

Existing Site
46°58'24" NL
123°08'11" WL
(NAD 1927)

Exhibit 12.1
USGS Topographic
Map of Existing Site


MUNN-REESE, INC.
Broadcast Engineering Consultants
Coldwater, MI 49036
1(517)278-7339



46°58'57"N
123°9'13"W Map Extent 123°7'19"W
46°57'49"N



Geographic Coordinate System (WGS84)

Exhibit 12.2

Vertical Plan of Antenna System

The site is located on top of Capital Peak
Thurston County, State of Washington.

Site Location (NAD 27)

NL: 46° 58' 24"

WL: 123° 08' 11"

NOTE: Existing Tower Construction

Antenna Structure Registration No.

Not Required

Proposed Antenna
max HAAT: 740 meters

Horizontal Component
842 meters AMSL
31 meters AGL

Vertical Component
839 meters AMSL
28 meters AMSL

859.6 meters AMSL

48.8 meters AGL

Ground Elevation = 810.8 m AMSL
Drawing is not to Scale

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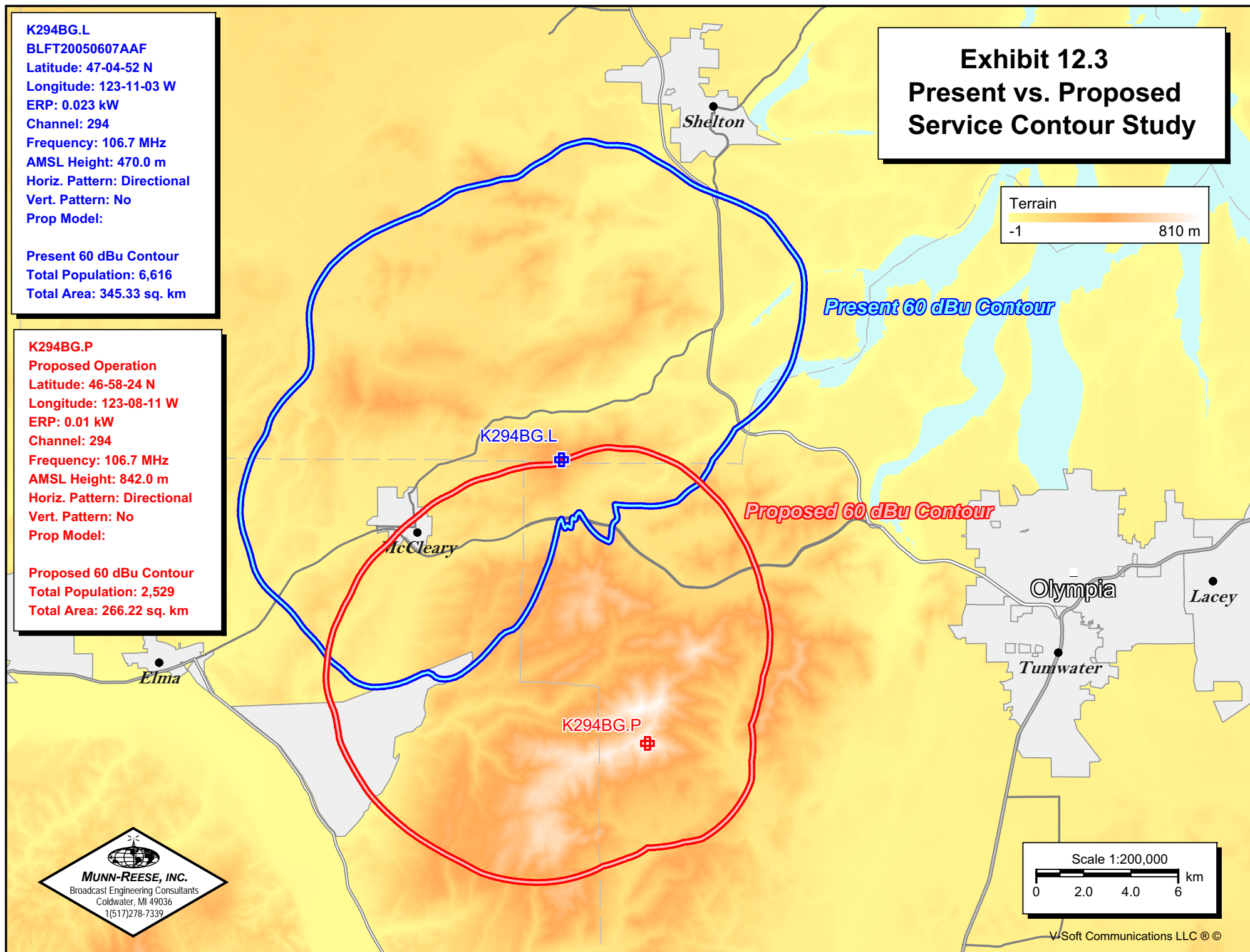
K294BG.L
BLFT20050607AAF
Latitude: 47-04-52 N
Longitude: 123-11-03 W
ERP: 0.023 kW
Channel: 294
Frequency: 106.7 MHz
AMSL Height: 470.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model:

Present 60 dBu Contour
Total Population: 6,616
Total Area: 345.33 sq. km

K294BG.P
Proposed Operation
Latitude: 46-58-24 N
Longitude: 123-08-11 W
ERP: 0.01 kW
Channel: 294
Frequency: 106.7 MHz
AMSL Height: 842.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model:

Proposed 60 dBu Contour
Total Population: 2,529
Total Area: 266.22 sq. km

Exhibit 12.3 Present vs. Proposed Service Contour Study



KGHO-LP.L
BLL20080331AGD
Latitude: 46-58-22 N
Longitude: 123-51-10 W
ERP: 0.10 kW
Channel: 253
Frequency: 98.5 MHz
AMSL Height: 50.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model:

K294BG.P
Proposed Operation
Latitude: 46-58-24 N
Longitude: 123-08-11 W
ERP: 0.01 kW
Channel: 294
Frequency: 106.7 MHz
AMSL Height: 842.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model:



Exhibit 12.4 Proposed vs Primary Service Contour Study

Grays Harbor

Primary 60 dBu Contour

KGHO-LP.L

Primary 16 dBu Contour

K294BG.P

Proposed 60 dBu Contour

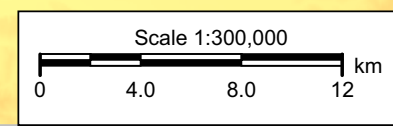


Exhibit 12.5

Tabulation of Proposed Allocation

Northwest Rock N Roll Preservation Society

REFERENCE		CH# 294D - 106.7 MHz, Pwr= 0.01 kW, HAAT= 638.7 M, COR= 842 M								DISPLAY DATES	
46 58 24.0 N.		Average Protected F(50-50)= 14.15 km								DATA	06-30-09
123 08 11.0 W.		Standard Directional								SEARCH	07-01-09
CH CITY	CALL	TYPE STATE	ANT <--	AZI FILE #	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
294D Malone	K294BG	LIC DC_ WA	343.2 163.2	12.5 BLFT20050607AAF	47 04 52.0 123 11 03.0	0.023 470	7.3	2.4	-7.2	-36.0	Northwest Rock N Roll Pres
294C Lake Oswego	KLTH	CP _CY OR	169.0 349.3	164.9 BPH20090127AAZ	45 30 58.0 122 43 59.0	100.000 502	191.6 594	87.5	-31.1*<	53.5	Citicasters Licenses, Inc.
294C Lake Oswego	KLTH	LIC _CY OR	169.0 349.3	164.9 BLH19970708KCC	45 30 58.0 122 43 59.0	100.000 440	187.1 532	83.5	-26.5*<	57.5	Citicasters Licenses, Inc.
295C1 Bremerton	KRWM	LIC ZCX WA	50.3 231.1	100.4 BMLH20051207AGQ	47 32 39.0 122 06 29.0	49.000 396	110.3 521	74.9	-16.6*<	14.0	Seascape Radio, Inc.
293D Independence	632165	APP _C_ WA	185.0 5.0	17.5 BNPFT20030310BNJ	46 48 58.0 123 09 24.0	0.150 44	8.9	6.2	3.9	3.0	South Sound Broadcasting L
293L1 Olympia	KOWA-LP	LIC _C_ WA	68.0 248.1	14.1 BLL20040816AAB	47 01 15.0 122 57 50.0	0.022 62	1.6	1.0	7.4	4.2	Media Island International
297D Olympia	631594	APP _C_ WA	74.0 254.2	17.4 BNPFT20030317HJY	47 00 58.0 122 54 57.0	0.250 138	1.1	7.1	11.6	10.3	The University Of Washingt
292D Satsop	639530	APP _C_ WA	247.0 66.8	23.2 BNPFT20030314AHU	46 53 30.0 123 24 59.0	0.005 1078	0.2	12.4	12.6	10.6	Northwest Rock N Roll Pres
291C Tacoma	KBKS-FM	LIC _C_ WA	55.8 236.6	106.4 BLH20001023AFA	47 30 17.0 121 58 04.0	73.000 698	13.8 932	95.0	86.5	11.3	Amfm Texas Licenses Limite
294D Hoquiam	649083	APP _C_ WA	261.9 81.2	67.4 BNPFT20030317KAA	46 53 03.7 124 00 44.3	0.250 90	23.8	7.1	31.5	14.4	Radio Assist Ministry, Inc
297D Olympia	633501	APP _C_ WA	89.5 269.7	24.8 BNPFT20030314BLN	46 58 30.0 122 48 40.0	0.250 100	1.1	8.4	19.2	16.3	Educational Media Foundati
293L1 Aberdeen	KAHS-LP	LIC _C_ WA	271.0 90.5	52.0 BLL20040820ABK	46 58 46.0 123 49 09.0	0.100 30	8.0	5.6	30.9	25.6	Aberdeen School District #
296C3 Castle Rock	KRQT	LIC NCX WA	177.5 357.5	70.7 BLH20081216AAF	46 20 18.0 123 05 45.0	0.800 523	1.9 809	43.0	64.3	27.6	Bicoastal Media Licenses I
296D Aberdeen	K296CV	CP DH_ WA	272.2 91.7	50.0 BMPFT20080417AAC	46 59 18.0 123 47 37.0	0.125 140	0.1	2.8	36.9	47.0	Grays Harbor Christian Bro
296D Aberdeen	K296CV	LIC DH_ WA	272.2 91.7	50.0 BLFT20080512AES	46 59 18.0 123 47 37.0	0.125 140	0.0	0.8	37.0	49.1	Grays Harbor Christian Bro
293C Lynden	KWPZ	LIC _C_ WA	6.5 186.7	191.0 BMLH20081008AJR	48 40 46.0 122 50 31.0	68.000 711	135.9 756	92.2	43.2	79.6	Crista Ministries, Inc.

