



AZIMUTHAL IMAGE
NEUTRON DENSITY
GAMMA-RAY
5" = 100'
FEET MD

COMPANY : GRIFFIN MANAGEMENT LLC
WELL : DONNA #1H
FIELD : VIOLA
COUNTY : PRATT
STATE : KS
COUNTRY : USA
API No. : 15-151-22470

COMPANY : GRIFFIN MANAGEMENT LLC
WELL : DONNA #1H
FIELD : VIOLA
COUNTY : PRATT
STATE : KS
COUNTRY : USA
API WELL No. : 15-151-22470

WELL LOCATION
LAT: 37°29'07"N LON: 98°59'28"W
X: 1,857,494 Y: 298,456 MWD27
SEC: 29 TWP: 29N RANGE: 15W

OTHER SERVICES
DIRECTIONAL
ROP
CALIPER

DEPTH REF. : ROTARY TABLE
ELEVATION : 15.00 ft (ROTARY TABLE - GROUND LEVEL)
ALTITUDE : 2026.00 ft (GROUND LEVEL - MEAN SEA LEVEL)

BOREHOLE RECORD				DEVIATION RECORD			
HOLE SIZE in	FROM ft	TO ft	INCLINATION deg	FROM ft	TO ft	TO ft	TO ft
12 1/4	0	366	00 +/-1	0		4050	
8 3/4	366	5415	00 - 90	4050		5530	
6 1/8	5415	7975	90 +/-4	5530		7975	
CASING RECORD							
CASING SIZE in	FROM ft	TO ft					
9 5/8	0	366					
7	0	5415					

DRILLING Co.: MW DRILLING
RIG : 14
LMD UNIT No.: TRAILER DISTRICT: OKC
SPUD DATE : 08-MAY-18
LMD START DATE : 12-MAY-18 DEPTH : 4034 ft
LMD END DATE : 26-MAY-18 DEPTH : 7975 ft
TOTAL DEPTH : 7975 ft

RUN DATA						
RUN NUMBER	1	2	3	4	5	6
START DATE	12-MAY-18	16-MAY-18	18-MAY-18	21-MAY-18	23-MAY-18	24-MAY-18
START TIME	16:30	07:30	16:00	01:00	06:00	20:45
END DATE	16-MAY-18	17-MAY-18	20-MAY-18	23-MAY-18	24-MAY-18	26-MAY-18
END TIME	07:15	19:00	23:30	03:00	19:30	21:00
DEPTH IN ft	4034	5209	5415	6107	6814	7293
DEPTH OUT ft	5209	5415	6107	6814	7293	7975
LOG TOP ft	3988	5162	5370	6067	6773	7253
LOG BOTTOM ft	5162	5370	6067	6773	7253	7584
HOLE SIZE in	8 3/4	8 3/4	6 1/8	6 1/8	6 1/8	6 1/8
MUD DATA @ ft	5209	5415	6107	6814	7293	7884
MUD TYPE	WATER BASE	WATER BASE	WATER BASE	WATER BASE	WATER BASE	WATER BASE
DENSITY lb/gal	9.10	9.10	9.00	9.10	9.10	9.20
VISCOSITY s/qt	83	83	30	28	30	29
pH	10.5	10.5	8.0	8.0	8.0	8.0
FLUID LOSS cm3/30	7.2	7.2			28.8	28.0
SALINITY ppm	7000	7000	72000	61000	72000	67000
Rm ohmm @ deg F	@	@	@	@	@	@
Rmf ohmm @ deg F	@	@	@	@	@	@

MAX REC TEMP deg F	134	134	139	140	144	144
Rm @ MAX TEMP ohmm						
LWD ENGINEER #1	R.GUTSHALL	R.GUTSHALL	R.GRAVEL	R.GRAVEL	R.GUTSHALL	R.GUTSHALL
LWD ENGINEER #2		R.GRAVEL	N.ROGERS	N.ROGERS	N.ROGERS	N.ROGERS
LWD ENGINEER #3		N.ROGERS		R.GUTSHALL		

REMARKS

GRIFFIN MANAGEMENT LLC LICENSE #: 33936

SCHLUMBERGER JOB #: 180KC0446

ALL LOGGING DATA IS MEMORY ONLY UNLESS STATED OTHERWISE.

ALL REFERENCES TO LOG TOP, LOG BOTTOM OR LOGGING TOOL DEPTH REFER TO THE GAMMA-RAY SENSOR UNLESS STATED OTHERWISE.

ALL ANNOTATIONS IN THE DEPTH TRACK ARE REFERENCED TO BIT DEPTH.

RUN #1: 6 3/4" TELEPACER/GAMMA-RAY LOGGING RUN.

RUN #2: 6 3/4" TELEPACER/GAMMA-RAY LOGGING RUN.

RUN #3: 4 3/4" TELEPACER/GAMMA-RAY/IDNSC LOGGING RUN.

RUN #4: 4 3/4" TELEPACER/GAMMA-RAY/IDNSC LOGGING RUN.

RUN #5: 4 3/4" TELEPACER/GAMMA-RAY/IDNSC LOGGING RUN.

RUN #6: 4 3/4" TELEPACER/GAMMA-RAY/IDNSC LOGGING RUN.

THIRD PARTY DEPTH TRACKING PROVIDED BY PASON.

NEUTRON POROSITY (NLIM) IS CALCULATED FOR A LIMESTONE MATRIX AND IS CORRECTED FOR STANDOFF AND HOLE SIZE.

DENSITY POROSITY (DPHI) IS CALCULATED FOR A MATRIX DENSITY OF 2.71G/CC AND A FLUID DENSITY OF 1.00G/CC.

DENSITY DATA DENSITY (DDDN) TO THE RIGHT OF THE DENSITY TRACK REPRESENTS 0-4 SAMPLES PER FOOT.

THE SLIDE INDICATOR TO THE LEFT OF THE DENSITY TRACK IS OFFSET TO THE DENSITY MEASUREMENT POINT.

DENSITY MEASUREMENTS MAY BE SUBSTANDARD THROUGH INTERVALS OF HIGH WEIGHTED STANDOFF (WSOD).

HIGH WSOD IS CAUSED BY POOR WALL CONTACT AND MAY BE THE RESULT OF UNFAVORABLE STABILIZER POSITION, UNFAVORABLE TOOLFACE ORIENTATION DURING SLIDING, EXCESSIVE HOLE ENLARGEMENT OR HIGH ROP'S.

REMARK #1: GAMMA-RAY LOGGED THROUGH CASING FROM 5371'-5405'MD (4759'-4671'TVD).

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA

0	GRC API	150	DEPTH	2.2	RHOB g/cc	2.88	2.4	RHOB32 g/cc	2.9	3	PE32	8
	avg = 6 in		MD ft									
500	ROP ft/hr	0	5" = 100ft	30	DPHI pu	-10						
	avg = 1 ft		COMMENTS	30	NLIM pu	-10						
5	CALI in	15	SHOES	-0.8	DRHO g/cc	0.2						
5	BS in	15		48	DNPB pu	-12						
0	WSOD in	10		0	PE	10						
					SLIDE (DEN)							

