

TP-00174 THRU 00177

TP-00177

THRU

TP-00174

Form 504	
U. S. DEPARTMENT OF COMMERCE	
COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey	Hydrographic (Photogrammetric)
Field No.	TP-00174 - TP-00177
Office No.	
LOCALITY	
State	Puerto Rico
General locality	Mayaguez District
Locality	Bahia de Guayanilla
Special Project	
19.69-71	
CHIEF OF PARTY	
LIBRARY & ARCHIVES	
DATE	

DESCRIPTIVE REPORT - DATA RECORD

TYPE OF SURVEY

☒ ORIGINAL☐ REVISED

SURVEY TP - 00174

JOB PH - 6903

PHOTOGRAMMETRIC OFFICE

Rockville, Maryland

OFFICER-IN-CHARGE

Jack E. Guth

FOR REVISED SURVEY USE ONLY

ORIGINAL
SURVEY DATA:

JOB PH -

DATES:

19 TO 19

I. INSTRUCTIONS DATED

1. OFFICE

General Instructions - 4/14/69

2. FIELD

4/8/69

II. DATUMS

1. HORIZONTAL:

☐ 1927 NORTH AMERICAN

OTHER (Specify)

Puerto Rico

2. VERTICAL:

☒ MEAN HIGH-WATER
☒ MEAN LOW-WATER
☐ MEAN LOWER LOW-WATER
☐ MEAN SEA LEVEL

OTHER (Specify)

3. MAP PROJECTION

Mercator

4. GRID(S)

STATE

None

ZONE

None

5. SCALE

1:5,000

STATE

None

ZONE

None

III. HISTORY OF OFFICE OPERATIONS

OPERATIONS		NAME	DATE
1. AEROTRIANGULATION	BY	H.P. Eichert/Saperstein	10/1/69
METHOD: Analytical	LANDMARKS AND AIDS BY	Inapplicable	
2. CONTROL AND BRIDGE POINTS	PLOTTED BY	P.J. Dempsey	12/1/69
METHOD: Coradi Plotter	CHECKED BY	P. J. Dempsey	12/1/69
3. STEREOSCOPIC INSTRUMENT	PLANIMETRY BY	E. L. Rolle	3/21/70
COMPILATION	CHECKED BY	E. L. Rolle	3/21/70
INSTRUMENT: Wild B-8	CONTOURS BY	E. L. Rolle	3/21/70
SCALE: 1:7,500	CHECKED BY	H.R. Brooks/E.L. Rolle	3/21/70
4. MANUSCRIPT DELINEATION	PLANIMETRY BY	E. L. Rolle	4/27/70
	CHECKED BY	E. L. Rolle	4/27/70
METHOD: Drafted	CONTOURS BY	E. L. Rolle	4/27/70
under- water & soundings	CHECKED BY	H.R. Brooks/E.L. Rolle	4/27/70
SCALE: 1:5,000	HYDRO SUPPORT DATA BY	None	
	CHECKED BY	None	
5. OFFICE INSPECTION PRIOR TO FIELD EDIT	BY	Inapplicable	
6. APPLICATION OF FIELD EDIT DATA	BY	E. L. Rolle	9/28/71
	CHECKED BY		
7. COMPILATION SECTION REVIEW	BY	E. L. Rolle	9/28/71
8. FINAL REVIEW	BY		
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH	BY		
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH	BY	F.A. WRIGHT (see page 28)	7/24/74
11. MAP REGISTERED - COASTAL SURVEY SECTION	BY	R. J. Lento	8-12-74

TP-00174
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) "E" and "L"	TYPES OF PHOTOGRAPHY LEGEND (C) <u>COLOR</u> (P) PANCHROMATIC (I) <u>INFRARED</u>	TIME REFERENCE		
TIDE STAGE REFERENCE ☐ PREDICTED TIDES ☐ REFERENCE STATION RECORDS ☒ TIDE CONTROLLED PHOTOGRAPHY		ZONE 8	☒ STANDARD	
		MERIDIAN 60th	☐ DAYLIGHT	
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE
69-E(C)-160 & 161	5/3/69	1625	1:15,000	MLW ✓
69-E(C)-181 & 182	5/3/69	1640	1:15,000	MLW ✓
<i>Infrared photography used in bridging only. see page 19 Item 26</i>				

REMARKS

2. SOURCE OF MEAN HIGH-WATER LINE:

Aerial photography dated 5/3/69

3. SOURCE OF MEAN LOW WATER OR MEAN LOWER LOW WATER LINE:

*underwater features*Tide controlled aerial photography. Refer to the enclosed
Photogrammetric Plot Report.

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
None	TP-00175	TP-00176	None

REMARKS

As this is a special project, no attempt was made to make
junction with other contemporary surveys to the north and west.

