www.pmles.com

Scale 1:240 (5"=100') Imperial

Well Name:	Starks 3408 2-35H		
Location:	35-34S-8W	Harper County	
Licence Number:	15-077-21903-01-00	Region:	Kansas
Spud Date:	1/31/13	Drilling Completed:	
Surface Coordinates:	200' FNL & 1,980' FEL of Section 35-34S-8W		
Bottom Hole Coordinates:	330' FSL & 1,980' FEL of Section 35-34S-8W		
Ground Elevation (ft):	1,277'	K.B. Elevation (ft):	1,295' (+20' EST)
Logged Interval (ft):	3,400' To:	Total Depth (ft):	9,200
Formation:	Mississippi Limestone		
Type of Drilling Fluid:	WATER BASE MUD		

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Sandridge Energy, Inc.
Address: 123 Robert S. Kerr Avenue
Oklahoma City, OK 73102
405-429-5720

GEOLOGIST

Name: Tammy Alcorn
Company: Sandridge Energy, Inc.
Address: 123 Robert S. Kerr Avenue
Oklahoma City, OK 73102
405-429-5720

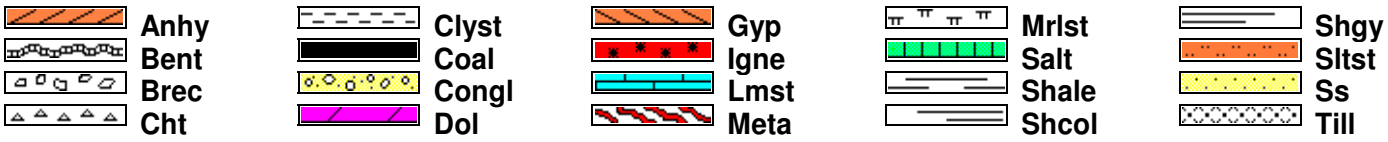
MUD LOG

PML Exploration Services LLC
5601 NW 72nd St., Suite 354
Oklahoma City, OK 73132
UNIT # 34
MUDLOGGERS: Devonia Horton / Brad Baram

