

COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name Sekich State 40N-17HZ

Location Sec 18 T3N R67W

State COLORADO

Country USA

API Number 05123390460000

Region DJ BASIN

Spud Date 4/10/2014

Surface Coordinates 2060' FSL & 380' FWL

Bottom Hole Coordinates RELATIVE TO WELLHEAD:
204.23' North & 9860' EAST

Ground Elevation 4850'

Logged Interval 6455' MD To 16,766

Formation NIOBRARA

Type of Drilling Fluid WBM

County WELD

Rig Number H&P 307

AFE # 2089132

Field WATTENBERG

Drilling Completed 4/21/2014

K.B. Elevation 4875'

Total Depth 16,766

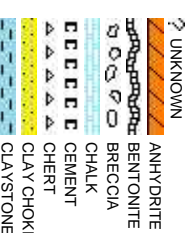
Company Anadarko

Address 1099 18th Street
Denver, Co., 80202

Name Jim Frank, Chris

Company Columbine Logging

Address 2385 S. Lipan Street
Denver, CO 80210



Operator

Operator
2022

Geologist

Geologist
Johnson
Inc.

223

Rock Types

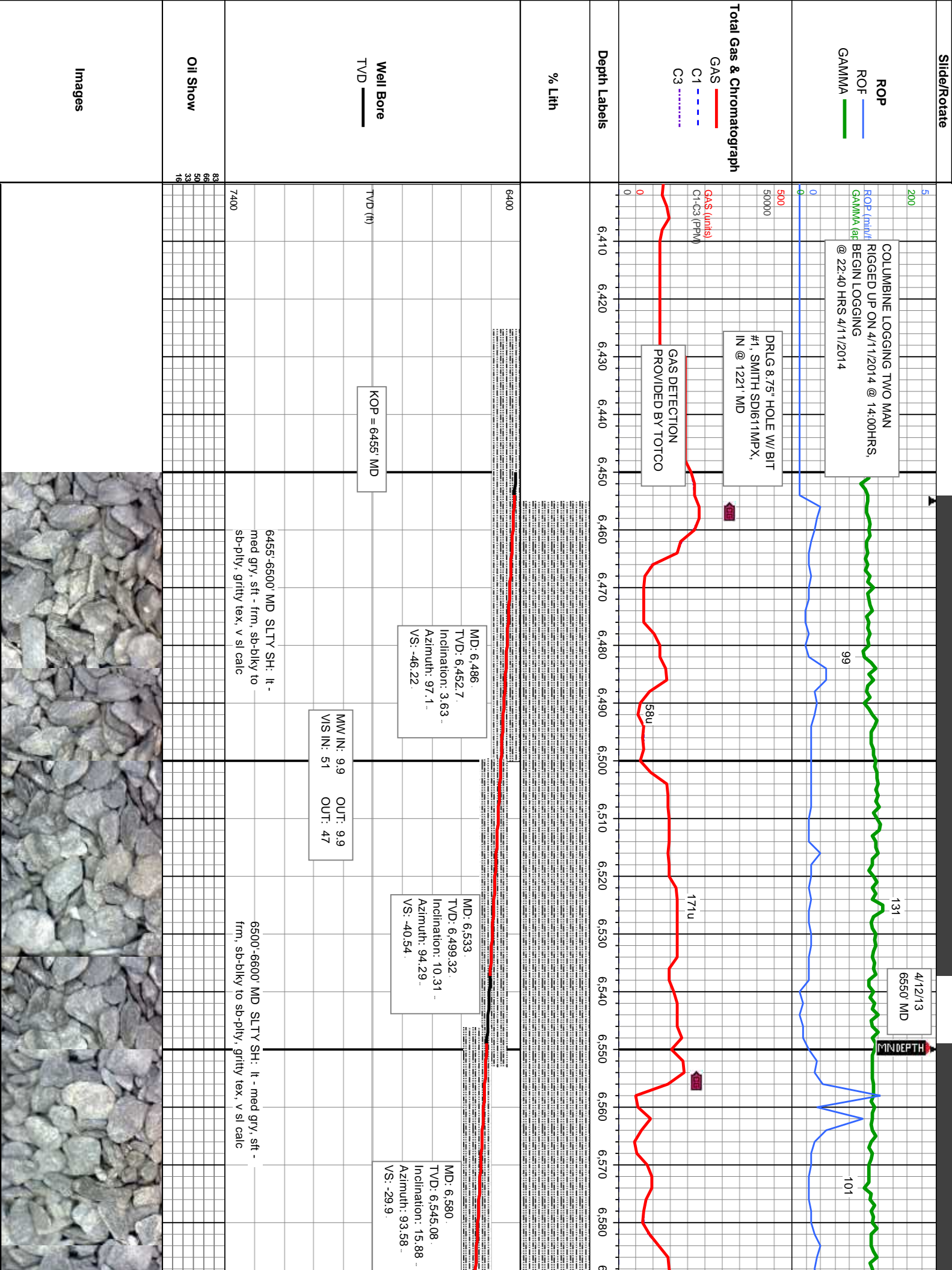
CONGLOMERATE	MARLSTONE	SHALY SANDSTONE
DOLOMITE	METAMORPHIC	SHALY SILTSTONE
DOLOMITIC LIMESTONE	NO SAMPLE	SILTY SHALE
GRANITE	SALT	SILTSTONE
GYPSUM	SANDSTONE	TILL
IGNEOUS	SALT-PEPPER SAND	TUFF
SIDERITE or LIMONITE	SHALE	WELDED TUFF
LIMESTONE	SHALE COLORED	
	SHALE GRAY	

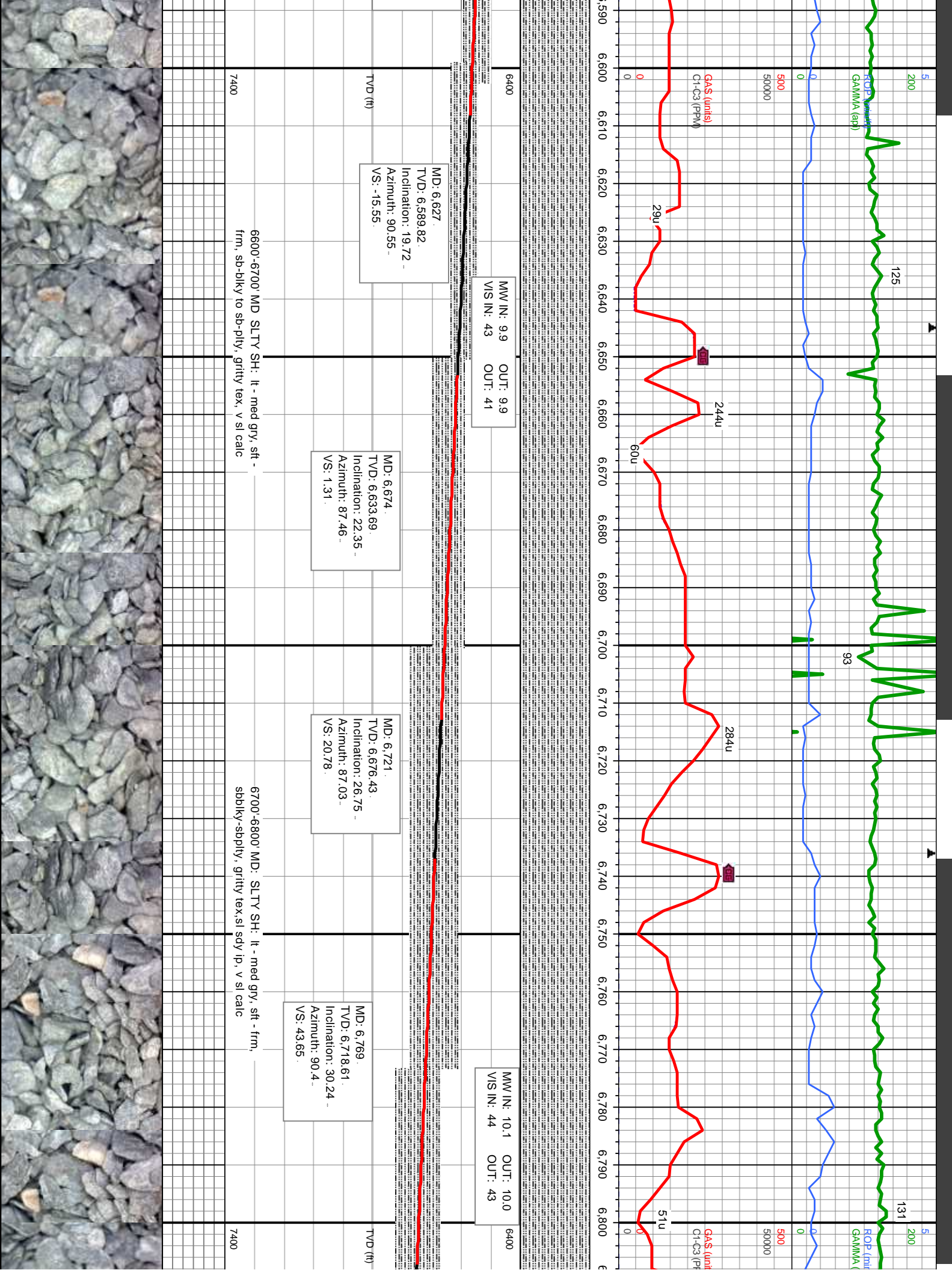
Accessories

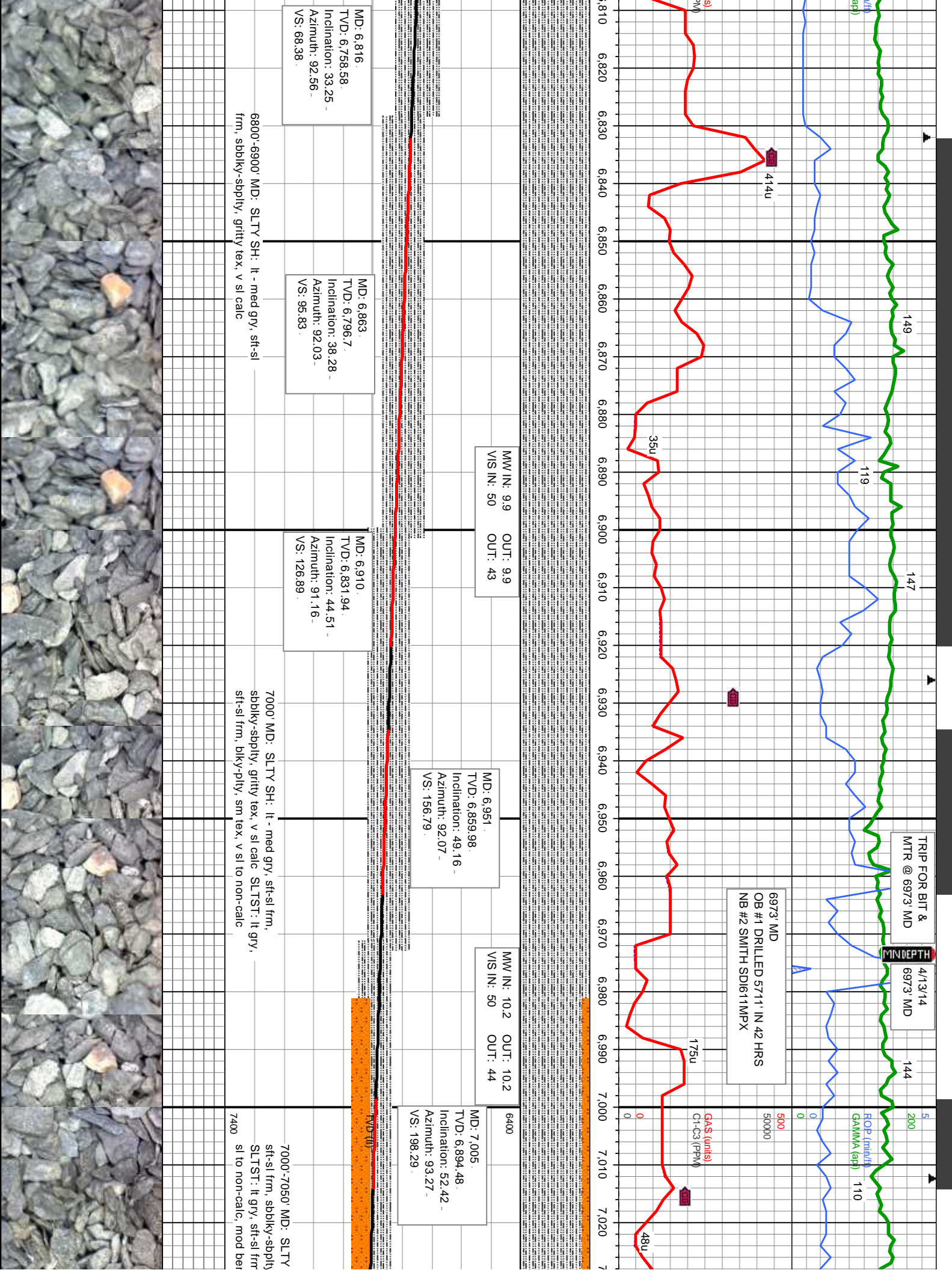
Fossils	GASTROPOD	ARGILLITE GRAIN	HEAVY MINERAL
INOCERAMUS	B BENTONITE	K KAOLIN	ANHYDRITE STRINGER
ALGAE	O OOLITE	BITUMINOUS SUBSTANCE	BENTONITE STRINGER
AMPHIPORA	O OSTRACOD	BRECCIA FRAGMENTS	COAL STRINGER
BELEMNITE	P PELECYPOD	C CALCAREOUS	DOLOMITE STRINGER
BIOCLASTIC	P PELLET	CARBONACEOUS FLAKES	GYPSUM STRINGER
BRACHIOPOD	P PISOLITE	C CHTD	LIMESTONE STRINGER
BRYOZOA	P PLANT REMAINS	C CHTL	MARLSTONE (CALC) STRG
CEPHALOPOD	P PLANT SPORES	C COAL - THIN BEDS	MARLSTONE (DOL) STRG
CORAL	S SCAPHOPOD	D DOLOMITIC	SANDSTONE STRINGER
CRINOID	S STROMATOPOROID	F FELDSPAR	SHALE STRINGER
ECHINOID	F FERRUGINOUS PELLET	F FERRUGINOUS	S SILTY
FISH	Minerals	T TUFFACEOUS	
FORAMINIFERA	A ANHYDRITIC	G GLAUCONITE	
F FOSSIL	A ARGILLACEOUS	G GYPSIFEROUS	Stringer

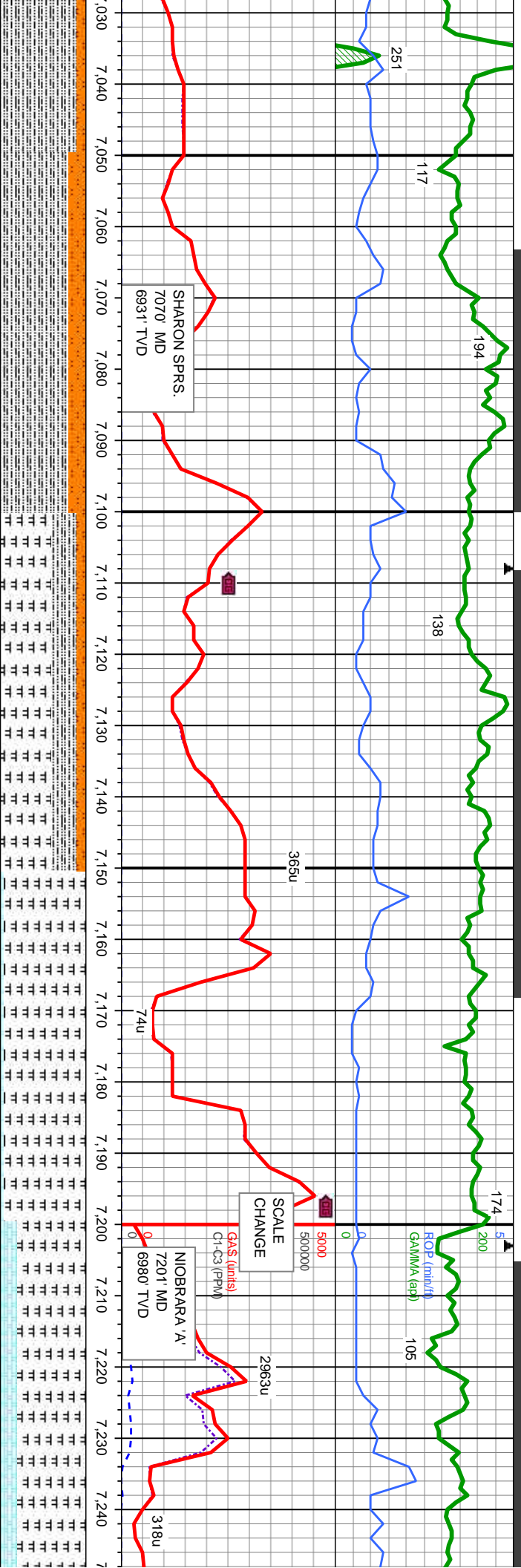
Other Symbols

Oil Show	P PINPOINT	DST INTERVAL	WIRELINE TESTED - LEFT	E EARTHY
V VUGGY	F FAULT	WIRELINE TESTED - RT	FX FINELY XLN	
Engineering	FORMATION TOP	DRILL STEM TEST	GS GRAINSTONE	
D DEAD	GAS SHOW	MN DEPTH	L LITHOGRAPHIC	
E EVEN	OIL SHOW	MN DEPTH	MX MICROXLN	
Q QUESTIONABLE	BIT	Rounding	MS MUDSTONE	
S SPOTTED STAINING	A CONNECTION (UP)	A ANGULAR	PS PACKSTONE	
Porosity	V CONNECTION (DOWN)	B SUBANG	WS WACKESTONE	
E EARTHY	C CONNECTION GAS (LEFT)	N NORMAL FAULT		
F FENESTRAL	T TRIP GAS	O OVERTURNED STRATA		
F FRACTURE	T TRIP GAS (LEFT)	R REVERSE FAULT	P SUBUND	Sorting
X INTERCRYSTALLINE	D DOWN TIME GAS	C CASING		P POOR
X INTERCRYSTALLINE	D DOWN TIME GAS (LEFT)	S SIDEWALL CORE (LEFT)		M MODERATE
M MOLDIC	L CORE - LOST	S SIDEWALL CORE (RIGHT)		
O ORGANIC	R CORE - RECOVERED	S SLIDE	B BOUNDSTONE	W WELL
		S SURVEY	C CHALKY	
			C CRYPTOXLN	









