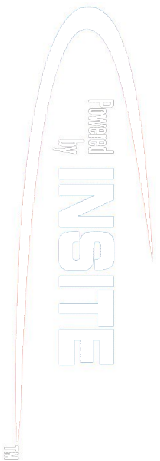


SLIM PHASE 4
DGR Dual Gamma Ray



1 : 240

Country : USA		Field : Wattenberg		Location : Lat: 40° 7' 1.73" North Long: 104° 44' 26.75" West		Well : Gobbler 2N-23Hz		Company : Anadarko Petroleum Corp		Rig : Ensign 132		Company : Anadarko Petroleum Corp		Rig : Ensign 132		Well : Gobbler 2N-23Hz		Field : Wattenberg		Country : USA		API Number : 05-123-36817					
Permanent Datum : Ground Level		Elevation : 5094.00 ft		Log Measured From : Drill Floor		13.00 ft Above Permanent Datum		Drilling Measured From : Drill Floor		MD LOG		Other Services		Directional Drilling		DDSR		KB N/A		DF 5107.00 ft		GL 5094.00 ft		WD N/A			
Depth Logged : 7,690.00 ft To 11,928.00 ft		Unit No. : 11210429		Date Logged : 26-Apr-13 To 29-Apr-13		Job No. : CA-XX-0900275970		Total Depth MD : 11,928.00 ft TVD: 7,360.01 ft		Plot Type : Final		Plot Date : 01-May-13		Borehole Record (MD)		Run No.		Size		From		To					
Spud Date : 16-Apr-13		Borehole Record (MD)		Run No.		Size		From		To		Casing Record (MD)		Run No.		Size		Weight		From		To					
Run No.		Size		From		To		Run No.		Size		From		To		Run No.		Size		Weight		From		To			
5		6.125 in		7,690.00 ft		11,928.00 ft														9,625 in		40.60 lbpf		SUREFACE		1,073.00 ft	
																				7,000 in		28.00 lbpf		SUREFACE		7,676.00 ft	

SENSOR INFORMATION					
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Downhole Processor Information					
Tool Type	HCIM				
Software Version	88.56				
Sub Serial Number	11235113				
Insert Serial Number	10951820				
Date and Time Initialized	26-Apr-13 12:39				
Date and Time Read	29-Apr-13 23:47				
ECMB SW Version	N/A				

Directional Sensor Information					
Tool Type	PCDC				
Distance From Bit (ft)	41.28				
Software Version	6.21				
Sub Serial Number	12121221				
Sonde Serial Number	11297583				
Sensor ID Number	N/A				
Toolface Offset (deg)	5.75				

Gamma Ray Sensor Information					
Tool Type	DGR				
Distance From Bit (ft)	63.27				
Recorded Sample Period (sec)	8				
Software Version	N/A				
Sub Serial Number	11235113				
Insert/Sonde Serial Number	262542				

Resistivity Sensor Information					
Tool Type	Slim P4				
Distance From Bit (ft)	56.28				
Recorded Sample Period (sec)	12				
Software Version	5.55				
Sub Serial Number	11235113				
Receiver Insert Serial Number	10468588				
Transmitter Insert Serial Number	11032505				
Receiver Orientation	Up				

Pulser Controller Sensor Information					
Tool Type	PCM				
Software Version	8.17				
PIC Software Version					
Sub/HOC Serial Number	11633645				
Insert/Probe/Module SN	10921370				
Battery Serial Number	N/A				
Valve Insert SN	N/A				
DC Insert Serial Number	N/A				
Choke Size (32nd)	N/A				
Driver Current (amps)	N/A				
Driver SMI Current (amps)	N/A				
Boot Strap Version					

REMARKS					
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<div>1. All depths are calibrated to the driller's pipe tally and are measured from the rotary table.</div> <div>2. No depth corrections have been made for pipe stretch or compression.</div>					
--	--	--	--	--	--

2. No depth corrections have been made for pipe stretch or compression.
3. All data presented is recorded (memory data) unless otherwise stated.
4. All main log data was logged while drilling
5. Environmental parameters used to process Gamma Ray are as follows:
 □ Hole Size: 8.75" 6820-7690, 6.125" 7690-11928
 □ Mud Density: 9.3 to 10.1 ppg
6. Resistivity tools were not utilized on runs 100-300.
7. Formation Exposure Time is the time from between the bit cutting new formation and the EWR tool passing over that area.
8. The following smoothing parameters have been applied to the data:
 □ ROP: 0.5 ft interval, 1.2 ft coercion distance
 □ All other curves: 0.5 ft interval, 0.6 ft coercion distance

WARRANTY

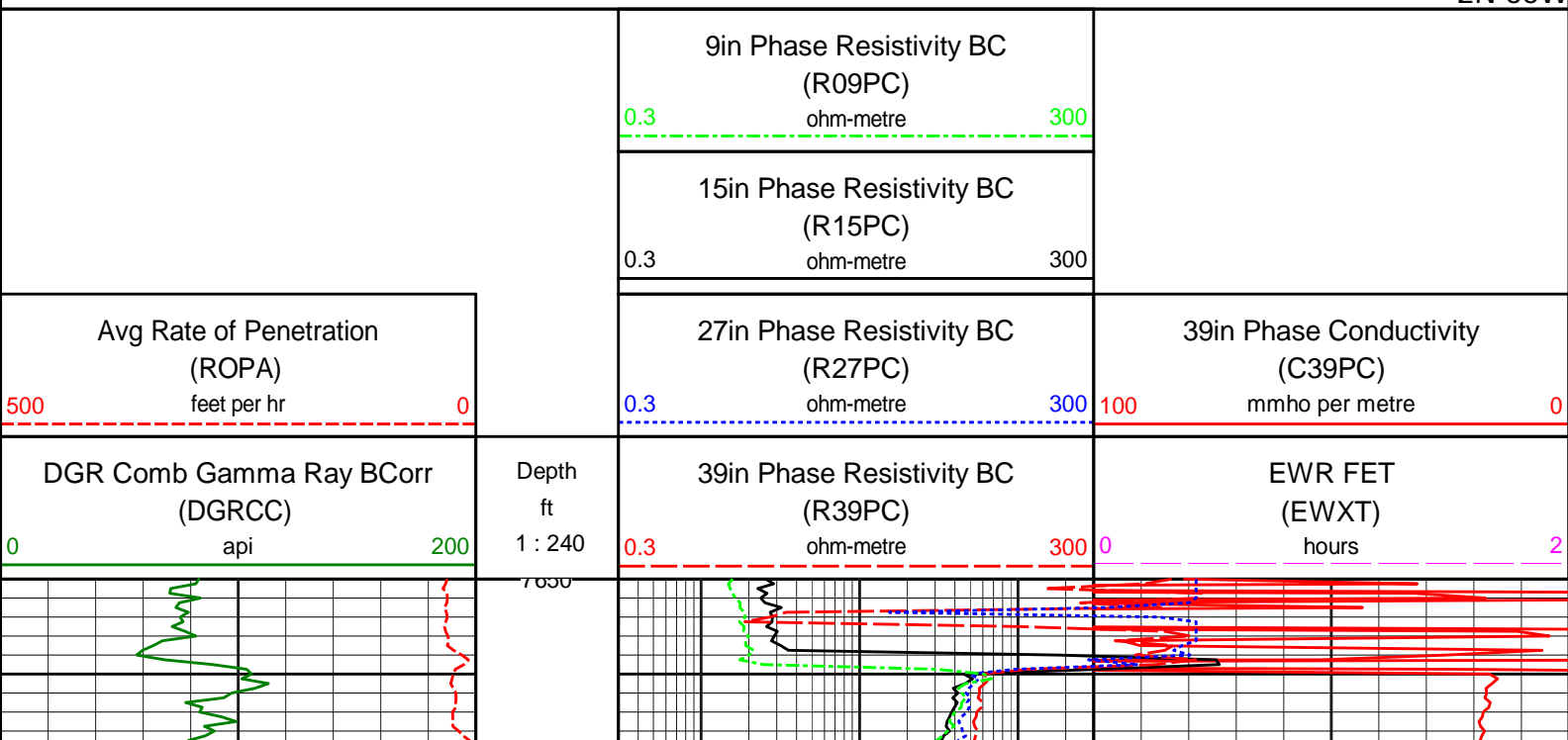
HALLIBURTON WILL USE ITS BEST EFFORTS TO FURNISH CUSTOMERS WITH ACCURATE INFORMATION AND INTERPRETATIONS THAT ARE PART OF, AND INCIDENT TO, THE SERVICES PROVIDED. HOWEVER, HALLIBURTON CANNOT AND DOES NOT WARRANT THE ACCURACY OR CORRECTNESS OF SUCH INFORMATION AND INTERPRETATIONS. UNDER NO CIRCUMSTANCES SHOULD ANY SUCH INFORMATION OR INTERPRETATION BE RELIED UPON AS THE SOLE BASIS FOR ANY DRILLING, COMPLETION, PRODUCTION, OR FINANCIAL DECISION OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING VENTURE, DRILLING RIG OR ITS CREW OR ANY OTHER THIRD PARTY. THE CUSTOMER HAS FULL RESPONSIBILITY FOR ALL DRILLING, COMPLETION AND PRODUCTION OPERATION. HALLIBURTON MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SERVICES RENDERED. IN NO EVENT WILL HALLIBURTON BE LIABLE FOR FAILURE TO OBTAIN ANY PARTICULAR RESULTS OR FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF ANY INFORMATION OR INTERPRETATION PROVIDED BY HALLIBURTON.

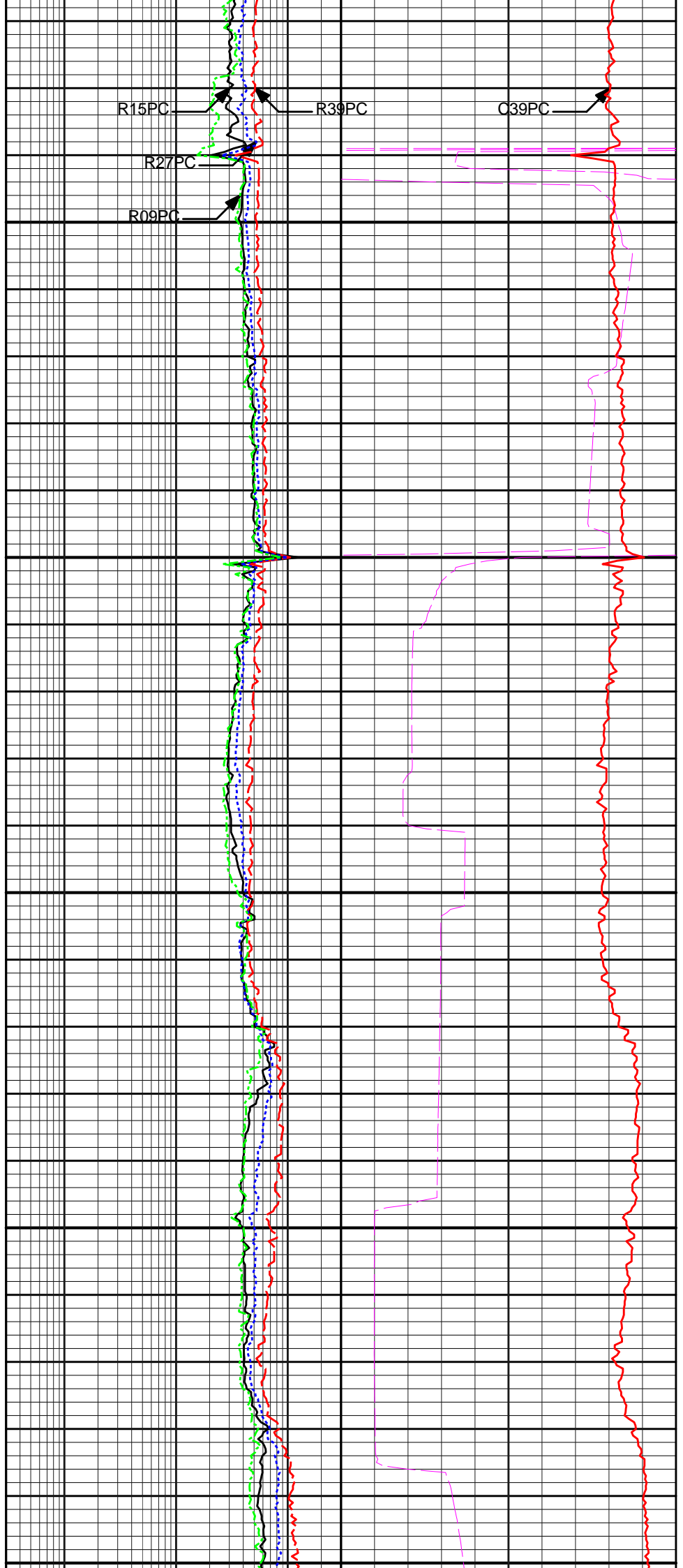
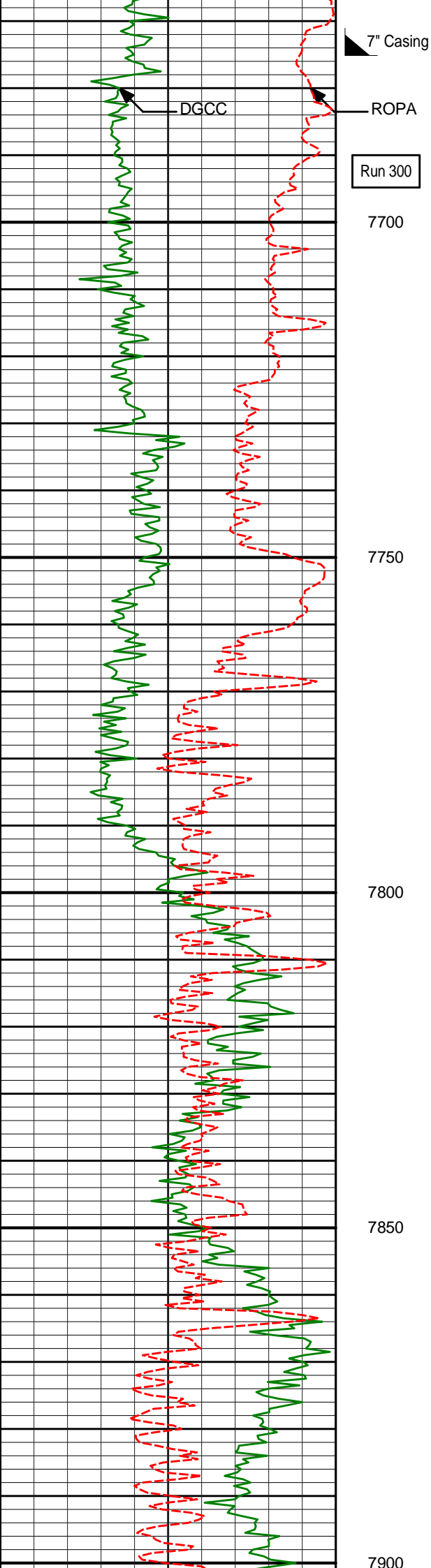
HALLIBURTON

