



Scale: 5" / 100'
Measured Depth Log

Well Name Elliott State 1N-17HZ

Location NWNW SEC 17, T3N, R67W

State Colorado

Country USA

API Number 05123386300000

Region DJ Basin

Spud Date 4/17/2014

Surface Coordinates 537' FNL & 760' FWL

Bottom Hole Coordinates 670' FNL & 50' FWL (Projected)

County Weld

Rig Number Ensign 138

Field Wattenberg

Drilling Completed 4/23/2014

Ground Elevation 4836'

K.B. Elevation 4849'

Logged Interval 6800' To 12025'

Total Depth 12025'

Formation Niobrara B

Type of Drilling Fluid H2O, LSND

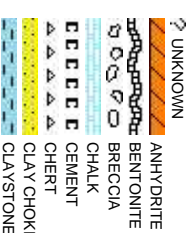
Company Anadarko

Address Granite Tower
1099 18th St, S
Denver, CO 80202

Name Zach Uber & Associates

Company Columbine Logging

Address 2385 S. Lipan St
Denver, CO 80202



Operator

uite #1800
202

Geologist

Dam Harris

giving, Inc.

























































223

Rock Types

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

Accessories

Fossils

Fossils		Stringer	
 GASTROPOD	 ARGILLITE GRAIN	 HEAVY MINERAL	
 INOCERAMUS	 B BENTONITE	 K KAOLIN	
 ALGAE	 O OOLITE	 M MARCASITE	 ANHYDRITE STRINGER
 AMPHIPORA	 O OSTRACOD	 T MARLSTONE	 B BENTONITE STRINGER
 BELEMNITE	 P PELECYPOD	 M MICACEOUS	 C COAL STRINGER
 BIOCLASTIC	 P PELLET	 M MINERAL CRYSTALS	 D DOLOMITE STRINGER
 BRACHIOPOD	 P PISOLITE	 N NODULES	 G GYPSUM STRINGER
 BRYOZOA	 P PLANT REMAINS	 P PHOSPHATE PELLETS	 L LIMESTONE STRINGER
 CEPHALOPOD	 S PLANT SPORES	 P PYRITE	 M MARLSTONE (CALC) STRG
 CORAL	 S SCAPHOPOD	 S SALT CAST	 M MARLSTONE (DOL) STRG
 CRINOID	 S STROMATOPOROID	 S SANDY	 S SANDSTONE STRINGER
 ECHINOID	 F FELDSPAR	 S SIDERITE	 S SHALE STRINGER
 FISH	 F FERRUGINOUS	 S SILICEOUS	 S SILTSTONE STRINGER
 FORAMINIFERA	 A ANHYDRITIC	 S SILTY	
 F FOSSIL	 A ARGILLACEOUS	 T TUFFACEOUS	

Other Symbols

Oil Show

	P	PINPOINT
	V	VULGY
		DST INTERVAL
		FAULT
		WIRELINE TESTED - LEFT
	E	EARTHY
		WIRELINE TESTED - RT
	F	FINELY XLN

Engineering

- EVEN
- QUESTIONABLE
- BIT
- ✖ GAS SHOW
- OIL SHOW
- MN DEPTH
- MN DEPTH
- ✖ LITHOGRAPHIC
- ✖ MICROXIN

SPOTTED STAINING: CONNECTION (UP)


Rounding

Rounding

Porosity

MIN DEPTH	CONNECTION (DOWN)	ANGULAR	PACKSTONE
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21
22	22	22	22
23	23	23	23
24	24	24	24
25	25	25	25
26	26	26	26
27	27	27	27
28	28	28	28
29	29	29	29
30	30	30	30
31	31	31	31
32	32	32	32
33	33	33	33
34	34	34	34
35	35	35	35
36	36	36	36
37	37	37	37
38	38	38	38
39	39	39	39
40	40	40	40
41	41	41	41
42	42	42	42
43	43	43	43
44	44	44	44
45	45	45	45
46	46	46	46
47	47	47	47
48	48	48	48
49	49	49	49
50	50	50	50
51	51	51	51
52	52	52	52
53	53	53	53
54	54	54	54
55	55	55	55
56	56	56	56
57	57	57	57
58	58	58	58
59	59	59	59
60	60	60	60
61	61	61	61
62	62	62	62
63	63	63	63
64	64	64	64
65	65	65	65
66	66	66	66
67	67	67	67
68	68	68	68
69	69	69	69
70	70	70	70
71	71	71	71
72	72	72	72
73	73	73	73
74	74	74	74
75	75	75	75
76	76	76	76
77	77	77	77
78	78	78	78
79	79	79	79
80	80	80	80
81	81	81	81
82	82	82	82
83	83	83	83
84	84	84	84
85	85	85	85
86	86	86	86
87	87	87	87
88	88	88	88
89	89	89	89
90	90	90	90
91	91	91	91
92	92	92	92
93	93	93	93
94	94	94	94
95	95	95	95
96	96	96	96
97	97	97	97
98	98	98	98
99	99	99	99
100	100	100	100

E EARTHY

 CONNECTION GAS (LEFT)
  OVERTURNED STRATA
  SUBURD

 TRIP GAS
  REVERSE FAULT
  SUBURD

Sorting

F FRACTURE

TRIP GAS (LEFT) CASING M MODERATE

Textures

Φ INTERPOLITIC

DOWN TIME GAS (LEFT) SIDEWALL CORE (RIGHT) BS BOUNDSTONE W WELL

☐ ORGANIC

CORE - RECOVERED
 50 SURVEY
 CRYPTOXIN

Slide/Rotate

ROP SCALE:
0 - 400 FT/HR

ROP
ROF
GAMMA

GAMMA SCALE:
0 - 400 API

Total Gas & Chromatograph

GAS
C1
C2
C3
C4

PASON TOTAL GAS
IN "GAS10000" UNITS

Depth Labels

% Lith

100' SAMPLE INTERVALS

6500

Bit Data

Type: Smith/ SDI 611
Size: 8.75
Jets: 3x14/ 3x15

Well Bore
TVD

MD: 6,828'
TVD: 6,708.05'
Inclination: 37.3 °
Azimuth: 90.2 °
VS: -755.23'

MD: 6,924'
TVD: 6,778.03'
Inclination: 48.9 °
Azimuth: 91 °
VS: -689.75'

COLUMBINE LOGGING INC.
RIGGED UP ON 04/19/2014

100% SLTY SH: lt-med gy bm, sme dk gy, mot lp, frm-hd, sb blk-y-sb plty, silty tex, tr
SS strg, non calc

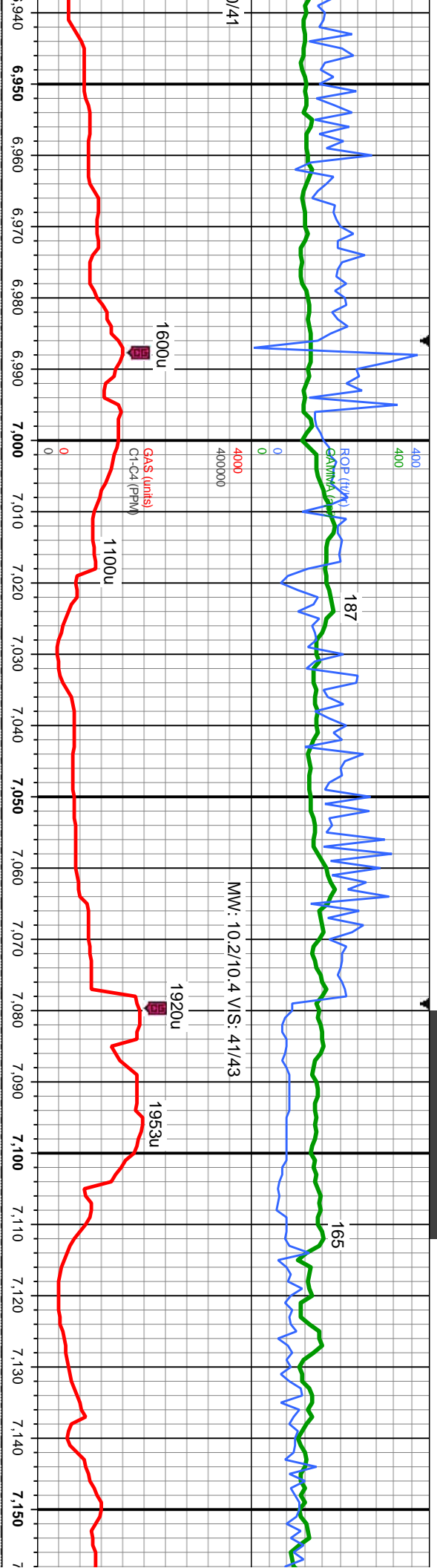
100% SLTY SH: lt-med gy bm, sm
pyr, tr SS strg, tr bent, sl calc

Oil Show

Oil Show

Images





Sharon Springs Top:
MD: 7006'
TVD: 6829'

MD: 7,111'
TVD: 6,883.62'
Inclination: 62.4 °
Azimuth: 89.8 °
VS: -535.95'

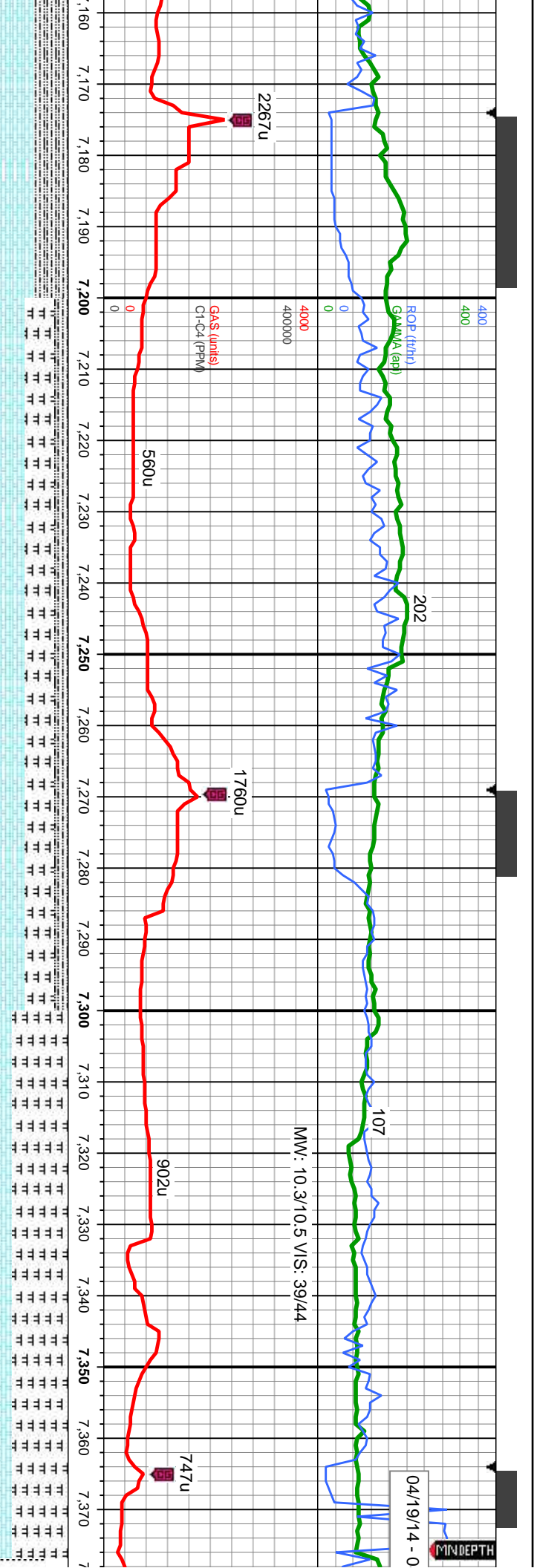
Niobrara Top:
MD: 7113'
TVD: 6885'

