

COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name State Seventy Holes A-E-6HNB

Location NENW SEC. 6 T4N R62W

State CO

County WELD

Country WELD

Rig Number CADE 26

API Number 05-123-39858-00

AFE # 14286

Region DJ BASIN

Field WATTENBERG

Spud Date 8/15/2014

Drilling Completed 8/22/2014

Surface Coordinates 788' FNL x 1680' FWL (LAT: 40.34692,-104.37140)

Bottom Hole Coordinates 470' FSL x 60' FWL (LAT: 40.33555,-104.37664)

Ground Elevation 4538'

K.B. Elevation 4555'

Logged Interval 6150' To 11331'

Total Depth 11331'

Formation NIOBRARA, B-CHALK

Type of Drilling Fluid LSND, H2O

Operator

Company Bonanza Creek Energy Inc.

Address 410 17th Street, Suite 1500 Denver, CO 80202

Geologist

Name Paul McKay

Company Bonanza Creek

Address 410 17TH STREET, SUITE 1500 DENVER, CO 80202

Other

Kevin Geraghty Columbine Logging

Mark Norris Columbine Logging




















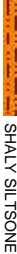









Zone Color Coding

Oil
Note
Error

Condensate
Core
Water

Gas
Pre
Sea

Rock Types

 UNKNOWN	 COAL	 CONGLOMERATE	 CHALK
 ANHYDRITE	 MARLSTONE	 BRECCIA	 SILTY SHALE
 GYPSUM	 CLAYSTONE	 TILL	 NO SAMPLE
 SALT	 SHALE	 BENTONITE	 SHALY SANDSTONE
 SIDERITE or LIMONITE	 SHALE GRAY	 TUFF	 SHALY SILTSTONE
 LIMESTONE	 SHALE COLORED	 IGNEOUS	
 DOLOMITE	 SILTSTONE	 METAMORPHIC	
 CHERT	 SANDSTONE	 CEMENT	

Oth


Oil Show


-  ORGANIC
-  PINPOINT

 DEAD

 VUGGY

 EVEN

 QUESTIONABLE

 SPOTTED STAINING


 BIT

Engineering

Porosity


 CONNECTION (LEFT)

 EARTHY

 CONNECTION (RIGHT)


 FENESTRAL


 CONNECTION GAS


 FRACTURE

 CORE - LOST

 INTERCRYSTALLINE

 CORE - RECOVERED






























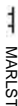



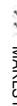











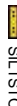








 INTEROOLITIC

 DST INTERVAL

 MOLDIC

 FAULT

Accessories

 FOSSIL	 ARGILLACEOUS	 GLAUCONITE	
 GASTROPOD	 ARGILLITE GRAIN	 GYPSIFEROUS	
 ALGAE	 OOLITE	 HEAVY MINERAL	 ANHYDRITE STRINGER
 AMPHIPORA	 OSTRACOD	 BITUMINOUS SUBSTANCE	 BENTONITE STRINGER
 BELEMNITE	 PELECYPOD	 BRECCIA FRAGMENTS	 COAL STRINGER
 BIOCLASTIC	 PELLET	 CALCAREOUS	 DOLOMITE STRINGER
 BRACHIOPOD	 PISOLITE	 CARBONACEOUS FLAKES	 GYPSUM STRINGER
 BRYOZOA	 PLANT REMAINS	 CHTDK	 LIMESTONE STRINGER
 CEPHALOPOD	 PLANT SPORES	 CHTLT	 MARLSTONE (CALC) STRG
 CORAL	 SCAPHOPOD	 COAL - THIN BEDS	 MARLSTONE (DOL) STRG
 CRINOID	 STROMATOPOROID	 DOLOMITIC	 SANDY
 ECHINOID	 FELDSPAR	 SILTY	 SHALE STRINGER
 FISH	 MINERALS	 FERRUGINOUS PELLET	 SILTSTONE STRINGER
 FORAMINIFERA	 ANHYDRITIC	 FERRUGINOUS	 TUFFACEOUS

Oth

er Symbols

 FORMATION TOP  CONNECTION GAS  CRYPTOXLN

 GAS SHOW  CONNECTION DOWN  EARTHLY

 MN DEPTH  CASING  FINELYXLN

 FORMATION TOP  GRAINSTONE

 LITHOGRAPHIC

 MICROXLN

Rounding

 ANGULAR  MUDSTONE

 ROUNDED  PACKSTONE

 SUBANG  WACKESTONE

 SUBRND

Sorting

 SURVEY

Textures

 MODERATE

 POOR

 WELL

ROP
ROP —
GAMMA —

Bit Data
Bit #: 2
Type: HE04JMRSV
Size: 8.75
Jets: 3 x 20
S/N: 1347660

Total Gas & Chromatograph

GAS —
C1 —
C2 —
C3 —
C4 —

Depth Labels

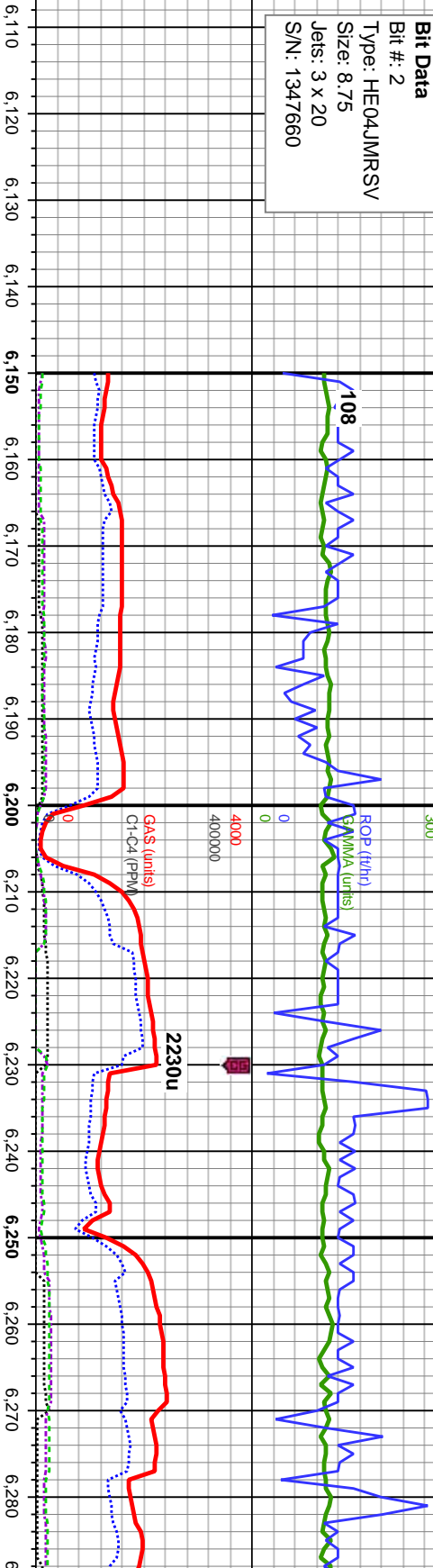
% Lith

Well Bore
TVD —

Oil Show

E
G
M
F
T
S

Images



COLUMBINE LOGGING RIGGED UP ON
8/18/2014 MANNED 2-PERSON LOGGING
WITH BLOODHOUND GAS
CHROMATOGRAPH UNIT #0696 BEGAN
ON 8/19/2014, 07:30 MST at 6150' MD

MD: 6,188'
TVD: 5,776.6'
Inclination: 4.94°
Azimuth: 152.96°
VS: -160.96'

MD: 6,235'
TVD: 5,823.17'
Inclination: 10.22°
Azimuth: 171.03°
VS: -155.89'

