

TECHNICAL EXHIBIT
APPLICATION FOR CONSTRUCTION PERMIT
LPTV STATION KZOL-LP
FCC FILE NO. BLTTL-20050715ABL
FACILITY ID 128896
SAFFORD, ARIZONA
CH 15 9.95 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of an application for construction permit for LPTV station KZOL-LP at Safford, Arizona (Facility ID: 128896; File No. BLTTL-20050715ABL). Station KZOL-LP is currently licensed for operation on channel 15 with a maximum directional effective radiated power (ERP) of 9.95 kilowatts (kW) and antenna radiation center height above mean sea level (RCMSL) 3076 meters. Specifically, this application proposes to move KZOL-LP to a neighboring tower only 60 meters away and to slightly decrease the antenna radiation center height above mean sea level (RCMSL). No other changes are proposed including channel (15), directional antenna system (RFS RD8S), city of license (Safford), frequency offset (Z), or maximum effective radiated power (9.95 kW).

As detailed below, this application is considered a "minor change" in facilities pursuant to Section 73.3572. In addition, this application is located 6.8 km within the geographically restricted Tucson, AZ area applicable to LPTV, TV translator and Class A TV applications filed during the July 31 to August 4, 2000 auction filing window. Thus, a waiver of the geographic restriction based on terrain shielding with respect to the Tucson, AZ geographic restriction is respectfully requested.¹

Proposed Operation

It is proposed to operate on channel 15 (476-482 MHz) with a "zero" carrier frequency offset and employing a RFS RD8S directional antenna with a maximum radiated power (ERP) of 9.95 kW and a main lobe orientation of 30 degrees true. The maximum

¹ It is noted that KZOL-LP has already obtained a waiver for its currently licensed site with respect to the Tucson market. Since the proposed site is only 60 meters away from the licensed site, it is believed that the necessary waiver has previously been obtained and can apply to the proposed site.

directional ERP will be 9.95 kW. The antenna will be mounted at the 31 meter (102 foot) level on an existing tower resulting in an RCAMSL of 3068 meters. Based on the FCC's TOWAIR Program the existing tower does not require registration.

Minor Change Application

Figure 1 depicts the licensed and herein proposed 74 dBu contours for KZOL-LP. As shown, the 74 dBu contours are nearly identical and therefore the KZOL-LP coverage is not changing by any measurable amount. Therefore, the proposed modification is considered a "minor change" in facilities pursuant to Section 73.3572. Figure 2 is a graph of the vertical plane relative field pattern for the RFS RD8S directional antenna.

Waiver of Geographic Restriction Based on Terrain Shielding

The proposed KZOL-LP transmitter site is located 115.6 km (71.8 miles) from the Tucson, AZ reference point (N32°13'15", W110°58'08"), whereas the auction filing window specified a minimum distance of 121 km (75 miles). The FCC has already granted a waiver to KZOL-LP at its currently licensed site, which is only 60 meters away. However in an abundance of caution, a waiver is respectfully requested based on the fact that the proposed facilities are completely shielded by terrain barriers from the Tucson television market. The Pinaleno and Galiuro Mountains are located between Tucson and Safford. A terrain study has been prepared based on the procedures outlined in Commission Policy Regarding Terrain Shielding, 3 FCC Rcd 7105 (1988).

Figure 3 is a terrain relief map, which depicts the 74 dBu coverage contour for the proposed KZOL-LP channel 15 operation at Safford. The contour location is based on the FCC's standard prediction method. In addition, the map depicts the Tucson reference point along with four radials from the Tucson reference point towards the proposed 74 dBu contour, namely, a radial through the proposed site at 65.4° true and additional radials towards the proposed KZOL-LP 74 dBu contour at 50°, 60°, and 70° true. Sheets 1 through 4 of Figure 4 are terrain profiles along the 50°, 60°, 65.4°, and 70° true radials, respectively. The terrain was derived using the Defense Mapping

Agency's 3-second digitized terrain database. Also shown are the locations of the 74 dBu contour along each radial and the "direct" line-of-sight path drawn from the Tucson reference point and the most distant point on the 74 dBu contour. It is apparent that the effect of "terrain shielding" caused by the intervening mountains would be significant. Therefore, it is believed that the proposed facilities would be completely shielded from the Tucson television market by the intervening mountains.

