

MINOR CHANGE APPLICATION
WAGR BROADCASTING, INC.
NEW FM TRANSLATOR STATION
CH 246D - 97.1 MHZ - 0.25 kW
LUMBERTON, NORTH CAROLINA
March 2018

EXHIBIT B

Interference Study for Channel 246D
Using Proposed Site as Reference

The proposed Channel 246, operating with an effective radiated power of 0.25 kilowatt, will not cause interference to any existing, applied for or proposed facility. As noted on Exhibit B1, the proposed Channel 246 is within the predicted 60 dBu contour of second adjacent stations WFLB, Channel 243C, Laurinburg, North Carolina and application for new translator on Channel 248D ("Ch 248") at Fairmont, North Carolina (BNPFT-20170728ABD). Due to the relationship between the proposed Channel 246 and WFLB and Ch 248, a 40 db ratio of the protected and interfering contours applies.

Proposed Channel 246 vs WFLB

The WFLB contour at the Channel 246 antenna site is in excess of 96.3 dBu (50/50). The corresponding interfering contour for Channel 246 is 136.3 dBu (50/10) (Exhibit B2). As shown in the tabulation of desired to undesired contours (Exhibit B3), the Channel 246 interfering contour (136.3 dBu, FCC 50/10) will not reach ground level. Since the Channel 246 antenna will be mounted 121.0 meters (397.0 feet) above ground and there are no structures of comparable height in the vicinity of the proposed Channel 246 antenna, this contour never reaches any potentially occupied space. As such, WFLB will not receive interference from the proposed translator.

Proposed Channel 246 vs Ch 248

The Ch 248 contour at the Channel 246 antenna site is in excess of 96.3 dBu (50/50). The corresponding interfering contour for Channel 246 is 136.3 dBu (50/10) (Exhibit B2). As shown in the tabulation of desired to undesired contours (Exhibit B4), the Channel 246 interfering contour (136.3 dBu, FCC 50/10) will not reach ground level. Since the Channel 246 antenna will be mounted 121.0 meters (397.0 feet) above ground and there are no structures of comparable height in the vicinity of the proposed Channel 246 antenna, this contour never reaches any potentially occupied space. As such, Ch 248 will not receive interference from the proposed translator.

Based on the foregoing, it is believed that the proposed Channel 246 is in compliance with §74.1204(d) of the Commission's rules. If a waiver of the rule is needed to address WFLB or Ch 248, one is respectfully requested.

