

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: CAMPBELL 33-7-4 1H LAT #1

Location: S3 T33N R7W

Licence Number: 05067099020100

Spud Date: 6/10/14

Surface Coordinates: FSL FWL

Region: IGNACIO

Drilling Completed:

Bottom Hole Coordinates

Ground Elevation (ft): 6692

K.B. Elevation (ft): 6705

Logged Interval (ft): To:

Total Depth (ft):

Formation: FRUITLAND COAL

Type of Drilling Fluid: BRINE WATER

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

OPERATOR

Company: CATAMOUNT ENERGY PARTNERS

Address: 1801 BROADWAY STE 1000
DENVER CO 80202

GEOLOGIST

Name: NOLAN REDMOND AND JOE NICOLETTE

Company: CATAMOUNT ENERGY PARTNERS






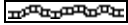



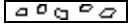

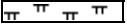









Address: 1801 BROADWAY STE 1000
DENVER CO 80202

Cores








































































DSTs

Comments
























ROCK TYPES

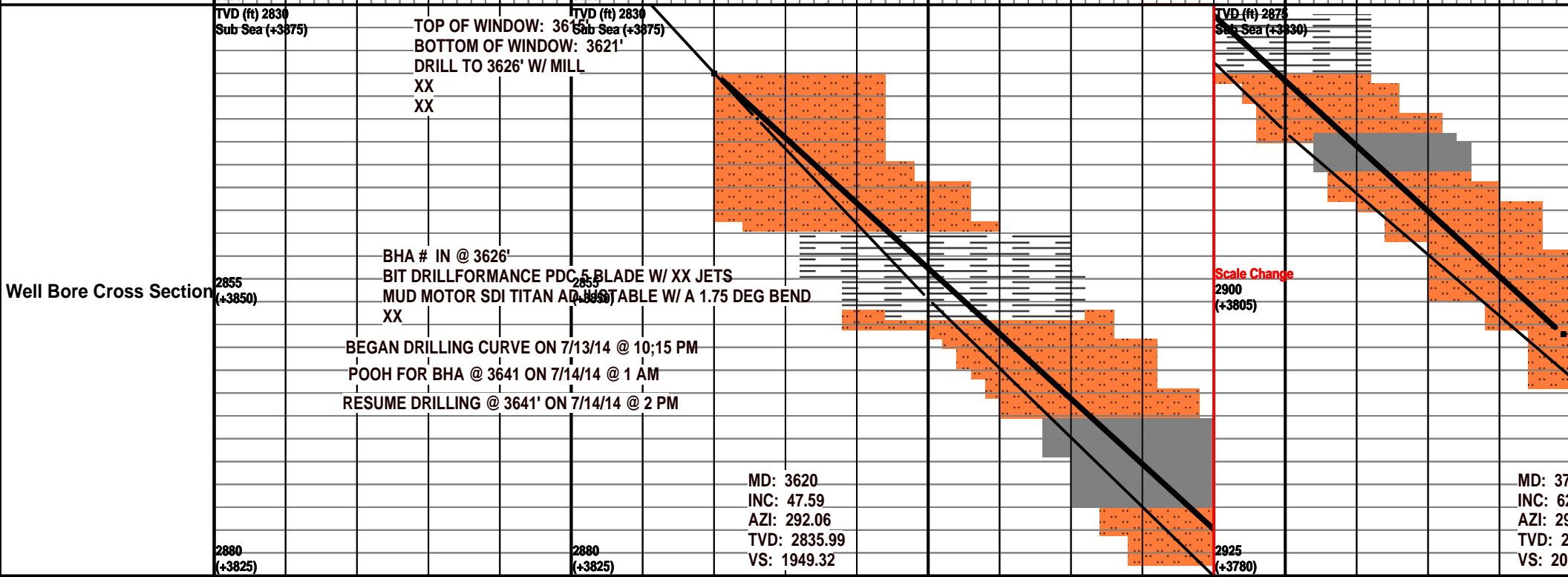
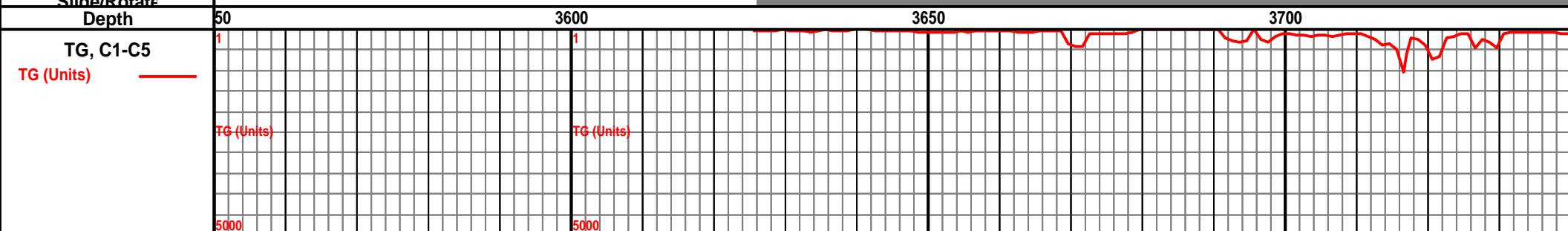
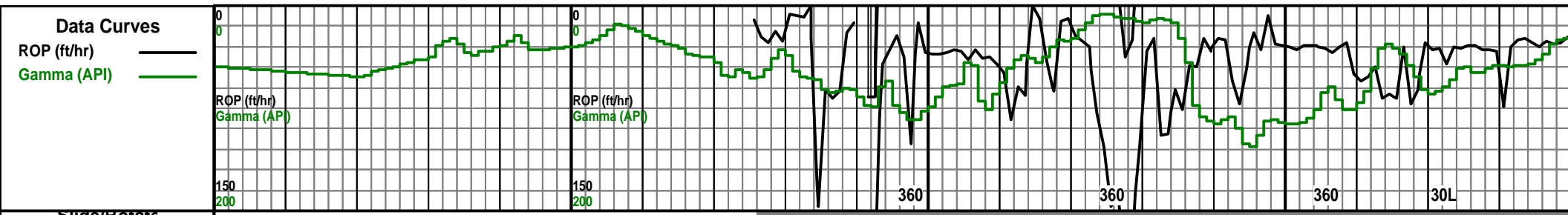
 Anhy	 Coal	 Lmst	 Shcol	 Coal
 Bent	 Congl	 Meta	 Shgy	
 Brec	 Dol	 Mrlst	 Sltst	
 Cht	 Gyp	 Salt	 Ss	
 Clyst	 Igne	 Shale	 Till	

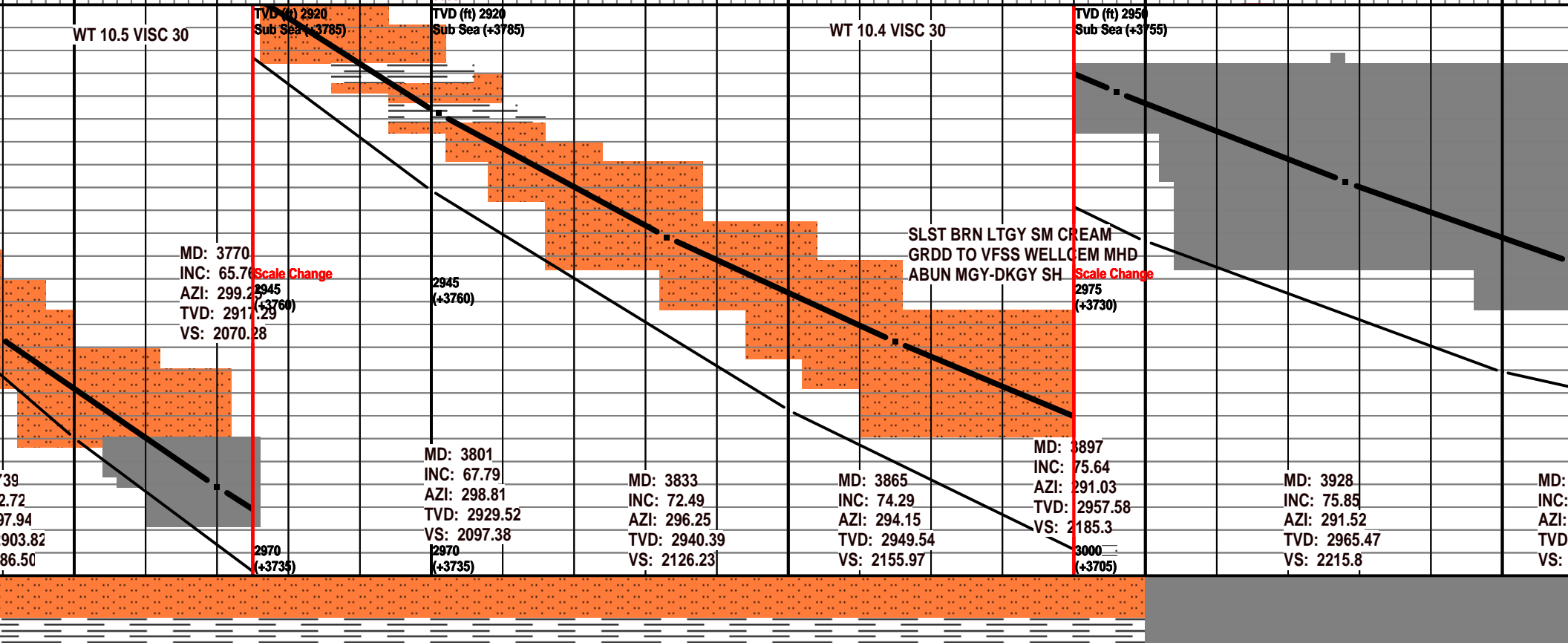
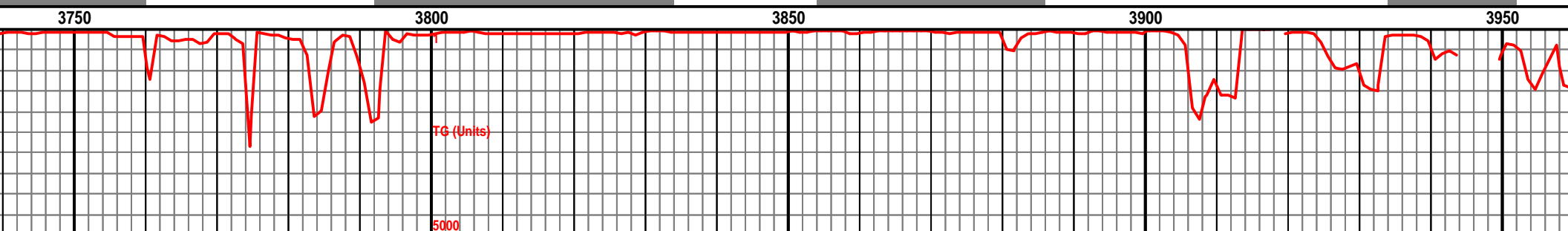
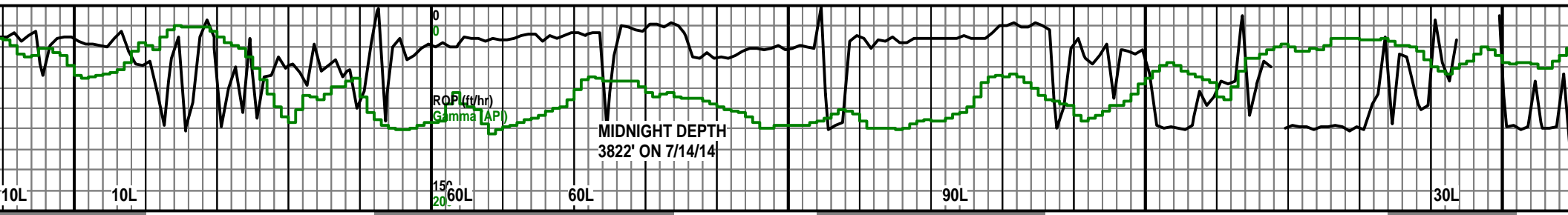
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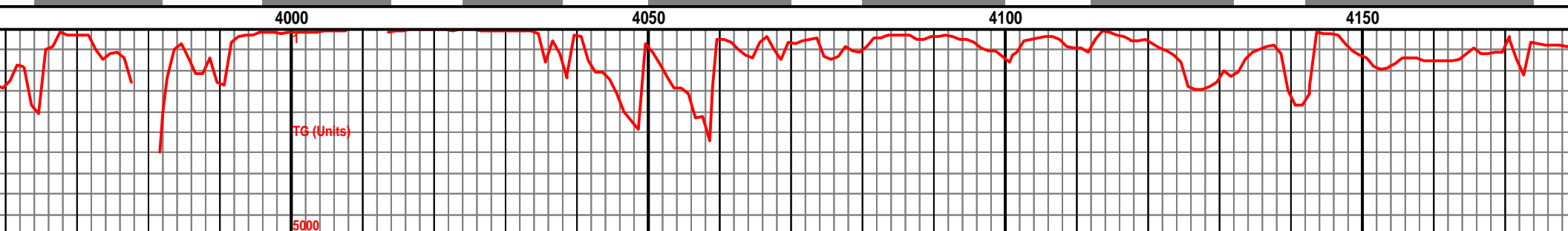
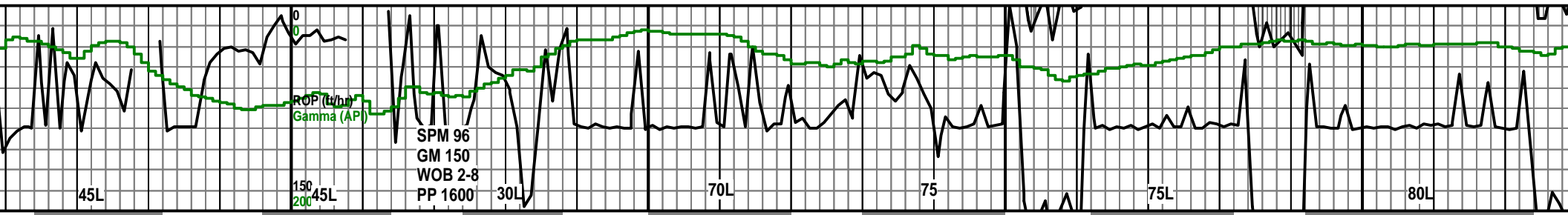
MINERAL	 Gyp	FOSSIL	 Ostra	 Sltstrg
 Anhy	 Hvymin	 Algae	 Pelec	 Ssstrg
 Arggrn	 Kaol	 Amph	 Pellet	TEXTURE
 Arg	 Marl	 Belm	 Pisolite	 Boundst
 Bent	 Minxl	 Bioclst	 Plant	 Chalky
 Bit	 Nodule	 Brach	 Strom	 Cryxln
 Brecfrag	 Phos	 Bryozoa	STRINGER	 Earthy
 Calc	 Pyr	 Cephal	 Anhy	 Finexln
 Carb	 Salt	 Coral	 Arg	 Grainst
 Chtdk	 Sandy	 Crin	 Bent	 Lithogr
 Chtlt	 Silt	 Echin	 Coal	 Microxln
 Dol	 Sil	 Fish	 Dol	 Mudst
 Feldspar	 Sulphur	 Foram	 Gyp	 Packst
 Ferrpel	 Tuff	 Fossil	 Ls	 Wackst
 Ferr		 Gastro	 Mrst	
 Glau		 Oolite		

