Water Wells on St. John, U.S. Virgin Islands

By Judy I. Steiger and Richard Kessler

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CONVERSION FACTORS AND ACRONYMS

Multiply	By	To obtain
inch	25.4	millimeter
foot	0.3048	meter
mile	1.609	kilometer
square mile	2.590	square kilometer
gallon	3.785	liter
gallons per minute	0.06308	liter per second
gallons per day	0.003785	cubic meter per day

Acronyms used in this report:

U.S. Geological Survey (USGS)
U.S. National Park Service (NPS)
U.S. Virgin Islands (USVI)
U.S. Virgin Islands Department of Planning and Natural Resources (VIDPNR)
U.S. Virgin Islands Water and Power Authority (VIWAPA)

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Abstract

An inventory of wells was conducted between February 1990 and April 1991 on St. John, U.S. Virgin Islands. Maps of well locations and tables of well-inventory data for 83 wells (34 are dug wells and 49 are drilled wells) are compiled in this report. The demand for freshwater on St. John has exceeded the supply because of the growth in population and tourism. Currently, the demand for water on St. John is met by desalinated seawater, rainfall collected in cisterns, and ground water. The well-inventory data provides a database to assist hydrologists, water managers, and planners in the development and full utilization of the ground-water resources of St. John.

INTRODUCTION

Freshwater is a scarce and expensive commodity in the U.S. Virgin Islands (USVI) (Gómez-Gómez and others, 1984). A variety of freshwater sources are used to meet demand for freshwater in St. John. Currently, desalinated seawater, rooftop-rainfall catchments, and ground water are the major sources of freshwater supply.

The U.S. Virgin Islands Water and Power Authority (VIWAPA) is responsible for the supply and distribution of public water for the USVI. Because of increases in the population and tourism, the development of the water resources of the USVI is becoming more important for the future of St. John. In planning for long-term supply of water for the USVI, VIWAPA is considering all possible sources of water. Carefully planned ground-water development can be the key to an inexpensive water supply in the future.

Purpose and Scope

The U.S. Geological Survey (USGS) entered into a cooperative program with VIWAPA during 1990 to complete a well inventory of St. John, USVI. This report presents data for 83 wells, including locations, from the completed inventory conducted on St. John between February 1990 and April 1991. Of the 83 wells in this report, 34 are dug wells and 49 are drilled wells.

Description of Study Area

St. John is the smallest of the three principal islands (St. Croix, St. Thomas, and St. John) that make up the USVI (fig. 1). The island is approximately 9 miles long and 2 to 4 miles wide and has an area of 19 square

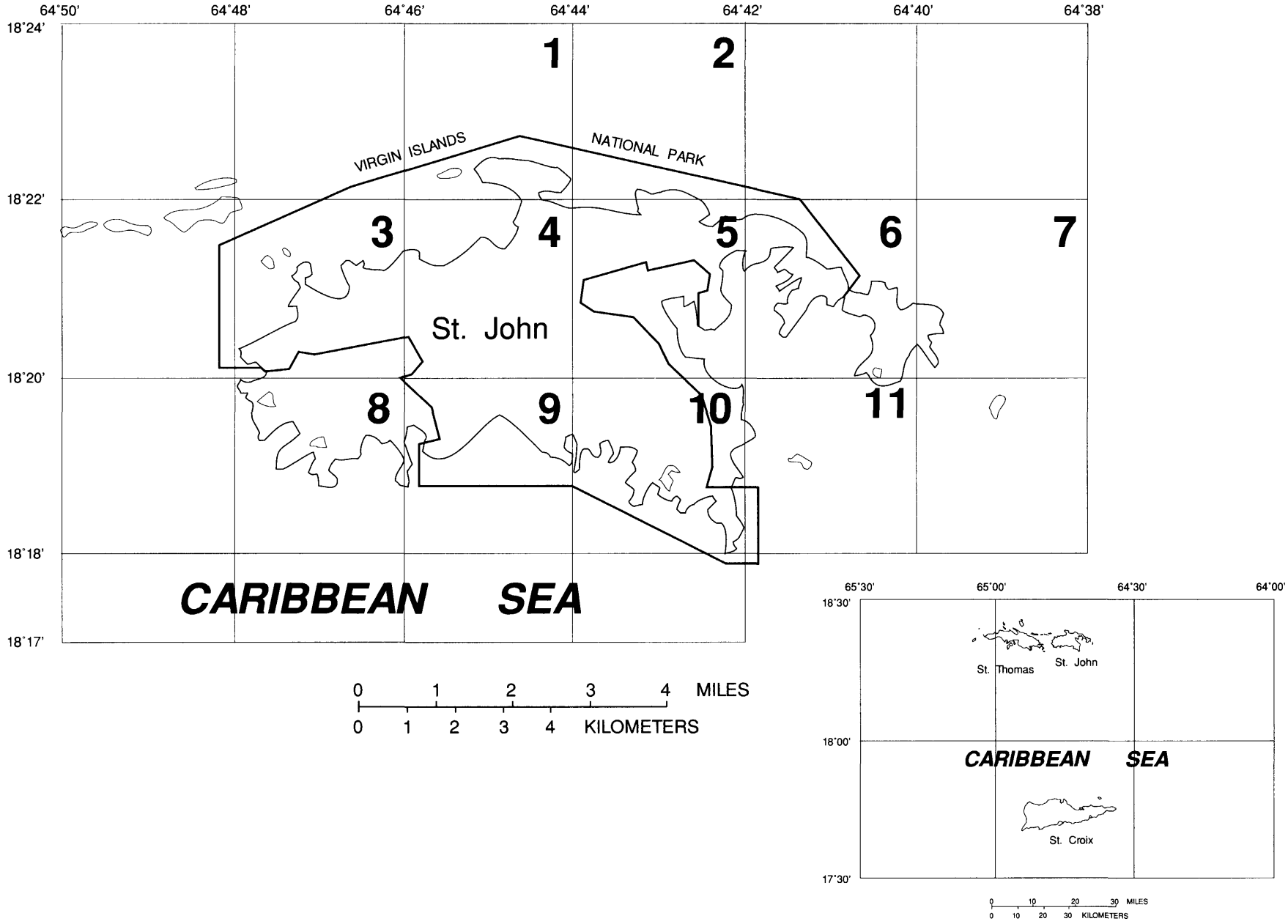

Figure 1. Location of St. John and area grids.

miles. St. John is composed of a main eastward trending ridge with steep slopes to the north descending to the sea. In contrast, the south side of the ridge has several prominent spur ridges that extend southward (Cosner, 1972). About two-thirds of the island lies within the boundaries of the Virgin Islands National Park administered by the U.S. National Park Service (NPS).

Acknowledgments

The authors express their appreciation to the NPS on St. John and to the U.S. Virgin Islands Department of Planning and Natural Resources (VIDPNR), Division of Environmental Protection, for their assistance in helping to locate many of the wells on St. John. The cooperation of the many well and land owners who allowed access to their property and provided information about their wells is gratefully acknowledged.

DATA PRESENTATION

The locations and descriptions of 83 wells constructed before May 1991 on St. John are presented in this report. For ease in locating wells, St. John was divided into 11 grids (fig. 1). Each numbered grid block is presented as a separate figure in this report (figs. 2 through 12). Each grid represents a two-minute square section of the USGS 1982 photorevised, 7.5 minute series, topographic maps of St. John. Each figure is published at the original topographic map scale of 1:24,000. Some grids cover areas in which no wells exist.

Figures with grids that have wells located on them are followed immediately by a table (tables 1 through 7) containing selected well data for each well in that grid. When available, information presented in these tables includes well number as referenced on the preceding figure, well name, primary use of water, year the well was constructed, reported depth of well when constructed, measured depth of well, well casing diameter, type of well finish and finished interval, land-surface altitude at well site, depth to water below land-surface datum, date water level was measured, and yield of well. The well numbers used in tables 1 through 7 consist of two parts. The first part refers to the grid number from figure 1, and the second part is a sequence number for the well within the grid. These numbers apply only to wells located on the accompanying figure.

An appendix at the back of this report shows other information for each well including subsurface lithologic descriptions (when available), and any special remarks about the well. Also included for each well is the site-identification number by which the well may be referenced in other USGS publications. This site-identification number conforms with the USGS Ground-Water Site Inventory classification scheme. Once this number is established for a well it does not change.

Records of wells on St. John were compiled from the USGS historical files, VIDPNR files, previously published reports (Cosner, 1972; Robison and others, 1973; Ausherman, [1983]), and verbal reports of well locations. These records were used to locate well sites in the field. All the wells presented in this report have been verified and inventoried by USGS personnel.

Lithologic information and information about the construction of the wells were taken from well-drillers' logs, when available. Wells that could be sounded with a weighted steel tape were measured for depth by

USGS personnel. Some of the information on well depths and type of well finish were provided by the well owner or were reported on previous well inventories.

Land-surface elevations at the well site were estimated from USGS topographic maps. The contour interval of the topographic maps of St. John is generally 40 feet. However, twenty-foot intervals are shown where slopes are gentle. The accuracy of reporting land-surface elevations in this report is considered to be half of the contour interval used.

Depth-to-water measurements were made by USGS personnel. Yields were reported by the driller or estimated by the well owner or well manager. Wells that were pumping and had in-line flow meters were measured for yield by USGS personnel.

