

WMAQ-TV Auxiliary Broadcast Application**EXHIBIT 46**
April 2, 2012**TABULATION OF AZIMUTH PATTERN: Dielectric TUF-C4-12/48U-2BR****Main beam axis of symmetry: 235°true****Electrical Beam Tilt: 1.0****Main Beam Calculated Maximum Azimuth Pattern Gain (peak): 1.75 (2.43 dBd)****Maximum Main Beam Effective Radiated Power (ERP): 350.0 kW****Maximum Peak of Beam Effective Radiated Power (ERP): 25.44 dBk****Peak of Beam**

Angle	Field	ERP (dBk)	ERP (kW)
0	0.683	22.13	163.3
10	0.586	20.80	120.2
20	0.443	18.37	68.7
30	0.312	15.32	34.1
40	0.304	15.10	32.3
50	0.356	16.47	44.4
60	0.355	16.45	44.1
70	0.309	15.24	33.4
80	0.332	15.86	38.6
90	0.461	18.71	74.4
100	0.587	20.81	120.6
110	0.670	21.96	157.1
120	0.762	23.08	203.2
130	0.884	24.37	273.5
140	0.980	25.27	336.1
150	0.981	25.27	336.8
160	0.882	24.35	272.3
170	0.806	23.57	227.4
180	0.831	23.83	241.7
190	0.853	24.06	254.7
200	0.794	23.44	220.7
210	0.763	23.09	203.8
220	0.857	24.10	257.1
230	0.963	25.11	324.6
240	0.962	25.10	323.9
250	0.864	24.17	261.3
260	0.791	23.40	219.0
270	0.825	23.77	238.2
280	0.858	24.11	257.7
290	0.808	23.59	228.5
300	0.782	23.30	214.0
310	0.873	24.26	266.7
320	0.969	25.17	328.6
330	0.967	25.15	327.3
340	0.885	24.38	274.1
350	0.776	23.24	210.8

MAXIMA - Peak of Beam

Angle	Field	ERP (dBk)	ERP (kW)
55	0.369	16.8	47.66
145	1.000	25.4	350.00
188	0.857	24.1	257.06
235	0.983	25.3	338.20
279	0.859	24.1	258.26
325	0.981	25.3	336.83

MINIMA - Peak of Beam

Angle	Field	ERP (dBk)	ERP (kW)
36	0.292	14.7	29.84
72	0.305	15.1	32.56
172	0.803	23.5	225.68
208	0.759	23.0	201.63
262	0.790	23.4	218.44
298	0.777	23.2	211.31

