GRAHAM BROCK, INC.

BROADCAST TECHNICAL CONSULTANTS

EXHIBIT 1 A

TECHNICAL EXHIBIT IN SUPPORT OF
REQUEST FOR
EXPERIMENTAL STATION AUTHORIZATION
TED HART
1590 kHz - 0.1 kW - ND
EATONTON, GEORGIA
April 2001

TECHNICAL EXHIBIT

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TECHNICAL EXHIBIT IN SUPPORT OF
REQUEST FOR
EXPERIMENTAL STATION AUTHORIZATION
TED HART
EATONTON, GEORGIA
April 2001

This Technical Exhibit supports the request by Ted Hart, CEO - EH Antenna Systems ("Hart") for an experimental station authorization in Eatonton, Georgia. The request is for daytime operation only and examines two frequencies for clearance to preclude interference to operating or authorized facilities. The operation of the experimental station is necessary to assess the efficiency of an experimental antenna design for AM broadcast use. The proposed antenna is a unique and new approach to the delivery of standard broadcast signals and has the potential to significantly affect the continued viability of AM broadcasting by reducing property requirements for transmitting facilities.

Proposed Operation

It is proposed to operate the experimental station at 100 Watts from two different antennas to compare their relative efficiencies and bandwidth characteristics. The first antenna proposed is a standard vertical radiator (19.8 meters, 65 feet in height - the efficiency of the radiator will depend upon the frequency assigned to the experimental station) with a complete standard ground system ¼ λ at the proposed frequency. The operating impedance of the standard antenna will be measured (using a Delta OIB impedance bridge and either a Delta RG-3 or Potomac SD-31 generator set) at the operating frequency and frequencies 10 kHz below and above the authorized frequency. The power delivered to the antenna will be monitored using an RF Ammeter of suitable scale.

Field Measurement Procedure

A full non-directional proof of performance of the standard radiator will be conducted in compliance with the guidelines set forth in MM Docket 93-177 (RM-7594), adopted February 4, 2001, released March 7, 2001. Specifically, field measurements of the signal will be made with a Potomac FIM-21 or FIM-41 Field Intensity Meter. The measurements will be made along six (6) radials spaced around the radiator (for ease of point location the radials may not be evenly spaced, but in no case will they be more than ninety (90) degrees apart).

1. The closest measurement point will be at a distance at least five times the vertical height of the antenna;
2. Close-in measurements will be made at intervals of approximately 0.2 kilometers (where possible), out to a distance of approximately 3.0 kilometers, with a minimum of seven points;
3. Measurements will be made at intervals of approximately 1.0 kilometer (where possible) between 3.0 and 5.0 kilometers;
4. Measurements will be made at intervals of approximately 2.0 kilometers (where possible) between 5.0 and 15.0 kilometers;
5. Additional measurements will be made as necessary at greater distances to achieve at least 15 total points clear of potential re-radiating structures.

After field measurements are conducted, as detailed above, the measurements will be tabulated and plotted on expanded scale log-log graph paper and analyzed for ground conductivity as per §73.184 of the FCC Rules.

The vertical radiator will be dismantled (to avoid affecting the next set of measurements) and the transmitter will then be connected to the experimental antenna. The operating impedance of the experimental antenna will be measured (using a Delta OIB impedance bridge and either a Delta RG-3 or Potomac SD-31 generator set) at the operating frequency and frequencies 10 kHz below and above the authorized frequency. The power delivered to the antenna will be monitored using an RF Ammeter of suitable scale. The measurements resulting from the experimental antenna will then be tabulated and graphed using the ground conductivity established by analyzing the measurements from the standard vertical radiator.

In this manner, by comparing the measurements from the standard type radiator and the experimental radiator, the horizontal radiation efficiency of the experimental radiator (inverse field, mV/m/km/kW) can be established.

Frequency Selection

The entire AM Broadcast Band, 540 kHz through 1700 kHz, was examined for use by the experimental station. Particular attention was placed on the higher (1400 kHz and above) frequencies. This is due to several factors and desired criteria:

1. The signals from the higher frequencies travel a shorter distance and have a lower potential for delivering unintended interference to the public;
2. The size of the standard antenna system is significantly less at the higher frequencies. The ¼ λ ground system at 540 kHz requires 19.06 acres of clear land while the ground system at 1700 kHz requires only 2.8 acres;.

3. The vertical radiator specified above has a greater efficiency at the higher frequencies (as derived from §73.190, Figure 8, Curve A).

The geographic coordinates of the proposed field test antenna are North Latitude 33° 21' 55", West Longitude 83° 22' 55". For determining possible interference delivered to or received rom other stations, the experimental radiator was assigned an efficiency of 434.6 mV/m/km/kW (the highest value of radiator efficiency from Curve A, §73.180, Figure 8, equivalent to a 215° (5/8 λ) standard broadcast antenna. This value of radiator efficiency was used to identify possible frequencies for use by the experimental station. One final factor in selecting the possible operating frequency of the experimental station was to identify possible authorizations in the southeastern United States which were authorized but not yet constructed. It is felt that this would further preclude any possible interference to operating facilities.

Two frequencies were identified which we believe meet the interference criteria of §73.182(q) for daytime operation and the desired criteria noted above. The first frequency of 1620 kHz is the most desirable, since this frequency is lower in the broadcast band. The second frequency identified is 1690 kHz.

1620 kHz

The vertical radiator will consist of a temporary, series excited pole radiator, 19.8 meters (65 ft) in height. Along with this radiator, a temporary ground system will be installed on the ground surface consisting of 120 equally spaced ground wires, 46.3 meters (152 feet) in length

(1/4 λ at 1620 kHz). Using Curve A, §73.180, Figure 8, the efficiency of this radiator is 269.1 mV/m/km/kW. This tower will, then, radiate 88.097 mV/m with 0.1 kW input power.

A tabulation of the stations considered in the selection of 1620 kHz is included with this submission as Exhibit #1A. Allocation maps demonstrating the lack of interference to and from the stations identified in Exhibit #1A are included as Exhibits #1B, #1C and #1D. Tabulations of he proposed contours of the experimental stations as well as the stations shown on Exhibits #1B, #1C and #1D are included as Exhibits #1E through #1J. The ground conductivity for all stations is taken from FCC Figure M-3. It is noted that neither WAZG, 1620 kHz, Myrtle Beach, South Carolina, nor WPHG, 1620 kHz, Atmore, Alabama (or Gulf Breeze, Florida) is believed operational at this time.

1690 kHz

A tabulation of the stations considered in the selection of 1690 kHz are included with this submission with Exhibit #2A. Allocation maps demonstrating the lack of interference to and from the stations identified in Exhibit #2A are included as Exhibits #2B, #2C and #2D. Tabulations of the proposed contours of the experimental stations as well as the stations shown on Exhibits #2B, #2C and #2D are included as Exhibits #2E through #2J. The ground conductivity for all stations is taken from FCC Figure M-3. It is noted that WSWK, 1690 kHz, Adel, Georgia, is not believed to be operational at this time.

As proposed, there will be no objectionable interference to the operation of other authorized radio services by this experimental stations operating on either 1620 kHz or 1690 kHz..

R. Stuart Graham, President of Graham Brock, Inc., Broadcast Technical Consultants, will be performing, or directly supervising, the measurements on the experimental antenna requested herein. Mr. Graham has provided services to the broadcast industry since 1973 and is widely accepted as an expert on the operation and maintenance of AM broadcast stations, both directional and non-directional. Mr. Graham's qualifications are a matter of record before the Federal Communications Commission.

The qualifications of Ted Hart, EH Antennas, the developer of the experimental antenna for which this authorization is requested, are addressed elsewhere with this Request for Experimental Station Authorization.

