

TECHNICAL STATEMENT
K294CW PHOENIX, ARIZONA, CH 294D
MOUNTAIN COMMUNITY TRANSLATORS, LLC
FCC FORM 349
SEPTEMBER 2016

This Technical Statement is made in support of a minor change of for FM translator station K294CW at Phoenix, Arizona, facility ID 148238. K294CW is a fill-in translator for KASA(AM) Phoenix, Arizona, facility ID 33451. K294CW now seeks to remain at its current transmitter site with the same antenna height and Effective Radiated Power (“ERP”) of 250 watts (0.25 KW), but make modification to its directional antenna system. The following will show that the new proposed operation of K294CW will meet all of the Commissions technical requirements for an FM translator station.

The proposed operation of K294CW specifies an Effective Radiated Power of 0.25 kilowatts. It will operate with a custom directional antenna with an “off the shelf” type antenna, or a Nicom BKG77 one bay with circular polarization. The antenna will be mounted on an existing non-registered tower with an overall height of 24 meters above the ground. The antenna will be mounted with a Center of Radiation of 20 meters above the ground, and 665 meters Above Mean Sea Level. The coordinates of this tower are located at N 33° 35’ 39”, W 112° 05’ 08”, NAD 27.

Figure 1 is a detailed interference study conducted on channel 294D with these new proposed facilities. It shows that the new operation of K294CW will not cause any interference to any existing or proposed FM stations on any of the pertinent same channel or adjacent channels to channel 294, with the exception of 2nd adjacent channel station

KVVA-FM Apache Junction, Arizona operating on channel 296C3, facility ID 1331 and KOMR(FM) Sun City, Arizona operating on channel 292C2, facility ID 55913.

There is an apparent overlap with an allotment of channel 294C3 at Buckeye, AZ, however this allotment is reserved for Mexican protection purposes only. US stations do not need to protect this allotment.

The proposed operation of K294CW on 294D is also located within the protected 60 dB μ contour of 2nd adjacent channel KOMR(FM). Figure 2 show the predicted F(50-50) field strength of KOMR at the proposed K294CW transmitter site is 62.0 dB μ . Therefore, the respective predicted interfering contour F(50-10) generated by the proposed K294CW on channel 294D is an additional 40 DB μ or 102.0 dB μ .

The proposed operation of K294CW on 294D is located within the protected 60 dB μ contour of 2nd adjacent channel of KVVA-FM. Figure 3 shows the predicted F(50-50) field strength of KVVA-FM at the proposed K294CW transmitter site is 61.5 dB μ . Therefore, the respective predicted interfering contour F(50-10) generated by the proposed K294CW on channel 294D is an additional 40 dB μ or 101.5 dB μ .

Figure 4 shows the coverage area for the worse case 101.5 dB μ interference contour F(50-10) and shows that there is no population in the area of interference. The applicant, Mountain Community Translators, LLC, respectfully requests a waiver of C.F.R. 74.1204(d) of the Commission's rules based on the fact that there is no population within the area of predicted interference. There are no homes nearby the proposed existing tower site, which is a privately owned with private gated access located at a remote mountain tower site known as "Shaw Butte". 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 K294CW until such interference can be eliminated. Figure 5 shows a USGS 7.5 minute map of the area around the proposed site. It also documents that there are no homes located in the predicted 101.5 dB μ contour.

Figure 6 is the directional antenna data for the proposed Nicom antenna system proposed to be used.

The proposed operation of K294CW Phoenix will remain a “Fill-In” operation for Class D AM station KASA Phoenix, Arizona. KASA(AM) operates with 10 kilowatts daytime with a directional antenna system on 1540 kHz. Figure 7 shows that the proposed 60 dB μ contour for the proposed K294CW will not extend beyond the daytime 2.0 mV/m contour of KASA. It will also not extend beyond a 25 mile (40 KM) radius from the KASA tower site. Since this is a “Fill-In” translator, the maximum ERP will not exceed the maximum permissible ERP of 250 watts in any azimuth.

