

Doug Vernier, Telecommunications Consultants
1600 Picturesque Dr., Cedar Falls, IA 50613

Contour-to-Contour Table - Allocation for channel 201.

Public Broadcasting of Colorado, Inc.

REFERENCE 39 43 58.0 N. CH# 201C3 - 88.1 MHz, Pwr= 4.4 kW, HAAT= 238.0 M, COR= 2275 M DISPLAY DATES
105 14 08.0 W. Average Protected F(50-50)= 39.07 km DATA 05-17-17
Omni-directional SEARCH 05-17-17

CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap	*OUT* in km)
201C2 KVOD Lakewood	CP DCY CO	166.7 346.7	6.77 BPED20150715AAX	39 40 24.4 105 13 02.5	6.400 326	101.7 2364	40.0 Public Broadcasting of Col	-127.7*	-124.3*	
201C3 KVOD Lakewood	LIC _CX CO	167.6 347.6	6.95 BLED20100805AJY	39 40 18.0 105 13 05.0	1.200 321	84.9 2348	30.6 Public Broadcasting of Col	-109.2*	-112.7*	
203A KGNU-FM Boulder	LIC DC_ CO	13.5 193.5	29.69 BLED20100528ADY	39 59 33.0 105 09 16.0	4.000 65	1.6 1732	14.2 Boulder Community Broadcas	-22.9*	11.4 <***	
202A KVXQ Fort Collins	LIC _CX CO	355.5 175.5	98.57 BLED20140731AQY	40 37 00.0 105 19 36.0	0.140 374	42.0 2545	21.8 Public Broadcasting of Col	12.5	0.0	
202C3 KFFR Winter Park	LIC DHX CO	302.8 122.4	56.46 BLED20150424AAC	40 00 23.0 105 47 35.0	10.000 -180	26.8 2747	18.1 Fraser Valley Community Me	8.8	16.7	
202C3 KFFR Winter Park	CP DHX CO	302.9 122.5	56.58 BPED20160519ABH	40 00 28.0 105 47 37.0	10.000 -167	26.8 2759	18.1 Fraser Valley Community Me	8.9	16.8	
201A KAIX Cheyenne	LIC _CX WY	15.2 195.5	164.49 BMLED20140611ABG	41 09 35.0 104 43 18.0	1.800 63	53.0 1898	12.1 Educational Media Foundati	62.0	22.8	
201C3 KMPZ Salida	LIC _CX CO	205.3 24.8	157.83 BLED20101029ADJ	38 26 48.0 106 00 36.0	0.200 827	106.2 3567	42.5 Cheyenne Mountain Public B	24.3	40.2	
201C2 KDNK Glenwood Springs	LIC DEX CO	259.9 78.5	186.16 BLED20041022ABU	39 25 08.0 107 22 10.0	1.200 775	135.5 3227	58.4 Carbondale Community Acces	24.5	57.6	
204C1 KCME Manitou Springs	LIC _CY CO	163.5 343.8	114.50 BLED19990203KA	38 44 40.0 104 51 41.0	12.000 668	6.9 2918	76.6 Cheyenne Mountain Public B	60.4	33.1	
202C1 KTPL Pueblo	LIC _CX CO	174.0 354.2	199.88 BLED20050309AAH	37 56 40.0 104 59 56.0	65.000 69	113.9 2593	68.5 Educational Communications	42.5	62.1	
203A KVJZ Vail	LIC _CX CO	263.2 82.5	104.66 BLED20091112AJH	39 36 56.0 106 26 57.0	5.000 -241	1.6 2730	15.0 Rocky Mountain Public Medi	76.6	88.1	
255C KKMG« Pueblo	LIC _CY CO	163.5 343.8	114.29 BLH19951005KA	38 44 43.0 104 51 41.0	72.000 695	0.0 2946	0.0 Radio License Holding Cbc,	30.5R	83.8M	
204A KMKZ Red Feather Lakes	LIC _CX CO	344.8 164.6	130.82 BLED20110316AAC	40 52 04.0 105 38 33.0	0.005 260	0.2 2927	8.4 3g Learning Solutions	85.3	118.7	
204A KDNR South Greeley	CP DCX WY	6.6 186.8	153.11 BPED20160202ABM	41 06 02.1 105 01 29.1	2.500 127	2.4 2153	26.9 western Inspirational Broa	99.9	121.1	
204A KDNR South Greeley	LIC _CX WY	6.6 186.8	153.11 BMLED20080929AUD	41 06 02.0 105 01 29.1	0.500 129	1.6 2153	18.4 western Inspirational Broa	100.8	129.7	
201A KHTU Wray	LIC _VX CO	80.6 262.6	258.75 BLED20110516AAA	40 04 24.0 102 14 03.0	0.100 -38	18.6 1097	5.6 Home Town Radio	183.5	118.4	

Terrain database is GLOBE 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= - Zone 2, 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.

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

< ** Existing Overlap not exacerbated

HOW TO READ THE FM COMPUTER PRINT-OUT

The computer printout should be self-explanatory for the most part. The parameters of the station being checked, (reference station) are printed in the heading. Contour distances are in kilometers and are predicted using the Commission's TVFMINT FORTRAN subroutine. When interference contour distances are less than 16 kilometers the F(50-50) tables are used. If signal contour distances are less than 1.6 km the free-space equation is used.

The column listed "IN " is the difference in kilometers between of the reference station's protected contour and the data file station's interference contour at the closest point between the contours. (All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket 80-90.) Therefore, "IN" column is a measure of incoming interference. Negative distances in this column indicate the presence of contour overlap. Listed antenna heights and power are those given in the FCC database. The column labeled "OUT " shows the greatest distance in kilometers of overlap or smallest of clearance between the reference station's interference contour and the database station's protected contour. Negative distance figures in this column indicate outgoing contour overlap.

Under the "AZI" column, the first row of numbers indicate the True North bearings from the reference station toward the database stations, while the numbers in the second row indicate the reverse bearings from the database stations to the reference station.

The columns labeled "INT" and "PRO" contain the distance in kilometers of the appropriate interference contour and the protected contour of a data base station.

For I.F. relationships, some channel-six TV relationships and relationships with commercial channel stations providing clearance the minimum spacings values the "IN" and "OUT" columns can change their significance. The letter "R" stands for the minimum **required** distance in kilometers, while the letter "M" in the next column follows the **available clear space** (or lack of it) in kilometers. Minimum separation distances when displayed are taken from Sec 73.207 of the rules as amended. Canadian and Mexican separation distances, U/D ratios and protected contour values are from the US/Mexican Working Agreement and the US/Canada Working Agreement".

The call letters of stations meeting the minimum separation distances under the rules will be flagged by the characters "<<" appended to the right-hand side of the call sign. The "^" character appended to the call sign means the station has been "max-classed" according to the provisions of section 73.525 of the Rules.

The first three letters of the "TYPE" column identify the current FCC status of the stations. The fourth letter will be a "D" if the facility is directional. "Z" indicates a 73.215 directional. An "N" indicates it is a 73.215 station that operates with an omni-directional antenna. The fifth letter will be an E, H or V depending on the type of antenna polarization. The sixth letter will be a "Y" if the antenna uses beam tilt or an "X" if the commission is not sure, otherwise it will be an "N" or left blank.

Translator relationships with LPTV/Translators are calculated using the 62 dBu protected and the F(50-10) interference contour, as defined in section 74.1205 of the Rules.

Contour-to-Contour Table - KVOD vs KVVQ
Public Broadcasting of Colorado, Inc.

FMCommander Single Allocation Study - 05-19-2017 - GLOBE 30 Sec
KVOD's Overlaps (In= 12.46 km, Out= 0.01 km)

