Exhibit 7
Engineering Statement
In Support of
Application for Modification of License
KRBE Channel 281C, Houston Texas
Facility I.D. 35524

This instant application has been prepared on behalf of KRBE Lico, Inc., licensee of the above FM Broadcast Station.

The master antenna utilized by KRBE and 8 other FM stations has been replaced with an ERI Model COG3-1083-12CP master antenna. There has been no change in the antenna center location above ground level. This antenna went into full time operation January 15, 2006, therefore in accordance with section 73.1690 (c) of the Commissions rules this application is timely filed.

Figure 1 attached, is an intermodulation study conducted by the antenna manufacturer and Figure 2 is a vertical plane relative field pattern for the antenna at the operating frequency of 104.1 MHz.

Calculations regarding RFR exposure to humans result in a power density at 2 meters above ground level at the base of the tower to be 0.007225 mw/cm^2 or only 0.72 percent of the MPE for controlled areas. These calculations considered the vertical radiation factor (90°) for all stations to be 0.2 percent and the antenna was lowered by 2 meters in order to determine the value at 2 meters AGL.

Date: January 24, 2006

Fred W. Greaves Jr.
Technical Consultant

EXHIBIT 7, FIGURE 1

ELECTRONICS RESEARCH, INC.

7777 Gardner Road, Chandler, Indiana 47610, (812) 925-6000, Fax (812) 925-4030

Report Of Intermodulation Product Findings

SENIOR ROAD COMBINED BROADCAST FACILITY
HOUSTON, TEXAS

KKBQ	***92.9***
KTBZ	***94.5***
KHJZ	***95.7***
KHMX	***96.5***
KBXX	***97.9***
KODA	***99.1***
KILT	***100.3***
KLOL	***101.1***
KRBE	***104.1***

January 2006

Electronics Research Inc.
7777 Gardner Road
Chandler, Indiana 47610
Phone (812) 925-6000 Fax (812) 925- 4030

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Report of Findings for Intermodulation Product Measurements

Exhibits Accompanying This Report

REPORT OF FINDINGS
SENIOR ROAD COMBINED BROADCAST FACILITY
HOUSTON, TEXAS

Introduction : This report of findings is based on data collected at the KKBQ, KTBZ, KHJZ, KHMX, KBXX, KODA, KILT, KLOL and KRBE Senior Road combined FM broadcast facility located in Houston, TX. The report includes measurements offered as proof that the operations of KKBQ (92.9 MHz.), KTBZ (94.5 MHz.), KHJZ (95.7 MHz.), KHMX (96.5 MHz.), KBXX (97.9 MHz.), KODA (99.1 MHz.), KILT (100.3 MHz.), KLOL (101.1 MHz.), KRBE (104.1 MHz.) and (MHz.) transmitters are in compliance with the FCC Rules and Regulations as required by the Code of Federal Regulations (CFR) Title 47 section 73.317 paragraph (b) through (d). In brief, the collection of measurements presented in this report shows that all possible third order inter-modulation (IM) products generated by this multiplex system are less than the maximum allowable level as required by section 73.317 (b) through (d). Thomas B. Silliman of Electronics Research, Inc. located in Chandler, Indiana performed the measurements summarized herein on January 15, 2006.

The following exhibits are provided:

- Exhibit A:
  - A-1 Drawing Depicting Antenna.
  - A-2 COG3-20P-12 Antenna Specification Sheet.
  - A-3 Drawing Depicting Multiplexing Scheme.
  - A-4 973-8 Multiplexer Specification Sheet.
  - A-5 Theoretical Vertical Plane Relative Field Antenna Plots
- Exhibit B:
  - B-1 Equipment Employed In Intermodulation Product Measurement.
  - B-2 Broadcasting Scheme of the Multiplexed Systems.
- Table 1. Carrier Reference Levels.
- Table 2. Calculated Third Order Products.
- Table 3. Intermodulation Analysis Measurements.

Exhibits Accompanying Report: Exhibit A, provides comprehensive information on both antenna and filters used by these radio stations. Exhibit B, illustrates the broadcasting scheme of each station, the layout of the equipment used to isolate and measure potential intermodulation products and forward carrier reference levels. Found within Table 1 are the narrow band carrier frequency measurements that provide relative output signal levels for the IM analysis. Table 2 lists the calculated third order products that can be generated from FM transmitters broadcasting from the multiplexed system. The IM Analysis Measurements, in Table 3, provides detailed information obtained from the product frequency investigation.

The Nature Of Intermodulation Products (IM) : Intermodulation products result from inadequate transmitter-to-transmitter isolation. Intermodulation products are commonly generated from radio stations operating into multiplexed facilities and congested antenna broadcast sites. The mechanics associated with the phenomenon have been well documented. When two or more transmitters are coupled to each other, new spectral components are produced by the mixing of the station frequencies in the active circuits of each transmitter. The common term used to describe this phenomenon is third order product denoted by the mathematical expression [$2(F_1)-(F_2)$], where F_1 signifies the frequency of the transmitter that is generating the intermodulation product, and F_2 signifies the frequency causing the interference.

The Multiplexed System : At the time of my measurements nine FM stations were operating from the combined antenna system. The KKBQ, KTBZ, KHJZ, KHMX, KBXX, KODA, KILT, KLOL, KRBE and multiplexed system is fundamentally comprised of antenna, feed line and multiplexer unit. The COG3-20P-12 antenna and 973-8 multiplexer units are products of Electronics Research, Inc, whereas the feed line is manufactured by Dielectric, Inc, Refer to Exhibit B-1, for an illustration of the Broadcasting Scheme of these stations.

To accomplish the aggregation of nine transmitter signals into a common antenna feed and provide transmitter-to-transmitter isolation, a multiplexing scheme consisting of ERI 973-8 constant Impedance combiner modules were used which is illustrated in the attached Exhibit A-3. The multiplexer, fully assembled, exhibited transmitter port-to-port isolation in excess of - 51 dB. Other performance measurements, such as match, loss, group-delay, etc, revealed that the multiplexer unit was in proper working condition. Refer to Exhibit A-4 for the Combiner Specification Sheet.

The IM Investigation : Directional Couplers were placed at key locations throughout the combiner to monitor and maintain the multiplexers performance. All couplers furnished with the system are factory calibrated and capable of delivering accurate and repeatable RF measurements. To facilitate the taking of the measurements, the couplers located at the antenna outputs of the multiplexed system was used. Care was taken in the selection of the measurement location to insure that the measurements would be made far removed from transmitters and any filtering used to reduce broadcast emissions. The coupler selected would normally be used for antenna reflection measurements and thus would provide greater than 40 dB directivity and a forward signal sample of -57 dB.

The forward port of the coupler was used for sampling the outgoing carrier levels and IM products. The IM sampled signal was fed by shielded cable into a Celwave Model PD500-OS Adjustable Band Pass Filter (Serial # 22828) where all extraneous energy was steeply attenuated. Various attenuation pads were used, when needed, on the band pass filter and/or the FIM71 to ensure an adequate signal level for measurements without overloading the measurement equipment. A Potomac Instruments FIM-71 Field Strength Receiver (Serial # 317) was employed to record the level of all signals investigated. To facilitate the selective tuning of the Receiver and Band Pass Filter a Wavetek Model 3000 signal generator (Serial #3130189) was used. An IFR Model 2399A Spectrum Analyzer (Serial # 02113071) was used to measure the close in spectral attenuation of each carrier and wide band search for any anomalies that may need further investigation. See attached Exhibit B-2 for an illustration of the measurement equipment.

Prior to recording measurements, all pertinent broadcasting equipment including Transmitters, Multiplexer, Feed Line and Antenna were adjusted to optimal performance. Also, it was confirmed before taking any measurements that all stations of concern were operating at their full licensed power level. From the equipment setup described above, the relative output signal level of each stations forward carrier was made. The resulting signal levels of these measurements are listed in Table 1, column labeled "Adjusted Level". This level will be used as the reference level for possible IM products of each carrier and was necessary to confirm that no significant levels of spurious energy, referenced to each carrier, were present from any transmitter operating from the multiplexed system.

Table 1 - Carrier Reference Levels

Carrier Frequency (MHz)	Pad One (dB)	Bandpass Filter Loss (dB)	Scale Reading (Volts)	**Adjusted Level (Volts)**	Notes
KKBQ (92.9)	---	---	1.05	**1.05**	
KTBZ (94.5)	---	---	1.05	**1.05**	
KHJZ (95.7)	---	---	1.05	**1.05**	
KHMX (96.5)	---	---	1.10	**1.10**	
KBXX (97.9)	---	---	1.10	**1.10**	
KODA (99.1)	---	---	1.12	**1.12**	
KILT (100.3)	---	---	1.20	**1.20**	
KLOL (101.1)	---	---	1.15	**1.15**	
KRBE (104.1)	---	---	1.18	**1.18**	

Predictable third-order products due to system harmonics mixed with all on-site interfering frequencies that could be generated from the multiplexed system are calculated and listed in Table 2.

Table 2 - Third Order Products.

Mix Freq.	**Carrier Frequency (MHz)**								
	92.9	**94.5**	**95.7**	**96.5**	**97.9**	**99.1**	**100.3**	**101.1**	**104.1**
92.9	---	96.1	98.5	100.1	102.9	105.3	107.7	109.3	115.3
94.5	91.3	---	96.9	98.5	101.3	103.7	106.1	107.7	113.7
95.7	90.1	93.3	---	97.3	100.1	102.5	104.9	106.5	112.5
96.5	89.3	92.5	94.9	---	99.3	101.7	104.1	105.7	111.7
97.9	87.9	91.1	93.5	95.1	---	100.3	102.7	104.3	110.3
99.1	86.7	89.9	92.3	93.9	96.7	---	101.5	103.1	109.1
100.3	85.5	88.7	91.1	92.7	95.5	97.9	---	101.9	107.9
101.1	84.7	87.9	90.3	91.9	94.7	97.1	99.5	---	107.1
104.1	81.7	84.9	87.3	88.9	91.7	94.1	96.5	98.1	---

Using the equipment previously described the IM product measurements were recorded and are listed in Table 3. The signal levels referenced to the carriers are calculated and listed in the column labeled "Level Referenced to Carrier". Refer to Exhibit B for a layout of the measurement equipment.

