

TECHNICAL STATEMENT
K294CW PHOENIX, ARIZONA, CH 294D
MOUNTAIN COMMUNITY TRANSLATORS, LLC
FCC FORM 349
NOVEMBER 2017

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 BEXT TFC2K-D 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 dBμ 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 dBμ.

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, facility ID 148238. KASA(AM) operates with 10 KW 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 or it will 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.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE STUDY

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 11-14-17
 SEARCH 11-15-17

CH CITY	CALL	TYPE STATE	ANT AZ	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
294C3 AL9806 ** Buckeye		AZ		230.1 49.9	52.65	33 17 23.0 112 31 12.0	25.000 100	118.2 433	43.0	-78.4*	-38.7**
294D K294CW Phoenix		LIC_DC_ AZ		0.0 0.0	0.00 BLFT20161117ABV	33 35 39.0 112 05 08.0	0.250	51.3 665	15.8	-69.1*	-72.0*
294C2 KPPV Prescott Valley		LIC_CN AZ		337.6 157.4	107.65 BLH19930204KB	34 29 25.0 112 32 00.0	3.700 493	131.8 2181	51.9	-38.2*	0.8
294C0 KNKI Pinetop		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	-13.2	57.5
295A KDVA Buckeye		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	-10.6*	0.8
292C2 KOMR* Sun City		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	31.7	-4.9*
296C3 KVVA-FM * Apache Junction		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	22.1	-4.1*
292D K292GY Phoenix		LIC_DC_ AZ		160.4 340.4	24.14 BLFT20170822AAB	33 23 21.0 111 59 53.0	0.099	0.1 478	5.1	7.7	17.8
293A KMR Arizona City		LIC_CN AZ		153.6 333.9	94.04 BLH19970102KC	32 50 04.0 111 38 15.0	6.000 89	43.6 537	27.6	33.9	42.1
297C2 KAZV Agua Fria		CP_ZCX AZ		298.0 117.6	83.27 BNPH20070403ACO	33 56 36.0 112 52 53.0	50.000 150	5.1 929	45.6	63.0	36.4
297C2 KAZV Agua Fria		APP_CX AZ		292.6 112.1	88.80 BMPH20151022AFO	33 53 49.6 112 58 21.6	50.000 150	5.0 904	48.0	69.1	37.1
294D K294AN Payson		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	48.8	43.6
295C AL6595 Show Low		RSV-A AZ		70.5 251.6	209.67 RMNS-155	34 12 20.0 109 56 26.0	100.000 600	141.1 2675	95.3	49.4	86.0
294D KPPV-FM2 Prescott Valley		LIC_DV_ AZ		358.6 178.6	122.76 BLFTB20120525AAF	34 42 02.2 112 07 04.4	0.100	36.1 2389	5.1	75.7	51.2
294C XHSNFM Nogales		USE_ SO		156.7 337.3	273.40	31 19 51.0 110 56 45.0	100.000 600	204.0 1873	92.0	52.0	130.8
294C1 KNKI Pinetop		LIC_C_ AZ		71.7 253.1	242.45 BLH20100426AAU	34 15 06.0 109 35 06.0	65.000 357	170.7 2600	73.4	52.7	109.0
295D K295AL Little Acres		LIC_C_ AZ		105.7 286.4	120.89 BLFT20070323AIE	33 17 37.0 110 50 09.0	0.015 1039	29.3 2378	18.6	72.2	74.4
291D K291AL Prescott		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	90.7	93.5
240C0 KKLD Cottonwood		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	24.5R	96.7M
291D 1761787 Globe		APP_C_ AZ		99.5 280.2	120.86 BNPFT20170726ABL	33 24 30.0 110 48 14.0	0.250	1.1 1224	7.1	100.1	108.1
296D K296GN Prescott Valley		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	103.5	100.1
291C2 KFSZ Munds Park		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	139.2	107.6
293C1 DKLFZ Leupp		VAC_ AZ		20.9 201.5	240.75	35 37 00.0 111 08 00.0	100.000 299	105.6 1757	72.8	117.1	141.3
294C XHSNFM Nogales		OPE_HN SO		156.7 337.3	273.40	31 19 51.0 110 56 45.0	20.000 150	129.4 1423	92.0	126.7	130.8
292C2 KTG Oracle		LIC_ZHX AZ		136.3 317.0	176.34 BMLH20110726AHI	32 26 26.0 110 47 12.0	0.440 1272	1.0 2807	45.7	159.6	126.8

