JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS

ENGINEERING EXHIBIT

APPLICATION FOR LICENSE

AND PROOF OF PERFORMANCE

RADIO STATION WQBN, TEMPLE TERRACE, FLORIDA

1300 Khz. 5.0/1.0 KW DA-2

APRIL, 1999

ENGINEERING EXHIBIT
APPLICATION FOR LICENSE AND PROOF OF PERFORMANCE
WQBN, TEMPLE TERRACE, FLORIDA

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Federal Communications Commission
Washington, D. C. 20554

Approved by OMB
3060-0627
Expires 01/31/98

FOR FCC USE ONLY

FCC 302-AM
APPLICATION FOR AM BROADCAST STATION LICENSE

(Please read instructions before filling out form.

FOR COMMISSION USE ONLY
FILE NO.

SECTION I - APPLICANT FEE INFORMATION

1. PAYOR NAME (Last, First, Middle Initial)
Radio Tropical, Inc.

MAILING ADDRESS (Line 1) (Maximum 35 characters) 5203 Armenia Ave.

MAILING ADDRESS (Line 2) (Maximum 35 characters)

CITY	STATE OR COUNTRY (If foreign address)	ZIP CODE
Tampa	Florida	33603

TELEPHONE NUMBER (include area code)	CALL LETTERS	OTHER FCC IDENTIFIER (If applicable)
	WQBN	

2. A. Is a fee submitted with this application? [X] Yes [ ] No

B. If No, indicate reason for fee exemption (see 47 C.F.R. Section

[ ] Governmental Entity [ ] Noncommercial educational licensee [ ] Other (Please explain):

C. If Yes, provide the following information:

Enter in Column (A) the correct Fee Type Code for the service you are applying for. Fee Type Codes may be found in the "Mass Media Services Fee Filing Guide." Column (B) lists the Fee Multiple applicable for this application. Enter fee amount due in Column (C).

(A) FEE TYPE CODE	(B) FEE MULTIPLE	(C) FEE DUE FOR FEE TYPE CODE IN COLUMN (A)	FOR FCC USE ONLY
MMR	0001	$ 475.00	

To be used only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

(A)	(B)	(C)	FOR FCC USE ONLY
MOR	0001	$ 545.00	

	TOTAL AMOUNT REMITTED WITH THIS APPLICATION	FOR FCC USE ONLY
ADD ALL AMOUNTS SHOWN IN COLUMN C, AND ENTER THE TOTAL HERE. THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.	$ 1020.00	

SECTION II - APPLICANT INFORMATION		
1. NAME OF APPLICANT Radio Tropical, Inc.		
MAILING ADDRESS 5203 Armenia Avenue		
CITY Tampa	STATE Fl	ZIP CODE 33603

2. This application is for:

[X] Commercial [ ] Noncommercial

[X] AM Directional [ ] AM Non-Directional

Call letters	Community of License	Construction Permit File No.	Modification of Construction Permit File No(s).	Expiration Date of Last Construction Permit
WQBN	Temple Terrace	BP-961016AD	BP-981007DC	April 30, 1999

3. Is the station now operating pursuant to automatic program test authority in accordance with 47 C.F.R. Section 73.1620?

[ ] Yes [X] No

Exhibit No. EE

If No, explain in an Exhibit.

Directional Antenna Requires Program Test Authority

4. Have all the terms, conditions, and obligations set forth in the above described construction permit been fully met?

[X] Yes [ ] No

Exhibit No. N/A

If No, state exceptions in an Exhibit.

5. Apart from the changes already reported, has any cause or circumstance arisen since the grant of the underlying construction permit which would result in any statement or representation contained in the construction permit application to be now incorrect?

[ ] Yes [X] No

Exhibit No. N/A

If Yes, explain in an Exhibit.

6. Has the permittee filed its Ownership Report (FCC Form 323) or ownership certification in accordance with 47 C.F.R. Section 73.3615(b)?

[ ] Yes [ ] No

[X] Does not apply

If No, explain in an Exhibit.

Exhibit No. N/A

7. Has an adverse finding been made or an adverse final action been taken by any court or administrative body with respect to the applicant or parties to the application in a civil or criminal proceeding, brought under the provisions of any law relating to the following: any felony; mass media related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination?

[ ] Yes [X] No

If the answer is Yes, attach as an Exhibit a full disclosure of the persons and matters involved, including an identification of the court or administrative body and the proceeding (by dates and file numbers), and the disposition of the litigation. Where the requisite information has been earlier disclosed in connection with another application or as required by 47 U.S.C. Section 1.65(c), the applicant need only provide: (i) an identification of that previous submission by reference to the file number in the case of an application, the call letters of the station regarding which the application or Section 1.65 information was filed, and the date of filing; and (ii) the disposition of the previously reported matter

Exhibit No. N/A

8. Does the applicant, or any party to the application, have a petition on file to migrate to the expanded band (1605-1705 kHz) or a permit or license either in the existing band or expanded band that is held in combination (pursuant to the 5 year holding period allowed) with the AM facility proposed to be modified herein?

☐ Yes ☒ No

If Yes, provide particulars as an Exhibit.

Exhibit No.

The APPLICANT hereby waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because use of the same, whether by license or otherwise, and requests and authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended).

The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations and that all the exhibits are a material part hereof and are incorporated herein as set out in full in

CERTIFICATION

1. By checking Yes, the applicant certifies, that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

☒ Yes ☐ No

2. I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

Name	Signature	
Radio Tropical, Inc.		
Title	Date	Telephone Number
Vice President	04/27/1999	(813)871-1333

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of the application is in the public interest. In reaching that determination, or for law enforcement purposes, it may become necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Your response is required to obtain the requested authorization.

Public reporting burden for this collection of information is estimated to average 639 hours and 53 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0627), Washington, D. C. 20554. Do NOT send completed forms to this address.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

SECTION III - LICENSE APPLICATION ENGINEERING DATA

Name of Applicant

Radio Tropical, Inc.

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)

[X] Station License [ ] Direct Measurement of Power

1. Facilities authorized in construction permit

Call Sign	File No. of Construction Permit (if applicable)	Frequency (kHz)	Hours of Operation	Power in kilowatts	
				Night	Day
WQBN	BP-961016AB	1300	Unlimited	1.0	5.0

2. Station location

State	City or Town
Florida	Temple Terrace

3. Transmitter location

State	County	City or Town	Street address (or other identification)
Fl	Hillsborough	Tampa	5207 Washington Blvd.

4. Main studio location

State	County	City or Town	Street address (or other identification)
Fl	Hillsborough	Tampa	5203 Armenia Ave.

5. Remote control point location (specify only if authorized directional antenna)

State	County	City or Town	Street address (or other identification)
Fl	Hillsborough	Tampa	5203 Armenia Ave.

6. Has type-approved stereo generating equipment been installed? [ ] Yes [X] No

7. Does the sampling system meet the requirements of 47 C.F.R. Section 73.68? [X] Yes [ ] No [ ] Not Applicable

Attach as an Exhibit a detailed description of the sampling system as installed. Exhibit No. EE

8. Operating constants:

RF common point or antenna current (in amperes) without modulation for night system	RF common point or antenna current (in amperes) without modulation for day system
No Change	10.19

Measured antenna or common point resistance (in ohms) at operating frequency		Measured antenna or common point reactance (in ohms) at operating frequency	
Night	Day	Night	Day
	54.2		0

Antenna indications for directional operation

Towers	Antenna monitor Phase reading(s) in degrees		Antenna monitor sample current ratio(s)		Antenna base currents	
	Night	Day	Night	Day	Night	Day
1		0.0		100.0		7.80
2		-95.0		60.0		4.40
3		125.0		50.0		3.70

Manufacturer and type of antenna monitor: Potomac Instruments AM19D(210)

SECTION III - Page 2

9. Description of antenna system ((f directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

Type Radiator	Overall height in meters of radiator above base insulator, or above base, if grounded.	Overall height in meters above ground (without obstruction lighting)	Overall height in meters above ground (include obstruction lighting)	If antenna is either top loaded or sectionalized, describe fully in an Exhibit.
Uniform cross-section guyed steel towers	#1,#3=55m #2=65.5m	#1,#3=56 #2=67	#1-#3=56 #3=67	Exhibit No. N/A

Excitation [X] Series [ ] Shunt

Geographic coordinates to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude	27 °	56 '	51 "	West Longitude	82 °	23 '	45 "

If not fully described above, attach as an Exhibit further details and dimensions including any other antenna mounted on tower and associated isolation circuits. Exhibit No. EE

Also, if necessary for a complete description, attach as an Exhibit a sketch of the details and dimensions of ground system. Exhibit No. EE

10. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

The coordinates are different due to a correction found during tower registration.

11. Give reasons for the change in antenna or common point resistance.

N/A

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Name (Please Print or Type)	Signature (check appropriate box below)
James M. Johnson	
Address (include ZIP Code) 10144 Seagrape Way Palm Beach Gardens, Fl 33418	Date April 26, 1999
	Telephone No. (Include Area Code) (561)625-5900

[ ] Technical Director

[ ] Registered Professional Engineer

[ ] Chief Operator

[X] Technical Consultant

[ ] Other (specify)

APPLICATION FOR LICENSE
AND PROOF OF PERFORMANCE
WQBN, TEMPLE TERRACE, FLORIDA

ENGINEERING STATEMENT

This Engineering Exhibit has been prepared on behalf of Radio Tropical, Inc., licensee of WQBN, Temple Terrace, Florida. WQBN currently holds a Construction Permit (BP-961016AB) to build new daytime facilities at the former daytime site of WTMP, Temple Terrace, Florida. WTMP has now completed its move which allows WQBN to begin operation from the site.

ANTENNA SYSTEM

The WQBN antenna system consists of three vertical, guyed, uniform cross-section, steel towers. Towers #1 and #3 are 55 meters or 85.7 electrical degrees in height, while tower #2 is 65.5 meters or 102.3 electrical degrees in height. The towers are spaced 99.5 electrical degrees on a 115 and 295 degree bearing.

SAMPLING SYSTEM

The WQBN phase and current sampling system consists of the following:

A. TCT-1 Sampling torroids are used at each of the towers. There is one in the output lead of each antenna coupling unit.

B. Three equal lengths of Cablewave FLC38-50J foam filled, hard outer shield type, coaxial cable are used to deliver the R.F. energy from the torroids to the Antenna Monitor. No connections are exposed to the weather. The cable is buried in the ground, except for the lengths from the antenna coupling units to the ground and inside the transmitter building. Since the cables are equal electrical length and the temperature variations in Florida are not extreme, the phase tolerance for the sample system will be within FCC tolerances.

C. A Potomac Instruments AM19-D (210) Antenna Monitor provides phase angle and sample current indications of the towers.

In view of the above, it is submitted that the WQBN antenna monitoring system meets the requirements of an approved sample system.

ADJUSTMENTS AND MEASUREMENTS

A non-directional as well as daytime directional proof of performance was conducted. The directional and the non-directional measurements were taken while switching between the modes via two-way radio. For non-directional operation, Tower #1 was used. The non-directional base impedance was measured with an R.F. Bridge and the measured resistance is 43.5 ohms. An antenna current of 5.36 amperes was maintained during non-directional operation for a power of 1250 watts. The unused towers were floating during non-directional operation. Directional measurements were made with the common point resistance adjusted to 52 ohms and the common point current maintained at 10.19 amperes daytime for 5,400 watts input.

Tower # 1 is used as the reference tower for the operating parameters. This tower has the highest operating current in the directional mode. Field strength measurements were made by James Johnson, Jeff Crews and Ed Pendino using Potomac Instruments FIM-41, S.N. 661 and FIM-21, S.N. 283 and FIM-41; S.N. 306 Field Strength Meters. The field strength meters were compared with FIM-41, S.N. 306 which was recently calibrated by the manufacturer. The meters were in agreement.

Measurement locations were found using topographic maps on land, supplemented by boat measurements in Tampa Bay. The exact location of the measuring points was determined by a differential GPS navigational system.

Exhibit 6 is a tabulation of field strength measurements for the directional and non-directional modes. The data is plotted on graphs of distance vs. field strength and the data analyzed. Exhibit 8 consists of graphs showing the plots of measured field strength and the conductivities

DIRECT MEASUREMENT OF POWER

The impedance at the common point and the non-directional antenna base was measured in the following manner:

A Potomac Instruments SD-31 Generator-Detector was used with a General Radio 916-A R.F. Bridge and a Potomac Instruments FIM-41 Field Strength Meter. The Bridge calibration was checked before measurements were made by placing known standards across the "output" terminals of the bridge. Measurements were made by James Johnson. The measurements were made at locations shown in Exhibit 16, the schematic of the phasing and coupling equipment. Manufacturer's instructions were followed in the operation of the equipment used for the measurements.

Manufacturer & Rated Accuracy

Instrument	Manufacturer	Rated Accuracy
• Radio Frequency Bridge Model 916-A	General Radio	Resistance (2%, +-1.0 ohm) Reactance (2%, +-1.0 ohm)
• SD-31 Gen-Detector	Potomac Instruments	.005%
• FIM-41 Field Strength Meter	Potomac Instruments	2%

MONITOR POINTS

Monitor points were established on the radials required by the construction permit. Photos as well as a description for proceeding to the monitor points is included as Exhibit 14. Exhibit 15 is a Map showing the locations of the Monitor Points. The distance to the 32 degree

monitor point exceeds 4 miles from the transmitter site. A waiver of that requirement is requested. The monitor points that were selected are easily accessible, on or near main roads.

GROUND SYSTEM

Specifications are the same as those shown on the construction permit. Exhibit 2 is a sketch of the system.

TOWER LIGHTING AND MARKING

Tower registration numbers are shown on Exhibit 1. Lighting and Marking is only required on tower #2.

R.F. RADIATION HAZARD

The general public will not be exposed to RF radiation as described by ANSI standards. Warning signs are posted at the locked gates to the towers. The station will reduce power or terminate operation when maintenance or repairs is required, or authorized personnel are in the area of RF hazard.

Additional Antennas

Two STL Antennas are side-mounted on tower #1. The RF energy crosses the base insulator using two Kintronics Isocouplers. These changes were completed before final adjustments and the proof of performances made.

Summary

There are no changes proposed in the nighttime operation with this application. A separate application is being prepared for a construction permit for nighttime changes. Based on the information included in the following exhibits, it is submitted that the daytime WQBN Antenna system is in proper adjustment and is ready for Program Test Authority.

EXHIBIT 1

VERTICAL TOWER SKETCH
WQBN, TEMPLE TERRACE, FLORIDA
1300 KHz., 5.0/1.0 Kw, DA-2
APRIL, 1999
WQBN DAY SITE

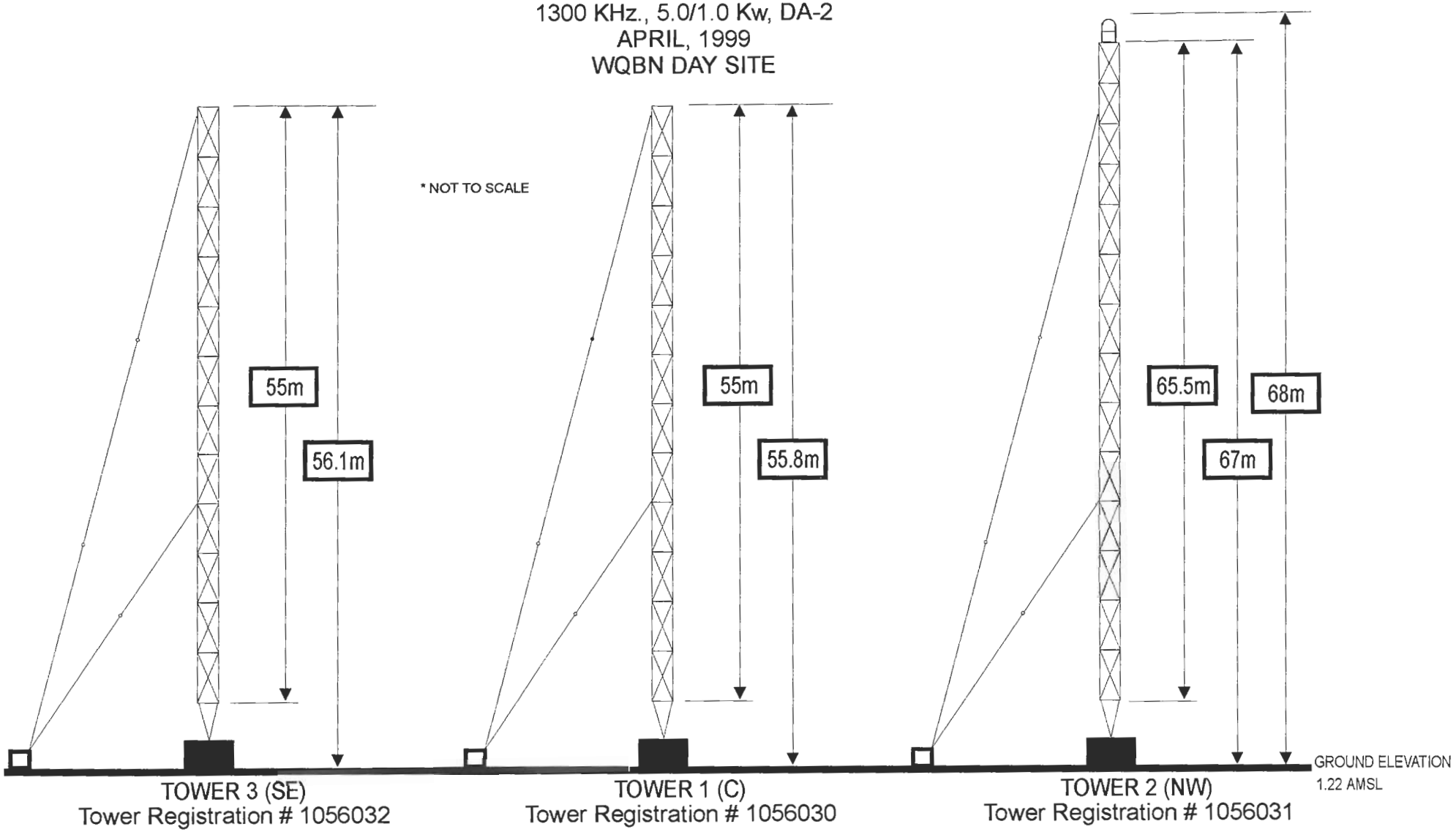
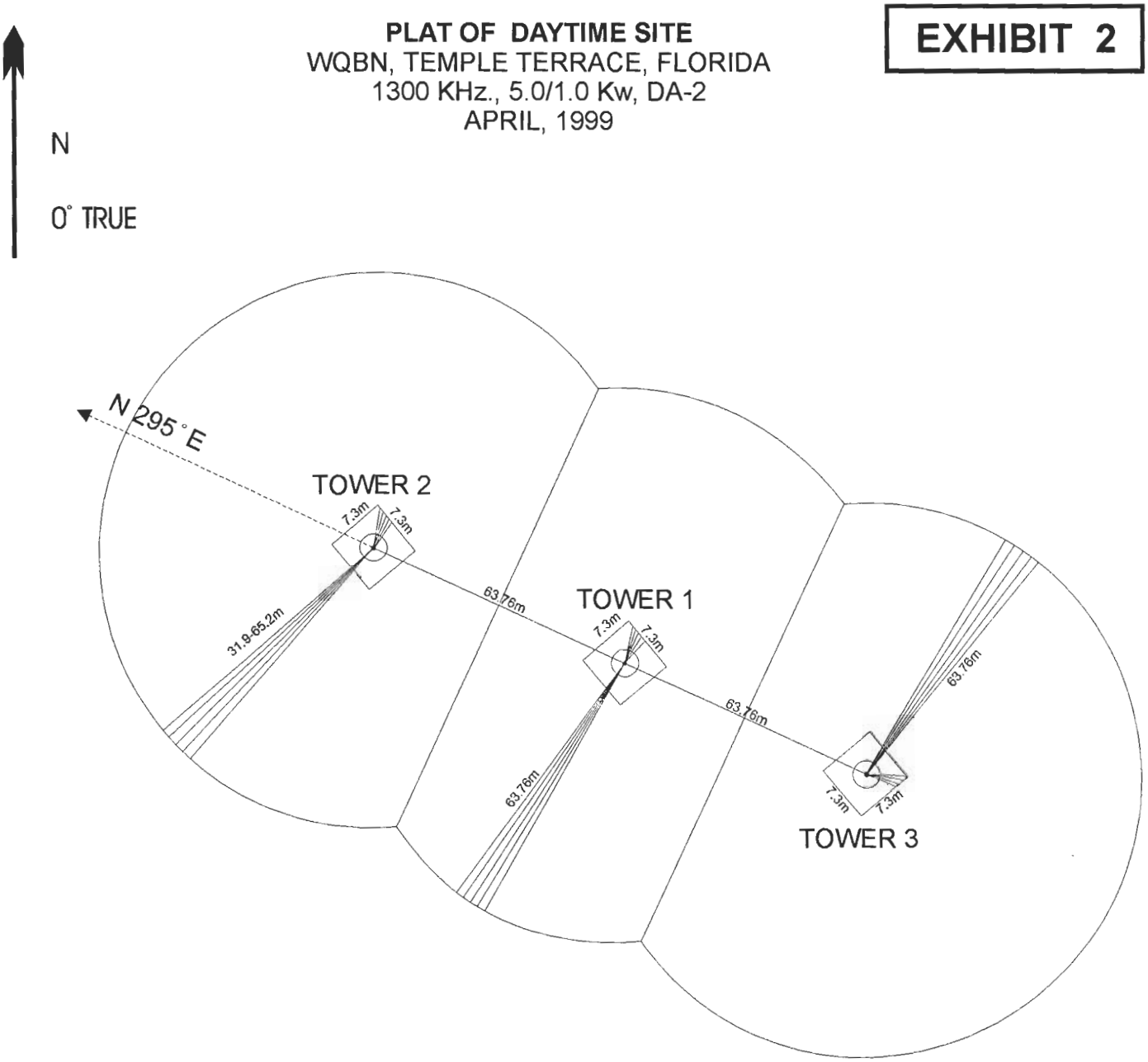


EXHIBIT 2

PLAT OF DAYTIME SITE
WQBN, TEMPLE TERRACE, FLORIDA
1300 KHz., 5.0/1.0 Kw, DA-2
APRIL, 1999



The existing ground system will be used and consists of 120-31.9 to 65.2 meter buried copper radials about the base of each tower. In addition, a 7.3 square meter copper ground screen is at the base of each tower. The radials are shortened and bonded to transverse copper straps between adjacent towers plus an additional strap bonding the centers of grounds.

EXHIBIT 3

ENGINEERING EXHIBIT
APPLICATION FOR LICENSE AND PROOF OF PERFORMANCE
WQBN, TEMPLE TERRACE, FLORIDA

ANTENNA OPERATING SPECIFICATIONS

DAYTIME

Tower:	#1(C)	#2(NW)	#3(SE)
Theoretical Field Ratio:	1.000	0.822	0.527
Theoretical Phase: (Degrees)	0.00	-102.6	157.6
Operating Base Currents (Amps):	7.80	4.40	3.70
Operating Base Current Ratio:	1.000	0.564	0.474
Antenna Monitor Loop Currents:	100.0	60.0	50.0
Antenna Monitor Phase: (Degrees)	0.00	-95.0	125.0

POWER DETERMINATION:

Measured Resistance =	52	Ohms
Common Point =	10.19	Amperes
Power (10.0)x(10.0)x(54) =	5399	Watts

EXHIBIT 4

ENGINNERING EXHIBIT
APPLICATION FOR LICENSE AND PROOF OF PERFORMANCE
WQBN, TEMPLE TERRACE, FLORIDA
1300 KHz. 5.0/1.0 Kw DA-2

TABULATION OF UNATTENUATED FIELD INTENSITIES

(DAYTIME)

RadialTrue Bearing (Degrees)	DA/NON-DA (Ratio)	Inverse Field at one Kilometer: Measured NON-DA 1250 watts (mV/m)	Inverse Field at one Kilometer: C.P. Max Standard Pattern (mV/m)	Inverse Field at one Kilometer: 1999 Measured 5400 watts DA-D (mV/m)	Monitor Point Distance (Km)	Monitor Point Values (mV/m)
*32	0.917	320	415.7	293.4	7.13	23.0
45	0.720	320	423.98	230.4		
*115	0.227	390	149.6	88.5	4.83	9.0
185	1.061	310	423.98	328.9		
*198	1.329	310	415.7	412	2.81	125.0
245	2.841	340	1001.27	966		
295	3.161	390	1330.39	1221		
345	2.803	340	1001.26	953		

* CP Radials

EXHIBIT 5

MAP INDEX

WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz, 5.0/1.0 Kw, DA-2

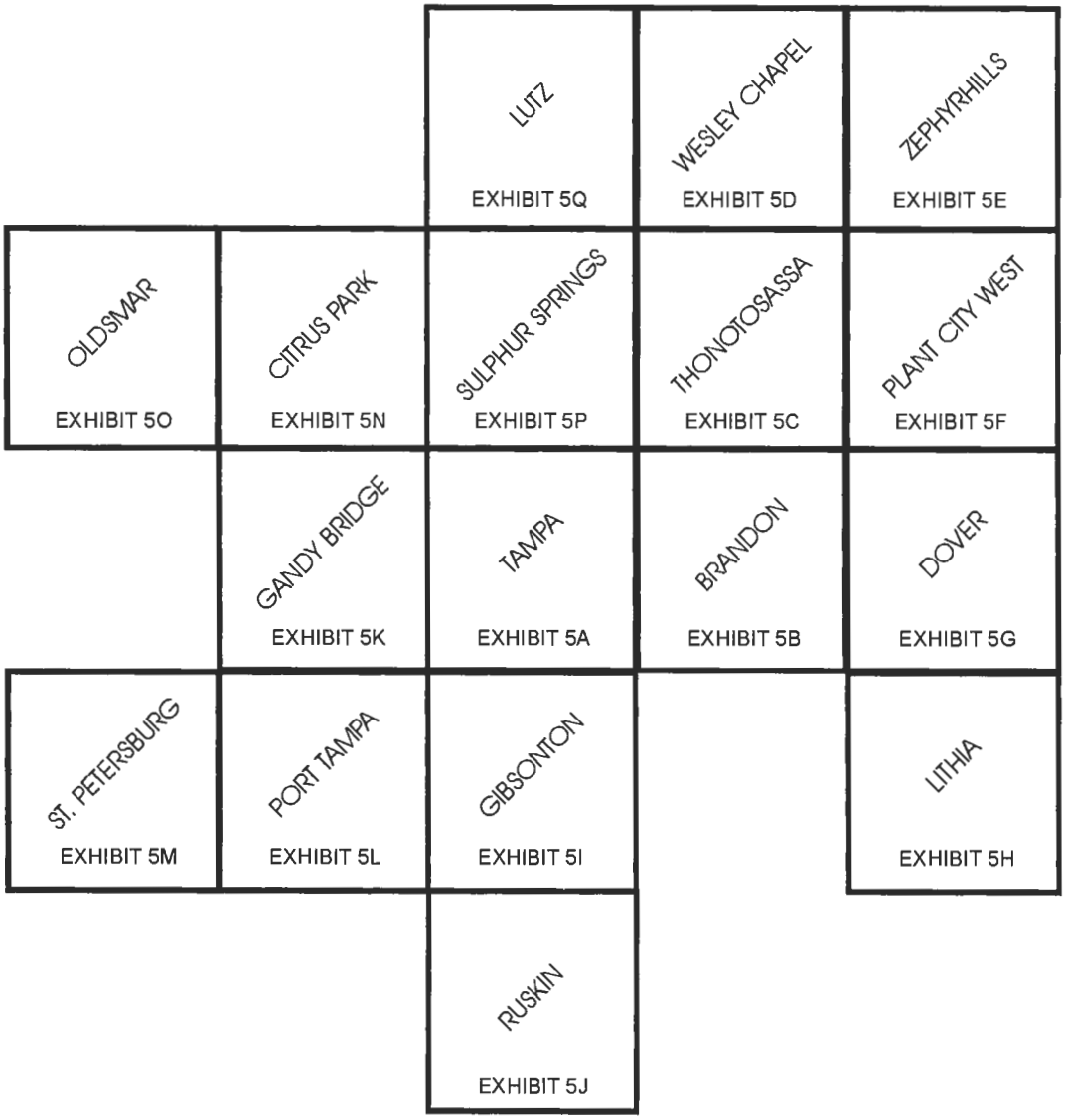
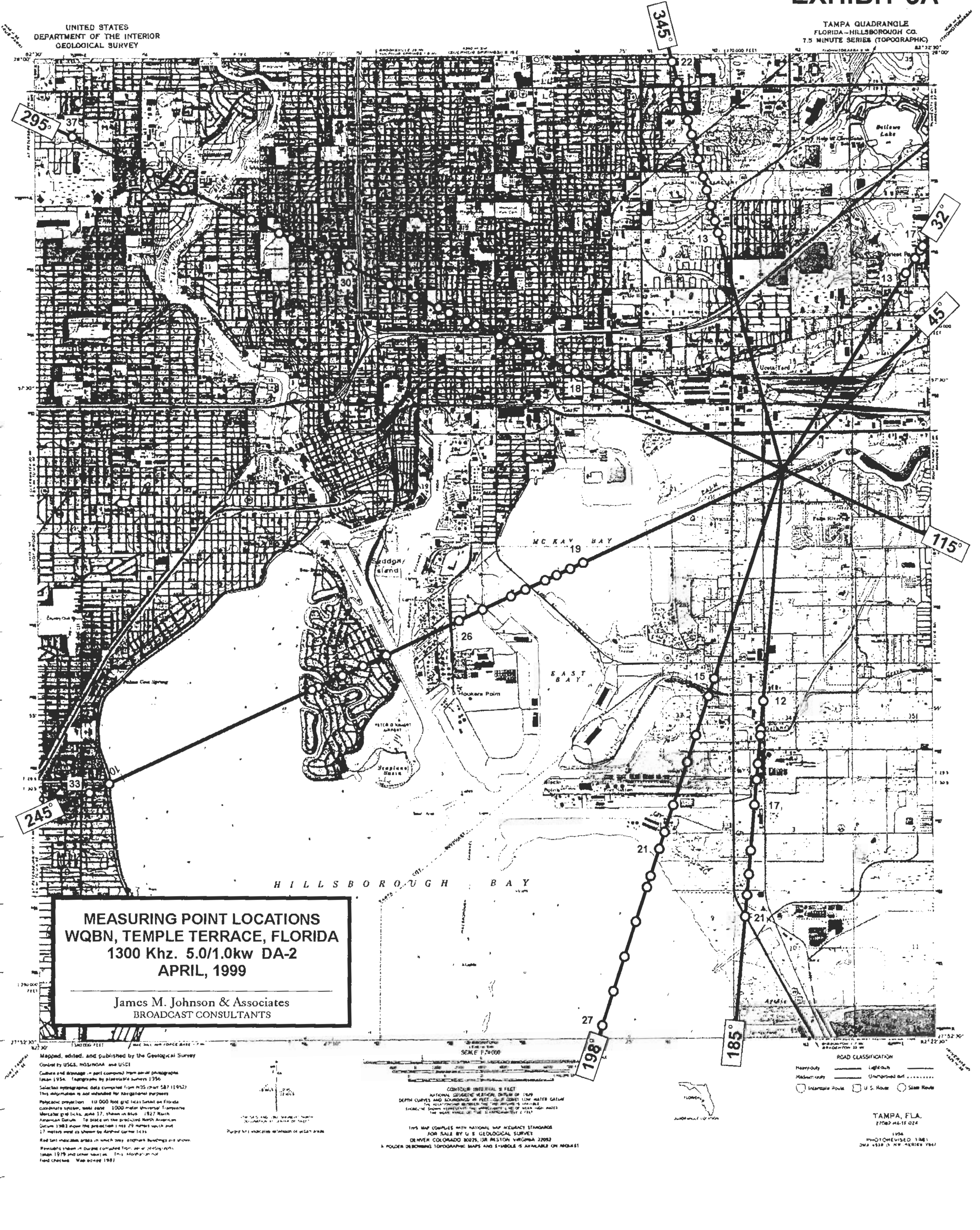