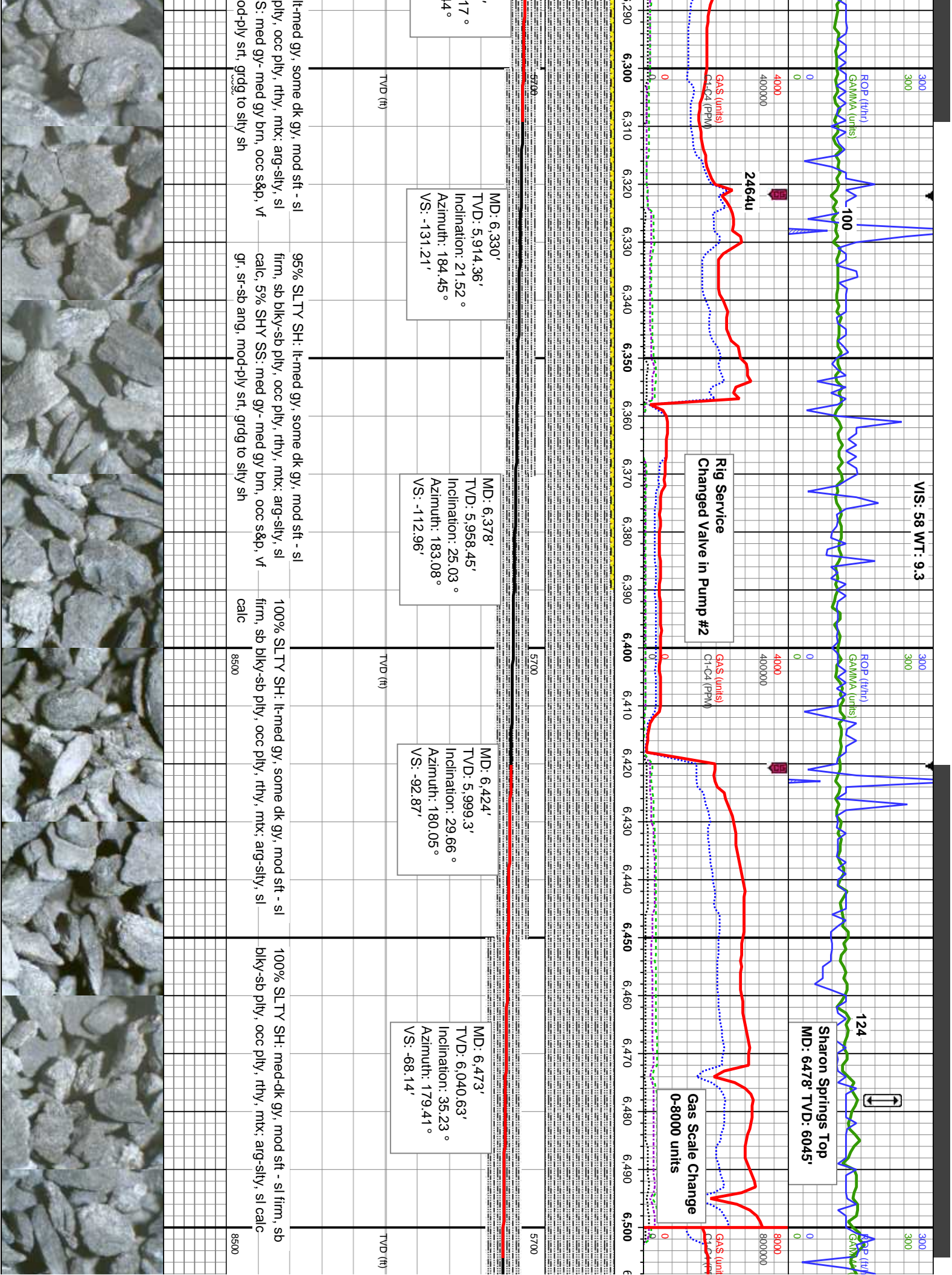
MD: 6,283'
TVD: 5,869.89
Inclination: 16.
Azimuth: 181.4
VS: -145.78'

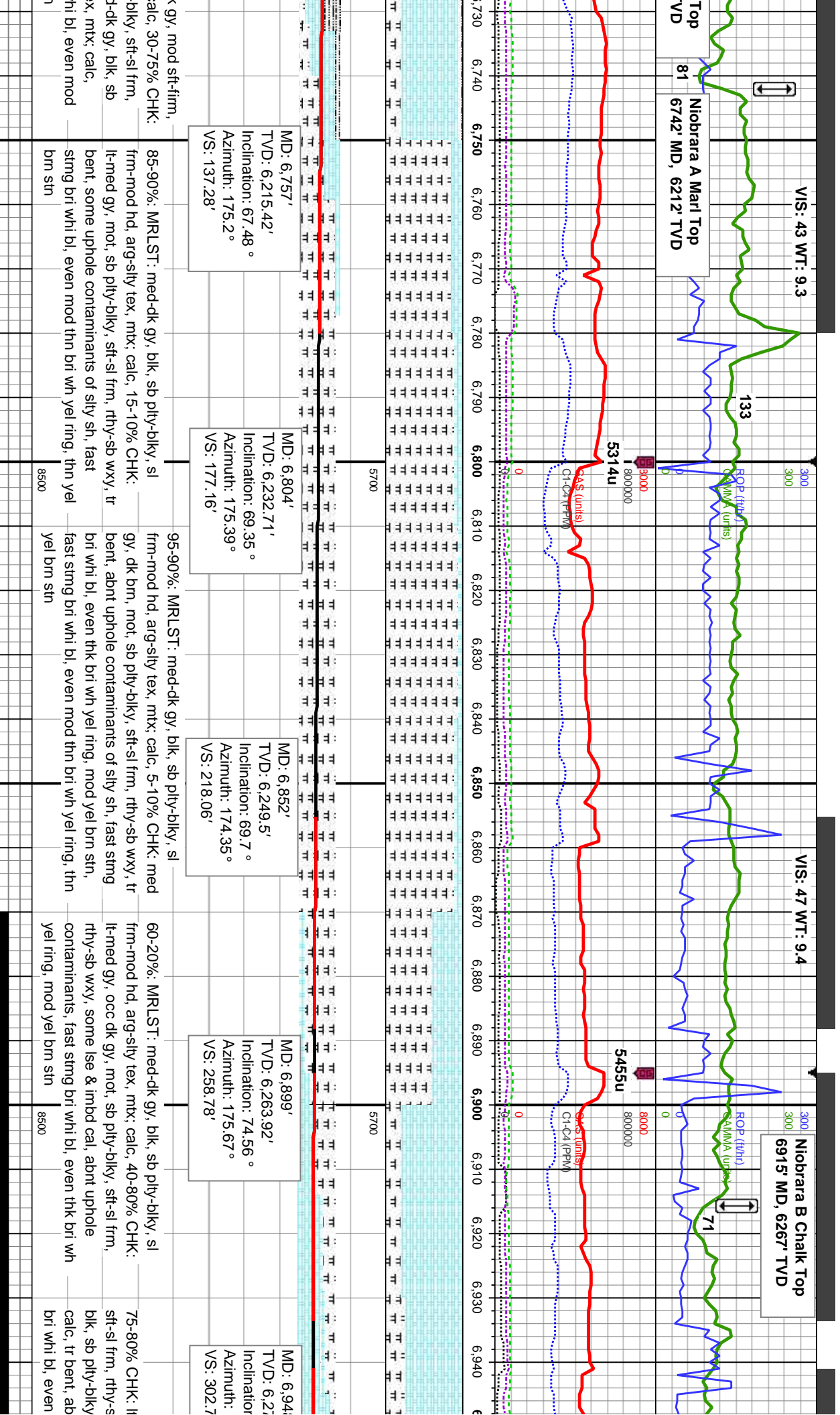
100% SLTY SH: lt-med gy, some dk gy, mod sft - sl
firm, sb blk-ss plty, occ plty, rthy, mtx; arg-slt, sl
calc, tr shy ss

100% SLTY SH: lt-med gy, some dk gy, mod sft - sl
firm, sb blk-ss plty, occ plty, rthy, mtx; arg-slt, sl
calc, tr shy ss

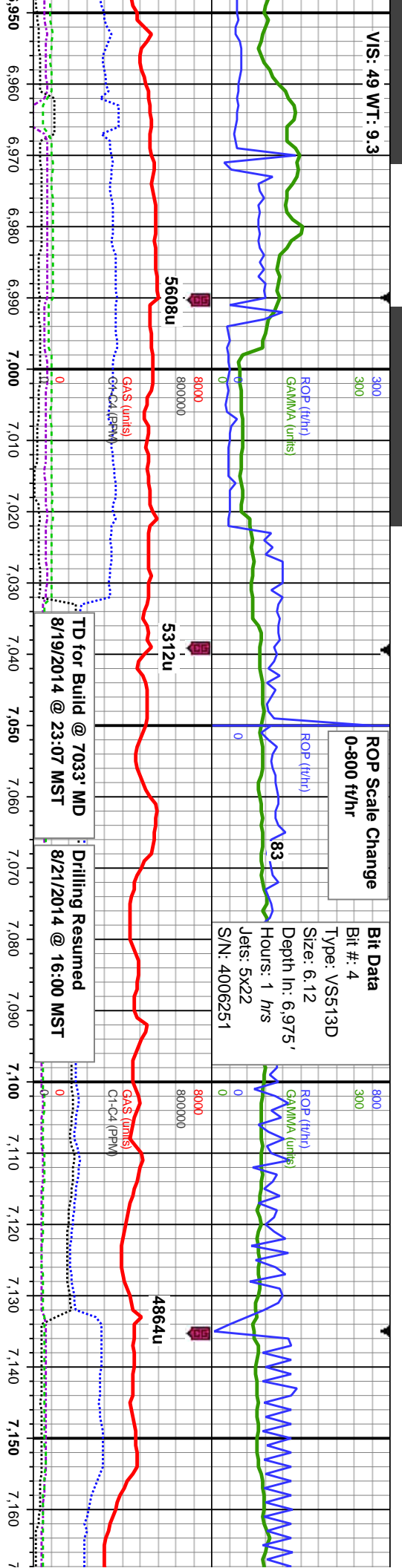
95% SLTY SH:
firm, sb blk-ss
calc, 5% SHY S
gr, sr-sb ang, m







VIS: 49 WT: 9.3



MD: 6,991'
TVD: 6,279.05'
Inclination: 85.9 °
Azimuth: 178.09 °
VS: 342.38'

