WATER RESOURCES REPORT

NUMBER TWELVE-A

ARIZONA STATE LAND DEPARTMENT

OBED M. LASSEN, COMMISSIONER

GEOHYDROLOGIC DATA IN THE NAVAJO AND HOPI INDIAN RESERVATIONS, ARIZONA, NEW MEXICO, AND UTAH

PART I

RECORDS OF GROUND-WATER SUPPLIES

By G. E. Davis, W. F. Hardt, L. K. Thompson, and M. E. Cooley

United States Department of the Interior, Geological Survey

Prepared in cooperation with the Bureau of Indian Affairs

and the Navajo Tribe

Tucson, Arizona
April 1963

"Water Rights Adjudication Team
Civil Division
Attorney General's Office:

CONTENTS

	Page
Introduction	1
Purpose, scope, and organization of the report	1
Personnel	1
Acknowledgments	1
Location and land-net system	1
Explanation of the ground-water records	3
Bureau of Indian Affairs field number	3
Quadrangle location number	3
Explanation of the ground-water records—Continued	
Altitude above mean sea level	6
Construction data	6
Water-bearing strata	6
Hydrologic data	6
Quality	6
Records of ground-water supplies in the Navajo and Hopi Indian Reservations, Arizona, New Mexico, and Utah	7

ILLUSTRATIONS

	Page
Figure 1. Map of the Navajo and Hopi Indian Reservations, Arizona, New Mexico, and Utah, showing roads, villages, Bureau of Indian Affairs district boundaries, and 15-minute quadrangles	2
Figure 2. Sketch showing well-numbering system used in the Navajo and Hopi Indian Reservations	3
3. Names of the rocks and sediments of the Navajo and Hopi Indian Reservations, Arizona, New Mexico, and Utah	4

GEOHYDROLOGIC DATA IN THE NAVAJO AND HOPI INDIAN RESERVATIONS, ARIZONA, NEW MEXICO, AND UTAH

PART I

RECORDS OF GROUND-WATER SUPPLIES

By G. E. Davis, W. F. Hardt, L. K. Thompson, and M. E. Cooley

Introduction

The geohydrologic data in this report represent a field inventory completed in 1956 of the Navajo and Hopi Indian Reservations. This inventory includes 846 drilled wells, 537 dug wells, and 955 springs. The report also summarizes the results of bailing and pumping tests of the wells. The data were compiled to provide an easy reference for obtaining information about individual wells and springs, which will supplement the information contained in the forthcoming comprehensive report on the ground-water resources and the geology of the reservations. The comprehensive report is to be published as a U.S. Geological Survey Professional Paper.

Purpose, Scope, and Organization of the Report

In 1946 the U.S. Geological Survey was asked by the Bureau of Indian Affairs to make a series of hydrologic investigations to help alleviate the water shortage at several localities. Later, in 1950, the U.S. Geological Survey in cooperation with the Bureau of Indian Affairs began a comprehensive investigation of the geology and ground-water resources of the Navajo and Hopi Indian Reservations, which occupy parts of northeastern Arizona, northwestern New Mexico, and southeastern Utah (fig. 1). The principal objectives of the investigation were as follows: (1) To determine the feasibility of developing ground-water supplies for stock, domestic, institutional, and industrial use in particular areas and at several-hundred well sites scattered throughout the reservations and in adjoining areas owned by the Navajo Tribe; (2) to compile an inventory of the existing ground-water supplies; (3) to make a comprehensive investigation of the geology and determine the hydrogeologic factors that control the occurrence and movement of ground water; and (4) to appraise the water potential for future development.

The basic geohydrologic data of the Navajo and Hopi Indian Reservations are reproduced separately in sections as Parts I, II, III, and IV of Arizona State Land Department Water Resources Report No. 12. Part I (this report) contains a compilation of the records of drilled wells, dug wells, and springs which were inventoried before 1957. Part II is a compilation of selected chemical analyses from the wells and springs that were sampled. Part III contains selected drillers' logs, lithologic logs, and stratigraphic sections. Part IV consists only of maps of the reservations showing the locations of the wells and springs listed in Parts I, II, and III. Information about other wells that were drilled after the completion of this study is available in the open files of the Geological Survey Ground Water Branch offices in Tucson and Holbrook, Ariz.

Personnel

The collection, compilation, and analysis of the data contained in this report were under the general supervision of A. N. Sayre, former chief, and O. M. Hackett, present chief, of the Ground Water Branch; and S. F. Turner, L. C. Halpenny, and J. W. Harshbarger, former district supervisors, and P. E. Dennis, present district supervisor, of the Ground Water Branch in Arizona. The collection of the data was begun under the direct supervision of Mr. Halpenny and was continued by Mr. Harshbarger.

Substantial contributions, including field inventory of the water developments, geological descriptions and correlations, and other hydrologic work, were made by other personnel of the Navajo Project. Those deserving special mention are E. L. Gillespie, R. A. McCleve, J. R. Howard, D.K. Greene, J. T. Callahan, P. R. Stevens, William Kam, H. G. Page, J. P. Akers, H.A. Whitcomb, H. A. Yazzie, N. E. McClymonds, J. H. Irwin, S. E. Galloway, R. L. Cushman, W. A. Beldin, A. E. Robinson, H. O. Ash, and C. A. Repenning. The well and spring records were typed by Mrs. Ruth Blubaugh and Mrs. Carol Jenkins.

Acknowledgments

The Geological Survey is grateful for the assistance, cooperation, and information given by the late J. J. Schwartz, former head of the Bureau of Indian Affairs water development program for the Navajo Indians; by M. H. Miller, Bureau of Indian Affairs engineer; by Buster Kingsley, Bureau of Indian Affairs supervisor of the Hopi Indians; and by other personnel of the Bureau of Indian Affairs and the Navajo and Hopi Indian Tribes connected with the well-development program. The hydrologic information given the Geological Survey by the El Paso Natural Gas Co. and various religious missions and trading posts is greatly appreciated. Acknowledgment is due the many water-well drillers who, since 1948, conscientiously collected drill cuttings of the wells and supplied hydrologic data, with special thanks to Cowley Bros. Drilling Co., St. Johns, Ariz.; Perry Bros. Drilling Co., Flagstaff, Ariz.; and Myers Drilling Co., Holbrook, Ariz.

Location and Land-Net System

The Navajo and Hopi Indian Reservations are in the south-central section of the Colorado Plateau. The Navajo Indian Reservation occupies parts of Apache, Navajo, and Coconino Counties in northeastern Arizona, San Juan and McKinley Counties in northwestern New Mexico, and San Juan

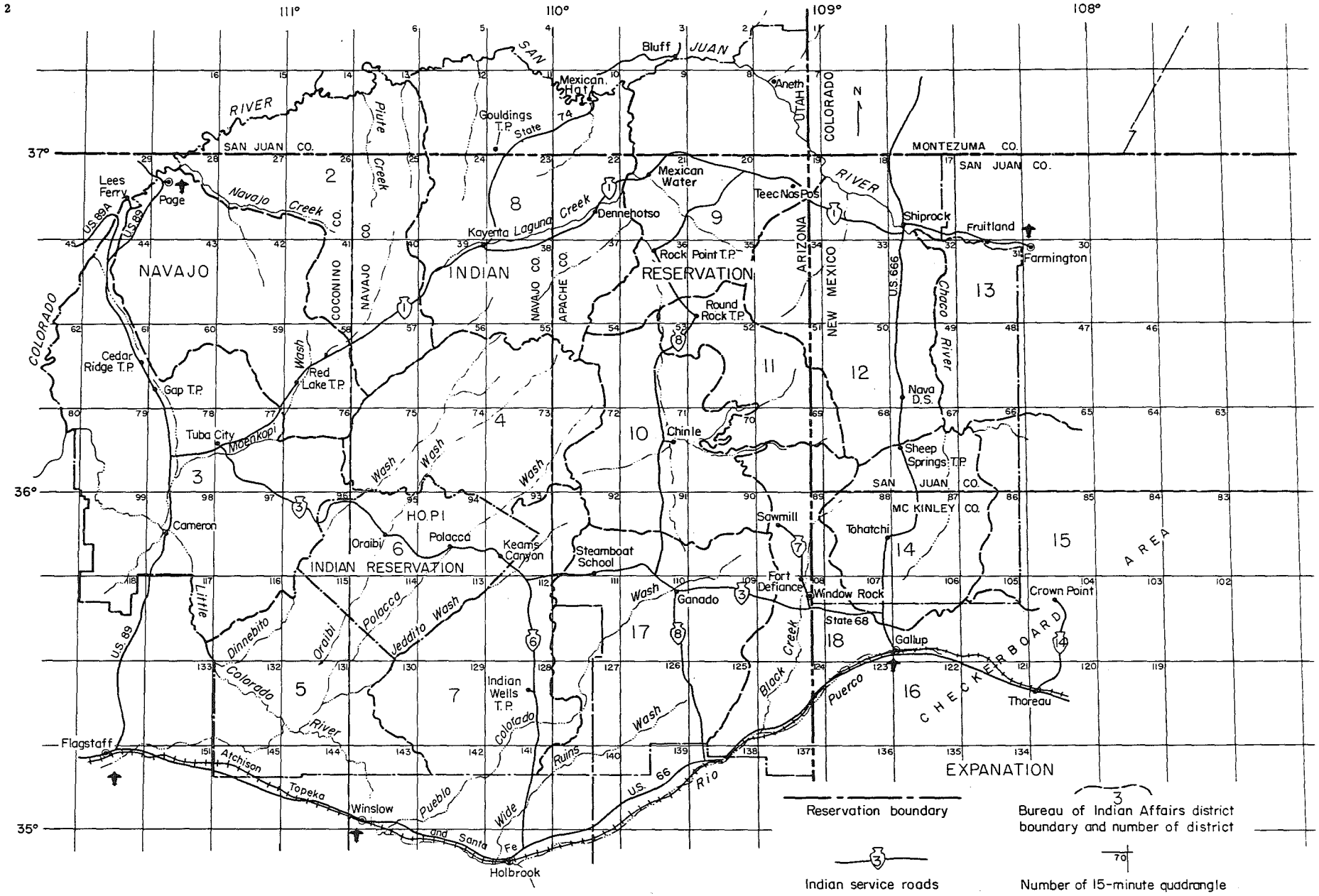

Figure 1.--Map of the Navajo and Hopi Indian Reservations, Arizona, New Mexico, and Utah, showing roads, villages, Bureau of Indian Affairs district boundaries, and 15 – minute quadrangles.

County in southeastern Utah (fig. 1). The Hopi Indian Reservation is within the central part of the Navajo Indian Reservation in Arizona. The reservations comprise an area of about 25,000 square miles, which is about three times the size of New Jersey.

The Navajo Indian Reservation is divided into 17 administrative districts, numbered 1 to 5 and 7 to 18, and the Hopi Indian Reservation comprises district 6 (fig. 1). District 19 is east of the reservation boundary in New Mexico. The reservations and adjoining area were not mapped in detail at the time of study, but 15-minute planimetric maps of the area had been made from aerial photographs. These maps were used for the geologic and hydrologic base maps and are arbitrarily numbered from 1 to 151, starting in the upper-right corner of the area and numbering consecutively in rows from right to left.

Explanation of the Ground-Water Records

The well and spring records are arranged in the numerical order of the 18 administrative districts of the Bureau of Indian Affairs and in accordance with the 15-minute quadrangles within each district. In each quadrangle the drilled wells are listed first, followed in order by the dug wells, springs, and other types of developments. No data are included in this report from district 19, which is outside the reservation boundary in New Mexico. Many private wells drilled in the reservations that were not included in the Bureau of Indian Affairs inventory are listed alphabetically by name.

Bureau of Indian Affairs Field Number

The ground-water and surface-water developments were inventoried during the 1930's by personnel of the Bureau of Indian Affairs. The water developments, regardless of type, were numbered consecutively within each administrative district. Since this field inventory, new water developments—principally drilled wells—were assigned a number and added to the inventory.

The wells and springs assigned a Bureau of Indian Affairs field number are identified by a compound number consisting of two main parts. The first part is divided into a numeral that designates the Bureau of Indian Affairs district and a letter that indicates one of several factors. Since about 1950, it denotes the source of funds used in the drilling of a well; the letter "K" is used for wells drilled under the Bureau's drilling program, and the letter "T" is used for wells drilled under the Navajo Tribal Well-Development Program. However, new wells drilled and all developments inventoried before 1950 may use instead of "K" or "T" the first letter of the last name of the person who first inventoried the well or spring for the Bureau of Indian Affairs. The second part of the Bureau field number represents the consecutive order in which the drilled wells, dug wells, and springs were inventoried in each district. Some developments contain an additional letter at the end of the field number. These letters are arranged consecutively, beginning with "A." Usually, these field numbers are obtained from the number of a nearby development that was inventoried previously.

Other dug wells or springs and a few drilled wells not inventoried previously were assigned a field number during the inventory of the early 1950's. This field number consists of three parts. The first part is formed from the district number and is followed by the letters "GS." The second part is the quadrangle number. The third part is the number representing the order in which the new developments were inventoried in the quadrangle.

Quadrangle Location Number

The quadrangle location number indicates the position of a development within a 15-minute quadrangle and consists of two parts. The first part is the distance in miles west of the northeast corner of the quadrangle, and the second part is the distance in miles south of the northeast corner of the quadrangle (fig. 2). The letter "A" at the end of the quadrangle location number means an approximate location.

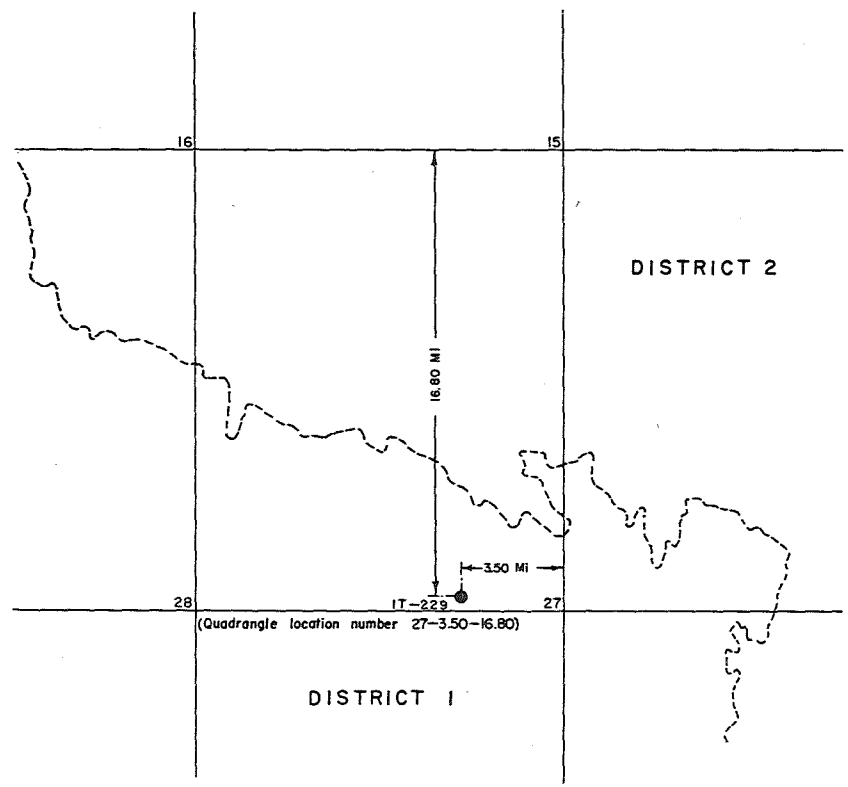

Figure 2.--Sketch showing well-numbering system used in the Navajo and Hopi Indian Reservations.

SYSTEM	SERIES	ENTIRE AREA		
QUATERNARY		Alluvium Spring deposits Landslide deposits and talus Windblown sands Terrace deposits Volcanic rocks		
TERTIARY	PLIOCENE	Bidahochi Formation Upper member Volcanic member (tuff) Lower member		
	PLIOCENE(?)	Chuska Sandstone		
	PALEOCENE	Nacimiento Formation		
CRETACEOUS	UPPER	BLACK MESA BASIN	SOUTHERN SAN JUAN BASIN	NORTHERN SAN JUAN BASIN
		Yale Point Sandstone Wepo Formation Toreva Formation Upper sandstone member Middle carbonaceous member Lower sandstone member Mancos Shale	Menefee Formation Point Lookout Sandstone Satan Tongue of Mancos Shale Hosta Tongue of Point Lookout Sandstone Cleary Coal Member of Menefee Formation Crevasse Canyon Formation Gibson Coal Member Dalton Sandstone Member Mulatto Tongue of Mancos Shale Bartlett Barren Member Dilco Coal Member Gallup Sandstone Upper part Tongue of Mancos Shale Lower part Mancos Shale	Ojo Alamo Sandstone Kirtland Shale Upper member Farmington Sandstone Member Lower member Fruitland Formation Pictured Cliffs Sandstone Lewis Shale Cliff House Sandstone Menefee Formation Point Lookout Sandstone Mancos Shale (upper part) Gallup Sandstone Mancos Shale (lower part) Dakota Sandstone
	UPPER AND LOWER	Dakota Sandstone Upper member Middle member Lower member	Dakota Sandstone	
	LOWER			Burro Canyon Formation
JURASSIC	UPPER	ENTIRE AREA		
		Cow Springs Sandstone	Morrison Formation Brushy Basin Member Westwater Canyon Member { Recapture Shale Member Salt Wash Sandstone Member } Bluff Sandstone Summerville Formation Todilto Limestone Entrada Sandstone Upper sandy member Medial silty member Lower sandy member	
	UPPER AND MIDDLE	Carmel Formation		
JURASSIC AND TRIASSIC(?)		Navajo Sandstone		

TRIASSIC(?)	UPPER	Kayenta Formation Moenave Formation Springdale Sandstone Member Dinosaur Canyon Sandstone Member			
TRIASSIC	UPPER	Wingate Sandstone Lukachukai Member Rock Point Member Chinle Formation Church Rock Member Owl Rock Member Petrified Forest Member Upper part Sonsela Sandstone Bed Lower part Monitor Butte Member Lower red member Shinarump Member			
	MIDDLE(?) AND LOWER	SOUTHERN AND SOUTHWESTERN PARTS OF THE RESERVATIONS Moenkopi Formation Holbrook Member Moqui Member Wupatki Member		MONUMENT VALLEY Moenkopi Formation Upper siltstone member Middle sandstone member Lower siltstone member Hoskinnini Member	
TRIASSIC(?)					
PERMIAN		GRAND CANYON Kaibab Limestone Toroweap Formation Coconino Sandstone	DEFIANCE PLATEAU De Chelly Sandstone Upper member Tongue of Supai Formation Lower member	ZUNI MOUNTAINS San Andres Limestone Glorieta Sandstone Yeso Formation Abo Formation	MONUMENT VALLEY Cutler Formation De Chelly Sandstone Member Organ Rock Tongue Cedar Mesa Sandstone Member Halgaito Tongue
CARBONIFEROUS: PERMIAN AND PENNSYLVANIAN		Supai Formation	Supai Formation		Rico Formation
CARBONIFEROUS: PENNSYLVANIAN					Hermosa Formation
CARBONIFEROUS: MISSISSIPPIAN		Redwall Limestone			Stratigraphic units not listed below the Hermosa Formation
CAMBRIAN	MIDDLE	Muav Limestone Bright Angel Shale			
CAMBRIAN	MIDDLE AND LOWER	Tapeats Sandstone			
PRECAMBRIAN		Granite	Quartzite and granite	Granite	

Figure 3.--Names of the rocks and sediments of the Navajo and Hopi Indian Reservations, Arizona, New Mexico, and Utah.

Altitude Above Mean Sea Level

The altitudes of the wells and springs were obtained by using barometric altimeters. The altitudes are rounded to the nearest 10 feet, although this should not imply that all the altitudes are correct to that figure. After 1955, some topographic maps of the reservations were available and in these areas the altitudes were estimated from the maps. Some corrections of the altitudes of the wells will be possible when additional topographic maps become available.

Construction Data

The construction data listed includes the well depth, diameter and depth of casing in the well, finish of the well, and other improvements. The finish for drilled wells describes the perforated interval, placement of well screen, and other related information. "Open hole" means there is no casing in the well below the last casing depth. The finish for dug wells describes the type of construction or material used in the wellcurb. The finish for springs describes the type of construction used for collecting the water. The word "none" under the heading "Finish" means the spring is not developed.

Water-Bearing Strata

The water-bearing strata are referred to by their standard geologic names and are divided into formations and members. Some aquifers consist of combinations of two or more formations and/or members. Figure 3 lists the stratigraphic names of the rocks that yield some water to wells and springs in the Navajo and Hopi Indian Reservations.

The principal unit (or units) yielding water to a well or spring are listed under the heading "Stratigraphic unit." Strata that are open to the well and yield a negligible quantity of water are not listed under this heading. Other water-yielding zones may be present but cased out of a well either because of undesirable chemical quality or small yield. These zones are not listed under the "Stratigraphic unit" column but may be noted in the "Remarks" column.

The columns "Depth below land surface to top of stratigraphic unit" and "Thickness" apply only to the strata penetrated by drilled wells. "Thickness" refers to the thickness of the stratigraphic unit or aquifer that yields sizable amounts of ground water to a well. Many wells penetrate only part of the stratigraphic unit. These partial thicknesses are denoted by the letter "P" following the figure in the "Thickness" column.

Artesian aquifers are fully saturated and the thickness of the water-bearing strata is equal to the saturated thickness. If water-table conditions prevail, the thickness of the saturated zone penetrated by a well is not necessarily equal to the thickness of the stratigraphic unit. The saturated thickness penetrated by the well may be calculated by subtracting the depth of the static water level from the total depth of those wells that penetrate only part of the aquifer. The total saturated thickness of the stratigraphic unit may be calculated by subtracting the depth of the static water level from the depth of the base of the aquifer. The depth to the base of the aquifer is the sum of the figures in the columns headed "Depth below land surface to top of stratigraphic unit" and "Thickness."

Hydrologic Data

The hydrologic data consist of information that gives an indication of the aquifer's potential yield in that area. The principal hydrologic information contained in this report are static water levels, yields, and results of bail, pump, or flow tests.

The static water level is the distance in feet measured below the land surface when the well is not pumping. All water-level measurements more than 115 feet below the land surface are rounded off to the nearest 1 foot. The water-level measurements were obtained by a steel tape or by electrical measuring equipment. The word "flow" in the column containing the depth of the static water level means a flowing well.

The production or discharge rate of the well or spring is indicated under the heading "Yield." The yield listed for a dug well or a nonflowing drilled well represents only the estimated rate at which the well is pumped during normal operation. The yield for wells having windmills was estimated roughly from the size of the windmill and the amount of lift. The rate of discharge measured or estimated from a flowing well is listed in the "Yield" column. The rate listed for springs is the rate of discharge that was either measured or estimated when the spring was inventoried or last visited. Estimated flowing-well and spring discharges are indicated by the letter "E."

The data listed under the heading "Bail or pump test" describe the water-yielding characteristics of the well and of the water-bearing strata penetrated by the well. Most bail tests were made in cooperation with the driller at the time of completion of the well. The drawdown is the amount of lowering of the water level in the well caused by bailing or pumping water from the well. The rate of pumping or bailing is the average rate maintained only during the test and is not related to the rate of discharge of the well listed under the heading "Yield."

Quality

Samples of water were taken from selected wells and springs for chemical analysis. If there is a "yes" under the heading "Chemical analysis," the analysis is contained in Part II, "Selected Chemical Analyses of the Ground Water," of the "Geohydrologic Data in the Navajo and Hopi Indian Reservations, Arizona, New Mexico, and Utah."

A sensory test was determined by inspection of the quality-of-water analysis, or it was estimated by field inspection if no sample for chemical analysis was taken of the water. The water analyzed chemically is classified as "good" if there are less than 1,000 ppm (parts per million) total dissolved solids, "fair" if there are between 1,000 and 2,500 ppm total dissolved solids, and "poor" if there are more than 2,500 ppm total dissolved solids.

RECORDS OF GROUND-WATER SUPPLIES IN THE NAVAJO AND HOPI INDIAN RESERVATIONS,

ARIZONA, NEW MEXICO, AND UTAH

Bureau of Indian Affairs field number: See p. 3 for description of numbering system.
Quadrangle location number: A, approximate location. See p. 3 for description of numbering system.
Approximate location: D.S., day school; T.P., trading post.
Altitude: E, estimated. See p. 6 for explanation of accuracy of measurements.
Construction data, depth columns: R, reported.
Construction data, improvements: A, concrete apron; C, cistern; G, staff gage; H, hand pump; N, no improvements; P, power pump; Re, earthen reservoir; S, sump; Ta, tank; Tr, trough; W, windmill; Wc, concrete weir.

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA				
								Depth of well (feet)	Casing or cribbing		Finish	Improvements
									Diameter (drilled well in inches, dug well in feet)	Depth (feet)		
					DISTRICT 1							
26	None											
27	Drilled well	1T-229	3.50-16.80	11 N of Kaibito	5/55	Top of mesa	5,650	1,248	8	94	Open hole	
	Spring	1A-10	5.85-14.60	1 SSW of Tsai Skizzie Rock	9/27	Shallow canyon	5,360				Masonry wall	C, Tr
	do.	1GS-27-1	11.90-12.70	17 NNW of Kaibito		Deep canyon	4,100				None	N
28	Drilled well	1K-223	4.90-12.75	2 WSW of Leche-e Rock	3/54	Edge of mesa	5,180	1,417	8	8	Open hole	N
	Dug well	1A-91A	4.05-10.00	1 W of Leche-e Rock		Head of wash	5,100	6	8	6	Rock cribbed	A
	do.	1A-92A	4.05-15.95	12 NNE of Copper Mine T.P.		Head of canyon	5,260	5	4	5	do.	N
	Spring	1A-90	4.50-8.45	2 NW of Leche-e Rock		Hillside	4,800				None	Re
	do.	1A-91	4.15-9.95	1 W of Leche-e Rock		Head of wash	5,100				Collection gallery	C, Tr
29	None											
41	Drilled well	1T-218	12.85-7.30	6 ENE of Kaibito	8/51	Plain	5,950	890	8	115	Open hole	W, Ta, Tr
	do.	1T-227	9.70-4.70	10 NE of Kaibito	5/55	Stripped plain	6,000	851	8	22	do.	W, Ta, Tr
	Dug well	1A-17	12.55-6.75	6 NE of Kaibito	5/27	Shallow canyon	5,910		4 x 4		Masonry cribbed	H, Tr, A
	do.	1A-18	10.35-10.30	8 E of Kaibito	7/27	Deep canyon	6,450	7.5	8 x 8		do.	H, Tr, A
	do.	1A-119	11.05-14.50	8 ESE of Kaibito	7/29	Shallow canyon	6,500	4	7 x 7		do.	H, Tr, A
	Spring	1A-53	12.95-14.20	6 SE of Kaibito		Deep canyon	6,400				Masonry wall	C, Tr
	do.	1A-119A	11.45-14.25	8 ESE of Kaibito		do.	6,600				None	N
42	Drilled well	1A-23	13.65-16.85	11 SW of Kaibito	7/41	Stripped plain	5,950	770	6	740	Perforated 708-712	W, Ta, Tr
	do.	1K-217	4.05-10.60	Kaibito	3/51	Narrow valley	5,900	1,240	8	727	Open hole	P, Ta
	do.	1K-220	10.05-9.55	6 W of Kaibito	7/53	Stripped plain	5,520	895	8	25	do.	W, Ta, Tr
	do.	1K-221	12.65-13.40	9 WSW of Kaibito	8/53	Base of mesa	6,050	985	8	15	do.	W, Ta, Tr
	Dug well	1A-19	0.55-10.05	4 E of Kaibito	7/27	Narrow valley	6,130	6	5	6	Masonry cribbed	H, Tr, A
	do.	1A-33	4.45-14.85	4 S of Kaibito	8/27	Shallow canyon	6,200		7 x 7		do.	H, Tr, A
	Spring	1A-1	3.85-10.45	Kaibito	4/27	Narrow valley	5,920				Collection gallery	C, Ta, Tr
	do.	1A-1A	4.15-10.80	1 S of Kaibito		do.	5,910				do.	C, Tr
	do.	1A-2	4.20-9.55	1 N of Kaibito	4/27	do.	5,740				do.	Ta, Tr
	do.	1A-3	4.70-8.70	2 NNW of Kaibito		Bank of wash	5,660				Masonry wall	N
	do.	1A-4	4.75-7.95	2 NNW of Kaibito	8/27	do.	5,500				do.	C
	do.	1A-5	3.15-6.40	4 NNE of Kaibito	5/27	Narrow valley	5,600				do.	Tr

Hopi Indian Reservations, Arizona, New Mexico, and Utah

Water-bearing strata, thickness: P, partial penetration.
Water-bearing strata, stratigraphic unit: undiff., undifferentiated. See p. 6 for discussion of water-bearing strata.
Log: DL, driller's log; LL, lithologic log. These logs are in Part III, "Selected Lithologic Logs, Drillers' Logs, and Stratigraphic Sections."
Hydrologic data: E, estimated; Flow, flowing well; R, reported; >, greater than; <, less than. See p. 6 for discussion concerning yield and bail or pump test.
Use of water: D, domestic; Ind, industrial; Irr, irrigation; O, observation; PS, public supply; S, stock; Un, unused.
Remarks: ATSF, Atchison, Topeka and Santa Fe Railroad; BIA, Bureau of Indian Affairs; D.S., day school; T.P., trading post; USGS, U.S. Geological Survey.

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 1									
150	1,098 P	Navajo	LL	1,113	5/13/55			6.5	63	1½		Yes	Good	68	Excessive lift.
		Entrada				0.8 R .1 E	4/21/37 7/29/54				D, S	Yes	Good	66	
		Navajo									S	No			Located by aerial reconnaissance.
80	1,337 P	do.	LL	1,360	3/10/54			6	45	½	Un	Yes	Good	69	Recovery, 2.7 gpm for 35 minutes; excessive lift.
		Entrada		5.5	7/27/54						D, S	No	Good		
		Carmel		1.1	7/27/54						D, S	Yes	Good	64	
		do.				.5 R .8 E	5/10/37 7/27/54				D, S	Yes	Good	73	"North Leche-e Spring."
		Entrada				.8 R .2 E	5/10/37 1/26/54				D, S	Yes	Good	78	"Leche-e Spring."
120	770 P	Navajo		736	1/15/54	1-2		8	None	1	D, S	Yes	Good		
5	846 P	do.	LL	555	5/10/55	1-2		10	None	2½	D, S	Yes	Good	60	
		Carmel		14 E	5/21/52			2 R			D, S	Yes	Good		"Tse-ya-toh well"; destroyed prior to July 28, 1954.
		Alluvium		4.8	7/29/54						S	Yes	Good	64	
		do.		2.2	7/ 9/54			1 R			D, S	Yes	Good	59	
		Entrada				2 R 2	5/ 8/37 7/29/54				D, S	Yes	Good	60	
		Cow Springs				2 E	7/ 9/54				S	No	Good	78	
678	92 P	Tongue of Navajo in Kayenta	DL	690	1/14/54	1-2		5			D, S	Yes	Good	62	Two wells drilled at this location.
90	1,140	Navajo	LL	557	1/14/53			30	9	12	PS	Yes	Good	64	Kaibito School, pump test.
10	885 P	do.	LL	755	7/21/53	1-2		8	96	1	D, S	Yes	Good	60	Replaces 1A-28 (depth, 880 feet), water sample Mar. 22, 1950.
12	973 P	do.		875	8/11/53	1-2		7	35	1	D, S	Yes	Good	65	
		Alluvium		3.9	7/29/54						D, S	Yes	Good	71	
		Carmel		6 R	5/ 7/37						D, S	Yes	Good	64	
		do.				.8 R 2 E	4/24/37 3/19/50				D, S	Yes	Good	45	Kaibito T.P.
		do.				.6	3/19/50				S	No	Good	45	
		do.				.8 R 4 R	4/21/37 3/19/50				D, S	Yes	Good	54	
		do.				.5 R .5 R	4/24/37 7/30/54				S	No	Good	65	
		do.				.1 E < .1	4/24/37 7/30/54				D	Yes	Good	70	
		do.				.8 R < .1	5/18/37 7/30/54				S	Yes	Good	78	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA				
								Depth of well (feet)	Casing or cribbing		Finish	Improvements
									Diameter (drilled well in inches, dug well in feet)	Depth (feet)		
				DISTRICT 1—Continued								
42 con.	Spring	1A-5A	5.05-5.80	4 NNW of Kaibito	9/27	Edge of mesa	5,570				Collection gallery	Tr
	do.	1A-35	2.35-13.70	4 SE of Kaibito	4/27	Deep canyon	6,350				do.	Tr
	do.	1GS-42-1	6.70-2.90	10 NNW of Kaibito		do.	4,400				None	N
43	Drilled well	1A-125	8.90-6.60	3 ENE of Copper Mine T.P.	2/36	Stripped plain	5,960	1,268				N
	do.	1A-150	7.8-0.7 A	9 NNE of Copper Mine T.P.	3/38	Top of mesa	5,600	1,420				N
	do.	1K-213	8.30-14.00	6 SSE of Copper Mine T.P.	8/41	Stripped plain	5,970	870	6	819	Perforated 781-818	N
	do.	1K-215	9.80-14.70	6 S of Copper Mine T.P.	8/51	Broad valley	5,710	585	8		Open hole	W, Ta, Tr
	do.	Copper Mine Mission	11.35-9.10	1 S of Copper Mine T.P.		Stripped plain	6,100	1,180	8		do.	P, Ta
	Dug well	1A-105	10.10-9.80	2 SSE of Copper Mine T.P.	11/25	do.	5,930	5	4 x 3	5	Log cribbed	N
	do.	1A-106	11.05-14.00	6 S of Copper Mine T.P.	12/26	Shallow canyon	5,840	40.5	6		None	Tr, A
	do.	1A-106A	11.10-14.10	6 S of Copper Mine T.P.	12/26	do.	5,860	20.5	8		do.	Tr, A
	do.	1A-108	10.65-15.25	7 S of Copper Mine T.P.	12/26	do.	5,800	6	6		do.	H, A
	Spring	1A-107	10.05-13.40	5 S of Copper Mine T.P.		Hillside	5,830				Masonry wall	C, Tr
44	Drilled well	1A-151	1.95-7.95	4 W of Copper Mine T.P.	5/38	Stripped plain	6,130	820				
	do.	1K-231	0.30-10.80	4 SW of Copper Mine T.P.	6/56	do.	6,320	1,200	8	212	Open hole	W, Tr
	do.	1K-232	0.10-14.90	8 SSW of Copper Mine T.P.	4/56	do.	6,410	1,105	10	85	do.	W, Tr
	Dug well	1A-112	4.60-14.90	8 WSW of Copper Mine T.P.		Base of cliff	6,690	13.5	5 x 7		None	H, Tr, A
	do.	1A-112A	4.60-14.80	8 WSW of Copper Mine T.P.		do.	6,700	9	4		do.	A
57	None											
58	Drilled well	1K-214	9.90-6.70	6 N of Red Lake T.P.	5/50	Stripped plain	5,850	356	8	168	Open hole	W, Ta, Tr
	do.	1K-219	10.80-2.10	10 N of Red Lake T.P.	5/52	Base of mesa	6,220	732	8 6	78 551	do.	W, Ta, Tr
	do.	1K-225	5.20-5.80	Cow Springs T.P.	7/54	Stripped plain	5,670	251	10	19	do.	P, Ta
	do.	1K-228	10.55-12.25	Red Lake T.P.	7/54	Side of mesa	5,490	504	6	400	do.	P, Ta
	Dug well	1A-49	13.15-2.20	10 NNW of Red Lake T.P.		Deep canyon	6,210	6	4	6	Masonry cribbed	A
	do.	1A-51	12.30-1.30	11 N of Red Lake T.P.		Narrow valley	6,200	8.5	6	8.5	do.	H, Tr, A
	do.	1A-64A	3.25-10.15	5 SE of Cow Springs T.P.		Bank of wash	6,000	3.5	3	3.5	Rock cribbed	N
	do.	1A-65	2.85-12.85	8 E of Red Lake T.P.		do.	5,800	4	2 x 2	4	do.	N
	do.	1A-69	8.15-14.80	4 SE of Red Lake T.P.	8/28	do.	5,570	24	5 x 5	24	Masonry cribbed	H, Tr, A
	do.	1A-72	12.70-16.75	5 SSW of Red Lake T.P.	9/28	Base of cliff	5,280	5.5	4 x 6	5.5	do.	H, Tr, A
	do.	1A-81	6.60-11.85	4 E of Red Lake T.P.	/29	Head of wash	5,830	7	4 x 4	7	do.	H, Tr, A
	do.	1A-87	10.50-11.90	0.25 N of Red Lake T.P.	/32	Dry lakebed	5,450			30	do.	W, Tr, Ta, A
	do.	1A-88	10.45-12.05	0.25 NE of Red Lake T.P.	/22	do.	5,440				do.	Tr, Ta, A
	Spring	1A-48	13.20-2.10	10 NNW of Red Lake T.P.		Deep canyon	6,210				None	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 1—Continued									
		Carmel				.5 R <.1	5/18/37 7/30/54				D, S	Yes	Good	78	
		Entrada				.2 R .1 E	5/ 7/37 7/29/54				S	Yes	Good	62	
		Navajo				10 E	3/ 5/54				S	No			Located by aerial reconnaissance.
0	1,177	do.	DL	Dry								No			Abandoned.
70	1,350 P	do.		Dry								No			Do.
666	204 P	Tongue of Navajo in Kayenta	DL	786	1/14/54			2	17	15	Un	No			Abandoned, insufficient yield.
0	570	Navajo		460	1/12/53	2-3		19	124	1	D, S	Yes	Good		Bailed hole dry.
0	1,180 P	do.		820 R	1/14/54	1.5 R	12/ /53				D	Yes	Good	76	Copper Mine Mission.
		do.		Dry	7/15/54			1.2 R			Un	No			Temporary.
		do.		28	7/15/54			2 R			Un	Yes	Good	55	
		do.		13	7/15/54			2 R			Un	No	Good		
		do.		Dry	7/15/54			1 R			Un	No			Temporary.
		do.				<.1	7/15/54				D, S	Yes	Good	78	"Dove Springs"; temporary.
0	820 P	do.		Dry								No			Abandoned.
3	1,185	do.	DL	1,171	6/14/56			5	5	1½	D, S	Yes	Good	65	
4	1,101 P	do.		993	4/17/56			4	None	1	D, S	No	Good		
		do.		7.9	7/26/54						D, S	Yes	Good	63	Temporary.
		do.		5.3	7/26/54						D	No	Good	63	Do.
250	106 P	Navajo	LL	188	6/ 4/53	3-4		23	28	6	D, S	Yes	Good	61	
260	472 P	do.		598	1/13/54	1-2		9		1	D, S	Yes	Good		
10	241 P	do.		57	11/16/54			130	93	20½	PS	Yes	Good		Pump test Nov. 16, 1954; Cow Springs School.
370	134 P	do.	DL	45	7/11/54	50 R		30	10	1	PS	Yes	Good	61	Red Lake T.P. and School.
		Alluvium									Un	No			
		Carmel		7.4	7/ 8/54						D, S	Yes	Good	64	
		Alluvium		1	6/24/54						D	No	Good	65	Temporary.
		do.		3	7/ 2/54						D, S	No	Fair		Do.
		do.		17.5	6/24/54						D, S	Yes	Bad	58	
		Navajo		1.7	6/24/54						D	No	Good		"Peach Tree well."
		Landslide and talus		5	6/24/54						D, S	Yes	Bad	65	
		Alluvium				2-3 E	6/23/54				D, S	Yes	Good	58	
		do.		2.5	6/23/54						D	No	Good	58	
		Entrada				2 E	7/ 8/54				S	Yes	Good	60	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA				
								Depth of well (feet)	Casing or cribbing		Finish	Improvements
									Diameter (drilled well in inches, dug well in feet)	Depth (feet)		
					DISTRICT 1—Continued							
58 con.	Spring	1A-50	13.80-1.70	11 NNW of Red Lake T.P.		Head of canyon	6,500				None	N
	do.	1A-62	0.00-5.40	6 E of Cow Springs T.P.		do.	6,340				Rock wall	Tr
	do.	1A-64	2.95-9.05	4 SE of Cow Springs T.P.		Bank of wash	6,140				Masonry wall	Tr, Ta
	do.	1A-66	3.10-13.10	8 E of Red Lake T.P.		Bed of wash	5,780				None	N
	do.	1A-67	4.75-14.05	6 ESE of Red Lake T.P.		Deep canyon	5,760				do.	N
	do.	1A-71	11.55-14.65	3 SW of Red Lake T.P.	8/29	Head of canyon	5,480				Masonry wall	C, Tr
	do.	1A-73	13.05-16.00	4 SW of Red Lake T.P.		do.	5,390				do.	Tr
	Stream	1A-59	4.90-4.45	2 NW of Cow Springs T.P.		Shallow canyon					None	N
59	Drilled well	1A-160	7.15-0.40	8 SSW of Kaibito	12/37	Stripped plain	6,240	870	8 6	40 782	Open hole	W, Ta, Tr
	do.	1K-204	9.10-6.50	14 SSW of Kaibito	6/35	do.	5,930	368	8	368	Perforated	W, Ta, Tr
	do.	1K-216	0.80-15.25	4 SW of Red Lake T.P.	8/51	do.	5,650	475	10		Open hole	W, Ta, Tr
	do.	1K-222	4.80-5.10	11 NW of Red Lake T.P.	4/54	do.	6,200	499	8	10	do.	W, Ta, Tr
	do.	1K-224	12.50-3.20	13 SW of Kaibito	9/54	do.	6,040	506	8	22	do.	W, Ta, Tr
	do.	1K-226	1.25-9.90	4 WNW of Red Lake T.P.	9/54	do.	5,880	500	8	21	do.	W, Ta, Tr
	Dug well	1A-43	2.15-3.00	11 NNW of Red Lake T.P.	7/28	Base of mesa	6,450	7	6	7	Masonry cribbed	A
	do.	1A-84	3.40-12.25	6 W of Red Lake T.P.		Stripped plain	5,850	9	8	7	do.	Tr, A
	Spring	1A-86	3.30-10.15	6 WNW of Red Lake T.P.	11/26	do.	6,000				Masonry wall	C, Tr
60	Drilled well	1A-25	3.75-3.70	12 NE of Gap T.P.	6/38	do.	5,700	740	6	640	Perforated	W, Ta, Tr
	do.	1A-115	9.25-7.00	6 NNE of Gap T.P.	5/35	Alluvial plain	5,480	430	6	430	do.	W, Ta, Tr
	do.	1K-202	1.60-1.75	16 NE of Gap T.P.	5/39	Stripped plain	5,770	518	6	487	Open hole	W, Ta, Tr
	do.	1K-203	9.15-1.75	12 NNE of Gap T.P.	6/41	Alluvial plain	5,560	356	6	298	do.	W, Ta, Tr
	do.	1K-233	13.10-2.55	11 N of Gap T.P.	3/56	Stripped plain	6,200	996	10 8	12 134	do.	W, Ta, Tr
	do.	1K-233A	13.70-2.50	11 N of Gap T.P.	2/56	do.	6,200	180				N
	Dug well	1A-114	10.65-0.15	9 S of Copper Mine T.P.	11/25	Hillside	5,820	13.5	2 x 4	13.5	Masonry cribbed	H, A
	do.	1A-116	12.85-8.85	4 NNW of Gap T.P.		Bed of wash	5,700	6.5	2 x 4	6.5	do.	Tr, A
	do.	1A-117	5.35-3.50	12 NE of Gap T.P.	12/28	Bank of wash	5,750	9	2 x 4	9	do.	N
61	None											
75	Spring	1A-80	12.90-3.05	13 ESE of Red Lake T.P.		Deep canyon	5,320				None	N
	do.	1A-80A	13.40-1.80	13 ESE of Red Lake T.P.		Head of canyon	5,540				do.	Ta, Tr
76	Dug well	1A-70	10.60-0.10	5 S of Red Lake T.P.	10/24	Bed of wash	5,400	8	5	8	Masonry cribbed	A
	do.	1A-76	8.90-0.70	5 SSE of Red Lake T.P.		Bank of wash	5,440	10.5	5	10.5	do.	H, Tr, A
	Spring	1A-74	13.45-0.75	6 SW of Red Lake T.P.	9/28	Head of canyon	5,260				Masonry wall	Tr
	do.	1A-75	13.15-1.20	7 SSW of Red Lake T.P.		Bank of wash	5,180				None	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 1—Continued									
		Cow Springs				1.5 R 4	5/ 8/37 7/ 8/54				S	No	Good	60	
		Landslide and talus				.2 R .2 E	2/11/37 6/29/54				D, S	Yes	Good	64	
		Wepo				.1 E	6/24/54				D, S	Yes	Good	65	
		Toreva				4 E	7/ 2/54				D, S	Yes	Fair	61	Temporary.
		Mancos				Dry	7/ 2/54					No			Do.
		Navajo				1 R .1 E	12/10/36 6/23/54				D, S	Yes	Good	69	
		do.				1 R 1 E	12/ 8/36 6/24/54				S	Yes	Good	80	Improvements covered by dune sand.
		do.				120 R 480	3/ 8/37 5/ 4/54				S	Yes	Good	78	"Begashibito Canyon."
18	832	do.		700 R	12/22/37	1-2		11			D, S	Yes	Good		"Amos Singer well."
0	365	do.		245	2/ 5/53	2-3		20			D, S	Yes	Good		"Dick Sands well."
10	450	do.		197	9/18/52	3-4		46	25	1½	D, S	Yes	Good		
10	480	do.	LL	406	4/15/54	2-3		16	53	¾	D, S	Yes	Good		
0	490	do.	LL	455	9/19/54	2-3		3		1	D, S	Yes	Good	60	Bailed hole dry at 5 gpm.
30	470 P	do.		355	9/28/54	2-3		15	45	1	D, S	No	Good		
		Entrada		2	7/ 7/54						D, S	Yes	Good	65	
		Navajo		6	7/ 7/54						D, S	Yes	Good	66	
		do.				1 R 1	12/ 8/36 7/ 7/54				D, S	Yes	Good	71	"Rat Spring."
610	130 P	Tongue of Navajo in Kayenta and Moenave	DL	545	1/14/54	1-2		3	132	7	D, S	Yes	Good	59	
0	430 P	Navajo		100	1/12/53	3-4		35			D, S	Yes	Good	60	
12	498	do.		475	1/14/54	2-3		10	15		D, S	Yes	Good	56	
20	336 P	do.		274	1/13/53	2-3		15			D, S	Yes	Good		
870	126 P	Tongue of Navajo in Kayenta	LL	870	3/26/56			3	None	2	D, S	No	Good		
2	178 P	Navajo		Dry								No			Abandoned; crevice near bottom.
		do.		9.5	7/15/54						D, S	Yes	Good	62	"To-nilth-chonik"; temporary.
		Alluvium		2.5	7/15/54						D, S	Yes	Good	69	
		do.		Dry	7/14/54			8 R			D, S	No			Temporary.
		Wepo				10 R 1 E	12/11/36 6/25/54				S	No	Good	62	
		Alluvium				< .1	6/25/54				D, S	Yes	Good	62	
		Navajo		7.5	7/ 2/54	< .1	5/13/37				D	Yes	Good	66	
		Alluvium		9.4	6/25/54						D, S	Yes	Bad	65	Temporary.
		Navajo				2 R .5	12/ 7/36 6/24/54				S	Yes	Good	75	
		do.				5 R 5 E	12/ 7/36 6/24/54				S	Yes	Good	67	Rock and concrete dam across wash above spring.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA				
								Depth of well (feet)	Casing or cribbing		Finish	Improvements
									Diameter (drilled well in inches, dug well in feet)	Depth (feet)		
					DISTRICT 1—Continued							
76 con.	Spring	1A-79	2.85-0.65	10 SE of Red Lake T.P.		Deep canyon	5,620				None	N
	do.	1A-82	7.90-6.10	11 SSE of Red Lake T.P.		do.	4,950				do.	N
	do.	1A-83	10.00-5.50	10 S of Red Lake T.P.		Stripped plain	5,100				Masonry wall	Tr
					DISTRICT 2							
12	None											
13	Spring	2A-28	6.65-8.50	11 NE of Navajo Mtn. D.S.		Edge of cliff	5,720				Collection gallery	Tr
	do.	2A-74	10.05-12.30	7 NE of Navajo Mtn. D.S.		Deep canyon	4,400				None	N
	do.	2A-75	10.05-11.80	8 NE of Navajo Mtn. D.S.		do.	4,450				do.	Re
	do.	2A-76	10.95-11.75	6 NE of Navajo Mtn. D.S.		Head of canyon	4,700 E				do.	N
	do.	2A-78	7.80-10.15	10 NE of Navajo Mtn. D.S.		Edge of cliff	5,400 E				do.	N
	do.	2A-78A	7.70-10.65	10 NE of Navajo Mtn. D.S.		do.	5,400 E				do.	N
	do.	2A-83	12.0-8.7 A	8 NNE of Navajo Mtn. D.S.		Deep canyon	4,300				do.	N
	Combination spring	2A-73	11.0-15.3 A	5 E of Navajo Mtn. D.S.		do.	4,680 E				do.	N
	do.	2A-80	9.7-10.6 A	9 NE of Navajo Mtn. D.S.		do.	4,130 E				do.	N
	do.	2A-81	10.2-7.7 A	10 NNE of Navajo Mtn. D.S.		do.	3,750 E				do.	N
	do.	2A-82	11.2-6.1 A	11 NNE of Navajo Mtn. D.S.		do.	3,550 E				do.	N
	do.	2A-84	3.4-4.8 A	17 NE of Navajo Mtn. D.S.		do.	3,680 E				do.	N
14	Drilled well	2K-306	2.45-16.10	Navajo Mtn. D.S.	8/46	Mountainside	6,020	823	8			N
	Dug well	2A-96	2.45-16.25	Navajo Mtn. T.P.	/35	Bed of wash	6,000	19.5	9	19.5	Concrete caisson	P, Tr, Re
	Spring	2A-98	2.35-8.15	8 N of Navajo Mtn. D.S.		Deep canyon	4,470				None	N
	do.	2A-99	3.5-7.9 A	7 N of Navajo Mtn. D.S.		Head of canyon	4,000 E				do.	N
	do.	2A-102	5.95-10.85	7 NNW of Navajo Mtn. D.S.		do.	4,900				do.	N
	do.	2A-103	7.0-7.3 A	7 NE of Rainbow Bridge National Monument		Deep canyon	4,420 E				do.	N
	do.	2A-104	7.30-10.80	5 E of Rainbow Bridge National Monument		do.	4,500				do.	N
	do.	2A-105	5.70-16.10	2 NNE of Rainbow Lodge		Mountainside	8,480				do.	N
	do.	2A-106	6.40-16.35	1 NNE of Rainbow Lodge		do.	8,680				do.	N
	do.	2A-106A	5.65-16.90	2 ENE of Rainbow Lodge		do.	7,300				Collection gallery	N
	do.	2GS-14-3	1.00-9.50	6 N of Navajo Mtn. D.S.		Edge of cliff	4,220				None	N
	do.	2GS-14-4	0.70-9.85	6 NNE of Navajo Mtn. D.S.		Head of canyon	4,350				do.	N
	do.	2GS-14-5	11.45-12.20	1 E of Rainbow Bridge National Monument		do.	3,900				Collection well	Re
	do.	2GS-14-6	10.05-7.95	4 NNE of Rainbow Bridge National Monument		Canyon	3,500				None	N
	Combination spring	2A-101	4.10-10.90	5 NNW of Navajo Mtn. D.S.		Deep canyon	4,950				do.	N
	do.	2A-110	11.0-14.6 A	4 SSE of Rainbow Bridge National Monument		do.	4,200 E				do.	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 1—Continued									
		Toreva				Dry	6/25/54					No			Temporary.
		Alluvium				2 E	6/25/54				S	Yes	Good	85	Yield variable, from a few gallons to several second-feet.
		Navajo				.1	6/25/54				D, S	Yes	Good	85	
						DISTRICT 2									
		Kayenta				0.2 R <.1	7/23/54				D, S	Yes	Good	63	
		Alluvium									S	No			
		Landslide and talus				5 E	8/25/37				S	No			
		Wingate (Lukachukai)				10 E	8/25/37				S	No			
		do.				.5 E	7/22/54				S	No			
		do.				.5 E	7/22/54				S	No			
		do.				5 E	8/25/37				S	No			
		Alluvium									S	No			
		do.									S	No			
		do.									S	No			Dry in June 1958.
		do.									S	No			
		do.									S	No			
284	256	Wingate (Lukachukai)	DL	500	8/ 1/46			0.2				No			Abandoned, insufficient yield.
		Alluvium		13.3	7/10/48						D	Yes	Good	56	Temporary.
		Kayenta									S	No			
		Wingate (Lukachukai)				5 E	11/25/37				S	No			
		Navajo				2 E	9/11/53				S	No	Good		
		do.									S	No			
		do.				10.5	9/11/53				S	Yes	Good	70	
		Landslide and talus				.5 E	3/ 2/53				S	No	Good		"Soldiers Seep"; temporary.
		do.				1/4 R	9/ 4/53				S	Yes	Good	47	"War God Spring."
		do.				5	9/ 4/53				D, S	Yes	Good	50	"Endischee."
		Wingate (Lukachukai)				3.5	9/ 2/53				D, S	Yes	Good	60	
		do.				1.5	9/ 2/53				D, S	Yes	Good	55	
		Navajo				2 E	9/ 2/53				D, S	No	Good		"Echo Camp Spring."
		do.									D, S	No	Good		
		do.				2.5	9/10/53				S	Yes	Good	65	
		do.				25 R	11/ /37				S	No			

