

Exhibit 1

INTELSAT satellite earth terminals. There will be one on the Command Ship and one on the Launch Platform. Each terminal will have its own up and down links and will be operated 24 hours a day 7 days a week.

2002 Edmund Halley Drive

Reston, VA 20191 USA

(703) 430-8300

Fax (703) 476-2720

<http://www.comsearch.com>



COMSEARCH

August 26, 1998

**Mr. Gerry Broerman
The Boeing Company
Frequency Management
M/S 3U-AJ
P.O. Box 3707
Seattle, Wa. 98124-2207**

**Re: Coordination Final Report
Long Beach, Ca. - Port Location
C-band T/R Earth Station**

Dear Mr. Broerman:

Enclosed please find the Coordination Final Report for your proposed C-band transmit/receive earth stations at Long Beach, California.

If you have any questions, or require additional information, please call.

Sincerely,

COMSEARCH

**Gary K. Edwards
(703) 476-2662**

Enclosures

**FREQUENCY COORDINATION AND INTERFERENCE
ANALYSIS REPORT**

**PREPARED FOR
U.S. SEA LAUNCH
LONG BEACH, CA
SATELLITE EARTH STATION**

**PREPARED BY
COMSEARCH
2002 EDMUND HALLEY DRIVE
RESTON, VIRGINIA 20191
August 26, 1998**

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1. CONCLUSIONS
2. SUMMARY OF RESULTS
3. SUPPLEMENTAL SHOWING, RE: PART 25.203(C)
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5. CERTIFICATION

1. CONCLUSIONS

AN INTERFERENCE STUDY CONSIDERING ALL EXISTING, PROPOSED AND PRIOR COORDINATED MICROWAVE FACILITIES WITHIN THE COORDINATION CONTOURS OF THE PROPOSED EARTH STATION DEMONSTRATES THAT THIS SITE WILL OPERATE SATISFACTORILY WITH THE COMMON CARRIER MICROWAVE ENVIRONMENT. THE TRANSMIT BAND OF THE PROPOSED EARTH STATION WILL BE LIMITED TO AVOID CONFLICT WITH LOCAL 6 GHZ TERRESTRIAL MICROWAVE RECEIVERS. THERE WILL BE NO OTHER RESTRICTIONS OF ITS OPERATION DUE TO INTERFERENCE CONSIDERATIONS.

2. SUMMARY OF RESULTS

A NUMBER OF GREAT CIRCLE INTERFERENCE CASES WERE IDENTIFIED DURING THE INTERFERENCE STUDY OF THE PROPOSED EARTH STATION. EACH OF THE CASES WHICH EXCEEDED THE INTERFERENCE OBJECTIVE ON A LINE-OF-SIGHT BASIS WAS PROFILED AND THE PROPAGATION LOSSES ESTIMATED USING NBS TN101 (REVISED) TECHNIQUES. THE LOSSES WERE FOUND TO BE SUFFICIENT TO REDUCE THE SIGNAL LEVELS TO ACCEPTABLE MAGNITUDES IN EVERY CASE, WITH THE EXCEPTION OF THOSE CASES WHICH WERE CLEARED WITH FREQUENCY OFFSETS.

THE FOLLOWING COMPANIES REPORTED POTENTIAL GREAT CIRCLE INTERFERENCE CONFLICTS WHICH DID NOT MEET THE OBJECTIVES ON A LINE-OF-SIGHT BASIS. WHEN OVER-THE-HORIZON LOSSES ARE CONSIDERED ON THE INTERFERING PATHS, SUFFICIENT BLOCKAGE EXISTS TO NEGATE HARMFUL INTERFERENCE FROM OCCURRING WITH THE PROPOSED TRANSMIT AND RECEIVE EARTH STATION.

COMPANY

LOS ANGELES COUNTY
AMERICAN TOWER SYSTEMS (DELAWARE) INC.

NO OTHER CARRIERS REPORTED POTENTIAL INTERFERENCE CASES.

3. SUPPLEMENTAL SHOWING
RE: PART 25.203(C)

PURSUANT TO PART 25.203(C) OF THE FCC RULES AND REGULATIONS,
THE SATELLITE EARTH STATION PROPOSED IN THIS APPLICATION
WAS COORDINATED BY COMSEARCH USING COMPUTER TECHNIQUES
AND IN ACCORDANCE WITH PART 25 OF THE FCC RULES AND
REGULATIONS.

COORDINATION DATA FOR THIS EARTH STATION WAS SENT TO THE
BELOW LISTED CARRIERS WITH A LETTER DATED JULY 24, 1998.

AIRTOUCH CELLULAR
ALLNET COMMUNICATIONS SERVICES, INC.
AMERICA TOWER SYSTEMS, INC.
AT&T COMMUNICATIONS
AT&T COMMUNICATIONS OF CALIFORNIA, INC.
CALIFORNIA STATE OF
COAST COMMUNITY COLLEGE - TRUSTEES
CONTEL FEDERAL SYSTEMS, GVNMT NTRK DIV
GE AMERICOM
GLOBECAST NORTH AMERICA INCORPORATED
GTE CALIFORNIA INCORPORATED
GTE MOBILNET INCORPORATED - SAN DIEGO
GTE TELECOM, INC. - NONPRO
ICG TELECOM GROUP
KAISER FOUNDATION HEALTH PLAN
KEYSTONE COMMUNICATION, L.P.
LOS ANGELES CITY OF COMMUNICATIONS SRV
LOS ANGELES COUNTY FCC/LICENSING SECTION
LOS ANGELES SMSA LTD PARTNERSHIP
MCCAW COMM. OF THE MIDSOUTH - OXNARD
MCI TELECOMMUNICATIONS CORP (ATR SYSTEM)
MCI TELECOMMUNICATIONS CORPORATION
METROPOLITAN WATER DISTRICT
MICROWAVE SERVICE COMPANY
MOBILECOMM WIRELESS HOLDINGS LP
MOBILEMEDIA COMMUNICATIONS, INC. - LA
MOBILEMEDIA COMMUNICATIONS, INC. - LA 1
ORANGE COUNTY GSA COMMUNICATIONS DIV
OXNARD VENTURA SIMI LIMITED PARTNERSHIP

PACIFIC BELL PASADENA REGION
PACIFIC BELL VIDEO SERVICES - EL MONTE
RIVERSIDE COUNTY OF CALIFORNIA
SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA EDISON COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
US WEST COMMUNICATIONS, INC.
WESTERN STATES MICROWAVE TRANS CO

4. EARTH STATION COORDINATION DATA

THIS SECTION PRESENTS THE DATA PERTINENT TO FREQUENCY COORDINATION OF THE PROPOSED EARTH STATION WHICH WAS CIRCULATED TO ALL COMMON CARRIERS WITHIN ITS COORDINATION CONTOURS.

**SATELLITE EARTH STATION
FREQUENCY COORDINATION DATA
07/23/98**

Company U.S. SEA LAUNCH

Owner code

Earth Station Name, State

Latitude (DMS)

Longitude (DMS)

Ground Elevation AMSL (Ft/m)

Antenna Centerline AGL (Ft/m)

USSEAL

LONG BEACH, CA

33 44 44.0 N

118 13 10.0 W

0.0 / 0.0

145.5 / 44.3

Receive Antenna Type: A40371

4 GHz Gain (dBi) / Diameter (m)

3 dB / 15 dB Half Beamwidth

ANDREW CORPORATION

ES37K-C

42.5 / 3.7

0.60 / 1.20

Transmit Antenna Type: A60371

6 GHz Gain (dBi) / Diameter (m)

3 dB / 15 dB Half Beamwidth

ANDREW CORPORATION

ES37K-C

46.3 / 3.7

0.40 / 0.80

Operating Mode

Modulation

Emission / Receive Band (MHz)

1M09G7D, 5M37G7D / 3700.0000 - 4200.0000

Emission / Transmit Band (MHz)

1M09G7D, 5M37G7D / 5925.0000 - 6231.0000

1M09G7D, 5M37G7D / 6282.0000 - 6290.0000

1M09G7D, 5M37G7D / 6341.0000 - 6350.0000

1M09G7D, 5M37G7D / 6400.0000 - 6425.0000

TRANSMIT AND RECEIVE

DIGITAL

Max. Available RF Power (dBW)/4 kHz)

(dBW)/MHz)

-13.88

10.12

Max. EIRP

(dBW)/4 kHz)

(dBW)/MHz)

32.42

56.42

Max permissible Interference Power

4 GHz, 20% (dBW/1 MHz)

4 GHz, 0.0100% (dBW/1 MHz)

6 GHz, 20% (dBW/4 kHz)

6 GHz, 0.0025% (dBW/4 kHz)

-162.0

-152.0

-154.0

-131.0

Range of Satellite Arc (Geostationary)

Degrees Longitude

Azimuth Range (Min/Max)

Corresponding Elevation Angles

180.0 W / 180.0 W

253.4 / 253.4

14.7 / 14.7

Radio Climate

Rain Zone

B

4

Max Great Circle Coordination Distance (Mi/Km)

4 GHz

6 GHz

406.7 / 654.6

113.7 / 183.0

Precipitation Scatter contour radius (Mi/Km)

