

**EXHIBIT 12**

**TECHNICAL STATEMENT**

**FM TRANSLATOR STATION  
ABILENE, TEXAS  
K281BP  
FACILITY ID - 153609  
BNPFT - 20130305AAC  
104.1 MHZ / 0.035 KW ERP**

**ARMIDA A. SAILLE**

**17 February 2016**

**EXHIBIT 12**

## APPLICATION TO MOVE TRANSLATOR

This technical statement and attached exhibits have been prepared for Armida A. Saille to support this application to modify the current CP of K281BP.

This application proposes antenna location on a pole mounted on a tall building with coordinates of (NAD27):

32 – 26 – 39 N

99 – 44 – 02 W.

The transmission parameters are:

Antenna overall height AGL is 93 meters

Antenna RCAGL – 92 meters

Support Structure height – 87 meters

ERP – 0.035 kW (H) and (V)

Antenna – non-directional

Transmitter frequency change from ch 281 ( 104.1 MHz) to channel 283 (104.5 MHz)

Primary Station to be rebroadcast – KAGT, Facility ID – 87588

A NICOM BKG 77 – 2 (half-wave spacing) antenna will be mounted on a short pole of 6 meters in height, which is attached to the roof top of a tall building in Abilene, Texas at the coordinates provided in this application. This structure meets the 6.10 meter rule criteria and thus does not require FCC registration.

This station will rebroadcast KAGT ch 213C1 Facility ID 87588 Abilene, Texas. KAGT is NCEFM facility.

### Mexico:

This site is 336 km from the US/Mexico border and is beyond the 320 km coordination zone with Mexico.

### Exhibits:

Exhibit 12 – This narrative, channel study, 60 dbu contour overlap of licensed facility and proposed facility, RFE, a showing of no population inside the F(50,10) interfering contour of the translator. Aerial photo of site and photo of building included in this exhibit.

Exhibit 13 – Overlap Requirements

### EXHIBIT 13 OVERLAP REQUIREMENTS

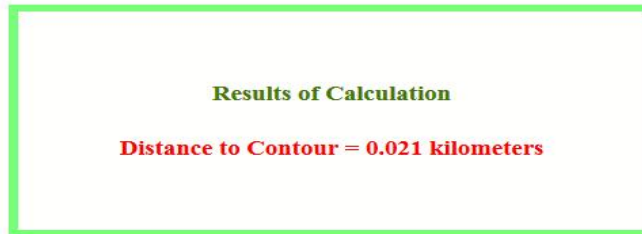
Callsign	State	City	Freq	Channel	ERP_w	Class	Status	Distance_km	Sep	Clr
<b>KEAN-FM</b>	<b>TX</b>	<b>ABILENE</b>	<b>105.1</b>	<b>286</b>	<b>100000</b>	<b>C1</b>	<b>LIC</b>	<b>22.84</b>	<b>0</b>	<b>-26.82 dB</b>
NEW	TX	MORAN	104.1	281	6000	A	APP	66.14	0	19.70 dB
NEW	TX	SANTA ANNA	104.3	282	1200	A	CP	85.97	0	24.64 dB
KPTJ	TX	GRAPE CREEK	104.5	283	25000	C3	LIC	136.76	0	25.92 dB
K283AJ	TX	SNYDER	104.5	283	10	D	LIC	117.93	0	29.07 dB
KYYI	TX	BURKBURNETT	104.7	284	92000	C1	LIC	199.5	0	33.86 dB
KQMJ	TX	BLANKET	104.7	284	5100	A	LIC	113	0	33.86 dB
KTXC	TX	LAMESA	104.7	284	100000	C1	LIC	208.96	0	35.39 dB
KLDE	TX	ELDORADO	104.9	285	50000	C2	APP	179.95	0	37.63 dB
NEW	TX	COMANCHE	103.9	280	3600	A	CP	113.55	0	38.73 dB
KKDA-FM	TX	DALLAS	104.5	283	99000	C	LIC	260.45	0	38.36 dB

Proposal clears all other licensed stations, applications, CPs and allotments.