This Technical Exhibit was prepared on behalf of Ted Hart by Graham Brock, Inc., his Technical Consultants. We have tried to be as accurate as possible in the preparation of this request. All information contained in this request was extracted from the CDBS database and other sources. We assume no liability for omissions or errors in those sources. Should there be any questions concerning the information contained herein, we welcome the opportunity to discuss the matter by phone at 912-638-8028 or by email at stu@grahambrock.com.

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #1

AM Broadcast Allocation Study

LATITUDE 33:21:55 LONGITUDE 83:22:55

FACTORS AFFECTING 1620 kHz
HART

********** 1590 KHZ **********

KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY	
**** NO STATIONS FOUND WITHIN ****													
MAXIMUM SEARCH DISTANCE 94 KILOMETERS													

********** 1600 KHZ **********

KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY	
84.32	(52.39)	196.8	32:38:19/ 83:38:33	LI	D	B	1.60	DAN- 469.2	WAXP	US	GA	WARNER ROBINS	
127.93	(79.49)	293.0	33:48:34/ 84:39:25	LI	D	D	5.00	NDD- 643.7	WAOS	US	GA	AUSTELL	
127.93	(79.49)	293.0	33:48:34/ 84:39:25	--	D	D	5.00	NDD- 643.7	WAOS	US	GA	AUSTELL	
129.15	(80.25)	83.3	33:29:37/ 81:59:52	LI	D	D	0.50	NDD- 225.3	WKZK	US	SC	NORTH AUGUSTA	
129.15	(80.25)	83.3	33:29:37/ 81:59:52	--	D	D	0.50	NDD- 225.3	WKZK	US	SC	NORTH AUGUSTA	
183.16	(113.81)	35.1	34:42:28/ 82:13:40	LI	D	D	1.00	ND1- 305.8	WFIS	US	SC	FOUNTAIN INN	
183.16	(113.81)	35.1	34:42:28/ 82:13:40	--	D	D	1.00	ND1- 305.8	WFIS	US	SC	FOUNTAIN INN	
MAXIMUM SEARCH DISTANCE 191 KILOMETERS													

********** 1610 KHZ **********

KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY	
**** NO STATIONS FOUND WITHIN ****													
MAXIMUM SEARCH DISTANCE 397 KILOMETERS													

********** 1620 KHZ **********

KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY	
417.76	(259.58)	83.6	33:42:20/ 78:53:23	CP	D	B	10.00	ND1- 974.0	WAZG	US	SC	MYRTLE BEACH	
417.76	(259.58)	83.6	33:42:20/ 78:53:23	--	D	B	10.00	ND1- 310.0	WJYR	US	SC	MYRTLE BEACH	
465.21	(289.07)	237.3	31: 2:14/ 87:29:42	CP	D	B	10.00	ND1-1196.3	WPHG	US	AL	ATMORE	
465.25	(289.09)	237.3	31: 2:12/ 87:29:42	--	D	B	10.00	ND1- 980.3	WGYJ	US	AL	ATMORE	
488.79	(303.72)	229.2	30:25:44/ 87:14:27	AP	D		10.00	ND2-1106.0	WPHG	US	FL	GULF BREEZE	
MAXIMUM SEARCH DISTANCE 618 KILOMETERS													

********** 1630 KHZ **********

KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY	
128.32	(79.73)	82.1	33:31: 0/ 82: 0:36	CP	D	B	10.00	ND1-1255.7	WTEL	US	GA	AUGUSTA	
128.48	(79.83)	82.1	33:31: 2/ 82: 0:30	--	D	B	10.00	ND1- 980.3	WRDW	US	GA	AUGUSTA	
MAXIMUM SEARCH DISTANCE 387 KILOMETERS													

********** 1640 KHZ **********

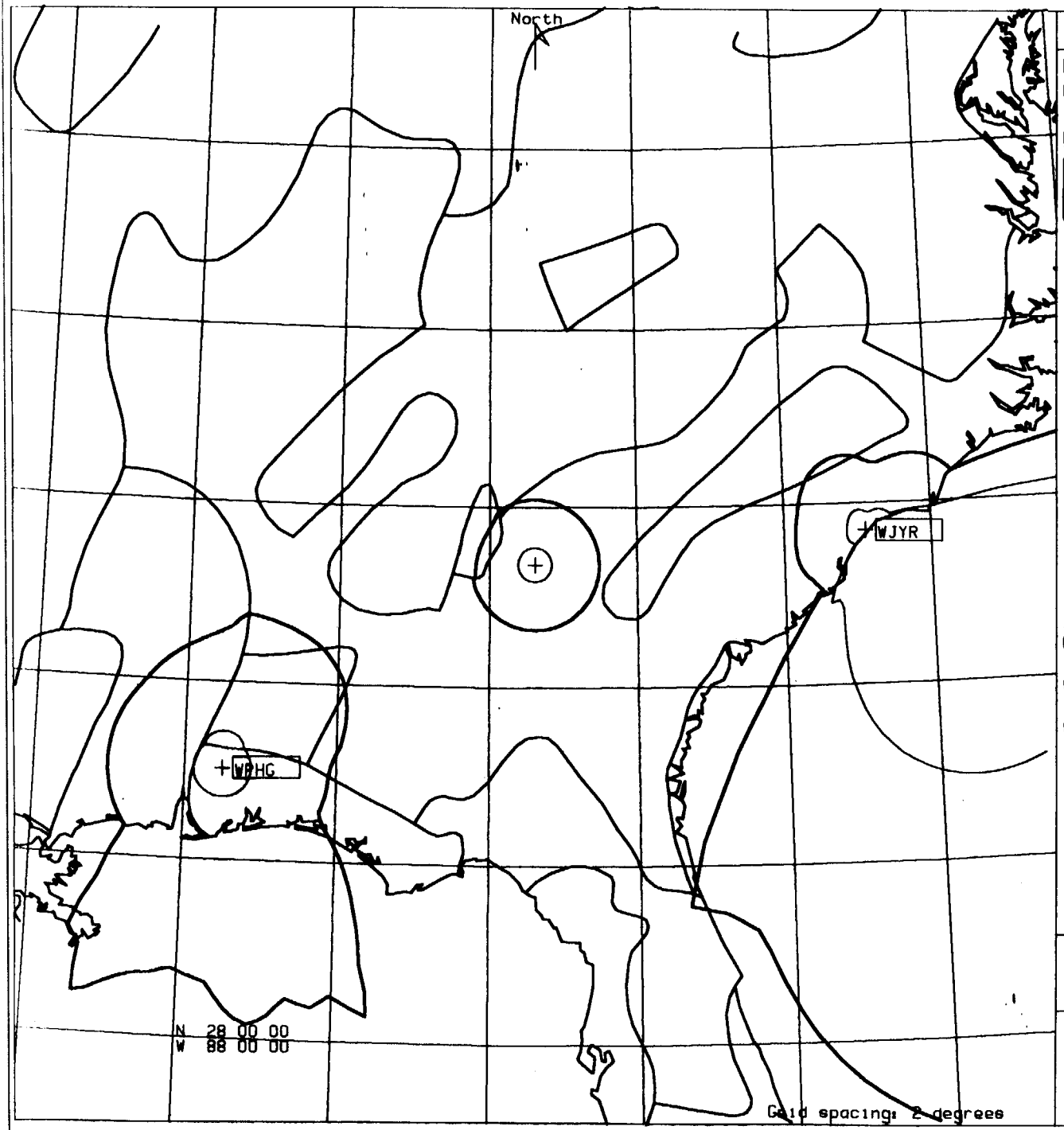
KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY	
**** NO STATIONS FOUND WITHIN ****													
MAXIMUM SEARCH DISTANCE 182 KILOMETERS													