MD: 7.052
TVD: 6.921.77
Inclination: 56.56
Azimuth: 93.77
VS: 236.5

MD: 7.099
TVD: 6.945.45
Inclination: 62.91
Azimuth: 94.07
VS: 277.03

MD: 7.146
TVD: 6.964.05
Inclination: 70.43
Azimuth: 94.84
VS: 320.08

MD: 7.193
TVD: 6.978.14
Inclination: 74.68
Azimuth: 94.61
VS: 364.82

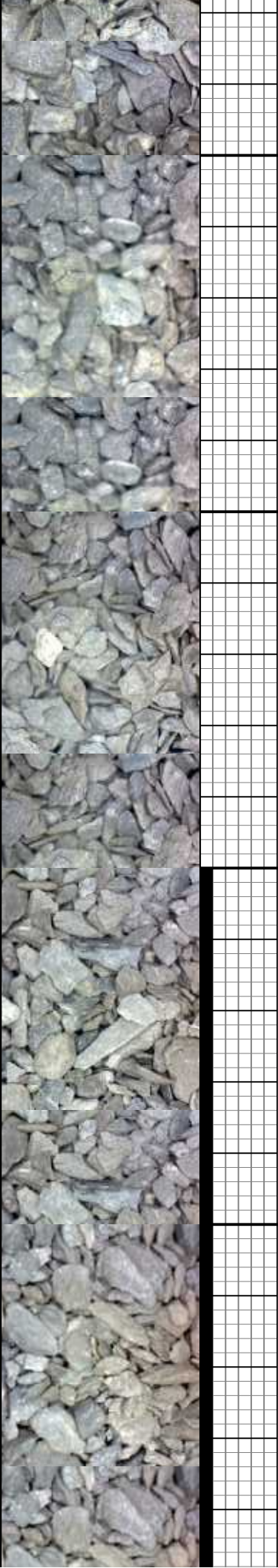
MD: 7.241
TVD: 6.989.39
Inclination: 78.2
Azimuth: 94.21
VS: 411.39

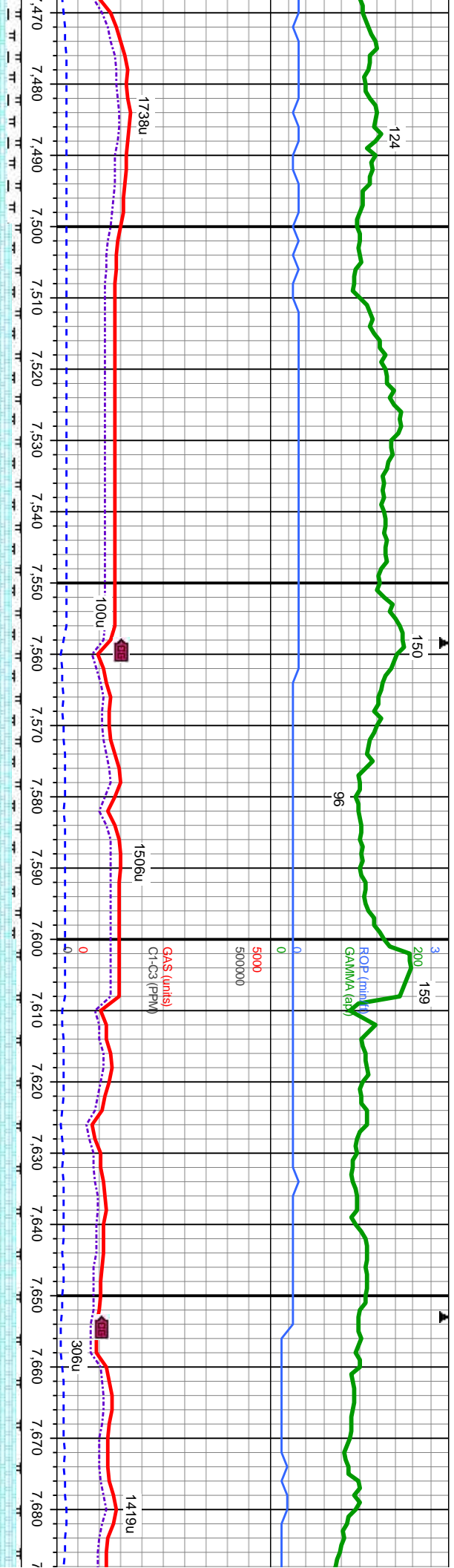
SH: lt - med gry, sft-si frm, sbblky-sbply, grtty tex, v sl calc
7050-7100' MD: SLTY SH: lt - med gry, sft-si frm, sbblky-sbply, grtty tex, v sl calc
SLTST: lt gry, sft-si frm, blky-ply, sm tex, v sl to non-calc, tr bent

7100-7150' MD: MRLST: med-dk gry, sft-frm, sb blky-sb ply, silty tex, v calc, SLTY SH: lt - med gry, sft-si frm, sbblky-sbply, grtty tex, v sl calc, SLTST: lt gry, sft-si frm, blky-ply, sm tex, v sl to non-calc, tr bent

7150-7200' MD: MRLST: med-dk gry, sft-frm, sb blky to sb ply, silty tex, v calc, CHK: lt-med gry-gry brn, sb blky to sb ply, sm-wxy tex, v calc, tr bent, tr pyr, sl tr lt blue flor, mky wht cut

7200-7250' MD: MRLST: med-dk gry, sft-frm, sb blky to sb ply, silty tex, v calc, CHK: lt-med gry-gry brn, sb blky to sb ply, sm-wxy tex, v calc, tr bent, tr pyr, sl tr lt blue flor, mky wht cut





OUT: 9.4
OUT: 39

MD: 7.484.
TVD: 7.009.82
Inclination: 88.64
Azimuth: 93.04
VS: 653.01

MD: 7.579.
TVD: 7.011.87
Inclination: 88.89
Azimuth: 93.01
VS: 747.93

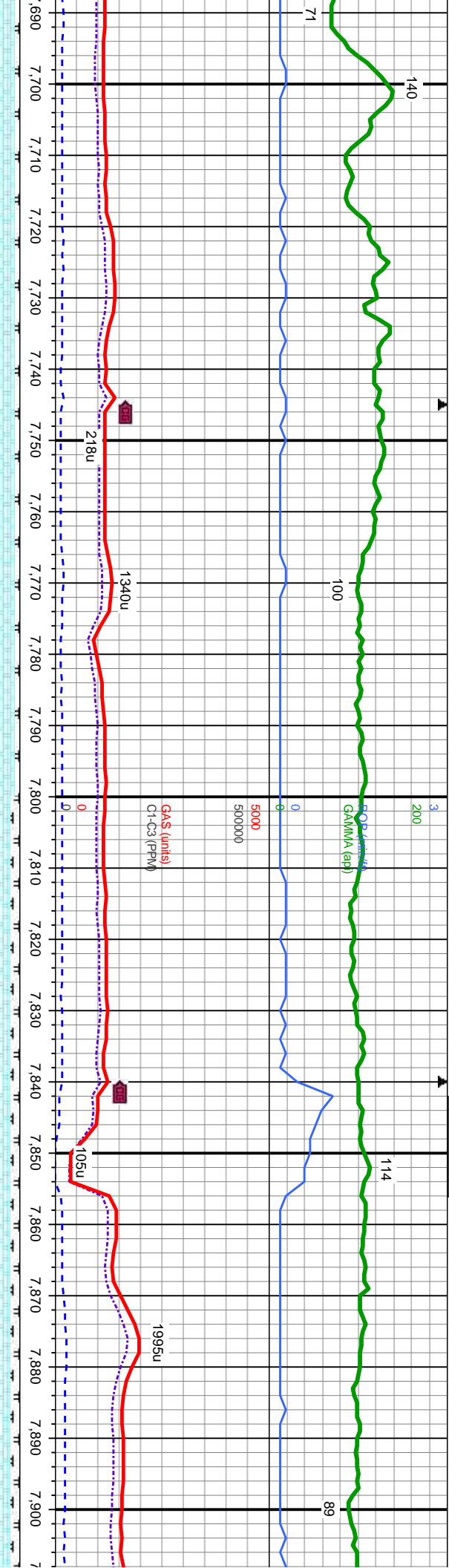
6400
TVD (ft)

MW IN: 9.4+
VIS IN: 46
OUT: 9.5
OUT: 37

MD: 7.673.
TVD: 7.013.66
Inclination: 88.92
Azimuth: 92.82
VS: 841.87

ky to sb ply,	7500'-7600' MD: CHK: lt-med gry-gry brn-mot, sb blk to sb ply, sm-wxy tex, sft-firm, v calc, MRLST: med-dk gry, sft-firm, sb blk to sb ply, silty tex, v calc, tr lt blue flor, mky wht cut	7600'-7700' MD: CHK: lt-med gry-gry brn-mot, sb blk to sb ply, sm-wxy tex, sft-firm, v calc, MRLST: med-dk gry, sft-firm, sb blk to sb ply, silty tex, v calc, tr lt blue flor, mky wht cut
-frm, sb		
ht cut		





MD: 7,768.
TVD: 7,015.66.
Inclination: 88.67 -
Azimuth: 92.65 -
VS: 936.81 -

6400
MW IN: 9.4+ OUT: 9.5
VIS IN: 41 OUT: 36
TVD (ft)

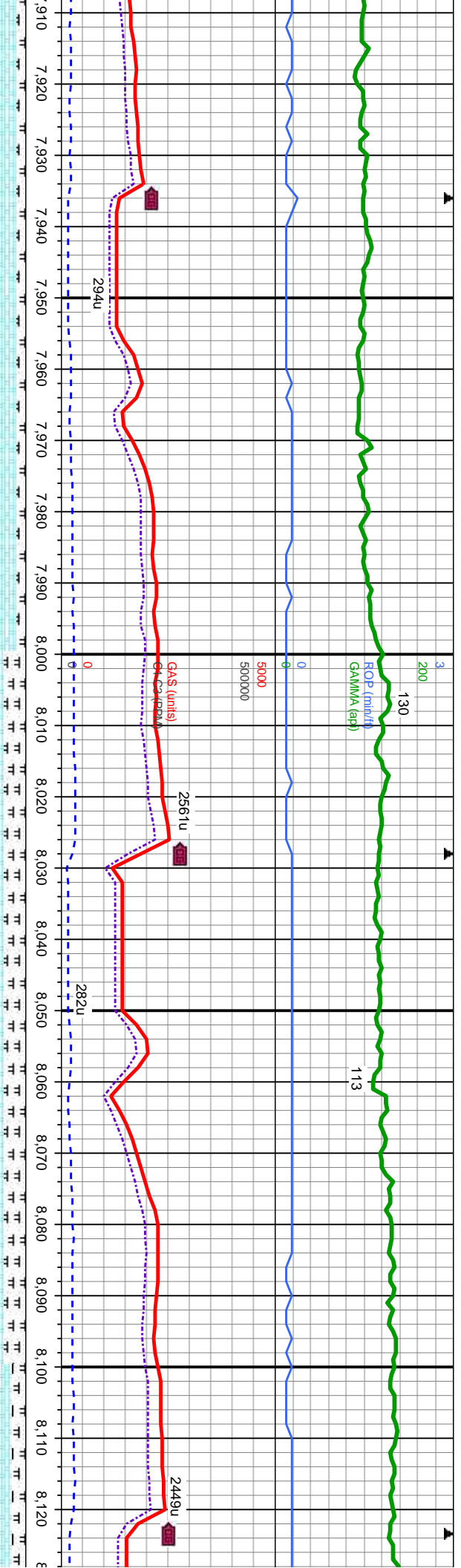
MD: 7,862.
TVD: 7,016.75.
Inclination: 90 -
Azimuth: 92.11 -
VS: 1,030.78 -

7700'-7800' MD: CHK: lt-med gry-gry brn-mot, sb blkly to sb plty,
sm-wxy tex, sft-firm, v calc, MRLST: med-dk gry, sft-firm, sb
blkly to sb plty, silty tex, v calc, tr lt blue flor, mky wht cut

7800'-7900' MD: CHK: lt-med gry-gry brn-mot, sb blkly to sb plty,
sm-wxy tex, sft-firm, v calc, MRLST: med-dk gry, sft-firm, sb
blkly to sb plty, silty tex, v calc, tr lt blue flor, mky wht cut

7400





MD: 7.956
TVD: 7,016.79
Inclination: 89.96
Azimuth: 92.02
VS: 1,124.76

MW IN: 9.4+ OUT: 9.5
VIS IN: 52 OUT: 36

6400
TVD (ft)

MD: 8.050
TVD: 7,016.7
Inclination: 90.15
Azimuth: 91.54
VS: 1,218.76

MW
VIS

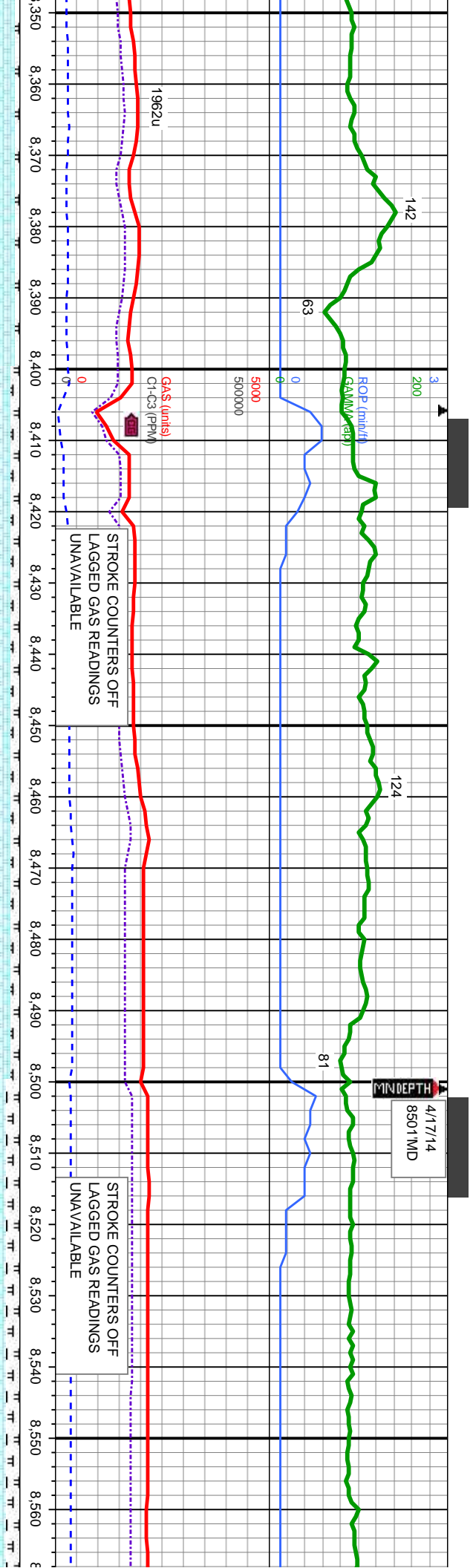
7900'-8000' MD: CHK: lt-med gry-gry brn-mot, sb blkly to sb plty,
sm-wxy tex, sft-firm, v calc, MRLST: med-dk gry, sft-firm, sb
blkly to sb plty, silty tex, v calc, tr lt blue flor, mky wnt cut

7400

8000'-8100' MD: CHK: lt-med gry-gry brn-mot, sb blkly to sb plty,
sm-wxy tex, sft-firm, v calc, MRLST: med-dk gry, sft-firm, sb
blkly to sb plty, silty tex, v calc, tr lt blue flor, mky wnt cut

8100'-8200' MD: CHK: lt-med gry-gry brn-mot, sb blkly to sb plty,
sm-wxy tex, sft-firm, v calc, MRLST: med-dk gry, sft-firm, sb
blkly to sb plty, silty tex, v calc, tr lt blue flor, mky wnt cut





MW IN: 9.5 OUT: 9.4+
VIS IN: 44 OUT: 41

6400

TVD (ft)

MD: 8,428.
TVD: 7,012.16.
Inclination: 90.83 -
Azimuth: 91.11 -
VS: 1,596.72.