OTHER SYMBOLS

POROSITY	 Vuggy	ROUNDING	 Spotted	EVENT
 Earthy	SORTING	 Rounded	 Ques	 Rft
 Fenest	 Well	 Subrnd	 Dead	 Sidewall
 Fracture	 Moderate	 Subang	INTERVAL	
 Inter	 Poor	 Angular	 Core	
 Moldic		OIL SHOW	 Dst	
 Organic		 Even		
 Pinpoint				





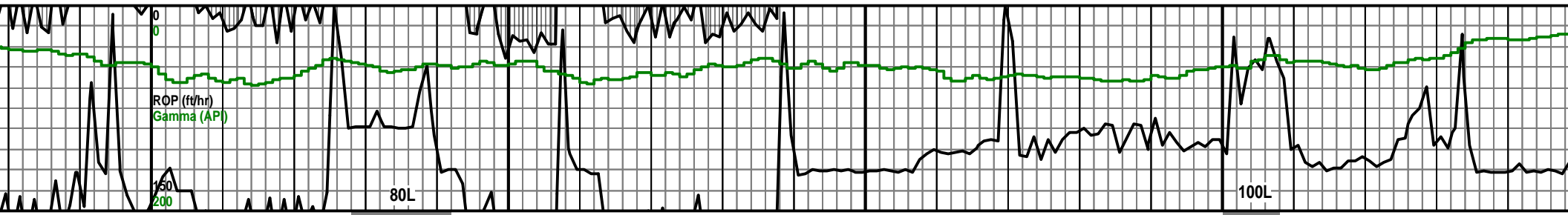


TVD (ft) 2950
 Sub Sea (+3755)
 POOH @ 4013' ON 7/15/14 @ 11 AM FOR BHA
 RESUME DRILLING ON 7/15/14 @ 12 PM
 BHA #3 BIT PDC DRILFORMANCE 5 BLADE W/ 6-20 JETS
 MUD MOTOR SDI STANDARD LOW SPEED W/ A 1.75 DEG BEND
 .88 REV/GAL 2.64' BIT TO BEND
 COAL BLK PRED BRI SHINY
 IRREG FRAC SOME CLEATING FRM
 OCC GRDD TO CARB SH

2975
(+3730)

3960	MD: 3985	MD: 4016	MD: 4048	MD: 4079	MD: 4110	MD: 4141	MD: 4173
78.26	INC: 82.01	INC: 84.79	INC: 86.43	INC: 88.52	INC: 88.02	INC: 89.53	INC: 90.94
291.19	AZI: 290.32	AZI: 289.7	AZI: 289.14	AZI: 286.93	AZI: 282.34	AZI: 278.54	AZI: 275.55
: 2972.63	TVD: 2976.91	TVD: 2980.47	TVD: 2982.92	TVD: 2984.29	TVD: 2985.23	TVD: 2985.89	TVD: 2985.7
2246.5	VS: 2270.78	VS: 2301.2	VS: 2332.76	VS: 2363.5	VS: 2394.42	VS: 2425.4	VS: 2457.32

3000
(+3705)



4200

4250

4300

4350

4400

TG (Units)

5000

TVD (ft) 2950
Sub Sea (+3755)

2975
(+3730)

COAL BLK PRED DULL SM SHINY GRNY IRREG FRAC FRM

MD: 4204
INC: 91.41
AZI: 274.63
TVD: 2985.76
VS: 2488.14
3000
(+3705)

MD: 4235
INC: 91.21
AZI: 272.46
TVD: 2984.41
VS: 2518.87

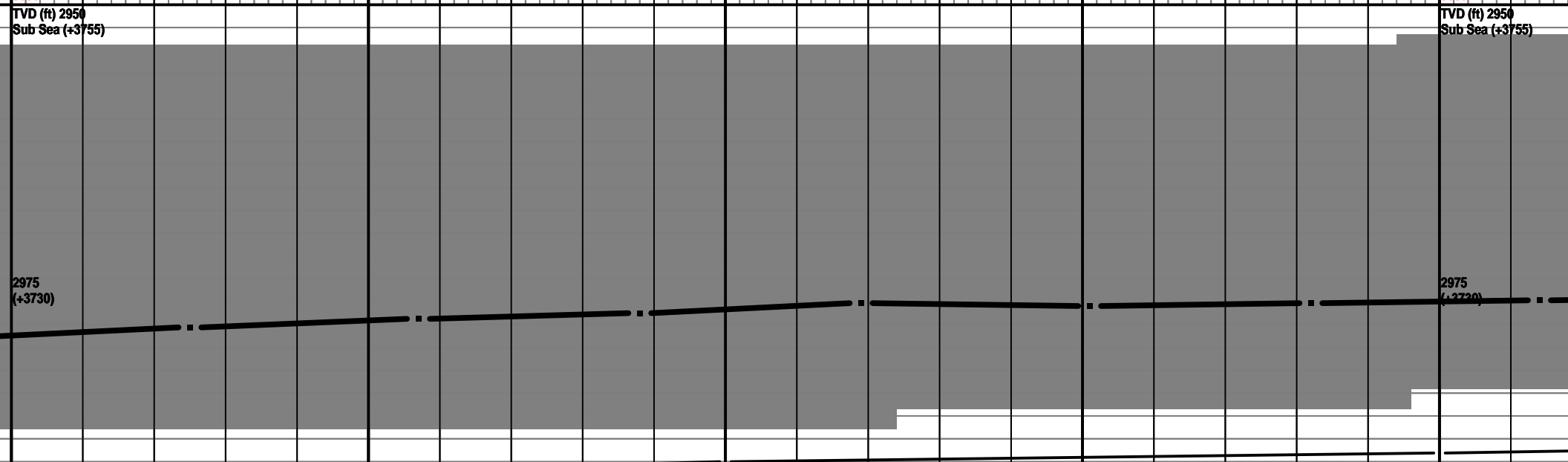
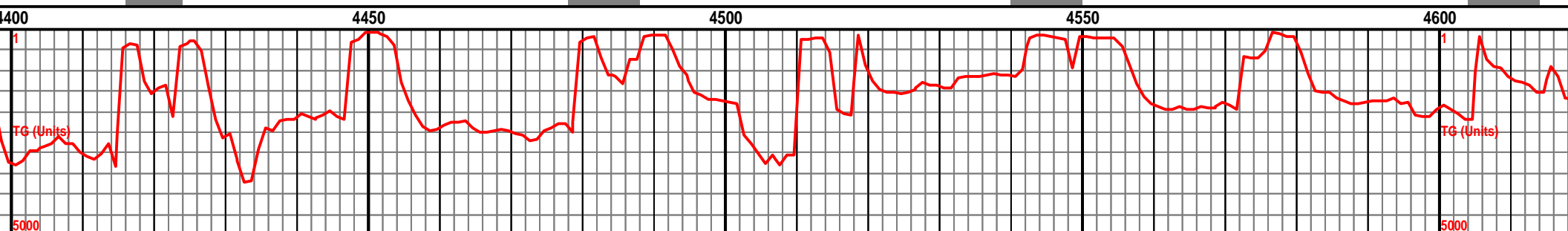
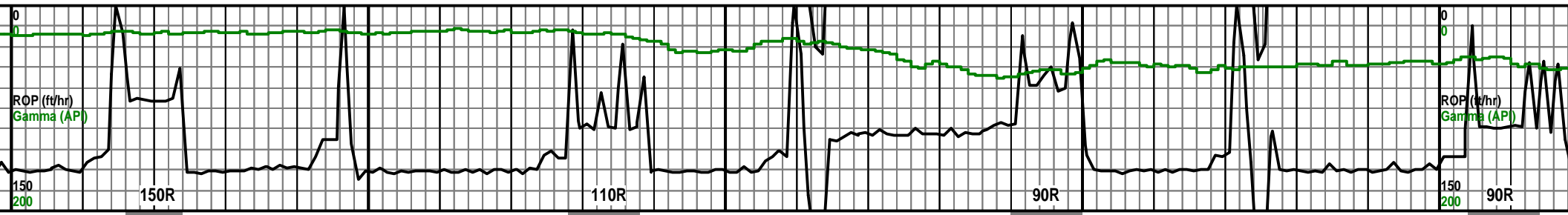
MD: 4267
INC: 91.27
AZI: 271.23
TVD: 2983.72
VS: 2550.45