Table 3 Intermodulation Measurements

Product Frequency (MHz)	Carrier Frequency (MHz)	Interfering Frequency (MHz)	Pad (dB)	Bandpass Filter Loss (dB)	Scale Reading (µVolts)	Adjusted Level (µVolts)	Carrier Reference Level (Volts) (See Table 1)	**Level Referenced to Carrier (dB)**	Notes*
81.7	92.9	104.1	-10	-10	18	180.0	1.05	**-75.3**	1
84.7	92.9	101.1	-10	-10	<1	<10.0	1.05	**-100.4**	
84.9	94.5	104.1	0	-10	<1	<10.0	1.05	**-100.4**	
85.5	92.9	100.3	-10	-10	<1	<10.0	1.05	**-100.4**	
86.7	92.9	99.1	-10	-10	<1	<10.0	1.05	**-100.4**	
87.3	95.7	104.1	0	-10	1.7	5.4	1.05	**-105.8**	
87.9	92.9	97.9	-10	-10	<1	<10.0	1.05	**-100.4**	
88.7	94.5	100.3	0	-10	30	94.9	1.05	**-80.9**	2
88.9	96.5	104.1	0	-10	30	94.9	1.10	**-81.3**	2
89.3	92.9	96.5	-10	-10	>1	10.0	1.05	**-100.4**	
89.9	94.5	99.1	0	-10	2	6.3	1.05	**-104.4**	
90.1	92.9	95.7	-10	-10	2	20.0	1.05	**-94.4**	
90.3	95.7	101.1	0	-10	1.5	4.7	1.05	**-107.0**	
91.1	95.7	100.3	0	-10	<1	<10.0	1.05	**-100.4**	
91.3	92.9	94.5	0	-10	1.3	4.1	1.05	**-108.2**	
91.7	97.9	104.1	0	-10	1.2	3.8	1.10	**-109.2**	
91.9	96.5	101.1	0	-10	<1	<10.0	1.10	**-100.8**	
92.3	95.7	99.1	0	-10	<1	<10.0	1.05	**-100.4**	
92.5	94.5	96.5	0	-10	3.2	10.1	1.05	**-100.3**	
92.7	96.5	100.3	0	-10	32	104.4	1.10	**-80.5**	3
93.3	94.5	95.7	0	-10	8	25.3	1.05	**-92.4**	3
93.5	95.7	97.9	0	-10	25	79.1	1.05	**-82.5**	4
93.9	96.5	99.1	0	-10	65	205.5	1.10	**-74.6**	4
94.1	99.1	104.1	0	-10	11	34.8	1.12	**-90.2**	
94.7	97.9	101.1	0	-10	2	6.3	1.10	**-104.8**	5
94.9	95.7	96.5	0	-10	7	22.1	1.05	**-93.5**	
95.1	96.5	97.9	0	-10	13	41.1	1.10	**-88.6**	
95.5	97.9	100.3	0	-10	2	6.3	1.10	**-104.8**	6
96.1	94.5	92.9	-10	-10	<1	<10.0	1.05	**-100.4**	

Product Frequency (MHz)	Carrier Frequency (MHz)	Interfering Frequency (MHz)	Pad (dB)	Bandpass Filter Loss (dB)	Scale Reading (μVolts)	Adjusted Level (μVolts)	Carrier Reference Level (Volts) (See Table 1)	**Level Referenced to Carrier (dB)**	Notes*
96.5	100.3	104.1	0	-10	3	9.5	1.20	**-102.0**	7
96.7	97.9	99.1	0	-10	10	31.6	1.10	**-90.8**	7
96.9	95.7	94.5	0	-10	8	25.3	1.05	**-92.4**	
97.1	99.1	101.1	0	-10	4.5	14.2	1.12	**-97.9**	7
97.3	96.5	95.7	-10	-10	2	20.0	1.10	**-94.8**	
97.9	99.1	100.3	-10	-10	<1	<10.0	1.12	**-101.0**	
98.1	101.1	104.1	-10	-10	<1	<10.0	1.15	**-101.2**	
98.5	96.5	94.5	-10	-10	6	60.0	1.10	**-85.3**	
99.3	97.9	96.5	-10	-10	<1	<10.0	1.10	**-100.8**	
99.5	100.3	101.1	-10	-10	<1	<10.0	1.20	**-101.6**	
100.1	97.9	95.7	-10	-10	<1	<10.0	1.10	**-100.8**	
100.3	99.1	97.9	-10	-10	<1	<10.0	1.12	**-101.0**	
101.3	97.9	94.5	-10	-10	<1	<10.0	1.10	**-100.8**	
101.5	100.3	99.1	-10	-10	<1	<10.0	1.20	**-101.6**	
101.7	99.1	96.5	-10	-10	<1	<10.0	1.12	**-101.0**	
101.9	101.1	100.3	-10	-10	2	20.0	1.15	**-95.2**	
102.5	99.1	95.7	-10	-10	<1	<10.0	1.12	**-101.0**	
102.7	100.3	97.9	-10	-10	<1	<10.0	1.20	**-101.6**	
102.9	97.9	92.9	-10	-10	2	10.0	1.10	**-100.8**	
103.1	101.1	99.1	-10	-10	<1	<10.0	1.15	**-101.2**	
103.7	99.1	94.5	-10	-10	18	180.0	1.12	**-75.9**	
104.1	100.3	96.5	-10	-10	<1	<10.0	1.20	**-101.6**	8
104.3	101.1	97.9	-10	-10	<1	<10.0	1.15	**-101.2**	8
104.9	100.3	95.7	-10	-10	1	10.0	1.20	**-101.6**	
105.3	99.1	92.9	-10	-10	<1	<10.10.	1.12	**-100.9**	
105.7	101.1	96.5	-10	-10	22	220.0	1.15	**-74.4**	9
106.1	100.3	94.5	-10	-10	<1	<10.0	1.20	**-101.6**	
106.5	101.1	95.7	-10	-10	<1	<10.0	1.15	**-101.2**	
107.1	104.1	101.1	-10	-10	<1	<10.0	1.18	**-101.4**	
107.7	101.1	94.5	-10	-10	<1	<10.0	1.15	**-101.2**	
107.9	104.1	100.3	-10	-10	<1	<10.0	1.18	**-101.4**	

Product Frequency (MHz)	Carrier Frequency (MHz)	Interfering Frequency (MHz)	Pad (dB)	Bandpass Filter Loss (dB)	Scale Reading (μVolts)	Adjusted Level (μVolts)	Carrier Reference Level (Volts) (See Table 1)	**Level Referenced to Carrier (dB)**	Notes*
109.1	104.1	99.1	-10	-10	<1	<10.0	1.18	**-101.4**	
109.3	101.1	92.9	-10	-10	<1	<10.0	1.15	**-101.2**	
110.3	104.1	97.9	-10	-10	<1	<10.0	1.18	**-101.4**	
111.7	104.1	96.5	-10	-10	<1	<10.0	1.18	**-101.4**	
112.5	104.1	95.7	-10	-10	<1	<10.0	1.18	**-101.4**	
113.7	104.1	94.5	-10	-10	<1	<10.0	1.18	**-101.4**	
115.3	104.1	92.9	-10	-10	<1	<10.0	1.18	**-101.4**	

*** NOTES**

1) Measured signal is a local TV Carrier KKRO transmitting at Channel 6: No discernable signal was measured.
2) Measured signal is a local carrier KUHF transmitting at 88.7 MHz. : No discernable signal was measured.
3) KKBQ 92.9 MHz. System carrier was turned OFF for this measurement.
4) Measured signal is a local carrier KKRD transmitting at 93.7 MHz. : No discernable signal was measured.
5) KTBZ 94.5 MHz. System carrier was turned OFF for this measurement.
6) KHJZ 95.7 MHz. System carrier was turned OFF for this measurement.
7) KHMX 96.5 MHz. System carrier was turned OFF for this measurement.
8) KRBE 104.1 MHz. System carrier was turned OFF for this measurement.
9) Measured signal is a local carrier KHCB transmitting at 105.7 MHz. : No discernable signal was measured.

The Spectrum Analyzer was used to check the close in spectral attenuation of each carrier to confirm the operation of these transmitters are in compliance with Sections (b) and (c) of the FCC Rules and Regulations.

As a final proof of the systems IM Product performance, a wide band search was undertaken using the Spectrum Analyzer . The purpose for this measurement was to look for suspicious anomalies that may warrant further investigation. My search ranged the complete frequency span of the receiver and resulted in no additional investigation.

Conclusion : Based upon my observations and measurements taken January 15, 2006 as summarized in this document, I, Tom Silliman, find the subject multiplexed system- specifically the transmitters and combiner system for the operation of the KKBQ, KTBZ, KHJZ, KHMX, KBXX, KODA, KILT and KLOL into the COG3-20P-12 antenna- to be in proper working order. Furthermore, based on the measured data, it is my opinion that there are no inter-modulation products in excess of 80 dB below carrier levels generated from or within the stations operating on the installed system. Also, based on this recorded data. I conclude that KKBQ, KTBZ, KHJZ, KHMX, KBXX, KODA, KILT, KLOL, KRBE and are in compliance with the requirements of Section 73.317 paragraph (b) through (d) of the FCC Rules and Regulations.

Respectfully submitted,
Electronics Research, Inc.

By ______________________________________
Thomas B. Silliman

AFFIDAVIT

WARRICK COUNTY)
) SS:
STATE OF INDIANA)

THOMAS B. SILLIMAN, being duly sworn upon his oath deposes and says:

That his qualifications are a matter of record with the Federal Communications Commission;

That he is a registered professional engineer in Indiana, Maryland and Minnesota and is the President of Electronics Research, Inc.;

That this corporation has been retained by Senior Road Tower Group, on behalf of radio stations KKBQ, KTBZ, KHJZ, KHMX, KBXX, KODA, KILT, KLOL and KRBE in Houston, TX to prepare this Report of Findings.

That he has either prepared or directly observed the preparation of all technical information contained in this engineering statement and that the facts stated in this engineering statement are true of his knowledge except as such statements as are herein stated to be on information and belief and as to such statements he believes them to be true.

____
Thomas B. Silliman

Subscribed and sworn to before me on this ___ day of __________, 2006.

