ENGINEERING STATEMENT

OF

JOHN F.X. BROWNE, P.E.

IN SUPPORT OF

APPLICATION FOR CONSTRUCTION PERMIT

FOR POST-TRANSITION DTV FACILITY

WRPT-DT

HIBBING, MN

Background

Duluth-Superior Area Educational TV Corporation holds a construction permit (BPEDT-20030605AFB, Facility ID# 159007) for digital WRPT, located at Hibbing, MN, on Channel 31 with the following parameters:

Pre-transition Facility (Ch. 31)

Coordinates:	47° 22' 53" N (NAD27)
	92° 57' 15" W
ERP:	500 kW (DA)
HAAT:	212m

WRPT is a "digital singleton" and has been allotted post-transition DTV operation with the Appendix B facility parameters listed below:

Post-transition Appendix B Facility (Ch. 31)

Coordinates:	47° 22' 53" N (NAD27)
	92° 57' 15" W
ERP:	500 kW (DA)
HAAT:	212m

During the channel election process, WRPT certified-to its maximized DTV coverage (BNPEDT-20030605AFB) on Channel 31, which specified a facility with the parameters listed in Appendix B. WRPT now wishes to operate with a directional antenna that differs from that specified in the construction permit also, to employ a lower ERP (250 kW).

Site

The facility is located within the Canadian border zone and coordination with the Canadian government is requested to the extent necessary in light of the FCC's ongoing negotiations with the Canadian government regarding the allotments specified in Appendix B of the Eighth Report and Order.

Antenna System and Tower

WRPT now proposes to replace the Dielectric TFU-22DSC-RP230 specified in the original construction permit, with an ERI ATW20H3-HSP5-31S. The ERI antenna has the same azimuth pattern as the Dielectric antenna; however, the electrical beam-tilt (0.75 degrees) is different (0.5 degrees) from that specified for the Dielectric antenna. The azimuth and elevation patterns and tabulations are attached as Exhibits 1a-d and a relative field/dBk table is attached as Table 1.

The tower (ASRN 1033720) is the same tower as specified in the original construction permit. The proposed ERI antenna will be side-mounted on the tower at a height of 601.7m AMSL (167m HAAT), 45m lower than the 212m HAAT specified for the Appendix B facility. The installation will not alter the overall tower height and, therefore, neither notification to the FAA nor modification of the ASR are necessary.

Coverage

The entire principal community of Hibbing, MN is well within the predicted F(50,90) 48dBu contour using the proposed directional antenna and 250 kW ERP. Appendix B lists the facility coverage as 118,000. The proposed 250 kW facility is predicted to provide coverage to 113,924 people or 96% and, therefore, satisfies the 95% population service requirement.

Interference

Interference studies were run utilizing software that emulates that used by the Commission. The results of these studies indicate that the proposed facility would not cause any full service digital TV station more than 0.5% new interference or more than 2% interference to any Class A television station.

Environmental/RFR

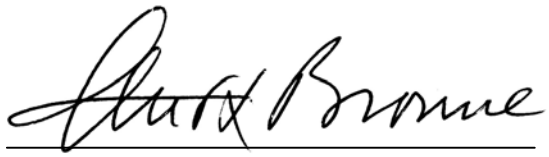
The proposed construction does not require preparation of an Environmental Assessment, as it does not involve any of the factors listed in Section 1.1306.

The additional ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.007105 mW/cm^2, which is less than 5% of the MPE for public exposure (0.383333 mW/cm^2) at the proposed frequency and, therefore, the proposal is excluded from further consideration.

WRPT agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers are encouraged to wear personal RFR monitors when on the structure. A locked security fence encloses the tower base and appropriate signage warning of RFR hazards are posted.

Certification

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.



John F.X. Browne, P.E.
June 9, 2008

Exhibit 1a

AZIMUTH PATTERN

TYPE:	**ATW-P5**		**Frequency:**	**31 (DTV)**
	Numeric	**dB**	**Location:**	**Hibbing, MN**
Directivity:	**2.90**	**4.62**	**Polarization:**	**Horizontal**
Peak(s) at:				

Note: Pattern shape and directivity may vary with channel and mounting configuration.

