



EW R-Phase 4

1:240

Country	: USA
Field	: Wattenburg
Location	: Lat: 40°26' 7.84" North Long: 104°17' 54.17" West
Well	: Antelope 11-2HZ
Company	: Bonanza Creek Energy, Inc
Rig	: Ensign 14
LOCATION	
Latitude : 40°26' 7.84" North Longitude : 104°17' 54.17" West UTM Easting = 3,334,477.92 ft UTM Northing = 1,403,763.29 ft	Company : Bonanza Creek Energy, Inc Rig : Ensign 14 Well : Antelope 11-2HZ Field : Wattenburg Country : USA API Number : 05 12333353 00
Other Services Directional Drilling DDSr-DGR	

WELL INFORMATION

MWD Run Number	100	200			
Date run completed	22-Jun-11	23-Jun-11			
Rig Bit Number	3	4			
Bit Size (in)	8.750	8.750			
Tool Nominal OD (in)	6.750	6.750			
Log Start Depth (MD, ft)	5,560.00	6,015.00			
Log End Depth (MD, ft)	6,015.00	6,554.00			
Drill or Wipe	Drill	Drill			
Drill/Wipe Start Date and Time	20-Jun-11 17:00	22-Jun-11 16:30			
Drill/Wipe End Date and Time	22-Jun-11 13:00	23-Jun-11 12:30			
Min Inc (deg) @ Depth (MD, ft)	1.97 @ 5,537.00	35.16 @ 5,982.00			
Max Inc (deg) @ Depth (MD, ft)	35.16 @ 5,982.00	86.60 @ 6,521.00			
Bit TFA(in2) / Bit Type	.86 / PDC	.86 / PDC			
Flow Rate (gpm)	435.00	420.00			
Max AV (fpm) / CV (fpm) @ MWD	357.0 / 360.0	331.9 / 331.4			
Fluid Type	Fresh Water Gel	Fresh Water Gel			
Density (ppg) / Viscosity (spqt)	9.50 / 46.00	9.50 / 46.00			
Filtrate CL (ppm)	1,500.00	1,500.00			
pH / Fluid Loss (mptm)	9.10 / 6	9.10 / 6			
PV (cP) / YP (lbf2)	16 / 18.00	16 / 18.00			
% Solids / % Sand	5.9 / .03	5.9 / .03			
% Oil / Oil:Water Ratio	N/A / N/A	N/A / N/A			
Rm @ Measured Temp (degF)	4.500 @ 70.00	4.500 @ 70.00			
Rmf @ Measured Temp (degF)	4.000 @ 70.00	4.000 @ 68.00			
Rmc @ Measured Temp (degF)	3.600 @ 70.00	3.600 @ 68.00			
Max Fracture Width (in)	1.1101 (100in)	1.5572 (100in)			

Max Tool Temp (degF) / Source	144.94 / HCIM	155.53 / HCIM			
Rm @ Max Tool Temp (degF)	2.2771 @ 144.94	0 @ 155.53			
Lead MWD Engineer	J. Huckleby	J. Huckleby			
Customer Representative	R. Hoffman	R. Hoffman			

SENSOR INFORMATION

Downhole Processor Information

Tool Type	HCIM	HCIM			
Software Version	88.47	88.47			
Sub Serial Number	230716	230716			
Insert Serial Number	11603378	11603378			
Date and Time Initialized	20-Jun-11 10:01	22-Jun-11 12:44			
Date and Time Read	22-Jun-11 03:56	23-Jun-11 21:44			
ECMB SW Version	N/A	N/A			

Directional Sensor Information

Tool Type	PCDC	PCDC			
Distance From Bit (ft)	31.09	31.09			
Software Version	6.21	6.21			
Sub Serial Number	11677158	11677158			
Sonde Serial Number	11297623	11297623			
Sensor ID Number	N/A	N/A			
Toolface Offset (deg)	288.10	288.10			

Gamma Ray Sensor Information

Tool Type	DGR	DGR			
Distance From Bit (ft)	53.92	53.92			
Recorded Sample Period (sec)	12	12			
Software Version	N/A	N/A			
Sub Serial Number	10806511	10806511			
Insert/Sonde Serial Number	226070	226070			

Resistivity Sensor Information

Tool Type	EWR-P4	EWR-P4			
Distance From Bit (ft)	44.06	44.06			
Recorded Sample Period (sec)	12	12			
Software Version	1.50	1.50			
Sub Serial Number	115502	115502			
Receiver Insert Serial Number	247501	247501			
Transmitter Insert Serial Number	216499	216499			
Receiver Orientation	Down	Down			