inc azi
TVD

S 0.5 114.6
5 3987

4000

S 0.6 114.2
6 4019

R
U
N
#1

S 0.6 49.1
7 4050

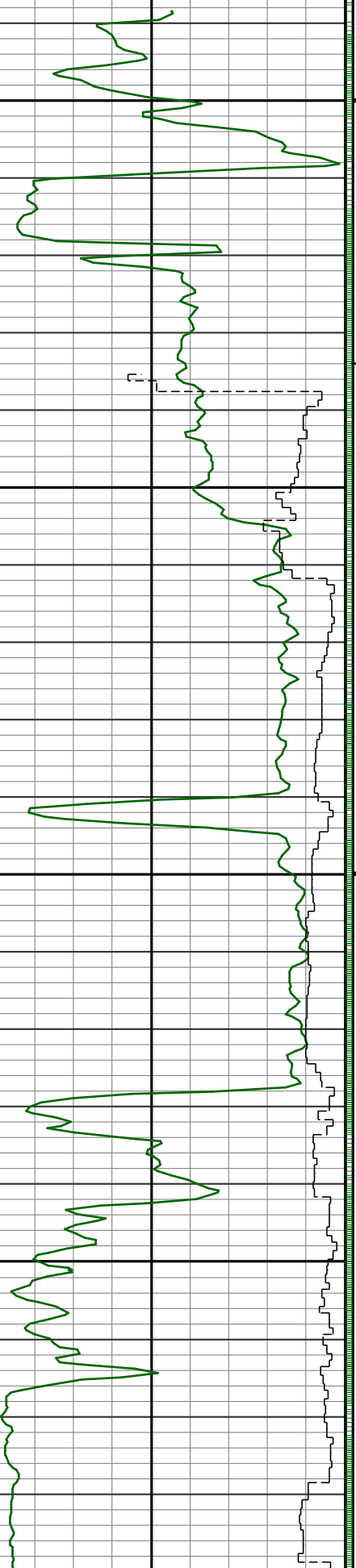
S 3.0 354.4
8 4082

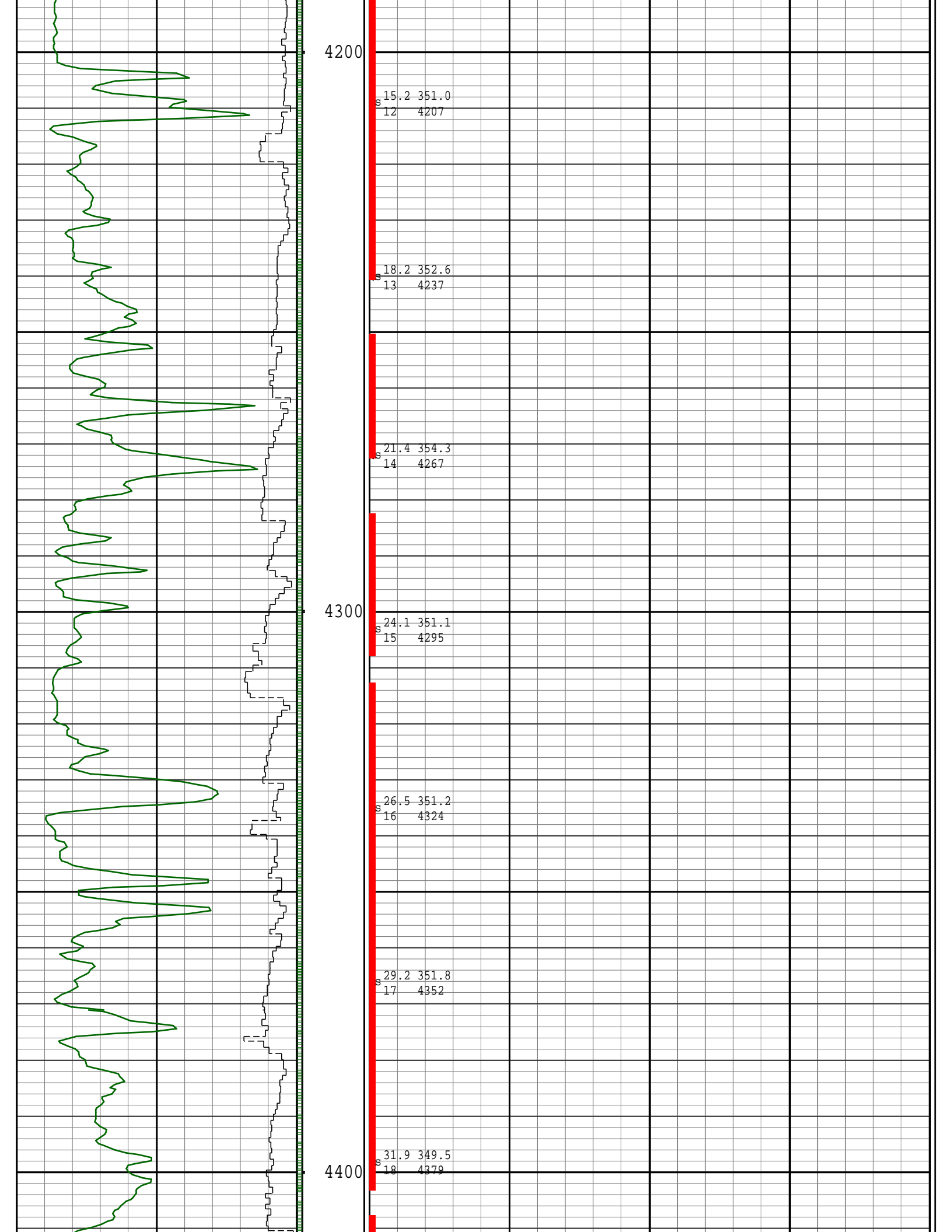
4100

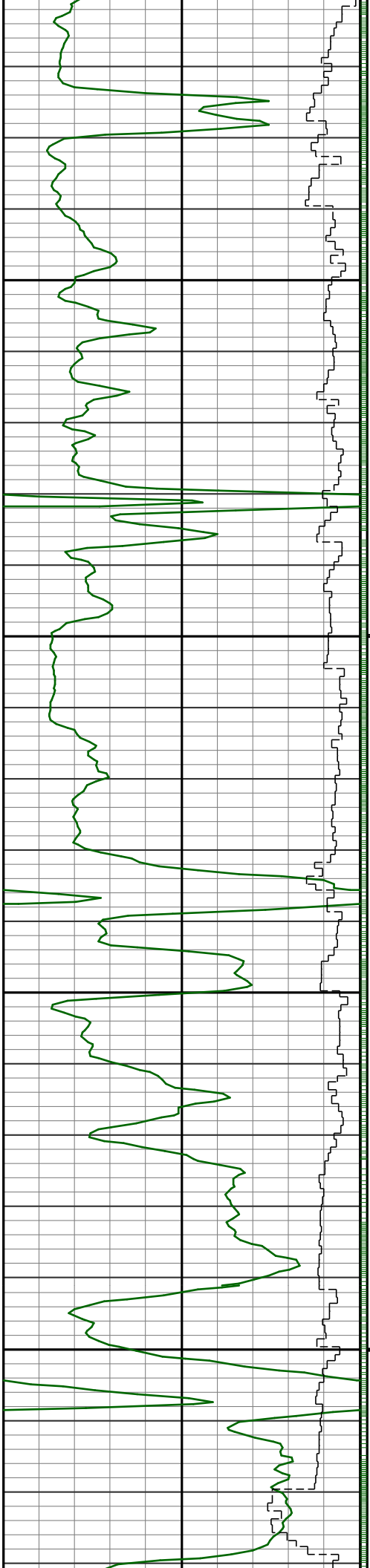
S 6.3 354.5
9 4113

S 9.6 354.6
10 4144

S 12.5 352.9
11 4176







S 35.0 352.1
19 4406

S 38.0 353.1
20 4431

S 41.2 353.5
21 4455

4500

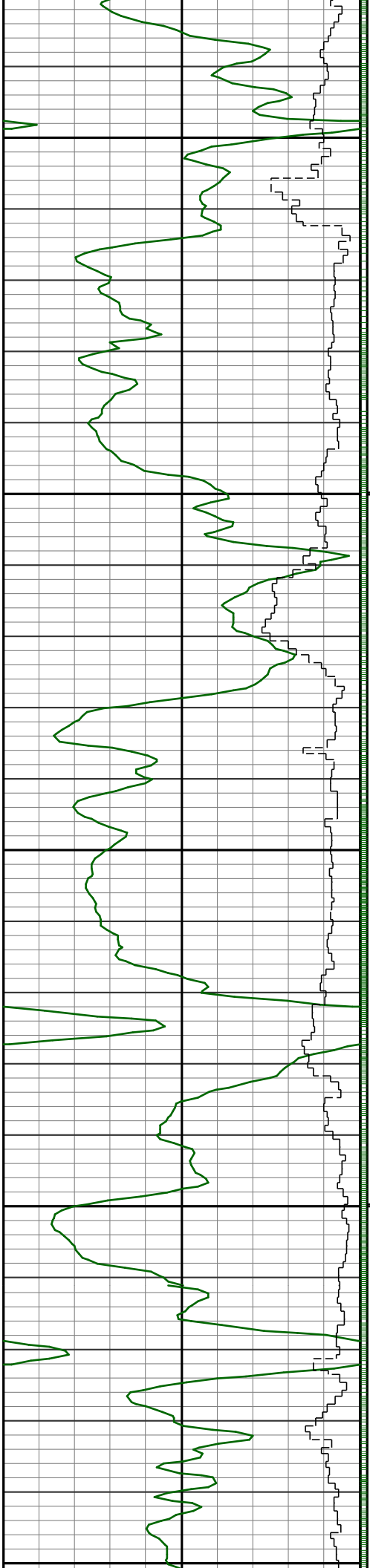
S 44.4 353.8
22 4479

S 47.3 352.6
23 4501

S 50.1 355.1
24 4522

4600

S 52.9 355.5
25 4542



56.1 354.4
S 26 4560

59.3 355.6
S 27 4577

4700

60.3 354.7
S 28 4593

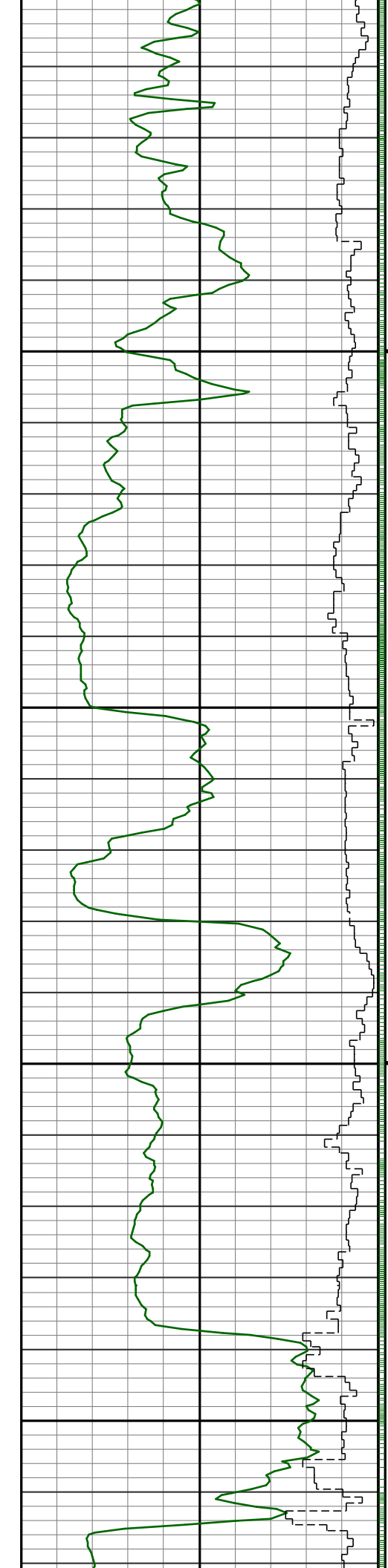
61.0 355.2
S 29 4608

61.3 356.1
S 30 4623

4800

62.1 356.9
S 31 4638

62.8 357.2
S 32 4653