********** 1650 KHZ **********

KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY	
**** NO STATIONS FOUND WITHIN ****													
MAXIMUM SEARCH DISTANCE 87 KILOMETERS													

********** 810 KHZ **********

KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY	
1328.41	(825.44)	35.2	42:47:37/ 74: 0:36	LI	U	A	50.00	ND1-2708.4	WGY	US	NY	SCHENECTADY	CLASS A
3510.53	(2181.34)	288.8	37:31:35/122: 6: 2	LI	U	A	50.00	DA1-2487.1	KGO	US	CA	SAN FRANCISCO	CLASS A
MAXIMUM SEARCH DISTANCE 50 KILOMETERS													



AMW(tm)

Propagation model:
Groundwave equivalent distance

Field Strength Levels:

.500 mV/m
.025 mV/m

EXHIBIT #1B

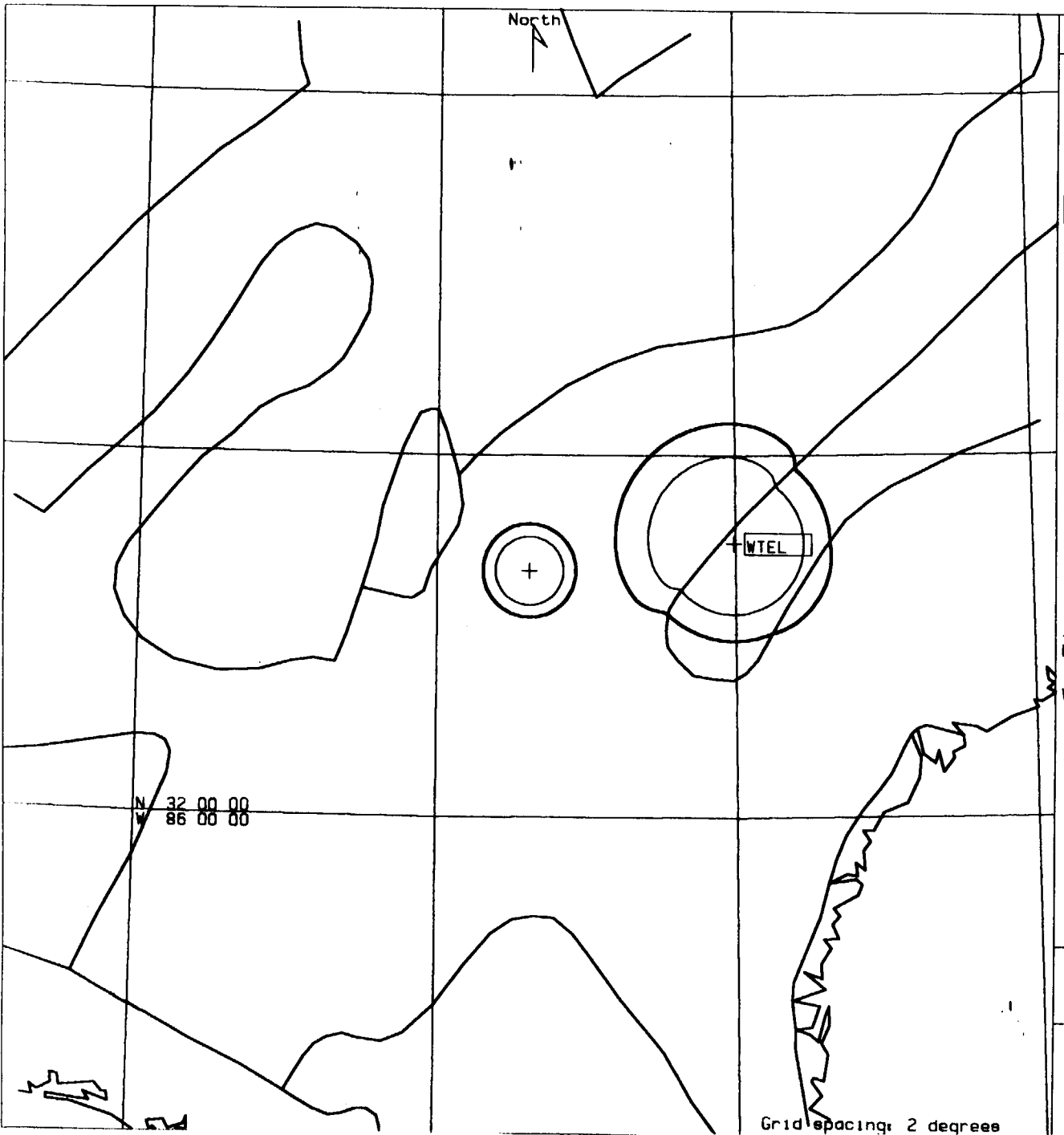
TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTH.

TED HART
EATONTON, GEORGIA
April 2001

Call	Freq. (kHz)	Power (kW)	Pattern	Coordinates
PROP	1620.0	.100	ND-D	N 33 21 55.0 W 83 22 55.0
WJYR	1620.0	10.000	DA-D	N 33 42 20.0 W 78 53 23.0
WPHG	1620.0	10.000	ND-D	N 31 2 14.0 W 87 29 42.0

KILOMETERS

100 0 100 200 300 400



AMW(tm)

Propagation model:
Groundwave equivalent distance

Field Strength Levels:

.500 mV/m
.250 mV/m

EXHIBIT #1C

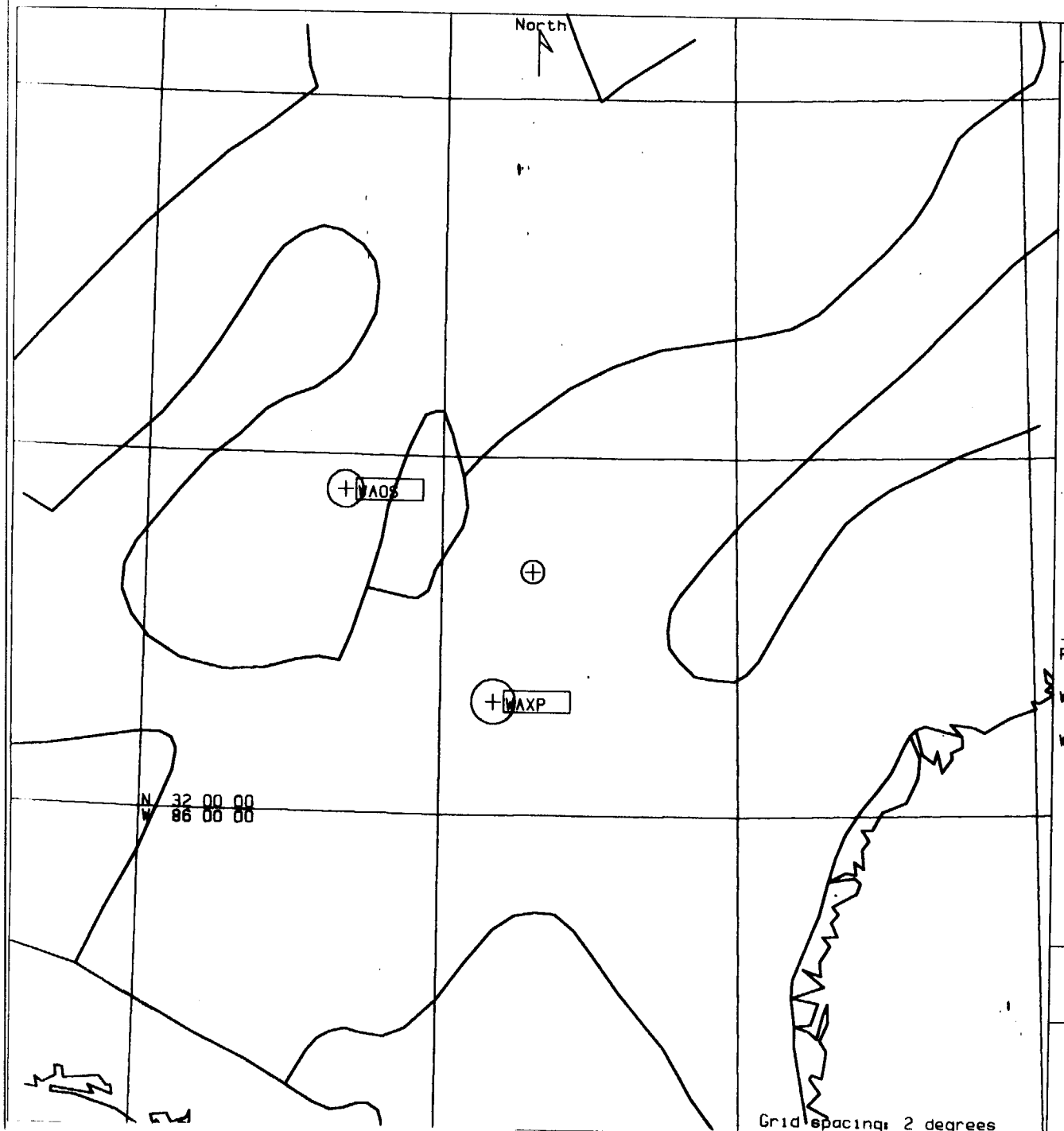
TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTH.

