SWBW Inc.

Plot Lower Right: 27-16-50.9 N, 96-56-56.4 W
Plot Upper Left : 28-28-15.8 N, 98-12-07.7 W
Plot Scale : 1:500000.0
Plot Projection: Lambert Conformal Conic Projection

Reliable Service Area Contours

SYSTEM	SITE	SEQUENCE	LATITUDE	LONGITUDE	G.E. (ft)	FLAGS					
SECTOR	ANTENNA	CODE	C/L (ft AGL)	AZM. (DTN)	ERP (Wt)	MDTLT (deg)	MAZ (DTN)	EDTLT (deg)	METHOD	DBU	TRES (sec)	PWR RED	NUM RAD	RADIAL DIST
CC_Coast	115	PtAran	27-49-56.0 N	097-03-52.0 E	5.0				IE,VP					
alpha	DB834H70RF-F&99.0		344.0	40.0	0.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	115	PtAran	27-49-56.0 N	097-03-52.0 E	5.0				IE,VP					
gamma	DB834R-F&1	99.0	240.0	40.0	0.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	118	Mustang	27-45-06.0 N	097-07-28.0 E	8.0				IE,VP					
alpha	DB882H45-X&	99.0	33.0	40.0	5.0	33.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	118	Mustang	27-45-06.0 N	097-07-28.0 E	8.0				IE,VP					
gamm	DB882H45-X&	99.0	213.0	80.0	5.0	213.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	116	Galleon	27-36-07.0 N	097-14-56.0 E	9.0				IE,VP					
alpha	DB834H70RF-F&77.0		25.0	63.0	0.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	116	Galleon	27-36-07.0 N	097-14-56.0 E	9.0				IE,VP					
beta	DB882H45-X&	79.0	230.0	40.0	0.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	116	Galleon	27-36-07.0 N	097-14-56.0 E	9.0				IE,VP					
gamma	DB834H85-WO/V9.0		307.0	63.0	0.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	116	Galleon	27-36-07.0 N	097-14-56.0 E	9.0				IE,VP					
setal	DB834H70RF-F&77.0		25.0	56.0	0.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	116	Galleon	27-36-07.0 N	097-14-56.0 E	9.0				IE,VP					
setga	DB834H85-WO/V9.0		307.0	40.0	0.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	108	Flourblf	27-40-22.0 N	097-20-41.0 E	17.0				IE,VP					
alpha	DB834H85RF-F	149.0	0.0	100.0	7.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	108	Flourblf	27-40-22.0 N	097-20-41.0 E	17.0				IE,VP					
beta	DB834H85RF-F	149.0	120.0	100.0	5.0	120.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	108	Flourblf	27-40-22.0 N	097-20-41.0 E	17.0				IE,VP					
gamma	DB834H85RF-F	149.0	240.0	100.0	5.0	240.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	108	Flourblf	27-40-22.0 N	097-20-41.0 E	17.0				IE,VP					
omni	DB809	155.0	0.0	100.0	0.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	123	Chapman	27-34-18.0 N	097-30-34.0 E	35.0				IE,VP					
Omni	DB810K@880&	192.0	0.0	40.0	0.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	104	Robstown	27-45-12.0 N	097-45-46.0 E	73.0				IE,VP					
F0-16	DB810	425.0	0.0	100.0	0.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	120	Mathis	28-04-56.0 N	097-50-02.0 E	146.0				IE,VP					
v0	DB810K@880&	188.0	0.0	100.0	0.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	105	Sinton	28-05-29.0 N	097-40-04.0 E	110.0				IE,VP					
F0-16	DB560PE	456.0	0.0	100.0	0.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	110	Taft	28-01-43.0 N	097-22-18.0 E	44.0				IE,VP					
F0-16	DB567R90	186.0	225.0	100.0	0.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	122	Aransas	27-54-04.0 N	097-11-14.0 E	15.0				IE,VP					
alpha	DB834R-F&1	177.0	0.0	100.0	5.0	0.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	122	Aransas	27-54-04.0 N	097-11-14.0 E	15.0				IE,VP					
beta	DB834H85RF-F	177.0	120.0	40.0	5.0	120.0	0.0	FCC	32.0	3		500W	8	N/A
CC_Coast	122	Aransas	27-54-04.0 N	097-11-14.0 E	15.0				IE,VP					
gamma	DB834R-F&1	177.0	240.0	40.0	5.0	240.0	0.0	FCC	32.0	3		500W	8	N/A

Flags: RE=Round Elevation IE=Interpolate Elevation VP=Use Vertical Pattern UA=Unserved Area
: GM=Gulf Of Mexico CE=Coordination Exemption MT=Mobile Transmitter

DLG Attributes:
Primary
Secondary
County Boundaries

SCALE 1:500000
1 Inch = 7.8914 Miles
1 Centimeter = 5.0000 Kilometers
MILES
KILOMETERS

WINGS Navigator™ Version: 2.7.1
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CNET
23-May-97 15:36:52
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elems: 72728798
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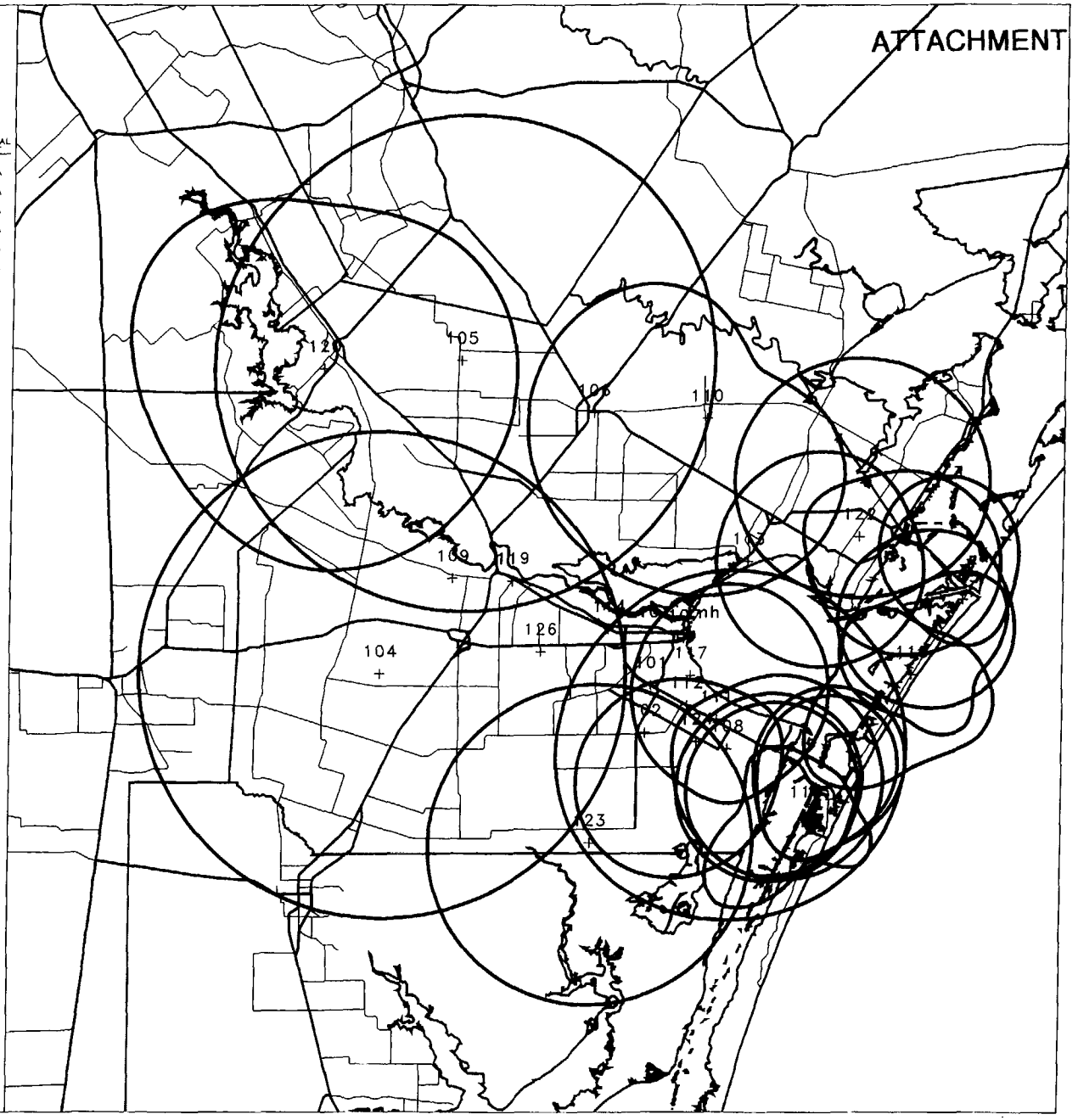

SWBW Inc.

Plot Lower Right: 27-16-50.9 N, 96-56-56.4 W
Plot Upper Left : 28-28-15.8 N, 98-12-07.7 W
Plot Scale : 1:500000.0
Plot Projection: Lambert Conformal Conic Projection

Reliable Service Area Contours

STEM SECTOR	SITE ANTENNA	CODE	SEQUENCE	C/L (ft AGL)	LATITUDE AZM (DTN)	ERP (WU)	LONGITUDE MDTLT (deg)	MAZ (DTN)	G.E. (ft) EDTLT (deg)	METHOD	FLAGS DBU	TRES (sec)	PWR RED	NUM RAD	RADIAL DIST
_Coast Omni	123	DB810K@880&	Chapman	192.0	27-34-18.0 N 0.0	40.0	097-30-34.0 E 0.0	0.0	35.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast alpha	122	DB834R--F&1	Aransas	177.0	27-54-04.0 N 0.0	100.0	097-11-14.0 E 5.0	0.0	15.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast gamma	122	DB834R-F&1	Aransas	177.0	27-54-04.0 N 240.0	40.0	097-11-14.0 E 5.0	240.0	15.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast newbe	122	DB834H85RF-F	Aransas	177.0	27-54-04.0 N 120.0	16.0	097-11-14.0 E 6.0	120.0	15.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast alpha	108	DB834H85RF-F	Flourblf	149.0	27-40-22.0 N 0.0	100.0	097-20-41.0 E 7.0	0.0	17.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast gamma	108	DB834H85RF-F	Flourblf	149.0	27-40-22.0 N 240.0	100.0	097-20-41.0 E 5.0	240.0	17.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast newbe	108	DB834H85RF-F	Flourblf	149.0	27-40-22.0 N 120.0	16.0	097-20-41.0 E 5.0	120.0	17.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast newse	108	DB809	Flourblf	155.0	27-40-22.0 N 0.0	16.0	097-20-41.0 E 0.0	0.0	17.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast F0-16	110	DB567R90	Taft	186.0	28-01-43.0 N 225.0	100.0	097-22-18.0 E 0.0	0.0	44.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast F0--16	105	DB560PE	Sinton	456.0	28-05-29.0 N 0.0	100.0	097-40-04.0 E 0.0	0.0	110.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast -0	120	DB810K@880&	Mathis	188.0	28-04-56.0 N 0.0	100.0	097-50-02.0 E 0.0	0.0	146.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast F0-16	104	DB810	Robstown	425.0	27-45-12.0 N 0.0	100.0	097-45-46.0 E 0.0	0.0	73.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast alpha	113	DB833RF	Portland	150.0	27-52-29.0 N 0.0	85.0	097-19-15.0 E 0.0	0.0	35.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast beta	113	DB833RF	Portland	150.0	27-52-29.0 N 120.0	40.0	097-19-15.0 E 0.0	0.0	35.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast gamma	113	DB833RF	Portland	150.0	27-52-29.0 N 240.0	40.0	097-19-15.0 E 0.0	0.0	35.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast alpha	112	DB833RF	Everhart	151.0	27-43-11.0 N 0.0	100.0	097-23-35.0 E 0.0	0.0	33.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast beta	112	DB833RF	Everhart	151.0	27-43-11.0 N 120.0	100.0	097-23-35.0 E 0.0	0.0	33.0	FCC	IE,VP 32.0	3	500W	8	N/A
_Coast gamma	112	DB833RF	Everhart	151.0	27-43-11.0 N 240.0	100.0	097-23-35.0 E 0.0	0.0	33.0	FCC	IE,VP 32.0	3	500W	8	N/A

