



Scale: 5" / 100'
Measured Depth Log

Well Name SHERLEY F-4-9HN

Location Lat: 40.434325 Long: -104.675164

State COLORADO County WELD

Country USA Rig Number FRONTIER 10

API Number 05-123-40897 AFE # 40897

Region DJ BASIN Field WATTENBERG

Spud Date 4/1/2015 Drilling Completed 5/19/2015

Surface Coordinates Sec 4 T5N R65W
SHL 531FNL, 713FWL

Bottom Hole Coordinates Projected:
Sec 9 T5N R65W
BHL 470FSL, 1460FWL

Ground Elevation 4641.3' K.B. Elevation 4666.3'

Logged Interval 6000' To 16770' Total Depth 16770'

Formation B CHALK

Type of Drilling Fluid LSND

Operator

Company Bayswater Exploration and Production LLC.

Address 730 17th Street, Suite 610
Denver, CO 80202

Geologist

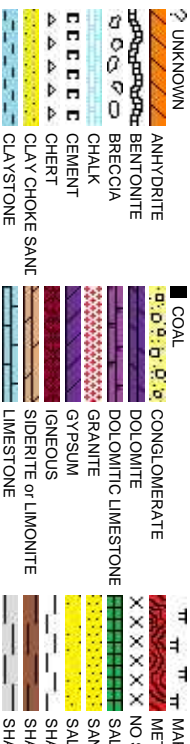
Name CHARLES TRODICK, TRACY LAWSON

Company COLUMBINE LOGGING, INC.
Address 602 S. LIPAN ST.
DENVER, CO 80223

Zone Color Coding



Rock Types



Accessories

Fossils

	GASTROPOD
	INOCERAMUS
	OOOLITE
	OSTRACOD
	BELEMNITE
	BIOCLASTIC
	BRACHIOPOD
	BRYOZOA
	CEPHALOPOD
	CORAL
	CRINOID
	ECHINOID
	FISH
	FORAMINIFERA
	F FOSSIL

Minerals

	ARGILLITE GRAIN
	B BENTONITE
	BITUMENOUS SUBSTANCE
	BRECCIA FRAGMENTS
	CALCAREOUS
	CARBONACEOUS FLAKES
	CHERT
	COAL - THIN BEDS
	DOLOMITIC
	FELDSPAR
	FERRUGINOUS PELLET
	FERRUGINOUS
	GLAUCONITE
	GYPSEFEROUS
	HEAVY MINERAL
	K KAOLIN
	MARCASITE
	MARLSTONE
	MICACEOUS
	MINERAL CRYSTALS
	NODULES
	PHOSPHATE PELLETS
	P PYRITE
	SALT CAST
	SANDY
	SIDERITE
	SILICEOUS
	SILTY
	TUFFACEOUS

Stringer

	ANHYDRITE STRINGER
	BENTONITE STRINGER
	COAL STRINGER
	DOLOMITE STRINGER
	GYPSEUM STRINGER
	LIMESTONE STRINGER
	MARLSTONE (CALC) STRG
	MARLSTONE (DOL) STRG
	SANDSTONE STRINGER
	SHALE STRINGER
	SILTSTONE STRINGER

Other Symbols

Oil Show

	P PINPOINT
	V VUGGY
	D DEAD
	EVEN
	QUESTIONABLE
	BIT
	SPOTTED STAINING
	CONNECTION (UP)

Engineering

	DST INTERVAL
	FAULT
	FORMATION TOP
	GAS SHOW
	OIL SHOW
	MN DEPTH UP

	WIRELINE TESTED - LEFT
	WIRELINE TESTED - RT
	DRILL STEM TEST
	MN DEPTH
	GRAINSTONE
	L LITHOGRAPHIC
	MX MICROXLN
	MUDSTONE

Rounding

	CONNECTION (DOWN)
--	-------------------

Porosity

	E EARTHY
	FENESTRAL
	FRACTURE

	INTERCRYSTALLINE
	INTEROOLITIC
	MOLDIC
	ORGANIC

	CONNECTION GAS
	CONNECTION GAS (LEFT)
	TRIP GAS
	TRIP GAS (LEFT)

	DOWN TIME GAS
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	DOWN TIME GAS (LEFT)
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	CORE - LOST
	CORE - RECOVERED

	NORMAL FAULT
	OVERTURED STRATIG
	REVERSE FAULT
	CASING
	SIDEWALL CORE (LEFT)
	SIDEWALL CORE (RIGHT)
	SLIDE
	SURVEY

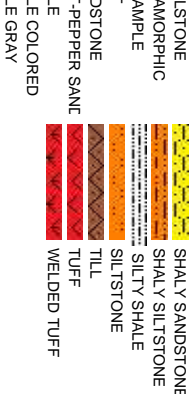
Textures

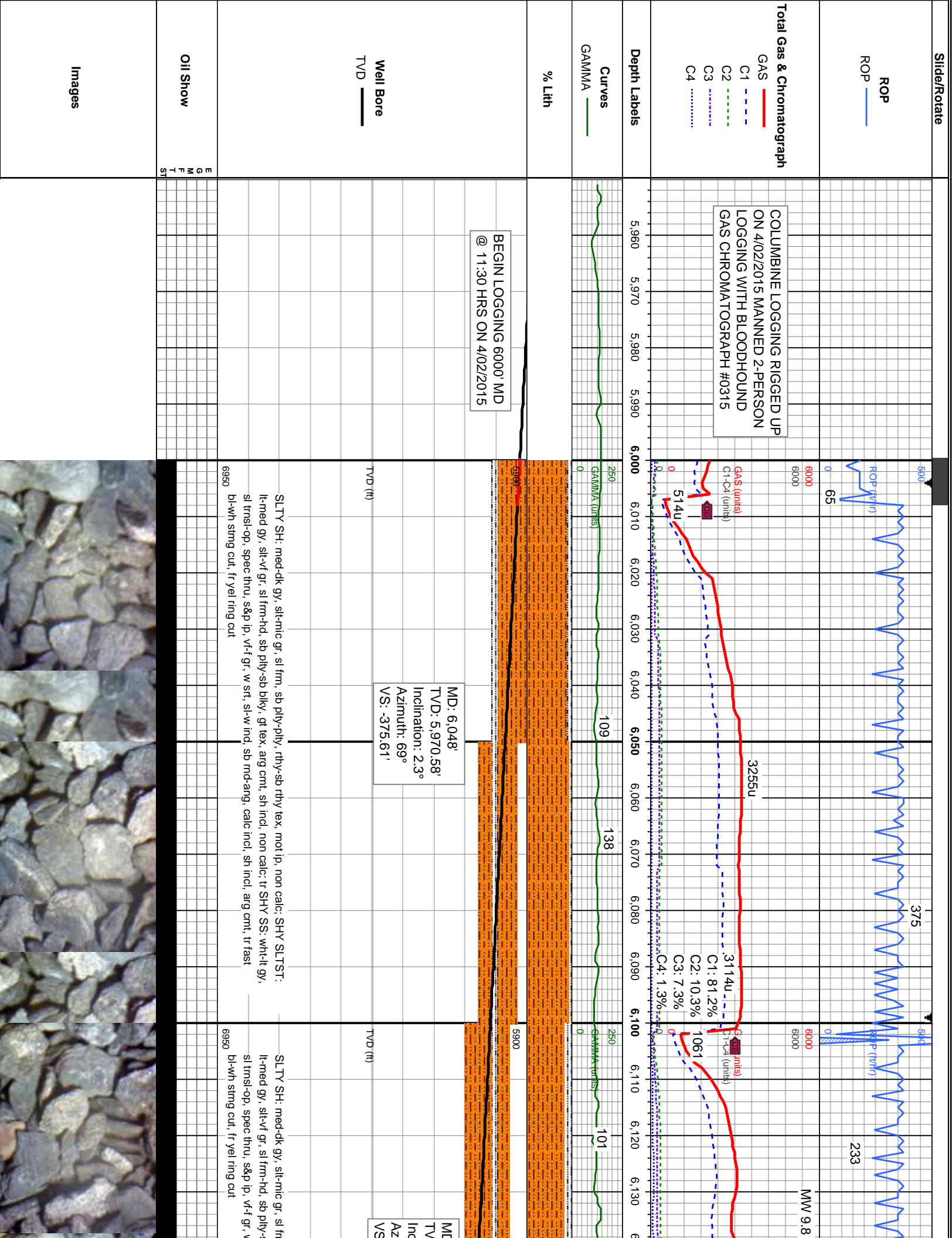
	BOUNDSTONE
	CHALKY
	CRYPTOXLN

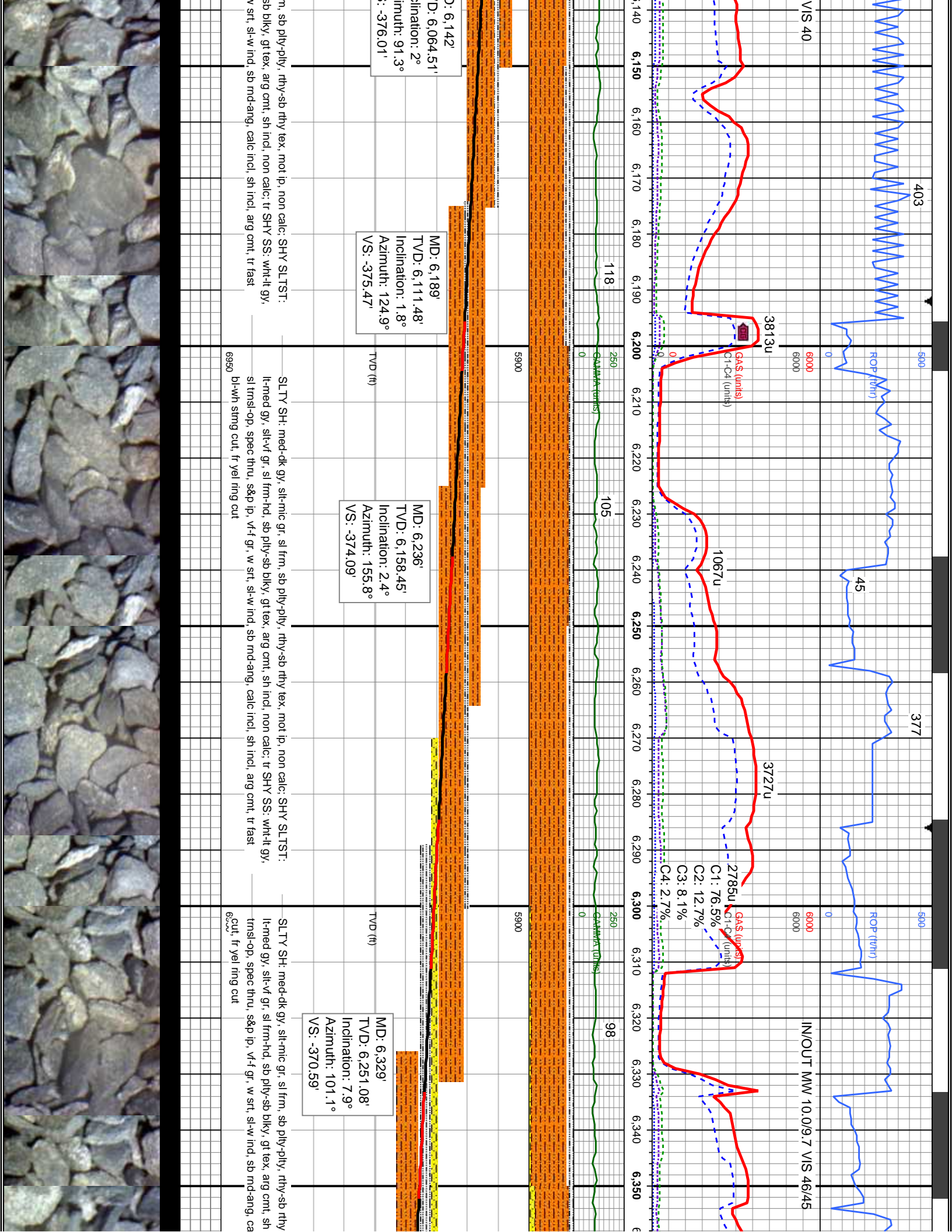
Sorting

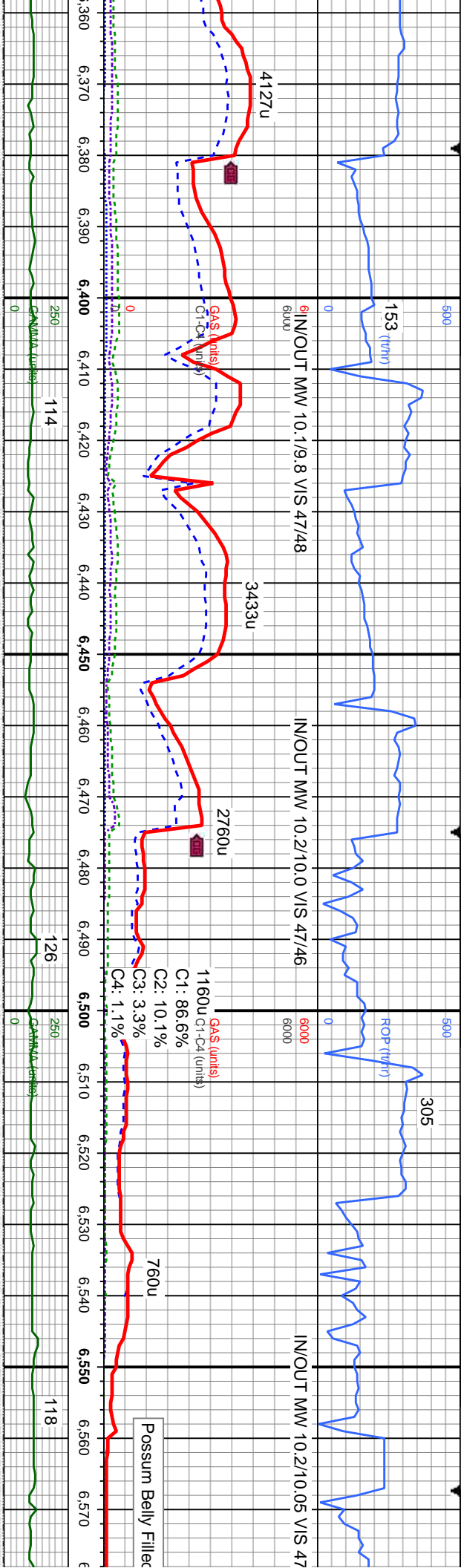
	M MODERATE
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	P POOR
	W WELL





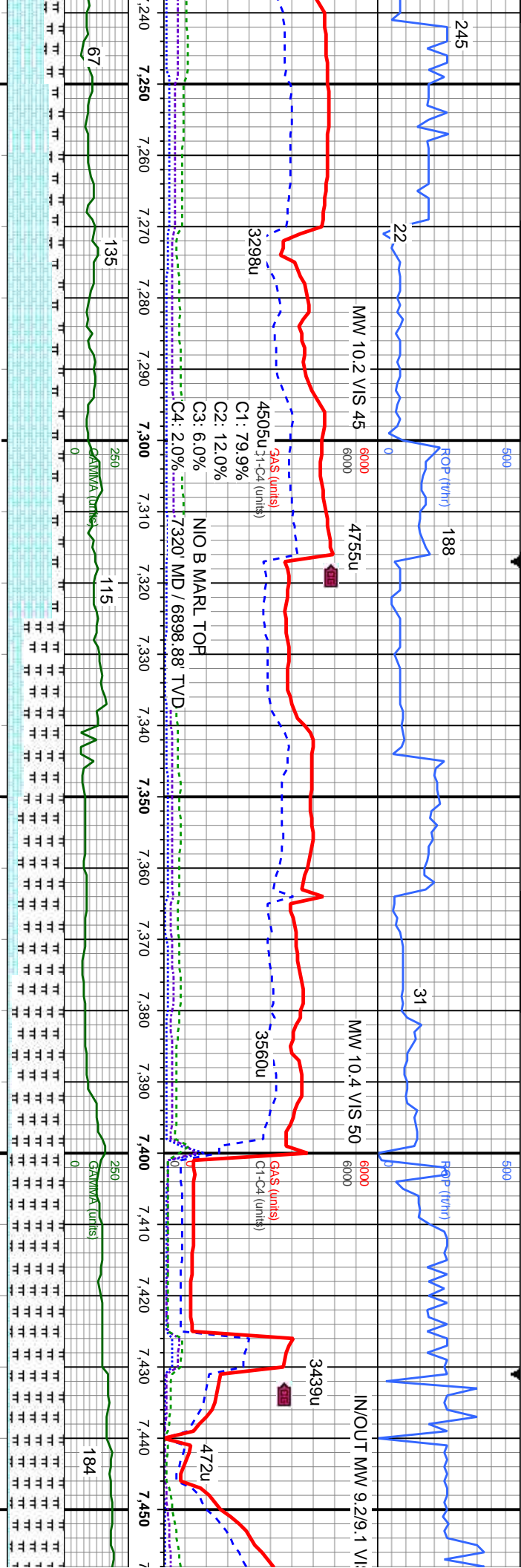




text, mot ip, non calc; SHY SLTST:
incl, non calc; tr SHY SS: wht-lt gy, sl
ic incl, sh incl, arg cmt, tr fast bl-wh stmg

SLTY SH: mead-k gy, slr-mic gr, sl frm, sb ply-ply, rthy-sb rthy tex, mot ip, non calc; SHY SLTST: lt-med gy, slt-vl gr, sl frm-hd, sb ply-sb bkky, gf tex, arg cmt, sh incl, non calc; tr SHY SS: wh-lt gy sl frm-slp, spec thru, s&p lp, vl-fr gr, w srl, sl-w ind, sb md-ang, calc incl, sh incl, arg cmt, tr fast bl-wt string cut, fr yel ring cut