____
Notary Public

My Commission Expires: ____________ ________________________________
I Reside in ___________ County. Printed Name

(Seal)

A-2 ERI Antenna Specification Sheet
SENIOR ROAD ~ HOUSTON, TEXAS

General Specifications

Antenna Type . . . . **High Power FM-Broadcast, Suitable For Diplexing**
Model Number **COG3-20P-12**
Number Of Bay Levels . . . . **(9) Nine**
Polarization . . . . **Right Hand Circular**

Electrical Specifications

Antenna Input Power Capability . . . . **240 KW. Average** (1)
Operating Frequency Band . . **92.9, 94.5, 95.7, 96.5, 97.9, 99.1, 100.3, 101.1 and 104.1 MHz.**
Power Split . . . . **50/50 (Horizontal & Vertical)**

Frequency Specific Information:

Frequency	Station ERP	Beam Tilt	First Null Fill	Second Null Fill	Power Gain (Max)	Analog System Loss (2	Digital System Loss (3)	Analog Digital to Isolation (4)	Analog TPO (KW)	Digital TPO (Watts)
92.9	100 (KW)	-0.75°	10 %	5 %	5.880	1.238 dB	4.220 dB	-20 dB	22.846	452
94.5	100 (KW)	-0.75°	10 %	5 %	5.952	1.197 dB	4.262 dB	-20 dB	22.358	453
95.7	100 (KW)	-0.75°	10 %	5 %	6.005	1.402 dB	4.326 dB	-20 dB	23.231	455
96.5	100 (KW)	0.75°	10 %	5 %	6.039	1.415 dB	4.437 dB	-20dB	23.165	465
97.9	100 (KW)	0.75°	10 %	5 %	6.095	1.415 dB	4.372 dB	-20dB	21.574	454
99.1	100 (KW)	0.75°	10 %	5 %	6.132	1.366 dB	4.445 dB	-20 dB	22.563	458
100.3	100 (KW)	0.75°	10 %	5 %	6.155	1.448 dB	4.548 dB	-20 dB	22.907	468
101.1	100 (KW)	-0.75°	10 %	5 %	6.159	1.092 dB	4.538dB	-20 dB	21.091	466
104.1	100 (KW)	-0.75°	11 %	5 %	6.073	1.126 dB	4.579 dB	-20 dB	21.558	477

Mechanical Specifications

Antenna Feed System . . . . **Analog and Digital Each Fed With Dual Feed Lines**
Input Connector . . . . . **(2) ~ 6-1/8" Analog and (2) ~ 3 1/8" Digital 50-Ohm EIA Flanged**
Element Deicing . . . . **Not Ordered** (5)
Interbay Spacing . . . . **114 Inch Center to Center**
Array Length . . . . **116. 5 Feet**
Construction Material (Antenna) . . . . **All Noncorrosive**
Construction Material (Mounting) . . . . **Galvanized Plated Steal and Stainless Steel**
Mounting . . . . **Integral Arrangement (Antenna Preassembled To Mast)**

1) Power Capability Has Been Rated Assuming An Operating Transmission VSWR Of 1.5:1
2) Analog System Loss Assumes Dual Feed Runs of 2012 Feet, Dielectric 8 1/16" Rigid Coax, 100 Feet 3" Andrew Type HJ8-50 Flex Coax And ERI Multiplexer .
3) Digital System Loss Assumes Dual Feed Line Runs of 2012 Feet, Of Andrew Type HJ12-50B 2 1/4" Air Coax, 100 Feet, Andrew Type LDF5 50J Foam Coax, ERI Multiplexer And ERI Circulator Loss Of 0.35 dB Per Station.
4) Analog To Digital Isolation Losses are included in TPO Calculations.
5) With Low Q Element Design, Moderate Icing Will Not Cause Appreciable VSWR Rise.

A-2 ERI Antenna Specification Sheet
SENIOR ROAD ~ HOUSTON, TEXAS

General Specifications

Antenna Type . . . . High Power FM-Broadcast, Suitable For Diplexing
Model Number COG3-20P-12
Number Of Bay Levels . . . . (9) Nine
Polarization . . . . Right Hand Circular

Electrical Specifications

Antenna Input Power Capability . . . . 240 KW. Average (1)
Operating Frequency Band . . 92.9, 94.5, 95.7, 96.5, 97.9, 99.1, 100.3, 101.1 and 104.1 MHz.
Power Split . . . . 50/50 (Horizontal & Vertical)

Frequency Specific Information:

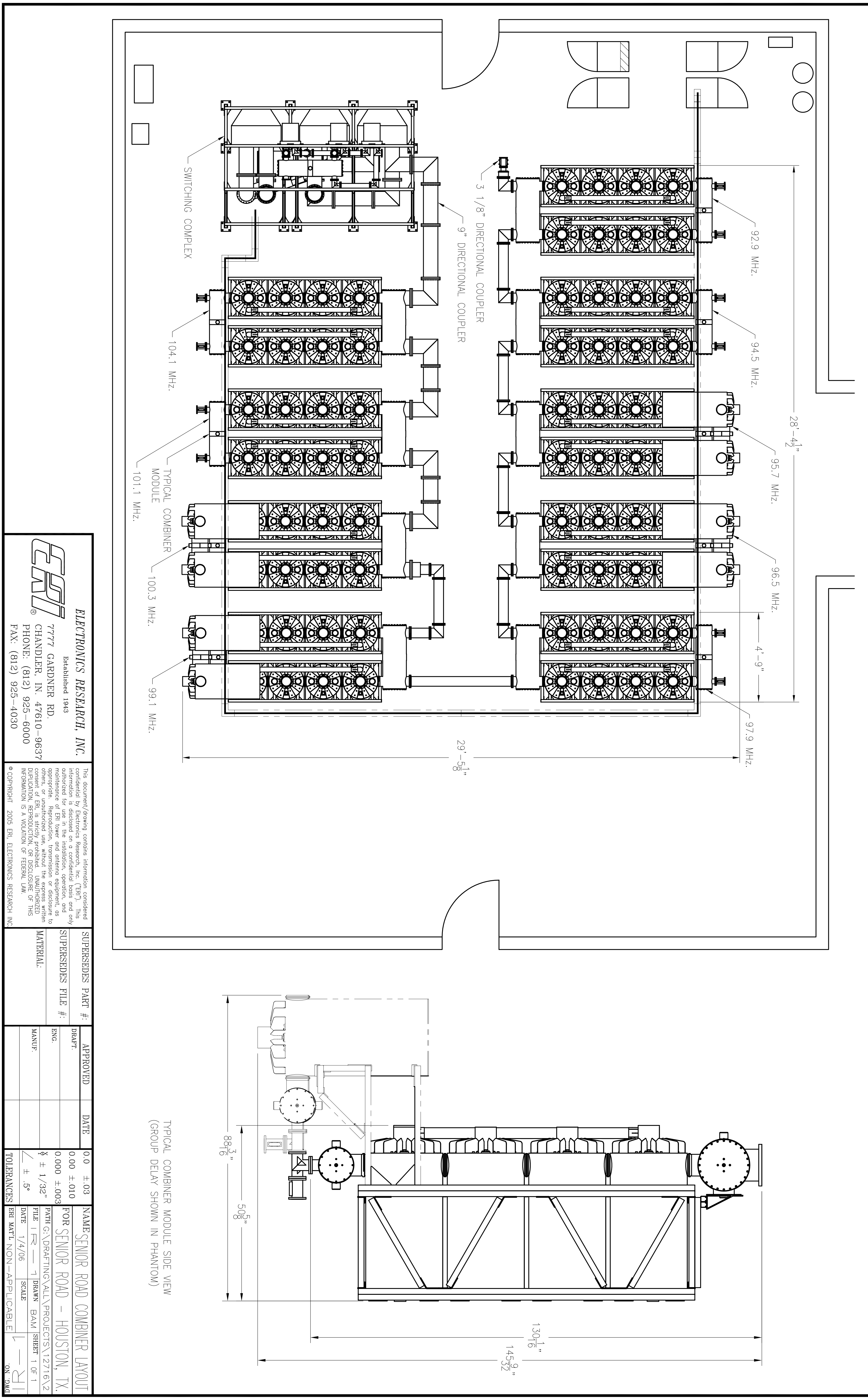
Frequency	Station ERP	Beam Tilt	First Null Fill	Second Null Fill	Power Gain (Max)	Analog System Loss (2	Digital System Loss (3)	Analog Digital to Isolation (4)	Analog TPO (KW)	Digital TPO (Watts)
92.9	100 (KW)	-0.75°	10 %	5 %	5.880	1.238 dB	4.220 dB	-20 dB	22.846	452
94.5	100 (KW)	-0.75°	10 %	5 %	5.952	1.197 dB	4.262 dB	-20 dB	22.358	453
95.7	100 (KW)	-0.75°	10 %	5 %	6.005	1.402 dB	4.326 dB	-20 dB	23.231	455
96.5	100 (KW)	0.75°	10 %	5 %	6.039	1.415 dB	4.437 dB	-20dB	23.165	465
97.9	100 (KW)	0.75°	10 %	5 %	6.095	1.415 dB	4.372 dB	-20dB	21.574	454
99.1	100 (KW)	0.75°	10 %	5 %	6.132	1.366 dB	4.445 dB	-20 dB	22.563	458
100.3	100 (KW)	0.75°	10 %	5 %	6.155	1.448 dB	4.548 dB	-20 dB	22.907	468
101.1	100 (KW)	-0.75°	10 %	5 %	6.159	1.092 dB	4.538dB	-20 dB	21.091	466
104.1	100 (KW)	-0.75°	11 %	5 %	6.073	1.126 dB	4.579 dB	-20 dB	21.558	477

Mechanical Specifications

Antenna Feed System . . . . Analog and Digital Each Fed With Dual Feed Lines
Input Connector . . . . . (2) ~ 6-1/8" Analog and (2) ~ 3 1/8" Digital 50-Ohm EIA Flanged
Element Deicing . . . . Not Ordered (5)
Interbay Spacing . . . . 114 Inch Center to Center
Array Length . . . . 116. 5 Feet
Construction Material (Antenna) . . . . All Noncorrosive
Construction Material (Mounting) . . . . Galvanized Plated Steal and Stainless Steel
Mounting . . . . Integral Arrangement (Antenna Preassembled To Mast)

1) Power Capability Has Been Rated Assuming An Operating Transmission VSWR Of 1.5:1
2) Analog System Loss Assumes Dual Feed Runs of 2012 Feet, Dielectric 8 1/16" Rigid Coax, 100 Feet 3" Andrew Type HJ8-50 Flex Coax And ERI Multiplexer .
3) Digital System Loss Assumes Dual Feed Line Runs of 2012 Feet, Of Andrew Type HJ12-50B 2 1/4" Air Coax, 100 Feet, Andrew Type LDF5 50J Foam Coax, ERI Multiplexer And ERI Circulator Loss Of 0.35 dB Per Station.
4) Analog To Digital Isolation Losses are included in TPO Calculations.
5) With Low Q Element Design, Moderate Icing Will Not Cause Appreciable VSWR Rise.