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
 Contour distances are on direct line to and from reference station. Reference zone = 2, Co to 3rd adjacent.
 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 protected contour.

Blue highlighted text denotes contour protection studies toward select station(s) as included in **Exhibit 12.6**.

Exhibit 12.6

Contour Protection Studies Toward KOWA-LP - Olympia, WA

FMCommander Single Allocation Study - 07-01-2009 - NGDC 30 SEC
K294BG.P's Overlaps (In= 7.42 km, Out= 4.23 km)

K294BG.P CH 294 D DA
Lat= 46 58 24.0, Lng= 123 08 11.0
0.01 kW 638.7 M HAAT, 842 M COR
Prot.= 60 dBu, Intef.= 54 dBu

KOWA-LP CH 293 L1 BLL20040816AAB
Lat= 47 01 15.0, Lng= 122 57 50.0
0.022 kW 62 M HAAT, 158 M COR
Prot.= 60 dBu, Intef.= 54 dBu

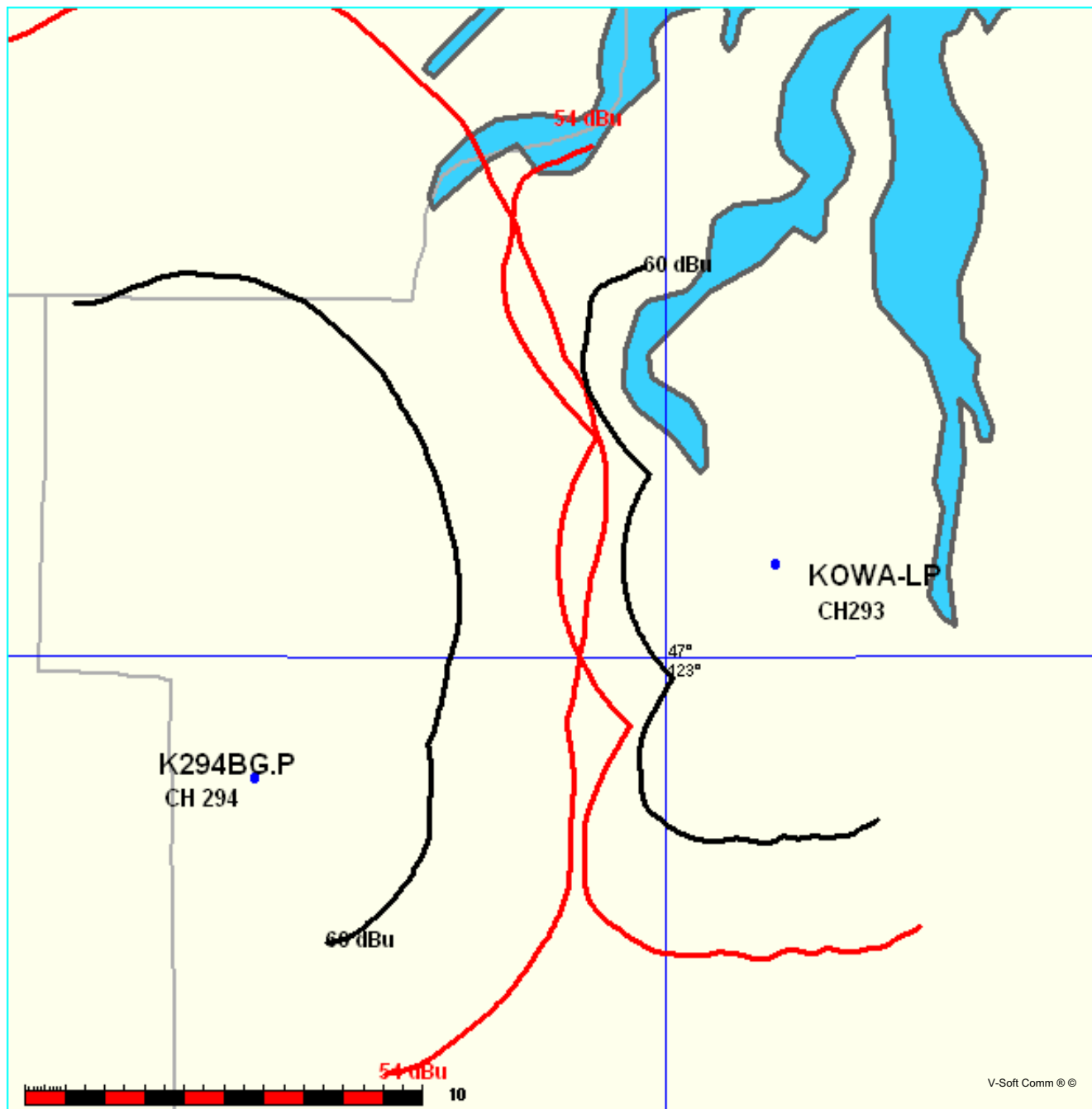


Exhibit 12.6**Contour Protection Studies Toward KOWA-LP - Olympia, WA**

07-01-2009

NGDC 30 SEC Terrain Data

FMOver Analysis

K294BG.P

Channel = 294D

Max ERP = 0.01 kW

RCAMSL = 842 M

N. Lat. 46 58 24.0

W. Lng. 123 08 11.0

Protected

60 dBu

KOWA-LP BLL20040816AAB

Channel = 293L1

Max ERP = 0.022 kW

RCAMSL = 158 M

N. Lat. 47 01 15.0

W. Lng. 122 57 50.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
025.0	000.0034	0605.0	009.5	290.5	000.0220	-0009.1	009.7	44.31	
026.0	000.0032	0606.3	009.4	289.7	000.0220	-0008.9	009.5	44.58	
027.0	000.0031	0606.7	009.3	288.9	000.0220	-0006.7	009.4	44.85	
028.0	000.0030	0605.3	009.2	287.9	000.0220	-0002.9	009.2	45.10	
029.0	000.0029	0603.2	009.0	286.9	000.0220	-0000.4	009.1	45.34	
030.0	000.0028	0601.2	008.9	285.8	000.0220	-0000.9	009.0	45.56	
031.0	000.0027	0600.7	008.8	284.9	000.0220	-0006.1	008.8	45.78	
032.0	000.0026	0600.3	008.7	283.8	000.0220	-0013.8	008.7	45.99	
033.0	000.0025	0599.6	008.6	282.7	000.0220	-0023.5	008.6	46.18	
034.0	000.0024	0598.3	008.4	281.6	000.0220	-0031.6	008.5	46.36	
035.0	000.0024	0595.0	008.3	280.4	000.0220	-0037.1	008.5	46.51	
036.0	000.0023	0591.2	008.2	279.2	000.0220	-0044.7	008.4	46.64	
037.0	000.0022	0591.8	008.1	278.0	000.0220	-0056.1	008.3	46.78	
038.0	000.0021	0599.8	008.0	276.9	000.0220	-0070.1	008.2	46.92	
039.0	000.0020	0611.1	007.9	275.9	000.0220	-0086.8	008.2	47.05	
040.0	000.0019	0621.1	007.8	274.8	000.0220	-0103.0	008.1	47.17	
041.0	000.0019	0627.1	007.7	273.7	000.0220	-0118.5	008.1	47.27	
042.0	000.0018	0629.8	007.6	272.5	000.0220	-0135.3	008.0	47.34	
043.0	000.0017	0630.5	007.5	271.3	000.0220	-0147.3	008.0	47.39	
044.0	000.0017	0632.9	007.4	270.1	000.0220	-0151.6	008.0	47.44	
045.0	000.0016	0638.3	007.3	269.0	000.0220	-0155.6	008.0	47.48	
046.0	000.0015	0647.7	007.2	267.9	000.0220	-0163.4	007.9	47.51	
047.0	000.0015	0658.1	007.1	266.7	000.0220	-0172.2	007.9	47.53	
048.0	000.0014	0667.2	007.0	265.6	000.0220	-0177.4	007.9	47.53	
049.0	000.0014	0673.1	006.9	264.4	000.0220	-0181.2	007.9	47.50	
050.0	000.0013	0677.1	006.8	263.3	000.0220	-0185.2	008.0	47.45	
051.0	000.0012	0679.1	006.7	262.2	000.0220	-0186.2	008.0	47.41	
052.0	000.0012	0680.8	006.5	261.1	000.0220	-0184.9	008.0	47.34	
053.0	000.0011	0682.4	006.4	260.0	000.0220	-0189.0	008.1	47.27	
054.0	000.0011	0683.2	006.3	259.0	000.0220	-0196.5	008.1	47.18	
055.0	000.0011	0681.9	006.2	258.0	000.0220	-0206.4	008.2	47.07	
056.0	000.0010	0678.1	006.1	257.0	000.0220	-0217.0	008.2	46.94	
057.0	000.0010	0672.4	006.0	256.0	000.0220	-0224.9	008.3	46.79	
058.0	000.0009	0666.2	005.9	255.1	000.0220	-0229.0	008.4	46.64	
059.0	000.0009	0660.5	005.8	254.2	000.0220	-0227.9	008.5	46.48	

Munn-Reese, Inc.