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EXHIBIT B1

Interference Study for Ch 246D
Using Proposed Site as Reference

REFERENCE		CH# 246D - 97.1 MHZ, Pwr= 0.25 kW, HAAT= 0.0 M, COR= 160 M							DISPLAY DATES		
34 40 00.0 N.		Average Protected F(50-50)= 7.1 km							DATA 03-12-18		
79 00 40.0 W.		Omni-directional							SEARCH 03-12-18		
CH CITY	CALL	TYPE STATE	ANT	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
243C	WFLB	LIC	NCX	345.9	13.02	34 46 49.0	100.000	10.6	74.5	-11.4*	-62.5*
Laurinburg			NC	165.9	BMLH20120425ADF	79 02 45.0	318	368	Beasley Media Group Licens		
246D	1772910!	APP	C	0.0	0.00	34 40 00.0	0.250	0.00	0.00	-64.5R	64.5M
Lumberton			NC	0.0	BNPFT20170726AQF	79 00 40.0		160	Wagr Broadcasting, Inc.		
246C0	WQMG	LIC	DCX	331.7	161.75	35 56 42.0	100.000	177.6	75.8	-29.5*	39.2
Greensboro			NC	151.2	BLH20031112AID	79 51 45.0	327	565	Entercom License, Llc		
248D	1772861	APP	C	0.0	0.00	34 40 00.0	0.250	1.1	13.8	-14.9*	-14.9*
Fairmont			NC	0.0	BNPFT20170728ABD	79 00 40.0		160	Truth Broadcasting Corpora		
247C1	WMNX	LIC	CX	128.5	109.26	34 03 06.0	100.000	101.7	69.6	-6.7	18.2
Wilmington			NC	309.0	BLH20090109AVP	78 04 57.0	269	276	Cumulus Licensing Llc		
245C0	WWPL	LIC	CX	44.2	113.86	35 23 52.0	100.000	105.4	72.7	-5.6	20.0
Goldsboro			NC	224.7	BMLH20090708AEX	78 08 07.0	300	337	New Age Communications, Lt		
299C3	WUKS	LIC	NCN	331.4	25.89	34 52 17.0	5.200	0.0	0.0	11.5R	14.4M
St. Pauls			NC	151.4	BLH19981020KB	79 08 49.0	200	261	Beasley Media Group Licens		
247D	W247BS	LIC	DV	8.8	46.44	35 04 46.0	0.250	11.1	7.8	21.5	17.8
Hope Mills			NC	188.9	BLFT20160425AAH	78 55 58.0		248	Educational Media Foundati		
246D	W246AW	LIC	C	236.9	93.68	34 12 12.0	0.250	51.1	15.6	28.5	30.5
Florence			SC	56.4	BLFT20071015AIX	79 51 52.0	137	176	Community Broadcasters, Ll		
247D	W247CE	LIC	DC	328.2	69.32	35 11 46.0	0.250	19.5	12.9	36.3	35.3
Southern Pines			NC	148.0	BLFT20161011AEN	79 24 46.0		220	Eastern Airwaves, Llc		

Terrain database is FCC 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= East Zone, Co to 3rd adjacent.

All separation margins (if shown) include rounding. Call signs with exclamation marks need not be protected.

Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)

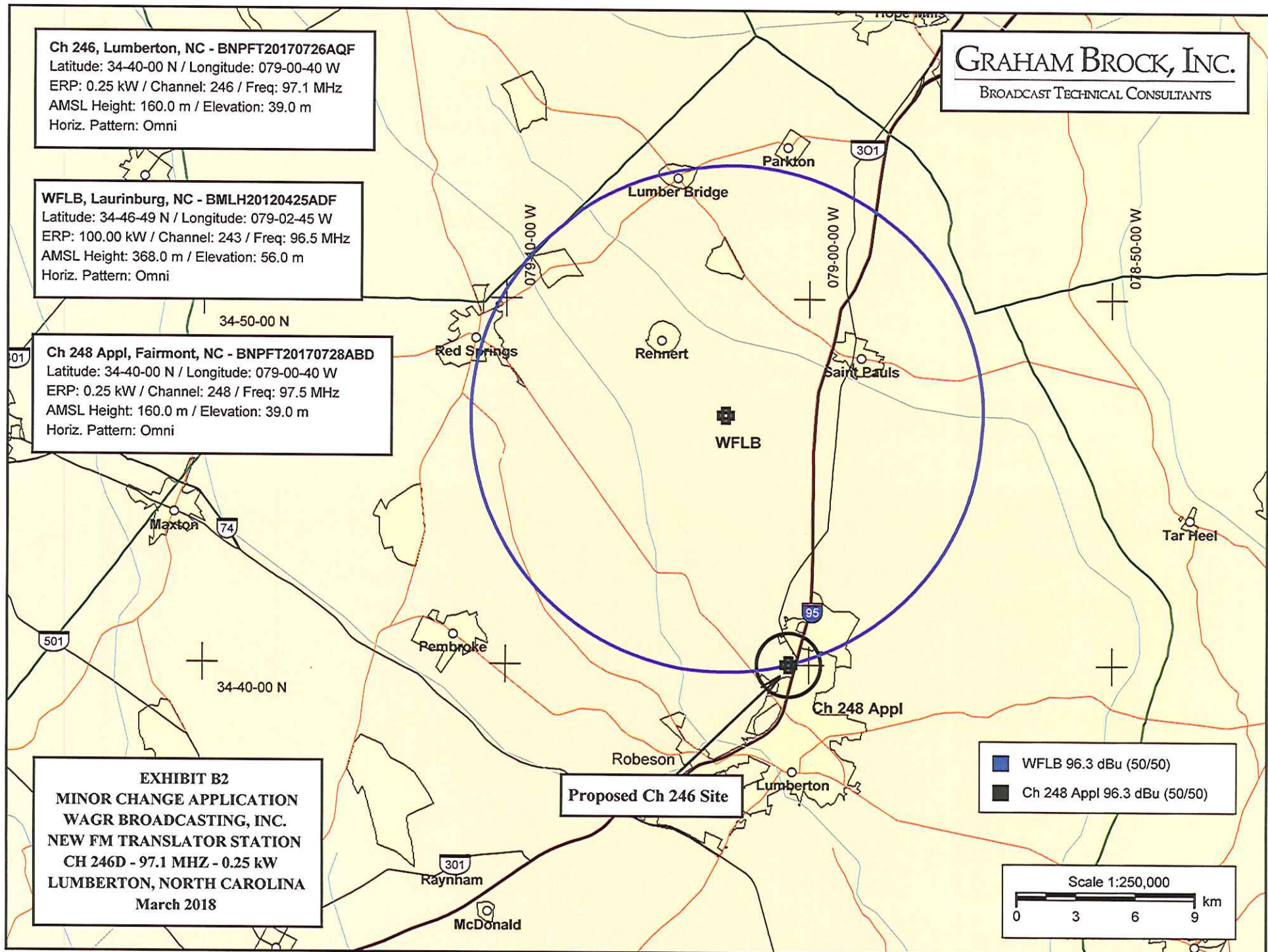
***affixed to 'IN' or 'OUT' values = site inside restricted contour.

