



Broadcast Engineering Services of Bonny Doon, Inc.

415 Emerald Forest Lane
Bonny Doon, California 95060
(831) 420-1571 dmsml@well.com

Donald E. Mussell Jr. NCE-CBT
Consulting Engineer

Engineering Statement in support of an application for a New Commercial FM station at Taos, New Mexico

Background

GRTG&J Real Estate, LLC (GRTG) hereby submits an application for a new commercial FM station to serve the community of Taos, New Mexico. This engineering statement supports the long form application for the winner of Auction 79, which supports the original application BSFH-20090625AEM.

Proposal

The applicant requests authorization to build a new station on an existing tower at the following location:

36 23' 14" North
105 35' 22" West

The structure proposed to be used by the applicant is an existing tower. The height of this structure is 30 meters. The applicant proposes to utilize a two-bay circularly polarized non-directional antenna, side mounted on the existing structure, with 1000 watts effective radiated power on Channel 228 (93.5 mhz). This will provide a 70 dbu contour over the entire community of Taos, while maintaining contour clearance to surrounding facilities, as outlined in the attachments to this engineering statement.

The nearest airport is the Taos Muni Apt, and is 10.76 kilometers northwest (136 degrees true) of the existing tower structure.

The applicant requests 73.215 contour protection with respect to KKOB-FM (BLH-19841011BY) and KRMK (BNPH-20070501AHC). Contour clearances to and from the proposed new facility do not cause any overlap to all surrounding existing and proposed stations. With respect to KKOB-FM, FCC 73.215(e) calls for a minimum clearance of 142 kilometers (Class C to Class A, first adjacent) and this proposed facility is 151.85 kilometers distant. By reducing the effective radiated power to 1 KW, ample contour protection is created between the two facilities. With respect to KRMK, FCC 73.215(e) calls for a minimum clearance of 89 kilometers (Class C2 to Class A, first adjacent), and this proposed facility is 101.75 kilometers distant. There is no resulting contour overlap between the two facilities. The attached contour maps for each facility show the relevant contours and clearances.

RF Statement

There are no other existing or proposed broadcast services at this location. The applicant proposes to mount a two-bay, full-wave spaced circularly polarized FM antenna with a center of radiation 23 meters above ground. The proposed effective radiated power is 1 Kilowatt. This will produce a calculated RFR level of $21.74 \mu\text{W}/\text{sq. centimeter}$ @ 13.8 meters from the base of the tower. This is just over 10% of the public limit, and complies with FCC and ANSI regulations and limitations concerning RF exposure to the general public.

Summary

GRTG is ready to construct this new facility and begin service to the community of Taos, New Mexico. With the grant of this application, GRTG will be able to provide a unique, localized radio service for the residents of the area.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'D. O. O. O. O.', written in a cursive style.

Consulting Engineer
October 14, 2009

Broadcast Engineering Services of Bonny Doon, Inc.

Don Mussell, Consulting Engineer

Taos 228A

Gill Vigil Application

REFERENCE		CLASS = A	DISPLAY DATES
36 23 14.0 N.			DATA 10-06-09
105 35 22.0 W.	Current Spacings to 3rd Adj.		SEARCH 10-12-09
----- Channel 228 - 93.5 MHz -----			

