



Scale: 5" / 100'
Measured Depth Log

Well Name Pronghorn F-J-15HNB

Location NWNW SEC15 T5N R61W

State COLORADO

Country USA

API Number 05-123-36416-00

County WELD

Rig Number 128

Field WILDCAT

Drilling Completed 3/21/2013

Spud Date 3/13/2013

Drilling Completed 3/21/2013

Surface Coordinates 430 FNL X 1187 FWL 40.40714/-104.19999

Bottom Hole Coordinates 531 FNL X 1326 FWL (LAT:40.40703, -104.19949)

Ground Elevation 4,648

K.B. Elevation 4,664

Logged Interval 5,700 To 10,722

Total Depth 10,722

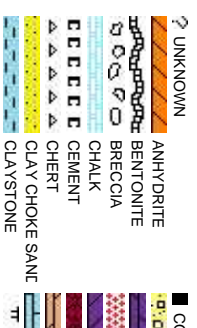
Formation NIOBRARA B-CHALK

Type of Drilling Fluid H2O, LSND

Company Bonanza Creek
Address 410 17th Street
Denver, CO 802

Name Paul McKay
Company Bonanza Creek
410 17th Street
Denver, CO 802

Wellsite Geologists



Operator

Energy Inc.

Suite 1500
202

Geologist

Energy Inc.

Suite 1500
202

Other

Kevin Geraghty
David Brooks

Rock Types

UNIT	THICKNESS (m)	DESCRIPTION	UNIT	THICKNESS (m)	DESCRIPTION
1	0.5	CONGLOMERATE	10	0.5	SHALY SILTSTONE
2	0.5	DOLOMITE	11	0.5	SILT SHALE
3	0.5	GRANITE	12	0.5	SILTSTONE
4	0.5	GYPNUM	13	0.5	TUFF
5	0.5	IGNEOUS	14	0.5	WELDED TUFF
6	0.5	SIDERITE or LIMONITE	15	0.5	
7	0.5	LIMESTONE	16	0.5	
8	0.5	MARLSTONE	17	0.5	
9	0.5		18	0.5	

Accessories

Fossils

[illegible]

Other Symbols

Oil Show

Oil Show


































☒ MOLDIC
☐ ORGANIC
☐ DEAD
☐ EVEN
☒ VUGGY

☒ FAULT
☒ FORMATION TOP
☒ GAS SHOW
☒ MINDEPTH
☐ MN DEPTH

☒ WIRELINE TESTED - LEFT
☒ WIRELINE TESTED - RT
☒ E EARTHY
☒ FINELYLYXN
☒ GRANSTONE
☒ L LITHOGRAPHIC

Rounding

Engineering

	QUESTIONABLE		NORMAL FAULT		ANGULAR		M _X MICROXYLON
	SPOTTED STAINING		OIL SHOW		R ROUNDED		M _S MUDSTONE
Engineering							
	BIT		OVERTURNED STRATA		S SUBANG		P _S PACKSTONE
	CONNECTION (LEFT)		REVERSE FAULT		S SUBREND		W _S WACKESTONE
	CONNECTION (RIGHT)		SIDEWALL CORE (LEFT)	Textures			
	FENESTRAL		SIDEWALL CORE (RIGHT)		B _S BOUNDSTONE		M MODERATE
	F FRACTURE		SLIDE		C CHALKY		P POOR
	INTERCRYSTALLINE		SURVEY		C _X CRYPTOXYLON		W WELL
	INTEROOLITIC		TRIP GAS	Sorting			
	DST INTERVAL						

ROP
ROF
GAMMA

Bit Data
Bit #: 3
Type: HE04JMRSW
Size: 8 3/4
Depth In: 5,529 '
Jets: 3-20
S/N: 1335621

Total Gas & Chromatograph
GAS
C1
C2
C3
C4
CO2

COLUMBINE
LOGGING RIGGED UP
ON 03/16/2013
MANNED 2-PERSON
LOGGING WITH
BLOODHOUND GAS
CHROMATOGRAPH
UNIT #0312 BEGAN
ON 03/16/2013

