Pathfinder Resources, L.L.C.

James D. Franklin
Registered Professional Land Surveyor

Danny R. Franklin
Land Surveyor

Sharon L. Franklin
Oil & Gas Asset Management

ALL TYPES OF LAND SURVEYING
RIGHT-OF-WAY TITLE & ACQUISITION
PIPELINE & CABLE LOCATING

CERTIFICATE OF TOWER LOCATION

I, James D. Franklin, Licensed Professional Land Surveyor No. 189 State of Oklahoma, hereby certify that this Tower Location Certificate was prepared for Sister Sherry Lynn Foundation Inc. for the purposes of accurately locating a new tower structure for radio station KFXU, Chickasha, Oklahoma.

The accurate location for the KFXU tower is:

North Latitude: 34°54'33"

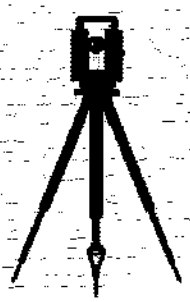
West Longitude: 97°57'29"

The Shively Antenna orientation is 70° East in accordance with the specifications.

Latitude and Longitude were achieved with a GPS (THALES) meeting 1C specifications of .04 feet Horizonal and .04 feet Vertical

James D. Franklin

Licensed Professional Land Surveyor No. 189
State of Oklahoma



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- An Employee-Owned Company -

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S.O. 25809

Report of Test 6810-3R-DA

for

SISTER SHERRY LYNN FOUNDATION INC.

KFXU 90.5 MHz Chickasha, OK

OBJECTIVE:

The objective of this test was to demonstrate the directional characteristics of a 6810-3R-DA to meet the needs of KFXU and to comply with the requirements of the FCC construction permit, file number BMPED-20070601ASR.

RESULTS:

The measured azimuth pattern for the 6810-3R-DA is shown in Figure 1. Figure 1A shows the Tabulation of the Horizontal Polarization. Figure 1B shows the Tabulation of the Vertical Polarization. Figure 1C shows the Tabulation of the FCC Composite Pattern. The calculated elevation pattern of the antenna is shown in Figure 3. Construction permit file number BMPED-20070601ASR indicates that the Horizontal radiation component shall not exceed 10.0 kW at any azimuth and is restricted to the following values at the azimuths specified:

240 Degrees T: 0.36 kW

From Figure 1, the maximum radiation of the Horizontal component occurs at 009 Degrees T to 116 Degrees T. At the restricted azimuth of 240 Degrees T the Horizontal component is 15.39 dB down from the maximum of 10.0 kW, or 0.29 kW.

The R.M.S. of the Horizontal component is 0.758. The total Horizontal power gain is 2.763. The R.M.S. of the Vertical component is 0.740. The total Vertical power gain is 2.654. See Figure 4 for calculations. The R.M.S. of the FCC composite pattern is 0.788. The R.M.S. of the measured composite pattern is 0.761. Eighty-five percent (85%) of the original authorized FCC composite pattern is 0.670. Therefore this pattern complies with the FCC requirement of 73.316(c)(2)(ix)(A).

METHOD OF DIRECTIONALIZATION:

One bay of the 6810-3R-DA was mounted on a tower of precise scale to the Bell tower at the KFXU site. The spacing of the antenna to the tower was varied to achieve the vertical pattern shown in Figure 1. A horizontal parasitic element was placed directly under the bay. The position of this horizontal parasitic element was changed until the horizontal pattern shown in Figure 1 was achieved. See Figure 2 for mechanical details.

METHOD OF MEASUREMENT:

As allowed by the construction permit, file number BMPED-20070601ASR, a single level of the 6810-3R-DA was set up on the Howell Laboratories scale model antenna pattern measuring range. A scale of 4.5:1 was used.

SUPERVISION:

Mr. Surette was graduated from Lowell Technological Institute, Lowell, Massachusetts in 1973 with the degree of Bachelor of Science in Electrical Engineering. He has been directly involved with design and development of broadcast antennas, filter systems and RF transmission components since 1974, as an RF Engineer for six years with the original Shively Labs in Raymond, ME and for a short period of time with Dielectric Communications. He is currently an Associate Member of the AFCCE and a Senior Member of IEEE. He has authored a chapter on filters and combining systems for the latest edition of the CRC Electronics Handbook and for the 9th and 10th Editions of the NAB Handbook.