Prepared by Doug Lung

WMAQ-TV Auxiliary Broadcast Application

EXHIBIT 46
April 2, 2012

PLOT OF AZIMUTH PATTERN (Relative field): Dielectric TUF-C4-12/48U-2BR

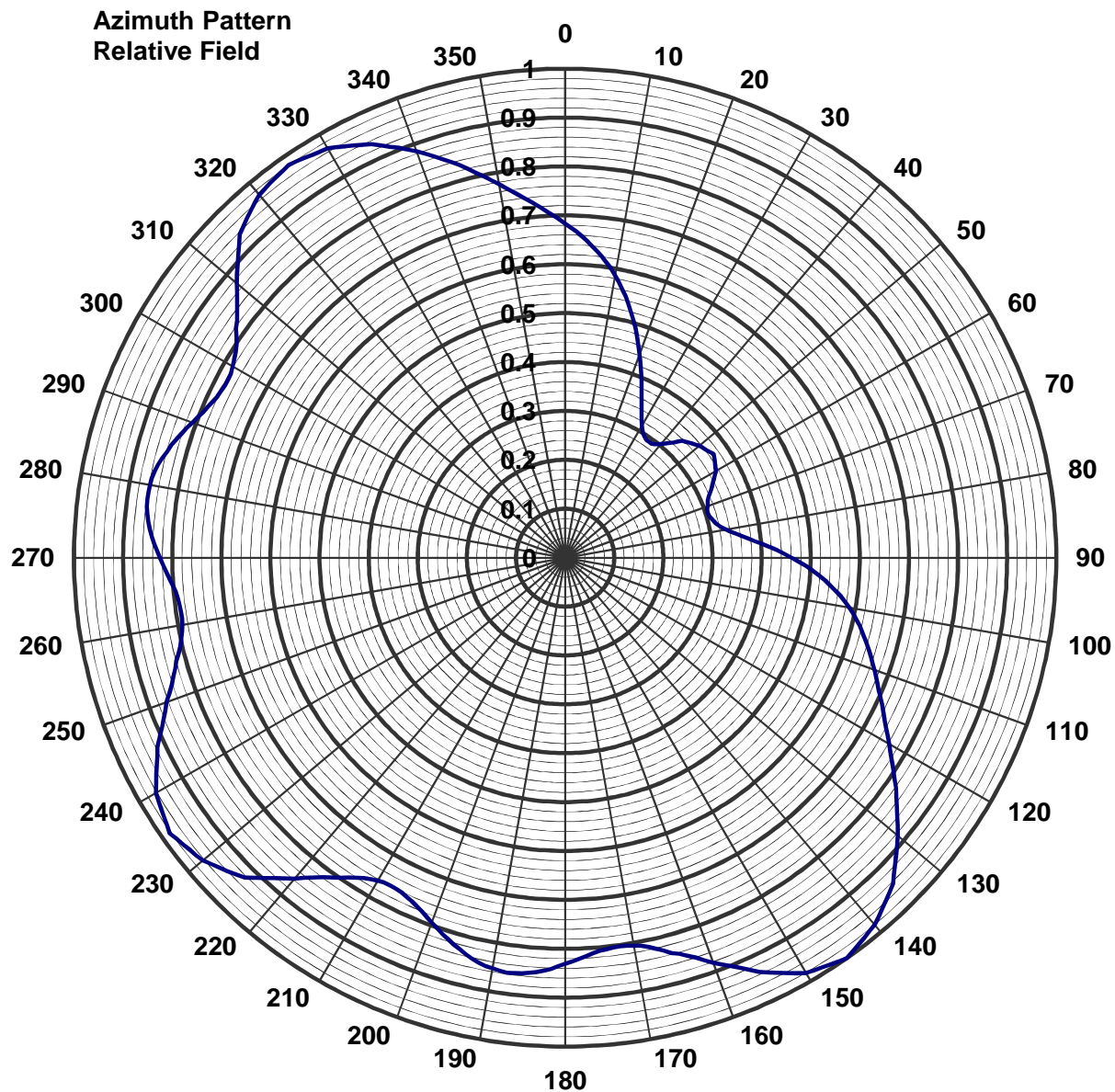
Main beam axis of symmetry: 235° true

Electrical Beam Tilt: 1.0

Main Beam Calculated Maximum Azimuth Pattern Gain (peak): 1.75 (2.43 dBd)