Ch 246, Lumberton, NC - BNPFT20170726AQF
Latitude: 34-40-00 N / Longitude: 079-00-40 W
ERP: 0.25 kW / Channel: 246 / Freq: 97.1 MHz
AMSL Height: 160.0 m / Elevation: 39.0 m
Horiz. Pattern: Omni

WFLB, Laurinburg, NC - BMLH20120425ADF
Latitude: 34-46-49 N / Longitude: 079-02-45 W
ERP: 100.00 kW / Channel: 243 / Freq: 96.5 MHz
AMSL Height: 368.0 m / Elevation: 56.0 m
Horiz. Pattern: Omni

Ch 248 Appl, Fairmont, NC - BNPFT20170728ABD
Latitude: 34-40-00 N / Longitude: 079-00-40 W
ERP: 0.25 kW / Channel: 248 / Freq: 97.5 MHz
AMSL Height: 160.0 m / Elevation: 39.0 m
Horiz. Pattern: Omni

GRAHAM BROCK, INC.
BROADCAST TECHNICAL CONSULTANTS



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EXHIBIT B3

Proposed Channel 246 vs WFLB Interference Contour Tabulation

1772910 Lumberton, NC, Showing Protection to WFLB
 74.1204(d) Study - Using NGDC 30 SEC Terrain Database
 Translator or LPFM Maximum Licensed ERP = 0.25
 Translator or LPFM Antenna Height AG = 121 Meters
 1772910 Antenna Model = 1 Bay

Protected Station's Contour = 96.25565 dBu
 Translator's or LPFM's full Interference contour 136.25565