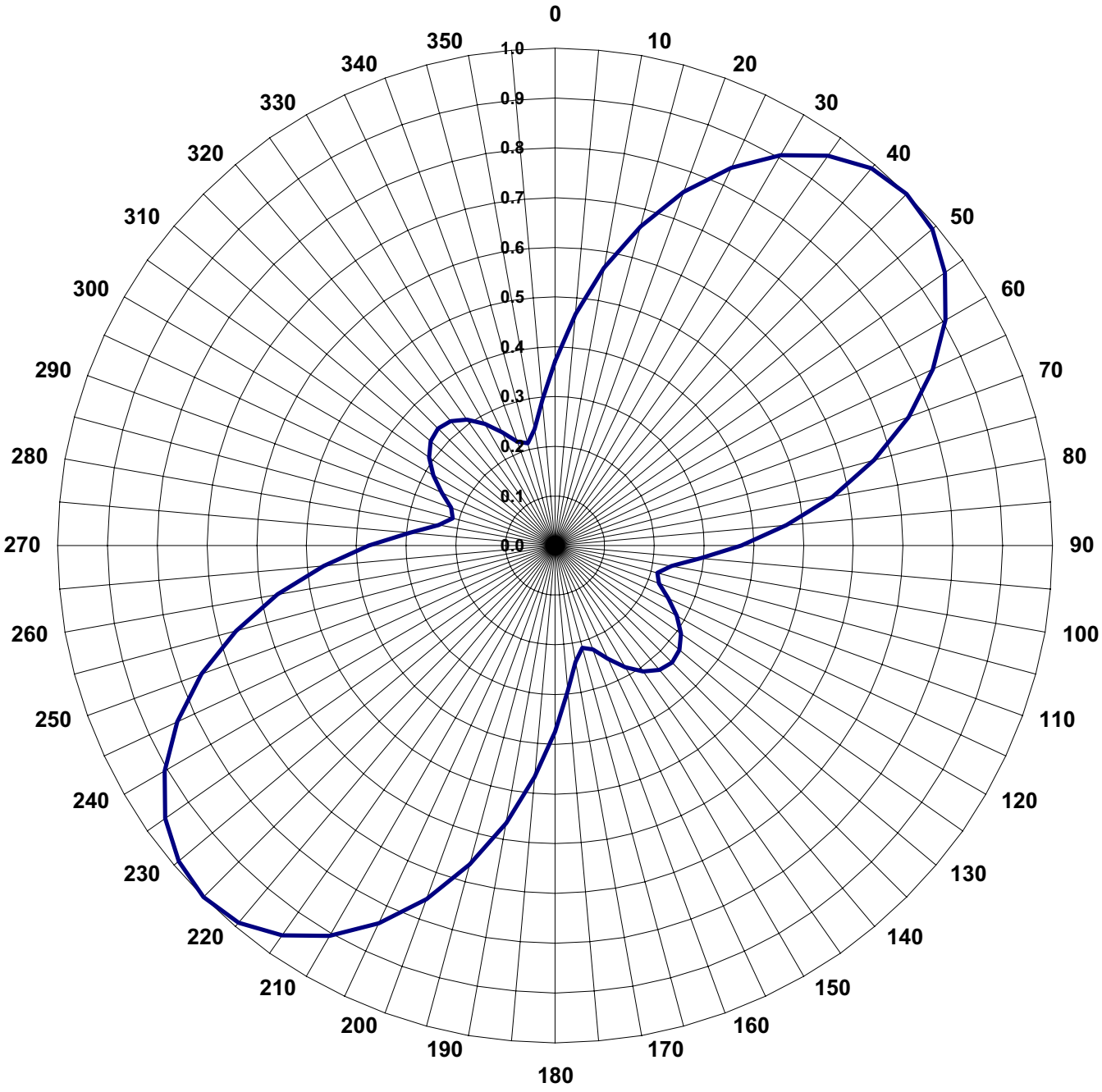


Exhibit 1b

TABULATED DATA FOR AZIMUTH PATTERN

TYPE: ATW-P5

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	0.370	-8.64	92	0.342	-9.32	184	0.448	-6.97	276	0.283	-10.96
2	0.411	-7.72	94	0.310	-10.17	186	0.487	-6.25	278	0.260	-11.70
4	0.448	-6.97	96	0.283	-10.96	188	0.526	-5.58	280	0.237	-12.51
6	0.487	-6.25	98	0.260	-11.70	190	0.566	-4.94	282	0.227	-12.88
8	0.526	-5.58	100	0.237	-12.51	192	0.605	-4.36	284	0.218	-13.23
10	0.566	-4.94	102	0.227	-12.88	194	0.644	-3.82	286	0.215	-13.35
12	0.605	-4.36	104	0.218	-13.23	196	0.681	-3.34	288	0.219	-13.19
14	0.644	-3.82	106	0.215	-13.35	198	0.718	-2.88	290	0.223	-13.03
16	0.682	-3.32	108	0.219	-13.19	200	0.756	-2.43	292	0.234	-12.62
18	0.719	-2.87	110	0.223	-13.03	202	0.789	-2.06	294	0.246	-12.18
20	0.756	-2.43	112	0.234	-12.62	204	0.822	-1.70	296	0.258	-11.77
22	0.789	-2.06	114	0.245	-12.22	206	0.851	-1.40	298	0.271	-11.34
24	0.822	-1.70	116	0.257	-11.80	208	0.878	-1.13	300	0.283	-10.96
26	0.851	-1.40	118	0.271	-11.34	210	0.906	-0.86	302	0.294	-10.63
28	0.878	-1.13	120	0.283	-10.96	212	0.927	-0.66	304	0.304	-10.34
30	0.906	-0.86	122	0.294	-10.63	214	0.947	-0.47	306	0.313	-10.09
32	0.927	-0.66	124	0.304	-10.34	216	0.964	-0.32	308	0.320	-9.90
34	0.947	-0.47	126	0.312	-10.12	218	0.977	-0.20	310	0.327	-9.71
36	0.964	-0.32	128	0.320	-9.90	220	0.989	-0.10	312	0.330	-9.63
38	0.977	-0.20	130	0.327	-9.71	222	0.994	-0.05	314	0.332	-9.58
40	0.989	-0.10	132	0.329	-9.66	224	0.998	-0.02	316	0.332	-9.58
42	0.994	-0.05	134	0.332	-9.58	226	0.998	-0.02	318	0.330	-9.63
44	0.998	-0.02	136	0.332	-9.58	228	0.994	-0.05	320	0.327	-9.71
