KDUB-TV LUBBOCK | KPAR-TV ABILENE - SWEETWATER | KEDY-TV BIG SPRING | KCBD-AM LUBBOCK

DUB

network operations: 7400 college avenue • lubbock, texas • phone SHerwood 4-2345 • twx lu 8111

CBS

July 29, 1957

Miss Mary Jane Morris
Secretary
Federal Communications Commission
Washington 25, D. C.

Dear Miss Morris:

We hereby amend our application for license for KEDY-TV in Big Spring, Texas, by submitting the enclosed antenna survey pursuant to instructions in Form 720.

It is believed that an explanation is in order in relation to this survey, since there is an over-all height difference above sea level than was originally proposed. Evidently, the ground level above mean sea level was taken from topographical maps instead of actual survey at the time of the proposal of this structure, the ground level being stated as 2460 feet above mean sea level. But as the actual survey shows, the ground level is 2468.13 feet above mean sea level. We enclose a copy of a telegram from the CAA which states there would be no objection to the structure so long as the height above ground level did not exceed 500 feet. Actually, the over-all height of this structure above ground is somewhat below 500 feet, as is indicated in the survey.

Sincerely yours,

W. D. Rogers, Jr.
President

wdr/dp

enclosures

Subscribed and sworn to before me this 29th day of July, 1957.

Notary Public
My Commission expires
June 1, 1959.

TEXAS TELEVISION NETWORK

CP 55-57

FCC Form 302
April 1958
Section I

Form Approved
Budget Bureau No. 52-R015.11

United States of America
Federal Communications Commission

APPLICATION FOR NEW BROADCAST STATION LICENSE

File No.

Name and post office address of applicant (See Instruction D)

TEXAS TELECASTING, INC.
7400 College Avenue
P. O. Box 1475
Lubbock, Texas

JUL 18 1957
BROADCAST FACILITIES DIVISION
BROADCAST BUREAU

JUL 1957
OFFICE OF

INSTRUCTIONS

A. This form is to be used in all cases when applying for a Broadcast Station License. It consists of this part, Section I, and the following sections:
Section II-A, License Application Engineering Data Standard Broadcast
Section II-B, License Application Engineering Data FM Broadcast
Section II-C, License Application Engineering Data Television Broadcast

B. Prepare and file three copies of this form and all exhibits and swear to one copy. File with Federal Communications Commission, Washington 25, D. C.

C. Number exhibits serially in the space provided in the body of the form and list each exhibit in the space provided on page 2 of this Section. Date each exhibit and each antenna pattern.

D. The name of the applicant must be stated exactly as it appears on the construction permit which is being covered.

E. Information called for by this application which is already on file with the Commission need not be refiled in this application provided (1) the information is now on file in another application or FCC form filed by or on behalf of this applicant; (2) the information is identified fully by reference to the file number (if any), the FCC form number, and the filing date of the application or other form containing the information and the page or paragraph referred to, and (3) after making the reference, the applicant states; "No change since date of filing." Any such reference will be considered to make a part hereof the application all information, confidential or otherwise, contained in the application or other form so referred to. The incorporated application or other form will thereafter, in its entirety, be open to the public.

F. This application must be executed by applicant, if an individual; by a partner of applicant, if a partnership; by an officer of applicant, if a corporation or association; or by attorney of applicant only under conditions shown in Section 1.303, Rules Relating to Organization and Procedure, in which event satisfactory showing of inability of applicant or his absence from the Continental United States and authority of attorney to act must be submitted with application.

G. BE SURE ALL NECESSARY INFORMATION IS FURNISHED AND ALL PARAGRAPHS ARE FULLY ANSWERED. IF ANY PORTIONS OF THE APPLICATION ARE NOT APPLICABLE, SPECIFICALLY SO STATE. DEFECTIVE OR INCOMPLETE APPLICATIONS MAY BE RETURNED WITHOUT CONSIDERATION.

JUL 18 1957
BROADCAST BUREAU

Notices and communications with respect to this application are to be addressed to the following-named persons at the address indicated W. D. Rogers, Jr., copy to Eliot C. Lovett, 734 Fifteenth Street, N. W., Washington 5, D. C.

1. Facilities authorized by construction permit

Frequency	Channel No.	Power in kilowatts	
		Night	Day
66-72 mc	4	12.75	12.75

Hours of operation	Call letters
Unlimited	KEDY-TV

2. Construction permit covered by this application

File number	Date
BMPCT-4624	4-22-57
Construction begun	**Construction completed**
See below*	

Is the station now in satisfactory operating condition and ready for regular operation? Yes [X] No [ ]
If not, explain

PROGRAM DATA

3. Has applicant any contract, arrangement, or understanding, expressed or implied, with a network organization for the broadcasting of network programs? Yes [X] No [ ]

Does applicant, in the event this application is granted, propose to broadcast network programs? Yes [X] No [ ]
If network programs are to be broadcast, state as Exhibit No. On file arrangements under which they are to be obtained and attach copies of any contractual arrangement which may have been made. If the arrangement is based on an oral understanding, a written statement of the arrangement should be submitted.

FINANCIAL DATA

4. Give actual costs of making installation for which construction was authorized

Transmitter proper including tubes	Antenna system, including antenna-ground system, coupling equipment, transmission line	Frequency and modulation monitors	Studio technical equipment, microphones, transcription equipment, etc.
$ See	below*	$	$
Acquiring land	**Acquiring or constructing buildings**	**Other items, state nature**	**Total**
$	$	$ See	below*

*Construction was completed when applicant acquired station in February, 1957. Detailed information herein contemplated not given by former owners.

FINANCIAL DATA (Continued)

5. (a) Attach a detailed balance sheet, as at the completion date of the authorized construction, showing applicant's financial position as Exhibit No. (b) If the actual cost of construction materially exceeds the original estimated cost of construction, attach as Exhibit No. a detailed statement showing the plan used to finance such construction. (If applicant is licensee of a broadcast station having on file with the Commission an Annual Financial Report (FCC Form 324) showing its financial position within the past 12 months and the request in this application is for a change in existing facilities, these exhibits need not be supplied provided that no substantial reduction in financial position has occurred.) (See balance sheet on file with BAPCT-214. No material change.)

6. State changes, if any, in capitalization, and report any contracts affecting ownership not shown in the application for construction permit. (If none, so state)

None

7. Apart from the apparatus constructed, have all the terms, conditions, and obligations set forth in the above-described application for construction permit been fully met? If "No", state exceptions. Yes [X] No [ ]

8. Is a request for authority to conduct program tests a part of this application? Yes [X] No [ ]

The applicant waives any claim to the use of any particular frequency or of the ether as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests a station license in accordance with this application. (See Section 304 of the Communications Act of 1934)

The applicant represents that this application is not filed for the purpose of impeding, obstruction, or delaying determination on any other application with which it may be in conflict.

All the statements made in the application and attached exhibits are considered material representations, and all the exhibits are a material part hereof and are incorporated herein as if set out in full in the application.

The applicant, or the undersigned on the applicant's behalf, states that he has endeavored to supply full and correct information as to all matters which are relevant to this application and that he has done so as to all matters within his own knowledge.

Dated this 12th day of July, 1957.

TEXAS TELECASTING, INC.
(Name of applicant)

By W. D. Rogers Jr.

President
Title

Subscribed and sworn to before me this 12 day of July, 1957.
(SEAL)

Notary Public

(Notary public's seal must be affixed where the law of jurisdiction requires, otherwise state the law does not require seal.)

My commission expires June 1, 1959

EXHIBITS furnished as required by this form:

Exhibit No.	Section and Para. No. of Form	Name of officer or employee (1) by whom or (2) under whose direction exhibit was prepared (show which)	Official title

Broadcast Application | FEDERAL COMMUNICATIONS COMMISSION | Section II-C

LICENSE APPLICATION ENGINEERING DATA TELEVISION BROADCAST

Name of applicant: Texas Telecasting, Inc.

1. Facilities authorized in construction permit

Call letters	Channel No.	File No. of construction permit
KEDY-TV	4	BMPCT-4624

Frequency: 66 — 72 Mc.

Carrier frequency: Visual 67.24 Mc; Aural 71.74 Mc

Effective Radiated Power (visual)	Effective Radiated Power (aural)	Antenna height above average terrain
In dbk: 11.06	In dbk: 8.382	380 feet
In kw: 12.75	In kw: 6.88	

2. Station location (principal community)

State	City or town
Texas	Big Spring

3. Transmitter location

State	County
Texas	Howard
City or town: Big Spring	Street Address (or other identification): 2500 Kentucky Way

4. Main studio location

State	County
Texas	Howard
City or town: Big Spring	Street address: 2500 Kentucky Way

5. Transmitters Installed

Visual

Make	Type No.	Rated power
General Electric	TT-10-A	In dbk: 6.99; In kw: 5.0

Aural

Make	Type No.	Rated power
General Electric	TT-10-A	In dbk: 4.31; In kw: 2.7

Operating constants

Visual transmitter (while transmitting black)

D. C. plate current in last radio stage, in amperes	Applied D. C. plate voltage of last radio stage, in volts
2.5	2250

Transmitter power output (after vestigial sideband filter, if used, and after multiplexer, if combined)	Multiplexer loss in db, if separate:	Input to transmission line in dbk:
In dbk: 6.99; In kw: 5.0	.008 / .006	6.984

Transmission line power loss in db:	Antenna input power in dbk:	Antenna power gain in db:	Effective radiated power
.54	6.444	4.62	In dbk: 11.06; In kw: 12.75

Attach as Exhibit No. I complete information concerning the method of power output determination. If power is measured at output of multiplexer, so state.

Reading of power output meter (transmission line voltage, current or power; indicate which) while operating at authorized power:

100 (Transmission Line Voltage)

Aural transmitter

D. C. plate current in last radio stage, in amperes	Applied D. C. plate voltage of last radio stage, in volts
1.0	4000

Plate input power to last radio stage in kilowatts	Efficiency factor F of transmitter at operating power, in percent
4.0	67.5

Transmitter power output	RF transmission line meter reading
In dbk: 4.31; In kw: 2.7	100

6. Antenna and transmission line

Antenna make and Type No.	Number of sections	Power gain in db
General Electric TY-60-C	3	4.62

Antenna supporting structure: Uniform cross-sectional steel guyed tower 44" square by Johnnie Andrews Company

Overall height of antenna system above ground in feet: 497

Geographical coordinates of antenna (to nearest second): North latitude 32° 15' 16" ; West longitude 101° 26' 44"

If directional antenna is used, give full details including horizontal and vertical plane radiation patterns, as Exhibit No.

Is electrical or mechanical beam tilting employed? Yes ☐ No ☒
If so, describe fully in Exhibit No. , including horizontal and pertinent vertical radiation patterns.

Has antenna been altered to provide null fill-in? Yes ☐ No ☒
If so, describe fully in Exhibit No.

Transmission line

Make	Type No.	Coaxial or waveguide
Communications Products	101-506	Coax.

Size (nominal inside transverse dimensions) in inches	Length in feet	Power loss in db for this length
3 1/8	510	.54

Multiplexer .008 / .006

Make	Type No.
General Electric	PY-16-B

If emergency antenna or transmission line measures are provided, describe in Exhibit No.

7. Modulation monitors

(a) Visual monitor or monitoring equipment

Make	Type No. (or describe in Exhibit No.)
General Electric	TV-54A/TM-8C

(b) Aural monitor

Make	Type No.
General Electric	TM-12-A

8. Frequency monitors

(a) Visual monitor

Make	Type No.	Normal limits of deviation of carrier frequency shown by monitor
General Electric	TM-12-A	250 cps, high XXX to 100 cps, low XXX

8. (Continued)

(b) Aural monitor

Make	Normal limits of deviation of carrier frequency shown by monitor
General Electric	high ~~XXXX~~
Type No.	100 cps. to 200 cps.
TM-12-A	~~XXX~~ low

If either frequency monitor indicates any carrier deviation in excess of the permissible tolerance, describe in Exhibit No. and state the corrective measures taken.

If the carrier frequencies have been measured by other means, describe in Exhibit No. II, giving the date, method used or frequency measuring service employed, the results obtained and the monitor readings (high or low) at the time.

9. Performance data - Visual transmitter

a. Attach as Exhibit No. III data showing the following:

1. Overall attenuation versus frequency of the visual transmitter;
2. Field strength or voltage of the lower side-band for a modulating frequency of 1.25 mc. or greater, and of the upper side-band for a modulating frequency of 4.75 mc. or greater;
3. A description of the equipment and technique used in making these measurements.

b. Attach as Exhibit No. IV data demonstrating that the waveform of the transmitted signal conforms to that specified by the standards. Until the form of these measurements may be specified by the Commission, the character of this data is left to the discretion of the applicant.

c. Attach as Exhibit No. V a photograph of a test pattern taken from a receiver or monitor connected to the transmitter output.

10. Performance data - Aural transmitter

Attach as Exhibit No. VI data, diagrams, and appropriate graphs together with description of measurement procedures and instruments with regard to the following: (All measurements shall be made with the equipment adjusted for normal program operation and shall include all circuits between the main studio microphone terminals and the antenna output, including telephone lines, pre-emphasis circuits and any equalizers employed except for microphones, and without compression if a compression amplifier is installed.)

a. Audio frequency response from 50 to 15,000 cycles for approximately 25, 50 and 100 percent modulation. Measurements shall be made on at least the following audio frequencies: 50, 100, 400, 1000, 5000, 10,000 and 15,000 cycles. The frequency response measurements should normally be made without de-emphasis; however, standard 75 microsecond deemphasis may be employed in the measuring equipment or system provided the accuracy of the deemphasis circuit is sufficient to insure that the measured response is within the prescribed limits.

b. Audio frequency harmonic distortion for 25, 50 and 100 percent modulation for the fundamental frequencies of 50, 100, 400, 1000 and 5000 cycles. Audio frequency harmonics for 100 percent modulation for fundamental frequencies of 10,000 and 15,000 cycles. Measurements shall normally include harmonics to 30,000 cycles. The distortion measurements shall be made employing 75 microsecond deemphasis in the measuring equipment or system.

c. Output noise level (frequency modulation) in the band of 50 to 15,000 cycles in decibels below the audio frequency level representing a frequency swing of 25 kilocycles. The noise measurements shall be made employing 75 microsecond deemphasis in the measuring equipment or system.

d. Output noise level (amplitude modulation) in the band of 50 to 15,000 cycles in decibels below the level representing 100 percent amplitude modulation. The noise measurements shall be made employing 75 microsecond deemphasis in the measuring equipment or system.

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

13. None

11. Does the equipment meet the color performance requirements of the Commission's Rules? YES

12. If equipment has been modified for color transmission, submit in Exhibit No. 7 data which indicate compliance with performance requirements of the rules relating to visual/aural carrier frequency tolerance, subcarrier frequency tolerance if locally generated, and transfer characteristic.

I certify that I am the ~~Technical Director~~, Chief Engineer ~~or Consulting Engineer~~ for the applicant of the radio station for which this application is submitted and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief. (This signature may be omitted provided the engineer's original signed report of the data from which the information contained herein has been obtained is attached hereto.)

Date July 12, 1957

Rudolph N. Stevens

~~Technical Director~~, Chief Engineer ~~or Consulting Engineer~~

☆U. S. GOVERNMENT PRINTING OFFICE: 1953 O - 257441

PROOF-OF-PERFORMANCE

KEDY-TV

BIG SPRING, TEXAS

CHANNEL 4

JULY 12, 1957

State of Texas)
County of Lubbock) S.S.

I, Rudolph N. Starnes, of Lubbock, Lubbock County, Texas, having been duly sworn, do depose and say:

1. That I am Chief Engineer of Texas Telecasting, Inc., licensees of stations KDUB-TV, Lubbock, Texas, KPAR-TV, Sweetwater, Texas, KEDY-TV, Big Spring, Texas, and KDUB-AM, Lubbock, Texas, and

2. That I have had eight years experience as Chief Engineer, Assistant Chief Engineer and Engineer in broadcasting stations, and

3. That I made, or caused to be made under my personal supervision, all of the measurements, tabulations, photographs and charts, excepting the Transmitter Harmonics Measurements, submitted herewith, and

4. That I have previously performed and submitted proof of performance for television broadcast properties.

Rudolph N. Starnes
Rudolph N. Starnes

Subscribed and sworn to before me, Sadie Tarr, a Notary Public in and for Lubbock County, Texas, this the 12 day of July, 1957.

Sadie Tarr
Notary Public

EXHIBIT I

Method of Power Output Determination

An RCA Type M-1-19024 R.F. load and wattmeter are connected to the transmitter output. This load has a calibrated wattmeter reading directly in kilowatts average power. Power determination is performed with transmitter operating at black picture level with 25% sync. The reading from the wattmeter is multiplied by a factor of 1.68 to determine peak power output. The transmitter reflectometer is then set to correspond with the reading obtained by this method.

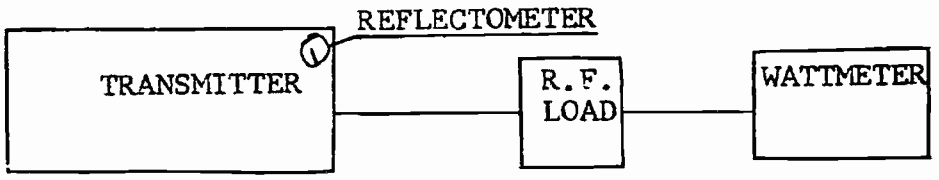


EXHIBIT II

Frequency Measurements

This station employs a frequency monitoring service known as Commercial Radio Monitoring Company of Kansas City, Missouri. Our visual and aural frequencies are checked by this company on a semi-annual schedule. Attached are photocopies of our last frequency measurement reports showing date, measuring service employed, results obtained, and monitor readings.

Frequency Measurement Report

MADE BY THE

COMMERCIAL RADIO MONITORING CO.

JAckson 3-5302 P. O. Box 7037

KANSAS CITY, MISSOURI

TELEVISION STATION K E D Y
BIG SPRING,
TEXAS

ATTENTION: RUDY STARNES,
CHIEF ENGINEER

NO. OF MEASUREMENT: 20129

ASSIGNED FREQUENCY: 71,740

TOLERANCE PLUS OR MINUS: 1000 CPS

CLASS OF SERVICE: TV SOUND

DATE	TIME AND ZONE	MEASURED FREQUENCY	SCHEDULE
JUNE 2, 1957	2:50 AM CST	(1) 71,740.000 KILOCYCLES (2) 71,740.000 KILOCYCLES	SEMI-ANNUAL

(BOTH CRYSTALS ADJUSTED TO ZERO DEVIATION.)

The above measurement shows that at the time your station was measured it was found operating within the frequency tolerance limits permitted your class of service by the FCC

REMARKS:

DEVIATION WAS 100 CPS LOW AND MONITOR READ 200 CPS LOW.

MONITOR WAS CALIBRATED FOR FREQUENCY DEVIATION AND MODULATION %.