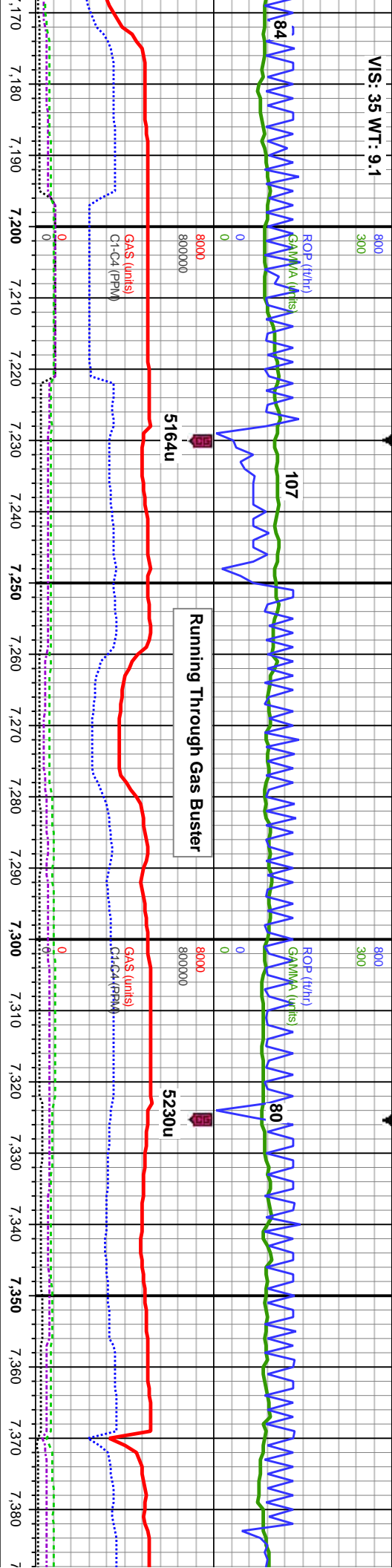
Projection to bit
MD: 7033
INC: 90.45
AZM: 178.09
TVD: 6280.36
VS: 381.42
Below 0.36 Left 11.05

MD: 7,079'
TVD: 6,282.22'
Inclination: 89.97 °
Azimuth: 177.96 °
VS: 424.23'

med gy, occ crm, mot, sb ply-biky, , sl frm-mod hd, arg-sily tex, mtk: uphole contaminants, fast strng thk bri wh yel ring, mod yel brn stn	75% CHK: lt-med gy, occ crm, mot, sb ply-biky, sft-sl frm, rthy-sb wxy, 25%: MRLST: med-dk gy, blk, sb ply-biky, sl frm-mod hd, arg-sily tex, mtk: calc, tr bent, tr pyr, abnt uphole contaminants, fast strng even thk bri wh yel ring, mod yel brn stn	95% CHK: med-dk gy, occ dk brn, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 5%: MRLST: med-dk gy, blk, sb ply-biky, sl frm-mod hd, arg-sily tex, mtk: calc, tr imbd cal, tr fos frags, g od, mod strng bri whi bl, even thk bri wh yel ring, mod yel brn stn	95% CHK: med-dk gy, occ dk brn, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 5%: MRLST: med-dk gy, blk, sb ply-biky, sl frm-mod hd, arg-sily tex, mtk: calc, tr imbd cal, tr fos frags, g od, fast strng bri whi bl, even v thk bri wh yel ring, thk brn stn	95% CHK: med biky-biky, sft-sl MRLST: med-dl frm-mod hd, arg cal, tr fos frags, even thk bri w
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VIS: 35 WT: 9.1



D: 7,174'
D: 6,281.4'
Inclination: 91.02 °
Azimuth: 178.87 °
VS: 512.91'

90% CHK: med-dk gy, occ dk brn, mot, sb
biky-biky, sft-sl frm, rthy-sb wxy, 5%:
k gy, blk, sb pty-biky, sl
-sly tex, mtx: calc, tr imbd
g od, fast stmg bri whi bl, —
h yel ring, thk brn stn

90% CHK: med-dk gy, occ dk brn, mot, sb
biky-biky, sft-sl frm, rthy-sb wxy, 10%:
MRLST: med-dk gy, blk, sb pty-biky, sl
frm-mod hd, arg-sly tex, mtx: calc, tr imbd
cal, g od, fast stmg bri whi bl, —
wh yel ring, thk brn stn

MD: 7,269'
TVD: 6,280.99'
Inclination: 89.48 °
Azimuth: 179.56 °
VS: 602.05'

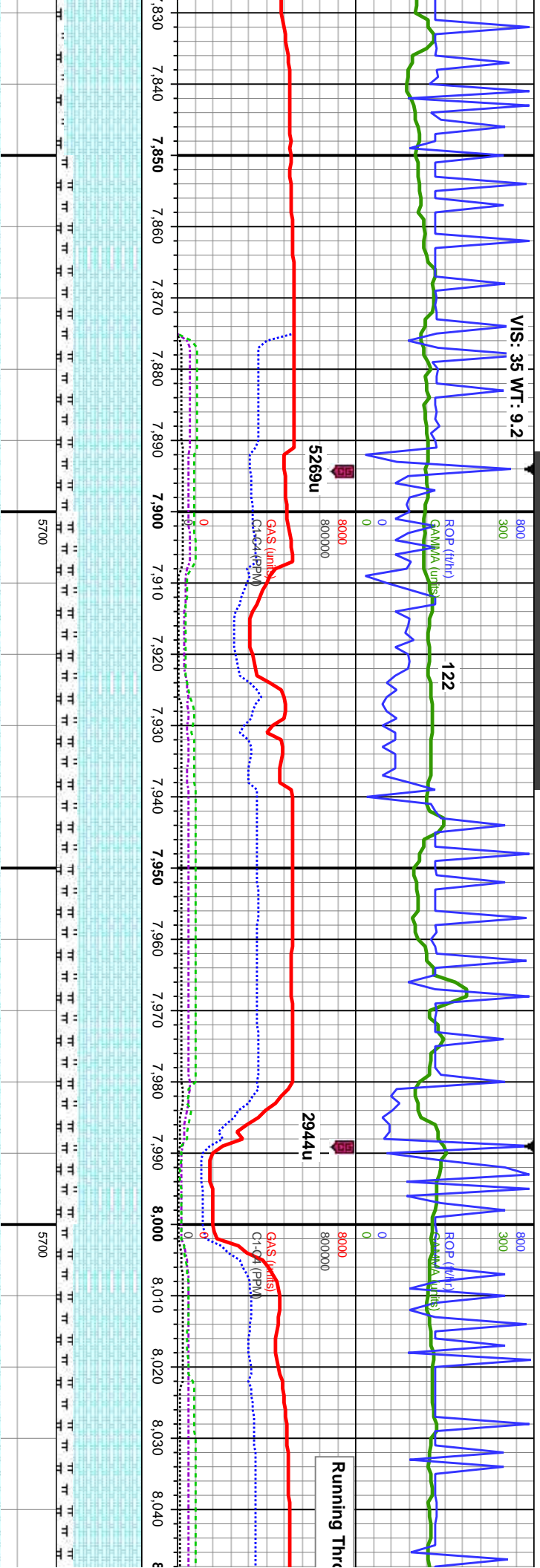
95% CHK: med-dk gy, occ dk brn, mot, sb
biky-biky, sft-sl frm, rthy-sb wxy, 5%:
MRLST: med-dk gy, blk, sb pty-biky, sl
frm-mod hd, arg-sly tex, mtx: calc, tr imbd
cal, tr fos frags, g od, fast stmg bri whi bl, —
even thk bri wh yel ring, thk brn stn

MD: 7,364'
TVD: 6,282.29'
Inclination: 88.95 °
Azimuth: 179.39 °
VS: 691.34'

95% CHK: med-dk gy, occ lt gy, mot, sb
biky-biky, sft-sl frm, rthy-sb wxy, 5%:
MRLST: med-dk gy, blk, sb pty-biky, sl
frm-mod hd, arg-sly tex, mtx: calc, tr imbd
cal, tr fos frags, g chk flor, g od, fast stmg
bri whi bl, even thk bri wh yel ring, thk brn
stn