Maximum Main Beam Effective Radiated Power (ERP): 350.0 kW

Maximum Peak of Beam Effective Radiated Power (ERP): 25.44 dBk



Prepared by Doug Lung

WMAQ-TV Auxiliary Broadcast Application

EXHIBIT 46
April 2, 2012

PLOT OF AZIMUTH PATTERN (dBk): Dielectric TUF-C4-12/48U-2BR

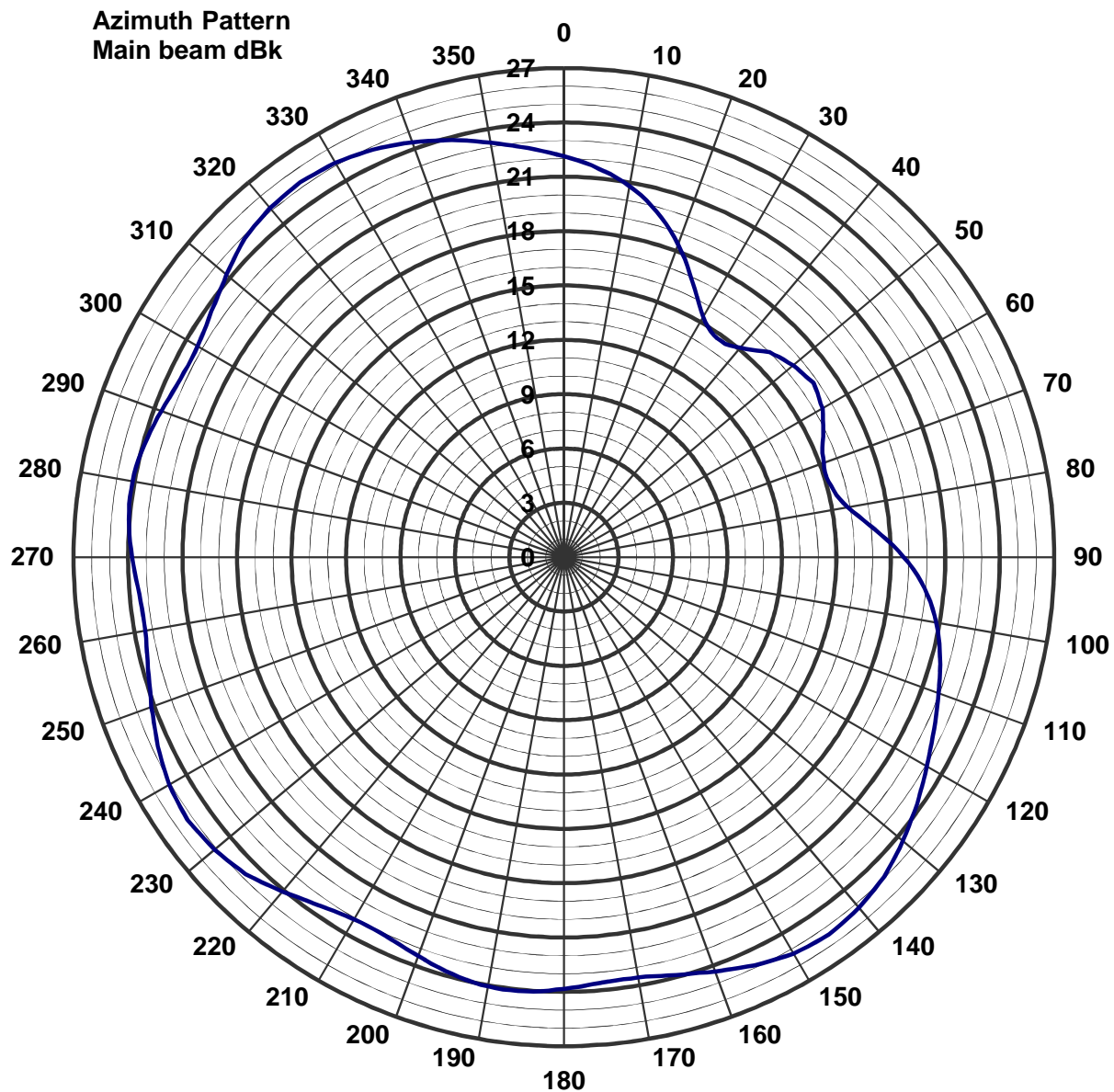
Main beam axis of symmetry: 235° true

Electrical Beam Tilt: 1.0

Main Beam Calculated Maximum Azimuth Pattern Gain (peak): 1.75 (2.43 dBd)