It was found that the new proposed operation of K294CW Phoenix, Arizona on channel 294D, will satisfy all of the required commission rules and regulations for an FM translator station.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE MAP

K294CW PHOENIX, AZ, CH. 294D

REFERENCE
33 35 39.0 N.
112 05 08.0 W.

CH# 294D - 106.7 MHz, Pwr= 0.25 kW DA, HAAT= 0.0 M, COR= 665 M

Average Protected F(50-50)= 7.09 km
Standard Directional

DISPLAY DATES
DATA 09-17-16
SEARCH 09-17-16

CH CITY	CALL	TYPE STATE	ANT AZ	AZI ---	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
294C3 Buckeye	AL9806 **	---	---	230.1 49.9	52.65	33 17 23.0 112 31 12.0	25.000 100	118.2 433	43.0	-78.4*	-40.6**
294D Phoenix	K294CW	LIC DC_ AZ	---	0.0 0.0	0.00 BLFT20160713AAY	33 35 39.0 112 05 08.0	0.250	29.9 665	9.0 Mountain Community Transla	-45.7*	-60.3*
294C2 Prescott Valley	KPPV	LIC _CN AZ	---	337.6 157.4	107.65 BLH19930204KB	34 29 25.0 112 32 00.0	3.700 493	128.8 2181	51.9 Prescott Valley Broadcasti	-35.7*	3.4
294C0 Pinetop	KNKI	RSV-A AZ	---	76.6 257.8	217.61	34 01 36.0 109 47 35.0	100.000 450	211.3 2795	99.9 Wsk Family Trust (cathy Ko	-11.0	62.7
295A Buckeye	KDVA	LIC _CN AZ	---	251.6 71.3	50.33 BLH19980814KB	33 27 01.0 112 35 58.0	6.000 93	50.8 472	30.2 Entravision Holdings, LIc	-10.7*	0.7
292C2 Sun City	KOMR	LIC _CN AZ	---	318.2 138.0	54.01 BLH19961025KC	33 57 21.0 112 28 34.0	23.000 221	6.7 1098	58.3 Univision Radio License Co	32.9	-4.7*
296C3 Apache Junction	KVVA-FM	LIC _CX AZ	---	110.9 291.2	46.11 BLH20130315ABB	33 26 44.0 111 37 19.0	17.000 124	5.3 651	49.3 Entravision Holdings, LIc	23.8	-4.0*
294D Morristown	K294CO	CP DV_ AZ	---	302.1 121.9	46.74 BNPFT20130829AAG	33 49 01.0 112 30 49.0	0.140 -28	37.3 585	10.1 Donald F. Hendren	-1.0	0.9
292D Phoenix	K292GY	CP DC_ AZ	---	160.4 340.4	24.14 BMPFT20160129AIO	33 23 21.0 111 59 53.0	0.099	0.1 478	5.1 Fiesta Radio, Inc.	1.8	17.3
293L1 Mesa	1625776	APP AZ	---	115.5 295.7	36.49 BNPL20131112AHV	33 27 10.0 111 43 51.0	0.100 19	457	7.4 Phoenix Community Radio	3.7	
293A Arizona City	KKMR	LIC _CN AZ	---	153.6 333.9	94.04 BLH19970102KC	32 50 04.0 111 38 15.0	6.000 89	43.2 537	27.6 Univision Radio License Co	28.9	33.3