TED HART
EATONTON, GEORGIA
April 2001

Call	Freq. (kHz)	Power (kW)	Pattern	Coordinates
PROP	1620.0	.100	ND-D	N 33 21 55.0 W 83 22 55.0
WTEL	1630.0	10.000	ND-D	N 33 31 .0 W 82 0 36.0

KILOMETERS

50 0 50 100 150 200



AMW (tm)

Propagation model:
Groundwave equivalent distance

Field Strength Levels:

5.000 mV/m

EXHIBIT #1D

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTH.

TED HART
EATONTON, GEORGIA
April 2001

Call	Freq. (kHz)	Power (kW)	Pattern	Coordinates
PROP	1620.0	.100	ND-D	N 33 21 55.0 W 83 22 55.0
WAXP	1600.0	1.600	ND-D	N 32 38 19.0 W 83 38 33.0
WAOS	1600.0	5.000	ND-D	N 33 48 34.0 W 84 39 25.0

KILOMETERS

50 0 50 100 150 200

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #1E

Proposed - Eatonton, GA - 1620 kHz - 0.1 kW - ND

North Latitude: 33° 21' 55"
West Longitude: 83° 22' 55"

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers : Contour levels in mV/m. 25.000	5.000	.500	.250	.025
.0	137.43	2.77	7.14	21.01	28.70	80.58
5.0	137.43	2.77	7.14	21.01	28.70	80.58
10.0	137.43	2.77	7.14	21.01	28.70	80.58
15.0	137.43	2.77	7.14	21.01	28.70	80.58
20.0	137.43	2.77	7.14	21.01	28.70	80.58
25.0	137.43	2.77	7.14	21.01	28.70	80.58
30.0	137.43	2.77	7.14	21.01	28.70	80.58
35.0	137.43	2.77	7.14	21.01	28.70	80.58
40.0	137.43	2.77	7.14	21.01	28.70	80.58
45.0	137.43	2.77	7.14	21.01	28.70	80.58
50.0	137.43	2.77	7.14	21.01	28.70	80.58
55.0	137.43	2.77	7.14	21.01	28.70	80.58
60.0	137.43	2.77	7.14	21.01	28.70	80.58
65.0	137.43	2.77	7.14	21.01	28.70	80.58
70.0	137.43	2.77	7.14	21.01	28.70	80.58
75.0	137.43	2.77	7.14	21.01	28.70	80.58
80.0	137.43	2.77	7.14	21.01	28.70	80.58
85.0	137.43	2.77	7.14	21.01	28.70	80.58
90.0	137.43	2.77	7.14	21.01	28.70	80.58
95.0	137.43	2.77	7.14	21.01	28.70	80.58
100.0	137.43	2.77	7.14	21.01	28.70	80.58
105.0	137.43	2.77	7.14	21.01	28.70	80.58
110.0	137.43	2.77	7.14	21.01	28.70	80.58
115.0	137.43	2.77	7.14	21.01	28.70	80.58
120.0	137.43	2.77	7.14	21.01	28.70	80.58
125.0	137.43	2.77	7.14	21.01	28.70	80.58
130.0	137.43	2.77	7.14	21.01	28.70	80.58
135.0	137.43	2.77	7.14	21.01	28.70	80.58
140.0	137.43	2.77	7.14	21.01	28.70	80.58
145.0	137.43	2.77	7.14	21.01	28.70	80.58
150.0	137.43	2.77	7.14	21.01	28.70	80.58
155.0	137.43	2.77	7.14	21.01	28.70	80.58
160.0	137.43	2.77	7.14	21.01	28.70	80.58
165.0	137.43	2.77	7.14	21.01	28.70	80.58
170.0	137.43	2.77	7.14	21.01	28.70	80.58
175.0	137.43	2.77	7.14	21.01	28.70	80.58

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #1E (continued)

North Latitude: 33° 21' 55"
West Longitude: 83° 22' 55"

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers : Contour levels in mV/m. 25.000	5.000	.500	.250	.025
180.0	137.43	2.77	7.14	21.01	28.70	80.58
185.0	137.43	2.77	7.14	21.01	28.70	80.58
190.0	137.43	2.77	7.14	21.01	28.70	80.58
195.0	137.43	2.77	7.14	21.01	28.70	80.58
200.0	137.43	2.77	7.14	21.01	28.70	80.58
205.0	137.43	2.77	7.14	21.01	28.70	80.58
210.0	137.43	2.77	7.14	21.01	28.70	80.58
215.0	137.43	2.77	7.14	21.01	28.70	80.58
220.0	137.43	2.77	7.14	21.01	28.70	80.58
225.0	137.43	2.77	7.14	21.01	28.70	80.58
230.0	137.43	2.77	7.14	21.01	28.70	80.58
235.0	137.43	2.77	7.14	21.01	28.70	80.58
240.0	137.43	2.77	7.14	21.01	28.70	80.58
245.0	137.43	2.77	7.14	21.01	28.70	80.58
250.0	137.43	2.77	7.14	21.01	28.70	80.58
255.0	137.43	2.77	7.14	21.01	28.70	80.58
260.0	137.43	2.77	7.14	21.01	28.70	76.31
265.0	137.43	2.77	7.14	21.01	28.70	75.41
270.0	137.43	2.77	7.14	21.01	28.70	74.73
275.0	137.43	2.77	7.14	21.01	28.70	73.85
280.0	137.43	2.77	7.14	21.01	28.70	73.12
285.0	137.43	2.77	7.14	21.01	28.70	72.57
290.0	137.43	2.77	7.14	21.01	28.70	72.17
295.0	137.43	2.77	7.14	21.01	28.70	71.92
300.0	137.43	2.77	7.14	21.01	28.70	71.80
305.0	137.43	2.77	7.14	21.01	28.70	72.14
310.0	137.43	2.77	7.14	21.01	28.70	72.83
315.0	137.43	2.77	7.14	21.01	28.70	74.01
320.0	137.43	2.77	7.14	21.01	28.70	76.50
325.0	137.43	2.77	7.14	21.01	28.70	79.25
330.0	137.43	2.77	7.14	21.01	28.70	79.59
335.0	137.43	2.77	7.14	21.01	28.70	80.03
340.0	137.43	2.77	7.14	21.01	28.70	80.52
345.0	137.43	2.77	7.14	21.01	28.70	80.58
350.0	137.43	2.77	7.14	21.01	28.70	80.58
355.0	137.43	2.77	7.14	21.01	28.70	80.58