TV Broadcast Analog Protection

A study has been conducted using the provisions of Section 74.705 which indicates that the proposed KZOL-LP operation will not create prohibited interference to other existing, authorized or proposed NTSC full-power stations.

DTV Station Protection

Calculations based on OET Bulletin No. 69 indicate that the proposed KZOL-LP operation on channel 15 will not cause any (0.0%) prohibited interference to any allotted, proposed or actual DTV operating facilities on channels 14, 15 or 16.

Class A/LPTV/TV Translator Protection

A study has been conducted using the provisions of Section 74.707 which indicates that the KZOL-LP proposal will not create prohibited interference to other existing, authorized or proposed LPTV or Class A stations.

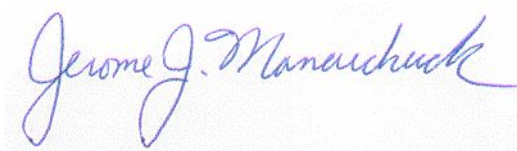
Response to Paragraph 14 - Environmental Protection Act

The proposed KZOL-LP facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation."² The calculated power density at the base of the tower was calculated using the appropriate equation on Page 13 of the Bulletin. Using a greater than expected vertical relative

² 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.

field value of 0.15, a visual effective radiated power of 9.95 kilowatts and 10 percent aural power, the calculated power density at 2 meters above ground at the tower base will be 0.0044 mW/cm², or 1.39% of the recommended limit of 0.32 mW/cm² for channel 15 applicable to general population/uncontrolled exposure areas. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the FCC's RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, as this is a multi-user site, an agreement will be in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down.

