

**ONE-STEP UPGRADE /**  
**MINOR CHANGE APPLICATION**  
**CUMULUS LICENSING LLC**  
**KUSB (FM) RADIO STATION**  
**CH 277C0 - 103.3 MHZ - 100.0 KW**  
**HAZELTON, NORTH DAKOTA**  
**October 2006**

**EXHIBIT B**

The proposed KUSB antenna location will be shortspaced to one other FM station: KRVX, Channel 276C1, Wimbledon, North Dakota. The relevant distance between the stations is shown on Exhibit B1. Cumulus proposes to use the provisions of §73.215 of the Commission's rules to address this shortspaced situation. The shortage to this station complies with §73.215(e) of the Commission's rules.

Exhibit B2 specifically demonstrates that there will be no prohibited overlap between the proposed KUSB and the authorized KRVX. The contours of KRVX are based their licensed facilities, granted under §73.215, of 99.0 kilowatts effective radiated power at 144.0 meters height above average terrain. Attached as Exhibits B3 and B4 are the tabulated distances to the protected and interfering contours, along the pertinent arcs, of the proposed KUSB and KRVX. Further, attached as Exhibit B5 are the tabulated and protected contours of the proposed facility, in ten degree increments. Again, there is no prohibited overlap between the facilities.

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**EXHIBIT B1**

Clearance/Upgrade Study for KUSB, Hazelton, North Dakota  
Using Current Site as Reference

REFERENCE	CLASS = C0	DISPLAY DATES
46 35 24 N.	Current	DATA 10-07-06
100 47 46 W.	Spacings	SEARCH 10-09-06
----- Channel 277 - 103.3 MHz -----		

Call	Channel	Location	Power	Azi	Dist	FCC	Margin
Lat.	Lng.	Ant		HAAT			
KUSB	LIC 277C1	Hazelton	ND	0.0	0.00	259.0	-259.00
	46 35 24	100 47 46	CX	100.000 kW	294 M		
	Cumulus Licensing Llc			BLH-20060913ACP			
* KRVX	LIC-N 276C1	Wimbledon	ND	77.5	193.96	196.0	-2.04
	46 56 21	98 18 30	NCX	99.000 kW	144 M		
	James River Broadcasting			BLH-20051026ACF			
KZZY	LIC 278C1	Devils Lake	ND	39.7	203.17	196.0	7.17
	47 58 49	99 03 11	CX	100.000 kW	138 M		
	Double Z Broadcasting, Inc			BLH-20040204ABL			

\* Note: This shortage is addressed under \$73.215, see Exhibit B.

