TECHNICAL EXHIBIT
APPLICATION FOR
FM CONSTRUCTION PERMIT
STATION WRCZ(FM) (FACILITY ID 73929)
RAVENA, NEW YORK

FEBRUARY 13, 2004

CH 233A 6 KW 100 M

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Technical Narrative

This Technical Exhibit supports an application for minor change to FM station WRCZ(FM) on channel 233A (94.5 MHz) at Ravena, New York (FCC Facility ID 73929).

According to the Federal Communication Commission (FCC) database, station WRCZ is currently authorized to operate on channel 233A at Ravena, Florida (BLH-19911212KD). It uses a non-directional (ND) antenna system with an effective radiated power (ERP) of 3 kilowatts (kW), horizontal and vertical polarization (H&V). The antenna height above average terrain (HAAT) is 100 meters. The antenna center of radiation is located 72 meters above ground level (AGL), and 237 meters above mean sea level (AMSL). The site coordinates are 42-33-23, 73-52-05 (NAD-27).

Station WRCZ proposes to move its site approximately 0.25 kilometer south of its present site in order to eliminate a short-spacing and permit maximum Class A transmitting facilities (6 kW, 100 m). It is proposed to use a Shively 4-bay half-wave spaced non-directional antenna system. The proposed FM antenna will be installed on a new self-supporting tower having an overall height of 92.4 meters AGL (241.4 meters AMSL). The coordinates for the new tower are 42-33-15, 73-52-07 (NAD-27). The applicant has sent notification to the Federal Aviation Administration (FAA) Eastern Regional Office for the proposed structure. After receipt of the FAA determination of no hazard, the applicant will register the proposed structure.

The proposed WRCZ antenna center of radiation will be 83.9 meters AGL, and 232.9 meters AMSL. The proposed antenna height above average terrain (HAAT) is 100 meters. The proposed ERP will be 6 kW, H&V. There is no proposed change in frequency (Ch.233A) or city of license (Ravena, NY).

The proposed WRCZ transmitter site is approximately 260 kilometers from the closest point of the Canadian border. It is believed that the proposed WRCZ operation complies with the US/Canada FM Agreement. If notification to Canada is required, it is respectfully requested.

The proposed WRCZ site is more than 2600 kilometers from the closest point of the Mexican border. The closest FCC monitoring station is at Canandaigua, New York, approximately 280 kilometers to the west. The closest point of the National Radio Quiet Zone (VA/WV) is more than 530 kilometers to the southwest. The closest point of the Table Mountain Radio Quiet Zone (CO) is more than 2600 kilometers to the west. The closest radio astronomy site operating on TV channel 37 is at Hancock, New Hampshire, approximately 159 kilometers to the east-northeast. These separations are considered sufficient to not be a concern for coordination purposes.

Predicted Coverage

Figure 1 is a map showing the predicted 3.16 mV/m (70 dBu) and 1 mV/m (60 dBu) contours. The map shows the Ravena limits. As shown, the predicted 3.16 mV/m (70 dBu) contour encompasses the Ravena limits. The estimated population (2000 US Census) within the predicted 1 mV/m (60 dBu) contour is 624,085 people and the area within the 1 mV/m contour is 2,835 square kilometers.

Allocation Study

Figure 2 contains a tabulation of actual and required separation distances with respect to other pertinent stations as specified in Section 73.207(b) of the Commission's Rules. The FCC's FM database was used as the basis for the separation study. The study indicates that there are no short-spacings.

Radiofrequency Electromagnetic Field Exposure

The proposed WRCZ facility was evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The proposed WRCZ antenna is a 4-bay half wave spaced system. The FM antenna center of radiation is located 83.9 meters above ground level (see Figure 3). For angles greater than 25 degrees a relative field value of 0.25 is conservatively assumed for the FM antenna's downward radiation (see Figure 4). Using the assumed relative field value (0.25) along with the combined ERP of 12 kW (6 kW horizontal polarization & 6 kW vertical polarization), the calculated power density at a point 2 meters above ground level is approximately 0.0037 mW/cm2, or about 2% of the FCC's recommended limit of 0.2 mW/cm^2 for FM channels, applicable to general population/"uncontrolled" exposure areas. The calculated power density is less than 1% of the FCC's limit for a "controlled" environment.

