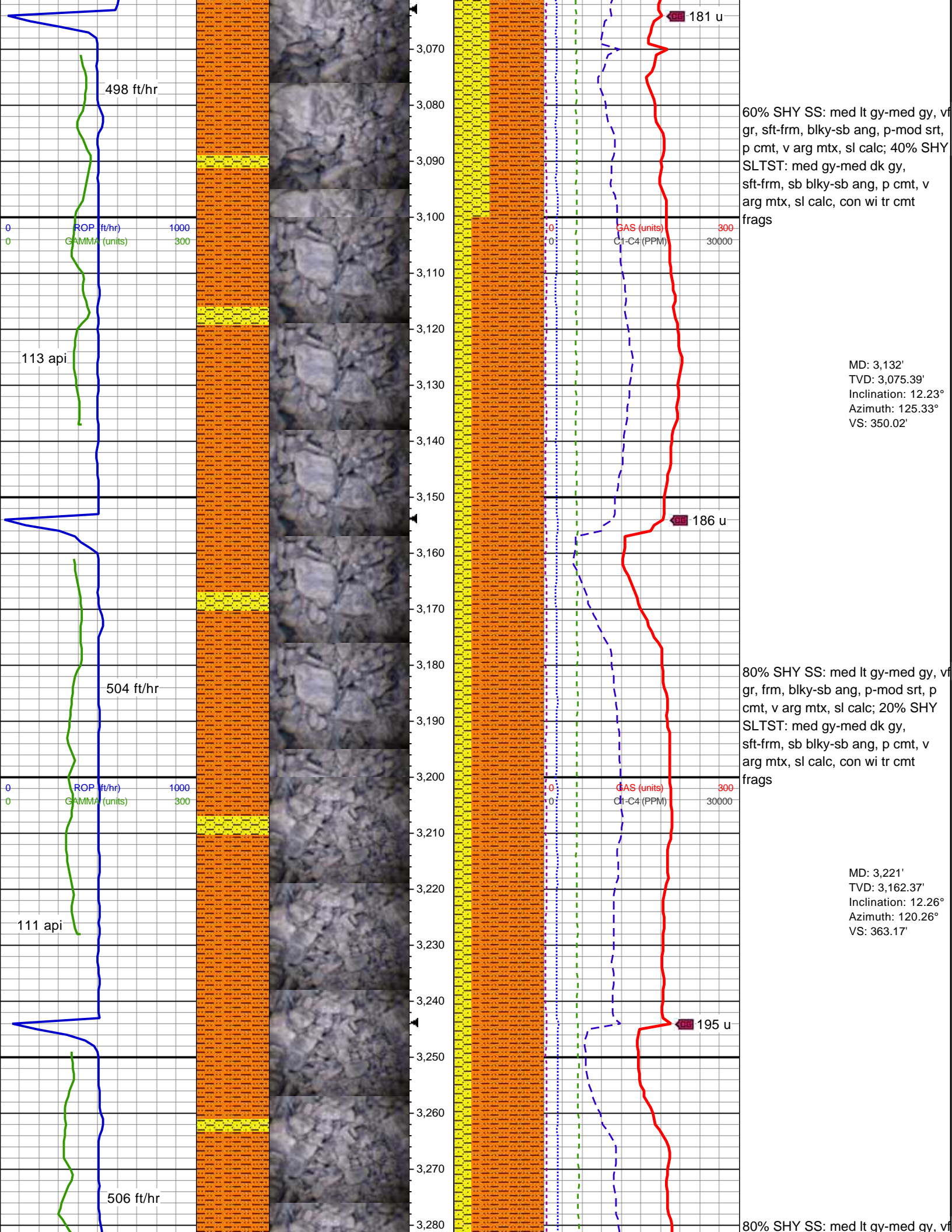
MW 9.5 / VIS 46 IN
MW 9.5 / VIS 46 OUT

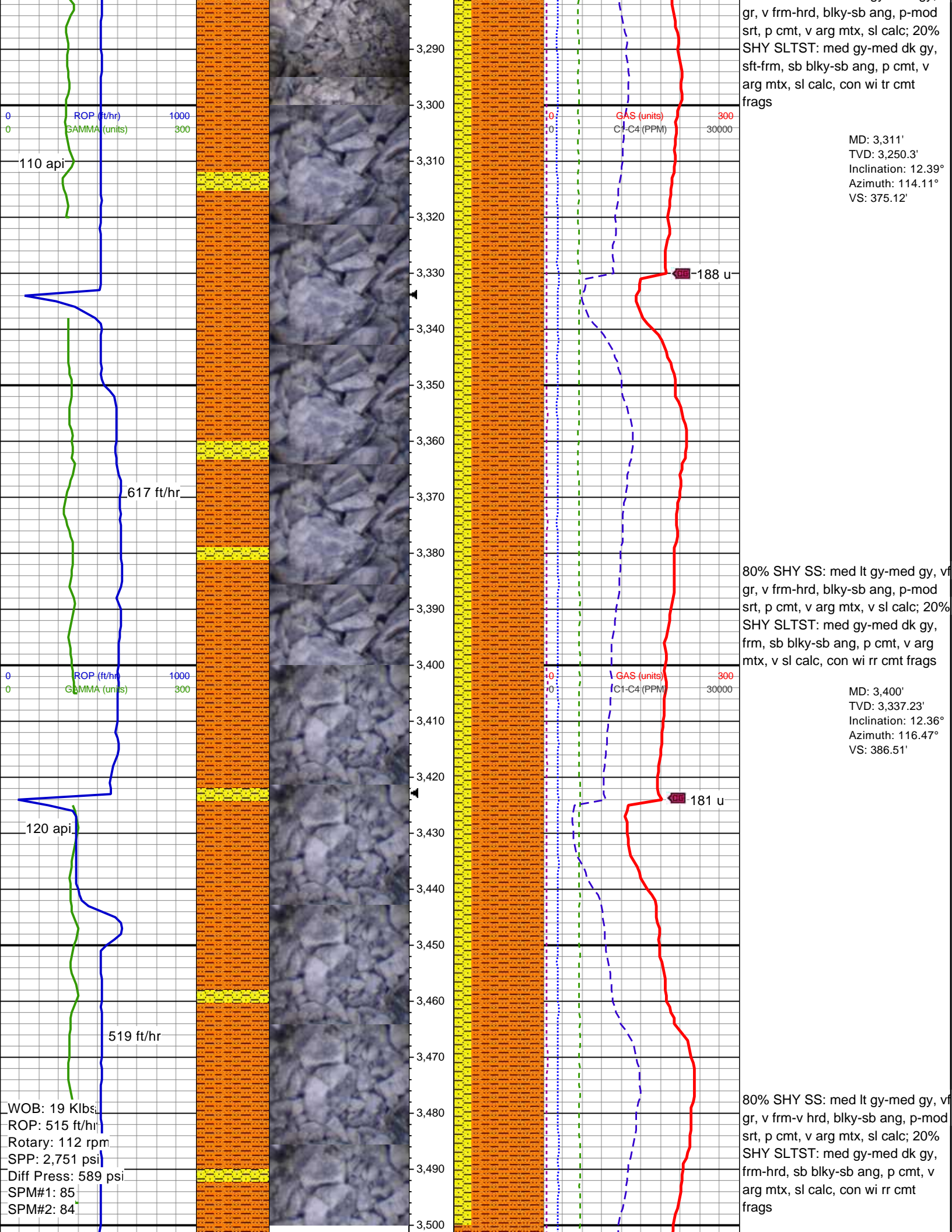
70% SHY SS: med lt gy-med gy, v
gr, sft frm, blk sb ang, p mod srt,
p cmt, arg mt, calc; 30% SHY
SLTST: med gy-med dk gy,
sft frm, sb blk sb ang, p cmt, arg
mt, sl calc

