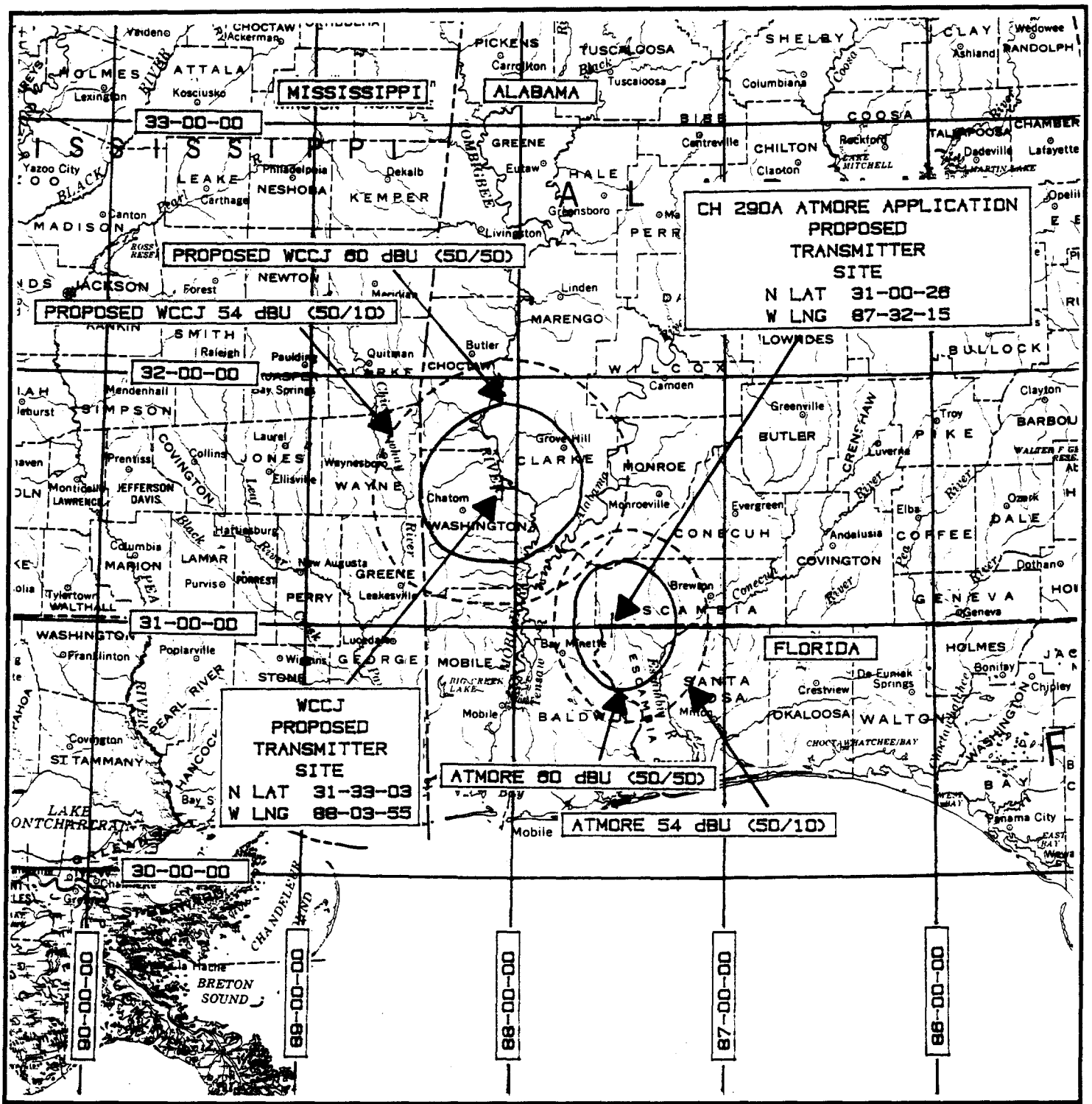


PROTECT/INTERFERING CONTOURS

MAP IS A USGS 1:2,500,000 SCALE OF A PORTION OF THE STATES OF ALABAMA, FLORIDA AND MISSISSIPPI.

SEE EXHIBIT # 4C FOR A MORE DETAILED DEPICTION OF THE CONTOURS.

SCALE 1:2,500,000

MI 50 0 50 MI

KM 50 0 50 100 KM

EXHIBIT #4B

AMEND BPH-891228MT

BENCHMARK COMM. CORP.