Maximum Main Beam Effective Radiated Power (ERP): 350.0 kW

Maximum Peak of Beam Effective Radiated Power (ERP): 25.44 dBk



WMAQ-TV Auxiliary Broadcast Application

EXHIBIT 46
April 2, 2012

ELEVATION PATTERN (Relative Field): Dielectric TUF-C4-12/48U-2BR

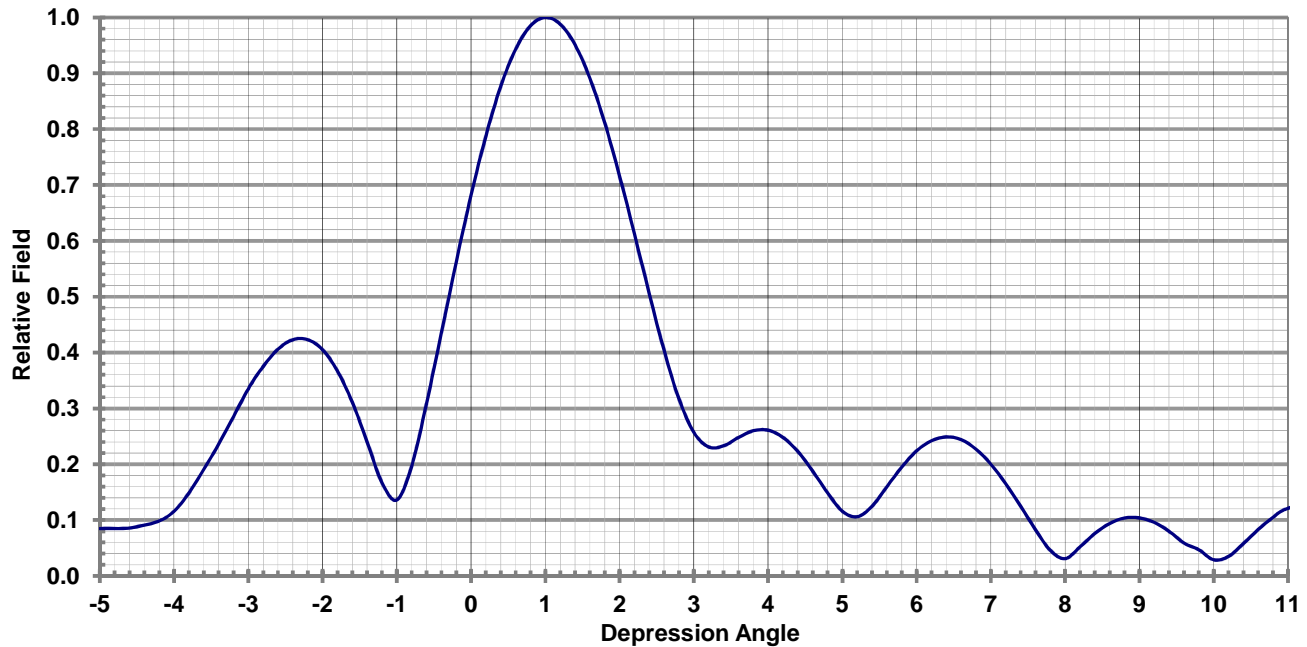
Electrical Beam Tilt: 1.00°

Calculated Maximum Elevation Gain: 25.10 14.00 dBd

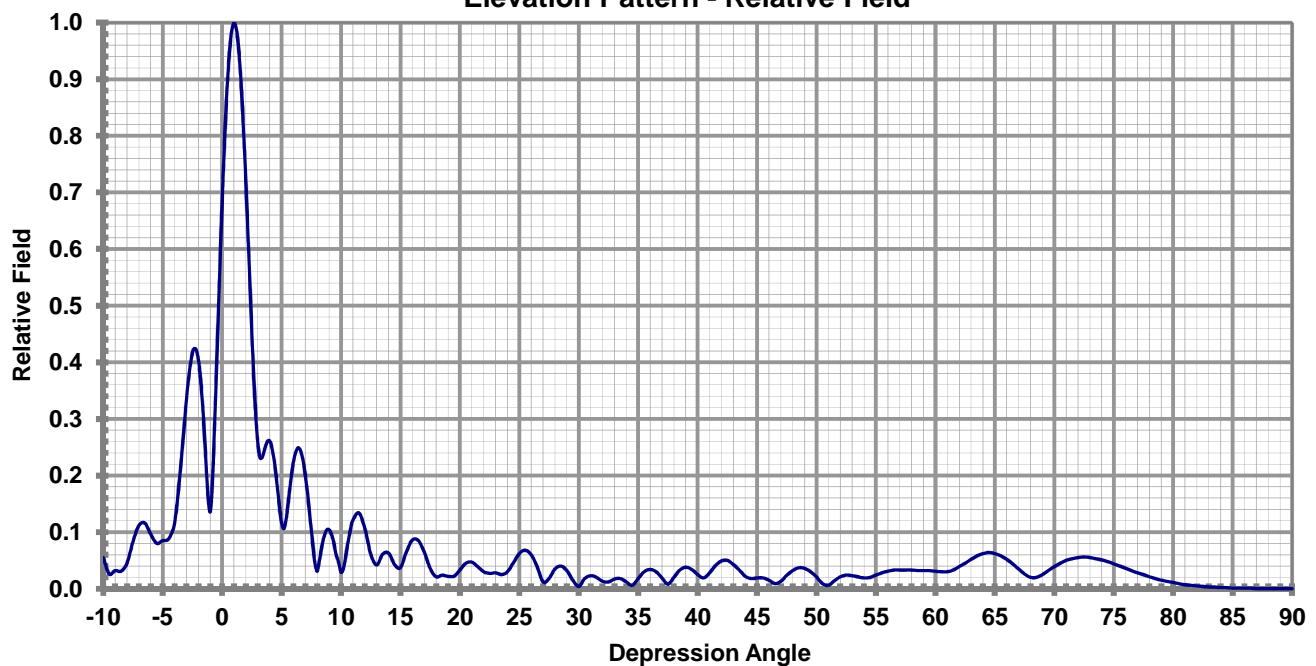
RMS Gain at Horizontal 11.70 10.68 dBd

Maximum Effective Radiated Power (ERP): 350.0 kW 25.44 dBk

Elevation Pattern - Relative Field



Elevation Pattern - Relative Field



Prepared by Doug Lung

WMAQ-TV Auxiliary Broadcast Application

EXHIBIT 46
April 2, 2012

ELEVATION PATTERN (dBk): Dielectric TUF-C4-12/48U-2BR

Electrical Beam Tilt: 1.00°

Calculated Maximum Elevation Gain:

25.10

14.00 dBd

RMS Gain at Horizontal

11.70

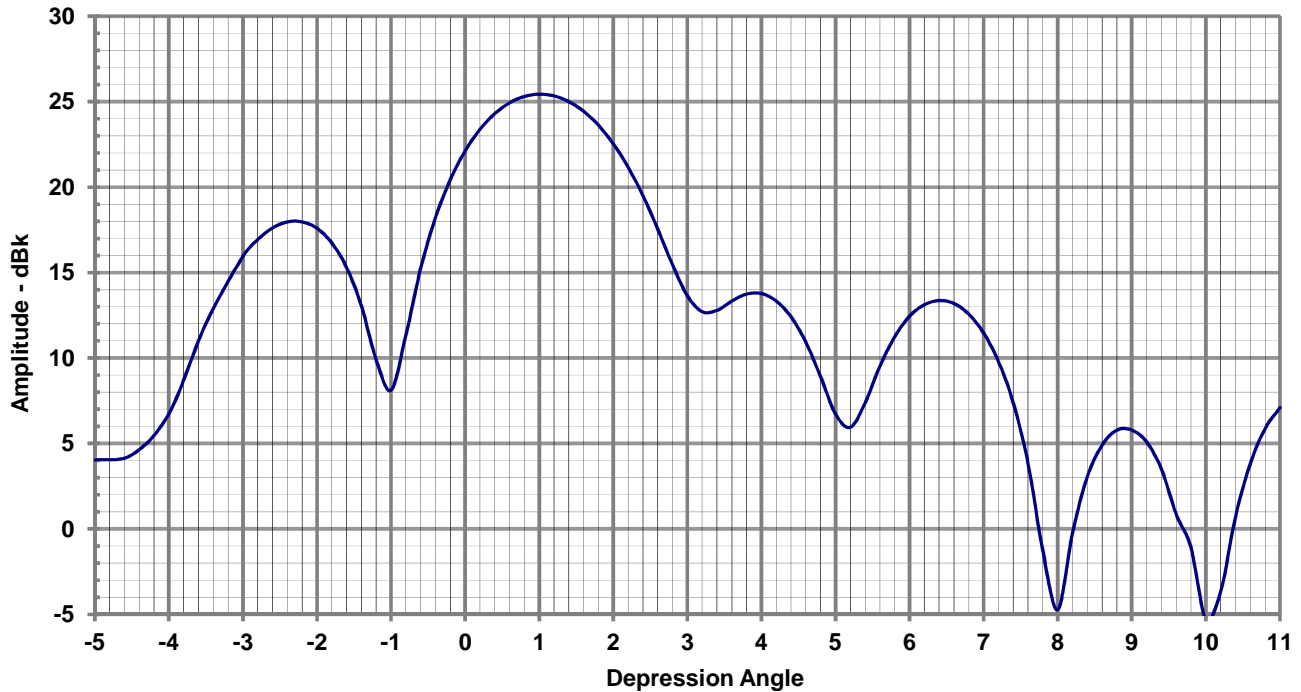
10.68 dBd

Maximum Effective Radiated Power (ERP):

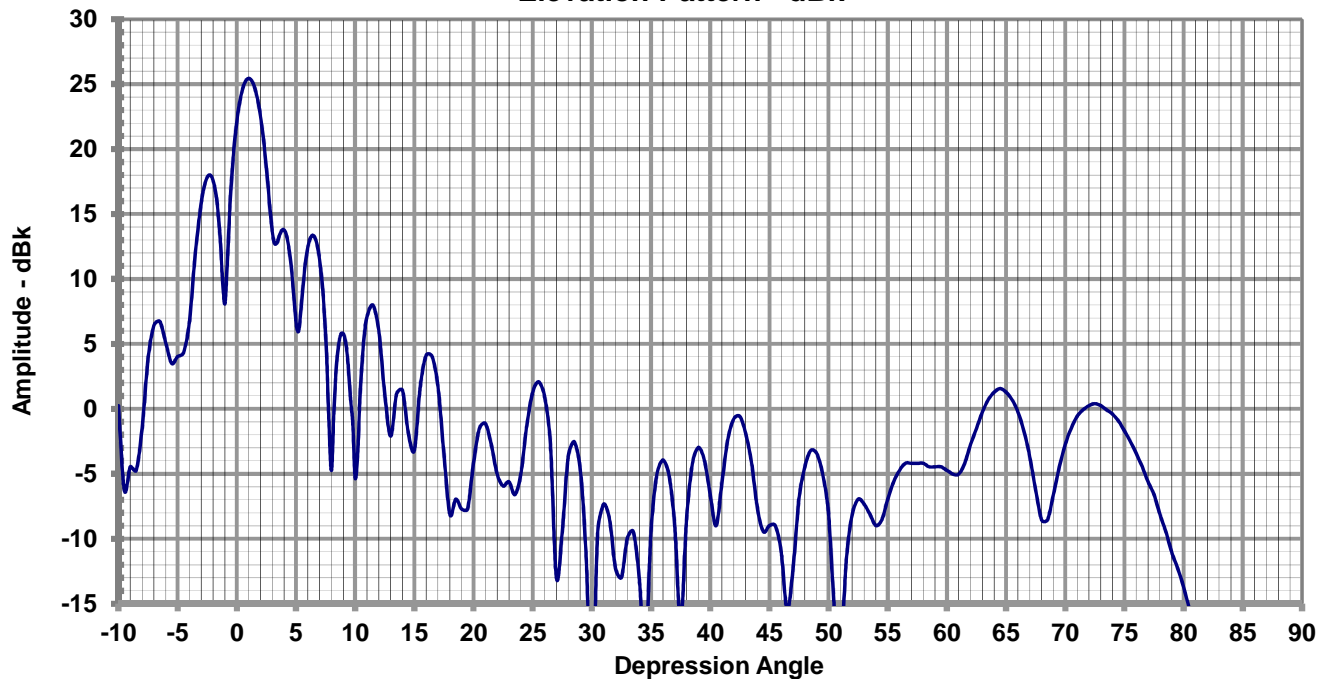
350.0 kW

25.44 dBk

Elevation Pattern - dBk



Elevation Pattern - dBk



Prepared by Doug Lung

WMAQ-TV Auxiliary Broadcast Application**EXHIBIT 46**
April 2, 2012**TABULATION OF ELEVATION PATTERN: Dielectric TUF-C4-12/48U-2BR****Electrical Beam Tilt: 1.00°****Calculated Maximum Elevation Gain:****25.10****14.00 dBd****RMS Gain at Horizontal****11.70****10.68 dBd****Maximum Effective Radiated Power (ERP):****350.0 kW****25.44 dBk**