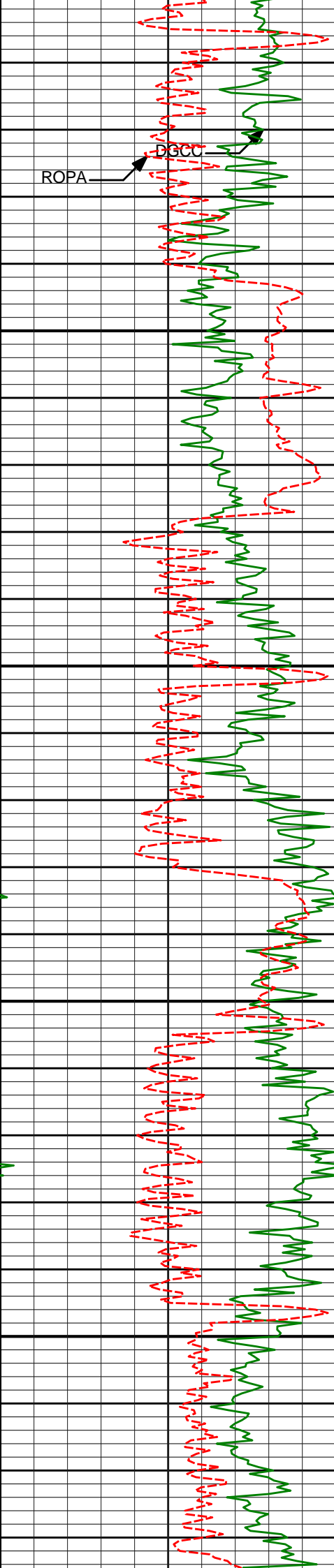
Sperry Drilling Services

MD Detail Log 1:240

Anadarko Petroleum Corp
Gobbler 2N-23Hz
Ensign 132
2N 66W





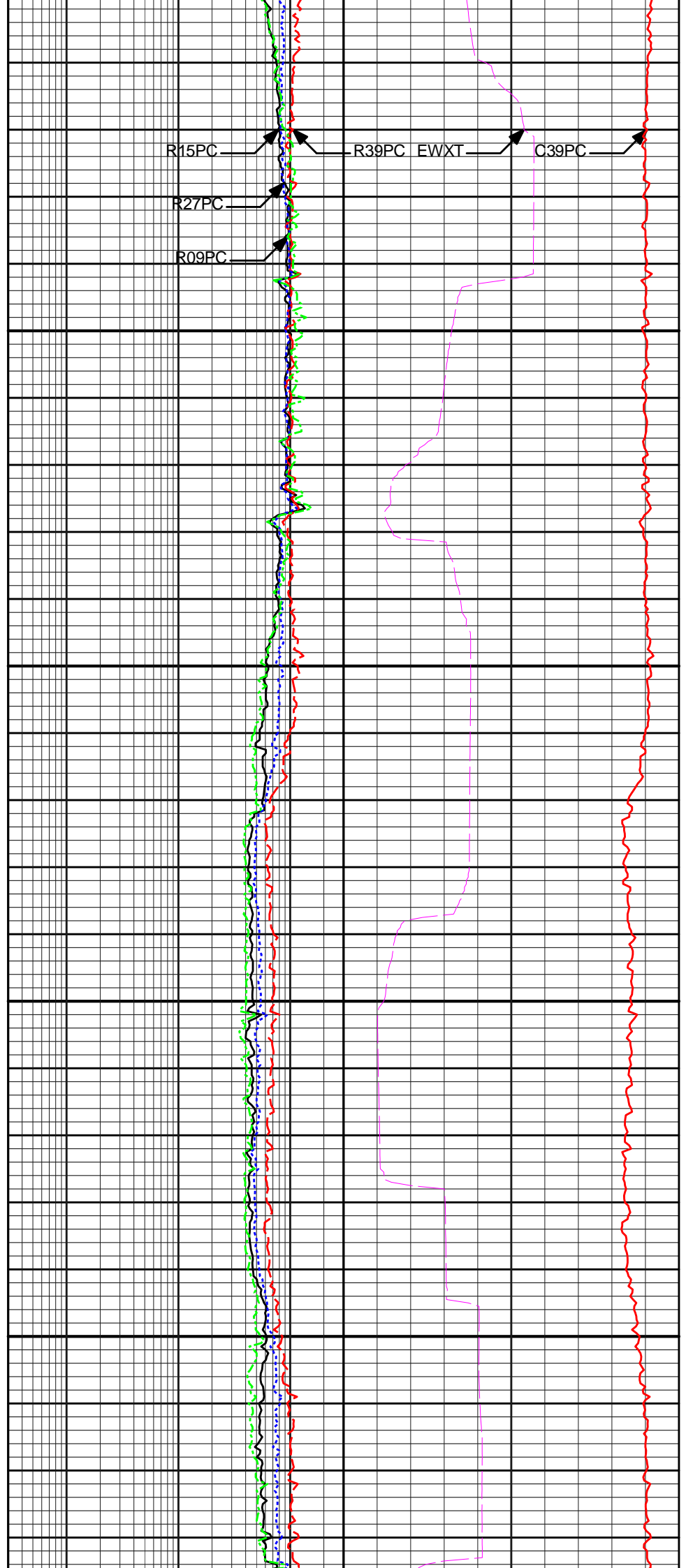


7950

8000

8050

8100



R15PC

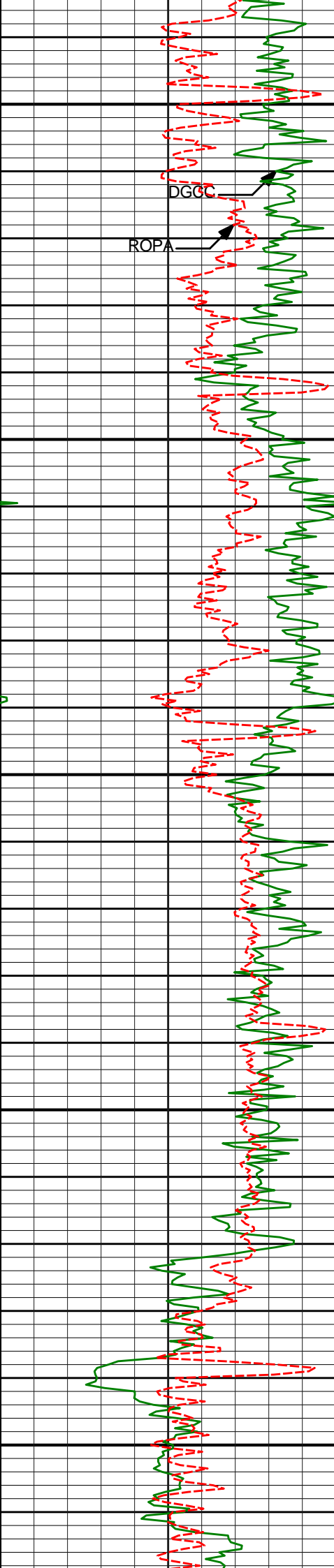
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R09PC

R39PC

EWXT

C39PC



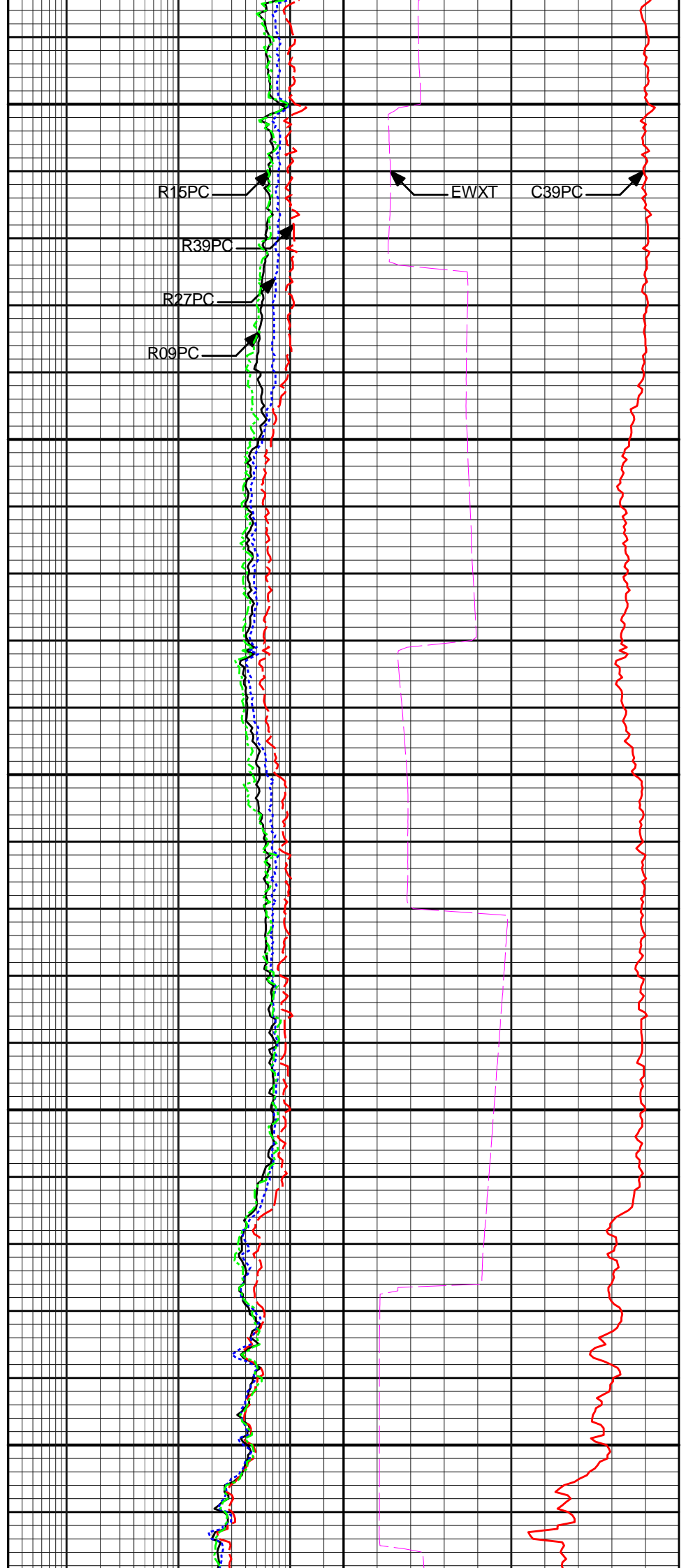
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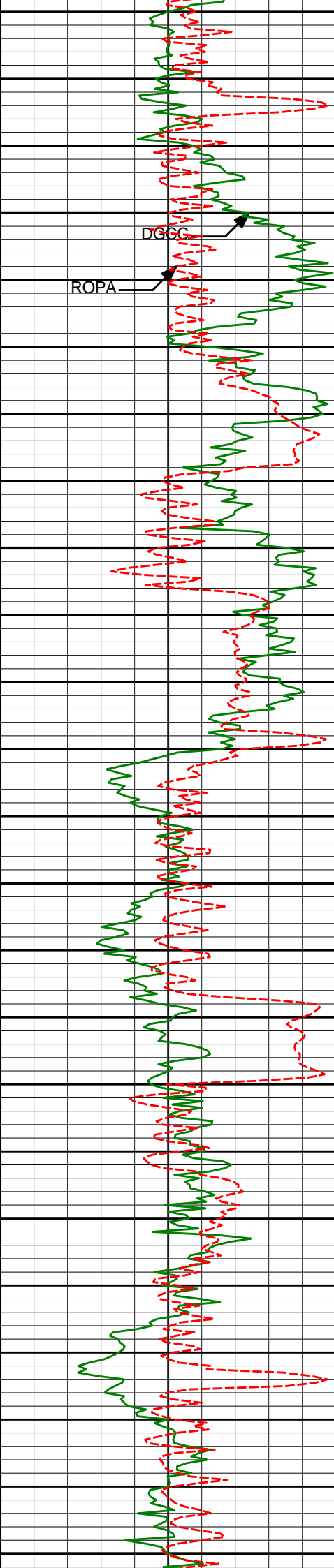
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8250

8300

8350





ROPA

D3GC

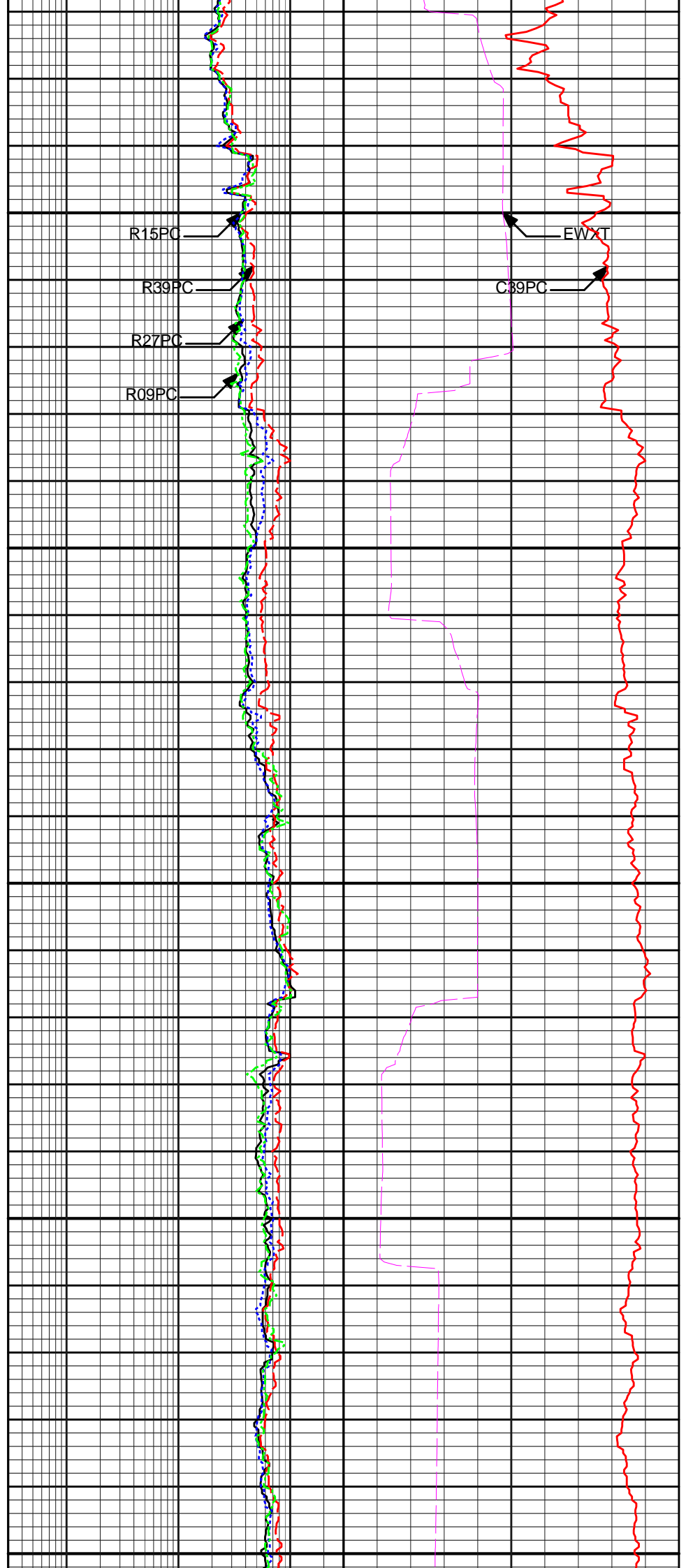
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8500