Broadcast Engineering Consultants

Coldwater, MI 49036

Exhibit 12.6**Contour Protection Studies Toward KOWA-LP - Olympia, WA**

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
060.0	000.0008	0655.5	005.6	253.4	000.0220	-0224.2	008.6	46.31
061.0	000.0008	0651.0	005.6	252.6	000.0220	-0221.1	008.6	46.22
062.0	000.0008	0646.5	005.5	251.9	000.0220	-0218.0	008.7	46.12
063.0	000.0008	0642.3	005.4	251.2	000.0220	-0215.9	008.7	46.02
064.0	000.0008	0640.8	005.4	250.5	000.0220	-0216.0	008.8	45.92
065.0	000.0007	0642.5	005.3	249.9	000.0220	-0217.1	008.8	45.82
066.0	000.0007	0646.8	005.2	249.3	000.0220	-0217.1	008.9	45.71
067.0	000.0007	0651.9	005.2	248.7	000.0220	-0214.3	008.9	45.60
068.0	000.0007	0656.4	005.1	248.1	000.0220	-0209.5	009.0	45.49
069.0	000.0006	0659.5	005.0	247.5	000.0220	-0201.9	009.1	45.36
070.0	000.0006	0662.2	005.0	247.0	000.0220	-0192.8	009.1	45.23
071.0	000.0006	0664.3	004.9	246.5	000.0220	-0183.0	009.2	45.12
072.0	000.0006	0666.4	004.9	246.0	000.0220	-0174.0	009.3	45.02
073.0	000.0006	0669.7	004.8	245.5	000.0220	-0166.2	009.3	44.90
074.0	000.0006	0673.8	004.8	245.0	000.0220	-0159.7	009.4	44.79
075.0	000.0006	0679.3	004.7	244.6	000.0220	-0153.7	009.5	44.67
076.0	000.0005	0685.6	004.7	244.2	000.0220	-0148.3	009.5	44.55
077.0	000.0005	0691.4	004.6	243.8	000.0220	-0143.2	009.6	44.43
078.0	000.0005	0696.2	004.6	243.4	000.0220	-0137.9	009.7	44.29
079.0	000.0005	0700.2	004.5	243.0	000.0220	-0132.7	009.7	44.16
080.0	000.0005	0703.8	004.4	242.7	000.0220	-0127.4	009.8	44.03
081.0	000.0005	0706.9	004.4	242.2	000.0220	-0121.1	009.8	43.99
082.0	000.0005	0709.1	004.4	241.8	000.0220	-0115.2	009.9	43.95
083.0	000.0005	0710.9	004.5	241.4	000.0220	-0109.2	009.9	43.90
084.0	000.0005	0713.3	004.5	241.0	000.0220	-0102.8	009.9	43.85
085.0	000.0005	0715.9	004.5	240.6	000.0220	-0096.6	009.9	43.80
086.0	000.0005	0718.4	004.5	240.2	000.0220	-0090.5	010.0	43.74
087.0	000.0005	0720.9	004.5	239.8	000.0220	-0084.8	010.0	43.68
088.0	000.0005	0723.5	004.5	239.4	000.0220	-0079.4	010.0	43.62
089.0	000.0005	0725.3	004.5	239.0	000.0220	-0074.0	010.1	43.55
090.0	000.0005	0726.6	004.5	238.6	000.0220	-0068.8	010.1	43.49
091.0	000.0005	0728.0	004.5	238.2	000.0220	-0063.9	010.2	43.41
092.0	000.0005	0729.3	004.5	237.9	000.0220	-0059.2	010.2	43.34
093.0	000.0005	0730.6	004.5	237.5	000.0220	-0055.1	010.3	43.26
094.0	000.0005	0731.9	004.5	237.2	000.0220	-0051.2	010.3	43.19
095.0	000.0005	0733.0	004.5	236.8	000.0220	-0047.5	010.3	43.10
096.0	000.0005	0734.0	004.5	236.5	000.0220	-0044.1	010.4	43.02
097.0	000.0005	0735.0	004.5	236.1	000.0220	-0040.9	010.4	42.94
098.0	000.0005	0736.4	004.5	235.8	000.0220	-0037.8	010.5	42.85
099.0	000.0005	0737.7	004.5	235.5	000.0220	-0034.7	010.5	42.76
100.0	000.0005	0739.0	004.5	235.2	000.0220	-0031.9	010.6	42.67
101.0	000.0005	0740.2	004.5	234.8	000.0220	-0028.6	010.6	42.60
102.0	000.0005	0741.4	004.5	234.5	000.0220	-0025.7	010.7	42.52
103.0	000.0005	0742.4	004.5	234.1	000.0220	-0023.1	010.7	42.44
104.0	000.0005	0743.4	004.5	233.8	000.0220	-0021.1	010.8	42.37
105.0	000.0005	0744.6	004.6	233.4	000.0220	-0019.6	010.8	42.29

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Coldwater, MI 49036

Exhibit 12.6**Contour Protection Studies Toward KOWA-LP - Olympia, WA**

07-01-2009 NGDC 30 SEC Terrain Data

KOWA-LP BLL20040816AAB

Channel = 293L1

Max ERP = 0.022 kW

RCAMSL = 158 M

N. Lat. 47 01 15.0

W. Lng. 122 57 50.0

Protected

60 dBu

K294BG.P

Channel = 294D

Max ERP = 0.01 kW

RCAMSL = 842 M

N. Lat. 46 58 24.0

W. Lng. 123 08 11.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
203.0	000.0220	0098.9	007.0	096.5	000.0005	0734.5	010.4	51.23	
204.0	000.0220	0098.0	007.0	096.1	000.0005	0734.1	010.3	51.34	
205.0	000.0220	0097.2	007.0	095.8	000.0005	0733.8	010.2	51.45	
206.0	000.0220	0096.4	006.9	095.4	000.0005	0733.4	010.1	51.57	
207.0	000.0220	0095.4	006.9	095.0	000.0005	0733.0	010.0	51.68	
208.0	000.0220	0094.3	006.9	094.5	000.0005	0732.5	009.9	51.78	
209.0	000.0220	0092.5	006.8	093.8	000.0005	0731.7	009.8	51.87	
210.0	000.0220	0089.6	006.7	092.9	000.0005	0730.5	009.8	51.93	
211.0	000.0220	0085.9	006.5	091.9	000.0005	0729.1	009.7	51.96	
212.0	000.0220	0081.8	006.4	090.7	000.0005	0727.6	009.7	51.97	
213.0	000.0220	0078.0	006.2	089.6	000.0005	0726.1	009.7	51.98	
214.0	000.0220	0074.3	006.1	088.5	000.0005	0724.5	009.7	51.97	
215.0	000.0220	0070.8	005.9	087.4	000.0005	0722.0	009.7	51.96	
216.0	000.0220	0067.0	005.8	086.4	000.0005	0719.4	009.7	51.94	
217.0	000.0220	0062.6	005.6	085.2	000.0005	0716.4	009.8	51.88	
218.0	000.0220	0057.2	005.4	083.9	000.0005	0712.9	009.8	51.77	
219.0	000.0220	0050.8	005.1	082.2	000.0005	0709.5	010.0	51.58	
220.0	000.0220	0043.7	004.7	080.3	000.0005	0704.8	010.2	51.28	
221.0	000.0220	0036.3	004.2	078.4	000.0005	0697.9	010.6	51.10	
222.0	000.0220	0027.7	003.8	076.9	000.0005	0691.0	010.8	50.96	
223.0	000.0220	0018.1	003.8	076.6	000.0005	0689.3	010.8	51.02	
224.0	000.0220	0008.0	003.8	076.3	000.0005	0687.5	010.7	51.09	
225.0	000.0220	-0001.5	003.8	076.0	000.0005	0685.7	010.7	51.15	
226.0	000.0220	-0009.7	003.8	075.7	000.0005	0683.8	010.7	51.21	
227.0	000.0220	-0016.1	003.8	075.4	000.0005	0681.9	010.6	51.27	
228.0	000.0220	-0022.1	003.8	075.1	000.0006	0679.9	010.6	51.33	
229.0	000.0220	-0026.7	003.8	074.8	000.0006	0677.9	010.6	51.39	
230.0	000.0220	-0028.0	003.8	074.4	000.0006	0676.0	010.5	51.44	
231.0	000.0220	-0025.1	003.8	074.1	000.0006	0674.3	010.5	51.50	
232.0	000.0220	-0020.6	003.8	073.8	000.0006	0672.8	010.5	51.56	
233.0	000.0220	-0018.7	003.8	073.4	000.0006	0671.3	010.5	51.61	
234.0	000.0220	-0022.4	003.8	073.1	000.0006	0670.0	010.4	51.67	
235.0	000.0220	-0030.0	003.8	072.7	000.0006	0668.7	010.4	51.72	
236.0	000.0220	-0039.5	003.8	072.4	000.0006	0667.5	010.4	51.78	

Munn-Reese, Inc.

