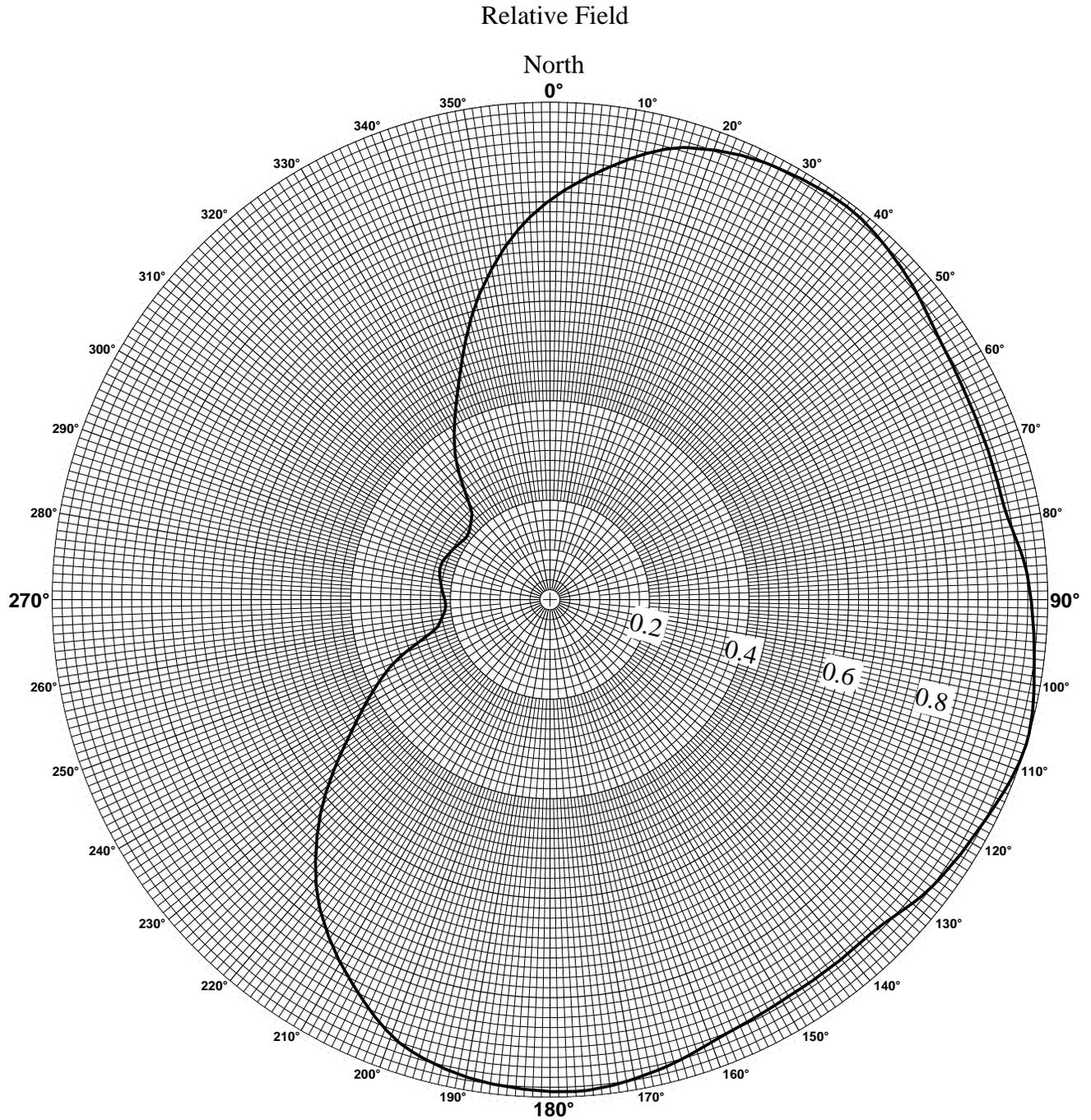


Station KNPB-DT • DTV Channel 15 • Reno, Nevada

Proposed Horizontal Plane Azimuth Pattern



Based on manufacturer's data. Above pattern INCLUDES rotation to 107°T. For tabulation, see FCC form 340§ VII Tech Box Question 10e.