297C2 Agui la	KAZV	CP ZCX AZ	---	298.0 117.6	83.27 BNPH20070403ACO	33 56 36.0 112 52 53.0	50.000 150	5.2 929	45.6 Matinee Media Corporation	66.1	36.7
297C2 Agui la	KAZV	APP _CX AZ	---	292.6 112.1	88.80 BMPH20151022AFO	33 53 49.6 112 58 21.6	50.000 150	5.6 904	48.0 Matinee Media Corporation	71.0	37.1
294D Payson	K294AN	LIC DVN AZ	---	46.6 227.1	112.89 BLFT19950920TA	34 17 17.0 111 11 32.0	0.012 306	45.9 1952	12.9 Family Life Broadcasting,	50.4	47.2
294C Nogales	XHSNFM	SO ---	---	156.7 337.3	273.40	31 19 51.0 110 56 45.0	100.000 600	204.1 1873	92.0	47.6	116.7
295C Show Low	AL6595	RSV-A AZ	---	70.5 251.6	209.67 RMNS-155	34 12 20.0 109 56 26.0	100.000 600	141.0 2675	95.3	51.6	88.7
294C1 Pinetop	KNKI	LIC _C_ AZ	---	71.7 253.1	242.45 BLH20100426AAU	34 15 06.0 109 35 06.0	65.000 357	170.9 2600	73.4 Wsk Family Trust (cathy Ko	54.6	113.5
294D Prescott Valley	KPPV-FM2	LIC DV_ AZ	---	358.6 178.6	122.76 BLFTB20120525AAF	34 42 02.2 112 07 04.4	0.100	31.8 2389	5.1 Prescott Valley Broadcasti	77.4	55.2
295D Little Acres	K295AL	LIC _C_ AZ	---	105.7 286.4	120.89 BLFT20070323AIE	33 17 37.0 110 50 09.0	0.015 1039	30.8 2378	18.6 Maricopa County Community	74.1	76.1
291A Miami	R12465	ADD AZ	---	99.5 280.2	120.86	33 24 30.0 110 48 14.0	6.000 100	2.5 1359	26.0 Jerry D. Russell	100.8	85.7
291D Prescott	K291AL	LIC _C_ AZ	---	337.6 157.4	107.61 BLFT20070402KSB	34 29 24.0 112 31 59.0	0.010 483	0.2 2175	12.5 Arizona Board Of Regents F	92.0	93.5
240C0 Cottonwood	KKLD	LIC NCX AZ	---	358.6 178.6	121.21 BMLH20100428AEO	34 41 12.0 112 07 02.0	21.000 799	12.8 2388	58.8 Yavapai Broadcasting Corpo	24.5R	96.7M
296D Prescott Valley	K296GN	LIC DV_ AZ	---	358.6 178.6	121.30 BLFT20150612AAD	34 41 15.0 112 07 01.0	0.250	0.1 2363	7.0 Advance Ministries, Inc.	105.4	100.2
295L1 Marana	KVAV-LP	CP AZ	---	151.4 331.9	144.95 BNPL20131021AIZ	32 26 42.3 111 20 46.2	0.100 -17	607	113.9 Voice Of Avra Valley	106.5	
291C2 Munds Park	KFSZ	LIC _C_ AZ	---	19.0 199.3	161.43 BLH20080219BFC	34 58 06.0 111 30 29.0	4.300 468	4.1 2646	51.4 Southwest Media, Inc.	141.2	107.8