8550

8600



R15PC

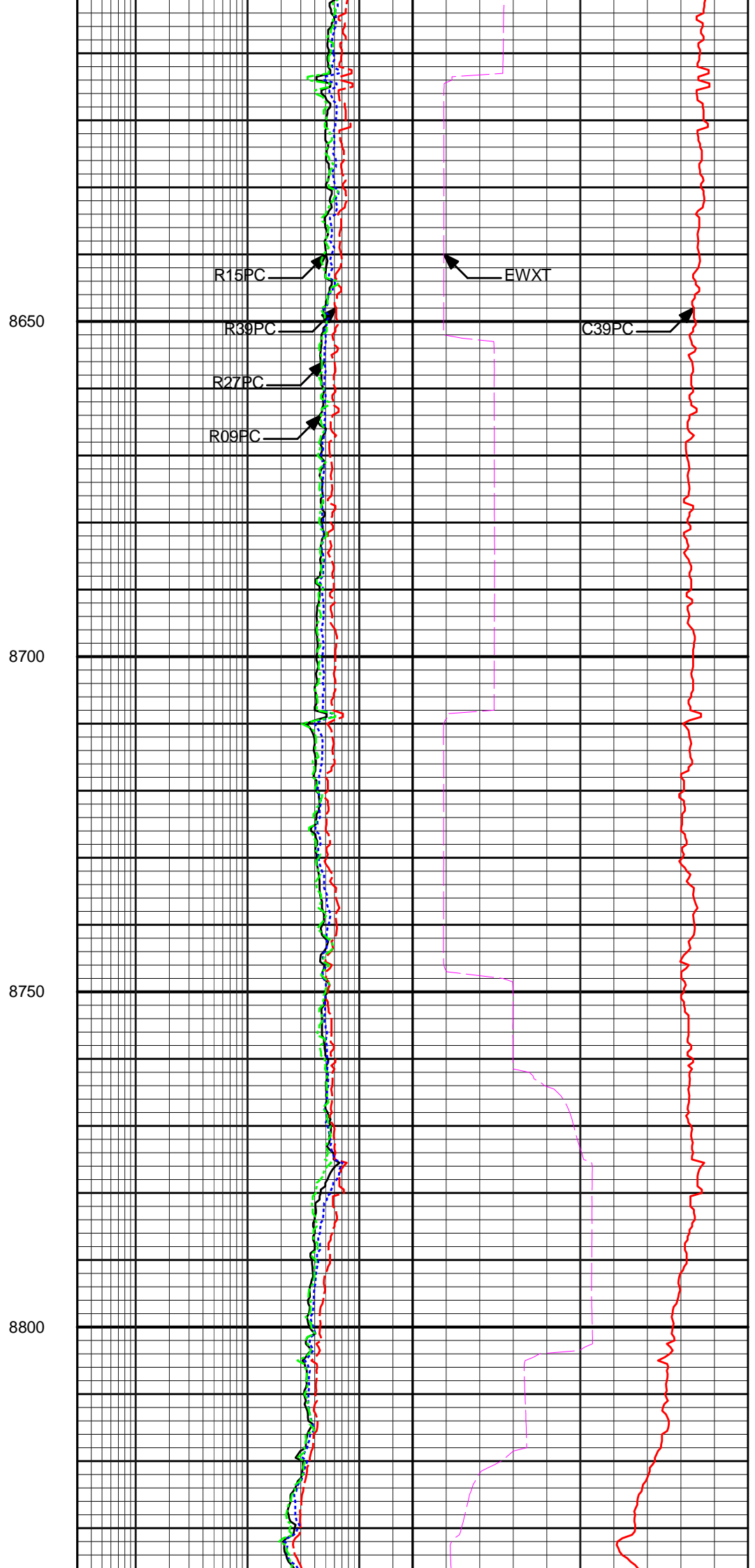
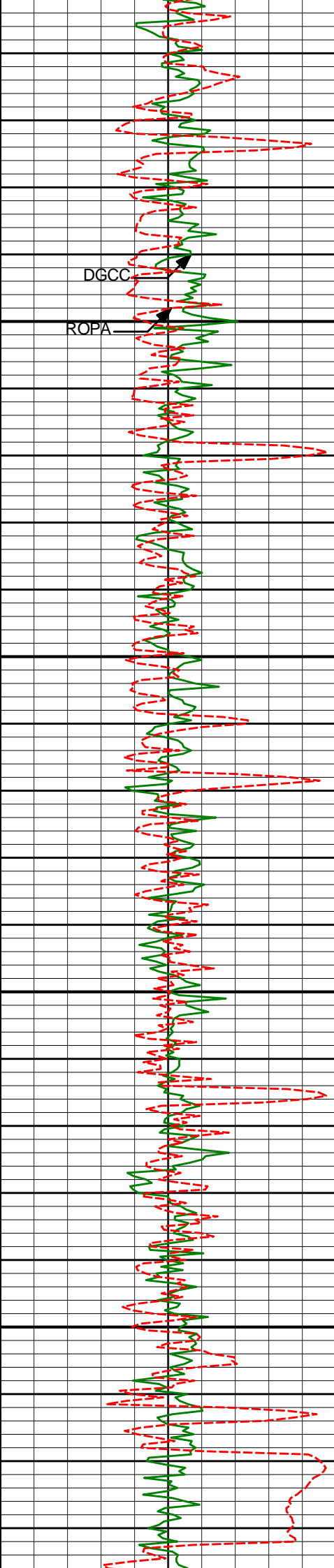
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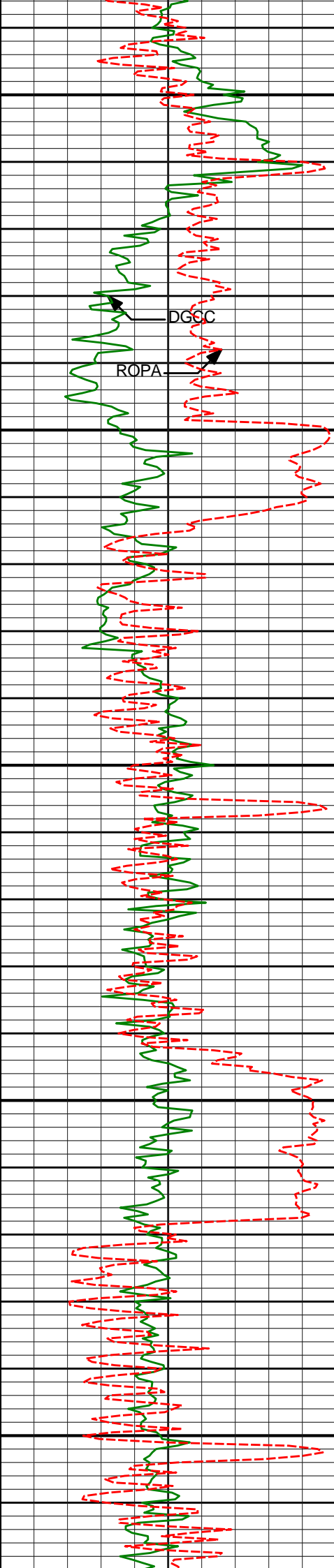
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C39PC

EWXT





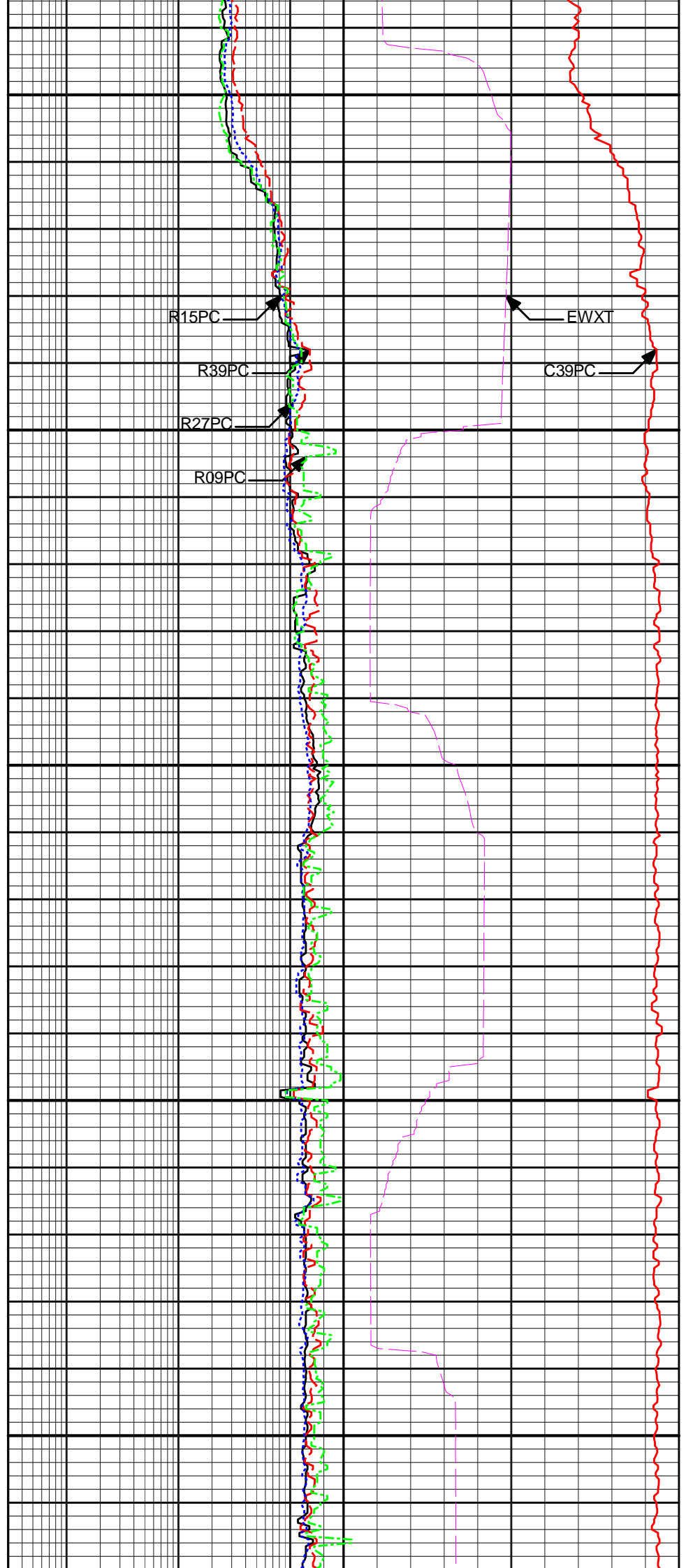
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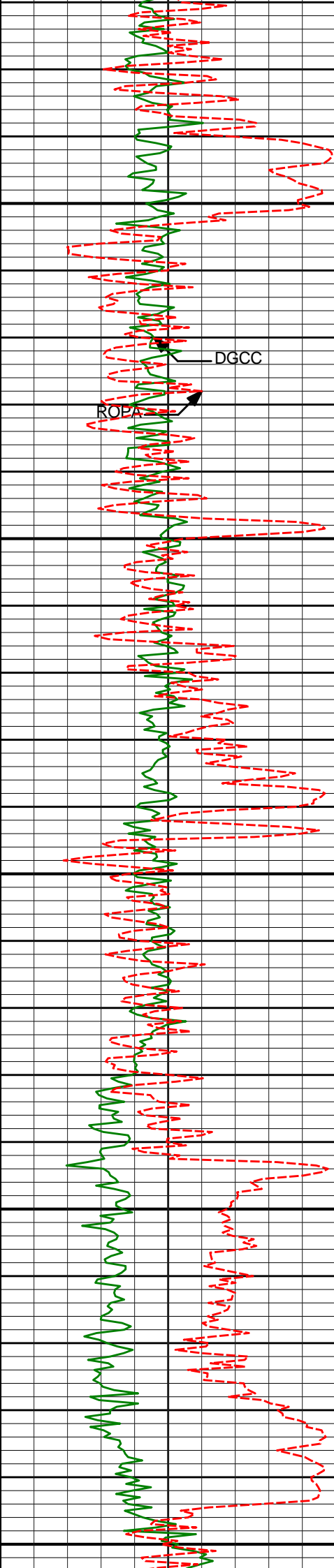
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8950