Measurement made by: W. H. CAMPBELL

This [illegible] an available 24-hour checking service [illegible] and [illegible] in need of highly accurate [illegible]
[illegible] A1404

Frequency Measurement Report

MADE BY THE

COMMERCIAL RADIO MONITORING CO.

EXHIBIT III JAckson 3-5302 P. O. Box 7037

KANSAS CITY, MISSOURI

Overall attenuation versus modulating frequency of

demod TELEVISION STATION KELD Y g frequencies NO. OF MEASUREMENT o to 20128

BIG SPRING,

4.5 mc. TEXAS gure 1 shows the equipment setup u ASSIGNED FREQUENCY maki 67,240

ATTENTION: RUDY STARNES 9A shows resul TOLERANCE PLUS OR MINUS 1000 CPS

this es. CHIEF ENGINEER

In this test. The technique used i asurin CLASS OF SERVICE mod TV VIDEO

DATE	TIME AND ZONE	MEASURED FREQUENCY	SCHEDULE
JUNE 2, 1957	1:30 AM CST	(1) 67,240.000 KILOCYCLES (2) 67,240.000 KILOCYCLES	SEMI-ANNUAL

lated overall esponse fr ter is

as ollows.

(BOTH CRYSTALS ADJUSTED TO ZERO DEVIATION.)

The above measurement shows that at the time your station was measured it was found operating within the frequency tolerance limits permitted your class of service by the FCC

REMARKS: ACKARD (VISUAL)

MOD. 650-A

GENERATOR

DEVIATION WAS 200 CPS HIGH AND MONITOR READ 520 CPS HIGH.

MONITOR WAS CALIBRATED. VTVM 10o.

Video modu ating frequencies from zero to 4.5 mc. were

Measurement by W. H. CAMPBELL

... accurate measurements ...

fed to the transmitter ... input ampli-

of the ... of

... also

used to ... resu

tained ...

Vol... les.

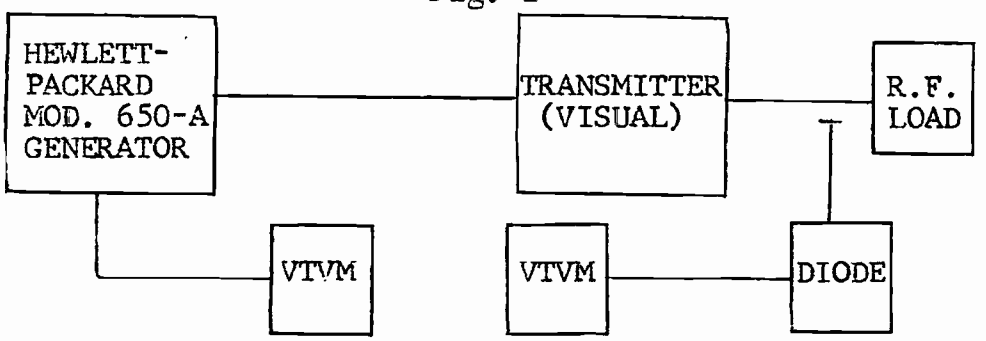
of ... tin

fr... quipme

EXHIBIT III

1. Overall attenuation versus modulating frequency of demodulated signal for modulating frequencies from zero to 4.5 mc. Figure 1 shows the equipment setup used for making this test. Attached graph No. 9A shows results obtained in this test. The technique used in measuring the demodulated overall video response from visual transmitter is as follows.

Fig. 1

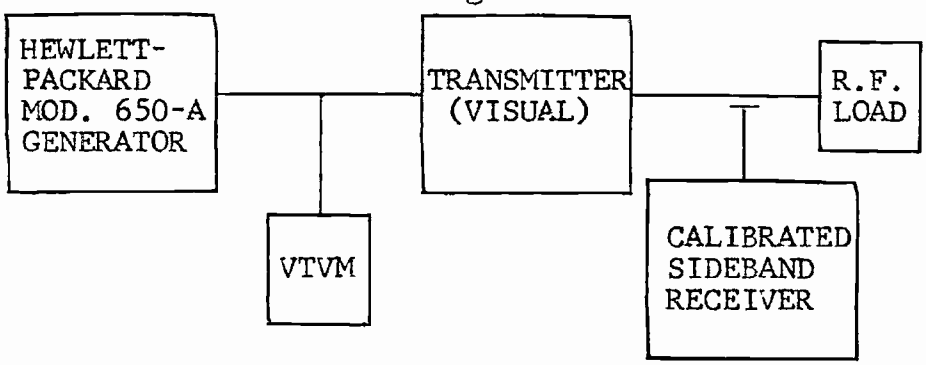


Video modulating frequencies from zero to 4.5 mc. were generated by a Hewlett-Packard Model 650-A oscillator and fed to the transmitter video input. Constant input amplitude of the modulating frequencies was maintained by use of a vacuum tube voltmeter. A vacuum tube voltmeter was also used to read the output of the monitoring diode. The results obtained were then plotted on graph No. 9A.

2. Voltage of lower sideband for modulating frequencies of 200 kc. to 5 mc. and of the upper sideband for modulating frequencies of 200 kc. to 8 mc. Figure 2 shows the equipment

setup for making this test and graph No. 9B shows results obtained. The technique used for this test is as follows.

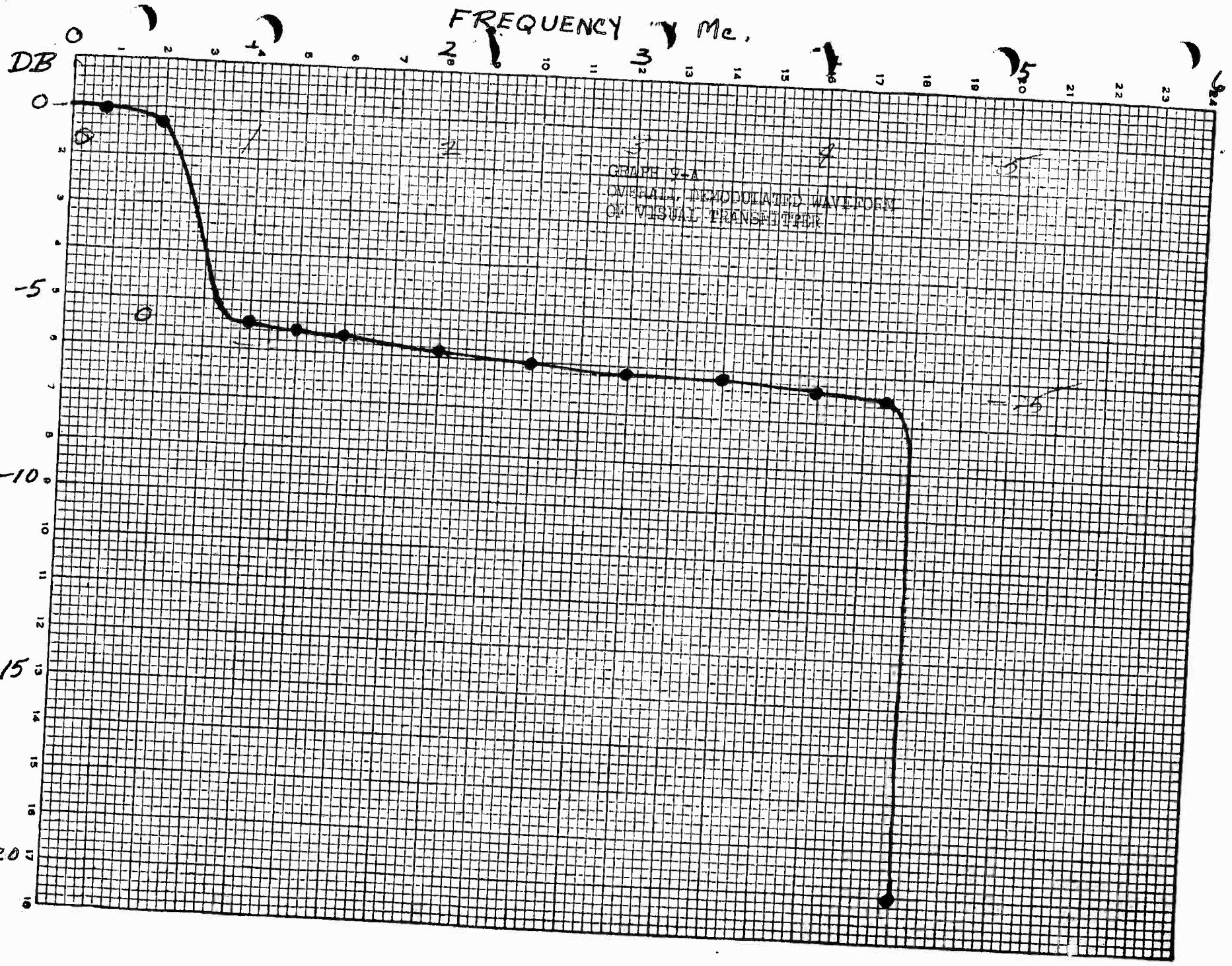
Fig. 2



The technique for measuring the attenuation characteristic was as follows. Modulating signals were applied to video input of transmitter. A 200 kc. signal was used as reference level. Modulating signals were generated by a Hewlett-Packard Model 650-A generator. Input level of modulating signals was maintained by use of a vacuum tube voltmeter. The input level was set to the equivalent of video modulation from 15% white level to 75% black level. A selective sideband receiver was then tuned to upper sideband and a reference output indication was obtained. Modulating frequencies from the generator were then varied upward from 200 kc. to 8 mc. as indicated by steps on graph in Figure 9B. The same measurements were repeated for the lower sideband. The sideband receiver used was calibrated against a Measurements Corporation Model 80 signal generator.

Since this receiver indicated directly in voltage the voltage ratios were converted to dbs and results plotted in graph No. 9B.

3. Attached are equipment setup and results obtained on harmonic measurements of visual transmitter. These measurements were conducted by an outside engineering firm.


FREQUENCY Mc.
DB
0
-5
-10
-15
-20
0
1
2
3
4
5
6
GRAPH 9-A
OVERALL DEMODULATED WAVEFORM
OF VISUAL TRANSMITTER

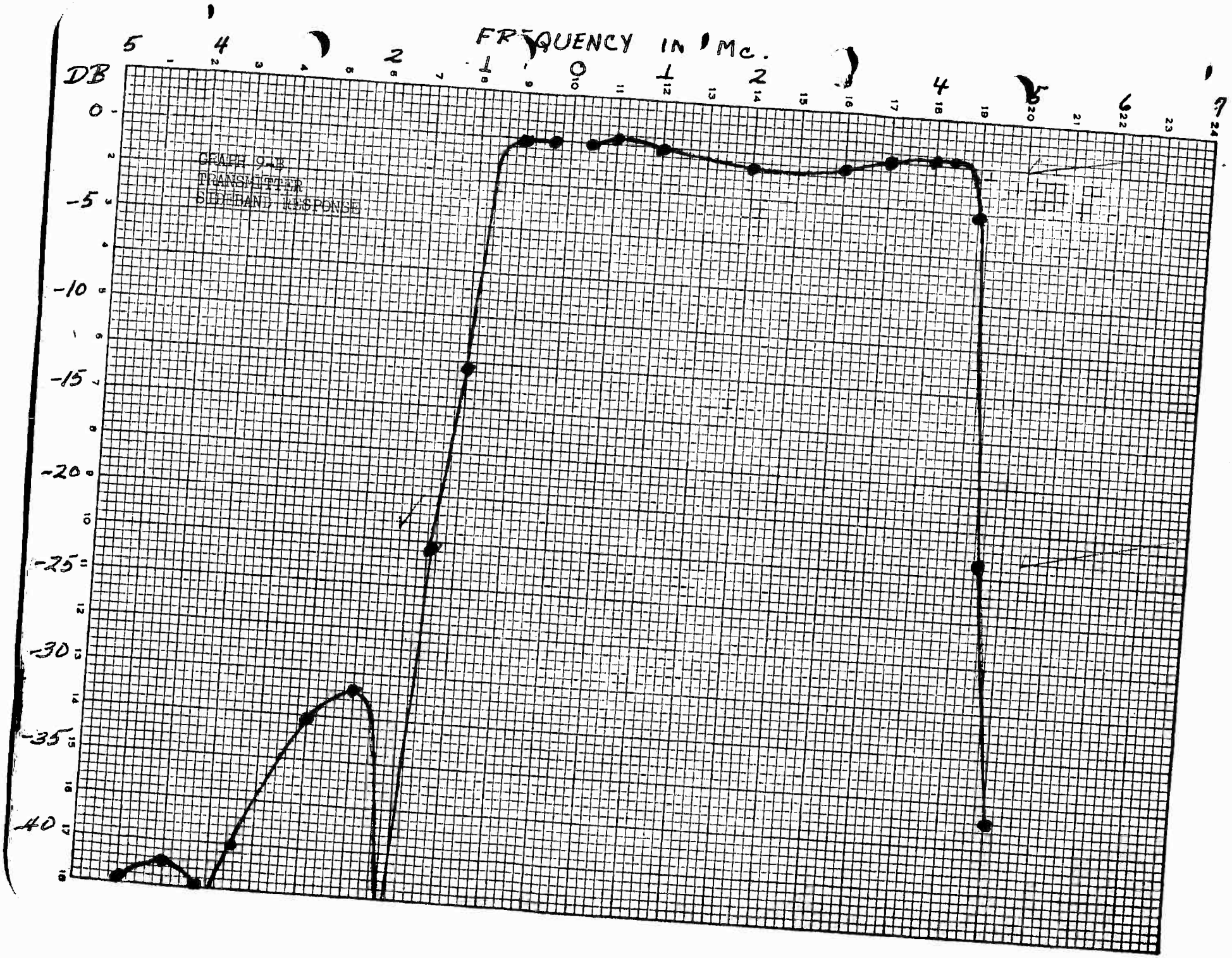

FREQUENCY IN Mc.
DB
0
-5
-10
-15
-20
-25
-30
-35
-40
GRAPH 9-13
TRANSMITTER
SIDEBAND RESPONSE

EXHIBIT V

Photograph of Test Pattern

Photograph 9-C1 shows picture of test pattern of this station as displayed on a monitor being fed by demodulation probe in transmission line.

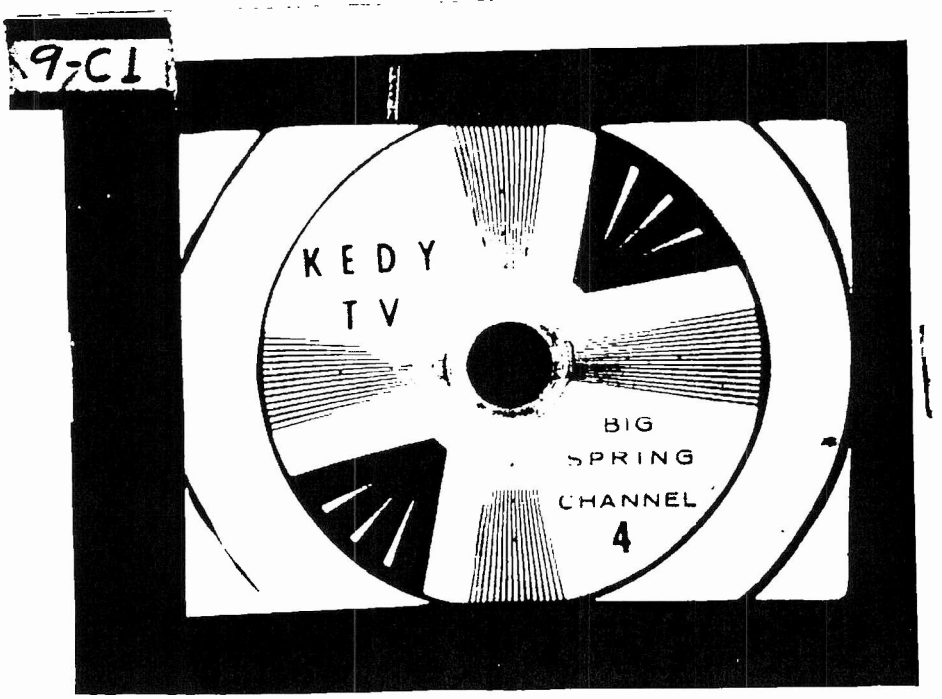
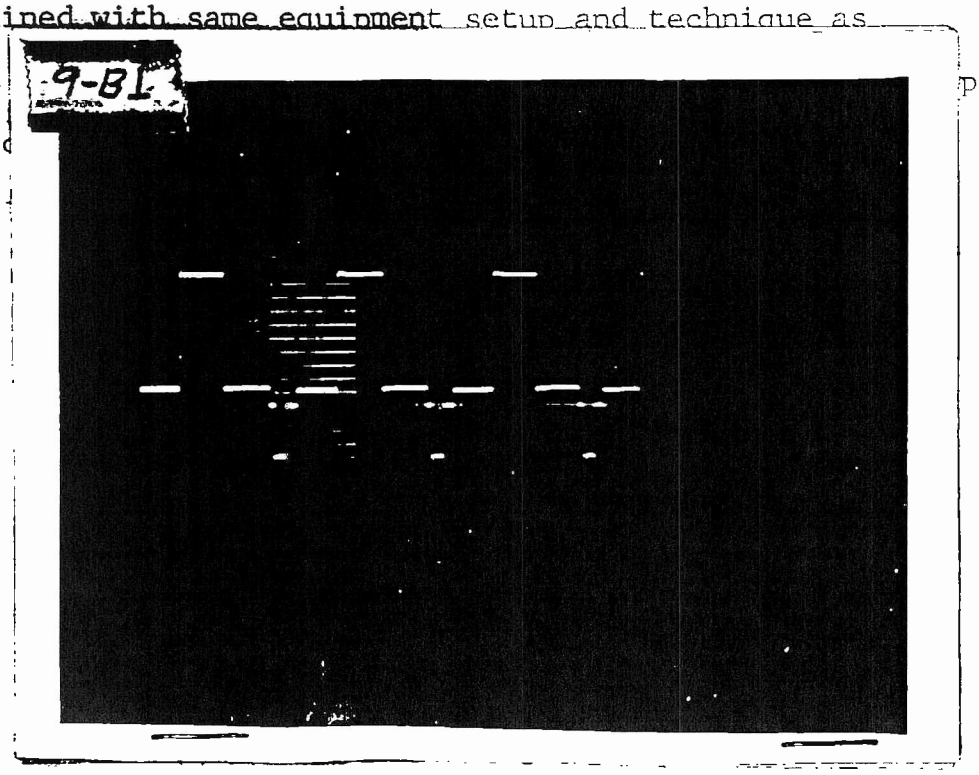


EXHIBIT IV

Photographs of Waveforms of Transmitted Signals and Transfer Characteristics of Visual Transmitter

Photograph 9-B1 shows blanking level, reference white level, and reference black level. This video was supplied by a black and white window generator and photograph was taken from oscilloscope being fed from demodulator probe in transmission line. Photographs 9-B2 and 9-B3 show transfer characteristics of visual transmitter, 9-B2 being the input to the visual transmitter and 9-B3 being the output of the visual transmitter. Photograph 9-B4 shows oscilloscope pattern of horizontal sync pulse and blanking of transmitter waveform, the oscilloscope being fed by demodulating probe in transmission line. This photograph also shows width of horizontal sync pulse, back porch and front porch, by having microsecond markers imposed on waveform by oscilloscope. Photograph 9-B5 shows vertical sync pulse and blanking and was obtained with same equipment setup and technique as previous

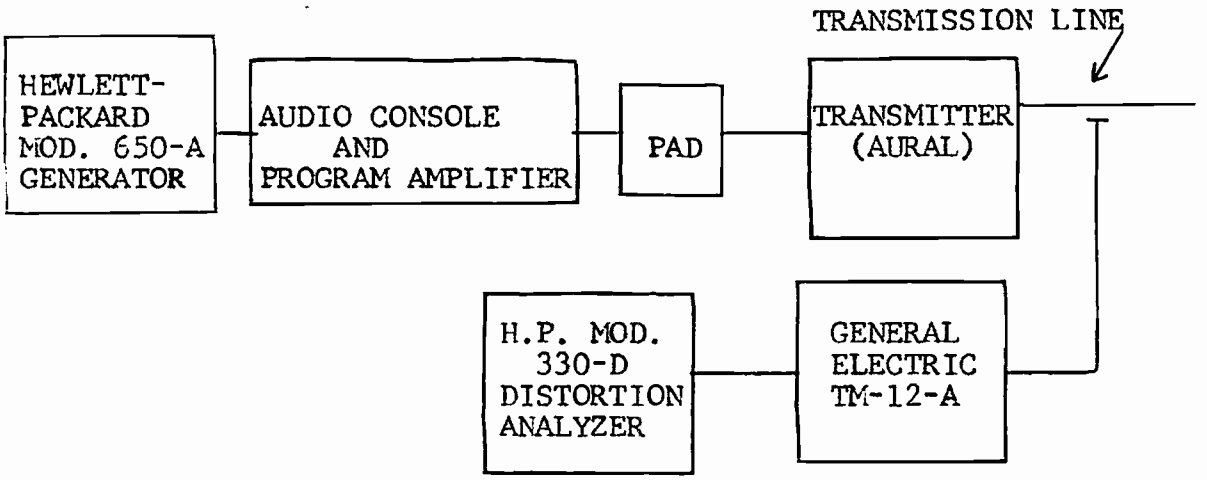


play on monit

EXHIBIT VI

A. Frequency Response

Frequency response curves were plotted on graphs No. 6-A, 6-B, and 6-C for 100%, 50%, and 25% modulation of aural transmitter. The equipment used and method of connection for these tests is shown in block diagram below.