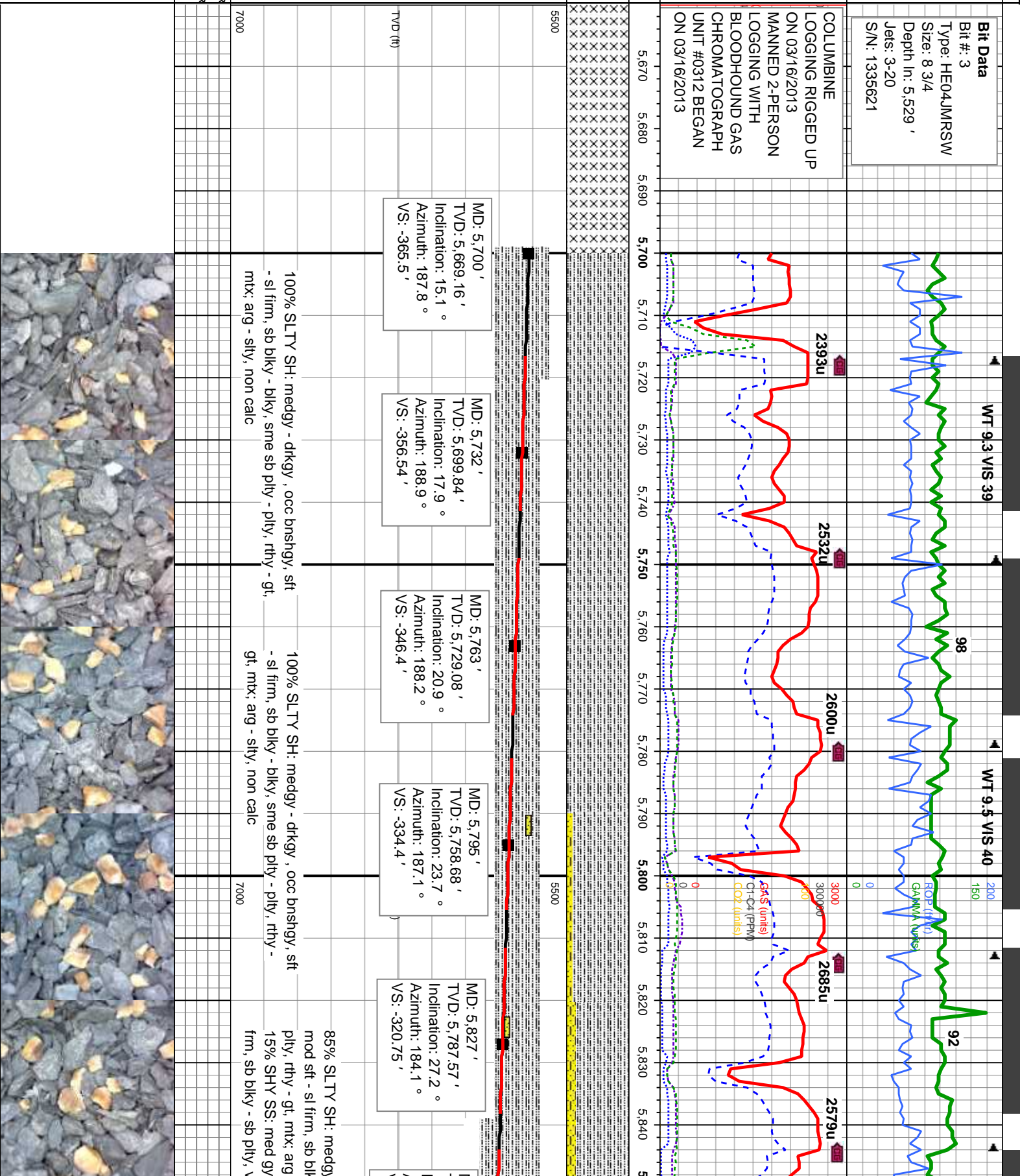
Depth Labels

% Lith

Well Bore
TVD

Oil Show

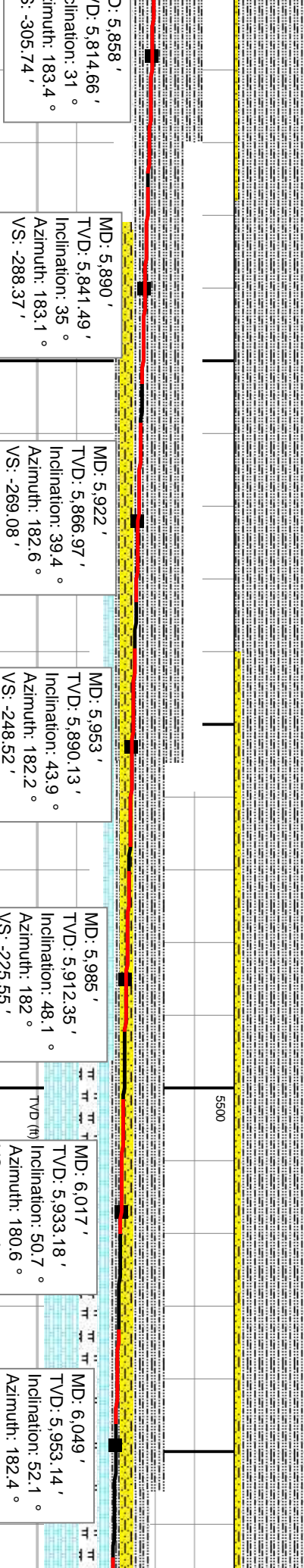
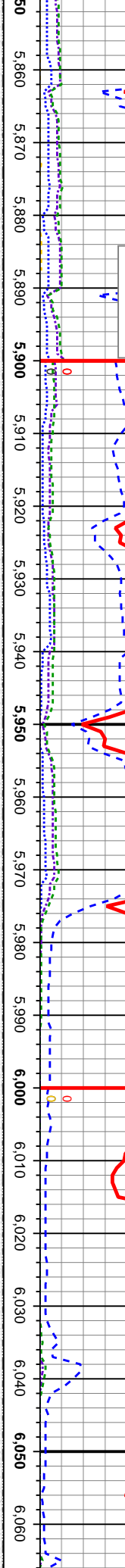
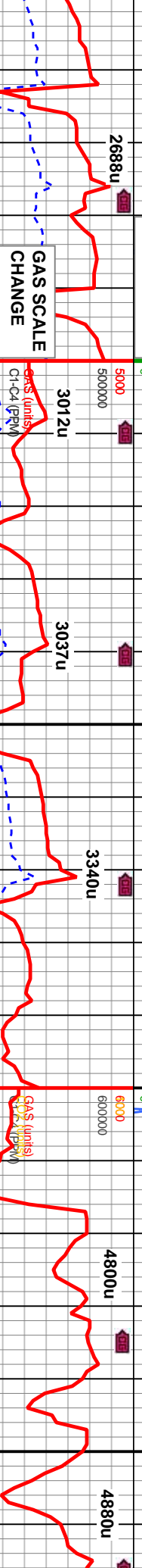
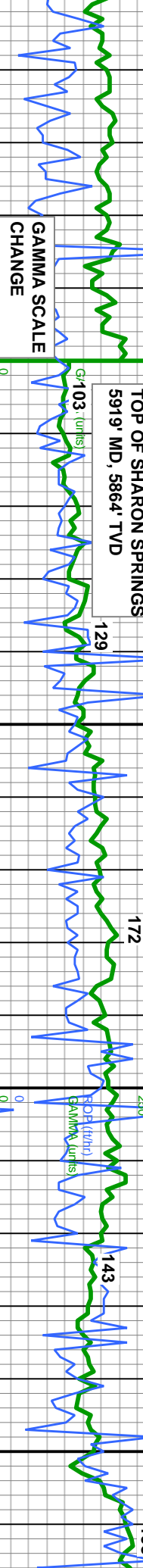
Images



WT 9.5 VIS 41

TOP OF SHARON SPRINGS
5919' MD, 5864' TVD

WT 9.6 VIS 41



MD: 5,858' TVD: 5,814.66' Inclination: 31° Azimuth: 183.4° VS: -305.74'

MD: 5,890' TVD: 5,841.49' Inclination: 35° Azimuth: 183.1° VS: -288.37'

MD: 5,922' TVD: 5,866.97' Inclination: 39.4° Azimuth: 182.6° VS: -269.08'

MD: 5,953' TVD: 5,890.13' Inclination: 43.9° Azimuth: 182.2° VS: -248.52'

MD: 5,985' TVD: 5,912.35' Inclination: 48.1° Azimuth: 182° VS: -225.55'

MD: 6,017' TVD: 5,933.18' Inclination: 50.7° Azimuth: 180.6° VS: -201.28'

MD: 6,049' TVD: 5,953.14' Inclination: 52.1° Azimuth: 182.4° VS: -176.3'

- drky, occ bnshgy,
- bly, sme sb ply -
- slty, non calc
- med - lt gy, sft - mod
non calc

100% SLTY SH: medgy - drky, occ bnshgy, sft - sl firm,
sb bly - bly, sme sb ply - ply, rthy - gt, mt; arg - slty,
non calc

90% SLTY SH: medgy - drky, occ bnshgy, sft - sl firm, sb bly -
bly, sme sb ply - ply, rthy - gt, mt; arg - slty, not calc,
10% SHY SS: med gy, med - lt gy, sft - mod frm, sb bly - sb ply,
non calc

7000



03/17/2013

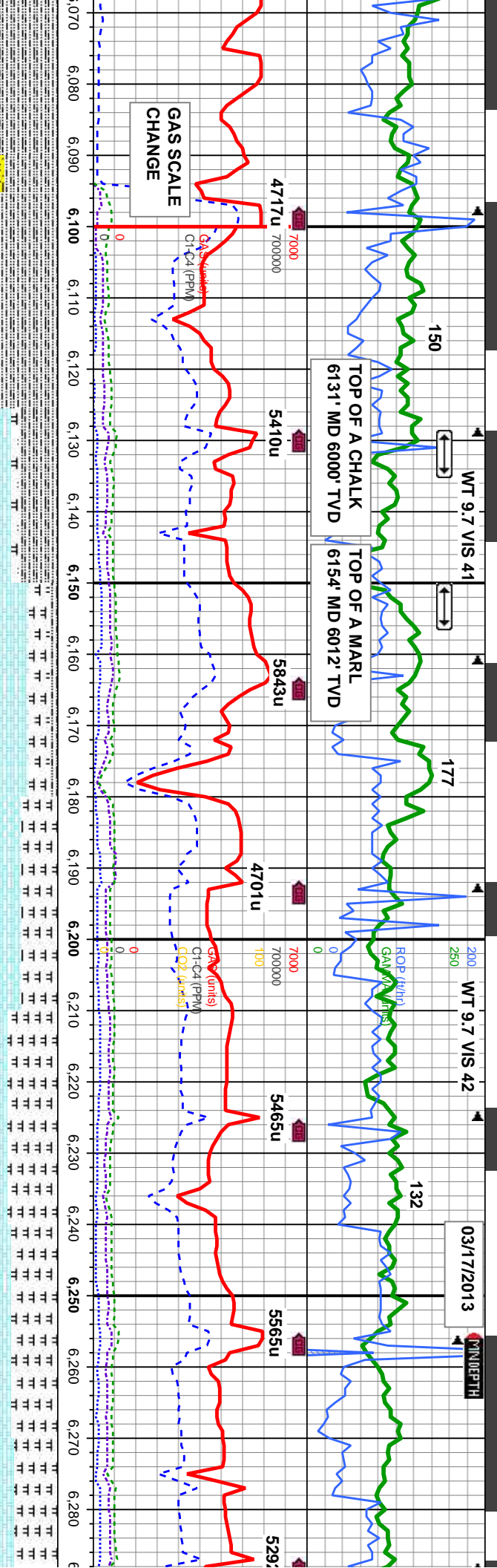
WT 9.7 VIS 42

WT 9.7 VIS 41

TOP OF A MARL
6154' MD 6012' TVD

TOP OF A CHALK
6131' MD 6000' TVD

GAS SCALE
CHANGE



MD: 6,176 '
TVD: 6,023 '
Inclination: 61.1 °
Azimuth: 180.6 °
VS: -70.63 '

MD: 6,207 '
TVD: 6,037.63 '
Inclination: 62.6 °
Azimuth: 178.2 °
VS: -43.3 '

MD: 6,239 '
TVD: 6,051.88 '
Inclination: 64.5 °
Azimuth: 179.6 °
VS: -14.65 '

MD: 6,271 '
TVD: 6,064.94 '
Inclination: 67.3 °
Azimuth: 179.9 °
VS: 14.55 '

MD: 6,112 '
TVD: 5,990.04 '
Inclination: 56.5 °
Azimuth: 182.2 °
VS: -125.39 '