9000

9050





9100

DGCC

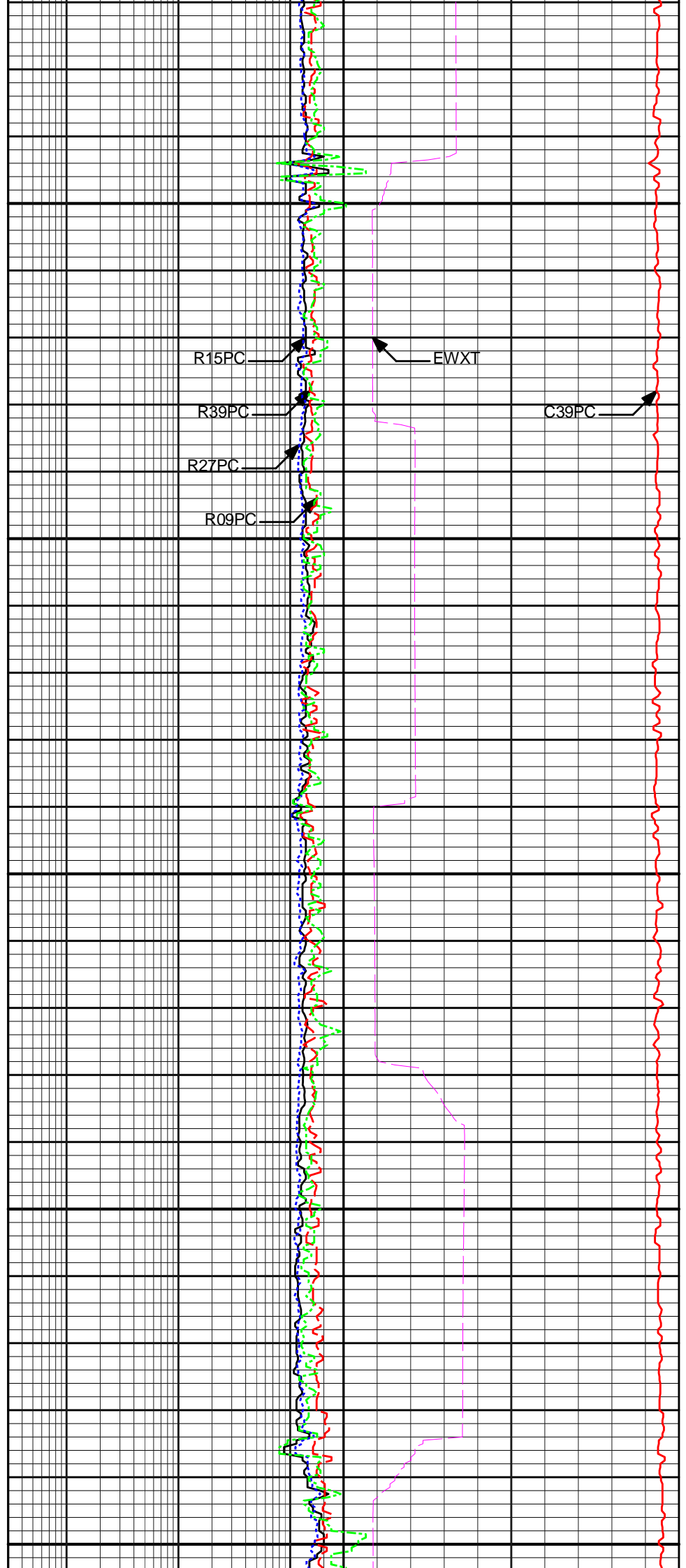
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9200

9250

9300



R15PC

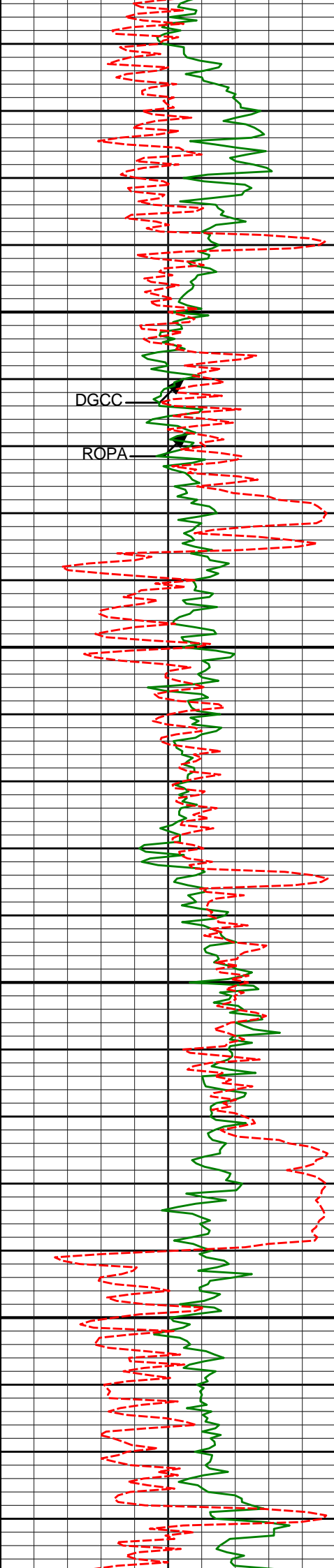
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R09PC

EWXT

C39PC



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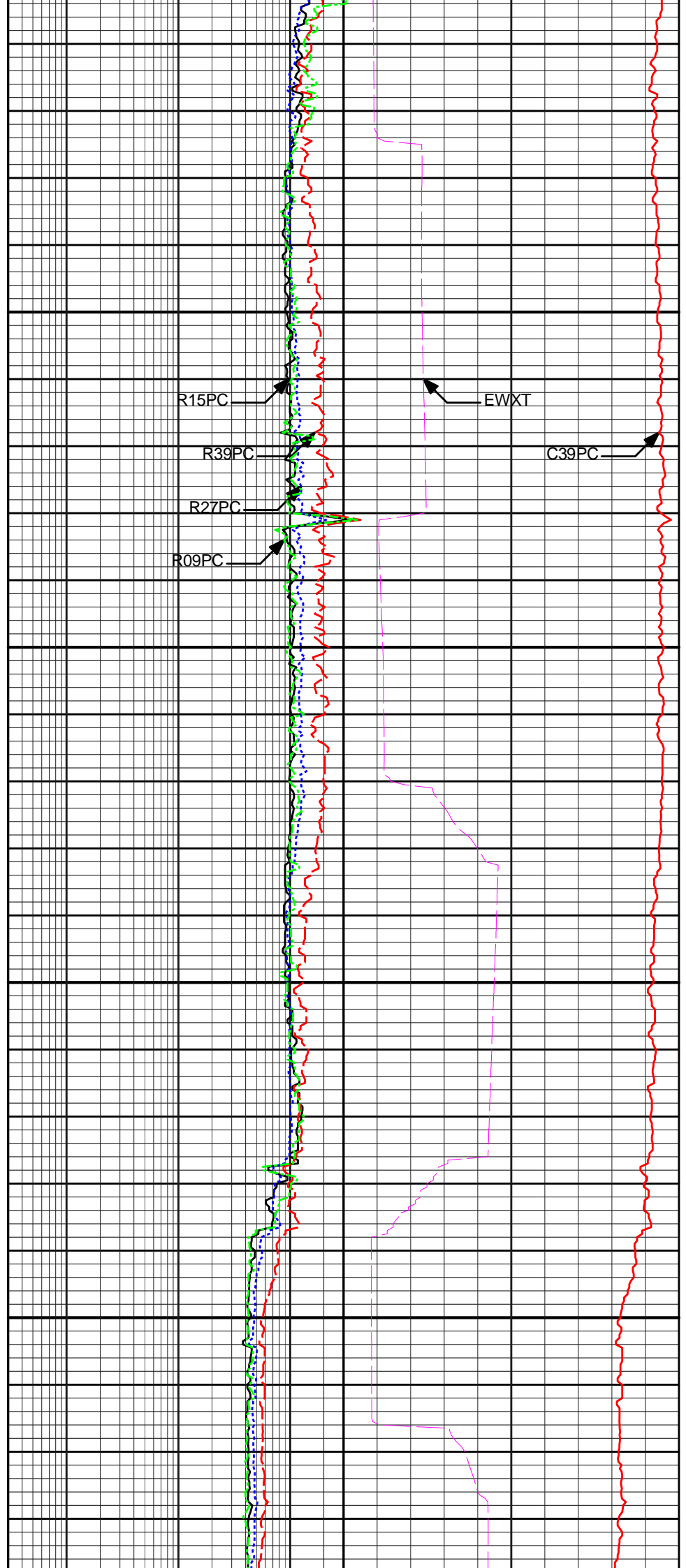
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9450

9500



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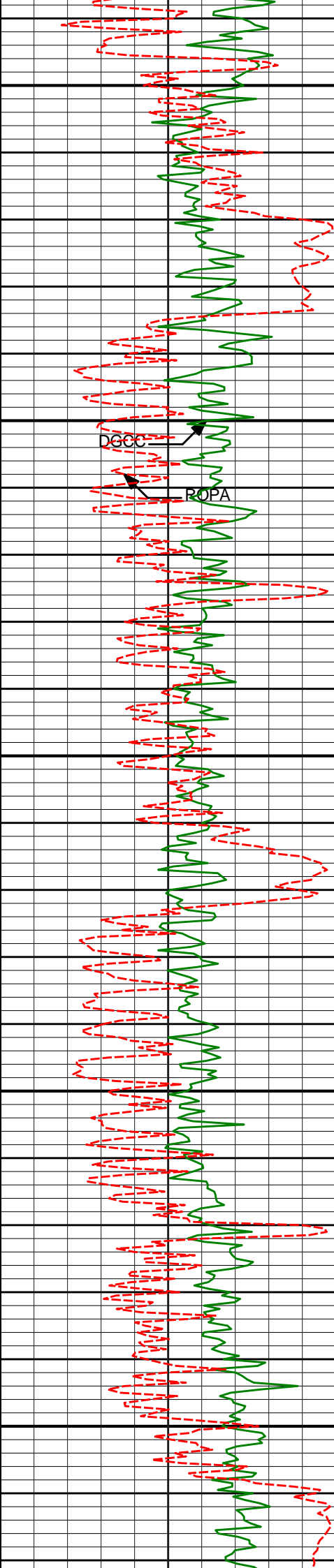
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C39PC



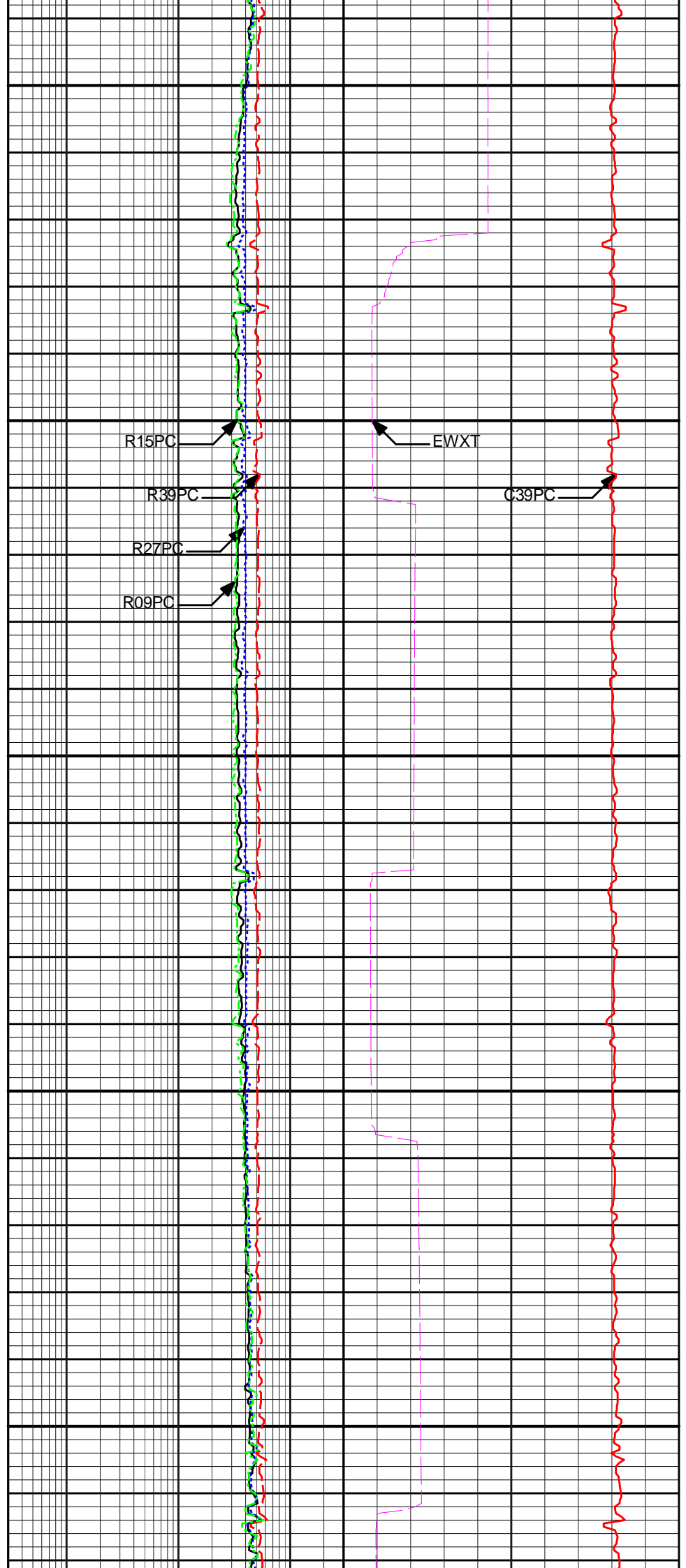
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9700

9750



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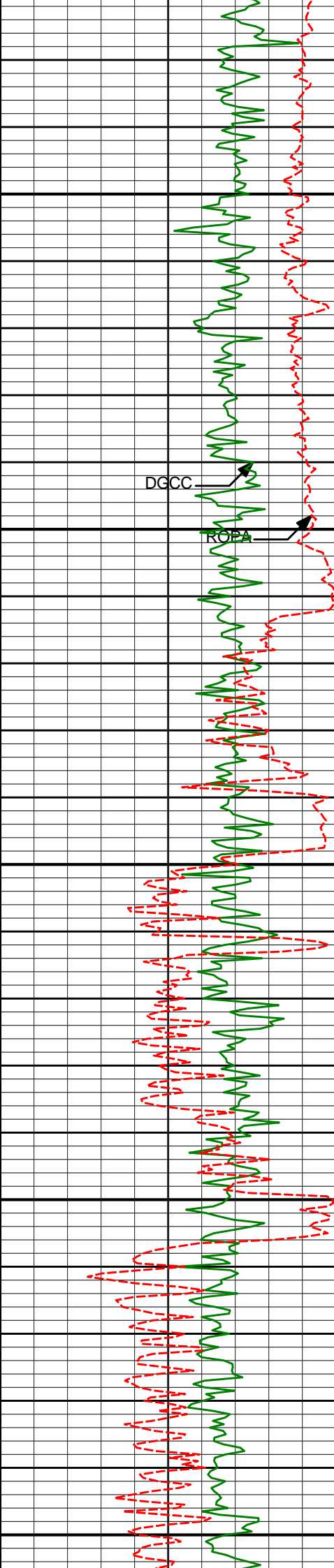
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R27PC