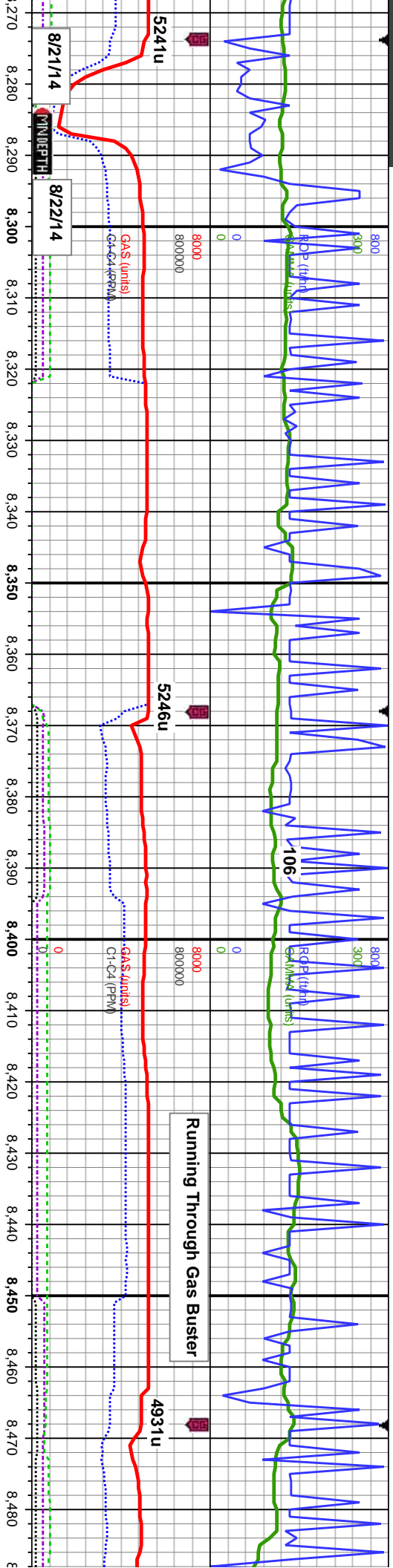
95% CHK: med-dk gy, occ lt gy, mot, sb
biky-biky, sft-sl frm, rthy-sb wxy, 5%:
MRLST: med-dk gy, blk, sb pty-biky, sl
frm-mod hd, arg-sly tex, mtx: calc, tr imbd
cal, tr fos frags, g od, fast stmg bri whi bl, —
bri wh yel ring, thk brn stn





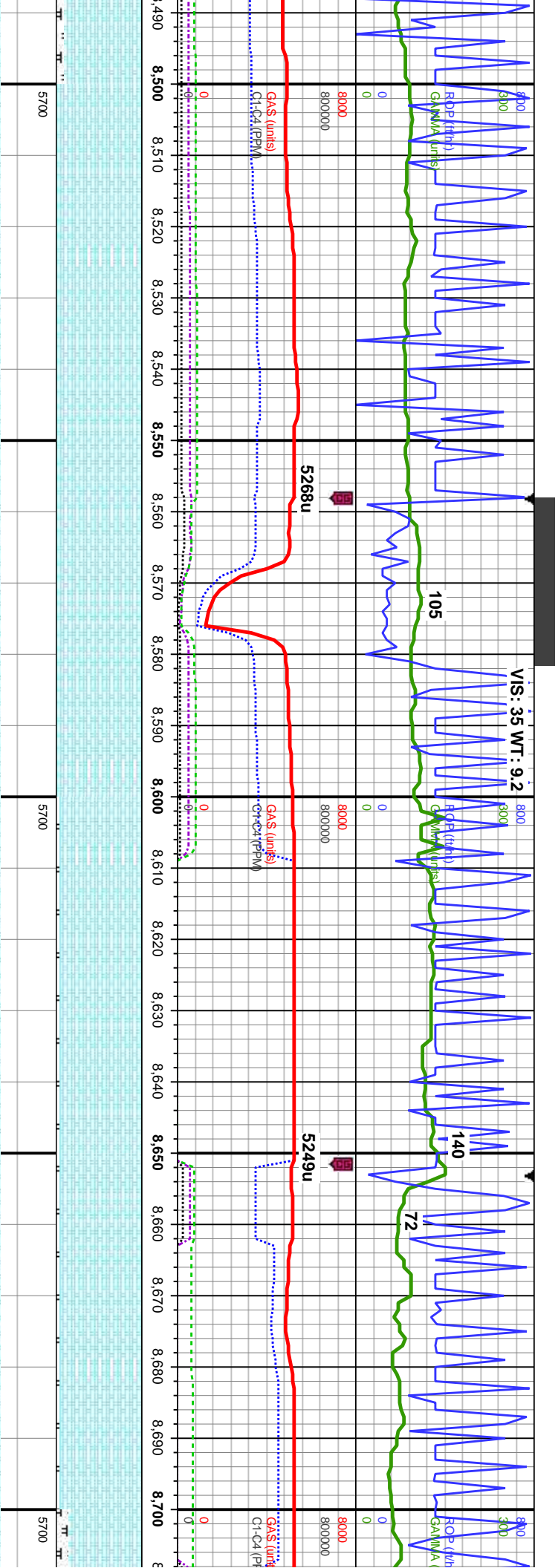
MD: 7,838' TVD: 6,285.32' Inclination: 91.83 ° Azimuth: 180.35° VS: 1,136.12'		80% CHK: med-dk gy, occ lt gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 20%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sily tex, mtx: calc, tr cal incl, tr inoc foss, tr bent, fast stmg bri whi bl, even thk bri wh yel ring, mod brn stn	75% CHK: med-dk gy, occ lt gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 25%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sily tex, mtx: calc, tr cal incl, tr inoc foss, tr bent, fast stmg bri whi bl, even mod thk bri wh yel ring, thk yel brn stn	75% CHK: med-dk gy, occ lt gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 25%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sily tex, mtx: calc, tr cal incl, tr inoc foss, tr bent, fast stmg bri whi bl, even mod thk bri wh yel ring, thk yel brn stn	80% CHK: med-dk gy, occ lt gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 20%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sily tex, mtx: calc, tr imbd cal, occ pyr, mod od, fast stmg bri whi bl, even mod thk bri wh yel ring, mod yel brn stn
MD: 7,934' TVD: 6,283.37' Inclination: 90.49 ° Azimuth: 177.8° VS: 1,226.09'					
MD: 8,028' TVD: 6,283.09' Inclination: 89.85 ° Azimuth: 177.24° VS: 1,313.3'					





5700		5700		5700	
MD: 8,313'		MD: 8,408'		MD: 8,408'	
TVD: 6,284.06'		TVD: 6,282.82'		TVD: 6,282.82'	
Inclination: 90.59 °		Inclination: 90.9 °		Inclination: 90.9 °	
Azimuth: 177.59 °		Azimuth: 178.29 °		Azimuth: 178.29 °	
VS: 1,577.95'		VS: 1,666.34'		VS: 1,666.34'	
95% CHK: med gy, occ lt gy, mot, sb		90% CHK: med gy, occ lt gy, mot, sb		95% CHK: med gy, occ lt gy, mot, sb	
biky-biky, sft-sl frm, rthy-sb wxy, tr cal incl		biky-biky, sft-sl frm, rthy-sb wxy, tr cal incl		biky-biky, sft-sl frm, rthy-sb wxy, tr cal incl	
5%: MRLST: med-dk gy, blk, sb pty-biky, sl		MRLST: med-dk gy, blk, sb pty-biky, sl		5%: MRLST: med-dk gy, blk, sb pty-biky, sl	
frm-mod hd, arg-sly tex, mtx: calc, tr foss		frm-mod hd, arg-sly tex, mtx: calc, g chk		frm-mod hd, arg-sly tex, mtx: calc, g chk	
frags, mod od, imm bri whi bl, even thk bri		flor, mod od, immed bri whi bl, even thk bri		frags, mod od, immed bri whi bl, ev	
wh yel ring, thk yel brn str		wh yel ring, thk yel brn str		bri wh yel ring, thk yel brn str	