Flags: RE=Round Elevation IE=Interpolate Elevation VP=Use Vertical Pattern
: GM=Gulf Of Mexico CE=Coordination Exemption MT=Mobile Transmitter UA=Unserved Area

DLG Attributes:
Primary
Secondary
County Boundaries

SCALE 1:500000
1 Inch = 7.8914 Miles
1 Centimeter = 5.0000 Kilometers
MILES
KILOMETERS

WINGS Navigator™ Version: 2.7.1
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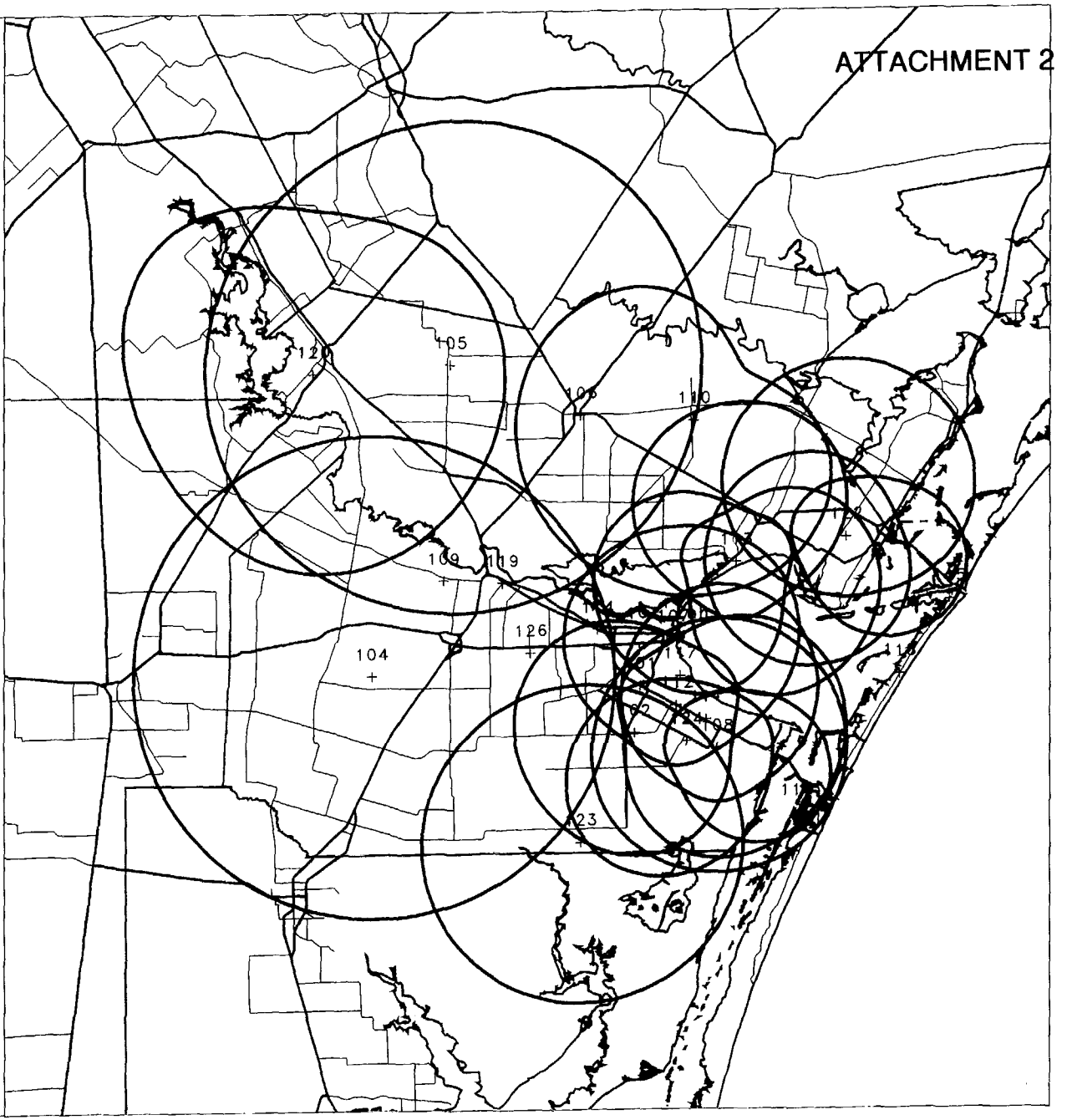
23-May-97 15:33:18



ATTACHMENT 3

SWBW Inc.

Plot Lower Right 27-33-06.4 N, 97-01-56.6 W
Plot Upper Left 27-59-54.2 N, 97-29-06.6 W
Plot Scale 1:141096.0
Plot Projection Lambert Conformal Conic Projection

Most Likely Server Coverage Analysis

Station	Freq (MHz)	Antenna Type	Lat	Long	Peak (dBm)	Peak (dBm)	Peak (dBm)	Peak (dBm)	Cab (dB)	Cab (dB)
CORPUS	110	[illegible]	27-34-27.0N	97-16-36.0W	0.0	0.0	90.0	0.0	0.0	0.0
CORPUS	110	[illegible]	27-49-06.0N	97-7-28.0W	0.0	0.0	90.0	0.0	0.0	0.0
CORPUS	110	[illegible]	27-59-36.0N	97-13-03.0W	0.0	0.0	90.0	0.0	0.0	0.0
CORPUS	112	[illegible]	27-54-04.0N	97-11-14.0W	0.0	0.0	90.0	0.0	0.0	0.0
CORPUS	108	[illegible]	27-49-22.0N	97-20-51.0W	0.0	0.0	90.0	0.0	0.0	0.0
CORPUS	112	[illegible]	27-33-20.0N	97-16-18.0W	0.0	0.0	90.0	0.0	0.0	0.0
CORPUS	107	[illegible]	27-47-31.0N	97-23-49.0W	0.0	0.0	90.0	0.0	0.0	0.0
CORPUS	112	[illegible]	27-49-56.0N	97-23-10.0W	0.0	0.0	90.0	0.0	0.0	0.0
CORPUS	112	[illegible]	27-59-16.0N	97-21-17.0W	0.0	0.0	90.0	0.0	0.0	0.0
CORPUS	112	[illegible]	27-43-11.0N	97-23-25.0W	0.0	0.0	90.0	0.0	0.0	0.0

Plot Resolution: 3 seconds

Color Scheme

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

DLG Attributes:
- Primary
- Secondary
- County Boundaries

SCALE 1:141096
1 inch = 2.2269 Miles
1 Centimeter = 1.4110 Kilometers

MILES 0 5 10 15

KILOMETERS 0 5 10 15

WINGS Navigator™ Version 2.7.1
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25-May-97 15:44:13

SWBW Inc.

Plot Lower Right 27-33-06.4 N, 97-01-58.6 W
Plot Upper Left 27-59-54.2 N, 97-29-06.6 W
Plot Scale 1:141096.0
Plot Projection Lambert Conformal Conic Projection

Most Likely Server Coverage Analysis

Subsystem	Cell ID	Antenna Class	Sector ID	Sector Name	Antenna Height (Meters)	Antenna Azimuth (Degrees)	Antenna Tilt (Degrees)	Antenna Gain (dBi)	Antenna Loss (dB)	Antenna Pattern	Pattern Name	Pattern Rotation (Degrees)	Pattern Tilt (Degrees)	Pattern Gain (dBi)	Pattern Loss (dB)	Pattern Azimuth (Degrees)	Pattern Elevation (Degrees)	Pattern Gain (dBi)	Pattern Loss (dB)
CORPUS	107	[illegible]	[illegible]	[illegible]	19.0	27-47-31.0N, 97-22-19.0W				85		90.0		3.0		11.1			
		[illegible]	[illegible]	[illegible]		180.3		0.0	0.0		10.0		0.0	11.1				43.0	
		[illegible]	[illegible]	[illegible]		181.3		0.0	0.0		0.0		180.0	11.1				43.0	
		[illegible]	[illegible]	[illegible]		182.3							180.0						
CORPUS	108	[illegible]	[illegible]	[illegible]	17.0	27-46-22.0N, 97-20-01.0W				5.0		90.0		3.0		11.0			
		[illegible]	[illegible]	[illegible]		180.1		0.0	0.0		1.0		0.0	11.0				19.0	
		[illegible]	[illegible]	[illegible]		180.1			0.0		3.0		180.0	11.0				19.0	
		[illegible]	[illegible]	[illegible]		180.1			0.0		4.0		180.0	11.0				19.0	
		[illegible]	[illegible]	[illegible]		181.4			0.0		0.0		0.0	3.0					
CORPUS	111	[illegible]	[illegible]	[illegible]	20.0	27-43-16.0N, 97-21-27.0W				5.0		90.0		3.0		11.0			
		[illegible]	[illegible]	[illegible]		0.0		0.0	0.0		5.0		0.0	11.0				43.0	
		[illegible]	[illegible]	[illegible]		180.0			0.0		3.0		180.0	11.0				43.0	
		[illegible]	[illegible]	[illegible]		180.0			0.0		4.0		180.0	11.0				43.0	
CORPUS	112	[illegible]	[illegible]	[illegible]	33.0	27-43-11.0N, 97-23-35.0W				5.0		90.0		3.0		11.0			
		[illegible]	[illegible]	[illegible]		0.0		0.0	0.0		5.0		0.0	11.0				43.0	
		[illegible]	[illegible]	[illegible]		180.0			0.0		3.0		180.0	11.0				43.0	
		[illegible]	[illegible]	[illegible]		180.0			0.0		4.0		180.0	11.0				43.0	
		[illegible]	[illegible]	[illegible]		181.0			0.0										
CORPUS	113	[illegible]	[illegible]	[illegible]	36.0	27-42-38.0N, 97-19-15.0W				5.0		90.0		3.0		11.0			
		[illegible]	[illegible]	[illegible]		0.0		0.0	0.0		5.0		0.0	11.0				43.0	
		[illegible]	[illegible]	[illegible]		180.0			0.0		3.0		180.0	11.0				43.0	
		[illegible]	[illegible]	[illegible]		180.0			0.0		4.0		180.0	11.0				43.0	
CORPUS	117	[illegible]	[illegible]	[illegible]	33.0	27-40-06.0N, 97-23-19.0W				5.0		90.0		3.0		11.0			
		[illegible]	[illegible]	[illegible]		0.0		0.0	0.0		5.0		0.0	11.0				43.0	
		[illegible]	[illegible]	[illegible]		180.0			0.0		3.0		180.0	11.0				43.0	
		[illegible]	[illegible]	[illegible]		180.0			0.0		4.0		180.0	11.0				43.0	
CORPUS	123	[illegible]	[illegible]	[illegible]	15.0	27-34-04.0N, 97-11-14.0W				5.0		90.0		3.0		10.0			
		[illegible]	[illegible]	[illegible]		0.0		0.0	0.0		5.0		0.0	10.0				43.0	
		[illegible]	[illegible]	[illegible]		177.0			0.0		3.0		180.0	10.0				43.0	
		[illegible]	[illegible]	[illegible]		177.0			0.0		4.0		180.0	10.0				43.0	