46	0.998	-0.02	138	0.330	-9.63	230	0.987	-0.11	322	0.320	-9.90
48	0.994	-0.05	140	0.327	-9.71	232	0.977	-0.20	324	0.313	-10.09
50	0.989	-0.10	142	0.320	-9.90	234	0.964	-0.32	326	0.304	-10.34
52	0.977	-0.20	144	0.313	-10.09	236	0.947	-0.47	328	0.294	-10.63
54	0.964	-0.32	146	0.304	-10.34	238	0.927	-0.66	330	0.283	-10.96
56	0.947	-0.47	148	0.294	-10.63	240	0.906	-0.86	332	0.271	-11.34
58	0.927	-0.66	150	0.283	-10.96	242	0.879	-1.12	334	0.258	-11.77
60	0.906	-0.86	152	0.271	-11.34	244	0.852	-1.39	336	0.246	-12.18
62	0.879	-1.12	154	0.258	-11.77	246	0.822	-1.70	338	0.235	-12.58
64	0.851	-1.40	156	0.246	-12.18	248	0.789	-2.06	340	0.223	-13.03
66	0.822	-1.70	158	0.235	-12.58	250	0.756	-2.43	342	0.219	-13.19
68	0.789	-2.06	160	0.223	-13.03	252	0.719	-2.87	344	0.215	-13.35
70	0.756	-2.43	162	0.219	-13.19	254	0.682	-3.32	346	0.218	-13.23
72	0.719	-2.87	164	0.215	-13.35	256	0.644	-3.82	348	0.227	-12.88
74	0.682	-3.32	166	0.218	-13.23	258	0.605	-4.36	350	0.237	-12.51
76	0.644	-3.82	168	0.227	-12.88	260	0.566	-4.94	352	0.259	-11.73
78	0.604	-4.38	170	0.237	-12.51	262	0.527	-5.56	354	0.283	-10.96
80	0.566	-4.94	172	0.260	-11.70	264	0.487	-6.25	356	0.310	-10.17
82	0.526	-5.58	174	0.283	-10.96	266	0.449	-6.96	358	0.342	-9.32
84	0.487	-6.25	176	0.310	-10.17	268	0.412	-7.70	360	0.370	-8.64
86	0.449	-6.96	178	0.342	-9.32	270	0.374	-8.54			
88	0.411	-7.72	180	0.374	-8.54	272	0.342	-9.32			
90	0.374	-8.54	182	0.412	-7.70	274	0.310	-10.17			

Exhibit 1c

ELEVATION PATTERN

TYPE:	ATW20H3H		Frequency:	31 (DTV)
Directivity:	Numeric	dBd	Location:	Hibbing, MN
Main Lobe:	20.00	13.01	Beam Tilt:	0.75
Horizontal:	15.66	11.95	Polarization:	Horizontal