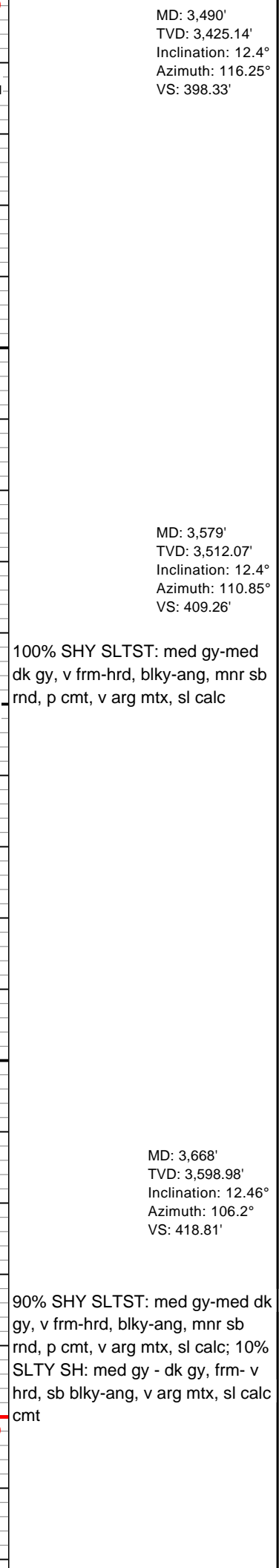
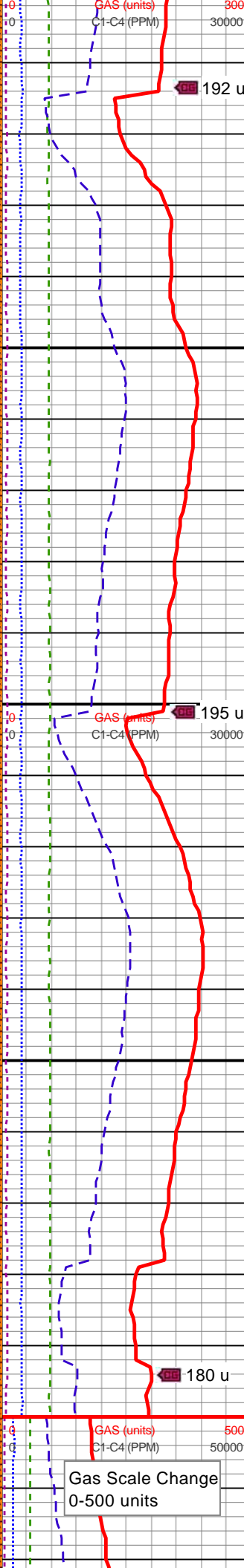
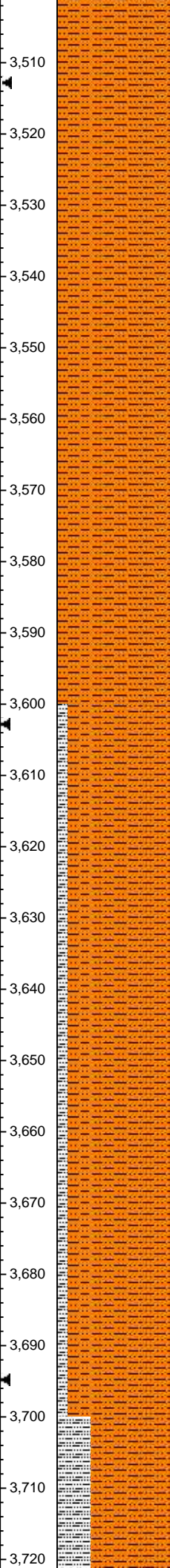
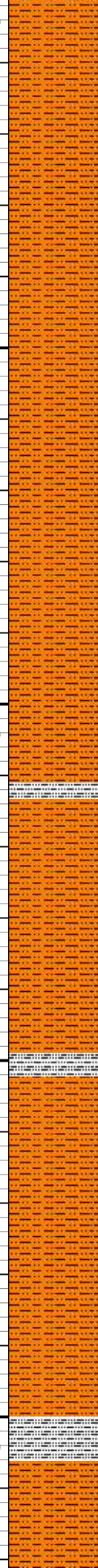
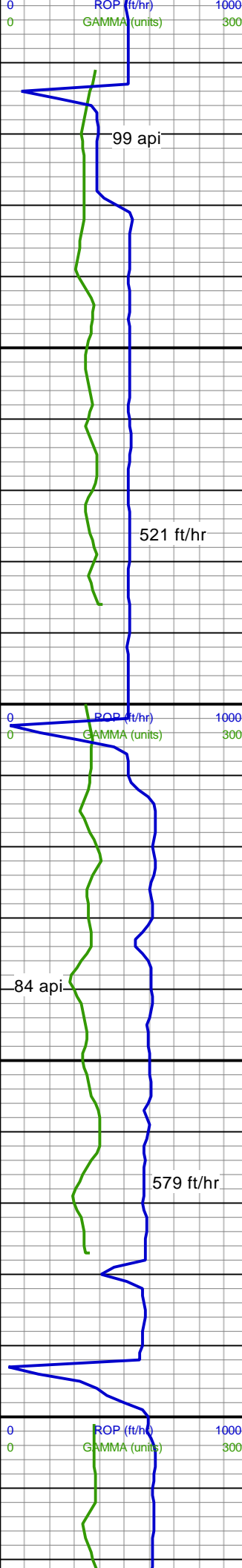
MD: 2,952'
TVD: 2,899.55'
Inclination: 12.32°
Azimuth: 121.75°
VS: 321.91'

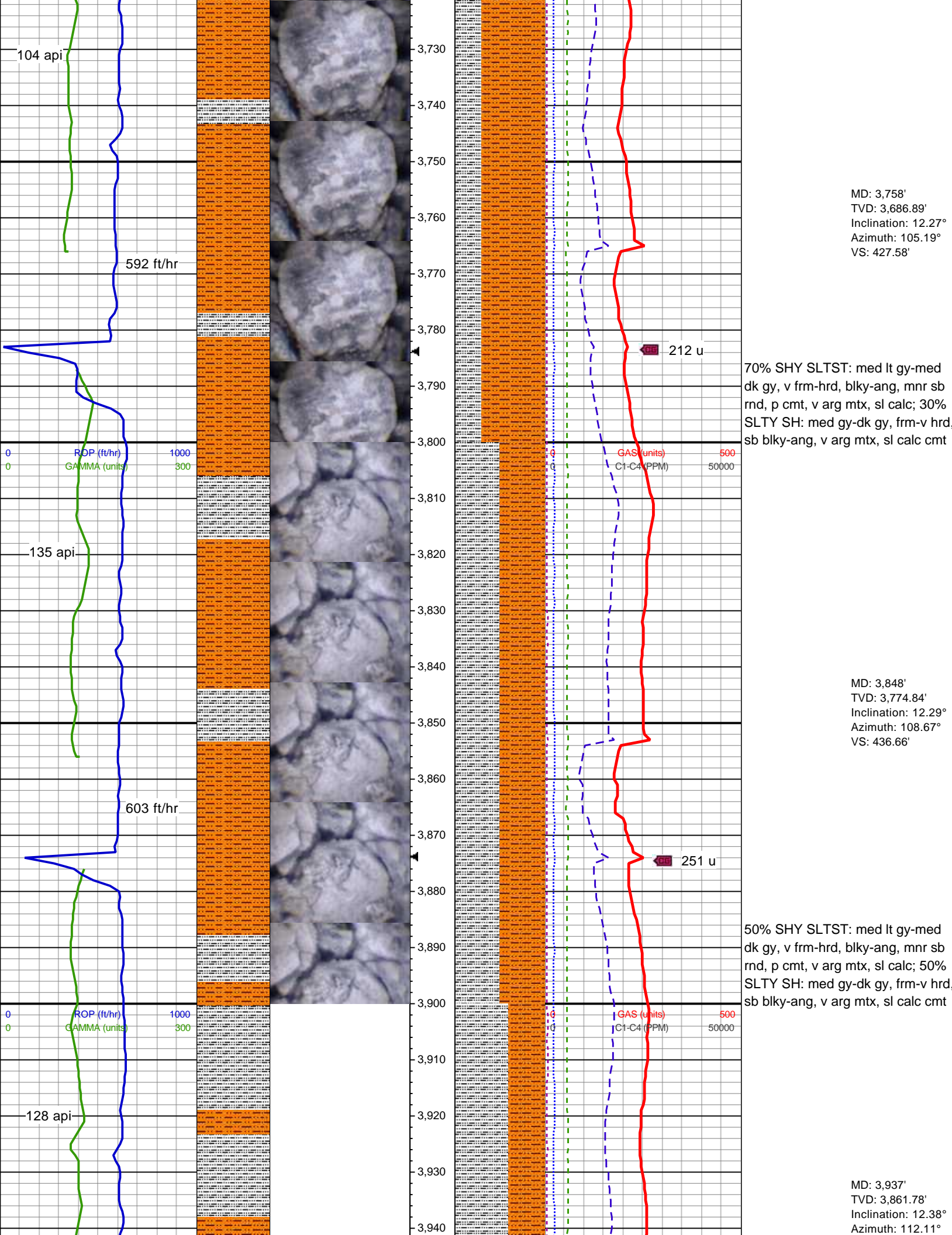
60% SHY SS: med lt gy-med gy, v
gr, sft frm, blk sb ang, p mod srt,
p cmt, v arg mt, calc; 40% SHY
SLTST: med gy-med dk gy,
sft frm, sb blk sb ang, p cmt, v
arg mt, sl calc

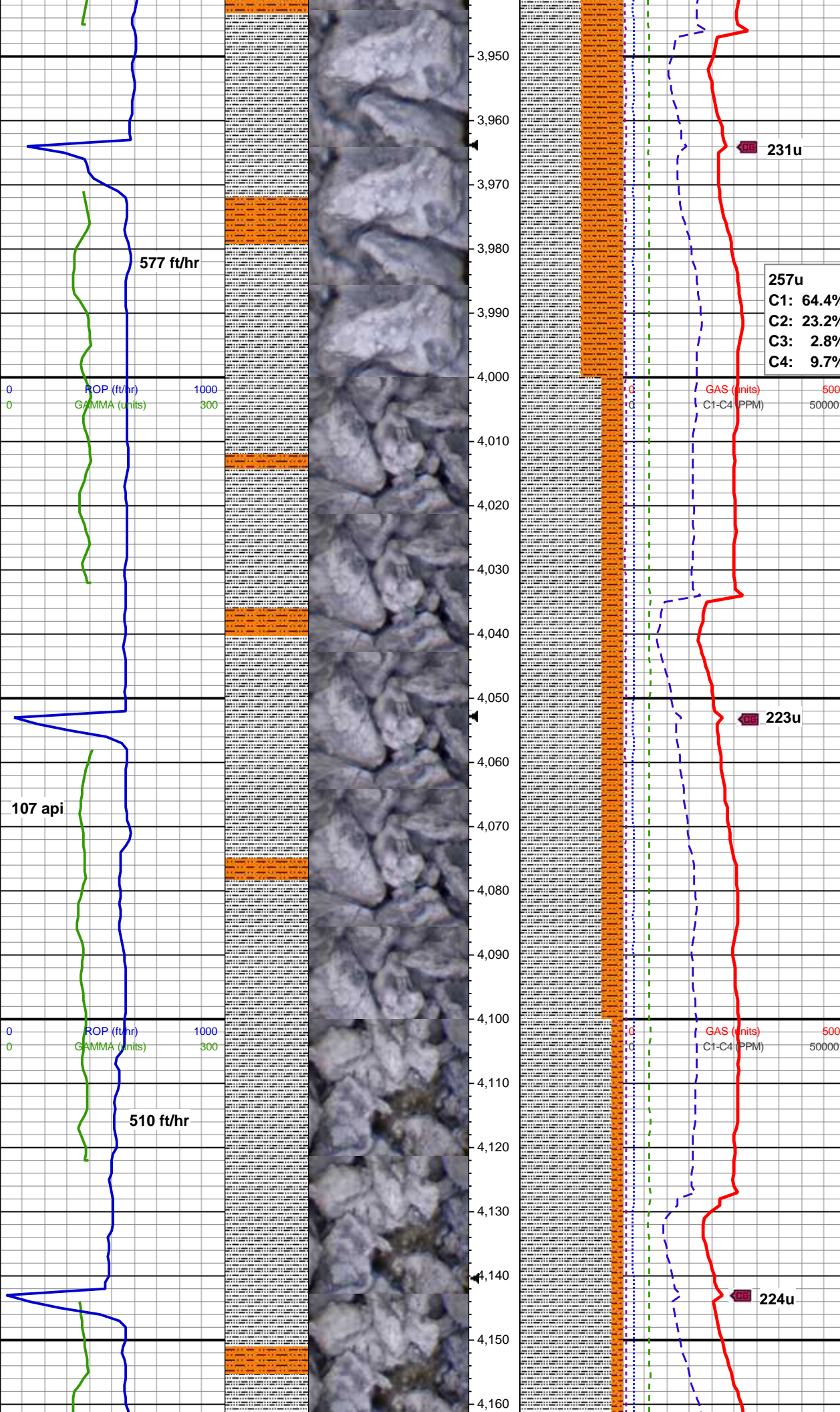
MD: 3,042'
TVD: 2,987.47'
Inclination: 12.43°
Azimuth: 127.56°
VS: 335.78'











