

TECHNICAL STATEMENT  
NEW(FM) TRANSLATOR  
FCC FORM 349  
DIVIDE, COLORADO, CH. 294D  
TIMOTHY C. CUTFORTH  
AUGUST 2013

This FCC “Long Form” 349 application is being submitted in response to DA 13-1675 released July 31st, 2013 regarding Non-Mutually exclusive Tech Box proposals, or “Singleton” applications for new Auction 83 FM translator stations. This application is response to an original application filed by Timothy C. Cutforth, BNPFT-20030310AAX, facility ID 138696, for a new FM translator for Divide, CO on channel 294D. This application is listed in “Attachment A” of DA 13-1675, report No. AUC-03-83-E.

The applicant does seek to make some minor technical changes to the current pending “Tech Box” application, thus a new LPFM non-preclusion study is attached at Exhibit 1 of this application. This application does propose to remain at the same site as proposed in the last “Tech Box” application, hence no material changes will be made to the conclusions of the originally filed LPFM Non-Preclusion study since channels 293, 294, and 295 are not available in the Colorado Springs, Colorado Spectrum limited market.

This application proposes service on channel 294D (106.7 Mhz) from an existing non-registered tower, located at the NAD 27 coordinates of N 38° 46’ 22”, W 104° 59’ 32”. The existing tower has an overall height of 19 meters. The proposed antenna will be a Scala Model HDCA-10, with horizontal and vertical polarization, mounted at the 18 meters above ground center of radiation and 3781 meters above mean sea level. An effective radiated power of 0.06 kilowatts (60 watts).

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 station KKLI(FM) Widefield, CO , operating on channel 292C2, facility ID 67187.

The proposed operation on 294D is located just within the protected 60 dB $\mu$  contour of 2<sup>nd</sup> adjacent channel of KKLI(FM) (ch. 292C2). Figure 2 shows the coverage area for the "worst case" 100.0 dB $\mu$  interference contour F(50-10) and shows that there is no population in the area of interference. The 100.0 dB $\mu$  interference contour would only extend 0.54 kilometers (540 meters). Thus, there will be no actual interference caused to KKLI(FM). Figure 3 is a Satellite view map of the area located around the proposed site. Figure 4 is a Topographic Map showing the area around the proposed site. The applicant, Timothy C. Cutforth, 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 located on U.S. Forrest Service property with private gated access. Equipment shelters at the site are not occupied and do not have indoor plumbing. Should any unforeseen actual interference be caused, the licensee will immediately cease broadcasting with new translator at Divide, CO until such interference can be eliminated.

With a proposed operation of 0.06 KW maximum ERP, some of the Maximum ERP's under 74.1235(b)(2) will be exceeded, however the proposed operation of this new translator will be a "fill-in" for KCMN(AM) Colorado Springs, Colorado, facility ID 67187, operating on 1530 Khz with 15KW daytime with a non-directional antenna. Figure 5 shows that the proposed 60 dB $\mu$  contour for the new translator will not extend beyond either a 25 mile radius from the KCMN tower site, or its 2mv/m daytime contour.

Figure 6 is the directional antenna data for the proposed antenna.

Figure 7 is a tabulation for 36 standard radials (every 10 degrees), average heights above average terrain for each radial and the distances to pertinent contours for the proposed operation on channel 294D.