Broadcast Engineering Consultants

Coldwater, MI 49036

Exhibit 12.6**Contour Protection Studies Toward KOWA-LP - Olympia, WA**

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
237.0	000.0220	-0049.6	003.8	072.0	000.0006	0666.5	010.4	51.83
238.0	000.0220	-0061.0	003.8	071.7	000.0006	0665.6	010.4	51.88
239.0	000.0220	-0074.2	003.8	071.3	000.0006	0664.9	010.4	51.93
240.0	000.0220	-0088.1	003.8	071.0	000.0006	0664.2	010.3	51.98
241.0	000.0220	-0103.1	003.8	070.6	000.0006	0663.5	010.3	52.03
242.0	000.0220	-0117.7	003.8	070.2	000.0006	0662.7	010.3	52.08
243.0	000.0220	-0132.2	003.8	069.9	000.0006	0661.7	010.3	52.12
244.0	000.0220	-0146.0	003.8	069.5	000.0006	0660.8	010.3	52.18
245.0	000.0220	-0159.0	003.8	069.1	000.0006	0659.8	010.3	52.23
246.0	000.0220	-0174.2	003.8	068.7	000.0007	0658.8	010.3	52.28
247.0	000.0220	-0192.7	003.8	068.4	000.0007	0657.6	010.3	52.33
248.0	000.0220	-0208.4	003.8	068.0	000.0007	0656.4	010.3	52.37
249.0	000.0220	-0216.1	003.8	067.6	000.0007	0654.9	010.3	52.41
250.0	000.0220	-0217.0	003.8	067.3	000.0007	0653.2	010.3	52.45
251.0	000.0220	-0215.7	003.8	066.9	000.0007	0651.3	010.3	52.48
252.0	000.0220	-0218.5	003.8	066.5	000.0007	0649.4	010.3	52.51
253.0	000.0220	-0222.6	003.8	066.1	000.0007	0647.5	010.3	52.54
254.0	000.0220	-0227.1	003.8	065.8	000.0007	0645.8	010.3	52.57
255.0	000.0220	-0229.2	003.8	065.4	000.0007	0644.1	010.3	52.60
256.0	000.0220	-0224.9	003.8	065.0	000.0007	0642.7	010.3	52.62
257.0	000.0220	-0216.8	003.8	064.7	000.0007	0641.6	010.4	52.65
258.0	000.0220	-0206.1	003.8	064.3	000.0007	0640.9	010.4	52.67
259.0	000.0220	-0196.5	003.8	064.0	000.0008	0640.8	010.4	52.70
260.0	000.0220	-0189.2	003.8	063.6	000.0008	0640.9	010.4	52.72
261.0	000.0220	-0185.2	003.8	063.3	000.0008	0641.6	010.4	52.75
262.0	000.0220	-0185.8	003.8	062.9	000.0008	0642.7	010.4	52.77
263.0	000.0220	-0186.2	003.8	062.6	000.0008	0644.0	010.5	52.80
264.0	000.0220	-0182.4	003.8	062.2	000.0008	0645.5	010.5	52.82
265.0	000.0220	-0180.0	003.8	061.9	000.0008	0647.0	010.5	52.84
266.0	000.0220	-0175.6	003.8	061.6	000.0008	0648.6	010.5	52.86
267.0	000.0220	-0170.5	003.8	061.2	000.0008	0650.0	010.6	52.88
268.0	000.0220	-0161.5	003.8	060.9	000.0008	0651.4	010.6	52.90
269.0	000.0220	-0155.5	003.8	060.6	000.0008	0652.8	010.6	52.91
270.0	000.0220	-0152.0	003.8	060.3	000.0008	0654.2	010.7	52.92
271.0	000.0220	-0148.4	003.8	060.0	000.0008	0655.7	010.7	52.93
272.0	000.0220	-0143.3	003.8	059.7	000.0009	0657.3	010.7	52.96
273.0	000.0220	-0129.0	003.8	059.4	000.0009	0658.8	010.8	52.99
274.0	000.0220	-0114.1	003.8	059.1	000.0009	0660.1	010.8	53.02
275.0	000.0220	-0100.6	003.8	058.8	000.0009	0661.7	010.8	53.05
276.0	000.0220	-0085.2	003.8	058.5	000.0009	0663.2	010.9	53.07
277.0	000.0220	-0069.1	003.8	058.2	000.0009	0664.9	010.9	53.09
278.0	000.0220	-0055.9	003.8	057.9	000.0009	0666.6	011.0	53.11
279.0	000.0220	-0046.0	003.8	057.7	000.0009	0668.2	011.0	53.12
280.0	000.0220	-0039.3	003.8	057.4	000.0009	0669.9	011.1	53.14

Munn-Reese, Inc.Broadcast Engineering Consultants
Coldwater, MI 49036

Exhibit 12.6

Contour Protection Studies Toward APP CH293D - Independence, WA

FMCommander Single Allocation Study - 07-01-2009 - NGDC 30 SEC
K294BG.P's Overlaps (In= 3.93 km, Out= 3.01 km)

K294BG.P CH 294 D DA
Lat= 46 58 24.0, Lng= 123 08 11.0
0.01 kW 638.7 M HAAT, 842 M COR
Prot.= 60 dBu, Intef.= 54 dBu

632165 CH 293 D BNPFT20030310BNJ
Lat= 46 48 58.0, Lng= 123 09 24.0
0.15 kW 0 M HAAT, 44 M COR
Prot.= 60 dBu, Intef.= 54 dBu