65.6 354.6
33 4667

4900
68.1 354.6
34 4679

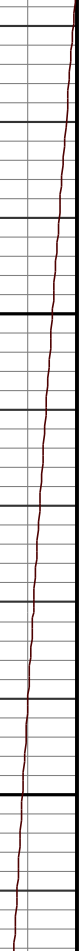
70.7 352.1
35 4691

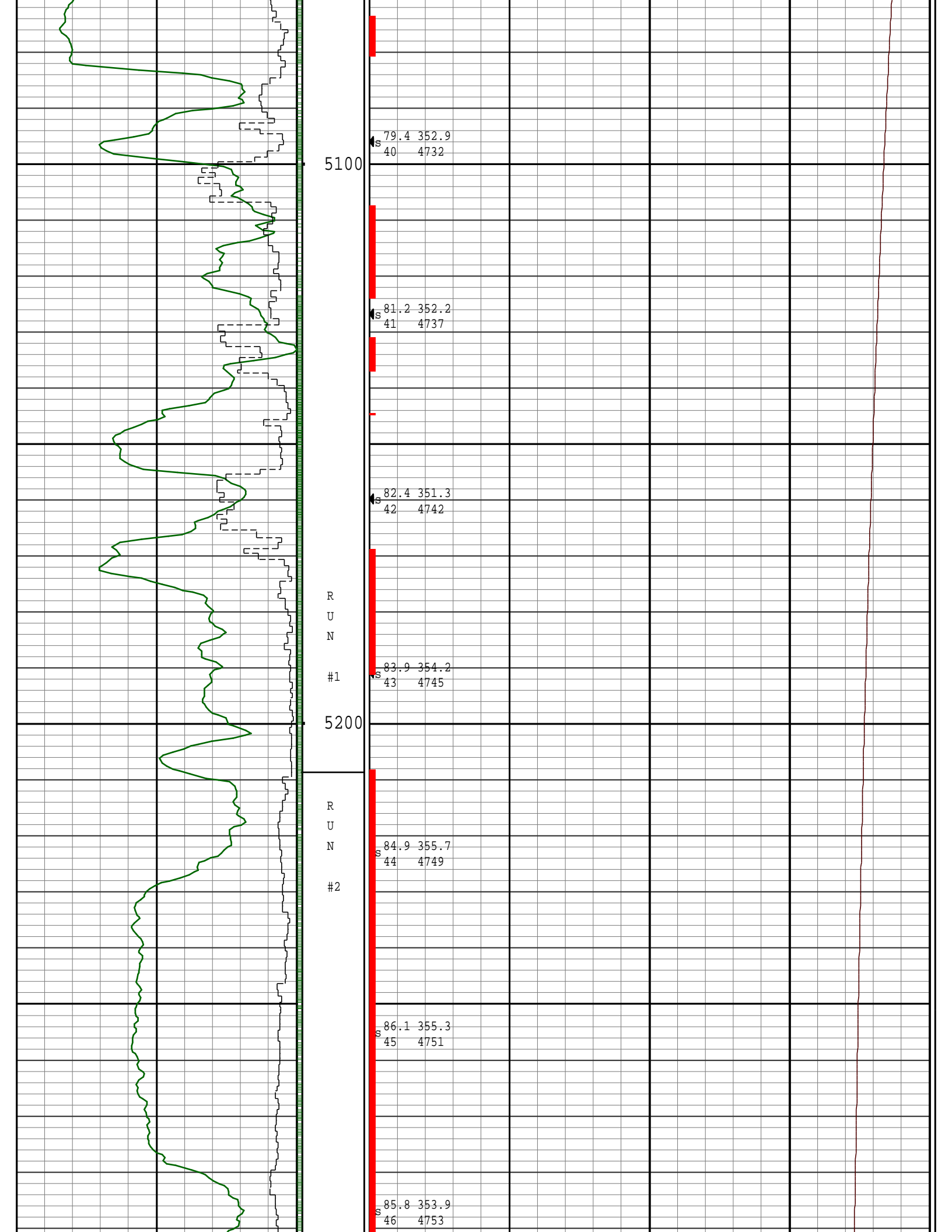
72.1 352.7
36 4701

5000
74.1 352.5
37 4710

76.0 353.5
38 4718

77.7 352.6
39 4725





5300

S 86.0 356.2
47 4756

S 86.5 356.1
48 4758

R
U
N

#2

SEE REMARK #1

5400

7"
CASING

R
U
N

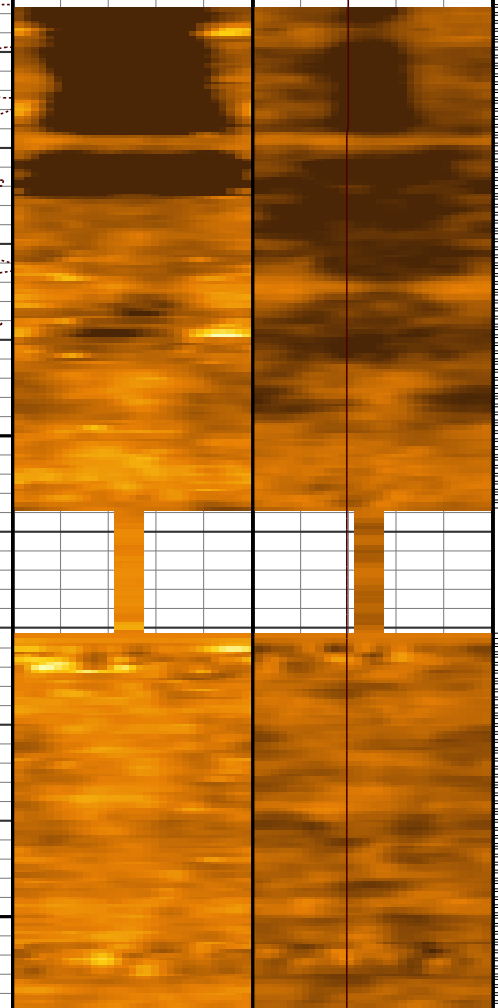
#3

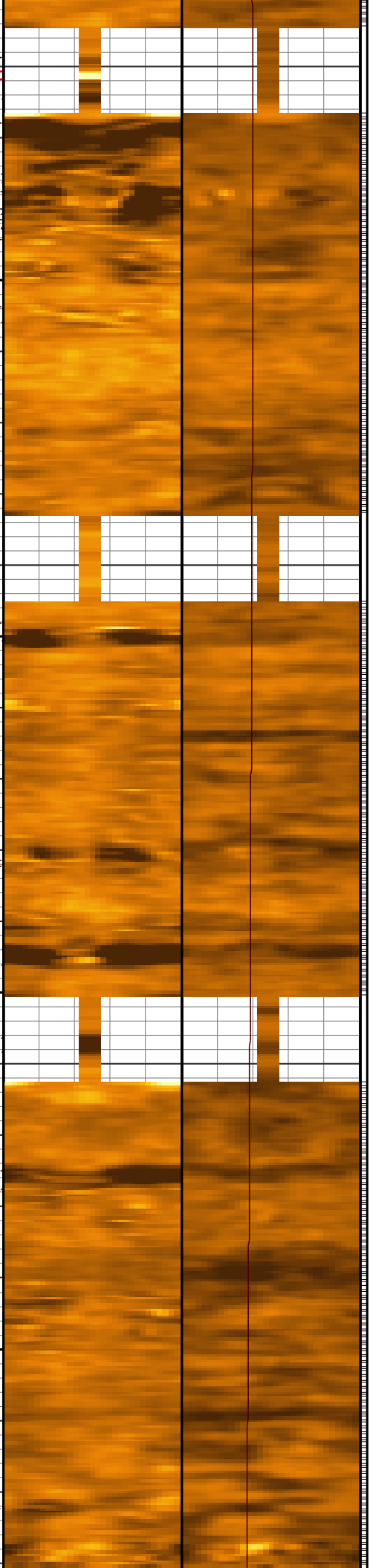
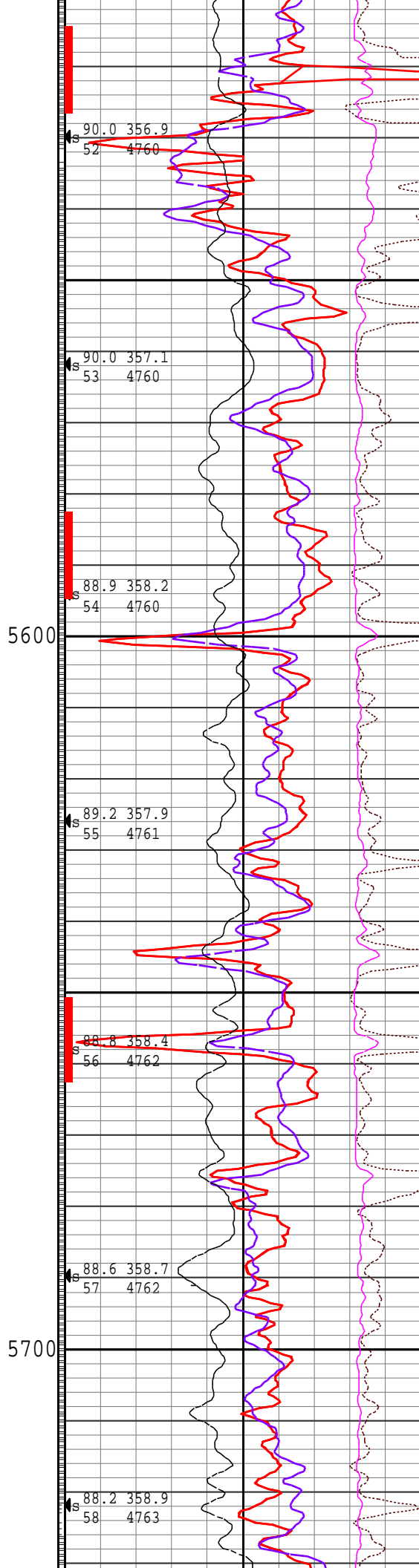
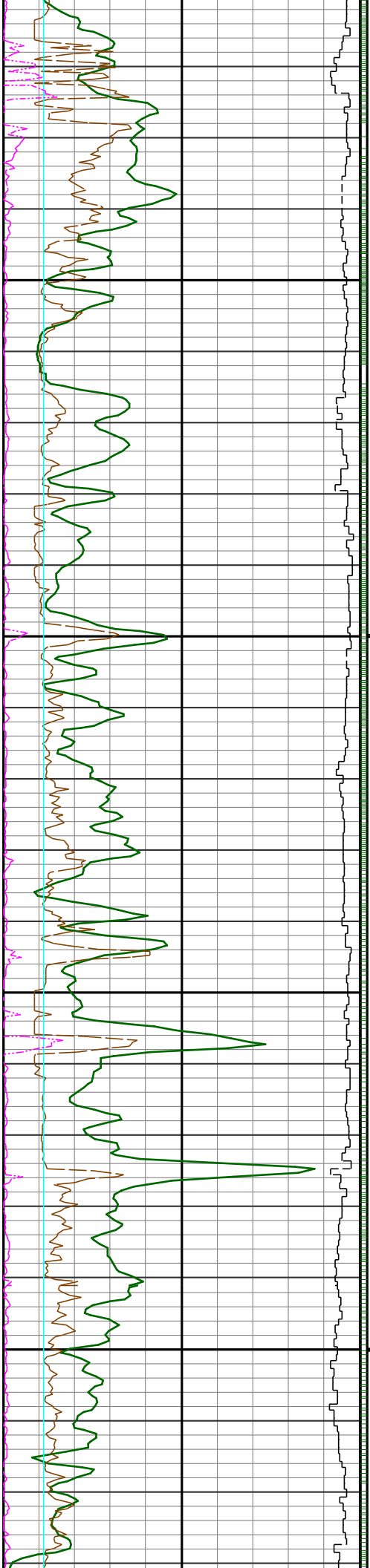
S 89.5 355.9
49 4760

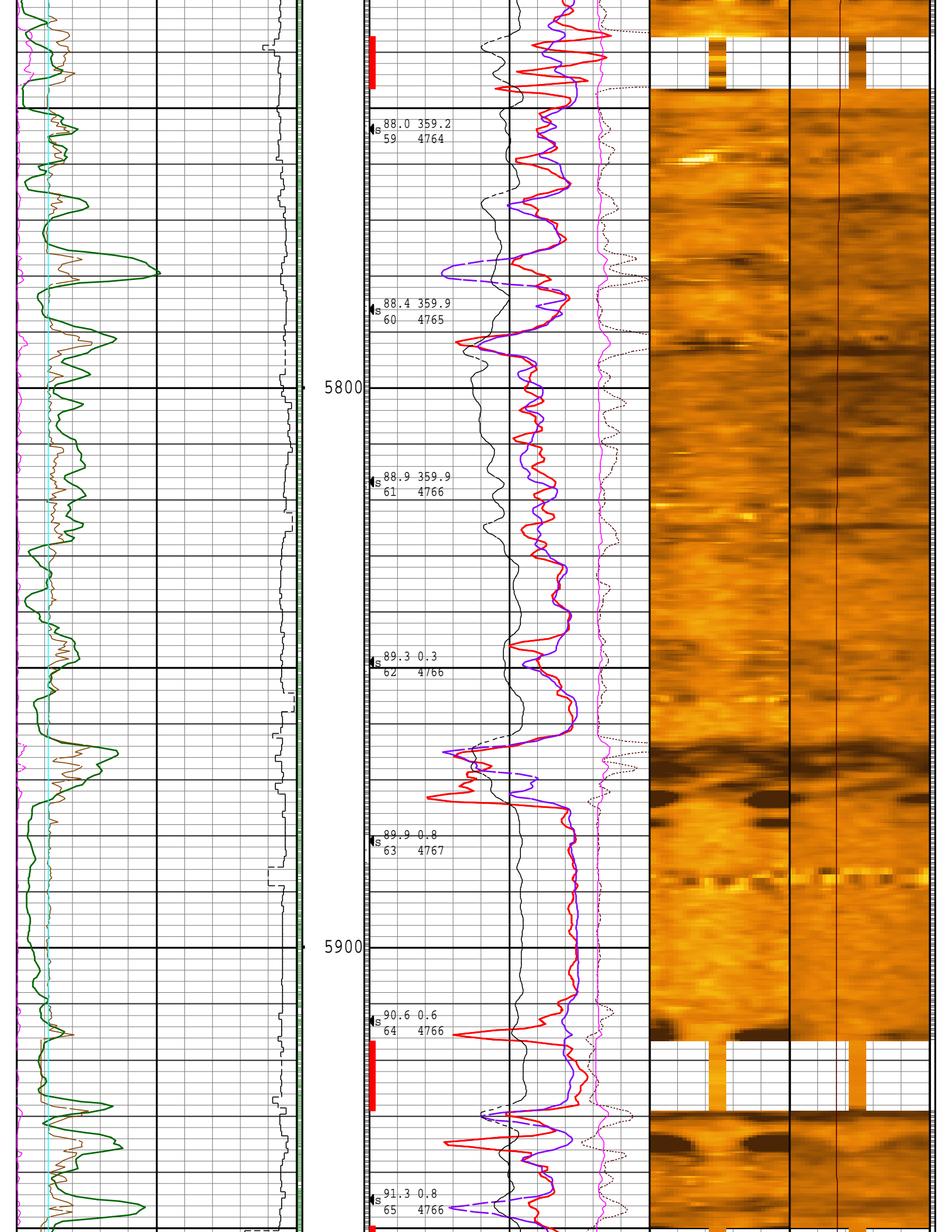
S 90.0 356.0
50 4761

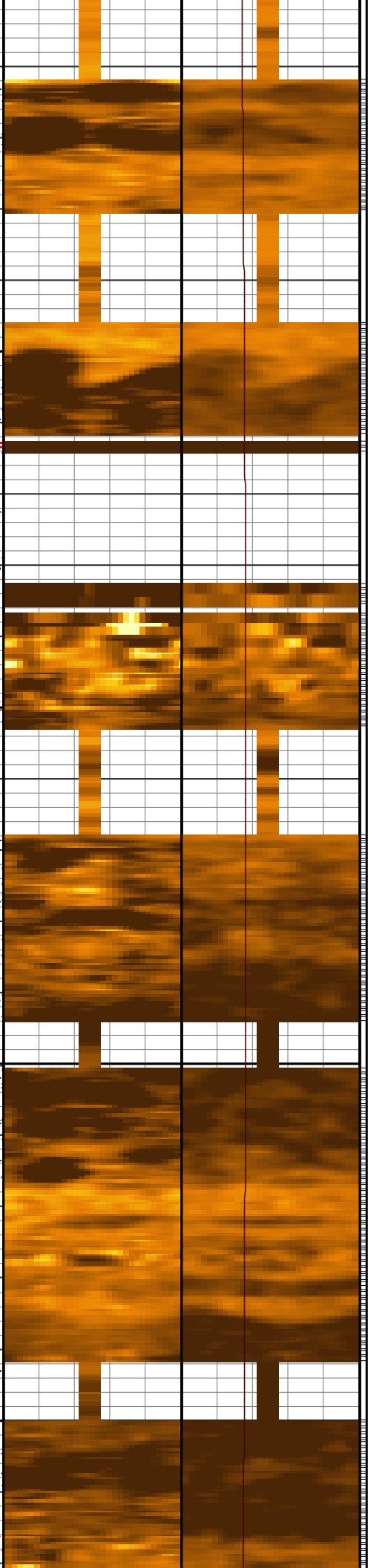
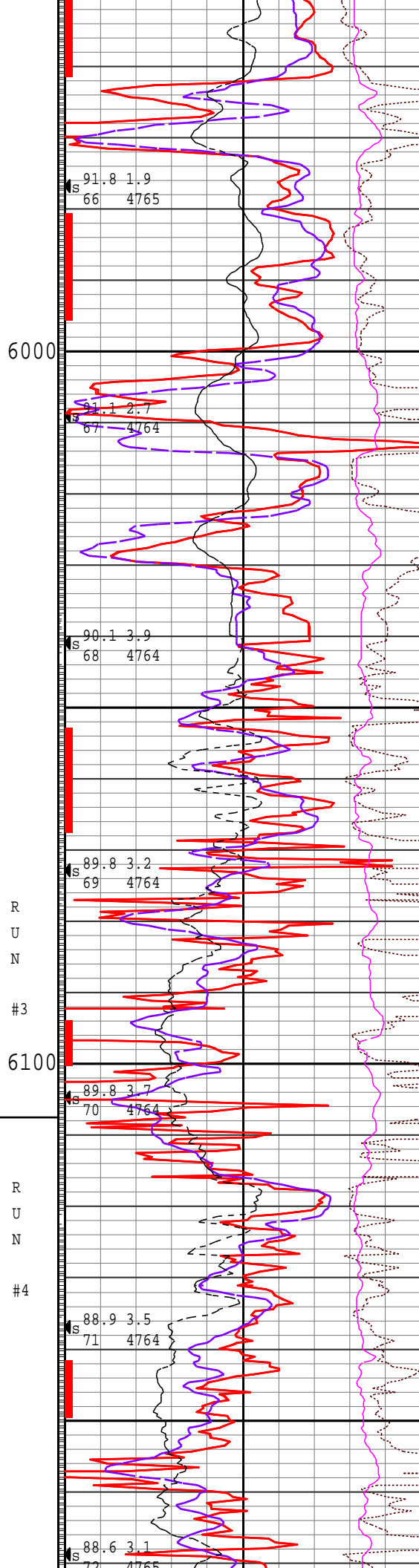
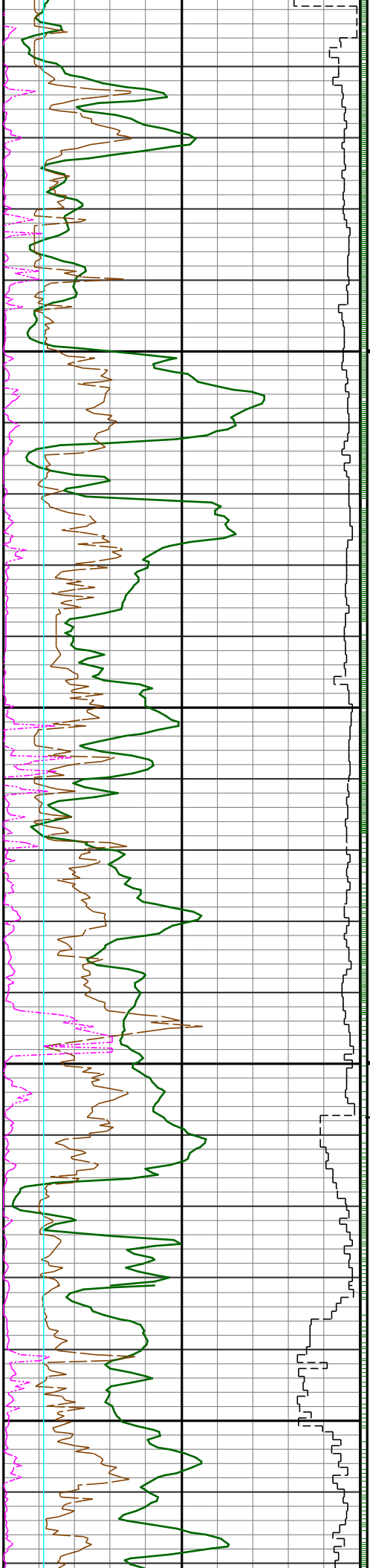
5500