CH CI TY	CALL	TYPE STATE	ANT	AZI <--	DI ST FI LE #	LAT LNG	PWR(KW) HAAT (M)	INT(km) COR (M)	PRO(km) LICENSEE	Page # *IN* (Overlap in km)	*OUT*
292D Tucson	KTGV-FM1	LIC_DC_ AZ		145.2 325.8	175.74 BLFTB20101129AOK	32 17 23.0 111 01 06.0	10.000	3.2 899	36.2 Scripps	156.8 Broadcasting	139.0 Holid
241C Tucson	KLPX	LIC_CY AZ		148.6 329.1	174.57 BLH19900503KD	32 14 56.0 111 06 59.0	100.000 595	12.8 1360	58.8 Arizona	28.5R Lotus Corp.	146.1M
291A Sonoi ta	AL8762	SO		200.7 20.3	205.63 RM	31 51 41.0 112 51 16.0	3.000 100	1.8 560	24.0	184.4	180.9
296C1 Needl es	KNKK	LIC_CX CA		308.0 126.7	263.66 BLH20020708AAZ	35 01 58.0 114 21 57.0	16.500 582	6.9 1368	67.8 Cameron	241.1 Broadcasting, Inc.	192.2
296A Pi ma	VA2384	VAC_N AZ		110.8 292.0	233.29	32 49 46.0 109 45 16.0	6.000 100	3.7 1116	39.7	210.5	192.4
292A Desert Hi lls	1768421	RSV-A AZ		297.4 116.2	235.73	34 32 57.0 114 22 01.0	6.000 100	1.6 442	15.8 L. Topaz	219.0 Enterprises, Inc.	201.9
294B1 Mexi cali	XEWVFM	USE BN		252.5 70.6	332.40	32 38 51.0 115 28 19.0	25.000 100	112.6 106	45.0	206.9	238.0
296B Ciudad Morel os	AL8716	VAC BN		248.2 66.7	278.70	32 38 00.0 114 51 00.0	50.000 150	5.9 192	65.0	260.1	213.1
292B San Lui s Ri o	AL8252	VAC SO		244.6 63.2	279.67	32 29 15.0 114 46 50.0	50.000 150	5.9 183	65.0	260.6	214.0
292B San Lui s Ri o	AL1557	VAC SO		244.6 63.2	279.67	32 29 15.0 114 46 50.0	50.000 150	5.9 183	65.0	260.6	214.0
292B San Lui s Ri o	AL6329	VAC SO		244.6 63.2	279.67	32 29 15.0 114 46 50.0	50.000 150	5.9 183	65.0	260.6	214.0
292A Desert Hi lls	1767935	APP_CX AZ		297.6 116.3	236.20 BNPH20171004AAO	34 33 20.8 114 22 07.3	6.000 -153	1.6 207	15.8 L. Topaz	219.5 Enterprises, Inc.	220.0