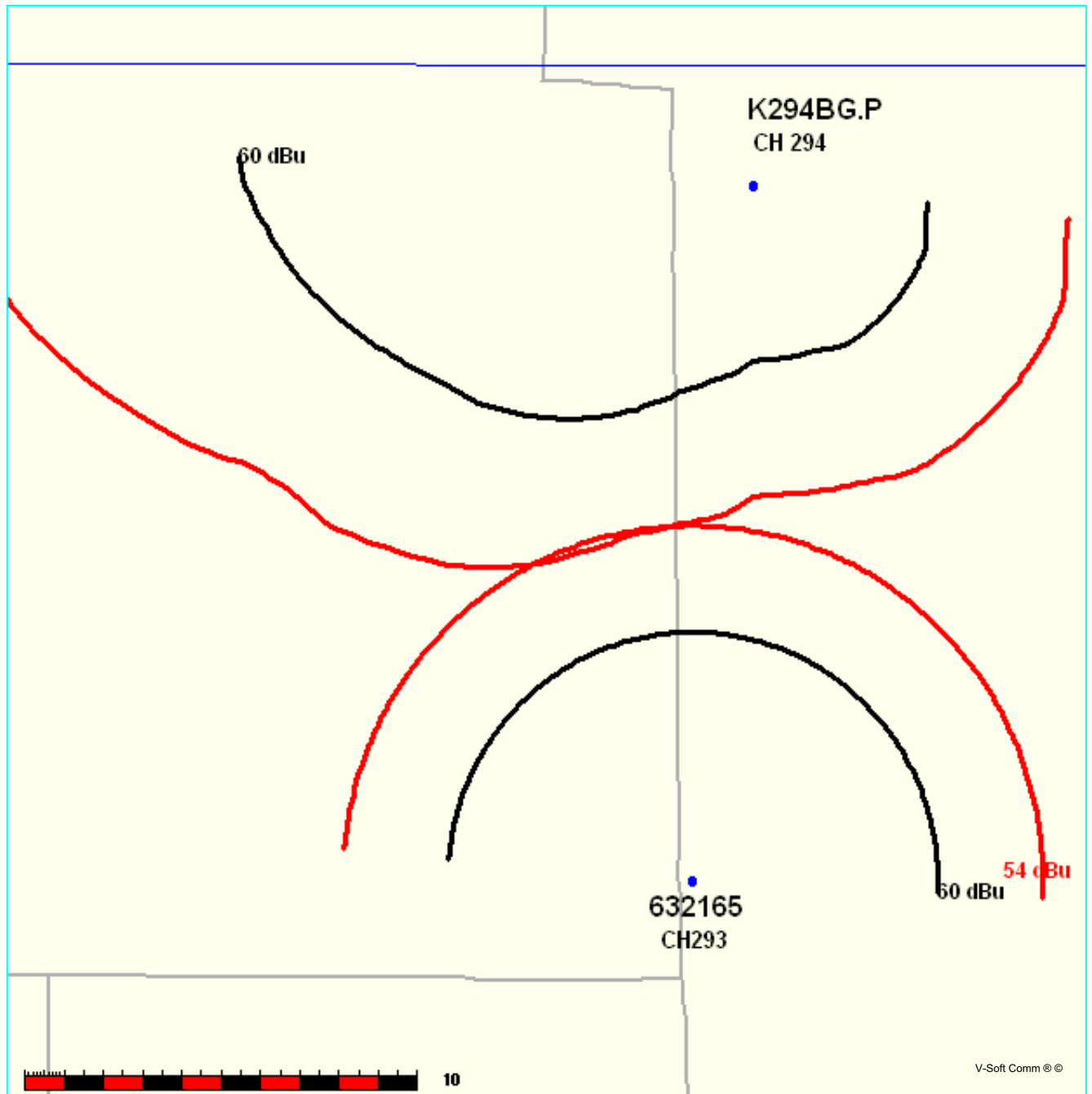


Exhibit 12.6**Contour Protection Studies Toward APP CH293D - Independence, WA**

07-01-2009

NGDC 30 SEC Terrain Data

FMOver Analysis

K294BG.P

Channel = 294D

Max ERP = 0.01 kW

RCAMSL = 842 M

N. Lat. 46 58 24.0

W. Lng. 123 08 11.0

Protected

60 dBu

632165 BNPFT20030310BNJ

Channel = 293D

Max ERP = 0.15 kW

RCAMSL = 44 M

N. Lat. 46 48 58.0

W. Lng. 123 09 24.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
140.0	000.0005	0711.0	004.6	018.0	000.1500	-0201.3	014.6	45.19	
141.0	000.0005	0709.8	004.6	017.8	000.1500	-0203.0	014.6	45.27	
142.0	000.0005	0708.5	004.6	017.6	000.1500	-0204.6	014.5	45.35	
143.0	000.0005	0707.6	004.6	017.4	000.1500	-0206.2	014.4	45.42	
144.0	000.0005	0707.2	004.6	017.2	000.1500	-0207.8	014.4	45.50	
145.0	000.0005	0707.2	004.6	017.0	000.1500	-0209.1	014.3	45.58	
146.0	000.0005	0707.5	004.6	016.8	000.1500	-0210.2	014.2	45.66	
147.0	000.0005	0707.6	004.6	016.6	000.1500	-0211.2	014.2	45.74	
148.0	000.0005	0707.6	004.6	016.4	000.1500	-0211.9	014.1	45.81	
149.0	000.0005	0707.3	004.6	016.2	000.1500	-0212.5	014.1	45.89	
150.0	000.0005	0706.6	004.6	016.0	000.1500	-0213.0	014.0	45.96	
151.0	000.0005	0706.0	004.6	015.7	000.1500	-0213.4	014.0	46.01	
152.0	000.0005	0705.1	004.6	015.4	000.1500	-0213.7	013.9	46.07	
153.0	000.0005	0704.0	004.6	015.1	000.1500	-0213.6	013.9	46.12	
154.0	000.0005	0703.0	004.6	014.8	000.1500	-0213.3	013.8	46.17	
155.0	000.0005	0701.9	004.5	014.5	000.1500	-0212.9	013.8	46.21	
156.0	000.0005	0700.7	004.5	014.2	000.1500	-0212.3	013.8	46.25	
157.0	000.0005	0699.8	004.5	013.9	000.1500	-0211.7	013.7	46.30	
158.0	000.0005	0699.0	004.5	013.5	000.1500	-0211.1	013.7	46.34	
159.0	000.0005	0698.2	004.5	013.2	000.1500	-0210.6	013.7	46.38	
160.0	000.0005	0697.1	004.4	012.9	000.1500	-0210.0	013.6	46.41	
161.0	000.0005	0694.8	004.4	012.6	000.1500	-0209.4	013.6	46.47	
162.0	000.0005	0691.4	004.4	012.4	000.1500	-0208.6	013.6	46.52	
163.0	000.0005	0687.3	004.4	012.1	000.1500	-0207.6	013.5	46.56	
164.0	000.0005	0682.7	004.4	011.8	000.1500	-0206.4	013.5	46.61	
165.0	000.0005	0677.5	004.4	011.5	000.1500	-0205.0	013.5	46.65	
166.0	000.0005	0672.2	004.4	011.2	000.1500	-0203.5	013.4	46.69	
167.0	000.0005	0666.8	004.4	010.9	000.1500	-0201.8	013.4	46.73	
168.0	000.0005	0661.9	004.4	010.6	000.1500	-0199.5	013.4	46.77	
169.0	000.0005	0657.6	004.4	010.3	000.1500	-0197.2	013.4	46.81	
170.0	000.0005	0653.1	004.4	010.0	000.1500	-0195.1	013.3	46.84	
171.0	000.0005	0647.8	004.4	009.6	000.1500	-0193.1	013.3	46.87	
172.0	000.0005	0641.8	004.4	009.3	000.1500	-0191.4	013.3	46.89	
173.0	000.0005	0637.6	004.4	009.0	000.1500	-0190.2	013.3	46.92	
174.0	000.0005	0636.1	004.4	008.7	000.1500	-0189.7	013.3	46.95	
175.0	000.0005	0636.7	004.4	008.4	000.1500	-0189.4	013.2	46.97	
176.0	000.0005	0638.7	004.4	008.0	000.1500	-0188.7	013.2	47.00	

Munn-Reese, Inc.

Broadcast Engineering Consultants

Coldwater, MI 49036

Exhibit 12.6**Contour Protection Studies Toward APP CH293D - Independence, WA**

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
177.0	000.0005	0640.5	004.4	007.7	000.1500	-0187.6	013.2	47.02
178.0	000.0005	0642.1	004.4	007.4	000.1500	-0186.5	013.2	47.04
179.0	000.0005	0643.1	004.4	007.0	000.1500	-0184.9	013.2	47.06
180.0	000.0005	0644.2	004.4	006.7	000.1500	-0183.0	013.2	47.07
181.0	000.0005	0645.2	004.5	006.4	000.1500	-0181.4	013.1	47.16
182.0	000.0005	0646.8	004.5	006.1	000.1500	-0179.7	013.0	47.24
183.0	000.0005	0650.5	004.6	005.8	000.1500	-0177.8	013.0	47.33
184.0	000.0005	0656.2	004.6	005.4	000.1500	-0175.5	012.9	47.42
185.0	000.0006	0658.7	004.7	005.1	000.1500	-0173.8	012.8	47.51
186.0	000.0006	0655.9	004.8	004.7	000.1500	-0172.9	012.8	47.58
187.0	000.0006	0648.2	004.8	004.3	000.1500	-0173.1	012.8	47.64
188.0	000.0006	0638.7	004.8	003.9	000.1500	-0174.4	012.7	47.70
189.0	000.0006	0629.9	004.9	003.5	000.1500	-0176.4	012.7	47.75
190.0	000.0006	0619.3	004.9	003.1	000.1500	-0179.5	012.6	47.79
191.0	000.0006	0608.5	005.0	002.7	000.1500	-0183.6	012.6	47.85
192.0	000.0007	0598.6	005.0	002.3	000.1500	-0189.6	012.6	47.91
193.0	000.0007	0589.6	005.1	001.8	000.1500	-0196.4	012.5	47.97
194.0	000.0007	0583.7	005.2	001.4	000.1500	-0201.6	012.5	48.03
195.0	000.0007	0580.3	005.2	000.9	000.1500	-0206.9	012.4	48.09
196.0	000.0008	0578.5	005.3	000.4	000.1500	-0212.3	012.4	48.15
197.0	000.0008	0577.2	005.3	359.9	000.1500	-0217.8	012.4	48.20
198.0	000.0008	0574.6	005.4	359.4	000.1500	-0224.0	012.3	48.24
199.0	000.0008	0573.0	005.5	358.9	000.1500	-0234.4	012.3	48.28
200.0	000.0008	0575.0	005.5	358.4	000.1500	-0245.2	012.3	48.32
201.0	000.0009	0579.4	005.6	357.8	000.1500	-0257.7	012.2	48.43
202.0	000.0009	0582.3	005.8	357.1	000.1500	-0270.0	012.2	48.52
203.0	000.0010	0581.5	005.9	356.5	000.1500	-0278.4	012.1	48.60
204.0	000.0010	0578.8	006.0	355.8	000.1500	-0286.0	012.1	48.66
205.0	000.0011	0576.9	006.1	355.2	000.1500	-0291.7	012.0	48.72
206.0	000.0011	0577.6	006.2	354.5	000.1500	-0297.7	012.0	48.78
207.0	000.0011	0581.4	006.3	353.7	000.1500	-0306.8	011.9	48.83
208.0	000.0012	0586.5	006.4	353.0	000.1500	-0317.1	011.9	48.88
209.0	000.0012	0590.4	006.5	352.3	000.1500	-0326.0	011.9	48.91
210.0	000.0013	0592.3	006.6	351.5	000.1500	-0335.4	011.9	48.93
211.0	000.0014	0592.1	006.7	350.8	000.1500	-0344.5	011.9	48.95
212.0	000.0014	0590.2	006.8	350.0	000.1500	-0351.4	011.9	48.95
213.0	000.0015	0587.3	006.9	349.2	000.1500	-0354.5	011.9	48.95
214.0	000.0015	0584.8	007.0	348.5	000.1500	-0353.7	011.9	48.93
215.0	000.0016	0583.6	007.1	347.7	000.1500	-0349.9	011.9	48.90
216.0	000.0017	0583.3	007.2	346.9	000.1500	-0342.7	011.9	48.87
217.0	000.0017	0583.7	007.4	346.1	000.1500	-0332.7	012.0	48.82
218.0	000.0018	0584.1	007.5	345.4	000.1500	-0321.8	012.0	48.77
219.0	000.0019	0583.3	007.6	344.6	000.1500	-0312.7	012.0	48.70
220.0	000.0019	0580.5	007.7	343.8	000.1500	-0305.3	012.1	48.62
221.0	000.0020	0576.4	007.8	343.1	000.1500	-0298.7	012.1	48.54
222.0	000.0021	0572.2	007.9	342.3	000.1500	-0293.2	012.2	48.44
223.0	000.0022	0568.9	008.0	341.6	000.1500	-0288.3	012.3	48.33
224.0	000.0023	0565.9	008.1	340.9	000.1500	-0284.0	012.4	48.22
225.0	000.0024	0563.1	008.2	340.2	000.1500	-0280.7	012.4	48.10

Munn-Reese, Inc.