EQUIPMENT:

The scale model pattern range consists of a wooden rotating pedestal equipped with a position indicator. The scale model bay is placed on the top of this pedestal and is used in the transmission mode at approximately 20 feet above ground level. The receiving corner reflector is spaced 50 feet away from the rotating pedestal at the same level above ground as the transmitting model. The transmitting and receiving signals are carried to a control building by means of RG-9/U double shielded coax cable.

The control building is equipped with:

Hewlett Packard Model 8753 Network Analyzer
PC Based Controller
Hewlett Packard 7550A Graphics Plotter

The test equipment is calibrated to ANSI/NCSL Z540-1-1994.

TEST PROCEDURES:

The corner reflector is mounted so that the horizontal and vertical azimuth patterns are measured independently by rotating the corner reflector by 90 degrees. The network analyzer was set to 407.25 MHz. Calibrated pads are used to check the linearity of the measuring system. For example, 6 dB padding yields a scale reading of 50 from an unpadded reading of 100 in voltage. From the recorded patterns, the R.M.S. values are calculated and recorded as shown in Figure 1.

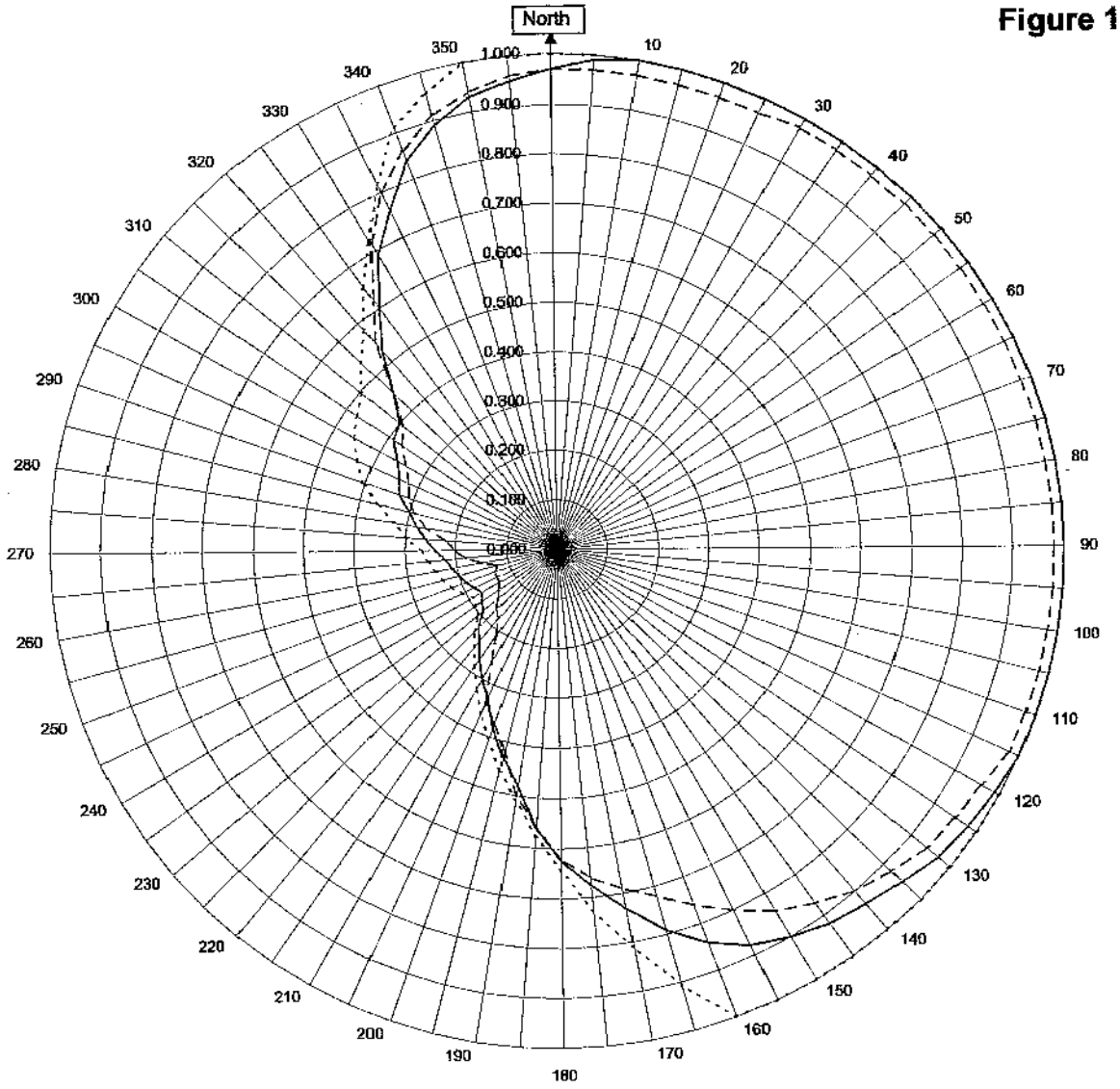
Respectfully submitted by:

Robert A. Surette
Director of Sales Engineering
S/O 25809
January 4, 2008

Shively Labs

Shively Labs, a division of Howell Laboratories, Inc. Bridgton, ME (207)647-3327

Figure 1



KFXU Chickasha, OK

25809

January 4, 2008

Horizontal RMS	0.758
Vertical RMS	0.740
H/V Composite RMS	0.761
FCC Composite RMS	0.788

Frequency	90.5 / 407.25 mHz
Plot	Relative Field
Scale	4.5 : 1
	See Figure 2 for Mechanical Details

Antenna Model	6810-3R-DA Pattern 5
Pattern Type	Directional Azimuth

Figure 1a

Tabulation of Horizontal Azimuth Pattern
KFXU Chickasha, OK

Azimuth	Rel Field	Azimuth	Rel Field
0	0.970	180	0.625
10	1.000	190	0.480
20	1.000	200	0.380
30	1.000	210	0.300
40	1.000	220	0.240
45	1.000	225	0.220
50	1.000	230	0.190
60	1.000	240	0.170
70	1.000	250	0.190
80	1.000	260	0.210
90	1.000	270	0.240
100	1.000	280	0.280
110	1.000	290	0.330
120	0.990	300	0.360
130	0.970	310	0.400
135	0.950	315	0.450
140	0.933	320	0.530
150	0.900	330	0.690
160	0.840	340	0.838
170	0.730	350	0.930

Figure 1b

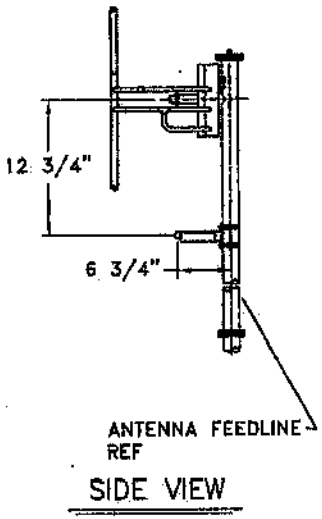
Tabulation of Vertical Azimuth Pattern
KFXU Chickasha, OK

Azimuth	Rel Field	Azimuth	Rel Field
0	0.970	180	0.620
10	0.970	190	0.500
20	0.970	200	0.370
30	0.980	210	0.260
40	0.980	220	0.180
45	0.980	225	0.170
50	0.980	230	0.150
60	0.980	240	0.130
70	0.980	250	0.130
80	0.980	260	0.150
90	0.980	270	0.200
100	0.980	280	0.260
110	0.980	290	0.310
120	0.960	300	0.340
130	0.940	310	0.390
135	0.920	315	0.450
140	0.900	320	0.550
150	0.840	330	0.716
160	0.760	340	0.860
170	0.690	350	0.940