This exhibit demonstrates that this application to modify the existing construction permit does comply with 74.1204, with the exception to KEAN, facility ID 54904. The 60 db contour of KEAN totally encompasses the proposed site of the translator. In that regard the applicant is requesting a wavier for third adjacent channel as there is no population inside the translator's F(50,10) interfering 126 db contour. The interfering contour doesn't reach ground level nor does it penetrate beyond 1 meter into the roof structure of the building.

KEAN ch 286, third adjacent contours at translator's antenna site:

FCC File number	Status	F(50,50) value	F(50,10) value
BLH – 20010730ABR –	LICENSED –	86.25 db –	Translator interfering contour – 126 db.



[Back to Numeric Entries](#)

[Back to Initial Selections](#)

#### Input Data from Screens 1 and 2

ERP = 0.035 kW  
 HAAT = 83.0 meters  
 Field Strength = 126.0 dBu

**Distances are in meters and kilometers**  
**Power is in kW (kilowatts)**  
**Field Strength is in dBu**  
**FM and NTSC TV Channels 2 through 6**  
**F(50,10) for interfering contours selected**  
**Find Distance, given a Field Strength**

Angle of Depression	Antenna REL (mv)	ERP watts	Distance to interfering Contour from antenna (m)	Horizl Distance of F(50,10) from tower (m)	Vert Distance	CLEARANCE
0	1	35.000	21.0	21.0	0.0	5.5
5	0.998	34.860	21.0	20.9	1.8	3.7
10	0.952	31.721	20.0	19.7	3.5	2.0
15	0.881	27.166	18.5	17.9	4.8	0.7
20	0.791	21.899	16.6	15.6	5.7	-0.2
25	0.686	16.471	14.4	13.1	6.1	-0.6
30	0.577	11.653	12.1	10.5	6.1	-0.6
35	0.463	7.503	9.7	8.0	5.6	-0.1
40	0.354	4.386	7.4	5.7	4.8	0.7
45	0.256	2.294	5.4	3.8	3.8	1.7
50	0.174	1.060	3.7	2.3	2.8	2.7
55	0.11	0.424	2.3	1.3	1.9	3.6
60	0.061	0.130	1.3	0.6	1.1	4.4
65	0.028	0.027	0.6	0.2	0.5	5.0
70	0.007	0.002	0.1	0.1	0.1	5.4
75	0.004	0.001	0.1	0.0	0.1	5.4
80	0.008	0.002	0.2	0.0	0.2	5.3
85	0.008	0.002	0.2	0.0	0.2	5.3
90	0.009	0.003	0.2	0.0	0.2	5.3

The F(50,10) contour distance is 21 meters at 0 degrees and will perpetrate 0.6 meter into the roof of the building. There is no population inside this contour.

Exhibit 17 – Environmental Protection Act.

At the RCAGL of 6 meters, less 2 meters, specified in this application, the RFE is calculated using the formula