EXHIBIT 5A



MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999

James M. Johnson & Associates
BROADCAST CONSULTANTS

EXHIBIT 5B

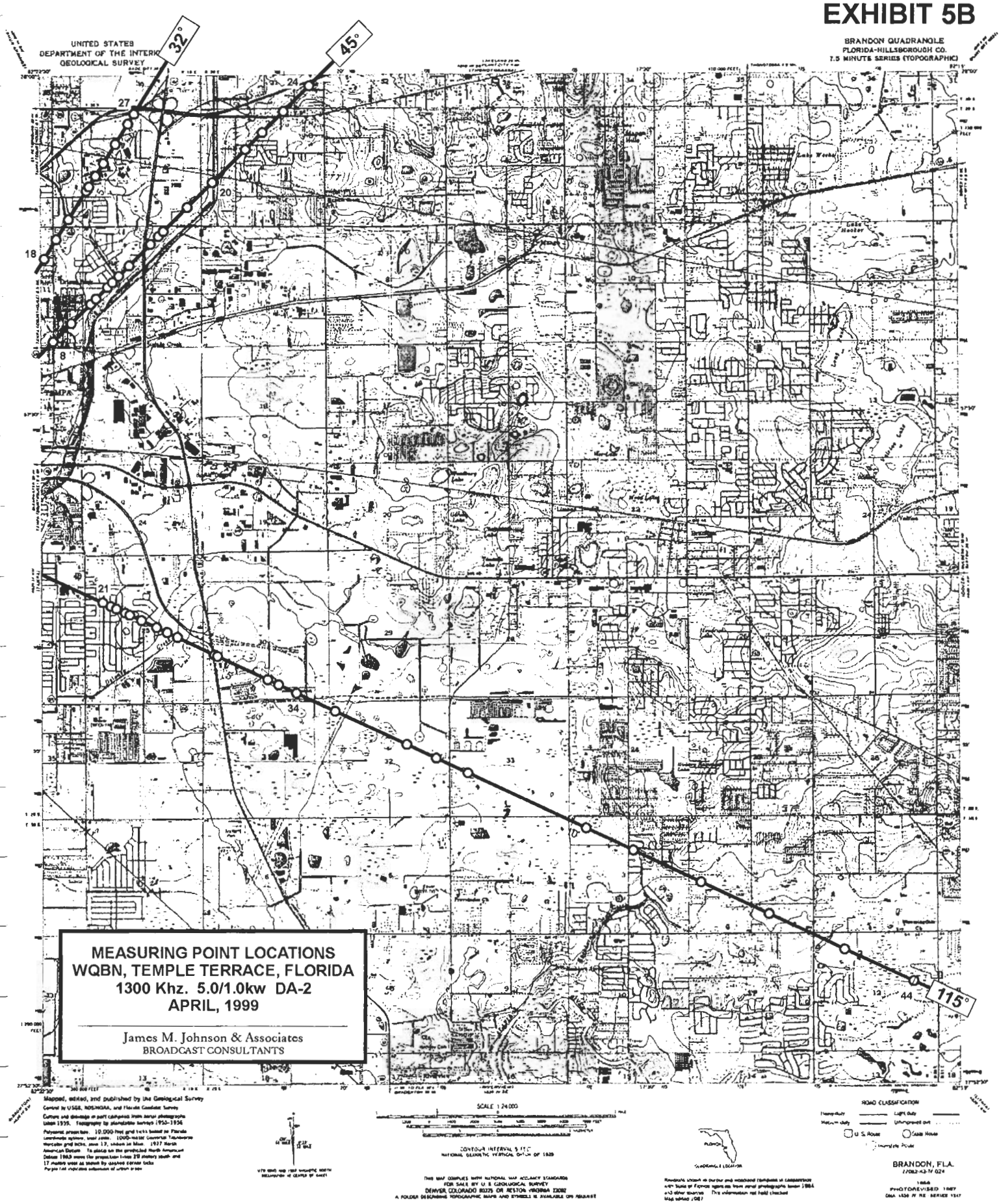
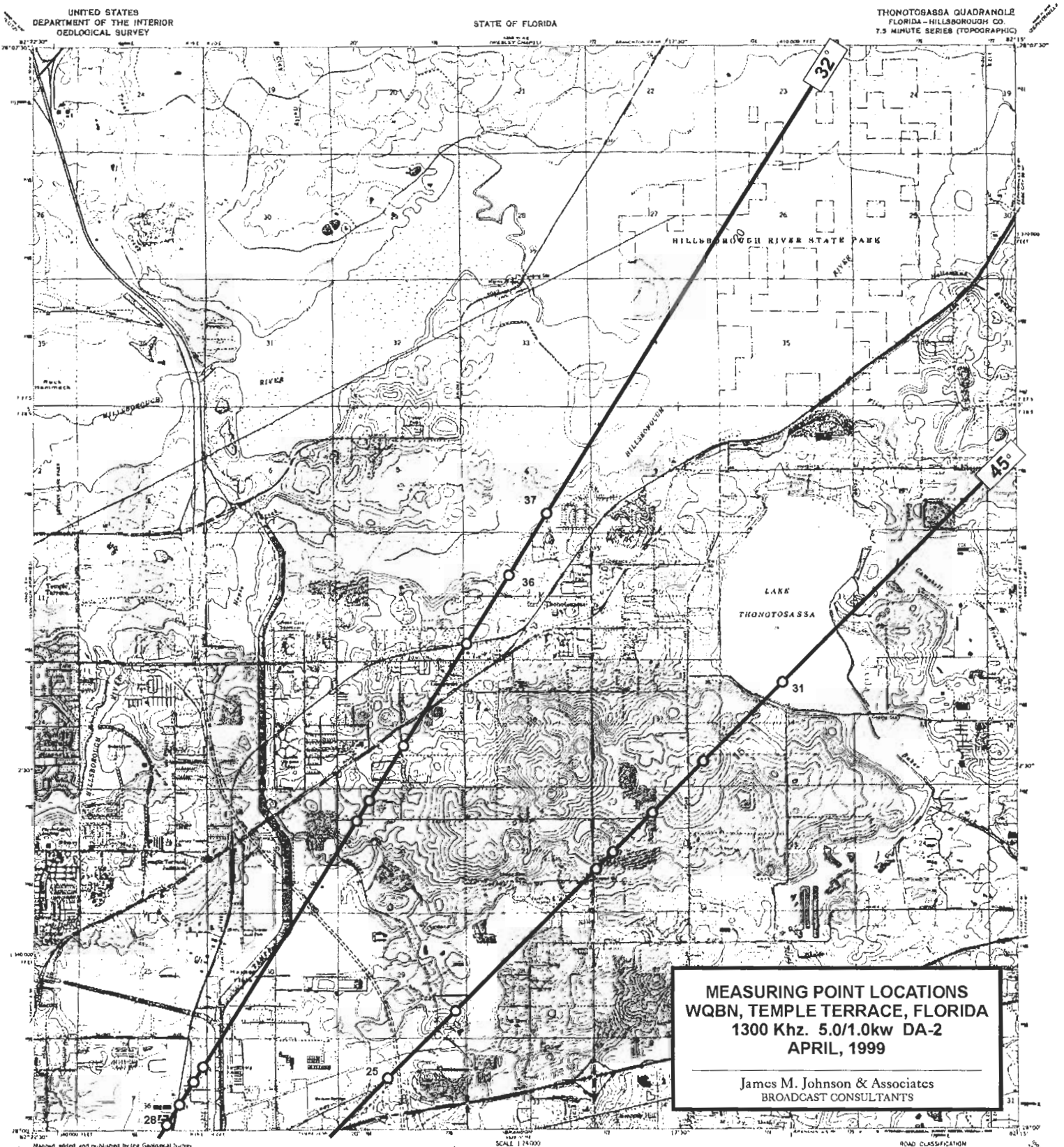

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
BRANDON QUADRANGLE
FLORIDA-HILLSBOROUGH CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
32°
45°
115°
MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999
James M. Johnson & Associates
BROADCAST CONSULTANTS
SCALE 1:24 000
CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
ROAD CLASSIFICATION
BRANDON, FLA.

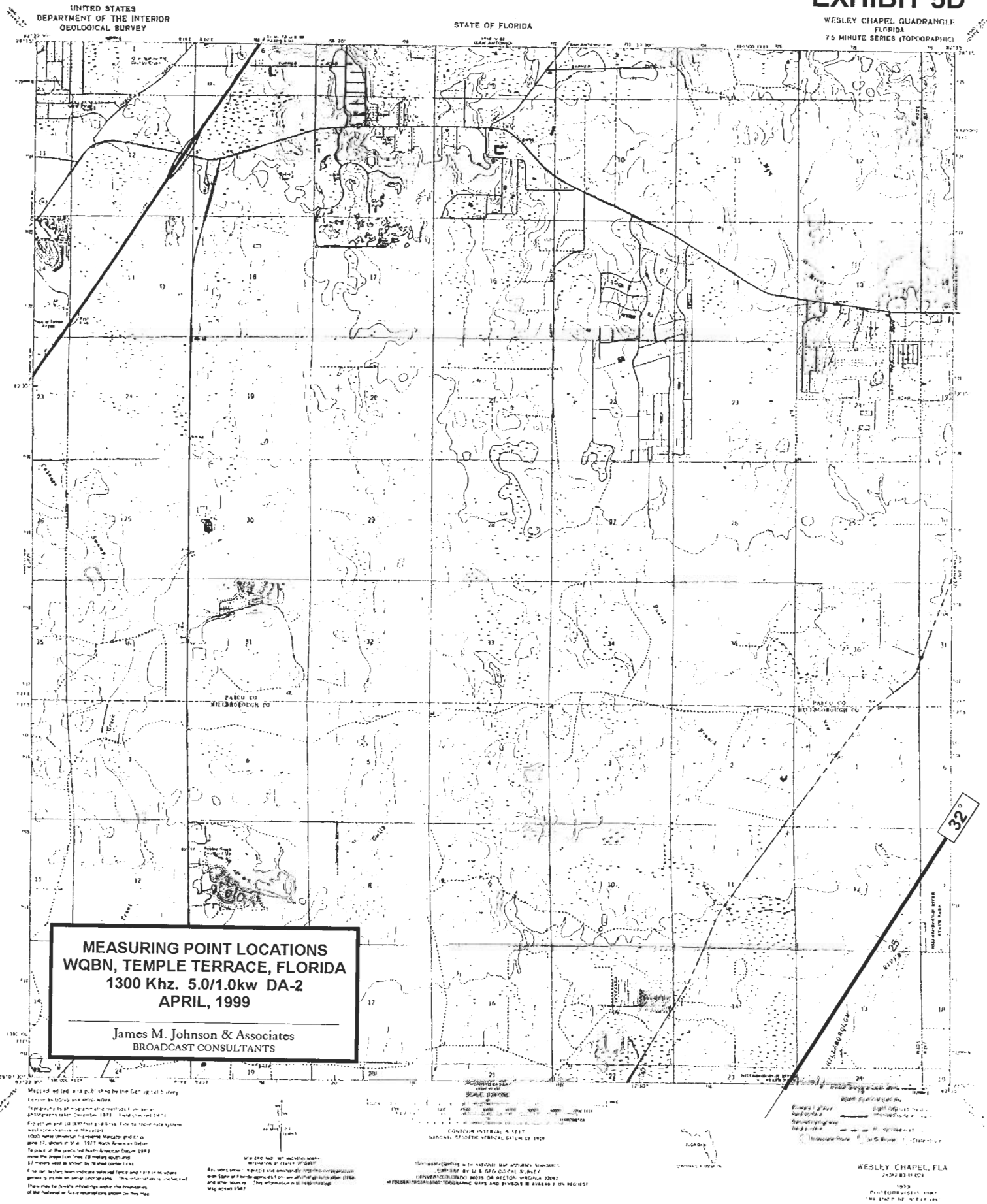
EXHIBIT 5C



MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999

James M. Johnson & Associates
BROADCAST CONSULTANTS

EXHIBIT 5D



MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999

James M. Johnson & Associates
BROADCAST CONSULTANTS

EXHIBIT 5E

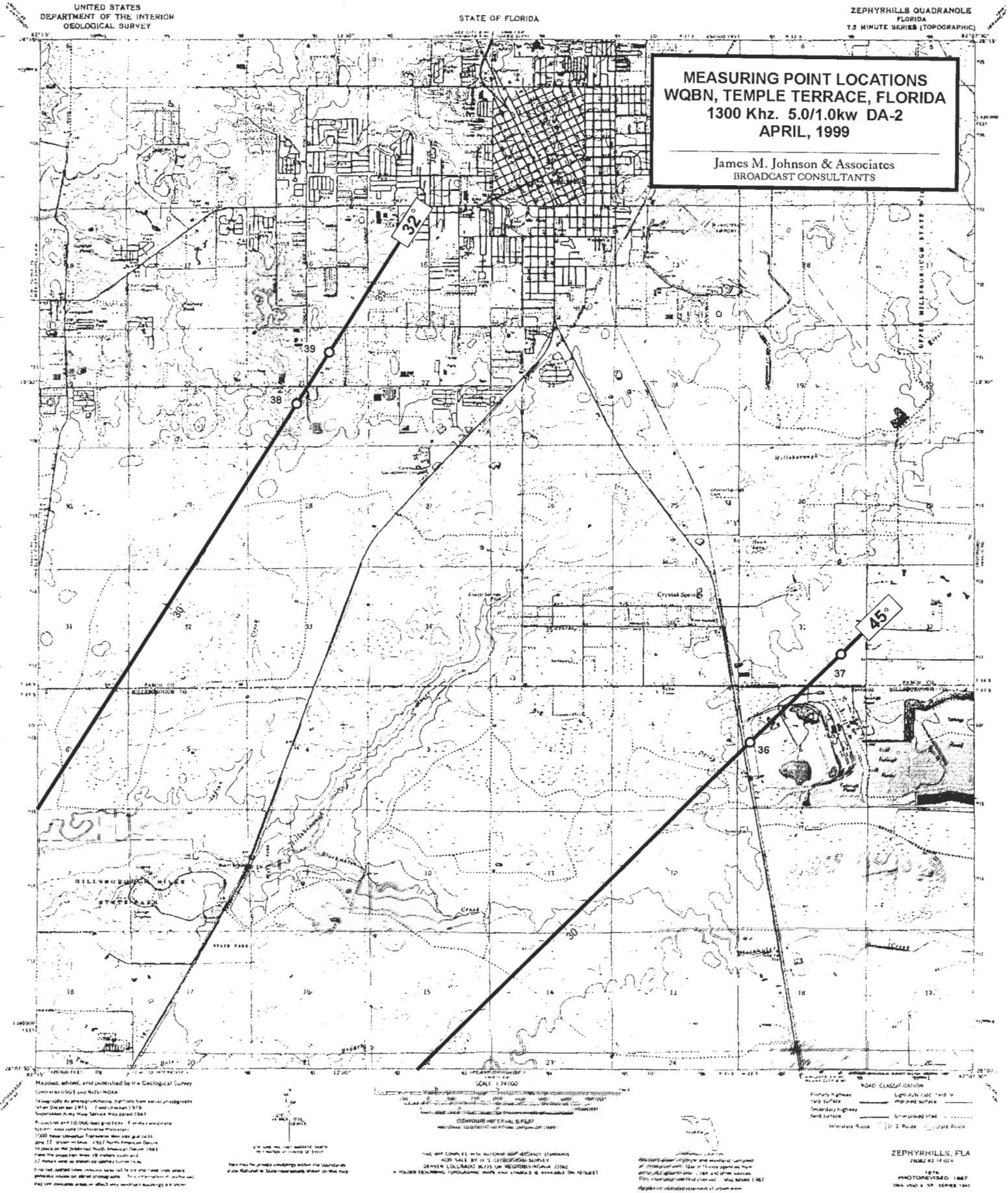

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
STATE OF FLORIDA
ZEPHYRHILLS QUADRANGLE
FLORIDA
7.5 MINUTE SERIES (TOPOGRAPHIC)
MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999
James M. Johnson & Associates
BROADCAST CONSULTANTS
32°
39
38
30
45°
37
36
30
Crystal Spring
ZEPHYRHILLS, FLA

EXHIBIT 5F

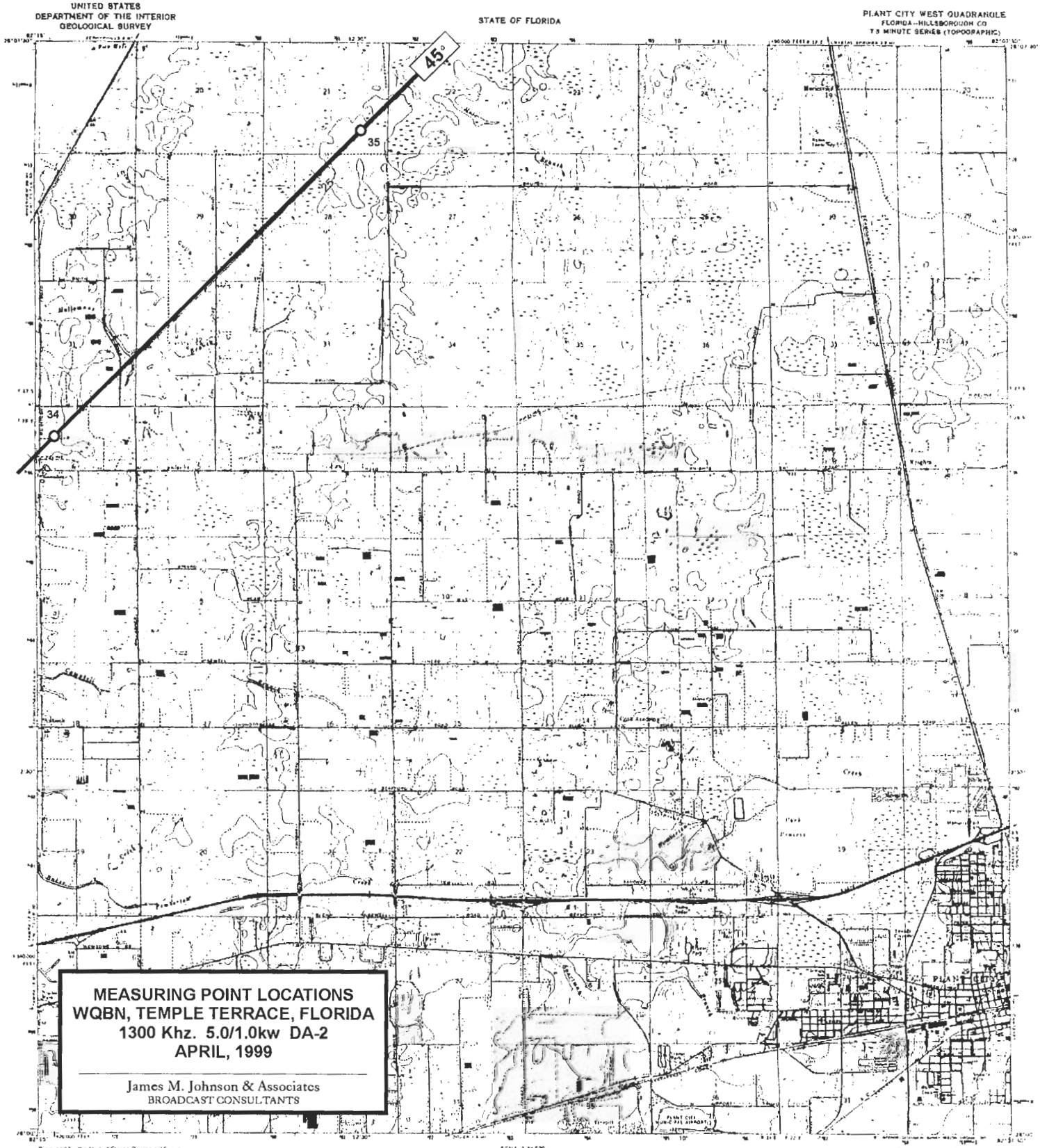

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
STATE OF FLORIDA
PLANT CITY WEST QUADRANGLE
FLORIDA--HILLSBOROUGH CO
7.5 MINUTE SERIES (TOPOGRAPHIC)
45°
35
34
MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999
James M. Johnson & Associates
BROADCAST CONSULTANTS
PLANT CITY WEST, FLA

EXHIBIT 5G

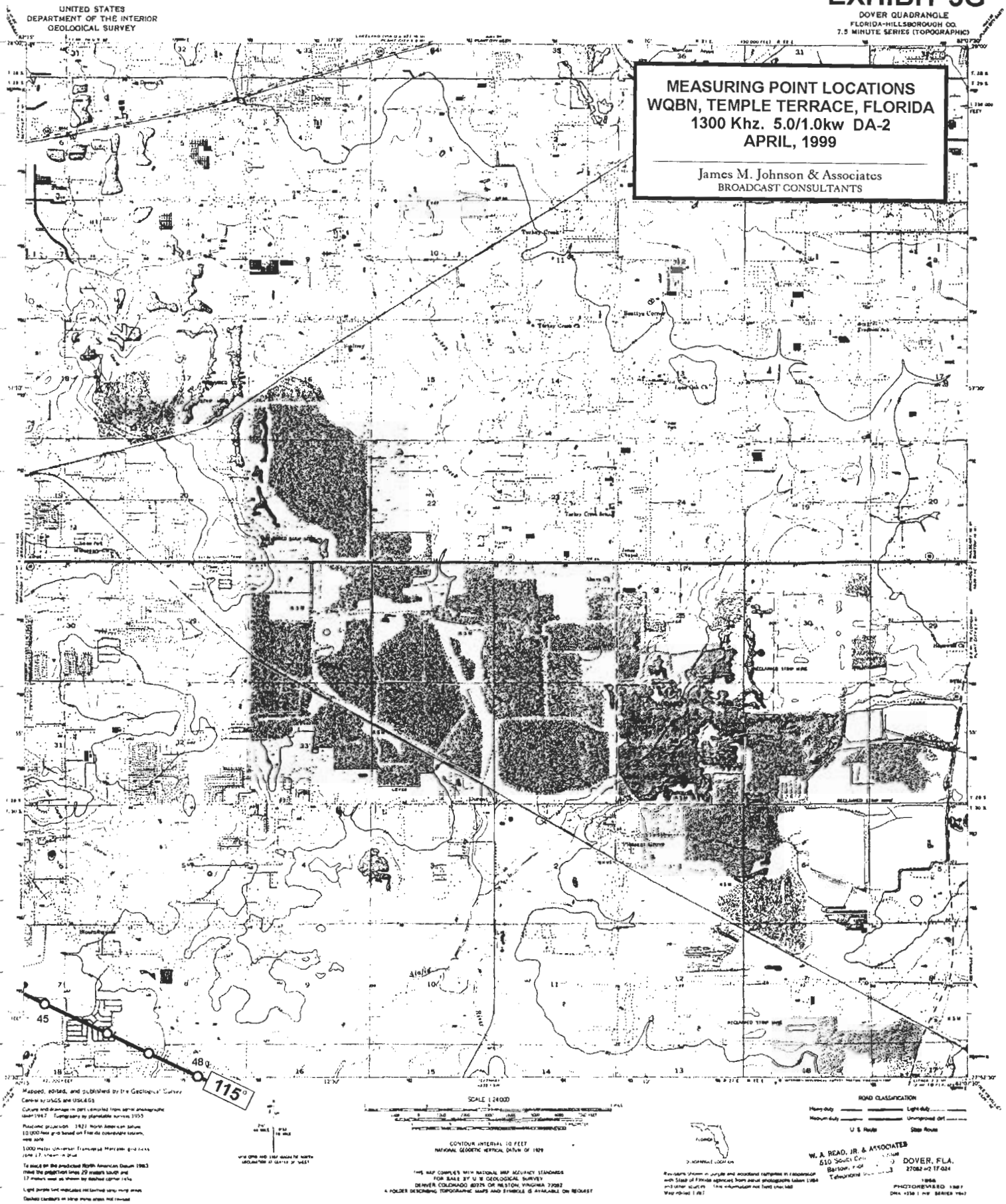

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
DOVER QUADRANGLE
FLORIDA-HILLSBOROUGH CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999
James M. Johnson & Associates
BROADCAST CONSULTANTS
45
48
115°
SCALE 1:24000
CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
ROAD CLASSIFICATION
W. A. READ, JR. & ASSOCIATES
DOVER, FLA.
27082-H2-TF-024
1984
PHOTOREVISED 1987