MD: 4298
INC: 92.32
AZI: 271.6
TVD: 2982.75
VS: 2580.99

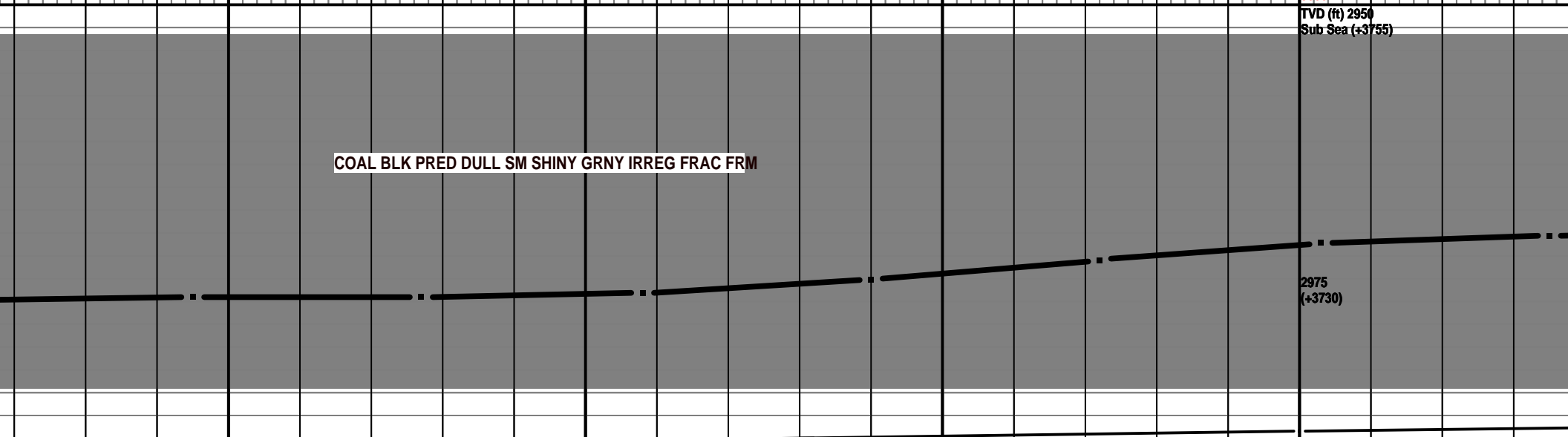
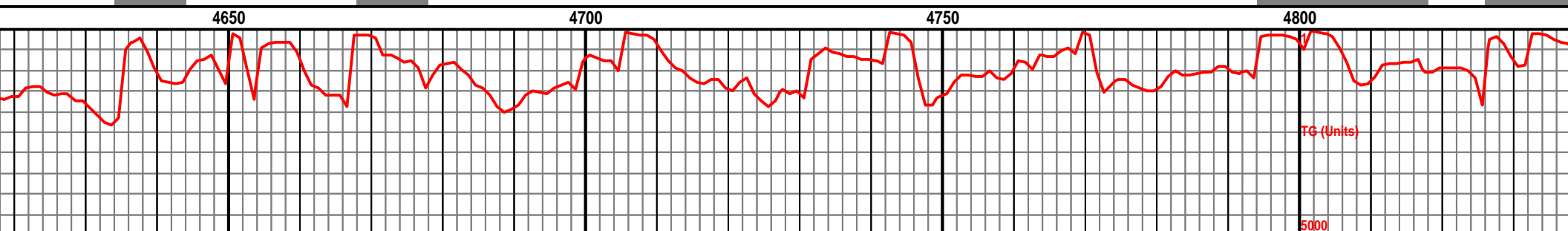
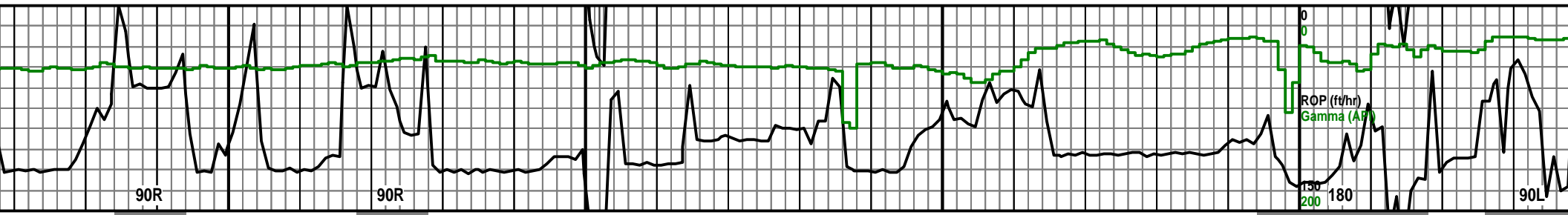
MD: 4330
INC: 92.28
AZI: 270.83
TVD: 2981.46
VS: 2612.49

MD: 4362
INC: 91.95
AZI: 270.09
TVD: 2980.28
VS: 2643.92

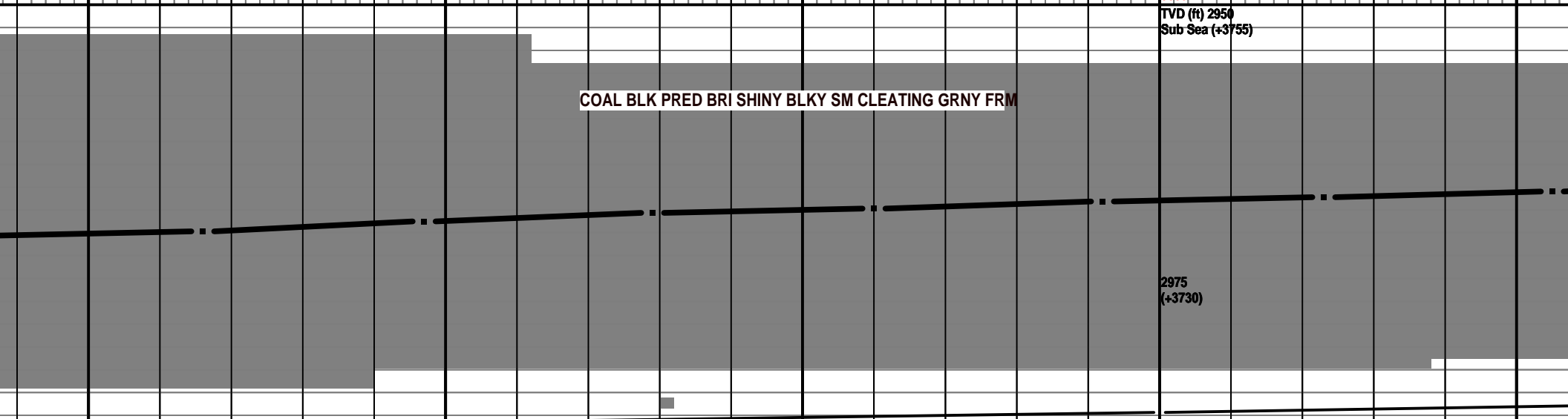
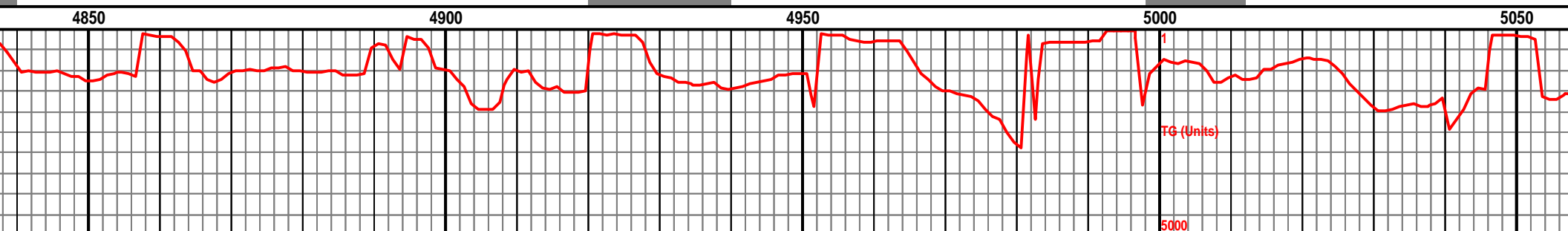
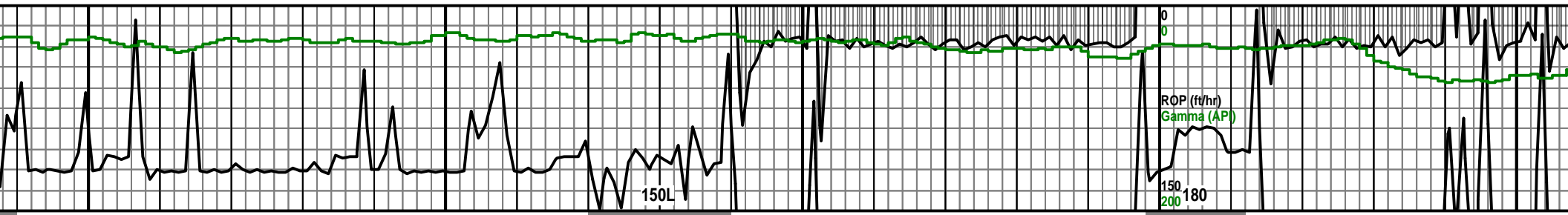
MD: 4393
INC: 92.32
AZI: 269.6
TVD: 2979.1
VS: 2674.31



	MD: 4425	MD: 4457	MD: 4488	MD: 4519	MD: 4551	MD: 4582	MD: 4614
	INC: 91.01	INC: 91.45	INC: 90.24	INC: 90.47	INC: 91.1	INC: 90.17	INC: 90.71
	AZI: 268.95	AZI: 268.51	AZI: 269.37	AZI: 269.17	AZI: 269.92	AZI: 268.84	AZI: 269.93
	TVD: 2978.2	TVD: 2977.52	TVD: 2977.05	TVD: 2976.86	TVD: 2976.42	TVD: 2976.08	TVD: 2975.5
3000 (+3705)	VS: 2705.62	VS: 2736.87	VS: 2767.18	VS: 2797.52	VS: 2828.87	VS: 2859.23	VS: 2890.5



MD: 4645	MD: 4677	MD: 4708	MD: 4740	MD: 4772	MD: 4803	MD: 4833
INC: 89.93	INC: 90.27	INC: 91.31	INC: 92.65	INC: 93.36	INC: 92.25	INC: 92.25
AZI: 270.54	AZI: 271.61	AZI: 273.01	AZI: 273.55	AZI: 273.62	AZI: 271.88	AZI: 271.88
TVD: 2975.66	TVD: 2975.64	TVD: 2975.21	TVD: 2974.11	TVD: 2972.43	TVD: 2970.91	TVD: 2970.91
VS: 2921.01	VS: 2952.52	VS: 2983.16	VS: 3014.84	VS: 3046.53	VS: 3077.16	VS: 3077.16
					3000 (+3705)	3000 (+3705)



