EXHIBIT 13

Interference Considerations

Introduction

This application is for modification of the facilities of an FM translator under the "250-mile window application" procedure set forth in the Commission's AM Revitalization proceeding, MB Docket No. 13-249. The application requests a change in the location of the transmitting facilities for the modified translator, and operation on Channel 258D with 190 watts effective radiated power and employing a directional antenna, to provide fill-in service for Class B AM station KWRN, Apple Valley, California.

The geographical coordinates (NAD27) of the proposed FM translator site are as follows:

North latitude 34º 36' 34"
West longitude 117º 17' 11".

At this location the ground elevation is 1368 meters above mean sea level.

The proposed operation of the modified FM translator conforms with the requirements of Section 74.1204 of the Commission's Rules for a Class D station on Channel 258 with respect to overlap of predicted contours with the licensed operation of any FM station, LPFM station or FM translator, and the operation of any such facilities specified in a construction permit or pending application, on the same channel, the first adjacent channels, and the third adjacent channels, as shown in this Exhibit. On each of the second adjacent channels, the site for the proposed translator is located within the predicted protected contour of an existing FM station. This exhibit demonstrates that, under Section 74.1204(d) of the Rules, no objectionable interference will be caused to either of these FM stations. Additionally, the location of the proposed translator complies with the intermediate frequency distance separation requirements set forth in the Rules. The proposed operation of the translator therefore would not result in objectionable interference to any station.

Description of Directional Antenna System

The directional antenna system for the proposed modified FM translator is a circularly polarized Scala Model CA2-FM/CP Antenna, oriented so that maximum radiation is in the direction 123 degrees True. The antenna system will be mounted on an existing tower, with the radiation center located 39 meters above ground.

EXHIBIT 13 (continued)

Interference Considerations

The values of relative radiation for the horizontal radiation pattern for the directional antenna are tabulated in Item 10 of the Tech Box in Section III-A of FCC Form 349 for this application. This data was provided by the antenna manufacturer, Kathrein USA.

Allocation Study

The FM stations and FM translators taken into account in the allocation study for this application are listed in Table A of this Exhibit.

Figure 1 of this Exhibit shows the pertinent predicted contours for the proposed translator and co-channel Class B station KKLA-FM, Los Angeles; Class A station KMRJ(FM), Rancho Mirage; and FM translator K238CK, Barstow; all in California.

The pertinent predicted contours for the proposed translator and first-adjacent-channel FM translator K257EX, Boron, California, on Channel 257D, are shown in Figure 2 of this Exhibit.

Figure 3 of this Exhibit depicts the location of the proposed translator site with respect to the predicted protected contours for the pertinent FM stations on the second adjacent channels. As shown in Figure 3, the proposed site is located within the 54 dBu F(50,50) contour for Class B station KGGI(FM), Riverside, California, on Channel 256B; and also within the 54 dBu F(50,50) contour for Class B station KOLA(FM), San Bernardino, California, on Channel 260B.

The potential for interference from the proposed operation of the translator to KGGI(FM) and KOLA(FM) was evaluated by determining the area within which the ratio of undesired to desired signal between the translator and each of these stations equals or exceeds 40 dB, using free space propagation calculations for the translator signal.

With respect to KGGI(FM), the predicted F(50,50) signal of KGGI(FM) at the proposed translator site is 64.8 dBu, and interference would occur where the translator signal is greater than 104.8 dBu (173.8 mV/m). In the case of KOLA(FM), the predicted F(50,50) signal of KOLA(FM) at the proposed translator site is 62.9 dBu, and interference would occur where the translator signal is 102.9 dBu (139.6 mV/m). Computations show that, for operation at 190 watts effective radiated power and assuming uniform radiation from the proposed translator in all directions in the horizontal plane, interference to KOLA(FM) would not extend beyond a distance of 691 meters from the translator antenna.

EXHIBIT 13 (continued)

Interference Considerations

The map of Figure 4 of this Exhibit is a portion of the USGS 7-1/2-minute topographic map showing the vicinity of the proposed FM translator site. Figure 4 depicts the proposed translator site and a circle drawn at a radius of 0.691 kilometer from the proposed antenna system. The part of the map showing the contour overlap has been compared with up-to-date aerial photography from the Google Earth website for accuracy.