MD: 7,016'
TVD: 6,834.51'
Inclination: 55.3 °
Azimuth: 91.3 °
VS: -617.2'

100% SLTY SH: lt-med gy brn, sme dk gy, mot ip, frm-hd, sb blk-y-sb plty, silty tex, sl calc, tr pyr, tr SS strg, abnt bent, v sl calc; OIL SHOW: dim lt gn slow cut, dim yel-gn thin ring, no stn, no od

60% CHK: lt gy-med gy, wh incl, mot ip, blk-y - sb p SLTY SH: lt-med gy brn, sme dk gy, mot ip, frm-hd pyr, tr SS strg, mod bent, v sl calc; OIL SHOW: mod min flr, solid gn-yel resd stn, no od





MD: 7,205'
TVD: 6,918.55'
Inclination: 73.9 °
Azimuth: 88.5 °
VS: -448.87'

MD: 7,301'
TVD: 6,937.59'
Inclination: 83.2 °
Azimuth: 87.4 °
VS: -354.97'

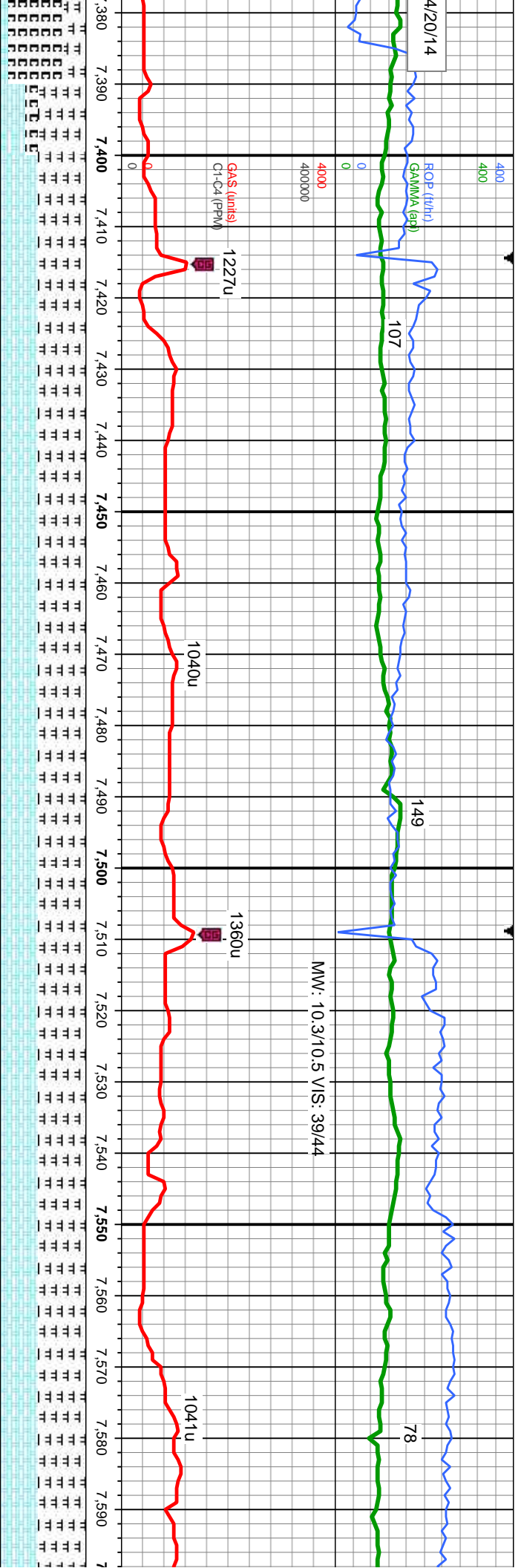
MD: 7,314'
TVD: 6,939.13'
Inclination: 83.2 °
Azimuth: 87.5 °
VS: -342.08'

TOOH @ 7367' MD FOR
INTERMEDIATE CASING
21:27 HRS ON 04/19/14
RESUME DRILLING @ 20:57
HRS ON 04/21/14

Bit D
Type:
Size:
Jets:

ity, rthy tex, frm-fri, v calc, rr fos, 40% sb blkys-sb pily, slty tex, sl calc, tr calc; tr bent; OIL SHOW: bri bl-wh stmg mlky cut, mod bl resd ring, no od	50% CHK: lt gy-med gy, wh incl, mot ip, blkys - sb pily, rthy tex, frm-fri, v calc, rr fos: 35% MRLST: med-dk gy, mot ip, wh incl, sb blkys-sb pily, rthy tex, frm-hd, v calc; 15% SLTY SH: lt-med gy brn, sme dk gy, mot ip, str ip, frm-hd, sb blkys-sb pily, slty tex, sl calc; tr bent; OIL SHOW: bri bl-wh stmg mlky cut, sme yel min flor, mod bl resd ring, no od	65% MRLST: med-dk gy, mot ip, wh incl, sb blkys-sb pily, rthy tex, frm-h bent, 35% CHK: lt gy-med gy, wh incl, mot ip, blkys - sb pily, rthy tex, frm wh fos; OIL SHOW: bri bl-wh stmg mlky cut, sme yel min flor, mod bl re od
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Smith/ HD513
6.12
5x20

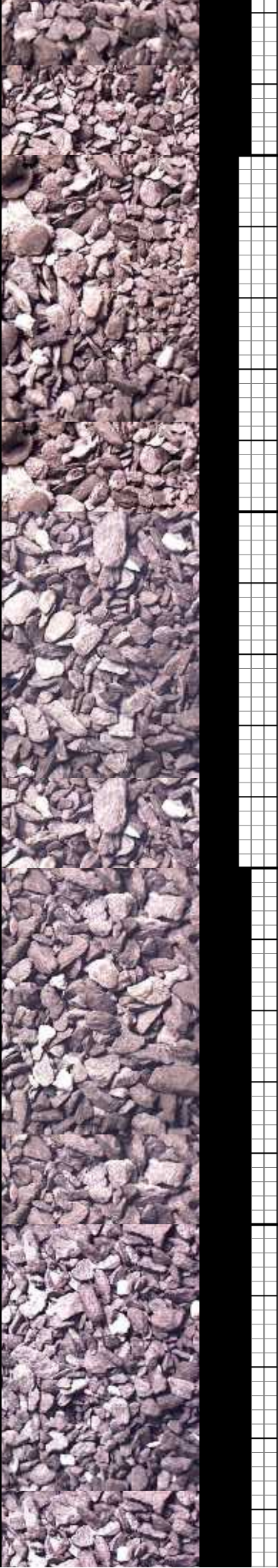
MD: 7,444'
TVD: 6,948.42'
Inclination: 88.6 °
Azimuth: 90.2 °
VS: -212.52'

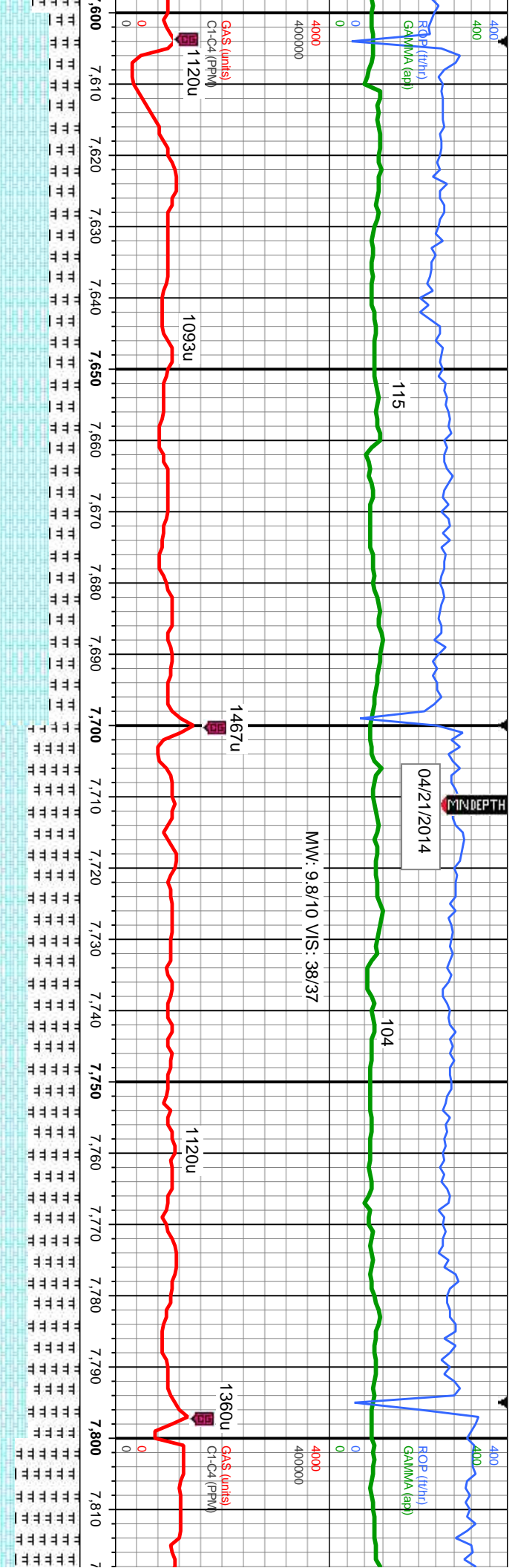
MD: 7,540'
TVD: 6,950.43'
Inclination: 89 °
Azimuth: 89.9 °
VS: -116.54'

d, v calc, tr
f, v calc, rr
resl ring, no

55% MRLST: med-dk gy, mot ip, wh incl, sb blk- sb pty, rthy tex, frm-hd, v calc, 45%
CHK: lt gy-med gy, wh incl, mot ip, blk- sb pty, rthy tex, frm-fri, v calc, rr wh fos; OIL
SHOW: bri gn cut, mod bri gn ring, tr yel min flr, solid gn-yel resl stn, no od