Broadcast Engineering Consultants

Coldwater, MI 49036

Exhibit 12.6**Contour Protection Studies Toward APP CH293D - Independence, WA**

07-01-2009 NGDC 30 SEC Terrain Data

632165 BNPFT20030310BNJ

Channel = 293D

Max ERP = 0.15 kW

RCAMSL = 44 M

N. Lat. 46 48 58.0

W. Lng. 123 09 24.0

Protected

60 dBu

K294BG.P

Channel = 294D

Max ERP = 0.01 kW

RCAMSL = 842 M

N. Lat. 46 58 24.0

W. Lng. 123 08 11.0

Interfering

54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
320.0	000.1500	-0104.3	006.2	203.6	000.0010	0580.0	013.9	49.55	
321.0	000.1500	-0111.9	006.2	203.4	000.0010	0580.6	013.8	49.62	
322.0	000.1500	-0119.3	006.2	203.2	000.0010	0581.1	013.7	49.68	
323.0	000.1500	-0126.9	006.2	202.9	000.0010	0581.6	013.6	49.74	
324.0	000.1500	-0135.3	006.2	202.7	000.0010	0582.1	013.5	49.80	
325.0	000.1500	-0145.2	006.2	202.5	000.0009	0582.4	013.4	49.85	
326.0	000.1500	-0157.2	006.2	202.2	000.0009	0582.5	013.3	49.90	
327.0	000.1500	-0169.8	006.2	201.9	000.0009	0582.2	013.2	49.93	
328.0	000.1500	-0181.4	006.2	201.7	000.0009	0581.7	013.1	49.96	
329.0	000.1500	-0191.4	006.2	201.4	000.0009	0580.9	013.0	49.99	
330.0	000.1500	-0201.6	006.2	201.1	000.0009	0579.7	012.9	50.01	
331.0	000.1500	-0212.7	006.2	200.8	000.0009	0578.3	012.9	50.02	
332.0	000.1500	-0224.1	006.2	200.5	000.0009	0576.9	012.8	50.02	
333.0	000.1500	-0233.5	006.2	200.1	000.0008	0575.5	012.7	50.02	
334.0	000.1500	-0240.5	006.2	199.8	000.0008	0574.2	012.6	50.04	
335.0	000.1500	-0247.0	006.2	199.4	000.0008	0573.3	012.5	50.08	
336.0	000.1500	-0254.2	006.2	199.1	000.0008	0573.0	012.5	50.11	
337.0	000.1500	-0261.1	006.2	198.7	000.0008	0573.2	012.4	50.15	
338.0	000.1500	-0268.2	006.2	198.3	000.0008	0573.8	012.3	50.19	
339.0	000.1500	-0274.9	006.2	197.9	000.0008	0574.8	012.2	50.23	
340.0	000.1500	-0280.0	006.2	197.5	000.0008	0575.9	012.2	50.27	
341.0	000.1500	-0284.6	006.2	197.1	000.0008	0576.9	012.1	50.31	
342.0	000.1500	-0290.8	006.2	196.7	000.0008	0577.6	012.1	50.34	
343.0	000.1500	-0298.1	006.2	196.3	000.0008	0578.1	012.0	50.36	
344.0	000.1500	-0306.7	006.2	195.8	000.0007	0578.8	011.9	50.37	
345.0	000.1500	-0317.4	006.2	195.4	000.0007	0579.5	011.9	50.39	
346.0	000.1500	-0330.9	006.2	194.9	000.0007	0580.4	011.8	50.40	
347.0	000.1500	-0343.8	006.2	194.5	000.0007	0581.7	011.8	50.42	
348.0	000.1500	-0351.8	006.2	194.0	000.0007	0583.7	011.7	50.43	
349.0	000.1500	-0354.7	006.2	193.5	000.0007	0586.3	011.7	50.45	
350.0	000.1500	-0351.4	006.2	193.0	000.0007	0589.4	011.6	50.47	
351.0	000.1500	-0342.0	006.2	192.5	000.0007	0593.5	011.6	50.49	
352.0	000.1500	-0329.4	006.2	192.0	000.0007	0598.3	011.6	50.51	
353.0	000.1500	-0317.2	006.2	191.5	000.0007	0603.3	011.5	50.53	

Munn-Reese, Inc.

Broadcast Engineering Consultants

Coldwater, MI 49036

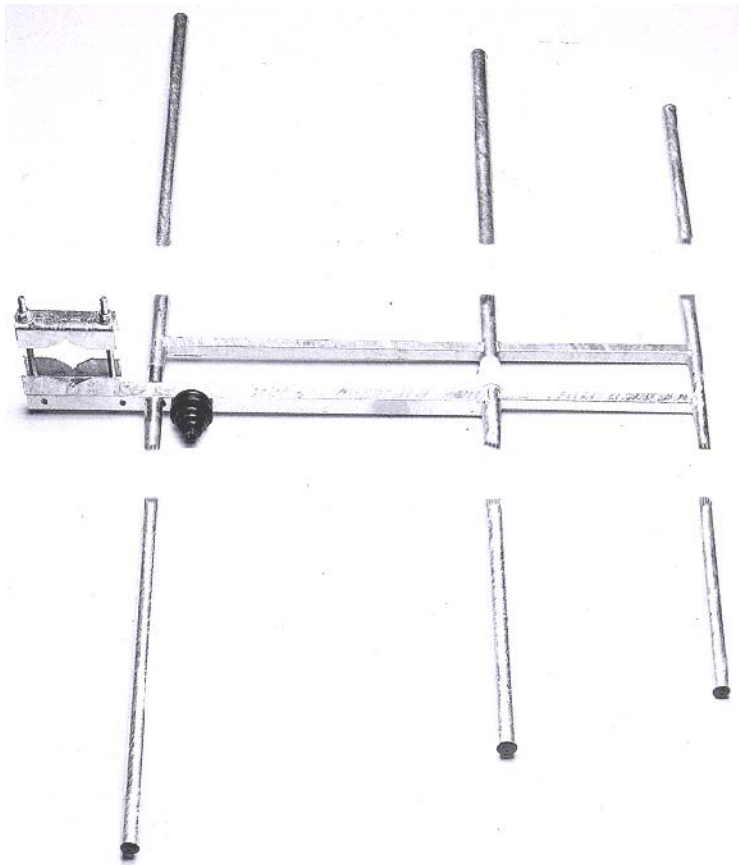
Exhibit 12.6**Contour Protection Studies Toward APP CH293D - Independence, WA**