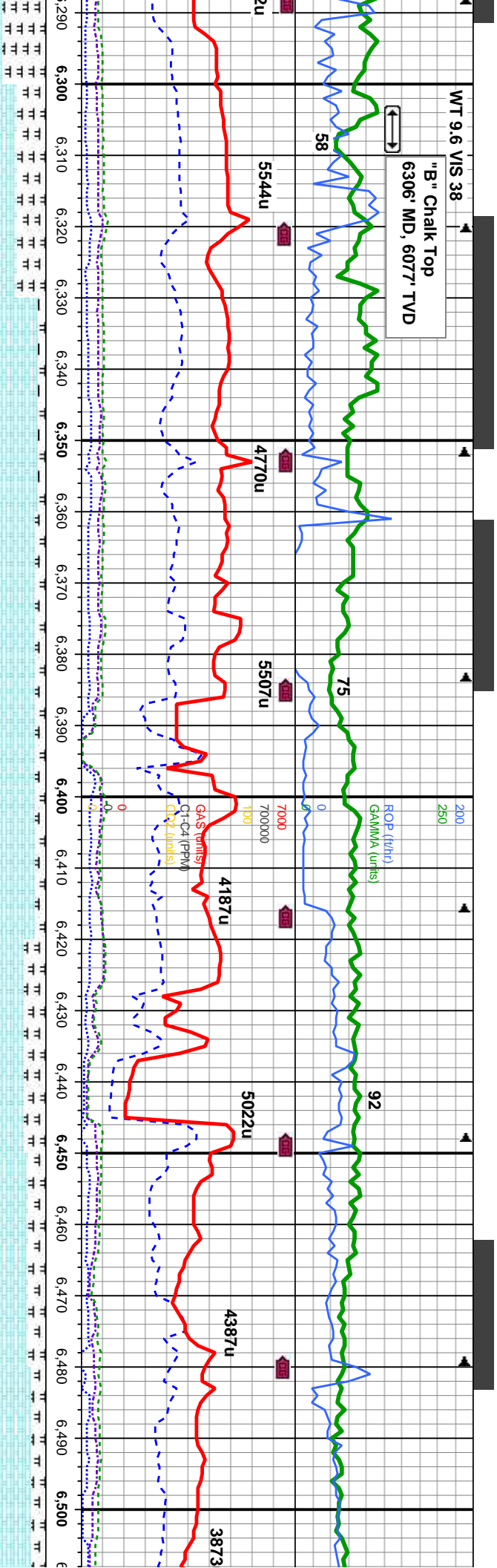
MD: 6,144 '
TVD: 6,007.07 '
Inclination: 59.2 °
Azimuth: 182.4 °
VS: -98.35 '

50% CHK: lt gy - med gy brn, occ dk gy, mod mot, blk - sb blk, occ sb ply, brit - mod firm, chky - sbwxy, mtx: v calc, 50% MRLST: blk - dk gy, blk - sb blk, sme sb ply, sft - firm, rthy, mtx: aren - slty, mod calc, tr bent, mod bishwh string, mod even yel resd ring, mod bl flr

60% MRLST: blk - dk gy, blk - sb blk, sme sb ply, sft - firm, rthy, mtx: aren - slty, mod calc 40% CHK: lt gy - med gy brn, occ dk gy, mod mot, blk - sb blk, occ sb ply, brit - mod firm, chky - sbwxy, mtx: v calc, mod bishwh string, mod even yel resd ring, mod bl flr

SH: medgy - drkgy, occ bnshgy, sft - sl firm, sb blk - b ply - ply, rthy - gt, mtx: arg - slty, sl calc, tr bent
SS: med gy, med - lt gy, sft - mod firm, sb blk - sb ply,





MD: 6,303 '
TVD: 6,076.33 '
Inclination: 71 °
Azimuth: 179.6 °
VS: 44.44 '

MD: 6,335 '
TVD: 6,085.71 '
Inclination: 74.9 °
Azimuth: 178 °
VS: 75.03 '

MD: 6,366 '
TVD: 6,092.34 '
Inclination: 80.4 °
Azimuth: 179.7 °
VS: 105.3 '

MD: 6,398 '
TVD: 6,096.05 '
Inclination: 86.3 °
Azimuth: 180.8 °
VS: 137.06 '

MD: 6,430 '
TVD: 6,097.55 '
Inclination: 88.3 °
Azimuth: 180.4 °
VS: 169 '

MD: 6,462 '
TVD: 6,098.45 '
Inclination: 88.5 °
Azimuth: 180.8 °
VS: 200.97 '

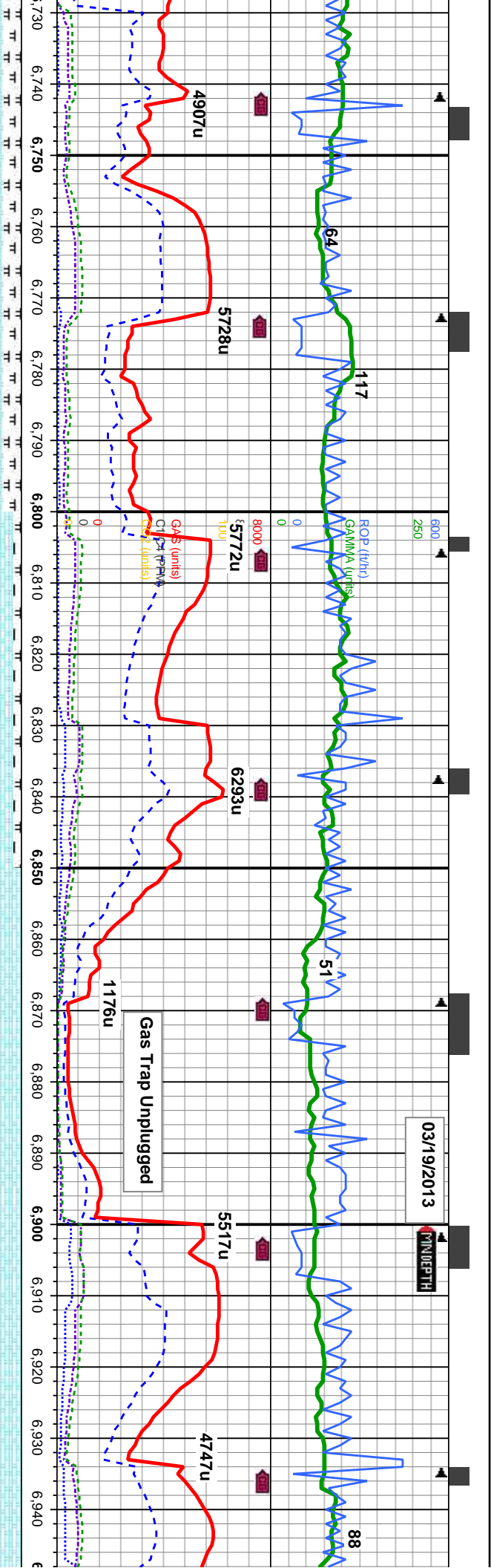
MD: 6,494 '
TVD: 6,099.06 '
Inclination: 89.3 °
Azimuth: 179.2 °
VS: 232.96 '

60% CHK: lt gy - med gy brn, occ crm, mod mot, blk - sb blk, occ sb ply, brit - mod firm, chky - sbwxy, mtx, v calc, 40% MRLST: blk - dk gy, blk - sb blk, sme sb ply, mod sft - firm, rthy, mtx; aren - silty, mod calc, mod bishwh stmg, mod even yel resdl ring, mod bl flr

85% CHK: lt gy - med gy brn, occ crm, mod mot, blk - sb blk, occ sb ply, brit - mod firm, chky - sbwxy, mtx, v calc, 15% MRLST: blk - dk gy, blk - sb blk, sme sb ply, mod sft - firm, rthy, mtx; aren - silty, mod calc, tr gysghn sh, tr bent, gd od, mod bishwh stmg, mod even yel resdl ring, mod bl flr

70% CHK: lt gy - dk gy brn, occ crm, mod mot, blk - sb blk, occ sb ply, brit - mod firm, chky - sbwxy, mtx; v calc, 30% MRLST: blk - dk gy, blk - sb blk, sme sb ply, mod sft - firm, rthy, mtx; aren - silty, mod calc, abnt sec cal, scat inoc fos, tr bent, fr od, mod bishwh stmg, mod even yel resdl ring, mod bl flr





MD: 6.753 '
TVD: 6.098.85 '
Inclination: 90.9 °
Azimuth: 179.2 °
VS: 491.88 '

MD: 6.785 '
TVD: 6.098.29 '
Inclination: 91.1 °
Azimuth: 179.9 °
VS: 523.87 '

MD: 6.816 '
TVD: 6.097.67 '
Inclination: 91.2 °
Azimuth: 179.9 °
VS: 554.86 '

MD: 6.849 '
TVD: 6.096.95 '
Inclination: 91.3 °
Azimuth: 180.1 °
VS: 587.84 '

MD: 6.882 '
TVD: 6.096.4 '
Inclination: 90.6 °
Azimuth: 179.6 °
VS: 620.83 '