The type of well finish refers to the method used to complete the drilled well. A slotted finish refers to the narrow slots cut into the well casing to allow for the flow of water into the well. An open hole refers to the portion of the well where no casing has been installed. Generally, the well is left open when the hole has been drilled into bedrock and there is no need to protect the well from cave-ins. The finish interval is the depth below land surface where the casing has been slotted or the hole has not been cased.

REFERENCES

Ausherman, Betty, [1983], St. John Sites Report 1981-1982: Virgin Islands Planning Office, Division for Archaeology and Historic Preservation, 550 p.

Cosner, O.J., 1972, Water in St. John, U.S. Virgin Islands: U.S. Geological Survey Open-File Data Report (unnumbered), 46 p.

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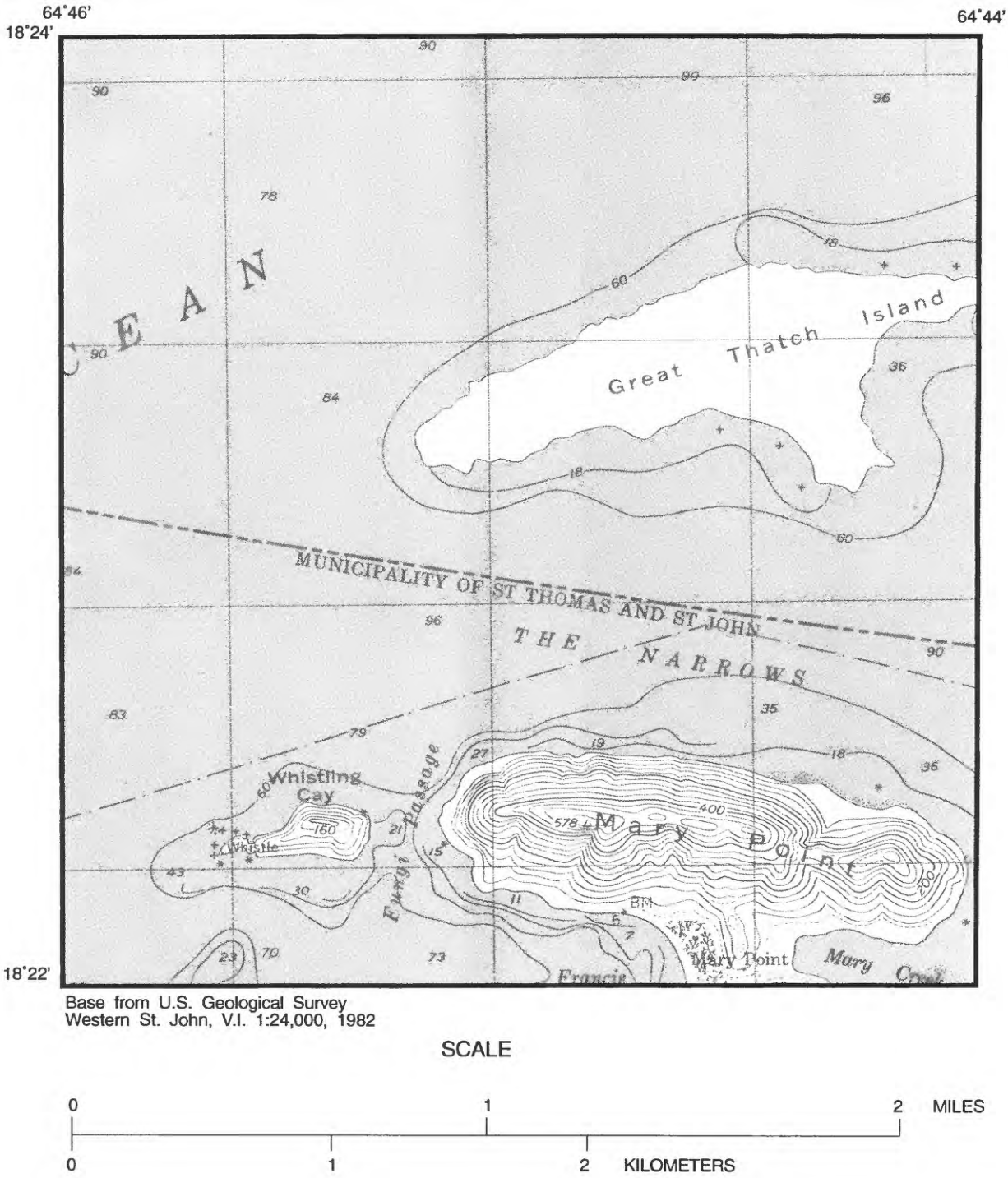


Figure 2. Grid 1 of figure 1.

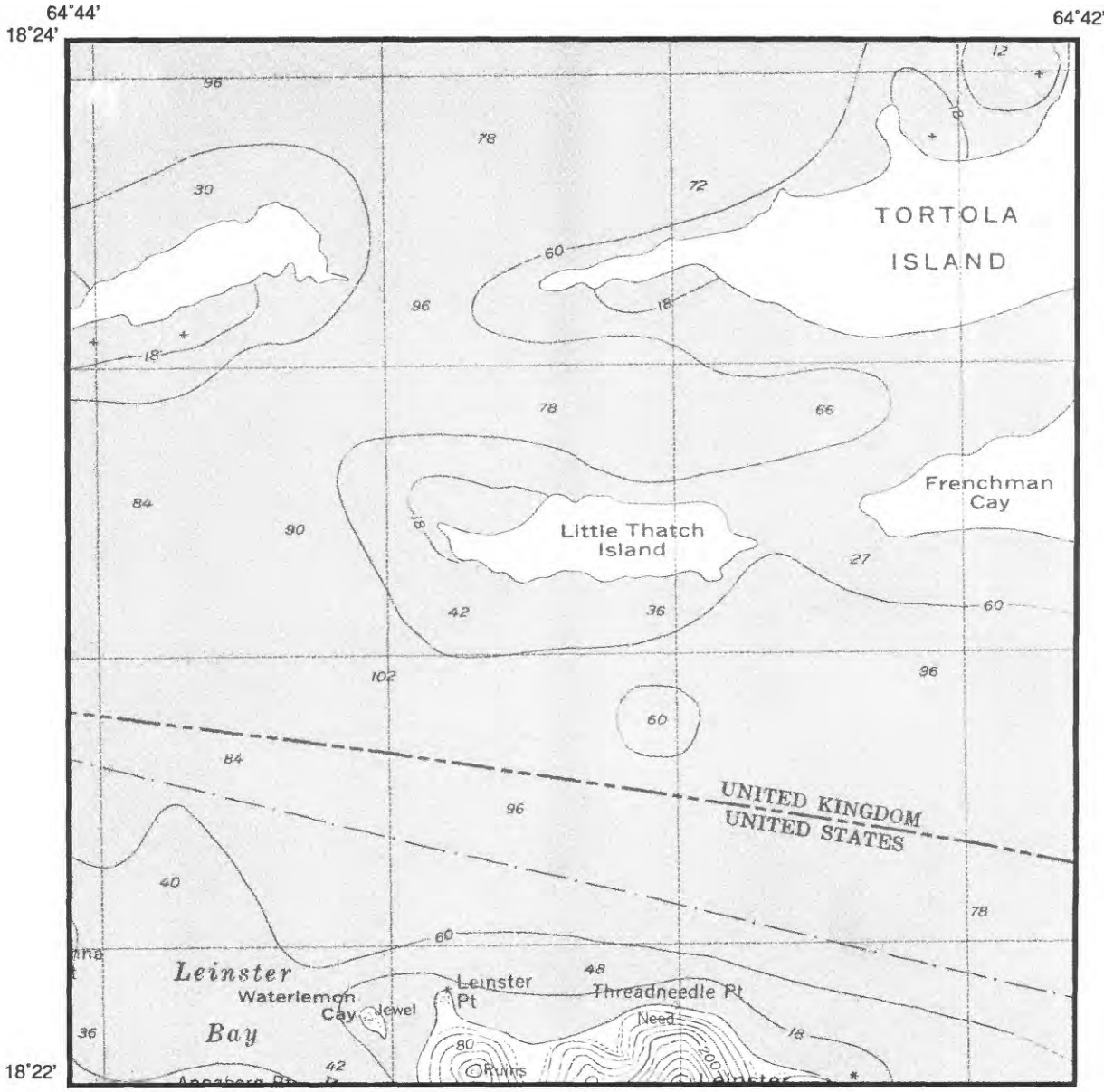


Figure 3. Grid 2 of figure 1.