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA				
								Depth of well (feet)	Casing or cribbing		Finish	Improvements
									Diameter (drilled well in inches, dug well in feet)	Depth (feet)		
					DISTRICT 2—Continued							
14 con.	Combination spring	2A-111	11.25-12.90	2 SE of Rainbow Bridge National Monument		Bed of wash	4,050				None	N
	do.	2A-111A	10.70-12.70	2 SE of Rainbow Bridge National Monument		do.	4,150				do.	N
	do.	2A-112	13.0-15.0 A	3 SSW of Rainbow Bridge National Monument		Deep canyon	4,050				do.	N
	do.	2GS-14-1	12.40-11.50	1 SE of Rainbow Bridge National Monument		do.	3,600				do.	N
	do.	2GS-14-2	1.10-9.60	6 N of Navajo Mtn. D.S.		do.	4,320				do.	N
15	Spring	2K-454	7.6-13.2 A	10 W of Rainbow Bridge National Monument		Head of canyon	4,150				do.	N
	Combination spring	2K-455	0.50-11.55	2 W of Rainbow Bridge National Monument		Deep canyon	3,650				do.	N
	do.	2GS-15-1	2.00-10.50	4 WNW of Rainbow Bridge National Monument		Head of canyon	3,850				do.	N
16	None											
24	do.											
25	Drilled well	2K-305	4.05-15.25	13 NNE of Shonto T.P.	9/52	Stripped plain	7,380	804	10	6	Open hole	W, Ta, Tr
	do.	2K-322	9.75-15.50	13 NNW of Shonto T.P.	6/56	do.	7,300	742	8	18	do.	W, Ta, Tr
	Spring	2A-31	4.60-2.15	12 ESE of Navajo Mtn. D.S.		Hillside	6,620				Collection gallery	Tr
	do.	2A-32	5.65-11.35	15 NE of Inscription House T.P.		Base of cliff	7,030				do.	Tr
	do.	2A-33	5.80-11.25	15 NE of Inscription House T.P.		do.	7,030				None	N
	do.	2A-35	3.60-13.50	16 NNE of Shonto T.P.		Stripped plain	7,540				Collection gallery	Re
	do.	2A-66	4.9-6.9 A	22 N of Shonto T.P.		Head of canyon	6,400 E				None	N
	do.	2A-68	7.5-8.8 A	16 NNE of Inscription House T.P.		do.	7,200				do.	N
	do.	2A-69	7.7-9.5 A	15 NNE of Inscription House T.P.		do.	7,200				do.	N
	do.	2A-89	10.2-2.3 A	7 SE of Navajo Mtn. D.S.		Deep canyon	5,200				do.	N
	do.	2A-130	12.20-9.05	15 NNE of Inscription House T.P.		Hillside	6,720				Collection gallery	Re
	Combination spring	2A-36	3.2-12.8 A	16 NNE of Shonto T.P.		Head of canyon	7,200				None	N
	do.	2A-37	2.1-12.7 A	15 NNE of Shonto T.P.		do.	7,000				do.	N
	do.	2A-64	1.4-9.3 A	20 NNE of Shonto T.P.		Bed of wash	5,600				do.	N
	do.	2A-70	9.4-12.0 A	13 NNE of Inscription House T.P.		Head of canyon	6,500				do.	N
	do.	2A-71	10.2-10.8 A	14 NNE of Inscription House T.P.		do.	6,100				do.	N
	do.	2A-129	12.5-16.3 A	8 NNE of Inscription House T.P.		Deep canyon	5,800				do.	N
26	Drilled well	2A-93	2.25-3.80	5 S of Navajo Mtn. D.S.	7/35	Stripped plain	6,140	733	6	733	Perforated	W, Ta, Tr
	do.	2T-316	1.05-5.05	6 S of Navajo Mtn. D.S.	8/54	do.	6,320	858	6	385	Open hole	W, Ta, Tr
	Spring	2A-107	7.80-0.05	1 NE of Rainbow Lodge		Base of cliff	6,720				Collection well	Ta
	do.	2A-108	8.55-0.25	2 W of Rainbow Lodge		Shallow canyon	5,950				None	N
	do.	2A-113	11.5-7.5 A	8 SSW of Rainbow Lodge		Deep canyon	4,800				do.	N
	do.	2A-114	9.9-10.3 A	10 S of Rainbow Lodge		do.	4,700				do.	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 2—Continued									
		Navajo				20 R 5.5	9/11/53				S	Yes	Good	72	
		do.				1.5	9/11/53				S	Yes	Good	70	
		do.				20 R					S	No			
		do.				109	9/13/53				D, S	Yes	Good	64	
		Wingate (Lukachukai)				113	9/ 2/53				D, S	Yes	Good	60	
		Entrada									S	No			
		Navajo									S	No			
		Morrison (Salt Wash) and Entrada									S	No	Good		
0	745	Navajo	LL	657	1/20/54	1-2		14	25	1	D, S	Yes	Good	58	Bailed hole dry.
10	732 P	do.		640	6/ 5/56	1-2		10	75	1	D, S	No	Good	58	
		do.				.2 R < .1 E	7/21/54				S	No	Good		
		Navajo and Kayenta				1.5 R 1.5	7/28/54				D, S	Yes	Good	74	
		Navajo				.8 E	7/28/54				S	No	Good	78	
		do.				.2	6/ 4/53				S	Yes	Good	51	
		Wingate (Lukachukai)				2 E					S	No			
		do.				10 E					S, Irr	No			
		do.				10 E					S, Irr	No			
		Alluvium									S	No			
		Navajo				.5 R .2 E	7/21/54				S	Yes	Good	65	
		Navajo, Kayenta, and Wingate (Lukachukai)									S	No	Good		
		do.				30 E					S	No	Good		
		Alluvium				4 E					S	No			
		Navajo, Kayenta, and Wingate (Lukachukai)				10 E					S	No			
		do.				5 E					S	No			
		do.				10 E					S	No			
700	33 P	Wingate (Lukachukai)		623	2/17/53	1-2		3			D, S	Yes	Good	60	Navajo Sandstone dry.
650	130	do.	LL	759	8/19/54	1-2		7	10	½	D, S	Yes	Good		Show of Navajo Sandstone water at 280 feet.
		Navajo				5 R 5.5	9/ 3/53				D, S, Irr	Yes	Good	60	Rainbow Lodge Spring.
		Wingate (Lukachukai)				5 E	7/22/54				S	Yes	Good	62	
		Navajo				20 E					S	No			
		do.				20 R					S	No	Good		

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 2—Continued							
26 con.	Spring	2GS-26-1	13.45-9.30	10 SSW of Rainbow Lodge		Deep canyon	4,600				None	N
	do.	2GS-26-2	9.00-13.60	13 NW of Inscription House T.P.		Head of canyon	5,000				do.	N
	Combination spring	2A-109	13.4-1.2 A	6 W of Rainbow Lodge		Deep canyon	4,300				do.	N
	do.	2A-116	3.5-11.0 A	12 SSE of Navajo Mtn. D.S.		do.	5,000				do.	N
	do.	2A-117	1.3-13.7 A	10 N of Inscription House T.P.		do.	5,300				do.	N
	do.	2A-118	3.8-16.8 A	8 NNW of Inscription House T.P.		do.	5,200				do.	N
	do.	2A-201	5.5-6.1 A	6 SSE of Rainbow Lodge		Edge of mesa	6,000				do.	N
	Stream	2A-115	12.7-11.0 A	12 SSW of Rainbow Lodge		Small canyon					do.	N
	do.	2GS-26-3	4.75-15.10	10 NNW of Inscription House T.P.		Deep canyon					do.	N
27	Spring	2GS-27-1	3.50-4.30	10 SW of Rainbow Lodge		Small canyon	4,100				do.	N
	do.	2GS-27-2	11.30-3.05	17 WSW of Rainbow Lodge		do.	3,550				do.	N
28	None											
39	do.											
40	Drilled well	2K-300	11.10-13.70	6 SW of Shonto T.P.	6/50	Stripped plain	6,350	300	8	300	Perforated 260-300	W, Ta, Tr
	do.	2K-301	4.40-14.85	5 ESE of Shonto T.P.	6/50	Alluvial plain	6,440	500	8	328	Perforated 318-328	W, Ta, Tr
	do.	2K-302	6.90-1.10	10 NNE of Shonto T.P.	10/51	Small valley	6,960	855	10		Open hole	W, Ta, Tr
	do.	2K-318	4.40-4.80	9 N of Shonto T.P.	8/54	Stripped plain	6,980	447	8	21	do.	W, Ta, Tr
	do.	2K-320	4.40-11.25	4 E of Shonto T.P.	3/56	do.	6,730	725	6	725	Perforated 425-725	W, Ta, Tr
	do.	2K-321	8.50-5.75	6 N of Shonto T.P.	4/56	do.	6,770	533	8	21	Open hole	W, Ta, Tr
	do.	2K-324	4.30-8.20	5 NE of Shonto T.P.	4/56	do.	6,900	490	8		do.	W, Ta, Tr
	do.	2T-304	12.25-16.95	8 SW of Shonto T.P.	9/51	do.	6,040	600	8	7	do.	W, Tr
	Dug well	Shonto 1	8.10-10.90	Shonto T.P.		Small canyon	6,340	20	6	20	Concrete caisson	P, Ta
	Spring	2A-12	13.35-6.75	1 E of Inscription House T.P.		Base of mesa	6,640				Collection gallery	Tr
	do.	2A-40	3.5-2.0 A	9 NE of Shonto T.P.		Head of canyon	6,800				do.	Tr
	do.	2A-40A	1.80-4.60	9 NE of Shonto T.P.		do.	6,400				do.	P
	do.	2A-41	7.85-9.80	1 N of Shonto T.P.		Side of cliff	6,400				Masonry wall	Tr
	do.	2C-14	5.65-4.05	7 N of Shonto T.P.		Stripped plain	6,810				Collection gallery	Tr
	do.	2C-14A	6.95-4.30	6 N of Shonto T.P.		Small valley	6,780				do.	Tr
	do.	2K-456	12.8-12.0 A	4 WSW of Shonto T.P.		Head of canyon	6,200				None	N
	do.	Shonto 2	8.00-10.95	Shonto T.P.		Small canyon	6,340				do.	N
	Combination spring	2A-42	7.2-8.2 A	2 N of Shonto T.P.		Deep canyon	6,450				do.	N
	do.	2A-122	11.5-1.5 A	10 NNW of Shonto T.P.		Head of canyon	6,100				do.	N
	Stream	2A-43	8.8-13.2 A	2 S of Shonto T.P.		Deep canyon	6,170				do.	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 2—Continued															
		Navajo									S	No			
		do.									S	No			
		do.									S	No			
		Navajo, Kayenta, and Wingate (Lukachukai)									S	No			
		do.									S	No			
		do.									S	No			
		Navajo									S	No	Good		
											S	No			
											S	No			"Navajo Creek."
		Navajo									S	No			
		do.									S	No			
0	300 P	Navajo		175	6/ 4/53	3-4		24	9	6	D, S	Yes	Good	56	
30	470 P	do.	LL	284	12/10/52	2-3		20	21	6	D, S	Yes	Good	50	
0 700	555 155 P	Navajo Wingate (Lukachukai)	LL	250	2/17/53	2-3		34	40	½	D, S	Yes	Good	56	
0	447 P	Navajo		270	8/31/54	2-3		20	10	1	S	Yes	Good		
4	608	Navajo and Wingate (Lukachukai)		429	3/15/56	2-3		4	171	4	D, S	Yes	Good	50	
30	503 P	Navajo	DL	251	4/24/56	2-3		25	25	¾	D, S	No	Good	58	
0	490 P	do.		270	4/ 6/56	2-3		10	35	½	D, S	No	Good		
0	595	do.	LL	96	1/13/54	3-4		16	7	3	S	Yes	Good	57	
		Alluvium		6.8	10/11/49						D, S	Yes	Good	52	
		Navajo				.1 R <.1	8/ 7/54				S	No	Good		
		do.				.5 R					S	No			"Spruce Spring."
		do.				1.5 E	6/11/52				D, S	Yes	Good	64	Betatakin National Monument Spring.
		do.				1.5 R 1.5 E	8/ 6/54				D, S	Yes	Good	71	
		do.				1	8/ 7/54				D, S	Yes	Good	70	
		do.				<.1	5/16/55				D, S	No	Good	58	
		do.									S	No			
		do.				50	3/20/50				D, S	Yes	Good	54	Shonto D.S.
		Alluvium				20 E	6/11/56				S	No			
		Navajo									S	No			
											S	No			

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 2—Continued							
41	Drilled well	2A-13	0.20-7.50	1 SE of Inscription House T.P.	8/35	Small valley	6,650	620	6	620	Perforated	W, Tr
	do.	2K-303	8.25-12.05	9 SW of Inscription House T.P.	8/51	Plain	6,590	1,120	6	1,120	Perforated 1,060-1,120	W, Tr
	do.	2K-319	5.60-16.00	10 SSW of Inscription House T.P.	9/54	Stripped plain	6,100	626	8	28	Open hole	W, Tr
	do.	2K-323	5.35-10.20	6 SW of Inscription House T.P.	5/56	Edge of mesa	6,760	1,092	8	135	do.	W, Tr
	do.	2K-323A	6.70-9.65	6 WSW of Inscription House T.P.	5/56	do.	6,760	1,160	8			N
	do.	2T-317	2.80-11.00	5 SSW of Inscription House T.P.	/50	Small valley	6,340	950	6			
	Spring	2A-22	0.7-15.5 A	9 S of Inscription House T.P.		Small canyon	6,000				None	N
	do.	2A-26	2.50-5.95	2 WNW of Inscription House T.P.		Head of canyon	6,490				Masonry wall	Tr
	do.	2A-120	5.5-4.5 A	2 WNW of Inscription House Ruin		do.	6,400				None	N
	do.	2A-121	4.8-0.8 A	4 NNW of Inscription House Ruin		Deep canyon	5,150				do.	N
	do.	2K-451	2.0-11.3 A	6 SSE of Inscription House Ruin		Stripped plain	6,300				Collection gallery	Tr
	Combination spring	2A-124	3.20-5.15	1 N of Inscription House Ruin		Deep canyon	5,500				None	N
	do.	2A-125	3.3-5.8 A	1 S of Inscription House Ruin		do.	5,600				do.	N
	do.	2A-127	4.0-8.6 A	4 S of Inscription House Ruin		Head of canyon	5,700				do.	N
	do.	2K-453	8.0-6.2 A	5 WSW of Inscription House Ruin		Canyon	5,500				do.	N
	Stream	2GS-41-1	4.95-3.65	2 NW of Inscription House Ruin		Canyon bed					do.	N
56	Spring	2A-44	10.65-1.85	14 ESE of Shonto T.P.		Bed of wash	6,250				do.	N
	do.	2A-45	11.45-5.50	16 SE of Shonto T.P.		do.	6,100				do.	N
	do.	2A-47	12.75-6.45	16 SE of Shonto T.P.		do.	6,050				do.	N
57	do.	2A-4	12.60-5.50	13 SSW of Shonto T.P.		Base of cliff	6,360				Collection well	C, Tr
	do.	2A-7	11.65-9.50	16 SSW of Shonto T.P.		Small canyon	6,020				None	N
	do.	2A-8	11.00-10.45	17 SSW of Shonto T.P.		do.	5,900				do.	N
	do.	2A-10	10.00-3.70	10 SSW of Shonto T.P.		Base of cliff	6,400				Masonry wall	N
	do.	2A-11	8.10-2.15	8 S of Shonto T.P.		Hillside	6,500				Collection gallery	Tr
	do.	2A-50	5.60-5.70	12 SSE of Shonto T.P.		Small canyon	6,220				None	N
	do.	2A-52	7.10-7.85	14 S of Shonto T.P.		do.	6,020				do.	N
	do.	2A-54	8.15-8.70	15 S of Shonto T.P.		do.	6,175				do.	N
	do.	2A-55	9.55-11.00	17 S of Shonto T.P.		Bed of wash	5,750				do.	N
	do.	2A-56	9.45-14.15	20 S of Shonto T.P.		Deep canyon	5,280				do.	N
	do.	2A-58	4.95-10.50	17 SSE of Shonto T.P.		Bed of wash	5,770				do.	N
	do.	2A-59	2.70-9.50	17 SSE of Shonto T.P.		do.	5,880				do.	N
	do.	2A-60	1.75-8.30	16 SSE of Shonto T.P.		do.	5,950				do.	N
	do.	2A-61	0.75-7.55	16 SSE of Shonto T.P.		do.	5,980				do.	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 2—Continued															
0	620 P	Navajo		493	2/17/53	1-2		10			D, S	Yes	Good	62	
120	1,000 P	do.	LL	1,013	1/13/54	1-2		17	10	1	D, S	Yes	Good		
30	596 P	do.		385	8/30/54	2-3		12	10	¾	S	Yes	Good	60	
128	964 P	do.		997	5/15/56			6	15	1	D, S	No	Good	58	
178	982 P	do.		Dry								No			Abandoned.
80	870 P	do.	DL	509	2/ 2/54	1-2		70			Ind	Yes	Good		Drilled by Sinclair Oil Co.
		do.				50 R					S	No			
		do.				.5 R	2/27/40					Yes		62	Abandoned.
		do.									S	No			
		do.									S	No			
		do.									S	No			
		do.				700	7/27/54				S	Yes	Good	75	
		do.									S	No			
		do.									S	No			
		do.									S	No			Large flow.
						1,000	7/27/54				S	Yes	Good	74	
		Wepo									S	No			
		Alluvium									S	No			
		do.									S	No			
		Landslide and talus				1.5 E	4/28/55				D, S	Yes	Good	44	
		Wepo									S	No			
		do.									S	No			
		Landslide and talus				.2 E	4/28/55				S	Yes	Good	46	Indian masonry wall.
		do.				.1	4/28/55				S	Yes	Good	51	
		Wepo									S	No			Aerial reconnaissance.
		do.									S	No			Do.
		Toreva									S	No			Do.
		Alluvium									S	No			Do.
		Toreva				3 E	8/11/54				S	Yes	Fair	71	
		Alluvium									S	No			Aerial reconnaissance.
		do.									S	No			Do.
		do.									S	No			Do.
		do.									S	No			Do.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 2—Continued							
57 con.	Spring	2C-2	6.75-1.45	7 SSE of Shonto T.P.		Base of cliff	6,580				Masonry wall	Tr
58	Dug well	2A-3	1.0-3.0 A	11 SSW of Shonto T.P.	9/28	Bank of wash	5,950	15 R		15 R	Masonry cribbed	H, Tr
	Combination spring	2A-23	1.1-0.1 A	9 SW of Shonto T.P.		Small canyon	5,950				None	N
					DISTRICT 3							
29	Drilled well	Marble Canyon Lodge	7.35-12.50	800 feet W of Colorado River at Navajo Bridge	/54	Edge of cliff	3,560	1,205				
	Spring	3A-189	5.60-15.90	7 S of Lees Ferry	5/29	do.	4,700				Collection gallery	Tr
	do.	3A-189A	5.70-16.10	7 S of Lees Ferry	5/29	do.	4,400				do.	Tr, Ta
	do.	Lees Ferry	4.35-9.40	Lees Ferry		Base of cliff	3,130				Collection well	C
44	Dug well	3A-187	8.90-9.95	14 S of Navajo Bridge	4/32	Bank of wash	5,140	11.5	5	11.5	Masonry cribbed	W, Tr, Ta
	Spring	3A-188	8.15-6.25	10 S of Navajo Bridge	3/37	Base of cliff	4,950				Collection gallery	Tr, Re
45	None											
59	Drilled well	3K-313	7.45-11.50	13 NNE of Tuba City	9/51	Stripped plain	5,870	645	6	349	Open hole	W, Ta, Tr
	do.	3K-324	6.20-15.80	12 NE of Tuba City	3/55	Sand dune	5,580	405	8	21	do.	W, Ta, Tr
60	do.	3K-316	1.50-8.75	11 ENE of Gap T.P.	1/52	Stripped plain	5,740	480	8	21	do.	N
	do.	3K-317	9.55-12.45	2 ENE of Gap T.P.	10/52	do.	5,440	467	10	4	do.	W, Ta, Tr
	do.	Gap T.P. 1	11.85-13.40	Gap T.P.	2/55	Hillside	5,280	100	4	100	Perforated 80-100	P
	Dug well	3A-184	11.75-13.20	0.25 E of Gap T.P.	11/31	Bank of wash	5,260	23	6 x 6	23	Masonry cribbed	Ta
	do.	3A-184A	11.70-13.25	0.25 E of Gap T.P.	11/31	do.	5,260	19.5	6 x 6	19.5	do.	W, P, Ta, Tr
	do.	3A-193	5.15-11.15	6 ENE of Gap T.P.	12/28	Stripped plain	5,480	12		12	do.	H, Tr
	do.	3A-194	4.25-11.75	8 ENE of Gap T.P.	12/28	do.	5,450	5	3 x 6	5	do.	H, Tr
	do.	3A-209	10.90-14.35	4 SE of Gap T.P.	2/37	Bank of wash	5,170	11	5	12	do.	H, Tr
61	do.	3A-183	0.00-9.95	4 NW of Gap T.P.	2/32	do.	5,640	10	5		do.	H, Tr
	Spring	3A-182	0.45-8.50	6 NW of Gap T.P.	3/27	Bed of wash	5,720				Collection gallery	Tr
62	None											
76	Drilled well	3K-330	13.00-11.00	25 NW of Oraibi	5/55	Sand dune	5,575	458	6	332	Open hole	W, Tr
	do.	3M-156	6.75-9.40	20 NW of Oraibi	2/35	Plain	5,580	529	8	529	Perforated	W, Ta, Tr
	Dug well	3M-160	5.65-15.20	17 NW of Oraibi		Bed of wash	5,710	5	4	5	Rock cribbed	Tr
	Spring	3M-159	6.70-13.95	18 NW of Oraibi		Bank of wash	5,650				Collection gallery	C, Tr
	do.	3GS-76-1	11.30-9.25	16 E of Tuba City		Deep canyon	5,010				None	N
77	Drilled well	3K-312	3.15-16.25	13 SE of Tuba City	5/50	Edge of mesa	5,850	857	8 6	767 740-857	Perforated 770-850	W, Ta, Tr
	do.	3K-318-1	13.65-7.55	Tuba City	11/51	Stripped plain	4,960	230	6	230	Perforated	Ta
	do.	3K-318-2	13.95-7.40	1 W of Tuba City	1/52	do.	5,020	300	6	300	do.	Ta
	do.	3K-323	1.65-3.45	12 NE of Tuba City	9/54	Sand dune	5,260	407	8	33	Open hole	W, Ta, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 2—Continued									
		Landslide and talus				3 E	4/28/55				D, S	Yes	Good	50	"Peach Tree Spring."
		Alluvium		6 R	8/25/37						D	No			
		Navajo									S	No			
						DISTRICT 3									
		Coconino		Dry								No			Abandoned.
		Chinle (Owl Rock)				1	4/30/52				D, S	No	Fair		"Navajo Springs."
		Chinle (Shinarump)				7	4/30/52				D, S	Yes	Good		Do.
		Talus				< .1	1/15/52				D	Yes	Good		USGS residence.
		Alluvium		10.8	6/23/54	2-3	6/23/54	1.5 R			D, S	Yes	Fair	72	"Tanner's well."
		Moenkopi				3	4/30/52				S	Yes	Bad		"Bitter Seeps."
390	255 P	Tongue of Navajo in Kayenta	LL	250	10/19/51	2-3		8	48	1	D, S	Yes	Good	60	
10	395 P	Navajo		207	3/ 3/55	2-3		23	18	¾	D, S	Yes	Good	60	
0	340	do.	LL	262	1/14/54			10	170	1	Un	Yes	Good	58	Abandoned, insufficient yield.
0	467 P	do.	LL	79	10/ 1/52	3-4		35	5	1½	D, S	Yes	Good	60	
0	100 P	Chinle (Shinarump)		15	2/10/55						D	Yes	Fair		Gap T. P.
		Alluvium		10.2	6/23/54			6 R			Un	Yes	Good	64	Abandoned.
		do.		9.9	6/23/54	3-4	6/23/54	6 R			D, S	Yes	Good	64	Two wells connected together; composite water sample.
		Navajo		9 R	12/ /28			.5 R			D, S	No			Not visited, reported by district supervisor.
		do.		1.5	7/15/54			.5 R			D, S	Yes	Good	68	
		Alluvium		8.5	5/ 2/52						D, S	Yes	Good	68	
		do.		10.1	6/23/54			1.2 R			S	Yes	Good	69	
		Chinle (Shinarump)				2 R Dry	3/ /27 6/23/54				Un	No			Abandoned.
200	258 P	Navajo		409	6/22/55	2-3		10	None	1	D, S	Yes	Good		
2 380	378 149 P	Entrada and Carmel undiff. Navajo	DL	316	11/ 3/53	2-3		30		1	D, S	Yes	Good	64	
		Alluvium		4.5	7/ 8/54						S	No	Fair		Temporary.
		Entrada and Carmel undiff.				1.8	7/ 8/54				D, S	Yes	Good	66	In Bat Canyon.
		Navajo				15 E	2/16/55				S	No			Aerial reconnaissance.
460	397 P	do.	LL	745	12/11/52	1-2		13	None	6	D, S	Yes	Good	56	"Coal Mine well."
40	190 P	Tongue of Navajo in Kayenta		Flow	8/22/52	44	8/22/52				PS	Yes	Good	61	Tuba City water supply.
10	290 P	do.	LL	Flow	1/22/52	18	1/22/52				PS	Yes	Good	60	Do.
30	370	Navajo	LL	120	9/14/54	3-4		18	85	⅔	D, S	Yes	Good	61	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA				
								Depth of well (feet)	Casing or cribbing		Finish	Improvements
									Diameter (drilled well in inches, dug well in feet)	Depth (feet)		
						DISTRICT 3—Continued						
77 con.	Drilled well	3K-325	12.20-14.65	7 S of Tuba City	6/55	Sand dune	5,200	450	8	75	Open hole	W, Ta, Tr
	do.	3K-329	5.55-13.00	10 SE of Tuba City	7/55	Edge of mesa	5,870	845	8	282	do.	W, Tr
	do.	3T-322-1	13.65-7.90	Tuba City	9/53	Stripped plain	4,940	250	8			Ta
	do.	3T-322-2	13.70-7.90	Tuba City	9/53	do.	4,940	200	6			Ta
	do.	3T-333	13.85-8.00	1 SW of Tuba City	12/55	do.	4,940	229	10 8	16 63	Open hole	W, Ta, Tr
	do.	3GS-77-5	12.85-9.05	2 S of Tuba City	9/53	Hillside	4,780	200	6		do.	P, Ta
	do.	Rare Metals Corp. 1	7.65-6.20	6 ENE of Tuba City	2/55	Stripped plain	5,110	707	13 10	58 707	Perforated 106-707	P
	do.	Rare Metals Corp. 2	7.55-6.00	6 ENE of Tuba City	9/55	do.	5,120	705	13 10	55 705	Perforated 100-705	P
	do.	Rare Metals Corp. 3	7.35-5.55	6 ENE of Tuba City	11/55	do.	5,110	900	12 10	10 700	Perforated 117-700	P
	do.	Rare Metals Corp. 4	7.95-5.70	6 ENE of Tuba City	1/56	do.	5,140	730	12-10	730	Perforated	P
	do.	Kerley T.P.	13.15-8.65	1 SE of Tuba City	6/56	do.	4,870	270	10			
	Dug well	3A-8	11.00-1.25	8 NNE of Tuba City		do.	5,380	3.5	4 x 6	3.5		N
	do.	3A-88	6.00-4.05	8 NE of Tuba City	8/29	Lakebed	5,090	8.5	2	8.5	Masonry cribbed	Tr
	Spring	3A-5A	11.15-4.20	5 NNE of Tuba City		Shallow canyon	5,050				None	N
	do.	3A-15	9.65-10.70	5 SE of Tuba City	2/28	do.	4,820				Collection gallery	Tr
	do.	3A-17	13.90-16.95	9 S of Tuba City		Head of canyon	4,800				Collection well	Tr
	do.	3A-18	13.40-7.05	1 N of Tuba City		Stripped plain	4,970				Collection gallery	Ta, Tr, Re
	do.	3A-89	5.00-3.25	10 NE of Tuba City	/25	do.	5,130				do.	Ta, Tr
	do.	3A-144	6.40-7.50	8 E of Tuba City	8/28	Base of cliff	4,760				do.	C, Tr
	do.	3A-145	0.80-9.80	13 ESE of Tuba City		Bed of wash	4,950				None	N
	do.	3B-265	12.45-9.50	Moenkopi	10/27	Hillside	4,690				Masonry wall	C, Tr
	do.	3B-266	12.50-9.40	Moenkopi	11/27	do.	4,690				Collection well	P, C
	do.	3B-270	13.80-9.40	2 S of Tuba City	12/28	Side of cliff	4,720				Collection gallery	C
	do.	3GS-77-1	13.35-6.70	2 N of Tuba City		Stripped plain	5,070				Collection well	C
	do.	3GS-77-2	13.90-7.10	1 NNW of Tuba City		do.	5,050				Collection gallery	C, Ta
	do.	3GS-77-3	13.90-7.15	1 NNW of Tuba City		do.	5,040				do.	C
	do.	3GS-77-4	12.60-6.00	2 NNE of Tuba City		do.	5,090				None	N
	do.	3GS-77-6	12.45-9.45	Moenkopi		Hillside	4,690				Collection gallery	P, C, Ta
	Combination spring	3A-5	11.40-5.00	4 NNE of Tuba City		Shallow canyon	5,000				None	Re
	Stream	3A-13	11.45-9.80	3 SE of Tuba City		Bed of wash					do.	G
78	Drilled well	3T-222	0.55-8.10	1 W of Tuba City	4/54	Stripped plain	4,950	271	8	62	Open hole	Ta, Tr
	Dug well	3A-47	9.00-14.85	11 SW of Tuba City		Bed of wash	4,440		5		Rock cribbed	N
	do.	3A-48	10.85-14.60	13 SW of Tuba City		do.	4,530	6	5	6	Concrete caisson	H, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
				DISTRICT 3—Continued											
30	418	Navajo		208	5/31/55	2-3		19	125	1	D, S	Yes	Good	57	
430	415 P	do.		745	7/20/55	1-2		11	None	10	D, S	Yes	Good	62	
		Tongue of Navajo in Kayenta		Flow	8/10/54	12	8/10/54				D	Yes	Good	60	Babbitt Brothers T. P.
		do.		Flow	8/10/54	6	8/10/54				D	Yes	Good	60	
4 182	176 13	Navajo Tongue of Navajo in Kayenta		23	11/ 9/55			59	42	1½	D, S	No	Good		
		Tongue of Navajo in Kayenta		40	10/28/53	45	10/28/53				D	Yes	Good	63	Mormon Mission.
30 645	610 55	Navajo Tongue of Navajo in Kayenta		59	2/21/55			100	365	4	Ind, D	Yes	Good	61	Rare Metals Corp.
55 600	525 70	Navajo Tongue of Navajo in Kayenta		57	9/24/55			200	166	24	Ind, D	Yes	Good	60	Do.
10 510	490 140	Navajo Tongue of Navajo in Kayenta		40	11/19/55			100	360	12½	Ind, D	No	Good		Do.
20	675	Navajo	LL	54	1/ 6/56			150	204	17	Ind, D	No	Good		Do.
		Tongue of Navajo in Kayenta		10	6/ 5/56			6				No	Good		
		Navajo		3 R Dry	2/18/37 6/24/54						Un	No			Temporary.
		Navajo and dune		3 R 5	12/ 8/36 6/24/54			2 R			D, S	No	Good	67	
		Navajo				50	2/27/48				S	Yes	Good	60	"Eagle Nest Spring"; important spring in Pasture Canyon.
		do.				2 R 2	12/10/36 7/ 7/54				S	Yes	Good	67	
		Tongue of Navajo in Kayenta				.8 R 3 E	12/22/36 7/ 7/54				S	Yes	Good	65	
		Navajo				50	2/26/48				PS, Ind	Yes	Good	61	"Charlie Day Spring"; Tuba City public supply.
		do.				.5 R .2 E	12/ 8/36 6/24/54				D, S	Yes	Good	70	
		do.				.5 R .8 E	2/20/37 7/17/54				D, S, Irr	Yes	Good	72	
		do.				100-450 R	2/16/55				S	No			"Coal Canyon Wash"; aerial reconnaissance.
		Tongue of Navajo in Kayenta				3 R 10	11/ /27 6/25/54				S, Irr	No	Good	63	
		do.				3 R Dry	10/ /27 6/25/54				Un	No			
		do.				1.5 R 2 E	12/ /28 8/10/54				D, S, Irr	Yes	Good	65	Kerley-Yazzie T.P. Spring.
		Navajo				.1 E	6/22/54				D	Yes	Good	65	"Sand Spring."
		do.				66	7/26/54				PS, Ind	Yes	Good	60	Gravity flow to Tuba City storage tank; "Big Dodson."
		do.				19	7/26/54				PS	Yes	Good	60	"Little Dodson."
		do.				2 E	3/ 9/48				Irr	No	Good		"Navajo Spring."
		Tongue of Navajo in Kayenta				40	5/16/52				D, PS	Yes	Good	63	"Moenkopi School Spring."
		Navajo				174	8/10/54				S, Irr	Yes	Good	64	"Pasture Canyon Springs."
						900	7/26/54				D, S, Irr	No	Fair	74	Surface-water gaging site on Moenkopi Wash.
0 60	40 170	Navajo Tongue of Navajo in Kayenta		Flow	4/10/55	8	4/10/55	30	37	½	D, S	Yes	Good	62	
		Alluvium		Dry	6/25/54							No			Abandoned.
		do.		2	6/25/54						D, S	Yes	Good	71	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 3—Continued							
78 con.	Dug well	3A-201	8.20-2.00	6 SE of Gap T. P.		Bed of wash	4,920	10	4	10	Masonry cribbed	H, Tr
	Spring	3A-42	1.75-9.05	2 WSW of Tuba City		Side of cliff	4,700				Collection gallery	Tr
	do.	3A-43	3.55-7.70	4 W of Tuba City	4/32	do.	4,830				do.	Tr
	do.	3A-43A	3.60-7.60	4 W of Tuba City		do.	4,840				do.	N
	do.	3A-44	4.05-7.05	4 WNW of Tuba City		do.	4,940				do.	Tr
	do.	3A-44A	3.85-7.40	4 WNW of Tuba City		do.	4,920				do.	Re
	do.	3A-45	4.70-7.55	5 W of Tuba City		do.	4,710				None	N
	do.	3A-46	4.95-6.85	6 WNW of Tuba City		do.	4,920				Collection gallery	Wc, Re
	do.	3A-202	7.65-3.70	Arizona Highway Dept. Camp		do.	5,200				do.	C, Ta
	do.	3A-203	7.65-3.95	9 SE of Gap T. P.		do.	5,150				do.	Tr
	do.	3A-204	7.30-5.00	8 WNW of Tuba City		do.	5,050				None	N
	do.	3A-206	7.05-5.05	8 WNW of Tuba City		do.	5,170				do.	N
	do.	3B-267	0.80-9.20	2 SW of Tuba City	9/29	do.	4,700				Collection gallery	Tr
	do.	3GS-78-1	0.20-7.60	1 NW of Tuba City		Stripped plain	5,090				None	N
79	Combination spring	Blue Springs	10.95-9.30	22 NW of Cameron		Deep canyon	3,180					
80	None											
96	Drilled well	3A-153	13.15-14.55	28 SE of Tuba City	4/34	Stripped plain	5,420	549	8			W, Ta, Tr
	do.	3K-311	5.20-1.00	14 NW of Oraibi	11/34	Plain	5,950	745	8	645	Perforated 380-395 605-645	W, Ta, Tr
	do.	3K-320	10.65-10.95	16 SW of Oraibi	9/53	Sand dune	5,590	502	8 6	10 124	Open hole	W, Ta, Tr
	do.	3K-332	9.60-4.35	18 WNW of Oraibi	5/55	do.	5,980	866	6	866	Perforated 744-866	W, Tr
	do.	3M-175	13.35-8.25	23 SE of Tuba City	3/35	do.	5,780	752	6	752	Perforated	W, Ta, Tr
	do.	3M-176	13.50-3.15	18 SE of Tuba City	5/36 1/45	do.	6,050	1,016	6 5	688 666-927	Open hole	W, Ta, Tr
	Dug well	3M-170	8.30-4.45	24 SE of Tuba City		Hillside	6,060	8.5	8	8.5	Rock cribbed	Tr
	do.	3M-172	9.00-10.20	26 SE of Tuba City		Small canyon	5,480	6.5	5	6.5	Masonry cribbed	Tr
	do.	3M-180	8.70-2.65	22 SE of Tuba City		Edge of cliff	5,850	13.5	5	13.5	do.	Tr
97	Drilled well	3A-27	8.45-0.50	5 N of Goldtooth	4/35	Sand dune	5,550	564	6	564	Perforated	W, Ta, Tr
	do.	3A-28	8.40-6.00	1 SSW of Goldtooth	4/35	do.	5,400	358	6	358	do.	W, Ta, Tr
	do.	3A-149	2.95-2.55	4 NE of Goldtooth	5/35	do.	5,820	810	6	752	Open hole	W, Ta, Tr
	do.	3A-151	5.30-10.00	6 SE of Goldtooth	4/36	do.	5,420	336	6	243	do.	W, Ta, Tr
	do.	3K-326	12.00-0.50	4 NW of Goldtooth	5/55	do.	5,360	348	8 6	49 94	do.	W, Ta, Tr
	do.	3K-327	1.90-6.30	8 ESE of Goldtooth	6/55	do.	5,960	800	8	284	do.	W, Ta, Tr
	do.	3K-328	1.20-10.90	10 SE of Goldtooth	5/55	do.	5,550	335	8	42	do.	W, Ta, Tr
	Dug well	3A-26	13.55-2.35	6 NW of Goldtooth		Edge of mesa	5,220	7	6 x 12	7	Rock cribbed	H, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 3—Continued															
		Alluvium		8.1	6/23/54						D, S	Yes	Good	70	
		Tongue of Navajo in Kayenta				.9	6/25/54				D, S	No	Good		
		do.				.5 R Dry	2/ 2/37 3/ 4/52				S	No			Temporary.
		do.				.8 E	4/ 4/52				S	Yes	Good	66	
		do.				5.5	4/ 4/52				D, S, Irr	Yes	Good	63	
		do.				38	8/10/54				S, Irr	Yes	Good	63	"Kinthlockai Spring."
		do.				5 E	4/ 5/52				Un	Yes	Good	68	
		do.				118	8/ 9/54				D, S, Irr	Yes	Good	64	"Moenave Spring."
		Moenave				5-10	8/ 9/54				D, S	Yes	Good	63	"Hidden Spring"; three-quarters of a mile of pipeline to camp.
		Chinle (Owl Rock)				3-4 6	2/ 2/37 6/24/54				D, S	Yes	Good	64	"Government Spring."
		Tongue of Navajo in Kayenta				35	4/ 5/52				D, S	Yes	Good	65	"Willow Springs."
		Navajo				10 E	7/16/54				D, S, Irr	Yes	Good	62	"Jack Homer Spring."
		Tongue of Navajo in Kayenta				1.2 R 3	9/ /29 6/25/54				D, S, Irr	Yes	Good	65	Half a mile of pipeline.
		Navajo				5	2/25/48				S	Yes	Good	40	"West Spring."
		Redwall				90,000	6/21/51				Un	Yes	Bad	70	Blue color; main ground-water discharge for Black Mesa basin.
15	544 P	Navajo and tongue of Navajo in Kayenta		199	11/ 3/53	3-4		10	49		D, S	Yes	Good	61	
255 615	360 130 P	Entrada and Carmel undiff. Navajo	DL	463	11/ 3/53	2-3		7	75	8	D, S	Yes	Fair	68	
130	360	Navajo	LL	335	10/29/53	2-3		8	4	2	D, S	Yes	Good	62	
530	336 P	do.	LL	680	5/ 5/55	1-2		7	None	2	D, S	Yes	Good	63	
450	300	do.		507	11/ 3/53	1-2		25			D, S	Yes	Good	61	
676	340 P	do.		832 R	1/ 1/45	1-2		5	91	18	D, S	Yes	Good		Deepened in January 1945 from 853 to 1,016 feet.
		Toreva		8.0	7/ 7/51			.5 R			S	Yes	Good		
		Alluvium		6.2	7/ 8/54			1 R			D, S	Yes	Good		
		Dakota		12.9	7/ 7/54			1 R			Un	No	Fair		
15	549 P	Navajo		487	10/29/53	2-3		10	None		D, S	Yes	Good	62	
60	295	do.		230	10/29/53	2-3		20	None		D, S	Yes	Good	61	
390	420 P	do.		618	10/29/53	1-2		10		24	D, S	Yes	Good	61	
26	310 P	do.	DL	218	11/ 3/53	2-3		7	30	12	D, S	Yes	Good	61	
45	303 P	do.	LL	269	5/25/55	2-3		15	20	1	D, S	Yes	Good	60	
130	670 P	do.		735	6/ 2/55	1-2		12	25	½	D, S	No	Good	62	
30	305 P	do.		263	5/15/55	2-3		22	None	½	D, S	Yes	Good	62	
		do.		4.7	7/ 7/54						D, S	No	Good	68	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 3—Continued							
97 con.	Spring	3A-23	13.80-0.70	8 NW of Goldtooth		Edge of mesa	5,100				Collection gallery	Tr
	do.	3A-25	13.65-1.90	6 NW of Goldtooth		do.	5,060				do.	Tr
	do.	3A-26A	13.65-2.65	6 NW of Goldtooth		do.	5,190				do.	Tr
	do.	3A-30	12.35-15.45	13 SE of Cameron		Bank of wash	4,370				None	Tr
	do.	3GS-97-1	12.35-5.30	5 WNW of Goldtooth		Edge of mesa	5,190				do.	Tr
98	Drilled well	3K-319	11.35-10.40	4 SW of Cameron	8/53	Broad valley	4,470	432	8	7	Open hole	N
	do.	3K-331	8.70-15.90	8 S of Cameron	4/55	Stripped plain	4,410	828	6 5	741 630-764	do.	W, Ta, Tr
	do.	Cameron 1	9.05-8.65	0.25 E of Cameron		Hillside	4,230	370			do.	N
	do.	Cameron 2	9.25-8.55	Cameron	3/51	Edge of cliff	4,230	1,012	10	280	do.	P, Ta
	do.	Cameron 3	9.2-8.5 A	Cameron		do.	4,230 E	164				N
	do.	Cameron 4	9.2-8.5 A	Cameron		do.	4,230 E	170				N
	do.	Cameron 5	9.2-8.5 A	Cameron		do.	4,230 E	170				N
	do.	Cameron 6	9.30-8.55	Cameron	/56	do.	4,230	600	4			
	do.	Gray Mtn. T. P.	13.00-17.00	10 SSW of Cameron	9/55	Stripped plain	5,030	1,408	8			P, Ta
	do.	Rare Metals test hole	6.80-9.45	2 ESE of Cameron	2/55	Broad valley	4,160	40	4			N
	Sump	Rare Metals sump	4.3-13.0 A	7 SE of Cameron		River bed	4,150 E	75				
	Dug well	3A-60	7.95-14.35	6 SSE of Cameron		Bed of wash	4,370	4.5	4	4.5	Masonry cribbed	H, Tr
	do.	3A-61	10.20-15.00	6 S of Cameron	2/42	do.	4,440	9	$3\frac{1}{2}$ x 5	9	do.	H, Tr
	Spring	3A-39	4.40-1.55	8 NNE of Cameron		Head of canyon	4,390				None	N
	do.	3A-58	10.90-9.75	2 SW of Cameron	11/30	Small canyon	4,340				Collection gallery	P, Ta, Tr
99	None											
115	Drilled well	3A-154	13.0-1.0 A	16 SE of Goldtooth	6/36	Stripped plain	5,430 E	1,010				N
116	Dug well	3A-155	5.90-4.25	22 SE of Cameron		Bed of wash	4,570	7	$2\frac{1}{2}$ x $2\frac{1}{2}$	7	Masonry cribbed	H, Tr
	Spring	3A-32	9.65-3.55	18 SE of Cameron		Head of canyon	4,370				Collection gallery	Tr
	do.	3A-33	9.90-4.25	18 SE of Cameron		Bed of wash	4,400				do.	Tr
117	Drilled well	3K-310	2.85-10.80	2 N of Black Falls	8/40	Broad valley	4,340	193	8 6	108	Perforated	N
	Spring	3A-35	2.00-4.80	8 N of Black Falls		Narrow valley	4,520				Collection gallery	C, Tr
	do.	3GS-117-1	3.00-5.85	7 N of Black Falls		Bed of wash	4,500				None	N
118	Drilled well	3T-314	6.70-2.85	16 SW of Cameron	11/51	Broad valley	5,500	300				N
	do.	3T-314A	6.45-3.45	16 SW of Cameron	12/51	do.	5,500	133				N
					DISTRICT 4							
54	Dug well	4M-52	8.95-14.90	9 SSW of Rough Rock T. P.	7/29	Bank of wash	6,950	9.5	8	9.5	Rock cribbed	Tr
	Spring	4K-348	9.50-15.80	10 SSW of Rough Rock T. P.		Canyon	6,880				None	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 3—Continued									
		Navajo				.2	7/ 7/54				S	No	Good	73	
		do.				.5 R .2	12/22/36 7/ 7/54				S	No	Good	66	
		do.				.2	7/ 7/54				S	Yes	Good	70	
		Chinle (Owl Rock)				.2 R 1 E	12/23/36 7/14/54				S	Yes	Bad	65	
		Navajo				1 E	7/ 7/54				S	No	Good		
		Moenkopi		Dry								No			Abandoned.
520	308 P	Kaibab	DL	641	3/21/55	1-2		14	None	2	S	Yes	Bad	61	
		Moenkopi		102	8/24/54	5	8/19/49	4		4	Un	Yes	Good	66	Abandoned, insufficient yield.
435	577 P	Kaibab, Toroweap, and Coconino		600	3/ /51			17			Un	Yes	Bad		Abandoned, poor quality.
		Moenkopi		120 R							Un	No			Abandoned.
93	77 P	do.		120 R							Un	No			Do.
88	82 P	do.		120 R							Un	No			Do.
		Moenkopi and Kaibab										No			Injection well.
		Coconino		1,250	9/30/55			10			D, PS	No			
0	40 P	Chinle (Shinarump)		14	2/17/55						Un	Yes	Fair		Uranium test hole.
		do.		13 R		8 R						No			Sump 15 feet deep; drilled hole 60 feet below bottom of sump.
		Alluvium		Dry	7/14/54						Un	No			Abandoned.
		do.		3	7/14/54			15 R			D, S	Yes	Good	68	
		Chinle (Owl Rock)				.8 R .5 E	12/23/36 7/14/54				S	Yes	Good	77	
		Volcanic				10-15 15-20	2/ 8/37 5/ 1/52				D, S	Yes	Good	64	Water supply for Cameron; "Tappan Spring."
0	162	Navajo	DL					.5			Un	No			Abandoned, insufficient yield.
		Chinle (Owl Rock)		4.7	7/ 9/54						D, S	Yes	Good	72	"Burr Williams well."
		do.				.5 R .1 E	12/23/36 7/ 9/54				S	No	Good	76	"Burr Williams Springs."
		do.				3 R .5	12/23/36 7/ 9/54				S	No	Good	74	"Burr Williams Springs."
5	188 P	Moenkopi	DL	35	7/13/54			12			Un	No	Bad		Abandoned, poor quality.
		Terrace				.5 R < .1	12/22/36 7/13/54				D, S	Yes	Good	72	
		do.				1 E	2/ 3/54				S	Yes	Good	44	"Lee Spring."
0	300 P	Alluvium and volcanic	LL	Dry								No			Abandoned.
0	133 P	do.		Dry								No			Do.
						DISTRICT 4									
		Alluvium		6.8	10/20/54	0.8 R	7/ /29				S	No	Bad	56	
		Toreva				.1 E	10/20/54				D, S	No	Fair	55	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
						DISTRICT 4—Continued						
54 con.	Spring	4M-13	10.05-7.45	4 W of Rough Rock T.P.		Bank of wash	7,260				None	N
	do.	4M-50	10.10-14.35	9 SW of Rough Rock T.P.		Bed of wash	6,970				Collection gallery	Tr
55	Drilled well	4K-382	3.40-10.85	12 WSW of Rough Rock T.P.	6/53	Small valley	6,750	191	7	191	Perforated 70-191	W, Ta, Tr
	do.	4K-389	10.75-2.50	8 WSW of Chilchinbito T.P.	7/56	Bank of wash	6,950	417	8 6	180 170-417	Perforated 370-403	W
	Dug well	4M-33	12.10-10.00	17 N of Pinon		Small valley	7,200	20 R		20 R	Rock cribbed	H, Tr, A
	do.	4M-34	12.60-8.60	19 N of Pinon		Bank of wash	7,240	15	6 x 6	15	do.	Tr
	Spring	4M-9	4.65-11.05	13 WSW of Rough Rock T.P.		Bed of wash	6,660				None	N
	do.	4M-23	11.65-11.25	16 N of Pinon		Hillside	7,030				Collection gallery	C, Tr
56	Drilled well	4K-380	5.40-9.20	19 NNW of Pinon	3/52	do.	6,780	950	8 6	525 525-950	Perforated	W
	do.	Mission well	7.35-15.15	15 NW of Pinon	9/51	Broad valley	6,450	350				P
	Dug well	4M-27	4.80-16.15	13 NNW of Pinon		Narrow valley	6,760	8	6 x 6	8	Masonry cribbed	Tr
	do.	4M-28	7.50-14.85	15 NW of Pinon		Bank of wash	6,430	19		19	do.	Tr, A
	do.	4M-58	11.00-14.25	18 NW of Pinon		Small valley	6,700	9	6	9	do.	Tr, A
	do.	4M-190	7.5-6.6 A	23 NNW of Pinon		Bank of wash	6,280	15 R		15 R	Rock cribbed	H, Tr
	Spring	4M-22	0.10-13.75	14 N of Pinon		Bed of wash	5,750				None	N
	do.	4M-26	4.75-13.80	15 NNW of Pinon		do.	6,560				do.	N
	do.	4M-28A	7.25-14.75	15 NW of Pinon		do.	6,430				do.	N
	do.	4M-31	3.10-8.70	19 NNW of Pinon		do.	6,700				do.	N
	do.	4M-190A	7.65-6.60	23 NNW of Pinon		do.	6,280				do.	N
	do.	4M-191	7.75-4.60	23 NNW of Pinon		do.	6,320				Collection gallery	Tr
	do.	4M-207	9.75-13.25	18 NW of Pinon		do.	6,720				None	N
57	Drilled well	4K-387	3.70-14.15	23 NW of Pinon	1/55	Stripped plain	6,470	945	6	945	Perforated 854-914	W, Ta, Tr
	Dug well	4K-349	1.60-15.20	21 NW of Pinon		Hillside	6,580	7.5	10	7.5		Tr
	do.	4M-61	5.30-12.20	25 NW of Pinon		Small canyon	5,960	13	8	13	Masonry cribbed	Tr
	Spring	4M-60	2.90-12.35	24 NW of Pinon		Head of canyon	6,260				Collection gallery	C, Tr
72	Drilled well	4K-388	10.35-5.35	4 NW of Black Mtn. T.P.	9/54	Broad valley	6,500	458	6	458	Perforated 250-260 400-458	W, Ta, Tr
	do.	4R-21	12.45-7.70	5 W of Black Mtn. T.P.	6/35	do.	6,430	385	6	309	Open hole	W, Ta, Tr
	do.	4T-386	7.80-1.70	6 N of Black Mtn. T.P.	9/54	do.	6,650	902	10 8 5	130 564 544-902	Perforated 802-902	P, Ta
	Dug well	4K-324A	12.35-14.85	15 ESE of Pinon		Hillside	6,710	3.5	2 x 4	3.5	Log cribbed	N
	do.	4M-195	6.60-1.30	6 N of Black Mtn. T.P.		Head of canyon	6,820	3	4 x 6	3	do.	Tr
	do.	4R-18	9.75-3.70	4 WNW of Black Mtn. T.P.	5/29	Bank of wash	6,560	9	6	9	Masonry cribbed	Tr
	do.	4R-19	6.35-3.15	4 N of Black Mtn. T.P.		Hillside	6,810	7	4	7	Rock cribbed	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 4—Continued															
		Wepo				Damp	10/ 7/54				S	No			Temporary.
		Toreva				.4 E	10/20/54				D, S	No	Fair	46	
70	121 P	do.	LL	36	6/26/53	2-3		27	23	1	D, S	Yes	Good		
20	397 P	Wepo	DL	356	7/21/56	2-3		6		1	D, S	Yes	Fair		
		do.		15	10/26/54						D, S	No			
		Alluvium		10.7	10/26/54						D, S	No			
		Toreva				6 E	10/ 7/54				S	No	Fair		450-foot rock dam below spring.
		Wepo				Dry R Dry	10/26/54				D, S	No			Temporary.
0 650	650 300 P	Wepo Toreva	LL	520	2/27/52	1-2		14	31	1½	D, S	Yes	Good	61	
0	350 P	Wepo	LL								D, S	No			
		Alluvium		3.9	10/27/54						D, S	Yes	Good		
		do.		13.5	10/27/54						D, S	Yes	Good		
		Wepo		7.1	10/27/54						D, S	No		56	
		Alluvium		7 R								No			
		Wepo									D, S	No			
		do.									D, S	No			Temporary.
		do.				3 E	10/ 8/54				D, S	No	Fair		
		Alluvium				Damp	10/26/54				D, S	No			In Dinnebito Wash; temporary.
		Wepo				2 E	10/ 8/54				D, S	No	Fair		
		do.				2 E	10/ 8/54				D, S	No	Fair		
		do.				Dry	10/27/54				S	No			Temporary.
860 910	50 35 P	Dakota Cow Springs	DL	450	1/ 4/55	2-3		6	495	2	D, S	Yes	Fair		Show of Mancos Shale water, bailed hole dry.
		Landslide and talus		6	10/28/54						D, S	Yes	Good	55	
		Toreva		10.2	10/28/54						D, S	Yes	Good	55	
		do.				2 E	10/28/54				D, S	Yes	Good	50	
110 290	180 168 P	Morrison (Recapture) Cow Springs	LL	225	9/29/54	2-3		18	115	1	D, S	Yes	Good	56	
145	240 P	Morrison (Recapture) and Cow Springs		182	10/ 6/54	3-4		17			D, S	Yes	Fair	59	
730	172 P	do.	LL	425	9/ 3/54	2-3		11	80	1¼	D	Yes	Fair	64	Mancos Shale dry; Tochee Trailer School.
		Landslide and talus		2	10/ 6/54						D, S	No	Good	60	
		do.		2	10/ 6/54						D, S	Yes	Fair	62	
		Alluvium		Dry	10/ 6/54			5 R			Un	No			Abandoned.
		Landslide and talus		3.1	10/ 6/54						S	No	Bad		