Pulser Controller Sensor Information

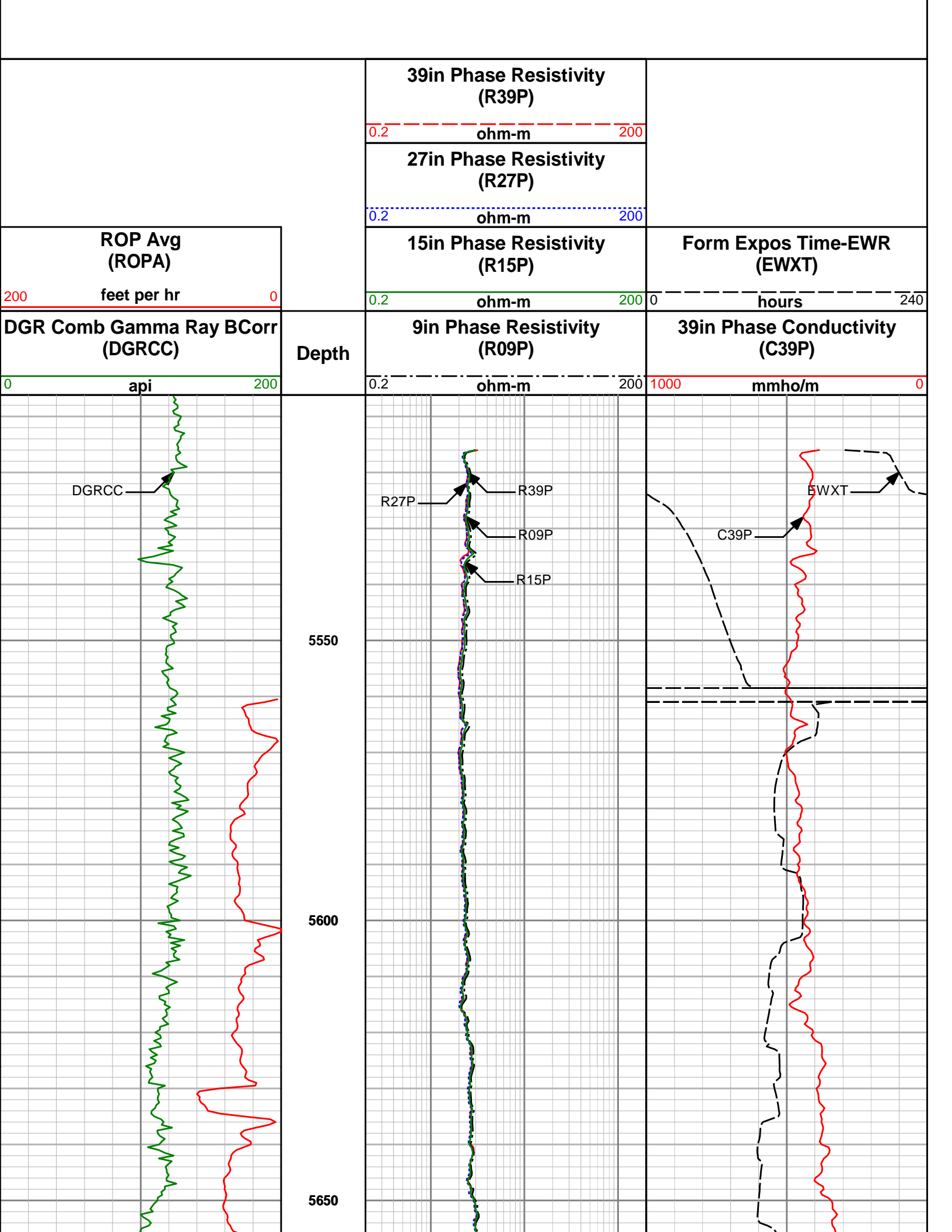
Tool Type	PCM	PCM			
Software Version	8.04	8.04			
PIC Software Version	N/A	N/A			
Sub/HOC Serial Number	11608312	11608312			
Insert/Probe/Module SN	11227486	11227486			
Battery Serial Number	N/A	N/A			
Valve Insert SN	N/A	N/A			
DC Insert Serial Number	N/A	N/A			
Choke Size (32nd)	N/A	N/A			
Driver Current (amps)	N/A	N/A			
Driver SMI Current (amps)	N/A	N/A			

Boot Strap Version	N/A	N/A			
DDSr-DGR Sensor Information					
Tool Type	DDSr-DGR	DDSr-DGR			
Distance From Bit (ft)	52.93	52.93			
Recorded Sample Period (sec)	12	12			
Software Version	10.72	10.72			
Sub Serial Number	10806511	10806511			
Insert Serial Number	245254	245254			
Sensor ID Number	5548	5548			