$$S = \frac{33.4 (F^2) ERP}{R^2}$$

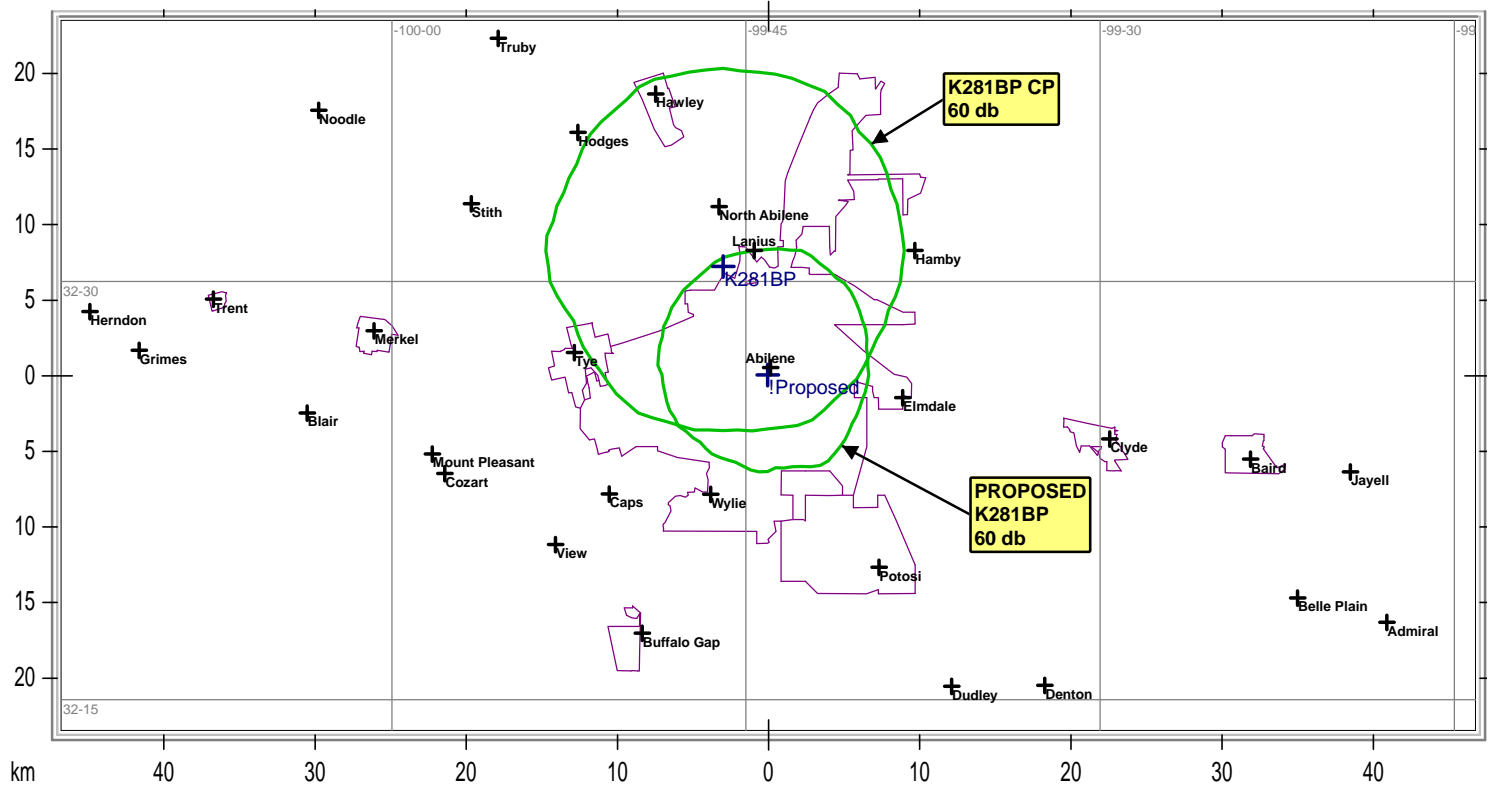
R = 4 meters

ERP (H & V) = 0.070 KW

F = 0.35

S = 17.9  $\mu\text{W}/\text{cm}^2$  which is 8.95% of the 200  $\mu\text{W}/\text{cm}^2$  maximum allowable for uncontrolled public access. While this is more than 5%, there will be no other broadcast radiators on this pole. Antenna used will be a non-directional NICOM BKG77 -2 or similar.

Applicant will reduce power or cease operations whenever there are personnel near the antenna pole. Appropriate signage will be posted.

