

# Exhibit 13

Kingville, TX

## Freespace Interference Study based on Vertical Radiation Pattern ERI 100-2HW 2 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	0.000	0.000	-80.97	50.00	51.97	0	51.97	0.00	0.06	49.94
85	0.001	0.000	-73.01	50.19	59.90	0	59.90	4.37	0.15	49.85
80	0.007	0.002	-56.11	50.77	76.70	0	76.70	8.82	1.02	49.00
75	0.019	0.018	-47.44	51.76	85.20	0	85.20	13.40	2.77	47.33
70	0.040	0.080	-40.97	53.21	91.43	0	91.43	18.20	5.83	44.52
65	0.073	0.266	-35.74	55.17	96.34	0	96.34	23.32	10.64	40.36
60	0.120	0.720	-31.43	57.74	100.26	0	100.26	28.87	17.49	34.86
55	0.176	1.549	-28.10	61.04	103.11	0	103.11	35.01	25.64	28.99
50	0.247	3.050	-25.16	65.27	105.47	0	105.47	41.95	35.99	22.43
45	0.330	5.445	-22.64	70.71	107.29	0	107.29	50.00	48.08	16.00
40	0.423	8.946	-20.48	77.79	108.62	0	108.62	59.59	61.63	10.38
35	0.523	13.676	-18.64	87.17	109.47	0	109.47	71.41	76.21	6.29
30	0.624	19.469	-17.11	100.00	109.81	0	109.81	86.60	90.92	4.54
25	0.723	26.136	-15.83	118.31	109.63	0	109.63	107.23	105.35	5.48
20	0.814	33.130	-14.80	146.19	108.82	0	108.82	137.37	118.61	9.43
15	0.891	39.694	-14.01	193.19	107.19	0	107.19	186.60	129.83	16.40
10	0.950	45.125	-13.46	287.94	104.28	0	104.28	283.56	138.42	25.96
5	0.987	48.708	-13.12	573.69	98.62	0	98.62	571.50	143.81	37.47

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

Maximum ERP	50 watts	Max dBu at Ground Level	109.81	Lowest Height of Contour (m)	4.54
Radiation Center AG	50 m			(ft)	14.89
Radiation Center AG	164 ft.				
Maximum ERP	-13.01 dBk				
Protected dBu	70.64 dBu				
Interfering dBu	110.64 dBu				
Free Space Distance	145.71 m				
	477.95 feet				