55% MRLST: med-dk gy, mot ip, wh incl, sb blk- sb pty, rthy tex, frm-hd, v calc, 45%
CHK: lt gy-med gy, wh incl, mot ip, blk- sb pty, rthy tex, frm-fri, v calc, rr wh fos; OIL
SHOW: bri bl-wh stmg milky cut, sme yel min flr, mod bl resl ring, no od



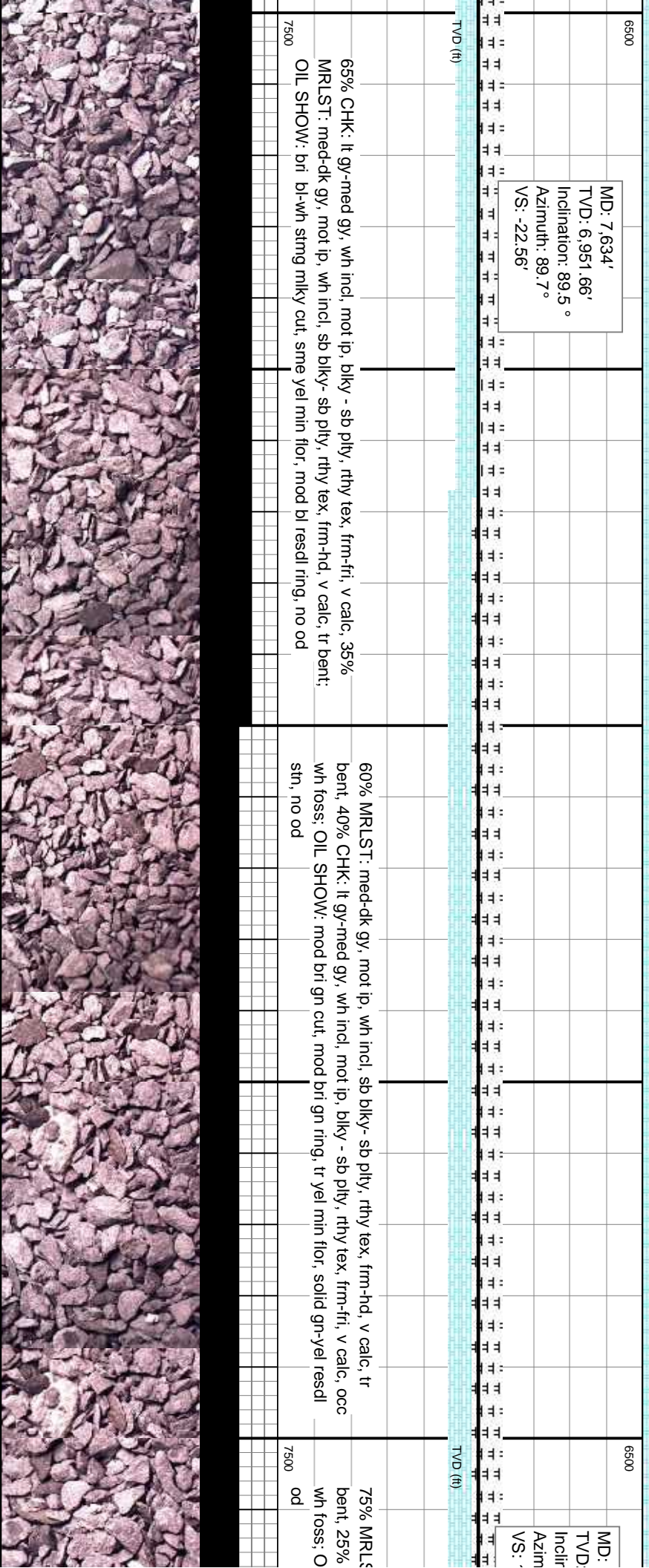


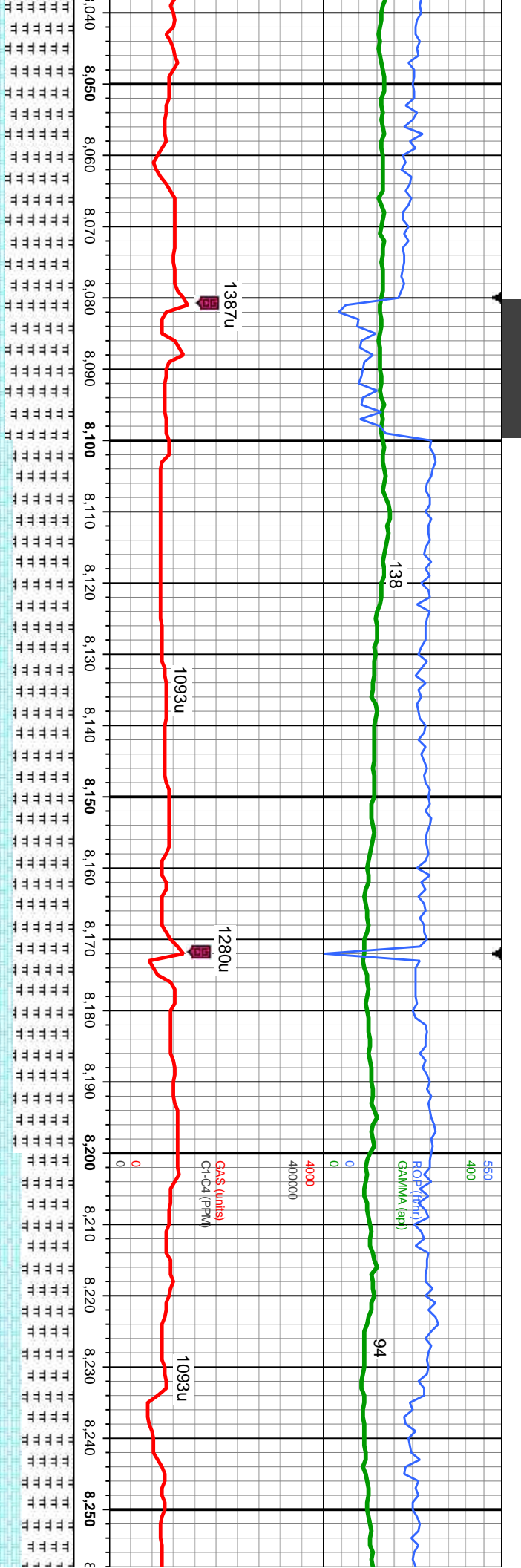
MD: 7,634'
TVD: 6,951.66'
Inclination: 89.5 °
Azimuth: 89.7°
VS: -22.56'

65% CHK: lt gy-med gy, wh incl, mot ip, blkly - sb plty, rthy tex, frm-fri, v calc, 35%
MRLST: med-dk gy, mot ip, wh incl, sb blkly- sb plty, rthy tex, frm-hd, v calc, tr bent;
OIL SHOW: bri bl-wh string milky cut, sme yel min flr, mod bl resdl ring, no od

60% MRLST: med-dk gy, mot ip, wh incl, sb blkly- sb plty, rthy tex, frm-hd, v calc, tr bent, 40% CHK: lt gy-med gy, wh incl, mot ip, blkly - sb plty, rthy tex, frm-fri, v calc, occ wh foss; OIL SHOW: mod bri gn cut, mod bri gn ring, tr yel min flr, solid gn-yel resdl stn, no od

75% MRLST: bent, 25% wh foss; O od

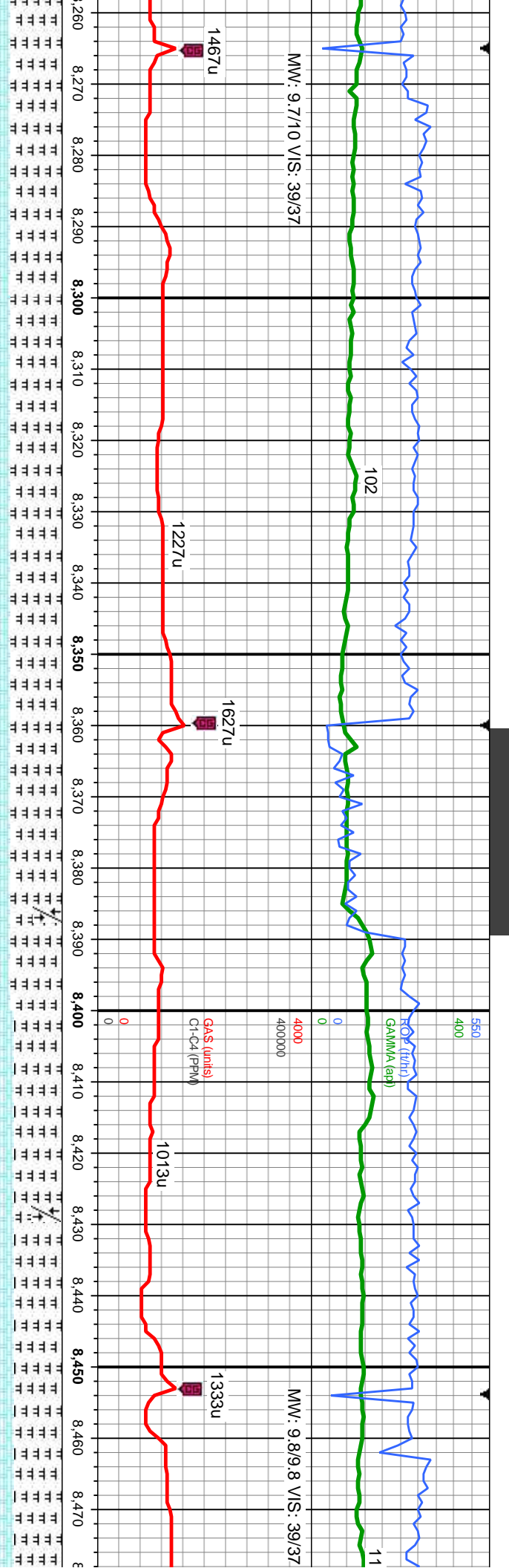




MD: 8,106'
TVD: 6,948.95'
Inclination: 89 °
Azimuth: 91.2°
VS: 449.39'

										MD: 8,106' TVD: 6,948.95' Inclination: 89 ° Azimuth: 91.2° VS: 449.39'																				6500									
																				TVD (ft)																			
not, occ wh incl, sb blk-y- sb ply, rthy tex, frm-hd, v calc, tr																																							
, wh incl, mot ip, blk-y - sb ply, rthy tex, mod frm-fri, v																																							
/: bri gn-yel cut, mod bri gn ring, tr yel min flor, solid																																							



