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Contour to Contour Tabular Channel Study
Silver State Broadcasting LLC.

REFERENCE CH# 284D - 104.7 MHz, Pwr= 0.055 kW DA, HAAT= 653.1 M, COR= 1237 M DISPLAY DATES
36 10 37.1 N. DATA 07-27-16
114 59 52.1 W. SEARCH 07-27-16
Average Protected F(50-50)= 23.31 km
Standard Directional

CH CITY	CALL	TYPE STATE	ANT STATE	AZI ---	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*OUT* (Overlap in km)
282C	KFRH	LIC _CN	242.9	50.93	35 58 02.0	24.500	10.0	95.9	-45.5* Silver State Broadcasting	<***
North Las Vegas		NV	62.6	BLH19961122KB	115 30 06.0	1128	2593			
286C2	KQRT	LIC _C_	298.2	36.94	36 20 00.0	50.000	8.7	67.1	-30.3* Entravision Holdings, Llc	<***
Las Vegas		NV	118.0	BLH20080429AAO	115 21 41.0	19	1097			
284C1	KJUL	LIC _CX	37.4	71.04	36 41 00.0	100.000	152.5	56.5	0.1 Summit American, Inc.	
Moapa Valley		NV	217.7	BLH20041115ACG	114 30 48.0	184	775			
285C2	KISK	LIC ZCX	167.6	105.22	35 15 08.0	1.500	53.5	31.6	42.6 Smoke And Mirrors, Llc	
Cal-nev-ari		NV	347.8	BLH20150623ABJ	114 44 58.0	703	1515			
287D	K287BE	LIC _C_	213.6	91.41	35 29 28.0	0.120	0.8	29.9	60.2 Calvary Chapel Of Costa Me	
Clark Mountain		CA	33.3	BLFT20130325AQH	115 33 26.0	538	1850			
285D	DK285BV	LIC DHN	37.0	70.87	36 41 06.0	0.082	1.3	0.6	60.3 Faith Communications Corpo	
Logandale		NV	217.3	BLFT19850401TB	114 31 09.0	125	717			
284A	KIHT	CP NCX	200.3	172.60	34 43 10.0	0.760	32.4	9.5	89.0 Point Five Llc	
Amboy		CA	20.0	BNPH20130724ABV	115 39 15.0	224	1153			

Terrain database is FCC 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)
Incoming contour overlap is ignored.
"*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
< ** Protected using U/D, see attachment

HOW TO READ THE FM COMPUTER PRINT-OUT

Translator Reference Station

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. The 60 dBu protected contour is predicted from the Commission's F(50-50) table. 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.

All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket 80-90. The column labeled "* OUT *" shows the greatest distance in kilometers of overlap (or smallest distance 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. Since translators are able to receive interference there is no "In" or incoming column in this report.

Listed antenna heights and power are the specific antenna heights and power from the FCC database.

Under the "AZI" column, the first row of numbers indicate the True North azimuths 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. Bearings are calculated using spherical trigonometry.

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 the minimum spacings the "OUT" columns change its significance. The letter "R" stands for the minimum **required** distance in kilometers, while the letter "M" in the next column displays the **available clear space** separation 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".