S 90.7 356.0
51 4760









S 91.8 1.9
66 4765

S 91.1 2.7
67 4764

S 90.1 3.9
68 4764

S 89.8 3.2
69 4764

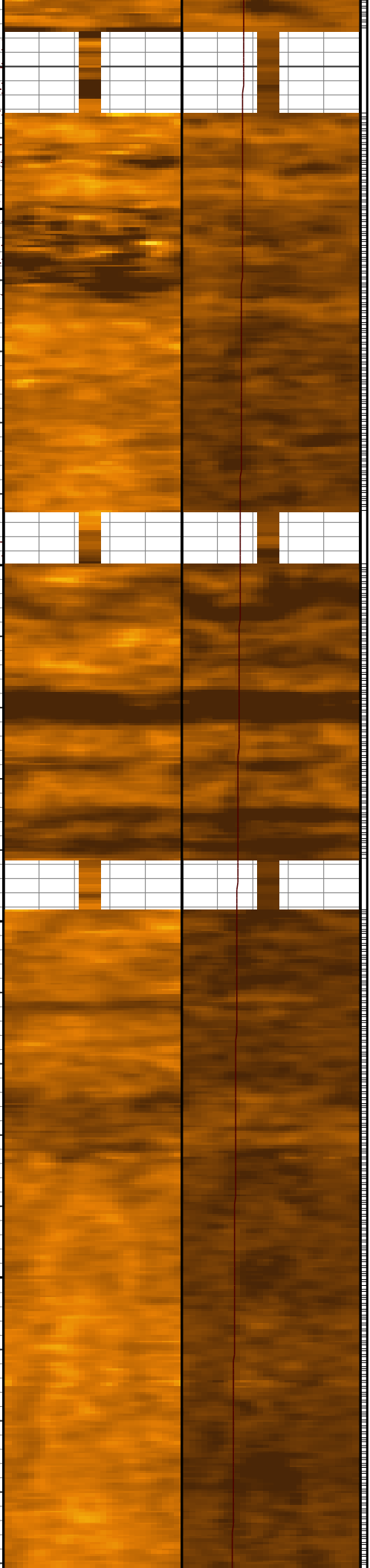
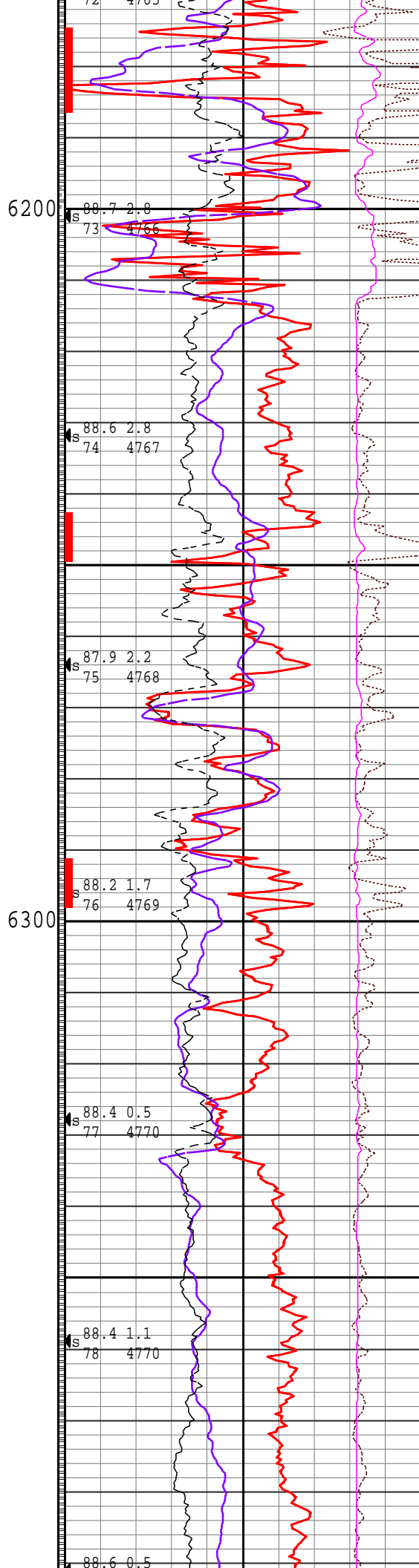
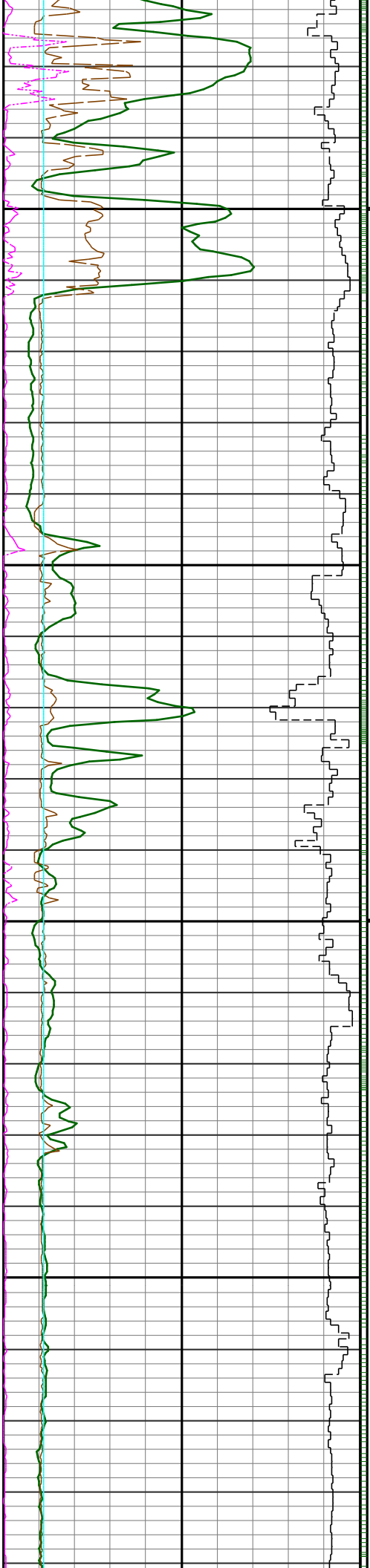
R
U
N
#3