EXHIBIT 5H

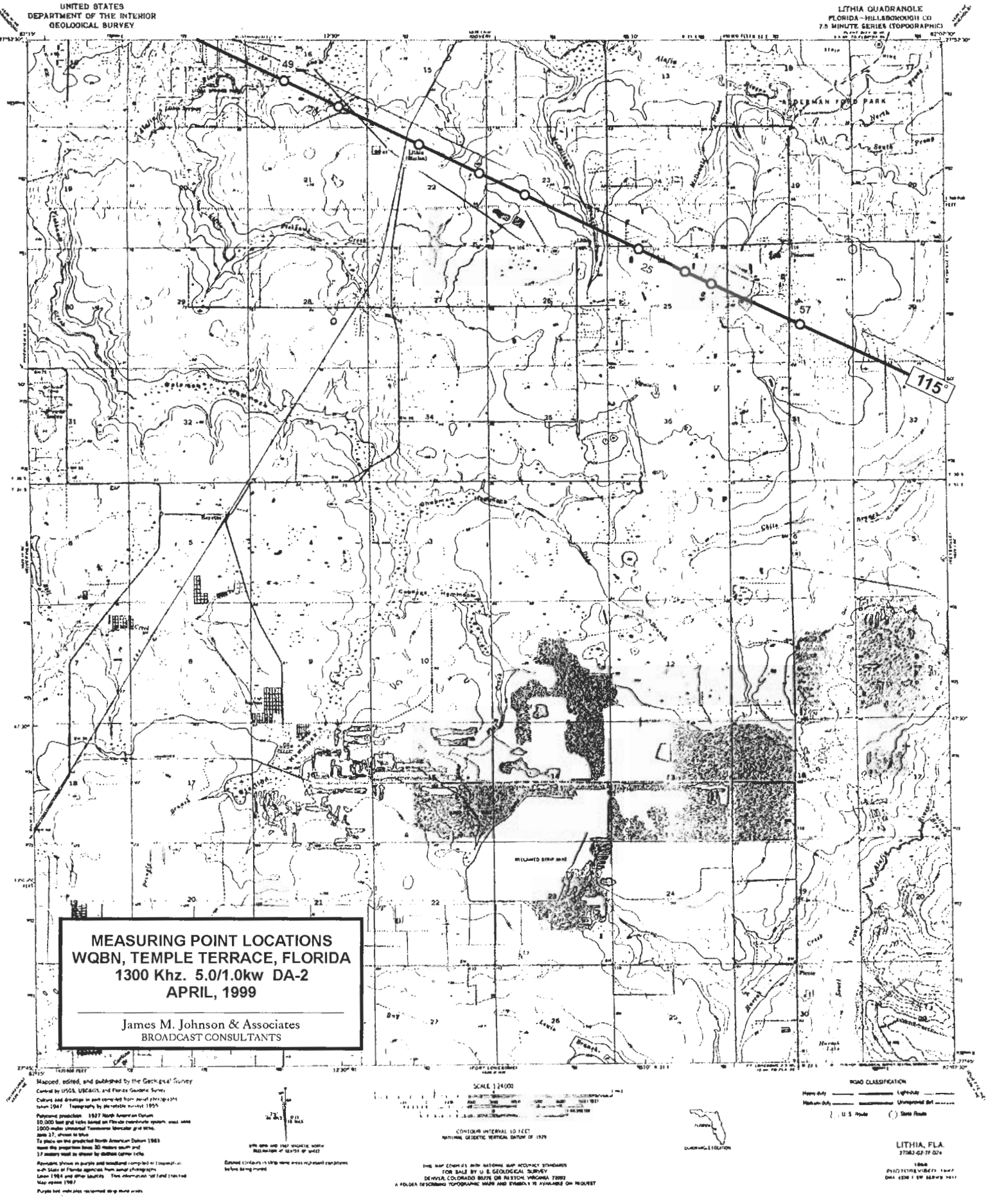
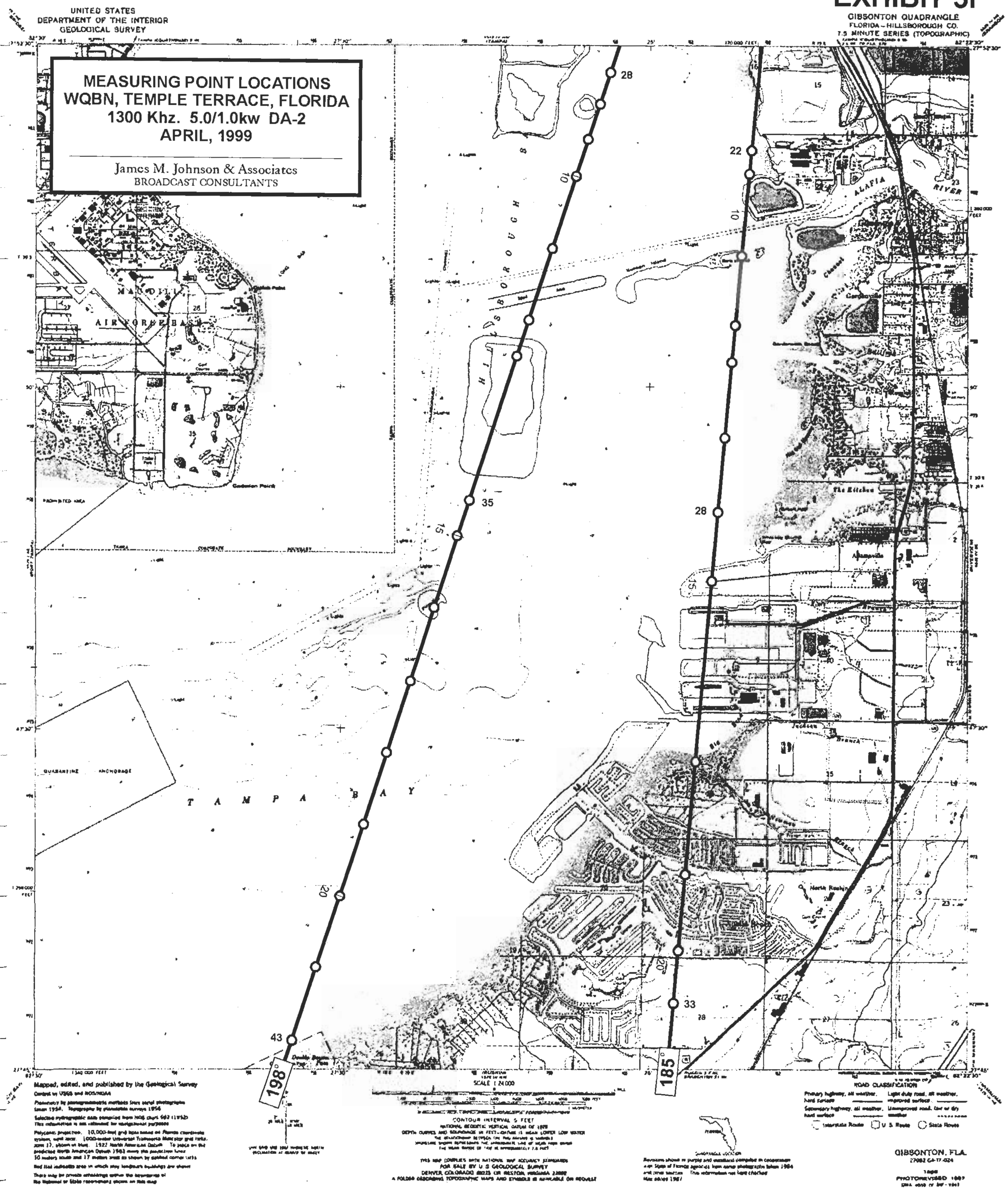

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
LITHIA QUADRANGLE
FLORIDA-HILLSBOROUGH CO
7.5 MINUTE SERIES (TOPOGRAPHIC)
115°
MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999
James M. Johnson & Associates
BROADCAST CONSULTANTS
LITHIA, FLA.

EXHIBIT 5I



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
GIBSONTON QUADRANGLE
FLORIDA–HILLSBOROUGH CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999
James M. Johnson & Associates
BROADCAST CONSULTANTS
198°
185°
ALAFIA RIVER
TAMPA BAY
QUARANTINE ANCHORAGE
SCALE 1:24 000
CONTOUR INTERVAL 5 FEET
ROAD CLASSIFICATION
GIBSONTON, FLA.

EXHIBIT 5J

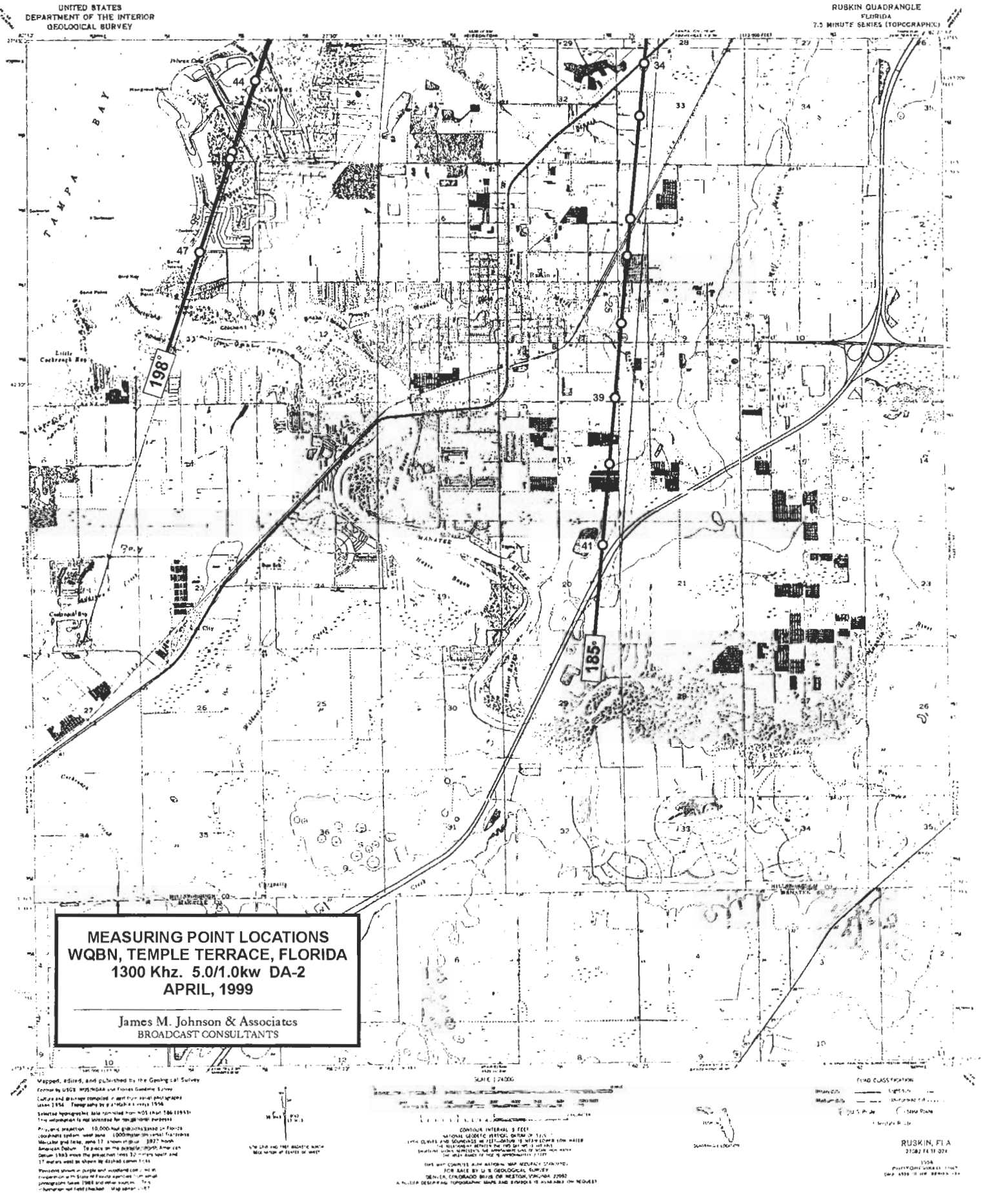

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
RUSKIN QUADRANGLE
FLORIDA
7.5 MINUTE SERIES (TOPOGRAPHIC)
TAMPA BAY
198°
185°
MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999
James M. Johnson & Associates
BROADCAST CONSULTANTS
RUSKIN, FLA.

EXHIBIT 5K

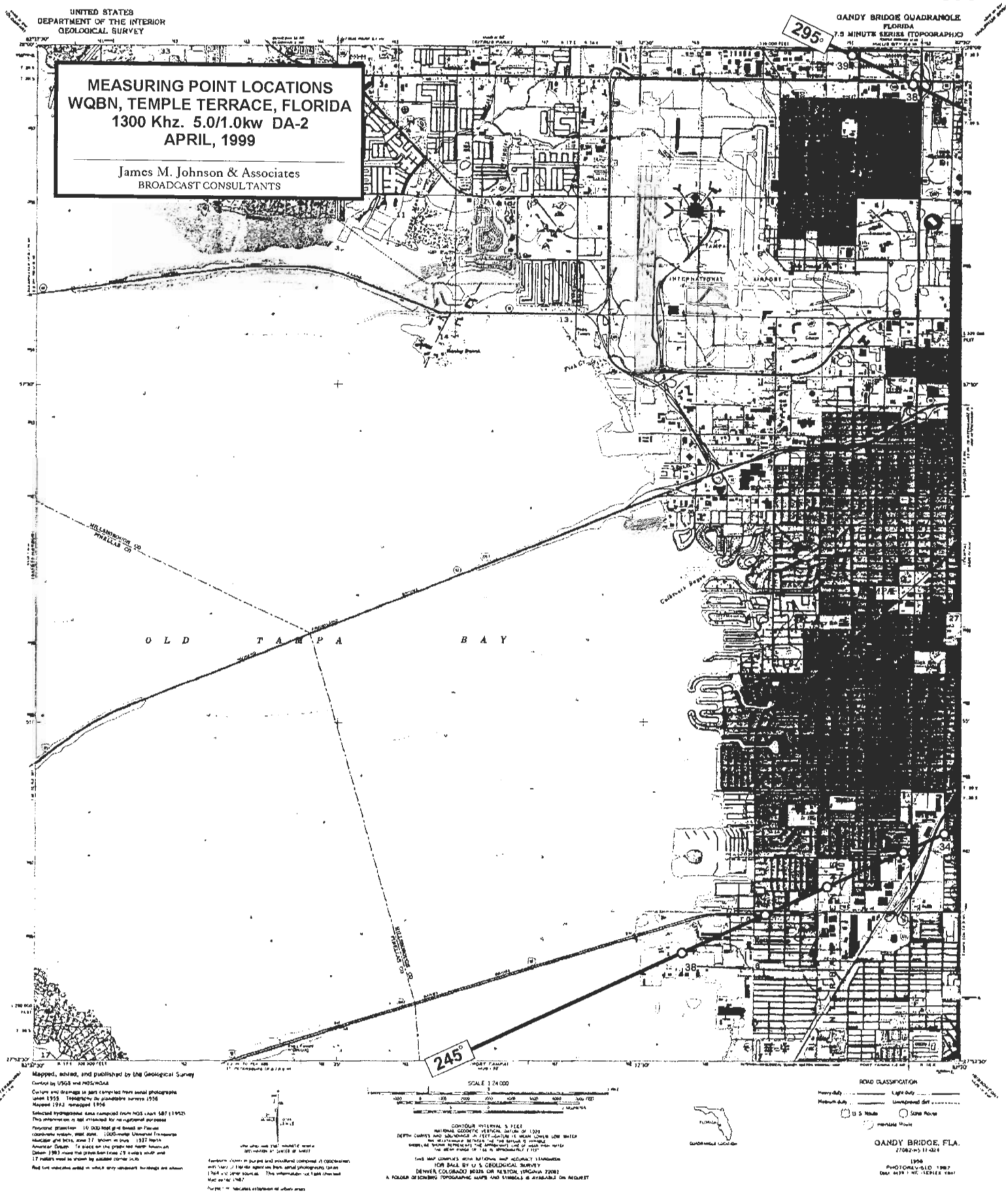
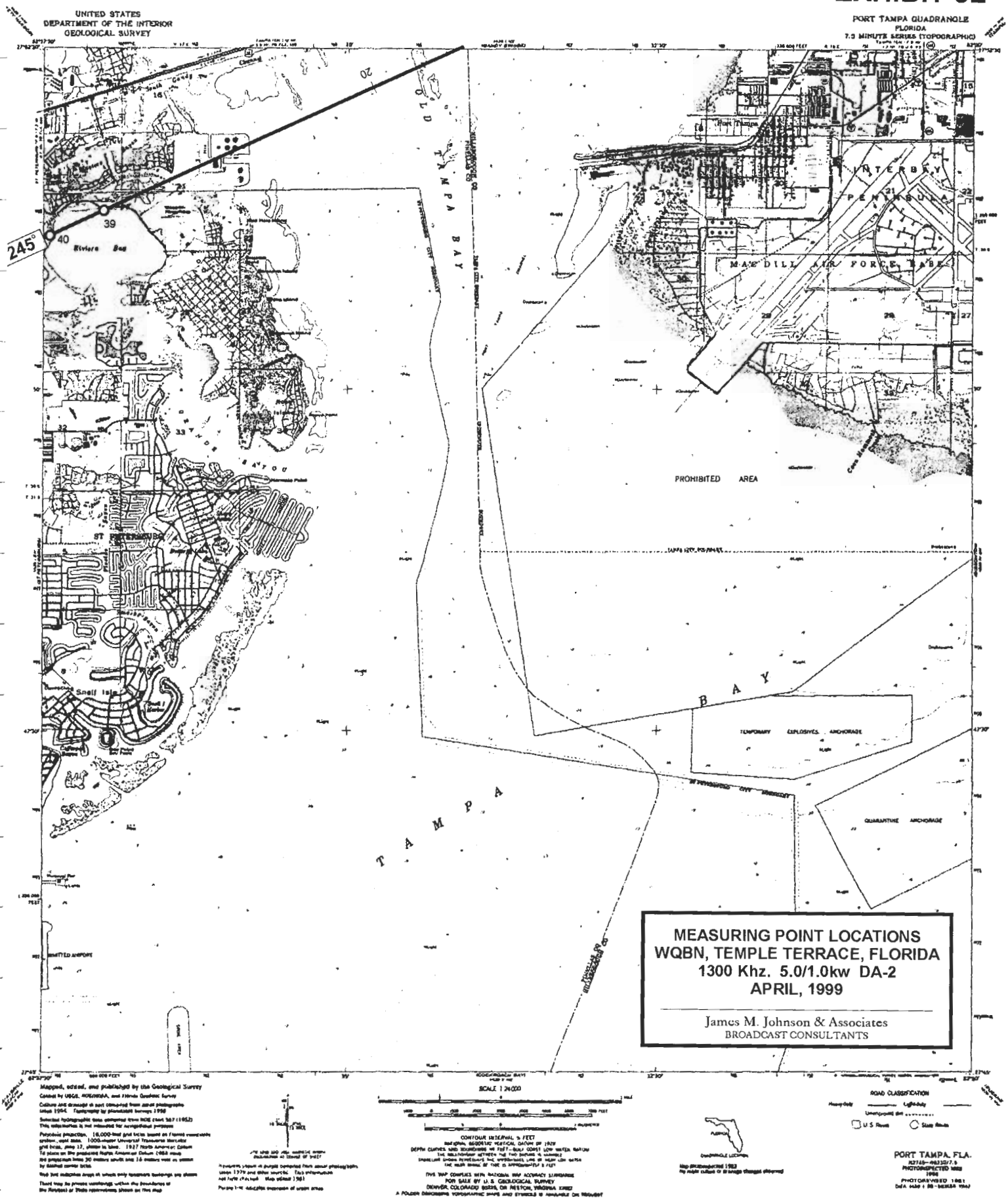

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
GANDY BRIDGE QUADRANGLE
FLORIDA
7.5 MINUTE SERIES (TOPOGRAPHIC)
MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999
James M. Johnson & Associates
BROADCAST CONSULTANTS
295°
245°
OLD TAMPA BAY
INTERNATIONAL AIRPORT
GANDY BRIDGE, FLA.

EXHIBIT 5L



MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999

James M. Johnson & Associates
BROADCAST CONSULTANTS

EXHIBIT 5M

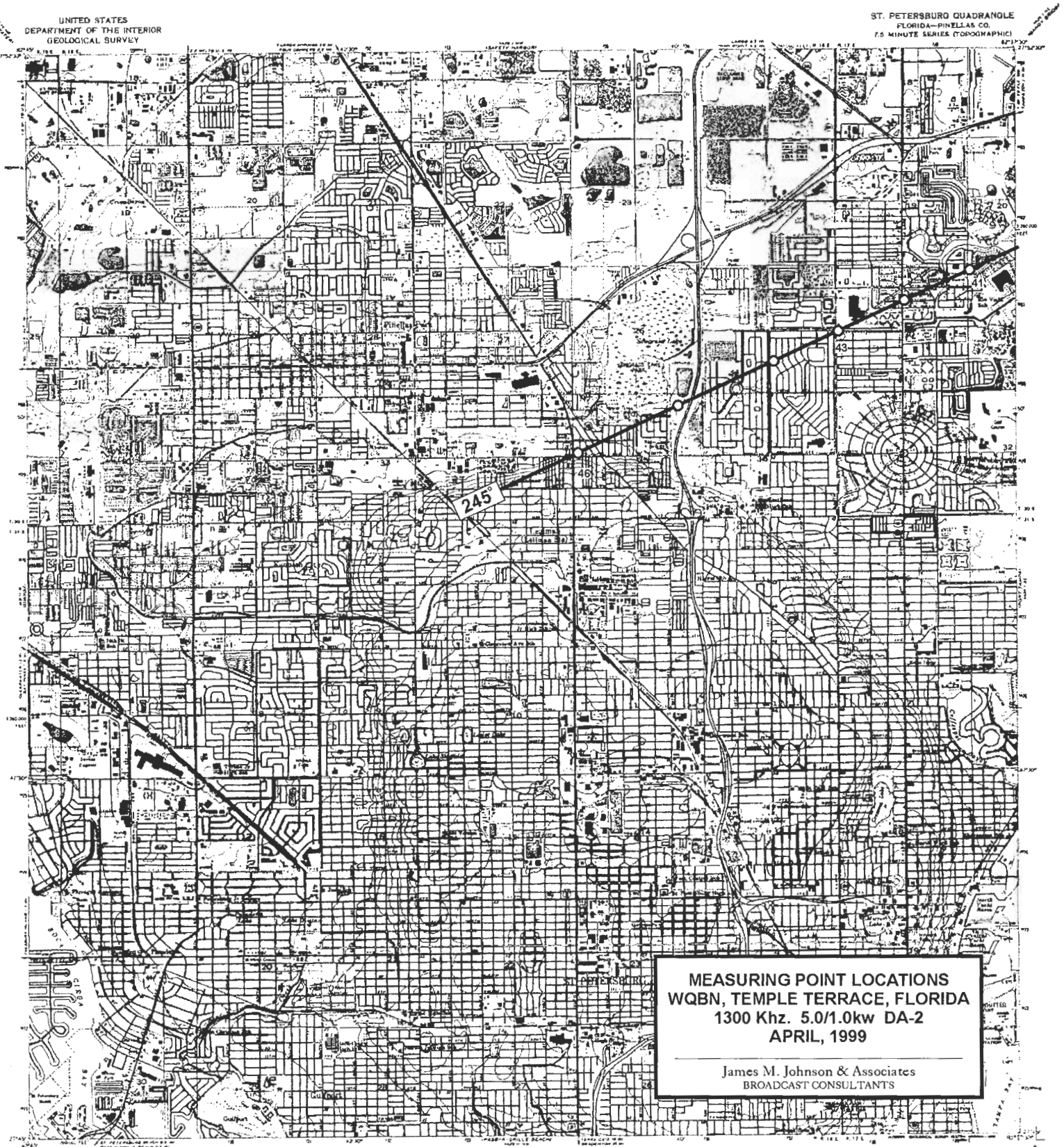

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
ST. PETERSBURG QUADRANGLE
FLORIDA—PINELLAS CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
245
MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999
James M. Johnson & Associates
BROADCAST CONSULTANTS
Mapped, edited, and published by the Geological Survey
SCALE 1:24000
ROAD CLASSIFICATION
ST. PETERSBURG, FLA.
1968
PHOTOREVISED 1987

EXHIBIT 5N

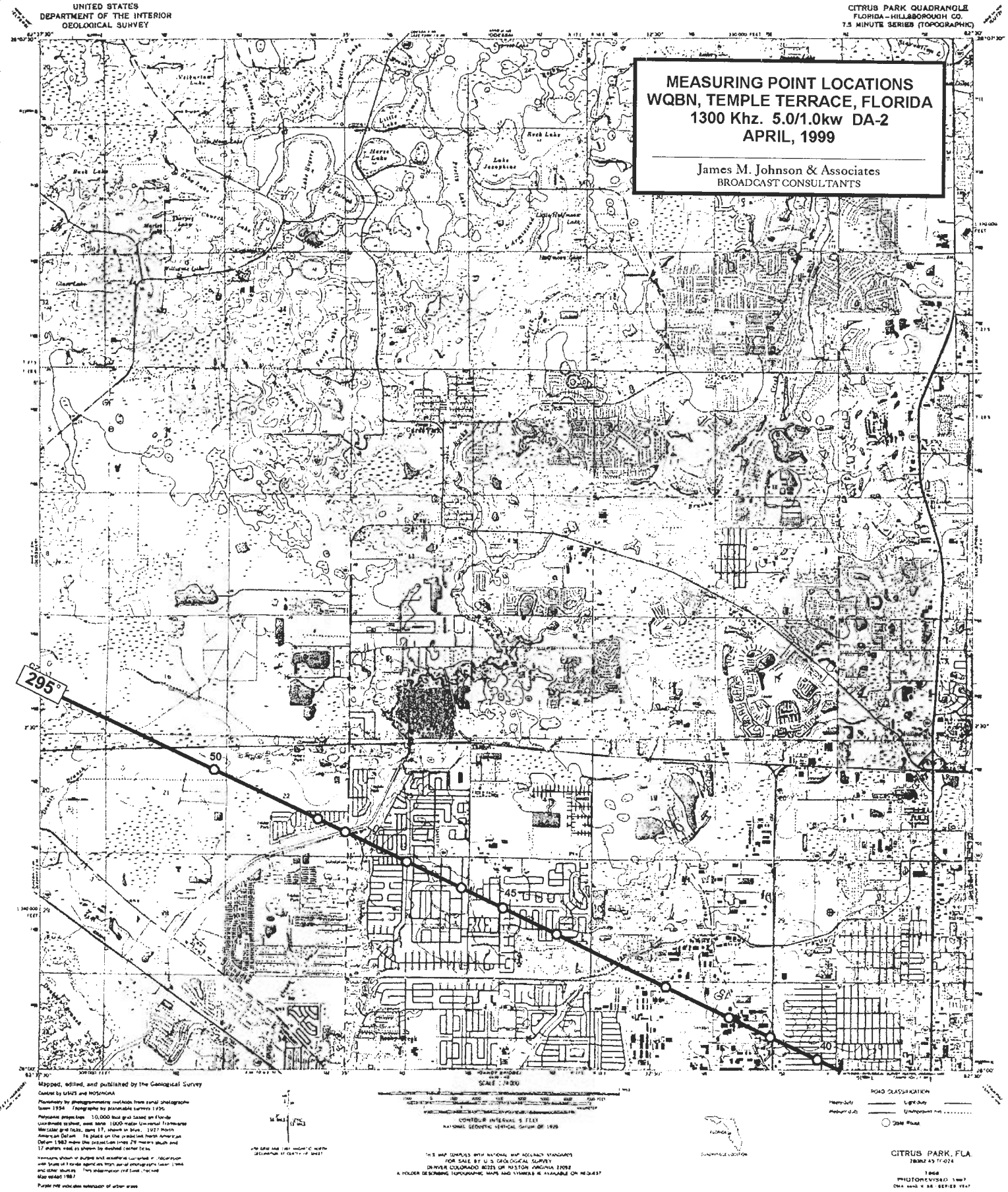

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CITRUS PARK QUADRANGLE
FLORIDA—HILLSBOROUGH CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999
James M. Johnson & Associates
BROADCAST CONSULTANTS
295°
50
45
40
Mapped, edited, and published by the Geological Survey
CITRUS PARK, FLA.

