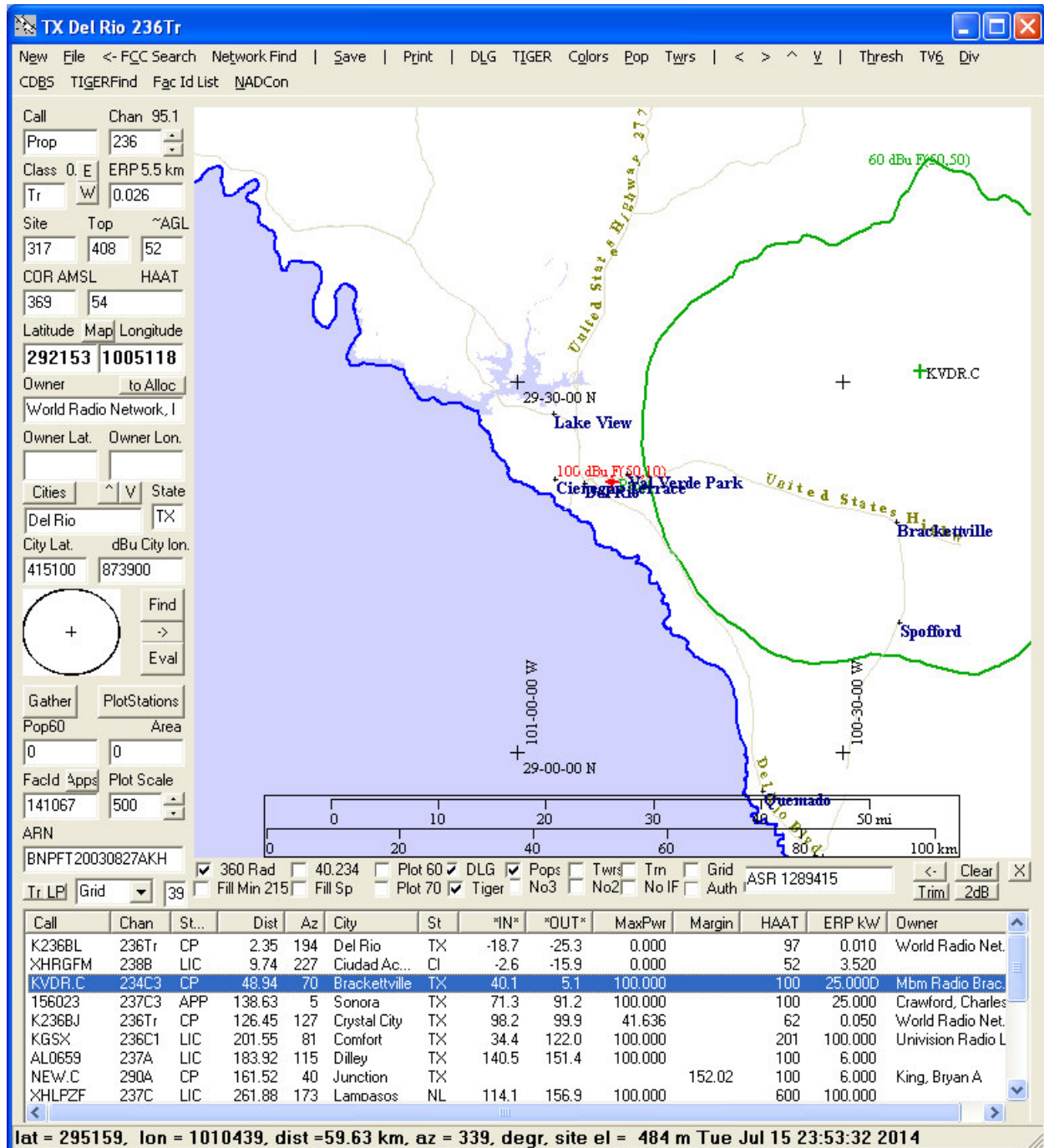


```
#: 1
Dist: 0.02
Az: 167
ASR 1289415
NAD27: 292153 1005118
NAD83: 292154 1005119
Site El: 317.0m Height 91.0m Top AMSL 408.0m
Structure Type: GTOWE
Location: Off Railway Ave extension 2 miles east
of central Del Rio, Del Rio, TX
Dates Construction: Action: 11/17/2013
FAA Number: 2013-ASW-2847-OE
FAA Circular Number: 70/7460-1K Chapter: 3, 4, 5, 12
Owner: World Radio Network, Inc.
Glenn
969 East Thomas Drive
Pharr, TX, 78577
(956) 787-9700
GLAFITTE@LWRN.ORG
```

This map demonstrates the protection of KVDR.C .