WCCJ-FM RADIO STATION

CH 291C3 - 106.1 MHZ - 25 KW

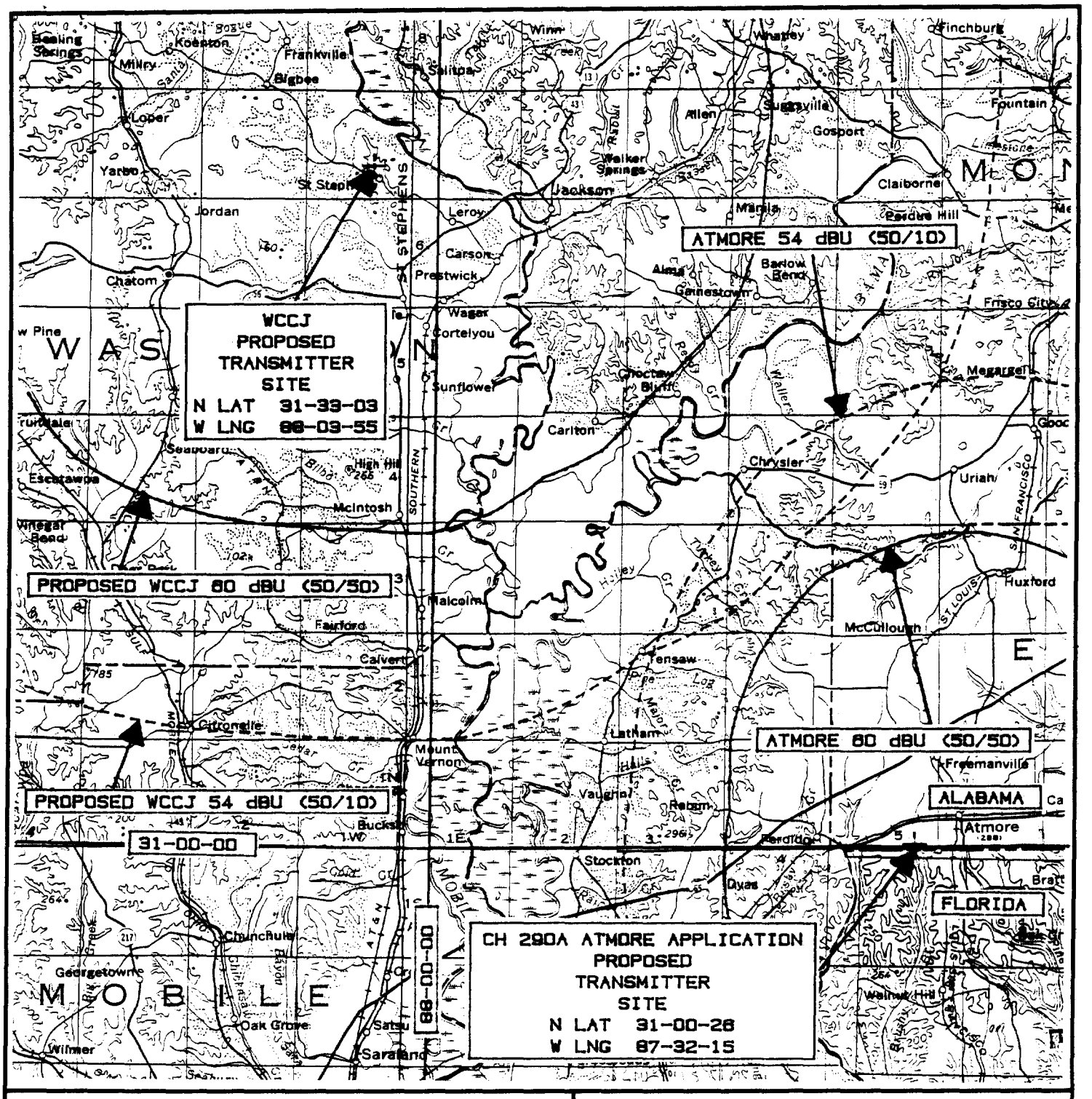
CHATOM, ALABAMA

SEPTEMBER 1990

BROMO COMMUNICATIONS

BROADCAST TECHNICAL CONSULTANTS

St Simons Island, Georgia Washington, D.C.



ALLOCATION STUDY (DETAIL)

MAP IS A USGS 1:500,000 SCALE OF A PORTION OF THE STATES OF ALABAMA AND FLORIDA.

SCALE 1:500,000

MI 10 0 10 MI

KM 10 0 10 20 KM

EXHIBIT #4C

AMEND BPH-891228MT
BENCHMARK COMM. CORP.
WCCJ-FM RADIO STATION
CH 291C3 - 106.1 MHZ - 25 KW
CHATOM, ALABAMA

SEPTEMBER 1990

BROMO COMMUNICATIONS
BROADCAST TECHNICAL CONSULTANTS
St Simons Island, Georgia Washington, D.C.

TABULATION OF TV/FM CONTOUR CALCULATIONS ON CHANNEL 291

AZIMUTH	KW	FIELD	DBK	HAAT (M)	70/50%	60/50%	54/10%
* 0.0	14.06	.750	11.48	119.73	22.87	37.42	56.92
* 45.0	23.04	.960	13.62	93.64	22.33	36.62	57.68
* 90.0	20.25	.900	13.06	94.43	21.70	35.71	56.20
*135.0	13.73	.741	11.38	96.93	19.85	32.97	51.84
*180.0	12.96	.720	11.13	97.42	19.59	32.59	51.22
*225.0	23.52	.970	13.71	96.62	22.82	37.35	58.56
*270.0	22.33	.945	13.49	96.23	22.48	36.84	57.82
*315.0	13.73	.741	11.38	105.04	20.87	34.48	53.62
10.0	15.60	.790	11.93	113.93	22.72	37.20	57.01
20.0	17.64	.840	12.46	108.13	22.67	37.12	57.33
30.0	20.03	.895	13.02	102.33	22.64	37.09	57.71
40.0	22.09	.940	13.44	96.53	22.46	36.81	57.75
50.0	24.01	.980	13.80	93.72	22.57	36.97	58.22
60.0	24.75	.995	13.94	93.90	22.76	37.26	58.64
70.0	25.00	1.000	13.98	94.08	22.84	37.37	58.81
80.0	23.04	.960	13.62	94.25	22.40	36.73	57.80
*100.0	18.28	.855	12.62	98.12	21.60	35.55	55.69
*110.0	16.81	.820	12.26	99.82	21.35	35.18	55.01
*120.0	15.60	.790	11.93	94.61	20.27	33.60	52.93
*130.0	14.44	.760	11.60	92.51	19.57	32.57	51.47
*140.0	13.32	.730	11.25	98.82	19.92	33.08	51.99
*140.2	13.29	.729	11.23	98.91	19.92	33.07	51.87
*150.0	12.08	.695	10.82	97.63	19.22	32.09	50.38
*160.0	11.90	.690	10.76	103.60	19.90	33.05	51.56
*170.0	12.08	.695	10.82	104.73	20.12	33.37	51.98
*190.0	14.06	.750	11.48	94.82	19.72	32.78	51.66
200.0	16.00	.800	12.04	95.34	20.50	33.94	53.41
210.0	18.49	.860	12.67	95.85	21.38	35.22	55.36
220.0	21.86	.935	13.40	96.37	22.38	36.69	57.58
230.0	24.50	.990	13.89	95.18	22.97	37.41	58.79
240.0	25.00	1.000	13.98	92.30	22.61	37.04	58.44
*241.6	25.00	1.000	13.98	91.34	22.55	36.96	58.34
250.0	24.75	.995	13.94	93.14	22.66	37.11	58.48
260.0	24.01	.980	13.80	94.68	22.69	37.15	58.42
280.0	20.25	.900	13.06	98.18	22.18	36.41	57.00
290.0	18.06	.850	12.57	100.14	21.79	35.83	55.98
300.0	16.00	.800	12.04	102.10	21.36	35.20	54.98
310.0	14.44	.760	11.60	104.06	21.03	34.72	54.04
320.0	13.32	.730	11.25	106.67	20.91	34.54	53.61
330.0	12.78	.715	11.07	109.93	21.10	34.81	53.80
340.0	12.78	.715	11.07	113.20	21.51	35.42	54.48
350.0	13.14	.725	11.19	116.46	22.08	36.26	55.48