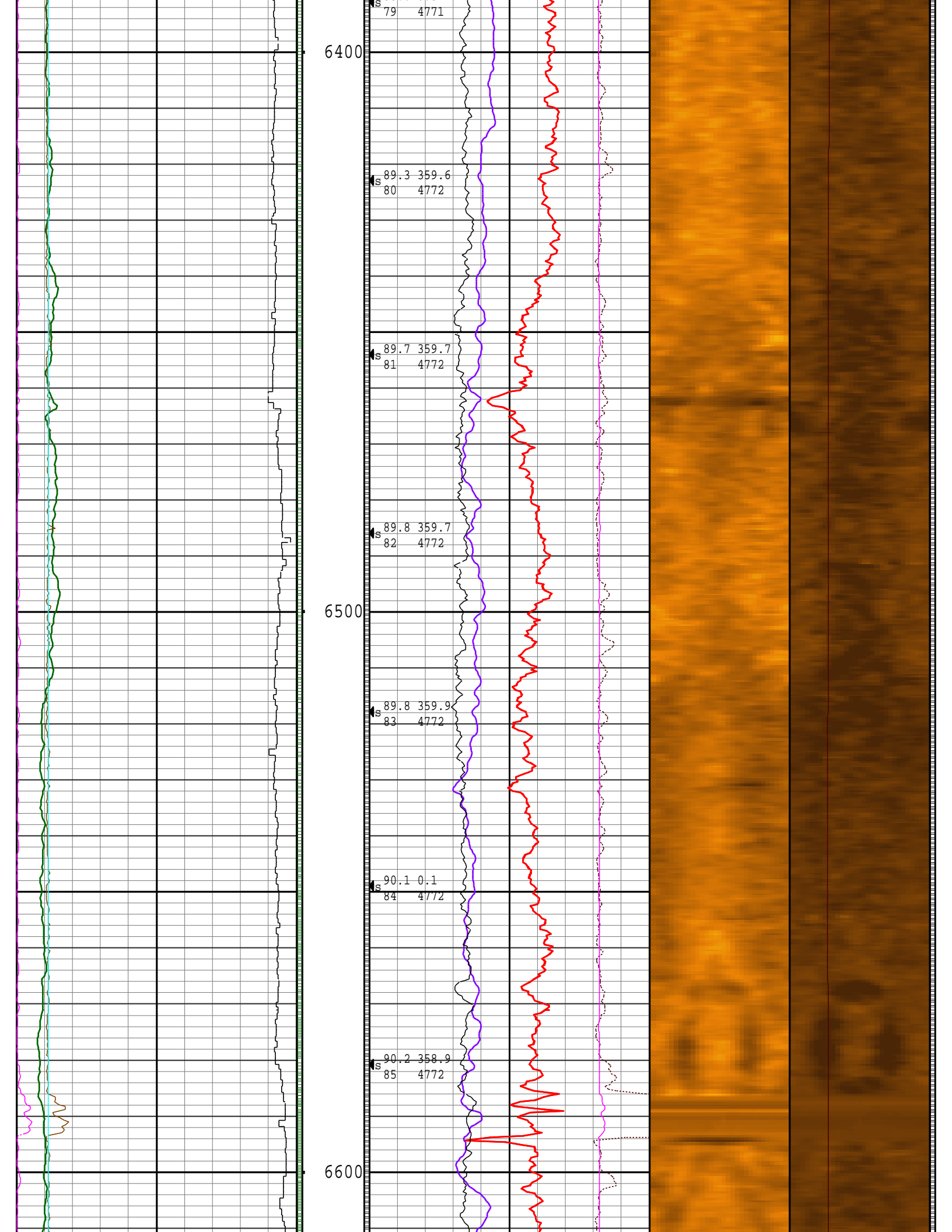
S 89.8 3.7
70 4764

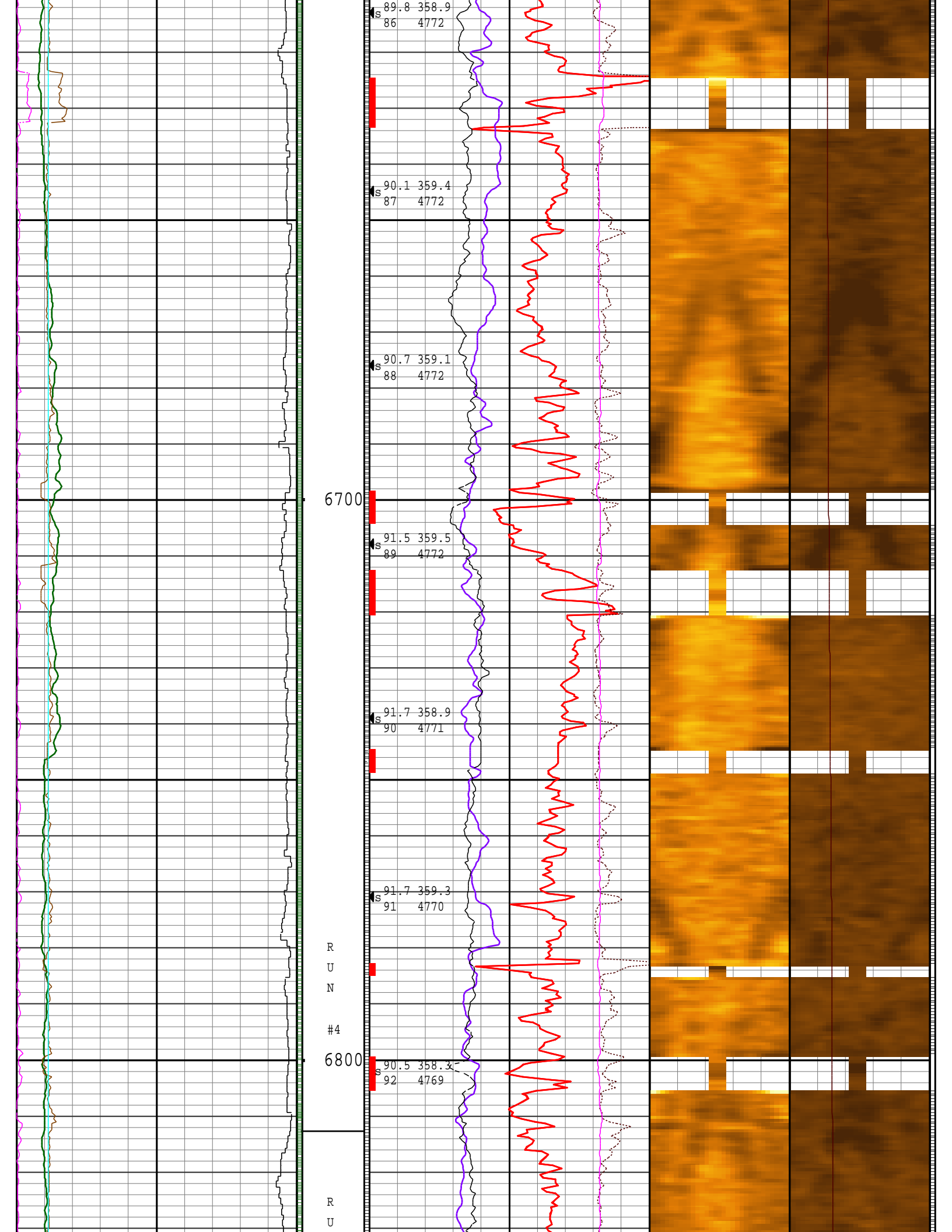
R
U
N
#4

S 88.9 3.5
71 4764

S 88.6 3.1
72 4765







s 89.8 358.9
86 4772

s 90.1 359.4
87 4772

s 90.7 359.1
88 4772

6700

s 91.5 359.5
89 4772

s 91.7 358.9
90 4771

s 91.7 359.3
91 4770

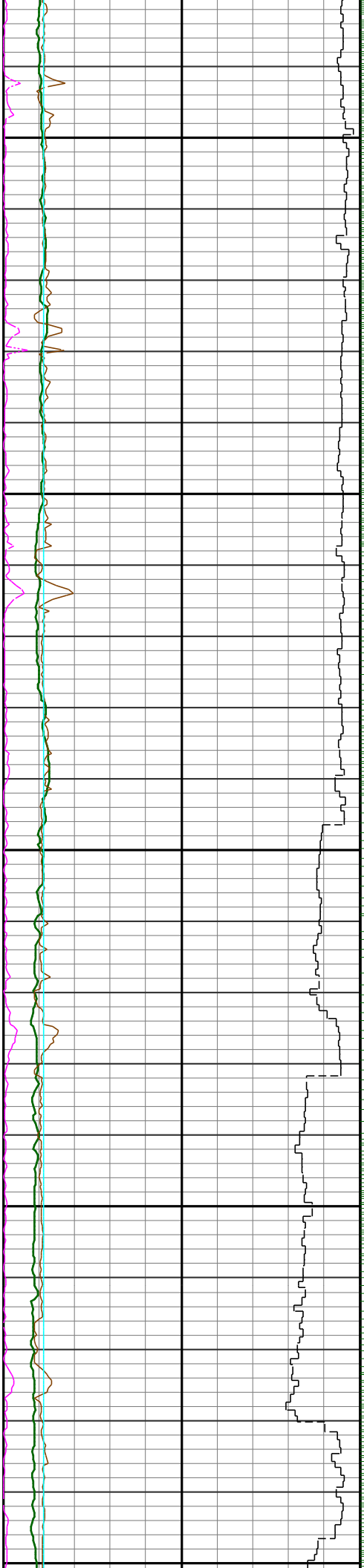
R
U
N

#4

6800

s 90.5 358.2
92 4769

R
U



N

#5

6900

7000

s 89.9 357.6
93 4769

s 90.9 357.4
94 4769

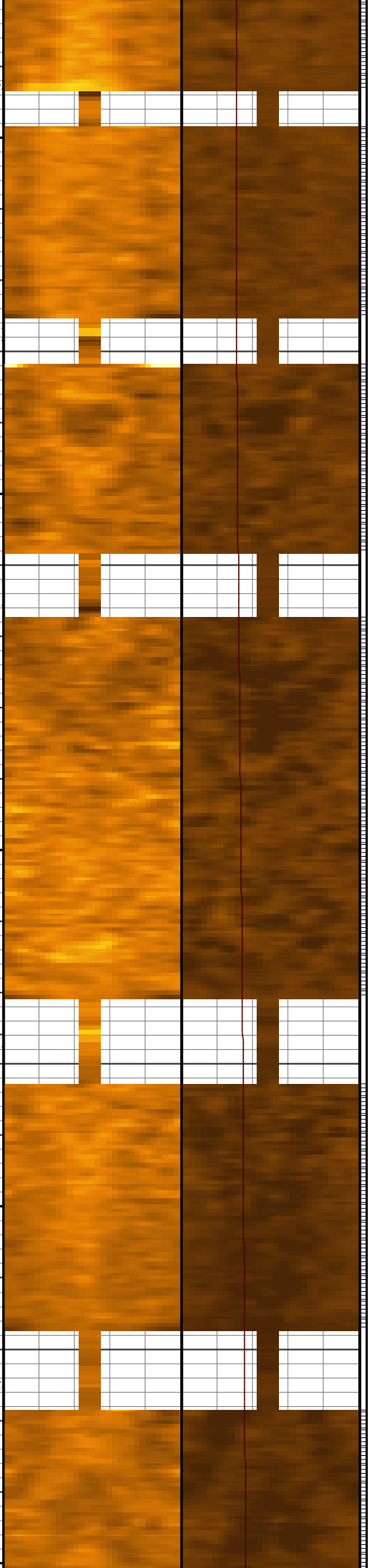
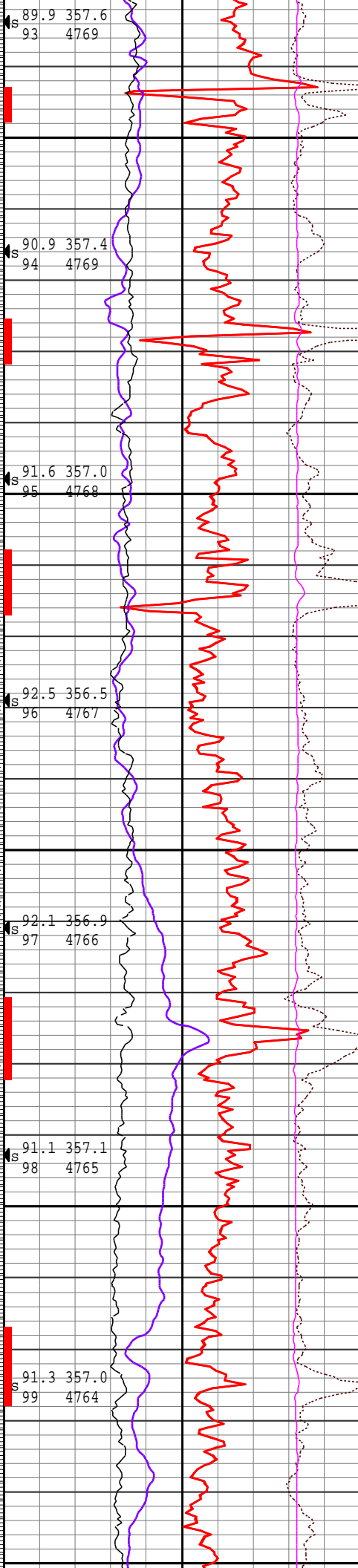
s 91.6 357.0
95 4768