REMARKS
<p>1. All depths are measured bit depths, referenced to the Driller's pipe tally and are measured from the Kelly Bushing, unless otherwise specified.</p> <p>2. No depth corrections have been made for pipe stretch or compression.</p> <p>3. Critical annular velocities are calculated using the "Power Law" model for water based fluids and the "Bingham Plastic" model for oil and synthetic based fluids.</p> <p>4. All data presented is recorded data unless otherwise specified</p> <p>5. The following smoothing parameters have been applied to the data:</p> <p>ROPA (Average Rate of Penetration):</p> <div> Interval Resolution: 0.5 ft Interval Distance: 1 2 ft Gap Fill : 3.0 ft </div> <p>All other data:</p> <div> Interval Resolution: 0.5 ft Interval Distance: 0.6 ft Gap Fill: 3.0 ft </div> <p>6. INSITE version 7.2.4 Build 03</p>

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<div> <div>HALLIBURTON</div> <div>MD Detail Log 1:240</div> </div>
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DGRCC

ROPA

5700

5750

5800

5850

R27P

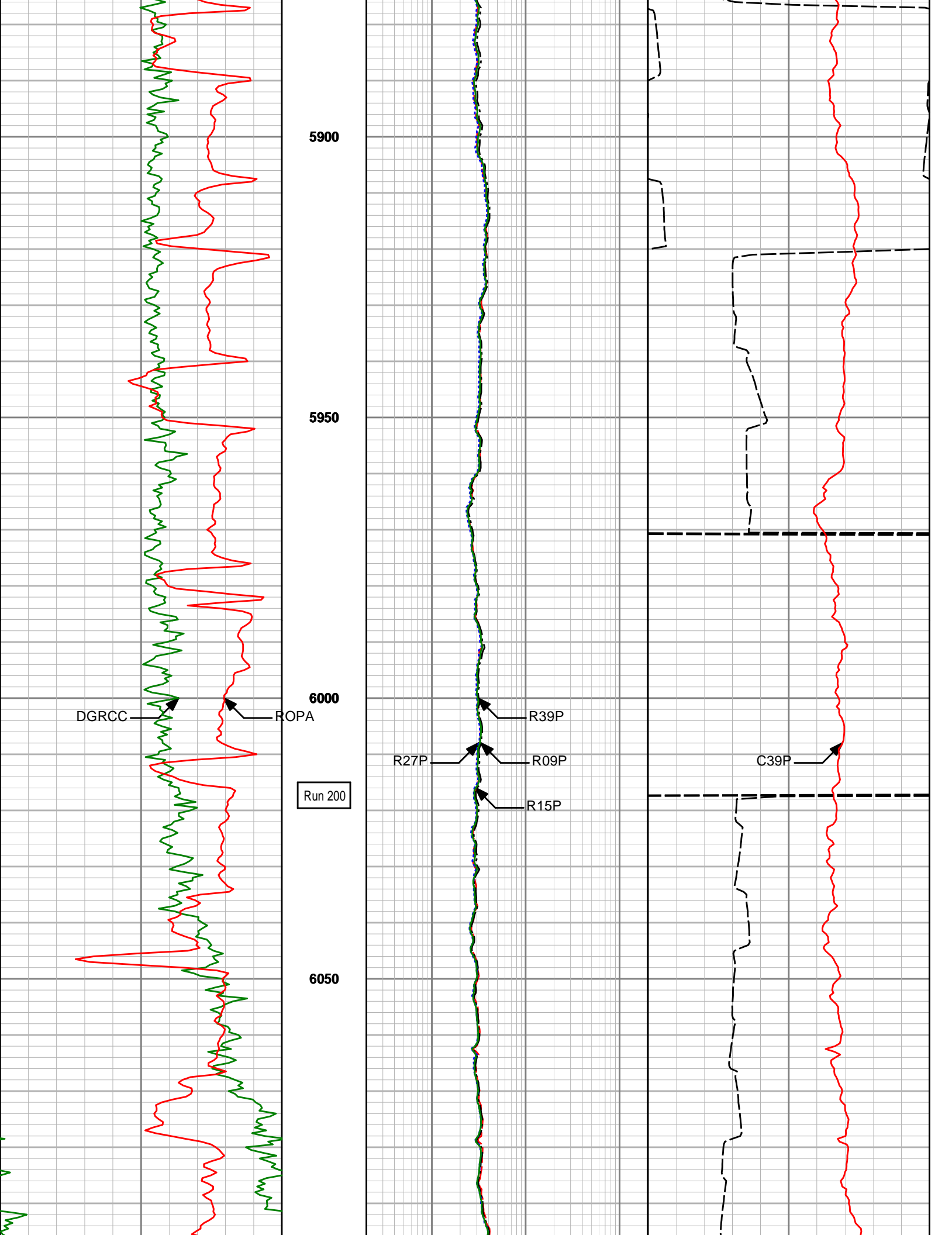