AREAS WITHIN CONTOURS, Sq. Km. : 1465.56 3969.01 9693.00

OVERALL HEIGHT ABOVE AVERAGE TERRAIN = 100 (M)

ALL HEIGHTS IN METERS. ALL CONTOUR DISTANCES IN KILOMETERS.

ALL CONTOURS IN DBU AS DETERMINED BY BIVARIATE INTERPOLATION
USING VALUES FROM APPROPRIATE FCC F(50,50) AND F(50,10) CURVES.

WCCJ TABULATED CONTOUR DATA

* NOTE : TERRAIN DATA WAS DETERMINED FROM THE 3 TO 18 KILOMETER AVERAGE ELEVATIONS EXTRACTED FROM THE NGDC 30-SECOND DATABASE.

NOTE : ALL OTHER HEIGHT DATA WAS LINEARLY INTERPOLATED.

EXHIBIT #4D
AMEND BPH-891228MT
BENCHMARK COMM. CORP.
WCCJ-FM RADIO STATION
CH 291C3 - 106.1 MHZ - 25 KW
CHATOM, ALABAMA
SEPTEMBER 1990

BROMO COMMUNICATIONS
BROADCAST TECHNICAL CONSULTANTS
St Simons Island, Georgia Washington, D.C.

TABULATION OF TV/FM CONTOUR CALCULATIONS ON CHANNEL 290

AZIMUTH	KW	FIELD	DBK	HAAT (M)	60/50%	54/10%
* 0.0	3.27	.940	5.14	120.28	27.66	41.25
* 45.0	3.70	1.000	5.68	134.72	29.51	44.32
* 90.0	3.70	1.000	5.68	128.99	29.08	43.64
* 135.0	3.70	1.000	5.68	139.39	29.86	44.87
* 180.0	2.43	.810	3.85	150.91	28.36	42.16
* 225.0	.55	.385	-2.61	148.23	19.87	29.22
* 270.0	.36	.310	-4.49	144.87	17.20	26.28
* 315.0	1.00	.520	.00	124.51	21.44	30.98
10.0	3.59	.985	5.55	123.49	28.51	42.69
20.0	3.70	1.000	5.68	126.69	28.91	43.37
30.0	3.70	1.000	5.68	129.91	29.15	43.75
40.0	3.70	1.000	5.68	133.12	29.39	44.13
50.0	3.70	1.000	5.68	134.09	29.46	44.25
60.0	3.70	1.000	5.68	132.81	29.37	44.10
70.0	3.70	1.000	5.68	131.54	29.27	43.95
80.0	3.70	1.000	5.68	130.27	29.18	43.80
100.0	3.70	1.000	5.68	131.30	29.26	43.92
110.0	3.70	1.000	5.68	133.61	29.43	44.19
120.0	3.70	1.000	5.68	135.92	29.60	44.46
130.0	3.70	1.000	5.68	138.23	29.77	44.73
140.0	3.70	1.000	5.68	140.67	29.95	45.02
150.0	3.70	1.000	5.68	143.23	30.14	45.31
160.0	3.41	.960	5.33	145.79	29.87	44.82
170.0	2.96	.895	4.72	148.35	29.28	43.77
190.0	1.81	.700	2.58	144.26	26.24	38.55
* 200.0	1.27	.585	1.03	137.62	23.74	34.26
* 210.0	.89	.490	-.51	147.40	22.50	32.11
* 220.0	.62	.410	-2.06	150.45	20.74	30.18
* 230.0	.49	.365	-3.07	151.46	19.52	28.83
* 238.5	.43	.340	-3.69	149.11	18.55	27.77
* 240.0	.42	.335	-3.82	148.93	18.37	27.57
* 250.0	.37	.315	-4.35	152.68	17.97	27.12
* 260.0	.36	.310	-4.49	148.65	17.49	26.60
* 280.0	.39	.325	-4.08	136.89	17.13	26.20
* 290.0	.47	.355	-3.31	134.85	17.96	27.12
* 300.0	.61	.405	-2.17	134.88	19.43	28.75
* 310.0	.85	.480	-.69	126.49	20.70	30.15
* 318.3	1.12	.550	.49	123.90	22.02	31.62
* 320.0	1.18	.565	.72	123.99	22.33	31.96
+ * 320.2	1.18	.565	.72	124.03	22.33	31.96
* 330.0	1.61	.660	2.07	120.67	23.75	34.35
* 340.0	2.17	.765	3.36	122.74	25.62	37.63
* 350.0	2.70	.855	4.32	118.36	26.36	38.98

AREAS WITHIN CONTOURS, Sq. Km. : 2092.24 4659.51

OVERALL HEIGHT ABOVE AVERAGE TERRAIN = 136 (M)

ALL HEIGHTS IN METERS. ALL CONTOUR DISTANCES IN KILOMETERS.