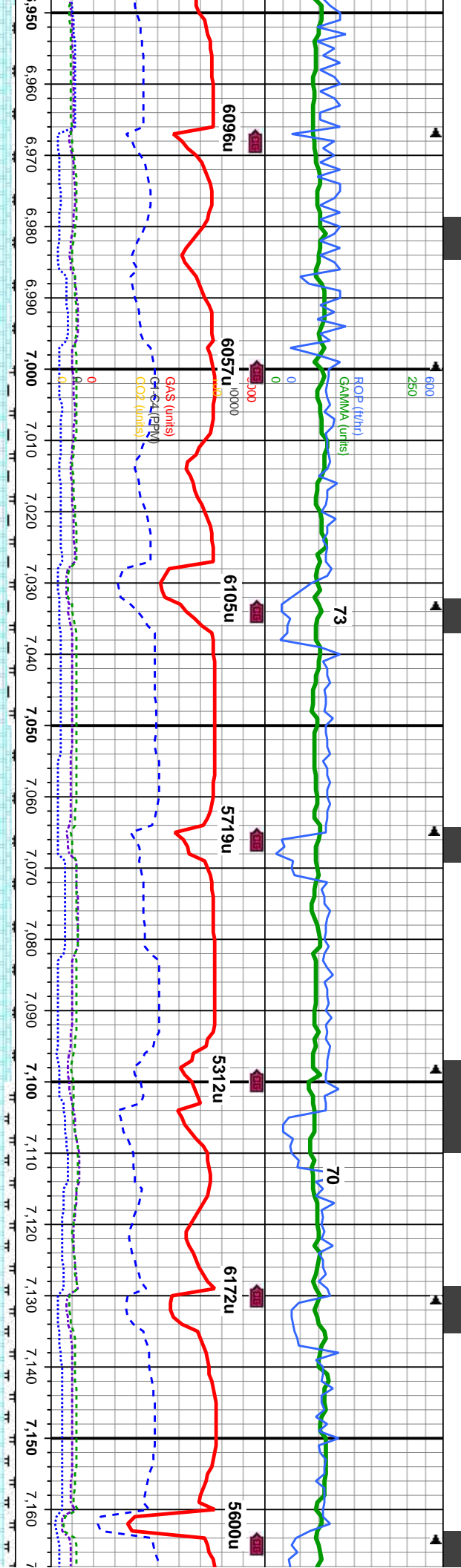
MD: 6.914 '
TVD: 6.096.04 '
Inclination: 90.7 °
Azimuth: 178.5 °
VS: 652.83 '

MD: 6.947 '
TVD: 6.095 '
Inclination: '
Azimuth: 178.5 °
VS: 685.82 '

75% CHK: lt gy - dk gy brn, occ crm, mod mot, blk - sb blk, occ sb ply, brit - mod firm, chky - sbwxy, mt; v calc, 25% MRLST: blk - dk gy, blk - sb blk, sme sb ply, mod sft - firm, rthy, mt; aren - silty, mod calc, scat sec & lse cal, some inoc fos, tr bent, mod bishwh stmg, thk yel resdl ring, mod bl flor

100% CHK: lt gy - dk gy brn, occ crm, mod mot, blk - sb blk, occ sb ply, brit - mod firm, chky - sbwxy, mt; v calc, some inoc fos, tr bent, mod bishwh stmg, thk yel resdl ring, mod bl flor



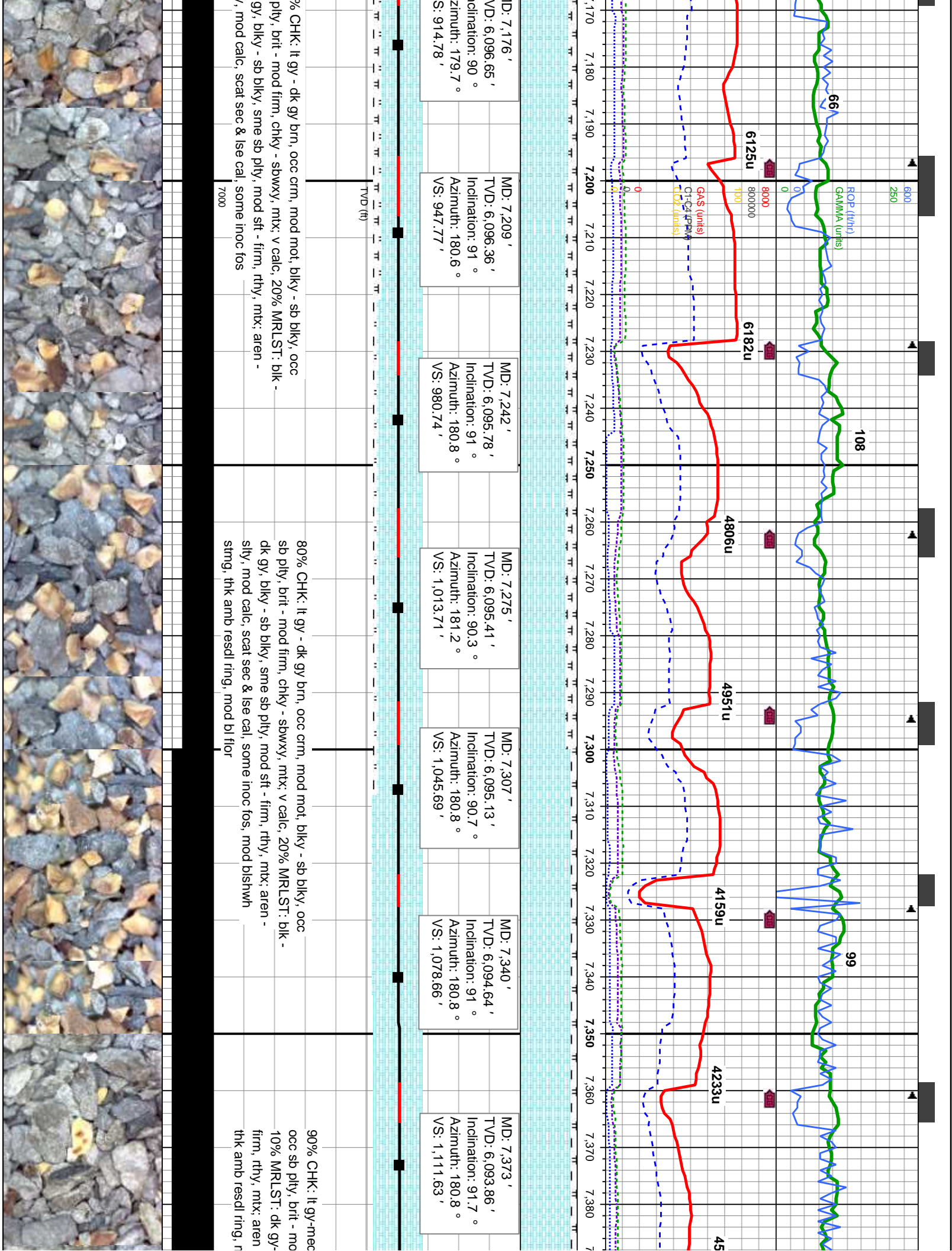


MD: 6,980 ' TVD: 6,095.29 ' Inclination: 90.5 ° Azimuth: 177.8 ° VS: 718.82 '	MD: 7,012 ' TVD: 6,095.21 ' Inclination: 89.8 ° Azimuth: 177.8 ° VS: 750.81 '	MD: 7,045 ' TVD: 6,095.55 ' Inclination: 89 ° Azimuth: 176.4 ° VS: 783.8 '	MD: 7,078 ' TVD: 6,096.01 ' Inclination: 89.4 ° Azimuth: 178.7 ° VS: 816.79 '	MD: 7,111 ' TVD: 6,096.36 ' Inclination: 89.4 ° Azimuth: 178.2 ° VS: 849.78 '	MD: 7,144 ' TVD: 6,096.59 ' Inclination: 89.8 ° Azimuth: 178.7 ° VS: 882.78 '
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90% CHK: lt gy - dk gy brn, occ crm, mod mot, blk - sb blk, occ sb ply, brit - mod firm, chky - sbwxy, mt; v calc, 10% MRLST: blk - dk gy, blk - sb blk, sme sb ply, mod sft - firm, rthy, mt; aren - slty, mod calc, scat sec & lse cal, some inoc fos, tr bent, fast blshwh string, thn amb resdl ring, mod bl flr

85% CHK: lt gy - dk gy brn, occ crm, mod mot, blk - sb blk, occ sb ply, brit - mod firm, chky - sbwxy, mt; v calc, 15% MRLST: blk - dk gy, blk - sb blk, sme sb ply, mod sft - firm, rthy, mt; aren - slty, mod calc, scat sec & lse cal, some inoc fos, fast blshwh string, mod amb resdl ring, mod bl flr





WT 9.4 VIS 42

117

77

114

ROP (ft/hr)
GAMMA (units)

600
250
0

GA\$ (units)
G1 G4 (PPM)
G02 (units)

High Gas on

5412u

5684u

5633u

5552u

5973u

5954u

5957u

610 7.620 7.630 7.640 7.650 7.660 7.670 7.680 7.690 7.700 7.710 7.720 7.730 7.740 7.750 7.760 7.770 7.780 7.790 7.800 7.810 7.820

MD: 7.635 '
TVD: 6,098.17 '
Inclination: 87.6 °
Azimuth: 181 °
VS: 1,373.16 '

MD: 7.667 '
TVD: 6,099.32 '
Inclination: 88.3 °
Azimuth: 181 °
VS: 1,405.12 '

MD: 7.700 '
TVD: 6,100.01 '
Inclination: 89.3 °
Azimuth: 180.6 °
VS: 1,438.09 '

MD: 7.733 '
TVD: 6,100.09 '
Inclination: 90.4 °
Azimuth: 180.8 °
VS: 1,471.07 '

MD: 7.766 '
TVD: 6,099.66 '
Inclination: 91.1 °
Azimuth: 181.3 °
VS: 1,504.03 '