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 CHANNEL INTERFERENCE STUDY

REFERENCE		CH#	294D	NEW FM TRANSLATOR, DIVIDE, CO, CH. 294D				COR=	3781 M	DISPLAY DATES	
38 46 22.0 N. 104 59 32.0 W.				- 106.7 MHz, Pwr= 0.06 kW DA, HAAT= 0.0 M, Average Protected F(50-50)= 4.94 km Standard Directional						DATA 08-14-13 SEARCH 08-15-13	
CH CITY	CALL	TYPE STATE	ANT --	AZI --	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT* (Overlap in km)
294C0 Denver	KBPI	LIC _CX CO		349.0 168.8	108.62 BLH20080602ADJ	39 43 58.0 105 14 08.0	100.000 408	184.9 2318	63.8 Citicasters Licenses, Inc.	-81.7	7.4
294D Divide	1549782 *	APP DV_ CO		0.0 0.0	0.00 BNPFT20030310AAX	38 46 22.0 104 59 32.0	0.019	27.4 3781	4.2 Timothy C. Cutforth	-27.9	-9.2 *
292C2 Widefield	KKLI **	LIC _CN CO		105.5 285.6	11.67 BLH19901205KE	38 44 41.0 104 51 46.0	1.600 678	1.6 2933	11.4 Capstar Tx Llc	-20.0	-0.2 **
295C2 Pueblo	KIQN	LIC _CX CO		149.2 329.5	86.09 BLH20050107AAQ	38 06 22.0 104 29 18.0	27.500 203	81.3 1710	54.5 United States Cp, Llc	-14.9	0.6
296C Bennett	KDHT-FM	LIC NC_ CO		34.1 214.8	155.04 BMLH20081028ABZ	39 55 22.0 103 58 18.0	97.000 624	13.6 2109	91.8 Max Radio Of Denver Llc	116.9	63.5
295L1 Salida	KHEN-LP	LIC ____ CO		253.7 73.1	90.26 BLL20070223AEL	38 32 29.9 105 59 11.1	0.100	8.0 2322	5.6 Tenderfoot Transmitting, I	73.0	70.0
296D Aurora	KDHT-FM3	LIC DC_ CO		5.8 185.9	100.72 BLFTB20050729DSZ	39 40 31.0 104 52 22.0	20.000	2.0 1766	17.3 Max Radio Of Denver Llc	85.9	81.0
291A Genoa	KONK	LIC NHX CO		71.6 252.4	120.03 BLH20121213AIU	39 06 20.0 103 40 30.0	3.700 87	1.6 1751	13.9 United States Cp, Llc	83.5	102.9
292D Denver	K292FM	LIC DC_ CO		348.9 168.8	108.26 BMLFT20111012AJU	39 43 46.0 105 14 08.0	0.099 213	0.4 2241	7.0 Educational Communications	101.0	92.0
296D Glendale	KDHT-FM6	CP DV_ CO		2.4 182.5	104.20 BNPFTB20130430ACX	39 42 38.0 104 56 25.0	0.100	0.0 1675	1.6 Max Radio Of Denver Llc	92.6	101.7
296D Greenwood Village	KDHT-FM7	CP DV_ CO		13.0 193.2	108.70 BNPFTB20130430ACZ	39 43 35.0 104 42 23.0	6.500	0.2 1762	6.0 Max Radio Of Denver Llc	92.8	93.2
296D Denver	KDHT-FM4	CP DV_ CO		4.1 184.2	107.66 BNPFTB20130430ABD	39 44 24.0 104 54 05.0	0.750	0.1 1644	2.4 Max Radio Of Denver Llc	95.3	102.8
293C0 Springer	1568211	RSV-A ____ NM		167.5 347.8	237.53	36 40 57.0 104 24 50.0	100.000 450	126.6 2400	85.3 Dmc Broadcasting Inc.	95.9	151.1
293C0 Springer	1567204	APP _HX NM		167.5 347.8	237.53 BNPH20130724AGJ	36 40 57.0 104 24 50.5	100.000 449	126.4 2398	85.2 Dmc Broadcasting Inc.	96.1	151.2
296D Breckenridge	K296CL	APP _H_ CO		312.2 131.6	114.48 20130628AGD	39 27 35.0 105 58 46.0	0.011	0.2 3828	13.9 Summit Public Radio And Tv	106.8	100.5
296D Commerce City	KDHT-FM5	CP DV_ CO		8.9 189.0	116.67 BNPFTB20130430ACV	39 48 39.0 104 46 52.0	8.000	0.3 1635	4.2 Max Radio Of Denver Llc	102.1	108.3
293C Olathe	KUSZ	CP _CX CO		260.4 78.8	237.55 BNPED20100226AEF	38 23 15.0 107 40 26.0	100.000 551	122.7 2932	82.6 Nc Friends Broadcasting, I	105.4	139.0
296D Breckenridge	K296CL	LIC DC_ CO		312.2 131.6	114.48 BLFT20120227AAJ	39 27 35.0 105 58 46.0	0.010 489	0.0 3828	2.7 Summit Public Radio And Tv	107.0	111.2
297C1 Las Animas	KRKV	LIC _CX CO		123.8 304.8	164.51 BMLED20081201ATJ	37 56 23.0 103 26 08.0	80.000 108	6.5 1397	55.8 Alleycat Communications	128.9	108.1
292C2 Kremmling	KIFT	LIC NHX CO		324.9 144.1	183.98 BLH20051114AFN	40 07 12.0 106 14 13.0	50.000 150	8.3 2695	65.0 Nrc Broadcasting Mountain	169.3	119.1
292D Empire	KIFT-FM3	LIC DV_ CO		330.0 149.5	131.56 BLFTB20061215AAO	39 47 42.0 105 45 49.0	0.150	0.0 3818	2.5 Nrc Broadcasting Mountain	125.7	119.9
292D Dillon	KIFT-FM5	LIC _C_ CO		315.6 134.9	131.69 BLFTB20121031AAG	39 36 50.0 106 04 02.0	0.400	1.4 2863	8.0 Nrc Broadcasting Mountain	123.1	123.7
296C3 Aspen	KPVW	LIC _C_ CO		290.2 108.9	180.61 BMLH20121107AEE	39 18 56.0 106 57 32.0	20.500 110	2.2 2682	21.6 Entravision Holdings, Llc	169.3	123.7
292C2 Kremmling	KIFT	RSV-A ____ CO		323.2 142.3	192.06	40 08 51.0 106 20 49.0	50.000 150	8.4 2623	65.4 Nrc Broadcasting Mountain	177.1	126.3
292D Eagle	KIFT-FM6	LIC DV_ CO		304.6 123.5	175.47 BLFTB20090317ADS	39 39 20.0 106 40 39.0	0.920	1.0 2841	16.5 Nrc Broadcasting Mountain	166.3	140.9