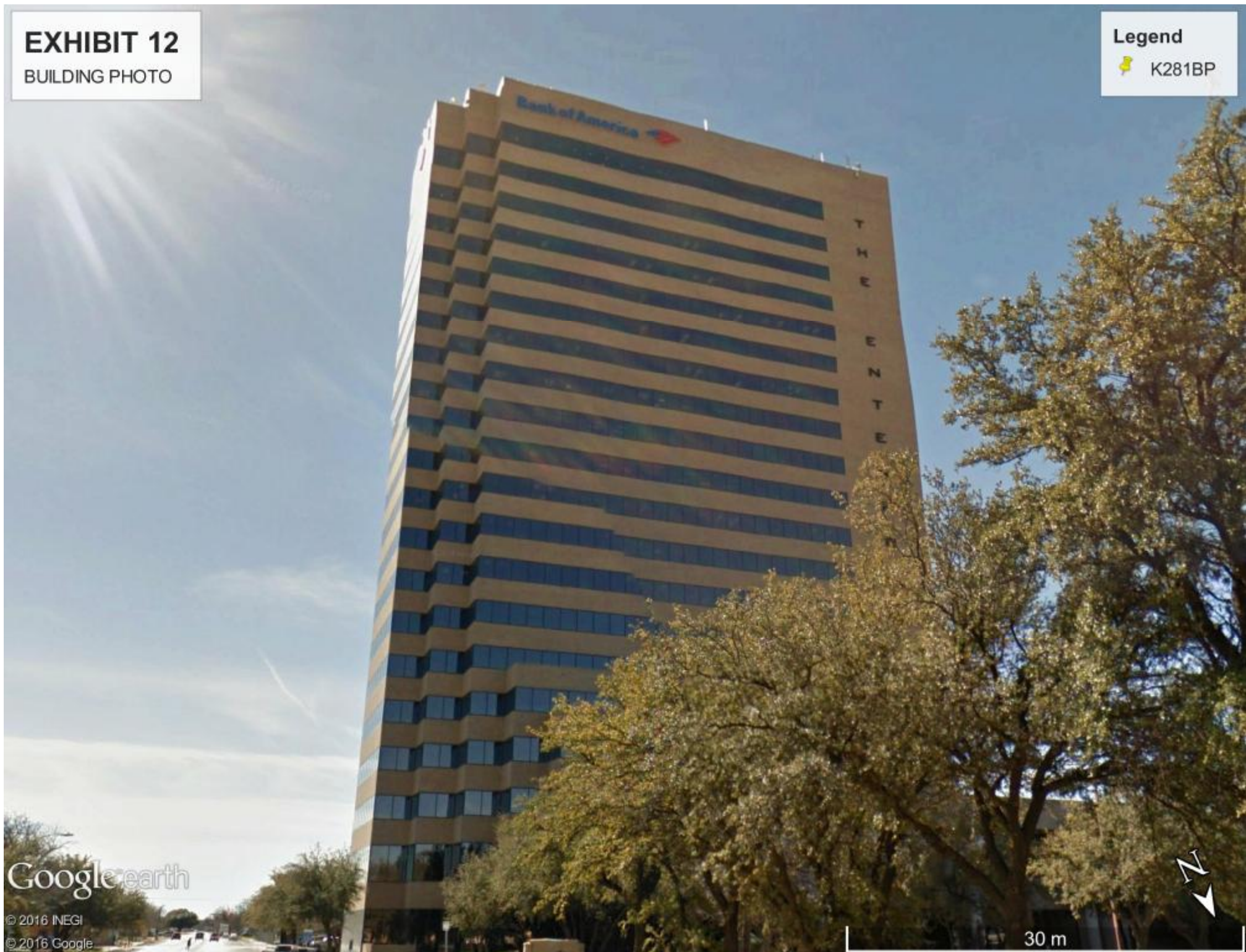


## EXHIBIT 12

BUILDING PHOTO

Legend

 K281BP






# EXHIBIT 12

AERIAL PHOTO

Legend

 K281BP

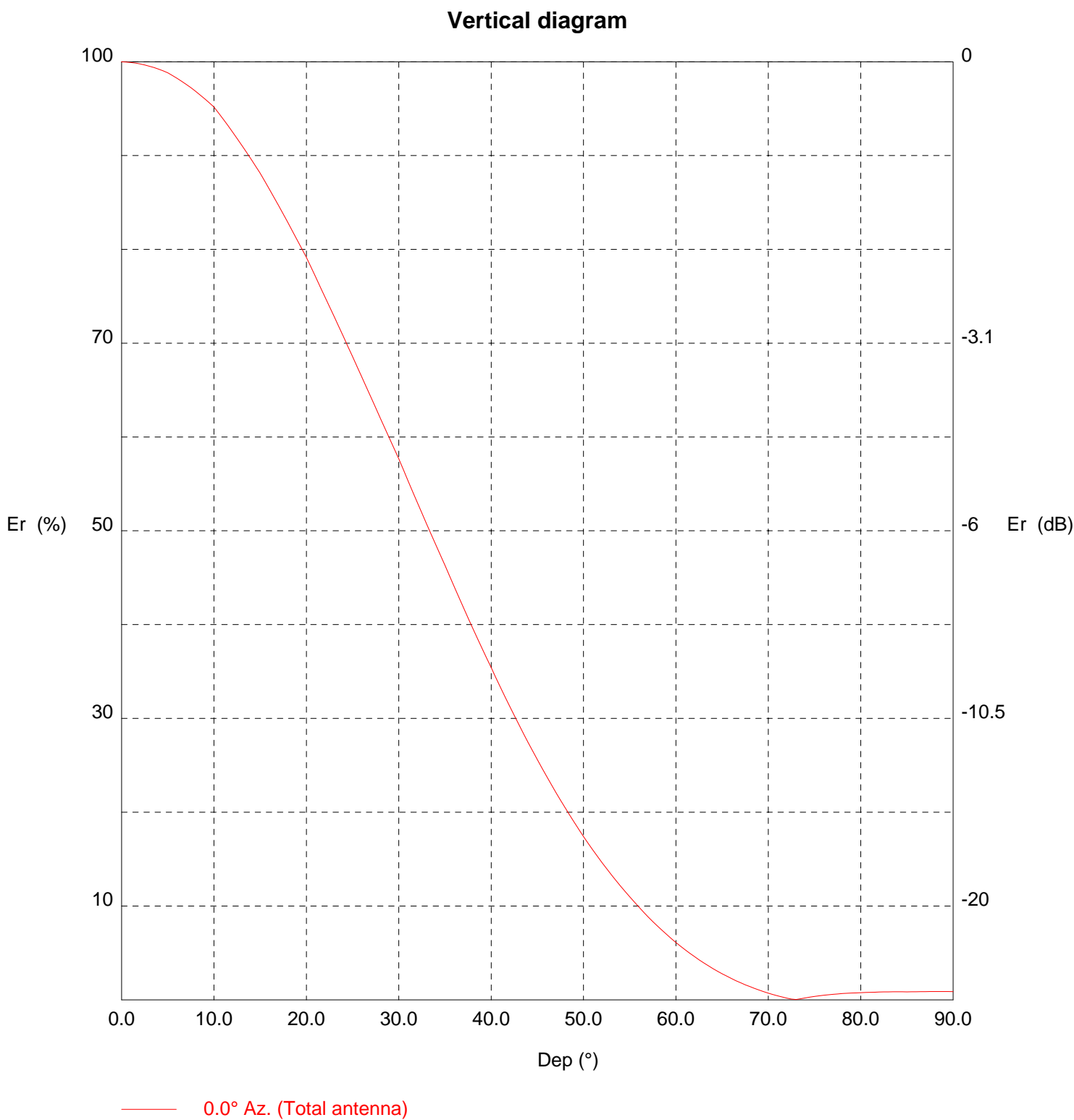
K281BP

Google earth

© 2015 Google



40 m





TX station: BKG77/2 GENERIC

Site name: 1/2 WAVE SEPARATION

Frequency: 98.10 MHz

## Vertical diagram at an azimuth of 0° degrees

Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)	Dep (°)	Er (%)	ERP (W)
0.0	100.0	914.2	30.0	57.7	304.2	60.0	6.1	3.4
0.5	100.0	913.7	30.5	56.5	292.0	60.5	5.7	3.0
1.0	99.9	912.9	31.0	55.3	280.1	61.0	5.3	2.6
1.5	99.9	911.6	31.5	54.2	268.5	61.5	5.0	2.3
2.0	99.8	910.0	32.0	53.0	257.2	62.0	4.6	1.9
2.5	99.7	908.1	32.5	51.9	246.3	62.5	4.3	1.7
3.0	99.5	905.7	33.0	50.8	235.6	63.0	3.9	1.4
3.5	99.4	903.0	33.5	49.6	225.3	63.5	3.6	1.2
4.0	99.2	899.9	34.0	48.5	215.3	64.0	3.3	1.0
4.5	99.0	896.5	34.5	47.4	205.5	64.5	3.1	0.9
5.0	98.8	892.7	35.0	46.3	196.1	65.0	2.8	0.7
5.5	98.5	887.7	35.5	45.2	186.5	65.5	2.5	0.6
6.0	98.2	882.4	36.0	44.0	177.3	66.0	2.3	0.5