KVOD CH 201 C3

Lat= 39 43 58.0, Lng= 105 14 08.0

4.4 kW 238 m HAAT, 2275 m COR

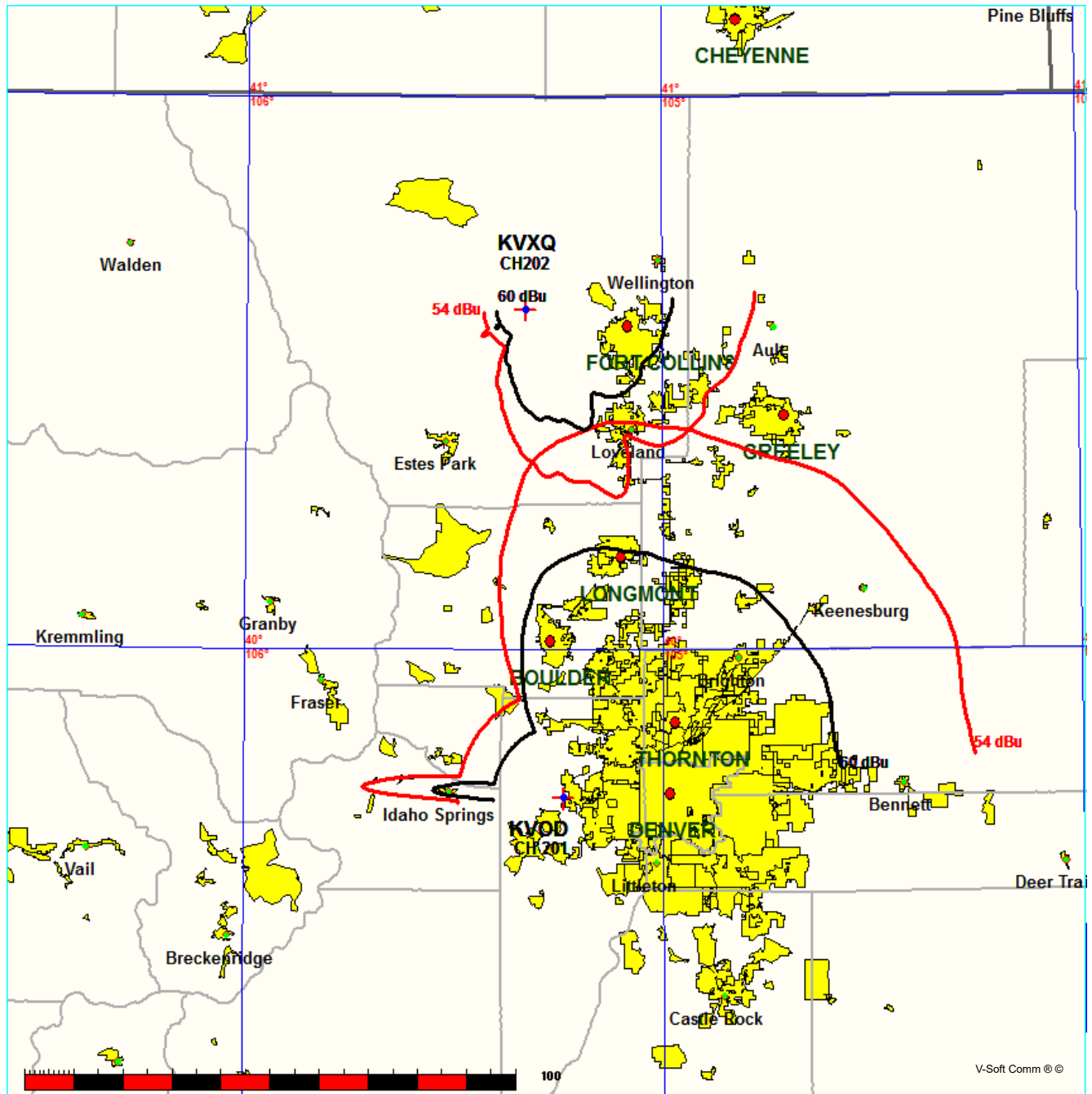
Prot.= 60 dBu, Intef.= 54 dBu

KVVQ CH 202 A BLED20140731AQY

Lat= 40 37 00.0, Lng= 105 19 36.0

0.14 kW 374 m HAAT, 2545 m COR

Prot.= 60 dBu, Intef.= 54 dBu



05-19-2017

Terrain Data: GLOBE 30 Sec

FMOver Analysis

KVOD

KVXQ BLED20140731AQY

Channel = 201C3

Max ERP = 4.4 kW

RCAMSL = 2275 m

N. Lat. 39 43 58.0

W. Lng. 105 14 08.0

Protected

60 dBu

Channel = 202A

Max ERP = 0.14 kW

RCAMSL = 2545 m

N. Lat. 40 37 00.0

W. Lng. 105 19 36.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
296.0	004.4000	-0180.3	014.5	183.3	000.1400	0278.5	092.1	28.84	
297.0	004.4000	-0186.3	014.5	183.2	000.1400	0279.5	091.8	28.95	
298.0	004.4000	-0184.1	014.5	183.2	000.1400	0280.5	091.6	29.05	
299.0	004.4000	-0176.0	014.5	183.1	000.1400	0281.7	091.4	29.16	
300.0	004.4000	-0162.8	014.5	183.0	000.1400	0282.9	091.1	29.27	
301.0	004.4000	-0146.2	014.5	182.9	000.1400	0284.1	090.9	29.38	
302.0	004.4000	-0130.4	014.5	182.9	000.1400	0285.4	090.7	29.49	
303.0	004.4000	-0119.2	014.5	182.8	000.1400	0286.7	090.5	29.60	
304.0	004.4000	-0117.2	014.5	182.7	000.1400	0288.1	090.3	29.71	
305.0	004.4000	-0123.9	014.5	182.6	000.1400	0289.4	090.0	29.82	
306.0	004.4000	-0136.8	014.5	182.5	000.1400	0290.9	089.8	29.93	
307.0	004.4000	-0152.1	014.5	182.4	000.1400	0292.3	089.6	30.04	
308.0	004.4000	-0167.6	014.5	182.3	000.1400	0293.8	089.4	30.15	
309.0	004.4000	-0182.0	014.5	182.3	000.1400	0295.3	089.2	30.26	
310.0	004.4000	-0194.8	014.5	182.2	000.1400	0296.8	089.0	30.37	
311.0	004.4000	-0203.7	014.5	182.1	000.1400	0298.4	088.8	30.48	
312.0	004.4000	-0206.0	014.5	181.9	000.1400	0299.9	088.6	30.59	
313.0	004.4000	-0198.3	014.5	181.8	000.1400	0301.5	088.4	30.70	
314.0	004.4000	-0183.2	014.5	181.7	000.1400	0303.0	088.2	30.81	
315.0	004.4000	-0166.4	014.5	181.6	000.1400	0304.5	088.0	30.92	
316.0	004.4000	-0151.7	014.5	181.5	000.1400	0306.1	087.9	31.03	
317.0	004.4000	-0138.9	014.5	181.4	000.1400	0307.7	087.7	31.13	
318.0	004.4000	-0126.6	014.5	181.3	000.1400	0309.4	087.5	31.24	
319.0	004.4000	-0113.6	014.5	181.1	000.1400	0311.1	087.3	31.35	
320.0	004.4000	-0100.2	014.5	181.0	000.1400	0312.8	087.2	31.46	
321.0	004.4000	-0086.1	014.5	180.9	000.1400	0314.4	087.0	31.56	
322.0	004.4000	-0071.3	014.5	180.8	000.1400	0315.5	086.8	31.65	
323.0	004.4000	-0057.1	014.5	180.6	000.1400	0316.0	086.7	31.71	
324.0	004.4000	-0044.9	014.5	180.5	000.1400	0317.0	086.5	31.79	
325.0	004.4000	-0036.8	014.5	180.4	000.1400	0318.1	086.4	31.88	
326.0	004.4000	-0034.7	014.5	180.2	000.1400	0319.2	086.2	31.96	
327.0	004.4000	-0036.8	014.5	180.1	000.1400	0320.3	086.1	32.04	
328.0	004.4000	-0035.3	014.5	179.9	000.1400	0321.4	086.0	32.12	
329.0	004.4000	-0027.1	014.5	179.8	000.1400	0322.5	085.8	32.19	
330.0	004.4000	-0017.0	014.5	179.7	000.1400	0323.7	085.7	32.27	
331.0	004.4000	-0010.8	014.5	179.5	000.1400	0324.8	085.6	32.35	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
332.0	004.4000	-0006.7	014.5	179.4	000.1400	0326.0	085.5	32.42
333.0	004.4000	-0001.6	014.5	179.2	000.1400	0327.2	085.3	32.50
334.0	004.4000	0007.4	014.5	179.1	000.1400	0328.4	085.2	32.57
335.0	004.4000	0021.8	014.5	178.9	000.1400	0329.7	085.1	32.65
336.0	004.4000	0039.0	016.6	179.3	000.1400	0326.5	083.1	33.20
337.0	004.4000	0054.6	020.0	180.0	000.1400	0320.8	079.9	34.07
338.0	004.4000	0067.0	021.9	180.3	000.1400	0318.4	078.0	34.64
339.0	004.4000	0076.6	023.3	180.4	000.1400	0317.6	076.5	35.09
340.0	004.4000	0086.2	024.6	180.5	000.1400	0317.1	075.2	35.55
341.0	004.4000	0098.4	026.2	180.6	000.1400	0316.3	073.5	36.10
342.0	004.4000	0113.2	027.9	180.7	000.1400	0315.8	071.7	36.71
343.0	004.4000	0130.1	029.6	180.7	000.1400	0315.7	070.0	37.32
344.0	004.4000	0147.2	031.3	180.7	000.1400	0315.7	068.2	37.96
345.0	004.4000	0164.4	033.1	180.7	000.1400	0315.7	066.3	38.65
346.0	004.4000	0180.9	034.7	180.6	000.1400	0316.5	064.6	39.29
347.0	004.4000	0195.5	035.9	180.3	000.1400	0318.6	063.3	39.84
348.0	004.4000	0213.3	037.3	180.0	000.1400	0320.9	061.7	40.48
349.0	004.4000	0229.5	038.5	179.6	000.1400	0323.9	060.5	41.06
350.0	004.4000	0248.6	039.7	179.2	000.1400	0327.4	059.1	41.68
351.0	004.4000	0270.6	041.1	178.7	000.1400	0331.3	057.7	42.36
352.0	004.4000	0294.0	042.5	178.1	000.1400	0335.7	056.2	43.07
353.0	004.4000	0317.2	043.9	177.5	000.1400	0340.7	054.8	43.77
354.0	004.4000	0333.1	044.8	176.7	000.1400	0352.2	053.8	44.52
355.0	004.4000	0347.5	045.6	175.9	000.1400	0366.1	052.9	45.27
356.0	004.4000	0357.9	046.2	175.0	000.1400	0380.2	052.3	45.90
357.0	004.4000	0365.7	046.7	174.1	000.1400	0390.2	051.9	46.33
358.0	004.4000	0374.2	047.1	173.2	000.1400	0396.5	051.5	46.65
359.0	004.4000	0382.2	047.6	172.2	000.1400	0400.6	051.2	46.88
000.0	004.4000	0389.8	048.0	171.3	000.1400	0396.9	050.9	46.90
001.0	004.4000	0396.5	048.3	170.2	000.1400	0391.7	050.7	46.84
002.0	004.4000	0403.3	048.7	169.2	000.1400	0390.9	050.5	46.89
003.0	004.4000	0410.4	049.1	168.2	000.1400	0397.7	050.3	47.14
004.0	004.4000	0417.2	049.4	167.1	000.1400	0407.2	050.2	47.43
005.0	004.4000	0423.3	049.8	166.1	000.1400	0418.9	050.2	47.73
006.0	004.4000	0429.5	050.1	165.0	000.1400	0429.0	050.1	47.99
007.0	004.4000	0434.1	050.4	164.0	000.1400	0439.5	050.2	48.21
008.0	004.4000	0437.7	050.6	163.0	000.1400	0444.6	050.4	48.26
009.0	004.4000	0440.7	050.7	162.0	000.1400	0446.2	050.6	48.21
010.0	004.4000	0443.5	050.9	161.0	000.1400	0450.4	050.9	48.20
011.0	004.4000	0445.9	051.0	160.1	000.1400	0459.0	051.3	48.28
012.0	004.4000	0446.6	051.0	159.2	000.1400	0471.0	051.7	48.41
013.0	004.4000	0445.8	051.0	158.4	000.1400	0484.0	052.2	48.53
014.0	004.4000	0445.6	051.0	157.6	000.1400	0498.7	052.7	48.69
015.0	004.4000	0447.1	051.1	156.8	000.1400	0516.6	053.2	48.95
016.0	004.4000	0450.9	051.3	155.9	000.1400	0536.5	053.6	49.26
017.0	004.4000	0455.3	051.5	155.0	000.1400	0553.1	054.0	49.45
018.0	004.4000	0459.8	051.8	154.2	000.1400	0564.1	054.5	49.48
019.0	004.4000	0462.5	051.9	153.4	000.1400	0569.3	055.0	49.38
020.0	004.4000	0463.3	052.0	152.7	000.1400	0570.8	055.6	49.18
021.0	004.4000	0463.2	052.0	152.1	000.1400	0569.2	056.3	48.93
022.0	004.4000	0463.5	052.0	151.5	000.1400	0565.5	057.0	48.63

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)		Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
023.0	004.4000	0464.5	052.0		150.9	000.1400	0559.6	057.6	48.31
024.0	004.4000	0466.1	052.1		150.2	000.1400	0551.6	058.3	47.94
025.0	004.4000	0468.2	052.2		149.6	000.1400	0541.0	059.0	47.50
026.0	004.4000	0470.6	052.4		149.0	000.1400	0528.8	059.7	46.97
027.0	004.4000	0472.8	052.5		148.5	000.1400	0515.9	060.4	46.39
028.0	004.4000	0475.2	052.6		147.9	000.1400	0502.9	061.1	45.79
029.0	004.4000	0478.4	052.8		147.4	000.1400	0489.5	061.8	45.19
030.0	004.4000	0482.2	053.0		146.8	000.1400	0476.4	062.5	44.59
031.0	004.4000	0486.7	053.3		146.2	000.1400	0463.2	063.3	44.00
032.0	004.4000	0492.2	053.6		145.6	000.1400	0449.3	064.0	43.39
033.0	004.4000	0498.9	054.0		144.9	000.1400	0434.0	064.7	42.75
034.0	004.4000	0506.7	054.5		144.3	000.1400	0417.0	065.4	42.05
035.0	004.4000	0514.5	054.9		143.6	000.1400	0399.8	066.1	41.34
036.0	004.4000	0522.5	055.4		143.0	000.1400	0384.8	066.9	40.66
037.0	004.4000	0529.9	055.8		142.4	000.1400	0374.9	067.7	40.10
038.0	004.4000	0536.7	056.2		141.8	000.1400	0370.9	068.6	39.69
039.0	004.4000	0542.6	056.6		141.4	000.1400	0371.9	069.5	39.40
040.0	004.4000	0546.7	056.8		141.0	000.1400	0375.2	070.4	39.18
041.0	004.4000	0549.8	056.9		140.8	000.1400	0378.8	071.3	38.95
042.0	004.4000	0552.0	057.1		140.6	000.1400	0382.2	072.3	38.71
043.0	004.4000	0553.5	057.1		140.4	000.1400	0385.4	073.3	38.47
044.0	004.4000	0554.0	057.2		140.3	000.1400	0387.6	074.3	38.20
045.0	004.4000	0554.1	057.2		140.2	000.1400	0389.2	075.2	37.91
046.0	004.4000	0554.1	057.2		140.1	000.1400	0390.5	076.2	37.60
047.0	004.4000	0553.9	057.2		140.1	000.1400	0391.3	077.2	37.29
048.0	004.4000	0554.5	057.2		140.0	000.1400	0392.5	078.2	36.99
049.0	004.4000	0555.6	057.2		140.0	000.1400	0393.8	079.2	36.69
050.0	004.4000	0556.4	057.3		139.9	000.1400	0394.5	080.2	36.38
051.0	004.4000	0556.6	057.3		139.9	000.1400	0394.6	081.2	36.04
052.0	004.4000	0556.2	057.3		140.0	000.1400	0393.9	082.2	35.68
053.0	004.4000	0556.1	057.3		140.0	000.1400	0393.2	083.2	35.32
054.0	004.4000	0556.8	057.3		140.0	000.1400	0392.8	084.2	34.96
055.0	004.4000	0558.1	057.4		140.0	000.1400	0392.6	085.2	34.62