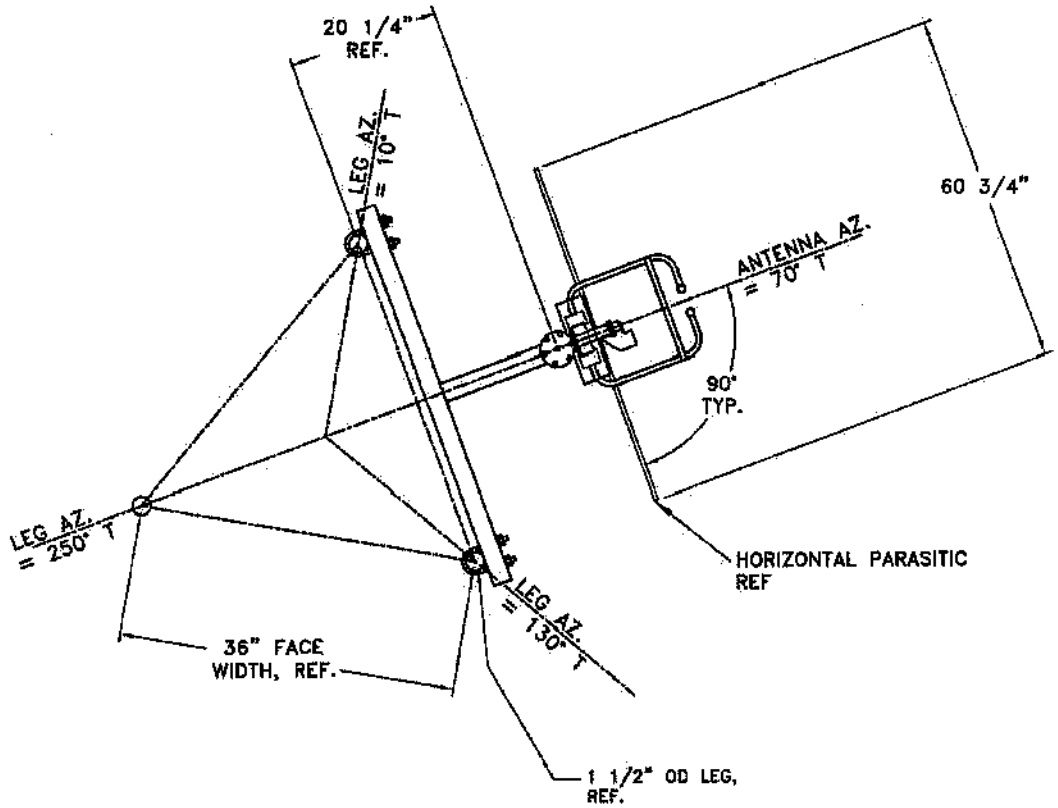
Figure 1c

Tabulation of FCC Directional Composite
KFXU Chickasha, OK

Azimuth	Rel Field	Azimuth	Rel Field
0	1.000	180	0.644
10	1.000	190	0.510
20	1.000	200	0.405
30	1.000	210	0.322
40	1.000	220	0.255
50	1.000	230	0.203
60	1.000	240	0.190
70	1.000	250	0.221
80	1.000	260	0.243
90	1.000	270	0.268
100	1.000	280	0.327
110	1.000	290	0.404
120	1.000	300	0.457
130	1.000	310	0.495
140	1.000	320	0.582
150	1.000	330	0.724
160	1.000	340	0.912
170	0.811	350	1.000