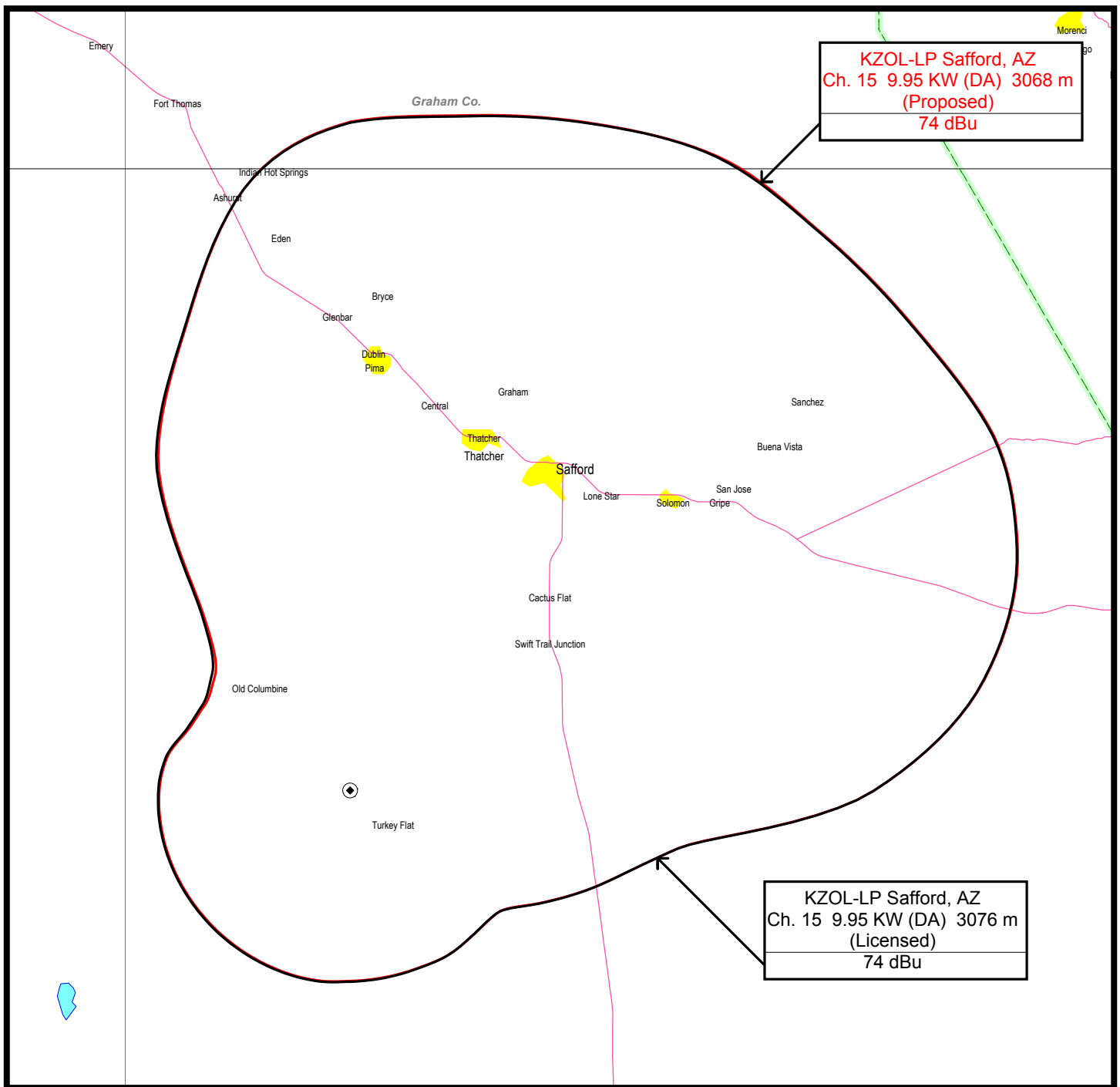


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Figure 1

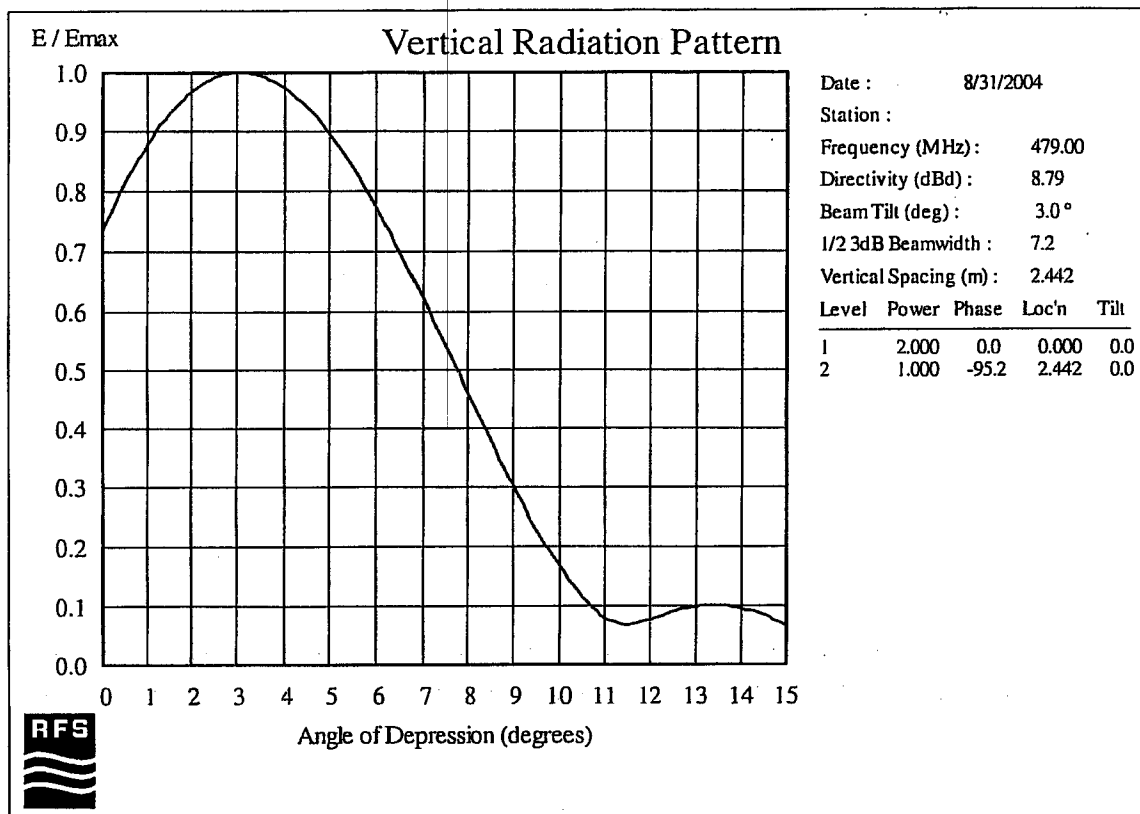