4 GHz

6 GHz

236.1 / 379.9

62.1 / 100.0

Table of Earth Station Coordination Values
07/23/98

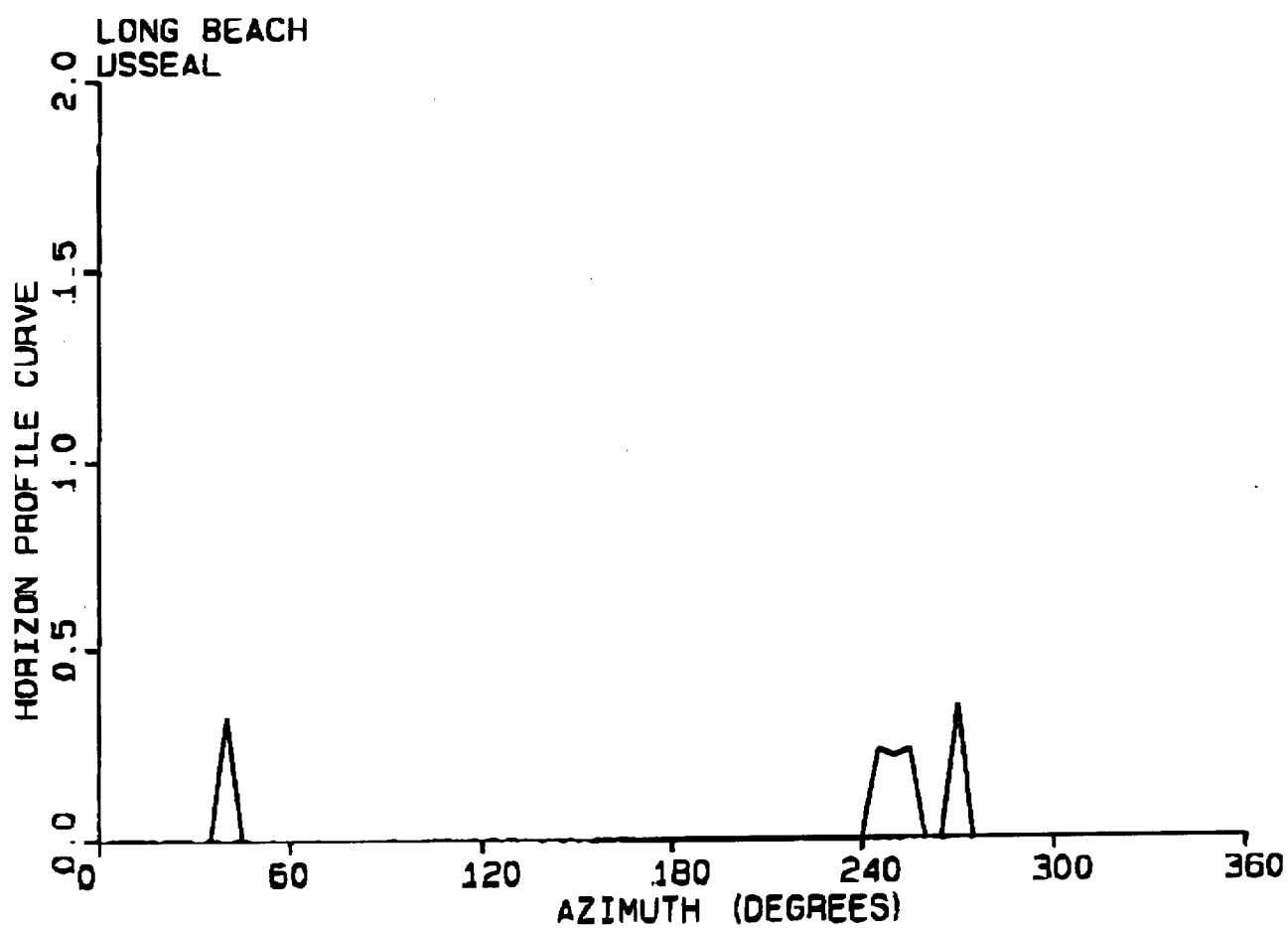
Earth Station Name LONG BEACH CA
Owner U.S. SEA LAUNCH
Latitude 33 44 44.0 N
Longitude 118 13 10.0 W
Ground Elevation (Ft/m) 0.0 / 0.0 AMSL ACL 145.5 Feet AGL
Antenna Model ANDREW CORPORATION ES37K-C
Objectives: Receive -162.0 (dBW /1 MHz)
Transmit -154.0 (dBW /4 kHz) TX Power -13.9 (dBW/4 kHz)

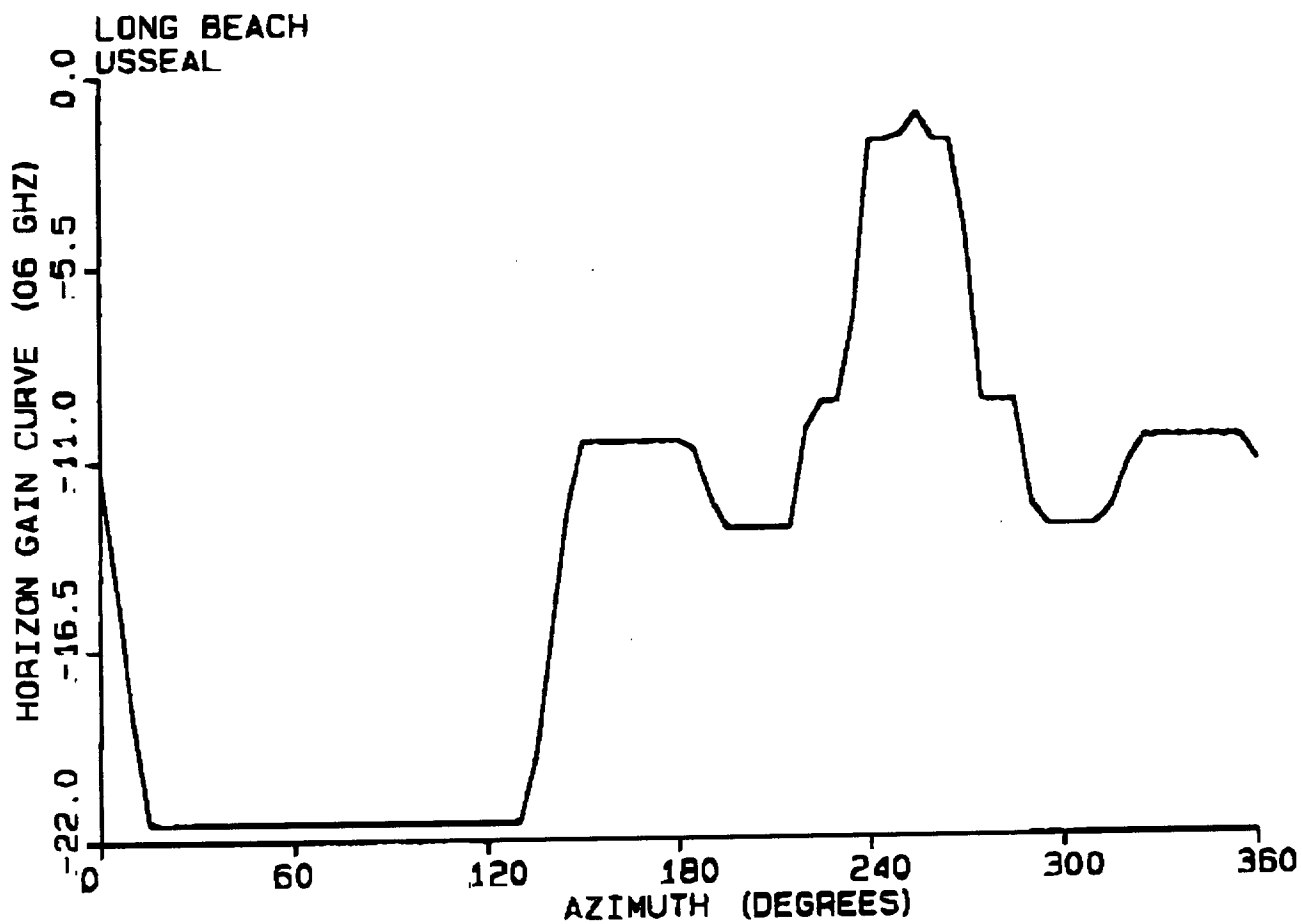
Azimuth (Deg)	Horizon Elevation Angle (Deg)	Antenna Disc. Angle (Deg)	4 GHz		6 GHz	
			Antenna Gain (dBi)	Coordination Distance (Km)	Antenna Gain (dBi)	Coordination Distance (Km)
0	0.00	106.04	-13.83	440.0	-11.23	141.8
5	0.00	110.85	-17.00	400.0	-14.68	129.7
10	0.00	115.66	-17.00	400.0	-18.46	118.5
15	0.00	120.45	-17.00	400.0	-21.50	112.7
20	0.00	125.21	-17.00	400.0	-21.50	112.7
25	0.00	129.95	-17.00	400.0	-21.50	112.7
30	0.00	134.64	-17.00	400.0	-21.50	112.7
35	0.00	139.28	-17.00	400.0	-21.50	112.7
40	0.32	143.95	-17.00	361.8	-21.50	103.2
45	0.00	148.29	-17.00	400.0	-21.50	112.7
50	0.00	152.57	-17.00	400.0	-21.50	112.7
55	0.00	156.58	-17.00	400.0	-21.50	112.7
60	0.00	160.18	-17.00	400.0	-21.50	112.7
65	0.00	163.08	-17.00	400.0	-21.50	112.7
70	0.00	164.88	-17.00	400.0	-21.50	112.7
75	0.00	165.17	-16.91	401.0	-21.50	112.7
80	0.00	163.88	-17.00	400.0	-21.50	112.7
85	0.00	161.32	-17.00	400.0	-21.50	112.7
90	0.00	157.93	-17.00	400.0	-21.50	112.7
95	0.00	154.05	-17.00	400.0	-21.50	112.7
100	0.00	149.85	-17.00	400.0	-21.50	112.7
105	0.00	145.45	-17.00	400.0	-21.50	112.7
110	0.00	140.93	-17.00	400.0	-21.50	112.7
115	0.00	136.31	-17.00	400.0	-21.50	112.7
120	0.00	131.64	-17.00	400.0	-21.50	112.7
125	0.00	126.92	-17.00	400.0	-21.50	112.7
130	0.00	122.16	-17.00	400.0	-21.50	112.7
135	0.00	117.38	-17.00	400.0	-19.67	117.3
140	0.00	112.58	-17.00	400.0	-16.07	125.3
145	0.00	107.77	-15.22	422.0	-12.44	137.3
150	0.00	102.95	-11.77	467.6	-10.50	144.5
155	0.00	98.12	-8.49	516.2	-10.50	144.5
160	0.00	93.28	-4.97	573.9	-10.50	144.5
165	0.00	88.45	-3.00	608.6	-10.50	144.5
170	0.00	83.62	-3.00	608.6	-10.50	144.5
175	0.00	78.78	-3.24	604.2	-10.50	144.5
180	0.00	73.96	-4.31	585.3	-10.50	144.5