240C3 Well ton	KUKY	LIC_CX AZ		244.6 63.3	233.57 BLH20120803AAD	32 40 22.0 114 20 11.2	1.600 385	12.8 534	58.8 Hi spanic	11.5R Target Media Inc.	222.1M
291B Puerto Penasco	XHPPOFM	OPE_HN SO		208.7 27.9	289.42	31 18 09.0 113 32 57.0	50.000 150	5.8 154	65.0	264.9	223.4
291B Puerto Penasco	XHPPOFM	USE SO		208.7 27.9	289.42	31 18 09.0 113 32 57.0	50.000 150	5.8 154	65.0	264.9	223.4
294B1 Mexi cali	XEWVFM	OPE_HN BN		252.5 70.6	332.40	32 38 51.0 115 28 19.0	2.020 39	47.9 45	45.0	271.6	238.0
296A Nogales	R17547	VAC SO		156.8 337.4	274.65	31 19 07.0 110 56 45.0	3.000 100	2.9 1383	24.0	254.4	250.1
293C0 Las Vegas	KSNE-FM	LIC_CX NV		316.0 134.4	378.31 BMLH20110126ABC	36 00 30.0 115 00 20.0	100.000 352	111.4 1048	76.0 Ci ti casters	251.2 Licenses, Inc.	278.5
296B Caborca	AL9098	VAC SO		181.2 1.2	322.15	30 41 50.0 112 09 29.0	50.000 150	5.1 450	65.0	297.5	255.6
293B1 Agua Pri eta	R17547	VAC SO		136.0 317.3	346.71	31 19 33.0 109 32 56.0	25.000 100	69.5 1377	45.0	260.2	274.3
295B1 Agua Pri eta	R14915	VAC SO		136.2 317.5	345.33	31 19 38.0 109 34 07.0	25.000 100	67.9 1369	45.0	260.6	272.9
297A Cananea	R17613	VAC SO		149.5 330.5	335.38	30 58 55.0 110 18 02.0	3.000 100	1.6 1670	24.0	317.5	310.8
291C1 Gall up	KFMQ	LIC_NCX NM		54.5 236.4	372.30 BMLH20050608AAE	35 29 39.0 108 44 32.0	100.000 57	5.3 2134	47.2 Clear Channel	348.6 Broadcasting	318.8
297C2 Chi nle	KFXR-FM	LIC_CN AZ		33.2 214.5	368.73 BLH19950908KE	36 21 07.0 109 49 54.0	3.600 497	3.5 2507	43.0 Cc Li censes,	347.3 Lic	324.6
241C1 Wind ow Rock	KWRK	LIC_CY AZ		50.4 232.1	349.54 BLH19960911KD	35 33 36.0 109 06 30.0	100.000 178	12.8 2321	58.8 The Navajo Nation	21.5R	328.0M
241A Nacozari De Garcia	AL0055	VAC SO		189.2 8.9	361.66	30 22 25.0 112 41 30.0	3.000 100	12.8 214	58.8	5.0R	356.7M