Plot Resolution 5 seconds

Color Scheme

-110.0 dBm	to	-105.1 dBm	No Signal Strength Coverage		
-105.0 dBm	to	-90.1 dBm	Poor		
-90.0 dBm	to	-75.1 dBm	Marginal		
-75.0 dBm	to	0.0 dBm	Super Coverage		

DLG Attributes:
- Primary
- Secondary
- County Boundaries

SCALE 1:141096
1 Inch = 2.2289 Miles
1 Centimeter = 1.4110 Kilometers
MILES

KILOMETERS

WINGS Navigator™ Version 2.7.1
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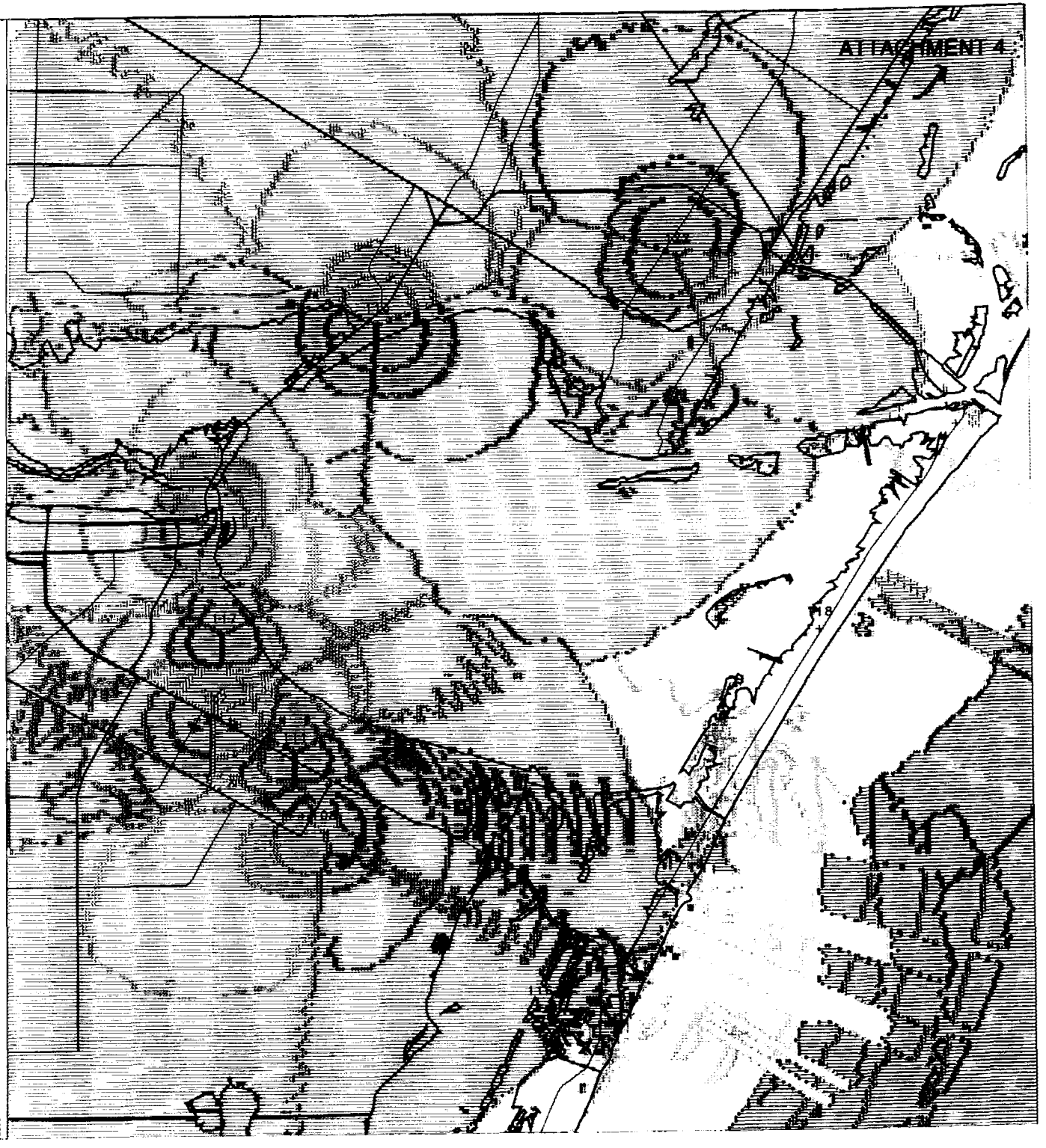
CNET

23-May-97 13:40:02



SWBW Inc.

Plot Lower Right: 25-38-08.2 N, 97-01-26.7 W
Plot Upper Left : 26-33-12.0 N, 98-03-29.6 W
Plot Scale : 1:500000.0
Plot Projection: Lambert Conformal Conic Projection

Reliable Service Area Contours

SYSTEM SECTOR	SITE ANTENNA CODE	SEQUENCE C/L (ft AGL)	LATITUDE AZM (DTN)	ERP (Wtt)	LONGITUDE MDTLT (deg)	MAZ (DTN)	G.E. (ft) EDTLT (deg)	FLAGS METHOD	DBU	TRES (sec)	PWR RED	NUM RAD	RADIAL DIST
RGVCoast v1	032 DB834R-F&1	BrnvlAir 78.0	25-54-26.0 N 20.0	100.0	097-26-15.0 E 4.0	20.0	20.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast v2	032 DB834R-F&1	BrnvlAir 78.0	25-54-26.0 N 115.0	16.0	097-26-15.0 E 5.0	20.0	115.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast v3	032 DB834R-F&1	BrnvlAir 78.0	25-54-26.0 N 240.0	40.0	097-26-15.0 E 4.0	20.0	240.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast v0	039 DB559	Los_Fres 448.0	26-07-53.0 N 0.0	100.0	097-28-18.0 E 0.0	20.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast alpha	003 DB834H85RF-F	Dtn_Harl 107.0	26-11-28.0 N 0.0	100.0	097-41-36.0 E 0.0	41.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast beta	003 DB834H85RF-F	Dtn_Harl 107.0	26-11-28.0 N 120.0	40.0	097-41-36.0 E 5.0	41.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast gamma	003 DB834H85RF-F	Dtn_Harl 107.0	26-11-28.0 N 240.0	40.0	097-41-36.0 E 5.0	41.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast alpha	001 DB834H85RF-F	MTSO 101.0	26-11-15.0 N 0.0	100.0	097-45-35.0 E 0.0	47.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast beta	001 DB834H85RF-F	MTSO 101.0	26-11-15.0 N 120.0	40.0	097-45-35.0 E 4.0	47.0	120.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast gamma	001 DB834H85RF-F	MTSO 101.0	26-11-15.0 N 240.0	40.0	097-45-35.0 E 4.0	47.0	240.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast insvc	037 PD10183	LagungVl 157.0	26-05-30.0 N 0.0	100.0	097-19-38.0 E 0.0	9.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast alpha	033 DB834R-F&1	Brownsvl 104.0	25-57-06.0 N 0.0	100.0	097-28-04.0 E 0.0	20.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast beta	033 DB834R-F&1	Brownsvl 104.0	25-57-06.0 N 120.0	40.0	097-28-04.0 E 0.0	20.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast gamma	033 DB834R-F&1	Brownsvl 104.0	25-57-06.0 N 240.0	40.0	097-28-04.0 E 0.0	20.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast new1	037_Enh DB561	Buena_Vs 117.0	26-16-12.0 N 342.0	100.0	097-21-16.0 E 0.0	12.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast alpha	010 DB834R-F&1	LosIndio 139.0	26-05-05.0 N 17.0	40.0	097-42-50.0 E 4.0	54.0	17.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast beta	010 DB834H70RF-F&1	LosIndio 139.0	26-05-05.0 N 121.0	16.0	097-42-50.0 E 4.0	54.0	121.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast gamma	010 DB834H70RF-F&1	LosIndio 139.0	26-05-05.0 N 271.0	16.0	097-42-50.0 E 4.0	54.0	271.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast alpha	041 DB834R-F&1	Ranch_V 138.0	26-02-34.0 N 0.0	40.0	097-34-13.0 E 4.0	35.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast beta	041 DB834R-F&1	Ranch_V 138.0	26-02-34.0 N 120.0	40.0	097-34-13.0 E 4.0	35.0	120.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast gamma	041 DB834R-F&1	Ranch_V 138.0	26-02-34.0 N 240.0	16.0	097-34-13.0 E 6.0	35.0	240.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast 0	038 DB564K&	S_Padre 105.0	26-05-44.0 N 270.0	100.0	097-09-48.0 E 0.0	8.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast alpha	009 DB833R-F&	SantaRos 150.0	26-15-08.0 N 0.0	40.0	097-50-12.0 E 0.0	49.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast beta	009 DB833R-F&	SantaRos 150.0	26-15-08.0 N 120.0	40.0	097-50-12.0 E 8.0	49.0	120.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast gamma	009 DB833R-F&	SantaRos 150.0	26-15-08.0 N 240.0	40.0	097-50-12.0 E 8.0	49.0	240.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast setup	009 DB561K@880&	SantaRos 156.0	26-15-08.0 N 0.0	40.0	097-50-12.0 E 0.0	49.0	0.0	FCC	IE,VP 32.0	3	500W	8	N/A

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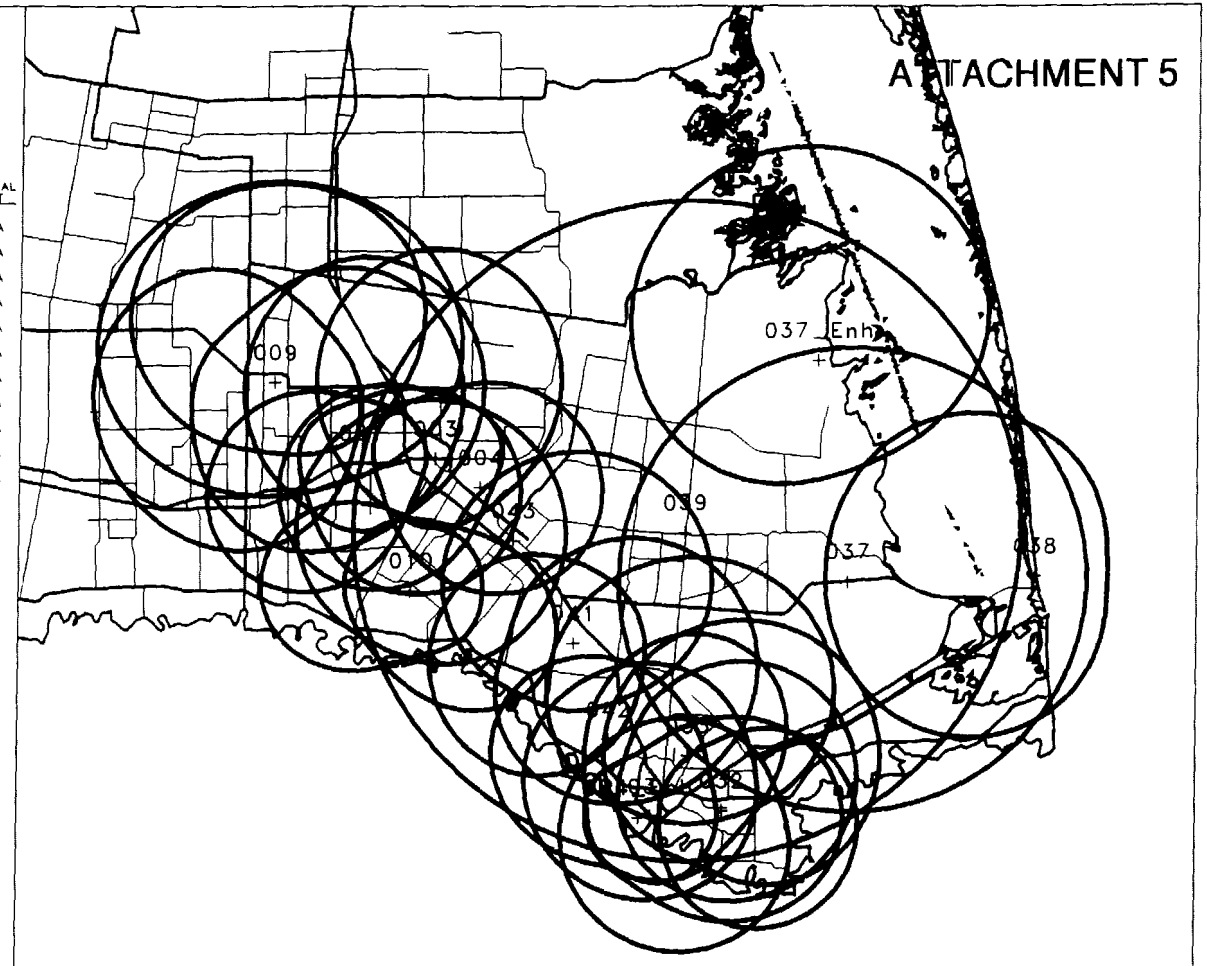
Flags: RE=Round Elevation IE=Interpolate Elevation VP=Use Vertical Pattern
: GM=Gulf Of Mexico CE=Coordination Exemption MT=Mobile Transmitter UA=Unserved Area