MW IN: 9.5 OUT: 9.5
VIS IN: 42 OUT: 42

MD: 8,522.
TVD: 7,010.98.
Inclination: 90.61 -
Azimuth: 91.63 -
VS: 1,690.71.

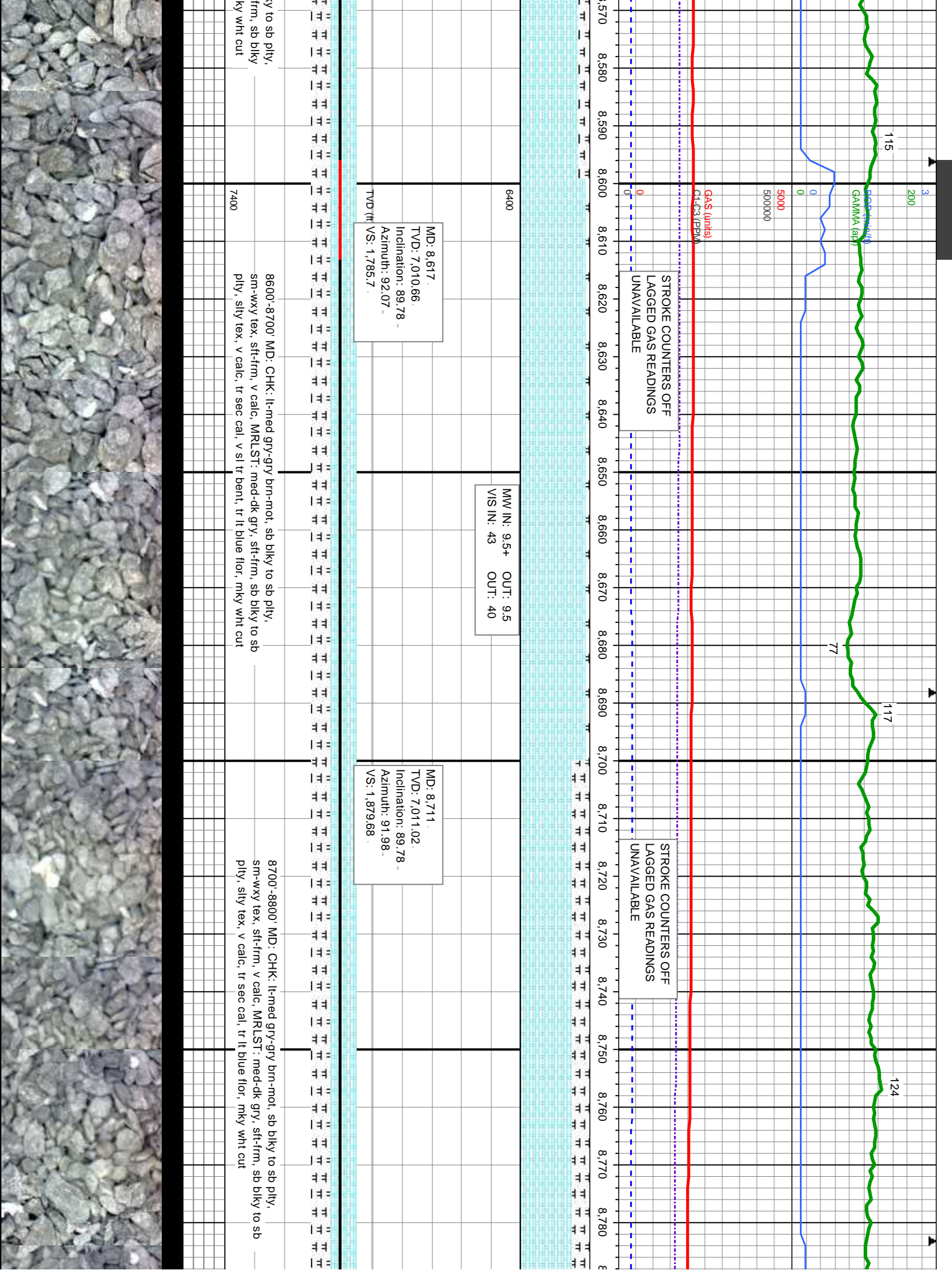
gry-gry brn-mot, sb blkly to sb ply,
RST: med-dk gry, sft-firm, sb
tr lt blue flor, mky wht cut

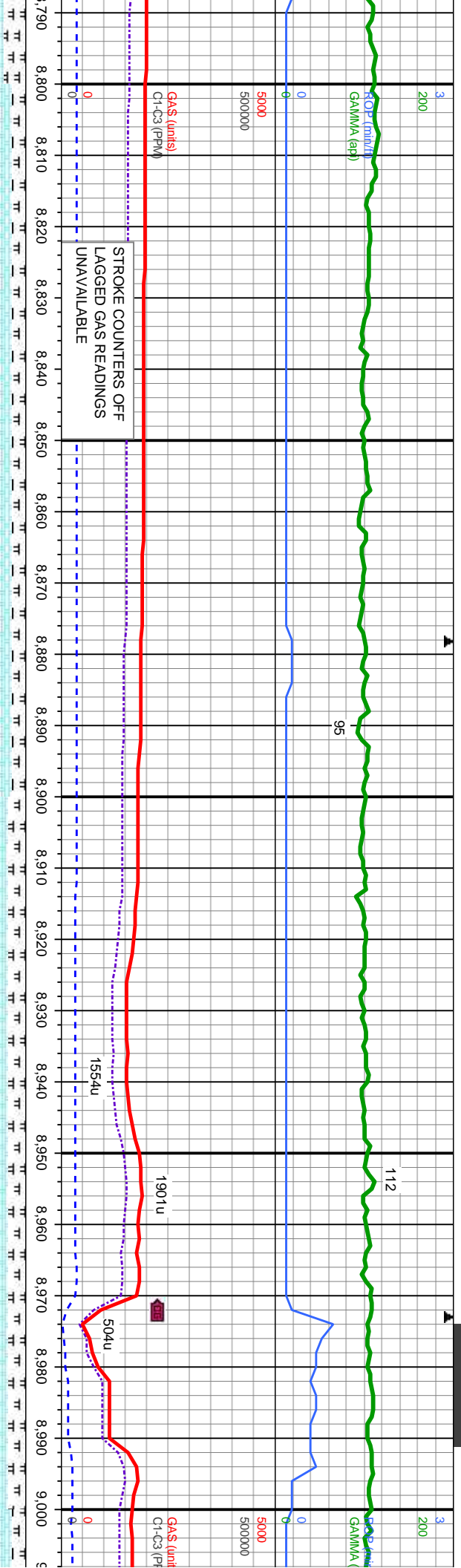
7400

8400-8500' MD: CHK: lt-med gry-gry brn-mot, sb blkly to sb ply,
sm-wxy tex, sft-firm, v calc, MRLST: med-dk gry, sft-firm, sb blkly
to sb ply, silty tex, v calc, tr lt blue flor, mky wht cut

8500-8600' MD: CHK: lt-med gry-gry brn-mot, sb blkly
sm-wxy tex, sft-firm, v calc, MRLST: med-dk gry, sft-
to sb ply, silty tex, v calc, tr lt blue flor, mky wht cut







MD: 8,806.
TVD: 7,011.48.
Inclination: 89.66 -
Azimuth: 91.75 -
VS: 1.974.67 .

MW IN: 9.5 OUT: 9.5
VIS IN: 43 OUT: 41

MD: 8,900.
TVD: 7,011.21.
Inclination: 90.67 -
Azimuth: 91.5 -
VS: 2.068.67 .

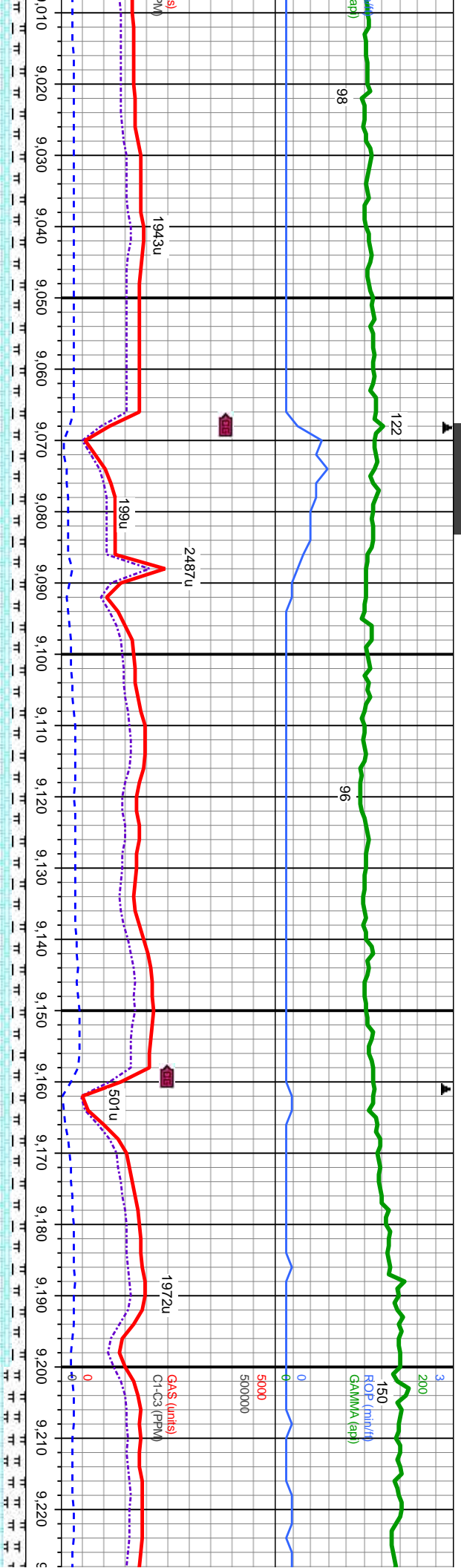
MW IN: 9.5 OUT: 9.4+
VIS IN: 43 OUT: 43

MD: 8,994.
TVD: 7,010.56.
Inclination: 90.12 -
Azimuth: 91.71 -
VS: 2.162.66 .

8800'-8900' MD: CHK: lt-med gry-gry brn-mot, sbbky-sbply, sm-wxy
tex, m stf-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbky-sbply,
sily tex, v calc, tr lt blue flr w/ slw mlky wht halo cut

8900'-9000' MD: CHK: lt-med gry-gry brn-mot, sbbky-sbply, sm-wxy
tex, m stf-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbky-sbply,
sily tex, v calc, tr lt blue flr w/ slw mlky wht halo cut





MD: 9.089
TVD: 7,010.65
Inclination: 89.78
Azimuth: 92.04
VS: 2,257.65

MD: 9.183
TVD: 7,010.78
Inclination: 90.06
Azimuth: 92.09
VS: 2,351.64

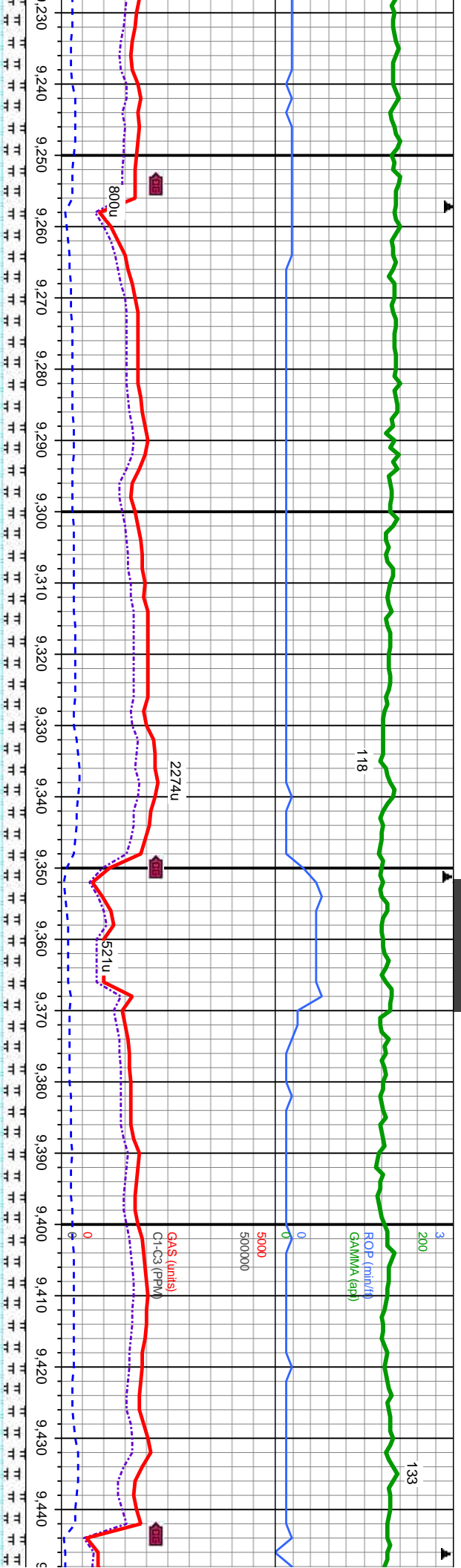
TVD (ft)

9000'-9100' MD: CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sbply, slty tex, v calc, tr sec cal, tr lt blue flr w/ slw mlky wht halo cut

9100'-9200' MD: CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sbply, slty tex, v calc, tr sec cal, tr lt blue flr w/ slw mlky wht halo cut

9200'-9300' m sft-sl frm tex, m-v cal





MW IN: 9.5 OUT: 9.4+
VIS IN: 44 OUT: 46

MD: 9,278.
TVD: 7,010.43.
Inclination: 90.36
Azimuth: 92.04
VS: 2,446.62

MD: 9,372.
TVD: 7,010.8
Inclination: 89.19
Azimuth: 92.3
VS: 2,540.61

6400 MW IN: 9.5 OUT: 9.5
VIS IN: 51 OUT: 49

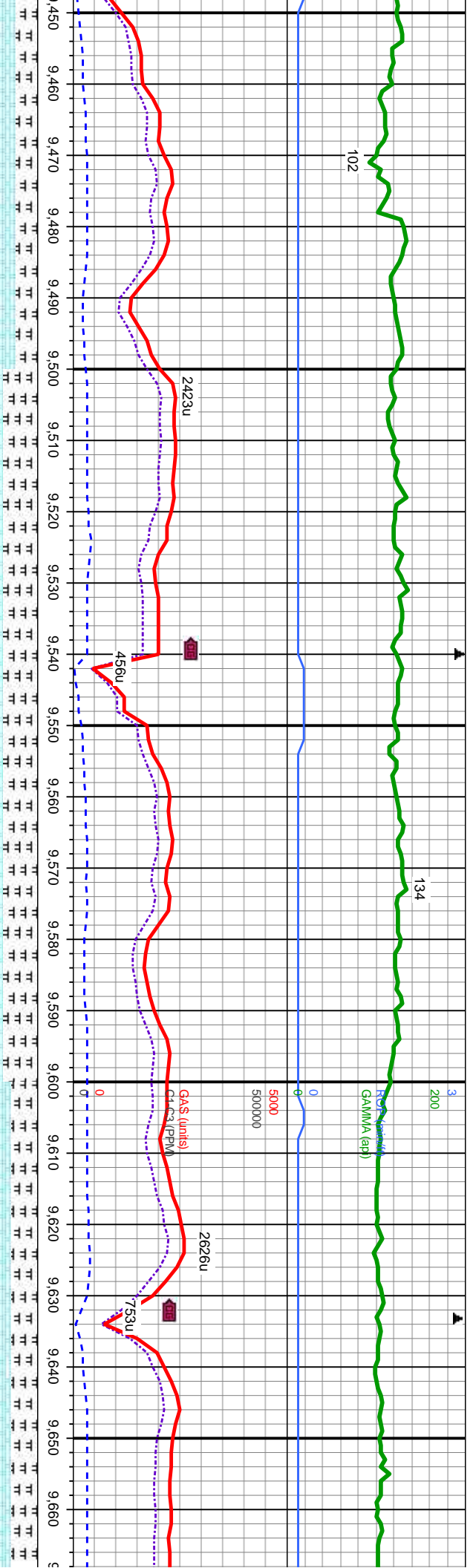
TVD (ft)

MD: CHK: lt-m gy-gybrn-mot, sbbkly-sbply, sm-wxy tex, v calc, MRLST: med-dk gry, m-v frm, sbbkly-sbply, silty c, tr sec cal, tr lt blue flwr w/ slw mlky wht halo cut

9300'-9400' MD: CHK: lt-m gy-gybrn-mot, sbbkly-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbkly-sbply, silty tex, m-v calc, tr sec cal, tr lt blue flwr w/ slw mlky wht halo cut

9400'-9500' MD: CHK: lt-m gy-gybrn-mot, sbbkly-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbkly-sbply, silty tex, m-v calc, tr sec cal, tr lt blue flwr w/ slw mlky wht halo cut