CONTRACTOR

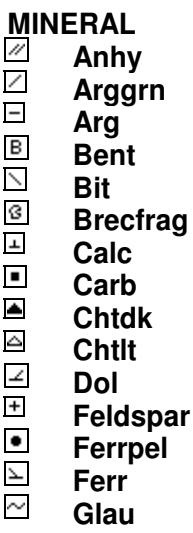
Unit Rig 310

ROCK TYPES

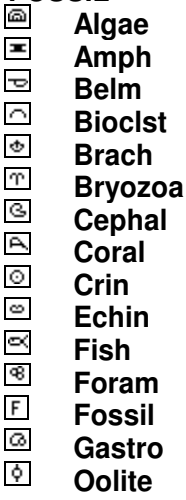


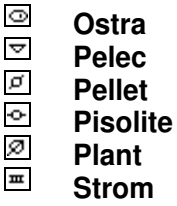
ACCESSORIES

MINERAL

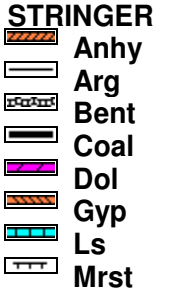


FOSSIL

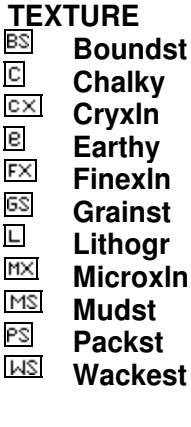




STRINGER

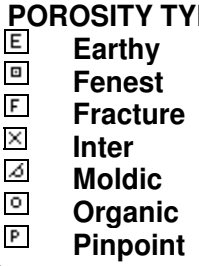


TEXTURE



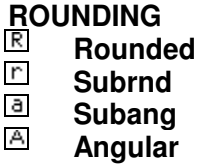
OTHER SYMBOLS

POROSITY TYPE



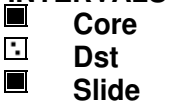
SORTING

ROUNDING

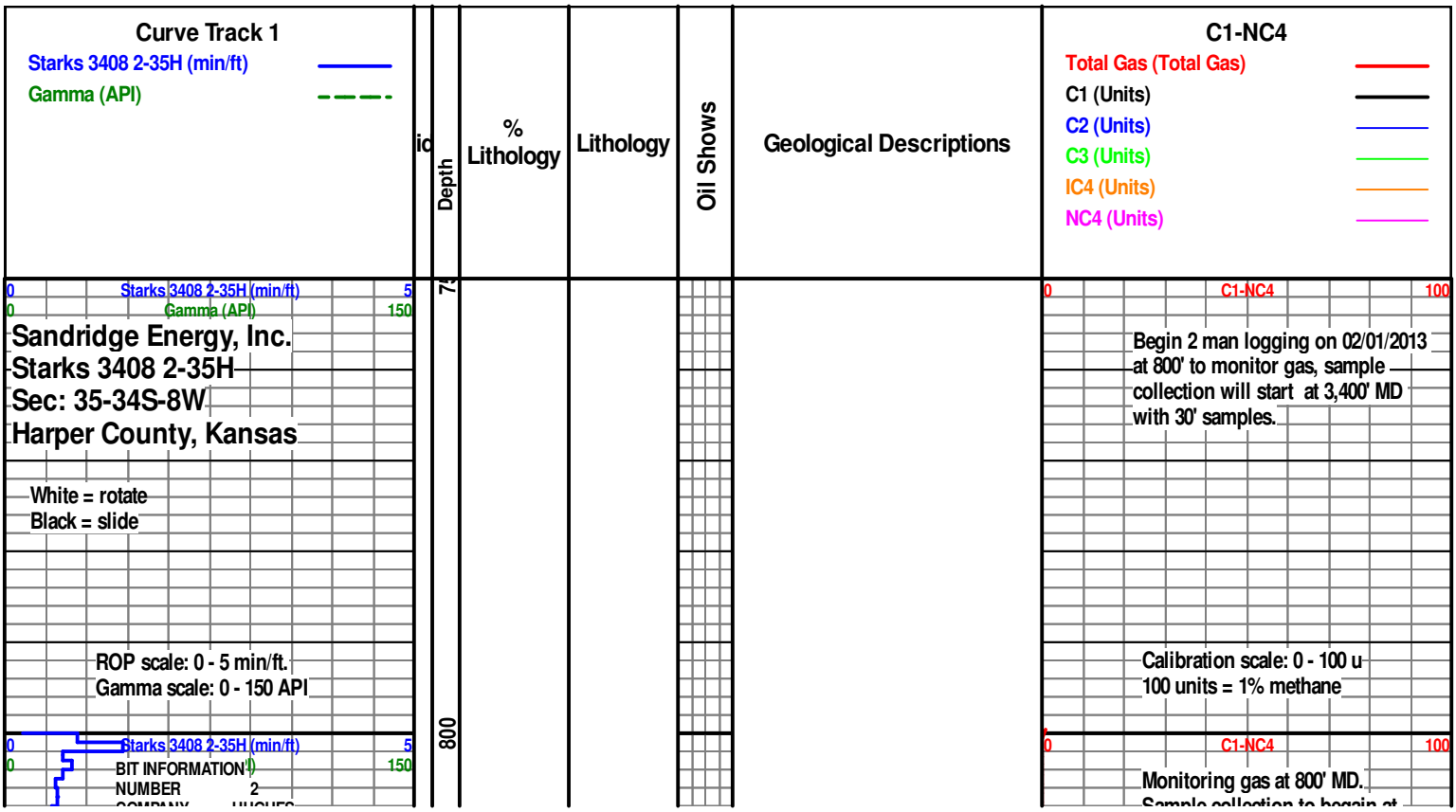


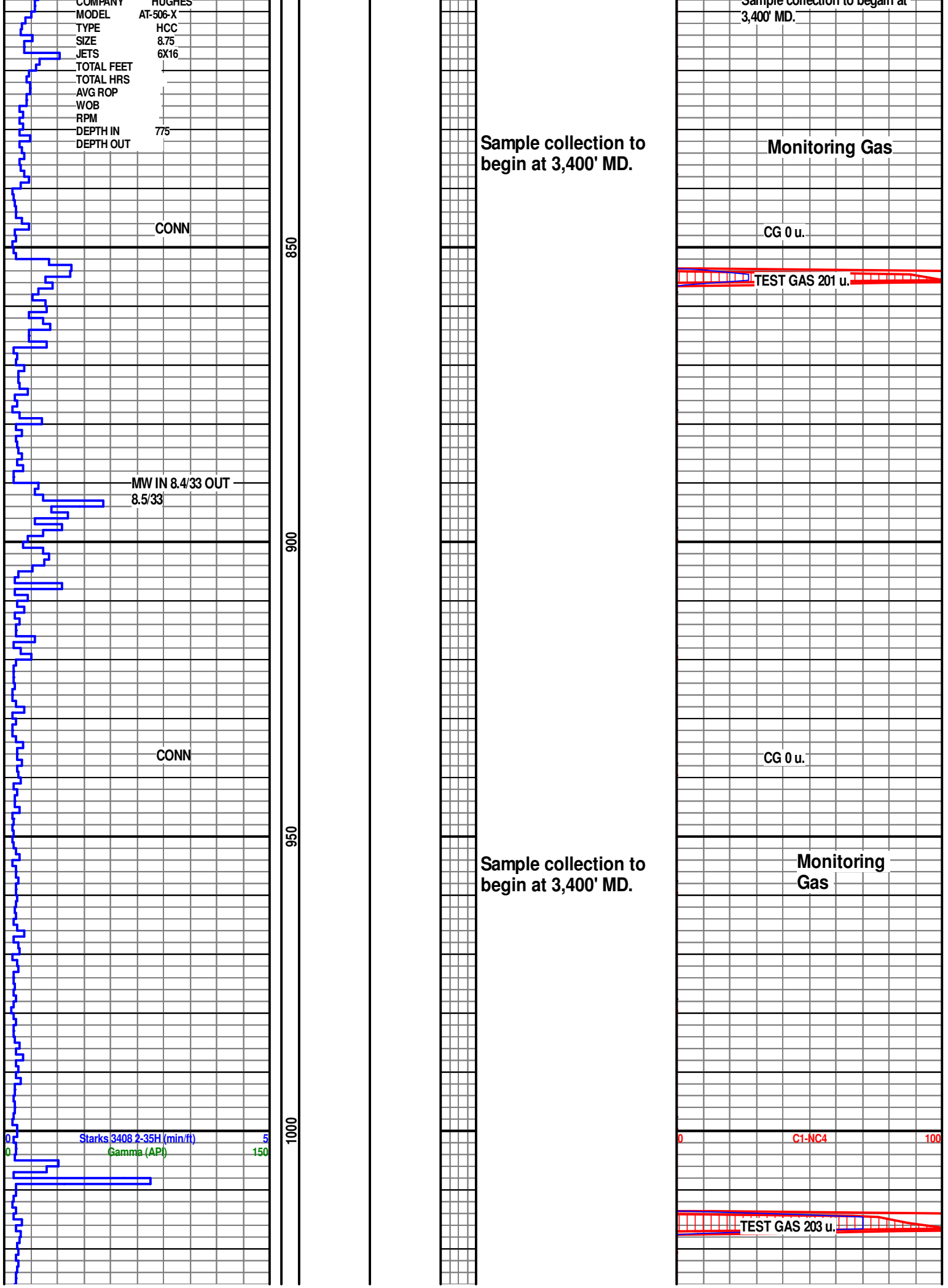
OIL SHOWS

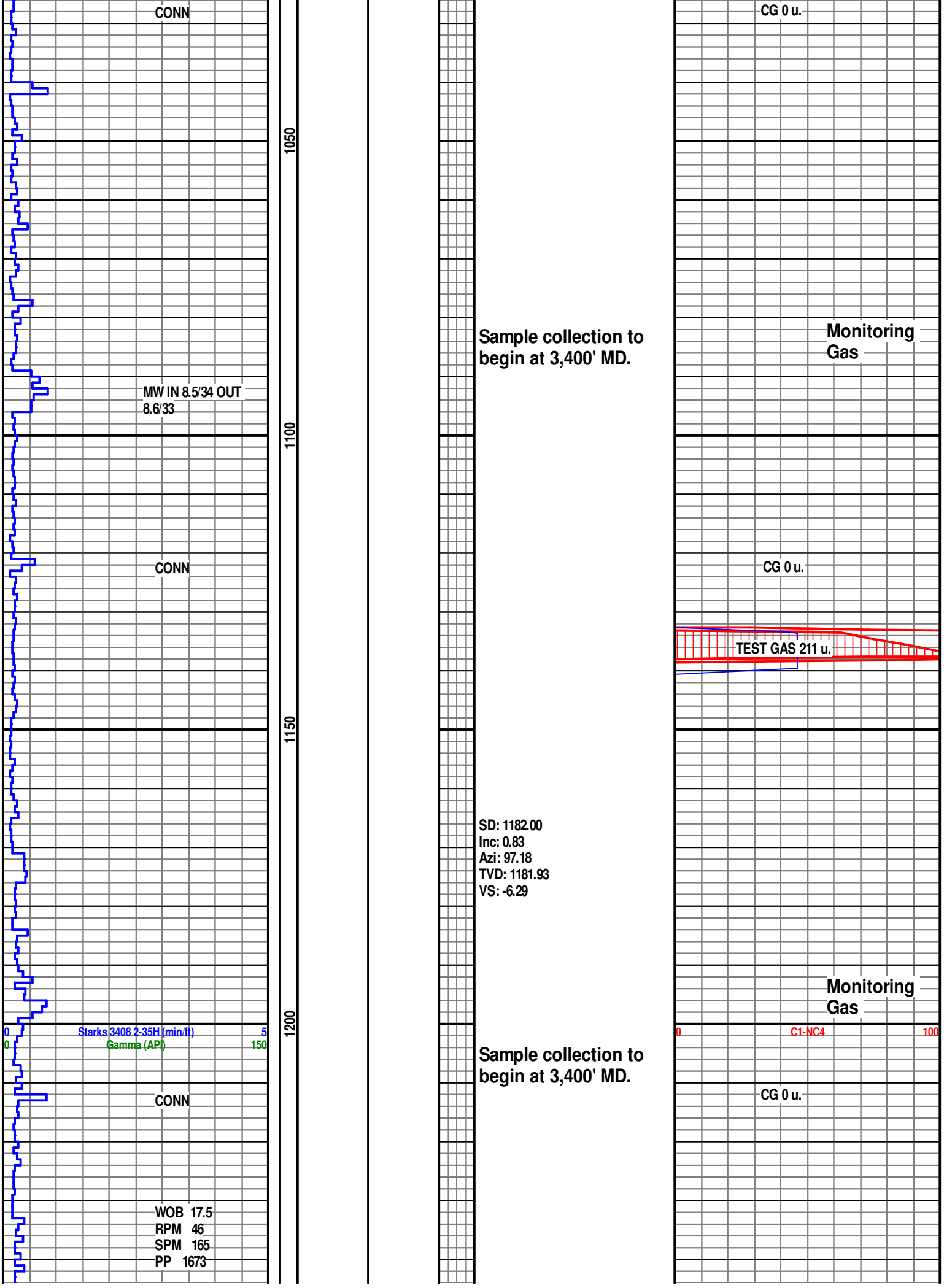
INTERVALS

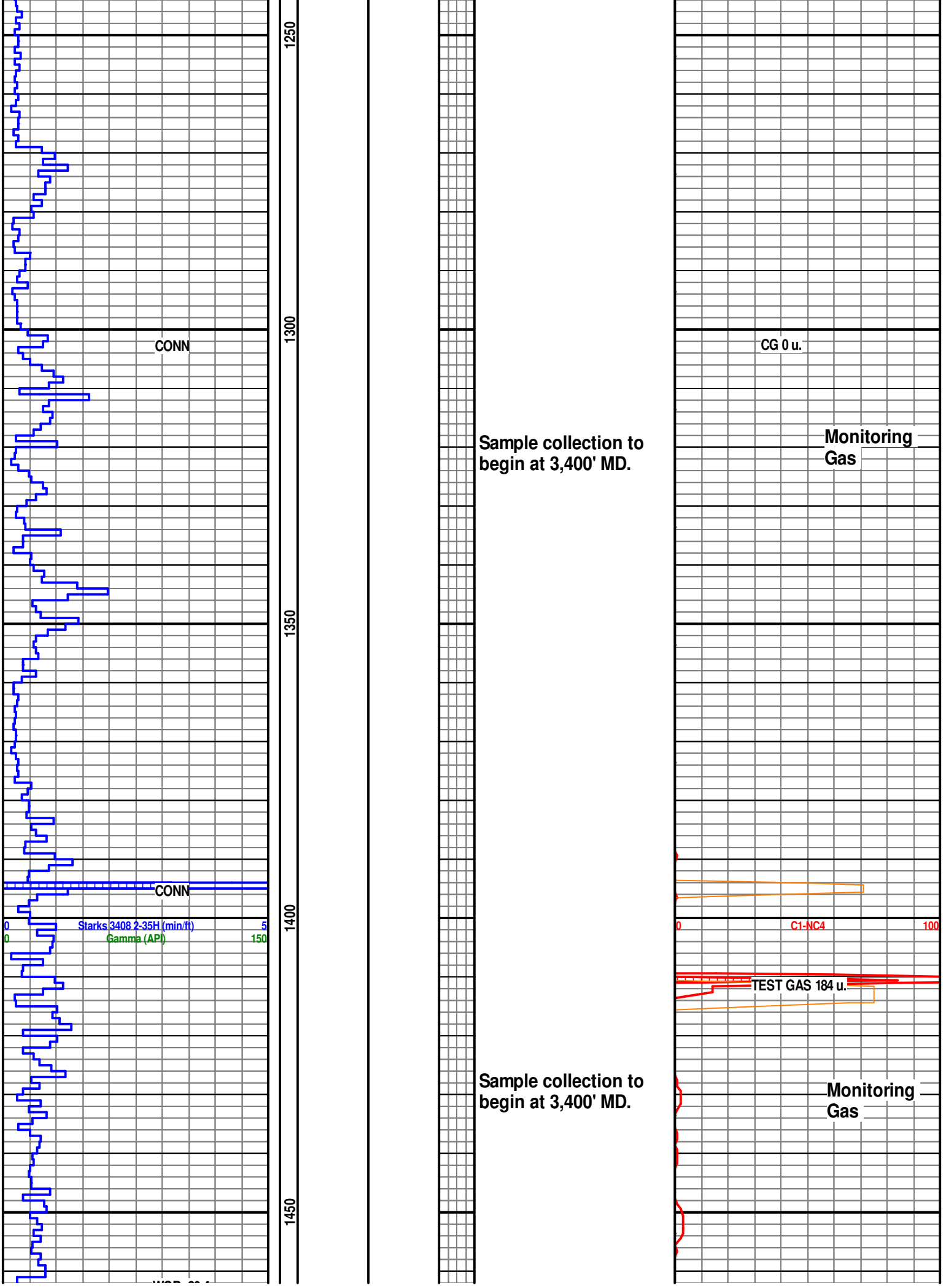


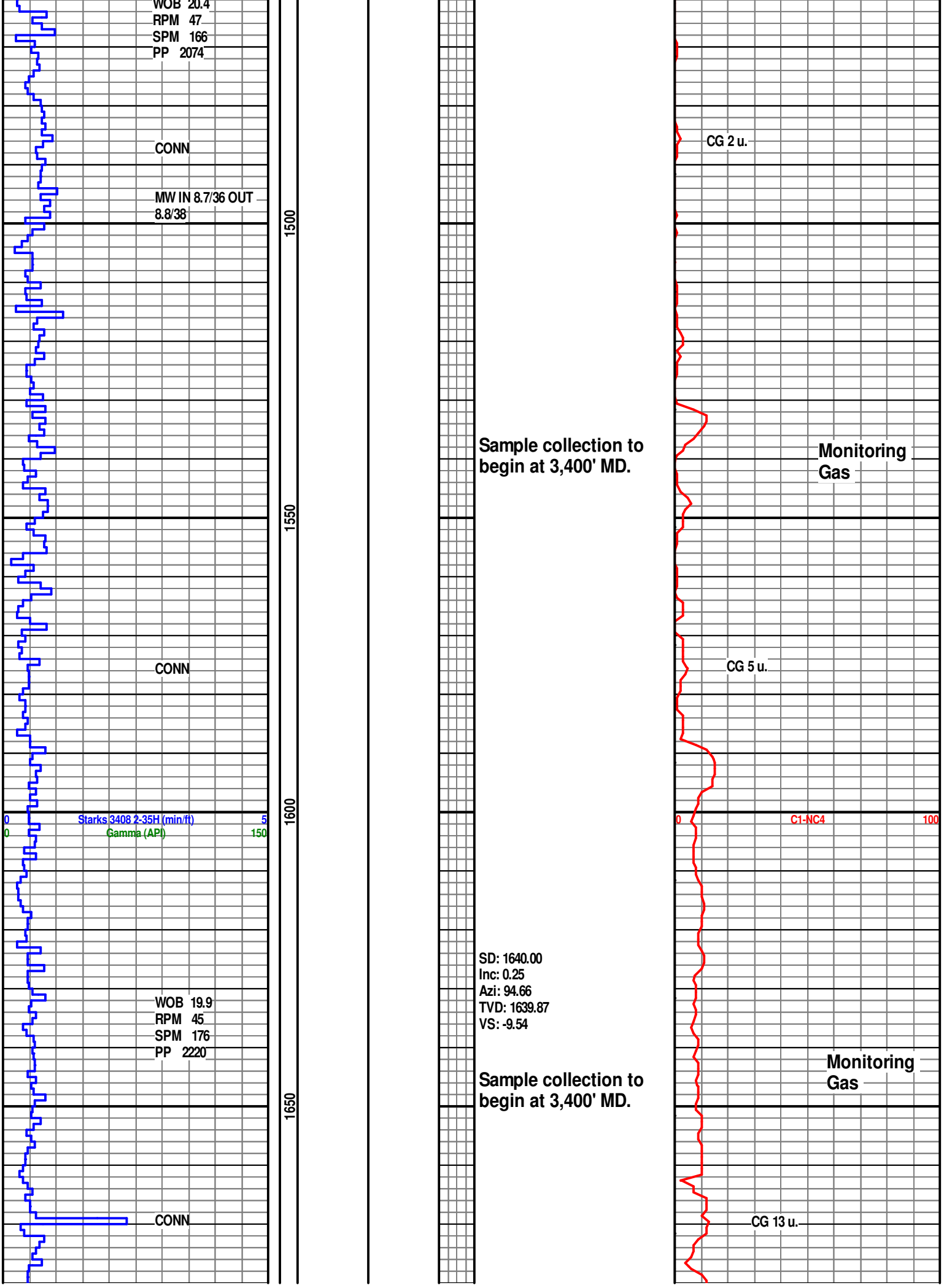
EVENTS

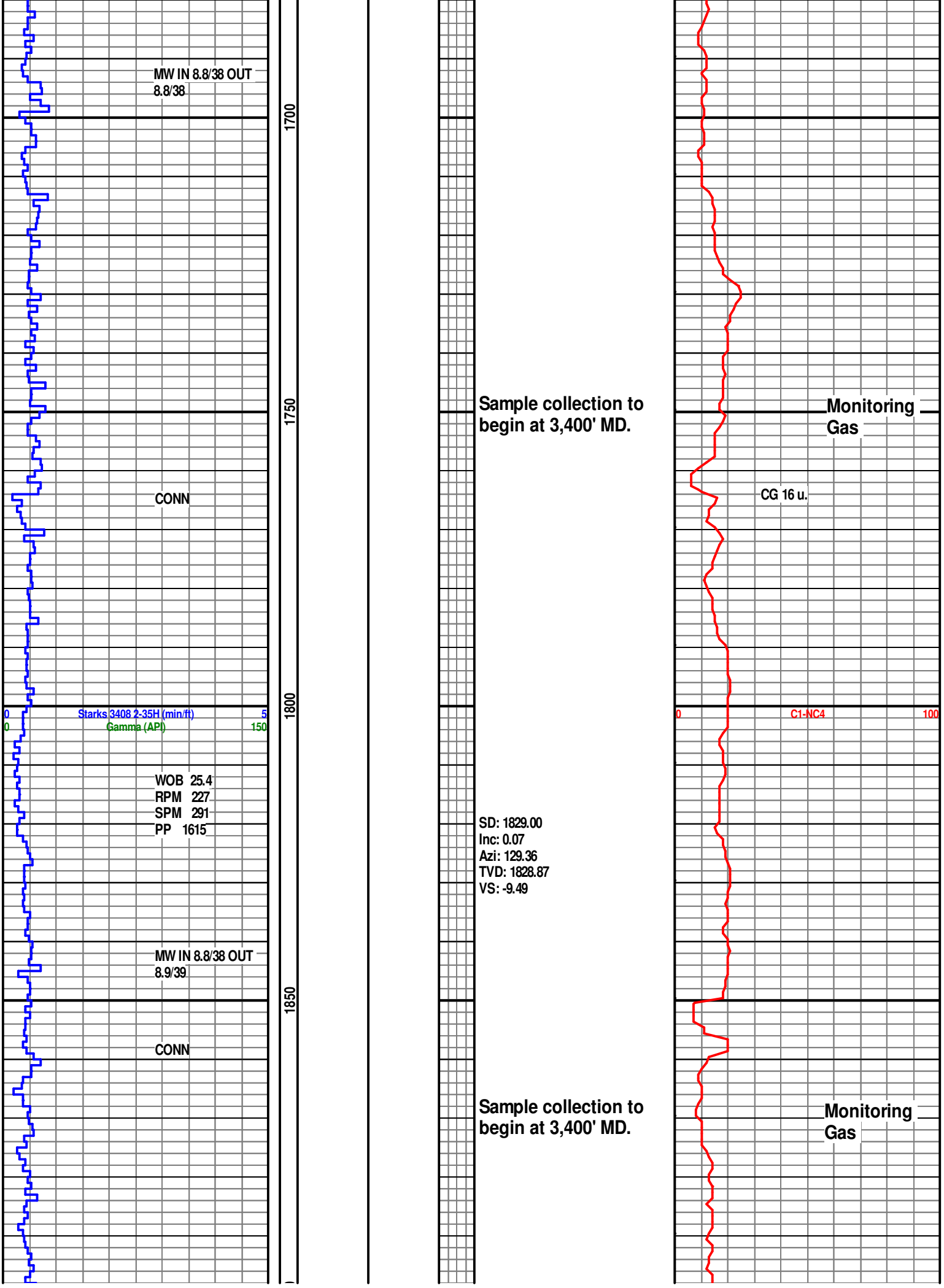


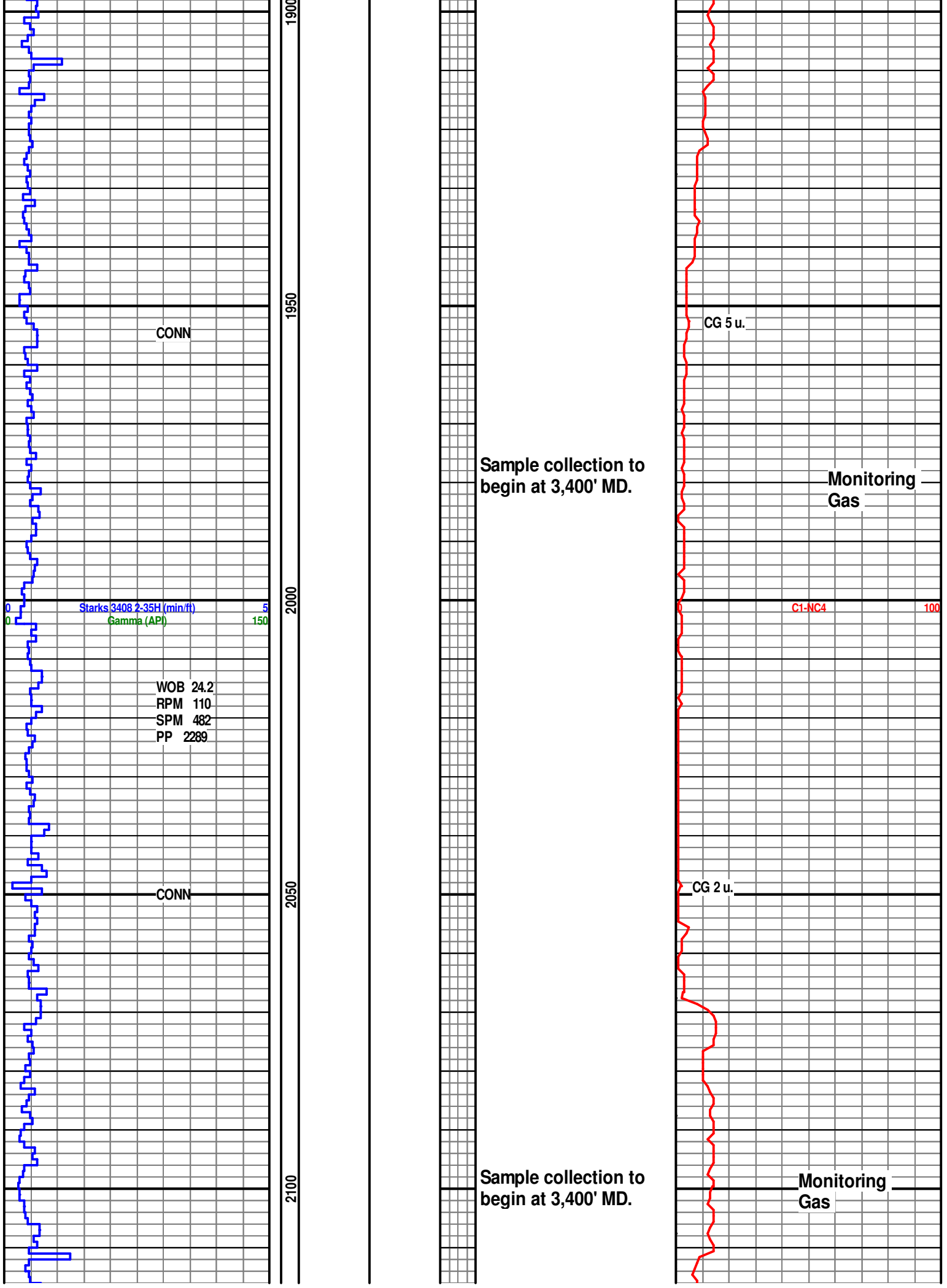

COMPANY HUGHES
MODEL AT-506-X
TYPE HCC
SIZE 8.75
JETS 6X16
TOTAL FEET
TOTAL HRS
AVG ROP
WOB
RPM
DEPTH IN 775
DEPTH OUT
CONN
MW IN 8.4/33 OUT
8.5/33
CONN
850
900
950
1000
Sample collection to begin at 3,400' MD.
Sample collection to begin at 3,400' MD.
Monitoring Gas
CG 0 u.
TEST GAS 201 u.
CG 0 u.
Sample collection to begin at 3,400' MD.
Monitoring Gas
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
0
C1-NC4
100
TEST GAS 203 u.

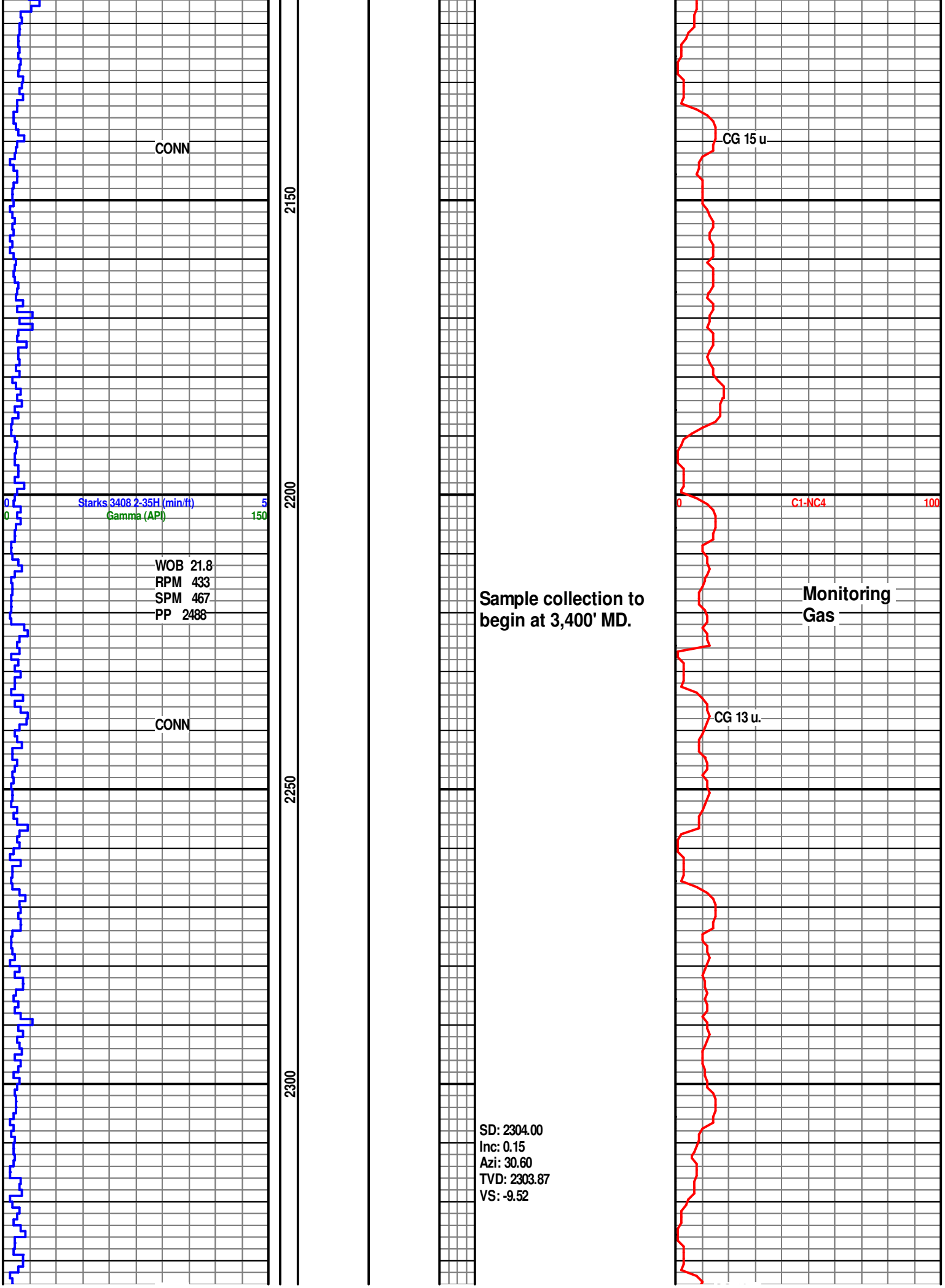

CONN
MW IN 8.5/34 OUT
8.6/33
CONN
Starks 3408 2-35H (min/ft)
0
5
Gamma (API)
0
150
CONN
WOB 17.5
RPM 46
SPM 165
PP 1673
1050
1100
1150
1200
Sample collection to
begin at 3,400' MD.
SD: 1182.00
Inc: 0.83
Azi: 97.18
TVD: 1181.93
VS: -6.29
Sample collection to
begin at 3,400' MD.
CG 0 u.
Monitoring
Gas
CG 0 u.
TEST GAS 211 u.
Monitoring
Gas
0
C1-NC4
100
CG 0 u.

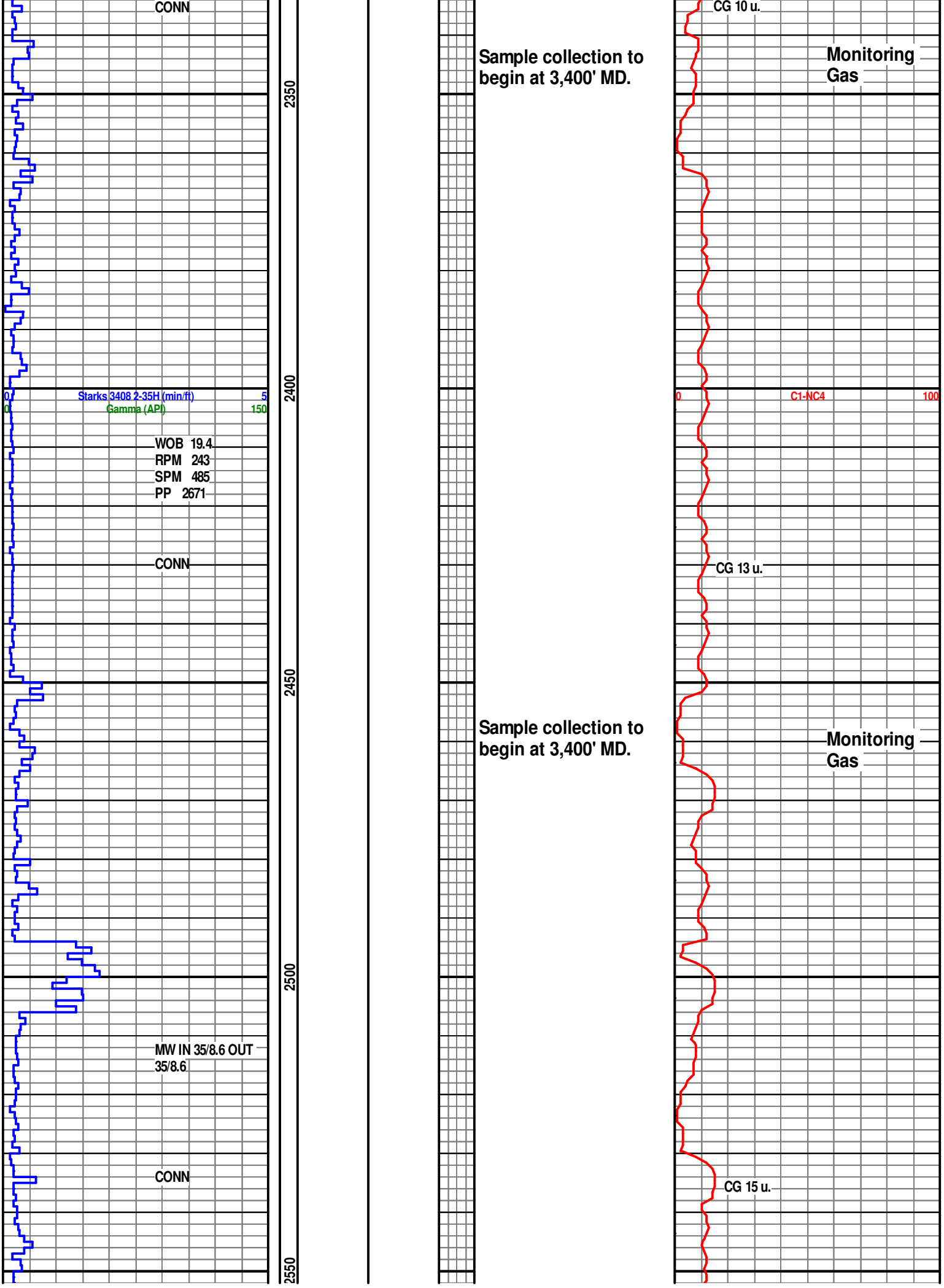

1250
1300
1350
1400
1450
CONN
CONN
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
Sample collection to begin at 3,400' MD.
CG 0 u.
Monitoring Gas
0
C1-NC4
100
TEST GAS 184 u.
Sample collection to begin at 3,400' MD.
Monitoring Gas

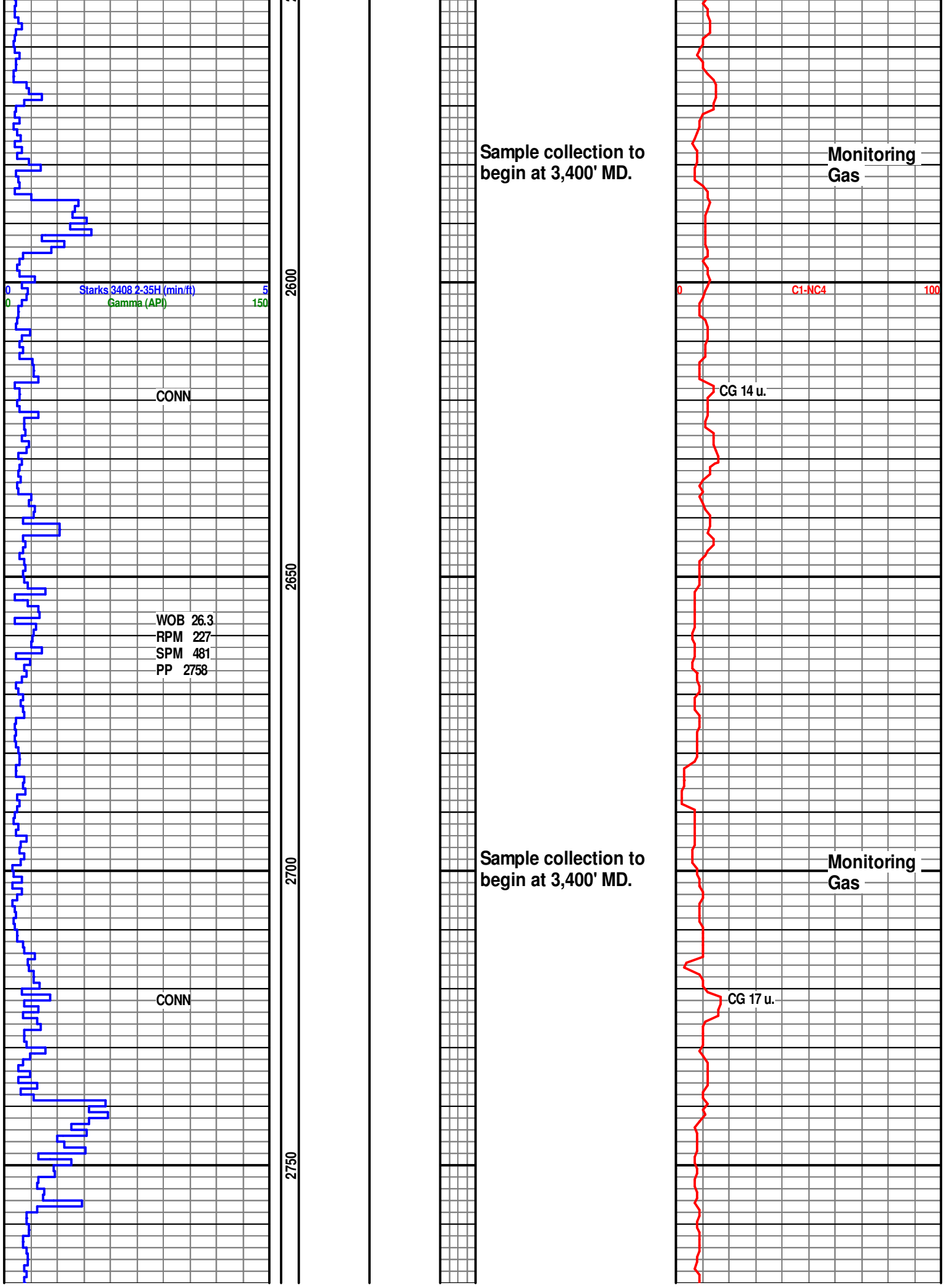

WOB 20.4
RPM 47
SPM 166
PP 2074
CONN
MW IN 8.7/36 OUT
8.8/38
CONN
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
WOB 19.9
RPM 45
SPM 176
PP 2220
CONN
1500
1550
1600
1650
Sample collection to begin at 3,400' MD.
SD: 1640.00
Inc: 0.25
Azi: 94.66
TVD: 1639.87
VS: -9.54
Sample collection to begin at 3,400' MD.
CG 2 u.
Monitoring Gas
CG 5 u.
0
C1-NC4
100
Monitoring Gas
CG 13 u.