MD: 7.799 '
TVD: 6,098.97 '
Inclination: 91.3 °
Azimuth: 179.9 °
VS: 1,537.01 '

MD: 7.820 '
TVD: 6,098.97 '
Inclination: 91.3 °
Azimuth: 179.9 °
VS: 1,537.01 '

not, blkly - sb blkly, occ
ntx: v calc, 5%
e sb ply, sft - firm,
l, occ inoc fos, g od,
mod bl flor

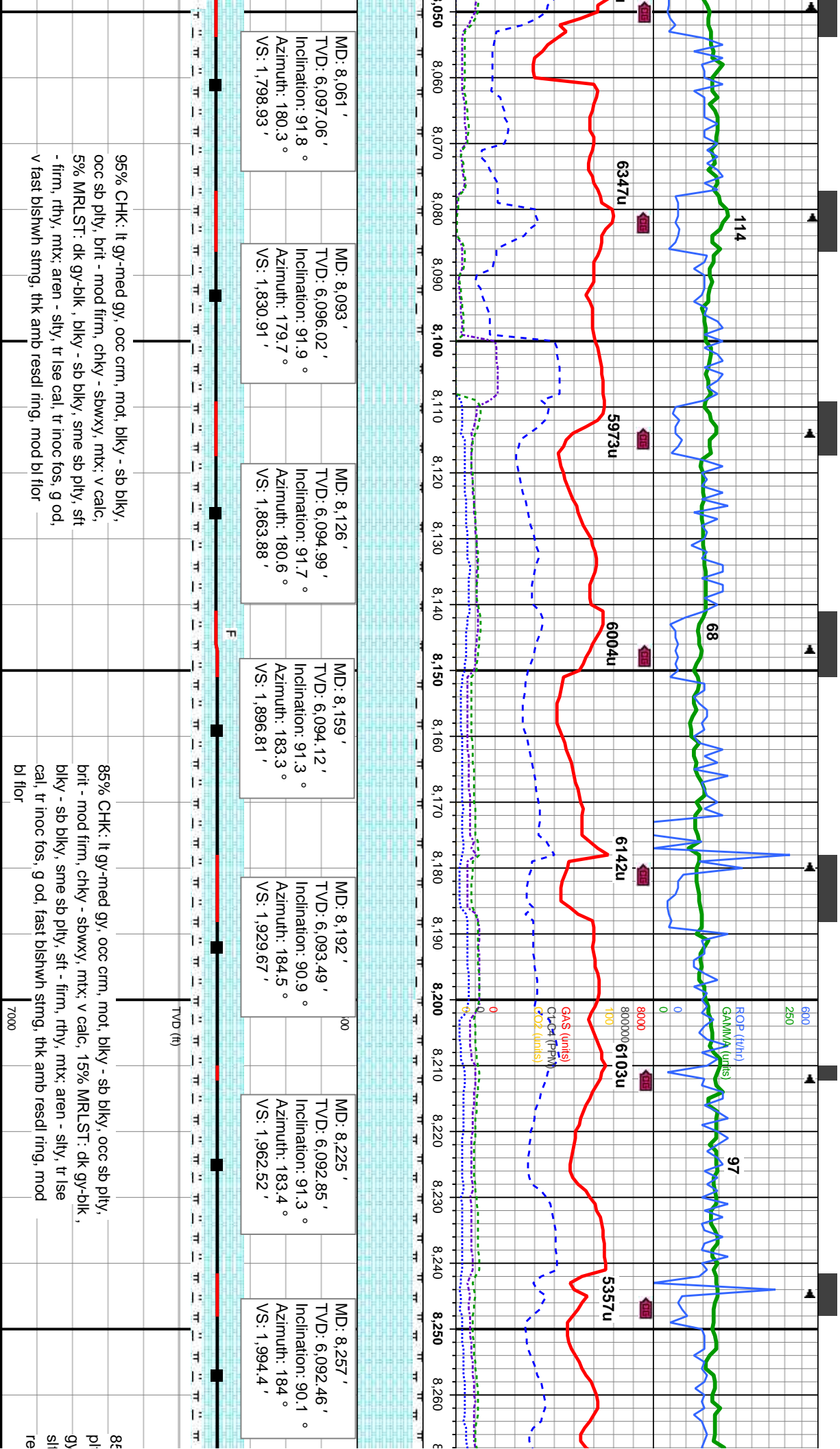
70% CHK: lt gy-med gy, occ gy brn, mot, blkly - sb blkly, occ
sb ply, brit - mod firm, chky - sbwxy, mtx: v calc, 30%
MRLST: dk gy-blk, blkly - sb blkly, sme sb ply, sft - firm,
rthy, mtx: aren - silty, scat sec & ise cal, some inoc fos,
some bent, tr pyr, g od, slow bishwh mky string, thk amb
resd ring, mod bl flor

70% CHK: lt gy-med gy, occ gy brn, mot, blkly - sb blkly, occ
ply, brit - mod firm, chky - sbwxy, mtx: v calc, 30% MRLS
gy-blk, blkly - sb blkly, sme sb ply, sft - firm, rthy, mtx: aren
scat sec & ise cal, some inoc fos, some bent, tr pyr, g od,
bishwh string, thk amb resd ring, mod bl flor

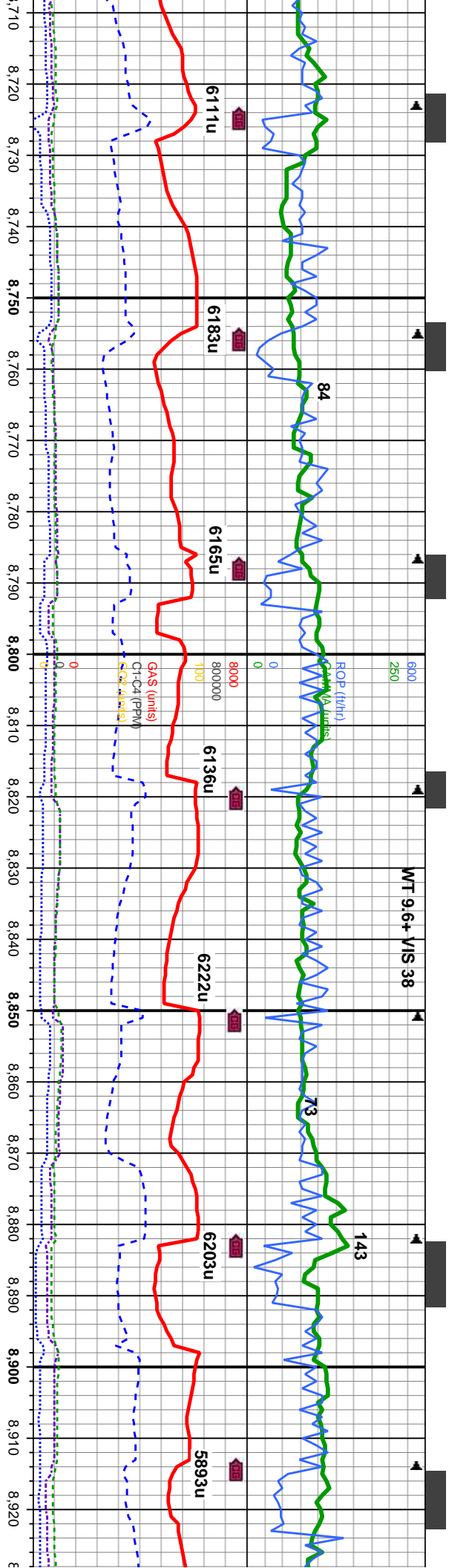
TVD (ft)
7000











MD: 8,734 '
TVD: 6,095.62 '
Inclination: 91.5 °
Azimuth: 180.6 °
VS: 2,470.9 '

MD: 8,766 '
TVD: 6,094.78 '
Inclination: 91.5 °
Azimuth: 181.2 °
VS: 2,502.86 '

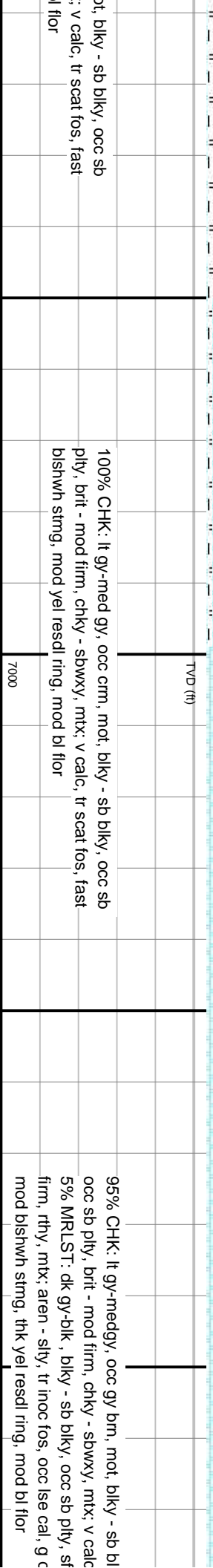
MD: 8,797 '
TVD: 6,094.13 '
Inclination: 90.9 °
Azimuth: 181.3 °
VS: 2,533.83 '

