



**PULSED NEUTRON DECAY
LOG (QUICK LOOK)**

COMPANY	URSA OPERATING COMPANY
WELL	BAT 34D-24-07-96
FIELD	BATTLEMENT MESA
COUNTY	GARFIELD
LOCATION:	
SHL:	1830' FSL & 2031' FWL
BHL:	0428' FSL & 1943' FEL
SEC.24	TWP.7S RGE96W

LOCATION:		
SHL: 1830'	FSL & 2031'	FWL
BHL: 0428'	FSL & 1943'	FEL
SEC.24	TWP.7S	RGE.

OTHER SERVICES:
GR/JB
SBT

PERM. DATUM GROUND LEVEL ELEV. 5182.5'
LOG MEASURED FROM K.B. 17 FT. ABOVE PERMANENT DATUM
DRILLING MEASURED FROM K.B.

ELEV.:K.B.	5199.5
D.F.	5199.5
G.L.	5182.5

DATE	08-MAR-2015
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RUN NO.

DEPTH DRILLER

DEPTH LOGGER

BIM. LOG INIER

TOP LOG INIERV

OPEN HOLE SIZE

TYPE FLUID

MAX. PRESS. (MPa)	DENS. (g/cm ³)	VISC. (Pa·s)
0.1	1.02	0.01
0.2	1.03	0.02
0.3	1.04	0.03
0.4	1.05	0.04
0.5	1.06	0.05
0.6	1.07	0.06
0.7	1.08	0.07
0.8	1.09	0.08
0.9	1.10	0.09
1.0	1.11	0.10
1.1	1.12	0.11
1.2	1.13	0.12
1.3	1.14	0.13
1.4	1.15	0.14
1.5	1.16	0.15
1.6	1.17	0.16
1.7	1.18	0.17
1.8	1.19	0.18
1.9	1.20	0.19
2.0	1.21	0.20
2.1	1.22	0.21
2.2	1.23	0.22
2.3	1.24	0.23
2.4	1.25	0.24
2.5	1.26	0.25
2.6	1.27	0.26
2.7	1.28	0.27
2.8	1.29	0.28
2.9	1.30	0.29
3.0	1.31	0.30
3.1	1.32	0.31
3.2	1.33	0.32
3.3	1.34	0.33
3.4	1.35	0.34
3.5	1.36	0.35
3.6	1.37	0.36
3.7	1.38	0.37
3.8	1.39	0.38
3.9	1.40	0.39
4.0	1.41	0.40
4.1	1.42	0.41
4.2	1.43	0.42
4.3	1.44	0.43
4.4	1.45	0.44
4.5	1.46	0.45
4.6	1.47	0.46
4.7	1.48	0.47
4.8	1.49	0.48
4.9	1.50	0.49
5.0	1.51	0.50
5.1	1.52	0.51
5.2	1.53	0.52
5.3	1.54	0.53
5.4	1.55	0.54
5.5	1.56	0.55
5.6	1.57	0.56
5.7	1.58	0.57
5.8	1.59	0.58
5.9	1.60	0.59
6.0	1.61	0.60
6.1	1.62	0.61
6.2	1.63	0.62
6.3	1.64	0.63
6.4	1.65	0.64
6.5	1.66	0.65
6.6	1.67	0.66
6.7	1.68	0.67
6.8	1.69	0.68
6.9	1.70	0.69
7.0	1.71	0.70
7.1	1.72	0.71
7.2	1.73	0.72
7.3	1.74	0.73
7.4	1.75	0.74
7.5	1.76	0.75
7.6	1.77	0.76
7.7	1.78	0.77
7.8	1.79	0.78
7.9	1.80	0.79
8.0	1.81	0.80
8.1	1.82	0.81
8.2	1.83	0.82
8.3	1.84	0.83
8.4	1.85	0.84
8.5	1.86	0.85
8.6	1.87	0.86
8.7	1.88	0.87
8.8	1.89	0.88
8.9	1.90	0.89
9.0	1.91	0.90
9.1	1.92	0.91
9.2	1.93	0.92
9.3	1.94	0.93
9.4	1.95	0.94
9.5	1.96	0.95
9.6	1.97	0.96
9.7	1.98	0.97
9.8	1.99	0.98
9.9	2.00	0.99
10.0	2.01	1.00

MAX. REC. TEMP

ES1: CEMENT 10

**TIME WELL HEAD
TIME LOGGED ON**

COLITD NO

EQUIP. NO.

LOCKED BY

WITNESSED BY

BOB

BLIN NO B

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523
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[illegible][illegible]

CASTING RECORD

SURFACE STRING

PROT. STRING

PROD. STRING

LINER

All interpretations of log data are opinions based on inferences from electrical or other measurements. We do not guarantee the accuracy or correctness of any interpretation or recommendation and we shall not be liable or responsible for any loss, cost, damages or expenses incurred or sustained by anyone resulting from any interpretation or recommendation made by any of our employees or agents.

REMARKS	Rig: WFT CRANE #15045	Service Order # 113056099
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THIS IS THE PRIMARY LOG FOR THIS WELL

ALL LOGGED INTERVALS PER CUSTOMER REQUEST

Prints: 2

THANK YOU FOR CHOOSING WEATHERFORD WIRELINE SERVICES

EQUIPMENT DATA

[illegible]

DEPTH SCALE: 5":100'

PROCESSED VERSION: 2012.07.18.162"

MAIN PASS

113056099 PNDMAIN

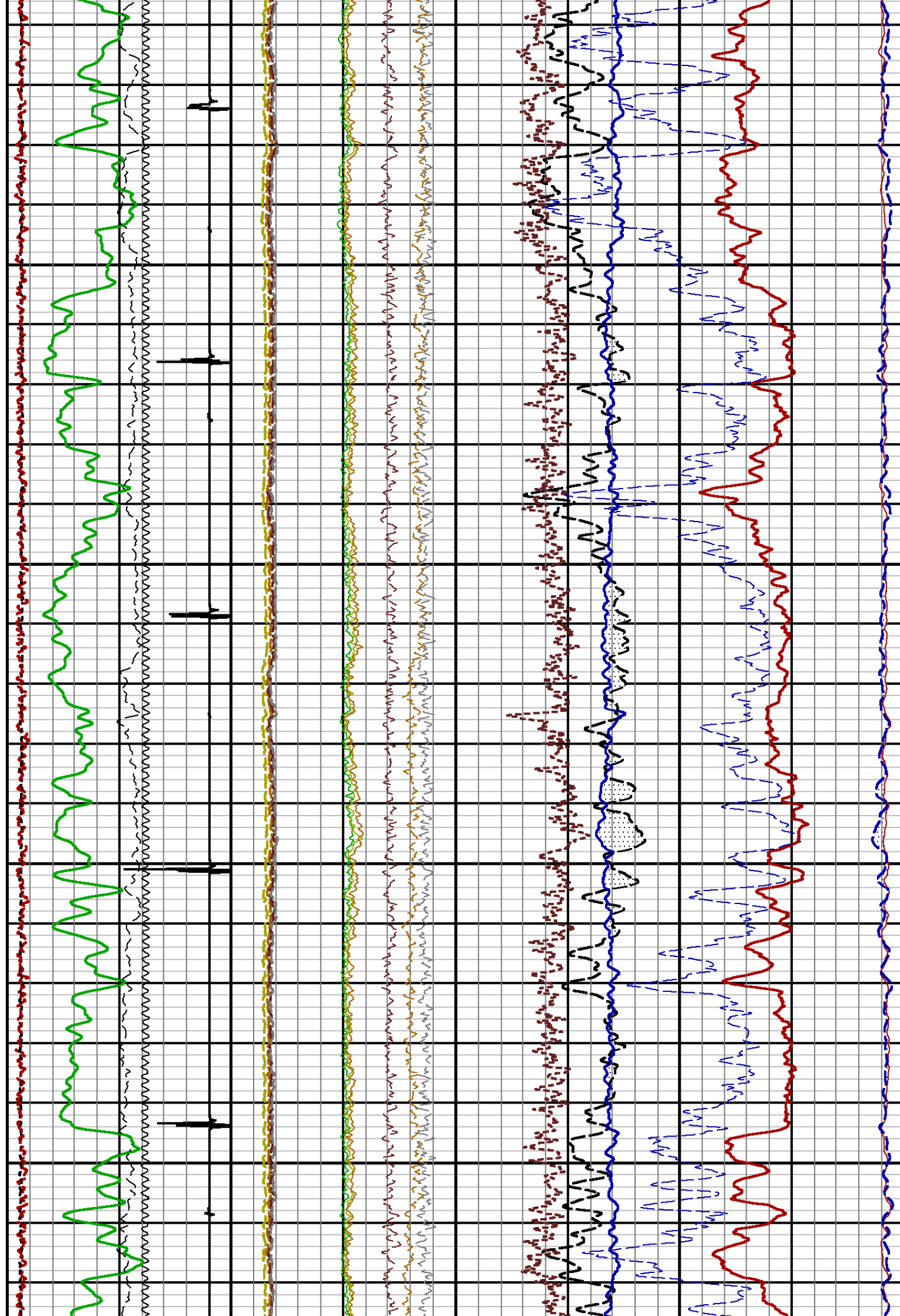
FINISH DEPTH: 3055.5 Feet DIRECTION: UP DATE: 03/09/2015 TIME: 12:35 MODE: ORIGINAL

