

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of BORGER BROADCASTING, INC., permittee of KEYU-DT, Channel 31 in Borger, Texas, in support of its application for modification of Construction Permit BMPCDT-20040107ABA to specify operation at a new site.

Exhibit B provides directional antenna pattern data, and proposed operating parameters are tabulated in Exhibit C. Exhibit D is a map upon which the predicted service contours are plotted. As shown, the city of license is completely contained within the proposed 48 dBu service contour. Exhibit E is an interference study, and a power density study follows as Exhibit F.

It is important to note that the coverage of the proposed facility does not exceed the coverage of the largest authorized DTV facility in the Amarillo television market. Below is a comparison to an other DTV facility in the market that has a coverage area larger than that proposed herein:

<u>Call Sign</u>	<u>Power (kw)</u>	<u>HAAT (meters)</u>	<u>41 dBu Coverage Area (sq. km.)</u>
KAMR-DT	1,000 kw	403	35,774
KEYU-DT	700 kw	305	24,375

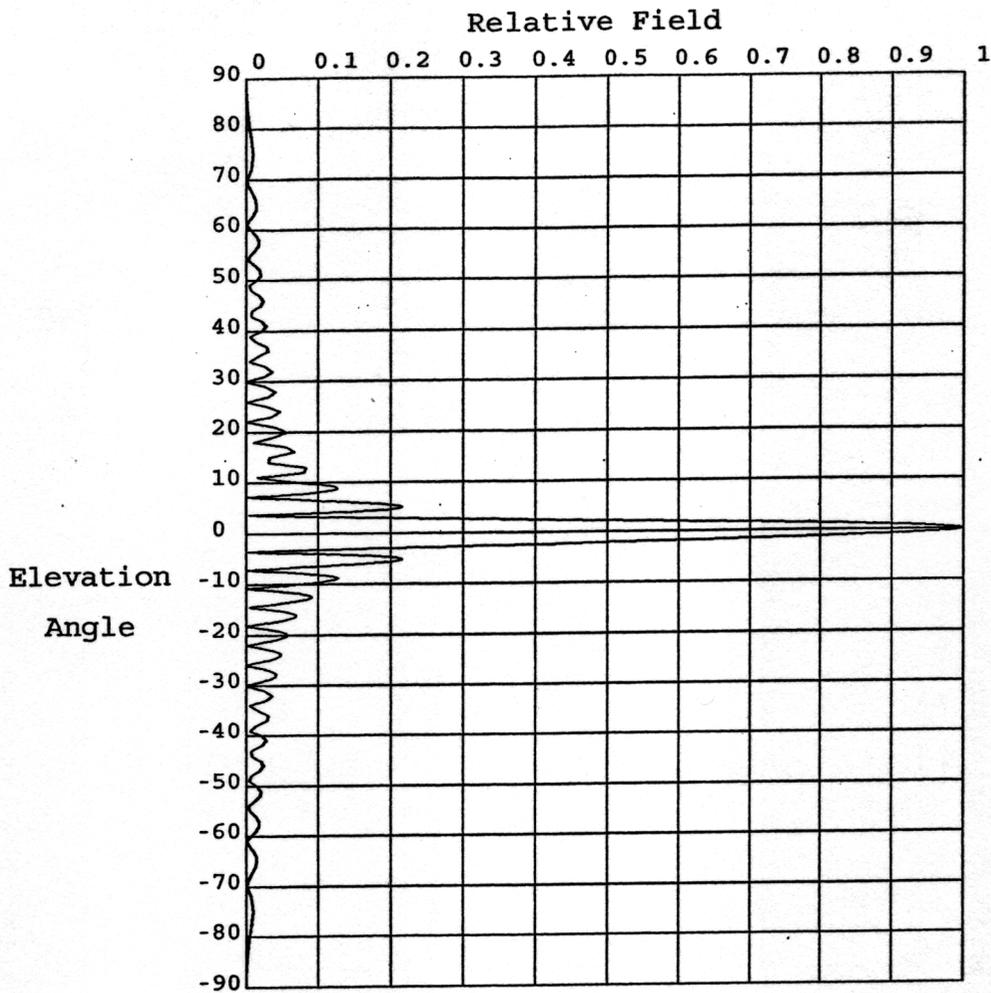
Since no change in the overall height or location of the existing tower is proposed herein, the FAA has not been notified of this application. In addition, the FCC issued Antenna Structure Registration Number 1048587 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached Engineering Report, which was prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.