SCALE 1:500000
1 Inch = 7.8914 Miles
1 Centimeter = 5.0000 Kilometers
MILES
KILOMETERS



CNET
WiNGS Navigator™ Version: 2.7.1
(c) CNET, Inc. 4875 Preston Park Blvd., 8th Floor Plano, TX 75093 USA 972.867.3333 FAX 972.867.6800
23-May-97 13:55:16
wings
alamo: 72726745
6.170 14.548
Untitled

SWBW Inc.

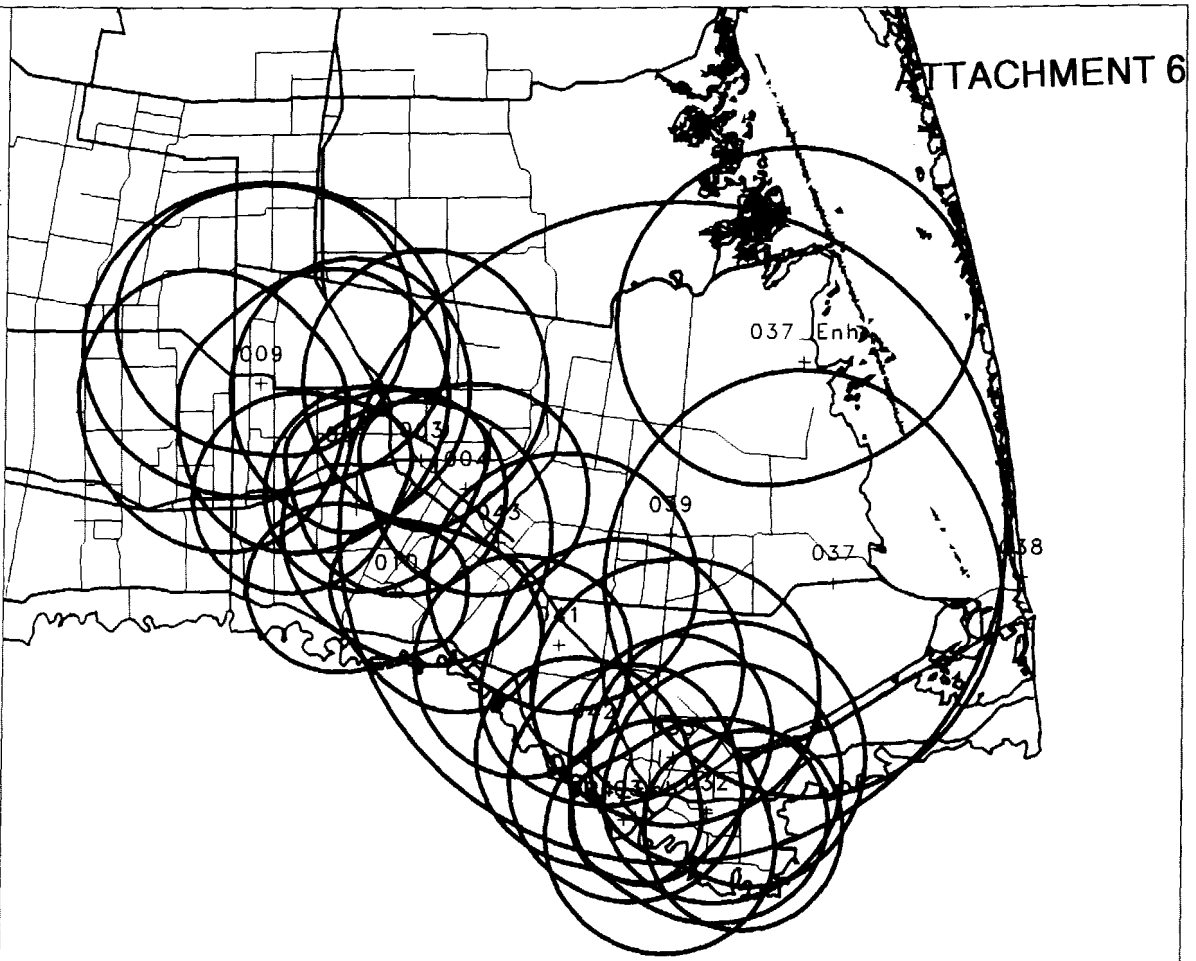
Plot Lower Right: 25-38-08.2 N, 97-01-26.7 W
Plot Upper Left : 26-33-12.0 N, 98-03-29.6 W
Plot Scale : 1:500000.0
Plot Projection: Lambert Conformal Conic Projection

Reliable Service Area Contours

SYSTEM SECTOR	SITE ANTENNA	SEQUENCE CODE	C/L (ft AGL)	LATITUDE AZM. (DTN)	ERP (Wtt)	LONGITUDE MDTLT (deg)	MAZ (DTN)	G.E. (ft) EDTLT (deg)	FLAGS METHOD	DBU	TRES (sec)	PWR RED	NUM RAD	RADIAL DIST
RGVCoast v1	032 DB834R-F&1	BrnvlAir	78.0	25-54-26.0 N 20.0	100.0	097-26-15.0 E 4.0	20.0	20.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast v2	032 DB834R-F&1	BrnvlAir	78.0	25-54-26.0 N 115.0	16.0	097-26-15.0 E 5.0	115.0	20.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast v3	032 DB834R-F&1	BrnvlAir	78.0	25-54-26.0 N 240.0	40.0	097-26-15.0 E 4.0	240.0	20.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast v0	039 DB559	Los_Fres	448.0	26-07-53.0 N 0.0	100.0	097-28-18.0 E 0.0	0.0	20.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast alpha	003 DB834H85RF-F	Dtn_Harl	107.0	26-11-28.0 N 0.0	100.0	097-41-36.0 E 0.0	0.0	41.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast beta	003 DB834H85RF-F	Dtn_Harl	107.0	26-11-28.0 N 120.0	40.0	097-41-36.0 E 5.0	0.0	41.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast gamma	003 DB834H85RF-F	Dtn_Harl	107.0	26-11-28.0 N 240.0	40.0	097-41-36.0 E 5.0	0.0	41.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast alpha	001 DB834H85RF-F	MTSO	101.0	26-11-15.0 N 0.0	100.0	097-45-35.0 E 0.0	0.0	47.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast beta	001 DB834H85RF-F	MTSO	101.0	26-11-15.0 N 120.0	40.0	097-45-35.0 E 4.0	120.0	47.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast gamma	001 DB834H85RF-F	MTSO	101.0	26-11-15.0 N 240.0	40.0	097-45-35.0 E 4.0	240.0	47.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast alpha	033 DB834R-F&1	Brownsvl	104.0	25-57-06.0 N 0.0	100.0	097-28-04.0 E 0.0	0.0	20.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast beta	033 DB834R-F&1	Brownsvl	104.0	25-57-06.0 N 120.0	40.0	097-28-04.0 E 0.0	0.0	20.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast gamma	033 DB834R-F&1	Brownsvl	104.0	25-57-06.0 N 240.0	40.0	097-28-04.0 E 0.0	0.0	20.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast new1	037_Enh DB561	Buena_Vs	117.0	26-16-12.0 N 342.0	100.0	097-21-16.0 E 0.0	0.0	12.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast alpha	010 DB834R-F&1	Losindio	139.0	26-05-05.0 N 17.0	40.0	097-42-50.0 E 4.0	17.0	54.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast beta	010 DB834H70RF-F&1	Losindio	139.0	26-05-05.0 N 121.0	16.0	097-42-50.0 E 4.0	121.0	54.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast gamma	010 DB834H70RF-F&1	Losindio	139.0	26-05-05.0 N 271.0	16.0	097-42-50.0 E 4.0	271.0	54.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast alpha	041 DB834R-F&1	Ranch_V	138.0	26-02-34.0 N 0.0	40.0	097-34-13.0 E 4.0	0.0	35.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast beta	041 DB834R-F&1	Ranch_V	138.0	26-02-34.0 N 120.0	40.0	097-34-13.0 E 4.0	120.0	35.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast gamma	041 DB834R-F&1	Ranch_V	138.0	26-02-34.0 N 240.0	16.0	097-34-13.0 E 6.0	240.0	35.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast alpha	009 DB833R-F&	SantaRos	150.0	26-15-08.0 N 0.0	40.0	097-50-12.0 E 0.0	0.0	49.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast beta	009 DB833R-F&	SantaRos	150.0	26-15-08.0 N 120.0	40.0	097-50-12.0 E 8.0	120.0	49.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast gamma	009 DB833R-F&	SantaRos	150.0	26-15-08.0 N 240.0	40.0	097-50-12.0 E 8.0	240.0	49.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast setup	009 DB561K@880&	SantaRos	156.0	26-15-08.0 N 0.0	40.0	097-50-12.0 E 0.0	0.0	49.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast alpha	034 DB884H60&	W_Bank	100.0	25-54-10.0 N 25.0	62.0	097-30-03.0 E 0.0	0.0	35.0	FCC	IE,VP 32.0	3	500W	8	N/A
RGVCoast beta	034 DB884H60&	W_Bank	100.0	25-54-10.0 N 92.0	62.0	097-30-03.0 E 0.0	0.0	35.0	FCC	IE,VP 32.0	3	500W	8	N/A

List truncated...
Flags: RE=Round Elevation IE=Interpolate Elevation VP=Use Vertical Pattern
: GM=Gulf Of Mexico CE=Coordination Exemption MT=Mobile Transmitter UA=Unserved Area

SCALE 1:500000
1 Inch = 7.8914 Miles
1 Centimeter = 5.0000 Kilometers
MILES
KILOMETERS



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25-May-97 15:56:12

wings
alamo: 72728765
8,170 14,348
Untitled

ATTACHMENT 7

SWBW Inc.