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #1F

WAXP - Warner Robins, GA - 1600 kHz - 1.6 kW - ND

North Latitude: 32° 38' 19"
West Longitude: 83° 38' 33"

Azimuth	Radiation (mV/m at one km)	Dist. to Contours in km: Contour levels in mV/m. 5.000
10.0	469.22	13.79
15.0	469.22	13.79
20.0	469.22	13.79
25.0	469.22	13.79
30.0	469.22	13.79

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #1G

WAOS - Austell, GA - 1600 kHz - 5.0 kW - ND

North Latitude: 33° 48' 34"
West Longitude: 84° 39' 25"

Azimuth	Radiation (mV/m at one km)	Dist. to Contours in km: Contour levels in mV/m. 5.000
100.0	643.74	11.38
105.0	643.74	11.38
110.0	643.74	11.38
115.0	643.74	11.38
120.0	643.74	11.38
125.0	643.74	11.38
130.0	643.74	11.38

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #1H

WJYR - Myrtle Beach, SC - 1620 kHz - 10.0 kW - ND

North Latitude: 33° 42' 20"
West Longitude: 78° 53' 23"

Azimuth	Radiation (mV/m at one km)	Dist. to Contours in km: Contour levels in mV/m. .500	.025
250.0	185.39	24.03	91.50
255.0	179.83	23.71	90.34
260.0	174.49	23.39	89.20
265.0	170.16	23.13	88.26
270.0	167.44	22.96	87.66
275.0	166.75	22.92	87.51
280.0	168.32	23.01	87.86

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #1I

WPHG - Atmore, AL - 1620 kHz - 10.0 kW - ND

North Latitude: 31° 02' 14"
West Longitude: 87° 29' 42"

Azimuth	Radiation (mV/m at one km)	Dist. to Contours in km: Contour levels in mV/m. .500	.025
40.0	1196.29	40.30	194.28
45.0	1196.29	38.12	192.11
50.0	1196.29	36.00	189.40
55.0	1196.29	36.00	185.83
60.0	1196.29	36.00	179.53
65.0	1196.29	36.00	172.72
70.0	1196.29	36.00	165.62

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #1J

WTEL - Augusta, GA - 1630 kHz - 10.0 kW - ND

North Latitude: 33° 31' 00"
West Longitude: 82° 00' 36"

Azimuth	Radiation (mV/m at one km)	Dist. to Contours in km: Contour levels in mV/m. .500	.250
250.0	1255.74	51.81	72.24
255.0	1255.74	52.43	72.85
260.0	1255.74	52.89	73.31
265.0	1255.74	53.24	73.66
270.0	1255.74	53.52	73.94
275.0	1255.74	53.74	74.16
280.0	1255.74	53.92	74.34

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #2A

AM Broadcast Allocation Study

LATITUDE 33:21:55 LONGITUDE 83:22:55

FACTORS AFFECTING 1690 kHz
HART

****************** 1660 KHZ ******************

KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY
			**** NO STATIONS FOUND WITHIN ****									
			MAXIMUM SEARCH DISTANCE 85 KILOMETERS									

****************** 1670 KHZ ******************

KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY
65.67	(40.81)	198.4	32:48:16/ 83:36:16	AP	D	B	10.00	ND1-1061.3	WRNC	US	GA	DRY BRANCH
84.32	(52.39)	196.8	32:38:19/ 83:38:33	CP	D	B	10.00	ND1-1201.7	WRNC	US	GA	WARNER ROBINS
84.32	(52.39)	196.8	32:38:19/ 83:38:33	--	D	B	10.00	ND1- 980.3	WAXP	US	GA	WARNER ROBINS
			MAXIMUM SEARCH DISTANCE 175 KILOMETERS									

****************** 1680 KHZ ******************

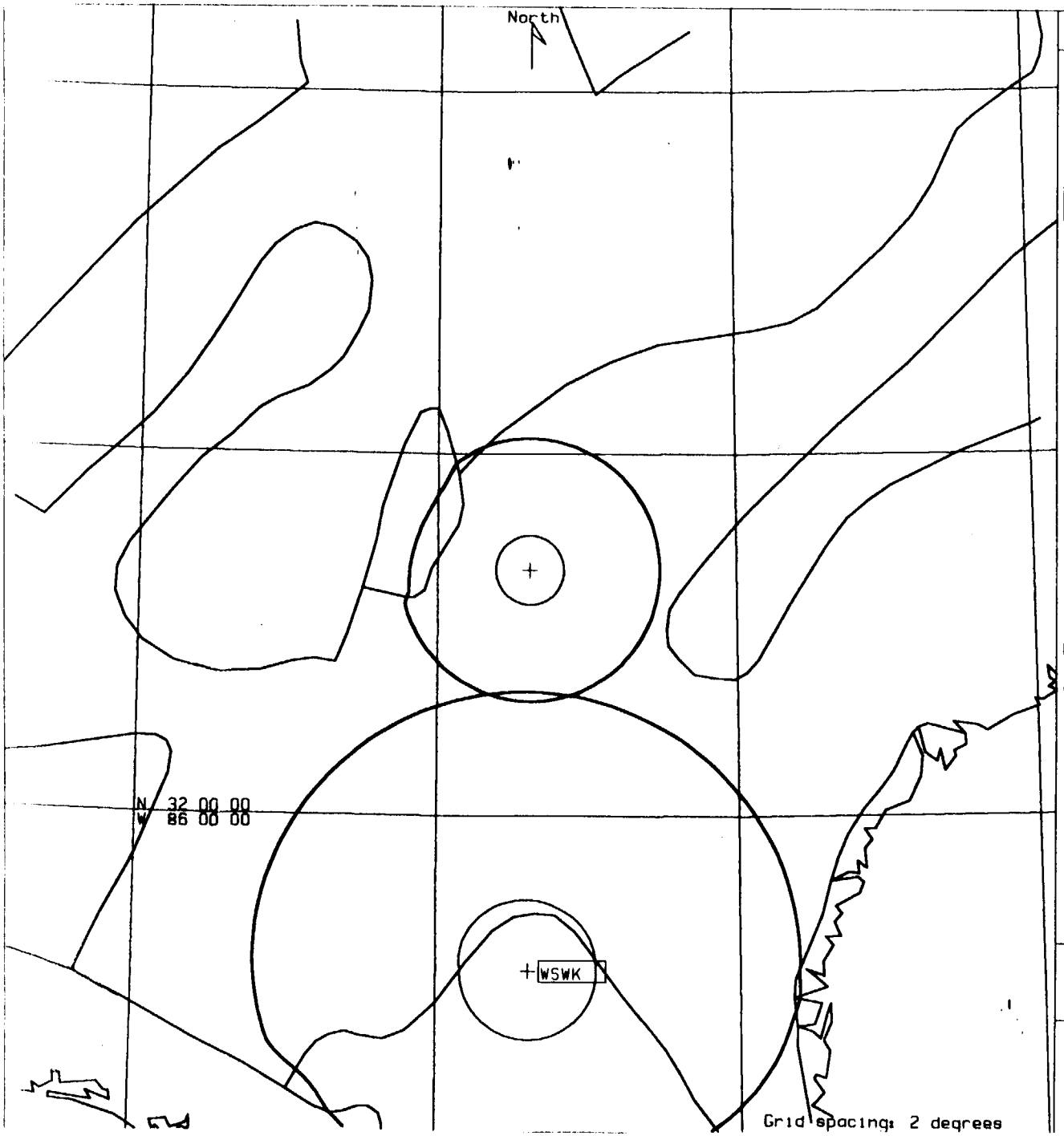
KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY
339.85	(211.17)	13.8	36:19:54/ 82:28:27	--	D	B	10.00	ND1- 980.3	WKTP	US	TN	JONESBORO
			MAXIMUM SEARCH DISTANCE 363 KILOMETERS									