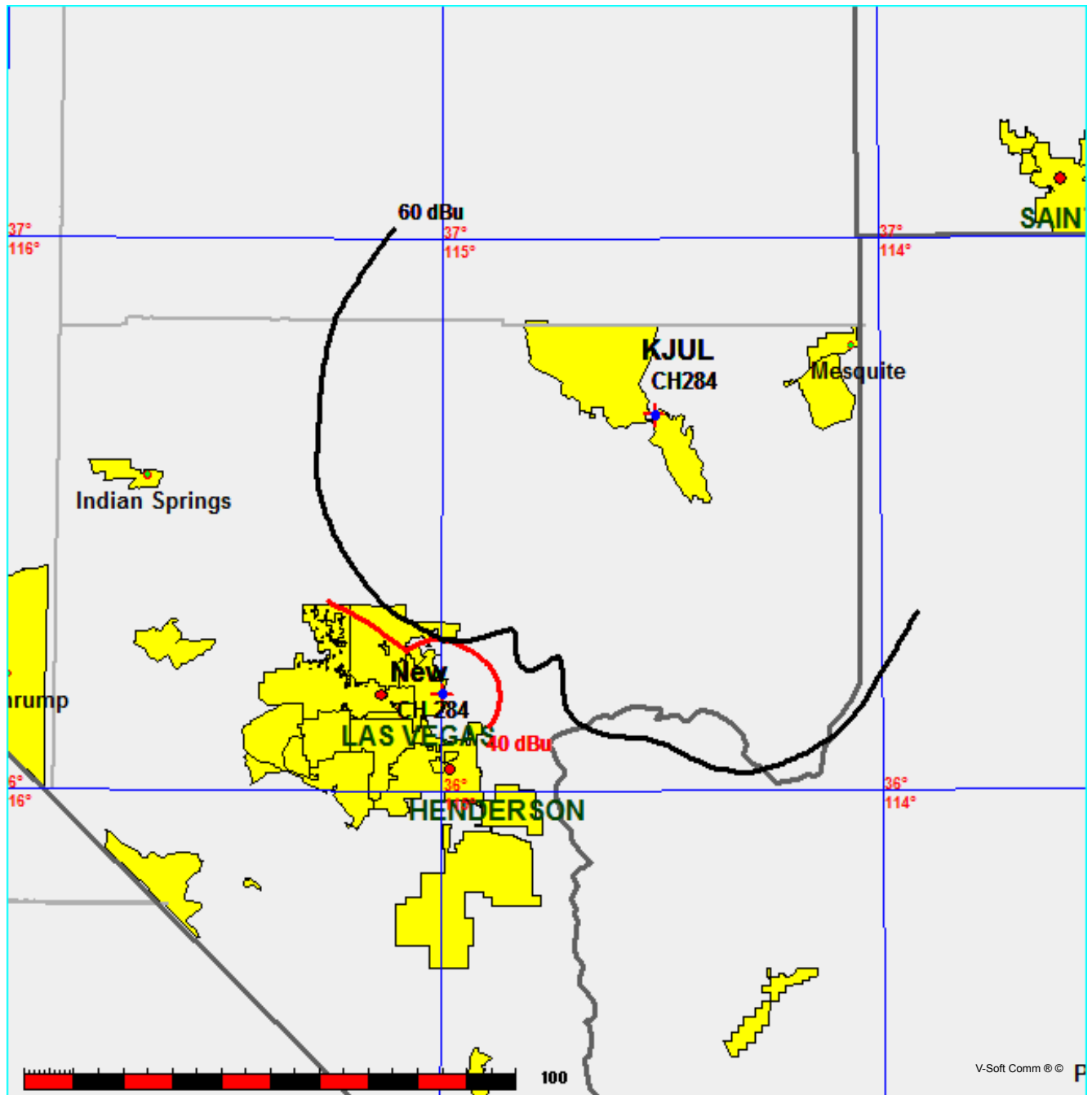
The first three letters of the "TYPE" column identify the current FCC status of the stations. The fourth letter will be a "D" if the facility is directional. "Z" indicates a 73.215 directional. An "N" indicates it is a 73.215 station that operates with an omni-directional antenna. The fifth letter will 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.

Contour to Contour Map Study - KJUL
Silver State Broadcasting LLC.

FMCommander Single Allocation Study - 07-28-2016 - FCC NGDC 30 Sec
New's Overlaps (In= -88.5 km, Out= 0.08 km)

New CH 284 D DA
Lat= 36 10 37.1, Lng= 114 59 52.1
0.055 kW 653.1 m HAAT, 1237 m COR
Prot.= 60 dBu, Intef.= 40 dBu

KJUL CH 284 C1 BLH20041115ACG
Lat= 36 41 00.0, Lng= 114 30 48.0
100.0 kW 184 m HAAT, 775 m COR
Prot.= 60 dBu, Intef.= 40 dBu