Table 1. Description of wells located on figure 4

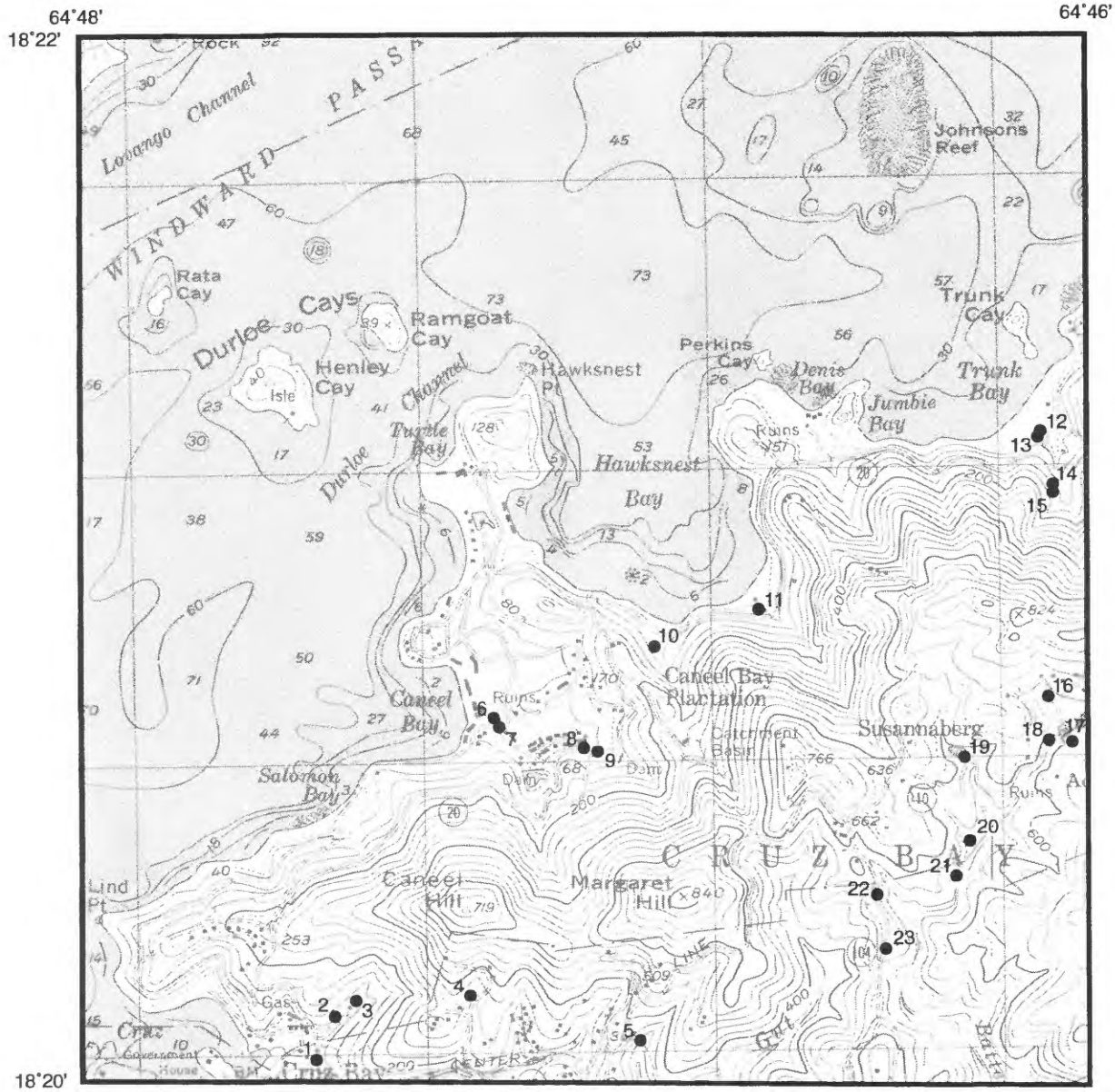
[C, commercial well; D, domestic well; IS, institutional well; NU, well not in use; PS, public-supply well; --, indicates data not available]

Well number on figure 4	Well name	Use of water	Year con-structed	Reported depth of well (feet)	Measured depth of well (feet)	Casing diameter (inches)	Type of well finish and finish interval (feet)	Land-surface altitude at well site (feet)	Depth to water below land surface datum (feet)	Date water level measured (month-day-year)	Yield (gallons per minute)
3- 1	G. Stuckart	D	1986	125	--	6	slotted 45-125	20	37	11-09-90	reported yield less than 1
3- 2	NPS-3 (Cruz Bay)	IS	1964	54	--	6	open hole 25-54	40	--	--	--
3- 3	NPS-2 (Cruz Bay)	NU	1964	99	72	4	open hole 20-99	60	16	11-06-90	reported yield less than 1
3- 4	S. Black	NU	1991	195	--	4	slotted 125-135 155-195	320	--	--	reported yield 8
3- 5	Road to Guinea Gut	NU	--	--	--	6	--	320	--	--	--
3- 6	Caneel Bay Inc. dug well 2	NU	--	--	--	96	--	10	5	12-17-90	--
3- 7	Caneel Bay Inc. dug well 1	NU	--	13	15	114	--	10	2	12-17-90	--
3- 8	Caneel Bay Inc. drilled well 1	C	--	--	--	6	--	40	33	12-17-90	--
3- 9	Caneel Bay Inc. drilled well 2	C	1982	200	--	4,6	slotted 50-200	40	--	--	--
3-10	NPS-7 (Hawksnest)	NU	1964	36	36	6	open hole 28-36	30	17	11-08-90	--
3-11	Gibney (dug well)	NU	--	--	12	66	--	20	--	--	--
3-12	NPS-16 (Trunk Bay dug well)	PS	--	9	9	80	--	10	6	11-08-90	--
3-13	Trunk Bay (New dug well)	PS	--	--	--	60	--	10	5	11-08-90	--
3-14	NPS-5 (Trunk Bay)	PS	1964	60	--	6	open hole 12-60	70	35	11-08-90	reported yield 6
3-15	NPS-14 (Trunk Bay) horizontal well	NU	1966	803	--	2	open hole 420-803	70	--	--	reported yield 0.5

Table 1. Description of wells located on figure 4--Continued

[C, commercial well; D, domestic well; IS, institutional well; NU, well not in use; PS, public-supply well; --, indicates data not available]

Well number on figure 4	Well name	Use of water	Year con-structed	Reported depth of well (feet)	Measured depth of well (feet)	Casing diameter (inches)	Type of well finish and finish interval (feet)	Land-surface altitude at well site (feet)	Depth to water below land surface datum (feet)	Date water level measured (month-day-year)	Yield (gallons per minute)
3-16	Cruz Bay Baptist Church property	D	1972	--	--	6	--	640	--	--	--
3-17	DPW-1 Susannaberg	PS	1976	66	--	6	--	610	33	12-28-90	--
3-18	V.I. Government - WAPA	NU	--	--	--	6	--	600	--	--	--
3-19	Moses - Centerline road	--	--	--	--	6	--	580	17	02-22-91	--
3-20	Majestic Construction	C	1982	100	--	6	open hole 95-100	540	--	--	--
3-21	Battery Gut well (dug well)	NU	--	--	14	120	--	530	--	--	--
3-22	Moses - Gift Hill road	NU	1986	150	153	6	slotted 60-120 open hole 120-150	540	32	01-25-91	--
3-23	A. Willis	NU	1978	--	--	6	--	540	--	--	--



Base from U.S. Geological Survey
Western St. John, V.I. 1:24,000, 1982

SCALE

0 1 2 MILES

0 1 2 KILOMETERS

Figure 4. Location of wells on grid 3 of figure 1. The well numbers shown on this figure correspond to well numbers which begin with 3- in table 1 and in the appendix.

Table 2. Description of wells located on figure 5

[C, commercial well; D, domestic well; PS, public supply well; NU, well not in use; --, indicates data not available]

Well number on figure 5	Well name	Use of water	Year con-structed	Reported depth of well (feet)	Measured depth of well (feet)	Casing diameter (inches)	Type of well finish and finish interval (feet)	Land-surface altitude at well site (feet)	Depth to water below land surface datum (feet)	Date water level measured (month-day-year)	Yield (gallons per minute)
4- 1	DPW-2 Susannaberg	PS	1976	65	--	6	--	620	35	12-28-90	--
4- 2	DPW-3 Susannaberg	PS	1976	105	105	6	--	620	23	08-24-90	--
4- 3	Estate Adrian dug well	NU	--	23	23	108	--	620	21	03-14-91	--
4- 4	DPW-4 Susannaberg	PS	1976	60	--	6	--	640	31	12-28-90	--
4- 5	DPW-5 Susannaberg USGS-16	PS	1964	158	--	6,4	slotted 50-158	640	42	12-28-90	--
4- 6	DPW-6 Susannaberg	NU	--	70	--	6	--	640	21	12-28-90	--
4- 7	T. Mardam-Bey	D	--	--	--	6,4	--	740	69	01-04-91	reported yield 30
4- 8	Peter Bay Homeowners	NU	1991	100	94	4	slotted 50-60	80	50	04-05-91	--
4- 9	St. John Land Investment Co. (dug well)	NU	--	--	5	78	--	5	--	--	--
4-10	NPS-Cinnamon Bay Beach (dug well)	NU	--	--	--	48	--	10	--	--	--
4-11	NPS-15 Cinnamon Bay (dug well)	NU	--	9	--	80	--	10	--	--	--
4-12	NPS Cinnamon Bay (dug well)	NU	--	--	10	18	--	15	--	--	--
4-13	Cinnamon Bay Campground supply well	C	1989	100	--	6	--	20	--	--	measured yield 20
4-14	NPS-9 (Cinnamon Bay)	NU	1964	60	--	6,4	slotted 50-60	40	--	--	reported yield 8
4-15	NPS-6 (Cinnamon Bay)	NU	1964	70	--	6	open hole 51-70	60	57	11-08-90	reported yield 8
4-16	Maho Bay Camps 1	C	1975	200	--	6	--	95	--	--	--
4-17	Maho Bay Camps 2	C	1989	350	--	6	open hole 95-350	100	--	--	--
4-18	Maho Bay Camps closed well	NU	--	--	--	6	--	100	79	03-27-90	--
4-19	Mary Point dug well	NU	--	20	18	132	--	25	--	--	--
4-20	Fredriksdal ruins	NU	--	--	18	72	--	20	--	--	--