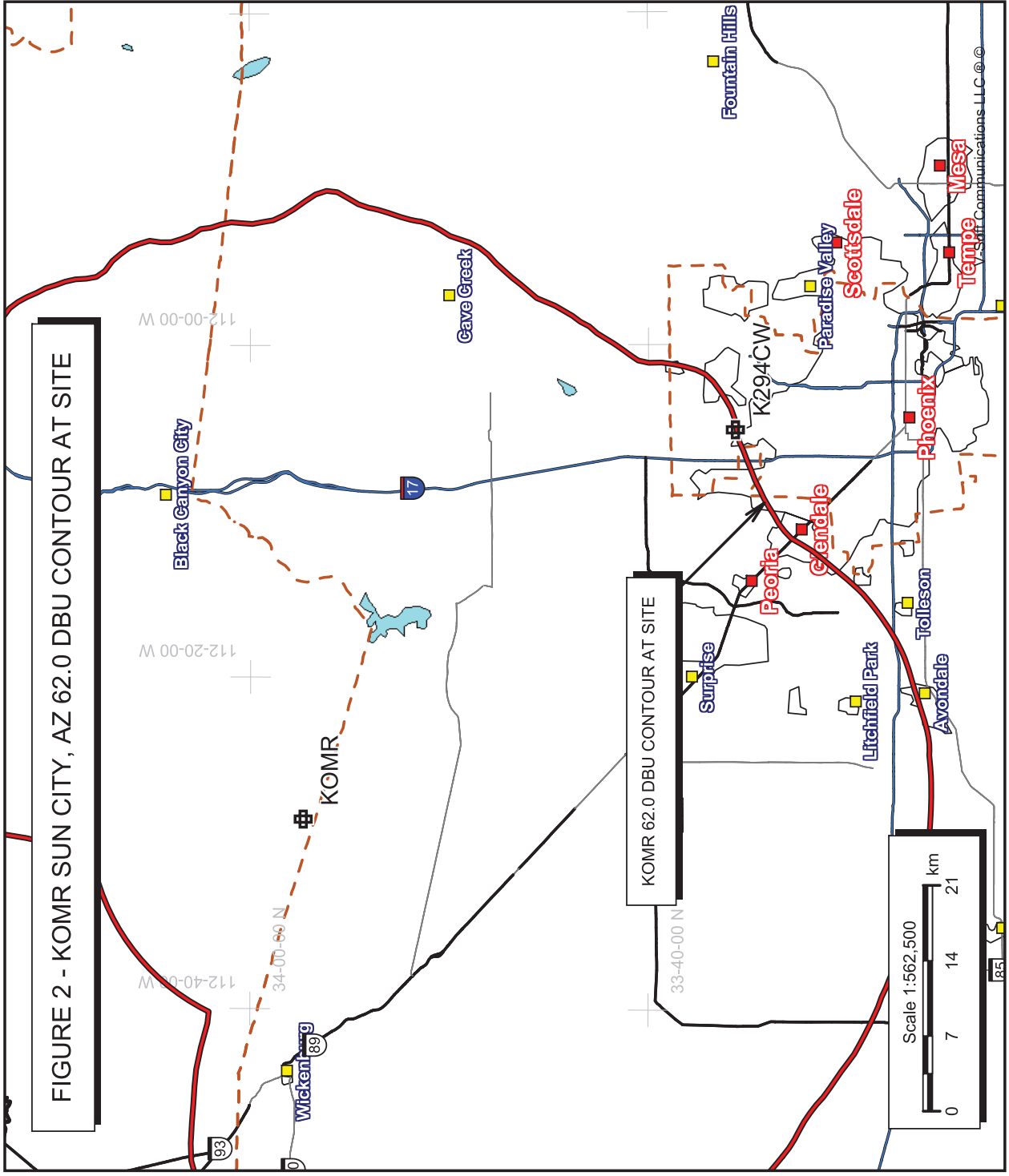
Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= West Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding.
Ant Column: (D= DA Standard, 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 restricted contour.
Reference station has protected zone issue: Mexico