Review Azimuth = 0 Degrees True
 Relative Field on the horizon at Review Azimuth = 1.000
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW
 Distance between stations = 13.0 km
 Protected Station= WFLB, 100 kW, 368 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle (m)	Dist to IX Contour From Tower Base (m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	017.0682	017.0682	121.000
05.00	0.996	1.0	0.2480	016.9999	016.9352	119.518
10.00	0.985	1.0	0.2426	016.8122	016.5568	118.081
15.00	0.967	1.0	0.2338	016.5049	015.9425	116.728
20.00	0.942	1.0	0.2218	016.0782	015.1086	115.501
25.00	0.91	1.0	0.2070	015.5321	014.0768	114.436
30.00	0.871	1.0	0.1897	014.8664	012.8747	113.567
35.00	0.826	1.0	0.1706	014.0983	011.5487	112.914
40.00	0.774	1.0	0.1498	013.2108	010.1200	112.508
45.00	0.717	1.0	0.1285	012.2379	008.6535	112.347
50.00	0.654	1.0	0.1069	011.1626	007.1752	112.449
55.00	0.586	1.0	0.0858	010.0020	005.7369	112.807
60.00	0.514	1.0	0.0660	008.7731	004.3865	113.402
65.00	0.437	1.0	0.0477	007.4588	003.1522	114.240
70.00	0.357	1.0	0.0319	006.0933	002.0840	115.274
75.00	0.273	1.0	0.0186	004.6596	001.2060	116.499
80.00	0.186	1.0	0.0086	003.1747	000.5513	117.874
85.00	0.096	1.0	0.0023	001.6385	000.1428	119.368
90.00	0.0	1.0	0.0000	000.0085	000.0000	120.991

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EXHIBIT B4

Proposed Channel 246 vs Ch 248 Interference Contour Tabulation

1772910 Lumberton, NC, Showing Protection to 1772861
 74.1204(d) Study - Using NGDC 30 SEC Terrain Database
 Translator or LPFM Maximum Licensed ERP = 0.25
 Translator or LPFM Antenna Height AG = 121 Meters
 1772910 Antenna Model = 1 Bay

Protected Station's Contour = 96.25565 dBu
 Translator's or LPFM's full Interference contour 136.25565

Review Azimuth = 0 Degrees True
 Relative Field on the horizon at Review Azimuth = 1.000
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW
 Distance between stations = 0.0 km
 Protected Station= 1772861, .25 kW, 160 M Meters COR AMSL

Depression Angle From Horizon(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	1.0	0.2500	017.0682	017.0682	121.000
05.00	0.996	1.0	0.2480	016.9999	016.9352	119.518
10.00	0.985	1.0	0.2426	016.8122	016.5568	118.081
15.00	0.967	1.0	0.2338	016.5049	015.9425	116.728
20.00	0.942	1.0	0.2218	016.0782	015.1086	115.501
25.00	0.91	1.0	0.2070	015.5321	014.0768	114.436
30.00	0.871	1.0	0.1897	014.8664	012.8747	113.567
35.00	0.826	1.0	0.1706	014.0983	011.5487	112.914
40.00	0.774	1.0	0.1498	013.2108	010.1200	112.508
45.00	0.717	1.0	0.1285	012.2379	008.6535	112.347
50.00	0.654	1.0	0.1069	011.1626	007.1752	112.449
55.00	0.586	1.0	0.0858	010.0020	005.7369	112.807
60.00	0.514	1.0	0.0660	008.7731	004.3865	113.402
65.00	0.437	1.0	0.0477	007.4588	003.1522	114.240
70.00	0.357	1.0	0.0319	006.0933	002.0840	115.274
75.00	0.273	1.0	0.0186	004.6596	001.2060	116.499
80.00	0.186	1.0	0.0086	003.1747	000.5513	117.874
85.00	0.096	1.0	0.0023	001.6385	000.1428	119.368
90.00	0.0	1.0	0.0000	000.0085	000.0000	120.991

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EXHIBIT B5

N. Lat. = 34 40 00.0 - Predicted Protected and Interfering Contours
W. Lng. = 79 00 40.0 - New FM Translator, Lumberton, North Carolina