The location of the proposed FM translator is at the Quartzite Mountain "antenna farm," with rugged mountainous terrain extending in all directions from the translator site. There are no residences or occupied buildings, and no roads other than the access road to the "antenna farm," within the 0.691-kilometer-radius circle. This application conforms with the requirements of Section 74.1204(d) of the Commission's Rules, as the area within the circle is unpopulated; and operation of the proposed FM translator therefore would not result in objectionable interference to either KGGI(FM) or KOLA(FM).

The nearest FM stations, LPFM stations and FM translators on the third adjacent channels are at sufficient distances from the proposed translator site so as not to require further studies with respect to overlap of contours with the proposed translator.

On the frequencies 53 and 54 channels removed from Channel 258, there are no FM stations or FM translators within 50 kilometers of the proposed translator site.

The site for the proposed modified translator is located within 320 kilometers of the U.S.-Mexico border. With respect to the requirements of Section 74.1235(d) of the Commission's Rules, the proposed translator site is 231 kilometers, or more than 125 kilometers, from the international border. The maximum distance to the 60 dBu F(50,50) contour for the proposed translator is 26.7 kilometers, and the contour therefore does not fall within 116.3 kilometers of the border.

From a review of the pertinent FM assignments and allotments, there are three Mexican FM stations on first adjacent channels to Channel 258D, and one station on a third adjacent channel, to be considered with respect to the proposed translator. They are Class A station XHATEFM, Tecate, on Channel 257A; Class B1 station XHKYFM, Tijuana, on Channel 257B1; and Class C1 station XHTY-FM, Tijuana, on Channel 259C1;

and Class B station XHMOREFM, Tijuana, on Channel 255B; all in Baja Norte, Mexico. Computations show that the distance separation between the proposed translator and each of these stations conforms with the spacing requirements of Section 73.207(b)(3) of the Commission's Rules for a Class A station in the United States and the respective stations in Mexico.

The predicted contours shown in this Exhibit were determined in accordance with the requirements of Section 73.313 of the Commission's Rules, from computerized calculations based on the NGDC 30-second terrain database, and Figures 1 and 1a of Section 73.333 of the Rules. Distances to the contours were calculated at azimuthal increments of one degree.

Fred W. Volken
Engineering Consultant

October 2016 Sierra Madre, California

EXHIBIT 13 (continued)

Interference Considerations

TABLE A

Station Facilities

	Channel and Class	Station and Location, Status, File Number	Geographical Coordinates	Facilities	
				Effective Radiated Power and Antenna	Antenna Height Above Average Terrain (meters)
Co-Channel Stations	258D	Proposed Modified Translator, Apple Valley, CA	N 34° 36' 34" W 117° 17' 11"	0.19 kW Directional	-----
	258B	KKLA-FM, Los Angeles, CA License BMLH-20160325AAB	N 34° 13' 26" W 118° 03' 44"	10.0 kW Directional	902
	258A	KMRJ(FM), Rancho Mirage, CA License BLH-19980724KA	N 33° 52' 15" W 116° 13' 37"	3.0 kW Nondirectional	100
	258D	K258CK, Barstow, CA License BLFT-20160513AAH	N 34° 51' 46" W 117° 03' 20"	0.01 kW Nondirectional	-----
First Adjacent Channel Station	257D	K257EX, Boron, CA License BLFT-20070817ACV	N 35° 00' 04" W 117° 39' 04"	0.02 kW Nondirectional	-----

EXHIBIT 13 (continued)

Interference Considerations

TABLE A (continued)

Station Facilities

	Channel and Class	Station and Location, Status, File Number	Geographical Coordinates	Facilities	
				Effective Radiated Power and Antenna	Antenna Height Above Average Terrain (meters)
Second Adjacent Channel Stations	256B	KGGI(FM), Riverside, CA License BLH-19910802KF	N 34° 14' 04" W 117° 08' 24"	2.55 kW Nondirectional	562
	260B	KOLA(FM), San Bernardino, CA License BMLH-20101214AAF	N 33° 57' 59" W 117° 17' 16"	29.5 kW Nondirectional	507