MD: 8,829 '
TVD: 6,093.57 '
Inclination: 91.1 °
Azimuth: 179.4 °
VS: 2,565.81 '

MD: 8,861 '
TVD: 6,092.93 '
Inclination: 91.2 °
Azimuth: 180.1 °
VS: 2,597.79 '

MD: 8,893 '
TVD: 6,092.18 '
Inclination: 91.5 °
Azimuth: 180.4 °
VS: 2,629.77 '

MD: 8,924 '
TVD: 6,091 '
Inclination: '
Azimuth: 18 '
VS: 2,660.7 '



MD: 8,734 '
TVD: 6,095.62 '
Inclination: 91.5 °
Azimuth: 180.6 °
VS: 2,470.9 '

MD: 8,766 '
TVD: 6,094.78 '
Inclination: 91.5 °
Azimuth: 181.2 °
VS: 2,502.86 '

MD: 8,797 '
TVD: 6,094.13 '
Inclination: 90.9 °
Azimuth: 181.3 °
VS: 2,533.83 '

MD: 8,829 '
TVD: 6,093.57 '
Inclination: 91.1 °
Azimuth: 179.4 °
VS: 2,565.81 '

MD: 8,861 '
TVD: 6,092.93 '
Inclination: 91.2 °
Azimuth: 180.1 °
VS: 2,597.79 '

MD: 8,893 '
TVD: 6,092.18 '
Inclination: 91.5 °
Azimuth: 180.4 °
VS: 2,629.77 '

MD: 8,924 '
TVD: 6,091 '
Inclination: '
Azimuth: 18 '
VS: 2,660.7 '



MD: 8,734 '
TVD: 6,095.62 '
Inclination: 91.5 °
Azimuth: 180.6 °
VS: 2,470.9 '

MD: 8,766 '
TVD: 6,094.78 '
Inclination: 91.5 °
Azimuth: 181.2 °
VS: 2,502.86 '

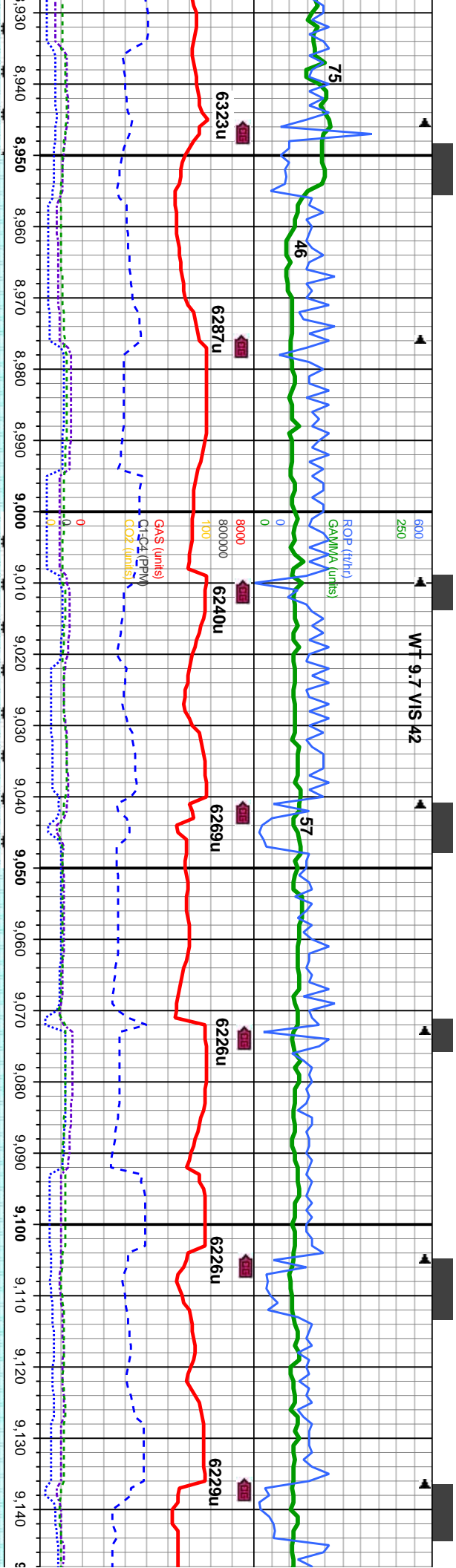
MD: 8,797 '
TVD: 6,094.13 '
Inclination: 90.9 °
Azimuth: 181.3 °
VS: 2,533.83 '

MD: 8,829 '
TVD: 6,093.57 '
Inclination: 91.1 °
Azimuth: 179.4 °
VS: 2,565.81 '

MD: 8,861 '
TVD: 6,092.93 '
Inclination: 91.2 °
Azimuth: 180.1 °
VS: 2,597.79 '

MD: 8,893 '
TVD: 6,092.18 '
Inclination: 91.5 °
Azimuth: 180.4 °
VS: 2,629.77 '

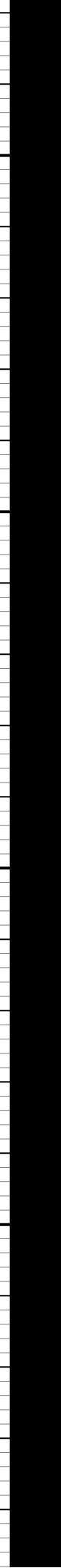
MD: 8,924 '
TVD: 6,091 '
Inclination: '
Azimuth: 18 '
VS: 2,660.7 '



72.1 ' MD: 8,956 ' TVD: 6,092.1 ' Inclination: 88.8 ° Azimuth: 180.1 ° VS: 2,692.74 ' 5500	72.1 ' MD: 8,988 ' TVD: 6,092.61 ' Inclination: 89 ° Azimuth: 179.7 ° VS: 2,724.72 ' 5500	72.1 ' MD: 9,020 ' TVD: 6,093.09 ' Inclination: 89.3 ° Azimuth: 180.3 ° VS: 2,756.71 ' 5500	72.1 ' MD: 9,052 ' TVD: 6,093.37 ' Inclination: 89.7 ° Azimuth: 179.4 ° VS: 2,788.7 ' 5500	72.1 ' MD: 9,083 ' TVD: 6,093.53 ' Inclination: 89.7 ° Azimuth: 179 ° VS: 2,819.7 ' 5500	72.1 ' MD: 9,115 ' TVD: 6,093.72 ' Inclination: 89.6 ° Azimuth: 180.4 ° VS: 2,851.69 ' 5500	72.1 ' MD: 9,144 ' TVD: 6,093.72 ' Inclination: 89.6 ° Azimuth: 180.4 ° VS: 2,882.69 ' 5500
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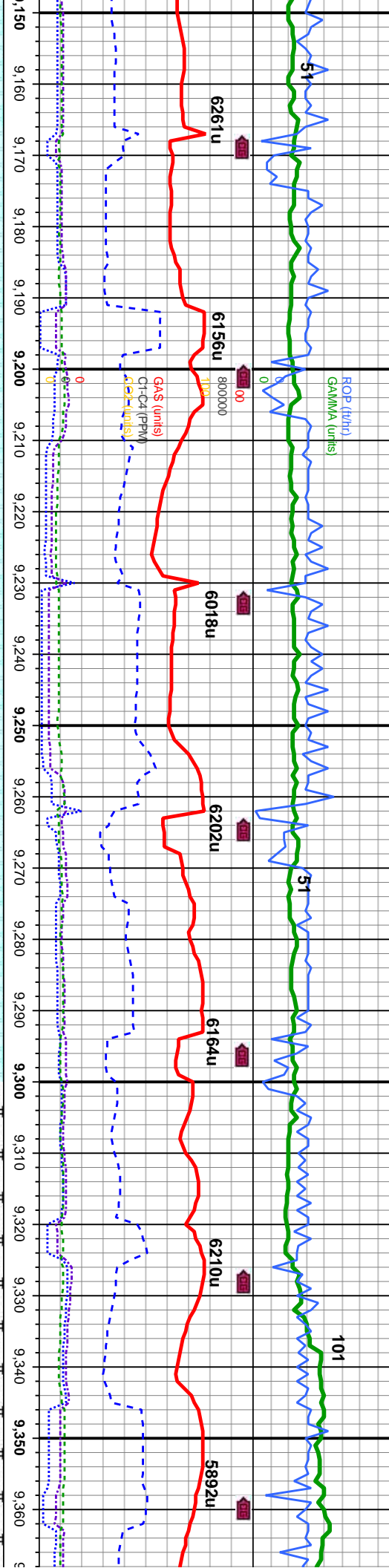
100% CHK: It gy-medgy, occ gy brn, mot, blkly - sb blkly, occ sb ply, brit - mod firm, chky - sbwxy, mtix; v calc, occ mlst, tr inoc fos, occ lse cal, g od, fast blshwn stmg, thk yel resd ring, mod bl flr