10 0 10 20 30 40 50 60
Kilometres

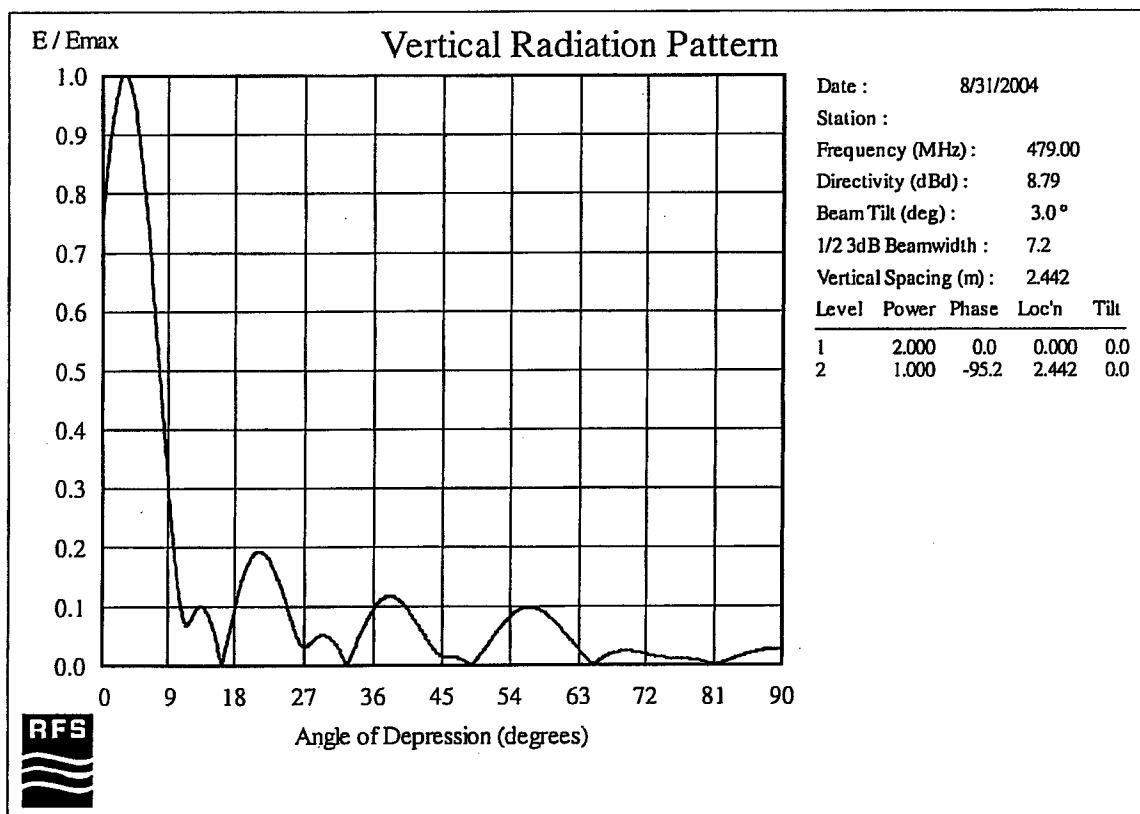
FCC PREDICTED 74 dBu CONTOURS

LPTV STATIONS KZOL-LP
SAFFORD, AZ
CH 15 9.95 KW (DA)