EXHIBIT A - 3



SWITCHING COMPLEX
3 1/8" DIRECTIONAL COUPLER
9" DIRECTIONAL COUPLER
92.9 MHz.
94.5 MHz.
95.7 MHz.
96.5 MHz.
97.9 MHz.
104.1 MHz.
101.1 MHz.
TYPICAL COMBINER MODULE
100.3 MHz.
99.1 MHz.
28'-4½"
4'-9"
29'-5⅛"
TYPICAL COMBINER MODULE SIDE VIEW
(GROUP DELAY SHOWN IN PHANTOM)
88 3/16"
50 5/8"
130 1/16"
145 9/32"
ELECTRONICS RESEARCH, INC.
Established 1943
7777 GARDNER RD.
CHANDLER, IN. 47610-9637
PHONE: (812) 925-6000
FAX: (812) 925-4030
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SUPERSEDES PART #:
SUPERSEDES FILE #:
MATERIAL:
APPROVED
DATE
DRAFT.
ENG.
MANUF.
0.0 ±.03
0.00 ±.010
0.000 ±.003
± 1/32"
± .5°
TOLERANCES
NAME SENIOR ROAD COMBINER LAYOUT
FOR SENIOR ROAD - HOUSTON, TX.
PATH G:\DRAFTING\ALL\PROJECTS\12716\2
DRAWN BAM
SHEET 1 OF 1
DATE 1/4/06
SCALE
ERI MAT'L NON-APPLICABLE

A-4 ERI Combiner Specification Sheet
SENIOR ROAD ~ HOUSTON, TEXAS

General Specifications:

Multiplexer Type . . . . Band Pass Constant Impedance Combiner
Number Of Combining Units . . . . (9) Nine
Output Connector Analog . . . . 9 3/16" 50 Ohm EIA (Flanged)
Output Connector Digital . . . . 3 1/8" 50 Ohm EIA (Flanged)
Output Power . . . . 280 KW
Combiner Units, Approximate Size and Weight :

Freq.	Type	Size	Weight
92.9	973-8	51" H X 57" W X 146" L	1900 Lbs.
94.5	973-8	51" H X 57"' W X 146"' L	1900 Lbs.
95.7	973-8GD **(With Group Delay And Non-Adjacent coupling)**	89" H X 57" W X 146" L	2,375 Lbs.
96.5	973-8GD **(With Group Delay And Non-Adjacent coupling)**	89" H X 57" W X 146" L	2,375 Lbs.
97.9	973-8	51" H X 57" W X 146" L	1900 Lbs.
99.1	973-8GD **(With Group Delay And Non-Adjacent coupling)**	89" H X 57" W X 146" L	2,375 Lbs.
100.3	973-8GD **(With Group Delay And Non-Adjacent coupling)**	86" H X 57" W X 146" L	2,375 Lbs.
101.1	973-8	51" H. X 57" W X 146" L	1900 Lbs.
104.1	973-8	51" H. X 57" W X 146" L	1900 Lbs.

Heat Removal (All Multiplexer Components) . . . . Natural Convection
Physical Arrangement . . . . All Components Mounted Upright in Racks

Injected Port Specifications:

Frequency Assignment . . . . 92.9 ~ 94.5 ~ 95.7 ~ 96.5 ~ 97.9 ~ 99.1 ~ 100.3 ~ 101.1 and 104.1 MHz.
Power Rating, Analog Injected Port (Maximum) . . . . 39 KW
Power Rating, Digital Injected (Designed) . . . . 1 KW
Input Connector (Analog and Digital) . . . . 3-1/8" 50 Ohm EIA (Flanged)

Insertion Loss (Measured):

	ANALOG	DIGITAL
92.9 MHz.	- 0.398 dB	- 0.588 dB
94.5 MHz.	- 0.350 dB	- 0.606 dB
95.7 MHz.	- 0.552 dB	- 0.648 dB
96.5 MHz.	- 0.557 dB	- 0.737 dB
97.9 MHz.	- 0.281 dB	- 0.650 dB
99.1 MHz.	- 0.497 dB	- 0.700 dB
100.3 MHz.	- 0.547 dB	- 0.781 dB
101.1 MHz.	- 0.214 dB	- 0.750 dB
104.1 MHz.	- 0.235 dB	- 0.742 dB

1) When Terminated in 50 Ohm Resistive Load.

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CHANDLER, IN. 47610

FIGURE 1

----THEORETICAL----
VERTICAL PLANE RELATIVE FIELD

ERI MODEL COG-1083-12CP ANTENNA
-.75 DEGREE(S) BEAM TILT
10 PERCENT FIRST NULL FILL
5 PERCENT SECOND NULL FILL
POWER GAIN IS 5.509 IN THE HORIZONTAL PLANE(5.880 IN THE MAX.)
[POWER GAINS AT 95% ANTENNA EFFICIENCY]

JANUARY 6, 2006

92.9 MHz.

BAY SPACING:
114.00 INCHES

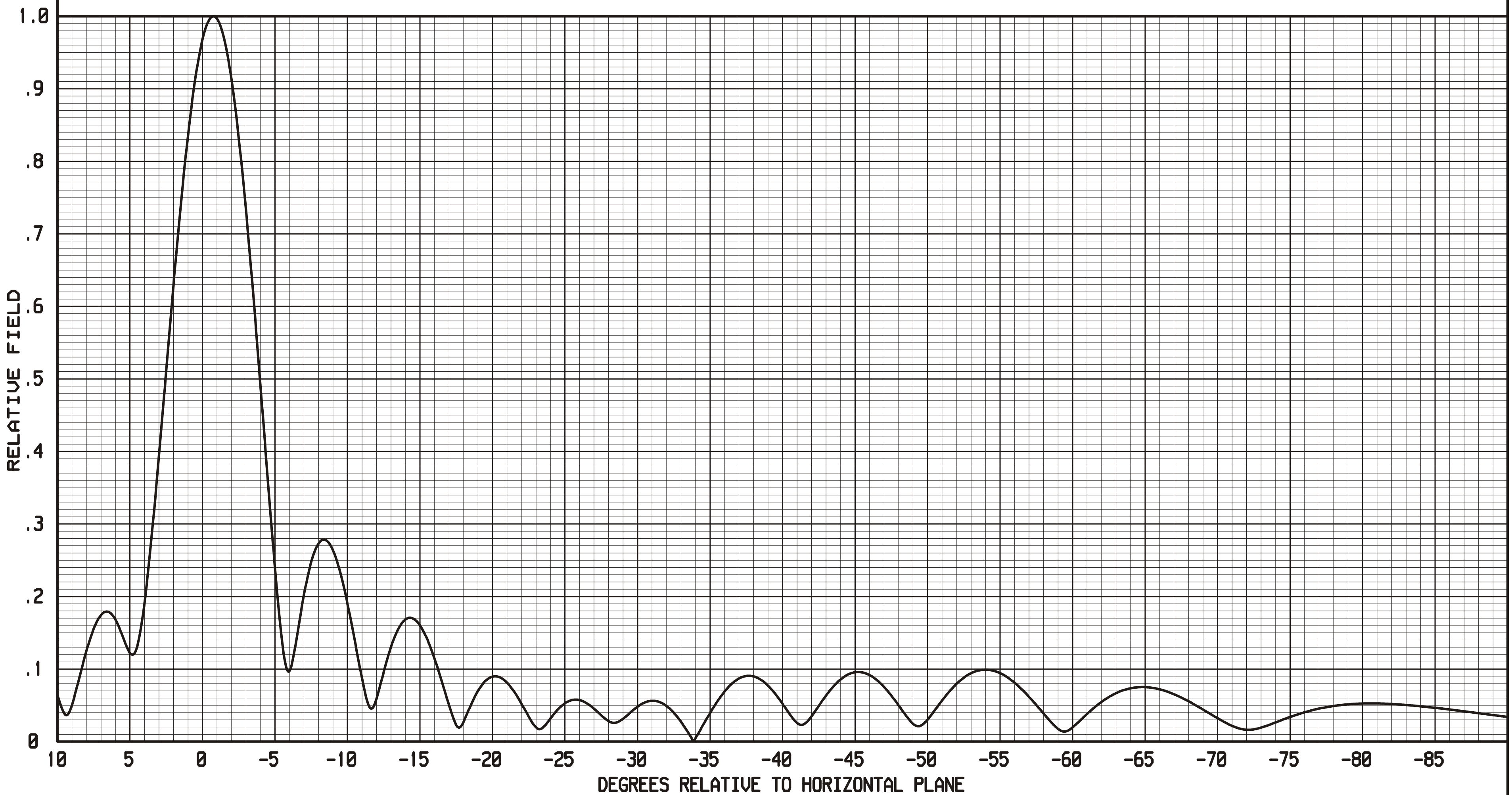

EXHIBIT A - 5

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CHANDLER, IN. 47610

FIGURE 2

----THEORETICAL----
VERTICAL PLANE RELATIVE FIELD

ERI MODEL COG-1083-12CP ANTENNA
-.75 DEGREE(S) BEAM TILT
10 PERCENT FIRST NULL FILL
5 PERCENT SECOND NULL FILL
POWER GAIN IS 5.564 IN THE HORIZONTAL PLANE(5.952 IN THE MAX.)
[POWER GAINS AT 95% ANTENNA EFFICIENCY]

JANUARY 6, 2006

94.5 MHz.

BAY SPACING:
114.00 INCHES

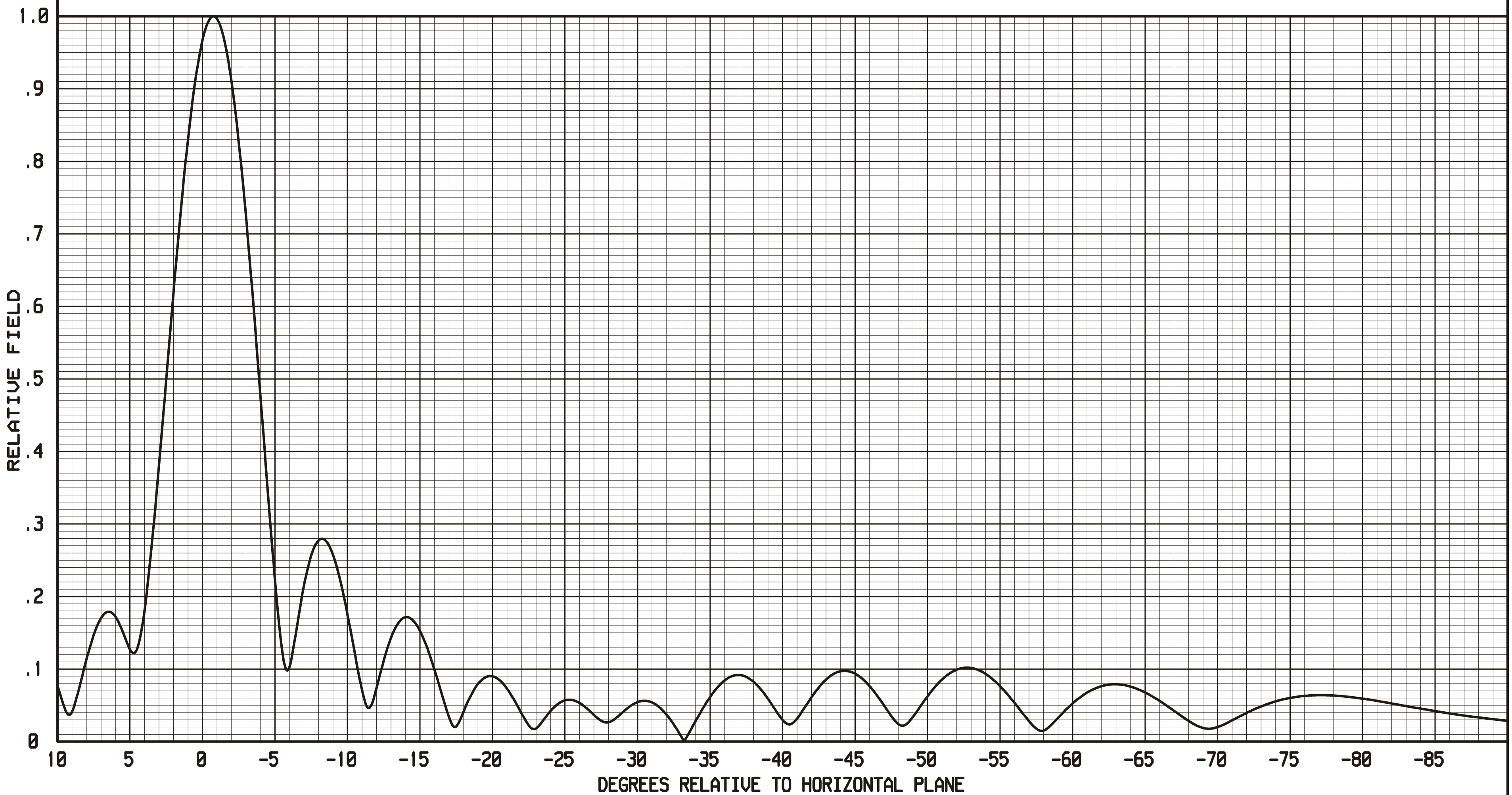

EXHIBIT A - 5

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CHANDLER, IN. 47610

FIGURE 3

----THEORETICAL----
VERTICAL PLANE RELATIVE FIELD

ERI MODEL COG-1083-12CP ANTENNA
-.75 DEGREE(S) BEAM TILT
10 PERCENT FIRST NULL FILL
5 PERCENT SECOND NULL FILL
POWER GAIN IS 5.604 IN THE HORIZONTAL PLANE(6.005 IN THE MAX.)
[POWER GAINS AT 95% ANTENNA EFFICIENCY]

JANUARY 6, 2006

95.7 MHz.

BAY SPACING:
114.00 INCHES

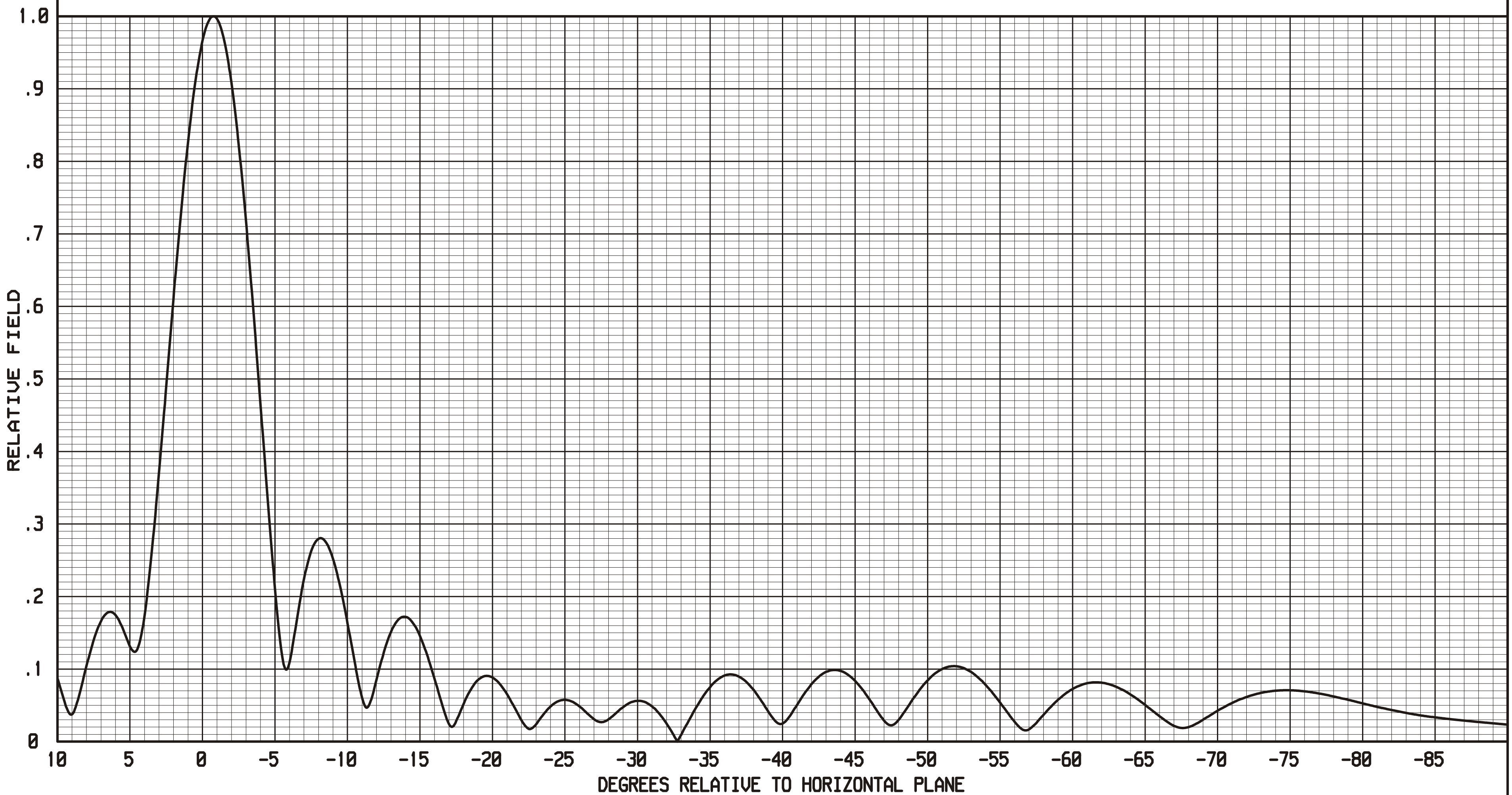

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FIGURE 4

----THEORETICAL----
VERTICAL PLANE RELATIVE FIELD

ERI MODEL COG-1083-12CP ANTENNA
-.75 DEGREE(S) BEAM TILT
10 PERCENT FIRST NULL FILL
5 PERCENT SECOND NULL FILL
POWER GAIN IS 5.630 IN THE HORIZONTAL PLANE(6.039 IN THE MAX.)
[POWER GAINS AT 95% ANTENNA EFFICIENCY]

JANUARY 6, 2006

96.5 MHz.

BAY SPACING:
114.00 INCHES

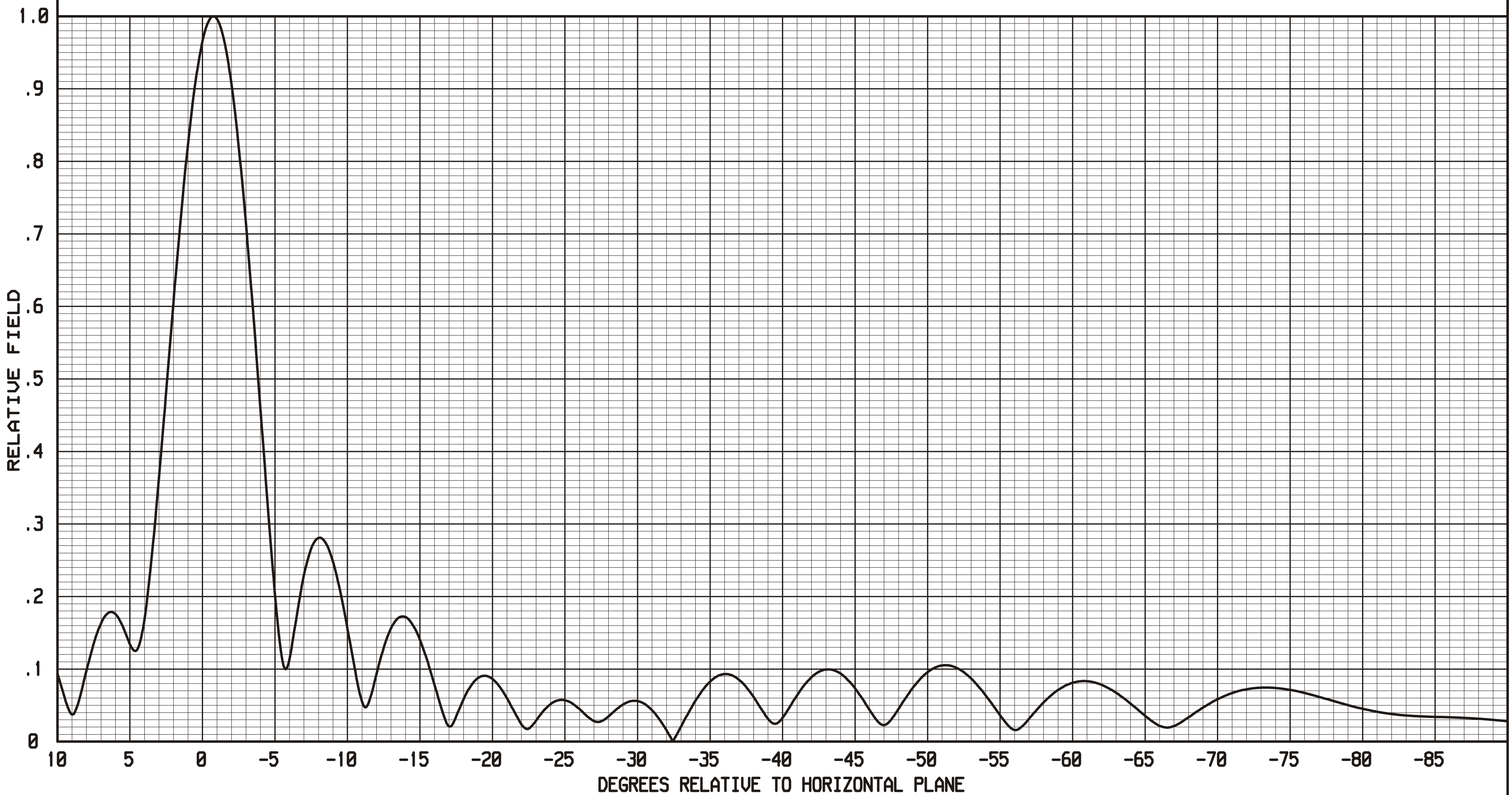

EXHIBIT A - 5

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FIGURE 5

----THEORETICAL----
VERTICAL PLANE RELATIVE FIELD

ERI MODEL COG-1083-12CP ANTENNA
-.75 DEGREE(S) BEAM TILT
10 PERCENT FIRST NULL FILL
5 PERCENT SECOND NULL FILL
POWER GAIN IS 5.670 IN THE HORIZONTAL PLANE(6.095 IN THE MAX.)
[POWER GAINS AT 95% ANTENNA EFFICIENCY]