EXHIBIT 5O

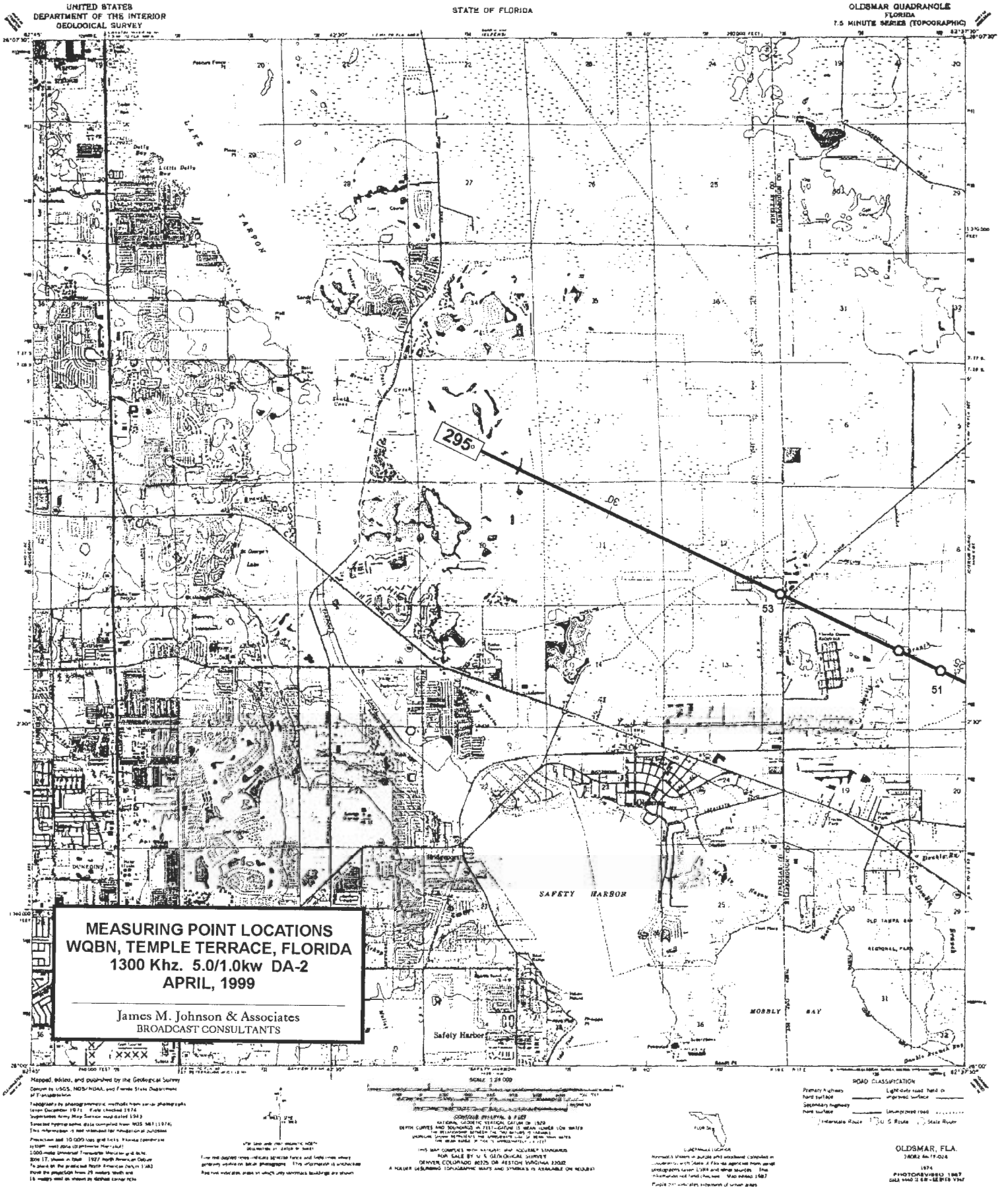

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
STATE OF FLORIDA
OLDSMAR QUADRANGLE
FLORIDA
7.5 MINUTE SERIES (TOPOGRAPHIC)
295°
DE
53
51
SAFETY HARBOR
Safety Harbor
MOBBLY BAY
TARPON
LAKE
MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999
James M. Johnson & Associates
BROADCAST CONSULTANTS
OLDSMAR, FLA.
1974

EXHIBIT 5P

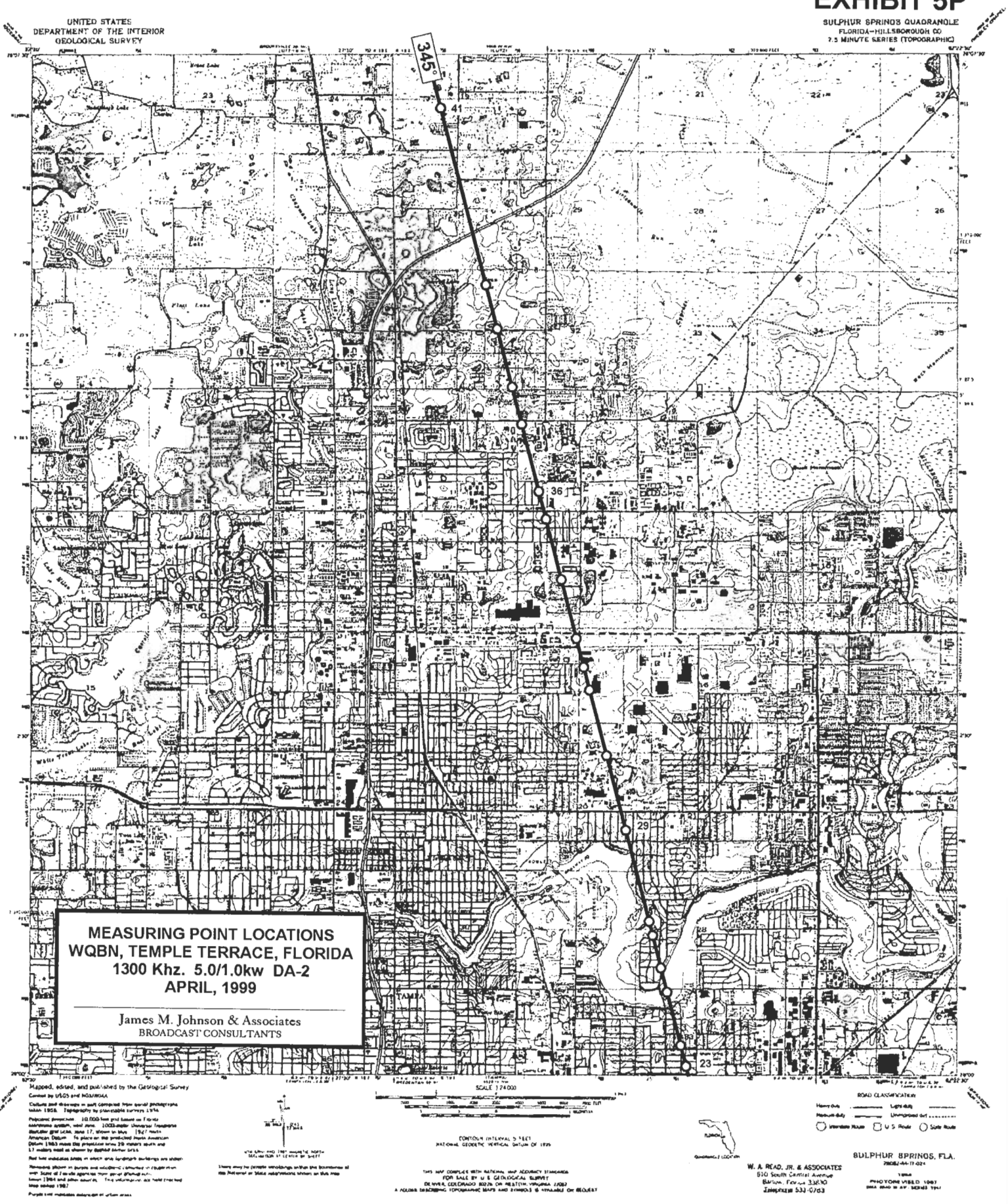

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
SULPHUR SPRINGS QUADRANGLE
FLORIDA—HILLSBOROUGH CO
7.5 MINUTE SERIES (TOPOGRAPHIC)
345°
MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999
James M. Johnson & Associates
BROADCAST CONSULTANTS
Mapped, edited, and published by the Geological Survey
SCALE 1:24000
CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
ROAD CLASSIFICATION
SULPHUR SPRINGS, FLA.
W. A. READ, JR. & ASSOCIATES
510 South Central Avenue
Belton, Texas 33230
Telephone 533-0763

EXHIBIT 5Q

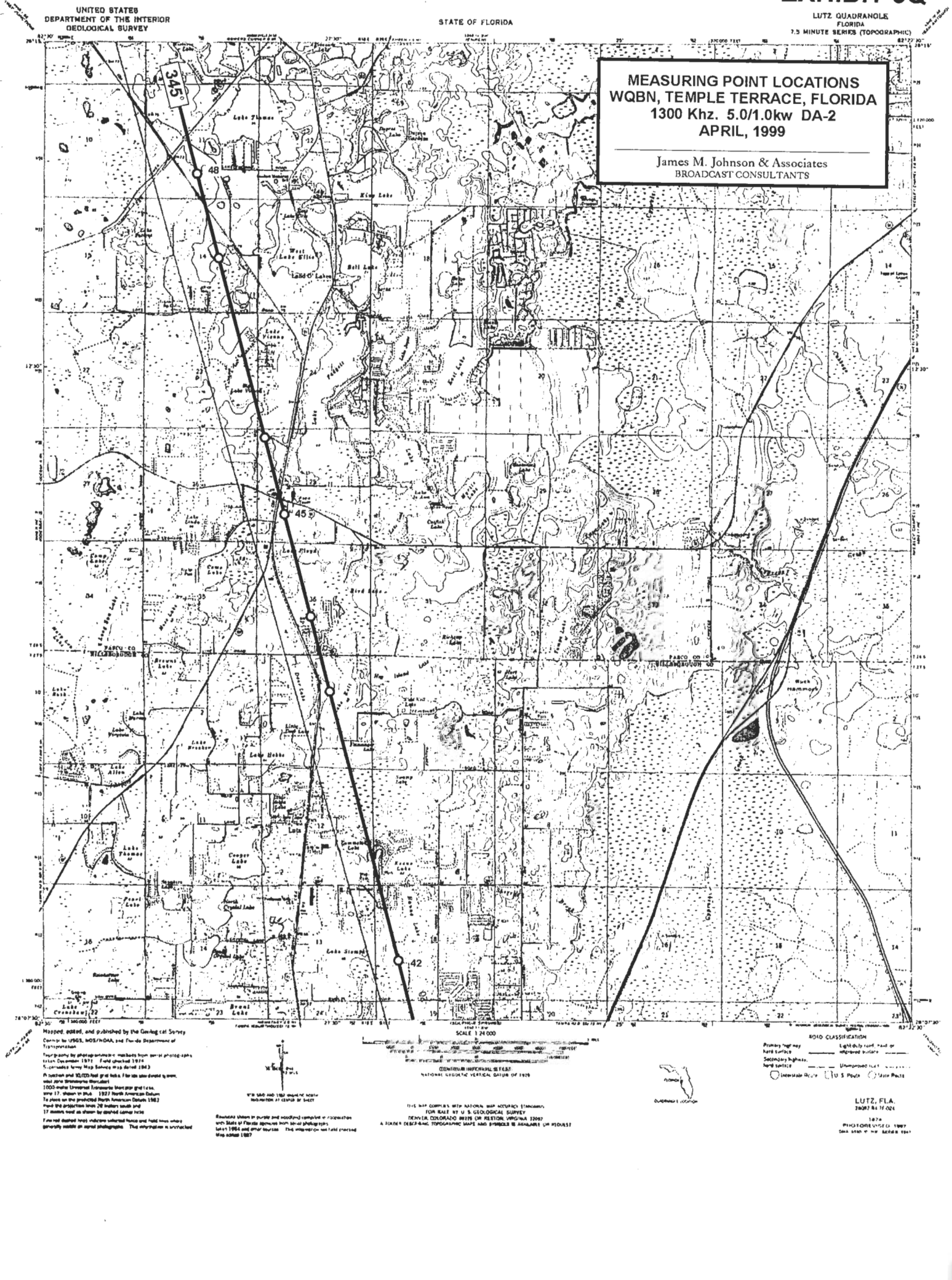

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
STATE OF FLORIDA
LUTZ QUADRANGLE
FLORIDA
7.5 MINUTE SERIES (TOPOGRAPHIC)
MEASURING POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0kw DA-2
APRIL, 1999
James M. Johnson & Associates
BROADCAST CONSULTANTS
345
48
45
42
SCALE 1:24 000
ROAD CLASSIFICATION
LUTZ, FLA.

EXHIBIT 6

TABULATION OF DAYTIME FIELD STRENGTH DATA

All readings are 24 hour Eastern Daylight Time.

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 32 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
1	0.57	540.0	4/21/99	1530				
2	0.77	340.0	4/21/99	1527				
3	0.90	280.0	4/21/99	1525				
4	1.33	350.0	4/21/99	1433	460.0	4/21/99	1433	1.314
5	1.69	138.0	4/21/99	934	130.0	4/21/99	934	0.942
6	1.80	148.0	4/21/99	937	130.0	4/21/99	937	0.878
7	2.04	110.0	4/21/99	941	80.0	4/21/99	941	0.727
8	2.14	109.0	4/21/99	939	104.0	4/21/99	939	0.954
9	2.25	125.0	4/21/99	945	116.0	4/21/99	945	0.928
10	2.44	100.0	4/21/99	953	95.0	4/21/99	953	0.950
11	2.78	85.0	4/21/99	956	87.0	4/21/99	956	1.024
12	2.98	80.0	4/21/99	1000	72.0	4/21/99	1000	0.900
13	3.11	62.0	4/21/99	1003	69.0	4/21/99	1003	1.113
14	3.17	66.0	4/21/99	1004	66.0	4/21/99	1004	1.000
15	3.41	70.0	4/21/99	1006	64.0	4/21/99	1006	0.914
16	3.53	65.0	4/21/99	1012	59.0	4/21/99	1012	0.908
17	3.60	65.0	4/21/99	1014	64.0	4/21/99	1014	0.985
18	3.87	56.0	4/21/99	1016	64.0	4/21/99	1016	1.143
19	4.17	53.0	4/21/99	1621	42.0	4/21/99	1621	0.792
20	4.47	37.0	4/21/99	1625	24.0	4/21/99	1625	0.649
21	4.92	42.0	4/21/99	1634	25.5	4/21/99	1634	0.607
22	5.00	35.0	4/21/99	1631	22.5	4/21/99	1631	0.643
23	5.17	32.0	4/21/99	1644	21.8	4/21/99	1644	0.681
24	5.36	30.0	4/21/99	1646	19.2	4/21/99	1646	0.640
25	5.66	30.0	4/21/99	1647	23.5	4/21/99	1647	0.783
26	5.98	26.0	4/21/99	1651	20.2	4/21/99	1651	0.777

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 32 Degrees

Point		Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.		Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
27		6.13	31.0	4/21/99	1653	29.0	4/21/99	1653	0.935
28		6.84	24.5	4/21/99	1027	22.5	4/21/99	1027	0.918
29	MP	7.13	26.0	4/21/99	1024	23.0	4/21/99	1024	0.885
30		7.46	22.2	4/21/99	1030	21.8	4/21/99	1030	0.982
31		7.69	21.5	4/21/99	1034	19.5	4/21/99	1034	0.907
32		11.3	11.0	4/21/99	1041	10.0	4/21/99	1041	0.909
33		11.6	10.0	4/21/99	1045	9.5	4/21/99	1045	0.950
34		12.4	6.90	4/21/99	1059	5.0	4/21/99	1059	0.725
35		13.9	4.40	4/21/99	1103	4.5	4/21/99	1103	1.023
36		14.9	3.70	4/21/99	1114	3.7	4/21/99	1114	1.000
37		15.8	3.00	4/21/99	1120	2.5	4/21/99	1120	0.833
38		33.2	0.57	4/21/99	1142	0.79	4/21/99	1142	1.386
39		34.0	0.50	4/21/99	1150	0.66	4/21/99	1150	1.320

Average Ratio= 0.917

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 45 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
1	0.43	720.0	4/24/99	1536				
2	0.67	440.0	4/24/99	1533				
3	0.92	280.0	4/24/99	1520				
4	1.85	170.0	4/24/99	1516				
5	2.49	190.0	4/24/99	1430	145.0	4/24/99	1430	0.763
6	2.65	92.0	4/21/99	1737	88.0	4/21/99	1737	0.957
7	2.87	80.0	4/21/99	1734	70.0	4/21/99	1734	0.875
8	3.08	90.0	4/21/99	1723	85.0	4/21/99	1723	0.944
9	3.41	80.0	4/21/99	1726	63.0	4/21/99	1726	0.788
10	3.77	57.0	4/21/99	1730	30.0	4/21/99	1730	0.526
11	3.88	58.0	4/21/99	1707	34.0	4/21/99	1707	0.586
12	4.10	67.0	4/21/99	1712	38.0	4/21/99	1712	0.567
13	4.19	52.0	4/21/99	1532	32.0	4/21/99	1532	0.615
14	4.31	48.0	4/21/99	1731	30.0	4/21/99	1731	0.625
15	4.50	58.0	4/21/99	1724	40.0	4/21/99	1724	0.690
16	4.91	40.0	4/21/99	1722	24.0	4/21/99	1722	0.600
17	5.05	32.0	4/21/99	1716	19.0	4/21/99	1716	0.594
18	5.14	40.0	4/21/99	1718	24.0	4/21/99	1718	0.600
19	5.59	29.0	4/21/99	1711	22.0	4/21/99	1711	0.759
20	6.07	32.0	4/21/99	1705	22.0	4/21/99	1705	0.688
21	6.69	23.5	4/21/99	1700	16.5	4/21/99	1700	0.702
22	7.01	23.5	4/21/99	1457	14.0	4/21/99	1457	0.596
23	7.40	18.0	4/21/99	1454	11.0	4/21/99	1454	0.611
24	7.88	18.0	4/21/99	1451	9.8	4/21/99	1451	0.544
25	9.02	12.5	4/21/99	1409	5.4	4/21/99	1409	0.432
26	10.2	11.0	4/21/99	1400	4.7	4/21/99	1400	0.427

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 45 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
27	12.7	3.70	4/21/99	1350	2.00	4/21/99	1350	0.541
28	13.0	3.20	4/21/99	1346	2.00	4/21/99	1346	0.625
29	13.7	4.00	4/21/99	1341	4.60	4/21/99	1341	1.150
30	14.6	2.60	4/21/99	1331	2.60	4/21/99	1331	1.000
31	16.0	1.95	4/21/99	1327	1.90	4/21/99	1327	0.974
32	20.4	1.45	4/21/99	1316	1.30	4/21/99	1316	0.897
33	21.4	1.02	4/21/99	1312	1.00	4/21/99	1312	0.980
34	23.5	1.09	4/21/99	1306	1.05	4/21/99	1306	0.963
35	25.8	1.02	4/21/99	1301	1.00	4/21/99	1301	0.980
36	33.5	0.41	4/21/99	1248	0.23	4/21/99	1248	0.561
37	35.2	0.46	4/21/99	1242	0.28	4/21/99	1242	0.609

Average Ratio = 0.720

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 115 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
1	0.36	1000.0	4/23/99	1307				
2	0.40	900.0	4/23/99	1308				
3	0.45	820.0	4/23/99	1309				
4	0.62	500.0	4/21/99	1708				
5	0.76	430.0	4/21/99	1706				
6	0.97	318.0	4/21/99	1700	69.0	4/21/99	1700	0.217
7	1.13	262.0	4/21/99	1658	70.0	4/21/99	1658	0.267
8	1.25	228.0	4/21/99	1656	63.0	4/21/99	1656	0.276
9	1.35	208.0	4/21/99	1653	57.0	4/21/99	1653	0.274
10	1.52	168.0	4/21/99	1650	46.0	4/21/99	1650	0.274
11	1.65	140.0	4/21/99	1645	46.5	4/21/99	1645	0.332
12	1.75	129.0	4/21/99	1644	44.0	4/21/99	1644	0.341
13	1.91	118.0	4/21/99	1631	68.0	4/21/99	1631	0.576
14	2.03	101.0	4/21/99	1628	27.5	4/21/99	1628	0.272
15	2.21	102.0	4/21/99	1625	28.0	4/21/99	1625	0.275
16	2.38	117.0	4/21/99	1623	26.0	4/21/99	1623	0.222
17	2.51	100.0	4/21/99	1621	15.5	4/21/99	1621	0.155
18	2.77	96.0	4/21/99	1609	12.0	4/21/99	1609	0.125
19	2.88	92.0	4/21/99	1537	10.0	4/21/99	1537	0.109
20	2.98	82.0	4/21/99	1605	4.00	4/21/99	1605	0.049
21	3.11	80.0	4/21/99	1542	6.00	4/21/99	1542	0.075
22	3.22	90.0	4/21/99	1532	9.50	4/21/99	1532	0.106
23	3.31	77.0	4/21/99	1547	7.40	4/21/99	1547	0.096
24	3.42	70.0	4/21/99	1550	5.80	4/21/99	1550	0.083
25	3.50	51.0	4/21/99	1527	4.30	4/21/99	1527	0.084
26	3.67	62.0	4/21/99	1556	10.5	4/21/99	1556	0.169

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 115 Degrees

Point No.		Dist. Km	1.25 Kw-ND mV/m	Date	Time	5.4 Kw-DA mV/m	Date	Time	Ratio DA/ND
27		3.89	70.0	4/21/99	1507	8.40	4/21/99	1507	0.120
28		4.04	62.0	4/21/99	1512	6.80	4/21/99	1512	0.110
29		4.20	50.0	4/21/99	1515	6.00	4/21/99	1515	0.120
30	MP	4.83	51.0	4/21/99	1352	9.00	4/21/99	1352	0.176
31		4.88	47.0	4/21/99	1354	10.00	4/21/99	1354	0.213
32		5.50	40.0	4/21/99	1337	6.20	4/21/99	1337	0.155
33		5.67	36.5	4/21/99	1335	7.00	4/21/99	1335	0.192
34		5.93	28.2	4/21/99	1332	8.60	4/21/99	1332	0.305
35		6.49	27.7	4/21/99	1327	9.90	4/21/99	1327	0.357
36		7.54	23.8	4/21/99	1319	10.50	4/21/99	1319	0.441
37		7.98	17.0	4/21/99	1311	7.20	4/21/99	1311	0.424
38		8.45	15.8	4/21/99	1303	6.30	4/21/99	1303	0.399
39		10.2	11.2	4/21/99	1253	3.10	4/21/99	1253	0.277
40		10.9	12.5	4/21/99	1149	3.70	4/21/99	1149	0.296
41		11.9	8.30	4/21/99	1143	2.70	4/21/99	1143	0.325
42		12.9	8.30	4/21/99	1136	2.45	4/21/99	1136	0.295
43		14.0	5.70	4/21/99	1129	1.65	4/21/99	1129	0.289
44		15.0	5.18	4/21/99	1124	1.20	4/21/99	1124	0.232
45		16.0	4.10	4/21/99	1117	1.25	4/21/99	1117	0.305
46		16.9	4.20	4/21/99	1111	1.20	4/21/99	1111	0.286
47		17.5	3.50	4/21/99	1101	0.95	4/21/99	1101	0.271
48		18.2	2.80	4/21/99	1054	0.58	4/21/99	1054	0.207
49		19.5	2.175	4/21/99	1048	0.21	4/21/99	1048	0.097
50		20.3	1.90	4/21/99	1043	0.12	4/21/99	1043	0.063
51		21.5	1.29	4/21/99	1031	0.23	4/21/99	1031	0.178
52		22.4	1.20	4/21/99	1004	0.27	4/21/99	1004	0.225
53		23.1	1.08	4/21/99	1018	0.29	4/21/99	1018	0.269
54		24.8	0.80	4/21/99	935	0.17	4/21/99	935	0.213

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 115 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
55	25.5	0.75	4/21/99	930	0.15	4/21/99	930	0.200
56	25.9	0.74	4/21/99	926	0.16	4/21/99	926	0.216
57	27.2	0.76	4/21/99	920	0.13	4/21/99	920	0.171

Average Ratio = 0.227

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 185 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
1	0.53	450.0	4/24/99	1325				
2	0.70	460.0	4/24/99	1330				
3	1.25	200.0	4/24/99	1337				
4	1.62	140.0	4/24/99	1348				
5	1.77	145.0	4/24/99	1351	155.0	4/24/99	1351	1.069
6	1.95	130.0	4/24/99	1353	145.0	4/24/99	1353	1.115
7	2.10	118.0	4/24/99	1355	128.0	4/24/99	1355	1.085
8	2.29	110.0	4/24/99	1357	118.0	4/24/99	1357	1.073
9	2.55	112.0	4/24/99	1539	137.0	4/24/99	1539	1.223
10	2.75	68.0	4/22/99	1541	75.0	4/22/99	1541	1.103
11	2.81	98.0	4/22/99	1534	105.0	4/22/99	1534	1.071
12	3.18	91.0	4/22/99	1529	99.0	4/22/99	1529	1.088
13	3.57	78.0	4/22/99	1517	82.0	4/22/99	1517	1.051
14	3.66	75.0	4/22/99	1519	81.0	4/22/99	1519	1.080
15	4.05	53.5	4/22/99	1512	52.0	4/22/99	1512	0.972
16	4.27	46.0	4/22/99	1508	51.0	4/22/99	1508	1.109
17	4.62	58.0	4/22/99	1503	60.0	4/22/99	1503	1.034
18	5.23	55.5	4/22/99	1456	52.0	4/22/99	1456	0.937
19	5.56	44.5	4/22/99	1405	56.0	4/22/99	1405	1.258
20	5.86	41.0	4/22/99	1402	50.5	4/22/99	1402	1.232
21	6.16	33.5	4/22/99	1357	45.0	4/22/99	1357	1.343
22	9.18	23.0	4/24/99	958	28.0	4/24/99	958	1.217
23	9.50	22.0	4/24/99	954	24.5	4/24/99	954	1.114
24	10.6	20.5	4/24/99	950	17.0	4/24/99	950	0.829
25	11.5	17.5	4/24/99	1006	23.0	4/24/99	1006	1.314
26	12.0	19.5	4/24/99	1008	22.5	4/24/99	1008	1.154

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 185 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
27	13.0	14.5	4/24/99	1010	11.0	4/24/99	1010	0.759
28	14.0	16.0	4/24/99	1012	17.0	4/24/99	1012	1.063
29	14.9	15.0	4/24/99	1014	15.0	4/24/99	1014	1.000
30	17.3	11.5	4/24/99	1020	9.5	4/24/99	1020	0.826
31	18.8	11.5	4/22/99	1322	11.2	4/22/99	1322	0.974
32	19.8	10.1	4/22/99	1313	11.1	4/22/99	1313	1.099
33	20.5	11.5	4/22/99	1302	11.8	4/22/99	1302	1.026
34	21.7	10.0	4/22/99	1254	9.8	4/22/99	1254	0.980
35	22.4	9.4	4/22/99	1249	8.8	4/22/99	1249	0.936
36	23.8	7.7	4/22/99	1242	6.2	4/22/99	1242	0.805
37	24.3	7.4	4/22/99	1239	5.9	4/22/99	1239	0.797
38	25.2	5.3	4/22/99	1226	6.3	4/22/99	1226	1.189
39	26.2	4.6	4/22/99	1219	5.4	4/22/99	1219	1.174
40	27.1	5.6	4/22/99	1213	5.8	4/22/99	1213	1.036
41	28.2	4.7	4/22/99	1206	5.2	4/22/99	1206	1.106

Average Ratio= 1.061

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 198 Degrees

Point		Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.		Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
1		0.50	560.0	4/24/99	1407				
2		0.59	470.0	4/20/99	1735				
3		0.67	410.0	4/24/99	1411				
4		1.15	260.0	4/20/99	1726	325.0	4/20/99	1726	1.250
5		1.30	210.0	4/20/99	1722	280.0	4/20/99	1722	1.333
6		1.42	225.0	4/20/99	1717	280.0	4/20/99	1717	1.244
7		1.62	178.0	4/20/99	1709	245.0	4/20/99	1709	1.376
8		1.75	115.0	4/20/99	1706	135.0	4/20/99	1706	1.174
9		1.86	125.0	4/20/99	1702	160.0	4/20/99	1702	1.280
10		2.03	140.0	4/20/99	1659	188.0	4/20/99	1659	1.343
11		2.22	125.0	4/20/99	1652	170.0	4/20/99	1652	1.360
12		2.35	92.0	4/20/99	1649	115.0	4/20/99	1649	1.250
13	MP	2.81	105.0	4/20/99	1641	125.0	4/20/99	1641	1.190
14		2.95	93.0	4/20/99	1637	110.0	4/20/99	1637	1.183
15		3.00	85.0	4/20/99	1631	110.0	4/20/99	1631	1.294
16		3.27	80.0	4/20/99	1624	105.0	4/20/99	1624	1.313
17		3.82	50.0	4/20/99	1615	70.0	4/20/99	1615	1.400
18		4.21	83.0	4/20/99	1610	110.0	4/20/99	1610	1.325
19		4.84	68.0	4/20/99	1604	88.0	4/20/99	1604	1.294
20		5.21	42.0	4/20/99	1553	57.0	4/20/99	1553	1.357
21		5.44	50.0	4/20/99	1548	65.0	4/20/99	1548	1.300
22		5.85	51.0	4/24/99	937	65.0	4/24/99	937	1.275
23		6.00	49.0	4/24/99	935	57.0	4/24/99	935	1.163
24		6.50	46.0	4/24/99	934	60.0	4/24/99	934	1.304
25		7.00	36.5	4/24/99	933	45.0	4/24/99	933	1.233
26		7.50	33.0	4/24/99	931	41.0	4/24/99	931	1.242

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 198 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
27	8.00	29.0	4/24/99	929	35.0	4/24/99	929	1.207
28	8.55	29.0	4/24/99	926	40.0	4/24/99	926	1.379
29	9.00	22.5	4/24/99	924	29.0	4/24/99	924	1.289
30	9.50	21.0	4/24/99	920	30.0	4/24/99	920	1.429
31	10.00	24.5	4/24/99	918	32.0	4/24/99	918	1.306
32	11.00	22.5	4/24/99	916	28.5	4/24/99	916	1.267
33	12.00	20.5	4/24/99	914	27.5	4/24/99	914	1.341
34	12.50	19.0	4/24/99	912	27.0	4/24/99	912	1.421
35	14.50	20.0	4/24/99	907	28.0	4/24/99	907	1.400
36	15.00	18.5	4/24/99	905	26.0	4/24/99	905	1.405
37	16.00	16.7	4/24/99	902	24.0	4/24/99	902	1.437
38	17.00	14.70	4/24/99	900	22.0	4/24/99	900	1.497
39	18.00	15.00	4/24/99	857	21.0	4/24/99	857	1.400
40	19.00	14.70	4/24/99	854	19.7	4/24/99	854	1.340
41	20.00	13.00	4/24/99	851	17.5	4/24/99	851	1.346
42	21.00	12.50	4/24/99	848	16.5	4/24/99	848	1.320
43	22.00	12.40	4/24/99	845	18.0	4/24/99	845	1.452
44	23.00	11.80	4/24/99	837	16.5	4/24/99	837	1.398
45	24.00	11.50	4/22/99	940	16.5	4/22/99	940	1.435
46	24.10	11.00	4/22/99	950	16.2	4/22/99	950	1.473
47	25.40	11.50	4/22/99	1057	16.5	4/22/99	1057	1.435