<div>Line Speed</div> <div>-50.0 Feet/Min 50.0</div>	<div>HESC</div> <div>-7.0 8.0</div>	<div>Ratio Bore n to f</div> <div>-1.0 14.0</div> <div>RATIO</div> <div>6.0 1.0</div> <div>NphiS</div> <div>40.0 0.0</div> <div>Formation Sigma</div> <div>60.0 0.0</div> <div>Borehole Ratio</div> <div>12.5 -2.5</div>	
	<div>SB4Q</div> <div>-8.0 7.0</div>		
	<div>NBPS</div> <div>-1.5 1.5</div>		
	<div>FB94</div> <div>-80000 160000</div>		
	<div>FB93</div> <div>-80000 160000</div>		
<div>Far Background</div> <div>0.0 4000.0</div>	<div>FB92</div> <div>-80000 160000</div>	<div>FAR 1</div> <div>40.0 Counts/Second 0.0</div>	
<div>Near Background</div> <div>0.0 40000.0</div>	<div>NB94</div> <div>0 2400000</div>	<div>NEAR 1</div> <div>240.0 CPS 0.0</div>	
<div>CCL</div> <div>-10000 Millivolts 1000</div>	<div>NB93</div> <div>0 2400000</div>		
<div>GAMMA RAY</div> <div>0 API 200</div>	<div>NB92</div> <div>0 2400000</div>		
<div>OUTPUT QUALITY</div> <div>0.0 200000.0</div>	<div>NB91</div> <div>0 2400000</div>		

3100

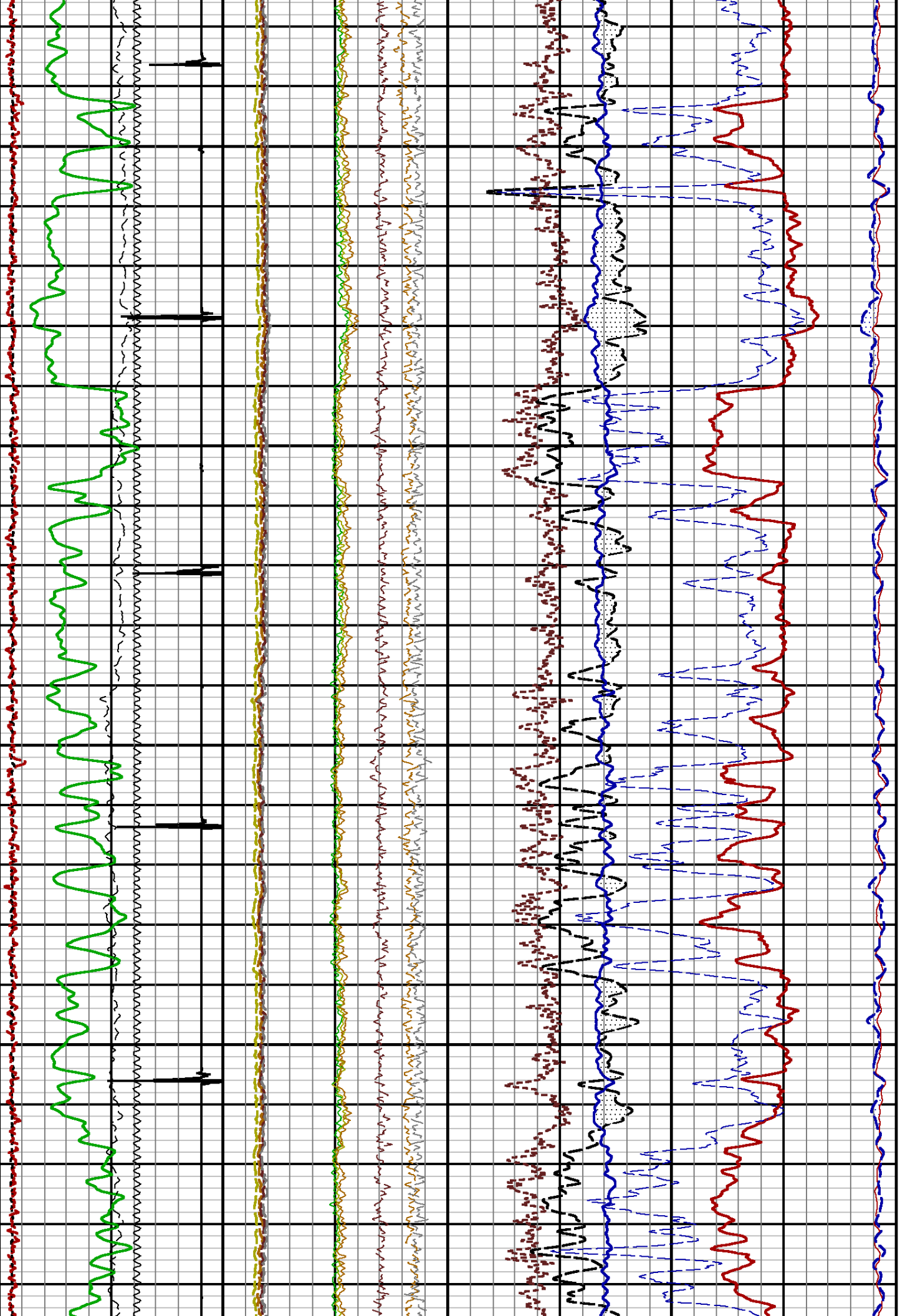
3200

3300



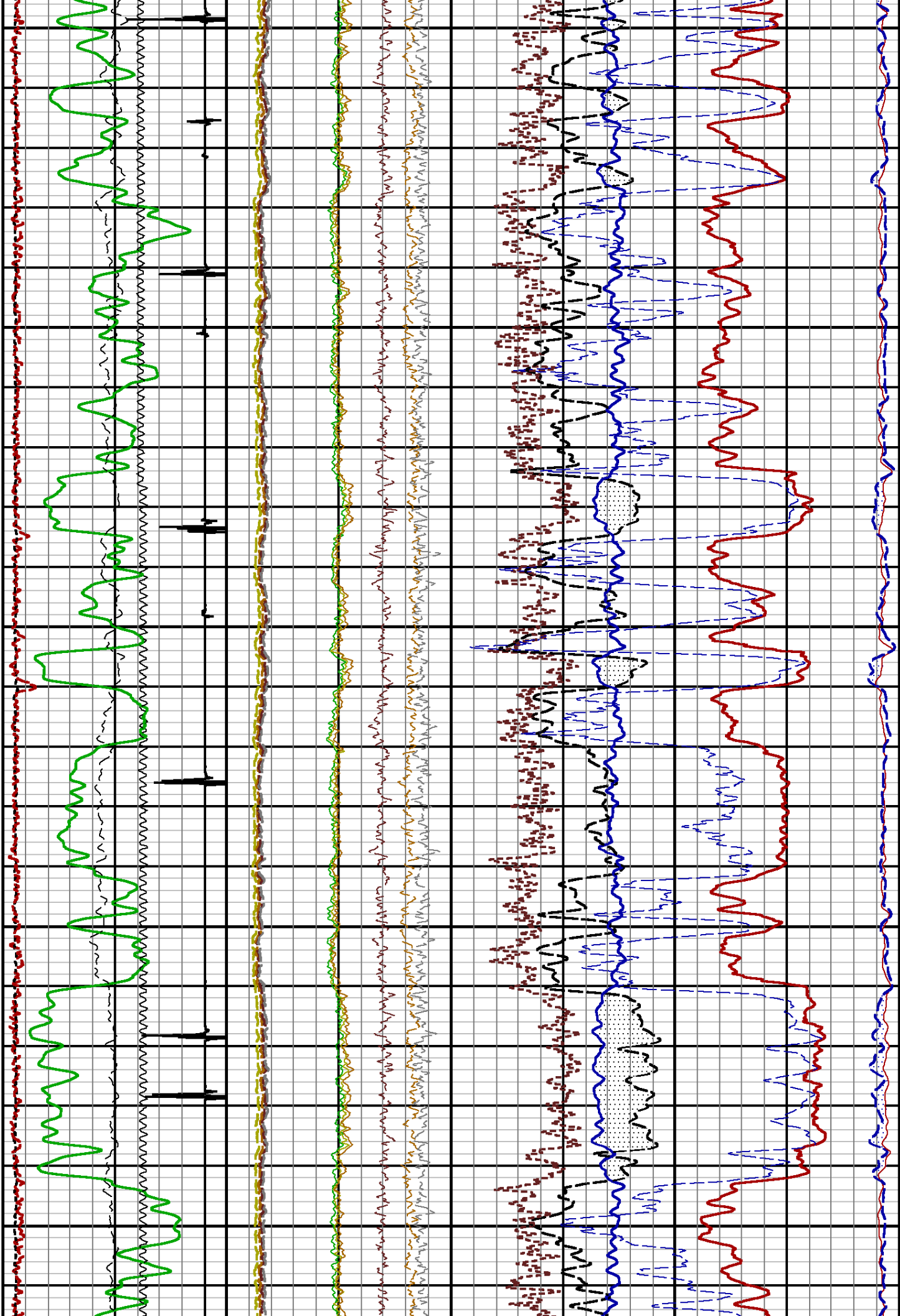
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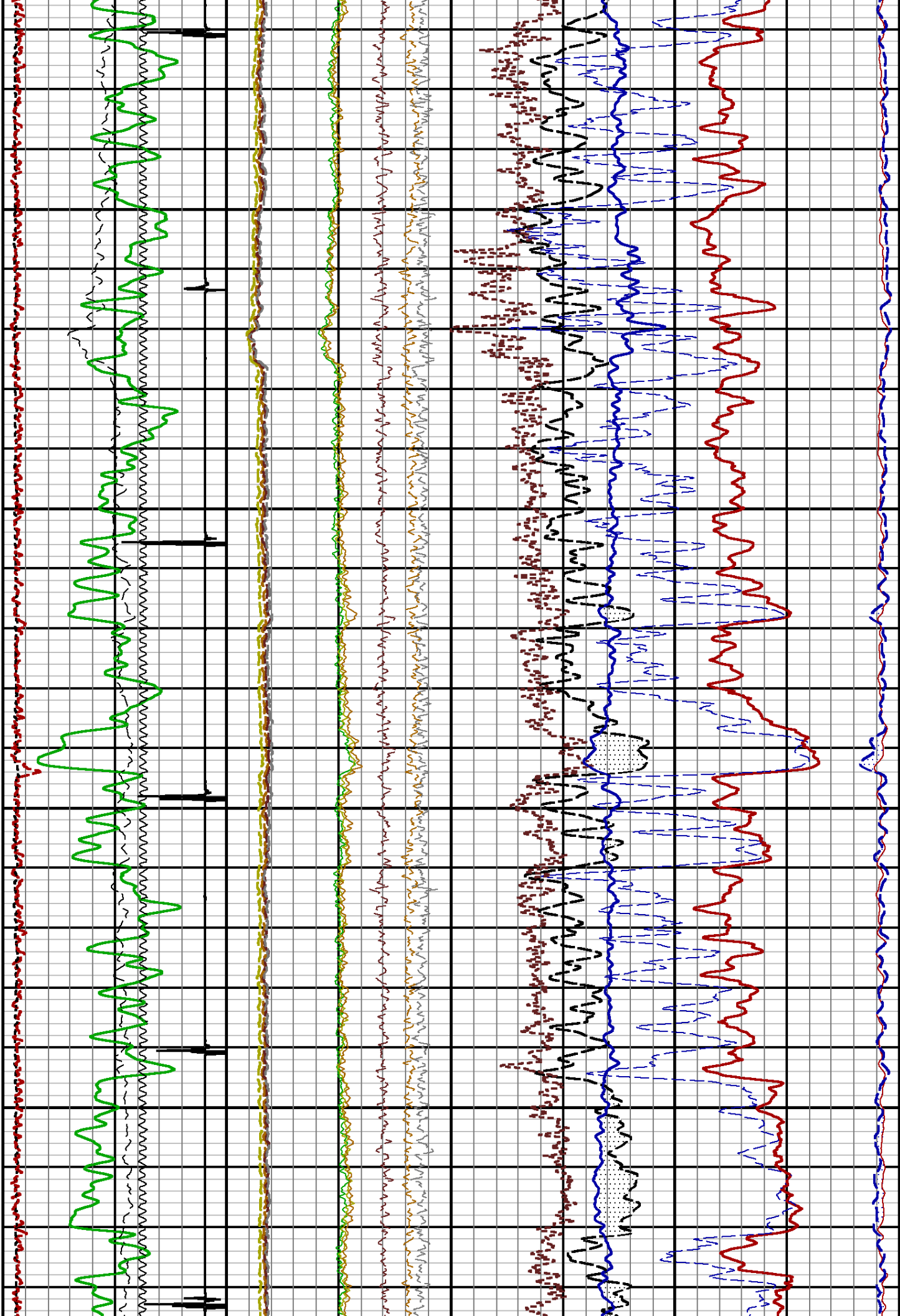
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3600