TP-00174

HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

Identification of horizontal & vertical control only

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	J. K. Wilson	4/69
2. HORIZONTAL CONTROL		
RECOVERED BY		
ESTABLISHED BY		
PRE-MARKED OR IDENTIFIED BY	R. E. Kesselring	4/69
3. VERTICAL CONTROL		
RECOVERED BY		
ESTABLISHED BY		
PRE-MARKED OR IDENTIFIED BY	R. E. Kesselring	4/69
4. LANDMARKS AND AIDS TO NAVIGATION		
RECOVERED (Triangulation Stations) BY		
LOCATED (Field Methods) BY		
IDENTIFIED BY	R. E. Kesselring	4/69
5. GEOGRAPHIC NAMES INVESTIGATION		
TYPE OF INVESTIGATION		
☐ COMPLETE		
☐ SPECIFIC NAMES ONLY		
☒ NO INVESTIGATION	None	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	None
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	None

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

Form C&GS 152

2. VERTICAL CONTROL IDENTIFIED

Form C&GS-152 & Hydro survey

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
69-E(C)-180	FAR, 1969 (sub. pt.)	69-E(C)-224	hydro signal 509 (passpoint 99509)

3. PHOTO NUMBERS (Clarification of details)

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
69-E(C)-224	Hydro Signal 509		

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

1 book labeled PH-6903 Field Notes

TP-00174
RECORD OF SURVEY USE

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Underwater contours, sounding data, rock info and planimetry	9/27/71			

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: _____3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

III. FEDERAL RECORDS CENTER DATA

1. ☐ BRIDGING PHOTOGRAPHS; ☐ DUPLICATE BRIDGING REPORT; ☐ COMPUTER READOUTS.
2. ☐ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM C&GS 567 SUBMITTED BY FIELD PARTIES.
3. ☐ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, ESSA FORM 76-36C.
ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____

IV. SURVEY REVISION (This section shall be completed when a revised survey is registered.)

FIRST REVISION	SURVEY NUMBER TP - (2)	JOB NUMBER PH -	REMARKS
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
SECOND REVISION	SURVEY NUMBER TP - (3)	JOB NUMBER PH -	REMARKS
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD REVISION	SURVEY NUMBER TP - (4)	JOB NUMBER PH -	REMARKS
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	

TYPE OF SURVEY

☒ ORIGINAL☐ REVISEDSURVEY TP. 00175JOB PH. 6903

DESCRIPTIVE REPORT - DATA RECORD

PHOTOGRAMMETRIC OFFICE

Rockville, Maryland

OFFICER-IN-CHARGE

Jack E. Guth

FOR REVISED SURVEY USE ONLY

ORIGINAL
SURVEY DATA:

JOB PH. _____

DATES:

19____ TO 19____

I. INSTRUCTIONS DATED

1. OFFICE

General Instructions 4/14/69

2. FIELD

4/8/69

II. DATUMS

1. HORIZONTAL:

☐ 1927 NORTH AMERICAN

OTHER (Specify)

Puerto Rico

2. VERTICAL:

☐ MEAN HIGH-WATER☒ MEAN LOW-WATER☐ MEAN LOWER LOW-WATER☐ MEAN SEA LEVEL

OTHER (Specify)

3. MAP PROJECTION

Mercator

4. GRID(S)

STATE

None

ZONE

None

5. SCALE

1:5,000

STATE

None

ZONE

None

III. HISTORY OF OFFICE OPERATIONS

OPERATIONS		NAME	DATE
1. AEROTRIANGULATION	BY	H.P. Eichert/II Saperstein	10/1/69
METHOD: Analytical	LANDMARKS AND AIDS BY	Inapplicable	
2. CONTROL AND BRIDGE POINTS	PLOTTED BY	P. J. Dempsey	12/1/69
METHOD: Coradi Plotter	CHECKED BY	P. J. Dempsey	12/1/69
3. STEREOSCOPIC INSTRUMENT	PLANIMETRY BY	E. L. Rolle	1/15/70
COMPILATION	CHECKED BY	E. L. Rolle	1/15/70
INSTRUMENT: Wild B8	CONTOURS BY	E. L. Rolle	1/15/70
SCALE: 1:7,500	CHECKED BY	H.R. Brooks-E.L. Rolle	1/15/70
4. MANUSCRIPT DELINEATION	PLANIMETRY BY	E. L. Rolle	4/10/70
	CHECKED BY	E. L. Rolle	4/10/70
METHOD: Drafted	CONTOURS BY	E. L. Rolle	4/10/70
under- water & soundings	CHECKED BY	H.R. Brooks-E.L. Rolle	4/10/70
SCALE: 1:5,000	HYDRO SUPPORT DATA BY	E. L. Rolle	4/10/70
	CHECKED BY	H.R. Brooks-E.L. Rolle	4/10/70
5. OFFICE INSPECTION PRIOR TO FIELD EDIT	BY	None	
6. APPLICATION OF FIELD EDIT DATA	BY	None	
	CHECKED BY	Inapplicable	
7. COMPILATION SECTION REVIEW	BY	E. L. Rolle	9/24/71
8. FINAL REVIEW	BY		
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH	BY		
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH	BY	F. Wright (see page 28)	7/24/74
11. MAP REGISTERED - COASTAL SURVEY SECTION	BY		

