

TECHNICAL EXHIBIT  
DIGITAL DISPLACEMENT RELIEF APPLICATION FOR  
TV TRANSLATOR STATION K15FT  
FACILITY ID 32312  
ROSWELL, NEW MEXICO  
CH 41 6.8 K

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of a digital displacement relief application for TV translator station K15FT at Roswell, New Mexico (Facility ID: 32312).

Specifically, this displacement relief application proposes to modify the K15FT licensed operation (BLTT-20030307ADP) by converting to a digital operation on channel 41. It is proposed to operate on digital channel 41 employing a nondirectional antenna. The maximum effective radiated power will be 6.8 kW and the antenna radiation center above mean sea level will be 1133.5 meters.

Displacement Relief Eligibility

The K15FT currently licensed facility on channel 15 is located 265 kilometers from the licensed, co-channel operation of full-power DTV station KFOX-DT on channel 15 at El Paso, Texas (BLCDDT-20051103AAE). According to Section 73.3572(a)(4)(ii) and 73.3572(a)(4)(iv)(A)(1) of FCC's rules, a TV translator station is eligible for displacement relief if it is located within 265 km of the coordinates of a co-channel DTV authorization or DTV allotment. Therefore, TV translator station K15FT is eligible for displacement relief.

It is also proposed to operate K15FT on digital channel 41 from a new transmitter site located 14.8 kilometers east of the current K15FT site. It is noted that the proposed site is located less than 48 kilometers (30 miles) from K15FT's currently licensed site. In addition, there will be overlap of the current 74 dBu and proposed 51 dBu contours as detailed below. Therefore, based on current FCC policy, a displacement relief application specifying a site change of less than 48 kilometers (30 miles) and also involving protected contour overlap is considered permissible.

This application is considered a "minor change" in facilities pursuant to Section 73.3572, as it is a displacement relief application and the proposed 51 dBu contour will overlap a portion of the licensed 74 dBu contour (see Figure 1).

#### Proposed Antenna System/Antenna Structure Registration

A Dielectric TLP-8B nondirectional antenna will be employed, along with a maximum ERP of 8.6 kW and an RCAMSL of 1133.5 meters. The Dielectric TLP-8B antenna will be mounted at the 30.5 meter level on an existing 32.6 meter tower. Based on the FCC's TOWAIR program (see Figure 2), the existing tower does not need to be registered.

#### Response to Paragraph 13 (Interference)

The proposed facility complies with all the following applicable rule Sections: Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030.

#### Mexican Coordination/MOU Compliance

Figure 3 is a separation study based on the provisions of the US-Mexican TV Agreement (June 1982) and the Memorandum of Understanding (MOU) between the United States and Mexico regarding the use of DTV Broadcasting Service along the common border.<sup>1</sup> The separation requirements are applicable to full-power NTSC and DTV stations (but are not applicable to TV translator stations) but have been used for this analysis in an abundance of caution. As indicated, the proposed channel 41 digital operation complies with the full power separation requirements to all Mexican NTSC and DTV stations and allotments.

Station KBIM-DT was authorized to operate on DTV channel 41 at Roswell, NM (BPCDT-19991029AGU) with a nondirectional antenna maximum ERP of 50 kW and an antenna height above average terrain (HAAT) of 26.7 meters. The herein proposed digital operation for K15FT will utilize the same facilities

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<sup>1</sup> See "Memorandum of Understanding Between the Federal Communications Commission of the United States of America and the Secretaria de Comunicaciones y Transportes of the United Mexican States Related to the Use of the 54-72 MHz, 76-88 MHz, 174-216 MHz and 470-806 MHz Bands for The Digital Television Broadcasting Service Along the Common Border" dated July 22, 1998 ("MOU").

(site, antenna, height) as authorized to KBIM-DT with the exception that the ERP will be reduced from 50 kW to 6.8 kW (8.7 dB reduction). The authorized KBIM-DT DTV operation on channel 41 has been successfully coordinated with Mexico. Therefore, as it is proposed to operate with reduced facilities as compared to the authorized KBIM-DT operation on channel 41 it is believed that the proposal complies with the US-Mexican TV Agreement (June 1982) and Memorandum of Understanding (MOU) between the United States and Mexico regarding the use of DTV Broadcasting Service along the common border. If necessary, it is respectfully requested that the proposal be coordinated with Mexico.