R09PC

EWXT

C39PC



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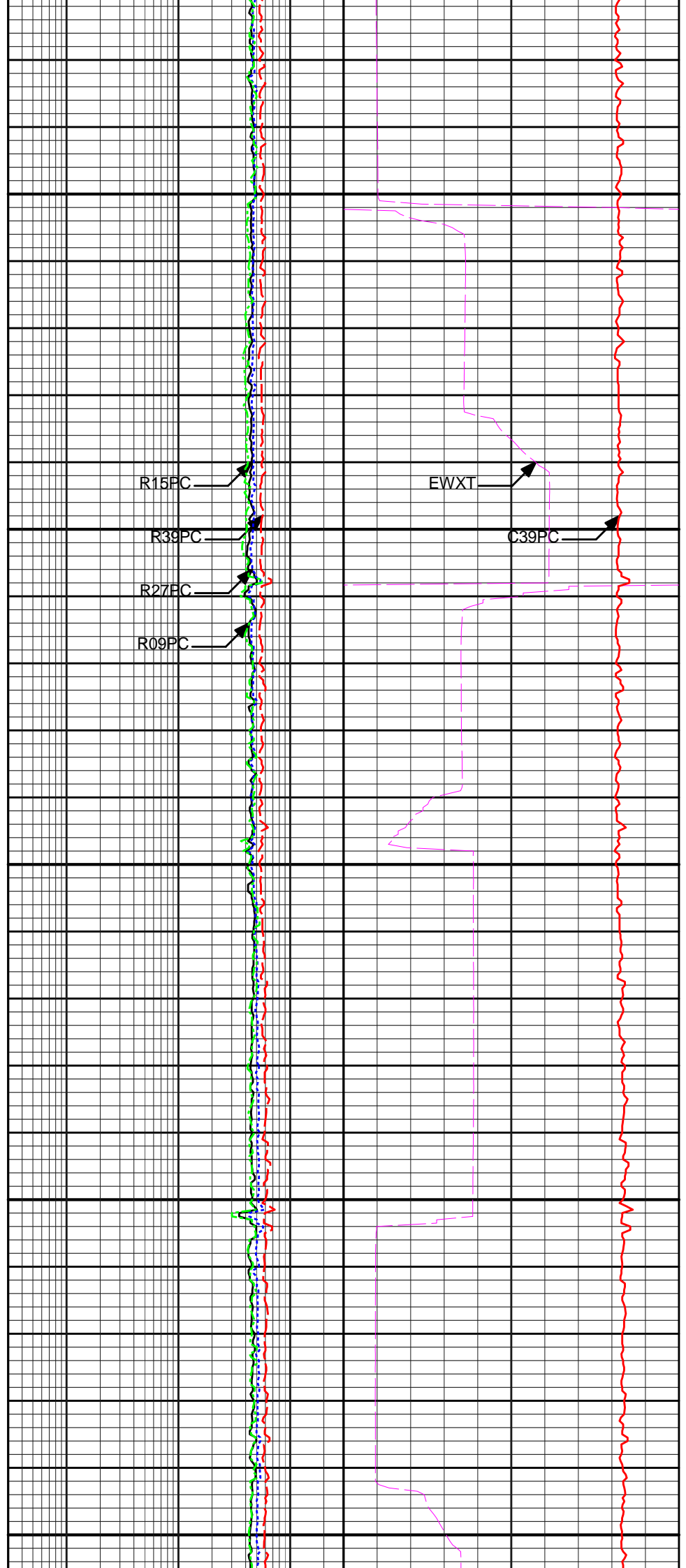
ROP

9850

9900

9950

10000



R15PC

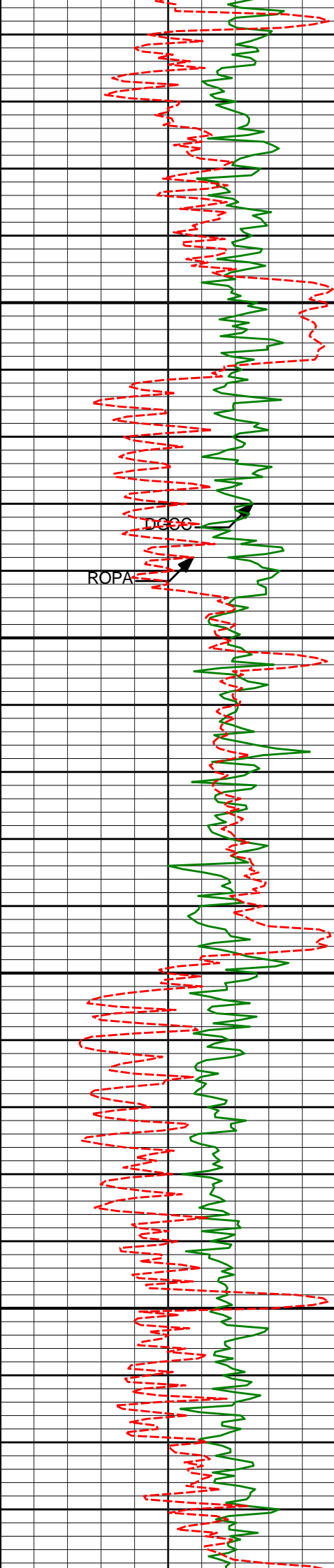
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R09PC

EWXT

C39PC

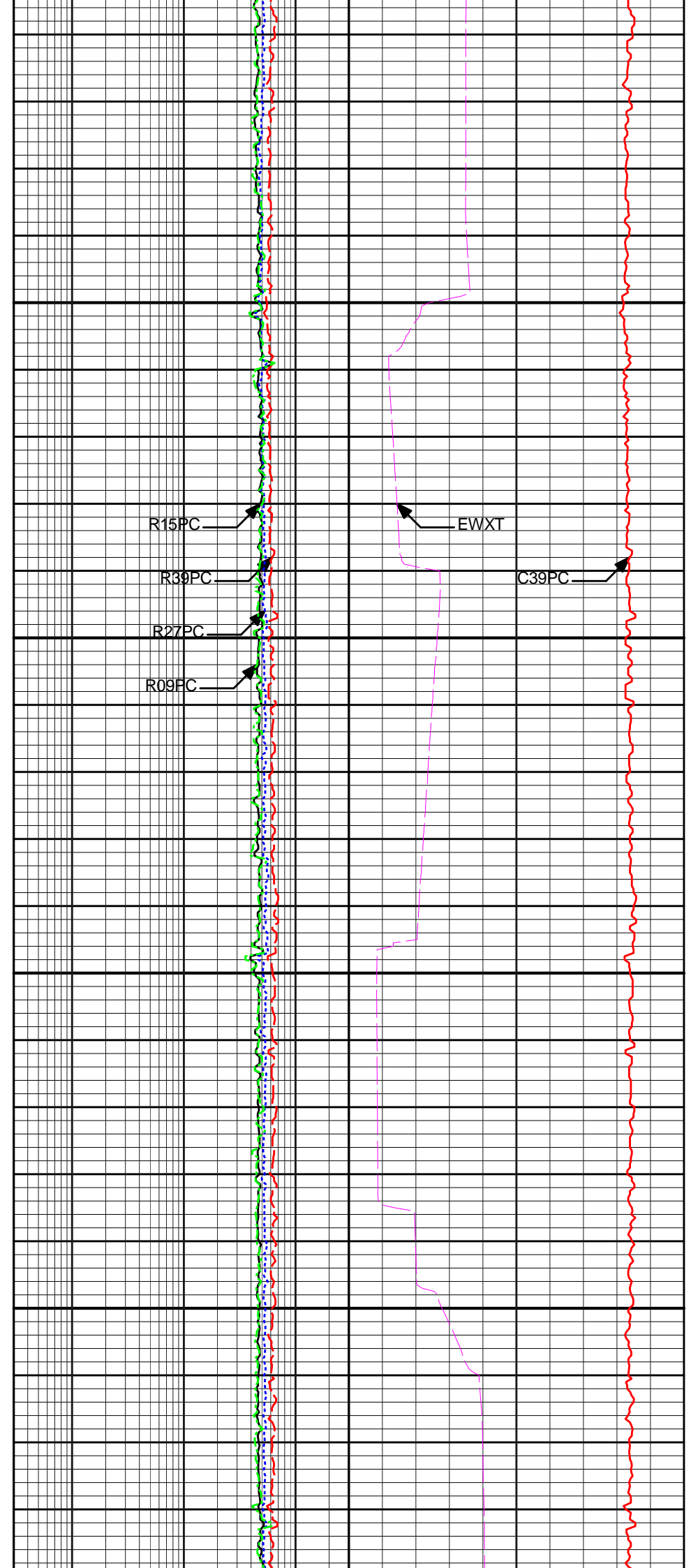


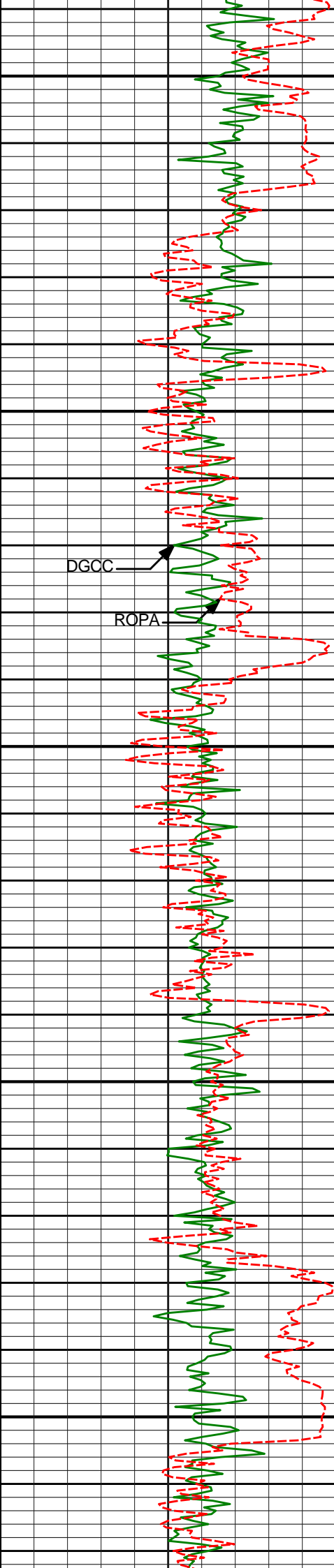
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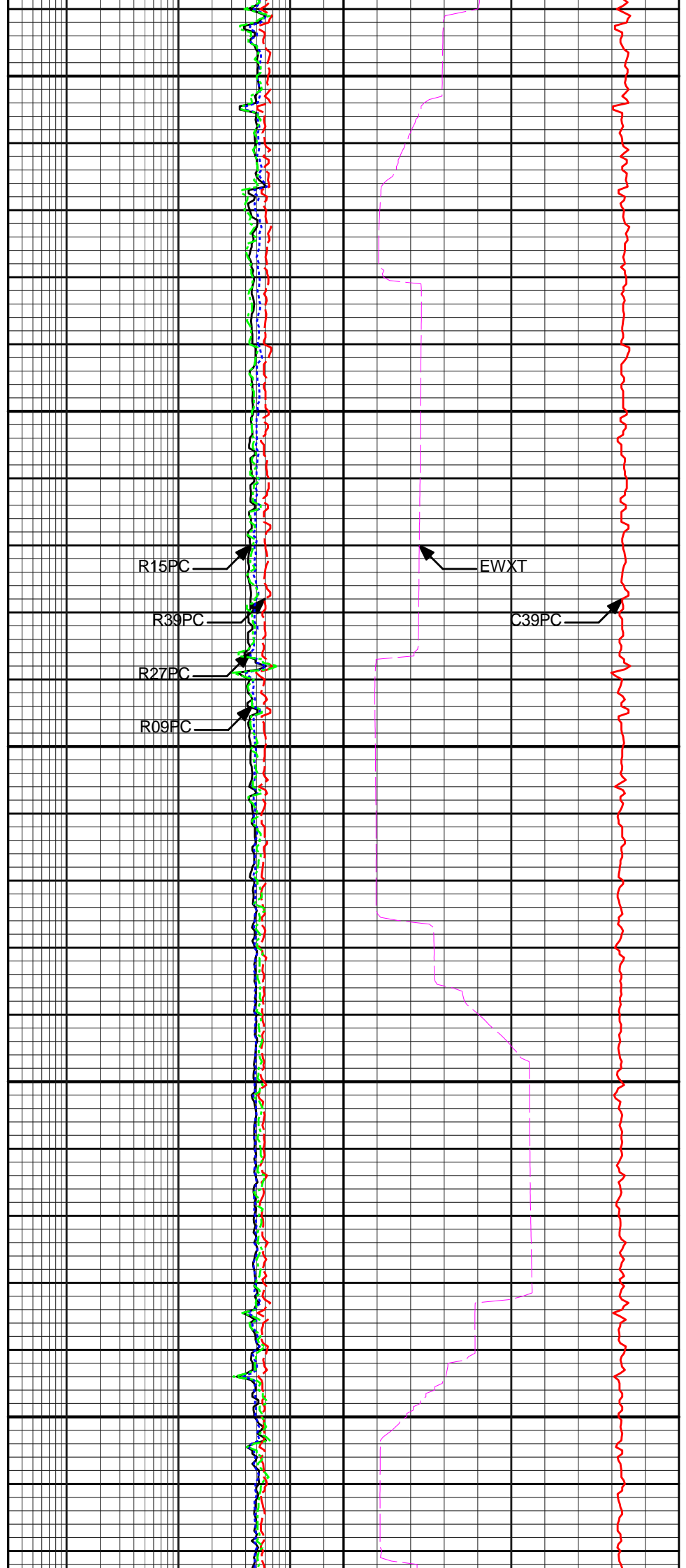
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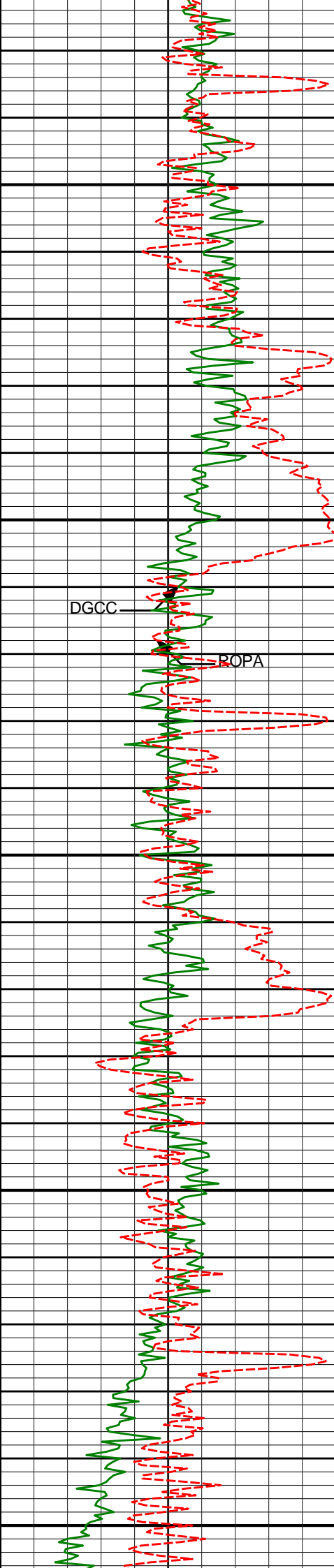
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R09PC