TP-00175
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) "E" and "L"		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE		(C) <u>COLOR</u> (P) PANCHROMATIC (I) <u>INFRARED</u>		ZONE 8	☒ STANDARD
☐ PREDICTED TIDES ☐ REFERENCE STATION RECORDS ☒ TIDE CONTROLLED PHOTOGRAPHY				MERIDIAN 60th	☐ DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
69-E(C)-153 & 154	5/3/69	1619	1:15,000	MLW	
69-E(C)-174	5/3/69	1635	1:15,000	MLW	
69-E(C)-194-196	5/3/69	1645	1:15,000	MLW	
Infrared photography used in bridging only. See Page 19 Item 26					

REMARKS

2. SOURCE OF MEAN HIGH-WATER LINE:

Aerial photography dated 5/3/69

3. SOURCE OF ~~MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE~~ UNDERWATER features

Tide-controlled aerial photography. Refer to the enclosed Photogrammetric Plot Report.

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
None	None	TP-00177	TP-00174

REMARKS

As this is a special project, no attempt was made to make junction with other contemporary surveys to the north and east.

TP-00175
HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION		☐ FIELD EDIT OPERATION		Identification of horizontal control only	
OPERATION		NAME		DATE	
1. CHIEF OF FIELD PARTY		J. K. Wilson		April '69	
2. HORIZONTAL CONTROL		RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY		R. E. Kesselring April '69	
3. VERTICAL CONTROL		RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY		None	
4. LANDMARKS AND AIDS TO NAVIGATION		RECOVERED (Triangulation Stations) BY LOCATED (Field Methods) BY IDENTIFIED BY		None	
5. GEOGRAPHIC NAMES INVESTIGATION		TYPE OF INVESTIGATION ☐ COMPLETE ☐ SPECIFIC NAMES ONLY ☒ NO INVESTIGATION		None	
6. PHOTO INSPECTION		CLARIFICATION OF DETAILS BY		None	
7. BOUNDARIES AND LIMITS		SURVEYED OR IDENTIFIED BY		None	
II. SOURCE DATA					
1. HORIZONTAL CONTROL IDENTIFIED From C&GS 152			2. VERTICAL CONTROL IDENTIFIED None		
PHOTO NUMBER		STATION NAME		PHOTO NUMBER	
69-E(C)-194		GOT, 1969 (substation)			
69-E(C)-196		TURN 2, 1966			
3. PHOTO NUMBERS (Clarification of details)					
None					
4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED					
None					
PHOTO NUMBER		OBJECT NAME		PHOTO NUMBER	
5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE		6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE			
7. SUPPLEMENTAL MAPS AND PLANS					
8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)					
1 book labeled PH-6903, Field Notes					

TP-00175
RECORD OF SURVEY USE

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Underwater contours, sounding data, rock info and planimetry	9/28/71			

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: _____3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

III. FEDERAL RECORDS CENTER DATA

1. ☐ BRIDGING PHOTOGRAPHS; ☐ DUPLICATE BRIDGING REPORT; ☐ COMPUTER READOUTS.
2. ☐ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM C&GS 567 SUBMITTED BY FIELD PARTIES.
3. ☐ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, ESSA FORM 76-36C.
ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____

IV. SURVEY REVISION (This section shall be completed when a revised survey is registered.)

FIRST REVISION	SURVEY NUMBER TP - (2)	JOB NUMBER PH -	REMARKS
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
SECOND REVISION	SURVEY NUMBER TP - (3)	JOB NUMBER PH -	REMARKS
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD REVISION	SURVEY NUMBER TP - (4)	JOB NUMBER PH -	REMARKS
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	

TYPE OF SURVEY

☒ ORIGINAL

SURVEY TP - 00176

☐ REVISED

JOB PH - 6903

DESCRIPTIVE REPORT - DATA RECORD

PHOTOGRAMMETRIC OFFICE

Rockville, Maryland

OFFICER-IN-CHARGE

Jack E. Guth

FOR REVISED SURVEY USE ONLY

ORIGINAL
SURVEY DATA:

JOB PH -

DATES:

19 TO 19

I. INSTRUCTIONS DATED

1. OFFICE

General Instructions 4/14/69

2. FIELD

4/8/69

II. DATUMS

1. HORIZONTAL:

☐ 1927 NORTH AMERICAN

OTHER (Specify)

Puerto Rico

2. VERTICAL:

☒ MEAN HIGH-WATER
☒ MEAN LOW-WATER
☐ MEAN LOWER LOW-WATER
☐ MEAN SEA LEVEL

OTHER (Specify)