JANUARY 6, 2006

97.9 MHz.

BAY SPACING:
114.00 INCHES

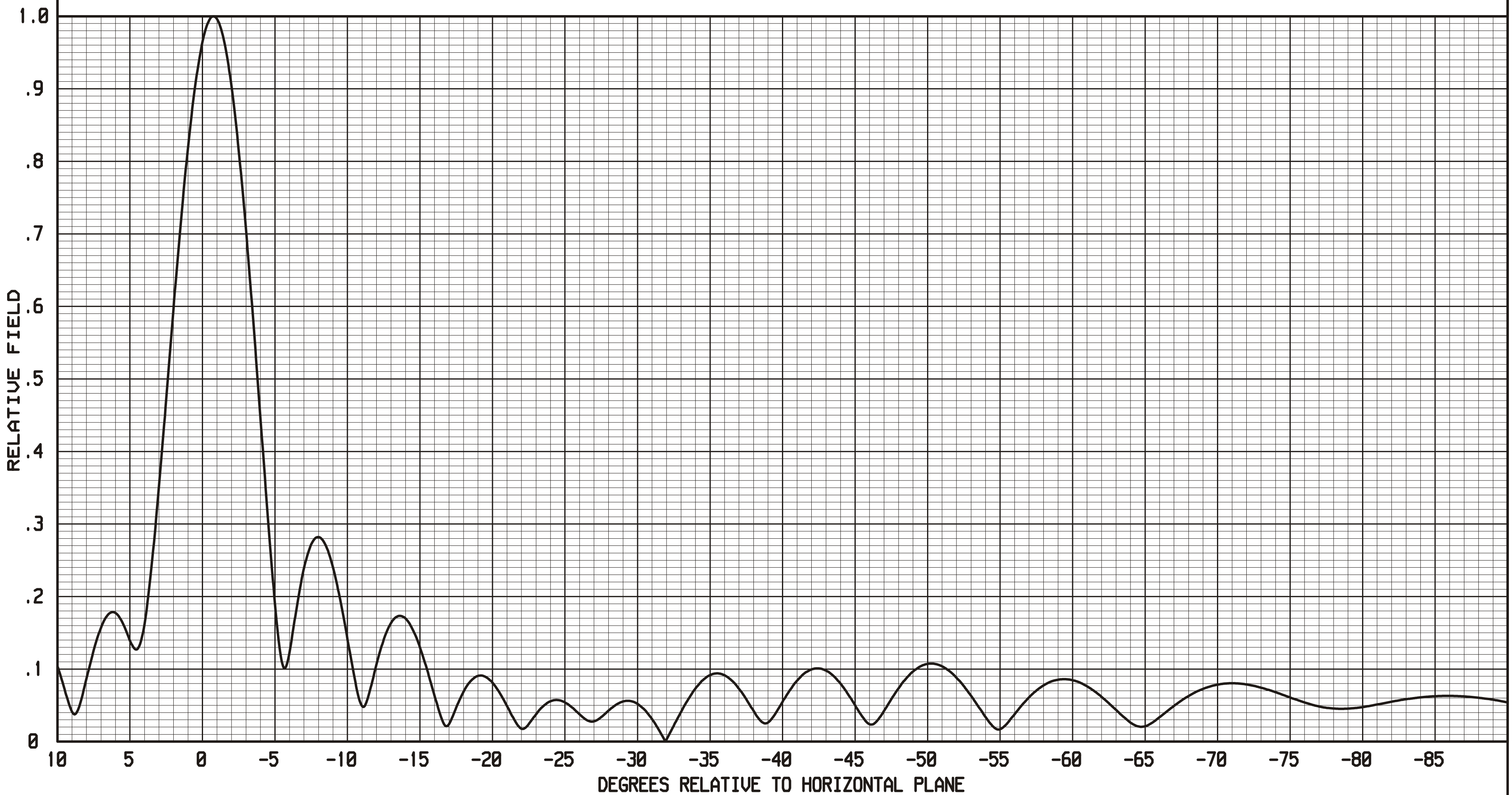

EXHIBIT A - 5

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FIGURE 6

----THEORETICAL----
VERTICAL PLANE RELATIVE FIELD

ERI MODEL COG-1083-12CP ANTENNA
-.75 DEGREE(S) BEAM TILT
10 PERCENT FIRST NULL FILL
5 PERCENT SECOND NULL FILL
POWER GAIN IS 5.695 IN THE HORIZONTAL PLANE(6.132 IN THE MAX.)
[POWER GAINS AT 95% ANTENNA EFFICIENCY]

JANUARY 6, 2006

99.1 MHz.

BAY SPACING:
114.00 INCHES

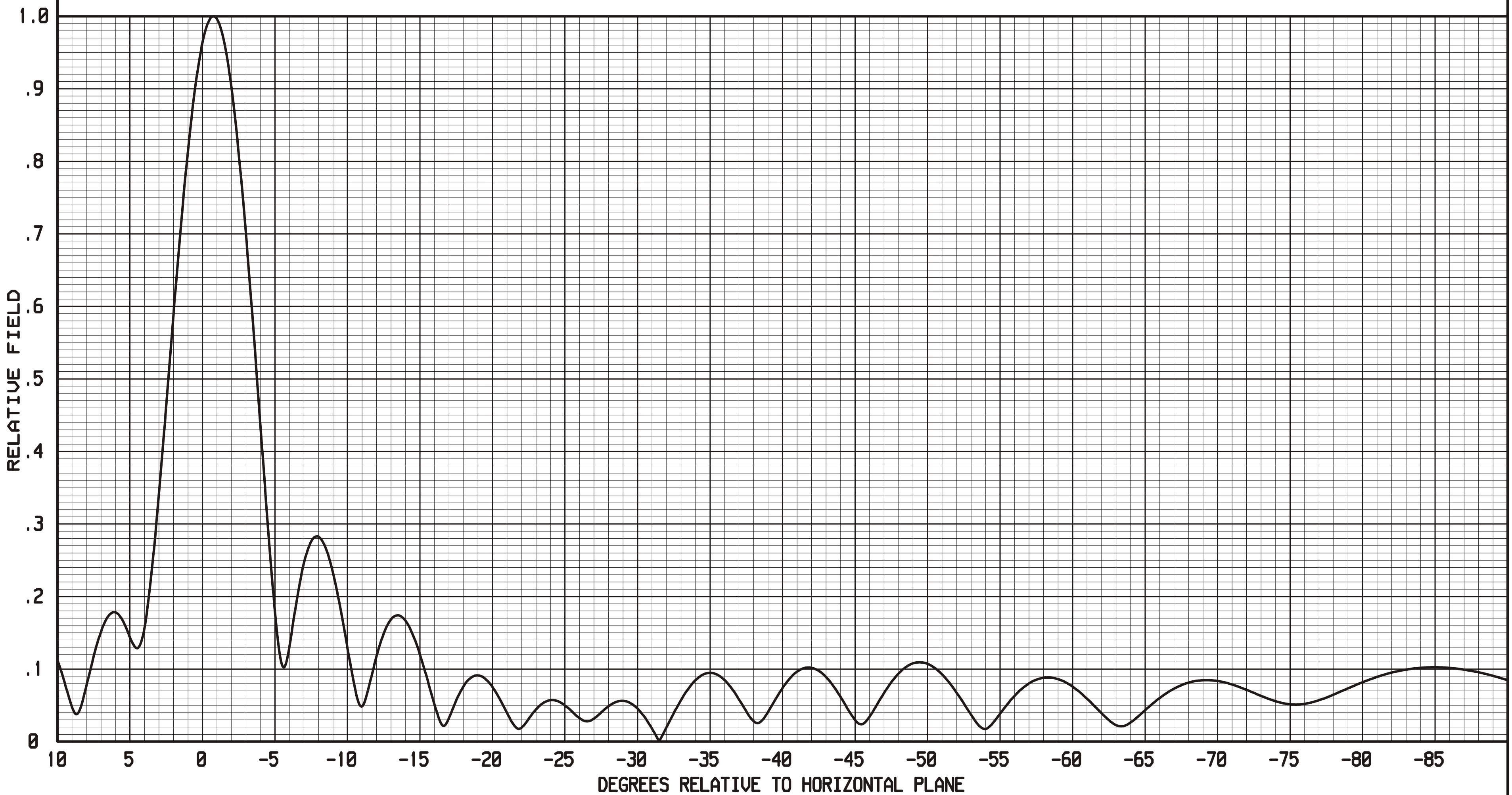

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FIGURE 7

----THEORETICAL----
VERTICAL PLANE RELATIVE FIELD

ERI MODEL COG-1083-12CP ANTENNA
-.75 DEGREE(S) BEAM TILT
10 PERCENT FIRST NULL FILL
5 PERCENT SECOND NULL FILL
POWER GAIN IS 5.706 IN THE HORIZONTAL PLANE(6.155 IN THE MAX.)
[POWER GAINS AT 95% ANTENNA EFFICIENCY]