Average Ratio = 1.329

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 Khz 5.0/1.0 Kw DA-2

Radial 245 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
1	0.36	1000.0	4/23/99	1302				
2	0.42	780.0	4/23/99	1300				
3	0.54	620.0	4/23/99	1259				
4	0.62	500.0	4/23/99	1258				
5	0.72	440.0	4/23/99	1257				
6	0.80	335.0	4/23/99	1256				
7	0.92	310.0	4/23/99	1253				
8	0.99	330.0	4/23/99	1252				
9	1.12	290.0	4/23/99	1249				
10	1.21	250.0	4/23/99	1248				
11	1.33	225.0	4/23/99	1247				
12	1.44	200.0	4/23/99	1246				
13	1.63	185.0	4/23/99	1245	460.0	4/23/99	1245	2.486
14	1.81	155.0	4/23/99	1243	440.0	4/23/99	1243	2.839
15	2.02	155.0	4/23/99	1242	450.0	4/23/99	1242	2.903
16	2.20	165.0	4/23/99	1241	470.0	4/23/99	1241	2.848
17	2.42	120.0	4/23/99	1240	370.0	4/23/99	1240	3.083
18	2.81	110.0	4/23/99	1239	310.0	4/23/99	1239	2.818
19	3.02	120.0	4/23/99	1238	320.0	4/23/99	1238	2.667
20	3.21	120.0	4/23/99	1237	310.0	4/23/99	1237	2.583
21	3.42	72.0	4/23/99	1235	340.0	4/23/99	1235	4.722
22	3.59	115.0	4/23/99	1234	310.0	4/23/99	1234	2.696
23	3.89	78.0	4/23/99	1214	200.0	4/23/99	1214	2.564
24	4.12	55.0	4/23/99	1212	145.0	4/23/99	1212	2.636
25	4.53	84.0	4/20/99	1330	212.0	4/20/99	1330	2.524
26	4.90	86.0	4/20/99	1527	240.0	4/20/99	1527	2.791

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 Khz 5.0/1.0 Kw DA-2

Radial 245 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
27	6.02	56.0	4/20/99	1507	155.0	4/20/99	1507	2.768
28	6.36	58.0	4/20/99	1503	155.0	4/20/99	1503	2.672
29	6.69	54.0	4/20/99	1459	150.0	4/20/99	1459	2.778
30	7.04	52.0	4/20/99	1447	145.0	4/20/99	1447	2.788
31	7.14	45.5	4/20/99	1453	125.0	4/20/99	1453	2.747
32	10.2	29.0	4/20/99	1435	86.0	4/20/99	1435	2.966
33	10.5	25.0	4/20/99	1430	76.0	4/20/99	1430	3.040
34	11.5	17.9	4/20/99	1420	55.0	4/20/99	1420	3.073
35	12.1	18.1	4/20/99	1407	55.0	4/20/99	1407	3.039
36	13.2	15.5	4/20/99	1355	45.0	4/20/99	1355	2.903
37	14.1	13.1	4/20/99	1345	38.0	4/20/99	1345	2.901
38	15.3	14.0	4/20/99	1336	41.0	4/20/99	1336	2.929
39	23.9	9.8	4/20/99	1309	22.8	4/20/99	1309	2.327
40	24.7	9.0	4/20/99	1304	25.8	4/20/99	1304	2.867
41	25.4	9.2	4/20/99	1256	27.0	4/20/99	1256	2.935
42	26.3	10.0	4/20/99	1250	29.0	4/20/99	1250	2.900
43	27.2	8.3	4/20/99	1243	23.8	4/20/99	1243	2.867
44	28.1	7.6	4/20/99	1238	22.0	4/20/99	1238	2.895
45	29.4	6.2	4/20/99	1230	13.5	4/20/99	1230	2.177
46	30.8	4.5	4/20/99	1222	12.9	4/20/99	1222	2.867

Average Ratio= 2.841

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 295 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
1	0.46	800.0	4/24/99	1420				
2	0.67	530.0	4/20/99	1743				
3	0.74	470.0	4/20/99	1657				
4	0.82	290.0	4/20/99	1700				
5	0.87	290.0	4/20/99	1702				
6	0.91	410.0	4/20/99	1708				
7	1.05	310.0	4/20/99	1745				
8	1.08	285.0	4/20/99	1725				
9	1.20	285.0	4/20/99	1716				
10	1.50	230.0	4/20/99	1718				
11	1.68	180.0	4/20/99	1728	520.0	4/20/99	1728	2.889
12	1.82	175.0	4/20/99	1730	520.0	4/20/99	1730	2.971
13	1.95	130.0	4/20/99	1733	400.0	4/20/99	1733	3.077
14	2.20	105.0	4/20/99	1648	320.0	4/20/99	1648	3.048
15	2.35	102.0	4/20/99	1646	310.0	4/20/99	1646	3.039
16	2.49	105.0	4/20/99	1640	315.0	4/20/99	1640	3.000
17	2.81	97.0	4/20/99	1635	270.0	4/20/99	1635	2.784
18	3.11	73.0	4/20/99	1630	215.0	4/20/99	1630	2.945
19	3.21	72.0	4/20/99	1626	215.0	4/20/99	1626	2.986
20	3.62	90.0	4/20/99	1623	280.0	4/20/99	1623	3.111
21	3.66	71.0	4/20/99	1620	215.0	4/20/99	1620	3.028
22	4.08	76.0	4/20/99	1616	230.0	4/20/99	1616	3.026
23	4.25	54.0	4/20/99	1611	165.0	4/20/99	1611	3.056
24	4.61	45.0	4/20/99	1606	140.0	4/20/99	1606	3.111
25	4.76	49.0	4/20/99	1602	153.0	4/20/99	1602	3.122
26	5.01	52.0	4/20/99	1600	160.0	4/20/99	1600	3.077

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 295 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
27	5.19	41.5	4/20/99	1554	130.0	4/20/99	1554	3.133
28	5.53	40.0	4/20/99	1549	125.0	4/20/99	1549	3.125
29	5.94	42.0	4/20/99	1548	135.0	4/20/99	1548	3.214
30	6.53	30.0	4/20/99	1545	102.0	4/20/99	1545	3.400
31	6.88	26.0	4/20/99	1542	90.0	4/20/99	1542	3.462
32	7.42	21.5	4/20/99	1438	75.0	4/20/99	1438	3.488
33	7.60	23.0	4/20/99	1436	79.0	4/20/99	1436	3.435
34	8.02	19.5	4/20/99	1433	65.0	4/20/99	1433	3.333
35	9.03	14.7	4/20/99	1428	45.0	4/20/99	1428	3.061
36	9.55	15.3	4/20/99	1423	48.0	4/20/99	1423	3.137
37	10.7	9.3	4/20/99	1415	27.0	4/20/99	1415	2.903
38	12.0	7.0	4/20/99	1357	21.5	4/20/99	1357	3.071
39	12.9	7.5	4/20/99	1352	22.5	4/20/99	1352	3.000
40	13.5	4.4	4/20/99	1344	14.0	4/20/99	1344	3.182
41	14.2	5.4	4/20/99	1339	16.5	4/20/99	1339	3.056
42	14.8	5.80	4/20/99	1334	18.0	4/20/99	1334	3.103
43	15.7	6.40	4/20/99	1327	19.5	4/20/99	1327	3.047
44	17.3	4.40	4/20/99	1315	14.0	4/20/99	1315	3.182
45	18.1	3.70	4/20/99	1306	11.5	4/20/99	1306	3.108
46	18.7	3.20	4/20/99	1303	10.5	4/20/99	1303	3.281
47	19.5	2.90	4/20/99	1256	10.0	4/20/99	1256	3.448
48	20.4	3.30	4/20/99	1253	11.0	4/20/99	1253	3.333
49	20.8	2.80	4/20/99	1250	9.9	4/20/99	1250	3.536
50	22.3	2.00	4/20/99	1244	6.8	4/20/99	1244	3.400
51	25.2	1.20	4/20/99	1238	4.1	4/20/99	1238	3.417
52	25.8	1.15	4/20/99	1225	4.0	4/20/99	1225	3.478
53	27.5	1.0	4/20/99	1214	3.3	4/20/99	1214	3.300

Average Ratio= 3.161

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

1300 KHz. 5.0/1.0 Kw DA-2

Radial 345 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
1	0.42	800.0	4/22/99	1546				
2	0.60	450.0	4/22/99	1547				
3	0.68	460.0	4/22/99	1548				
4	0.96	380.0	4/22/99	1552				
5	1.46	200.0	4/22/99	1433	600.0	4/22/99	1433	3.000
6	1.56	190.0	4/22/99	1431	530.0	4/22/99	1431	2.789
7	1.86	175.0	4/22/99	1422	500.0	4/22/99	1422	2.857
8	2.00	138.0	4/22/99	1424	400.0	4/22/99	1424	2.899
9	2.36	117.0	4/22/99	1418	325.0	4/22/99	1418	2.778
10	2.58	110.0	4/22/99	1415	300.0	4/22/99	1415	2.727
11	2.82	98.0	4/22/99	1411	260.0	4/22/99	1411	2.653
12	2.99	82.0	4/22/99	1410	200.0	4/22/99	1410	2.439
13	3.33	91.0	4/22/99	1406	235.0	4/22/99	1406	2.582
14	3.49	87.0	4/22/99	1403	225.0	4/22/99	1403	2.586
15	3.71	78.0	4/22/99	1400	210.0	4/22/99	1400	2.692
16	3.93	61.0	4/22/99	1357	168.0	4/22/99	1357	2.754
17	4.12	64.0	4/22/99	1354	175.0	4/22/99	1354	2.734
18	4.36	64.0	4/22/99	1351	175.0	4/22/99	1351	2.734
19	4.72	48.0	4/22/99	1347	135.0	4/22/99	1347	2.813
20	4.92	44.0	4/22/99	1345	120.0	4/22/99	1345	2.727
21	5.44	34.0	4/22/99	1339	91.0	4/22/99	1339	2.676
22	5.74	35.0	4/22/99	1330	100.0	4/22/99	1330	2.857
23	5.96	25.8	4/22/99	1321	75.0	4/22/99	1321	2.907
24	6.24	20.0	4/22/99	1318	62.0	4/22/99	1318	3.100
25	6.97	20.0	4/22/99	1314	58.0	4/22/99	1314	2.900
26	7.30	19.2	4/22/99	1313	54.0	4/22/99	1313	2.813

TABULATION OF FIELD STRENGTH MEASUREMENTS

RADIO STATION WQBN
TEMPLE TERRACE, FLORIDA

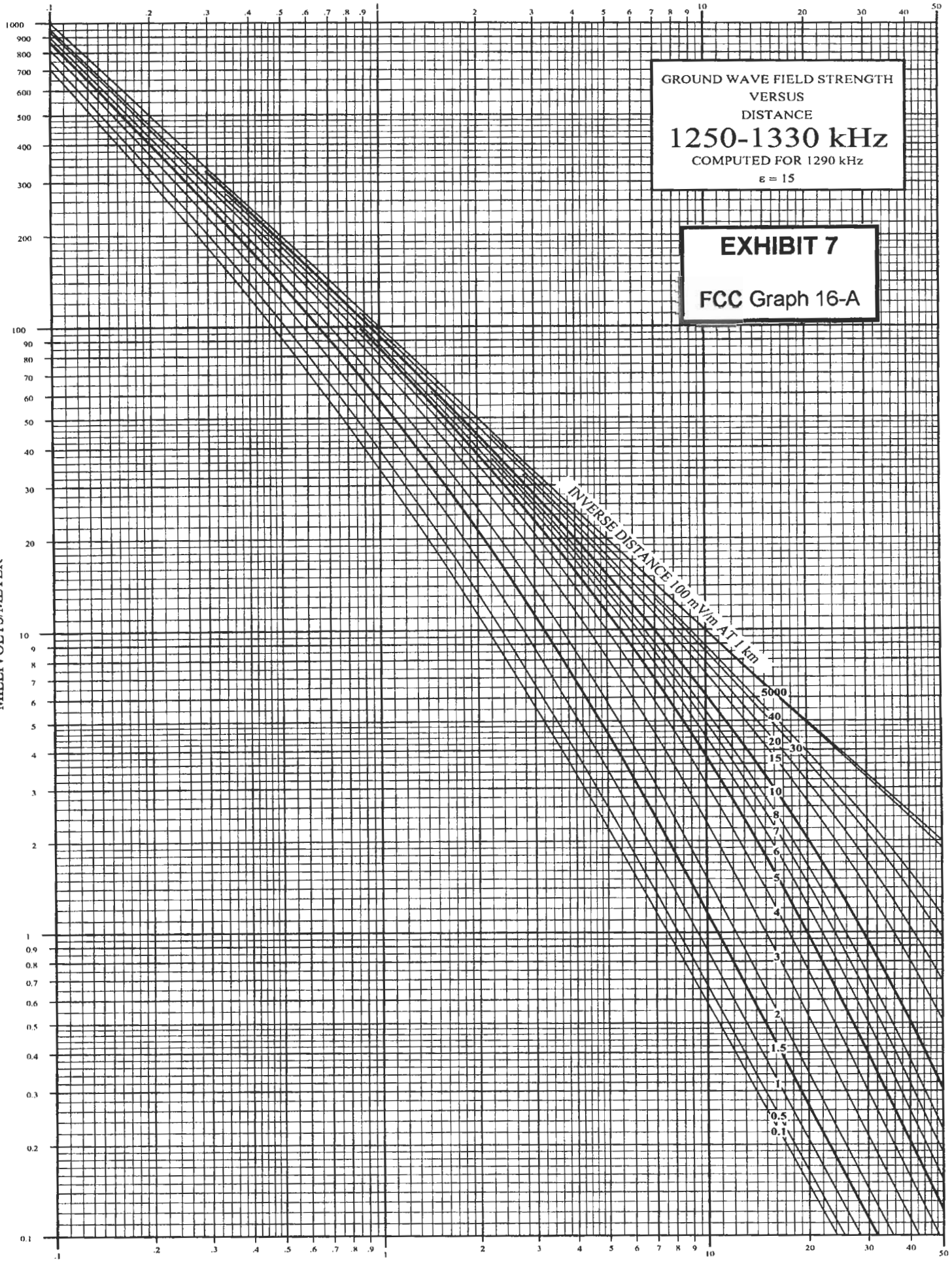
1300 KHz. 5.0/1.0 Kw DA-2

Radial 345 Degrees

Point	Dist.	1.25 Kw-ND			5.4 Kw-DA			Ratio
No.	Km	mV/m	Date	Time	mV/m	Date	Time	DA/ND
27	7.74	16.5	4/22/99	1309	48.0	4/22/99	1309	2.909
28	7.93	19.8	4/22/99	1304	55.0	4/22/99	1304	2.778
29	9.18	18.5	4/22/99	1258	50.0	4/22/99	1258	2.703
30	10.2	11.5	4/22/99	1250	28.0	4/22/99	1250	2.435
31	11.1	10.2	4/22/99	1244	27.5	4/22/99	1244	2.696
32	11.4	10.0	4/22/99	1240	26.5	4/22/99	1240	2.650
33	11.8	11.0	4/22/99	1237	31.0	4/22/99	1237	2.818
34	12.6	7.20	4/22/99	1229	19.0	4/22/99	1229	2.639
35	13.4	6.20	4/22/99	1224	15.8	4/22/99	1224	2.548
36	13.8	4.30	4/22/99	1215	11.5	4/22/99	1215	2.674
37	14.7	4.80	4/22/99	1210	13.0	4/22/99	1210	2.708
38	15.2	4.00	4/22/99	1204	11.5	4/22/99	1204	2.875
39	16.0	3.05	4/22/99	1130	9.00	4/22/99	1130	2.951
40	16.6	2.55	4/22/99	1126	7.40	4/22/99	1126	2.902
41	19.0	1.40	4/22/99	1118	4.20	4/22/99	1118	3.000
42	20.6	0.82	4/22/99	1113	2.35	4/22/99	1113	2.866
43	24.5	0.50	4/22/99	1106	1.45	4/22/99	1106	2.900
44	25.6	0.61	4/22/99	1103	1.80	4/22/99	1103	2.951
45	27.1	0.60	4/22/99	1056	1.80	4/22/99	1056	3.000
46	28.2	0.53	4/22/99	1048	1.60	4/22/99	1048	3.019
47	30.8	0.31	4/22/99	1030	1.00	4/22/99	1030	3.226
48	32.0	0.39	4/22/99	1025	1.20	4/22/99	1025	3.077

Average Ratio = 2.803

KILOMETERS FROM ANTENNA



KILOMETERS FROM ANTENNA

GRAPH 16-A

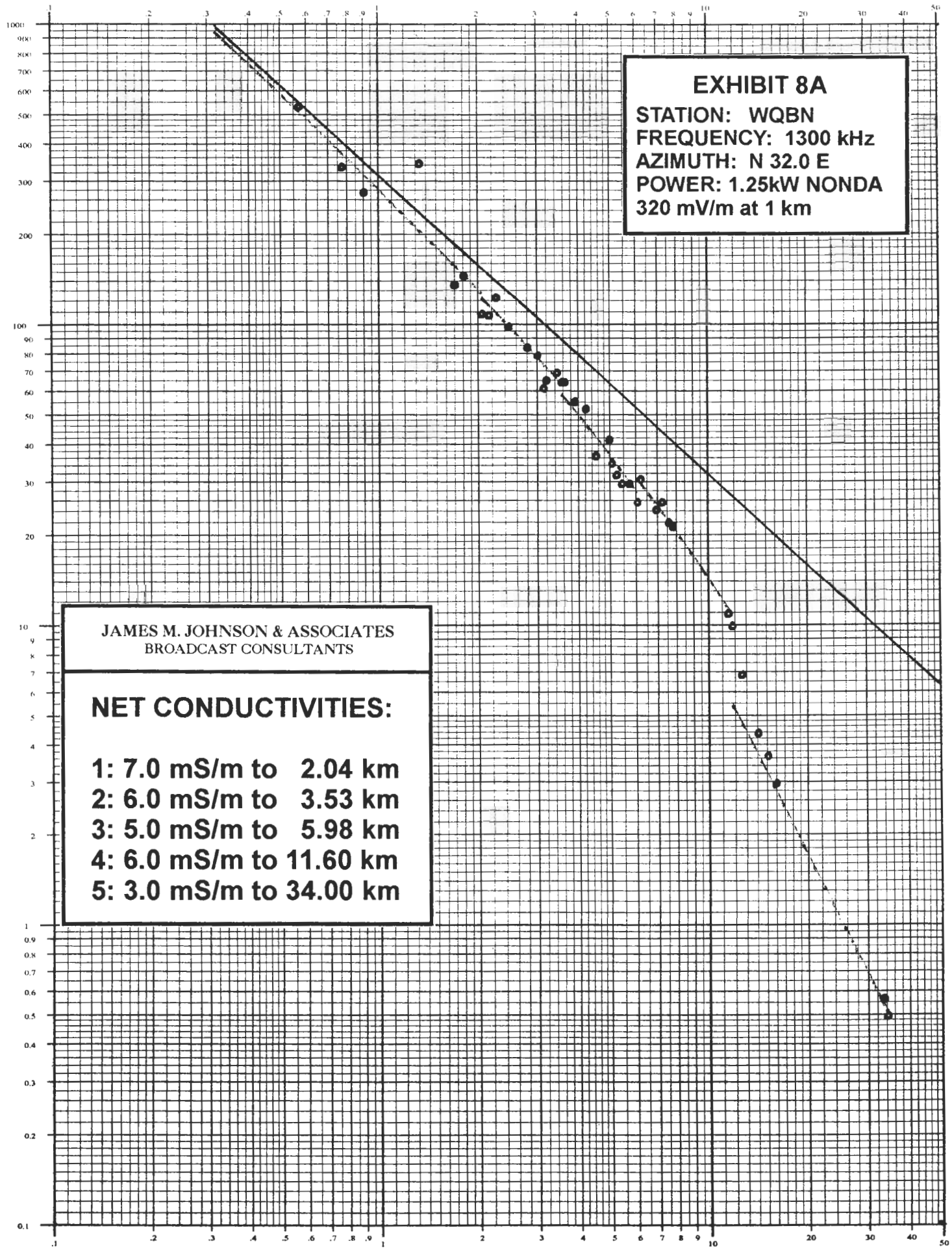


EXHIBIT 8A
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 32.0 E
POWER: 1.25kW NONDA
320 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 7.0 mS/m to 2.04 km
2: 6.0 mS/m to 3.53 km
3: 5.0 mS/m to 5.98 km
4: 6.0 mS/m to 11.60 km
5: 3.0 mS/m to 34.00 km

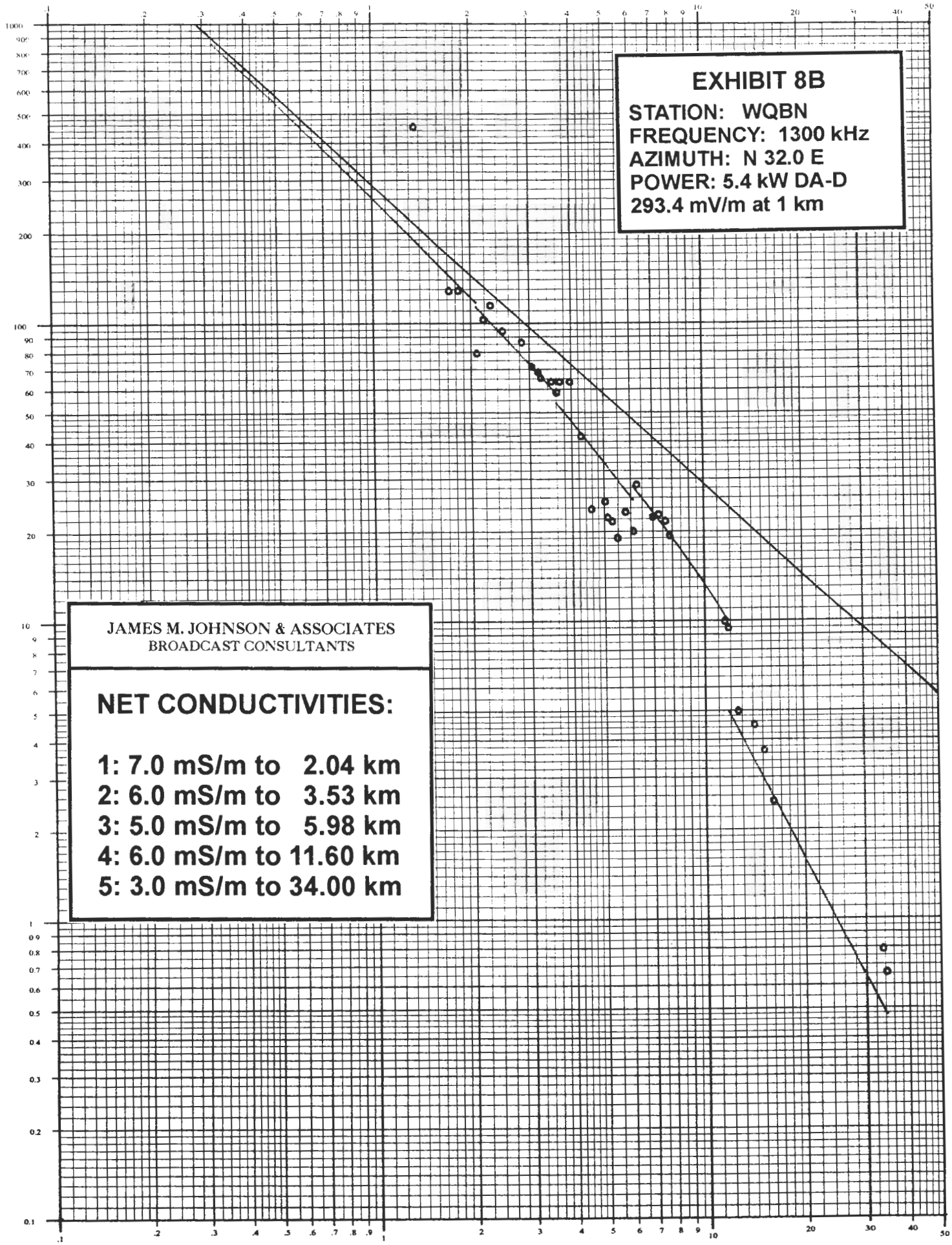


EXHIBIT 8B
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 32.0 E
POWER: 5.4 kW DA-D
293.4 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 7.0 mS/m to 2.04 km
2: 6.0 mS/m to 3.53 km
3: 5.0 mS/m to 5.98 km
4: 6.0 mS/m to 11.60 km
5: 3.0 mS/m to 34.00 km

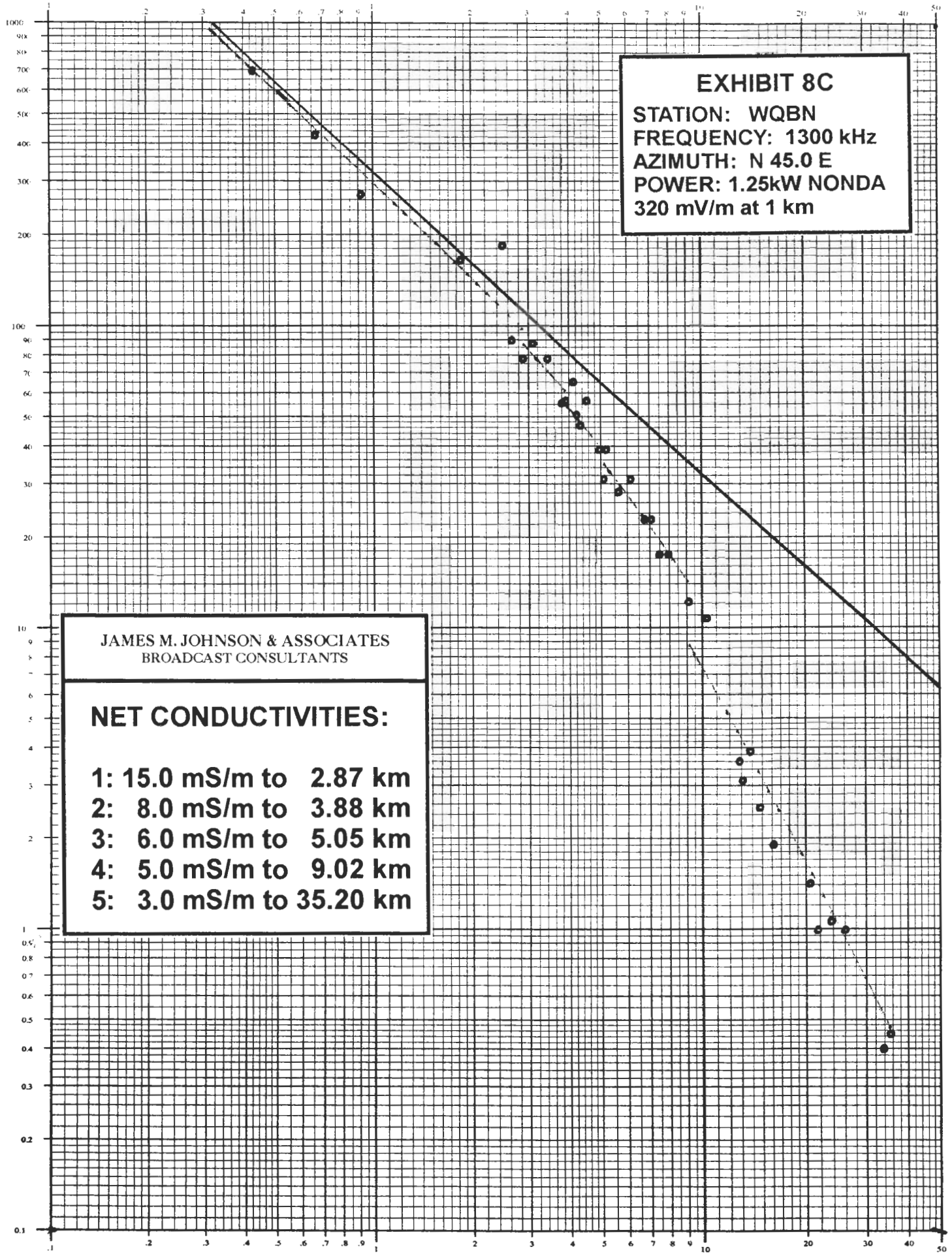


EXHIBIT 8C
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 45.0 E
POWER: 1.25kW NONDA
320 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 15.0 mS/m to 2.87 km
2: 8.0 mS/m to 3.88 km
3: 6.0 mS/m to 5.05 km
4: 5.0 mS/m to 9.02 km
5: 3.0 mS/m to 35.20 km