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
-10	0.055	-25.19	1.8	0.811	-1.82	9.4	0.080	-21.94	26	0.060	-24.44
-9.5	0.026	-31.70	2	0.716	-2.90	9.6	0.059	-24.58	26.5	0.039	-28.18
-9	0.032	-29.90	2.2	0.612	-4.26	9.8	0.047	-26.56	27	0.012	-38.42
-8.5	0.031	-30.17	2.4	0.505	-5.93	10	0.029	-30.75	27.5	0.018	-34.89
-8	0.045	-26.94	2.6	0.403	-7.89	10.2	0.035	-29.12	28	0.035	-29.12
-7.5	0.083	-21.62	2.8	0.317	-9.98	10.4	0.058	-24.73	28.5	0.040	-27.96
-7	0.112	-19.02	3	0.257	-11.80	10.6	0.083	-21.62	29	0.032	-29.90
-6.5	0.116	-18.71	3.2	0.231	-12.73	10.8	0.105	-19.58	29.5	0.015	-36.48
-6	0.096	-20.35	3.4	0.233	-12.65	11	0.121	-18.34	30	0.004	-47.96
-5.5	0.080	-21.94	3.6	0.248	-12.11	11.5	0.134	-17.46	30.5	0.018	-34.89
-5	0.085	-21.41	3.8	0.260	-11.70	12	0.107	-19.41	31	0.023	-32.77
-4.5	0.088	-21.11	4	0.261	-11.67	12.5	0.061	-24.29	31.5	0.020	-33.98
-4	0.116	-18.71	4.2	0.248	-12.11	13	0.042	-27.54	32	0.013	-37.72
-3.5	0.213	-13.43	4.4	0.223	-13.03	13.5	0.061	-24.29	32.5	0.012	-38.42
-3	0.335	-9.50	4.6	0.188	-14.52	14	0.063	-24.01	33	0.017	-35.39
-2.8	0.375	-8.52	4.8	0.149	-16.54	14.5	0.043	-27.33	33.5	0.018	-34.89
-2.6	0.406	-7.83	5	0.116	-18.71	15	0.037	-28.64	34	0.012	-38.42
-2.4	0.423	-7.47	5.2	0.106	-19.49	15.5	0.065	-23.74	34.5	0.006	-44.44
-2.2	0.423	-7.47	5.4	0.125	-18.06	16	0.086	-21.31	35	0.018	-34.89
-2	0.405	-7.85	5.6	0.160	-15.92	16.5	0.085	-21.41	35.5	0.030	-30.46
-1.8	0.367	-8.71	5.8	0.195	-14.20	17	0.065	-23.74	36	0.034	-29.37
-1.6	0.311	-10.14	6	0.224	-13.00	17.5	0.036	-28.87	36.5	0.030	-30.46
-1.4	0.240	-12.40	6.2	0.242	-12.32	18	0.021	-33.56	37	0.019	-34.42
-1.2	0.167	-15.55	6.4	0.249	-12.08	18.5	0.024	-32.40	37.5	0.008	-41.94
-1	0.136	-17.33	6.6	0.244	-12.25	19	0.022	-33.15	38	0.020	-33.98
-0.8	0.197	-14.11	6.8	0.227	-12.88	19.5	0.022	-33.15	38.5	0.033	-29.63
-0.6	0.309	-10.20	7	0.200	-13.98	20	0.033	-29.63	39	0.038	-28.40
-0.4	0.435	-7.23	7.2	0.165	-15.65	20.5	0.045	-26.94	39.5	0.034	-29.37
-0.2	0.562	-5.01	7.4	0.125	-18.06	21	0.047	-26.56	40	0.025	-32.04
0	0.682	-3.32	7.6	0.083	-21.62	21.5	0.039	-28.18	40.5	0.019	-34.42
0.2	0.788	-2.07	7.8	0.046	-26.74	22	0.030	-30.46	41	0.028	-31.06
0.4	0.877	-1.14	8	0.031	-30.17	22.5	0.027	-31.37	41.5	0.041	-27.74
0.6	0.943	-0.51	8.2	0.052	-25.68	23	0.028	-31.06	42	0.049	-26.20
0.8	0.985	-0.13	8.4	0.076	-22.38	23.5	0.025	-32.04	42.5	0.050	-26.02
1	1.000	0.00	8.6	0.094	-20.54	24	0.030	-30.46	43	0.043	-27.33
1.2	0.988	-0.10	8.8	0.104	-19.66	24.5	0.046	-26.74	43.5	0.033	-29.63
1.4	0.951	-0.44	9	0.104	-19.66	25	0.062	-24.15	44	0.022	-33.15
1.6	0.891	-1.00	9.2	0.096	-20.35	25.5	0.068	-23.35	44.5	0.018	-34.89