JANUARY 6, 2006

100.3 MHz.

BAY SPACING:
114.00 INCHES

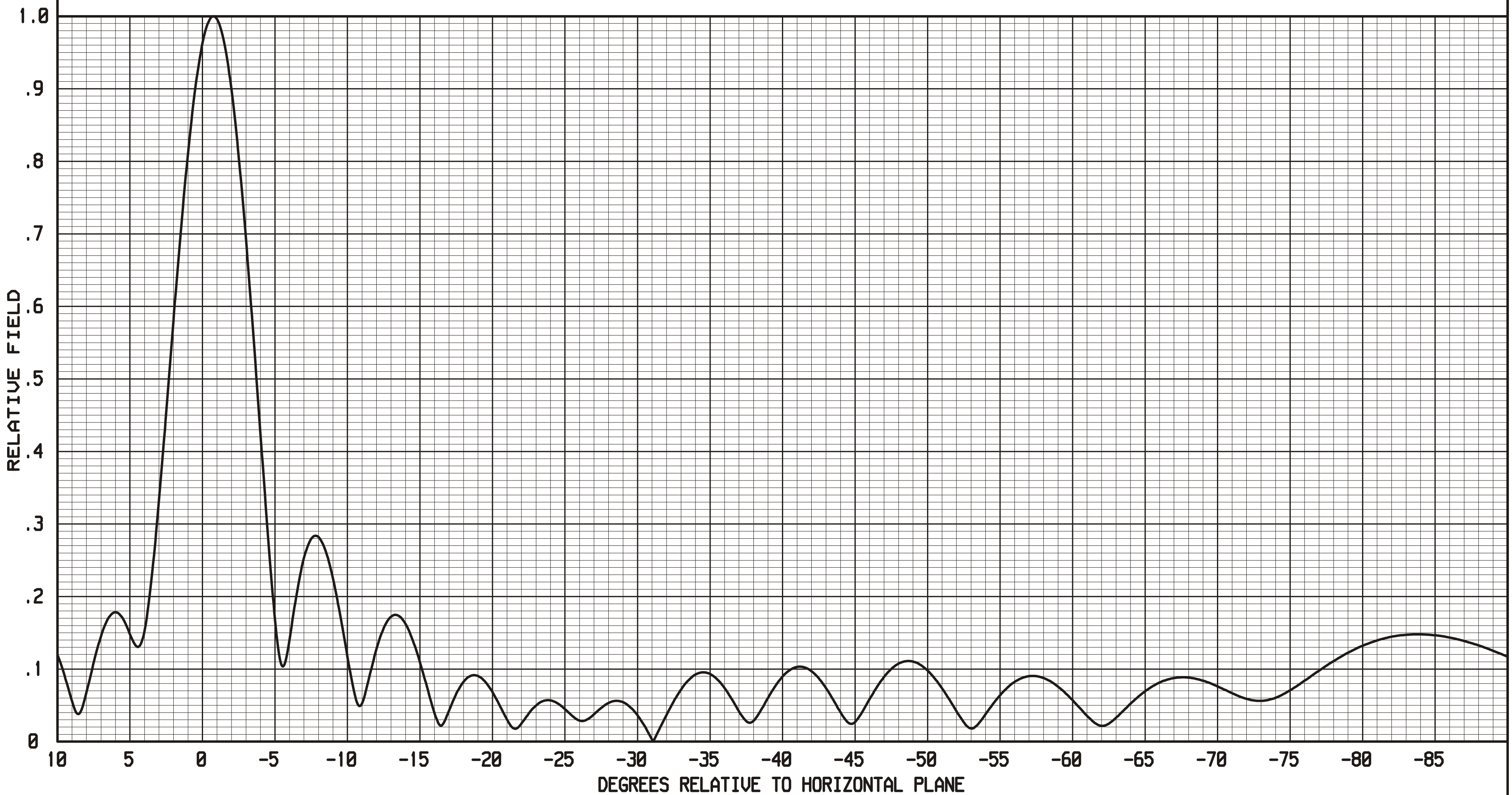

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FIGURE 8

----THEORETICAL----
VERTICAL PLANE RELATIVE FIELD

ERI MODEL COG-1083-12CP ANTENNA
-.75 DEGREE(S) BEAM TILT
10 PERCENT FIRST NULL FILL
5 PERCENT SECOND NULL FILL
POWER GAIN IS 5.703 IN THE HORIZONTAL PLANE(6.159 IN THE MAX.)
[POWER GAINS AT 95% ANTENNA EFFICIENCY]