SLTY SH: med-*dk* gy, *sl* firm, *sb* ply-*ply*, *rfty*-*sb* *rfty* tex, *mot* ip, non calc; SH
lk-med gy, *sl*-*v* f gy, *sl* firm-hd, *sb* ply-*sb* *biky*, *gt* tex, *ang* cm, *sh* incl, non calc; tr SHY S
trnslop, spec thru, *s&p* ip, *v*-*f* gy, *w* str, *sl*-*w* incl, *sb* md-ang, calc incl, *sh* incl, *ang* cm, i
cut, tr yei ring cut



MR.LST: med-dk gy, sl frm, ply-sb ply, rthy-gt tex, calc, tr CHK: lt-med gy, mot-str, mod sft, sb biky-sb
ply, sm-rthy tex, v calc, g bl-wh mod fast sting cut, bri thk yel ring cut

MD: 7,266'
TVD: 6,888.98'
Inclination: 76.4°
Azimuth: 179.7°
VS: 221.6'

TVD (ft)

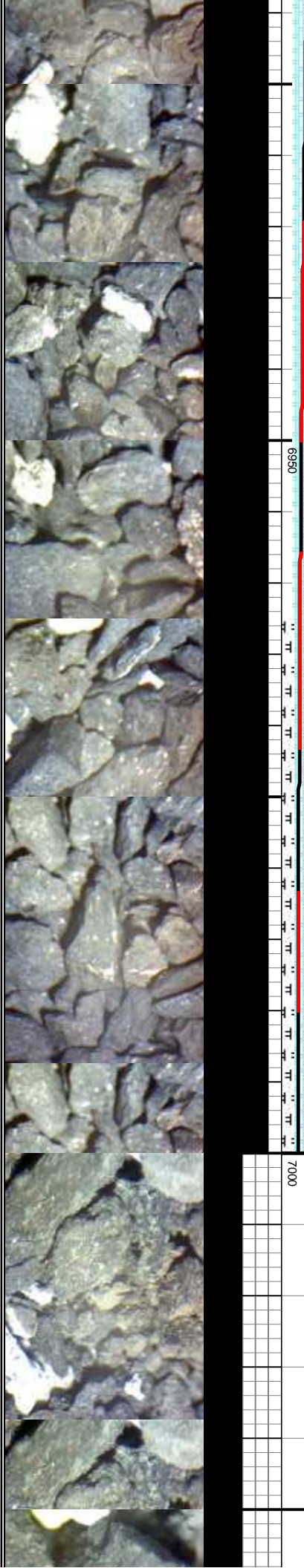
MD: 7,313'
TVD: 6,898.03'
Inclination: 81.4°
Azimuth: 178.8°
VS: 267.64'

MD: 7,360'
TVD: 6,902.51'
Inclination: 84.7°
Azimuth: 181.3°
VS: 304.26'

MR.LST: med-dk gy, sl frm, ply-sb ply, rthy-gt tex, calc, tr CHK: lt-med gy, mot-str, mod sft, sb biky-sb
ply, sm-rthy tex, v calc, g bl-wh mod fast sting cut, bri thk yel ring cut

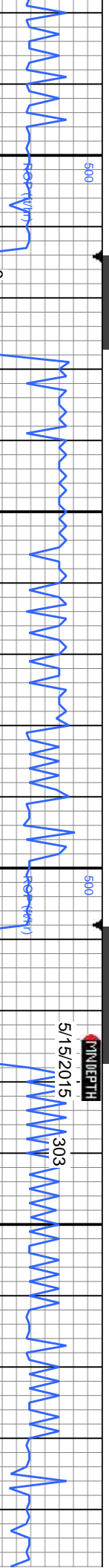
MR.LST: dk gy-v dk gy, gy, sb ply-ply, mot, sft-mod frm
biky-sb ply, mod sft-mod frm, calc, tr bl-wh mod fast str

TVD SCALE CHANGE



DATE TIME

5/15/2015 303



IN/OUT MW 9.2/9.2 VIS 38/36

2907u

3540u

2911u

2741u

C1-C4 (unls)

2916u

C1: 67.3%

C2: 18.1%

C3: 9.5%

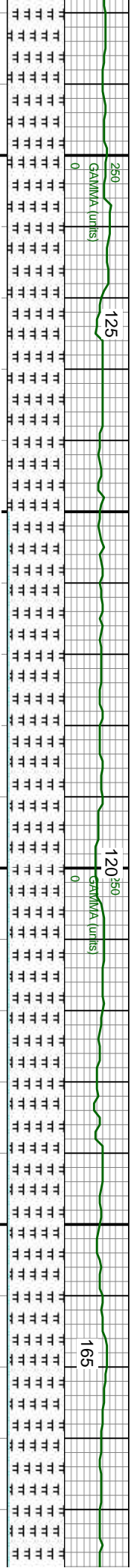
C4: 5.0%

C1: 75.6%

C2: 15.0%

C3: 7.1%

C4: 2.2%



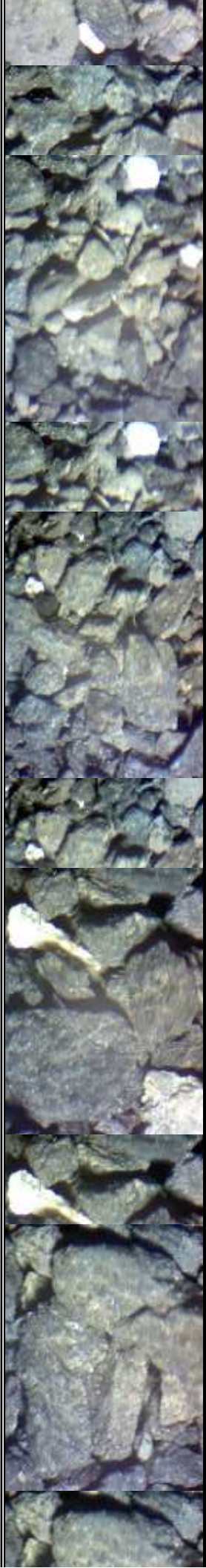
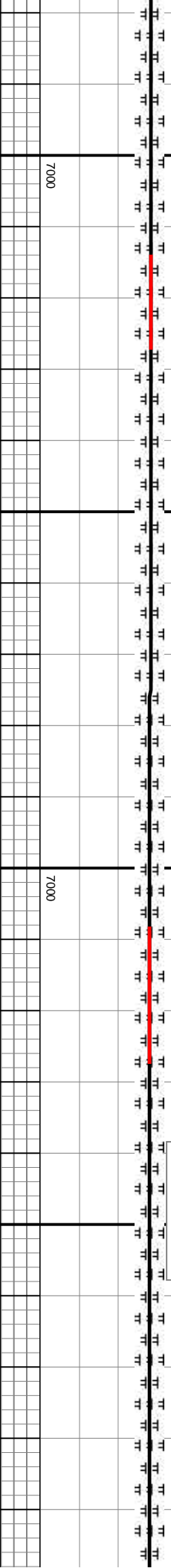
gy-gy, sb
MRLST: dk gy-v dk gy, gy, sb ply-ply, mot, sft-mod frm, mod calc; tr CHK: med
gy-gy, sb blk-y-sb ply, mod sft-mod frm, v calc; tr bl-wh mod fast sting cut, f thk
yel ring cut

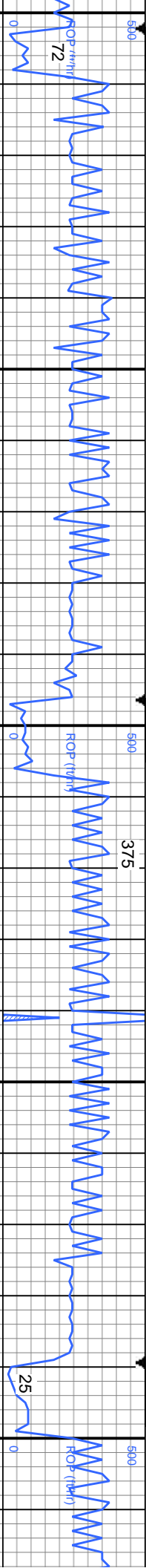
TVD (ft)

MD: 7,750'
TVD: 6,915.25'
Inclination: 89°
Azimuth: 178.4°
VS: 702.85'

TVD (ft)

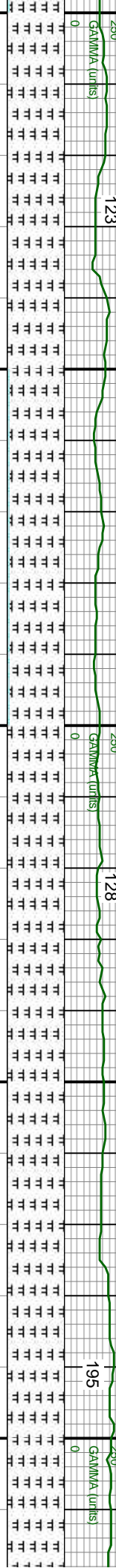
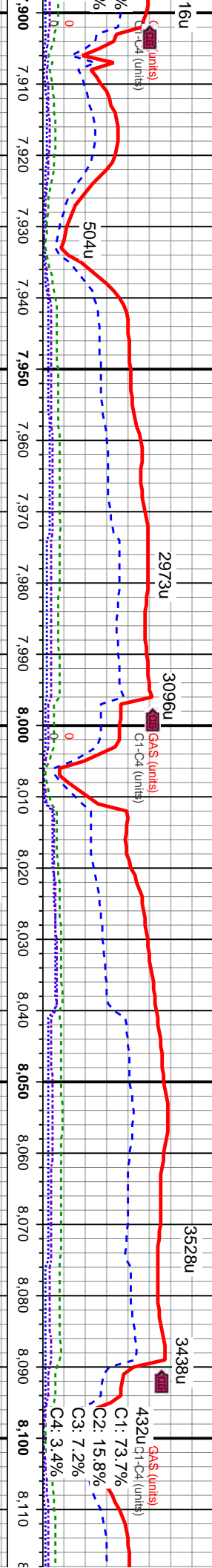
MD: 7,848'
TVD: 6,916.02'
Inclination: 90.1°
Azimuth: 180.9°
VS: 800.64'





UT MW 9.2+9.3 VIS 38/38

IN/OUT MW 9.3+9.4 VIS 37/360

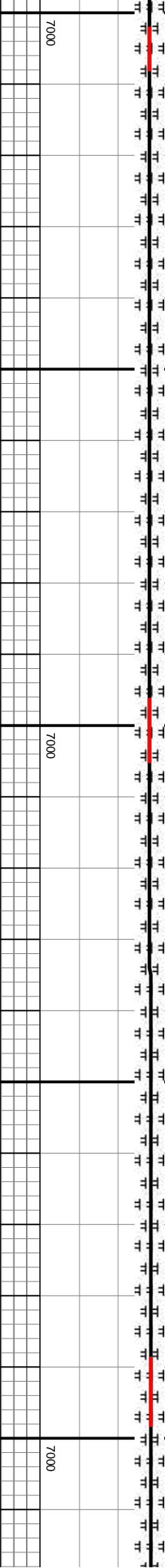


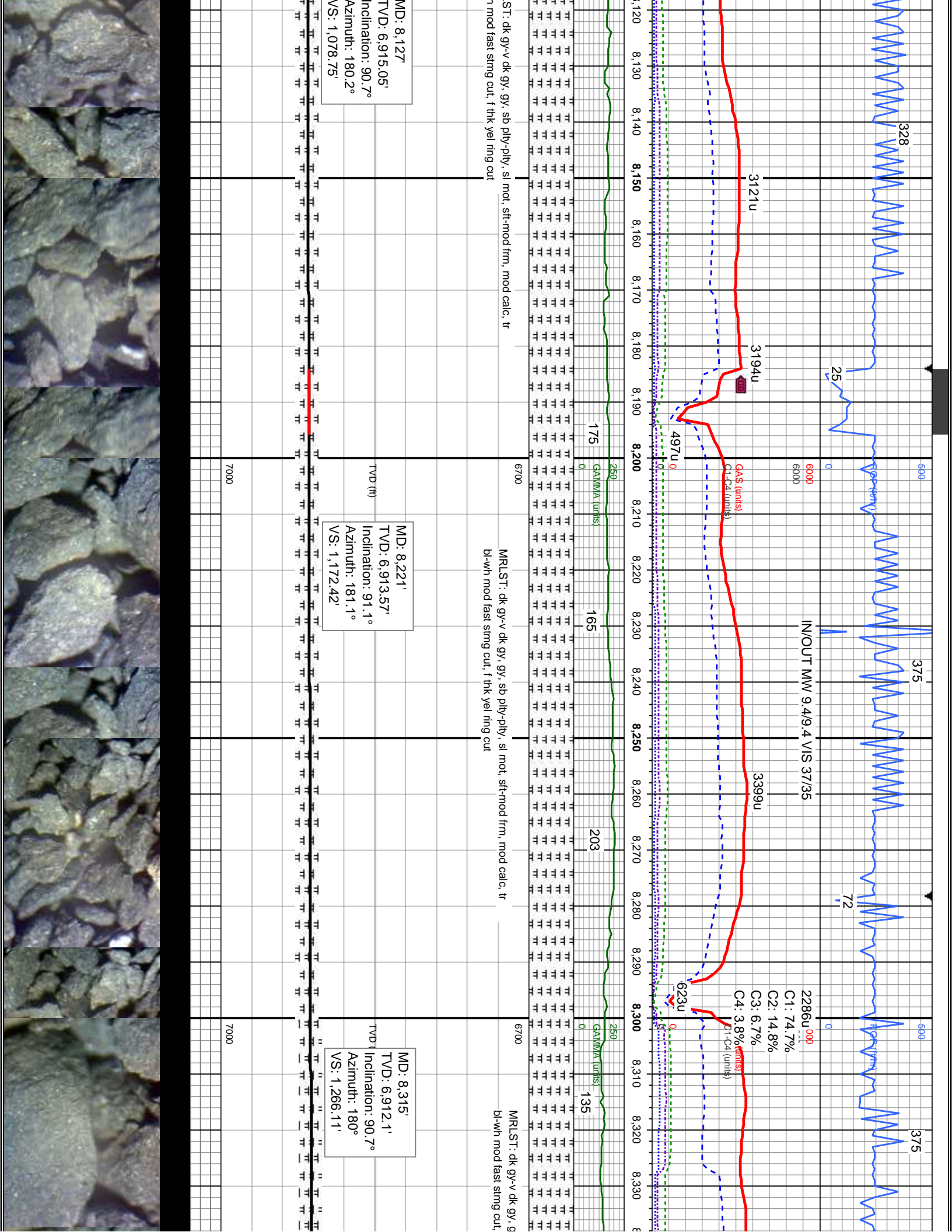
6700 MRLST: dk gy-v dk gy, gy, sb ply-ply, mod, sft-mod frm, mod calc; tr CHK: med gy-gy, sb blk-y-sb ply, mod sft-mod frm, v calc, tr bl-wh mod fast sting cut, f thk yel ring cut

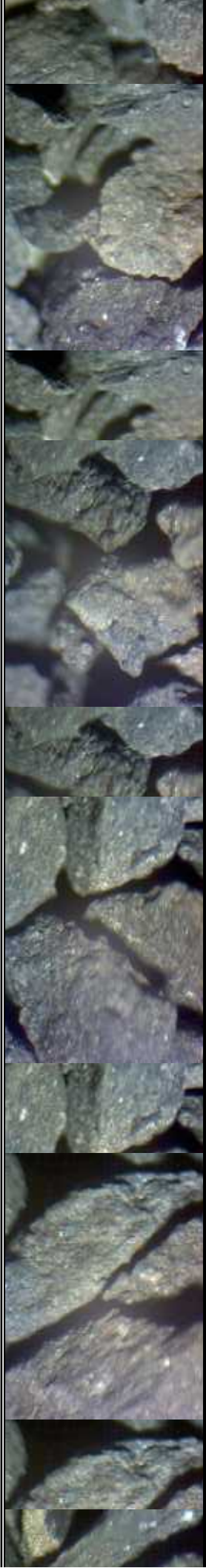
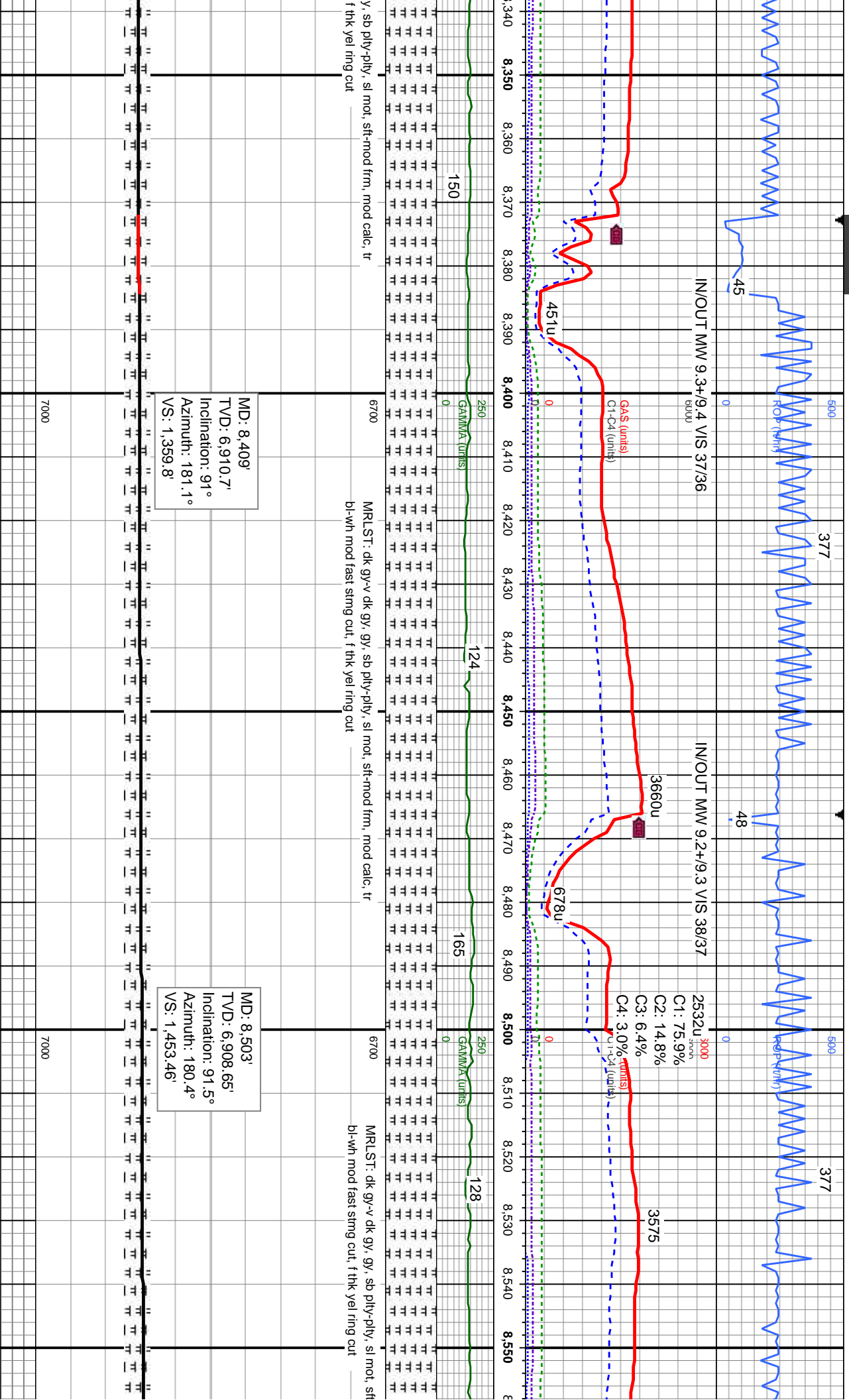
6700 MRL bl-w