3. MAP PROJECTION

Mercator

4. GRID(S)

STATE

None

ZONE

None

5. SCALE

1:5,000

STATE

None

ZONE

None

III. HISTORY OF OFFICE OPERATIONS

OPERATIONS		NAME	DATE
1. AEROTRIANGULATION	BY	H. Eichert/I. Saperstein	10/1/69
METHOD: Analytical	LANDMARKS AND AIDS BY	Inapplicable	
2. CONTROL AND BRIDGE POINTS	PLOTTED BY	P. J. Dempsey	12/1/69
METHOD: Coradi Plotter	CHECKED BY	P. J. Dempsey	12/1/69
3. STEREOSCOPIC INSTRUMENT	PLANIMETRY BY	E. L. Rolle	3/9/70
COMPILATION	CHECKED BY	E. L. Rolle	3/9/70
INSTRUMENT: B-8	underwater - CONTOURS BY	E. L. Rolle	3/9/70
SCALE: 1:7,500	& soundings	H.R. Brooks/E.L. Rolle	3/9/70
4. MANUSCRIPT DELINEATION	PLANIMETRY BY	E. L. Rolle	4/21/70
	CHECKED BY	E. L. Rolle	4/21/70
	underwater - CONTOURS BY	E. L. Rolle	4/21/70
METHOD: Drafted	& soundings	H.R. Brooks/E.L. Rolle	4/21/70
	CHECKED BY	H.R. Brooks/E.L. Rolle	4/21/70
	HYDRO SUPPORT DATA BY	E. L. Rolle	4/21/70
SCALE: 1:5,000	CHECKED BY	H. R. Brooks/E.L. Rolle	4/21/70
5. OFFICE INSPECTION PRIOR TO FIELD EDIT	BY	None	
6. APPLICATION OF FIELD EDIT DATA	BY	None	
	CHECKED BY	Inapplicable	
7. COMPILATION SECTION REVIEW	BY	E. L. Rolle	9/23/71
8. FINAL REVIEW	BY		
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH	BY		
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH	BY	F. Wright (see page 28)	7-24-74
11. MAP REGISTERED - COASTAL SURVEY SECTION	BY		

TP-00176
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) "E" and "L"		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE ☐ PREDICTED TIDES ☐ REFERENCE STATION RECORDS ☒ TIDE CONTROLLED PHOTOGRAPHY		(C) <u>COLOR</u> (P) PANCHROMATIC (I) <u>INFRARED</u>		ZONE 8	☒ STANDARD
				MERIDIAN 60th	☐ DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
69-E(C)-183-185	5/3/69	1640	1:15,000	MLW	
69-E(C)-221 & 222	5/3/69	1657	1:15,000	MLW	
<i>Infrared photography used in bridging only. see Item 26, Page 19</i>					
REMARKS					

2. SOURCE OF MEAN HIGH-WATER LINE:

Aerial photography dated 5/3/69

3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE: *Underwater Features*

Tide-controlled aerial photography. Refer to the enclosed Photogrammetric Plot Report.

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
TP-00174	TP-00177	None	None

REMARKS As this is a special project, no attempt was made to make junction with other contemporary surveys to the south and west.

TP-00176
HISTORY OF FIELD OPERATIONS

OPERATION		NAME	DATE
1. CHIEF OF FIELD PARTY		J. K. Wilson	April '69
2. HORIZONTAL CONTROL			
RECOVERED BY			
ESTABLISHED BY			
PRE-MARKED OR IDENTIFIED BY		R. E. Kesselring	April '69
3. VERTICAL CONTROL			
RECOVERED BY			
ESTABLISHED BY			
PRE-MARKED OR IDENTIFIED BY		R. E. Kesselring	April '69
4. LANDMARKS AND AIDS TO NAVIGATION			
RECOVERED (Triangulation Stations) BY			
LOCATED (Field Methods) BY			
IDENTIFIED BY		R. E. Kesselring	April '69
5. GEOGRAPHIC NAMES INVESTIGATION		TYPE OF INVESTIGATION	
		☐ COMPLETE	
		☐ SPECIFIC NAMES ONLY	
		☒ NO INVESTIGATION	
6. PHOTO INSPECTION		CLARIFICATION OF DETAILS BY	
		None	
7. BOUNDARIES AND LIMITS		SURVEYED OR IDENTIFIED BY	
		None	
II. SOURCE DATA			
1. HORIZONTAL CONTROL IDENTIFIED		2. VERTICAL CONTROL IDENTIFIED	
From C&GS-152			
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
69-E(C)-221	NUN, 1969	69-E(C)-221	Float No. 1 (pass point 99221)
		69-E(C)-183	Float No. 2 (pass point 99222)
		69-E(C)-182	Float No. 3 (pass point 99223)
3. PHOTO NUMBERS (Clarification of details)		69-E(C)-182	Hydro Signal 510 (pass point 99510)
None		69-E(C)-183	Hydro Signal 514 (pass point 99514)
4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED			
PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
69-E(C)-182	Hydro Signal 510		
69-E(C)-183	Hydro Signal 514		
5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE		6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE	
7. SUPPLEMENTAL MAPS AND PLANS			
None			
8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)			
1 book labeled PH-6903 Field Notes			

TP-00176
RECORD OF SURVEY USE

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Underwater contours, sounding data, rock info and planimetry	9/25/71			

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: _____3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

III. FEDERAL RECORDS CENTER DATA

1. ☐ BRIDGING PHOTOGRAPHS; ☐ DUPLICATE BRIDGING REPORT; ☐ COMPUTER READOUTS.
2. ☐ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM C&GS 567 SUBMITTED BY FIELD PARTIES.
3. ☐ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, ESSA FORM 76-36C.
ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____

IV. SURVEY REVISION (This section shall be completed when a revised survey is registered.)

FIRST REVISION	SURVEY NUMBER	JOB NUMBER	REMARKS
	TP - (2)	PH -	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
SECOND REVISION	SURVEY NUMBER	JOB NUMBER	REMARKS
	TP - (3)	PH -	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD REVISION	SURVEY NUMBER	JOB NUMBER	REMARKS
	TP - (4)	PH -	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	

TYPE OF SURVEY

☒ ORIGINALSURVEY TP. 00177☐ REVISEDJOB PH. 6903

DESCRIPTIVE REPORT - DATA RECORD

PHOTOGRAMMETRIC OFFICE

Rockville, Maryland

OFFICER-IN-CHARGE

Jack E. Guth

FOR REVISED SURVEY USE ONLY

ORIGINAL
SURVEY DATA:

JOB PH. _____

DATES:
19____ TO 19____

I. INSTRUCTIONS DATED

1. OFFICE

General Instructions 4/14/69

2. FIELD

4/8/69

II. DATUMS

1. HORIZONTAL:

☐ 1927 NORTH AMERICAN

OTHER (Specify)

Puerto Rico

2. VERTICAL:

☒ MEAN HIGH-WATER
☒ MEAN LOW-WATER
☐ MEAN LOWER LOW-WATER
☐ MEAN SEA LEVEL

OTHER (Specify)

3. MAP PROJECTION

Mercator

4. GRID(S)

STATE

None

ZONE

None

5. SCALE

1:5,000

STATE

None

ZONE

None

III. HISTORY OF OFFICE OPERATIONS

OPERATIONS		NAME	DATE
1. AEROTRIANGULATION METHOD: <u>Analytical</u>	BY LANDMARKS AND AIDS BY	<u>H.P. Eichert/Saperstein</u>	<u>10/1/69</u>
2. CONTROL AND BRIDGE POINTS METHOD: <u>Coradi Plotter</u>	PLOTTED BY CHECKED BY	<u>P.J. Dempsey</u> <u>P.J. Dempsey</u>	<u>12/1/69</u> <u>12/1/69</u>
3. STEREOSCOPIC INSTRUMENT COMPILATION INSTRUMENT: <u>B-8</u> SCALE: <u>1:7,500</u>	PLANIMETRY BY CHECKED BY CONTOURS BY CHECKED BY	<u>E. L. Rolle</u> <u>E.L. Rolle</u> <u>E.L. Rolle</u> <u>H.R. Brooks/E.L. Rolle</u>	<u>12/15/69</u> <u>12/15/69</u> <u>12/15/69</u> <u>12/15/69</u>
4. MANUSCRIPT DELINEATION METHOD: <u>Drafted</u> SCALE: <u>1:5,000</u>	PLANIMETRY BY CHECKED BY CONTOURS BY CHECKED BY HYDRO SUPPORT DATA BY CHECKED BY	<u>E.L. Rolle</u> <u>E.L. Rolle</u> <u>E.L. Rolle</u> <u>H.R. Brooks/E.L. Rolle</u> <u>E.L. Rolle</u> <u>H.R. Brooks/E.L. Rolle</u>	<u>4/3/70</u> <u>4/3/70</u> <u>4/3/70</u> <u>4/3/70</u> <u>4/3/70</u> <u>4/3/70</u>
5. OFFICE INSPECTION PRIOR TO FIELD EDIT	BY	<u>None</u>	
6. APPLICATION OF FIELD EDIT DATA	BY CHECKED BY	<u>None</u> <u>Inapplicable</u>	
7. COMPILATION SECTION REVIEW	BY	<u>E.L. Rolle</u>	<u>9/29/71</u>
8. FINAL REVIEW	BY		
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH	BY		
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH	BY	<u>F. Wright (see page 28)</u>	<u>7-24-74</u>
11. MAP REGISTERED - COASTAL SURVEY SECTION	BY		

T-00177
COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

CAMERA(S) "E" and "I"		TYPES OF PHOTOGRAPHY LEGEND		TIME REFERENCE	
TIDE STAGE REFERENCE ☐ PREDICTED TIDES ☐ REFERENCE STATION RECORDS ☒ TIDE CONTROLLED PHOTOGRAPHY		(C) <u>COLOR</u> (P) PANCHROMATIC (I) <u>INFRARED</u>		ZONE 8	☒ STANDARD
				MERIDIAN 60th	☐ DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
69-E(C)-150-152	5/3/69	1618	1:15,000	MLW ✓	
69-E(C)-192&193	5/3/69	1645	1:15,000	MLW ✓	
69-E(C)-9960	4/3/69	0809	1:15,000	MLW ✓	
<i>Infrared photography used in bridging only. See page 19, Item 26</i>					

REMARKS

2. SOURCE OF MEAN HIGH-WATER LINE:

Aerial photography dated 5/3/69

3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER-LOW-WATER LINE: *UNDERWATER Features*Tide-controlled aerial photography. Refer to the enclose
Photogrammetric Plot Report.