In the tabular printout above, only XHRG-FM License and K236BL(this facility) have outgoing contour overlaps from the proposed translator, so no interference to other stations is anticipated. Incoming overlap is not prohibited. This facility need not be protected from itself.

XHRG-FM is second adjacent to the proposed translator, and, according to §74.1204(d),

**"The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to ... lack of population ... ."**

The F(50,50) signal from XHRG-FM (lic) at the proposed site is 70.29 dBu. A 40 dB ratio of undesired to desired signal strength gives an allowable interfering F(50,10) field strength of 110.29 dBu. With 26 Watts ERP and the specified antenna, this spreadsheet below shows that the interfering contour does not reach the ground.

## Exhibit 12

### *Freespace Interference Study based on Vertical Radiation Pattern ERI 100A-2F-HW 2 Bay Half Wave Spaced Antenna*

Depression Angle from Antenna	Antenna Relative Field	ERP Watts	ERP dBk	Distance to Ground from Antenna (m)	Free Space Signal (dBu)	dB Loss for Reflection	Signal Strength at Ground (dBu)	Circular Distance From Tower (m)	Distance to Contour using Free Space (m)	Height of Contour above Ground (m)
90	0.001	0.000	-75.85	52.00	56.75	0	56.75	0.00	0.11	51.89
85	0.002	0.000	-69.83	52.20	62.74	0	62.74	4.55	0.22	51.78
80	0.009	0.002	-56.77	52.80	75.70	0	75.70	9.17	0.98	51.03
75	0.023	0.014	-48.62	53.83	83.68	0	83.68	13.93	2.52	49.57
70	0.049	0.062	-42.05	55.34	90.01	0	90.01	18.93	5.36	46.96
65	0.076	0.150	-38.23	57.38	93.51	0	93.51	24.25	8.31	44.47
60	0.120	0.374	-34.27	60.04	97.08	0	97.08	30.02	13.13	40.63
55	0.180	0.842	-30.74	63.48	100.12	0	100.12	36.41	19.69	35.87
50	0.250	1.625	-27.89	67.88	102.39	0	102.39	43.63	27.35	31.05
45	0.333	2.883	-25.40	73.54	104.19	0	104.19	52.00	36.43	26.24
40	0.425	4.696	-23.28	80.90	105.48	0	105.48	61.97	46.49	22.12
35	0.524	7.139	-21.46	90.66	106.31	0	106.31	74.26	57.32	19.12
30	0.625	10.156	-19.93	104.00	106.65	0	106.65	90.07	68.37	17.81
25	0.723	13.591	-18.67	123.04	106.45	0	106.45	111.51	79.09	18.57
20	0.815	17.270	-17.63	152.04	105.65	0	105.65	142.87	89.15	21.51
15	0.890	20.595	-16.86	200.91	104.00	0	104.00	194.07	97.36	26.80
10	0.950	23.465	-16.30	299.46	101.10	0	101.10	294.91	103.92	33.95
5	0.989	25.431	-15.95	596.63	95.46	0	95.46	594.36	108.19	42.57

Distance to Ground Level assumes flat ground or a site where the site level is above average terrain in all azimuths.

Maximum ERP	26 watts	Max dBu at Ground Level	106.65	Lowest Height of Contour (m)	17.81
Radiation Center AG	52 m			Lowest Height of Contour (ft)	58.45
Radiation Center AG	171 ft.				
Maximum ERP	-15.85 dBk				
Protected dBu	70.29 dBu				
Interfering dBu	110.3 dBu				
Free Space Distance	109.39 m				