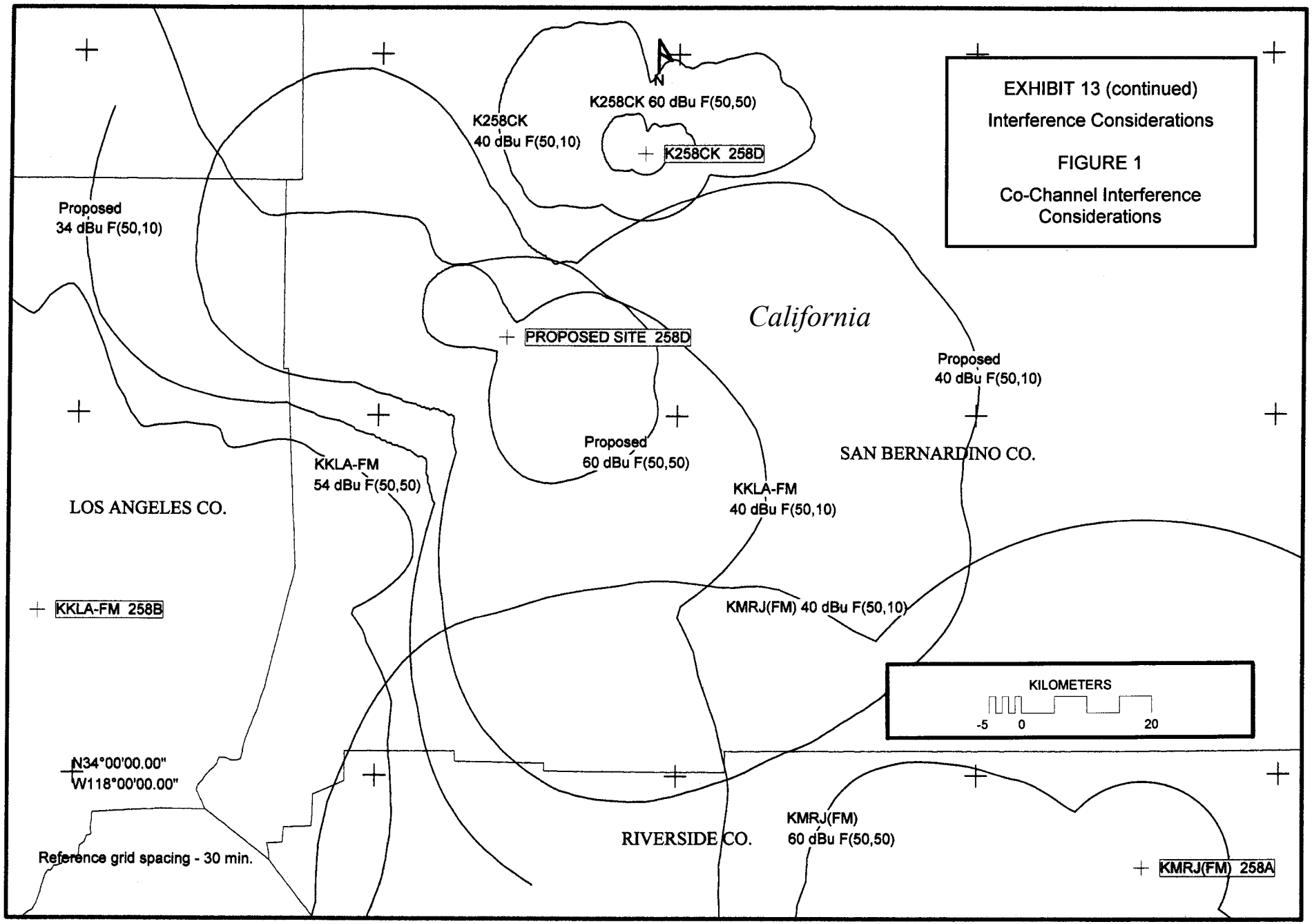


EXHIBIT 13 (continued)
Interference Considerations
FIGURE 1
Co-Channel Interference Considerations
N
K258CK 60 dBu F(50,50)
K258CK
40 dBu F(50,10)
K258CK 258D
Proposed
34 dBu F(50,10)
California
PROPOSED SITE 258D
Proposed
40 dBu F(50,10)
Proposed
60 dBu F(50,50)
SAN BERNARDINO CO.
KKLA-FM
54 dBu F(50,50)
LOS ANGELES CO.
KKLA-FM
40 dBu F(50,10)
KKLA-FM 258B
KMRJ(FM) 40 dBu F(50,10)
KILOMETERS
-5 0 20
N34°00'00.00"
W118°00'00.00"
Reference grid spacing - 30 min.
RIVERSIDE CO.
KMRJ(FM)
60 dBu F(50,50)
KMRJ(FM) 258A