CH CITY	CALL	TYPE STATE	ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	Page # 2	
										*IN*	*OUT*
										(Overlap	in km)
292D Fraser	KIFT-FM7	LIC DV_		331.8 151.3	148.43 BLFTB20070711AFO	39 56 49.0 105 48 57.0	0.400	1.0 2629	6.7 Nrc Broadcasting	141.8	141.6
291A Basalt	KNFO	LIC NCX		290.2 108.9	180.69 BMLH20030501AAQ	39 18 55.0 106 57 36.0	1.600 111	1.6 2688	11.4 Nrc Broadcasting	170.0	144.6
292D Granby	KIFT-FM1	LIC DC_		330.4 149.8	162.50 BLFTB20090331ATN	40 02 24.0 105 56 11.0	0.400	0.2 2534	3.2 Nrc Broadcasting	156.5	159.2
292C3 Brush	KPRB	LIC NCX		34.3 215.1	195.31 BLH20080903ABD	40 13 02.0 103 41 46.1	7.000 76	2.1 1401	21.3 Northeast Colorado	168.4	173.8
294C0 Los Alamos	KAGM	LIC ZC_		202.7 21.7	358.87 BLH20061218ABW	35 46 50.0 106 31 35.0	44.000 592	166.4 3078	72.0 Agm Nevada, Llc	186.6	272.0
294C1 Hugoton	KFXX-FM	LIC NCX		115.7 298.0	359.24 BLH20110714AAR	37 18 57.0 101 20 16.0	55.000 78	126.0 1022	37.9 Kbuf Partnership	201.9	238.2
291D Glenwood Springs	KNFO-FM1	LIC DV_		294.4 112.9	219.12 BLFTB20010725AFJ	39 33 40.0 107 19 00.0	0.075	0.3 2217	3.5 Nrc Broadcasting	210.0	209.1
291C3 Pagosa Springs	KWUF-FM	CP NCX		227.1 45.8	254.99 BPH20101130AFG	37 11 32.0 107 05 55.0	1.550 389	2.5 2632	39.9 Wolf Creek Broadcasting, L	244.7	214.7
295C0 Clifton	KMZK	LIC _CX		286.0 103.5	354.41 BLH20110425AAI	39 34 52.0 108 57 36.0	100.000 440	130.3 2690	87.0 Charles D. Hall	214.9	253.3
292C3 Taos Pueblo	AU9467125	VAC _		190.8 10.4	263.60 RM11035	36 26 19.0 105 32 38.0	25.000 100	2.3 2587	22.7 Dana J. Puopolo	254.0	215.8
292C3 Taos Pueblo	1560183	APP _		190.8 10.4	263.60 BSFH20130206ADZ	36 26 19.0 105 32 38.0	25.000 100	2.3 2587	22.7 Dmc Broadcasting Inc.	254.0	215.8
292D Steamboat Springs	KIFT-FM2	LIC DV_		321.8 140.7	239.70 BLFTB20061116ADJ	40 27 16.0 106 44 34.0	0.420	1.3 3165	22.2 Nrc Broadcasting	231.8	217.0
297C2 Hayden	KQZR	LIC _C_		315.3 133.8	277.10 BLH20000731ACV	40 31 16.0 107 17 46.0	29.000 198	6.7 2252	57.3 Nrc Broadcasting	263.1	220.1
292A Cheyenne	KLEN	LIC NCX		3.0 183.1	253.49 BLH20051114AFQ	41 03 09.0 104 49 55.0	6.000 99	3.1 1977	32.4 Townsquare Media	237.3	220.8
296C Bayfield	KLJH	LIC NHX		238.3 56.6	291.48 BLH20050919ABQ	37 21 46.0 107 47 40.0	100.000 574	6.6 3008	57.0 Voice Ministries Of Farmin	276.3	224.1
292A Pagosa Springs	KWUF-FM	LIC _CN		227.1 45.8	254.99 BMLH19891211KX	37 11 32.0 107 05 55.0	0.255 390	1.1 2633	26.3 Wolf Creek Broadcasting, L	246.1	228.5
296D Pagosa Springs	KLJH-FM4	CP _H_		227.1 45.8	254.99 BNPFTB20100608AIW	37 11 32.0 107 05 55.0	0.210	1.0 2636	25.2 Voice Ministries Of Farmin	246.2	229.6
294L1 Parachute	KPCT-LP	LIC _		286.5 104.6	276.10 BLL20040223AOZ	39 26 12.0 108 04 06.0	0.100	18.6 1572	5.6 Colorado, State Of, Teleco	248.3	239.1
291C2 Rock River	KLMI	CP _CX		343.7 163.0	314.36 BPH20101112AWB	41 29 05.0 106 03 06.0	50.000 52	6.1 2491	51.2 Greeley Broadcasting Corpo	302.1	260.9
291C3 Rock River	KLMI	LIC _CX		343.7 163.0	314.36 BLH20090923ACO	41 29 05.0 106 03 06.0	25.000 52	5.1 2491	45.0 Greeley Broadcasting Corpo	303.2	267.0
294L1 Grand Junction	KGJN-LP«	LIC _		277.1 94.9	311.27 BLL20040225ABH	39 03 57.0 108 33 42.0	0.100	18.6 1425	5.6 Colorado, State Of, Teleco	65.0R	246.8M

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.  
« = Station meets FCC minimum distance spacing for its class.