EWXT

C39PC



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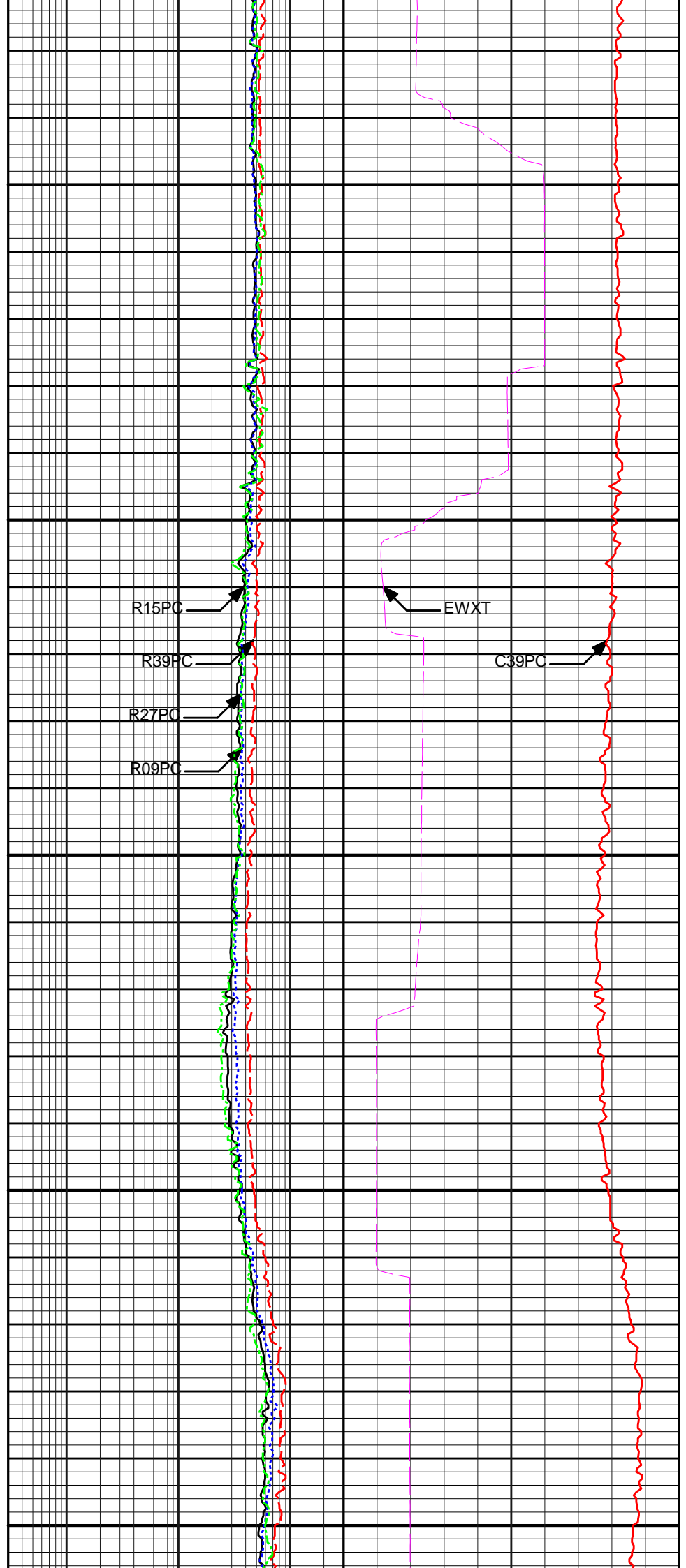
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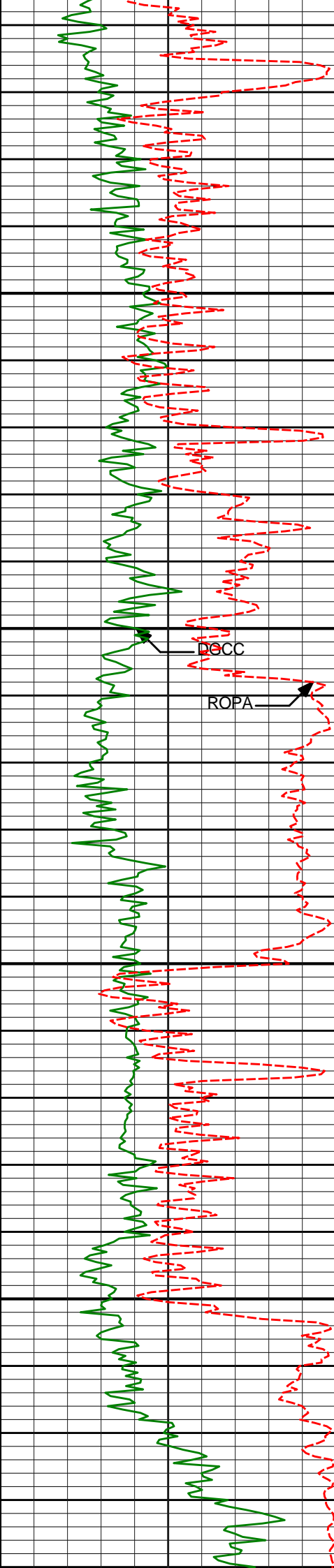
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R09PC

EWXT

C39PC



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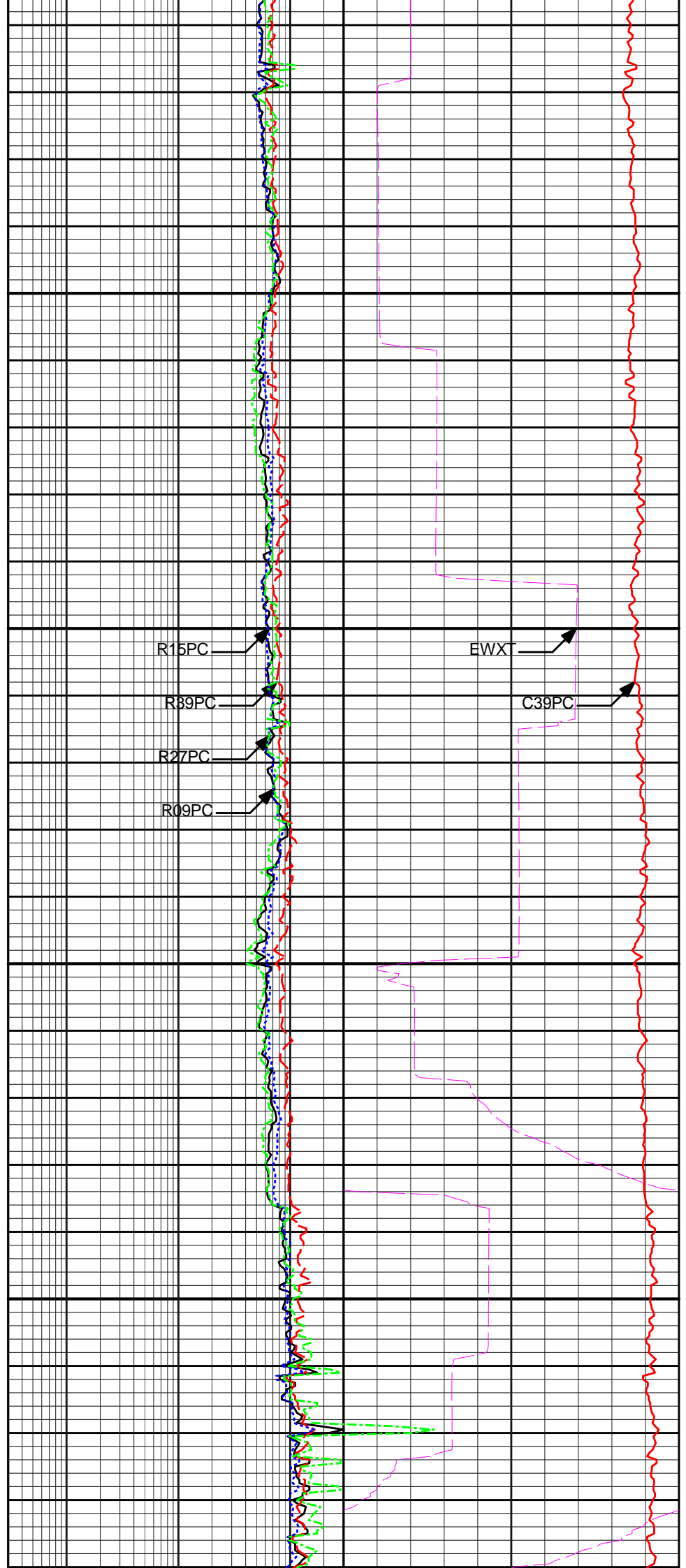
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10900

DOCC

ROPA



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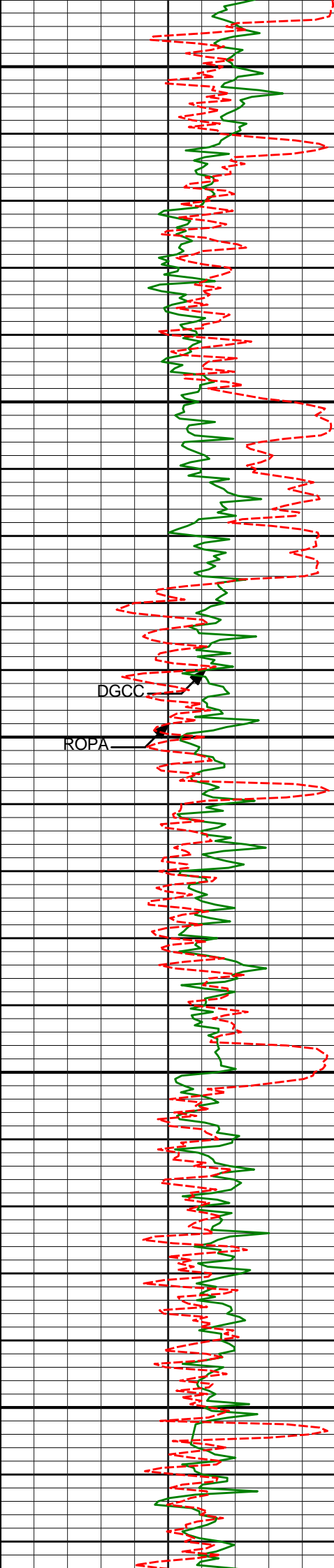
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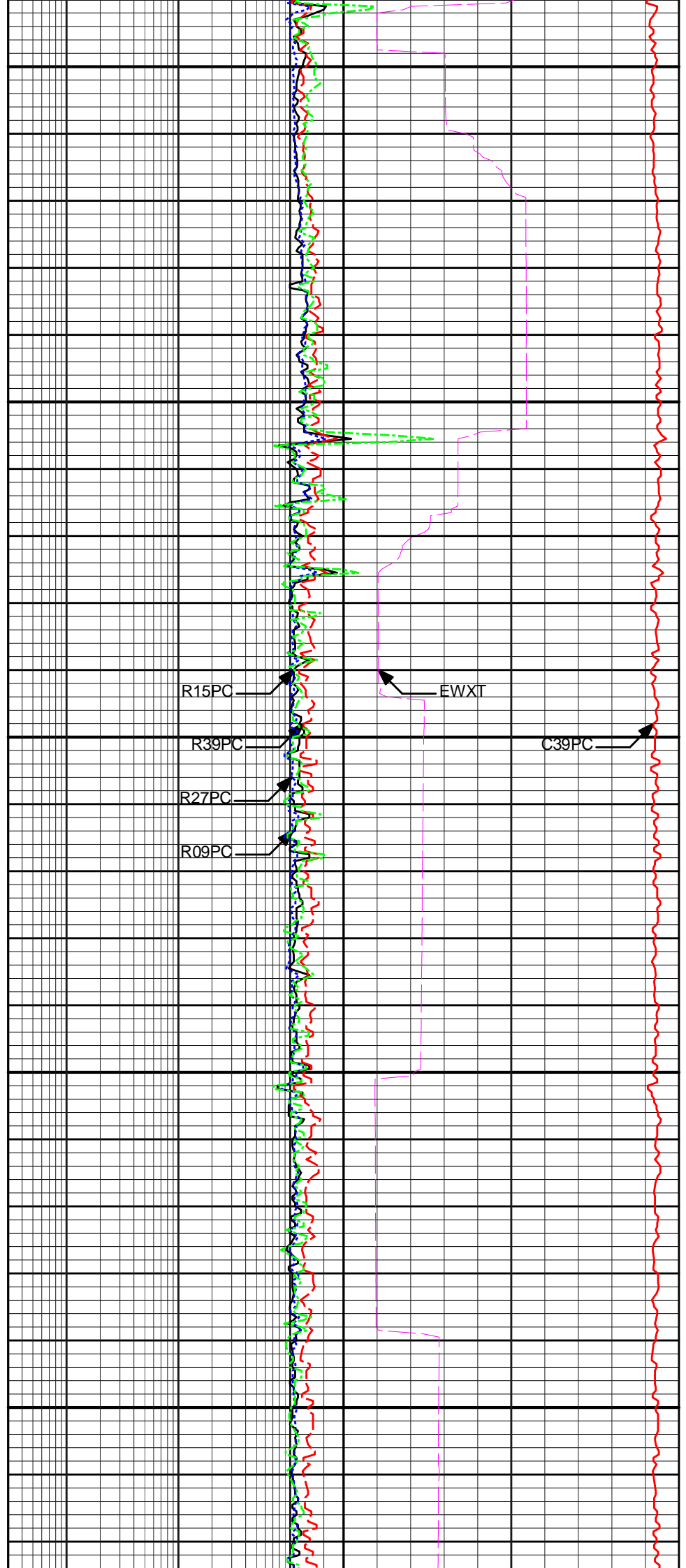
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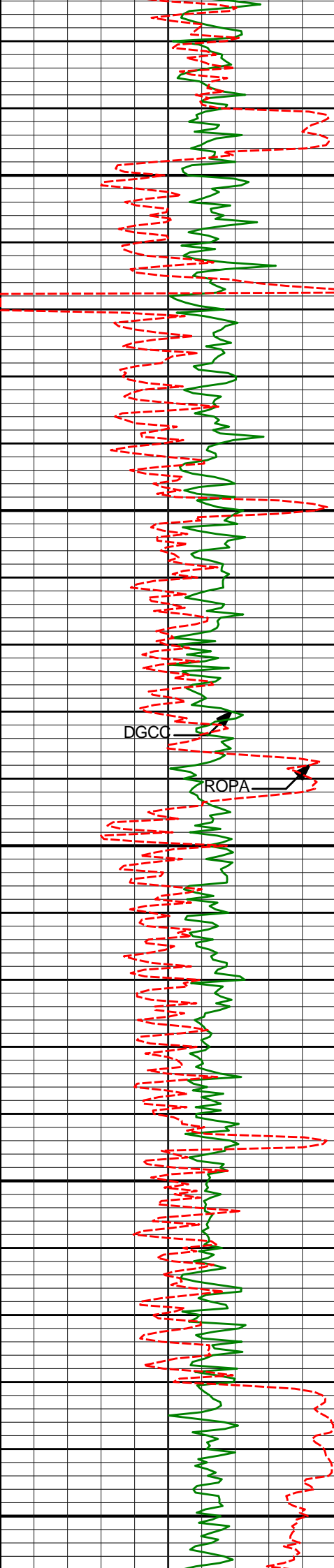
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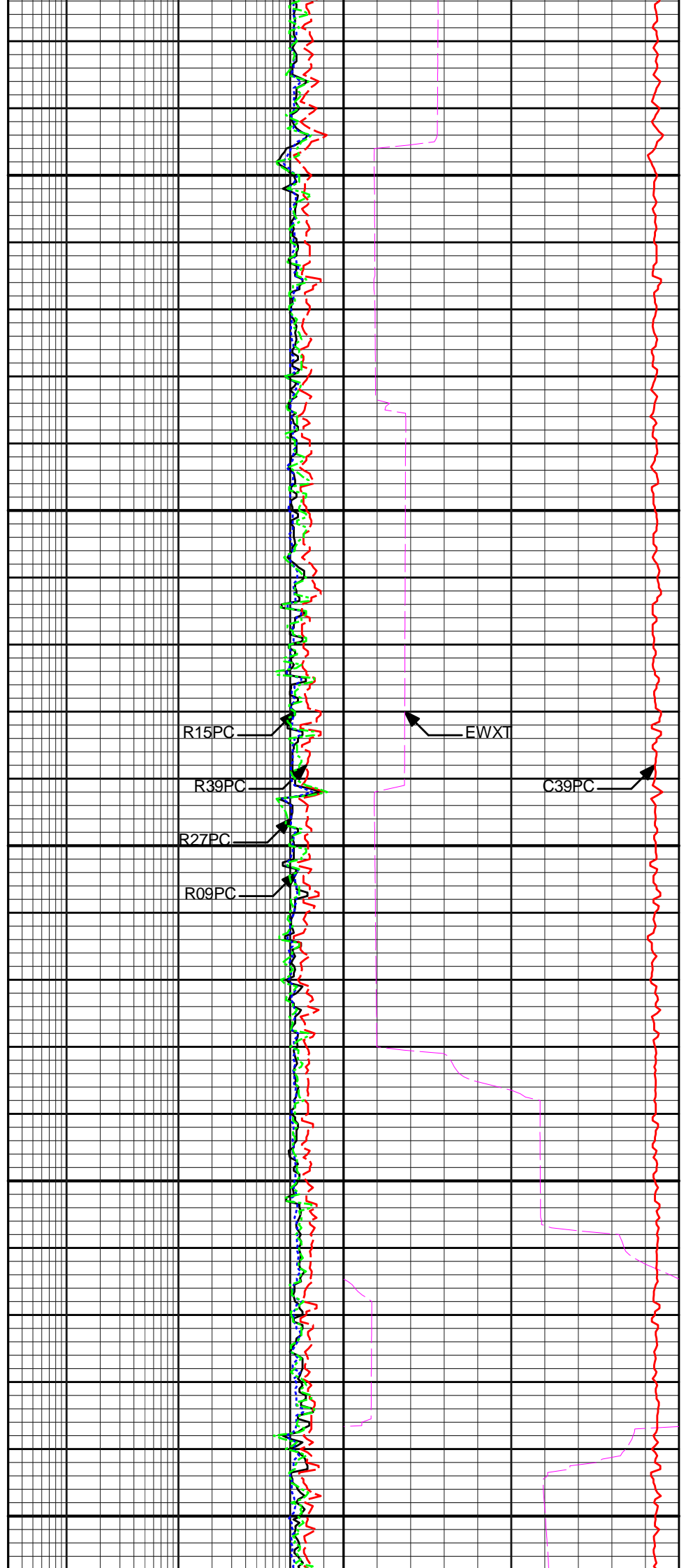
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11350