The following procedure was used in determining audio frequency response of aural transmitter. The frequency of the audio signal generator was set as required and the output pad was adjusted to give the desired percentage of modulation. The meter and output pad of this signal generator read directly in dbs. Settings of this pad were recorded for various frequencies used. Frequencies used are indicated on graphs.

B. Percentage Distortion

The same equipment and setup were used for this measurement. After the frequency response reading was made the voltmeter on the Hewlett-Packard Model 330-D analyzer was

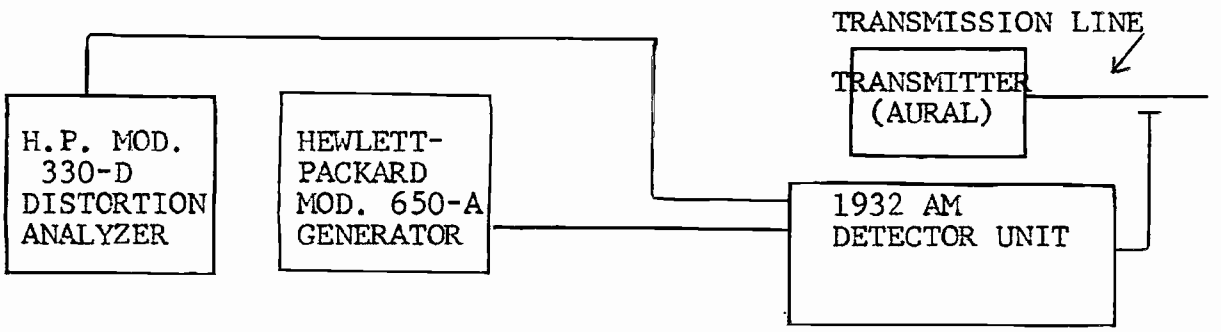
set at a reference of 100%. Then the filter in the analyzer was tuned to the frequency being measured, thus removing the fundamental and leaving only the distortion reading. The voltage of this distortion was read in percentage of the reference setting. Distortion curves were plotted along with frequency response curves.

C. FM Noise Level

This measurement was made with the same equipment and setup as previously described. A reference level at 400 cycles and 100% modulation as read on the modulation meter was used. Modulation was removed and the remaining noise read directly on the noise and distortion analyzer. This reading was 57 db below the audio level required for 25 kc. deviation or 100% modulation.

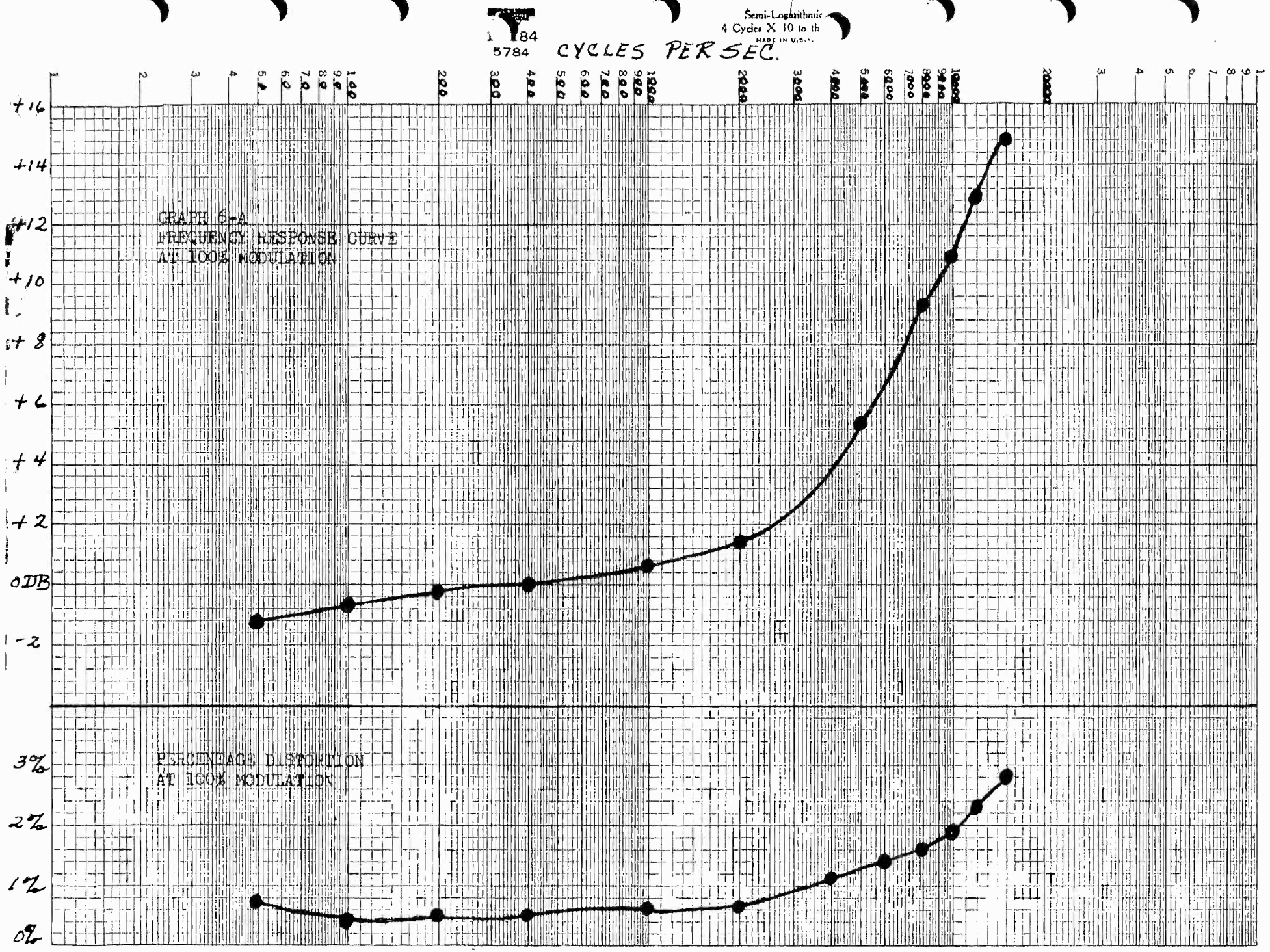
D. AM Noise Level

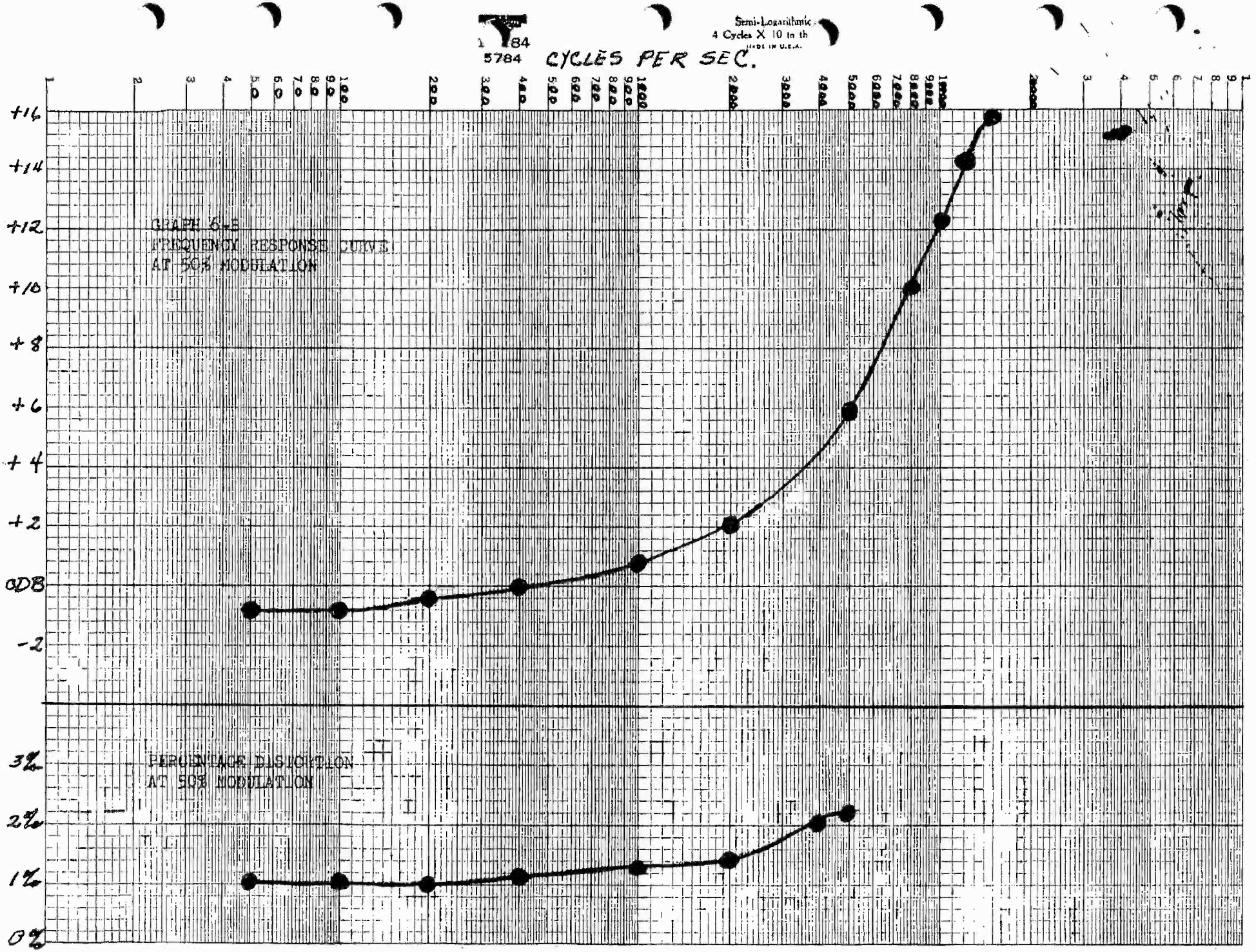
AM noise level tests were performed with equipment setup as shown below.



The technique used and results obtained are as follows. A type 1932 detector unit was connected as shown in equipment setup above. A reading was obtained on the meter of the detector unit by adjustment of transmission line probe. The R.F. input to the unit was then removed and audio voltage of 400 cycles from the audio oscillator was applied to audio input of detector unit. The potentiometer of the detector unit was then adjusted for the same reading on the meter as with the R.F. input. Thus a reference level corresponding to 100% AM modulation was acquired. The audio voltage was then removed and the R.F. probe again connected to the detector unit. The output of the detector unit is now read as AM noise on the FM carrier by the noise and distortion analyzer. Standard 75 microsecond de-emphasis is used in the detector unit. The resultant reading obtained was 56 db below the level represented 100% amplitude modulation.

E. Attached are equipment setup and results obtained on harmonic measurements of aural transmitter. These measurements were conducted by an outside engineering firm.


Semi-Logarithmic
4 Cycles X 10 to th
MADE IN U.S.A.
5784
CYCLES PER SEC.
+16
+14
+12
+10
+8
+6
+4
+2
0DB
-2
GRAPH 6-A
FREQUENCY RESPONSE CURVE
AT 100% MODULATION
3%
2%
1%
0%
PERCENTAGE DISTORTION
AT 100% MODULATION


Semi-Logarithmic
4 Cycles X 10 to th
MADE IN U.S.A.
5784
CYCLES PER SEC.
+16
+14
+12
+10
+8
+6
+4
+2
0DB
-2
GRAPH 6-E
FREQUENCY RESPONSE CURVE
AT 50% MODULATION
3%
2%
1%
0%
PERCENTAGE DISTORTION
AT 50% MODULATION

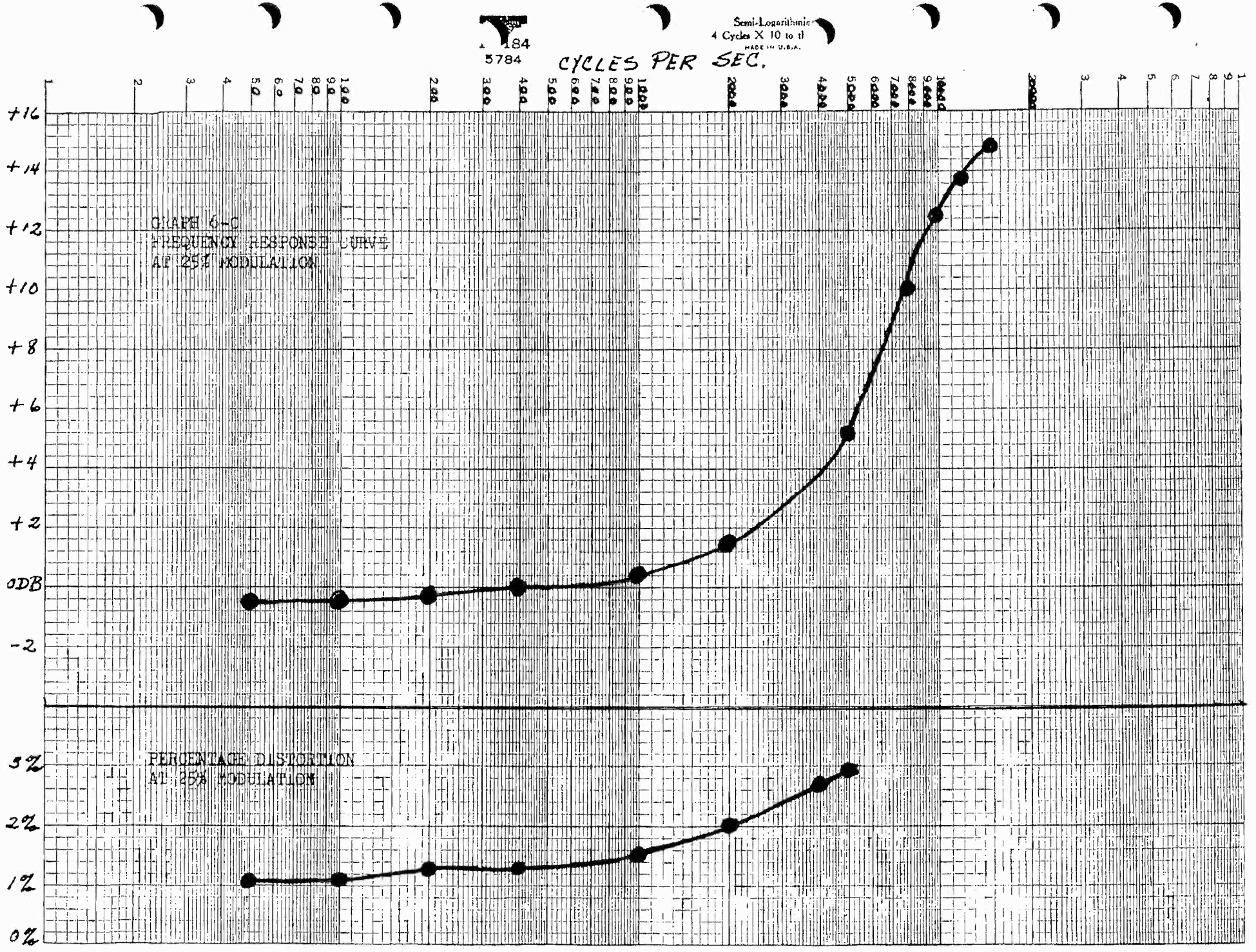

Semi-Logarithmic
4 Cycles X 10 to 1
MADE IN U.S.A.
184
5784
CYCLES PER SEC.
GRAPH 6-C
FREQUENCY RESPONSE CURVE
AT 25% MODULATION
+16
+14
+12
+10
+8
+6
+4
+2
0DB
-2
PERCENTAGE DISTORTION
AT 25% MODULATION
3%
2%
1%
0%

EXHIBIT VII

Compliance with Performance Requirements for Color

Data showing visual/aural carrier frequency measurements have been given in Exhibit II. Please refer to Exhibit II.

Transfer characteristics of visual transmitter have been shown by waveform photographs in Exhibit V. Please refer to Exhibit V.

This station does not originate color programs.