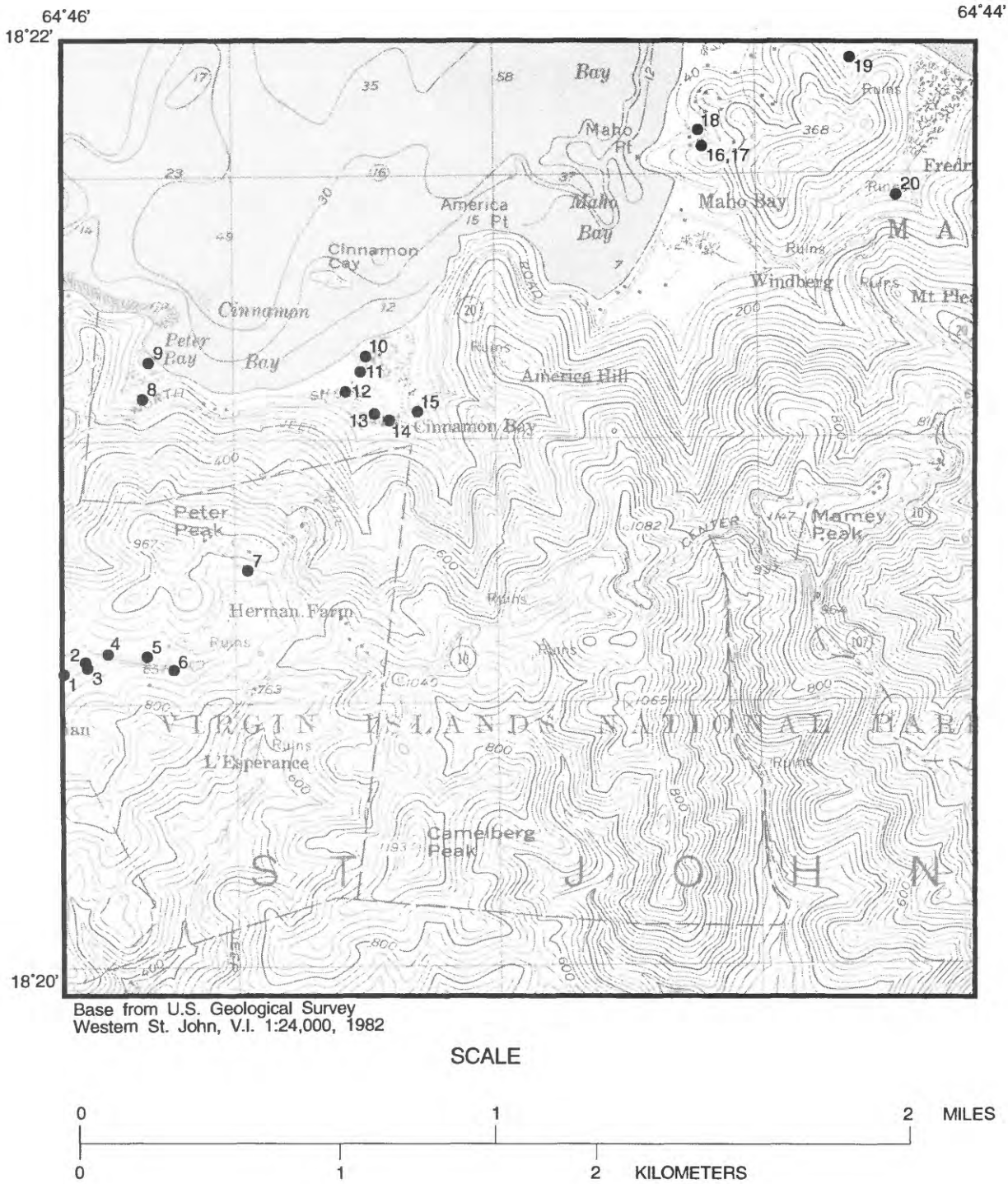
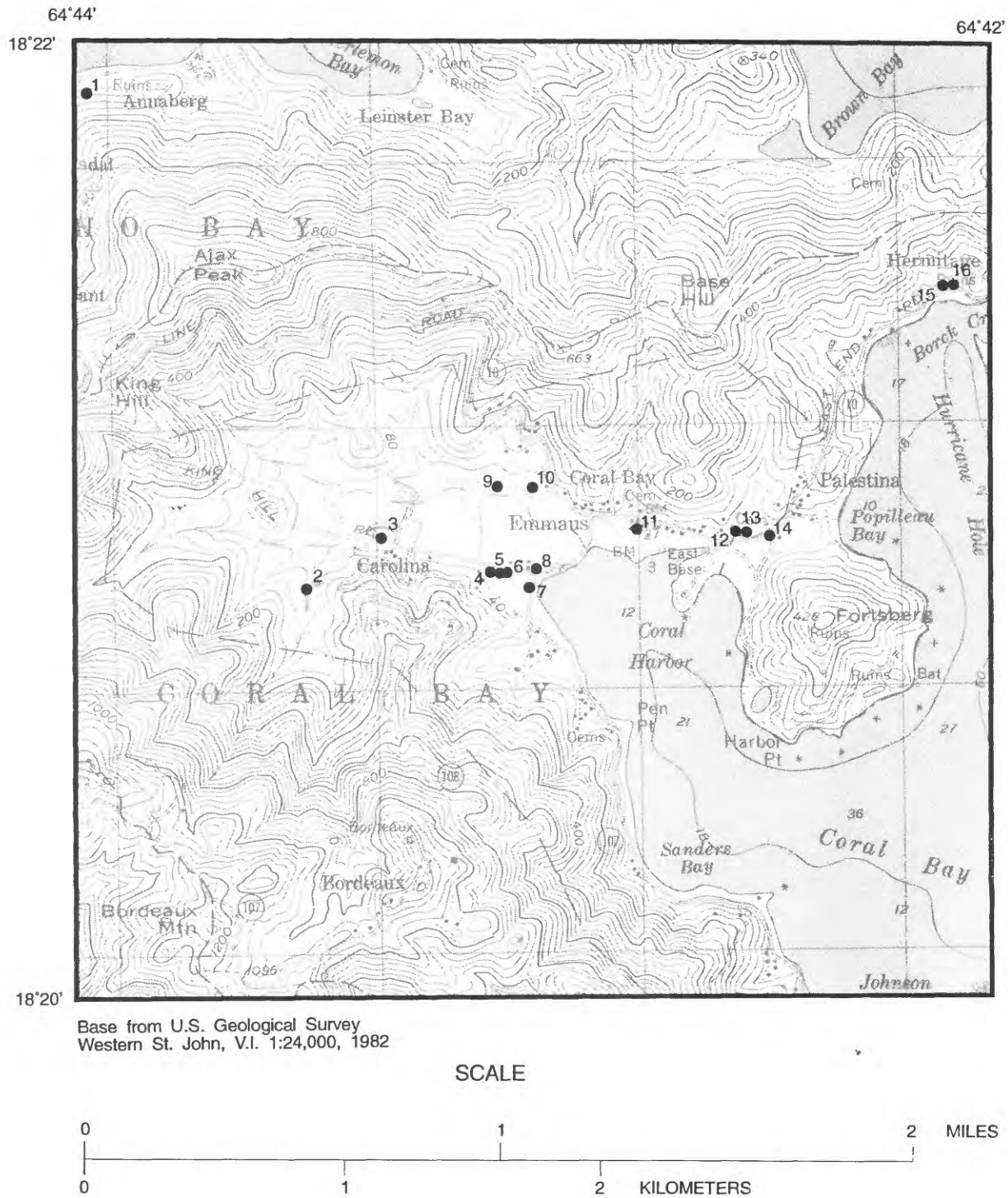


Figure 5. Location of wells on grid 4 of figure 1. The well numbers shown on this figure correspond to well numbers which begin with 4- in table 2 and in the appendix.

Table 3. Description of wells located on figure 6

[A, agriculture or stock well; D, domestic well; NU, well not in use; PS, public-supply well; --, indicates data not available]

Well number on figure 6	Well name	Use of water	Year con-structed	Reported depth of well (feet)	Measured depth of well (feet)	Casing diameter (inches)	Type of well finish and finish interval (feet)	Land-surface altitude at well site (feet)	Depth to water below land surface datum (feet)	Date water level measured (month-day-year)	Yield (gallons per minute)
5- 1	Annaberg ruins (dug well)	NU	--	--	--	72	--	5	--	--	--
5- 2	H. Roller	A	1986	155	151	8,6	open hole 110-155	85	31	03-09-90	reported yield 20
5- 3	V.I. Government - WAPA USGS-14A	NU	--	86	--	5	--	45	27	02-22-90	--
5- 4	V.I. Government - WAPA (SJWS-2)	PS	1991	46	46	6	slotted 26-46	15	13	03-08-91	measured yield 15
5- 5	V.I. Government - WAPA (VIEO-4)	NU	1991	50	50	6	slotted 20-50	13	11	03-08-91	--
5- 6	V.I. Government - King Hill Road dug well	NU	--	--	14	--	--	15	12	01-14-91	--
5- 7	V.I. Government Carolina dug well	NU	--	--	8	126	--	5	3	01-14-91	--
5- 8	Marsh - Coral Bay dug well	D	1875	15	--	132	--	7	6	02-22-90	--
5- 9	R. Thomas in Carolina	NU	1991	96	--	4	slotted 56-96	20	--	--	--
5-10	V.I. Government - WAPA (VIEO-2)	NU	1991	66	66	4	slotted 26-66	30	23	03-22-91	--
5-11	Guy Benjamin School (dug well)	NU	--	--	--	--	--	20	--	--	--
5-12	C. Liburd 2	NU	--	--	9	60	--	5	2	01-15-91	--
5-13	C. Liburd 1	A	1890	--	9	108	--	10	5	01-15-91	--
5-14	Liburd	A	--	--	9	44	--	10	3	01-15-91	--
5-15	Hermitage Ruins 2	NU	--	--	4	120	--	10	3	01-16-91	--
5-16	Hermitage Ruins 1	NU	--	--	4	108	--	10	--	--	--



Base from U.S. Geological Survey
Western St. John, V.I. 1:24,000, 1982

SCALE

0 1 2 MILES

0 1 2 KILOMETERS

Figure 6. Location of wells on grid 5 of figure 1. The well numbers shown on this figure correspond to well numbers which begin with 5- in table 3 and in the appendix.