****************** 1690 KHZ ******************

KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY
247.55	(153.82)	180.3	31: 8:15/ 83:23:41	CP	D	B	10.00	ND1-1187.4	WSWK	US	GA	ADEL
247.55	(153.82)	180.3	31: 8:15/ 83:23:41	--	D	B	10.00	ND1- 980.3	WBIT	US	GA	ADEL
			MAXIMUM SEARCH DISTANCE 576 KILOMETERS									

****************** 1700 KHZ ******************

KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY
337.76	(209.87)	298.2	34:45:32/ 86:38:35	CP	D	B	10.00	ND1-1399.5	WEUV	US	AL	HUNTSVILLE
337.76	(209.87)	298.2	34:45:32/ 86:38:35	--	D	B	10.00	ND1- 980.3	WEUP	US	AL	HUNTSVILLE
			MAXIMUM SEARCH DISTANCE 354 KILOMETERS									



AMW(tm)

Propagation model:
Groundwave equivalent distance

Field Strength Levels:

.500 mV/m

.025 mV/m

EXHIBIT #2B

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTH.

TED HART

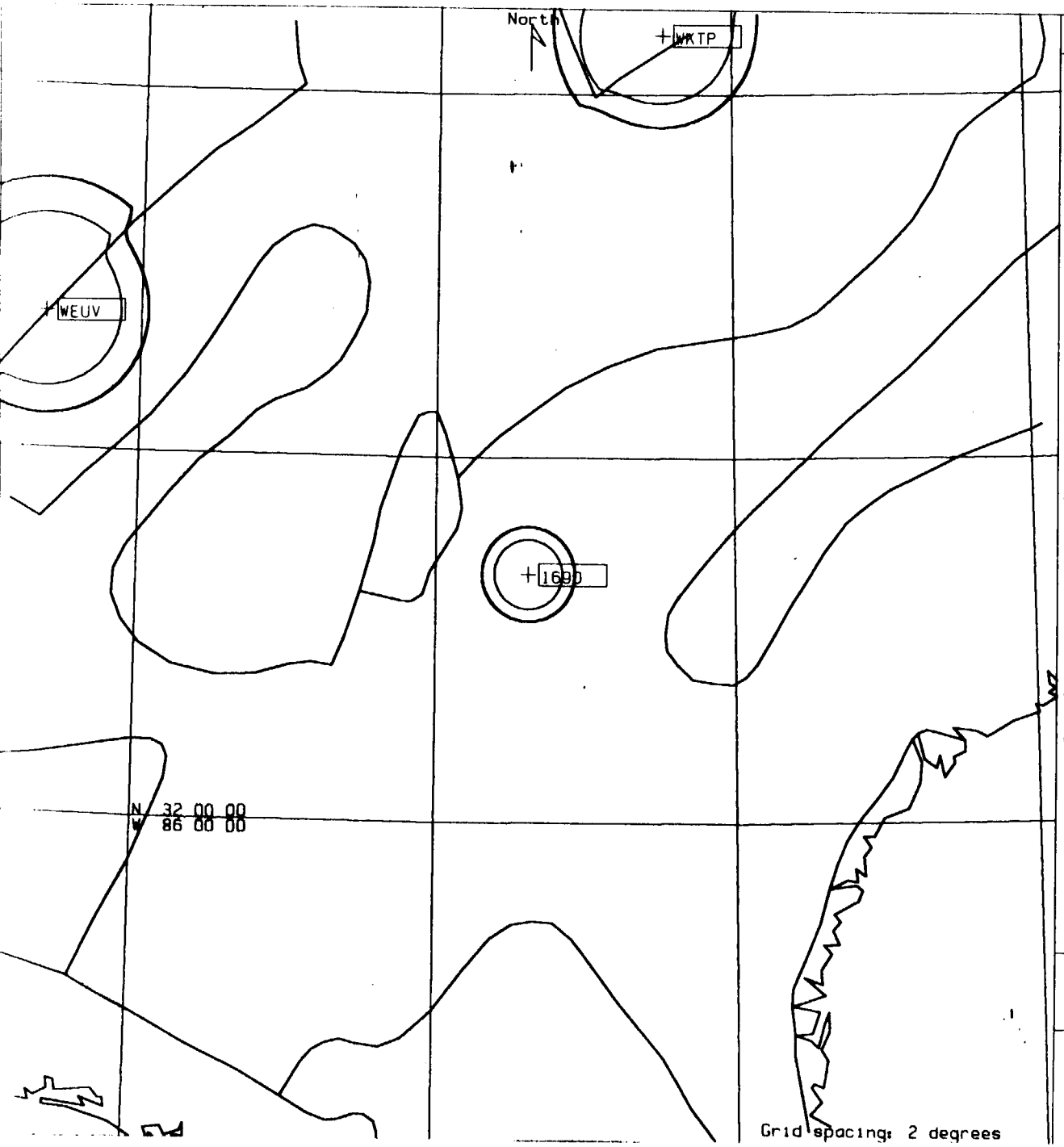
EATONTON, GEORGIA

April 2001

Call	Freq. (kHz)	Power (kW)	Pattern	Coordinates
PROP	1690.0	.100	ND-D	N 33 21 55.0 W 83 22 55.0
WSWK	1690.0	10.000	ND-D	N 31 8 15.0 W 83 23 41.0

KILOMETERS

50 0 50 100 150 200



AMW(tm)

Propagation model:
Groundwave equivalent distance

Field Strength Levels:

.500 mV/m

.250 mV/m

EXHIBIT #2C

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTH.