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
354.0	000.1500	-0303.3	006.2	191.0	000.0006	0608.5	011.5	50.55
355.0	000.1500	-0292.8	006.2	190.5	000.0006	0614.0	011.5	50.56
356.0	000.1500	-0284.1	006.2	190.0	000.0006	0619.8	011.4	50.56
357.0	000.1500	-0271.9	006.2	189.4	000.0006	0625.6	011.4	50.58
358.0	000.1500	-0253.1	006.2	188.9	000.0006	0630.9	011.4	50.59
359.0	000.1500	-0232.7	006.2	188.3	000.0006	0635.6	011.4	50.59
000.0	000.1500	-0217.0	006.2	187.8	000.0006	0640.5	011.3	50.58
001.0	000.1500	-0205.8	006.2	187.3	000.0006	0645.6	011.3	50.57
002.0	000.1500	-0193.8	006.2	186.7	000.0006	0650.9	011.3	50.56
003.0	000.1500	-0180.5	006.2	186.2	000.0006	0655.0	011.3	50.54
004.0	000.1500	-0174.1	006.2	185.6	000.0006	0657.4	011.3	50.50
005.0	000.1500	-0173.6	006.2	185.1	000.0006	0658.6	011.3	50.45
006.0	000.1500	-0179.3	006.2	184.5	000.0005	0658.4	011.3	50.38
007.0	000.1500	-0184.6	006.2	184.0	000.0005	0656.0	011.3	50.30
008.0	000.1500	-0188.6	006.2	183.4	000.0005	0652.6	011.3	50.21
009.0	000.1500	-0190.3	006.2	182.9	000.0005	0649.8	011.3	50.12
010.0	000.1500	-0195.4	006.2	182.3	000.0005	0647.5	011.3	50.03
011.0	000.1500	-0202.5	006.2	181.8	000.0005	0646.1	011.4	49.94
012.0	000.1500	-0207.3	006.2	181.2	000.0005	0645.5	011.4	49.85
013.0	000.1500	-0210.2	006.2	180.7	000.0005	0644.9	011.4	49.76
014.0	000.1500	-0212.0	006.2	180.2	000.0005	0644.4	011.4	49.66
015.0	000.1500	-0213.5	006.2	179.6	000.0005	0643.8	011.5	49.61
016.0	000.1500	-0212.9	006.2	179.1	000.0005	0643.3	011.5	49.57
017.0	000.1500	-0209.3	006.2	178.6	000.0005	0642.5	011.5	49.53
018.0	000.1500	-0200.8	006.2	178.1	000.0005	0642.1	011.6	49.49
019.0	000.1500	-0189.3	006.2	177.6	000.0005	0641.4	011.6	49.44
020.0	000.1500	-0177.4	006.2	177.1	000.0005	0640.7	011.6	49.39
021.0	000.1500	-0166.0	006.2	176.6	000.0005	0640.0	011.7	49.34
022.0	000.1500	-0154.7	006.2	176.1	000.0005	0639.0	011.7	49.28
023.0	000.1500	-0143.9	006.2	175.7	000.0005	0637.8	011.8	49.22
024.0	000.1500	-0133.4	006.2	175.2	000.0005	0636.9	011.8	49.16
025.0	000.1500	-0123.8	006.2	174.7	000.0005	0636.5	011.9	49.10
026.0	000.1500	-0116.0	006.2	174.3	000.0005	0636.2	011.9	49.04
027.0	000.1500	-0109.7	006.2	173.8	000.0005	0636.0	012.0	48.98
028.0	000.1500	-0104.1	006.2	173.4	000.0005	0636.5	012.1	48.92
029.0	000.1500	-0098.9	006.2	173.0	000.0005	0637.6	012.1	48.86
030.0	000.1500	-0093.5	006.2	172.6	000.0005	0639.0	012.2	48.80
031.0	000.1500	-0087.9	006.2	172.2	000.0005	0640.9	012.2	48.75
032.0	000.1500	-0081.5	006.2	171.8	000.0005	0643.0	012.3	48.69
033.0	000.1500	-0074.2	006.2	171.4	000.0005	0645.3	012.4	48.64
034.0	000.1500	-0066.8	006.2	171.0	000.0005	0647.6	012.5	48.58
035.0	000.1500	-0059.6	006.2	170.7	000.0005	0649.7	012.5	48.52
036.0	000.1500	-0052.8	006.2	170.3	000.0005	0651.6	012.6	48.46
037.0	000.1500	-0046.7	006.2	170.0	000.0005	0653.2	012.7	48.40
038.0	000.1500	-0041.0	006.2	169.7	000.0005	0654.7	012.8	48.33
039.0	000.1500	-0035.5	006.2	169.3	000.0005	0656.1	012.9	48.26
040.0	000.1500	-0030.5	006.2	169.0	000.0005	0657.5	012.9	48.19

Munn-Reese, Inc.Broadcast Engineering Consultants
Coldwater, MI 49036

Exhibit 12.7 - Reprint of Directional Antenna Data from Antenna Manufacturer

(Actual Horizontal DA Pattern Component Rotated to 310°T)
(Actual Vertical DA Pattern Component Rotated to 310°T)



NICOM
BKY3/P
Medium Power
Portable
Broadband FM
Directional Antenna
Antena Portátil
Direccional
de FM Banda Ancha

This broadband dipole antenna constructed of stainless steel is designed to last a long time in any weather condition. Because of its sturdy construction it can support up to 2 kw of input power with the appropriate connector. Since it has a wide angle of radiation it is strongly recommended for omni-directional arrays. Due to the fact that it is easily disassembled and reassembled, it can be placed in a compact container making it very portable and

inexpensive to ship.

Esta antena dipolo de banda ancha, fabricada de acero inoxidable fue concebida para ser duradera en cualquier condición de clima. Debido a su robusta construcción puede soportar hasta 2 kw de potencia de entrada con el conector apropiado. Esta antena es recomendada para formaciones omnidireccionales ya que tiene un gran ángulo de irradiación. Dado al hecho que es fácil de armar y desarmar esta antena puede ser enviada en un contenedor muy compacto rendiendola portátil y económica para envíos.

TECHNICAL SPECIFICATIONS

Antenna type	3 element directional antenna
Frequency range	87.5 - 108 MHz
Bandwidth	20 MHz
Impedance	50 Ohms
Connectors	N type (1 kw) - EIA 7/8 (2 kw)
Power rating	2000 Watts max.
VSWR	< 1.2 max.
Polarization	vertical or horizontal
Gain	4.5 dB (referred to half-wave dipole)
H plane	150 degrees
V plane	70 degrees

Front-to-back ratio	18 dB
Lightning protection	all parts grounded
Max wind velocity	130 mph (208 km/h)
Wind load	48.4 Lbs (22 kg)
Wind surface	2.0 ft ² (0.19 m ²)
Materials (external)	stainless steel
Mounting	from 2" to 4"
Weight	20 Lbs (9 kg)
Dimensions	50"×72"×3" (1250×1800×60mm)
Packing	53"×19"×4" (1300×480×100mm)

Radiation Patterns (at mid-band)

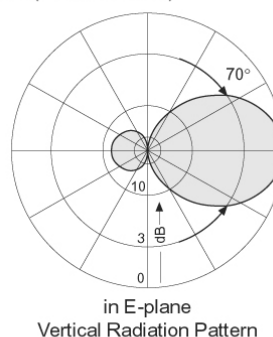
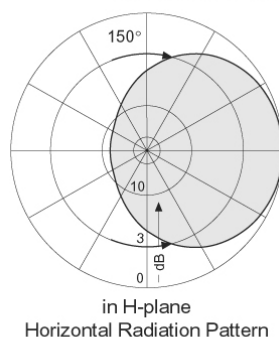
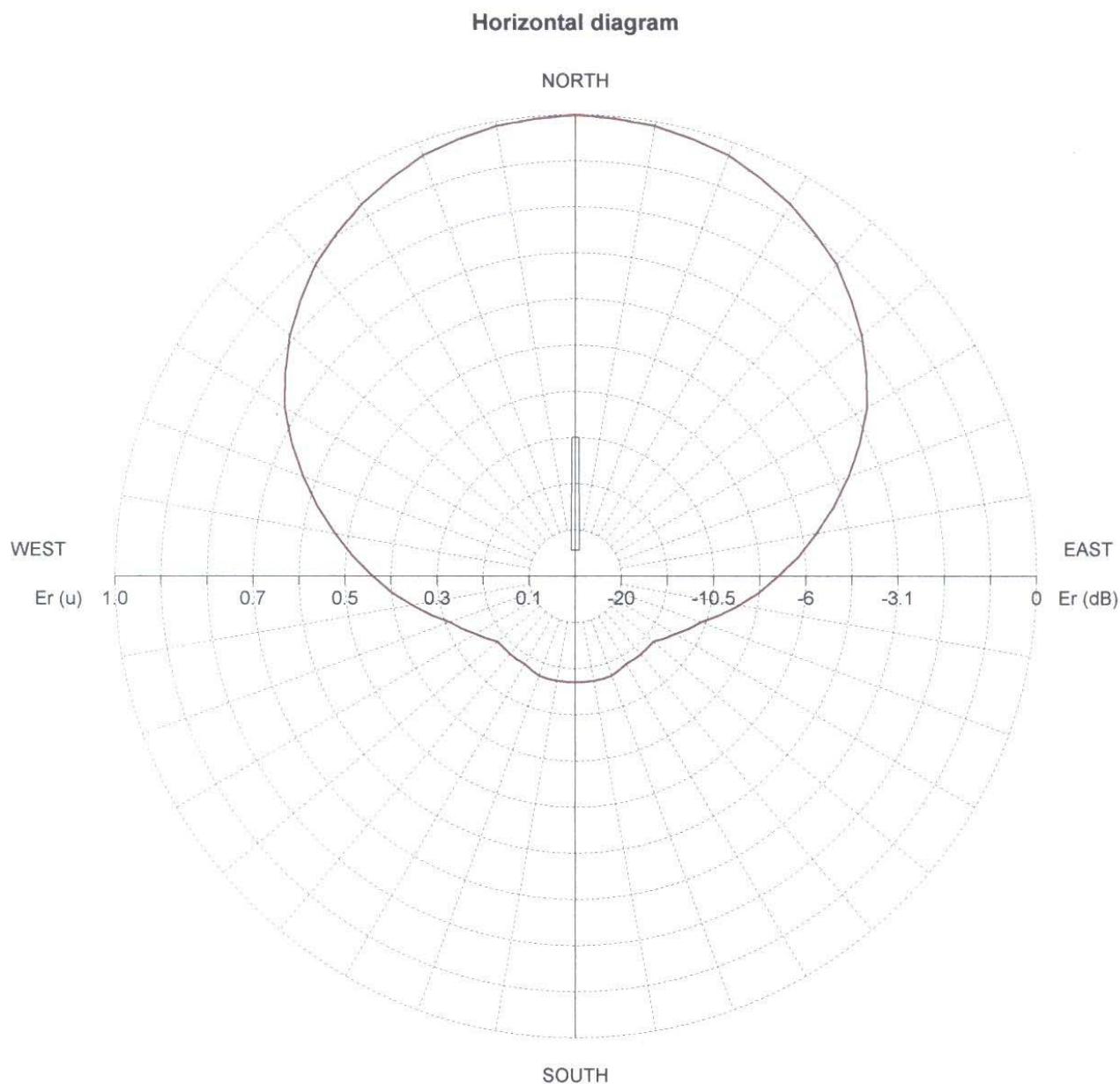