3700





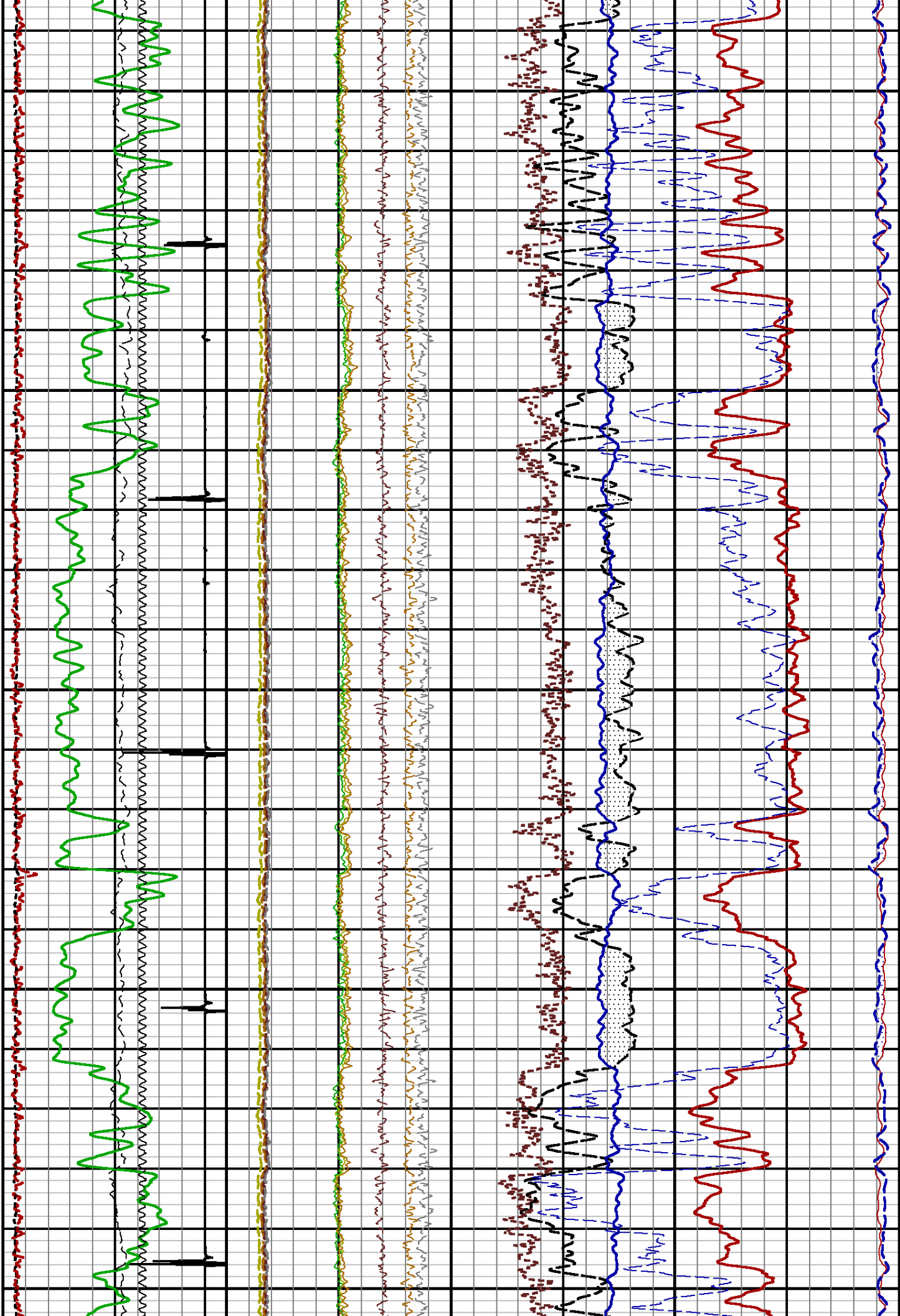
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3900

4000

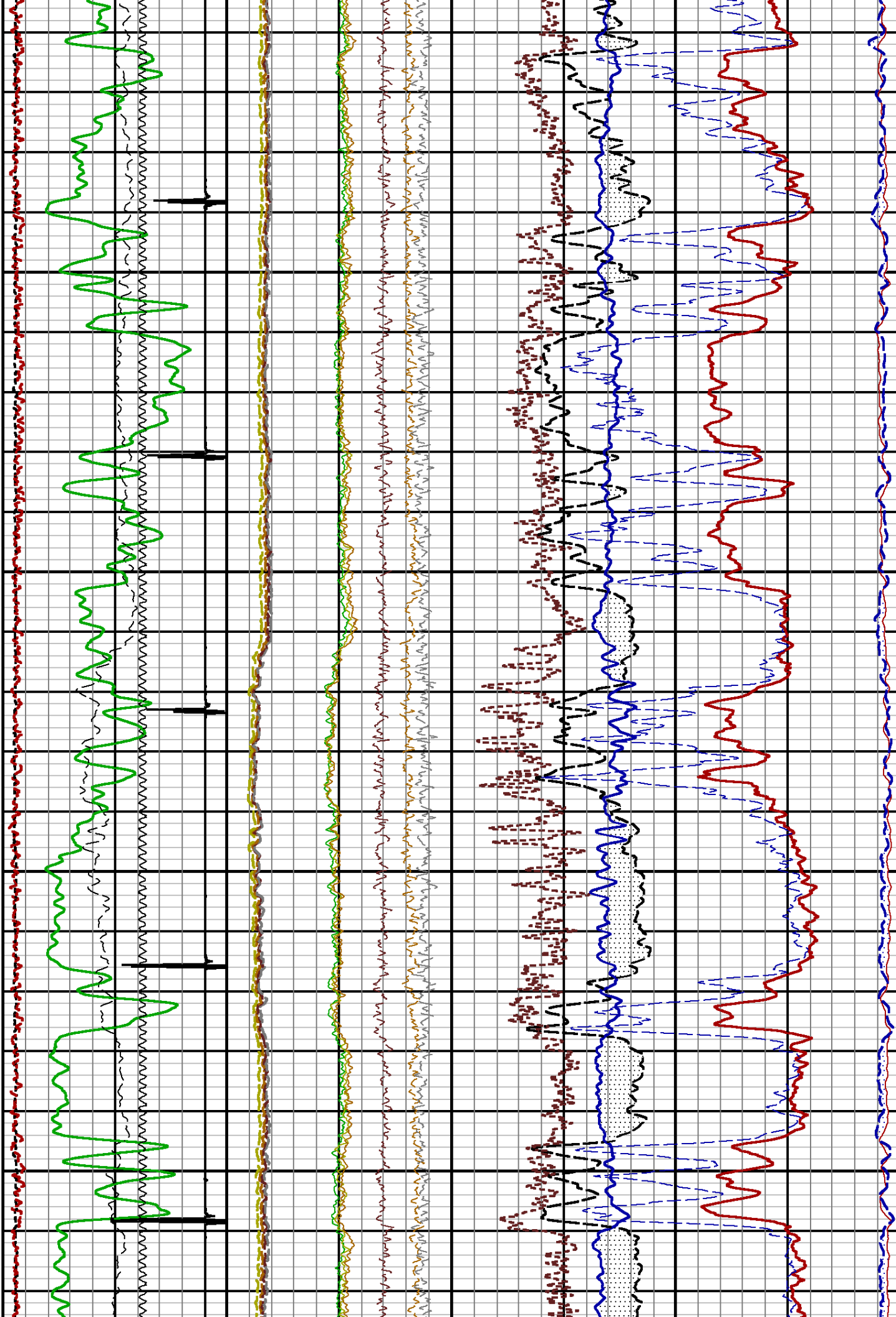
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4200



