TECHNICAL STATEMENT
K249EX DENVER, COLORADO
MOUNTAIN COMMUNITY TRANSLATORS, LLC
FCC FORM 349
FEBRUARY 2017

This Technical Statement is made in support of a minor change application for FM translator station K249EX at Denver, Colorado, facility ID 157657. K249EX seeks to modify its current directional pattern and increase its Effective Radiated Power from 140 watts (0.14 KW) to 250 watts (0.25 KW). It will remain a "fill-in" translator for KBNO(AM) Denver, Colorado. No other changes are being proposed. The following will show that the new proposed operation of K249EX will meet all of the Commissions technical requirements for an FM translator station.

The proposed operation of K249EX specifies an Effective Radiated Power of 0.25 kilowatts. It will operate with a Custom BEXT model TFC2K-D directional antenna with circular polarization. The antenna will be mounted on an existing non-registered tower, with an overall height of 10 meters above the ground. The antenna will be mounted with a Center of Radiation of 10 meters above the ground, and 2253 meters Above Mean Sea Level. The coordinates of this tower are located at N 39° 43' 46.1", W 105° 14' 08.1", NAD 27. This is a multi-user site located on Lookout Mountain. There are several towers and mounting poles at this facility. This will be the only antenna mounted on a 10 meter monopole at this site. It will replace the current antenna system for K248EX at the same height.

Figure 1 is a detailed interference study conducted on channel 249D with these new proposed facilities. It shows that the new operation of K249EX will not cause any

interference to any existing or proposed FM stations on any of the pertinent same channel or adjacent channels to channel 249, with the exception of 2nd adjacent channel station KBCO Boulder, Colorado operating on channel 247C, facility ID 48966.

The proposed operation of K249EX on 249D is located within the protected 60 dBμ contour of 2nd adjacent KBCO. The predicted F(50-50) field strength of KBCO at the proposed K249EX transmitter site is 91.9 dBμ, see figure 2. Therefore, the respective predicted interfering contour F(50-10) generated by the proposed K249EX on channel 249D is an additional 40 dBμ or 131.9 dBμ.

Figure 3 shows the predicted 131.9 dBμ interference contour. The applicant, Mountain Community Translators, LLC, 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 with private access. The transmitter building is uninhabited and does not have indoor plumbing. Should any unforeseen actual interference be caused, the licensee will immediately cease broadcasting with K249EX until such interference can be eliminated.

Figure 4 is a tabulation of the directional antenna pattern.

The proposed operation of K249EX Denver will be considered a “Fill-In” operation for Class B AM station KBNO Denver, Colorado, facility ID 59956. KBNO(AM) operates with 5 kilowatts daytime with a directional antenna system on 1280 kHz. Figure 5 shows that the proposed 60 dBμ contour for the proposed K249EX will not extend beyond the daytime 2.0 mV/m contour of KBNO. Since this is a “Fill-In” translator,

the maximum ERP will not exceed the maximum permissible ERP of 250 watts in any azimuth.

It was found that the new proposed operation of K249EX Denver, Colorado on channel 249D, will satisfy all of the required commission rules and regulations for an FM translator station.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE STUDY
K249EX DENVER, CO, CH. 249D

REFERENCE CH# 249D - 97.7 MHz, Pwr= 0.25 kW DA, HAAT= 0.0 M, COR= 2253 M DISPLAY DATES
39 43 46.1 N. Average Protected F(50-50)= 7.09 km DATA 02-26-17
105 14 08.1 W. Standard Directional SEARCH 02-27-17