\* Translator being filed for by this long form application.

\*\* No actual interference will be caused to KKLI since the proposed 100 dBu contour will not cover any population. See the technical statement for more details.

FIGURE 2 - PREDICTED 100 DBU  
NEW FM TRANSLATOR, DIVIDE, CO, CH. 294D

Coverage Study - NGDC 30 SEC  
08-15-2013

1549782 CH294 D , 0.06 kW, 0.0M HAAT, 3781.0M COR AMSL  
Interference Contour = 100 dBu. Population = 0

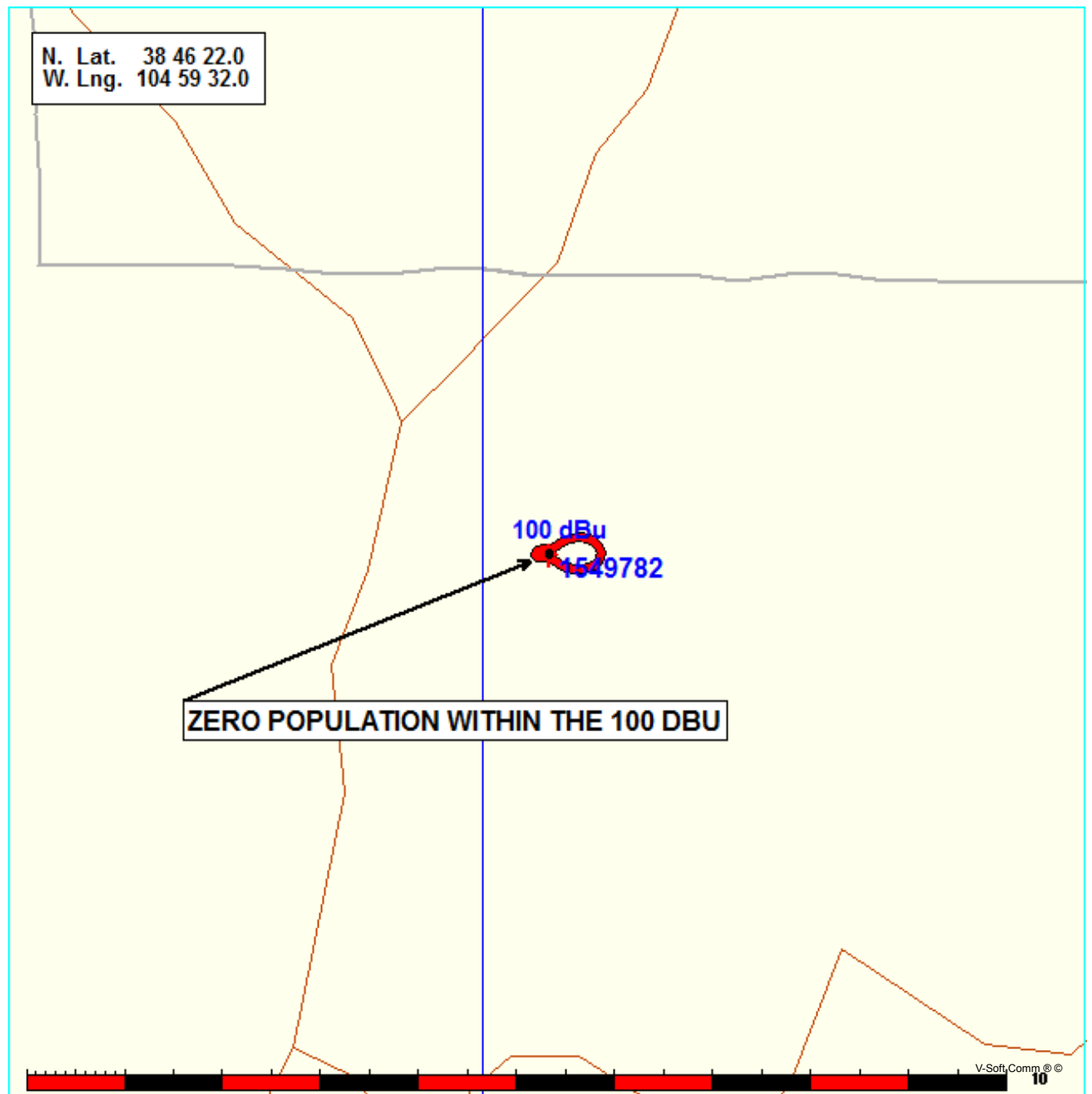
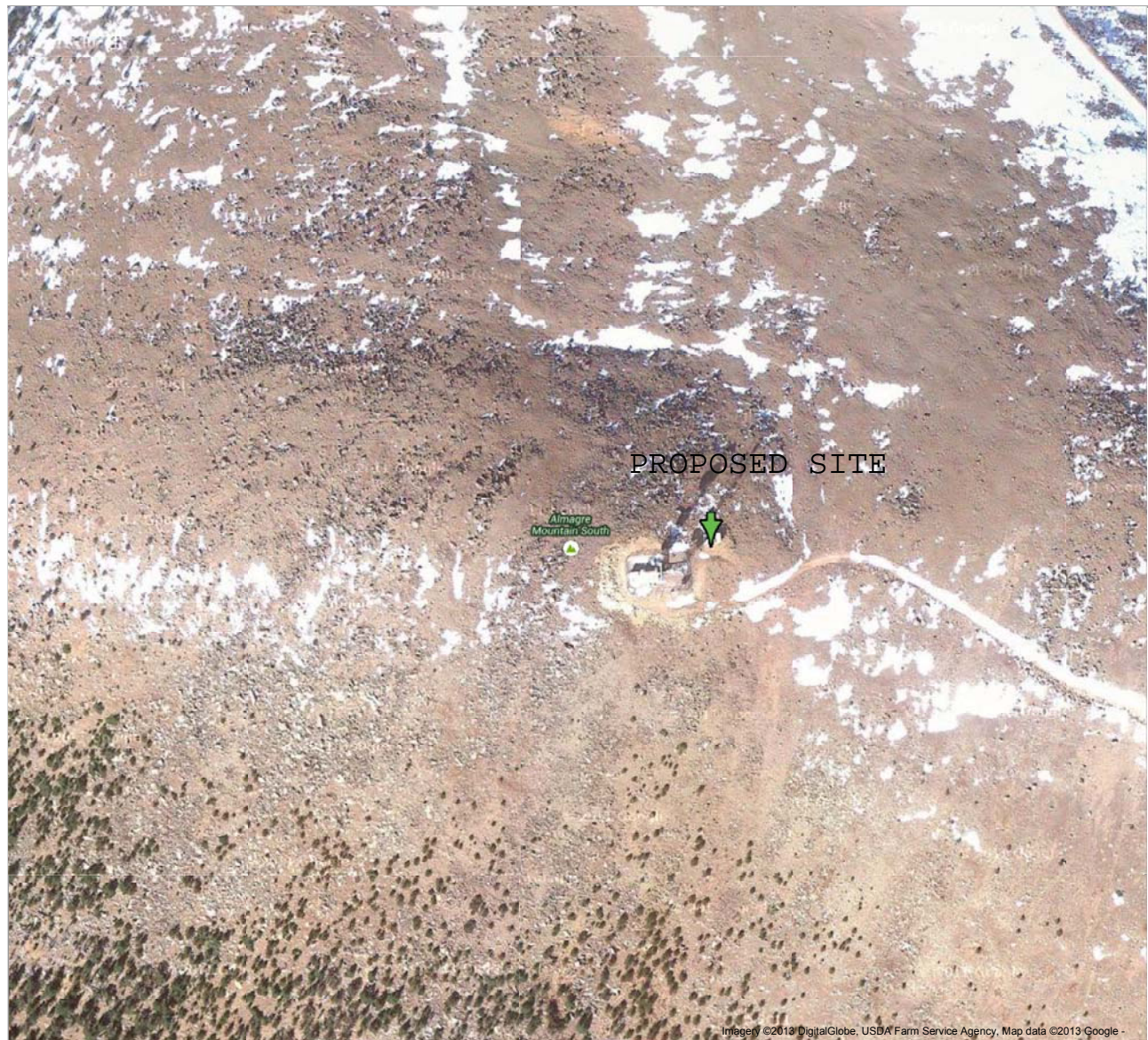