TVD (ft)



WT 9.7 VS 41

ROP (ft/hr)
GAMMA (units)



MD: 9.178 ' TVD: 6,093.67 ' Inclination: 90.4 ° Azimuth: 182.7 ° VS: 2,914.64 '	MD: 9.210 ' TVD: 6,093.39 ' Inclination: 90.6 ° Azimuth: 184.1 ° VS: 2,946.53 '	MD: 9.242 ' TVD: 6,092.99 ' Inclination: 90.8 ° Azimuth: 184.3 ° VS: 2,978.38 '	MD: 9.274 ' TVD: 6,092.77 ' Inclination: 90 ° Azimuth: 182.2 ° VS: 3,010.27 '	MD: 9.305 ' TVD: 6,092.96 ' Inclination: 89.3 ° Azimuth: 183.1 ° VS: 3,041.2 '	MD: 9.337 ' TVD: 6,093.41 ' Inclination: 89.1 ° Azimuth: 183.8 ° VS: 3,073.09 '	MD: 9.369 ' TVD: 6,093.41 ' Inclination: 89.1 ° Azimuth: 183.8 ° VS: 3,105.09 '
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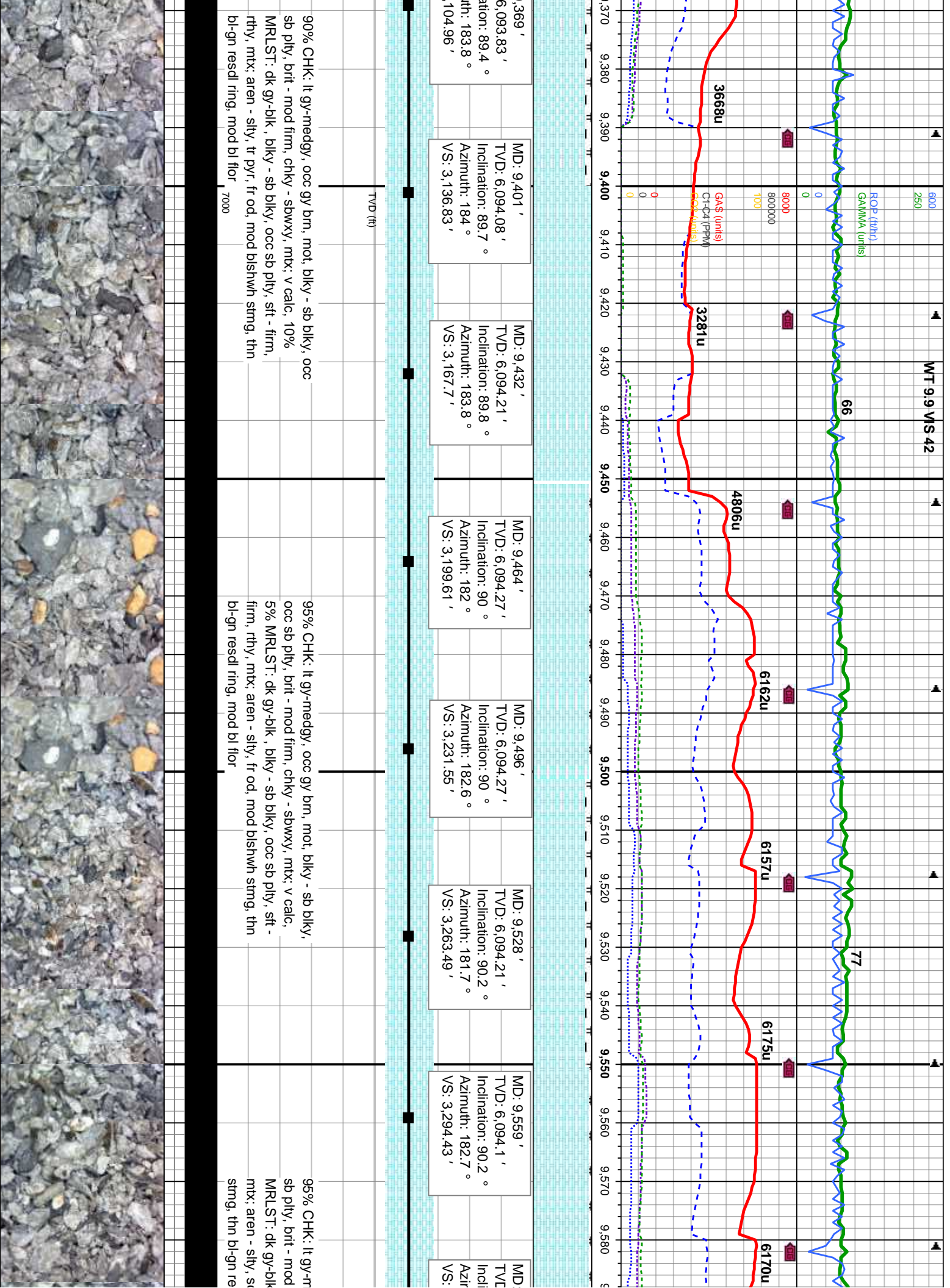
100% CHK: lt gy-medgy, wh-crm, mot, blkly - sb blkly, occ sb pily, brit - mod firm, chky - sbwxy, mtz; v calc, occ mlst, tr inoc fos, occ lse cal, sl tr bent, g od, fast bishwn stimg, thk bri yel-gn resd ring, mod bl flr

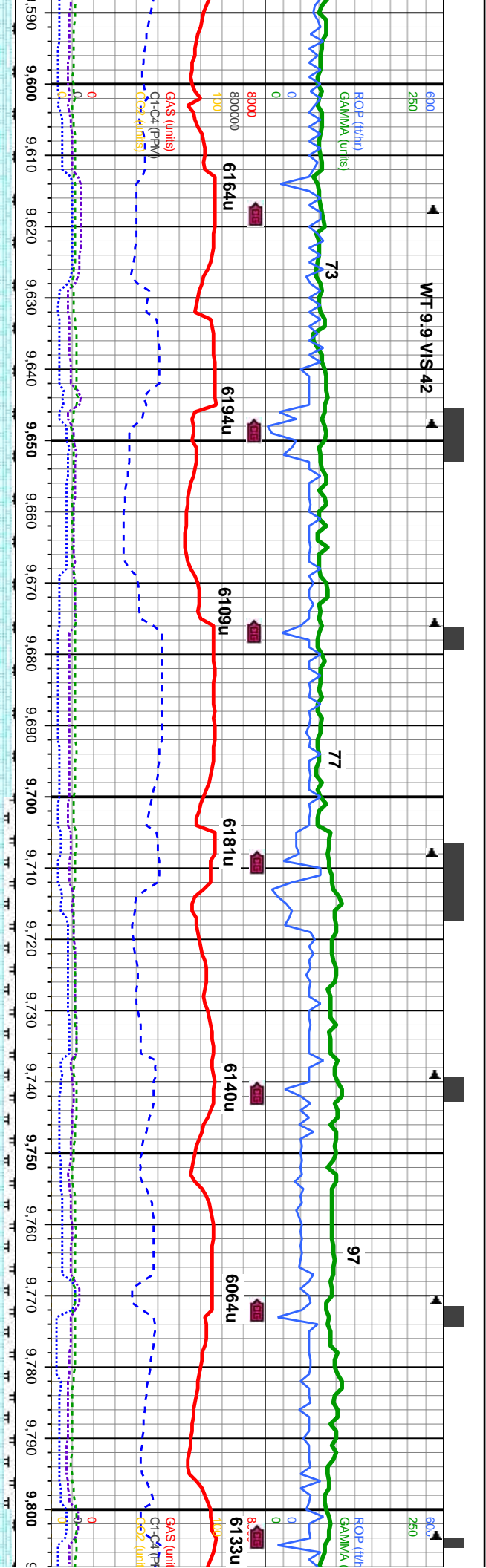
100% CHK: lt gy-medgy, wh-crm, mot, blkly - sb blkly, occ sb pily, brit - mod firm, chky - sbwxy, mtz; v calc, occ mlst, tr inoc fos, occ lse cal, sl tr bent, g od, fast bishwn stimg, thn amb resd ring, mod bl flr

TVD (ft)

7000







9,591 '	MD: 9,623 '	MD: 9,655 '	MD: 9,686 '	MD: 9,718 '	MD: 9,750 '	MD: 9,782 '	5500
6,093.88 '	TVD: 6,093.46 '	TVD: 6,093.1 '	TVD: 6,092.94 '	TVD: 6,092.91 '	TVD: 6,092.94 '	TVD: 6,092.91 '	T
Inclination: 90.6 °	Inclination: 90.9 °	Inclination: 90.4 °	Inclination: 90.2 °	Inclination: 89.9 °	Inclination: 90 °	Inclination: 90.1 °	Ir
Azimuth: 183.4 °	Azimuth: 182.9 °	Azimuth: 182.9 °	Azimuth: 181.2 °	Azimuth: 180.3 °	Azimuth: 180.4 °	Azimuth: 179.7 °	A
VS: 3,326.34 '	VS: 3,358.24 '	VS: 3,390.15 '	VS: 3,421.1 '	VS: 3,453.08 '	VS: 3,485.06 '	VS: 3,517.06 '	V