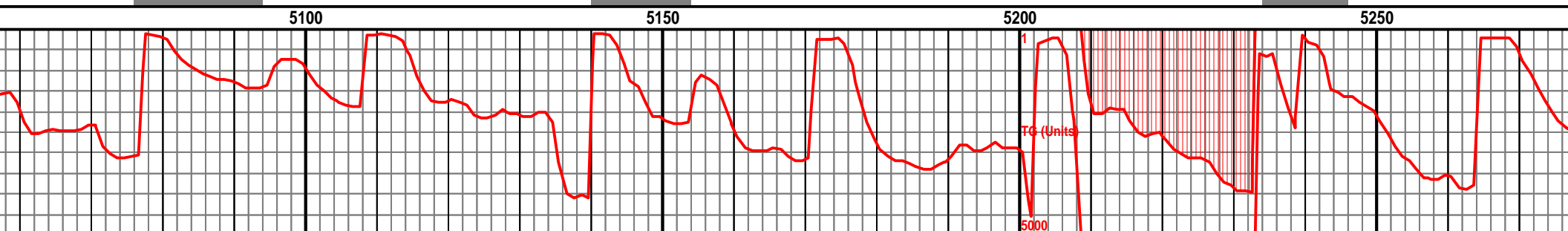
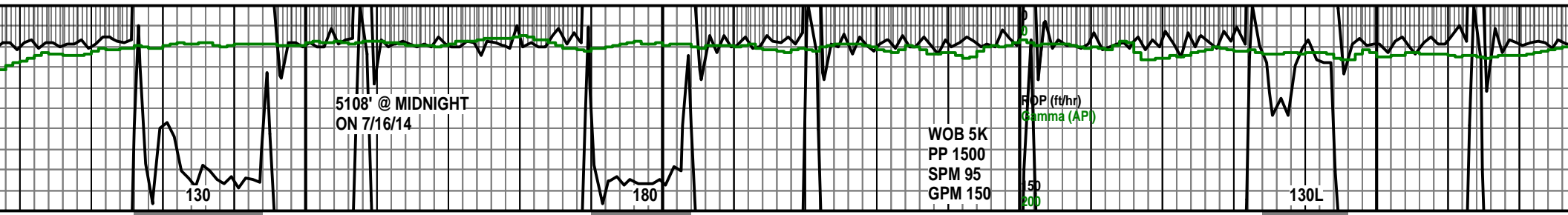
35	MD: 4866	MD: 4897	MD: 4929	MD: 4960	MD: 4992	MD: 5023	MD: 5050
.10	INC: 91.31	INC: 91.91	INC: 90.87	INC: 90.64	INC: 91.55	INC: 89.53	INC: 91.55
1.33	AZI: 271.42	AZI: 271.31	AZI: 270.96	AZI: 270.20	AZI: 269.48	AZI: 268.05	AZI: 271.42
370.2E	TVD: 2969.88	TVD: 2969.00	TVD: 2968.22	TVD: 2967.82	TVD: 2967.21	TVD: 2966.91	TVD: 2966.91
8.72	VS: 3139.27	VS: 3169.82	VS: 3201.33	VS: 3231.81	VS: 3263.19	VS: 3293.47	VS: 3323.95

0
0
150
200
180

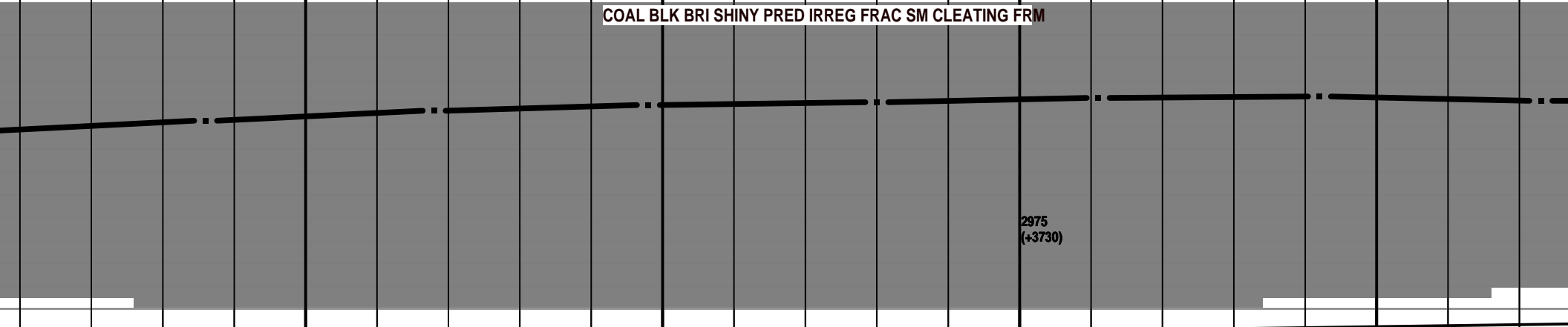
5000
TVD (ft) 2950
Sub Sea (+3755)

2975
(+3730)

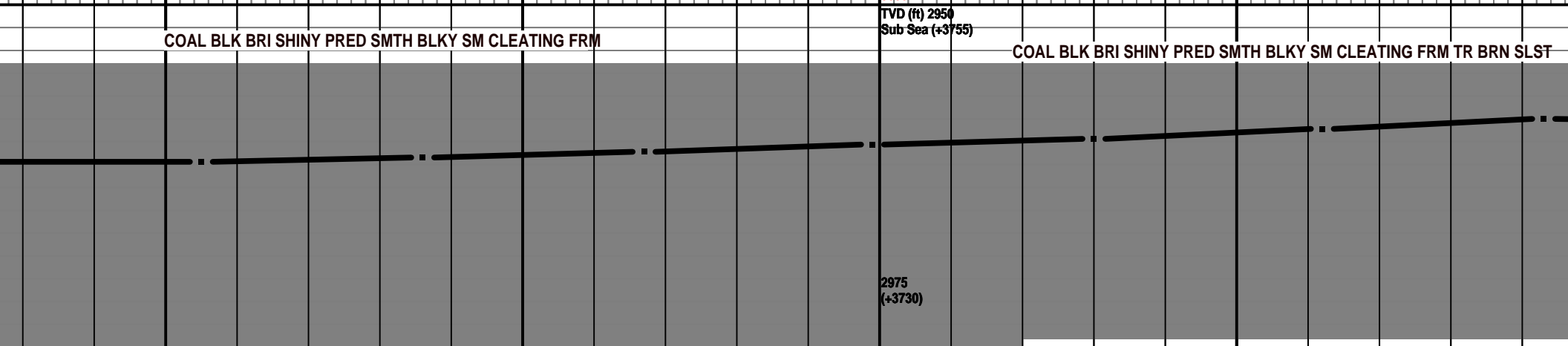
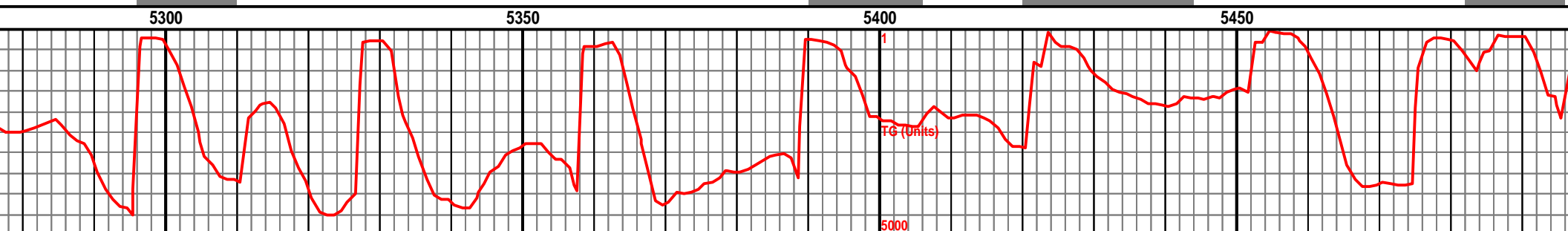
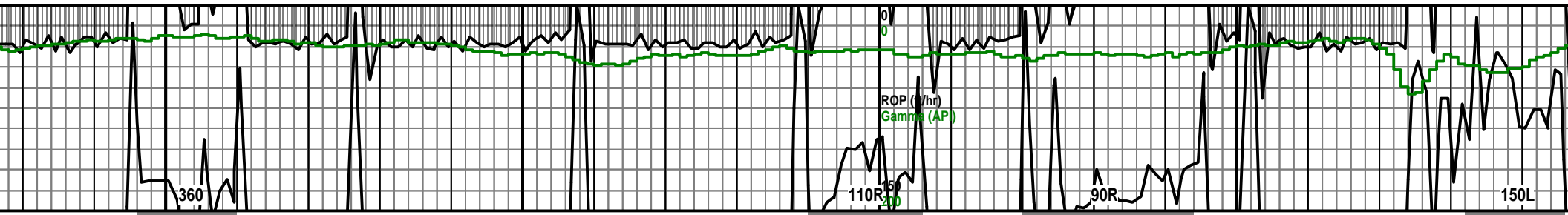
3000
(+3705)



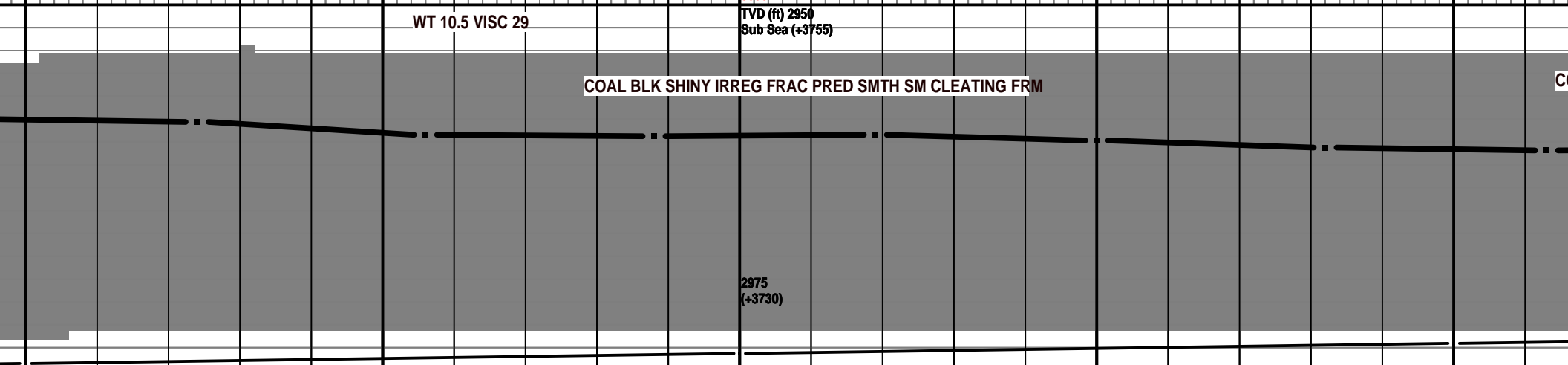
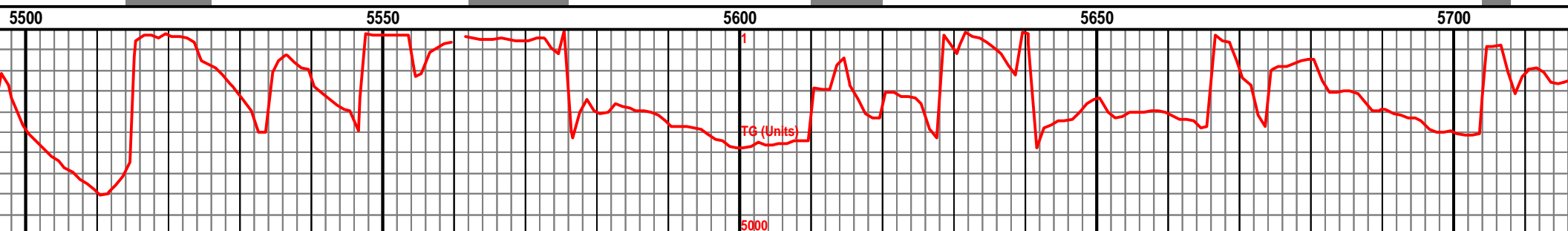
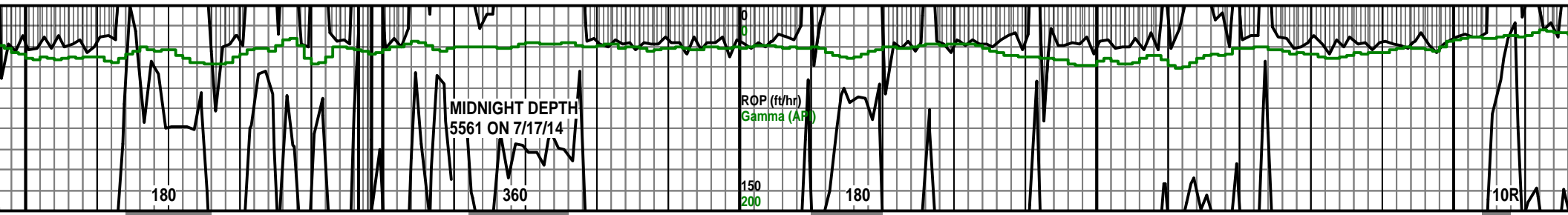
TVD (ft) 2950
Sub Sea (+3755) WT 10.15 VISC 28