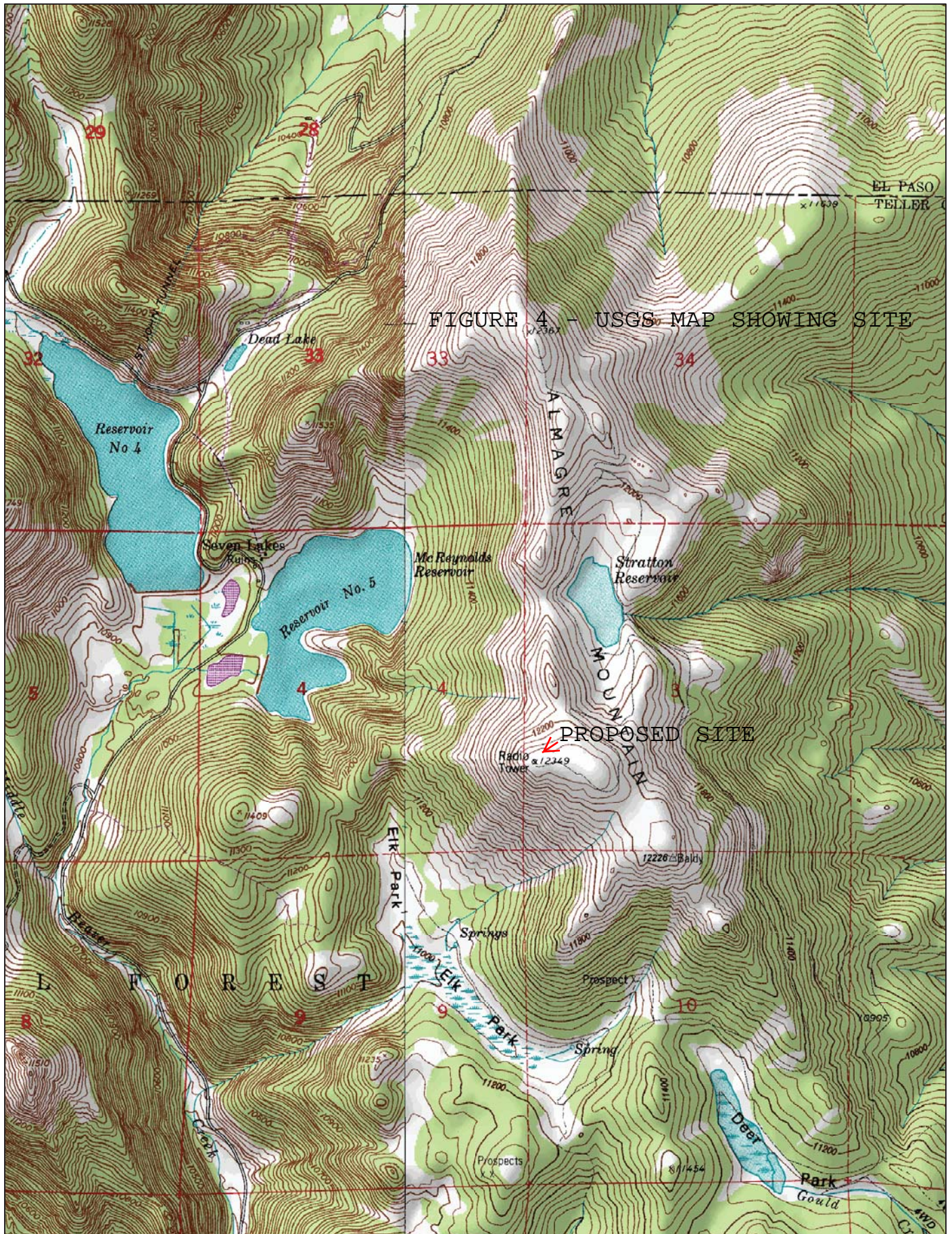
FIGURE 3 SATELLITE MAP OF PROPOSED SITE

Google

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







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Scale: 1 : 25,000 Map Rotation: 0° Magnetic Declination: 41991162814577712000000000025,000



### New Divide

BNPFT20030310AAX  
Latitude: 38-46-22 N  
Longitude: 104-59-32 W  
ERP: 0.06 kW  
Channel: 294  
Frequency: 106.7 MHz  
AMSL Height: 3781.0 m  
Elevation: 3763.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: Longley/Rice  
Climate: Cont temperate  
Conductivity: 0.0050  
Dielec Const: 15.0  
Refractivity: 311.0  
Receiver Ht AG: 9.1 m  
Receiver Gain: 0 dB  
Time Variability: 50.0%  
Sit. Variability: 50.0%  
ITM Mode: Broadcast

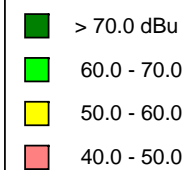


FIGURE 5 - FILL IN MAP WITH KCMN(AM)