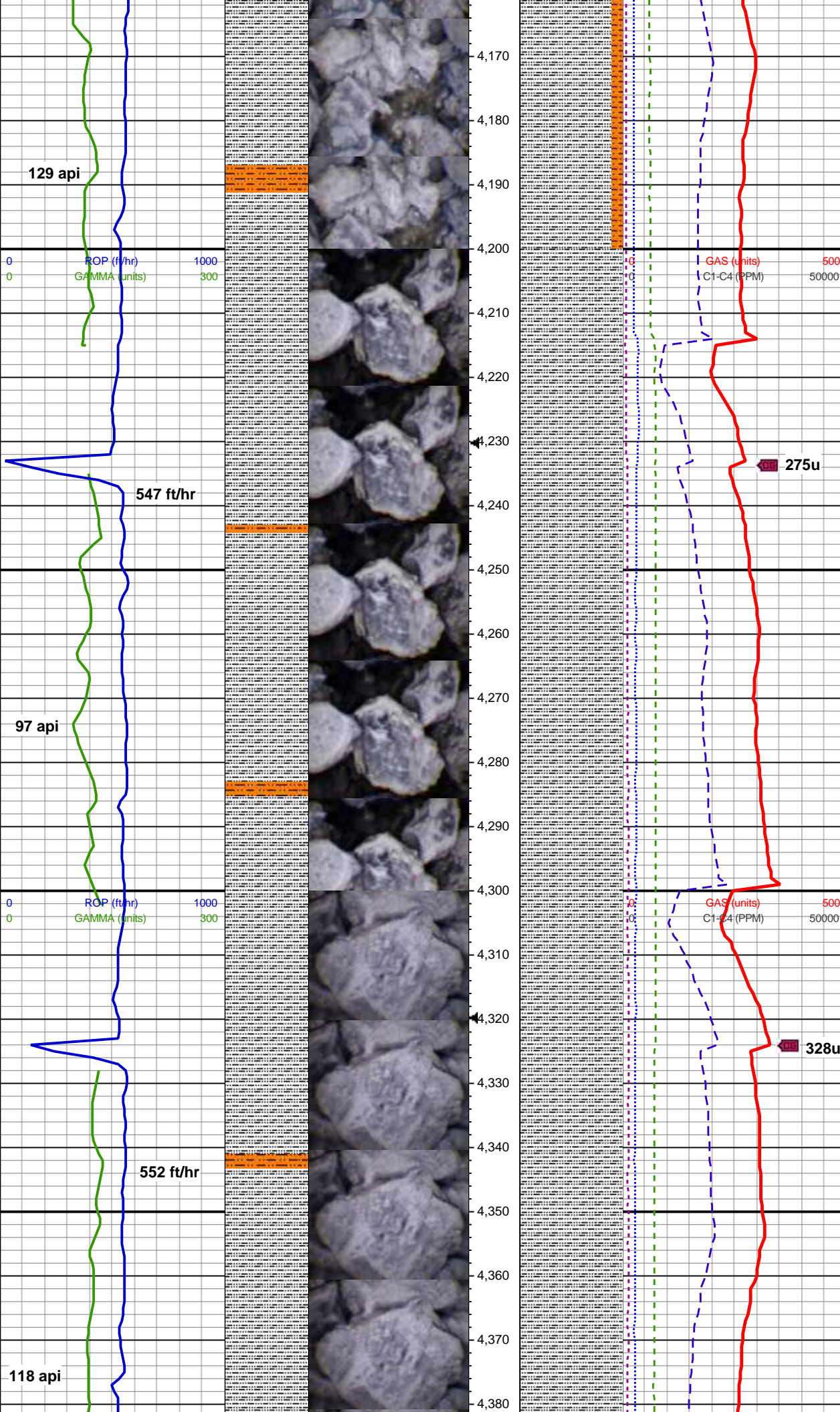
60% SLTY SH: med gy-dk gy, frm-hrd, sb blk-y-sb ang, v arg mtx, sl calc cmt; 40% SHY SLTST: med lt gy-med dk gy, v frm-hrd, blk-y-ang, mnr sb rnd, p cmt, v arg mtx, sl calc

MW 9.5 / VIS 46 IN
MW 9.4 / VIS 47 OUT

MD: 4,027'
TVD: 3,949.72'
Inclination: 12.23°
Azimuth: 113.22°
VS: 457.41'

80% SLTY SH: med gy-dk gy, v frm-hrd, sb blk-y-sb ang, arg mtx, sl calc cmt; 20% SHY SLTST: med lt gy-med dk gy, frm-hrd, sb blk-y-ang, p cmt, v arg mtx, sl calc

MD: 4,116'
TVD: 4,036.69'
Inclination: 12.27°
Azimuth: 111.41°
VS: 467.89'



90% SLTY SH: medgy-drkgy, v
frm-hrd, sb blkgy-sb ang, arg mtx,
sl calc cmt; 10% SHY SLTST:
med-drkgy, occ ltgy, frm-hrd, sb
blkgy-ang, p cmt, v arg mtx, sl calc

MD: 4,206'
TVD: 4,124.63'
Inclination: 12.29°
Azimuth: 112.27°
VS: 478.38'

100% SLTY SH: med-drkgy,
gy/brn, ip blk, sl sft-frm, brit-occ fri,
sb plty-sb fis, rthy, slty tex, v arg, v
sl calc, grdg shy sltst

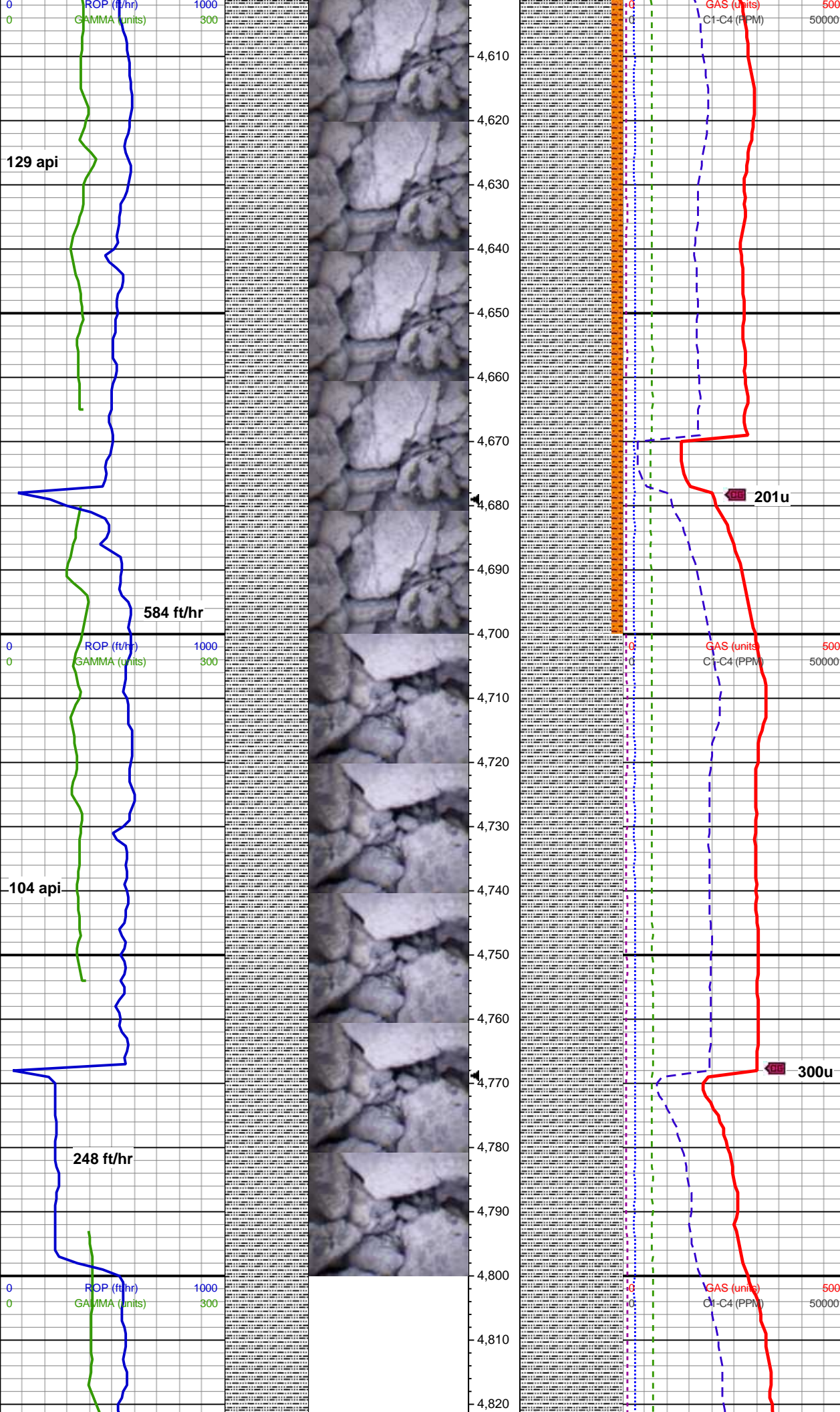
MW 9.4 / VIS 46

MD: 4,386'
TVD: 4,300.89'
Inclination: 11.09°
Azimuth: 112.28°

WOB: 16.3 Klbs
ROP: 543 ft/hr
Rotary: 110 rpm
SPP: 2,946 psi
Diff Press: 534 psi
SPM#1: 83
SPM#2: 82