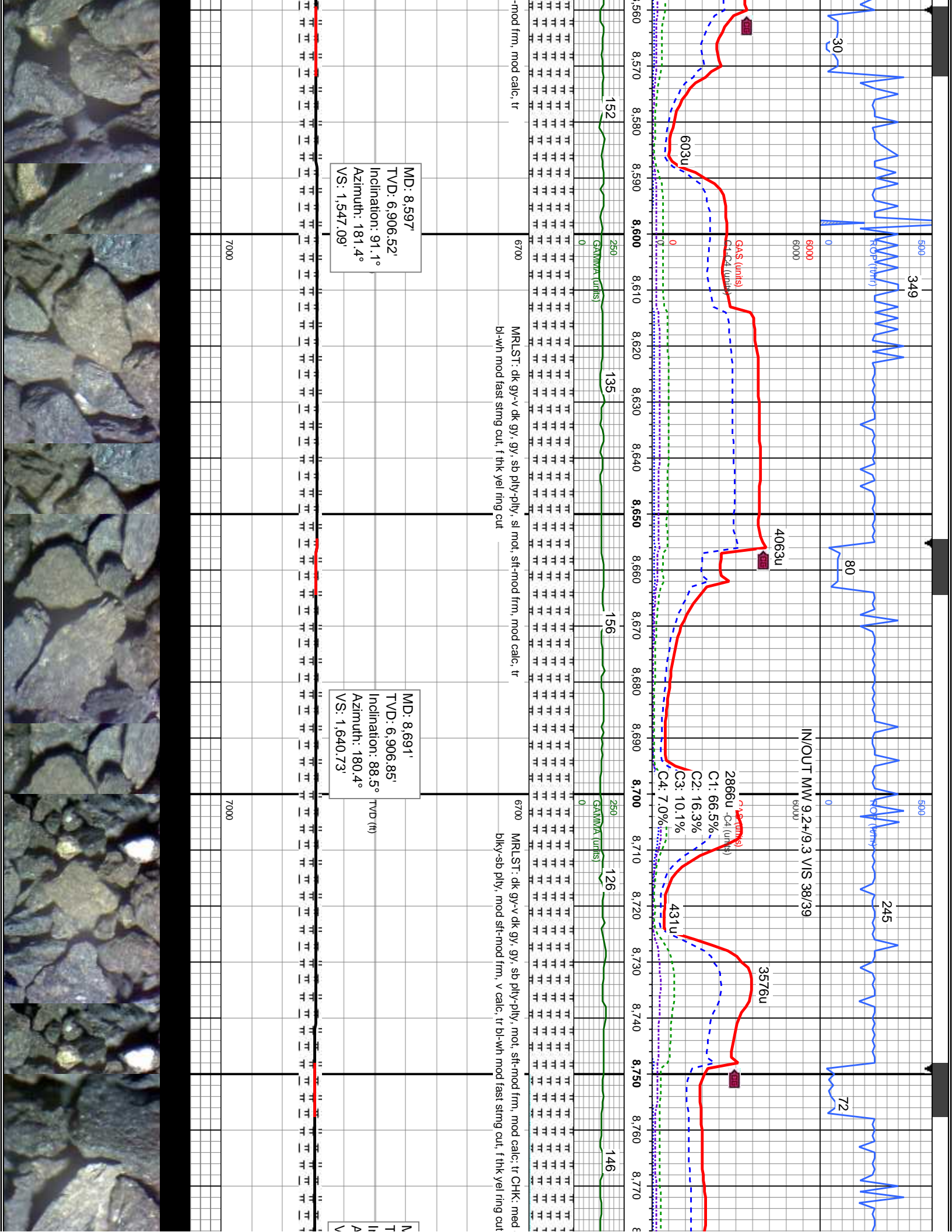
MD: 7,939'
TVD: 6,915.62'
Inclination: 90.4°
Azimuth: 180°
VS: 891.36'

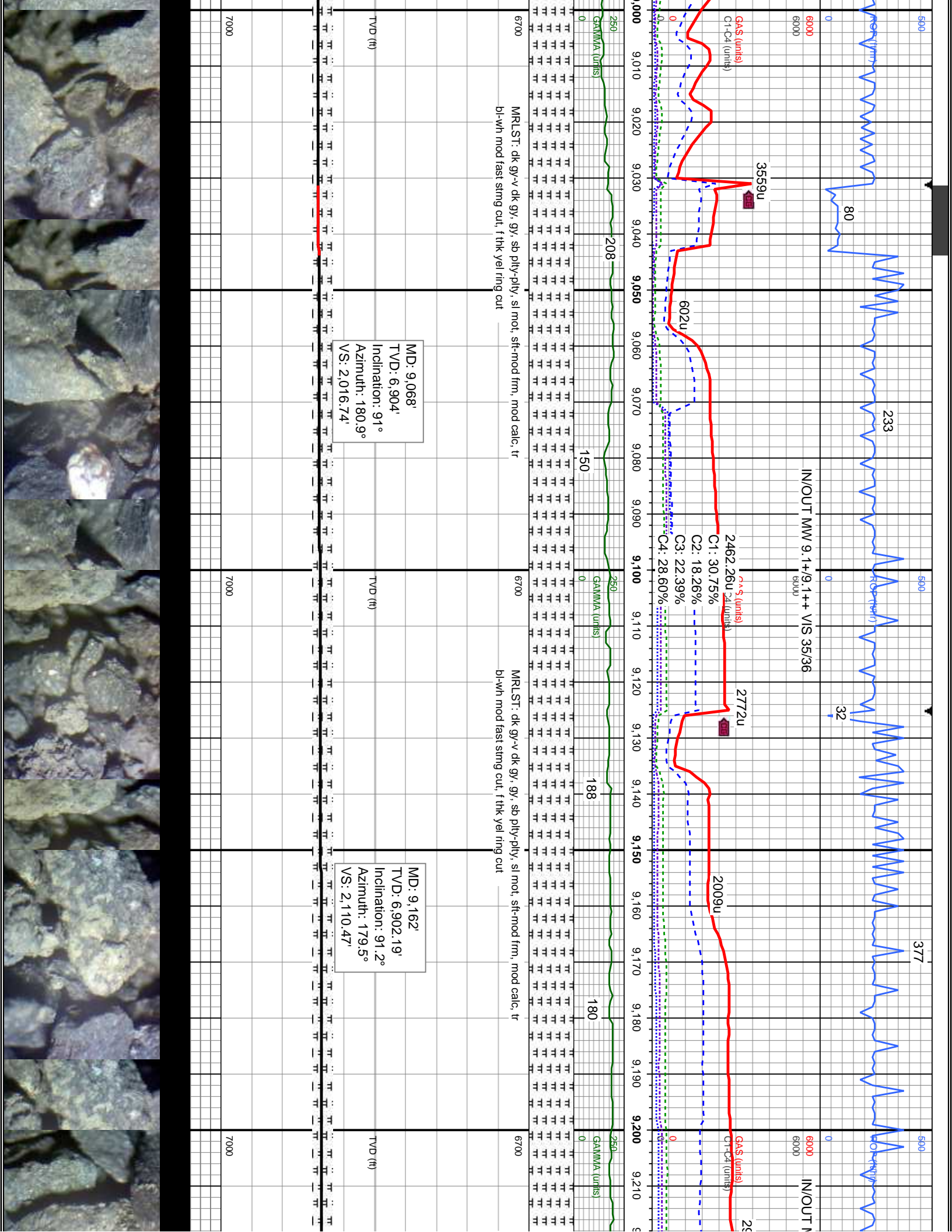
MD: 8,033'
TVD: 6,915.46'
Inclination: 89.8°
Azimuth: 181.1°
VS: 985.06'