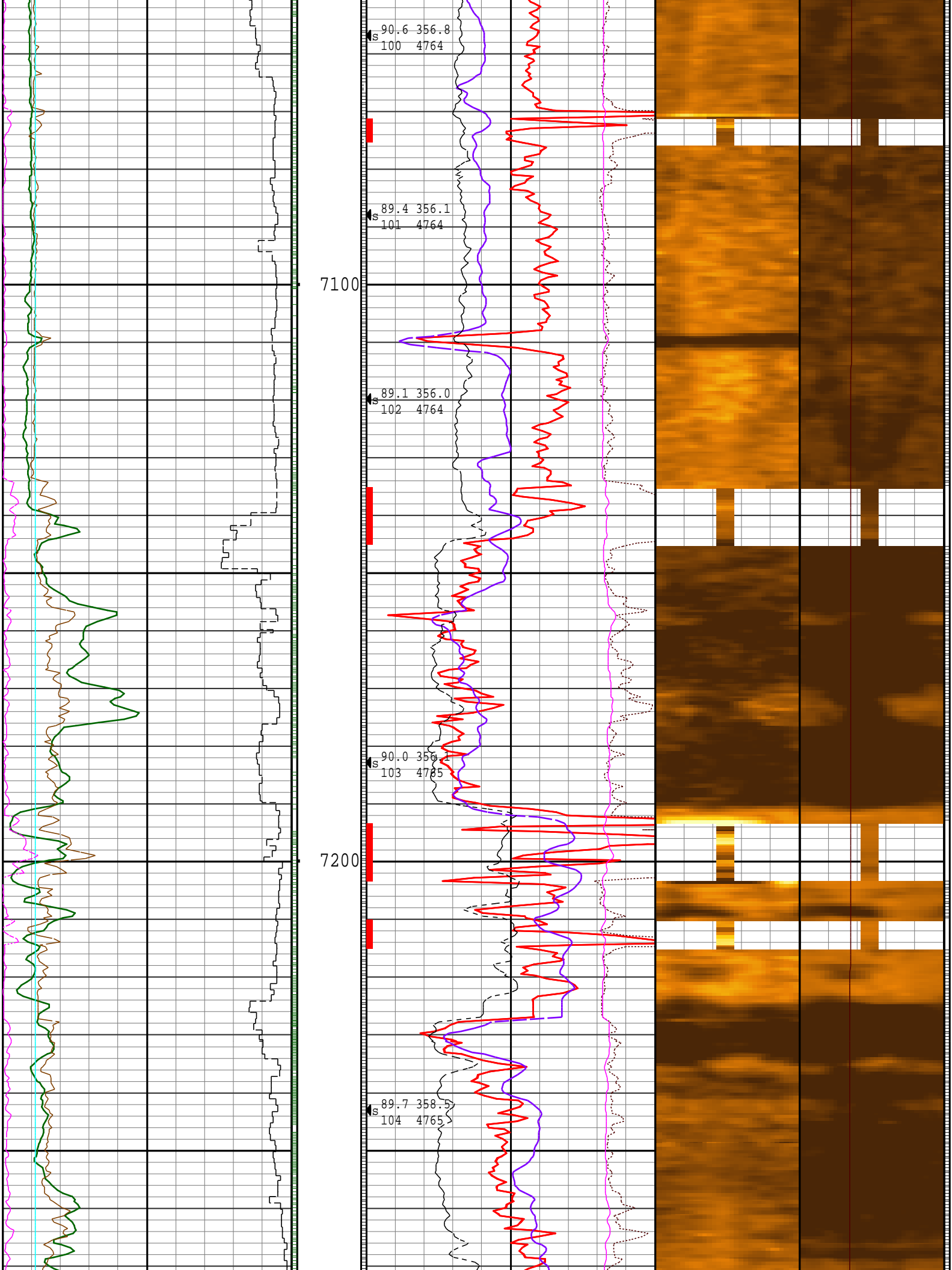
s 92.5 356.5
96 4767

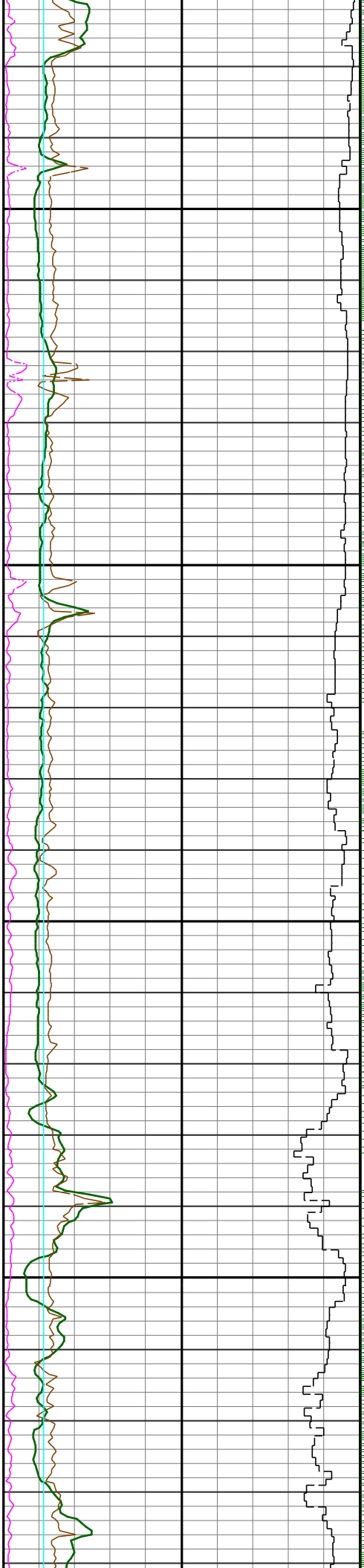
s 92.1 356.9
97 4766

s 91.1 357.1
98 4765

s 91.3 357.0
99 4764







R
U
N
#5

7300

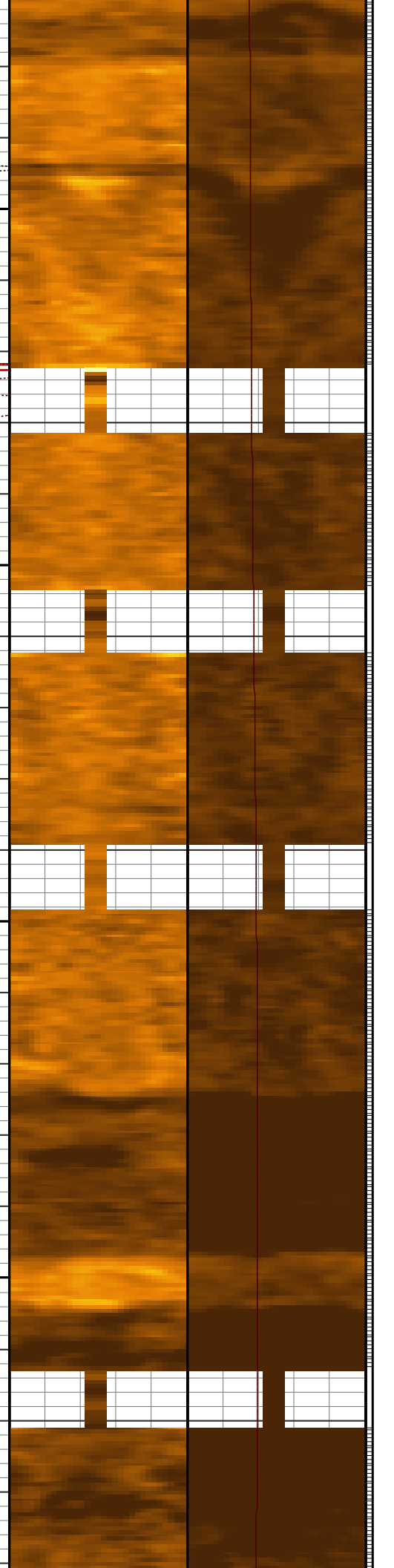
R
U
N
#6

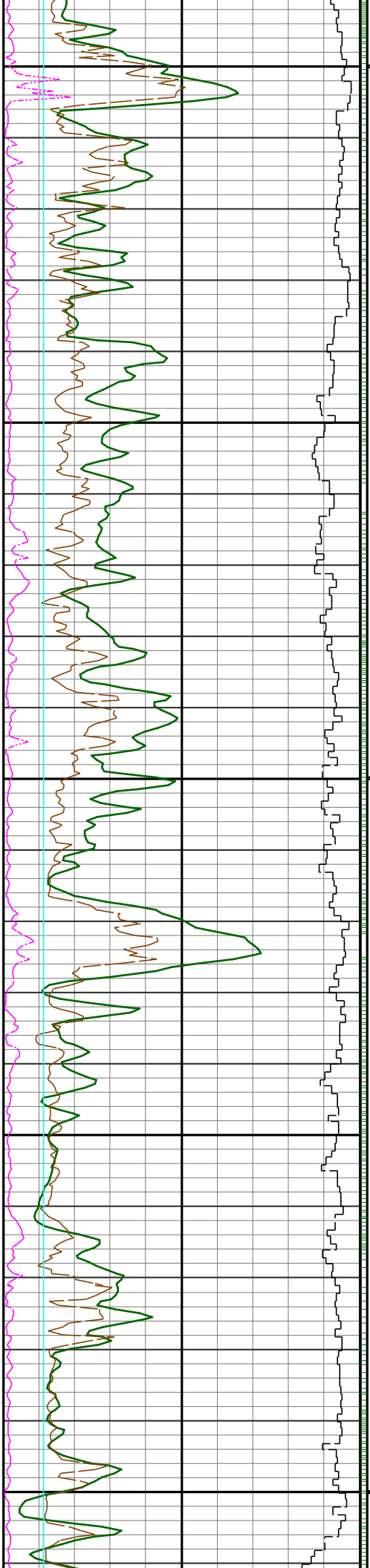
7400

s 91.3 359.9
105 4764

s 92.6 359.6
106 4762

s 90.2 359.5
107 4760



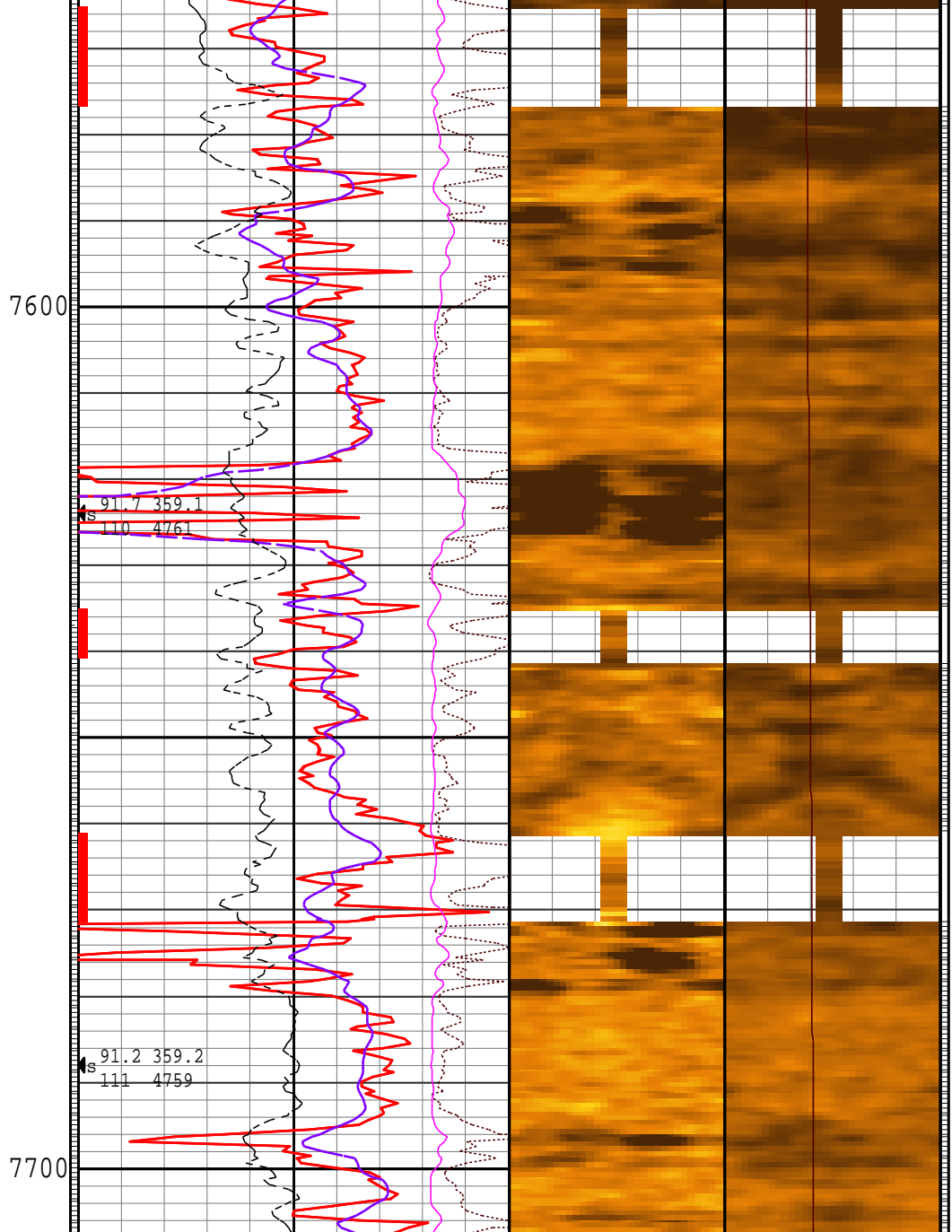


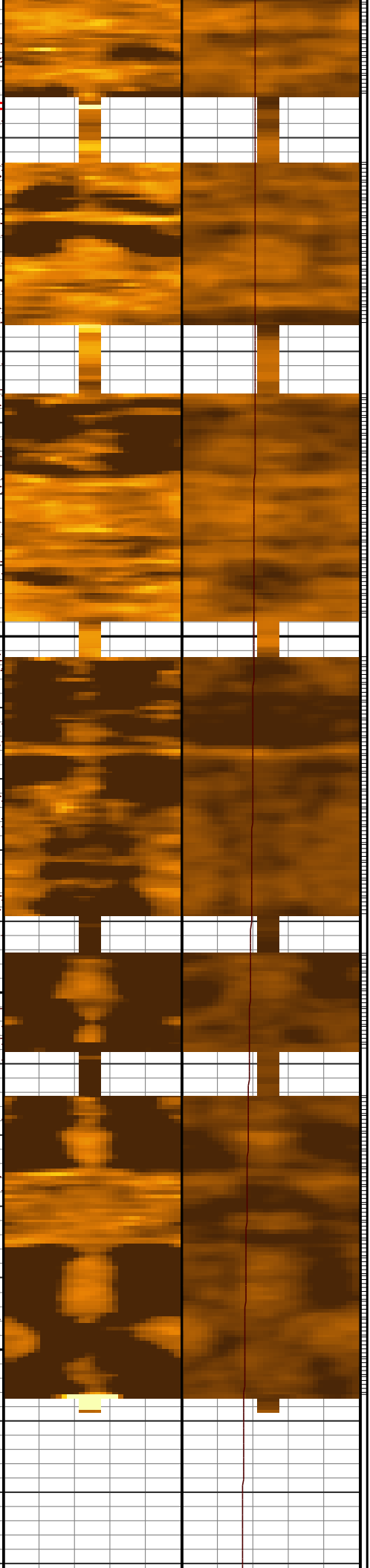
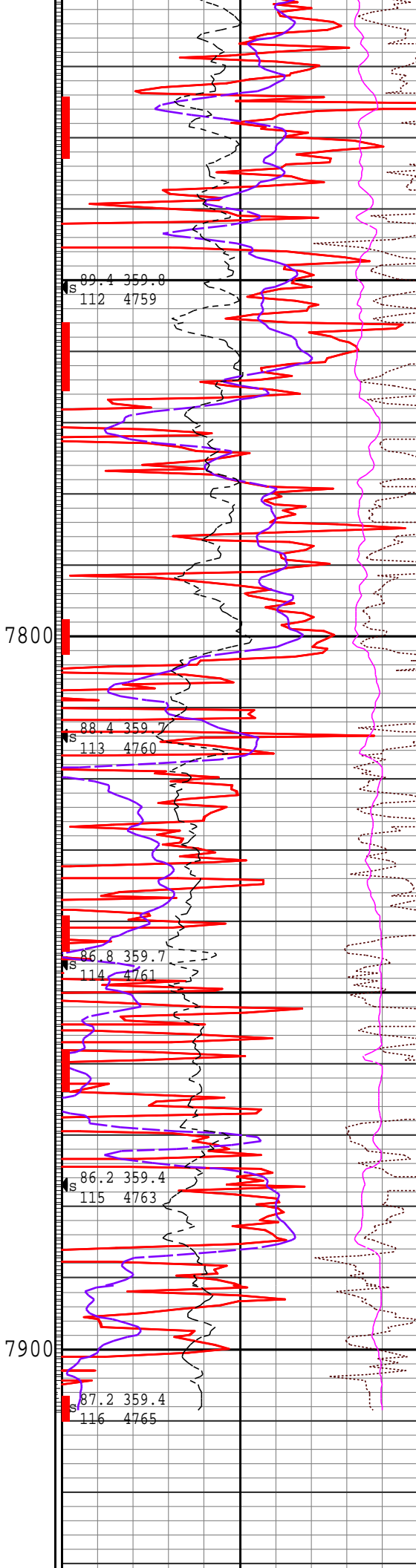
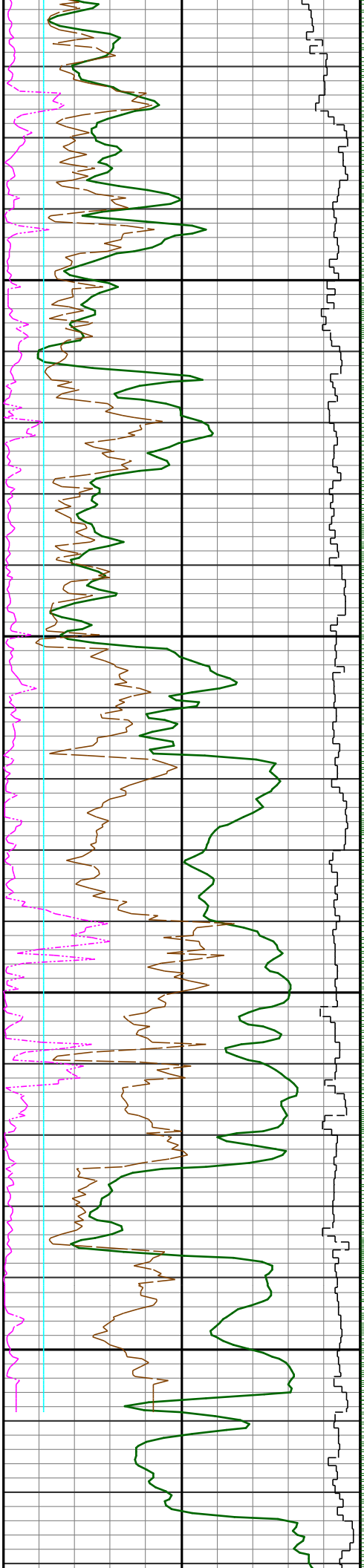
88.3 359.1
s 108 4761