07-28-2016

Terrain Data: FCC NGDC 30 Sec

FMOver Analysis

KJUL BLH20041115ACG

New

Channel = 284C1

Max ERP = 100 kW

RCAMSL = 775 m

N. Lat. 36 41 00.0

W. Lng. 114 30 48.0

Protected

60 dBu

Channel = 284D

Max ERP = 0.055 kW

RCAMSL = 1237 m

N. Lat. 36 10 37.1

W. Lng. 114 59 52.1

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
158.0	100.0000	0333.5	074.9	100.2	000.0000	0750.8	072.7	11.41	
159.0	100.0000	0333.9	074.9	100.8	000.0000	0751.4	071.6	11.75	
160.0	100.0000	0334.1	074.9	101.3	000.0000	0751.9	070.5	12.09	
161.0	100.0000	0334.3	074.9	101.9	000.0000	0752.5	069.4	12.43	
162.0	100.0000	0334.4	074.9	102.5	000.0000	0753.0	068.3	12.78	
163.0	100.0000	0334.4	074.9	103.0	000.0000	0753.7	067.2	13.14	
164.0	100.0000	0333.8	074.9	103.6	000.0000	0754.3	066.0	13.51	
165.0	100.0000	0331.7	074.7	104.0	000.0000	0755.0	064.8	13.90	
166.0	100.0000	0327.6	074.4	104.3	000.0000	0755.6	063.5	14.32	
167.0	100.0000	0321.8	074.0	104.6	000.0000	0756.0	062.2	14.76	
168.0	100.0000	0315.3	073.5	104.7	000.0000	0756.3	060.8	15.23	
169.0	100.0000	0308.7	073.0	104.8	000.0000	0756.5	059.5	15.71	
170.0	100.0000	0301.9	072.5	104.9	000.0000	0756.6	058.1	16.19	
171.0	100.0000	0294.1	071.9	104.9	000.0000	0756.6	056.7	16.69	
172.0	100.0000	0285.8	071.2	104.8	000.0000	0756.4	055.3	17.20	
173.0	100.0000	0276.6	070.5	104.5	000.0000	0755.9	053.9	17.72	
174.0	100.0000	0267.8	069.7	104.2	000.0000	0755.4	052.4	18.23	
175.0	100.0000	0259.2	069.0	103.9	000.0000	0754.9	051.1	18.73	
176.0	100.0000	0250.5	068.3	103.6	000.0000	0754.4	049.7	19.23	
177.0	100.0000	0242.1	067.6	103.2	000.0000	0753.9	048.4	19.71	
178.0	100.0000	0233.1	066.8	102.7	000.0000	0753.3	047.0	20.19	
179.0	100.0000	0227.7	066.4	102.5	000.0000	0753.1	045.8	20.66	
180.0	100.0000	0223.9	066.0	102.5	000.0000	0753.0	044.6	21.13	
181.0	100.0000	0220.1	065.7	102.3	000.0000	0752.9	043.4	21.61	
182.0	100.0000	0217.4	065.4	102.3	000.0000	0752.9	042.2	22.10	
183.0	100.0000	0217.5	065.4	102.6	000.0000	0753.2	041.1	22.57	
184.0	100.0000	0218.0	065.5	102.9	000.0000	0753.5	040.0	23.06	
185.0	100.0000	0217.5	065.4	103.1	000.0000	0753.8	038.8	23.56	
186.0	100.0000	0217.0	065.4	103.3	000.0000	0754.0	037.7	24.06	
187.0	100.0000	0216.6	065.4	103.4	000.0000	0754.2	036.6	24.58	
188.0	100.0000	0217.2	065.4	103.7	000.0000	0754.6	035.4	25.10	
189.0	100.0000	0217.3	065.4	103.9	000.0000	0754.9	034.3	25.62	
190.0	100.0000	0215.5	065.3	103.8	000.0000	0754.7	033.1	26.15	
191.0	100.0000	0212.6	065.0	103.5	000.0000	0754.2	032.0	26.69	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
192.0	100.0000	0210.1	064.7	103.1	000.0000	0753.7	030.9	27.24
193.0	100.0000	0208.0	064.6	102.8	000.0000	0753.4	029.7	27.82
194.0	100.0000	0204.8	064.2	102.1	000.0000	0752.7	028.6	28.42
195.0	100.0000	0199.5	063.8	101.0	000.0000	0751.6	027.5	29.03
196.0	100.0000	0192.5	063.1	099.4	000.0000	0749.9	026.5	29.63