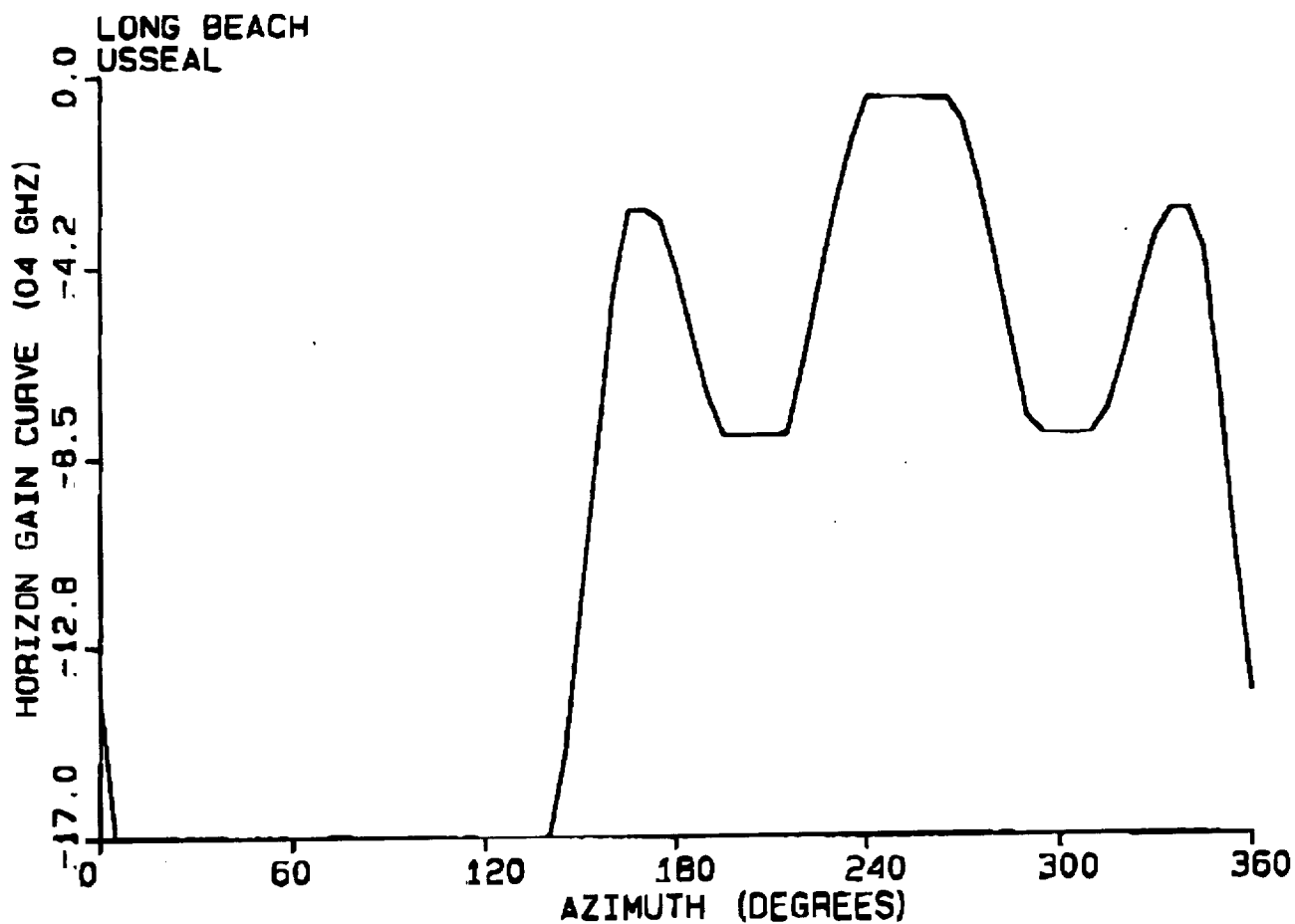
Table of Earth Station Coordination Values
07/23/98

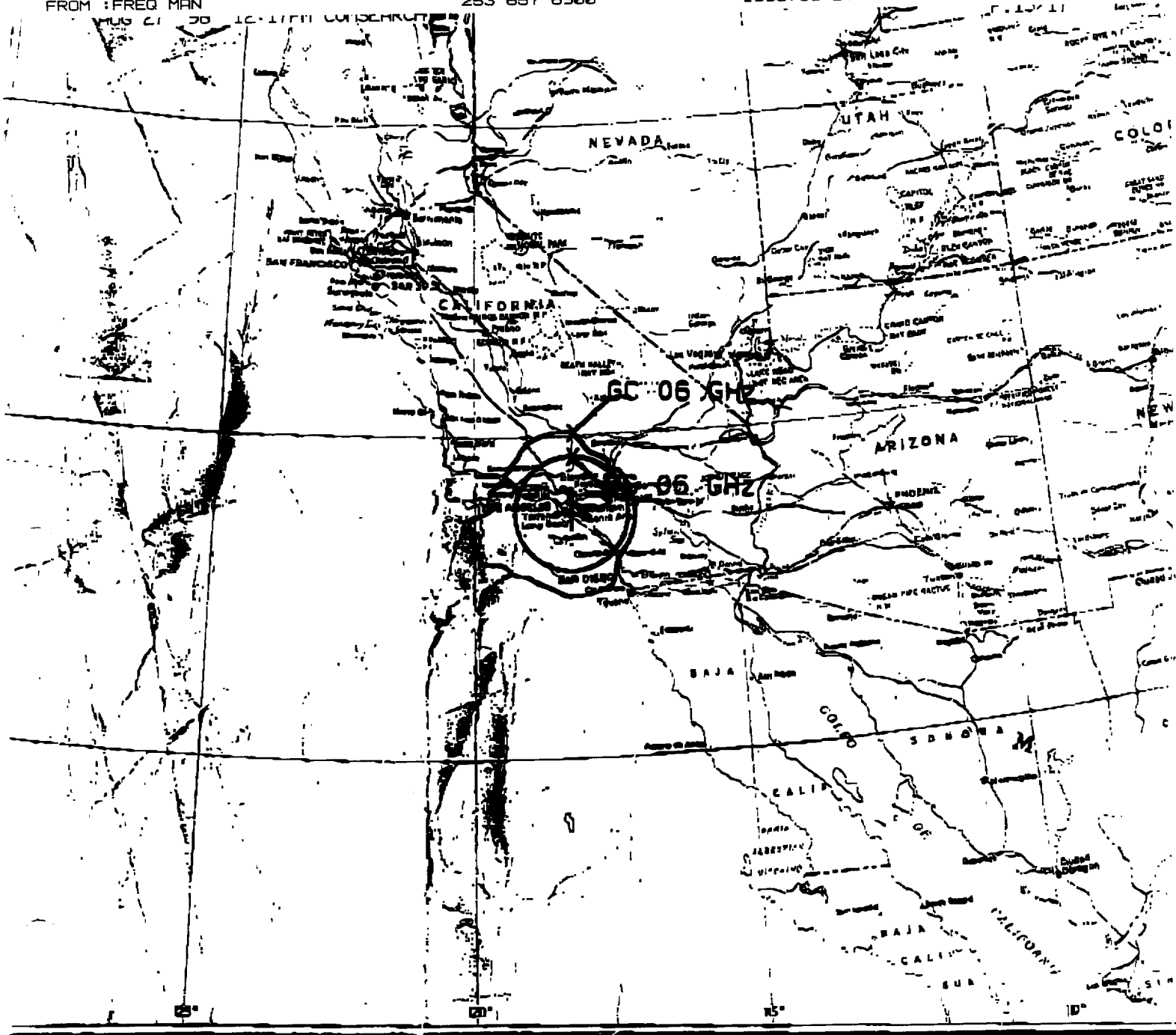
Earth Station Name LONG BEACH CA
Owner U.S. SEA LAUNCH
Latitude 33 44 44.0 N
Longitude 118 13 10.0 W
Ground Elevation (Ft/m) 0.0 / 0.0 AMSL ACL 145.5 Feet AGL
Antenna Model ANDREW CORPORATION ES37K-C
Objectives: Receive -162.0 (dBW /1 MHz)
Transmit -154.0 (dBW /4 kHz) TX Power -13.9 (dBW/4 kHz)

Azimuth (Deg)	Horizon Elevation Angle (Deg)	Antenna Disc. Angle (Deg)	4 GHz		6 GHz	
			Antenna Gain (dBi)	Coordination Distance (Km)	Antenna Gain (dBi)	Coordination Distance (Km)
185	0.00	69.14	-5.76	560.5	-10.76	143.5
190	0.00	64.34	-7.13	537.8	-12.13	138.4
195	0.00	59.55	-8.00	523.9	-13.00	135.3
200	0.00	54.79	-8.00	523.9	-13.00	135.3
205	0.00	50.05	-8.00	523.9	-13.00	135.3
210	0.00	45.36	-8.00	523.9	-13.00	135.3
215	0.00	40.72	-8.00	523.9	-13.00	135.3
220	0.00	36.16	-6.46	548.7	-10.23	145.6
225	0.00	31.71	-4.68	578.8	-9.40	148.8
230	0.00	27.43	-2.97	609.0	-9.40	148.8
235	0.00	23.42	-1.52	635.1	-7.05	158.6
240	0.00	19.82	-0.50	654.5	-2.00	183.0
245	0.23	16.72	-0.50	638.2	-2.00	177.9
250	0.21	14.92	-0.50	649.6	-1.83	182.3
255	0.23	14.60	-0.50	640.9	-1.21	182.9
260	0.00	16.12	-0.50	654.5	-2.00	183.0
265	0.00	18.68	-0.50	654.5	-2.00	183.0
270	0.35	21.84	-1.05	568.9	-4.72	148.1
275	0.00	25.95	-2.38	619.8	-9.40	148.8
280	0.00	30.15	-4.06	589.7	-9.40	148.8
285	0.00	34.55	-5.82	559.5	-9.40	148.8
290	0.00	39.07	-7.63	529.8	-12.33	137.7
295	0.00	43.68	-8.00	523.9	-13.00	135.3
300	0.00	48.36	-8.00	523.9	-13.00	135.3
305	0.00	53.08	-8.00	523.9	-13.00	135.3
310	0.00	57.84	-8.00	523.9	-13.00	135.3
315	0.00	62.62	-7.48	532.3	-12.48	137.2
320	0.00	67.41	-6.28	551.8	-11.28	141.6
325	0.00	72.23	-4.83	576.2	-10.50	144.5
330	0.00	77.05	-3.59	598.0	-10.50	144.5
335	0.00	81.88	-3.00	608.6	-10.50	144.5
340	0.00	86.71	-3.00	608.6	-10.50	144.5
345	0.00	91.55	-3.93	592.0	-10.50	144.5
350	0.00	96.38	-7.11	538.2	-10.50	144.5
355	0.00	101.21	-10.73	482.5	-10.50	144.5