ALL CONTOURS IN DBU AS DETERMINED BY BIVARIATE INTERPOLATION USING VALUES FROM APPROPRIATE FCC F(50,50) AND F(50,10) CURVES.

CH 290A APPL. ATMORE DATA

NOTE : UNLESS OTHERWISE NOTED ALL DATA WAS TAKEN FROM THE ATMORE CHANNEL 290A APPLICATION, FILE BPH-891205MJ.

* NOTE : THIS HEIGHT DATA WAS EXTRACTED FROM NGDC 30-SECOND DATABASE.

+ NOTE : SUPPLEMENTAL RADIAL ON A DIRECT BEARING TOWARDS WCCJ. HEIGHT DATA EXTRACTED FROM NGDC 30 SECOND DATABASE.

EXHIBIT #4E

AMEND BPH-891228MT
BENCHMARK COMM. CORP.
WCCJ-FM RADIO STATION
CH 291C3 - 106.1 MHZ - 25 KW
CHATOM, ALABAMA

SEPTEMBER 1990

BROMO COMMUNICATIONS
BROADCAST TECHNICAL CONSULTANTS
St Simons Island, Georgia Washington, D.C.

AMEND BPH-891228MT
BENCHMARK COMMUNICATIONS CORP.
WCCJ-FM RADIO STATION
CH 291C3 - 106.1 MHZ - 25 KW
CHATOM, ALABAMA
September 1990

Exhibit # 5

Facilities Within Study

There are no proposed or authorized FM or Television transmitters, or any non-broadcast radio stations within 60 meters of this proposed location.

There are no known established commercial or government receiving stations or cable head-end facilities within the blanketing contour of the proposed facility. There is, however, a sparsely populated area within the contour. See Exhibit # 5A for a further blanketing statement.

There are no proposed or authorized FM or Television transmitters, with the exception of one of two mutually exclusive applications for Channel 291C3 at Chatom, Alabama, within ten kilometers of this proposal. It should be further noted that there are no AM stations within 3.2 kilometers (2.0 miles) of this proposal.

FM BLANKETING CONTOUR CALCULATION

The blanketing contour of WCCJ is determined using the following formula as defined in 73.318 of the Commission's Rules:

D=0.394 * SQR(P)
where D= distance to blanketing contour in km
P=ERP in kW of the station

The ERP of WCCJ is 25 kW yielding a blanketing contour 1.97 km from the tower.

While it is the experience of this firm that very little, if any blanketing interference will be experienced by the grant of this proposal WCCJ will follow the guidelines of 73.318 and good engineering practice to satisfy blanketing complaints.

BLANKETING CONTOUR STUDY

EXHIBIT #5A
AMEND BPH-891228MT
BENCHMARK COMM. CORP.
WCCJ-FM RADIO STATION
CH 291C3 - 106.1 MHZ - 25 KW
CHATOM, ALABAMA
SEPTEMBER 1990

BROMO COMMUNICATIONS
BROADCAST TECHNICAL CONSULTANTS
St Simons Island, Georgia
Washington, D.C.