11400



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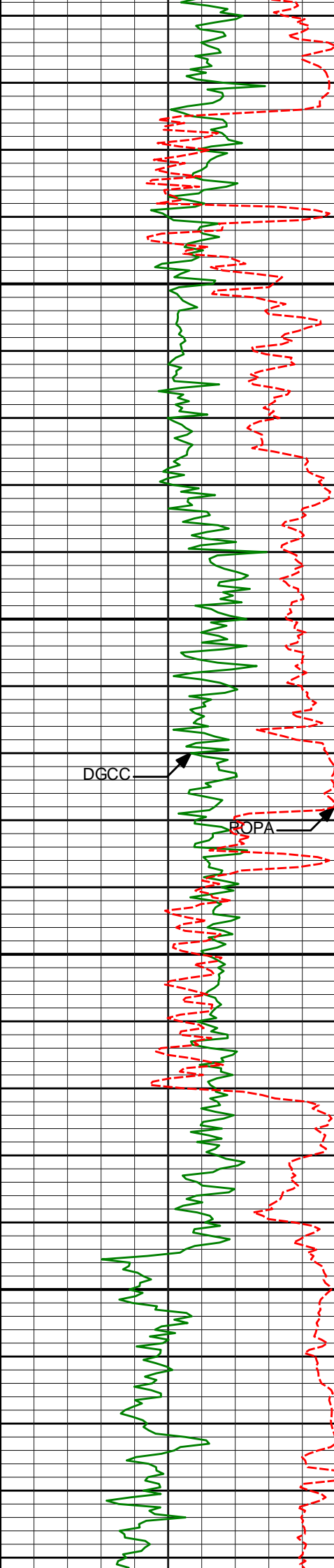
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R27PC

R09PC

EWXT

C39PC



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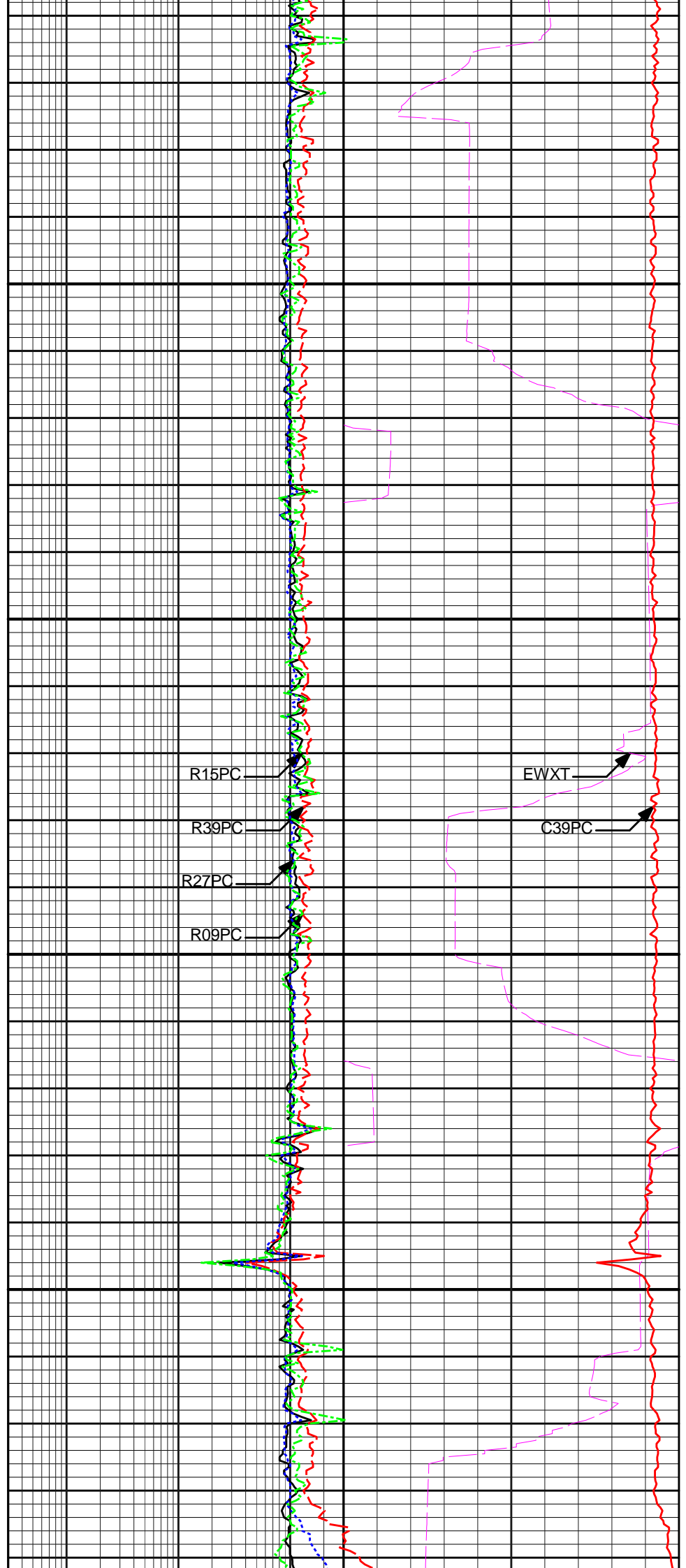
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DGCC

ROPA



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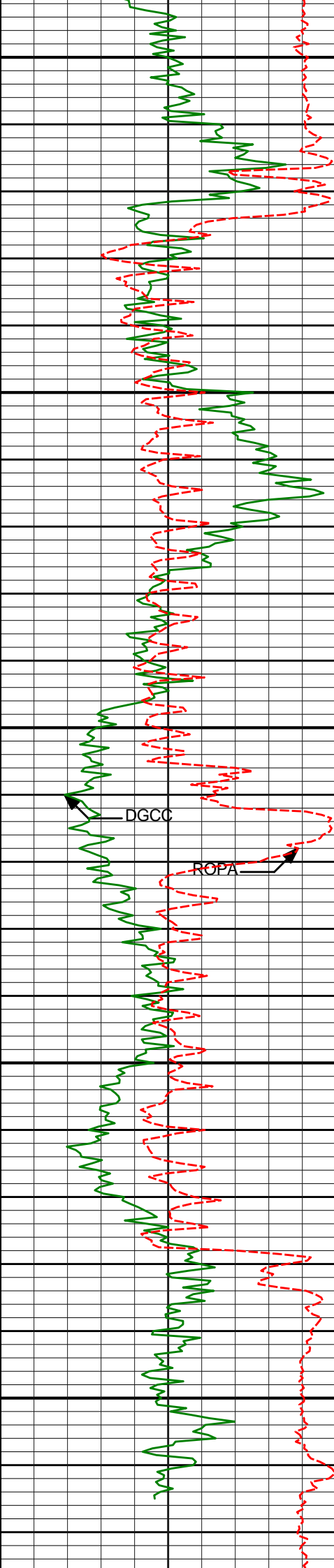
R39PC

R27PC

R09PC

EWXT

C39PC



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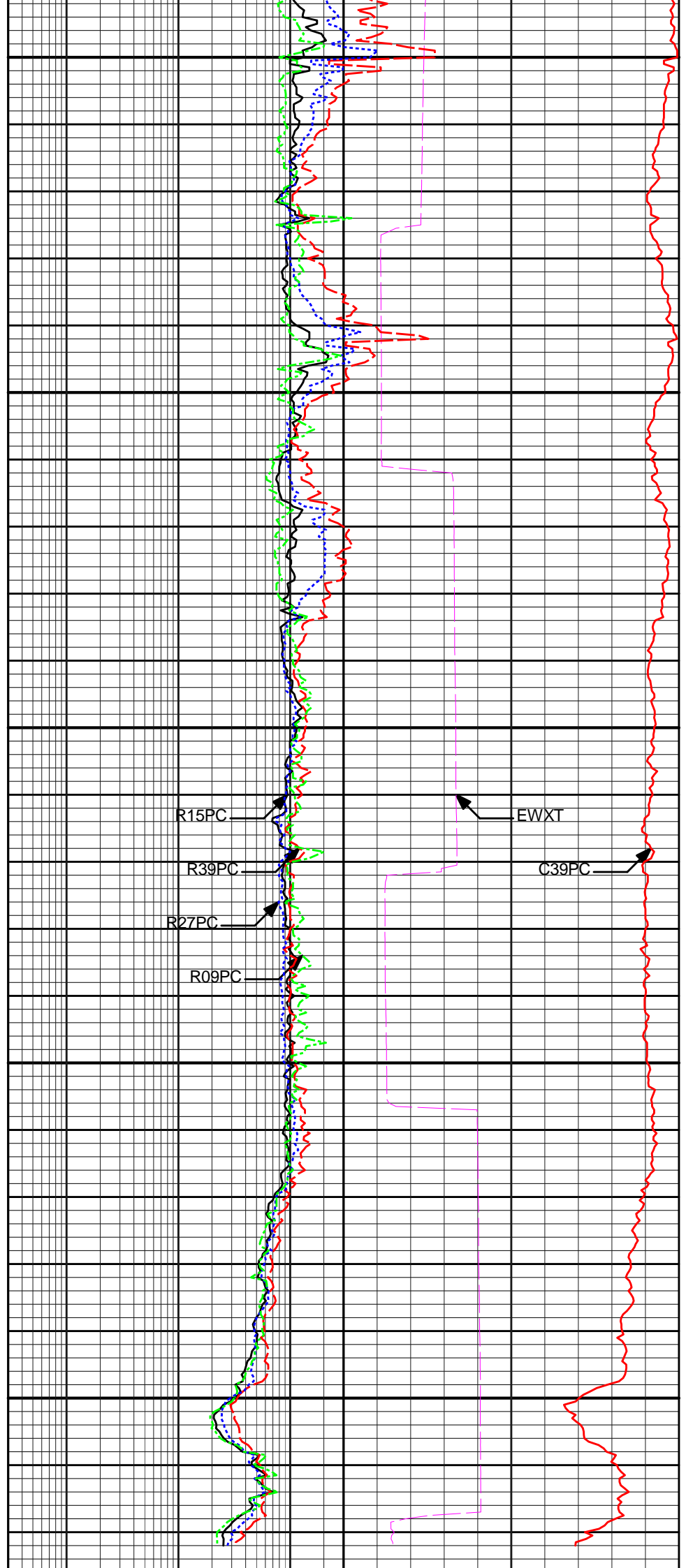
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ROPA