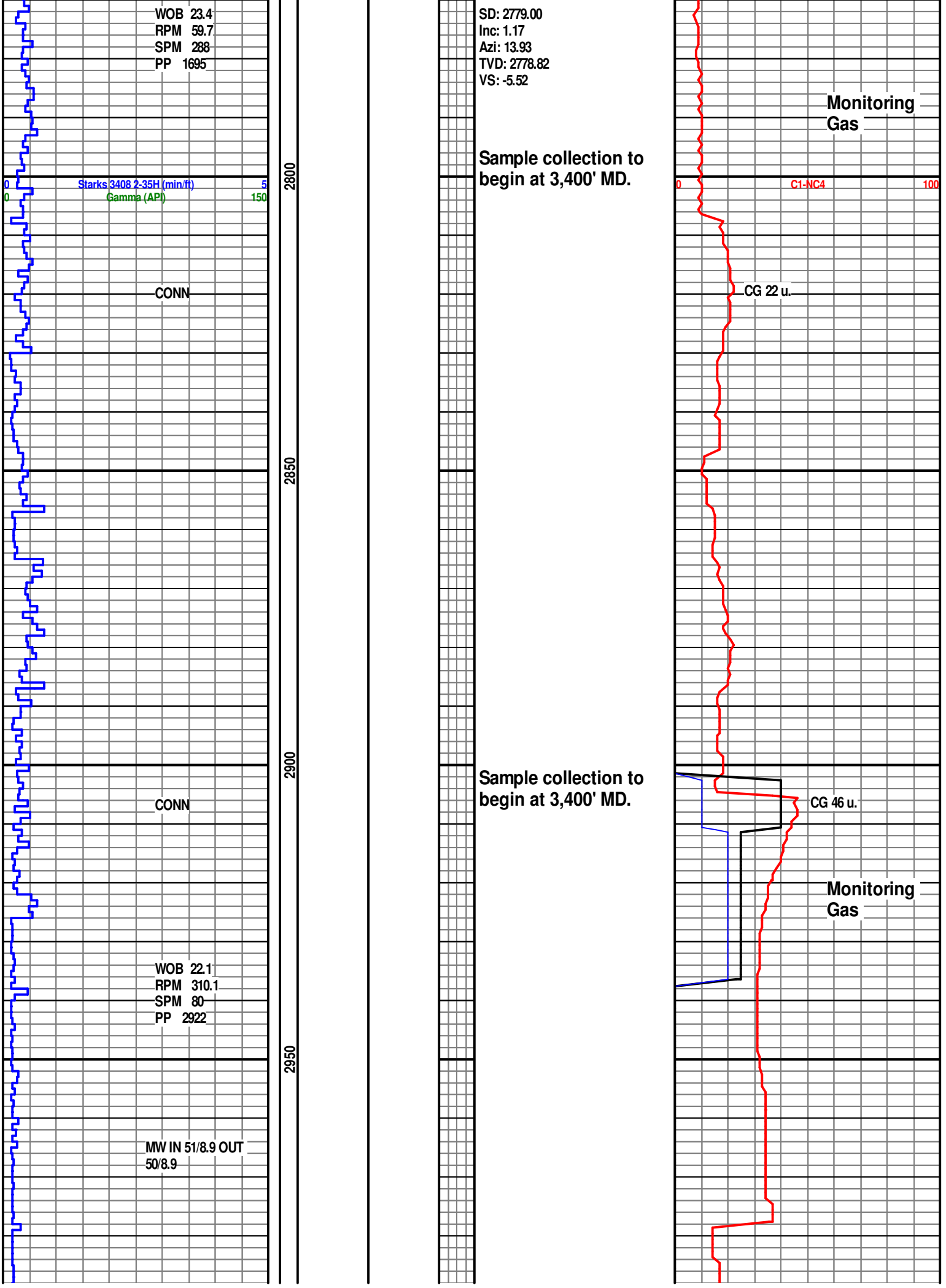

MW IN 8.8/38 OUT
8.8/38
1700
1750
CONN
Sample collection to begin at 3,400' MD.
Monitoring Gas
CG 16 u.
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
1800
0
C1-NC4
100
WOB 25.4
RPM 227
SPM 291
PP 1615
SD: 1829.00
Inc: 0.07
Azi: 129.36
TVD: 1828.87
VS: -9.49
MW IN 8.8/38 OUT
8.9/39
1850
CONN
Sample collection to begin at 3,400' MD.
Monitoring Gas

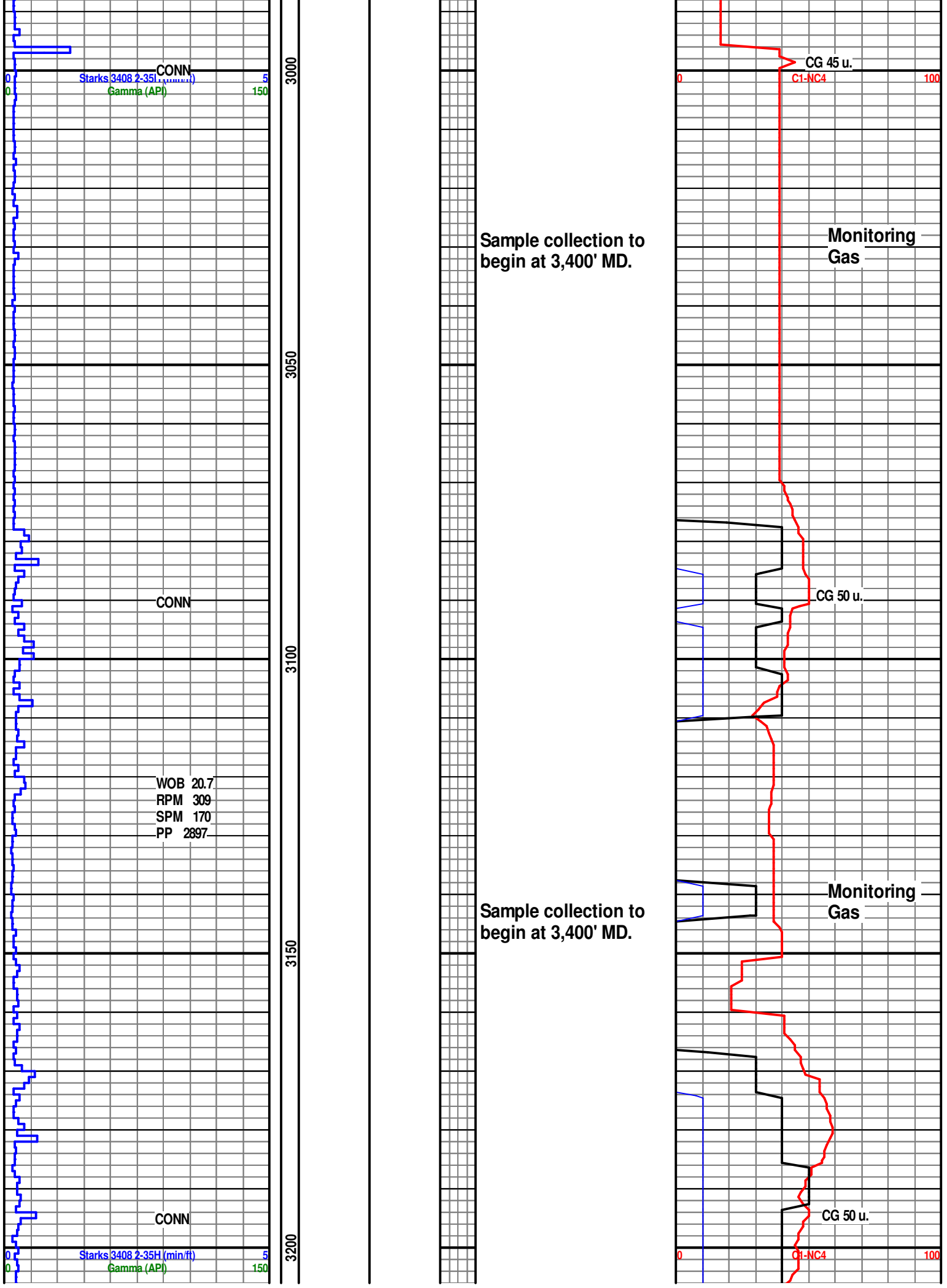

1900
1950
2000
2050
2100
CONN
CONN
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
WOB 24.2
RPM 110
SPM 482
PP 2289
Sample collection to begin at 3,400' MD.
Sample collection to begin at 3,400' MD.
CG 5 u.
CG 2 u.
Monitoring Gas
Monitoring Gas
0
C1-NC4
100

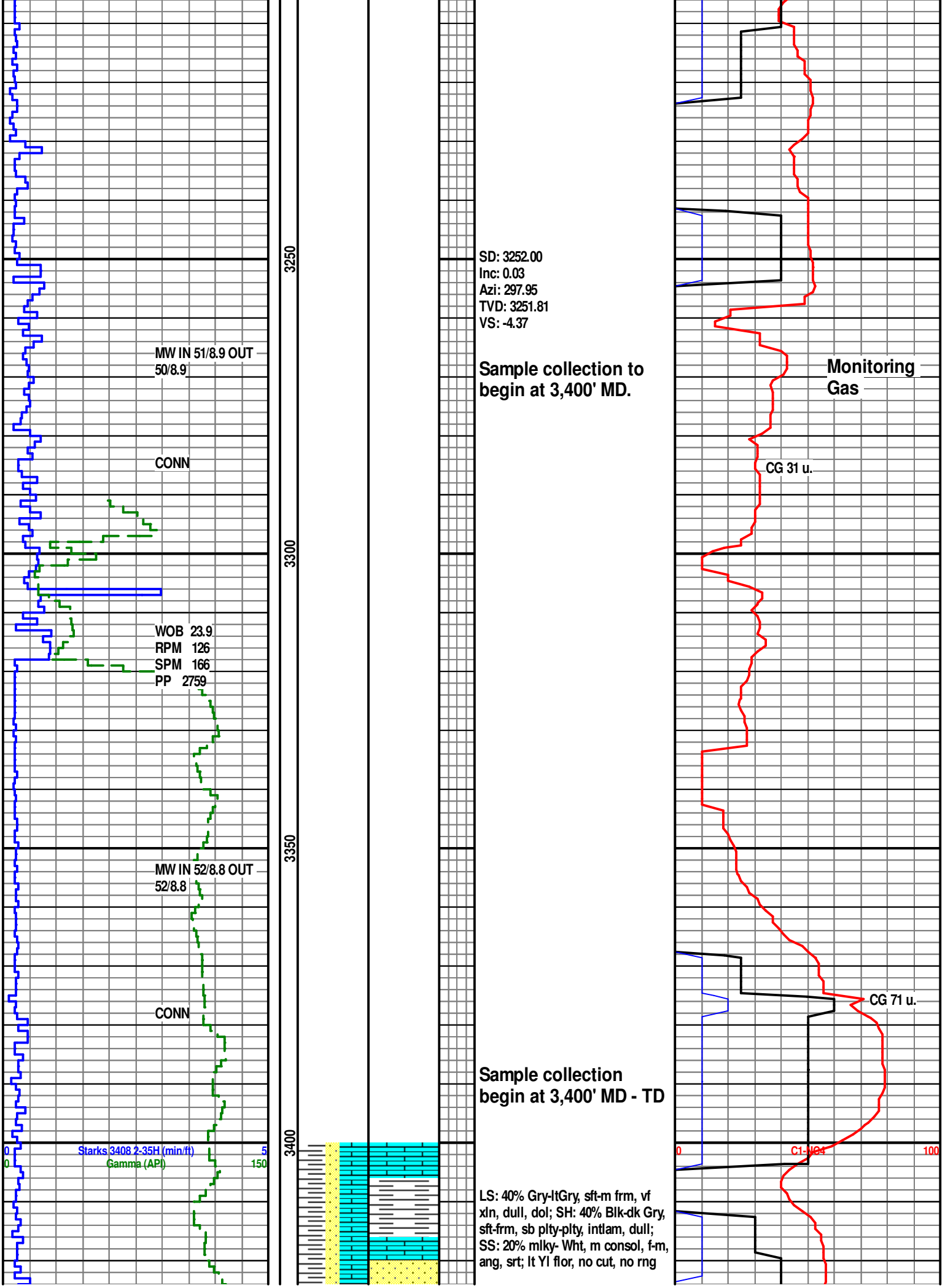

CONN
2150
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
2200
WOB 21.8
RPM 433
SPM 467
PP 2488
CONN
2250
2300
CG 15 u
0
C1-NC4
100
Sample collection to begin at 3,400' MD.
Monitoring Gas
CG 13 u.
SD: 2304.00
Inc: 0.15
Azi: 30.60
TVD: 2303.87
VS: -9.52

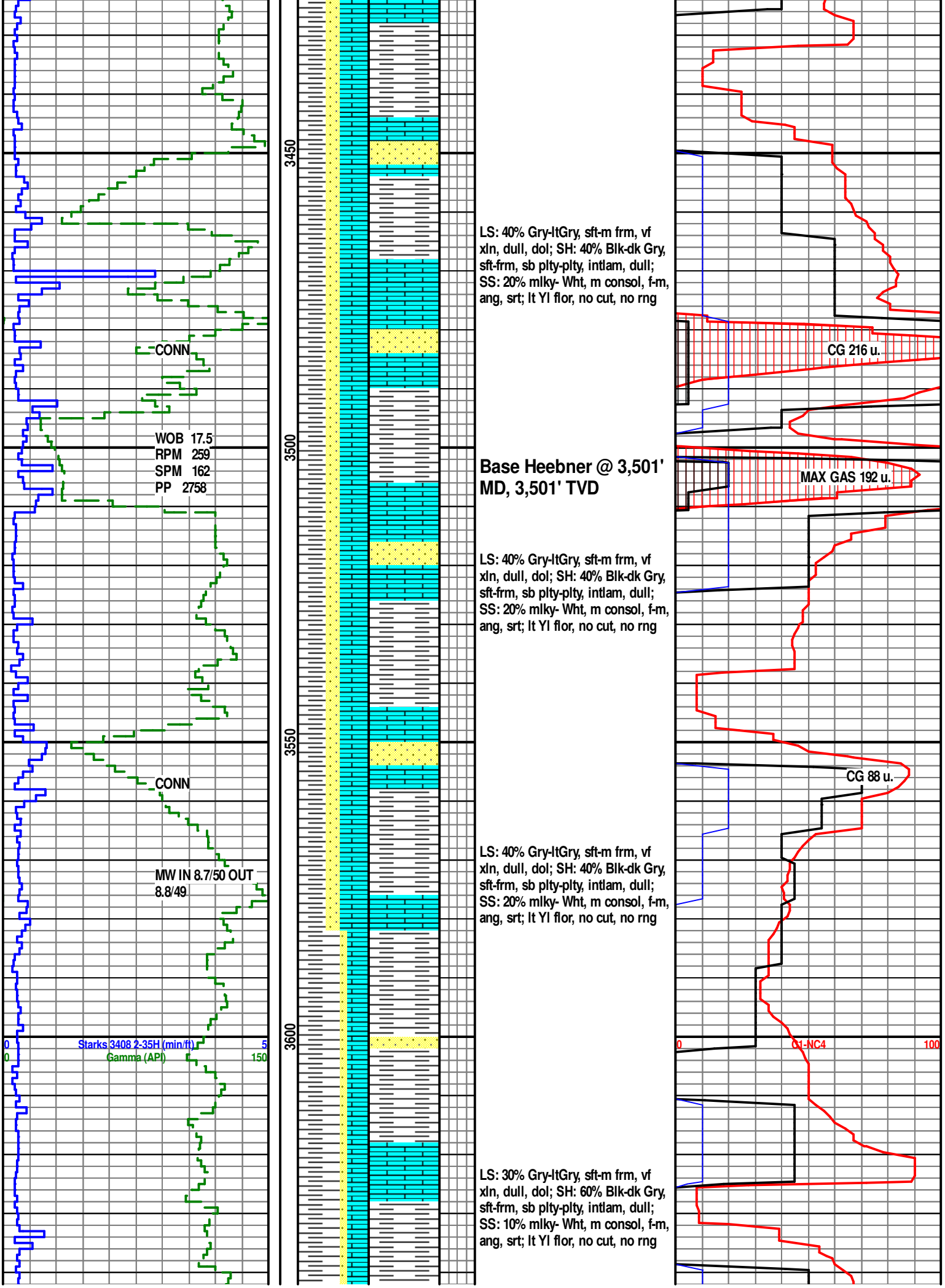

CONN
2350
Starks 3408 2-35H (min/ft)
0
5
Gamma (API)
0
150
2400
WOB 19.4
RPM 243
SPM 485
PP 2671
CONN
2450
MW IN 35/8.6 OUT
35/8.6
2500
CONN
2550
Sample collection to
begin at 3,400' MD.
CG 10 u.
Monitoring
Gas
0
C1-NC4
100
CG 13 u.
Sample collection to
begin at 3,400' MD.
Monitoring
Gas
CG 15 u.

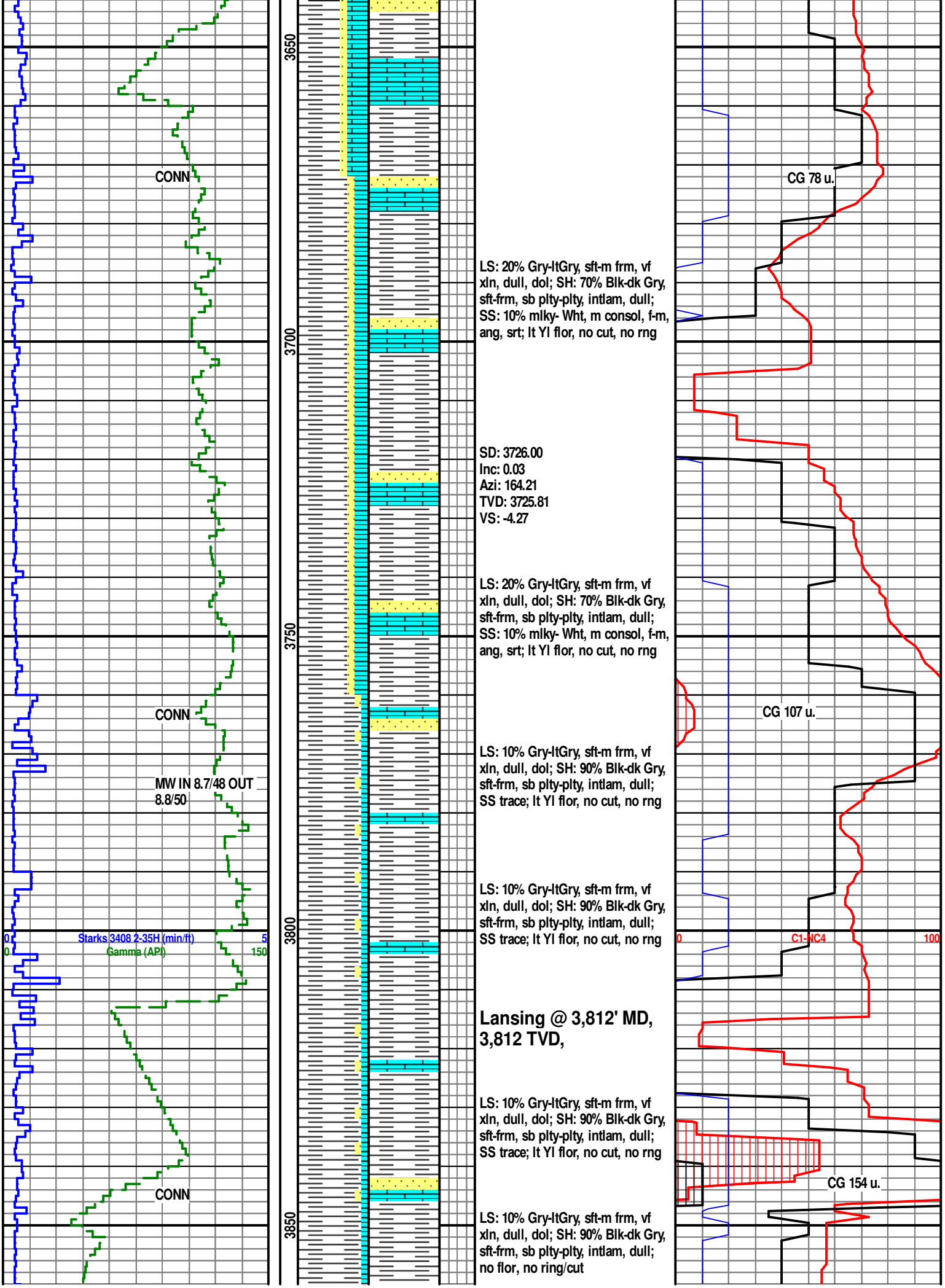

0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
2600
CONN
2650
WOB 26.3
RPM 227
SPM 481
PP 2758
2700
CONN
2750
Sample collection to begin at 3,400' MD.
Monitoring Gas
0
C1-NC4
100
CG 14 u.
Sample collection to begin at 3,400' MD.
Monitoring Gas
CG 17 u.

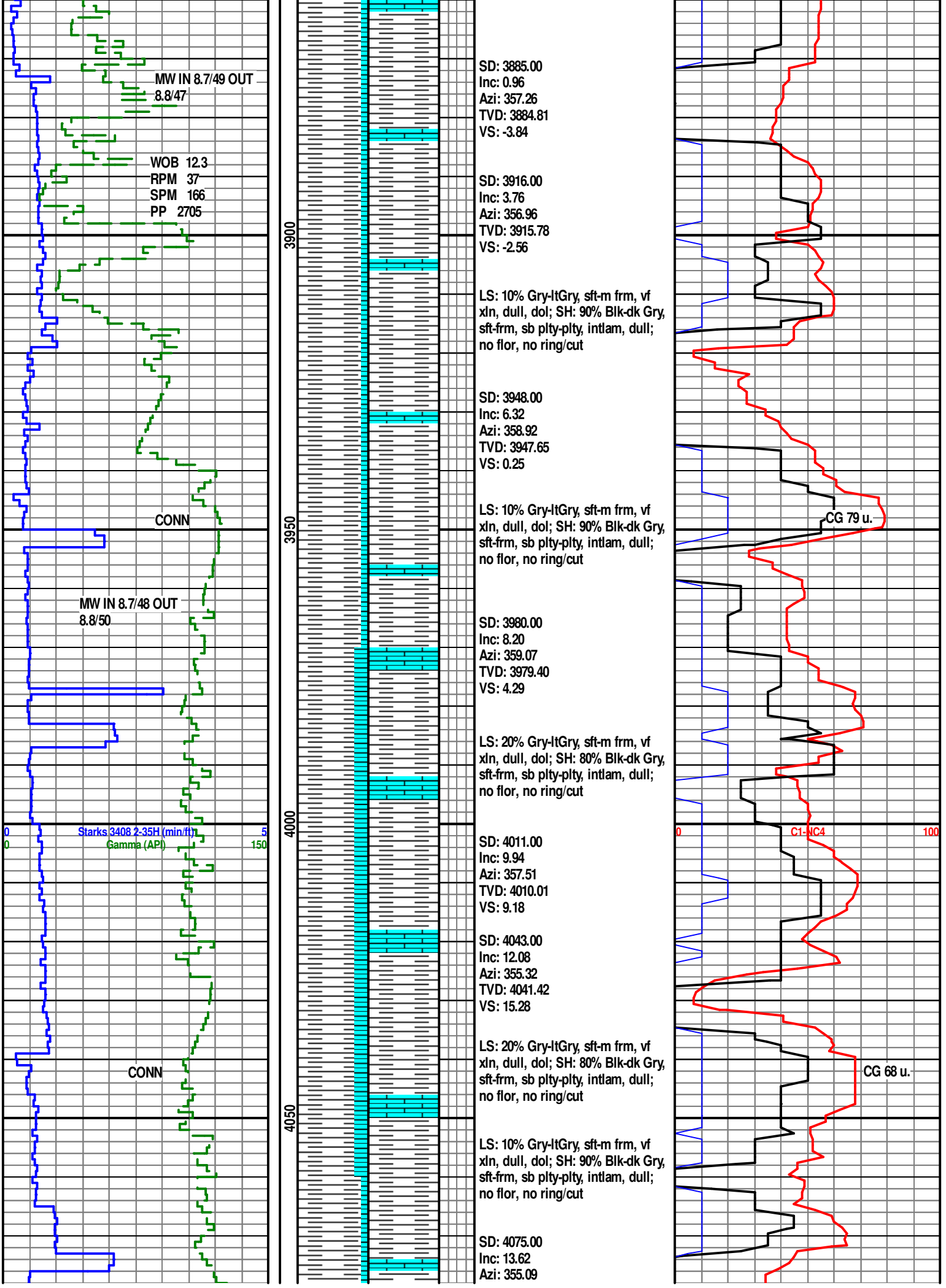

WOB 23.4
RPM 59.7
SPM 288
PP 1695
0 Starks 3408 2-35H (min/ft) 5
0 Gamma (API) 150
CONN
CONN
WOB 22.1
RPM 310.1
SPM 80
PP 2922
MW IN 51/8.9 OUT 50/8.9
2800
2850
2900
2950
SD: 2779.00
Inc: 1.17
Azi: 13.93
TVD: 2778.82
VS: -5.52
Sample collection to begin at 3,400' MD.
Sample collection to begin at 3,400' MD.
Monitoring Gas
0 C1-NC4 100
CG 22 u.
CG 46 u.
Monitoring Gas