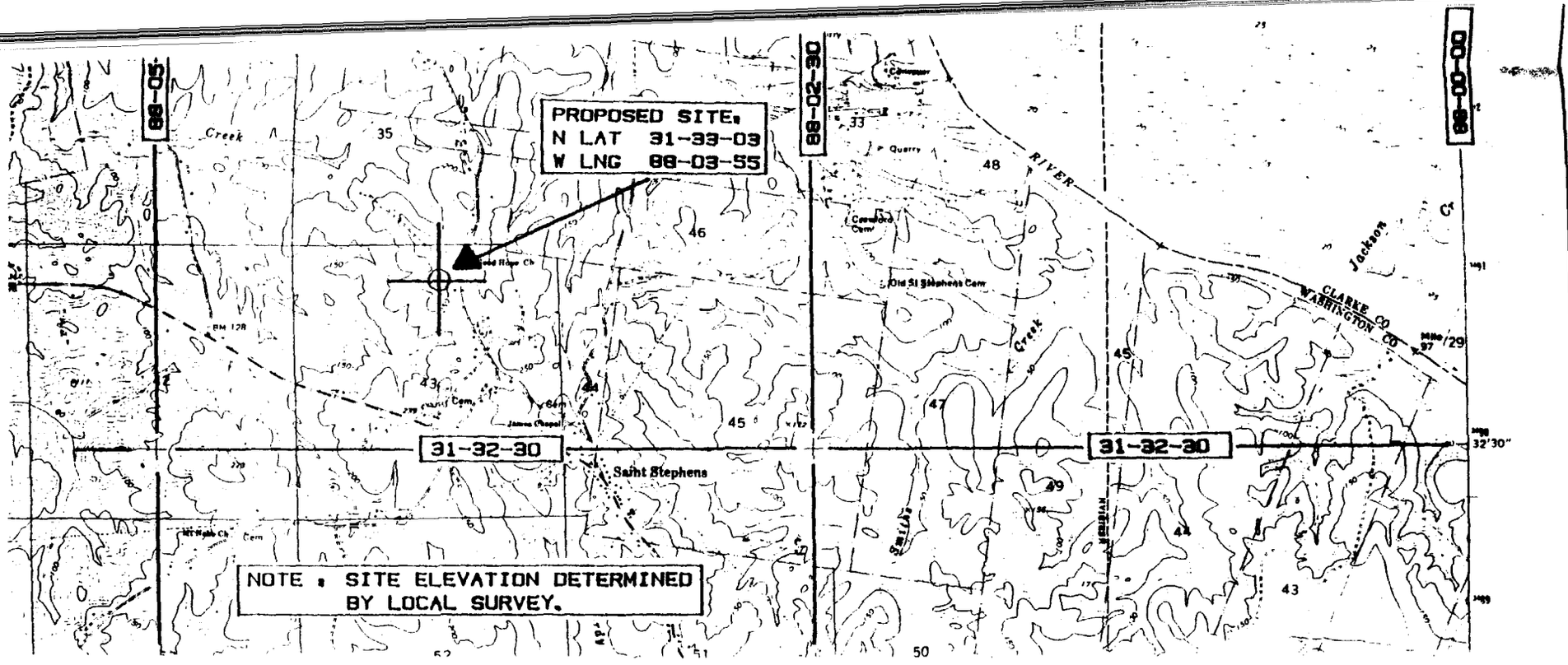


PHOTO-REDUCED SITE MAP

A FULL SCALE PORTION OF THE SAINT STEPHENS 7.5 MINUTE USGS TOPOGRAPHIC MAP IS ATTACHED AS EXHIBIT # 6.

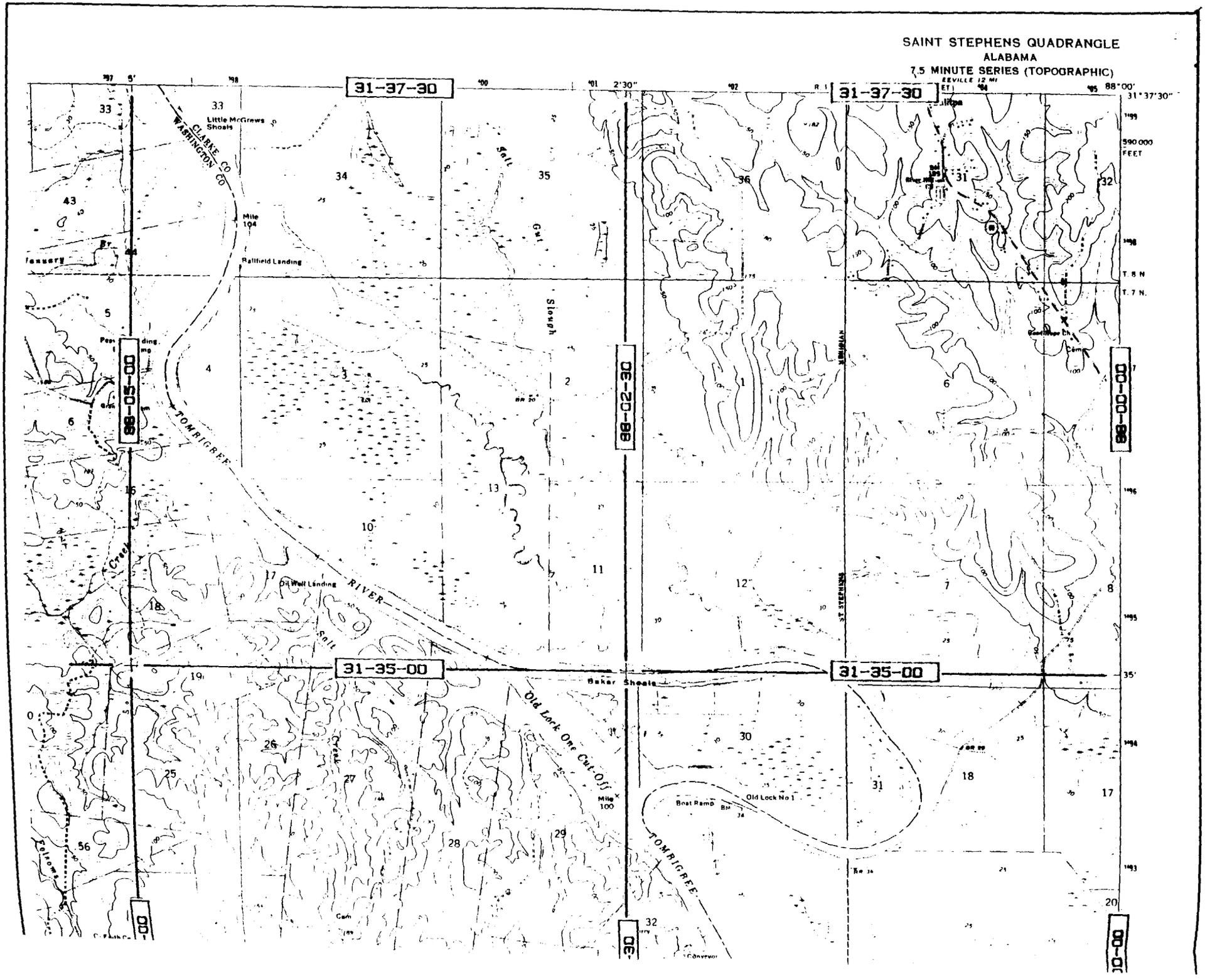
AN ORIGINAL SAINT STEPHENS QUADRANGLE IS ATTACHED TO THE ORIGINAL COPY OF THIS APPLICATION AS EXHIBIT # 6B.