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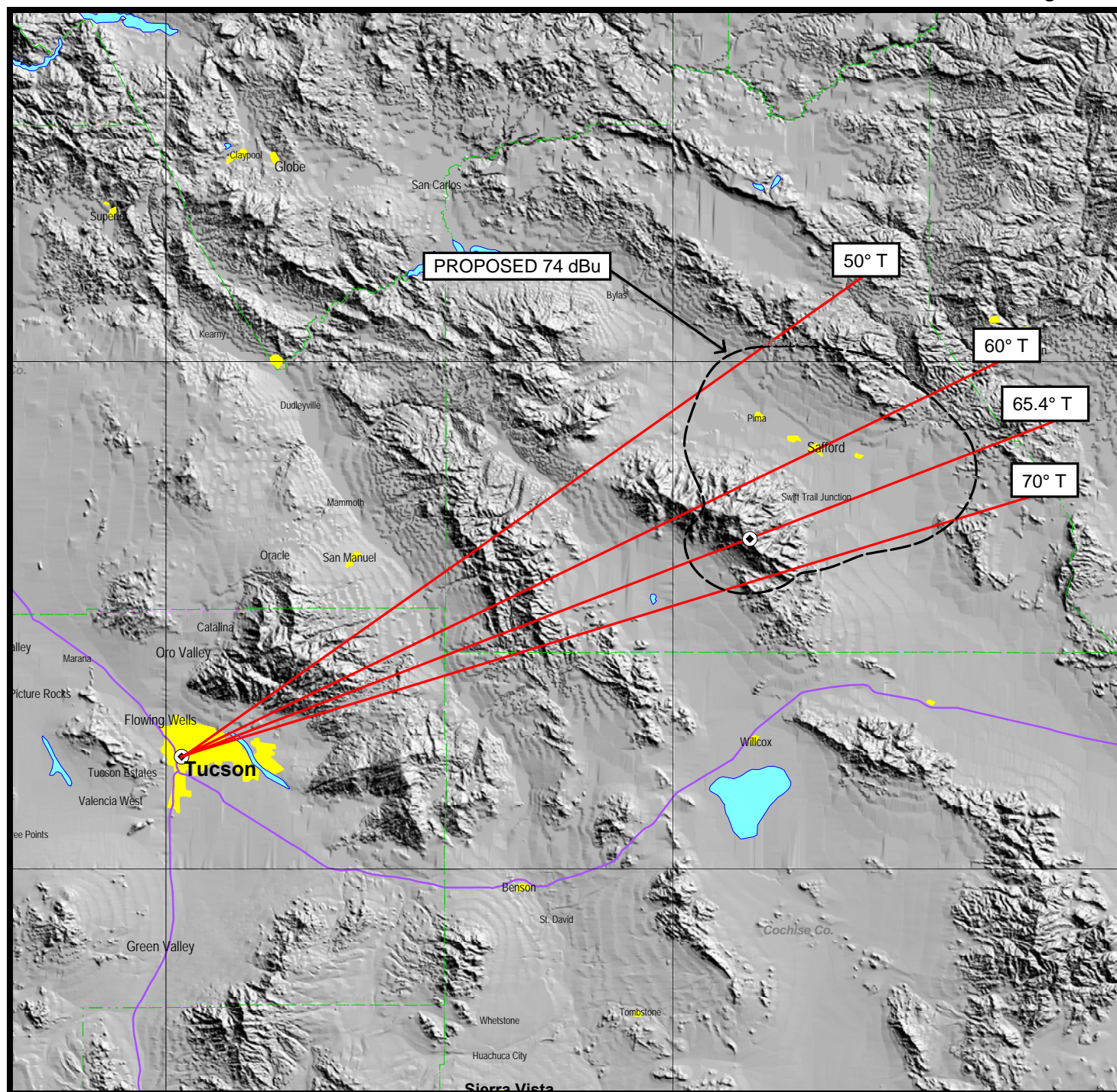