**Graham Brock, Inc. - Broadcast Technical Consultants**

**KUSB - Proposed**  
Latitude: 46-35-24 N  
Longitude: 100-47-46 W  
ERP: 100.00 kW  
Channel: 277C0

**KRVX**  
BLH-20051026ACF  
Latitude: 46-56-21 N  
Longitude: 098-18-30 W  
ERP: 99.00 kW  
Channel: 276C1

**KUSB 54 dBu (50/10)**

**KUSB 60 dBu (50/50)**

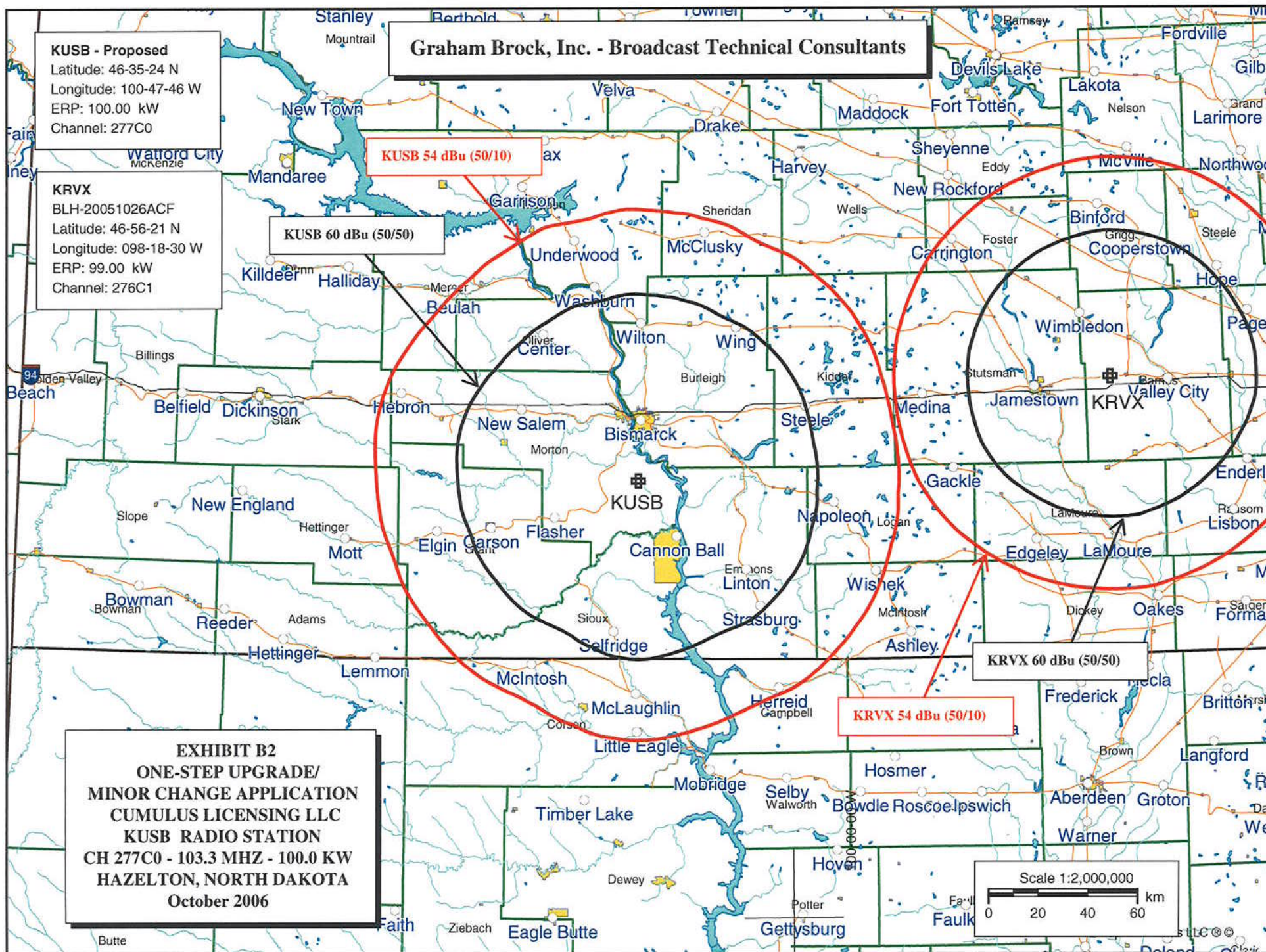
**KRVX 60 dBu (50/50)**

**KRVX 54 dBu (50/10)**

**EXHIBIT B2**  
**ONE-STEP UPGRADE/  
MINOR CHANGE APPLICATION**  
**CUMULUS LICENSING LLC**  
**KUSB RADIO STATION**  
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Scale 1:2,000,000

0 20 40 60 km



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**EXHIBIT B3**

KUSB - Proposed  
Channel = 277C0  
Max ERP = 100 kW  
RCAMSL = 884.9 M  
N. Lat = 46 35 24  
W. Lng = 100 47 46

KRVX - BLH-20051026ACF  
Channel = 276C1  
Max ERP = 99 kW  
RCAMSL = 587 M  
N. Lat = 46 56 21  
W. Lng = 98 18 30