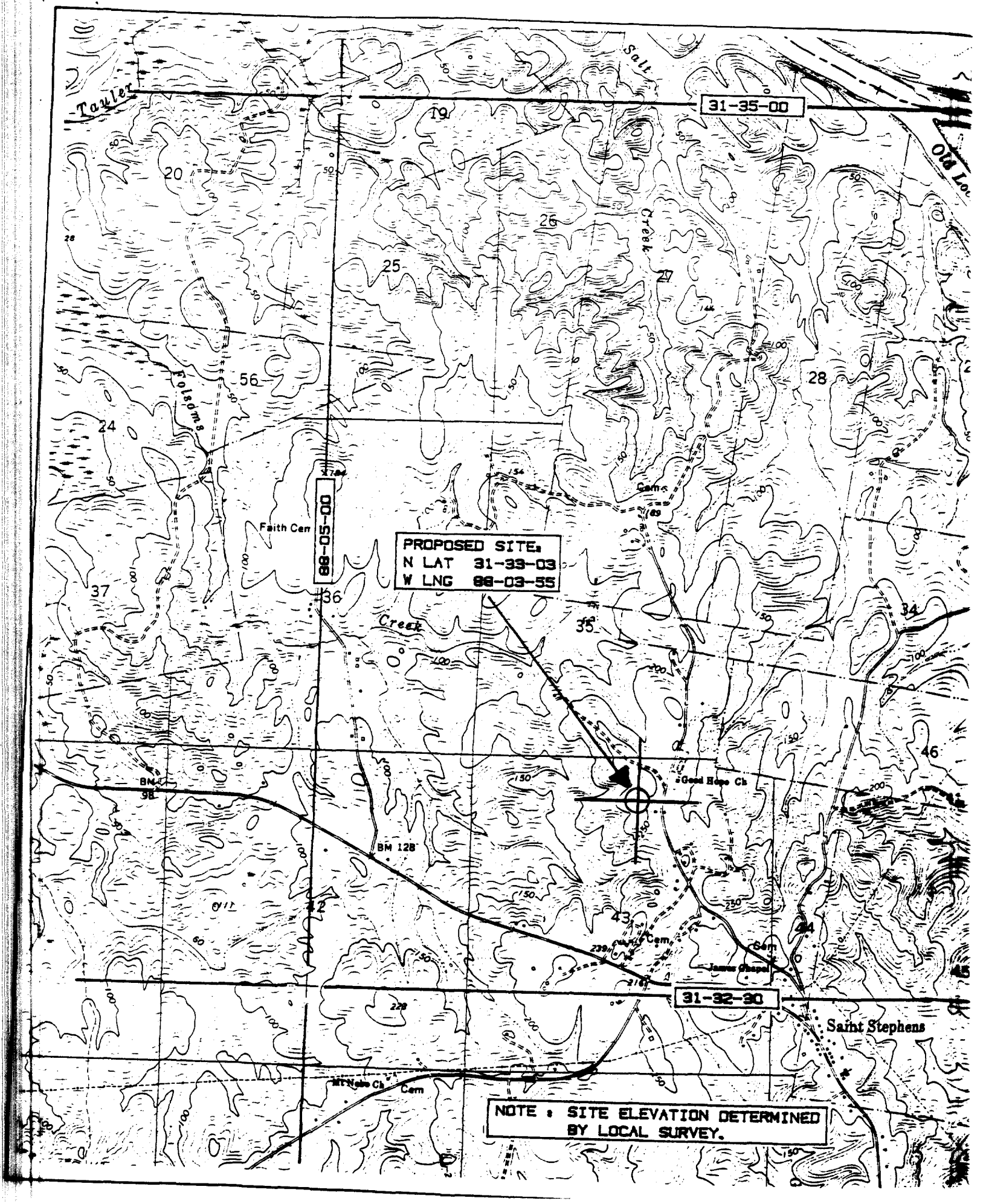
SCALE

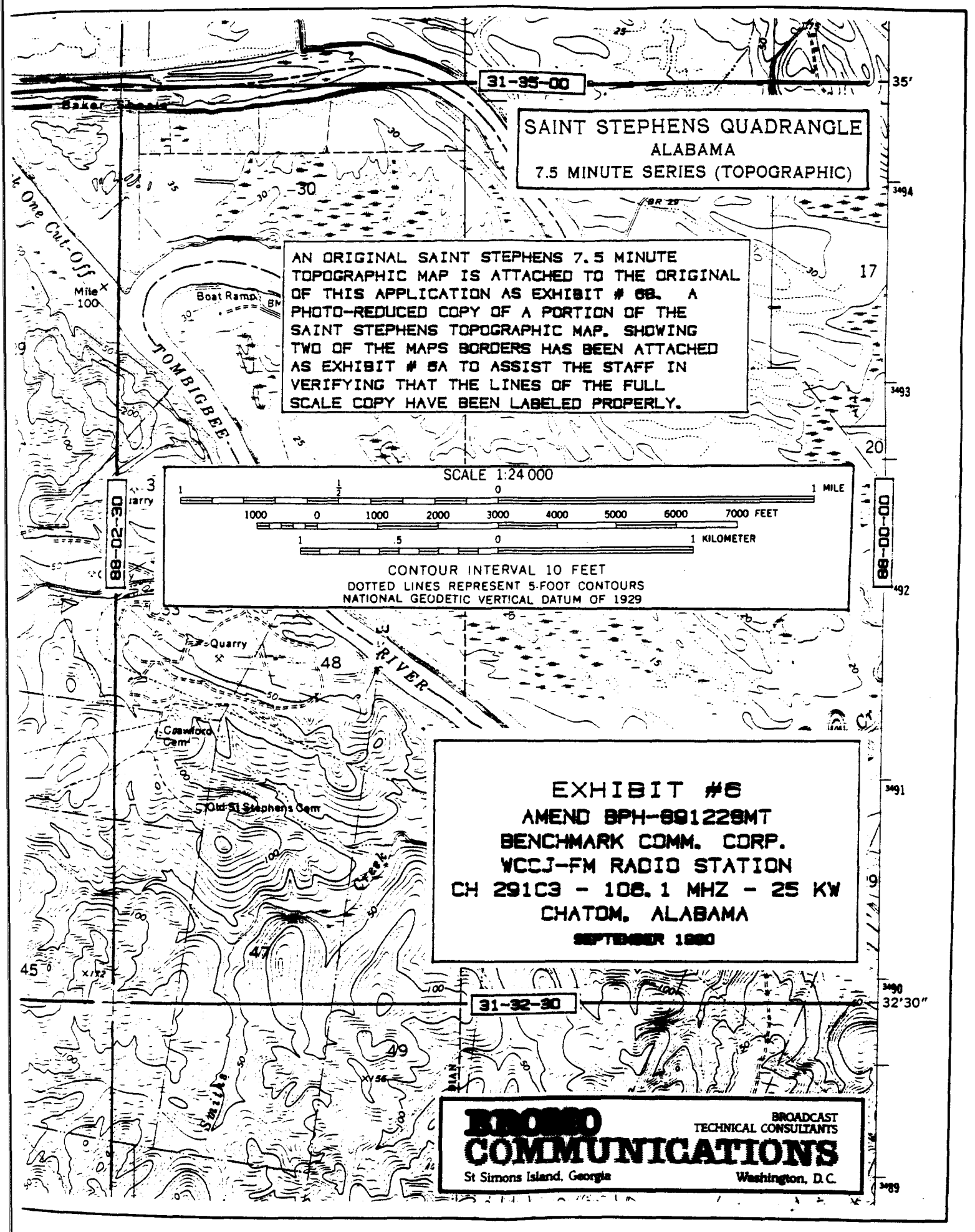
CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5 FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