Exhibit 12.7 - Reprint of Directional Antenna Data from Antenna Manufacturer
(Actual Horizontal DA Pattern Component Rotated to 310°T)
(Actual Vertical DA Pattern Component Rotated to 310°T)

TX station: BKY/3
Frequency: 98.00 MHz

Site name:



—— 0.0° depres. (Total antenna), Gain (dBd): 3.6 ERP T.max (KW): 2.291 ERP E.max (KW): 1.778

Exhibit 12.7 - Reprint of Directional Antenna Data from Antenna Manufacturer
(Actual Horizontal DA Pattern Component Rotated to 310°T)
(Actual Vertical DA Pattern Component Rotated to 310°T)

TX station: BKY/3

Site name:

Frequency: 98.00 MHz

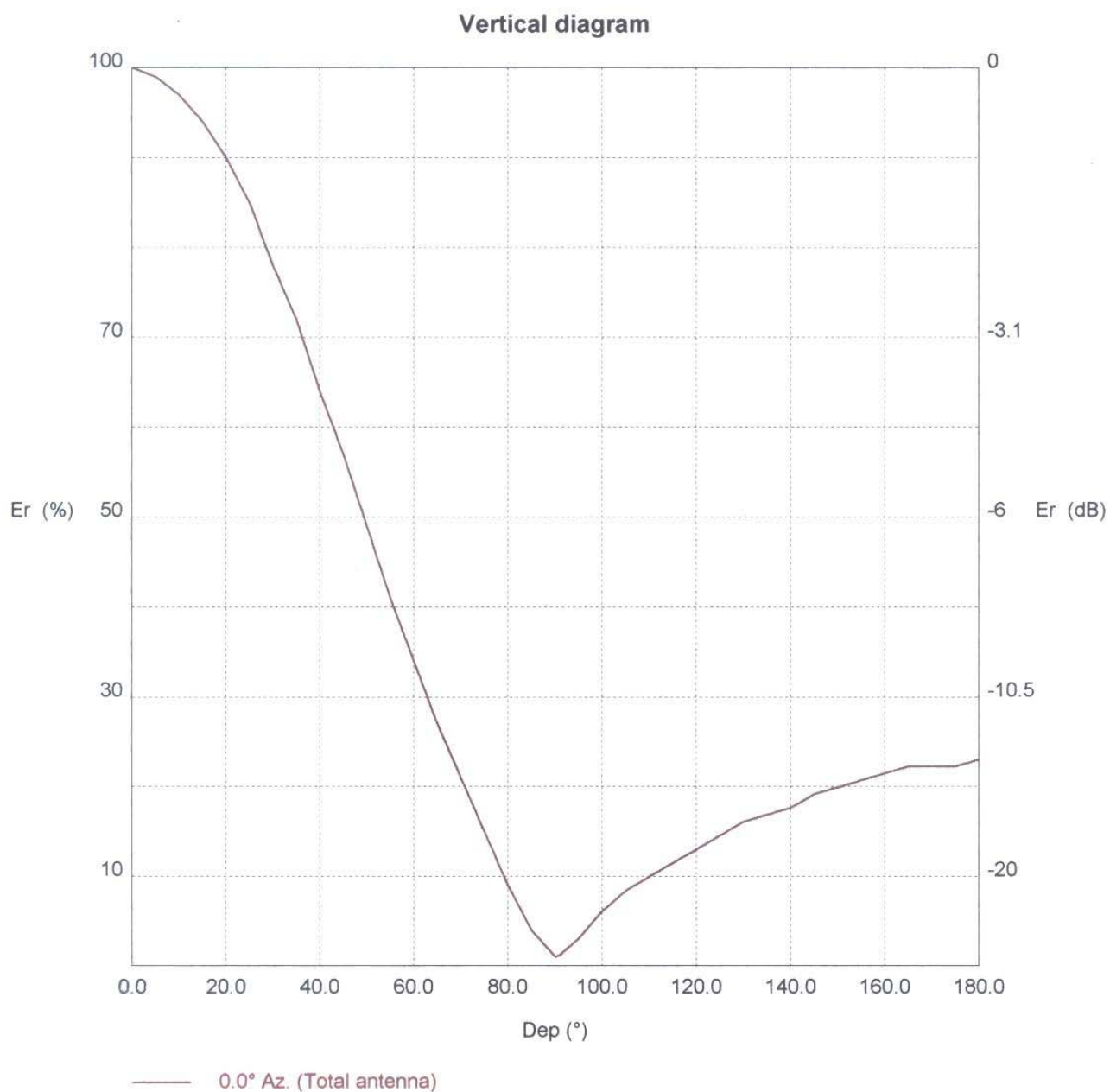


Exhibit 12.7 - Reprint of Directional Antenna Data from Antenna Manufacturer

(Actual Horizontal DA Pattern Component Rotated to 310°T)

(Actual Vertical DA Pattern Component Rotated to 310°T)

TX station: BKY/3

Site name:

Frequency: 98.00 MHz

Vertical diagram at an azimuth of 0° degrees

Dep (°)	Er (%)	ERP (KW)	Dep (°)	Er (%)	ERP (KW)	Dep (°)	Er (%)	ERP (KW)
0.0	100.0	1.78	60.0	34.0	0.21	120.0	13.0	0.03
2.0	99.6	1.76	62.0	31.2	0.17	122.0	13.6	0.03
4.0	99.2	1.75	64.0	28.4	0.14	124.0	14.3	0.04
6.0	98.6	1.73	66.0	25.8	0.12	126.0	14.9	0.04
8.0	97.8	1.70	68.0	23.4	0.10	128.0	15.5	0.04
10.0	97.0	1.67	70.0	21.0	0.08	130.0	16.1	0.05
12.0	95.8	1.63	72.0	18.6	0.06	132.0	16.4	0.05
14.0	94.6	1.59	74.0	16.2	0.05	134.0	16.7	0.05
16.0	93.2	1.54	76.0	13.8	0.03	136.0	17.0	0.05
18.0	91.6	1.49	78.0	11.4	0.02	138.0	17.3	0.05
20.0	90.0	1.44	80.0	9.0	0.01	140.0	17.6	0.06
22.0	88.0	1.38	82.0	7.0	0.01	142.0	18.2	0.06
24.0	86.0	1.32	84.0	5.0	0.00	144.0	18.9	0.06
26.0	83.6	1.24	86.0	3.4	0.00	146.0	19.3	0.07
28.0	80.8	1.16	88.0	2.2	0.00	148.0	19.6	0.07
30.0	78.0	1.08	90.0	1.0	0.00	150.0	19.9	0.07
32.0	75.6	1.02	92.0	1.7	0.00	152.0	20.2	0.07
34.0	73.2	0.95	94.0	2.6	0.00	154.0	20.5	0.08
36.0	70.4	0.88	96.0	3.7	0.00	156.0	20.9	0.08
38.0	67.2	0.80	98.0	4.9	0.00	158.0	21.2	0.08
40.0	64.0	0.73	100.0	6.1	0.01	160.0	21.5	0.08
42.0	61.2	0.67	102.0	7.1	0.01	162.0	21.8	0.08
44.0	58.4	0.61	104.0	8.0	0.01	164.0	22.1	0.09
46.0	55.4	0.55	106.0	8.7	0.01	166.0	22.2	0.09
48.0	52.2	0.48	108.0	9.4	0.02	168.0	22.2	0.09
50.0	49.0	0.43	110.0	10.0	0.02	170.0	22.2	0.09
52.0	45.8	0.37	112.0	10.6	0.02	172.0	22.2	0.09
54.0	42.6	0.32	114.0	11.2	0.02	174.0	22.2	0.09
56.0	39.6	0.28	116.0	11.8	0.02	176.0	22.4	0.09
58.0	36.8	0.24	118.0	12.4	0.03	178.0	22.7	0.09

TX station: BKY/3

Site name:

Frequency: 98.00 MHz

Horizontal diagram at 0.0° depres. (Total antenna)

Az (°)	Er (%)	ERP (KW)	Az (°)	Er (%)	ERP (KW)	Az (°)	Er (%)	ERP (KW)
0.0	100.0	1.78	120.0	25.0	0.11	240.0	25.0	0.11
10.0	99.0	1.74	130.0	22.0	0.09	250.0	29.0	0.15
20.0	97.0	1.67	140.0	22.0	0.09	260.0	36.0	0.23
30.0	93.0	1.54	150.0	22.0	0.09	270.0	44.0	0.34
40.0	88.0	1.38	160.0	23.0	0.09	280.0	53.0	0.50
50.0	81.0	1.17	170.0	23.0	0.09	290.0	63.0	0.71
60.0	73.0	0.95	180.0	23.0	0.09	300.0	73.0	0.95
70.0	63.0	0.71	190.0	23.0	0.09	310.0	81.0	1.17
80.0	53.0	0.50	200.0	23.0	0.09	320.0	88.0	1.38
90.0	44.0	0.34	210.0	22.0	0.09	330.0	93.0	1.54
100.0	36.0	0.23	220.0	22.0	0.09	340.0	97.0	1.67
110.0	29.0	0.15	230.0	22.0	0.09	350.0	99.0	1.74