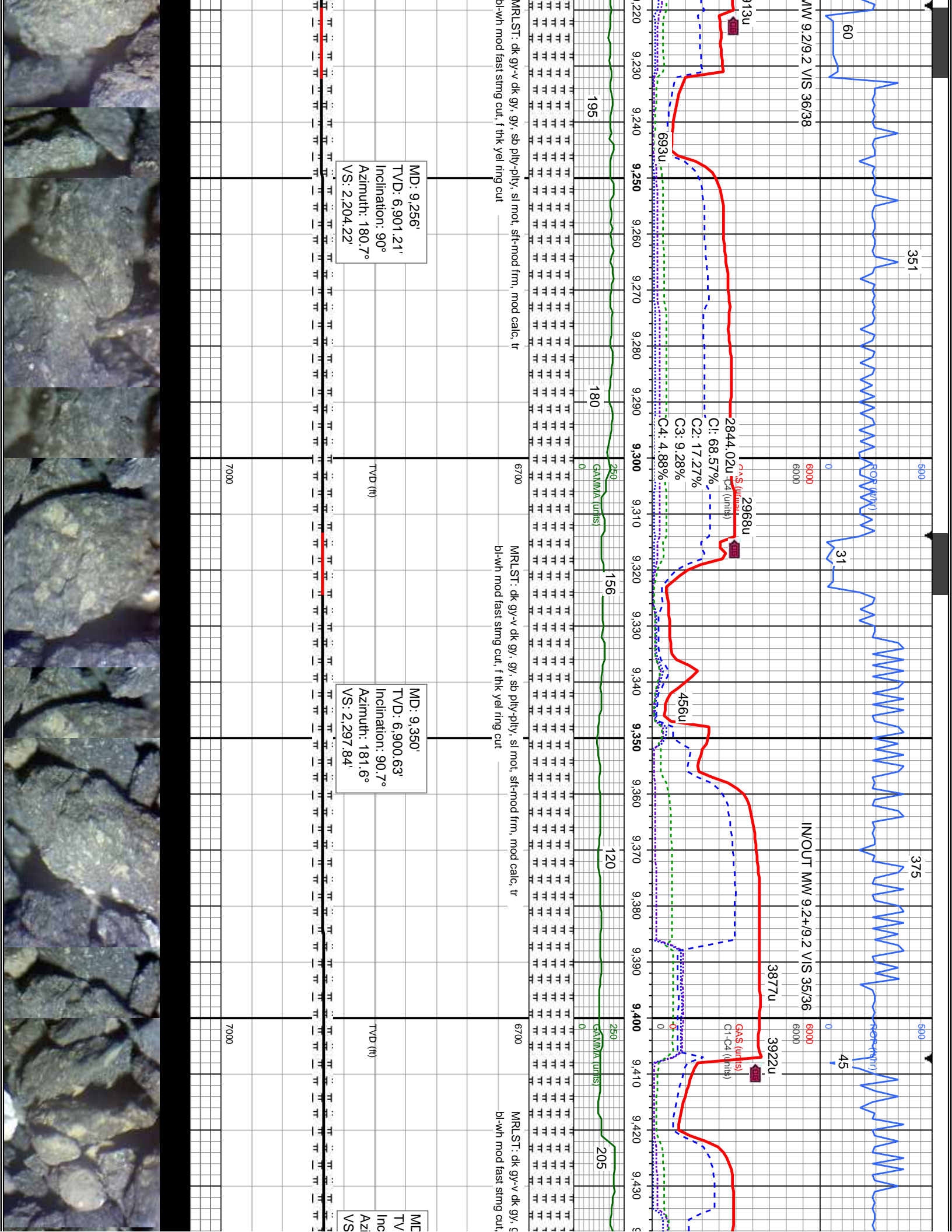


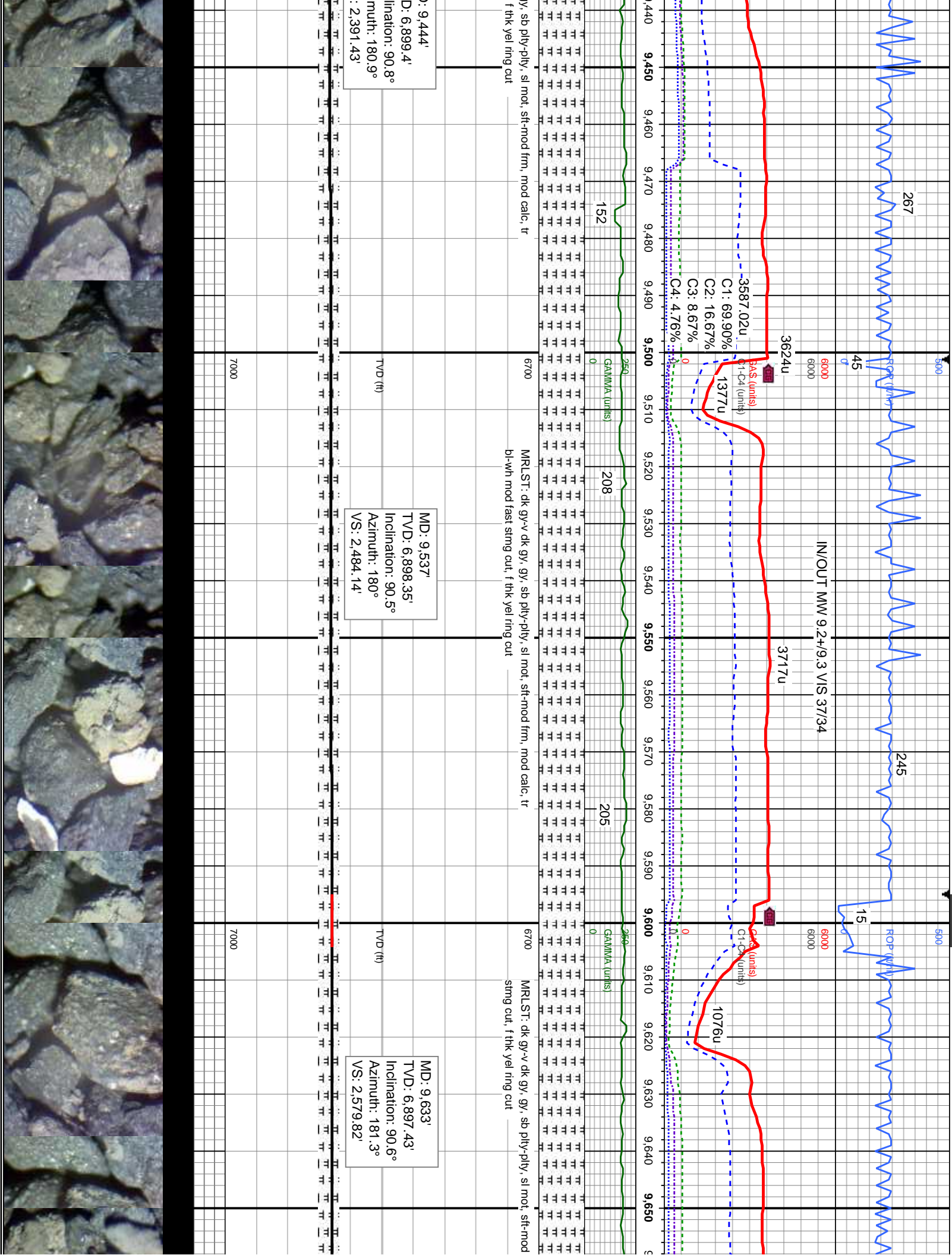


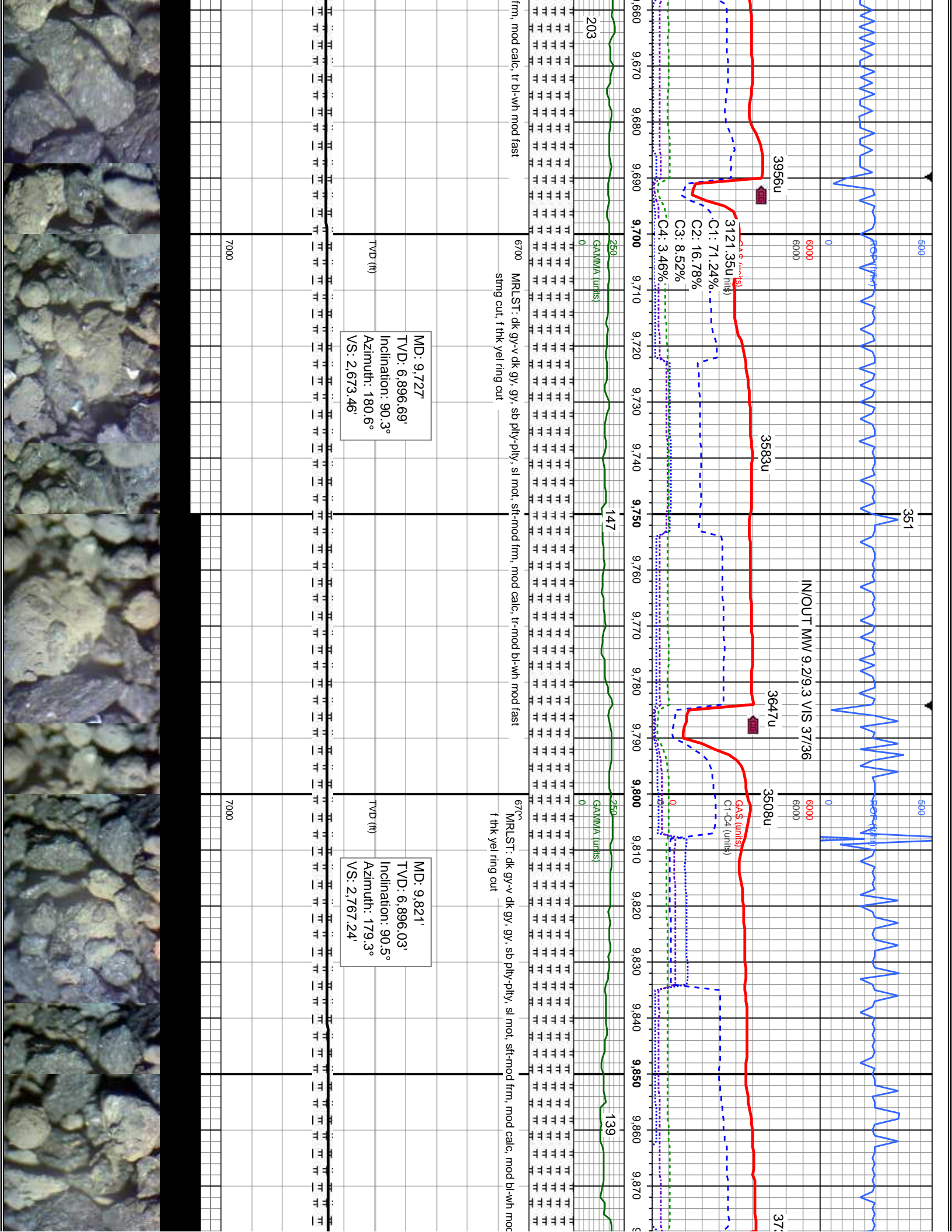


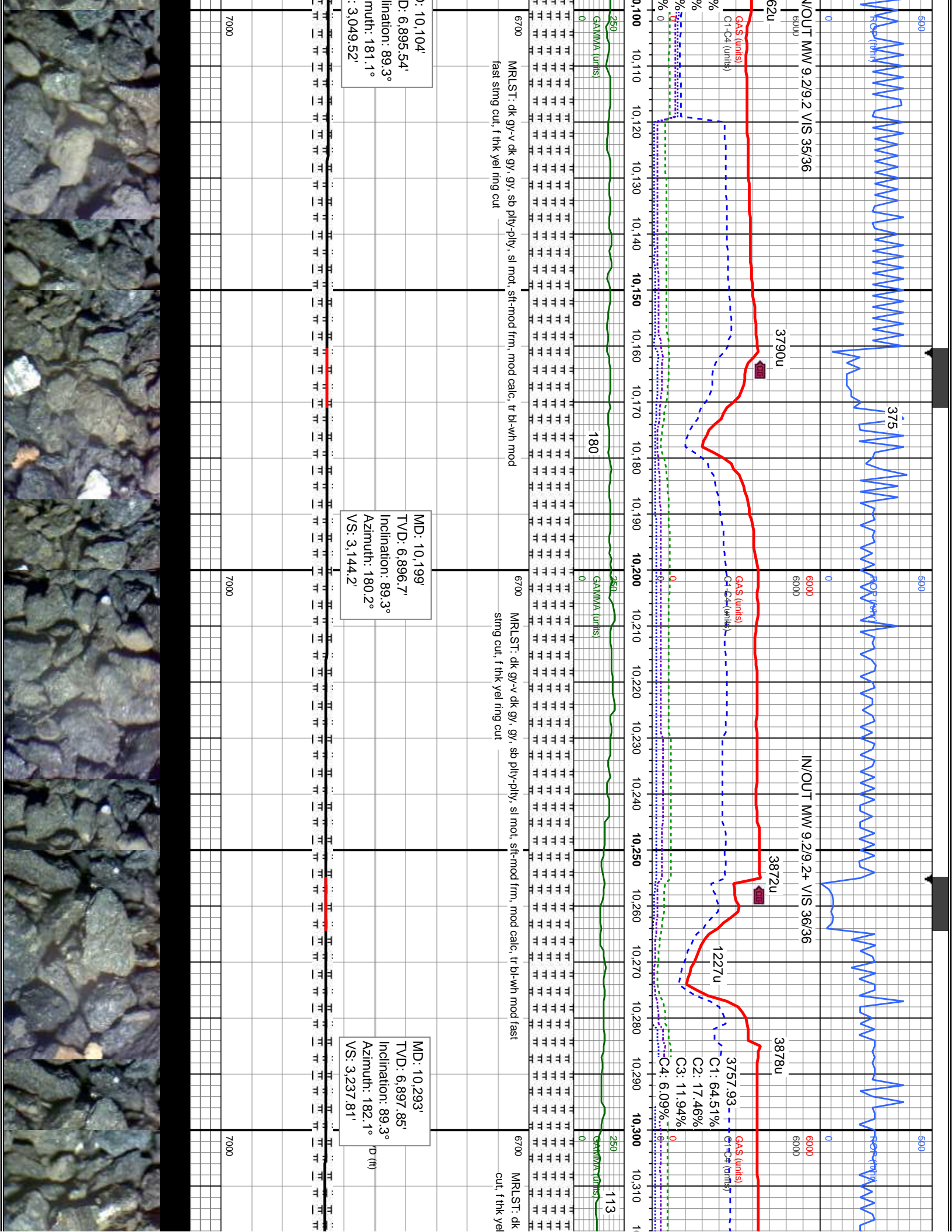












CONCEPT 1.0

5/16/2015

201

ROP (ft/hr)

9.3 VIS 37/35

IN/OUT MW 9.3/9.3 VIS 36/35

3708u

3646u

55

GAS (units)

C1-C4 (units)

C1: 75.63%

C2: 14.80%

C3: 7.02%

C4: 2.55%

GAMMA (units)

3686.16

122

141

3995u

4083u

670u

670u

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670u

500

ROP (ft/hr)

9.3 VIS 37/35

IN/OUT MW 9.3/9.3 VIS 36/35

55

GAS (units)

C1-C4 (units)

C1: 75.63%

C2: 14.80%

C3: 7.02%

C4: 2.55%

GAMMA (units)

3686.16

122

141

3995u

4083u

670u

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500

ROP (ft/hr)

9.3 VIS 37/35

IN/OUT MW 9.3/9.3 VIS 36/35

55

GAS (units)

C1-C4 (units)

C1: 75.63%

C2: 14.80%

C3: 7.02%

C4: 2.55%

GAMMA (units)

3686.16

122

141

3995u

4083u

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500

ROP (ft/hr)

9.3 VIS 37/35

IN/OUT MW 9.3/9.3 VIS 36/35

55

GAS (units)

C1-C4 (units)

C1: 75.63%

C2: 14.80%

C3: 7.02%

C4: 2.55%

GAMMA (units)

3686.16

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3995u

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500

ROP (ft/hr)

9.3 VIS 37/35

IN/OUT MW 9.3/9.3 VIS 36/35

55

GAS (units)

C1-C4 (units)

C1: 75.63%

C2: 14.80%

C3: 7.02%

C4: 2.55%

GAMMA (units)

3686.16

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500

ROP (ft/hr)

9.3 VIS 37/35

IN/OUT MW 9.3/9.3 VIS 36/35

55

GAS (units)

C1-C4 (units)

C1: 75.63%

C2: 14.80%

C3: 7.02%

C4: 2.55%

GAMMA (units)

3686.16

122

141

3995u

4083u

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500

ROP (ft/hr)

9.3 VIS 37/35

IN/OUT MW 9.3/9.3 VIS 36/35

55

GAS (units)

C1-C4 (units)

C1: 75.63%

C2: 14.80%

C3: 7.02%

C4: 2.55%

GAMMA (units)

3686.16

122

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3995u

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500

ROP (ft/hr)

9.3 VIS 37/35

IN/OUT MW 9.3/9.3 VIS 36/35

55

GAS (units)

C1-C4 (units)

C1: 75.63%

C2: 14.80%

C3: 7.02%

C4: 2.55%

GAMMA (units)