MD: 9,466
TVD: 7,011.92
Inclination: 89.44
Azimuth: 92.48
VS: 2.634.57

MD: 9,559
TVD: 7,012.68
Inclination: 89.63
Azimuth: 92.24
VS: 2.727.55

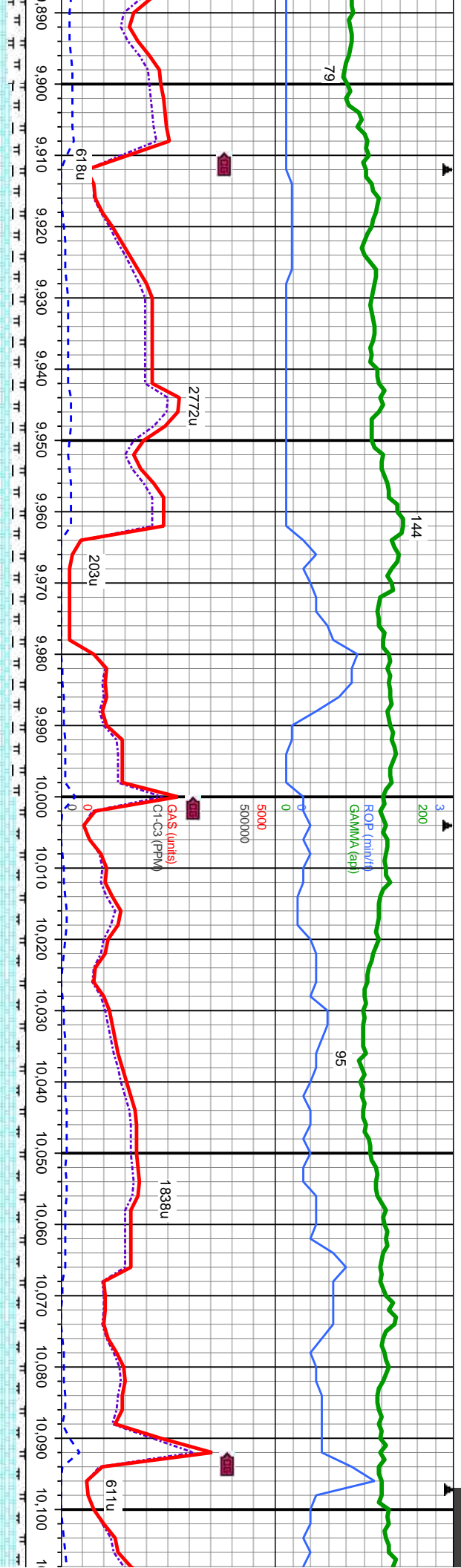
MW IN: 9.5 OUT: 9.5
VIS IN: 46 OUT: 44

6400
TVD (ft)

9500'-9600' MD: CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sbply, slty tex, m-v calc, tr sec cal, tr lt blue flr w/ slw mlky wnt halo cut

9600'-9700' MD: CHK: lt-m gy-gybrn-mot, sbblky-sbply, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sbply, slty tex, m-v calc, tr sec cal, tr lt blue flr w/ slw mlky wnt h





MD: 9,931.
TVD: 7,012.4.
Inclination: 90.36 -
Azimuth: 91.8 -
VS: 3.099.49 -

MW IN: 9.6 OUT: 9.6
VIS IN: 45 OUT: 45

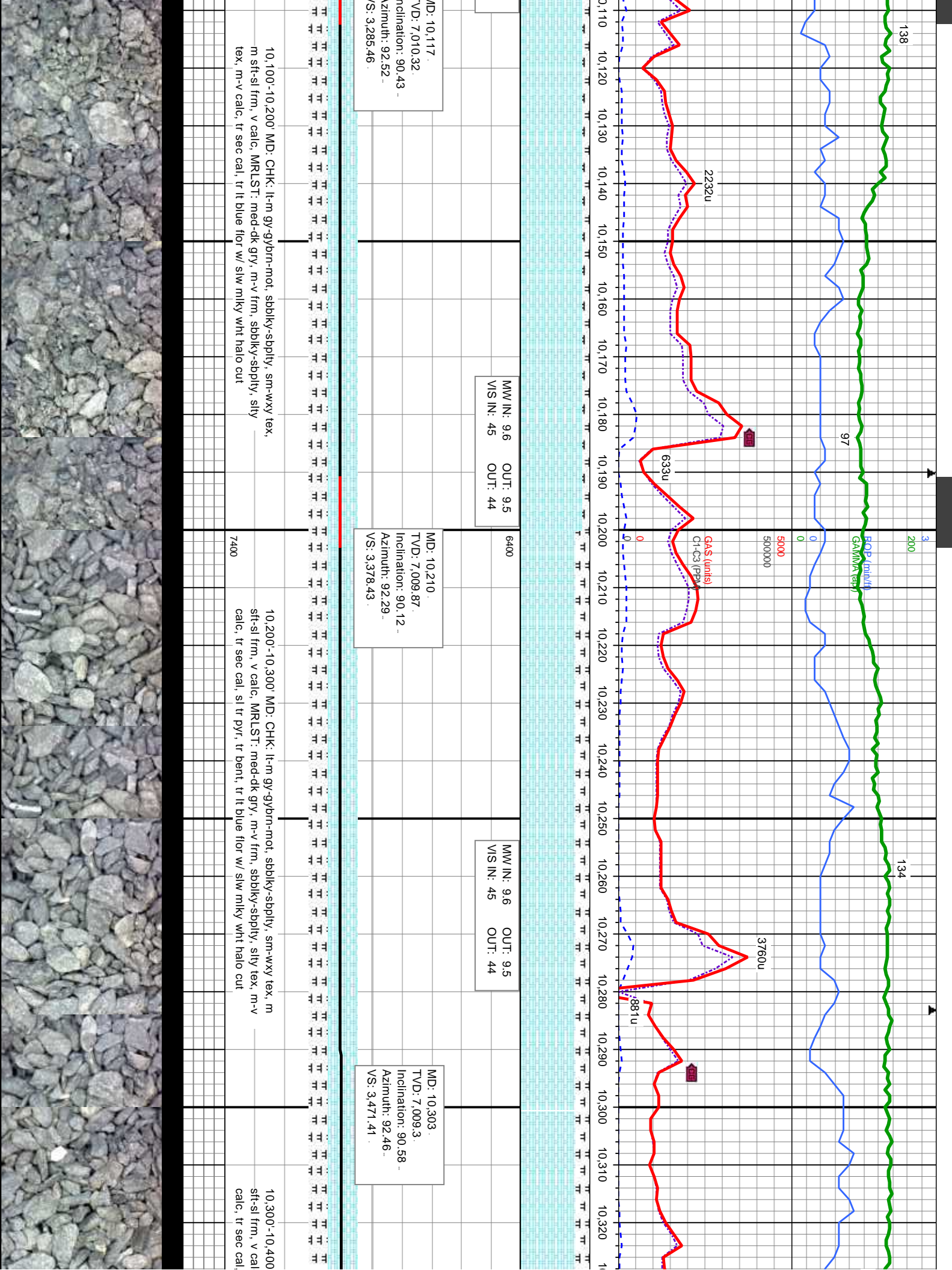
MD: 10,023.
TVD: 7,011.4.
Inclination: 90.89 -
Azimuth: 91.77 -
VS: 3.191.48 -

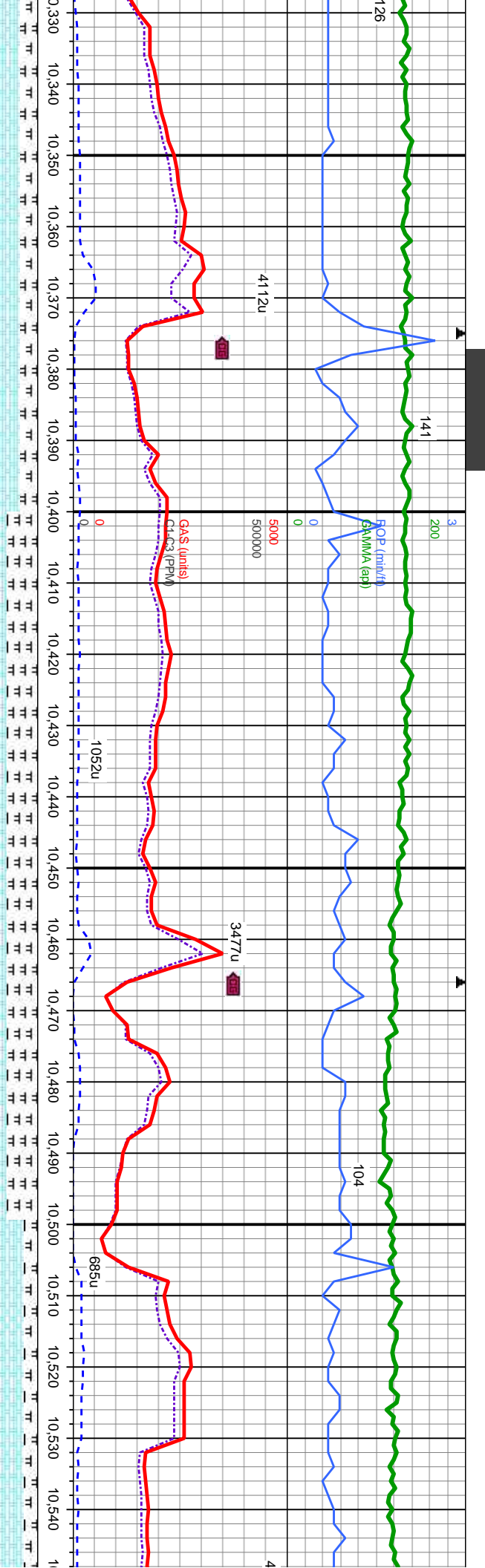
MW IN: 9.6 OUT: 9.6
VIS IN: 45 OUT: 45

9,900'-10,000' MD: CHK: lt-m gy-gy/brn-mot, sbbiky-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbiky-sbply, slty tex, m-v calc, tr sec cal, tr lt blue flr w/ slw mlky wht halo cut

10,000'-10,100' MD: CHK: lt-m gy-gy/brn-mot, sbbiky-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbiky-sbply, slty tex, m-v calc, tr sec cal, tr lt blue flr w/ slw mlky wht halo cut







MD: 10,396.
TVD: 7,008.96.
Inclination: 89.84
Azimuth: 91.84
VS: 3,564.39

MW IN: 9.5+ OUT: 9.5
VIS IN: 43 OUT: 46

MD: 10,490.
TVD: 7,008.71.
Inclination: 90.46
Azimuth: 91.32
VS: 3,658.38

MW IN: 9.6 OUT: 9.5+
VIS IN: 44 OUT: 43

MD: CHK: lt-m gy-gybrn-mot, sbbkly-sbply, sm-wxy tex, m
c, MRLST: med-dk gry, m-v frm, sbbkly-sbply, silty tex, m-v
sl tr pyr, tr bent, tr lt blue flwr w/ slw mlky wht halo cut

10,400'-10,500' MD: CHK: lt-m gy-gybrn-mot, sbbkly-sbply, sm-wxy tex, m
sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbkly-sbply, silty tex, m-v
calc, sec cal, sl tr pyr, sl tr bent, tr lt blue flwr w/ slw mlky wht halo cut

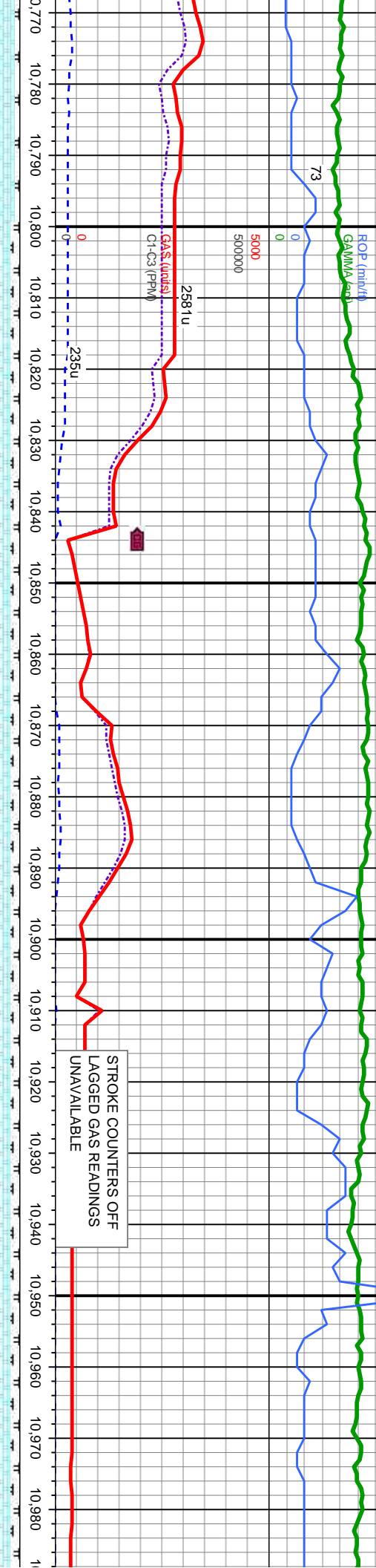
10,500'-10,600' MD: CHK: lt-m gy-gyb
sft-sl frm, v calc, MRLST: med-dk gry,
calc, abnt sec cal, sl tr pyr, sl tr bent,



04/18/14
10.857' MD

MINDEPTH

113



MW IN: 9.5+ OUT: 9.5+
VIS IN: 47 OUT: 45

MD: 10.863
TVD: 7,008.87
Inclination: 90.55
Azimuth: 93.98
VS: 4,031.28

MW IN: 9.5 OUT: 9.5+
VIS IN: 47 OUT: 49

MD: 10.957
TVD: 7,007.69
Inclination: 90.89
Azimuth: 95.2
VS: 4,125.09

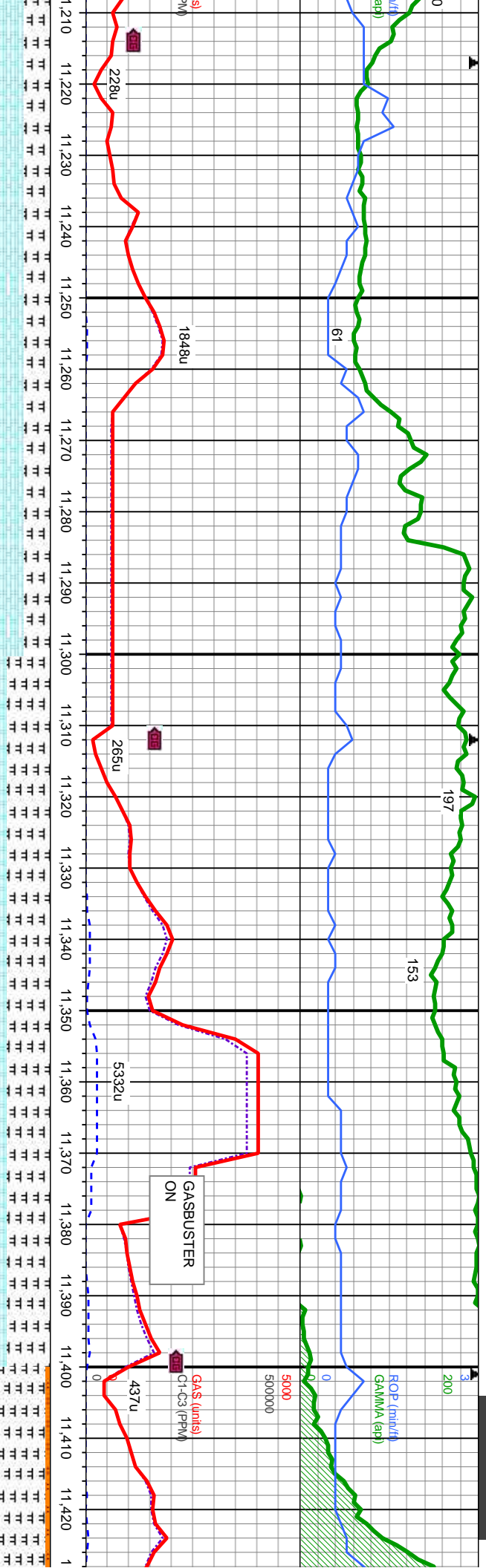
MD: 10.863
TVD: 7,008.87
Inclination: 90.55
Azimuth: 93.98
VS: 4,031.28

TVD (ft)

10,800'-10,900' MD: CHK: lt-m gy-gy/brn-mot, sbblky-sbply, sm-wxy tex, m
stf-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sbply, sily tex, m-v
calc, tr sec cal, sl tr bent, tr lt blue flor w/ slw mlky wht halo cut

10,900'-11,000' MD: CHK: lt-m gy-gy/brn-mot, sbblky-sbply, sm-wxy tex, m
stf-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sbply, sily tex, m-v
calc, tr sec cal, sl tr bent, tr lt blue flor w/ slw mlky wht halo cut





W IN: 9.6+ OUT: 9.5+
S IN: 49 OUT: 47

MD: 11,237
TVD: 7,000.92
Inclination: 90
Azimuth: 96.26
VS: 4,404.03

11,200'-11,300' MD: CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m
sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sbply, sl-m slty,
m-v calc, tr sec cal, sl tr bent, tr lt blue flr w/ slw mlky wht halo cut