55	MD: 5086	MD: 5118	MD: 5148	MD: 5180	MD: 5211	MD: 5242	MD: 5273
2.22	INC: 91.28	INC: 91.68	INC: 90.40	INC: 90.47	INC: 91.11	INC: 89.13	INC: 89.2
70.05	AZI: 271.0	AZI: 271.44	AZI: 271.22	AZI: 271.61	AZI: 271.39	AZI: 269.92	AZI: 269.
966.43	TVD: 2965.48	TVD: 2964.66	TVD: 2964.11	TVD: 2963.87	TVD: 2963.44	TVD: 2963.38	TVD: 296
24.76	VS: 3355.22	VS: 3386.74	VS: 3416.30	VS: 3447.85	VS: 3478.41	VS: 3508.90	VS: 3539

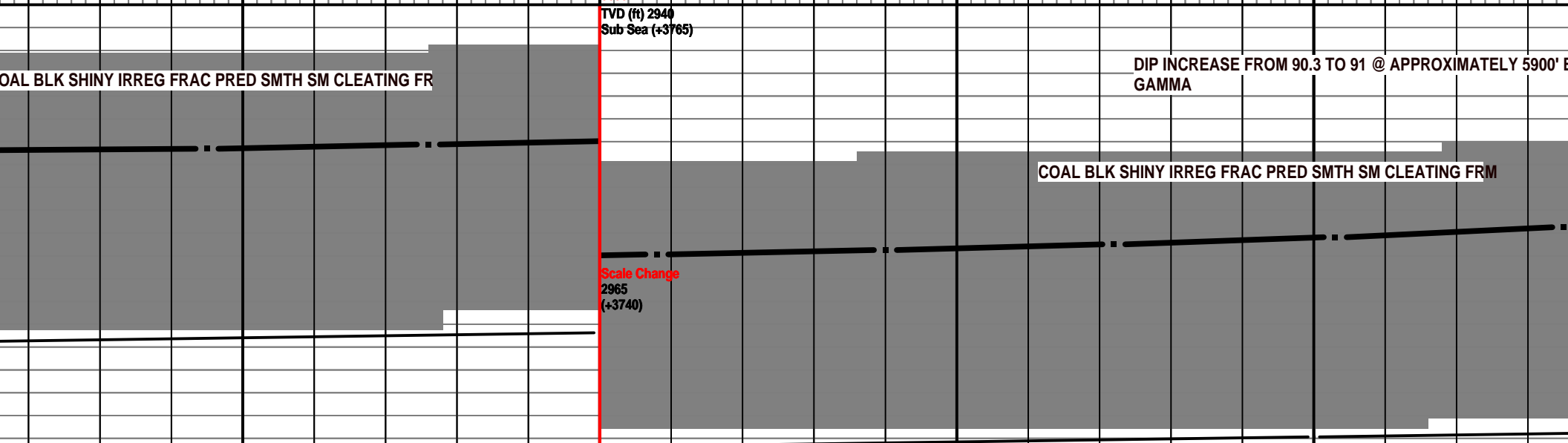
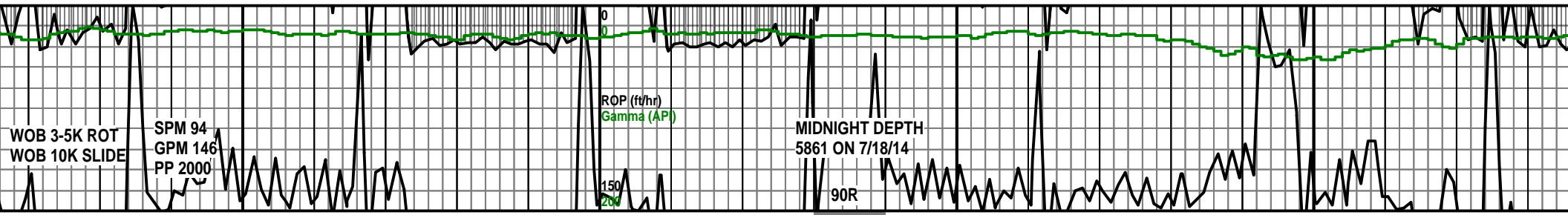


MD: 5305	MD: 5336	MD: 5367	MD: 5399	MD: 5430	MD: 5462	MD: 5493
INC: 90.84	INC: 90.60	INC: 91.18	INC: 90.97	INC: 91.04	INC: 91.95	INC: 91.44
AZI: 269.22	AZI: 267.17	AZI: 266.88	AZI: 267.92	AZI: 270.39	AZI: 271.87	AZI: 271.7
TVD: 2963.78	TVD: 2963.39	TVD: 2962.91	TVD: 2962.31	TVD: 2961.73	TVD: 2960.93	TVD: 2960.93
VS: 3570.64	VS: 3600.86	VS: 3630.93	VS: 3662.02 (+3705)	VS: 3692.34	VS: 3723.85	VS: 3754.4

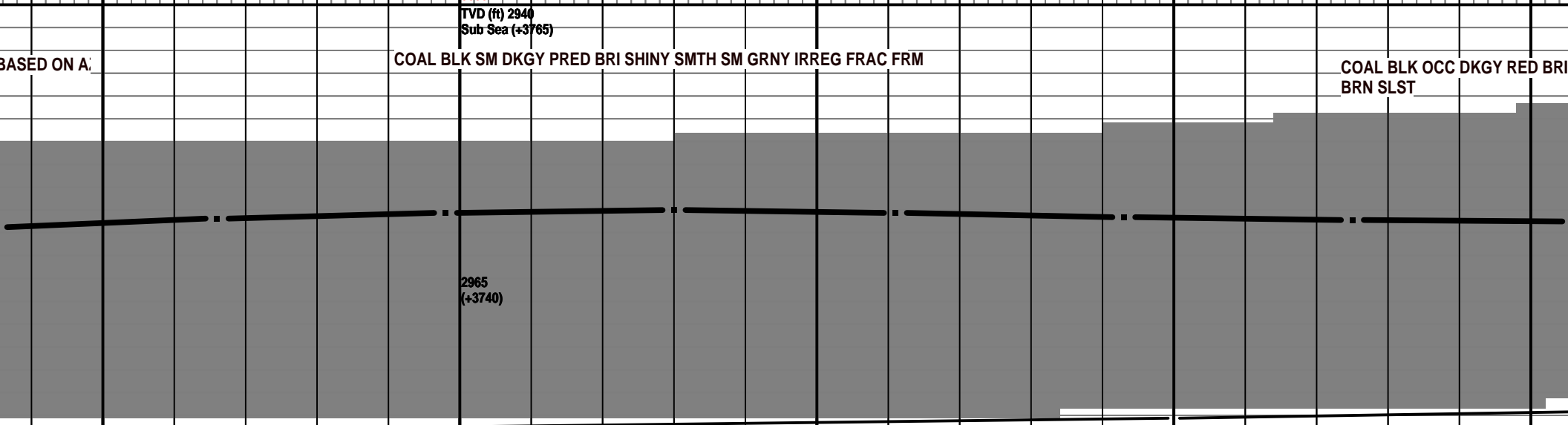
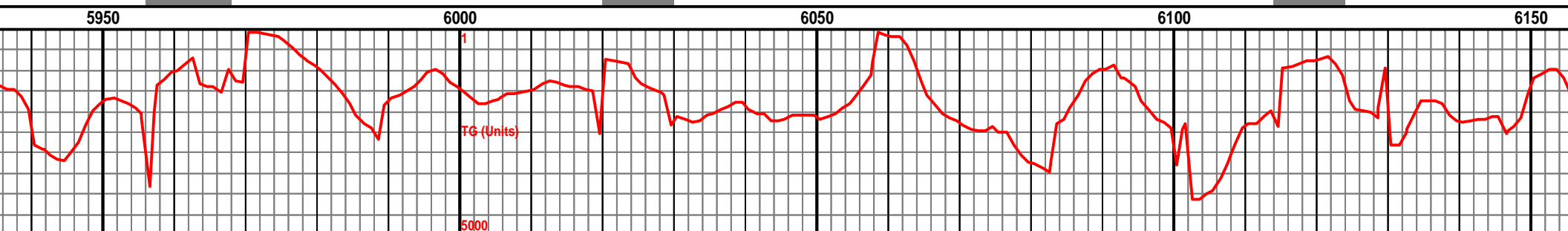
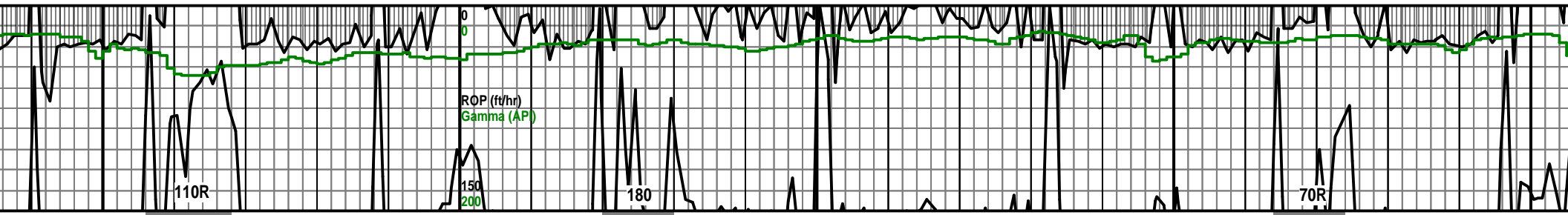