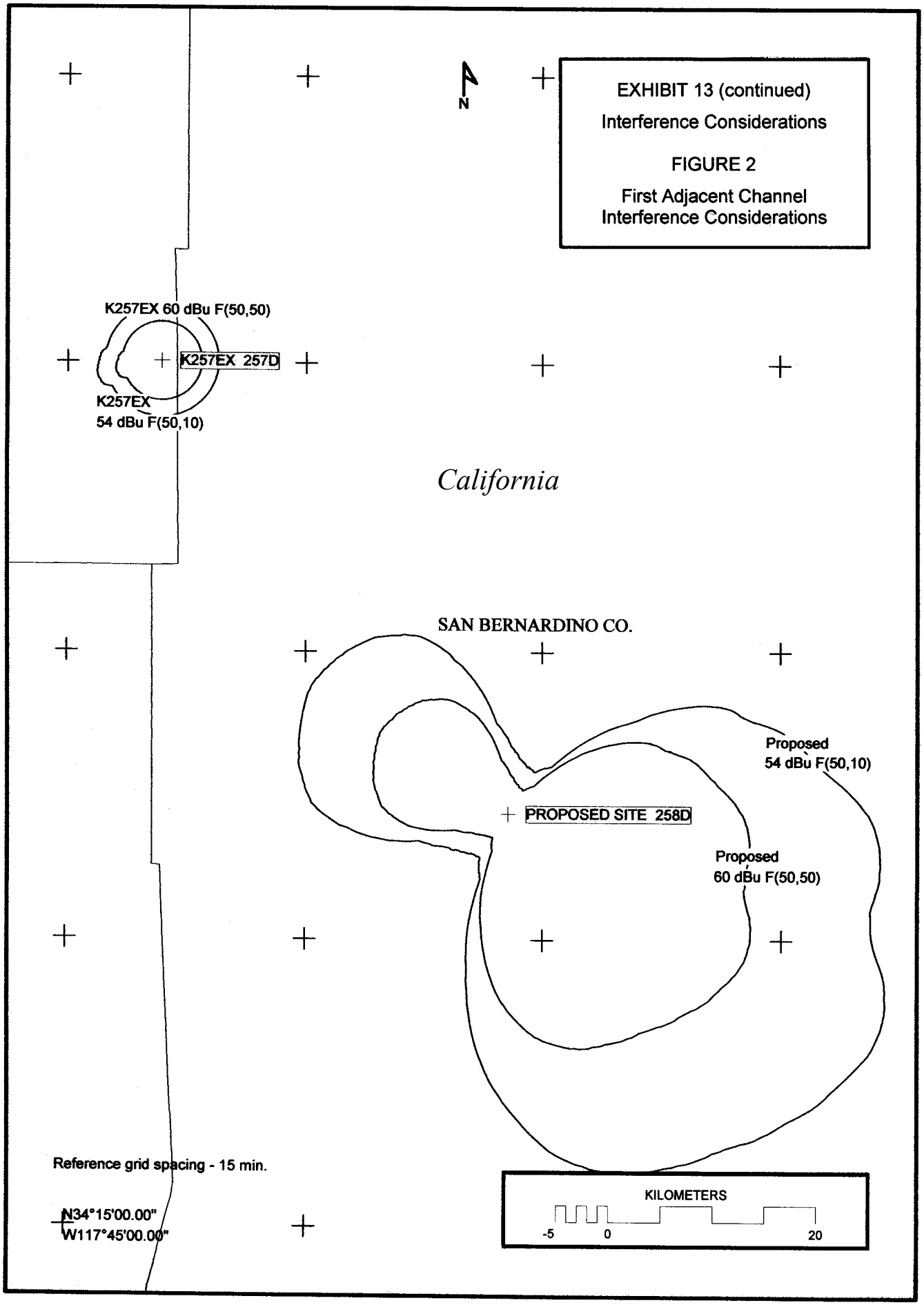


EXHIBIT 13 (continued)
Interference Considerations
FIGURE 2
First Adjacent Channel
Interference Considerations
N
K257EX 60 dBu F(50,50)
K257EX 257D
K257EX
54 dBu F(50,10)
California
SAN BERNARDINO CO.
Proposed
54 dBu F(50,10)
PROPOSED SITE 258D
Proposed
60 dBu F(50,50)
Reference grid spacing - 15 min.
N34°15'00.00"
W117°45'00.00"
KILOMETERS
-5
0
20