TVD (ft)

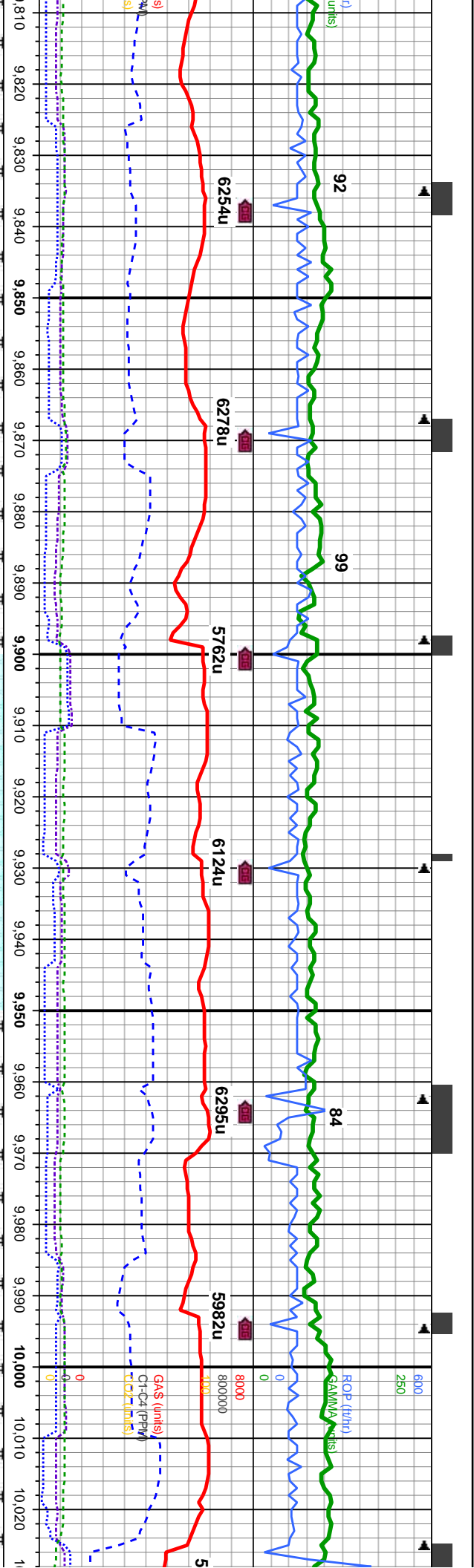
95% CHK: lt gy-medgy, occ wht-crm, mot, blkly - sb blkly, occ sb ply, brit - mod firm, chky - sbwxy, mtX: v calc, 5% MRLST: dk gy-blk, blkly - sb blkly, occ sb ply, sft - firm, rthy, mtX: aren - stly, some lse cal, tr inoc fos, tr pyr, g od, mod blshwh string, thn bl-gn resd ring, mod bl flor

TVD (ft)

85% CHK: lt gy-medgy, occ wht-crm, mot, blkly - sb blkly, occ sb ply, brit - mod firm, chky - sbwxy, mtX: v calc, 5% MRLST: dk gy-blk, blkly - sb blkly, occ sb ply, sft - firm, rthy, mtX: aren - stly, some lse cal, tr inoc fos, tr pyr, g od, mod blshwh string, thn bl-gn resd ring, mod bl flor

7000



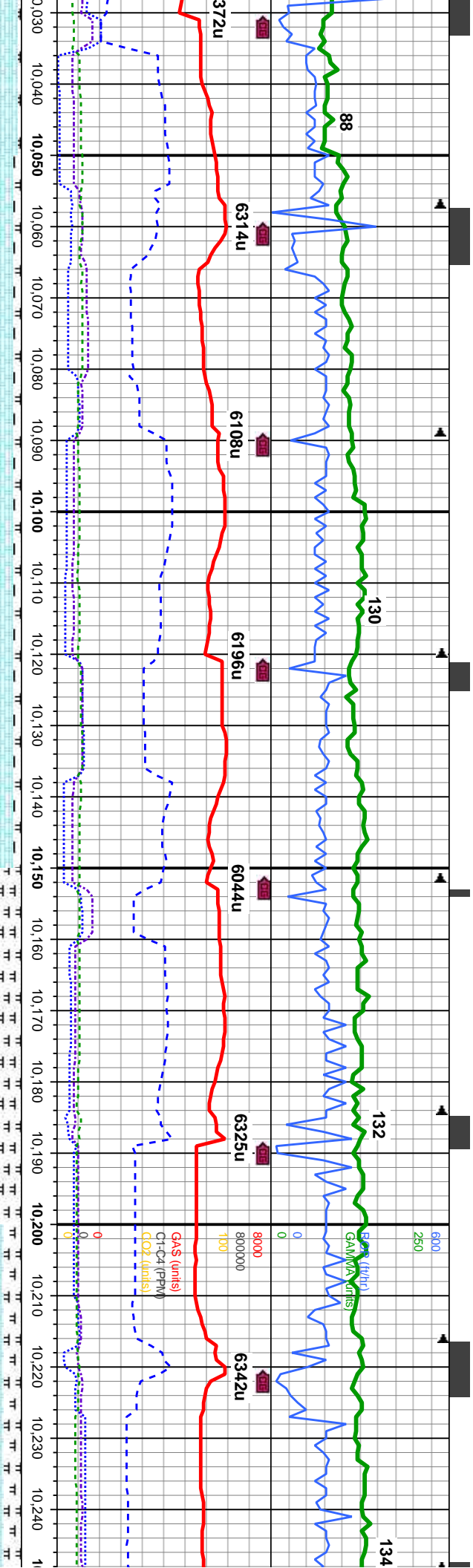


ID: 9.813 ' VD: 6.092.8 ' Inclination: 90.3 ° Azimuth: 180.4 ° VS: 3.548.05 '	MD: 9.845 ' TVD: 6.092.69 ' Inclination: 90.1 ° Azimuth: 179.9 ° VS: 3.580.04 '	MD: 9.877 ' TVD: 6.092.58 ' Inclination: 90.3 ° Azimuth: 179.4 ° VS: 3.612.03 '	MD: 9.909 ' TVD: 6.092.35 ' Inclination: 90.5 ° Azimuth: 178.3 ° VS: 3.644.03 '	MD: 9.941 ' TVD: 6.092.08 ' Inclination: 90.5 ° Azimuth: 179.7 ° VS: 3.676.03 '	MD: 9.972 ' TVD: 6.091.75 ' Inclination: 90.7 ° Azimuth: 180.1 ° VS: 3.707.02 '	MD: 10.004 ' TVD: 6.091.36 ' Inclination: 90.7 ° Azimuth: 178.9 ° VS: 3.739.01 '
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95% CHK: lt gy-medgy, occ wht-crm, mot, blkly - sb blkly, occ sb ply, brt - mod firm, chky - sbwxy, mtix; v calc, 5% MRLST: dk gy-blk , blkly - sb blkly, occ sb ply, sft - firm, rthy, mtix; aren - slty, some lse cal, tr inoc fos, tr pyr, g od, fast bishwh stmg, thk yel resdl ring, mod bl flr

100% CHK: lt gy-medgy, occ wht-crm, mot, blkly - sb blkly, sb ply, brt - mod firm, chky - sbwxy, mtix; v calc, mod bl stmg, thn bl-gn resdl ring, mod bl flr





MD: 10,036 ' VD: 6,091.16 ' Inclination: 90 ° Azimuth: 178.3 ° S: 3,771.01 '	MD: 10,067 ' TVD: 6,091.16 ' Inclination: 90 ° Azimuth: 180.3 ° VS: 3,802.01 '	MD: 10,099 ' TVD: 6,091.16 ' Inclination: 90 ° Azimuth: 179.7 ° VS: 3,834 '	MD: 10,131 ' TVD: 6,091.08 ' Inclination: 90.3 ° Azimuth: 179.6 ° VS: 3,866 '	MD: 10,163 ' TVD: 6,090.77 ' Inclination: 90.8 ° Azimuth: 180.6 ° VS: 3,897.99 '	MD: 10,195 ' TVD: 6,090.52 ' Inclination: 90.1 ° Azimuth: 179.2 ° VS: 3,929.98 '	MD: 10,226 ' TVD: 6,090.58 ' Inclination: 89.7 ° Azimuth: 178.5 ° VS: 3,960.98 '
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90% CHK: lt gy-medgy, occ wht-crm, occ med - med dk gy, w mot, blk - sb blk, occ sb ply, brit - mod firm, chky - sbwxy, mtx: v calc, 10% MRLST: dk gy-blk, occ blk, blk - sb blk, occ sb ply, sft - firm, rthy, mtx: aren - silty, some lse cal, tr inoc fos, v g od, mod blshw sting, thn bl-gn resdl ring, mod bl flr