Access to the transmission system will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RF protective clothing and/or RF exposure monitors or scheduling work when the stations are at reduced power or shut down.

If there are questions concerning the technical portion of this application, please contact the office of the undersigned.

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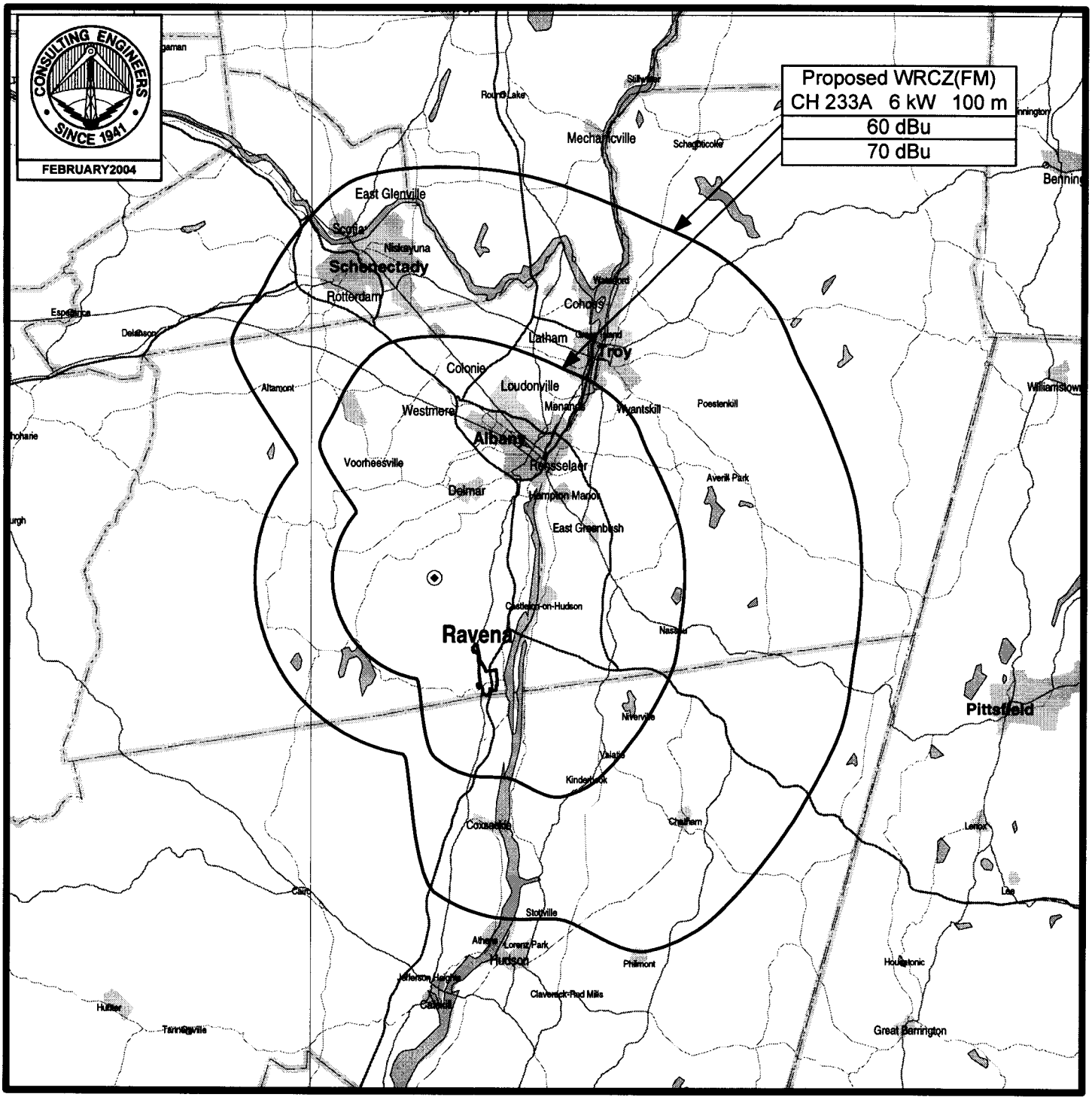
February 13, 2004