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA				
								Depth of well (feet)	Casing or cribbing		Finish	Improvements
									Diameter (drilled well in inches, dug well in feet)	Depth (feet)		
					DISTRICT 4—Continued							
72 con.	Spring	4K-324	12.30-14.85	15 ESE of Pinon		Hillside	6,740				None	Ta
	do.	4R-17	11.20-1.00	8 WNW of Black Mtn. T.P.	5/29	Bed of wash	6,850				do.	Ta
73	Drilled well	4K-300A	12.55-10.15	Pinon	3/34	Broad valley	6,360	500	6	275	Perforated 231-242	P, Ta
	do.	4K-300B	12.55-10.15	Pinon	4/34	do.	6,360	260	8	231	Open hole	P, Ta
	do.	4K-379	3.70-6.25	10 ENE of Pinon	12/51	do.	6,350	650	8			W, Ta, Tr
	do.	4K-381	6.35-3.25	9 NE of Pinon	6/52	Narrow valley	6,630	763	8 6	102 763	Perforated 697-763	W, Tr
	do.	4M-4	13.15-2.30	8 N of Pinon	4/35	Broad valley	6,250	690	5	550	Open hole	W, Ta, Tr
	do.	4M-4A	13.1-2.3 A	8 N of Pinon	11/17	do.	6,250	138	3	138	Perforated 134-136	N
	do.	4M-43	11.00-9.95	2 ENE of Pinon	4/35	do.	6,340	235	6	175	Open hole	W, Ta, Tr
	do.	4M-95	13.05-9.15	1 NNW of Pinon	5/35	do.	6,350	200	6	175		W, Ta, Tr
	do.	4M-201	12.65-10.20	Pinon	9/17	do.	6,360	223	3	223	Perforated 156-161	W, Tr
	do.	4R-26	1.90-13.70	11 ESE of Pinon	7/35	do.	6,120	695	6	460	Open hole	W, Ta, Tr
	do.	4R-27	7.15-12.65	6 ESE of Pinon	6/35	do.	6,060	688	6	607	do.	W, Ta, Tr
	do.	4T-385	11.00-15.90	6 SSE of Pinon	11/54	Small valley	6,480	1,017	6	1,012	Perforated 942-1,011	W, Ta, Tr
	do.	Pinon 3	12.45-10.05	Pinon	8/51	Broad valley	6,360	1,000	8	368	Perforated 290-310 348-368	P, Ta
	do.	Pinon 4	12.45-10.15	Pinon	8/51	do.	6,360	330	10	330	Perforated 170-190 290-310	P, Ta
	Dug well	4K-318	9.60-13.25	4 SE of Pinon		Bed of wash	6,350	7	4 x 6	7	Log cribbed	Tr
	do.	4M-96	12.95-8.20	2 N of Pinon		Broad valley	6,400	10	5	10	Masonry cribbed	Tr
	Spring	4K-7	9.05-4.85	6 NNE of Pinon		Small valley	6,660				None	N
	do.	4K-331	9.45-14.95	6 SE of Pinon		Head of canyon	6,370				Collection gallery	N
	do.	4M-2	12.30-3.05	7 N of Pinon		do.	6,420				None	N
	do.	4M-3	12.40-2.95	8 N of Pinon		do.	6,420				Collection gallery	C, Tr
	do.	4M-67	5.85-12.90	7 ESE of Pinon		Side of mesa	6,400				Collection well	C, Tr
	do.	4M-70	7.15-16.25	8 SE of Pinon	5/28	do.	6,140				Collection gallery	C, Tr, Ta
	do.	4M-71	6.55-16.80	9 SE of Pinon	4/28	do.	6,110				do.	Tr
	do.	4M-72A	5.05-13.55	8 ESE of Pinon		do.	6,470				None	N
	do.	4M-73	5.30-16.40	10 SE of Pinon	5/29	Broad valley	6,030				Collection gallery	C, Tr
	do.	4R-6	5.65-7.30	8 ENE of Pinon	3/28	Narrow valley	6,560				do.	C, Tr
	do.	4R-12	1.10-1.80	14 NE of Pinon		Edge of cliff	7,200				do.	C, Tr
	do.	4R-13	1.90-2.35	13 NE of Pinon		Bed of wash	6,820				None	N
	do.	4R-30	6.25-13.50	7 ESE of Pinon		Bank of wash	6,250				Collection gallery	C, Tr
	do.	4R-33	0.40-15.20	14 ESE of Pinon	5/28	Narrow valley	6,570				do.	C, Tr
	do.	4GS-73-1	9.00-8.90	4 ENE of Pinon		Small valley	6,480				None	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 4—Continued															
		Landslide and talus				.5 E	10/ 6/54				S	No	Good	60	
		do.				.8 .2 E	5/ /29 10/20/54				D, S	Yes	Bad	51	
74	189	Toreva		134 R	4/ /34			10		72	D	Yes	Good	56	Pinon D. S.
74	186 P	do.		134 R	4/ /34			10		72	D	Yes	Good	56	Do.
390 520	130 130 P	Morrison (Westwater Canyon) Cow Springs	LL	305	12/19/51	2-3		10	50	2	D, S	Yes	Fair	56	Mancos Shale dry.
690	73 P	Dakota	LL	665	6/16/52	1-2		6	65	1½	D, S	Yes	Fair	68	Do.
547 635	88 55 P	Dakota Cow Springs	DL	283	10/ 5/54	2-3		10			S	Yes	Fair	63	Do.
0	138 P	Alluvium		64	11/22/17			10			Un	No	Bad		
110	125 P	Toreva		119	10/ 6/54	3-4		7		3	S	Yes	Good		
138	62 P	do.		93	10/ 5/54	3-4		9			S	Yes	Good		
54	169 P	do.		136				3			D, S	Yes	Good		Hubbell T. P.
98	122	Morrison (Westwater Canyon) and Cow Springs	DL	45	10/ 7/54	3-4		4			D, S	Yes	Fair	54	
578	110 P	Dakota	DL	162		3-4		15	40		D, S	Yes	Fair	57	Mancos Shale dry.
930	87 P	do.	LL	472	11/ 1/54	2-3		14	52	1	D, S	Yes	Fair		Wepo and Toreva Formations dry: Mancos Shale dry.
70	220	Toreva	LL	149	6/27/51	15		15	128	6	PS	Yes	Good	55	Pump test July 15, 1953; Pinon D. S.
70	260 P	do.	LL	138	8/16/51	15		19	100	4	PS	Yes	Good	56	Pinon D. S.
		Alluvium		5.2	10/27/54						D, S	No	Fair	59	"Sage Spring."
		do.		9.7	10/ 5/54						D, S	No	Fair		
		Toreva				< .1	10/ 6/54				S	No .	Good	58	
		do.				< .1	10/27/54				S	No	Good	56	
		do.				< .1	10/ 5/54				S	No	Good		
		do.				.1 E	10/ 5/54				S	No	Good		
		Landslide and talus				.5 E	10/ 7/54				D, S	No	Good	60	
		do.				1 R .2	5/ /28 8/ 8/52				D, S	Yes	Good	54	
		do.				.2	10/27/54				D, S	No	Good	59	
		do.				.2 E	10/ 7/54				S	No	Fair	62	
		Alluvium				.8 R .2 E	5/ /29 10/ 7/54				D, S	No	Fair	63	
		Landslide and talus				.5 .5	3/ /28 10/ 6/54				D, S	Yes	Fair	62	
		Toreva				.2 .5	10/ 6/54				D, S	Yes	Good	58	
		Mancos				1 E	10/ 6/54				S	No	Good	58	
		Landslide and talus				.2 .1	10/ 7/54				S	No			Abandoned.
		do.				.8 R .1	5/ /28 10/ 5/54				D, S	No	Fair	63	
		Wepo				< .1	10/ 6/54				D, S	No	Fair	66	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 4—Continued							
73 con.	Spring	4GS-73-2	4.65-14.95	9 ESE of Pinon		Hillside	6,300					
	do.	4GS-73-3	4.65-14.95	9 ESE of Pinon		do.	6,300				Collection gallery	Tr
74	Drilled well	4M-87	7.70-16.75	10 SW of Pinon	5/35	Broad valley	6,180	250	6	250	Perforated	W, Ta, Tr
	do.	4M-89	10.70-11.85	12 W of Pinon	3/35	do.	5,950	145	6	92	Open hole	W, Ta, Tr
	do.	4M-89A	10.65-11.85	12 W of Pinon	12/17	do.	5,950	139	3	139	Perforated	P, Ta
	do.	4M-101	1.15-15.60	6 SSW of Pinon	6/35	do.	6,140	135	6	70	Open hole	W, Ta, Tr
	Dug well	4M-103	3.00-14.70	6 SW of Pinon	8/30	Small valley	6,280	10 R	5	10 R	Masonry cribbed	H, Tr
	do.	4M-105A	3.75-16.30	8 SW of Pinon		Hillside	6,360	8	5	8	do.	N
	do.	4M-109	1.15-6.55	4 NNW of Pinon		Bank of wash	6,420	12	6	12	Rock cribbed	C, Tr, A
	do.	4M-116	7.80-11.30	9 W of Pinon		Narrow valley	6,230	11	4	11	do.	C
	do.	4M-117	6.95-11.40	8 W of Pinon	7/30	Head of canyon	6,280	7	3	7	Masonry cribbed	Tr
	Spring	4M-99	0.40-12.55	3 SW of Pinon		Hillside	6,220				Collection well	C, Tr
	do.	4M-100	0.30-12.40	2 SW of Pinon		do.	6,210				do.	N
	do.	4M-102	3.10-14.65	6 SW of Pinon	8/30	Base of cliff	6,550				Collection gallery	C
	do.	4M-104	3.70-14.10	6 SW of Pinon	9/30	Head of canyon	6,510				do.	Tr
	do.	4M-105	3.75-15.25	8 SW of Pinon	8/30	do.	6,390				do.	Tr
	do.	4M-108	1.70-5.20	6 NNW of Pinon		Small valley	6,400				do.	Tr
	do.	4M-108A	1.65-5.55	6 NNW of Pinon		do.	6,350				do.	C, Tr
	do.	4M-115	3.90-10.25	6 W of Pinon		Head of canyon	6,430				do.	C, Tr
	do.	4M-130	12.25-15.85	14 WSW of Pinon	5/30	Hillside	5,900				do.	C, Tr
	do.	4M-187	12.75-2.00	16 NW of Pinon		Narrow valley	6,670				do.	Tr
75	Drilled well	4K-377	2.00-6.90	15 NNE of Hotevila	5/45	Small valley	6,210	315	8	303	Perforated 268-282	W, Ta, Tr, Re
	do.	4K-383	10.10-10.10	13 N of Hotevila	11/54	Stripped plain	6,200	540	7	540	Perforated 340-460	W, Ta, Tr
	do.	4K-384	5.80-5.60	17 NNE of Hotevila	1/55	do.	6,230	515	6	456	Perforated 400-456	W, Ta, Tr
	do.	4M-128A	0.25-15.05	13 NNE of Oraibi		do.	6,010	200	6			P
	do.	4M-128B	0.30-15.05	13 NNE of Oraibi	6/53	do.	6,010	239	6	239	Perforated	P, Re
	do.	4T-378	5.30-12.90	8 NE of Hotevila	7/51	Broad valley	6,020	284	8 6	18 284	Perforated 80-160 260-280	P, W, Ta, Tr
	Dug well	4M-91	2.85-11.00	11 NE of Hotevila		Bank of wash	6,080	14	8	14	Masonry cribbed	Tr
	do.	4M-123	7.35-13.60	6 NNE of Hotevila	3/32	Edge of mesa	6,150	14	5	14	Rock cribbed	H, Tr
	do.	4M-123A	7.30-13.60	7 NNE of Hotevila		do.	6,150	6.5	4 x 4	6.5	Concrete caisson	N
	do.	4M-137	12.30-5.95	14 NNW of Hotevila		Bank of wash	5,580	6	5 x 5	6	Concrete cribbed	Tr
	do.	4M-142	7.05-12.25	8 NNE of Hotevila	4/29	Narrow valley	6,350	15 R	5	15 R	Rock cribbed	Tr
	do.	4M-143	9.20-7.85	12 N of Hotevila		Bed of wash	5,980	11.5	5	11.5	do.	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 4—Continued															
		Landslide and talus									D	No	Good	63	At Whippoorwill D. S.
		do.				.8	10/ 7/54				S	Yes	Good	63	
162	88 P	Toreva	DL	149	10/26/54	3-4		3.5			D, S	Yes	Good	74	
75	70 P	Wepo	DL	53	10/26/54	3-4		18			D, S	Yes	Fair	73	
73	66 P	do.		80	12/ /17			12			S	No			
25	86	Toreva		42	10/26/54			3		6	D, S	Yes	Good	70	
		Wepo		6.2	8/ 1/52			.5 R			D, S	Yes	Good	68	
		do.		6.8	8/ 1/52						D	Yes	Good	69	
		do.		5.7	10/27/54						D, S	Yes	Good	59	
		do.		3	10/27/54						D, S	Yes	Good	57	
		do.		3	10/27/54	.5 R	7/ /30				D, S	No	Good	59	
		Toreva				Dry	10/26/54				S	No			Temporary.
		do.				.2 E	10/26/54				D, S	No	Good	50	
		Wepo				.2 R .5 E	8/ /30 8/ 1/52				D, S	No	Good	68	"Crooked Finger Spring."
		do.				.5 R .5	9/ /30 10/26/54				D, S	No	Good	52	
		do.				.5 .5	8/ /30 10/26/54				D, S	No	Good	44	
		do.				.2	10/27/54				D, S	No	Good	50	
		do.				.1	10/27/54				D, S	No	Good	51	
		do.				.8 .1	10/26/54				D, S	Yes	Good	61	
		do.				.2 R .1	5/ /30 10/29/54				D, S	No	Good	70	
		do.				< .1	10/27/54				D, S	Yes	Good	56	
4	311 P	do.	DL	254	10/29/54	2-3		15	40	3	D, S	Yes	Good	79	
160	380 P	Toreva	LL	333	11/22/54	2-3		7	207	1	D, S	Yes	Good		Bailed hole dry.
230	185 P	do.	LL	350	1/19/55	2-3		5	41	2	D, S	Yes	Good	58	Plugged back to 456 feet.
		do.		185	8/ 1/52	1					D	Yes	Good	72	Hard Rocks Mission.
105	134 P	do.		175	6/ 6/53			30	30		D	Yes	Good	58	Do.
0	160	do.	LL	68	7/25/51	3-4		5	100	3	D, S	Yes	Good		
		Alluvium		12.3	10/29/54						S	No			
		Toreva		9.5	10/29/54						D, S	No	Good	59	
		do.		Dry	10/29/54						Un	No			Abandoned.
		Alluvium		1.1	10/28/54						D, S	Yes	Good	59	
		Wepo		11	10/29/53			.8 R			D, S	Yes	Good		
		do.		7.4	10/28/54						D, S	Yes	Good	56	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 4—Continued							
75 con.	Spring	4M-66	6.65-2.05	18 NNE of Hotevila		Bed of wash	5,800				None	N
	do.	4M-128	0.05-15.30	11 ENE of Hotevila	5/29	Narrow valley	5,980				Collection gallery	H, C, Tr
	do.	4M-138	11.05-8.95	11 N of Hotevila		Bed of wash	5,940				None	N
	do.	4M-139	12.50-11.85	8 NNW of Hotevila	3/29	Head of canyon	6,000				Collection gallery	Tr
	do.	4M-145	6.65-4.70	15 NNE of Hotevila		Bed of wash	6,090				None	N
	do.	4M-146	7.15-4.10	16 NNE of Hotevila		Head of canyon	5,800				do.	N
	do.	4M-149	8.45-14.30	6 NNE of Hotevila	3/29	Edge of mesa	6,150				Collection gallery	C, Tr
	do.	4M-194	4.50-0.45	20 NNE of Hotevila		Bed of wash	6,190				None	N
76	None											
93	Drilled well	4M-79	9.65-3.15	11 SSE of Pinon	9/21	Broad valley	6,050	570	3	378	Open hole	Tr
	Spring	4M-75	2.70-1.40	13 SE of Pinon	6/28	Narrow valley	6,440				Collection gallery	C, Tr
	do.	4M-77	3.55-1.00	12 SE of Pinon		Side of mesa	6,440				do.	Tr
94	do.	4K-314	13.10-0.30	16 WSW of Pinon		Hillside	5,900				do.	Tr
	do.	4K-315	13.25-0.50	16 WSW of Pinon		do.	5,900				do.	Tr
95	None											
					DISTRICT 5							
96	Spring	5M-5	10.80-16.40	23 NNW of Tolani Lake D.S.		Bed of wash	5,220				None	N
114	Drilled well	5K-300	11.7-14.2 A	10 NE of Tolani Lake D.S.	/40	Broad valley	5,150 E	1,250				N
115	do.	5K-307	3.25-12.80	9 N of Tolani Lake D.S.	5/45	do.	5,020	151	6	119	Perforated 115-119	W, Ta, Tr
	Dug well	5M-14	10.60-15.80	8 NW of Tolani Lake D.S.	2/28	do.	4,840	19.5	4	19.5	Masonry cribbed	H, Tr
	Spring	5M-1	10.10-2.20	20 NNW of Tolani Lake D.S.	/24	Side of mesa	5,160				Collection gallery	Tr, Re
	do.	5M-4	10.60-0.50	21 NNW of Tolani Lake D.S.		Head of canyon	5,260				do.	Tr
	do.	5M-73	7.50-4.10	18 N of Tolani Lake D.S.		Small valley	5,340				None	N
116	Dug well	5M-142	0.70-5.45	18 NW of Tolani Lake D.S.		Bed of wash	5,250	30.5	5	30.5	Masonry cribbed	Tr
	Spring	5M-68	1.50-15.95	12 WNW of Tolani Lake D.S.		Head of canyon	4,870				Collection gallery	H, C, Tr
	do.	5M-74	13.50-17.10	6 NNW of Grand Falls		do.	4,420				do.	Tr
	do.	5M-74A	13.55-17.10	6 NNW of Grand Falls		do.	4,400				do.	Tr
	do.	5M-75	10.40-13.55	9 N of Grand Falls	1/39	Narrow valley	4,670				Collection well	H, C, Tr
117	None											
130	Drilled well	5K-323	5.80-1.90	25 NE of Sunrise T.P.	9/55	Broad valley	5,210	176				
	do.	5T-308	13.35-16.15	14 ESE of Sunrise T.P.	3/52	do.	4,900	905	6	756	Open hole	W, Re
	Dug well	5K-12	7.50-13.10	19 E of Sunrise T.P.		Bank of wash	5,250	11.5	5	11.5	Masonry cribbed	H, Tr, A
	do.	5M-31	13.35-2.15	6 ENE of Tolani Lake D.S.		Sand dune	5,050					P, Tr, Ta

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 4—Continued									
		Toreva				4 E	10/28/54				S	No	Good	54	
		Wepo				1 1 E	5/ /29 8/ 1/52				D, S	Yes	Good	70	"Hard Rocks Spring."
		do.				< .1	10/28/54				S	No	Fair	55	
		Toreva				1.5 .8	3/ /29 10/28/54				D, S	Yes	Good	54	
		Wepo				< .1	10/28/54				S	No	Fair	45	
		Toreva				1 E	10/28/54				S	No	Good	54	
		do.				1 R .1	3/ /29 10/29/54				D, S	Yes	Good	59	
		Alluvium				10 E	10/28/54				S	No	Good	51	Temporary.
372 478	106 92 P	Dakota Cow Springs		Flow	6/13/51	2.1	10/ 7/54	3.3			D, S	Yes	Fair	59	Show of Mancos Shale water.
		Landslide and talus				.8	10/27/54				D, S	No	Good	58	
		do.				.4	10/27/54				D, S	Yes	Good	58	
		Toreva				< .1	10/29/54				D, S	No	Good	56	"Onion Spring."
		do.				< .1	10/29/54				D, S	No	Good	56	
						DISTRICT 5									
		Alluvium				2 E	5/13/54				D, S	No	Fair	68	
0	1,250	Wingate (Rock Point) and Chinle (Owl Rock, Petrified Forest)		Dry								No			Abandoned.
0	115	Alluvium	DL	105	2/26/53	3-4		15	15	2	S	Yes	Bad	69	
		do.		Dry	5/14/54			1.2 R			Un	No			Abandoned.
		Alluvium and windblown sands				3 R 2	/24 5/13/54				D, S	Yes	Good	67	"Sand Springs."
		Navajo				2 R .4	5/13/54				S	Yes	Good	68	
		Alluvium and windblown sands				1 E	5/13/54				S	Yes	Good	68	
		do.		30.3	7/ 9/54						Un	No			
		Chinle (Petrified Forest)				1 E	5/14/54				D, S	Yes	Fair	68	
		Moenkopi				1 R .8	5/14/54				D, S	Yes	Good	67	"Box Springs."
		do.				2 R .2	5/14/54				D, S	No	Good	67	
		Terrace				1 R .2 E	1/16/39 5/14/54				D, S	Yes	Good	67	
		Alluvium		Dry								No			Abandoned.
490 830	340 75 P	Moenkopi and Kaibab Coconino	LL	167	5/12/54	3-4		28	None	1	D, S	Yes	Bad	64	
		Alluvium		11.5	5/13/54						D, S	Yes	Good	61	"Bird Springs."
		do.									D, S	Yes	Bad		Tank sample, high nitrates; "Big Belly well."

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 5—Continued							
130 con.	Dug well	5M-50	10.60-12.85	17 E of Sunrise T.P.		Bank of wash	5,050	19	8	19	Masonry cribbed	Tr
	do.	5M-52	9.90-12.80	18 E of Sunrise T.P.		do.	5,090	9.5		9.5	Rock cribbed	A
	do.	5M-54	7.60-16.65	20 ENE of Sunrise T.P.		do.	5,050	11.5	9 x 10	11.5	Masonry cribbed	H, Tr
131	Drilled well	5K-303	9.0-12.8 A	4 ENE of Sunrise T.P.		Alluvial plain	4,740 E					N
	do.	5K-304	9.0-13.0 A	4 ENE of Sunrise T.P.	5/40	do.	4,740 E	205	6	205	Perforated	N
	do.	5K-305	4.10-12.60	10 ENE of Sunrise T.P.	4/43	do.	4,760	785	4			W, Re
	do.	5K-321	7.10-1.25	14 NNE of Sunrise T.P.	9/55	Lakebed	4,920	94				N
	do.	5K-322	3.40-4.60	14 NE of Sunrise T.P.	9/55	Broad valley	4,880	199				N
	do.	Leupp	11.90-15.00	Leupp		Alluvial plain	4,700	77-90	12	77-90	Perforated	P, Ta
	do.	Sunrise T.P.	13.45-14.20	Sunrise T.P.		Stripped plain	4,700	200 R	6			P, W, Ta
	Dug well	5K-302	5.35-4.30	Tolani Lake D.S.		Lakebed	4,900	22	6	22	Masonry cribbed	Tr
	do.	5M-17	13.35-11.90	2 N of Sunrise T.P.		Alluvial plain	4,690	13.5	5	13.5	do.	Tr
	do.	5M-19	13.25-13.90	1 NE of Sunrise T.P.		Bank of wash	4,690	33	8	33	do.	H, Tr
	do.	5M-30	5.50-4.25	Tolani Lake D.S.	/26	Lakebed	4,890	16		16	do.	W, Tr, Ta
	do.	5M-35	3.25-8.50	4 SSE of Tolani Lake D.S.		Bed of wash	4,860	8.5	5	8.5	do.	A
	do.	5M-40	3.05-14.00	10 E of Sunrise T.P.	4/33	Alluvial plain	4,780	17.5	6	17.5	do.	H, Tr
	do.	5M-47	0.30-16.60	13 ESE of Sunrise T.P.		do.	4,780	16	5	16	do.	Tr
	do.	5M-81	7.85-17.05	5 ESE of Sunrise T.P.	7/35	do.	4,740	12.5	4		Concrete top	Tr, A
	do.	5M-128	6.30-15.50	7 ESE of Sunrise T.P.		do.	4,740	9	6	9	Masonry cribbed	Tr, A
	do.	5M-138	5.30-4.20	0.25 ENE of Tolani Lake D.S.		Lakebed	4,900	19.5	5	19.5	do.	
	do.	5M-152	6.30-3.95	2 NW of Tolani Lake D.S.		do.	4,900	17	5	17	Rock cribbed	H, Tr
	do.	5GS-131-1	11.60-15.10	0.25 E of Leupp		Alluvial plain	4,700	11	4	11	do.	H, Tr
	do.	Tolani Lake T.P.	5.40-4.35	Tolani Lake T.P.		Lakebed	4,900	15 E	5			N
	do.	Tolani Lake D.S.	5.40-4.25	Tolani Lake D.S.		do.	4,890	24	16	26		P, Ta
132	Drilled well	5K-309	3.70-16.80	5 SW of Sunrise T.P.	10/52	Stripped plain	5,030	632	10 6	4 636	Perforated 490-514	W, Ta, Tr, Re
	do.	5K-314	5.35-10.50	6 NW of Sunrise T.P.	10/53	Small valley	4,840	380	8	22	Open hole	W, Ta, Tr, Re
	do.	5K-315	9.65-13.80	10 W of Sunrise T.P.	2/55	Broad valley	5,310	250				N
	do.	5K-315A	8.50-14.30	9 W of Sunrise T.P.	3/55	Stripped plain	5,220	818	10 8	11 302	Open hole	W, Ta, Tr
	do.	5K-318	7.85-8.65	10 NW of Sunrise T.P.	4/55	do.	4,850	422	8	105	do.	W, Tr
	do.	5M-103	11.35-16.95	12 WSW of Sunrise T.P.	3/35 4/50	do.	5,350	1,161	6	850	do.	W, Ta, Tr
	do.	5M-104	12.30-9.70	14 WNW of Sunrise T.P.	8/36	Small valley	5,150	757	6	650	do.	W, Ta, Tr
	do.	5M-108	5.60-13.70	6 W of Sunrise T.P.	/24	Stripped plain	5,030	400	6	340	do.	W, Ta, Tr, Re
	do.	5GS-132-1	10.4-9.9 A	12 WNW of Sunrise T.P.	5/32	Edge of cliff	5,100 E	525				N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 5—Continued															
		Alluvium		Dry	5/13/54							No			
		do.		Dry	5/13/54							No		64	Bird Springs area.
		do.		7.8	5/13/54						D, S	Yes	Fair	60	
		do.		Dry								No			Abandoned.
0	90	do.	DL	30 R	5/28/40			3			Un	No	Bad		Do.
674	111 P	Coconino	DL	167	5/13/54			15	48	8	S	No	Bad		
0	92	Alluvium		Dry								No			Seep at 90 feet; abandoned.
0	190	do.		115	9/13/55			13	None	1	Un	Yes	Bad	67	Abandoned.
0	90	do.				30-50	/50				PS	Yes	Fair	60	Four wells.
		Kaibab		85	1/22/53						D	Yes	Good	66	Sunrise T. P.
		Alluvium		20.8	5/14/54						D, S	Yes	Good	61	
		do.		Dry	5/14/54						Un	No			Abandoned.
		do.		Dry	5/13/54			5 R			D, S	No			Temporary; had windmill at one time.
		do.		13.7	5/14/54	3-4	9/ 7/50	2.5 R			S	Yes	Fair	62	
		do.		Dry	5/14/54						Un	No			Abandoned.
		do.		13	5/13/54			2 R			S	Yes	Fair		
		do.		15.4	5/13/54						D, S	Yes	Fair	56	
		do.		10.5	5/11/54						Un	No			Abandoned.
		do.		Dry	5/13/54			5 R			Un	No			Do.
		do.		16	5/14/54						S	No	Fair	62	
		do.		Dry	5/14/54						S	No			Temporary.
		do.		Dry	5/26/54						S	No			
		do.									Un	No			Abandoned.
		do.		14.8	9/ 7/50			10	1.8	6	D	Yes	Fair	62	Pump test June 11, 1953.
160	472 P	Coconino	LL	379	2/27/53	2-3		40	None	¼	D, S	Yes	Good	65	
150	230 P	do.		231	5/11/54	2-3		18	None	½	D, S	Yes	Good	66	
0	250 P	Volcanic		Dry								No			Abandoned.
190	628 P	Coconino		640	3/24/55	1-2		17	None	2	D, S	Yes	Good	60	
120	302 P	do.	LL	312	4/ 7/55	2-3		18	None	½	D, S	Yes	Fair		
240	921 P	Coconino and Supai	DL	732	5/12/54	1-2		12			S	Yes	Good	59	Deepened from 853 to 1,161 feet (April 1950).
350	427 P	Coconino	DL	646	5/12/54	1-2		6		5½	D, S	Yes	Fair	63	Bail test November 1948.
33	367 P	do.		379	4/14/53	2-3		10			D, S	Yes	Fair		
		do.		Dry								No			Abandoned.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 5—Continued							
132 con.	Drilled well	EPNG-L-1	5.30-13.40	El Paso Natural Gas Compressor Station near Leupp	10/52	Stripped plain	4,990	687	8	682	Perforated 328-682	P, Ta
	do.	EPNG-L-2	5.35-13.25	El Paso Natural Gas Compressor Station near Leupp	11/52	do.	5,010	685	8	685	Perforated 334-685	P
	Dug well	5M-110	0.80-12.45	2 NW of Sunrise T.P.		Alluvial plain	4,680	21.5	4	21.5	Rock cribbed	H, Tr, A
	do.	5M-111	2.80-11.20	4 NW of Sunrise T.P.		Bank of wash	4,670	22.5	4	22.5	Masonry cribbed	Tr, A
	do.	5M-112	4.05-8.90	7 NW of Sunrise T.P.		Bed of wash	4,660	18	4	18	do.	Tr, H
142	None											
143	Drilled well	5M-43	6.60-5.30	21 ESE of Leupp		Alluvial plain	4,880	46	6			N
	Dug well	5M-42	9.45-4.90	18 ESE of Leupp		Bank of wash	4,820	8.5	4	8.5	Plank cribbed	W, Ta
	do.	5M-84	13.40-5.40	14 SE of Leupp		Alluvial plain	4,820	15.5	4	15.5	Masonry cribbed	Tr, A
	do.	5M-85	11.00-5.40	16 SE of Leupp		Bed of wash	4,820	16 R	4	16 R	do.	P, H, Ta, Re, A
	do.	5M-126	13.55-3.25	13 ESE of Leupp		do.	4,810	12	6	12	do.	H, Tr
144	Drilled well	5K-313	5.70-1.25	7 ESE of Leupp	10/53	Lakebed	4,810	540	12 8	47 321	Open hole	W, Tr
	do.	5M-86	10.75-3.90	7 SSE of Sunrise T.P.	/24	Narrow valley	4,800	253	6	214	do.	W, Ta, Tr
	do.	5M-88	10.65-5.80	9 SSE of Sunrise T.P.	/24	Small valley	4,870	426	6	388	do.	W, Ta, Tr
	do.	5T-319	3.35-4.25	13 SE of Sunrise T.P.	10/55	Top of mesa	4,900	440	10 6	17 416	Perforated 395-415	W, Tr
	Dug well	5M-33	1.75-2.25	11 ESE of Leupp		Alluvial plain	4,760	8	6	8	Masonry cribbed	H, Tr
	do.	5M-82	3.10-0.50	10 ESE of Leupp	3/29	do.	4,760	9.5	7	9.5	do.	H, A
145	Drilled well	5K-316	8.15-2.75	11 SW of Sunrise T.P.	4/55	Stripped plain	5,340	717	8	283	Open hole	W, Ta
	do.	5K-317	6.40-1.10	8 SW of Sunrise T.P.	3/55	do.	5,330	812	8	207	do.	W, Tr
	do.	5M-94	2.15-3.25	7 SSW of Sunrise T.P.	/24	Small valley	5,040	388	6	163	do.	W, Ta, Tr, Re
	do.	5M-122	9.70-4.10	12 SW of Sunrise T.P.	2/35	Stripped plain	5,510	738	6	657	do.	W, Ta, Tr
	do.	5T-320	1.40-6.00	9 SW of Sunrise T.P.	9/55	do.	5,180	553	8	241	do.	W, Ta
					DISTRICT 6							
74	Spring	6K-314	8.50-16.20	16 NE of Oraibi		Small valley	6,220				Collection gallery	C, Tr
	do.	6K-315	8.70-16.95	15 NE of Oraibi		do.	6,280				do.	Tr
	do.	6M-130	8.20-15.20	17 NE of Oraibi		do.	6,240				do.	C, Tr
75	None											
93	Drilled well	6K-2	10.50-13.15	Keams Canyon	6/46	Deep canyon	6,250	106	8	89	Perforated 42-86	P, Ta
	do.	6K-85	10.70-12.80	Keams Canyon		do.	6,200	1,288				N
	do.	6K-303	10.55-13.15	Keams Canyon	10/38	do.	6,250	115	8	87	Perforated 83-87	P, Ta
	do.	6K-320	11.80-9.35	4 NNW of Keams Canyon	8/54	Top of mesa	6,380	1,032	8			W, Ta
	do.	6K-323	9.80-13.60	1 SE of Keams Canyon	6/55	do.	6,490	230	8	230	Perforated 170-230	W, Tr
	do.	6M-1	11.40-12.75	1 WNW of Keams Canyon	12/33	Deep canyon	6,140	115	5	115	Perforated 91-93	P, Ta

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 5—Continued															
120	567 P	Coconino	LL	335	10/20/52			200	15	14½	Ind, D	Yes	Good		
120	565 P	do.		332	1/ 8/53						Ind	No	Good		
		Alluvium		16.5	5/11/54						D, S	Yes	Good	59	
		do.		Dry	5/11/54						Un	No			Temporary.
		do.		17.1	5/11/54						Un	No			Abandoned.
		Alluvium		Dry								No			Abandoned.
		do.		Dry	5/13/54						Un	No			Do.
		do.		14	5/12/54						Un	Yes	Bad	58	Do.
		do.		3 R							D, S, Irr	Yes	Fair	57	
		do.		10.1	5/12/54						D, S	Yes	Fair	57	
310 380	70 160 P	Kaibab Coconino	LL	103	10/16/53	3-4		37		½	D, S	Yes	Bad	62	
200	53 P	Coconino	DL	140	1/22/53	3-4		10			D, S	Yes	Good	62	
175	251 P	do.		223	5/11/54	2-3		10			S	Yes	Good	69	
370	70 P	do.		216	10/12/55			15	None	½	S	Yes	Bad	61	Moenkopi Formation water at 338 feet.
		Alluvium		7	5/12/54						S	Yes	Bad	61	
		do.		8.3	5/12/54			10 R			D, S	Yes	Fair	51	
190	527 P	Coconino		530	4/22/55	1-2		14	None	1¼	D, S	Yes	Good	60	
185	627 P	do.		618	3/16/55	1-2		10	None	¾	D, S	Yes	Good		
130	258 P	do.		324	3/30/53	2-3		10			D, S	Yes	Good	63	
255	483 P	do.	DL	617	5/12/54	1-2		6		5½	D, S	Yes	Good	60	
215	338 P	do.	DL	460	9/16/55	2-3		10	None	¾	D, S	No	Good	62	
DISTRICT 6															
		Wepo				0.1	4/14/55				D, S	No	Good		
		do.				.1	4/14/55				D, S	No	Good		
		do.				.2	4/14/55				D, S	Yes	Good	67	
0	83	Alluvium		34		25		25	21	16¾	PS	Yes	Good	51	Pump test Jan. 10, 1950.
1,000	288 P	Cow Springs and Entrada and Carmel undiff.	DL	200 R							Un	No			Seep at 72 feet; insufficient yield in alluvium.
0	85	Alluvium		43	1/ 9/50	17	1/ 9/50	17	1	25	PS	No	Good		
910 1,000	90 32 P	Dakota Cow Springs	LL	310	4/26/55	2-3		19	75	½	S	Yes	Fair		Show of Toreva Formation water.
10	220 P	Toreva		150	6/28/55	3-4		24	20	2	D, S	Yes	Good		
0	90	Alluvium		18 R	12/14/33			15			D, S	No	Good	64	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 6—Continued							
93 con.	Drilled well	6M-2	12.90-11.10	3 NW of Keams Canyon	12/33	Deep canyon	6,020	96	5	96	Perforated 61-64	W, Ta
	do.	6M-80	13.65-5.90	8 NNW of Keams Canyon	6/21	Broad valley	5,880	473	6 3	96 368	Open hole	Ta, Re
	Dug well	6M-4A	12.80-13.25	2 W of Keams Canyon		Bed of wash	6,270	8.5	4 x 4	8.5		H, Tr
	Infiltration gallery	6K-3	10.40-13.25	Keams Canyon	/43	Deep canyon	6,250					N
	Spring	6A-20	8.40-9.80	4 NNE of Keams Canyon		Head of canyon	6,300				None	N
	do.	6A-21	8.20-9.10	4 NNE of Keams Canyon		do.	6,310				Collection gallery	C, Tr
	do.	6A-21A	8.60-9.30	4 NNE of Keams Canyon		Side of cliff	6,320				None	N
	do.	6A-24	12.20-10.30	3 NW of Keams Canyon		do.	6,150				do.	N
	do.	6H-11	13.70-0.55	13 NNW of Keams Canyon		Bank of wash	6,310				Collection gallery	C, Tr
	do.	6K-1S	10.05-13.40	1 ESE of Keams Canyon		Side of canyon	6,280				do.	N
	do.	6K-2S	9.40-13.00	1 E of Keams Canyon		do.	6,320				Collection well	N
	do.	6K-3S	9.30-12.90	1 ENE of Keams Canyon		do.	6,340				do.	N
	do.	6K-4S	9.55-12.95	2 ENE of Keams Canyon		do.	6,300					
	do.	6K-5S	10.55-13.20	0.25 S of Keams Canyon		do.	6,265				Collection gallery	N
	do.	6K-6S	9.60-13.00	1 E of Keams Canyon		do.	6,300				Collection well	N
	do.	6K-7S	8.15-12.00	2 ENE of Keams Canyon		Shallow canyon	6,460				None	N
	do.	6K-8S	11.10-13.25	1 WSW of Keams Canyon		Head of canyon	6,230				do.	N
	do.	6K-9S	11.05-12.65	1 WNW of Keams Canyon		Side of cliff	6,220				Collection well	
	do.	6K-10S	11.25-12.55	1 WNW of Keams Canyon		Head of canyon	6,220				Collection gallery	C
	do.	6K-11S	8.85-12.55	2 ENE of Keams Canyon		do.	6,390				None	N
	do.	6K-12S	8.90-12.60	2 ENE of Keams Canyon		do.	6,390				Collection well	N
	do.	6K-13S	9.00-12.70	2 ENE of Keams Canyon		do.	6,380				None	N
	do.	6K-14S	9.10-12.80	2 ENE of Keams Canyon		Side of canyon	6,360				do.	N
	do.	6K-308S	10.10-10.60	2 N of Keams Canyon		Head of canyon	6,110				do.	Re
	do.	6M-4B	12.85-13.30	2 WSW of Keams Canyon		Side of cliff	6,270				do.	Re
	do.	6M-11	13.40-14.85	4 SW of Keams Canyon		Head of canyon	6,160				Collection gallery	Ta, Re
	do.	6M-82	9.40-7.05	6 N of Keams Canyon		Side of cliff	6,210				Collection well	N
94	Drilled well	6H-8	4.75-2.45	10 NNE of Polacca	6/35	Broad valley	6,020	144	6	94	Perforated 89-94	W, Ta, Tr, Re
	do.	6H-14	8.20-12.80	2 SSW of Polacca	1/34	do.	5,650	135	5	124	Perforated 112-117	W, Ta, Tr, Re
	do.	6H-15	10.15-13.55	4 SW of Polacca	2/34	do.	5,600	115	6	88	Perforated 80-86	W, Ta, Re
	do.	6H-16	9.65-11.55	2 W of Polacca	2/34	do.	5,680	110	5	93	Perforated 88-91	W, Ta, Tr, Re
	do.	6K-301	6.70-11.20	1 ENE of Polacca	12/34	do.	5,640	610	10 8	100 236	Open hole	P, Re

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 6—Continued															
0	64	Alluvium		29	7/ 8/52	3-4		9.5			D, S	Yes	Good	55	
385	88 P	Dakota	DL	Flow	8/ 8/52	6	8/ 8/52				S	Yes	Fair	60	Mancos Shale dry.
		Toreva		7.1	4/21/55						D, S	Yes	Good	44	
		Alluvium		35.2	8/ 7/52						Un	No			Abandoned.
		Toreva				1 E	4/21/55				S	Yes	Good	44	
		do.				.8 E	4/21/55				D, S	Yes	Good	43	
		do.				2 E	4/21/55				S	No	Good		
		do.				.2 E	4/21/55				S	No	Good		
		Wepo				.2	4/19/55				D, S	Yes	Good	47	
		Toreva				10 1.5	1/17/50 10/30/51				D, PS	Yes	Good	54	
		do.				5 3 E	1/17/50 10/30/51				D, S	Yes	Good	52	Two springs piped together.
		do.				10 5.5	1/17/50 10/30/51				D	Yes	Good	52	Do.
		do.				1 1 E	1/17/50 7/19/55				S	No	Good		
		do.				3 .1 E	1/17/50 5/22/55				D	No	Good		Piped to house.
		do.									D, Irr	No			
		do.				50	1/17/50				D, S	Yes	Good	53	
		do.				15 .1 E	1/17/50 7/18/55				D, S	No	Good		
		do.				.5 R	8/ 7/52				D	Yes	Good		Baptist Church Spring.
		do.				2 E	1/17/50				D	No	Good		
		do.				1.5	10/30/51				D	No	Good	54	
		do.				8.5	10/30/51				D	Yes	Good	54	
		do.				.5	10/30/51				D	Yes	Good	52	
		do.				.6	10/30/51				D	Yes	Good	53	
		do.				.5 E	4/21/55				S	Yes	Good	42	
		do.				.2 E	4/21/55				S, Irr	No	Fair		
		do.				2.5 E	4/21/55				D, S, Irr	Yes	Good	58	"Blue Bird Spring."
		do.				.2 E	4/22/55				D, S	Yes	Good	48	
0	89	Alluvium		49	4/14/55	3-4		20			D, S	No	Good	74	
0	117	do.		50	8/ 6/52	3-4		10			D, S	Yes	Bad	56	
0	98	do.		49	8/ 7/52	3-4		26			D, S	Yes	Good	56	
0	88	do.		41	4/20/55	3-4		6			D, S	Yes	Good	56	
325	93	Cow Springs		Flow 77	1/31/35 1/19/54	1 R		40	150		PS, D	Yes	Fair	55	Measured depth 430 feet, Aug. 18, 1953; Polacca School, pump test.