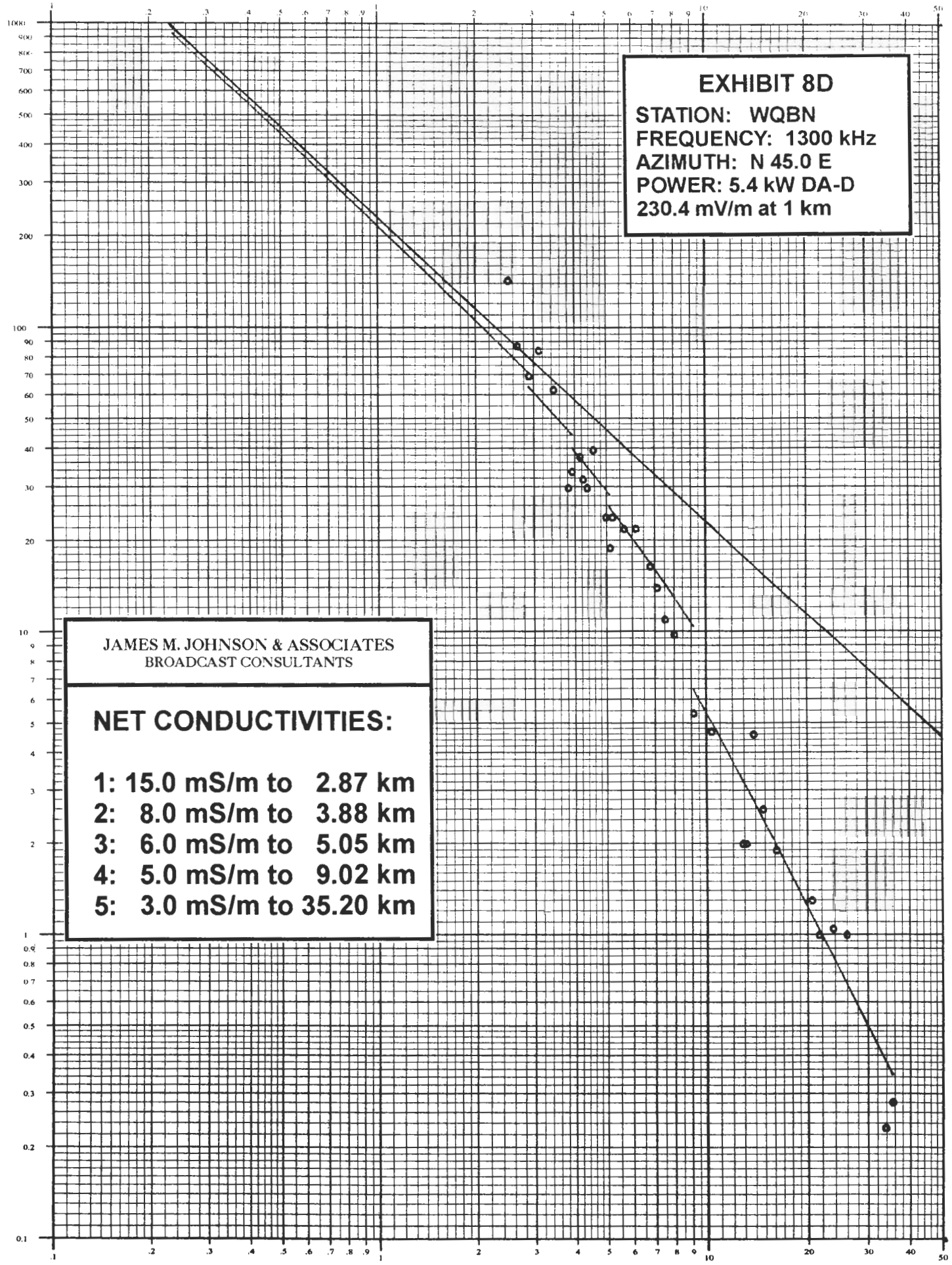


EXHIBIT 8D
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 45.0 E
POWER: 5.4 kW DA-D
230.4 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 15.0 mS/m to 2.87 km
2: 8.0 mS/m to 3.88 km
3: 6.0 mS/m to 5.05 km
4: 5.0 mS/m to 9.02 km
5: 3.0 mS/m to 35.20 km

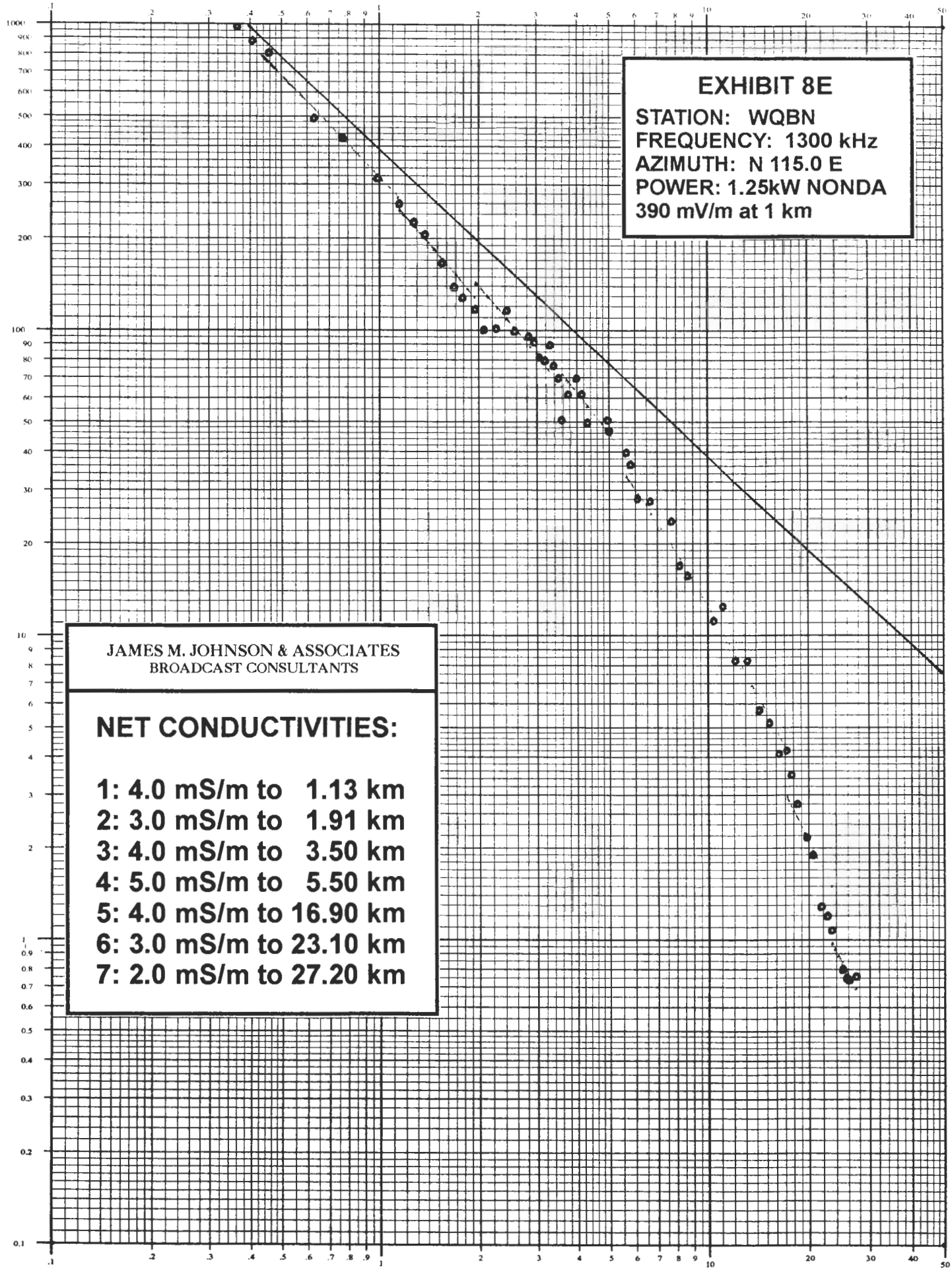


EXHIBIT 8E
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 115.0 E
POWER: 1.25kW NONDA
390 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 4.0 mS/m to 1.13 km
2: 3.0 mS/m to 1.91 km
3: 4.0 mS/m to 3.50 km
4: 5.0 mS/m to 5.50 km
5: 4.0 mS/m to 16.90 km
6: 3.0 mS/m to 23.10 km
7: 2.0 mS/m to 27.20 km

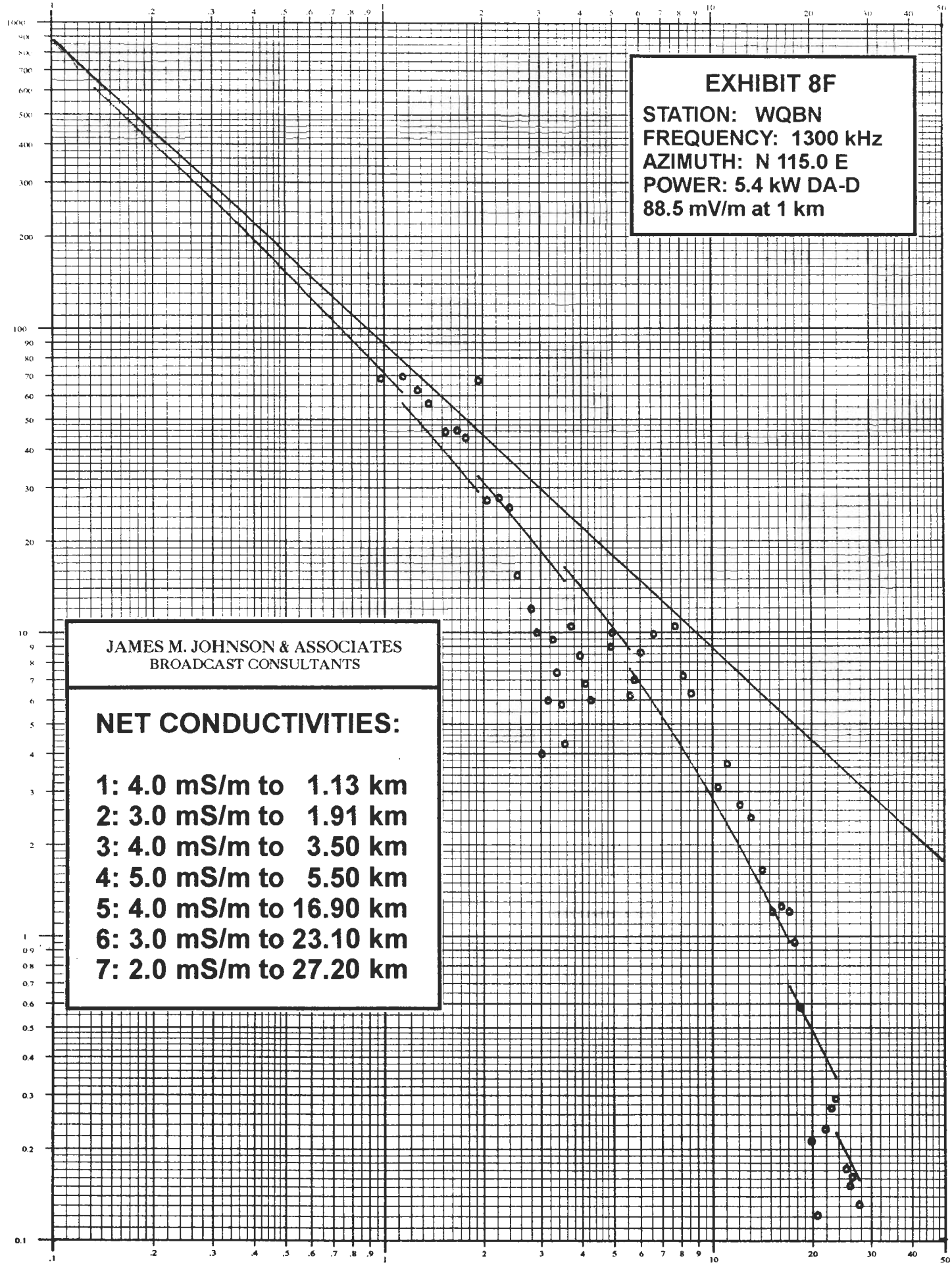


EXHIBIT 8F
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 115.0 E
POWER: 5.4 kW DA-D
88.5 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 4.0 mS/m to 1.13 km
2: 3.0 mS/m to 1.91 km
3: 4.0 mS/m to 3.50 km
4: 5.0 mS/m to 5.50 km
5: 4.0 mS/m to 16.90 km
6: 3.0 mS/m to 23.10 km
7: 2.0 mS/m to 27.20 km

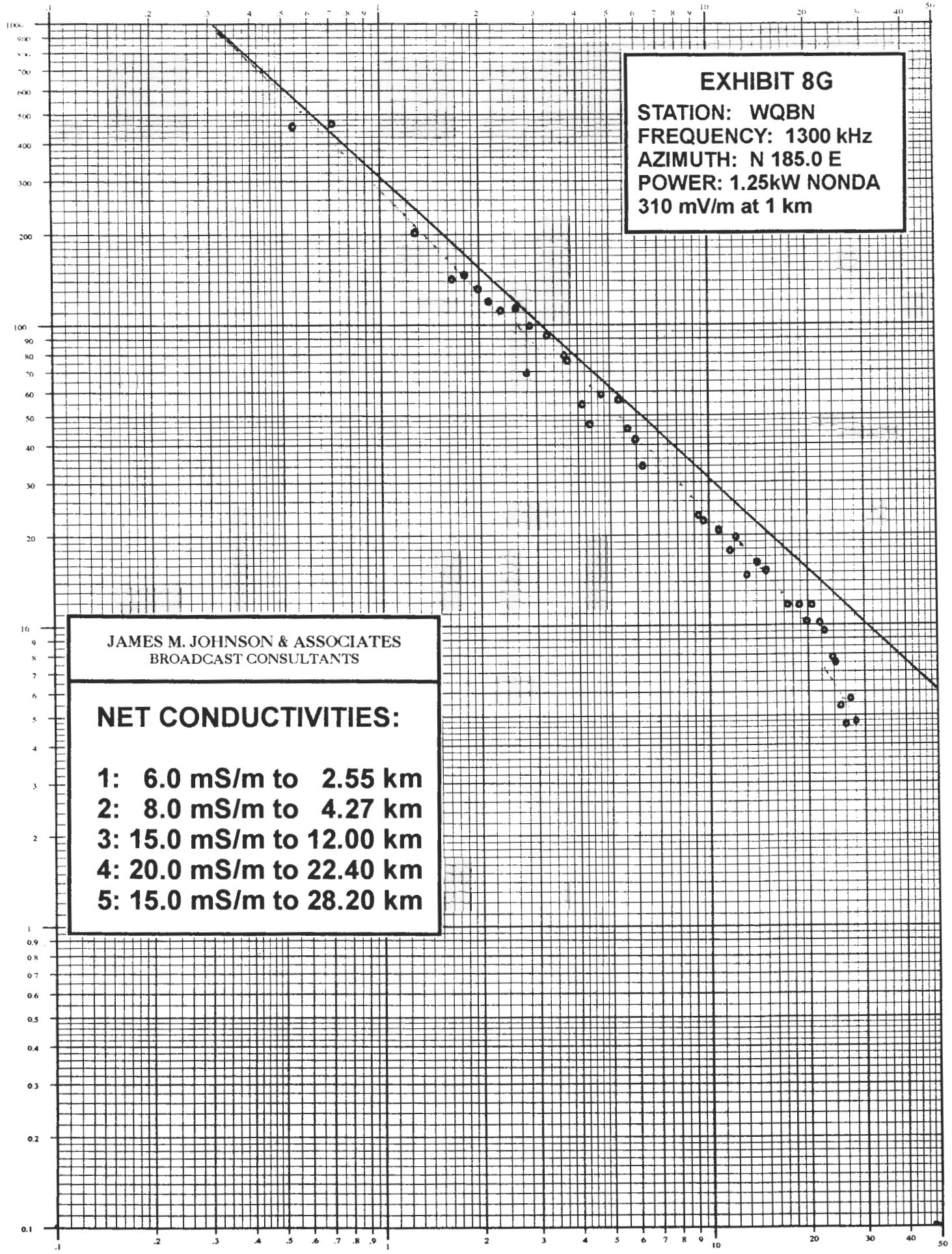


EXHIBIT 8G
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 185.0 E
POWER: 1.25kW NONDA
310 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 6.0 mS/m to 2.55 km
2: 8.0 mS/m to 4.27 km
3: 15.0 mS/m to 12.00 km
4: 20.0 mS/m to 22.40 km
5: 15.0 mS/m to 28.20 km

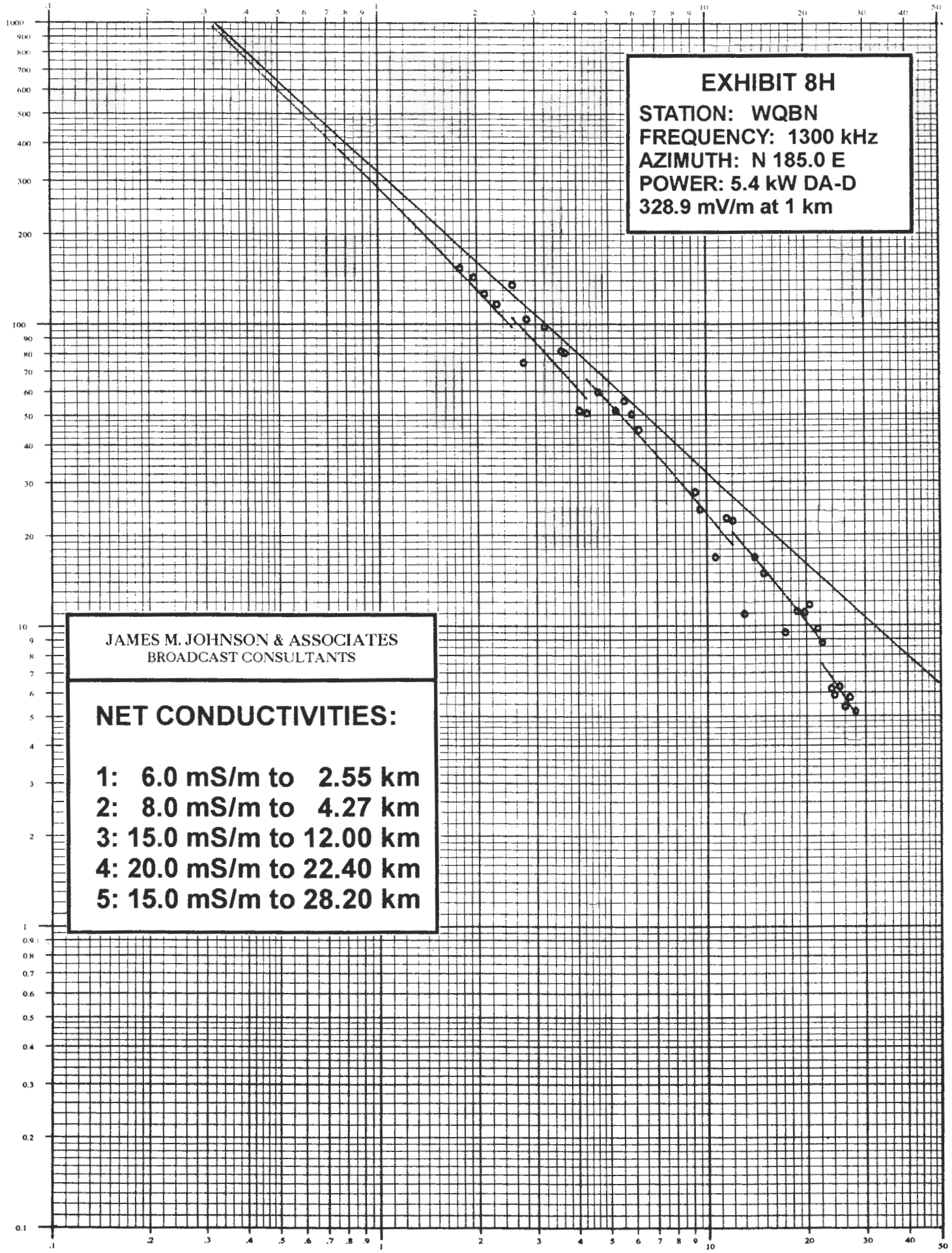


EXHIBIT 8H
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 185.0 E
POWER: 5.4 kW DA-D
328.9 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 6.0 mS/m to 2.55 km
2: 8.0 mS/m to 4.27 km
3: 15.0 mS/m to 12.00 km
4: 20.0 mS/m to 22.40 km
5: 15.0 mS/m to 28.20 km

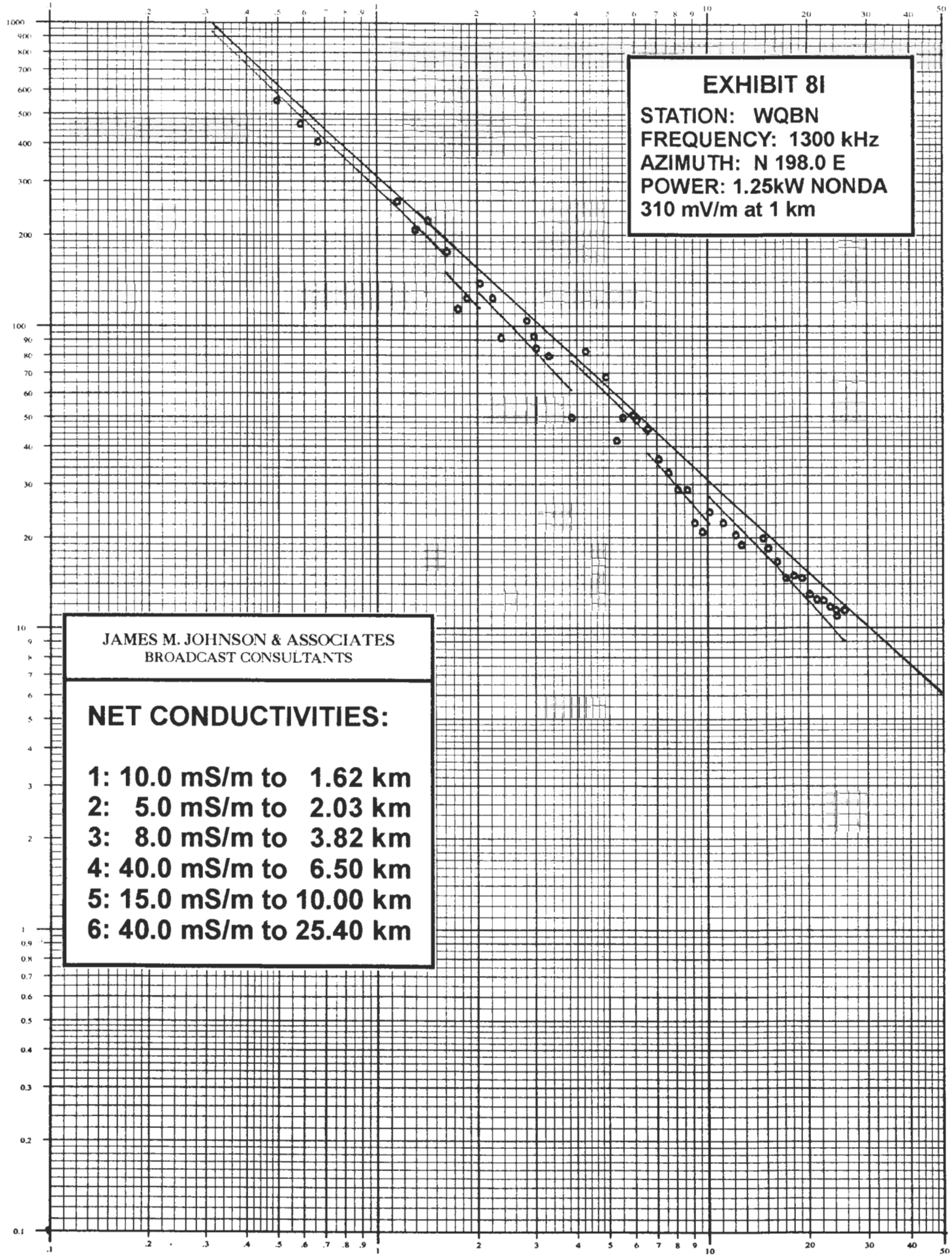


EXHIBIT 8I
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 198.0 E
POWER: 1.25kW NONDA
310 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 10.0 mS/m to 1.62 km
2: 5.0 mS/m to 2.03 km
3: 8.0 mS/m to 3.82 km
4: 40.0 mS/m to 6.50 km
5: 15.0 mS/m to 10.00 km
6: 40.0 mS/m to 25.40 km

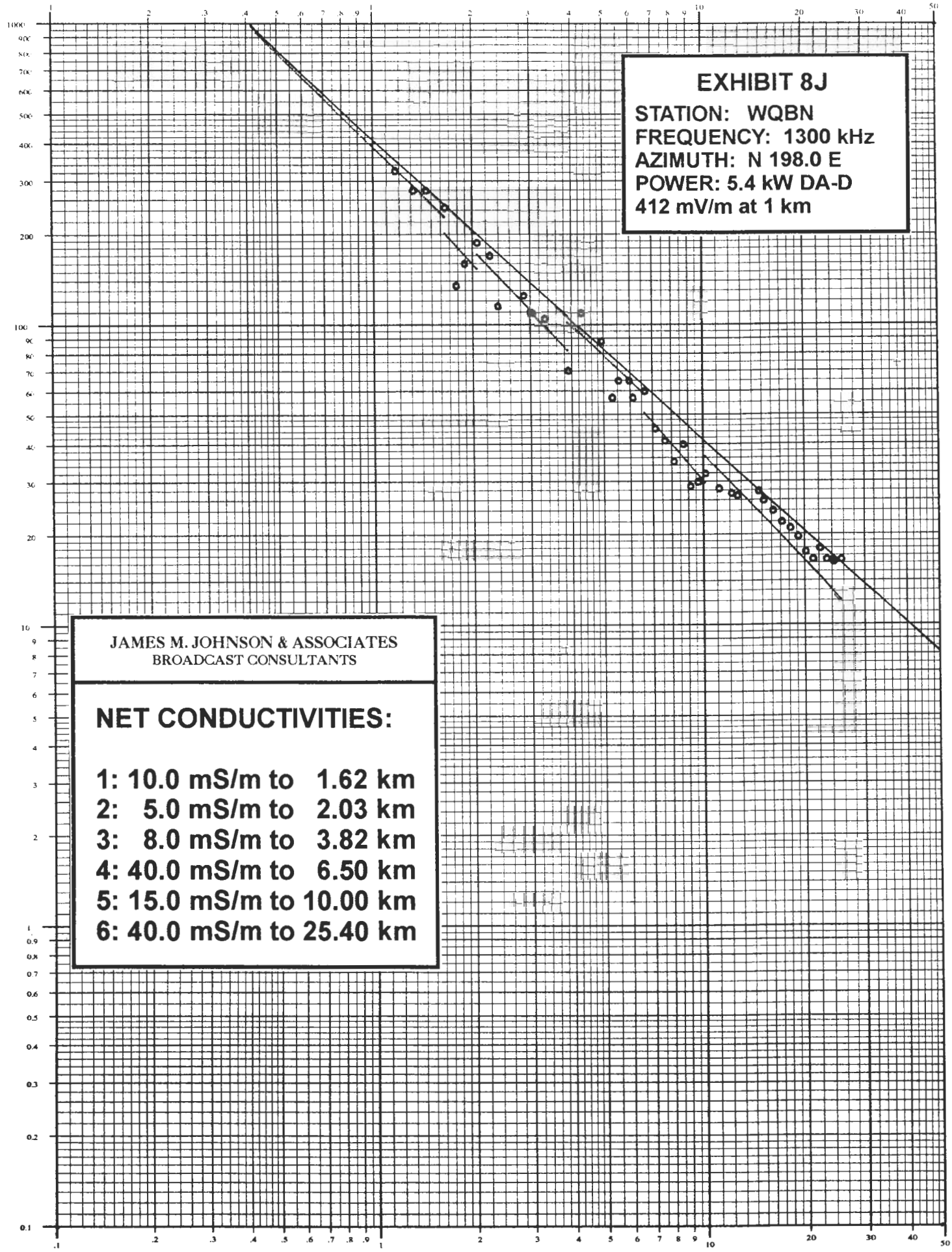


EXHIBIT 8J
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 198.0 E
POWER: 5.4 kW DA-D
412 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 10.0 mS/m to 1.62 km
2: 5.0 mS/m to 2.03 km
3: 8.0 mS/m to 3.82 km
4: 40.0 mS/m to 6.50 km
5: 15.0 mS/m to 10.00 km
6: 40.0 mS/m to 25.40 km