* No actual interference will be caused to either KOMR OR KVVA-FM since the worse case 101.5 DBU interference contour will not cover any population. See the Technical Statement for more details

** The allotment of 294C3 at Buckeye is for Mexican protection purposes only and need not be protected domestically.

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



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

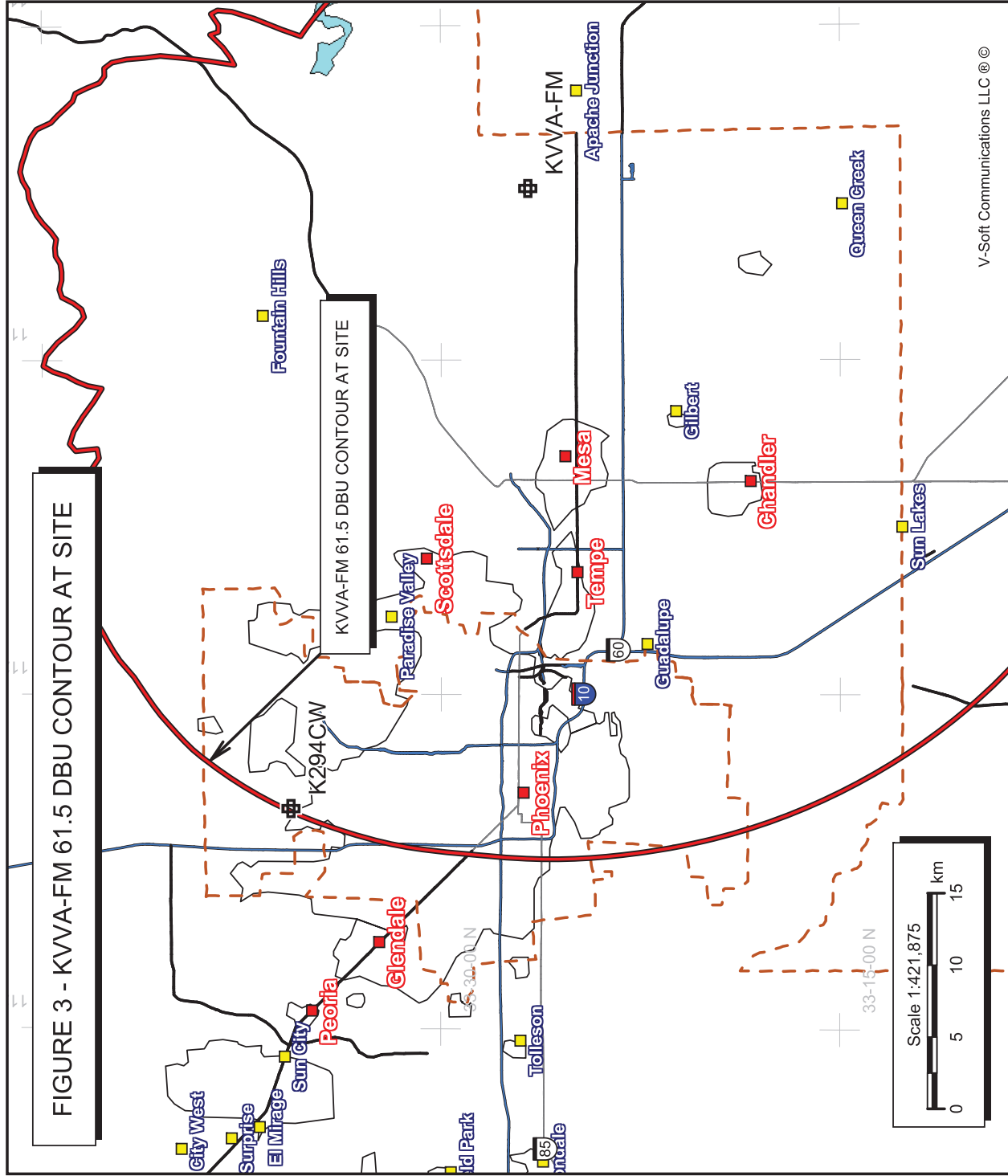


FIGURE 4 - PREDICTED 101.5 DBU INTERFERENCE CONTOUR
K294CW PHOENIX, AZ, CH. 294D

Coverage Study - NGDC 30 SEC
11-15-2017

K294CW CH294 D , 0.25 kW, 0.0m HAAT, 665.0m COR AMSL
Interference Contour = 101.5 dBu. Population = 0