05-19-2017

Terrain Data: GLOBE 30 Sec

FMOver Analysis

KVXQ BLEED20140731AQY

KVOD

Channel = 202A

Max ERP = 0.14 kW

RCAMSL = 2545 m

N. Lat. 40 37 00.0

W. Lng. 105 19 36.0

Protected

60 dBu

Channel = 201C3

Max ERP = 4.4 kW

RCAMSL = 2275 m

N. Lat. 39 43 58.0

W. Lng. 105 14 08.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
115.0	000.1400	0529.6	026.1	010.4	004.4000	0444.5	088.7	50.11	
116.0	000.1400	0530.2	026.1	010.3	004.4000	0444.3	088.2	50.25	
117.0	000.1400	0534.9	026.3	010.3	004.4000	0444.3	087.7	50.40	
118.0	000.1400	0543.1	026.5	010.4	004.4000	0444.5	087.2	50.57	
119.0	000.1400	0551.8	026.7	010.4	004.4000	0444.6	086.7	50.74	
120.0	000.1400	0557.6	026.9	010.4	004.4000	0444.6	086.2	50.90	
121.0	000.1400	0560.4	027.0	010.3	004.4000	0444.4	085.8	51.05	
122.0	000.1400	0560.4	027.0	010.2	004.4000	0444.1	085.3	51.18	
123.0	000.1400	0558.1	026.9	010.1	004.4000	0443.7	084.9	51.31	
124.0	000.1400	0554.7	026.8	009.9	004.4000	0443.2	084.5	51.42	
125.0	000.1400	0550.9	026.7	009.7	004.4000	0442.7	084.1	51.53	
126.0	000.1400	0548.7	026.6	009.5	004.4000	0442.2	083.7	51.64	
127.0	000.1400	0546.1	026.6	009.3	004.4000	0441.7	083.4	51.75	
128.0	000.1400	0542.0	026.5	009.1	004.4000	0441.1	083.0	51.85	
129.0	000.1400	0535.7	026.3	008.8	004.4000	0440.3	082.7	51.93	
130.0	000.1400	0530.7	026.1	008.6	004.4000	0439.5	082.4	52.01	
131.0	000.1400	0527.0	026.0	008.4	004.4000	0438.8	082.1	52.09	
132.0	000.1400	0522.2	025.9	008.1	004.4000	0438.0	081.8	52.17	
133.0	000.1400	0515.4	025.7	007.8	004.4000	0437.1	081.5	52.23	
134.0	000.1400	0507.4	025.4	007.5	004.4000	0436.0	081.3	52.27	
135.0	000.1400	0497.8	025.1	007.1	004.4000	0434.7	081.1	52.28	
136.0	000.1400	0483.5	024.7	006.7	004.4000	0432.9	081.0	52.25	
137.0	000.1400	0463.9	024.1	006.2	004.4000	0430.5	081.1	52.17	
138.0	000.1400	0440.9	023.5	005.7	004.4000	0427.5	081.2	52.05	
139.0	000.1400	0416.7	022.9	005.2	004.4000	0424.3	081.3	51.90	
140.0	000.1400	0393.2	022.3	004.7	004.4000	0421.1	081.5	51.76	
141.0	000.1400	0375.7	021.8	004.2	004.4000	0418.5	081.5	51.66	
142.0	000.1400	0371.4	021.7	004.0	004.4000	0417.1	081.4	51.67	
143.0	000.1400	0385.5	022.1	004.0	004.4000	0417.0	080.8	51.85	
144.0	000.1400	0410.0	022.7	004.0	004.4000	0417.4	080.1	52.11	
145.0	000.1400	0435.4	023.4	004.1	004.4000	0417.9	079.3	52.37	
146.0	000.1400	0458.9	024.0	004.2	004.4000	0418.1	078.6	52.63	
147.0	000.1400	0481.4	024.6	004.2	004.4000	0418.4	077.8	52.89	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
148.0	000.1400	0504.9	025.4	004.3	004.4000	0418.7	077.0	53.18
149.0	000.1400	0527.9	026.0	004.3	004.4000	0418.9	076.1	53.46
150.0	000.1400	0547.5	026.6	004.3	004.4000	0418.6	075.4	53.69
151.0	000.1400	0561.2	027.0	004.1	004.4000	0417.8	074.9	53.86
152.0	000.1400	0568.9	027.2	003.9	004.4000	0416.5	074.4	53.96
153.0	000.1400	0570.3	027.2	003.6	004.4000	0414.7	074.2	54.00*
154.0	000.1400	0565.4	027.1	003.2	004.4000	0412.0	074.0	53.96
155.0	000.1400	0553.7	026.8	002.8	004.4000	0408.9	074.1	53.86
156.0	000.1400	0534.9	026.3	002.3	004.4000	0405.3	074.3	53.67
157.0	000.1400	0512.3	025.6	001.8	004.4000	0401.6	074.7	53.42
158.0	000.1400	0491.5	024.9	001.2	004.4000	0398.2	075.2	53.18
159.0	000.1400	0474.3	024.4	000.8	004.4000	0395.1	075.5	52.98
160.0	000.1400	0459.9	024.0	000.4	004.4000	0392.3	075.7	52.82
161.0	000.1400	0450.5	023.8	000.0	004.4000	0389.9	075.8	52.71
162.0	000.1400	0446.2	023.6	359.7	004.4000	0387.7	075.8	52.65
163.0	000.1400	0444.4	023.6	359.4	004.4000	0385.4	075.7	52.60
164.0	000.1400	0439.3	023.5	359.1	004.4000	0382.7	075.7	52.51
165.0	000.1400	0429.0	023.2	358.7	004.4000	0380.0	075.9	52.38
166.0	000.1400	0419.5	023.0	358.4	004.4000	0377.4	076.0	52.24
167.0	000.1400	0408.5	022.7	358.0	004.4000	0374.5	076.2	52.08
168.0	000.1400	0399.1	022.4	357.7	004.4000	0371.8	076.4	51.94
169.0	000.1400	0392.0	022.2	357.4	004.4000	0369.2	076.5	51.81
170.0	000.1400	0390.7	022.2	357.1	004.4000	0366.7	076.5	51.73
171.0	000.1400	0395.7	022.3	356.8	004.4000	0364.3	076.3	51.72
172.0	000.1400	0400.1	022.5	356.5	004.4000	0361.9	076.2	51.69
173.0	000.1400	0397.9	022.4	356.3	004.4000	0359.7	076.2	51.61
174.0	000.1400	0391.3	022.2	356.0	004.4000	0357.5	076.4	51.48
175.0	000.1400	0380.9	022.0	355.7	004.4000	0355.0	076.6	51.30
176.0	000.1400	0364.7	021.5	355.4	004.4000	0352.1	077.1	51.05
177.0	000.1400	0348.0	021.1	355.1	004.4000	0348.9	077.5	50.78
178.0	000.1400	0336.8	020.7	354.9	004.4000	0345.5	077.9	50.55
179.0	000.1400	0328.8	020.5	354.6	004.4000	0341.8	078.1	50.34
180.0	000.1400	0320.9	020.3	354.4	004.4000	0338.2	078.4	50.13
181.0	000.1400	0313.1	020.0	354.1	004.4000	0334.8	078.7	49.92
182.0	000.1400	0299.1	019.6	353.9	004.4000	0331.9	079.2	49.66
183.0	000.1400	0283.1	019.0	353.7	004.4000	0329.4	079.7	49.38
184.0	000.1400	0265.3	018.4	353.6	004.4000	0327.1	080.4	49.09
185.0	000.1400	0249.5	017.8	353.4	004.4000	0325.0	081.0	48.81
186.0	000.1400	0236.1	017.3	353.3	004.4000	0322.7	081.6	48.55
187.0	000.1400	0222.9	016.8	353.2	004.4000	0320.6	082.2	48.29
188.0	000.1400	0210.1	016.3	353.1	004.4000	0318.7	082.8	48.04
189.0	000.1400	0196.5	015.7	353.0	004.4000	0317.1	083.4	47.79
190.0	000.1400	0183.4	015.2	352.9	004.4000	0315.6	083.9	47.55
191.0	000.1400	0170.9	014.7	352.9	004.4000	0314.3	084.5	47.32
192.0	000.1400	0162.1	014.3	352.8	004.4000	0312.8	085.0	47.12
193.0	000.1400	0155.9	013.9	352.7	004.4000	0310.9	085.4	46.94
194.0	000.1400	0149.1	013.6	352.6	004.4000	0309.3	085.8	46.76
195.0	000.1400	0139.0	013.1	352.6	004.4000	0308.9	086.3	46.57
196.0	000.1400	0127.5	012.5	352.6	004.4000	0309.2	086.9	46.39
197.0	000.1400	0119.2	012.1	352.6	004.4000	0308.5	087.4	46.23
198.0	000.1400	0114.0	011.9	352.5	004.4000	0307.3	087.7	46.09

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)		Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
199.0	000.1400	0110.5	011.7		352.5	004.4000	0305.6	087.9	45.96
200.0	000.1400	0107.7	011.6		352.4	004.4000	0303.8	088.2	45.83
201.0	000.1400	0103.9	011.4		352.3	004.4000	0302.4	088.4	45.70
202.0	000.1400	0098.1	011.1		352.3	004.4000	0302.1	088.8	45.58
203.0	000.1400	0091.1	010.7		352.3	004.4000	0302.5	089.2	45.46
204.0	000.1400	0081.9	010.2		352.4	004.4000	0304.4	089.8	45.34
205.0	000.1400	0071.1	009.5		352.6	004.4000	0307.4	090.4	45.24
206.0	000.1400	0060.9	008.8		352.7	004.4000	0310.9	091.1	45.14
207.0	000.1400	0050.3	007.9		352.9	004.4000	0315.8	091.9	45.03
208.0	000.1400	0040.6	007.1		353.2	004.4000	0320.6	092.7	44.93
209.0	000.1400	0033.8	006.5		353.3	004.4000	0323.3	093.3	44.84
210.0	000.1400	0029.3	006.1		353.4	004.4000	0324.4	093.6	44.77
211.0	000.1400	0024.6	006.1		353.3	004.4000	0323.5	093.7	44.72
212.0	000.1400	0020.5	006.1		353.3	004.4000	0322.6	093.7	44.68
213.0	000.1400	0016.4	006.1		353.2	004.4000	0321.8	093.8	44.63
214.0	000.1400	0009.8	006.1		353.2	004.4000	0320.9	093.9	44.58
215.0	000.1400	0001.4	006.1		353.1	004.4000	0320.0	093.9	44.53
216.0	000.1400	-0008.1	006.1		353.1	004.4000	0319.0	094.0	44.48
217.0	000.1400	-0016.2	006.1		353.0	004.4000	0318.1	094.1	44.43
218.0	000.1400	-0022.2	006.1		353.0	004.4000	0317.2	094.1	44.37
219.0	000.1400	-0028.4	006.1		353.0	004.4000	0316.3	094.2	44.32
220.0	000.1400	-0036.1	006.1		352.9	004.4000	0315.4	094.3	44.27
221.0	000.1400	-0042.8	006.1		352.9	004.4000	0314.5	094.4	44.22
222.0	000.1400	-0045.5	006.1		352.8	004.4000	0313.6	094.5	44.16
223.0	000.1400	-0048.4	006.1		352.8	004.4000	0312.7	094.5	44.11
224.0	000.1400	-0053.7	006.1		352.7	004.4000	0311.8	094.6	44.06
225.0	000.1400	-0059.7	006.1		352.7	004.4000	0310.9	094.7	44.00
226.0	000.1400	-0063.9	006.1		352.7	004.4000	0310.0	094.8	43.95
227.0	000.1400	-0065.2	006.1		352.6	004.4000	0309.1	094.9	43.89
228.0	000.1400	-0061.5	006.1		352.6	004.4000	0308.3	095.0	43.84
229.0	000.1400	-0053.3	006.1		352.6	004.4000	0307.4	095.1	43.78
230.0	000.1400	-0042.6	006.1		352.5	004.4000	0306.6	095.1	43.73
231.0	000.1400	-0032.4	006.1		352.5	004.4000	0305.8	095.2	43.68
232.0	000.1400	-0022.0	006.1		352.5	004.4000	0305.0	095.3	43.62
233.0	000.1400	-0010.4	006.1		352.4	004.4000	0304.3	095.4	43.57
234.0	000.1400	0004.9	006.1		352.4	004.4000	0303.5	095.5	43.52

Contour-to-Contour Table - KVOD vs KFFR
Public Broadcasting of Colorado, Inc.

FMCommander Single Allocation Study - 05-19-2017 - GLOBE 30 Sec
KVOD's Overlaps (In= 8.78 km, Out= 16.7 km)

KVOD CH 201 C3

Lat= 39 43 58.0, Lng= 105 14 08.0

4.4 kW 238 m HAAT, 2275 m COR

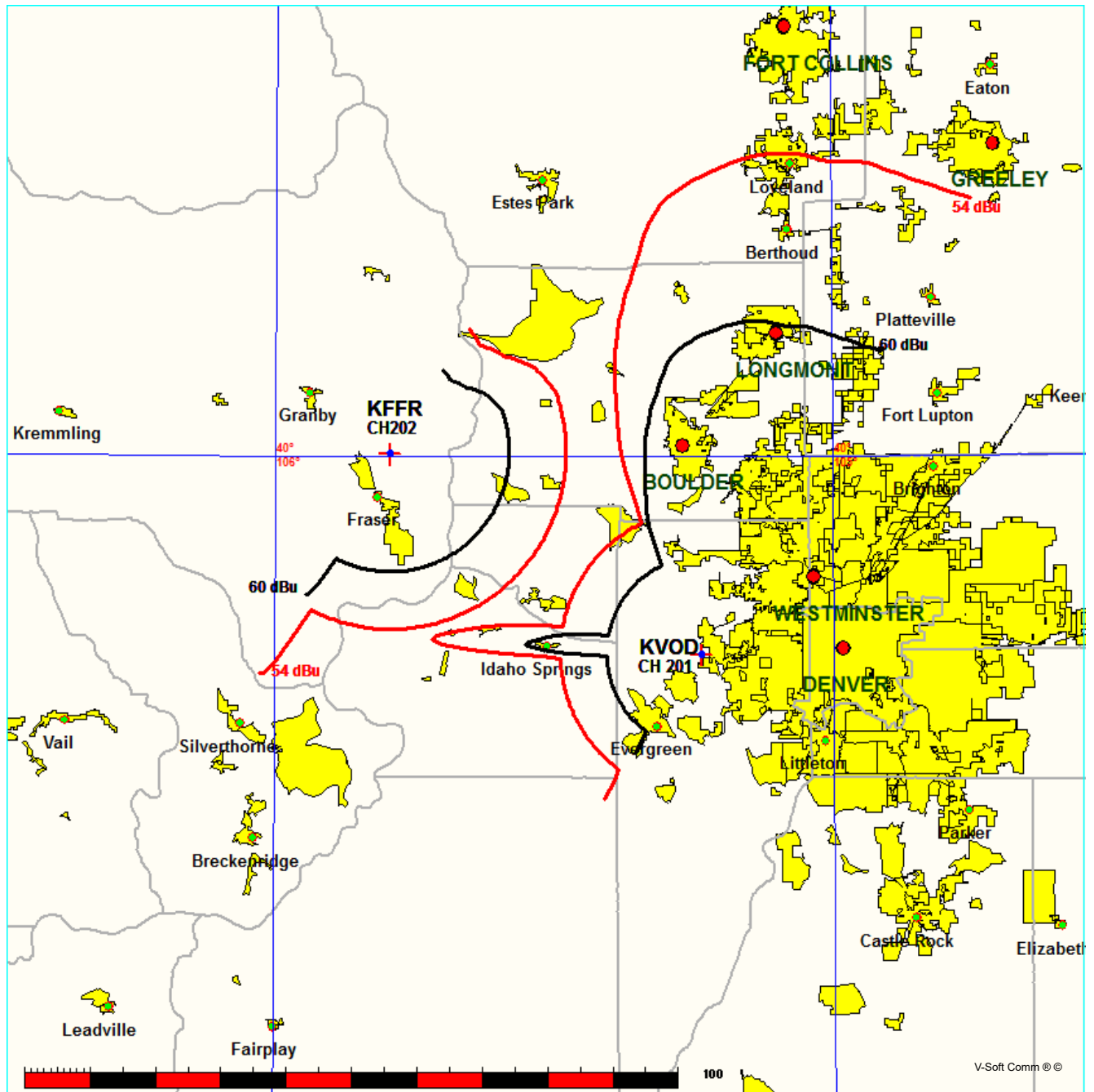
Prot.= 60 dBu, Intef.= 54 dBu

KFFR CH 202 C3 DA BLED20150424AAC

Lat= 40 00 23.0, Lng= 105 47 35.0

10.0 kW -180 m HAAT, 2747 m COR

Prot.= 60 dBu, Intef.= 54 dBu



Contour-to-Contour Table - KVOD vs KFFR
Public Broadcasting of Colorado, Inc.