MD: 5524	MD: 5556	MD: 5588	MD: 5619	MD: 5650	MD: 5682	MD: 5713
INC: 87.88	INC: 87.85	INC: 91.58	INC: 89.13	INC: 88.99	INC: 88.89	INC: 90.00
AZI: 270.18	AZI: 269.99	AZI: 269.74	AZI: 268.25	AZI: 268.07	AZI: 267.19	AZI: 267.00
TVD: 2960.20	TVD: 2961.39	TVD: 2961.55	TVD: 2961.36	TVD: 2961.86	TVD: 2962.46	TVD: 2962.00
VS: 3784.94	VS: 3816.33	VS: 3847.72	VS: 3878.03	VS: 3908.24	VS: 3939.36	VS: 3969.00

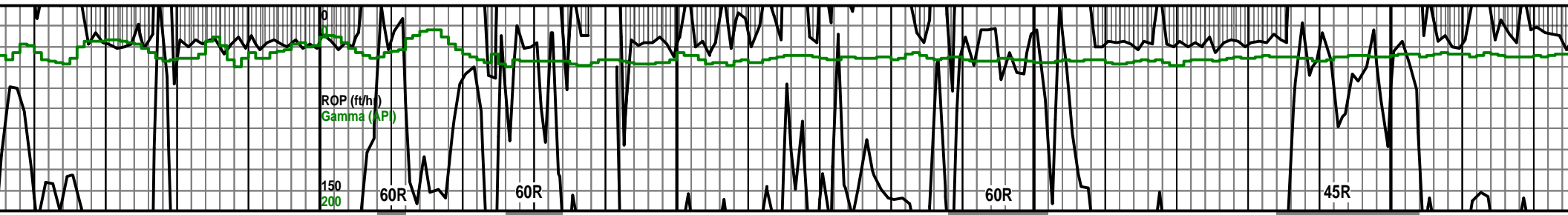
3000
(+3705)



MD: 5745	MD: 5776	MD: 5808	MD: 5840	MD: 5872	MD: 5903	MD: 5933
INC: 90.54	INC: 90.77	INC: 90.67	INC: 90.67	INC: 90.77	INC: 91.51	INC: 91.51
AZI: 267.13	AZI: 266.94	AZI: 266.90	AZI: 268.54	AZI: 268.74	AZI: 269.22	AZI: 269.22
TVD: 2962.59	TVD: 2962.23	TVD: 2961.83	TVD: 2961.45	TVD: 2961.05	TVD: 2960.41	TVD: 2960.41
VS: 4000.49	VS: 4030.57	VS: 4061.59	VS: 4092.73	VS: 4123.97	VS: 4154.22	VS: 4184.35



Depth (ft)	MD	INC	AZI	TVD	VS
5950	5966	91.04	270.08	2958.77	4215.97
6000	5998	91.04	270.08	2958.24	4247.36
6030	6030	89.63	269.41	2958.06	4278.74
6061	6061	89.43	269.05	2958.31	4309.08
6093	6093	89.43	268.71	2958.63	4340.35
6125	6125	89.60	270.06	2958.90	4371.69

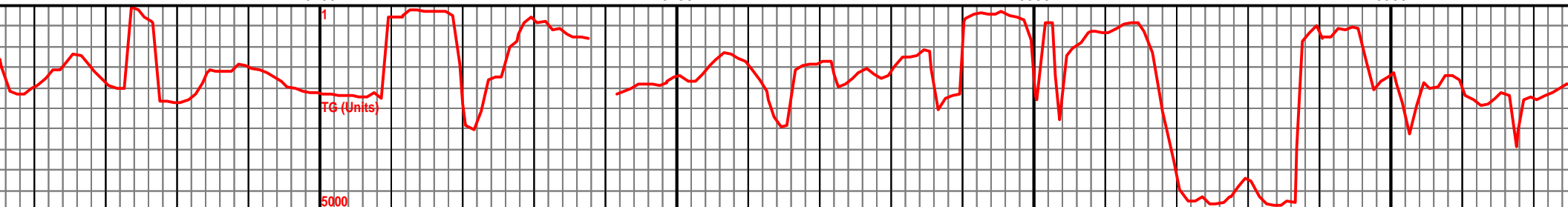


6200

6250

6300

6350



5000
TVD (ft) 2940
Sub Sea (+3765)

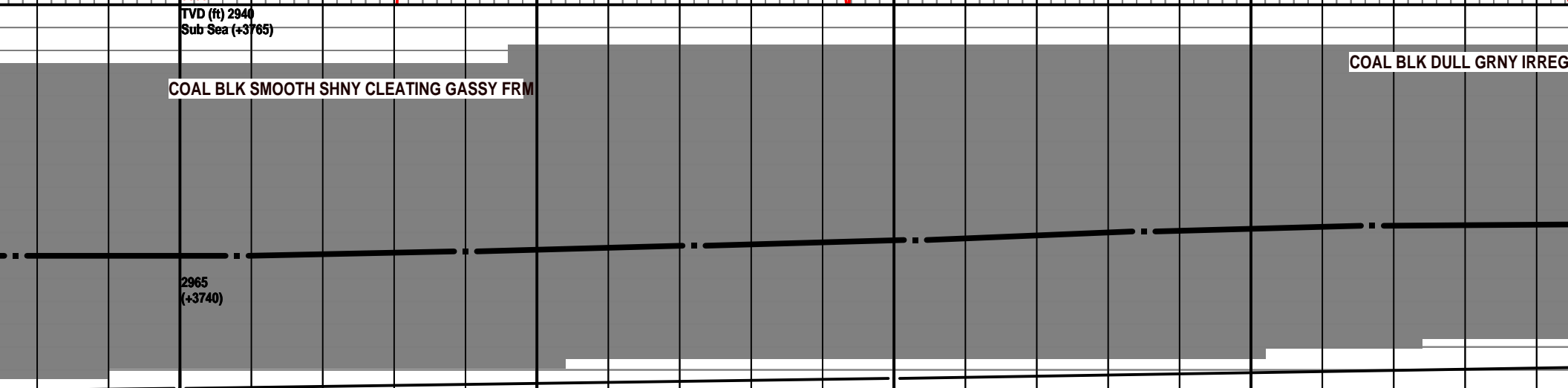
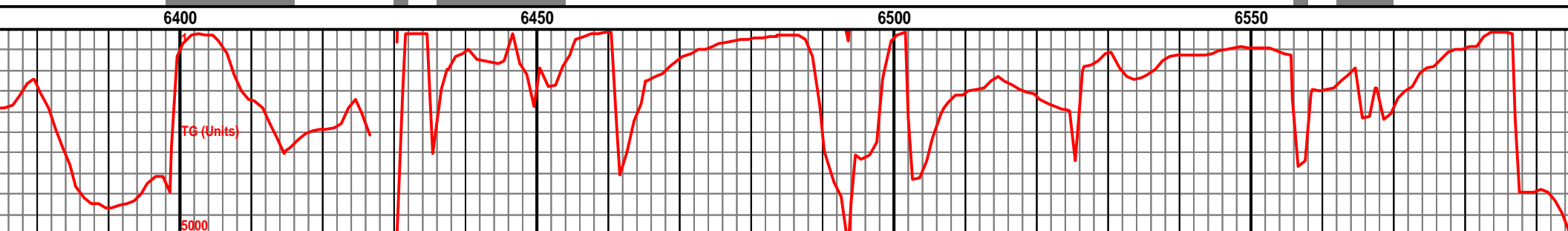
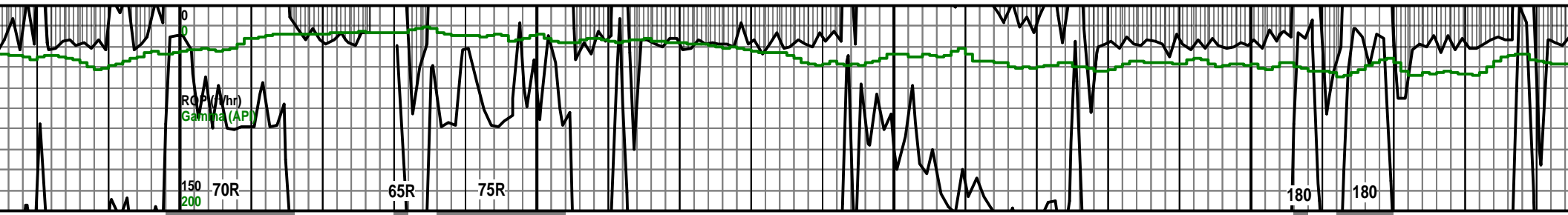
SHINY GRNY SM SMTH IRREG FRAC FRM T COAL BLK DKGY GRNY GRDD TO CARB SH FRM MDH

COAL BLK DKGY GRNY GRDD TO CARB SH FRM MHD TR SLST

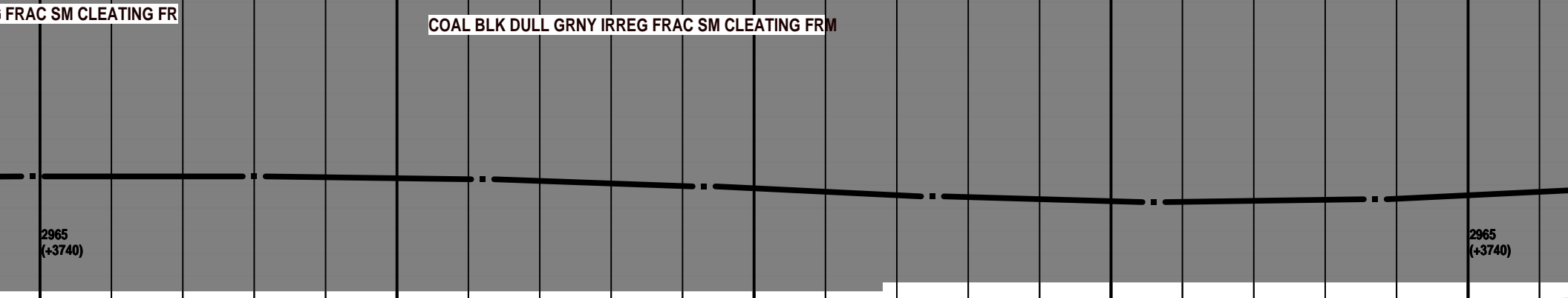
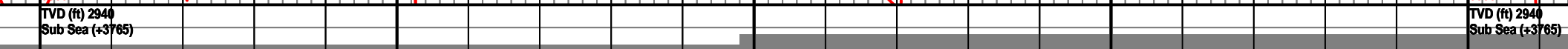
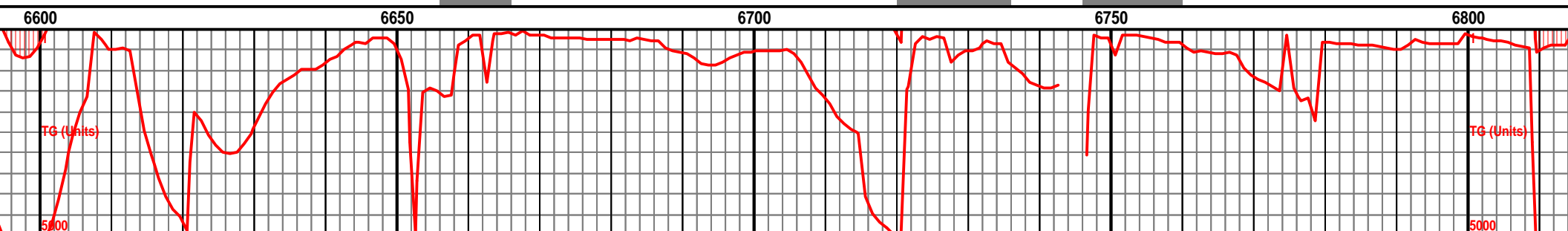
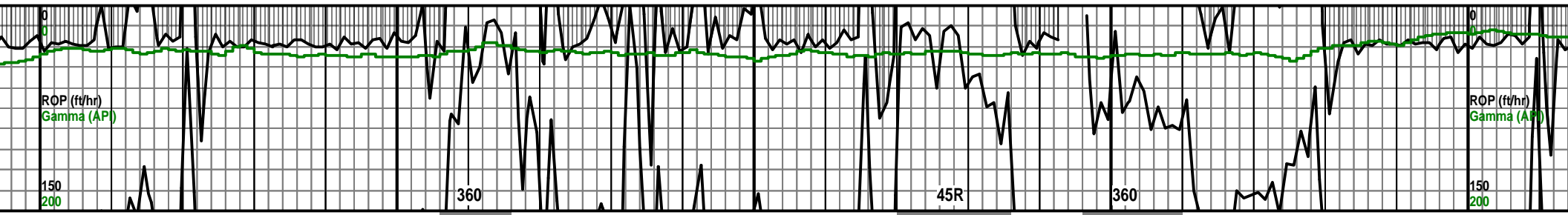
2965
(+3740)