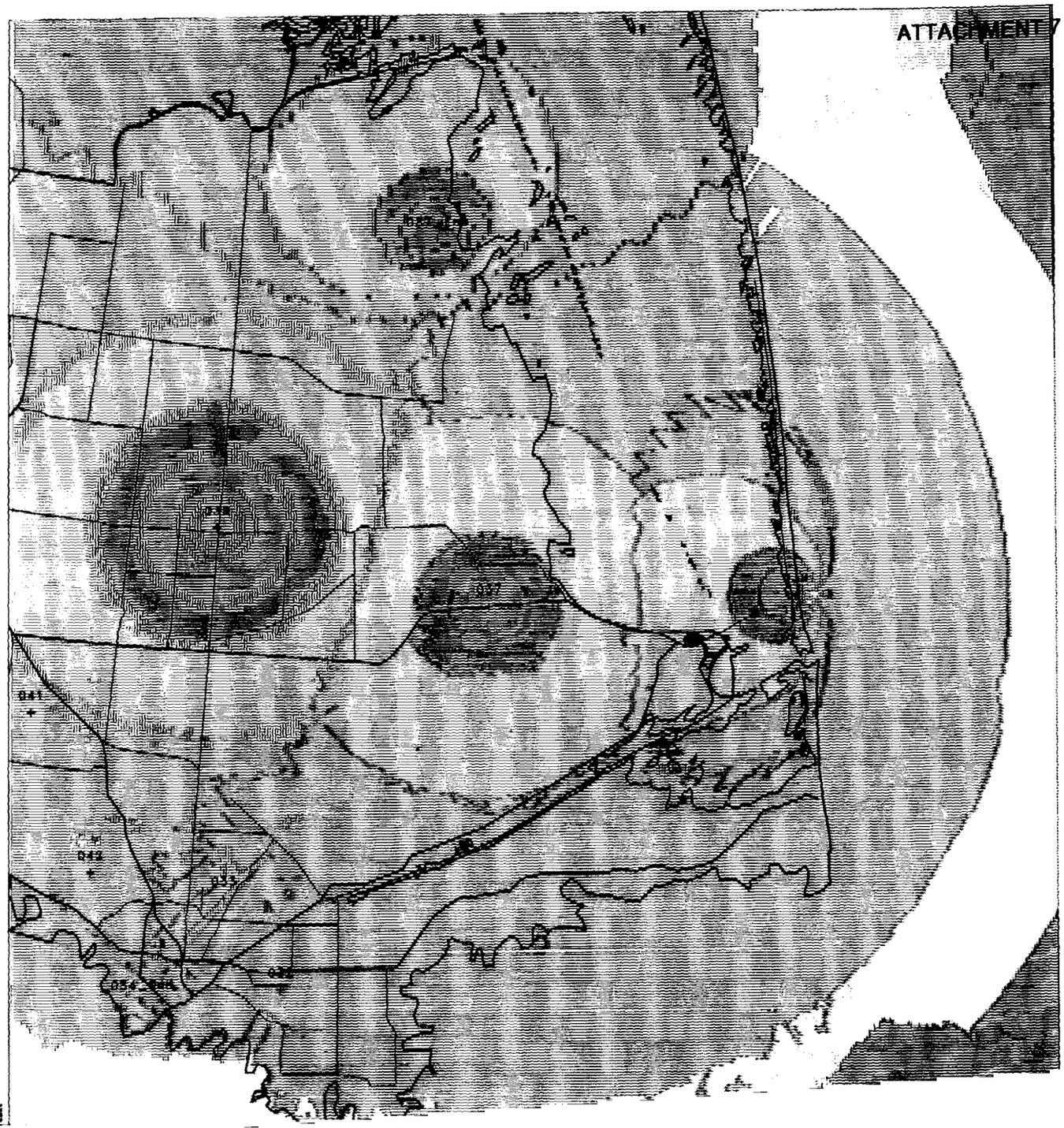
Plot Lower Right 26-50-35 3 N, 97-01-37 5 W
Plot Upper Left 28-22-43 7 N, 97-34-53 5 W
Plot Scale 1 170192.0
Plot Projection Lambert Conformal Conic Projection

Most Likely Server Coverage Analysis

LG Attributes:
Primary
Secondary
County Boundaries

1192
661 Miles
= 1 7019 Kilometers

S Navigator™ Version 2 7 1



ATTACHMENT 8

SWBW Inc.

Plot Lower Right 25-50-35.3 N, 97-01-37.5 W
Plot Upper Left 26-22-43.7 N, 97-34-53.5 W
Plot Scale 1:170192.0
Plot Projection Lambert Conformal Conic Projection

Most Likely Server Coverage Analysis

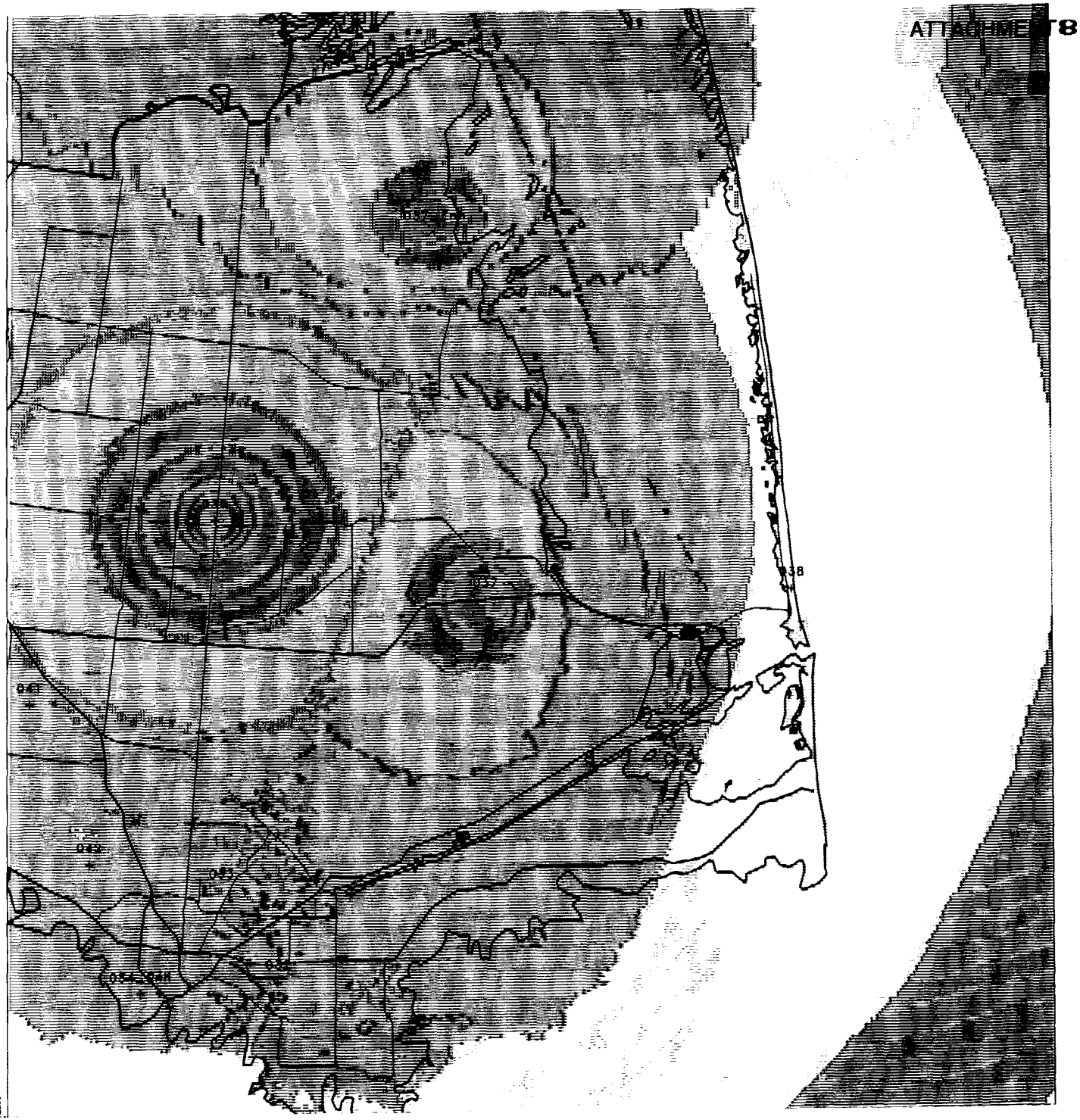
Station	Channel	Antenna Code	Antenna Gain	Antenna Height	Power	Loss	Min Level	Peak Level	Peak Margin	Exp Cells
RBV	037 East	Dipol_hw	13.0	26-19-12.0N, 117.0	97-21-19.0W 42.0	0.0	0.0	90.0	5.0	100.0
RBV	039	105_Yagi	28.0	26-7-43.0N, 356.0	97-28-10.0W 0.0	0.0	0.0	90.0	5.0	100.0
RBV	037	Isotropic	0.0	26-3-30.0N, 157.0	97-18-00.0W 770.0	0.0	0.0	90.0	5.0	100.0

Plot Resolution 5 seconds

Color Ranges

-110.0 dBm	to	-105.1 dBm	No Svc/Drop Call
-105.0 dBm	to	-90.1 dBm	Poor
-90.0 dBm	to	-75.1 dBm	Fair
-75.0 dBm	to	-70.1 dBm	Good
-70.0 dBm	to	-7.0 dBm	Inside Building
			Inside Contour

DLG Attributes:
Primary
Secondary
County Boundaries



SCALE 1:170192
1 inch = 2.6861 Miles
1 Centimeter = 1.7019 Kilometers
MILES
KILOMETERS

CNET

WINGS Navigator™ Version 2.7.1
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22-May-97 10:27:00

ATTACHMENT 9

SWBW Inc.