116 api
337 ft/hr
124 api
482 ft/hr

231u
260u
237u



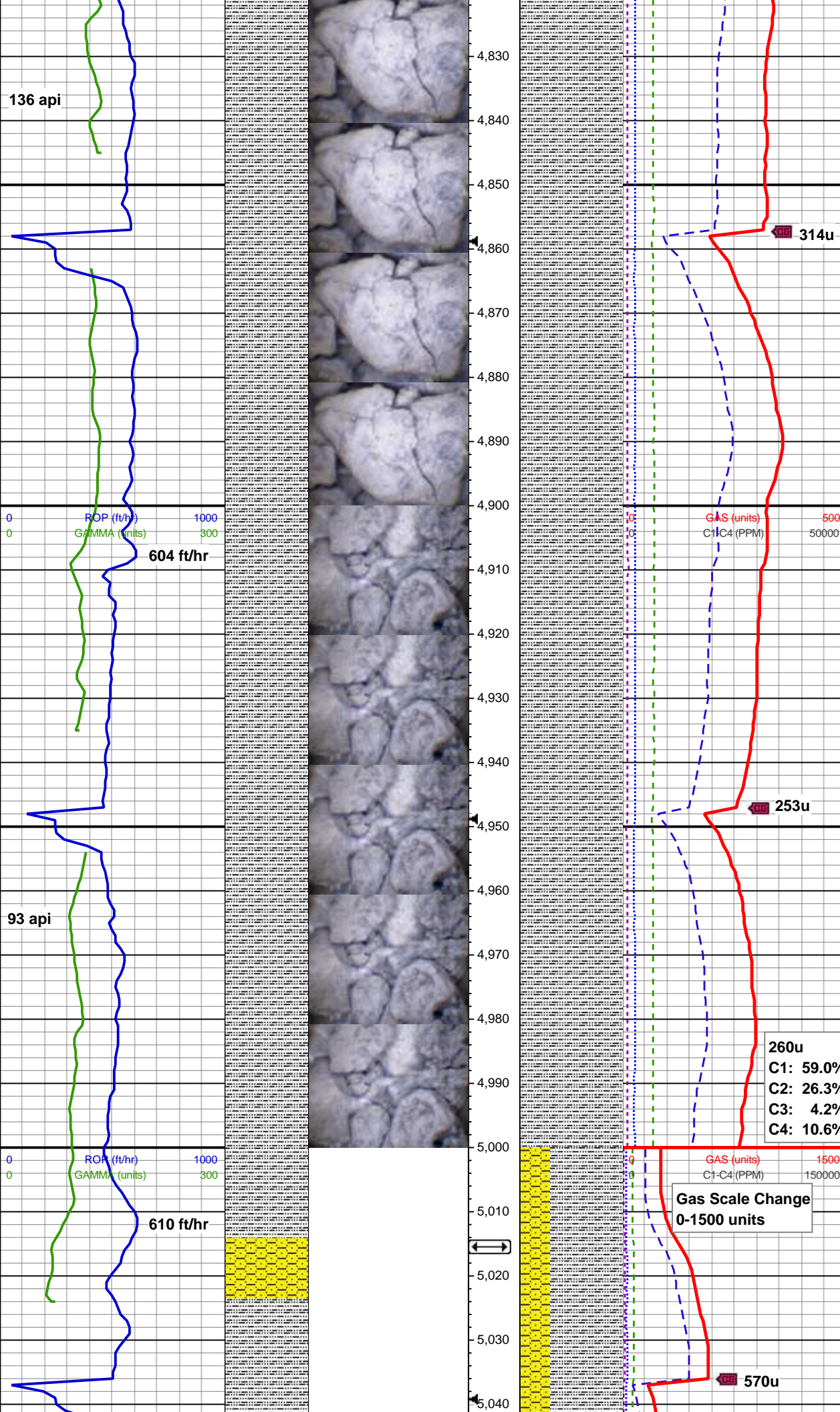
MD: 4,655'
TVD: 4,563.92'
Inclination: 12.21°
Azimuth: 101.33°
VS: 529.66'

90% SLTY SH: med-v drkgy, gy/brn, sl sft frm, brit-sme fri, sb plty-sb fis, rthy, slty tex, v arg, sl calc; 10% SHY SLTST: med-drkgy, frm-sl sft, fri, sb blkly-sb plty, vfg, mod srt, v arg mtx, non-sl calc

MW 9.4 / VIS 47 IN
MW 9.4 / VIS 48 OUT

MD: 4,745'
TVD: 4,651.9'
Inclination: 12.18°
Azimuth: 89.97°
VS: 535.21'

100% SLTY SH: med-drkgy, sft-sl frm, brit, sb blkly-sb fis, rthy-gritty, v slty, arg, sl calc



MD: 4,836'
TVD: 4,740.73'
Inclination: 12.87°
Azimuth: 86.65°
VS: 538.52'

100% SLTY SH: med-drkgy, sft-sl
frm, brit, sb blkly-sb fis, rthy-gritty, v
slty, arg, sl calc

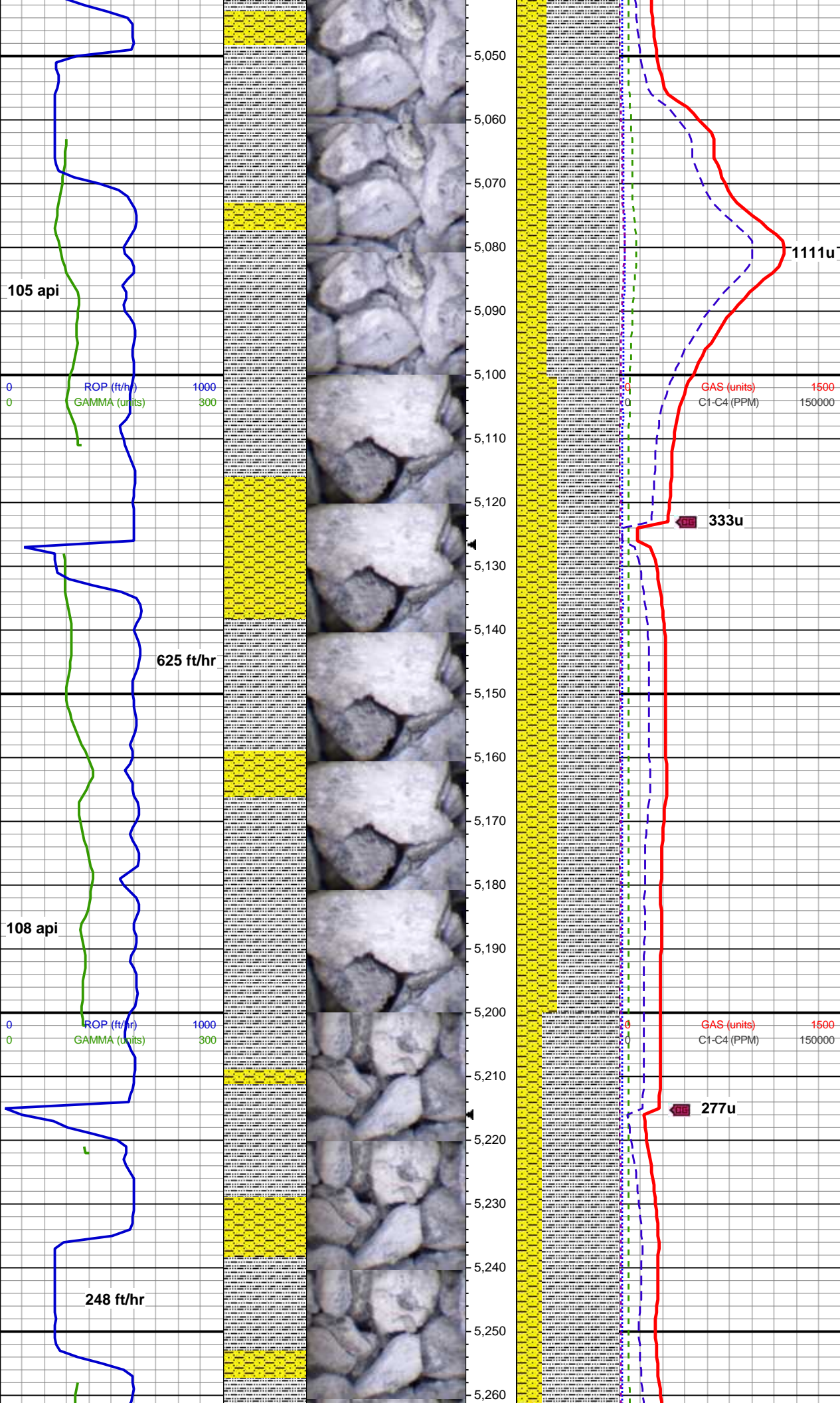
MW 9.4 / VIS 47 IN
MW 9.4 / VIS 48 OUT

MD: 4,925'
TVD: 4,827.61'
Inclination: 12.22°
Azimuth: 94.2°
VS: 542.44'

100% SLTY SH: med-drkgy, sft-sl
frm, brit, sb blkly-sb fis, rthy-gritty, v
slty-ip aren, arg, sl calc

Sussex/Shannon Top
5015' MD / 4915' TVD

MD: 5,014'
TVD: 4,914.63'
Inclination: 12.1°
Azimuth: 105.22°
VS: 549.15'