JEFFREY S. FISHER

April 2, 2004



Elevation Pattern

Scale: Linear

Systems With Reliability Inc.

Units: Field, Relative

CLIENT: NIA Broadcasting	Date: 11/6/03
ANTENNA TYPE: SWDDP8-8-8-0/UHF	
FREQUENCY: UHF	
PATTERN POL.: Horizontal	
DIRECTIVITY(Peak) 19.677/12.94 dBd	Beam Tilt (Deg.) : 0
DIRECTIVITY(Horiz) 19.677/12.94 dBd	Null Fill(s) (%) 0, 0, 0

EXHIBIT B-1

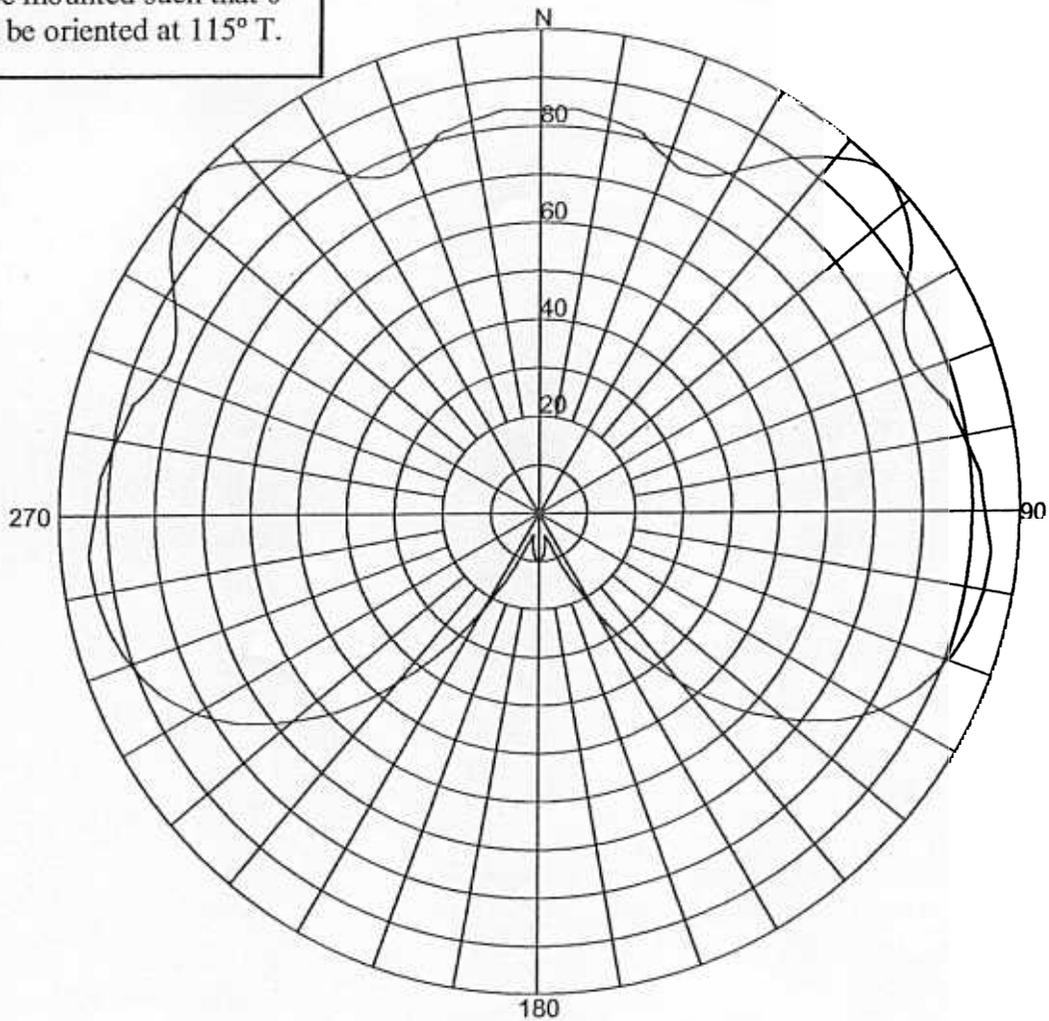
ANTENNA ELEVATION PATTERN

PROPOSED KEYU-DT
CHANNEL 31 - AMARILLO, TEXAS
[MODIFICATION OF BMPCDT-20040107ABA]

SMITH AND FISHER

Note:

Antenna will be mounted such that 0° on the graph will be oriented at 115° T.



Azimuth Pattern

Scale: Linear

Unit: Relative Field

Systems With Reliability Inc.

Date: 11/6/2003

CLIENT: *NIA Broadcasting*

ANTENNA TYPE: SWDDP8-8-8-0/UHF

FREQUENCY: UHF

PATTERN POL.: Horizontal

AZ. DIRECTIVITY: 1.7183 / 2.3511dB

CIRCULARITY(+/-dB):

PATTERN RMS: 0.763

EXHIBIT B-2

ANTENNA AZIMUTH PATTERN

**PROPOSED KEYU-DT
CHANNEL 31 - AMARILLO, TEXAS
[MODIFICATION OF BMPCDT-20040107ABA]**

SMITH AND FISHER

ANTENNA AZIMUTH PATTERN DATA

PROPOSED KEYU-DT
CHANNEL 31 – AMARILLO, TEXAS
[MODIFICATION OF BMPCDT-20040107ABA]

<u>Azimuth</u> <u>(° T)</u>	<u>Relative</u> <u>Field</u>	<u>ERP</u> <u>(dbk)</u>	<u>Azimuth</u> <u>(° T)</u>	<u>Relative</u> <u>Field</u>	<u>ERP</u> <u>(dbk)</u>