56	MD: 6188	MD: 6219	MD: 6251	MD: 6282	MD: 6314	MD: 6345	M
0.00	INC: 89.63	INC: 90.10	INC: 89.23	INC: 87.61	INC: 87.95	INC: 90.17	IN
69.87	AZI: 268.79	AZI: 269.28	AZI: 267.59	AZI: 265.27	AZI: 265.26	AZI: 266.84	A
2959.01	TVD: 2959.11	TVD: 2959.19	TVD: 2959.37	TVD: 2960.23	TVD: 2961.47	TVD: 2961.98	T
402.11	VS: 4433.44	VS: 4463.76	VS: 4494.98	VS: 4524.96	VS: 4555.73	VS: 4585.66	V

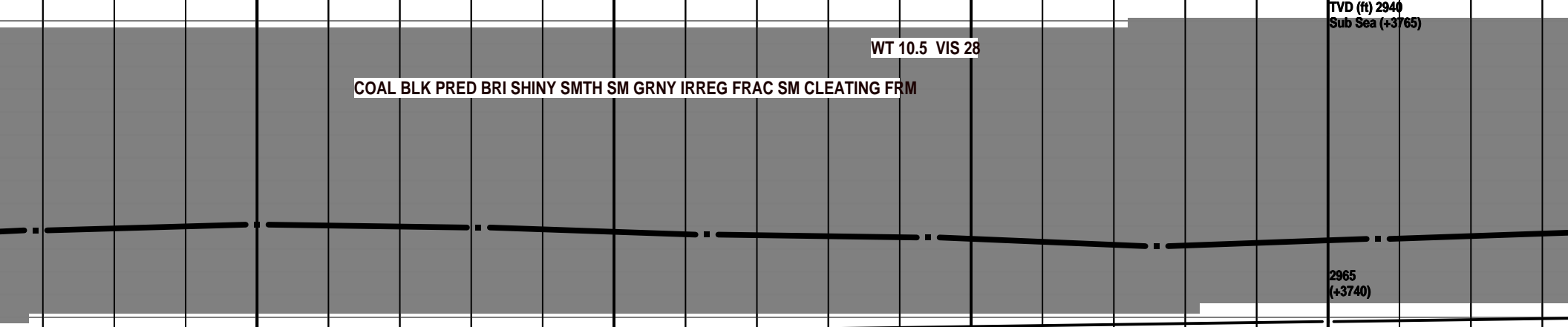
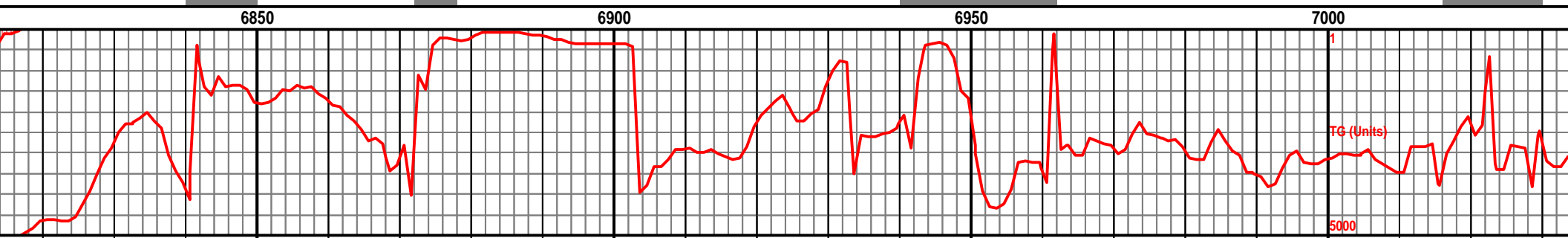
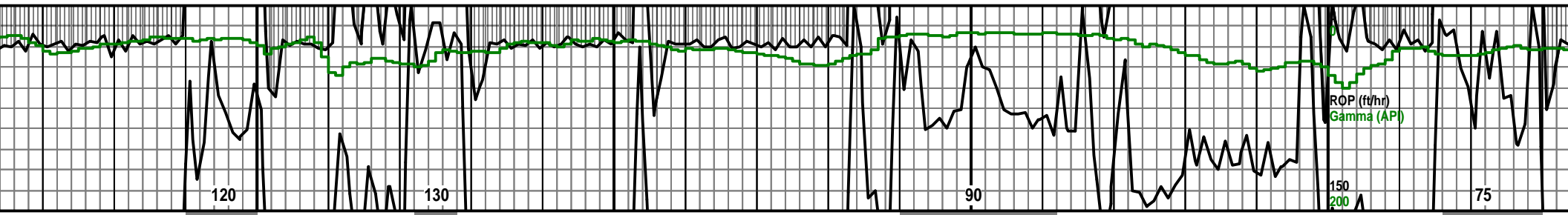
2990
(+3715)



ID: 6377	MD: 6408	MD: 6440	MD: 6472	MD: 6503	MD: 6535	MD: 6567
INC: 89.76	INC: 90.44	INC: 90.87	INC: 90.81	INC: 91.04	INC: 91.38	INC: 90.54
AZI: 265.78	AZI: 266.57	AZI: 268.28	AZI: 269.84	AZI: 269.74	AZI: 269.51	AZI: 269.60
TVD: 2961.99	TVD: 2961.94	TVD: 2961.57	TVD: 2961.11	TVD: 2960.61	TVD: 2959.93	TVD: 2959.40
VS: 4616.60	2990 (+3715) VS: 4646.56	VS: 4677.66	VS: 4708.95	VS: 4739.35	VS: 4770.70	VS: 4802.06

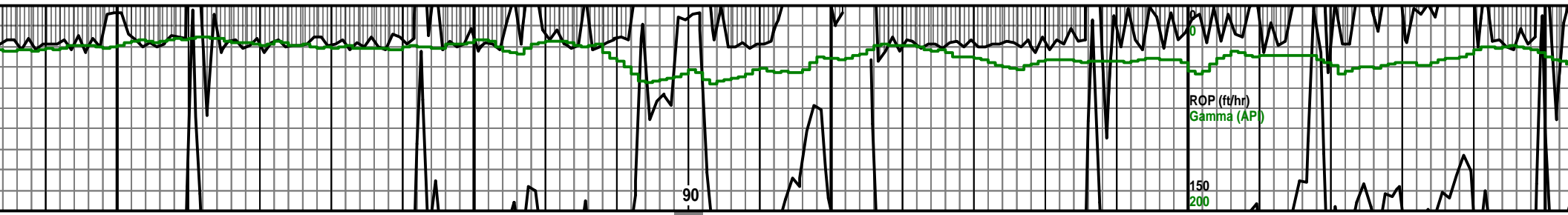


2965 (+3740)								2965 (+3740)
MD: 6599 INC: 90.20 AZI: 269.38 TVD: 2959.19 VS: 4833.40 2990 (+3715)	MD: 6630 INC: 89.46 AZI: 268.51 TVD: 2959.28 VS: 4863.71	MD: 6662 INC: 89.53 AZI: 266.75 TVD: 2959.56 VS: 4894.83	MD: 6693 INC: 88.42 AZI: 263.65 TVD: 2960.12 VS: 4924.64	MD: 6725 INC: 88.35 AZI: 264.14 TVD: 2961.02 VS: 4955.20	MD: 6756 INC: 89.90 AZI: 264.76 TVD: 2961.49 VS: 4984.91	MD: 6787 INC: 91.11 AZI: 263.99 TVD: 2961.22 VS: 5014.60	2990 (+3715)	

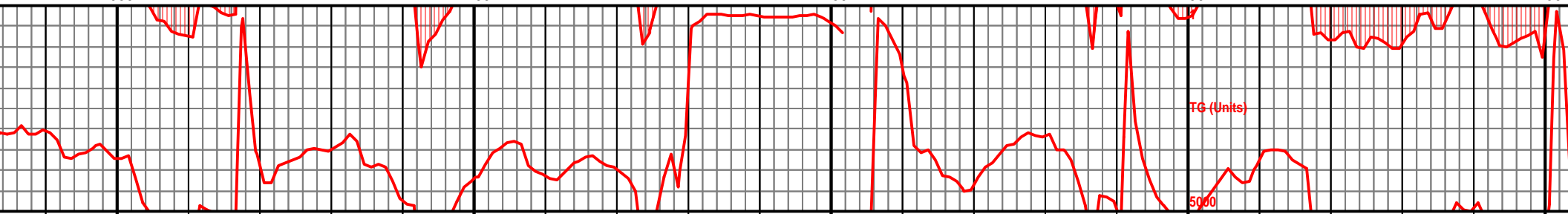


MD: 6819 INC: 91.71 AZI: 264.18 TVD: 2960.43 VS: 5045.19	MD: 6850 INC: 90.24 AZI: 263.00 TVD: 2959.90 VS: 5074.75	MD: 6881 INC: 88.79 AZI: 261.87 TVD: 2960.17 VS: 5104.13	MD: 6913 INC: 89.09 AZI: 261.93 TVD: 2960.76 VS: 5134.35	MD: 6944 INC: 89.97 AZI: 263.68 TVD: 2961.01 VS: 5163.79	MD: 6976 INC: 89.53 AZI: 265.53 TVD: 2961.69 VS: 5194.47	MD: 7007 INC: 90.44 AZI: 266.13 TVD: 2961.16 VS: 5224.38
----------------------------------------------------------------------	----------------------------------------------------------------------	----------------------------------------------------------------------	----------------------------------------------------------------------	----------------------------------------------------------------------	----------------------------------------------------------------------	----------------------------------------------------------------------

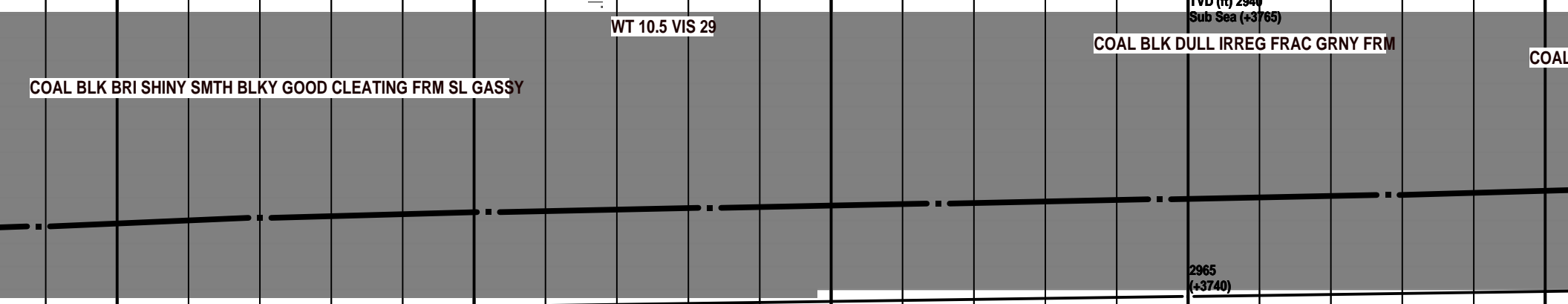
2990
(+3715)