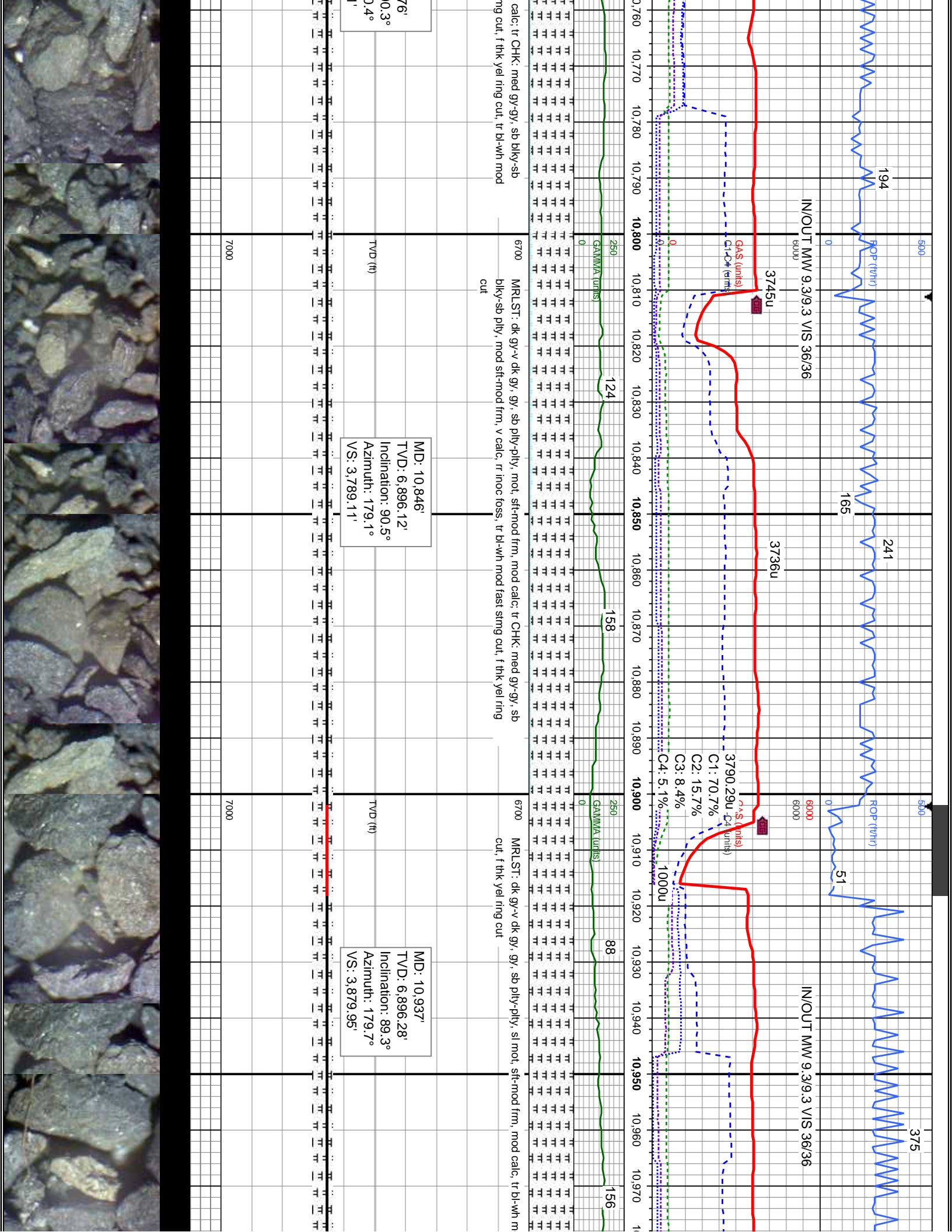
3686.16

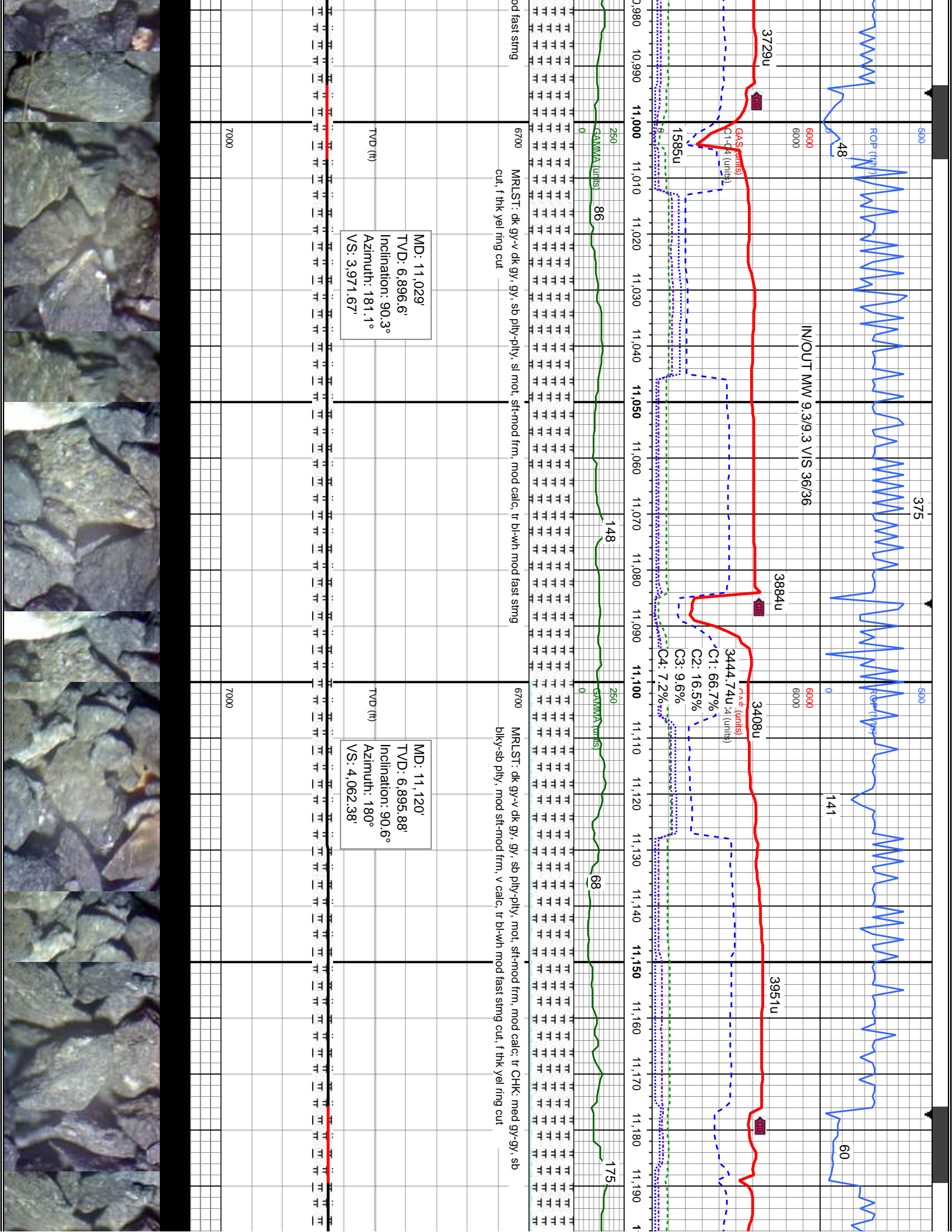
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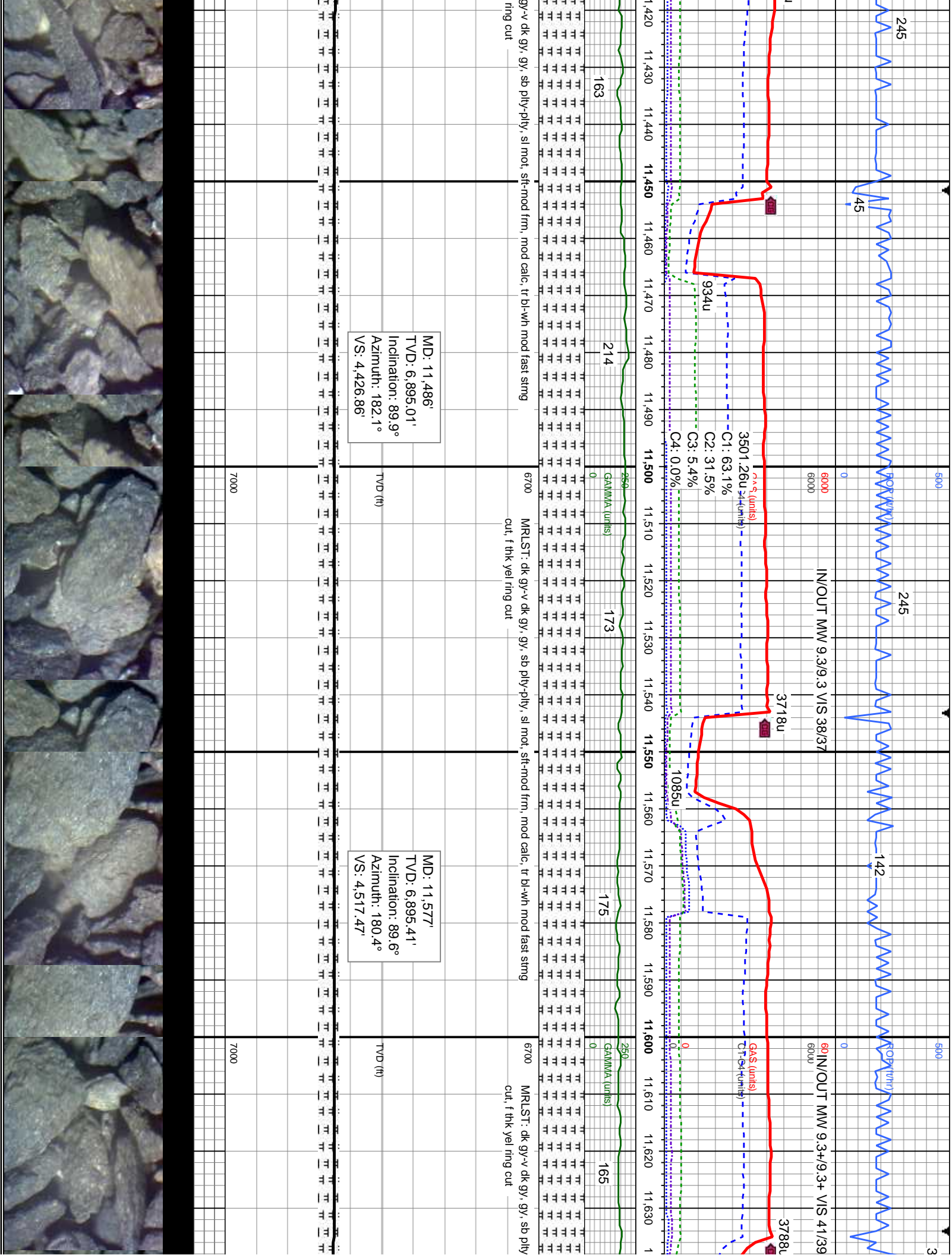
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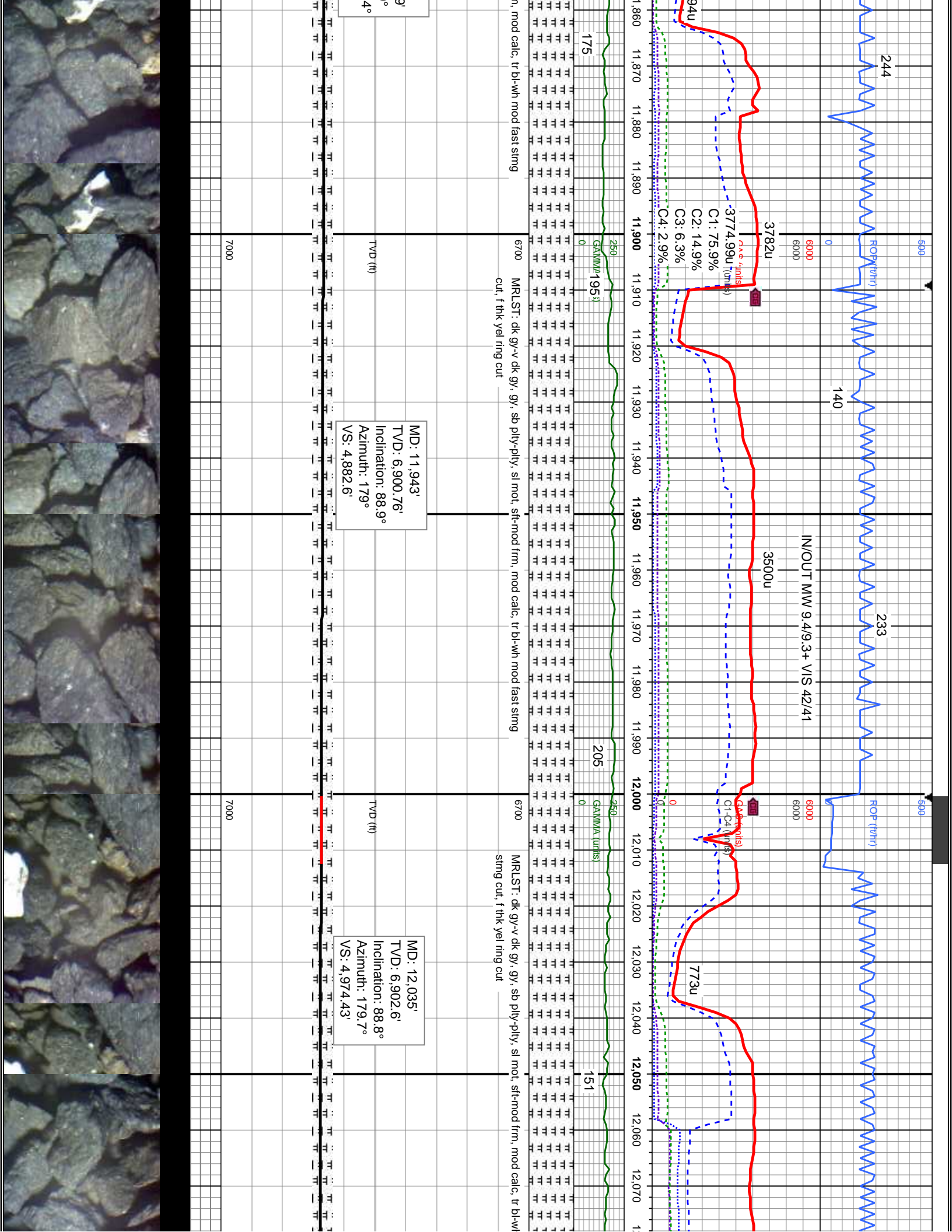
3995u

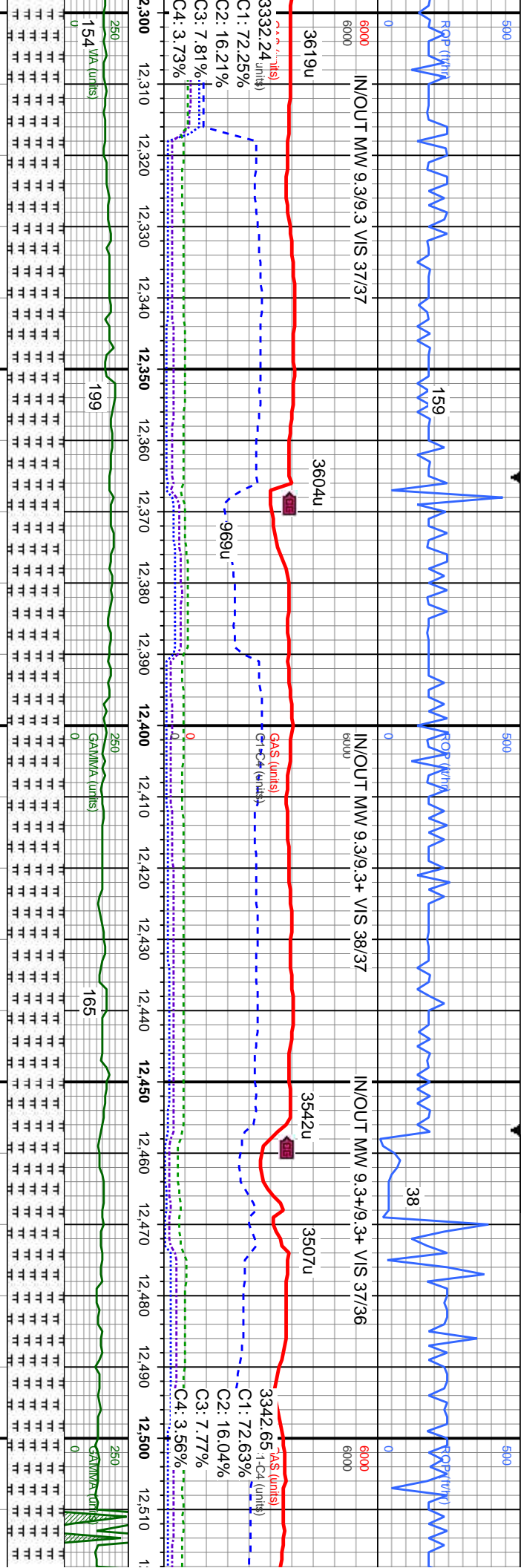
4083u











MD: 12,310'
TVD: 6,903.23'
Inclination: 90.6°
Azimuth: 180.6°
VS: 5,248.32'

MD: 12,401'
TVD: 6,902.2'
Inclination: 90.7°
Azimuth: 179.9°
VS: 5,339.06'

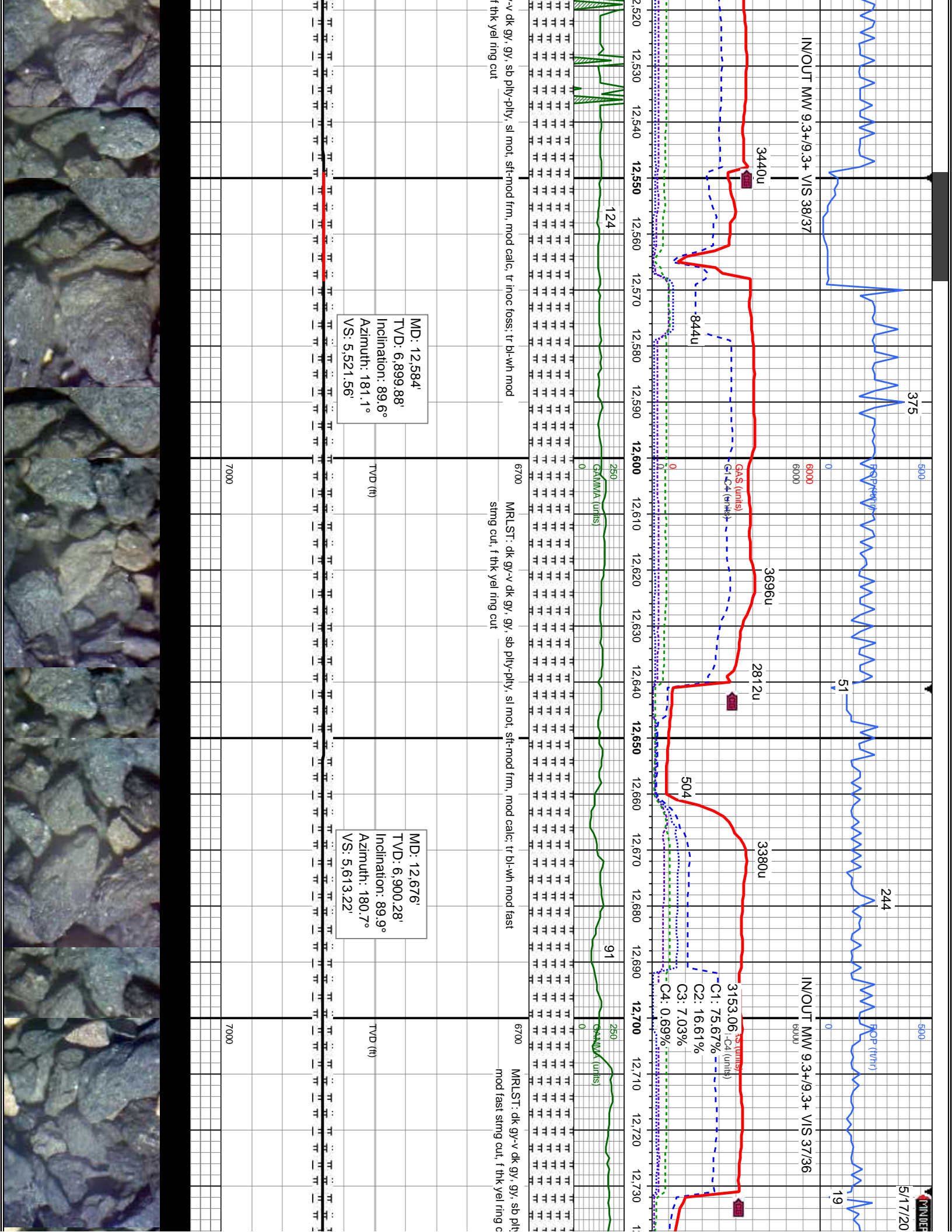
MD: 12,493'
TVD: 6,900.59'
Inclination: 91.3°
Azimuth: 179.7°
VS: 5,430.84'

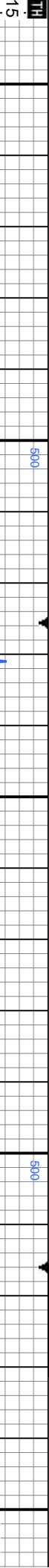
MRSLT: dk gy-v dk gy, gy, sb ply-ply, sl mot, sft-mod frm, mod calc, tr
bl-wh mod fast stmg cut, f thk yel ring cut

MRSLT: dk gy-v dk gy, gy, sb ply-ply, sl mot, sft-mod frm, mod calc, tr inoc foss, tr bl-wh
mod fast stmg cut, f thk yel ring cut

MRSLT: dk gy
fast stmg cut,







IN/OUT MW 9.3+9.3+ VIS 37/37

6000 IN/OUT MW 9.3+9.4 VIS 38/37

IN/OUT MW 9.3+9.4 VIS 39/37

3061u

2765u

2747u

2682u

GAS (units)

2563.10

C1: 74.08%
C2: 17.27%
C3: 8.02%
C4: 0.63%

199

250

122

250

86

159

1

ply, sl mot, sft-mod frm, mod calc; tr bl-wh

6700 MRLST: dk gy-v dk gy, gy, sb ply-ply, sl mot, sft-mod frm, mod calc; tr bl-wh
mod fast stmg cut, f thk yel ring cut

6700 MRLST: dk gy-v dk gy, gy, sb ply-ply, mot, sft-mod frm, blk-y sb ply, mod sft-mod frm, v calc; tr bl-wh mod fast st

MD: 12,767'
TVD: 6,900.28'
Inclination: 90.1°
Azimuth: 179.9°
VS: 5,703.96'

MD: 12,859'
TVD: 6,899.72'
Inclination: 90.6°
Azimuth: 179.1°
VS: 5,795.79'

MD: 12,950'
TVD: 6,899.48'
Inclination: 89.7°
Azimuth: 180.9°
VS: 5,886.56'

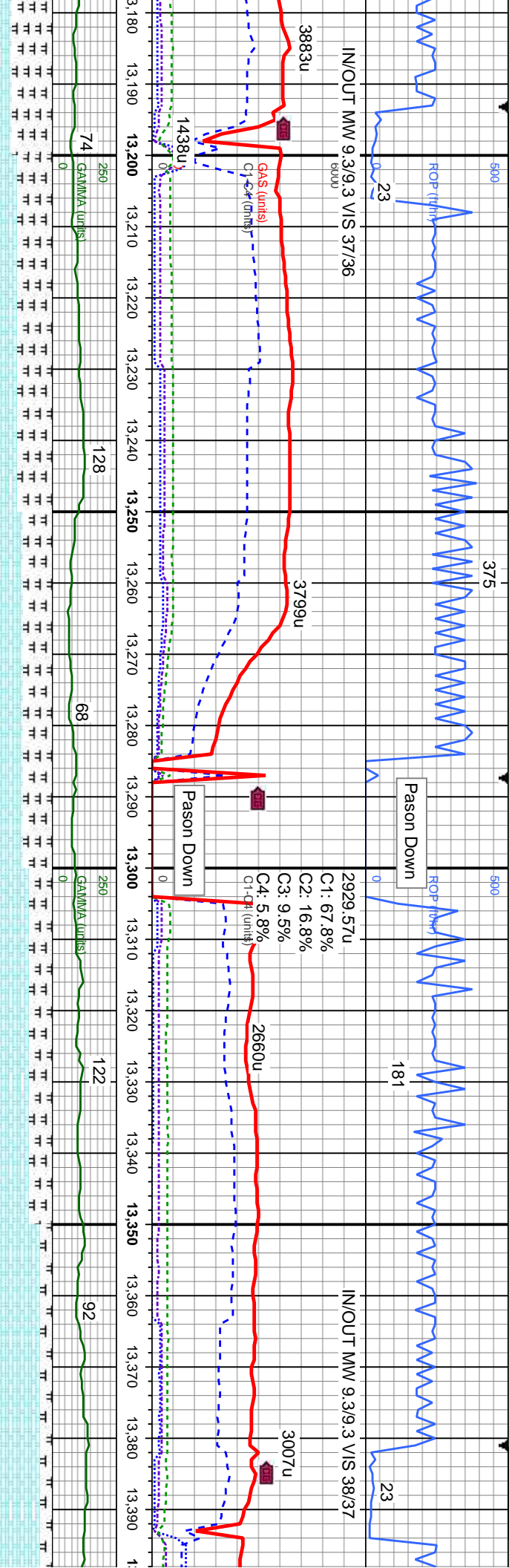
TVD (ft)

TVD (ft)