6.5	97.9	876.7	36.5	42.9	168.4	66.5	2.0	0.4
7.0	97.6	870.7	37.0	41.8	159.8	67.0	1.8	0.3
7.5	97.2	864.3	37.5	40.7	151.5	67.5	1.6	0.2
8.0	96.9	857.7	38.0	39.6	143.5	68.0	1.4	0.2
8.5	96.5	850.8	38.5	38.5	135.8	68.5	1.2	0.1
9.0	96.1	843.5	39.0	37.5	128.5	69.0	1.0	0.1
9.5	95.6	836.0	39.5	36.4	121.4	69.5	0.9	0.1
10.0	95.2	828.2	40.0	35.4	114.6	70.0	0.7	0.0
10.5	94.5	817.1	40.5	34.4	107.9	70.5	0.6	0.0
11.0	93.9	805.8	41.0	33.3	101.5	71.0	0.4	0.0
11.5	93.2	794.4	41.5	32.3	95.4	71.5	0.3	0.0
12.0	92.5	782.7	42.0	31.3	89.5	72.0	0.2	0.0
12.5	91.8	770.9	42.5	30.3	84.0	72.5	0.1	0.0
13.0	91.1	759.0	43.0	29.3	78.7	73.0	0.0	0.0
13.5	90.4	746.9	43.5	28.4	73.6	73.5	0.1	0.0
14.0	89.6	734.6	44.0	27.4	68.8	74.0	0.2	0.0
14.5	88.9	722.3	44.5	26.5	64.3	74.5	0.3	0.0
15.0	88.1	709.8	45.0	25.6	59.9	75.0	0.4	0.0
15.5	87.3	696.2	45.5	24.7	55.8	75.5	0.4	0.0
16.0	86.4	682.5	46.0	23.8	51.9	76.0	0.5	0.0
16.5	85.5	668.7	46.5	23.0	48.2	76.5	0.5	0.0
17.0	84.6	655.0	47.0	22.1	44.7	77.0	0.6	0.0
17.5	83.8	641.2	47.5	21.3	41.5	77.5	0.6	0.0