KEDY-TV, BIG SPRING, TEXAS

CHANNEL 4

HARMONIC AND SPURIOUS EMISSION MEASUREMENTS

METHOD AND RESULTS

The level of all harmonic emissions relative to the peak visual power at the aural and visual transmitter output while operating into a dummy load, were measured with the equipment operating with the authorized power. The visual transmitter was operated at black level and 25% sync. The attached drawing shows the equipment setup and the method of measurement is as described in the General Radio Instruction Book which is furnished with the G. R. 874FR rejection filters. A tabulation of results plus correction factors is attached. Excepting at harmonic frequencies, no other measurable spurious radiation was detected. All measurements were made personally by affiant.

KEAR AND KENNEDY

James R. Gray

James R. Gray

Subscribed and sworn to before me this 9th day of July 1957.

Ambrose J. Carlan

NOTARY PUBLIC, D. C.

My Commission expires October 1, 1960.

KEDY-TV, Big Spring, Texas

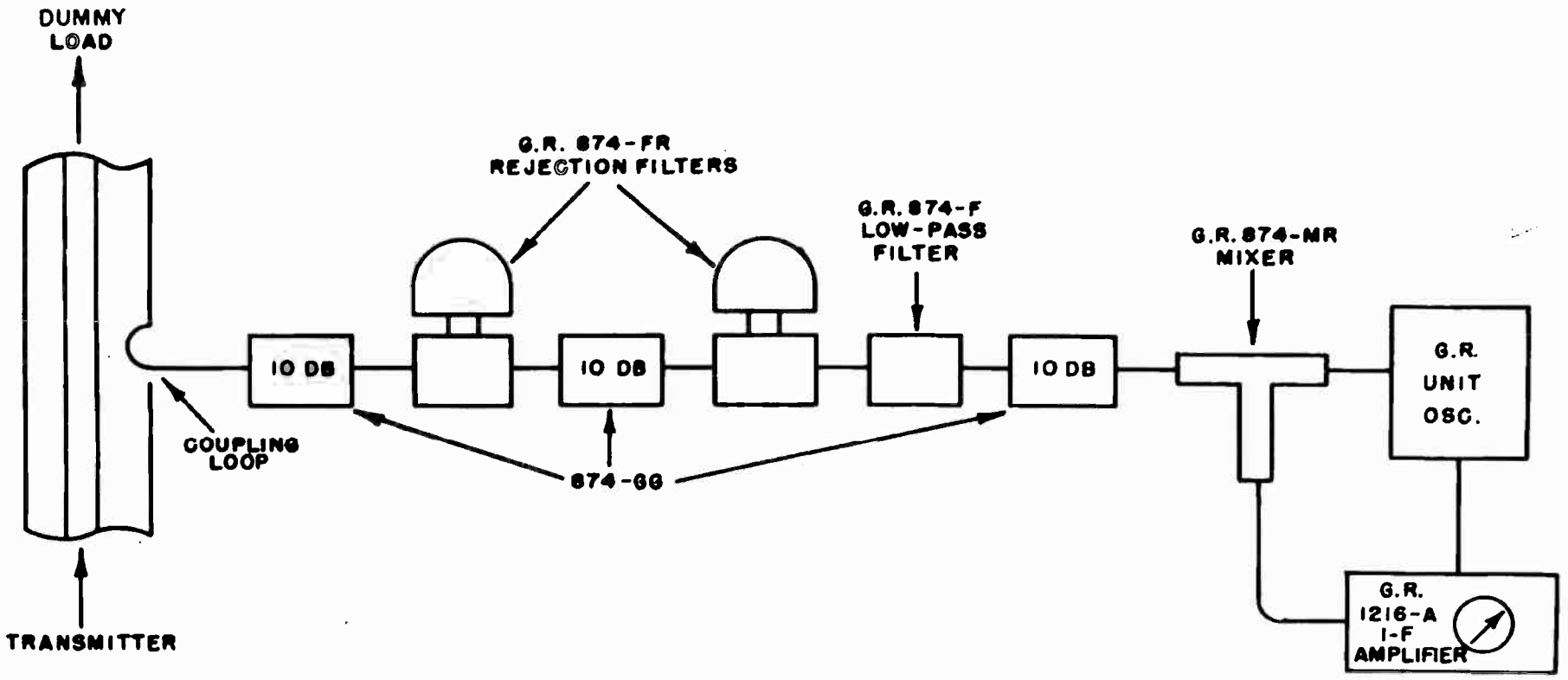
Harmonic Measurements - Channel 4 - Visual Carrier - 67.24 mc.

Measured Frequency MC	Local Osc. Frequency	Measured Level db	CORRECTIONS (Pads Removed)	CORRECTIONS Probe	CORRECTIONS (Low Pass Filter)	Harmonic Level
67.24	97.24	----	—	—	—	0
134.48	164.48	69	—	6	±2	73
201.72	231.72	72	10	9	+1	90
268.96	298.96	57	30	12	+2.5	96.5
336.20	366.20	58	—	14	+3.5	68.5
403.44	433.44	55	30	15.6	—	100.6
470.68	500.68	74	30	17	+0.5	120.5
537.92	567.92	64	30	18	+2.5	109.5
605.16	635.16	72	30	19	+3.5	117.5
672.40	702.40	67	30	20	+3.5	113.5

KEDY-TV, Big Spring, Texas

Harmonic Measurements - Channel 4 - Aural Carrier - 71.74 mc.

Measured Frequency MC	Local Osc. Frequency	Measured Level db	CORRECTIONS (Pads Removed	Probe	Low Pass Filter)	Harmonic Level
71.74	101.74	0	—	—	—	0
143.48	173.48	65	10	6	+2	79
215.22	245.22	63	20	9	+1	91
286.96	316.96	68	20	12	+2.5	97.5
358.70	388.70	48	20	14	+3.5	78.5
430.44	460.44	70	20	15.6	0	105.6
502.18	532.18	70	20	17	+0.5	106.5
573.92	603.92	52	20	18	+2.5	87.5
645.66	675.66	70	20	19	+3.5	105.5
717.40	747.40	70	20	20	+3.5	106.5



TEST SETUP FOR MEASUREMENT
OF RELATIVE LEVELS OF HARMONICS
VISUAL AND AURAL

KEDY-TV

BIG SPRING, TEXAS

CHANNEL 4

57 07 10

KEAR AND KENNEDY
CONSULTING ENGINEERS
WASHINGTON, D.C.

LOUIS JEAN THOMPSON CONSULTING ENGINEER

302 WEST TWELFTH STREET BIG SPRING, TEXAS

THE STATE OF TEXAS, §

COUNTY OF HOWARD, §

BEFORE ME, the undersigned authority, in and for Howard County, Texas, on this day personally appeared LOUIS JEAN THOMPSON, who being by me duly sworn, on his oath, states and says:

I am a Registered Professional Engineer and a Registered Public Surveyor, licensed under the laws of the State of Texas, and have been practicing my profession for a number of years.

I have located the Television Antenna used by Television Station KEDY TV, at Big Spring, Howard County, Texas. My investigation shows that said Antenna is situated on Section No. 45, in Block No. 32, Township 1-North, T. and P. Ry. Co. Surveys in Howard County, Texas, and that the geographic coordinates of said structure are as follows:

Latitude 32° 15' 13.9" N
Longitude 101° 26' 43.6" W

According to my findings, the overall height of the structure, including obstruction marker, above sea level is 2962.20 Ft. and the Elevation above MSL of a Bench Mark on the Southeast corner of the concrete base of the Tower is 2470.20 ft.

The survey and reference points on which same is based, are as follows:

The Geographic position was determined by Triangulation from U.S. C. and G.S. Triangulation Station WILLIAMS,
Latitude 32° 11' 24.876" N
Longitude 101° 26' 44.620" W
And from U.S. Corps of Engineers, Albuquerque District Triangulation Station PARK,
x = 765,396.36 ft.
y = 237,824.80 ft.
The Elevation above Mean Sea Level (U.S.C. and G.S. Datum of 1929) was determined for the base of the Tower (BM on SE corner of Concrete Base) by a closed level net from U.S.C. and G.S. BM-N-918 (El. 2559.102 ft.). The height of the Structure was determined by vertical triangulation.

LOUIS JEAN THOMPSON CONSULTING ENGINEER

302 WEST TWELFTH STREET BIG SPRING, TEXAS

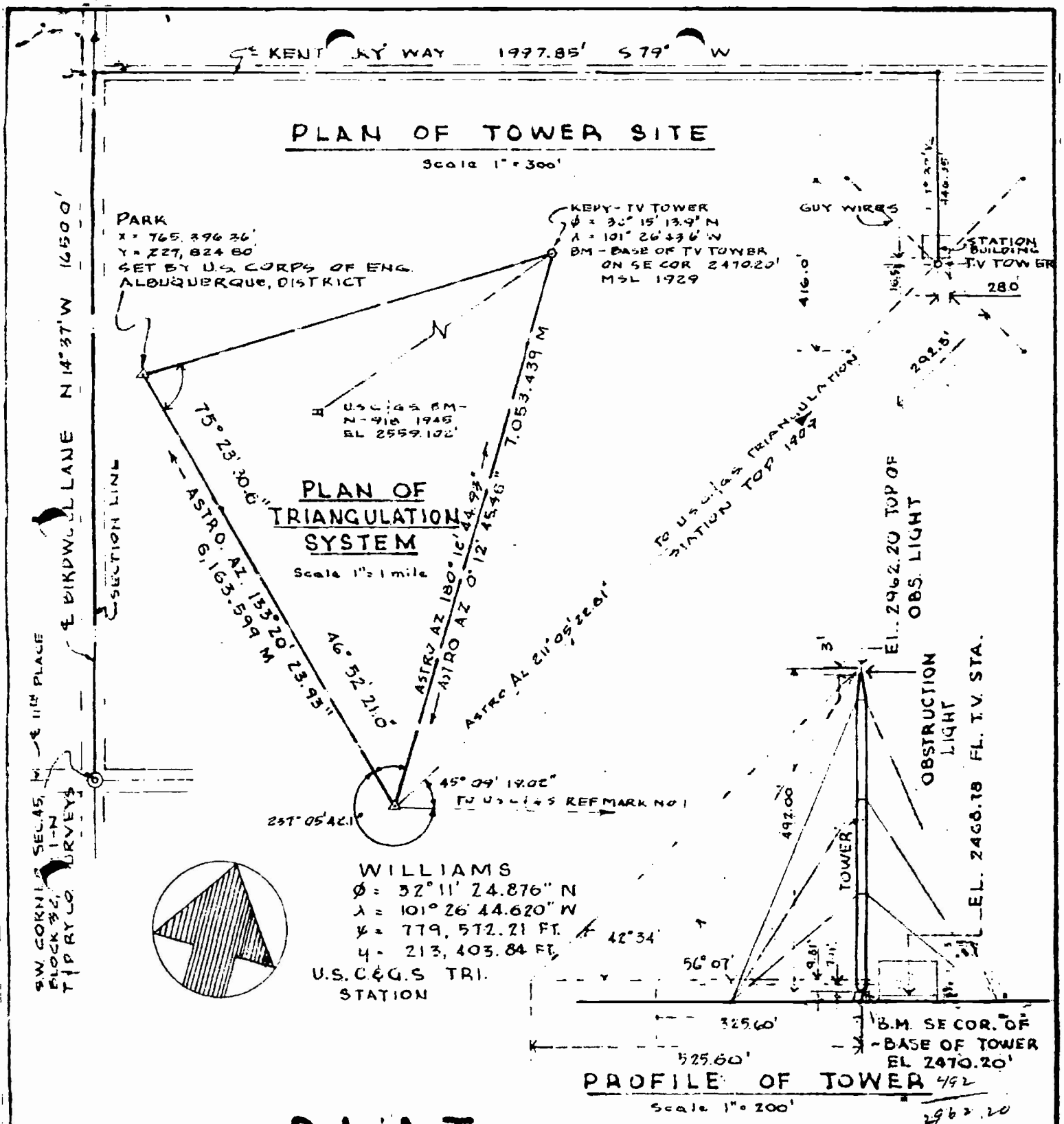
Plat of antenna site and vertical plan sketch of the antenna structure, portraying pertinent details is attached.

I make the statements in connection with FCC requirements and requirements of CAA in connection with licensing of station KEDY TV, at Big Spring, Texas.

Louis Jean Thompson

SWORN TO AND SUBSCRIBED BEFORE ME, THIS 29 DAY OF JULY, A. D. 1957.

Notary Public, Howard County, Texas



PLAT

SHOWING LOCATION AND ELEVATION OF K.E.D.Y. TV TOWER BIG SPRING TEXAS

SCALE:- AS SHOWN, SURVEYED: JULY 26, 1957

CERTIFICATE:

I, LOUIS JEAN THOMPSON, A REGISTERED PROFESSIONAL ENGINEER, DO HERE BY CERTIFY, THAT THE ABOVE SURVEY AND COMPUTATIONS WERE MADE BY ME AND THAT ALL VALUES ARE TRULY DESCRIBED AS I FOUND THEM. Louis Jean Thompson

COPY

COPY

DA07

D FWD576 NL PD=WUX Fort Worth Tex 14

1955 Jun 14 PM 5 30

Jack Wallace
Radio Station KBST, Big Spring, Texas

This is to advise that Airspace has recommended approval of your proposed tower at Lat 32-15-16 Long 101-26-44 not to exceed 500 ABG 2960 sea level.=

Paul H. Boatman Civil Aeronautics Admn=

COPY

COPY

#1013 Referred ASB 5/8/62 APPLICANT'S COPY

BPCT-3029

Broadcast Application — FEDERAL COMMUNICATIONS COMMISSION — Section V-C

TELEVISION BROADCAST ENGINEERING DATA

Name of applicant: GRAYSON ENTERPRISES Inc. — KEDY-TV

1. Purpose of authorization applied for: (Indicate by check mark)

(If application is for a new station or for any of the changes numbered B through D, complete all paragraphs of this form; if change E is of a character which will change coverage or increase the overall height of the antenna structure more than 20 feet, answer all paragraphs, otherwise complete only paragraphs 2 and 7 and the appropriate other paragraphs; for changes F through I, complete only paragraph 2 and the appropriate other paragraphs; for change J, complete only paragraphs 2, 5 and 16(b).

- A. [ ] Construct a new station
- B. [ ] Change effective radiated power or antenna height above average terrain
- C. [X] Change transmitter location
- D. [ ] Change frequency
- E. [X] Change antenna system
- F. [ ] Construct or change auxiliary antenna system
- G. [X] Change transmitter
- H. [ ] Install auxiliary or alternate main transmitter
- I. [ ] Other changes (specify)
- J. [ ] Change studio location

RECEIVED — OFFICE OF THE F.C.C.

2. Facilities requested

Frequency: 66 — 72 Mc. Channel No. 4

Effective Radiated Power (visual)	Effective Radiated Power (aural)	Antenna height above average terrain
In dbk: 20 In kw: 100	In dbk: 17 In kw: 50	1124 feet

3. Station location (principal community)

State: Texas — City or town: Big Spring

4. Transmitter location

State: Texas — County: Midland

City or town: near Stanton — Street Address (or other identification): Texas Hiway 137 4 mi S of Stanton

5. Main studio location

State: Texas — County: Howard

City or town: Big Spring — Street address: 2500 Kentucky Way

6. Transmitters

Visual

Make	Type No.	Rated power
General Electric	TT 24 A2	In dbk: 15.44 In kw: 35.

Aural

Make	Type No.	Rated Power
General Electric	TT 24 A2	In dbk: 12.72 In kw: 18.7

(If the above transmitter has not been accepted for licensing by the F.C.C., attach as Exhibit No. a complete showing of transmitter details. Showing should include schematic diagram and full details of frequency control. If changes are to be made in licensed transmitter include schematic diagram and give full details of change.) does not apply

(a) Describe in Exhibit No. means which will be used for determining and maintaining power output of the transmitters to the values specified in this application. See eng. rpt.

(b) Multiplexer: Make General Elec. Type No. PY16E

Rated input power 16.99 dbk

Feed loss: Visual .008 db Aural .006 db

7. (a) Antenna structure

Is the proposed construction in the immediate vicinity of any other radio station or will the proposed transmitting antenna be supported by the antenna structure of any other radio station? If "Yes", attach as Exhibit No. complete engineering data showing details and effect upon other station. Yes [ ] No [X]

Submit as Exhibit No. a vertical plan sketch for the proposed total structure (including supporting building if any) giving heights above ground in feet for all significant features. See eng rpt

Overall height in feet above ground (Without obstruction lighting)	Overall height in feet above mean sea level. (Without obstruction lighting)
1158	3781

Overall height in feet above ground. (With obstruction lighting)	Overall height in feet above mean sea level. (With obstruction lighting)
1161	3784

Height of antenna radiation center in feet above mean sea level. 3754 feet

Geographical coordinates of antenna (to nearest second)

North latitude 32° 03' 59" — West longitude 101° 47' 16"

How were coordinates determined? By registered surveyor.

Indicate by check mark the zone in which structure is located. 1 [ ] 2 [X] 3 [ ]

(b) Antenna data

Visual

Make: General Electric — Type No. TY 60 E

Number of sections	Rated input power in dbk	Power gain in db
4	16.56	6.02

Aural (if separate)

Make: not separate — Type No.

Number of sections	Rated input power in dbk	Power gain in db

If directional antenna is proposed, give full details including horizontal and vertical plane radiation patterns, as Exhibit No. does not apply

Is electrical or mechanical beam tilting proposed? If so, describe fully in Exhibit No. including horizontal and pertinent vertical radiation patterns. Yes [ ] No [X]

Will antenna be altered to provide null fill-in? Yes [ ] No [X]

If yes, describe fully in Exhibit No.

8. Transmission line proposed to supply power to the antenna from the transmitter

(a) Visual

Make	Type No.	Rated input power in dbk
Andrew	562A	17.77

Size (nominal inside transverse dimensions) in inches	Length in feet	Power loss in db for this length
3.125	1150	1.035

(b) Aural (if separate) not separate

Make	Type No.	Rated input power in dbk

Size (nominal inside transverse dimension) in inches	Length in feet	Power loss in db for this length

9. Proposed operation

(a) Visual

Transmitter power output (after vestigial sideband filter, if used)	Multiplexer loss in db:	Input to transmission line in dbk:
In dbk: 15.023 In kw: 31.8	0.008	15.015

Transmission line power loss in db:	Antenna input power in dbk:	Antenna power gain in db:	Effective radiated power
1.035	13.98	6.02	In dbk: 20 In kw: 100

(b) Aural

Transmitter power output	Multiplexer loss in db:	Input to transmission line in dbk:
In dbk: 12.021 In kw: 15.9	0.006	12.015

Transmission line power loss in db:	Antenna input power in dbk:	Antenna power gain in db:	Effective radiated power
1.035	10.98	6.02	In dbk: 17 In kw: 50

10. Modulation monitors on file no change

(a) Visual monitor or monitoring equipment

Make	Type No.