Protected  
60 dBu

Interfering  
54 dBu

***30 second terrain database***

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
058.0	100.0000	0328.7	074.5	270.9	099.0000	0141.3	126.2	45.0
059.0	100.0000	0327.9	074.5	270.4	099.0000	0141.1	125.6	45.1
060.0	100.0000	0326.9	074.4	269.9	099.0000	0141.1	125.0	45.2
061.0	100.0000	0325.6	074.3	269.3	099.0000	0141.0	124.5	45.3
062.0	100.0000	0323.7	074.2	268.7	099.0000	0141.0	124.1	45.3
063.0	100.0000	0321.5	074.0	268.2	099.0000	0140.8	123.7	45.4
064.0	100.0000	0319.2	073.8	267.6	099.0000	0140.8	123.4	45.5
065.0	100.0000	0316.6	073.6	267.0	099.0000	0140.6	123.1	45.5
066.0	100.0000	0314.3	073.5	266.4	099.0000	0140.5	122.8	45.6
067.0	100.0000	0312.4	073.3	265.8	099.0000	0140.5	122.5	45.6
068.0	100.0000	0310.7	073.2	265.2	099.0000	0140.4	122.3	45.7
069.0	100.0000	0309.0	073.1	264.6	099.0000	0140.4	122.1	45.7
070.0	100.0000	0307.3	072.9	264.0	099.0000	0140.5	121.9	45.7
071.0	100.0000	0305.4	072.8	263.4	099.0000	0140.6	121.8	45.8
072.0	100.0000	0303.6	072.7	262.8	099.0000	0140.6	121.7	45.8
073.0	100.0000	0302.2	072.6	262.2	099.0000	0140.9	121.6	45.8
074.0	100.0000	0301.3	072.5	261.6	099.0000	0140.9	121.5	45.8
075.0	100.0000	0300.0	072.4	261.0	099.0000	0141.1	121.5	45.8
076.0	100.0000	0298.2	072.2	260.4	099.0000	0141.2	121.6	45.8
077.0	100.0000	0296.8	072.1	259.8	099.0000	0141.2	121.6	45.8
078.0	100.0000	0296.2	072.1	259.2	099.0000	0141.4	121.6	45.8
079.0	100.0000	0296.3	072.1	258.6	099.0000	0141.4	121.7	45.8
080.0	100.0000	0297.2	072.2	258.1	099.0000	0141.4	121.6	45.8
081.0	100.0000	0297.8	072.2	257.5	099.0000	0141.5	121.7	45.8
082.0	100.0000	0298.0	072.2	256.9	099.0000	0141.5	121.8	45.8
083.0	100.0000	0298.0	072.2	256.3	099.0000	0141.8	122.0	45.8
084.0	100.0000	0297.9	072.2	255.7	099.0000	0141.8	122.2	45.7
085.0	100.0000	0298.2	072.2	255.1	099.0000	0142.0	122.4	45.7
086.0	100.0000	0298.3	072.2	254.5	099.0000	0142.0	122.6	45.6
087.0	100.0000	0298.2	072.2	254.0	099.0000	0142.3	122.9	45.6
088.0	100.0000	0298.1	072.2	253.4	099.0000	0142.4	123.3	45.5
089.0	100.0000	0298.1	072.2	252.8	099.0000	0142.4	123.6	45.5
090.0	100.0000	0297.6	072.2	252.3	099.0000	0142.6	124.1	45.4
091.0	100.0000	0296.9	072.1	251.7	099.0000	0142.6	124.6	45.3
092.0	100.0000	0296.1	072.1	251.2	099.0000	0142.8	125.1	45.2
093.0	100.0000	0295.3	072.0	250.7	099.0000	0142.8	125.6	45.1
094.0	100.0000	0296.5	072.1	250.2	099.0000	0143.2	126.1	45.0
095.0	100.0000	0298.2	072.2	249.6	099.0000	0143.2	126.5	45.0
096.0	100.0000	0299.8	072.4	249.1	099.0000	0143.6	127.0	44.9
097.0	100.0000	0301.1	072.5	248.6	099.0000	0143.6	127.5	44.8
098.0	100.0000	0301.6	072.5	248.1	099.0000	0144.1	128.1	44.7

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**EXHIBIT B4**

KRVX - BLH-20051026ACF  
Channel = 276C1  
Max ERP = 99 kW  
RCAMSL = 587 M  
N. Lat = 46 56 21  
W. Lng = 98 18 30