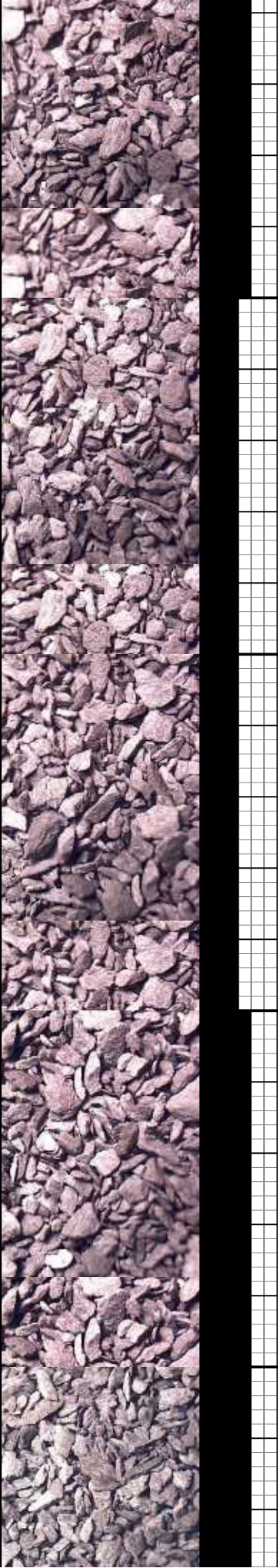


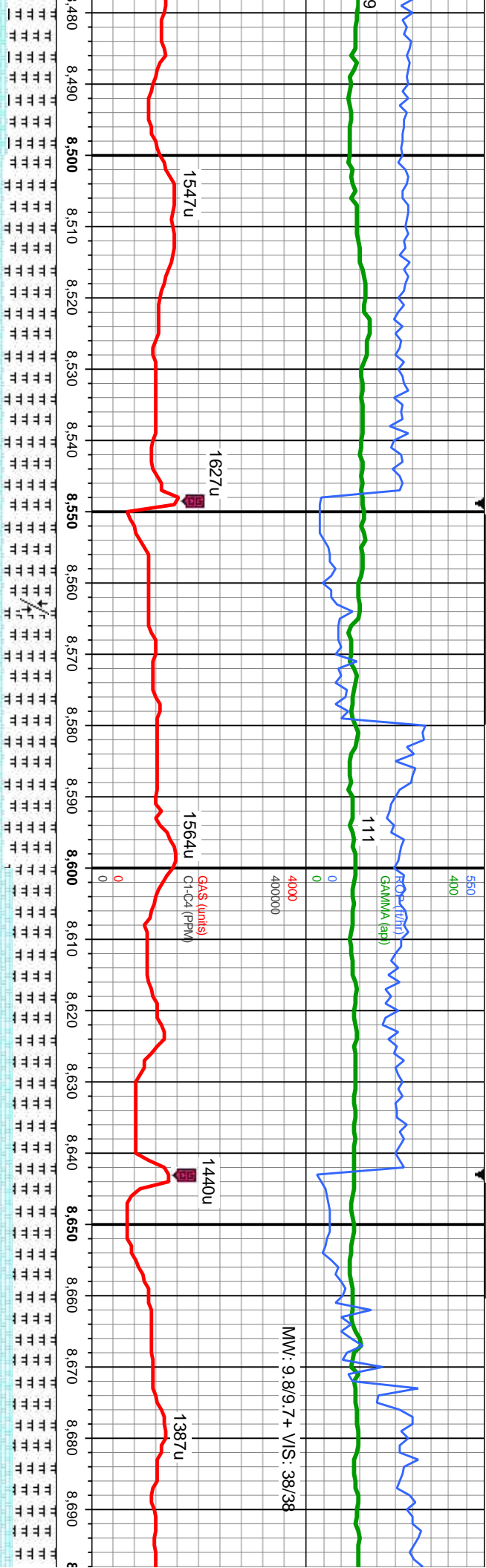
MD: 8,293'
TVD: 6,950.09'
Inclination: 90.3°
Azimuth: 90.5°
VS: 636.38'

sb pily, rthy tex, frm-hd, v calc;
pily, rthy tex, mod frm-frt, v calc; OIL
r, mod bl resdl ring, no od

60% MRLST: med-dk gy, rr mot, occ wh incl, sb biky- sb pily, rthy tex, frm-hd, v calc, 40%
CHK: lt gy-med gy, wh incl, mot ip, biky - sb pily, rthy tex, mod frm-frt, v calc; OIL SHOW:
bri gn-yel cut, mod bri gn-yel ring, tr yel mln flor, solid gn-yel resdl str, no od

55% MRLST: med-dk gy, rr mot, occ wh incl, sb biky- sb pily, rthy tex, frm-hd, v calc, 45%
CHK: lt gy-med gy, wh incl, mot ip, biky - sb pily, rthy tex, mod frm-frt, v calc; OIL SHOW:
bri gn-yel cut, mod bri gn-yel ring, tr yel mln flor, solid gn-yel resdl str, no od



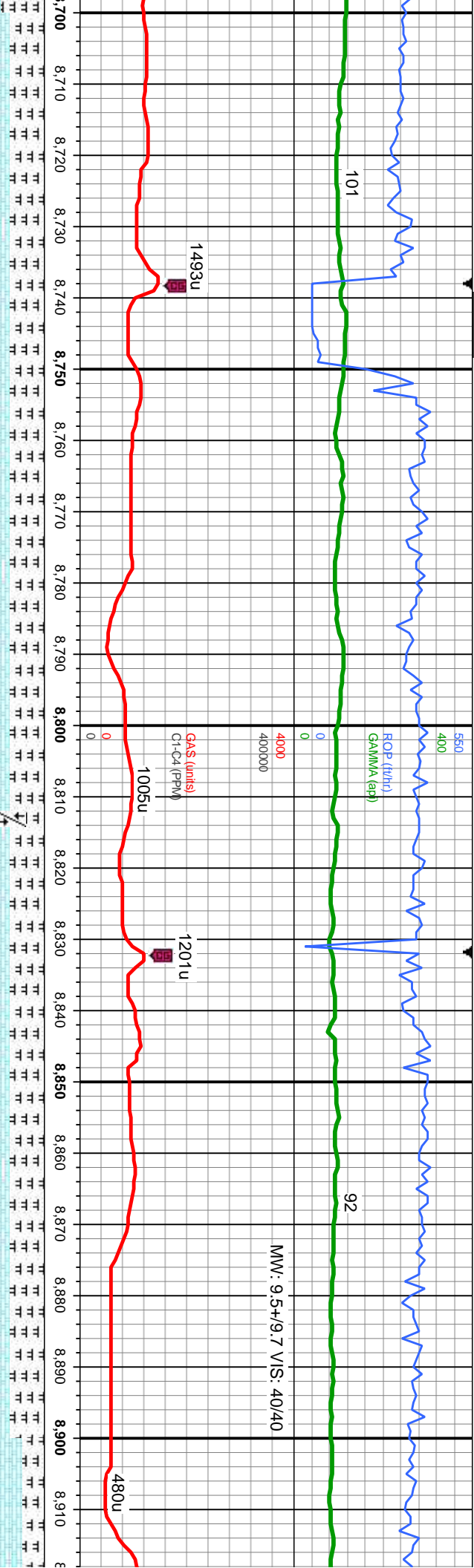


6,948.77'
Inclination: 90.5 °
Azimuth: 91.4 °
VS: 225.36'

60% MRLST: med-dk gy, tr mot, occ wh incl, sb blkv- sb plty, rthy tex, frm-hd, v calc, 40% CHK: lt gy-med gy, wh incl, mot ip, blkv - sb plty, rthy tex, mod frm-fri, v calc, tr wh inoc foss; OIL SHOW: bri bl-wh stmg mlky cut, sme yel min flor, mod bl resdl ring, no od	7500
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MD: 8,671'
TV: 6,950.26'
Inclination: 88.6 °
Azimuth: 92 °
VS: 1,014.29'





6500

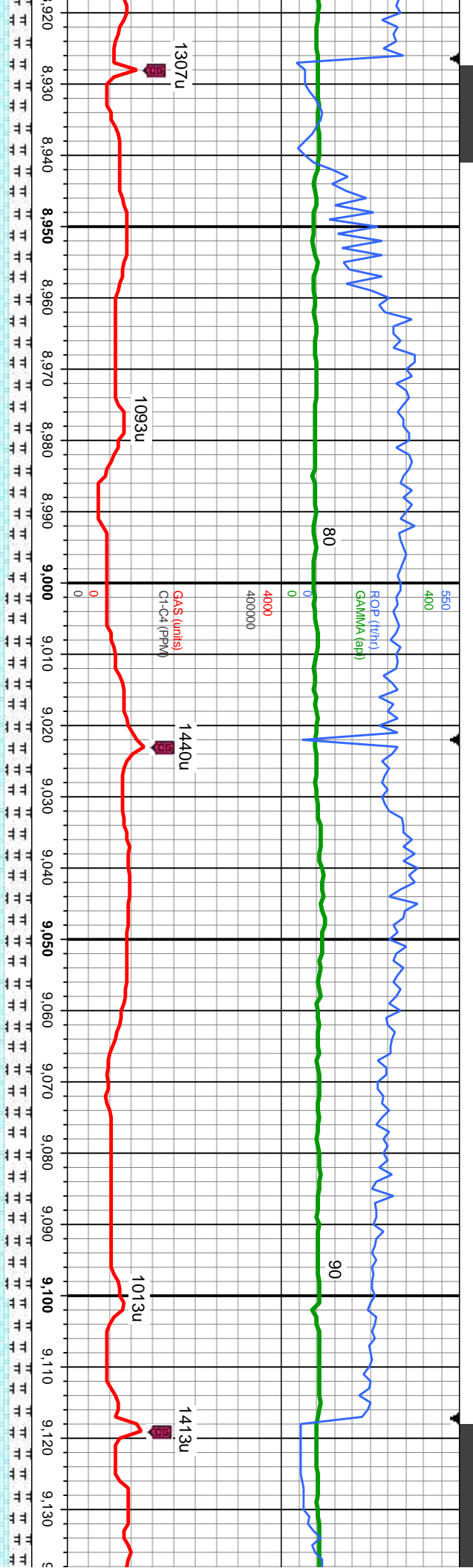
MD: 8,861'
TVD: 6,952.74'
Inclination: 89.9 °
Azimuth: 92.2 °
VS: 1,204.19'

60% CHK: It gy-med gy, wh incl, mot ip, blkly - sb pty, rthy tex, frm-fri, v calc; 40% MRLST: med-dk gy, mot ip, wh incl, sb blkly-sb pty, rthy tex, frm-hd, v calc; OIL SHOW: bri bl-wh stmg milky cut, sme yel min flr, mod bl resd ring, no od