(b) Aural monitor

Make	Type No.

11. Frequency monitors on file no change

(a) Visual monitor

Make	Type No.	Accuracy

(b) Aural monitor

Make	Type No.	Accuracy

12. If the above monitors or monitoring equipment have not been approved by the F.C.C., include as Exhibit No. a brief technical description of each. does not apply

13. Will the studios, cameras, microphones, and other equipment proposed for transmission of programs be designed for compliance with the Commission's Rules? Yes [x] No [ ]

14. (a) Attach as Exhibit No. a map(s) (topographic where obtainable, such as U. S. Geological Survey quadrangles) for the area within 15 miles of the proposed transmitter location and show drawn thereon the following data:

1. Proposed transmitter location—accurately plotted;
2. Transmitter location and call letters of all known radio stations (except amateur) and the location of known commercial and government receiving stations within 2 miles of the proposed transmitter location;
3. Character of the area within 2 miles of proposed transmitter location, suitably designated as to residential, business, industrial, and rural nature;
4. At least eight radials each extending to a distance of ten or more miles from the proposed transmitter location, one or more of which must extend through the principal city to be served.

see engineering report
see engineering report

(b) Attach as Exhibit No. profile graphs with reasonably large scales for the radials in (a) (4) above. Each graph shall show the elevation of the antenna radiation center. Identify each graph by its bearing from the proposed transmitter location. Direction of true north shall be zero azimuth, with angles measured clockwise. Show source of topographical data on each.

15. From the profile graphs in 14(b), for the eight mile distance between two and ten miles from the proposed transmitter location, and in accordance with the procedure prescribed in the Commission's Rules, supply the following tabulation of data:

Radial bearing (degrees true)	Average elevation of radial (2-10 mi.) in feet above mean sea level	Height in feet of antenna radiation center above average elevation of radial (2-10 mi.)	Effective radiated power in radial direction	Predicted distance in miles to the Grade A contour	Predicted distance in miles to the Grade B contour
0 0	2690 feet	1064 feet	20 dbk	38 mi.	71 mi.
45	2530	1224	"	41	74
90	2580	1174	"	40	73
135	2580	1174	"	40	73
180	2680	1174	"	40	73
225	2680	1074	"	38	71
270	2690	1064	"	38	71
315	2710	1044	"	37	70
(*)55°	2550	1204	"	41	74
Average	2630				

over principal community if not included above. Do not include in average.

height above average terrain 1124 feet (Must be identical with Paragraph 2)

16. Attach as Exhibit No. map(s) (Sectional Aeronautical charts where obtainable, preferably without aeronautical overlay) of the area proposed to be served and shown drawn thereon:

(a) Proposed transmitter location and the radials along which the profile graphs have been prepared:

(b) The studio location and boundaries of the principal community;

(c) The predicted Grade A and Grade B contours from 12 above:

(d) The required minimum field strength contour;

(e) Scale of mil**see eng. rpt.**

17. Attach as Exhibit No. a sufficient number of aerial photographs taken in clear weather at appropriate altitudes and angles to show the nature of the surrounding terrain in the vicinity of the proposed transmitter site. The photographs must be marked so as to show compass directions. Photographs taken in eight different directions from an elevated position on the ground will be acceptable in lieu of the aerial photographs if the area can be clearly shown.

Give date photographs were taken.

See eng. rpt.

APRIL 1962.

18. Will the minimum required value of field strength predicted in accordance with the method prescribed in the Commission's Rules, be provided over the entire principal community proposed to be served? ✓ Yes ☐ No ☐

19. Will the main studio be located within the limits of the principal community proposed to be served. ✓ Yes ☐ No ☐

20. (a) Does the proposed transmitter location comply with the minimum separation requirements of the Commission's Rules? ✓ Yes ☐ No ☐

(b) If any co-channel separations are proposed that are less than the applicable minimum separation requirement plus 20 miles, or if other channel separations are proposed that are less than the applicable minimum separations plus 10 miles, list such separations below. (Include existing stations, proposed stations and cities which appear in the table of assignments; the location and geographical coordinates of each antenna, proposed antenna or reference point as appropriate; the distance to each from the proposed transmitter location; and the method used in each instance to measure the distance.) If none, so state.

NONE.

21. If this is an application for modification of construction permit state briefly as Exhibit No. the present status of construction and indicate when it is expected that construction will be completed.

Station presently operating as licensed.

I certify that I am the Technical Director, Chief Engineer, or Consulting Engineer of the radio station for which this application is submitted and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief. (This signature may be omitted provided the engineer's original signed report of the data from which the information contained herein has been obtained is attached hereto.)

April 17 1962.

James R. Croy

James R. Croy

Technical Director, Chief Engineer or Consulting Engineer

Broadcast Application | FEDERAL COMMUNICATIONS COMMISSION | Section V-G (Antenna)

ANTENNA AND SITE INFORMATION
(see instruction B
Section I)

Name of applicant: Grayson Enterprises Inc. | KEDY

Address where applicant can be reached in person: 2500 Kentucky Way, Big Spring, Texas

Since this Section is submitted to the Regional Airspace Subcommittee of the Air Coordinating Committee for clearance in connection with obstructions to air navigation, it is necessary that all the data called for be supplied. Previously and separately filed data must not be incorporated by reference.

Legal Counsel: Bernard Koteen

Address: Washington, D.C.

Consulting Engineer: James R. Croy

Address: Washington, D.C.

Class of station: Television

Facilities requested: Channel 4

1. Location of antenna

State	County	City or Town
Texas	Midland	near Stanton

Exact antenna location (street address) (If outside city limits, give distance and direction from, and name of nearest town)

Texas Hiway 137, 4 miles South of Stanton.

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

North latitude	West longitude
32° 03' 59"	101° 47' 16"

Purpose of application (Check appropriate box)

a. New antenna construction [X]
b. Alteration of existing antenna structures [ ]
c. Change in location [X]

2. Features of surrounding terrain

List any natural formations or existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft and thereby minimize the aeronautical hazard of the antenna.

none

RECEIVED
APR 22 12
F. C. C.
OFFICE OF THE SECRETARY

Submit as Exhibit No. a chart on which is plotted the exact location of the antenna site, and also the relative location of the natural formations and/or the existing man-made structures listed above. see attached map

The chart used shall be an Instrument Approach Chart (or the landing chart on reverse side thereof), or a Sectional Aeronautical Chart, choice depending upon proximity of the antenna site to landing areas. 1/ In general, the Sectional Aeronautical Chart should be used only when the antenna site is more than 10 miles from a landing area or when an Instrument Approach Chart is unobtainable. 1/ These charts may be purchased from the U. S. Coast and Geodetic Survey, Washington 25, D. C.

1/ Exception - Where the proposed antenna site is within the boundary of a landing area for which no Instrument Approach Chart is available, submit a self-made, large scale map showing antenna site, runway(s) and existing man-made structures listed above.

3. Designation, distance, and bearing to center line of nearest established airway within 5 miles: on airway V66

4. List all landing areas within 10 miles of antenna site. Give distance and direction to the nearest boundary of each landing area from the antenna site.

	Landing Area	Distance	Direction
(a)	none		
(b)			
(c)			

5. Description of antenna system (If directional, give spacing and orientation of towers).

1100 ft guyed steel tower supporting 4 bay TV antenna.

Type

Description of tower(s)

Self-supporting | Guyed XXX | Tubular (Pole)

Tower (height figures should include obstruction lighting)	#1	#2	#3	#4	#5	#6
Height of radiating elements	55 ft.					
Overall height above ground	1161 ft.					
Overall height above mean sea level	3784 ft.					

If a combination of Standard, FM, or TV operation is proposed on the same multi-element array (either existing or proposed) submit as Exhibit No. a horizontal plan for the proposed antenna system, giving heights of the elements above ground and showing their orientation and spacing in feet. Clearly indicate if any towers are existing. does not apply

Submit as Exhibit No. a vertical plan sketch for the proposed total structure (including supporting building if any) giving heights above ground in feet for all significant features. Clearly indicate existing portions, noting painting and lighting. see exhibit

Is the proposed antenna system designed so that obstruction lights may be installed and maintained at the uppermost point(s)? Yes [X] No [ ]

Is the proposed site the same or immediately adjoining the transmitter-antenna site of other stations authorized by the Commission or specified in another application pending before the Commission? Yes [ ] No [X]

If answer is "Yes", give File numbers

Date April 17 1962

James R. Croy
Signature of Engineer preparing data

ENGINEER'S COPY

AFFIDAVIT

CITY OF WASHINGTON)
) ss
DISTRICT OF COLUMBIA)

JAMES R. CROY, being duly sworn, deposes and says that he is an experienced and qualified electronic engineer.

That his qualifications as an engineer are a matter of record with the Federal Communications Commission.

That he is authorized to practice as a Registered Professional Engineer in the District of Columbia.

That the attached engineering exhibit has been prepared by him or under his supervision and direction, and he believes it to be true and accurate.

James R. Croy
JAMES R. CROY

Subdoribed and sworn to before me
this 19 day of April 1962.

Ambrose J. Cavegn (signed)
NOTARY PUBLIC

My Commission Expires Oct. 1 1965.

(seal)

ENGINEERING REPORT

This engineering report is part of an application by GRAYSON ENTERPRISES INC. to move the transmitter and antenna of KEDY-TV from Big Spring Texas to a new location approximatly 22 miles southwest of the city. The herein proposed site is on Texas state hiway 137, 4 miles south of Stanton Texas. Studios will remain at 2500 Kentucky Way in Big Spring.

This proposal requests authorization to install a 4 bay antenna atop an 1100 ft. guyed tower. The 35 KW transmitter will be operated at slightly reduced power to produce the maximum allowed radiation of 100 KW.

Included in this report are the following maps and graphs showing the technical data and information required in FCC form 301.

Available local topographic maps of the area.

Sectional topographic maps of the area within 15 miles of the site.

Profile graphs of the terrain within 10 miles of the antenna location and a graph of the terrain between the site and Big Spring.

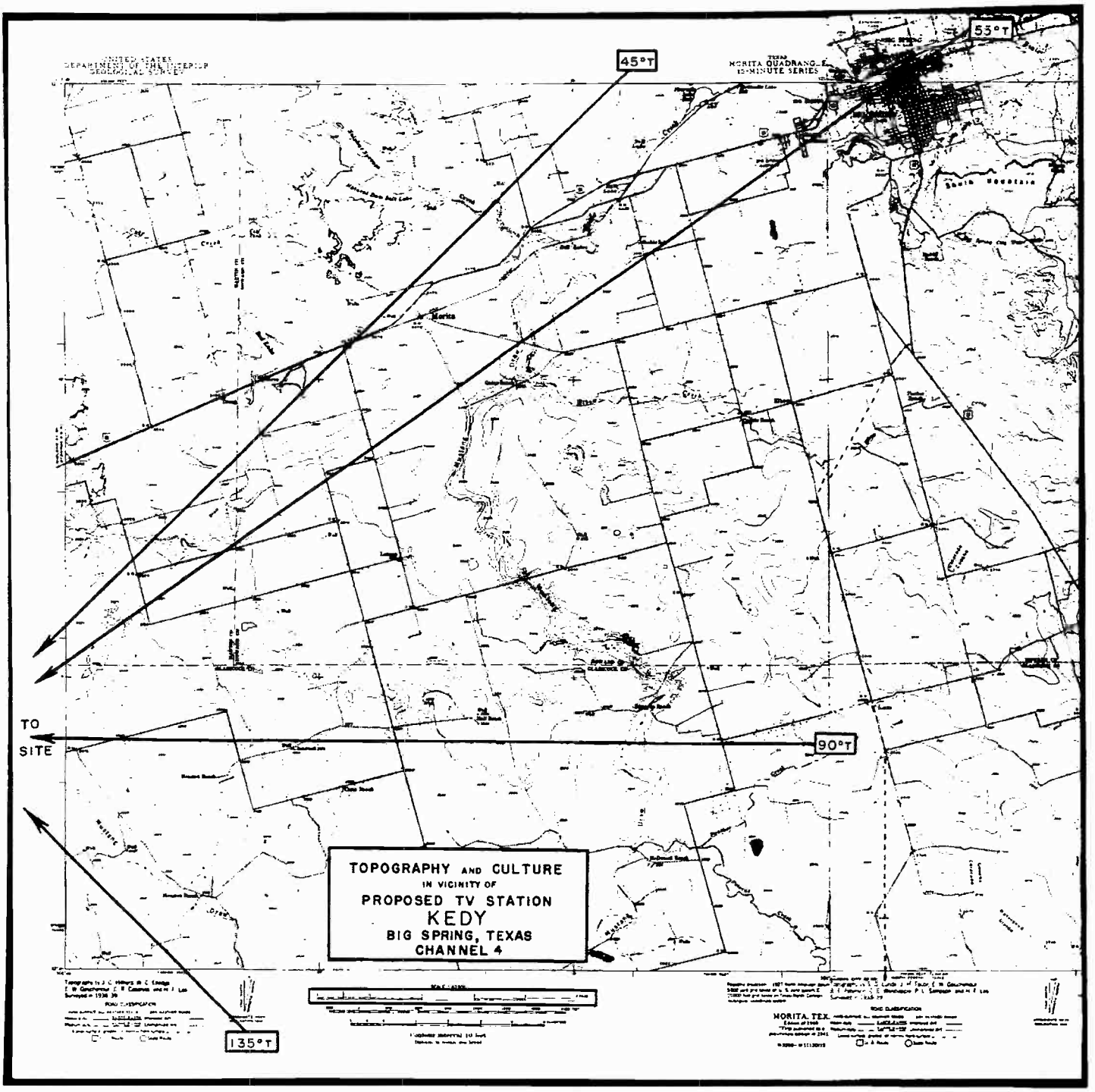
Map showing the predicted city grade, grade A and grade B contours.

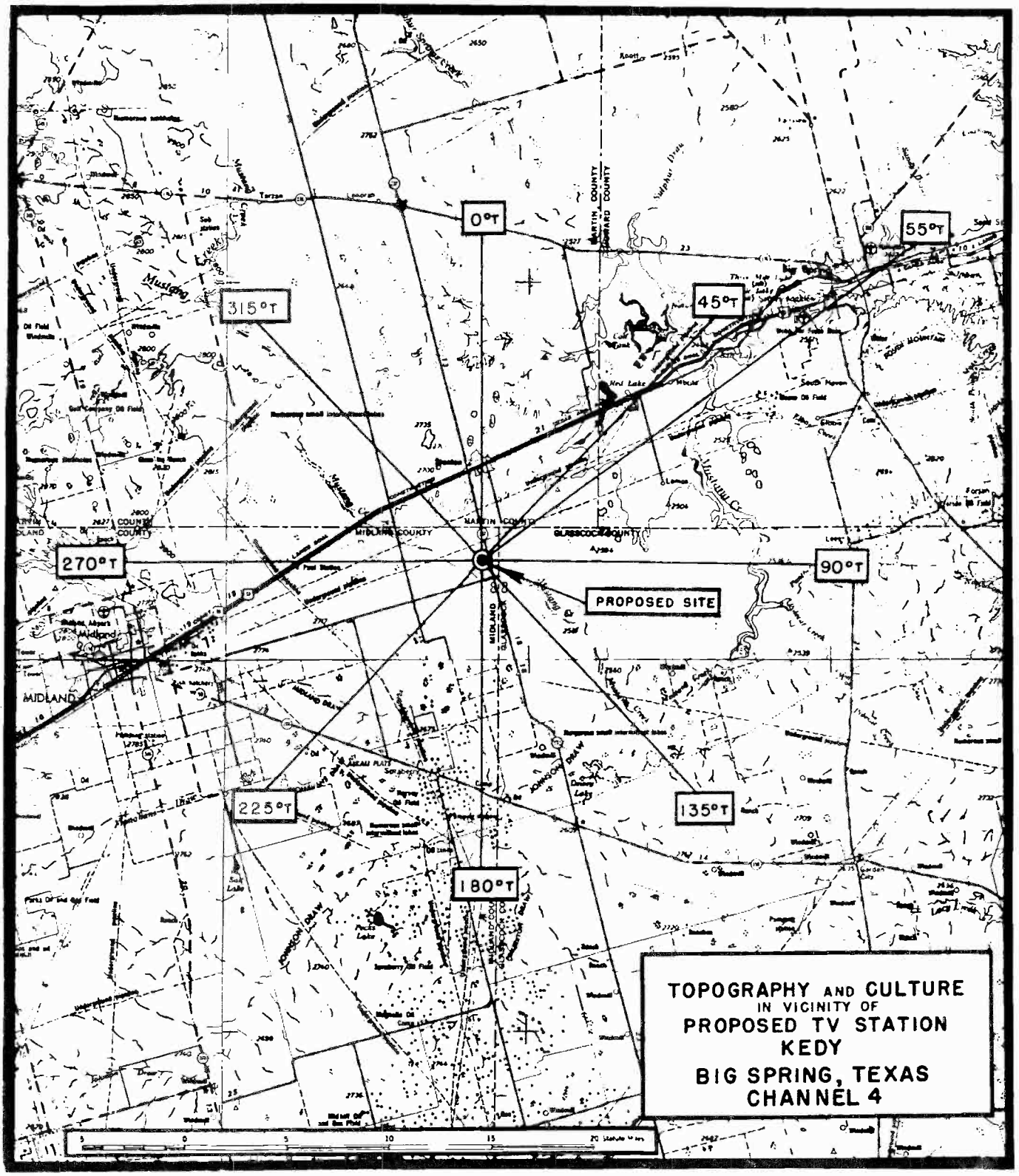
Photograph of the site from an altitude of 6000 ft.

