ATTACHMENT B

GEOPHYSICAL LOGS, STEREOGRAPHIC POLE-PLOTS AND ROSE DIAGRAMS

COLOG

BOREHOLE GEOPHYSICS & HYDROPHYSICS

A Division of Layne Christensen Company

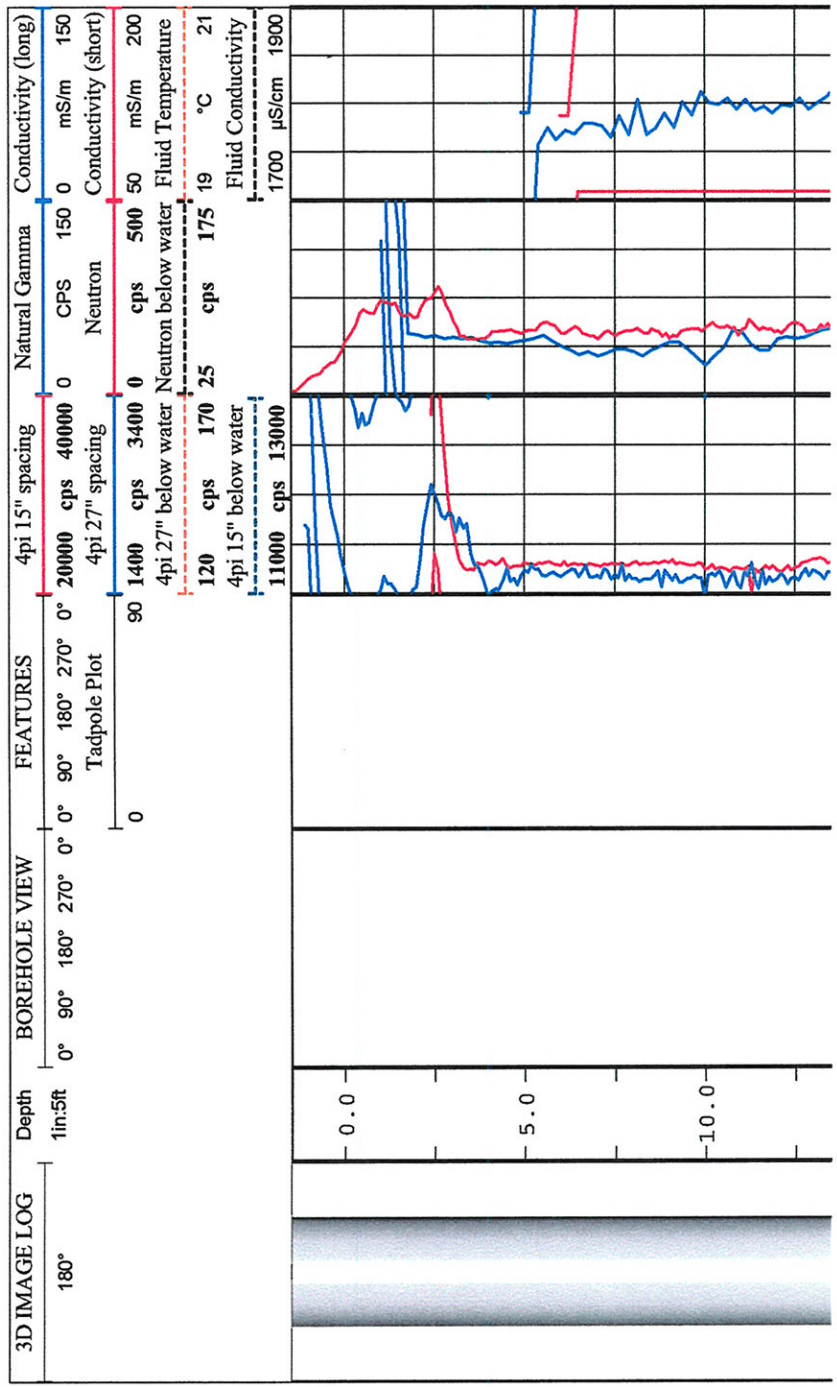
11001 Etiwanda Ave., Fontana CA 92337
PH: (909) 390-2833 FAX (909) 390-6097

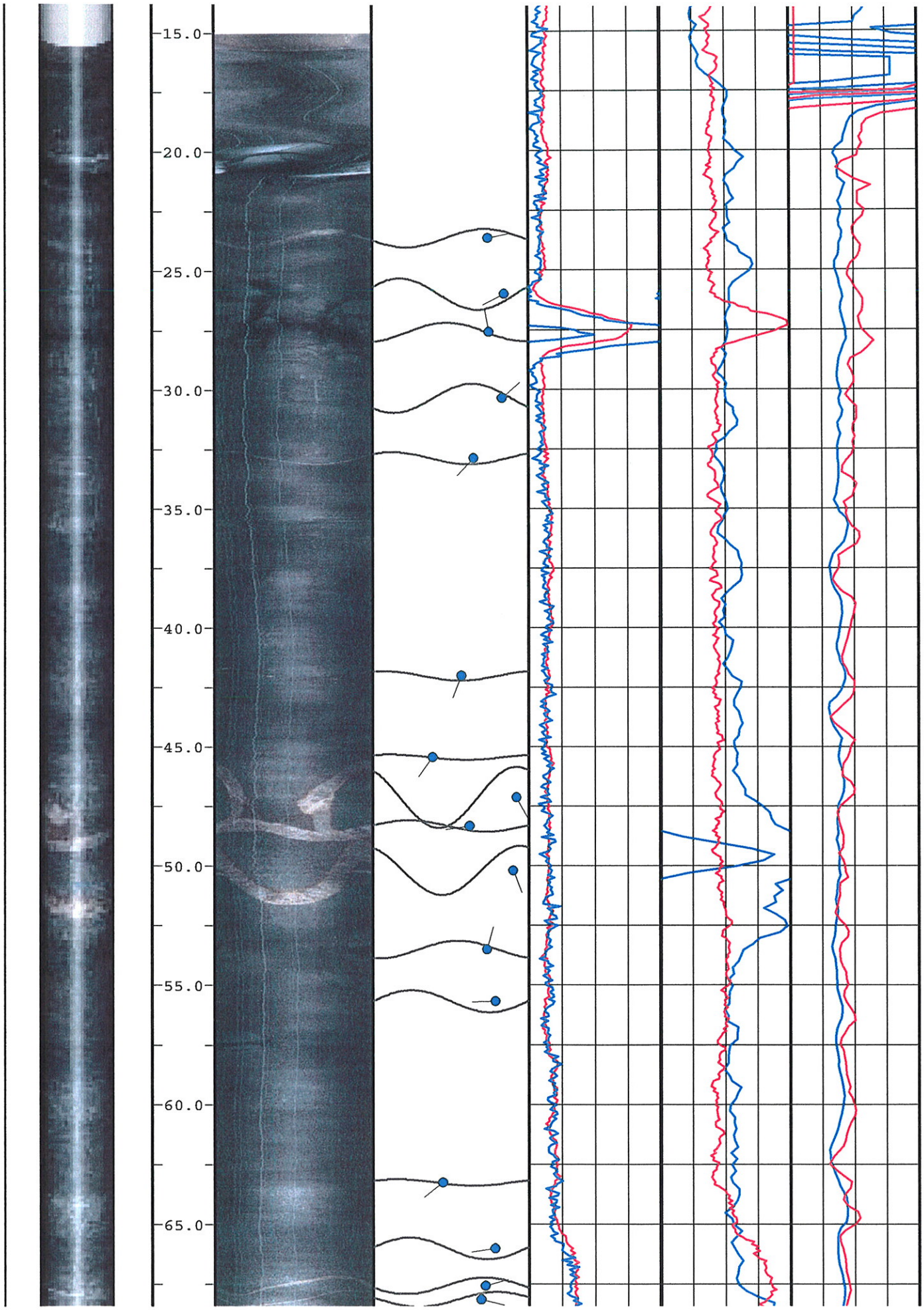
CO GEOLOGIC ASSOCIATES	COMPANY GEOLOGIC ASSOCIATES
WELL GLA-A	WELL ID GLA-A
FLD GREGORY CANYON	FIELD PALA
CTY PALA	COUNTRY USA STATE CA
STE	LOCATION
FILING No	GREGORY CANYON LANDFILL PROJECT
	SEC TWP RGE
	OTHER SERVICES

PERMANENT DATUM	GROUND SURFACE	ELEVATION	K.B.
LOG MEAS. FROM	GROUND SURFACE	ABOVE PERM. DATUM	D.F.
DRILLING MEAS. FROM	GROUND SURFACE		G.L.

DATE	11/06/04	TYPE FLUID IN HOLE	
RUN No	1	SALINITY	
TYPE LOG	ENGINEERING SUITE	DENSITY	
DEPTH-DRILLER	104'	LEVEL	
DEPTH-LOGGER	104'	MAX. REC. TEMP.	
BTM LOGGED INTERVAL	104'		
TOP LOGGED INTERVAL	20'		
OPERATING RIG TIME			
RECORDED BY			
WITNESSED BY			

RUN	BOREHOLE RECORD			CASING RECORD			
NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO

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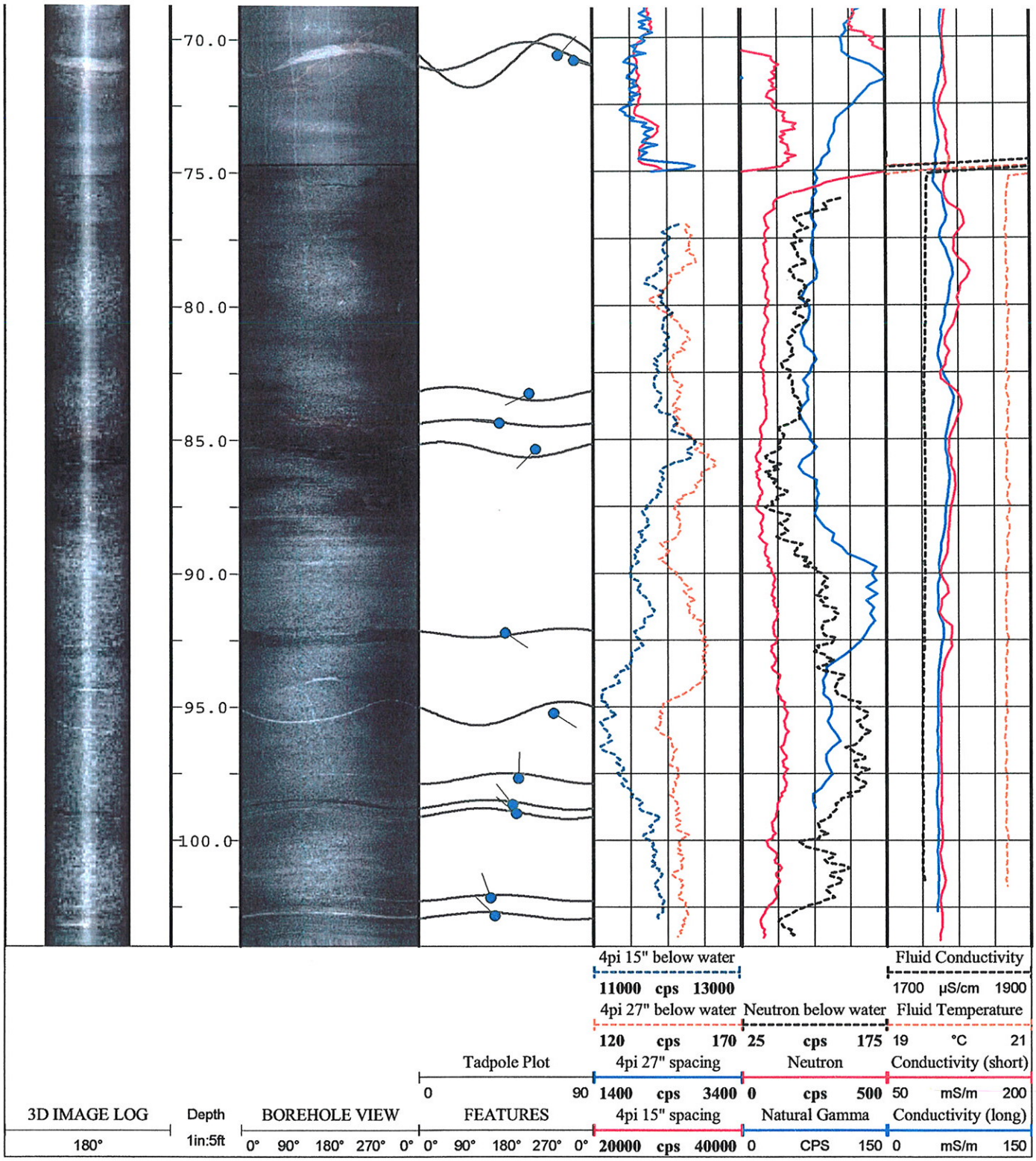
70.0
75.0
80.0
85.0
90.0
95.0
100.0
4pi 15" below water
11000 cps 13000
Fluid Conductivity
1700 µS/cm 1900
4pi 27" below water
120 cps 170
Neutron below water
25 cps 175
Fluid Temperature
19 °C 21
Tadpole Plot
0 90
4pi 27" spacing
1400 cps 3400
Neutron
0 cps 500
Conductivity (short)
50 mS/m 200
3D IMAGE LOG
180°
Depth
1in:5ft
BOREHOLE VIEW
0° 90° 180° 270° 0°
FEATURES
0° 90° 180° 270° 0°
4pi 15" spacing
20000 cps 40000
Natural Gamma
0 CPS 150
Conductivity (long)
0 mS/m 150

Orientation Summary Table
Image Features
Wellbore: GLA-A
GREGORY CANYON
June 2004

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)
1	7.21	23.65	78.06	66.43
2	7.92	25.99	241.70	76.15
3	8.40	27.57	350.37	67.17
4	9.25	30.35	48.73	74.72
5	10.02	32.87	222.32	58.20
6	12.80	42.01	201.05	51.04
7	13.85	45.44	216.78	34.57
8	14.37	47.13	151.29	82.70
9	14.73	48.33	261.33	55.66
10	15.30	50.19	158.49	80.89
11	16.31	53.51	15.13	65.61
12	16.97	55.67	268.12	70.63
13	19.28	63.25	232.73	40.37
14	20.12	66.00	262.20	70.29
15	20.60	67.57	74.93	64.52
16	20.77	68.13	103.72	62.13
17	21.53	70.65	44.75	72.15
18	21.60	70.85	106.92	80.53
19	25.38	83.27	246.30	56.93
20	25.72	84.37	274.06	41.52
21	26.01	85.35	225.44	60.36
22	28.11	92.22	123.39	44.54
23	29.03	95.24	122.00	69.66
24	29.77	97.68	1.21	51.31
25	30.07	98.65	320.48	48.44
26	30.18	99.00	309.09	50.19
27	31.14	102.16	340.30	37.05
28	31.34	102.82	314.95	39.30

All directions are with respect to magnetic north.

COLOG

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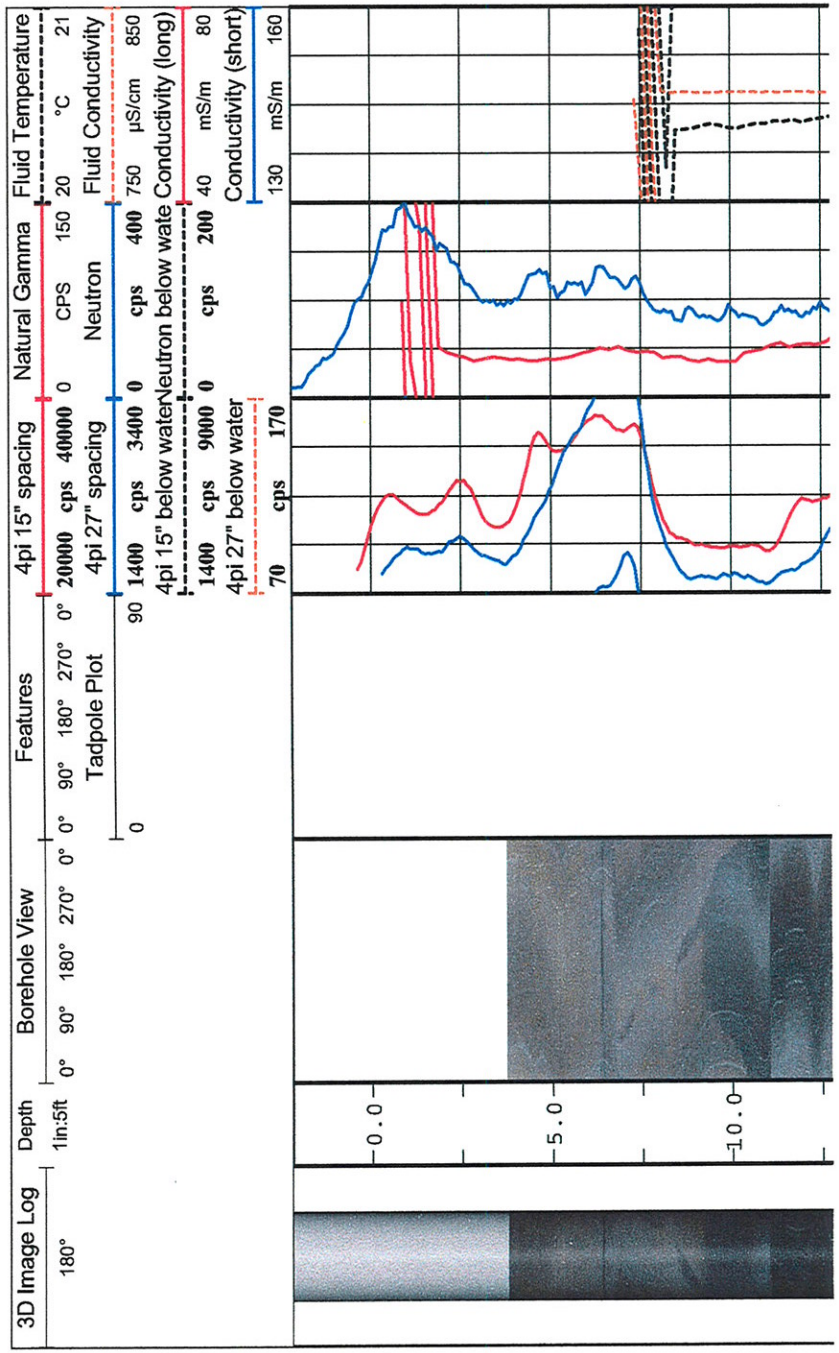
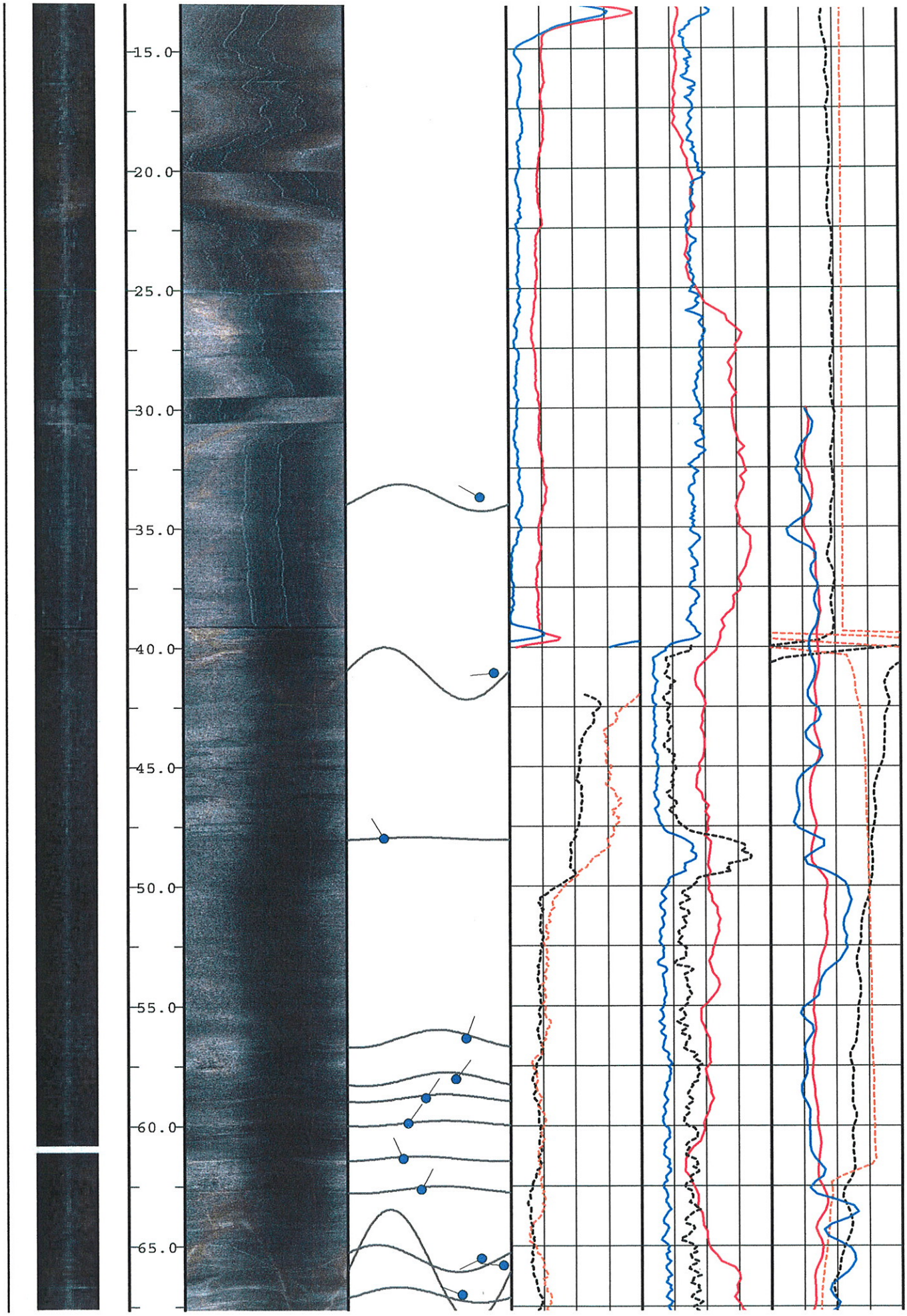
CO GEOLOGIC ASSOCIATES	COMPANY GEOLOGIC ASSOCIATES
WELL GLA-B	WELL ID GLA-B
FLD GREGORY CANYON	FIELD GREGORY CANYON LANDFILL
CTY PALA	COUNTRY USA STATE CA
STE	LOCATION
FILING No	GREGORY CANYON LANDFILL PROJECT
	SEC TWP RGE
	OTHER SERVICES

PERMANENT DATUM	GROUND SURFACE	ELEVATION	K.B.
LOG MEAS. FROM	GROUND SURFACE	ABOVE PERM. DATUM	D.F.
DRILLING MEAS. FROM	GROUND SURFACE		G.L.

