

## Exhibit 13

### *Freespace Interference Study based on Vertical Radiation Pattern ERI 100-4HW 4 Bay Half Wave Spaced Antenna*

Depression Angle from Antenna	Antenna Relative Field	ERP Watts	ERP dBk	Distance to Ground from Antenna (m)	Free Space Signal (dBu)	dB Loss for Reflection	Signal Strength at Ground (dBu)	Circular Distance From Tower (m)	Distance to Contour using Free Space (m)	Height of Contour above Ground (m)
90	0.001	0.000	-70.81	21.00	69.67	0	69.67	0.00	0.07	20.93
85	0.005	0.002	-56.83	21.08	83.61	0	83.61	1.84	0.36	20.64
80	0.010	0.008	-50.81	21.32	89.53	0	89.53	3.70	0.72	20.29
75	0.025	0.052	-42.85	21.74	97.32	0	97.32	5.63	1.81	19.26
70	0.040	0.133	-38.77	22.35	101.17	0	101.17	7.64	2.89	18.29
65	0.075	0.467	-33.31	23.17	106.31	0	106.31	9.79	5.42	16.09
60	0.110	1.004	-29.98	24.25	109.24	0	109.24	12.12	7.94	14.12
55	0.150	1.868	-27.29	25.64	111.46	0	111.46	14.70	10.83	12.13
50	0.185	2.841	-25.47	27.41	112.69	0	112.69	17.62	13.36	10.77
45	0.199	3.287	-24.83	29.70	112.63	0	112.63	21.00	14.37	10.84
40	0.180	2.689	-25.70	32.67	110.93	0	110.93	25.03	13.00	12.65
35	0.115	1.098	-29.60	36.61	106.05	0	106.05	29.99	8.30	16.24
30	0.005	0.002	-56.83	42.00	77.63	0	77.63	36.37	0.36	20.82
25	0.180	2.689	-25.70	49.69	107.29	0	107.29	45.03	13.00	15.51
20	0.395	12.950	-18.88	61.40	112.28	0	112.28	57.70	28.52	11.25
15	0.615	31.393	-15.03	81.14	113.70	0	113.70	78.37	44.40	9.51
10	0.810	54.456	-12.64	120.93	112.63	0	112.63	119.10	58.48	10.84
5	0.950	74.908	-11.25	240.95	108.03	0	108.03	240.03	68.59	15.02

Distance to Ground Level assumes flat ground or a site where the site level is above average terrain in all azimuths.

Maximum ERP	83	watts	Max dBu at Ground Level	113.70	Lowest Height of Contour (m)	9.51
Radiation Center AG	21	m			Lowest Height of Contour (ft)	31.19
Radiation Center AG		69 ft.				
Maximum ERP	-10.81	dBk				
Protected dBu	78.94	dBu				
Interfering dBu		118.9 dBu				
Free Space Distance		72.20 m				
		237 ft.				