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
						DISTRICT 6—Continued						
94 con.	Drilled well	6K-305-94	8.40-16.85	6 S of Polacca	12/43	Hillside	5,690	445	8 6 4	15 365 445	Perforated 430-445	W, Ta
	do.	6K-306	4.65-13.75	4 SE of Polacca	6/51	Broad valley	5,810	710	8 6	327 710	Perforated 484-506 594-616	W, Re
	do.	6K-308	12.15-0.35	13 N of Toreva	2/52	do.	5,910	530	6			W, Ta, Tr
	do.	6K-311	0.70-2.70	11 NE of Polacca	7/53	Small valley	6,400	413	6			W, Re
	do.	6M-3	0.70-11.50	7 E of Polacca	12/33	Deep canyon	5,950	96	5	96	Perforated 63-65	W, Ta, Tr
	do.	6M-7	6.95-12.45	1 SE of Polacca	11/33	Broad valley	5,650	100	5	90	Perforated 68-70	W, Tr
	do.	6M-10	6.70-11.25	1 E of Polacca	12/33	do.	5,640	101	6	101	Perforated 89-93	W, Tr
	do.	6M-10A	6.75-11.30	1 E of Polacca	4/21	do.	5,640	428	6 3	100 228	Open hole	W, Ta
	do.	6M-19	11.05-17.05	6 SW of Polacca	10/33	do.	5,480	145	5	145	Perforated 93-97	W, Ta, Tr
	do.	6M-40	12.60-6.50	7 N of Toreva	6/35	Top of mesa	6,170	1,250	6	758	Open hole	W, Ta, Tr
	do.	6M-43	9.55-2.35	12 NNE of Toreva	6/35	Broad valley	6,150	216	6	170	do.	W, Ta, Tr
	do.	6M-66	2.65-8.15	6 NE of Polacca	7/21	do.	5,790	694	6 3	115 358	do.	Tr
	do.	Sunlight Baptist Mission	12.80-13.35	Sunlight Mission	3/54	Hillside	5,860	700	6	700	Perforated 655-700	P, Ta
	Dug well	6H-1	8.15-11.10	1 NNW of Polacca		Bed of wash	5,820	8 R	9	11	Masonry cribbed	H
	do.	6M-9	8.00-13.20	2 S of Polacca		Bank of wash	5,640	6	3 x 3	6	Rock cribbed	Tr
	Spring	6B-3	7.60-11.20	0.25 N of Polacca		Side of mesa	5,820				Collection well	N
	do.	6H-2	6.90-7.25	4 N of Polacca		Broad valley	5,850				Collection gallery	Tr
	do.	6H-3	5.60-7.50	4 NNE of Polacca		do.	6,230				do.	Re
	do.	6H-5	6.40-7.15	4 NNE of Polacca		Head of canyon	6,000				None	Re
	do.	6H-6	6.75-8.70	3 NNE of Polacca		Side of cliff	6,000				do.	Re
	do.	6H-7	5.85-5.75	6 NNE of Polacca		Head of canyon	6,000				Collection gallery	H, C, Tr
	do.	6H-12	4.05-2.70	10 NNE of Polacca		do.	6,150				None	N
	do.	6H-13	4.75-4.00	8 NNE of Polacca		do.	6,010				Collection gallery	C, Tr
	do.	6H-17	13.00-13.40	0.25 SE of Sunlight Mission		Hillside	5,930				Collection well	N
	do.	6H-20	13.80-13.40	Toreva		do.	5,960				do.	N
	do.	6H-22	13.65-12.40	1 N of Toreva		Side of cliff	6,300				do.	Tr, Ta
	do.	6H-22A	13.60-12.05	2 N of Toreva		do.	6,320				Masonry wall	N
	do.	6H-23	13.75-11.75	2 N of Toreva		do.	6,370				Collection gallery	N
	do.	6K-310S	13.60-1.30	12 N of Toreva		do.	5,910				do.	C, Tr
	do.	6M-3A	0.30-11.80	8 E of Polacca		do.	6,040				None	Re
	do.	6M-4	0.95-14.25	7 ESE of Polacca		Bed of wash	6,060				do.	N
	do.	6M-5	2.50-13.85	6 ESE of Polacca		Hillside	6,150				Collection gallery	C, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 6—Continued															
200	245 P	Cow Springs and Entrada and Carmel undiff.		43	4/20/55	3-4		6		2	D, S	Yes	Fair	63	
180	530 P	Cow Springs and Entrada and Carmel undiff.	LL	181	1/20/54	3-4		12	330	5	D, S	Yes	Fair		
0	260	Toreva	LL	72	2/26/52	3-4		15	45	2	D, S	Yes	Good	56	
50	300	do.	LL	200	7/25/53	2-3		5	20	1	D, S	Yes	Good	57	
0	65	Alluvium	DL	21	4/21/55	3-4		5			D, S	Yes	Good	54	
0	88	do.		50	4/21/55	3-4		20			D, S	Yes	Fair	55	
0	101 P	do.		20 R		3-4		17			S	Yes	Bad	57	
233 334	101 80	Dakota Cow Springs	DL	Flow	4/30/21			4			PS, D	Yes	Fair	55	Polacca School.
0	90	Alluvium	DL	67	4/20/55	3-4		20			S	Yes	Fair	71	
840 1,005	165 245 P	Dakota Cow Springs	DL	550 R	6/ 5/35			20			D, S	Yes	Fair	66	Toreva Formation and Mancos Shale dry.
171	45 P	Toreva		150	6/ 3/35	3-4		7			D, S	Yes	Good		
376	318 P	Dakota and Cow Springs		Flow	8/ 8/52	6	8/ 8/52				D, S	Yes	Fair	61	
440	260 P	Cow Springs and Entrada and Carmel undiff.	LL	450	3/19/54			4		5	D	Yes	Fair		
		Landslide and talus		8.4	8/ 5/52						D, S	Yes	Fair	72	Walk-in dug well.
		Alluvium		5	4/13/55						D, S	Yes	Good	48	
		Landslide and talus									D	Yes	Good	50	Walk-in spring.
		Alluvium				25 R 12	8/ 5/52				S	Yes	Good	75	In Wepo Wash.
		Windblown sands				.5 .8	4/19/55				D, S, Irr	Yes	Good	42	Indian developed.
		Toreva				.8 E	4/19/55				D, S, Irr	Yes	Good	52	Do.
		Landslide and talus				.5 E	4/19/55				S, Irr	No	Good		Do.
		Toreva				.2	4/19/55				D, S	No	Good	43	
		do.				.5 E	4/28/55				S	No	Good		
		do.				.2 .5 E	4/19/55				D, S	No	Good		
		Landslide and talus									Un	No	Good	51	Was a ceremonial spring.
		do.				Dry	4/19/55				D	Yes	Good	71	Do.
		Toreva				1 E	7/10/52				D	Yes	Good		
		do.				.2 E	4/19/55				D, S	Yes	Good	67	"Ausuivi Spring."
		do.				3 E	7/10/52				D, S	No	Good	67	"Hocevi Spring."
		do.				.2	4/14/55				D, S	Yes	Good	64	
		do.				.5 E	4/21/55				D, S, Irr	No	Good	42	
		Alluvium				4 E	4/21/55				S	Yes	Good	56	
		Landslide and talus				.2 R .2	4/20/55				D, S	Yes	Good	60	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 6—Continued							
94 con.	Spring	6M-12	1.55-15.05	7 SE of Polacca	7/28	Head of canyon	6,310				Collection gallery	Tr
	do.	6M-21	12.90-13.45	0.25 SW of Sunlight Mission		Hillside	5,950				Collection well	Tr
	do.	6M-67	4.50-8.80	4 NE of Polacca		Side of mesa	5,830				Collection gallery	C, Tr
	do.	6M-68	7.10-10.50	1 NNE of Polacca		Side of cliff	5,830				None	N
95	Drilled well	6H-32	0.30-14.00	1 SW of Toreva	10/36	Broad valley	5,790	938	10 8	49 568	Open hole	P, Ta
	do.	6K-302	5.65-8.50	1 E of Oraibi	5/35	do.	5,570	715	10		do.	P, Ta
	do.	6K-305-95	4.30-16.25	6 SE of Toreva	5/51	Plain	5,700	415	6	415	Perforated 336-359	W, Tr
	do.	6K-309A	9.45-5.55	1 S of Hotevila	6/53	Top of mesa	6,420	172	10	172	Perforated	N
	do.	6K-309B	9.40-5.55	1 S of Hotevila	6/53	do.	6,410	164	10	164	do.	N
	do.	6K-310	11.05-12.20	6 SW of Oraibi	6/53	Plain	5,620	340	6	340	Perforated 320-340	W, Tr
	do.	6M-35	8.50-15.20	7 S of Oraibi	3/34	Broad valley	5,430	133	6 4	75 115	Perforated 86-106	W, Ta, Tr
	do.	6M-52	7.50-11.80	4 S of Oraibi	4/34	do.	5,480	435	4	390	Open hole	N
	do.	6M-52A	7.55-11.75	4 S of Oraibi	4/51	do.	5,480	450	6	450	Perforated 400-423	W, Tr
	do.	6M-60	4.90-6.45	3 NE of Oraibi	3/35	do.	5,660	180	8 6	18 98	Perforated 88-93	W, Ta, Tr
	do.	6M-61	2.90-3.90	6 NE of Oraibi	3/35	do.	5,720	164	5	164	Perforated 134-141	Ta, Tr
	do.	6M-64	4.45-1.25	8 NNE of Oraibi	3/35	Small valley	6,130	860	6	838	Open hole	W, Ta, Tr, Re
	do.	6M-302	6.60-8.50	Oraibi		Broad valley	5,630		10			P, Ta
	do.	6K-2C-1	8.50-15.20	7 S of Oraibi	1/56	do.	5,430	150	8 6	71 150	Perforated 95-142	W, Tr
	Dug well	6M-46	13.50-16.00	10 SW of Oraibi		Bank of wash	5,650	11	4 x 5	11	Masonry cribbed	H, Tr
	do.	6M-58	10.60-7.70	3 SSW of Hotevila		Side of mesa	5,950					H, Tr
	do.	6M-70	11.80-5.05	2 W of Hotevila		Edge of cliff	5,940	3.5	10 x 20	3.5	Masonry cribbed	N
	do.	6M-302A	6.65-8.65	0.25 S of Oraibi		Hillside	5,680	15.5		15.5	do.	H
	do.	6M-302B	6.70-8.70	0.25 S of Oraibi		do.	5,680					H
	Spring	6H-24	0.35-11.40	2 NNW of Toreva		Head of canyon	6,330				Collection gallery	Tr
	do.	6H-26	0.15-12.30	2 NNW of Toreva		do.	6,330				Collection well	Tr
	do.	6H-26A	0.10-12.50	1 NNW of Toreva		Side of cliff	6,360				do.	N
	do.	6H-27	1.85-13.35	2 W of Toreva		do.	6,320				do.	N
	do.	6H-27A	1.40-12.95	2 WNW of Toreva		Head of canyon	6,290				do.	N
	do.	6H-29	1.10-13.70	2 W of Toreva		Side of mesa	5,890				do.	N
	do.	6H-31	1.15-13.80	2 W of Toreva		do.	5,850				Collection gallery	Tr
	do.	6M-39	1.45-10.00	6 ESE of Oraibi		Head of canyon	6,220				do.	C, Tr
	do.	6M-59	9.75-6.85	2 S of Hotevila		Side of cliff	6,350				do.	C, Tr
	do.	6M-63	3.00-1.80	8 NNE of Oraibi		do.	5,860				Collection well	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 6—Continued									
		Toreva				2 R 4 E	7/ /28 4/21/55				S	No	Good	45	
		Landslide and talus				2 E	4/19/55				D, S	Yes	Good	50	
		do.				.2 R .5 E	4/20/55				D, S	Yes	Good	55	
		do.				.5 R .2 E	4/22/55				S	Yes	Good	69	
334 617	283 321 P	Entrada and Carmel undiff. Navajo		170	10/ 1/36			18	280		PS	Yes	Fair		Toreva public supply.
280	435 P	Dakota, Cow Springs, and Entrada and Carmel undiff.	DL	46	5/31/35			15			Un	No			Oraibi D.S.
210	205 P	Entrada and Carmel undiff.	LL	244	5/ 3/51	2-3		14	5	1½	D, S	Yes	Good	63	
0	172 P	Toreva	LL	134	11/ 3/53			5.5	15	1	D	Yes	Good	61	Hotevila School.
0	164 P	do.		115	11/ 3/53			4	45	2½	D	Yes	Good	61	Do.
200	140 P	Navajo	LL	233	11/ 2/53	2-3		14	11	1	D, S	Yes	Good	62	
107	26 P	do.	DL	45	3/16/34	2-3		21	25		Un	No			Dry Apr. 7, 1955; abandoned.
370	65 P	Entrada and Carmel undiff.		110	8/ 9/52			7				No			Abandoned.
378	72 P	do.	LL	111	2/27/53	3-4		35	10	2	D, S	Yes	Fair		
0	92	Alluvium		60	4/15/55	3-4		10			D, S	Yes	Fair	66	
0	137	do.	DL	80	3/26/35			8			Un	No			Abandoned.
835	25 P	Dakota	DL	465	3/30/35	2-3		25 R			D, S	Yes	Fair	67	Toreva Formation and Mancos Shale dry.
		Dakota, Cow Springs, and Entrada and Carmel undiff.									PS	Yes	Good	69	Oraibi public supply.
95	55 P	Navajo		48	1/25/56	3-4		25	10	1	D, S	No	Fair		
		Alluvium		7.6	3/30/55			.5 R			D, S	No	Good		
		Landslide and talus		Flow	4/21/55						D, S	Yes	Good	51	
		do.		Dry	4/20/55						S	Yes	Bad	68	Walk-in well.
		Alluvium		15.2	7/ 2/52						S	No	Good		
		do.										Yes	Good	46	Do.
		Toreva				.5 R					D, S	No	Good		
		do.				4 E .2 R	7/10/52 4/19/55				D, S	Yes	Good	66	"Suvebi Spring."
		do.				.2 R	4/19/55				D, S	No	Good	50	
		do.				.8 .1 E	4/20/55				D, S	Yes	Good	48	At Chimopovy Village.
		do.				.2 E	4/27/55				D, S	Yes	Good	60	
		Landslide and talus				Dry	9/20/55				D	No			Temporary; ceremonial spring.
		do.				.5 R .5	4/20/55				S	Yes	Bad	57	At Shongopovi D.S.
		Toreva				.2 R .5	4/14/55				D, S	Yes	Good	54	
		do.				3 R 3 E	4/21/55				S	No	Good	52	
		do.				3 E	4/15/55				D, S	Yes	Good		

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 6—Continued							
95 con.	Spring	6M-70A	11.75-5.15	2 W of Hotevila		Side of cliff	5,970				Collection gallery	C, Tr
	do.	6M-72	8.85-5.40	Bacobi		Head of canyon	6,280				Collection well	P
	do.	6M-72A	9.05-5.50	0.25 SW of Bacobi		do.	6,350				do.	P
	do.	Hotevila Spring	9.60-4.85	Hotevila		do.	6,260				Collection gallery	Re
96	Drilled well	6H-55	2.35-3.40	7 WNW of Hotevila	12/44	Broad valley	5,640	361	6	361	Perforated 310-335	W, Tr, Re
	do.	6K-300	6.90-14.00	14 SW of Hotevila	3/35	do.	5,380	222	6	165	Open hole	W, Ta, Tr
	do.	6K-321	4.50-16.50	14 SW of Oraibi	6/55	Hillside	5,850	520	8 6	68 520	Perforated 370-390 430-520	W, Tr
	do.	6K-322	1.00-10.50	8 WSW of Oraibi	7/55	do.	5,840	557	6	554	Perforated	W, Tr
	do.	6M-174	4.45-8.80	10 W of Oraibi	3/35	Broad valley	5,490	410	8 6	40 230	Perforated 181-218	W, Ta, Tr
	Dug well	6M-44	4.25-13.90	12 SW of Hotevila	4/29	Bank of wash	5,650	9	4 x 6	9	Masonry cribbed	H, Tr
	do.	6M-45	0.90-16.40	11 SW of Oraibi		do.	5,650	13	6 x 6	13	do.	H, Tr, Ta
	do.	6M-50	2.50-11.05	9 SW of Hotevila		Bed of wash	5,610	7.5	4 x 5	7.5	Rock cribbed	H, Tr
	do.	6M-183	5.30-5.00	10 W of Hotevila		do.	5,880	12.5	4 x 6	12.5	do.	H, Tr
	do.	6M-183A	5.30-4.90	10 W of Hotevila		do.	5,880	9	4 x 4	9	do.	Tr
112	None											
113	Drilled well	6H-12	3.15-4.55	11 SSE of Polacca	9/33	Broad valley	5,820	194	5 3	144 194	Perforated 150-170	W, Ta, Tr
	do.	6H-13	5.25-5.75	12 S of Polacca	9/33	do.	5,730	350	5 3	293 350	Perforated	W, Ta, Tr, Re
	do.	6M-17	7.05-2.90	8 S of Polacca	7/20	do.	5,830	148	5	120	Perforated 108-114	W, Ta, Tr, Re
	do.	6M-17A	7.10-2.95	8 S of Polacca		do.	5,830		4			P
	do.	6M-38	11.10-8.05	14 SSW of Polacca	/33	do.	5,590	1,000				N
	do.	6GS-113-1	8.70-4.00	10 S of Polacca	8/54	do.	5,780	191				N
	do.	6GS-113-2	11.40-5.75	12 SSW of Polacca	7/54	Top of mesa	5,700	360				N
	Spring	6M-13	1.90-1.10	9 SE of Polacca		Side of cliff	6,440				Collection gallery	C, Tr
	do.	6M-15	1.55-0.90	9 SE of Polacca		do.	6,350				do.	Tr, Ta
	do.	6M-16	3.35-2.55	10 SE of Polacca		Hillside	6,180				do.	Tr
114	Drilled well	6K-304	5.70-2.65	8 SW of Toreva	11/39	Sand dune	5,440	200	6	200	Perforated	W, Ta, Tr
	do.	6K-312	8.65-5.05	12 SW of Toreva	7/53	Stripped plain	5,570	145				N
	do.	6M-25	5.55-9.00	14 SSW of Toreva	11/33	Broad valley	5,180	97	5	97	Perforated 69-72	W, Ta, Tr
	do.	6M-26	1.25-5.20	9 S of Toreva	11/33	do.	5,300	107	5	107	Perforated 69-72	W, Ta, Tr
	do.	6M-29	1.40-1.80	6 SSW of Toreva	3/34	do.	5,460	200	5	200	Perforated 161-163	W, Ta, Tr, Re
	Dug well	6M-27	4.10-5.10	10 SSW of Toreva		Bank of wash	5,260	11	6	11	Masonry cribbed	W, Tr, Ta
	Spring	6M-24	3.50-6.60	11 SSW of Toreva	7/32	Bed of wash	5,210				Masonry wall	Ta, Re
	do.	6M-27A	3.95-5.10	10 SSW of Toreva		do.	5,260				Collection well	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 6—Continued															
		Toreva				.1 E	4/20/55				D, S	No	Good	48	
		do.				.5 R 15 E	6/12/52				D	Yes	Good	58	Dry, September 1956; Bacobi water supply 2.
		do.				7.5	6/12/52				D	No	Good		Dry, September 1956; Bacobi water supply 1.
		do.				7.2	4/21/54				D	Yes	Good		Hotevila Spring.
65 310	245 51 P	Entrada and Carmel undiff. Navajo		212	7/ 8/54	2-3		15		1	D, S	Yes	Good	63	
18 202	184 20 P	Entrada and Carmel undiff. Navajo		90	6/ 5/53	3-4		9		3	S	Yes	Good	60	
220 380	160 140 P	Cow Springs Entrada and Carmel undiff.		430	6/22/55	2-3		13	None	3	D, S	Yes	Good		Mancos Shale dry.
480	77 P	Navajo	LL	486	7/21/55	2-3		16	12	1	D, S	Yes	Good		
78	332 P	Cow Springs and Entrada and Carmel undiff.		80	3/12/35	3-4		6		8	D, S	Yes	Fair	60	
		Landslide and talus		6	3/30/55						D, S	Yes	Fair	48	
		Alluvium		11.5	3/30/55						D, S	Yes	Bad	47	
		do.		6.9	3/30/55						D, S	Yes	Bad	47	
		Landslide and talus		7	4/ 6/55						D, S	Yes	Good	50	
		do.		6.9	4/ 6/55						D, S	Yes	Good	50	
136	58 P	Dakota	DL	65	7/ 4/51	3-4		20			D, S	Yes	Fair	62	Mancos Shale dry.
140	210 P	Entrada and Carmel undiff.	DL	110	4/13/55	3-4		15			D, S	Yes	Good	64	
0	112	Alluvium		54	4/13/55	3-4		6			D, S	Yes	Good	60	
		do.		54	2/26/53	3-4					D, S	No			
		Moenave and Wingate (Lukachukai)		Dry								No			Show of water, 1 gpm reported; abandoned.
110	81 P	Cow Springs and Entrada and Carmel undiff.	LL	118	4/13/55						Un	No			Abandoned, insufficient yield.
0	260	Entrada and Carmel undiff. and Navajo	LL	223	4/13/55			.2			Un	No			Do.
		Toreva				1.5 R .2	4/13/55				D, S, Irr	Yes	Good	52	
		do.				1.5	4/13/55				D, S, Irr	Yes	Good	63	
		Landslide and talus				.5	4/13/55				D, S	Yes	Good	52	
75	125 P	Entrada and Carmel undiff.		140	2/26/53	3-4		20			D, S	Yes	Good	63	
0	103	Navajo	LL	91	11/ 5/53			.2			Un	No			Abandoned.
0	72	Alluvium	DL	48	4/ 7/55	3-4		12			S	Yes	Bad	60	
0	69	do.		32	4/ 7/55	3-4		8			D, S	Yes	Fair	61	
0	160	do.	DL	83	4/ 7/55	3-4		8			S	Yes	Bad	62	
		do.		7.6 5.2	9/13/50 4/ 7/55	3-4	4/ 7/55				D, S	Yes	Good	66	
		do.				1 R 15 E	7/ /32 4/ 7/55				D, S	Yes	Fair	55	
		do.				3 E	4/ 7/55				S	Yes	Good	54	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 6—Continued							
114 con.	Spring	6M-31	10.70-3.45	13 SSW of Oraibi	2/27	Side of cliff	5,320				Collection gallery	Tr
	do.	6M-32	11.25-4.15	14 SSW of Oraibi		do.	5,320				do.	Tr
	do.	6M-33	11.90-5.30	15 SSW of Oraibi	3/27	do.	5,320				do.	Tr
115	Drilled well	6H-79	3.00-3.35	16 SW of Toreva	10/36	Stripped plain	5,470	275	10 6	21 263	Perforated	W, Re
	do.	6K-307	0.10-0.30	12 SW of Toreva	1/52	Plain	5,580	635	6	635	do.	W, Tr
	do.	6K-310(N)	4.10-3.15	18 N of Tolani Lake D.S.	8/53	Sand dune	5,600	405	8 6	18 405	Perforated 325-405	W, Ta, Tr
	Spring	6M-54	0.20-5.50	16 SSW of Oraibi	7/24	Side of cliff	5,260				Collection gallery	Tr, Re
					DISTRICT 7							
72	None											
73	do.											
92	Drilled well	7H-1	10.55-16.25	5 W of Steamboat D.S.	/35	Top of mesa	6,700	665	5	595	Open hole	W, Ta, Tr
	Spring	7H-2	10.45-14.10	6 WNW of Steamboat D.S.		Small canyon	6,930				Collection gallery	C, Tr
	do.	7H-16	11.80-13.25	8 WNW of Steamboat D.S.		do.	6,910				Masonry wall	Tr
	do.	7H-17	12.95-13.05	9 WNW of Steamboat D.S.	5/30	do.	6,770				do.	C, Tr
	do.	7H-28	8.10-5.10	12 N of Steamboat D.S.	9/30	Head of canyon	7,200				do.	C, Tr, Re
	do.	7H-31	11.70-7.85	11 NNW of Steamboat D.S.		do.	7,150				Collection gallery	C, Tr
	do.	7R-36	9.20-2.85	15 NNW of Steamboat D.S.		Edge of mesa	7,020				None	Re
	do.	7R-37	10.90-5.15	13 NNW of Steamboat D.S.		Side of mesa	6,750				Masonry wall	Tr, Re
	do.	7R-38	12.90-6.20	13 NW of Steamboat D.S.		Bank of wash	6,730				Collection well	C, Tr
93	Drilled well	7H-37	1.90-16.80	6 ESE of Jeddito T.P.	12/34	Top of mesa	6,740	920	10 6	40 905	Open hole	W, Ta, Tr
	do.	7K-361	6.35-4.00	10 NNE of Keams Canyon	6/54	Broad valley	6,200	471	8	471	Perforated 375-450	P, Ta
	do.	7K-364	4.50-11.50	6 ENE of Keams Canyon	3/55	Top of mesa	6,700	602	10 8 5	44 110 260	Perforated 110-150 190-220	W, Tr
	do.	7T-353	6.80-2.85	12 SE of Pinon	6/51	Broad valley	6,150	500	6	420	Open hole	W, Ta, Tr, Re
	do.	Jeddito T.P.	7.70-15.15	Jeddito T.P.	/54	Edge of mesa	6,340	180	6	180	Perforated 120-180	P, Ta
	Dug well	7H-26	3.60-12.75	5 NE of Jeddito T.P.		Bottom of canyon	6,550	14.5	8	14.5	Masonry cribbed	H, Tr, A
	do.	7R-40	5.50-5.95	9 NE of Keams Canyon		Side of mesa	6,430	3	4 x 4	3	Log cribbed	N
	Spring	7H-6	2.05-6.60	11 NE of Keams Canyon		Hillside	6,710				Masonry wall	Tr
	do.	7H-11	9.80-16.05	2 WSW of Jeddito T.P.	8/32	Head of canyon	6,300				Collection gallery	C, Tr
	do.	7H-32	7.40-15.00	1 N of Jeddito T.P.	9/29	Edge of mesa	6,380				do.	C, Tr
	do.	7H-33	7.65-15.20	1 NNW of Jeddito T.P.		do.	6,340				Collection well	C, H, Tr
	do.	7H-34	6.90-14.95	1 NE of Jeddito T.P.		do.	6,270				do.	Tr
	do.	7H-242	11.30-17.00	4 WSW of Jeddito T.P.		Head of canyon	6,280				Collection gallery	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 6—Continued									
		Navajo				.5 R .5	2/ /27 4/ 7/55				D, S	No	Good	56	"Burro Springs."
		do.				.2	4/ 7/55				D, S	Yes	Good	56	
		do.				.2 R .5	3/ /27 4/ 7/55				D, S	No	Good	56	
5	210	do.		147	11/ 4/53	3-4		5		5	D, S	Yes	Good	69	
130 480	350 150	Entrada and Carmel undiff. Navajo	LL	185	11/ 4/53	3-4		38	90	¾	D, S	Yes	Fair	59	
310	95 P	Tongue of Navajo in Kayenta	LL	284	8/26/53	2-3		6	25	1	D, S	Yes	Good	61	Originally drilled as 5K-310.
		Navajo				1 R 1 E	7/ /24 7/ 9/52				S	Yes	Good	72	"Shonto Springs."
						DISTRICT 7									
575	90 P	Dakota	DL	550	/35	1-2		18			D, S	No	Fair		Bidahochi Formation dry.
		Toreva				3 R 1.5	6/16/54				D, S	Yes	Good	56	Seeps along canyon for an eighth of a mile.
		do.				1 R .2	6/16/54				D, S	Yes	Good	57	
		do.				.8	6/16/54				D, S	Yes	Good	65	"Pete Spring."
		do.				.8 R .4	9/ /30 6/17/54				D, S	Yes	Good	57	
		do.				.5 R .5	6/17/54				D, S	Yes	Good	57	Rock wall for flood protection.
		do.				3 R 5	6/18/54				D, S, Irr	Yes	Good	51	
		Landslide and talus				4.2 R 3.5	6/17/54				D, S	Yes	Good	55	
		do.				3 R .5	6/18/54				D, S	No	Good	65	
860	60 P	Dakota		589	4/25/55	2-3		5			D, S	Yes	Good	55	Bidahochi Formation and Mancos Shale dry.
370	101 P	do.	LL	80	6/15/54	10	3/31/55	36	156	1½	D	Yes	Fair	59	Low Mountain Trailer School.
0 110	110 300	Bidahochi Toreva	LL	209	3/17/55	2-3		2	11	3½	D, S	Yes	Good	56	
420	80 P	Dakota		59	6/12/51	3-4		16	370	2½	D, S	Yes	Fair	60	
80	100 P	Toreva		68	8/13/54	5	8/13/54	11	70		D	Yes	Good	71	
		do.		10.5	6/17/54						D, S	Yes	Good	53	Prior to 1939 called "President Wilson Spring."
		Landslide and talus		2.8	6/18/54						S	No			Temporary, Indian developed.
		Toreva				.5 R .8 E	6/18/54				D, S	Yes	Good	51	
		do.				.5 R Dry	8/ /32 6/21/54				Un	No			Temporary.
		do.				1.2 R Dry	9/ /29 6/21/54				D, S	Yes	Good	54	Dry about 6 months of the year.
		do.				< .1	6/19/54				D	Yes	Good	54	Temporary; Jeddito T.P. Spring.
		do.				Dry	6/19/54				Un	Yes	Good	54	Temporary.
		do.				.5 R .1	8/13/54				D, S	Yes	Good	83	"Skunk Springs."

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 7—Continued							
93 con.	Spring	7R-34	1.05-0.35	16 NE of Keams Canyon		Side of mesa	6,690				Collection well	C, Tr
	do.	7R-39	1.10-6.40	12 NE of Keams Canyon		Head of canyon	6,510				Masonry wall	C, Tr
	do.	7R-41	3.30-5.20	11 NE of Keams Canyon		do.	6,490				Collection well	C, Tr
	do.	7R-43	5.95-2.15	12 NNE of Keams Canyon		Base of cliff	6,380				Masonry wall	C, Tr
111	Drilled well	7K-365	12.25-1.90	6 WSW of Steamboat D.S.	3/55	Narrow valley	6,570	494	8 6	207 494	Perforated 405-470	W, Ta, Tr
112	do.	7H-15	7.00-3.25	5 S of Jeddito T.P.	5/36	Top of mesa	6,670	993	8 6	178 879	Open hole	W, Ta, Tr
	do.	7H-45	10.40-13.30	8 WSW of White Cone T.P.	5/36	Broad valley	6,180	264	8	212	do.	W, Ta, Tr
	do.	7H-52	5.50-10.30	2 W of White Cone T.P.	12/34	do.	6,050	424	8	424	Perforated	W, Ta, Tr
	do.	7K-355	12.80-8.05	8 W of White Cone T.P.	8/52	do.	5,970	536	6	536	Perforated 494-536	W, Ta, Tr
	do.	7K-362	1.50-9.60	2 ENE of White Cone T.P.	2/55	do.	6,100	346	8 6	210 346	Perforated 235-322	W, Tr
	do.	7K-363	9.20-6.60	6 NW of White Cone T.P.	4/55	Small valley	6,190	772	6	772	Perforated 728-751	W, Tr
	do.	White Cone T.P.	3.50-10.10	White Cone T.P.	8/54	Broad valley	6,100	455	6	455	Perforated	P, Ta
	Dug well	7H-51	3.50-10.00	White Cone T.P.	/26	Dry lakebed	6,100	25	3	25	Masonry cribbed	P, Ta, Tr
	do.	7H-55	10.90-4.35	10 NW of White Cone T.P.		Bed of wash	6,120	11	5	11	do.	H, Tr
	do.	7H-56	12.45-3.25	11 NW of White Cone T.P.		Side of mesa	6,150	10	6 x 5	8	do.	Tr
	do.	7M-112	1.25-9.20	2 E of White Cone T.P.		Dry lakebed	6,070	24	3	24	do.	H, Tr
	Spring	7H-44	13.45-13.10	10 WSW of White Cone T.P.	8/30	Head of canyon	6,240				Collection well	H, C, Tr
	do.	7H-49	4.25-16.45	6 S of White Cone T.P.		do.	6,170				Collection gallery	C, Tr
	do.	7H-53	9.30-1.15	11 NNW of White Cone T.P.	8/32	Base of cliff	6,320				Collection well	C, Tr
	do.	7H-62	2.50-10.65	2 SE of White Cone T.P.	5/30	Hillside	6,300				Collection gallery	Tr
	do.	7H-63	2.10-10.85	2 SE of White Cone T.P.	3/26	do.	6,230				do.	C, Tr
	do.	7H-155	7.65-13.65	6 SW of White Cone T.P.		Edge of mesa	6,270				Masonry wall	C, Tr
	do.	7H-156	8.00-16.20	8 SW of White Cone T.P.		Head of canyon	6,300				Collection gallery	C, Tr
	do.	7H-190	2.35-16.50	6 S of White Cone T.P.		Side of mesa	6,100				do.	Tr, Re
	do.	7H-191	3.10-15.20	6 S of White Cone T.P.		do.	6,200				do.	C, Tr, Re
	do.	7H-220	2.30-11.40	2 SE of White Cone T.P.		Hillside	6,260				do.	C, Tr
	do.	7H-237	12.60-13.15	10 WSW of White Cone T.P.		Side of mesa	6,350				do.	Tr
113	Drilled well	7K-369	0.75-12.50	10 ENE of Teastoh T.P.	5/56	Broad valley	6,010	497	10			W, Ta
	do.	Seba Dalkai 1	10.80-17.15	Seba Dalkai School	10/55	Bank of wash	5,580	34	12	14	Gravel packed, screen 14-34	N
	Dug well	7H-81	11.15-17.10	Seba Dalkai School	10/31	do.	5,570	35 R		35 R	Concrete caisson	P, Ta
	do.	7H-81A	11.30-17.10	Seba Dalkai School		Bed of wash	5,560	9	3	9	Masonry cribbed	H, Tr
	do.	7H-180	8.70-17.10	Teastoh T.P.		Bank of wash	5,780	50 R	6 x 8	50 R	do.	W, Tr, Ta
	do.	7K-302	10.60-13.20	4 NNW of Teastoh T.P.		do.	5,660	16.5	5	16.5	do.	H, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 7—Continued									
		Landslide and talus				.5 R .5	6/18/54				D, S	Yes	Fair	64	
		Toreva				1.5 R 7 E	6/18/54				D, S	Yes	Good	56	
		do.				.2 R Dry	6/18/54				Un	No			
		do.				.5 R .5	6/18/54				D, S	Yes	Good	64	Bidahochi Formation dry; white salty deposits (alkali).
390	104 P	Dakota	DL	287	3/ 4/55	2-3		16	73	1¼	D, S	Yes	Good	58	Bidahochi Formation dry.
885	108 P	do.	DL	721	5/ 4/36	1-2		5			D, S	Yes	Good	65	Do.
155	109 P	do.	DL	142	6/17/54	3-4		30	75		D, S	Yes	Good	63	Do.
175	249 P	Cow Springs and Entrada and Carmel undiff.		131	1/26/52	3-4		50	25		D, S	Yes	Fair	55	
190	346 P	Entrada and Carmel undiff.	LL	73	8/27/52	3-4		17	80	1	D, S	Yes	Good	58	Show of Mancos Shale water.
200 320	120 26 P	Cow Springs Entrada and Carmel undiff.		162	2/16/55	3-4		32	76	1	D, S	Yes	Good	55	Show of Bidahochi Formation water.
391	381 P	Cow Springs and Entrada and Carmel undiff.		234	4/12/55	2-3		14	261	2½	D, S	Yes	Fair	60	
190 230	40 225 P	Cow Springs Entrada and Carmel undiff.	LL	172	8/15/54	3-4		20	90	¾	D, S	Yes	Good	54	Show of Bidahochi Formation water.
		Alluvium		12.4	9/14/50	1 R					D, S	Yes	Good	56	White Cone T.P. well.
		do.		Dry	6/17/54						Un	No			
		Landslide and talus		7.1	6/17/54						D, S	No	Good		
		Alluvium		23.7	6/17/54						Un	No			
		Spring deposits				1 R .5	8/ /30 6/17/54				D, S	No	Good		"Cottonwood Spring."
		do.				.5	6/18/54				D, S	Yes	Good	61	"Narrow Cottonwood Spring."
		Toreva				.5 R < .1	8/ /32 8/ 8/52				Un	No	Good	50	
		Spring deposits				.2 R	5/ /30				S	No	Fair		
		do.				.5 R .2 E	3/ /26 7/ 3/51				D, S	Yes	Good	70	
		do.				.5 R .8 E	9/14/50				D, S	Yes	Good	65	
		do.				.2 R < .1	6/18/54				D, S	No	Good		
		do.				.2 R .2 E	6/18/53				D, S	No	Fair		
		do.				.1 R .2	6/18/53				D, S	No	Good		"Rabbit Spring."
		do.				.5 R < .1	6/17/54				S	No	Good		
		do.				.4 R .2 E	6/17/54				S	No	Good		"Rainbow Spring."
80	417	Entrada and Carmel undiff.	DL	59	7/24/56	3-4		8	370	2½	D, S	Yes	Good		
0	34	Alluvium		3	10/22/55			8	16	1	Un	No	Good		Similar data for test holes 2, 3, and 4.
		do.		11	9/ 1/53			7	20	12	PS	Yes	Good	61	Pump test Sept. 1, 1953; Seba Dalkai School well.
		do.		7.9	7/11/52						D, S	Yes	Good	62	
		do.		47	7/ 4/51						D, S	Yes	Good	62	Owned by Teastoh T.P.
		do.		12.5	7/11/52						D, S	Yes	Good	60	Frank Nez well.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 7—Continued							
113 con.	Dug well	7K-315	9.35-15.10	2 NNW of Teastoh T.P.		Bank of wash	5,750	5.5	10 x 14	5.5	Masonry cribbed	H, Tr
	Spring	7H-69	3.90-11.00	8 NE of Teastoh T.P.		Shallow canyon	6,000				Collection gallery	C, Tr
	do.	7H-75	6.70-14.70	4 NE of Teastoh T.P.	7/32	do.	6,150				do.	C, Tr
	do.	7H-76	5.50-15.70	4 ENE of Teastoh T.P.		Head of canyon	6,390				Collection well	Tr
	do.	7H-78	10.35-15.60	3 NW of Teastoh T.P.		Edge of terrace	5,700				Collection gallery	Tr
	do.	7H-79	10.20-15.75	2 NW of Teastoh T.P.		Bank of wash	5,720				do.	N
	do.	7H-179	5.30-12.95	6 NE of Teastoh T.P.	10/25	Shallow canyon	6,290				do.	C, Tr
	do.	7H-233	2.50-15.15	6 ENE of Teastoh T.P.	10/25	Head of canyon	6,450				do.	C, Tr
	do.	7H-234	2.30-13.80	8 ENE of Teastoh T.P.	/23	Base of cliff	6,380				Collection well	C, Tr
	do.	7H-236	3.80-12.05	7 NE of Teastoh T.P.	9/30	Shallow canyon	6,400				Collection gallery	C, Tr
114	Dug well	7H-218	1.55-16.70	6 W of Seba Dalkai School		Bank of wash	5,360	18	4	18	Masonry cribbed	W, Tr, Ta
127	Drilled well	7H-121	10.80-12.60	10 SE of Indian Wells T.P.	5/38	Broad valley	5,550	109	6	109	Perforated	W, Ta, Tr
	do.	7H-121A	10.8-12.6 A	10 SE of Indian Wells T.P.	5/38	do.	5,550 E	190	6	190	do.	N
	Dug well	7H-120A	10.65-13.20	11 SE of Indian Wells T.P.		Head of canyon	5,650	6	5	6	Masonry cribbed	A
	do.	7H-126	11.65-13.65	10 SE of Indian Wells T.P.		Bank of wash	5,640	7	5 x 7	7	do.	H, Tr, A
	Spring	7H-119	8.95-10.55	11 ESE of Indian Wells T.P.		do.	5,740				Collection gallery	C
	do.	7H-119A	9.00-10.60	11 ESE of Indian Wells T.P.		Side of terrace	5,740				do.	C
	do.	7H-125	13.15-13.60	9 SE of Indian Wells T.P.		Base of cliff	5,580				do.	C, Tr
	do.	7H-129	13.15-14.10	10 SE of Indian Wells T.P.		Bank of wash	5,610				do.	Tr
	do.	7H-130	13.40-15.05	10 SE of Indian Wells T.P.		do.	5,660				do.	Tr
128	Drilled well	7H-246	13.4-8.8 A	8 WSW of Indian Wells T.P.	4/35	Broad valley	6,160 E	1,012				N
	do.	7K-367	11.30-7.30	8 W of Indian Wells T.P.	7/55	Edge of mesa	6,300	522	8 6 5	12 410 522	Perforated 300-409 470-521	W, Tr
	do.	7GS-128-3	3.60-6.40	Bidahochi T.P.	10/54	Base of butte	5,750	310				N
	Dug well	7H-114	4.00-5.60	1 NE of Indian Wells T.P.		Bank of wash	5,710	8	4 x 6	8	Masonry cribbed	N
	do.	7H-116	2.20-6.55	2 E of Bidahochi T.P.	10/27	do.	5,750	9	4	9	do.	Tr
	do.	7H-117	0.85-6.35	3 E of Bidahochi T.P.		do.	5,920	10	4	10	do.	Tr
	do.	7H-117A	0.75-6.40	3 E of Bidahochi T.P.		Bed of wash	5,920	6	3 x 3	6	Log cribbed	Tr
	do.	7H-118	0.55-10.10	6 SE of Indian Wells T.P.		Bank of wash	5,730	13	4	13	Masonry cribbed	H, Tr
	do.	7H-123	0.30-11.90	7 SE of Indian Wells T.P.	6/32	Small valley	5,590	8.5	3	8.5	do.	H
	do.	7H-148	3.10-13.10	7 S of Indian Wells T.P.		do.	5,600	7	2 x 2	7	do.	H, Tr
	do.	7H-154	5.05-7.50	2 S of Indian Wells T.P.		Bed of wash	5,770	10	4	10	do.	H, Tr, A
	do.	7H-157	8.45-0.90	6 NW of Indian Wells T.P.		Bank of wash	6,090	37	2	37	Concrete caisson	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 7—Continued									
		Terrace		3.1	7/11/52						D, S	Yes	Good	60	Comar vat well.
		Landslide and talus				< .1	6/16/54				D, S	No	Good		"Skull Spring."
		Dakota				1 R .1 E	7/ /32 6/16/54				D, S	No	Good		
		Spring deposits				1 R .2 E	6/16/54				S	Yes	Good	64	"Lukai Spring."
		Terrace and windblown sands				5 R 1.5	4/18/51				D, S	No	Good	57	
		do.				20 R 8	6/16/54				D, S	Yes	Good	60	"Comar Springs."
		Spring deposits				1.2 R 1 E	10/ /25 6/16/54				D, S	Yes	Good	64	
		do.				.5 R .1 E	10/ /25 6/16/54				S	No	Good		
		do.				1 R .5 E	/23 6/16/54				S	No	Good		"Shonto-hi Spring."
		do.				.5 R .5 E	9/ /30 6/16/54				S	No	Good		"Horse Spring."
		Alluvium		11.6	6/15/54	3-4	6/15/54				D, S	Yes	Fair	63	
0	109 P	do.		90 R	5/ 3/38	3-4		5			S	Yes	Bad	59	
0	167	do.	DL	90 R	5/ 3/38			7			Un	No	Bad		Abandoned.
		Chinle (Owl Rock)		5.5	5/26/54						D, S	No	Good		Owned by Burton Morse.
		do.		7.5	5/26/54						S	No			"Hosteen Say-bito Spring."
		Terrace				< .1	5/26/54				D	Yes	Good	65	
		do.				< .1	5/26/54				D	No	Good		
		Chinle (Owl Rock)				.1 R					D, S	Yes	Good	60	
		do.				.1 R .1	5/26/54				D, S	Yes	Good	67	
		do.				.5 R .1	5/26/54				D, S	No	Good	65	
720	292 P	do.	DL					.2	None	29	Un	No	Bad		Abandoned, Bidahochi Formation dry; seep of bad-quality water reported.
10	512 P	Bidahochi (volcanic)	LL	191	7/13/55	3-4		18	None	1	D, S	Yes	Fair	64	
0	310 P	Wingate (Rock Point)		Dry								No			Abandoned.
		do.		Dry	5/27/54						Un	No			Do.
		do.		Dry	5/28/54			2 R			Un	No			Do.
		Alluvium		8.8	5/28/54						S	Yes	Good	59	
		do.		5.6	5/28/54						S	No	Good		100 yards from 7H-117.
		Wingate (Rock Point)		11.6 12.1	6/17/53 5/28/54						S	Yes	Fair	60	
		Terrace		7.3	9/ 9/50			1.5 R			D, S	Yes	Good	61	
		Chinle (Owl Rock)		6	6/17/53						D	No	Fair		
		Wingate (Rock Point)		8.6	5/26/54						D	Yes	Fair	65	
		Alluvium		Dry	5/27/54						Un	No			Abandoned.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 7—Continued							
128 con.	Dug well	7H-165	9.80-8.10	5 WSW of Indian Wells T.P.		Bank of wash	5,920	18 R	5	18 R	Masonry cribbed	H, Tr
	do.	7H-175	12.40-13.45	8 E of Castle Butte T.P.		Bed of wash	5,720	9.5	5	9.5	do.	H, Tr
	do.	7H-227	11.60-15.80	8 ESE of Castle Butte T.P.		Bank of wash	5,480	25	2 x 2	25	do.	H, Tr
	do.	7H-241	6.50-0.65	6 NNW of Indian Wells T.P.		do.	6,010	22	2	22	Concrete caisson	Tr
	do.	7H-244	10.90-5.10	6 W of Indian Wells T.P.		do.	6,360	13	4	13	Masonry cribbed	Tr
	do.	7K-312	9.20-8.75	5 WSW of Indian Wells T.P.		do.	5,840	16 R	5	16 R	do.	H, Tr
	do.	7GS-128-1	9.50-10.40	6 SW of Indian Wells T.P.		Bed of wash	5,750	4	4 x 4	4	Log cribbed	Tr
	do.	7GS-128-2	9.90-11.40	8 SW of Indian Wells T.P.		do.	5,640	3.5	3 x 6	3.5	Steel caisson	N
	Spring	7H-47	5.60-0.50	6 N of Indian Wells T.P.		Edge of cliff	6,120				Masonry wall	Tr
	do.	7H-113	4.90-6.00	0.25 N of Indian Wells T.P.		Small valley	5,800				Collection gallery	C, Tr
	do.	7H-113A	4.95-6.25	0.25 W of Indian Wells T.P.		do.	5,810				do.	C, Tr
	do.	7H-115	3.50-6.45	Bidahochi T.P.		Side of butte	5,800				Collection well	P, Ta
	do.	7H-122	0.75-11.85	7 SE of Indian Wells T.P.		Edge of terrace	5,510				Collection gallery	Tr
	do.	7H-132	2.25-13.60	8 SSE of Indian Wells T.P.		Bank of wash	5,570				do.	Tr
	do.	7H-147	3.15-13.30	8 S of Indian Wells T.P.	8/27	Small valley	5,600				do.	Tr, Re
	do.	7H-149	6.90-11.45	6 SSW of Indian Wells T.P.		Small canyon	5,760				do.	Tr, Re
	do.	7H-151	5.45-8.80	2 SSW of Indian Wells T.P.	11/31	Base of cliff	5,760				do.	H, C, Tr
	do.	7H-153	5.10-8.35	2 S of Indian Wells T.P.	10/24	Bank of wash	5,730				do.	Tr
	do.	7H-158	7.90-0.60	6 NNW of Indian Wells T.P.		Side of cliff	6,170				do.	Tr
	do.	7H-158A	8.05-0.60	6 NNW of Indian Wells T.P.		do.	6,180				do.	Ta
	do.	7H-159	8.50-2.50	6 NW of Indian Wells T.P.		do.	6,270				do.	Tr
	do.	7H-161	6.40-3.95	3 NW of Indian Wells T.P.		do.	6,190				do.	Tr
	do.	7H-162	9.15-5.20	4 WNW of Indian Wells T.P.		Bed of wash	6,250				None	Re
	do.	7H-164	9.85-6.75	5 W of Indian Wells T.P.		Head of canyon	6,240				Collection gallery	C, Tr
	do.	7H-186	13.85-12.30	6 E of Castle Butte T.P.		Base of cliff	-5,900				do.	Tr, Re
	do.	7H-187	5.90-8.95	3 SSW of Indian Wells T.P.		Base of butte	5,710				do.	C, Tr
	do.	7H-228	8.45-5.90	4 W of Indian Wells T.P.		Narrow valley	6,050				None	Re
	do.	7H-238A	8.50-0.75	6 NW of Indian Wells T.P.		Side of cliff	6,160				do.	Tr
	do.	7H-239	9.10-0.35	8 NW of Indian Wells T.P.		Bank of wash	6,220				Collection well	C, Tr
	do.	7H-244A	10.85-5.00	6 W of Indian Wells T.P.		Head of canyon	6,400				Collection gallery	C, Tr
	do.	7K-303	8.05-6.40	3 W of Indian Wells T.P.		Bank of wash	6,020				None	N
	do.	7K-313	1.80-3.60	4 NE of Indian Wells T.P.		Side of canyon	6,200				Collection gallery	H, C, Tr
129	Drilled well	7H-245	11.1-5.0 A	4 S of Seba Dalkai School	5/36	Broad valley	5,800 E	511				N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 7—Continued									
		Alluvium		9.9	6/17/53						D, S	Yes	Good	60	
		do.		9.1	6/18/54						D, S	No	Fair		
		do.		Dry	6/18/54						Un	No			Abandoned.
		do.		Dry	5/27/54						Un	No			Well may be filled in partially by rock.
		Spring deposits		11.3	5/26/54						D, S	Yes	Good	55	
		Wingate (Rock Point)		9.6	6/18/53						S	No	Fair		
		Alluvium		3.1	6/18/54						S	No	Fair		
		do.		3.2	6/18/54						D	No	Fair		Rectangular steel box casing.
		Spring deposits				1 E	5/27/54				D, S	Yes	Good	58	
		Bidahochi				1.5	9/ 9/50				D	Yes	Good	63	"Indian Wells Spring."
		Wingate (Rock Point)				< .1	5/26/54				D, S	No	Good		Fluctuation is great.
		do.				< .1	5/28/54				D	Yes	Good	67	Bidahochi T.P. Spring.
		Chinle (Owl Rock)				.1 R Dry	5/28/54				Un	No			Abandoned.
		do.				.5 R Dry	6/17/53				Un	No			Do.
		do.				.6 R 1 E	8/ /27 6/17/53				S	Yes	Good	58	
		Spring deposits				.5 R 1.8	5/26/54				D, S	Yes	Good	67	
		Wingate (Rock Point)				1 R 2 E	5/26/54				D, S	Yes	Good	68	Indian Wells dipping vat.
		do.				3 R 1.5	10/ /24 5/26/54				D, S	Yes	Good	61	
		Spring deposits				.8	5/18/53				S	No	Fair		Semideveloped.
		do.				.8	5/27/54				D, S	Yes	Good		Piped into Na-ah-tee T.P.
		do.				.2 R .8	5/27/54				D, S	Yes	Good	54	Concrete face with door.
		do.				3	5/27/54				D, S	Yes	Good	58	
		do.				3 R 1 E	5/26/54				D, S	Yes	Good	60	Indian developed.
		do.				1 R .1	5/26/54				D, S	Yes	Good	64	
		do.				1 R .1	6/18/54				S	Yes	Good	70	
		Wingate (Rock Point)				.2 R .2 E	5/26/54				D, S	Yes	Good	74	"Dog Springs."
		Spring deposits				2 R < .1	5/26/54				S	No	Fair		Indian developed.
		do.				.2	6/18/53				D	Yes	Good	63	Semideveloped.
		do.				2 R .2	5/27/54				D, S	Yes	Good	63	
		do.				.1	5/26/54				D, S	No	Good	55	
		do.				3	5/26/54				D, S	Yes	Good	60	
		do.				.2	5/28/54				D, S	Yes	Good	68	
100	411 P	Wingate (Rock Point)		Dry							Un	No	Bad		Seep of bad water; abandoned.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 7—Continued							
129 con.	Drilled well	7K-352	6.30-3.35	0.25 E of Cedar Springs	3/44	Hillside	6,320	775	7	760	Perforated 320-430 587-739	P, Ta
	do.	7K-354	12.15-2.45	2 S of Seba Dalkai School	7/52	Broad valley	5,670	700				N
	do.	7K-356	7.65-16.95	4 SW of Castle Butte T.P.	8/52	Plain	5,730	400	10	12	Open hole	N
	do.	7K-356A	7.65-17.00	4 SW of Castle Butte T.P.	11/53	do.	5,730	1,844	10 8 6	908 1,127 1,676	do.	N
	do.	7K-366	5.95-1.20	2 N of Cedar Springs	4/55	Broad valley	5,980	122				N
	do.	N. Mex.—Ariz. Uranium Co.	6.75-3.15	1 WNW of Cedar Springs	5/55	Valley	6,150	293			Open hole	N
	Dug well	7H-42	4.90-0.80	3 NE of Cedar Springs		Bank of wash	6,000	27	2	27	Masonry cribbed	Tr
	do.	7H-86	4.15-8.40	1 S of Dilcon T.P.		do.	5,860	11	5	11	do.	N
	do.	7H-90	3.65-7.90	1 E of Dilcon T.P.	/23	Bed of wash	5,880	4.5	5 x 5	4.5	Rock cribbed	Tr
	do.	7H-91	4.45-8.45	1 SW of Dilcon T.P.		do.	5,840	4.5	5 x 5	4.5	Plank cribbed	Tr
	do.	7H-92	6.25-9.00	2 WSW of Dilcon T.P.	6/26	Bank of wash	5,740	11	4	11	Masonry cribbed	W, Ta, Tr, A
	do.	7H-94	6.20-10.95	4 SW of Dilcon T.P.	11/31	do.	5,800	8.5	5	8.5	do.	H, Tr
	do.	7H-100	8.70-9.30	5 WSW of Dilcon T.P.		do.	5,590	9.5	5	9.5	do.	H, Tr
	do.	7H-109	12.50-1.80	2 SSW of Seba Dalkai School		Bed of wash	5,580	8.5	5	8.5	do.	Tr
	do.	7H-110	12.75-1.20	2 SW of Seba Dalkai School		do.	5,550	4.5	4 x 6	4.5	Rock cribbed	N
	do.	7H-112	12.85-0.30	2 WSW of Seba Dalkai School		do.	5,480	17	4	17	Masonry cribbed	H
	do.	7H-196	12.90-14.50	8 W of Castle Butte T.P.		do.	5,400	9.5	4	9.5	do.	Tr
	do.	7H-197	12.30-15.30	7 WSW of Castle Butte T.P.		do.	5,450	6	4 x 6	6	do.	N
	do.	7H-198	10.95-16.40	6 WSW of Castle Butte T.P.	6/32	do.	5,540	13	4	13	do.	Tr
	do.	7H-198A	10.85-16.30	6 WSW of Castle Butte T.P.		Bank of wash	5,550	26.5	3	26.5	do.	Tr
	do.	7K-319	3.90-8.15	0.25 SE of Dilcon T.P.	1/41	Bed of wash	5,860	9	5	9	do.	P, Ta
	Spring	7H-43	3.15-0.70	4 NE of Cedar Springs	2/39	Side of mesa	6,300				Collection gallery	H, C, Tr, Re
	do.	7H-87	6.35-3.40	Cedar Springs	12/31	Hillside	6,280				do.	C, Tr
	do.	7H-95	8.15-11.70	6 SW of Dilcon T.P.	9/24	Small valley	5,920				do.	H, C, Tr
	do.	7H-96	9.65-12.20	7 SW of Dilcon T.P.	/24	Bank of wash	5,620				do.	C, Tr
	do.	7H-103	12.55-8.40	9 W of Dilcon T.P.		Edge of terrace	5,550				do.	Tr, Re
	do.	7H-104	12.25-8.65	8 W of Dilcon T.P.		do.	5,540				do.	Ta
	do.	7H-105	11.70-8.60	8 W of Dilcon T.P.		do.	5,560				do.	Re
	do.	7H-170	4.10-11.90	2 NE of Castle Butte T.P.	1/32	Bank of wash	5,950				Collection well	C, Tr
	do.	7H-172	2.50-13.60	3 E of Castle Butte T.P.	8/24	Side of mesa	6,200				do.	C, Tr
	do.	7H-177	2.50-15.20	4 ESE of Castle Butte T.P.		Base of cliff	6,150				Masonry wall	Tr, Re
	do.	7H-182	6.90-2.20	2 NNW of Cedar Springs	9/25	Side of butte	6,120				Collection gallery	C, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
				DISTRICT 7—Continued											
348	427 P	Wingate (Lukachukai, Rock Point)	DL	316	5/27/54	2-3		7	413	10	D	No	Good		Bidahochi Formation dry.
50	200	Wingate (Lukachukai)	LL	Dry								No			Seep of water; abandoned, dry hole.
0	400 P	Chinle (Owl Rock)		Dry				1			Un	No			Seep of water at 165 feet; abandoned.
1,690	154 P	Coconino	LL	1,010	10/15/53			12	None	3	Un	Yes	Bad	76	Abandoned, poor quality.
0	82	Alluvium	DL	Dry								No			Abandoned.
0	293 P	Bidahochi (volcanic)		173	5/25/55						Un	No			Do.
		Alluvium		Dry	5/27/54			2 R			Un	No			Do.
		do.		9.8	6/ 3/54						D, S	No	Good		
		do.		4.2	6/ 3/54			.2 R			S	No	Bad		Poor sanitation; Dilcon wells.
		do.		2.8	6/ 3/54						S	No	Good		
		do.		9.5	6/ 3/54	3-4	6/ 3/54				D, S	Yes	Fair	60	Dilcon dipping vats.
		do.		7.9	6/ 3/54			3 R			S	Yes	Good	58	
		do.		9.2	6/ 3/54						D, S	No	Fair		
		do.		Dry	6/ 4/54						Un	No			Temporary.
		do.		3.5	6/ 4/54						S	No	Bad		Temporary; barbed-wire fence around well.
		do.		14.1	6/ 4/54						Un	No	Fair		
		do.		9	6/ 3/54						Un	No	Bad		Unfit for human consumption.
		do.		Dry	6/ 3/54						Un	No			Abandoned.
		do.		Dry	6/ 3/54						Un	No			Do.
		do.		26.4	6/ 3/54						Un	Yes			
		do.		6.6	6/ 3/54			5	2		D, S	Yes	Good	64	Owned by Dilcon T. P.
		Landslide and talus				1 R 1 E	2/17/39 5/27/54				D, S	Yes	Good	61	"Tees Tah Spring."
		do.				.5 R .5 E	12/ /31 5/27/54				D, S	Yes	Good	59	"Cedar Spring"; covered by wooden house.
		do.				1.2 R < .1	9/ /24 6/ 3/54				D, S	No	Good		
		Wingate (Rock Point)				2 R < .1	/24 6/ 3/54				D, S	No	Good		
		do.				.5 R .8	7/29/52				D, S	Yes	Good	69	
		do.				.5 R .2 E	7/29/52				D, S	Yes	Good	69	
		do.				.5 R 3 E	7/29/52				D, S	Yes	Good	64	
		Spring deposits				.8 R .5 E	1/ /32 6/10/54				D, S	No	Good		
		do.				.8 R Dry	8/ /24 6/10/54				D, S	No			Temporary; at Old Farmer's Station near Castle Butte.
		do.				.1 R .1	6/10/54				D, S	No	Good		
		do.				2.2 R .5	9/ /25 5/27/54				D, S	Yes	Good	59	"Lone Cottonwood Spring."