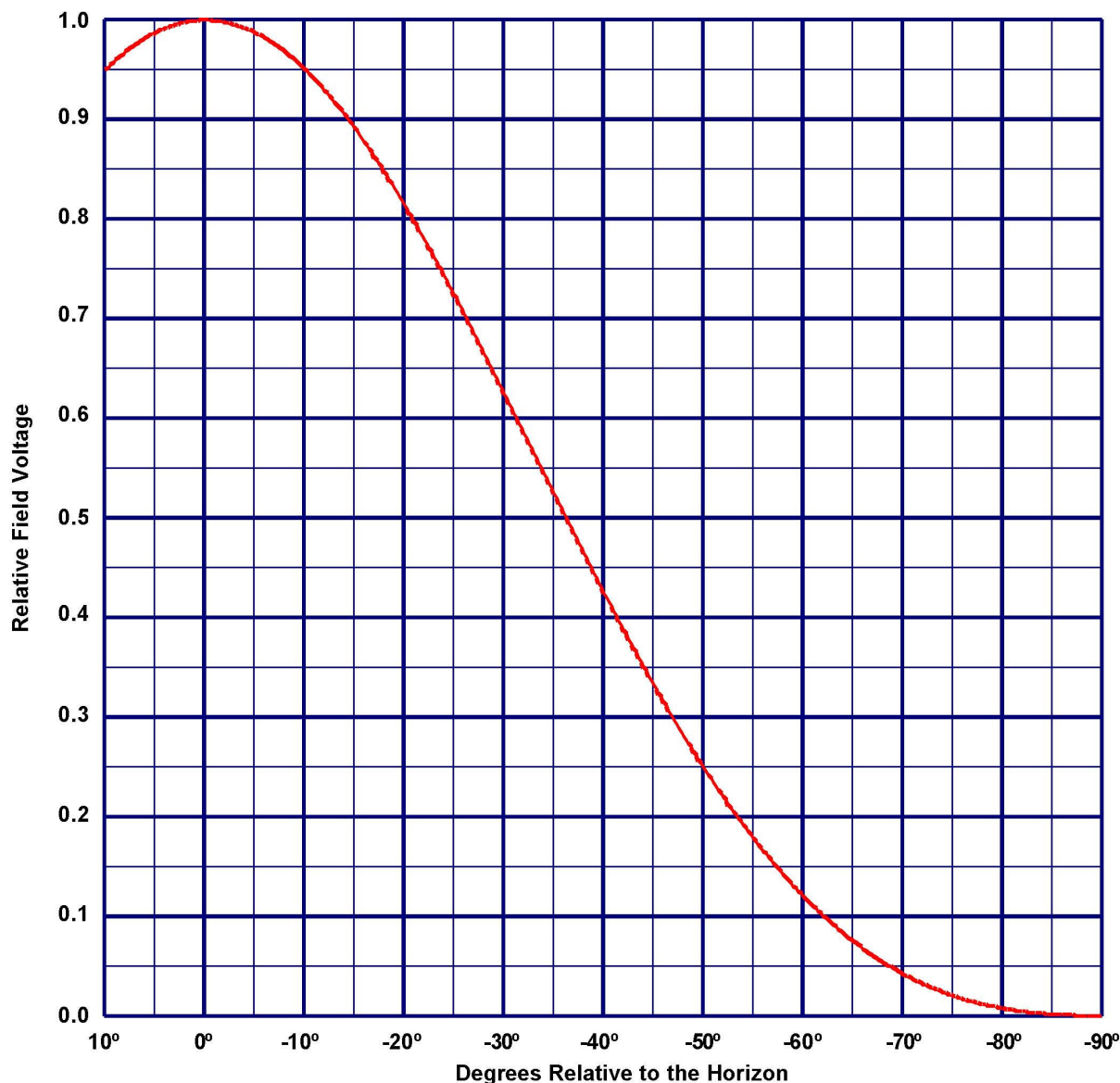


## **Vertical Plane Relative Field Pattern**

**ERI TYPE SHP, SHPX, MP, MPX, LP OR LPX ELEMENTS**

*A 2 level, .5 wave-length spaced non directional antenna*

*with 0° beam tilt, 0% null fill and a H/V maximum power ratio of 1.000*



**Vertical Polarization Gain:**

**Maximum: 0.702 (-1.535 dB)**

**Horizontal Plane: 0.702 (-1.535 dB)**

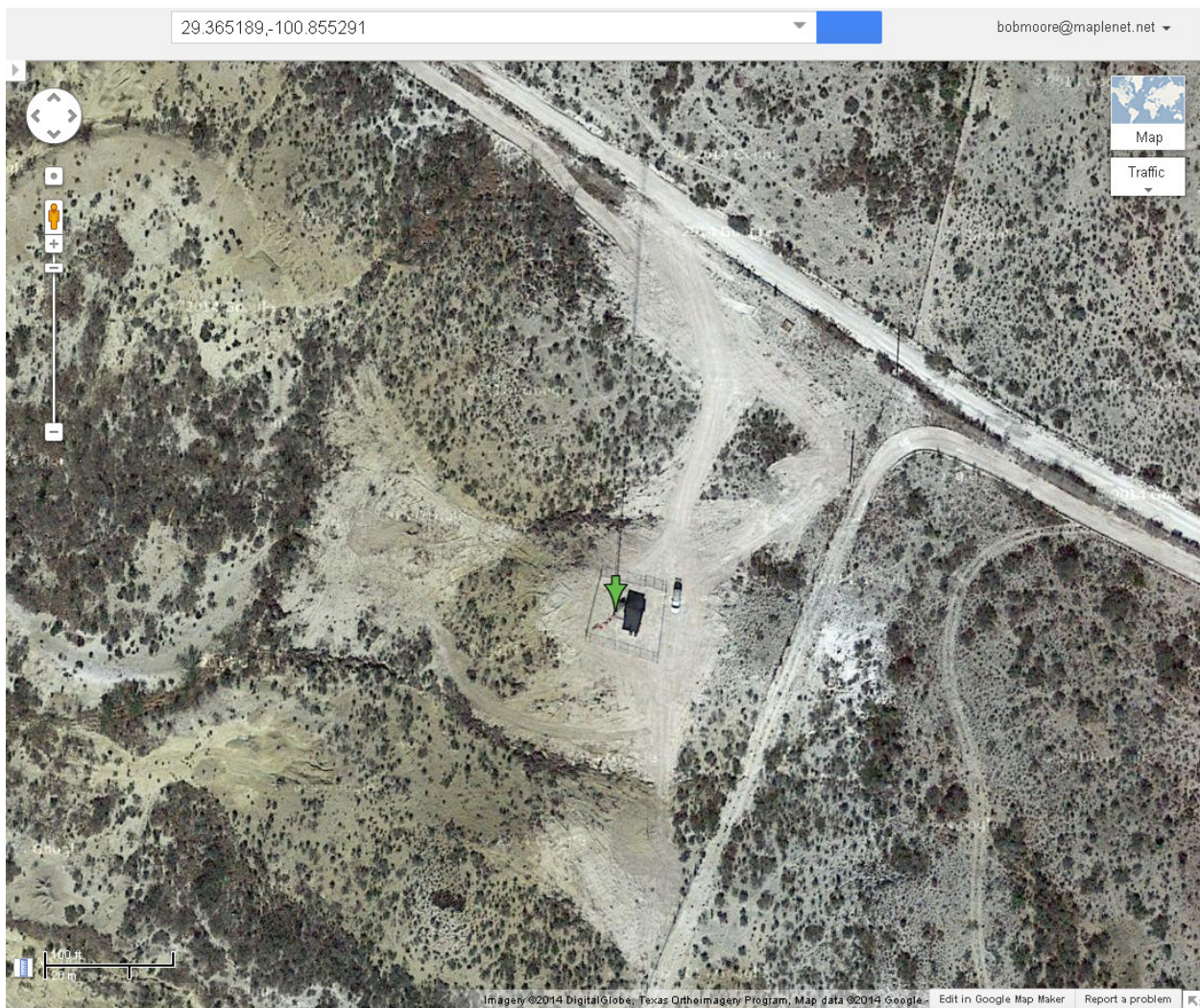
**Horizontal Polarization Gain:**

**Maximum: 0.702 (-1.535 dB)**

**Horizontal Plane: 0.702 (-1.535 dB)**



This aerial photo demonstrates that there are no habitable buildings in the area which could reach up to intersect the contour. Hence §74.1204(d) applies, and the predicted area of interference is acceptable to the Commission.



## MERP Consideration

The highest 12 radial HAAT is at 180 degrees, where the HAAT is 87.1 meters. The MERP rules for the western part of the US would allow 250 Watts ERP, but the Mexican treaty limits the ERP to much less.