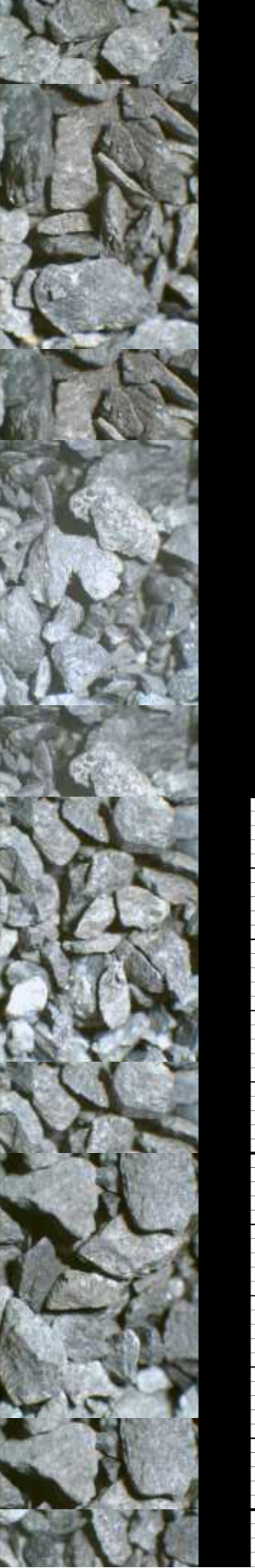


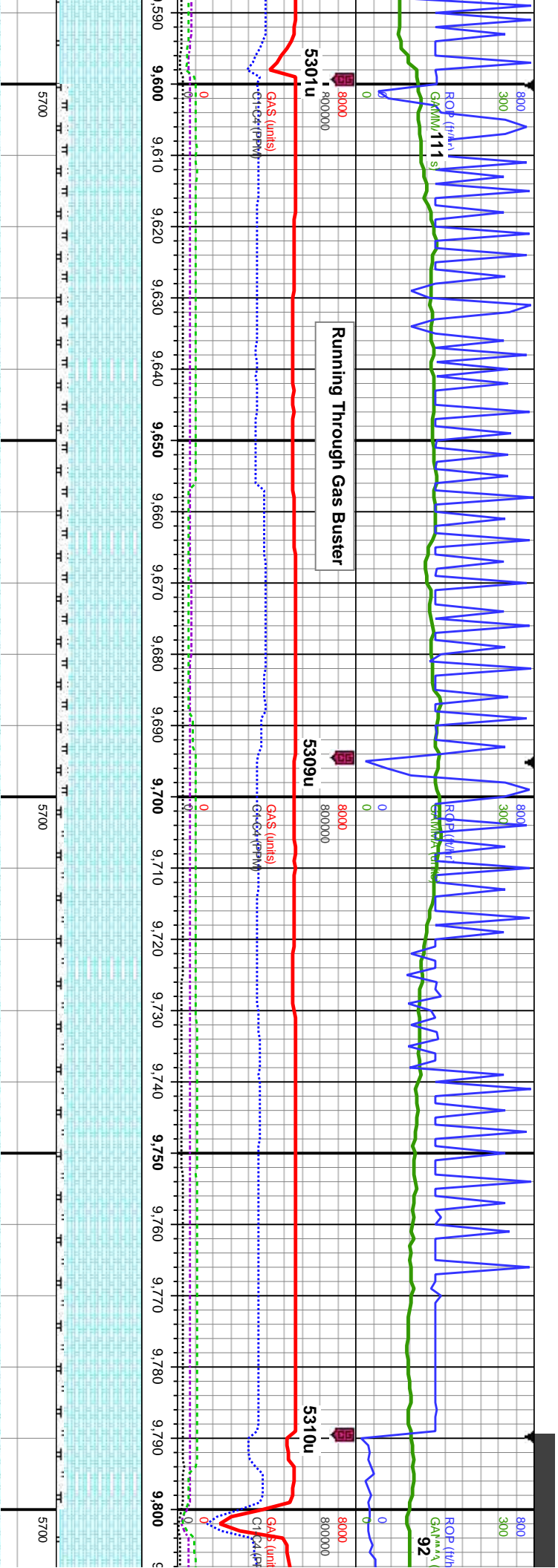
MD: 8,503'
TVD: 6,280.79'
Inclination: 91.55 °
Azimuth: 178.62 °
VS: 1,755.02'

MD: 8,597'
TVD: 6,279.17'
Inclination: 90.43 °
Azimuth: 177.35 °
VS: 1,842.5'

MD: 8,692'
TVD: 6,278.15'
Inclination: 90.8 °
Azimuth: 178.36 °
VS: 1,930.83'

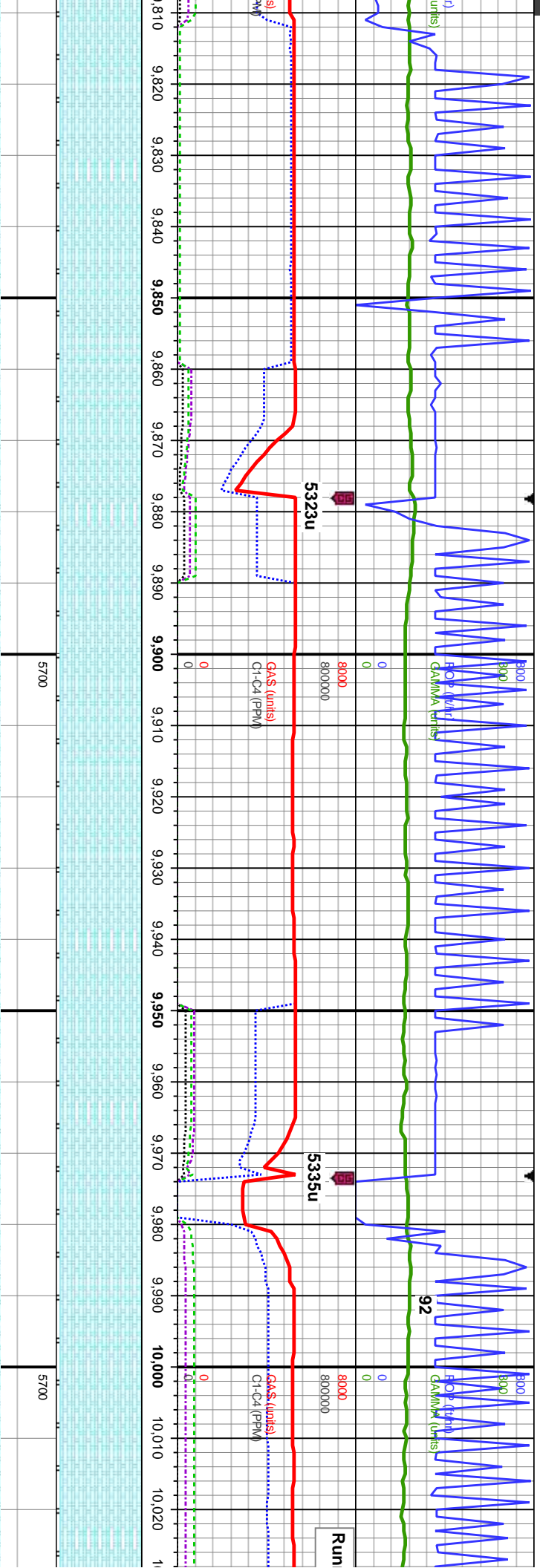
100% CHK: med-it gy, occ dk gy, mot, sb	100% CHK: med-it gy, occ dk gy, mot, sb	95% CHK: lt-med gy, occ dk gy, mot, sb	95% CHK: lt-med gy, occ dk gy, mot, sb
blky-blky, sft-sl frm, rthy-sb wxy, tr cal incl, tr	blky-blky, sft-sl frm, rthy-sb wxy, tr cal incl, tr	blky-blky, sft-sl frm, rthy-sb wxy, occ cal incl	blky-blky, sft-sl frm, rthy-sb wxy, occ cal incl
pyr, tr cal incl, mod chk flor, mod od, immed	pyr, tr cal incl, mod chk flor, mod od, immed	5%: MRLST: med-dk gy, blk, sb pty-blky, sl	5%: MRLST: med-dk gy, blk, sb pty-blky, sl
bri whi bl, even thk bri wh yel ring, thk yel	bri whi bl, even thk bri wh yel ring, thk yel	frm-mod hd, arg-sily tex, scatt cal frags, g	frm-mod hd, arg-sily tex, scatt cal frags, g
brn stn	brn stn	chk flor, mod od, fast stmg bri whi bl, even	chk flor, mod od, fast stmg bri whi bl, even
mod thk mod yel amb ring, thk yel brn stn	mod thk mod yel amb ring, thk yel brn stn	mod thk mod yel amb ring, thk yel brn stn	mod thk mod yel amb ring, thk yel brn stn





MD: 9,641' TVD: 6,279.84' Inclination: 89.57 ° Azimuth: 178.73 ° VS: 2,813.62'		MD: 9,735' TVD: 6,280.52' Inclination: 89.6 ° Azimuth: 179.37 ° VS: 2,901.74'	
85% CHK: med-dk gy, occ lt gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 15%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, tr cal frags, mod chk flor, g od, mod bri wht bl, — even mod bri wht yel ring, mod yel brn str	85% CHK: med-dk gy, occ lt gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 15%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, tr cal frags, mod chk flor, g od, mod bri wht bl, — even mod bri wht yel ring, mod yel brn str	90% CHK: med-dk gy, occ lt gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 10%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, tr cal frags, mod chk flor, g od, mod bri wht bl, — even mod wht yel ring, mod yel brn str	90% CHK: med-dk gy, occ lt gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 10%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, tr cal frags, mod chk flor, g od, mod bri wht bl, — even mod wht yel ring, mod yel brn str
85% CHK: med-dk gy, occ lt gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 15%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, tr cal frags, mod chk flor, g od, mod bri wht bl, — even mod bri wht yel ring, mod yel brn str	85% CHK: med-dk gy, occ lt gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 15%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, tr cal frags, mod chk flor, g od, mod bri wht bl, — even mod bri wht yel ring, mod yel brn str	90% CHK: med-dk gy, occ lt gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 10%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, tr cal frags, mod chk flor, g od, mod bri wht bl, — even mod wht yel ring, mod yel brn str	95% CHK: med-dk gy, occ lt gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 10%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, tr cal frags, mod chk flor, g od, mod bri wht bl, — even mod bri wht yel ring, mod yel brn str