Table 4. Description of wells located on figure 7

[NU, well not in use; --, indicates data not available]

Well number on figure 7	Well name	Use of water	Year con-structed	Reported depth of well (feet)	Measured depth of well (feet)	Casing diameter (inches)	Type of well finish and finish interval (feet)	Land-surface altitude at well site (feet)	Depth to water below land surface datum (feet)	Date water level measured (month-day-year)	Yield (gallons per minute)
6- 1	B. Williams (dug well)	--	--	--	12	90	--	15	9	03-15-91	--
6- 2	Newfound Partnership (dug well)	NU	--	--	5	54	--	20	--	--	--

Figure 7. Location of wells on grid 6 of figure 1. The well numbers shown on this figure correspond to well numbers which begin with 6- in table 4 and in the appendix.

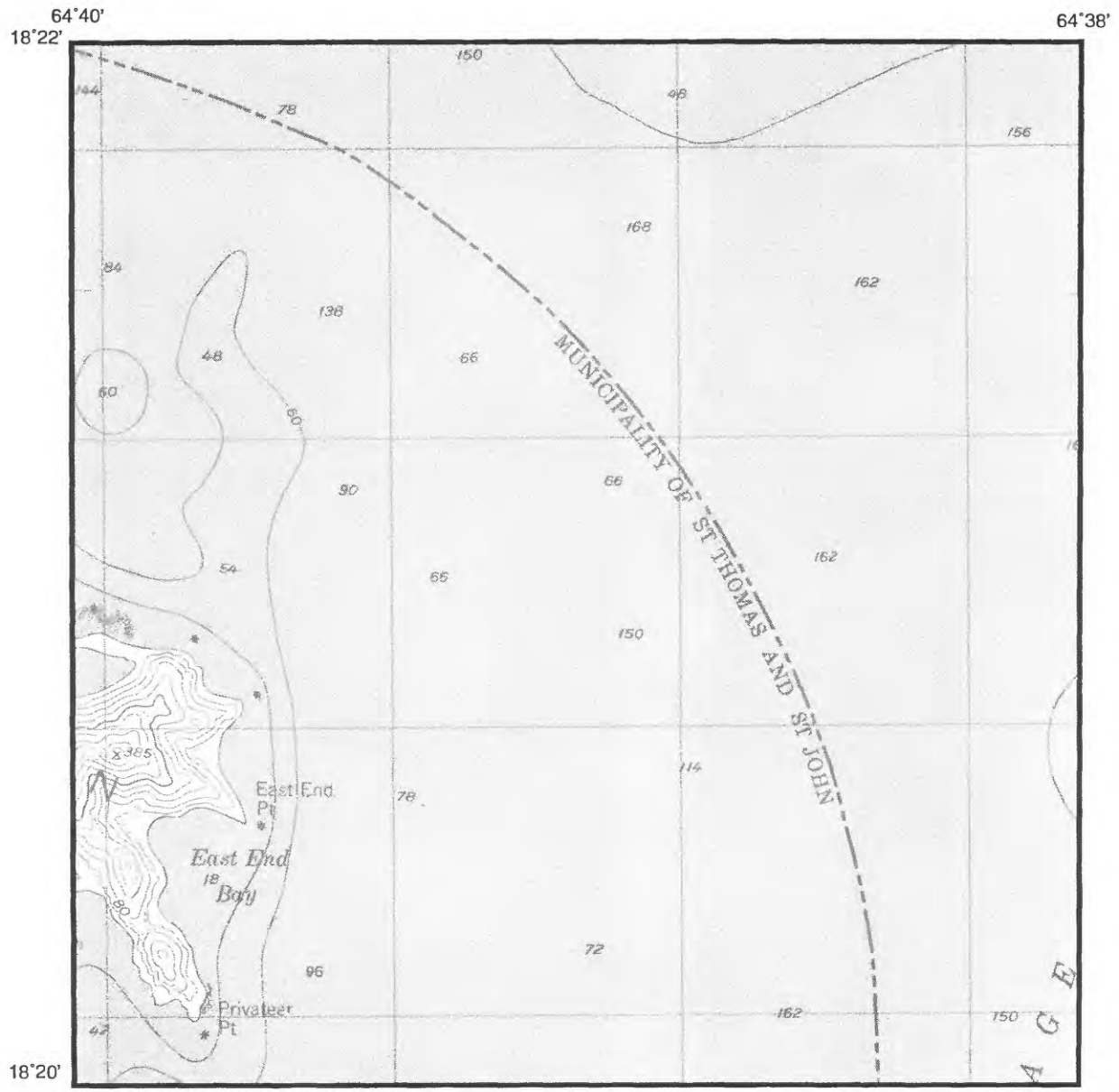


Figure 8. Grid 7 of figure 1.

Table 5. Description of wells located on figure 9

[C, commercial well; D, domestic well; PS, public supply well; NU, well not in use; --, indicates data not available]

Well number on figure 9	Well name	Use of water	Year con-structed	Reported depth of well (feet)	Measured depth of well (feet)	Casing diameter (inches)	Type of well finish and finish interval (feet)	Land-surface altitude at well site (feet)	Depth to water below land surface datum (feet)	Date water level measured (month-day-year)	Yield (gallons per minute)
8- 1	V.I. Government - WAPA (Enighed pond)	PS	1989	150	--	8,6	--	5	--	--	--
8- 2	E. Yearwood	C	1989	100	--	8	--	30	--	--	--
8- 3	R. Varlack	C,D	1988	150	--	6	slotted	20	--	--	--
8- 4	I. Samuel	C	1986	130	--	6	slotted 0-120	20	--	--	reported yield 100
8- 5	R. Thomas	C	1991	45	--	4	slotted 25-45	20	--	--	reported yield 5
8- 6	Hyatt Regency	NU	--	--	--	6	--	10	--	--	--
8- 7	Hyatt Regency supply well	C	--	--	--	6	--	10	--	--	--
8- 8	Guinea Gut well	NU	--	85	--	6	--	280	14	03-11-91	--