PREDICTED COVERAGE CONTOURS

STATION WRCZ(FM)
RAVENA, NEW YORK
CH 233A 6 KW 100 M

du Treil, Lundin & Rackley, Inc., Sarasota, Florida

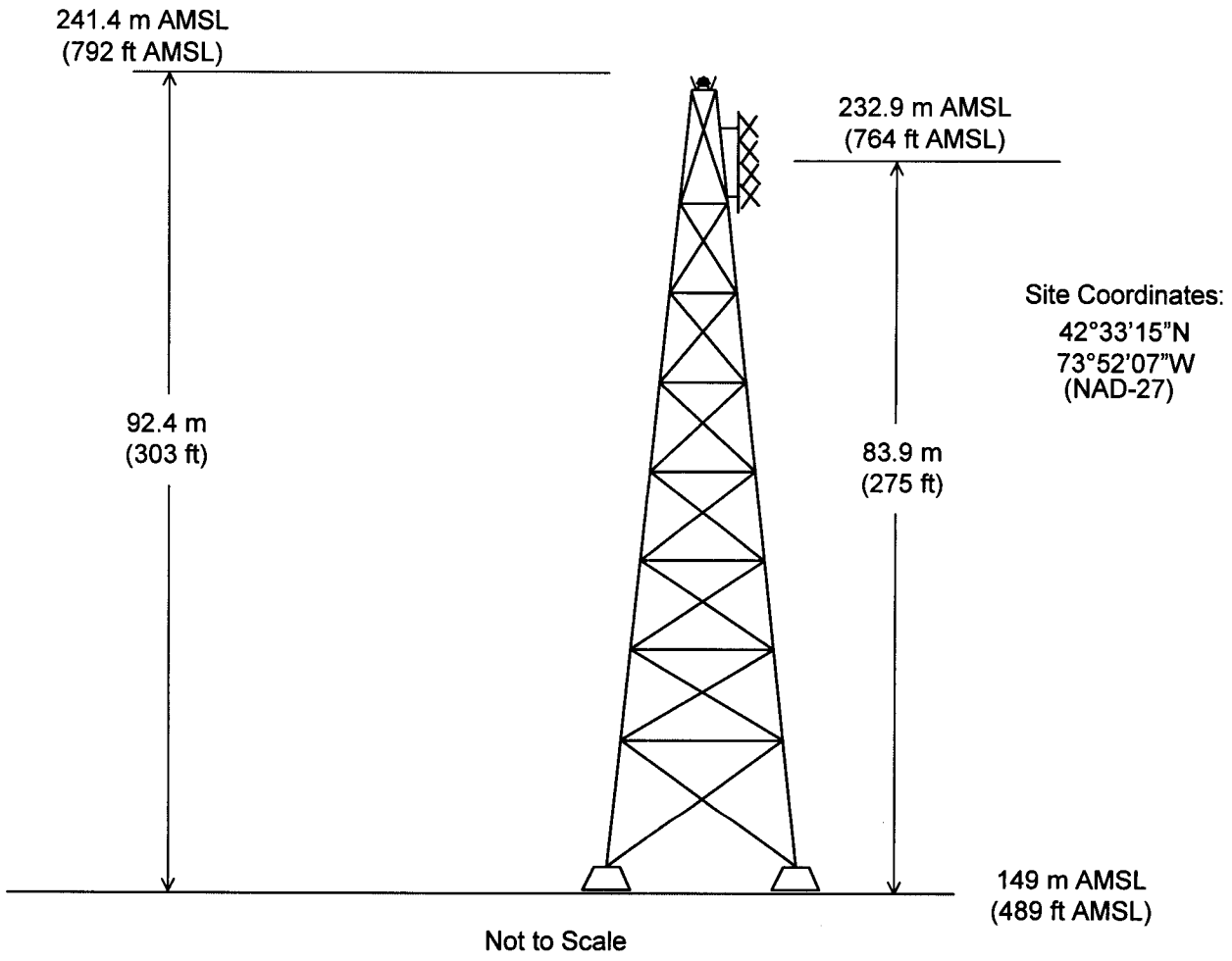
FIGURE 2

CDBS FM SEPARATION STUDY

Job Title: Proposed WRCZ(FM), Ravena, NY — Separation Buffer: 40 km
Channel: 233A — Coordinates: 42-33-15 073-52-07

Call / FID	City / St Status	File Num	Chan. / Freq	ERP-kW / HAAT-m	DA / ID	Latitude / Longitude	73.215	Bearing (deg.)	Distance (km)	Required (km)
WBTN-FM	BENNINGTON	BLH	232A	3.0	ND	42-56-52	N	52.0	71.56	72.0
9310	VT LIC C	19780821AA	94.3	34		073-10-36				Close
WKXP	KINGSTON	BLH	232A	1.1	ND	41-53-44	N	188.0	73.86	72.0
27395	NY LIC C	19881229KA	94.3	169		073-59-32				Close
WKXP	KINGSTON	BPH	232A	2.25	ND	41-53-44	N	188.0	73.86	72.0
27395	NY CP C	20010209ABL	94.3	166		073-59-32				Close
WRCZ	RAVENA	BLH	233A	3.0	ND	42-33-23	N	10.5	0.25	