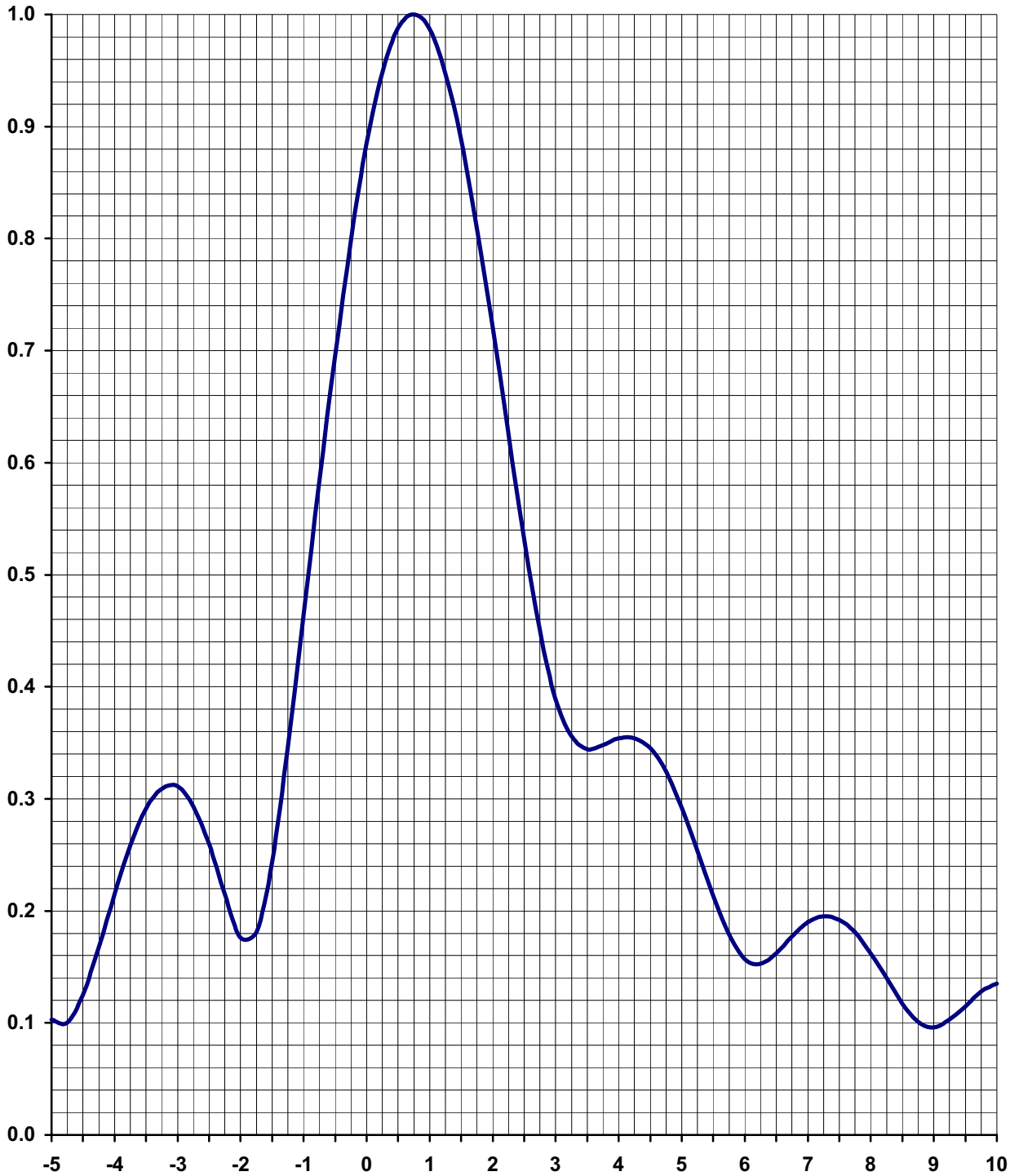


Exhibit 1d

TABULATED DATA FOR ELEVATION PATTERN

ATW20H3H -5 to 10 degrees in 0.25 increments 10 to 90 degrees in 0.50 increments

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
-5.000	0.103	-19.74	6.75	0.177	-15.04	27.00	0.042	-27.54	50.50	0.038	-28.40	74.00	0.069	-23.22
-4.750	0.100	-20.00	7.00	0.190	-14.42	27.50	0.054	-25.35	51.00	0.028	-31.06	74.50	0.065	-23.74
-4.500	0.125	-18.06	7.25	0.195	-14.20	28.00	0.057	-24.88	51.50	0.022	-33.15	75.00	0.061	-24.29
-4.250	0.168	-15.49	7.50	0.192	-14.33	28.50	0.051	-25.85	52.00	0.027	-31.37	75.50	0.055	-25.19
-4.000	0.215	-13.35	7.75	0.181	-14.85	29.00	0.038	-28.40	52.50	0.037	-28.64	76.00	0.049	-26.20
-3.750	0.258	-11.77	8.00	0.162	-15.81	29.50	0.030	-30.46	53.00	0.047	-26.56	76.50	0.042	-27.54
-3.500	0.291	-10.72	8.25	0.140	-17.08	30.00	0.036	-28.87	53.50	0.053	-25.51	77.00	0.035	-29.12
-3.250	0.309	-10.20	8.50	0.117	-18.64	30.50	0.048	-26.38	54.00	0.054	-25.35	77.50	0.028	-31.06
-3.000	0.311	-10.14	8.75	0.101	-19.91	31.00	0.054	-25.35	54.50	0.050	-26.02	78.00	0.021	-33.56
-2.750	0.293	-10.66	9.00	0.096	-20.35	31.50	0.051	-25.85	55.00	0.042	-27.54	78.50	0.015	-36.48
-2.500	0.260	-11.70	9.25	0.103	-19.74	32.00	0.041	-27.74	55.50	0.031	-30.17	79.00	0.010	-40.00
-2.250	0.215	-13.35	9.50	0.115	-18.79	32.50	0.030	-30.46	56.00	0.022	-33.15	79.50	0.007	-43.10
-2.000	0.176	-15.09	9.75	0.128	-17.86	33.00	0.029	-30.75	56.50	0.023	-32.77	80.00	0.009	-40.92
-1.750	0.181	-14.85	10.00	0.135	-17.39	33.50	0.040	-27.96	57.00	0.032	-29.90	80.50	0.012	-38.42
-1.500	0.244	-12.25	10.50	0.132	-17.59	34.00	0.049	-26.20	57.50	0.042	-27.54	81.00	0.016	-35.92
-1.250	0.346	-9.22	11.00	0.106	-19.49	34.50	0.052	-25.68	58.00	0.051	-25.85	81.50	0.019	-34.42
-1.000	0.462	-6.71	11.50	0.076	-22.38	35.00	0.046	-26.74	58.50	0.057	-24.88	82.00	0.022	-33.15
-0.750	0.582	-4.70	12.00	0.074	-22.62	35.50	0.035	-29.12	59.00	0.058	-24.73	82.50	0.024	-32.40
-0.500	0.697	-3.14	12.50	0.094	-20.54	36.00	0.026	-31.70	59.50	0.055	-25.19	83.00	0.025	-32.04
-0.250	0.799	-1.95	13.00	0.106	-19.49	36.50	0.030	-30.46	60.00	0.049	-26.20	83.50	0.026	-31.70
0.000	0.885	-1.06	13.50	0.098	-20.18	37.00	0.041	-27.74	60.50	0.039	-28.18	84.00	0.026	-31.70