WMAQ-TV Auxiliary Broadcast Application**EXHIBIT 46**
April 2, 2012**TABULATION OF ELEVATION PATTERN: Dielectric TUF-C4-12/48U-2BR****Electrical Beam Tilt: 1.00°****Calculated Maximum Elevation Gain:****25.10****14.00 dBd****RMS Gain at Horizontal****11.70****10.68 dBd****Maximum Effective Radiated Power (ERP):****350.0 kW****25.44 dBk**

Angle	Field	dB	Angle	Field	dB	Angle	Field	dB
45	0.019	-34.42	64	0.062	-24.15	83	0.003	-50.46
45.5	0.019	-34.42	64.5	0.064	-23.88	83.5	0.003	-50.46
46	0.015	-36.48	65	0.062	-24.15	84	0.002	-53.98
46.5	0.009	-40.92	65.5	0.058	-24.73	84.5	0.002	-53.98
47	0.013	-37.72	66	0.052	-25.68	85	0.001	-60.00
47.5	0.024	-32.40	66.5	0.044	-27.13	85.5	0.001	-60.00
48	0.032	-29.90	67	0.035	-29.12	86	0.001	-60.00
48.5	0.037	-28.64	67.5	0.026	-31.70	86.5	0.001	-60.00
49	0.036	-28.87	68	0.020	-33.98	87	0.000	NA
49.5	0.030	-30.46	68.5	0.020	-33.98	87.5	0.000	NA
50	0.021	-33.56	69	0.025	-32.04	88	0.000	NA
50.5	0.009	-40.92	69.5	0.032	-29.90	88.5	0.000	NA
51	0.006	-44.44	70	0.039	-28.18	89	0.000	NA
51.5	0.014	-37.08	70.5	0.045	-26.94	89.5	0.000	NA
52	0.021	-33.56	71	0.050	-26.02	90	0.000	NA
52.5	0.024	-32.40	71.5	0.053	-25.51			
53	0.023	-32.77	72	0.055	-25.19			
53.5	0.021	-33.56	72.5	0.056	-25.04			
54	0.019	-34.42	73	0.055	-25.19			
54.5	0.020	-33.98	73.5	0.053	-25.51			
55	0.024	-32.40	74	0.051	-25.85			
55.5	0.028	-31.06	74.5	0.048	-26.38			
56	0.031	-30.17	75	0.044	-27.13			
56.5	0.033	-29.63	75.5	0.040	-27.96			
57	0.033	-29.63	76	0.036	-28.87			
57.5	0.033	-29.63	76.5	0.032	-29.90			
58	0.033	-29.63	77	0.028	-31.06			
58.5	0.032	-29.90	77.5	0.025	-32.04			
59	0.032	-29.90	78	0.021	-33.56			
59.5	0.032	-29.90	78.5	0.018	-34.89			
60	0.031	-30.17	79	0.015	-36.48			
60.5	0.030	-30.46	79.5	0.013	-37.72			
61	0.030	-30.46	80	0.011	-39.17			
61.5	0.033	-29.63	80.5	0.009	-40.92			
62	0.039	-28.18	81	0.007	-43.10			
62.5	0.045	-26.94	81.5	0.006	-44.44			
63	0.052	-25.68	82	0.005	-46.02			
63.5	0.058	-24.73	82.5	0.004	-47.96			