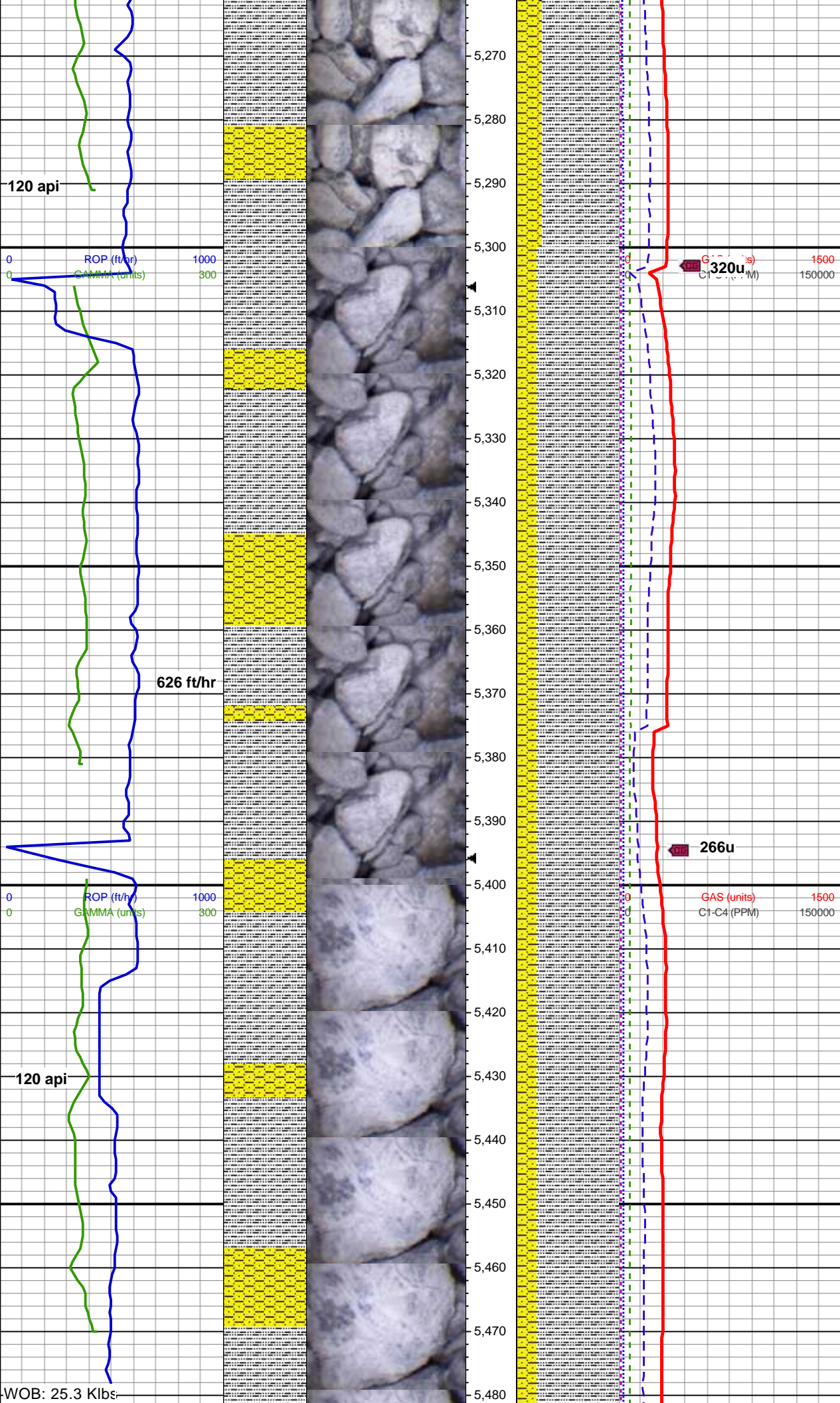
70% SLTY SH: lt-medgy, gy/brn, mod sft-hd, fri, sb blk-yp plty, mod srt, arg mtx, aren, sl calc; 30% SHY SS: lt-medgy, sft-sl frm, sb blk-yp mod cons, vfg, slty-arg, lmy calc mtx, ip intbd wi slty sh

MD: 5,104'
TVD: 5,002.59'
Inclination: 12.36°
Azimuth: 107.32°
VS: 558'

60% SLTY SH: lt-medgy, gy/brn, mod sft-hd, fri, sb blk-yp plty, mod srt, arg mtx, aren, sl calc; 40% SHY SS: lt-medgy, sft-sl frm, sb blk-yp mod cons, vfg, slty-arg, lmy calc mtx, ip intbd wi slty sh

MD: 5,193'
TVD: 5,089.53'
Inclination: 12.36°
Azimuth: 102.34°
VS: 566.41'

MW 9.4 / VIS 49 IN
MW 9.4 / VIS 49 OUT



MD: 5,283'
TVD: 5,177.47'
Inclination: 12.18°
Azimuth: 99.18°
VS: 573.62'

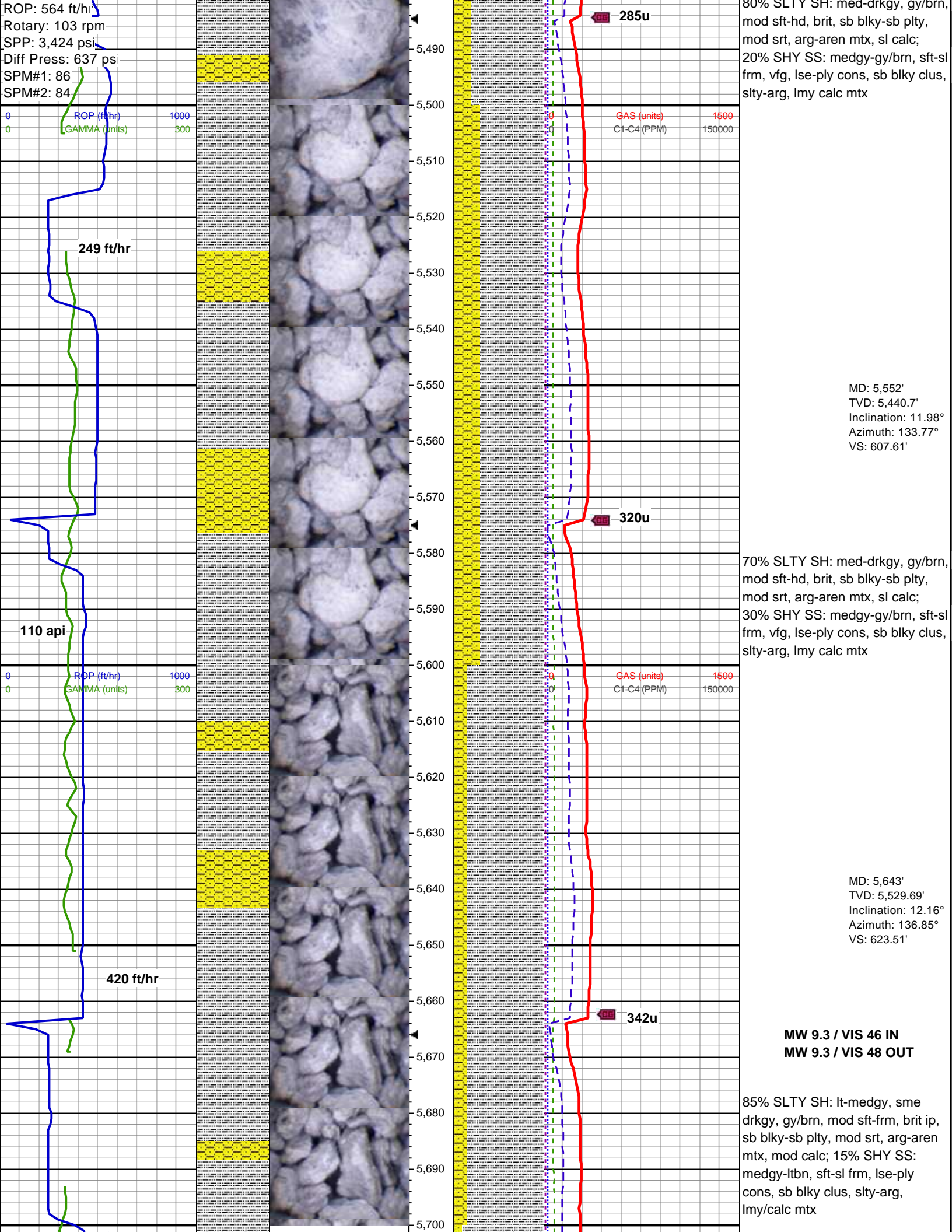
75% SLTY SH: lt-medgy, gy/brn,
mod sft-hd, fri, sb blk-yp plty,
mod srt, arg mtz, aren, sl calc;
25% SHY SS: lt-medgy, sft-sl frm,
sb blk-yp mod cons, vfg, slty-arg,
lmy calc mtz, ip intbd wi slty sh

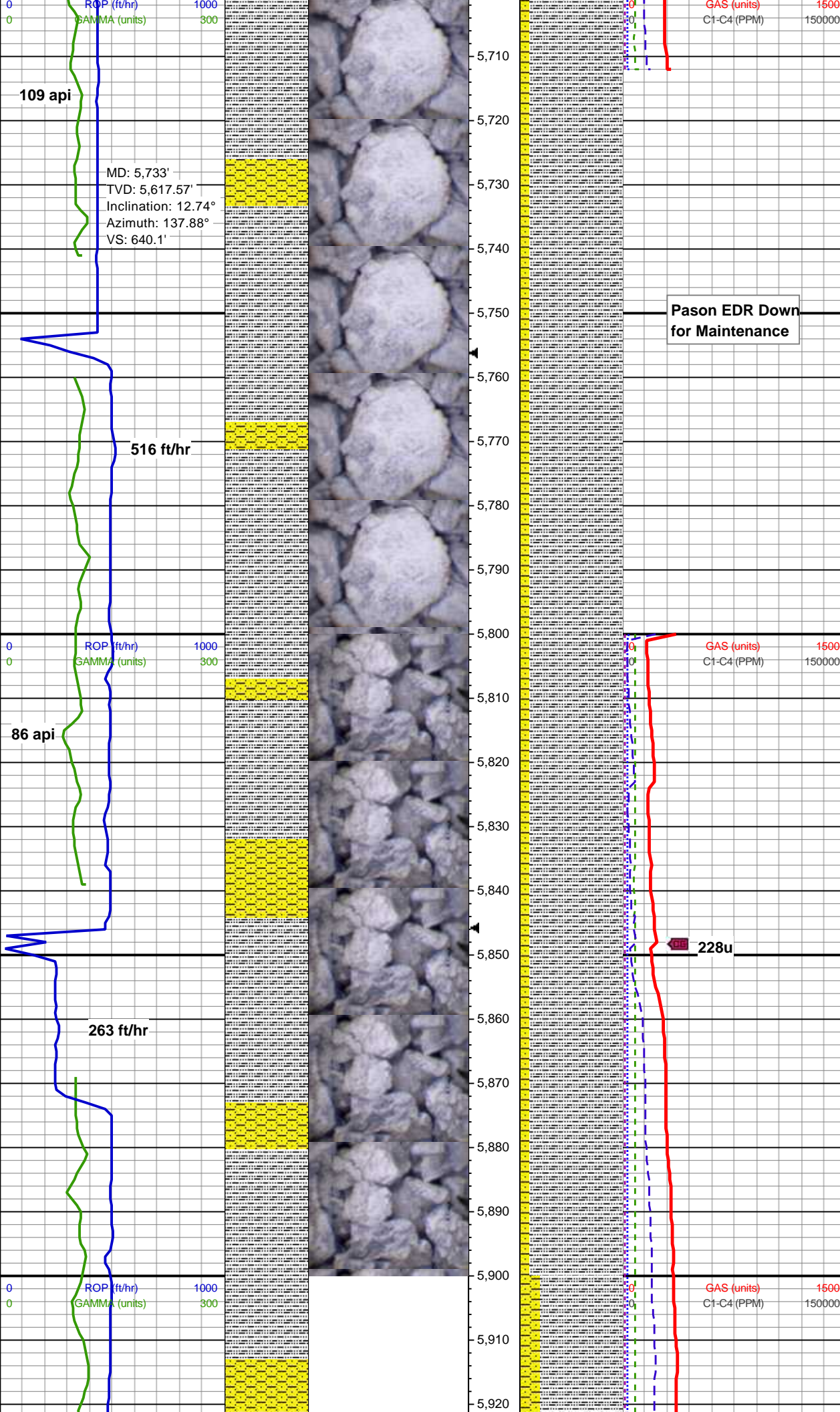
MD: 5,372'
TVD: 5,264.56'
Inclination: 11.71°
Azimuth: 110.65°
VS: 581.71'