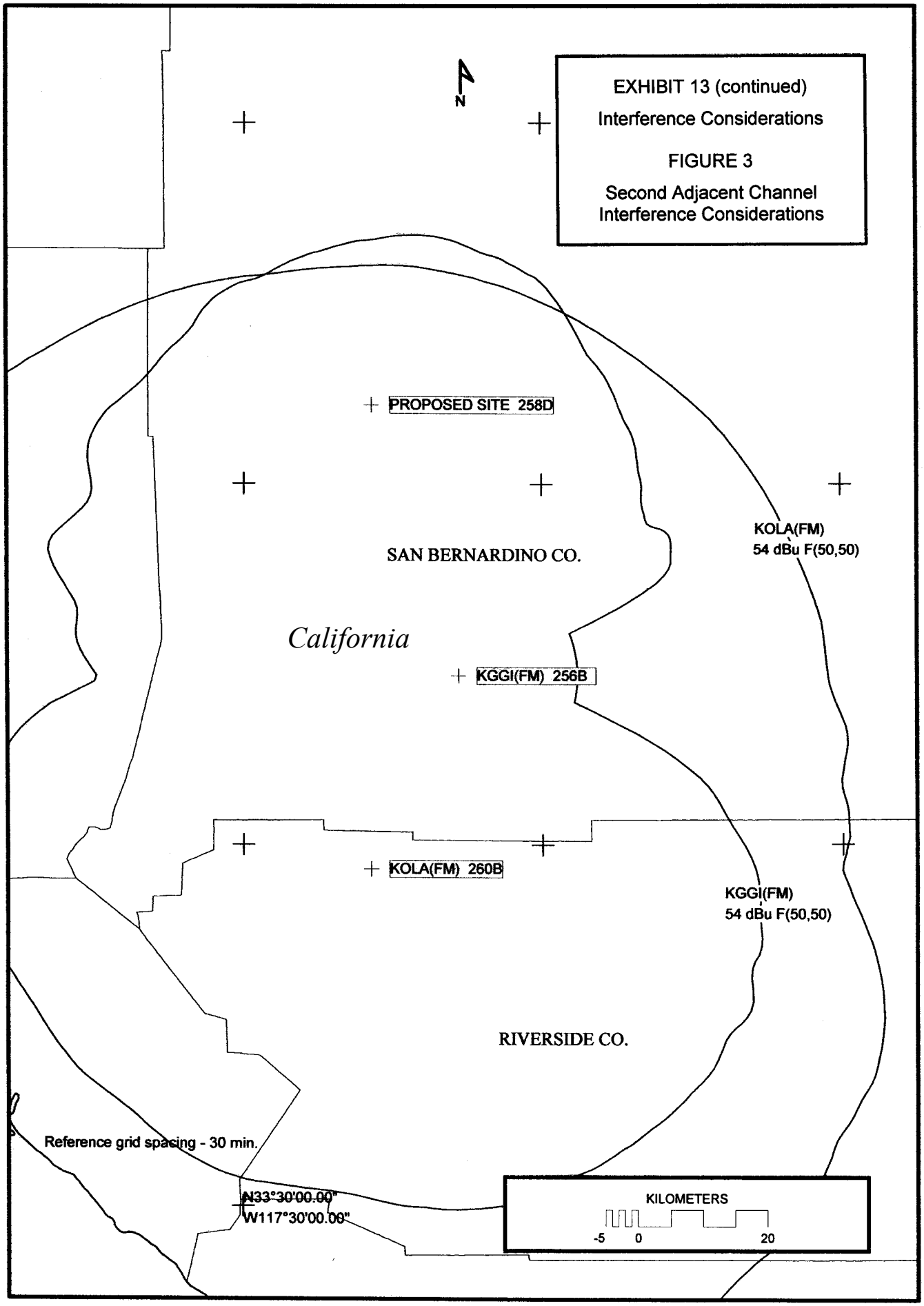
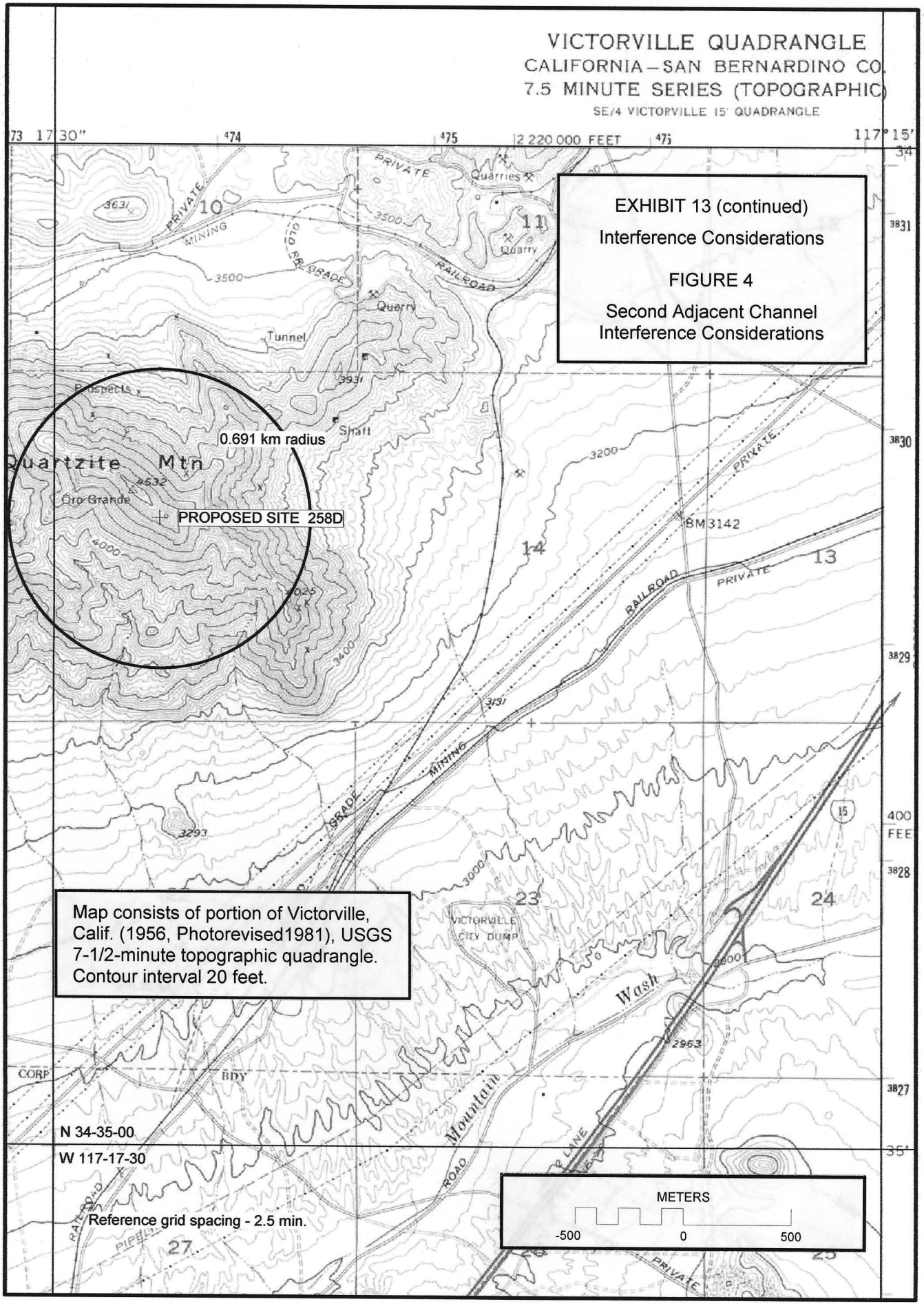