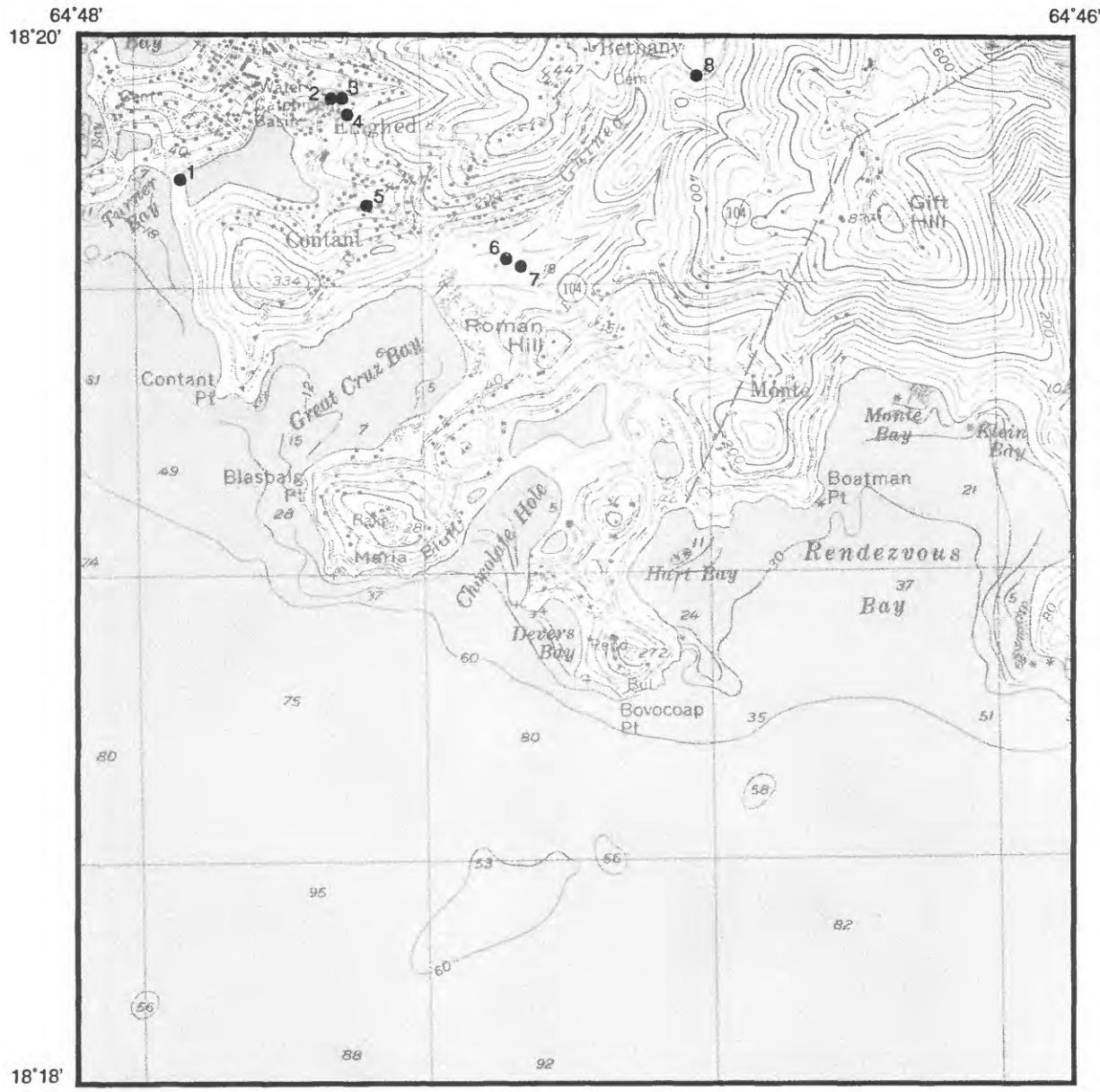
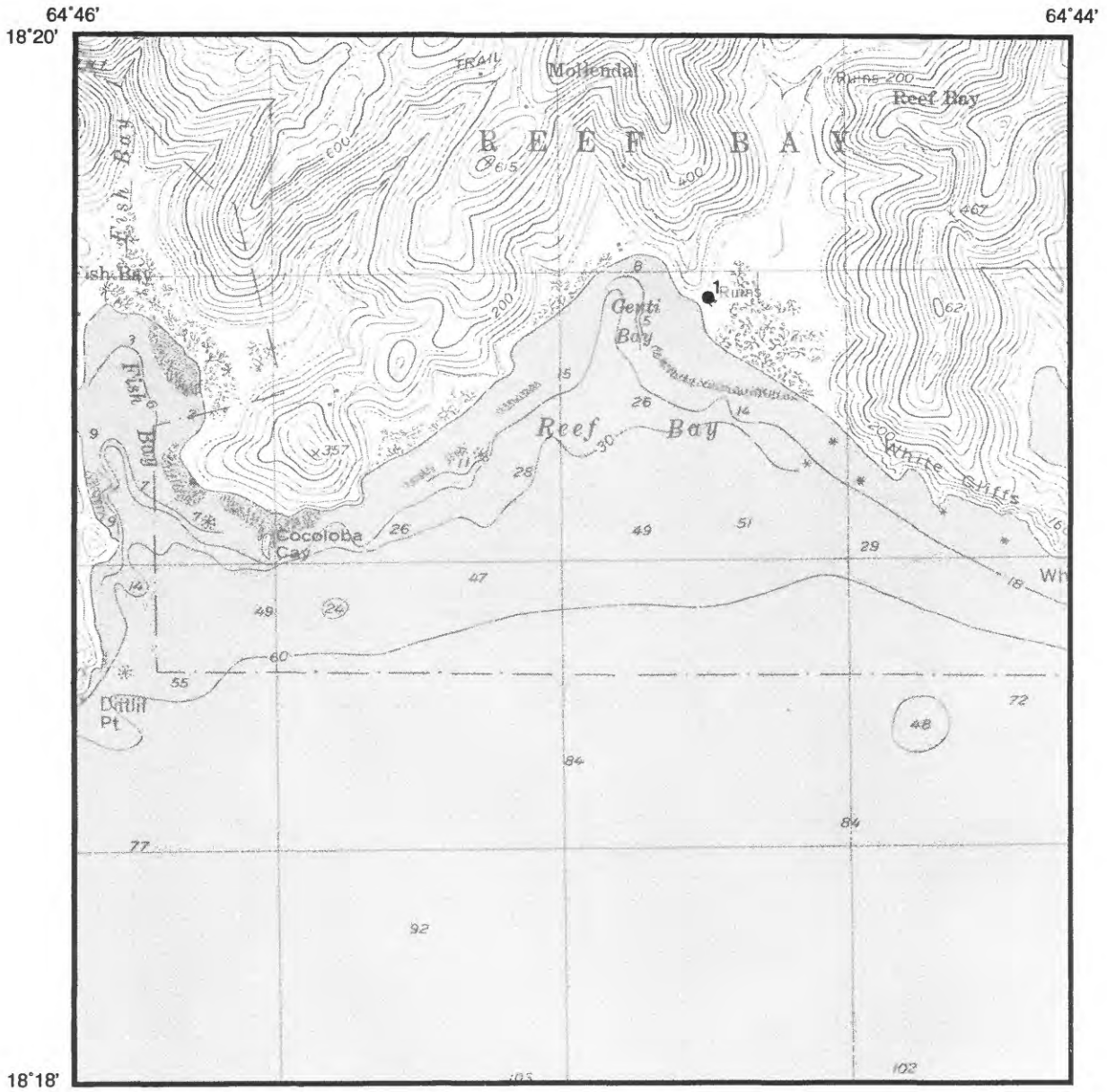


Figure 9. Location of wells on grid 8 of figure 1. The well numbers shown on this figure correspond to well numbers which begin with 8- in table 5 and in the appendix.

Table 6. Description of well located on figure 10

[NU, well not in use; --, indicates data not available]

Well number on figure 10	Well name	Use of water	Year con-structed	Reported depth of well (feet)	Measured depth of well (feet)	Casing diameter (inches)	Type of well finish and finish interval (feet)	Land-surface altitude at well site (feet)	Depth to water below land surface datum (feet)	Date water level measured (month-day-year)	Yield (gallons per minute)
9- 1	Reef Bay Sugar Mill Ruins (dug well)	NU	--	--	7	66	--	10	--	--	--



Base from U.S. Geological Survey
Western St. John, V.I. 1:24,000, 1982

SCALE

0 1 2 MILES

0 1 2 KILOMETERS

Figure 10. Location of well on grid 9 of figure 1. The well number shown on this figure corresponds to the well number which begins with 9- in table 6 and in the appendix.

Table 7. Description of wells located on figure 11

[A, agriculture or stock well; D, domestic well; NU, well not in use; --, indicates data not available]

Well number on figure 11	Well name	Use of water	Year con-structed	Reported depth of well (feet)	Measured depth of well (feet)	Casing diameter (inches)	Type of well finish and finish interval (feet)	Land-surface altitude at well site (feet)	Depth to water below land surface datum (feet)	Date water level measured (month-day-year)	Yield (gallons per minute)
10- 1	Lameshur Ruins (dug well)	NU	--	--	6	60	--	20	4	01-08-91	--
10- 2	NPS-10 (Lameshur Bay)	D	1964	67	--	6,4	slotted 47-67	30	--	--	--
10- 3	S. Selengut (dug well)	D	--	--	11	96	--	15	6	01-25-91	--
10- 4	Benjamin (dug well)	A,D	--	--	8	--	--	8	--	--	--
10- 5	L. Smith (dug well)	NU	--	--	--	60	--	10	--	--	--
10- 6	V.I. Government - WAPA (VIEO-3)	NU	1991	110	110	4	slotted 50-110	55	52	03-29-91	--
10- 7	V.I. Government USGS-15	NU	1964	62	25	6	slotted 40-61	35	--	--	reported yield 2
10- 8	V.I. Government - Human Services dug well	NU	--	--	21	108	--	15	18	01-09-91	--
10- 9	S. Towsends (dug well)	NU	--	--	7	60	--	7	6	03-22-91	--
10-10	G. Bornn - Johnson's Bay Estate	NU	1926	--	8	65	--	7	6	01-10-91	--
10-11	Dr. Pear well (dug well)	NU	--	--	15	108	--	20	--	--	--
10-12	G. Vaughn	NU	1985	56	80	4	slotted --	15	17	09-26-90	reported yield 20
10-13	H. Kauffman	D	--	130	--	6,4	slotted 60-130	70	--	--	--