0.250	0.948	-0.46	14.00	0.075	-22.50	37.50	0.049	-26.20	61.00	0.029	-30.75	84.50	0.026	-31.70
0.500	0.988	-0.10	14.50	0.056	-25.04	38.00	0.050	-26.02	61.50	0.021	-33.56	85.00	0.025	-32.04
0.750	1.000	0.00	15.00	0.064	-23.88	38.50	0.044	-27.13	62.00	0.022	-33.15	85.50	0.024	-32.40
1.000	0.987	-0.11	15.50	0.081	-21.83	39.00	0.033	-29.63	62.50	0.031	-30.17	86.00	0.022	-33.15
1.250	0.948	-0.46	16.00	0.088	-21.11	39.50	0.025	-32.04	63.00	0.041	-27.74	86.50	0.020	-33.98
1.500	0.889	-1.02	16.50	0.077	-22.27	40.00	0.028	-31.06	63.50	0.051	-25.85	87.00	0.018	-34.89
1.750	0.810	-1.83	17.00	0.057	-24.88	40.50	0.039	-28.18	64.00	0.058	-24.73	87.50	0.015	-36.48
2.000	0.720	-2.85	17.50	0.046	-26.74	41.00	0.047	-26.56	64.50	0.063	-24.01	88.00	0.013	-37.72
2.250	0.625	-4.08	18.00	0.058	-24.73	41.50	0.050	-26.02	65.00	0.064	-23.88	88.50	0.010	-40.00
2.500	0.532	-5.48	18.50	0.072	-22.85	42.00	0.046	-26.74	65.50	0.062	-24.15	89.00	0.006	-44.44
2.750	0.451	-6.92	19.00	0.075	-22.50	42.50	0.036	-28.87	66.00	0.057	-24.88	89.50	0.003	-50.46
3.000	0.389	-8.20	19.50	0.064	-23.88	43.00	0.026	-31.70	66.50	0.049	-26.20	90.00	0.000	---
3.250	0.356	-8.97	20.00	0.047	-26.56	43.50	0.024	-32.40	67.00	0.040	-27.96			
3.500	0.344	-9.27	20.50	0.041	-27.74	44.00	0.033	-29.63	67.50	0.029	-30.75			
3.750	0.348	-9.17	21.00	0.053	-25.51	44.50	0.044	-27.13	68.00	0.019	-34.42			
4.000	0.354	-9.02	21.50	0.065	-23.74	45.00	0.050	-26.02	68.50	0.015	-36.48			
4.250	0.354	-9.02	22.00	0.066	-23.61	45.50	0.050	-26.02	69.00	0.020	-33.98			
4.500	0.345	-9.24	22.50	0.056	-25.04	46.00	0.044	-27.13	69.50	0.030	-30.46			
4.750	0.324	-9.79	23.00	0.041	-27.74	46.50	0.034	-29.37	70.00	0.040	-27.96			
5.000	0.292	-10.69	23.50	0.036	-28.87	47.00	0.024	-32.40	70.50	0.050	-26.02			
5.250	0.254	-11.90	24.00	0.048	-26.38	47.50	0.024	-32.40	71.00	0.058	-24.73			
5.500	0.214	-13.39	24.50	0.059	-24.58	48.00	0.034	-29.37	71.50	0.064	-23.88			
5.750	0.179	-14.94	25.00	0.061	-24.29	48.50	0.044	-27.13	72.00	0.069	-23.22			
6.000	0.157	-16.08	25.50	0.052	-25.68	49.00	0.050	-26.02	72.50	0.071	-22.97			
6.250	0.153	-16.31	26.00	0.038	-28.40	49.50	0.051	-25.85	73.00	0.072	-22.85			
6.500	0.162	-15.81	26.50	0.033	-29.63	50.00	0.047	-26.56	73.50	0.071	-22.97			