TED HART

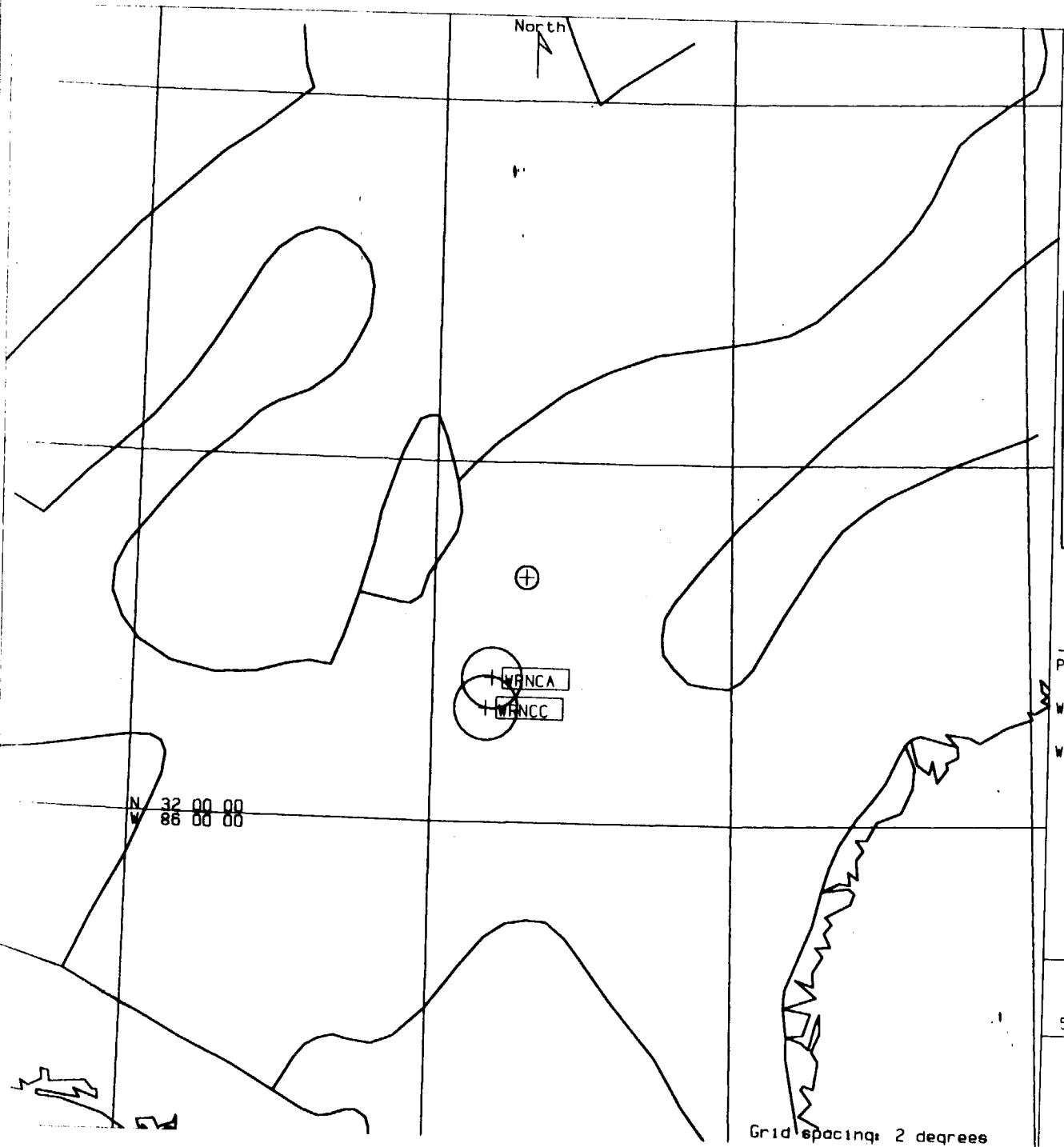
EATONTON, GEORGIA

April 2001

Call	Freq. (kHz)	Power (kW)	Pattern	Coordinates
1690	1690.0	.100	ND-D	N 33 21 55.0
				W 83 22 55.0
WKTP	1680.0	10.000	ND-D	N 36 19 54.0
				W 82 28 27.0
WEUV	1700.0	10.000	ND-D	N 34 45 32.0
				W 86 38 35.0

KILOMETERS

50 0 50 100 150 200



AMW(tm)

Propagation model:
Groundwave equivalent distance

Field Strength Levels:

5.000 mV/m

EXHIBIT #2D

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTH.

TED HART
EATONTON, GEORGIA
April 2001

Call	Freq. (kHz)	Power (kW)	Pattern	Coordinates
PROP	1690.0	.100	ND-D	N 33 21 55.0 W 83 22 55.0
WRNCA	1670.0	10.000	ND-D	N 32 48 16.0 W 83 36 16.0
WRNCC	1670.0	10.000	ND-D	N 32 38 19.0 W 83 38 33.0

KILOMETERS

50 0 50 100 150 200

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #2E

Proposed - Eatonton, GA - 1690 kHz - 0.1 kW - ND

North Latitude: 33° 21' 55"
West Longitude: 83° 22' 55"

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers : Contour levels in mV/m. 25.000	5.000	.500	.250	.025
.0	137.43	2.77	7.14	21.01	28.70	80.58
5.0	137.43	2.77	7.14	21.01	28.70	80.58
10.0	137.43	2.77	7.14	21.01	28.70	80.58
15.0	137.43	2.77	7.14	21.01	28.70	80.58
20.0	137.43	2.77	7.14	21.01	28.70	80.58
25.0	137.43	2.77	7.14	21.01	28.70	80.58
30.0	137.43	2.77	7.14	21.01	28.70	80.58
35.0	137.43	2.77	7.14	21.01	28.70	80.58
40.0	137.43	2.77	7.14	21.01	28.70	80.58
45.0	137.43	2.77	7.14	21.01	28.70	80.58
50.0	137.43	2.77	7.14	21.01	28.70	80.58
55.0	137.43	2.77	7.14	21.01	28.70	80.58
60.0	137.43	2.77	7.14	21.01	28.70	80.58
65.0	137.43	2.77	7.14	21.01	28.70	80.58
70.0	137.43	2.77	7.14	21.01	28.70	80.58
75.0	137.43	2.77	7.14	21.01	28.70	80.58
80.0	137.43	2.77	7.14	21.01	28.70	80.58
85.0	137.43	2.77	7.14	21.01	28.70	80.58
90.0	137.43	2.77	7.14	21.01	28.70	80.58
95.0	137.43	2.77	7.14	21.01	28.70	80.58
100.0	137.43	2.77	7.14	21.01	28.70	80.58
105.0	137.43	2.77	7.14	21.01	28.70	80.58
110.0	137.43	2.77	7.14	21.01	28.70	80.58
115.0	137.43	2.77	7.14	21.01	28.70	80.58
120.0	137.43	2.77	7.14	21.01	28.70	80.58
125.0	137.43	2.77	7.14	21.01	28.70	80.58
130.0	137.43	2.77	7.14	21.01	28.70	80.58
135.0	137.43	2.77	7.14	21.01	28.70	80.58
140.0	137.43	2.77	7.14	21.01	28.70	80.58
145.0	137.43	2.77	7.14	21.01	28.70	80.58
150.0	137.43	2.77	7.14	21.01	28.70	80.58
155.0	137.43	2.77	7.14	21.01	28.70	80.58
160.0	137.43	2.77	7.14	21.01	28.70	80.58
165.0	137.43	2.77	7.14	21.01	28.70	80.58
170.0	137.43	2.77	7.14	21.01	28.70	80.58
175.0	137.43	2.77	7.14	21.01	28.70	80.58

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #2E (continued)

North Latitude: 33° 21' 55"
West Longitude: 83° 22' 55"