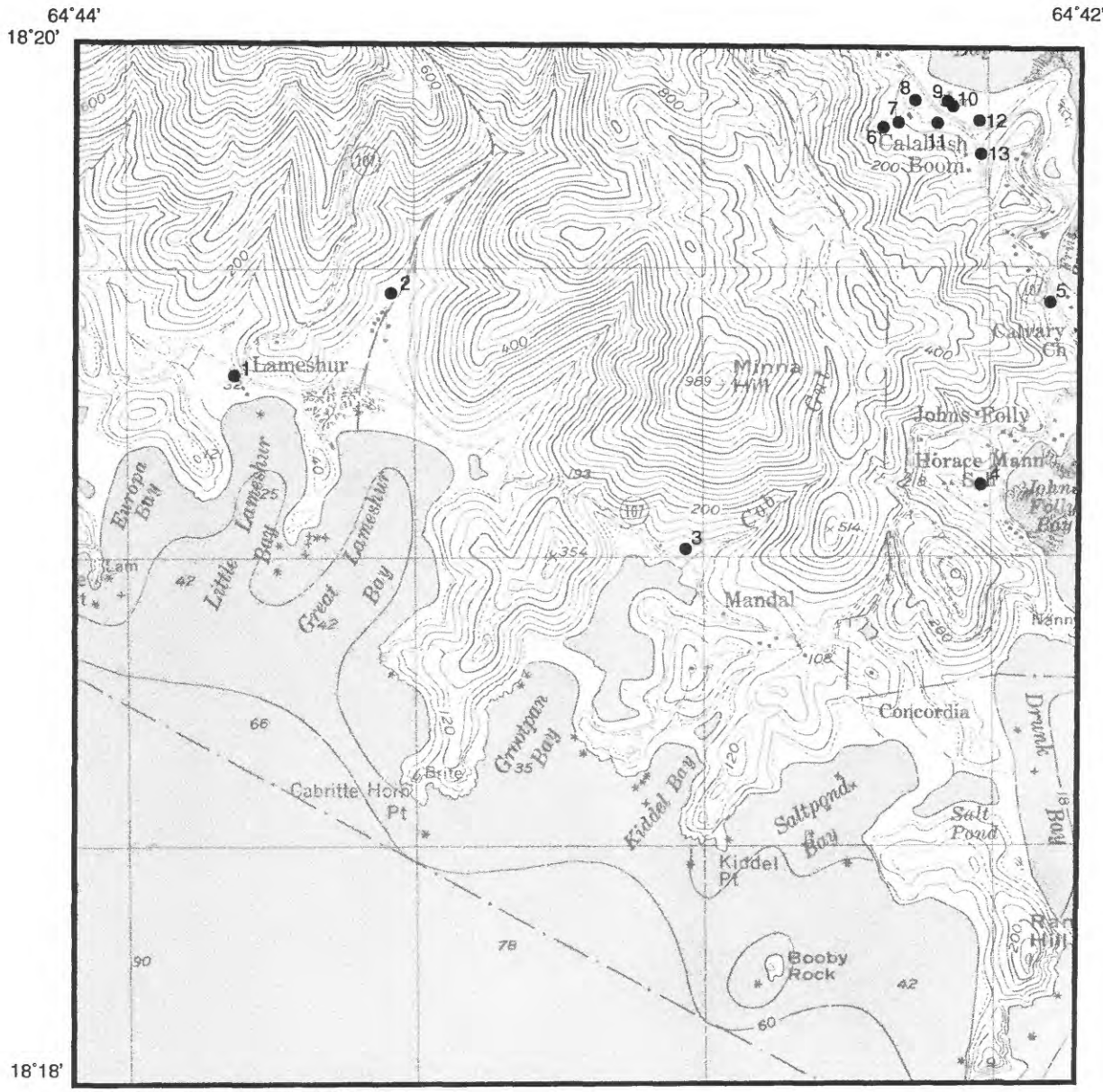


Figure 11. Location of wells on grid 10 of figure 1. The well numbers shown on this figure correspond to well numbers which begin with 10- in table 7 and in the appendix.

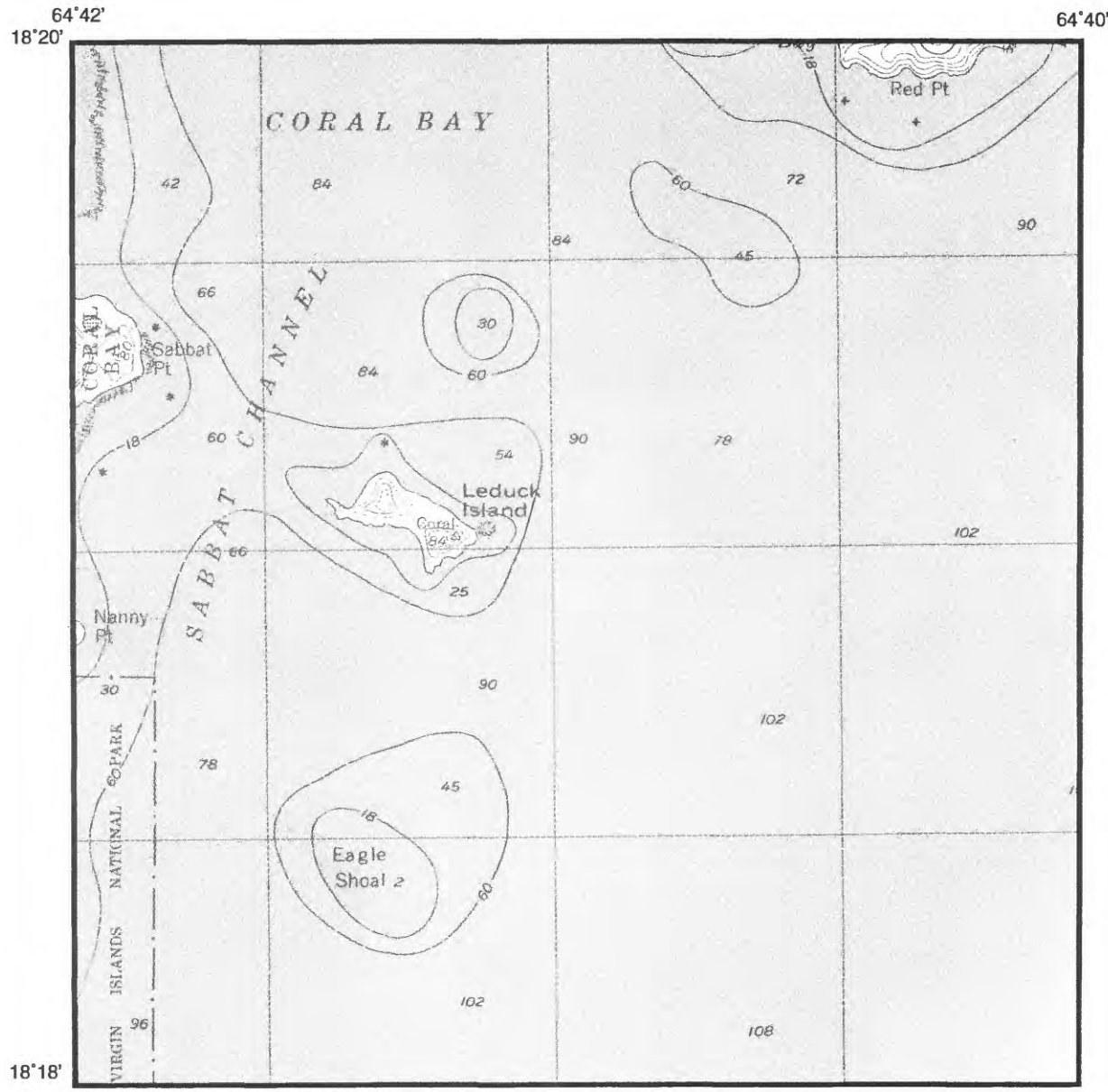


Figure 12. Grid 11 of figure 1.

APPENDIX

Appendix. Well number, well name, site-identification number, lithologic description, and remarks for wells on St. John, U.S. Virgin Islands
[--, indicates data not available]

Well number	Figure number	Well name	Site identification number	Lithologic description and depth interval (feet)	Remarks
3- 1	4	G. Stuckart	182003064473200	Unconsolidated material 0-3 Bedrock 3	--
3- 2	4	NPS-3 (Cruz Bay)	182008064473000	--	Water-level data from 1964 to 1969 are available in Robison and others (1973) (well 21).
3- 3	4	NPS-2 (Cruz Bay)	182010064472600	--	U.S. Geological Survey observation well. Water-level data from 1964 to 1967 are available in Robison and others (1973) (well 20).
3- 4	4	S. Black	182011064471300	--	--
3- 5	4	Road to Guinea Gut	182005064465300	--	Well sounded to 38 feet. No water level reached on 11-2-90.
3- 6	4	Caneel Bay Inc. dug well 2	182042064471000	--	--
3- 7	4	Caneel Bay Inc. dug well 1	182041064471000	--	--
3- 8	4	Caneel Bay Inc. drilled well 1	182038064470000	--	Well was drilled in the early 1980's.
3- 9	4	Caneel Bay Inc. drilled well 2	182038064465800	Unconsolidated material 0-35 Bedrock 35	6-inch casing from 0-40 feet. 4-inch casing from 0-200 feet.
3-10	4	NPS-7 (Hawksnest)	182050064465100	--	Water-level data from 1964 to 1969 are available in Robison and others (1973) (well 1).
3-11	4	Gibney (dug well)	182055064463900	--	Well was dry on 3-22-91.
3-12	4	NPS-16 (Trunk Bay dug well)	182115064460500	--	Well used in Trunk Bay beach facilities. Water-level data from 1963 to 1969 are available in Robison and others (1973) (well 2).
3-13	4	Trunk Bay (New dug well)	182115064460501	--	Well constructed in 1983 or 1984.
3-14	4	NPS-5 (Trunk Bay)	182109064460300	--	Supply well for Trunk Bay beach facilities. Water-level data from 1964 to 1969 are available in Robison and others (1973) (well 4).
3-15	4	NPS-14 (Trunk Bay) horizontal well	182108064460400	--	Water-pressure data from 1966 to 1969 are available in Robison and others (1973) (well 3).
3-16	4	Cruz Bay Baptist Church property	182044064460400	--	Well reported to be between 100 to 120 feet deep.