80% SLTY SH: med-drkgy, gy/brn,
mod sft-hd, brit, sb blk-yp sb plty,
mod srt, arg-aren mtz, sl calc;
20% SHY SS: medgy-gy/brn, sft-sl
frm, vfg, lse-yp cons, sb blk-yp clus,
slty-arg, lmy calc mtz

MW 9.3 / VIS 48 IN
MW 9.3 / VIS 46 OUT

MD: 5,462'
TVD: 5,352.65'
Inclination: 12°
Azimuth: 124.27°
VS: 593.25'





MD: 5,733'
TVD: 5,617.57'
Inclination: 12.74°
Azimuth: 137.88°
VS: 640.1'

Pason EDR Down
for Maintenance

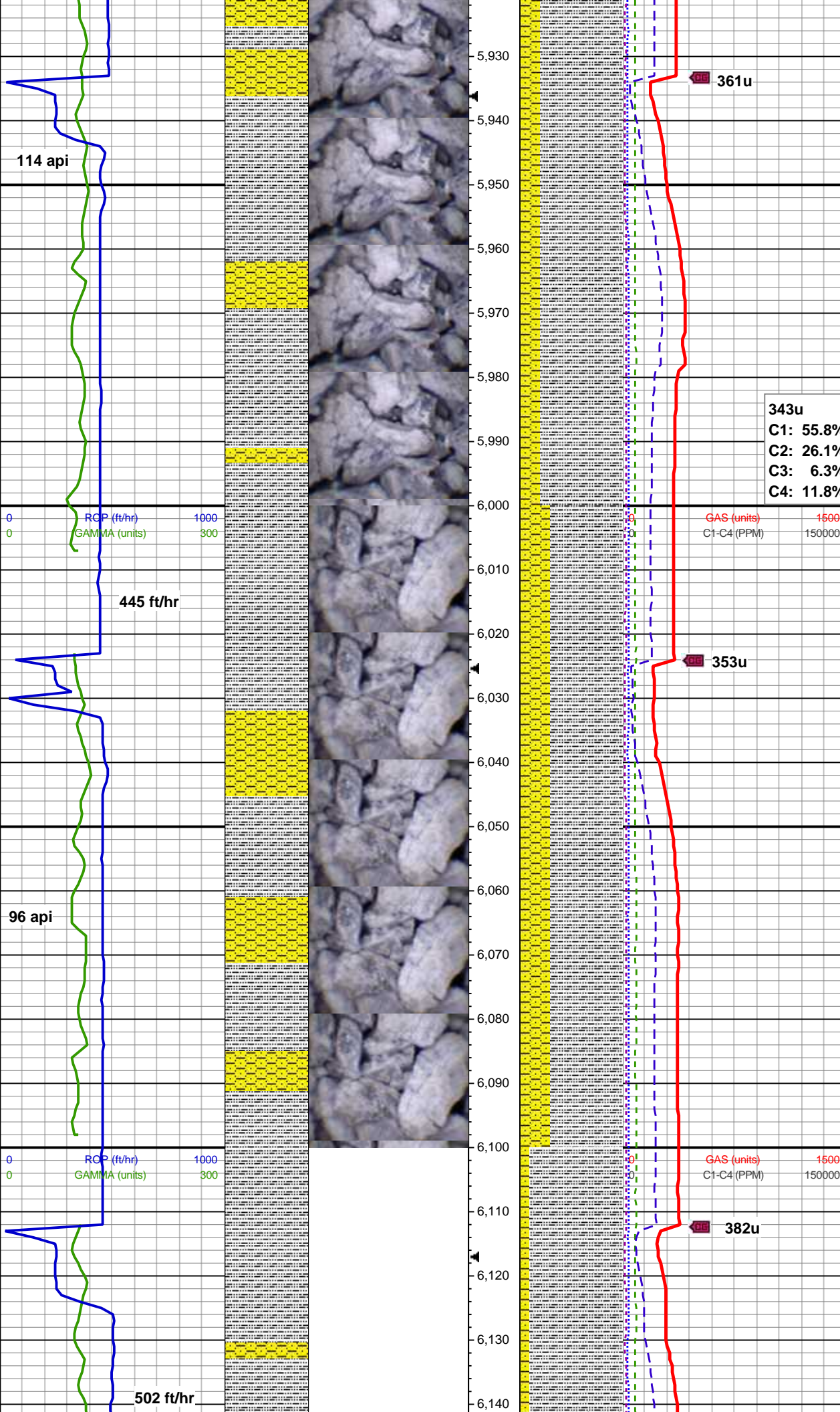
90% SLTY SH: lt-medgy, sme
drkgy, gy/brn, mod sft-frm, brit ip,
sb blkly-sb plty, mod srt, arg-aren
mtx, mod calc; 10% SHY SS:
medgy-ltbn, sft-sl frm, lse-ply
cons, sb blkly clus, slty-arg,
lmy/calc mtx

MD: 5,822'
TVD: 5,704.38'
Inclination: 12.77°
Azimuth: 140.95°
VS: 657.25'

MW 9.3 / VIS 46 IN
MW 9.3 / VIS 50 OUT

90% SLTY SH: lt-medgy, sme
drkgy, gy/brn, mod sft-frm, brit ip,
sb blkly-sb plty, mod srt, arg-aren
mtx, mod calc; 10% SHY SS:
medgy-ltbn, sft-sl frm, lse-ply
cons, sb blkly clus, slty-arg,
lmy/calc mtx

MD: 5,912'
TVD: 5,792.15'
Inclination: 12.75°
Azimuth: 139.9°
VS: 674.77'



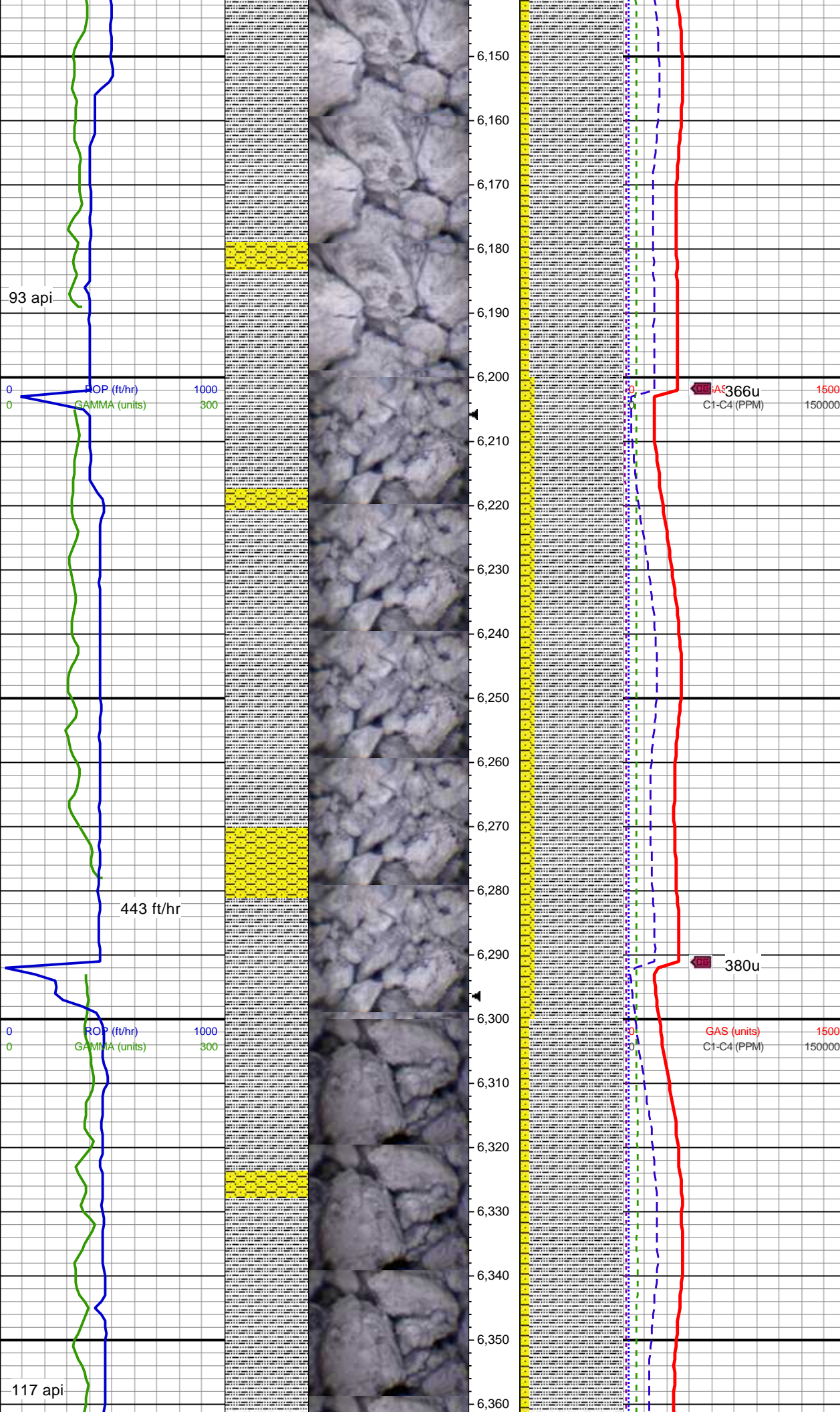
80% SLTY SH: med-drkgy, gy/brn, mod sft-frm, brit ip, sb blkysb plty, mod srt, arg-aren mtx, sl calc; 20% SHY SS: medgy-drkgy, sft-sl frm, ply cons, sb blkysb ang clus, slty-arg, sl calc