FMCommander Single Allocation Study - 05-19-2017 - GLOBE 30 Sec
KVOD's Overlaps (In= 8.78 km, Out= 16.7 km)

KVOD CH 201 C3

Lat= 39 43 58.0, Lng= 105 14 08.0

4.4 kW 238 m HAAT, 2275 m COR

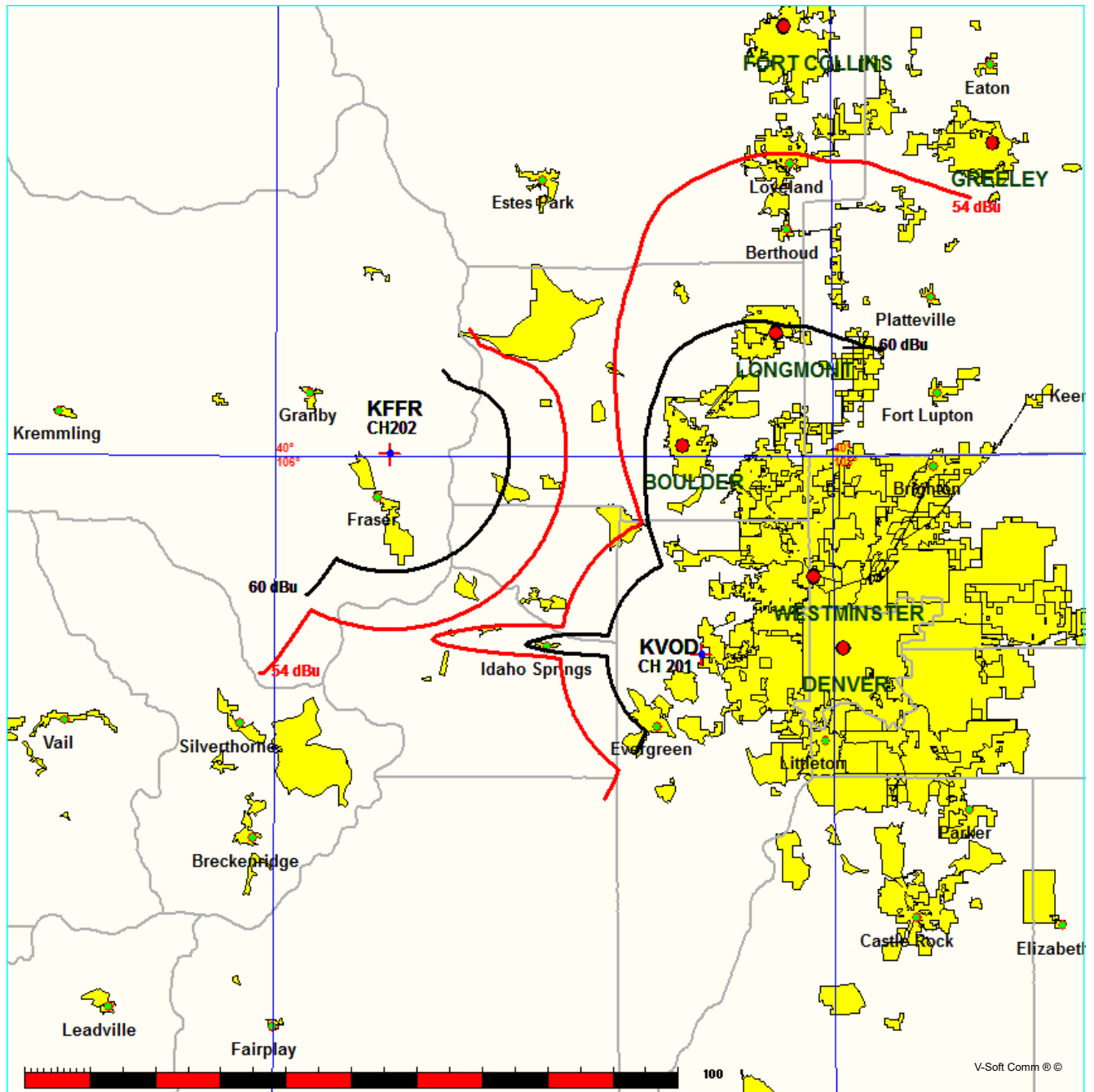
Prot.= 60 dBu, Intef.= 54 dBu

KFFR CH 202 C3 DA BLED20150424AAC

Lat= 40 00 23.0, Lng= 105 47 35.0

10.0 kW -180 m HAAT, 2747 m COR

Prot.= 60 dBu, Intef.= 54 dBu



Contour-to-Contour Table - KVOD vs KFFR (CP)
Public Broadcasting of Colorado, Inc.

FMCommander Single Allocation Study - 05-19-2017 - GLOBE 30 Sec
KVOD's Overlaps (In= 8.94 km, Out= 16.82 km)