DIRECTIONAL ANTENNA DATA
WRPT-DT
dBk Table

Actual Bearing	Pattern Azimuth	Relative Field	ERP (dBk)	CONTOURS(km) 48 dBu	CONTOURS(km) 41 dBu
N000E	0.00	0.370	15.34	56.1	64.4
	10.00	0.566	19.04		
	20.00	0.756	21.55		
	30.00	0.906	23.12		
	40.00	0.989	23.88		
N045E	45.00	1.000	23.98	67.1	75.8
	50.00	0.989	23.88		
	60.00	0.906	23.12		
	70.00	0.756	21.55		
	80.00	0.566	19.04		
N090E	90.00	0.374	15.44	59.9	68.2
	100.00	0.237	11.47		
	110.00	0.223	10.95		
	120.00	0.283	13.02		
	130.00	0.327	14.27		
N135E	135.00	0.332	14.40	59.2	67.6
	140.00	0.327	14.27		
	150.00	0.283	13.02		
	160.00	0.223	10.95		
	170.00	0.237	11.47		
N180E	180.00	0.374	15.44	60.2	68.5
	190.00	0.566	19.04		
	200.00	0.756	21.55		
	210.00	0.906	23.12		
	220.00	0.989	23.88		
N225E	225.00	1.000	23.98	67.6	76.3
	230.00	0.987	23.87		
	240.00	0.906	23.12		
	250.00	0.756	21.55		
	260.00	0.566	19.04		
N270E	270.00	0.374	15.44	57.6	65.8
	280.00	0.237	11.47		
	290.00	0.223	10.95		
	300.00	0.283	13.02		
	310.00	0.327	14.27		
N315E	315.00	0.332	14.40	55.0	63.3
	320.00	0.327	14.27		
	330.00	0.283	13.02		
	340.00	0.223	10.95		
	350.00	0.237	11.47		

Maxima:	N045E	23.98 dBk
	N225E	23.98 dBk
Minima:	N106E	10.63 dBk
	N164E	10.63 dBk
	N286E	10.63 dBk
	N344E	10.63 dBk