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* (Overlap in km)	*OUT*
294C Nogales	XHSNFM	OPE _HN SO		156.7 337.3	273.40	31 19 51.0 110 56 45.0	20.000 150	129.5 1423	92.0	122.2	116.7

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. Call signs with strikeout need not be protected. 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. Reference station has protected zone issue: Mexico

* No actual interference will be caused to either second adjacent channel stations KOMR or KVVA-FM since the 101.5 DBU Interference contour will not cover any population. See the Technical Statement for more details.

** The allotment of channel 294C3 for Buckeye, AZ is only for Mexican protection. It does not require US station protection.

K294CW

BLFT20160713AAY

Latitude: 33-35-39 N

Longitude: 112-05-08 W

ERP: 0.25 kW

Channel: 294

Frequency: 106.7 MHz

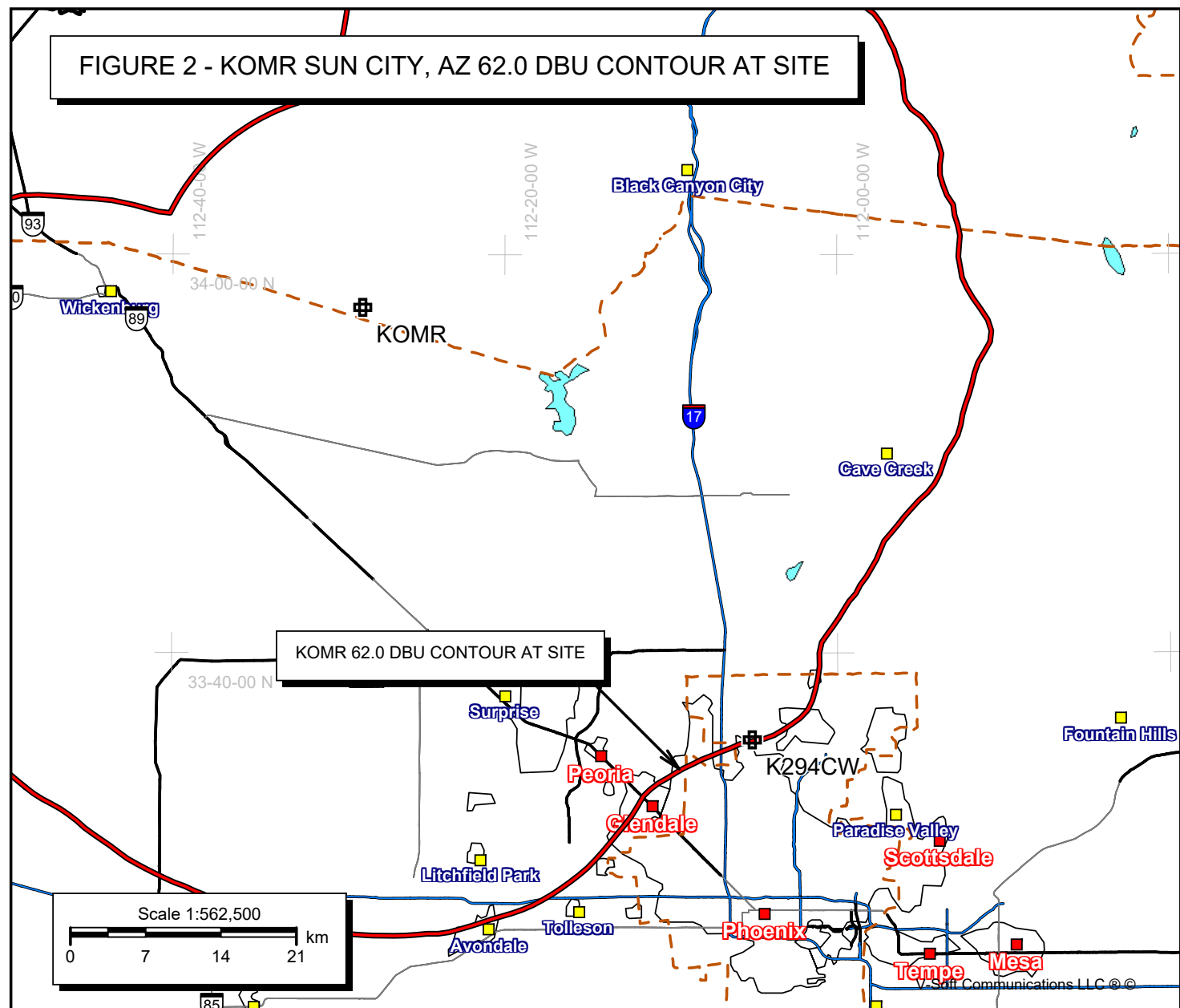
AMSL Height: 665.0 m

Elevation: 645.0 m

Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model: None

FIGURE 2 - KOMR SUN CITY, AZ 62.0 DBU CONTOUR AT SITE

K294CW

BLFT20160713AAY

Latitude: 33-35-39 N

Longitude: 112-05-08 W

ERP: 0.25 kW

Channel: 294

Frequency: 106.7 MHz

AMSL Height: 665.0 m

Elevation: 645.0 m

Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model: None

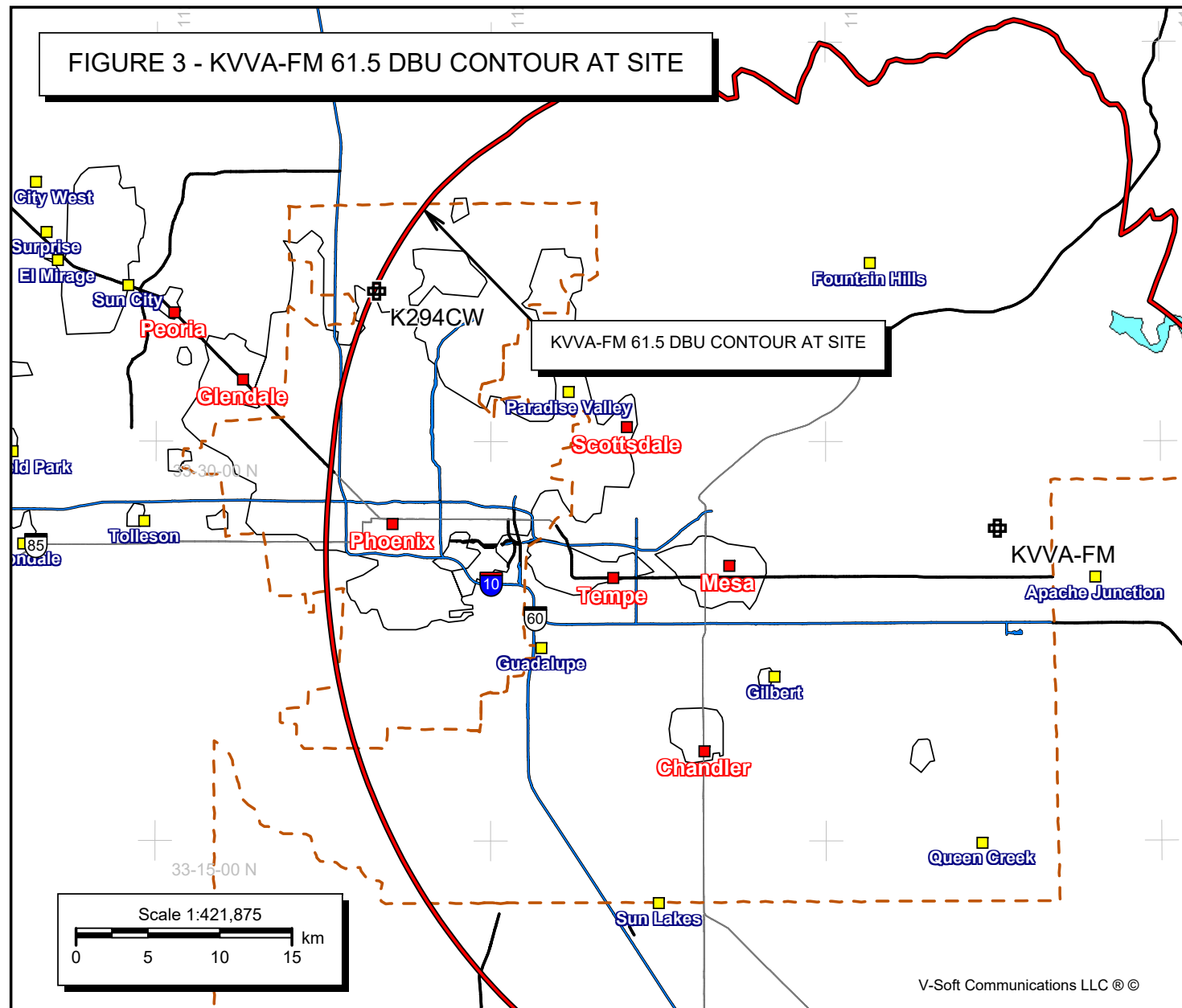
FIGURE 3 - KVVA-FM 61.5 DBU CONTOUR AT SITE

FIGURE 4 - PREDICTED 101.5 DBU CONTOUR
K294CW PHOENIX, AZ, CH. 294D

Coverage Study - NGDC 30 SEC
09-17-2016

K294CW CH294 D , 0.25 kW, 0.0m HAAT, 665.0m COR AMSL
Interference Contour = 102 dBu. Population = 0