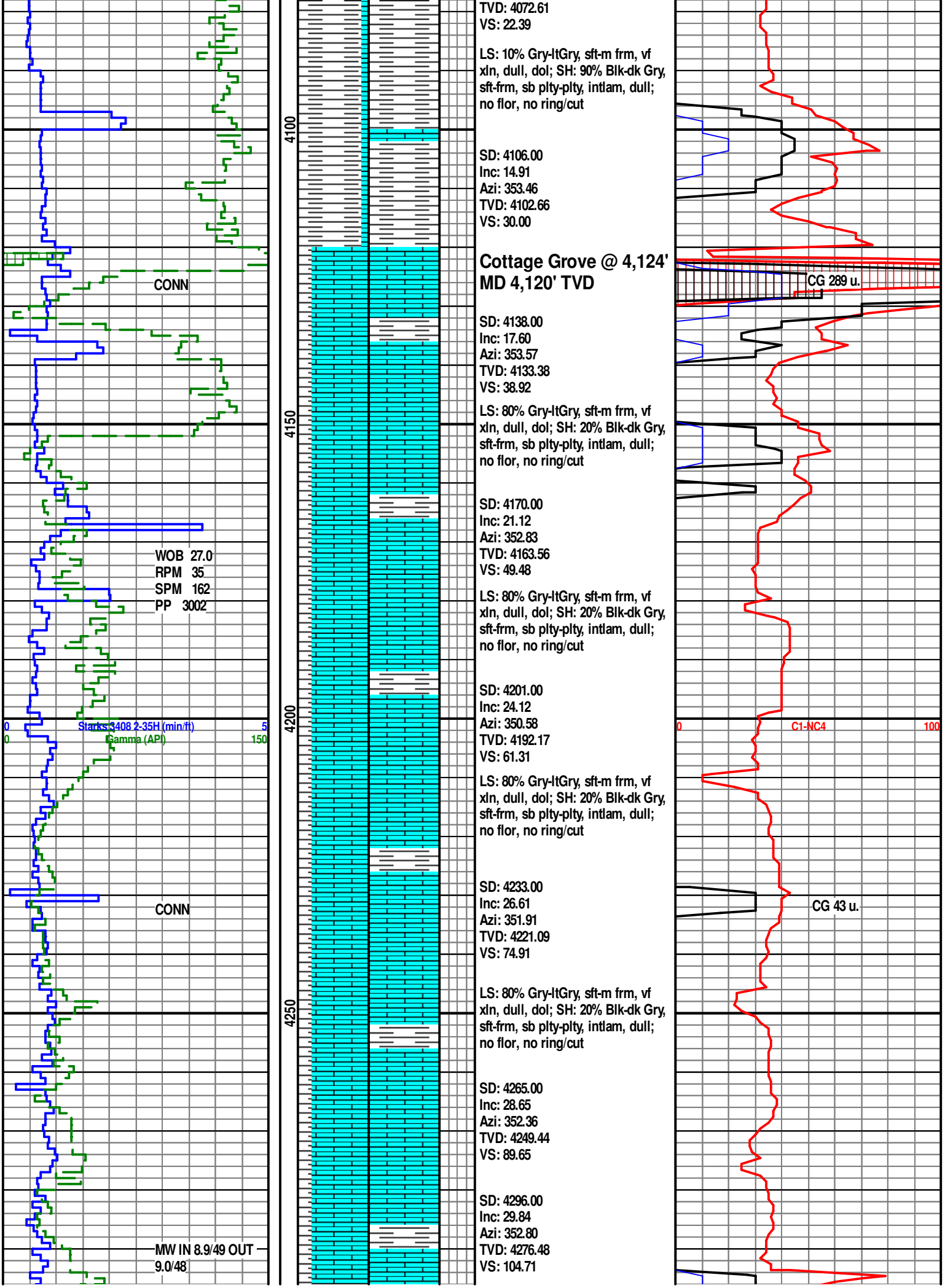

CONN
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
3000
3050
CONN
3100
WOB 20.7
RPM 309
SPM 170
PP 2897
3150
CONN
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
3200
Sample collection to begin at 3,400' MD.
Sample collection to begin at 3,400' MD.
CG 45 u.
0
C1-NC4
100
Monitoring Gas
CG 50 u.
Monitoring Gas
CG 50 u.
0
C1-NC4
100

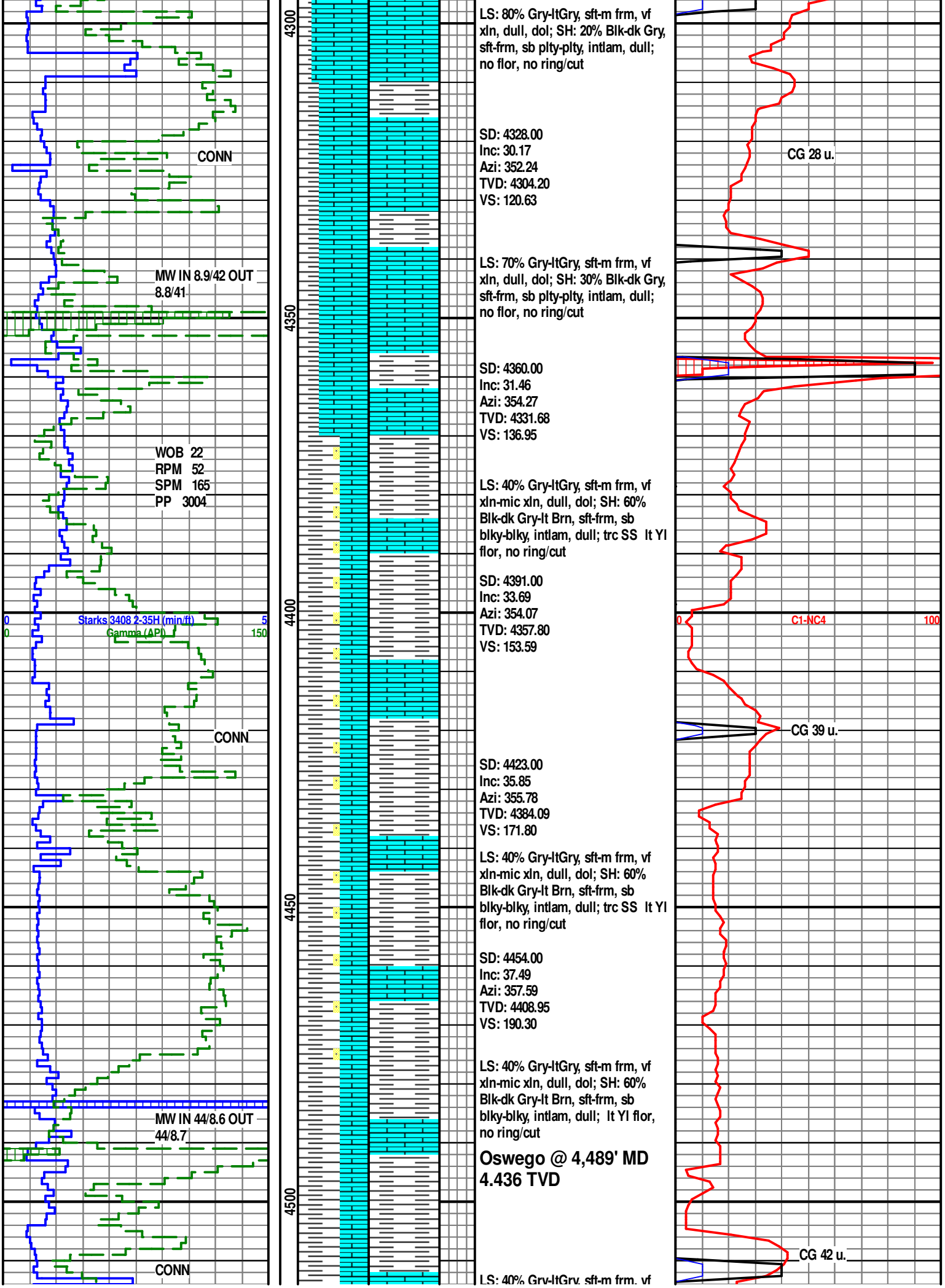

MW IN 51/8.9 OUT
50/8.9
CONN
WOB 23.9
RPM 126
SPM 166
PP 2759
MW IN 52/8.8 OUT
52/8.8
CONN
Starks 3408 2-35H (min/ft)
Gamma (API)
0
5
0
150
3250
3300
3350
3400
SD: 3252.00
Inc: 0.03
Azi: 297.95
TVD: 3251.81
VS: -4.37
Sample collection to begin at 3,400' MD.
Sample collection begin at 3,400' MD - TD
LS: 40% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 40% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; SS: 20% mlky- Wht, m consol, f-m, ang, srt; lt Yl flor, no cut, no rng
Monitoring Gas
CG 31 u.
CG 71 u.
0
C1-WG4
100

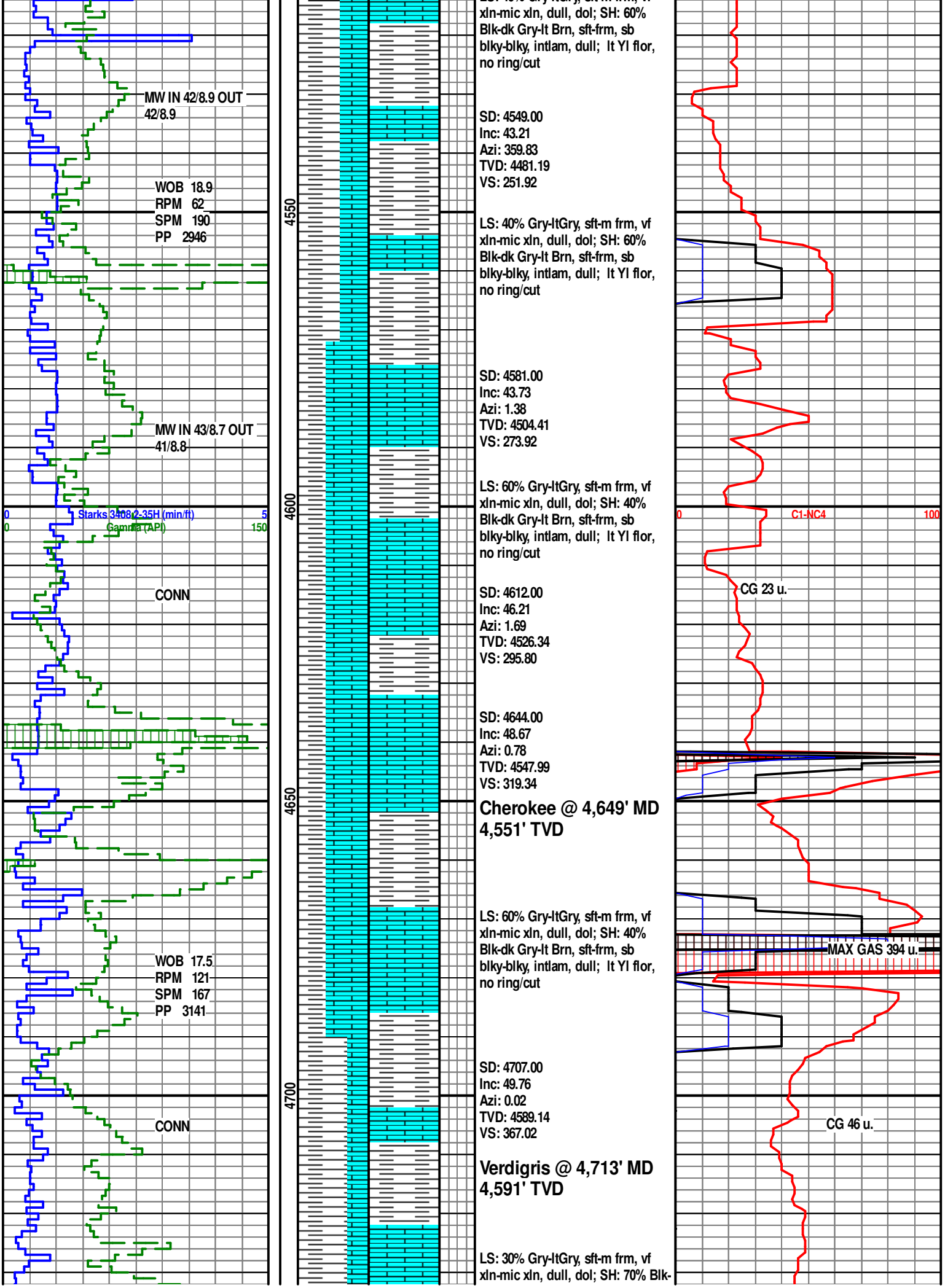

3450
3500
3550
3600
CONN
WOB 17.5
RPM 259
SPM 162
PP 2758
CONN
MW IN 8.7/50 OUT
8.8/49
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
LS: 40% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 40% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; SS: 20% mlky- Wht, m consol, f-m, ang, srt; lt Yl flor, no cut, no rng
CG 216 u.
Base Heebner @ 3,501' MD, 3,501' TVD
MAX GAS 192 u.
LS: 40% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 40% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; SS: 20% mlky- Wht, m consol, f-m, ang, srt; lt Yl flor, no cut, no rng
CG 88 u.
LS: 40% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 40% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; SS: 20% mlky- Wht, m consol, f-m, ang, srt; lt Yl flor, no cut, no rng
0
C1-NC4
100
LS: 30% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 60% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; SS: 10% mlky- Wht, m consol, f-m, ang, srt; lt Yl flor, no cut, no rng

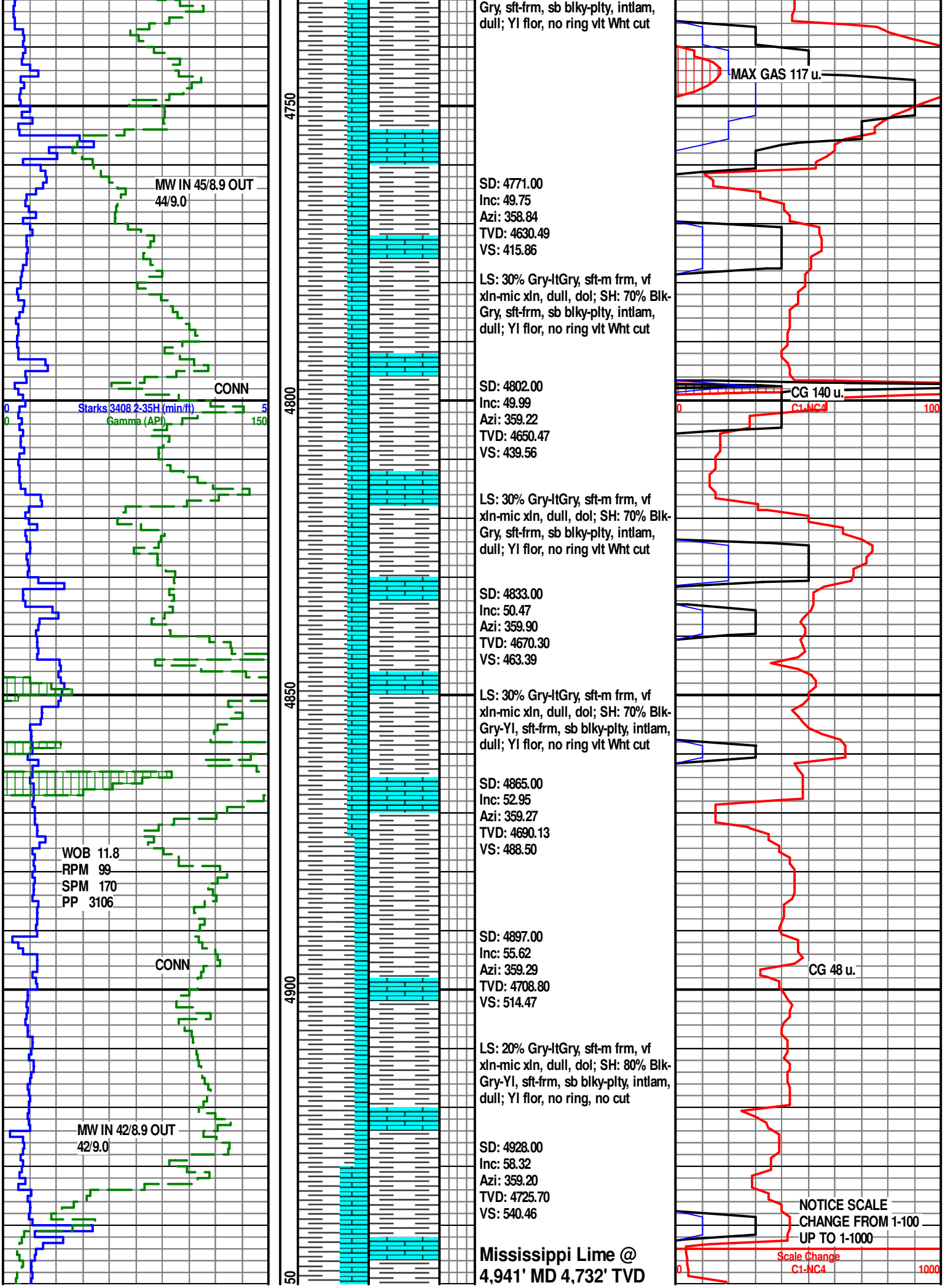

CONN
CONN
MW IN 8.7/48 OUT
8.8/50
CONN
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
3650
3700
3750
3800
3850
LS: 20% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 70% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; SS: 10% mlky- Wht, m consol, f-m, ang, srt; lt Yl flor, no cut, no rng
SD: 3726.00
Inc: 0.03
Azi: 164.21
TVD: 3725.81
VS: -4.27
LS: 20% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 70% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; SS: 10% mlky- Wht, m consol, f-m, ang, srt; lt Yl flor, no cut, no rng
LS: 10% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 90% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; SS trace; lt Yl flor, no cut, no rng
LS: 10% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 90% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; SS trace; lt Yl flor, no cut, no rng
Lansing @ 3,812' MD, 3,812 TVD,
LS: 10% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 90% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; SS trace; lt Yl flor, no cut, no rng
LS: 10% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 90% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; no flor, no ring/cut
CG 78 u.
CG 107 u.
0
C1-NC4
100
CG 154 u.

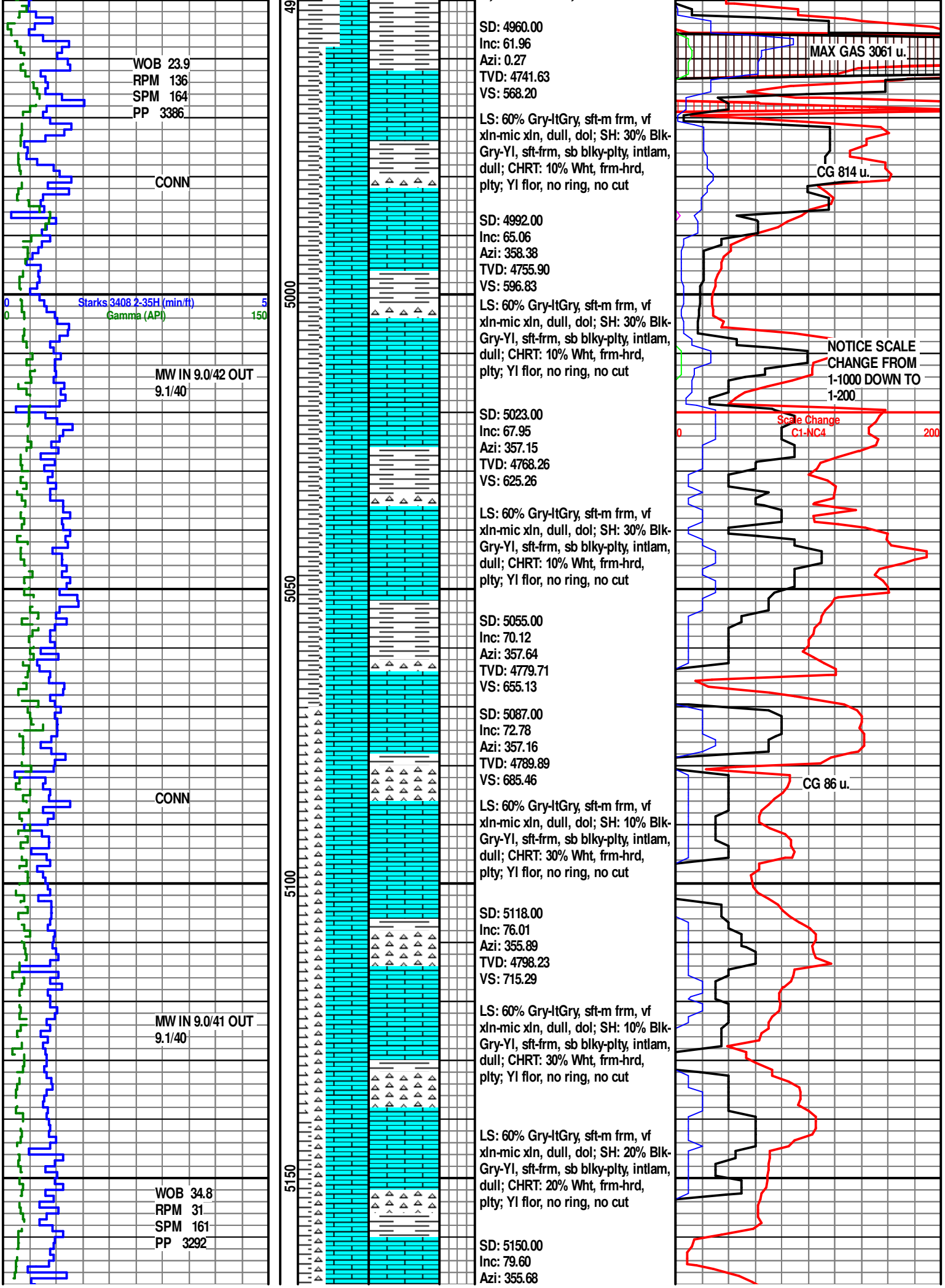

MW IN 8.7/49 OUT
8.8/47
WOB 12.3
RPM 37
SPM 166
PP 2705
CONN
MW IN 8.7/48 OUT
8.8/50
CONN
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
3900
3950
4000
4050
SD: 3885.00
Inc: 0.96
Azi: 357.26
TVD: 3884.81
VS: -3.84
SD: 3916.00
Inc: 3.76
Azi: 356.96
TVD: 3915.78
VS: -2.56
LS: 10% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 90% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; no flor, no ring/cut
SD: 3948.00
Inc: 6.32
Azi: 358.92
TVD: 3947.65
VS: 0.25
LS: 10% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 90% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; no flor, no ring/cut
SD: 3980.00
Inc: 8.20
Azi: 359.07
TVD: 3979.40
VS: 4.29
LS: 20% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 80% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; no flor, no ring/cut
SD: 4011.00
Inc: 9.94
Azi: 357.51
TVD: 4010.01
VS: 9.18
SD: 4043.00
Inc: 12.08
Azi: 355.32
TVD: 4041.42
VS: 15.28
LS: 20% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 80% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; no flor, no ring/cut
LS: 10% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 90% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; no flor, no ring/cut
SD: 4075.00
Inc: 13.62
Azi: 355.09
CG 79 u.
0
C1-NC4
100
CG 68 u.