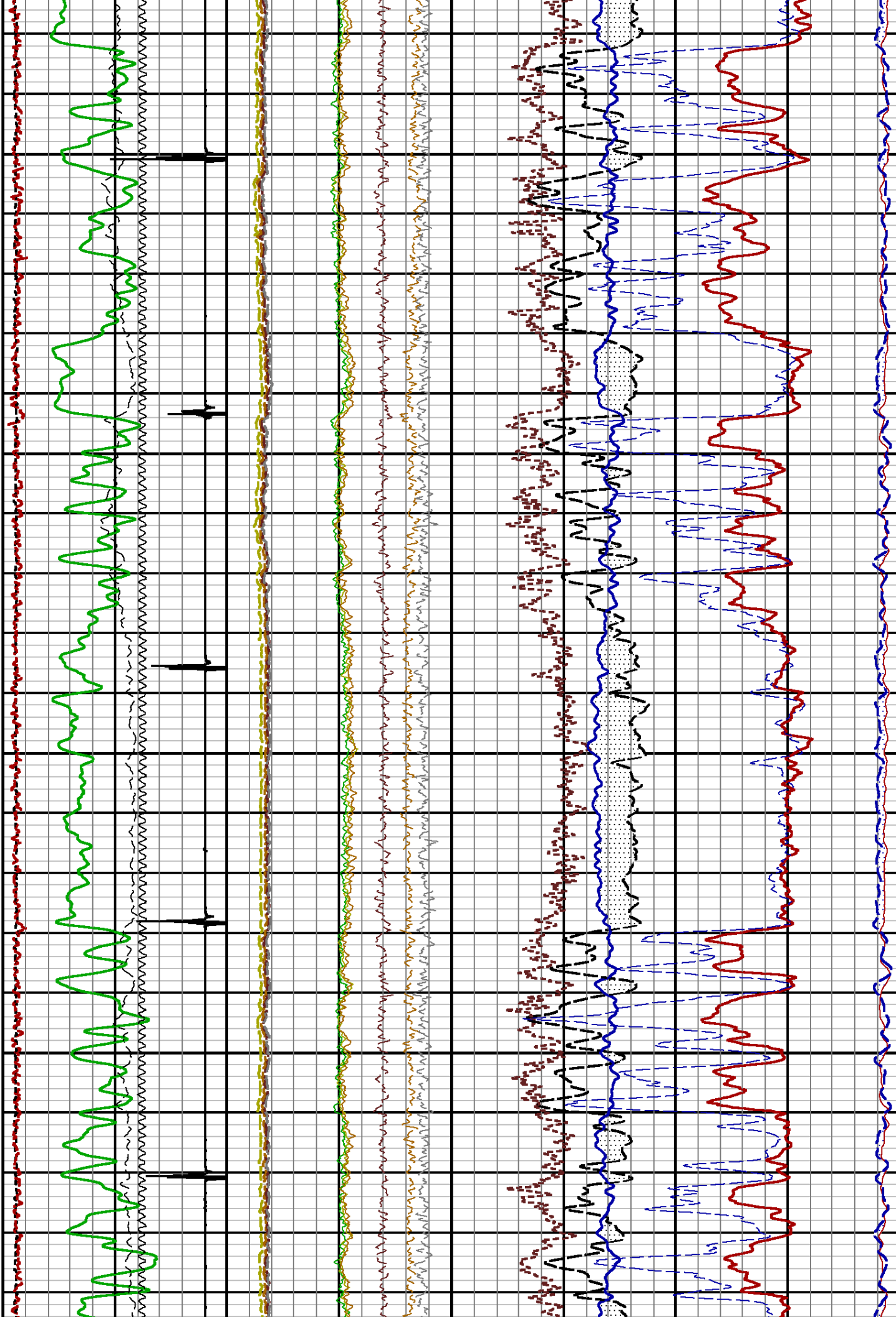
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4400



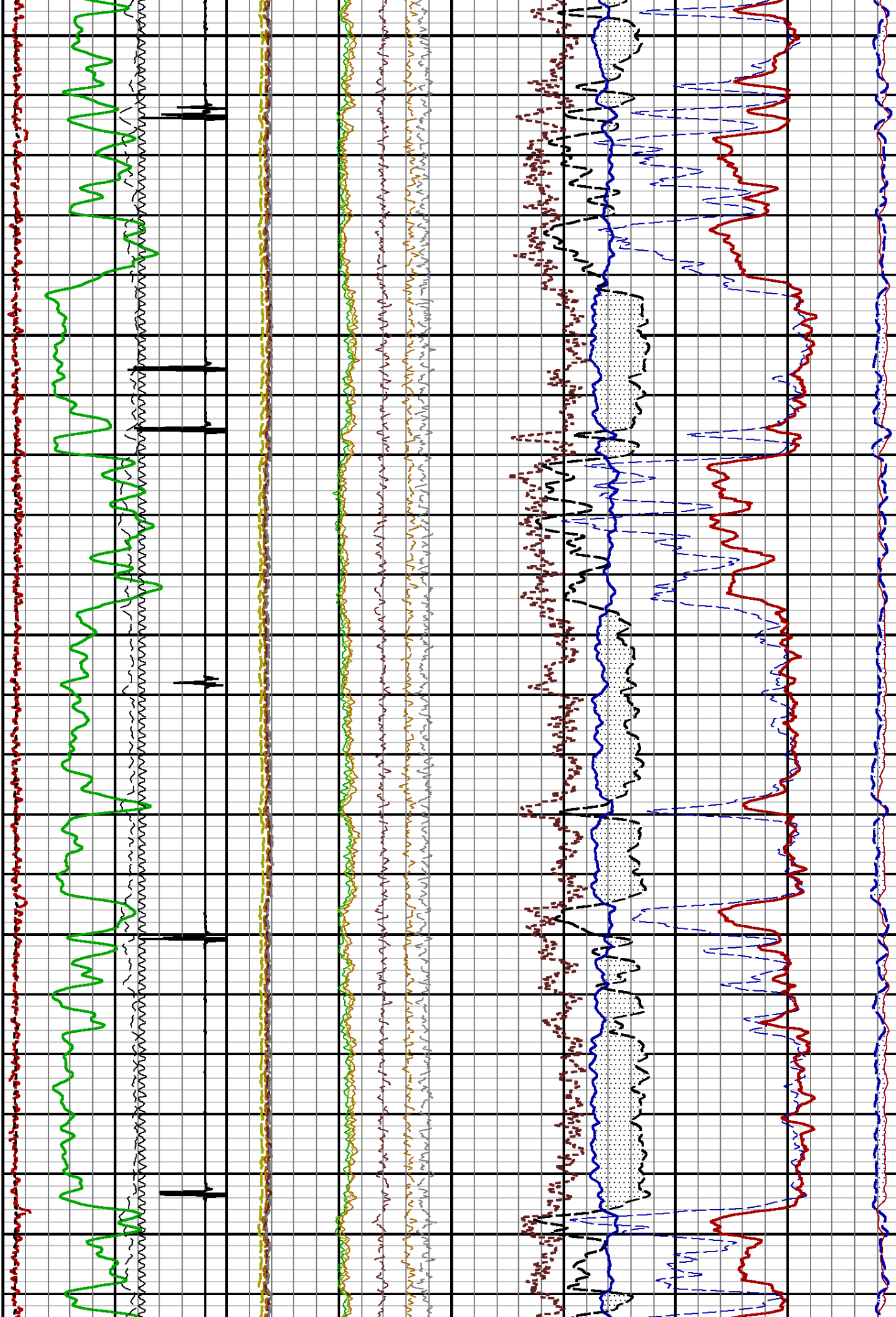
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4600