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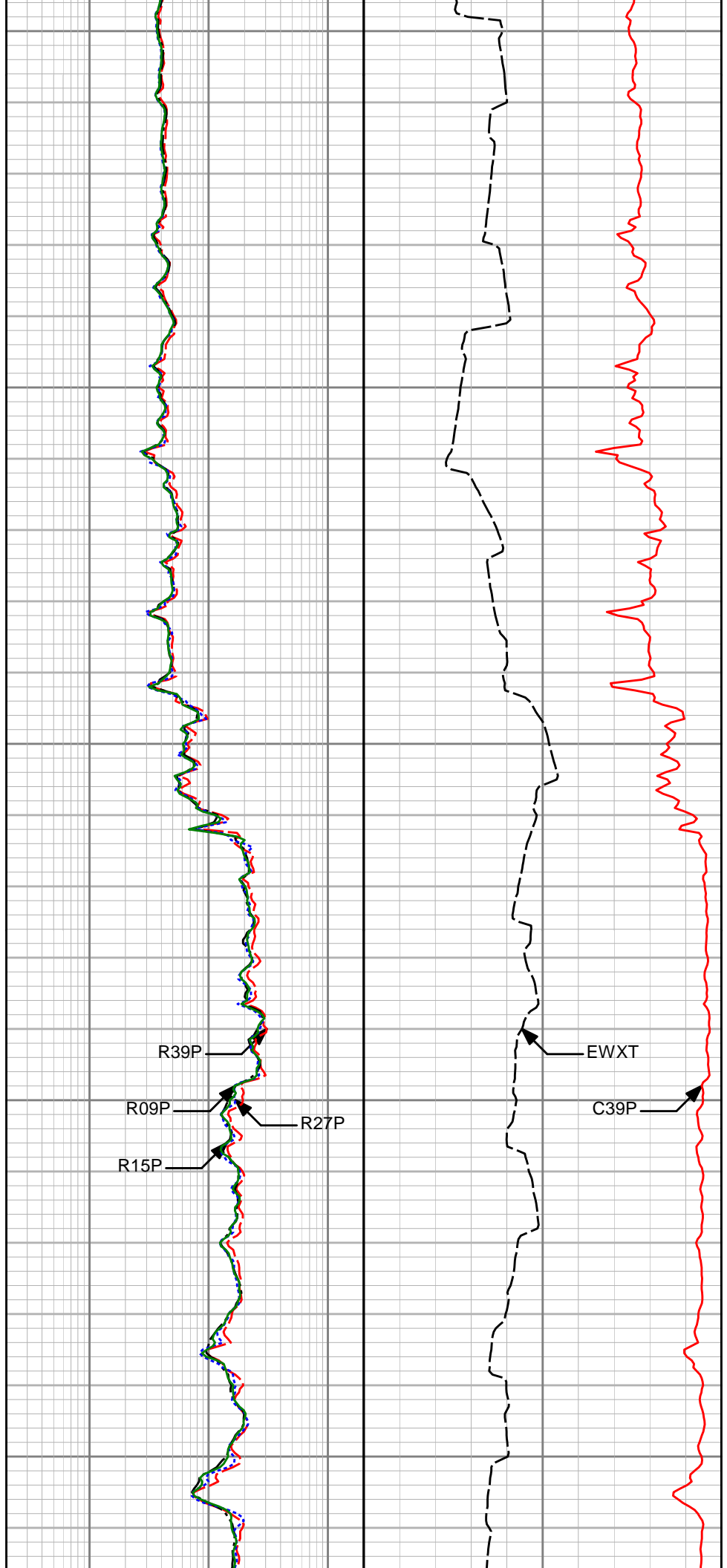
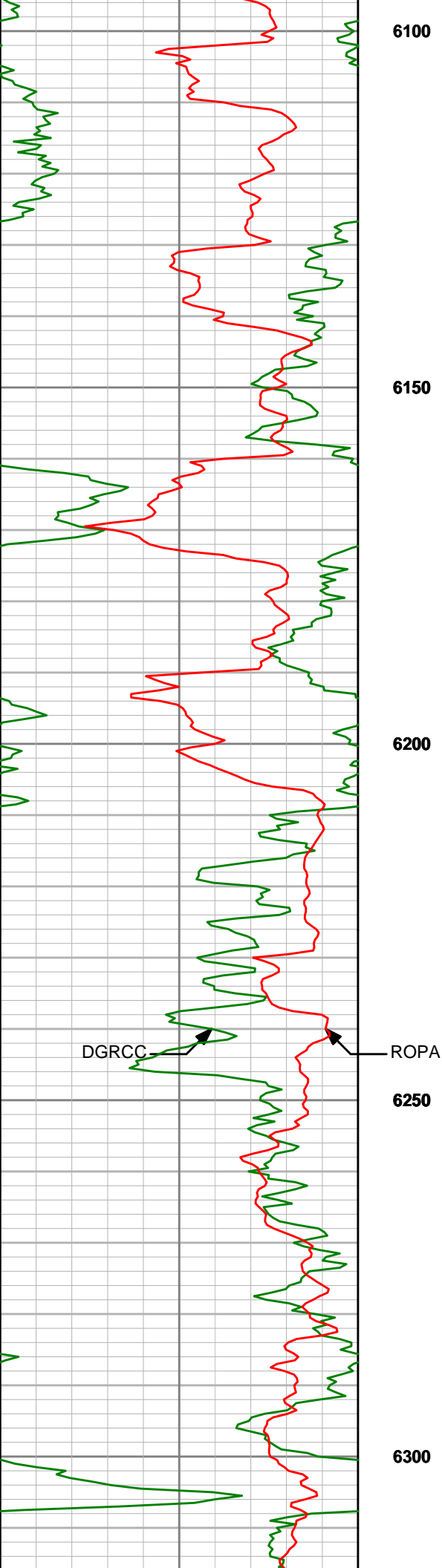
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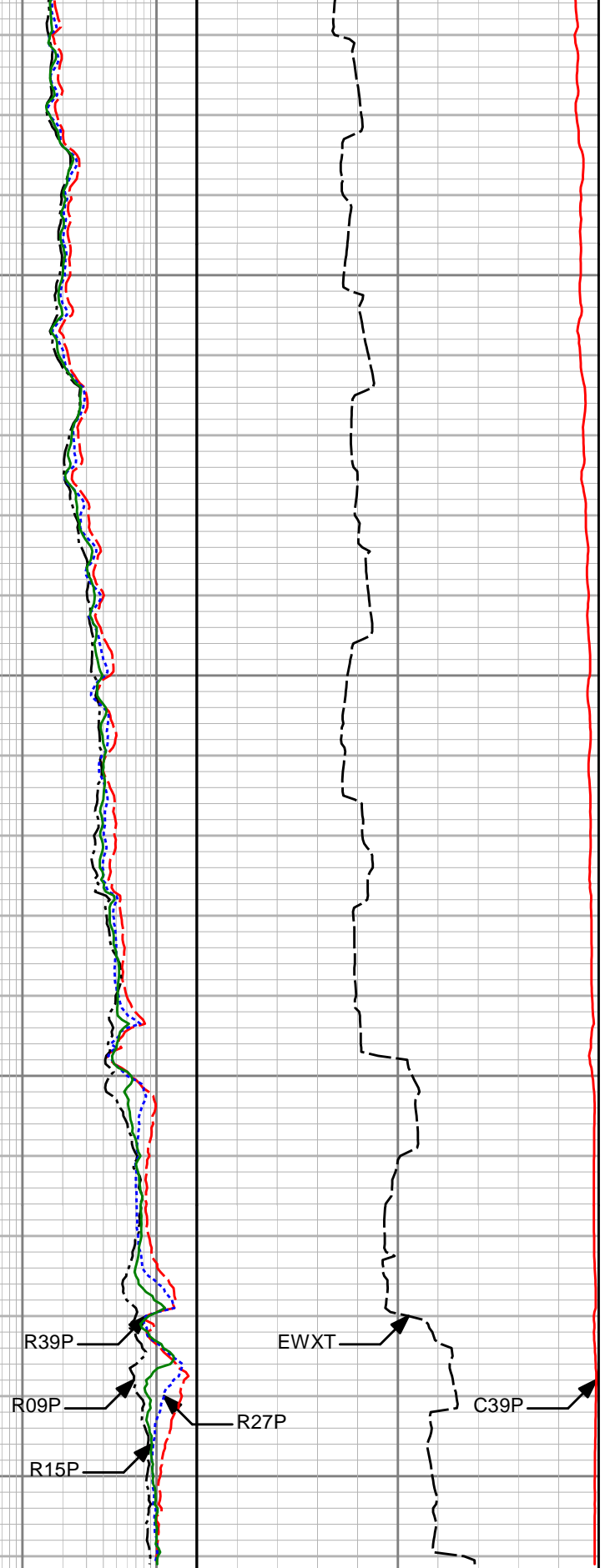
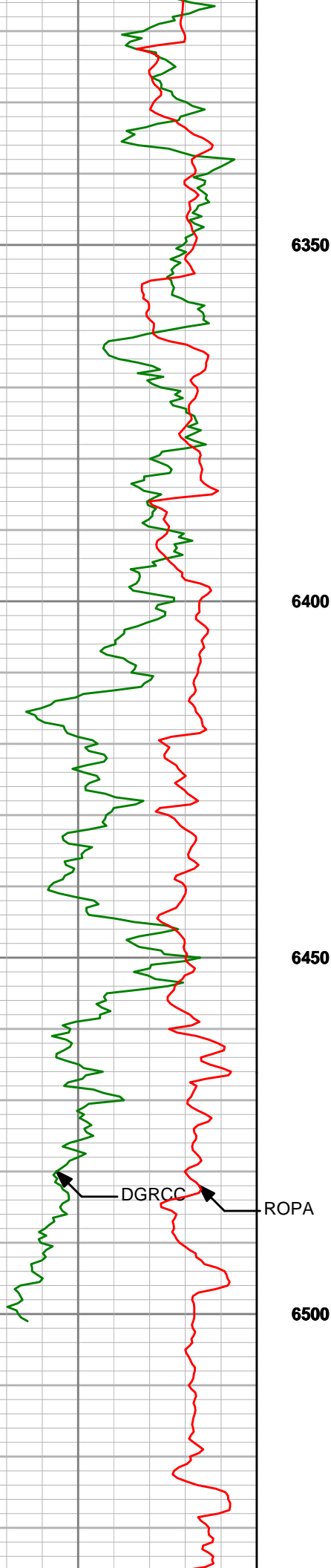
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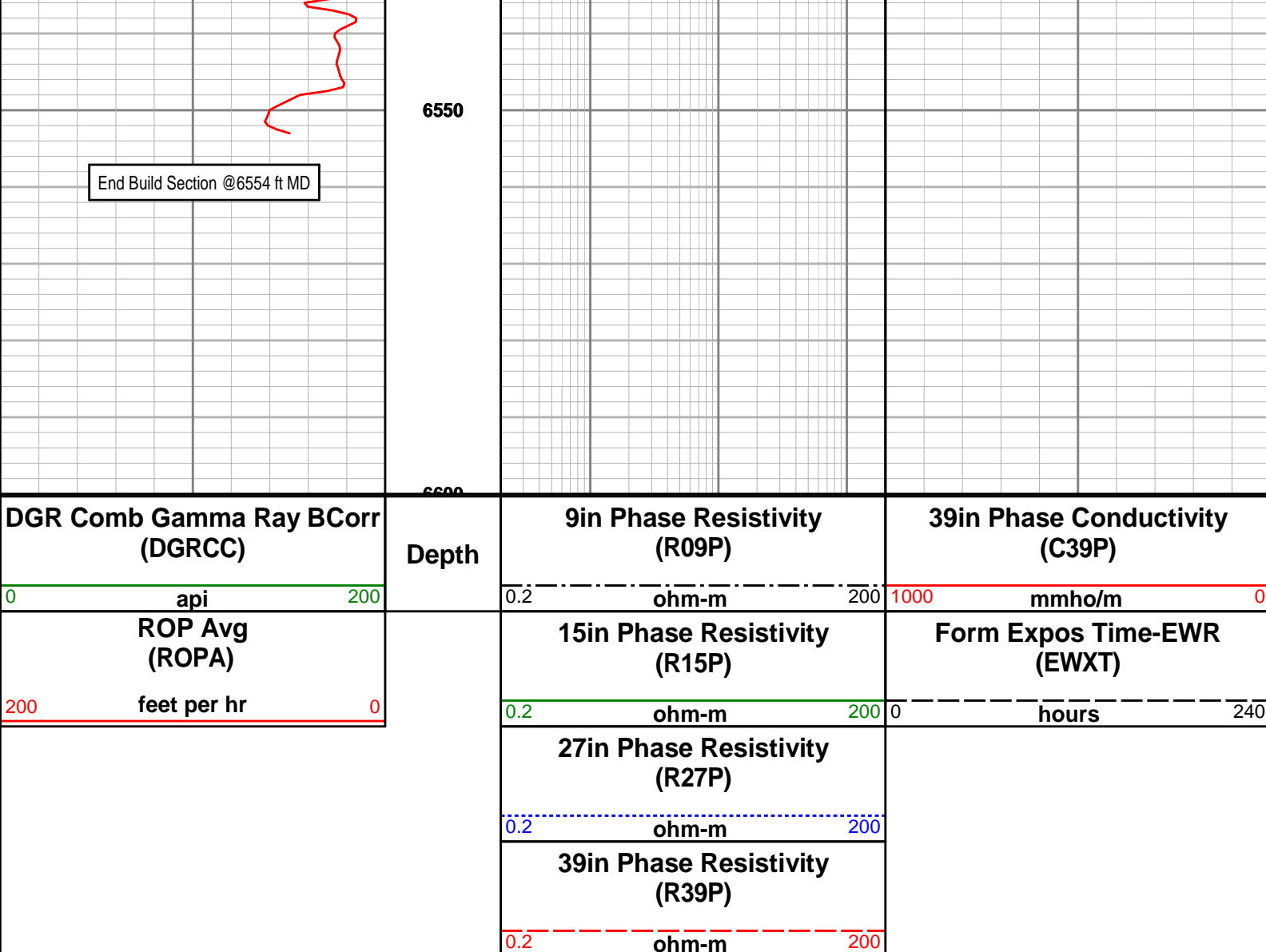
C39P