Ch. 15, 8 bay, 3 degree beam tilt, 0-15 degree angle depression



Ch.15, 8 bay, 3 degree beam tilt, 0-90 degree angle depression

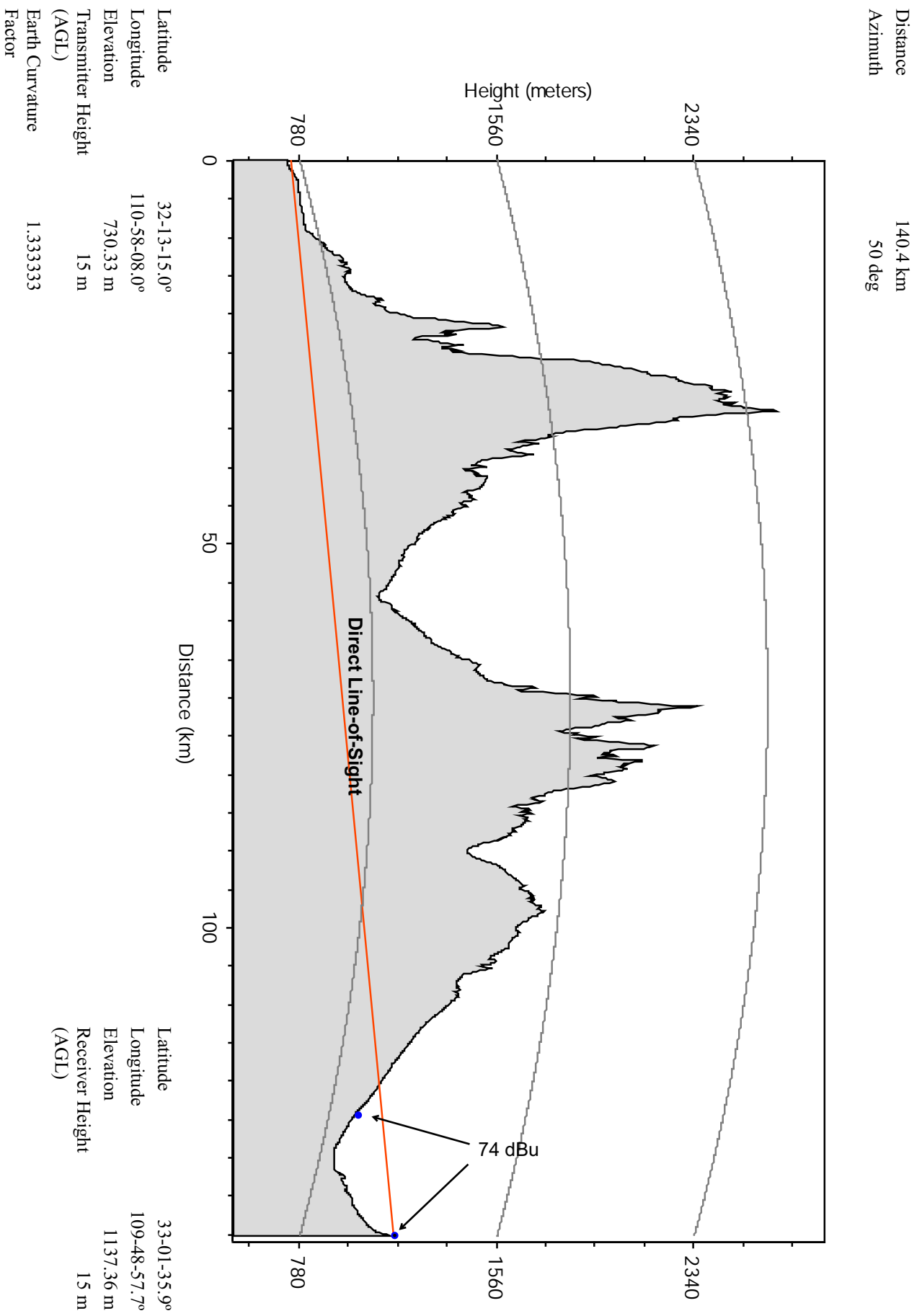
Figure 3



TERRAIN SHIELDING WAIVER

LPTV STATIONS KZOL-LP
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