KVOD CH 201 C3

Lat= 39 43 58.0, Lng= 105 14 08.0

4.4 kW 238 m HAAT, 2275 m COR

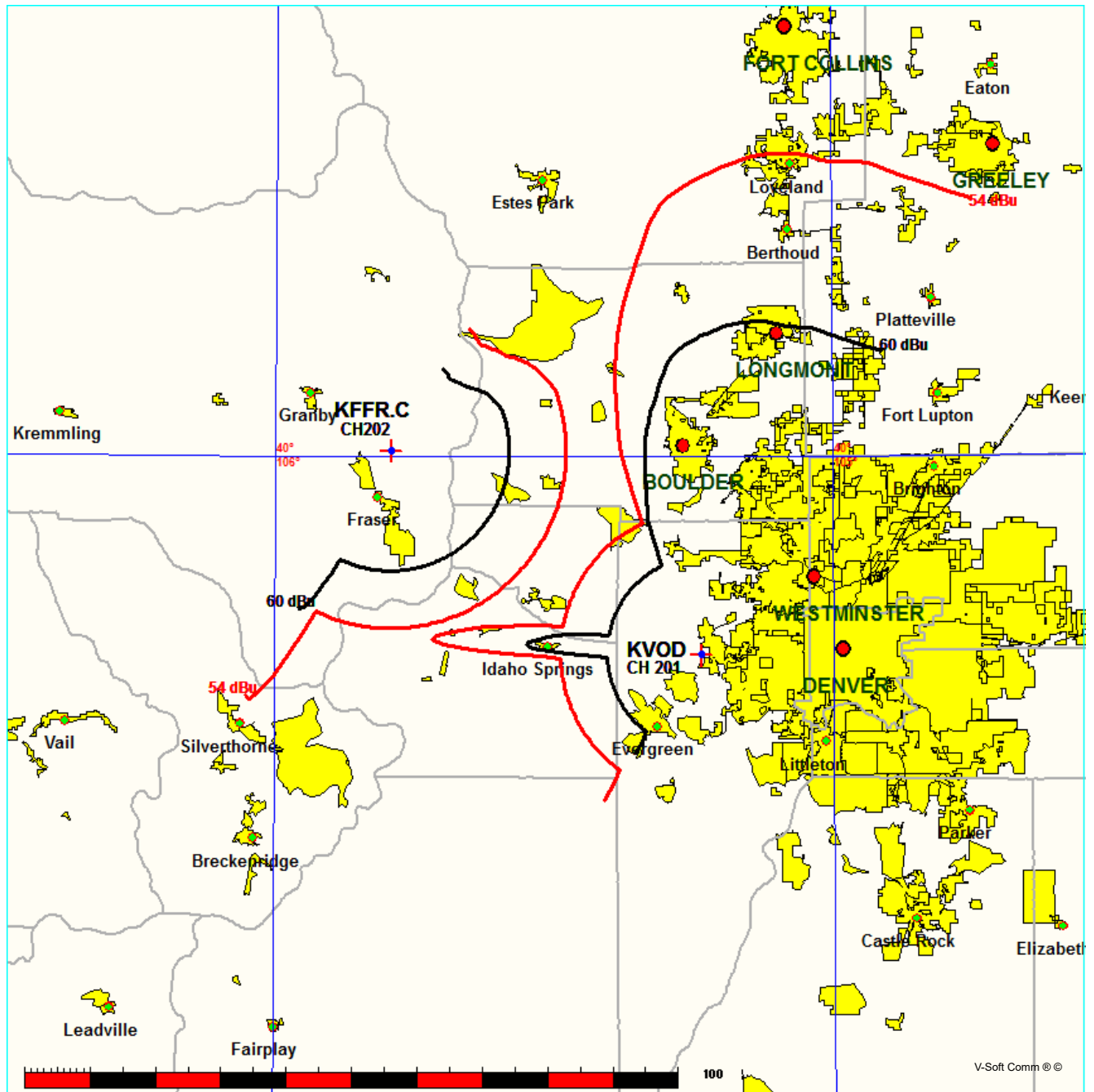
Prot.= 60 dBu, Intef.= 54 dBu

KFFR-C CH 202 C3 DA BPED20160519ABH

Lat= 40 00 28.0, Lng= 105 47 37.0

10.0 kW -167 m HAAT, 2759 m COR

Prot.= 60 dBu, Intef.= 54 dBu



05-19-2017

Terrain Data: GLOBE 30 Sec

FMOver Analysis

KVOD

KFFR BPED20160519ABH

Channel = 201C3

Max ERP = 4.4 kW

RCAMSL = 2275 m

N. Lat. 39 43 58.0

W. Lng. 105 14 08.0

Protected

60 dBu

Channel = 202C3

Max ERP = 10 kW

RCAMSL = 2759 m

N. Lat. 40 00 28.0

W. Lng. 105 47 37.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
243.0	004.4000	-0147.2	014.5	136.8	010.0000	-0369.3	050.9	45.75	
244.0	004.4000	-0139.4	014.5	136.7	010.0000	-0370.3	050.6	45.80	
245.0	004.4000	-0135.8	014.5	136.6	010.0000	-0371.4	050.4	45.86	
246.0	004.4000	-0133.6	014.5	136.6	010.0000	-0372.6	050.2	45.91	
247.0	004.4000	-0128.5	014.5	136.5	010.0000	-0373.7	049.9	45.96	
248.0	004.4000	-0118.7	014.5	136.4	010.0000	-0374.8	049.7	46.01	
249.0	004.4000	-0106.3	014.5	136.2	010.0000	-0376.0	049.4	46.06	
250.0	004.4000	-0095.3	014.5	136.1	010.0000	-0377.3	049.2	46.11	
251.0	004.4000	-0088.7	014.5	136.0	010.0000	-0378.6	049.0	46.16	
252.0	004.4000	-0084.8	014.5	135.9	010.0000	-0379.9	048.7	46.21	
253.0	004.4000	-0080.5	014.5	135.8	010.0000	-0381.3	048.5	46.26	
254.0	004.4000	-0074.7	014.5	135.6	010.0000	-0382.8	048.3	46.31	
255.0	004.4000	-0066.6	014.5	135.5	010.0000	-0384.4	048.1	46.36	
256.0	004.4000	-0058.8	014.5	135.3	010.0000	-0386.0	047.9	46.41	
257.0	004.4000	-0048.5	014.5	135.2	010.0000	-0387.6	047.6	46.46	
258.0	004.4000	-0036.8	014.5	135.0	010.0000	-0389.2	047.4	46.50	
259.0	004.4000	-0027.6	014.5	134.8	010.0000	-0390.9	047.2	46.55	
260.0	004.4000	-0020.9	014.5	134.7	010.0000	-0392.6	047.0	46.60	
261.0	004.4000	-0019.3	014.5	134.5	010.0000	-0394.5	046.8	46.65	
262.0	004.4000	-0024.8	014.5	134.3	010.0000	-0396.3	046.6	46.70	
263.0	004.4000	-0028.3	014.5	134.1	010.0000	-0398.2	046.4	46.74	
264.0	004.4000	-0027.8	014.5	133.9	010.0000	-0400.0	046.2	46.79	
265.0	004.4000	-0019.8	014.5	133.7	010.0000	-0401.8	046.0	46.84	
266.0	004.4000	-0009.1	014.5	133.5	010.0000	-0403.9	045.8	46.89	
267.0	004.4000	0003.2	014.5	133.3	010.0000	-0406.3	045.6	46.93	
268.0	004.4000	0020.4	014.5	133.1	010.0000	-0408.7	045.4	46.98	
269.0	004.4000	0038.9	016.5	134.7	010.0000	-0392.5	043.8	47.40	
270.0	004.4000	0057.9	020.5	138.3	010.0000	-0344.3	040.9	48.25	
271.0	004.4000	0077.0	023.3	141.1	010.0000	-0287.7	038.8	48.92	
272.0	004.4000	0096.2	025.9	143.7	010.0000	-0264.8	036.8	49.58	
273.0	004.4000	0104.8	027.0	144.6	010.0000	-0254.8	035.8	49.94	
274.0	004.4000	0100.8	026.5	143.5	010.0000	-0266.6	035.8	49.96	
275.0	004.4000	0089.4	025.0	141.3	010.0000	-0284.2	036.4	49.73	
276.0	004.4000	0079.6	023.7	139.3	010.0000	-0323.0	037.0	49.51	
277.0	004.4000	0070.1	022.3	137.5	010.0000	-0359.8	037.8	49.26	
278.0	004.4000	0058.4	020.6	135.4	010.0000	-0384.9	038.9	48.90	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
279.0	004.4000	0050.3	019.1	133.7	010.0000	-0401.6	039.9	48.57
280.0	004.4000	0040.0	016.8	131.6	010.0000	-0426.5	041.6	48.03
281.0	004.4000	0027.6	014.5	129.7	010.0000	-0443.3	043.5	47.51
282.0	004.4000	0016.8	014.5	129.4	010.0000	-0444.1	043.3	47.54
283.0	004.4000	0000.1	014.5	129.1	010.0000	-0444.8	043.2	47.57
284.0	004.4000	-0020.0	014.5	128.8	010.0000	-0445.2	043.1	47.60
285.0	004.4000	-0040.4	014.5	128.5	010.0000	-0445.2	043.0	47.63
286.0	004.4000	-0058.0	014.5	128.2	010.0000	-0445.4	042.9	47.66
287.0	004.4000	-0069.4	014.5	127.8	010.0000	-0445.7	042.8	47.69
288.0	004.4000	-0077.2	014.5	127.5	010.0000	-0446.5	042.7	47.71
289.0	004.4000	-0083.5	014.5	127.2	010.0000	-0447.9	042.6	47.74
290.0	004.4000	-0091.5	014.5	126.9	010.0000	-0449.6	042.6	47.76
291.0	004.4000	-0102.0	014.5	126.6	010.0000	-0452.2	042.5	47.78
292.0	004.4000	-0115.8	014.5	126.2	010.0000	-0455.4	042.4	47.80
293.0	004.4000	-0131.9	014.5	125.9	010.0000	-0459.1	042.4	47.82
294.0	004.4000	-0149.5	014.5	125.6	010.0000	-0463.5	042.3	47.83
295.0	004.4000	-0166.6	014.5	125.2	010.0000	-0468.1	042.3	47.85
296.0	004.4000	-0180.3	014.5	124.9	010.0000	-0472.4	042.2	47.86
297.0	004.4000	-0186.3	014.5	124.5	010.0000	-0476.8	042.2	47.87
298.0	004.4000	-0184.1	014.5	124.2	010.0000	-0480.8	042.1	47.88
299.0	004.4000	-0176.0	014.5	123.9	010.0000	-0484.5	042.1	47.89
300.0	004.4000	-0162.8	014.5	123.5	010.0000	-0487.2	042.1	47.89
301.0	004.4000	-0146.2	014.5	123.2	010.0000	-0489.0	042.1	47.90
302.0	004.4000	-0130.4	014.5	122.8	010.0000	-0489.8	042.1	47.90
303.0	004.4000	-0119.2	014.5	122.5	010.0000	-0489.6	042.1	47.90
304.0	004.4000	-0117.2	014.5	122.1	010.0000	-0488.6	042.1	47.90
305.0	004.4000	-0123.9	014.5	121.8	010.0000	-0487.0	042.1	47.90
306.0	004.4000	-0136.8	014.5	121.4	010.0000	-0485.1	042.1	47.89
307.0	004.4000	-0152.1	014.5	121.1	010.0000	-0482.5	042.1	47.89
308.0	004.4000	-0167.6	014.5	120.8	010.0000	-0479.2	042.1	47.88
309.0	004.4000	-0182.0	014.5	120.4	010.0000	-0475.5	042.2	47.87
310.0	004.4000	-0194.8	014.5	120.1	010.0000	-0471.5	042.2	47.86
311.0	004.4000	-0203.7	014.5	119.7	010.0000	-0467.4	042.3	47.84
312.0	004.4000	-0206.0	014.5	119.4	010.0000	-0463.3	042.3	47.83
313.0	004.4000	-0198.3	014.5	119.1	010.0000	-0459.1	042.4	47.81
314.0	004.4000	-0183.2	014.5	118.7	010.0000	-0454.1	042.4	47.79
315.0	004.4000	-0166.4	014.5	118.4	010.0000	-0449.4	042.5	47.77
316.0	004.4000	-0151.7	014.5	118.1	010.0000	-0444.8	042.6	47.75
317.0	004.4000	-0138.9	014.5	117.8	010.0000	-0440.8	042.7	47.73
318.0	004.4000	-0126.6	014.5	117.4	010.0000	-0437.2	042.7	47.71
319.0	004.4000	-0113.6	014.5	117.1	010.0000	-0434.2	042.8	47.68
320.0	004.4000	-0100.2	014.5	116.8	010.0000	-0431.9	042.9	47.65
321.0	004.4000	-0086.1	014.5	116.5	010.0000	-0430.2	043.0	47.63
322.0	004.4000	-0071.3	014.5	116.2	010.0000	-0428.9	043.1	47.60
323.0	004.4000	-0057.1	014.5	115.9	010.0000	-0428.1	043.2	47.56
324.0	004.4000	-0044.9	014.5	115.6	010.0000	-0427.6	043.4	47.53
325.0	004.4000	-0036.8	014.5	115.3	010.0000	-0427.6	043.5	47.50
326.0	004.4000	-0034.7	014.5	115.0	010.0000	-0427.9	043.6	47.46
327.0	004.4000	-0036.8	014.5	114.7	010.0000	-0428.2	043.7	47.43
328.0	004.4000	-0035.3	014.5	114.4	010.0000	-0428.9	043.9	47.39
329.0	004.4000	-0027.1	014.5	114.2	010.0000	-0429.5	044.0	47.35

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)		Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
330.0	004.4000	-0017.0	014.5		113.9	010.0000	-0430.0	044.2	47.31
331.0	004.4000	-0010.8	014.5		113.6	010.0000	-0430.7	044.3	47.27
332.0	004.4000	-0006.7	014.5		113.4	010.0000	-0431.3	044.5	47.23
333.0	004.4000	-0001.6	014.5		113.1	010.0000	-0431.9	044.6	47.19
334.0	004.4000	0007.4	014.5		112.9	010.0000	-0432.4	044.8	47.15
335.0	004.4000	0021.8	014.5		112.6	010.0000	-0432.9	045.0	47.10
336.0	004.4000	0039.0	016.6		110.5	010.0000	-0446.9	043.7	47.45
337.0	004.4000	0054.6	020.0		106.9	010.0000	-0513.3	041.6	48.04
338.0	004.4000	0067.0	021.9		104.5	010.0000	-0550.5	040.7	48.32
339.0	004.4000	0076.6	023.3		102.6	010.0000	-0554.7	040.2	48.47
340.0	004.4000	0086.2	024.6		100.6	010.0000	-0551.3	039.8	48.58
341.0	004.4000	0098.4	026.2		098.3	010.0000	-0560.2	039.4	48.71
342.0	004.4000	0113.2	027.9		095.8	010.0000	-0587.0	039.1	48.81
343.0	004.4000	0130.1	029.6		093.2	010.0000	-0639.3	039.0	48.87
344.0	004.4000	0147.2	031.3		090.6	010.0000	-0696.0	038.9	48.88
345.0	004.4000	0164.4	033.1		087.8	010.0000	-0753.8	039.0	48.86
346.0	004.4000	0180.9	034.7		085.3	010.0000	-0696.0	039.2	48.78
347.0	004.4000	0195.5	035.9		083.4	010.0000	-0655.3	039.7	48.64
348.0	004.4000	0213.3	037.3		081.3	010.0000	-0629.5	040.2	48.47
349.0	004.4000	0229.5	038.5		079.7	010.0000	-0638.6	040.8	48.28
350.0	004.4000	0248.6	039.7		077.9	010.0000	-0646.8	041.5	48.07
351.0	004.4000	0270.6	041.1		076.1	010.0000	-0625.9	042.3	47.84
352.0	004.4000	0294.0	042.5		074.4	010.0000	-0611.6	043.1	47.60
353.0	004.4000	0317.2	043.9		072.8	010.0000	-0613.0	044.1	47.33
354.0	004.4000	0333.1	044.8		071.8	010.0000	-0613.1	045.0	47.09
355.0	004.4000	0347.5	045.6		070.9	010.0000	-0614.2	046.0	46.85
356.0	004.4000	0357.9	046.2		070.5	010.0000	-0614.0	046.9	46.62
357.0	004.4000	0365.7	046.7		070.2	010.0000	-0614.0	047.8	46.42
358.0	004.4000	0374.2	047.1		070.0	009.9973	-0614.1	048.7	46.22
359.0	004.4000	0382.2	047.6		069.8	009.9639	-0614.1	049.6	46.00
000.0	004.4000	0389.8	048.0		069.7	009.9414	-0614.2	050.6	45.80
001.0	004.4000	0396.5	048.3		069.6	009.9310	-0614.3	051.5	45.59
002.0	004.4000	0403.3	048.7		069.6	009.9244	-0614.3	052.4	45.39

05-19-2017

Terrain Data: GLOBE 30 Sec

FMOver Analysis

KFFR BPED20160519ABH

KVOD

Channel = 202C3

Max ERP = 10 kW

RCAMSL = 2759 m

N. Lat. 40 00 28.0

W. Lng. 105 47 37.0

Protected

60 dBu

Channel = 201C3

Max ERP = 4.4 kW

RCAMSL = 2275 m

N. Lat. 39 43 58.0

W. Lng. 105 14 08.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
063.0	008.6751	-0613.2	017.4	320.4	004.4000	-0095.0	050.1	42.36	
064.0	008.8586	-0615.7	017.5	320.4	004.4000	-0094.6	049.7	42.43	
065.0	009.0440	-0619.0	017.6	320.4	004.4000	-0094.3	049.4	42.50	
066.0	009.2314	-0621.4	017.7	320.4	004.4000	-0094.1	049.1	42.57	
067.0	009.4206	-0621.7	017.8	320.4	004.4000	-0094.0	048.8	42.64	
068.0	009.6118	-0620.7	017.9	320.4	004.4000	-0094.1	048.4	42.71	
069.0	009.8050	-0615.8	018.0	320.4	004.4000	-0094.3	048.1	42.78	
070.0	010.0000	-0614.1	018.1	320.4	004.4000	-0094.5	047.8	42.86	
071.0	010.0000	-0614.1	018.1	320.3	004.4000	-0096.5	047.5	42.92	
072.0	010.0000	-0612.9	018.1	320.1	004.4000	-0098.6	047.2	42.99	
073.0	010.0000	-0613.2	018.1	320.0	004.4000	-0100.7	046.9	43.06	
074.0	010.0000	-0612.7	018.1	319.8	004.4000	-0102.8	046.6	43.13	
075.0	010.0000	-0612.9	018.1	319.6	004.4000	-0105.0	046.3	43.20	
076.0	010.0000	-0623.9	018.1	319.5	004.4000	-0107.3	046.0	43.26	
077.0	010.0000	-0638.0	018.1	319.3	004.4000	-0109.7	045.8	43.33	
078.0	010.0000	-0647.0	018.1	319.1	004.4000	-0112.3	045.5	43.40	
079.0	010.0000	-0643.9	018.1	318.9	004.4000	-0115.0	045.2	43.47	
080.0	010.0000	-0635.5	018.1	318.7	004.4000	-0117.8	044.9	43.54	
081.0	010.0000	-0628.6	018.1	318.5	004.4000	-0120.5	044.7	43.61	
082.0	010.0000	-0635.6	018.1	318.3	004.4000	-0123.3	044.4	43.68	
083.0	010.0000	-0648.7	018.1	318.0	004.4000	-0126.3	044.1	43.75	
084.0	010.0000	-0663.3	018.1	317.8	004.4000	-0129.4	043.9	43.82	
085.0	010.0000	-0687.7	018.1	317.5	004.4000	-0132.5	043.6	43.89	
086.0	010.0000	-0715.5	018.1	317.3	004.4000	-0135.7	043.4	43.96	
087.0	010.0000	-0741.8	018.1	317.0	004.4000	-0138.9	043.1	44.03	
088.0	010.0000	-0752.2	018.1	316.7	004.4000	-0142.3	042.9	44.09	
089.0	010.0000	-0730.6	018.1	316.4	004.4000	-0146.0	042.7	44.16	
090.0	010.0000	-0708.7	018.1	316.1	004.4000	-0149.7	042.4	44.22	
091.0	010.0000	-0686.7	018.1	315.8	004.4000	-0153.8	042.2	44.29	
092.0	010.0000	-0663.0	018.1	315.5	004.4000	-0158.3	042.0	44.35	
093.0	010.0000	-0644.0	018.1	315.2	004.4000	-0163.1	041.8	44.42	
094.0	010.0000	-0623.5	018.1	314.9	004.4000	-0168.2	041.6	44.48	
095.0	010.0000	-0603.4	018.1	314.6	004.4000	-0173.6	041.4	44.54	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
096.0	010.0000	-0583.6	018.1	314.2	004.4000	-0179.7	041.2	44.60
097.0	010.0000	-0573.9	018.1	313.9	004.4000	-0185.6	041.0	44.66
098.0	010.0000	-0563.9	018.1	313.5	004.4000	-0191.5	040.8	44.71
099.0	010.0000	-0553.7	018.1	313.1	004.4000	-0196.7	040.6	44.77
100.0	010.0000	-0552.3	018.1	312.8	004.4000	-0200.9	040.5	44.82
101.0	010.0000	-0550.7	018.1	312.4	004.4000	-0204.4	040.3	44.87
102.0	010.0000	-0551.8	018.1	312.0	004.4000	-0206.0	040.1	44.92
103.0	010.0000	-0555.6	018.1	311.6	004.4000	-0206.1	040.0	44.97
104.0	010.0000	-0553.4	018.1	311.2	004.4000	-0204.9	039.8	45.02
105.0	010.0000	-0545.5	018.1	310.8	004.4000	-0202.0	039.7	45.06
106.0	010.0000	-0529.7	018.1	310.4	004.4000	-0198.4	039.6	45.11
107.0	010.0000	-0511.7	018.1	309.9	004.4000	-0194.1	039.4	45.15
108.0	010.0000	-0492.5	018.1	309.5	004.4000	-0188.5	039.3	45.18
109.0	010.0000	-0472.0	018.1	309.1	004.4000	-0183.1	039.2	45.22
110.0	010.0000	-0454.1	018.1	308.6	004.4000	-0177.3	039.1	45.25
111.0	010.0000	-0442.4	018.1	308.2	004.4000	-0170.6	039.0	45.28
112.0	010.0000	-0435.0	018.1	307.8	004.4000	-0164.1	038.9	45.31
113.0	010.0000	-0432.1	018.1	307.3	004.4000	-0157.2	038.8	45.34
114.0	010.0000	-0429.9	018.1	306.9	004.4000	-0149.7	038.8	45.36
115.0	010.0000	-0428.0	018.1	306.4	004.4000	-0142.8	038.7	45.38
116.0	010.0000	-0428.3	018.1	305.9	004.4000	-0135.8	038.6	45.40
117.0	010.0000	-0433.2	018.1	305.5	004.4000	-0129.4	038.6	45.42
118.0	010.0000	-0443.7	018.1	305.0	004.4000	-0123.9	038.6	45.43
119.0	010.0000	-0458.0	018.1	304.5	004.4000	-0119.9	038.5	45.44
120.0	010.0000	-0470.5	018.1	304.1	004.4000	-0117.4	038.5	45.45
121.0	010.0000	-0481.5	018.1	303.6	004.4000	-0116.8	038.5	45.46
122.0	010.0000	-0488.0	018.1	303.1	004.4000	-0118.4	038.5	45.46
123.0	010.0000	-0489.6	018.1	302.7	004.4000	-0122.3	038.5	45.46
124.0	010.0000	-0483.1	018.1	302.2	004.4000	-0127.8	038.5	45.46
125.0	010.0000	-0470.9	018.1	301.7	004.4000	-0134.5	038.5	45.45
126.0	010.0000	-0457.8	018.1	301.2	004.4000	-0142.0	038.5	45.44
127.0	010.0000	-0449.0	018.1	300.8	004.4000	-0149.9	038.6	45.43
128.0	010.0000	-0445.5	018.1	300.3	004.4000	-0157.8	038.6	45.42
129.0	010.0000	-0444.9	018.1	299.9	004.4000	-0165.0	038.6	45.40
130.0	010.0000	-0441.8	018.1	299.4	004.4000	-0171.4	038.7	45.38
131.0	010.0000	-0433.0	018.1	298.9	004.4000	-0176.7	038.8	45.36
132.0	010.0000	-0421.0	018.1	298.5	004.4000	-0181.0	038.8	45.34
133.0	010.0000	-0409.3	018.1	298.0	004.4000	-0183.9	038.9	45.31
134.0	010.0000	-0399.1	018.1	297.6	004.4000	-0185.8	039.0	45.28
135.0	010.0000	-0389.2	018.1	297.1	004.4000	-0186.5	039.1	45.25
136.0	010.0000	-0378.7	018.1	296.7	004.4000	-0185.6	039.2	45.22
137.0	010.0000	-0366.8	018.1	296.3	004.4000	-0182.9	039.3	45.18
138.0	010.0000	-0350.8	018.1	295.8	004.4000	-0178.6	039.4	45.15
139.0	010.0000	-0330.6	018.1	295.4	004.4000	-0172.9	039.6	45.11
140.0	010.0000	-0308.3	018.1	295.0	004.4000	-0166.7	039.7	45.06
141.0	010.0000	-0288.6	018.1	294.6	004.4000	-0159.9	039.8	45.02
142.0	010.0000	-0276.5	018.1	294.2	004.4000	-0152.9	040.0	44.97
143.0	010.0000	-0269.9	018.1	293.8	004.4000	-0145.9	040.1	44.93
144.0	010.0000	-0261.8	018.1	293.4	004.4000	-0139.0	040.3	44.88
145.0	010.0000	-0248.8	018.1	293.0	004.4000	-0132.3	040.4	44.82
146.0	010.0000	-0236.3	018.1	292.6	004.4000	-0126.0	040.6	44.77

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)		Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
147.0	010.0000	-0229.5	018.1		292.3	004.4000	-0120.1	040.8	44.72
148.0	010.0000	-0224.2	018.1		291.9	004.4000	-0114.6	041.0	44.66
149.0	010.0000	-0216.5	018.1		291.6	004.4000	-0109.5	041.2	44.60
150.0	010.0000	-0207.2	018.1		291.2	004.4000	-0104.9	041.4	44.54
151.0	010.0000	-0193.5	018.1		290.9	004.4000	-0100.7	041.6	44.48
152.0	010.0000	-0175.5	018.1		290.6	004.4000	-0097.0	041.8	44.42
153.0	010.0000	-0156.1	018.1		290.2	004.4000	-0093.7	042.0	44.36
154.0	010.0000	-0138.5	018.1		289.9	004.4000	-0090.9	042.2	44.29
155.0	010.0000	-0123.4	018.1		289.6	004.4000	-0088.4	042.4	44.23
156.0	010.0000	-0110.1	018.1		289.3	004.4000	-0086.0	042.7	44.16
157.0	010.0000	-0095.8	018.1		289.1	004.4000	-0083.9	042.9	44.10
158.0	010.0000	-0078.4	018.1		288.8	004.4000	-0082.0	043.1	44.03
159.0	010.0000	-0061.5	018.1		288.5	004.4000	-0080.3	043.4	43.96
160.0	010.0000	-0048.8	018.1		288.2	004.4000	-0078.7	043.6	43.89
161.0	010.0000	-0038.3	018.1		288.0	004.4000	-0077.2	043.9	43.82
162.0	010.0000	-0028.8	018.1		287.8	004.4000	-0075.5	044.1	43.75
163.0	010.0000	-0015.4	018.1		287.5	004.4000	-0073.9	044.4	43.68
164.0	010.0000	-0001.2	018.1		287.3	004.4000	-0072.1	044.7	43.62
165.0	010.0000	0010.6	018.1		287.1	004.4000	-0070.2	044.9	43.55
166.0	010.0000	0016.1	018.1		286.9	004.4000	-0068.2	045.2	43.48
167.0	010.0000	0018.4	018.1		286.7	004.4000	-0066.2	045.5	43.41
168.0	010.0000	0019.0	018.1		286.5	004.4000	-0064.1	045.7	43.34
169.0	010.0000	0018.3	018.1		286.3	004.4000	-0061.9	046.0	43.27
170.0	010.0000	0014.7	018.1		286.1	004.4000	-0059.7	046.3	43.20
171.0	010.0000	0007.2	018.1		286.0	004.4000	-0057.5	046.6	43.13
172.0	010.0000	-0003.9	018.1		285.8	004.4000	-0055.2	046.9	43.06
173.0	010.0000	-0014.1	018.1		285.7	004.4000	-0052.8	047.2	42.99
174.0	010.0000	-0021.7	018.1		285.5	004.4000	-0050.4	047.5	42.93
175.0	010.0000	-0028.1	018.1		285.4	004.4000	-0047.9	047.8	42.86
176.0	010.0000	-0027.0	018.1		285.3	004.4000	-0045.5	048.1	42.79
177.0	010.0000	-0024.1	018.1		285.1	004.4000	-0043.1	048.4	42.73
178.0	010.0000	-0020.0	018.1		285.0	004.4000	-0040.9	048.7	42.66
179.0	010.0000	-0021.2	018.1		284.9	004.4000	-0038.8	049.0	42.60
180.0	010.0000	-0022.2	018.1		284.8	004.4000	-0036.9	049.3	42.53
181.0	010.0000	-0023.0	018.1		284.7	004.4000	-0035.1	049.6	42.47
182.0	010.0000	-0025.7	018.1		284.7	004.4000	-0033.4	049.9	42.40

Contour-to-Contour Table - KVOD vs KAIX (CP)
Public Broadcasting of Colorado, Inc.

FMCommander Single Allocation Study - 05-19-2017 - GLOBE 30 Sec
KVOD's Overlaps (In= 62.03 km, Out= 22.82 km)