EWXT









HALLIBURTON

DIRECTIONAL SURVEY REPORT

Bonanza Creek Energy, Inc
Antelope 11-2HZ
Wattenburg
Weld Colorado
USA
CA-MJ-0008259296

Measured Depth (feet)	Inclination (degrees)	Direction (degrees)	Vertical Depth (feet)	Latitude (feet)	Departure (feet)	Vertical Section (feet)	Dogleg (deg/100ft)
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	TIE-IN
517.00	0.40	123.70	517.00	1.00 S	1.50 E	1.80	0.08
915.00	1.40	149.60	914.94	5.97 S	5.12 E	7.66	0.27
1069.00	1.10	153.00	1068.91	8.91 S	6.74 E	10.71	0.20
1161.00	1.40	154.20	1160.88	10.70 S	7.63 E	12.50	0.33
1252.00	1.90	160.50	1251.85	13.13 S	8.62 E	14.73	0.58
1403.00	2.10	147.10	1402.75	17.81 S	10.96 E	19.40	0.34
1466.00	0.40	166.40	1465.74	18.99 S	11.64 E	20.64	2.74
1530.00	0.70	180.00	1529.73	19.60 S	11.69 E	21.05	0.51
1593.00	0.50	95.90	1592.73	20.01 S	11.96 E	21.51	1.30
1685.00	0.30	133.10	1684.73	20.22 S	12.54 E	22.10	0.35
1805.00	0.30	187.20	1804.73	20.75 S	12.73 E	22.56	0.23
1901.00	0.10	144.60	1900.73	21.06 S	12.74 E	22.77	0.25
1995.00	0.50	244.20	1994.73	21.31 S	12.42 E	22.65	0.56