7000

7000



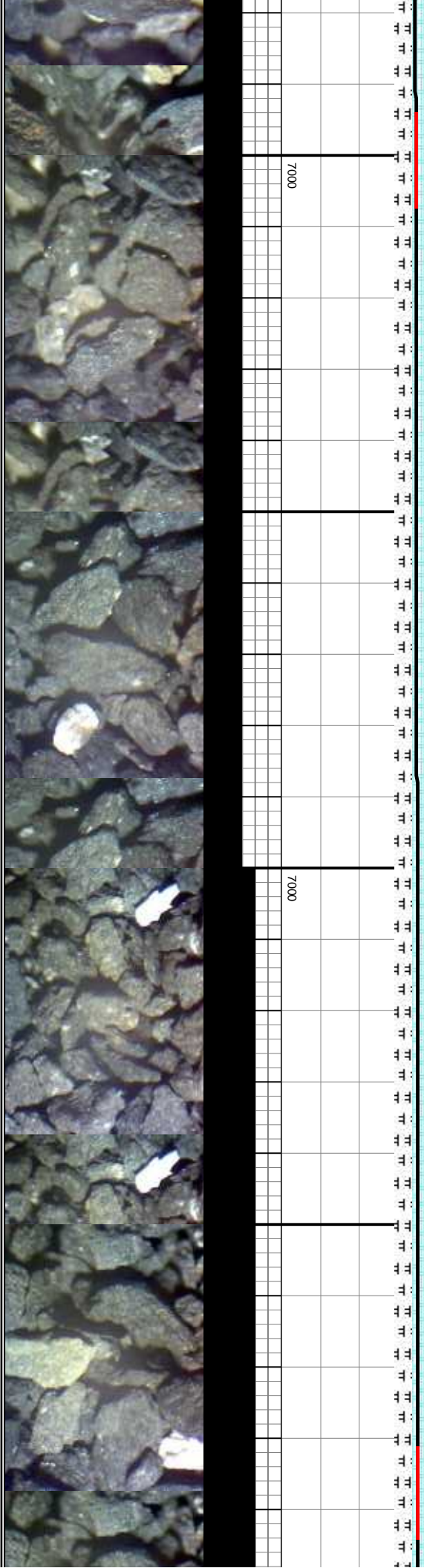


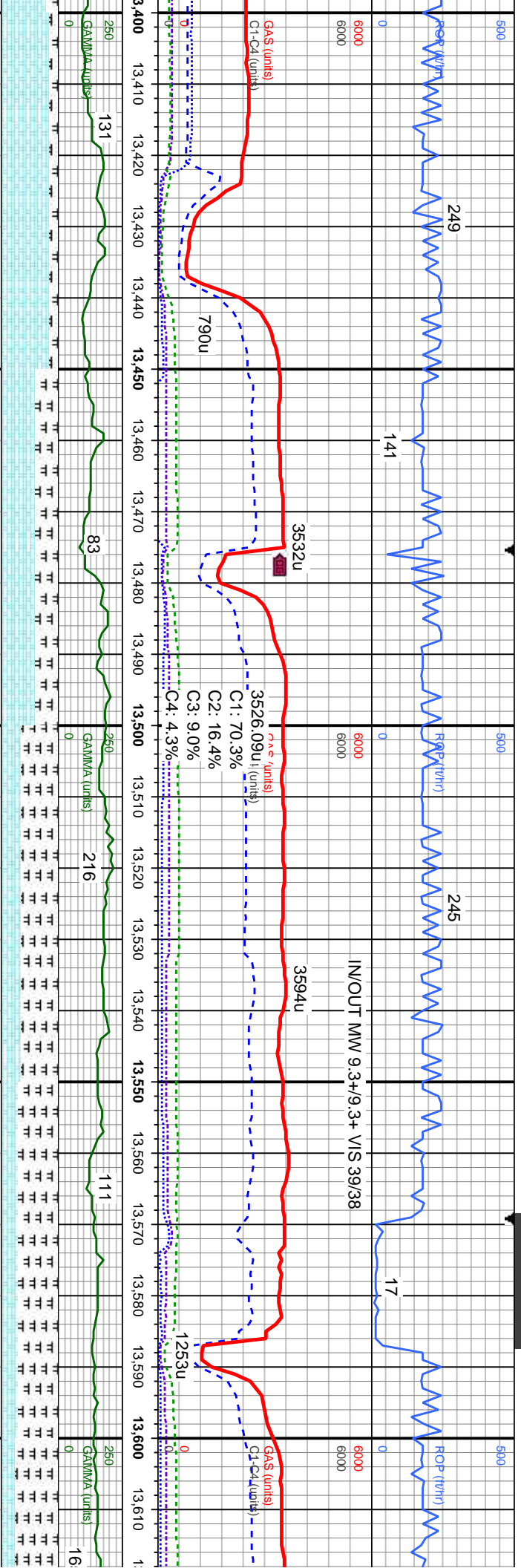
6700 MR.LST: dk gy-v dk gy, gy, sb ply-ply, mot, sft-mod frm, mod calc, about CHK: med
gy-gy, sb blk-y-sb ply, mod sft-mod frm, v calc, fr bl-wh mod fast sting cut, f thk yel ring
cut

MD: 13,230'
TVD: 6,896.37'
Inclination: 90.3°
Azimuth: 180.6°
VS: 6,165.75'

6700 CHK: med gy-gy, sb blk-y-sb ply, mod sft-mod frm, mod calc, mod MR.LST: dk gy-v dk gy, gy,
sb ply-ply, mot, sft-mod frm, mod calc, fr bl-wh mod fast sting cut, mod thk yel ring cut

MD: 13,324'
TVD: 6,895.46'
Inclination: 90.8°
Azimuth: 179.9°
VS: 6,259.48'





6700 CHK: med gy-gy, sb blk-y-sb ply, mod sft-mod frm, v calc, mod MRLST: dk gy-v dk gy, gy, sb ply-ply, mot, sft-mod frm, mod calc, f bl-wh mod fast sting cut, mod thk yel ring cut

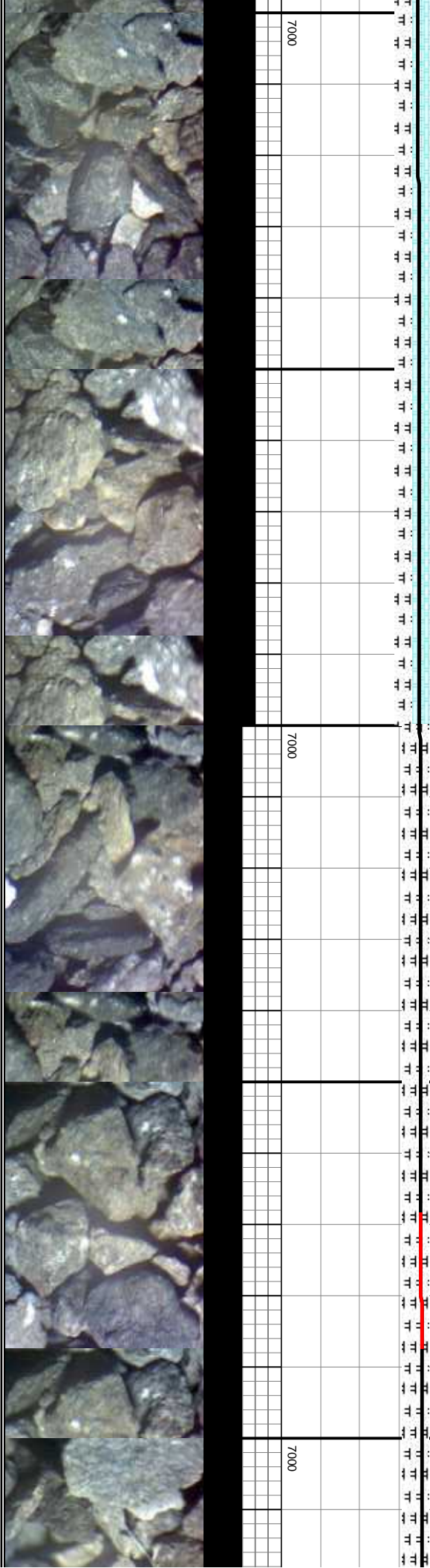
6700 MRLST: dk gy-v dk gy, gy, sb ply-ply, mot, sft-mod frm, mod calc, mod CHK: med gy-gy, sb blk-y-sb ply, mod sft-mod frm, v calc, tr bl-wh mod fast sting cut, f thk yel ring cut

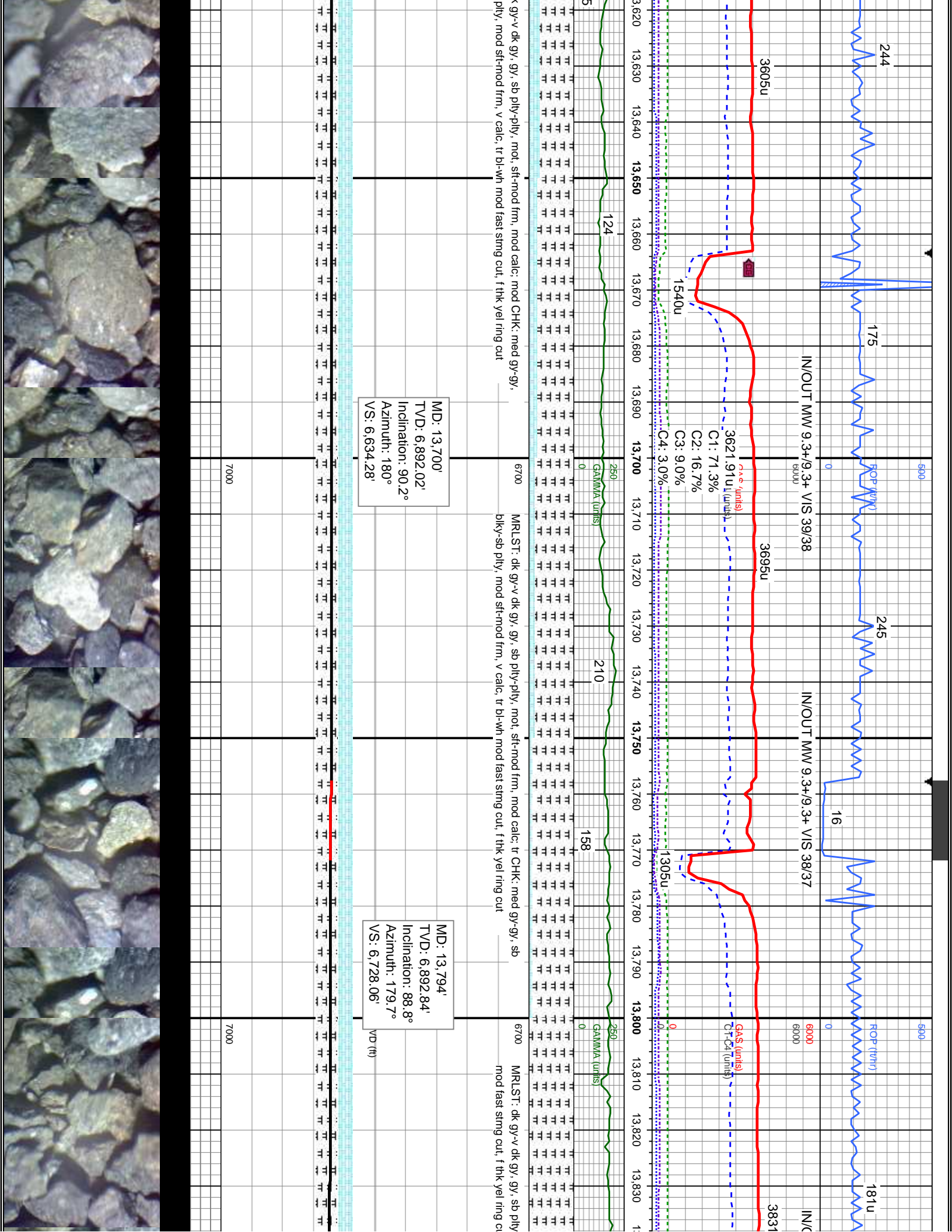
6700 MRLST: dk gy-gy, sb blk-y-sb ply, mod sft-mod frm, mod calc, mod MRLST: dk gy-v dk gy, gy, sb ply-ply, mot, sft-mod frm, mod calc, f bl-wh mod fast sting cut, mod thk yel ring cut

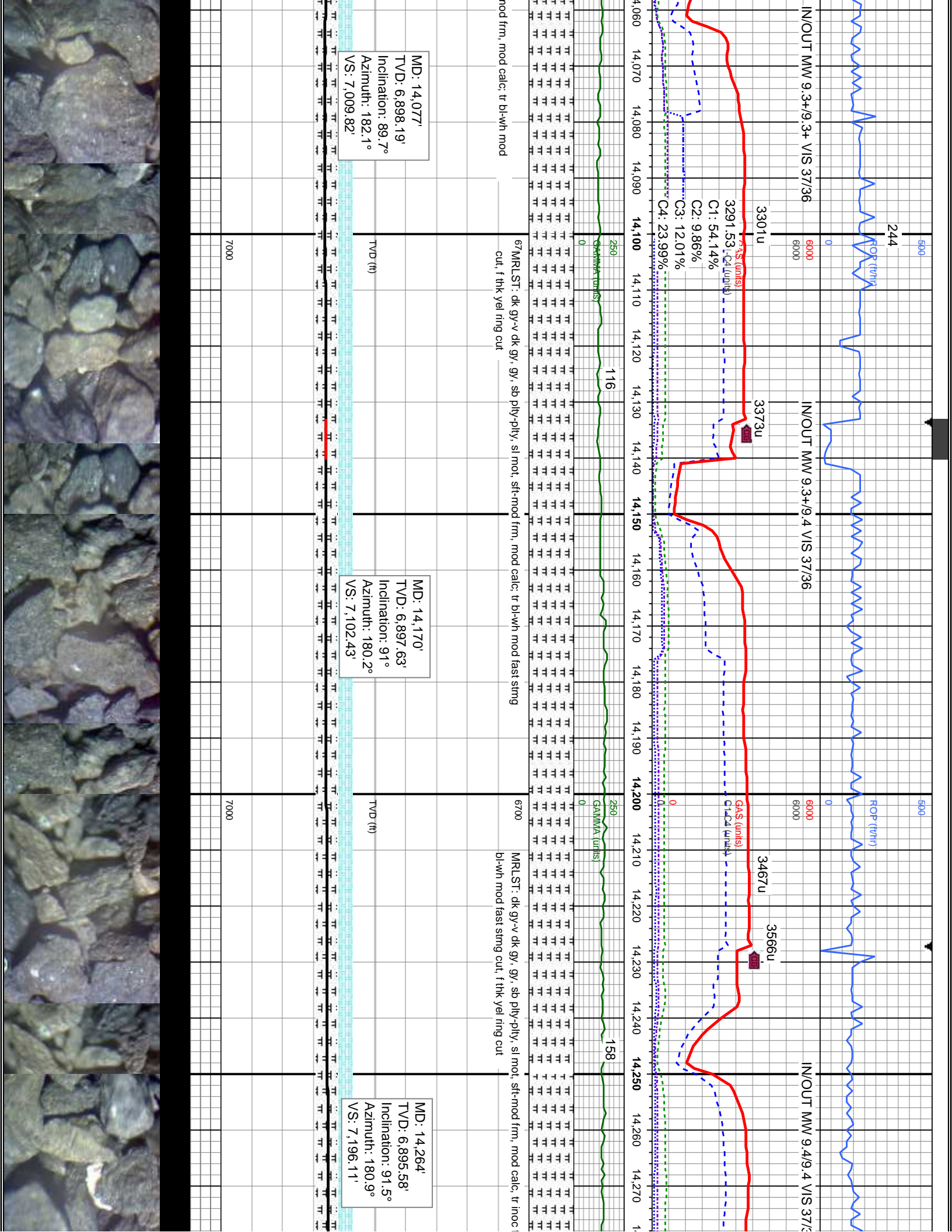
MD: 13.418'
TVD: 6,894.81'
Inclination: 90°
Azimuth: 181.3°
VS: 6,353.17'

MD: 13.512'
TVD: 6,893.5'
Inclination: 91.6°
Azimuth: 180.4°
VS: 6,446.82'

MD: 13.606'
TVD: 6,892.18'
Inclination: 90°
Azimuth: 180.4°
VS: 6,540.53'







50' (IN DEPTH)

5/18/2015

ROP (ft/hr)

0

IN/OUT MW 9.3/9.3 VIS 36/36

6000

6000

3557u

3505u

GAS (units)

C1: 75.12%

C2: 14.34%

C3: 6.77%

C4: 3.77%

3543.10 \$ (units)

3505u

3505u

3505u

3505u

3505u

3505u

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3505u

3505u

181

IN/OUT MW 9.3/9.3 VIS 36/36

6000

6000

3750u

3381u

GAS (units)

C1: 75.12%

C2: 14.34%

C3: 6.77%

C4: 3.77%

3543.10 \$ (units)

3505u

3505u

3505u

3505u

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3505u

163

IN/OUT MW 9.3/9.3 VIS 36/36

6000

6000

3381u

3314u

GAS (units)

C1: 75.12%

C2: 14.34%

C3: 6.77%

C4: 3.77%

3543.10 \$ (units)

3505u

3505u

3505u

3505u

3505u

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6700 MR.LST: dk gy-v dk gy, gy, sb ply-ply, mot, sft-mod frm, tr calc: mod CHK: med gy-gy, sb bky-sb ply, mod sft-mod frm, v calc, tr bl-wh mod fast string cut, f thk yel ring cut

MD: 14,358'
TVD: 6,892.95'
Inclination: 91.7°
Azimuth: 180°
VS: 7,289.79'

MD: 14,452'
TVD: 6,890.82'
Inclination: 90.9°
Azimuth: 179.5°
VS: 7,383.56'

TVD (ft)

TVD (ft)

TVD (ft)

7000

7000

7000

loss, tr

6700

6700

GAMMA (units)