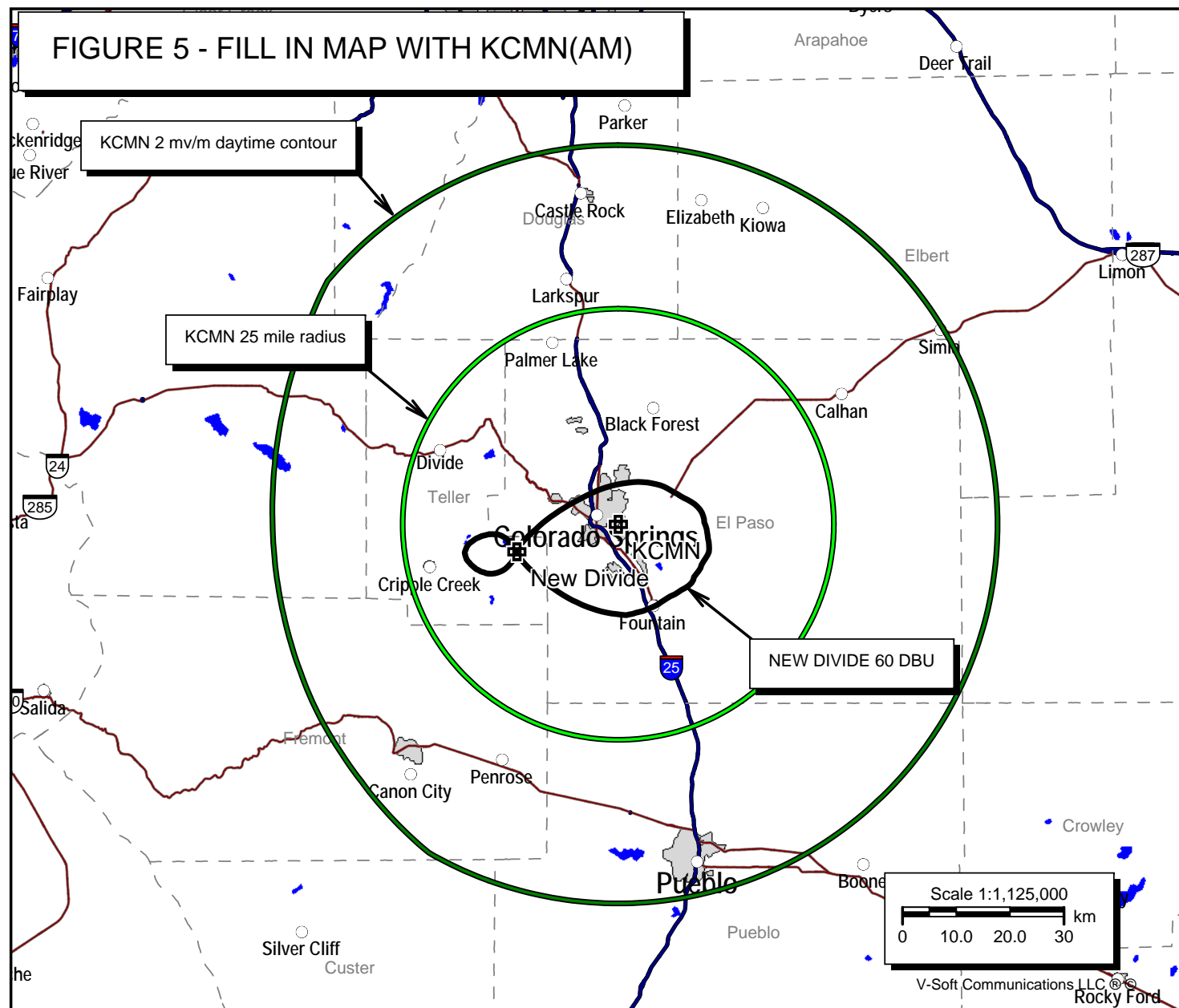
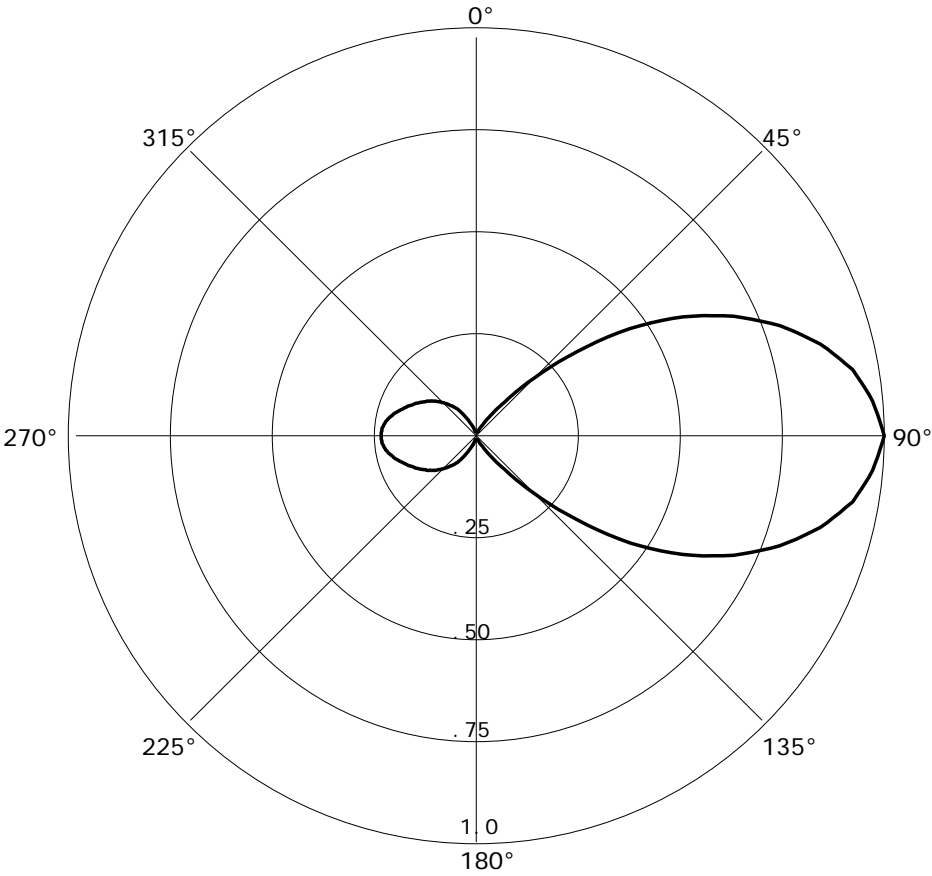