1995.00	0.50	244.30	1994.75	21.31 S	12.42 E	22.65	0.36
2088.00	0.90	196.20	2087.72	22.19 S	11.85 E	22.72	0.73
2182.00	1.20	211.60	2181.70	23.73 S	11.13 E	23.06	0.44
2309.00	0.80	136.20	2308.69	25.51 S	11.05 E	24.04	0.99
2473.00	1.20	229.80	2472.67	27.44 S	10.53 E	24.77	0.90
2600.00	0.70	238.60	2599.66	28.70 S	8.85 E	24.17	0.41
2727.00	1.20	222.50	2726.64	30.09 S	7.29 E	23.74	0.44
2854.00	0.70	198.90	2853.62	31.80 S	6.14 E	23.84	0.49
2981.00	1.10	221.10	2980.60	33.45 S	5.09 E	23.97	0.41
3108.00	0.70	187.20	3107.59	35.14 S	4.19 E	24.25	0.51
3235.00	0.90	227.50	3234.58	36.59 S	3.36 E	24.44	0.46
3362.00	1.10	244.40	3361.56	37.79 S	1.52 E	23.68	0.28
3489.00	1.80	243.80	3488.52	39.19 S	1.37 W	22.19	0.55
3616.00	2.10	239.40	3615.44	41.26 S	5.16 W	20.37	0.26
3712.00	1.90	234.10	3711.39	43.09 S	7.96 W	19.20	0.28
3743.00	2.20	241.20	3742.37	43.68 S	8.90 W	18.80	1.27
3775.00	1.70	261.80	3774.35	44.04 S	9.91 W	18.20	2.67
3838.00	1.40	259.90	3837.32	44.31 S	11.59 W	17.01	0.48
3870.00	1.30	290.00	3869.32	44.25 S	12.32 W	16.39	2.21
3902.00	1.60	297.30	3901.31	43.92 S	13.06 W	15.60	1.10
3966.00	2.20	289.40	3965.27	43.11 S	15.01 W	13.54	1.02
4030.00	1.90	304.00	4029.23	42.10 S	17.05 W	11.31	0.94
4093.00	2.70	322.60	4092.18	40.34 S	18.81 W	8.84	1.72
4125.00	2.20	333.50	4124.15	39.19 S	19.55 W	7.57	2.13
4156.00	2.80	328.50	4155.12	38.01 S	20.21 W	6.34	2.06
4220.00	2.50	342.70	4219.05	35.35 S	21.44 W	3.76	1.12
4283.00	2.20	347.40	4282.00	32.86 S	22.11 W	1.74	0.57
4315.00	1.80	7.90	4313.98	31.76 S	22.18 W	1.04	2.54
4347.00	1.50	7.00	4345.97	30.85 S	22.06 W	0.59	0.94
4379.00	1.80	24.50	4377.95	29.97 S	21.80 W	0.28	1.82
4411.00	1.60	23.10	4409.94	29.11 S	21.41 W	0.07	0.64
4442.00	2.00	43.70	4440.92	28.32 S	20.87 W	0.04	2.43
4474.00	1.80	38.30	4472.91	27.52 S	20.17 W	0.13	0.84
4537.00	2.40	45.10	4535.86	25.81 S	18.62 W	0.36	1.03
4569.00	2.00	46.00	4567.84	24.95 S	17.75 W	0.55	1.25
4664.00	1.90	31.60	4662.79	22.46 S	15.73 W	0.69	0.52
4759.00	1.20	19.80	4757.75	20.18 S	14.57 W	0.27	0.81
4883.00	1.50	10.20	4881.72	17.36 S	13.84 W	-0.82	0.30
4976.00	1.70	26.70	4974.68	14.93 S	13.01 W	-1.59	0.54
5069.00	1.90	39.90	5067.64	12.51 S	11.40 W	-1.73	0.49
5162.00	2.30	56.40	5160.57	10.30 S	8.85 W	-1.00	0.78
5255.00	1.60	72.40	5253.52	8.87 S	6.06 W	0.40	0.95
5348.00	1.90	80.40	5346.48	8.22 S	3.30 W	2.23	0.42
5515.00	1.80	89.90	5513.39	7.76 S	2.05 E	6.26	0.19
5537.00	1.97	95.36	5535.38	7.79 S	2.77 E	6.86	1.14
5569.00	3.90	118.07	5567.34	8.36 S	4.28 E	8.41	6.92
5601.00	7.35	123.88	5599.18	10.01 S	6.94 E	11.53	10.90
5632.00	10.56	123.60	5629.80	12.69 S	10.95 E	16.35	10.37
5664.00	13.28	124.77	5661.10	16.41 S	16.41 E	22.95	8.52
5696.00	15.93	126.38	5692.07	21.11 S	22.97 E	31.02	8.39
5728.00	17.99	126.20	5722.67	26.63 S	30.49 E	40.35	6.43
5759.00	20.10	127.35	5751.98	32.69 S	38.59 E	50.46	6.92
5791.00	22.17	126.44	5781.82	39.61 S	47.82 E	62.00	6.55
5823.00	23.64	126.84	5811.30	47.04 S	57.81 E	74.45	4.60
5855.00	25.25	127.00	5840.43	55.00 S	68.40 E	87.69	5.03
5886.00	26.97	126.51	5868.27	63.16 S	79.33 E	101.33	5.61
5918.00	29.26	125.91	5896.49	72.06 S	91.49 E	116.41	7.20
5950.00	31.75	127.16	5924.06	81.73 S	104.54 E	132.65	8.03
5982.00	35.16	127.22	5950.75	92.39 S	118.59 E	150.28	10.66
6013.00	38.28	125.60	5975.60	103.39 S	133.51 E	168.82	10.55
6045.00	40.81	125.71	6000.27	115.26 S	150.06 E	189.19	7.89
6076.00	43.60	125.22	6023.24	127.34 S	167.02 E	210.00	9.07
6108.00	46.45	124.38	6045.85	140.26 S	185.61 E	232.63	9.12
6140.00	49.20	124.62	6067.33	153.69 S	205.15 E	256.33	8.61
6172.00	51.27	125.30	6087.80	167.78 S	225.31 E	280.92	6.67
6203.00	53.79	124.73	6106.65	181.90 S	245.46 E	305.51	8.25
6235.00	56.63	124.78	6124.91	196.88 S	267.05 E	331.78	8.89
6267.00	59.20	125.34	6141.91	212.45 S	289.24 E	358.88	8.17
6299.00	62.80	125.81	6157.42	228.74 S	312.00 E	386.86	11.32
6331.00	65.88	125.88	6171.27	245.62 S	335.38 E	415.70	9.62
6362.00	68.94	126.18	6183.17	262.46 S	358.52 E	444.32	9.92
6394.00	72.10	126.63	6193.84	280.36 S	382.80 E	474.48	9.94