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers : Contour levels in mV/m. 25.000	5.000	.500	.250	.025
180.0	137.43	2.77	7.14	21.01	28.70	80.58
185.0	137.43	2.77	7.14	21.01	28.70	80.58
190.0	137.43	2.77	7.14	21.01	28.70	80.58
195.0	137.43	2.77	7.14	21.01	28.70	80.58
200.0	137.43	2.77	7.14	21.01	28.70	80.58
205.0	137.43	2.77	7.14	21.01	28.70	80.58
210.0	137.43	2.77	7.14	21.01	28.70	80.58
215.0	137.43	2.77	7.14	21.01	28.70	80.58
220.0	137.43	2.77	7.14	21.01	28.70	80.58
225.0	137.43	2.77	7.14	21.01	28.70	80.58
230.0	137.43	2.77	7.14	21.01	28.70	80.58
235.0	137.43	2.77	7.14	21.01	28.70	80.58
240.0	137.43	2.77	7.14	21.01	28.70	80.58
245.0	137.43	2.77	7.14	21.01	28.70	80.58
250.0	137.43	2.77	7.14	21.01	28.70	80.58
255.0	137.43	2.77	7.14	21.01	28.70	80.58
260.0	137.43	2.77	7.14	21.01	28.70	76.31
265.0	137.43	2.77	7.14	21.01	28.70	75.41
270.0	137.43	2.77	7.14	21.01	28.70	74.73
275.0	137.43	2.77	7.14	21.01	28.70	73.85
280.0	137.43	2.77	7.14	21.01	28.70	73.12
285.0	137.43	2.77	7.14	21.01	28.70	72.57
290.0	137.43	2.77	7.14	21.01	28.70	72.17
295.0	137.43	2.77	7.14	21.01	28.70	71.92
300.0	137.43	2.77	7.14	21.01	28.70	71.80
305.0	137.43	2.77	7.14	21.01	28.70	72.14
310.0	137.43	2.77	7.14	21.01	28.70	72.83
315.0	137.43	2.77	7.14	21.01	28.70	74.01
320.0	137.43	2.77	7.14	21.01	28.70	76.50
325.0	137.43	2.77	7.14	21.01	28.70	79.25
330.0	137.43	2.77	7.14	21.01	28.70	79.59
335.0	137.43	2.77	7.14	21.01	28.70	80.03
340.0	137.43	2.77	7.14	21.01	28.70	80.52
345.0	137.43	2.77	7.14	21.01	28.70	80.58
350.0	137.43	2.77	7.14	21.01	28.70	80.58
355.0	137.43	2.77	7.14	21.01	28.70	80.58

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #2F

WRNC.A - Dry Branch, GA - 1670 kHz - 10.0 kW - ND

North Latitude: 32° 48' 16"
West Longitude: 83° 36' 16"

Azimuth	Radiation (mV/m at one km)	Dist. to Contours in km: Contour levels in mV/m. 5.000
10.0	1061.26	18.71
15.0	1061.26	18.71
20.0	1061.26	18.71
25.0	1061.26	18.71
30.0	1061.26	18.71

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #2G

WRNC.C - Warner Robins, GA - 1670 kHz - 10.0 kW - ND

North Latitude: 32° 38' 19"
West Longitude: 83° 38' 33"

Azimuth	Radiation (mV/m at one km)	Dist. to Contours in km: Contour levels in mV/m. 5.000
10.0	1201.67	19.79
15.0	1201.67	19.79
20.0	1201.67	19.79
25.0	1201.67	19.79
30.0	1201.67	19.79

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #2H

WKTP - Jonesboro, TN - 1680 kHz - 10.0 kW - ND

North Latitude: 36° 19' 54"
West Longitude: 82° 28' 27"

Azimuth	Radiation (mV/m at one km)	Dist. to Contours in km: Contour levels in mV/m. .500	.250
180.0	980.31	41.59	56.28
185.0	980.31	41.76	56.44
190.0	980.31	41.96	56.65
195.0	980.31	42.23	56.91
200.0	980.31	42.56	57.24

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #2I

WSWK - Adel, GA - 1690 kHz - 10.0 kW - ND

North Latitude: 31° 08' 15"
West Longitude: 83° 23' 41"

Azimuth	Radiation (mV/m at one km)	Dist. to Contours in km: Contour levels in mV/m. .500	.025
340.0	1187.44	44.76	173.34
345.0	1187.44	44.53	173.11
350.0	1187.44	44.57	173.15
355.0	1187.44	44.54	173.12
.0	1187.44	44.44	173.02
5.0	1187.44	44.26	172.84
10.0	1187.44	44.15	172.73
15.0	1187.44	44.04	172.61
20.0	1187.44	43.84	172.42

TECHNICAL EXHIBIT IN SUPPORT OF REQUEST FOR EXPERIMENTAL STATION AUTHORIZATION TED HART EATONTON, GEORGIA April 2001

EXHIBIT #2J

WEUV - Huntsville, AL - 1700 kHz - 10.0 kW- ND

North Latitude: 34° 45' 32"
West Longitude: 86° 38' 35"

Azimuth	Radiation (mV/m at one km)	Dist. to Contours in km: Contour levels in mV/m. .500	.250
110.0	1399.53	46.09	63.12
115.0	1399.53	46.08	63.11
120.0	1399.53	46.07	63.11
125.0	1399.53	46.07	63.10
130.0	1399.53	46.06	63.10

AFFIDAVIT AND QUALIFICATIONS OF CONSULTANT

State of Georgia)
St. Simons Island) ss:
County of Glynn)

R. STUART GRAHAM, being duly sworn, deposes and says that he is an officer of Graham Brock, Inc. Graham Brock has been engaged by Ted Hart to prepare the attached Technical Exhibit.

His qualifications are a matter of record before the Federal Communications Commission. He is a graduate of Auburn University and has been active in Broadcast Engineering since 1972.

The attached report was either prepared by him or under his direction and all material and exhibits attached hereto are believed to be true and correct.

This the 3rd day of April, 2001.

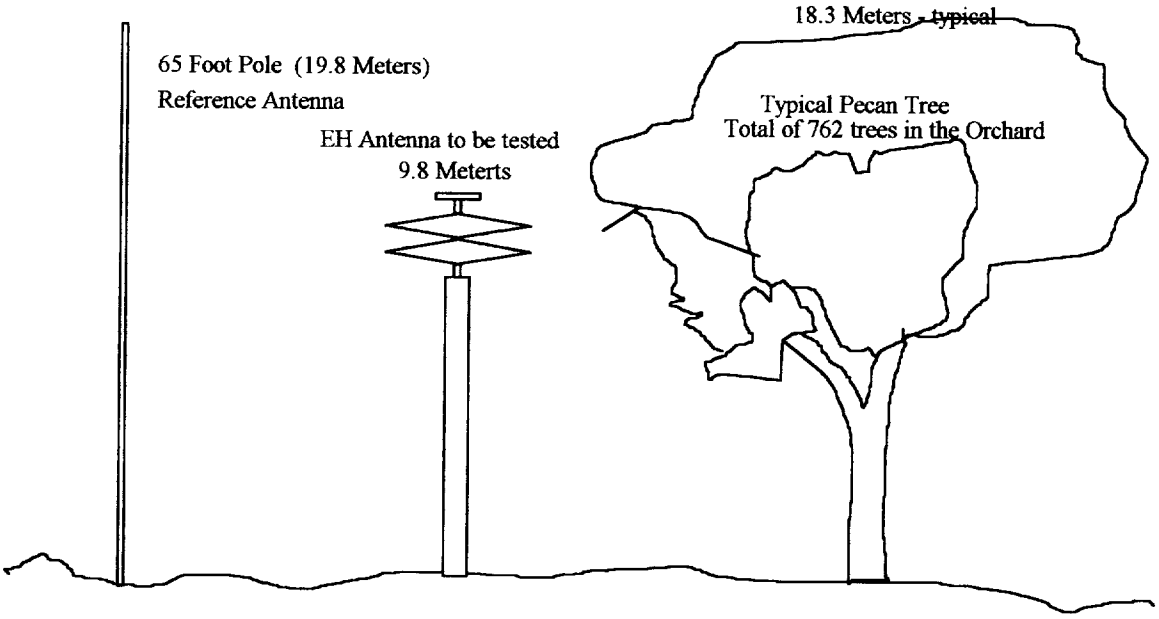
R. Stuart Graham, Jr.
Affiant

Sworn to and subscribed before me
this the 3rd day of April, 2001.

Notary Public, State of Georgia
My Commission Expires: April 20, 2002

EXHIBIT 2

This exhibit is provided in support of item 15 of FCC Form 442.



VERTICAL PROFILE SKETCH OF TOTAL STRUCTURES