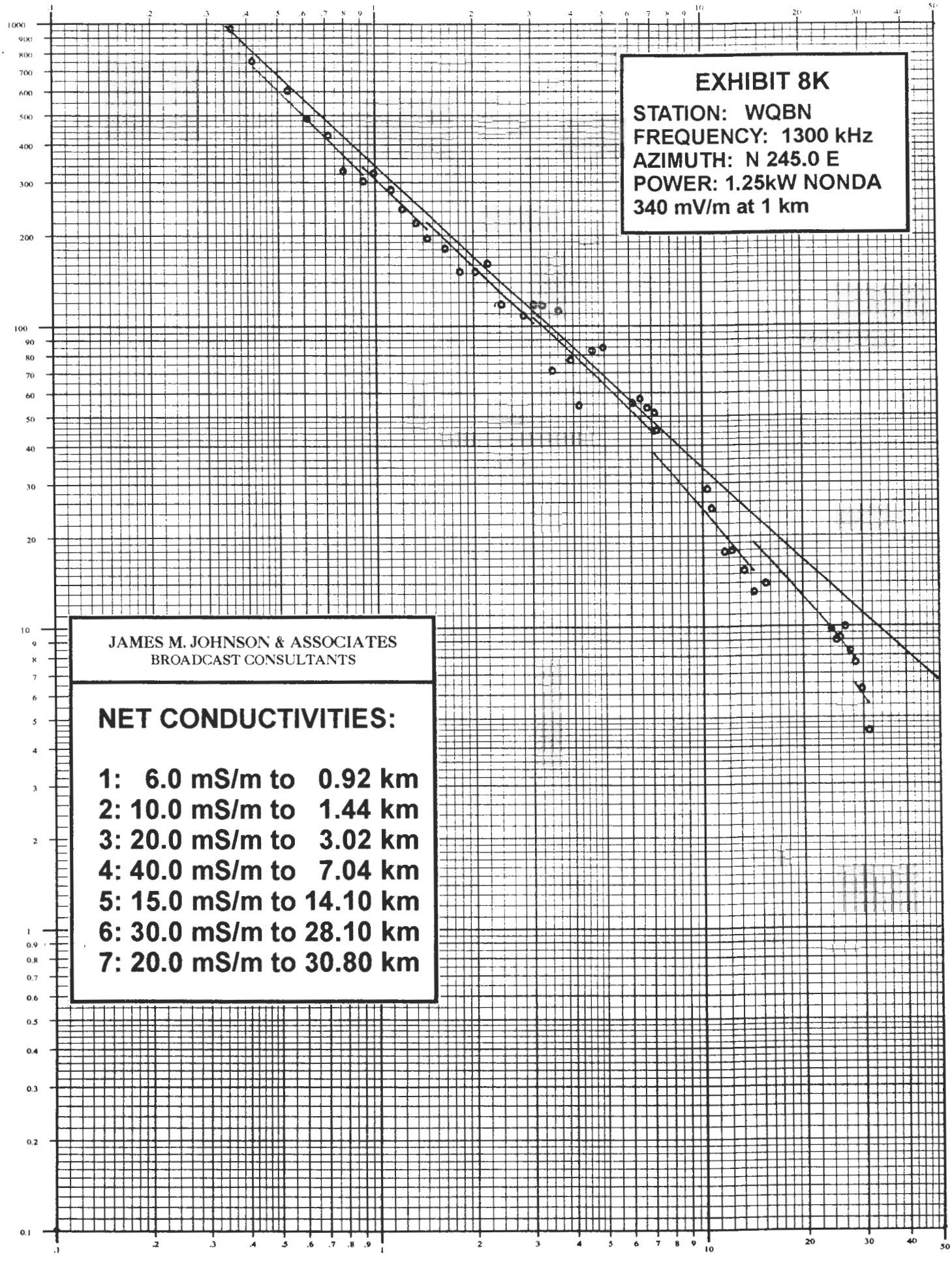


EXHIBIT 8K
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 245.0 E
POWER: 1.25kW NONDA
340 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 6.0 mS/m to 0.92 km
2: 10.0 mS/m to 1.44 km
3: 20.0 mS/m to 3.02 km
4: 40.0 mS/m to 7.04 km
5: 15.0 mS/m to 14.10 km
6: 30.0 mS/m to 28.10 km
7: 20.0 mS/m to 30.80 km

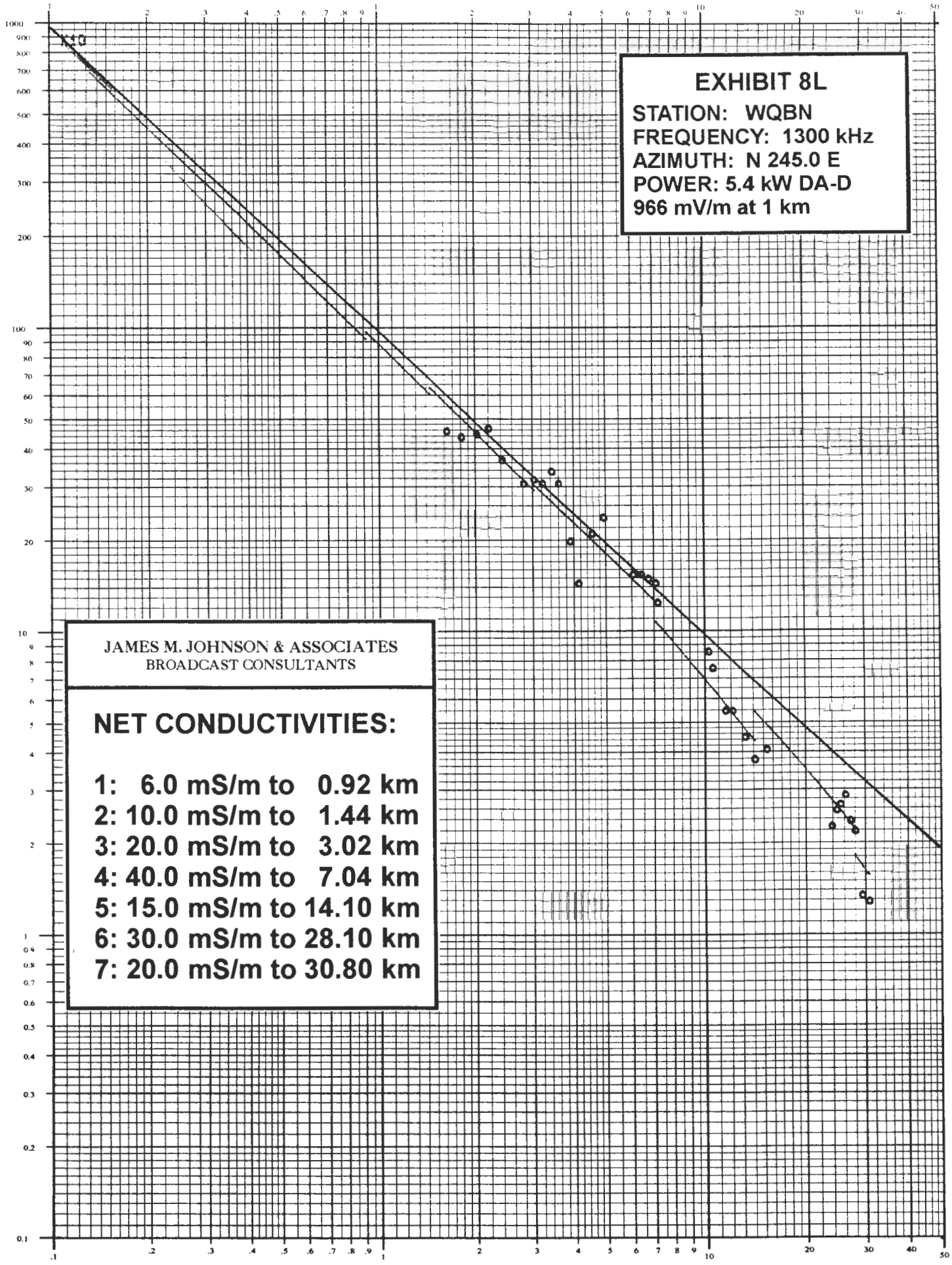


EXHIBIT 8L
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 245.0 E
POWER: 5.4 kW DA-D
966 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 6.0 mS/m to 0.92 km
2: 10.0 mS/m to 1.44 km
3: 20.0 mS/m to 3.02 km
4: 40.0 mS/m to 7.04 km
5: 15.0 mS/m to 14.10 km
6: 30.0 mS/m to 28.10 km
7: 20.0 mS/m to 30.80 km

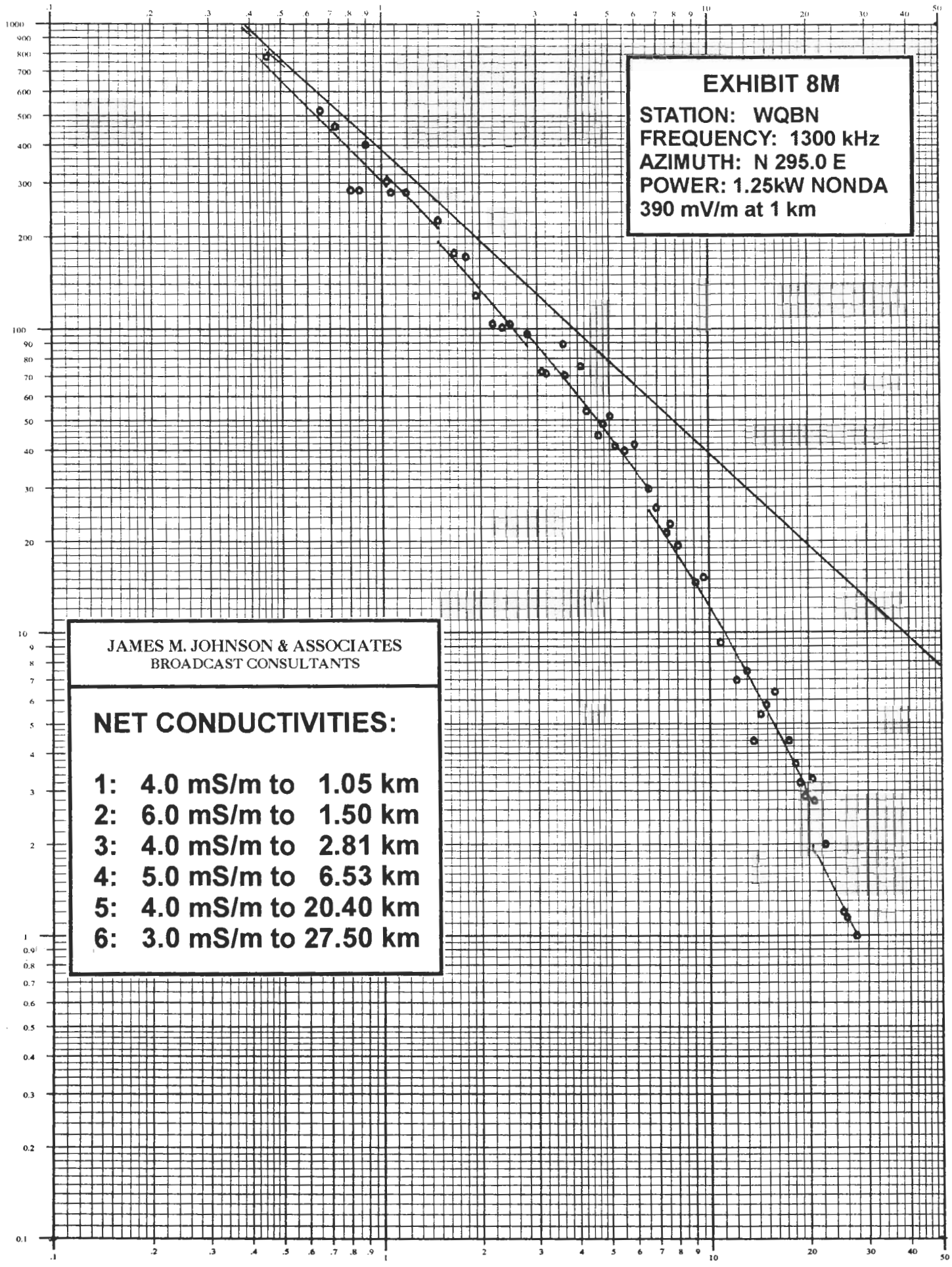


EXHIBIT 8M
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 295.0 E
POWER: 1.25kW NONDA
390 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 4.0 mS/m to 1.05 km
2: 6.0 mS/m to 1.50 km
3: 4.0 mS/m to 2.81 km
4: 5.0 mS/m to 6.53 km
5: 4.0 mS/m to 20.40 km
6: 3.0 mS/m to 27.50 km

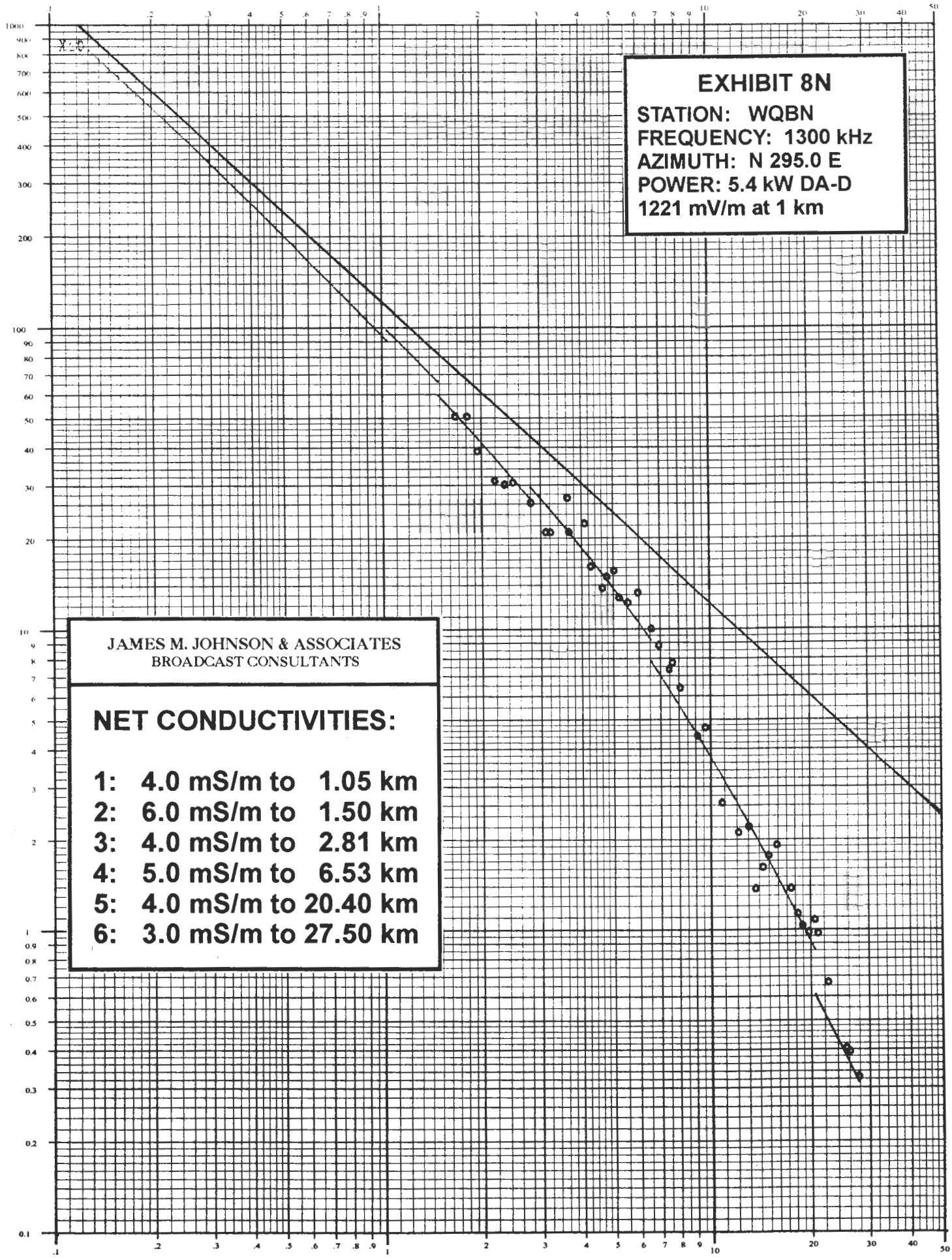


EXHIBIT 8N
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 295.0 E
POWER: 5.4 kW DA-D
1221 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 4.0 mS/m to 1.05 km
2: 6.0 mS/m to 1.50 km
3: 4.0 mS/m to 2.81 km
4: 5.0 mS/m to 6.53 km
5: 4.0 mS/m to 20.40 km
6: 3.0 mS/m to 27.50 km

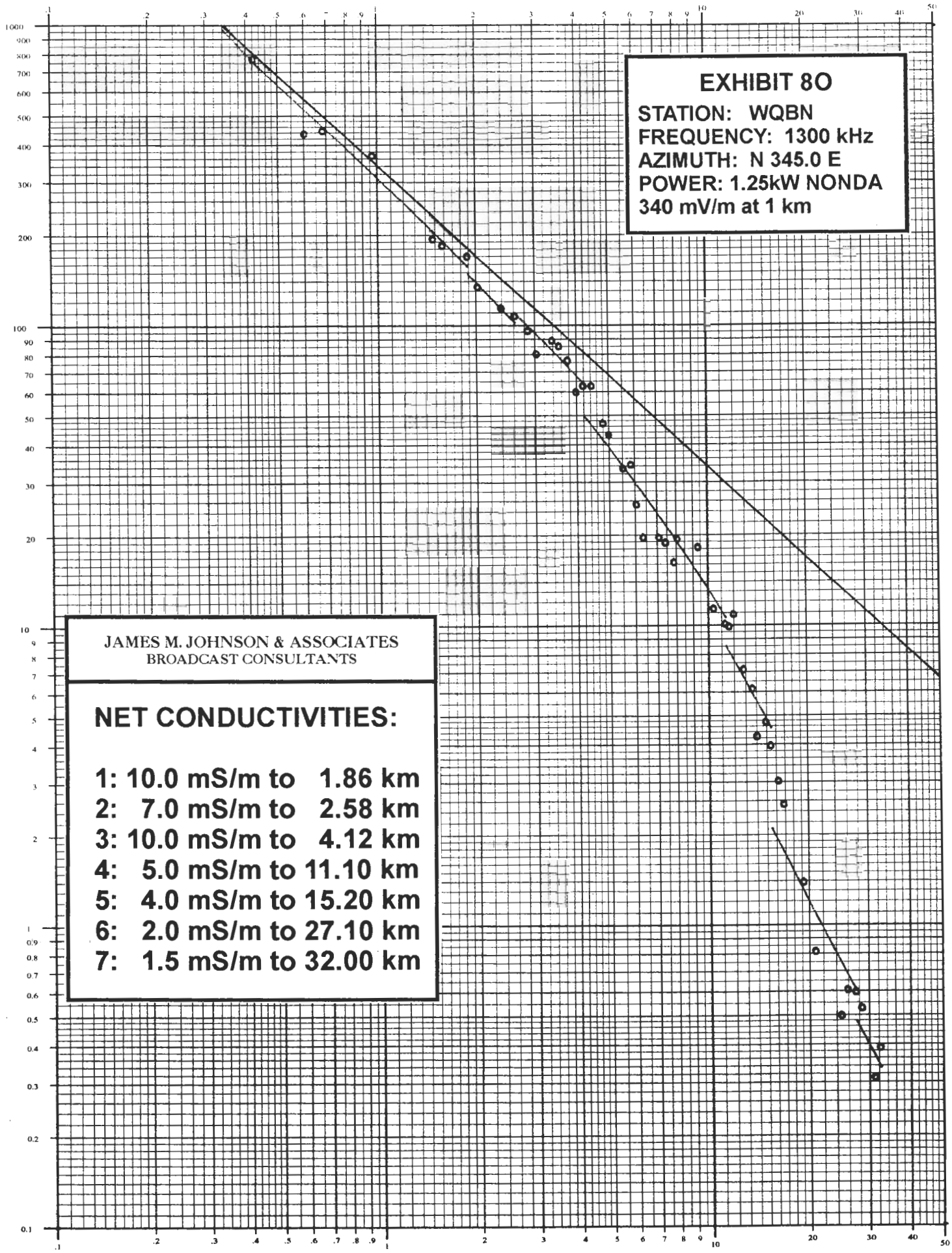


EXHIBIT 8O
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 345.0 E
POWER: 1.25kW NONDA
340 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 10.0 mS/m to 1.86 km
2: 7.0 mS/m to 2.58 km
3: 10.0 mS/m to 4.12 km
4: 5.0 mS/m to 11.10 km
5: 4.0 mS/m to 15.20 km
6: 2.0 mS/m to 27.10 km
7: 1.5 mS/m to 32.00 km

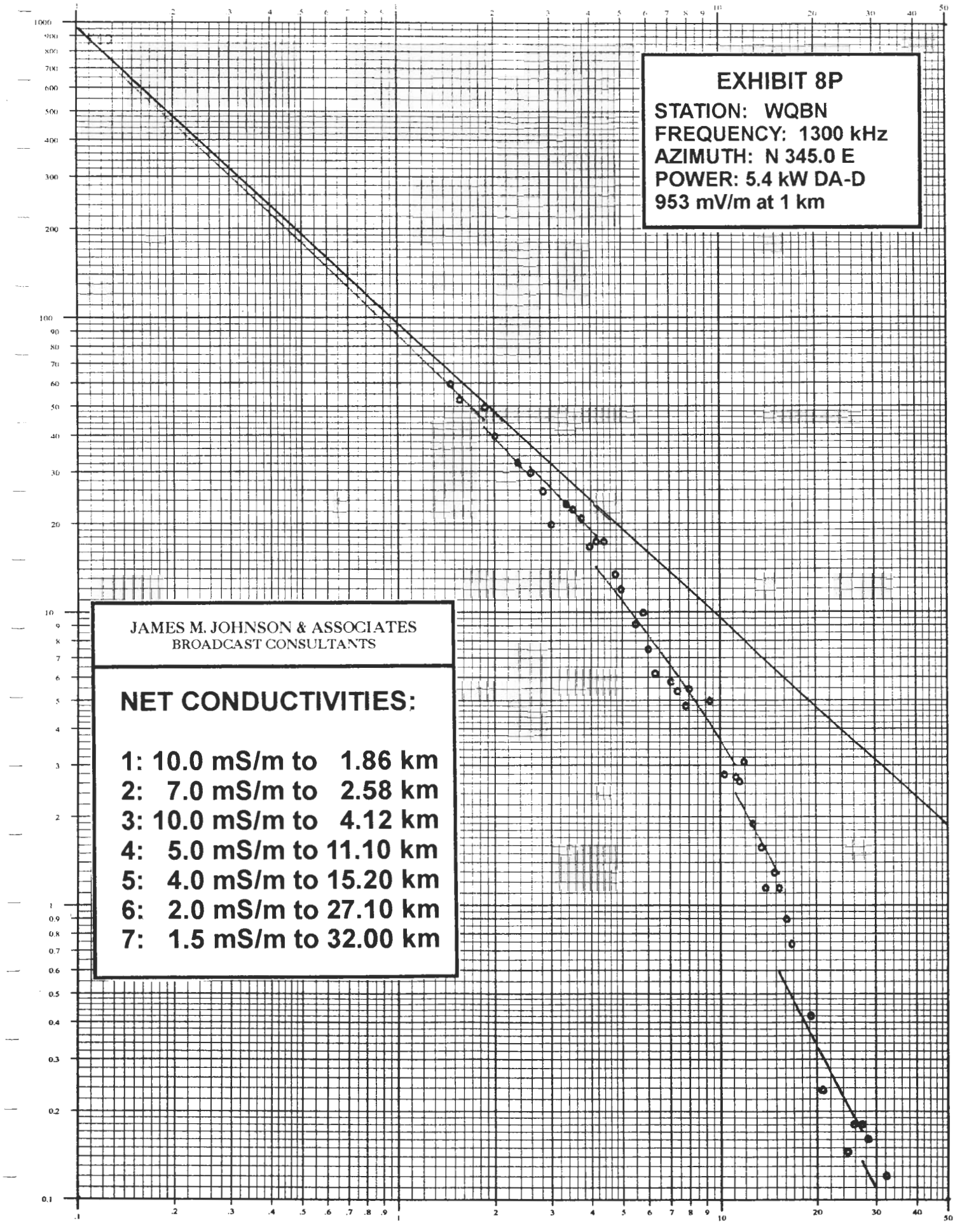
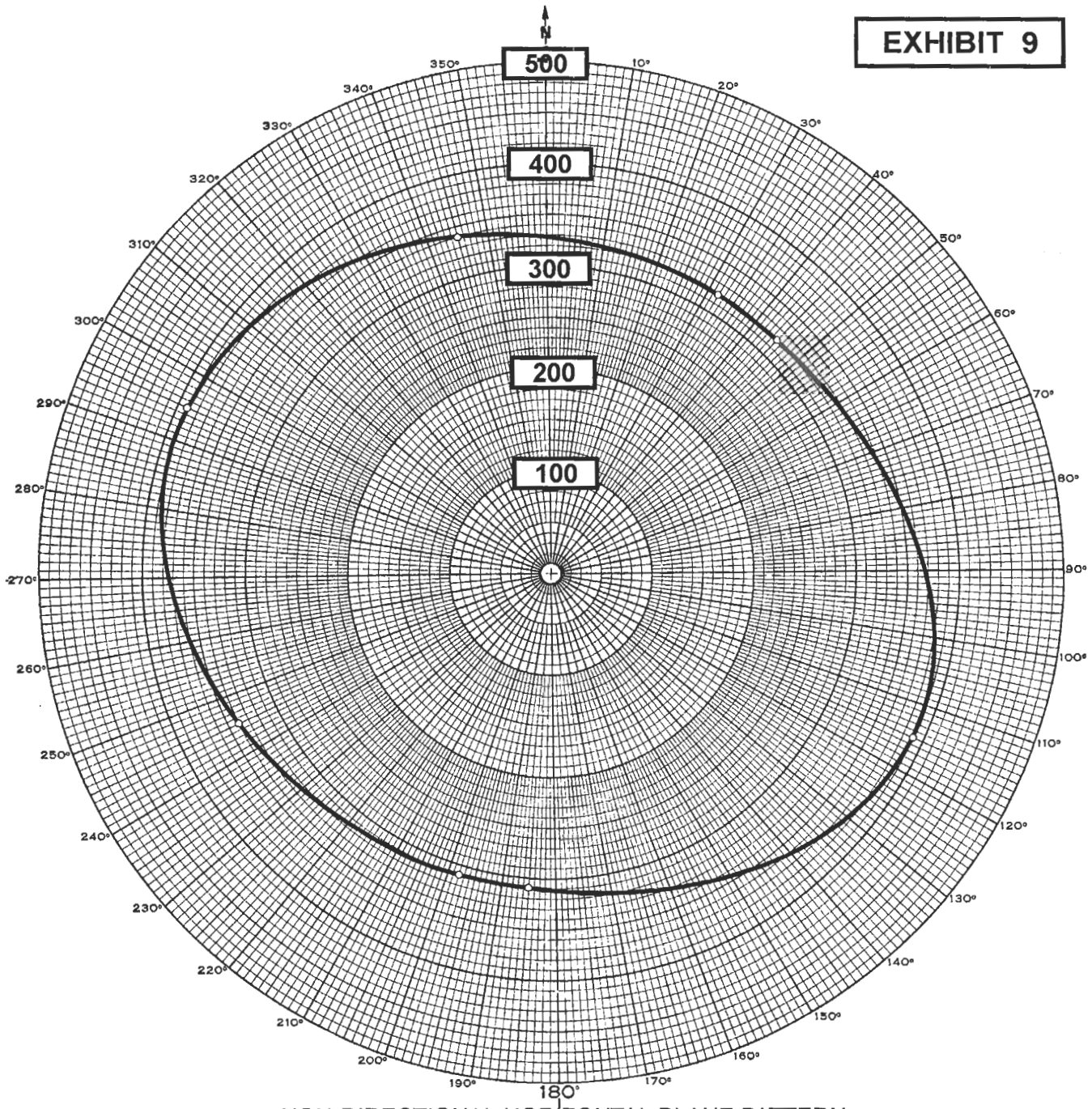


EXHIBIT 8P
STATION: WQBN
FREQUENCY: 1300 kHz
AZIMUTH: N 345.0 E
POWER: 5.4 kW DA-D
953 mV/m at 1 km
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS
NET CONDUCTIVITIES:
1: 10.0 mS/m to 1.86 km
2: 7.0 mS/m to 2.58 km
3: 10.0 mS/m to 4.12 km
4: 5.0 mS/m to 11.10 km
5: 4.0 mS/m to 15.20 km
6: 2.0 mS/m to 27.10 km
7: 1.5 mS/m to 32.00 km

EXHIBIT 9



NON-DIRECTIONAL HORIZONTAL PLANE PATTERN

LAT: 27-56-51 LON: 82-23-45

Measured RMS: 340 mV/m at 1km

WQBN, TEMPLE TERRACE, FLORIDA
1300 KHz., 5.0/1.0 Kw, DA-2
April, 1999

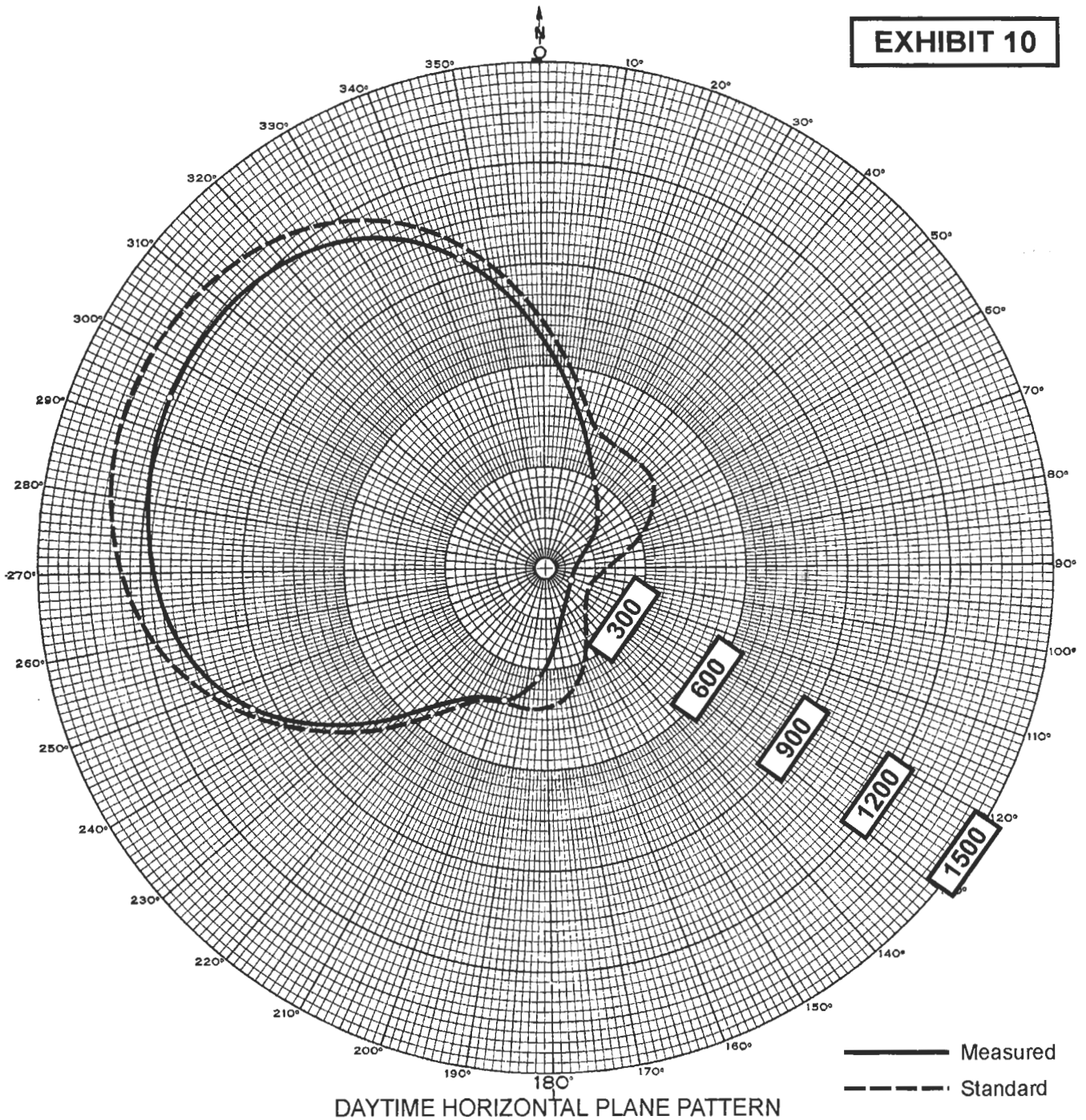
JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS

——— Measured

THEORETICAL TOWER PARAMETERS

Tower #	Field Ratio	Phase (Degs.)	Spac. (Degs.)	Bear. (Degs)	Ht (Degs.)
1	1.000	00.0	00.0	00.0	85.7

EXHIBIT 10



DAYTIME HORIZONTAL PLANE PATTERN

LAT: 27-56-51 LON: 82-23-45

Measured RMS: 665 mV/m at 1km

WQBN, TEMPLE TERRACE, FLORIDA
1300 KHz., 5.0/1.0 Kw, DA-2
April, 1999

JAMES M. JOHNSON & ASSOCIATES
BROADCAST CONSULTANTS

ERSS: 828.30 mV/m at 1 km

Q factor at 0 degrees:
22.36 mV/m at 1 km

Theoretical Pattern RMS:
727.43 mV/m at 1 km

Standard Pattern RMS:
764.16 mV/m at 1 km

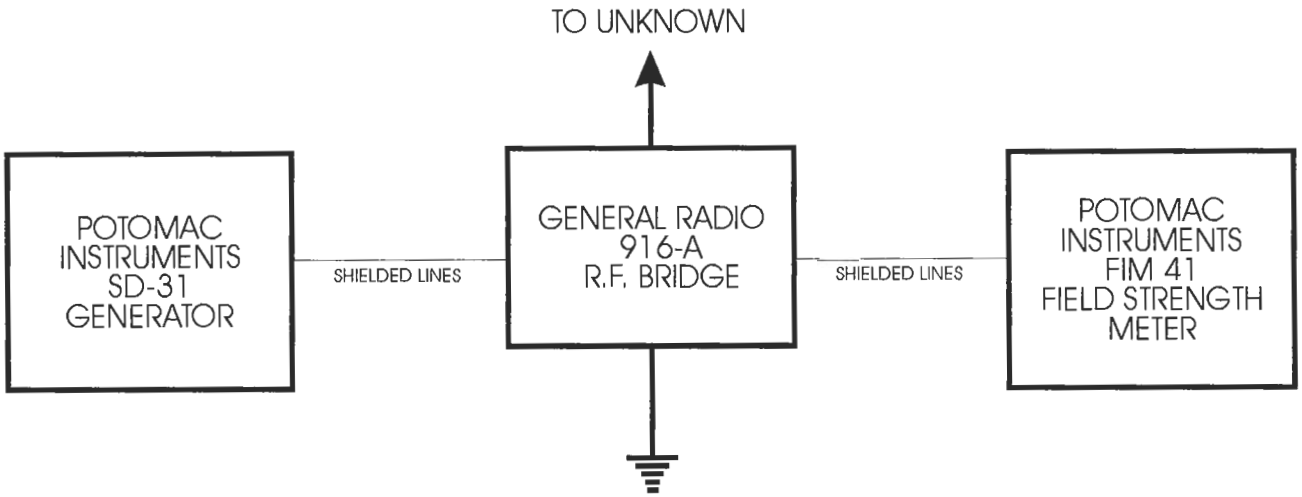
K factor: 592.64

THEORETICAL TOWER PARAMETERS

Tower #	Field Ratio	Phase (Degs.)	Spac. (Degs.)	Bear. (Degs)	Ht (Degs.)
1	1.000	00.0	00.0	00.0	85.7
2	0.822	-102.6	99.5	295.0	102.3
3	0.527	157.6	99.5	115.0	85.7

EXHIBIT 11

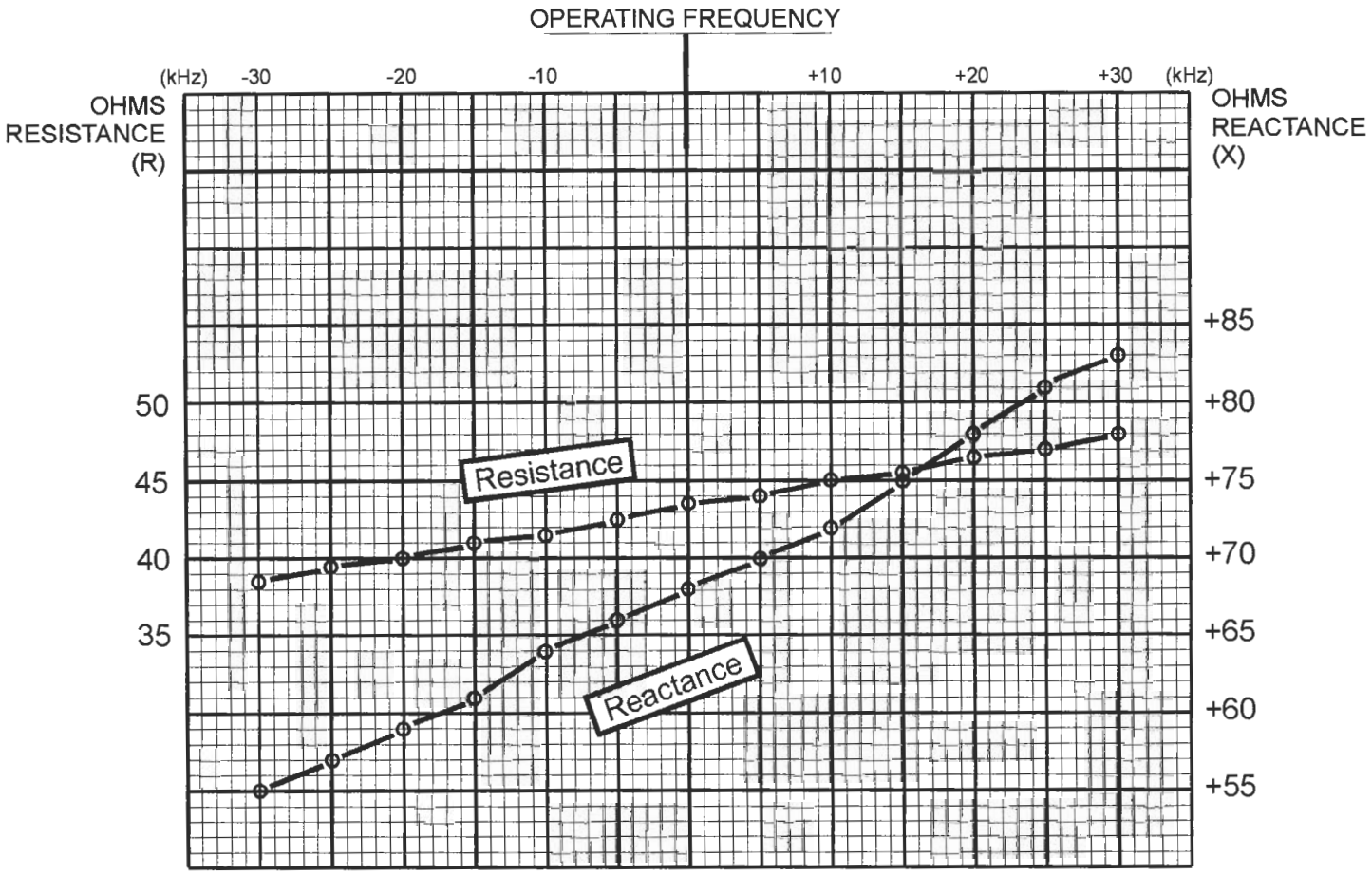
ENGINEERING EXHIBIT
APPLICATION FOR LICENSE AND PROOF OF PERFORMANCE
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz., 5.0/1.0 Kw, DA-2



BLOCK DIAGRAM OF IMPEDANCE MEASURING EQUIPMENT

EXHIBIT 12

WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0 Kw DA-2
APRIL, 1999

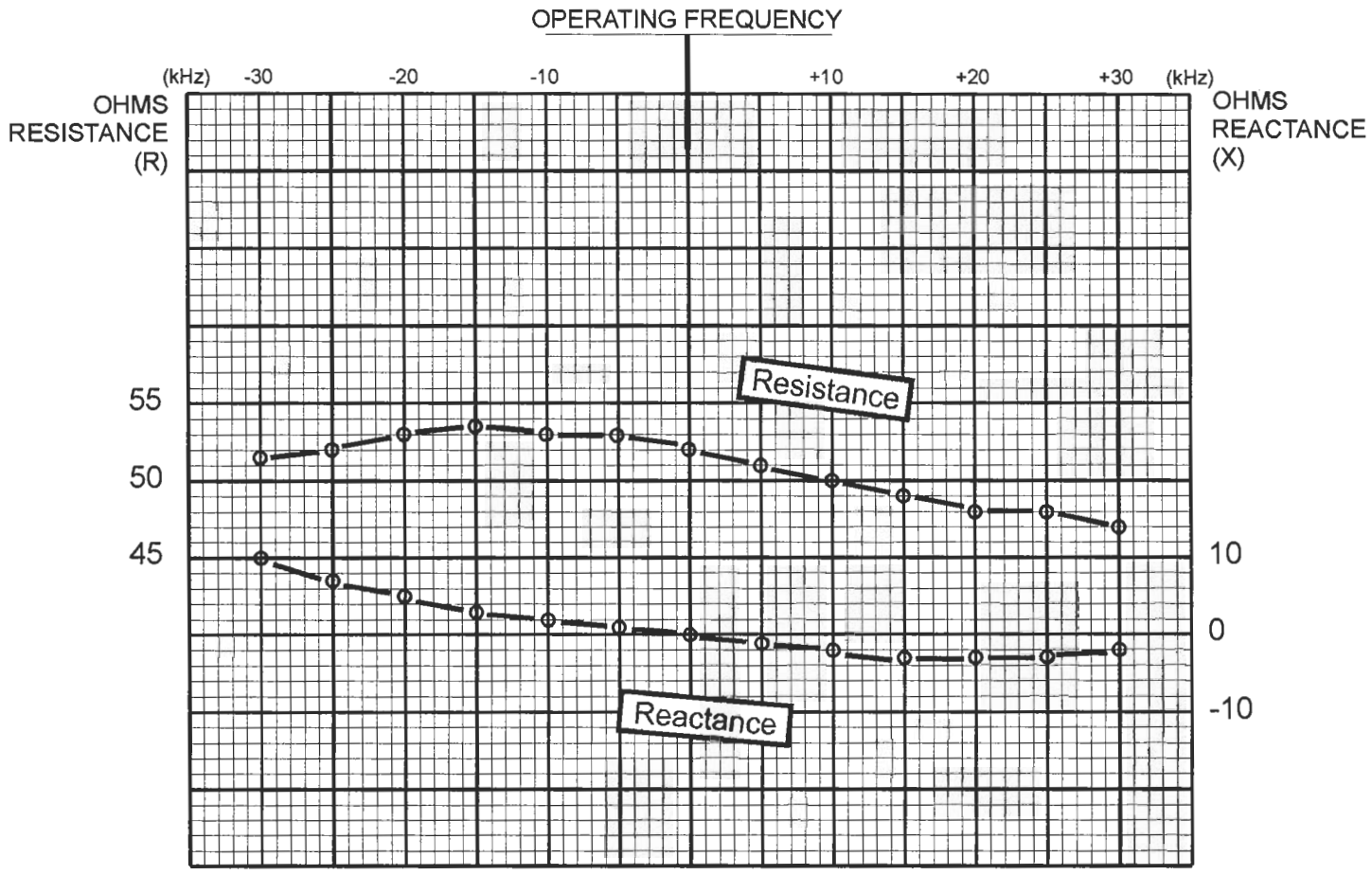


NON-DIRECTIONAL ANTENNA IMPEDANCE MEASUREMENTS

FREQUENCY	RESISTANCE	REACTANCE
1270	38.5	55
1275	39.5	57
1280	40	59
1285	41	61
1290	41.5	64
1295	42.5	66
1300	43.5	68
1305	44	70
1310	45	72
1315	45.5	75
1320	46.5	78
1325	47	81
1310	48	83

EXHIBIT 13

WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz. 5.0/1.0 Kw DA-2
APRIL, 1999



COMMON POINT IMPEDANCE MEASUREMENTS

FREQUENCY	RESISTANCE	REACTANCE
1270	51.5	10j
1275	52	7j
1280	53	5j
1285	53.5	3j
1290	53	2j
1295	53	1j
1300	52	0j
1305	52	-1j
1310	51	-2j
1315	50	-3j
1320	49	-3j
1325	48	-3j
1330	47	-2j

EXHIBIT 14

DESCRIPTION OF DAYTIME MONITOR POINTS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz., 5.0/1.0 Kw, DA-2

DIRECTION OF 32° TRUE NORTH.

32 DEGREE MP - CAMERA LOOKING EAST

Leave the WQBN transmitter and proceed West on Washington Blvd. 0.3 miles to 50th Street (US Highway 41). Turn right and proceed North on 50th Street 0.25 miles to Adamo Drive (Highway 60). Turn right and proceed East on Adamo Drive 2.95 miles to Highway 301. Turn left and proceed North 3.75 miles to Breckenridge Parkway. Turn left and proceed West on Breckenridge Parkway for a distance of 225 feet. The Monitor Point is located on the North side of Breckenridge Parkway, 15 feet East of the first light pole. Distance from the transmitter site is 7.13 kilometers.

The field intensity measured at this point is 23.0 mV/m Daytime

EXHIBIT 14

DESCRIPTION OF DAYTIME MONITOR POINTS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz., 5.0/1.0 kW, DA-2

DIRECTION OF 115° TRUE NORTH.

115 DEGREE MP - CAMERA LOOKING SOUTHEAST

Leave the WQBN transmitter and proceed West on Washington Blvd. 0.3 miles to 50th Street (US Highway 41). Turn right and proceed North on 50th Street 0.25 miles to Adamo Drive (Highway 60). Turn right and proceed East on Adamo Drive 2.95 miles to Highway 301. Turn right and proceed South on Highway 301, 1.35 miles to the Monitor Point. The Monitor Point is located at the West edge of Highway 301 where the Eastbound Cross-town Expressway exit ramp joins the Highway 301. The location is 10 feet south of the "Yield" sign, which is 60 feet north of light pole #729. Distance from the transmitter site is 4.83 kilometers.

The field intensity measured at this point is 9.0 mV/m Daytime

EXHIBIT 14

DESCRIPTION OF DAYTIME MONITOR POINTS
WQBN, TEMPLE TERRACE, FLORIDA
1300 Khz., 5.0/1.0 kW, DA-2

DIRECTION OF 198° TRUE NORTH.

198 DEGREE MP - CAMERA LOOKING SOUTHWEST

Leave the WQBN transmitter and proceed West on Washington Blvd. 0.3 miles to 50th Street (US Highway 41). Turn left and proceed South on 50th Street 1.75 miles to Causeway Blvd. Turn right and proceed West on Causeway Blvd. 0.2 miles to 47th Street. Turn right and proceed North 0.1 mile to El Camino Blanco Blvd. Turn right and proceed East on El Camino Blanco Blvd. 330 feet to the Monitor Point which is located in the vacant lot just East of 4711 El Camino Blanco Blvd by the marker. Distance from the transmitter site is 2.81 kilometers.

The field intensity measured at this point is 125 mV/m Daytime

EXHIBIT 15

MAP OF MONITOR POINT LOCATIONS
WQBN, TEMPLE TERRACE, FLORIDA
APRIL, 1999

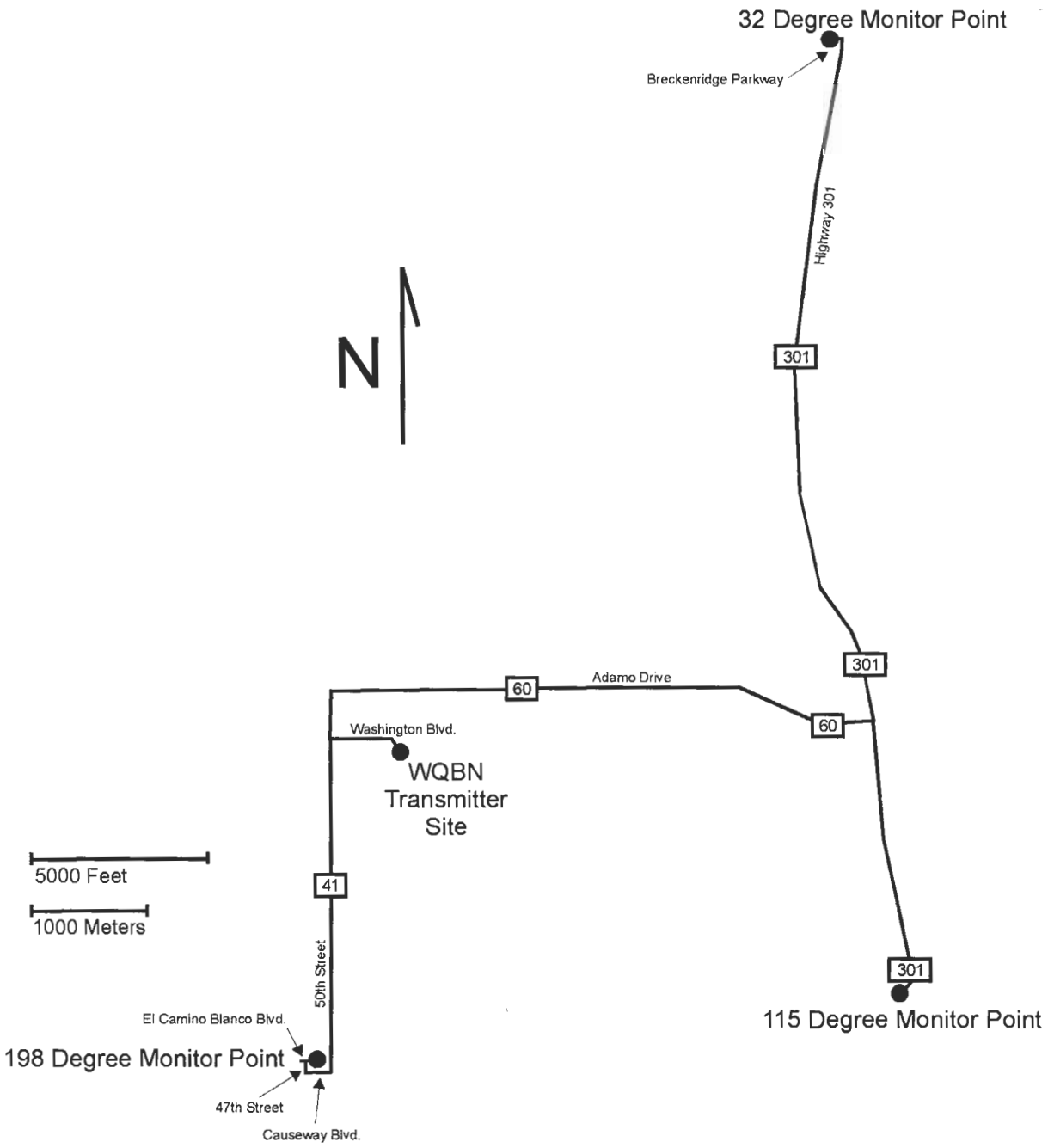
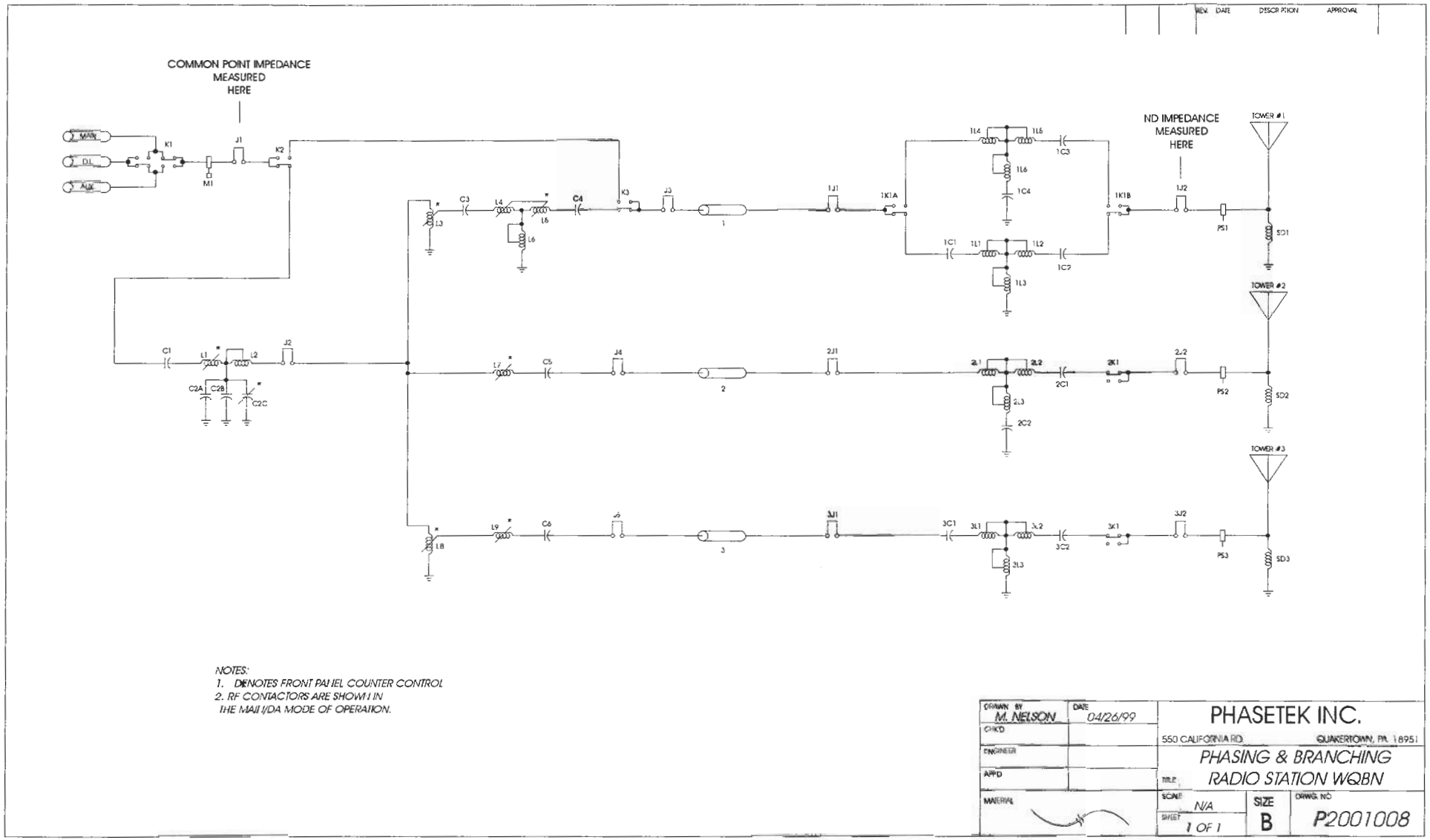


EXHIBIT 16

SCHEMATIC OF PHASING AND COUPLING
WQBN, TEMPLE TERRACE, FLORIDA
1300 KHz., 5.0/1.0 Kw, DA-2



NOTES:
1. *DENOTES FRONT PANEL COUNTER CONTROL*
2. *RF CONTACTORS ARE SHOWN IN THE MAIN/DA MODE OF OPERATION.*

DRAWN BY: M. NELSON	DATE: 04/26/99	PHASETEK INC.
CHK'D		550 CALIFORNIA RD. QUAKERTOWN, PA. 18951
ENGINEER		PHASING & BRANCHING
APP'D		TITLE: RADIO STATION WQBN
MATERIAL	SCALE: N/A	SIZE: B
	SHEET: 1 OF 1	DRWG. NO: P2001008

FCC Form 351
December 1985

UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION

EXHIBIT 17

File No.: BP-961016AB
Call Sign: WQBN

AM BROADCAST STATION CONSTRUCTION PERMIT
(DAYTIME ANTENNA)

1. Permittee: Radio Tropical, Inc.

2. Station location ..... : Temple Terrace, FL
3. Transmitter location ..... : 5207 Washington Blvd.

North Latitude ..... : 27° 56′ 51"
West Longitude ..... : 82° 23′ 50"

4. Main studio. location..... :

(Listed only if not at transmitter site or not within boundaries of principal community.)

5. Remote control location ..... :

6. Transmitter ..... : Type accepted

(See Section 73.1660, 73.1665 and 73.1670 of the Commission's Rules.)

Average hours of sunrise and sunset:
Standard Time (Non-Advanced)

Provided With Previous Authorization

7. Antenna and ground system: Attached

8. Obstruction marking and lighting specifications: FCC Form 715, paragraphs: 1, 3, 11, 21 & 22 (Twr #2 only.)
9. Operating Assignment

Frequency ..... : 1300 kHz
Power-Night ..... : 1.0 kw (Directional, per BL-821026AJ)
Day ..... : 5.0 kw (Directional)
Hours of Operation ..... : Unlimited

10. Conditions ..... : Attached

11. Deadline for completion of construction and filing FCC Form 302: 18 months from the date of grant (shown below)

Subject to the provisions of the Communications Act of 1934, as amended, treaties, and Commission Rules, and further subject to conditions set forth in this permit, 'authority is hereby granted to construct an AM broadcast station located and described as above.
Equipment and program tests shall be conducted only pursuant to Sections 73.1610 and 73.1620 of the Commission Rules.
This permit shall be forfeited if the station is ready for operation within the time specified or within such further time as the Commission may allow unless completion of the station is prevented by causes not under the control of the permittee. See Section **73.3599 of the Commission's Rules.**

CNM

'This construction permit consists of this page and page(s): 2 & 3

Dated:

MAY 2 1997

FEDERAL
COMMUNICATIONS
COMMISSION

FCC Form 353-A
June 1980

File No.: BP-961016AB **Call Sign: WQBN**

1. **DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM**

No. and Type of Elements: Three uniform cross-section, guyed, series-excited vertical steel radiators.

Height above Insulators: #1 and #3: 55 m (85.7°); #2: 65.5 m (102.3°)

Overall Height: #1 and #3: 56 m; #2: 67 m

Spacing and Orientation: Using Tower #1 as a reference, tower #2 is spaced 99.5° on a bearing of 295° True; tower #3 is spaced 99.5° on a bearing of 115° True.

Non-Directional Antenna: None

Ground System: 120 equally spaced buried copper radials about the base of each tower; each 64 meters in length except at the property boundary or where shortened and bonded to a transverse copper strap midway between towers.

Theoretical RMS: 727.43 mV/m/km

Standard RMS: 764.16 mV/m/km

Q: 22.36 mV/m

2. **THEORETICAL SPECIFICATIONS**

Towers:	#1(C)	#2(NW)	#3(SE)
Phasing:	0.0°	-102.6°	157.6°
Field Ratio:	1.00	0.822	0.527

3. The inverse distance field strength at a distance of one kilometer from the above antenna in the directions specified shall not exceed the following values:

Daytime

Azimuth	**Radiation**
32.0°	415.7 mV/m
115.0°	149.6 mV/m
198.0°	415.7 mV/m

FCC Form 353-A
June 1980

File No.: BP-961016AB **Call Sign: WQBN**

THE AUTHORITY GRANTED IS SUBJECT TO THE FOLLOWING CONDITIONS:

Painting and lighting of Tower #2 shall be maintained in accordance with paragraphs 1, 3, 11, 21 and 22 of FCC Form 715. Marking and lighting are not required for Towers #1 and #3.

Permittee shall install a type accepted transmitter, or submit an application (FCC Form 301) along with data prescribed in Section 73.1660(b) should a non-type accepted transmitter be proposed.

Complete nondirectional and daytime directional proofs of performance shall be submitted before program tests are authorized. The nondirectional and directional field strength measurements must be made under similar environmental conditions.