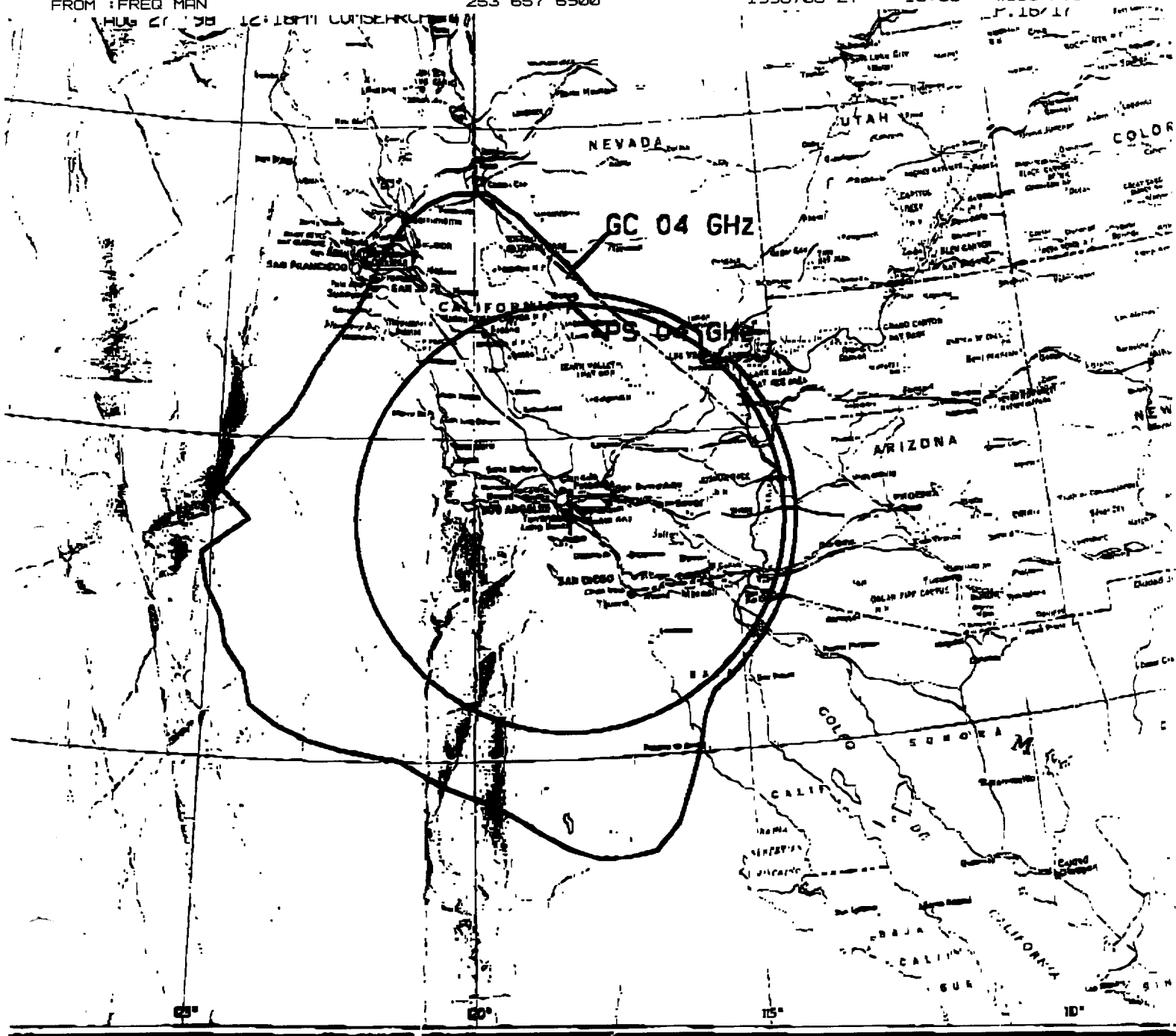






Comsearch

Scale 1: 10000000



Comsearch

Scale 1: 10000000

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY:


GARY K. EDWARDS
GROUP MANAGER
COMSEARCH
2002 EDMUND HALLEY DRIVE
RESTON, VIRGINIA 20191

DATED: August 26, 1998

2002 Edmund Halley Drive

Reston, VA 20191 USA

(703) 620-6300

Fax (703) 476-2720

<http://www.comsearch.com>



COMSEARCH

August 24, 1998

Mr. Gerry Broerman
The Boeing Company
Frequency Management
M/S 3U-AJ
P.O. Box 3707
Seattle, Wa. 98124-2207

Re: Interference Analysis
Ship Route
Sea Launch

Dear Mr. Broerman:

Enclosed please find the results of the Interference Analysis of the Ship's Route from the Long Beach Port location.

The analysis indicates that the following C-band transmit spectrum is available along the Ship's route from the Port Location to the off shore communications boundary limit of 100 kilometers.

5925 - 5930, 6222 - 6231, 6282 - 6290 and 6341 - 6350 MHz

Please contact us, after you have reviewed this report and verified the available transmit spectrum with COMSAT.

Sincerely,

COMSEARCH

Gary K. Edwards
(703) 476-2662

Enclosures

Boeing Sea Launch Ship Route Analysis

Section 1 **Introduction**

This analysis considers all interference conflicts to the transmit band based on the proposed Andrew 3.7 Meter antenna operating with a Maximum Available RF transmit power of -13.88 dBW/4 kHz and a single satellite position of 180 degrees West Longitude.

The following is a brief summary of the methodology used in the calculation of the Coordination Area for the shipboard earth stations, as well as, the calculation of the potential interference conflicts to the uplink band of these antennas.

Coordination Area: Based on ITU recommendations the Coordination Area for mobile earth stations should be established by selecting periphery points in the geographical area of operation and constructing an envelope of the resulting point coordination contours by straight line. The straight line envelope will then constitute the effective coordination contour.

The periphery points in this study were based on the Sailing route break points provided by Boeing Sea Launch in their fax dated 07-10-98. Those points were as follows:

WP 1 : N. Lat. 33-43-24; W. Lon. 118-11-00
WP 2 : N. Lat. 33-41-24; W. Lon. 118-11-30
WP 3: N. Lat. 33-38-00; W. Lon. 118-10-30
WP 4: N. Lat. 33-00-00; W. Lon. 118-00-00

Figure 1 provides a plot of the break points and the final direct azimuth to the Launch site at N. Lat: 00-00-00; W. Lon: 154-00-00.

Interference Calculations: Since the ship follows a fixed route, a worst case analysis of fixed points on the route is necessary to estimate the interference potential of the earth station into 6 GHz terrestrial microwave receivers. The critical points of potential interference along the ship's route were selected based on the following:

- (1) The point at which the microwave path intersects the ship's route.
- (2) A projection of the microwave path to an intersection in the ship's route.
- (3) The point along the ship's route that represents the minimum discrimination angle between the terrestrial path and a point on the ship's route.
- (4) The point along the ship's route representing the minimum distance between the terrestrial receiver and the closest point.

The critical points were selected from one of the four options mentioned above. When the critical point is determined to be from an intersection point or from the projection of the terrestrial path, the main beam antenna gain was considered for each point on the path being studied. This adjustment is necessary to assure that the worst case levels are being evaluated. In those cases where there was a question of whether the intersection point or the smallest discrimination angle or the closest point on the ship's route should be selected, all points were analyzed and the data for the appropriate point(s) is included in the Interference Summary Table.

After the critical points were selected, the interfering levels at each point were calculated and then compared to both the long-term interference objective of -154 dBW/4 kHz and to the short-term interference objective of -131 dBW/4 kHz.

For each point analyzed, a path profile was generated and the over-the-horizon losses (O-H) were determined for both the long-term (20 percent) and short-term (0.0025 percent) periods. These losses were then added to the predicted line-of-sight (LOS) losses to determine if the interference case is resolved.