MD: 11,330
TVD: 7,000.45
Inclination: 90.58
Azimuth: 96.25
VS: 4,496.65

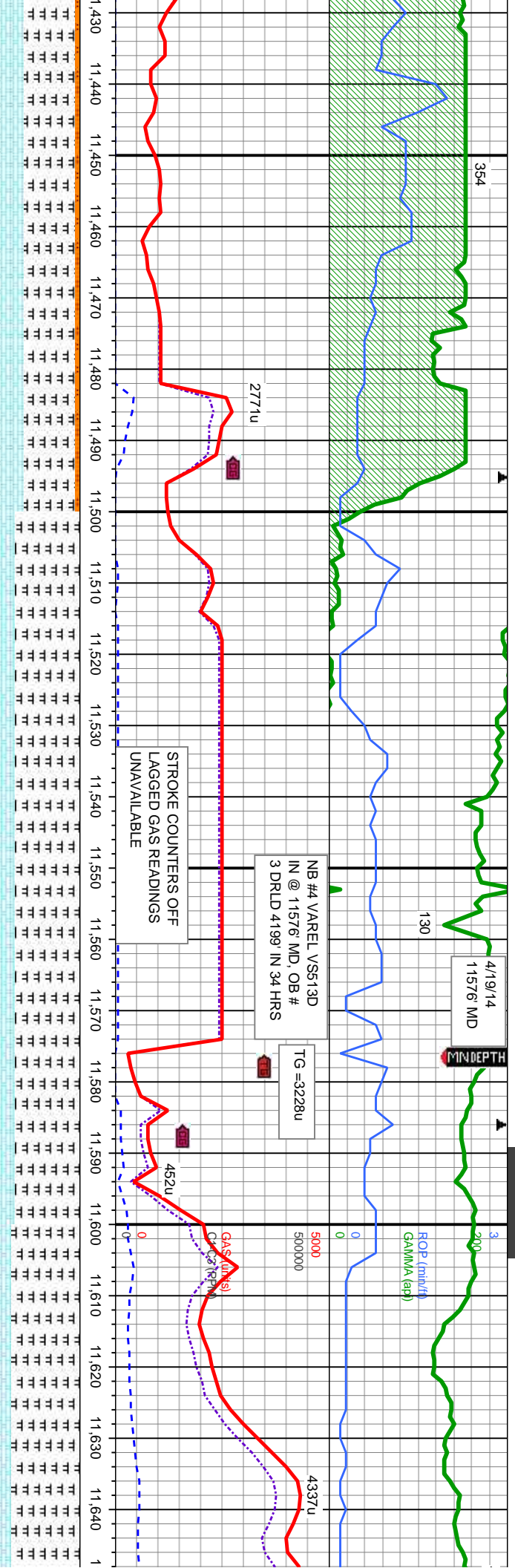
11,300'-11,400' MD: CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m
sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sbply, m-v slty, sl arg
ip, m calc, tr sec cal, sl tr bent, tr lt blue flr w/ slw mlky wht halo cut

MW IN: 9.5 OUT: 9.5
VIS IN: 50 OUT: 49

MD: 11,423
TVD: 7,000.03
Inclination: 89.5
Azimuth: 95.37
VS: 4,589.34

11,400'-11,500' f
arg ip, m calc, tr
sm-wxy tex, m s
sdy, v sl calc, tr





MW IN: 9.6 OUT: 9.6
VIS IN: 47 OUT: 48

MW IN: 9.6 OUT: 9.5
VIS IN: 49 OUT: 51

MD: 11,503
TVD: 6,999.82
Inclination: 90.37
Azimuth: 95.54
VS: 4,669.1

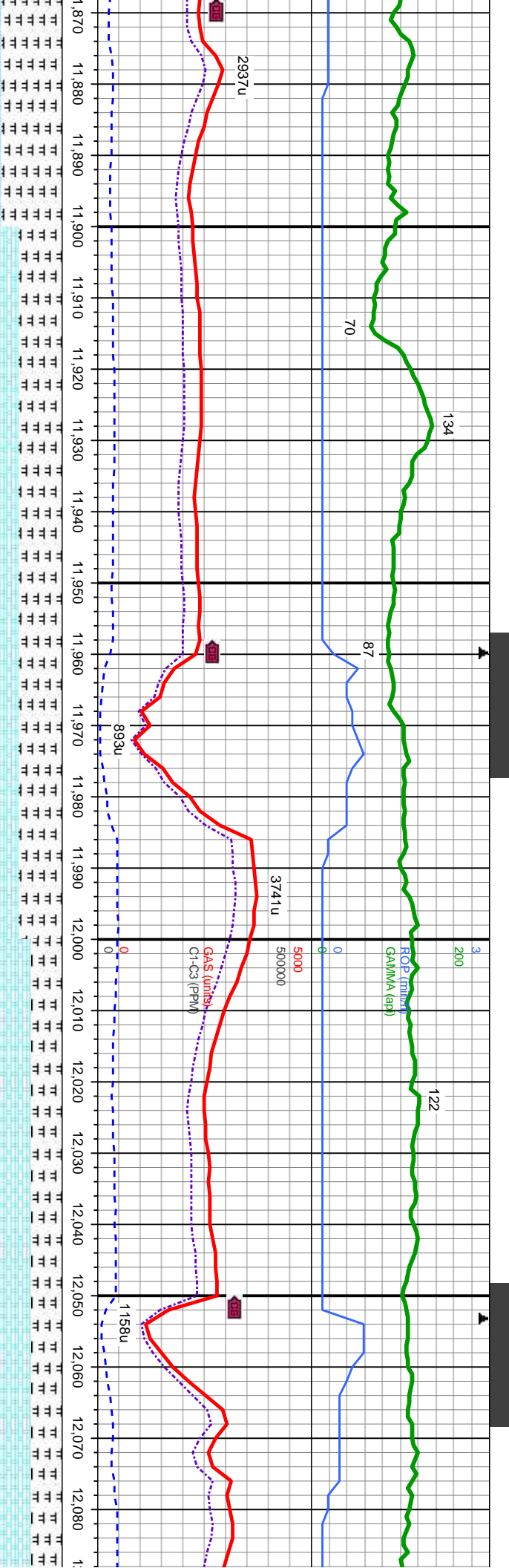
MD: 11,607
TVD: 7,000.17
Inclination: 89.25
Azimuth: 95.14
VS: 4,772.81

MD: MRLST: med-dk gry, m-v frm, sbbly-sbply, m-v silty, sl
sec cal, sl tr bent, CHK: lt-m gy-gybrn-mot, sbbly-sbply,
lt-sl frm, v calc, SLTST: lt gy-lt gybrn, blkly-sbply, m-v frm, sl
pyr, sl tr lt blue flwr w/ slw mlky wht halo cut

11,500'-11,600' MD: MRLST: med-dk gry, m-v frm, sbbly-sbply, m-v silty, sl arg
ip, m calc, tr sec cal, sl tr bent, CHK: lt-m gy-gybrn-mot, sbbly-sbply, sm-wxy
tex, m sft-sl frm, v calc, tr pyr, sl tr lt blue flwr w/ slw mlky wht halo cut

11,600'-11,700' MD: MRLST: med-dk g
ip, m calc, tr sec cal, sl tr bent, CHK: lt
tex, m sft-sl frm, v calc, tr pyr, sl tr lt b





MD: 11,883.
TVD: 7,001.89.
Inclination: 89.87.
Azimuth: 93.08.
VS: 5,048.52.

MW IN: 9.5 OUT: 9.5
VIS IN: 45 OUT: 44

MD: 11,974.
TVD: 7,002.16.
Inclination: 89.78.
Azimuth: 92.44.
VS: 5,139.48.

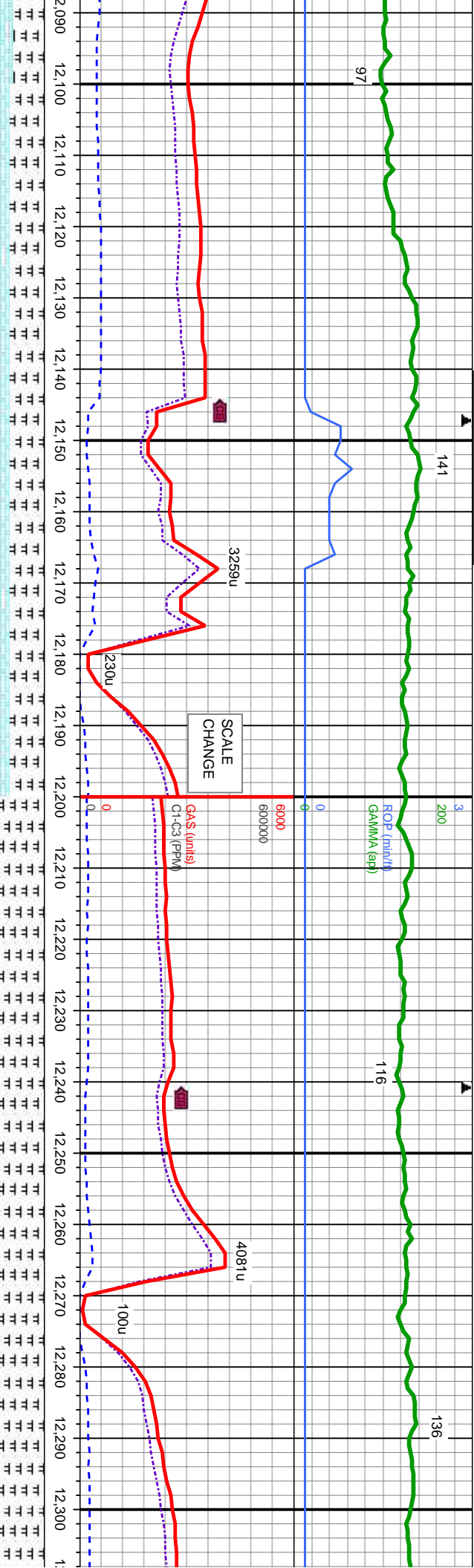
MW IN: 9.6 OUT: 9.6
VIS IN: 43 OUT: 43

MD: 12,066.
TVD: 7,002.34.
Inclination: 90.
Azimuth: 91.01.
VS: 5,231.47.

11,900'-12,000' MD: MRLST: med-dk gry, m-v frm, sbblky-sbply, m silty, sl arg ip, m-v calc, tr sec cal, sl tr bent, CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, tr pyr, tr lt blue flwr w/ slw mlky wht halo cut

12,000'-12,100' MD: CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, tr pyr, MRLST: med-dk gry, m-v frm, sbblky-sbply, m silty, sl arg ip, m-v calc, tr sec cal, sl tr bent, tr lt blue flwr w/ slw mlky wht halo cut





MD: 12,158.
TVD: 7,002.29.
Inclination: 90.06 -
Azimuth: 89.28.
VS: 5,323.45.

6400
TVD (ft)

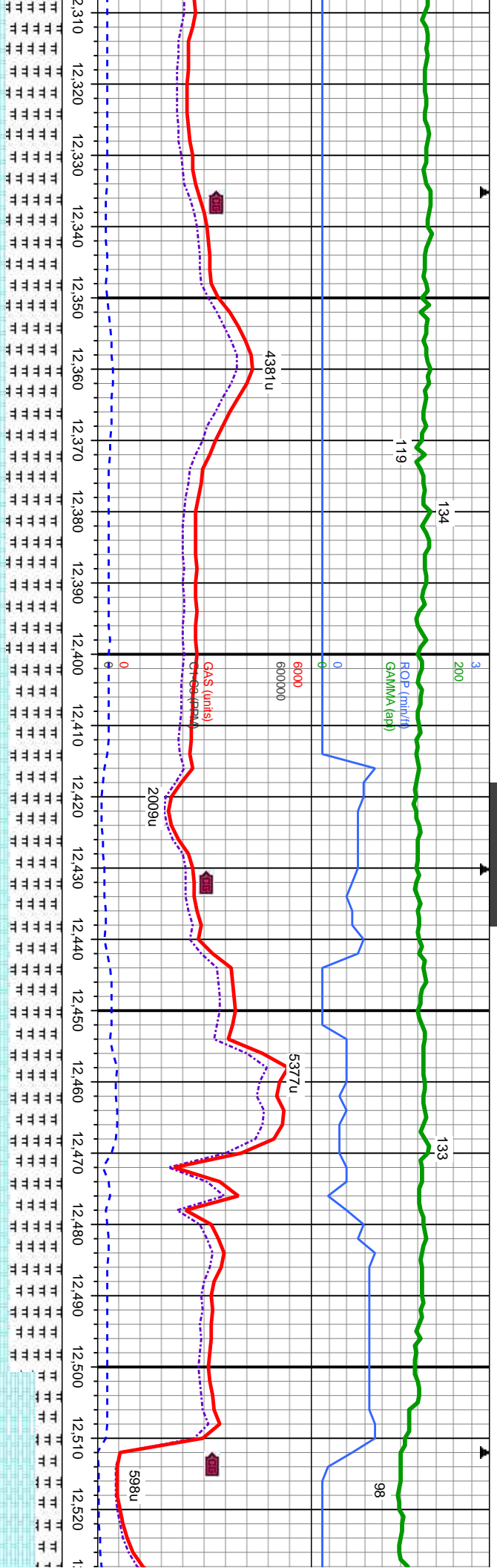
MW IN: 9.6 OUT: 9.6
VIS IN: 43 OUT: 43

12,100'-12,200' MD: CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m
sft-sl frm, v calc, tr pyr, MRLST: med-dk gry, m-v frm, sbbiky-sbply, m silty, sl
arg ip, m-v calc, tr sec cal, sl tr bent, tr lt blue flr w/ slw mlky wht halo cut

12,200'-12,300' MD: MRLST: med-dk gry, m-v frm, sbbiky-sbply, m silty, sl arg
ip, m-v calc, tr sec cal, sl tr bent, CHK: lt-m gy-gybrn-mot, sbbiky-sbply,
sm-wxy tex, m sft-sl frm, v calc, tr pyr, tr lt blue flr w/ slw mlky wht halo cut

7400





MW IN: 9.6 OUT: 9.6
VIS IN: 43 OUT: 43

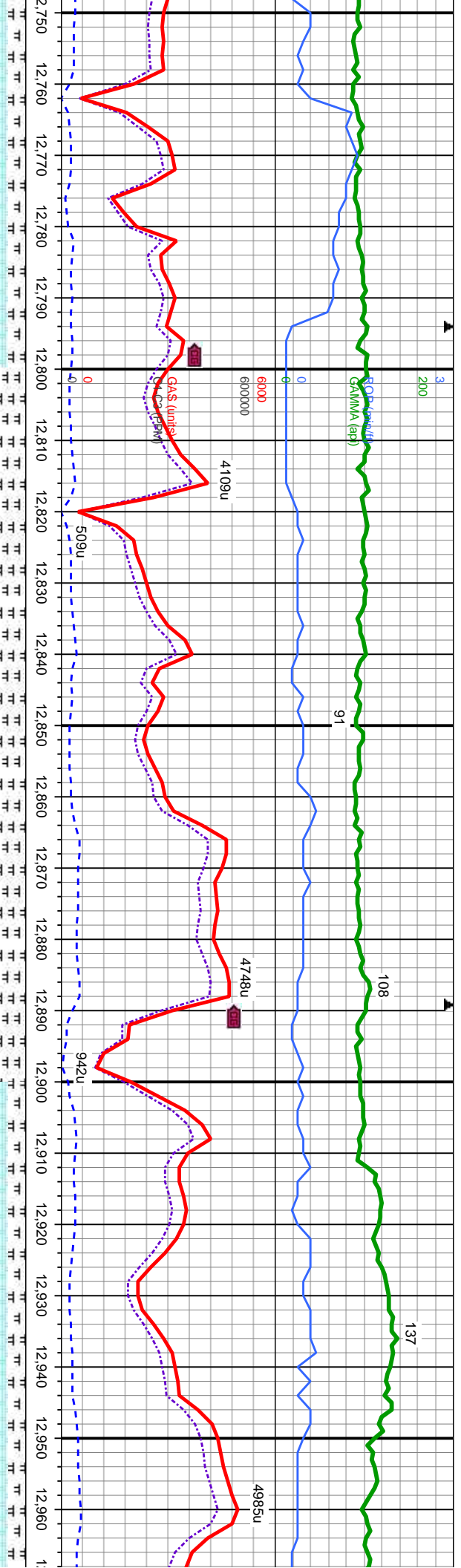
MD: 12,344
TVD: 7,000.85
Inclination: 90.83
Azimuth: 89.95
VS: 5,509.38