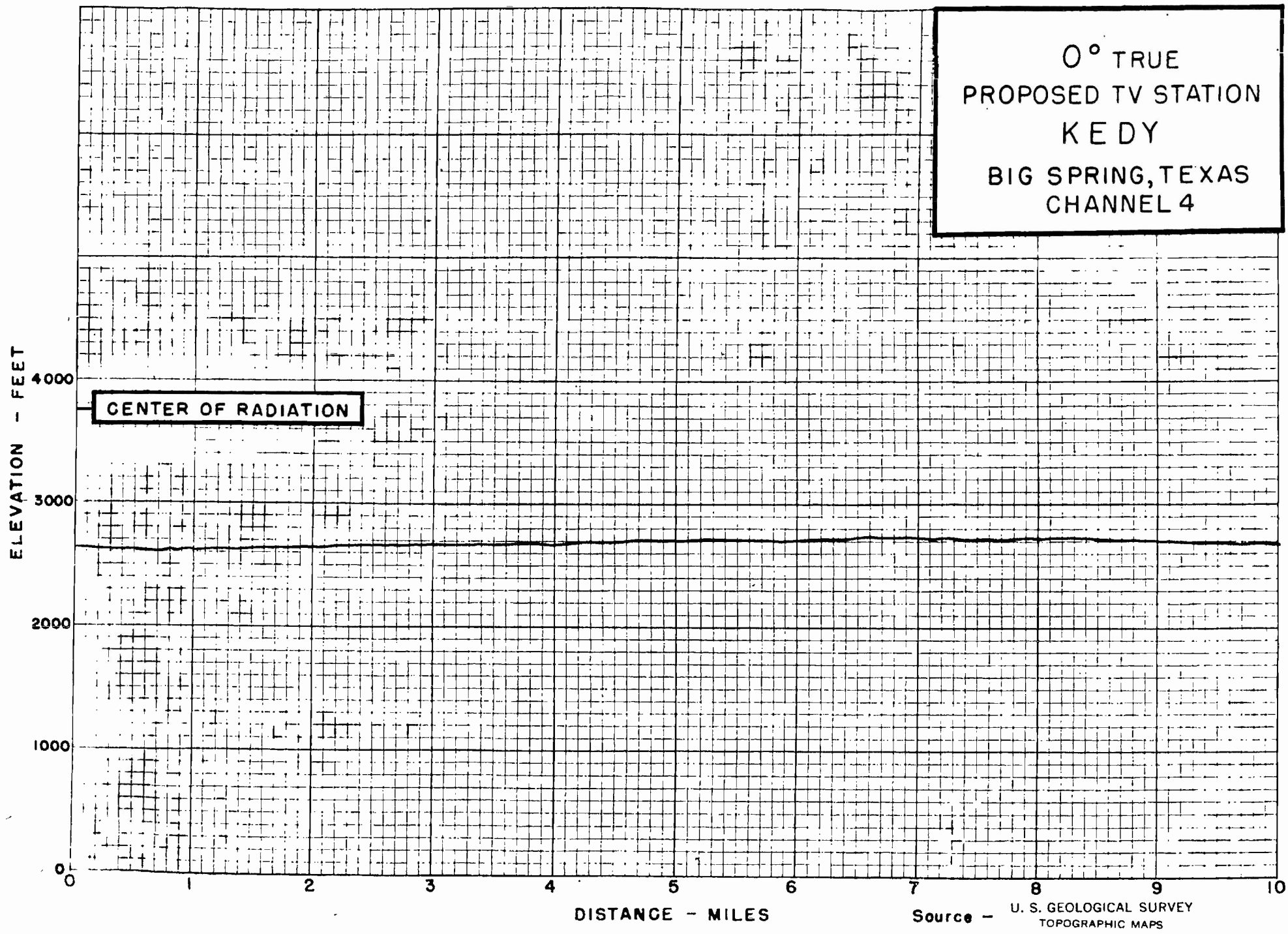
Vertical plan sketch of the antenna and supporting structure including all pertinent elevation data.

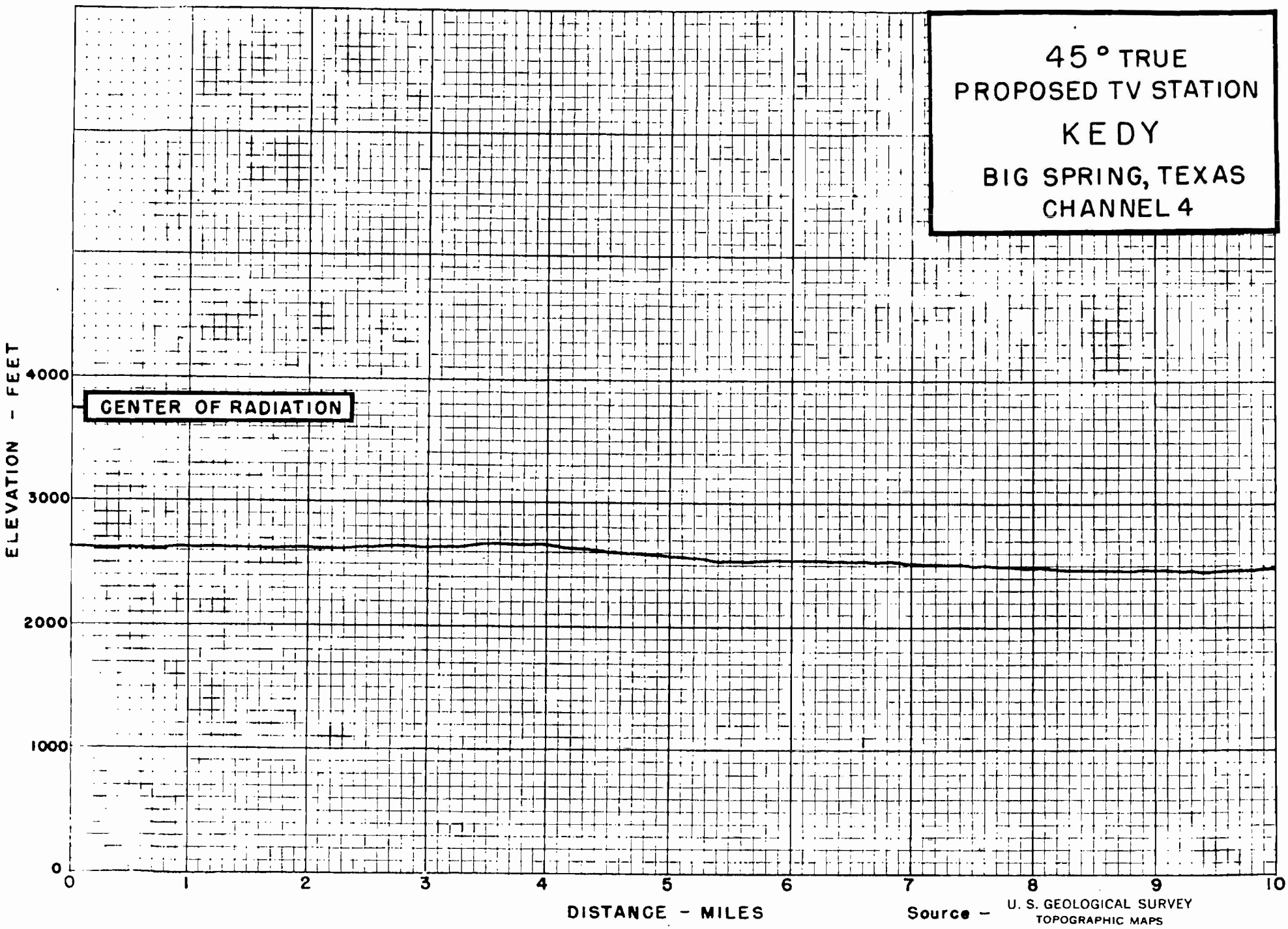
Sectional airways chart showing location of the site.

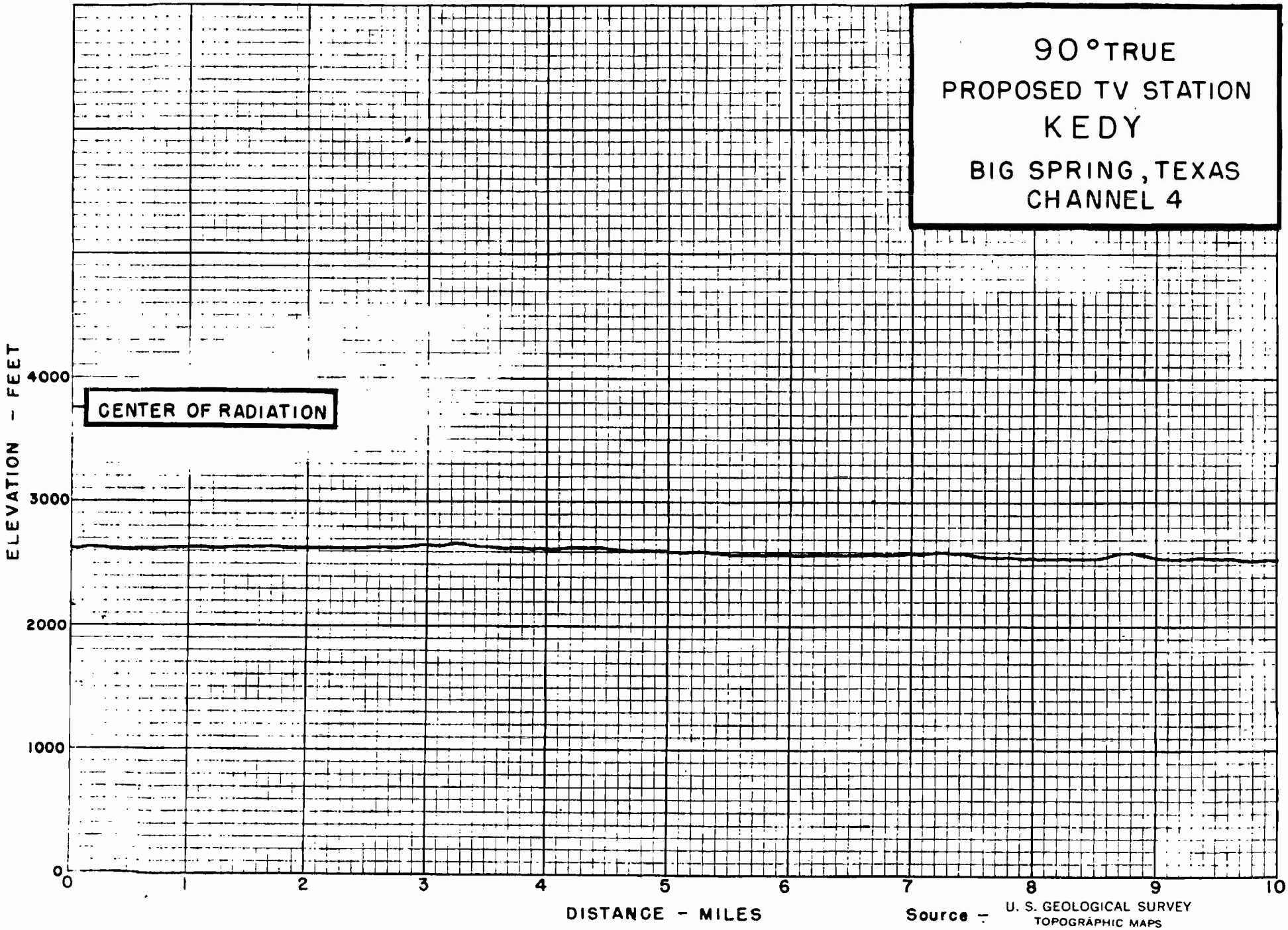
Surveyed plat of site with coordinates and ground elevation.

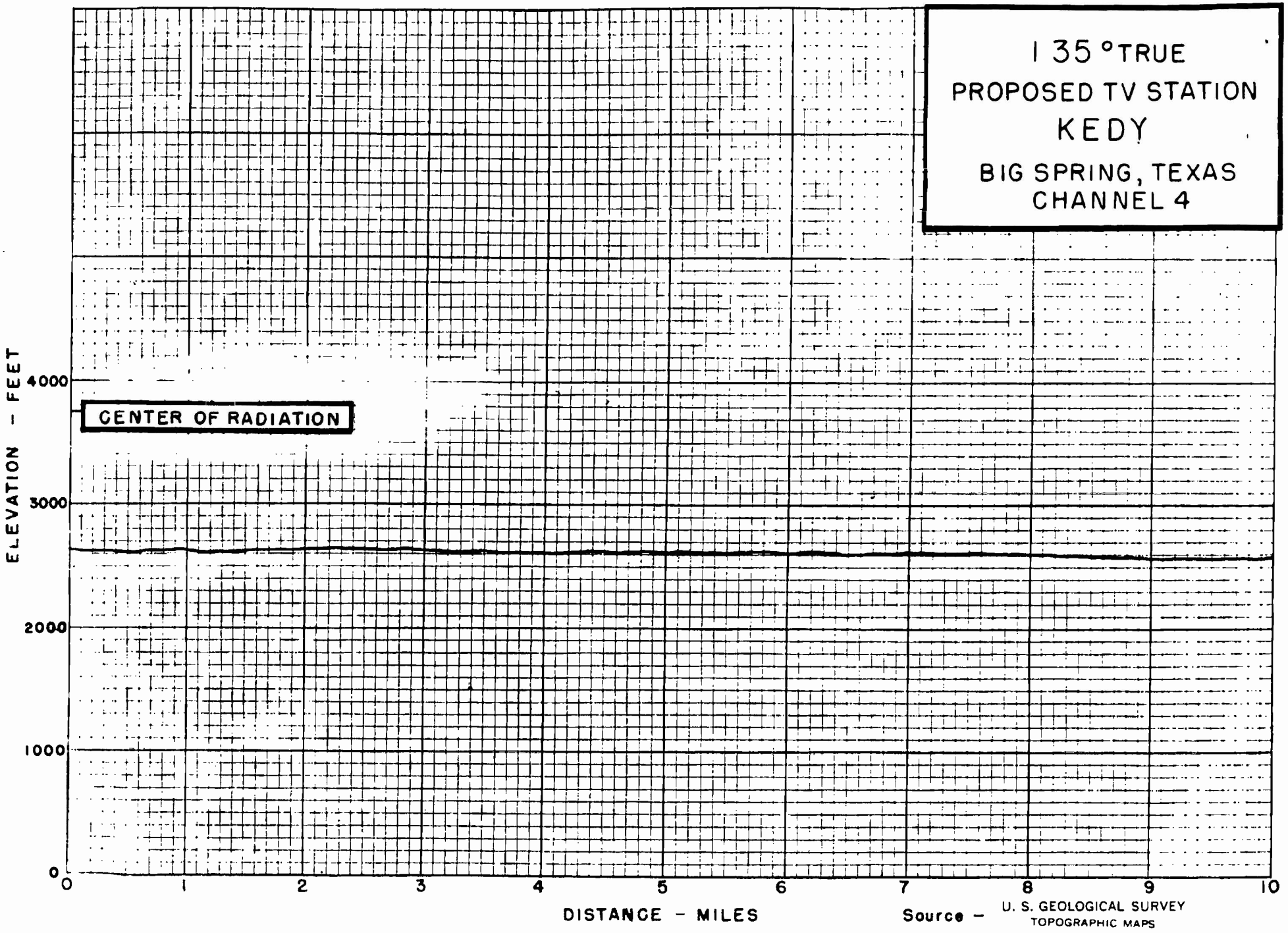

45°T
53°T
90°T
135°T
TO SITE
TOPOGRAPHY AND CULTURE
IN VICINITY OF
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS
CHANNEL 4
MORITA QUADRANGLE
15-MINUTE SERIES
MORITA, TEX.

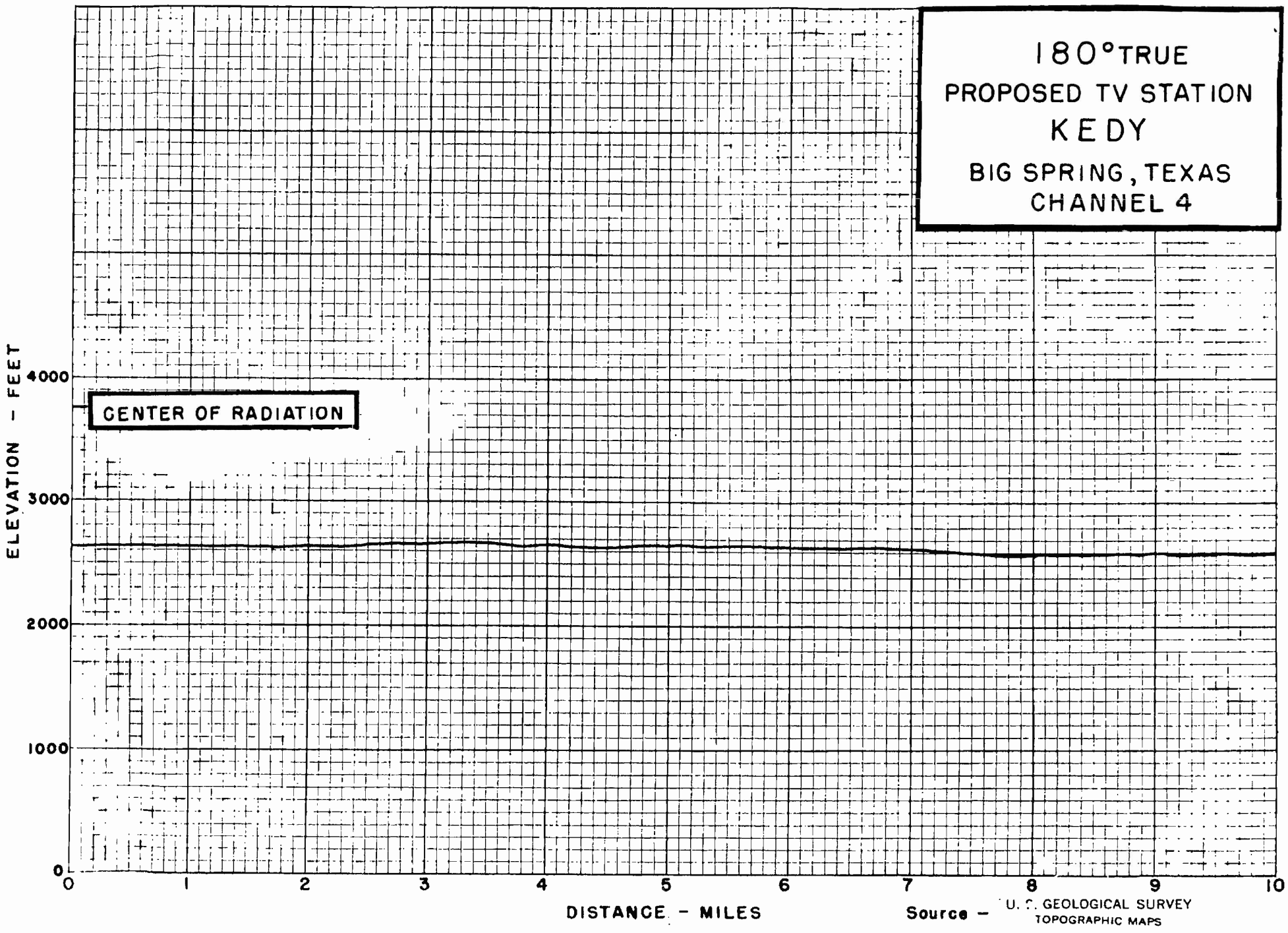

0°T
45°T
55°T
90°T
135°T
180°T
225°T
270°T
315°T
PROPOSED SITE
MIDLAND
MARTIN COUNTY
HOWARD COUNTY
GLASSCOCK COUNTY
MIDLAND COUNTY
TOPOGRAPHY AND CULTURE
IN VICINITY OF
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS
CHANNEL 4