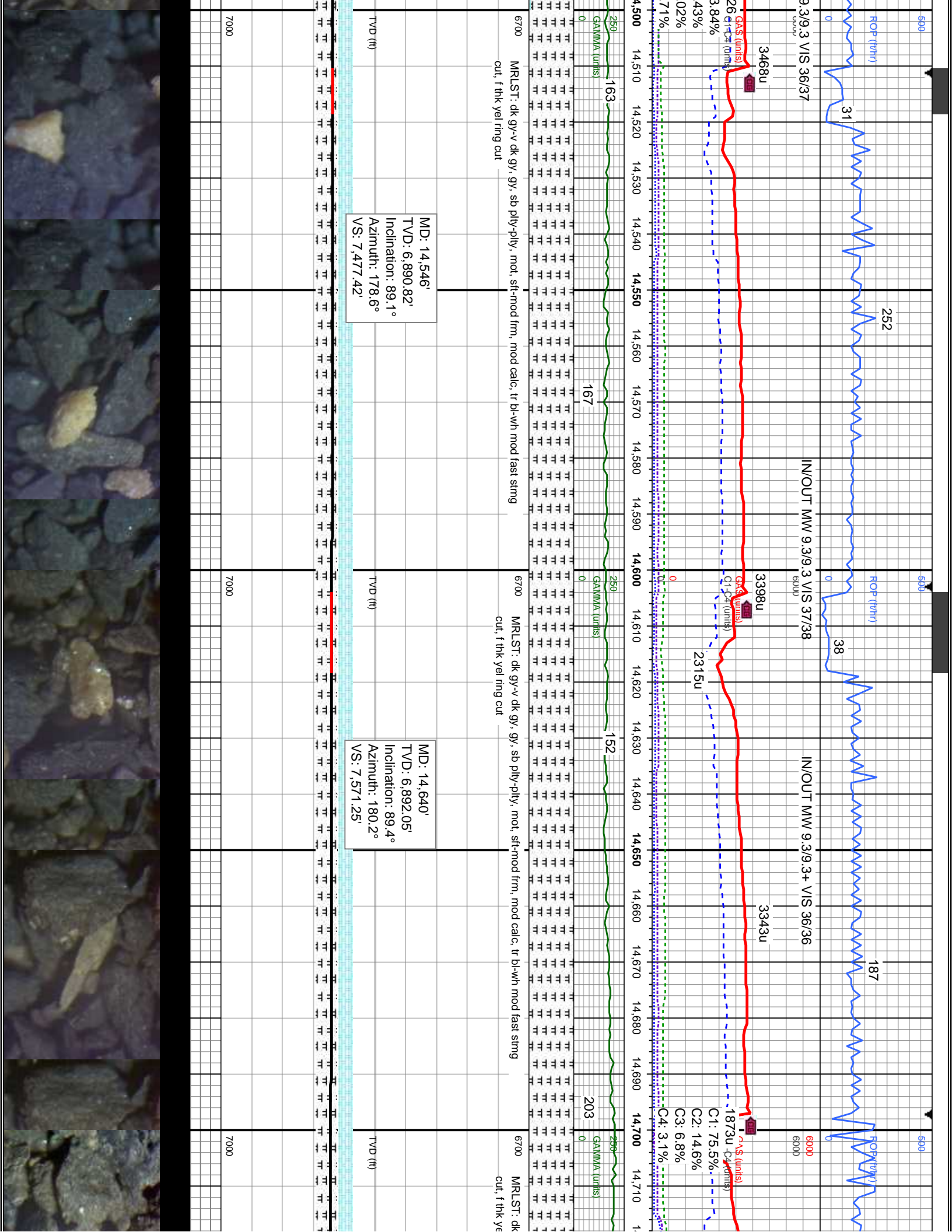
205

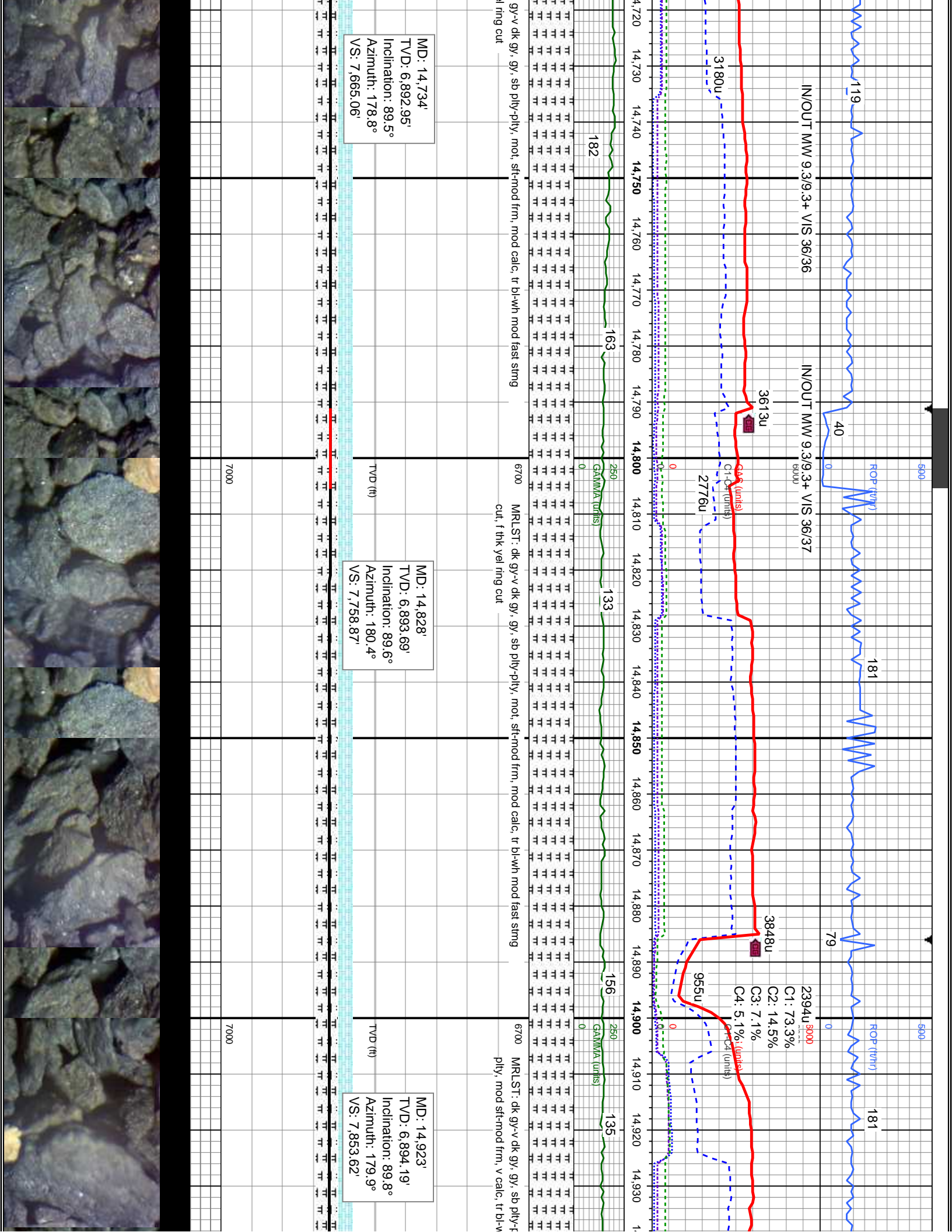
GAMMA (units)

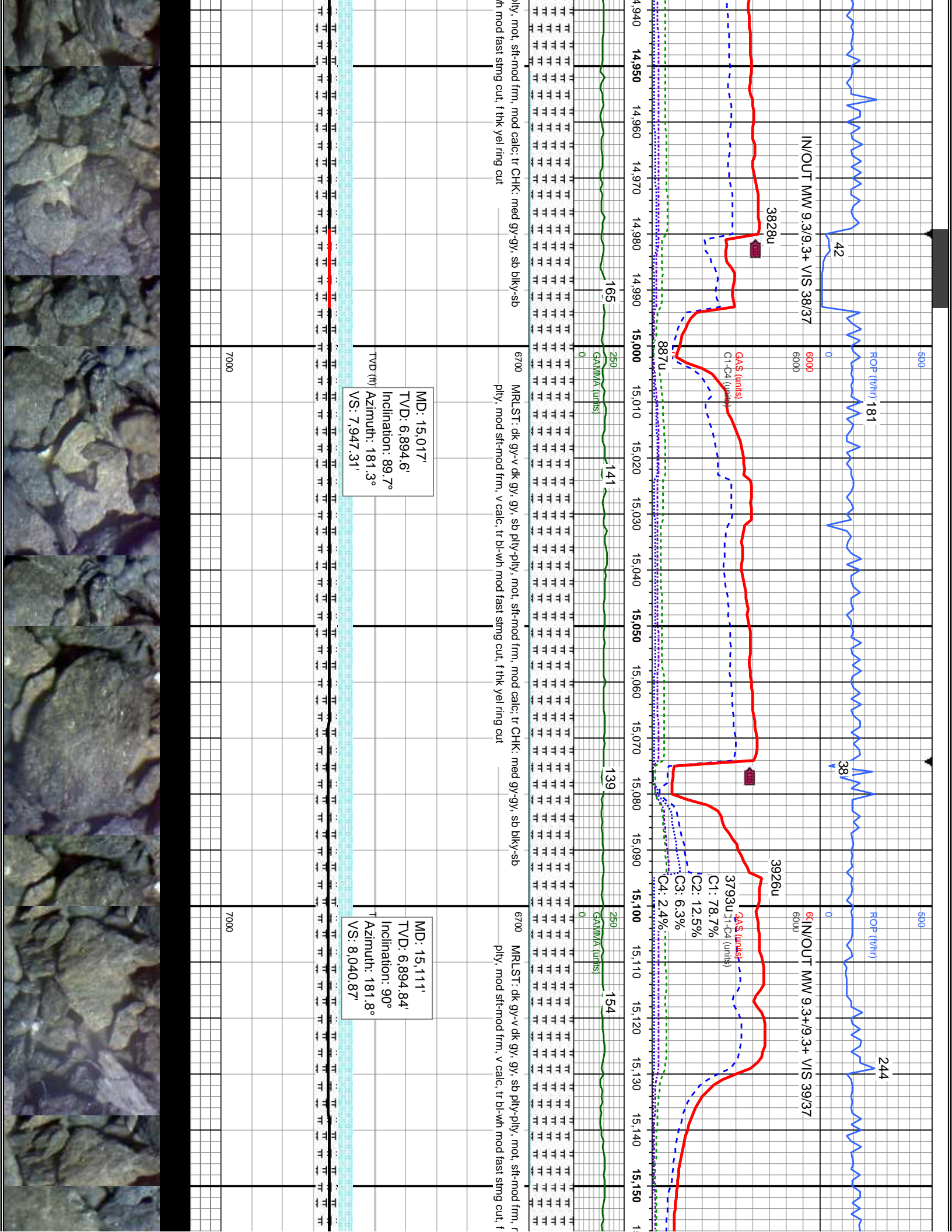
154

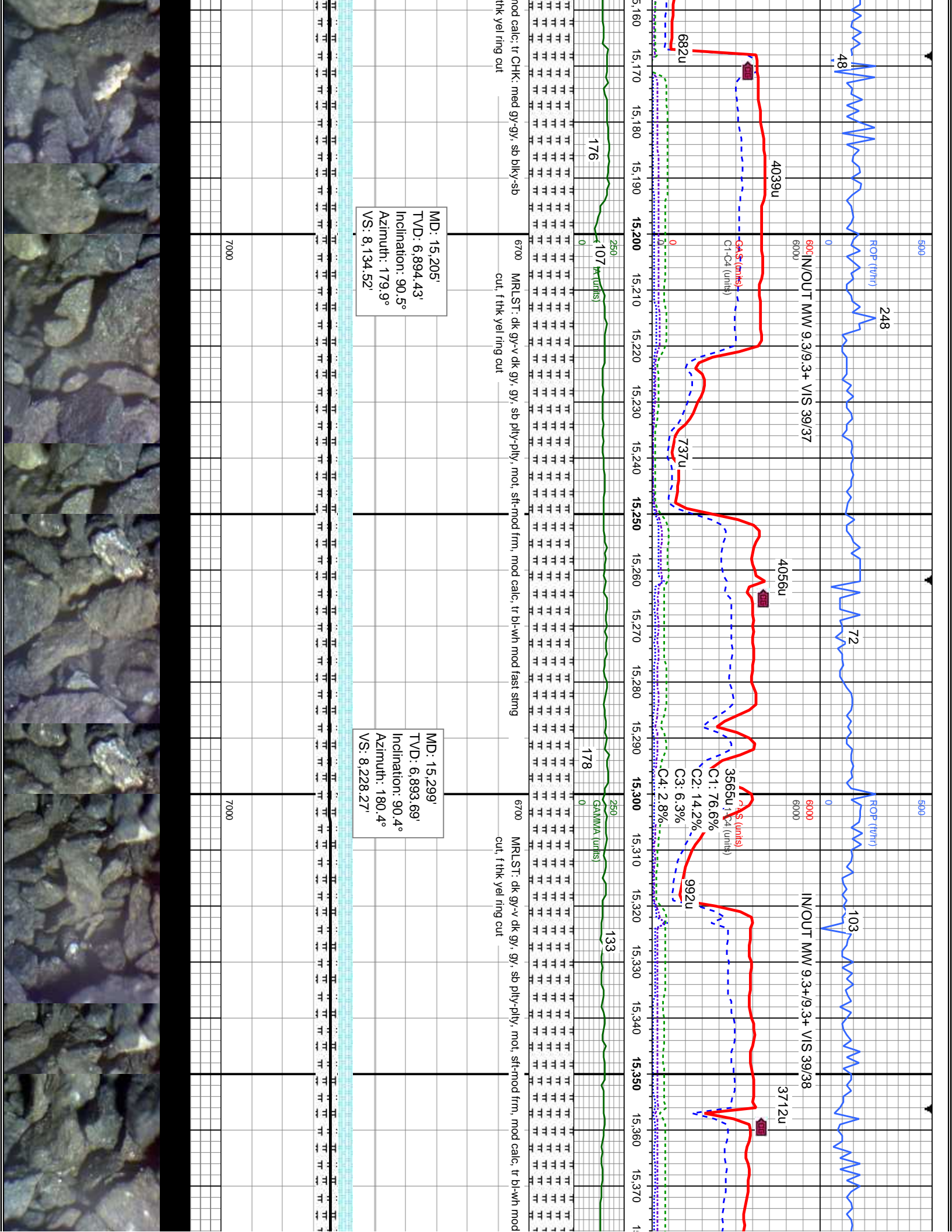
163

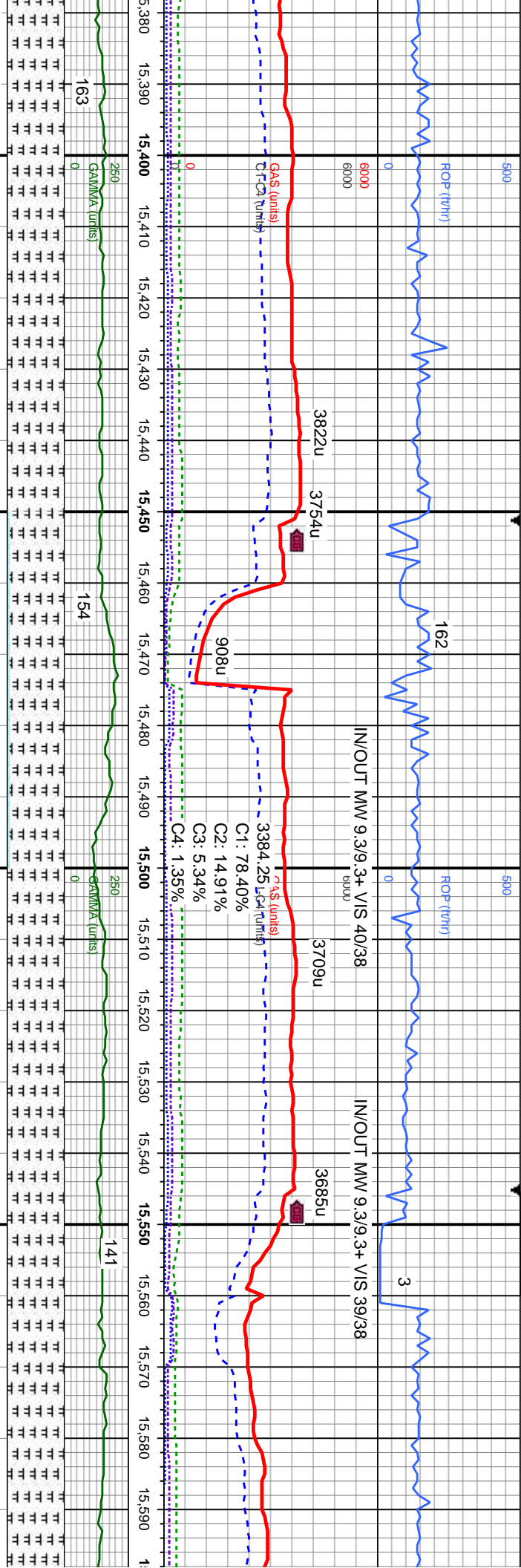












fast string
6700' MRLST: dk gy-v dk gy, sb ply-ply, mot, sft-mod frm, mod calc; tr bl-wh mod fast string cut, f thk yel ring cut

6700' MRLST: dk gy-v dk gy, sb ply-ply, mot, sft-mod frm, mod calc; tr bl-wh mod fast string cut, f thk yel ring cut