CH CALL / CITY	TYPE ANT / STATE	AZI <--	DIST / FILE #	LAT / LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) / LICENSEE	*IN* (Overlap in km)	*OUT*
249D K249EX	LIC DC_	0.0	0.00	39 43 46.1	0.140	24.3	6.1	-47.0*	-77.0*
Denver	CO	0.0	BLFT20161109ABY	105 14 08.1		2253	Mountain Community Transla		
249D K249EX	APP DC_	0.0	0.00	39 43 46.1	0.250	23.5	5.9	-46.2*	-76.7*
Denver	CO	0.0	BPFT20170207ABR	105 14 08.1		2253	Mountain Community Transla		
247C KBCO **	LIC DEY	346.7	20.98	39 54 48.0	100.000	12.3	87.2	-14.9	-67.3**
Boulder	CO	166.7	BMLH19960506KA	105 17 32.0	469	2583	Citicasters Licenses, Inc.		
249C2 KSJL	CP _CX	103.6	94.48	39 31 32.0	50.000	135.4	51.7	-56.7*	2.7
Strasburg	CO	284.3	BPED20140304ADG	104 10 02.0	150	1854	Radio 74 Internationale		
249C2 KZYR	LIC NC_	264.6	104.40	39 38 05.0	15.000	128.7	54.3	-35.9*	26.2
Avon	CO	83.8	BLH20010913AAK	106 26 47.0	134	3028	Cool Radio, Llc		
249C3 KSJL	LIC NH_	91.4	88.43	39 42 19.0	25.000	99.8	22.7	-24.2*	29.4
Strasburg	CO	272.1	BLED20120315AEJ	104 12 17.0	16	1621	Radio 74 Internationale		
250C1 KXBG	CP _CN	1.5	129.46	40 53 42.0	100.000	109.0	74.7	-1.9	20.0
Cheyenne	WY	181.6	BPH19981207IC	105 11 38.0	247	2197	Citicasters Licenses, Inc.		
250L1 NEW	CP ___	60.4	21.12	39 49 22.5	0.100		2.6		0.6
Westminster	CO	240.6	BNPL20131022ANK	105 01 15.0	-13	1619	Regis University		
251C KKFM	LIC _CN	163.5	114.12	38 44 36.0	71.000	14.1	97.1	77.8	15.7
Colorado Springs	CO	343.8	BLH19940321KC	104 51 44.0	698	2949	Radio License Holding Cbc,		
251D K251AB	LIC DCN	15.1	58.74	40 14 24.0	0.250	1.1	11.6	36.1	46.4
Longmont	CO	195.2	BLFT19920831TD	105 03 19.0	77	1615	Bonneville International C		
250C1 KXBG	LIC _CN	7.2	153.45	41 06 01.0	100.000	93.8	63.3	37.2	57.3
Cheyenne	WY	187.3	BLH19800229AD	105 00 23.0	165	2174	Citicasters Licenses, Inc.		
248D K248AS	LIC _C_	162.3	98.25	38 53 10.0	0.250	10.1	7.1	65.9	51.5
Woodland Park	CO	342.5	BLFT20120927AGP	104 53 24.0	-105	2215	Educational Communications		
248D K248AP	LIC _H_	260.0	72.50	39 36 50.0	0.105	8.1	5.7	53.0	56.6
Silverthorne	CO	79.5	BLFT20010713ABO	106 04 02.0	-288	2861	Skandia, Llc		
248C3 KWUZ	CP NCX	205.7	157.01	38 27 11.0	0.250	65.6	45.5	77.0	100.9
Poncha Springs	CO	25.2	BPH20150212ABF	106 01 02.0	834	3575	Three Eagles Communication		
248C2 KSRX	LIC _CX	64.9	195.08	40 27 15.1	38.000	81.8	54.9	101.5	125.1
Sterling	CO	246.2	BMLH20100204ADR	103 09 06.1	171	1492	Media Logic Llc		
248A KWUZ	LIC ZCX	205.7	157.01	38 27 11.0	0.029	20.8	12.8	121.8	125.7
Poncha Springs	CO	25.2	BLH20080109AGB	106 01 02.0	892	3575	Three Eagles Communication		
252C1 KATR-FM	LIC NC_	67.6	207.96	40 25 13.0	100.000	7.3	59.5	189.3	148.2
Otis	CO	249.0	BLH19991115AAT	102 58 10.0	169	1500	Media Logic, Llc		
249C2 KNOZ	LIC NCX	257.4	311.20	39 04 00.0	5.000	149.2	66.8	150.7	220.4
Orchard Mesa	CO	75.2	BLH20120127AIR	108 44 45.0	446	2239	Varecha, Paul		
252C3 KEJJ	RSV-A __N	227.6	197.11	38 31 22.0	25.000	2.3	22.7	186.2	154.9
Gunnison	CO	46.5		106 54 28.0	100	2638	John Harvey Rees		
251C0 KAYW	CP _CX	283.6	236.35	40 11 47.0	100.000	8.5	64.8	216.0	164.1
Meeker	CO	101.9	BPH20161212AAI	107 56 04.0	372	2637	Western Slope Communicatio		
246C1 DKGGY	VAC ___	100.6	235.20	39 18 34.0	100.000	9.7	70.5	209.7	164.4
Stratton	CO	282.3		102 33 17.0	299	1620	Kona Coast Radio, Llc		
246A KAYV	LIC _CX	239.0	175.69	38 54 10.0	0.300	1.2	7.4	165.1	167.2
Crested Butte	CO	57.9	BLH20111205AGJ	106 58 22.0	-211	2967	Arkansas Valley Broadcasti		
251C0 KAYW	LIC _C_	283.6	236.24	40 11 45.0	100.000	7.9	62.2	216.5	165.9
Meeker	CO	101.8	BLH20070802ABI	107 56 00.0	349	2609	Western Slope Communicatio		
252A KEJJ	LIC _CN	227.6	197.11	38 31 22.0	3.000	1.6	13.2	186.9	170.0
Gunnison	CO	46.5	BLH19811216AQ	106 54 28.0	91	2627	John Harvey Rees		
246C1 KCMI	LIC _CX	30.3	255.33	41 42 08.0	100.000	7.3	60.1	228.4	194.7
Terrytown	NE	211.3	BLH20160525AAB	103 41 00.0	211	1521	Christian Media Incorporat		

CH CALL / CITY	TYPE ANT / STATE	AZI / <--	DIST / FILE #	LAT / LNG	PWR(kW) / HAAT(M)	INT(km) / COR(M)	PRO(km) / LICENSEE	*IN* / (Overlap in km)	*OUT*
250C1 KWGB	LIC _C_	95.7	318.15	39 23 24.0	100.000	94.0	63.6	209.4	239.7
Colby	KS	278.0	BLH19981216KD	101 33 35.0	216	1296	Melia Communications Inc		
247A NEW	CP _CX	223.8	264.25	37 59 43.4	1.022	1.9	24.8	253.2	216.0
Lake City	CO	42.5	BNPH20151013AIR	107 19 16.9	242	3605	Munera, Campo E		
246C3 KZBR	LIC _CX	196.5	273.04	37 22 05.0	25.000	4.6	43.1	251.1	228.9
La Jara	CO	15.9	BLH20080416AAD	106 06 44.0	55	2458	Wolf Creek Broadcasting, L		
252C3 KSBK	CP NCX	188.1	262.56	37 23 14.0	2.800	2.6	29.2	240.8	232.3
Blanca	CO	7.9	BMPH20170103ABV	105 39 21.0	156	2474	Mainstreet Broadcasting Co		
249C2 KCYA	LIC _CX	345.4	346.34	42 44 28.0	3.600	88.1	31.0	235.9	246.4
Rolling Hills	WY	164.6	BLH20100707KNL	106 18 31.0	506	2473	Cochise Media Licenses Llc		
252A KERM	LIC _CN	18.7	266.23	41 59 41.0	3.000	2.1	22.0	242.6	243.8
Torrington	WY	199.4	BLH7692	104 12 05.0	91	1370	Kath Broadcasting Co, Llc		
248C1 KQSK	LIC _CN	28.2	368.95	42 38 06.0	100.000	93.6	63.2	255.2	283.0
Chadron	NE	209.6	BLH19790910AA	103 06 12.0	256	1519	Eagle Communications, Inc.		
249L1 KQQO-LP	LIC ___	61.3	337.19	41 07 55.0	0.063			308.0	294.8
Ogallala	NE	243.6	BLL20170201AAF	101 42 40.0	10	1020	Adventist Learning Center		
250C KISZ-FM	LIC _CN	224.8	365.43	37 21 48.0	100.000	59.1	31.0	297.3	315.0
Cortez	CO	43.0	BLH19780921AG	108 09 00.0	399	3104	Winton Road Broadcasting C		
246C1 KCYN	LIC _CX	250.4	376.43	38 31 37.0	29.000	2.4	23.5	363.4	326.1
Moab	UT	67.9	BLH19981223KB	109 18 21.0	394	2767	Moab Communications, Llc		

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= West Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding.
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 restricted contour.

** No actual interference will be caused to KBCO since the 131.9 DBU interference contour will not cover any population. See the Technical Statement for more details.

FIGURE 2 - KBCO PREDICTED 91.9 DBU CONTOUR
K281BW DENVER, CO. CH. 249D

Coverage Study - NGDC 30 SEC
02-07-2017

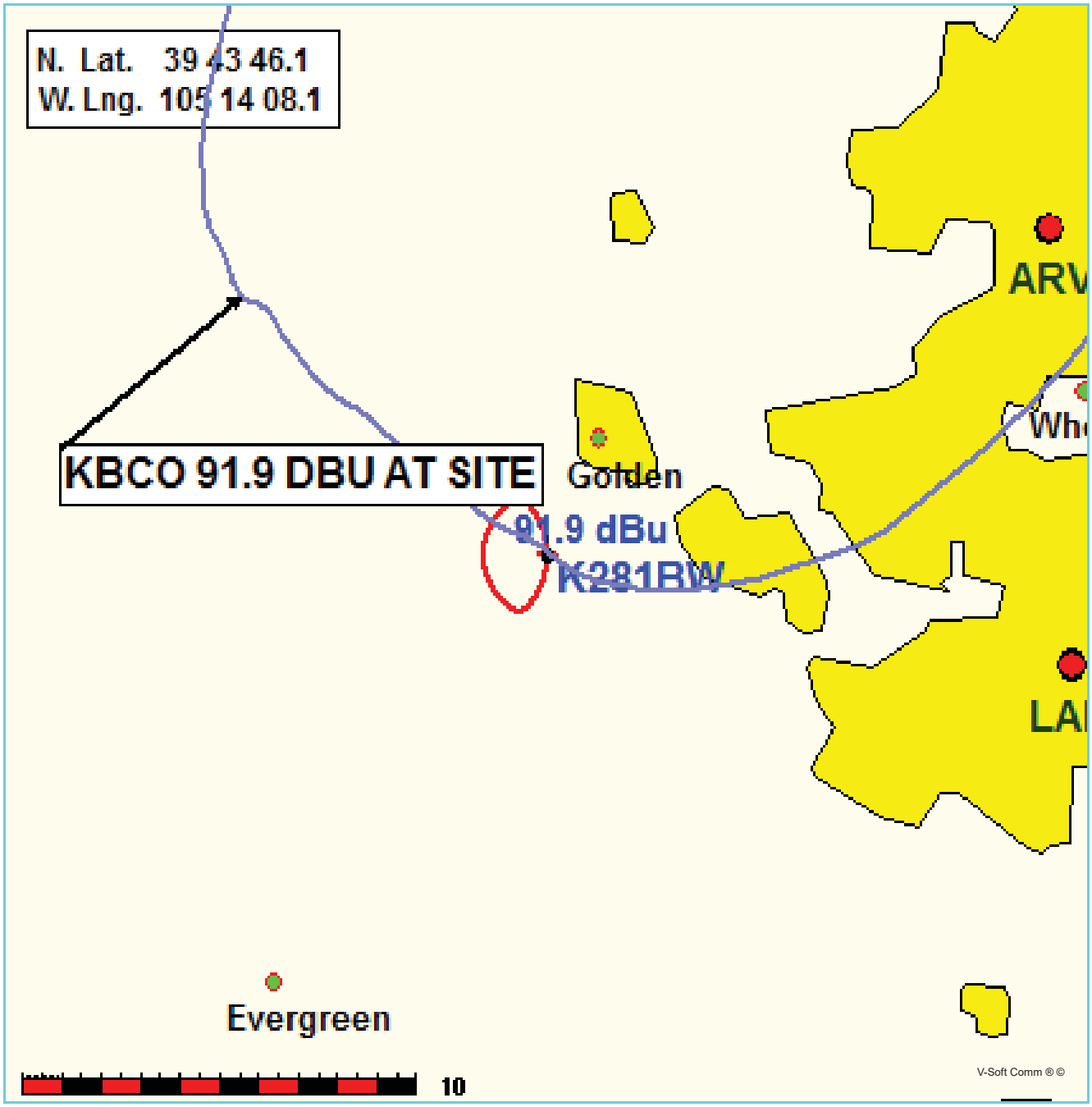


FIGURE 3 - PREDICTED 131.9 DBU INTERFERENCE CONTOUR
K249EX DENVER, CO, CH. 249D

Coverage Study - NGDC 30 SEC
02-27-2017

K249EX CH249 D , 0.25 kW, 0.0m HAAT, 2253.0m COR AMSL
Interference Contour = 131.9 dBu. Population = 0

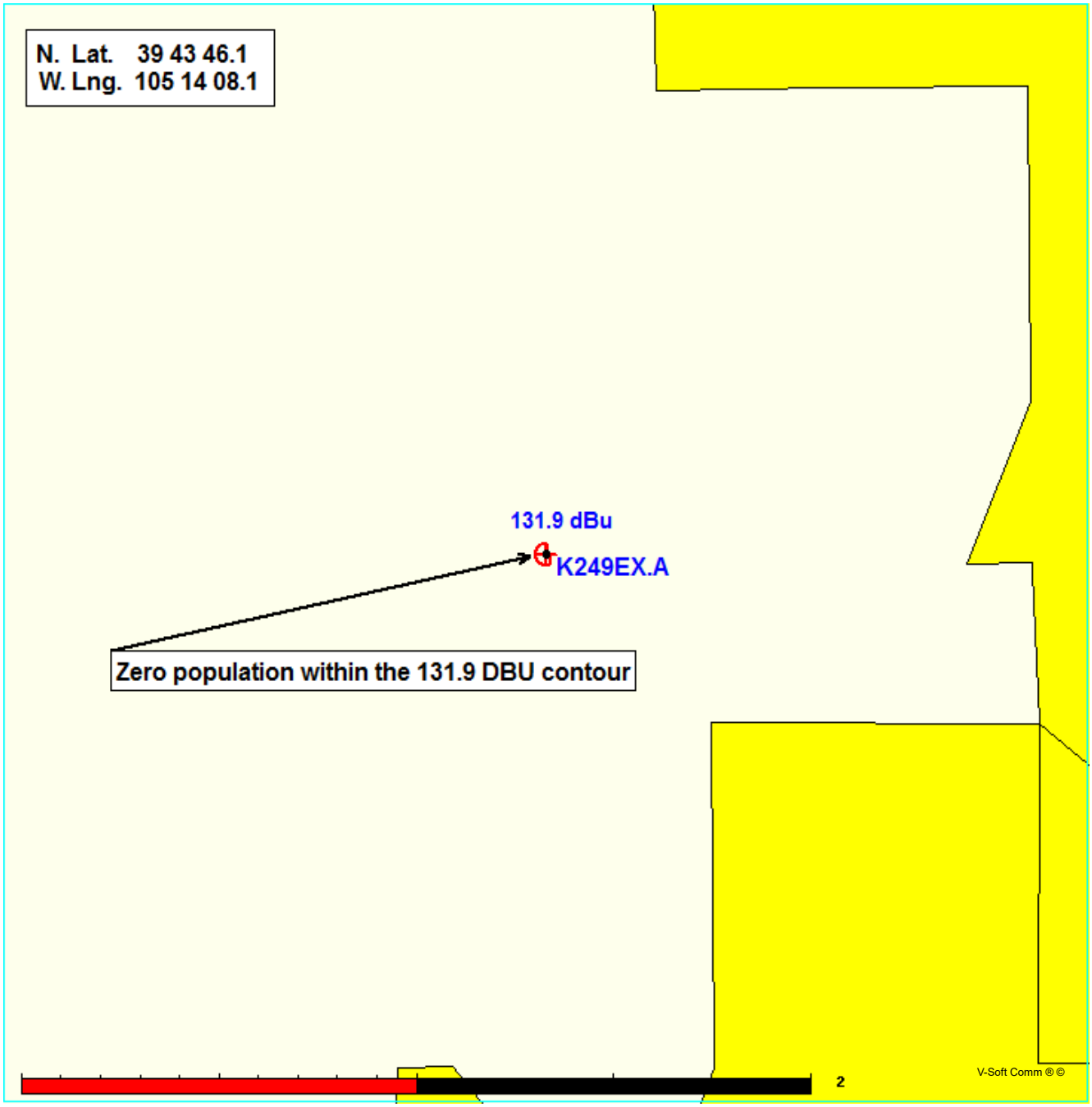
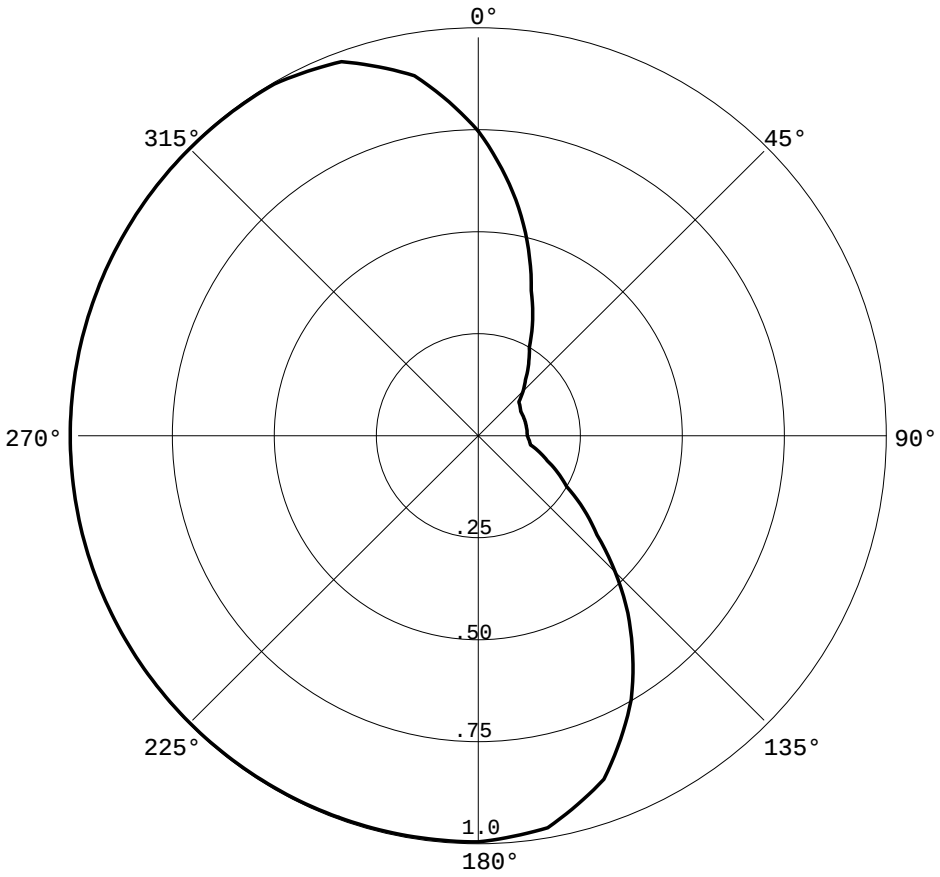


FIGURE 4 - DIRECTIONAL ANTENNA DATA

K249EX.A BEXT TFC2K-D 02-27-2017 RMS(V)= .779

Azi	Field	dBk	kW
000	0.750	-08.519	0.141
010	0.570	-10.903	0.081
020	0.380	-14.425	0.036
030	0.250	-18.062	0.016
040	0.180	-20.915	0.008
050	0.130	-23.742	0.004
060	0.120	-24.437	0.004
070	0.120	-24.437	0.004
080	0.120	-24.437	0.004
090	0.120	-24.437	0.004
100	0.130	-23.742	0.004
110	0.180	-20.915	0.008
120	0.250	-18.062	0.016
130	0.380	-14.425	0.036
140	0.570	-10.903	0.081
150	0.750	-08.519	0.141
160	0.900	-06.936	0.202
170	0.980	-06.196	0.240
180	1.000	-06.021	0.250
190	1.000	-06.021	0.250
200	1.000	-06.021	0.250
210	1.000	-06.021	0.250
220	1.000	-06.021	0.250
230	1.000	-06.021	0.250
240	1.000	-06.021	0.250
250	1.000	-06.021	0.250
260	1.000	-06.021	0.250
270	1.000	-06.021	0.250
280	1.000	-06.021	0.250
290	1.000	-06.021	0.250
300	1.000	-06.021	0.250
310	1.000	-06.021	0.250
320	1.000	-06.021	0.250
330	1.000	-06.021	0.250
340	0.980	-06.196	0.240
350	0.900	-06.936	0.202

Graph is Relative Field



K249EX.A
BPFT20170207ABR
Latitude: 39-43-46.10 N
Longitude: 105-14-08.10 W
ERP: 0.25 kW
Channel: 249
Frequency: 97.7 MHz
AMSL Height: 2253.0 m
Elevation: 2243.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

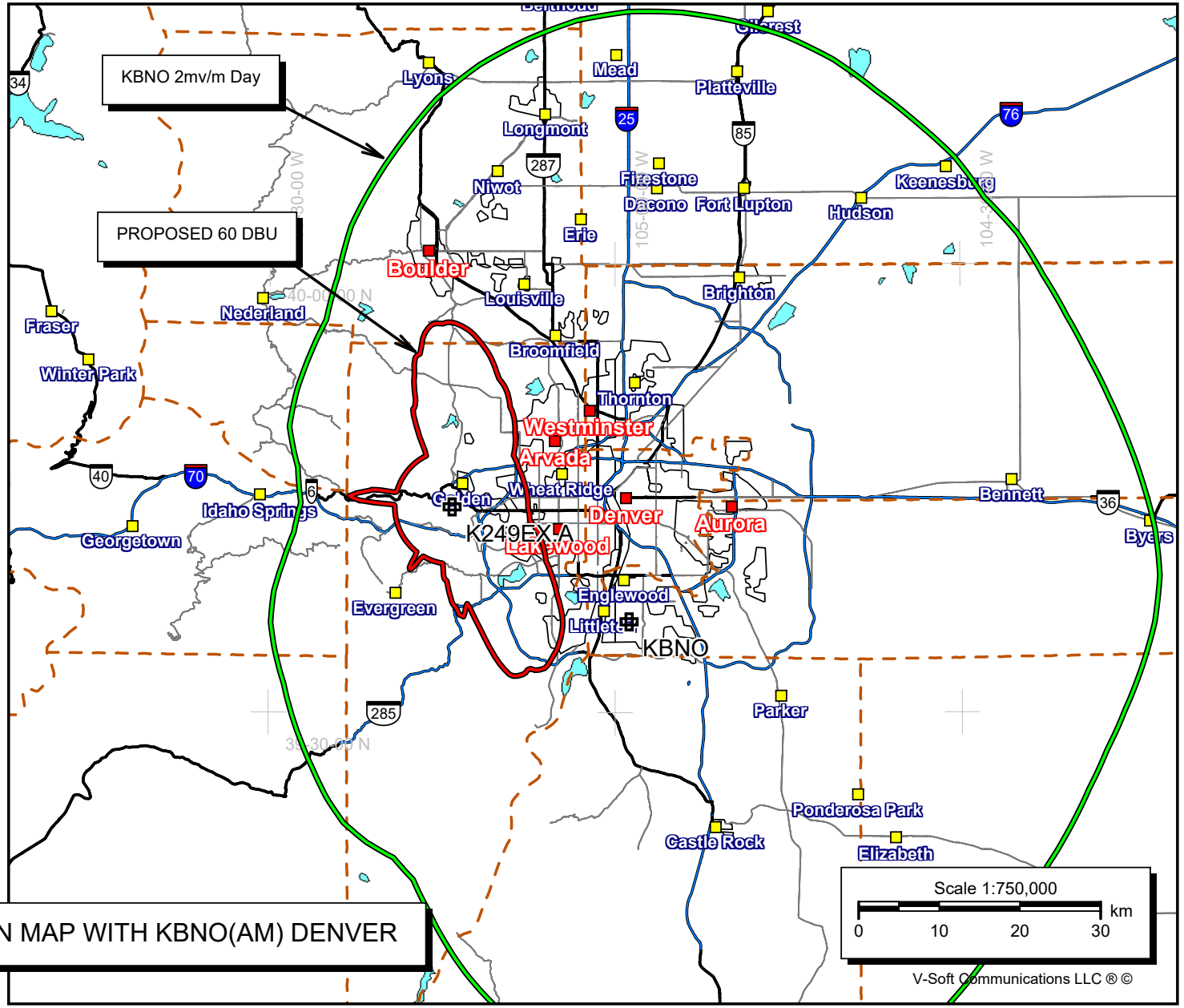


FIGURE 5 - FILL-IN MAP WITH KBNO(AM) DENVER