60% CHK: It gy-med gy, wh incl, mot ip, blkly - sb pty, rthy tex, frm-fri, v calc; 40% MRLST: med-dk gy, mot ip, wh incl, sb blkly-sb pty, rthy tex, frm-hd, v calc; OIL SHOW: bri bl-wh stmg milky cut, abnt yel min flr, mod bl resd ring, no od

75% CHK: It g calc; 25% MRLST: OIL SHOW: bri

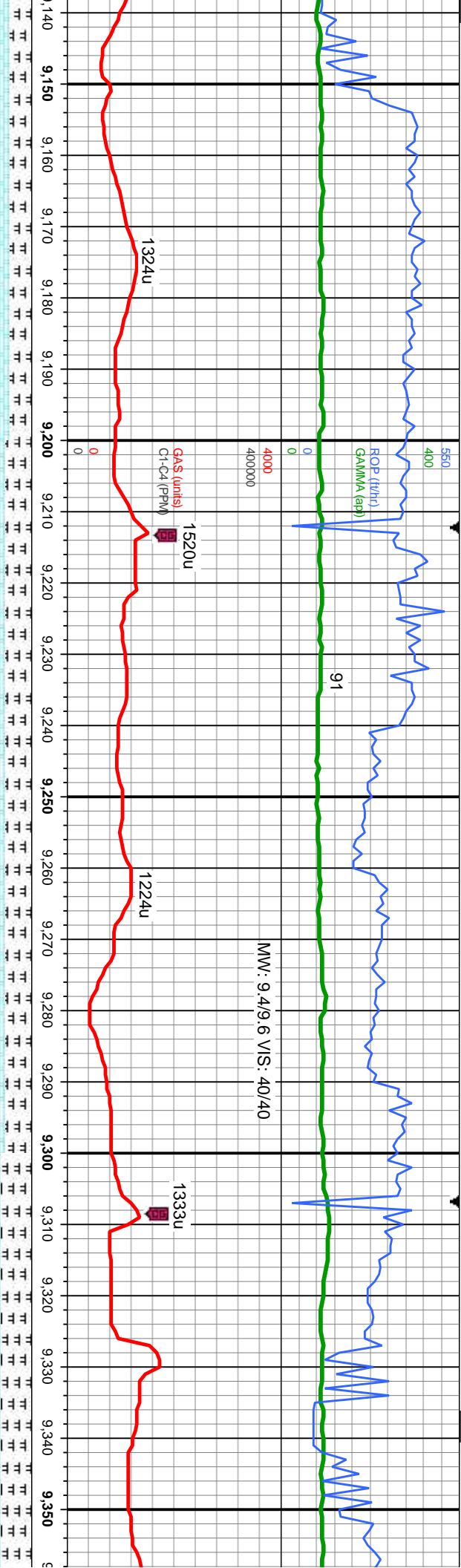




MD: 9,050'
TVD: 6,951.75'
Inclination: 90.7°
Azimuth: 91.4°
VS: 1,393.12'

gy-med gy, wh incl, mot ip, blkly - sb pty, rthy tex, frm-fri, tr wh inoc foss, v	70% CHK: lt gy-med gy, wh incl, mot ip, blkly - sb pty, rthy tex, frm-fri, tr wh inoc foss, v calc: 30% MRLST: med-dk gy, mot ip, wh incl, sb blkly- sb pty, rthy tex, frm-hd, v calc: OIL SHOW: bri bl-wh stmg milky cut, sme yel min flor, mod bl resdl ring, no od
ST: med-dk gy, mot ip, wh incl, sb blkly- sb pty, rthy tex, frm-hd, v calc: i bl-wh stmg milky cut, sme yel min flor, mod bl resdl ring, no od	75% CHK: lt gy-med gy, wh incl, r calc: 25% MRLST: med-dk gy, mc OIL SHOW: bri gn-yel cut, mod b od

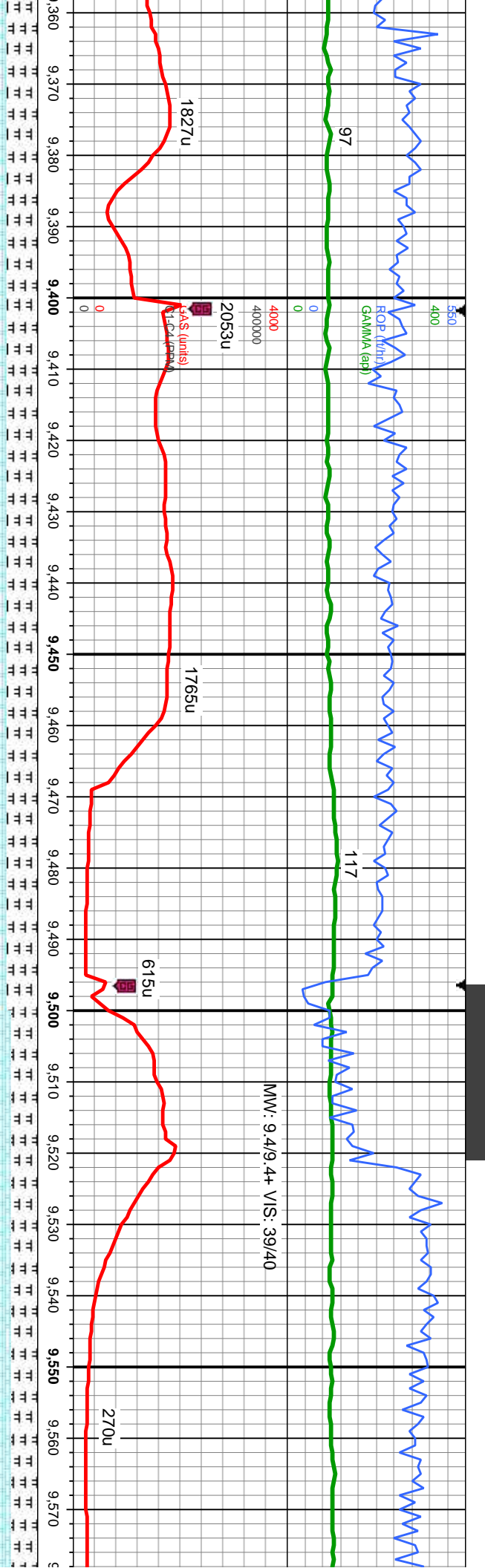




6500	
MD: 9,241'	
TVD: 6,950.09'	
Inclination: 90.3°	
Azimuth: 91°	
VS: 1,584.09'	

mot ip, blkly - sb pily, rthy tex, frm-fri, tr wh inoc foss, v	70% CHK: lt gy-med gy, wh incl, mot ip, blkly - sb pily, rthy tex, frm-fri, tr wh inoc foss, v
calc: 30% MRLST: med-dk gy, mot ip, wh incl, sb blkly- sb pily, rthy tex, frm-hd, v calc;	calc: 30% MRLST: med-dk gy, mot ip, wh incl, sb blkly- sb pily, rthy tex, frm-hd, v calc;
OIL SHOW: bri gn-yel cut, mod bri gn-yel ring, tr yel min flor, solid gn-yel resd sln, no	OIL SHOW: bri gn-yel cut, mod bri gn-yel ring, tr yel min flor, solid gn-yel resd sln, no
7500	od

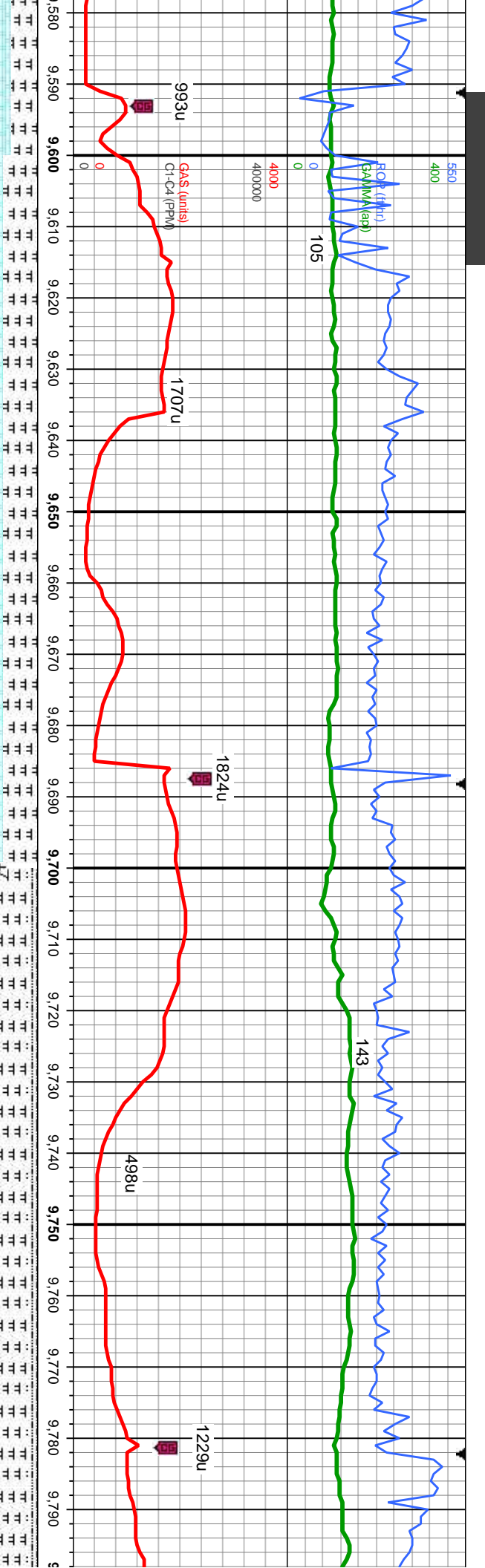




MD: 9,432'
TVD: 6,948.75'
Inclination: 90.5 °
Azimuth: 89.8 °
VS: 1,775.09'

ly, rthy tex, frm-fri, abnt wh inoc foss, v	65% CHK: lt gy-med gy, wh incl, mot ip, blk - sb pty, rthy tex, frm-fri, abnt wh inoc	70% CHK: lt gy-med gy, wh incl, mot ip, blk - sb pty, rthy tex, frm-fri, w
lky- sb pty, rthy tex, frm-hd, v calc: OIL	foss, v calc: 35% MRLST: med-dk gy, mot ip, wh incl, sb blk - sb pty, rthy tex, frm-hd,	30% MRLST: med-dk gy, mot ip, wh incl, sb blk - sb pty, rthy tex, frm-hd
mod bl resd ring, no od	v calc: OIL SHOW: bri bl-wh stmg cut, sme yel min flr, mod bl resd ring, no od	SHOW: bri lt bl-wh mlky stmg cut, bri wh thk ring, solid bri bl resd stn, no
7500		