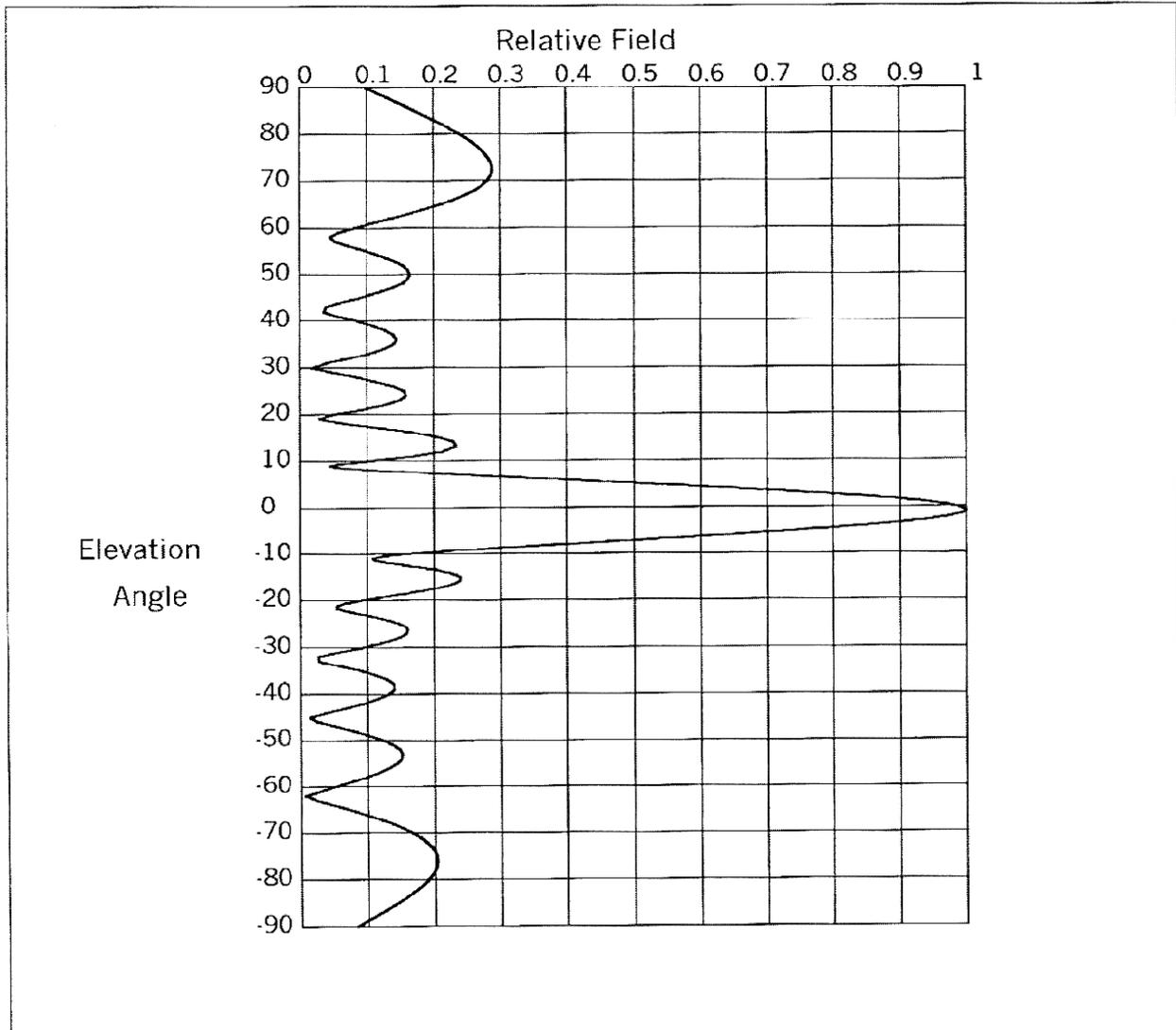
Although the FCC Rules request submission of the horizontal plane patterns in dBk, it has been Commission policy not to require this duplicative information, and it is not included here. These patterns can, of course, be provided upon request.



HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
SAN FRANCISCO

030306
Exhibit 33A

Proposed Elevation Pattern



Elevation Pattern

Scale: Linear

Units: Field, Relative

Antenna Concepts Inc.