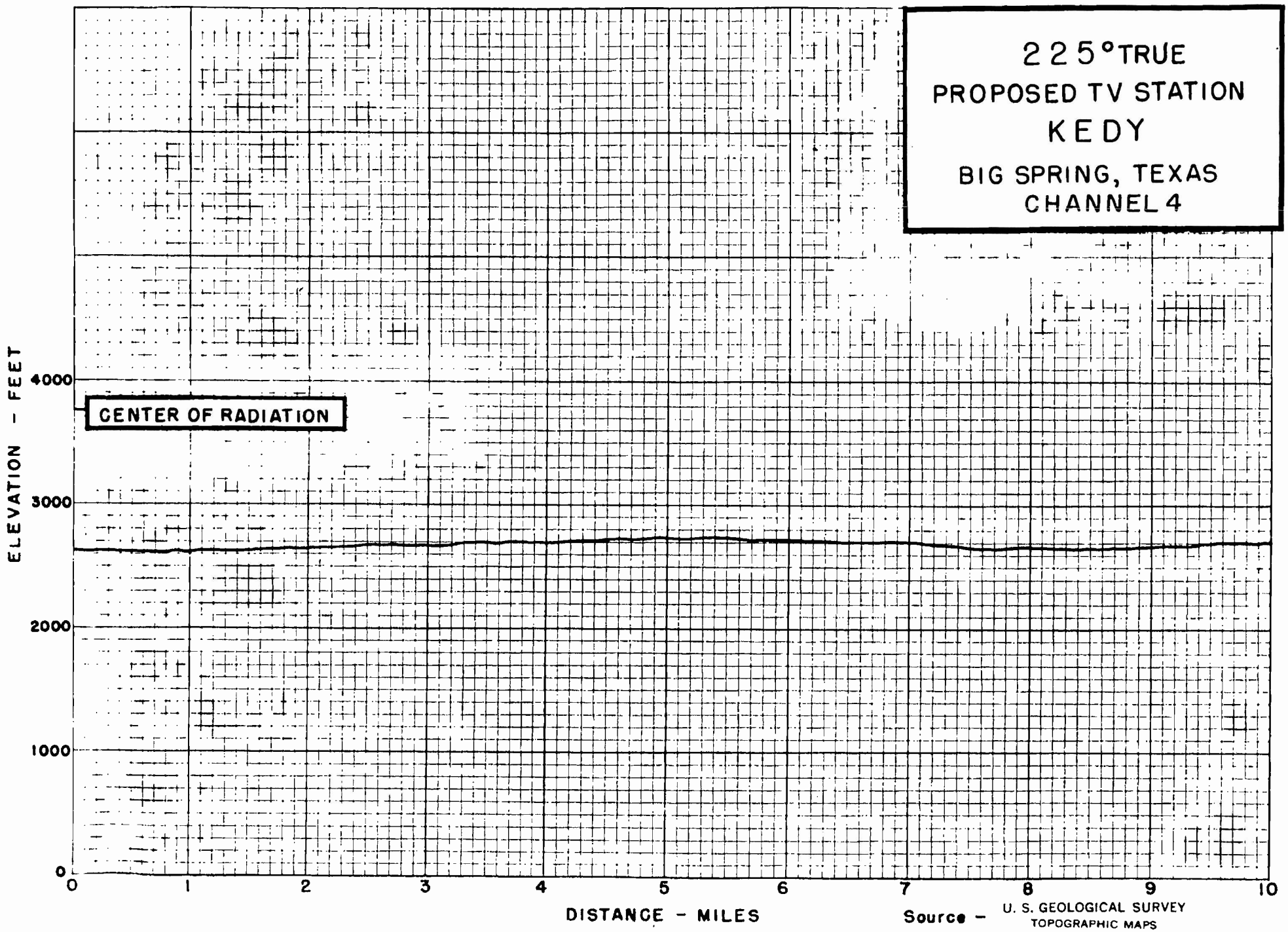

0° TRUE
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS
CHANNEL 4
CENTER OF RADIATION
ELEVATION - FEET
4000
3000
2000
1000
0
0
1
2
3
4
5
6
7
8
9
10
DISTANCE - MILES
Source - U. S. GEOLOGICAL SURVEY
TOPOGRAPHIC MAPS

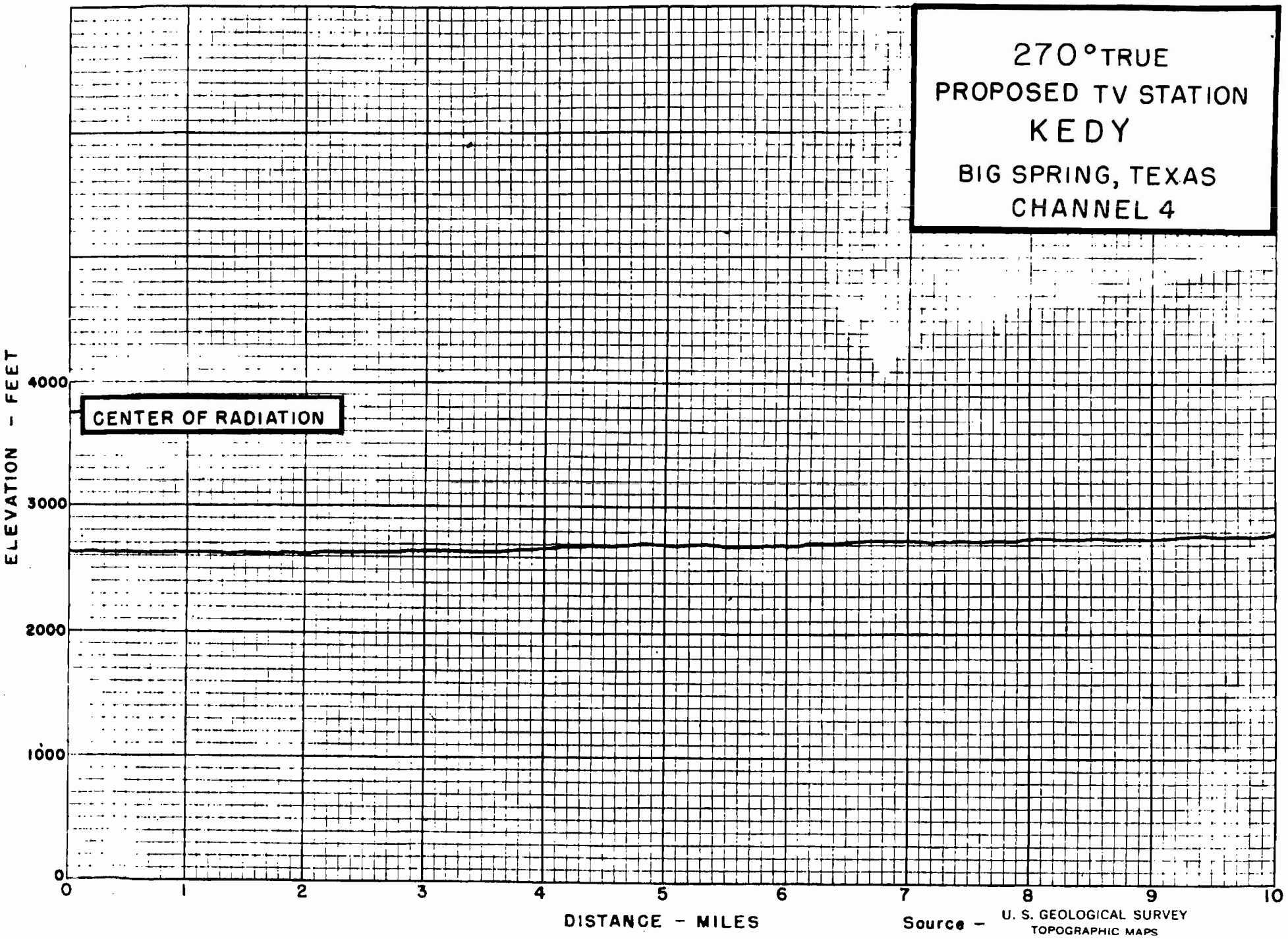

45° TRUE
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS
CHANNEL 4
CENTER OF RADIATION
ELEVATION - FEET
4000
3000
2000
1000
0
0
1
2
3
4
5
6
7
8
9
10
DISTANCE - MILES
Source - U. S. GEOLOGICAL SURVEY
TOPOGRAPHIC MAPS

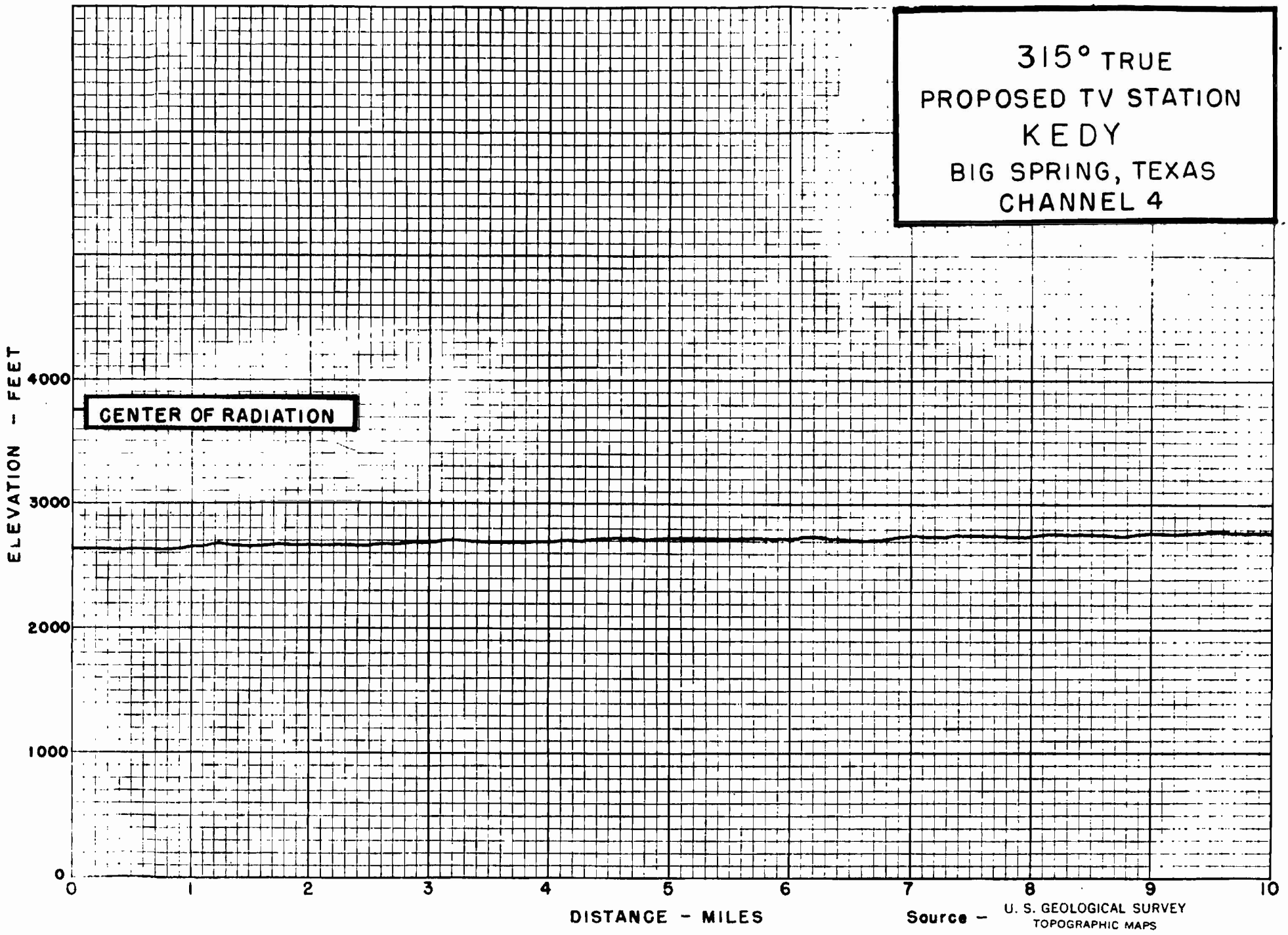

90° TRUE
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS
CHANNEL 4
CENTER OF RADIATION
ELEVATION - FEET
4000
3000
2000
1000
0
0
1
2
3
4
5
6
7
8
9
10
DISTANCE - MILES
Source - U. S. GEOLOGICAL SURVEY
TOPOGRAPHIC MAPS


135° TRUE
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS
CHANNEL 4
CENTER OF RADIATION
ELEVATION - FEET
4000
3000
2000
1000
0
0
1
2
3
4
5
6
7
8
9
10
DISTANCE - MILES
Source - U. S. GEOLOGICAL SURVEY
TOPOGRAPHIC MAPS

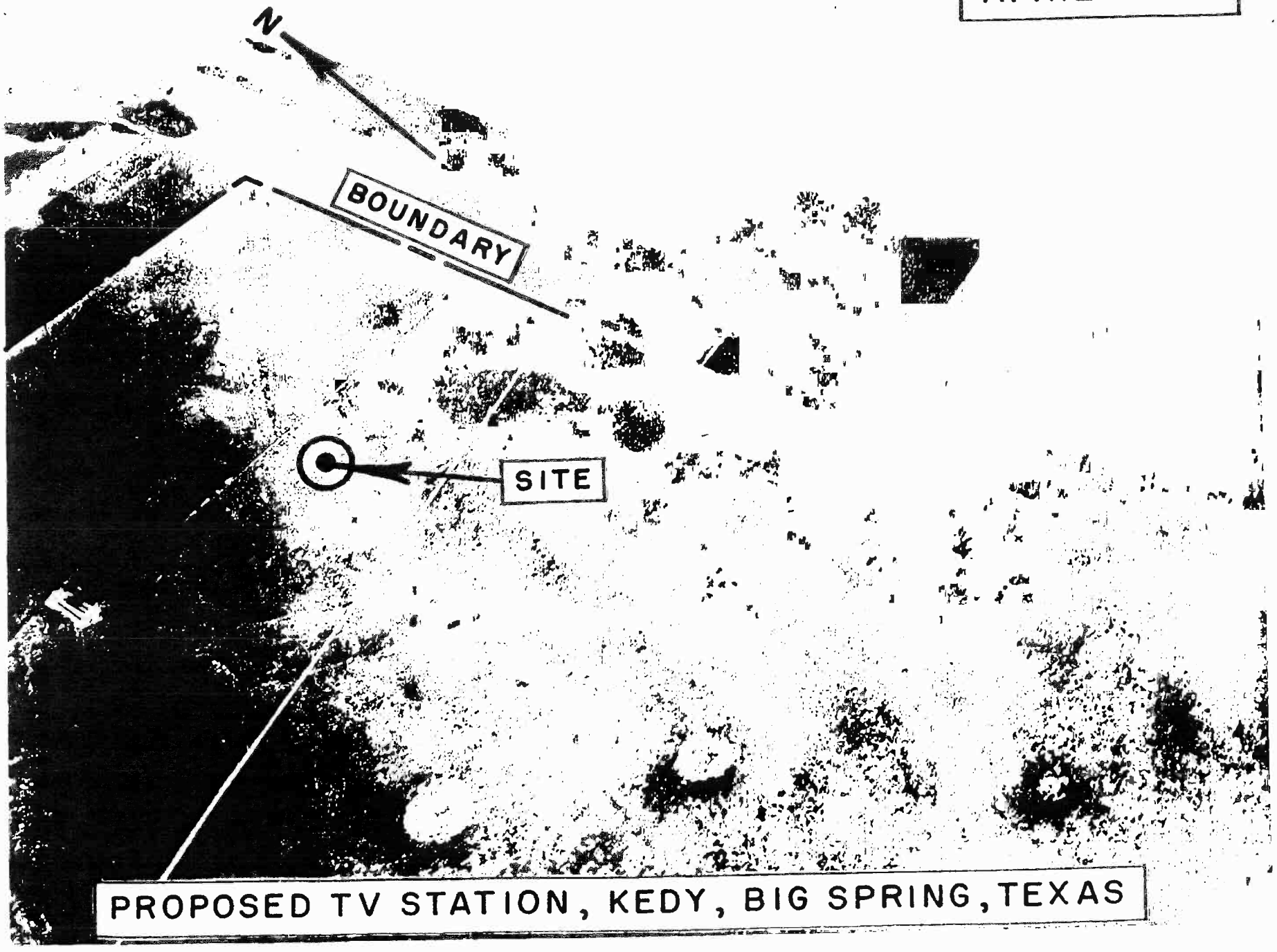

180° TRUE
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS
CHANNEL 4
CENTER OF RADIATION
ELEVATION - FEET
4000
3000
2000
1000
0
0
1
2
3
4
5
6
7
8
9
10
DISTANCE - MILES
Source - U. S. GEOLOGICAL SURVEY
TOPOGRAPHIC MAPS


225° TRUE
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS
CHANNEL 4
CENTER OF RADIATION
ELEVATION - FEET
4000
3000
2000
1000
0
0
1
2
3
4
5
6
7
8
9
10
DISTANCE - MILES
Source - U. S. GEOLOGICAL SURVEY
TOPOGRAPHIC MAPS

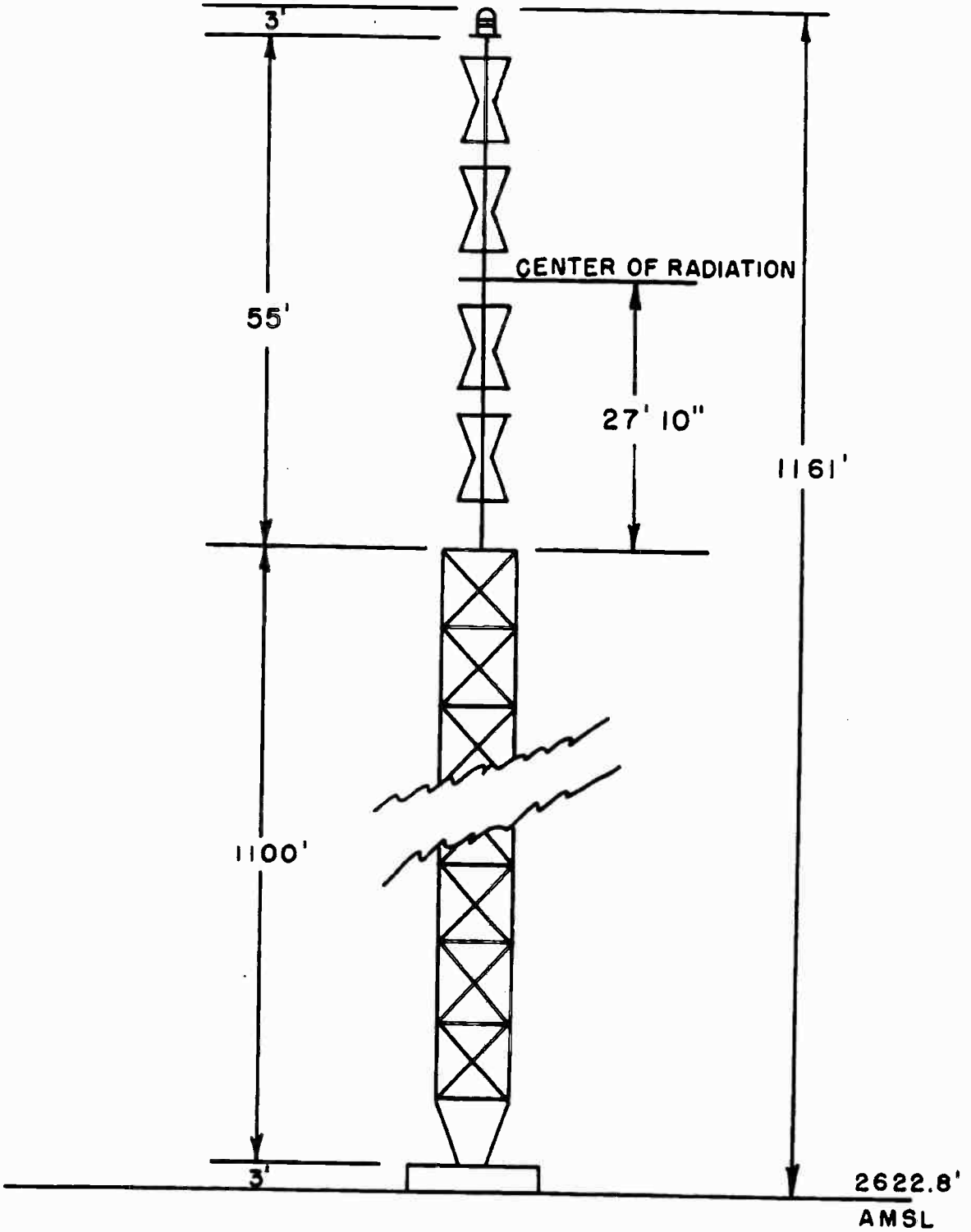

270° TRUE
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS
CHANNEL 4
CENTER OF RADIATION
ELEVATION - FEET
4000
3000
2000
1000
0
0
1
2
3
4
5
6
7
8
9
10
DISTANCE - MILES
Source - U. S. GEOLOGICAL SURVEY
TOPOGRAPHIC MAPS