197.0	100.0000	0182.8	062.2	097.1	000.0000	0746.2	025.5	30.18
198.0	100.0000	0168.4	060.7	093.3	000.0000	0738.8	024.8	30.57
199.0	100.0000	0149.0	058.3	087.3	000.0000	0724.6	024.5	30.58
200.0	100.0000	0129.4	055.6	080.6	000.0000	0713.2	024.8	30.27
201.0	100.0000	0114.7	053.4	075.2	000.0000	0701.0	025.1	29.90
202.0	100.0000	0109.6	052.6	072.4	000.0000	0691.6	024.9	29.92
203.0	100.0000	0114.1	053.3	072.3	000.0000	0691.4	023.7	30.69
204.0	100.0000	0124.1	054.8	073.7	000.0000	0696.3	022.0	31.89
205.0	100.0000	0134.4	056.3	075.0	000.0000	0700.5	020.3	33.13
206.0	100.0000	0141.7	057.3	075.5	000.0000	0701.9	018.9	34.17
207.0	100.0000	0145.2	057.8	074.6	000.0000	0699.1	017.8	34.93
208.0	100.0000	0145.3	057.8	072.3	000.0000	0691.4	017.1	35.40
209.0	100.0000	0142.5	057.5	068.9	000.0000	0675.3	016.7	35.52
210.0	100.0000	0136.5	056.6	064.5	000.0000	0660.5	016.8	35.29
211.0	100.0000	0127.4	055.3	059.4	000.0000	0631.5	017.4	34.46
212.0	100.0000	0116.7	053.8	054.4	000.0000	0594.1	018.4	33.15
213.0	100.0000	0108.8	052.5	050.4	000.0000	0577.6	019.3	32.20
214.0	100.0000	0107.6	052.3	047.6	000.0000	0569.1	019.2	32.09
215.0	100.0000	0112.4	053.1	045.4	000.0000	0562.2	018.2	32.73
216.0	100.0000	0120.2	054.3	043.0	000.0000	0555.2	016.9	33.67
217.0	100.0000	0128.8	055.5	040.1	000.0000	0544.4	015.5	34.55
218.0	100.0000	0138.6	056.9	036.4	000.0000	0532.0	014.1	35.54
219.0	100.0000	0148.7	058.3	031.7	000.0000	0518.8	012.8	36.83
220.0	100.0000	0158.6	059.6	025.9	000.0000	0511.1	011.8	38.04
221.0	100.0000	0167.3	060.6	019.4	000.0000	0519.0	011.1	38.95
222.0	100.0000	0175.1	061.4	012.4	000.0000	0548.4	010.8	39.61
223.0	100.0000	0182.2	062.1	005.6	000.0000	0578.4	010.8	39.90
224.0	100.0000	0188.8	062.7	359.2	000.0000	0599.9	011.1	39.81
225.0	100.0000	0194.5	063.3	353.4	000.0000	0609.9	011.5	39.37
226.0	100.0000	0199.0	063.7	348.6	000.0000	0615.7	012.2	38.71
227.0	100.0000	0202.6	064.0	344.7	000.0000	0616.3	013.0	37.89
228.0	100.0000	0206.1	064.4	341.3	000.0000	0616.2	013.8	37.02
229.0	100.0000	0210.0	064.7	338.3	000.0000	0618.1	014.7	36.17
230.0	100.0000	0214.6	065.2	335.5	000.0000	0622.8	015.7	35.65
231.0	100.0000	0219.8	065.7	332.8	000.0000	0628.7	016.7	34.96
232.0	100.0000	0225.1	066.1	330.6	000.0000	0633.1	017.7	34.22
233.0	100.0000	0230.0	066.6	328.7	000.0000	0635.6	018.8	33.43
234.0	100.0000	0234.1	066.9	327.4	000.0000	0637.1	019.9	32.61
235.0	100.0000	0237.4	067.2	326.5	000.0000	0638.2	021.1	31.79
236.0	100.0000	0240.1	067.4	325.8	000.0000	0639.0	022.3	30.97
237.0	100.0000	0242.5	067.6	325.4	000.0000	0639.6	023.4	30.16
238.0	100.0000	0244.9	067.8	325.0	000.0000	0640.0	024.6	29.37
239.0	100.0000	0247.2	068.0	324.7	000.0000	0640.3	025.8	28.61
240.0	100.0000	0249.5	068.2	324.5	000.0000	0640.5	027.0	27.87
241.0	100.0000	0251.7	068.4	324.4	000.0000	0640.7	028.2	27.16
242.0	100.0000	0253.7	068.5	324.3	000.0000	0640.7	029.4	26.48