HAAT and Distance to Contour - FCC 30 second terrain database

Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5	40-F1	54-F1	100-F1	136.3-F1
000	44.2	115.8	0.2500	-6.02	1.000	13.83	47.07	20.84	1.11	0.02
010	43.5	116.5	0.2500	-6.02	1.000	13.87	47.18	20.92	1.11	0.02
020	44.4	115.6	0.2500	-6.02	1.000	13.82	47.05	20.83	1.11	0.02
030	42.4	117.6	0.2500	-6.02	1.000	13.93	47.34	21.01	1.11	0.02
040	40.2	119.8	0.2500	-6.02	1.000	14.06	47.67	21.21	1.11	0.02
050	40.0	120.0	0.2500	-6.02	1.000	14.07	47.70	21.23	1.11	0.02
060	40.0	120.0	0.2500	-6.02	1.000	14.07	47.70	21.23	1.11	0.02
070	40.5	119.5	0.2500	-6.02	1.000	14.04	47.63	21.19	1.11	0.02
080	42.1	117.9	0.2500	-6.02	1.000	13.95	47.40	21.05	1.11	0.02
090	42.9	117.1	0.2500	-6.02	1.000	13.90	47.27	20.97	1.11	0.02
100	38.9	121.1	0.2500	-6.02	1.000	14.13	47.86	21.33	1.11	0.02
110	39.0	121.0	0.2500	-6.02	1.000	14.13	47.84	21.32	1.11	0.02
120	37.1	122.9	0.2500	-6.02	1.000	14.23	48.10	21.48	1.11	0.02
130	36.7	123.3	0.2500	-6.02	1.000	14.26	48.16	21.52	1.11	0.02
140	35.0	125.0	0.2500	-6.02	1.000	14.35	48.40	21.67	1.11	0.02
150	32.1	127.9	0.2500	-6.02	1.000	14.52	48.80	21.92	1.11	0.02
160	31.5	128.5	0.2500	-6.02	1.000	14.56	48.88	21.97	1.11	0.02
170	36.2	123.8	0.2500	-6.02	1.000	14.28	48.22	21.56	1.11	0.02
180	39.3	120.7	0.2500	-6.02	1.000	14.11	47.80	21.29	1.11	0.02
190	39.4	120.6	0.2500	-6.02	1.000	14.10	47.79	21.29	1.11	0.02
200	40.0	120.0	0.2500	-6.02	1.000	14.07	47.70	21.23	1.11	0.02
210	40.0	120.0	0.2500	-6.02	1.000	14.07	47.70	21.23	1.11	0.02
220	40.0	120.0	0.2500	-6.02	1.000	14.07	47.70	21.23	1.11	0.02
230	40.0	120.0	0.2500	-6.02	1.000	14.07	47.70	21.23	1.11	0.02
240	40.4	119.6	0.2500	-6.02	1.000	14.05	47.64	21.20	1.11	0.02
250	40.0	120.0	0.2500	-6.02	1.000	14.07	47.70	21.23	1.11	0.02
260	40.2	119.8	0.2500	-6.02	1.000	14.06	47.67	21.21	1.11	0.02
270	40.7	119.3	0.2500	-6.02	1.000	14.03	47.59	21.17	1.11	0.02
280	41.9	118.1	0.2500	-6.02	1.000	13.96	47.43	21.06	1.11	0.02
290	43.3	116.7	0.2500	-6.02	1.000	13.88	47.20	20.93	1.11	0.02
300	43.3	116.7	0.2500	-6.02	1.000	13.88	47.21	20.93	1.11	0.02
310	46.0	114.0	0.2500	-6.02	1.000	13.72	46.79	20.68	1.11	0.02
320	45.6	114.4	0.2500	-6.02	1.000	13.75	46.85	20.71	1.11	0.02
330	47.0	113.0	0.2500	-6.02	1.000	13.66	46.62	20.57	1.11	0.02
340	45.0	115.0	0.2500	-6.02	1.000	13.78	46.95	20.77	1.11	0.02
350	43.4	116.6	0.2500	-6.02	1.000	13.87	47.19	20.92	1.11	0.02

AMSL= 160.0 M