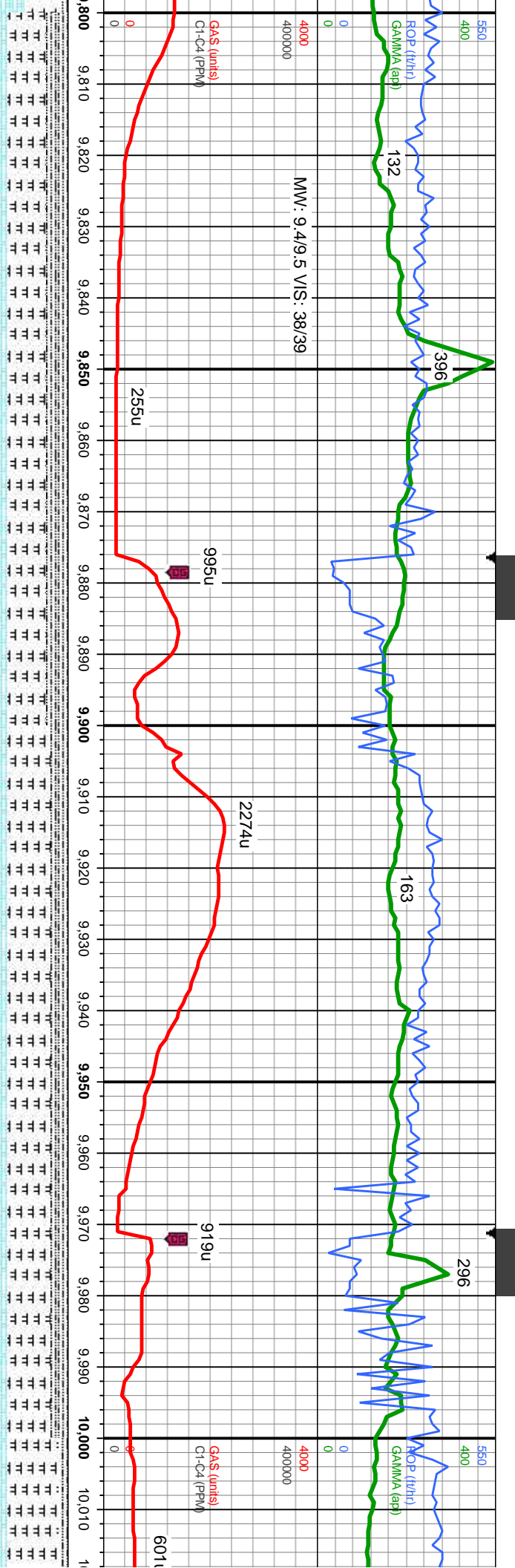


MD: 9,621'
TVD: 6,948.92'
Inclination: 89.4 °
Azimuth: 88.6 °
VS: 1,964.04'

h inoc foss, v calc;
v calc; OIL
60% CHK: lt gy-med gy, wh incl, mot ip, blkly - sb plty, rthy tex, frm-fri, wh inoc foss, v calc; 40% MRLST: med-dk gy, mot ip, wh incl, sb blkly - sb plty, rthy tex, frm-hd, v calc;
OIL SHOW: bri b-wh stmg mlky cut, sme yel min flor, mod bl resdl ring, no od
7500

50% CHK: lt gy-med gy, wh incl, mot ip, blkly - sb plty, rthy tex, frm-fri, v calc; 40% MRLST med-dk gy, mot ip, wh incl, sb blkly - sb plty, rthy tex, frm-hd, v calc; 10% SLTY SH: dk gy-occ blk, sb plty-sb blkly, occ plty, mod sft-mod frm, sl calc; OIL SHOW: mod bri gn cut, dul gn ring, blotchy yel resdl stn, no od

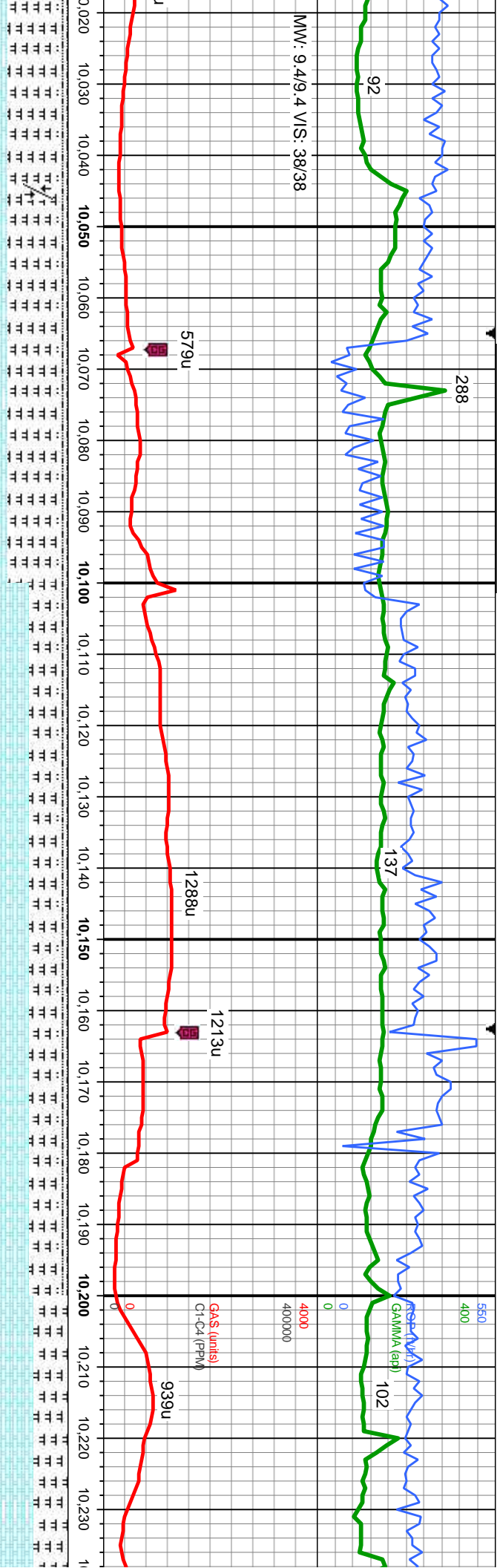




MD: 9,810'	MD: 9,999'
TVD: 6,947.76'	TVD: 6,946.61'
Inclination: 91.3°	Inclination: 89.4°
Azimuth: 88.8°	Azimuth: 89.3°
VS: 2,152.95'	VS: 2,341.88'

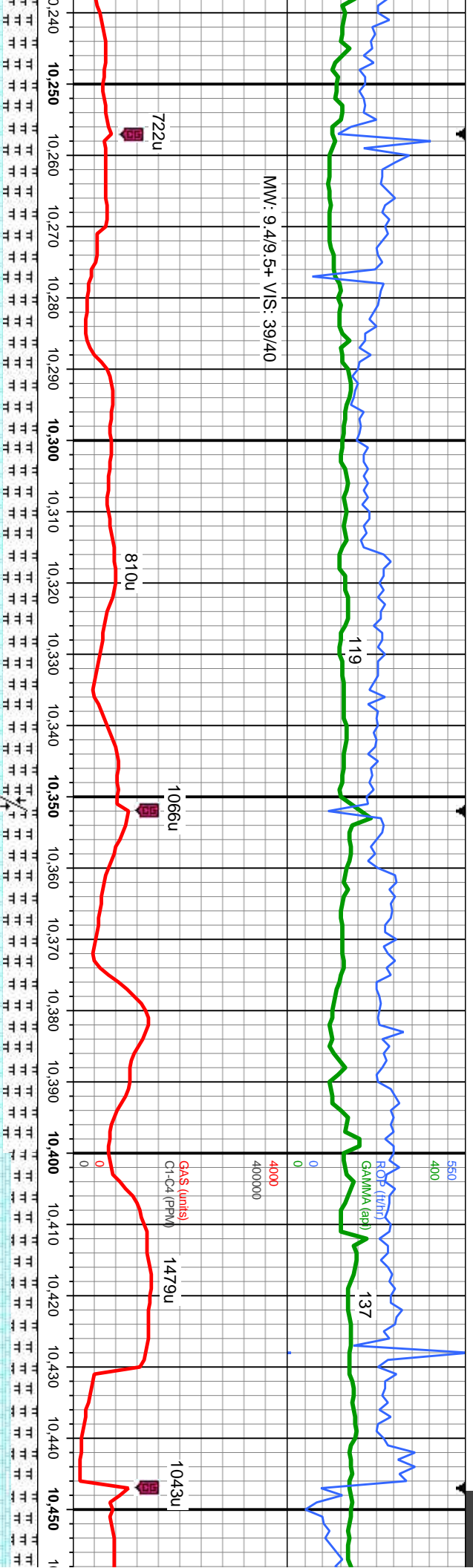
45% MRLST: med-dk gy, mot ip, wh incl, sb blkly- sb plty, rthy tex, frm-hd, v calc 30% CHK: lt gy-med gy, wh incl, mot ip, blkly - sb plty, rthy tex, frm-fri, v calc, tr inoc foss; 25% SLTY SH: dk gy-occ blk, sb plty-sb blkly, occ plty, mod sft-mod frm, sl calc; OIL SHOW: mod bri gn cut, dul gn ring, blotchy yel resdl stn, no od	50% MRLST: med-dk gy, mot ip, wh incl, sb blkly- sb plty, rthy tex, frm-hd, v calc 30% CHK: lt gy-med gy, wh incl, mot ip, blkly - sb plty, rthy tex, frm-fri, v calc, tr inoc foss; 20% SLTY SH: dk gy-occ blk, sb plty-sb blkly, occ plty, mod sft-mod frm, sl calc; OIL SHOW: mod bri gn cut, dul gn ring, blotchy yel resdl stn, no od
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T: med-dk gy, sl mot ip, wh incl, sb blk- sb ply, rthy tex, frm-hd, v calc 30% med gy, wh incl, mot ip, blk- sb ply, rthy tex, frm-fri, v calc, 10% SLTY SH: blk, sb ply-sb blk, occ ply, mod sft-mod frm, sl calc; OIL SHOW: bri gn-yel i gn-yel ring, tr yel min flr, solid gn-yel resdl stn, no od		55% CHK: lt gy-med gy, wh incl, mot ip, blk- sb ply, rthy tex, frm-fri, v calc, 35% MRST: med-dk gy, sl mot ip, wh incl, sb blk- sb ply, rthy tex, frm-hd, v calc 10% SLTY SH: dk gy-occ blk, sb ply-sb blk, occ ply, mod sft-mod frm, sl calc; OIL SHOW: bri bl-wh stmg milky cut, sme yel min flr, mod bl resdl ring, no od	
		60% CHK: lt gy-med gy, wh i MRST: med-dk gy, sl mot ip SHOW: bri bl stmg milky cut,	