6400
TVD (ft)

MD: 12,439
TVD: 7,000.24
Inclination: 89.9
Azimuth: 89.44
VS: 5,604.35

12,300'-12,400' MD: MRLST: med-dk gry, m-v frm, sbblky-sbply, m silv, sl arg ip, m-v calc, tr sec cal, sl tr bent, CHK: lt-m gy-gy/bm-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, tr pyr, tr lt blue flwr w/ silw mlky wht halo cut	7400	12,400'-12,500' MD: MRLST: med-dk gry, m-v frm, sbblky-sbply, m silv, sl arg ip, m-v calc, tr sec cal, sl tr bent, CHK: lt-m gy-gy/bm-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, tr pyr, tr lt blue flwr w/ silw mlky wht halo cut		12,500'-12,600' sft-sl frm, v calc ip, m-v calc, tr s
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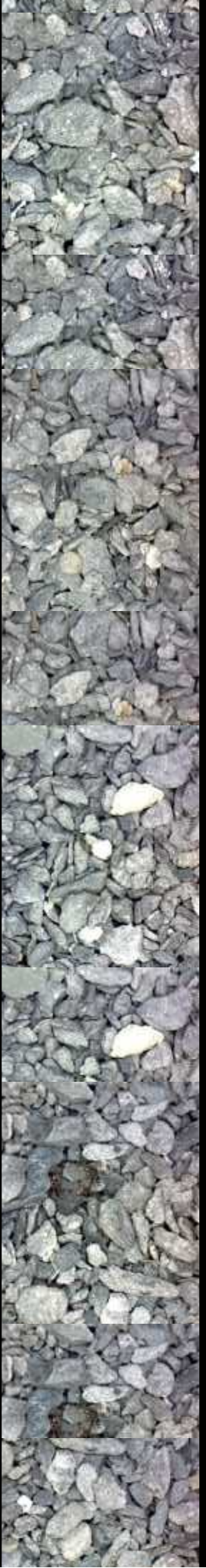


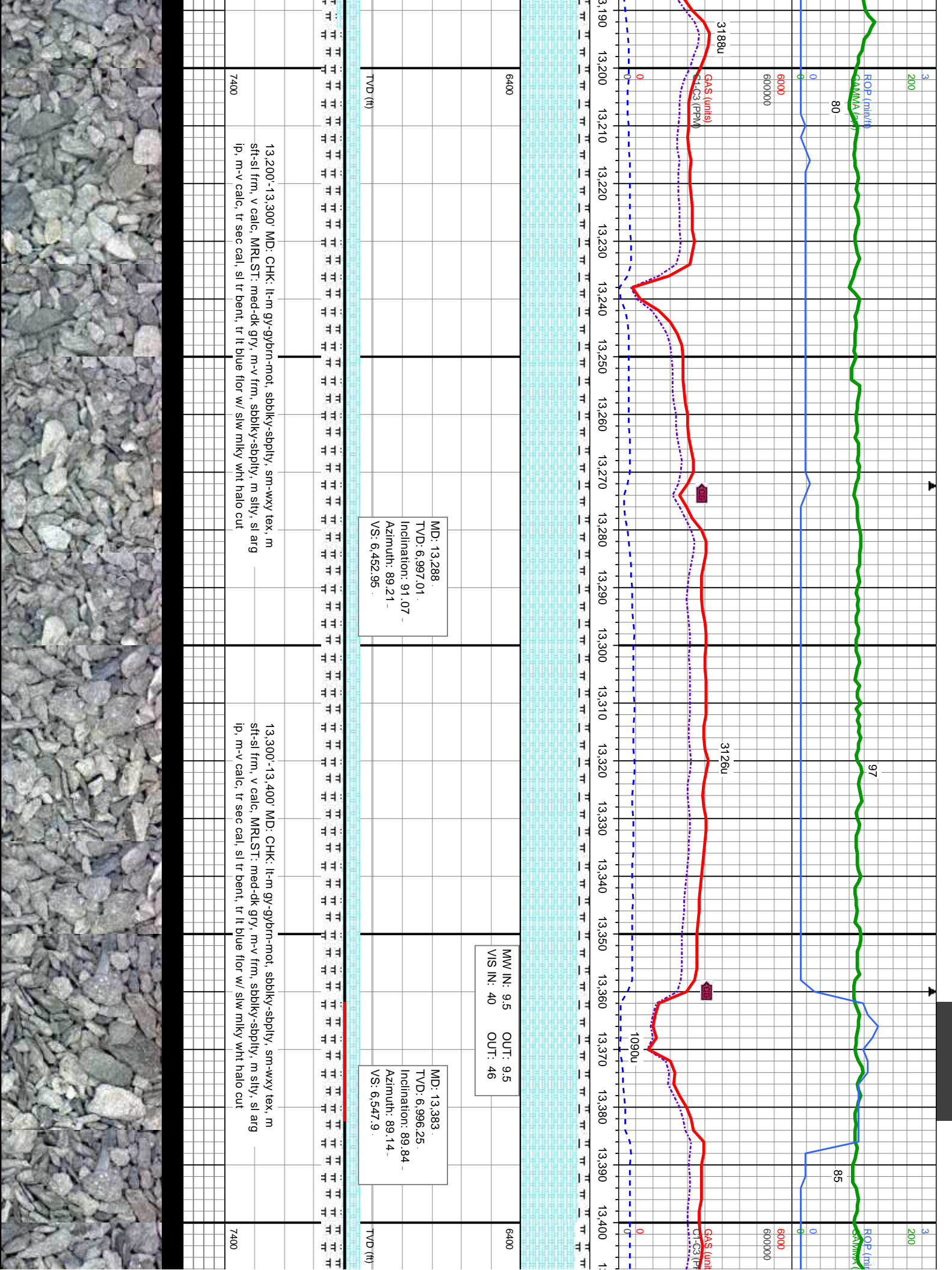
IN: 9.5 OUT: 9.5	OUT: 9.5	MMW IN: 9.5 VIS IN: 42
IN: 41 OUT: 50	6400	

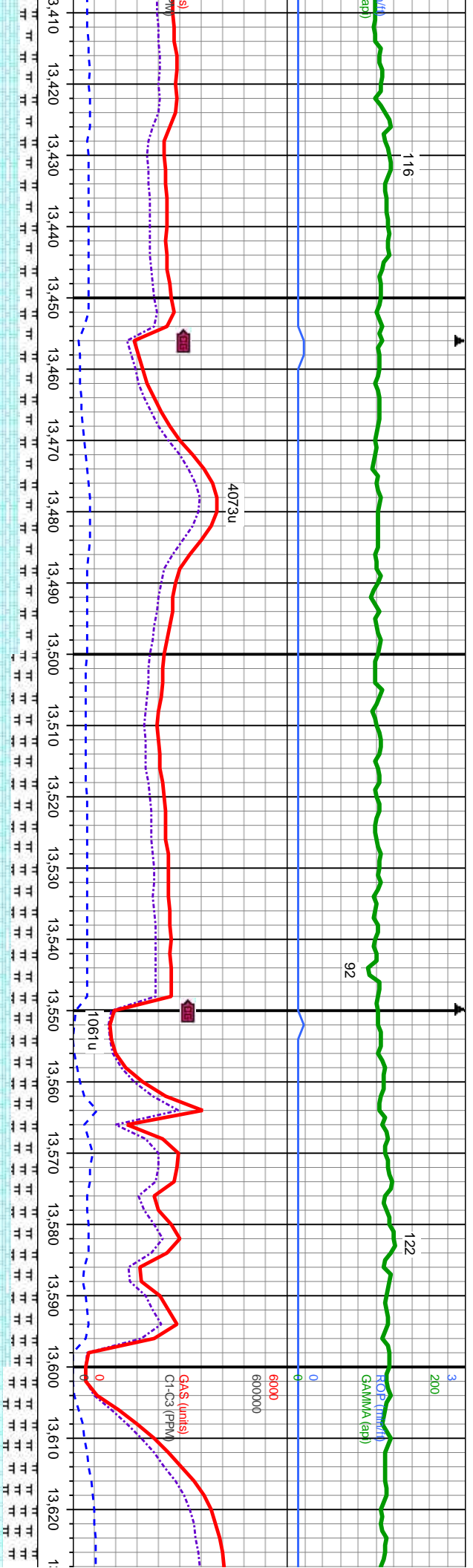
MD: 12,816.
TVD: 7,000.18.
Inclination: 90.46
Azimuth: 89.77
VS: 5.981.22

MD: 12,911.
TVD: 6,998.6.
Inclination: 91.44
Azimuth: 90.06
VS: 6.076.19

brn-mot, sbbiky-sbply, sm-wxy tex, m	12,800'-12,900' MD: CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m	12,900'-13,000' MD: CHK: lt-m gy-gybrn-mot, sbbiky-sbply
/, m-v frm, sbbiky-sbply, m silty, sl arg	sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbiky-sbply, m silty, sl arg	sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbiky-sbply
blue flr w/ slw mlky wht halo cut	ip, m-v calc, tr sec cal, sl tr bent, tr lt blue flr w/ slw mlky wht halo cut	ip, m-v calc, tr sec cal, sl tr bent, tr lt blue flr w/ slw mlky
7400		





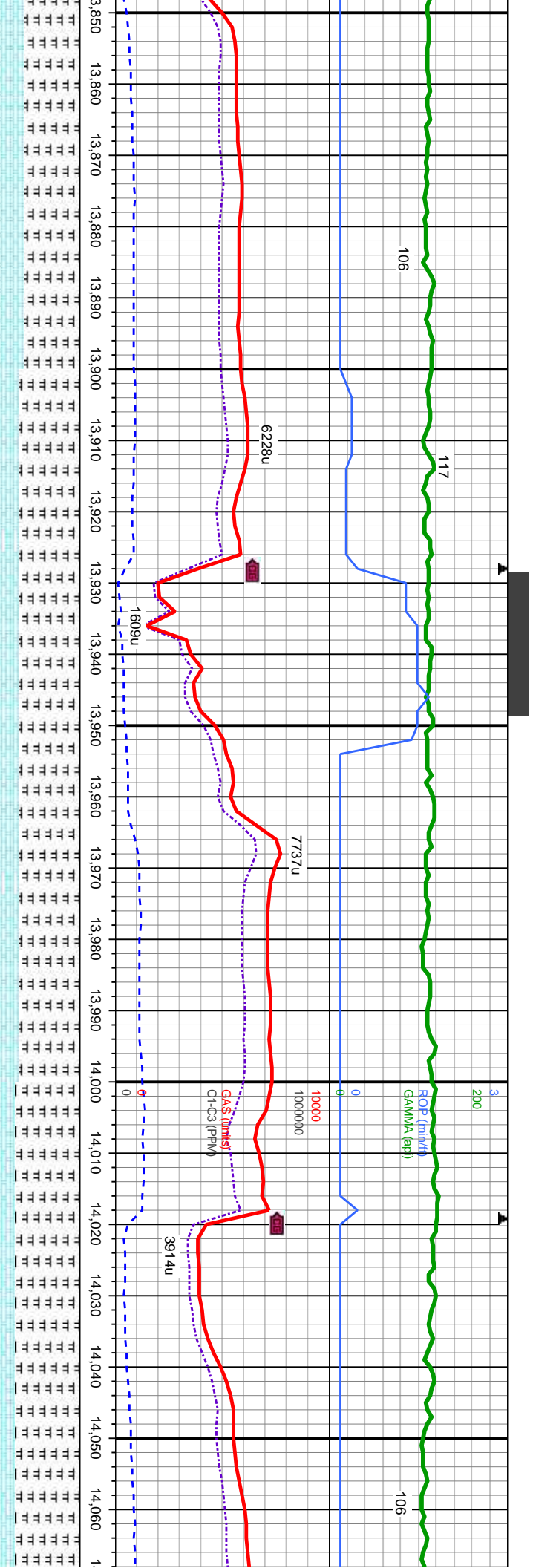


MD: 13,477
TVD: 6,996.51
Inclination: 89.84
Azimuth: 89.14
VS: 6,641.84

MW IN: 9.4+ OUT: 9.5
VIS IN: 42 OUT: 46

13,400'-13,500' MD: CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sbply, m silty, sl arg ip, m-v calc, tr sec cal, sl tr bent, tr lt blue flwr w/ slw milky wht halo cut	13,500'-13,600' MD: CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sbply, m silty, sl arg ip, m-v calc, tr sec cal, sl tr bent, tr lt blue flwr w/ slw milky wht halo cut	13,600'-13,700' MD: CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sbply, m silty, sl arg ip, m-v calc, tr sec cal, sl tr bent, tr lt blue flwr w/ slw milky wht halo cut
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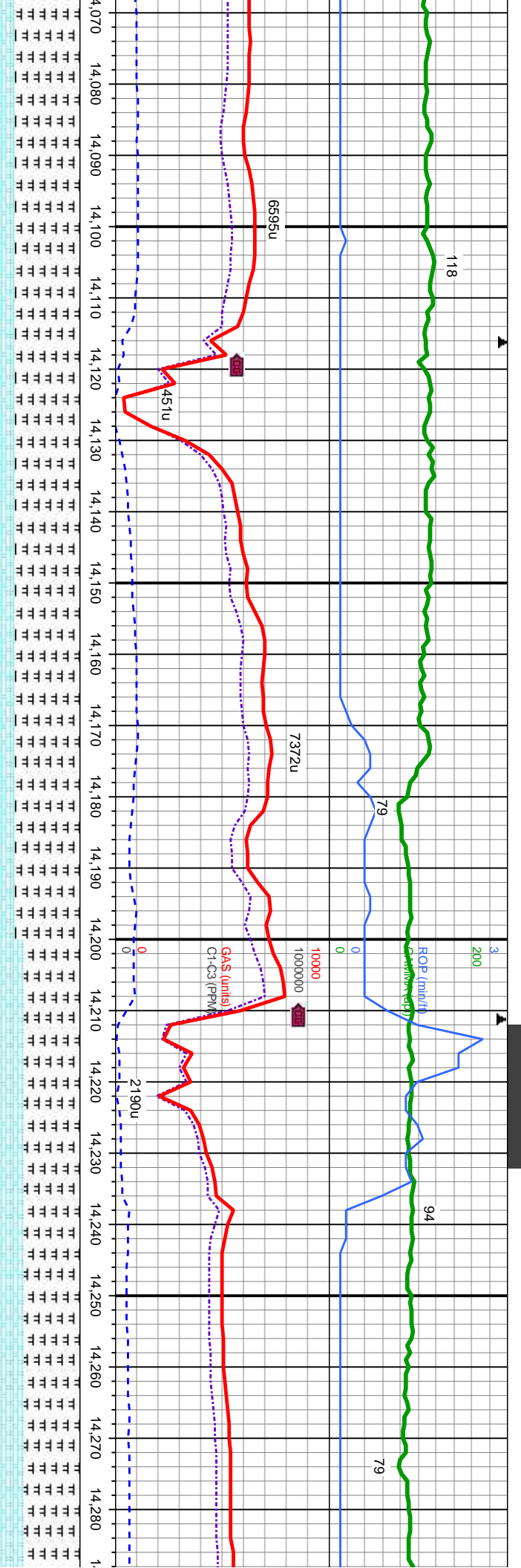
MMW IN: 9.5 OUT: 9.5
VIS IN: 42 OUT: 43

MD: 13,949
TVD: 6,996.15
Inclination: 89.63
Azimuth: 89.04
VS: 7,113.48

13,854
: 6,996.3
nation: 90.55
outh: 88.94
7,018.54

13,900'-14,000' MD: MRLST: med-dk gry, m-v frm, sbbiky-sbply, m silty, sl arg ip, m-v calc, tr sec cal, sl tr bent, CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m sft-sl frm, v calc, tr lt blue flr w/ slw mlky wht halo cut	14,000'-14,100' MD: MRLST: med-dk gry, m-v frm, sbbiky-sbply, m silty, sl arg ip, m-v calc, tr sec cal, sl tr bent, CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m sft-sl frm, v calc, tr lt blue flr w/ slw mlky w
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MD: 14,138.
TVD: 6,995.7.
Inclination: 90.64
Azimuth: 89.17
VS: 7,302.36

MD: 14,232.
TVD: 6,995.01.
Inclination: 90.21
Azimuth: 89.43
VS: 7,396.31

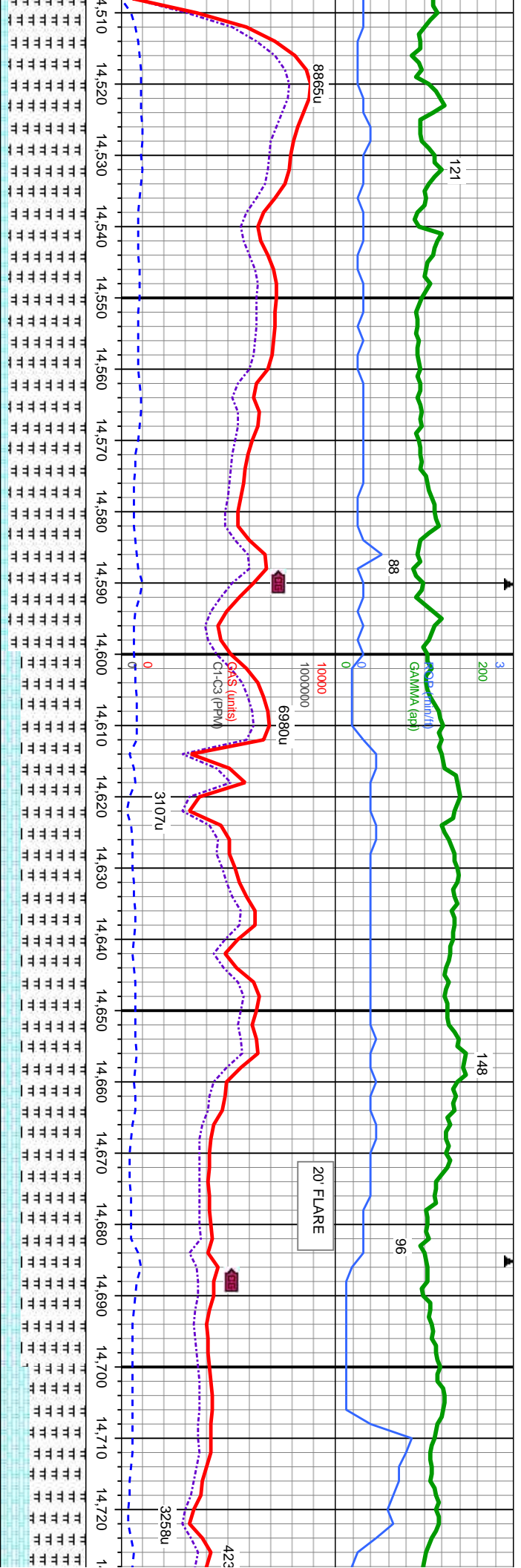
6400
NMW IN: 9.6 OUT: 9.5
VIS IN: 43 OUT: 44