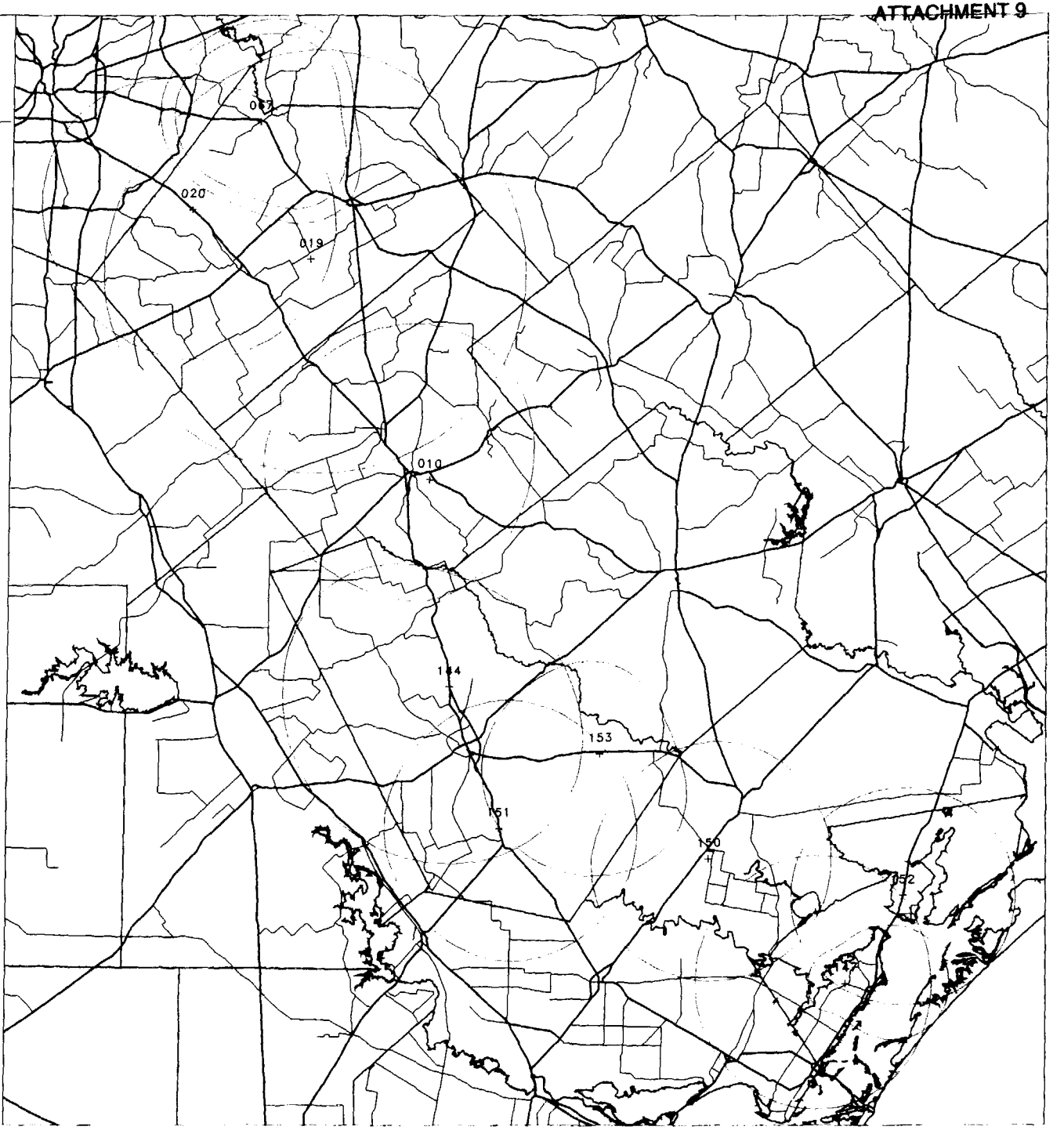
Plot Lower Right 27-49-00 9 N, 96-45-49 4 W
Plot Upper Left 29-30-49 7 N, 98-31-49 2 W
Plot Scale 1 500000 0
Plot Projection Lambert Conformal Conic Projection

Reliable Service Area Contours

SYSTEM	SITE	SEQUENCE	LATITUDE	LONGITUDE	GE (ft)	FLAGS
TX2081	020	Floresv2	29-13-12 0 N	098-13-58 0 E	508 0	IE,VP
TX2081	067	Lavernia	29-21-17 0 N	098-07-08 0 E	501 0	IE,VP
TX2081	067	Lavernia	29-21-17 0 N	098-07-08 0 E	501 0	IE,VP
TX2081	019	Floresvl	29-08-39 0 N	098-01-37 0 E	448.0	IE,VP
TX2081	010	Kenedy	28-48-27 0 N	097-48-55 0 E	339 0	IE,VP
TX2081	144	Beeville	28-28-24 0 N	097-46-44 0 E	357 0	IE,VP
TX2081	151	Skidmore	28-16-21 0 N	097-41-50 0 E	155 0	IE,VP
TX2081	153	Blanconi	28-23-13 0 N	097-31-02 0 E	122 0	IE,VP
TX2081	150	Woodsbar	28-13-32 0 N	097-19-43 0 E	42 0	IE,VP
TX2081	147	Rockport	00-00-00 0 S	000-00-00 0 W	N/A	
TX2081	147	Rockport	28-02-01 0 N	097-05-37 0 E	5 0	IE,VP
TX2081	147	Rockport	28-02-01 0 N	097-05-37 0 E	5 0	IE,VP
TX2081	152	Holiday	28-10-03 0 N	096-59-54 0 E	11 0	IE,VP

Flags PE=Round Elevation IE=Interpolate Elevation VP=Uses Vertical Pattern
GM=Gulf Of Mexico CE=Coordination Exemption MT=Multiple Transmitter UA=Unserved Area

DLG Attributes:
Primary
Secondary
County Boundaries



SCALE 1 500000
1 inch = 7 8814 Miles
1 Centimeter = 5 0000 Kilometers
MILES
KILOMETERS

WINGS Navigator™ Version 2 7 1
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CNET

ATTACHMENT 10

SWBW Inc.

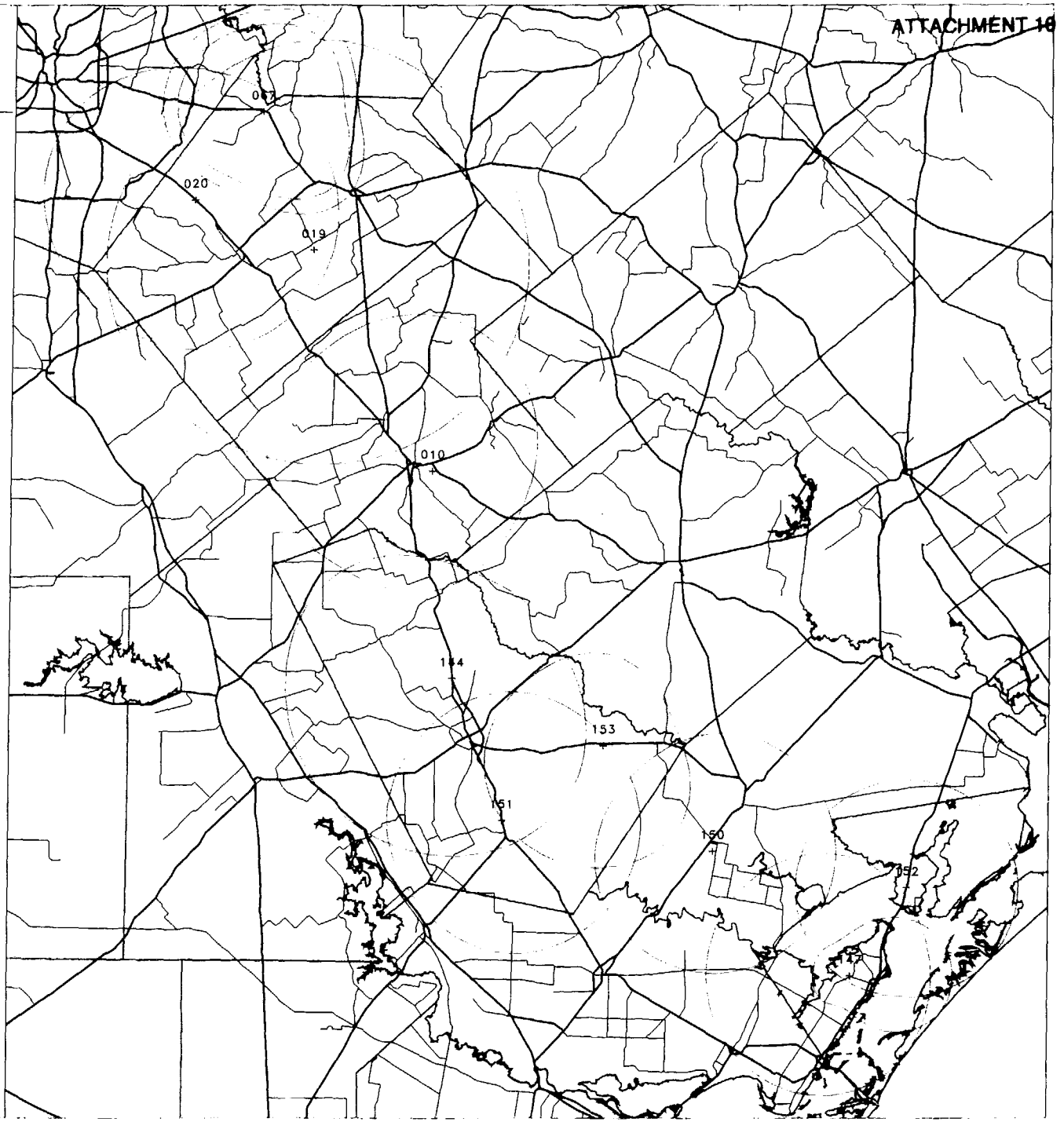
Plot Lower Right 27-49-00 8 N, 96-45-49 4 W
Plot Upper Left 29-30-49 7 N, 98-31-49 2 W
Plot Scale 1 500000 0
Plot Projection Lambert Conformal Conic Projection

Reliable Service Area Contours

SYSTEM	SITE	SEQUENCE	LATITUDE	LONGITUDE	G E (ft)	FLAGS
TX2081	010	Kenedy	28-48-27 0 N	097-48-55 0 E	339 0	IE,VP
TX2081	019	Floresvl	29-08-39 0 N	098-01-37 0 E	448 0	IE,VP
TX2081	020	Floresv2	29-13-12 0 N	098-13-58 0 E	506 0	IE,VP
TX2081	067	Lovernia	29-21-17 0 N	098-07-08 0 E	501 0	IE,VP
TX2081	144	Beeville	28-29-24 0 N	097-46-44 0 E	357 0	IE,VP
TX2081	147	Rockport	28-02-01 0 N	097-05-37 0 E	5 0	IE,VP
TX2081	150	Woodsber	28-13-32 0 N	097-19-43 0 E	42 0	IE,VP
TX2081	151	Skidmore	28-16-21 0 N	097-41-30 0 E	155 0	IE,VP
TX2081	152	Holiday	28-10-03 0 N	096-59-54 0 E	11 0	IE,VP
TX2081	153	Bienseni	28-23-13 0 N	097-31-02 0 E	122 0	IE,VP

Flags RE=Round Elevation IE=Interpolate Elevation VP=Use Vertical Pattern
GM=Gulf Of Mexico CE=Coersington Exemption MT=Mobile Transmitter UA=Unserved Area

DLG Attributes:
Primary
Secondary
County Boundaries



SCALE 1 500000
1 Inch = 7 8914 Miles
1 Centimeter = 5.0000 Kilometers
MILES
KILOMETERS

WINGS Navigator™ Version 2.7.1
CNET

ATTACHMENT 11

SWBW Inc.