DATE	11/06/04	TYPE FLUID IN HOLE	WATER
RUN No	1	SALINITY	
TYPE LOG	ENGINERING SUITE	DENSITY	
DEPTH-DRILLER	90'	LEVEL	
DEPTH-LOGGER	90'	MAX. REC. TEMP.	
BTM LOGGED INTERVAL	90'		
TOP LOGGED INTERVAL	25'		
OPERATING RIG TIME			
RECORDED BY	J. ABREAU		
WITNESSED BY	B. LOPEZ		

RUN	BOREHOLE RECORD			CASING RECORD			
NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO

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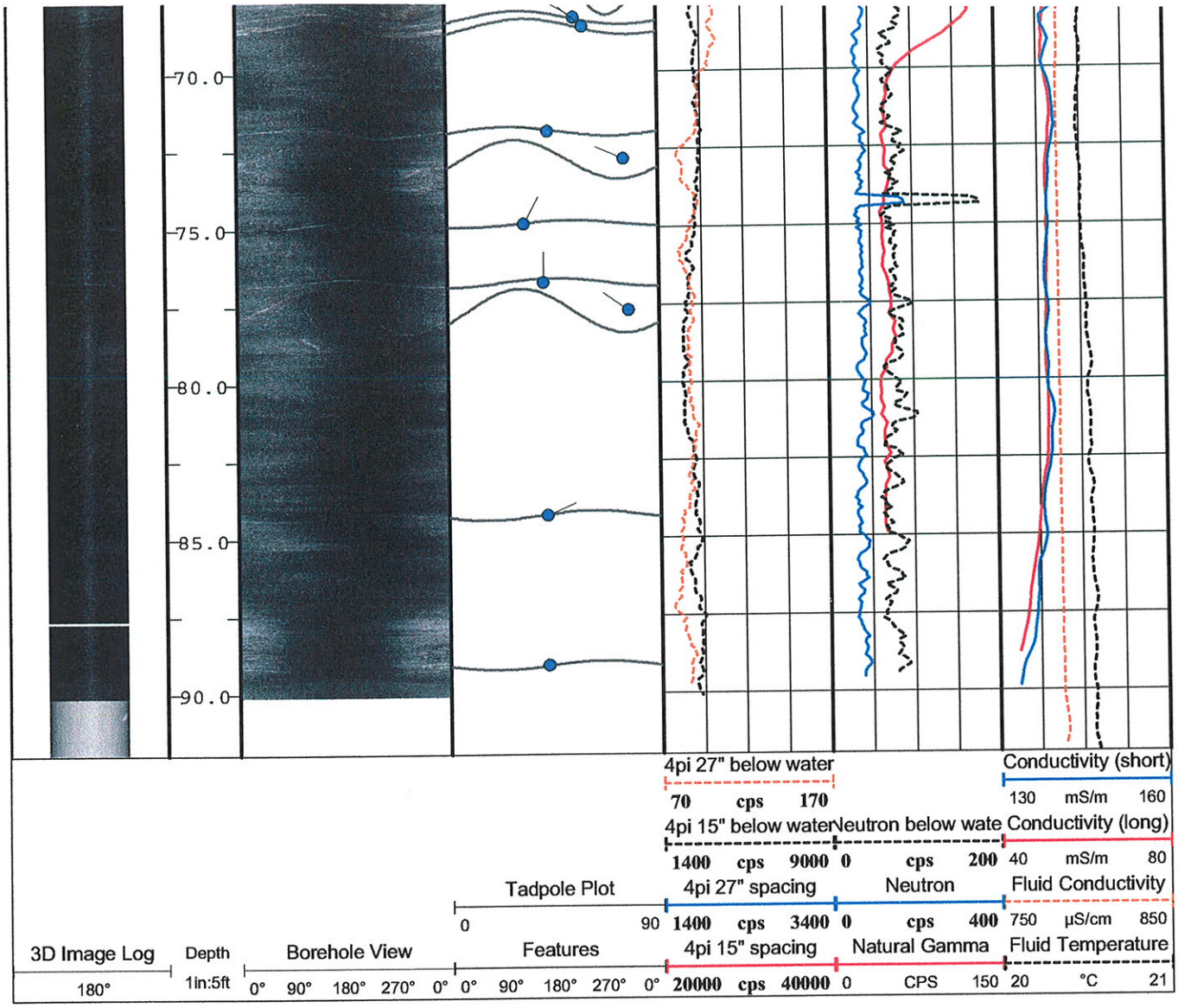
65.0


70.0
75.0
80.0
85.0
90.0
4pi 27" below water
70 cps 170
Conductivity (short)
130 mS/m 160
4pi 15" below water
Neutron below wate
Conductivity (long)
1400 cps 9000
0 cps 200
40 mS/m 80
Tadpole Plot
4pi 27" spacing
Neutron
Fluid Conductivity
0 90
1400 cps 3400
0 cps 400
750 µS/cm 850
3D Image Log
Depth
Borehole View
Features
4pi 15" spacing
Natural Gamma
Fluid Temperature
180°
1in:5ft
0° 90° 180° 270° 0°
0° 90° 180° 270° 0°
20000 cps 40000
0 CPS 150
20 °C 21

Orientation Summary Table
Image Features
Wellbore: GLA-B
GREGORY CANYON
June 2004

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)
1	10.27	33.71	299.60	74.05
2	12.52	41.08	264.91	81.50
3	14.62	47.98	328.94	21.01
4	17.18	56.35	20.45	65.71
5	17.69	58.04	37.73	59.94
6	17.93	58.83	33.81	43.45
7	18.25	59.87	34.60	33.90
8	18.70	61.35	335.40	30.96
9	19.09	62.63	28.51	40.86
10	19.97	65.52	244.22	73.90
11	20.06	65.80	274.29	85.98
12	20.42	67.01	291.01	63.19
13	20.79	68.22	299.50	54.93
14	20.88	68.52	310.15	58.37
15	21.91	71.87	279.93	43.31
16	22.18	72.78	293.70	75.59
17	22.81	74.85	28.77	32.46
18	23.39	76.74	0.51	40.94
19	23.67	77.66	303.59	77.06
20	25.68	84.25	66.50	41.99
21	27.15	89.09	84.01	41.99

All directions are with respect to magnetic north.

COLOG

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CO GEOLOGIC ASSOCIATES
WELL GLA-C
FLD GREGORY CANYON
CTY PALA
STE
FILING No

COMPANY GEOLOGIC ASSOCIATES
WELL ID GLA-C
FIELD GREGORY CANYON
COUNTRY USA STATE CA

LOCATION
GREGORY CANYON ALNDFILL

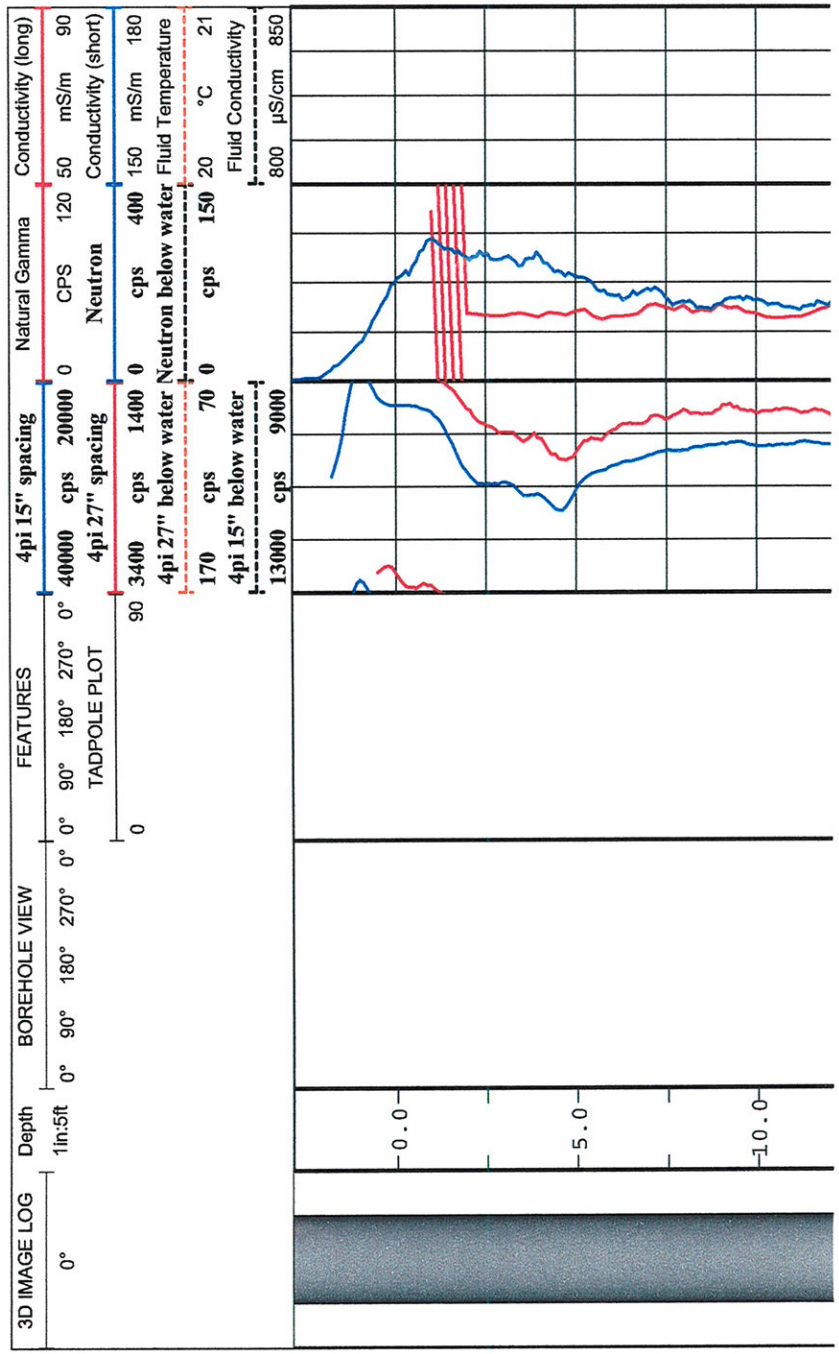
SEC TWP RGE

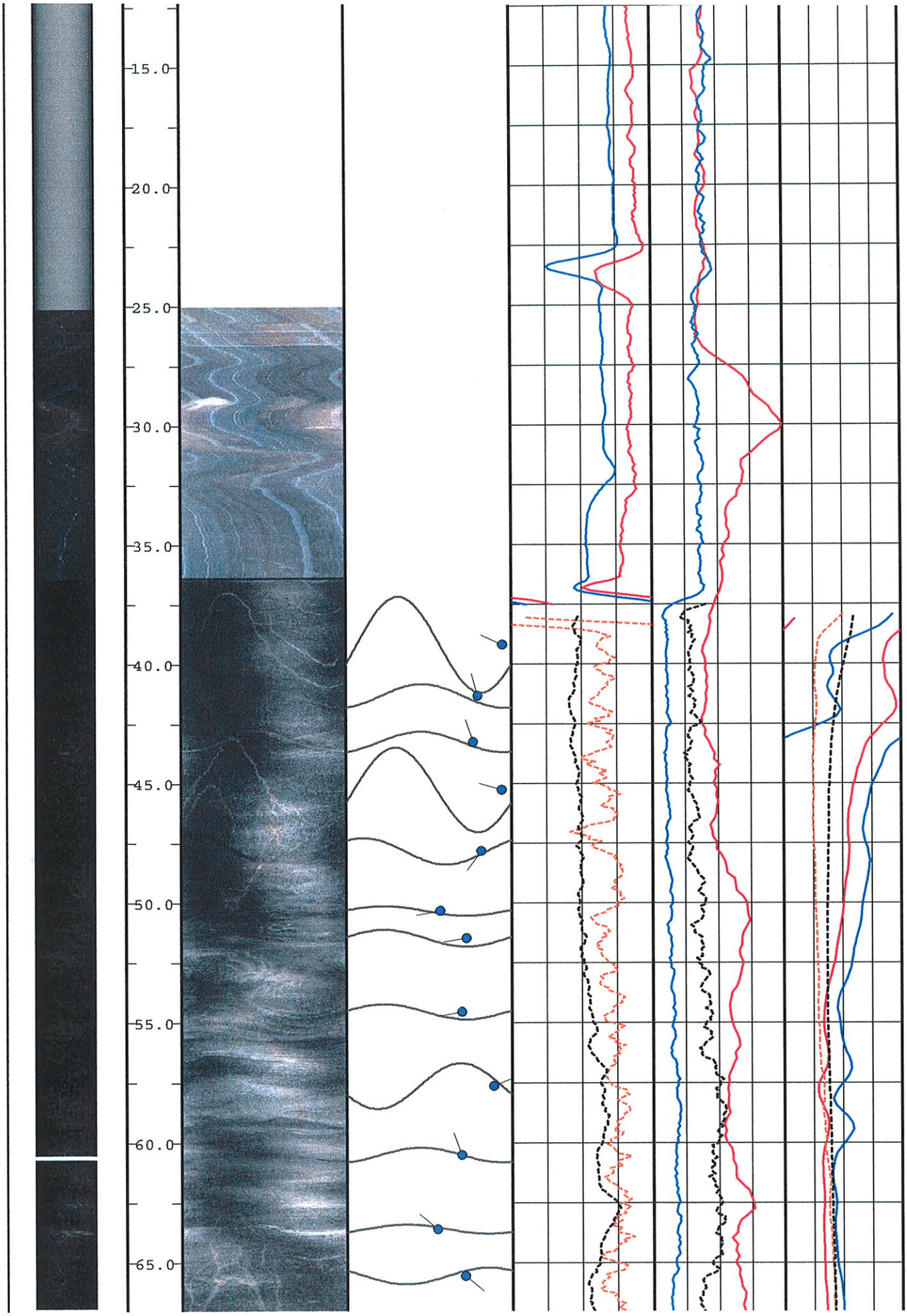
OTHER SERVICES

PERMANENT DATUM	GROUND SURFACE	ELEVATION	K.B.
LOG MEAS. FROM	GROUND SURFACE	ABOVE PERM. DATUM	D.F.
DRILLING MEAS. FROM	GROUND SURFACE		G.L.

DATE	18/06/04	TYPE FLUID IN HOLE	
RUN No	1	SALINITY	
TYPE LOG	OPTV, NEUTRON, DENSITY	DENSITY	
DEPTH-DRILLER	82'	LEVEL	
DEPTH-LOGGER	82'	MAX. REC. TEMP.	
BTM LOGGED INTERVAL	82'		
TOP LOGGED INTERVAL	25'		
OPERATING RIG TIME			
RECORDED BY			
WITNESSED BY			

RUN	BOREHOLE RECORD			CASING RECORD			
NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO

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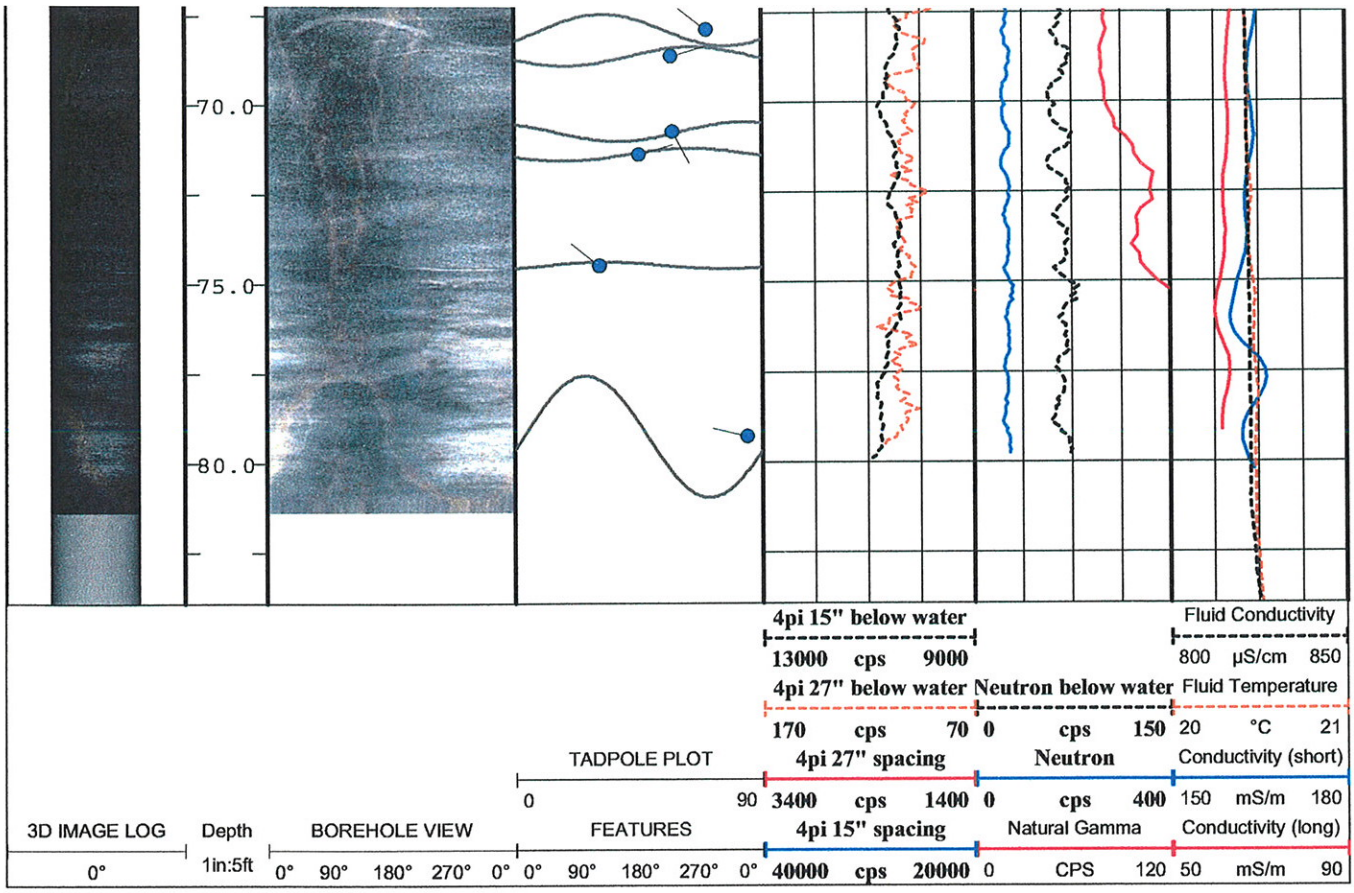
60.0
65.0


70.0
75.0
80.0
4pi 15" below water
13000 cps 9000
Fluid Conductivity
800 µS/cm 850
4pi 27" below water
170 cps 70
Neutron below water
0 cps 150
Fluid Temperature
20 °C 21
TADPOLE PLOT
0 90
4pi 27" spacing
3400 cps 1400
Neutron
0 cps 400
Conductivity (short)
150 mS/m 180
3D IMAGE LOG
0°
Depth
1in:5ft
BOREHOLE VIEW
0° 90° 180° 270° 0°
FEATURES
0° 90° 180° 270° 0°
4pi 15" spacing
40000 cps 20000
Natural Gamma
0 CPS 120
Conductivity (long)
50 mS/m 90

Orientation Summary Table
Image Features
Wellbore: GLA-C
GREGORY CANYON
June 2004

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)
1	11.94	39.16	293.38	85.34
2	12.59	41.32	344.26	71.77
3	13.18	43.23	341.41	69.14
4	13.79	45.24	286.55	84.72
5	14.57	47.80	216.67	73.63
6	15.33	50.31	260.65	51.03
7	15.68	51.44	261.05	65.28
8	16.62	54.53	260.65	62.92
9	17.56	57.62	67.27	80.16
10	18.43	60.48	339.97	62.49
11	19.38	63.57	309.30	49.33
12	19.97	65.52	128.16	64.36
13	20.71	67.95	307.15	70.01
14	20.93	68.67	74.81	56.86
15	21.57	70.78	151.48	57.54
16	21.77	71.41	73.39	45.23
17	22.71	74.50	307.87	30.96
18	24.16	79.27	282.32	84.48

All directions are with respect to magnetic north.

COLOG

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CO GEOLOGIC ASSOCIATES
WELL GLA-D
FLD GREGORY CANYON
CTY PALA
STE
FILING No

COMPANY GEOLOGIC ASSOCIATES
WELL ID GLA-D
FIELD GREGORY CANYON
COUNTRY USA STATE CA

LOCATION
GREGORY CANYON

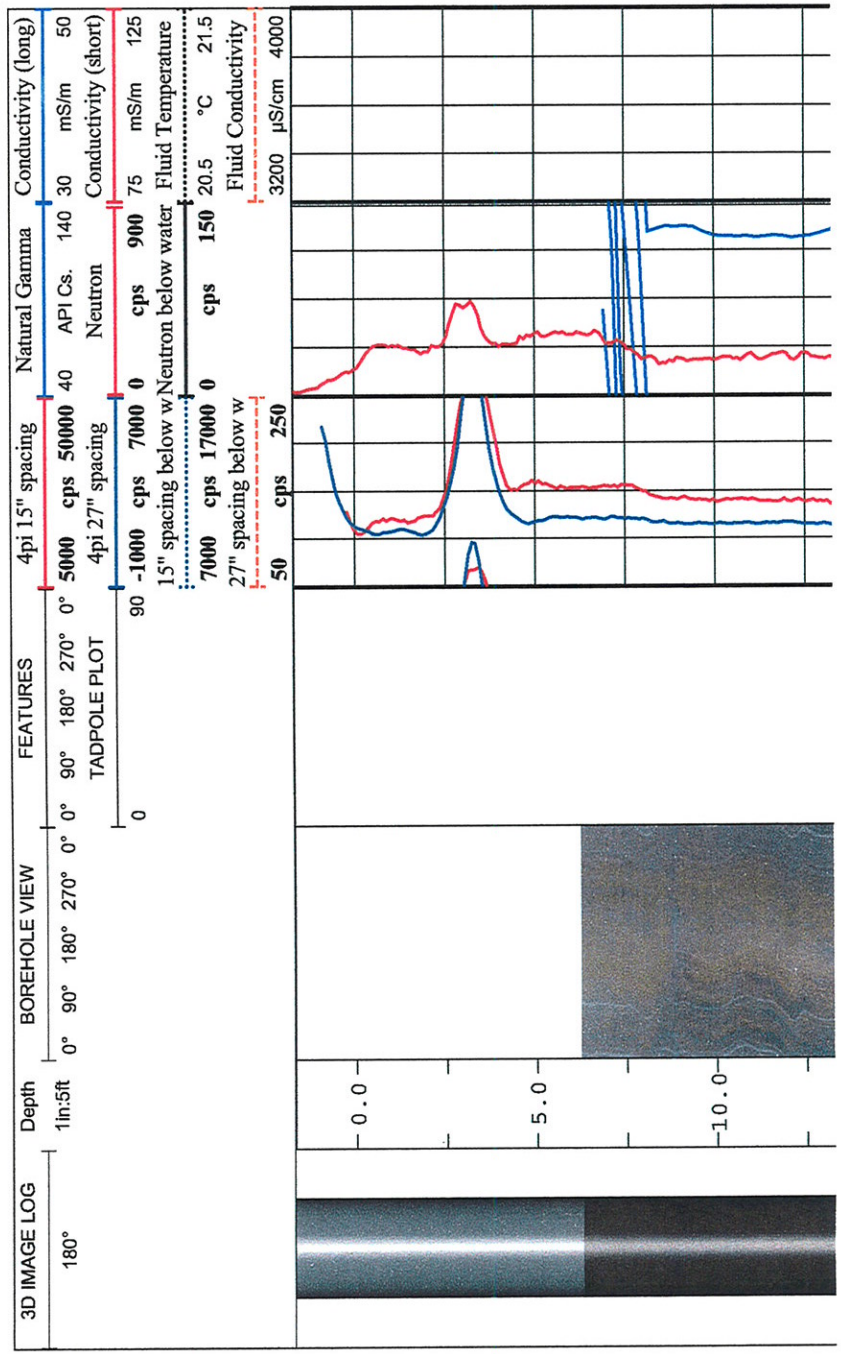
SEC TWP RGE

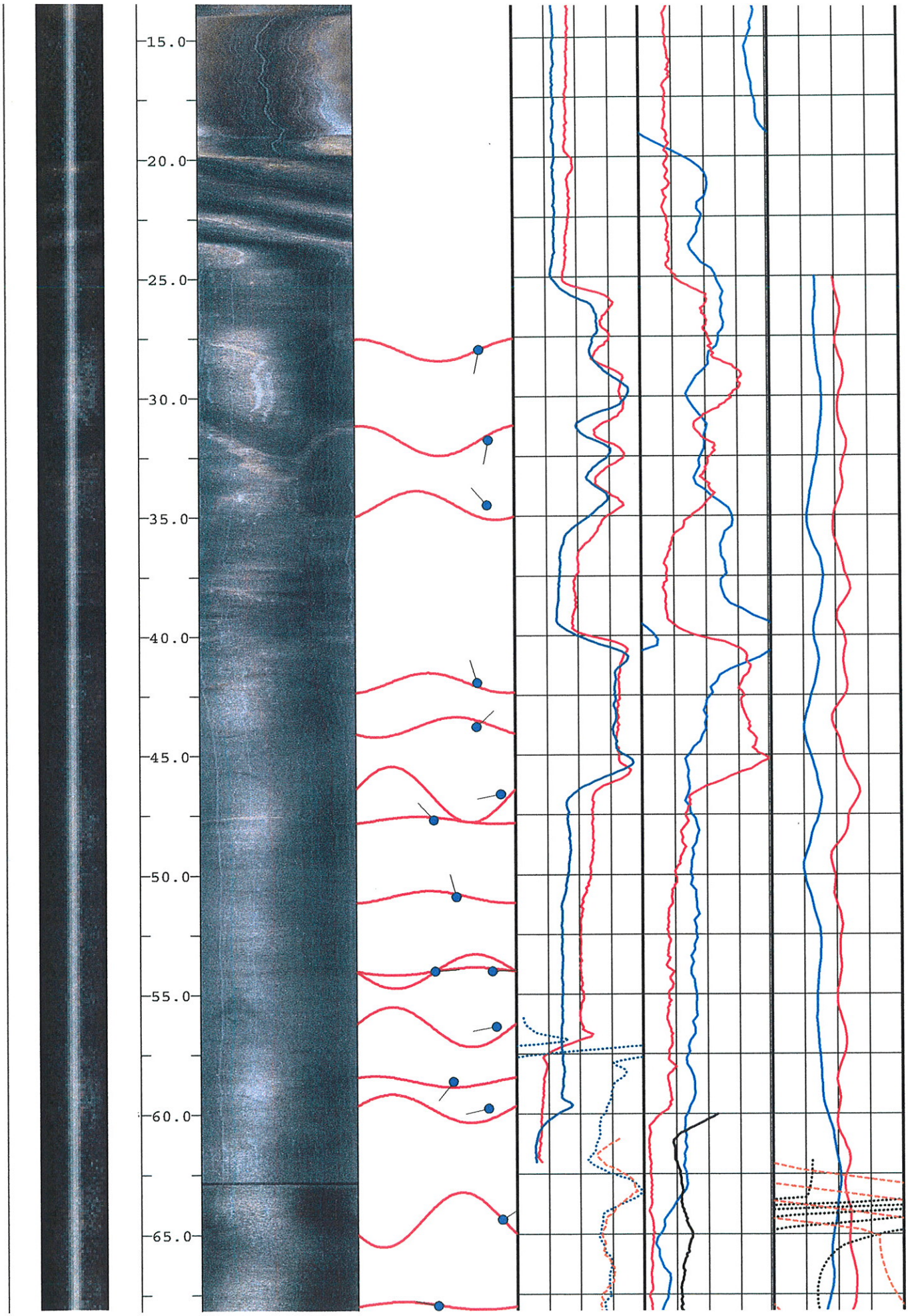
OTHER SERVICES

PERMANENT DATUM ELEVATION K.B.
LOG MEAS. FROM ABOVE PERM. DATUM D.F.
DRILLING MEAS. FROM G.L.