#### Environmental Considerations

The K15FT facilities were evaluated in terms of potential radiofrequency radiation exposure at 2 meters above ground level in accordance with OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation". This Bulletin provides assistance in determining whether FCC-regulated transmitting facilities, operations or devices comply with limits for human exposure to radiofrequency (RF) electromagnetic fields adopted by the Commission in 1996.<sup>2</sup>

The calculated power density at 2 meters above ground level at the base of the tower was calculated using the appropriate equation contained in the Bulletin. As shown on Figure 4 (antenna vertical relative pattern), the maximum vertical relative field for depression angles towards the tower base (-60° to -90°) is less than 0.25. Therefore, using a vertical relative field value of 0.25, a maximum ERP of 6.8 kilowatts, and an antenna center of radiation height above ground level of 30.5 meters, the calculated power density at two meters above ground level at the base of the tower is 0.0175 milliwatt per square centimeter (mW/cm<sup>2</sup>), or 4.1 percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas (0.42 mW/cm<sup>2</sup> for TV

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<sup>2</sup> See *Report and Order* in ET Docket 93-62, FCC 96-326, adopted August 1, 1996, 11 FCC Rcd 15123 (1997). See also *First Memorandum Opinion and Order*, ET Docket 93-62, FCC 96-487, adopted December 23, 1996, 11 FCC Rcd 17512 (1997), and *Second Memorandum Opinion and Order and Notice of Proposed Rulemaking*, ET Docket 93-62, FCC 97-303, adopted August 25, 1997.

channel 41). Therefore, the facility complies with the FCC's RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, an agreement will be in effect to control access to the site. In the event that workers or other authorized personnel enter the restricted area appropriate measures shall be taken to limit RF energy exposure. Such measures include limiting the exposure time, wearing protective clothing, reducing power to an acceptable level or termination of transmitter output power all together until workers leave the restricted area.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been addressed by the tower owner.

If there are questions concerning the technical portion of this application, please contact the office of the undersigned.

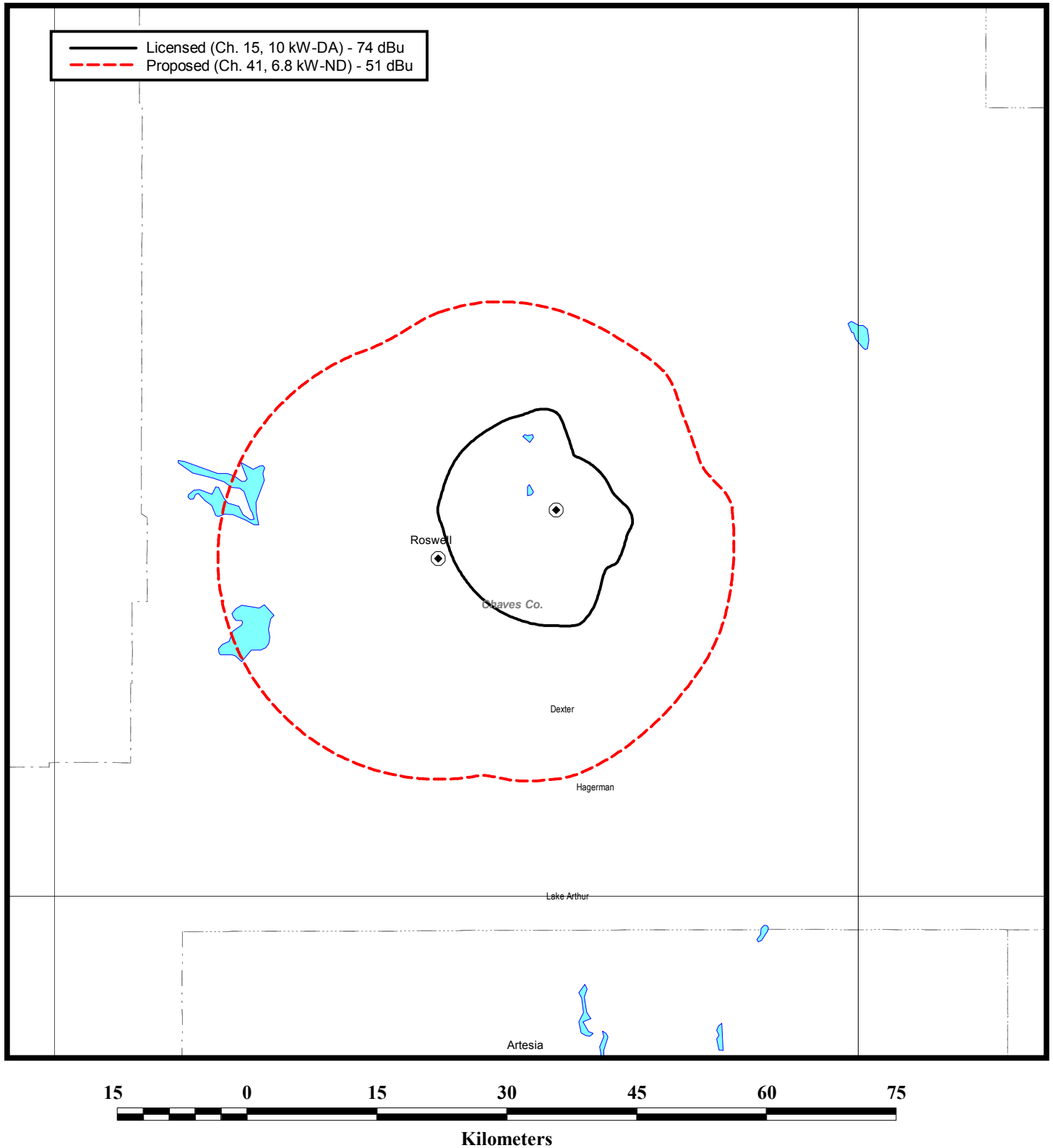
A handwritten signature in black ink, appearing to read 'T. Howell', is centered on the page.