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 7—Continued							
129 con.	Spring	7H-183	3.60-2.50	3 ENE of Cedar Springs	11/31	Head of canyon	6,450				Collection gallery	Tr
	do.	7H-184	1.95-2.90	4 E of Cedar Springs	/23	do.	6,450				do.	C, Tr
	do.	7H-210	7.55-6.10	3 SSW of Cedar Springs		Side of butte	6,400				do.	Tr
	do.	7H-211	6.20-3.25	Cedar Springs	9/31	Hillside	6,330				do.	C, Tr
	do.	7H-217	12.30-10.75	9 WSW of Dilcon T.P.		Small valley	5,490				None	Re
130	Drilled well	7K-320	0.80-12.80	12 WSW of Dilcon T.P.		do.	5,350	200 R	8			W, Ta
	Dug well	7H-212	1.70-3.20	6 SW of Seba Dalkai School	10/31	do.	5,530	12.5	5	12.5	Rock cribbed	Tr
	do.	7H-214	3.75-10.75	14 WSW of Dilcon T.P.		Bank of wash	5,220	9	5	9	Masonry cribbed	H, Tr, Ta
141	Drilled well	7H-247	4.0-4.0 A	15 S of Indian Wells T.P.	3/35	Plain	5,620 E	1,015				N
	do.	7K-374	11.60-4.40	17 SSW of Indian Wells T.P.	10/55	Broad valley	5,310	132				N
	Dug well	7H-134	5.10-1.05	12 S of Indian Wells T.P.		Bank of wash	5,510	11.5	6 x 10	11.5	Rock cribbed	W, Tr, Ta
	do.	7H-136	6.30-2.25	13 S of Indian Wells T.P.		do.	5,390	7	5	7	do.	W, Tr
	do.	7H-137	8.80-4.55	16 SSW of Indian Wells T.P.		do.	5,300	9.5		9.5	do.	Tr
142	do.	7H-200	8.25-0.10	5 SW of Castle Butte T.P.		Bed of wash	5,700	18	4	18	Masonry cribbed	Tr
	do.	7H-203	6.20-2.05	6 S of Castle Butte T.P.		do.	5,740	11.5	2	11.5	do.	Tr
	do.	7H-204	6.20-3.80	8 S of Castle Butte T.P.		Bank of wash	5,620	9.5	5	9.5	do.	Tr
	do.	7H-207	1.65-2.90	8 SSE of Castle Butte T.P.		do.	5,430	10.5	2	10.5	do.	Tr
	do.	7H-208	1.35-0.65	6 SE of Castle Butte T.P.		Bed of wash	5,580	7	8	7	do.	Tr
	Spring	7H-209	1.55-0.35	6 SE of Castle Butte T.P.		do.	5,610				Collection well	N
					DISTRICT 8							
4	None											
5	do.											
9	Spring	8GS-9-1	12.15-15.70	4 S of Poncho House Ruin		Head of canyon	4,580				None	N
10	do.	8A-186	13.55-10.45	10 WSW of Mexican Hat		Bank of wash	5,020				Collection gallery	Tr
	do.	8A-234	8.80-15.75	11 SSW of Mexican Hat		Bed of wash	4,570				None	N
	do.	8A-235	9.70-16.60	12 SSW of Mexican Hat		do.	4,610				do.	N
	do.	8A-260	5.00-15.75	10 S of Mexican Hat		Bank of wash	4,640				Collection gallery	C, Tr
	do.	8A-290	0.50-11.20	8 SE of Mexican Hat		do.	4,560				Masonry wall	
	Combination spring	8GS-10-1	6.20-16.60	11 S of Mexican Hat		Bed of wash	4,540				None	N
11	Drilled well	8K-418	10.80-16.20	1 NNE of Gouldings T.P.	/46	Broad valley	5,160	990		440	Open hole	N
	do.	8K-422	8.70-5.30	11 NNE of Gouldings T.P.	10/53	Stripped plain	5,150	422	10	24	do.	W, Ta, Tr
	do.	8K-423	7.60-1.60	15 NNE of Gouldings T.P.	6/55	Top of mesa	5,340	705			do.	N
	do.	8K-424	7.25-9.05	8 NE of Gouldings T.P.	7/55	Stripped plain	5,250	600			do.	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 7—Continued									
		Spring deposits				.5 R .8	11/ /31 5/27/54				D, S	Yes	Good	56	"Tsi-ha-jinnie Spring."
		do.				.1 R .1	/23 5/27/54				D, S	Yes	Good	60	
		do.				1 R .1 E	6/15/54				D, S	No	Good		
		do.				.2 R .1	9/ /31 5/27/54				S	Yes	Good	59	
		Wingate (Rock Point)				2 R .8 E	7/29/52				S	Yes	Good	67	"Coyote Springs."
0	200 P	Alluvium and Chinle (Owl Rock)		32	6/ 3/54						D, S	Yes	Good	70	Benton Ranch.
		Wingate (Lukachukai)		10.4	6/ 4/54			.7 R			D, S	Yes	Good	70	Combination spring and dug well.
		Alluvium		5	1/23/53						D, S	Yes	Good	56	"Pete's well"; abandoned storage tank.
29	986 P	Chinle (Petrified Forest)	DL	Dry								No			Abandoned.
0	124	Alluvium		46	10/ 3/55						Un	Yes	Bad	62	Do.
		do.		10.4	5/25/54	3-4	6/26/51				D, S	Yes	Fair	72	
		do.		5.6	5/25/54						D, S	Yes	Fair	47	
		do.		Dry	5/25/54						Un	No			Abandoned.
		do.		15	6/11/54						D, S	No	Good		
		Chinle (Owl Rock)		6.2	6/11/54						D, S	Yes	Fair	59	
		do.		Dry	6/11/54						Un	No			Abandoned.
		Alluvium		10.3	6/11/54						Un	Yes	Bad	60	Do.
		do.		7.2	6/11/54						Un	No			Water is salty; abandoned.
		Chinle (Owl Rock)				8 R .2 E	6/11/54				S	No			
						DISTRICT 8									
		Navajo				10 E	2/16/55				D, S	No	Good		
		Alluvium				Dry	9/ 9/54				S	No			
		do.				2 E	9/ 9/54				S	No	Fair	87	Some alkali.
		do.				5 E	9/ 9/54				D, S	No	Fair	64	Do.
		Cutler (De Chelly)				4 R 4 E	9/ 9/54				D, S	Yes	Good	72	
		Moenkopi									S	No			
		Alluvium									S	No			"Gypsum Creek."
440	400	Cutler (Cedar Mesa)		425	/46			1.5			Un	No	Bad		Abandoned.
23	395	do.	LL	185	10/11/53	3-4		23	140	¾	D, S	Yes	Fair		
0	705 P	do.		Dry								No			Abandoned.
0	600 P	do.	DL	Show								No			Show of water; abandoned.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 8—Continued							
11 con.	Dug well	8A-230	6.20-14.75	6 ENE of Gouldings T.P.		Small valley	5,420	14		14	Masonry cribbed	H, Tr
	do.	8A-280	2.90-12.15	9 ENE of Gouldings T.P.		do.	5,240	6.5		6.5	do.	H, Tr, C
	Spring	8A-191	4.90-7.90	11 NE of Gouldings T.P.		Head of canyon	5,650				Collection gallery	Tr
	do.	8A-192	2.60-5.80	13 NE of Gouldings T.P.		Narrow valley	5,790				do.	Tr
	do.	8A-193	2.30-5.05	14 NE of Gouldings T.P.		do.	5,860				do.	Tr
	do.	8A-229	6.45-15.05	5 ENE of Gouldings T.P.		Small valley	5,380				None	N
	do.	8A-281	0.70-8.15	13 NE of Mexican Hat		Narrow valley	5,350				Collection gallery	Tr
	do.	8A-293	10.85-9.00	8 N of Gouldings T.P.		Stripped plain	5,030				do.	Tr
	do.	8A-294	10.10-10.25	6 N of Gouldings T.P.		do.	5,100				Masonry wall	Tr
12	Drilled well	8A-216	3.85-14.95	0.25 W of Oljeto T.P.	/48	Canyon	4,840	18	30	18	Perforated	W, Ta, Tr
	do.	8A-216A	3.80-14.80	0.1 W of Oljeto T.P.	7/51	do.	4,840	100	8	31	Open hole	P, Ta
	do.	8A-216B	3.70-14.90	0.1 E of Oljeto T.P.	10/53	do.	4,840	50	6	32	do.	P, Ta
	do.	8K-432	6.45-14.65	2 W of Oljeto T.P.	5/55	do.	5,080	451	8	41	do.	W, Ta, Tr
	Spring	8A-213	4.80-13.30	2 NW of Oljeto T.P.		Base of butte	4,940				Collection gallery	C
	do.	8A-215	2.55-9.85	5 N of Oljeto T.P.		Bed of wash	4,680				None	N
	do.	8A-217	2.80-15.90	2 SE of Oljeto T.P.		do.	4,940				do.	N
	do.	8A-219	2.35-6.00	3 N of Oljeto T.P.		do.	4,540				do.	N
	do.	8A-269	11.60-12.95	8 W of Oljeto T.P.		do.	4,600				do.	N
	do.	8K-550	3.45-13.60	1 N of Oljeto T.P.		Base of cliff	4,840				do.	N
	do.	8GS-12-1	2.25-2.45	12 N of Oljeto T.P.		Bottom of canyon	4,280				do.	N
	do.	8GS-12-2	12.85-6.85	12 NW of Oljeto T.P.		Bed of wash	4,040				do.	N
13	None											
21	Spring	8A-221	10.30-17.00	11 ESE of Dennehotso		Head of canyon	5,200				None	N
	do.	8A-222	10.75-15.50	10 ESE of Dennehotso		do.	5,240				do.	N
	do.	8A-223	11.50-14.35	8 ESE of Dennehotso		do.	5,240				do.	N
	do.	8A-224	11.15-14.95	9 ESE of Dennehotso		Bed of wash	5,240				do.	N
	do.	8GS-21-1	13.15-5.10	8 NE of Dennehotso		Head of canyon	4,830				do.	N
	do.	8GS-21-2	11.95-0.60	12 NE of Dennehotso		Bed of wash	4,730				do.	N
22	Drilled well	8A-101	13.60-15.00	8 WSW of Dennehotso	7/39	Alluvial plain	5,180	250	6	179	Open hole	W, Ta, Tr, Re
	do.	8K-403	5.35-10.70	Dennehotso	8/48	Broad valley	5,020	707	8	280	do.	P, Ta
	do.	8K-434	5.75-16.00	6 S of Dennehotso	6/55	Stripped plain	5,260	202	8	9	Open hole	
	Dug well	8A-243	10.50-12.05	5 WSW of Dennehotso		Broad valley	5,130	11	6	11	Masonry cribbed	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 8—Continued									
		Alluvium		12.5	9/ 9/54						D, S	Yes	Good	69	
		do.		5.5	9/17/54						D, S	Yes	Bad	70	
		Cutler (Cedar Mesa)				.2 R 1	12/20/38 9/17/54				D, S	Yes	Good	68	
		do.				1 E	9/17/54				D, S	No	Good	65	
		do.				2.5 R .2	9/17/54				D, S	Yes	Good	66	
		Cutler (Organ Rock Tongue)				< .1	9/ 9/54				D, S	Yes	Good	70	
		Cutler (Halgaito Tongue)				.8 R 2	9/17/54				S	Yes	Fair	74	
		Cutler (Cedar Mesa)				2 R .2 E	9/18/54				D, S	Yes	Good	77	
		do.				.2 E	9/19/54				D, S	Yes	Good	67	
0	18 P	Alluvium		4	10/ 1/48						D, S	Yes	Good		Oljeto T. P.
0	30	do.		11	7/ 7/51			30	20		D	Yes	Good	68	Do.
0	32	do.		12	10/20/54			10	8	1	D	Yes	Good	59	Do.
230	221 P	Cutler (Cedar Mesa)	DL	276	5/11/55	2-3		18	68	1	D, S	Yes	Good	64	
		Cutler (De Chelly)				< .1	9/30/54				D	Yes	Good	65	
		Cutler (Cedar Mesa)									S	No			
		Alluvium				2 E	6/ 8/48					Yes	Good	81	"Oljeto Spring."
		Cutler (Cedar Mesa)									S	No			"Cottonwood Spring."
		do.									S	No			Aerial reconnaissance.
		Cutler (De Chelly)				.2 E	9/30/54				D	Yes	Good	64	
		Cutler (Cedar Mesa)									S	No			
		Cutler (De Chelly)				5 E	2/16/55				S	No			Aerial reconnaissance.
		Navajo				1 E	10/ 6/54				D, S	No	Good		
		do.				1 E	10/ 6/54				D, S	No	Good		
		do.				10 E	10/ 6/54				D, S	No	Good		
		do.				1 E	10/ 6/54				D, S	Yes	Good	60	
		do.				10 E	2/16/55				S	No	Good		
		do.				15 E	2/16/55				D, S, Irr	No	Good		
180	70 P	do.		Flow 4	8/ 2/49 1/18/53			21	111		D, S	Yes	Good	62	Flows 3 to 4 gpm during summer.
0 263 375	263 112 286	Navajo Kayenta Wingate (Lukachukai)	DL	10	11/11/53	30	2/ 2/54	30	165	4	PS	Yes	Good	59	Dennehotso School; reported flow during summer; pump test Feb. 12, 1954.
0	202 P	Navajo		65	6/17/55	3-4		30	60	½	D, S	Yes	Good	58	
		Alluvium		Dry	9/15/54						D, S	Yes	Fair	70	

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 8—Continued							
22 con.	Dug well	8A-245	7.70-13.75	4 SW of Dennehotso		Broad valley	5,120	9.5 R	2	9.5 R	Masonry cribbed	H
	do.	8A-246	7.00-12.60	2 SW of Dennehotso		do.	5,080	7.5		7.5	do.	Tr
	do.	8A-246A	6.20-12.00	2 S of Dennehotso		do.	5,060	1.5		1.5	None	N
	do.	8A-253	9.70-11.60	4 W of Dennehotso		do.	5,120	8.5	6	8.5	Masonry cribbed	N
	do.	8A-256	6.10-11.20	1 SW of Dennehotso		do.	5,040	9.5	6 x 6	9.5	do.	N
	do.	8A-258	5.45-10.70	Dennehotso		do.	5,020	14.5	5		do.	P, W, Ta
	do.	8A-264	9.00-8.35	4 NW of Dennehotso	1/35	do.	5,070	14.5	6 x 4		do.	C, Tr
	do.	VCA-1	5.80-4.70	6 N of Dennehotso		do.	4,860	4.5	6 x 6		Plank cribbed	N
	do.	VCA-2	5.80-4.75	6 N of Dennehotso		do.	4,860	5	7 x 7		Concrete caisson	P, C
	do.	VCA-4	5.80-4.75	6 N of Dennehotso		do.	4,860	5 E	7 x 7		do.	P
	Spring	8A-236	11.45-1.50	11 NNW of Dennehotso		Small valley	4,750				None	N
	do.	8A-249	1.50-16.85	8 SSE of Dennehotso		Base of cliff	5,100				do.	N
	do.	8A-261	5.30-1.25	10 N of Dennehotso		Broad valley	4,690				Collection gallery	Tr
	do.	8A-263	5.45-4.40	6 N of Dennehotso		do.	4,850				do.	Tr
	do.	8A-285	12.00-8.00	7 WNW of Dennehotso		Head of canyon	5,180				do.	C, Tr
	do.	8K-413	11.25-2.90	10 NNW of Dennehotso		Shallow canyon	4,800				None	N
	do.	8GS-22-1	3.55-9.00	2 NE of Dennehotso		Head of canyon	4,940				do.	N
	do.	VCA-3	5.80-4.65	6 N of Dennehotso		Broad valley	4,860				do.	N
23	Drilled well	8K-402	11.65-3.15	4 S of Gouldings T.P.	3/39	do.	5,240	123	6	123	Perforated	W, Ta, Tr
	do.	8K-417	12.90-1.70	2 SSW of Gouldings T.P.	/47	do.	5,200	137	6	122	Open hole	P
	do.	8K-436	1.40-13.10	10 WSW of Dennehotso	2/56	do.	5,320	306	6	235	Perforated 135-235	W, Ta, Tr
	Dug well	8A-227	6.45-15.20	8 ENE of Kayenta		Bed of wash	5,420	5	6	5	Masonry cribbed	Tr
	Spring	8A-225	9.70-13.50	6 NE of Kayenta		Bottom of canyon	5,550				Collection gallery	Tr
	do.	8A-238	1.10-3.75	11 ESE of Gouldings T.P.		Side of wash	4,940				None	Tr
	do.	8A-239	3.00-4.80	10 ESE of Gouldings T.P.		Bed of wash	5,070				do.	N
	do.	8A-244	2.70-17.10	12 E of Kayenta		Side of cliff	5,360				Collection well	C, Tr
	do.	8A-283	0.80-8.50	17 NE of Kayenta		Head of canyon	5,400				Collection gallery	Tr
24	Drilled well	8A-299	4.80-13.50	8 NW of Kayenta	11/35	Stripped plain	6,260	500	6	500	Perforated	W, Ta, Tr
	do.	8K-433	2.10-3.00	6 SSE of Oljeto T.P.	4/55	Broad valley	5,150	46	8	46	Perforated 32-38	W, Ta, Tr
	do.	8K-566	2.7-1.7 A	6 WSW of Gouldings T.P.	/53	Stripped plain	5,180 E	112				N
	Dug well	8A-199	4.30-1.80	8 WSW of Gouldings T.P.		Broad valley	5,000	7	5		Masonry cribbed	H, Tr
	do.	8A-210	2.35-4.50	14 N of Kayenta		do.	5,080		6		do.	Tr
	do.	8A-296	0.65-14.05	4 N of Kayenta		Bed of wash	5,730					H, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
				DISTRICT 8—Continued											
		Alluvium		7.7	8/21/52						D, S	Yes	Good	62	
		do.		7.6	9/15/54						D, S	No			
		do.		1.5	9/15/54						S	Yes	Good	70	
		do.		6.7	9/15/54						D, S	No			
		do.		8.5	9/15/54						D, S	No			
		do.		10.5	11/11/53						D	Yes	Good	60	Dennehotso T.P. well.
		do.		5.2	9/16/54						S	No			Broken cistern.
		do.		2.7	9/16/54						D	No	Good		Vanadium Corp. of America well.
		do.		2.5	9/16/54			21 R			D	No	Good		Do.
		do.			9/16/54			5 R			D	No	Good		Do.
		Cutler (Cedar Mesa)				25 R	10/6/50				D, S	Yes	Fair	58	"Gypsum Spring."
		Navajo									S	No			
		Chinle (Shinarump)				.1 R 2 E	9/16/54				D, S	No	Good	70	
		Alluvium				< .1 R Dry	9/16/54					No			
		Chinle (Shinarump)				< .1 R < .1	9/16/54				S	No	Good		
		Cutler (Cedar Mesa)				< .1	9/16/54				S	No		67	
		Navajo				15 E	2/16/55				S	No			
		Alluvium									Ind	Yes	Good	65	Vanadium Corp. of America Spring.
0 75	75 40	Alluvium Cutler (De Chelly)	DL	67	8/11/49	3-4		15	None		D, S	Yes	Good	60	
0 123	123 14 P	Alluvium Cutler (De Chelly)		65	6/ 8/48			30	>30	½	D, S	Yes	Good		"Movie Co. well."
150	156 P	Navajo	DL	43	2/20/56	3-4		20	62	¾	D, S	No	Good		
		Alluvium		2.9	9/30/54						S	Yes	Good	68	
		Chinle (Shinarump)				.5 R 3 E	10/ 1/54				D, S	Yes	Good	68	
		Cutler (Cedar Mesa)				.8 R < .1	9/ 8/54				D, S	Yes	Good	78	
		Alluvium				15-20 R	/36				D, S	No	Good		
		Summerville				3.1 R .2 E	10/ 5/54				D, S	No			
		Cutler (De Chelly)				.2 R	/36				D, S	No			
0	500 P	Navajo	DL	230	11/18/35	2-3		18	50		S	No	Good		
2	36	Chinle (Shinarump)		5	4/20/55	3-4		33	25	1	D, S	Yes	Good		
0	95	do.	DL	30	/53			1.2	65	4	Un	No			Abandoned.
		Alluvium		4.5	9/29/54						D, S	No			
		do.		8 R Dry	12/20/38 12/30/52							No			
		do.									D, S	Yes	Fair	64	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 8—Continued							
24 con.	Spring	8A-200	4.40-1.20	8 WSW of Gouldings T.P.		Narrow valley	5,020				Masonry wall	C, Tr
	do.	8A-201	3.70-1.15	6 WSW of Gouldings T.P.		do.	5,060				Collection gallery	Tr
	do.	8A-204	4.60-8.70	11 NNW of Kayenta		Broad valley	5,300				do.	N
	do.	8A-220	0.80-9.90	8 N of Kayenta		Small canyon	5,360				Collection well	Tr
	do.	8A-278	1.60-11.10	8 N of Kayenta		do.	5,610				Collection gallery	Tr
	do.	8A-297	6.55-7.95	12 NW of Kayenta		Side of cliff	5,440				None	N
	do.	8K-404A	5.95-12.45	8 NW of Kayenta		Head of canyon	5,900				Collection well	N
	do.	8K-410	3.45-15.10	4 NW of Kayenta		do.	6,000				None	N
	do.	8K-411	6.35-15.30	7 WNW of Kayenta		Narrow canyon	5,980				do.	N
	Combination spring	8A-202	4.50-6.85	12 NNW of Kayenta		Bed of wash	5,180				do.	N
	do.	8A-203	4.35-5.80	13 NNW of Kayenta		do.	5,140				do.	N
	do.	8GS-24-1	11.45-15.70	11 WNW of Kayenta		Deep canyon	6,700				do.	N
25	do.	8GS-25-1	0.90-14.40	15 WNW of Kayenta		do.	6,700				do.	N
36	None											
37	Drilled well	8A-179	5.00-9.40	14 N of Rough Rock T.P.	1/39	Broad valley	5,290	163	6			W, Ta, Tr
	do.	8A-180	6.20-2.40	13 W of Rock Point	1/39	do.	5,180	107	6	60	Open hole	W, Ta, Tr
	do.	8A-273	8.20-15.85	10 E of Chilchinbito T.P.	2/35	do.	5,660	184	6	180	do.	W, Ta, Tr
	do.	8A-273A	8.20-15.95	8 NNW of Rough Rock T.P.	6/55	do.	5,660	450	6	325	do.	W, Ta, Tr
	do.	8A-277	11.45-10.75	8 NE of Chilchinbito T.P.	3/35	Top of mesa	5,650	212	6	212	Perforated	W, Re
	do.	8K-1	13.50-7.80	9 NNE of Chilchinbito T.P.	7/39	Broad valley	5,610	610	6	542	Open hole	W, Ta, Tr
	do.	8K-421	12.40-3.55	13 NNE of Chilchinbito T.P.	5/52	Top of mesa	5,680	840	6	670	do.	W, Ta, Tr
	do.	8K-430	9.60-12.80	9 ENE of Chilchinbito T.P.	3/55	do.	5,730	734	8 6	363 634	do.	W, Ta, Tr
	do.	8K-431	10.65-0.20	8 SW of Dennehotso	4/55	do.	5,280	528	8	476	do.	W, Ta, Tr
	Dug well	8A-135A	10.30-9.10	10 NE of Chilchinbito T.P.		Stripped plain	5,540	15 R		15 R	Masonry cribbed	H, Tr
	do.	8A-177	11.60-14.35	8 NE of Chilchinbito T.P.	2/40	Bed of wash	5,880	4	8 x 10	4	Log cribbed	Tr
	do.	8A-178	10.90-12.40	8 ENE of Chilchinbito T.P.		Side of wash	5,700	17.5	4 x 4	17.5	Masonry cribbed	Tr
	do.	8A-248	2.05-0.95	9 W of Rock Point		Small valley	5,210				do.	Tr
	Spring	8A-135	10.35-9.35	10 NE of Chilchinbito T.P.		Stripped plain	5,510				Collection well	Tr
38	Drilled well	8A-106	13.25-4.30	3 S of Kayenta	5/39	Broad valley	5,880	220	6	86	Open hole	W, Ta, Tr
	do.	8A-121	0.85-12.65	4 NE of Chilchinbito T.P.	7/35	do.	5,590	400	6	347	do.	W, Ta, Tr
	do.	8A-136	3.45-4.90	11 N of Chilchinbito T.P.	3/36	Top of mesa	5,680	594	6 5	547 594	Perforated	W, Ta, Tr
	do.	8A-138	7.90-4.00	7 ESE of Kayenta	3/39	Broad valley	5,490	210	6	165	Open hole	W, Ta, Tr
	do.	8K-416	13.65-1.40	1 E of Kayenta	6/48	do.	5,640	807	10	563	Perforated	P, Ta

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 8—Continued															
		Chinle (Shinarump)				2 R 3 E	9/29/54				D, S	Yes	Good	66	
		do.				2 R 1.5 E	9/30/54				S	Yes	Good	56	
		Alluvium									D	No			Indian-developed bathhouse.
		Chinle (Shinarump)				.8 E	9/29/54				D, S	Yes	Good	66	
		Chinle (Owl Rock)				7 R <.1	9/29/54				S	No	Good		
		do.									S	Yes	Fair		
		Navajo				2 E	10/14/54				S	Yes	Good	62	Indian developed.
		do.									D, S	No			Water rises and sinks at intervals in Yellow Head Canyon.
		do.				1 E	10/14/54				D, S, Irr	No			Water rises and sinks at intervals in Cutfoot Creek.
		Alluvium									S	No			
		do.									S	No			
		Navajo, Kayenta, and Wingate (Lukachukai)									D, S	No			Aerial reconnaissance.
		Navajo and Kayenta									D, S	No			Headwaters of Laguna Creek; aerial reconnaissance.
130	33 P	Navajo		43	11/11/53	3-4		10			D, S	Yes	Good	62	
40	67 P	do.		47	11/11/53	3-4		12			D, S	Yes	Good	66	
75	109 P	Entrada		107	11/11/53	3-4		20			S	Yes	Bad	60	
300	150 P	Navajo	LL	178	6/23/55	3-4		19	50	1½	D, S	Yes	Good	60	
145	67 P	Morrison (Salt Wash)	DL								D, S	Yes	Fair	62	
551	59 P	Navajo		163	11/12/53	3-4		14	310		D, S	Yes	Good	64	Possibility of some Carmel Formation water.
650	190 P	do.		408	11/12/53	2-3		12	50	1	D, S	Yes	Good	61	
630	104 P	do.		352	3/ 4/55	2-3		15	65	½	D, S	Yes	Good	60	
410	118 P	do.	LL	386	4/ 5/55	2-3		23	104	¾	D, S	Yes	Good		
		Terrace		8.2	8/21/52						D	Yes	Good	68	
		Alluvium		1.3	10/12/54						D, S	Yes	Bad	62	In corral.
		Morrison (Recapture)		10.6	7/17/52						D, S	Yes	Good	63	
		Alluvium		4 R							D, S	No			
		Terrace				.1 E	8/21/52				D, S	Yes	Fair	70	
88	132 P	Entrada		116	7/15/52	3-4		8			D, S	Yes	Good		
350	50 P	Navajo		200	11/11/53	2-3		10	110		S	Yes	Good	63	Possibility of some Carmel Formation water.
547	47 P	do.		314	11/12/53	2-3		10	133	3	D, S	Yes	Good	60	
130	80 P	do.		69	11/11/53	3-4		10	40		D, S	Yes	Good	62	
15 670	655 137 P	Navajo Kayenta	LL	53	11/13/53			100	138	13½	PS	Yes	Good		Pump test June 29, 1954; Kayenta School.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 8—Continued							
38 con.	Drilled well	8K-420	0.90-3.35	13 NNE of Chilchinbito T.P.	12/51	Top of mesa	5,620	900	8 6	593 900	Perforated 590-900	W, Ta, Tr
	do.	8K-426	4.55-15.20	1 NW of Chilchinbito T.P.	6/54	Small valley	5,960	769	8	769	Perforated 125-135 636-745	P, Ta
	do.	8T-419	7.00-9.90	6 NNW of Chilchinbito T.P.	4/52	do.	5,980	1,280	7	1,130	Open hole	W, Ta, Tr
	Dug well	8A-107	10.95-7.65	11 NW of Chilchinbito T.P.		do.	5,760	12.5	6 x 6	12.5	Masonry cribbed	Tr
	do.	8A-114	6.35-12.75	4 NW of Chilchinbito T.P.		Broad valley	5,780	7		7	do.	Tr
	do.	8A-127	4.95-11.40	4 NNW of Chilchinbito T.P.		Narrow valley	5,760	12	6	12	do.	Tr
	do.	8A-128	3.00-10.90	5 N of Chilchinbito T.P.	2/40	Side of wash	5,500	5.5	5	5.5	Rock cribbed	Tr
	Spring	8A-100	8.05-1.85	6 E of Kayenta		Broad valley	5,480				Collection well	Tr
	do.	8A-109	8.70-11.20	6 NW of Chilchinbito T.P.		Head of canyon	6,030				do.	C, Tr, Ta
	do.	8A-111	8.05-11.00	6 NW of Chilchinbito T.P.		Side of cliff	6,070				Masonry wall	N
	do.	8A-120	6.80-12.60	4 NW of Chilchinbito T.P.		Small valley	5,840				None	N
	do.	8A-122	3.90-15.70	0.25 SE of Chilchinbito T.P.	3/30	Base of cliff	5,890				Collection well	Tr
	do.	8A-122A	3.80-15.65	1 E of Chilchinbito T.P.		do.	5,930				None	N
	do.	8A-124	4.65-14.20	2 NNW of Chilchinbito T.P.		do.	5,880				Collection gallery	Tr
	do.	8A-126	3.80-11.85	4 N of Chilchinbito T.P.		Bed of wash	5,600				None	N
	do.	8A-182	10.80-4.20	4 SE of Kayenta	12/38	Hillside	5,640				Collection well	C, Tr
	do.	8A-241	0.25-0.05	14 E of Kayenta		Side of cliff	5,380				Collection gallery	C, Tr
	Combination spring	8A-125	5.55-14.90	2 NW of Chilchinbito T.P.		Small valley	5,860				None	N
39	Drilled well	8A-295	0.20-1.30	Kayenta	/36	Broad valley	5,630	840	8	788	Perforated 268-280 691-788	P, Ta
	do.	8A-295A	0.25-1.35	Kayenta	8/24	do.	5,640	349	6	47	Open hole	N
	do.	8K-401	7.20-1.50	7 W of Kayenta	2/39	Stripped plain	6,050	250	6	148	do.	W, Ta, Tr
	Dug well	Tsegi T.P.	10.25-6.80	11 WSW of Kayenta		Bed of wash	6,100					P, Ta
	Spring	8A-115A	8.80-0.90	8 W of Kayenta		Small valley	6,320				None	N
	do.	8A-119	12.65-14.00	18 SW of Kayenta		Head of canyon	7,000				do.	N
	do.	8A-139	9.50-13.95	15 SW of Kayenta		Narrow valley	6,600				do.	N
	do.	8A-140	10.00-14.50	16 SW of Kayenta		do.	6,570				do.	N
	do.	8A-143	8.00-14.75	15 SSW of Kayenta		do.	6,550				do.	N
	do.	8A-144	7.15-14.25	14 SSW of Kayenta		do.	6,600				do.	N
	do.	8A-145	6.75-14.00	14 SSW of Kayenta		do.	6,620				do.	N
	do.	8A-153	3.50-17.05	16 S of Kayenta		Bed of wash	6,600				do.	N
	do.	8A-295B	0.35-1.45	0.1 S of Kayenta		Hillside	5,660				Collection well	Ta
	do.	8M-141	9.05-15.40	16 SW of Kayenta		Narrow valley	6,460				None	N
	Stream	8A-268		3 W of Kayenta							do.	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 8—Continued															
600	300 P	Navajo	LL	416	5/14/52	2-3		13	17	1	D, S	Yes	Good	60	
0	769 P	Morrison (Westwater Canyon, Recapture, Salt Wash)	LL	90	6/24/54	3-4		19	170	1½	PS	Yes	Fair		Chilchinbito Trailer School.
1,080	200 P	Navajo	LL	438	10/ 7/52	2-3		7	19	1	D, S	Yes	Good		Pump test Oct. 7, 1952.
		Morrison (Recapture)		10.5	10/13/54						D, S	Yes	Good	60	
		Alluvium		4.9	7/15/52						S	Yes	Fair	61	
		Morrison (Recapture)		5.9	10/13/54						D, S	Yes	Good	62	
		Alluvium		2.8	10/13/54	.8 R	2/27/40				D, S	Yes	Good	64	
		Terrace				.2 E	8/12/49				D, S	Yes	Good	66	
		Dakota				< 1 E	10/13/54				D, S	No			
		do.				.2 E	10/13/54				D	Yes	Good	57	
		Alluvium				1 E	10/13/54				S	No	Fair		
		Morrison (Recapture)				2.5 R 3 E	3/ /30 2/10/55				D, S	Yes	Fair	62	
		do.				5 E	10/13/54				D, S	Yes	Fair	56	
		Morrison (Westwater Canyon)				2 E	7/15/52				S	Yes	Good	65	
		Alluvium				1 E	10/13/54				S	No	Fair		
		Morrison (Salt Wash)				< .1	10/13/54				S	No	Fair	60	
		do.				1.6 R .1 E	10/ 5/54				S	No	Good		
		Alluvium, Dakota, and Morrison (Westwater Canyon)				4 E	10/13/54				S	Yes	Bad	58	
10 682	672 158 P	Navajo Kayenta		48		35	6/ 9/48	52	54		PS	Yes	Good		Kayenta School.
47	302 P	Navajo		43	6/30/54			23		8	Un	No			Abandoned; Kayenta School.
0	250 P	do.	DL	123	12/12/52	3-4		12	30		D, S	Yes	Good	69	
		Alluvium									D	No	Good		Tsegi T.P. well.
		Wingate (Rock Point)				< .1	10/14/54				S	No	Good		
		Toreva									D, S	Yes	Good	54	Corral around spring.
		Wepo				1 E	10/15/54				S	Yes	Bad	38	
		Alluvium									S	No	Bad		
		Wepo				1 E	10/15/54				S	Yes	Fair	48	
		do.				1 E	10/15/54				S	No		48	
		do.				1 E	10/15/54				S	No		48	
		do.				1 E	10/15/54				S	No			
		Carmel				2 E	2/12/48				D	Yes	Good	41	"Hyde Spring."
		Alluvium				2 E	10/ 8/54				D, S	No			
											D, S, Irr	No			"Laguna Creek."

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 8—Continued							
40	Stream	8GS-40-1	0.15-0.20	14 W of Kayenta							None	N
54	Drilled well	8K-435	9.90-1.30	6 NW of Rough Rock T.P.	6/55	Broad valley	5,810	461	8	252	Open hole	W, Ta, Tr
	Dug well	8A-130	8.40-3.60	3 NW of Rough Rock T.P.		Bank of wash	5,800				Log cribbed	H, Tr, C
	do.	8A-131	10.30-4.15	4 WNW of Rough Rock T.P.		Small canyon	6,230				Masonry cribbed	C, Tr
	do.	8A-175	8.65-5.15	2 WNW of Rough Rock T.P.	12/38	do.	6,200	6	10 x 10	6	Log cribbed	N
	Spring	8A-130A	8.40-3.60	2 NW of Rough Rock T.P.		Bank of wash	5,800				None	N
	do.	8A-176	8.85-4.85	2 WNW of Rough Rock T.P.		Small canyon	6,080				Collection gallery	Tr
55	None											
56	Spring	8A-147	5.90-1.40	18 SSW of Kayenta		Bed of wash	6,410				None	N
	do.	8A-149A	4.40-0.60	17 SSW of Kayenta		Narrow valley	6,580				do.	N
					DISTRICT 9							
2	None											
3	do.											
7	Drilled well	9K-211	10.20-13.50	11 NNW of Teec Nos Pos	5/44	Broad valley	4,970	550	7	239	Open hole	N
	Dug well	9K-3	8.90-11.55	13 NNW of Teec Nos Pos	12/38	Bed of wash	4,870	2	7		None	Tr
8	Drilled well	9K-219	7.70-13.90	4 NNW of Red Mesa T.P.	1/54	Plain	5,130	508	6	508	Perforated 418-508	W, Tr
	do.	9T-214	12.80-7.35	12 NW of Red Mesa T.P.	10/51	do.	5,120	590	7	497	Open hole	W, Ta, Tr
	do.	9Y-32	2.20-14.80	6 ENE of Red Mesa T.P.	2/35	do.	5,150	735	6	560	do.	W, Ta, Tr
	do.	Shell Oil Co.	6.35-5.50	12 N of Red Mesa T.P.		do.	4,780	460	6	316	do.	P, Re
	Dug well	9Y-41A	1.80-3.40	15 NNE of Red Mesa T.P.		Bed of wash	4,580	4.5	3 x 3	4.5	Masonry cribbed	Tr
	Spring	9Y-40	4.95-3.20	14 N of Red Mesa T.P.		Broad valley	4,790				Collection gallery	C, Tr
	do.	9Y-41	3.60-5.00	13 NNE of Red Mesa T.P.		Small valley	4,810				do.	C, Tr
	do.	9Y-42	4.45-2.40	15 N of Red Mesa T.P.		Hillside	4,700				do.	C, Tr
	do.	9Y-43A	5.45-4.15	13 N of Red Mesa T.P.		Small valley	4,970				do.	Ta, Tr
	do.	9Y-46	10.45-4.70	13 NNW of Red Mesa T.P.		Shallow canyon	4,800				None	N
	do.	9Y-57	9.10-16.80	2 WNW of Red Mesa T.P.		Hillside	5,350				Collection gallery	C, Tr
	do.	9Y-61	10.75-2.30	16 NNW of Red Mesa T.P.		Small valley	4,870				do.	C, Tr
	do.	9Y-62	12.05-0.05	18 NNW of Red Mesa T.P.		Head of canyon	4,850				do.	C, Tr
	do.	9Y-123	2.95-3.30	15 NNE of Red Mesa T.P.		Narrow valley	4,900				None	N
9	Drilled well	9K-209	0.50-5.00	16 NNE of Mexican Water T.P.	/41	Top of mesa	4,930	520	6	432	Perforated at 30	W, Ta, Tr
	do.	9K-221	3.60-7.80	13 NNE of Mexican Water T.P.	2/54	Broad valley	4,620	209	8 6	20 64	Perforated 40-64	W, Tr
	do.	9T-220	5.50-3.10	17 N of Mexican Water T.P.	1/54	do.	4,500	405	12	39	Open hole	W, Tr
	Dug well	9Y-30	2.15-14.35	8 NE of Mexican Water T.P.	6/31	Bed of wash	4,960	13	10	13	Masonry cribbed	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 8—Continued															
											D, S	No			Aerial reconnaissance.
235	226 P	Navajo	LL	320	6/ 8/55	2-3		8	141	1¼	D, S	Yes	Good		Bailed hole dry.
		Alluvium		Dry	10/12/54						S	No			Abandoned.
		Dakota and Morrison (Westwater Canyon)		3 R							S	No			
		Morrison (Westwater Canyon)		2	10/12/54						D, S	Yes	Bad	59	
		Cow Springs				.8 E	2/17/56				S	No			
		Morrison (Westwater Canyon)				.5 E	10/11/54				D, S	Yes	Good	64	
		Wepo				.5 E	10/15/54				S	Yes	Bad	63	
		do.									S	No			
DISTRICT 9															
208	325	Morrison (Salt Wash) and Entrada	DL	30	5/12/44	3		3	140	16	Un	No	Bad		BIA records.
		Alluvium		.5	10/20/54						D, S	Yes	Good	70	Old well gone, two shallow holes.
210	298 P	Navajo	LL	133	1/20/54	3-4		20	67	1	D, S	Yes	Good	62	1.5 gpm at 140 feet.
460	130 P	do.	LL	315	12/ 3/53	2-3		15	12	1	D, S	Yes	Good	61	
570	165 P	Wingate (Lukachukai)		309	2/18/51	2-3		10			D, S	Yes	Good	66	Show of Navajo Sandstone water.
385	75 P	Navajo		Flow	10/21/54	35 R	10/21/54	35	160		D, S	Yes	Good	65	Water well.
		Alluvium		3	10/21/54						D, S	Yes	Fair	60	
		Morrison (Recapture)				.5 R .2 E	9/ 3/36 10/21/54				D, S	Yes	Good	62	
		do.				.2 R .2 E	9/ 4/36 10/21/54				D, S	Yes	Good	63	
		do.				< .1 R .2	9/ 5/36 10/21/54				D, S	Yes	Good	63	
		do.				.2 E	10/21/54				S	Yes	Good	58	
		Bluff				5-10 E	10/27/54				S	No			Yield varies in different seasons.
		Wingate (Lukachukai)				< .1 R .5 E	9/15/36 10/20/54				D, S	Yes	Good	68	
		Morrison (Recapture)				.5 R .2 E	10/27/54				D, S	Yes	Good	66	
		do.				1 R .1 E	9/15/36 10/27/54				D, S	Yes	Good	58	
		do.				< .1	10/21/54				S	No			
0 418	60 102 P	Bluff Navajo		30 R 54	5/ 6/41 12/ 8/53	3-4		8			D, S	Yes	Good	64	Deepened to 775 feet.
60	149 P	Navajo	LL	47	2/ 1/54	7 E	11/ 3/54	40	20	1	S	Yes	Good	58	Flowed when drilled.
130	275 P	do.	LL	52	1/ 6/54	3-4		34	51	1		Yes	Good	62	
		do.		12.5	10/29/54						S	Yes	Good	42	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 9—Continued							
9 con.	Dug well	9Y-66	1.75-11.05	11 NE of Mexican Water T. P.	/34	Bank of wash	4,700	5	2	5	Masonry cribbed	N
	Spring	9Y-21	10.65-14.80	6 NNW of Mexican Water T. P.		Head of canyon	4,620				Collection gallery	Tr, Re
	do.	9Y-24	3.40-3.65	17 NNE of Mexican Water T. P.		Base of cliff	4,850				do.	C, Tr
	do.	9Y-25	3.55-4.50	16 NNE of Mexican Water T. P.		Side of cliff	4,890				do.	C, Tr
	do.	9Y-27	3.25-6.15	14 NNE of Mexican Water T. P.	5/26	Small valley	4,580				do.	Tr
	do.	9Y-29	1.55-9.70	12 NNE of Mexican Water T. P.	6/26	Bank of wash	4,800				do.	Tr
	do.	9Y-31	3.30-15.20	6 NE of Mexican Water T. P.		Small valley	4,990				do.	Tr
	do.	9Y-65	0.75-12.90	10 NE of Mexican Water T. P.	7/26	Canyon	4,970				do.	C, Tr
19	Drilled well	9Y-100	13.80-1.75	10 NW of Teec Nos Pos	1/35	Plain	5,220	295	6	208	Open hole	W, Ta, Tr
	do.	Teec Nos Pos 1	5.85-6.80	Teec Nos Pos D. S.	6/47	Small valley	5,240	395	8 6	212 395	Perforated 30- 60 180-190	P, Ta
	do.	Teec Nos Pos 4	5.90-6.85	Teec Nos Pos D. S.	2/55	do.	5,230	543	8	543	Perforated 375-543	P, Ta
	Dug well	9Y-3	2.95-2.75	5 NE of Teec Nos Pos		Bank of wash	4,920	20	6	20	Rock cribbed	Tr
	Spring	9B-14	13.6-11.3 A	10 SW of Teec Nos Pos	3/40	Narrow canyon	7,000 E				Collection gallery	Tr
	do.	9B-25	7.55-7.00	2 W of Teec Nos Pos	3/40	Small valley	5,360				do.	Tr
	do.	9B-26	7.60-5.75	2 WNW of Teec Nos Pos	12/26	do.	5,140				do.	Tr
	do.	9R-1	5.85-5.80	1 N of Teec Nos Pos	11/26	Bank of wash	5,200				do.	C, Tr, Ta
	do.	9Y-7	10.20-5.35	4 WNW of Teec Nos Pos		Shallow canyon	5,460				do.	Tr
	do.	9Y-8	10.00-4.75	4 NW of Teec Nos Pos		Bank of wash	5,370				do.	Tr
	do.	9Y-11	6.15-7.25	1 SSW of Teec Nos Pos	1/40	do.	5,360				do.	Tr
	do.	9Y-54	9.6-12.5 A	7 SW of Teec Nos Pos		Deep canyon	8,920 E					Tr
	do.	Teec Nos Pos 2	5.70-6.30	0.25 NE of Teec Nos Pos		Small valley	5,190				Collection well	P, Ta
	do.	Teec Nos Pos 3	5.75-6.50	Teec Nos Pos		Edge of terrace	5,220				do.	Ta
	Combination spring	9R-49	6.95-3.80	3 NNW of Teec Nos Pos		Narrow valley	4,990				None	N
	do.	9R-49A	6.10-4.80	2 N of Teec Nos Pos		Small valley	5,020				do.	N
	do.	9Y-5	9.30-5.20	4 WNW of Teec Nos Pos		Narrow valley	5,420				do.	N
	do.	9Y-51	10.1-14.5 A	9 SSW of Teec Nos Pos		Head of canyon	8,840 E					Tr
20	Drilled well	9B-17	4.00-3.65	4 SE of Red Mesa T. P.	1/35	Plain	5,420	528	6 5	339 528	Perforated	W, Ta, Tr
	do.	9K-212	6.55-0.30	0.25 SE of Red Mesa T. P.	6/44	Stripped plain	5,400	715	6 5	111 443	Perforated 113-132	W, Ta, Tr
	do.	9K-213	10.00-10.50	Sweetwater	/49	Edge of mesa	5,380	165	6			P, W
	do.	9K-213A	9.95-10.55	Sweetwater		do.	5,380	160	6			
	do.	9K-216	6.45-11.00	4 E of Sweetwater	8/52	Plain	5,690	692	6 5	534 590	Perforated at 240 and 550-690	W, Ta, Tr
	do.	9K-217	8.10-13.70	Emanuel Mission		Broad valley	5,500	51	6	51	Open end	P
	do.	9Y-10	10.20-1.95	4 WSW of Red Mesa T. P.	2/35	Plain	5,260	603	6	446	Open hole	W, Ta, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 9—Continued									
		Alluvium		2.3	10/28/54						D, S	Yes	Good	60	
		Navajo				4 R 10	8/27/36 11/ 4/54				D, S	Yes	Good	61	
		Bluff				.2 R .5	8/27/36 11/ 3/54				D, S	Yes	Good	62	
		do.				.5 R .8 E	8/27/36 11/ 3/54				S	Yes	Good	62	
		Entrada				.5 R 1 E	8/27/36 11/ 3/54				D, S	Yes	Good	64	
		Navajo				4 R 3 E	8/27/36 10/20/54				D, S	Yes	Good	58	
		do.				1.5 R 1 E	8/27/36 10/27/54				D, S	Yes	Good	54	
		Wingate (Lukachukai)				1 R .5 E	9/17/36 10/29/54				D, S	Yes	Good	56	"Clah Spring."
145	150 P	Navajo		42	9/17/53	3-4		10			D, S	Yes	Good	64	Original depth 356 feet, plugged.
10	360	Morrison (Recapture, Salt Wash) and Bluff		14	6/30/47			15		1½	D	Yes	Good	71	Teec Nos Pos School.
0	543 P	Morrison (Salt Wash) and Entrada	DL	28	3/11/55			32	220	1	D	Yes	Good	58	Do.
		Alluvium		Dry	10/14/54						Un	No			Abandoned.
		Morrison (Westwater Canyon)				.8 R 4 E	8/24/36 1/14/55				D, S	No	Good		
		Morrison (Recapture)				.5 R .2	3/29/40 10/14/54				S	No	Fair	60	
		Morrison (Salt Wash)				1 R < .1	12/ /26 10/14/54				D, S	Yes	Bad	64	
		Morrison (Recapture)				1 R Dry	11/ /26 10/14/54				Un	No			Abandoned.
		do.				.5 R .8	10/13/54				D, S	No	Good	62	
		do.				.8 R .8 E	10/13/54				D, S	No	Good	64	
		do.				1.5	10/14/54				D, S	No	Good	60	
											D, S	No	Good		
		Morrison (Recapture)									D	Yes	Good	71	
		do.									D	Yes	Good		Spring at mission.
		Morrison (Salt Wash)				6 E	10/14/54				D, S, Irr	No	Good	60	
		Alluvium				150 E	10/14/54				D, S, Irr	No	Good	60	
		Morrison (Recapture)				40 E	10/13/54				S	Yes	Good	58	"Toh-do-es-con Stream."
											D, S	No	Good		
390	138 P	Navajo	DL	190	1/21/35	2-3		10			D, S	Yes	Good	62	
7	708 P	Navajo and Wingate (Lukachukai)		203	12/10/53	2-3		3		8	D, S	Yes	Good	71	
		Morrison (Salt Wash)		42 R				1			D, S	Yes	Good	52	Sweetwater T. P.
		do.		42 R							D	No			Do.
0 580	230 112 P	Morrison (Salt Wash) Bluff and Navajo	LL	107	12/ 8/53	3-4		9 11	113 67	1 ¾	D, S	Yes	Good	65	Navajo Sandstone water level 362 feet, August 1952.
0	51 P	Alluvium	LL	28	10/15/54			40			D, S	Yes	Good	58	
475	128 P	Navajo		148	5/29/52	3-4		10		1	S	Yes	Good		

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 9—Continued							
20 con.	Spring	9B-1	7.80-14.35	1 SSE of Emanuel Mission		Bank of wash	5,480				Collection gallery	Tr
	do.	9B-2	8.75-13.70	1 W of Emanuel Mission	11/30	do.	5,430				Collection well	Tr
	do.	9B-5	13.10-13.25	5 W of Emanuel Mission		Small valley	5,240				Collection gallery	Tr
	do.	9B-6	9.95-10.50	Sweetwater		Broad valley	5,360				do.	C
	do.	9B-9	1.95-8.60	8 ENE of Sweetwater	11/28	Bank of wash	5,740				do.	Tr, Re
	do.	9B-12	9.25-10.00	1 NE of Sweetwater		Small valley	5,320				None	N
	do.	9B-21	3.45-1.65	4 ESE of Red Mesa T.P.		Base of butte	5,540				Collection gallery	C, Tr
	do.	9R-3	8.25-12.45	1 N of Emanuel Mission	10/28	Head of canyon	5,480				do.	Tr, Re
	do.	9R-4	9.05-9.00	1 NNE of Sweetwater	10/28	Small valley	5,360				do.	Tr
	do.	9R-6	12.60-12.45	4 SW of Sweetwater		Broad valley	5,180				do.	C, Tr
	do.	9R-10	12.95-14.00	4 W of Emanuel Mission	11/28	Small valley	5,260				None	Tr
	do.	9Y-9	6.60-0.15	Red Mesa T.P.	8/26	Stripped plain	5,400				Collection gallery	C, Tr
	do.	9Y-121A	5.85-16.65	4 SSE of Emanuel Mission		Small valley	5,600				None	N
21	Drilled well	9K-210	7.65-2.70	0.25 E of Mexican Water T.P.	5/41	Broad valley	4,840	85	8	7	Open hole	W, Ta
	do.	9K-210A	7.70-2.50	Mexican Water T.P.	5/52	do.	4,850	130	4		do.	W, Ta
	do.	9K-210B	7.75-2.65	Mexican Water T.P.		do.	4,840	110	6		do.	P, Ta
	do.	9K-218	7.35-9.35	7 S of Mexican Water T.P.	6/53	Stripped plain	5,280	516	8		do.	W, Tr
	do.	9Y-12	1.75-1.40	6 ENE of Mexican Water T.P.	2/35	Plain	5,170	592	6	489	do.	W, Ta, Tr
	do.	9Y-81	2.30-16.30	6 ENE of Rock Point	3/35	Top of mesa	5,630	836	6	252	do.	W, Ta, Tr
	Spring	9B-4	2.50-10.50	10 NE of Rock Point	11/27	Head of canyon	5,240				Masonry wall	Tr
	do.	9Y-16	6.70-2.40	1 ENE of Mexican Water T.P.		Bank of wash	4,860				Collection gallery	C, Tr
	do.	9Y-18	8.15-2.90	1 SW of Mexican Water T.P.		Head of canyon	4,770				None	N
	do.	9Y-19	11.15-3.45	4 WSW of Mexican Water T.P.		Bank of wash	4,730				Collection gallery	C, Tr
	do.	9Y-68	3.20-7.65	7 SE of Mexican Water T.P.	/36	Head of canyon	5,180				None	N
	do.	9Y-69	1.25-6.85	8 SE of Mexican Water T.P.	11/27	Bank of wash	5,120				Collection gallery	Tr
	do.	9Y-71	11.20-11.05	9 SSW of Mexican Water T.P.	9/27	Stripped plain	5,050				do.	Tr
	do.	9Y-72	11.00-11.90	10 SSW of Mexican Water T.P.		Head of canyon	4,980				do.	Tr
	do.	9Y-73	9.15-13.40	11 S of Mexican Water T.P.	10/27	do.	5,030				do.	Tr
	do.	9Y-74	7.40-14.10	12 S of Mexican Water T.P.	7/27	Stripped plain	5,200				do.	C, Tr
	do.	9Y-75	4.45-8.45	6 SE of Mexican Water T.P.		Head of canyon	5,250				do.	Tr
	do.	9Y-79	6.00-15.55	4 NNE of Rock Point		do.	5,030				None	Tr
	Stream	9Y-17	8.05-2.75	1 WSW of Mexican Water T.P.							do.	N
34	None											

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 9—Continued															
		Alluvium				.5 R .4	8/21/36 10/15/54				D, S	No	Good	64	
		do.				.8 R <.1	8/21/36 10/15/54				S	No	Fair	59	Sweetwater dipping vat.
		Navajo				.5 E	11/18/54				D, S	Yes	Good	52	Trough sanded over.
		do.				.5 R 2 E	8/21/36 11/19/54				D	Yes	Good	50	Sweetwater T.P. water supply.
		Morrison (Salt Wash)				.5 R .2	8/22/36 10/14/54				D, S	Yes	Good	60	Flows for about 9 months out of year.
		do.				1 R 8 E	11/17/54				D, S	Yes	Fair	54	
		Bluff				.4	10/13/54				D, S	Yes	Good	64	
		Morrison (Salt Wash)				.8 R .5	10/ /28 10/15/54				D, S	Yes	Good	56	
		do.				1 E	11/18/54				S	Yes	Good	60	
		do.				.5 R 2	11/18/54				D, S	Yes	Good	46	
		do.				.5 R 2 E	11/ /28 11/18/54				S	No	Good		
		Navajo				1 R <.1	8/ /26 10/13/54				D, S	No	Good		Red Mesa T.P. Spring.
		do.				<.1	10/15/54				S	No	Good	66	
4	81 P	do.		27	9/17/53	3-4		15			D, S	Yes	Good		
0	130 P	do.		31	8/21/52	3-4					D	Yes	Good	68	Mexican Water Mission well.
0	110 P	do.		27	10/13/54						D	No	Good		Mexican Water T.P.
0 390	280 126 P	Navajo Wingate (Lukachukai)	LL	216	12/ 3/53	2-3		20	150		D, S	Yes	Good	58	
498	94 P	Navajo	DL	70	2/12/35	3-4		10			D, S, Irr	Yes	Good		
75 505	365 281	Navajo Wingate (Lukachukai)	DL	165	8/13/52	3-4		5			D, S	Yes	Good	62	
		Navajo				.5 R 1 E	11/ /27 11/10/54				S	Yes	Good	46	
		do.				1 R Dry	8/26/36 10/13/54				Un	No			Abandoned.
		do.				2 R 4 E	10/13/54				S	No	Good	53	
		Alluvium				Dry	10/13/54				Un	No			Abandoned.
		Navajo				.2 R .2	9/18/36 10/13/54				S	No	Good	60	
		do.				1 R .5	9/18/36 10/13/54				S	No	Good	65	"Toh-bih-na-kissih Spring."
		do.				.2 R 1 E	9/22/36 11/10/54				D, S	No	Good		
		do.				1 R 1 E	9/22/36 11/10/54				S	No	Good		
		Wingate (Lukachukai)				.2 R .5	9/22/36 11/10/54				D, S	Yes	Good	54	
		Kayenta				.2 R .5	9/22/36 11/10/54				S	No	Fair		
		Navajo				.5 R .5 E	9/22/36 11/10/54				D, S	Yes	Good	50	
		Wingate (Lukachukai)				2.5 R 1 E	9/24/36 12/ 1/54				D, S	No	Good		
						200 E	10/13/54				S	No	Good	53	"Walker Creek."