Appendix. Well number, well name, site-identification number, lithologic description, and remarks for wells on St. John, U.S. Virgin Islands--Continued
[--, indicates data not available]

Well number	Figure number	Well name	Site identification number	Lithologic description and depth interval (feet)	Remarks
3-17	4	DPW-1 Susannaberg	182044064455200	--	Well owned by Virgin Islands Water and Power Authority.
3-18	4	V.I. Government - WAPA	182040064460400	--	Well owned by Virgin Islands Water and Power Authority.
3-19	4	Moses - Centerline road	182037064461400	--	--
3-20	4	Majestic Construction	182028064461300	Unconsolidated material 0-45 Bedrock 45	--
3-21	4	Battery Gut well (dug well)	182024064461500	--	Well was almost dry on 1-24-91.
3-22	4	Moses - Gift Hill road	182022064462500	Unconsolidated material 0-2 Bedrock 2	--
3-23	4	A. Willis	182016064462400	--	--
4- 1	5	DPW-2 Susannaberg	182044064455000	--	Well owned by Virgin Islands Water and Power Authority.
4- 2	5	DPW-3 Susannaberg	182044064454900	--	Well owned by Virgin Islands Water and Power Authority.
4- 3	5	Estate Adrian dug well	182041064455700	--	Water-level data from 1963 to 1967 are are available in Robison and others (1973) (well 16).
4- 4	5	DPW-4 Susannaberg	182044064454800	--	Well owned by Virgin Islands Water and Power Authority.
4- 5	5	DPW-5 Susannaberg USGS-16	182044064454600	--	6-inch casing from 0 to 22 feet. 8-inch casing from 0 to 158 feet. Water-level data from 1964 to 1969 are available in Robison and others (1973) (well 15). Well owned by Virgin Islands Water and Power Authority.
4- 6	5	DPW-6 Susannaberg	182042064454500	--	US Geological Survey observation well.
4- 7	5	T. Mardam-Bey	182054064453600	--	Well has 4-inch plastic casing inside of 6-inch steel casing.
4- 8	5	Peter Bay Homeowners	182115064454900	--	Well is cased below the screen, from 60-100 feet.
4- 9	5	St. John Land Investment Co. (dug well)	182120064454800	--	Well was almost dry on 1-24-91.
4-10	5	NPS-Cinnamon Bay Beach (dug well)	182120064452000	--	--

Appendix. Well number, well name, site-identification number, lithologic description, and remarks for wells on St. John, U.S. Virgin Islands--Continued

[--, indicates data not available]

Well number	Figure number	Well name	Site identification number	Lithologic description and depth interval (feet)	Remarks
4-11	5	NPS-15 (Cinnamon Bay dug well)	182118064452000	--	Water-level data from 1963 to 1969 are available in Robison and others (1973) (well 6).
4-12	5	NPS-Cinnamon Bay (dug well)	182116064452300	--	--
4-13	5	Cinnamon Bay campground supply well	182113064451900	--	Well supplies Cinnamon Bay Campground facilities.
4-14	5	NPS-9 (Cinnamon Bay)	182112064451700	--	6-inch casing from 0 to 39 feet, 4-inch casing from 0 to 60 feet. Water-level data from 1964 to 1969 are available in Robison and others (1973) (well 8).
4-15	5	NPS-6 (Cinnamon Bay)	182116064451000	--	US Geological Survey observation well. Water-level data from 1964 to 1969 are available in Robison and others (1973) (well 9).
4-16	5	Maho Bay Camps 1	182147064443501	--	See remarks for well number 4-17 below.
4-17	5	Maho Bay Camps 2	182147064443500	Unconsolidated material 0-2 Bedrock 2	Head of maintenance reported combined pumpage of Maho Bay Camps wells 1 and 2 can yield 130 gallons per day.
4-18	5	Maho Bay Camps closed well	182149064443600	--	Measured depth was greater than 200 feet. This well was closed in order to drill Maho Bay Camps well 2.
4-19	5	Mary Point dug well	182158064441700	--	Well was almost dry on 1-22-91. Water-level data from 1965 to 1967 are available in Robison and others (1973) (well 10).
4-20	5	Fredriksdal ruins	182141064441000	--	Well was dry on 1-16-91.
5- 1	6	Annaberg ruins (dug well)	182154064435800	--	Well is filled in with silt and debris.
5- 2	6	H. Roller	182052064433000	Unconsolidated material 0-120 Bedrock 120	8-inch casing from 0 to 30 feet. 6-inch casing from 0 to 100 feet.
5- 3	6	V.I. Government - WAPA USGS-14A	182058064432300	--	Well had blockage in it when visited in May 1991. Well will be closed. Water-level data from 1964 to 1967 are available in Robison and others (1973) (well 11). Well owned by Virgin Islands Water and Power Authority.
5- 4	6	V.I. Government - WAPA (SJWS-2)	182048064430500	Unconsolidated material 0-40 Bedrock 40	Well owned by Virgin Islands Water and Power Authority.

Appendix. Well number, well name, site-identification number, lithologic description, and remarks for wells on St. John, U.S. Virgin Islands--Continued
[--, indicates data not available]

Well number	Figure number	Well name	Site identification number	Lithologic description and depth interval (feet)	Remarks
5- 5	6	V.I. Government - WAPA (VIEO-4)	182048064430400	--	US Geological Survey observation well. Well owned by Virgin Islands Water and Power Authority.
5- 6	6	V.I. Government - King Hill Road dug well	182054064430300	--	--
5- 7	6	V.I. Government Carolina dug well	182052064430000	--	--
5- 8	6	Marsh - Coral Bay dug well	182054064430000	--	Water-level data from 1963 to 1969 are available in Robison and others (1973) (well 12).
5- 9	6	R. Thomas in Carolina	182104064430500	Unconsolidated material 0-5 Bedrock 5	--
5-10	6	V.I. Government - WAPA (VIEO-2)	182110064430000	Unconsolidated material 0-32 Bedrock 32	Well owned by Virgin Islands Water and Power Authority. US Geological Survey observation well.
5-11	6	Guy Benjamin School (dug well)	181959064424700	--	--
5-12	6	C. Liburd 2	182058064423300	--	--
5-13	6	C. Liburd 1	182059064423200	--	--
5-14	6	Liburd	182058064422900	--	--
5-15	6	Hermitage Ruins 2	182129064420600	--	Well is filled in with silt and debris.
5-16	6	Hermitage Ruins 1	182129064420400	--	Well is filled in with silt and debris.
6- 1	7	B. Williams (dug well)	182037064402500	--	--
6- 2	7	Newfound Partnership (dug well)	182026064402800	--	--
8- 1	9	V.I. Government - WAPA (Enighed pond)	181945064474800	--	Well used for desalinization plant.
8- 2	9	E. Yearwood	181953064472900	--	--
8- 3	9	R. Varlack	181953064472800	--	--
8- 4	9	I. Samuel	181952064472700	Unconsolidated material 0-10 Bedrock 10	8-inch casing from 0 to 20 feet. Original depth of well was 210 feet but well has caved in.
8- 5	9	R. Thomas	181942064472500	--	--
8- 6	9	Hyatt Regency	181935064470800	--	--

Appendix. Well number, well name, site-identification number, lithologic description, and remarks for wells on St. John, U.S. Virgin Islands--Continued
[--, indicates data not available]

Well number	Figure number	Well name	Site identification number	Lithologic description and depth interval (feet)	Remarks
8- 7	9	Hyatt Regency supply well	181934064470700	--	Water from well used in reverse osmosis system.
8- 8	9	Guinea Gut well	181956064464500	--	U.S. Geological Survey observation well.
9- 1	10	Reef Bay Sugar Mill Ruins (dug well)	181930064444300	--	Runoff from roof of ruins is channelled into well.
10- 1	11	Lameshur Ruins (dug well)	181921064434000	--	--
10- 2	11	NPS-10 (Lameshur Bay)	181930064432200	--	Well has a 4-inch plastic casing inside of the 6-inch steel casing. Maintenance personnel estimate yield at 400 gallons in 24 hours. Water-level data from 1964 to 1969 are available in Robison and others (1973) (well 14).
10- 3	11	S. Selengut (dug well)	181902064424700	--	--
10- 4	11	Benjamin (dug well)	181910064421100	--	Much of this dug well's walls have caved in.
10- 5	11	L. Smith (dug well)	181931064420300	--	Well is filled in with debri.
10- 6	11	V.I. Government - WAPA (VIEO-3)	181950064422300	Unconsolidated material 0-54 Bedrock 54	Well owned by Virgin Islands Water and Power Authority. US Geological Survey observation well.
10- 7	11	V.I. Government USGS-15	181951064422200	--	Blockage in well at 25 feet. Could not measure water level on 10-11-90. Water-level data from 1964 to 1967 are available in Robison and others (1973) (well 13).
10- 8	11	V.I. Government - Human Services dug well	181953064422000	--	--
10- 9	11	S. Towsends (dug well)	181954064421600	--	--
10-10	11	G. Bornn - Johnson's Bay Estate	181953064421500	--	--
10-11	11	Dr. Pear Well (dug well)	181951064421700	--	Well was dry on 1-10-91.
10-12	11	G. Vaughn	181952064421200	--	--
10-13	11	H. Kauffman	181948064421100	--	Well has 6-inch casing from 0 to 20 feet, 4-inch casing from 0 to 130 feet. Owner reported well can yield 200 gallons per day.