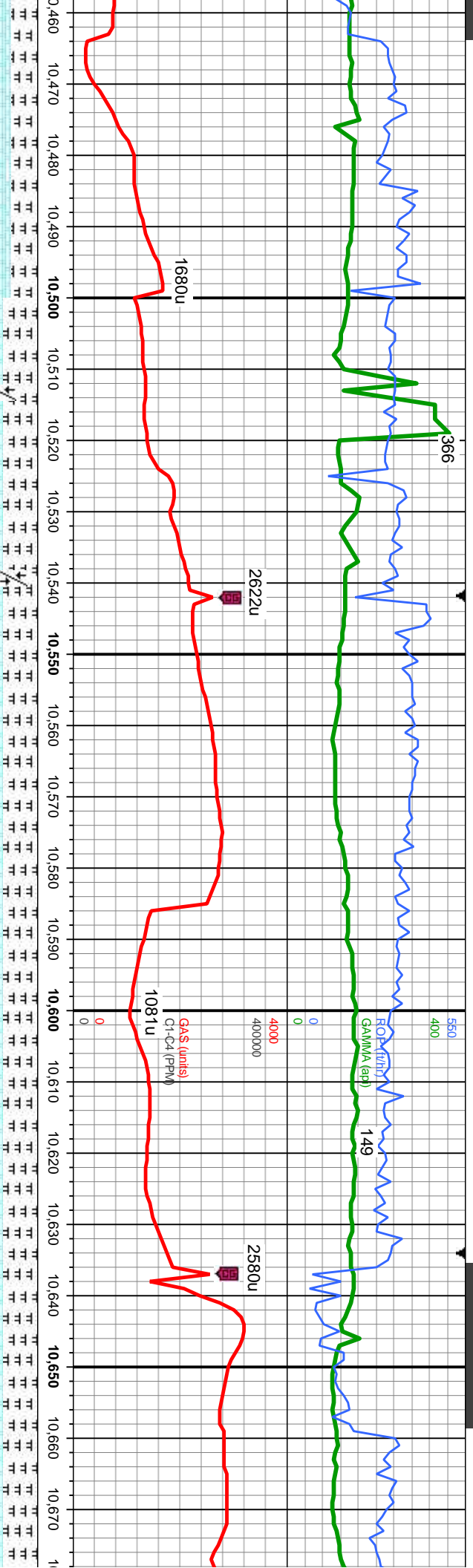


MMW: 9.4/9.5+ VIS: 39/40

MD: 10,377'
TVD: 6,954.2'
Inclination: 89.4 °
Azimuth: 89.4 °
VS: 2,719.75'

nci, mot ip, blkly - sb plty, rthy tex, frm-fri, v calc, 40% wh incl, sb blkly-sb plty, rthy tex, frm-hd, v calc; OIL tr yel mln fior, mod bl-wh resdl ring, no od	60% CHK: lt gy-med gy, wh incl, mot ip, blkly - sb plty, rthy tex, frm-fri, v calc, 40% MRLST: med-dk gy, sl mot ip, wh incl, sb blkly-sb plty, rthy tex, frm-hd, v calc; OIL SHOW: bri bl string mlky cut, tr yel mln fior, mod bl-wh resdl ring, no od
	70% CHK: lt gy-med gy, wh incl, mot ip, blkly - sb plty, rthy tex, frm-fri, v calc, 40% MRLST: med-dk gy, sl mot ip, wh incl, sb blkly-sb plty, rthy tex, frm-hd, v calc; OIL SHOW: bri lt bl-wh mlky string cut, bri wh thk





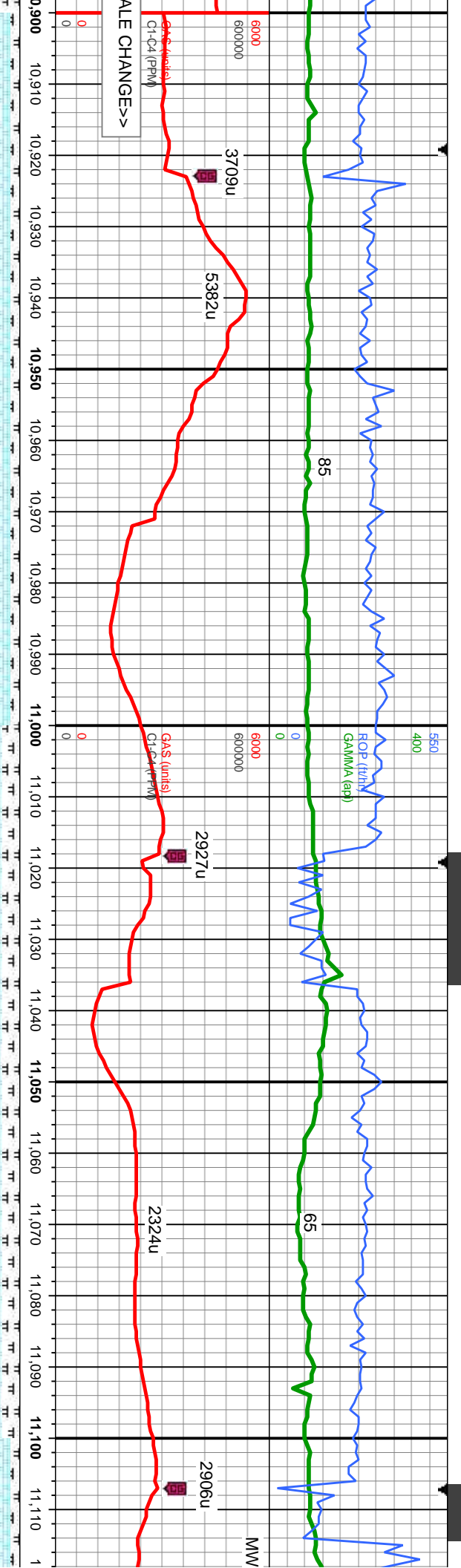
MD: 10,567'
TVD: 6,955.69'
Inclination: 89.7°
Azimuth: 89.9°
VS: 2,909.72'

ply, rthy tex, frm-fri, v calc, tr bent
xy-sb ply, rthy tex, frm-hd, v calc;
ring, solid brt bl resd stn, no od

60% CHK: lt gy-med gy, wh incl, mot ip, blk - sb ply, rthy tex, frm-fri, v calc, rr bent;
40% MRLST: med-dk gy, sl mot ip, wh incl, sb blk - sb ply, rthy tex, frm-hd, v calc; OIL
SHOW: brt gn-yei cut, mod brt gn-yei ring, tr yei min flor, solid gn-yei resd stn, no od

60% CHK: lt gy-med gy, wh incl, mot ip, blk - sb blk, rthy tex, frm
40% MRLST: med-dk gy, sl mot ip, wh incl, sb blk - sb ply, rthy tex
OIL SHOW: brt bl sting mlky cut, tr yei min flor, mod bl-wh resd rin





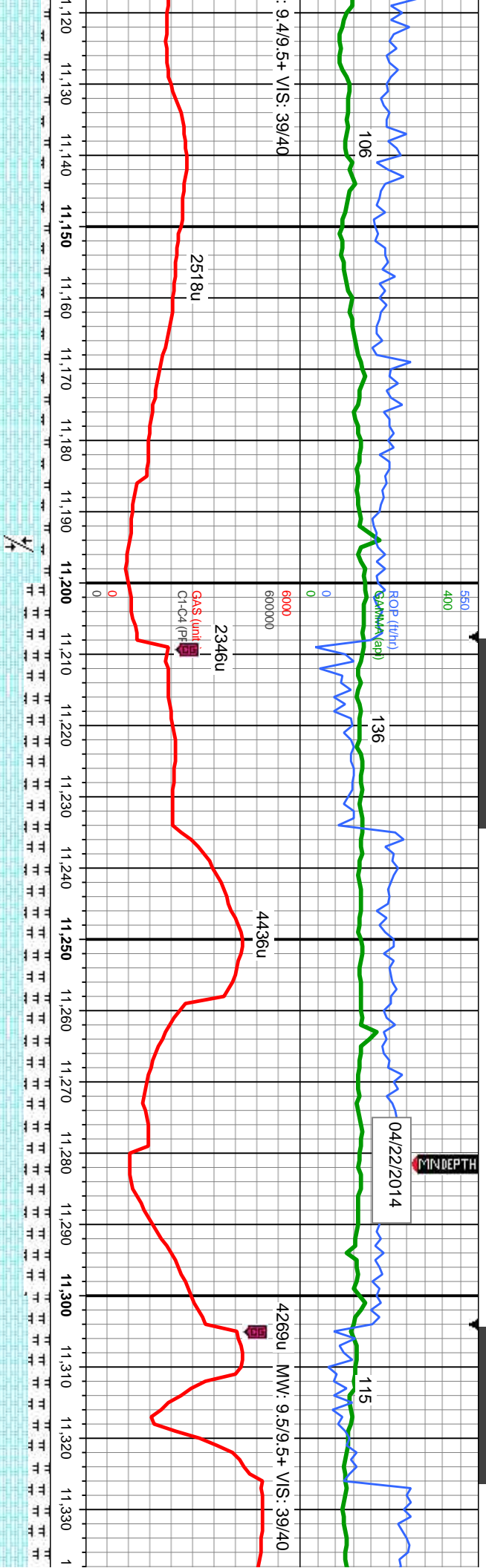
MD: 10,947'
TVD: 6,959'
Inclination: 90.3 °
Azimuth: 89.4 °
VS: 3,289.68'

90% CHK: lt gy-med gy, wh incl, mot ip, blk-y - sb pty, rthy tex, frm-fri, v calc, tr bent
10% MRLST: med-dk gy, sl mot ip, wh incl, sb blk-y - sb pty, rthy tex, frm-hd, v calc;
OIL SHOW: bri lt bl-wh milky string cut, bri wh thk ring, solid bri bl resd stn, no od

80% CHK: lt gy-med gy, wh incl, mot ip, blk-y - sb pty, rthy tex, frm-fri, v calc, tr bent, tr
inoc 20% MRLST: med-dk gy, sl mot ip, wh incl, sb blk-y - sb pty, rthy tex, frm-hd, v calc;
OIL SHOW: bri lt bl-wh milky string cut, bri wh thk ring, solid bri bl resd stn, no od