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)		Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
243.0	100.0000	0255.5	068.7		324.4	000.0000	0640.7	030.6	25.84
244.0	100.0000	0257.3	068.8		324.4	000.0000	0640.6	031.9	25.24
245.0	100.0000	0259.1	069.0		324.5	000.0000	0640.5	033.1	24.67
246.0	100.0000	0261.1	069.2		324.6	000.0000	0640.4	034.3	24.11
247.0	100.0000	0263.1	069.3		324.8	000.0000	0640.3	035.5	23.55
248.0	100.0000	0264.9	069.5		324.9	000.0000	0640.1	036.7	23.00
249.0	100.0000	0266.4	069.6		325.2	000.0000	0639.8	037.9	22.46
250.0	100.0000	0267.6	069.7		325.5	000.0000	0639.5	039.1	21.92
251.0	100.0000	0268.6	069.8		325.8	000.0000	0639.1	040.3	21.40
252.0	100.0000	0269.7	069.9		326.1	000.0000	0638.7	041.5	20.89
253.0	100.0000	0270.7	070.0		326.5	000.0000	0638.3	042.7	20.39
254.0	100.0000	0271.6	070.0		326.8	000.0000	0637.8	043.9	19.90
255.0	100.0000	0272.3	070.1		327.2	000.0000	0637.4	045.1	19.42
256.0	100.0000	0272.8	070.2		327.6	000.0000	0636.9	046.3	18.96
257.0	100.0000	0272.9	070.2		328.1	000.0000	0636.4	047.5	18.52
258.0	100.0000	0272.7	070.1		328.6	000.0000	0635.8	048.6	18.09
259.0	100.0000	0272.1	070.1		329.1	000.0000	0635.2	049.7	17.67
260.0	100.0000	0271.2	070.0		329.7	000.0000	0634.5	050.9	17.25
261.0	100.0000	0270.0	069.9		330.2	000.0000	0633.6	052.0	16.83
262.0	100.0000	0268.1	069.8		330.9	000.0000	0632.6	053.1	16.42
263.0	100.0000	0265.1	069.5		331.6	000.0000	0631.2	054.1	16.02
264.0	100.0000	0261.8	069.2		332.3	000.0000	0629.7	055.1	15.63
265.0	100.0000	0258.9	069.0		333.0	000.0000	0628.3	056.2	15.24
266.0	100.0000	0256.5	068.8		333.6	000.0000	0626.8	057.2	14.84
267.0	100.0000	0255.3	068.7		334.2	000.0000	0625.5	058.3	14.44
268.0	100.0000	0254.2	068.6		334.7	000.0000	0624.3	059.3	14.05
269.0	100.0000	0253.1	068.5		335.3	000.0000	0623.2	060.4	13.66
270.0	100.0000	0252.0	068.4		335.8	000.0000	0622.1	061.5	13.28
271.0	100.0000	0251.5	068.4		336.3	000.0000	0621.2	062.5	12.91
272.0	100.0000	0251.0	068.3		336.8	000.0000	0620.3	063.6	12.54
273.0	100.0000	0250.6	068.3		337.2	000.0000	0619.5	064.7	12.18
274.0	100.0000	0250.1	068.3		337.7	000.0000	0618.8	065.7	11.82
275.0	100.0000	0249.7	068.2		338.2	000.0000	0618.2	066.8	11.47
276.0	100.0000	0249.3	068.2		338.7	000.0000	0617.7	067.8	11.13
277.0	100.0000	0249.1	068.2		339.2	000.0000	0617.3	068.9	10.78

Satellite Image of the tower site and the 114.5 dBu interference contour of 2nd adjacent KQRT

The KFRH interference contour is 118.6 dBu which is smaller than the 2nd adjacent KQRT contour.