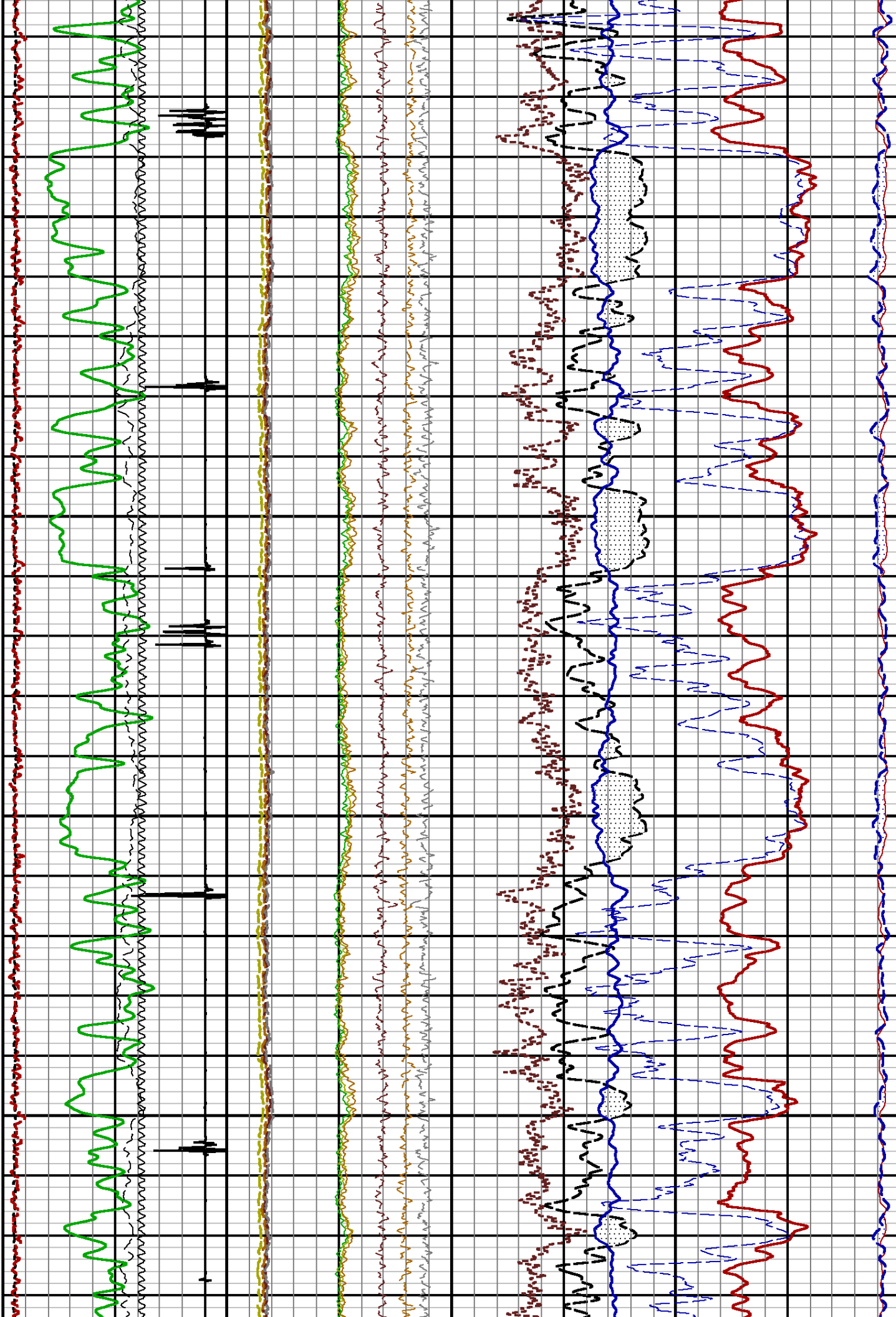
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4800



4900

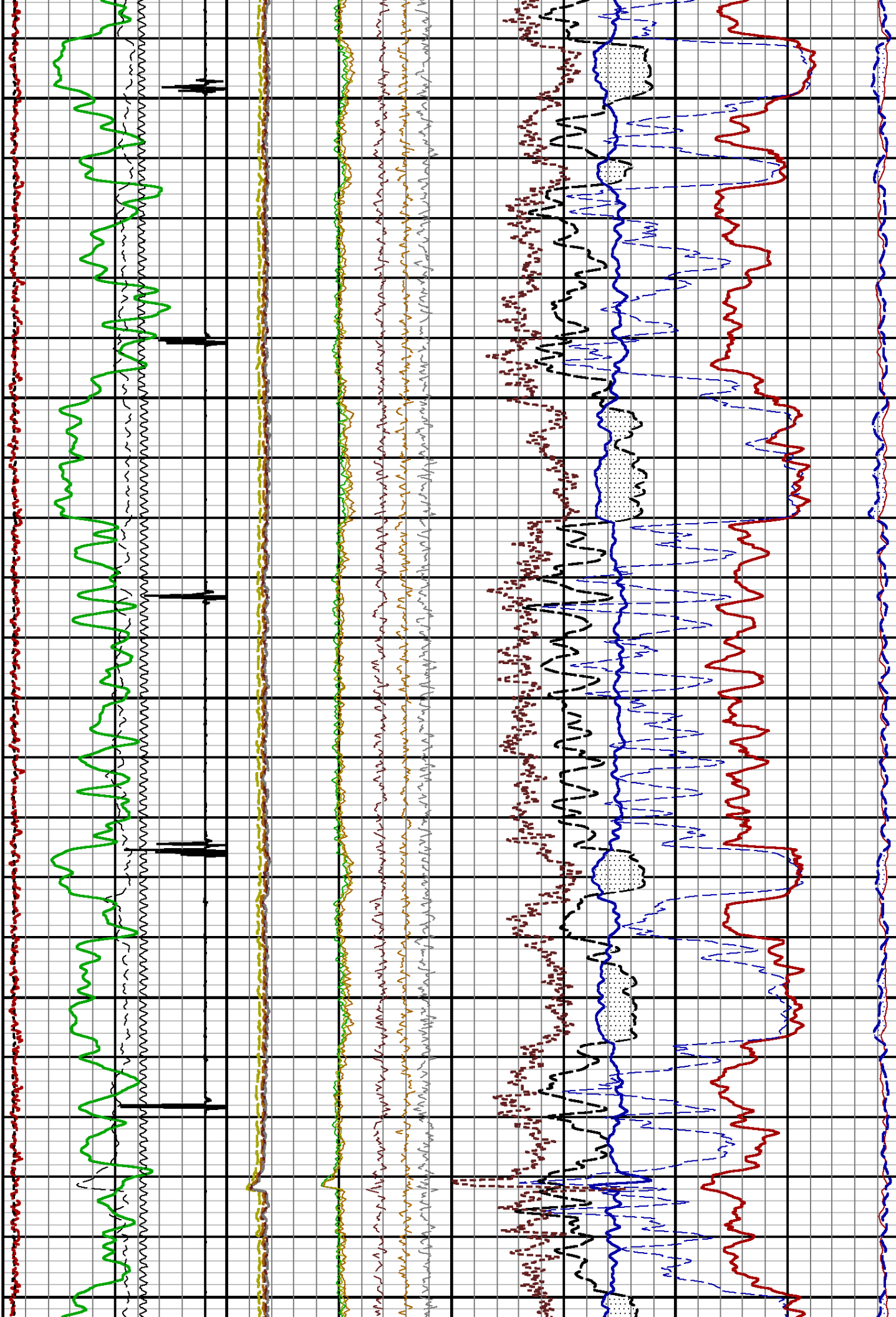
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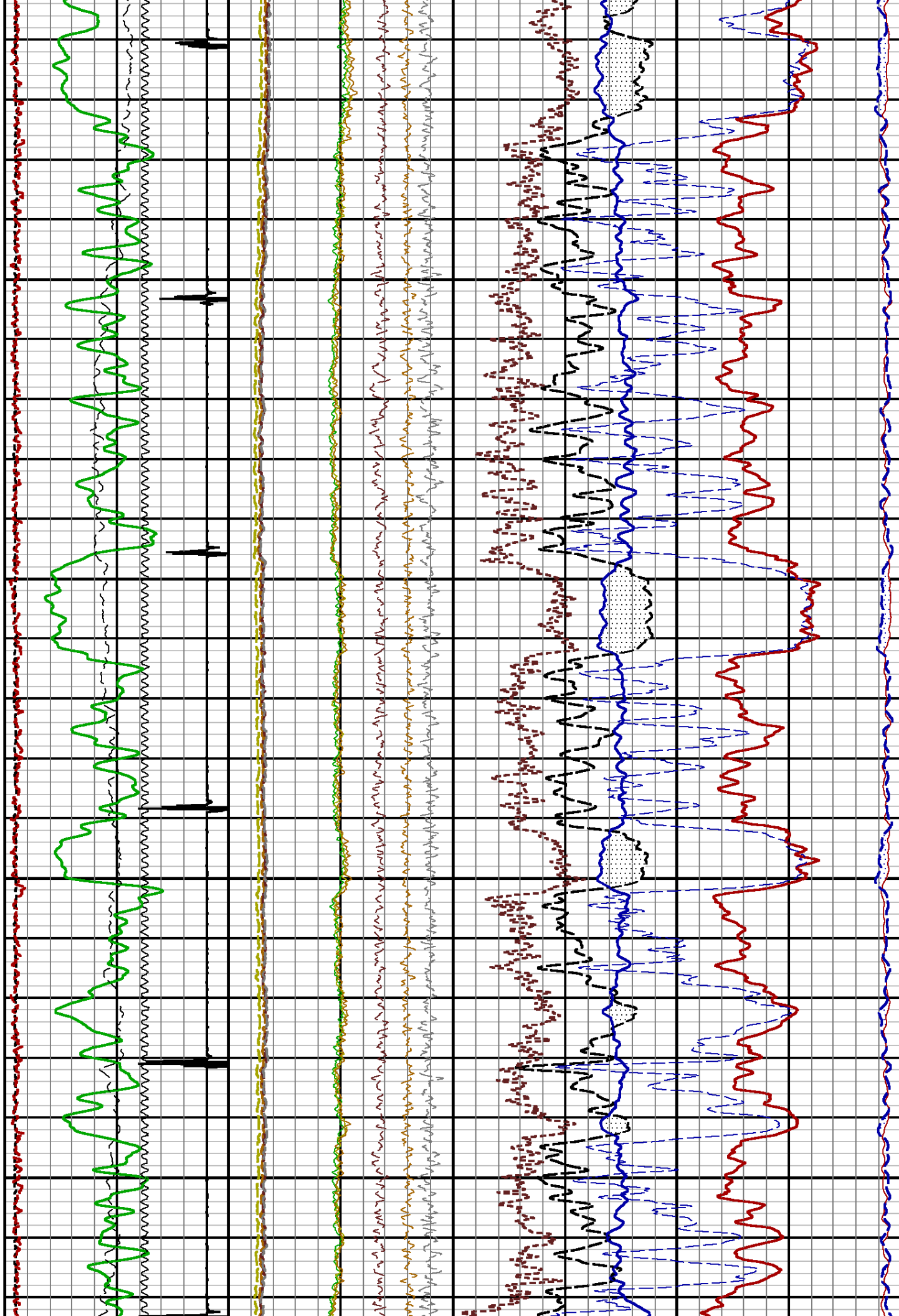
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5300