KVOD CH 201 C3

Lat= 39 43 58.0, Lng= 105 14 08.0

4.4 kW 238 m HAAT, 2275 m COR

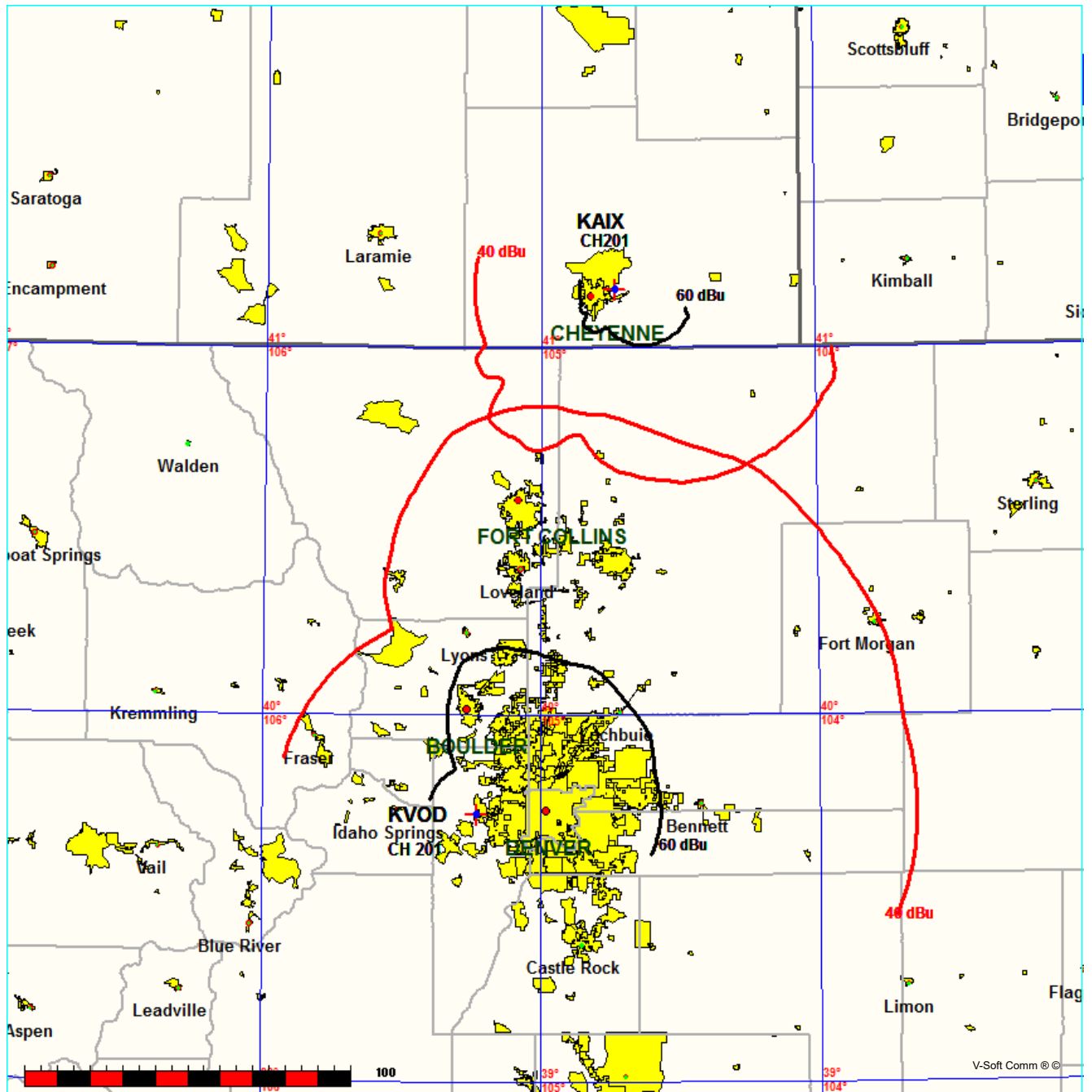
Prot.= 60 dBu, Intef.= 40 dBu

KAIX CH 201 A BMLED20140611ABG

Lat= 41 09 35.0, Lng= 104 43 18.0

1.8 kW 63 m HAAT, 1898 m COR

Prot.= 60 dBu, Intef.= 40 dBu



05-19-2017

Terrain Data: GLOBE 30 Sec

FMOver Analysis

KVOD

KAIX BMLED20140611ABG

Channel = 201C3

Max ERP = 4.4 kW

RCAMSL = 2275 m

N. Lat. 39 43 58.0

W. Lng. 105 14 08.0

Protected

60 dBu

Channel = 201A

Max ERP = 1.8 kW

RCAMSL = 1898 m

N. Lat. 41 09 35.0

W. Lng. 104 43 18.0

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
315.0	004.4000	-0166.4	014.5	200.1	001.8000	0037.2	157.8	18.04	
316.0	004.4000	-0151.7	014.5	200.0	001.8000	0037.1	157.5	18.08	
317.0	004.4000	-0138.9	014.5	200.0	001.8000	0037.0	157.3	18.11	
318.0	004.4000	-0126.6	014.5	199.9	001.8000	0037.0	157.1	18.15	
319.0	004.4000	-0113.6	014.5	199.9	001.8000	0036.9	156.9	18.18	
320.0	004.4000	-0100.2	014.5	199.9	001.8000	0036.8	156.7	18.22	
321.0	004.4000	-0086.1	014.5	199.8	001.8000	0036.7	156.4	18.25	
322.0	004.4000	-0071.3	014.5	199.8	001.8000	0036.6	156.2	18.29	
323.0	004.4000	-0057.1	014.5	199.7	001.8000	0036.6	156.0	18.32	
324.0	004.4000	-0044.9	014.5	199.7	001.8000	0036.5	155.8	18.35	
325.0	004.4000	-0036.8	014.5	199.6	001.8000	0036.4	155.6	18.38	
326.0	004.4000	-0034.7	014.5	199.5	001.8000	0036.3	155.4	18.42	
327.0	004.4000	-0036.8	014.5	199.5	001.8000	0036.2	155.2	18.45	
328.0	004.4000	-0035.3	014.5	199.4	001.8000	0036.1	155.0	18.48	
329.0	004.4000	-0027.1	014.5	199.4	001.8000	0036.0	154.8	18.51	
330.0	004.4000	-0017.0	014.5	199.3	001.8000	0035.9	154.6	18.54	
331.0	004.4000	-0010.8	014.5	199.3	001.8000	0035.8	154.4	18.56	
332.0	004.4000	-0006.7	014.5	199.2	001.8000	0035.7	154.2	18.59	
333.0	004.4000	-0001.6	014.5	199.1	001.8000	0035.6	154.0	18.62	
334.0	004.4000	0007.4	014.5	199.1	001.8000	0035.5	153.9	18.65	
335.0	004.4000	0021.8	014.5	199.0	001.8000	0035.4	153.7	18.67	
336.0	004.4000	0039.0	016.6	199.4	001.8000	0036.1	152.0	19.01	
337.0	004.4000	0054.6	020.0	200.2	001.8000	0037.5	149.3	19.58	
338.0	004.4000	0067.0	021.9	200.6	001.8000	0038.2	147.6	19.92	
339.0	004.4000	0076.6	023.3	200.9	001.8000	0038.7	146.3	20.18	
340.0	004.4000	0086.2	024.6	201.1	001.8000	0039.1	145.1	20.44	
341.0	004.4000	0098.4	026.2	201.4	001.8000	0039.7	143.6	20.75	
342.0	004.4000	0113.2	027.9	201.7	001.8000	0040.3	141.9	21.08	
343.0	004.4000	0130.1	029.6	201.9	001.8000	0040.7	140.3	21.41	
344.0	004.4000	0147.2	031.3	202.2	001.8000	0041.2	138.7	21.75	
345.0	004.4000	0164.4	033.1	202.5	001.8000	0041.6	136.9	22.11	
346.0	004.4000	0180.9	034.7	202.7	001.8000	0041.9	135.2	22.43	
347.0	004.4000	0195.5	035.9	202.8	001.8000	0042.1	133.9	22.69	
348.0	004.4000	0213.3	037.3	202.9	001.8000	0042.2	132.4	22.98	
349.0	004.4000	0229.5	038.5	202.9	001.8000	0042.3	131.0	23.23	
350.0	004.4000	0248.6	039.7	203.0	001.8000	0042.4	129.6	23.50	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
351.0	004.4000	0270.6	041.1	203.0	001.8000	0042.5	128.1	23.79
352.0	004.4000	0294.0	042.5	203.1	001.8000	0042.5	126.5	24.08
353.0	004.4000	0317.2	043.9	203.1	001.8000	0042.5	125.0	24.37
354.0	004.4000	0333.1	044.8	203.0	001.8000	0042.4	123.8	24.59
355.0	004.4000	0347.5	045.6	202.9	001.8000	0042.2	122.7	24.78
356.0	004.4000	0357.9	046.2	202.7	001.8000	0041.9	121.8	24.93
357.0	004.4000	0365.7	046.7	202.4	001.8000	0041.5	121.0	25.05
358.0	004.4000	0374.2	047.1	202.1	001.8000	0041.1	120.3	25.17
359.0	004.4000	0382.2	047.6	201.9	001.8000	0040.6	119.5	25.28
000.0	004.4000	0389.8	048.0	201.6	001.8000	0040.0	118.9	25.37
001.0	004.4000	0396.5	048.3	201.2	001.8000	0039.4	118.2	25.46
002.0	004.4000	0403.3	048.7	200.9	001.8000	0038.8	117.6	25.54
003.0	004.4000	0410.4	049.1	200.6	001.8000	0038.1	117.0	25.63
004.0	004.4000	0417.2	049.4	200.2	001.8000	0037.4	116.4	25.70
005.0	004.4000	0423.3	049.8	199.8	001.8000	0036.8	115.8	25.77
006.0	004.4000	0429.5	050.1	199.5	001.8000	0036.1	115.3	25.84
007.0	004.4000	0434.1	050.4	199.1	001.8000	0035.5	114.9	25.89
008.0	004.4000	0437.7	050.6	198.6	001.8000	0035.0	114.5	25.93
009.0	004.4000	0440.7	050.7	198.2	001.8000	0034.5	114.2	25.97
010.0	004.4000	0443.5	050.9	197.8	001.8000	0034.1	113.9	26.00
011.0	004.4000	0445.9	051.0	197.4	001.8000	0033.7	113.7	26.02
012.0	004.4000	0446.6	051.0	196.9	001.8000	0033.4	113.6	26.03
013.0	004.4000	0445.8	051.0	196.5	001.8000	0033.1	113.5	26.02
014.0	004.4000	0445.6	051.0	196.0	001.8000	0032.9	113.5	26.01
015.0	004.4000	0447.1	051.1	195.6	001.8000	0032.8	113.4	26.02
016.0	004.4000	0450.9	051.3	195.1	001.8000	0032.6	113.2	26.05
017.0	004.4000	0455.3	051.5	194.7	001.8000	0032.7	113.0	26.10
018.0	004.4000	0459.8	051.8	194.2	001.8000	0032.9	112.8	26.15
019.0	004.4000	0462.5	051.9	193.7	001.8000	0033.2	112.8	26.18
020.0	004.4000	0463.3	052.0	193.3	001.8000	0033.7	112.8	26.19
021.0	004.4000	0463.2	052.0	192.8	001.8000	0034.2	112.9	26.19
022.0	004.4000	0463.5	052.0	192.4	001.8000	0034.8	113.1	26.20
023.0	004.4000	0464.5	052.0	191.9	001.8000	0035.5	113.2	26.21
024.0	004.4000	0466.1	052.1	191.4	001.8000	0036.0	113.3	26.22
025.0	004.4000	0468.2	052.2	191.0	001.8000	0036.5	113.4	26.22
026.0	004.4000	0470.6	052.4	190.5	001.8000	0036.9	113.5	26.23
027.0	004.4000	0472.8	052.5	190.1	001.8000	0037.4	113.6	26.22
028.0	004.4000	0475.2	052.6	189.6	001.8000	0037.9	113.8	26.22
029.0	004.4000	0478.4	052.8	189.1	001.8000	0038.5	113.9	26.23
030.0	004.4000	0482.2	053.0	188.7	001.8000	0039.0	114.0	26.23
031.0	004.4000	0486.7	053.3	188.2	001.8000	0039.6	114.2	26.24
032.0	004.4000	0492.2	053.6	187.7	001.8000	0040.2	114.2	26.25
033.0	004.4000	0498.9	054.0	187.2	001.8000	0040.8	114.3	26.27
034.0	004.4000	0506.7	054.5	186.6	001.8000	0041.3	114.3	26.30
035.0	004.4000	0514.5	054.9	186.1	001.8000	0041.8	114.4	26.31
036.0	004.4000	0522.5	055.4	185.6	001.8000	0042.4	114.4	26.33
037.0	004.4000	0529.9	055.8	185.0	001.8000	0043.1	114.6	26.34
038.0	004.4000	0536.7	056.2	184.5	001.8000	0043.8	114.8	26.33
039.0	004.4000	0542.6	056.6	184.0	001.8000	0044.4	115.1	26.31
040.0	004.4000	0546.7	056.8	183.6	001.8000	0045.0	115.5	26.27
041.0	004.4000	0549.8	056.9	183.1	001.8000	0045.6	115.9	26.21

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)		Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
042.0	004.4000	0552.0	057.1		182.7	001.8000	0046.1	116.5	26.13
043.0	004.4000	0553.5	057.1		182.3	001.8000	0046.4	117.1	26.04
044.0	004.4000	0554.0	057.2		181.9	001.8000	0046.7	117.7	25.94
045.0	004.4000	0554.1	057.2		181.6	001.8000	0047.1	118.4	25.83
046.0	004.4000	0554.1	057.2		181.2	001.8000	0047.4	119.1	25.72
047.0	004.4000	0553.9	057.2		180.9	001.8000	0047.8	119.8	25.60
048.0	004.4000	0554.5	057.2		180.6	001.8000	0048.1	120.5	25.49
049.0	004.4000	0555.6	057.2		180.2	001.8000	0048.4	121.2	25.37
050.0	004.4000	0556.4	057.3		179.9	001.8000	0048.8	122.0	25.26
051.0	004.4000	0556.6	057.3		179.6	001.8000	0049.1	122.7	25.13
052.0	004.4000	0556.2	057.3		179.4	001.8000	0049.3	123.5	24.99
053.0	004.4000	0556.1	057.3		179.1	001.8000	0049.5	124.3	24.86
054.0	004.4000	0556.8	057.3		178.8	001.8000	0049.7	125.1	24.72
055.0	004.4000	0558.1	057.4		178.5	001.8000	0049.9	125.9	24.58
056.0	004.4000	0559.7	057.4		178.3	001.8000	0050.1	126.7	24.44
057.0	004.4000	0561.7	057.5		178.0	001.8000	0050.2	127.5	24.30
058.0	004.4000	0563.6	057.6		177.7	001.8000	0050.3	128.4	24.15
059.0	004.4000	0565.5	057.7		177.5	001.8000	0050.4	129.2	24.01
060.0	004.4000	0567.2	057.8		177.2	001.8000	0050.5	130.1	23.85
061.0	004.4000	0569.1	057.9		177.0	001.8000	0050.7	130.9	23.70
062.0	004.4000	0571.2	058.0		176.8	001.8000	0050.8	131.8	23.54
063.0	004.4000	0573.2	058.1		176.6	001.8000	0051.0	132.7	23.38
064.0	004.4000	0574.6	058.1		176.4	001.8000	0051.1	133.6	23.22
065.0	004.4000	0575.1	058.1		176.2	001.8000	0051.2	134.5	23.05
066.0	004.4000	0574.8	058.1		176.1	001.8000	0051.3	135.5	22.88
067.0	004.4000	0573.3	058.1		175.9	001.8000	0051.4	136.5	22.70
068.0	004.4000	0570.9	058.0		175.9	001.8000	0051.5	137.5	22.52
069.0	004.4000	0567.6	057.8		175.8	001.8000	0051.6	138.5	22.34
070.0	004.4000	0563.8	057.6		175.8	001.8000	0051.7	139.5	22.15
071.0	004.4000	0559.5	057.4		175.7	001.8000	0051.7	140.5	21.96
072.0	004.4000	0554.8	057.2		175.7	001.8000	0051.7	141.6	21.77
073.0	004.4000	0550.0	057.0		175.7	001.8000	0051.7	142.6	21.58
074.0	004.4000	0545.4	056.7		175.7	001.8000	0051.7	143.6	21.39