MD: 6,002'
TVD: 5,879.93'
Inclination: 12.76°
Azimuth: 140.07°
VS: 692.21'

MW 9.3 / VIS 48 IN
MW 9.3 / VIS 49 OUT

70% SLTY SH: med-drkgy, gy/brn, mod sft-frm, brit ip, sb blkysb plty, mod srt, arg-aren mtx, sl calc; 30% SHY SS: medgy-drkgy, sft-sl frm, ply cons, sb blkysb ang clus, slty-arg, sl calc

MD: 6,093'
TVD: 5,968.72'
Inclination: 12.58°
Azimuth: 135.82°
VS: 709.37'



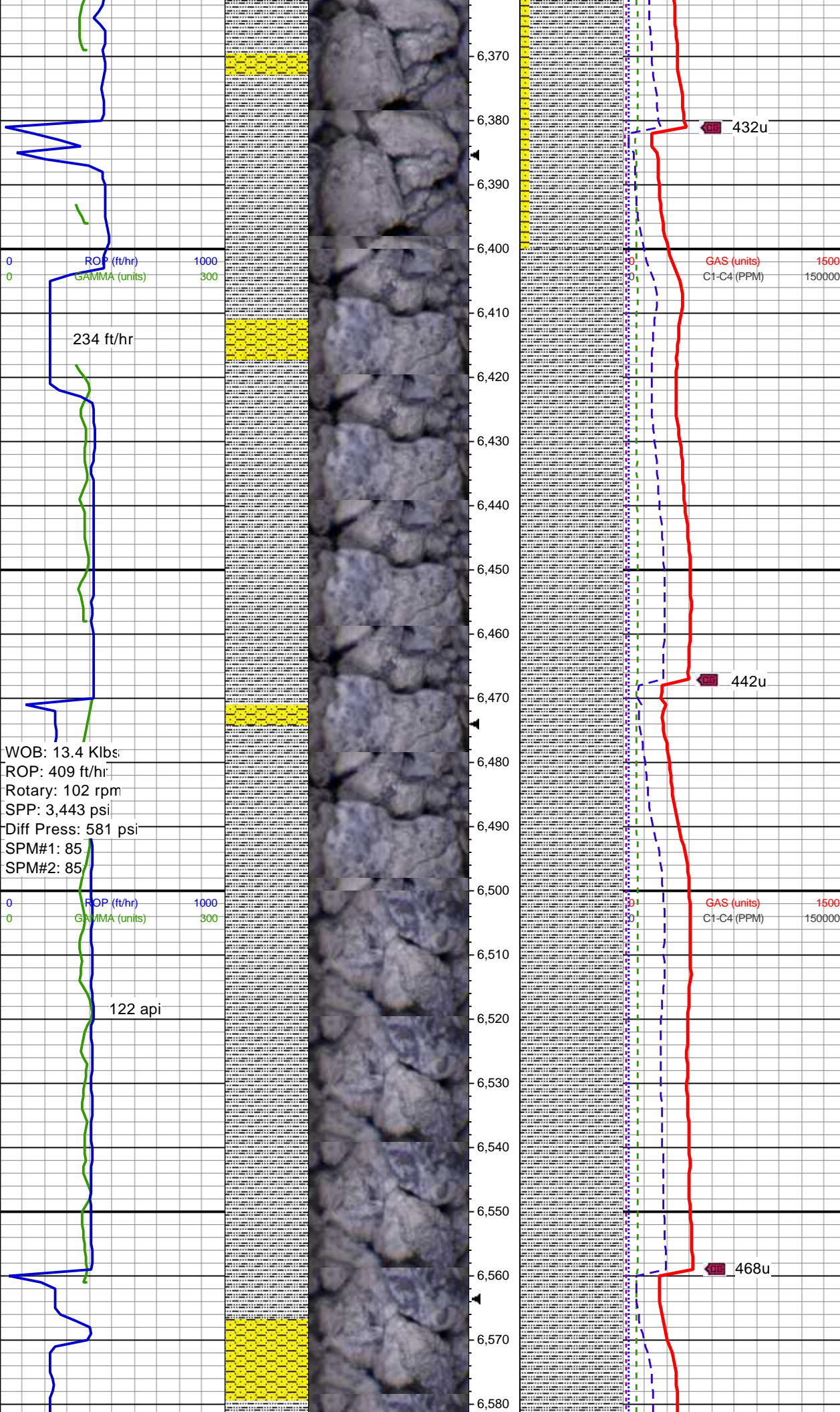
MD: 6,182'
TVD: 6,055.57'
Inclination: 12.65°
Azimuth: 131.25°
VS: 725.27'

90% SLTY SH: med-drkgy, gy/brn, occ ltr gy, mod sft frm, brit ip, sb blkly-sb plty, mod srt, arg-aren mtx, sl calc; 10% SHY SS: medgy-drkgy, sft-sl frm, ply cons, sb blkly-sb ang clus, slty-arg, sl calc

MW 9.3 / VIS 47 IN
MW 9.3 / VIS 48 OUT

85% SLTY SH: med-drkgy, gy/brn, occ ltr gy, mod sft frm, brit ip, sb blkly-sb plty, mod srt, arg-aren mtx, sl calc; 15% SHY SS: medgy-drkgy, sft-sl frm, ply cons, sb blkly-sb ang clus, slty-arg, sl calc

MD: 6,361'
TVD: 6,230.97'
Inclination: 10.48°



Azimuth: 116.27°
VS: 750.8'

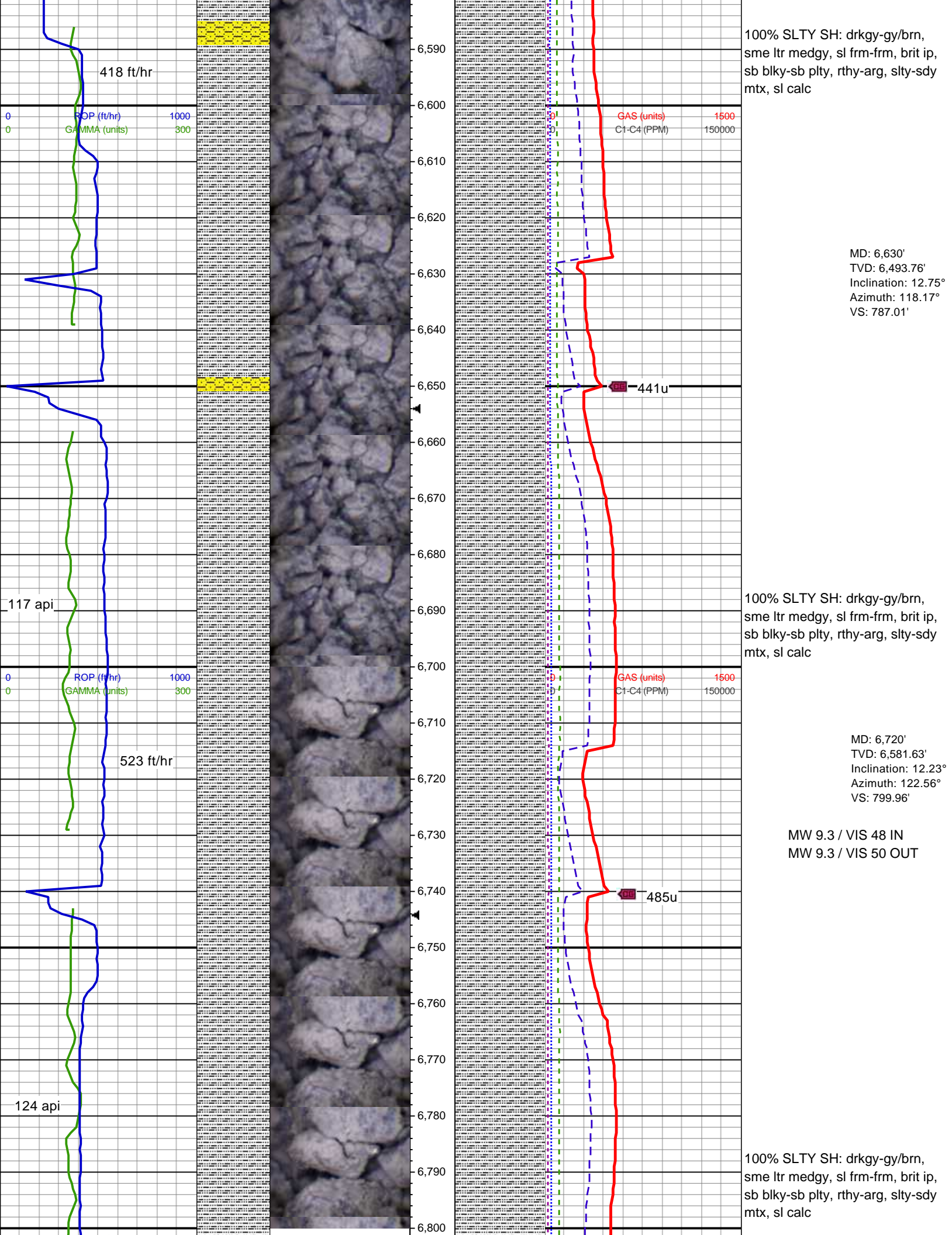
90% SLTY SH: med-drkgy, gy/brn,
occ ltr gy, mod sft frm, brit ip, sb
blky-sb plty, mod srt, arg-aren
mtx, sl calc; 10% SHY SS:
medgy-drkgy, sft-sl frm, ply cons,
sb blky-sb ang clus, slty-arg, sl
calc