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED

5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
TP-00175	None	None	TP-00176

REMARKS

As this is a special project, no attempt was made to make junction
with other contemporary surveys to the south and the east.

TP-00177
HISTORY OF FIELD OPERATIONSI. ☐ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATIONIdentification of hori.
& vert. control only.

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	J. K. Wilson	5/69
2. HORIZONTAL CONTROL RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	R. E. Kesselring	5/69
3. VERTICAL CONTROL RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	R. E. Kesselring	5/69
4. LANDMARKS AND AIDS TO NAVIGATION RECOVERED (Triangulation Stations) BY LOCATED (Field Methods) BY IDENTIFIED BY	R. E. Kesselring	5/69
5. GEOGRAPHIC NAMES INVESTIGATION TYPE OF INVESTIGATION ☐ COMPLETE BY ☐ SPECIFIC NAMES ONLY ☒ NO INVESTIGATION	None	
6. PHOTO INSPECTION CLARIFICATION OF DETAILS BY	None	
7. BOUNDARIES AND LIMITS SURVEYED OR IDENTIFIED BY	None	

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

Form C&GS-152

2. VERTICAL CONTROL IDENTIFIED

PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
69(E)192	MARIA 2, 1969	69E(C)192	Float #4 (pass point 99224)
		69-E(C)151	Float #5 (pass point 99225)

3. PHOTO NUMBERS (Clarification of details)

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☐ NONE

7. SUPPLEMENTAL MAPS AND PLANS

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

1 book labeled PH-6903, Field Notes

TP-00177
RECORD OF SURVEY USE

I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Underwater contours, sounding data, rock info and planimetry	9/28/71			

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

NUMBER	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: _____3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