05-19-2017

Terrain Data: GLOBE 30 Sec

FMOver Analysis

KAIX BMLED20140611ABG

KVOD

Channel = 201A

Max ERP = 1.8 kW

RCAMSL = 1898 m

N. Lat. 41 09 35.0

W. Lng. 104 43 18.0

Protected

60 dBu

Channel = 201C3

Max ERP = 4.4 kW

RCAMSL = 2275 m

N. Lat. 39 43 58.0

W. Lng. 105 14 08.0

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
135.0	001.8000	0098.6	021.4	022.0	004.4000	0463.5	155.1	33.34	
136.0	001.8000	0097.3	021.2	021.9	004.4000	0463.4	154.8	33.40	
137.0	001.8000	0096.1	021.1	021.8	004.4000	0463.3	154.5	33.46	
138.0	001.8000	0094.9	021.0	021.7	004.4000	0463.3	154.3	33.52	
139.0	001.8000	0093.5	020.8	021.6	004.4000	0463.2	154.0	33.58	
140.0	001.8000	0092.1	020.6	021.5	004.4000	0463.2	153.7	33.63	
141.0	001.8000	0090.8	020.5	021.4	004.4000	0463.1	153.5	33.68	
142.0	001.8000	0089.9	020.4	021.3	004.4000	0463.2	153.2	33.74	
143.0	001.8000	0089.6	020.3	021.2	004.4000	0463.2	153.0	33.80	
144.0	001.8000	0089.2	020.3	021.1	004.4000	0463.2	152.7	33.86	
145.0	001.8000	0088.5	020.2	021.0	004.4000	0463.2	152.4	33.92	
146.0	001.8000	0087.3	020.1	020.9	004.4000	0463.2	152.2	33.97	
147.0	001.8000	0086.4	020.0	020.8	004.4000	0463.2	152.0	34.01	
148.0	001.8000	0085.4	019.8	020.7	004.4000	0463.3	151.8	34.06	
149.0	001.8000	0084.3	019.7	020.6	004.4000	0463.3	151.6	34.11	
150.0	001.8000	0083.1	019.6	020.4	004.4000	0463.3	151.4	34.14	
151.0	001.8000	0082.1	019.4	020.3	004.4000	0463.3	151.2	34.18	
152.0	001.8000	0081.0	019.3	020.2	004.4000	0463.3	151.1	34.22	
153.0	001.8000	0079.9	019.2	020.1	004.4000	0463.3	150.9	34.26	
154.0	001.8000	0078.8	019.0	020.0	004.4000	0463.3	150.8	34.29	
155.0	001.8000	0077.6	018.9	019.8	004.4000	0463.3	150.6	34.32	
156.0	001.8000	0076.5	018.7	019.7	004.4000	0463.2	150.5	34.34	
157.0	001.8000	0075.2	018.6	019.6	004.4000	0463.1	150.4	34.36	
158.0	001.8000	0073.9	018.4	019.4	004.4000	0463.0	150.3	34.38	
159.0	001.8000	0072.7	018.2	019.3	004.4000	0462.9	150.2	34.40	
160.0	001.8000	0071.8	018.1	019.2	004.4000	0462.7	150.1	34.42	
161.0	001.8000	0071.1	018.0	019.1	004.4000	0462.6	150.0	34.45	
162.0	001.8000	0069.9	017.9	018.9	004.4000	0462.4	149.9	34.46	
163.0	001.8000	0068.1	017.6	018.8	004.4000	0462.1	149.9	34.45	
164.0	001.8000	0066.0	017.4	018.6	004.4000	0461.8	150.0	34.43	
165.0	001.8000	0064.1	017.1	018.5	004.4000	0461.4	150.0	34.41	
166.0	001.8000	0062.6	016.9	018.3	004.4000	0461.0	150.0	34.40	
167.0	001.8000	0061.3	016.7	018.2	004.4000	0460.6	150.0	34.39	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
168.0	001.8000	0060.0	016.5	018.1	004.4000	0460.1	150.0	34.38
169.0	001.8000	0058.6	016.4	017.9	004.4000	0459.6	150.0	34.36
170.0	001.8000	0057.8	016.2	017.8	004.4000	0459.1	150.0	34.35
171.0	001.8000	0057.1	016.1	017.7	004.4000	0458.6	150.0	34.35
172.0	001.8000	0056.2	016.0	017.6	004.4000	0458.0	150.0	34.34
173.0	001.8000	0055.2	015.8	017.5	004.4000	0457.5	150.0	34.32
174.0	001.8000	0053.9	015.6	017.3	004.4000	0456.9	150.1	34.29
175.0	001.8000	0052.5	015.4	017.2	004.4000	0456.3	150.2	34.25
176.0	001.8000	0051.4	015.2	017.1	004.4000	0455.7	150.3	34.22
177.0	001.8000	0050.7	015.1	017.0	004.4000	0455.2	150.3	34.20
178.0	001.8000	0050.2	015.0	016.9	004.4000	0454.7	150.3	34.20
179.0	001.8000	0049.6	014.9	016.8	004.4000	0454.3	150.3	34.18
180.0	001.8000	0048.7	014.8	016.7	004.4000	0453.8	150.3	34.16
181.0	001.8000	0047.7	014.6	016.6	004.4000	0453.3	150.4	34.13
182.0	001.8000	0046.7	014.4	016.4	004.4000	0452.8	150.5	34.10
183.0	001.8000	0045.8	014.3	016.3	004.4000	0452.4	150.6	34.07
184.0	001.8000	0044.4	014.1	016.2	004.4000	0451.9	150.8	34.02
185.0	001.8000	0043.2	013.9	016.1	004.4000	0451.4	150.9	33.98
186.0	001.8000	0042.0	013.7	016.0	004.4000	0451.0	151.1	33.94
187.0	001.8000	0040.9	013.5	015.9	004.4000	0450.5	151.2	33.90
188.0	001.8000	0039.8	013.3	015.8	004.4000	0450.1	151.3	33.86
189.0	001.8000	0038.6	013.1	015.7	004.4000	0449.7	151.5	33.81
190.0	001.8000	0037.5	012.9	015.6	004.4000	0449.3	151.7	33.77
191.0	001.8000	0036.4	012.7	015.5	004.4000	0448.9	151.8	33.73
192.0	001.8000	0035.3	012.6	015.4	004.4000	0448.6	152.0	33.68
193.0	001.8000	0034.0	012.3	015.4	004.4000	0448.3	152.2	33.63
194.0	001.8000	0033.0	012.2	015.3	004.4000	0448.0	152.3	33.60
195.0	001.8000	0032.6	012.1	015.2	004.4000	0447.7	152.4	33.58
196.0	001.8000	0032.9	012.2	015.1	004.4000	0447.4	152.3	33.58
197.0	001.8000	0033.4	012.3	015.0	004.4000	0447.2	152.2	33.59
198.0	001.8000	0034.3	012.4	015.0	004.4000	0447.0	152.1	33.62
199.0	001.8000	0035.5	012.6	014.9	004.4000	0446.9	151.9	33.65
200.0	001.8000	0037.1	012.8	014.8	004.4000	0446.7	151.7	33.70
201.0	001.8000	0038.9	013.2	014.7	004.4000	0446.5	151.4	33.75
202.0	001.8000	0040.8	013.5	014.6	004.4000	0446.3	151.1	33.81
203.0	001.8000	0042.4	013.7	014.5	004.4000	0446.2	150.9	33.85
204.0	001.8000	0043.9	014.0	014.4	004.4000	0446.0	150.7	33.89
205.0	001.8000	0045.6	014.3	014.3	004.4000	0445.9	150.5	33.94
206.0	001.8000	0047.3	014.5	014.2	004.4000	0445.8	150.2	33.98
207.0	001.8000	0048.4	014.7	014.0	004.4000	0445.7	150.1	34.01
208.0	001.8000	0049.1	014.8	013.9	004.4000	0445.6	150.1	34.02
209.0	001.8000	0049.7	014.9	013.8	004.4000	0445.5	150.0	34.02
210.0	001.8000	0049.8	014.9	013.7	004.4000	0445.5	150.1	34.01
211.0	001.8000	0049.4	014.9	013.6	004.4000	0445.4	150.2	33.98
212.0	001.8000	0048.8	014.8	013.6	004.4000	0445.4	150.4	33.94
213.0	001.8000	0048.5	014.7	013.5	004.4000	0445.4	150.5	33.92
214.0	001.8000	0048.5	014.7	013.4	004.4000	0445.5	150.6	33.90
215.0	001.8000	0048.7	014.8	013.3	004.4000	0445.5	150.7	33.89
216.0	001.8000	0049.2	014.8	013.2	004.4000	0445.6	150.7	33.89
217.0	001.8000	0049.8	014.9	013.1	004.4000	0445.7	150.7	33.89
218.0	001.8000	0050.3	015.0	013.0	004.4000	0445.9	150.7	33.88

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)		Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
219.0	001.8000	0050.6	015.1		012.9	004.4000	0446.0	150.8	33.87
220.0	001.8000	0050.6	015.1		012.8	004.4000	0446.1	150.9	33.85
221.0	001.8000	0050.5	015.0		012.7	004.4000	0446.2	151.1	33.82
222.0	001.8000	0050.5	015.1		012.6	004.4000	0446.3	151.2	33.80
223.0	001.8000	0050.7	015.1		012.5	004.4000	0446.3	151.3	33.78
224.0	001.8000	0050.8	015.1		012.4	004.4000	0446.4	151.4	33.75
225.0	001.8000	0050.2	015.0		012.4	004.4000	0446.5	151.6	33.71
226.0	001.8000	0048.6	014.7		012.3	004.4000	0446.5	152.0	33.63
227.0	001.8000	0045.6	014.3		012.4	004.4000	0446.5	152.5	33.51
228.0	001.8000	0041.5	013.6		012.4	004.4000	0446.4	153.2	33.37
229.0	001.8000	0037.3	012.9		012.5	004.4000	0446.4	153.9	33.22
230.0	001.8000	0033.9	012.3		012.6	004.4000	0446.3	154.5	33.09
231.0	001.8000	0031.9	012.0		012.6	004.4000	0446.3	154.9	33.01
232.0	001.8000	0031.2	011.9		012.5	004.4000	0446.3	155.1	32.97
233.0	001.8000	0031.4	011.9		012.5	004.4000	0446.4	155.2	32.94
234.0	001.8000	0032.4	012.1		012.4	004.4000	0446.4	155.2	32.94
235.0	001.8000	0033.7	012.3		012.3	004.4000	0446.5	155.2	32.95
236.0	001.8000	0035.1	012.5		012.2	004.4000	0446.5	155.2	32.95
237.0	001.8000	0036.3	012.7		012.0	004.4000	0446.6	155.2	32.95
238.0	001.8000	0037.0	012.8		012.0	004.4000	0446.6	155.3	32.93
239.0	001.8000	0037.2	012.9		011.9	004.4000	0446.6	155.4	32.90
240.0	001.8000	0037.1	012.9		011.8	004.4000	0446.6	155.6	32.86
241.0	001.8000	0037.1	012.8		011.8	004.4000	0446.6	155.8	32.83
242.0	001.8000	0037.0	012.8		011.7	004.4000	0446.6	155.9	32.79
243.0	001.8000	0036.7	012.8		011.7	004.4000	0446.6	156.1	32.75
244.0	001.8000	0036.0	012.7		011.7	004.4000	0446.6	156.4	32.69
245.0	001.8000	0034.8	012.5		011.7	004.4000	0446.6	156.7	32.63
246.0	001.8000	0033.1	012.2		011.7	004.4000	0446.6	157.0	32.56
247.0	001.8000	0031.3	011.9		011.8	004.4000	0446.6	157.4	32.49
248.0	001.8000	0029.6	011.7		011.8	004.4000	0446.6	157.6	32.43
249.0	001.8000	0028.2	011.7		011.7	004.4000	0446.6	157.8	32.39
250.0	001.8000	0027.2	011.7		011.7	004.4000	0446.6	158.0	32.35
251.0	001.8000	0026.6	011.7		011.7	004.4000	0446.5	158.2	32.32
252.0	001.8000	0026.5	011.7		011.6	004.4000	0446.5	158.3	32.28
253.0	001.8000	0026.7	011.7		011.6	004.4000	0446.5	158.5	32.24
254.0	001.8000	0027.2	011.7		011.6	004.4000	0446.5	158.7	32.20