Section 2 - Summary of Results

The interference analysis of the Ship's route identified 226 critical points of potential interference. Based on the calculated interference receive levels only 38 of the terrestrial receive sites had margins which exceeded the Long term interference objective of -154 dBW/4 kHz. Terrain pathloss calculations were completed and 20 of these cases were cleared by pathloss. A summary of the remaining cases follows:

<u>Interference Path</u>	<u>Call Sign</u>	<u>Predicted Margin (dB)</u>	<u>Spectrum Occupied (MHz)</u>
Criminal Cr - Compton Blvd.	WJY71	26.9	6241.54 - 6271.54
Mt Lukens - LA MTSO	WLV362	25.5	6078.45 - 6108.45, 6137.75 - 6167.75
Loma Ridge - W1	KNK89	14.3	6360.14 - 6390.14
Santiago PK - Laguna Beach	WHA708	14.3	6160 - 6164
Bolero S4 - HI	WBD382	13.6	6360.14 - 6390.14
R Springs R - San B Ino	KNL86	12.6	5959.85 - 5989.85
Modeska Pea - Tustin	MODESK	10.9	5959.85 - 5989.85, 6048.80 - 6078.80, 6137.75 - 6167.75
Sunset Ridge - 2 Anaheim	WNEN879	10.9	6182.24 - 6212.24
Santiago PK - Dana Hills	WHA708	10.9	6156.0 - 6160.0
BREA - 2 Anaheim	BREA	10.7	6241.54 - 6271.54
Woodson - Encina	WNEQ695	10.6	6048.8 - 6078.8

(Continued)

<u>Interference Path</u>	<u>Call Sign</u>	<u>Predicted Margin (dB)</u>	<u>Spectrum Occupied (MHz)</u>
Heaps Peak - Rialto	WLC500	9.8	5930.2 - 6167.75
Detention Peak - Pleasants PK	WHH547	9.8	6389.79 - 6419.79
Mt Woodson - Rancho Brnd	WPNM474	8.6	6019.15 - 6049.15
Bailey Peak - Sierra Peak	KNJ71	8.5	5930.2 - 6167.75
80 Palos - 2 Anaheim	WNEW280	8.2	6300.84 - 6330.84
Woodson II - Olivenhain	WMP212	6.5	6168.00 - 6172.00
Dollar Bldg. - International Twr.	WHQ761	5.7	5940.2 - 5950.2, 5999.5 - 6009.5, 6118.1 - 6128.1

Available Transmit Spectrum

When considering the appropriate frequency offset around the above referenced receivers, the available transmit spectrum for the ship route is as follows:

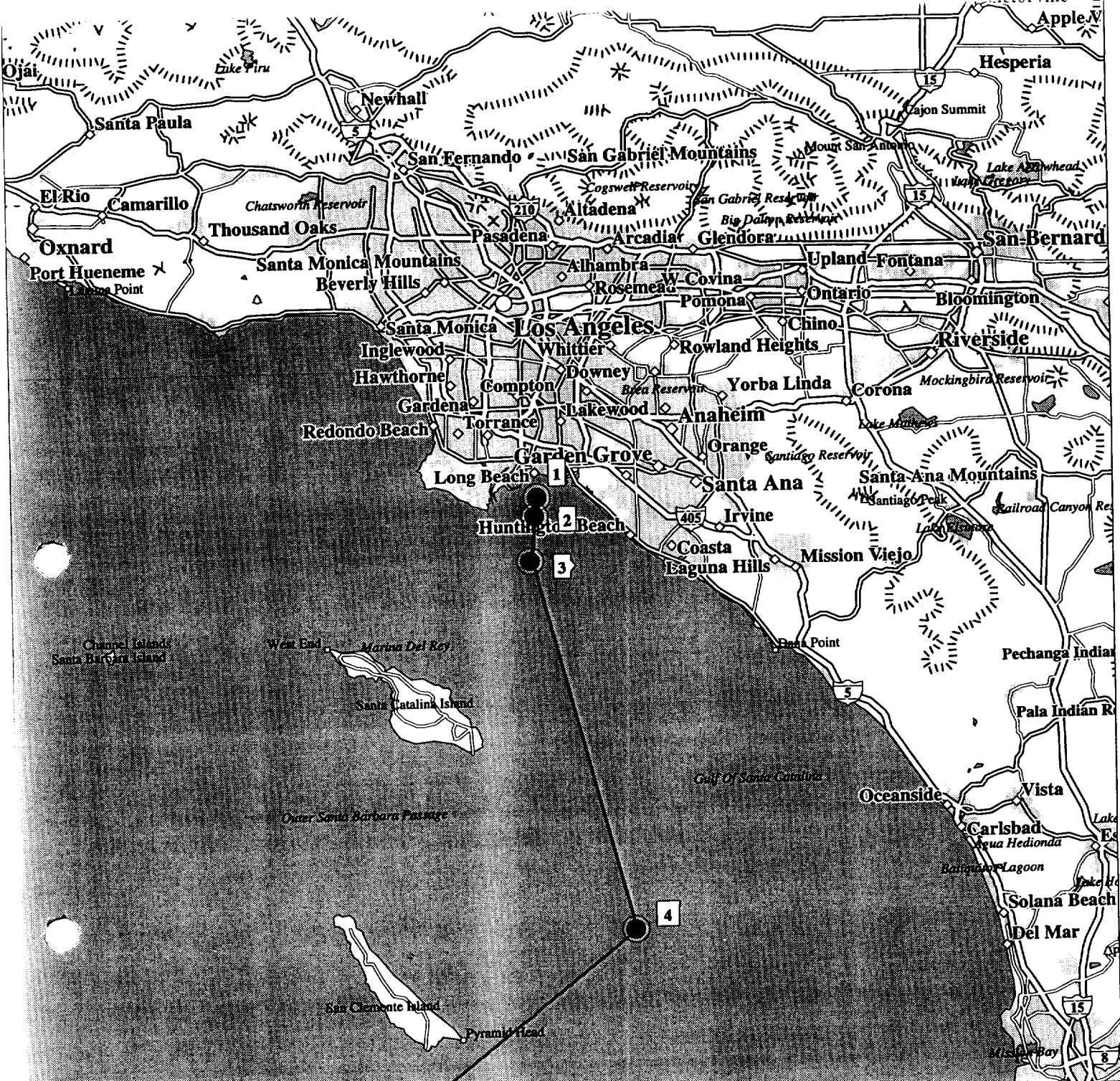
5925 - 5930 MHz

6222 - 6231 MHz

6282 - 6290 MHz

6341 - 6350 MHz

We can begin coordination of these frequencies after your review of this spectrum with COMSAT.



LEGEND

- Population Center
- Geo Feature
- Major City
- Town, Small City
- Large City
- Hill
- Park
- Interstate, Turnpike
- Major Street/Road

- State Route
- Interstate Highway
- US Highway
- Land Mass
- Open Water
- Contour

Scale 1:1,000,000 (at center)

20 Miles

20 KM

Mag 9.00

Thu Aug 20 09:21:33 1998

2002 Edmund Halley Drive

Reston, VA 20191 USA

(703) 620-6300

Fax (703) 476-2720

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August 26, 1998

Mr. Gerry Broerman
The Boeing Company
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P.O. Box 3707
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C-band T/R Earth Station

Dear Mr. Broerman:

Enclosed please find the Coordination Final Report for your proposed C-band transmit/receive earth stations at Long Beach, California.

If you have any questions, or require additional information, please call.

Sincerely,

COMSEARCH

A handwritten signature in black ink, appearing to read "Gary K. Edwards", is written over the company name.

Gary K. Edwards
(703) 476-2662

Enclosures

**FREQUENCY COORDINATION AND INTERFERENCE
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**PREPARED FOR
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5. CERTIFICATION

1. CONCLUSIONS

AN INTERFERENCE STUDY CONSIDERING ALL EXISTING, PROPOSED AND PRIOR COORDINATED MICROWAVE FACILITIES WITHIN THE COORDINATION CONTOURS OF THE PROPOSED EARTH STATION DEMONSTRATES THAT THIS SITE WILL OPERATE SATISFACTORILY WITH THE COMMON CARRIER MICROWAVE ENVIRONMENT. THE TRANSMIT BAND OF THE PROPOSED EARTH STATION WILL BE LIMITED TO AVOID CONFLICT WITH LOCAL 6 GHZ TERRESTRIAL MICROWAVE RECEIVERS. THERE WILL BE NO OTHER RESTRICTIONS OF ITS OPERATION DUE TO INTERFERENCE CONSIDERATIONS.

2. SUMMARY OF RESULTS

A NUMBER OF GREAT CIRCLE INTERFERENCE CASES WERE IDENTIFIED DURING THE INTERFERENCE STUDY OF THE PROPOSED EARTH STATION. EACH OF THE CASES WHICH EXCEEDED THE INTERFERENCE OBJECTIVE ON A LINE-OF-SIGHT BASIS WAS PROFILED AND THE PROPAGATION LOSSES ESTIMATED USING NBS TN101 (REVISED) TECHNIQUES. THE LOSSES WERE FOUND TO BE SUFFICIENT TO REDUCE THE SIGNAL LEVELS TO ACCEPTABLE MAGNITUDES IN EVERY CASE, WITH THE EXCEPTION OF THOSE CASES WHICH WERE CLEARED WITH FREQUENCY OFFSETS.

THE FOLLOWING COMPANIES REPORTED POTENTIAL GREAT CIRCLE INTERFERENCE CONFLICTS WHICH DID NOT MEET THE OBJECTIVES ON A LINE-OF-SIGHT BASIS. WHEN OVER-THE-HORIZON LOSSES ARE CONSIDERED ON THE INTERFERING PATHS, SUFFICIENT BLOCKAGE EXISTS TO NEGATE HARMFUL INTERFERENCE FROM OCCURRING WITH THE PROPOSED TRANSMIT AND RECEIVE EARTH STATION.

COMPANY

LOS ANGELES COUNTY
AMERICAN TOWER SYSTEMS (DELAWARE) INC.

NO OTHER CARRIERS REPORTED POTENTIAL INTERFERENCE CASES.

3. SUPPLEMENTAL SHOWING
RE: PART 25.203(C)

PURSUANT TO PART 25.203(C) OF THE FCC RULES AND REGULATIONS,
THE SATELLITE EARTH STATION PROPOSED IN THIS APPLICATION
WAS COORDINATED BY COMSEARCH USING COMPUTER TECHNIQUES
AND IN ACCORDANCE WITH PART 25 OF THE FCC RULES AND
REGULATIONS.

COORDINATION DATA FOR THIS EARTH STATION WAS SENT TO THE
BELOW LISTED CARRIERS WITH A LETTER DATED JULY 24, 1998.