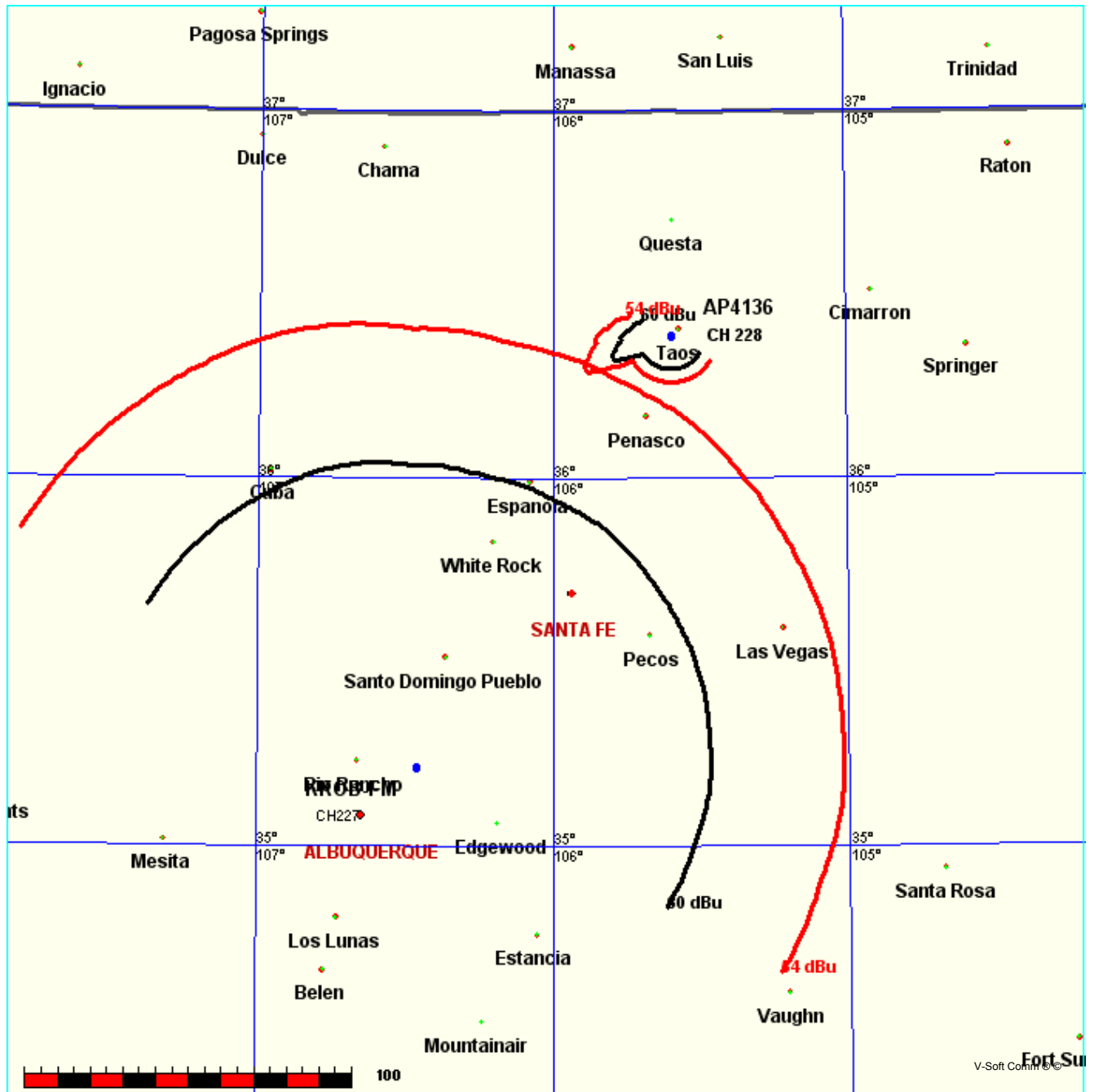
Call	Channel	Location		Azi	Dist	FCC	Margin
AP4136	APP 228A	Taos	NM	47.8	14.08	115.0	-100.92
AU7958052	VAC 228A	Taos	NM	47.8	14.08	115.0	-100.92
KKOB-FM	LIC 227C	Albuquerque	NM	210.9	151.85	165.0	-13.15
KRMK	CP -N 229C2	Las Vegas	NM	162.7	101.75	106.0	-4.25
One Step Application							
KYBR	LIC-Z 225C3	Espanola	NM	237.2	48.11	42.0	6.11
KALQ-FM	LIC 228A	Alamosa	CO	349.1	122.68	115.0	7.68
KYBR	LIC-Z 225C3	Espanola	NM	236.2	57.62	42.0	15.62
KRTN-FM	LIC 230C1	Raton	NM	72.3	110.27	75.0	35.27
KZRR	LIC 231C	Albuquerque	NM	210.9	151.78	95.0	56.78

Taos 228A
73.215 Spacing Study Map

FMCommander Single Allocation Study - 10-12-2009 -
AP4136's Overlaps (In= 0.0 km, Out= 0.0 km)

AP4136 CH 228 A
Lat= 36 23 14.0, Lng= 105 35 22.0
1.0 kW -195.7 M HAAT, 2134 M COR
Prot.= 60 dBu, Intef.= 54 dBu

KKOB-FM CH 227 C BLH19841011BY
Lat= 35 12 42.0, Lng= 106 26 59.0
21.5 kW 1265 M HAAT, 3274 M COR
Prot.= 60 dBu, Intef.= 54 dBu

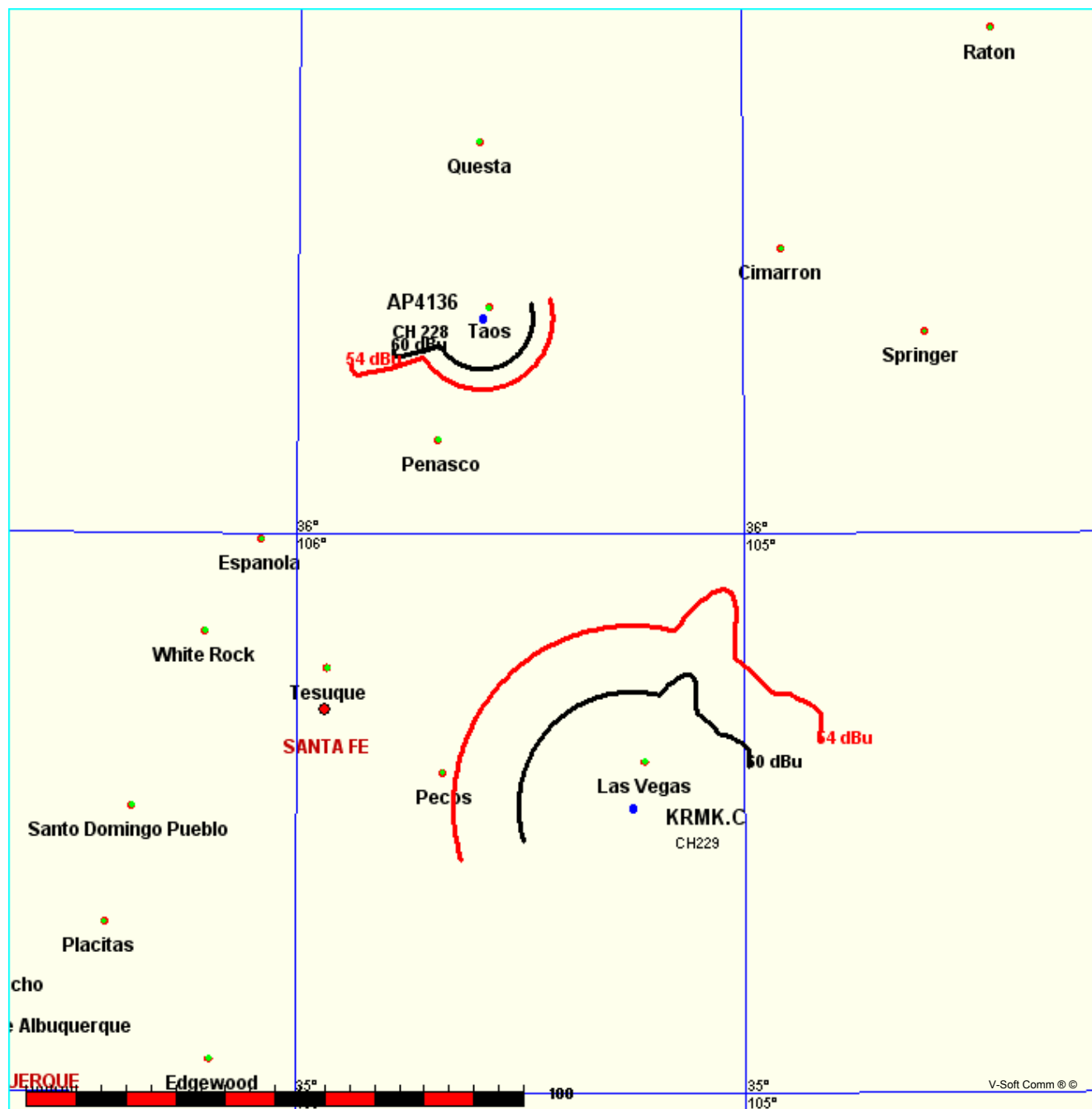


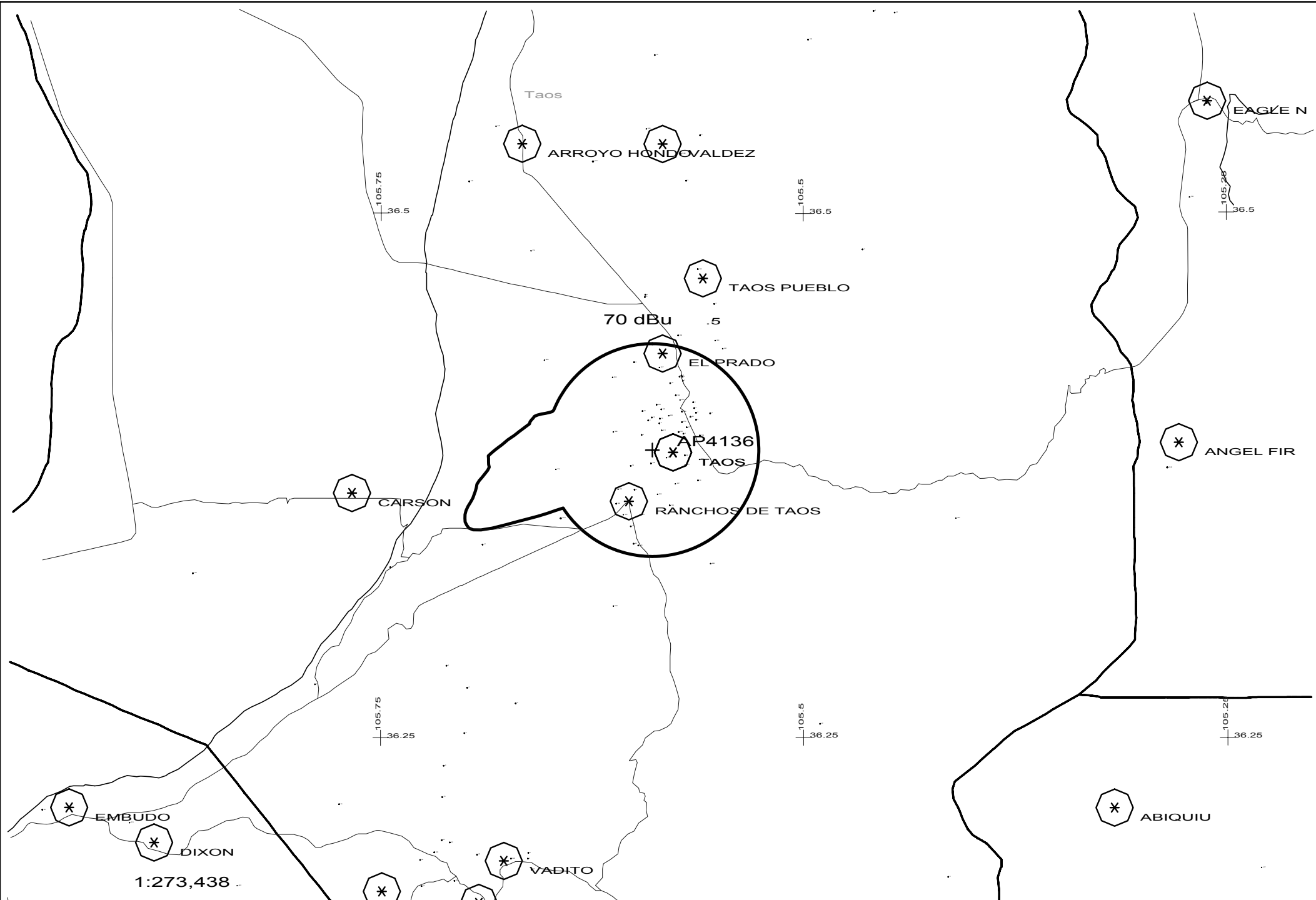
Taos 228A - KRMK.C
73.215 Spacing Study Map

FMCommander Single Allocation Study - 10-12-2009 -
AP4136's Overlaps (In= 0.0 km, Out= 0.0 km)

AP4136 CH 228 A
Lat= 36 23 14.0, Lng= 105 35 22.0
1.0 kW -195.7 M HAAT, 2134 M COR
Prot.= 60 dBu, Intef.= 54 dBu

KRMK.C CH 229 C2 73.215 N BNPH20070501AHC
Lat= 35 30 41.0, Lng= 105 15 18.0
26.0 kW 4 M HAAT, 2015 M COR
Prot.= 60 dBu, Intef.= 54 dBu





New Taos FM Ch228

N. Lat. 36 23 14 W. Lng. 105 35 22

AP4136

70 dbu Contour Map

**AFFIDAVIT AND QUALIFICATIONS OF
DONALD E. MUSSELL JR.**

State of California)
Bonny Doon)
County of Santa Cruz)

Donald E. Mussell Jr. affirms that he is a consulting radio and electronics engineer; that he is Certified as a Broadcast Engineer, Class 1, by the National Association of Radio and Telecommunications Engineers, Inc., License #E1-00619, issued in 1985;

That he is recognized as a Broadcast Technologist by the Society of Broadcast Engineers, License # 22301, and a member of the Society of Broadcast Engineers since 1980;

That he held a First Class Radiotelephone License from 1975 until 1985, when it was replaced by a lifetime General Class Radiotelephone license (PG-12-20588), issued by the Federal Communications Commission in January of 1985;

That he has submitted many applications to the Federal Communications Commission for broadcast and auxiliary broadcast construction permits and licenses, and that his experience in Radio and Television broadcast engineering extends over four decades;

That he declares, under penalty of perjury, that the foregoing engineering exhibits were prepared by him or under his direction and supervision; and that the statements contained therein are true and correct to the best of his belief and knowledge.

A handwritten signature in black ink, appearing to read 'D. Mussell Jr.', with a stylized, cursive flourish at the end.

Donald E. Mussell Jr. NCE-CBT
Consulting Engineer
October 14, 2009