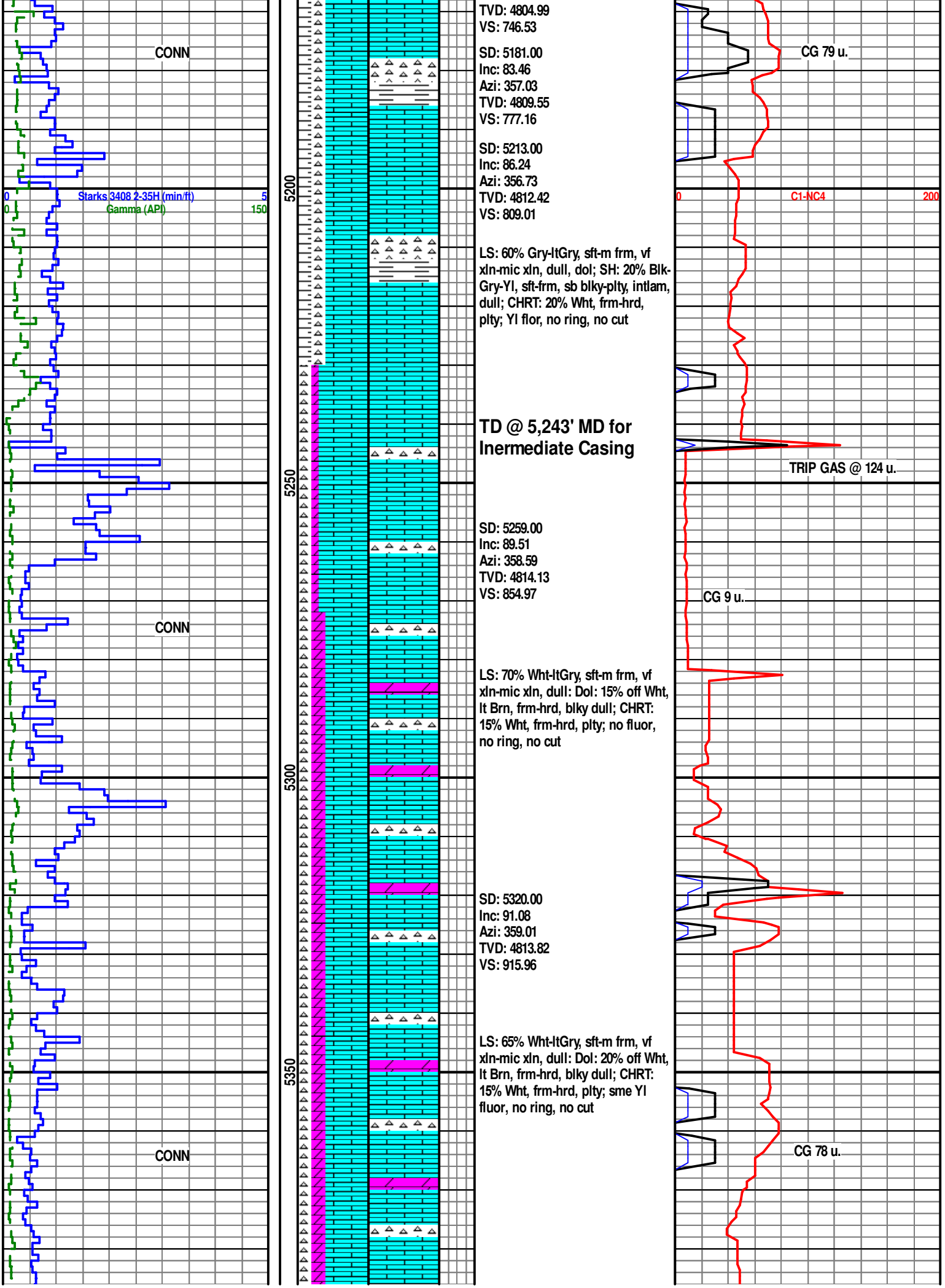

TVD: 4072.61
VS: 22.39
LS: 10% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 90% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; no flor, no ring/cut
4100
SD: 4106.00
Inc: 14.91
Azi: 353.46
TVD: 4102.66
VS: 30.00
CONN
Cottage Grove @ 4,124' MD 4,120' TVD
CG 289 u.
SD: 4138.00
Inc: 17.60
Azi: 353.57
TVD: 4133.38
VS: 38.92
4150
LS: 80% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 20% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; no flor, no ring/cut
SD: 4170.00
Inc: 21.12
Azi: 352.83
TVD: 4163.56
VS: 49.48
WOB 27.0
RPM 35
SPM 162
PP 3002
LS: 80% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 20% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; no flor, no ring/cut
SD: 4201.00
Inc: 24.12
Azi: 350.58
TVD: 4192.17
VS: 61.31
4200
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
0
C1-NC4
100
LS: 80% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 20% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; no flor, no ring/cut
SD: 4233.00
Inc: 26.61
Azi: 351.91
TVD: 4221.09
VS: 74.91
CONN
CG 43 u.
4250
LS: 80% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 20% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; no flor, no ring/cut
SD: 4265.00
Inc: 28.65
Azi: 352.36
TVD: 4249.44
VS: 89.65
SD: 4296.00
Inc: 29.84
Azi: 352.80
TVD: 4276.48
VS: 104.71
MW IN 8.9/49 OUT 9.0/48

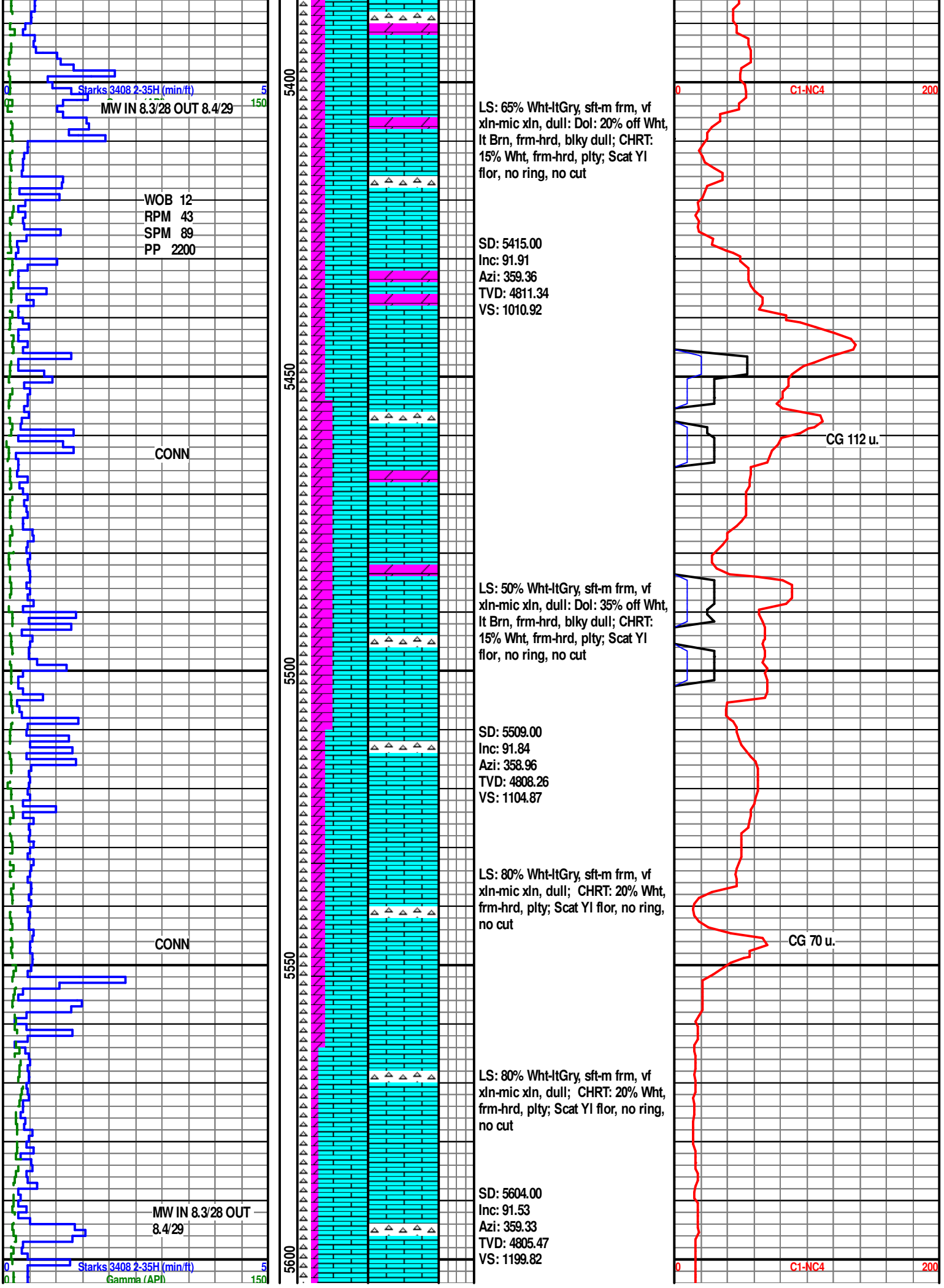

CONN
MW IN 8.9/42 OUT 8.8/41
WOB 22
RPM 52
SPM 165
PP 3004
0 Starks 3408 2-35H (min/ft) 5
0 Gamma (API) 150
CONN
MW IN 44/8.6 OUT 44/8.7
CONN
4300
4350
4400
4450
4500
LS: 80% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 20% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; no flor, no ring/cut
SD: 4328.00
Inc: 30.17
Azi: 352.24
TVD: 4304.20
VS: 120.63
LS: 70% Gry-ltGry, sft-m frm, vf xln, dull, dol; SH: 30% Blk-dk Gry, sft-frm, sb plty-plty, intlam, dull; no flor, no ring/cut
SD: 4360.00
Inc: 31.46
Azi: 354.27
TVD: 4331.68
VS: 136.95
LS: 40% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 60% Blk-dk Gry-lt Brn, sft-frm, sb blky-blky, intlam, dull; trc SS lt Yl flor, no ring/cut
SD: 4391.00
Inc: 33.69
Azi: 354.07
TVD: 4357.80
VS: 153.59
SD: 4423.00
Inc: 35.85
Azi: 355.78
TVD: 4384.09
VS: 171.80
LS: 40% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 60% Blk-dk Gry-lt Brn, sft-frm, sb blky-blky, intlam, dull; trc SS lt Yl flor, no ring/cut
SD: 4454.00
Inc: 37.49
Azi: 357.59
TVD: 4408.95
VS: 190.30
LS: 40% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 60% Blk-dk Gry-lt Brn, sft-frm, sb blky-blky, intlam, dull; lt Yl flor, no ring/cut
Oswego @ 4,489' MD
4.436 TVD
LS: 40% Gry-ltGry, sft-m frm, vf
CG 28 u.
0 C1-NC4 100
CG 39 u.
CG 42 u.

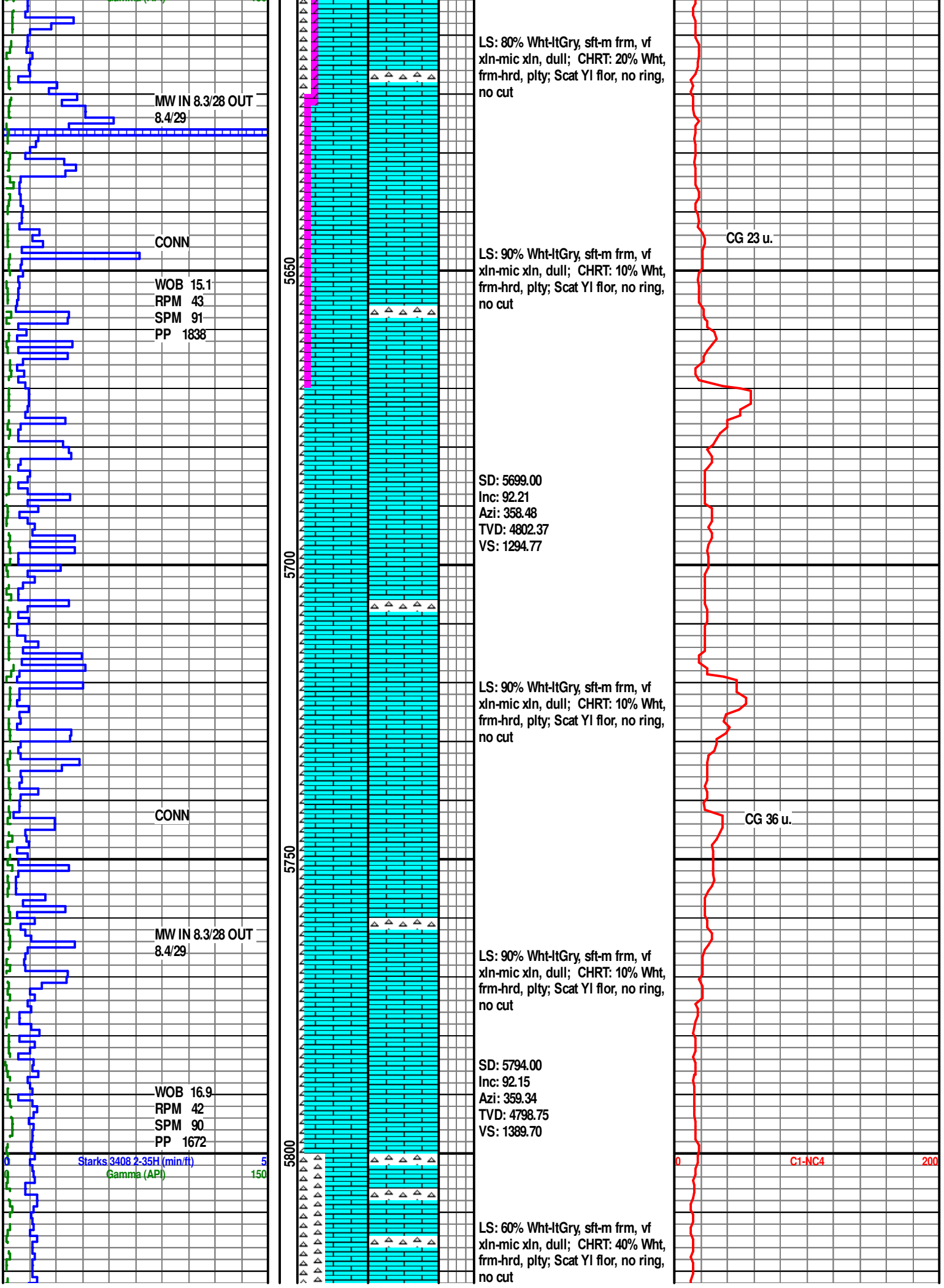

MW IN 42/8.9 OUT
42/8.9
WOB 18.9
RPM 62
SPM 190
PP 2946
MW IN 43/8.7 OUT
41/8.8
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
CONN
WOB 17.5
RPM 121
SPM 167
PP 3141
CONN
4550
4600
4650
4700
LS: 40% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 60% Blk-dk Gry-lt Brn, sft-frm, sb blky-blky, intlam, dull; lt Yl flor, no ring/cut
SD: 4549.00
Inc: 43.21
Azi: 359.83
TVD: 4481.19
VS: 251.92
LS: 40% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 60% Blk-dk Gry-lt Brn, sft-frm, sb blky-blky, intlam, dull; lt Yl flor, no ring/cut
SD: 4581.00
Inc: 43.73
Azi: 1.38
TVD: 4504.41
VS: 273.92
LS: 60% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 40% Blk-dk Gry-lt Brn, sft-frm, sb blky-blky, intlam, dull; lt Yl flor, no ring/cut
SD: 4612.00
Inc: 46.21
Azi: 1.69
TVD: 4526.34
VS: 295.80
SD: 4644.00
Inc: 48.67
Azi: 0.78
TVD: 4547.99
VS: 319.34
Cherokee @ 4,649' MD
4,551' TVD
LS: 60% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 40% Blk-dk Gry-lt Brn, sft-frm, sb blky-blky, intlam, dull; lt Yl flor, no ring/cut
SD: 4707.00
Inc: 49.76
Azi: 0.02
TVD: 4589.14
VS: 367.02
Verdigris @ 4,713' MD
4,591' TVD
LS: 30% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 70% Blk-
0
C1-NC4
100
CG 23 u.
MAX GAS 394 u.
CG 46 u.

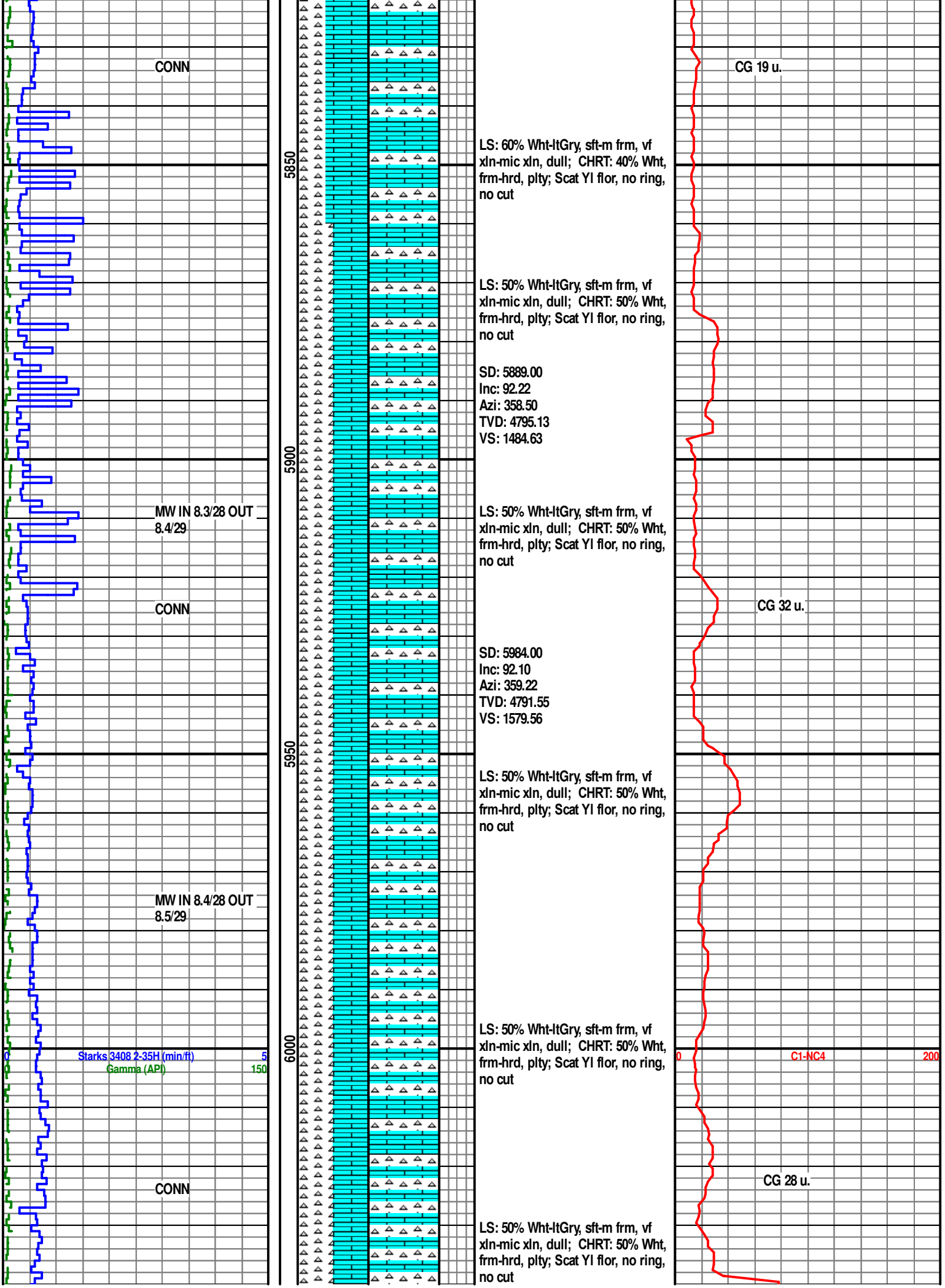

Gry, sft-frm, sb blky-plty, intlam, dull; Yl flor, no ring vlt Wht cut
MAX GAS 117 u.
MW IN 45/8.9 OUT 44/9.0
SD: 4771.00
Inc: 49.75
Azi: 358.84
TVD: 4630.49
VS: 415.86
LS: 30% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 70% Blk-Gry, sft-frm, sb blky-plty, intlam, dull; Yl flor, no ring vlt Wht cut
CONN
Starks 3408 2-35H (min/ft)
Gamma (API)
CG 140 u.
C1-NC4
SD: 4802.00
Inc: 49.99
Azi: 359.22
TVD: 4650.47
VS: 439.56
LS: 30% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 70% Blk-Gry, sft-frm, sb blky-plty, intlam, dull; Yl flor, no ring vlt Wht cut
SD: 4833.00
Inc: 50.47
Azi: 359.90
TVD: 4670.30
VS: 463.39
LS: 30% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 70% Blk-Gry-Yl, sft-frm, sb blky-plty, intlam, dull; Yl flor, no ring vlt Wht cut
SD: 4865.00
Inc: 52.95
Azi: 359.27
TVD: 4690.13
VS: 488.50
WOB 11.8
RPM 99
SPM 170
PP 3106
CONN
SD: 4897.00
Inc: 55.62
Azi: 359.29
TVD: 4708.80
VS: 514.47
CG 48 u.
LS: 20% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 80% Blk-Gry-Yl, sft-frm, sb blky-plty, intlam, dull; Yl flor, no ring, no cut
MW IN 42/8.9 OUT 42/9.0
SD: 4928.00
Inc: 58.32
Azi: 359.20
TVD: 4725.70
VS: 540.46
NOTICE SCALE CHANGE FROM 1-100 UP TO 1-1000
Scale Change
C1-NC4
Mississippi Lime @ 4,941' MD 4,732' TVD
4750
4800
4850
4900
50
0
5
150
100
1000