AIRTOUCH CELLULAR
ALLNET COMMUNICATIONS SERVICES, INC.
AMERICA TOWER SYSTEMS, INC.
AT&T COMMUNICATIONS
AT&T COMMUNICATIONS OF CALIFORNIA, INC.
CALIFORNIA STATE OF
COAST COMMUNITY COLLEGE - TRUSTEES
CONTEL FEDERAL SYSTEMS, GVNMT NTWRK DIV
GE AMERICOM
GLOBECAST NORTH AMERICA INCORPORATED
GTE CALIFORNIA INCORPORATED
GTE MOBILNET INCORPORATED - SAN DIEGO
GTE TELECOM, INC. - NONPRO
ICG TELECOM GROUP
KAISER FOUNDATION HEALTH PLAN
KEYSTONE COMMUNICATION, L.P.
LOS ANGELES CITY OF COMMUNICATIONS SRV
LOS ANGELES COUNTY FCC/LICENSING SECTION
LOS ANGELES SMSA LTD PARTNERSHIP
MCCAW COMM. OF THE MIDSOUTH - OXNARD
MCI TELECOMMUNICATIONS CORP (ATR SYSTEM)
MCI TELECOMMUNICATIONS CORPORATION
METROPOLITAN WATER DISTRICT
MICROWAVE SERVICE COMPANY
MOBILECOMM WIRELESS HOLDINGS LP
MOBILEMEDIA COMMUNICATIONS, INC. - LA
MOBILEMEDIA COMMUNICATIONS, INC. - LA 1
ORANGE COUNTY GSA COMMUNICATIONS DIV
OXNARD VENTURA SIMI LIMITED PARTNERSHIP

PACIFIC BELL PASADENA REGION
PACIFIC BELL VIDEO SERVICES - EL MONTE
RIVERSIDE COUNTY OF CALIFORNIA
SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA EDISON COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
US WEST COMMUNICATIONS, INC.
WESTERN STATES MICROWAVE TRANS CO

4. EARTH STATION COORDINATION DATA

THIS SECTION PRESENTS THE DATA PERTINENT TO FREQUENCY COORDINATION OF THE PROPOSED EARTH STATION WHICH WAS CIRCULATED TO ALL COMMON CARRIERS WITHIN ITS COORDINATION CONTOURS.

SATELLITE EARTH STATION
FREQUENCY COORDINATION DATA
07/23/98

Company	U.S. SEA LAUNCH		USSEAL	
Owner code			LONG BEACH, CA	
Earth Station Name, State			33 44 44.0 N	
Latitude (DMS)			118 13 10.0 W	
Longitude (DMS)			0.0 / 0.0	
Ground Elevation AMSL (Ft/m)			145.5 / 44.3	
Antenna Centerline AGL (Ft/m)				
Receive Antenna Type:	A40371	ANDREW CORPORATION		
		ES37K-C		
4 GHz Gain (dBi) / Diameter (m)		42.5 /	3.7	
3 dB / 15 dB Half Beamwidth		0.60 /	1.20	
Transmit Antenna Type:	A60371	ANDREW CORPORATION		
		ES37K-C		
6 GHz Gain (dBi) / Diameter (m)		46.3 /	3.7	
3 dB / 15 dB Half Beamwidth		0.40 /	0.80	
Operating Mode	TRANSMIT AND RECEIVE			
Modulation	DIGITAL			
Emission / Receive Band (MHz)	1M09G7D, 5M37G7D /	3700.0000 - 4200.0000		
Emission / Transmit Band (MHz)	1M09G7D, 5M37G7D /	5925.0000 - 6231.0000		
	1M09G7D, 5M37G7D /	6282.0000 - 6290.0000		
	1M09G7D, 5M37G7D /	6341.0000 - 6350.0000		
	1M09G7D, 5M37G7D /	6400.0000 - 6425.0000		
Max. Available RF Power (dBW)/4 kHz		-13.88		
(dBW)/MHz)		10.12		
Max. EIRP	(dBW)/4 kHz	32.42		
	(dBW)/MHz)	56.42		
Max permissible Interference Power				
4 GHz, 20% (dBW/1 MHz)		-162.0		
4 GHz, 0.0100% (dBW/1 MHz)		-152.0		
6 GHz, 20% (dBW/4 kHz)		-154.0		
6 GHz, 0.0025% (dBW/4 kHz)		-131.0		
Range of Satellite Arc (Geostationary)				
Degrees Longitude	180.0 W / 180.0 W			
Azimuth Range (Min/Max)	253.4 / 253.4			
Corresponding Elevation Angles	14.7 / 14.7			
Radio Climate	B			
Rain Zone	4			
Max Great Circle Coordination Distance (Mi/Km)				
4 GHz	406.7 / 654.6			
6 GHz	113.7 / 183.0			
Precipitation Scatter contour radius (Mi/Km)				
4 GHz	236.1 / 379.9			
6 GHz	62.1 / 100.0			

Table of Earth Station Coordination Values
07/23/98

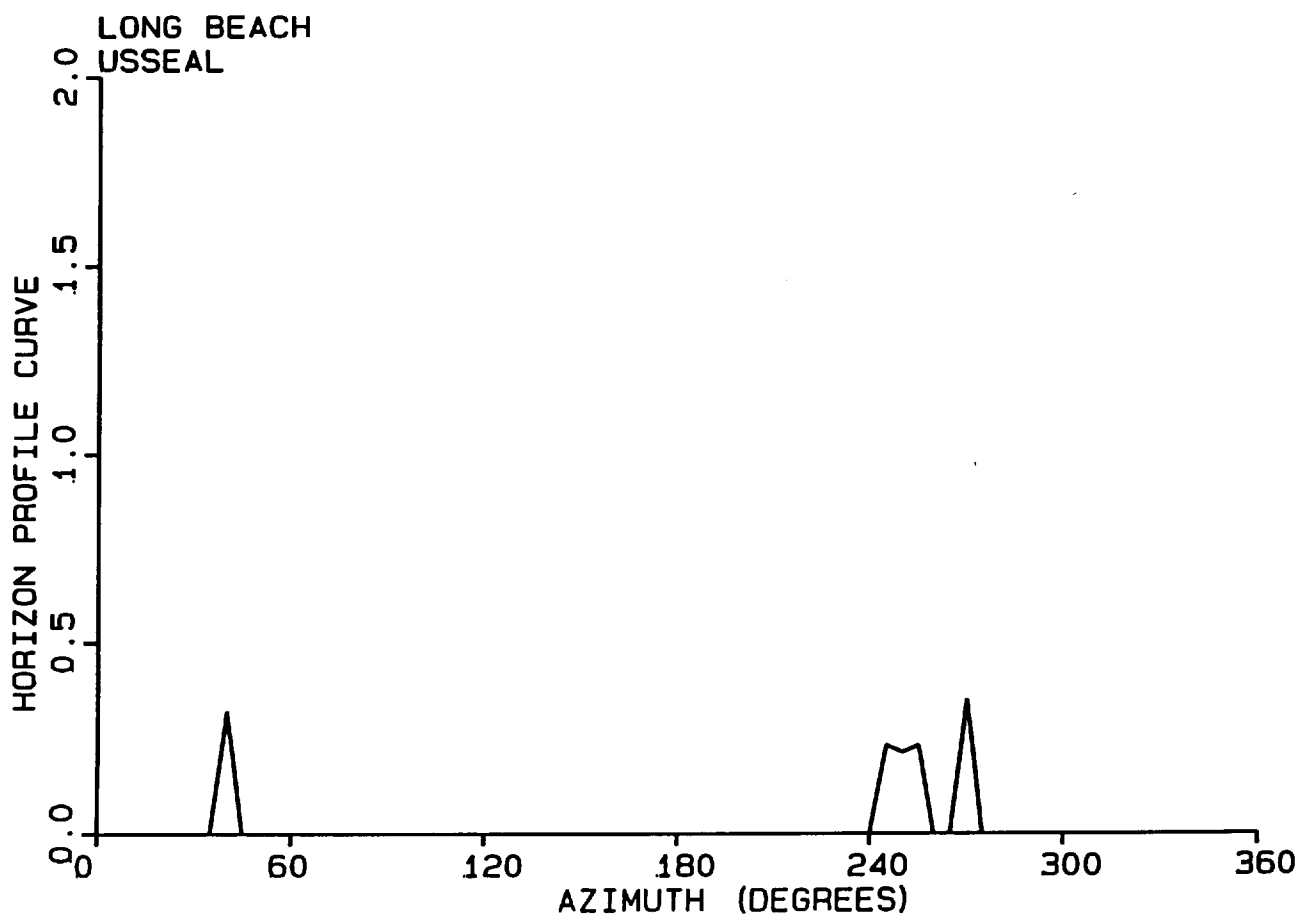
Earth Station Name LONG BEACH CA
 Owner U.S. SEA LAUNCH
 Latitude 33 44 44.0 N
 Longitude 118 13 10.0 W
 Ground Elevation (Ft/m) 0.0 / 0.0 AMSL ACL 145.5 Feet AGL
 Antenna Model ANDREW CORPORATION ES37K-C
 Objectives: Receive -162.0 (dBW /1 MHz)
 Transmit -154.0 (dBW /4 kHz) TX Power -13.9 (dBW/4 kHz)