73929	NY LIC C	19911212KD	94.5	100		073-52-05				
WJEN	RUTLAND	BLH	233A	3.0	ND	43-36-49	N	29.9	136.24	115.0
14719	VT LIC C	19890504KA	94.5	-73		073-01-33				Clear
To amend to channel 233C3 per D89-518, Class B1 with respect to Canada-Accepted by Canada 901108										
WJEN	RUTLAND	BPH	233A	0.14	ND	43-39-31	Y	26.5	137.47	115.0
14719	VT CP C	19970908ID	94.5	399		073-06-25				Clear
WYYY	SYRACUSE	BLH	233B	100.0	ND	42-56-46	N	284.1	189.29	178.0
48725	NY LIC C	20030625AAO	94.5	198		076-07-07				Close
WBAR-FM	LAKE LUZERN	BLH	234A	0.3	ND	43-17-22	Y	7.1	82.32	72.0
8678	NY LIC C	19920623KA	94.7	272		073-44-35				Close
WBAR-FM	LAKE LUZERN	BPH	234A	0.94	DA	43-17-22	Y	7.1	82.32	72.0
8678	NY APP C	20010305AAL	94.7	253	40894	073-44-35				Close
WMAS-FM	SPRINGFIELD	BLH	234B	50.0	ND	42-06-32	N	115.2	114.76	113.0
36543	MA LIC C	19801010AD	94.7	59		072-36-44				Close