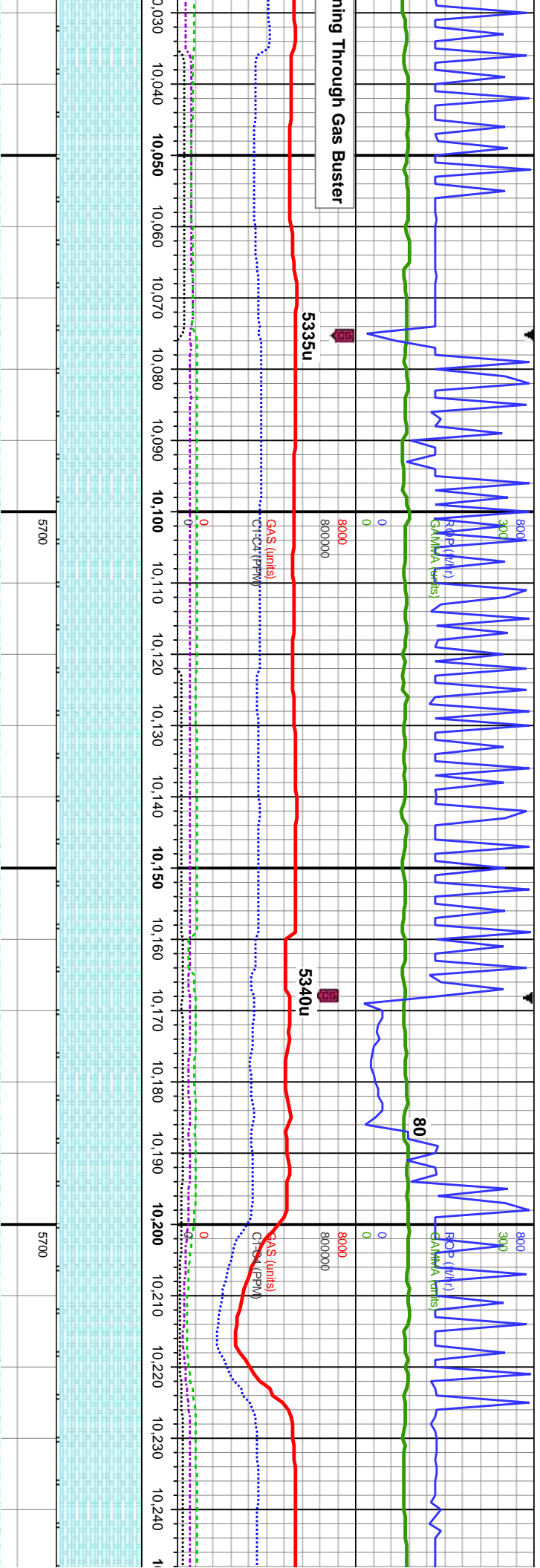
MD: 9,830'
TVD: 6,280.87'
Inclination: 89.97 °
Azimuth: 177.01 °
VS: 2,990.28'

HK: med-dk gy, occ lt gy, mot, sb Kly, sft-sl frm, rthy-sb wxy, 5%:	95% CHK: med-dk gy, occ lt gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 5%:	95% CHK: lt-med gy, occ dk gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, occ cal incl, 5%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, scatt cal frags, g chk flor, mod od, mod bri wht bl, — even mod wht yel ring, mod yel brn str	95% CHK: lt-med gy, occ dk gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, occ cal incl, 5%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, scatt cal frags, g chk flor, mod od, mod bri wht bl, — even mod wht yel ring, mod yel brn str	95% CHK: lt-med gy, occ dk gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, occ cal incl, 5%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, scatt cal frags, g chk flor, mod od, mod bri wht bl, — even mod wht yel ring, mod yel brn str
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MD: 9,925'
TVD: 6,280.97'
Inclination: 89.91 °
Azimuth: 177.76 °
VS: 3,078.33'

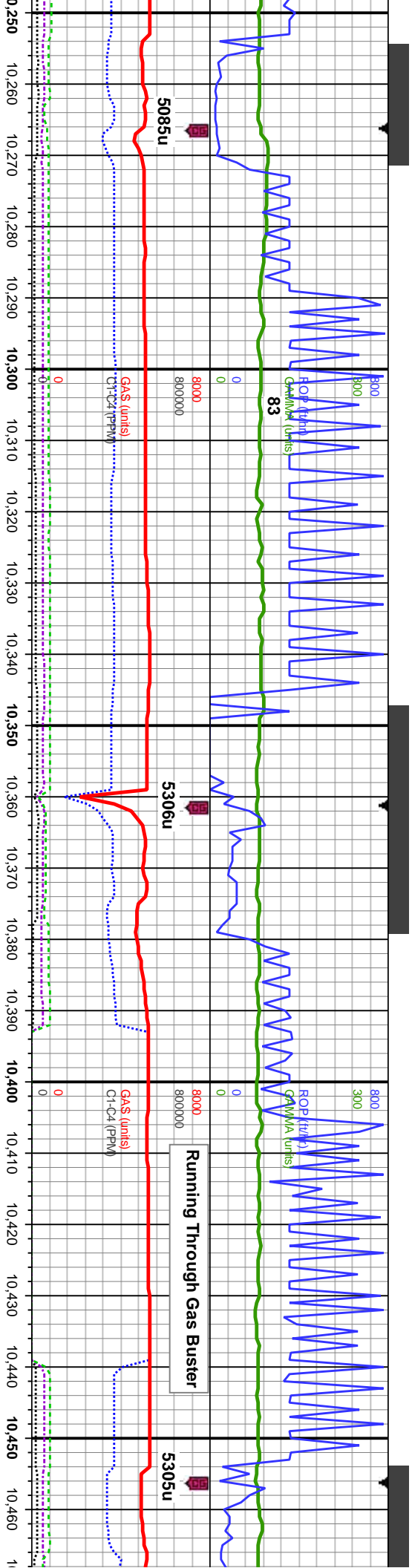
MD: 10,020'
TVD: 6,281.59'
Inclination: 89.33 °
Azimuth: 177.98 °
VS: 3,166.68'





5 ° °	ddk gy, mot, sb o wxy, occ cal incl,	95% CHK: lt-med gy, occ dk gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, occ cal incl,	MD: 10,116' TVD: 6,282.21' Inclination: 89.91 ° Azimuth: 179.23 ° TVD (ft) VS: 3,256.41'	ddk gy, mot, sb o wxy, occ cal incl,	95% CHK: lt-med gy, occ dk gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, occ cal incl,	MD: 10,211' TVD: 6,281.9' Inclination: 90.46 ° Azimuth: 178.29 ° VS: 3,345.29'	ddk gy, mot, sb o wxy, occ cal incl,	95% CHK: lt-med gy, occ dk gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, occ cal incl,
	blky, sb pty-blky, sl frm-mod hd, arg-sly tex, mtx: calc, scatt cal frags, g chk flor, g od, v fast bri wht bl, even thk bri wh yel ring, v g yel brn stn	blky-biky, sft-sl frm, rthy-sb wxy, occ cal incl, 5%: MRLST: med-dk gy, blk, sb pty-blky, sl frm-mod hd, arg-sly tex, mtx: calc, scatt cal frags, g chk flor, g od, v fast bri wht bl, even thk bri wh yel ring, v g yel brn stn		blky, sb pty-blky, sl frm-mod hd, arg-sly tex, mtx: calc, scatt cal frags, g chk flor, g od, v fast bri wht bl, even thk bri wh yel ring, v g yel brn stn	blky-biky, sft-sl frm, rthy-sb wxy, occ cal incl, 5%: MRLST: med-dk gy, blk, sb pty-blky, sl frm-mod hd, arg-sly tex, mtx: calc, scatt cal frags, g chk flor, g od, v fast bri wht bl, even thk bri wh yel ring, v g yel brn stn		blky, sb pty-blky, sl frm-mod hd, arg-sly tex, mtx: calc, scatt cal frags, g chk flor, g od, v fast bri wht bl, even thk bri wh yel ring, v g yel brn stn	blky-biky, sft-sl frm, rthy-sb wxy, occ cal incl, 5%: MRLST: med-dk gy, blk, sb pty-blky, sl frm-mod hd, arg-sly tex, mtx: calc, scatt cal frags, g chk flor, g od, v fast bri wht bl, even thk bri wh yel ring, v g yel brn stn