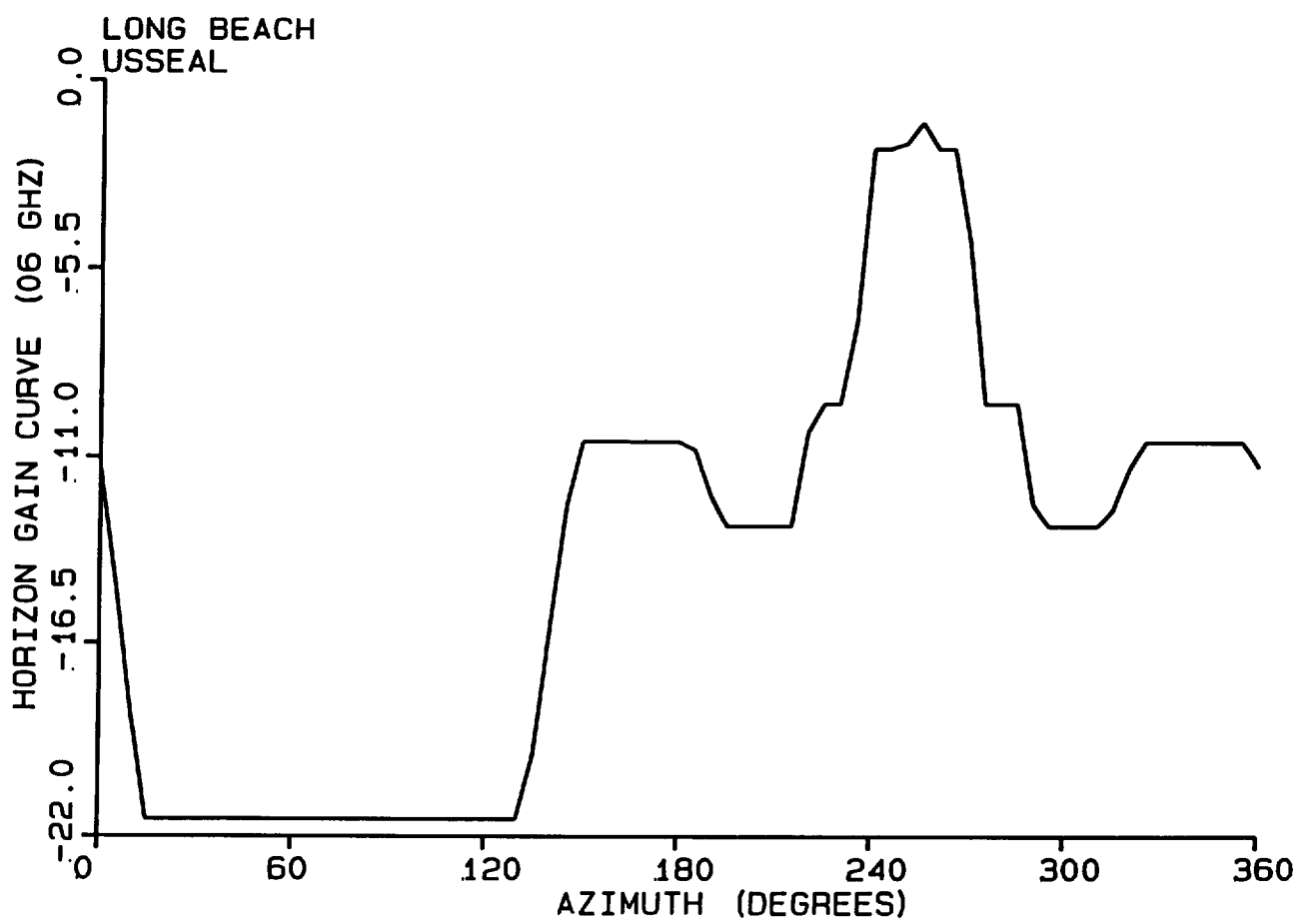
Azimuth (Deg)	Horizon Elevation Angle (Deg)	Antenna Disc. Angle (Deg)	4 GHz		6 GHz	
			Antenna Gain (dBi)	Coordination Distance (Km)	Antenna Gain (dBi)	Coordination Distance (Km)
0	0.00	106.04	-13.83	440.0	-11.23	141.8
5	0.00	110.85	-17.00	400.0	-14.68	129.7
10	0.00	115.66	-17.00	400.0	-18.46	118.5
15	0.00	120.45	-17.00	400.0	-21.50	112.7
20	0.00	125.21	-17.00	400.0	-21.50	112.7
25	0.00	129.95	-17.00	400.0	-21.50	112.7
30	0.00	134.64	-17.00	400.0	-21.50	112.7
35	0.00	139.28	-17.00	400.0	-21.50	112.7
40	0.32	143.95	-17.00	361.8	-21.50	103.2
45	0.00	148.29	-17.00	400.0	-21.50	112.7
50	0.00	152.57	-17.00	400.0	-21.50	112.7
55	0.00	156.58	-17.00	400.0	-21.50	112.7
60	0.00	160.18	-17.00	400.0	-21.50	112.7
65	0.00	163.08	-17.00	400.0	-21.50	112.7
70	0.00	164.88	-17.00	400.0	-21.50	112.7
75	0.00	165.17	-16.91	401.0	-21.50	112.7
80	0.00	163.88	-17.00	400.0	-21.50	112.7
85	0.00	161.32	-17.00	400.0	-21.50	112.7
90	0.00	157.93	-17.00	400.0	-21.50	112.7
95	0.00	154.05	-17.00	400.0	-21.50	112.7
100	0.00	149.85	-17.00	400.0	-21.50	112.7
105	0.00	145.45	-17.00	400.0	-21.50	112.7
110	0.00	140.93	-17.00	400.0	-21.50	112.7
115	0.00	136.31	-17.00	400.0	-21.50	112.7
120	0.00	131.64	-17.00	400.0	-21.50	112.7
125	0.00	126.92	-17.00	400.0	-21.50	112.7
130	0.00	122.16	-17.00	400.0	-21.50	112.7
135	0.00	117.38	-17.00	400.0	-19.67	117.3
140	0.00	112.58	-17.00	400.0	-16.07	125.3
145	0.00	107.77	-15.22	422.0	-12.44	137.3
150	0.00	102.95	-11.77	467.6	-10.50	144.5
155	0.00	98.12	-8.49	516.2	-10.50	144.5
160	0.00	93.28	-4.97	573.9	-10.50	144.5
165	0.00	88.45	-3.00	608.6	-10.50	144.5
170	0.00	83.62	-3.00	608.6	-10.50	144.5
175	0.00	78.78	-3.24	604.2	-10.50	144.5
180	0.00	73.96	-4.31	585.3	-10.50	144.5

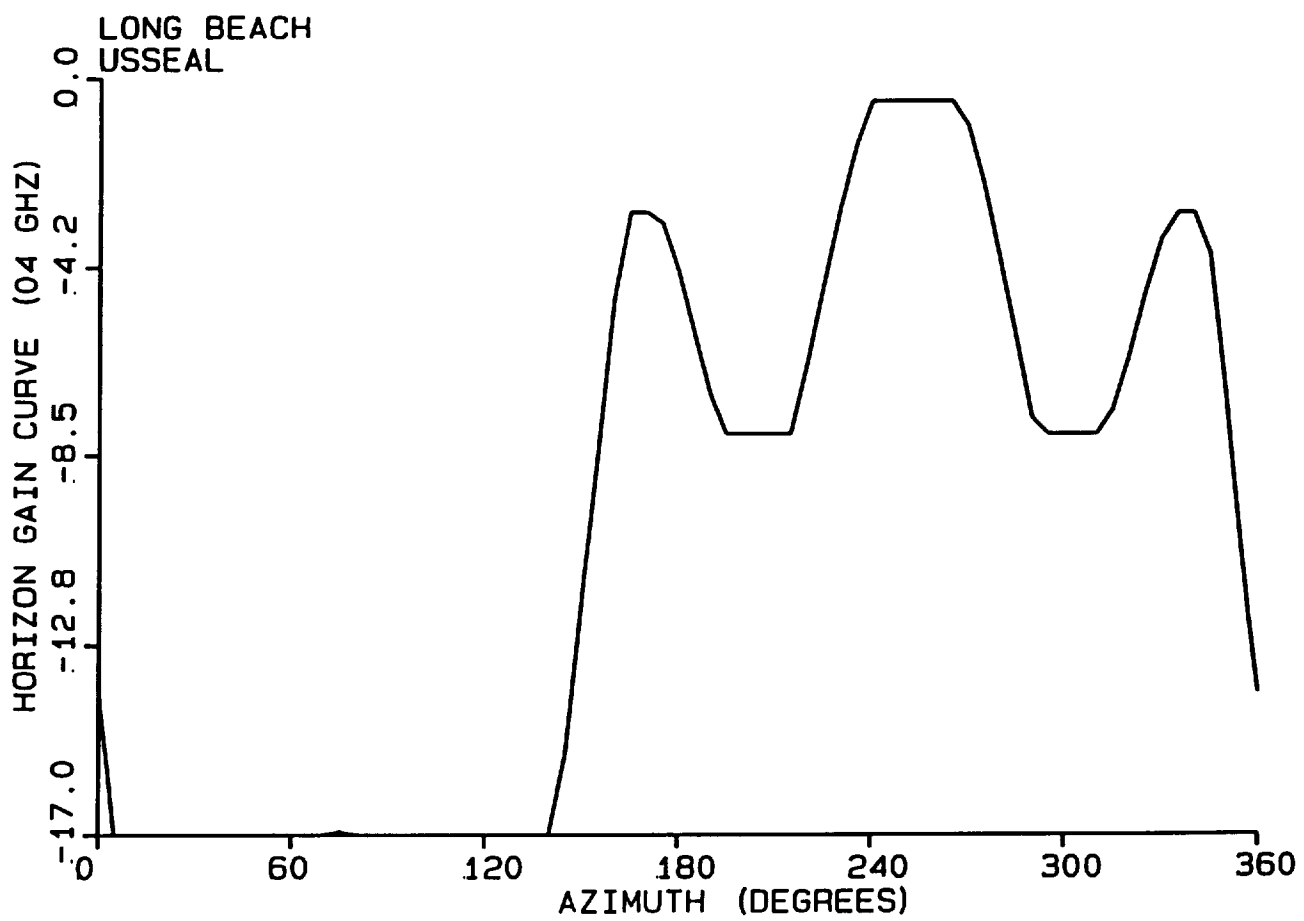
Table of Earth Station Coordination Values
07/23/98