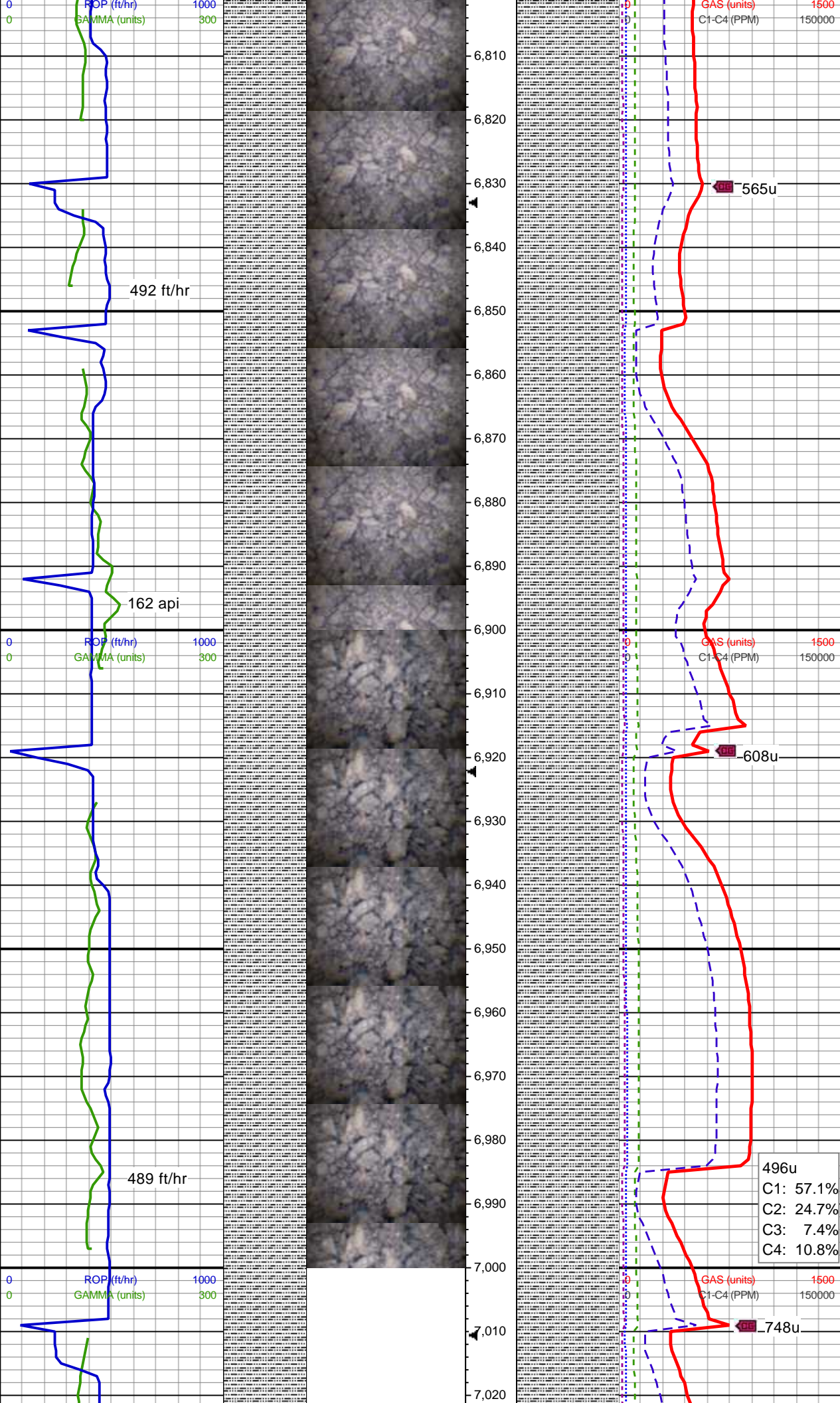
MW 9.3 / VIS 47 IN
MW 9.3 / VIS 46 OUT

MD: 6,451'
TVD: 6,319.14'
Inclination: 12.64°
Azimuth: 116.92°
VS: 761.91'

100% SLTY SH: drkgy-gy/brn,
sme ltr medgy, sl frm frm, brit ip,
sb blky-sb plty, rthy-arg, slty-sdy
mtx, sl calc

MD: 6,540'
TVD: 6,405.97'
Inclination: 12.71°
Azimuth: 118.95°
VS: 774.28'





MD: 6,809'
TVD: 6,668.42'
Inclination: 13.4°
Azimuth: 131.41°
VS: 814.71'

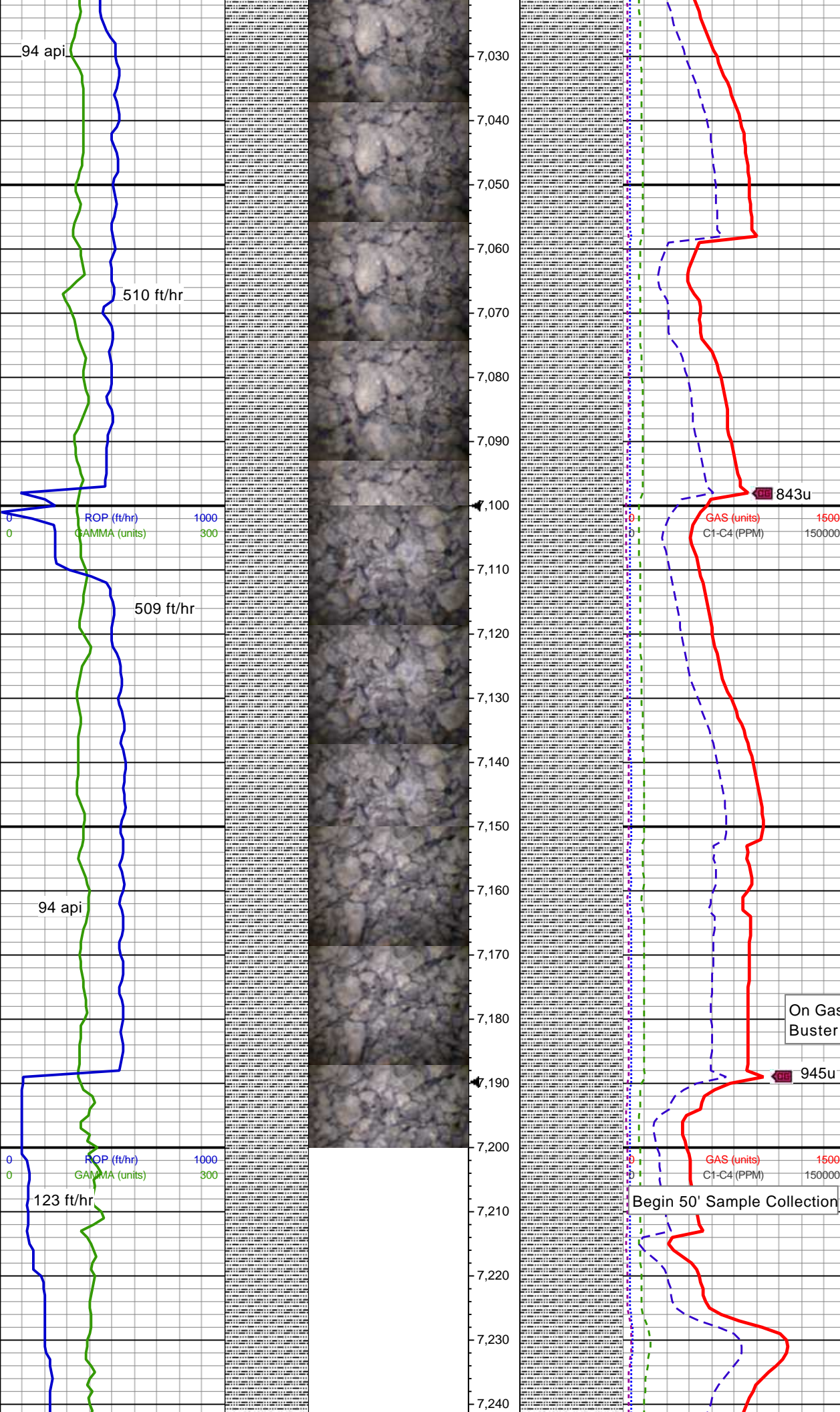
100% SLTY SH: pred
drkgy-gy/brn, mod sft-frm, brit-ip
fri, sb blkly-sb ang, rthy, ip arg,
calc

MD: 6,898'
TVD: 6,755.08'
Inclination: 12.94°
Azimuth: 129.01°
VS: 830.61'

100% SLTY SH: pred
drkgy-drkgy/brn, mod sft-frm,
brit-ip fri, sb blkly-sb fis, rthy-gritty,
ip arg, calc

MD: 6,987'
TVD: 6,841.86'
Inclination: 12.67°
Azimuth: 131.15°
VS: 846.03'

MW 9.3 / VIS 49 IN
MW 9.3 / VIS 50 OUT



MD: 7,077'
TVD: 6,929.72'
Inclination: 12.43°
Azimuth: 134.97°
VS: 0.96'

100% SLTY SH: pred
drkgy-drkgy/brn, mod sft-frm,
brit-ip fri, sb blkgy-sb fis, rthy-gritty,
ip arg, calc

MD: 7,166'
TVD: 7,016.68'
Inclination: 12.13°
Azimuth: 140.58°
VS: 1.38'

100% SLTY SH: dk gy-dk brn gy,
frm-hrd, sb blkgy-sb plty, rthy-slty,
arg mtx, v sl calc

KOP @ 7210' MD, 17:03 MDT,
07/13/2017

MW 9.4 / VIS 47 IN
MW 9.4 / VIS 49 OUT