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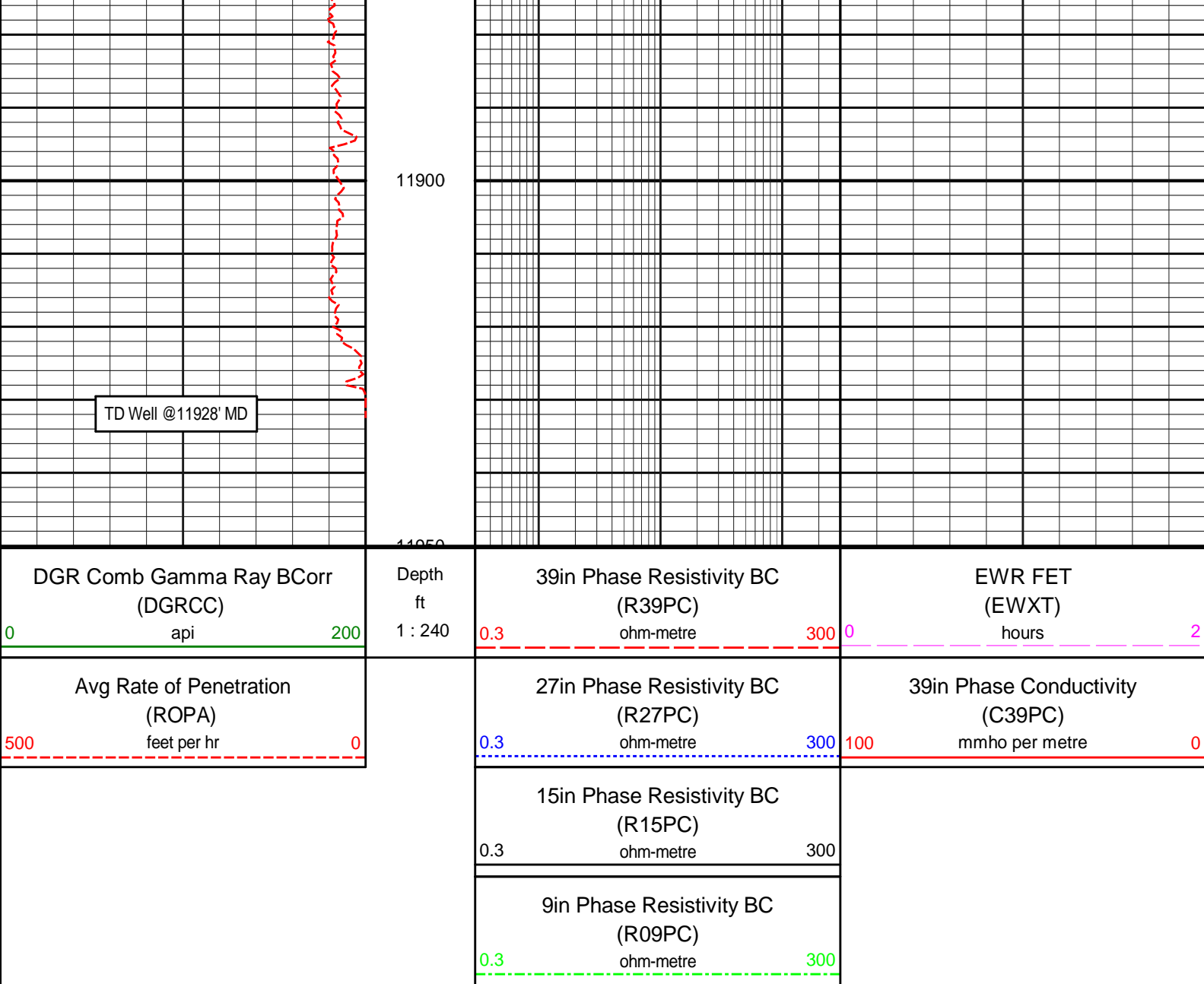
R39PC

R27PC

R09PC

EWXT

C39PC



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DIRECTIONAL SURVEY REPORT

Anadarko Petroleum Corp
Gobbler 2N-23Hz
Wattenberg
Weld Colorado
USA
CA-XX-0900275970

Measured Depth (feet)	Inclination (degrees)	Direction (degrees)	Vertical Depth (feet)	Latitude (feet)	Departure (feet)	Vertical Section (feet)	Dogleg (deg/100ft)
1001.00	0.18	10.66	1000.99	2.88 N	0.67 E	2.88	TIE-IN
1250.00	0.13	343.36	1249.99	3.54 N	0.66 E	3.54	0.04
1526.00	0.39	311.22	1525.99	4.45 N	0.13 W	4.45	0.10
1802.00	0.59	311.13	1801.98	6.01 N	1.91 W	6.00	0.07
2085.00	1.46	286.82	2084.93	8.01 N	6.46 W	7.97	0.34
2372.00	1.62	322.22	2371.83	12.27 N	12.45 W	12.21	0.33
2467.00	2.26	306.36	2466.78	14.45 N	14.78 W	14.37	0.87
2562.00	2.38	279.69	2561.70	15.89 N	18.23 W	15.79	1.13
2658.00	3.09	263.48	2657.59	15.93 N	22.77 W	15.81	1.09
2753.00	4.10	261.28	2752.41	15.12 N	28.67 W	14.97	1.07
2849.00	4.55	245.89	2848.14	13.05 N	35.53 W	12.86	1.29
2944.00	5.86	236.84	2942.74	8.86 N	43.03 W	8.62	1.62
3040.00	6.54	241.63	3038.18	3.58 N	51.95 W	3.30	0.89
3135.00	8.91	239.90	3132.31	2.68 S	63.07 W	-3.02	2.51
3230.00	9.27	242.57	3226.12	9.90 S	76.23 W	-10.31	0.58

3326.00	8.80	233.47	3320.93	17.83 S	88.99 W	-18.31	1.57
3421.00	7.85	235.56	3414.93	25.83 S	100.18 W	-26.37	1.05
3517.00	7.04	239.70	3510.12	32.50 S	110.67 W	-33.10	1.01
3613.00	6.93	235.03	3605.41	38.79 S	120.50 W	-39.44	0.60
3709.00	7.79	231.05	3700.62	46.20 S	130.30 W	-46.90	1.04
3805.00	7.68	231.78	3795.75	54.26 S	140.40 W	-55.02	0.15
3901.00	7.89	236.17	3890.86	61.89 S	150.91 W	-62.71	0.66
3996.00	8.98	235.85	3984.83	69.69 S	162.47 W	-70.57	1.15
4092.00	8.20	236.72	4079.76	77.65 S	174.39 W	-78.59	0.82
4187.00	8.53	231.75	4173.75	85.73 S	185.59 W	-86.73	0.84
4282.00	8.53	231.35	4267.69	94.49 S	196.62 W	-95.55	0.06
4378.00	9.21	232.70	4362.55	103.59 S	208.30 W	-104.72	0.74
4474.00	7.06	220.84	4457.58	112.71 S	218.27 W	-113.89	2.83
4569.00	6.22	219.81	4551.94	121.08 S	225.38 W	-122.30	0.89
4665.00	5.61	222.15	4647.43	128.56 S	231.86 W	-129.81	0.68
4760.00	5.75	225.92	4741.97	135.31 S	238.39 W	-136.60	0.42
4856.00	5.76	233.24	4837.48	141.54 S	245.71 W	-142.87	0.76
4951.00	6.58	216.09	4931.94	148.79 S	252.73 W	-150.16	2.11
5047.00	4.54	209.91	5027.48	156.53 S	257.87 W	-157.92	2.21
5142.00	4.12	195.24	5122.22	163.08 S	260.64 W	-164.49	1.24
5238.00	2.46	191.49	5218.05	168.43 S	261.96 W	-169.85	1.74
5333.00	0.50	189.92	5313.02	170.84 S	262.44 W	-172.25	2.06
5429.00	1.18	23.92	5409.01	170.35 S	262.11 W	-171.76	1.74
5715.00	0.94	4.44	5694.96	165.32 S	260.73 W	-166.72	0.15
6097.00	0.84	34.41	6076.92	159.88 S	258.91 W	-161.28	0.12
6480.00	0.82	42.07	6459.88	155.53 S	255.48 W	-156.91	0.03
6823.00	1.27	340.90	6802.83	150.12 S	255.08 W	-151.49	0.33
6861.00	1.26	357.31	6840.82	149.30 S	255.24 W	-150.68	0.95
6909.00	3.54	41.53	6888.78	147.66 S	254.28 W	-149.04	5.79
6956.00	6.68	12.03	6935.60	143.90 S	252.75 W	-145.27	8.50
7004.00	9.68	19.35	6983.10	137.36 S	250.83 W	-138.72	6.60
7052.00	13.42	16.15	7030.12	128.20 S	247.94 W	-129.54	7.90
7148.00	19.47	9.31	7122.16	101.69 S	242.25 W	-103.00	6.61
7195.00	23.54	11.86	7165.88	84.76 S	239.05 W	-86.06	8.88
7243.00	28.98	15.62	7208.91	64.17 S	233.95 W	-65.43	11.85
7291.00	35.27	17.74	7249.55	39.74 S	226.59 W	-40.97	13.31
7338.00	41.19	17.11	7286.45	12.00 S	217.89 W	-13.18	12.62
7386.00	47.85	14.11	7320.66	20.40 N	208.89 W	19.27	14.55
7434.00	53.46	9.60	7351.09	56.71 N	201.33 W	55.62	13.76
7482.00	60.91	7.40	7377.08	96.58 N	195.40 W	95.52	15.99
7530.00	67.37	6.91	7398.01	139.41 N	190.03 W	138.38	13.49
7579.00	75.49	6.19	7413.60	185.52 N	184.74 W	184.52	16.63
7625.00	82.66	5.16	7422.31	230.44 N	180.29 W	229.46	15.74
7642.00	84.35	3.44	7424.24	247.28 N	179.02 W	246.31	14.14
7683.00	89.20	0.15	7426.54	288.18 N	177.74 W	287.21	14.29
7714.00	90.62	359.99	7426.59	319.17 N	177.70 W	318.21	4.61
7809.00	88.58	358.77	7427.25	414.16 N	178.73 W	413.19	2.50
7905.00	86.91	358.38	7431.03	510.05 N	181.12 W	509.06	1.79
8000.00	91.73	357.19	7432.16	604.94 N	184.79 W	603.94	5.23
8096.00	89.51	358.97	7431.12	700.88 N	188.00 W	699.85	2.96
8288.00	89.44	358.21	7432.88	892.81 N	192.73 W	891.75	0.40
8384.00	88.39	357.52	7434.70	988.72 N	196.30 W	987.65	1.31
8480.00	89.38	358.19	7436.57	1084.63 N	199.90 W	1083.54	1.25
8576.00	90.86	358.67	7436.36	1180.60 N	202.53 W	1179.48	1.62
8671.00	90.06	357.04	7435.60	1275.52 N	206.08 W	1274.39	1.91
8766.00	89.63	354.26	7435.86	1370.24 N	213.29 W	1369.06	2.96
8862.00	90.06	355.20	7436.12	1465.83 N	222.10 W	1464.61	1.08
8958.00	90.06	357.58	7436.02	1561.63 N	228.15 W	1560.38	2.48
9053.00	92.04	1.03	7434.28	1656.59 N	229.30 W	1655.33	4.19
9148.00	91.42	359.85	7431.41	1751.54 N	228.57 W	1750.28	1.40
9244.00	91.67	359.38	7428.82	1847.51 N	229.22 W	1846.24	0.55
9339.00	90.62	0.80	7426.92	1942.48 N	229.07 W	1941.22	1.86
9435.00	89.57	359.83	7426.76	2038.48 N	228.54 W	2037.21	1.49
9530.00	89.81	1.53	7427.28	2133.47 N	227.41 W	2132.21	1.81
9626.00	91.67	2.77	7426.04	2229.39 N	223.81 W	2228.14	2.33
9722.00	91.42	3.12	7423.45	2325.22 N	218.88 W	2324.01	0.45
9817.00	90.49	1.85	7421.87	2420.12 N	214.76 W	2418.92	1.66
9912.00	91.91	2.33	7419.88	2515.03 N	211.30 W	2513.85	1.58
10008.00	90.99	1.22	7417.45	2610.95 N	208.33 W	2609.79	1.50
10104.00	91.98	2.96	7414.96	2706.85 N	204.83 W	2705.70	2.08
10199.00	91.24	1.42	7412.29	2801.74 N	201.20 W	2800.61	1.80
10294.00	92.22	1.25	7409.42	2896.67 N	198.99 W	2895.55	1.05
10389.00	91.60	1.14	7406.26	2991.60 N	197.01 W	2990.49	0.66
10485.00	92.04	0.98	7403.21	3087.53 N	195.23 W	3086.43	0.49
10581.00	92.66	1.36	7399.27	3183.43 N	193.27 W	3182.34	0.76
10676.00	92.85	1.31	7394.70	3278.29 N	191.06 W	3277.21	0.21
10771.00	93.40	1.00	7389.52	3373.13 N	189.15 W	3372.06	0.66
10867.00	94.14	1.22	7383.21	3468.91 N	187.29 W	3467.84	0.80
10962.00	92.04	359.74	7378.09	3563.76 N	186.50 W	3562.70	2.70
11057.00	90.80	358.80	7375.74	3658.72 N	187.71 W	3657.65	1.64

11037.00	90.88	358.80	7373.74	3838.72 N	187.71 W	3837.83	1.84
11153.00	91.05	358.31	7374.19	3754.67 N	190.13 W	3753.59	0.57
11249.00	90.56	357.23	7372.84	3850.59 N	193.87 W	3849.49	1.24
11344.00	89.57	355.70	7372.73	3945.41 N	199.72 W	3944.27	1.92
11439.00	90.43	357.49	7372.73	4040.23 N	205.37 W	4039.06	2.09
11534.00	90.19	359.65	7372.22	4135.20 N	207.74 W	4134.01	2.29
11630.00	91.24	358.49	7371.02	4231.17 N	209.30 W	4229.98	1.63
11727.00	91.85	358.21	7368.40	4328.10 N	212.09 W	4326.89	0.69
11822.00	92.53	358.71	7364.77	4422.99 N	214.64 W	4421.77	0.89
11886.00	92.59	358.96	7361.92	4486.92 N	215.94 W	4485.68	0.40
11928.00	92.60	358.96	7360.01	4528.87 N	216.70 W	4527.63	0.02

CALCULATION BASED ON MINIMUM CURVATURE METHOD

**SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT**

**VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 0.31 DEGREES (TRUE)
A TOTAL CORRECTION OF 8.63 DEG FROM MAGNETIC NORTH TO TRUE NORTH HAS BEEN APPLIED**

**HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 11928.00 FEET
IS 4534.05 FEET ALONG 357.26 DEGREES (TRUE)**

**All surveys are magnetic In-Field-Referencing (IFR) corrected.
Final survey is a projection to TD.**