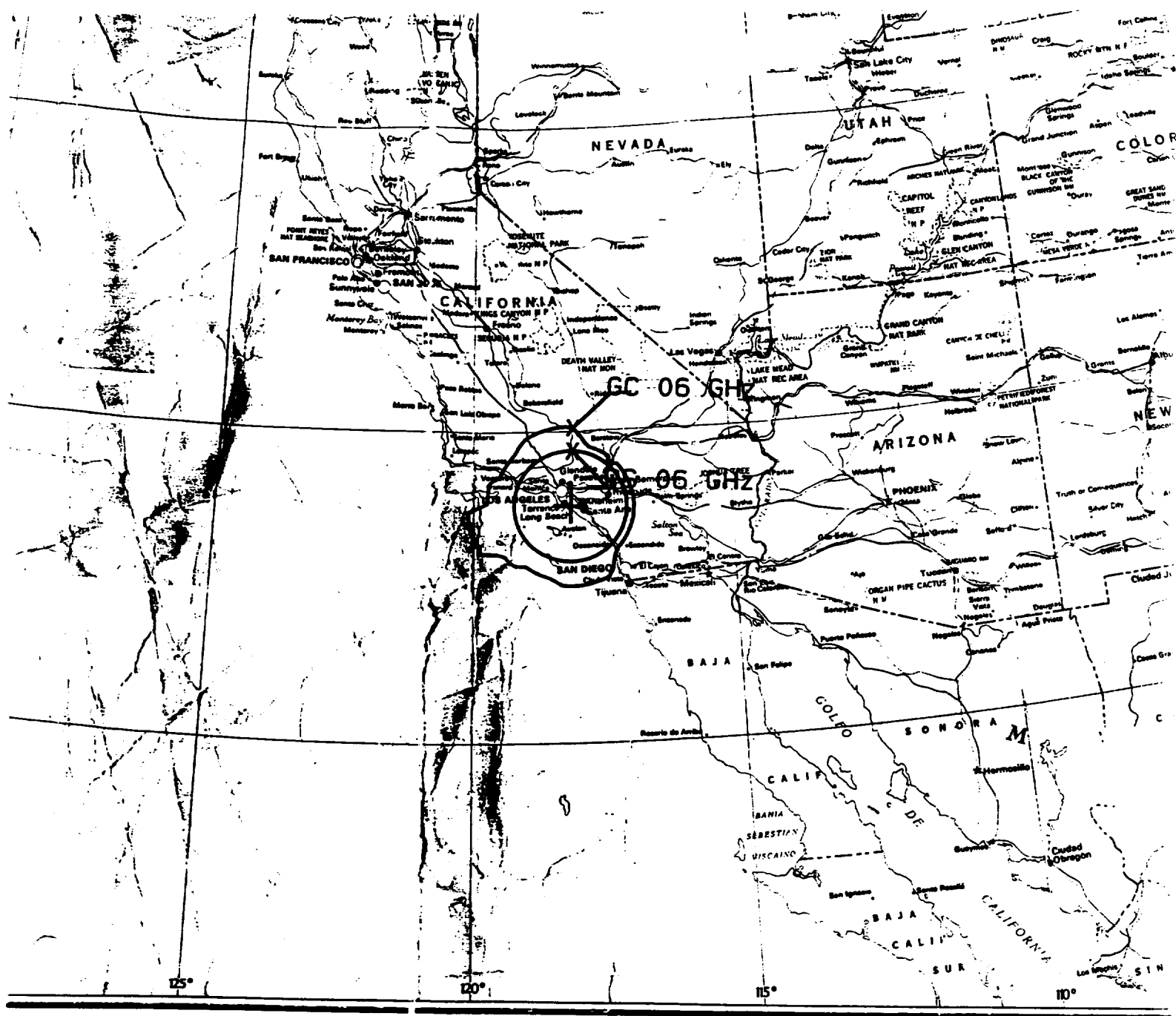
Earth Station Name LONG BEACH CA
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 Objectives: Receive -162.0 (dBW /1 MHz)
 Transmit -154.0 (dBW /4 kHz) TX Power -13.9 (dBW/4 kHz)

Azimuth (Deg)	Horizon Elevation Angle (Deg)	Antenna Disc. Angle (Deg)	4 GHz		6 GHz	
			Antenna Gain (dBi)	Coordination Distance (Km)	Antenna Gain (dBi)	Coordination Distance (Km)
185	0.00	69.14	-5.76	560.5	-10.76	143.5
190	0.00	64.34	-7.13	537.8	-12.13	138.4
195	0.00	59.55	-8.00	523.9	-13.00	135.3
200	0.00	54.79	-8.00	523.9	-13.00	135.3
205	0.00	50.05	-8.00	523.9	-13.00	135.3
210	0.00	45.36	-8.00	523.9	-13.00	135.3
215	0.00	40.72	-8.00	523.9	-13.00	135.3
220	0.00	36.16	-6.46	548.7	-10.23	145.6
225	0.00	31.71	-4.68	578.8	-9.40	148.8
230	0.00	27.43	-2.97	609.0	-9.40	148.8
235	0.00	23.42	-1.52	635.1	-7.05	158.6
240	0.00	19.82	-0.50	654.5	-2.00	183.0
245	0.23	16.72	-0.50	638.2	-2.00	177.9
250	0.21	14.92	-0.50	649.6	-1.83	182.3
255	0.23	14.60	-0.50	640.9	-1.21	182.9
260	0.00	16.12	-0.50	654.5	-2.00	183.0
265	0.00	18.68	-0.50	654.5	-2.00	183.0
270	0.35	21.84	-1.05	568.9	-4.72	148.1
275	0.00	25.95	-2.38	619.8	-9.40	148.8
280	0.00	30.15	-4.06	589.7	-9.40	148.8
285	0.00	34.55	-5.82	559.5	-9.40	148.8
290	0.00	39.07	-7.63	529.8	-12.33	137.7
295	0.00	43.68	-8.00	523.9	-13.00	135.3
300	0.00	48.36	-8.00	523.9	-13.00	135.3
305	0.00	53.08	-8.00	523.9	-13.00	135.3
310	0.00	57.84	-8.00	523.9	-13.00	135.3
315	0.00	62.62	-7.48	532.3	-12.48	137.2
320	0.00	67.41	-6.28	551.8	-11.28	141.6
325	0.00	72.23	-4.83	576.2	-10.50	144.5
330	0.00	77.05	-3.59	598.0	-10.50	144.5
335	0.00	81.88	-3.00	608.6	-10.50	144.5
340	0.00	86.71	-3.00	608.6	-10.50	144.5
345	0.00	91.55	-3.93	592.0	-10.50	144.5
350	0.00	96.38	-7.11	538.2	-10.50	144.5
355	0.00	101.21	-10.73	482.5	-10.50	144.5



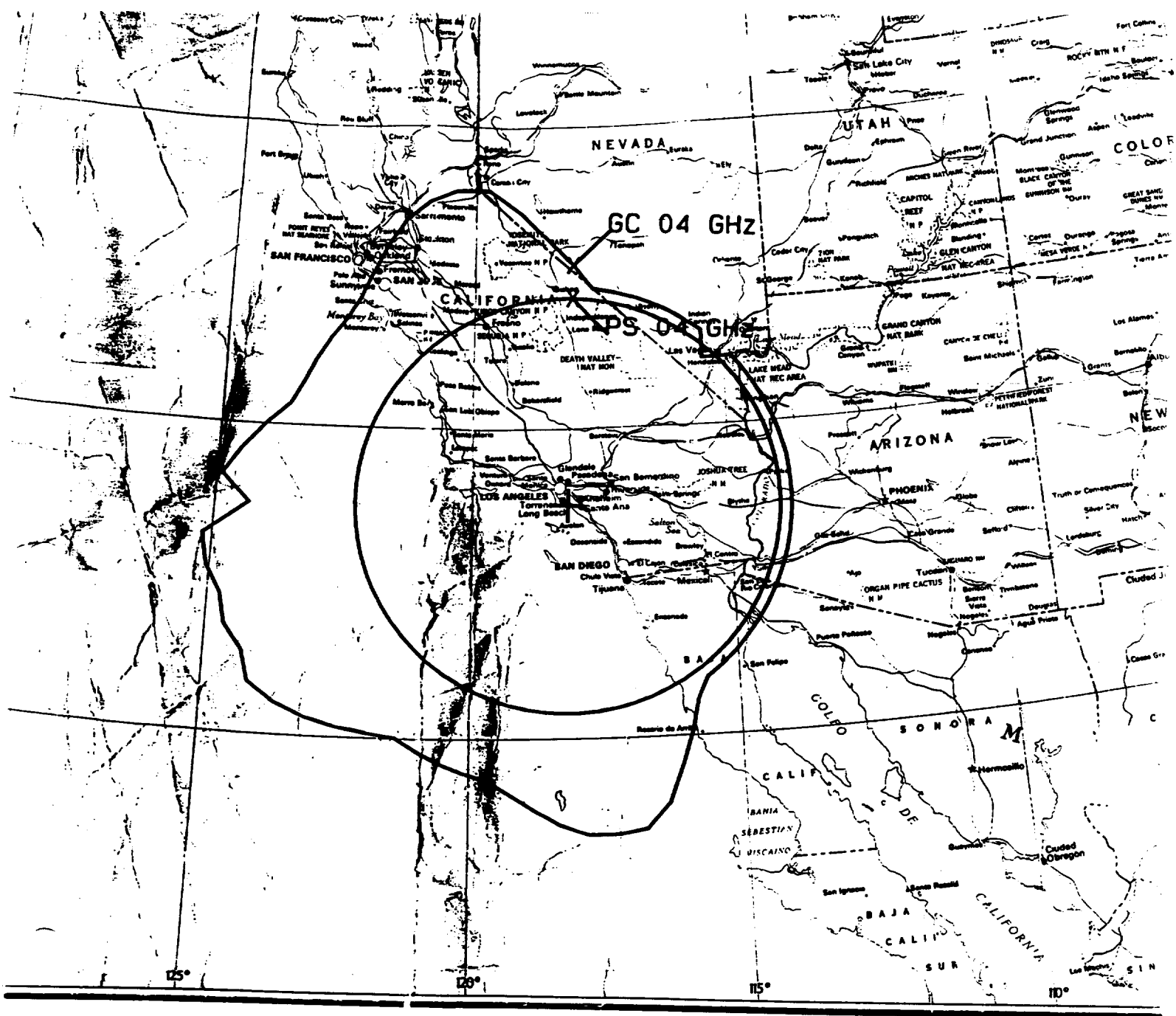






Comsearch

Scale 1: 10000000



Comsearch

Scale 1: 10000000

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY:


GARY K. EDWARDS
GROUP MANAGER
COMSEARCH
2002 EDMUND HALLEY DRIVE
RESTON, VIRGINIA 20191

DATED: August 26, 1998