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 9—Continued							
35	Drilled well	9T-222	9.65-1.80	11 E of Rock Point	6/54	Top of mesa	6,220	853	12 6	8 508	Open hole	W, Ta, Tr
	Spring	9Y-88	12.80-0.35	8 ENE of Rock Point	11/28	Head of canyon	5,870				Collection gallery	Tr
	do.	9Y-119	7.35-1.25	5 S of Emanuel Mission		do.	5,550				None	N
	do.	9Y-120	5.35-2.50	7 SSE of Emanuel Mission		do.	5,840				do.	N
	do.	9Y-121B	6.20-0.00	4 SSE of Emanuel Mission		Bed of wash	5,500				do.	N
36	Drilled well	9K-215	10.80-11.50	10 SSW of Rock Point	9/52	Stripped plain	5,470	641	6	641	Perforated 500-641	W, Ta, Tr
	do.	9Y-97	4.30-7.85	6 SSE of Rock Point	6/37	Broad valley	5,080	165	6	152	10-foot screen	W, Ta, Tr, Re
	do.	9Y-98	7.20-2.20	Rock Point	6/37	do.	5,000	124	6	114	do.	W, Ta, Tr
	do.	9Y-98A	7.25-2.40	Rock Point School	9/37	do.	5,000	127	6	127	do.	P
	do.	9Y-98B	6.95-2.60	1 SSE of Rock Point	9/34	do.	5,000	233	6	210	Perforated 205-209	N
	do.	9Y-107	10.3-13.3 A	11 SSW of Rock Point		Stripped plain	5,650 E	418				
	Dug well	9Y-96	10.50-10.00	8 SSW of Rock Point		Head of canyon	5,280	8.5	5 x 6	8.5	Masonry cribbed	H, Tr
	Spring	9A-25	9.50-2.00	2 W of Rock Point		do.	5,210				None	N
	do.	9R-7	3.40-7.30	6 SE of Rock Point		Base of butte	5,220				Collection gallery	Tr
	do.	9R-9	5.30-3.25	2 ESE of Rock Point		Small valley	5,040				do.	C, Tr
	do.	9Y-89	3.75-3.30	4 ESE of Rock Point		Bed of wash	5,190				None	N
	do.	9Y-114	7.35-7.35	5 S of Rock Point		Head of canyon	5,300				Collection gallery	Tr
37	Drilled well	9Y-92	1.85-14.25	15 SW of Rock Point	1/39	Bank of wash	5,580	300	8 6	154 300	Perforated 154-300	W, Tr
	do.	9Y-95	0.10-16.15	16 SSW of Rock Point	11/37	Stripped plain	5,650	300	8 6	145 300	Perforated 145-300	W, Ta, Tr
53	None											
54	do.											
					DISTRICT 10							
36	Dug well	10R-162A	5.65-16.65	11 N of Many Farms		Broad valley	5,160	8.5	6	8.5	Steel caisson	H, Tr
52	Spring	10R-90	12.30-13.20	12 NNE of Chinle		Bottom of canyon	5,840				None	N
53	Drilled well	10K-7	6.45-10.00	Many Farms	6/39	Broad valley	5,300	1,509	5	732	Open hole	W, Tr
	do.	10K-213	0.30-11.05	6 E of Many Farms	4/39	Edge of mesa	5,840	344	6	223	do.	W, Ta, Tr
	do.	10K-216	6.55-10.05	Many Farms	6/40	Broad valley	5,300	290	13 10	246 276	Perforated 165-175 190-230	N
	do.	10K-217	6.55-9.90	0.25 NW of Many Farms	12/40	do.	5,300	1,253	10	720	Open hole	N
	do.	10K-218	5.30-10.20	1 E of Many Farms	8/41	Bank of wash	5,290	174	6	174	Perforated 168-173	N
	do.	10K-235	13.45-5.75	8 WNW of Many Farms	8/52	Broad valley	5,750	703	8	496	Perforated 180-203 474-496	W, Ta, Tr
	do.	10R-98	6.20-10.70	1 S of Many Farms	8/36	do.	5,300	110	6 4	95 110	Perforated 89-93	W, Ta, Tr
	do.	10R-166	5.45-16.15	Chinle Valley Store	8/36	do.	5,380	190	6	169	Perforated 164-167	P, Ta, Tr
	do.	10R-174	11.45-1.90	10 NNW of Many Farms	9/37	Stripped plain	5,690	192	8 6	108 192	Perforated	W, Ta, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 9—Continued															
570	283 P	Wingate (Lukachukai)	LL	710	6/19/54	1-2		7	115	¾	D, S	Yes	Good		Navajo Sandstone dry.
		Navajo				Dry	10/15/54				Un	No			
		Wingate (Lukachukai)				.5	10/15/54				S	No	Good		
		Navajo				.5 E	10/15/54				S	No	Good		
		do.				.2 E	10/15/54				S	No	Good	66	
360	281 P	Wingate (Lukachukai)	LL	15	9/16/52	3-4		8	435	3	D, S	Yes	Good	60	Show of Navajo Sandstone water.
0	152	Alluvium	DL	46	6/ 6/52	3-4		12			D, S	Yes	Good	62	
0	124 P	do.		21	8/ 3/49	3-4		12	18		D, S	Yes	Good		
0	127 P	do.		21	12/17/49			25	23	2	D, S, Irr	Yes	Good	57	Rock Point School.
0	210	do.	DL	22 R	9/30/34			23 R		8	Un	No	Fair	57	Abandoned.
4 112	76 288	Navajo Wingate (Lukachukai)		70				1			Un	No			Do.
		Kayenta		4.6	12/ 3/54						D, S	Yes	Good	42	
		Navajo				3 E	12/ 1/54				D, S	Yes	Good	46	
		Wingate (Lukachukai)				.2 R .5	11/ 9/54				D, S	Yes	Good	46	
		do.				.2 R .5 E	12/ 2/54				S	No	Good		
		do.				1 R 5 E	9/25/36 12/ 2/54				D, S, Irr	No	Good		
		do.				1 E	12/ 2/54				D, S	No	Fair		
50	250 P	Navajo	DL	169	12/13/52	3-4		13			D, S	Yes	Good	53	
68	176 P	do.		106	11/13/53	3-4		11			D, S	Yes	Good	62	
DISTRICT 10															
		Alluvium		7	7/29/54						D, S	No	Fair		Indian developed.
		De Chelly				2.5 R Dry	7/28/54				S	No			Temporary.
740 830	90 502	Chinle (Shinarump) De Chelly	DL	Flow	1/29/48	9	/39	110		6	D, S	Yes	Good		
218	126 P	De Chelly	DL	204	7/28/54	3-4		12			D, S	Yes	Good		Show of Chinle (Shinarump) water.
0	202	Alluvium		37	7/29/54			150			Un	Yes	Fair	56	Abandoned.
730	523 P	Chinle (Shinarump) and De Chelly		Flow	1/29/48	12					D, S	Yes	Good		
0	148	Alluvium		15	8/12/54			26		4	Un	No			Abandoned.
30	570	Navajo, Kayenta, and Wingate (Lukachukai)		100	7/30/54	3-4		10	90	1	D, S	Yes	Good	62	
0	88	Alluvium		24	7/29/54	3-4		13			D, S	Yes	Good		
0	163	do.	DL	13	4/17/52	3-4		30	45		D, S	Yes	Good		
50	142 P	Wingate (Lukachukai)	DL	97.4	7/29/54	3-4		3			D, S	Yes	Good	57	Original depth 601 feet, plugged.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 10—Continued							
53 con.	Drilled well	10T-238	6.75-5.80	4 N of Many Farms	4/54	Broad valley	5,230	160	12	150	Open hole	Ta, Tr
	do.	10T-241	5.50-7.20	3 NNE of Many Farms	5/54	do.	5,250	103	8	103	Gravel packed	W, Ta, Tr
	Dug well	10R-94	3.70-12.05	4 SE of Many Farms	7/30	Bank of wash	5,300	7	3	7	Masonry cribbed	H, Tr, Re
	do.	10R-97	5.15-5.60	4 NNE of Many Farms	2/40	do.	5,220	10	4	10	do.	W, Tr, Ta
	do.	10R-162	5.15-1.95	8 N of Many Farms		do.	5,190	15	5	15	do.	H, Tr
	Spring	10B-186	9.95-15.95	4 W of Chinle Valley Store	9/29	Head of canyon	5,780				Collection gallery	H, C, Tr
	do.	10R-93	4.25-14.80	2 NE of Chinle Valley Store	7/30	Small valley	5,360				do.	Tr
	do.	10R-106	9.85-11.75	4 WSW of Many Farms		Head of canyon	5,570				Masonry wall	Tr
	do.	10R-108	10.10-11.35	4 WSW of Many Farms		Side of cliff	5,600				do.	Tr
	do.	10R-109	12.30-15.70	7 W of Chinle Valley Store	12/35	Head of canyon	5,640				Collection gallery	Tr
	do.	10R-114	10.15-9.00	4 WNW of Many Farms	11/29	do.	5,550				do.	Tr
	do.	10R-115	11.80-8.00	6 WNW of Many Farms	11/29	Side of cliff	5,610				do.	C, Tr
	do.	10R-120	9.15-2.95	8 NNW of Many Farms		Small valley	5,200				None	N
	do.	10R-121	8.85-3.55	7 NNW of Many Farms		Small canyon	5,200				Collection gallery	Tr
	do.	10R-125	2.50-14.55	6 SE of Many Farms		Bed of wash	5,430				Collection well	
	do.	10R-134	7.75-15.05	2 WNW of Chinle Valley Store	1/30	Side of cliff	5,460				Collection gallery	Tr, Re
	do.	10R-161	9.10-1.50	9 NNW of Many Farms		Edge of cliff	5,650				do.	C, Tr
54	Drilled well	10K-201	6.90-6.25	Rough Rock T.P.	11/41	Small valley	6,290	305				N
	do.	10K-201A	6.9-6.2 A	Rough Rock T.P.		do.	6,290	900				N
	do.	10K-201B	6.9-6.2 A	Rough Rock T.P.		do.	6,290	223				N
	do.	10K-201C	6.9-6.2 A	Rough Rock T.P.		do.	6,290	177				N
	do.	10K-221	6.90-6.25	Rough Rock T.P.	11/41	do.	6,290	1,215	8	1,117	Open hole	P, Ta
	do.	10R-111	1.15-9.15	6 ESE of Rough Rock T.P.	4/35	Broad valley	5,720	360	6	267	do.	W, Ta, Tr
	do.	10R-119	1.45-1.90	7 NE of Rough Rock T.P.	1/35	Plain	5,760	360	6	360	Perforated	W, Ta, Tr
	do.	10GS-54-1	7.00-5.95	1 NW of Rough Rock T.P.	12/52	Top of cliff	6,350	230			Open hole	P, Ta
	Dug well	10A-132	8.40-6.10	1 W of Rough Rock T.P.	2/40	Small valley	6,360	13.5 R	6	13.5 R	Masonry cribbed	Tr
	do.	10R-105A	1.60-10.55	7 SE of Rough Rock T.P.		Bed of wash	5,760	7.5	5	7.5	do.	N
	do.	10R-105B	1.65-10.65	7 SE of Rough Rock T.P.		do.	5,750	8	2	8	do.	N
	do.	10R-113	2.25-6.40	4 E of Rough Rock T.P.	/39	Bank of wash	5,890	18 R	5	18 R	do.	W, Ta, Tr
	Spring	10R-158	6.65-6.65	1 SSE of Rough Rock T.P.		Base of cliff	6,320				Collection well	C, Tr
	do.	10R-158A	6.70-6.40	0.25 SE of Rough Rock T.P.		do.	6,290				do.	
69	None											
70	Drilled well	10K-236	12.90-3.80	5 NE of Chinle	4/54	Stripped plain	6,210	526	8	185	Open hole	W, Ta, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 10—Continued															
0	151	Alluvium	LL	24.9	4/27/54			48	25	1½	D	Yes	Fair	59	
0	102	do.		18.1	7/29/54	3-4		9	11	4	D, S	Yes	Fair		
		do.		6	8/12/54						D, S	Yes	Good	71	
		do.		6.4	7/29/54						D, S	Yes	Fair		
		do.		14.8	7/29/54						S	Yes	Fair		
		Wingate (Rock Point)				1.2 E	8/ 4/54				S	No	Good		
		Chinle (Petrified Forest, lower)				1.5 R 1.5	2/28/40 7/28/54				S	Yes	Good	65	
		Wingate (Lukachukai)				2 R 4 E	2/27/50				D, S	No	Good		"Alamo Spring."
		do.				.2 R <.1	7/30/54				S	Yes	Good	65	
		Kayenta				4 R 1.5	12/ /35 2/27/50				D, S	Yes	Good	46	"Coyote Spring."
		Wingate (Lukachukai)				1.5 R .5 E	11/ /29 8/27/52				D, S	Yes	Good	72	
		Kayenta				.8 .2	7/ /35 3/ 3/50				D, S	Yes	Good	45	
		Wingate (Lukachukai)				<.1	7/29/54				S	Yes	Good	65	
		do.				3 R Dry	7/29/54				Un	No			Abandoned.
		Chinle (lower red)				2.2	7/28/54				D, S	Yes	Good	68	
		Chinle (Owl Rock)				1.5 R <.1	1/ /30 7/29/54				S	No	Fair		
		Wingate (Lukachukai)				.8 R <.1	7/29/54				S	Yes	Good	70	
10	220	Morrison (Westwater Canyon)		140 R	5/16/36						Un	Yes			Abandoned.
12	222	do.		140 R							Un	No			Rough Rock School; abandoned.
10	213 P	do.		140 R							Un	No			Do.
10	167 P	do.		140 R							Un	No			Do.
1,138	77 P	Navajo	DL	703	8/ 4/54	1-2		8	86		D	Yes	Good		Show of water in Morrison Formation; Rough Rock School.
210	150 P	Entrada and Navajo	DL	170	8/ 4/54	3-4		10	25		D, S	Yes	Bad	62	
310	50 P	Navajo	DL	256	12/ 2/53	2-3		9			D, S	Yes	Good	56	
		Dakota and Morrison (Westwater Canyon)		210	8/ 4/54	2-3					D	Yes	Fair		Rough Rock Mission.
		Alluvium		7.6	8/23/52						S	Yes	Bad	68	
		do.		7.1	8/ 4/54						D, S	No	Fair		
		do.		7.4	8/ 4/54						D, S	No	Fair		
		do.		10.2	8/ 4/54	3-4					S	Yes	Fair	71	
		Dakota				.1 E	8/ 4/54				D, S	Yes	Good	57	
		do.				1 E	8/ 4/54				D, S, Irr	Yes	Good	62	
165	361 P	De Chelly	DL	392	4/12/54	2-3		6	134	½	D, S	Yes	Good		Bailed hole dry; Chinle Formation dry.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 10—Continued							
70 con.	Drilled well	10T-233	7.05-15.30	13 SE of Chinle	/51	Edge of canyon	6,740	730	8		Open hole	W, Ta, Tr
	do.	10T-243	12.65-12.00	6 SE of Chinle	6/54	Stripped plain	6,300	629	8	16	do.	W, Ta, Tr
	Dug well	10R-73	7.05-14.40	12 SE of Chinle		Bank of wash	6,750	7	6	7	Masonry cribbed	H, Tr
	Spring	10R-78	8.95-15.45	12 SE of Chinle		Bottom of canyon	6,300				None	N
	do.	10R-81	12.70-4.55	4 ENE of Chinle		Head of canyon	6,000				do.	N
71	Drilled well	10K-200	3.50-1.85	5 N of Chinle	2/39	Terrace	5,580	267	6 5	220 267	Perforated	W, Ta, Tr
	do.	10K-231	2.35-6.85	Chinle		Broad valley	5,510	222				N
	do.	10K-232	2.30-6.85	Chinle	4/48	do.	5,510	280	16 10	84 223	Perforated 118-122	P, Ta
	do.	10K-234	12.45-14.40	13 SW of Chinle		Hillside	5,880	1,862	8 5	1,050 1,782	Open hole	N
	do.	10R-2	3.00-14.45	8 S of Chinle	12/38	Broad valley	5,600	65	6	65	10-foot screen	W, Ta, Tr
	do.	10R-3	2.90-17.05	10 S of Chinle	9/38	do.	5,660	58	6	58	do.	W, Ta, Tr
	do.	10R-54	4.25-9.05	3 SSW of Chinle	9/35	do.	5,520	205	6	190	Perforated 182-189	W, Ta, Tr
	do.	10R-58	7.50-15.10	10 SSW of Chinle	4/35	do.	5,750	117	6	93	Perforated 80-92	W
	do.	10R-135	13.65-10.65	12 WSW of Chinle	4/36	do.	5,770	127	6	86	Perforated 79-82	Ta, Tr
	do.	10R-155	3.75-6.10	1 WNW of Chinle	2/36	do.	5,500	210	4		10-foot screen	W, Ta, Tr
	do.	10R-155A	3.80-5.90	2 WNW of Chinle	1/50	do.	5,480	84	6	84	Gravel packed; perforated 52-58	W
	do.	10R-156	2.35-6.90	Chinle	6/34	do.	5,510	176	8 ft 6 in	41 176	20-foot screen	P
	do.	10R-156A	2.40-6.90	Chinle	5/34	do.	5,510	115	6	115	Perforated 64-66 84-86	W, Tr
	do.	10R-157	1.85-7.15	1 ESE of Chinle	1/36	Small valley	5,530	100	6	100	8-foot screen	P, Ta, Tr
	do.	10R-170	4.15-3.65	4 NNW of Chinle	2/36	Broad valley	5,430	162	6 4	122 162	Perforated 116-119	W, Ta, Tr
	do.	10R-413	8.40-11.15	8 SW of Chinle	10/35	Hillside	5,680	204				N
	do.	10T-242	5.10-6.65	2 W of Chinle	5/54	Broad valley	5,500	216	8	216	Perforated 214-216	W, Ta, Tr
	Dug well	10R-1	2.80-9.55	3 S of Chinle	2/40	Small valley	5,550	6.5	6	6.5	Masonry cribbed	H, Tr
	do.	10R-15	12.95-12.95	12 WSW of Chinle	1/29	Broad valley	5,800	10	2	10	do.	Tr, Ta
	do.	10R-100	12.35-8.85	10 WSW of Chinle	2/29	Bank of wash	5,800	15	3	15	do.	H, Tr, Ta
	do.	10R-131	12.25-2.65	11 WNW of Chinle		Small valley	5,750	8	6	8	do.	H, Tr
	do.	10R-154	4.45-1.50	6 NNW of Chinle		Broad valley	5,420	5	2 x 2	5	Plank cribbed	Tr
	do.	10R-171	3.05-6.85	0.25 W of Chinle		do.	5,500	20	10	20	Rock cribbed	N
	Spring	10B-188	2.35-13.10	6 S of Chinle		Small valley	5,590					Tr
	do.	10R-101	12.40-5.55	10 W of Chinle	8/29	do.	5,950				Collection gallery	C, Tr
72	Drilled well	10K-237	1.50-5.00	6 ENE of Black Mountain T. P.	9/54	Broad valley	6,070	517	8	353	Perforated 267-352	W, Ta, Tr
	do.	10K-245	0.45-8.90	6 E of Black Mountain T. P.	10/54	Terrace	5,980	483				N
	do.	10R-49	7.50-8.75	1 WSW of Black Mountain T. P.	3/36	Broad valley	6,250	197	6	197	Perforated 94-112	W, Ta, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 10—Continued															
140	590 P	De Chelly	LL	298	11/ 6/51	2-3		10	260	2½	S	Yes	Good	56	Chinle Formation dry.
40	589 P	do.	DL	465	6/ 2/54	2-3		8	164	1¾	D, S	Yes	Good		Bailed hole dry; Chinle Formation dry.
		Chinle (lower red)		3.9	6/ 2/54			3 E			D, S	Yes	Good	60	
		De Chelly				2.5 E	6/ 3/54				D, S	Yes	Good	72	
		Chinle (Shinarump)				.1 E	6/ 3/54				D, S	Yes	Good	52	
24	243 P	Chinle (lower red)	DL	97	2/28/54	3-4		15			D, S	Yes	Good		
0	221	Alluvium										No			Abandoned, insufficient yield.
0 223	223 57 P	Alluvium De Chelly	DL	11.5	7/27/54						D, S, PS	Yes	Good		Chinle water supply.
1,860	2 P	Chinle (Shinarump)	LL	750 R	2/ 3/54						Un	Yes	Good		Abandoned.
0	45	Alluvium		13	8/28/52	3-4		9			D, S	Yes	Good	60	
0	38	do.	DL	13	8/28/52	3-4		5			D, S	Yes	Good	57	
0	180	do.		23	7/27/54	3-4		33			D, S	Yes	Good		
0	85	do.	DL	30	8/ 3/54			3			D, S	Yes	Bad		
0	82	do.	DL	55	4/15/36			3			Un	No	Bad		Abandoned.
0	159	do.		9	2/ 2/48			3			D, S	Yes	Good	69	
0	84 P	do.		52	1/31/50			6		5	D, S	No			Gorman well.
0	176 P	do.		11.5	7/27/54			135	34		PS	Yes	Good	57	Drilled in caisson; Chinle School well.
0	87	do.		9.4	1/29/48	3-4		45			S	Yes	Good		
0 59	59 41 P	Alluvium Chinle (Shinarump)		1.6	2/ 3/48			47		3	D, S	Yes	Good		Canyon de Chelly National Monument headquarters.
0	118	Alluvium	DL	10	7/28/54	3-4		10			D, S	Yes	Good		
24		Wingate (Rock Point)		40	8/12/35			1			Un	No			Abandoned.
0	216 P	Alluvium	LL	44.6	2/17/54			28	30	1	D, S	Yes	Good		
		do.		5.7	8/ 3/54						S	Yes	Good		
		Wingate (Lukachukai)		8.3	8/28/52						S	Yes	Good	65	Windmill removed.
		Alluvium		8.6	8/12/54						Un	Yes	Good	70	Do.
		do.		6.8	8/12/54						D, S	Yes	Good	71	
		do.		3.8	7/28/54						D, S	Yes	Good	69	
		do.		16.8	7/27/54						Un	No	Bad		Abandoned.
		Chinle (lower red)				Dry	8/ 3/54				Un	No			Do.
		Wingate (Lukachukai)				1.5 R .2 E	8/ /29 11/30/50				D, S	Yes	Good		
90	370	Cow Springs and Entrada		245	9/17/54			2		1	S	Yes	Bad	59	
130	340	Wingate (Lukachukai)	LL	125	9/28/54							No			Show of water at 125 feet; abandoned.
0 106	106 91 P	Alluvium Cow Springs	DL	83	8/18/54			3			D, S	Yes	Good		

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 10—Continued							
72 con.	Drilled well	10R-51	7.45-12.15	4 S of Black Mountain T.P.	9/35	Broad valley	6,120	125	6	85	Perforated 77-83	W, Ta, Tr
	do.	10R-51A	7.50-12.15	4 S of Black Mountain T.P.	6/15	do.	6,120	80	3	80	Perforated 70-80	W, Tr, Re
	do.	10R-51B	7.00-12.05	4 S of Black Mountain T.P.	/50	do.	6,080	112	8	112	Perforated	W, Ta, Tr
	do.	10R-152	0.5-8.0 A	6 E of Black Mountain T.P.		Terrace	6,000 E	1,000				
	do.	Amerada 1	5.85-8.55	1 E of Black Mountain T.P.	7/51	Broad valley	6,150	460				N
	do.	Amerada 2	5.85-8.55	1 E of Black Mountain T.P.	8/50	do.	6,150	110				N
	do.	Black Mountain T.P. well	6.85-8.35	Black Mountain T.P.	9/54	Hillside	6,370	300 R	6			N
	do.	Salina T.P. 1	6.60-15.60	Salina T.P.		Small valley	6,530	578				P, Ta
	do.	Salina T.P. 2	6.60-15.70	Salina T.P.		do.	6,520		4			W, Tr
	Dug well	10R-50	7.00-8.45	0.25 SW of Black Mountain T.P.	3/29	Bed of wash	6,380	13 R		13 R	Masonry cribbed	H, Tr
	do.	10R-52	8.75-12.30	4 SSW of Black Mountain T.P.	1/29	Small valley	6,260	13 R	5	13 R	do.	H, Tr
	do.	10R-52A	8.65-12.30	4 SSW of Black Mountain T.P.		Bed of wash	6,250	13.5	5	13.5	do.	H, Tr
	do.	10R-53	8.10-10.35	2 SSW of Black Mountain T.P.	3/29	Small valley	6,210	9	4	9	do.	H, Tr
	do.	10R-53A	8.05-10.35	2 SSW of Black Mountain T.P.		do.	6,200	7	4	7	do.	Tr
	do.	10R-62	5.65-4.65	4 NNE of Black Mountain T.P.	4/29	do.	6,620	21.5	5	21.5	do.	Tr
	Spring	10B-180	6.90-8.30	Black Mountain T.P.	4/29	Hillside	6,370				Collection gallery	C
	do.	10B-181	7.20-8.25	0.25 W of Black Mountain T.P.	4/29	do.	6,380				do.	C
	do.	10B-183	6.70-6.80	2 N of Black Mountain T.P.	4/29	Side of cliff	6,460				do.	C
	do.	10R-153	2.55-8.95	4 E of Black Mountain T.P.	7/29	Small valley	6,020				do.	C, Tr
	do.	10R-169	6.95-15.45	1 NW of Salina T.P.	9/28	Side of cliff	6,450				Collection well	Tr
	do.	10R-169A	6.75-15.50	0.25 NW of Salina T.P.		do.	6,470				do.	P, Tr
89	None											
90	Drilled well	10K-8	13.20-6.65	2 W of Nazlini T.P.	10/38	Broad valley	6,050	305	6 5	220 305	Perforated 253-280	W, Ta, Tr
	do.	10R-24	11.50-0.70	6 N of Nazlini T.P.	5/35	Hillside	6,390	757	6	493	Open hole	W, Ta, Tr
	do.	10R-185	11.15-7.15	Nazlini T.P.	5/36	Top of mesa	6,240	162	6	142	Perforated 131-138	W, P, Ta
	do.	Nazlini 2	11.50-7.15	0.25 W of Nazlini T.P.	11/54	Small valley	6,220	306	8	207	Perforated 140-207	P, Ta
	Oil test	10GS-90-1	10.0-7.0 A	1 E of Nazlini T.P.	/21	do.	6,450 E	826				
	Spring	10R-11	11.25-11.75	4 S of Nazlini T.P.		do.	6,840				None	N
	do.	10R-25	12.25-4.25	3 NNW of Nazlini T.P.		Bed of wash	6,040				do.	N
	do.	10R-26	11.75-4.55	2 NNW of Nazlini T.P.		do.	6,060				do.	N
	do.	10R-28	7.70-7.15	4 E of Nazlini T.P.		Head of canyon	7,090				do.	N
	do.	10R-41	3.55-2.60	9 NE of Nazlini T.P.		Bed of wash	7,440				do.	N
	do.	10R-42	3.90-2.35	9 NE of Nazlini T.P.		Head of canyon	7,440				Collection gallery	Tr, Re

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 10—Continued															
0 80	80 45 P	Alluvium Cow Springs	DL	69	8/ 5/54	3-4		15			D, S	Yes	Fair	52	
0	80 P	Alluvium		69	8/ 5/54	3-4		8			D, S	Yes	Fair		
0	112 P	do.		60	8/ 5/54	3-4		5	29	5	D, S	No	Fair		
		Wingate (Lukachukai)		Dry	3/19/54							No			Show of water at 180 feet; abandoned.
250	210 P	do.	DL	229	7/29/53						Un	Yes	Fair	59	Abandoned.
0	90	Alluvium									Un	No			Do.
		Morrison (Recapture)		Dry	9/14/54							No			Do.
		Morrison (Westwater Canyon)		71	7/31/52	1					D	Yes	Good	63	Salina T.P.
		do.		68	7/31/52						D	No			Do.
		Morrison (Recapture)		10.2	8/18/54			.5 R			D, S	Yes	Good	63	
		do.		7.3	7/31/52			2 R			D, S	Yes	Good	65	
		do.		11.5	8/ 5/54						D, S	No	Fair	65	
		do.		8.5	8/18/54						D, S	Yes	Good	68	
		do.		Dry	8/18/54						S	No			
		Alluvium		17.8	8/18/54			10 R			Un	Yes	Bad	69	
		Morrison (Recapture)				1 E	7/26/49				D, S, Irr	Yes	Good		Black Mountain T.P. Spring.
		do.				Dry	8/18/54				D	No			
		Cow Springs				.2 R < .1	4/ /29 8/18/54				D	Yes	Good	67	
		do.				.5 R < .1	7/ /29 8/ 5/54				D, S	Yes	Good	69	
		Morrison (Westwater Canyon)				1 R Dry	9/ /28 8/17/54				D	Yes	Good		Temporary.
		do.				1 E	7/26/49				D, S, Irr	Yes	Good		Salina T.P. Spring.
253	52 P	Chinle (Shinarump) and De Chelly		153	10/10/38	3-4		12	25		D, S	Yes	Good		
60	655	De Chelly	DL	400	5/27/35	2-3		3			D, S	Yes	Good		
123	39 P	Chinle (Shinarump) and De Chelly		48	5/ 4/53	3-4		25	60		D, S	Yes	Good		Nazlini 1.
120	86 P	De Chelly	LL	38.6	10/19/54			25	120	1	D, PS	Yes	Good		Nazlini School.
0	805	De Chelly and Supai	DL	Flow	/21							No			Reported to be salt water; oil test.
		Chinle (Petrified Forest, upper)				1.5 E	11/13/54				D, S	No	Good	47	
		De Chelly				35 R 30 E	8/ 6/54				D, S, Irr	No	Good		
		do.				40 R 30 E	8/ 6/54				D, S, Irr	Yes	Good	75	
		Chinle (Sonsela)				.8 E	8/19/54				S	Yes	Good	62	
		Chinle (Petrified Forest, lower)				1 R 2 E	8/13/54				S	Yes	Good	70	
		Chinle (Sonsela)				1.5 R < .1	8/13/54				S	No			

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 10—Continued							
90 con.	Combination spring	10R-126	9.00-6.50	2 ENE of Nazlini T.P.		Side of canyon	6,440				None	N
91	Drilled well	10K-244	12.30-5.25	15 W of Nazlini T.P.	/55	Plain	6,020	1,125				N
	do.	10R-21	13.50-0.75	16 SW of Chinle	10/35	Broad valley	5,980	173	6	173	Perforated 124-128	W, Ta, Tr
	do.	10R-61	8.35-6.90	18 SSW of Chinle	8/36	Narrow valley	5,970	92	6	92	Perforated 64-68	W, Ta, Tr
	do.	10R-181	12.0-1.7 A	9 ESE of Salina T.P.	3/35	Terrace	5,900 E	927				N
	Drilled well	10R-182	12.0-6.5 A	12 SE of Salina T.P.	3/35	Plain	6,020 E	420				N
	do.	10T-239	2.45-0.75	11 S of Chinle	6/54	Hillside	5,690	748	12	312	Perforated 240-311	N
	do.	10T-244	7.40-1.10	13 SSW of Chinle	6/54	Broad valley	5,850	111				
	Dug well	10K-2	1.20-10.25	21 S of Chinle		Bank of wash	6,010	14		14	Masonry cribbed	Tr, Ta
	do.	10K-219	2.65-6.80	17 S of Chinle	12/34	do.	5,890	13		13	do.	W, Tr, Ta
	do.	10K-220	3.45-4.35	15 S of Chinle		do.	5,780	15	5	15	do.	W, Tr, Ta
	Spring	10R-8	3.45-10.05	21 S of Chinle		Side of cliff	6,290				Masonry wall	Re
92	Drilled well	10R-16	4.30-0.55	3 SE of Salina T.P.	12/35	Broad valley	6,230	213	4	187	Perforated 134-144	W, Ta, Tr
	Dug well	10R-147	4.40-2.55	5 SSE of Salina T.P.		Bank of wash	6,370	4.5	3 x 6	4.5	Plank cribbed	Tr
	Spring	10R-139	6.85-1.65	3 S of Salina T.P.		Side of cliff	6,540				Collection gallery	C, Tr
	do.	10R-139A	6.95-1.60	3 S of Salina T.P.		do.	6,560				do.	C, Tr
					DISTRICT 11							
35	Drilled well	11K-236	10.80-13.25	4 NNE of Round Rock T.P.	6/52	Stripped plain	5,780	1,325	6	1,168	Open hole	W
	do.	11K-238	7.15-10.40	8 NE of Round Rock T.P.	7/54	do.	5,840	1,377	6	1,216	do.	W, Tr
	do.	11Y-54	12.50-16.65	Round Rock T.P.	12/36	Hillside	5,350	750	5	490	do.	Ta, Tr
	do.	11Y-54A	12.50-16.55	Round Rock T.P.	9/36	do.	5,350	132	8 6	38 132	Perforated 37- 39 62- 64 96- 98 124-128	W, Ta
	Dug well	11Y-46	10.40-11.10	6 NNE of Round Rock T.P.		Bed of wash	5,540	7	6	7	Masonry cribbed	Tr
	Spring	11K-200	9.40-15.00	3 ENE of Round Rock T.P.		do.	5,440				Collection well	N
	do.	11Y-2	8.50-13.65	5 ENE of Round Rock T.P.	/36	do.	5,660				Collection gallery	C, Tr
	do.	11Y-45	4.75-8.85	11 NE of Round Rock T.P.		Bank of wash	5,790				None	N
	do.	11Y-52	10.70-6.70	10 N of Round Rock T.P.		do.	5,500				Collection gallery	Tr
	do.	11Y-60	12.30-8.45	8 N of Round Rock T.P.		Bed of wash	5,360				None	N
	do.	11Y-82	8.00-10.10	8 NE of Round Rock T.P.		do.	5,700				do.	N
36	Drilled well	11Y-75	1.15-14.10	4 NW of Round Rock T.P.	5/37	Broad valley	5,260	800	5	757	Open hole	Tr
	Dug well	11Y-47	3.50-10.15	8 NNW of Round Rock T.P.		Bed of wash	5,160	5.5	8	5.5	None	Tr
	do.	11Y-80	5.60-15.10	8 WNW of Round Rock T.P.		do.	5,140	13.5	5	13.5	Masonry cribbed	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 10—Continued									
		De Chelly				55 R 100 E	8/19/54				D, S, Irr	Yes	Good	70	
		Chinle		Dry								No			Plugged and abandoned.
0	126	Alluvium	DL	91.6	8/11/54	3-4		7			D, S	Yes	Bad		
0	63	do.	DL	42.6	8/ 3/54	3-4		10			D, S	Yes	Fair		
100	827 P	Wingate (Rock Point) and Chinle (Owl Rock)		Dry								No			Plugged and abandoned.
		Petrified Forest)													
5	415 P	Wingate (Lukachukai, Rock Point)		Dry								No			Abandoned.
200	548 P	De Chelly	LL	40	6/11/54			150	124	4¼	Irr	Yes	Good	63	
0	108	Alluvium	LL	Dry								No			Abandoned.
		do.		9.5	8/19/54						S	Yes	Good	60	
		do.		10.1	8/ 6/54	3-4	8/ 6/54				D, S	Yes	Good	59	
		do.		14	8/ 3/54	3-4	8/ 3/54				D, S	Yes	Good	58	
		Chinle (Owl Rock)				1 E	8/19/54				S	No	Good		
134	79 P	Cow Springs and Entrada	DL	109	/35	3-4		5			D, S	Yes	Fair	60	
		Alluvium		Dry	8/11/54						D, S	No			
		Dakota				.2 E	8/11/54				D, S	Yes	Good	68	
		do.				.2 E	8/11/54				D, S	No	Good	68	
						DISTRICT 11									
1,130 1,225	95 100 P	Chinle (Shinarump) De Chelly		229	8/ 5/54	2-3		10	70	1	S	Yes	Good	65	
1,190 1,320	130 57 P	Chinle (Shinarump) De Chelly	LL	210	7/29/54	2-3		17	100	1½	D, S	Yes	Good	76	
498	252 P	Chinle (Shinarump) and De Chelly	DL	Flow	8/26/52	4		60			D, S	Yes	Good	73	
39	58	Chinle (Sonsela)		18 R	9/12/36	3-4		7			D	Yes	Good	70	Owned by trading post.
		Alluvium		5.9	8/ 6/54						D, S	Yes	Good	66	
		Chinle (Sonsela)									D, S	Yes	Fair	80	
		Chinle (Owl Rock)				< .1	8/ 5/54				S	Yes	Good	78	"Nakitch Spring."
		Alluvium									S	Yes	Good	68	
		Wingate (Rock Point)				.2	8/ 6/54				D, S	Yes	Good	74	
		Chinle (Owl Rock)				1.5 E	8/ 6/54				D, S	Yes	Fair	82	
		Alluvium									S	No			"Hasbidito Spring."
767	33 P	Chinle (Shinarump)		Flow	8/22/52	18 12 R	8/22/52 5/29/37				D, S	Yes	Good	64	
		Alluvium		5	8/ 4/54						D, S	Yes	Good	68	Temporary.
		do.		12.5	8/ 4/54						D, S	Yes	Good	62	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA				
								Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 11—Continued							
50	None											
51	Drilled well	11Y-234	12.60-6.00	Lukachukai D.S.	9/51	Plain	6,470	900	6		Open hole	Ta
	do.	11Y-234A	12.65-5.95	Lukachukai D.S.	4/55	do.	6,470	1,097	6	730	do.	P
	do.	Lukachukai T.P.	13.80-6.25	Lukachukai T.P.		Hillside	6,420	304	5			P, Ta
	Dug well	11Y-18	12.00-13.50	4 SSE of Greasewood T.P.		Small valley	7,020	12	4 x 5	12	Masonry cribbed	H, Tr
	do.	Catholic Mission	12.95-5.85	Lukachukai D.S.		Plain	6,460	15		15	do.	P
	Spring	11K-205	5.70-3.30	8 ENE of Lukachukai T.P.		Hillside	9,260				Collection gallery	C, Tr
	do.	11K-259	5.80-5.45	7 E of Lukachukai D.S.		Shallow canyon	8,500				None	N
	do.	11K-260	6.10-6.90	6 E of Lukachukai D.S.		Deep canyon	8,240				do.	N
	do.	11Y-3	5.00-5.30	8 E of Lukachukai D.S.		Hillside	8,530				Collection gallery	Tr
	do.	11Y-35	13.30-9.20	Greasewood T.P.	10/30	Bank of wash	6,610				Collection well	P, Tr
	do.	11Y-37	6.10-10.10	8 E of Greasewood T.P.		Deep canyon	7,810				None	N
	do.	11Y-37A	6.15-10.80	8 ESE of Greasewood T.P.		do.	7,700				do.	N
	do.	11Y-39	12.60-6.30	1 E of Lukachukai T.P.	11/30	Bank of wash	6,490				Collection well	C
	do.	11Y-98A	9.20-3.60	4 NE of Lukachukai D.S.		Hillside	7,560				None	N
	do.	11Y-101	7.35-15.05	8 SE of Greasewood T.P.		do.	7,480				do.	Re
	do.	11Y-107	10.20-14.35	6 SSE of Greasewood T.P.		do.	7,140				Collection gallery	C, Tr
	Combination spring	11K-258	6.70-12.50	8 ESE of Greasewood T.P.		Bank of wash	7,440				None	N
	do.	11Y-9	5.65-16.60	11 SE of Greasewood T.P.		Deep canyon	7,600				do.	N
	Stream	11K-257	6.20-11.70	8 ESE of Greasewood T.P.								
	do.	11Y-64	7.10-12.90	8 SE of Greasewood T.P.							None	N
	do.	11Y-98	9.90-4.40	3 ENE of Lukachukai D.S.								
52	Drilled well	11K-237	9.15-14.70	13 NNE of Chinle	6/53	Stripped plain	6,420	517	8	350	Open hole	W, Tr
	do.	11K-239	7.40-11.90	15 NNE of Chinle	9/54	do.	6,430	540	8	163	do.	W
	do.	11K-243	1.80-1.50	11 ESE of Round Rock T.P.	7/56	Hillside	6,120	430	10	324	do.	W
	do.	11K-249	6.00-4.20	8 SE of Round Rock T.P.	8/56	Stripped plain	6,020	579	8	125	do.	W
	do.	11T-235	7.70-6.70	8 SSE of Round Rock T.P.	9/51	do.	6,200	580	7	180	do.	W
	do.	11Y-58	11.55-2.35	3 SSE of Round Rock T.P.	10/36	Bank of wash	5,450	202	6	140	do.	Tr
	do.	11Y-69	5.20-14.70	15 NE of Chinle	7/35	Hillside	6,780	800	6	703	do.	W, Tr
	do.	11Y-78	8.75-0.45	4 ESE of Round Rock T.P.	11/36	Bank of wash	5,520	280	6	115	do.	W, Tr
	do.	11Y-109	8.85-3.05	5 SE of Round Rock T.P.	3/39	Stripped plain	5,780	500	6	184	do.	Tr
	Drilled well	11GS-52-2	11.5-1.5 A	2 ESE of Round Rock T.P.	9/36	Hillside	5,520 E	233				

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 11—Continued															
490 650	160 250 P	Chinle (Shinarump) De Chelly	LL	438	6/26/52			15	51	1	Un	Yes	Good		Abandoned.
650	447 P	De Chelly		444	4/ 4/55			11	20	1¼	PS	No	Good		Lukachukai D.S. well.
110	194 P	Chinle (Shinarump)		197 R	3/ 4/54			10-15 R			D, S	Yes	Good	64	Kennedy's Store.
		Alluvium		11.6	8/19/54						Un	No			Abandoned.
		do.				3 E	7/29/49				D, S, Irr	Yes	Good	55	Combination dug well and spring: Catholic Franciscan Mission.
		Chuska				.5 E	8/26/54				D, S	No	Good	50	
		do.				2 E	8/27/54				D, S	No	Good	54	
		do.				7 E	8/27/54				D, S	No	Good	60	
		do.				1 R 6	8/27/54				D, S	Yes	Good	47	
		Chinle (lower red)				1.5 E	8/ 2/49				D, S, Irr	Yes	Good	60	"Greasewood Spring"; pumped to store.
		Chuska				.2 R 10	8/27/54				D, S	Yes	Good	49	
		do.				1	8/27/54				D, S	No	Good	47	
		Alluvium				1 R .5	11/ /30 8/12/54				D	Yes	Good	62	
		Chuska				20	7/25/56				D, S	No	Good	56	
		Chinle (Sonsela)				1 R 2	8/27/54				D, S	No	Good	65	
		do.				.2 R .5	8/19/54				D, S	Yes	Good	58	
		Chuska				10 E	8/27/54				D, S	No	Good	54	
		do.				69	8/19/54				D, S	No	Good		North tributary of Wheatfields Creek.
						150	8/27/54				D, S	No	Good	64	
						750	8/27/54				D, S, Irr	No	Good		"Tsaile Creek."
						300	8/27/54				D, S, Irr	No	Good		Stream-gaging station: "Lukachukai Creek."
180	337 P	De Chelly	LL	286	6/ 8/53	2-3		6	105	3	D, S	Yes	Good		Chinle Formation dry.
240	300 P	do.		400	9/10/54	2-3		5	140	1	D, S	Yes	Good		Bailed hole dry; Chinle Formation dry.
250	130	Chinle (Sonsela)	DL	112	7/27/56	3-4		25	103		D, S	No	Good		
180	399 P	De Chelly	DL	240	8/ 3/56	2-3		29	230	1	D, S	Yes	Good	64	Chinle Formation dry.
110	470 P	do.		339	9/ 8/51	2-3		19	241	¾	D, S	Yes	Good	62	Bailed hole dry; Chinle Formation dry.
100	102 P	Chinle (Shinarump)	DL	Flow	8/25/54	7 R 4.5	10/22/36 8/25/54				D, S	Yes	Good	61	Not flowing in 1950.
465	335 P	De Chelly		512	9/ 3/54	1-2		3	265		D, S	Yes	Good		Chinle Formation dry.
14 232	218 48 P	Chinle (Shinarump) De Chelly		25 R	11/11/36	3-4		50			D, S	Yes	Good		
179	321 P	De Chelly		166	4/17/52			15	195		S	Yes	Good		Show of Chinle Formation water; nearby well (280 feet deep) abandoned.
103	130 P	Chinle (Shinarump)		20 R	9/30/36			30				No			Drilled when building Round Rock Dam; casing pulled.