Thomas J. Howell

du Treil, Lundin & Rackley, Inc.  
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February 18, 2009

Figure 1



## FCC PREDICTED COVERAGE CONTOURS

TV TRANSLATOR STATION K15FT  
ROSWELL, NEW MEXICO  
CHANNEL 41

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

A routine check of the coordinates, heights, and structure type you provided indicates that this structure does not require registration.

\*\*\* NOTICE \*\*\*

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

PASS SLOPE(100:1)NO FAA REQ - 4635.0 Meters (15206.5 Feet)away & below slope by 15.0 Meters (49.2100 Feet)

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	33-18-40.00N	104-30-24.00W	ROSWELL INTL AIR CENTER	CHAVES ROSWELL, NM	1104.5	3962.699999999998

PASS SLOPE(100:1)NO FAA REQ - 4484.0 Meters (14711.1 Feet)away & below slope by 14.0 Meters (45.93 Feet)

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	33-18-50.00N	104-32-34.00W	ROSWELL INTL AIR CENTER	CHAVES ROSWELL, NM	1104.5	3962.699999999998

PASS SLOPE(100:1)NO FAA REQ - 4240.0 Meters (13910.5 Feet)away & below slope by 11.0 Meters (36.0900 Feet)

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	33-18-54.00N	104-32-21.00W	ROSWELL INTL AIR CENTER	CHAVES ROSWELL, NM	1104.5	3962.699999999998

Your Specifications

NAD83 Coordinates

Latitude	33-21-02.4 north
Longitude	104-31-21.9 west

Measurements (Meters)

Overall Structure Height (AGL)	32.6
Support Structure Height (AGL)	32.6
Site Elevation (AMSL)	1103

Structure Type

TOWER - Free standing or Guyed Structure used for Communications Purposes

Tower Construction Notifications

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

# TV Study

du Treil, Lundin, & Rackley, Inc., Sarasota, Florida



**Station Type:** DT **Station Coordinates:** 033-21-02.00 104-31-20.00 (NAD 27)  
**Station Channel:** 41 **Station Zone:** II **Equivalent Canadian Class:** EX  
**Buffer Distance:** 70 km **Comment:**