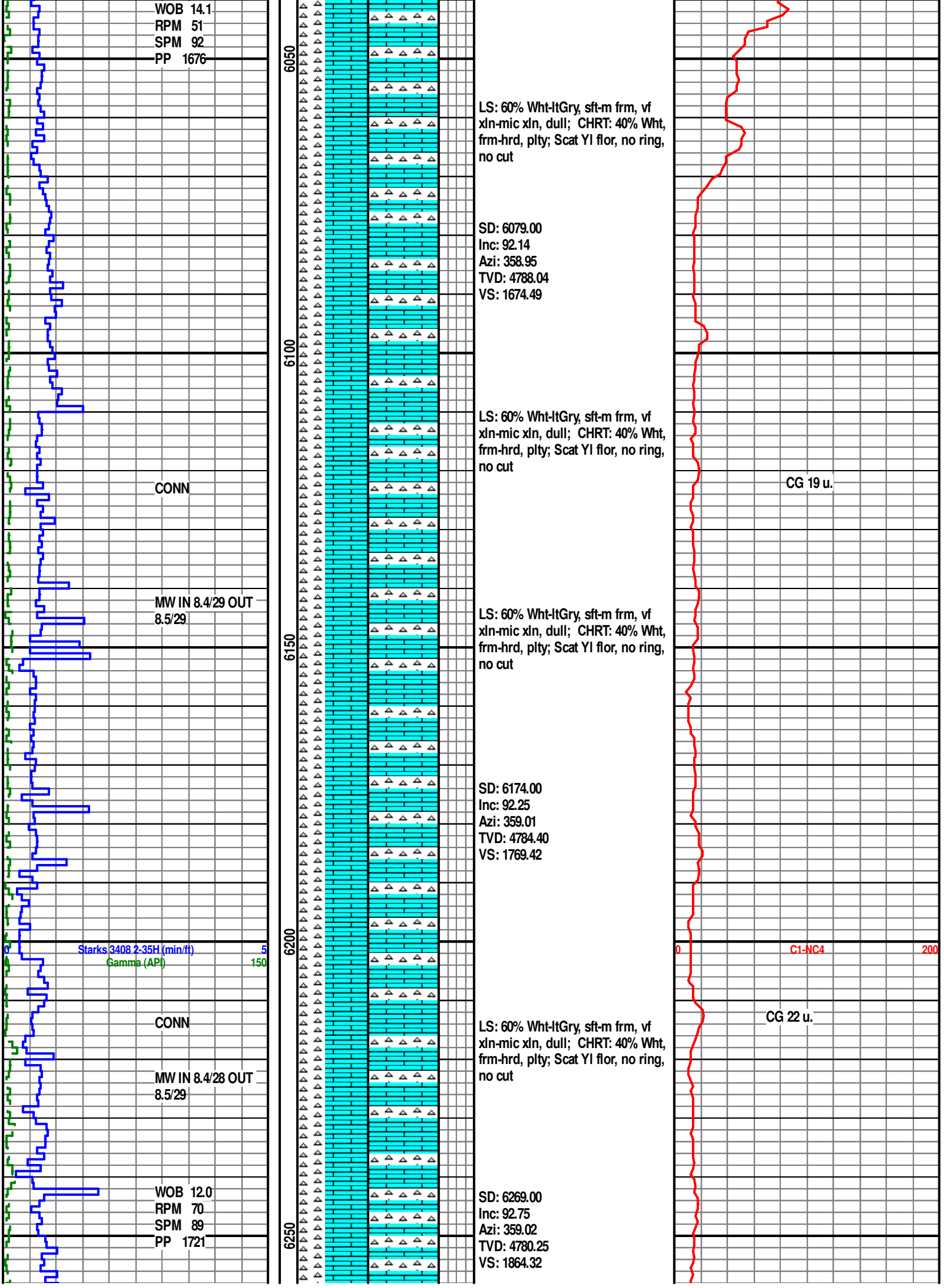

WOB 23.9
RPM 136
SPM 164
PP 3386
CONN
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
MW IN 9.0/42 OUT
9.1/40
CONN
MW IN 9.0/41 OUT
9.1/40
WOB 34.8
RPM 31
SPM 161
PP 3292
4950
5000
5050
5100
5150
SD: 4960.00
Inc: 61.96
Azi: 0.27
TVD: 4741.63
VS: 568.20
LS: 60% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 30% Blk-Gry-Yl, sft-frm, sb blky-plty, intlam, dull; CHRT: 10% Wht, frm-hrd, plty; Yl flor, no ring, no cut
SD: 4992.00
Inc: 65.06
Azi: 358.38
TVD: 4755.90
VS: 596.83
LS: 60% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 30% Blk-Gry-Yl, sft-frm, sb blky-plty, intlam, dull; CHRT: 10% Wht, frm-hrd, plty; Yl flor, no ring, no cut
SD: 5023.00
Inc: 67.95
Azi: 357.15
TVD: 4768.26
VS: 625.26
LS: 60% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 30% Blk-Gry-Yl, sft-frm, sb blky-plty, intlam, dull; CHRT: 10% Wht, frm-hrd, plty; Yl flor, no ring, no cut
SD: 5055.00
Inc: 70.12
Azi: 357.64
TVD: 4779.71
VS: 655.13
SD: 5087.00
Inc: 72.78
Azi: 357.16
TVD: 4789.89
VS: 685.46
LS: 60% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 10% Blk-Gry-Yl, sft-frm, sb blky-plty, intlam, dull; CHRT: 30% Wht, frm-hrd, plty; Yl flor, no ring, no cut
SD: 5118.00
Inc: 76.01
Azi: 355.89
TVD: 4798.23
VS: 715.29
LS: 60% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 10% Blk-Gry-Yl, sft-frm, sb blky-plty, intlam, dull; CHRT: 30% Wht, frm-hrd, plty; Yl flor, no ring, no cut
LS: 60% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 20% Blk-Gry-Yl, sft-frm, sb blky-plty, intlam, dull; CHRT: 20% Wht, frm-hrd, plty; Yl flor, no ring, no cut
SD: 5150.00
Inc: 79.60
Azi: 355.68
MAX GAS 3061 u.
CG 814 u.
NOTICE SCALE CHANGE FROM 1-1000 DOWN TO 1-200
Scale Change
C1-NC4
0
200
CG 86 u.

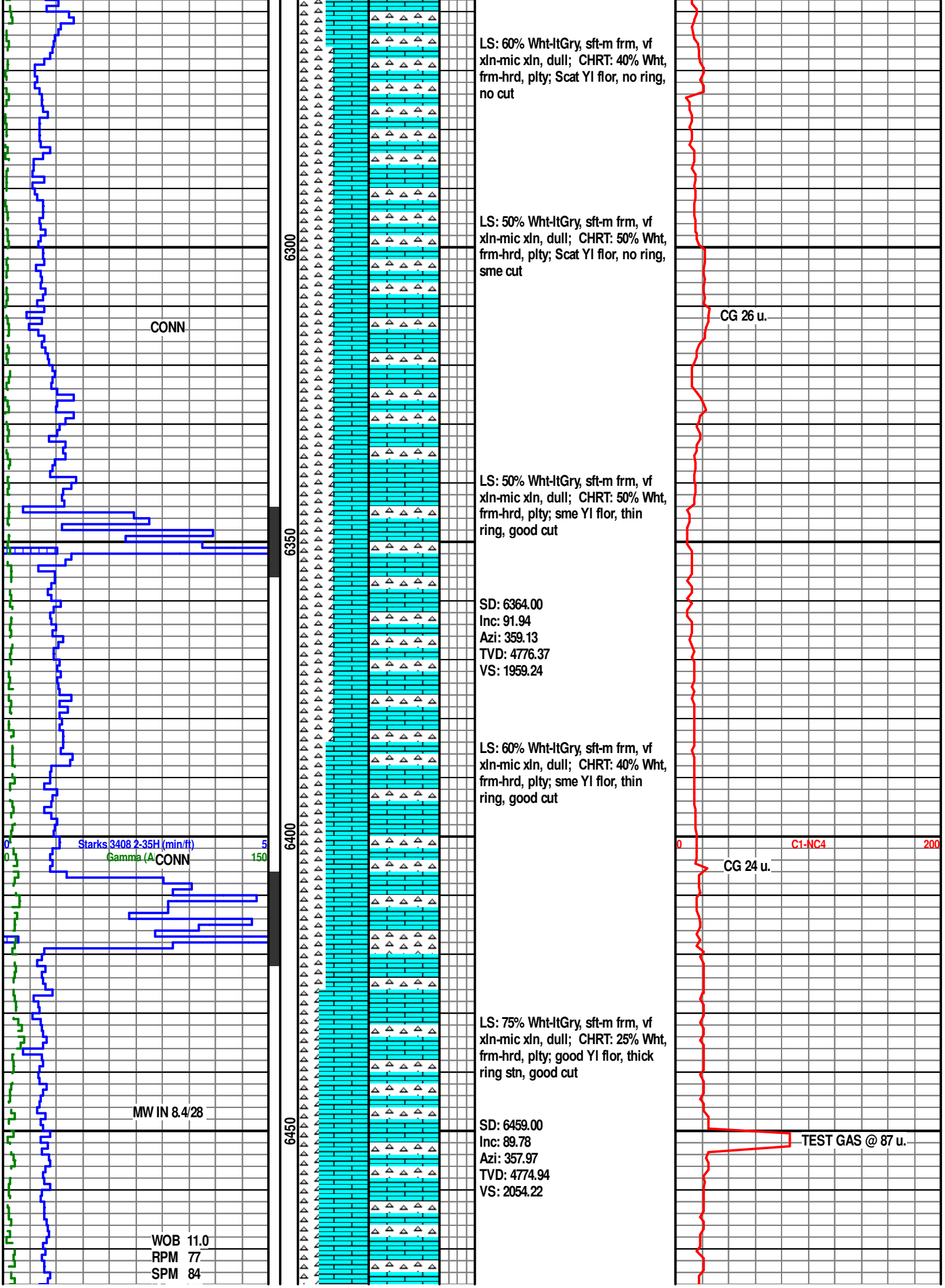

CONN
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
CONN
CONN
5200
5250
5300
5350
TVD: 4804.99
VS: 746.53
SD: 5181.00
Inc: 83.46
Azi: 357.03
TVD: 4809.55
VS: 777.16
SD: 5213.00
Inc: 86.24
Azi: 356.73
TVD: 4812.42
VS: 809.01
LS: 60% Gry-ltGry, sft-m frm, vf xln-mic xln, dull, dol; SH: 20% Blk-Gry-Yl, sft-frm, sb blky-plty, intlam, dull; CHRT: 20% Wht, frm-hrd, plty; Yl flor, no ring, no cut
TD @ 5,243' MD for Inermediate Casing
SD: 5259.00
Inc: 89.51
Azi: 358.59
TVD: 4814.13
VS: 854.97
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull: Dol: 15% off Wht, lt Brn, frm-hrd, blky dull; CHRT: 15% Wht, frm-hrd, plty; no fluor, no ring, no cut
SD: 5320.00
Inc: 91.08
Azi: 359.01
TVD: 4813.82
VS: 915.96
LS: 65% Wht-ltGry, sft-m frm, vf xln-mic xln, dull: Dol: 20% off Wht, lt Brn, frm-hrd, blky dull; CHRT: 15% Wht, frm-hrd, plty; sme Yl fluor, no ring, no cut
CG 79 u.
0
C1-NC4
200
TRIP GAS @ 124 u.
CG 9 u.
CG 78 u.

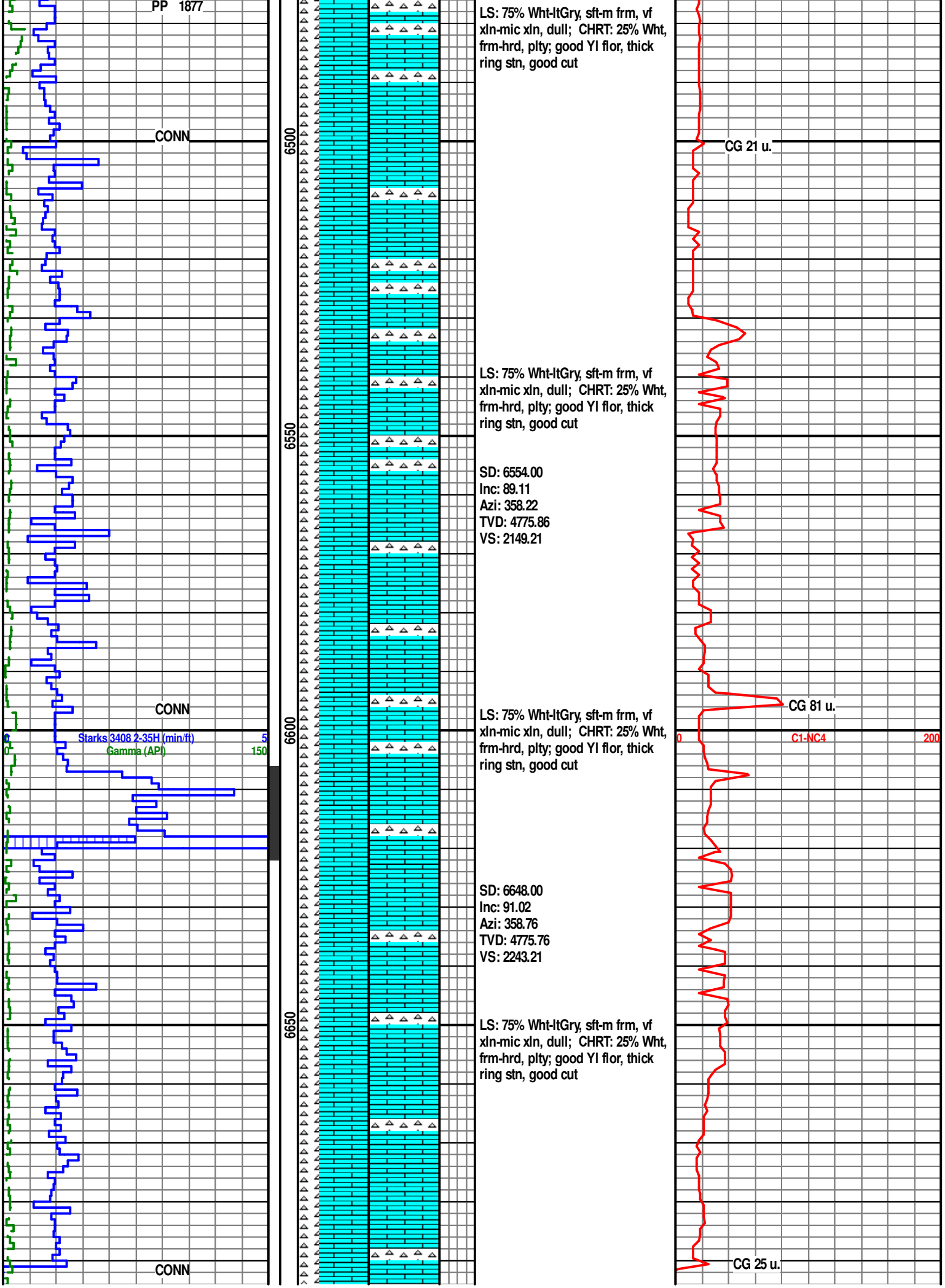

Starks 3408 2-35H (min/ft)
0
5
Gamma (API)
150
MW IN 8.3/28 OUT 8.4/29
WOB 12
RPM 43
SPM 89
PP 2200
CONN
CONN
MW IN 8.3/28 OUT
8.4/29
5400
5450
5500
5550
5600
LS: 65% Wht-ltGry, sft-m frm, vf xln-mic xln, dull: Dol: 20% off Wht, lt Brn, frm-hrd, blky dull; CHRT: 15% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
SD: 5415.00
Inc: 91.91
Azi: 359.36
TVD: 4811.34
VS: 1010.92
LS: 50% Wht-ltGry, sft-m frm, vf xln-mic xln, dull: Dol: 35% off Wht, lt Brn, frm-hrd, blky dull; CHRT: 15% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
SD: 5509.00
Inc: 91.84
Azi: 358.96
TVD: 4808.26
VS: 1104.87
LS: 80% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 20% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
LS: 80% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 20% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
SD: 5604.00
Inc: 91.53
Azi: 359.33
TVD: 4805.47
VS: 1199.82
0
C1-NC4
200
CG 112 u.
CG 70 u.

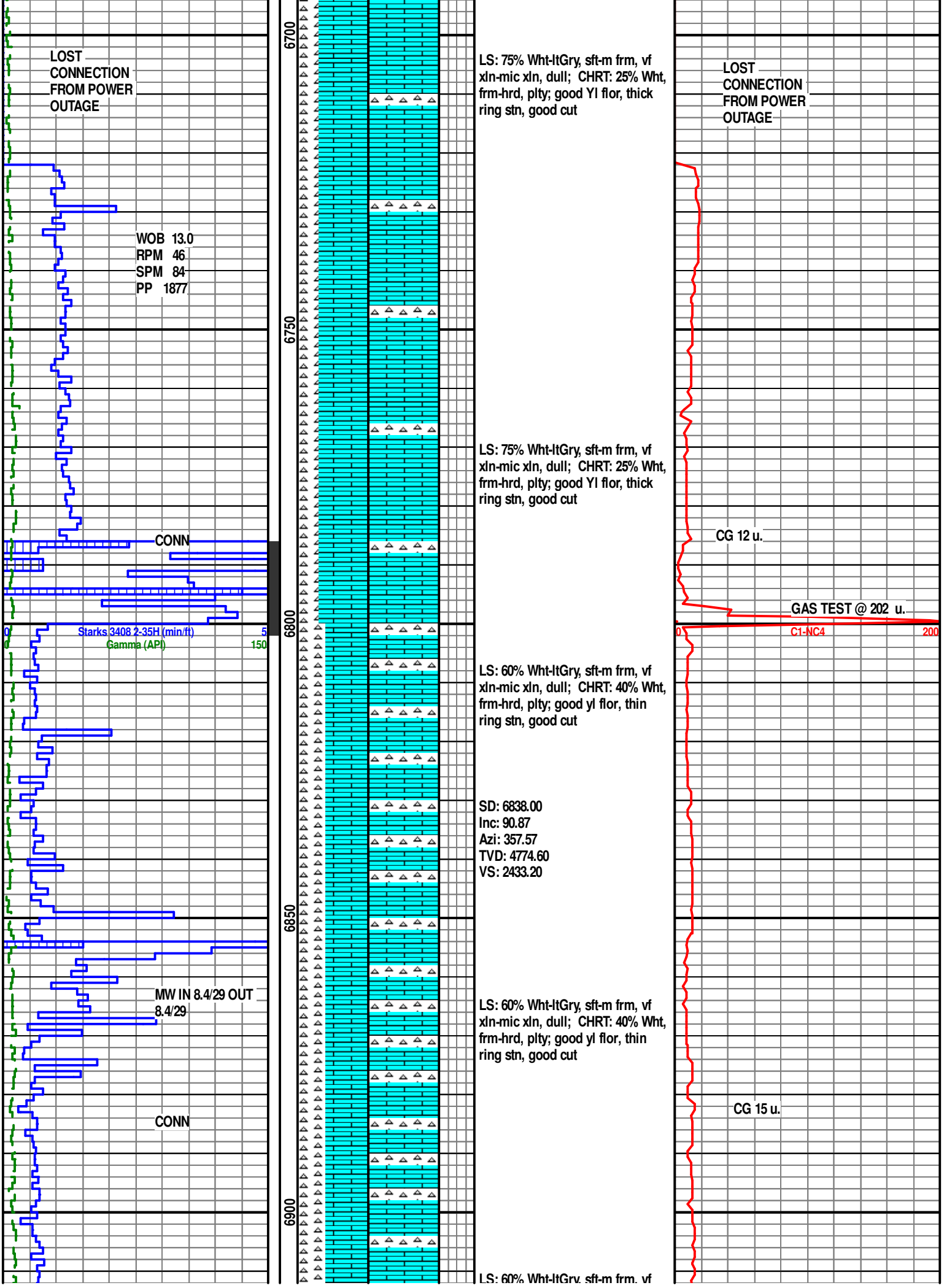

MW IN 8.3/28 OUT 8.4/29
CONN
WOB 15.1
RPM 43
SPM 91
PP 1838
CONN
MW IN 8.3/28 OUT 8.4/29
WOB 16.9
RPM 42
SPM 90
PP 1672
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
5650
5700
5750
5800
LS: 80% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 20% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
LS: 90% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 10% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
SD: 5699.00
Inc: 92.21
Azi: 358.48
TVD: 4802.37
VS: 1294.77
LS: 90% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 10% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
LS: 90% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 10% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
SD: 5794.00
Inc: 92.15
Azi: 359.34
TVD: 4798.75
VS: 1389.70
LS: 60% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 40% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
CG 23 u.
CG 36 u.
0
C1-NC4
200

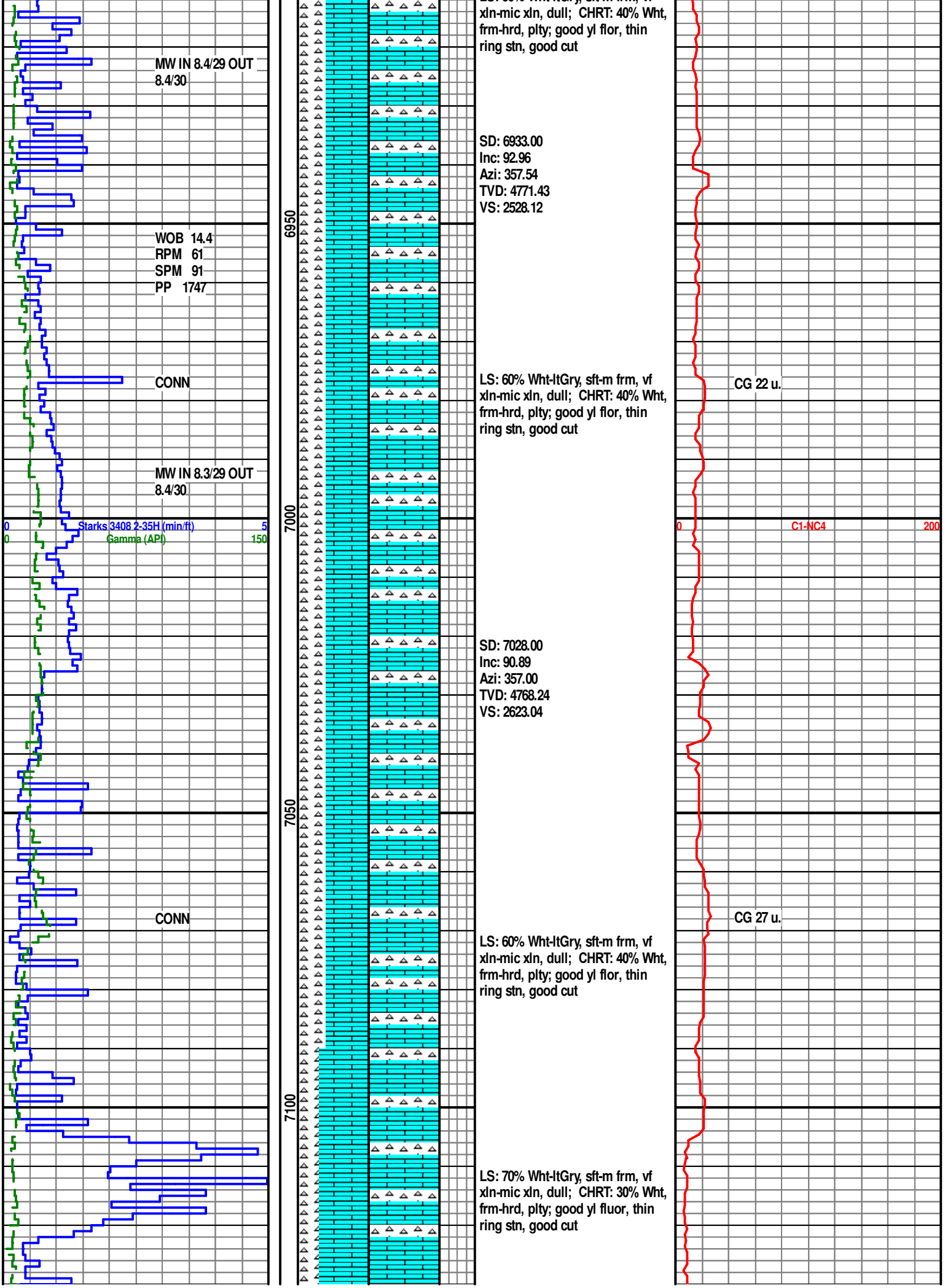

CONN
MW IN 8.3/28 OUT 8.4/29
CONN
MW IN 8.4/28 OUT 8.5/29
CONN
0
Starks 3408 2-35H (min/ft)
5
Gamma (API)
150
5850
5900
5950
6000
LS: 60% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 40% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
LS: 50% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 50% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
SD: 5889.00
Inc: 92.22
Azi: 358.50
TVD: 4795.13
VS: 1484.63
LS: 50% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 50% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
SD: 5984.00
Inc: 92.10
Azi: 359.22
TVD: 4791.55
VS: 1579.56
LS: 50% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 50% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
LS: 50% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 50% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
LS: 50% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 50% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
CG 19 u.
CG 32 u.
CG 28 u.
0
C1-NC4
200