18.0	82.8	627.4	48.0	20.5	38.4	78.0	0.7	0.0
18.5	81.9	613.7	48.5	19.7	35.4	78.5	0.7	0.0
19.0	81.0	599.9	49.0	18.9	32.7	79.0	0.7	0.0
19.5	80.1	586.2	49.5	18.2	30.1	79.5	0.7	0.1
20.0	79.1	572.5	50.0	17.4	27.7	80.0	0.8	0.1
20.5	78.1	557.6	50.5	16.7	25.5	80.5	0.8	0.1
21.0	77.1	542.9	51.0	16.0	23.4	81.0	0.8	0.1
21.5	76.0	528.2	51.5	15.3	21.4	81.5	0.8	0.1
22.0	75.0	513.7	52.0	14.6	19.6	82.0	0.8	0.1
22.5	73.9	499.3	52.5	14.0	17.9	82.5	0.8	0.1
23.0	72.8	485.1	53.0	13.3	16.3	83.0	0.8	0.1
23.5	71.8	471.1	53.5	12.7	14.8	83.5	0.9	0.1
24.0	70.7	457.2	54.0	12.1	13.4	84.0	0.9	0.1
24.5	69.6	443.5	54.5	11.5	12.2	84.5	0.9	0.1
25.0	68.6	429.9	55.0	11.0	11.0	85.0	0.8	0.1
25.5	67.5	416.4	55.5	10.4	9.9	85.5	0.9	0.1
26.0	66.4	403.0	56.0	9.9	8.9	86.0	0.9	0.1
26.5	65.3	389.8	56.5	9.3	8.0	86.5	0.9	0.1
27.0	64.2	376.9	57.0	8.8	7.1	87.0	0.9	0.1
27.5	63.1	364.2	57.5	8.3	6.4	87.5	0.9	0.1
28.0	62.0	351.7	58.0	7.9	5.6	88.0	0.9	0.1
28.5	60.9	339.4	58.5	7.4	5.0	88.5	0.9	0.1
29.0	59.8	327.4	59.0	7.0	4.4	89.0	0.9	0.1
29.5	58.8	315.7	59.5	6.5	3.9	89.5	0.9	0.1