

TECHNICAL STATEMENT
K229BT ESTES PARK, COLORADO 232D
CEDAR COVE BROADCASTING, INC.
FCC FORM 349
DECEMBER 2010

This Technical Statement is in support of FCC form 349 filed by Cedar Cove Broadcasting, Inc. for a minor change in the licensed facility of K229BT, facility ID 142150. It is proposing to remain at its current licensed tower site known as "Lee Hill" located at N. 40°-04'-20", W. 105°-21'-12", NAD 27, with an Effective Radiated Power of 110 Watts (0.110 KW) and utilizing a Scala model HDCA-10/HRM single yagi, directional horizontal only, type antenna. The antenna will be mounted at the 26 meter level on a 50 meter overall, unregistered, existing tower, with a Center of Radiation at 2425 meters Above Mean Sea Level. It also seeks to "one step" change channels from 229D to 232D, or its third adjacent channel.

Figure 1 shows a channel interference study conducted from the proposed site for K229BT. It shows that the proposed operation of K229BT on channel 232D, will not cause any prohibited outgoing interference to any licensed or proposed FM services, with the exception of KRKS Lafayette, Colorado operating on channel 234C, facility ID 58631. The proposed operation of K229BT on 232D is located within the protected 60 dBμ contour of 2nd adjacent station KRKS. Figure 2 shows the predicted F(50-50) field strength of KRKS at the proposed K229BT transmitter site is 131.6 dBμ. Therefore, the respective predicted interfering contour F(50-10) generated by the proposed K229BT on channel 229D is an additional 40 dBμ or 171.6 dBμ. Figure 3 shows the coverage area for the worse case 100 dBμ interference contour F(50-10) and shows that there is no

population in the area of interference. The applicant, Cedar Cove Broadcasting, Inc., respectfully requests a waiver of C.F.R. 74.1204(d) of the Commission's rules based on the fact that there is no population within the area of predicted interference. There are no homes nearby the proposed existing tower site, which is a privately owned 40 acre wooded area, with private access. The transmitter building is uninhabited and does not have indoor plumbing.

Figure 4 shows a more detailed interference study with K231AA Boulder, Colorado, facility ID 58631 on channel 231D. There will be no overlap of the proposed K229BT 54 dB μ interference contour on channel 232D and the protected 60 dB μ of K231AA.

The proposed operation of K229BT will 60 dB μ overlap with the currently licensed operation of K229BT as required since the new operation will be located at the same site as the currently licensed operation of K229BT.

Figure 5 shows the antenna polar plot of the proposed directional composite antenna system.

Figure 6 is a tabulation of distance to contours for the pertinent contours proposed by K229BT on channel 229D.

Figure 7 shows the proposed 60 dB μ of K229BT will be completely contained inside of the current 60 dB μ predicted coverage contour of the station being rebroadcast, KLDV Morrison, Colorado on channel 216C0, facility ID 12354. The proposed operation of K229BT will be considered a "fill-in" translator for KLDV, thus some of the maximum allowable ERP limits on some of the pertinent radials will be exceeded.

However, the maximum ERP on any radial will not exceed 110 watts, thus this proposed operation is in compliance with 74.1235(a).

It was concluded that the new proposed operation of K229BT Estes Park, Colorado on channel 232D will not cause any harmful interference to any existing stations, and will be in full compliance with the commission's rules.

FIGURE 1, DETAILED INTERFERENCE STUDY, CH. 232D

K229BT ESTES PARK, COLORADO

REFERENCE CH# 232D - 94.3 MHz, Pwr= 0.11 kW DA, HAAT= 288.5 M, COR= 2425 M DISPLAY DATES
 40 04 20.0 N. Average Protected F(50-50)= 18.08 km DATA 12-29-10
 105 21 12.0 W. Standard Directional SEARCH 12-30-10

CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT* (Overlap in km)
229D Estes Park	K229BT *	LIC DH_ CO	0.0 0.0	0.0 BLFT20101126AAU	40 04 20.0 105 21 12.0	0.090 0.4	0.4 2425	11.0 Cedar Cove Broadcasting, I	-6.3*	-11.1*
232C Colorado Springs	KILO	LIC _C_ CO	163.9 344.2	153.3 BLH20070426AAL	38 44 44.0 104 51 42.0	79.000 670	206.0 2922	98.1 Colorado Springs Radio Bro	-65.3*<	17.9
234C Lafayette	KRKS-FM **	LIC DCN CO	236.8 56.8	0.1 BMLH19981009KC	40 04 19.0 105 21 14.0	100.000 300	2.1 2442	47.9 Salem Media Of Colorado, I	-6.8*<	-48.3* *
232C3 Wellington	KMAX-FM	LIC _CX CO	10.5 190.6	96.7 BLH20021110AAV	40 55 41.0 105 08 36.0	8.700 168	121.2 2131	49.4 Townsquare Media Of Ft. Co	-34.9*<	7.9
231D Boulder	K231AA	LIC _CN CO	139.7 319.8	15.6 BLFT19960111TK	39 57 54.0 105 14 05.0	0.205 -133	9.7 1719	6.7 Citicasters Licenses, Inc.	-1.3<	0.2
229D Ward	K229AC	LIC _E_ CO	232.2 52.1	18.0 BLFT20061218ACR	39 58 22.0 105 31 13.0	0.028 0.4	0.4 2655	11.7 Boulder Community Broadcas	12.6	5.4
230A Loveland	KRKU	LIC ZCX CO	17.2 197.3	49.0 BLH20101214ACL	40 29 37.0 105 10 53.0	0.580 319	1.6 2098	32.4 Way Media, Inc.	37.6	16.4
229D Berthoud	631534	APP DE_ CO	53.4 233.6	31.4 BNPFT20030312ADC	40 14 24.0 105 03 23.0	0.100 0.1	0.1 1637	2.7 Educational Communications	21.0	28.6
286C Denver	KXKL-FM	LIC _CN CO	166.8 346.9	53.9 BLH19901023KB	39 36 00.0 105 12 35.0	100.000 356	86.2 2448	72.6 Wilks License Company-denv	29.0R	24.9M
229D Lakewood	K229BS	LIC DC_ CO	165.2 345.3	39.4 BLFT20100719AFS	39 43 46.0 105 14 08.0	0.099 0.6	0.6 2246	10.2 Mountain Community Transla	30.3	28.8
233D Greeley	652147	APP _C_ CO	56.2 236.6	62.9 BNPFT20030317MSW	40 23 05.0 104 44 12.0	0.060 9.0	9.0 1508	6.5 Kevin J. Youngers	42.8	39.0
230D Windsor	631544	APP DE_ CO	17.3 197.4	49.0 BNPFT20030312ADM	40 29 36.0 105 10 52.0	0.010 0.2	0.2 2078	0.6 Educational Communications	39.1	48.3
235D Masonville	K235BT	LIC DV_ CO	17.2 197.3	49.1 BLFT20090731AEP	40 29 38.0 105 10 53.0	0.065 0.2	0.2 2081	6.5 Mountain Community Transla	39.2	42.3
230D Fort Lupton	630344	APP _C_ CO	90.3 270.7	51.3 BNPFT20030317AZW	40 04 05.0 104 45 08.0	0.170 0.9	0.9 1611	11.4 Horizon Christian Fellowsh	46.3	39.8
230D Fort Lupton	644473	APP _C_ CO	83.4 263.8	52.3 BNPFT20030317GEL	40 07 28.1 104 44 36.1	0.115 0.8	0.8 1630	11.8 Radio Assist Ministry, Inc	45.7	40.4
230A Frisco	KYSL	LIC _CN CO	228.8 48.3	86.8 BLH19940808KA	39 33 22.0 106 06 53.0	0.560 324	1.6 3549	39.1 Krystal Broadcasting, Inco	80.0	47.1
232D Breckenridge	K232AC	LIC DHN CO	218.3 37.9	86.5 BLFT129	39 27 35.0 105 58 40.0	0.048 505	27.2 3840	6.6 Summit Public Radio And Tv	47.8	54.0
231C2 Phippsburg	KEZZ	LIC NCX CO	286.6 105.7	118.5 BLH20090522ACV	40 22 03.0 106 41 28.0	1.750 380	64.1 3107	42.3 Youngers Colorado Broadcas	51.4	74.7
286D Boulder	KXKL-FM1	LIC DC_ CO	136.1 316.2	17.3 BLFTB20030502ABA	39 57 37.0 105 12 46.0	1.500 11.2	11.2 1762	11.2 Wilks License Company-denv	10.0R	7.3M
231D Byers	649226	APP _C_ CO	112.2 293.0	106.3 BNPFT20030312ARO	39 42 19.0 104 12 18.0	0.200 16.4	16.4 1705	11.0 Frank G. Mccoy	84.0	93.0
229C1 Limon	KIIQ	RSV-A ____ CO	118.1 299.2	161.8	39 22 34.0 103 41 43.0	100.000 299	10.2 1996	71.2 Percheron Associates, Llc	151.0	90.5
230D Westcreek	631674	APP _C_ CO	164.6 344.8	103.2 BNPFT20030310BGE	39 10 33.0 105 02 03.1	0.010 0.2	0.2 2823	9.3 Way-fm Media Group, Inc.	94.9	93.4
229C1 Limon	KIIQ	APP NCX CO	118.1 299.2	161.8 BPH20070313ABN	39 22 34.0 103 41 43.0	100.000 205	8.5 1901	62.8 Percheron Associates, Llc	152.7	98.8
234D Vail	633927	APP DC_ CO	242.8 62.1	105.4 BNPFT20030313APU	39 38 05.0 106 26 47.0	0.010 0.0	0.0 2963	1.6 Educational Communications	101.2	103.2
229C3 Cheyenne	KAZY	LIC _CX WY	25.1 205.5	130.6 BLH20060615AAH	41 08 04.0 104 41 32.0	25.000 35	2.3 1859	22.7 Freisland Broadcasting Cor	117.6	107.7

										Page # 2	
CH CITY	CALL	TYPE STATE	ANT	AZI <--	DIST FILE #	LAT LNG	PWR (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap	*OUT* in km)
234D Cheyenne	K234AH	LIC _C_ WY		13.5 193.7	117.5 BLFT20090723AGJ	41 06 02.0 105 01 29.0	0.092	0.7 2107	8.8 Mountain Community Transla	108.2	108.5
229C1 Limon	KIIQ	CP _CX CO		118.1 299.1	161.9 BPH20070313ABN	39 22 34.0 103 41 41.0	100.000 117	7.2 1823	53.0 Percheron Associates, Llc	154.5	108.7
285C2 Cheyenne	KRRR	LIC NCX WY		25.1 205.5	130.6 BLH20031125AIV	41 08 04.0 104 41 32.0	25.500 35	23.9 1859	22.8 Brahmin Broadcasting Corpo	15.0R	115.6M
233C3 Merino	KRFD	LIC _CX CO		74.1 255.6	196.4 BLH20090622ADG	40 31 57.0 103 07 22.0	15.000 124	65.9 1431	44.4 Northeast Colorado Broadca	120.7	138.2
229C1 Craig	KRAI-FM	LIC _CN CO		287.1 105.6	199.6 BLH6997	40 34 35.0 107 36 29.0	100.000 299	11.0 2315	76.2 Wild West Radio, Inc.	188.0	123.1
229C2 Salida	KSBV	LIC _CX CO		197.6 17.2	189.2 BLH20020828AAQ	38 26 47.0 106 00 37.0	1.000 830	2.2 3572	58.8 Arkansas Valley Broadcasti	174.5	129.6
231C1 Scottsbluff	KNEB-FM	LIC _CN NE		37.3 218.4	229.4 BLH19810904AB	41 42 04.0 103 40 49.0	100.000 207	87.3 1512	57.8 Nebraska Rural Radio Assoc	130.2	151.8
231C Montrose	KKXK	LIC _CY CO		226.3 44.9	275.8 BLH19961009KC	38 20 16.0 107 38 23.0	100.000 574	134.4 3094	89.9 Ccr-montrose Iv, Llc	130.6	172.0
233C3 New Castle	KTUN	LIC _CX CO		253.9 72.5	195.0 BLH20050603ABU	39 33 56.0 107 32 01.0	25.000 -121	35.6 1935	22.7 Wildcat Communications Llc	152.5	153.7
229A Limon	KIIQ	LIC _CX CO		121.6 302.7	168.6 BLH20041025AEJ	39 16 00.0 103 41 15.0	1.000 -32	1.6 1649	10.2 Percheron Associates, Llc	166.3	158.2
233D Glenwood Springs	KTUN-FM1	LIC DV_ CO		251.9 70.7	177.5 BLFTB20051229AAQ	39 33 40.0 107 19 01.0	0.340	4.7 2216	3.3 Wildcat Communications, L.	165.6	169.7

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone = 2, Co to 3rd adjacent.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
***affixed to 'IN' or 'OUT' values = site inside protected contour.
Reference station has protected zone issue: Table Mtn.

* Translator being modified by this application.

** No real life interference will occur with KRKS on channel 234, since the interference contour
produced by the proposed K229BT will not coverage any population. See the Technical Statement for
more details.

FIGURE 2, KRKS 131.6 DBU CONTOUR AT K229BT SITE
K229BT ESTES PARK, COLORADO

Coverage Study - NGDC 30 SEC
12-30-2010

K229BT CH232 D , 0.11 kW, 288.5M HAAT, 2425.0M COR AMSL
Service Contour = 132 dBu. Population = 0

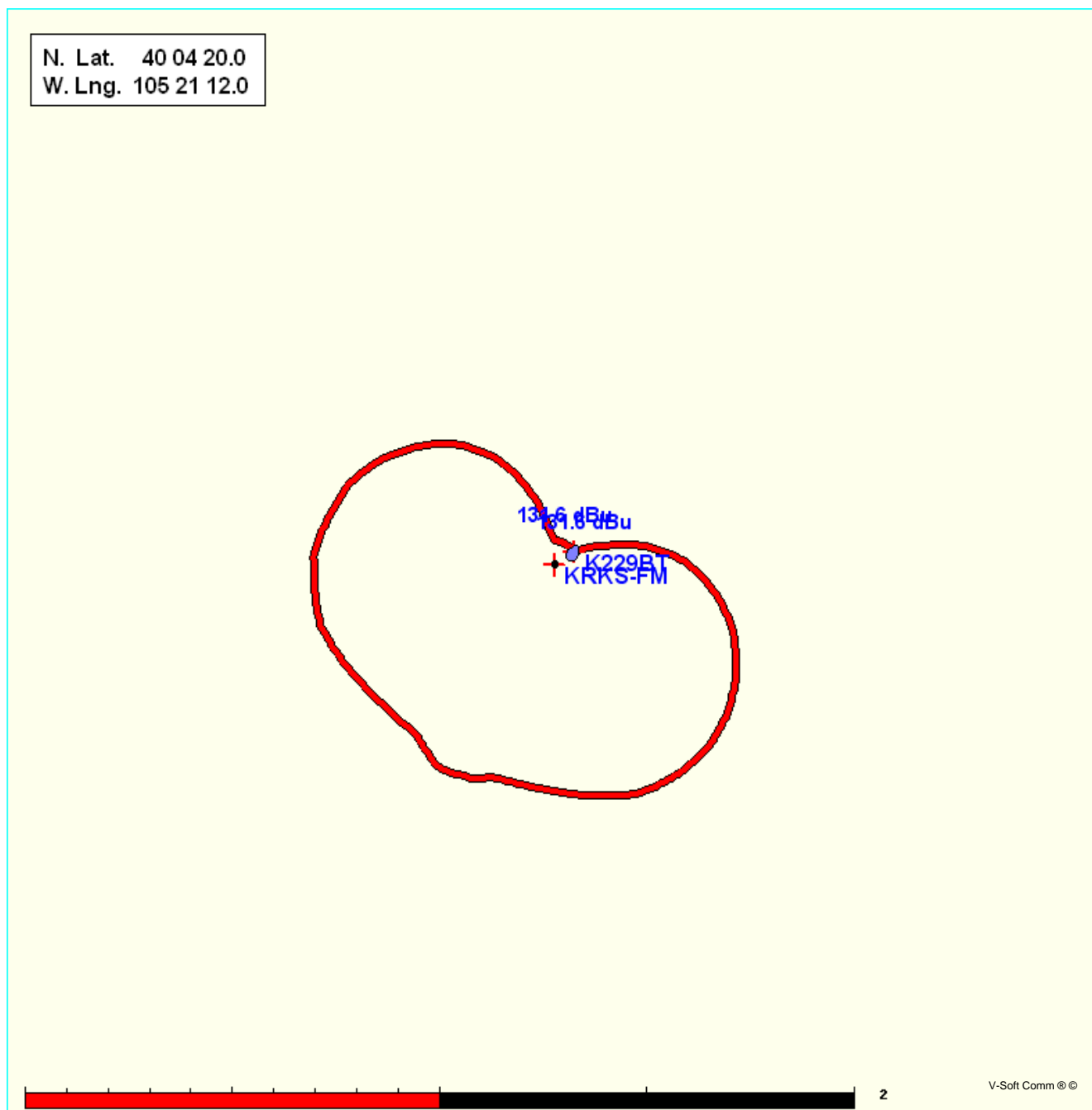


FIGURE 3, PROPOSED 100 DBU INTERFERENCE CONTOUR
K229BT ESTES PARK, COLORADO

Coverage Study - NGDC 30 SEC
12-30-2010

K229BT CH232 D , 0.11 kW, 288.5M HAAT, 2425.0M COR AMSL
Interference Contour = 100 dBu. Population = 0

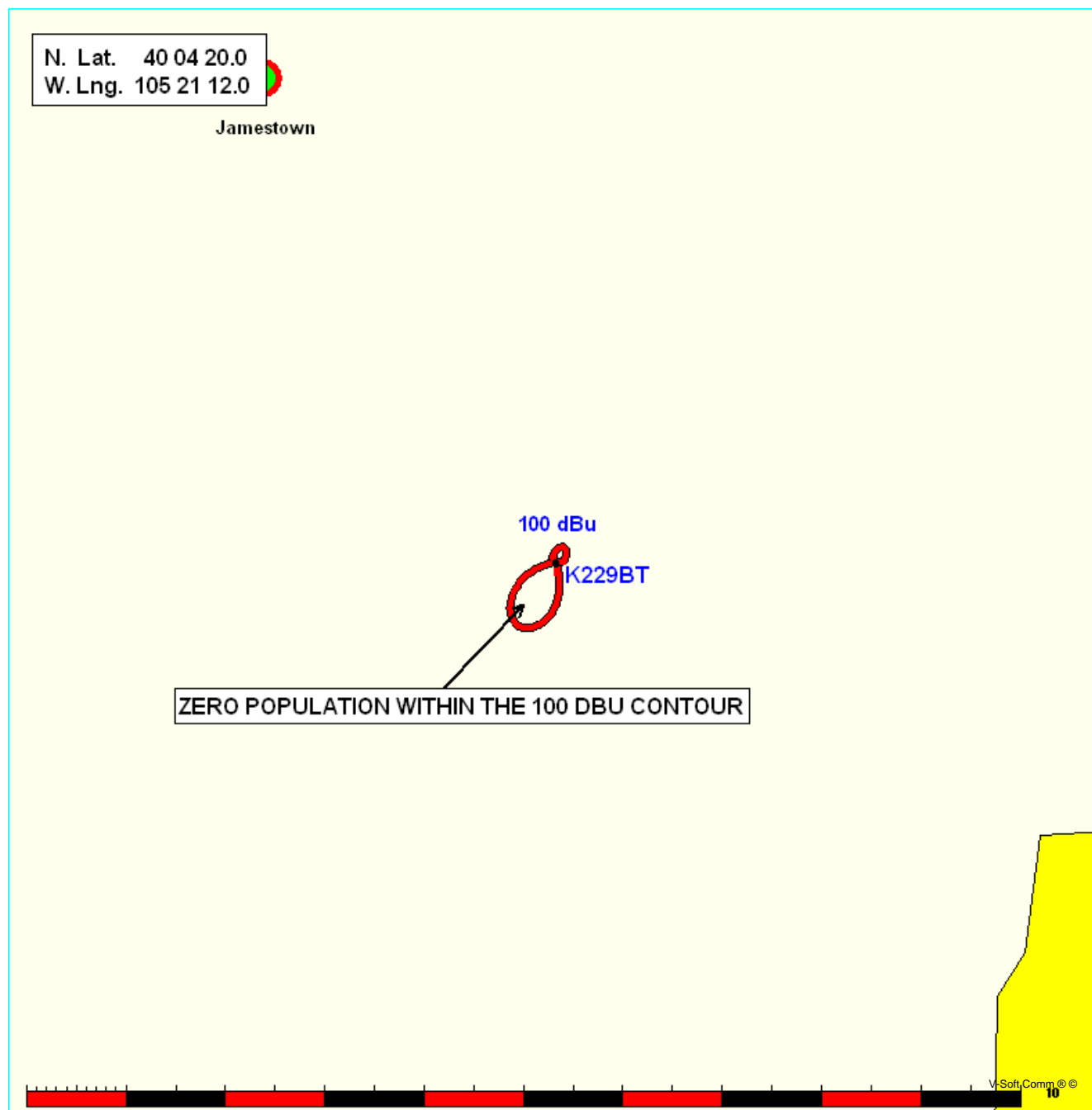


FIGURE 4, DETAILED INTERFERENCE STUDY WITH K231AA
K229BT ESTES PARK, COLORADO

FMCommander Single Allocation Study - 12-30-2010 - NGDC 30 SEC
K229BT's Overlaps (In= -1.35 km, Out= 0.21 km)

K229BT CH 232 D DA
Lat= 40 04 20.0, Lng= 105 21 12.0
0.11 kW 288.5 M HAAT, 2425 M COR
Prot.= 60 dBu, Intef.= 54 dBu

K231AA CH 231 D BLFT19960111TK
Lat= 39 57 54.0, Lng= 105 14 05.0
0.205 kW -133 M HAAT, 1719 M COR
Prot.= 60 dBu, Intef.= 54 dBu

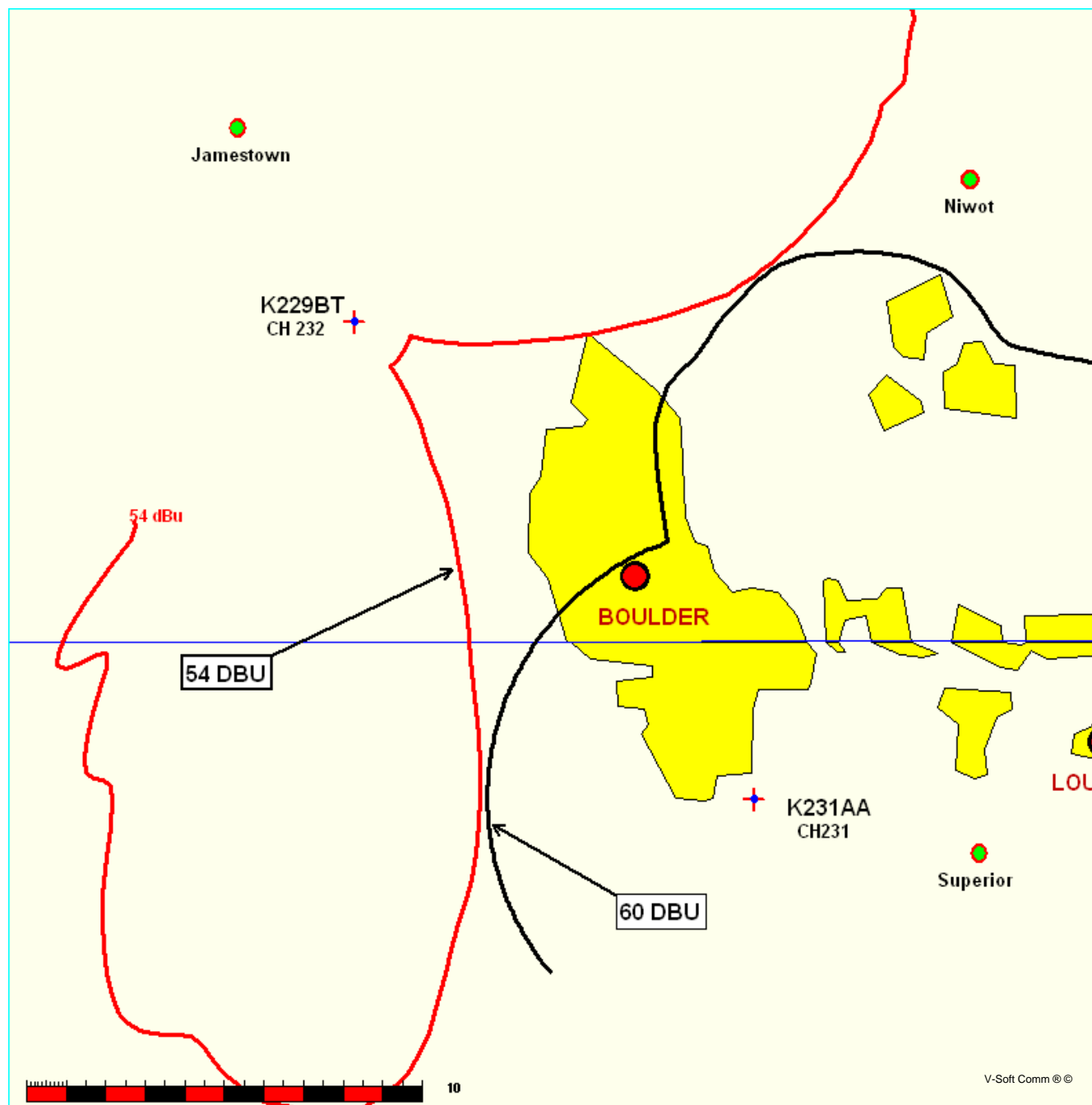


FIGURE 5
K229BT ESTES PARK, CO
DIRECTIONAL ANTENNA DATA

12-30-2010

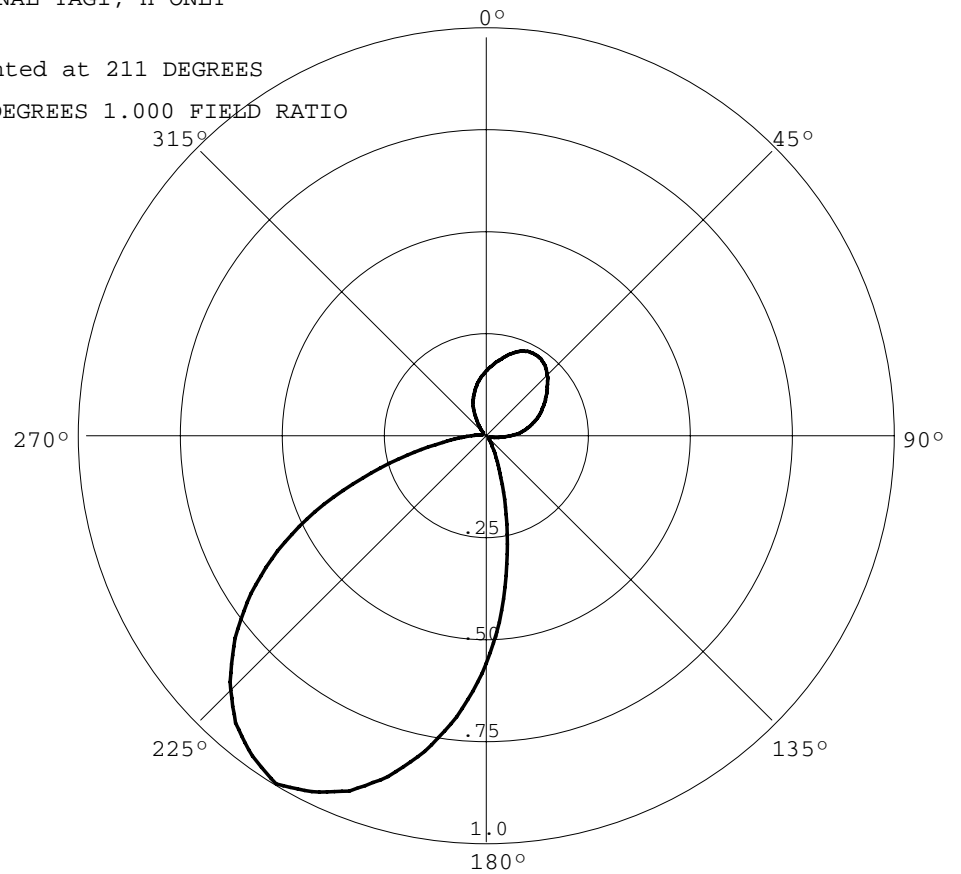
RMS(V) = .382

SCALA HDCA-10/HRM DIRECTIONAL YAGI, H-ONLY

Graph is Relative Field

Azi	Field	dBk	kW
000	0.160	-25.5	0.003
010	0.190	-24.0	0.004
020	0.220	-22.7	0.005
030	0.233	-22.2	0.006
040	0.225	-22.5	0.006
050	0.196	-23.7	0.004
060	0.166	-25.2	0.003
070	0.135	-27.0	0.002
080	0.101	-29.5	0.001
090	0.060	-34.0	0.000
100	0.025	-41.6	0.000
110	0.010	-49.6	0.000
120	0.010	-49.6	0.000
130	0.010	-49.6	0.000
140	0.010	-49.6	0.000
150	0.028	-40.6	0.000
160	0.098	-29.8	0.001
170	0.296	-20.2	0.010
180	0.560	-14.6	0.034
190	0.773	-11.8	0.066
200	0.923	-10.3	0.094
210	0.995	-9.6	0.109
220	0.944	-10.1	0.098
230	0.808	-11.4	0.072
240	0.607	-13.9	0.041
250	0.348	-18.8	0.013
260	0.126	-27.6	0.002
270	0.036	-38.5	0.000
280	0.012	-48.0	0.000
290	0.010	-49.6	0.000
300	0.010	-49.6	0.000
310	0.010	-49.6	0.000
320	0.020	-43.6	0.000
330	0.051	-35.4	0.000
340	0.094	-30.1	0.001
350	0.129	-27.4	0.002

Oriented at 211 DEGREES
211 DEGREES 1.000 FIELD RATIO



Contour.out

N. Lat. = 400420.0 W. Lng. = 1052112.0
 HAAT and Distance to Contour,
 FCC, FM 2-10 Mi, 51 pts Method - USGS 03 SEC

FIGURE 6, DISTANCE TO CONTOURS

Azi.	AV EL	HAAT	dBk	60-F5	54-F1	100-F1
000	2224.0	201.0	-25.40	5.89	8.56	0.12
010	2113.1	311.9	-23.92	8.01	11.63	0.14
020	1963.1	461.9	-22.66	10.30	15.27	0.16
030	1886.2	538.8	-22.24	11.07	17.15	0.17
040	1763.3	661.7	-22.66	11.67	19.05	0.16
050	1738.9	686.1	-23.92	10.63	17.74	0.14
060	1711.7	713.3	-25.40	9.43	16.15	0.12
070	1679.7	745.3	-27.11	8.11	13.87	0.10
080	1662.0	763.0	-29.85	6.30	11.03	0.07
090	1662.0	763.0	-34.78	3.76	6.97	0.04
100	1652.2	772.8	-42.35	1.65	3.18	0.02
110	1667.5	757.5	-49.59	0.74	1.47	0.01
120	1687.7	737.3	-49.59	0.74	1.47	0.01
130	1722.6	702.4	-49.59	0.74	1.47	0.01
140	1761.7	663.3	-49.59	0.74	1.47	0.01
150	1881.3	543.7	-40.04	2.12	3.95	0.02
160	2084.2	340.8	-28.92	5.66	8.94	0.08
170	2072.4	352.6	-19.48	11.29	16.12	0.24
180	2135.0	290.0	-14.24	13.78	20.55	0.43
190	2239.1	185.9	-11.61	12.83	19.16	0.58
200	2278.9	146.1	-10.15	12.29	18.22	0.69
210	2359.7	65.3	-9.59	8.56	12.07	0.74
220	2362.8	62.2	-10.15	8.05	11.47	0.69
230	2419.9	5.1	-11.61	5.13	7.26	0.58
240	2517.3	-92.3	-14.24	4.37	6.24	0.43
250	2568.8	-143.8	-19.48	3.25	4.57	0.24
260	2674.8	-249.8	-28.92	1.94	2.69	0.08
270	2638.1	-213.1	-40.04	1.61	1.61	0.02
280	2656.8	-231.8	-49.59	0.74	1.47	0.01
290	2652.3	-227.3	-49.59	0.74	1.47	0.01
300	2607.0	-182.0	-49.59	0.74	1.47	0.01
310	2517.6	-92.6	-49.59	0.74	1.47	0.01
320	2422.6	2.4	-42.35	1.61	1.61	0.02
330	2335.2	89.8	-34.78	2.25	3.24	0.04
340	2294.3	130.7	-29.85	3.59	5.30	0.07
350	2294.5	130.5	-27.11	4.30	6.23	0.10

Ave EI = 2136.33 M HAAT= 288.67 M AMSL= 2425

FIGURE 7, PROPOSED 60 DBU AND KLDV MORRISON, CO, CH. 216C0
K229BT ESTES PARK, COLORADO

Coverage Study - NGDC 30 SEC
12-30-2010

K229BT CH216 D , 0.11 kW, 288.5M HAAT, 2425.0M COR AMSL
Service Contour = 60 dBu. Population = 2,577,732