90% CHK: lt gy
inoc 10% MRL
OIL SHOW: br



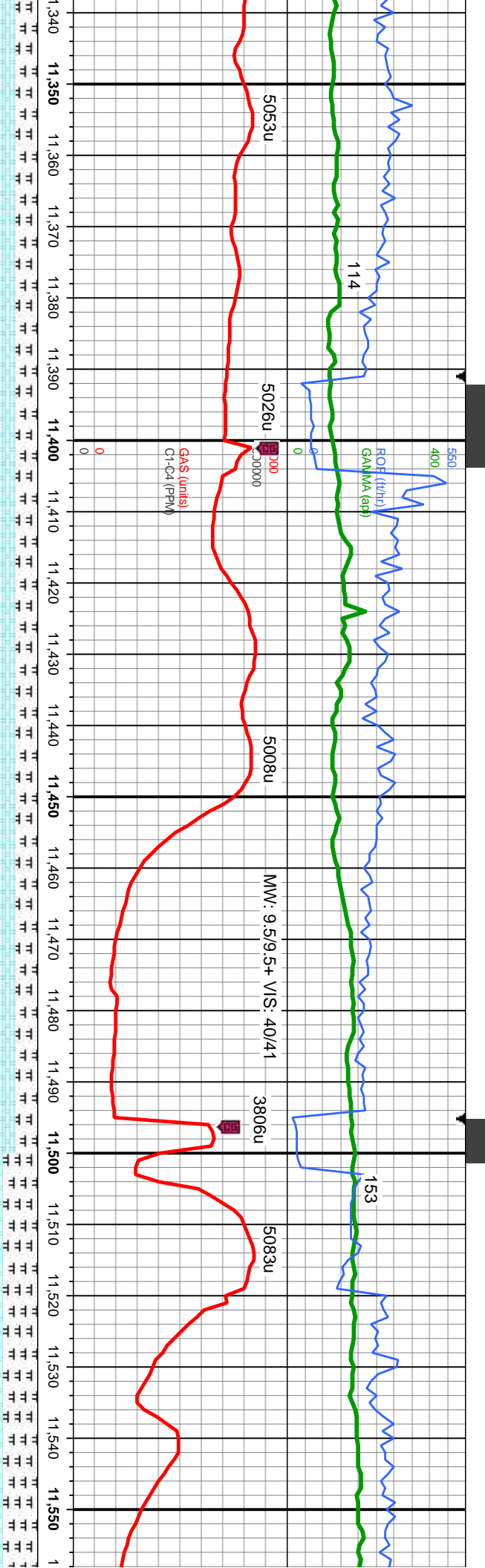


MD: 11,136'
TVD: 6,956.2'
Inclination: 91.4 °
Azimuth: 90.3°
VS: 3.478.65'

MD: 11,231'
TVD: 6,954.79'
Inclination: 90.3 °
Azimuth: 90.9°
VS: 3.573.64'

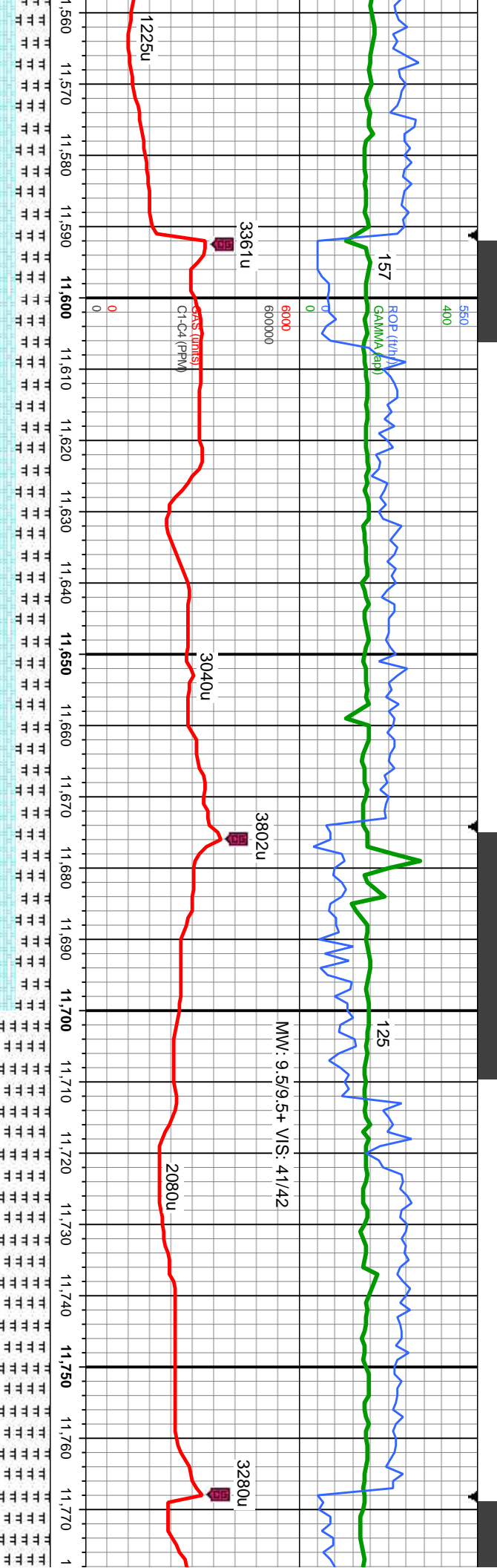
med gy, wh incl, mot ip, blkly - sb pily, rthy tex, frm-fri, v calc, tr bent, tr	70% CHK: lt gy-med gy, wh incl, mot ip, blkly - sb pily, rthy tex, frm-fri, v calc, abnt bent, tr
ST: med-dk gy, sl mot ip, wh incl, sb blkly-sb pily, rthy tex, frm-hd, v calc;	inoc; 30% MRLST: med-dk gy, sl mot ip, wh incl, sb blkly-sb pily, rthy tex, frm-hd, v calc;
i bl stmg mlky cut, tr yel min flor, mod bl-wh resdl ring, no od	OIL SHOW: brt bl stmg mlky cut, tr yel min flor, mod bl-wh resdl ring, no od





		6500	
		<div>MD: 11,420' TVD: 6,952.98' Inclination: 90.8 ° Azimuth: 91.6° VS: 3,762.6'</div>	



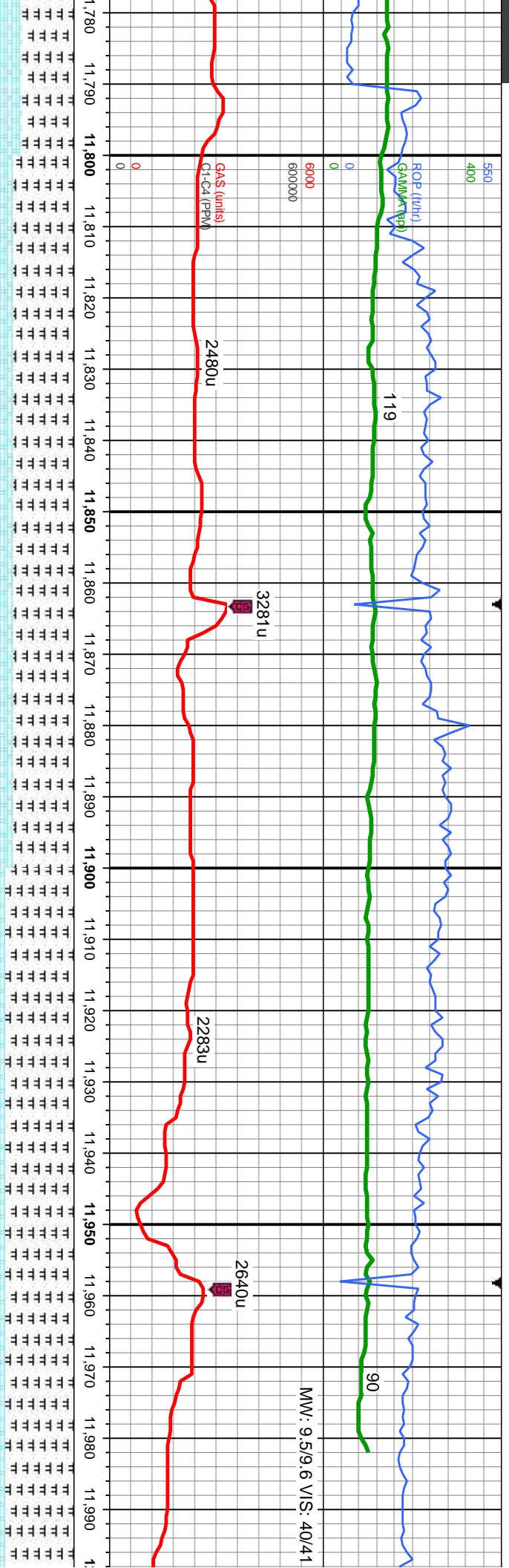


MD: 11,608'
TVD: 6,951.66'
Inclination: 90.2°
Azimuth: 92.4°
VS: 3,950.5'

MD: 11,702'
TVD: 6,952.4'
Inclination: 88.9°
Azimuth: 91.2°
VS: 4,044.46'

6500	60% CHK: lt gy-med gy, wh incl, mot ip, blk-y - sb pily, rthy tex, frm-fri, v calc, rr bent	60% MRLST: med-dk gy, sl mot ip, wh incl, sb blk-y - sb pily, pily ip, rthy tex, frm-hd, v
7500	40% MRLST: med-dk gy, sl mot ip, wh incl, sb blk-y - sb pily, pily ip, rthy tex, frm-hd, v	40% CHK: lt gy-med gy, wh incl, mot ip, blk-y - sb pily, rthy tex, frm-fri, v
	calc: OIL SHOW: bri gn-yel cut, mod bri gn-yel ring, tr yel min flor, solid gn-yel resdl	bri gn-yel cut, mod bri gn-yel ring, tr yel min flor, solid gn-yel resdl stn, no od
	stn, no od	





MD: 11,892'
TVD: 6,956.05'
Inclination: 88.9 °
Azimuth: 90.4°
VS: 4,234.42'

MD: 11,960'
TVD: 6,957.05'
Inclination: 89.4 °
Azimuth: 90.2°
VS: 4,302.41'

70% CHK: lt gy-med gy, wh incl, mot ip, blk y - sb pty, rthy tex, frm-fri, v calc, rr bent; 30% MR LST: med-dk gy, sl mot ip, wh incl, sb blk y- sb pty, pty ip, rthy tex, frm-hd, v calc; OIL SHOW: bri bl string milky cut, tr yel min flor, mod bl-wh resd l ring, no od	80% CHK: lt gy-med gy, wh incl, mot ip, blk y - sb pty, rthy tex, frm-fri, v calc; 20% MR LST rr wh incl, sb blk y- sb pty, pty ip, rthy tex, frm-hd, v calc; OIL SHOW: bri gn-yel cut, mod min flor, solid gn-yel resd l stn, no od
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