7050 7100 7150 7200 7250



TG (Units)
5000



COAL BLK BRI SHINY SMTH BLKY GOOD CLEATING FRM SL GASSY

WT 10.5 VIS 29

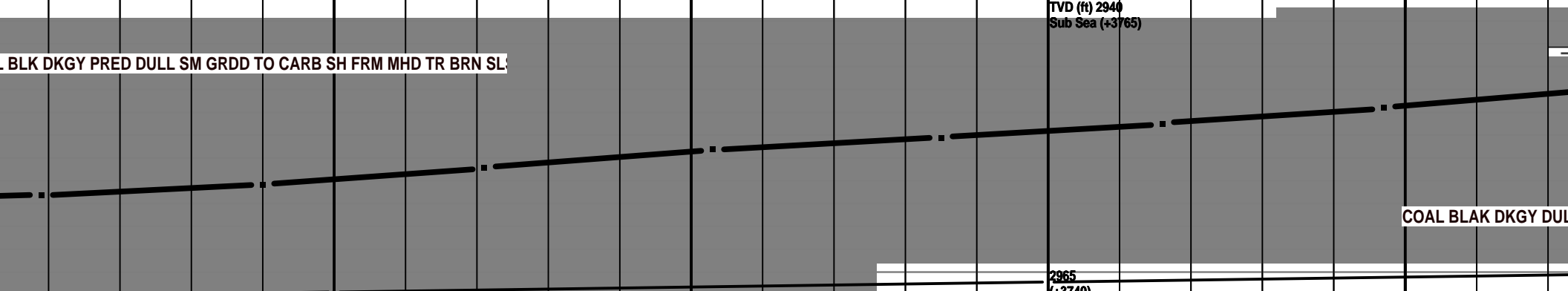
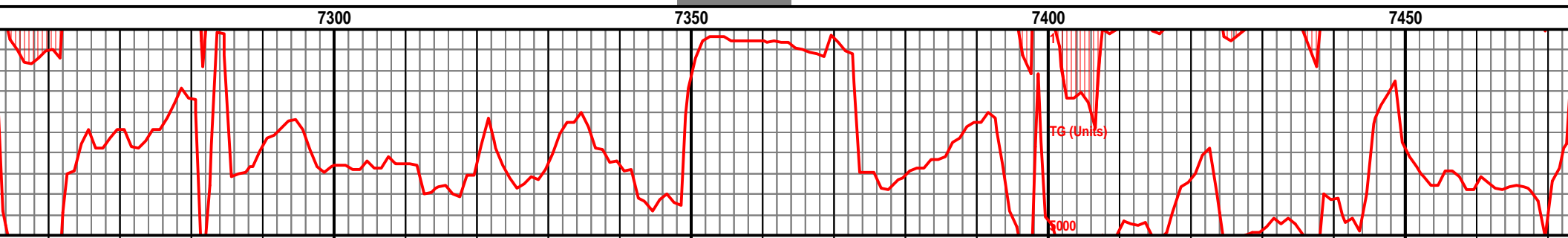
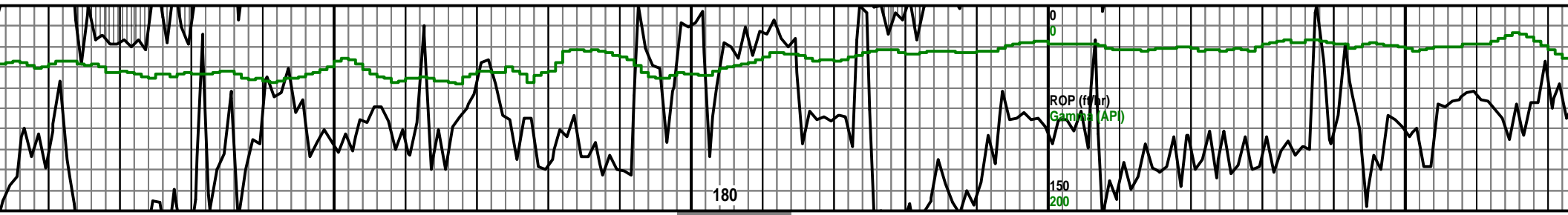
COAL BLK DULL IRREG FRAC GRNY FRM

COAL

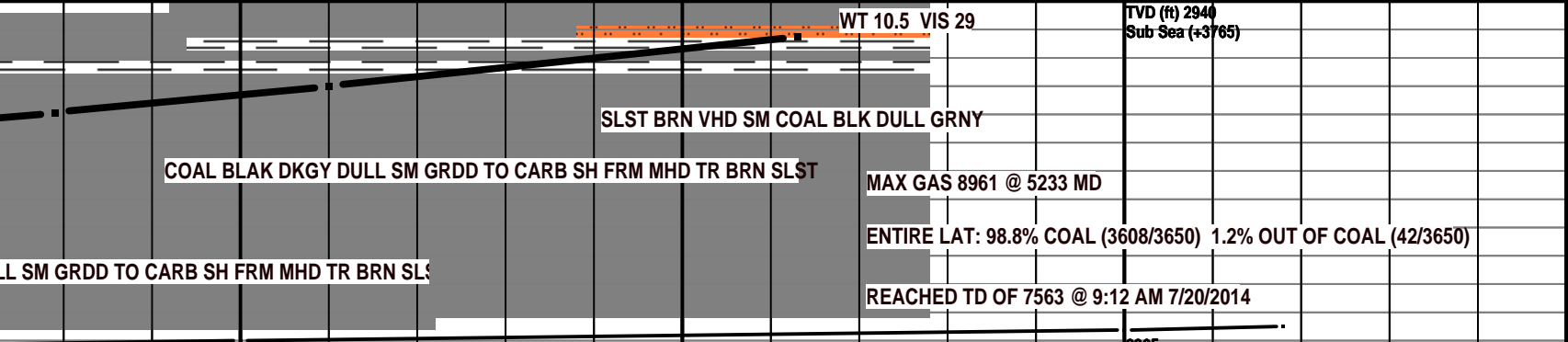
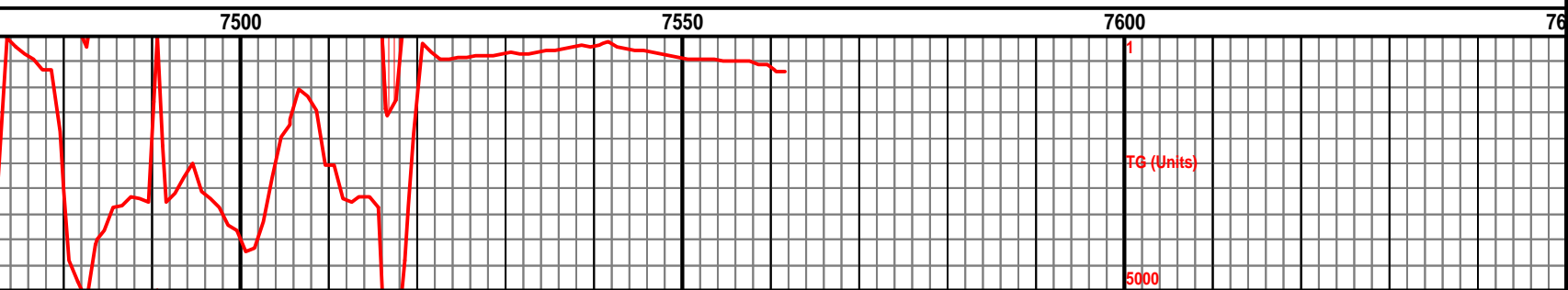
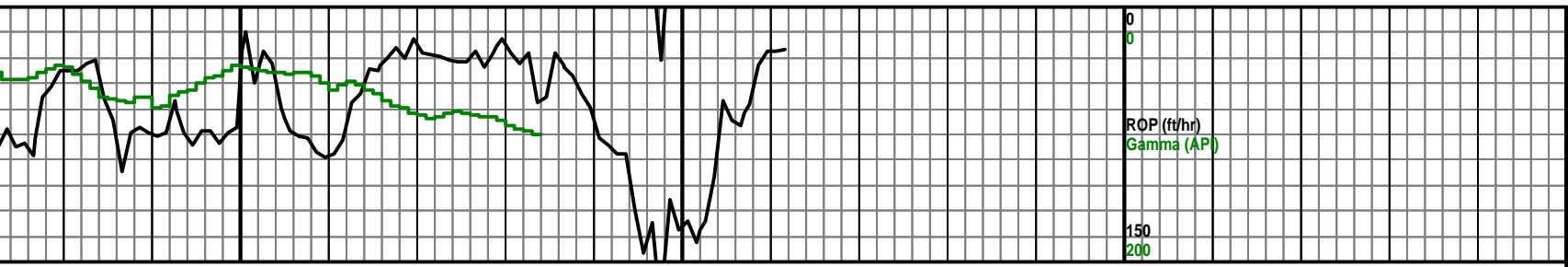
2965
(+3740)

MD: 7039	MD: 7070	MD: 7102	MD: 7133	MD: 7165	MD: 7196	MD: 7228	MD: 7250
INC: 91.78	INC: 91.04	INC: 91.04	INC: 90.30	INC: 90.74	INC: 90.84	INC: 90.64	INC: 90.64
AZI: 268.18	AZI: 267.47	AZI: 267.40	AZI: 267.12	AZI: 267.25	AZI: 266.80	AZI: 265.97	AZI: 265.97
TVD: 2960.54	TVD: 2959.78	TVD: 2959.20	TVD: 2958.83	TVD: 2958.54	TVD: 2958.12	TVD: 2957.70	TVD: 2957.70
VS: 5255.43	VS: 5285.60	VS: 5316.69	VS: 5346.80	VS: 5377.86	VS: 5407.93	VS: 5438.88	VS: 5438.88

2990
(+3715)



D: 7259	MD: 7290	MD: 7321	MD: 7353	MD: 7385	MD: 7416	MD: 7447
IC: 91.04	INC: 92.11	INC: 93.53	INC: 92.08	INC: 91.88	INC: 92.39	INC: 92.92
AZI: 265.96	AZI: 266.54	AZI: 268.15	AZI: 268.48	AZI: 269.68	AZI: 269.11	AZI: 268.89
TVD: 2957.25	TVD: 2956.39	TVD: 2954.87	TVD: 2953.30	TVD: 2952.20	TVD: 2951.04	TVD: 2949.61
VS: 5468.81	VS: 5498.76	VS: 5528.84	VS: 5560.01	VS: 5591.30	VS: 5621.63	VS: 5651.92



PROJECTION TO BIT
 INC: 93.83
 AZI: 268.50
 TVD: 2942.47
 VS: 5765.08

MD: 7563

MD: 7479
 INC: 93.19
 AZI: 268.68
 TVD: 2947.90
 VS: 5683.14

MD: 7510
 INC: 93.60
 AZI: 268.50
 TVD: 2946.06
 VS: 5713.35

2990
 (+3715)