DATE	11/06/04	TYPE FLUID IN HOLE	
RUN No	1	SALINITY	
TYPE LOG	OPTV, NEUTRON, DENSITY	DENSITY	
DEPTH-DRILLER	147'	LEVEL	
DEPTH-LOGGER	147'	MAX. REC. TEMP.	
BTM LOGGED INTERVAL	147'		
TOP LOGGED INTERVAL	20'		
OPERATING RIG TIME			
RECORDED BY	J. ABREAU		
WITNESSED BY	B. LOPEZ		

RUN	BOREHOLE RECORD			CASING RECORD			
NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO

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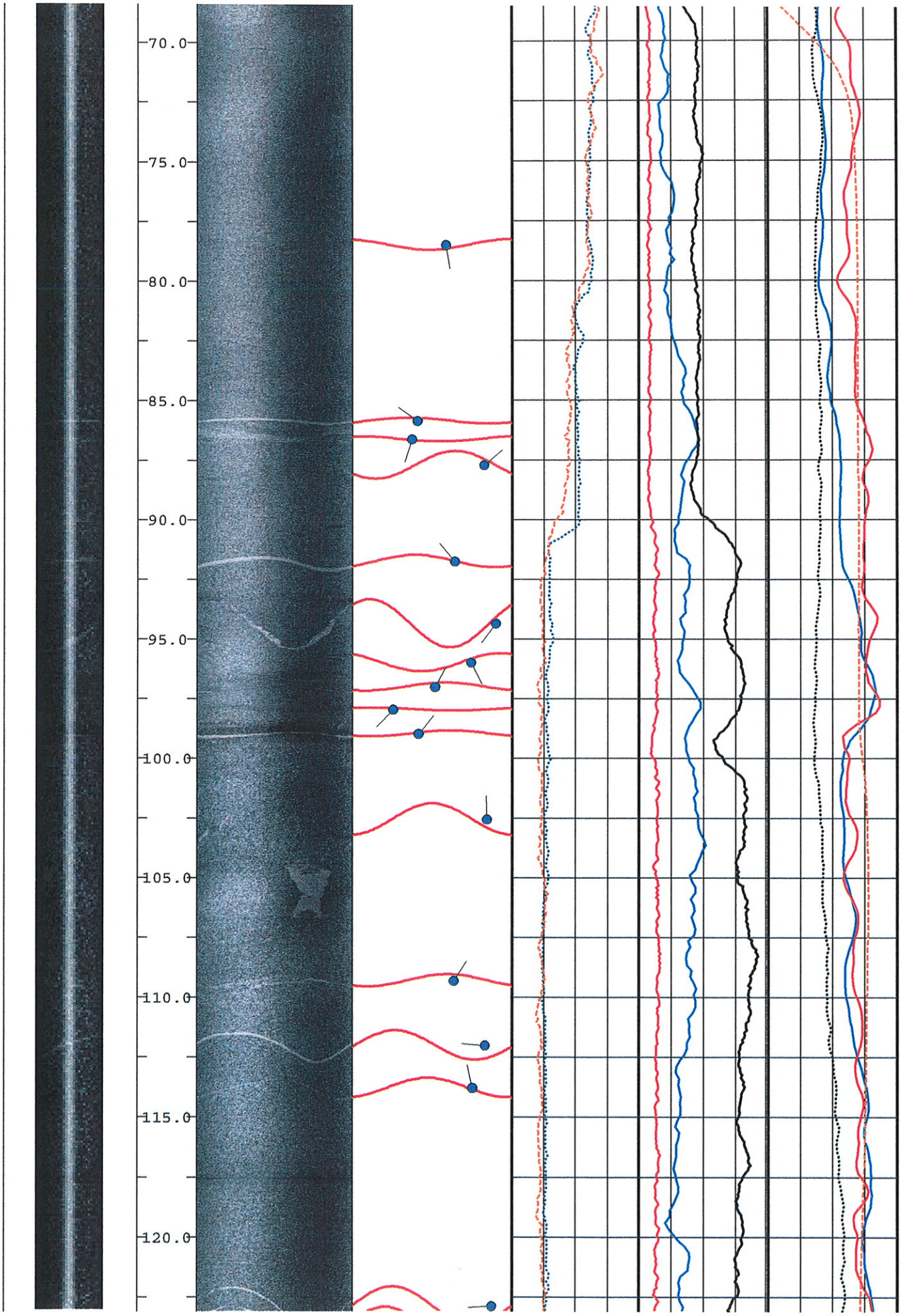
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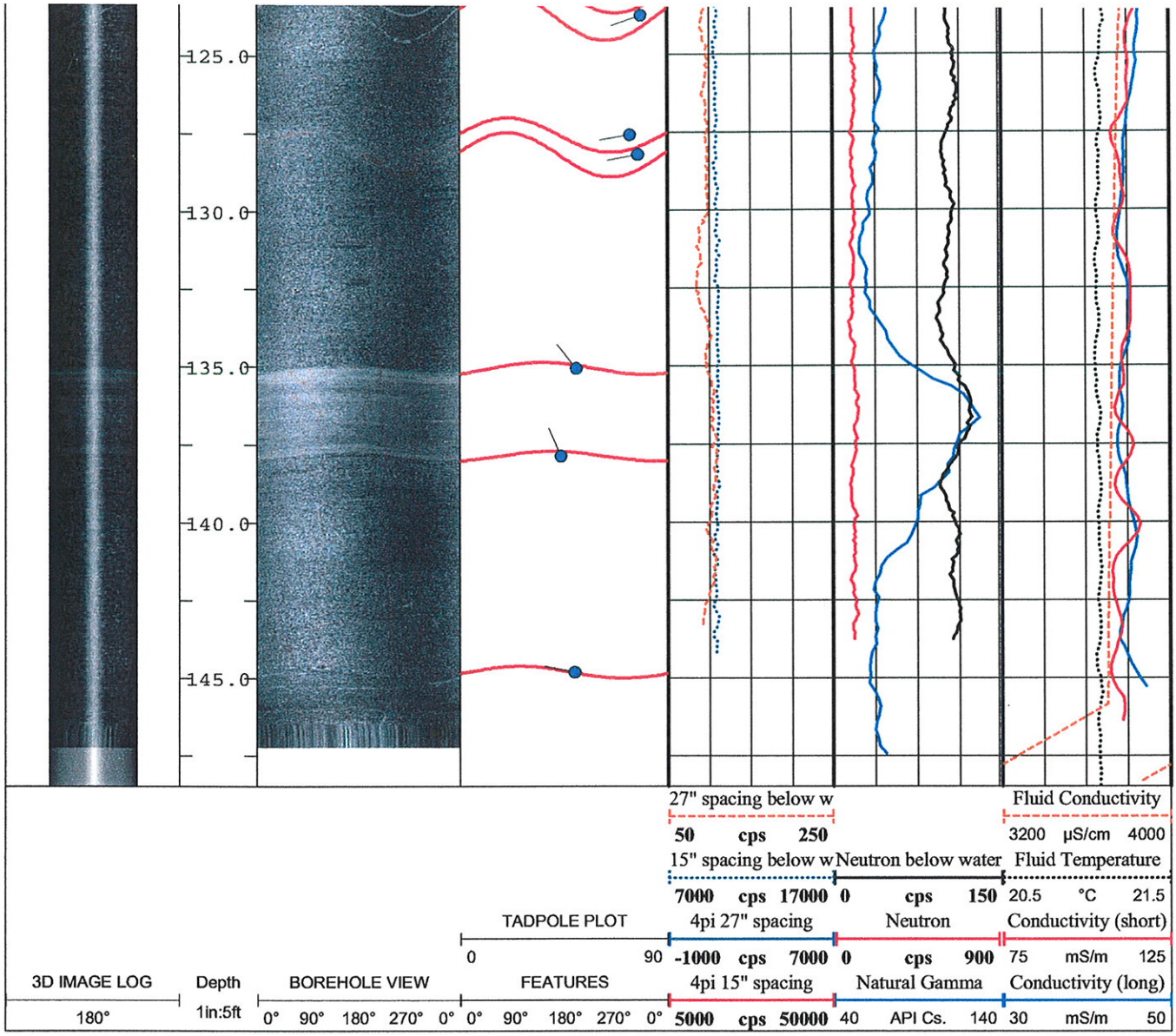
125.0
130.0
135.0
140.0
145.0
27" spacing below w
50 cps 250
Fluid Conductivity
3200 µS/cm 4000
15" spacing below w
Neutron below water
Fluid Temperature
7000 cps 17000
0 cps 150
20.5 °C 21.5
TADPOLE PLOT
4pi 27" spacing
Neutron
Conductivity (short)
0 90
-1000 cps 7000
0 cps 900
75 mS/m 125
3D IMAGE LOG
Depth
BOREHOLE VIEW
FEATURES
4pi 15" spacing
Natural Gamma
Conductivity (long)
180°
1in:5ft
0° 90° 180° 270° 0°
0° 90° 180° 270° 0°
5000 cps 50000
40 API Cs. 140
30 mS/m 50

Orientation Summary Table
Image Features
Wellbore: GLA-D
GREGORY CANYON
June 2004

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)
1	8.54	28.03	191.13	70.67
2	9.70	31.81	191.26	75.49
3	10.52	34.53	318.86	74.91
4	12.79	41.96	343.58	68.85
5	13.35	43.81	46.15	68.36
6	14.21	46.63	258.85	82.03
7	14.54	47.70	317.19	44.19
8	15.52	50.93	345.81	56.77
9	16.47	54.02	85.90	44.54
10	16.47	54.04	88.23	77.00
11	17.18	56.35	259.91	78.90
12	17.88	58.65	219.43	54.67
13	18.21	59.76	257.98	74.48
14	19.63	64.39	57.33	81.82
15	20.72	67.97	281.61	45.57
16	23.93	78.50	171.24	52.60
17	26.17	85.87	304.96	36.65
18	26.40	86.63	196.48	33.42
19	26.73	87.71	50.15	74.24
20	27.96	91.74	319.91	57.53
21	28.76	94.35	217.95	80.76
22	29.25	95.98	152.90	66.75
23	29.57	97.00	27.80	46.56
24	29.85	97.94	224.06	22.78
25	30.17	98.97	39.20	37.09
26	31.26	102.56	358.41	75.85
27	33.31	109.30	33.08	56.93
28	34.14	112.00	274.75	74.90
29	34.68	113.77	348.31	67.71
30	37.45	122.87	268.54	78.43
31	37.72	123.74	252.12	78.56
32	38.89	127.58	261.59	73.65
33	39.07	128.19	260.76	77.14
34	41.17	135.06	320.53	50.19
35	42.02	137.86	337.09	43.63
36	44.14	144.81	281.61	49.33

All directions are with respect to magnetic north.

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CO GEOLOGIC ASSOCIATES
WELL GLA-E
FLD GREGORY CANYON
CTY PALA
STE
FILING No

COMPANY GEOLOGIC ASSOCIATES
WELL ID GLA-E
FIELD PALA
COUNTRY USA STATE CA

LOCATION
GREGORY CANYON LANDFILL

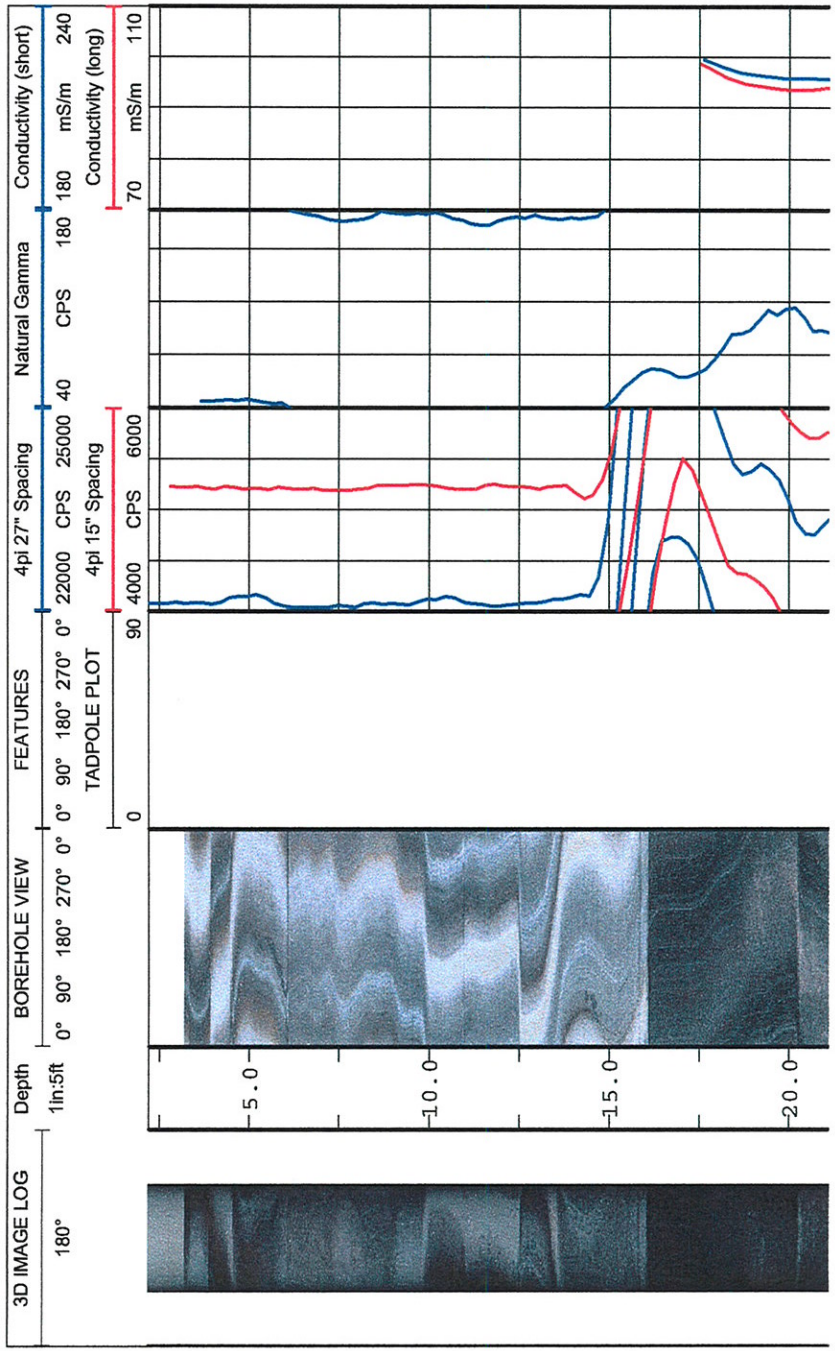
SEC TWP RGE

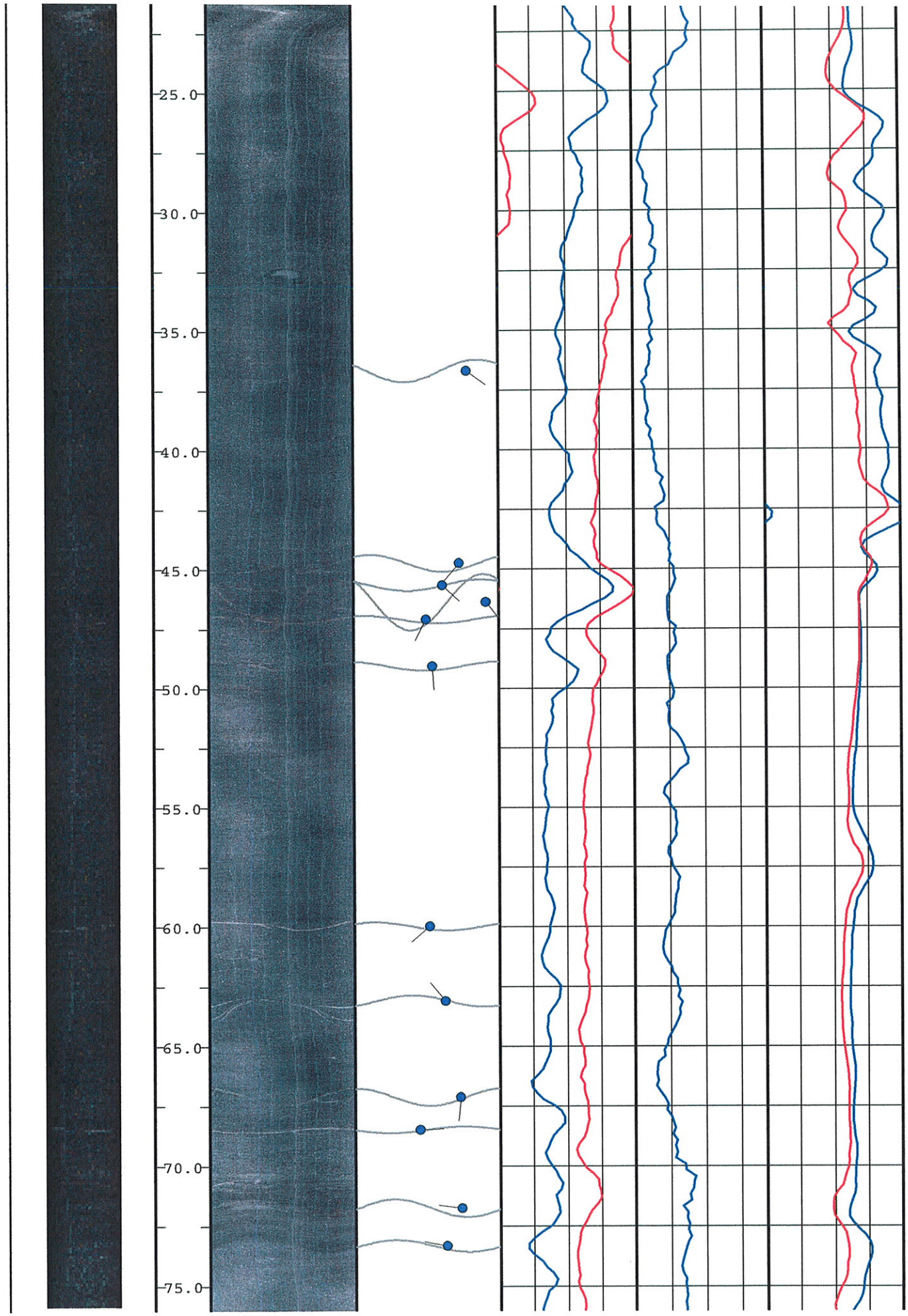
OTHER SERVICES

PERMANENT DATUM ELEVATION K.B.
LOG MEAS. FROM ABOVE PERM. DATUM D.F.
DRILLING MEAS. FROM G.L.

DATE	20/07/04	TYPE FLUID IN HOLE	
RUN No	1	SALINITY	
TYPE LOG	OPTV, NEUTRON, DENSITY	DENSITY	
DEPTH-DRILLER	154'	LEVEL	
DEPTH-LOGGER	154'	MAX. REC. TEMP.	
BTM LOGGED INTERVAL	154'		
TOP LOGGED INTERVAL	20'		
OPERATING RIG TIME			
RECORDED BY	J. ABREAU		
WITNESSED BY	B. LOPEZ		

RUN	BOREHOLE RECORD			CASING RECORD			
NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO

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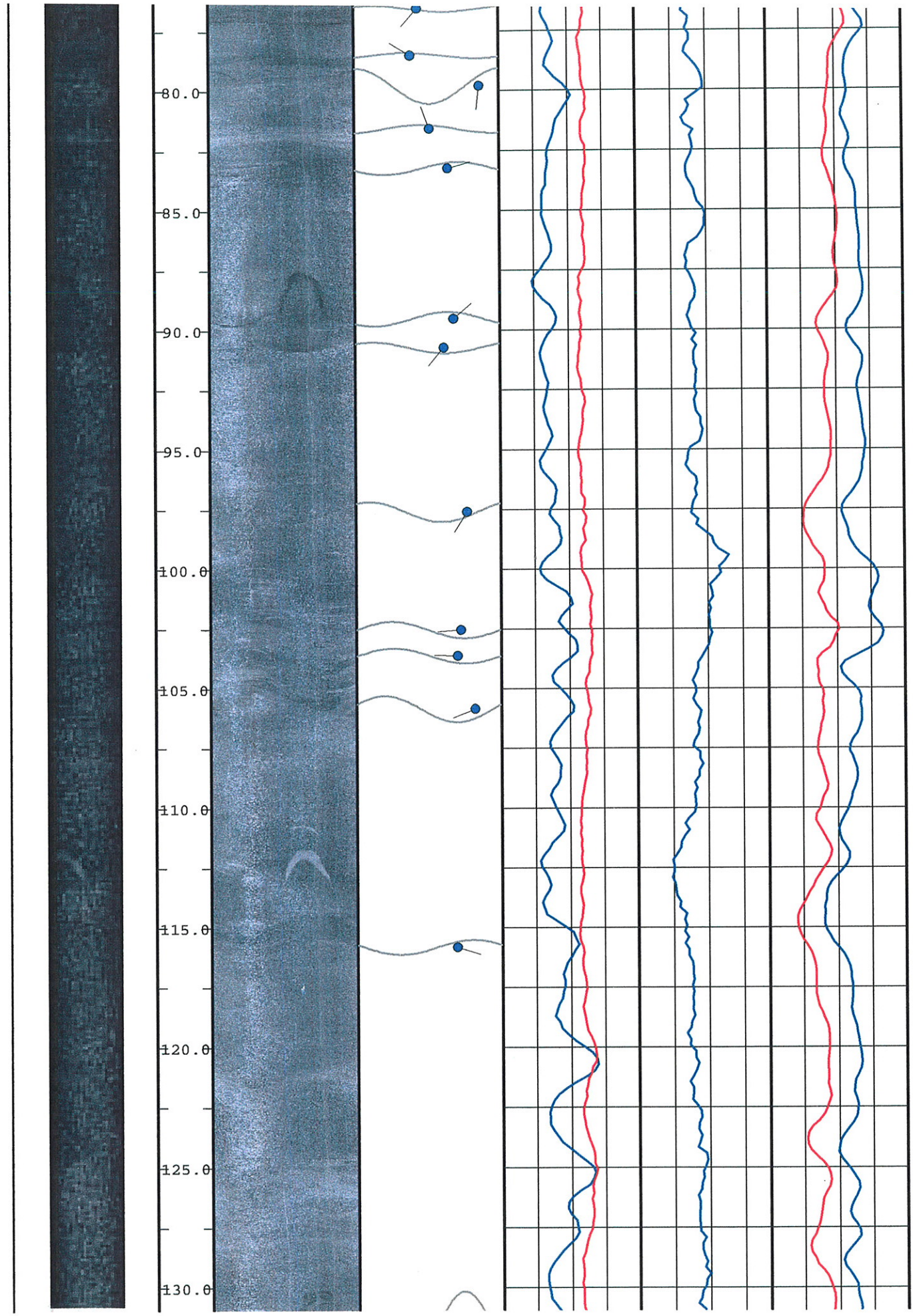
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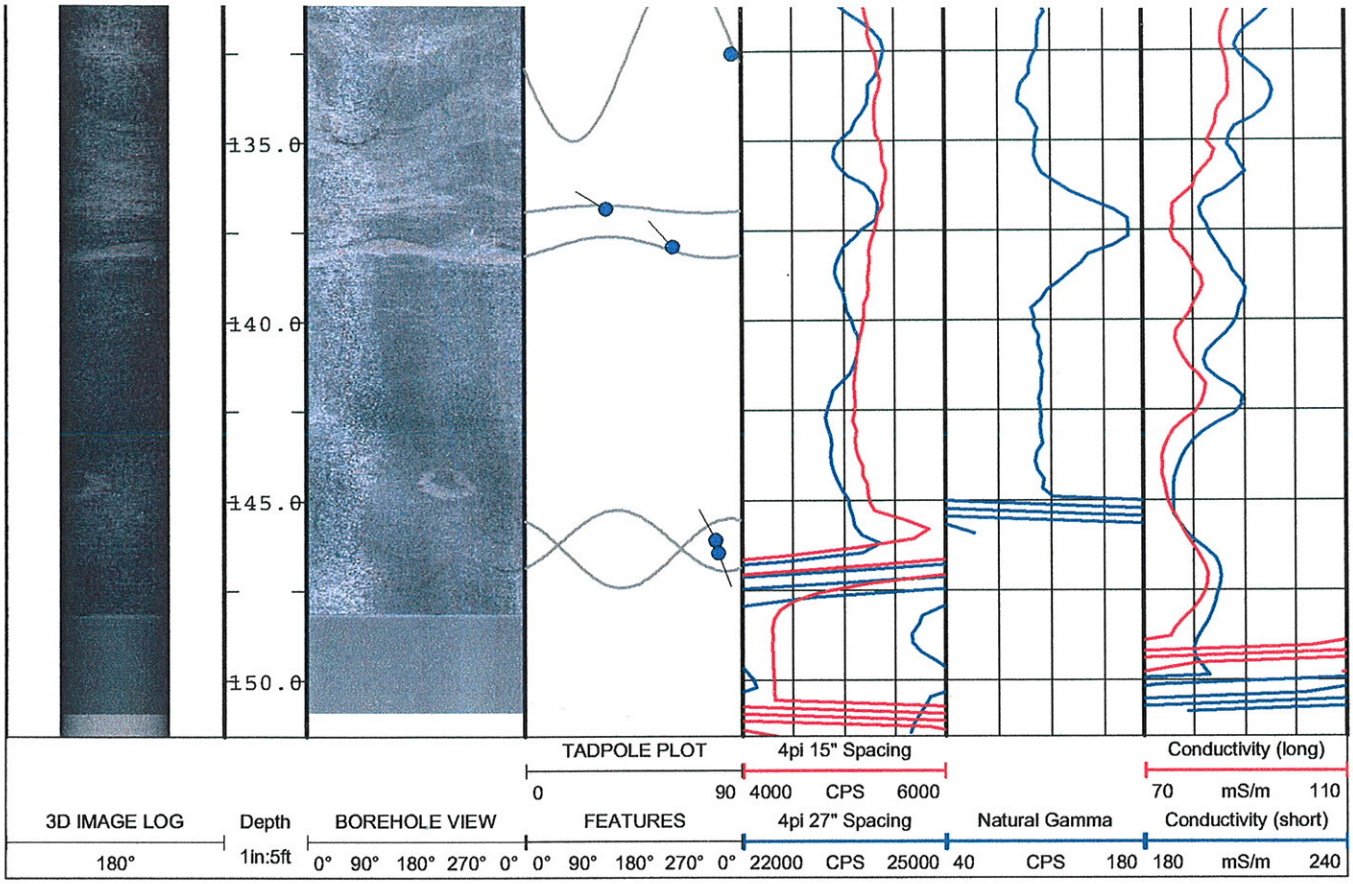

135.0
140.0
145.0
150.0
TADPOLE PLOT
0
90
4pi 15" Spacing
4000 CPS 6000
Conductivity (long)
70 mS/m 110
3D IMAGE LOG
180°
Depth
1in:5ft
BOREHOLE VIEW
0° 90° 180° 270° 0°
FEATURES
0° 90° 180° 270° 0°
4pi 27" Spacing
22000 CPS 25000
Natural Gamma
40 CPS 180
Conductivity (short)
180 mS/m 240

Orientation Summary Table
Image Features
Wellbore: GLA-E
GREGORY CANYON
June 2004

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)
1	11.18	36.68	125.40	70.45
2	13.63	44.72	220.30	65.40
3	13.91	45.65	132.18	54.77
4	14.13	46.35	140.50	82.05
5	14.35	47.09	207.33	44.65
6	14.95	49.05	175.72	48.44
7	18.28	59.96	230.15	46.56
8	19.23	63.09	321.64	56.10
9	20.46	67.11	184.79	65.40
10	20.87	68.46	87.60	40.03
11	21.86	71.73	277.06	66.09
12	22.34	73.30	280.43	56.52
13	23.33	76.54	221.08	39.21
14	23.93	78.50	302.20	34.84
15	24.32	79.78	184.95	77.55
16	24.86	81.57	341.08	46.56
17	25.37	83.23	74.64	57.74
18	27.28	89.50	48.73	60.95
19	27.65	90.71	221.08	54.77
20	29.74	97.58	211.78	68.74
21	31.25	102.51	267.47	64.66
22	31.57	103.59	271.36	62.78
23	32.25	105.82	248.19	73.41
24	35.30	115.81	107.04	61.89
25	40.40	132.55	81.12	86.11
26	41.72	136.87	301.43	33.90
27	42.04	137.93	317.45	61.44
28	44.53	146.10	332.27	79.03
29	44.64	146.46	159.33	80.32

All directions are with respect to magnetic north.

COLOG

BOREHOLE GEOPHYSICS & HYDROPHYSICS

A Division of Layne Christensen Company

11001 Etiwanda Ave., Fontana CA 92337
PH: (909) 390-2833 FAX (909) 390-6097

CO GEOLOGIC ASSOCIATES
WELL GLA-F
FLD GREGORY CANYON
CTY PALA
STE
FILING No

COMPANY GEOLOGIC ASSOCIATES
WELL ID GLA-F
FIELD PALA
COUNTRY USA STATE CA

LOCATION
GREGORY CANYON LANDFILL

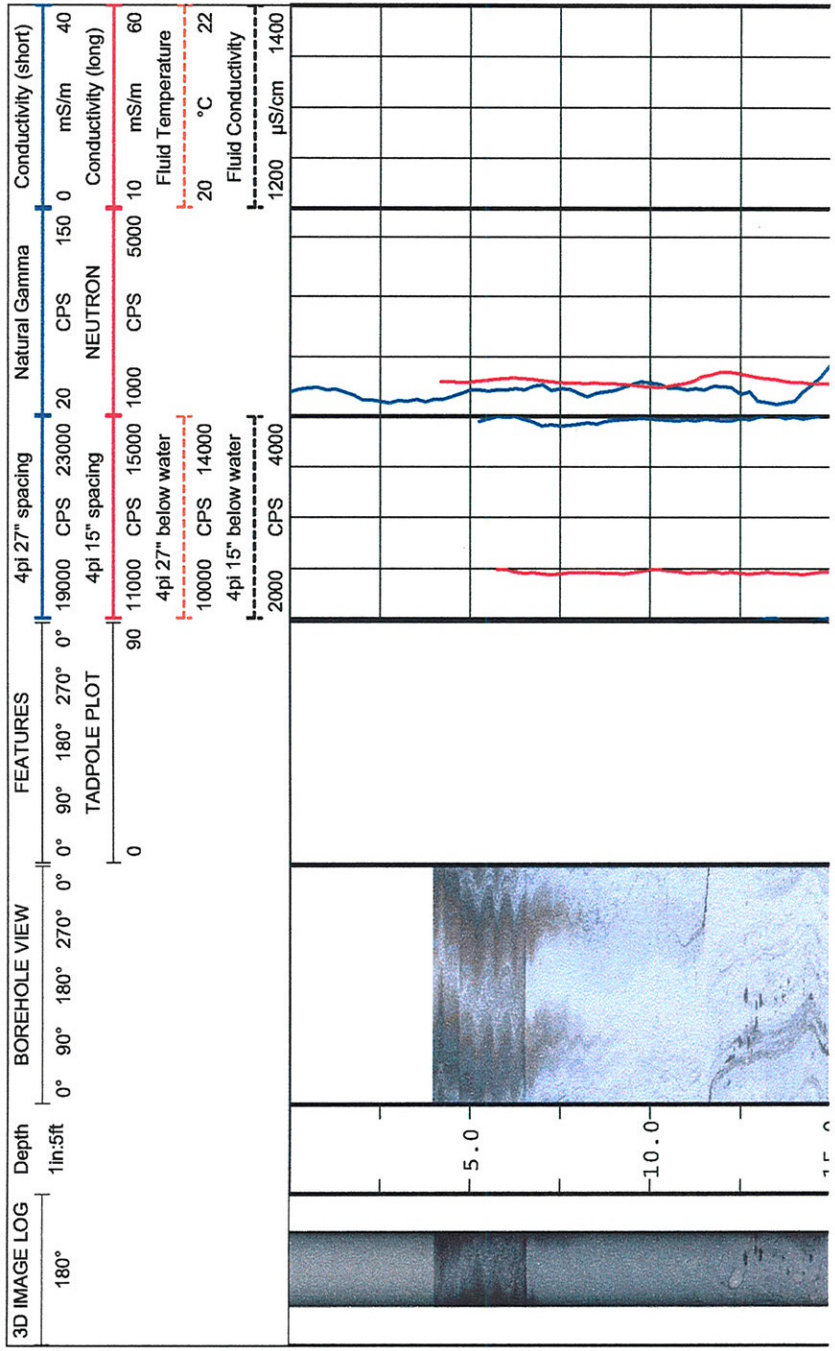
SEC TWP RGE

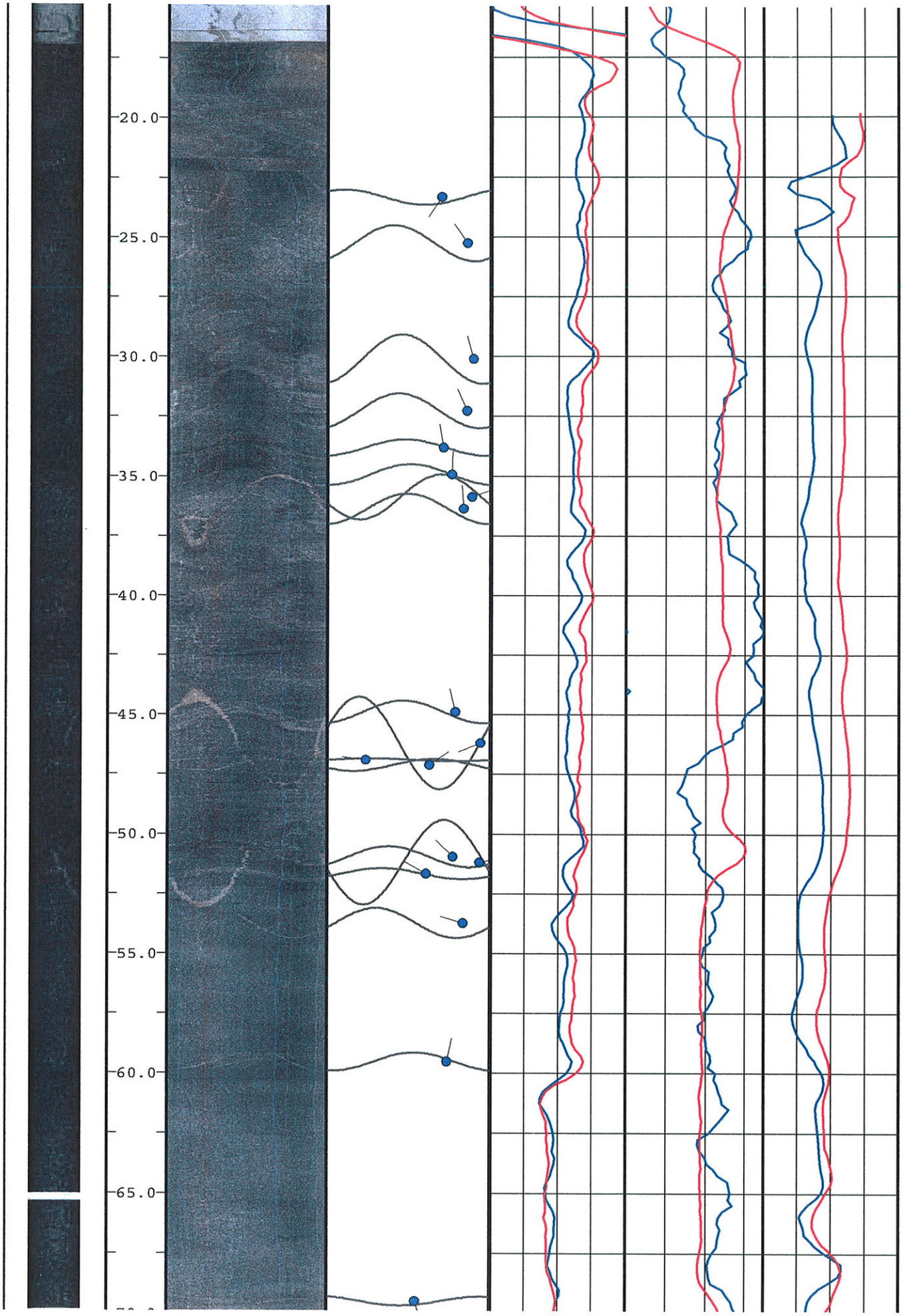
OTHER SERVICES

PERMANENT DATUM	GROUND SURFACE	ELEVATION	K.B.
LOG MEAS. FROM	GROUND SURFACE	ABOVE PERM. DATUM	D.F.
DRILLING MEAS. FROM	GROUND SURFACE		G.L.

DATE	21/07/04	TYPE FLUID IN HOLE	
RUN No	1	SALINITY	
TYPE LOG	OPTV, NEUTRON, DENSITY	DENSITY	
DEPTH-DRILLER	165'	LEVEL	
DEPTH-LOGGER	165'	MAX. REC. TEMP.	
BTM LOGGED INTERVAL	165'		
TOP LOGGED INTERVAL	20'		
OPERATING RIG TIME			
RECORDED BY	J. ABREAU		
WITNESSED BY	B. LOPEZ		

RUN	BOREHOLE RECORD			CASING RECORD			
NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO

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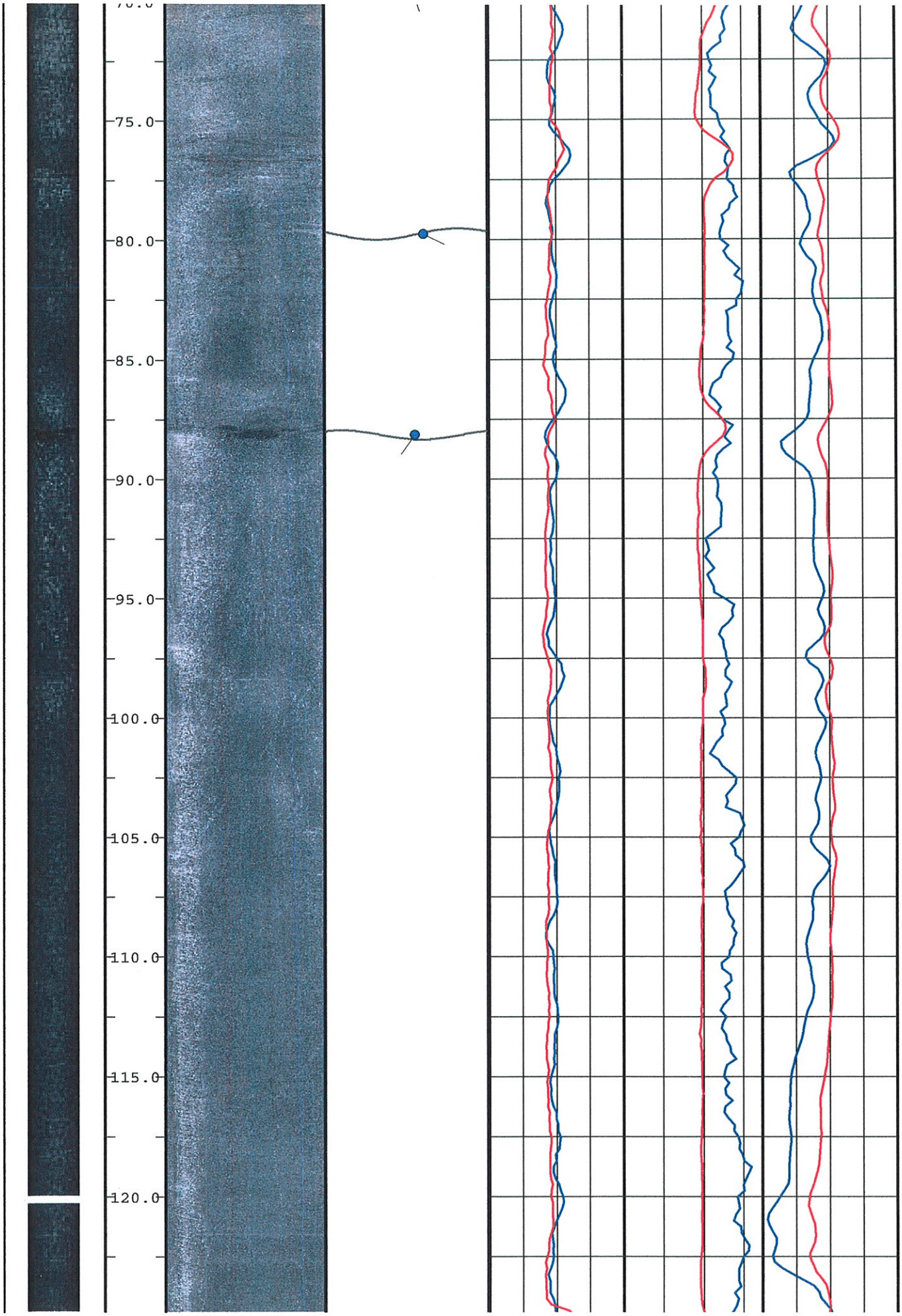
55.0
60.0
65.0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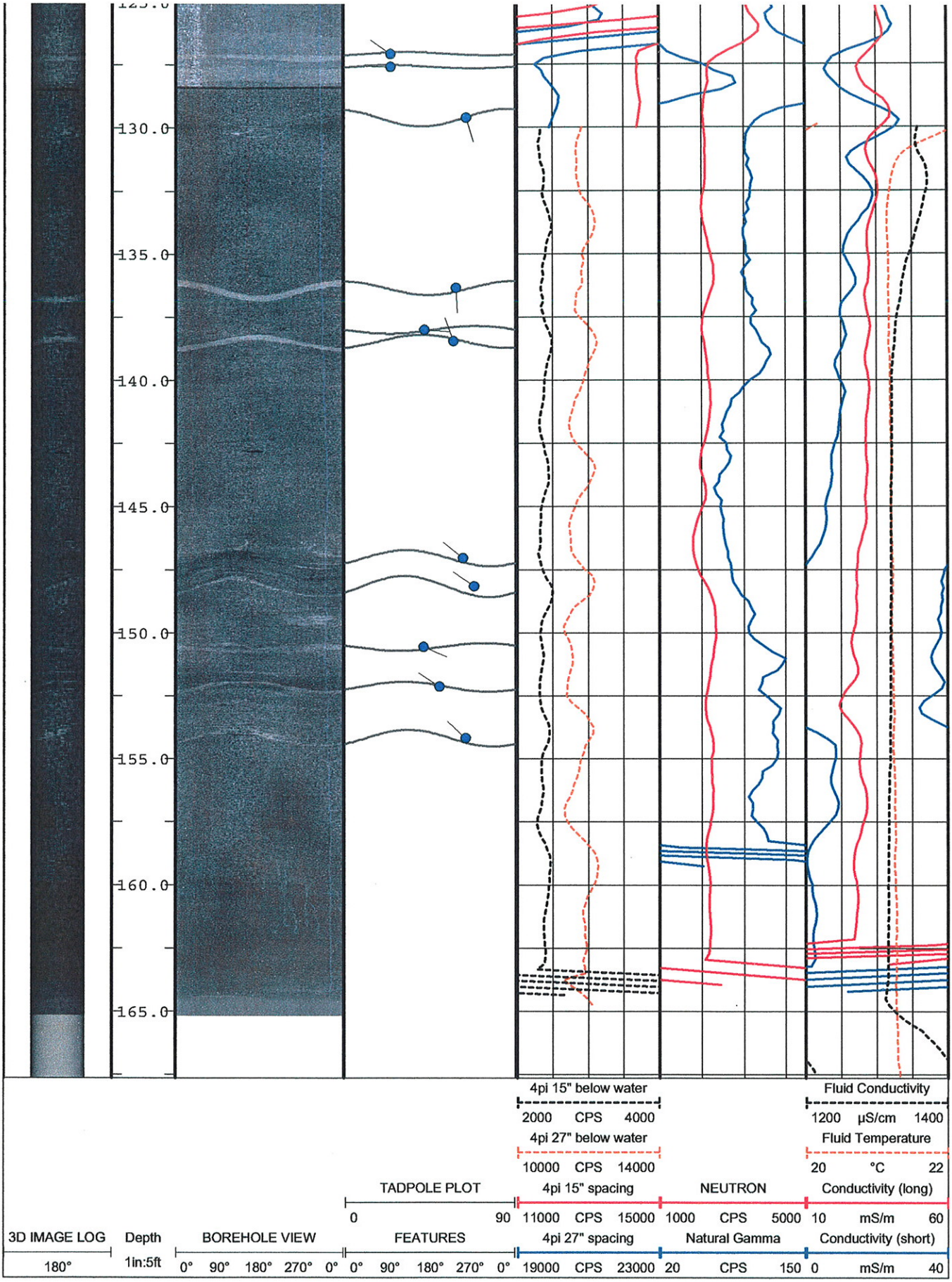
80.0
85.0
90.0
95.0
100.0
105.0
110.0
115.0
120.0


125.0
130.0
135.0
140.0
145.0
150.0
155.0
160.0
165.0
4pi 15" below water
2000 CPS 4000
4pi 27" below water
10000 CPS 14000
Fluid Conductivity
1200 µS/cm 1400
Fluid Temperature
20 °C 22
TADPOLE PLOT
0 90
4pi 15" spacing
11000 CPS 15000
NEUTRON
1000 CPS 5000
Conductivity (long)
10 mS/m 60
3D IMAGE LOG
180°
Depth
1in:5ft
BOREHOLE VIEW
0° 90° 180° 270° 0°
FEATURES
0° 90° 180° 270° 0°
4pi 27" spacing
19000 CPS 23000
Natural Gamma
20 CPS 150
Conductivity (short)
0 mS/m 40

Orientation Summary Table
Image Features
Wellbore: GLA-F
GREGORY CANYON
June 2004

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)
1	7.11	23.33	214.25	63.06
2	7.70	25.26	325.30	77.69
3	9.17	30.10	343.78	80.93
4	9.84	32.28	336.76	77.24
5	10.31	33.81	351.37	64.30
6	10.65	34.93	2.82	69.06
7	10.93	35.86	70.17	80.07
8	11.09	36.37	355.53	75.53
9	13.68	44.89	346.96	70.96
10	14.08	46.18	248.47	85.17
11	14.29	46.89	277.32	21.01
12	14.36	47.11	55.26	56.72
13	15.53	50.94	314.84	69.73
14	15.60	51.18	78.46	84.71
15	15.75	51.67	299.95	54.77
16	16.38	53.73	286.67	75.40
17	18.14	59.51	12.96	66.49
18	21.18	69.49	161.04	48.95
19	24.30	79.74	114.97	54.77
20	26.87	88.14	215.16	50.19
21	38.73	127.07	305.68	24.51
22	38.89	127.59	272.49	24.51
23	39.51	129.61	163.25	64.41
24	41.56	136.35	176.53	58.87
25	42.06	137.99	94.45	42.37
26	42.20	138.45	341.29	57.74
27	44.81	147.03	308.40	62.78
28	45.16	148.16	304.78	68.54
29	45.89	150.55	113.16	41.6
30	46.37	152.13	303.57	50.19
31	46.99	154.18	313.23	63.89

All directions are with respect to magnetic north.