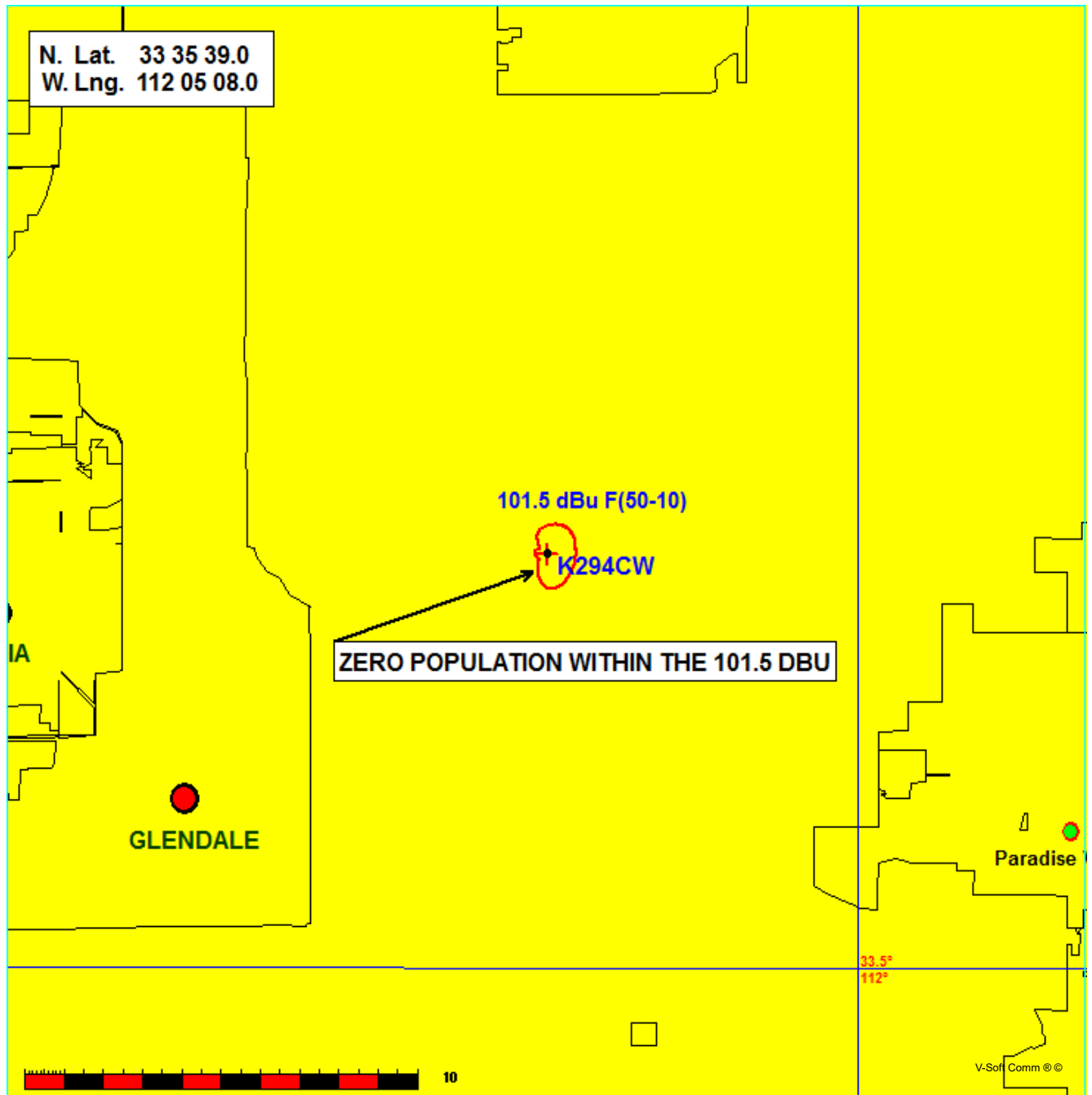


FIGURE 5 USGS 7.5 MINUTE TOPOGRAPHIC MAP OF AREA AROUND SITE

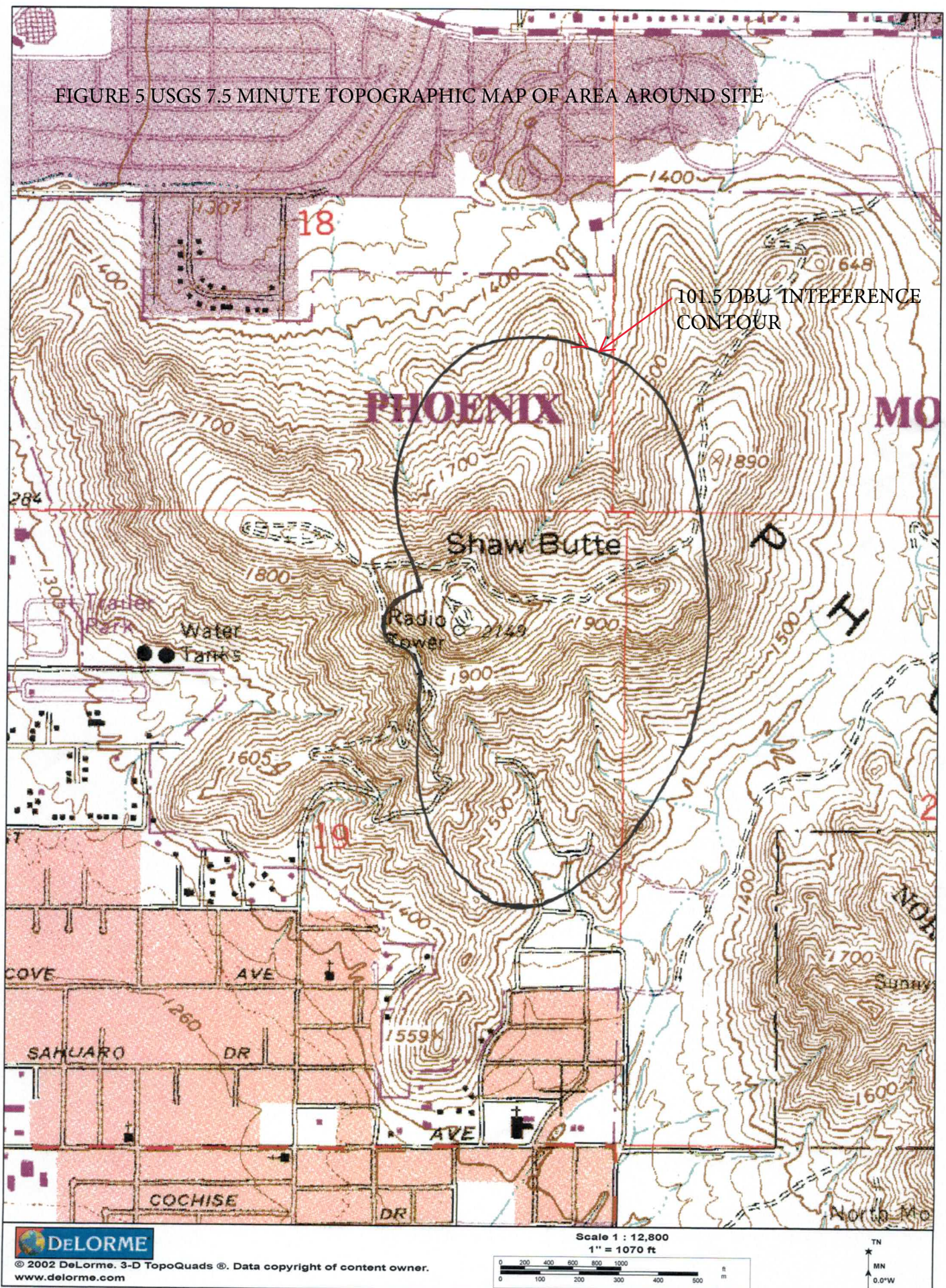


FIGURE 6 - DIRECTIONAL ANTENNA DATA

K294CW

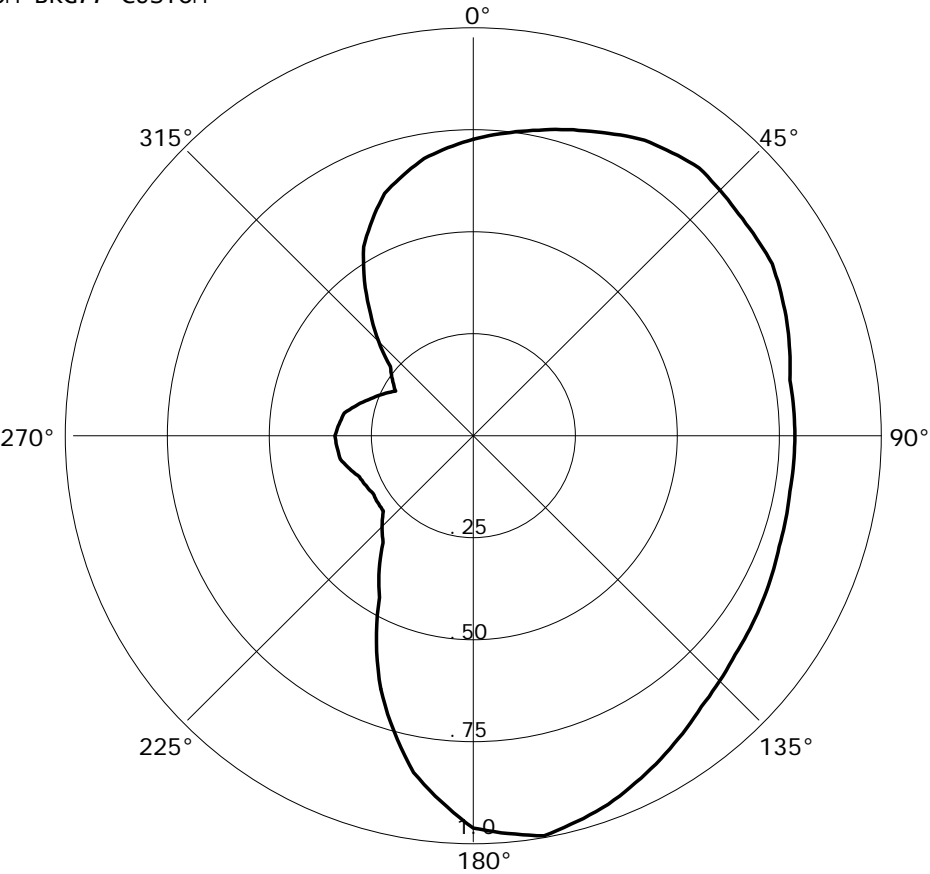
09-17-2016

RMS(V) = .691

Graph is Relative Field

NICOM BKG77 CUSTOM

Azi	Field	dBk	kW
000	0.730	-08.754	0.133
010	0.762	-08.382	0.145
020	0.799	-07.970	0.160
030	0.840	-07.535	0.176
040	0.861	-07.321	0.185
050	0.849	-07.442	0.180
060	0.846	-07.473	0.179