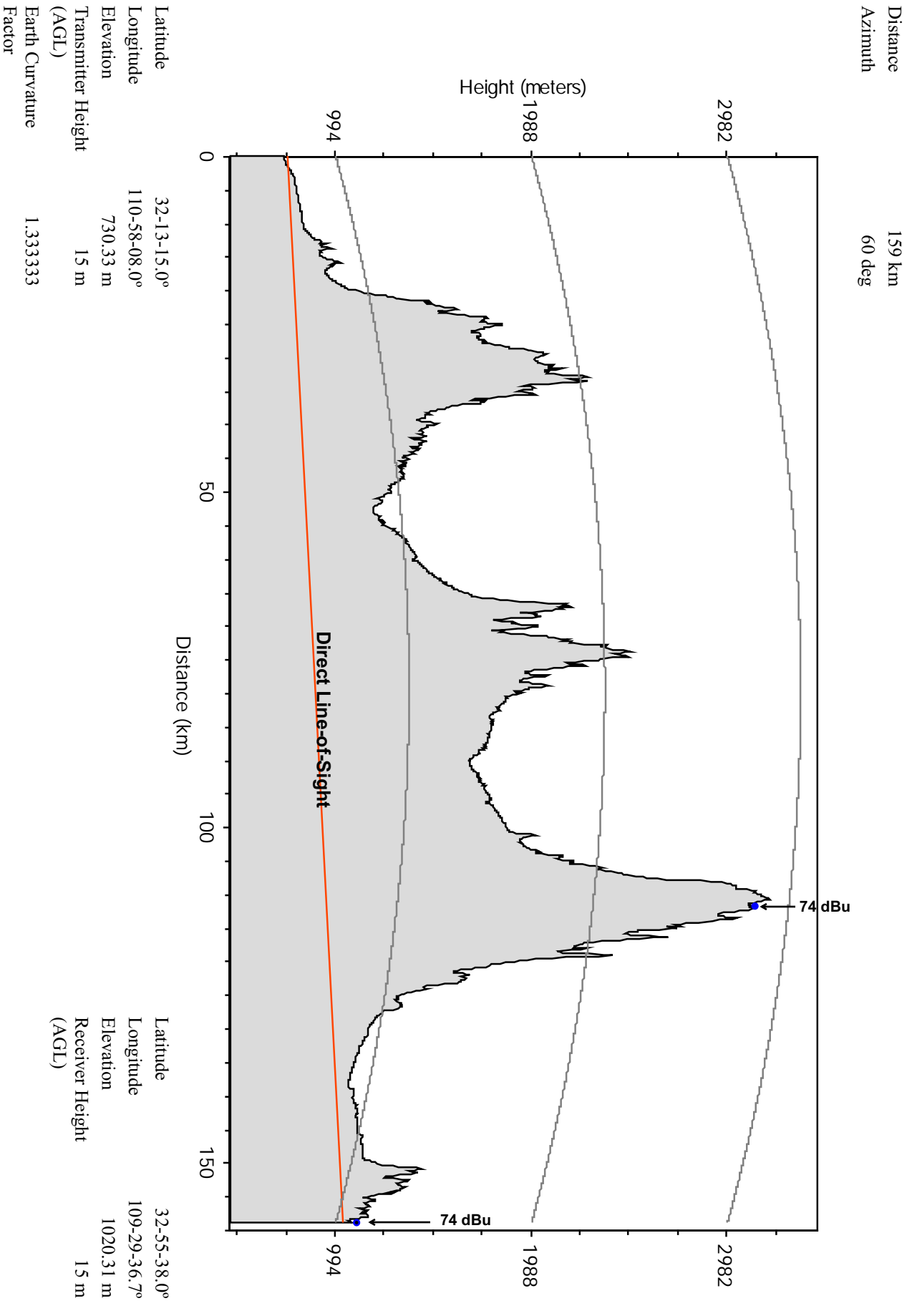
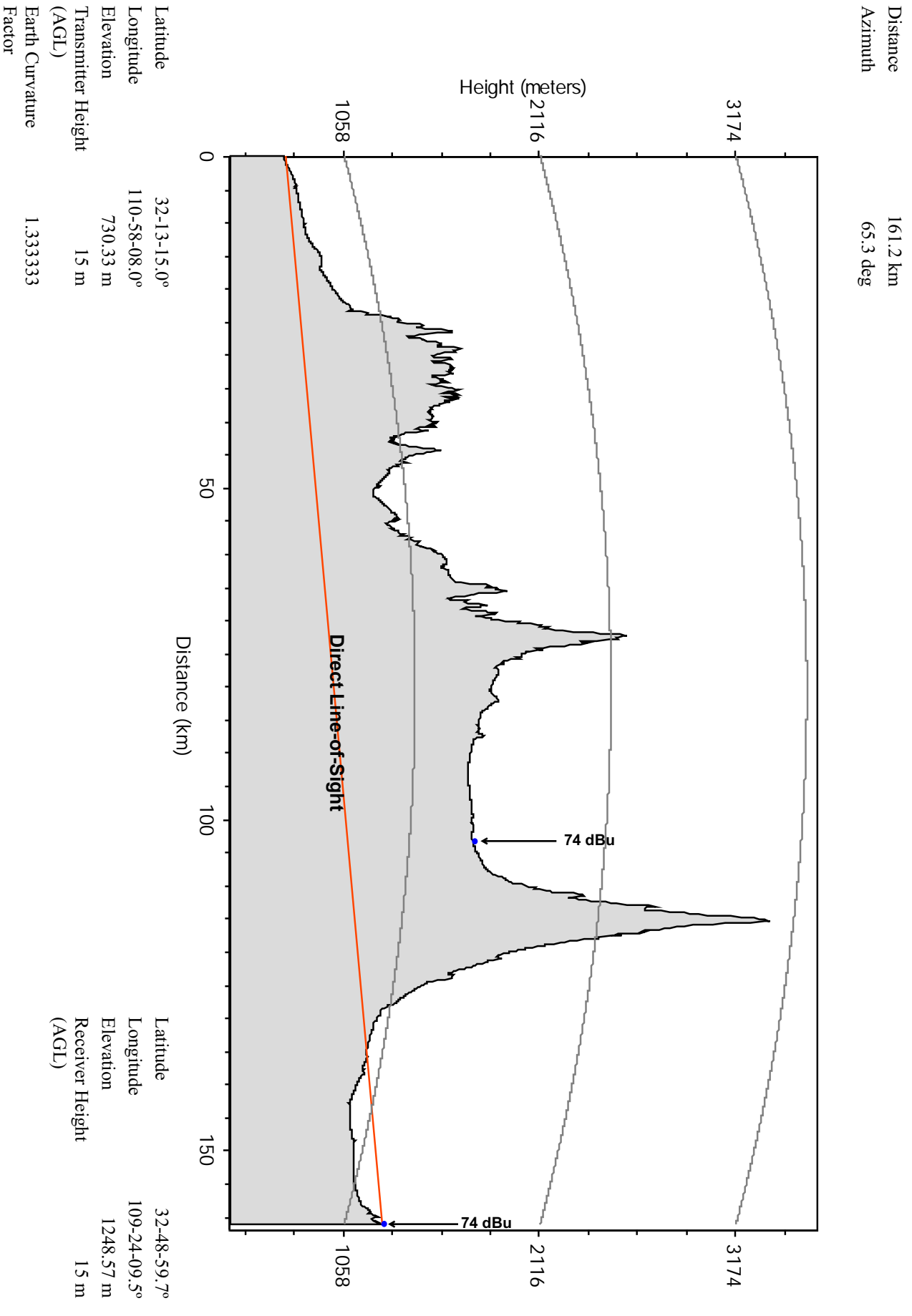


Figure 4
Sheet 3 of 4



Distance 152.3 km
Azimuth 70 deg