**HAAT Retrieval and MERP Computer**

Please enter the FCC tower registration number (if available) [Download Data](#)

1289415  Tower data as of 7/25/2007.

or enter the following data usually found on the tower registration.

Latitude:			Longitude:			Elevation:	Height:	HAMSL
29	21	53	100	51	18	317	52	HAAT/MERP

☒ NAD27 ☐ NAD83  
☐ EAST or ☒ WEST of Mississippi

Tower Registration #1289415

Highest radial is 180.0° with a HAAT of 87.7m.  
 250w MERP at the top of the tower.  
 Valid for sites WEST of the Mississippi River outside Zone I-A

Done!

## **Mexican Consideration**

The “Agreement Between The Government of the United States of America and the Government of the United Mexican States” of 1992, Annex 1, Section 2, defines the current regulation concerning translators located within 320 km of the Mexican border.

This section reads as follows:

### **2.1 Low Power FM Stations (LPFM)**

2.1.1 LPFM stations may operate on any channel from 201 to 300 and they must protect the allotments and assignments of the other Administration based on their maximum permitted parameters in accordance with the Table of Allotment's and Assignments.

2.1.2 An LPFM station is permitted to operate with ERP that shall not exceed 50 watts in the direction of the other country and to produce an interfering contour not to exceed 32 km in the direction of the other country.

2.1.3 The maximum distance to the protected contour (60 dBu) all of an LPFM station shall be 8.7 km in the direction of the other country.

2.1.4 LPFM stations located within 125 km of the common border must be notified in accordance with the notification procedures in Article 8.

2.1.5 An LPFM station located in excess of 125 km from the common border may operate with an ERP in excess of 50 watts in the direction of the other country, provided the protected contour produced is not greater than, starting from 125 km from the common border, 8.7 km in the direction of the other country. Before the station can commence operation it must comply with a notification procedures contained in Article 8 and the provisions of 2.1.1, 2.1.6, and 2.1.7 of this section.

2.1.6 Should any interference be caused by an LPFM station, the offending station must immediately correct the interference or cease operation.

2.1.7 The use of a channel by an LPFM station shall not prejudice in any manner the future allotment of such channel by the other Administration.

The proposed translator is 7.39 km from the Mexican border at 224 degrees true, so it falls under the provisions of the Agreement, Sections 2.1.1, 2.1.2, 2.1.3 and 2.1.4 (LPFM stations less than 125 km from the common border). These provisions are reflected in CFR 47 §74.1235(d).

Terrain and Contour Data  
TX Del Rio Prop

ERP 0.026 kW

N. Lat. 29 21 53

W. Lon. 100 51 18

Center of Radiation 369.00 m AMSL

Az. Deg T.	Avg Elev 3-16 km Meters AMSL	Effective Antenna Ht Meters AAT	ERP Kilowatts	Distance to Contour (km)	
				60.0 dBu F(50,50)	34.0 dBu F(50,10)
0	350.3	18.7	0.0260	4.0	18.8
45	345.5	23.5	0.0260	4.0	18.8
90	324.6	44.4	0.0260	4.9	23.0
135	299.4	69.6	0.0260	6.1	28.8
180	281.9	87.1	0.0260	6.9	32.6
225	286.2	82.8	0.0260	6.7	31.6
270	292.2	76.8	0.0260	6.4	30.3
315	328.0	41.0	0.0260	4.7	22.1
Average	313.512	55.488	<--HAAT m		
224	286.4	82.6	0.0260	6.7	31.6

This printout shows that in the direction of Mexico (224 degrees) the HAAT is 82.6 meters.

All LPFM stations within 125 km from the border must certify that their interfering contour [34 dBu F(50,10)] in the direction of the other country should not exceed 32 km. This output shows that the interfering contour reaches only 31.6 km in the direction of Mexico, less than the 32 km requirement.

All LPFM stations must also show that their 60 dBu F(50,50) contour shall not exceed 8.7 km in the direction of the other country. The output also shows that the contour only proceeds 6.7 km in the direction of Mexico.

The ERP in the direction of Mexico is 26 Watts, less than the limit of 50 Watts.

Therefore this proposal completely satisfies the requirements of the Agreement.