EXHIBIT 13 (continued)
Interference Considerations
FIGURE 3
Second Adjacent Channel
Interference Considerations
N
PROPOSED SITE 258D
SAN BERNARDINO CO.
California
KOLA(FM)
54 dBu F(50,50)
KGGI(FM) 256B
KOLA(FM) 260B
KGGI(FM)
54 dBu F(50,50)
RIVERSIDE CO.
Reference grid spacing - 30 min.
N33°30'00.00"
W117°30'00.00"
KILOMETERS
-5
0
20


VICTORVILLE QUADRANGLE
CALIFORNIA—SAN BERNARDINO CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
SE/4 VICTORVILLE 15' QUADRANGLE
EXHIBIT 13 (continued)
Interference Considerations
FIGURE 4
Second Adjacent Channel
Interference Considerations
0.691 km radius
PROPOSED SITE 258D
Quartzite Mtn
Oro Grande
Map consists of portion of Victorville, Calif. (1956, Photorevised1981), USGS 7-1/2-minute topographic quadrangle. Contour interval 20 feet.
N 34-35-00
W 117-17-30
Reference grid spacing - 2.5 min.
METERS
-500
0
500
PRIVATE
RAILROAD
MINING
Quarry
Tunnel
Shaft
Prospects
VICTORVILLE CITY DUMP
Wash
Mountain
ROAD
PIPELINE
CORP
BDY
BM 3142