Plot Lower Right 27-37-20.5 N, 96-37-15.3 W
Plot Upper Left 28-18-58.3 N, 97-30-28.0 W
Plot Scale 1:240403.0
Plot Projection Lambert Conformal Conic Projection

Most Likely Server Coverage Analysis

Station	Channel Sector ID	Channel Sector Name	Freq (MHz)	Antenna Height (m)	Antenna Gain (dBi)	Antenna Type	Azimuth (Deg)	Tilt (Deg)	Power (dBm)	Loss (dB)	Min Rxlev (dBm)	Max Rxlev (dBm)	Max Rxlev Average (dBm)	Coverage (%)
TX2081	100	[illegible]	[illegible]	[illegible]	13.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TX2081	147	[illegible]	[illegible]	[illegible]	9.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TX2081	152	[illegible]	[illegible]	[illegible]	11.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TX2081	167	[illegible]	[illegible]	[illegible]	9.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Plot Resolution: 5 seconds

Color Ranges

110.0 dBm	to	105.1 dBm	No Sec. Drop Call			
[illegible] dBm	to	[illegible] dBm	[illegible]			
[illegible] dBm	to	[illegible] dBm	[illegible]			
[illegible] dBm	to	[illegible] dBm	[illegible]			

DLG Attributes:
- Primary
- Secondary
- County Boundaries

SCALE 1:240403
1 Inch = 3.7942 Miles
1 Centimeter = 2.4040 Kilometers
MILES
0 5 10 15 20
KILOMETERS 0 10 20 30

CNET

WINGS Navigator™ Version 2.7.1
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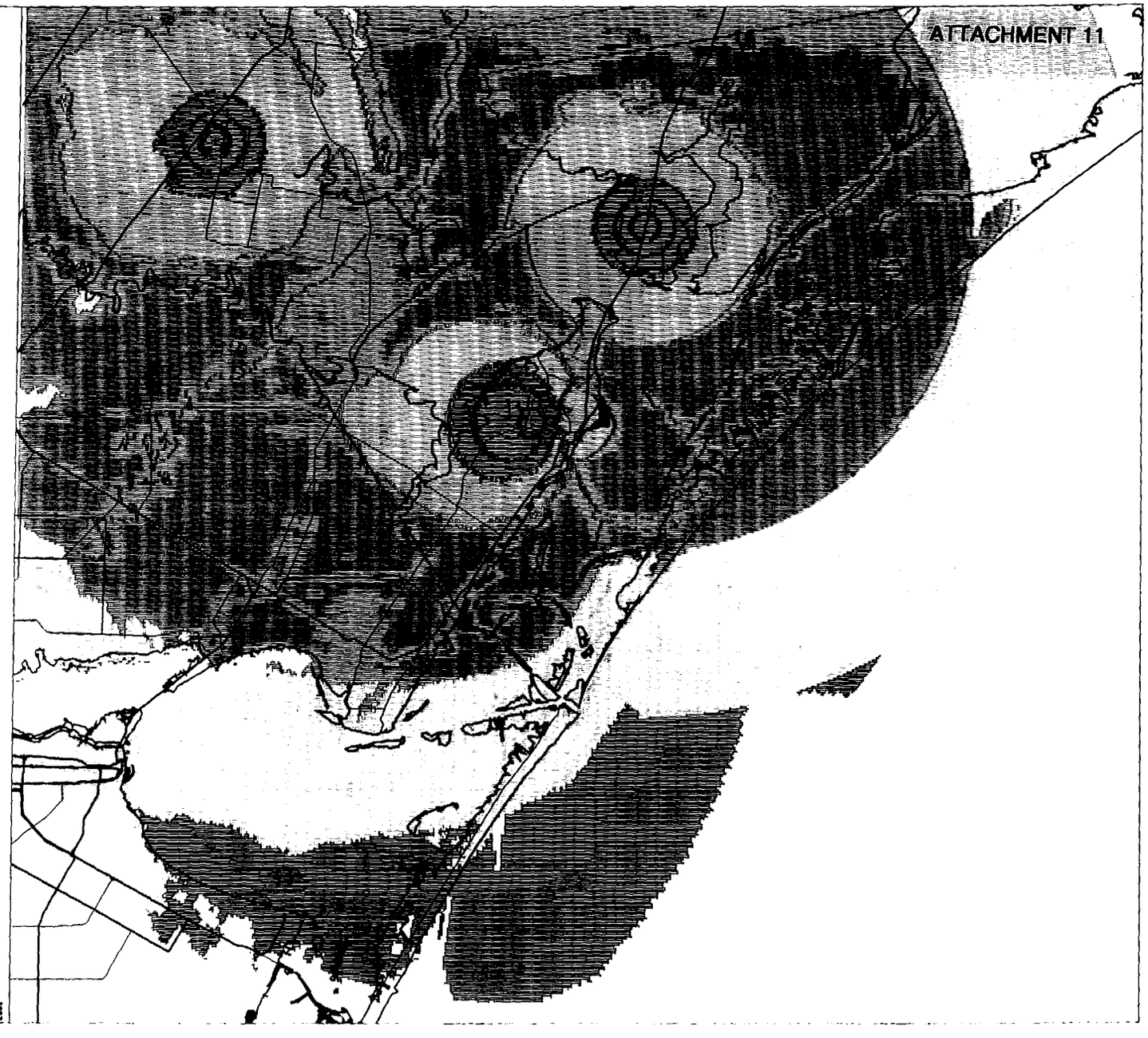
30-Nov-97 15:49:09



SWBW Inc.

Plot Lower Right 27-37-20 5 N, 96-37-18 3 W
Plot Upper Left 28-18-58 3 N, 97-30-28 0 W
Plot Scale 1 240403 0
Plot Projection Lambert Conformal Conic Projection

Most Likely Server Coverage Analysis

System	Cell ID	Antenna Code Ant. ID	Beam	Lat (DMS) Longitude	Height (AGL)	E (dB) (AGL)	W (dB) (AGL)	Max (AGL) Peak	Peak (AGL) Average	MRC (AGL)
T220B1	165	Roanoker	3.0	28-13-32 GN, 97-16-44 GW		5.0	90.0	5.0		
T220B1	167	Rockport	3.0	28-3-01 GN, 97-8-37 GW		5.0	90.0	5.0		
T220B1	168	Victoria	11.0	28-18-03 GN, 96-56-44 GW		5.0	90.0	5.0		
T220B1	167	Rockport	3.0	28-3-01 GN, 97-8-37 GW		5.0	90.0	5.0		

Plot Resolution 5 seconds

Color Ranges

-110.0 dBm	to	-105.1 dBm	No Svc	Black	Cell
-100.0 dBm	to	-95.1 dBm	Rural		
-90.0 dBm	to	-75.1 dBm	Suburban		
-70.0 dBm	to	0.0 dBm	Super Cell Area		

DLG Attributes:
- Primary
- Secondary
- County Boundaries

SCALE 1 240403
1 Inch = 3 7942 Miles
1 Centimeter = 2 4040 Kilometers
MILES
0 5 10 15 20
KILOMETERS
0 10 20 30 40

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26-May-97 10:57:06

Exhibit 4

A F F I D A V I T

City of Washington :
: SS.
District of Columbia :

I, LeRoy A. Adam, Consulting Engineer, having been first duly sworn, depose and state as follows:

1. I am a consulting engineer employed by the law firm of Lukas, McGowan, Nace & Gutierrez, Chartered in Washington, D. C.

2. I graduated from the United States Military Academy at West Point, New York in 1965 with a Bachelor of Science degree, and from the University of Alabama, Tuscaloosa, Alabama in 1972 with a degree of Masters of Science in Electrical Engineering. In addition, I am a graduate of the U.S. Army Command and General Staff College, and the National Defense University. I am a member of the Armed Forces Communications-Electronics Association and the Institute of Electrical and Electronic Engineers.

3. Since 1990, the principal focus of my professional activities has been the design of cellular systems. I am familiar with Part 22 of the Federal Communications Commission's ("FCC") rules and have prepared the technical portions of cellular applications for Metropolitan Statistical Area ("MSA") markets and for Rural Service Area ("RSA") markets filed with the FCC.

4. The purpose of this statement is to provide Southwestern Bell Wireless, Inc. ("SWBW") with technical commments regarding specific parts of the Federal Communications Commission's ("FCC") Second Further Notice of Proposed Rule Making in WT Docket No. 97-112 and CC Docket No. 90-6. The following paragraphs are keyed to the FCC paragraph numbers of FCC 97-110, which is part of the above

identified documentation and are included parenthetically after each paragraph number below.

5. (31) Approximately 41-43 km* assuming an ERP of 100 Watts, from an omni-directional antenna with radiation center at 200 feet (60.96 m) AMSL (i.e. HAAT=200') (See also paragraph 9,*infra*.). This coverage distance would vary according to variations in ERP, radiation center HAAT, seascape activity, and land mass that might exist along the radial.

6. (32) Based on map reconnaissance and selective coverage plots from locations along the coast line it would appear that few areas exist where reliable cellular coverage cannot be provided within the proposed Coastal Zone from properly placed cells along the coast and/or from water-based locations. Exceptions may include areas which lie beyond or along the Gulf side of coastal islands where those land masses in some places create shadowed areas or are too distant from the mainland and not near enough to a GMSA base station to receive a reliable signal. In order to cover the entire "Coastal Zone," under these conditions, it may be necessary to construct base stations or repeater stations at optimally selected sites on the coastal islands and/or with slightly greater proliferation along the coast of the mainland. Either case introduces uncertainty due to probable opposition by local governments to the construction of towers or other aesthetically and/or environmentally displeasing structures near recreation

* Computation based on Okumura 850 propagation model utilizing a -100 dBmW reliability threshold.

areas, wildlife refuges and parks. Locating on existing towers would likely create the maximum number of undesired "capture" and "forced roaming" situations for incumbent licensees.

7. (36) a. Alternatives to allowing water-based and land-based SABs which extend into the proposed Coastal Zone to be incorporated into the CGSA of the carrier currently providing the service include the two extremes: (1) requiring that all SABs extending into the proposed Coastal Zone be pulled back such that extensions into the Coastal Zone are totally and completely eliminated; and (2) allowing all carriers whose cells contribute to their SAB extensions into the proposed Coastal Zone to upgrade to optimally configured antennas and maximum ERPs. The first extreme would leave unserved area gaps within previously served markets (CGSAs) while the second extreme may leave little to be served in the Coastal Zone.

b. The proposal to allow all SABs that extend into the proposed Coastal Zone to be incorporated into the CGSA of the carrier currently providing the service is a fair and acceptable compromise as long as the formula used for calculating the SABs is the same for both land and water based cells.

c. Any number of other variations falling between the above extremes can be derived. Again, however, in the interest of quality of service to the public, efficiencies and economies in the cellular industry and the FCC, consistency of rules governing the cellular radiotelephone service, and flexibility of choice between a Coastal Zone, no Coastal Zone, or some other variation thereof, the least dramatic change is the best.

8. (38) a. A "hybrid formula" is not necessary for determining reliable coverage for signals that extend partially over water and partially over land. However, it is important that the same formula be used for both land-based cells whose contours extend into the Coastal Zone and for water-based cells extending into the Coastal Zone, because coverage into this zone from outside sources will have essentially the same propagation characteristics. The equation for calculating the 32 dBu contour over water which is provided by the FCC rules could be used. Table A, included herewith at page 8, compares the radial distances in kilometers calculated for various antenna heights and ERPs using the FCC formulas for land-based and water-based cells as well as for a hybrid "split-the-difference" formula. Although differences in the calculated radials using the different formulae are significant, the size of an extension into a neighboring CGSA is moot as long as the neighboring carriers agree. The agreement will likely be based on predicted signal strength, a most likely server ("MLS") analysis, empirical data or a combination thereof.

b. A 32 dBu contour is important only where it establishes or changes a licensees CGSA. This situation would occur if (1) the FCC decides to create the proposed Coastal Zone and adopts a new formula which redefines extensions from existing cells into the Coastal Zone; or (2) in unserved area applications. In either case the formula for a water-based or "hybrid" which "splits-the-difference between the FCCs equations for land-based and water-based contour calculations is acceptable. Again, although the size of the contour is of little consequence except where it can be used to

define CGSA, a "split-the-difference" equation is fair to all concerned and is acceptable. As can be seen from Table A, the difference in size of a 32 dBu contour (i.e. the contour radials) using the land-based equation and the water-based equation from the FCC rules can range from 10 to 30 km for parameters ranging from a radiation height of 30 meters and power of 50 Watts to a height of 120 meters and power of 200 Watts. This calculation assumes the same HAAT for land and water-based cells since we are transmitting over the same general area ("Coastal Zone"). Using the same parameters in a "split-the-difference" equation (i.e. $d = 4.713h^{.32}p^{.16}$) the difference in the size of the contour is significantly changed.

c. Although the propagation of cellular signals is attenuated less over water that over land (except perhaps during extremely stormy sea conditions) and thus would seem to create an advantage to a land-based cell extending out over water vis-a-vis a water-based cell extending over land, realistically, this issue is eliminated by the creation of a "Coastal Zone" and the use of the same 32 dBu equation by both land-based and water-based licensees. Further, if adjacent carriers agree to a level of predicted coverage based on a propagation model or on empirically collected signal strength readings then the site and operational parameters spelled out in the agreement will define the respective contours and the SABs within the markets of the carriers. Where such contours extend across a market boundary or a previously granted CGSA boundary then those boundaries will continue to serve as market boundaries and the

differences in the size of extensions into the adjacent markets remains moot.

d. The more difficult question to address is what propagation model to use to predict coverage in areas such as the proposed "Coastal Zone" where significantly varied combinations of water and land (rural, beach, swamp, etc.) could exist.

e. The Okumura propagation model with terrain correction parameters is generally accepted as among the most reliable radio wave prediction models. Okumura curves can be applied using the Hata formula, but this application does not allow for the flexibility built into the Okumura model to characterize the variations in areas such as a "Coastal Zone" described previously.

f. It would seem that neighboring carriers, which in this case would include licensees of coastal markets and licensees of the proposed "Coastal Zone" and/or GMSA licensees, would be permitted the freedom to negotiate terms of agreements to include the selection of a propagation model which most accurately or most fairly represents their common interests. The best propagation model (or the parameters used therewith) for one case may not be the best for another case. This level of negotiation is permitted and used among licensees of other markets; the same rules should apply in the Gulf region with oversite by the FCC to insure that one carrier does not frustrate efforts on the part of a neighboring licensee to improve service within his own market.