COLOG

BOREHOLE GEOPHYSICS & HYDROPHYSICS

A Division of Layne Christensen Company

11001 Etiwanda Ave., Fontana CA 92337
PH: (909) 390-2833 FAX (909) 390-6097

CO GEOLOGIC ASSOCIATES
WELL GLA-G
FLD GREGORY CANYON
CTY
STE
FILING No

COMPANY GEOLOGIC ASSOCIATES
WELL ID GLA-G
FIELD PALA
COUNTRY USA STATE CA

LOCATION
GREGORY CANYON LANDFILL

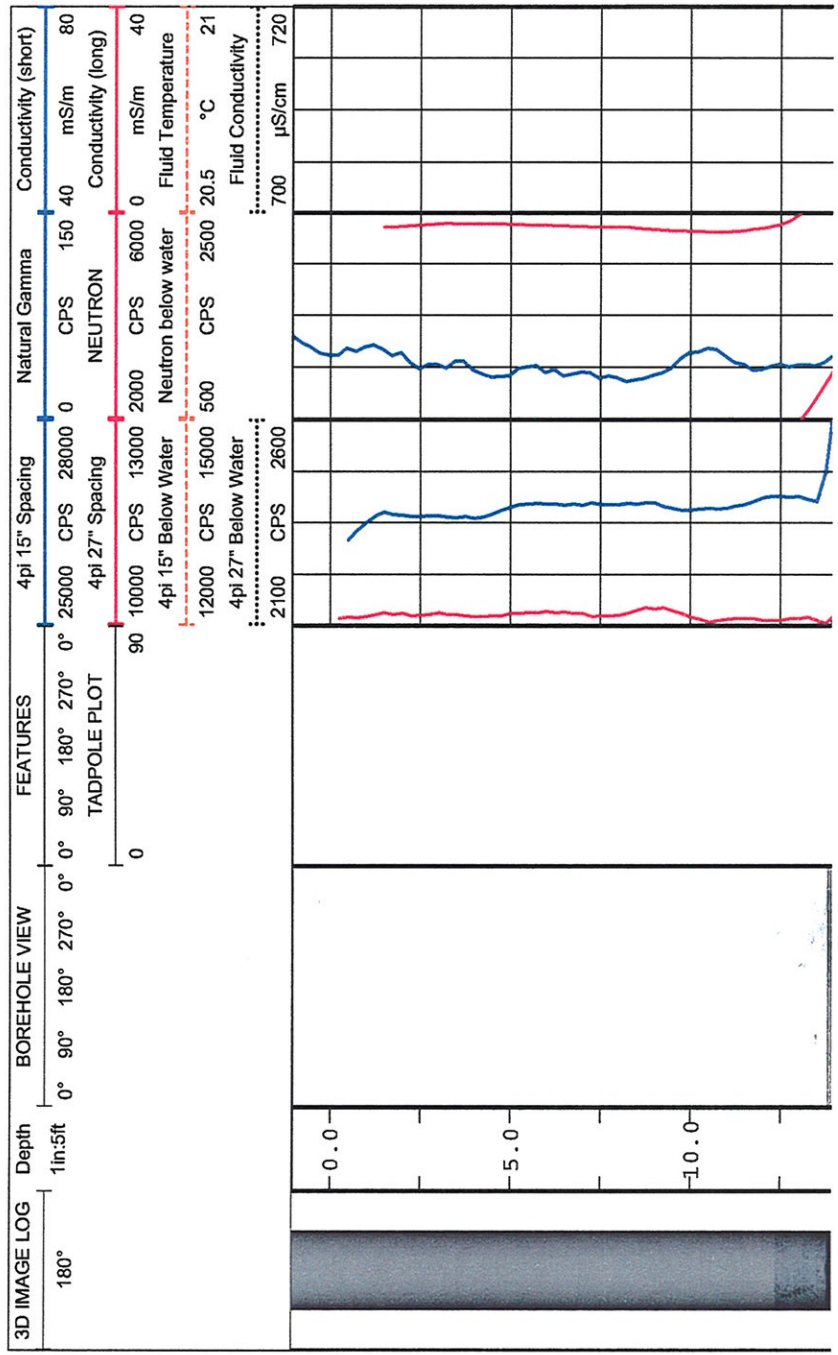
SEC TWP RGE

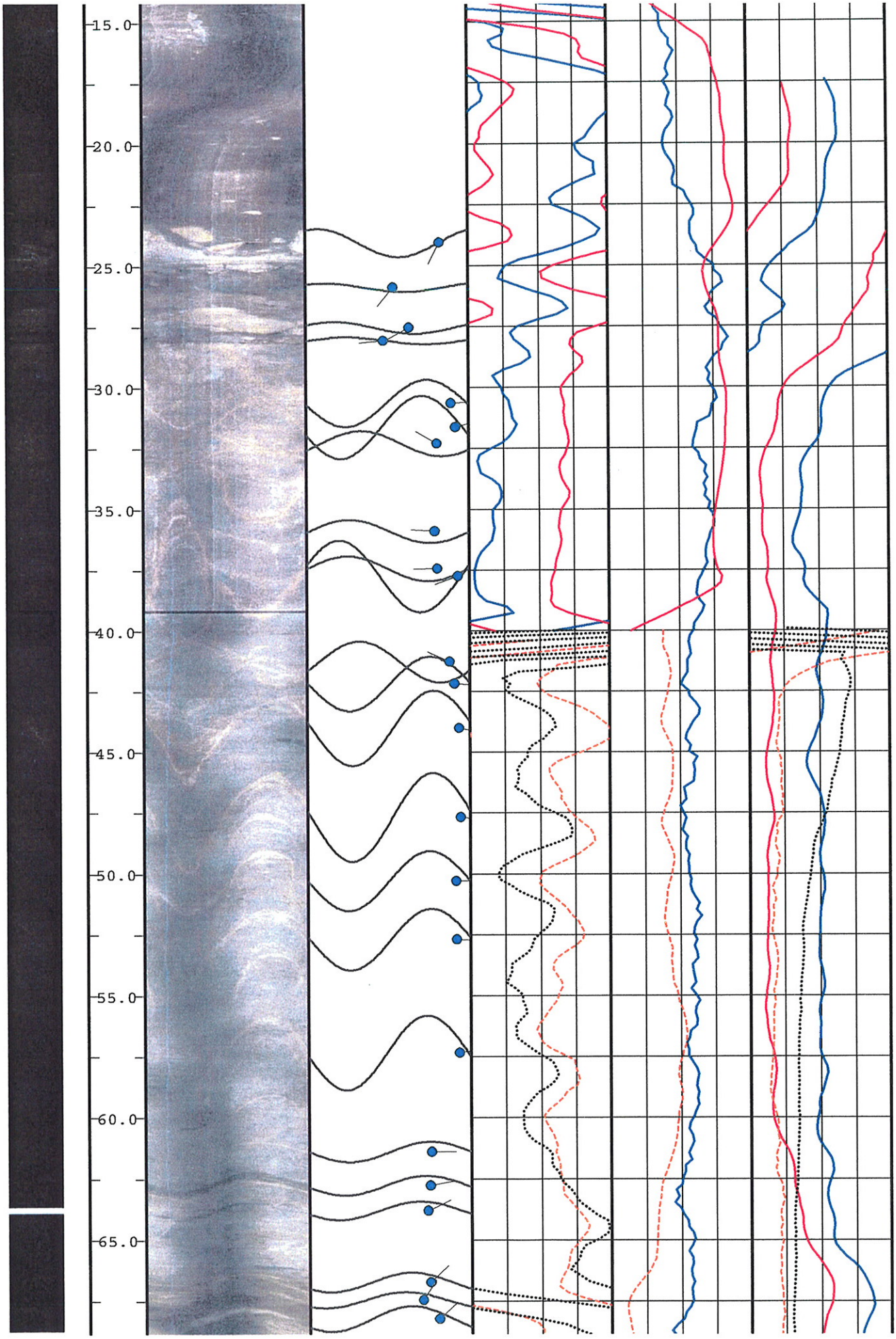
OTHER SERVICES

PERMANENT DATUM	GROUND SURFACE	ELEVATION	K.B.
LOG MEAS. FROM	GROUND SURFACE	ABOVE PERM. DATUM	D.F.
DRILLING MEAS. FROM			G.L.

DATE	21/07/04	TYPE FLUID IN HOLE	
RUN No	1	SALINITY	
TYPE LOG	OPTV, NEUTRON, DENSITY	DENSITY	
DEPTH-DRILLER	105'	LEVEL	
DEPTH-LOGGER	105'	MAX. REC. TEMP.	
BTM LOGGED INTERVAL	105'		
TOP LOGGED INTERVAL	15'		
OPERATING RIG TIME			
RECORDED BY	J. ABREAU		
WITNESSED BY	B.LOPEZ		

RUN	BOREHOLE RECORD			CASING RECORD			
NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO

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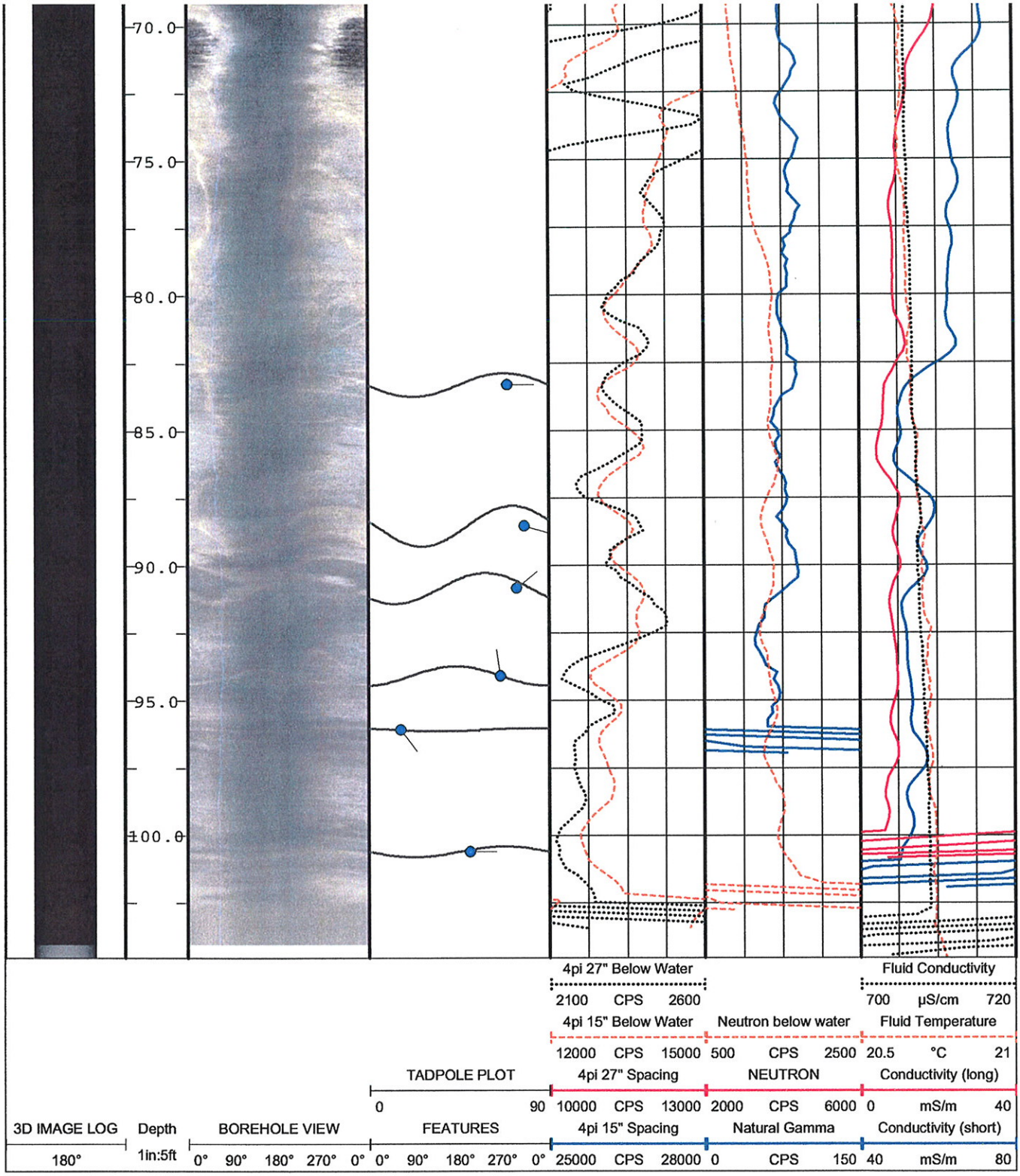
45.0
50.0
55.0
60.0
65.0


70.0
75.0
80.0
85.0
90.0
95.0
100.0
4pi 27" Below Water
2100 CPS 2600
4pi 15" Below Water
12000 CPS 15000
Neutron below water
500 CPS 2500
Fluid Conductivity
700 µS/cm 720
Fluid Temperature
20.5 °C 21
TADPOLE PLOT
0 90
4pi 27" Spacing
10000 CPS 13000
NEUTRON
2000 CPS 6000
Conductivity (long)
0 mS/m 40
3D IMAGE LOG
180°
Depth
1in:5ft
BOREHOLE VIEW
0° 90° 180° 270° 0°
FEATURES
0° 90° 180° 270° 0°
4pi 15" Spacing
25000 CPS 28000
Natural Gamma
0 CPS 150
Conductivity (short)
40 mS/m 80

Orientation Summary Table
Image Features
Wellbore: GLA-G
GREGORY CANYON
June 2004

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)
1	7.32	24.03	206.52	74.29
2	7.88	25.86	219.12	48.44
3	8.39	27.51	241.70	57.22
4	8.55	28.05	266.49	42.97
5	9.34	30.64	87.02	80.31
6	9.63	31.61	75.83	82.72
7	9.84	32.28	299.90	72.57
8	10.94	35.89	273.83	71.14
9	11.41	37.43	269.37	72.50
10	11.50	37.74	251.22	83.70
11	12.58	41.26	295.09	79.08
12	12.85	42.17	92.41	81.65
13	13.41	43.99	99.27	83.95
14	14.53	47.66	97.80	84.82
15	15.32	50.27	89.57	82.34
16	16.05	52.67	93.21	82.57
17	17.47	57.31	83.40	83.86
18	18.71	61.38	89.57	68.17
19	19.13	62.75	79.09	67.38
20	19.44	63.78	65.61	66.12
21	20.33	66.71	46.34	67.37
22	20.56	67.44	32.38	63.32
23	20.79	68.21	46.92	72.29
24	25.38	83.28	89.57	69.25
25	26.98	88.53	105.73	77.63
26	27.68	90.82	51.59	73.86
27	28.67	94.07	352.55	65.47
28	29.28	96.07	142.87	16.07
29	30.66	100.6	89.57	50.19

All directions are with respect to magnetic north.

COLOG

BOREHOLE GEOPHYSICS & HYDROPHYSICS

A Division of Layne Christensen Company

11001 Etiwanda Ave., Fontana CA 92337
PH: (909) 390-2833 FAX (909) 390-6097

CO GEOLOGIC ASSOCIATES
WELL GLA-3S
FLD GREGORY CANYON
CTY
STE
FILING No

COMPANY GEOLOGIC ASSOCIATES
WELL ID GLA-3S
FIELD PALA
COUNTRY USA STATE CA

LOCATION
GREGORY CANYON LANDFILL

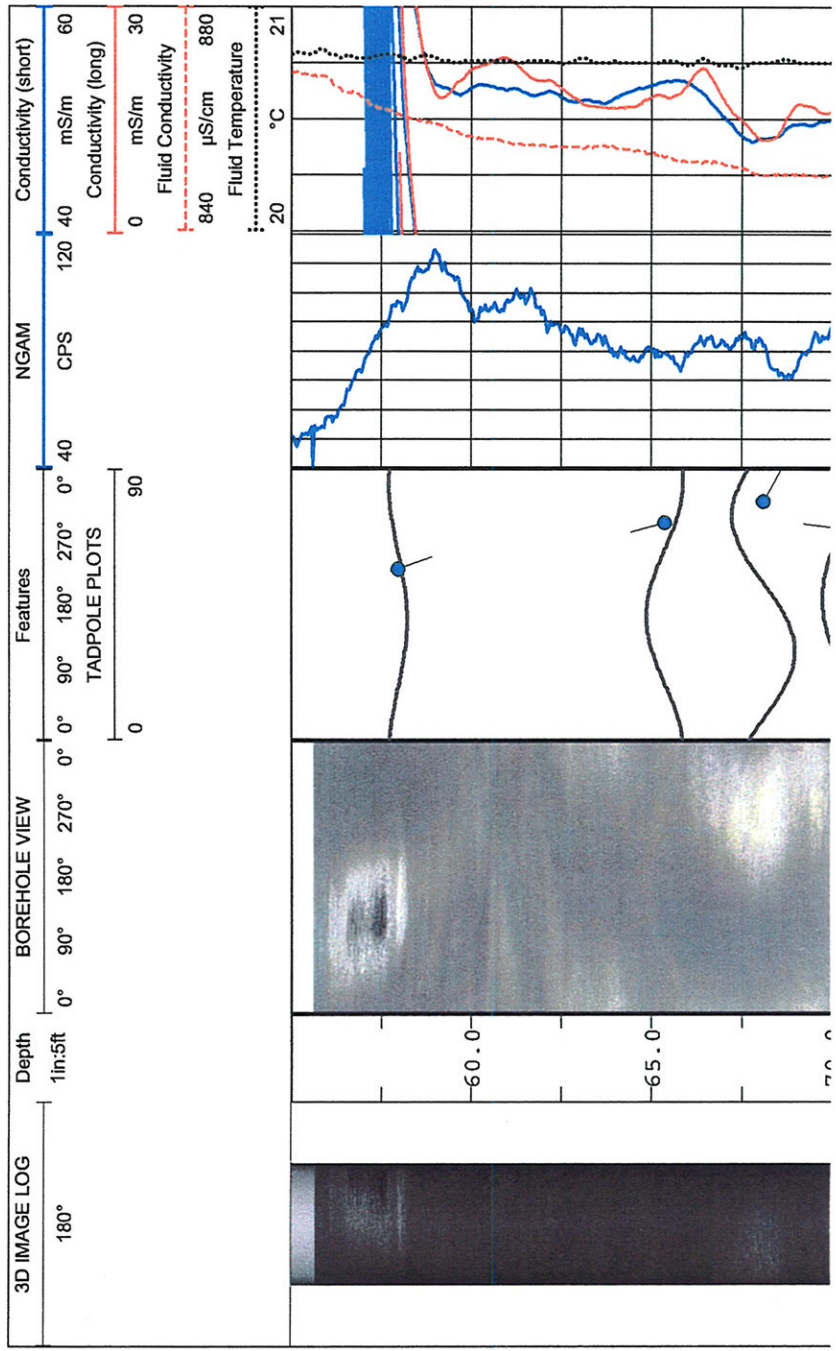
SEC TWP RGE

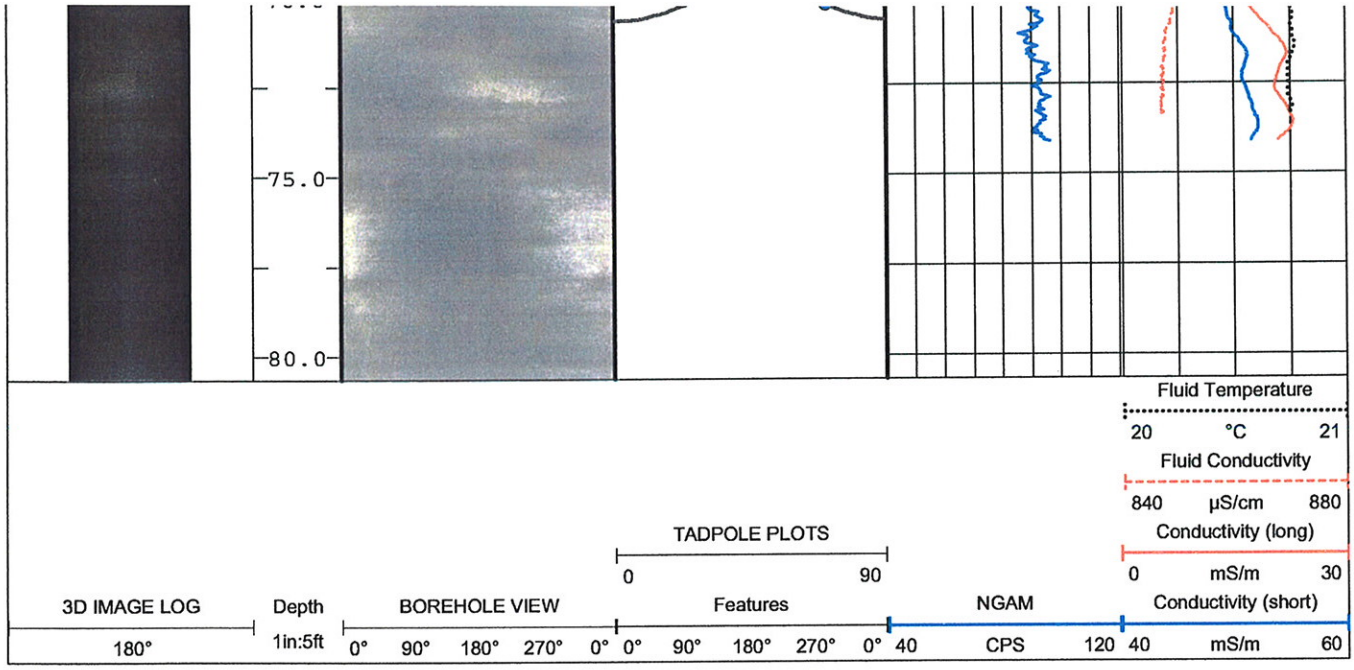
OTHER SERVICES

PERMANENT DATUM	GROUND SURFACE	ELEVATION	K.B.
LOG MEAS. FROM	GROUND SURFACE	ABOVE PERM. DATUM	D.F.
DRILLING MEAS. FROM	GROUND SURFACE		G.L.

DATE	18/06/04	TYPE FLUID IN HOLE	
RUN No	1	SALINITY	
TYPE LOG	OPTV, GAMMA, T/FEC	DENSITY	
DEPTH-DRILLER	80'	LEVEL	
DEPTH-LOGGER	80'	MAX. REC. TEMP.	
BTM LOGGED INTERVAL	80'		
TOP LOGGED INTERVAL	50'		
OPERATING RIG TIME			
RECORDED BY	J. ABREAU		
WITNESSED BY	B. LOPEZ		

RUN	BOREHOLE RECORD			CASING RECORD			
NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO




75.0
80.0
Fluid Temperature
20 °C 21
Fluid Conductivity
840 µS/cm 880
Conductivity (long)
0 mS/m 30
TADPOLE PLOTS
0 90
3D IMAGE LOG
180°
Depth
1in:5ft
BOREHOLE VIEW
0° 90° 180° 270° 0°
Features
0° 90° 180° 270° 0°
NGAM
40 CPS 120
Conductivity (short)
40 mS/m 60

Orientation Summary Table
Image Features
Wellbore: GLA-3S
GREGORY CANYON
June 2004

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)
1	17.67	57.97	159.91	56.97
2	19.92	65.37	343.74	72.40
3	20.76	68.11	118.34	79.34
4	21.40	70.22	7.40	70.44

All directions are with respect to magnetic north.