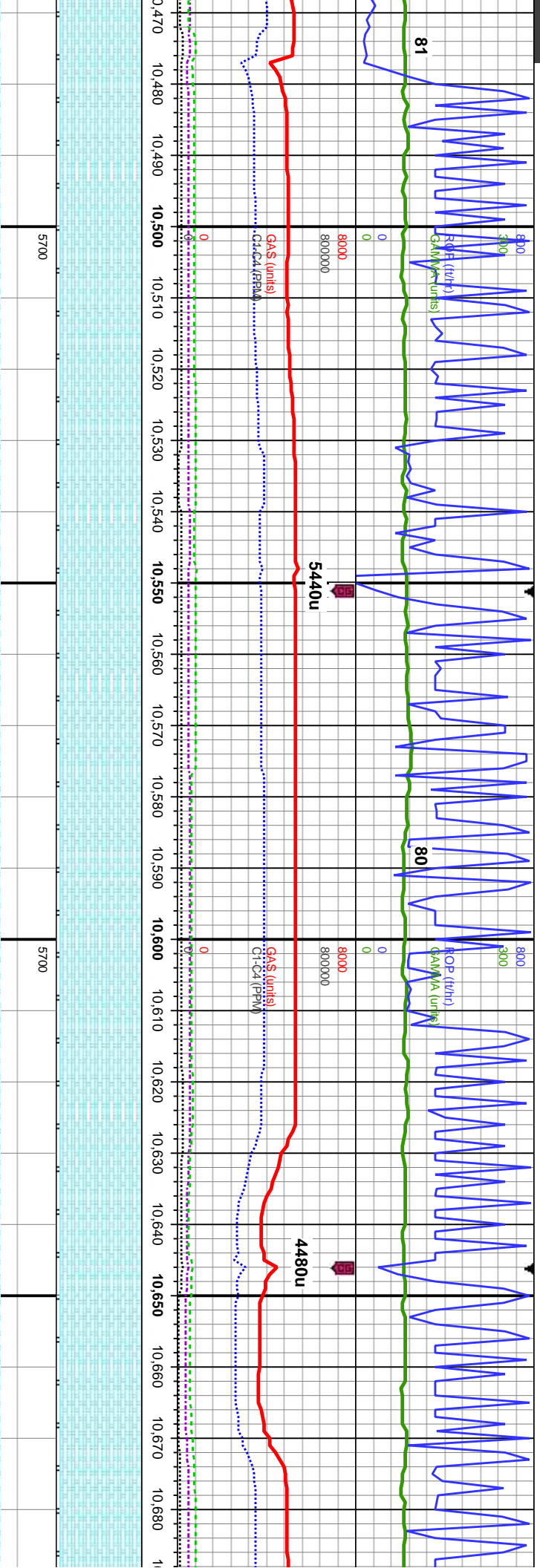


MD: 10,306'
TVD: 6,281.83'
Inclination: 89.63 °
Azimuth: 177.54 °
VS: 3,433.67'

MD: 10,401'
TVD: 6,281.88'
Inclination: 90.31 °
Azimuth: 177.36 °
VS: 3,521.76'

95% CHK: lt-med gy, occ dk gy, mot, sb blky-blky, sft-sl frm, rthy-sb wxy, 5%: MRLST: med-dk gy, blk, sb pily-blky, sl frm-mod hd, arg-sily tex, mtx: calc, g chk flor, g od, v fast bri wht bl, even thk bri wh yel ring, v g yel brn stn	95% CHK: lt-med gy, occ dk gy, mot, sb blky-blky, sft-sl frm, rthy-sb wxy, 5%: MRLST: med-dk gy, blk, sb pily-blky, sl frm-mod hd, arg-sily tex, mtx: calc, g chk flor, g od, v fast bri wht bl, even thk bri wh yel ring, g yel brn stn	95% CHK: lt-med gy, occ dk gy, mot, sb blky-blky, sft-sl frm, rthy-sb wxy, tr foss, g chk flor, g od, v fast bri wht bl, even thk bri wh yel ring, g yel brn stn	95% CHK: lt-med gy, occ dk gy, mot, sb blky-blky, sft-sl frm, rthy-sb wxy, tr foss, g chk flor, g od, v fast bri wht bl, even thk bri wh yel ring, g yel brn stn	95% CHK: lt-me blky-blky, sft-sl MRLST: med-dl frm-mod hd, arg lse cal, g chk flic thk bri wh yel fir
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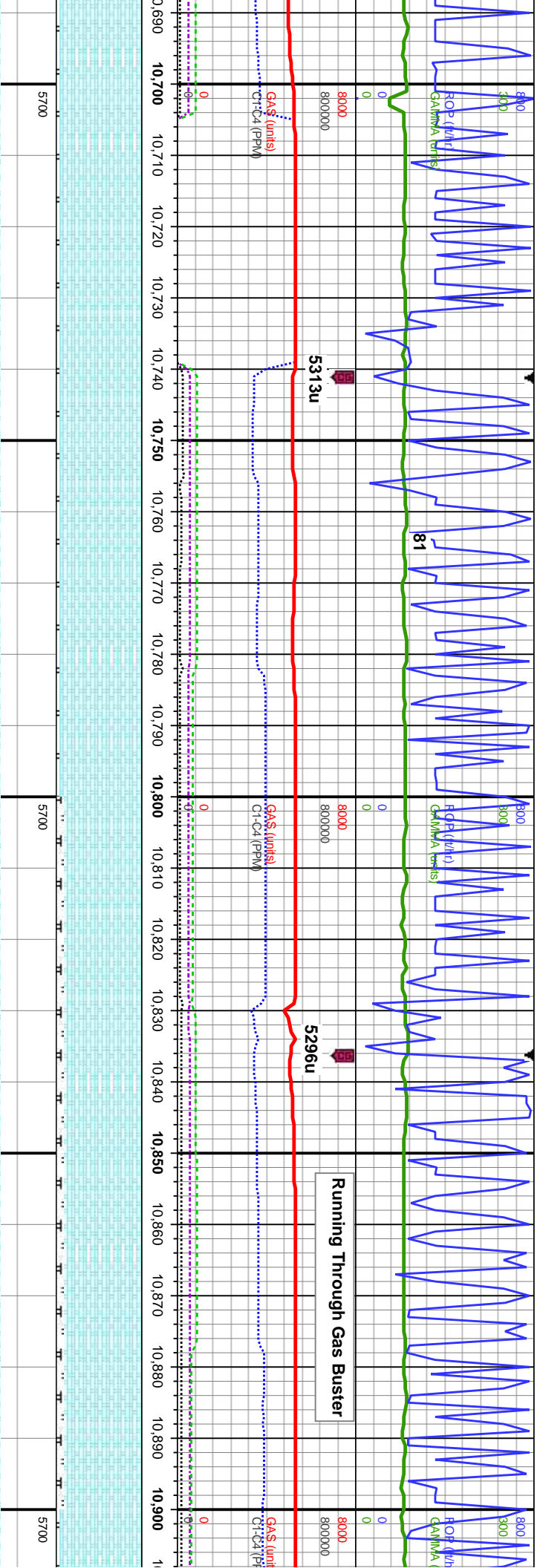
MD: 10,496'
 TVD: 6,281.72'
 Inclination: 89.88 °
 Azimuth: 176.89 °
 VS: 3,609.65'

MD: 10,591'
 TVD: 6,282.07'
 Inclination: 89.69 °
 Azimuth: 176.33 °
 VS: 3,697.22'

MD: 10,68
 TVD: 6,28
 Inclination:
 Azimuth: 1
 VS: 3,784.

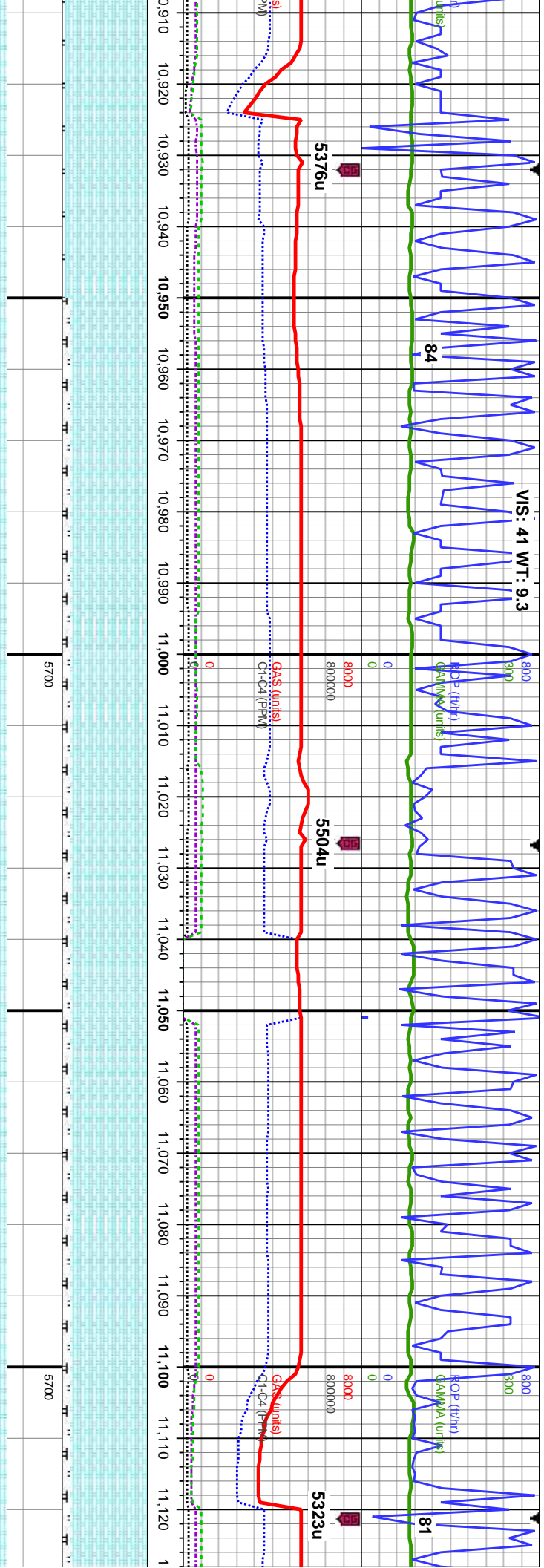
95% CHK: lt-med gy, occ dk gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 5%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, some lse cal, g chk flor, g od, mod- fast bri wht bl, even mod-thk bri wh yel ring, mod yel brn stn	95% CHK: lt-med gy, occ dk gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 5%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, tr cal frags, g chk flor, g od, v fast bri wht bl, even thk bri wh yel ring, g yel brn stn	95% CHK: lt-med gy, occ dk gy, mot, sb biky-biky, sft-sl frm, rthy-sb wxy, 5%: MRLST: med-dk gy, blk, sb pty-biky, sl frm-mod hd, arg-sly tex, mtx: calc, tr cal frags, g chk flor, g od,, v fast bri wht thk bri wh yel ring, g yel brn stn
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6'		MD: 10.781'		MD: 10.876'			
2.38'		TVD: 6,282.41'		TVD: 6,282.2'			
89.94 °		Inclination: 90.03 °		Inclination: 90.22 °			
76.85 °		Azimuth: 177.12 °		Azimuth: 177.31 °			
77'		VS: 3,872.57'		VS: 3,960.52'			
TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)	
95% CHK: lt-med gy, occ dk gy, mot, sb		90% CHK: lt-med gy, occ dk gy, mot, sb		90% CHK: lt-med gy, occ dk gy, mot, sb		95% C	
biky-blky, sft-sl frm, rthy-sb wxy, 5%:		biky-blky, sft-sl frm, rthy-sb wxy, 10%:		biky-blky, sft-sl frm, rthy-sb wxy, 10%:		biky-bl	
MRLST: med-dk gy, blk, sb pily-blky, sl		MRLST: med-dk gy, blk, sb pily-blky, sl		MRLST: med-dk gy, blk, sb pily-blky, sl		MRLS	
frm-mod hd, arg-sily tex, mtx: calc, tr cal		frm-mod hd, arg-sily tex, mtx: calc, g imbd		frm-mod hd, arg-sily tex, mtx: calc, tr imbd		frm-mo	
frags, g chk flor, g od, v fast bri wht bl, even		cal, g chk flor, g od, mod- fast bri wht bl,		cal, g chk flor, g od, mod- fast bri wht bl,		flor, g	
thk bri wh yel ring, v g yel bm stn		even mod-thk bri wh yel ring, mod yel bm		even mod-thk bri wh yel ring, mod yel bm		bri wh	
stn		stn		stn		stn	