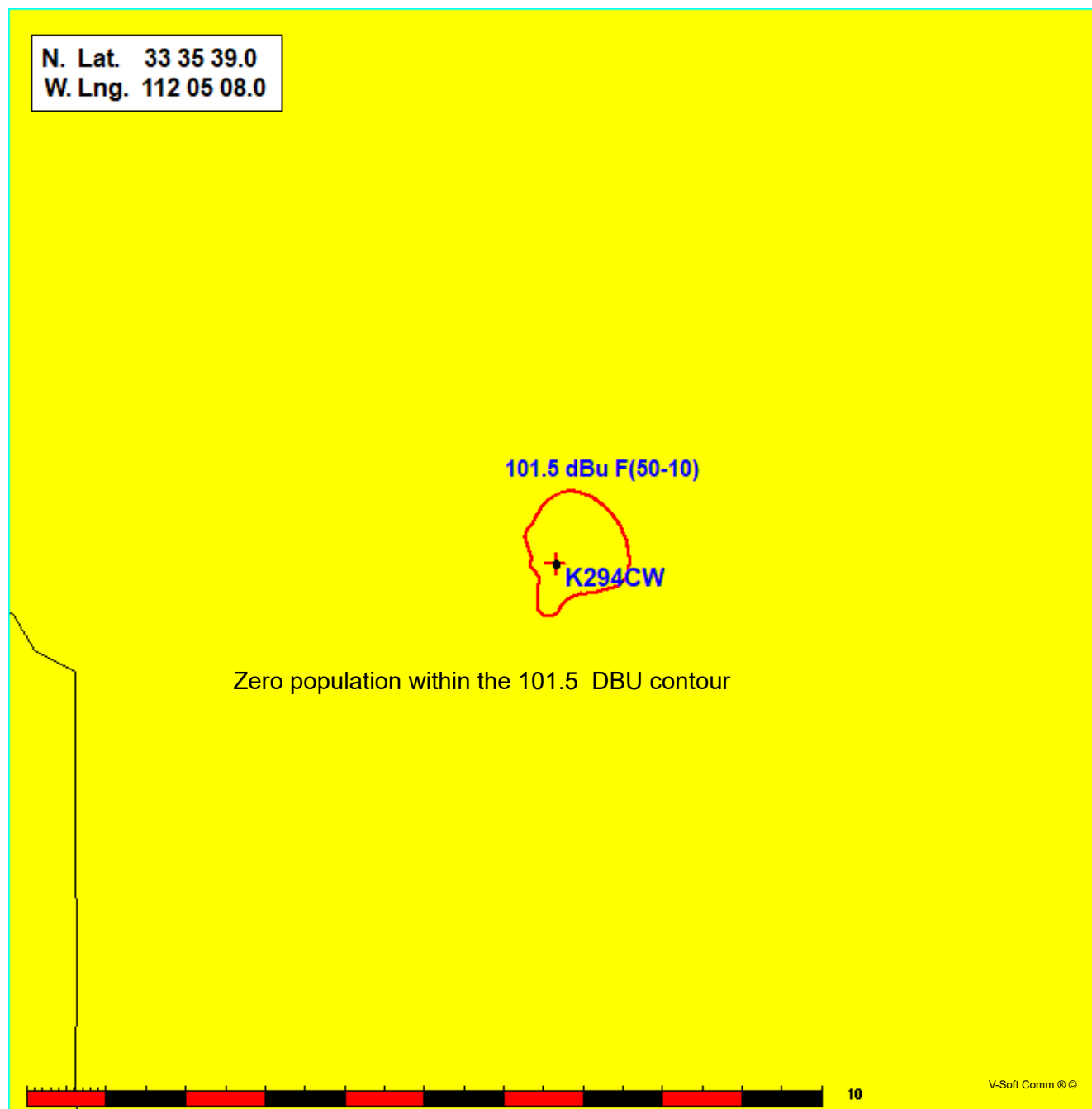


FIGURE 5 USGS 7.5 MINUTE TOPOGRAPHIC MAP OF AREA AROUND SITE

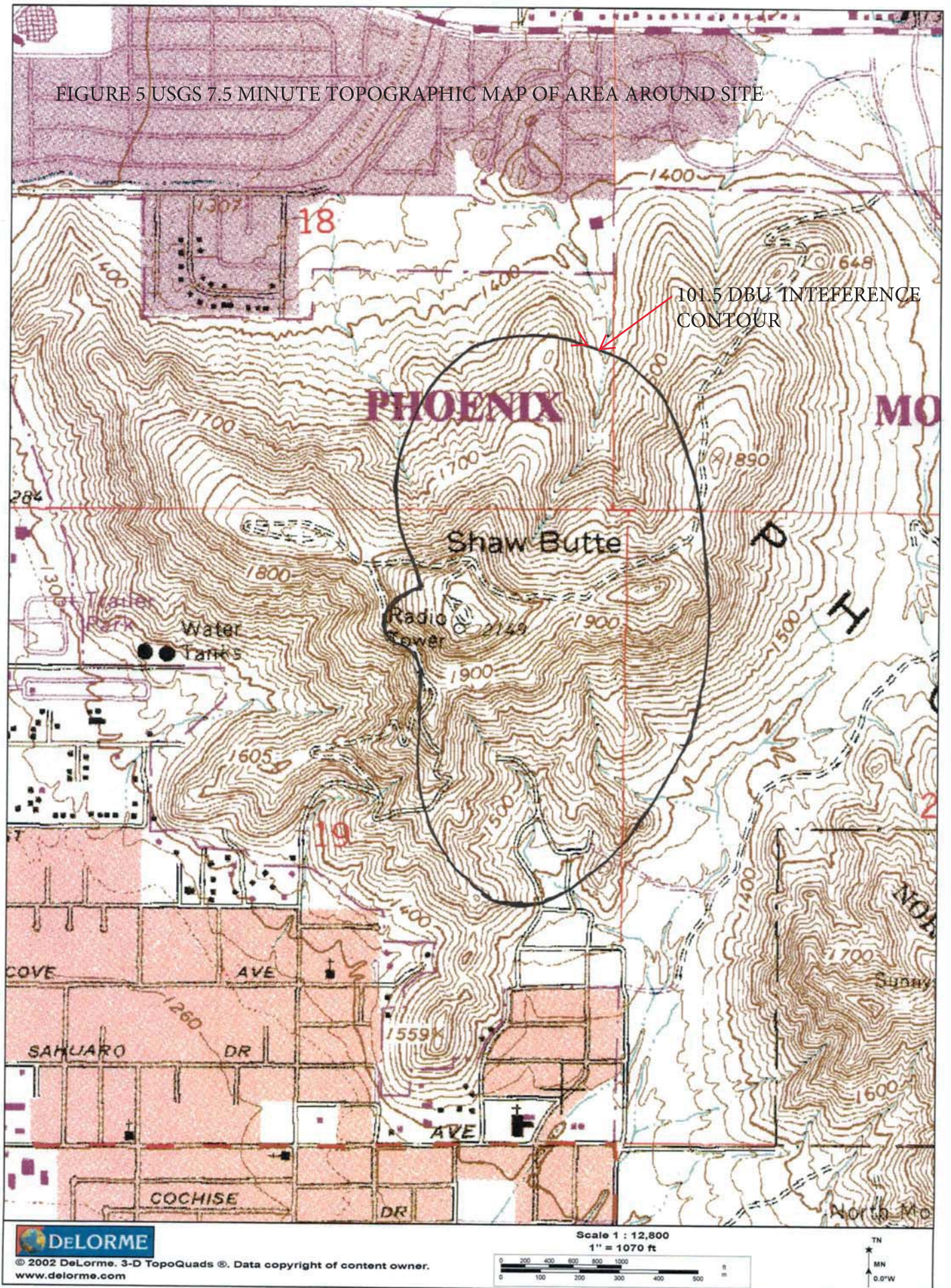


FIGURE 6 - DIRECTIONAL ANTENNA DATA

K294CW

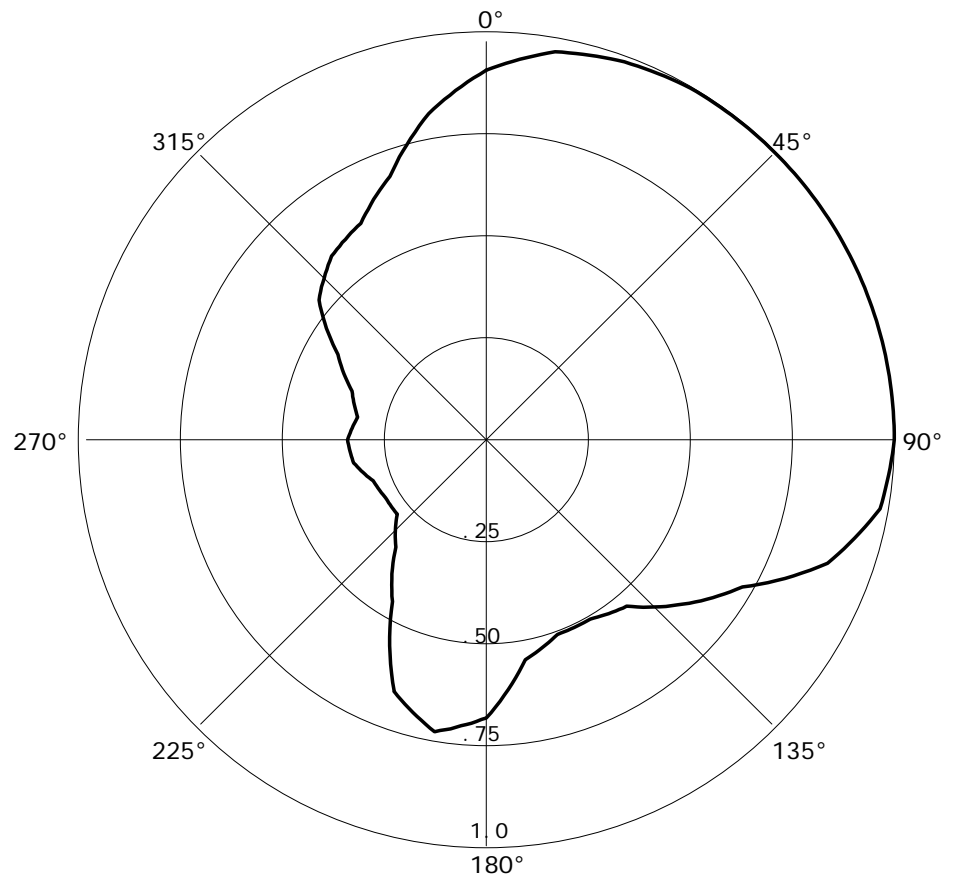
11-15-2017

RMS(V) = .713

BEXT TFC2K-D

Graph is Relative Field

Azi	Field	dBk	kW
000	0.910	-06.840	0.207
010	0.970	-06.285	0.235
020	0.990	-06.108	0.245
030	1.000	-06.021	0.250
040	1.000	-06.021	0.250
050	1.000	-06.021	0.250
060	1.000	-06.021	0.250
070	1.000	-06.021	0.250
080	1.000	-06.021	0.250
090	1.000	-06.021	0.250
100	0.980	-06.196	0.240
110	0.890	-07.033	0.198
120	0.725	-08.814	0.131
130	0.630	-10.034	0.099
140	0.535	-11.454	0.072
150	0.510	-11.869	0.065
160	0.510	-11.869	0.065
170	0.550	-11.213	0.076
180	0.685	-09.307	0.117
190	0.730	-08.754	0.133
200	0.660	-09.630	0.109
210	0.460	-12.765	0.053
220	0.345	-15.264	0.030
230	0.285	-16.924	0.020
240	0.285	-16.924	0.020
250	0.295	-16.624	0.022
260	0.330	-15.650	0.027
270	0.340	-15.391	0.029
280	0.320	-15.918	0.026
290	0.350	-15.139	0.031
300	0.420	-13.556	0.044
310	0.535	-11.454	0.072
320	0.590	-10.604	0.087
330	0.615	-10.243	0.095
340	0.690	-09.244	0.119
350	0.815	-07.797	0.166



K294CW

BLFT20161117ABV

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**