TVD (ft)

14,100'-14,200' MD: MRLST: med-dk gry, m-v frm, sbbiky-sbply, sl-m silty, sl alg ip, m-v calc, tr sec cal, sl tr bent, CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m sft-sl frm, v calc, tr lt blue flwr w/ slw mlky wht halo cut

14,200'-14,300' MD: MRLST: med-dk gry, m-v frm, sbbiky-sbply, sl-m silty, sl alg ip, m-v calc, tr sec cal, sl tr bent, CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m sft-sl frm, v calc, tr lt blue flwr w/ slw mlky wht halo cut

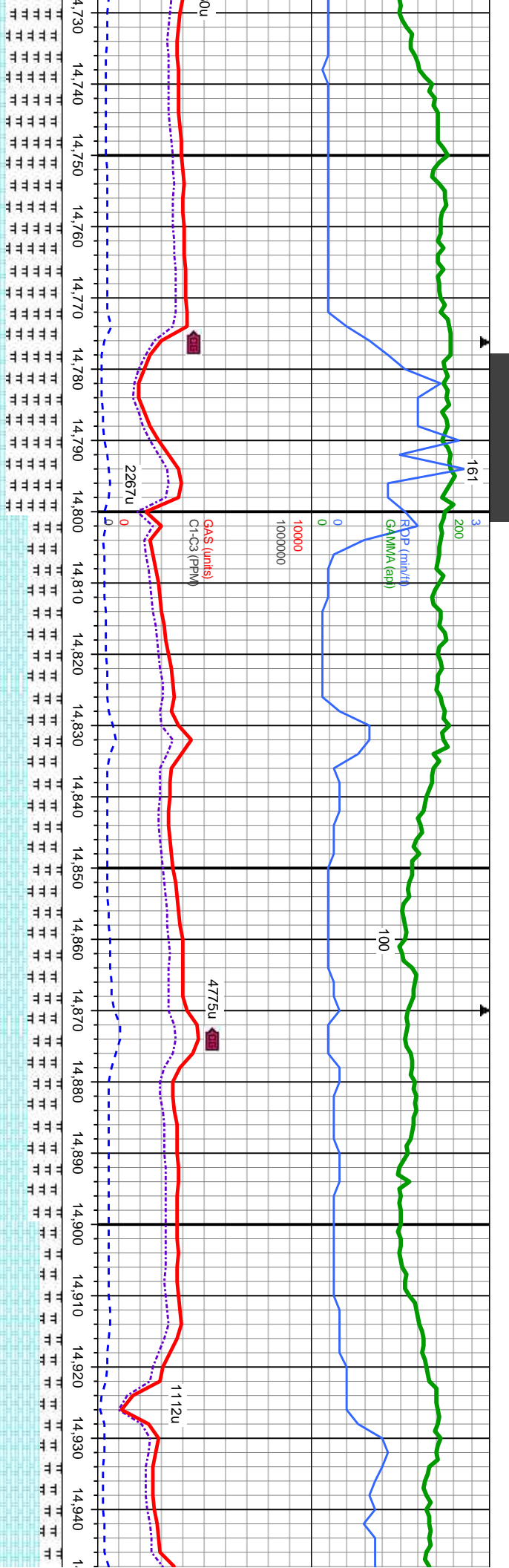
7400



5		MW IN: 9.6		OUT: 9.5		6400		MW IN: 9.6		OUT: 9.5+	
3		VIS IN: 43		OUT: 43				VIS IN: 41		OUT: 47	
D: 6,998.95 Inclination: 89.35 Azimuth: 89.99 VS: 7,679.17											
MD: 14,515 TVD: 6,998.7 Inclination: 90.8 Azimuth: 90.18 VS: 7,868.14											
TVD (ft)											

14,500'-14,600' MD: MRLST: med-dk gry, m-v frm, sbblky-sbply, sl-m silty, sl arg ip, m-v calc, tr sec cal, CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, tr lt blue flor w/ slw mlky wht halo cut		14,600'-14,700' MD: MRLST: med-dk gry, m-v frm, sbblky-sbply, sl-m silty, sl arg ip, m-v calc, sl tr sec cal, CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, tr lt blue flor w/ slw mlky wht halo cut		14,700'-14,800' MD: MRLST: med-dk gry, m-v frm, sbblky-sbply, sl-m silty, sl arg ip, m-v calc, tr sec cal, CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, tr lt blue flor w/ slw mlky wht halo cut	
7400					



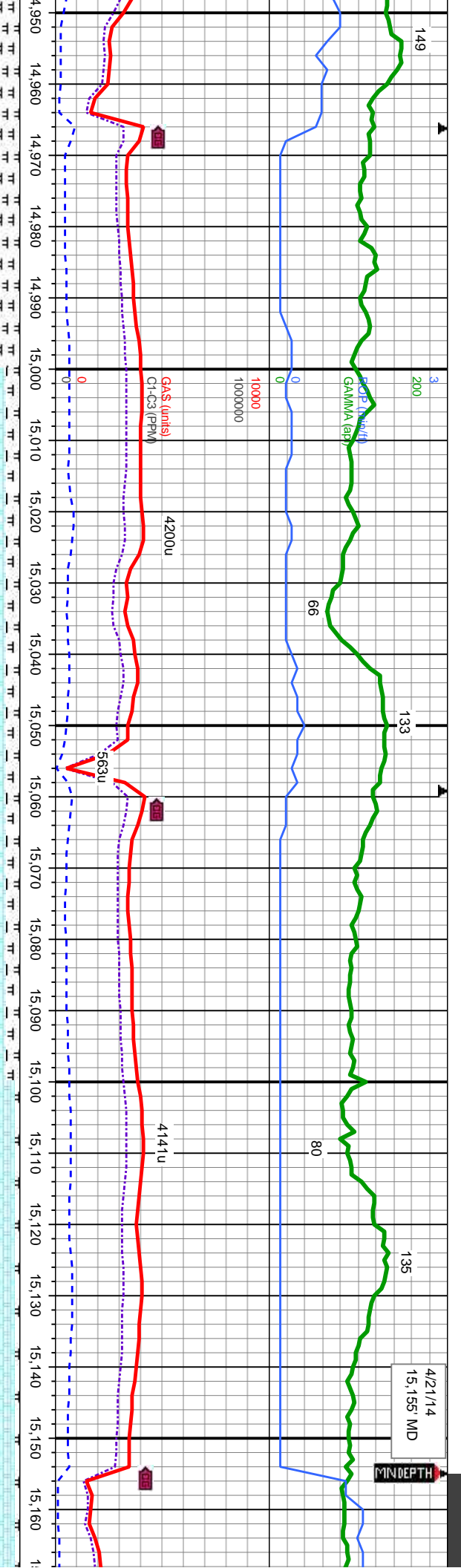


MW IN: 9.5+ OUT: 9.6
VIS IN: 42 OUT: 45

MW IN: 9.6 OUT: 9.6
VIS IN: 41 OUT: 43

MD: 14,893.
TVD: 6,999.62.
Inclination: 88.64
Azimuth: 90.53.
VS: 8,057.11

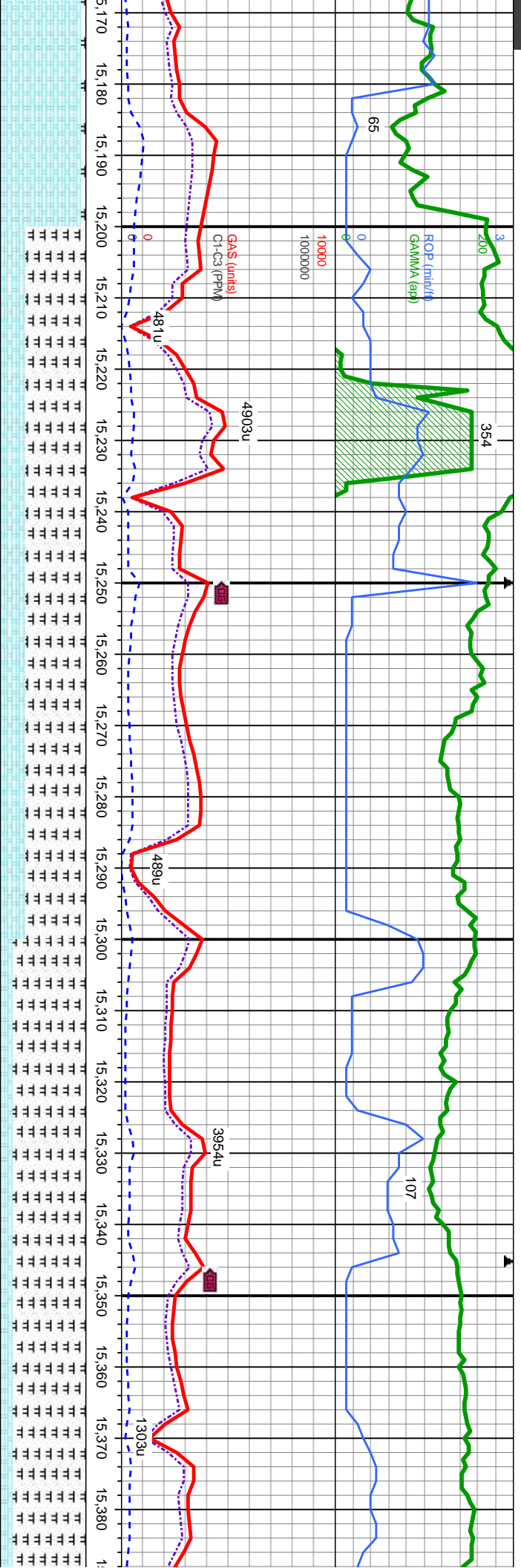
MD: MRLST: med-dk gry, m-v frm, sbbly-sbply, sl-m sily, alc, sl tr sec cal, CHK: lt-m gy-gybrn-mot, sbbly-sbply, sft-sl frm, v calc, tr lt blue flr w/ slw milky wht halo cut	14,800'-14,900' MD: CHK: lt-m gy-gybrn-mot, sbbly-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbly-sbply, sl-m sily, sl arg ip, m-v calc, sl tr sec cal, tr lt blue flr w/ slw milky wht halo cut	14,900'-15,000' MD: CHK: lt-m gy-gy sft-sl frm, v calc, MRLST: med-dk gry, arg ip, m-v calc, sl tr sec cal, tr lt bl
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6400	MW IN: 9.6 VIS IN: 45	OUT: 9.6 OUT: 43
TVD (ft)	MD: 15,081 TVD: 7,002.62 Inclination: 89.53 Azimuth: 90.86 VS: 8,245.08	

brn-mot, sbblky-sbply, sm-wxy tex, m /, m-v frm, sbblky-sbply, sl-m slty, sl ue flr w/ slw mlky wnt halo cut	15,000'-15,100' MD: CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sbply, sl-m slty, sl arg ip, m-v calc, sl tr sec cal, tr lt blue flr w/ slw mlky wnt halo cut	7400
	15,100'-15,200' MD: CHK: lt-m gy-gybrn-mot, sbblky-sbply sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sb arg ip, m-v calc, sl tr sec cal, tr lt blue flr w/ slw mlky w	



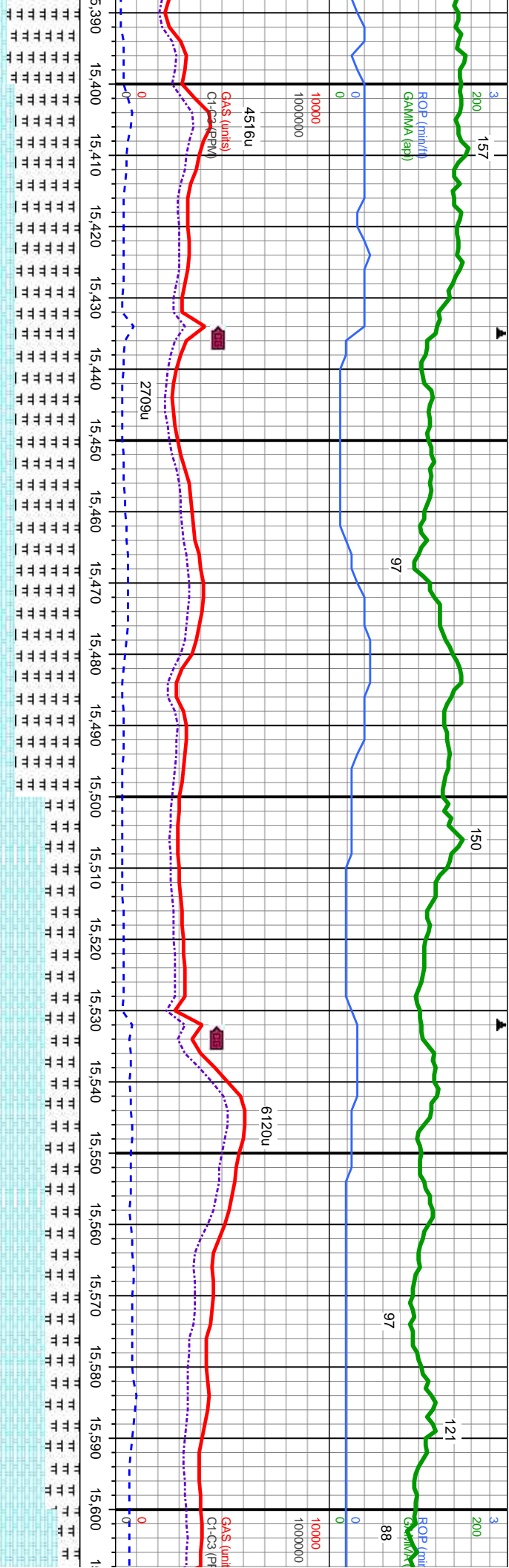


MD: 15,175.
D: 7,003.62.
Inclination: 89.25 -
muth: 89.73 -
8,339.06

15,200'-15,300' MD: MRLST: med-dk grv, m-v frm, sbblky-sbply, m-v silty, v arg, m calc, tr sec cal, sl tr bent, CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sil frm, v calc, tr pyr, sl tr lt blue flwr w/ slw mlky wht halo cut

15,300'-15,400' MD: MRLST: med-dk grv, m-v frm, sbblky-sbply, m-v silty, sl-m arg, m calc, tr sec cal, sl tr bent, CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sil frm, v calc, tr pyr, sl tr lt blue flwr w/ slw mlky wht halo cut