MD: 10.971'
TVD: 6,282.12'
Inclination: 89.88 °
Azimuth: 177.21 °
VS: 4,048.5'

TVD (ft)

5700

MD: 11.066'
TVD: 6,282.39'
Inclination: 89.79 °
Azimuth: 176.86 °
VS: 4,136.33'

TVD (ft)

5700

CHK: lt-med gy, occ dk gy, mot, sb
ky, sft-sl frm, rthy-sb wxy, 5%:
T: med-dk gy, blk, sb pily-blky, sl
od hd, arg-sily tex, mtx: calc, g chk
yel ring, mod-fast bri wht bl, even mod-thk

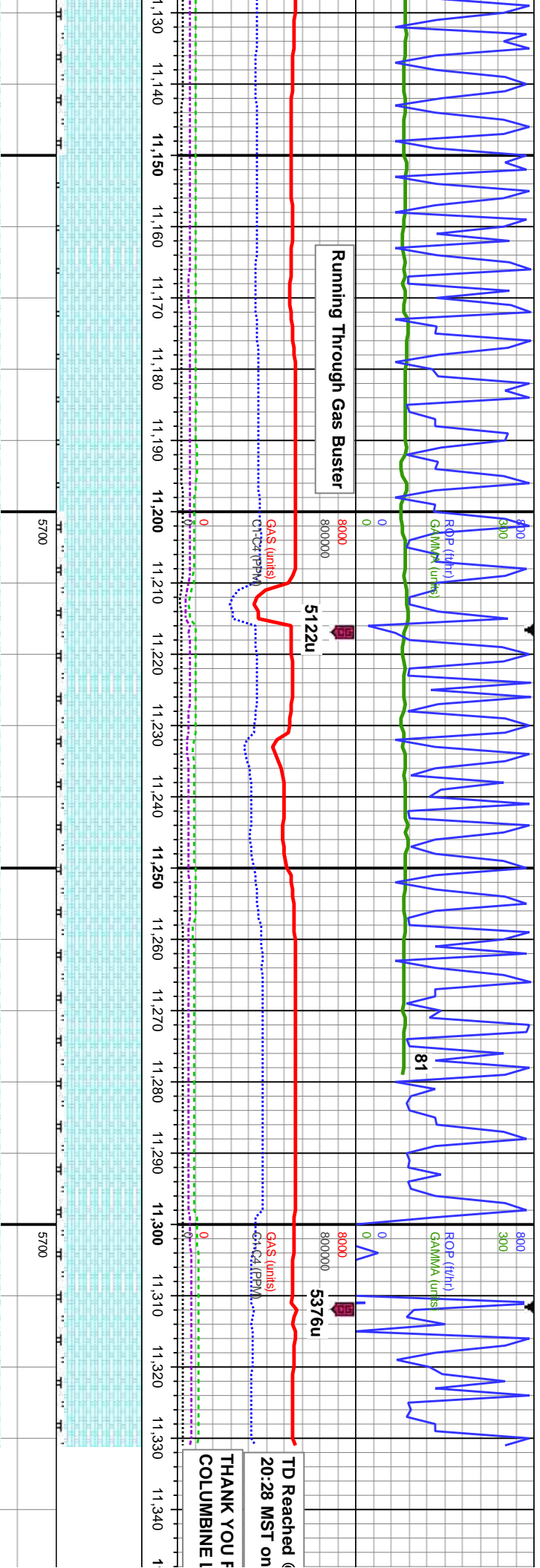
90% CHK: lt-med gy, occ dk gy, mot, sb
biky-blky, sft-sl frm, rthy-sb wxy, 10%:
MRLST: med-dk gy, blk, sb pily-blky, sl
frm-mod hd, arg-sily tex, mtx: calc, tr imbd
cal, g chk flor, g od, mod-fast bri wht bl, even
mod-thk bri wh yel ring, mod yel brn stn

90% CHK: lt-med gy, occ dk gy, mot, sb
biky-blky, sft-sl frm, rthy-sb wxy, 10%:
MRLST: med-dk gy, blk, sb pily-blky, sl
frm-mod hd, arg-sily tex, mtx: calc, g chk
flor, g od, mod-fast milky bri wht bl, even
mod-thk bri wh yel ring, mod yel brn stn

90% CHK: lt-med gy, occ dk gy, mot, sb
biky-blky, sft-sl frm, rthy-sb wxy, 10%:
MRLST: med-dk gy, blk, sb pily-blky, sl
frm-mod hd, arg-sily tex, mtx: calc, g chk
flor, g od, mod-fast milky bri wht bl, even
mod-thk bri wh yel ring, mod yel brn stn

90% CHK: lt-med gy, occ
biky-blky, sft-sl frm, rthy-s
MRLST: med-dk gy, blk, s
frm-mod hd, arg-sily tex,
flor, g od, mod-fast bri wh
bri wh yel ring, mod yel br





MD: 11,161'
TVD: 6,282.82'
Inclination: 89.69 °
Azimuth: 176.6°
VS: 4,223.97'

TVD (ft)

MD: 11,256'
TVD: 6,283.28'
Inclination: 89.75 °
Azimuth: 176.9°
VS: 4,311.62'

Projection Information:
MD: 11331'
INC: 89.94
AZM: 177.13
TVD: 6283.40
VS: 4381.00
Above or Below Plan: 3.44' B
Right or Left of Plan: 0.99 R

dk gy, mot, sb	95% CHK: lt-med gy, occ dk gy, mot, sb	90% CHK: lt-med gy, occ dk gy, mot, sb	90% CHK: lt-med gy, occ dk gy, mot, sb
b wxy, 10%:	biky-blky, sft-sl frm, rthy-sb wxy, 5%:	biky-blky, sft-sl frm, rthy-sb wxy, 10%:	rthy-sb wxy, 10%: MRLST: med-dk gy, blk, sb pily-blky, sl
sb pily-blky, sl	MRLST: med-dk gy, blk, sb pily-blky, sl	MRLST: med-dk gy, blk, sb pily-blky, sl	frm-mod hd, arg-sily tex, mtx: calc, mod chk
mtx: calc, g chk	frm-mod hd, arg-sily tex, mtx: calc, g chk	frm-mod hd, arg-sily tex, mtx: calc, mod chk	frm-mod hd, arg-sily tex, mtx: calc, mod chk
flor, g od, mod-fast bri wnt bl, even mod-thk	flor, g od, mod-fast bri wnt bl, even mod-thk	flor, g od, mod-fast bri wnt bl, even mod-thk	flor, g od, mod-fast bri wnt bl, even mod-thk
n stn	bri wh yel ring, mod yel brn stn	bri wh yel ring, mod yel brn stn	bri wh yel ring, mod yel brn stn



11,350	11,360	11,370	11,380	11,390	11,400
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A blank grid paper with a 10x10 grid of squares. The grid is divided into four 5x5 quadrants by a vertical line and a horizontal line. The top-left quadrant is shaded gray.