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 11—Continued							
52 con.	Dug well	11Y-53	13.20 1.70	2 SSW of Round Rock T.P.	9/30	Bank of wash	5,360	10.5	5	10.5	Masonry cribbed	H, Tr
	do.	11Y-56	11.85-5.65	6 S of Round Rock T.P.	8/30	Small valley	5,720	12	3	12	do.	H, Tr
	do.	11GS-52-1	12.15-2.35	2 S of Round Rock T.P.		Bed of wash	5,420	4	6	4	Rock cribbed	Tr
	Spring	11Y-41	4.50-1.90	8 ESE of Round Rock T.P.		Bank of wash	5,810				None	N
	do.	11Y-55	5.40-2.30	8 ESE of Round Rock T.P.		Small valley	5,790				do.	N
	do.	11Y-67	1.90-13.00	4 SSW of Greasewood T.P.		Shallow canyon	6,680				do.	N
	do.	11Y-72	11.30-4.10	4 SSE of Round Rock T.P.		do.	5,460				do.	N
	do.	11Y-85	3.75-0.25	8 E of Round Rock T.P.		Head of canyon	5,930				do.	N
	do.	11Y-93	3.50-0.40	9 E of Round Rock T.P.		do.	5,960				do.	Re
53	do.	11Y-74	1.70-0.20	4 WSW of Round Rock T.P.	2/34	Bed of wash	5,380				Collection gallery	C, Tr
68	None											
69	Spring	11Y-31	3.75-5.15	16 SE of Greasewood T.P.		Base of cliff	7,700				None	N
	do.	11Y-95	5.40-1.25	12 SE of Greasewood T.P.		Small valley	7,360				Collection well	N
	do.	11Y-95A	5.70-0.85	12 SE of Greasewood T.P.		do.	7,380				None	N
	do.	11Y-96	3.45-3.65	15 SE of Greasewood T.P.		Deep canyon	7,800				do.	Re
	Combination spring	11Y-29	1.70-2.55	16 SE of Greasewood T.P.		do.	7,800				do.	N
	do.	11Y-29A	2.20-2.50	15 SE of Greasewood T.P.		do.	7,800				do.	N
	Stream	11Y-28	2.70-1.20	14 SE of Greasewood T.P.		do.					do.	N
	do.	11Y-32	2.40-7.45	19 SE of Greasewood T.P.							do.	N
70	Spring	11Y-34	3.30-6.35	14 E of Chinle		Head of canyon	6,800				do.	N
	do.	11Y-34A	3.15-6.20	14 E of Chinle		do.	6,800				do.	N
					DISTRICT 12							
1	Drilled well	12K-316	11.30-13.80	6 NNW of Aneth	1/53	Broad valley	4,940	410	10 8	45 410	Perforated 350-390	W
	do.	12T-312	7.25-11.30	9 NNE of Aneth	8/52	Edge of cliff	5,230	1,404	7	1,222	Open hole	Ta, Tr
	do.	12T-326	12.20-8.80	2 E of Ismay	4/56	Broad valley	4,750	685	12 10	61 403	do.	
	Drilled well	12T-327	13.30-11.80	2 SW of Ismay	3/56	Broad valley	4,740	585	10 8	70 355	Open hole	
	Drilled well	12T-332	11.90-8.85	2 E of Ismay	5/56	Hillside	4,760	690	8	507		
	Dug well	12R-209	12.75-8.40	12 NNW of Aneth	8/37	Bank of wash	4,600	9	4	9	Rock cribbed	N
	do.	12R-210	13.10-9.55	10 NNW of Aneth		Bed of wash	4,590	4	3	4	do.	N
	do.	12GS-1-1	2.80-11.55	11 NE of Aneth		do.	4,900	4.5	2 x 4	4.5	do.	N
	Spring	12R-163	3.90-10.00	12 NE of Aneth		Side of mesa	5,050				Collection gallery	C, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 11—Continued									
		Alluvium		10	8/25/54	6 R	9/ /30				S	No			
		do.		10	8/25/54	.2 R	8/ /30				S	Yes	Fair	64	
		do.		Dry	8/25/54						Un	No			Abandoned.
		do.				1 R 1 E	8/26/54				S	Yes	Fair	65	
		Chinle (Shinarump)				.5 E	10/ 7/50				S, Irr	Yes	Bad	56	"Bitter Water Spring."
		do.									D	No			
		De Chelly				10 E	8/25/54				S	Yes	Good	52	
		Chinle (Sonsela)				<.1	8/26/54				S	Yes	Good	62	
		do.				.2 E	8/26/54				S	No	Good	61	
		Chinle (Petrified Forest, upper)				.2 E	8/ 5/54				S	Yes	Good	68	
		Chuska				2	8/18/54				S, Irr	No	Good		"Palisade Creek."
		Chinle (Petrified Forest, upper)				.5	8/18/54				D, S	No	Good	56	
		do.				.5	8/18/54				S	No	Good	56	
		Chuska				1.2 R .5	8/18/54				S	No	Good	56	
		do.				68	8/18/54				S, Irr	No	Good	57	Branch of Wheatfields Creek.
		do.				5	8/18/54				S, Irr	Yes	Good	57	
						750	8/18/54					No			"Wheatfields Creek."
						250						No			"Whiskey Creek"; stream-gaging station.
		Chinle (Shinarump) and De Chelly				10 E	8/19/54				D, S	Yes	Good	63	
		do.				10 E	8/19/54				D, S	No	Good	53	
						DISTRICT 12									
300	110 P	Morrison (Salt Wash)		231	1/15/53	2-3		11	26	1	D, S	Yes	Good		
830	574 P	Navajo and others	LL	Flow	3/10/55	1.8	3/10/55	22	116	1	D, S	Yes	Bad	71	See table 6.
32 519	487 161	Morrison Bluff		Flow	5/10/56	150	5/10/56				D, S	Yes	Good	70	8-inch liner to 526 feet; flow dropped to 75 gpm after 17T-332 started flowing.
30 130 370	100 240 150	Morrison (Westwater Canyon) Morrison (Salt Wash) Bluff	LL	Flow	3/ 8/56	150	3/ 8/56				D, S	Yes	Fair		Shut-in pressure after 2 hours; 30 psi.
0 505	505 180	Morrison Bluff	DL	Flow	5/12/56	50	5/12/56				D, S, Irr	No		66	500 feet southeast of 12T-326.
		Alluvium		Dry	9/ 8/54						Un	No			Abandoned.
		do.		3.5	9/ 8/54						D	No			
		do.		3.7	9/ 8/54						D	No	Good	72	
		Dakota				.2 R <.1	9/ 8/54				D, S	Yes	Fair	73	

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 12—Continued							
1 con.	Spring	12R-173	11.30-10.80	8 NNW of Aneth		Side of mesa	4,960				Collection gallery	Tr
	do.	12R-174	11.50-10.75	9 NNW of Aneth		do.	5,050				None	Re
	do.	12R-177	10.15-13.85	6 N of Aneth		Head of canyon	5,210				Masonry wall	C, Tr
	do.	12R-178	9.15-13.65	6 NNE of Aneth		Side of mesa	5,240				Collection gallery	C, Tr
	do.	12R-181	8.95-9.65	10 N of Aneth		Head of canyon	5,150				Collection well	Re
	do.	12R-211	12.25-14.40	6 NNW of Aneth		Small valley	4,650				None	Re
2	Dug well	12M-53	0.30-11.05	6 NE of Tanner T. P.		Bed of wash	4,550	4	12		do.	N
	do.	12GS-2-1	1.65-11.70	5 NE of Tanner T. P.		do.	4,510	6	4		do.	N
	do.	Tanner T. P.	4.70-15.65	Tanner T. P.	9/54	do.	4,410	7	8 x 8	7	Masonry cribbed	P
	Spring	12M-52	2.75-12.65	4 NE of Tanner T. P.		do.	4,490				None	N
	do.	12R-170	1.60-14.55	4 ENE of Tanner T. P.		Shallow canyon	4,690				Masonry wall	C, Tr
	do.	12R-171	3.00-14.20	2 NE of Tanner T. P.		Bed of wash	4,520				Collection gallery	Re
7	Drilled well	12K-308	10.25-2.55	Aneth	7/42	Broad valley	4,520	1,163	10	328	Open hole	N
	do.	12K-308A	10.20-2.50	Aneth	11/42	do.	4,520	300	6	235	do.	P
	Dug well	12R-189	3.95-5.10	7 ESE of Aneth		Bed of wash	4,850	11.5	4	11.5	Rock cribbed	H, Tr
	Spring	12R-184A	7.65-3.25	3 ESE of Aneth		Bank of wash	4,680				None	Re
	do.	12R-184B	7.55-2.95	3 ESE of Aneth		Small valley	4,740				Masonry wall	C, Tr
	do.	12R-192	3.15-9.40	10 SE of Aneth		Head of canyon	4,730				Collection gallery	Tr
	do.	12R-192A	2.95-9.80	11 SE of Aneth		Bank of wash	4,670				do.	Tr
	do.	12R-212	9.45-1.40	2 NE of Aneth		Small valley	4,540				None	N
17	Drilled well	12K-300	10.65-14.85	Shiprock		Broad valley	4,890	1,200 R	6			N
	do.	12K-300A	9.90-14.75	1 NE of Shiprock	9/28	do.	4,960	1,717	12 10 8 6	92 503 1,270 1,693	Open hole	N
	Drilled well	12R-204	6.50-10.30	6 NE of Shiprock		Plain	5,210	1,000 R	14			Tr
	do.	12T-321	6.15-1.20	14 NNE of Shiprock	8/54	Stripped plain	5,950	365			None	N
	do.	12T-322	3.65-17.05	7 ESE of Shiprock	9/54	Broad valley	4,990	63	8	54	Perforated 54-56	W, Ta, Tr
	Dug well	12K-300B	10.75-15.20	1 S of Shiprock		Bank of river	4,880		4		Pipe perforated for infiltration	P
	do.	12K-300C	8.40-15.15	2 E of Shiprock		do.	4,920					
	do.	12K-300D	11.65-13.40	2 NNW of Shiprock		Terrace	4,950	14 R				
	do.	12K-300E	11.35-13.95	2 NNW of Shiprock		do.	4,950	20	48		Rock cribbed	P
	do.	12R-137	2.40-14.70	8 E of Shiprock	9/25	Bank of wash	5,170	6.5	4 x 4	6.5	do.	Tr
	Spring	12R-195	7.45-1.30	13 NNE of Shiprock		Head of canyon	5,880				Collection gallery	C, Tr
	do.	12R-198	5.50-1.35	14 NNE of Shiprock		do.	5,690				do.	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 12—Continued									
		Burro Canyon				.2 R .1	9/ 8/54				S	Yes	Bad	68	
		do.				.1 E	9/ 8/54				S	No	Bad	68	
		do.				.2 R .2 E	9/ 9/54				D	No	Good	63	
		do.				.1 R .2 E	9/ 9/54				D, S	No		70	Temporary.
		Dakota				.1 E	9/ 8/54				D, S	No		64	Do.
		Morrison (Westwater Canyon)				1 E	9/ 9/54				S	Yes	Bad	65	
		Alluvium		1	9/ 8/54						S	No	Good	70	Fills in when wash is running.
		do.		4	9/ 8/54						D, S	No	Good	77	Do.
		do.		2	9/ 9/54						D, S	No			
		do.				20 R 15 E	9/ 8/54				D, S	Yes	Good	61	In bed of Montezuma Creek.
		Morrison (Westwater Canyon)				.2 R < .1	9/ 9/54				D, S	No	Good	74	
		Morrison (Recapture)				4 R 3.5 E	9/ 8/54				D, S	Yes	Good	60	
257 509	252 654 P	Entrada Navajo and Wingate	DL	Flow	9/ 9/54	75- 125	9/ 9/54				Un	Yes	Bad	65	Salty water.
24	276 P	Morrison (Salt Wash), Bluff, and Entrada		Flow	8/26/52	1	8/26/52					Yes	Fair		Do.
		Alluvium		10.8	9/10/54						D, S	Yes	Good	66	
		Morrison (Westwater Canyon)				.2 E	9/ 9/54				D	Yes	Good	67	
		Morrison (Brushy Basin)				< .1	9/ 9/54				D, S	No	Good	68	
		Dakota				< .1	9/10/54				D	No	Good	65	
		Morrison (Brushy Basin)				.5	9/10/54				D, S	No	Good	65	
		Morrison (Westwater Canyon)				.1 R .1 E	9/ 9/54				D	No	Bad		
1,010 1,168	158 32 P	Dakota Morrison	DL	Flow	7/19/52	1 R		10			Un	Yes	Bad	76	Unfit for domestic use; salty, H_2S; capped.
1,080 1,210	130 507 P	Dakota Morrison		Flow	10/ 9/52	150	10/ 9/52					Yes	Bad	90	Original depth 2,170 feet; used to wash gravel.
				Flow	9/29/54	8.8 8.6	9/29/54 6/30/55				S	Yes	Bad	83	Continental-Texas Co. oil well; alkaline.
0	350	Point Lookout	LL	Dry	8/18/54						Un	No			Abandoned.
0	63 P	Alluvium	LL	41	9/ 1/54	3-4		10	10		D, S	Yes	Bad	65	Original depth 94 feet, plugged to 63 feet.
		do.		27	9/29/54			30			D	No			Domestic supply for Shiprock.
		do.		10	9/29/54						Un	Yes	Fair	72	
		do.		6.2	9/ 1/49						S	Yes	Good	62	
		do.		12.1	9/30/54						D	Yes	Good	65	Nursery well northwest of Shiprock.
		do.		5.1	9/29/54						S	Yes	Fair	63	
		Point Lookout				.1 R .1 E	8/18/54				S	No	Fair		
		do.				.2 R .2 E	8/18/54				S	No	Fair		

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 12—Continued							
18	Drilled well	12K-317	7.80-3.60	11 NE of Bitlabito T.P.	8/53	Edge of mesa	5,170	874	8	858	Open hole	W, Tr
	do.	12K-318	2.20-9.65	13 ENE of Bitlabito T.P.	8/53	Bank of river	4,790	28	6	28	Perforated 18-28	W, Ta
	do.	12K-319	1.45-10.40	14 E of Bitlabito T.P.	8/53	do.	4,810	28	6	28	Perforated 18-28	W, Ta
	do.	12R-50A	3.10-17.05	13 SSE of Bitlabito T.P.	1/25	Hilltop	5,380	2,013 R				P
	do.	12R-50B	3.75-16.50	12 SSE of Bitlabito T.P.		do.	5,280					
	do.	12R-148	8.25-15.90	8 SE of Bitlabito T.P.	3/35	Edge of mesa	5,270	695	10 6	10 566	Perforated	W, Ta, Tr
	Dug well	12R-48	5.00-15.80	11 SSE of Bitlabito T.P.		Bed of wash	5,010	8	4	8	Rock cribbed	H, Tr
	do.	12R-48A	4.90-15.75	11 SSE of Bitlabito T.P.		do.	5,010	7	6	7	Masonry cribbed	Tr
	do.	12R-153	10.75-12.90	4 SSE of Bitlabito T.P.		Bank of wash	4,920	7	6	7	do.	Tr
	Spring	12R-3	11.05-8.15	5 NE of Bitlabito T.P.	9/29	Small valley	4,920				Masonry wall	C, Tr
	do.	12R-4	12.00-9.90	3 NE of Bitlabito T.P.		do.	5,020				None	N
	do.	12R-6	11.85-10.15	3 ENE of Bitlabito T.P.		do.	5,040				Collection gallery	Tr
	do.	12GS-18-1	13.50-13.25	2 SE of Bitlabito T.P.		do.	5,290				do.	Tr
19	Drilled well	Bitlabito oil-test water well	0.75-12.75	2 S of Bitlabito D.S.	/43	do.	5,480		7	257	Open hole	
	Dug well	12R-7A	1.05-11.10	Bitlabito D.S.		Bank of wash	5,560	14	7	14	Masonry cribbed	P, Ta
	do.	12R-10	1.65-15.85	5 SSW of Bitlabito D.S.		do.	5,640	4	7	4	Rock cribbed	Tr
	do.	12R-215	3.10-12.80	2 SW of Bitlabito D.S.		Bed of wash	5,930	6	4 x 6	6	Masonry cribbed	Tr
	Spring	12R-7	1.15-11.30	0.25 SW of Bitlabito D.S.	8/29	Bank of wash	5,550				Rock wall	C, Tr, Re
	do.	12R-10A	1.80-15.80	5 S of Bitlabito D.S.		do.	5,640				Collection well	C
	do.	12R-214	0.85-12.05	1 S of Bitlabito D.S.		Small valley	5,610				Rock wall	Tr
	do.	12R-229	0.65-17.05	6 S of Bitlabito D.S.		Bank of wash	5,440				Collection well	Tr
	do.	12R-231A	0.90-16.90	6 S of Bitlabito D.S.		Bed of wash	5,480				None	N
	do.	12GS-19-1	5.45-11.55	4 W of Bitlabito D.S.		Deep canyon	7,170				do.	N
	do.	12GS-19-2	5.65-12.20	5 WSW of Bitlabito D.S.		Bed of wash	7,400				do.	N
	do.	12GS-19-3	1.00-11.15	0.25 E of Bitlabito D.S.		Bank of wash	5,540				Collection gallery	P, C, Ta
	Oil test	Bitlabito 1	0.75-12.85	2 S of Bitlabito D.S.	/43	Small valley	5,480	4,840	13	296		
32	Drilled well	12K-309	11.25-5.00	8 S of Shiprock	5/40	Plain	5,280	1,640	8 7 5 4	40 829 1,526 1,640		Tr
	Drilled well	12K-320	13.20-13.05	16 SSW of Shiprock	5/54	Plain	5,520	1,800	10 8	826 1,340		N
	do.	12R-75	3.50-3.90	10 SE of Shiprock		do.	5,140					Tr
	do.	12R-76	8.20-10.45	13 SSE of Shiprock		do.	5,380		16			Tr
	do.	12R-91	7.10-15.45	19 SSE of Shiprock	12/34	Stripped plain	5,470	675	6	543		Tr
	do.	12R-132	7.75-10.25	13 SSE of Shiprock		Plain	5,370		12			N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 12—Continued															
710	150	Dakota	LL	136	8/ 6/54	3-4		22	583	2¼	D, S	Yes	Fair	55	Gas on top of water sand, drowned out by water.
0	28 P	Alluvium		6.3	9/21/54			9			D	Yes	Good		Cudia well B.
0	28 P	do.	LL	11.2	9/21/54			18			D	Yes	Good	71	Cudia well A.
		Dakota and Morrison		Flow	9/18/54	> 8	9/18/54				S	Yes	Fair	74	Drilled by Continental Oil Co.
		do.		Flow	9/18/54	> 3	9/18/54					No			Continental Oil Co. has record of repressuring oil wells by gravity.
535	158	Gallup	DL	196	5/29/52	3-4	5/29/52	11		2	S	Yes	Fair	69	
		Alluvium		4.7	9/18/54						D, S	Yes	Fair	66	
		do.		6.5	9/18/54						Un	No			Abandoned.
		do.		4.5	9/18/54						D, S	No	Good		Was a spring.
		Mancos				.1 R 1.1	9/18/54				D, S	Yes	Good	63	Two openings.
		Dakota				1 R .5 E	9/18/54				S	No		65	
		do.				.1 R .1	9/18/54				S	Yes	Fair	68	
		Wingate (Lukachukai)				.8	6/29/55				D, S	Yes	Good	66	
		Tongue of Wingate (Lukachukai) in Wingate (Rock Point)		Flow	6/29/55	.8	6/30/55					Yes	Fair		Continental Oil Co. well; abandoned; flows part of time.
		Morrison (Salt Wash)		4.6	9/21/54						PS	Yes	Good	58	Beclabito D.S. well.
		Alluvium		Dry	9/21/54						Un	No			Abandoned.
		Wingate (Lukachukai)		2	9/21/54						D, S	No		65	
		Morrison (Salt Wash)				3 R 12	9/21/54				D, S	No	Good	62	Two openings.
		Alluvium				.5 E	9/21/54				D, S	No	Good	62	
		Wingate (Lukachukai)				1.5 R 1.5	9/21/54				D, S	No	Good	62	
		Morrison (Recapture)				.2 R .1 E	9/22/54				D, S	No	Good	72	
		Alluvium				.1 E	9/22/54				S	No	Good	65	
		do.				.2 E	9/22/54				S	No	Good	58	
		do.				< .1 R	9/22/54				D	Yes	Good	49	
		Morrison (Salt Wash)				.4 E	9/21/54				D	No	Good	60	
		Tongue of Wingate (Lukachukai) in Wingate (Rock Point)		Flow	6/29/55	.1 E	6/30/55					Yes	Fair		Plugged to 960 feet; Continental Oil Co. test; flows part of time.
1,502	138 P	Dakota	DL	Flow	9/ 8/54	1.8 8.5	9/ 8/54 7/ 1/55				D, S	Yes	Fair	61	Well record has hole cased to 2,439 and depth of 1,640 feet, may be plugged to 1,640 feet; drilled by Red Cactus Oil Co.
1,300 1,470	170 330 P	Dakota Morrison (Westwater Canyon)	LL	Flow	9/ 9/54	40 E 60	9/ 9/54 7/13/55	38	445	1½	S	Yes	Good	60	6-inch liner, 1,340-1,800; well is capped (1954); deepened (1960).
		Gallup(?)		Flow	8/10/49	6.1 7.2	8/10/49 6/30/55				S	Yes	Bad	76	Unfit for human consumption.
		do.		Flow	9/ 8/54	12.5	9/ 8/54				Ind	No	Bad	62	Drilled by Continental Oil Co.; unfit for human consumption.
500	170	Cliff House	DL	Flow	6/26/52	.8	6/26/52				S	Yes	Fair	66	Unfit for human consumption.
		Gallup(?)		Flow	9/ 8/54	18.8	9/ 8/54				Ind	Yes	Bad	62	Drilled by Continental Oil Co.; unfit for human consumption.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 12—Continued							
32 con.	Drilled well	12R-132A	7.60-10.30	13 SSE of Shiprock		Plain	5,360		8			Tr
	do.	12GS-32-1	13.05-14.85	17 S of Shiprock			5,580	27 R	4	+5		N
	Dug well	12K-20	3.80-10.95	15 SE of Shiprock	1/31	Bank of wash	5,150	11.5	5	11.5	Rock cribbed	Tr
	do.	12R-77	11.35-10.25	13 S of Shiprock	2/31	Hillside	5,420	3.5	4	3.5	Masonry cribbed	Tr
	do.	12R-79	11.15-11.50	14 S of Shiprock	2/31	Plain	5,460	11	4	11	do.	Tr
	do.	12R-89	9.00-14.70	17 SSE of Shiprock	1/31	do.	5,380	14.5	3	14.5	do.	Tr
	do.	12R-133	4.25-16.95	21 SSE of Shiprock	10/29	Bank of wash	5,220	15.5	6	15.5	Rock cribbed	Tr
	Spring	12K-19	4.05-9.55	14 SE of Shiprock		do.	5,220				Collection gallery	Tr
	do.	12K-21	2.15-7.10	13 SE of Shiprock		do.	5,140				do.	Tr
	do.	12R-78	11.00-9.10	12 S of Shiprock	2/31	Plain	5,270				Collection well	C, Tr
	do.	12R-80	10.45-12.35	15 S of Shiprock	9/25	do.	5,340				Collection gallery	C, Tr, Re
	do.	12R-85	13.00-15.00	18 S of Shiprock	11/26	Bank of wash	5,580				do.	Tr
	do.	12R-86	13.25-16.30	19 S of Shiprock	10/25	do.	5,580				do.	C, Tr
	do.	12R-88	9.20-15.65	18 S of Shiprock	10/25	Shallow canyon	5,460				do.	Tr
	do.	12R-88A	9.05-15.15	18 S of Shiprock		do.	5,450				None	N
	do.	12R-101	12.05-6.95	10 S of Shiprock	6/24	Bank of wash	5,240				Collection gallery	Tr
	do.	12R-102	12.10-7.00	10 S of Shiprock	6/24	do.	5,240				do.	C, Tr
	Oil test	McMillen oil test			12/53			652 R	12	45		N
	do.	Continental oil test	13.00-4.30	7 SSW of Shiprock		Plain	5,340	1,000 R				
33	Drilled well	12K-310	3.30-5.85	10 SW of Shiprock	10/45	do.	5,440	1,482	10 7	18 1,330	Open hole	W, Tr
	do.	12R-50	2.90-0.10	7 WSW of Shiprock	4/31	Hilltop	5,370					Tr
	do.	12R-84	2.00-16.90	7 NE of Sanostee T.P.		Plain	5,830	1,430 R	8	1,136		Tr
	do.	12R-96	3.25-2.90	8 SW of Shiprock	11/34	do.	5,320	354	6	272		W
	do.	12R-98	4.90-9.45	12 E of Red Rock T.P.	12/26	do.	5,570	1,100	4	107	Open hole	W, Tr
	do.	12R-100	2.15-11.30	15 E of Red Rock T.P.	12/34	do.	5,380	415	8 6	42 299	do.	Tr
	do.	12T-324	11.15-12.80	6 ESE of Red Rock T.P.	12/55	Small valley	6,030	721	6	685	do.	W, Tr
	Dug well	12R-17	10.00-10.80	7 E of Red Rock T.P.	4/29	Head of canyon	5,720	7.5	5	7.5	Rock cribbed	Tr
	do.	12R-42	12.75-7.65	5 NE of Red Rock T.P.	4/29	Bank of wash	5,620	4	6	4	do.	Tr
	do.	12R-51	7.50-3.90	11 NE of Red Rock T.P.	10/30	Small valley	5,290	5.5	5	5.5	do.	W, Tr, Ta
	do.	12R-55A	8.10-7.05	10 ENE of Red Rock T.P.		Bank of wash	5,440	6.5	5	6.5	do.	H, Tr
	do.	12R-58	8.95-9.00	8 E of Red Rock T.P.		do.	5,620	7	5	7	do.	Tr
	do.	12R-95	0.85-2.30	6 SW of Shiprock	5/31	Bed of wash	5,230	6	3	6	do.	Tr
	do.	12R-131	5.60-15.05	12 ESE of Red Rock T.P.	10/29	Bank of wash	5,720	12	4	12	do.	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 12—Continued															
		Gallup(?)		Flow	9/ 8/54	18.8	9/ 8/54				S, Ind	Yes	Bad	62	Continental Oil Co. well; unfit for human consumption.
		Gallup		Flow	1/ 7/54	1	1/ 7/54				D, S	Yes	Fair	60	
		Alluvium		11.2	9/22/54						S	No	Fair	68	Filled with sand.
		do.		Dry	9/ 8/54						Un	No			Combination dug well and spring; filled with sand.
		do.		4.7	9/ 8/54						D, S	No	Fair	66	
		do.		14.4	9/ 9/54			20 R			Un	No			
		do.		Dry	9/23/54			.5 R			Un	No			Abandoned.
		Cliff House				.5 R .2	9/22/54				S	No	Fair	66	
		do.				1 R .8 E	9/22/54				S	No	Fair	64	
		Mancos				1 .2	2/ /31 9/ 8/54				D, S	No	Fair	64	
		Volcanic intrusive				4 R 2.5	9/ /25 9/ 9/54				D, S	Yes	Good	64	
		Gallup				2 R .1	11/ /26 9/ 9/54				S	Yes	Fair	71	
		do.				1 R < .1	10/ /25 9/ 9/54				Un	No	Fair	63	
		Cliff House				.8 R < .1	10/ /25 9/ 9/54				S	No	Fair	66	Temporary.
		do.				.1 E	9/ 9/54				S	No	Good	67	
		Mancos				1 R .2	6/ /24 9/ 8/54				S	Yes	Fair	63	"Stinking Springs"; temporary.
		do.				3 R .2	6/ /24 9/ 8/54				S	No	Bad	63	
				Flow	3/31/55	20	12/28/53					Yes	Fair		Capped.
		Gallup and Dakota		10.6	2/25/55							Yes	Fair		Shot hole, flow reported; hole plugged to 650 feet.
1,330	124	Dakota	DL	Flow	9/17/54	1	9/17/54	15			S	Yes	Fair	73	Artesian well with windmill.
		Gallup		Flow	9/24/54	2.6 R 1	4/ /31 9/24/54				S	Yes	Fair	80	Rattlesnake artesian well 2.
		Dakota Morrison		Flow	9/16/54	10 7.5	9/16/54 7/ 1/55				D, S	Yes	Good	76	Drilled by Continental Oil Co.
275	79 P	Gallup		30	11/20/34				70		D, S	No	Good	50	
434	149	do.		69.1	4/22/52	3-4					D, S	Yes	Good	72	
260	155 P	do.		Flow	10/ 1/54	13 11.2	10/ 1/54 6/30/55				D, S	Yes	Good	60	H_2S taste and smell.
690	31 P	Dakota	LL	210	12/ 9/55	2-3		11	426	$1\frac{1}{2}$	D, S	Yes	Fair		
		Gallup		4.9	9/17/54						D, S	Yes	Good	64	
		Alluvium		1	9/28/54						S	No	Fair	66	
		do.		1.6	9/23/54			20 R			S	No	Good		
		Gallup		5.5	9/23/54						D, S	Yes	Good	64	
		Alluvium		6.9	9/23/54						Un	No	Fair		
		Gallup		1.8	9/24/54	.2 R	5/ /31				S	Yes	Fair	68	
		Alluvium		5.5	9/16/54						D	No	Fair		

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA				
								Depth of well (feet)	Casing or cribbing		Finish	Improvements
									Diameter (drilled well in inches, dug well in feet)	Depth (feet)		
					DISTRICT 12—Continued							
33 con.	Dug well	12R-150	11.05-0.75	11 NNE of Red Rock T.P.		Bank of wash	5,220	4.5	5	4.5	Rock cribbed	H, Tr
	Spring	12R-43	11.25-6.80	6 NE of Red Rock T.P.	11/25	do.	5,510				Collection gallery	Tr
	do.	12R-53	8.60-5.55	10 NE of Red Rock T.P.	5/29	Small valley	5,440				do.	Tr
	do.	12R-57	11.25-10.50	6 E of Red Rock T.P.	11/28	Bed of wash	5,690				do.	Tr
	do.	12R-59	8.00-11.40	9 E of Red Rock T.P.	5/29	do.	5,600				do.	C, Tr
	do.	12R-61	7.10-14.75	11 ESE of Red Rock T.P.	10/29	Bank of wash	5,740				do.	Tr
	do.	12R-62	9.40-12.10	8 ESE of Red Rock T.P.	1/29	Base of cliff	5,840				do.	Tr
	do.	12R-95A	0.70-2.25	6 SW of Shiprock		Bed of wash	5,220				do.	Tr
	do.	12R-141	11.30-15.30	8 SE of Red Rock T.P.		Bottom of canyon	6,260				do.	Tr
	do.	12R-143	10.45-15.20	8 SE of Red Rock T.P.		Side of cliff	6,100				do.	Tr
34	Drilled well	12T-323	1.50-10.00	2 E of Red Rock T.P.	9/55	Alluvial plain	5,940	551	8	349	8-inch perforation at 312 and 320	W
	Dug well	12R-21	10.30-9.00	4 NNE of Cove D.S.	2/29	Bank of wash	6,010	4	6	3	Masonry cribbed	Tr
	do.	12R-28	2.50-15.85	6 SSE of Red Rock T.P.	1/29	do.	6,280				Rock cribbed	Tr
	do.	12R-30	2.35-14.15	4 SSE of Red Rock T.P.	4/36	do.	6,110		4		Masonry cribbed	Tr
	do.	12R-33	3.20-10.25	Red Rock T.P.	3/29	do.	5,760	3	5	3	do.	
	do.	12R-39	2.35-10.50	1 ESE of Red Rock T.P.	3/29	Bed of wash	5,800					Tr
	do.	12R-41	0.20-8.75	4 ENE of Red Rock T.P.	4/29	Small valley	5,770	6.5	5	6.5	Masonry cribbed	Tr
	do.	12R-41A	0.15-9.60	3 E of Red Rock T.P.		Bank of wash	5,880	3.5	5	3.5	do.	N
	do.	12R-245	9.75-10.80	4 NE of Cove D.S.		do.	5,950	9	5	9	do.	Tr
	do.	Red Rock T.P.	3.30-10.20	Red Rock T.P.		do.	5,780	24.5	3	24.5	Steel and concrete	P, Ta
	do.	Red Rock D.S.	3.50-11.20	1 S of Red Rock T.P.		do.	5,860	19	12	19	Concrete caisson	P, Ta
	do.	Cove D.S.	12.50-13.20	Cove D.S.		do.	6,420				do.	P
	Spring	12R-11	3.00-0.60	10 N of Red Rock T.P.		Hillside	6,030				Rock wall	Tr
	do.	12R-12	2.95-0.80	10 N of Red Rock T.P.		do.	6,050				Collection gallery	Re
	do.	12R-13	3.00-2.90	7 N of Red Rock T.P.		Bed of wash	5,700				None	N
	do.	12R-14	3.25-3.95	6 N of Red Rock T.P.		Bank of wash	5,610				Rock wall	Tr
	do.	12R-15	2.90-4.70	5 N of Red Rock T.P.		Bed of wash	5,450				None	N
	do.	12R-18	10.35-6.35	7 NNE of Cove D.S.		Bank of wash	6,020				Collection gallery	C, Tr
	do.	12R-20	9.65-8.05	6 NNE of Cove D.S.	12/38	do.	5,890				do.	C, Tr
	do.	12R-24	5.25-10.70	2 WSW of Red Rock T.P.		Bed of wash	5,810				do.	C, Tr
	do.	12R-25	5.70-12.35	3 SW of Red Rock T.P.	3/31	Hillside	6,030				do.	Tr
	do.	12R-26	5.70-12.60	4 SW of Red Rock T.P.	12/28	Bank of wash	6,060				do.	Tr
	do.	12R-27	5.30-13.55	4 SSW of Red Rock T.P.	12/28	do.	6,140				do.	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 12—Continued															
		Alluvium		3.3	9/23/54						D, S	Yes	Fair	66	
		do.				5 R .2 E	11/ /25 9/28/54				S	No	Fair	65	"Sand Spring."
		Gallup				2 R 1 E	5/ /29 9/23/54				S	No	Fair	64	
		Alluvium				2 R Dry	9/17/54				S	No	Fair		Abandoned.
		Gallup				4 R 3 E	5/ /29 9/16/54				S	Yes	Good	68	
		Dakota				1 R 1	10/ /29 9/16/54				D, S	Yes	Good	69	
		Gallup				.1 R .1	1/ /29 9/16/54				S	No	Fair	68	
		do.				.1	9/24/54				S	No	Fair	67	
		do.				.1 R .1	9/16/54				S	No	Good	68	
		do.				.1 R .1 E	9/16/54				S	No	Good	69	
220 360	140 40	Morrison (Salt Wash) Bluff	LL	176	9/19/55	3-4		11	225	1	D, S	Yes	Good		
		Alluvium		2.1	10/ 1/54						D, S	No			
		do.									S	No			
		do.		5	10/ 2/54						D, S	No	Good	60	
		do.		2.1	10/ 2/54						D, S	Yes	Good	60	Flows in winter.
		do.				1.5 R	3/ /29				S	Yes	Good	66	
		do.		2	9/23/54						D, S	No			
		Morrison (Recapture)		2	9/23/54						D, S	No	Good	60	
		Alluvium		8.7	10/ 1/54						Un	No			Cove demonstration area; abandoned.
		do.		21.9	10/ 2/54						D	Yes	Good	52	
		do.		14.5	10/ 2/54						D, PS	Yes	Good	61	Day-school supply.
		do.		9.1	8/26/49						D, S	Yes	Good	58	Do.
		Morrison (Salt Wash)				2.5 R 1.5	9/22/54				D, S	No	Good	58	Oak Spring.
		do.				20	9/22/54				D, S, Irr	Yes	Good	57	
		Wingate (Lukachukai)				20 R 20 E	9/22/54				D, S, Irr	No	Good	61	
		do.				5 R < .1	9/22/54				D, S	No	Good	62	
		Alluvium				.1 E	9/29/54				S	No	Good	65	
		Chinle (Owl Rock)				3 R Dry	9/30/54				S	No			Temporary.
		do.				2.5 R 2.5 E	12/12/38 10/ 1/54				D, S	No	Good	61	
		Wingate (Rock Point)				4 R 4	10/ 1/54				D, S	No	Good	57	
		do.				7 R 4	10/ 1/54				D, S	Yes	Good	60	
		do.				3 R 3	12/ /28 10/ 1/54				S	No	Good	59	
		do.				1 R 1	12/ /28 10/ 1/54				D, S	No	Good	60	

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 12—Continued							
34 con.	Spring	12R-28A	2.55-15.80	6 S of Red Rock T.P.		Bank of wash	6,280				None	N
	do.	12R-32	2.70-10.90	1 SE of Red Rock T.P.	3/29	Bed of wash	5,800				Collection gallery	Tr, Re
	do.	12R-34	4.20-9.10	2 NW of Red Rock T.P.	2/29	do.	5,700				do.	Tr
	do.	12R-35	4.00-8.75	2 NNW of Red Rock T.P.		do.	5,640				None	N
	do.	12R-36	4.20-7.10	4 NNW of Red Rock T.P.		Bank of wash	5,540				Collection gallery	C
	do.	12R-37	5.50-6.45	4 NW of Red Rock T.P.		Bed of wash	5,640				do.	Tr
	do.	12R-38A	7.10-6.00	6 NW of Red Rock T.P.		do.	5,800				None	N
	do.	12R-44	3.40-10.05	0.25 NW of Red Rock T.P.		Bank of wash	5,740				do.	N
	do.	12R-45	3.05-3.25	6 N of Red Rock T.P.		Small valley	5,640				do.	N
	do.	12R-152	0.60-2.55	8 NNE of Red Rock T.P.		Shallow canyon	5,320				Collection gallery	Tr
	do.	12R-218	3.50-1.70	8 N of Red Rock T.P.		Hillside	5,920				None	N
	do.	12R-219	5.30-2.40	8 NNW of Red Rock T.P.		Small valley	6,100				Rock wall	Tr
	do.	12R-220	5.75-2.85	8 NNW of Red Rock T.P.		Shallow canyon	6,100				None	N
	do.	12R-221	7.20-3.25	8 NE of Red Rock T.P.		do.	6,360				do.	N
	do.	12R-222	9.75-3.80	10 NNE of Cove D.S.		Bank of wash	6,600				Collection gallery	C, Tr
	do.	12R-222A	10.10-3.50	10 NNE of Cove D.S.		do.	6,680				None	N
	do.	12R-223	10.90-0.40	13 N of Cove D.S.		Deep canyon	7,600				do.	N
	do.	12R-224	8.90-5.10	9 NNE of Cove D.S.		Shallow canyon	6,360				Collection gallery	C, Tr
	do.	12R-226	1.90-4.15	6 NNE of Red Rock T.P.		Bed of wash	5,430				None	N
	do.	12R-227	1.60-3.30	7 NNE of Red Rock T.P.		Bank of wash	5,460				do.	N
	do.	12GS-34-1	3.65-11.35	1 SSW of Red Rock T.P.		Bed of wash	5,850				do.	N
	do.	12GS-34-2	12.35-6.35	7 N of Cove D.S.		Deep canyon	6,180				do.	N
	do.	12GS-34-3	9.40-3.90	10 NNE of Cove D.S.		Bank of wash	6,540				do.	Re
	do.	12GS-34-4	3.75-0.65	10 N of Red Rock T.P.		do.	6,120				Collection gallery	Tr, Re
	do.	12GS-34-5	11.85-14.15	1 SSE of Cove D.S.		Hillside	6,600				Collection well	N
	Combination spring	12K-25	12.65-14.55	2 S of Cove D.S.		Bottom of canyon	6,600					
49	Drilled well	12K-312	11.70-15.20	Nava D.S.	7/53	Hilltop	5,580	1,000	8	846	Open hole	P, Ta
	do.	12K-312A	11.65-15.15	Newcomb T.P.	1/52	Hillside	5,560	290	10	32	None	N
	do.	12M-49	6.75-15.55	5 E of Newcomb T.P.	12/34	Top of mesa	5,580	310	10 6	8 251	Perforated 5-inch liner, 260-270	W, Ta, Tr
	do.	12R-242	7.75-5.80	10 NNE of Newcomb T.P.	1/36	do.	5,500	362	6	204	Open hole	W, Ta, Tr
	Dug well	12K-2	3.70-15.85	8 E of Newcomb T.P.		Bank of wash	5,430	7	4	7	Rock cribbed	Tr
	do.	12K-3	3.45-16.55	8 ESE of Newcomb T.P.		do.	5,440	5.5	4	5.5	do.	H, Tr, Re
	do.	12K-10	3.85-11.15	9 ENE of Newcomb T.P.	12/37	do.	5,350	5	6	5	do.	H, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 12—Continued									
		Summerville				.5 E	10/ 2/54				S	No	Good	60	
		Morrison (Recapture)				1.5 R .4	3/ /29 10/ 2/54				S	No	Good	59	
		Entrada				.5 R .4	3/ /29 9/23/54				D, S	Yes	Good	65	
		do.									S	No			In Red Rock Wash.
		Wingate (Lukachukai)				5 R 10 E	9/23/54				D, S	Yes	Good	60	
		Wingate (Rock Point)				2 R 4 E	9/23/54				Un	No			Seepage area in vicinity of abandoned spring.
		do.				.2 E	9/23/54				S	No		68	
		Alluvium				3 E	10/ 2/54				D, S	No	Good	62	
		Wingate (Lukachukai)				20 E	9/22/54				D, S, Irr	No	Good	63	
		Morrison (Salt Wash)				2 R .4	9/29/54				D, S	No	Good	64	
		Wingate (Rock Point)				.2 E	9/22/54				S, Irr	No		64	Waters some fruit trees.
		do.				1.5 R .2	9/29/54				D, S	No	Good	58	
		do.				15 E	9/29/54				D, S, Irr	No	Good	56	
		do.				1.5 R 5 E	9/29/54				D, S	No	Good	63	
		Wingate (Lukachukai)				.5 R .2 E	9/30/54				D, S	No	Good	56	
		do.				3 E	9/30/54				D, S	No	Good	56	
		Volcanic intrusive				1 R .8 E	9/30/54				D, S	No	Good	49	
		Wingate (Lukachukai)				1.5 R .8	9/30/54				D, S	No	Good	66	
		Alluvium				5 E	9/29/54				S	No	Good	65	
		do.				18 R 18 E	9/29/54				D, S	No	Good	66	Irrigation ditch here.
		Wingate (Lukachukai)				4 E	10/ 2/54				S	No	Good	57	
		Wingate (Rock Point)				3 E	8/18/54				S	Yes	Good	65	
		Wingate (Lukachukai)				1 E	9/30/54				D, S	No	Good	57	
		do.				.8	9/30/54				D, S, Ind	Yes	Good	62	Industrial uranium mining.
		Chinle (Owl Rock)				1 E	10/ 1/54				D, S	No	Good	54	Indian developed.
		Chuska and Wingate (Lukachukai)				10 E	10/ 1/54				S, Irr	No			
0	1,000 P	Menefee	LL	Flow	7/16/53	3 E	7/16/53	18	250	1¼	D, PS	Yes	Good	70	Nava School supply.
26	264 P	do.		Dry	1/ /52							No			Dry hole; abandoned.
260	30	Cliff House	DL	74	9/21/54	3-4		10			D, S	Yes	Fair	64	5-inch liner to 310 feet.
270	90 P	do.	DL	87	5/30/52	3-4					S	Yes	Bad	62	
		Alluvium		6.5	9/21/54						Un	No	Fair		
		do.		4.5	9/21/54						D, S	Yes	Good	64	
		do.		4.4	9/21/54						S	No	Fair	66	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 12—Continued							
49 con.	Dug well	12K-11	3.95-10.05	10 ENE of Newcomb T.P.	4/31	Bank of wash	5,330	12 R	5	12 R	Rock cribbed	
	do.	12K-12	4.55-9.20	9 NE of Newcomb T.P.		do.	5,320	7	5	7	do.	W, Ta, Tr
	do.	12K-13	5.10-7.30	10 NE of Newcomb T.P.		do.	5,290	11.5	5	11.5	do.	W, Tr, Ta
	do.	12K-14	5.10-7.20	10 NE of Newcomb T.P.		do.	5,290	8	8	8	do.	Tr
	do.	12K-15	5.50-5.80	11 NE of Newcomb T.P.	2/32	do.	5,290	13	10 x 10	13	do.	Tr
	do.	12K-16	3.95-3.00	14 NNE of Newcomb T.P.	12/31	do.	5,240	12.5	6	12.5	do.	Tr
	do.	12K-312B	11.55-15.10	Newcomb T.P.		Bed of wash	5,550	21	16	21	Concrete caisson	N
	do.	12R-82	13.55-0.35	15 NNW of Newcomb T.P.	10/29	Bank of wash	5,580	4	4	4	Rock cribbed	A
	do.	12R-92	9.55-3.70	11 NNE of Newcomb T.P.	11/30	do.	5,470	9.5	5	9.5	do.	Tr
	do.	12R-93	12.70-4.35	11 NNW of Newcomb T.P.	11/30	do.	5,570	3	4	3	do.	N
	do.	12R-107	8.30-13.45	4 ENE of Newcomb T.P.	9/24	do.	5,460	5		5	do.	Tr
	do.	12R-107A	7.75-12.95	4 ENE of Newcomb T.P.		do.	5,440	10.5	4	10.5	do.	Tr
	Spring	12R-81	13.20-0.30	15 NNW of Newcomb T.P.	9/25	Bed of wash	5,580				None	Tr
	do.	12R-94	12.65-2.85	12 NNW of Newcomb T.P.	8/24	do.	5,570				Collection gallery	Tr
	do.	12R-103	13.00-7.30	8 NNW of Newcomb T.P.	8/24	Plain	5,630				do.	Tr
	do.	12R-104	12.05-9.95	5 N of Newcomb T.P.	11/26	Bank of wash	5,580				do.	Tr
	do.	12R-105	11.75-11.00	4 N of Newcomb T.P.	12/26	Plain	5,590				do.	Tr
	do.	12R-106	10.65-15.40	1 ESE of Newcomb T.P.	9/24	Bank of wash	5,520				do.	Tr
	Oil test	Table Mesa 1						3,000				
50	Drilled well	12K-311	6.95-5.35	1 W of Sanostee D.S.	8/51	Broad valley	5,990	1,475	10 8	563 1,098	Open hole	
	do.	12M-25	6.70-5.30	0.25 W of Sanostee D.S.	/25	do.	5,980	2,679	15 12	222 465	do.	
	do.	12R-83	1.95-0.85	6 N of Tocito T.P.		Stripped plain	5,870					Tr
	Dug well	12R-68	9.40-6.05	2 WSW of Sanostee D.S.	11/29	Bank of wash	6,160				Rock cribbed	Tr
	do.	12GS-50-2	6.05-12.45	7 SW of Tocito T.P.		do.	6,000	8	5	8	do.	Tr
	Spring	12M-6	11.85-16.40	13 SSW of Sanostee D.S.	11/34	Mountainside	9,130				Collection gallery	Tr
	do.	12M-7	11.55-11.75	8 SW of Sanostee D.S.	11/36	Bed of wash	7,870				do.	Tr
	do.	12M-16	13.05-11.50	9 SW of Sanostee D.S.		Mountainside	8,400				do.	Tr
	do.	12M-19	9.30-5.70	3 W of Sanostee D.S.		Head of canyon	6,200				do.	C, Tr
	do.	12M-39	6.20-1.40	4 N of Sanostee D.S.		Broad valley	6,030				None	N
	do.	12R-67	8.30-6.35	2 WSW of Sanostee D.S.		Head of canyon	6,200				Collection gallery	C, Tr
	do.	12R-69	5.70-6.45	2 SSE of Sanostee D.S.	6/24	Hillside	5,950				do.	C, Tr, Re
	do.	12R-69A	5.60-7.20	2 SSE of Sanostee D.S.		Bed of wash	5,870				None	N
	do.	12R-70	2.00-6.55	1 NW of Tocito T.P.		do.	5,700				do.	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 12—Continued															
		Alluvium		8.5	9/22/49						Un	No	Bad		Salty water.
		do.		5.9	9/21/54						D, S	No			Do.
		do.		8.3	9/22/54						D, S	Yes	Bad	69	
		do.		6.8	9/22/54						Un	No	Fair		
		do.		12.8	9/22/54						Un	No	Fair		
		do.		10.5	9/22/54			3 R			S	No	Good		Fenced-in well.
		do.		7.5	9/22/54						Un	Yes	Fair	56	Nava D.S. old well; very hard water.
		do.		Dry	9/ 9/54			.5 R			Un	No			Abandoned.
		do.		8.3	9/22/54			2 R			D, S	No	Good	70	
		do.		.6	8/11/49			.5 R			D, S	Yes	Good	66	May be a spring.
		do.		Dry	9/22/54			2 R			Un	No			Abandoned.
		do.		9.3	9/22/54						D, S	No	Fair		
		Gallup				.5 R .1	9/ /25 9/ 9/54				D, S	Yes	Good	75	
		do.				.8 R .5	8/ /24 9/ 7/54				S	Yes	Fair	64	
		Volcanic intrusive				.8 R .8	8/ /24 9/ 7/54				S	Yes	Good	63	
		Menefee				5 R 3	11/ /26 9/ 7/54				D, S	Yes	Good	60	
		do.				8 R 3	12/ /26 9/ 7/54				D, S	Yes	Good	61	"Sulphur Spring."
		Alluvium				1.5 R 2	9/ /24 9/22/54				S	Yes	Fair	64	
		Morrison(?)										No			See N. Mex. Bur. Mines and Mineral Resources Bull. 9, p. 82-83, 1933.
470	730	Morrison	LL	Flow	9/16/54	15	9/16/54	45		16	PS	Yes	Good	69	Plugged back to 1,435 feet.
340	1,080	do.		Flow	5/22/51	74	8/ 6/49				D, Irr	Yes	Good	67	
		Morrison(?)		Flow	9/16/54	17.6 15	9/16/54 7/ 1/55				D, S	Yes	Good	77	
		Alluvium						1.2 R			Un	No			Abandoned.
		do.		6	9/ 7/54						D, S	No	Fair		
		Chuska				1	9/ 4/54				D, S	No	Good		
		Alluvium				2 R Dry	11/ /36 9/ 4/54				S	No			
		Chuska				2 R .5	9/ 4/54				D, S	Yes	Good	57	
		Gallup				.2 R < .1	9/16/54				D, S	No	Good	69	
		do.				.5 E	2/ 1/55				D, S	Yes	Good		
		do.				.1 E	9/16/54				S	No			
		Alluvium				2.5 R 2	6/ /24 9/15/54				D, S	No	Good	66	
		do.				5 E	9/15/54				S	No			
		do.				3 R 4 E	9/15/54				S	No		59	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA				
								Depth of well (feet)	Casing or cribbing		Finish	Improvements
									Diameter (drilled well in inches, dug well in feet)	Depth (feet)		
					DISTRICT 12—Continued							
50 con.	Spring	12R-71	1.95-6.75	0.25 SW of Tocito T.P.	12/26	Broad valley	5,710				Collection well	C, Tr
	do.	12R-71A	1.85-7.15	1 S of Tocito T.P.		do.	5,710				do.	Re
	do.	12R-71B	1.80-6.75	0.25 S of Tocito T.P.		Bank of wash	5,710				Collection gallery	P, C, Ta
	do.	12R-72	0.65-9.05	2 SSE of Tocito T.P.		Sand dune	5,680				Irrigation ditches	
	do.	12R-111	3.00-15.60	9 SSW of Tocito T.P.	4/26	Hillside	5,900				Collection gallery	Tr
	do.	12R-112	3.05-15.70	9 SSW of Tocito T.P.		do.	5,900				None	N
	do.	12R-114	3.65-13.25	7 SSW of Tocito T.P.	7/27	Bank of wash	5,870				Collection gallery	Tr
	do.	12R-115	3.55-11.90	6 SSW of Tocito T.P.	7/27	do.	5,850				do.	Tr, Re
	do.	12R-117	6.95-10.60	6 S of Sanostee D.S.	7/27	Small canyon	6,200				do.	Tr
	do.	12R-119	6.05-13.60	8 S of Sanostee D.S.	7/27	Hillside	6,080				do.	Tr
	do.	12R-120	6.00-13.70	8 S of Sanostee D.S.		Side of cliff	6,070				do.	N
	do.	12R-122	4.65-15.00	8 SSW of Tocito T.P.		Bank of wash	6,020				do.	Tr
	do.	12R-124	3.90-13.90	7 SSW of Tocito T.P.		Bed of wash	5,920				None	Re
	do.	12R-145A	8.75-2.50	4 NNW of Sanostee D.S.		Shallow canyon	6,440				do.	N
	do.	12R-154	2.15-15.45	8 S of Tocito T.P.		Bed of wash	5,750				Collection gallery	Tr
	do.	12R-155	3.15-15.80	9 SSW of Tocito T.P.	5/27	Hillside	5,900				do.	Tr
	do.	12GS-50-1	6.05-17.10	12 S of Sanostee D.S.		Bank of wash	6,300				do.	Tr
	do.	12GS-50-3	13.30-16.35	13 SW of Sanostee D.S.		Small valley	8,430				None	N
	do.	12GS-50-4	6.60-4.70	1 N of Sanostee D.S.		Bank of wash	5,950				do.	N
	do.	12GS-50-5	6.60-4.60	1 N of Sanostee D.S.		do.	5,950				do.	N
	do.	12GS-50-6	6.70-4.60	1 N of Sanostee D.S.		do.	5,950				do.	N
	Oil test	12R-83A	2.15-1.00	6 N of Tocito T.P.		Stripped plain	5,850		14			
51	Spring	12M-8	0.80-12.30	13 ESE of Greasewood T.P.	12/34	Shallow canyon	8,990				Collection gallery	Tr
	do.	12M-10	3.85-6.20	9 E of Lukachukai D.S.		Small valley	8,640				do.	Tr
	do.	12M-12	4.85-2.85	8 ENE of Lukachukai D.S.		Mountainside	8,830				do.	Tr
	do.	12M-14	3.25-12.90	11 ESE of Greasewood T.P.		Hillside	9,080				do.	C
	do.	12R-66	1.00-3.00	12 ENE of Lukachukai D.S.		Mountainside	8,300				do.	Tr
	do.	12Y-4	2.70-8.30	10 ESE of Lukachukai D.S.	11/34	Shallow canyon	8,400				do.	Tr
	do.	12GS-51-1	7.40-2.35	6 NE of Lukachukai D.S.		Mountainside	8,560				do.	Tr
	do.	12GS-51-2	5.90-1.90	8 NE of Lukachukai D.S.		do.	8,160				None	N
	Combination spring	12M-15A	0.65-15.10	14 ESE of Greasewood T.P.		Canyon	8,260				do.	N
	do.	12Y-6A	4.10-10.85	10 E of Greasewood T.P.		Head of canyon	8,400				do.	N
	do.	12Y-100	2.00-14.50	13 ESE of Greasewood T.P.		Small valley	8,380				do.	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 12—Continued									
		Gallup				3 R 3 E	12/ /26 11/10/48				D, S	Yes	Good	64	Tocito T. P. Spring.
		do.				5 E	9/16/54				D, S, Irr	No	Good	68	
		do.				5	9/15/54				D, S, Irr	Yes	Good	68	Tocito Trailer School Spring.
		Windblown sands and alluvium				5 E	9/15/54				D, S, Irr	Yes	Good	68	
		Alluvium and terrace(?)				2.8 R 2	4/ /26 9/ 6/54				D, S	No	Good	64	
		do.				13 R 1 E	9/ 6/54				D, S	No	Good		
		Gallup				4 R Dry	7/ /27 9/ 7/54				S	No			Water in wash by spring.
		Alluvium				4 R 4 E	7/ /27 9/ 7/54				D, S	Yes	Good	63	
		do.				3 R 2	7/ /27 9/15/54				D, S	Yes	Good	61	
		Gallup				.8 R .1	7/ /27 9/ 7/54				D, S	Yes	Good	65	
		do.				<.1	9/ 7/55				D, S	No	Good	62	
		Alluvium				1.5 R .5	9/ 7/54				D, S	Yes	Fair	62	
		Gallup				7 E	9/ 7/54				D, S	No		69	
		Alluvium				6 E	10/ 2/54				S	No	Bad	64	
		Point Lookout				.5 R .1	9/ 6/54				D, S	Yes	Fair	70	
		Alluvium and terrace(?)				8 R 5	5/ /27 9/ 6/54				D, S	No	Good	64	
		Alluvium				.5	9/ 7/54				D, S	Yes	Good	62	
		Volcanic extrusive				10 E	9/11/52				D, S, Irr	Yes	Good		
		Alluvium									S	Yes	Good		
		do.				20 E	8/26/49				S	Yes	Good		
		do.				50 E	8/26/49				S	Yes	Fair		
											Un	No			Oil test.
		Chuska				.5 R <.1	9/ 4/54				D, S	No	Good	60	
		do.				2.5 R .5	9/ 3/54				S	No	Good	52	
		do.				2 R .4	9/ 3/54				D, S	No	Good	54	
		do.				<.1	9/ 4/54				D	No	Good	52	
		do.				5 R .8	9/16/54				D, S	No	Good	53	
		do.				1 R 1	9/ 3/54				D, S	Yes	Good	50	
		do.				3	8/26/54				D, S	No	Good	50	
		Volcanic tuff				2 E	8/26/54				D, S, Irr	No	Good	51	Ditched into orchard.
		Chuska				50 E	9/ 4/54				D, S, Irr	No	Good	55	Wheatfields Creek at head.
		do.				30 E	9/ 3/54				D, S	No	Good		
		do.				50 E	9/ 4/54				D, S	No	Good		