0	0.87	27.3	180	0.84	27.0
10	0.93	27.9	190	0.88	27.4
20	0.94	28.0	200	0.92	27.8
30	0.92	27.8	210	0.94	28.0
40	0.88	27.4	220	0.93	27.9
50	0.84	27.0	230	0.87	27.3
60	0.94	28.0	240	0.76	26.1
70	1.0	28.5	250	0.57	23.6
80	0.89	27.5	260	0.35	19.4
90	0.77	26.2	270	0.14	11.4
100	0.81	26.7	280	0.04	0.5
110	0.84	27.0	290	0.09	7.6
120	0.84	27.0	300	0.09	7.6
130	0.81	26.7	310	0.04	0.5
140	0.77	26.2	320	0.14	11.4
150	0.89	27.5	330	0.35	19.4
160	1.0	28.5	340	0.57	23.6
170	0.94	28.0	350	0.76	26.1

PROPOSED OPERATING PARAMETERS

PROPOSED KEYU-DT
CHANNEL 31 – AMARILLO, TEXAS
[MODIFICATION OF BMPCDT-20040107ABA]

Transmitter Power Output:	29.2 kw
Combiner Loss	3.2 kw
Input to Transmission Line	26.0 kw
Transmission Line Efficiency:	79.6%
Antenna Power Gain – Toward Horizon:	33.8
Antenna Power Gain – Main Lobe:	33.8
Effective Radiated Power – Toward Horizon:	700 kw
Effective Radiated Power – Main Lobe:	700 kw
Transmitter Make and Model:	Type-accepted
Rated Output	30 kw
Transmission Line Make and Model:	Andrew MACX775
Size and Type:	7-3/16" rigid line
Length:	1,080 feet
Antenna Make and Model:	SWR SWDDP8-8-8-0/UHF
Orientation	115° T degrees true
Beam Tilt	0.5 degrees
Effective Height Above Ground:	294.1 meters
Effective Height Above Mean Sea Level:	1,340.4 meters