Table A

32 dBu Contour Computations

May 27, 1997

h/p	Land-based ($d=2.531h^{.34}p^{.17}$)	Hybrid ($d=4.713h^{.32}p^{.16}$)	Water-based ($d=6.895h^{.30}p^{.15}$)
30/50	15.64	26.17	34.40
60/50	19.80	32.67	42.35
90/50	22.73	37.20	47.82
120/50	25.06	40.78	52.13
30/100	17.60	29.24	38.17
60/100	22.28	36.50	46.99
90/100	25.57	41.56	53.07
120/100	28.20	45.57	57.85
30/150	18.86	31.20	40.56
60/150	23.87	38.95	49.93
90/150	27.40	44.34	56.39
120/150	30.21	48.62	61.48
30/200	19.80	32.67	42.35
60/200	25.06	40.78	52.14
90/200	28.77	46.43	58.88
120/200	31.72	50.91	64.19

Where: d = radial distance in kilometers
h = radial antenna HAAT in meters
p = radial ERP in Watts

9. The foregoing statement of fact is true and correct to the best of my own personal knowledge and belief, and is proffered in good faith.

LeRoy A. Adam, Consulting Engineer

Subscribed and sworn to before me
this 30th day of May, 1997.

Notary Public

My commission expires:

CATHERINE M. SEYMOUR
NOTARY PUBLIC DISTRICT OF COLUMBIA
My Commission Expires June 14, 2000

CORPUS CHRISTI SMSA LIMITED PARTNERSHIP

KNKA388 #112B1 - CORPUS CHRISTI, TEXAS MSA

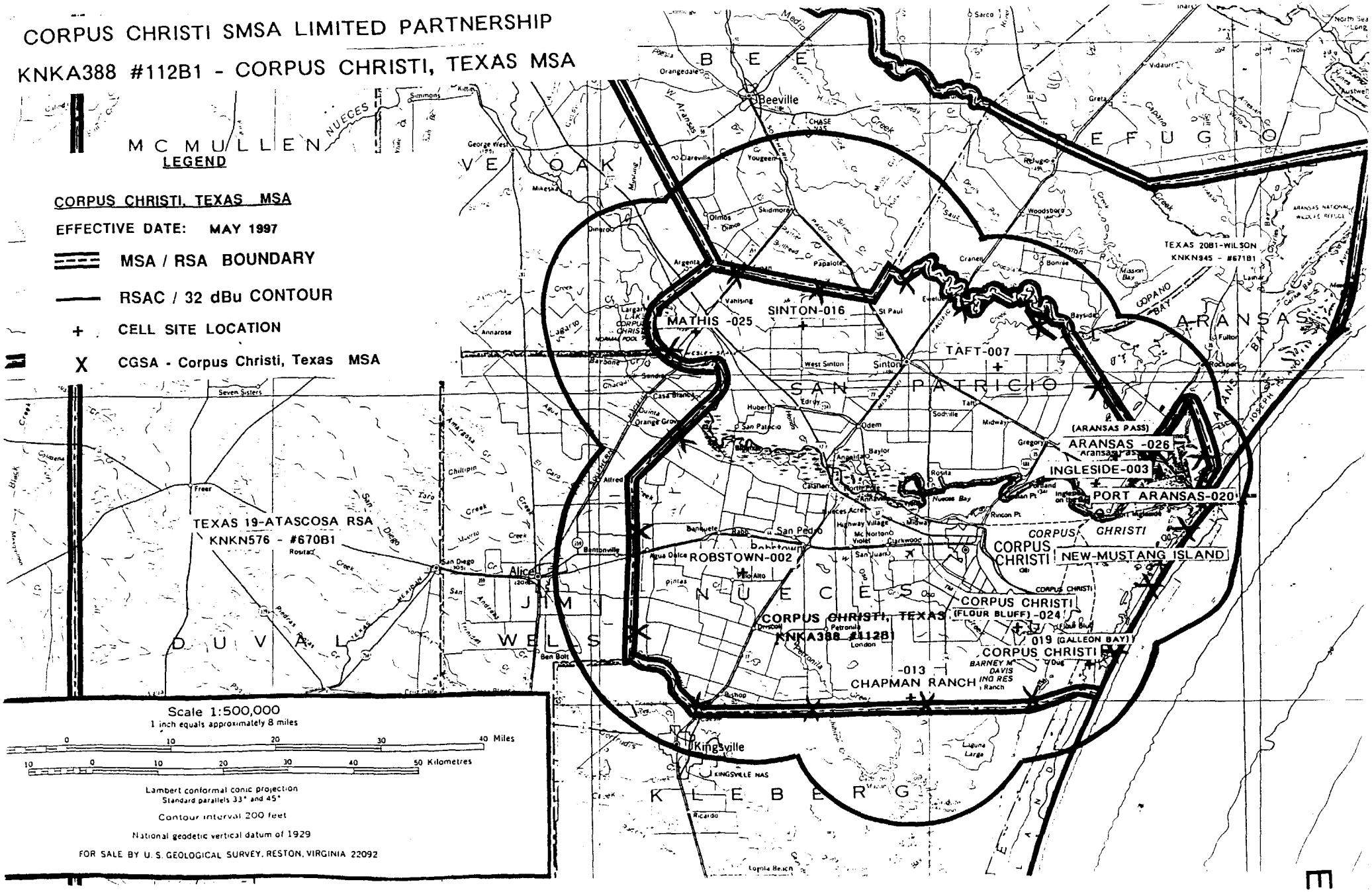
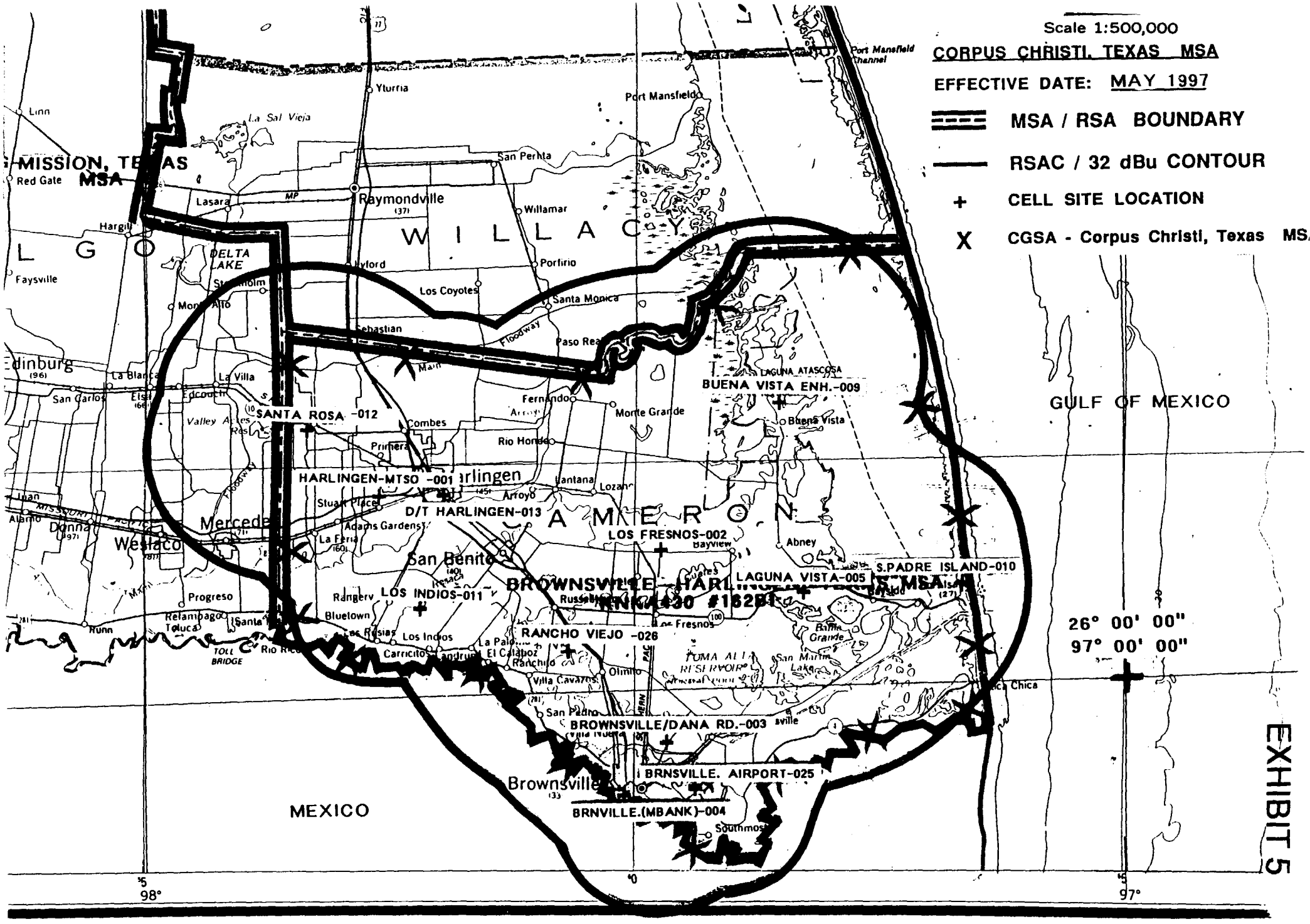


EXHIBIT 5


Scale 1:500,000
CORPUS CHRISTI, TEXAS MSA
EFFECTIVE DATE: MAY 1997
MSA / RSA BOUNDARY
RSAC / 32 dBu CONTOUR
CELL SITE LOCATION
CGSA - Corpus Christi, Texas MSA
MISSION, TEXAS MSA
WILLACY
CAMERON
GULF OF MEXICO
MEXICO
SANTA ROSA -012
HARLINGEN-MTSO -001
D/T HARLINGEN-013
LOS FRESNOS-002
BUENA VISTA ENH.-009
LAGUNA VISTA-005
S.PADRE ISLAND-010
LOS INDIOS-011
RANCHO VIEJO -026
BROWNSVILLE/DANA RD.-003
BRNSVILLE. AIRPORT-025
BRNVILLE.(MBANK)-004
26° 00' 00"
97° 00' 00"
98°
97°
EXHIBIT 5