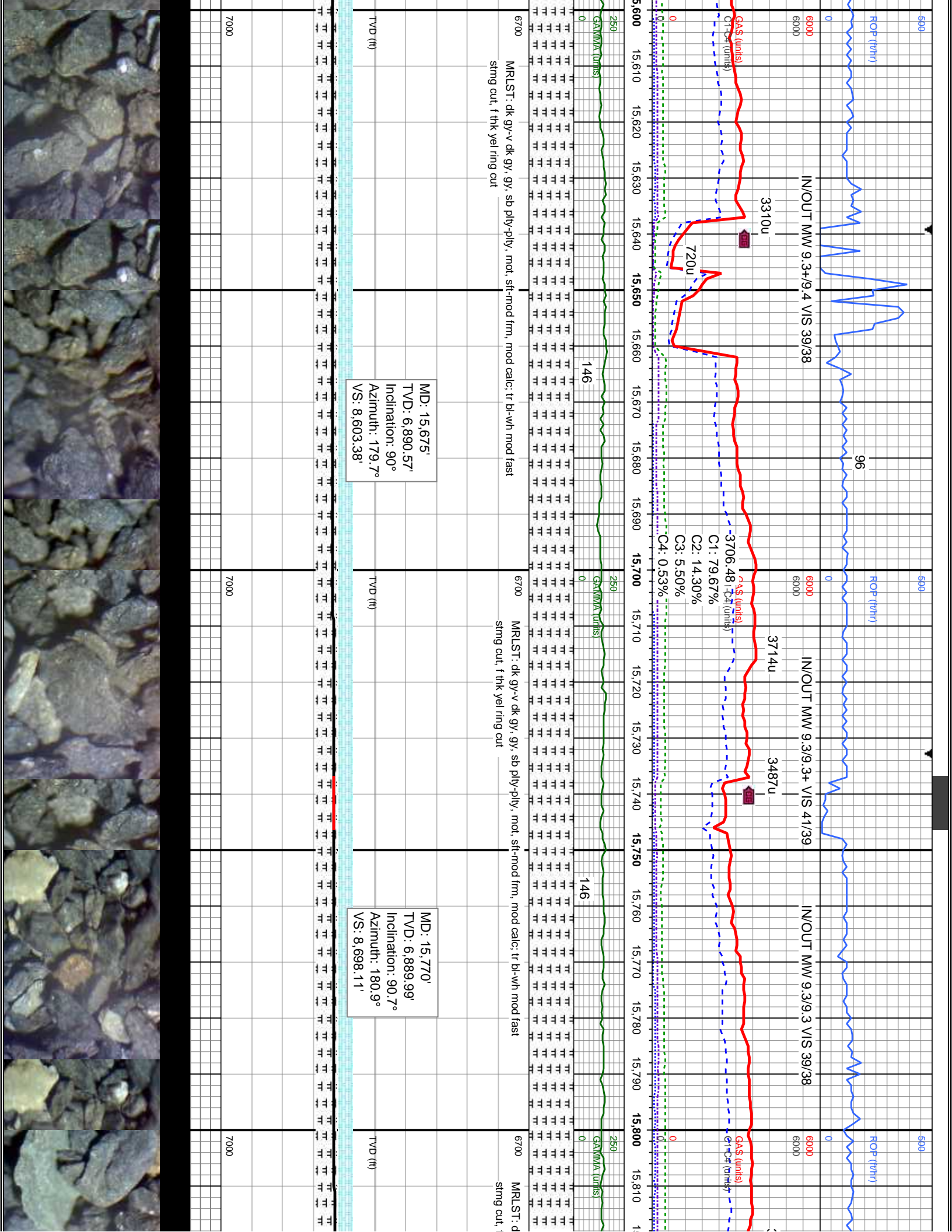
MD: 15,394'
TVD: 6,892.78'
Inclination: 90.7°
Azimuth: 179.9°
VS: 8,323.02'

MD: 15,488'
TVD: 6,891.39'
Inclination: 91°
Azimuth: 179.7°
VS: 8,416.8'

MD: 15,582'
TVD: 6,890.57'
Inclination: 90°
Azimuth: 179.9°
VS: 8,510.59'

7000

7000



ROP (ft/hr)

ROP (ft/hr) 149

IN/OUT MW 9.3/9.3 VIS 39/39

IN/OUT MW 9.3+/9.3+ VIS 39/38

IN/OUT MW 9.3+/9.3+ VIS 41/39

IN/OUT MW

5740u

3739u

3813u

3948u

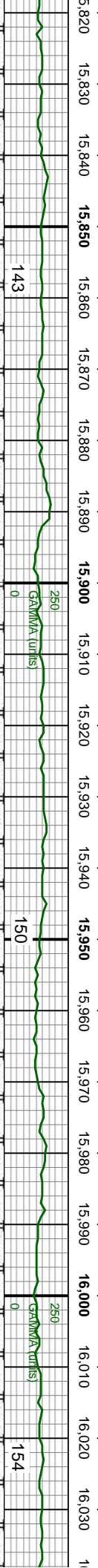
3647.52
GAS (units)
C1: 78.89%
C2: 13.14%
C3: 5.68%
C4: 2.29%

6000
6000

GAS (units)
C1-C4 (units)

GAS (units)
C1-C4 (units)

821u



dk gy-v dk gy, gy, sb ply-ply, mot, str-mod frm, mod calc; tr bl-wh mod fast
thk yel ring cut

MRLST: dk gy-v dk gy, gy, sb ply-ply, mot, str-mod frm, mod calc; tr bl-wh mod fast
string cut, f thk yel ring cut

MRLST: dk gy-v dk gy, gy, sb ply-ply, mot, str-mod frm, mod calc; tr bl-wh mod fast
string cut, f thk yel ring cut

MD: 15,864'
TVD: 6,888.35'
Inclination: 91.3°
Azimuth: 181.4°
VS: 8,791.71'

MD: 15,958'
TVD: 6,886.71'
Inclination: 90.7°
Azimuth: 179.7°
VS: 8,885.4'

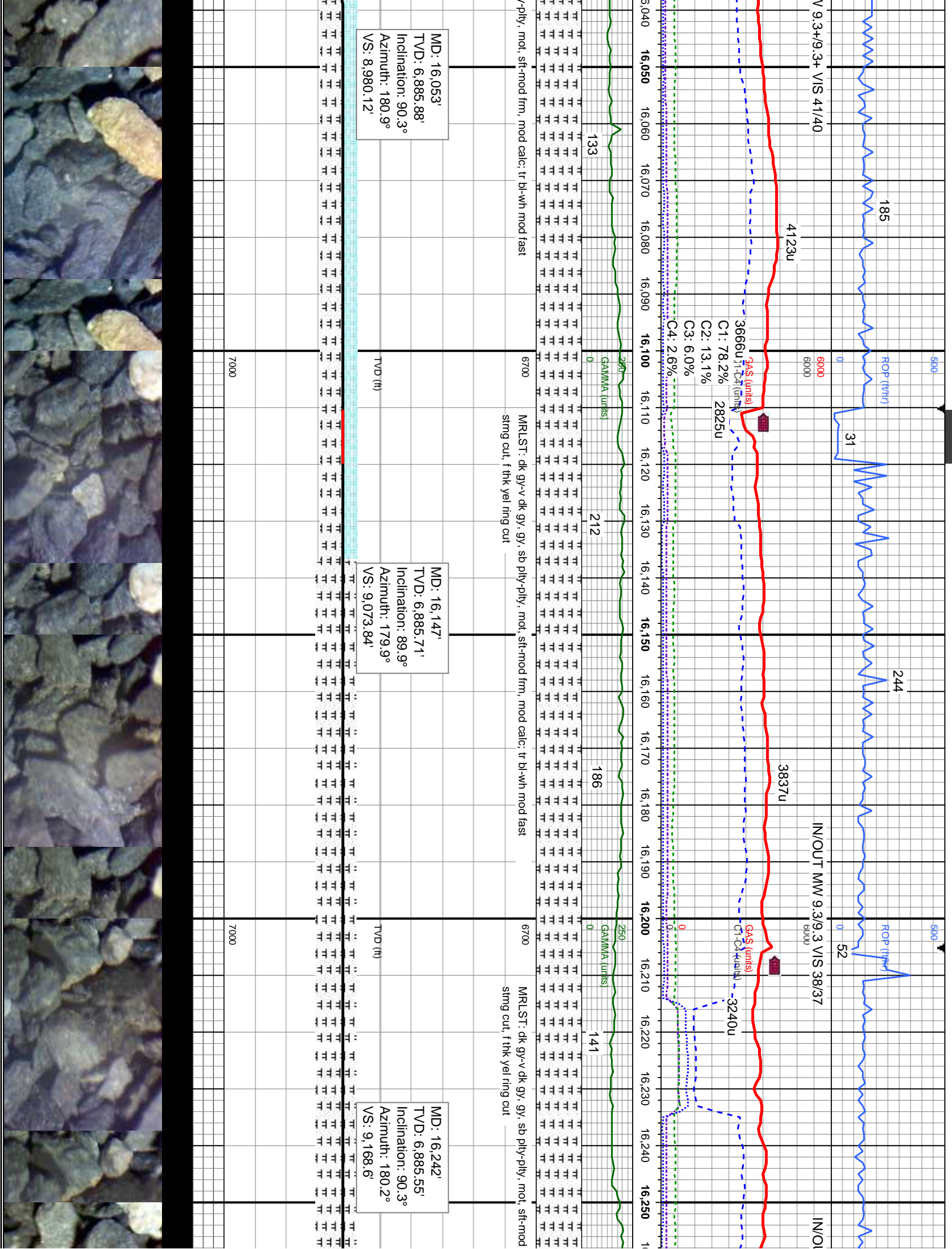
TVD (ft)

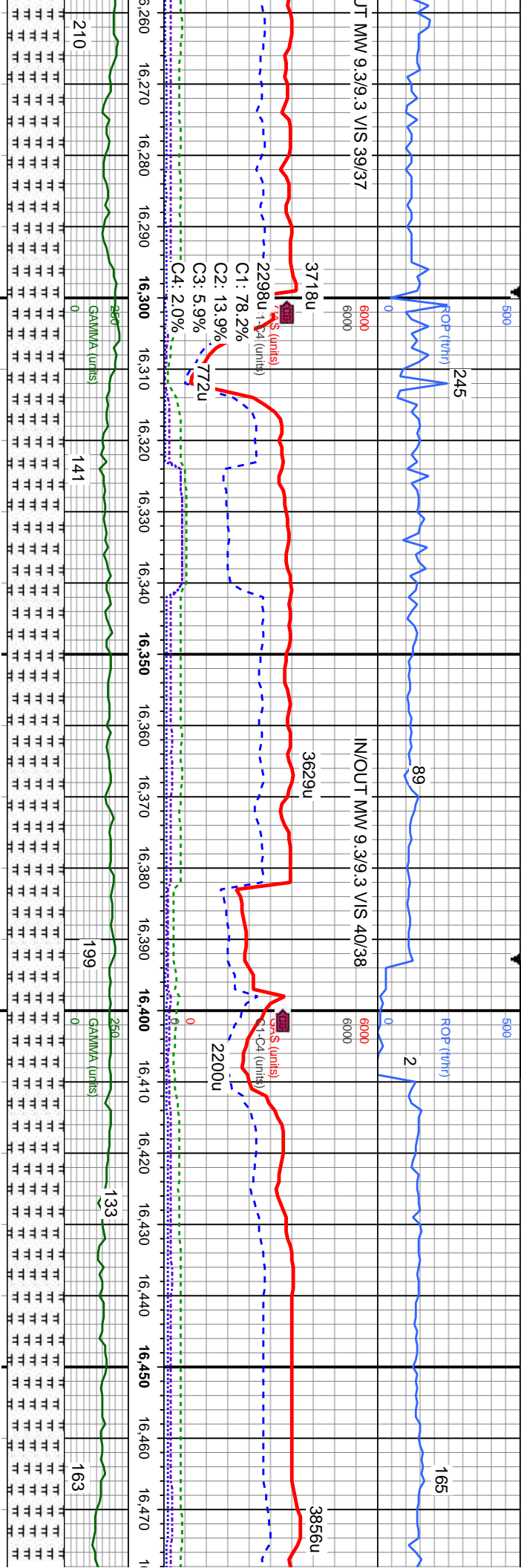
TVD (ft)

7000

7000



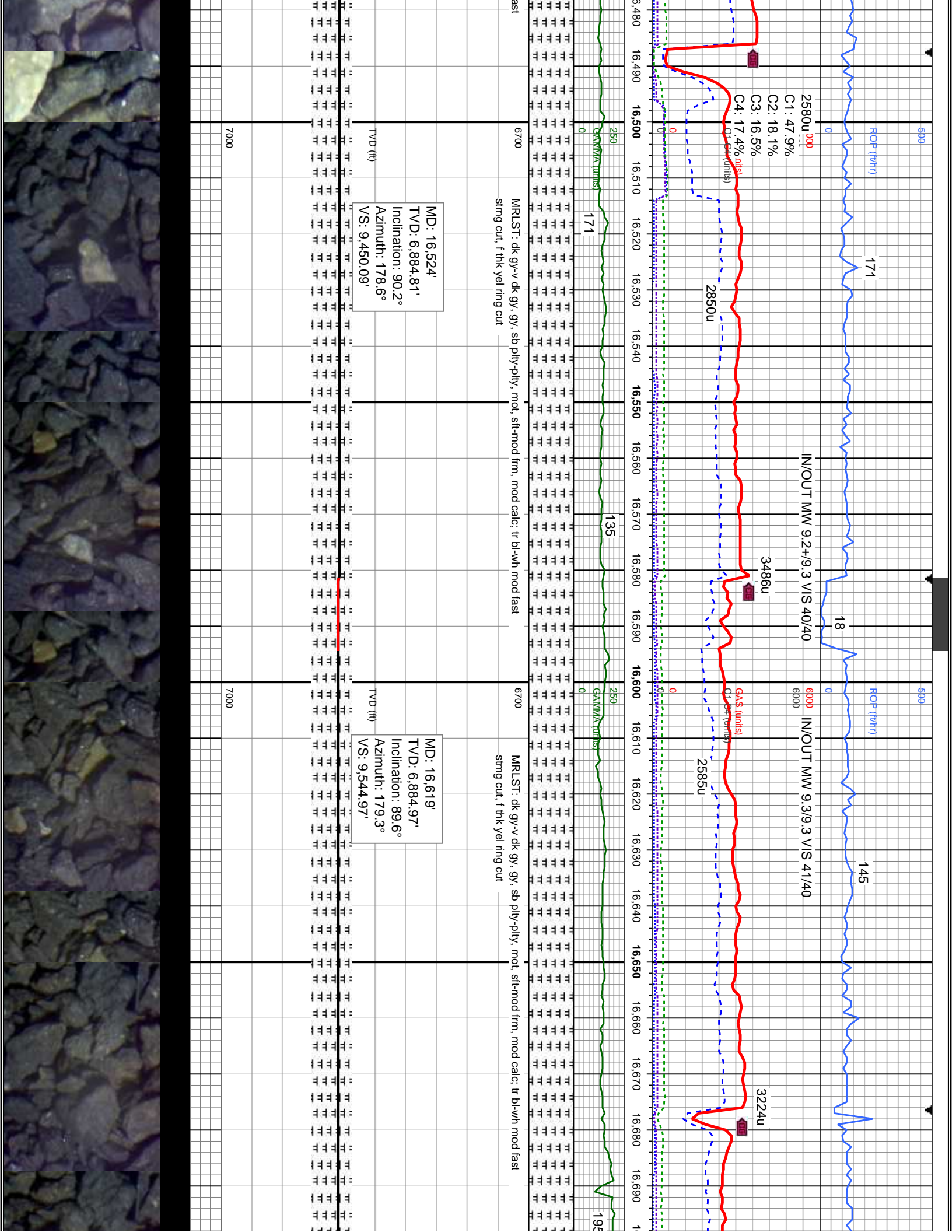


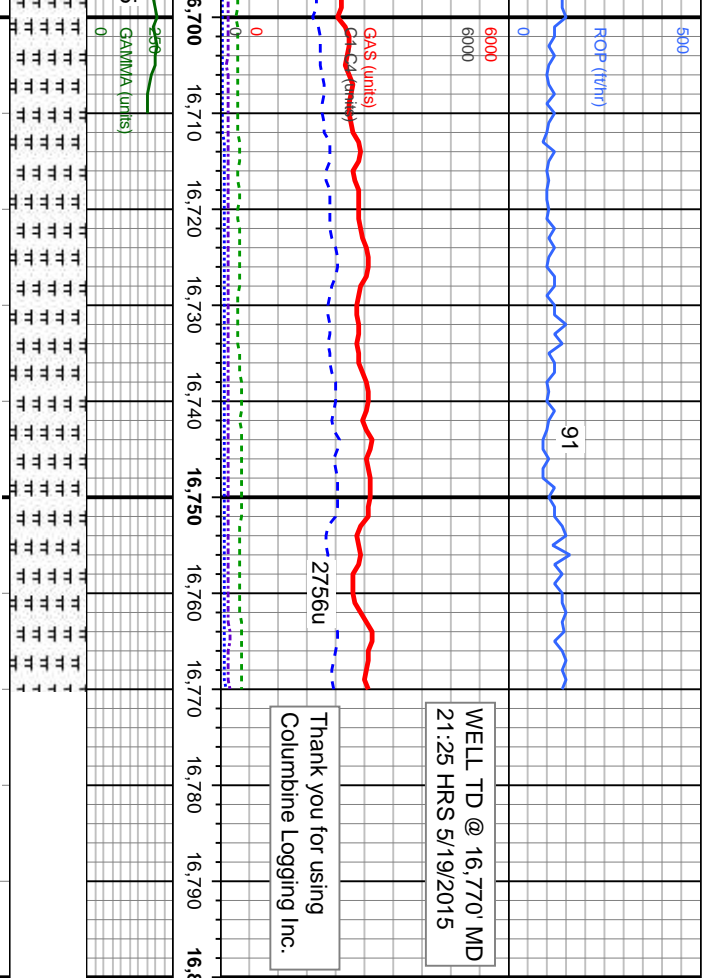


MD: 16,336'
TVD: 6,884.73'
Inclination: 90.7°
Azimuth: 179.3°
VS: 9,262.4'

MD: 16,430'
TVD: 6,884.56'
Inclination: 89.5°
Azimuth: 179.5°
VS: 9,356.23'







WELL TD @ 16,770' MD
21:25 HRS 5/19/2015

Thank you for using
Columbine Logging Inc.

6700 MRLST: dk gy-v dk gy, gy, sd ply-ply, mot, sft-mod frm, mod calc; tr bl-wh mod fast
string cut, r thk yel ring cut

PROJECTION
TO BIT

MD: 16,770'
TVD: 6,885.3'
Inclination: 90°
Azimuth: 179.3°
VS: 9,695.71'

MD: 16,713'
TVD: 6,885.3'
Inclination: 90°
Azimuth: 179.3°
VS: 9,638.81'