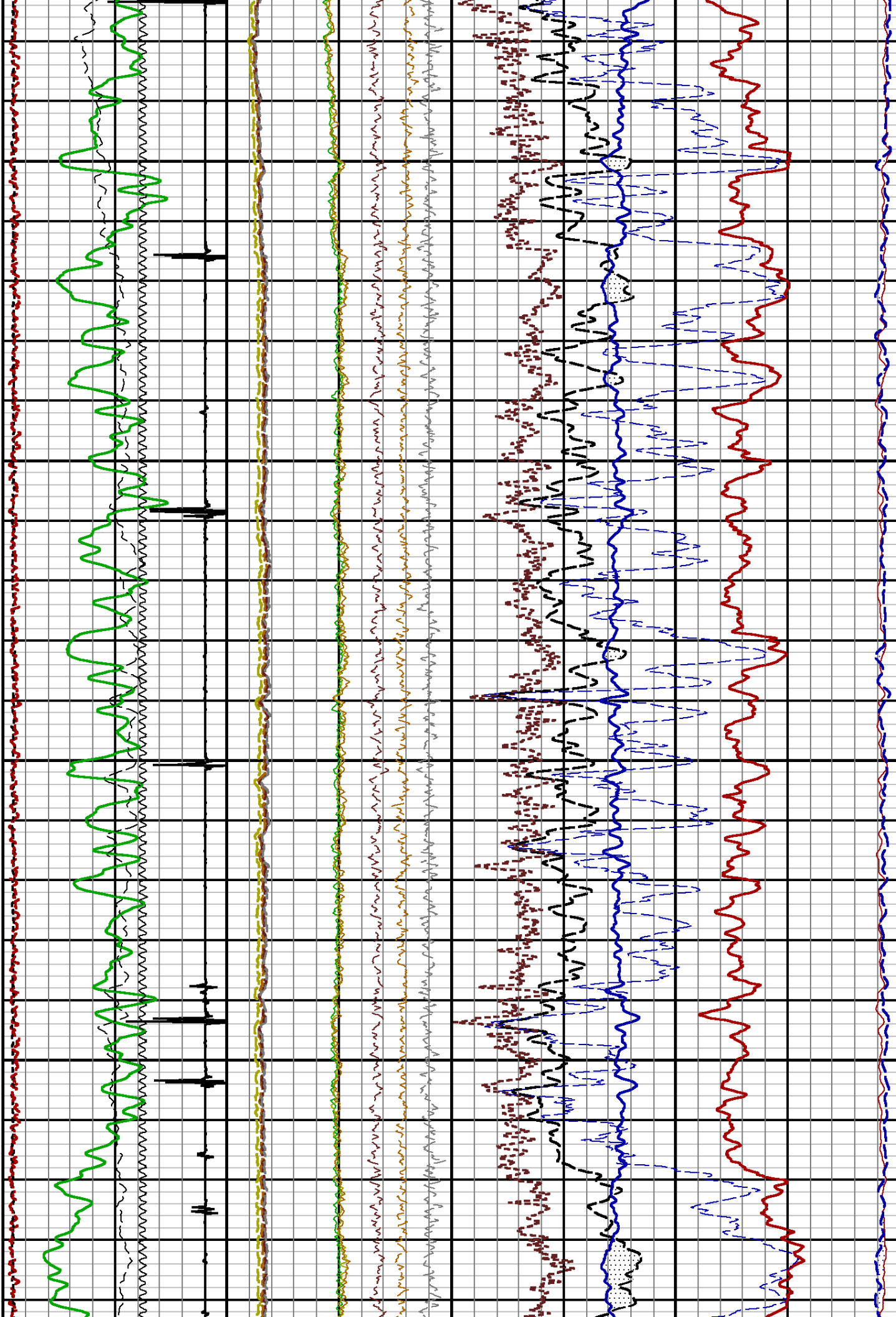
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5500



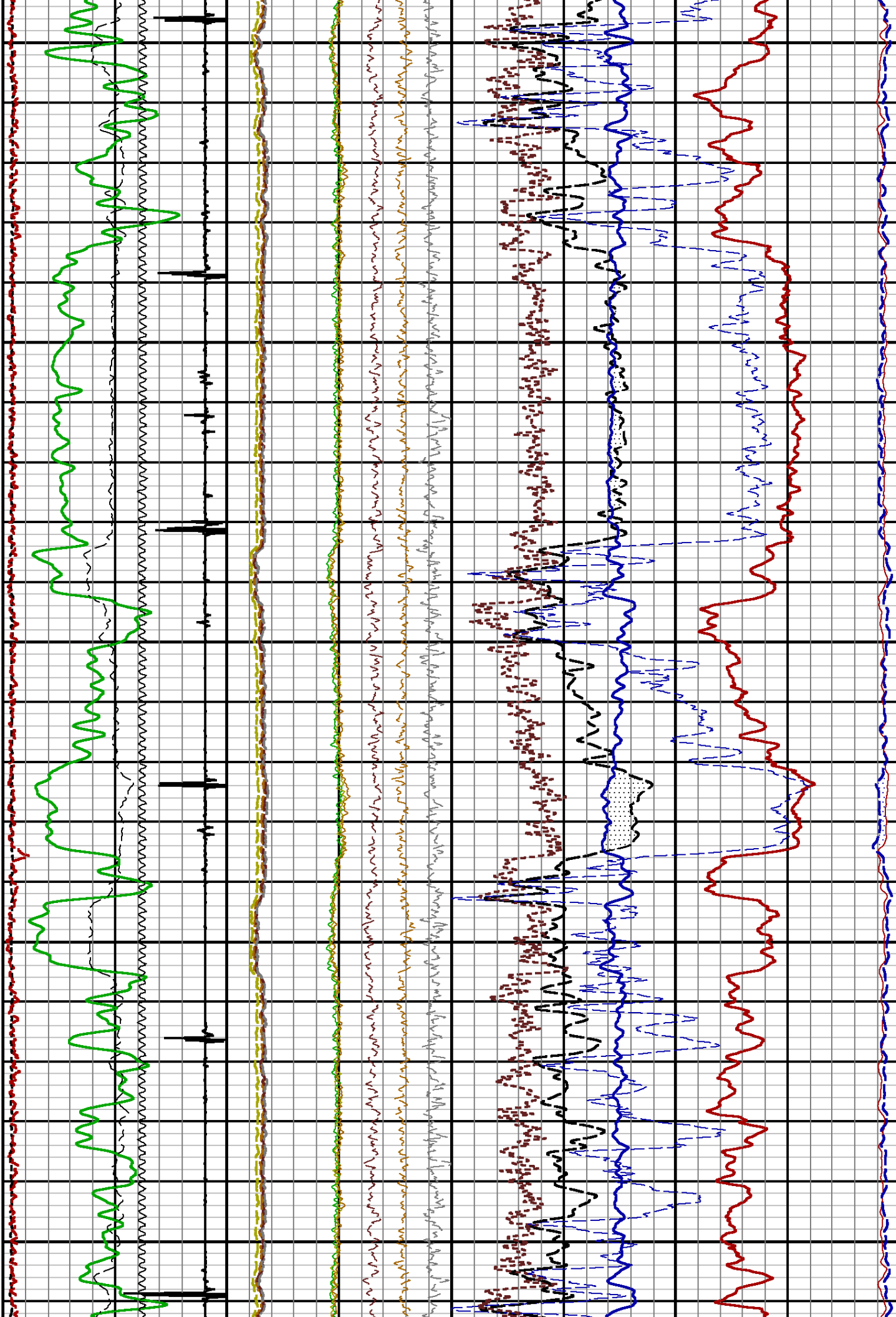
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5700