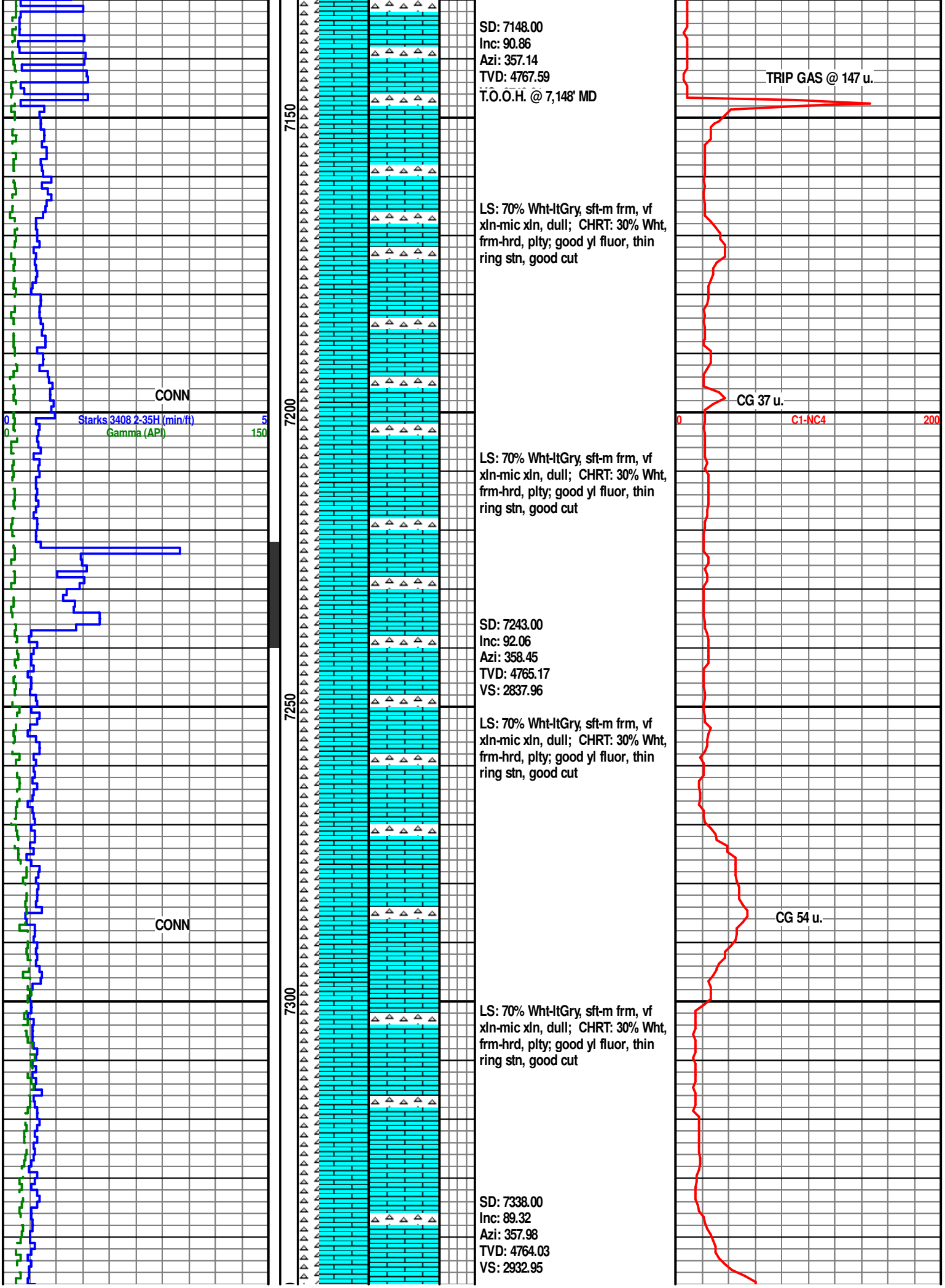

WOB 14.1
RPM 51
SPM 92
PP 1676
6050
LS: 60% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 40% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
SD: 6079.00
Inc: 92.14
Azi: 358.95
TVD: 4788.04
VS: 1674.49
6100
LS: 60% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 40% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
CONN
CG 19 u.
MW IN 8.4/29 OUT 8.5/29
6150
LS: 60% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 40% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
SD: 6174.00
Inc: 92.25
Azi: 359.01
TVD: 4784.40
VS: 1769.42
6200
0
Starks 3408 2-35H (min/ft)
5
Gamma (API)
150
0
C1-NC4
200
CONN
CG 22 u.
LS: 60% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 40% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
MW IN 8.4/28 OUT 8.5/29
WOB 12.0
RPM 70
SPM 89
PP 1721
6250
SD: 6269.00
Inc: 92.75
Azi: 359.02
TVD: 4780.25
VS: 1864.32

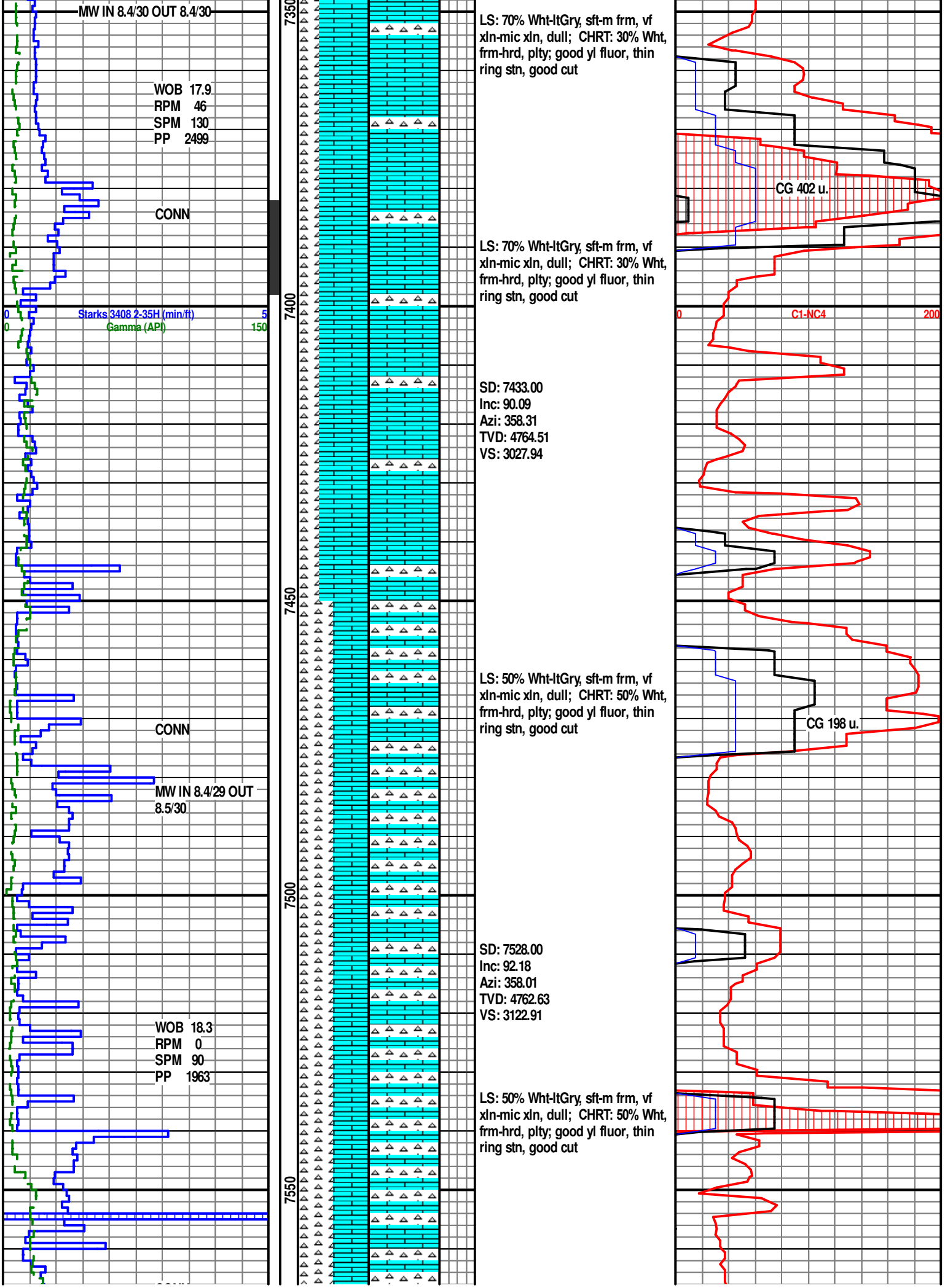

6300
6350
6400
6450
CONN
CONN
Starks 3408 2-35H (min/ft)
Gamma (A
0
5
0
150
MW IN 8.4/28
WOB 11.0
RPM 77
SPM 84
LS: 60% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 40% Wht, frm-hrd, plty; Scat Yl flor, no ring, no cut
LS: 50% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 50% Wht, frm-hrd, plty; Scat Yl flor, no ring, sme cut
LS: 50% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 50% Wht, frm-hrd, plty; sme Yl flor, thin ring, good cut
SD: 6364.00
Inc: 91.94
Azi: 359.13
TVD: 4776.37
VS: 1959.24
LS: 60% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 40% Wht, frm-hrd, plty; sme Yl flor, thin ring, good cut
LS: 75% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 25% Wht, frm-hrd, plty; good Yl flor, thick ring stn, good cut
SD: 6459.00
Inc: 89.78
Azi: 357.97
TVD: 4774.94
VS: 2054.22
CG 26 u.
0
C1-NC4
200
CG 24 u.
TEST GAS @ 87 u.

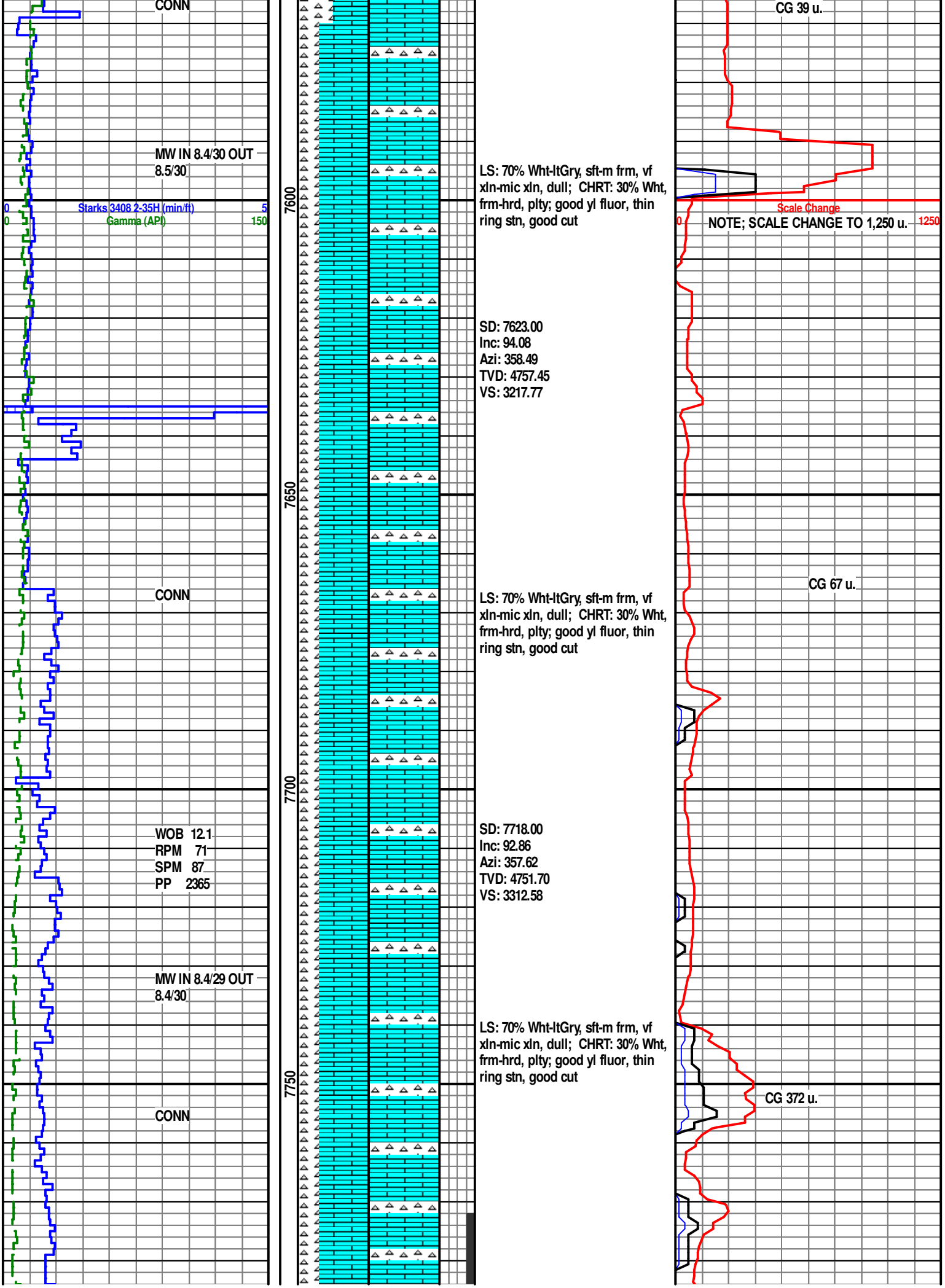

PP 1877
CONN
CONN
CONN
Starks 3408 2-35H (min/ft)
Gamma (API)
0
5
150
6500
6550
6600
6650
LS: 75% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 25% Wht, frm-hrd, plty; good YI flor, thick ring stn, good cut
LS: 75% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 25% Wht, frm-hrd, plty; good YI flor, thick ring stn, good cut
SD: 6554.00
Inc: 89.11
Azi: 358.22
TVD: 4775.86
VS: 2149.21
LS: 75% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 25% Wht, frm-hrd, plty; good YI flor, thick ring stn, good cut
SD: 6648.00
Inc: 91.02
Azi: 358.76
TVD: 4775.76
VS: 2243.21
LS: 75% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 25% Wht, frm-hrd, plty; good YI flor, thick ring stn, good cut
CG 21 u.
CG 81 u.
CG 25 u.
0
C1-NC4
200

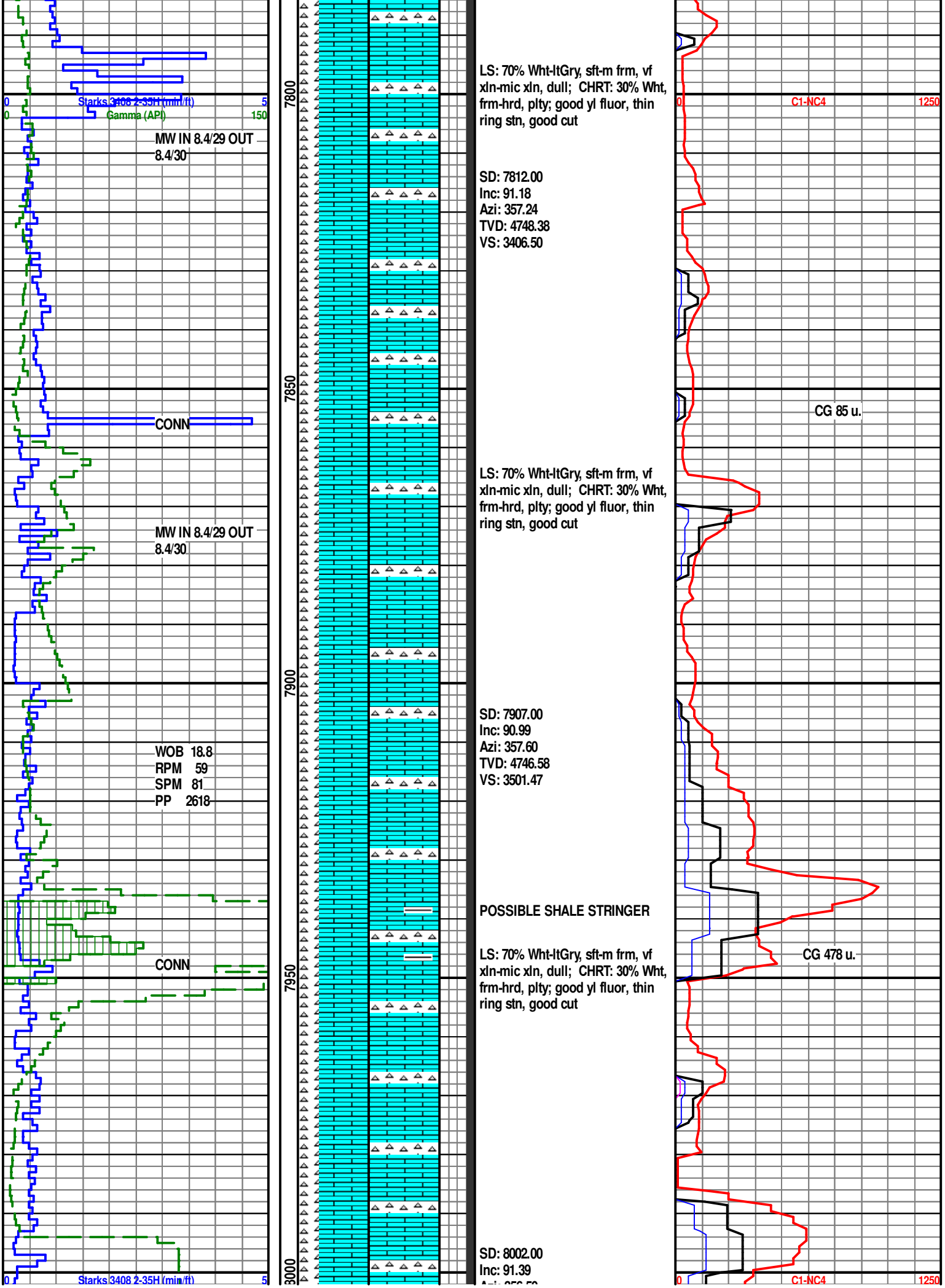

LOST
CONNECTION
FROM POWER
OUTAGE
WOB 13.0
RPM 46
SPM 84
PP 1877
CONN
Starks 3408 2-35H (min/ft)
Gamma (API)
0
5
150
MW IN 8.4/29 OUT
8.4/29
CONN
6700
6750
6800
6850
6900
LS: 75% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 25% Wht, frm-hrd, plty; good Yl flor, thick ring stn, good cut
LS: 75% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 25% Wht, frm-hrd, plty; good Yl flor, thick ring stn, good cut
LS: 60% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 40% Wht, frm-hrd, plty; good yl flor, thin ring stn, good cut
SD: 6838.00
Inc: 90.87
Azi: 357.57
TVD: 4774.60
VS: 2433.20
LS: 60% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 40% Wht, frm-hrd, plty; good yl flor, thin ring stn, good cut
LS: 60% Wht-ltGry, sft-m frm, vf
LOST
CONNECTION
FROM POWER
OUTAGE
CG 12 u.
GAS TEST @ 202 u.
0
C1-NC4
200
CG 15 u.

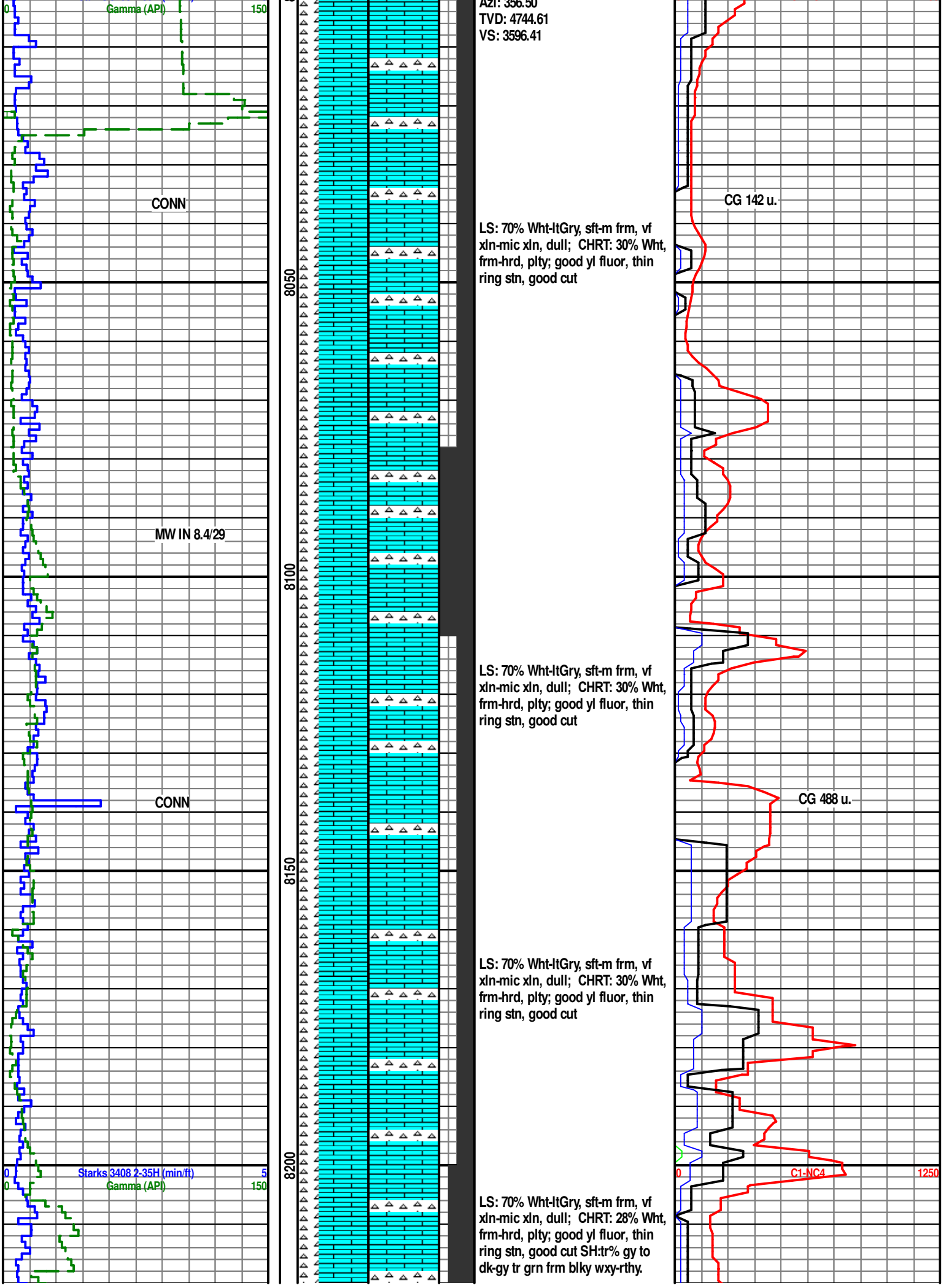

MW IN 8.4/29 OUT 8.4/30
WOB 14.4
RPM 61
SPM 91
PP 1747
CONN
MW IN 8.3/29 OUT 8.4/30
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
6950
7000
7050
7100
xln-mic xln, dull; CHRT: 40% Wht, frm-hrd, plty; good yl flor, thin ring stn, good cut
SD: 6933.00
Inc: 92.96
Azi: 357.54
TVD: 4771.43
VS: 2528.12
LS: 60% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 40% Wht, frm-hrd, plty; good yl flor, thin ring stn, good cut
CG 22 u.
0
C1-NC4
200
SD: 7028.00
Inc: 90.89
Azi: 357.00
TVD: 4768.24
VS: 2623.04
CONN
CG 27 u.
LS: 60% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 40% Wht, frm-hrd, plty; good yl flor, thin ring stn, good cut
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut

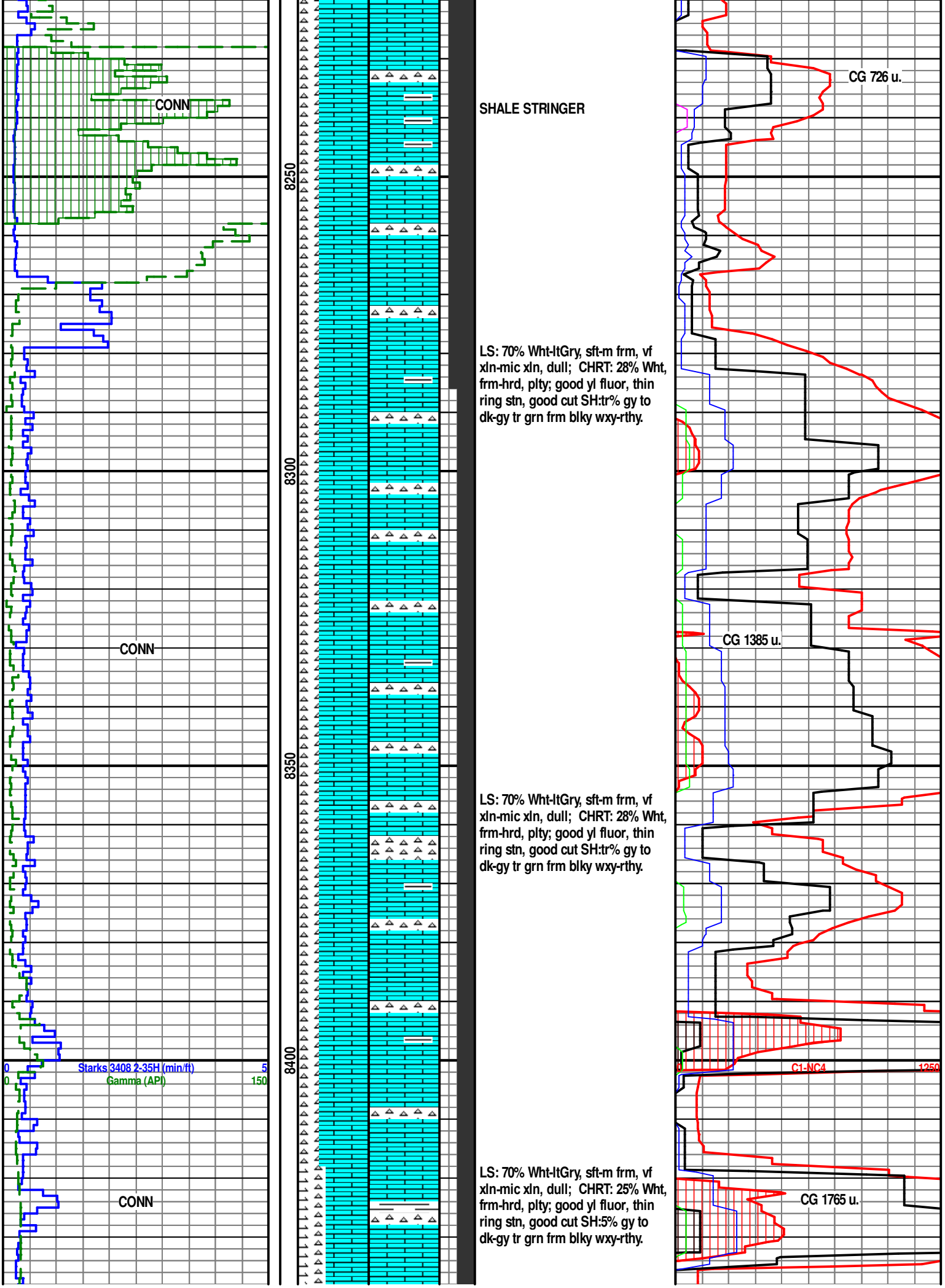

SD: 7148.00
Inc: 90.86
Azi: 357.14
TVD: 4767.59
T.O.O.H. @ 7,148' MD
TRIP GAS @ 147 u.
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
CONN
CG 37 u.
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
0
C1-NC4
200
7150
7200
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
SD: 7243.00
Inc: 92.06
Azi: 358.45
TVD: 4765.17
VS: 2837.96
7250
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
CONN
CG 54 u.
7300
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
SD: 7338.00
Inc: 89.32
Azi: 357.98
TVD: 4764.03
VS: 2932.95

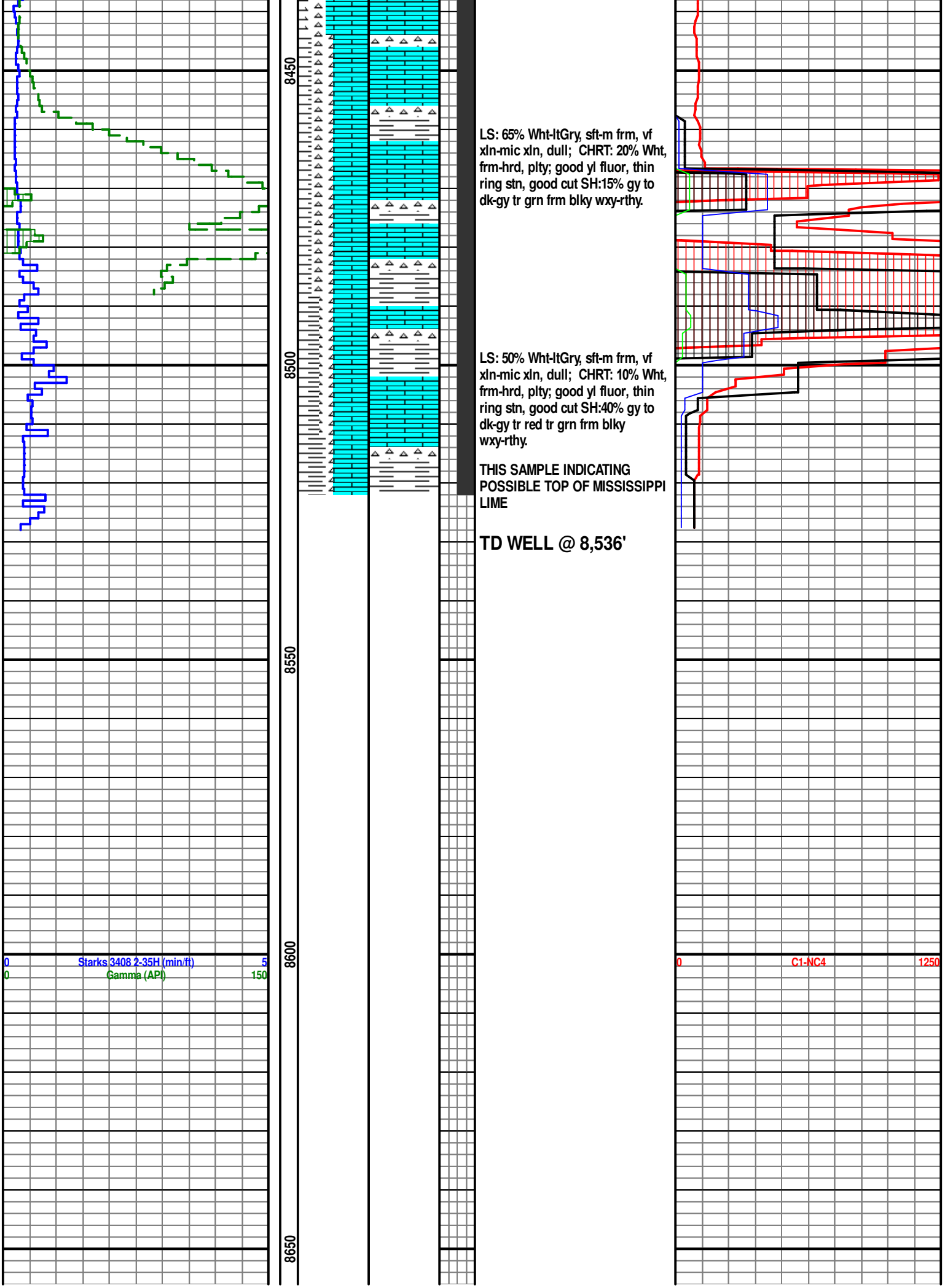

MW IN 8.4/30 OUT 8.4/30
WOB 17.9
RPM 46
SPM 130
PP 2499
CONN
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
CONN
MW IN 8.4/29 OUT 8.5/30
WOB 18.3
RPM 0
SPM 90
PP 1963
7350
7400
7450
7500
7550
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
SD: 7433.00
Inc: 90.09
Azi: 358.31
TVD: 4764.51
VS: 3027.94
LS: 50% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 50% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
SD: 7528.00
Inc: 92.18
Azi: 358.01
TVD: 4762.63
VS: 3122.91
LS: 50% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 50% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
CG 402 u.
0
C1-NC4
200
CG 198 u.

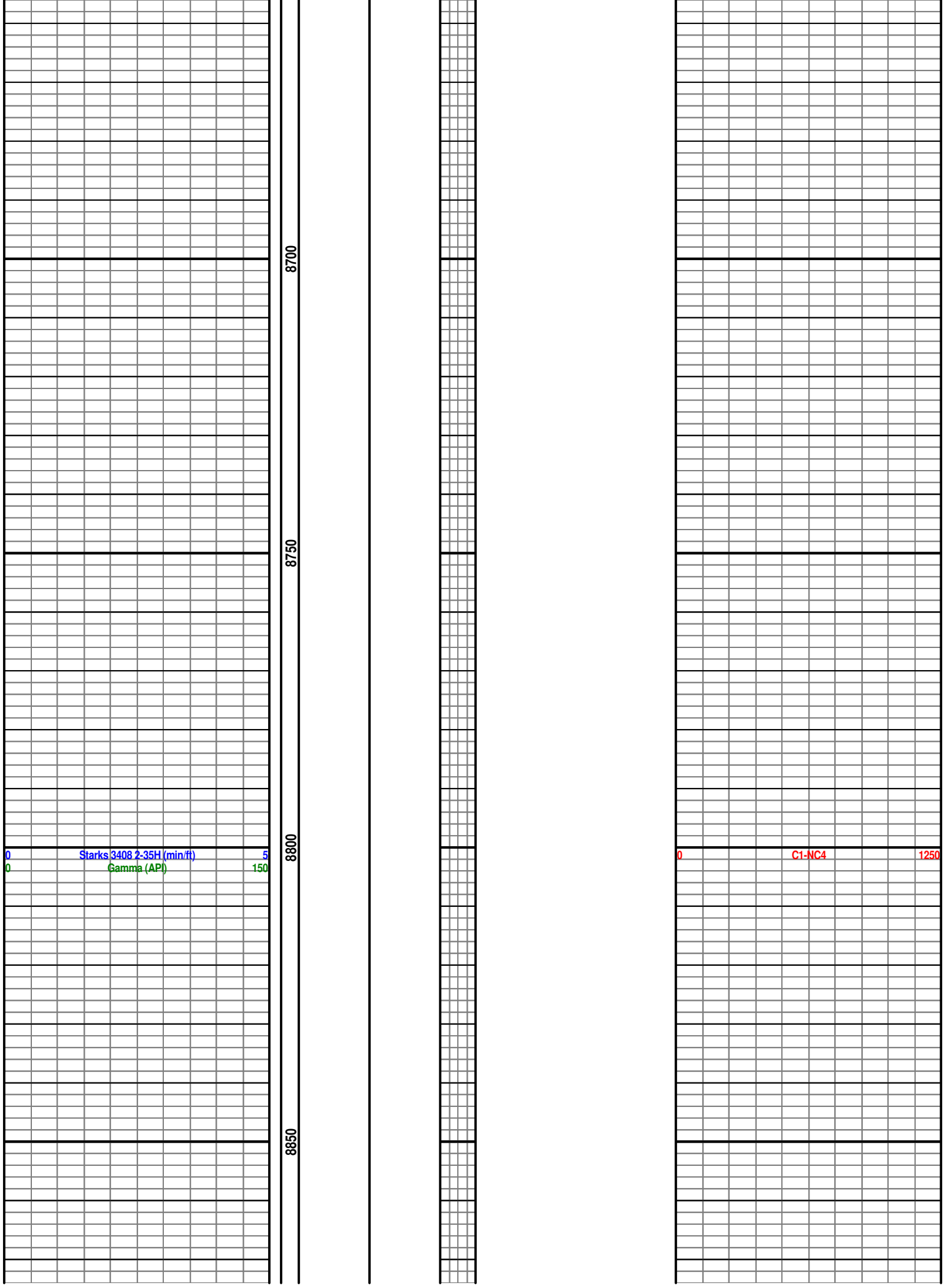

CONN
MW IN 8.4/30 OUT
8.5/30
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
7600
7650
7700
7750
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
SD: 7623.00
Inc: 94.08
Azi: 358.49
TVD: 4757.45
VS: 3217.77
CG 39 u.
Scale Change
0
NOTE; SCALE CHANGE TO 1,250 u.
1250
CONN
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
CG 67 u.
WOB 12.1
RPM 71
SPM 87
PP 2365
SD: 7718.00
Inc: 92.86
Azi: 357.62
TVD: 4751.70
VS: 3312.58
MW IN 8.4/29 OUT
8.4/30
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
CG 372 u.
CONN

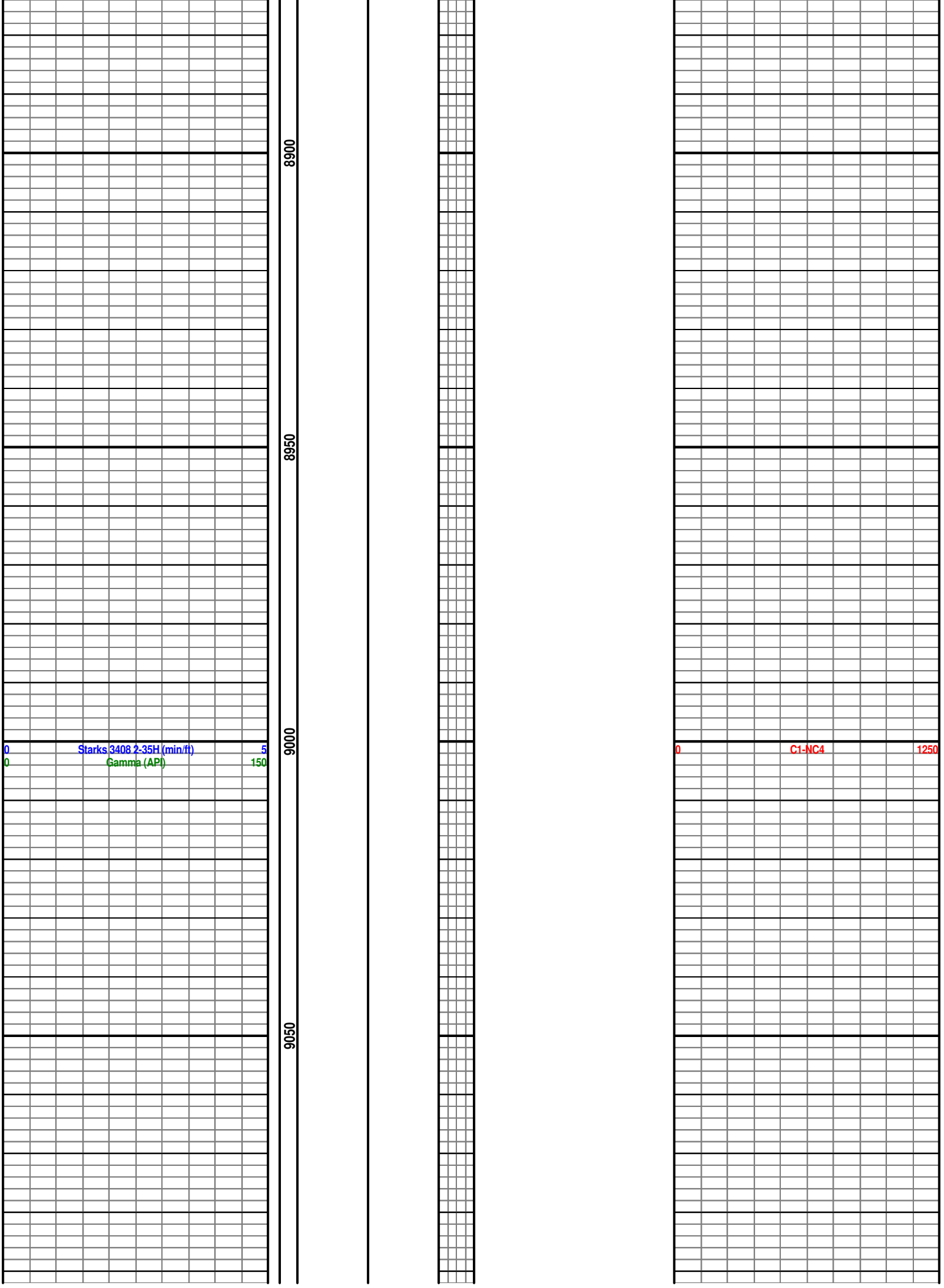

0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
MW IN 8.4/29 OUT
8.4/30
CONN
MW IN 8.4/29 OUT
8.4/30
WOB 18.8
RPM 59
SPM 81
PP 2618
CONN
0
Starks 3408 2-35H (min/ft)
5
7800
7850
7900
7950
8000
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
SD: 7812.00
Inc: 91.18
Azi: 357.24
TVD: 4748.38
VS: 3406.50
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
SD: 7907.00
Inc: 90.99
Azi: 357.60
TVD: 4746.58
VS: 3501.47
POSSIBLE SHALE STRINGER
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
SD: 8002.00
Inc: 91.39
0
C1-NC4
1250
CG 85 u.
CG 478 u.
0
C1-NC4
1250

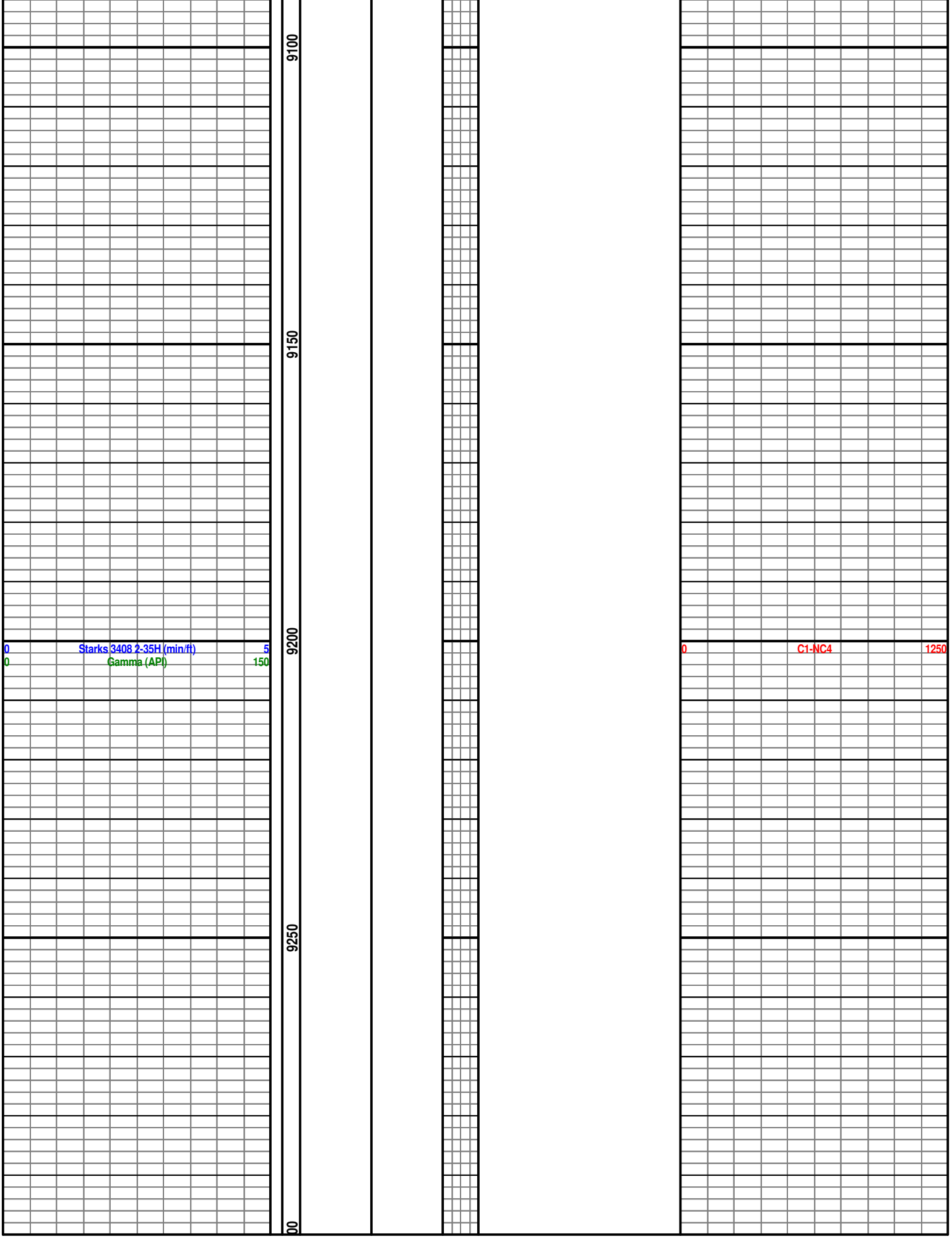

Gamma (API)
0
150
CONN
MW IN 8.4/29
CONN
Starks 3408 2-35H (min/ft)
5
Gamma (API)
0
150
8050
8100
8150
8200
AZI: 356.50
TVD: 4744.61
VS: 3596.41
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 30% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 28% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut SH:tr% gy to dk-gy tr grn frm blky wxy-rthy.
CG 142 u.
CG 488 u.
0
C1-NC4
1250


CONN
CONN
CONN
8250
8300
8350
8400
SHALE STRINGER
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 28% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut SH:tr% gy to dk-gy tr grn frm blky wxy-rthy.
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 28% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut SH:tr% gy to dk-gy tr grn frm blky wxy-rthy.
LS: 70% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 25% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut SH:5% gy to dk-gy tr grn frm blky wxy-rthy.
CG 726 u.
CG 1385 u.
CG 1765 u.
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
0
C1-NC4
1250


8450
8500
8550
8600
8650
LS: 65% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 20% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut SH:15% gy to dk-gy tr grn frm blky wxy-rthy.
LS: 50% Wht-ltGry, sft-m frm, vf xln-mic xln, dull; CHRT: 10% Wht, frm-hrd, plty; good yl fluor, thin ring stn, good cut SH:40% gy to dk-gy tr red tr grn frm blky wxy-rthy.
THIS SAMPLE INDICATING POSSIBLE TOP OF MISSISSIPPI LIME
TD WELL @ 8,536'
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
0
C1-NC4
1250


8700
8750
8800
8850
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
0
C1-NC4
1250


8900
8950
9000
9050
0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
0
C1-NC4
1250


0
Starks 3408 2-35H (min/ft)
5
0
Gamma (API)
150
9100
9150
9200
9250
00
0
C1-NC4
1250