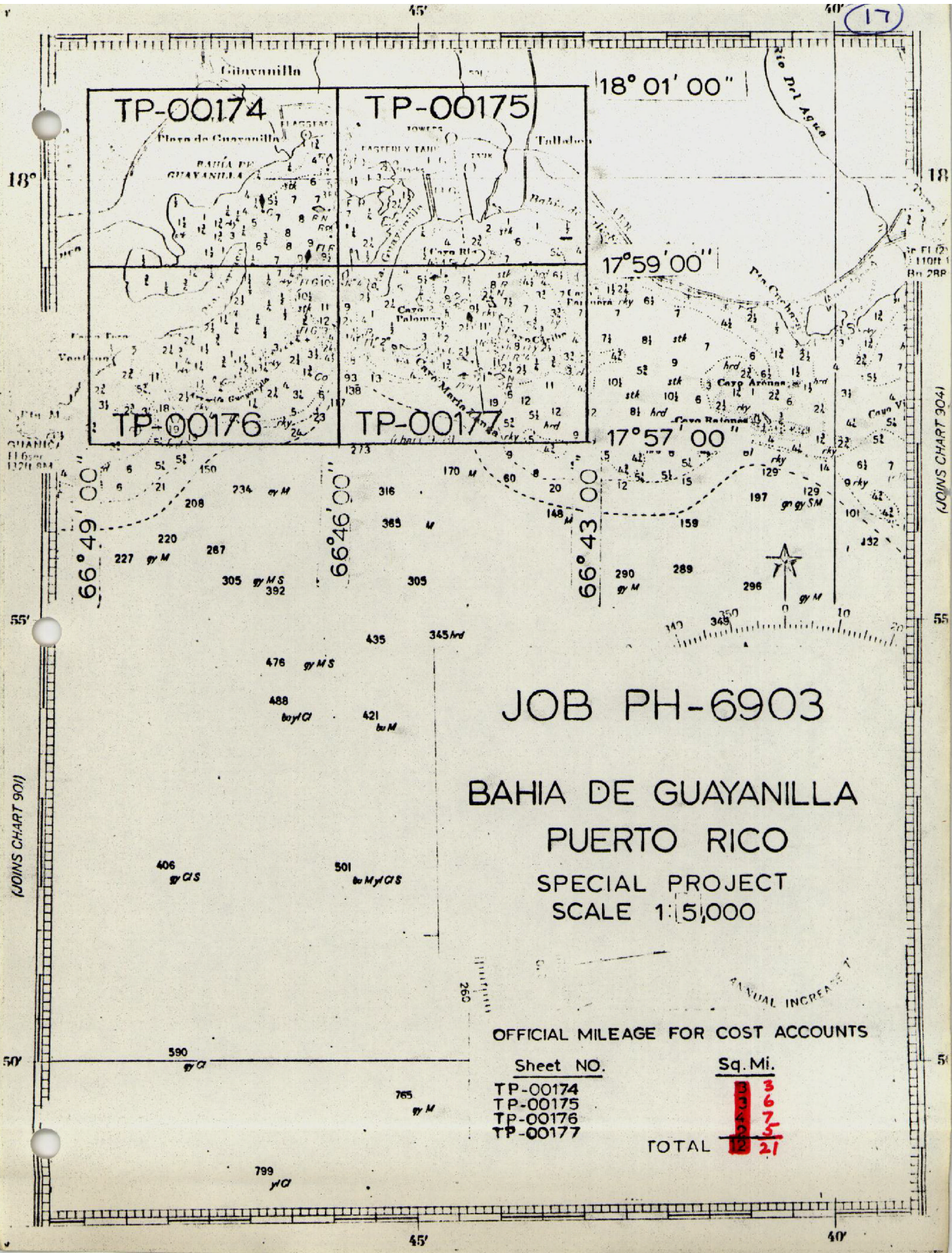
III. FEDERAL RECORDS CENTER DATA

1. ☐ BRIDGING PHOTOGRAPHS; ☐ DUPLICATE BRIDGING REPORT; ☐ COMPUTER READOUTS.
2. ☐ CONTROL STATION IDENTIFICATION CARDS; ☐ FORM C&GS 567 SUBMITTED BY FIELD PARTIES.
3. ☐ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, ESSA FORM 76-36C.
ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____

IV. SURVEY REVISION (This section shall be completed when a revised survey is registered.)

FIRST REVISION	SURVEY NUMBER	JOB NUMBER	REMARKS
	TP - (2)	PH -	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
SECOND REVISION	SURVEY NUMBER	JOB NUMBER	REMARKS
	TP - (3)	PH -	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD REVISION	SURVEY NUMBER	JOB NUMBER	REMARKS
	TP - (4)	PH -	
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	



JOB PH-6903

BAHIA DE GUAYANILLA
PUERTO RICO
SPECIAL PROJECT
SCALE 1:5,000

OFFICIAL MILEAGE FOR COST ACCOUNTS

Sheet NO.	Sq. Mi.
TP-00174	3
TP-00175	6
TP-00176	7
TP-00177	5
TOTAL	21

Photogrammetric Plot Report
Job PH-6903
Bahia de Guayanilla, Puerto Rico

October 1969

21. Purpose

The purpose of this pilot project is to test the feasibility of furnishing hydrographic surveys by photogrammetric methods. An area in Puerto Rico, Bahia de Guayanilla, was selected for the test.

22. Method

Seven (7) strips of 1:15,000 color photographs were bridged by analytical aerotriangulation methods, using a forty (40) photograph block adjustment.

23. Control

Eight (8) horizontal and twenty-four (24) vertical control stations were weighted in the final block adjustment. Seven horizontal stations were targeted and one was a natural object.

Two types of vertical control points were used:

1. Underwater points near floating targets and fixed hydro targets, depths of which were field determined, and
2. Shoreline points using infrared photography taken at low water and transferred to the color bridging photography.

The elevations of all underwater points were reduced from tide staff readings to the datum required (low water). The refined coordinates for these underwater points were corrected for refraction.

Shoreline point 42201 has an error of +3 feet. Upon closer examination it was found that the point was drilled on the side of a bush and evidently thus measured. Point 42201 should be discarded.

-2-

24. Photography

The definition and quality of photography taken with the RC-8 "L" camera were good, except for occasional sun spots which made measuring underwater points difficult.

25. Accuracy

The RMS for the block is 10.3 micrometers, with an RMS vertical error of 0.16 meters. Horizontal errors were not foreseen as a problem and as they are insignificantly small are not plotable at map scale, require no special mention.

26. Conclusions and Recommendations

The use of infrared photography flown in tandem with color for the purpose of furnishing vertical control at the water line introduced some inaccuracies. No difficulty was encountered transferring shoreline points from the infrared to the color when flown in tandem, but transferring the point to adjoining color strips proved very difficult because of wave action.

In future jobs of this kind, it might prove worthwhile to use targets to determine elevations of vertical control points needed. A target could be placed near the shore and a hand level shot from the waters edge to target, with date and time recorded, would determine the elevation.

In order to get depths in water areas where vertical control is needed, concrete blocks painted white could be placed in the water. In all probability a target could be seen underwater to a depth of ten feet or more.

Respectively submitted,


I. I. Saperstein

Approved and forwarded,


Henry P. Eichert
Chief, Aerotriangulation
Section

MAP T. TP-00174

PROJECT NO.

PH-6903

SCALE OF MAP.

1:5,000

SCALE FACTOR

[illegible]

MAP T- TP-00177 PROJECT NO. PH-6903 SCALE OF MAP 1:5,000 SCALE FACTOR _____

[illegible]

Compilation Report
TP-00174 through TP-00177

These four surveys are to be compared with the latest hydrographic surveys of the area. The purpose for this special project is to analyze the possibilities for providing hydrographic surveys by photogrammetric methods.