KUSB - Proposed  
Channel = 277C0  
Max ERP = 100 kW  
RCAMSL = 884.9 M  
N. Lat = 46 35 24  
W. Lng = 100 47 46

Protected  
60 dBu

Interfering  
54 dBu

***30 second terrain database***

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
239.0	099.0000	0145.1	057.7	085.6	100.0000	0298.3	141.3	45.6
240.0	099.0000	0145.4	057.8	085.3	100.0000	0298.2	140.8	45.7
241.0	099.0000	0145.6	057.8	084.9	100.0000	0298.2	140.4	45.8
242.0	099.0000	0145.8	057.8	084.5	100.0000	0298.2	139.9	45.8
243.0	099.0000	0145.9	057.8	084.2	100.0000	0297.9	139.5	45.9
244.0	099.0000	0145.9	057.8	083.8	100.0000	0297.9	139.1	46.0
245.0	099.0000	0145.7	057.8	083.4	100.0000	0298.0	138.8	46.1
246.0	099.0000	0145.3	057.7	083.0	100.0000	0298.0	138.5	46.1
247.0	099.0000	0144.7	057.7	082.6	100.0000	0298.0	138.3	46.2
248.0	099.0000	0144.1	057.6	082.2	100.0000	0298.0	138.1	46.2
249.0	099.0000	0143.6	057.5	081.7	100.0000	0298.0	137.9	46.3
250.0	099.0000	0143.2	057.5	081.3	100.0000	0297.8	137.7	46.3
251.0	099.0000	0142.8	057.4	080.9	100.0000	0297.8	137.5	46.3
252.0	099.0000	0142.6	057.4	080.5	100.0000	0297.2	137.4	46.4
253.0	099.0000	0142.4	057.4	080.1	100.0000	0297.2	137.3	46.4
254.0	099.0000	0142.3	057.3	079.7	100.0000	0297.2	137.1	46.4
255.0	099.0000	0142.0	057.3	079.2	100.0000	0296.3	137.1	46.4
256.0	099.0000	0141.8	057.3	078.8	100.0000	0296.3	137.0	46.4
257.0	099.0000	0141.5	057.2	078.4	100.0000	0296.2	137.0	46.4
258.0	099.0000	0141.4	057.2	078.0	100.0000	0296.2	136.9	46.4
259.0	099.0000	0141.4	057.2	077.6	100.0000	0296.2	136.9	46.4
260.0	099.0000	0141.2	057.2	077.2	100.0000	0296.8	137.0	46.4
261.0	099.0000	0141.1	057.2	076.7	100.0000	0296.8	137.0	46.4
262.0	099.0000	0140.9	057.1	076.3	100.0000	0298.2	137.1	46.4
263.0	099.0000	0140.6	057.1	075.9	100.0000	0298.2	137.2	46.4
264.0	099.0000	0140.5	057.1	075.5	100.0000	0300.0	137.4	46.4
265.0	099.0000	0140.4	057.1	075.1	100.0000	0300.0	137.5	46.4
266.0	099.0000	0140.5	057.1	074.7	100.0000	0300.0	137.6	46.4
267.0	099.0000	0140.6	057.1	074.3	100.0000	0301.3	137.8	46.4
268.0	099.0000	0140.8	057.1	073.8	100.0000	0301.3	138.0	46.3
269.0	099.0000	0141.0	057.1	073.4	100.0000	0302.2	138.2	46.3
270.0	099.0000	0141.1	057.2	073.0	100.0000	0302.2	138.4	46.3
271.0	099.0000	0141.3	057.2	072.6	100.0000	0302.2	138.7	46.2
272.0	099.0000	0141.4	057.2	072.2	100.0000	0303.6	139.0	46.2
273.0	099.0000	0141.4	057.2	071.8	100.0000	0303.6	139.3	46.1
274.0	099.0000	0141.4	057.2	071.5	100.0000	0305.4	139.6	46.1
275.0	099.0000	0141.3	057.2	071.1	100.0000	0305.4	140.0	46.0
276.0	099.0000	0141.4	057.2	070.7	100.0000	0305.4	140.4	45.9
277.0	099.0000	0141.5	057.2	070.3	100.0000	0307.3	140.8	45.9
278.0	099.0000	0141.6	057.2	070.0	100.0000	0307.3	141.2	45.8
279.0	099.0000	0141.9	057.3	069.6	100.0000	0307.3	141.6	45.7