CLIENT: KNPB-TV Ch-5 / Fred Ihlow

Date: 3/19/2003

ANTENNA TYPE: Top Mount Traveling Wave Slot

FREQUENCY: 479

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 6.347/8.026 dBd

Beam Tilt (Deg.): -1

DIRECTIVITY(Horiz): 6.129/7.874 dBd

Null Fill(s)(%): 10, 5, 2

Micro-Tek Eng. ver 2.5.03



Proposed Elevation Pattern

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
3.2	.733 (-2.7)	-4.4	.828 (-1.644)	-12.0	.135 (-17.391)
3.0	.755 (-2.436)	-4.6	.808 (-1.853)	-12.2	.145 (-16.791)
2.8	.777 (-2.187)	-4.8	.787 (-2.077)	-12.4	.155 (-16.213)
2.6	.799 (-1.953)	-5.0	.766 (-2.316)	-12.6	.165 (-15.672)
2.4	.819 (-1.735)	-5.2	.744 (-2.57)	-12.8	.174 (-15.174)
2.2	.838 (-1.531)	-5.4	.721 (-2.84)	-13.0	.184 (-14.723)
2.0	.857 (-1.342)	-5.6	.698 (-3.125)	-13.2	.192 (-14.318)
1.8	.874 (-1.166)	-5.8	.674 (-3.428)	-13.4	.201 (-13.957)
1.6	.891 (-1.003)	-6.0	.649 (-3.749)	-13.6	.208 (-13.64)
1.4	.906 (-0.854)	-6.2	.625 (-4.088)	-13.8	.215 (-13.363)
1.2	.921 (-0.717)	-6.4	.599 (-4.446)	-14.0	.221 (-13.124)
1.0	.934 (-0.592)	-6.6	.574 (-4.825)	-14.2	.226 (-12.922)
.8	.946 (-0.48)	-6.8	.548 (-5.225)	-14.4	.23 (-12.756)
.6	.957 (-0.38)	-7.0	.522 (-5.648)	-14.6	.234 (-12.622)
.4	.967 (-0.292)	-7.2	.496 (-6.094)	-14.8	.237 (-12.521)
.2	.975 (-0.216)	-7.4	.47 (-6.566)	-15.0	.238 (-12.45)
.0	.983 (-0.152)	-7.6	.443 (-7.065)	-15.2	.24 (-12.41)
-.2	.989 (-0.099)	-7.8	.417 (-7.593)	-15.4	.24 (-12.398)
-.4	.993 (-0.057)	-8.0	.391 (-8.152)	-15.6	.239 (-12.414)
-.6	.997 (-0.027)	-8.2	.365 (-8.743)	-15.8	.238 (-12.459)
-.8	.999 (-0.008)	-8.4	.34 (-9.37)	-16.0	.236 (-12.531)
-1.0	1.00 (0)	-8.6	.315 (-10.035)	-16.2	.234 (-12.631)
-1.2	1.00 (-0.004)	-8.8	.29 (-10.739)	-16.4	.23 (-12.758)
-1.4	.998 (-0.018)	-9.0	.266 (-11.486)	-16.6	.226 (-12.913)
-1.6	.995 (-0.044)	-9.2	.243 (-12.277)	-16.8	.221 (-13.096)
-1.8	.991 (-0.082)	-9.4	.221 (-13.111)	-17.0	.216 (-13.307)
-2.0	.985 (-0.131)	-9.6	.20 (-13.987)	-17.2	.21 (-13.548)
-2.2	.978 (-0.191)	-9.8	.18 (-14.897)	-17.4	.204 (-13.818)
-2.4	.97 (-0.262)	-10.0	.162 (-15.827)	-17.6	.197 (-14.119)
-2.6	.961 (-0.346)	-10.2	.145 (-16.749)	-17.8	.189 (-14.453)
-2.8	.951 (-0.44)	-10.4	.132 (-17.618)	-18.0	.182 (-14.82)
-3.0	.939 (-0.547)	-10.6	.121 (-18.37)	-18.2	.173 (-15.222)
-3.2	.926 (-0.666)	-10.8	.113 (-18.927)	-18.4	.165 (-15.661)
-3.4	.912 (-0.797)	-11.0	.109 (-19.221)	-18.6	.156 (-16.14)
-3.6	.897 (-0.941)	-11.2	.109 (-19.228)	-18.8	.147 (-16.661)
-3.8	.881 (-1.097)	-11.4	.113 (-18.977)	-19.0	.138 (-17.226)
-4.0	.864 (-1.266)	-11.6	.118 (-18.538)	-19.2	.128 (-17.837)
-4.2	.846 (-1.448)	-11.8	.126 (-17.988)	-19.4	.119 (-18.499)

Antenna Concepts Inc.