315° TRUE
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS
CHANNEL 4
CENTER OF RADIATION
ELEVATION - FEET
4000
3000
2000
1000
0
0
1
2
3
4
5
6
7
8
9
10
DISTANCE - MILES
Source - U. S. GEOLOGICAL SURVEY
TOPOGRAPHIC MAPS

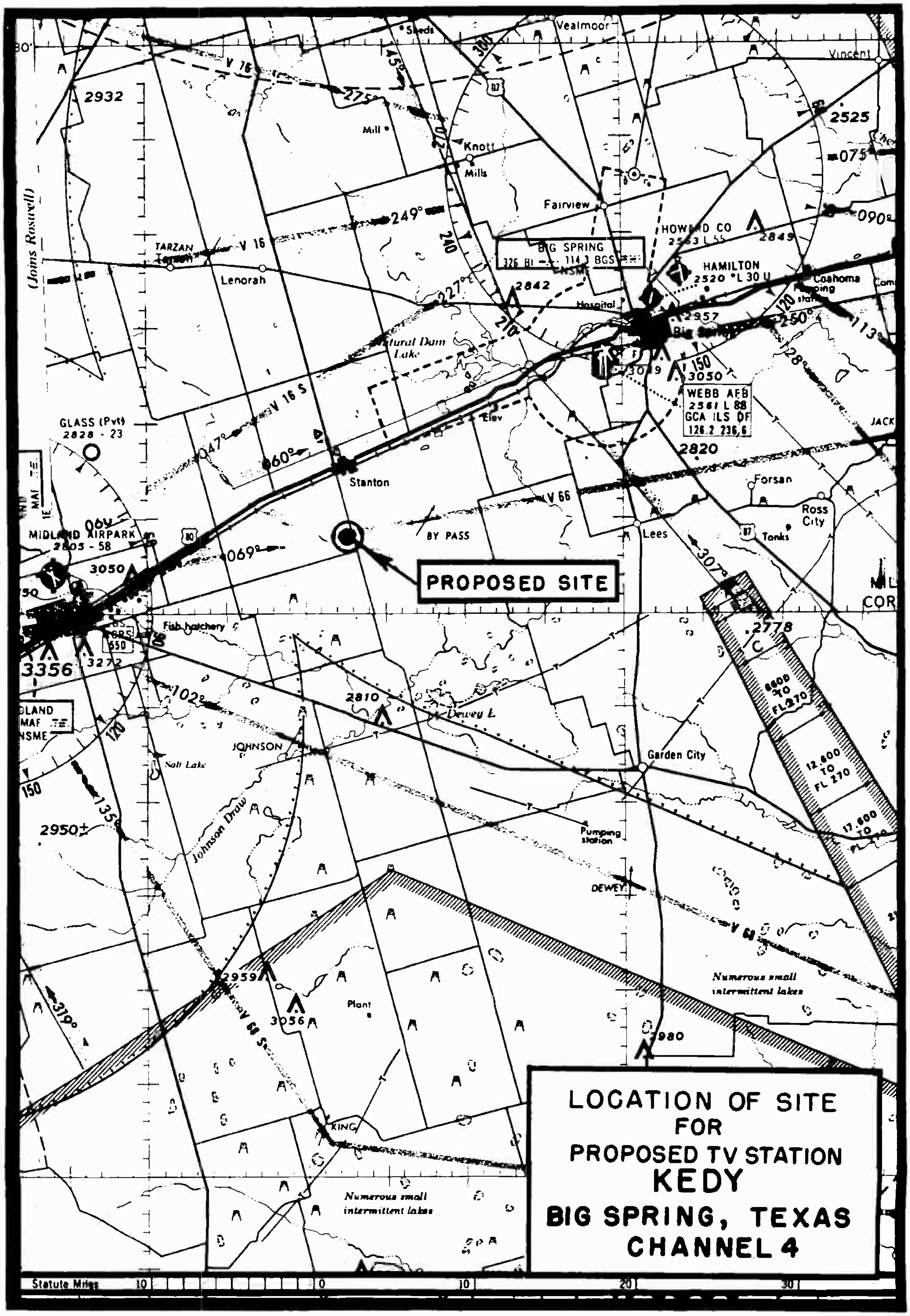
APRIL 1962



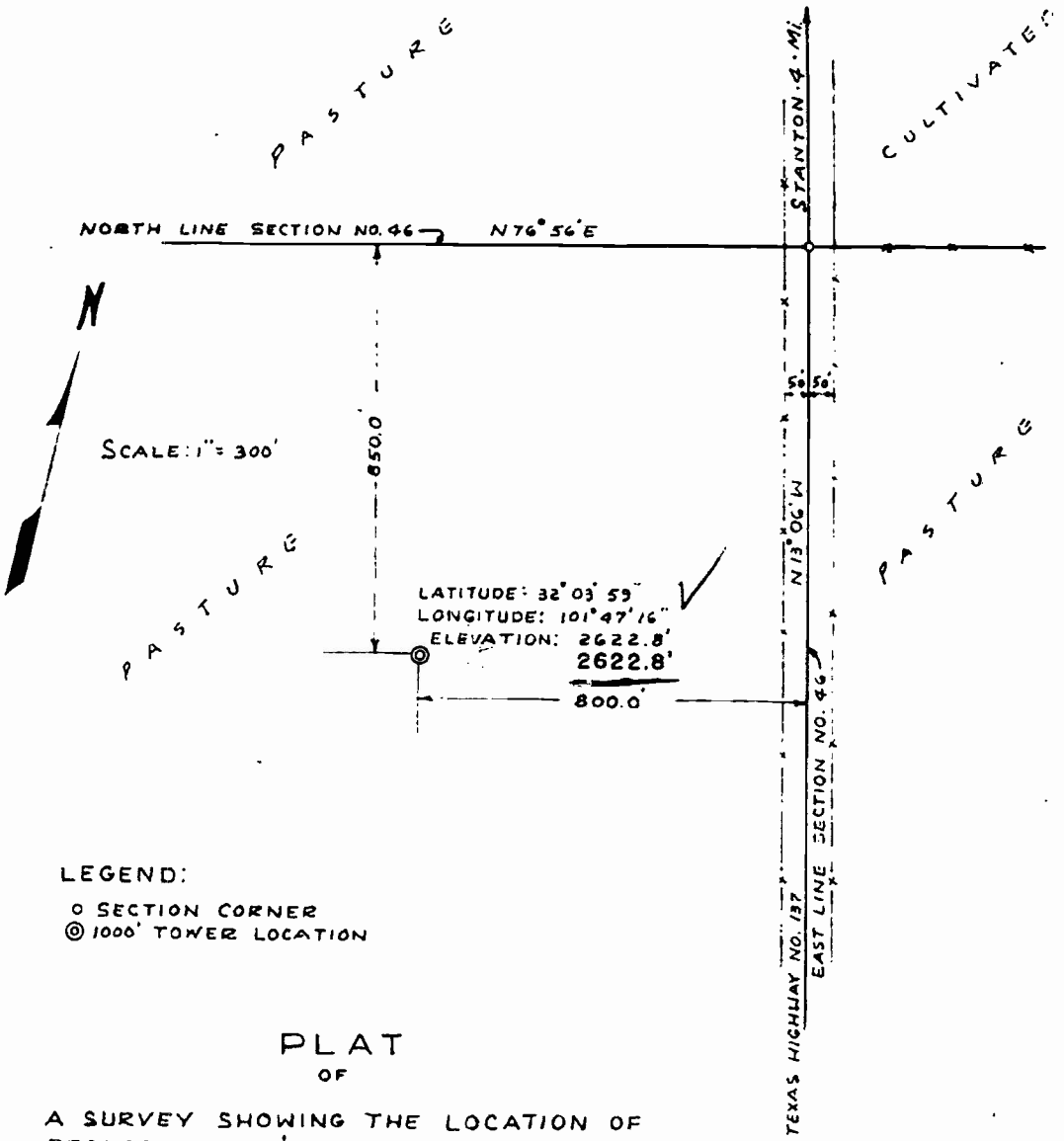
PROPOSED TV STATION, KEDY, BIG SPRING, TEXAS



VERTICAL ANTENNA SKETCH
FOR
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS
CHANNEL 4



LOCATION OF SITE
FOR
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS
CHANNEL 4



LEGEND:

o SECTION CORNER
◎ 1000' TOWER LOCATION

PLAT
OF

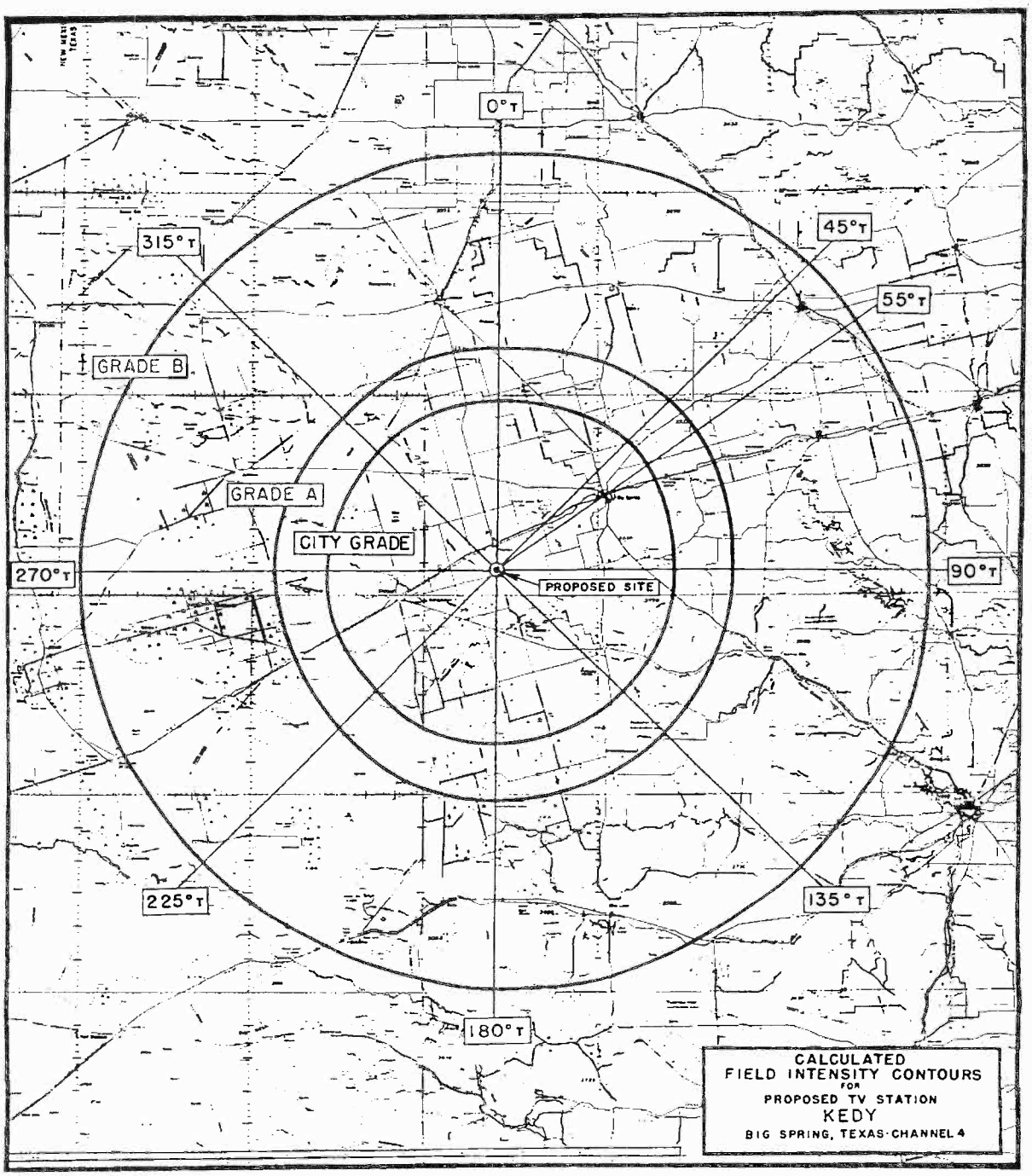
A SURVEY SHOWING THE LOCATION OF PROPOSED 1000' T.V. TOWER, IN THE N.E. ¼ OF SECTION 46, BLOCK 36, TWP. 1- SOUTH, T&P. R R. CO. SURVEY, MIDLAND COUNTY, TEXAS.

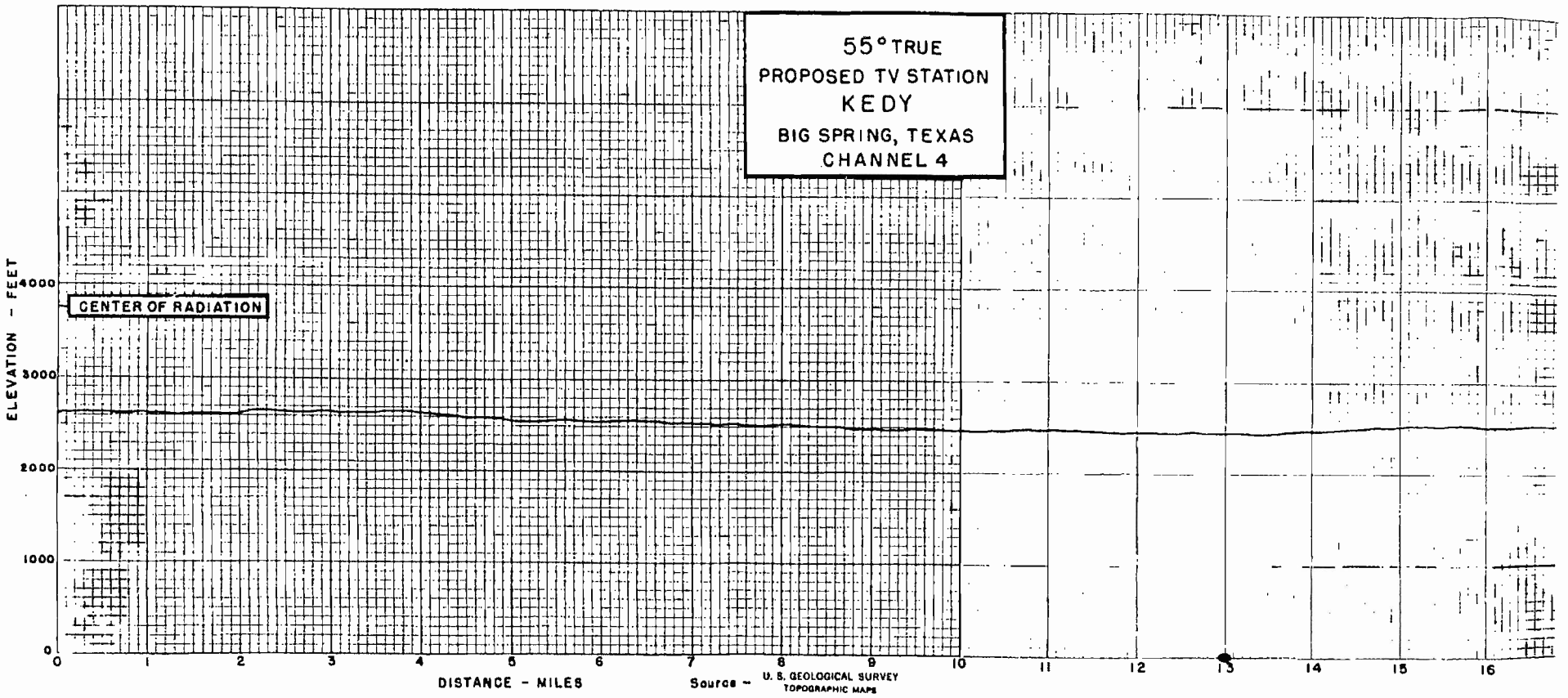
BIG SPRING, TEXAS
APRIL 11, 1962
CERTIFICATE:

I, R. S. McCULLAH, A REGISTERED PUBLIC SURVEYOR OF TEXAS, DO HEREBY CERTIFY THAT THE ABOVE DESCRIBED SURVEY WAS MADE BY ME ON THE GROUND, AND IS TRUE AND CORRECT.

R. S. McCullah
REGISTERED PUBLIC SURVEYOR NO. 796

R. S. McCULLAH
796


0°T
45°T
55°T
90°T
135°T
180°T
225°T
270°T
315°T
GRADE B
GRADE A
CITY GRADE
PROPOSED SITE
CALCULATED
FIELD INTENSITY CONTOURS
FOR
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS-CHANNEL 4


55° TRUE
PROPOSED TV STATION
KEDY
BIG SPRING, TEXAS
CHANNEL 4
CENTER OF RADIATION
ELEVATION - FEET
4000
3000
2000
1000
0
0
1
2
3
4
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6
7
8
9
10
11
12
13
14
15
16
DISTANCE - MILES
Source -- U. S. GEOLOGICAL SURVEY
TOPOGRAPHIC MAPS