COLOG

BOREHOLE GEOPHYSICS & HYDROPHYSICS

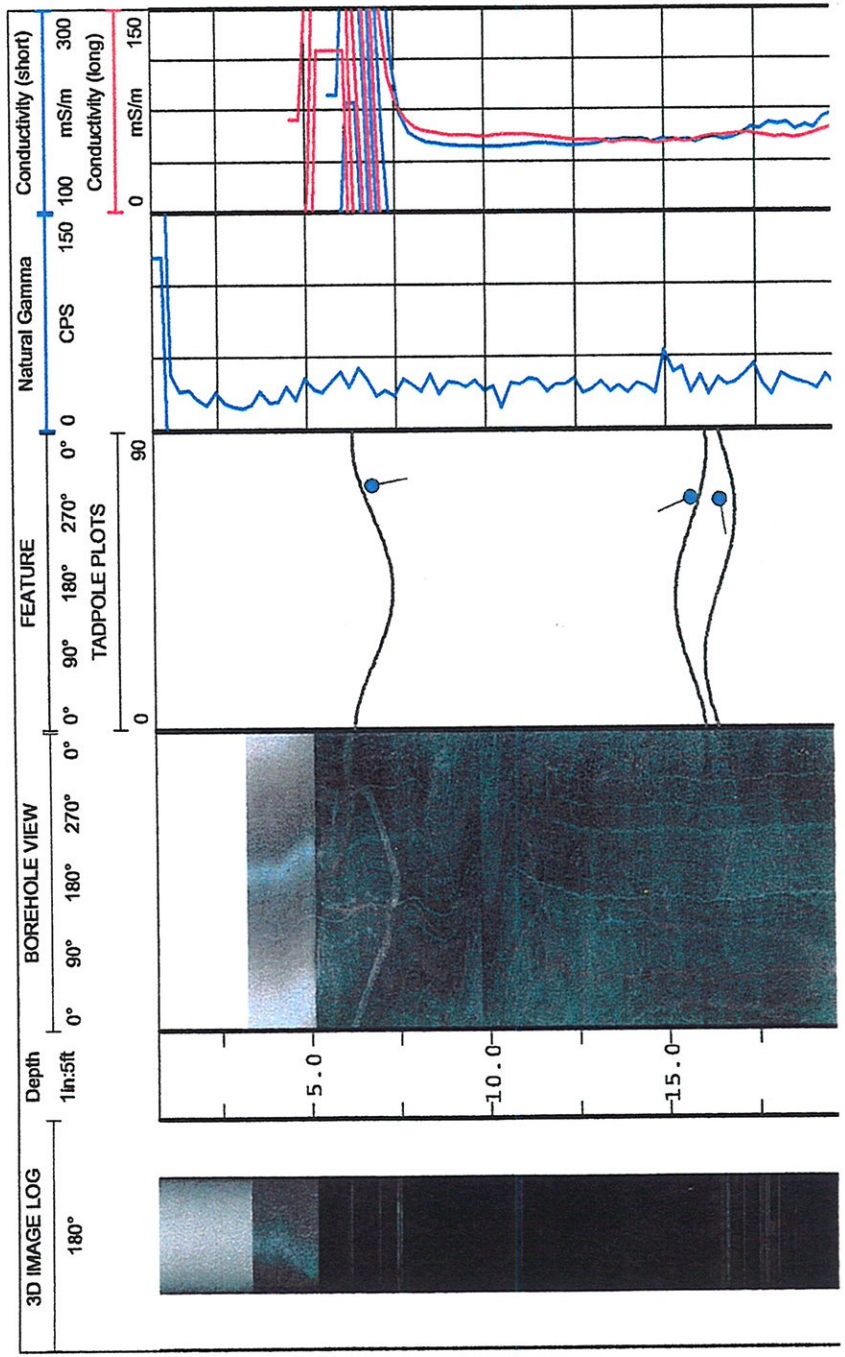
A Division of Layne Christensen Company

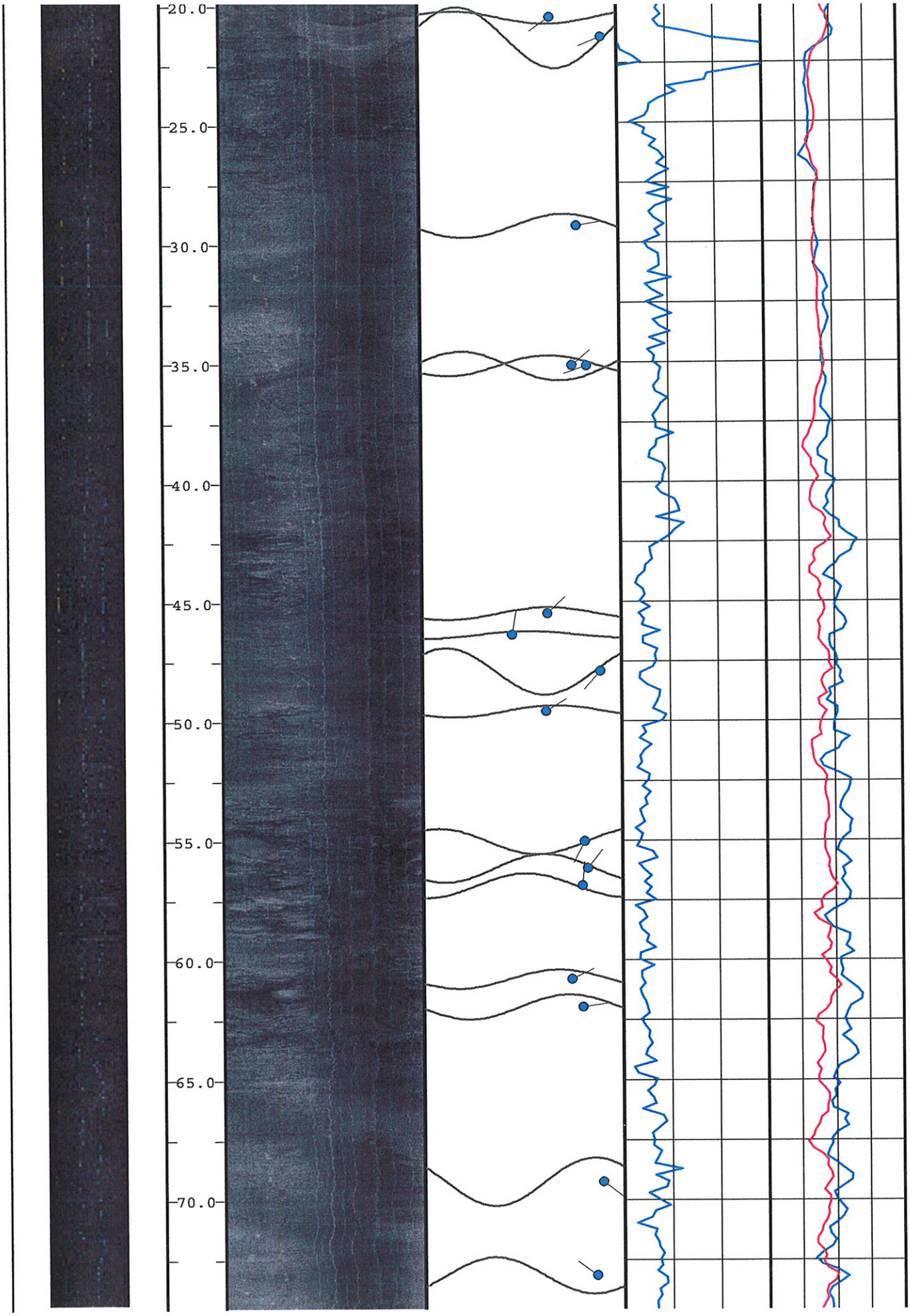
11001 Etiwanda Ave., Fontana CA 92337
PH: (909) 390-2833 FAX (909) 390-6097

WELL GLA-1T	COMPANY ROBERTSON GEOLOGGING TECHNOLOGY
FLD Gregory Canyon	WELL ID
CTY	FIELD
STE	COUNTRY USA STATE
FILING No	LOCATION / SEC TWP RGE / OTHER SERVICES

ERMANENT DATUM	ELEVATION		K.B.
OG MEAS. FROM	ABOVE PERM. DATUM		D.F.
RILLING MEAS. FROM			G.L.
ATE	21/06/04	TYPE FLUID IN HOLE	
UN No		SALINITY	
YPE LOG		DENSITY	
EPTH-DRILLER		LEVEL	
EPTH-LOGGER		MAX. REC. TEMP.	
TM LOGGED INTERVAL			
OP LOGGED INTERVAL			
PERATING RIG TIME			
ECORDED BY			
VITNESSED BY			

UN	BOREHOLE RECORD			CASING RECORD			
O.	BIT	FROM	TO	SIZE	WGT.	FROM	TO

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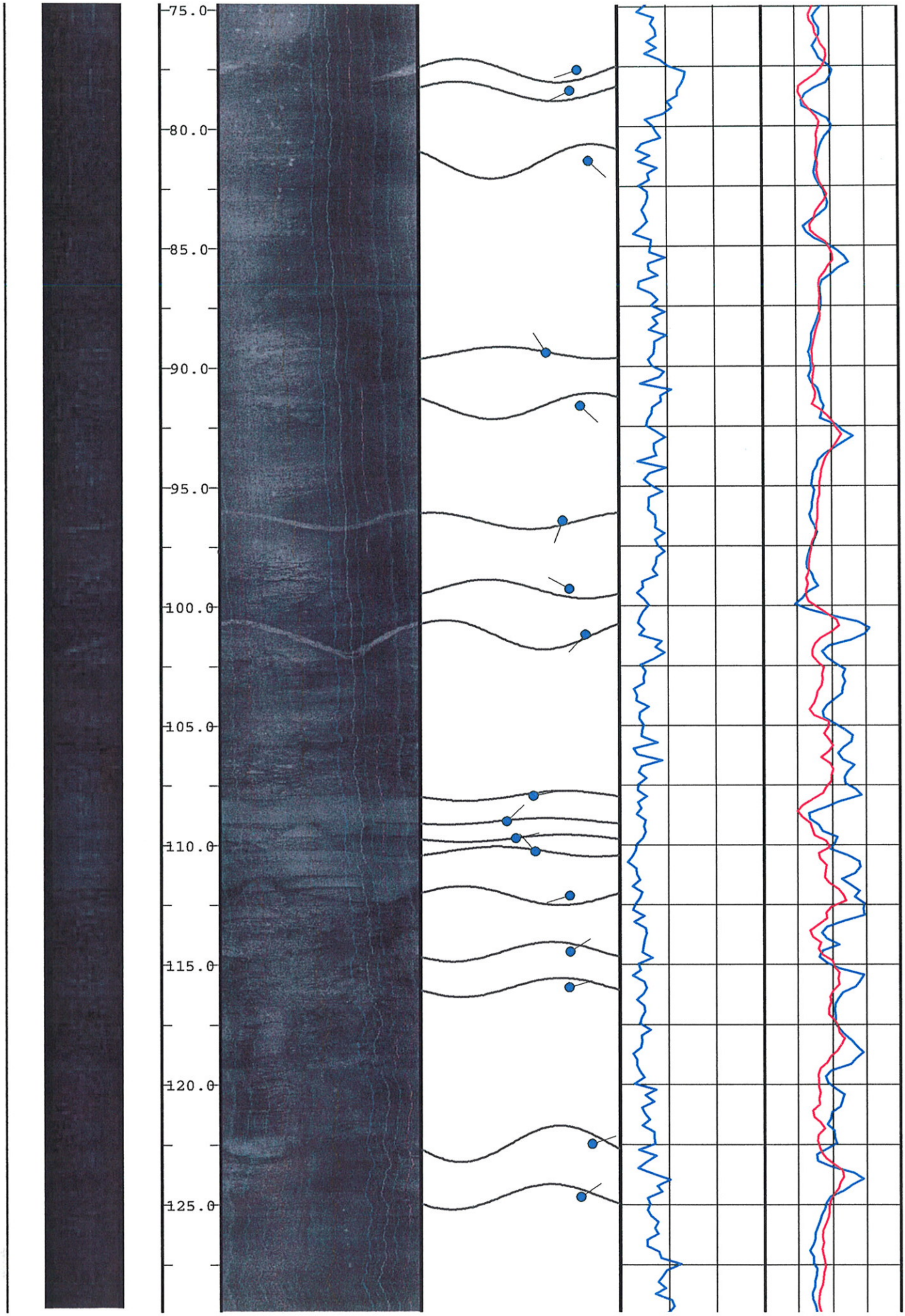
65.0
70.0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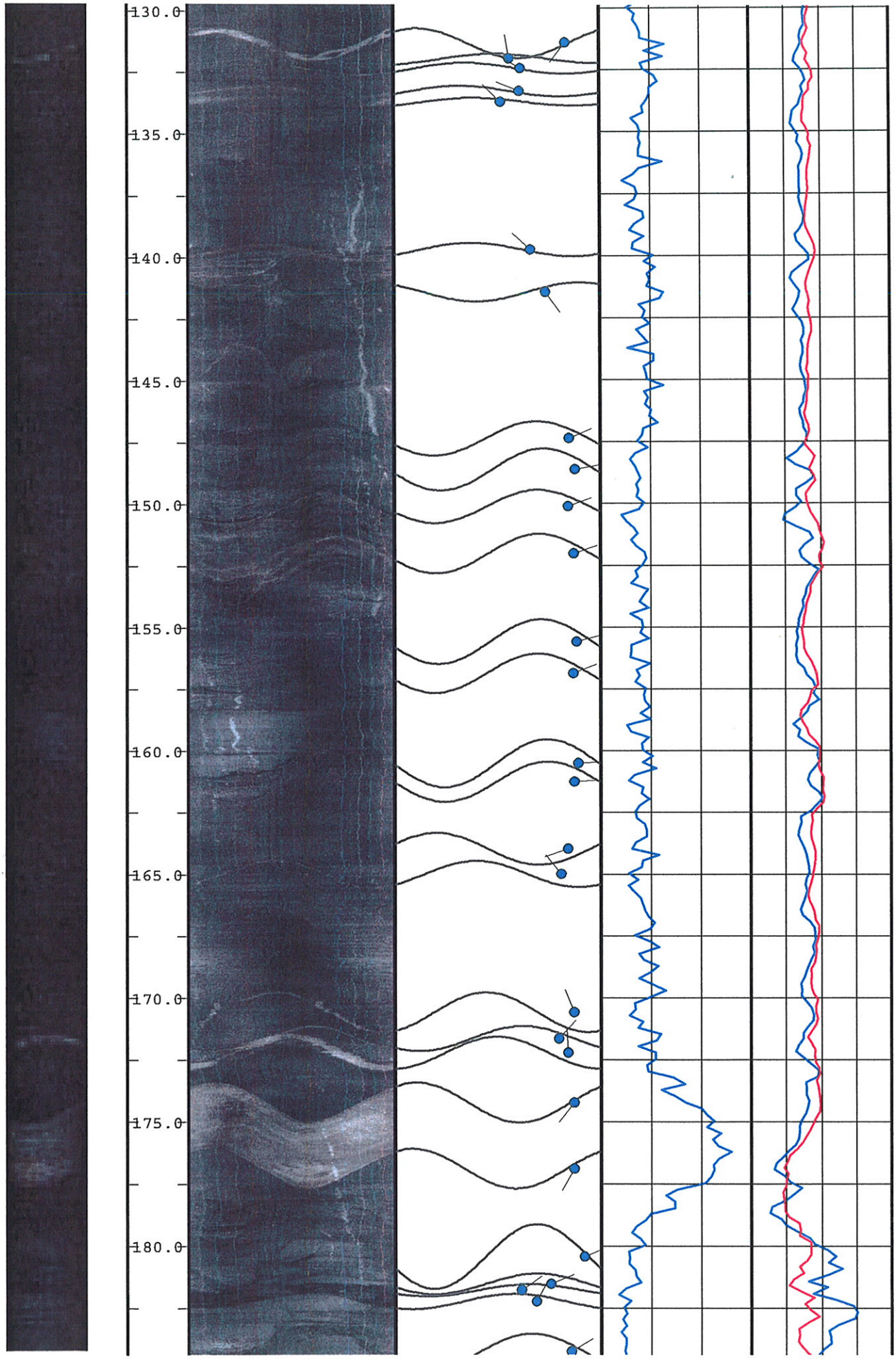
125.0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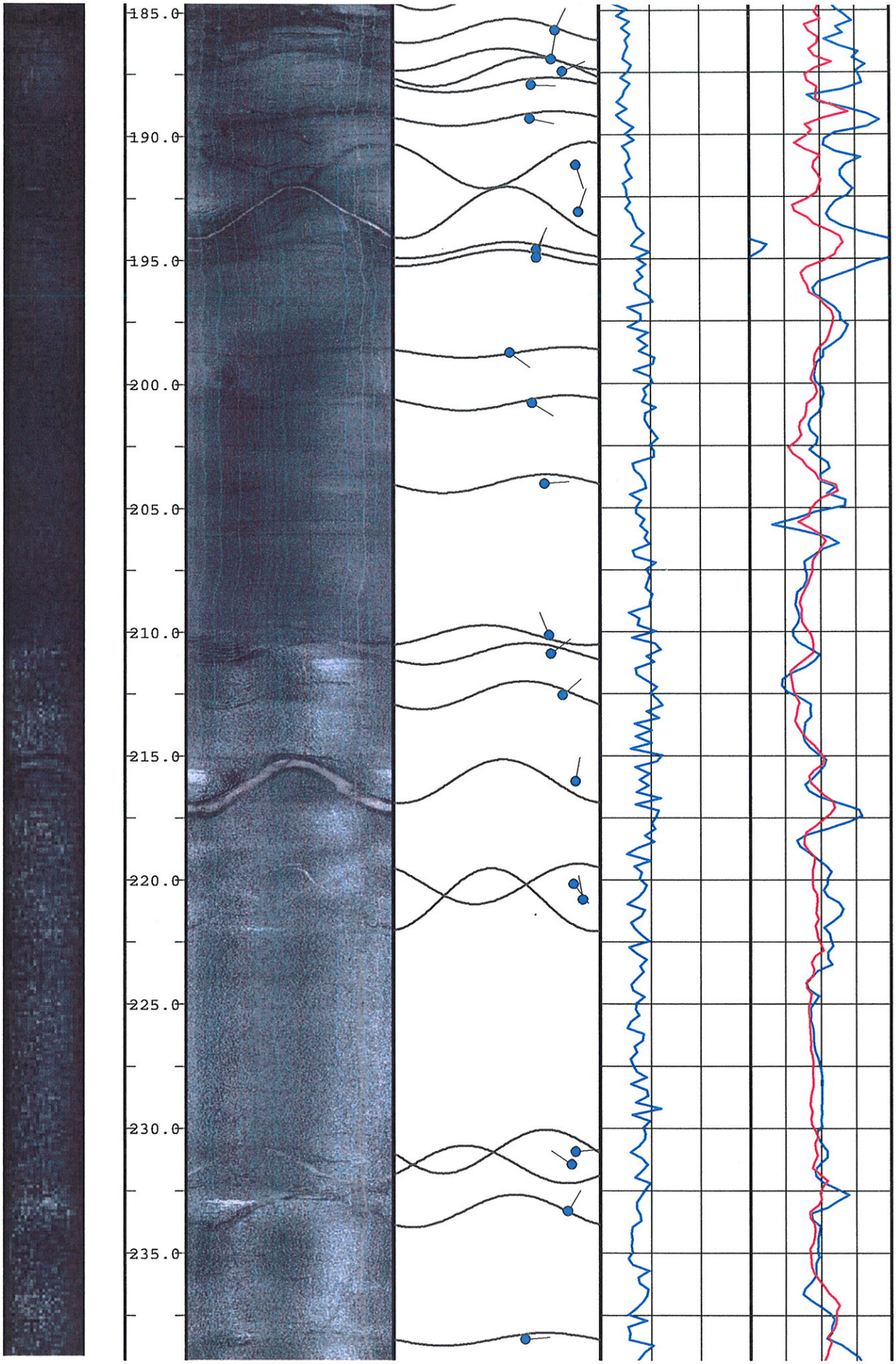
180.0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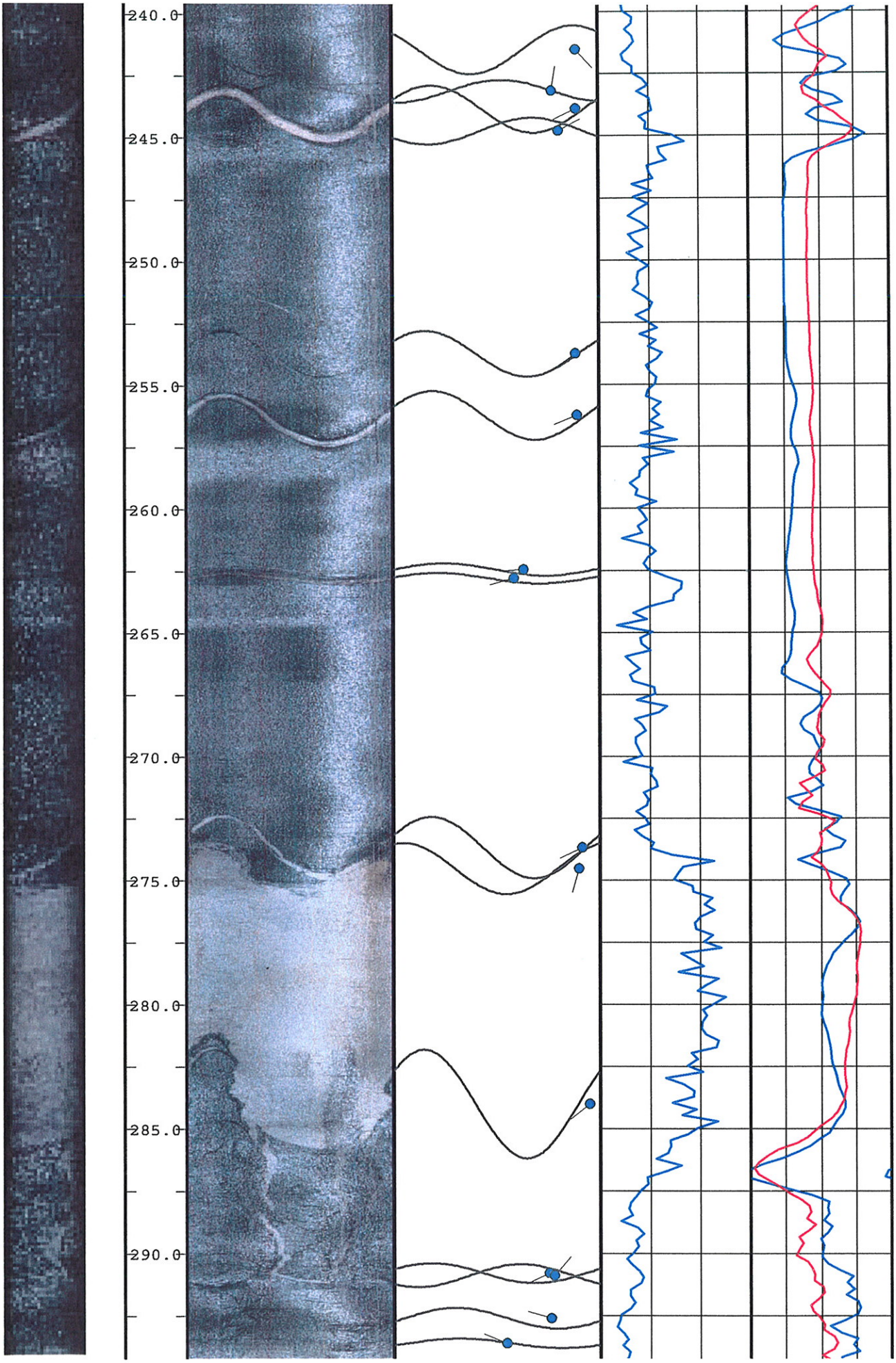
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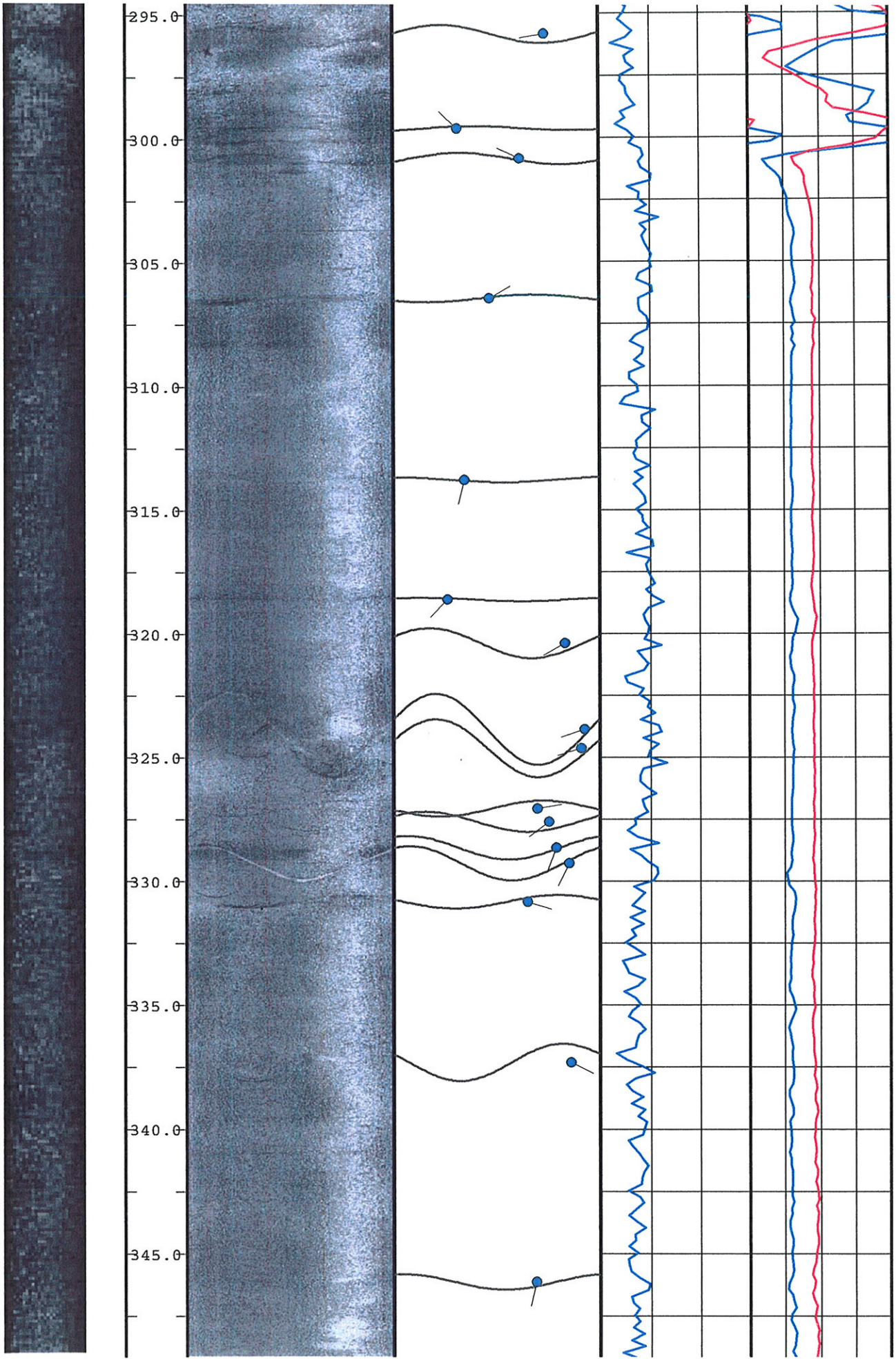
290.0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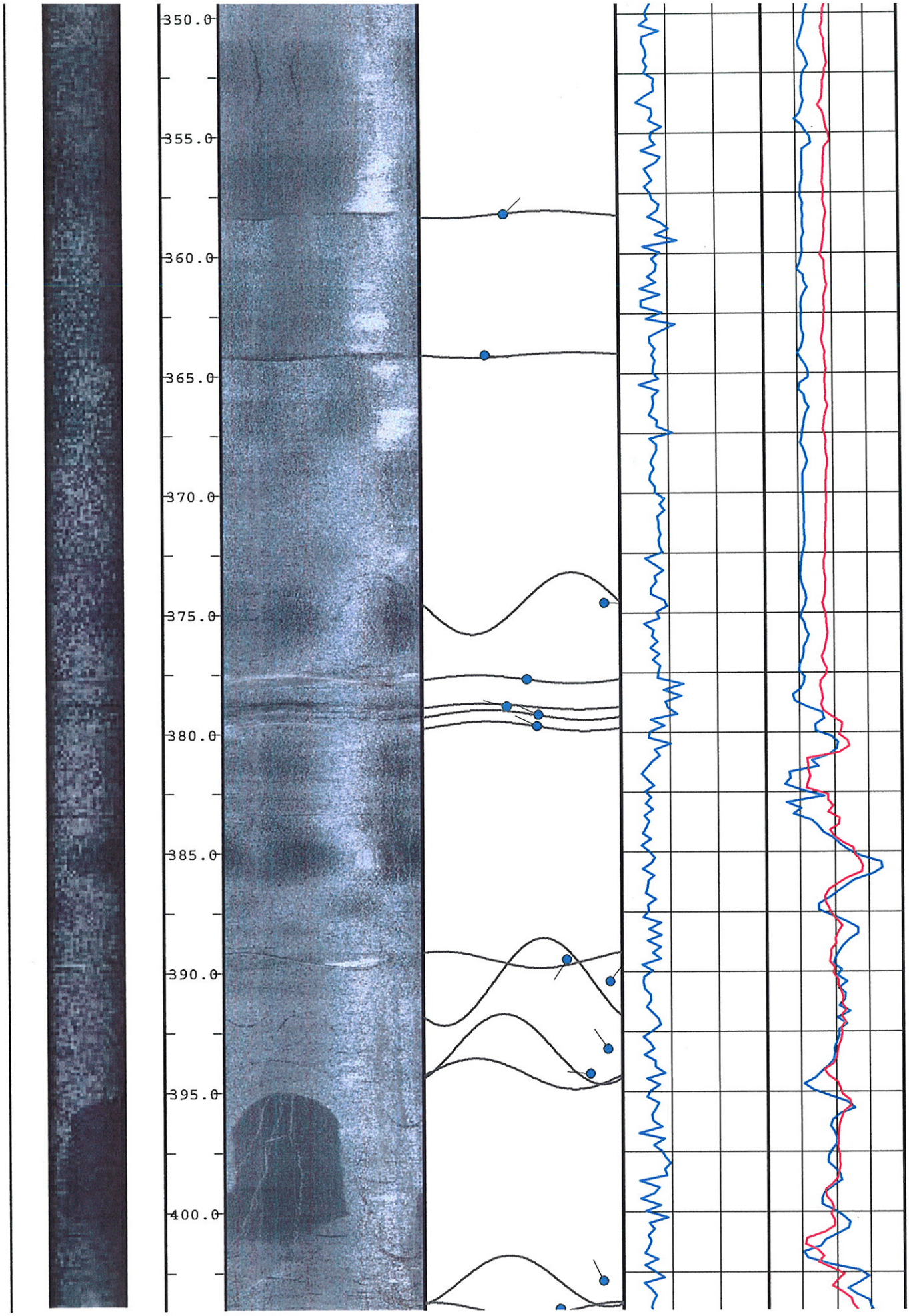
340.0
345.0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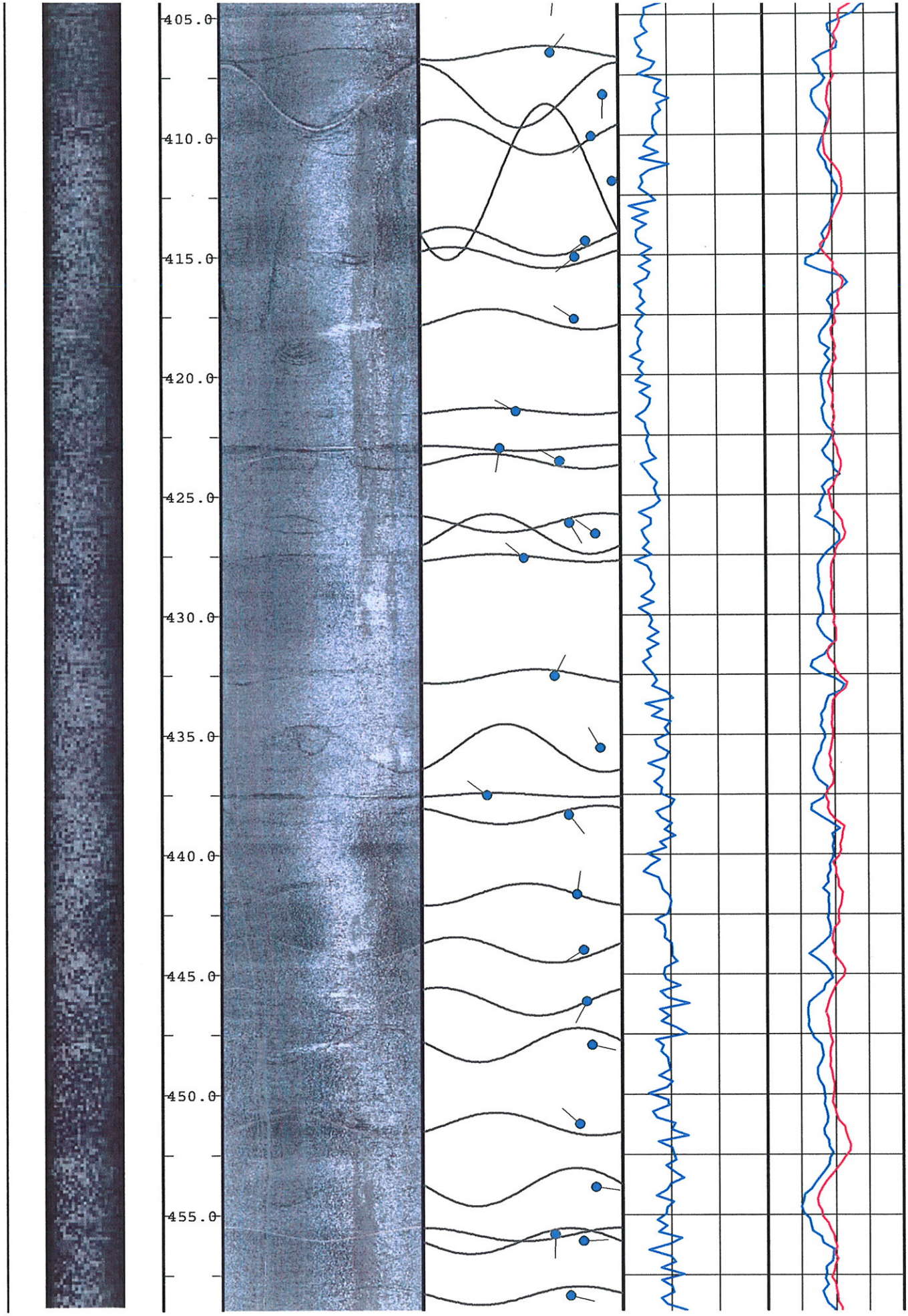
375.0
380.0
385.0
390.0
395.0
400.0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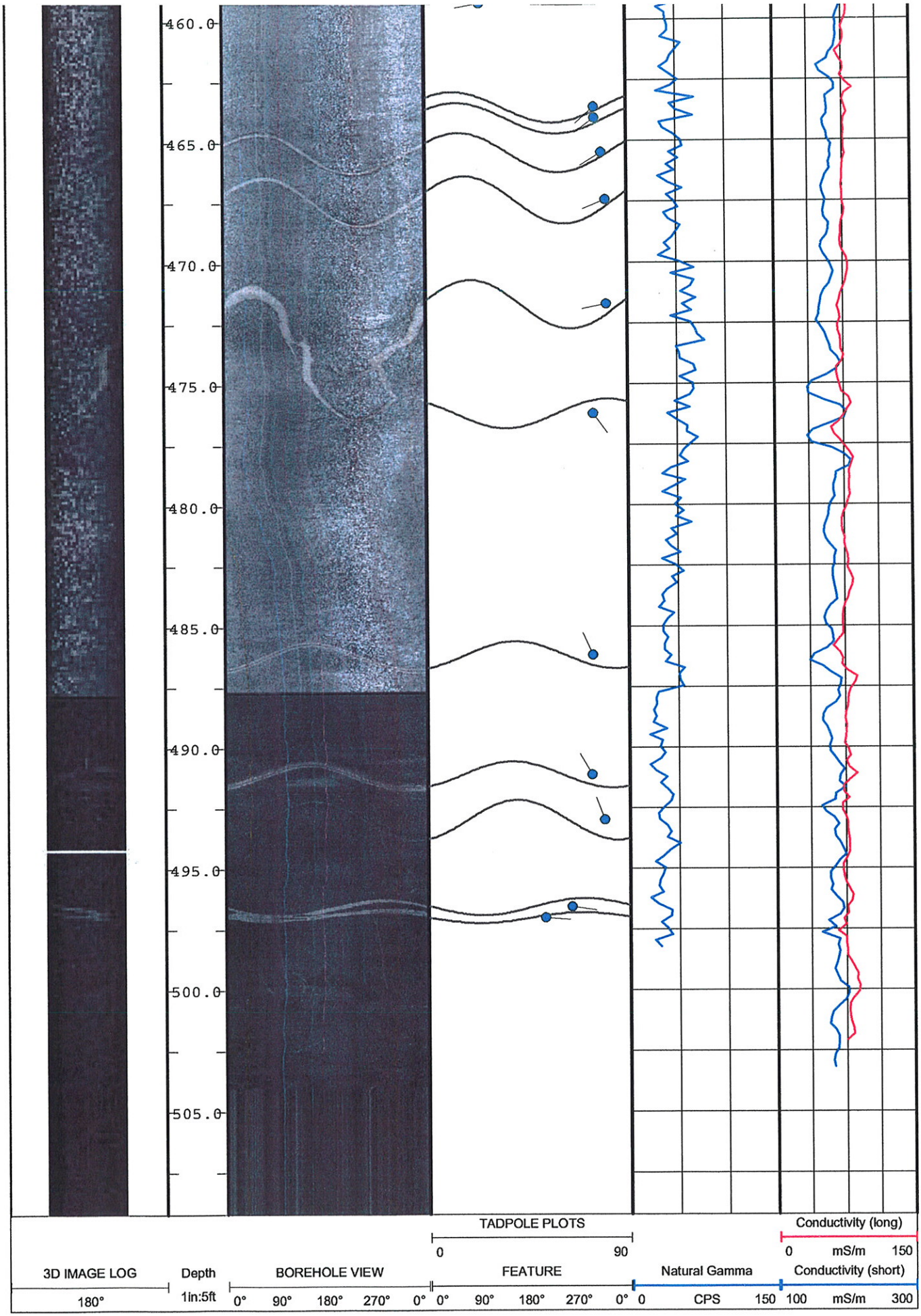
455.0