90.6 359.0
s 109 4762

91.7 359.1
s 110 4761

91.2 359.2
s 111 4759





			R U N #6										
				87.2 359.4 117 4768		PROJECTED SURVEY							
0	GRC API	150	8000	DEPTH	2.2	RHOB g/cc	2.88	2.4	RHOB32 g/cc	2.9	3	PE32	8
avg = 6 in			5" = 100ft	MD ft	30	DPHI pu	-10						
500	ROP ft/hr	0	COMMENTS	30	NLIM pu	-10	T R B L T				T R B L T		
avg = 1 ft			SHOES	-0.8	DRHO g/cc	0.2					4800 TVD ft 4700		
5	CALI in	15		48	DNPH pu	-12					avg = 1 ft		
5	BS in	15		0	PE	10							
0	WSOD in	10		SLIDE (DEN)									
				inc azi									
				# TVD									

Survey Report

Vertical Section Plane: 358.00°	Total Correction: 4.97° East to Grid
Calculation Method: Minimum Curvature	Survey Reference: Wellhead
North Aligned to: Grid North	Well: DONNA #1H
RT: 15' ROTARY TABLE TO GROUND LEVEL	FIELD: VIOLA

Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	Rect Co-ord North (ft)	Rect Co-ord East (ft)	Closure Distance (ft)	Closure Direction (deg)	Dog-leg Severity (dg/hft)	Temp (deg F)
ORIGIN OF WELL AT SURFACE.											
0.00	0.00	0.00	0.00		0.00	0.00 N	0.00 E	0.00	0.00		
THE FOLLOWING ARE SCHLUMBERGER MWD SURVEYS.											
1064.00	0.41	274.91	1063.99	1064.00	0.46	0.33 N	3.79 W	3.81	274.91	0.04	93.80
1989.00	0.18	251.77	1988.98	925.00	0.45	0.15 N	8.47 W	8.47	271.05	0.03	93.80
2976.00	0.33	43.21	2975.97	987.00	2.02	1.74 N	8.00 W	8.18	282.28	0.05	97.41
3966.00	0.78	112.02	3965.93	990.00	1.28	1.29 N	0.20 E	1.31	8.89	0.07	104.64
3987.00	0.51	114.57	3986.93	21.00	1.18	1.20 N	0.42 E	1.27	19.27	1.29	104.64
4019.00	0.58	114.23	4018.93	32.00	1.05	1.07 N	0.70 E	1.28	32.97	0.22	108.25
4050.00	0.60	49.09	4049.93	31.00	1.08	1.12 N	0.96 E	1.47	40.77	2.05	111.87
4082.00	2.98	354.44	4081.91	32.00	2.02	2.05 N	1.01 E	2.29	26.15	8.37	115.48
4113.00	6.34	354.50	4112.81	31.00	4.53	4.56 N	0.77 E	4.62	9.54	10.84	115.48
4145.00	9.57	354.65	4144.49	32.00	8.95	8.97 N	0.35 E	8.98	2.23	10.09	119.09
4177.00	12.51	352.89	4175.90	32.00	15.06	15.06 N	0.33 W	15.06	358.75	9.25	119.09
4209.00	15.18	351.04	4206.97	32.00	22.67	22.64 N	1.41 W	22.68	356.44	8.46	115.48
4240.00	18.20	352.56	4236.66	31.00	31.52	31.45 N	2.67 W	31.56	355.15	9.84	119.09
4272.00	21.44	354.29	4266.76	32.00	42.34	42.23 N	3.90 W	42.41	354.73	10.29	119.09
4303.00	24.14	351.13	4295.33	31.00	54.29	54.13 N	5.44 W	54.40	354.26	9.56	119.09
4335.00	26.55	351.18	4324.25	32.00	67.89	67.66 N	7.55 W	68.08	353.64	7.53	119.09
4366.00	29.20	351.78	4351.65	31.00	82.29	82.00 N	9.69 W	82.57	353.26	8.60	119.09
4398.00	31.92	349.52	4379.21	32.00	98.42	98.04 N	12.34 W	98.82	352.82	9.23	122.71
4430.00	35.01	352.14	4405.90	32.00	115.92	115.46 N	15.14 W	116.45	352.53	10.66	122.71
4461.00	38.03	353.07	4430.81	31.00	134.28	133.75 N	17.51 W	134.90	352.54	9.90	122.71
4493.00	41.23	353.45	4455.45	32.00	154.62	154.02 N	19.90 W	155.30	352.64	10.03	122.71
4525.00	44.39	353.75	4478.93	32.00	176.30	175.63 N	22.32 W	177.04	352.76	9.89	122.71
4556.00	47.28	352.58	4500.52	31.00	198.46	197.71 N	24.98 W	199.28	352.80	9.71	126.32
4588.00	50.12	355.12	4521.64	32.00	222.43	221.60 N	27.54 W	223.31	352.92	10.69	126.32

4620.00	52.93	355.50	4541.55	32.00	247.45	246.57 N	29.59 W	248.34	353.16	8.83	122.71
4651.00	56.11	354.42	4559.54	31.00	272.65	271.71 N	31.81 W	273.57	353.32	10.64	126.32
4683.00	59.29	355.64	4576.64	32.00	299.66	298.65 N	34.15 W	300.60	353.48	10.45	126.32
4715.00	60.34	354.71	4592.73	32.00	327.29	326.22 N	36.47 W	328.25	353.62	4.13	126.32
4747.00	61.03	355.19	4608.40	32.00	355.15	354.01 N	38.93 W	356.14	353.72	2.52	122.71
4778.00	61.35	356.06	4623.33	31.00	382.29	381.09 N	41.00 W	383.29	353.86	2.67	122.71
4810.00	62.12	356.94	4638.49	32.00	410.47	409.22 N	42.72 W	411.45	354.04	3.41	122.71
4842.00	62.84	357.20	4653.27	32.00	438.84	437.57 N	44.17 W	439.79	354.24	2.36	126.32
4874.00	65.57	354.60	4667.20	32.00	467.63	466.30 N	46.24 W	468.58	354.34	11.24	126.32
4905.00	68.10	354.56	4679.39	31.00	496.07	494.67 N	48.93 W	497.08	354.35	8.16	126.32
4937.00	70.66	352.08	4690.66	32.00	525.92	524.41 N	52.42 W	527.02	354.29	10.80	129.94
4969.00	72.14	352.73	4700.87	32.00	556.10	554.47 N	56.43 W	557.33	354.19	5.01	129.94
5000.00	74.13	352.54	4709.86	31.00	585.64	583.89 N	60.23 W	586.99	354.11	6.45	129.94
5032.00	75.97	353.46	4718.12	32.00	616.43	614.57 N	64.00 W	617.90	354.06	6.39	133.55
5064.00	77.71	352.62	4725.40	32.00	647.48	645.50 N	67.77 W	649.05	354.01	6.01	133.55
5096.00	79.36	352.88	4731.76	32.00	678.70	676.61 N	71.73 W	680.40	353.95	5.22	133.55
5127.00	81.17	352.24	4737.01	31.00	709.12	706.91 N	75.69 W	710.95	353.89	6.18	133.55
5160.00	82.42	351.31	4741.72	33.00	741.59	739.23 N	80.36 W	743.59	353.80	4.70	122.71
5191.00	83.89	354.17	4745.41	31.00	772.23	769.76 N	84.25 W	774.36	353.75	10.31	126.32
5223.00	84.95	355.72	4748.52	32.00	804.03	801.48 N	87.05 W	806.20	353.80	5.85	126.32
5255.00	86.07	355.29	4751.03	32.00	835.91	833.29 N	89.55 W	838.09	353.87	3.75	129.94
5287.00	85.85	353.87	4753.28	32.00	867.77	865.06 N	92.57 W	870.00	353.89	4.48	129.94
5319.00	86.02	356.19	4755.55	32.00	899.64	896.86 N	95.33 W	901.91	353.93	7.25	129.94
5349.00	86.47	356.15	4757.52	30.00	929.56	926.73 N	97.33 W	931.83	354.00	1.51	129.94
5434.00	89.55	355.89	4760.47	85.00	1014.45	1011.46 N	103.23 W	1016.72	354.17	3.64	126.32
5466.00	90.00	355.98	4760.59	32.00	1046.43	1043.38 N	105.50 W	1048.70	354.23	1.43	126.32
5498.00	90.73	356.01	4760.39	32.00	1078.41	1075.30 N	107.73 W	1080.69	354.28	2.28	126.32
5530.00	90.00	356.91	4760.18	32.00	1110.40	1107.24 N	109.71 W	1112.66	354.34	3.62	126.32
5562.00	90.00	357.09	4760.18	32.00	1142.39	1139.20 N	111.38 W	1144.63	354.42	0.56	129.94
5594.00	88.94	358.16	4760.48	32.00	1174.39	1171.17 N	112.71 W	1176.58	354.50	4.71	129.94
5626.00	89.22	357.87	4760.99	32.00	1206.38	1203.14 N	113.82 W	1208.52	354.60	1.26	129.94
5658.00	88.77	358.43	4761.56	32.00	1238.38	1235.12 N	114.85 W	1240.45	354.69	2.24	129.94
5690.00	88.60	358.74	4762.29	32.00	1270.37	1267.10 N	115.64 W	1272.37	354.79	1.10	133.55
5722.00	88.21	358.88	4763.18	32.00	1302.35	1299.09 N	116.30 W	1304.28	354.88	1.29	133.55
5754.00	88.04	359.17	4764.23	32.00	1334.33	1331.06 N	116.85 W	1336.18	354.98	1.05	133.55
5786.00	88.43	359.90	4765.21	32.00	1366.30	1363.05 N	117.11 W	1368.07	355.09	2.58	133.55
5817.00	88.88	359.90	4765.94	31.00	1397.28	1394.04 N	117.16 W	1398.95	355.20	1.45	133.55
5849.00	89.33	0.34	4766.44	32.00	1429.25	1426.03 N	117.09 W	1430.83	355.31	1.97	133.55
5881.00	89.94	0.83	4766.64	32.00	1461.22	1458.03 N	116.77 W	1462.70	355.42	2.44	129.94
5913.00	90.62	0.56	4766.49	32.00	1493.18	1490.03 N	116.38 W	1494.57	355.53	2.29	129.94
5945.00	91.34	0.75	4765.94	32.00	1525.14	1522.02 N	116.01 W	1526.44	355.64	2.33	133.55
5977.00	91.79	1.90	4765.07	32.00	1557.08	1554.00 N	115.27 W	1558.27	355.76	3.86	133.55
6009.00	91.12	2.73	4764.25	32.00	1588.98	1585.96 N	113.98 W	1590.05	355.89	3.33	133.55
6041.00	90.11	3.88	4763.91	32.00	1620.84	1617.91 N	112.14 W	1621.79	356.04	4.78	129.94