070	0.818	-07.766	0.167
080	0.788	-08.090	0.155
090	0.788	-08.090	0.155
100	0.788	-08.090	0.155
110	0.798	-07.981	0.159
120	0.818	-07.766	0.167
130	0.838	-07.556	0.176
140	0.870	-07.230	0.189
150	0.919	-06.754	0.211
160	0.966	-06.321	0.233
170	1.000	-06.021	0.250
180	0.966	-06.321	0.233
190	0.842	-07.514	0.177
200	0.663	-09.590	0.110
210	0.460	-12.765	0.053
220	0.344	-15.289	0.030
230	0.288	-16.833	0.021
240	0.284	-16.954	0.020
250	0.297	-16.565	0.022
260	0.331	-15.624	0.027
270	0.339	-15.417	0.029
280	0.321	-15.890	0.026
290	0.267	-17.490	0.018
300	0.220	-19.172	0.012
310	0.265	-17.556	0.018
320	0.392	-14.155	0.038
330	0.537	-11.421	0.072
340	0.635	-09.965	0.101
350	0.693	-09.206	0.120



K294CW

BLFT20160713AAY

Latitude: 33-35-39 N

Longitude: 112-05-08 W

ERP: 0.25 kW

Channel: 294

Frequency: 106.7 MHz

AMSL Height: 665.0 m

Elevation: 645.0 m

Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model: None

**FIGURE 7 - FILL IN MAP WITH KASA(AM)
PHOENIX, AZ**