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**EXHIBIT B5**

Predicted contour:

N. Lat. = 46 35 24 - Tabulated Protected and Interfering Contour Data  
W. Lng. = 100 47 46 - KUSB Radio Station - Hazelton, North Dakota

HAAT and Distance to Contour - FCC Method - NGDC 30 SEC

Azi.	HAAT	ERP kW	dBk	Field	60-F5	40-F1	54-F1	100-F1
000	334.0	100.0000	20.00	1.000	74.91	176.05	109.07	10.66
010	332.8	100.0000	20.00	1.000	74.82	175.91	108.90	10.64
020	331.1	100.0000	20.00	1.000	74.69	175.68	108.64	10.61
030	325.1	100.0000	20.00	1.000	74.25	174.92	107.83	10.52
040	333.5	100.0000	20.00	1.000	74.87	175.99	108.99	10.65
050	334.7	100.0000	20.00	1.000	74.96	176.14	109.17	10.67
060	326.9	100.0000	20.00	1.000	74.39	175.15	108.07	10.55
070	307.3	100.0000	20.00	1.000	72.93	172.76	105.78	10.24
080	297.2	100.0000	20.00	1.000	72.17	171.69	104.81	10.08
090	297.6	100.0000	20.00	1.000	72.19	171.73	104.84	10.09
100	301.3	100.0000	20.00	1.000	72.48	172.12	105.20	10.15
110	303.4	100.0000	20.00	1.000	72.64	172.34	105.41	10.18
120	307.8	100.0000	20.00	1.000	72.97	172.82	105.83	10.25
130	301.5	100.0000	20.00	1.000	72.50	172.14	105.22	10.15
140	297.7	100.0000	20.00	1.000	72.20	171.74	104.85	10.09
150	273.2	100.0000	20.00	1.000	70.18	169.44	102.45	9.67
160	274.0	100.0000	20.00	1.000	70.25	169.51	102.53	9.68
170	286.5	100.0000	20.00	1.000	71.30	170.65	103.76	9.90
180	298.4	100.0000	20.00	1.000	72.26	171.81	104.92	10.10
190	287.4	100.0000	20.00	1.000	71.37	170.73	103.85	9.92
200	260.1	100.0000	20.00	1.000	69.08	168.25	101.14	9.43
210	246.9	100.0000	20.00	1.000	67.98	166.99	99.82	9.18
220	265.9	100.0000	20.00	1.000	69.57	168.78	101.72	9.53
230	269.4	100.0000	20.00	1.000	69.86	169.10	102.07	9.60
240	275.7	100.0000	20.00	1.000	70.39	169.66	102.70	9.71
250	278.7	100.0000	20.00	1.000	70.65	169.94	103.00	9.77
260	292.2	100.0000	20.00	1.000	71.76	171.19	104.32	10.00
270	300.8	100.0000	20.00	1.000	72.44	172.06	105.15	10.14
280	319.5	100.0000	20.00	1.000	73.84	174.22	107.12	10.43
290	325.7	100.0000	20.00	1.000	74.30	175.00	107.91	10.53
300	317.5	100.0000	20.00	1.000	73.69	173.97	106.88	10.40
310	304.9	100.0000	20.00	1.000	72.75	172.50	105.55	10.20
320	306.4	100.0000	20.00	1.000	72.87	172.67	105.69	10.23
330	315.0	100.0000	20.00	1.000	73.50	173.67	106.60	10.36
340	330.1	100.0000	20.00	1.000	74.62	175.55	108.50	10.60
350	320.5	100.0000	20.00	1.000	73.91	174.35	107.25	10.45

AMSL= 884.9M