MD: 15,364.
TVD: 7,005.32.
Inclination: 89.72 -
Azimuth: 89.11 -
VS: 8,527.97



MW IN: 9.7 OUT: 9.7
VIS IN: 58 OUT: 43

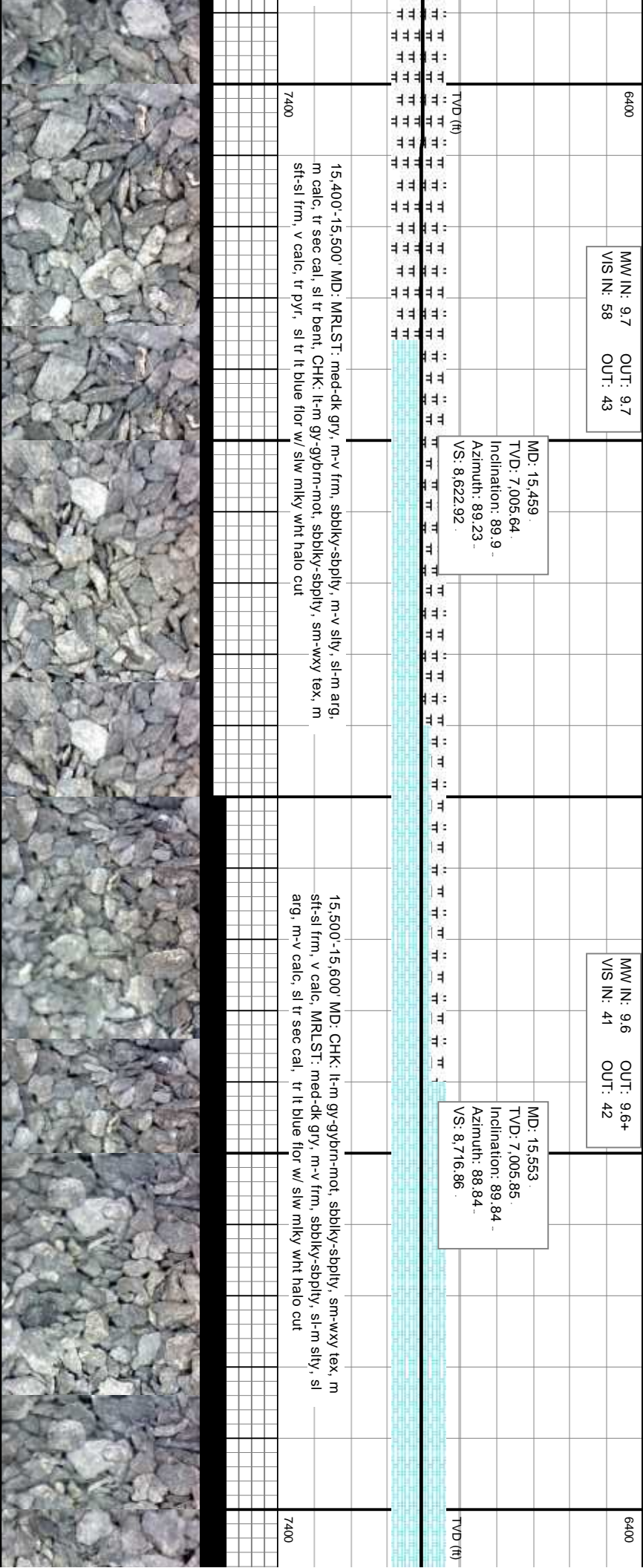
MD: 15.459
TVD: 7,005.64
Inclination: 89.9
Azimuth: 89.23
VS: 8,622.92

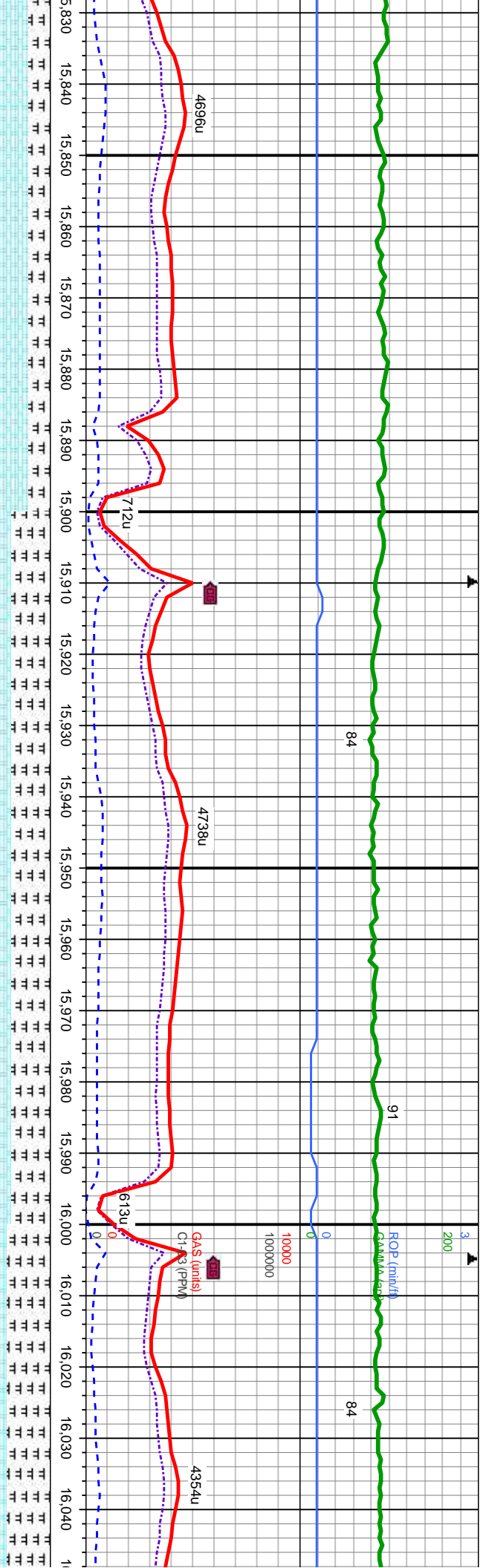
MW IN: 9.6 OUT: 9.6+
VIS IN: 41 OUT: 42

MD: 15.553
TVD: 7,005.85
Inclination: 89.84
Azimuth: 88.84
VS: 8,716.86

15,400'-15,500' MD: MRLST: med-dk gry, m-v frm, sbblky-sbply, m-v silty, sl-m arg, m calc, tr sec cal, sl tr bent, CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, tr pyr, sl tr lt blue flwr w/ slw milky wht halo cut

15,500'-15,600' MD: CHK: lt-m gy-gybrn-mot, sbblky-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbblky-sbply, sl-m silty, sl arg, m-v calc, sl tr sec cal, tr lt blue flwr w/ slw milky wht halo cut





MW IN: 9.6 OUT: 9.5
VIS IN: 40 OUT: 40

D: 15.836.
ID: 7.005.68.
Inclination: 90.33 -
Azimuth: 89.89 -
S: 8.999.74 .

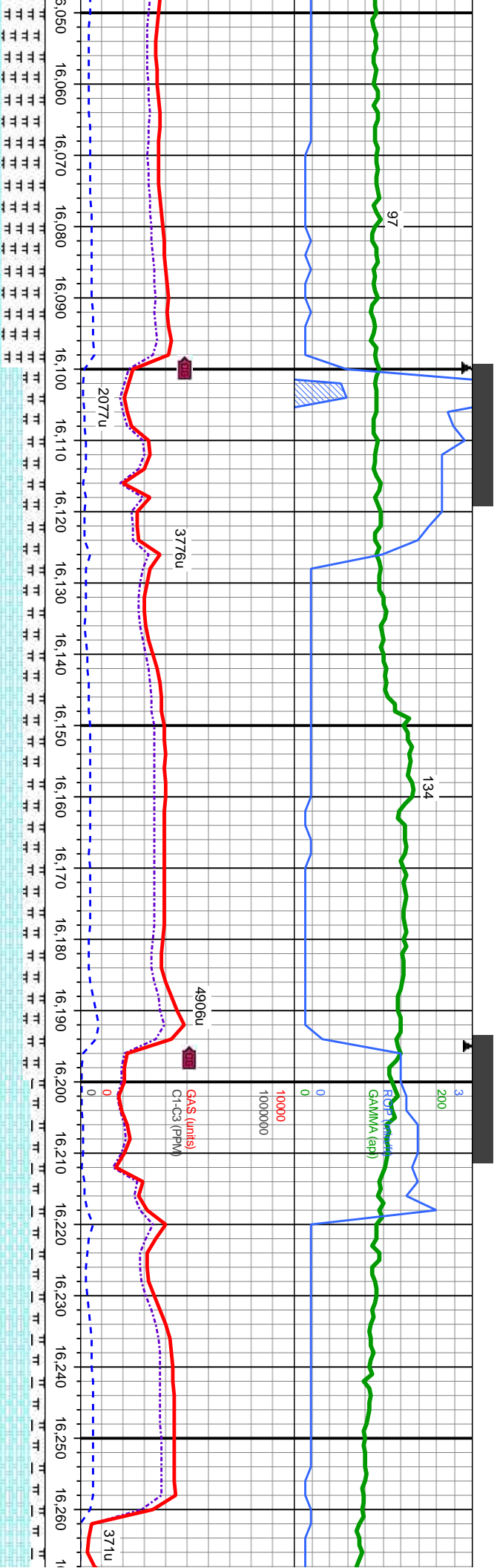
MD: 16.025.
TVD: 7.003.4.
Inclination: 91.05 -
Azimuth: 90.47 -
VS: 9.188.7 .

MD: CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m
MRLST: med-dk gry, m-v frm, sbbiky-sbply, sl-m slty, sl
tr sec cal, tr lt blue flr w/ slw mlky wht halo cut

15,900'-16,000' MD: CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m
sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbiky-sbply, sl-m slty, sl
arg, m-v calc, sl tr sec cal, tr lt blue flr w/ slw mlky wht halo cut

16,000'-16,100' MD: CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m
sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbiky-sbply, sl-m slty, sl
arg, m-v calc, sl tr sec cal, tr lt blue flr w/ slw mlky wht halo cut





MW IN: 9.6 OUT: 9.5
VIS IN: 41 OUT: 41

MD: 16,119.
TVD: 7,002.6.
Inclination: 89.93.
Azimuth: 89.65.
VS: 9,282.68.

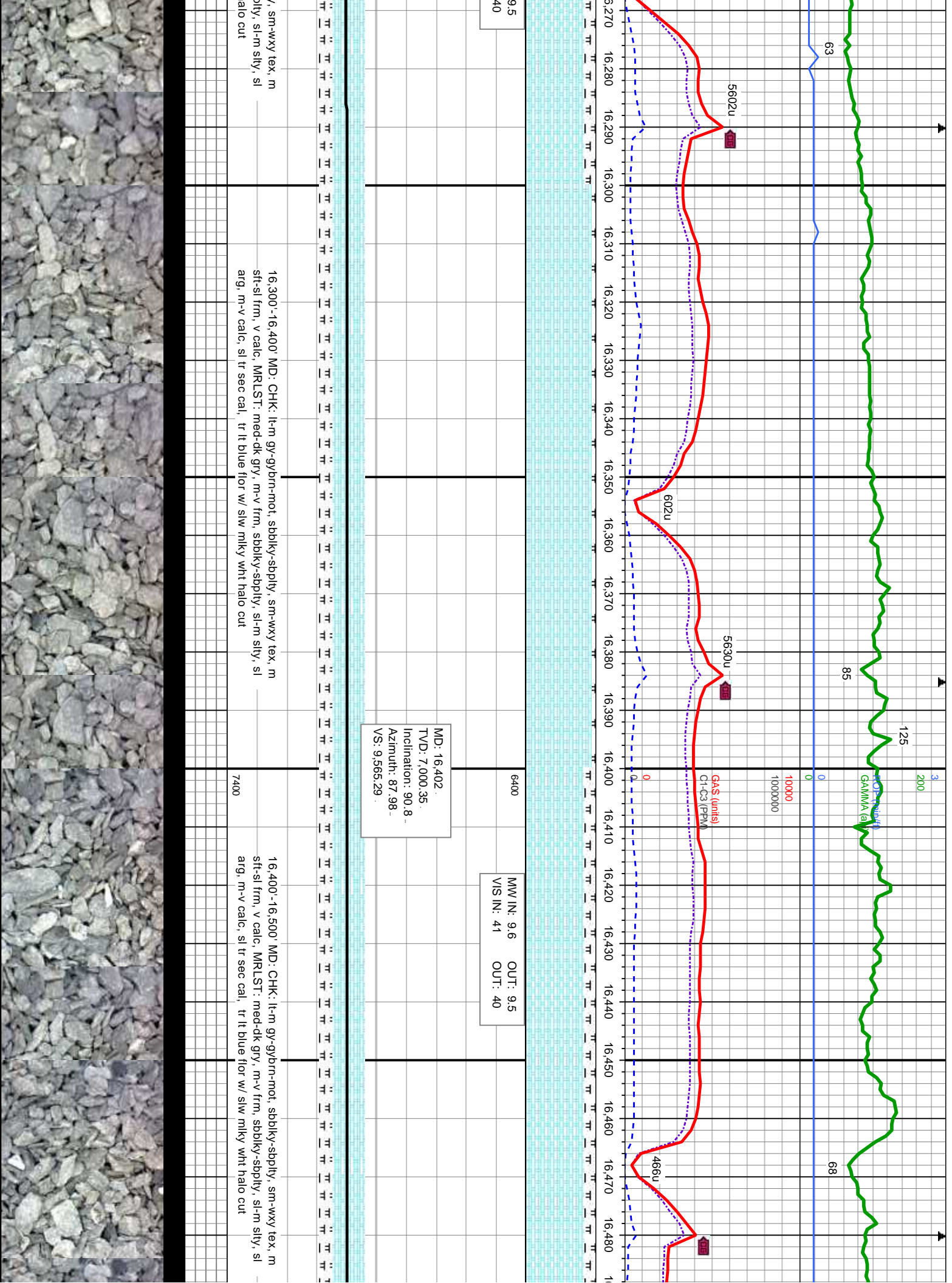
6400

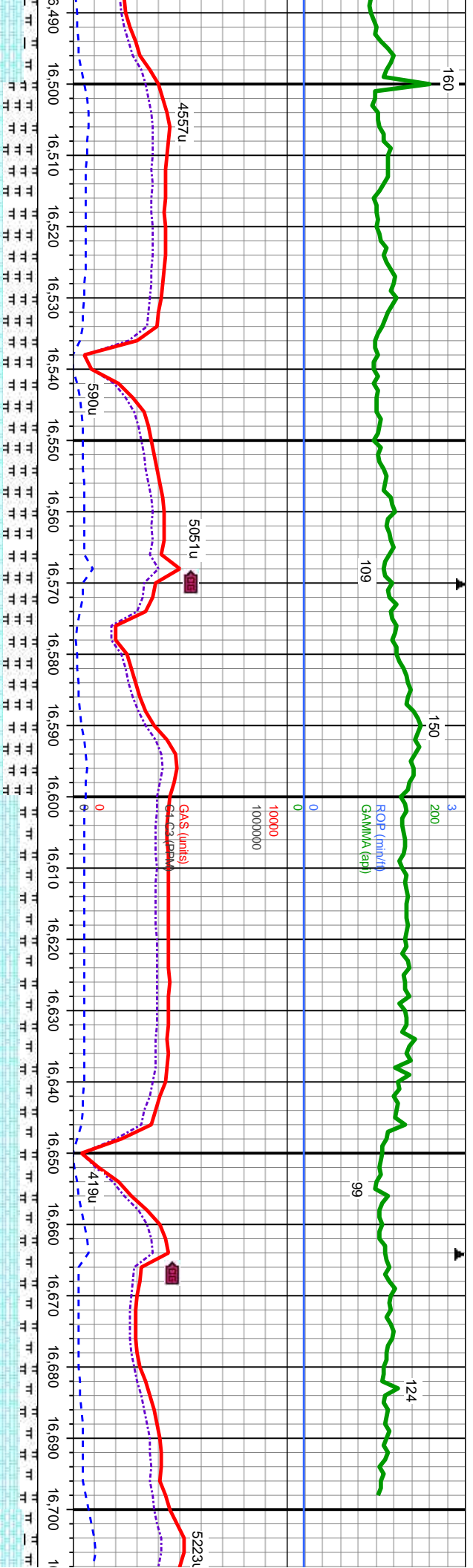
MD: 16,213.
TVD: 7,002.33.
Inclination: 90.4.
Azimuth: 87.8.
TV VS: 9,376.6.

MW IN: 9.6 OUT:
VIS IN: 40 OUT:

16,050-16,100' MD: CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m-v frm, sbbiky-sbply, sl-m slty, sl arg, m-v calc, sl tr sec cal, tr lt blue flwr w/ slw mlky wht halo cut	16,100'-16,200' MD: CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m-v frm, v calc, MRLST: med-dk gry, m-v frm, sbbiky-sbply, sl-m slty, sl arg, m-v calc, sl tr sec cal, tr lt blue flwr w/ slw mlky wht halo cut	16,200'-16,300' MD: CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m-v frm, v calc, MRLST: med-dk gry, m-v frm, sbbiky-sbply, sl-m slty, sl arg, m-v calc, sl tr sec cal, tr lt blue flwr w/ slw mlky wht h
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MD: 16.591 TVD: 6.995.95 Inclination: 91.87 Azimuth: 88.25 VS: 9.753.98		6400	MW IN: 9.6 OUT: 9.6 VIS IN: 38 OUT: 39		TVD (ft)
MD: 16.692 TVD: 6.992.4 Inclination: 92.15 Azimuth: 88.29 VS: 9.854.8					

16,500'-16,600' MD: CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbiky-sbply, sl-m slty, sl arg, m-v calc, sl tr sec cal, tr lt blue flwr w/ slw mlky wht halo cut	7400	16,600'-16,700' MD: CHK: lt-m gy-gybrn-mot, sbbiky-sbply, sm-wxy tex, m sft-sl frm, v calc, MRLST: med-dk gry, m-v frm, sbbiky-sbply, sl-m slty, sl arg, m-v calc, sl tr sec cal, tr lt blue flwr w/ slw mlky wht halo cut	
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WELL TOTAL DEPTH
19:46 HRS 4/21/14
16,766' MD



MD: 16,766
TVD: 6,989.63
Inclination: 92.15°
Azimuth: 88.29°
VS: 9,928.66

THANK YOU FOR USING
COLUMBINE LOGGING INC.

00-16,766' MD: CHK: lt-m gy-gybrn-mot, spbkly-sbply, m-v
xy tex, m sft-si frm, v calc, MRLST: med-dk gry, m-v
sbkly-sbply, sl-m slty, sl arg, m-v calc, sl tr sec cal,
blue flr w/ slw mlky wht halo cut