31. Delineation

The Wild B-8 stereoscopic instrument was used to compile the four surveys.

32. Control

Refer to the Photogrammetric Plot Report bound with this report.

The identification, density and placement of horizontal and vertical control was adequate.

33. Supplemental Data

Inapplicable.

34. Contours (Underwater) and Drainage

All drainage on these four manuscripts is from office interpretation of the photographs.

The quality of the photographs and diapositives covering the following four surveys of this project was good except as noted in the following paragraphs.

TP-00174

The 6', 12' and 18' underwater contours (depth curves) and underwater spot elevations (soundings), were compiled in the areas not affected by a suspended silt and pollution condition of the water. The poor water conditions rendered it impossible to compile depth curves in the lagoon area west of Punta Verraco and the north shore extending from the lagoon to the eastern limits of this survey. If the water conditions had been favorable, this survey could have been compiled with a minimum of effort.

-2-

TP-00175

The 3', 6', 9' and 12' underwater contours and underwater spot elevations were compiled in the areas not affected by the suspended silt referred to in survey TP-00174.

An attempt was made to overcome the silting conditions by setting additional stereomodels in various ways. A stereomodel was cleared, leveled and horizontalized using color transparencies 69-E(C)-9960, dated April 30, 1969, time 0810 and 69-E(C)-174, dated May 3, 1969, time 1635. A few additional underwater spot elevations were obtained in this solution, but were considered weak.

Another stereomodel, using photography from two separate flights, 69-E(C)-175 and 69-E(C)-195, was set with negative results. Stereomodel 69-E(C)-195 and 69-E(C)-197, eliminating photo 69-E(C)-196, was also set, but it too was unproductive.

As in TP-00174, this survey could have been more completely compiled but for the poor condition of the water.

TP-00176

The 6', 12' and 18' underwater contours, underwater spot elevations, sunken rocks with spot elevations and rocks awash were compiled. In stereomodel 69-E(C)-182 and 69-E(C)-183, some difficulty was encountered compiling contours in an area where the bottom characteristics were grass and sticky mud. The grass and mud area appeared as a very soft part of an otherwise solid stereomodel.

Sunglare in stereomodels 69-E(C)-183 through 185 and the pollution in model 69-E(C)-221 and 69-E(C)-222 at latitude 17°58'15" and longitude 66°47'30", made it impossible to complete the 6' and 12' underwater curves in this small area.

TP-00177

The 3', 6', 9', 12' and 15' underwater contours, underwater spot elevations, sunken rocks with spot elevations and rocks awash were compiled. The stereomodels set in this survey were soft below the 9' underwater curve, limiting the number of readable underwater spot elevations.

An additional model, 69-E(C)-9788 and 69-E(C)-9789 (1:10,000 scale transparencies) was set to supplement the underwater compilation, but no additional information was obtained.

-3-

The 6' and 9' underwater curves in the area of latitude 17°58'30" and longitude 66°45'30" are considered to be very weak.

Note:

Refraction corrections were applied to all of the underwater curves and underwater spot elevation compiled on the four manuscripts of this special project.

35. Shoreline and Alongshore Details

There was no shoreline inspection. The shoreline was delineated from office interpretation of the photographs. The mean low-water line was not delineated.

36. Offshore Details

Refer to Item 34 of this Compilation Report.

37. Landmarks and Aids

All landmarks and aids were located by office interpretation of the photographs.

No Form 567 submitted.

38. Control for Future Surveys

No Form 524 submitted.

39. Junctions

These four surveys have been joined together and the junctions are in agreement. As this is a special project, no attempt was made to make a junction with any other contemporary survey in the area.

-4-

40. Horizontal and Vertical Accuracy

No comment.

41. Conclusions and Recommendations

Refer to Item 26 of the Photogrammetric Plot Report bound with this report.

Underwater compilation was impeded in many areas throughout this project due to the polluted conditions of the water. Suspended silt in the water was evident in most of the stereomodels, limiting the penetration capabilities of the photography.

In future jobs involving water penetration, it would prove valuable to visually survey the area to be mapped, before aerial photography is recommended.

42. through 45. Not applicable.

46. Comparison with Existing Maps

No comparison made.

47. Comparison with Nautical Charts

Comparison has been made with Chart No. 928, scale 1:10,000, 6th Edition, December 16, 1968.

Items to be applied to Nautical Charts immediately:
Copies of these four surveys should be forwarded to the Marine Chart Division for comparison with the most recent hydrographic surveys in the area.

Items to be carried forward: None

Respectfully submitted,



Edward L. Rolle
Cartographer

7/10/74

Approved and Forwarded,



Harold R. Brooks
Chief, Revision Surveys Section

Quality Control Report
(Map Registration)

Data was forwarded for registration without a thorough examination.

Submitted by,

Frank Wright

Frank Wright

July 1974

Approved:

W. H. Engstrom

Chief, Photogrammetric Branch

Wesley J. Hull

Chief, Coastal Mapping Division