EXHIBIT #6A
AMEND BPH-891228MT
BENCHMARK COMM. CORP.
WCCJ-FM RADIO STATION
CH 291C3 - 106.1 MHZ - 25 KW
CHATOM, ALABAMA
SEPTEMBER 1990

BROMO COMMUNICATIONS
BROADCAST TECHNICAL CONSULTANTS
St Simons Island, Georgia
Washington, D.C.


SAINT STEPHENS QUADRANGLE
ALABAMA
7.5 MINUTE SERIES (TOPOGRAPHIC)
31-37-30
31-35-00
88-05-00
88-02-30
88-00-00
CLARKE CO
WASHINGTON CO
TOMBIGBEE
RIVER
Little McGrews Shoals
Mile 104
Railfield Landing
Salt Creek
Slough
Oil Well Landing
Baker Shoals
Old Lock One Cut-Off
Mile 100
Boat Ramp
Old Lock No 1
ST STEPHENS
T. 8 N
T. 7 N.
590 000 FEET
88°00'
31°37'30"


31-35-00
Tayler
Salt
Creek
Old Lo
19
20
26
25
27
28
56
24
Folsoms
Faith Cem
88-05-00
PROPOSED SITE:
N LAT 31-33-03
W LNG 88-03-55
37
36
Creek
35
34
46
Good Hope Ch
BM 98
BM 128
42
43
44
Cem
James Chapel
45
31-32-30
Saint Stephens
Mt Nebo Ch
Cem
NOTE : SITE ELEVATION DETERMINED
BY LOCAL SURVEY.


SAINT STEPHENS QUADRANGLE
ALABAMA
7.5 MINUTE SERIES (TOPOGRAPHIC)
AN ORIGINAL SAINT STEPHENS 7.5 MINUTE TOPOGRAPHIC MAP IS ATTACHED TO THE ORIGINAL OF THIS APPLICATION AS EXHIBIT # 6B. A PHOTO-REDUCED COPY OF A PORTION OF THE SAINT STEPHENS TOPOGRAPHIC MAP. SHOWING TWO OF THE MAPS BORDERS HAS BEEN ATTACHED AS EXHIBIT # 6A TO ASSIST THE STAFF IN VERIFYING THAT THE LINES OF THE FULL SCALE COPY HAVE BEEN LABELED PROPERLY.
SCALE 1:24 000
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER
CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929
31-35-00
31-32-30
88-02-30
88-00-00
35'
32'30"
Baker Shoals
One Cut-Off
Mile 100
Boat Ramp
TOMBIGBEE
RIVER
Quarry
Cawfoco Cem
Old St Stephens Cem
Creek
Smith
EXHIBIT #6
AMEND BPH-891228MT
BENCHMARK COMM. CORP.
WCCJ-FM RADIO STATION
CH 291C3 - 106.1 MHZ - 25 KW
CHATOM, ALABAMA
SEPTEMBER 1990
BROADCAST TECHNICAL CONSULTANTS
COMMUNICATIONS
St Simons Island, Georgia
Washington, D.C.