JANUARY 6, 2006

101.1 MHz.

BAY SPACING:
114.00 INCHES

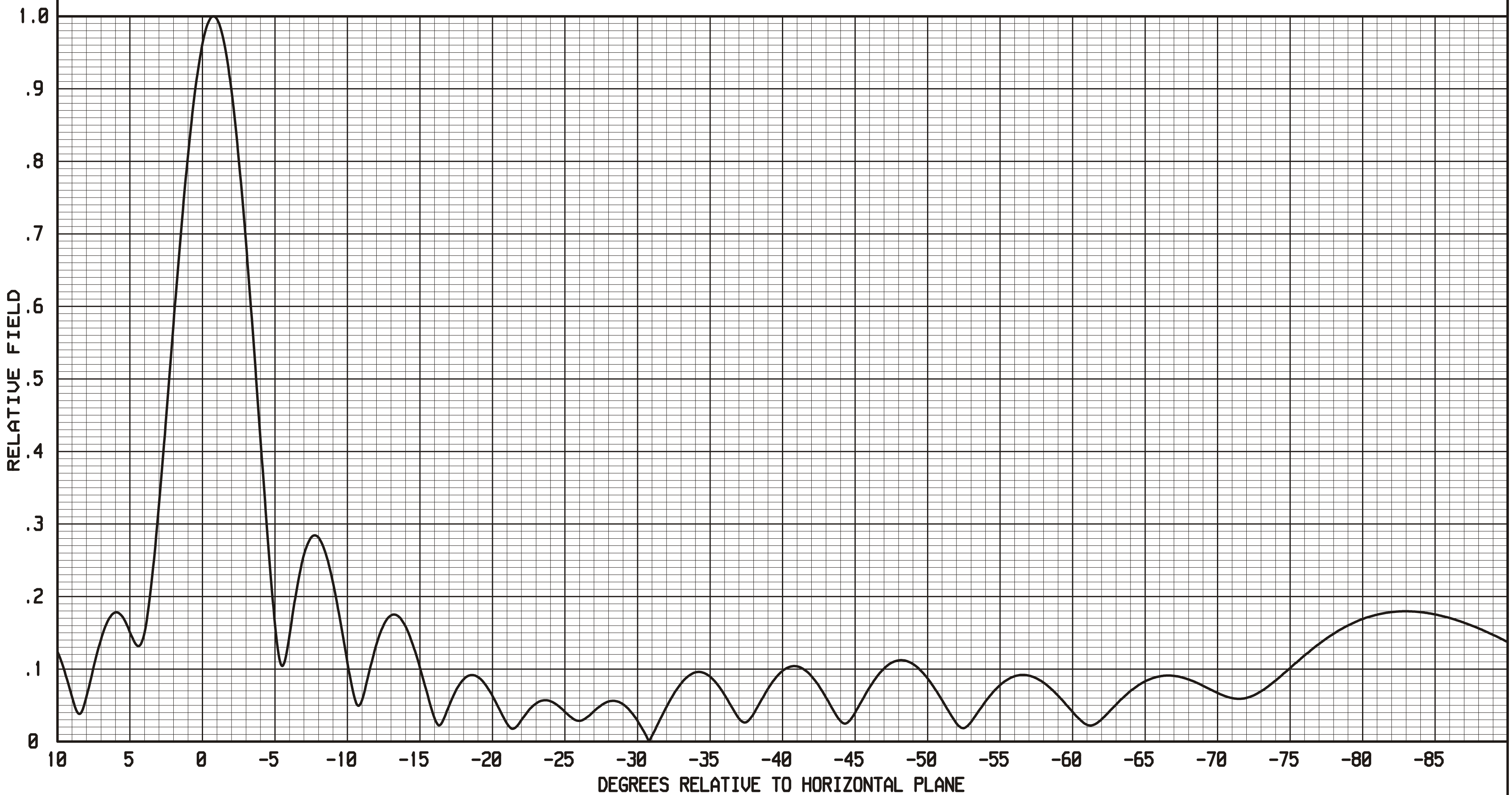

EXHIBIT A - 5

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FIGURE 9

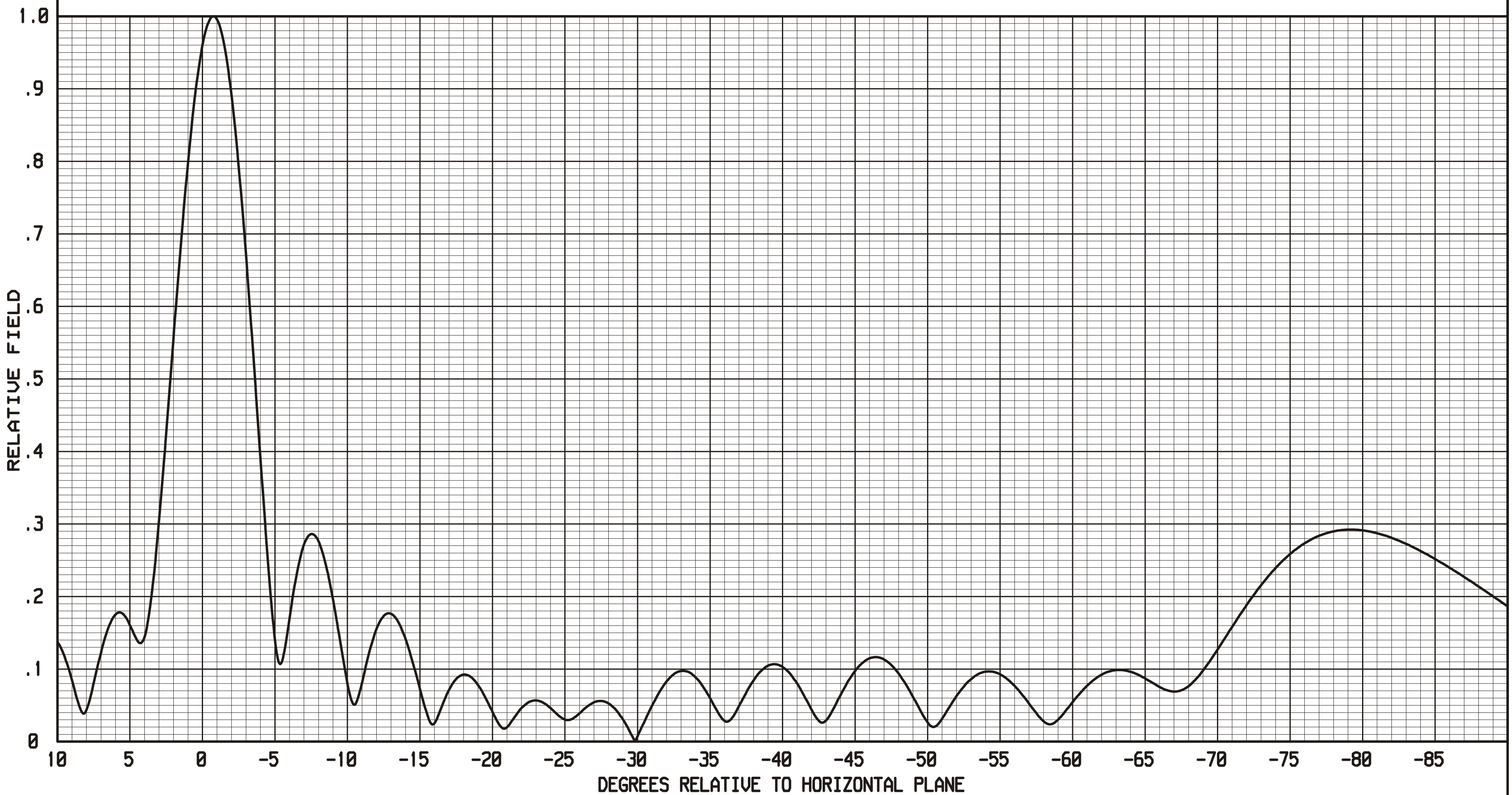
----THEORETICAL----
VERTICAL PLANE RELATIVE FIELD

ERI MODEL COG-1083-12CP ANTENNA
-.75 DEGREE(S) BEAM TILT
11 PERCENT FIRST NULL FILL
5 PERCENT SECOND NULL FILL
POWER GAIN IS 5.598 IN THE HORIZONTAL PLANE(6.073 IN THE MAX.)
[POWER GAINS AT 95% ANTENNA EFFICIENCY]

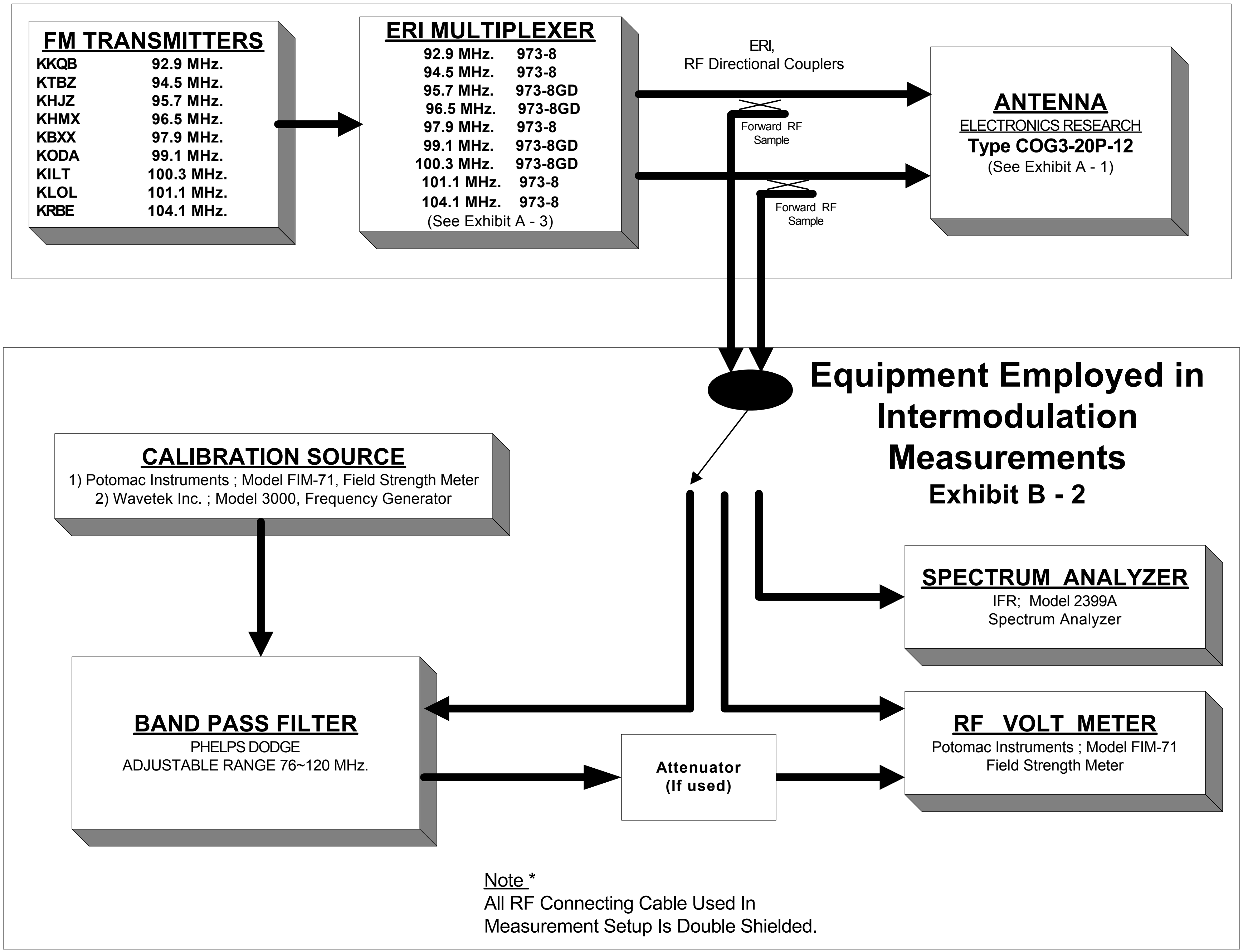
JANUARY 6, 2006

104.1 MHz.

BAY SPACING:
114.00 INCHES



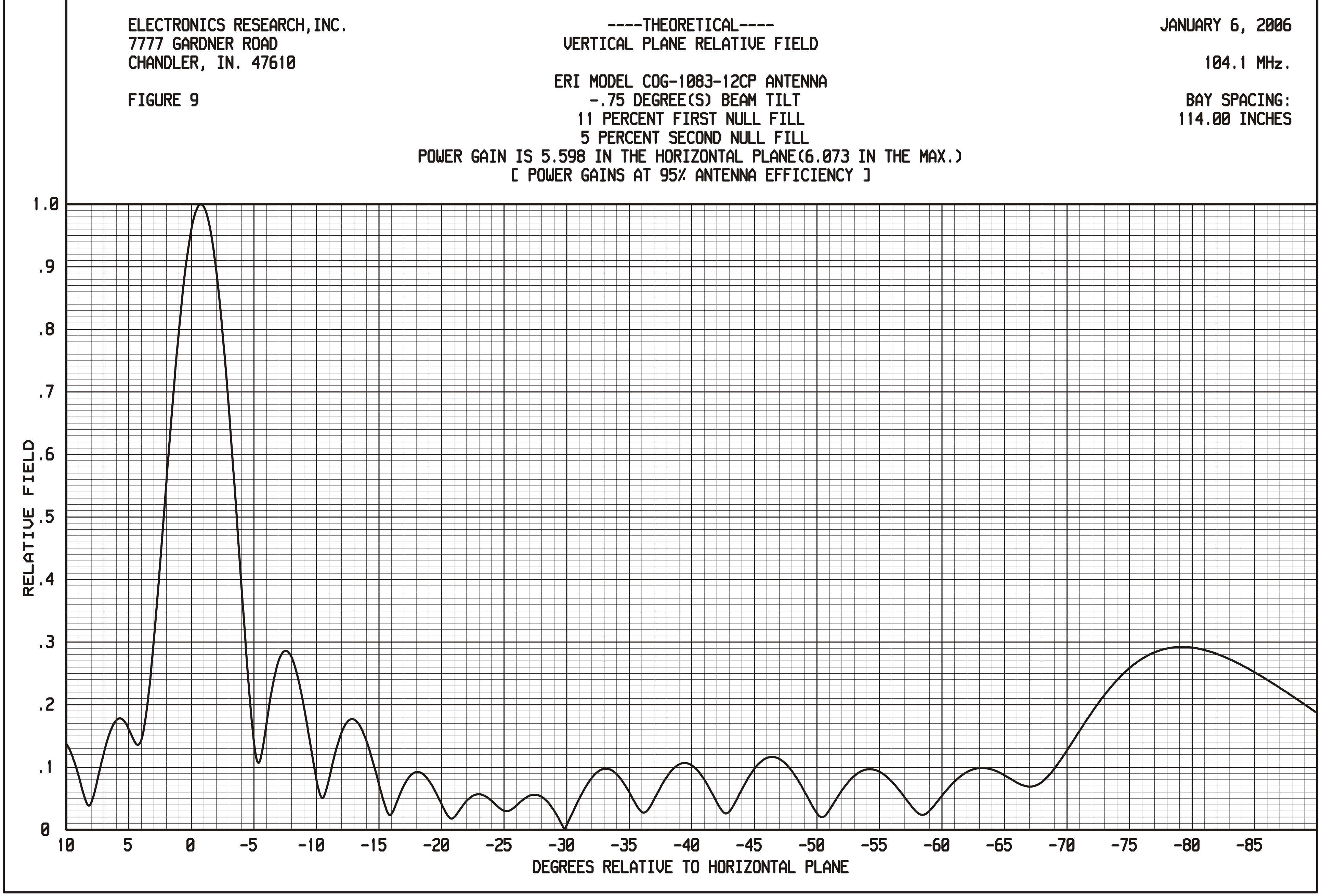
Houston TX ~ Senior Road Broadcasting Scheme EXHIBIT - B1



Broadcasting Scheme and Equipment Employed in Intermodulation Measurements

EXHIBIT B

FIGURE 2


ELECTRONICS RESEARCH,INC.
7777 GARDNER ROAD
CHANDLER, IN. 47610
FIGURE 9
----THEORETICAL----
VERTICAL PLANE RELATIVE FIELD
ERI MODEL COG-1083-12CP ANTENNA
-.75 DEGREE(S) BEAM TILT
11 PERCENT FIRST NULL FILL
5 PERCENT SECOND NULL FILL
POWER GAIN IS 5.598 IN THE HORIZONTAL PLANE(6.073 IN THE MAX.)
[POWER GAINS AT 95% ANTENNA EFFICIENCY]
JANUARY 6, 2006
104.1 MHz.
BAY SPACING:
114.00 INCHES
RELATIVE FIELD
1.0
.9
.8
.7
.6
.5
.4
.3
.2
.1
0
10 5 0 -5 -10 -15 -20 -25 -30 -35 -40 -45 -50 -55 -60 -65 -70 -75 -80 -85
DEGREES RELATIVE TO HORIZONTAL PLANE