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CLIENT: KNPB-TV Ch-5 / Fred Ihlow

Date: 3/19/2003

ANTENNA TYPE: Top Mount Traveling Wave Slot

FREQUENCY: 479

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 6.347/8.026 dBd

Beam Tilt (Deg.): -1

DIRECTIVITY(Horiz): 6.129/7.874 dBd

Null Fill(s)(%): 10, 5, 2

Micro-Tek Eng. ver 2.5.03



Proposed Elevation Pattern

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
-19.6	.11 (-19.212)	-27.2	.157 (-16.096)	-54.0	.149 (-16.507)
-19.8	.10 (-19.976)	-27.4	.155 (-16.21)	-55.0	.143 (-16.903)
-20.0	.091 (-20.79)	-27.6	.152 (-16.35)	-56.0	.132 (-17.618)
-20.2	.083 (-21.645)	-27.8	.149 (-16.516)	-57.0	.116 (-18.694)
-20.4	.075 (-22.523)	-28.0	.146 (-16.711)	-58.0	.097 (-20.221)
-20.6	.068 (-23.391)	-28.2	.142 (-16.934)	-59.0	.076 (-22.379)
-20.8	.062 (-24.191)	-28.4	.138 (-17.186)	-60.0	.053 (-25.575)
-21.0	.057 (-24.841)	-28.6	.134 (-17.47)	-61.0	.028 (-31.017)
-21.2	.055 (-25.249)	-28.8	.129 (-17.787)	-62.0	.007 (-43.512)
-21.4	.054 (-25.345)	-29.0	.124 (-18.138)	-63.0	.025 (-32.216)
-21.6	.055 (-25.123)	-29.2	.118 (-18.527)	-64.0	.049 (-26.181)
-21.8	.059 (-24.642)	-29.4	.113 (-18.956)	-65.0	.073 (-22.739)
-22.0	.063 (-23.995)	-29.6	.107 (-19.429)	-66.0	.095 (-20.402)
-22.2	.069 (-23.267)	-29.8	.101 (-19.951)	-67.0	.116 (-18.69)
-22.4	.075 (-22.52)	-30.0	.094 (-20.526)	-68.0	.135 (-17.387)
-22.6	.081 (-21.791)	-31.0	.06 (-24.5)	-69.0	.152 (-16.378)
-22.8	.088 (-21.101)	-32.0	.026 (-31.829)	-70.0	.166 (-15.594)
-23.0	.095 (-20.458)	-33.0	.026 (-31.613)	-71.0	.178 (-14.989)
-23.2	.102 (-19.867)	-34.0	.058 (-24.722)	-72.0	.188 (-14.531)
-23.4	.108 (-19.327)	-35.0	.088 (-21.083)	-73.0	.195 (-14.2)
-23.6	.114 (-18.837)	-36.0	.113 (-18.962)	-74.0	.20 (-13.978)
-23.8	.12 (-18.393)	-37.0	.13 (-17.739)	-75.0	.203 (-13.853)
-24.0	.126 (-17.994)	-38.0	.139 (-17.163)	-76.0	.204 (-13.816)
-24.2	.131 (-17.637)	-39.0	.139 (-17.13)	-77.0	.203 (-13.859)
-24.4	.136 (-17.318)	-40.0	.132 (-17.612)	-78.0	.20 (-13.978)
-24.6	.141 (-17.037)	-41.0	.117 (-18.647)	-79.0	.196 (-14.168)
-24.8	.145 (-16.79)	-42.0	.096 (-20.363)	-80.0	.19 (-14.428)
-25.0	.148 (-16.576)	-43.0	.07 (-23.073)	-81.0	.183 (-14.756)
-25.2	.151 (-16.394)	-44.0	.041 (-27.646)	-82.0	.175 (-15.153)
-25.4	.154 (-16.242)	-45.0	.014 (-37.322)	-83.0	.166 (-15.622)
-25.6	.156 (-16.119)	-46.0	.024 (-32.318)	-84.0	.155 (-16.167)
-25.8	.158 (-16.024)	-47.0	.053 (-25.506)	-85.0	.145 (-16.792)
-26.0	.159 (-15.956)	-48.0	.08 (-21.908)	-86.0	.133 (-17.506)
-26.2	.16 (-15.915)	-49.0	.104 (-19.649)	-87.0	.121 (-18.323)
-26.4	.16 (-15.9)	-50.0	.124 (-18.158)	-88.0	.109 (-19.259)
-26.6	.16 (-15.91)	-51.0	.138 (-17.193)	-89.0	.096 (-20.338)
-26.8	.159 (-15.947)	-52.0	.147 (-16.633)	-90.0	.083 (-21.596)
-27.0	.158 (-16.009)	-53.0	.151 (-16.415)		

Antenna Concepts Inc.

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CLIENT: KNPB-TV Ch-5 / Fred Ihlow

Date: 3/19/2003

ANTENNA TYPE: Top Mount Traveling Wave Slot

FREQUENCY: 479

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 6.347/8.026 dBd

Beam Tilt (Deg.): -1

DIRECTIVITY(Horiz): 6.129/7.874 dBd

Null Fill(s)(%): 10, 5, 2

Micro-Tek Eng. ver 2.5.03