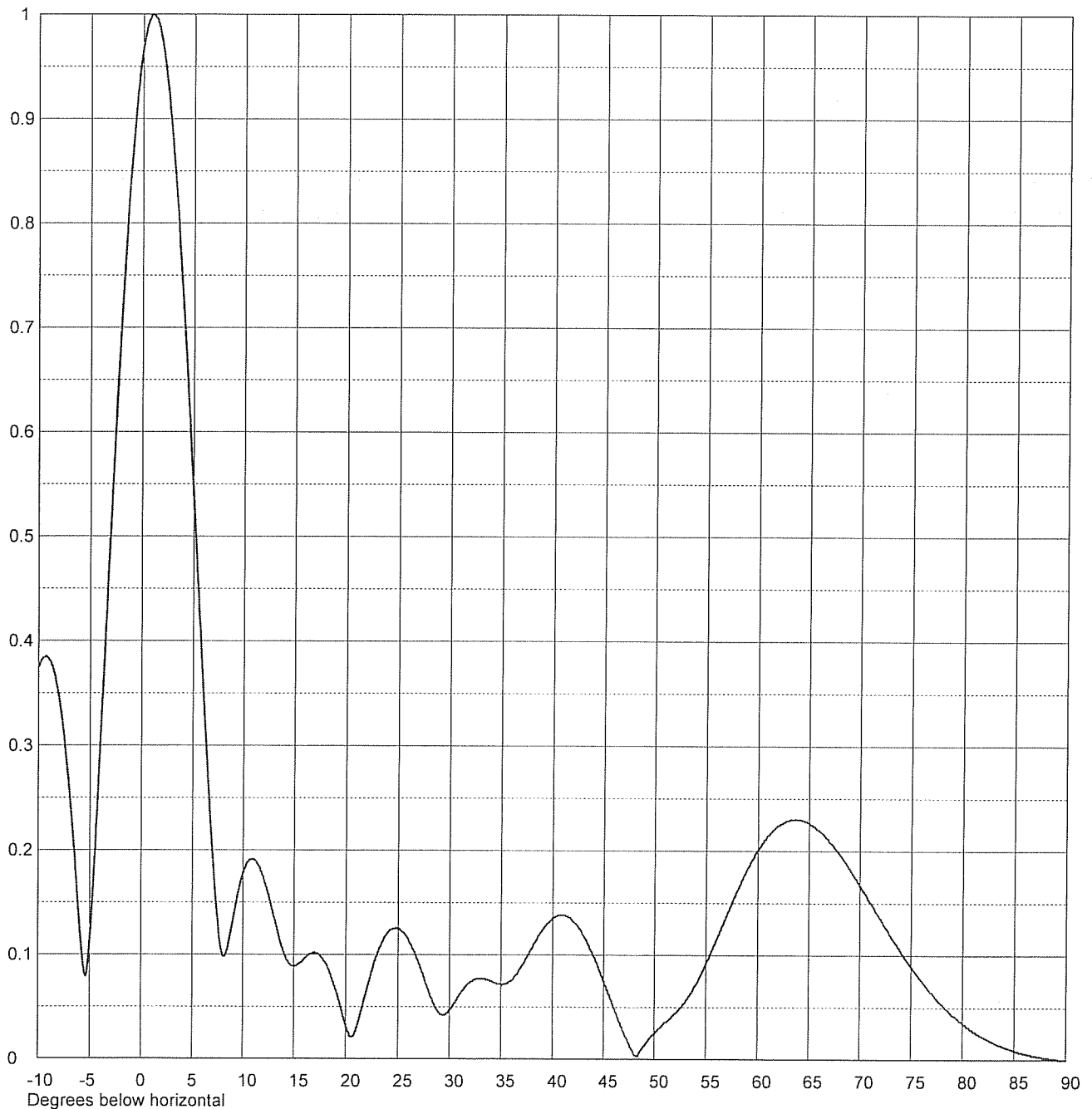
Callsign	Status	Channel	Service	Zone	City				State	Latitude	Dist. (km)	Min. (km)	Spacing (km)
Facility ID	ARN			Class	DA	Ant ID	ERP (kW)	HAAT (m)	Rec Type	Longitude	Bear. (deg)	Max. (km)	Comment
KRPV	LIC	27 -	TV	2	ROSWELL				NM	033-23-50	14.55	24.1	9.55
53539	BLCT	20040830AAF			D	66878	490	121.5	C	104-22-34	69.03	96.6	CLOSE
KKGD-LP		33 +	TA	2	ROSWELL				NM	033-23-47	5.09	24.1	19.01
53548					N				C	104-31-26	358.26	96.6	CLEAR
KBIM-TV	STA	41	DS		ROSWELL				NM	033-21-02	0	223.7	-223.7
48556	BDSTA	20021001ACV			N		6.8	28.2	C	104-31-20	90	223.7	SHORT
DKBIMTV	DTVALT	41	DT	2	ROSWELL				NM	33-03-20	73.19	223.7	-150.51
0							987.6	610	C	103-49-12	116.47	223.7	SHORT
KLUZ-TV	LIC	41 Z	TV	2	ALBUQUERQUE				NM	035-12-41	272.18	244.6	27.58
35084	BLCT	19980714KE			D	17506	1200	1256	C	106-26-56	319.99	244.6	CLEAR
	MEXDTV	41	DT		CIUDAD JUAREZ				CH	31-43-47	256.06	223	33.06
0						0	0	0	C	106-27-49	225.81	223	CLEAR
	GRANT	41	DT		CIUDAD JUAREZ				CH	031-42-16	260.38	223	37.38
179074	BPFS	20081118AFW			D	90325	300	162	C	106-29-55	225.89	223	CLEAR

Date **17 Feb 2009**  
 Call Letters  
 Location  
 Customer  
 Antenna Type **TLP-8B**

Channel **41**

## ELEVATION PATTERN

RMS Gain at Main Lobe	<b>8.0 (9.03 dB)</b>	Beam Tilt	<b>1.00 Degrees</b>
RMS Gain at Horizontal	<b>7.5 (8.75 dB)</b>	Frequency	<b>635.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>08L080100-90</b>



Remarks: