

TECHNICAL STATEMENT
NEW(FM) TRANSLATOR
FCC FORM 349
GOLDEN, COLORADO, CH. 268D
MARY MEDICUS
APRIL 2013

This FCC amended short form 349 application is being submitted in response to DA 13-427 released March 14, 2013 regarding Preclusion Showings, Tech Box proposals within Spectrum Limited Markets and/or within 39 km of Spectrum Limited Market Grids for new Auction 83 FM translator stations. This application is response to an original application filed by Mary Medicus, BNPFT-20030314BOM, facility ID 147935, for a new FM translator for Golden, Colorado on channel 270D. This application is listed in "Attachment A" of DA 13-427.

The applicant does seek to make a minor amendment to the original application by specifying to "one step" channel change from the original channel of 270D to 268D. It will also increase its antenna height from 2244 meters to 2251 Meters Above Mean Sea Level. It will remain at the originally proposed transmitter site. It will also decrease its effective radiated power from 0.01 kilowatts (10 watts) to 0.002 kilowatts (2 watts) and modify its proposed directional antenna system.

This application proposes service on channel 268D (101.5 Mhz) from an existing non-registered tower located at the NAD 27 coordinates of N 39° 43' 46", W 105° 14' 08". The existing tower has an overall height of 9.1 meters. The proposed antenna will be a Scala CA-5/CP, one yagi type, directional antenna, mounted at the 9 meters above ground center of radiation, and 2251 meters height above mean sea level. An effective radiated power of 0.002 kilowatts (2 watts), both horizontal and vertical polarization will be utilized.

Figure 1 is a detailed channel interference study conducted at the proposed site. As can be seen, there will not be any outgoing prohibited overlap with any other stations on Co-channel or pertinent adjacent channels, with the exception of 2nd adjacent channel stations KOSI(FM) Denver, CO, operating on channel 266C, facility ID 67844 and KXWA(FM) Centennial, CO, operating on channel 270C3, facility ID 70822.

The proposed operation on 268D is located within the protected 60 dB μ contour of 2nd adjacent channel of KOSI (ch. 266C) and KXWA (ch. 270C3). Figure 2 shows that KXWA produces a field strength of 66.4 dB μ at the proposed site. Therefore, the respective worst case predicted interfering contour F(50-10) generated by the proposed translator on channel 268D is an additional 40 dB μ or 106.4 dB μ . Figure 3 shows that KOSI produces a field strength of 138.7 dB μ at the proposed site. Therefore, the respective worst case predicted interference contour F(50-10) generated by the proposed translator on channel 268D is an additional 40 dB μ or 178.7 dB μ . Since this interference contour would be a much smaller coverage area than the interference contour for KXWA, only the KXWA interference contour was studied further.

Figure 4 shows the coverage area for the 106.4 dB μ interference contour F(50-10) and shows that there is no population in the area of interference. The 106.4 dB μ interference contour would only extend 0.048 kilometers (48 meters) in the maximum lobe areas of the directional antenna. Figure 5 is a USGS 7.5 minute map showing the area around the proposed site. Figure 6 is a Satellite view map of the area located around the proposed site and the proposed limits of the 106.4 dB μ contour which shows there are no homes or roads within this contour area. Figure 7 is a site photo of the proposed tower site and proposed supporting mast. The applicant, Mary Medicus, 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 new translator at Golden, Colorado until such interference can be eliminated.

Figure 9 is a tabulation, for the standard translator 12 radials, with additional radials, average heights above average terrain for each radial and the distances to pertinent contours for the proposed operation on channel 268D.

Figure 8 is a polar plot with data of the proposed directional antenna system.

This application will not overlap with any other proposed FM translator applications submitted in "Auction 83".

It was determined that this form 349 FM translator application will comply with all of the technical requirements under part C.F.R. 74 of the Commission's rules and regulation.

FIGURE 1 - DETAILED INTERFERENCE STUDY
 NEW FM TRANSLATOR, GOLDEN, CO, CH. 268D
 Average Protected F(50-50)= 5.58 km
 Standard Directional

REFERENCE
 39 43 46.0 N.
 105 14 08.0 W.

CH# 268D - 101.5 MHz, Pwr= 0.002 kw DA, HAAT= 225.1 M, COR= 2251 M

DISPLAY DATES
 DATA 03-30-13
 SEARCH 03-30-13

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*
268C Strasburg	KJHM	LIC NCY CO	78.3 259.1	110.31 BMLH20081028ABX	39 55 22.0 103 58 18.0	97.000 625	199.1 2109	92.7 Max Radio Of Denver Llc	-92.6	2.3
266C Denver	KOSI **	LIC DC CO	122.7 302.7	0.05 BLH20020118AAJ	39 43 45.0 105 14 06.0	100.000 495	1.6 2262	14.8 Entercom Denver License, L	-3.2	-14.8 **
270C3 Centennial	KXWA **	LIC NC CO	157.1 337.2	41.47 BLH20071207AAY	39 23 07.0 105 02 52.0	9.500 163	5.3 2226	54.7 Way Media, Inc.	34.6	-13.3 **
270D Golden	640689 *	APP DV CO	0.0 0.0	0.00 BNPFT20030314BOM	39 43 46.0 105 14 08.0	0.010 216	0.2 2244	9.4 Mary Medicus	-7.1	-9.5*
268D Commerce City	KJHM-FM1	LIC DC CO	100.9 281.1	31.68 BLFTB20050802ABY	39 40 31.0 104 52 22.0	20.000	34.7 1766	10.3 Max Radio Of Denver Llc	-5.0	4.8
269D Evergreen	K269CL	LIC DHN CO	201.6 21.5	12.67 BLFT19950811TB	39 37 24.0 105 17 24.0	0.035 354	0.8 2646	0.4 Citicasters Licenses, Inc.	10.2	5.8
268D Loveland	K269EQ	CP DH CO	3.1 183.1	84.97 BPFT20110222AAS	40 29 37.0 105 10 53.0	0.250 338	70.2 2085	22.0 Mountain Community Transla	7.8	34.8
269D Boulder	K269AE	LIC ?HN CO	4.0 184.0	25.72 BLFT221	39 57 38.0 105 12 52.0	0.103 -58	8.1 1747	5.7 Wilks License Company-denv	10.7	8.9
269C1 Eagle	KSKE-FM	LIC ZC CO	270.9 89.9	134.07 BLH20050915ADE	39 44 18.0 106 47 58.0	12.000 667	111.9 3171	76.3 Nrc Broadcasting Mountain	20.8	55.7
271A Estes Park	KRKY-FM	LIC _HX CO	341.1 160.9	74.15 BLH20070117AAE	40 21 38.0 105 31 12.0	6.000 25	3.3 2739	32.2 United States Cp, Llc	64.3	36.4
271D Longmont	KRKY-FM3	CP DC CO	12.5 192.6	52.26 BNPFTB20120210AAO	40 11 20.0 105 06 08.0	0.075	0.5 1549	4.5 United States Cp, Llc	44.9	47.4
271A Breckenridge	KSMT	LIC ZCX CO	249.3 68.8	72.91 BLH20070504ABR	39 29 44.0 106 01 44.0	6.000 -64	1.6 3250	14.4 Nrc Broadcasting Mountain	69.7	54.8
269D Loveland	K269EQ	LIC _C CO	3.1 183.1	84.97 BLFT20110103AAQ	40 29 37.0 105 10 53.0	0.010 338	18.2 2085	12.1 Mountain Community Transla	59.8	61.5
267D Woodland Park	629897	APP _C CO	170.1 350.2	83.67 BNPFT20030312AXL	38 59 13.0 105 04 08.0	0.015 53	18.1 2792	12.4 Educational Communications	64.0	69.1
270D Granby	K270AL	LIC DC CO	300.2 119.8	69.15 BLFT20120118AES	40 02 24.0 105 56 11.0	0.250	0.0 2530	1.6 Nrc Broadcasting Mountain	65.4	66.7
271D Fort Collins	KRKY-FM2	LIC DC CO	3.1 183.1	84.97 BLFTB20070404AAP	40 29 37.0 105 10 53.0	0.065	0.5 2090	18.1 United States Cp, Llc	77.5	66.5
271D Estes Park	K271BN	LIC DC CO	28.8 209.1	89.93 BLFT20100922ABN	40 26 15.0 104 43 25.0	0.250 69	1.1 1517	10.6 Mountain Community Transla	82.3	79.0
271D Estes Park	K271BN	CP D CO	28.8 209.1	89.93	40 26 15.0 104 43 25.0	0.240 67	1.1 1517	10.5 User	82.3	79.2
271D Colorado Springs	K253AH	APP _C CO	162.8 343.1	111.36 BPFT20130221AEE	38 46 15.0 104 51 20.0	0.099	0.7 2142	10.5 Mountain Community Transla	109.1	96.6
269A Rock Creek Park	KXCL	CP NCX CO	158.3 338.6	120.57 BMPH20120913ACC	38 43 11.0 104 43 16.0	2.100 -9	17.6 1803	12.1 United States Cp, Llc	101.3	105.7
265A Dotsero	NEW	CP NCX CO	267.8 86.7	151.99 BNPH20120529ALR	39 39 50.0 107 00 20.0	1.550 199	2.5 2484	37.9 Jer Licenses, Llc	147.9	110.0
267C1 Walsenburg	KFEZ	LIC _C CO	163.0 343.5	225.03 BLH20090105AGJ	37 47 20.0 104 29 12.0	95.500 305	113.2 2095	76.7 Edward Magnus	110.3	145.3
270C2 Burns	KIGN	LIC _CN WY	17.1 197.5	161.40 BMLH19950920KD	41 07 01.0 104 40 07.0	50.000 150	5.3 1963	47.8 Townsquare Media Cheyenne	149.2	112.0
265C2 Gunnison	AU9359555	VAC CO	231.7 50.6	197.36 RM10483	38 37 00.0 107 01 00.0	50.000 150	5.9 2866	51.5 Sierra Grande Broadcasting	189.9	137.6
267C0 Bridgeport	KOZY-FM	LIC _C NE	26.4 207.3	262.79 BLH20010827AAD	41 50 23.0 103 49 36.0	100.000 339	95.6 1630	64.6 Legacy Communications, Llc	160.6	188.3

CH CITY	CALL	TYPE STATE	ANT	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	Page # *IN* 2 (Overlap	*OUT* in km)
269A Westcliffe	KXCL	LIC _CX CO		186.1 6.0	177.90 BLH20080331AMM	38 08 09.0 105 27 07.0	0.180 -126	11.8 2429	8.3 United States	164.5 Cp, Llc	167.3
269D Glenwood Springs	KSKE-FM1	LIC DV_ CO		264.7 83.3	179.60 BLFTB20080529AEJ	39 33 40.0 107 19 00.0	0.600	11.7 2216	8.2 Nrc Broadcasting	166.3 Mountain	169.7
268C2 Fruita	KGJX	CP _CY CO		257.4 75.2	311.20 BNPH20120420AAA	39 04 00.0 108 44 45.0	3.150 418	140.5 2215	61.3 Kbdx Llc	169.1	246.7
265C3 Yuma	KNEC	LIC _CX CO		80.8 262.4	214.09 BLH20040811AAU	40 00 33.0 102 45 35.0	23.000 106	3.3 1393	32.0 Arnold Broadcasting, Inc.	207.1	181.3
271C2 Hanna	KBDY	LIC NC_ WY		333.2 152.4	237.91 BLH20090109AHF	41 38 00.9 106 31 32.1	0.630 1050	1.7 3409	50.3 Toga Radio Llc	230.0	187.6
270C2 Olathe	1432033	APP DCX CO		243.7 61.9	275.81 BNPED20100226AFP	38 35 48.2 108 04 33.0	50.000 150	7.5 1878	61.1 Montrose Christian Broadca	266.7	214.2
270C2 Olathe	1435397	RSV-A ____ CO		243.0 61.3	268.15	38 36 18.0 107 58 54.0	50.000 150	5.2 1860	46.4 Montrose Christian Broadca	261.4	219.2
270C2 Olathe	AL9051	VAC ____N CO		243.0 61.3	268.15 RM9438	38 36 18.0 107 58 54.0	50.000 150	5.2 1860	46.4 Mountain West Broadcasting	261.4	219.2
269A Wheatland	KZEW	LIC _CN WY		5.3 185.5	258.35 BLH19850723KC	42 02 44.0 104 56 47.0	3.000 38	19.5 1503	13.2 Smith Broadcasting, Incorp	231.8	234.0
266A Parachute	KDBN	LIC _CX CO		263.3 81.5	241.40 BLH20080328AGR	39 26 31.0 108 01 15.0	0.200 -426	1.0 1705	6.7 Townsquare Media Grand Jun	238.8	232.9
269C1 Ogallala	R12441	ADD ____ NE		64.5 247.1	362.58	41 03 50.0 101 20 16.0	100.000 299	101.4 1266	69.3 Jer Licenses, Llc	256.4	291.1
271C1 Alliance	KPNY	LIC _CX NE		33.1 214.5	319.49 BMLED20061219ACM	42 07 01.0 103 07 09.0	100.000 159	7.3 1427	59.8 My Bridge Radio	305.8	260.0

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 protected contour.
Reference station has protected zone issue:

* Associated translator record for this Long Form 349 application.

** No actual interference will be caused to either KOSI or KXWA since the 106.4 DBU interference contour will not cover any population. See the Technical Statement for more details.

FIGURE 2 - KXWA 66.4 DBU AT PROPOSED SITE
NEW FM TRANSLATOR, GOLDEN, CO, CH. 268D

Coverage Study - NGDC 30 SEC
03-30-2013

KXWA CH270 C3, 9.5 kW, 163.0M HAAT, 2226.0M COR AMSL
Service Contour = 66 dBu. Population = 1,689,187

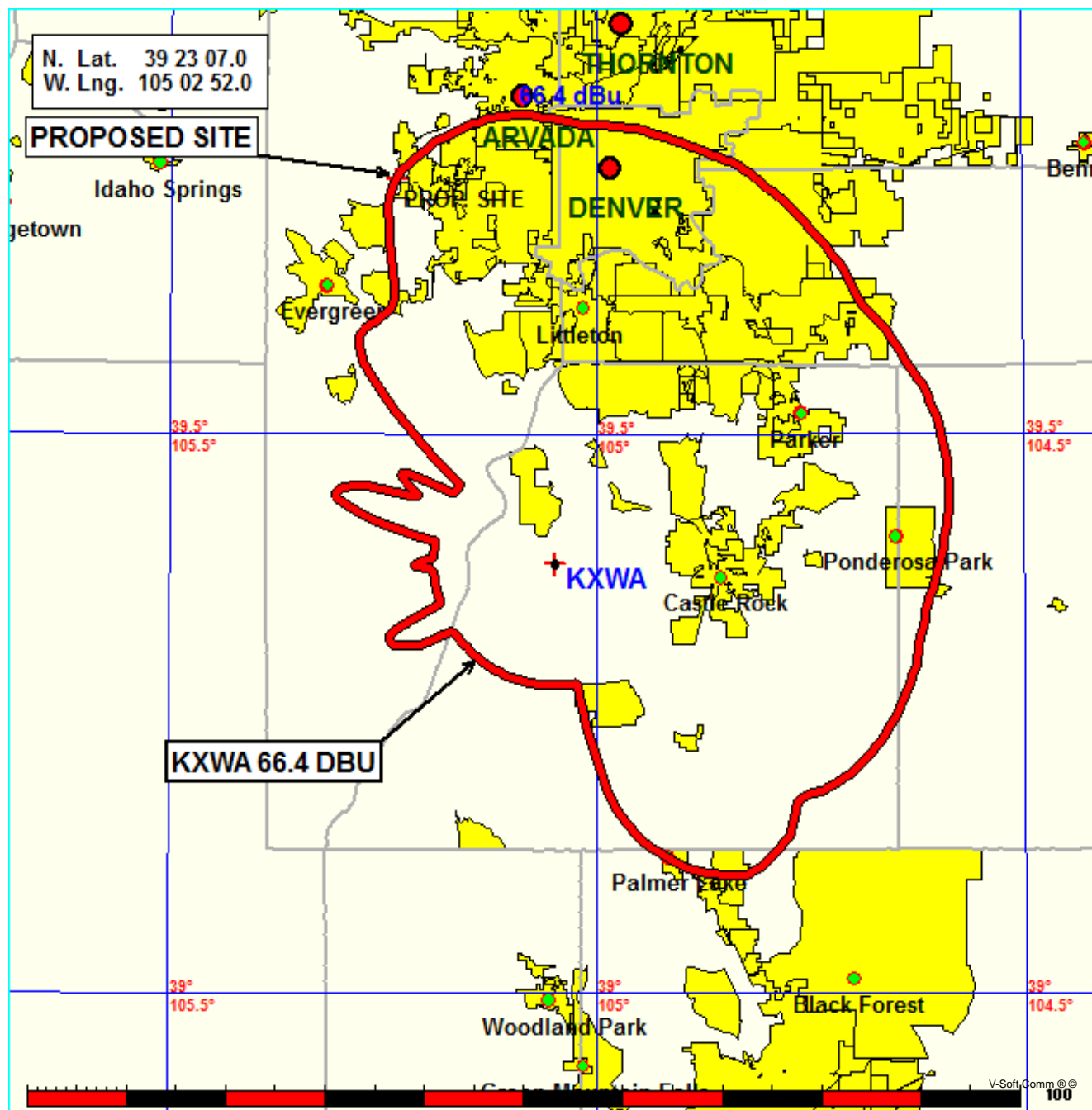


FIGURE 3 - KOSI 138.7 DBU AT PROPOSED SITE
NEW FM TRANSLATOR, GOLDEN, CO, CH. 268D

Coverage Study - NGDC 30 SEC
03-30-2013

KOSI CH266 C , 100.0 kW, 495.0M HAAT, 2262.0M COR AMSL
Service Contour = 139 dBu. Population = 0

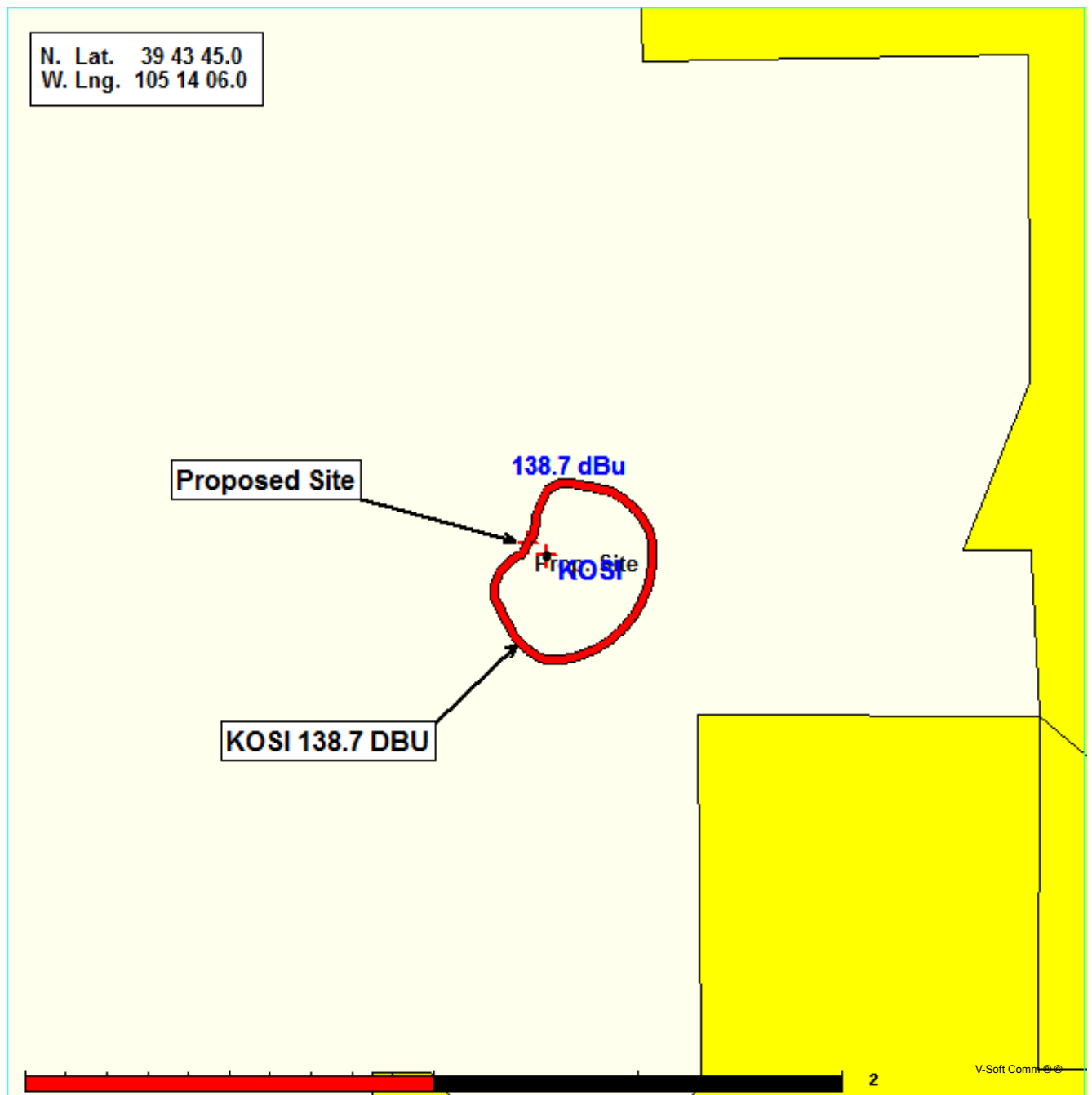
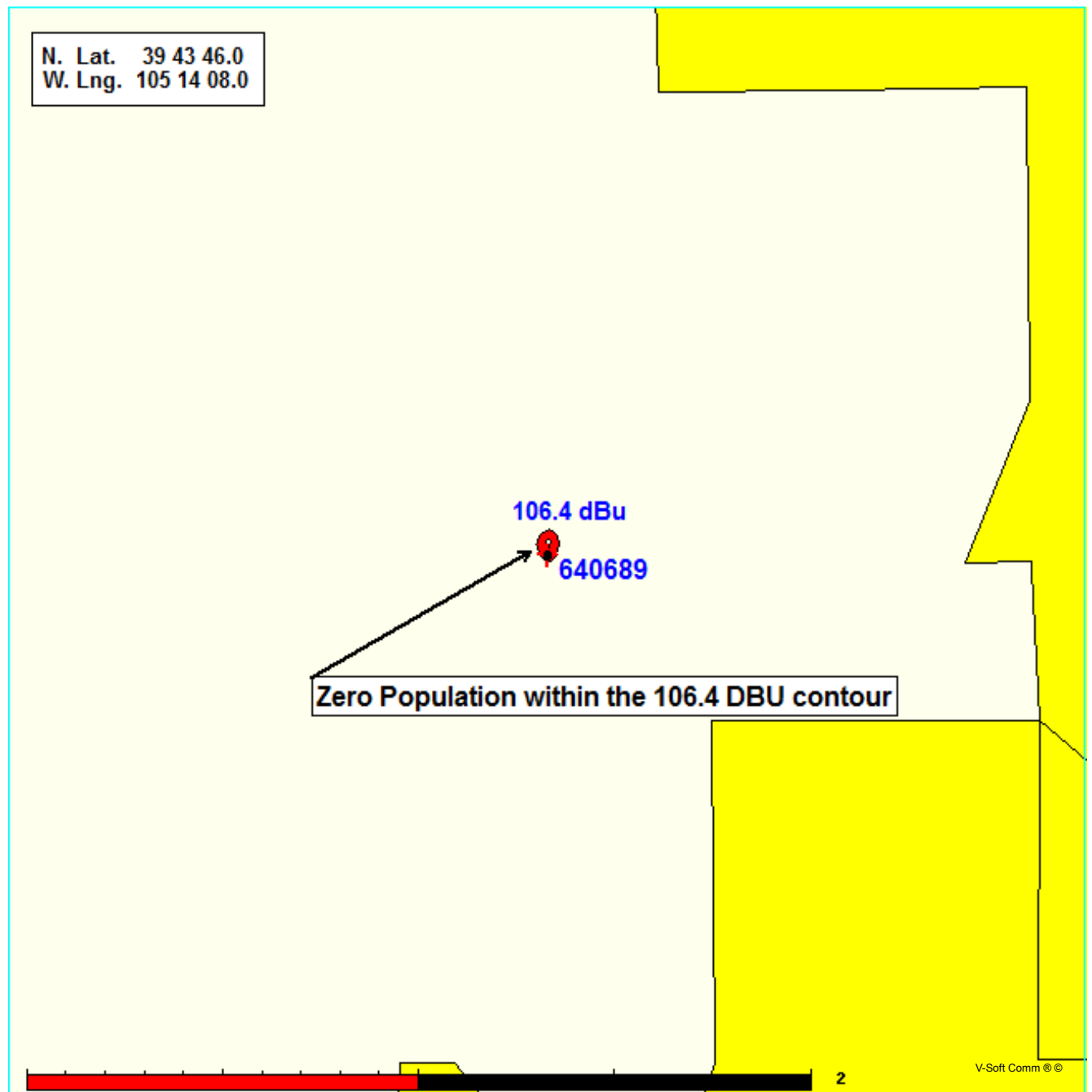
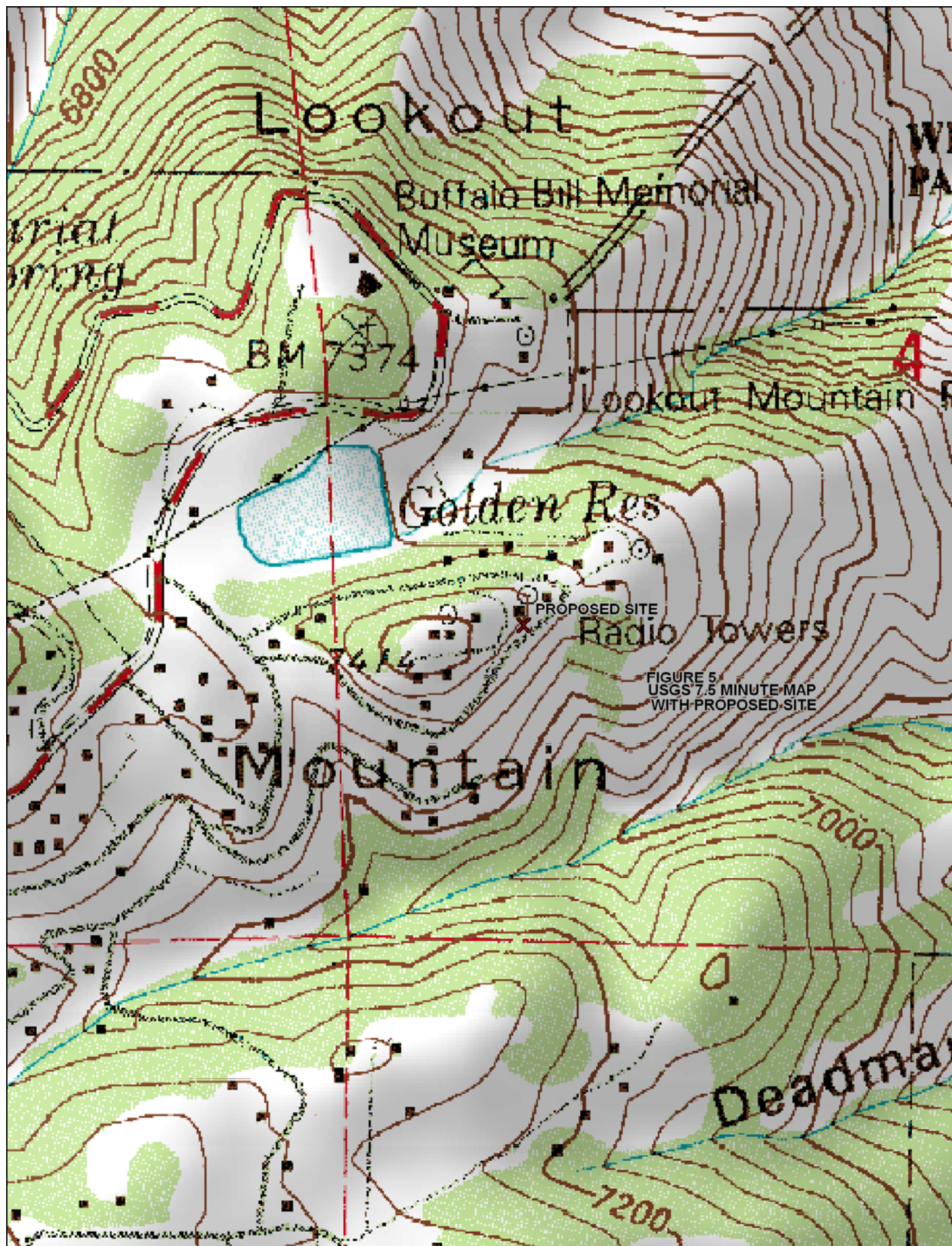


FIGURE 4 - PREDICTED 106.4 DBU CONTOUR MAP
NEW FM TRANSLATOR, GOLDEN, CO, CH. 268

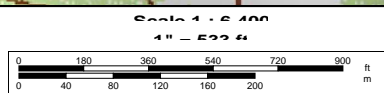
Coverage Study - NGDC 30 SEC
03-30-2013

640689 CH268 D , 0.002 kW, 225.1M HAAT, 2251.0M COR AMSL
Interference Contour = 106 dBu. Population = 0





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www.delorme.com





To see all the details that are visible on the screen, use the "Print" link next to the map.

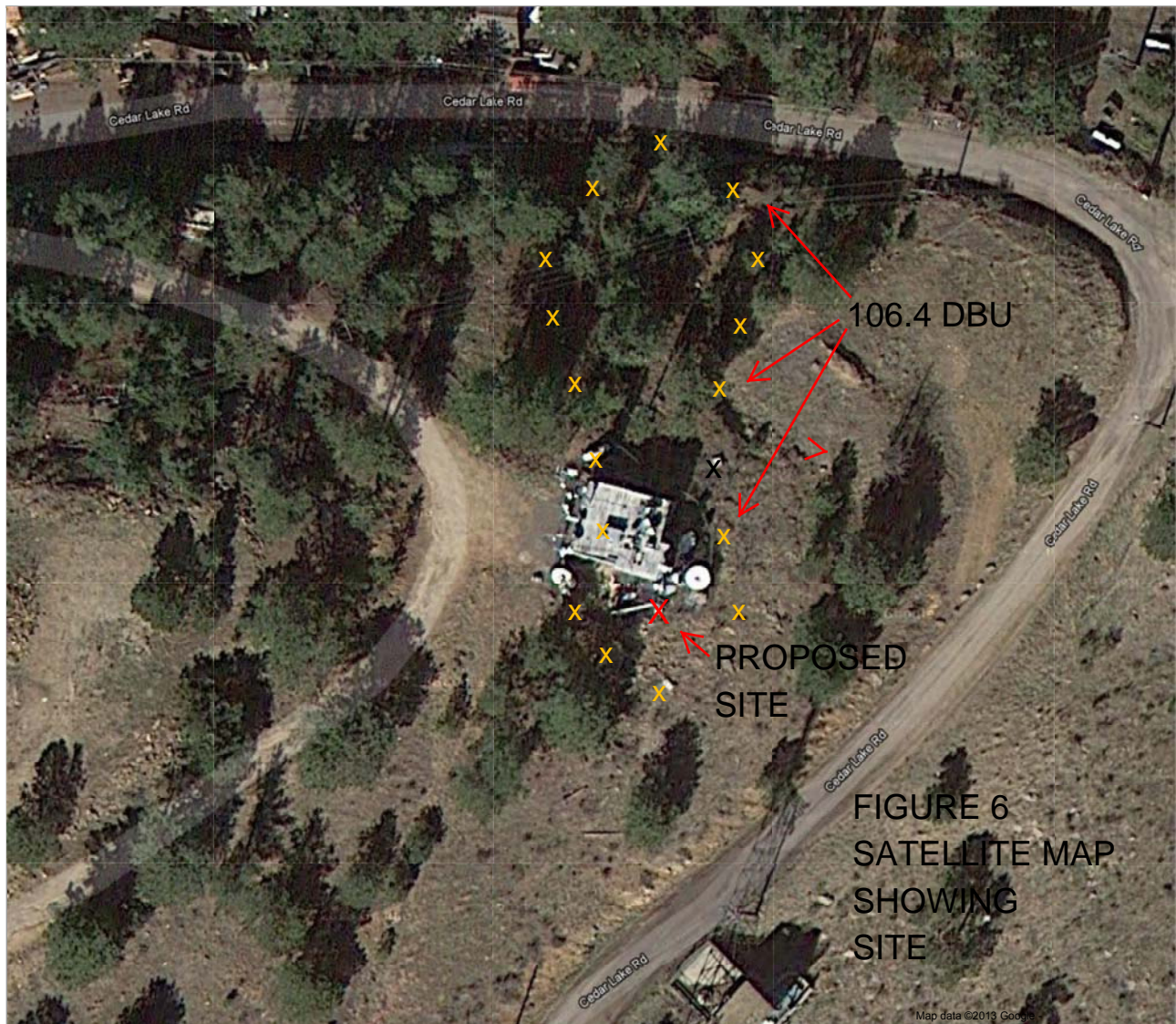


FIGURE 7- SITE PHOTO
NEW FM TRANSLATOR
GOLDEN, CO CH. 268D



PROPOSED
ANTENNA
SUPPORT
MAST

GOLDEN, CO, CH. 268D

640689

NEW FM TRANSLATOR

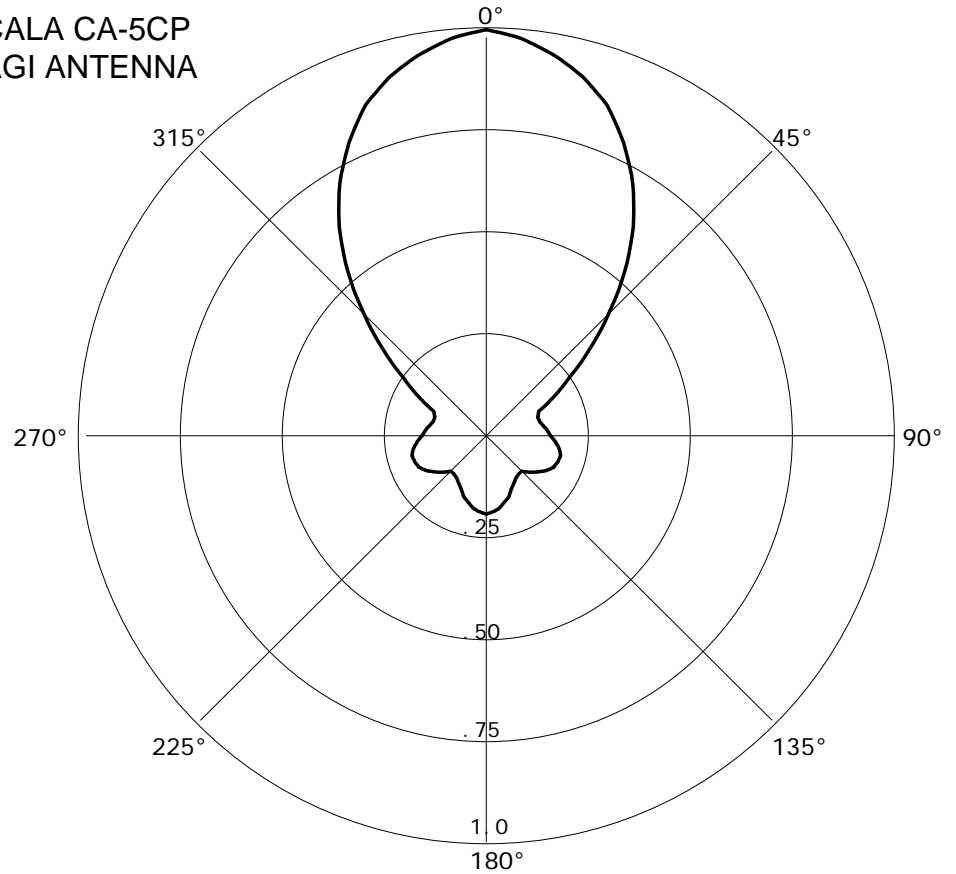
03-30-2013

RMS(V) = .433

FIGURE 8 - DA Antenna Data

Graph is Relative Field

Azi	Field	dBk	kW
000	1.000	-26.990	0.002
010	0.952	-27.417	0.002
020	0.866	-28.239	0.001
030	0.718	-29.867	0.001
040	0.528	-32.537	0.001
050	0.329	-36.646	0.000
060	0.190	-41.415	0.000
070	0.134	-44.448	0.000
080	0.142	-43.944	0.000
090	0.157	-43.072	0.000
100	0.181	-41.836	0.000
110	0.187	-41.553	0.000
120	0.171	-42.330	0.000
130	0.140	-44.067	0.000
140	0.123	-45.192	0.000
150	0.135	-44.383	0.000
160	0.160	-42.907	0.000
170	0.182	-41.788	0.000
180	0.193	-41.279	0.000
190	0.182	-41.788	0.000
200	0.160	-42.907	0.000
210	0.135	-44.383	0.000
220	0.123	-45.192	0.000
230	0.140	-44.067	0.000
240	0.171	-42.330	0.000
250	0.187	-41.553	0.000
260	0.181	-41.836	0.000
270	0.157	-43.072	0.000
280	0.142	-43.944	0.000
290	0.134	-44.448	0.000
300	0.190	-41.415	0.000
310	0.329	-36.646	0.000
320	0.528	-32.537	0.001
330	0.718	-29.867	0.001
340	0.866	-28.239	0.001
350	0.952	-27.417	0.002

SCALA CA-5CP
YAGI ANTENNA

Contour.out

N. Lat. = 394346.0 W. Lng. = 1051408.0
 HAAT and Distance to Contour,
 FCC, FM 2-10 Mi, 51 pts Method - NGDC 30 SEC

FIGURE 9 - TABULATION OF DISTANCES TO CONTOURS

Azi.	AV EL	HAAT	dBk	60-F5	40-F1	106.4-F1
000	1844.5	406.5	-26.99	6.96	26.41	0.05
010	1811.0	440.0	-27.42	6.88	26.96	0.05
020	1801.2	449.8	-28.24	6.44	26.01	0.04
030	1746.6	504.4	-29.87	5.81	24.97	0.03
040	1722.6	528.4	-32.54	4.57	21.75	0.03
050	1711.9	539.1	-36.65	3.01	16.65	0.02
060	1694.4	556.6	-41.41	1.81	11.91	0.01
070	1707.1	543.9	-44.45	1.33	9.42	0.01
080	1711.3	539.7	-43.94	1.41	9.77	0.01
090	1716.2	534.8	-43.07	1.56	10.40	0.01
100	1739.0	512.0	-41.84	1.71	11.20	0.01
110	1778.8	472.2	-41.55	1.76	11.18	0.01
120	1812.3	438.7	-42.33	1.58	10.36	0.01
130	1799.1	451.9	-44.07	1.39	9.24	0.01
140	1792.7	458.3	-45.19	1.22	8.48	0.01
150	1837.2	413.8	-44.38	1.34	8.73	0.01
160	1933.4	317.6	-42.91	1.59	8.66	0.01
170	2146.0	105.0	-41.79	1.61	5.41	0.01
180	2173.8	77.2	-41.28	1.61	4.74	0.01
190	2236.0	15.0	-41.79	1.61	2.86	0.01
200	2293.2	-42.2	-42.91	1.59	2.70	0.01
210	2223.6	27.4	-44.38	1.34	2.48	0.01
220	2242.9	8.1	-45.19	1.22	2.39	0.01
230	2290.3	-39.3	-44.07	1.39	2.53	0.01
240	2383.1	-132.1	-42.33	1.61	2.78	0.01
250	2400.4	-149.4	-41.55	1.61	2.89	0.01
260	2320.2	-69.2	-41.84	1.61	2.85	0.01
270	2253.3	-2.3	-43.07	1.56	2.67	0.01
280	2186.5	64.5	-43.94	1.41	3.72	0.01
290	2285.5	-34.5	-44.45	1.33	2.48	0.01
300	2389.0	-138.0	-41.41	1.61	2.91	0.01
310	2396.0	-145.0	-36.65	1.61	3.81	0.02
320	2347.1	-96.1	-32.54	1.54	4.85	0.03
330	2254.4	-3.4	-29.87	1.83	5.68	0.03
340	2140.4	110.6	-28.24	3.71	11.93	0.04
350	1968.0	283.0	-27.42	5.97	21.34	0.05

Ave EI = 2030.24 M HAAT= 220.76 M AMSL= 2251