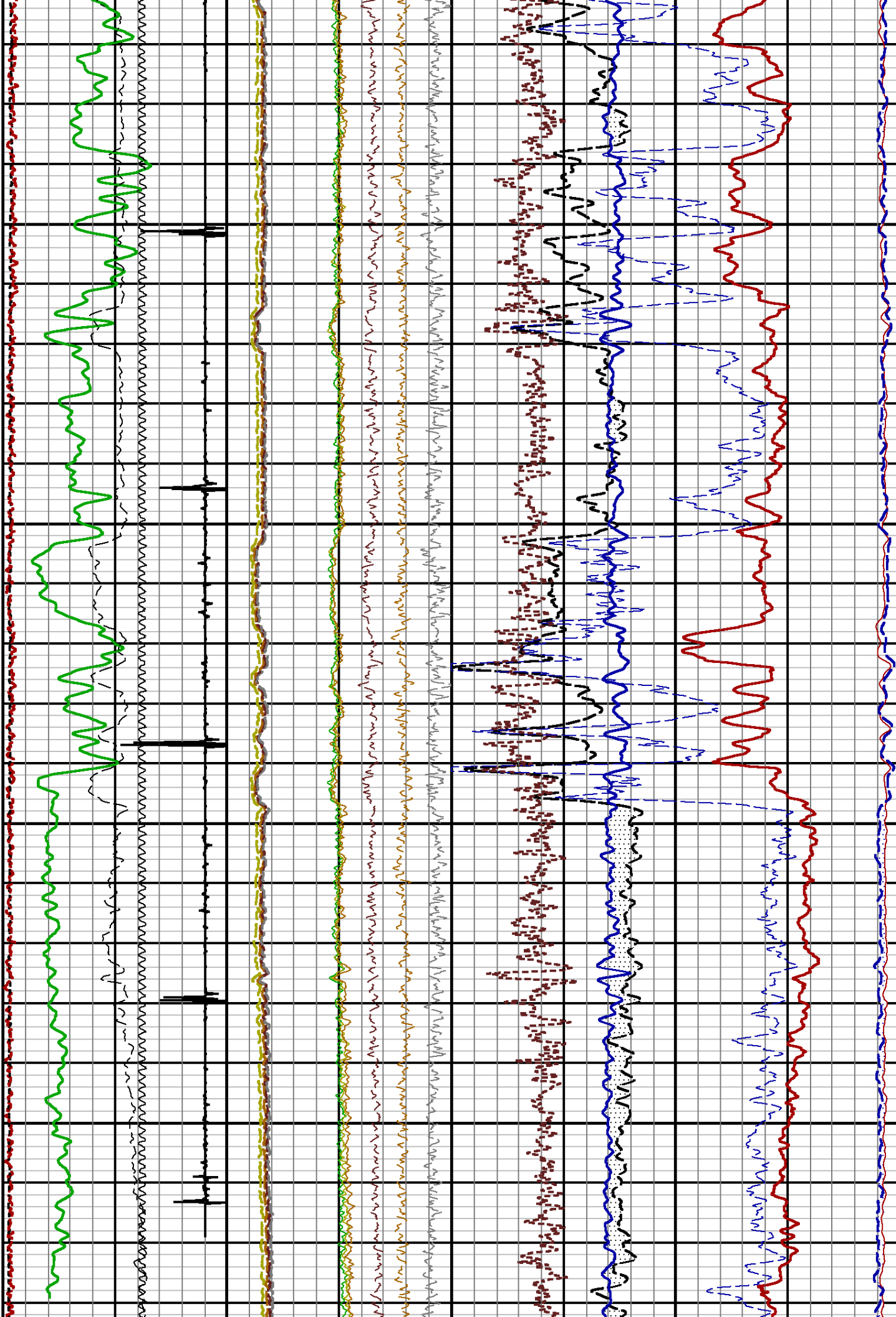
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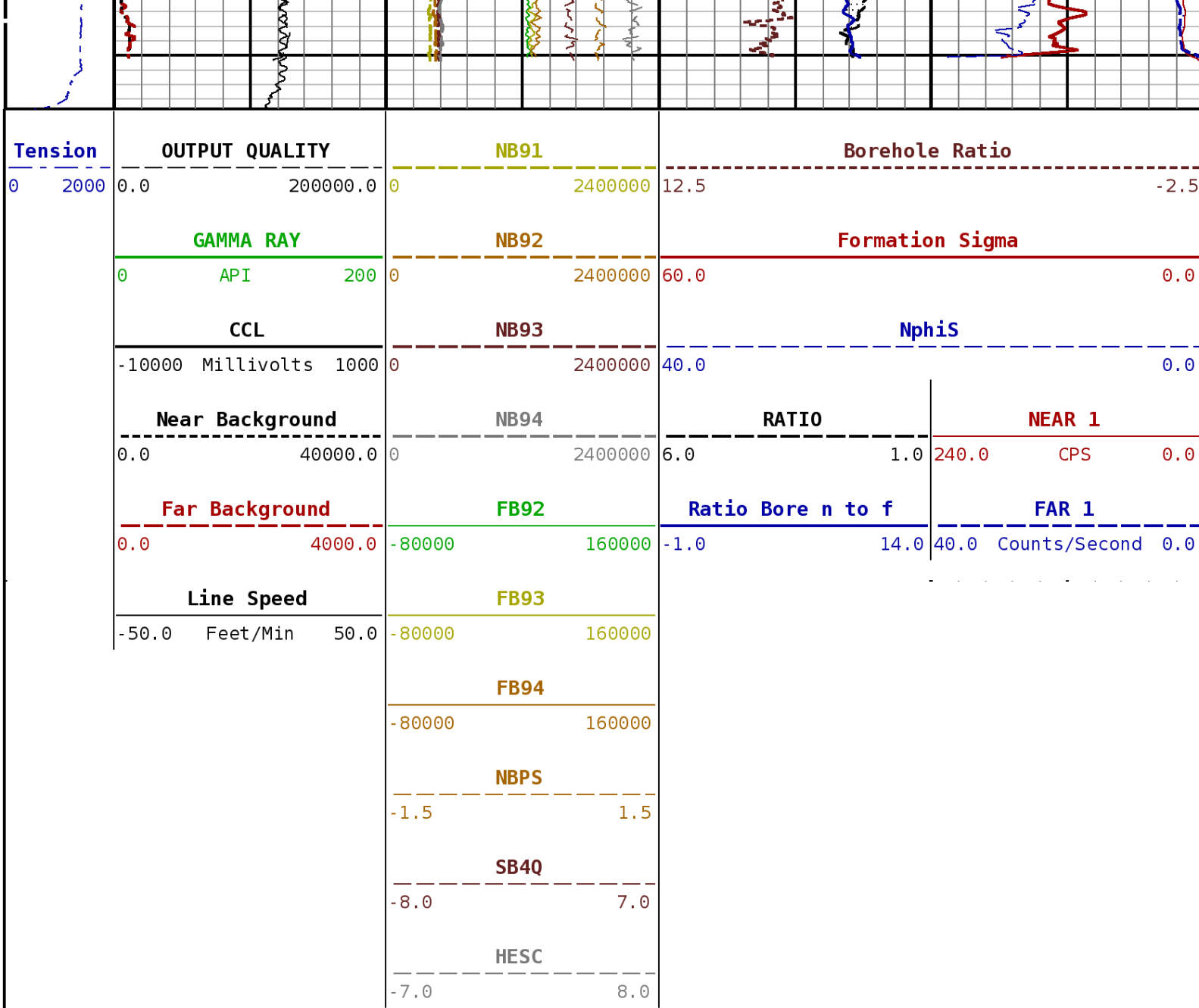
5900