SIDE VIEW



TOP VIEW

TOWER MAKE: BELL TOWER

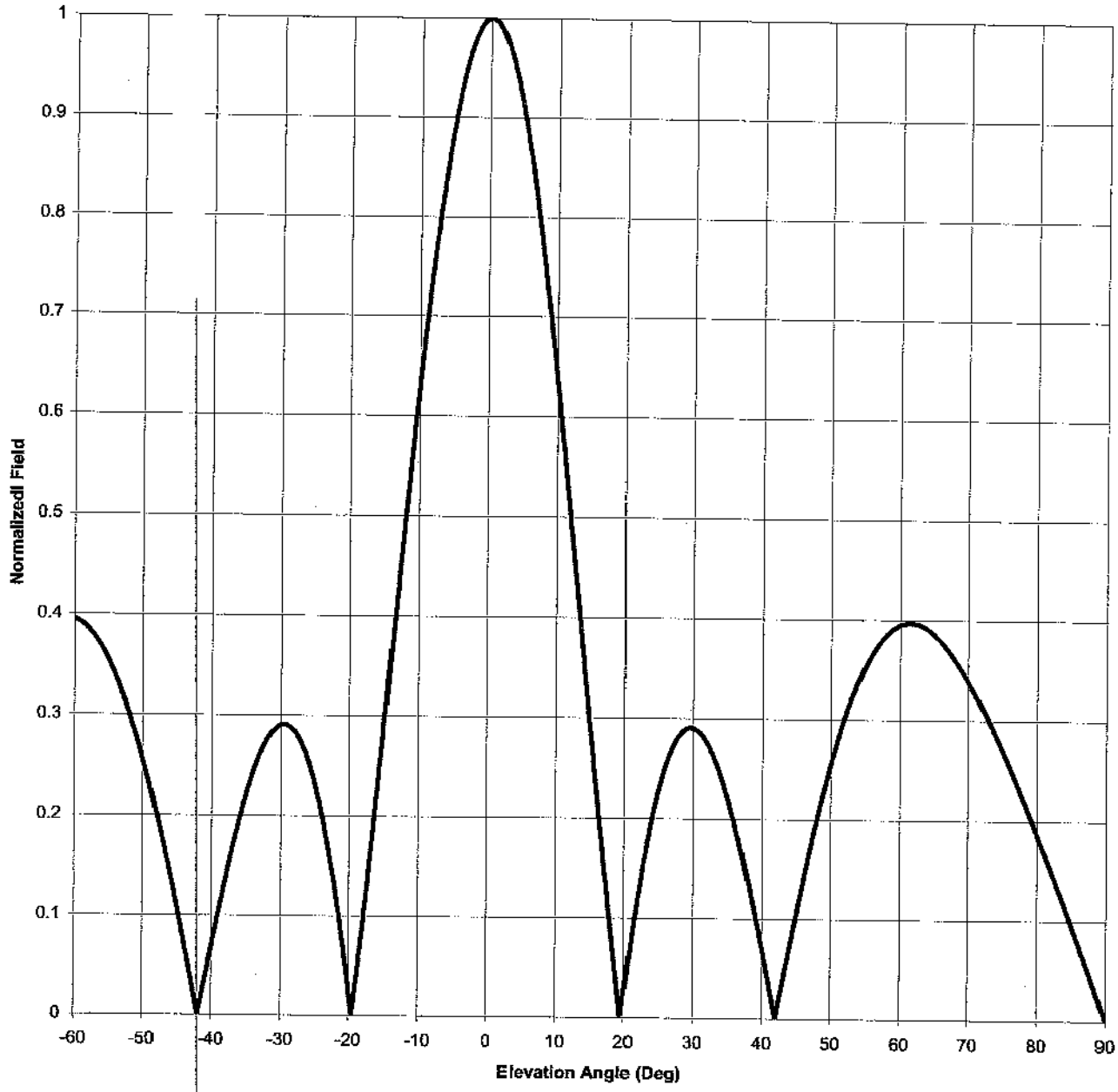
ANTENNA HEADING: 70° TRUE NORTH

SHIVELY LABS A DIVISION OF HOWELL LABORATORIES INC.,BRIDGTON, MAINE			
SHOP ORDER: 25809	FREQUENCY: 90.5 MHz.	SCALE: N.T.S.	DRAWN BY: ASP APPROVED BY:
MODEL: 6810-3R-DIRECTIONAL ANTENNA			
DATE: 7/27/07	FIGURE 2		

Antenna Mfg.: Shively Labs
Antenna Type: 6810-3R-DA
Station: KFXU
Frequency: 90.5
Channel #: 213
Figure: 3

Date: 1/4/2008

Beam Tilt	0	
Gain (Max)	2.763	4.414 dB
Gain (Horizon)	2.763	4.414 dB



Antenna Mfg.: Shively Labs
Antenna Type: 6810-3R-DA
Station: KFXU
Frequency: 90.5
Channel #: 213
Figure: 3

Date: 1/4/2008

Beam Tilt	**0**	
Gain (Max)	**2.763**	**4.414 dB**
Gain (Horizon)	**2.763**	**4.414 dB**

Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field	Angle of Depression (Deg)	Relative Field
-90	0.000	-44	0.071	0	1.000	46	0.138
-89	0.021	-43	0.036	1	0.996	47	0.170
-88	0.040	-42	0.001	2	0.984	48	0.200
-87	0.059	-41	0.034	3	0.963	49	0.229
-86	0.078	-40	0.069	4	0.935	50	0.255
-85	0.096	-39	0.103	5	0.900	51	0.280
-84	0.114	-38	0.136	6	0.858	52	0.302
-83	0.132	-37	0.166	7	0.809	53	0.322
-82	0.150	-36	0.195	8	0.755	54	0.339
-81	0.168	-35	0.220	9	0.696	55	0.354
-80	0.185	-34	0.243	10	0.634	56	0.367
-79	0.203	-33	0.261	11	0.568	57	0.377
-78	0.220	-32	0.276	12	0.500	58	0.385
-77	0.236	-31	0.285	13	0.430	59	0.391
-76	0.252	-30	0.290	14	0.360	60	0.395
-75	0.268	-29	0.290	15	0.290	61	0.397
-74	0.284	-28	0.284	16	0.222	62	0.397
-73	0.298	-27	0.272	17	0.155	63	0.395
-72	0.312	-26	0.254	18	0.091	64	0.391
-71	0.326	-25	0.231	19	0.031	65	0.385
-70	0.338	-24	0.201	20	0.026	66	0.378
-69	0.350	-23	0.165	21	0.077	67	0.370
-68	0.361	-22	0.124	22	0.124	68	0.361
-67	0.370	-21	0.077	23	0.165	69	0.350
-66	0.378	-20	0.026	24	0.201	70	0.338
-65	0.385	-19	0.031	25	0.231	71	0.326
-64	0.391	-18	0.091	26	0.254	72	0.312
-63	0.395	-17	0.155	27	0.272	73	0.298
-62	0.397	-16	0.222	28	0.284	74	0.284
-61	0.397	-15	0.290	29	0.290	75	0.268
-60	0.395	-14	0.360	30	0.290	76	0.252
-59	0.391	-13	0.430	31	0.285	77	0.236
-58	0.385	-12	0.500	32	0.276	78	0.220
-57	0.377	-11	0.568	33	0.261	79	0.203
-56	0.367	-10	0.634	34	0.243	80	0.185
-55	0.354	-9	0.696	35	0.220	81	0.168
-54	0.339	-8	0.755	36	0.195	82	0.150
-53	0.322	-7	0.809	37	0.166	83	0.132
-52	0.302	-6	0.858	38	0.136	84	0.114
-51	0.280	-5	0.900	39	0.103	85	0.096
-50	0.255	-4	0.935	40	0.069	86	0.078
-49	0.229	-3	0.963	41	0.034	87	0.059
-48	0.200	-2	0.984	42	0.001	88	0.040
-47	0.170	-1	0.996	43	0.036	89	0.021
-46	0.138	0	1.000	44	0.071	90	0.000
-45	0.105			45	0.105		

S.O. 25809

Figure 4

VALIDATION OF TOTAL POWER GAIN CALCULATION

KFXU 90.5 MHz CHICKASHA, OK

MODEL 6810-3R-DA

Elevation Gain of Antenna 1.55

Horizontal RMS value divided by the Vertical RMS value equals the Horiz. - Vert. Ratio

H RMS 0.758 V RMS 0.74 H/V Ratio 1.024

Elevation Gain of Horizontal Component 1.588

Elevation Gain of Vertical Component 1.513

Horizontal Azimuth Gain equals 1/(RMS)SQ. 1.740

Vertical Azimuth Gain equals 1/(RMS/Max Vert)SQ. 1.754
Max. Vertical 0.98

***Total Horizontal Power Gain is the Elevation Gain Times the Azimuth Gain**

Total Horizontal Power Gain = **2.763**

***Total Vertical Power Gain is the Elevation Gain Times the Azimuth Gain**

Total Vertical Power Gain = **2.654**

ERP divided by Horizontal Power Gain equals Antenna Input Power

10 KW ERP Equals 3.619 KW Antenna Input Power

Antenna Input Power times Vertical Power Gain equals Vertical ERP

3.619 KW Times 2.654 KW Equals 9.604 KW ERP

Maximum Value of the Vertical Component squared times the Maximum ERP equals the Vertical ERP

0.98 Equals 9.604 KW Vertical ERP

NOTE: Calculating the ERP of the Vertical Component by two methods validates the total power gain calculations