Attachment A

DOCUMENT OFF-LINE

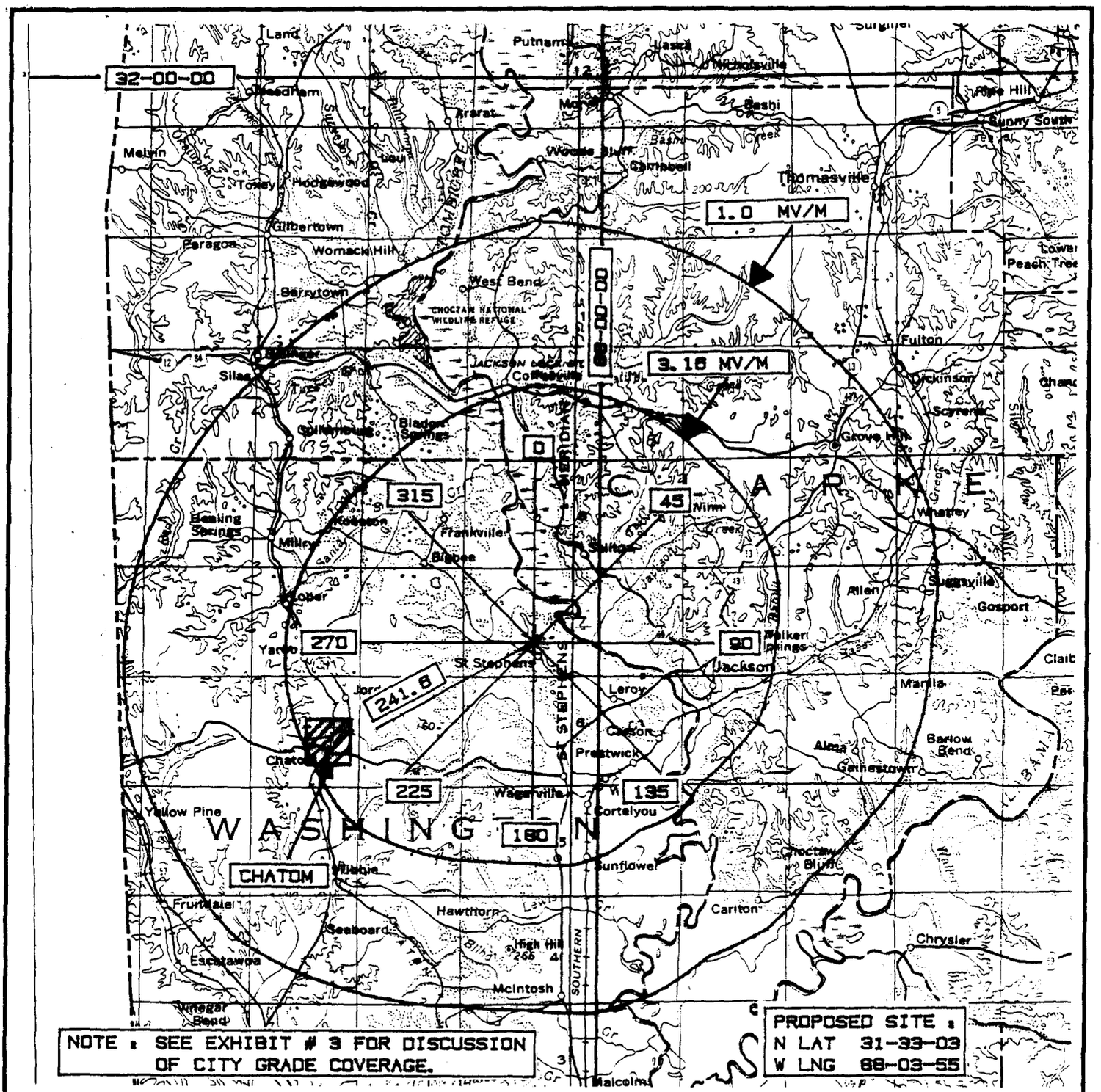
This page has been substituted for one of the following:

X An oversize page or document (such as a map) which was too large to be scanned into the RIPS system.

o Microfilm, microform, certain photographs or videotape.

o Other materials which, for one reason or another, could not be scanned into the RIPS system.

The actual document, page(s) or materials may be reviewed by contacting an Information Technician. Please note the applicable docket or rulemaking number, document type and any other relevant information about the document in order to ensure speedy retrieval by the Information Technician.



PREDICTED CONTOURS

MAP IS A USGS 1:500,000 SCALE OF A PORTION OF THE STATE OF ALABAMA.

SCALE 1:500,000

MI 10 0 10 MI

KM 10 0 10 20 KM

EXHIBIT #7

AMEND BPH-891228MT

BENCHMARK COMM. CORP.

WCCJ-FM RADIO STATION

CH 291C3 - 106.1 MHZ - 25 KW

CHATOM, ALABAMA

SEPTEMBER 1990

BROMO COMMUNICATIONS

BROADCAST TECHNICAL CONSULTANTS

St Simons Island, Georgia

Washington, D.C.

AMEND BPH-891228MT
BENCHMARK COMMUNICATIONS CORP.
WCCJ-FM RADIO STATION
CH 291C3 - 106.1 MHZ - 25 KW
CHATOM, ALABAMA
September 1990

Exhibit # 8

Radiofrequency Radiation Study

This Radiofrequency Radiation Study was conducted to determine if the proposed Benchmark Communication Corp. antenna system is believed to be in compliance with OST Bulletin, Number 65, dated October 1985.

The proposed directional, seven-bay antenna system will be mounted with its center of radiation 39.825 meters (130.7 feet) above the ground at the antenna site. The lowest bay of the system is 30.68 meters (100.6 feet) above the ground. The antenna system will be operated with 25 kilowatts horizontal and vertical power. Using the vertical field elevation pattern provided by the antenna manufacturer, which is attached to this application as Exhibit #2C, the worst case amount of power being delivered by the antenna in an area between 45° and 90° from the antenna system in a downward direction would be a relative field value of 0.252. The antenna operating with 25 kilowatts, where the relative field equals 1.0, would only be producing 1.59 kilowatts of horizontal and vertical power between 45° and 90° in a downward direction off of the antenna system.

Based on this amount of power and a height of 30.68 meters above the ground on the lowest antenna bay, only 0.1292 mw or 12.9% of the ANSI limit is being delivered at two meters above the ground at the base of the tower. Therefore, this antenna system is believed to be in compliance with OST Bulletin, Number 65, as is required by the Commission.

Additionally, Benchmark will install appropriate warning signs at the site to warn of potential RF radiation hazards in the area around the tower. Further, the only access road to this site will be gated and warning signs installed to prevent casual trespass at the antenna site. The site is located in a remote area.

QUALIFICATIONS OF CONSULTANT

Jefferson G. Brock says that he is a Technical Consultant with the firm of Bromo Communications, Inc. Having offices at 1200 18th Street, NW - Suite #206, Washington, DC 20036. Bromo has been engaged by Benchmark Communications Corp. to prepare the attached Technical Exhibit.

His qualifications are a matter of record before the Federal Communications Commission. He has been active in Broadcast Engineering since 1979. The attached report was either prepared by him or under his direction and all material and exhibits attached hereto are believed to be true and correct.

Signed this Nineteenth day of September, 1990

Jefferson G. Brock