End of Study



ANTENNA AND SUPPORTING STRUCTURE

STATION WRCZ(FM)
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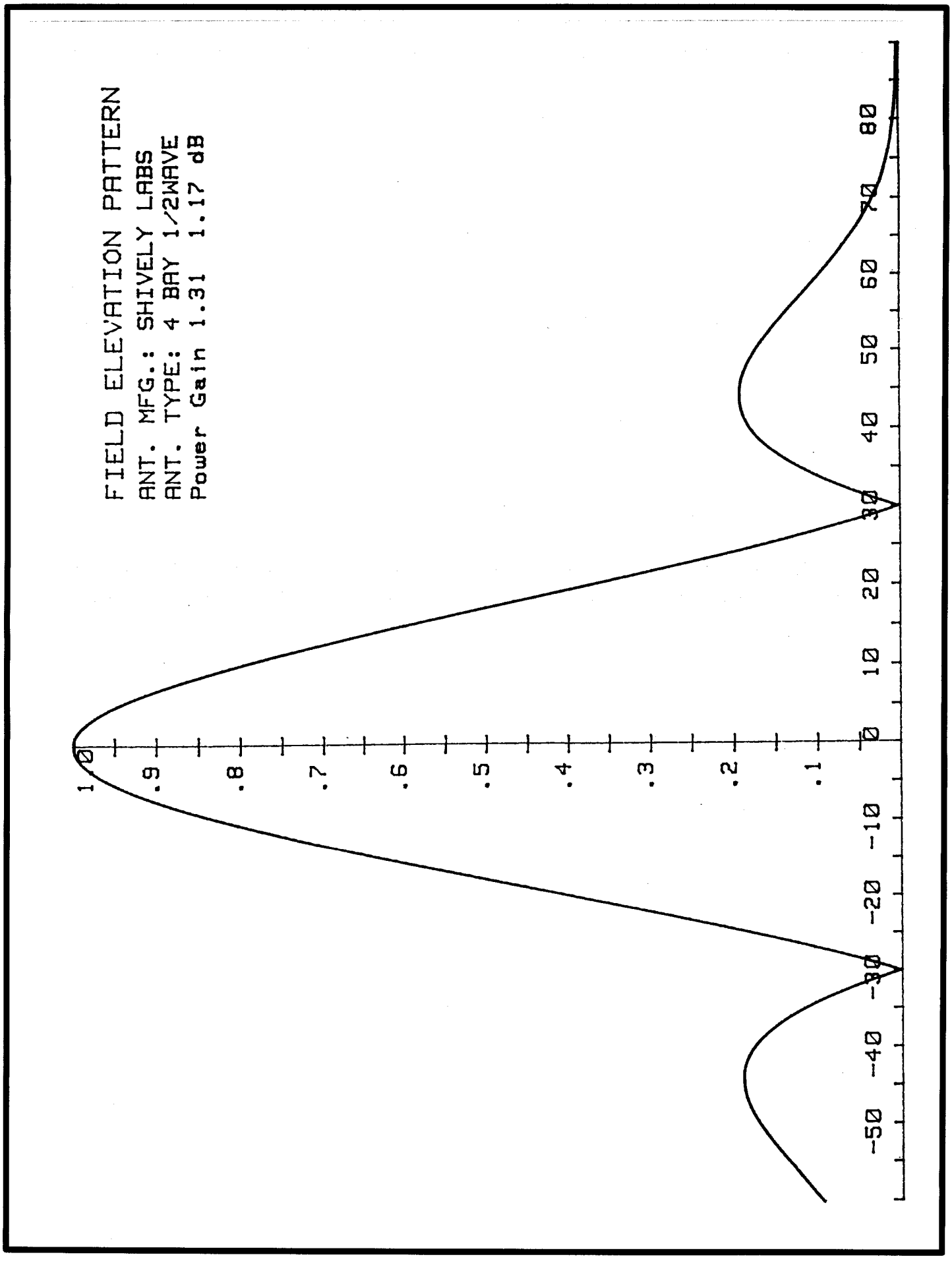
du Treil, Lundin & Rackley, Inc., Sarasota, Florida


FIELD ELEVATION PATTERN
ANT. MFG.: SHIVELY LABS
ANT. TYPE: 4 BAY 1/2WAVE
Power Gain 1.31 1.17 dB
1.0
.9
.8
.7
.6
.5
.4
.3
.2
.1
0
10
20
30
40
50
60
70
80
-50
-40
-30
-20
-10

FIELD ELEVATION PATTERN

ANT. MFG.: SHIVELY LABS
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POWER GAIN 1.31 1.17dB