460.0
465.0
470.0
475.0
480.0
485.0
490.0
495.0
500.0
505.0
TADPOLE PLOTS
0
90
Conductivity (long)
0
mS/m
150
3D IMAGE LOG
180°
Depth
1in:5ft
BOREHOLE VIEW
0°
90°
180°
270°
0°
FEATURE
0°
90°
180°
270°
0°
Natural Gamma
0
CPS
150
Conductivity (short)
100
mS/m
300

Orientation Summary Table
Image Features
Wellbore: GLA-17
GREGORY CANYON
June 2004

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)
1	2.07	6.80	168.93	73.60
2	4.77	15.66	335.55	69.43
3	5.02	16.47	261.65	68.83
4	6.26	20.55	235.32	59.94
5	6.53	21.41	248.35	82.83
6	8.92	29.28	80.23	71.12
7	10.70	35.11	50.30	68.63
8	10.70	35.12	251.92	75.15
9	13.86	45.47	45.77	56.86
10	14.13	46.36	8.64	40.82
11	14.60	47.89	221.52	80.52
12	15.11	49.57	58.03	55.99
13	16.77	55.02	206.28	73.14
14	17.11	56.15	38.26	74.38
15	17.33	56.87	4.50	72.07
16	18.53	60.78	64.05	67.07
17	18.89	61.96	82.39	72.11
18	21.10	69.23	127.03	80.69
19	22.29	73.13	305.52	77.81
20	23.66	77.63	252.50	72.07
21	23.92	78.49	245.95	68.63
22	24.81	81.41	131.43	76.86
23	27.26	89.42	327.98	57.59
24	27.93	91.64	132.52	72.82
25	29.39	96.42	200.09	64.76
26	30.25	99.26	300.59	67.80
27	30.84	101.19	223.88	75.10
28	32.90	107.94	80.09	51.43
29	33.22	109.00	45.71	39.21
30	33.44	109.70	77.08	43.25
31	33.61	110.27	317.89	52.16
32	34.17	112.11	254.40	67.70
33	34.88	114.45	57.23	67.98
34	35.34	115.95	73.55	67.45
35	37.33	122.46	71.91	77.69
36	38.00	124.66	56.12	72.63
37	40.05	131.39	218.09	75.23
38	40.23	132.00	351.75	50.49
39	40.36	132.40	301.39	55.50
40	40.64	133.32	292.55	55.00
41	40.77	133.75	315.16	46.76
42	42.59	139.72	313.39	59.78
43	43.11	141.44	143.20	66.29
44	44.91	147.34	68.09	76.54

All directions are with respect to magnetic north.

Orientation Summary Table
Image Features
Wellbore: GLA-17
GREGORY CANYON
June 2004

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)
45	45.30	148.61	79.79	78.98
46	45.75	150.10	69.79	76.11
47	46.34	152.02	71.91	78.32
48	47.42	155.57	75.30	79.64
49	47.81	156.86	69.48	78.28
50	48.92	160.50	86.38	80.37
51	49.15	161.24	87.02	78.59
52	49.98	163.96	251.57	75.84
53	50.29	164.98	321.06	72.97
54	51.99	170.58	338.12	78.42
55	52.32	171.64	42.37	71.89
56	52.49	172.20	356.90	75.76
57	53.10	174.21	217.05	78.51
58	53.91	176.88	209.96	78.40
59	54.99	180.41	67.23	82.83
60	55.33	181.52	67.87	68.26
61	55.41	181.78	54.91	55.31
62	55.54	182.22	28.08	61.79
63	56.15	184.22	58.28	77.09
64	56.63	185.80	26.64	70.94
65	56.98	186.95	10.74	69.35
66	57.13	187.44	65.92	74.24
67	57.30	187.98	91.92	60.45
68	57.71	189.33	101.7	59.94
69	58.27	191.19	161.28	79.85
70	58.85	193.09	18.41	81.00
71	59.31	194.6	24.94	62.58
72	59.41	194.93	17.01	62.75
73	60.57	198.73	125.74	51.03
74	61.19	200.77	121.06	60.72
75	62.19	204.02	85.74	65.98
76	64.04	210.12	338.51	67.98
77	64.27	210.86	53.1	68.90
78	64.78	212.54	48.51	73.92
79	65.84	216.02	10.33	79.48
80	67.10	220.15	141.88	78.57
81	67.29	220.78	349.96	82.61
82	70.39	230.93	84.82	79.39
83	70.54	231.43	303.83	77.79
84	71.11	233.31	31.83	76.00
85	72.68	238.44	85.11	57.54
86	73.61	241.51	137.02	80.37
87	74.12	243.16	8.66	69.64
88	74.34	243.9	246.01	80.34

All directions are with respect to magnetic north.

Orientation Summary Table
Image Features
Wellbore: GLA-17
GREGORY CANYON
June 2004

Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)
89	74.61	244.78	62.22	72.66
90	77.34	253.73	234.68	79.92
91	78.10	256.22	248.09	80.54
92	79.99	262.44	267.23	56.93
93	80.10	262.79	255.91	52.69
94	83.41	273.65	245.06	82.46
95	83.67	274.5	196.17	80.98
96	86.56	284	231.82	85.69
97	88.63	290.79	244.68	67.68
98	88.66	290.88	41.09	70.10
99	89.18	292.6	286.6	68.54
100	89.49	293.6	292.73	49.24
101	90.16	295.8	261.52	66.41
102	91.32	299.61	315.16	27.97
103	91.69	300.82	294.5	55.34
104	93.41	306.46	60.29	42.01
105	95.64	313.78	192.77	30.96
106	97.11	318.61	224.23	23.57
107	97.65	320.38	241.28	74.91
108	98.71	323.85	252.3	83.51
109	98.95	324.63	252.77	82.05
110	99.69	327.07	80.43	62.78
111	99.85	327.6	233.17	67.89
112	100.17	328.64	200.85	71.14
113	100.36	329.26	205.81	76.66
114	100.84	330.83	107.02	58.69
115	102.81	337.3	115.4	77.60
116	105.50	346.13	193.67	62.52
117	109.21	358.31	46.8	38.26
118	111.00	364.17	95.11	29.42
119	114.17	374.56	90.94	82.77
120	115.13	377.73	275.96	47.52
121	115.48	378.88	284.68	38.38
122	115.59	379.23	295.32	52.60
123	115.74	379.71	295.82	52.00
124	118.71	389.47	212.36	65.05
125	118.99	390.4	37.24	84.86
126	119.85	393.21	324.71	83.63
127	120.16	394.24	274.05	75.71
128	122.79	402.85	332.83	81.27
129	123.15	404.03	184.89	61.42
130	123.92	406.55	38.51	59.42
131	124.45	408.3	180.13	83.00
132	124.98	410.04	228.38	77.74

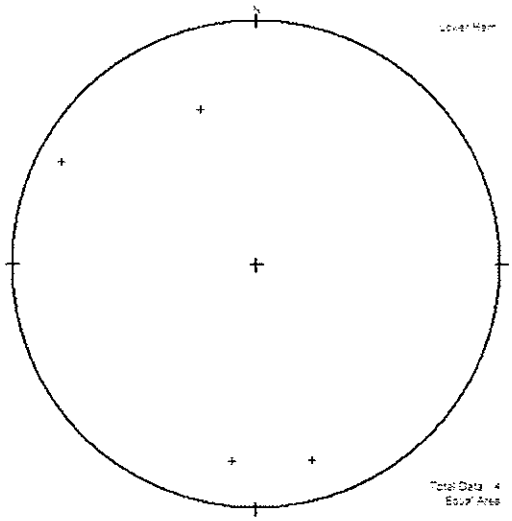
All directions are with respect to magnetic north.

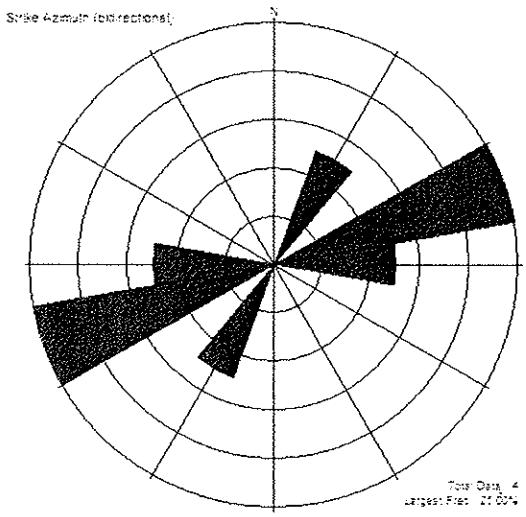
Orientation Summary Table
Image Features
Wellbore: GLA-17
GREGORY CANYON
June 2004

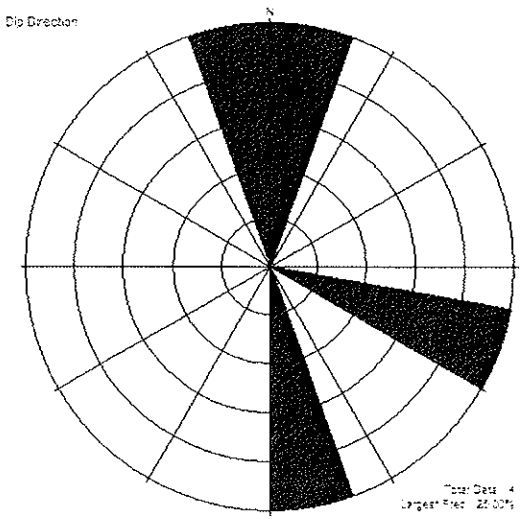
Feature No.	Depth (meters)	Depth (feet)	Dip Direction (degrees)	Dip Angle (degrees)
133	125.55	411.91	48.7	87.09
134	126.31	414.4	234.56	74.97
135	126.51	415.06	232.49	70.20
136	127.30	417.64	303.83	69.68
137	128.46	421.47	299.15	43.11
138	128.93	423	188.98	35.74
139	129.10	423.57	299.79	62.78
140	129.89	426.14	148.3	67.07
141	130.02	426.59	305.33	78.92
142	130.34	427.61	309.79	46.56
143	131.84	432.55	25.65	60.42
144	132.76	435.56	330.05	80.79
145	133.36	437.53	306.6	29.42
146	133.61	438.36	140.94	66.43
147	134.61	441.65	8.11	70.03
148	135.33	443.98	238.5	73.04
149	135.98	446.13	208.32	74.34
150	136.53	447.94	101.79	76.81
151	137.53	451.23	311.11	71.09
152	138.33	453.84	97.36	78.23
153	138.93	455.8	180.85	59.94
154	139.01	456.07	86.38	72.73
155	139.71	458.35	102.98	66.65
156	139.99	459.27	260	24.51
157	141.30	463.59	228.09	75.62
158	141.44	464.03	234.04	75.74
159	141.87	465.46	238.28	78.80
160	142.47	467.41	248.72	80.61
161	143.77	471.69	258.72	80.77
162	145.15	476.21	143.21	74.57
163	148.18	486.17	335.74	73.86
164	149.69	491.11	330.43	73.31
165	150.26	492.97	339.09	78.78
166	151.35	496.55	97.7	64.24
167	151.49	497.01	93.64	52.54

All directions are with respect to magnetic north.