FIGURE 6 DA ANTENNA DATA

1549782 08-15-2013 RMS(V) = .382  
SCALA HDCA-10 COMPOSITE H&V Graph is Relative Field

Azi	Field	dBk	kW
000	0.010	-52.218	0.000
010	0.010	-52.218	0.000
020	0.010	-52.218	0.000
030	0.030	-42.676	0.000
040	0.108	-31.550	0.001
050	0.320	-22.115	0.006
060	0.585	-16.875	0.021
070	0.792	-14.244	0.038
080	0.937	-12.784	0.053
090	1.000	-12.218	0.060
100	0.937	-12.784	0.053
110	0.792	-14.244	0.038
120	0.585	-16.875	0.021
130	0.320	-22.115	0.006
140	0.108	-31.550	0.001
150	0.030	-42.676	0.000
160	0.010	-52.218	0.000
170	0.010	-52.218	0.000
180	0.010	-52.218	0.000
190	0.010	-52.218	0.000
200	0.023	-44.984	0.000
210	0.055	-37.411	0.000
220	0.097	-32.483	0.001
230	0.133	-29.741	0.001
240	0.162	-28.028	0.002
250	0.192	-26.552	0.002
260	0.222	-25.291	0.003
270	0.233	-24.871	0.003
280	0.222	-25.291	0.003
290	0.192	-26.552	0.002
300	0.162	-28.028	0.002
310	0.133	-29.741	0.001
320	0.097	-32.483	0.001
330	0.055	-37.411	0.000
340	0.023	-44.984	0.000
350	0.010	-52.218	0.000



Contour.out

N. Lat. = 384622.0 W. Lng. = 1045932.0  
 HAAT and Distance to Contour,  
 FCC, FM 2-10 Mi, 51 pts Method - NGDC 30 SEC

FIGURE 7 - TABULATION OF DISTANCES TO CONTOUR

Azi.	AV EL	HAAT	dBk	60-F5	54-F1	100-F1
000	2839.2	941.8	-52.22	0.54	1.08	0.01
010	2723.1	1057.9	-52.22	0.54	1.08	0.01
020	2666.2	1114.8	-52.22	0.54	1.08	0.01
030	2553.7	1227.3	-42.68	1.57	3.17	0.02
040	2438.8	1342.2	-31.55	5.45	10.55	0.06
050	2398.4	1382.6	-22.12	15.30	29.24	0.17
060	2314.4	1466.6	-16.88	26.06	42.73	0.32
070	2288.5	1492.5	-14.24	31.76	49.74	0.43
080	2225.7	1555.3	-12.78	35.45	54.55	0.51
090	2327.8	1453.2	-12.22	35.59	54.52	0.54
100	2452.0	1329.0	-12.78	32.86	50.90	0.51
110	2581.4	1199.6	-14.24	28.21	44.67	0.43
120	2591.6	1189.4	-16.88	23.35	38.20	0.32
130	2628.5	1152.5	-22.12	14.56	26.41	0.17
140	2710.3	1070.7	-31.55	5.42	10.19	0.06
150	2749.2	1031.8	-42.68	1.57	3.13	0.02
160	2818.2	962.8	-52.22	0.54	1.08	0.01
170	2912.3	868.7	-52.22	0.54	1.08	0.01
180	2858.5	922.5	-52.22	0.54	1.08	0.01
190	2943.4	837.6	-52.22	0.54	1.08	0.01
200	2872.3	908.7	-44.98	1.25	2.43	0.01
210	2903.8	877.2	-37.41	2.87	5.47	0.03
220	2933.3	847.7	-32.48	4.84	8.86	0.05
230	3007.3	773.7	-29.74	6.38	11.18	0.07
240	3018.8	762.2	-28.03	7.47	12.94	0.09
250	3083.3	697.7	-26.55	8.43	14.13	0.10
260	3126.6	654.4	-25.29	9.31	15.45	0.12
270	3144.1	636.9	-24.87	9.58	15.71	0.13
280	3215.1	565.9	-25.29	8.91	13.94	0.12
290	3305.5	475.5	-26.55	7.62	11.95	0.10
300	3394.8	386.2	-28.03	6.29	10.03	0.09
310	3492.6	288.4	-29.74	5.01	7.82	0.07
320	3605.5	175.5	-32.48	3.40	5.19	0.05
330	3605.2	175.8	-37.41	2.33	3.69	0.03
340	3280.5	500.5	-44.98	1.25	2.36	0.01
350	2994.7	786.3	-52.22	0.54	1.08	0.01

Ave EI = 2861.24 M HAAT= 919.76 M AMSL= 3781