6000

6100





START DEPTH: **6197.4** DIRECTION: **UP** DATE: **03/09/2015** TIME: **12:35** MODE: **ORIGINAL**

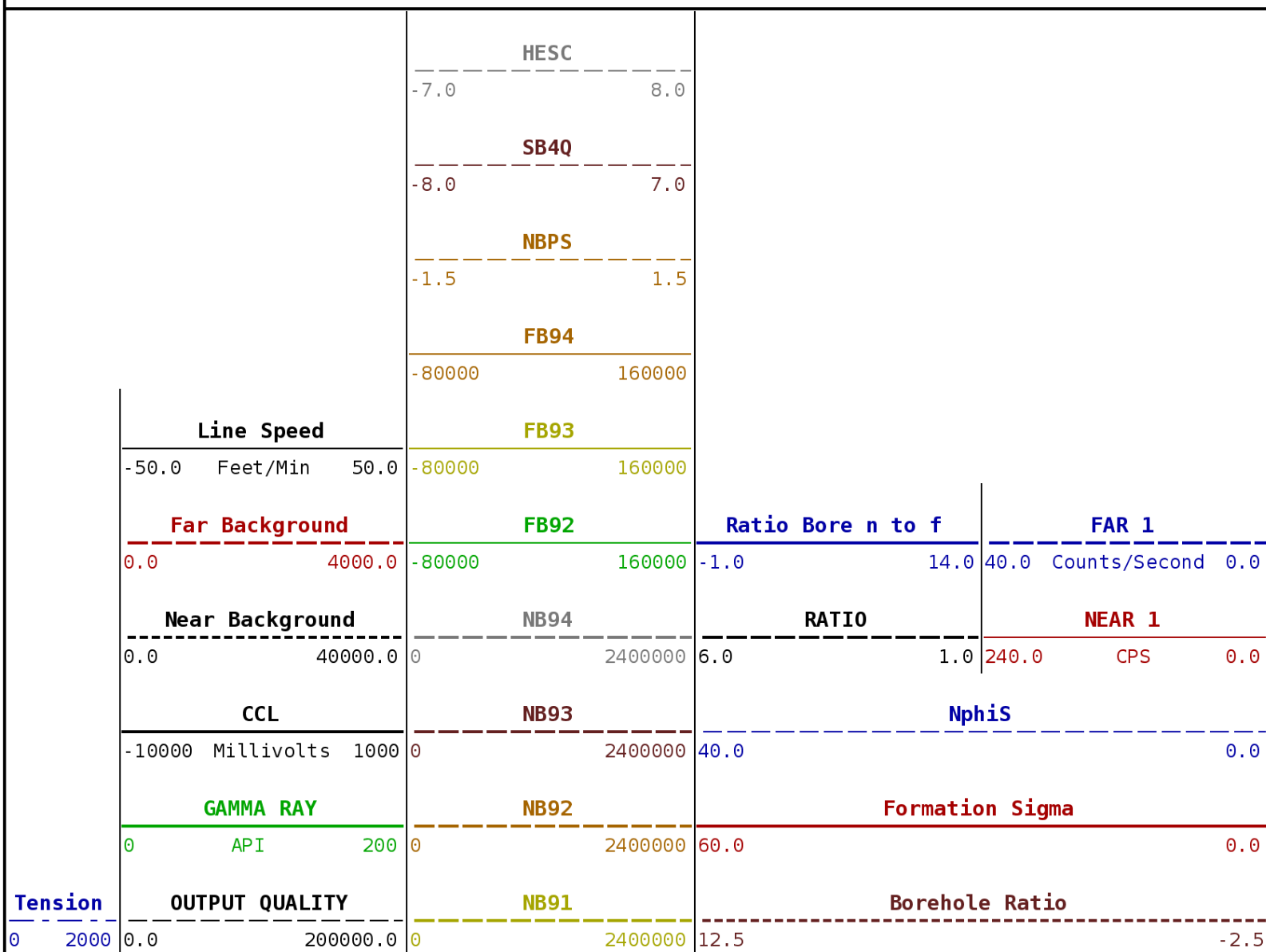
113056099 PNDMAIN

MAIN PASS

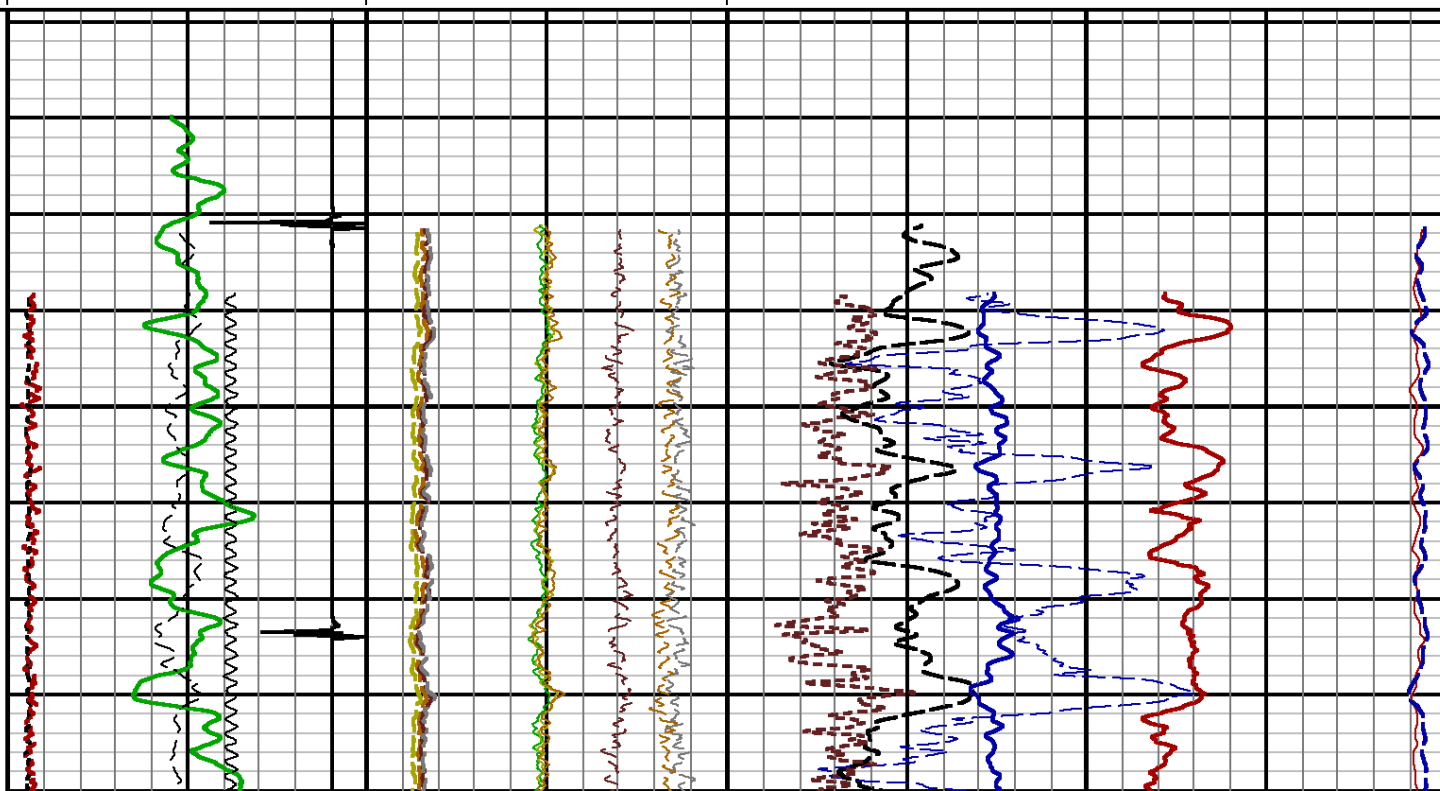
DEPTH SCALE: **5":100'** LOGGED VERSION: **2012.07.18.162"**

DEPTH SCALE: **5":100'** PROCESSED VERSION: **2012.07.18.162"**

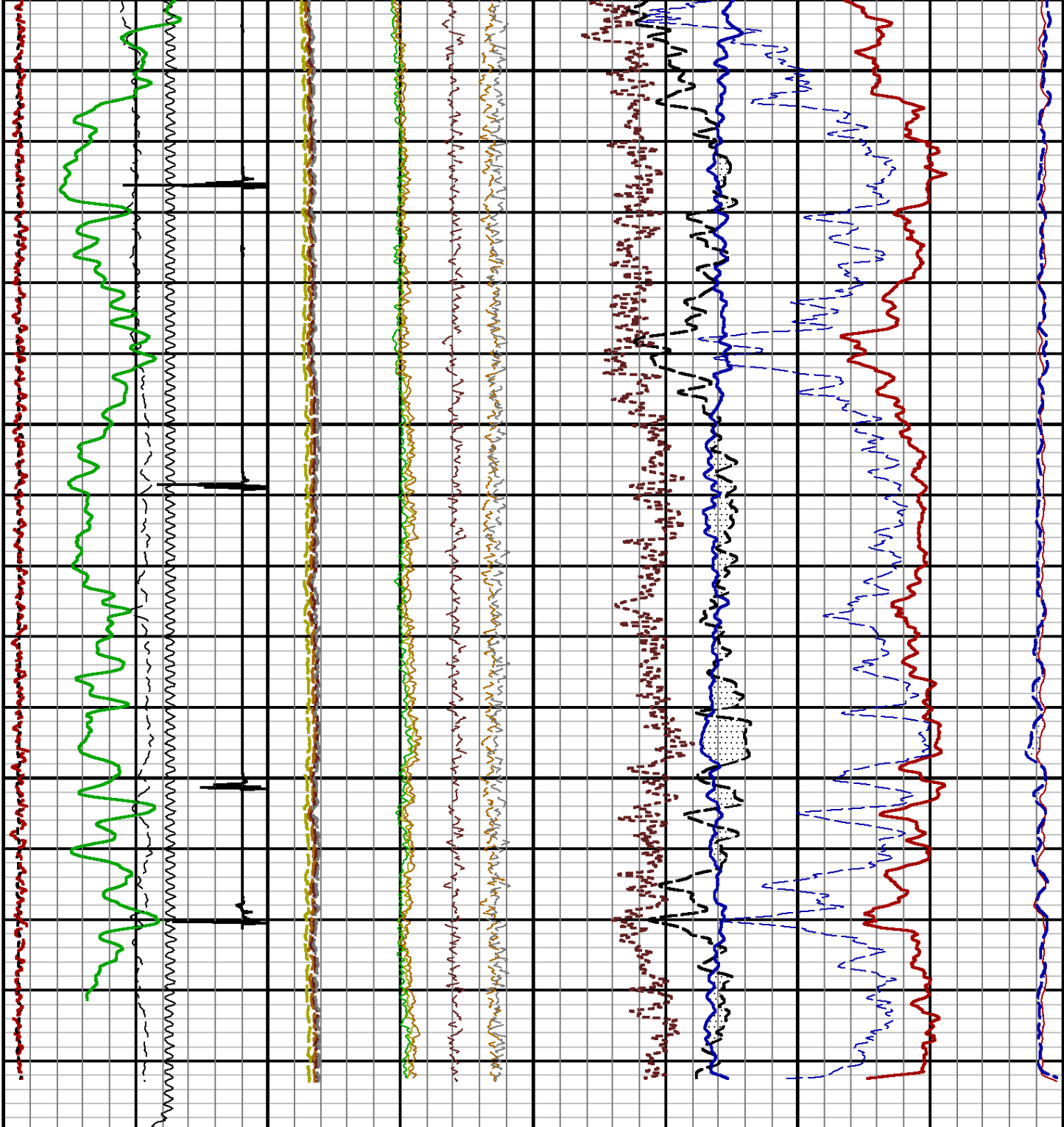
REPEAT PASS

FINISH DEPTH: **3061.7** Feet DIRECTION: **UP** DATE: **03/09/2015** TIME: **12:37** MODE: **ORIGINAL**

3100



3200



Tension		OUTPUT QUALITY		NB91		Borehole Ratio	
0	2000	0.0	200000.0	0	2400000	12.5	-2.5
GAMMA RAY		NB92		Formation Sigma			
0	200	0	2400000	60.0	0.0		
CCL		NB93		NphiS			
-10000	1000	0	2400000	40.0	0.0		
Near Background		NB94		RATIO		NEAR 1	
0.0	40000.0	0	2400000	6.0	1.0	240.0	0.0
Far Background		FB92		Ratio Bore n to f		FAR 1	
0.0	40000.0	-80000	160000	-1.0	14.0	40.0	0.0
						Counts/Second	

<div>Line Speed</div> <div>-50.0 Feet/Min 50.0</div>	FB93	
	-80000	160000
	FB94	
	-80000	160000
	NBPS	
	-1.5	1.5
	SB4Q	
	-8.0	7.0
	HESC	
	-7.0	8.0

START DEPTH: 3299.6	DIRECTION: UP	DATE: 03/09/2015	TIME: 12:37	MODE: ORIGINAL
113056099 PNDREPEAT				

REPEAT PASS	
DEPTH SCALE: 5":100'	LOGGED VERSION: 2012.07.18.162"

1 7/16 Adapter Head

Weight2.2 LBS.

Length12 IN.

Max. Diameter

Total Stack Weight

Total Stack Length 32.0 FT. in air

Pulsed Neutron Processor

Weight49 LBS.

Length12.9 FT.

Max. Diameter1.69 IN.

Pulsed Neutron Detectors

Weight29.9 LBS

Length19.0 FT.

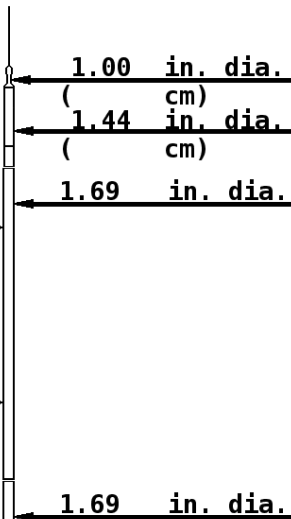
Max. Diameter1.69 IN.

CCL 28.51 FT.

GR 19.15 FT.

FAR DETECTOR 7.66 FT

From Target ()



NEAR DETECTOR 7.02 FT
From Target ()

TARGET 7.10 FT.

1.69 in. dia.

Pulsed Neutron Generator

Weight 26 LBS.
Length 8.7 FT.
Max. Diameter 1.69 IN.

COMPANY URSA OPERATING COMPANY

WELL BAT 34D-24-07-96

FIELD BATTLEMENT MESA

COUNTY GARFIELD

STATE COLORADO



Weatherford®