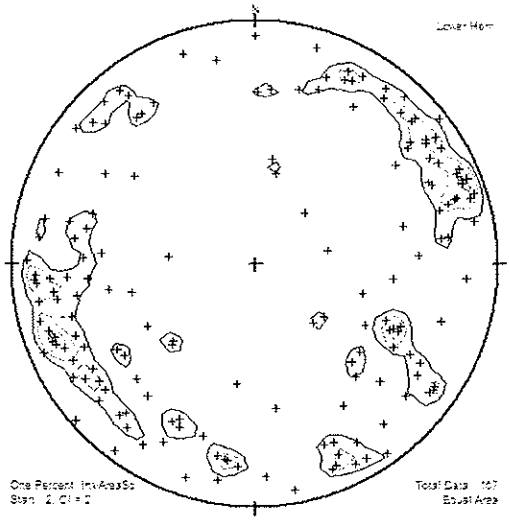
Stereographic Pole-Plots
and Rose Diagrams
Well GLA-3S
Gregory Canyon Landfill

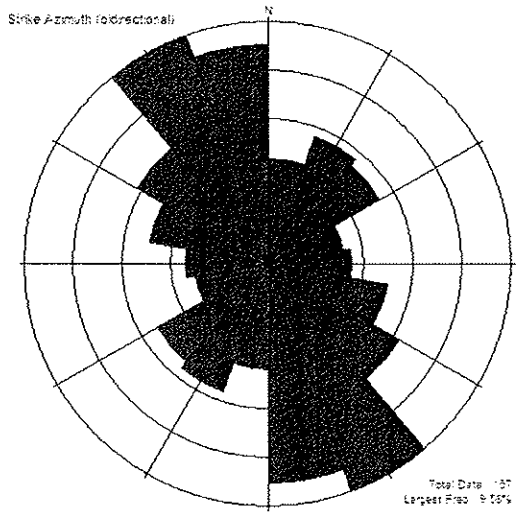


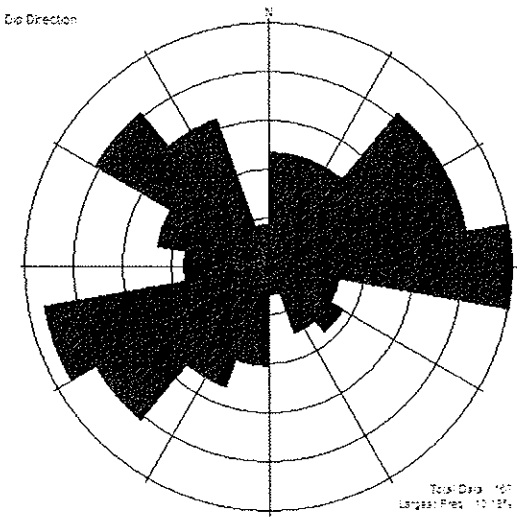




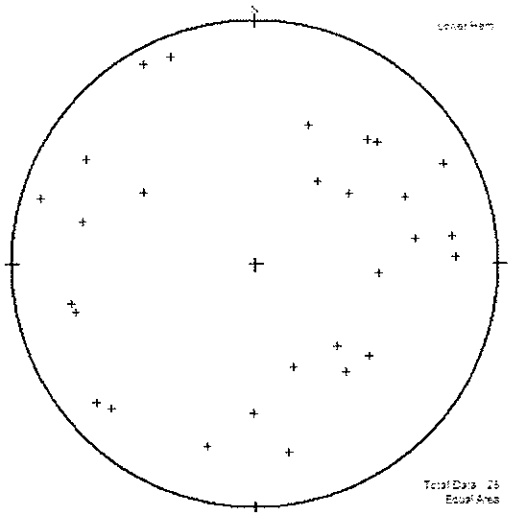
Stereographic Pole-Plots
and Rose Diagrams
Well GLA-17
Gregory Canyon Landfill

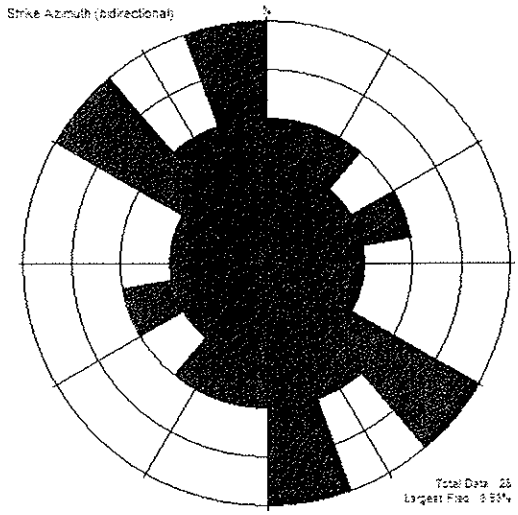


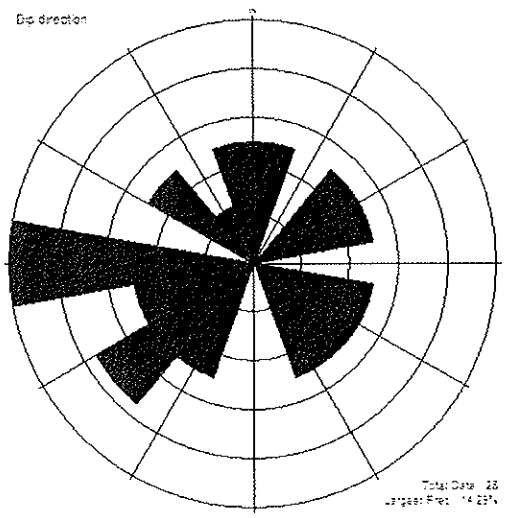




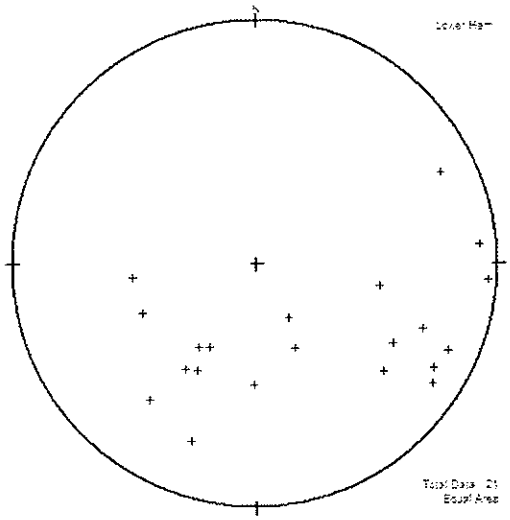
Stereographic Pole-Plots
and Rose Diagrams
Well GLA-A
Gregory Canyon Landfill

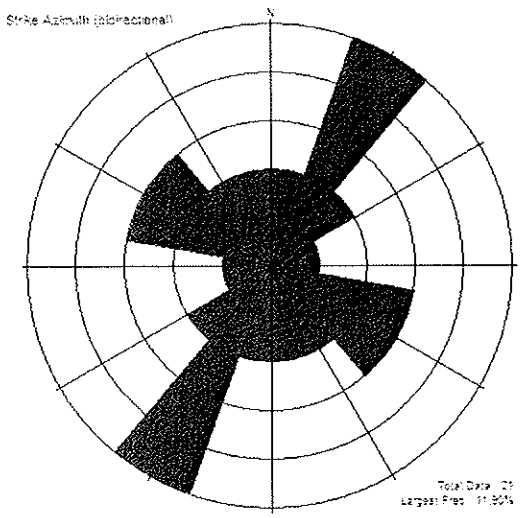


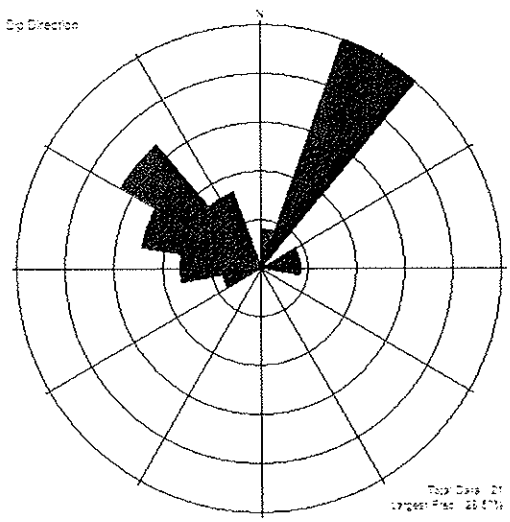




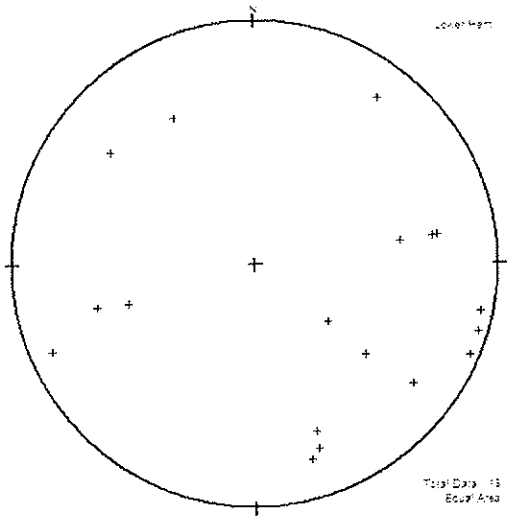
Stereographic Pole-Plots
and Rose Diagrams
Well GLA-B
Gregory Canyon Landfill

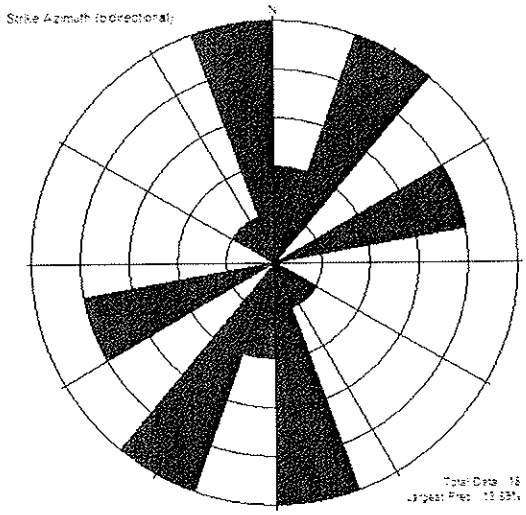


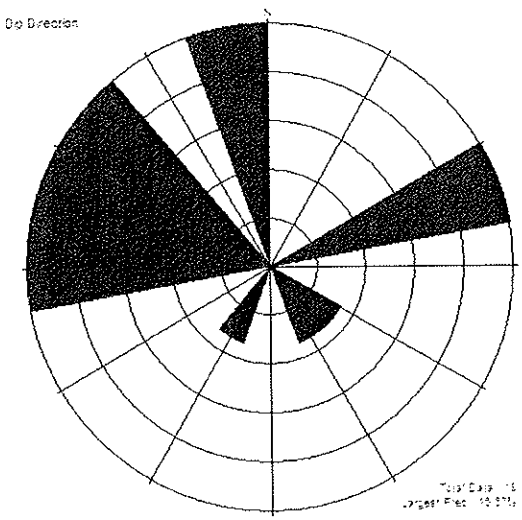




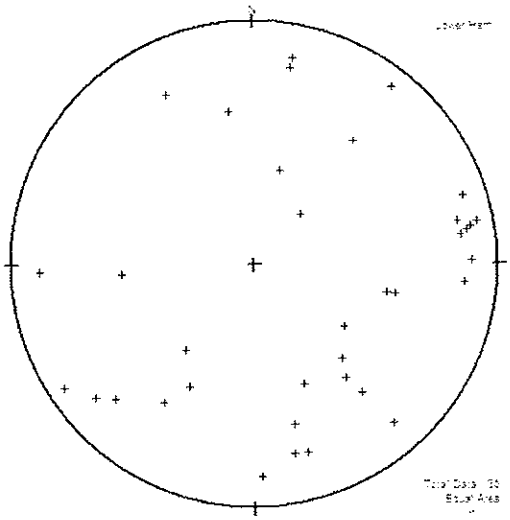
Stereographic Pole-Plots
and Rose Diagrams
Well GLA-C
Gregory Canyon Landfill

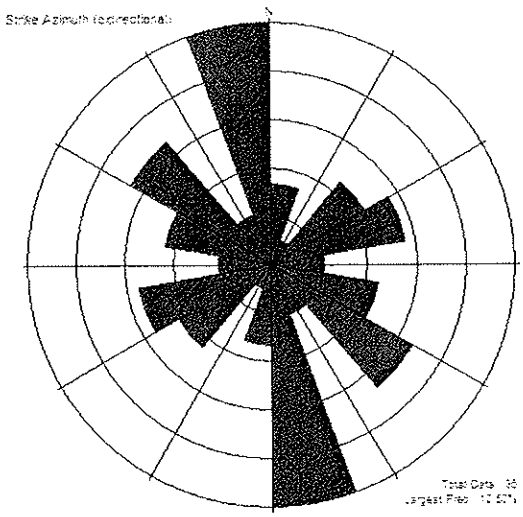


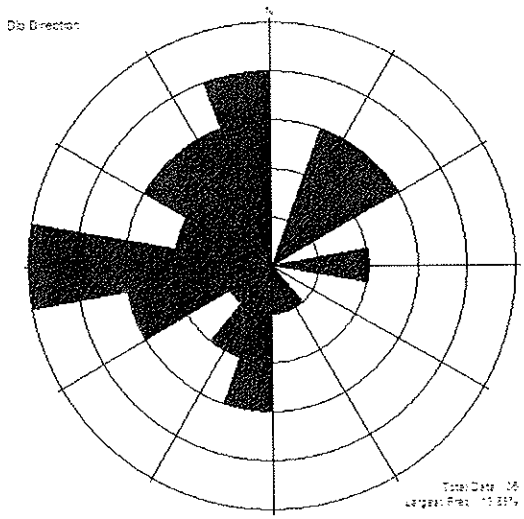




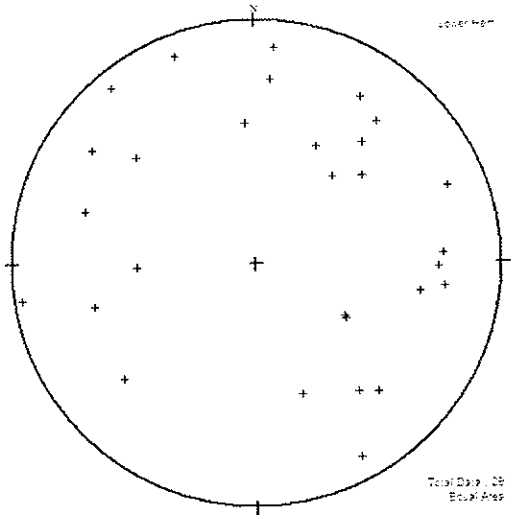
Stereographic Pole-Plots
and Rose Diagrams
Well GLA-D
Gregory Canyon Landfill

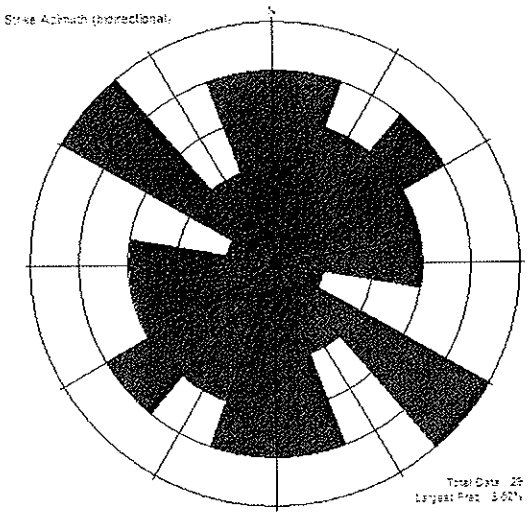


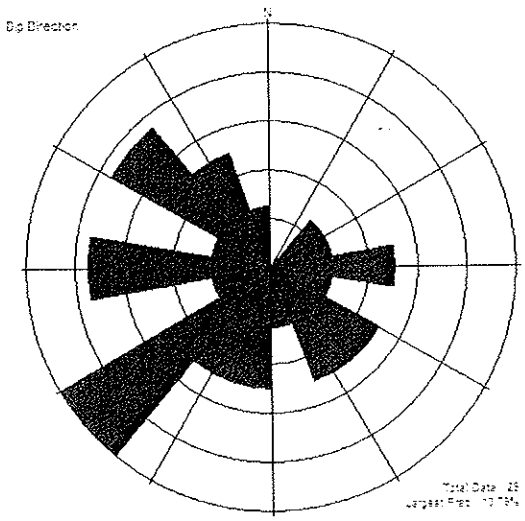




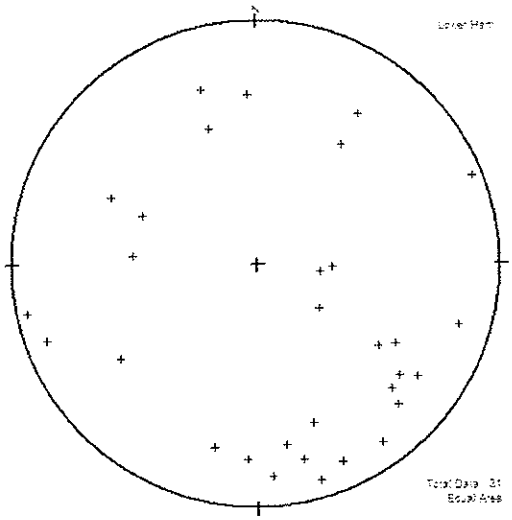
Stereographic Pole-Plots
and Rose Diagrams
Well GLA-E
Gregory Canyon Landfill

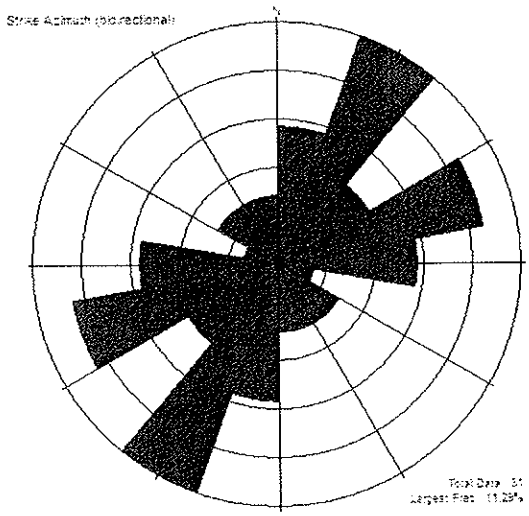


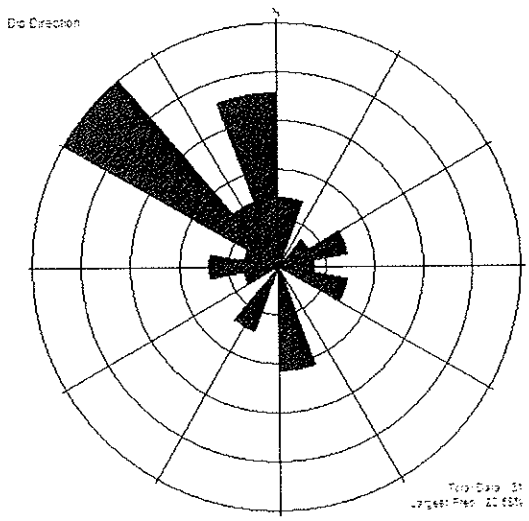




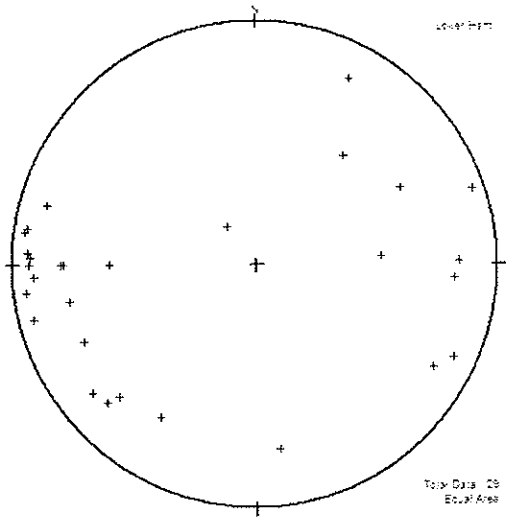
Stereographic Pole-Plots
and Rose Diagrams
Well GLA-F
Gregory Canyon Landfill

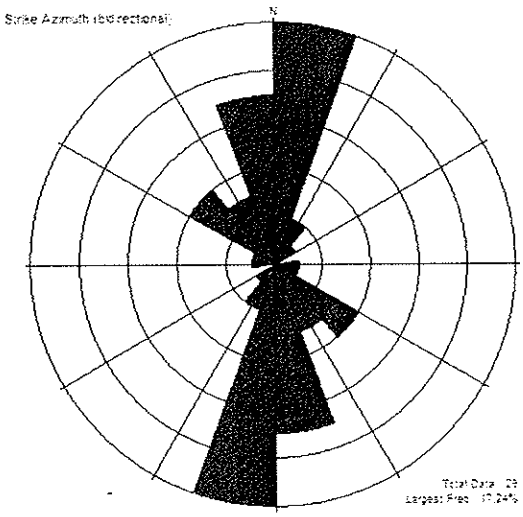


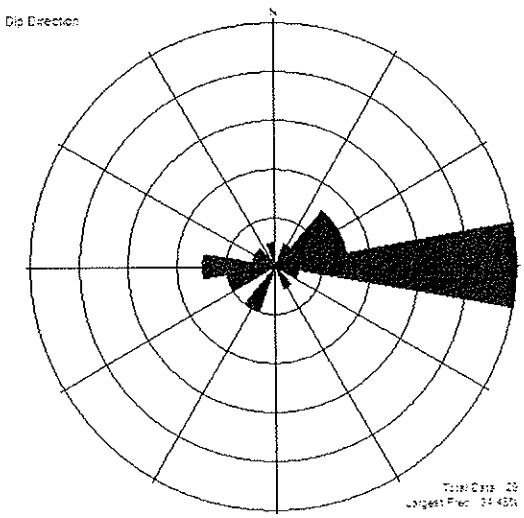
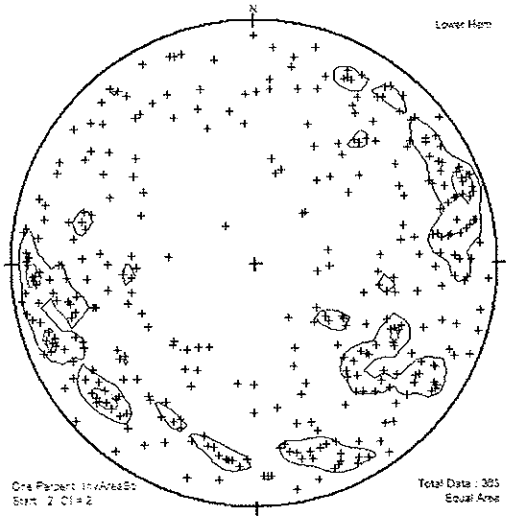
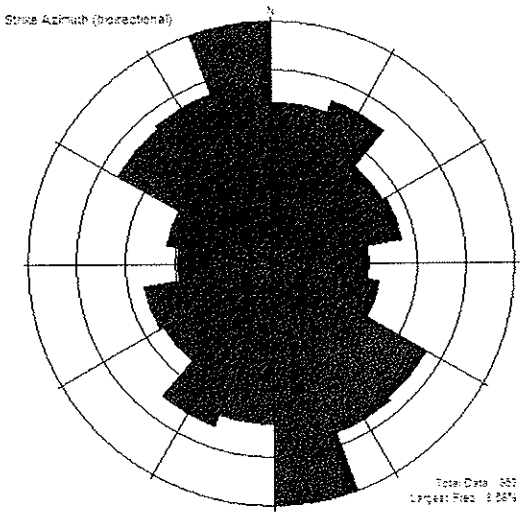
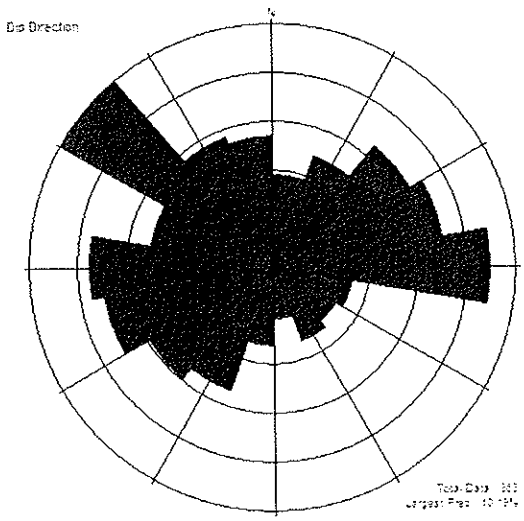




Stereographic Pole-Plots
and Rose Diagrams
Well GLA-G
Gregory Canyon Landfill







Stereographic Pole-Plots
and Rose Diagrams
Composite of All Wells
Gregory Canyon Landfill