Survey Report

Vertical Section Plane: 358.00°	Total Correction: 4.97° East to Grid
Calculation Method: Minimum Curvature	Survey Reference: Wellhead
North Aligned to: Grid North	Well: DONNA #1H
RT: 15' ROTARY TABLE TO GROUND LEVEL	FIELD: VIOLA

Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	Rect Co-ord North (ft)	Rect Co-ord East (ft)	Closure Distance (ft)	Closure Direction (deg)	Dog-leg Severity (dg/hft)	Temp (deg F)
6073.00	89.83	3.21	4763.93	32.00	1652.69	1649.85 N	110.16 W	1653.52	356.18	2.27	126.32
6105.00	89.83	3.73	4764.02	32.00	1684.54	1681.79 N	108.22 W	1685.27	356.32	1.63	126.32
6137.00	88.94	3.47	4764.37	32.00	1716.38	1713.72 N	106.21 W	1717.01	356.45	2.90	129.94
6169.00	88.60	3.10	4765.05	32.00	1748.24	1745.66 N	104.38 W	1748.78	356.58	1.57	129.94
6201.00	88.71	2.77	4765.80	32.00	1780.11	1777.61 N	102.74 W	1780.58	356.69	1.09	129.94
6232.00	88.60	2.76	4766.53	31.00	1811.00	1808.57 N	101.25 W	1811.40	356.80	0.36	129.94
6264.00	87.87	2.19	4767.52	32.00	1842.89	1840.52 N	99.86 W	1843.23	356.89	2.89	133.55
6296.00	88.21	1.75	4768.61	32.00	1874.79	1872.48 N	98.77 W	1875.09	356.98	1.74	133.55
6328.00	88.38	0.52	4769.56	32.00	1906.73	1904.46 N	98.13 W	1906.99	357.05	3.88	133.55
6359.00	88.38	1.12	4770.44	31.00	1937.68	1935.45 N	97.69 W	1937.91	357.11	1.93	137.17
6391.00	88.60	0.55	4771.28	32.00	1969.63	1967.43 N	97.22 W	1969.83	357.17	1.91	137.17
6423.00	89.27	359.61	4771.88	32.00	2001.60	1999.43 N	97.18 W	2001.79	357.22	3.61	137.17
6454.00	89.66	359.71	4772.17	31.00	2032.59	2030.42 N	97.36 W	2032.76	357.25	1.30	137.17
6486.00	89.78	359.72	4772.32	32.00	2064.57	2062.42 N	97.52 W	2064.73	357.29	0.38	137.17
6518.00	89.83	359.91	4772.43	32.00	2096.55	2094.42 N	97.62 W	2096.70	357.33	0.61	137.17
6549.00	90.06	0.05	4772.46	31.00	2127.54	2125.42 N	97.63 W	2127.66	357.37	0.87	137.17
6581.00	90.17	358.94	4772.40	32.00	2159.52	2157.42 N	97.92 W	2159.64	357.40	3.49	137.17
6613.00	89.78	358.85	4772.41	32.00	2191.52	2189.41 N	98.53 W	2191.63	357.42	1.25	137.17
6645.00	90.06	359.42	4772.46	32.00	2223.51	2221.41 N	99.02 W	2223.62	357.45	1.98	137.17
6676.00	90.67	359.11	4772.26	31.00	2254.50	2252.41 N	99.41 W	2254.60	357.47	2.21	137.17
6708.00	91.45	359.48	4771.67	32.00	2286.49	2284.40 N	99.81 W	2286.58	357.50	2.70	140.78
6739.00	91.68	358.94	4770.82	31.00	2317.47	2315.38 N	100.24 W	2317.55	357.52	1.89	140.78
6771.00	91.68	359.26	4769.88	32.00	2349.45	2347.37 N	100.74 W	2349.53	357.54	1.00	137.17
6802.00	90.50	358.28	4769.29	31.00	2380.44	2378.35 N	101.40 W	2380.51	357.56	4.95	137.17
6834.00	89.94	357.61	4769.17	32.00	2412.44	2410.33 N	102.55 W	2412.51	357.56	2.73	140.78
6866.00	90.89	357.36	4768.94	32.00	2444.44	2442.30 N	103.95 W	2444.51	357.56	3.07	140.78
6898.00	91.56	356.95	4768.25	32.00	2476.43	2474.25 N	105.54 W	2476.50	357.56	2.45	140.78
6929.00	92.52	356.55	4767.15	31.00	2507.40	2505.18 N	107.30 W	2507.48	357.55	3.35	140.78
6961.00	92.07	356.88	4765.87	32.00	2539.37	2537.11 N	109.13 W	2539.45	357.54	1.74	144.39
6993.00	91.12	357.09	4764.98	32.00	2571.35	2569.05 N	110.81 W	2571.44	357.53	3.04	140.78

7025.00	91.29	356.9	4764.31	32.00	2603.34	2601.00 N	112.47 W	2603.43	357.52	0.65	140.78
7057.00	90.56	356.76	4763.79	32.00	2635.33	2632.95 N	114.22 W	2635.42	357.52	2.37	140.78
7088.00	89.44	356.10	4763.79	31.00	2666.32	2663.88 N	116.15 W	2666.42	357.50	4.19	140.78
7120.00	89.10	356.02	4764.20	32.00	2698.29	2695.81 N	118.35 W	2698.40	357.49	1.09	140.78
7183.00	90.00	356.13	4764.69	63.00	2761.26	2758.66 N	122.66 W	2761.38	357.45	1.44	140.78
7243.00	89.72	358.48	4764.84	60.00	2821.25	2818.59 N	125.48 W	2821.38	357.45	3.95	137.17
7307.00	91.34	359.86	4764.25	64.00	2885.23	2882.57 N	126.41 W	2885.34	357.49	3.33	140.78
7371.00	92.63	359.63	4762.03	64.00	2949.16	2946.53 N	126.69 W	2949.25	357.54	2.05	137.17
7434.00	90.22	359.46	4760.46	63.00	3012.11	3009.51 N	127.20 W	3012.19	357.58	3.84	137.17
7497.00	88.32	359.10	4761.27	63.00	3075.09	3072.49 N	127.99 W	3075.16	357.61	3.07	137.17
7560.00	90.62	359.04	4761.85	63.00	3138.07	3135.48 N	129.01 W	3138.13	357.64	3.65	140.78
7624.00	91.73	359.14	4760.54	64.00	3202.04	3199.45 N	130.03 W	3202.10	357.67	1.74	140.78
7688.00	91.18	359.21	4758.91	64.00	3266.01	3263.43 N	130.95 W	3266.05	357.70	0.87	144.39
7751.00	89.39	359.78	4758.60	63.00	3328.98	3326.42 N	131.50 W	3329.02	357.74	2.98	144.39
7814.00	88.38	359.71	4759.82	63.00	3391.94	3389.41 N	131.78 W	3391.97	357.77	1.61	144.39
7846.00	86.76	359.69	4761.18	32.00	3423.90	3421.38 N	131.95 W	3423.92	357.79	5.06	144.39
7877.00	86.25	359.41	4763.07	31.00	3454.83	3452.32 N	132.19 W	3454.85	357.81	1.88	144.39
7908.00	87.15	359.41	4764.85	31.00	3485.77	3483.27 N	132.51 W	3485.79	357.82	2.90	144.39
STRAIGHT LINE PROJECTION TO BIT DEPTH AT 7975'MD.											
7975.00	87.15	359.41	4768.19	67.00	3552.67	3550.18 N	133.20 W	3552.68	357.85	0.00	

EQUIPMENT DATA						
RUN NUMBER	3	4	5	6		
RES DTA						
RES MANDREL						
RES SIZE in						
RES VERIFIER						
API BLANKET						
HDS-1M DTA						
HDS-1M MANDREL						
HDS-1M SIZE in						
DNSC DTA						
DNSC MANDREL	N47M091D	N47M091D	N47M091D	N47M091D		
DNSC SIZE in	4 3/4	4 3/4	4 3/4	4 3/4		
DENSITY SOURCE NO.	5202GW	5202GW	5202GW	5202GW		
NEUTRON SOURCE NO.	FTC-CF-3788	FTC-CF-3788	FTC-CF-3788	FTC-CF-3788		
CLSS DTA						
CLSS MANDREL						
CLSS SIZE in						
DPM DTA						
DPM SIZE in						
DFT DTA						
DFT MANDREL						
DFT SIZE in						
PZIG UXM DTA						
PZIG LXM DTA						
PZIG SIZE in						

BOTTOM HOLE ASSEMBLY RECORD							
RUN 1		RUN 2		RUN 3		RUN 4	
	ft		ft		ft		ft
8 3/4" PDC BIT	1.00	8 3/4" PDC BIT	1.00	6 1/8" PDC BIT	0.60	6 1/8" PDC BIT	0.60
2.0° MUD MOTOR	30.40	2.0° MUD MOTOR	30.39	1.5° MUD MOTOR	27.30	1.5° MUD MOTOR	27.30
XO FLOAT SUB	3.38	XO FLOAT SUB	3.38	5 7/8" STAB	5.83	5 7/8" STAB	5.83
XO SUB	3.12	XO SUB	3.12	HDS1 SPLIT GAMMA	22.55	HDS1 SPLIT GAMMA	22.55
TELEPACER-DIR/GR	28.79	TELEPACER-DIR/GR	28.79	IDNSC-NEU/DEN	18.63	IDNSC-NEU/DEN	18.63
PULSER SUB	5.91	PULSER SUB	5.91	ABS-BATTERY	15.25	ABS-BATTERY	15.25
XO SUB	1.67	XO SUB	1.67	TELEPACER-DIR	29.96	TELEPACER-DIR	29.96
NYEG	20.00	NYEG	20.00	FILTER SUB	5.00	FILTER SUB	5.00

NMFC	30.80	NMFC	30.80	FILTER SUB	5.96	FILTER SUB	5.96
FILTER SUB	5.03	FILTER SUB	5.03	XO SUB	3.10	XO SUB	3.10
XO SUB	3.25	XO SUB	3.25	DP X 104	3295.64	DP X 122	3900.04
DP X 34	1077.08	DP X 34	1077.08	HWDP X 38	1163.36	HWDP X 38	1163.36
HWDP X 38	1163.57	HWDP X 38	1163.57	XO SUB	2.45	XO SUB	2.45
XO SUB	2.45	XO SUB	2.45	DC X 20	616.47	DC X 20	616.47
DC X 20	616.35	DC X 20	616.35	XO SUB	2.91	XO SUB	2.91
XO SUB	2.91	XO SUB	2.91				
TOTAL BHA:	2975.71	TOTAL BHA:	2975.70	TOTAL BHA:	5209.97	TOTAL BHA:	5814.37
				SENSOR OFFSETS:		SENSOR OFFSETS:	
				DIRECTIONAL	97.53	DIRECTIONAL	97.53
				NEUTRON	70.45	NEUTRON	70.45
				CALIPER	66.41	CALIPER	66.41
SENSOR OFFSETS:		SENSOR OFFSETS:		DENSITY	64.96	DENSITY	64.96
DIRECTIONAL	63.37	DIRECTIONAL	63.36	IMAGE SURVEY	61.64	IMAGE SURVEY	61.64
GAMMA-RAY	46.76	GAMMA-RAY	46.75	GAMMA-RAY	40.07	GAMMA-RAY	40.07

BOTTOM HOLE ASSEMBLY RECORD

RUN 5		RUN 6					
	ft		ft				
6 1/8" PDC BIT	0.60	6 1/8" PDC BIT	0.60				
1.5° MUD MOTOR	26.93	1.5° MUD MOTOR	26.93				
5 7/8" STAB	5.83	5 7/8" STAB	5.83				
HDS1 SPLIT GAMMA	22.55	HDS1 SPLIT GAMMA	22.55				
IDNSC-NEU/DEN	18.63	IDNSC-NEU/DEN	18.63				
ABS-BATTERY	15.25	ABS-BATTERY	15.27				
TELEPACER-DIR	29.96	TELEPACER-DIR	29.96				
FILTER SUB	5.96	FILTER SUB	5.96				
XO SUB	3.10	XO SUB	3.10				
DP X 150	4760.67	DP X 64	2028.37				
HWDP X 38	1163.36	XO AGITATOR XO	28.34				
XO SUB	2.45	DP X 86	2732.30				
DC X 20	616.47	HWDP X 38	1163.36				
XO SUB	2.91	XO SUB	2.45				
		DC X 20	616.47				
		XO SUB	2.91				
TOTAL BHA:	6674.63	TOTAL BHA:	6702.99				
SENSOR OFFSETS:		SENSOR OFFSETS:					
DIRECTIONAL	97.16	DIRECTIONAL	97.18				
NEUTRON	70.08	NEUTRON	70.08				
CALIPER	66.04	CALIPER	66.04				
DENSITY	64.59	DENSITY	64.59				
IMAGE SURVEY	61.27	IMAGE SURVEY	61.27				
GAMMA-RAY	39.70	GAMMA-RAY	39.70				

AZIMUTHAL IMAGE
NEUTRON DENSITY
GAMMA-RAY

5" = 100'
FEET MD