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 12—Continued							
67	Drilled well	12K-314	8.30-0.30	8 NNE of Sheep Springs T.P.	5/52	Top of mesa	5,590	250	6	250	Perforated 145-163 232-250	W, Tr
	do.	12K-328	11.65-7.60	Sheep Springs T.P.	7/55	Broad valley	5,890	240	6	206	Open hole	
	do.	12M-27	7.55-6.65	4 ENE of Sheep Springs T.P.	1/35	Top of mesa	5,780	301	6	204	do.	W, Ta, Tr
	do.	12R-125	11.55-4.50	3 N of Sheep Springs T.P.	8/25	Plain	5,760	660	4			Tr
	do.	12T-325	11.70-7.65	Sheep Springs T.P.	1/56	Broad valley	5,890	274	8	234	Open hole	W, Tr
	Dug well	12K-4	3.60-0.35	11 NE of Sheep Springs T.P.		Bank of wash	5,400	6.5	4	6.5	Rock cribbed	N
	do.	12K-5	3.05-1.05	11 NE of Sheep Springs T.P.	2/30	do.	5,420	6	6	6	do.	Tr
	do.	12K-8	2.25-3.35	10 ENE of Sheep Springs T.P.		do.	5,440	8	8	8	do.	H, Tr
	do.	12K-9	2.75-4.80	10 ENE of Sheep Springs T.P.	3/30	do.	5,460	12 R	4	12 R	do.	H, Tr
	do.	12R-126	11.65-7.70	Sheep Springs T.P.		do.	5,890	8	5	8	Masonry cribbed	Tr
	do.	12R-126A	11.75-7.65	Sheep Springs T.P.		do.	5,890	14	5	14	do.	Tr
	do.	12R-126B	11.65-7.60	Sheep Springs T.P.		do.	5,890	14	5	6.5	Steel casing	P
	Spring	12R-127	12.05-8.15	1 SSW of Sheep Springs T.P.	6/24	Narrow valley	5,950				Collection gallery	Tr
68	Dug well	12K-304	2.05-3.70	3 SSE of Two Grey Hills T.P.		Bank of wash	6,200	8	5	8	Masonry cribbed	H, Tr
	do.	12R-109	3.10-1.10	Two Grey Hills T.P.		do.	5,920	18 R		18 R	Rock cribbed	P
	do.	12R-157A	2.00-2.05	2 SE of Two Grey Hills T.P.		Bed of wash	5,890	5	4	5	Masonry cribbed	Tr
	do.	12R-157B	1.25-1.60	2 ESE of Two Grey Hills T.P.		do.	5,840	4.5	6	4.5	Rock cribbed	N
	Spring	12A-6	6.90-10.35	6 NE of Crystal		Small valley	8,700				None	N
	do.	12A-7	7.20-9.95	6 NE of Crystal		Hillside	8,800				do.	N
	do.	12A-11	7.85-9.70	6 NE of Crystal		Small valley	9,100				do.	N
	do.	12K-306	9.70-8.30	6 NNE of Crystal		do.	8,870				do.	N
	do.	12M-1	5.55-10.65	7 ENE of Crystal		Mountainside	8,600				Collection gallery	Tr
	do.	12M-4	10.00-3.30	3 SW of Toadlena D.S.		Hillside	8,980				do.	C
	do.	12M-20	5.20-6.35	6 SSE of Toadlena D.S.		Small valley	7,280				do.	Tr
	do.	12M-35	1.20-5.40	4 SSE of Two Grey Hills T.P.		Bank of wash	6,010				do.	Tr
	do.	12R-110	2.50-0.25	1 NE of Two Grey Hills T.P.	4/27	Hillside	5,900				do.	Tr
	do.	12R-156	4.35-1.80	2 WSW of Two Grey Hills T.P.		Bank of wash	5,980				None	N
	do.	12R-156A	4.35-1.80	2 WSW of Two Grey Hills T.P.		do.	5,980				do.	N
	do.	12R-156B	4.35-1.80	2 WSW of Two Grey Hills T.P.		do.	5,980				do.	N
	do.	12R-158	5.35-6.45	6 SSE of Toadlena D.S.		Small valley	7,320				Small dam	N
	do.	12R-160	5.35-9.30	8 NE of Crystal		Mountainside	8,000				Collection gallery	Tr, Re
	do.	12R-161	5.30-10.50	8 ENE of Crystal		do.	8,400				do.	C, Tr
	do.	12R-162	5.65-10.70	7 ENE of Crystal		Base of cliff	8,600				None	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 12—Continued															
0	250 P	Menefee		79	9/21/54	3-4		23	171	¾	D, S	Yes	Bad	62	Bailed hole dry. Unfit for human consumption.
0	240 P	do.		10	7/12/55			20	140		D, S	Yes	Good		Sheep Springs T. P. well.
0	301 P	do.		124	12/10/48	3-4		10			D, S	Yes	Bad	37	Salty.
0	660 P	do.	DL	Flow	6/26/52	.2 .2	5/26/52 6/30/60				S	Yes	Good	73	
40	234 P	do.	LL	40	1/ 8/56	3-4		8	234	1	D	Yes	Good	60	Bailed hole dry.
		Alluvium		5.6	9/21/54						D	No	Fair		
		do.		5.8	9/21/54						Un	No	Fair		
		do.		3.6	9/21/54						S	No	Fair		
		do.		3	9/21/54						D, S	Yes	Good	68	
		do.		4.4	9/ 6/54						Un	Yes	Fair	52	
		do.		8.8	9/ 6/54						Un	Yes	Fair	57	Sheep Springs T. P. supply.
		do.		12.5	9/ 6/54						D	Yes	Fair	63	Walk-in well; Sheep Springs T. P. supply.
		Talus				.8 R .5	6/ /24 9/ 6/54				S	No	Good		
		Alluvium		.5	9/ 6/54						S	No	Fair	60	
		do.		9.9	7/16/49						D, S	Yes	Fair	47	
		do.		3.8	9/ 6/54						D, S	No	Fair	60	
		do.		3.5	9/ 6/54						D, S	No	Fair	60	
		Volcanic extrusive				.8 R 2 E	1/31/55				S	No	Good		
		do.				.8 R 2 E	1/31/55				S	No	Good		
		Chuska				.8 R 4 E	9/ 5/54				S	No	Good		
		do.				.8 E	9/ 5/54				D, S	No	Good		
		do.				1.5 R .5 E	9/ 5/54				D, S	No	Good	52	
		do.				.5 E	9/ 5/54				D, S	Yes	Good	55	By dipping vat.
		Landslide and talus				.5 R .5	9/ 5/54				D, S	Yes	Good	60	
		Menefee				.2 R .1	9/ 6/54				D, S	No	Good	61	
		Point Lookout				.5 R < .1	4/ /27 9/ 6/54				S	No	Bad	72	
		do.				.5 E	10/16/50					Yes	Good	59	"Mike Springs" 1.
		do.				.5 E	10/16/54					Yes	Bad	59	"Mike Springs" 2.
		do.				.5 E	10/16/54					Yes	Good	60	"Mike Springs" 3.
		Landslide and talus				2 E	9/ 5/54				S	No	Good	60	
		do.				6	9/ 5/54				D, S	No	Good	50	
		Chuska				1.5 R .8	9/ 5/54				S	Yes	Good	49	"Owl Spring."
		do.				12 E	9/ 5/54				D, S	No	Good		Collection of many seeps.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 12—Continued							
68 con.	Spring	12R-173	5.20-9.85	8 ENE of Crystal		Mountainside	8,010				Collection gallery	Tr
	do.	12GS-68-1	5.65-8.65	8 NE of Crystal		Hillside	7,940				None	Ta
	do.	12GS-68-2	10.60-7.15	7 NNE of Crystal		do.	8,890				do.	C
	do.	12GS-68-3	11.20-1.65	4 W of Toadlena D.S.		do.	9,100				do.	Re
	do.	12GS-68-4	8.55-0.95	1 NW of Toadlena D.S.		Shallow canyon	6,820				Collection gallery	Ta
	do.	12GS-68-5	8.65-1.00	1 WNW of Toadlena D.S.		Bed of wash	6,820				None	N
	do.	12GS-68-6	8.35-1.30	1 W of Toadlena D.S.		Shallow canyon	6,900				do.	N
	do.	12GS-68-7	9.90-0.65	2 WNW of Toadlena D.S.		Mountainside	7,830				Collection gallery	Tr
	do.	12GS-68-8	8.85-0.05	2 NW of Toadlena D.S.		Head of canyon	6,200				None	N
					DISTRICT 13							
31	Drilled well	13K-209	8.25-9.40	8 S of Fruitland	8/53	Plain	5,650	1,505	6	885	Open hole	
	do.	13K-210	4.65-13.75	13 SSE of Fruitland	2/34	do.	6,000	105				N
	do.	13K-210A	1.95-16.05	16 SSE of Fruitland	3/54	do.	6,200	393	8			N
	do.	13K-214	4.80-13.90	13 SSE of Fruitland	10/32	do.	6,000	915	6			N
	do.	13R-51	9.0-7.7 A	7 S of Fruitland	11/34	do.	5,550 E	60	10 6	40 60	Perforated 39-60	
	do.	13R-101	5.75-11.10	10 SSE of Fruitland	12/34	do.	5,820	448	6	487	Perforated 234-244 403-417	W
	do.	13R-109	2.55-9.35	10 SSE of Fruitland	8/32	do.	5,800	440	6	296		W, Ta, Tr
	do.	13T-205	8.20-9.35	8 S of Fruitland	5/51	do.	5,650	804	5	804	Perforated 704-804	W
	do.	13T-211	5.20-1.85	1 SSE of Kirtland	11/53	Bank of river	5,170	65	6	47	Perforated 37-47	W, Ta
	Dug well	13R-96	10.35-10.00	9 SSW of Fruitland		Bank of wash	5,500	9	4	9	Rock cribbed	H, Tr
	do.	13R-110	2.60-6.65	6 SSE of Kirtland	8/31	Bed of wash	5,700	3	4	3	do.	
	do.	13R-111	1.25-6.55	7 SE of Kirtland		Bank of wash	5,850	11.5	4	11.5	do.	H, Tr
	do.	13R-115	4.10-5.45	4 SSE of Kirtland	7/31	do.	5,510	6	5	6	do.	H, Tr
	do.	13R-115A	4.55-5.45	4 SSE of Kirtland		Bed of wash	5,550		4		do.	Tr
	do.	13R-116A	9.15-7.55	6 SSW of Fruitland		Plain	5,550	8 R				
	Spring	13R-103	8.70-15.25	14 S of Fruitland	6/24	Bed of wash	5,600				Collection gallery	Tr
	do.	13R-104	8.65-15.15	14 S of Fruitland	4/32	do.	5,600				do.	C, Tr, Re
	do.	13T-213	9.65-1.05	2 W of Fruitland		Terrace	5,120				do.	C, Tr, Re
	do.	13T-213A	3.10-2.35	3 ESE of Kirtland		Bank of river	5,210				None	N
	do.	13GS-31-1	9.55-0.85	2 W of Fruitland		Hillside	5,120				do.	N
32	Drilled well	13T-212	0.30-0.20	6 W of Fruitland		Bank of river	5,020	27	6	22	Perforated 12-22	W, Ta
	Dug well	13R-28	3.35-16.20	18 SW of Fruitland		Bed of wash	5,240	12.5	3 x 6	12.5	Plank cribbed	H, Tr
	do.	13R-28A	1.85-16.60	18 SSW of Fruitland		do.	5,250	6.5	8	6.5	Rock cribbed	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 12—Continued									
		Chuska				.2 R .5	9/ 5/54				D, S	No	Good	50	"Missionary Springs."
		Landslide and talus				.2 E	9/ 5/54				D, S	No	Good	53	Covered earth tank.
		Chuska				.5 E	9/ 5/54				D	No	Good	53	Entire area is seep zone.
		do.				.2 E	9/ 5/54				D, S	No	Good	45	
		De Chelly				56 50	8/24/48 6/25/53				D, Irr	Yes	Good	56	Toadlena School Spring.
		do.				23 14.5	8/24/48 6/25/53				Irr	No	Good	56	
		do.				20	8/25/48				D, Irr	Yes	Good		
		Landslide and talus				4.2 .1	6/25/53 9/ 5/54				D, S	Yes	Good	59	Toadlena picnic ground.
		do.				3 E	9/ 6/54				D, S, Irr	Yes	Good		
						DISTRICT 13									
750 1,480	235 25 P	Pictured Cliffs Cliff House	LL	470	8/ 4/53			4	532	4	Un	Yes	Bad	80	Abandoned, poor quality.
		Kirtland (Farmington)		Dry	2/26/54						Un	No			Abandoned.
270	100	Ojo Alamo	LL	260	3/ 1/54			.8		1½	Un	Yes	Fair	61	Capped, abandoned, low yield.
70	845 P	Kirtland and Fruitland undiff.		Dry	3/28/55						Un	No			Abandoned.
0	60 P	Kirtland (Farmington)		40	11/21/34			7			Un	No			Do.
40	408 P	Kirtland and Fruitland undiff.		180	12/ 8/34	3-4		4			Un	Yes	Bad		Originally drilled to 521 feet; analysis made in 1941; abandoned.
70	370 P	Kirtland (Farmington)	DL	248	9/30/54	2-3		5			D, S	Yes	Bad	65	Unfit for human consumption.
695	109 P	Pictured Cliffs		475	6/ 6/51	2-3		12	275	1½	S	Yes	Bad		Do.
0	35	Alluvium	DL	25.2	10/ 1/54	3-4		8			D, S	Yes	Fair	65	
		do.		7.3	9/30/54						D, S	Yes	Bad	65	
		do.		.6	10/ 1/54						S	No	Fair		Collects mud when wash flows.
		do.		5.4	10/ 1/54						D, S	No	Fair	66	
		do.		5.8	10/ 1/54						S	Yes	Good	69	
		do.		Dry	10/ 1/54						Un	No			Filled with sand and abandoned.
		do.		Dry	10/ 1/54						Un	No			Abandoned.
		Kirtland (Farmington)				2 R 1.5	6/ /24 5/10/55				D, S	Yes	Good	54	
		do.				2.5 R 2.5	4/ /32 5/10/55				D, S	No	Good		
		Terrace				18 E	5/11/55				D, S, Irr	Yes	Good	55	
		Alluvium				.5 E	5/11/55				S	No	Good		Dug out by Indians.
		Pictured Cliffs				10 E	6/ 3/55				D, S	Yes	Good	62	
0	21	Alluvium		6.7	5/11/55	3-4		30 R			S	Yes	Bad	60	
		do.		11.4	5/10/55						D, S	Yes	Fair	54	
		do.		4.9	5/10/55						D, S	Yes	Fair	54	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 13—Continued							
32 con.	Dug well	13R-29	3.85-14.90	17 SW of Fruitland	12/30	Bed of wash	5,200	10.5	3 x 6	10.5	Rock cribbed	Tr
	do.	13R-31	3.50-12.45	15 SW of Fruitland	12/30	do.	5,150	16	2½	16	do.	H, Tr
48	Drilled well	13K-206	2.40-11.30	12 ESE of Burnham T.P.	6/52	Plain	6,070	855 R	8			N
	do.	13K-207	2.35-11.35	12 ESE of Burnham T.P.	9/52	do.	6,070	1,110	10 6	96 890		W, Ta, Tr
	do.	13K-208	4.25-13.85	4 WNW of Bisti T.P.	9/53	do.	5,820	808	10 8	121 666	Open hole	W, Ta, Tr
	do.	Bisti Mission well	0.30-15.80	Bisti	11/54		5,780	750 R	8			
	do.	Bisti T.P.	0.30-15.65	Bisti	/52		5,810	460 R	6			N
	Dug well	13R-37	13.65-4.15	5 N of Burnham T.P.		Bank of wash	5,450	7.5	6	7.5	Masonry cribbed	N
	do.	13R-38	11.25-4.85	6 NNE of Burnham T.P.	11/31	do.	5,520	11	5	11	do.	Tr
	do.	13R-39	10.45-4.80	6 NNE of Burnham T.P.	9/31	do.	5,560	8.5	5	8.5	do.	Tr
	do.	13R-48	13.40-0.65	9 N of Burnham T.P.	3/32	do.	5,320	9	6	9	do.	Tr
	do.	13R-71	2.95-17.20	3 WSW of Bisti	5/32	Bed of wash	5,690	9	6	9	Rock cribbed	Tr
	do.	13R-74	1.90-16.75	2 WSW of Bisti	3/30	Bank of wash	5,720	29	7	29	do.	Tr
	do.	13R-75	1.75-16.75	2 WSW of Bisti	4/32	do.	5,720	10	5	10	do.	Tr
	do.	13R-78	7.55-9.45	6 E of Burnham T.P.	3/30	do.	5,650	10.5	3	10.5	do.	H, Tr
	do.	13R-85	2.25-2.55	13 NE of Burnham T.P.		Bed of wash	6,380				Plank cribbed	N
	do.	13R-90	4.85-8.20	9 E of Burnham T.P.	2/30	Bank of wash	5,840	8.5	4	8.5	Rock cribbed	Tr
	do.	13R-91	5.00-8.20	8 E of Burnham T.P.		do.	5,820	9.5	5	9.5	do.	H, Tr
	do.	13R-132	2.35-4.35	12 ENE of Burnham T.P.	5/31	do.	6,300	7	4 x 4	7	do.	N
	do.	13R-134	13.60-9.45	Burnham T.P.	3/31	do.	5,420	9	5	9	do.	H, Tr
	do.	13R-134A	13.75-9.50	Burnham T.P.		do.	5,420	8	3	8	do.	W
	do.	13R-137	0.25-15.70	Bisti		do.	5,780	10.5	6	10.5	do.	W
	do.	13R-139	0.25-15.75	Bisti		do.	5,780	10		10	do.	N
	do.	13R-150	2.65-17.10	2 WSW of Bisti	3/32	do.	5,710	10	5	10	do.	Tr
	do.	13R-152	0.20-15.70	Bisti	5/32	do.	5,780	14.5	8 x 8	14.5	do.	H, Tr
	Spring	13K-201	7.65-17.00	10 SE of Burnham T.P.		do.	5,600				None	Tr
	do.	13R-43	4.40-2.00	12 NE of Burnham T.P.	5/31	Bed of wash	6,020				Collection gallery	Tr
	do.	13R-80	10.65-9.65	3 E of Burnham T.P.		Bank of wash	5,550				do.	Tr
	do.	13R-80A	10.15-9.35	4 E of Burnham T.P.		do.	5,570				None	N
	do.	13R-84	2.95-3.90	12 NE of Burnham T.P.	5/31	Bed of wash	6,170				Collection gallery	Tr
	do.	13R-89	4.40-7.95	10 ENE of Burnham T.P.	2/30	Bank of wash	5,880				Collection well	N
	do.	13R-148	3.25-3.00	12 NE of Burnham T.P.	9/31	Head of canyon	6,250				do.	N
	do.	13R-153	2.45-5.80	12 ENE of Burnham T.P.		Side of mesa	6,270				Collection gallery	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 13—Continued															
		Alluvium		7.5	5/10/55			1.5 R			D, S	No			
		do.		12.2	5/10/55			7 R			D, S	Yes	Bad	60	
0	855 P	Kirtland										No			Drilling rig caught fire; abandoned; hit gas at 700 to 720 feet.
970	135	Pictured Cliffs		429	10/17/52	2-3		10	590	2½	D, S	Yes	Bad	78	Cement used to seal off gas at approximately 890 feet.
660	120	Cliff House	LL	280	8/31/54	2-3		15	160	2½	D, S	Yes	Bad		Bad water above Cliff House sealed off.
		Pictured Cliffs										No			Abandoned, poor quality.
		do.		25 R	9/ /52			6			Un	No			Abandoned, poor quality; caved.
		Alluvium		6.2	12/10/54						Un	No	Fair		Temporary.
		do.		9	12/10/54						D, S	Yes	Bad	63	
		do.		6.4	12/10/54						D, S	Yes	Bad	62	Well enclosed by fence.
		do.		6.8	12/10/54			.5 R			D, S	Yes	Fair	62	Trough buried by sand.
		do.		5.7	12/ 8/54						D, S	Yes	Fair	63	
		do.		14.1	12/ 8/54						D, S	No	Fair	50	Bisti dipping vat.
		do.		8.6	12/ 8/54						D, S	Yes	Fair	62	Bisti well.
		do.		7.4	12/ 9/54						D, S	Yes	Fair	64	
		do.		Dry	5/ 5/55							No			Filled with sand.
		do.		Dry	12/ 9/54						Un	No			Abandoned.
		do.		7	12/ 9/54						D, S	No	Fair	50	
		Ojo Alamo		5.8	5/ 5/55						D	Yes	Good	53	
		Alluvium		7.2	12/10/54			2 R			D, S	Yes	Bad	62	
		do.		6.4	12/10/54						D	Yes	Bad	64	
		do.		7.2	12/ 8/54						D	Yes	Fair	64	
		do.		7.4	12/ 8/54						Un	No			Abandoned; Bisti 2.
		do.		6	12/ 8/54			.5 R			D, S	Yes	Fair	50	
		do.		10	12/ 8/54						S	Yes	Fair	50	
		Pictured Cliffs				.8 E	12/ 8/54				Un	No	Fair	50	
		Kirtland (Farmington)				2 R 2 E	5/ /31 5/ 5/55				S	Yes	Bad	53	
		Kirtland (lower)				.1 R .2	12/10/54				S	No	Fair	40	
		do.				.1 E	12/10/54				S	No	Fair	34	
		Alluvium				1.5 R 1 E	5/ /31 5/ 5/55				S	Yes	Fair	68	Wash covered with seeps.
		Kirtland (lower)				.2	12/ 9/54				S	No	Fair	45	Some development by Indians.
		Ojo Alamo				.5 R .5 E	9/ /31 5/ 5/55				D	Yes	Good	53	
		do.				.5 R .4	5/ 4/55				D, S	Yes	Fair	52	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 13—Continued							
49	Drilled well	Gulf Oil Co. shot hole	4.8-6.0 A	6 NW of Burnham T.P.		River valley	5,120 E	131	4		None	N
	do.	Gulf Oil test	2.25-9.60	2 W of Burnham T.P.	/55		5,400	9,204 R				
	Dug well	13R-46	0.80-2.70	6 N of Burnham T.P.		Bank of wash	5,330	8	6	8	Rock cribbed	Tr
	do.	13R-136	0.15-9.45	Burnham D.S.		do.	5,420	23	6	23	Masonry cribbed	P
	do.	13R-149	0.45-2.35	8 N of Burnham T.P.	9/31	do.	5,360	8.5	4	8.5	Rock cribbed	N
	do.	13R-155	1.85-9.90	2 WSW of Burnham T.P.	11/27	do.	5,400	6	5	6	do.	Tr
66	Drilled well	13R-59	13.70-2.65	14 WSW of Bisti	1/35	Hillside	5,670	304	6	240	Perforated liner 245-266	W, Ta, Tr
	Dug well	13R-3	7.50-0.20	8 WSW of Bisti		Bank of wash	5,610	7.5	4 x 6	7.5	Rock cribbed	N
	do.	13R-55	0.85-2.40	4 S of Bisti		Bed of wash	5,800	5	5	5	do.	H, Tr
	do.	13R-55A	0.10-2.20	4 S of Bisti		do.	5,820	5	4½ x 6	5	do.	Tr
	do.	13R-144	0.75-5.90	7 S of Bisti		do.	5,740	5	6	5	do.	H, Tr
67	do.	13R-11	2.20-4.05	12 SSW of Burnham T.P.		do.	5,450	3.5	5	3.5	do.	H, Tr
					DISTRICT 14							
66	Drilled well	14N-79	9.50-17.15	15 ESE of Naschitti T.P.	12/38	Plain	5,850	320	6	260	Open hole	W, Ta, Tr
67	do.	14A-33	2.50-11.85	8 ENE of Naschitti T.P.	12/17	do.	5,630	458	10 6	21 110	do.	Tr
	do.	14A-46A	10.20-12.95	Naschitti T.P.		Bank of wash	5,920	130	6			P
	do.	14A-51A	10.05-13.10	0.25 SW of Naschitti T.P.		do.	5,880	155 R				W, Ta
	do.	14K-308	10.60-12.80	1 WNW of Naschitti T.P.	5/51	Terrace	5,940	380	10		Perforated 320-340	P
	do.	14K-310	5.00-8.05	7 NE of Naschitti T.P.	7/52	Small valley	5,750	642	10 8	210 484	Perforated	N
	do.	14K-316	5.00-11.35	6 ENE of Naschitti T.P.		Plain	5,590	300	4		None	N
	do.	14N-85	8.00-10.25	4 NNE of Naschitti T.P.	12/38	Edge of cliff	5,760	1,030	8 6	431 555	Open hole	Tr
	do.	14T-307	3.15-15.80	8 ESE of Naschitti T.P.	7/51	Alluvial plain	5,710	448	10 7	43 412	Gravel packed	Tr
	do.	14T-319	5.75-12.25	5 ENE of Naschitti T.P.	1/56	Plain	5,620	485	8 6	242 485	Perforated 380-390, screen	W, Tr
	Dug well	14A-26	9.45-14.30	2 SSE of Naschitti T.P.	7/31	Small valley	5,860	14 R		14 R	Masonry cribbed	H, Tr
	do.	14A-28	7.90-14.80	3 SE of Naschitti T.P.	4/31	Alluvial plain	5,790	14	5	14	Rock cribbed	Tr
	do.	14A-35	5.85-11.40	4 ENE of Naschitti T.P.		do.	5,610	11	5	11	do.	Tr
	do.	14A-46	10.15-13.05	Naschitti T.P.	/27	Bank of wash	5,880	14 R	5	14 R	Masonry cribbed	W, Ta
	do.	14A-51	10.40-13.10	1 W of Naschitti T.P.	5/31	Bed of wash	5,880	22	10	22	Concrete caisson	N
	do.	14B-1	10.30-12.95	0.25 WNW of Naschitti T.P.	3/31	Bank of wash	5,900	26 R		26 R	Masonry cribbed	N
	do.	14B-2	9.80-13.00	1 E of Naschitti T.P.		do.	5,870	12	4	12	Rock cribbed	Tr
	Spring	14A-30	1.20-15.40	10 ESE of Naschitti T.P.		Bed of wash	5,630				None	N
68	do.	14N-1	3.15-12.40	9 ENE of Crystal		Small valley	7,780				do.	N
	do.	14N-2	3.35-14.10	8 E of Crystal		do.	7,960				do.	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 13—Continued									
0	131 P	Pictured Cliffs		Flow	2/ 1/52	2 E	2/ 1/52				D, S	No			Flowing seismograph shot hole.
		Morrison(?)		Flow	/55	800 R						Yes	Bad		Shut-in pressure, 275 pounds; temperature, 128°F.
		Alluvium		7	12/10/54						D	No	Fair	64	
		do.		11	12/10/54						D	Yes	Bad	59	Burnham D.S. well.
		do.		7.4	12/10/54			3 R			D, S	Yes	Fair	62	
		do.		4.4	9/22/49						D, S	Yes	Fair	62	
50	254 P	Menefee	DL	100 R		3-4	3/21/52	16	50		D, S	Yes	Fair	54	Cleaned by BIA in March 1952.
		Alluvium		6.5	12/ 8/54						S	No	Fair	50	Temporary.
		do.		3.5	5/ 4/55						D, S	Yes	Good	48	
		do.		5.7	5/ 4/55						D, S	Yes	Good	54	
		do.		3.6	5/ 4/55						D, S	Yes	Bad	50	
		do.		3	5/ 3/55						D, S	Yes	Fair	52	
						DISTRICT 14									
15	305 P	Menefee		161	10/14/54	3-4		17	30		D, S	Yes	Fair	62	
5	453 P	do.		Flow	10/13/54	2 1.7	10/13/54 7/13/55				D, S	Yes	Good	62	Yield of 300 gpm reported Dec. 10, 1917.
0 35	35 95 P	Alluvium Menefee		13	5/27/55			2.8 R			D	Yes	Good	64	Naschitti T.P. well.
32	123 P	Menefee									D	No	Good		Cleaned and deepened, summer 1950; well is sealed; no measurements.
0	380 P	do.	LL	Flow	5/27/55			70	215	3	D, PS	Yes	Good	62	Naschitti D.S. well.
0	642 P	do.	LL	Flow	7/30/52	5 R 5.6	7/31/52 7/13/55				D, S	Yes	Good	65	Shut-in pressure, 28 pounds; 187 feet of 6-inch liner, perforated.
0	300 P	do.		Flow	10/13/54	8 E	10/13/54					No	Good	59	Wire fence around flowing shot hole; some gas.
0 1,000	1,000 30 P	Menefee Point Lookout	DL	Flow	10/14/54	30 12	12/ 7/38 10/14/54				S	Yes	Good	65	
20	428 P	Menefee	LL	Flow	10/14/54	3.8 3.8	10/14/54 7/13/55	26	105	1	S	Yes	Good	60	
52	433 P	do.		76	1/30/56	3-4		50	134	¼	S	No	Good	57	
		do.		3 R	7/ /31			2 R			D, S	Yes	Good	62	
		do.		Flow	10/13/54	1 R <.1	4/ /31 10/13/54				D, S	Yes	Good	63	
		Alluvium		Flow	10/13/54	.1	10/13/54				D, S	No	Good	61	
		do.		5.5	5/27/55			1.5 R			D, S	Yes	Good	58	Temporary.
		do.		9.7	7/13/49			18 R			Un	Yes	Good		Naschitti D.S. dug well; abandoned.
		do.						1.5 R			Un	No			Abandoned.
		do.		10.8	10/13/54						D, S	No	Good	61	
		Menefee									S	No			Flooded out Oct. 13, 1954.
		Chuska				30 E	10/15/54				D, S, Irr	Yes	Good	55	Irrigation ditches.
		do.				25	10/15/54				D, S, Irr	No	Good	46	Do.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 14—Continued							
68 con.	Spring	14N-108	6.20-11.15	6 ENE of Crystal		Small valley	7,700				None	N
	do.	14GS-68-1	2.05-16.55	10 ESE of Crystal		do.	7,800				do.	N
86	Drilled well	14A-4	11.10-12.40	5 W of Standing Rock T.P.	7/17	Plain	6,090	410	10 7 6	21 96 202	Open hole	Tr
	Drilled well	14A-10	10.85-4.45	10 NW of Standing Rock T.P.	5/23	Broad valley	5,880	690	6 4			
	do.	14A-81	12.95-15.30	7 WSW of Standing Rock T.P.	5/37	Stripped plain	6,220	395	8	300	Perforated 115-135 245-265 open hole below	W, Ta, Tr
	Drilled well	14N-52			5/31			900	4			
87	do.	14K-302	6.50-15.40	Coyote Canyon		Narrow valley	6,120	374	10 8	88 348	Perforated	N
	Drilled well	14K-305	8.45-4.50	Buffalo Springs T.P.	6/50	Terrace	6,070	250	5	250	Perforated	W, Tr
	do.	14K-311	9.80-10.60	6 NW of Coyote Canyon T.P.	2/52	Alluvial plain	6,120	500	4	160	Open hole	Tr
	do.	14K-312	8.25-10.90	5 NNW of Coyote Canyon T.P.	2/52	do.	6,080	450				Tr
	do.	14K-317	8.55-4.45	Buffalo Springs T.P.		Terrace	6,070	366	6	354		W, Ta, Tr
	do.	14M-1	10.75-15.55	4 W of Coyote Canyon T.P.	3/16	Alluvial plain	6,120	1,150				Re
	do.	14M-4	6.55-15.35	Coyote Canyon	12/15	Narrow valley	6,120	204	5	90	Open hole	Ta
	do.	14M-4A	6.60-15.25	Coyote Canyon	1/52	do.	6,110	220	6	180		Tr
	do.	14M-16	3.65-2.15	6 ENE of Buffalo Springs	11/16	Alluvial plain	5,810	550	5 4			Tr
	do.	14M-16A	3.70-2.15	6 ENE of Buffalo Springs	11/53	do.	5,810	530	8 6	310 530	Perforated	Tr
	do.	14M-25	6.05-11.40	4 N of Coyote Canyon	8/16	do.	6,000	530	5 4	60 295	Open hole	N
	do.	14M-25A	6.10-11.50	4 N of Coyote Canyon	11/53	do.	6,000	517	8	350	do.	Tr
	do.	14M-26	0.65-7.95	8 ESE of Buffalo Springs T.P.	3/17	Plain	5,880	555	8, 3, 2		Screen	Tr
	do.	14N-45	8.50-7.75	4 S of Buffalo Springs T.P.	12/36	do.	6,090	336	7	336	Perforated 275-336, gravel packed	W, Ta, Tr
	do.	14N-95	8.05-3.15	2 N of Buffalo Springs T.P.	4/39	Alluvial plain	5,980	1,185	8 6	415 918	Open hole	W, Tr
	do.	14N-102	12.00-16.45	6 WSW of Coyote Canyon T.P.	9/39	do.	6,180	1,353	12 8 6	60 810 1,086	Perforated at 245, open hole below	W, Tr
	Drilled well	EPNG-G1	8.35-7.05	2 S of Buffalo Springs T.P.		Plain	5,990					
	do.	EPNG-G2	8.35-7.00	2 S of Buffalo Springs T.P.		do.	5,990	371		370	Perforated	
	do.	EPNG-G3	8.35-7.00	2 S of Buffalo Springs T.P.			5,990	775		300+		
	do.	EPNG-G4	8.35-7.00	2 S of Buffalo Springs T.P.	6/55		5,990	1,131	7	1,094	Open hole	N
	do.	Pure Oil Co. 3			1/51			800	4			N
	Dug well	14M-7	12.80-12.90	7 WNW of Coyote Canyon T.P.		Small valley	6,200	17.5	5	17.5		W, Tr
	do.	14M-17	9.75-0.80	4 NNW of Buffalo Springs T.P.	7/31	do.	6,100	16 R		16 R		H, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 14—Continued															
		Volcanic extrusive				4 E	10/15/54				S	No	Good	52	
		Landslide and talus				25 E						No	Good		
145	113	Point Lookout		Flow	7/13/55	19 15	8/ 6/49 6/29/55				D, S	Yes	Bad	58	"Charlie Damon well."
0	690 P	Menefee		Flow	7/13/55	10 11	5/ /23 7/ 6/55				S	Yes	Fair	66	
4	371	Point Lookout	DL	135 R	5/25/37	3-4		10			D, S	Yes	Good	60	
												No			
215	66	Point Lookout	DL	Flow	5/ 9/55	10	1/ /52				D	Yes	Good		Other aquifers, Menefee and Crevasse Canyon; cleaned in 1952, 25 psi at surface; Coyote Canyon D.S. well.
55	195 P	Menefee	LL	180	/50			.7			D, S	Yes	Fair		
		Point Lookout		Flow	5/26/55	10	5/26/55				D, S	Yes	Good	63	Pure Oil Co. flowing shot hole.
		do.		Flow	5/26/55	8.5	5/26/55				S	Yes	Good	63	Do.
89	277 P	Menefee		176	5/27/55	3-4		20	109		D, S	Yes	Good		State of New Mexico maintenance-yard well.
1,001	107	Gallup	DL	Flow	3/25/53	45 E 18.7	3/25/53 6/29/55				D, S, Irr	Yes	Good	74	100 gpm in March 1916; other aquifer, Crevasse Canyon (Dalton).
82	122 P	Point Lookout		Flow	5/19/55	8 R 1.8	12/10/15 5/19/55				Un	Yes	Good	60	Capped well.
82	133	do.		Flow	1/ 8/52	12	1/ 8/52	27	24	¾	S	Yes	Good	60	Coyote Canyon School stock well.
20	530 P	Menefee		Flow	4/ 9/53	4 1.5	4/ 9/53 6/30/55				D, S	Yes	Good		Yield of 5 gpm Nov. 22, 1916.
20	510 P	do.		Flow	11/16/53	9.5 4.5	11/16/53 6/30/55	90	65	¼	D, S	Yes	Good	62	
365	165 P	Point Lookout		Flow	4/ 9/53	.5 .2	4/ 9/53 6/29/55				D, S	Yes	Good	57	Yield of 16 gpm reported Aug. 11, 1916.
350	167 P	do.		Flow	5/19/55	12	11/23/53	53	74		D, S	Yes	Good		Flow, 11.2 gpm June 29, 1955.
16	539 P	Menefee	DL	Flow	4/ 9/53	17 R 5.5	3/30/17 4/ 9/53				D, S	Yes	Good	63	
40	296 P	do.		102	4/23/52	3-4	4/23/52	20			S	Yes	Good		
70	1,115 P	do.	DL	Flow R	4/28/39	2 R	4/28/39	25			S	Yes	Fair		216 feet of 5-inch liner to 1,130 feet.
870	170	Gallup		54.8	3/25/53	3-4		40			D, S	Yes	Fair		Other aquifers, Menefee and Crevasse Canyon.
								60		7		Yes	Fair	61	Gallup Station.
				77 R								No			Do.
												No			Do.
		Menefee and Point Lookout		Flow	9/24/56	40	9/24/36				D, Ind	No			Cemented to 630 feet.
				Flow				5			Un	No			Oil test, very little data; deepened to Morrison Formation.
		Alluvium		11	11/ 5/54						D, S	No			
		do.		8 R	7/ /31						D, S	Yes	Fair	57	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 14—Continued							
87 con.	Dug well	14N-42	11.75-13.40	6 WNW of Coyote Canyon T. P.		Plain	6,200	11	8	11	Rock cribbed	H
	Spring	14A-73A	1.25-15.50	6 E of Coyote Canyon T. P.		Shallow canyon	6,150				Collection gallery	C, Tr
	do.	14A-73B	0.40-15.75	6 E of Coyote Canyon		do.	6,180				do.	C
	do.	14M-5	8.20-14.00	2 NW of Coyote Canyon		Bed of wash	6,040				None	N
	do.	14M-24	3.60-12.30	4 NE of Coyote Canyon		Plain	6,010				Collection gallery	Tr
	do.	14N-8A	13.20-3.25	5 WNW of Buffalo Springs T. P.		Top of mesa	7,480				None	C
	do.	14N-41	7.20-13.15	2 NNW of Coyote Canyon		Bed of wash	6,010				do.	N
	do.	14N-48	13.00-6.00	5 WSW of Buffalo Springs T. P.		Small valley	7,650				do.	N
	Oil test	Tohatchi Pure Oil	9.30-10.15	6 S of Buffalo Springs T. P.	/54	Alluvial plain	6,120		4		do.	N
88	Drilled well	14K-301	0.90-9.90	Tohatchi D. S.	/33	Bank of wash	6,420	1,790	8	1,200	Perforated, open hole below	P, Ta
	do.	14K-301A	0.90-9.80	Tohatchi		do.	6,440	57	8	60	Perforated 40-60	P
	do.	14K-303	4.40-14.55	1 W of Mexican Springs	10/48	Small valley	6,390	64	6	64	Perforated 50-55	P, Ta
	do.	14K-315	1.70-12.15	2 SSW of Tohatchi	3/54	Plain	6,360	305	6	305	Perforated 260-300, gravel packed	W, Tr
	do.	14N-39	1.50-15.85	3 ESE of Mexican Springs	10/39	Bank of wash	6,260	470	6	470	Perforated 50- 94 160-189	W, Ta, Tr
	do.	14N-71	3.50-12.80	2 NNE of Mexican Springs	11/39	do.	6,410	207	8 6	152 207	Perforated	W, Ta, Tr
	do.	14W-1	4.40-15.80	2 S of Mexican Springs	/34	do.	6,310	14.5	16	14.5	Open hole	N
	do.	14W-2	6.10-15.30	2 WSW of Mexican Springs		do.	6,460	24	20	24	do.	N
	do.	14W-3	5.40-13.45	2 NE of Mexican Springs		do.	6,500	10	20	10	do.	N
	do.	Mexican Springs D. S.	4.45-14.50	1 W of Mexican Springs	2/56	Small valley	6,390	404	10 8		Perforated 260-280 315-375	
	Dug well	14A-75	6.80-15.90	3 WSW of Mexican Springs		Bed of wash	6,500	23.5	4	23.5	Rock cribbed	H, Tr
	do.	14N-5	0.50-1.90	8 N of Tohatchi		do.	7,720				do.	N
	do.	14N-28	0.00-10.75	2 SE of Tohatchi		Bank of wash	6,300	12 R	8	12 R	do.	H, Tr
	do.	14N-28A	0.25-10.50	1 SE of Tohatchi		Bed of wash	6,310	6	8 x 8	6		N
	do.	14N-30	1.40-12.95	3 S of Tohatchi		Plain	6,300	50 R	4	50 R	Rock cribbed	N
	do.	14N-32	10.80-10.60	8 WNW of Mexican Springs	/33	Small valley	8,080	9	3 x 8	9	Masonry cribbed	Tr
	do.	14N-34	7.80-15.60	4 WSW of Mexican Springs		Bed of wash	6,630	15 R	4	15 R	do.	N
	do.	14N-35A	4.35-14.65	0.50 W of Mexican Springs		Narrow valley	6,380	15.5	4 x 6	15.5		N
	do.	14N-35B	5.05-14.25	1 WNW of Mexican Springs		do.	6,410	12	3	12	Barrels	N
	do.	14N-39A	1.35-15.90	3 ESE of Mexican Springs		Bank of wash	6,260	30		30		N
	do.	14N-72	5.50-13.35	2 NW of Mexican Springs		do.	6,500	21	5	21	Masonry cribbed	W, Tr, Ta, A
	do.	14N-73	3.65-15.85	2 S of Mexican Springs		Bed of wash	6,270					Tr
	do.	14N-75	4.45-15.70	2 S of Mexican Springs		do.	6,310	11	9 x 9	11	Rock cribbed	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 14—Continued									
		Menefee		5.5	11/ 5/54						D, S	No			
		Point Lookout				.5 E	5/18/55				D, S	Yes	Good	58	
		do.				.2 E	5/18/55				D, S	No	Good		
		Alluvium									S	Yes	Good	67	
		Menefee				.2 E	5/19/55				S	Yes	Fair	65	
		Landslide and talus				.5 E	11/ 4/54				D	Yes		45	
		Alluvium									S	No			
		Landslide and talus				.5 E	11/ 4/54				S	No		52	
		Morrison(?)		Flow R		2,000 R					Un	Yes	Good	100	Shut-in pressure, 200 pounds; flow through 2-inch pipe, 280 gpm with 175 pounds pressure; abandoned; casing pulled.
1,275 1,455	180 335 P	Point Lookout Crevasse Canyon	DL	242	5/28/50			74	200	12	D	Yes	Good	75	Liner set at 1,716 feet; Tohatchi School well (deep).
0	57 P	Alluvium		14	5/26/55			70			Un	Yes	Good	56	Not used, poor sanitation; Tohatchi School well (shallow).
48	16 P	Menefee	DL	26.3	10/14/48	12	12/ 3/48	18	15	240	D	Yes	Good		Mexican Springs D.S. well.
0	305 P	do.	LL	131	11/ 3/53	3-4		38	159	½	D, S	Yes	Good		
95	375 P	do.		40.1	12/22/54	3-4		17			D, S	Yes	Fair		
32	175 P	do.		20 R	11/ 9/39	3-4		11			D, S	Yes	Fair	57	6-inch liner.
0	15 P	Alluvium		4.4	9/30/48						O	No			Observation well in alluvial fill of Catron Wash.
0	24 P	do.		14.9	5/ 8/52						O	No			Observation well in alluvial fill.
0	10 P	do.		Dry	11/ 5/54						O	No			Do.
0	404 P	Menefee		43.2	5/ 7/56			16	15	2	PS	Yes	Fair	57	
		Alluvium		16.8	5/25/55						D, S	Yes	Fair	54	
		Landslide and talus		5.5	11/ 4/54						D, S	No			
		Alluvium		Dry	11/ 5/54						S	No			Tohatchi dipping vat.
		do.		Dry	11/ 5/54						Un	No			Abandoned.
		do.		Dry	5/26/55			1 R			Un	No			Do.
		do.		3.3	11/ 5/54						D, S	Yes	Good	51	
		do.		Dry	5/25/55			2.5 R			Un	No	Bad		Abandoned.
		do.		11.3	9/23/48						Un	No			Do.
		do.		10	5/26/55						D	No	Fair		Indian dug.
		do.		Dry	12/22/54						Un	No			Destroyed.
		do.		20.6	11/ 5/54						D, S	No	Good		
		do.		Dry	5/25/55						Un	No			Abandoned.
		do.		8.8	5/25/55						S	No			

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 14—Continued							
88 con.	Dug well	14N-75A	5.55-15.50	2 WSW of Mexican Springs		Bank of wash	6,410	15	$2\frac{1}{2}$ x 3	15	Rock cribbed	W, Ta, Tr
	do.	14N-76	7.50-11.00	5 NW of Mexican Springs		do.	6,790	6	6	6	do.	N
	do.	14N-83	4.60-17.05	2 S of Mexican Springs	/33	Bed of wash	6,350	18	5	18	do.	H, Tr
	do.	14N-106	6.60-14.50	2 W of Mexican Springs		Small valley	6,500	16	8	16	do.	W, Tr
	Spring	14A-78	8.45-14.50	4 W of Mexican Springs		Bed of wash	6,680				None	N
	do.	14K-353	11.60-12.00	8 WNW of Mexican Springs		Small valley	8,000 E					
	do.	14M-12	0.50-10.75	1 S of Tohatchi		Bed of wash	6,300				None	N
	do.	14N-4	1.05-1.65	8 N of Tohatchi		do.	7,840				do.	N
	do.	14N-6	0.25-2.10	8 N of Tohatchi		Small valley	7,630				do.	N
	do.	14N-8	0.4-5.1 A	4 N of Tohatchi		do.	7,990 E					
	do.	14N-14	6.65-4.10	8 NW of Tohatchi		Shallow canyon	8,020				Collection gallery	C, Re
	do.	14N-15	4.25-4.80	6 NNW of Tohatchi		Canyon bottom	8,280				None	N
	do.	14N-16	4.50-5.35	6 NW of Tohatchi		Side of cliff	8,340				Collection gallery	C, Tr
	do.	14N-17	6.85-4.90	8 NW of Tohatchi		Bed of wash	7,750				None	N
	do.	14N-18	6.95-5.55	8 NW of Tohatchi		do.	7,800 E				do.	Re
	do.	14N-23	6.90-6.30	7 WNW of Tohatchi		Canyon bottom	7,850				do.	N
	do.	14N-23A	7.05-6.25	7 WNW of Tohatchi		do.	7,850				Collection well	N
	do.	14N-25	3.80-6.05	4 NNW of Tohatchi	10/38	Hillside	8,240				do.	N
	do.	14N-25A	3.70-6.10	4 NNW of Tohatchi		do.	8,220				None	N
	do.	14N-27	1.80-8.80	2 NNW of Tohatchi		Bank of wash	6,680				Concrete wall	C
	do.	14N-28B	0.15-10.60	1 SE of Tohatchi		Bed of wash	6,300				None	N
	do.	14N-25B	4.00-5.95	5 NNW of Tohatchi			8,200				do.	N
	Combination spring	14N-24	4.10-5.65	6 NW of Tohatchi		Canyon bottom	8,250				do.	N
	Stream	14N-20	11.75-3.00	6 S of Crystal			7,280				do.	N
	do.	14N-21	10.15-3.60	7 SSE of Crystal			7,440				do.	N
	do.	14N-22	10.90-4.50	8 S of Crystal			7,260				do.	N
	Oil test	14K-304	11.65-4.05	8 S of Crystal		Broad valley	7,270	2,400			do.	N
	Infiltration gallery	14N-35	4.40-14.60	0.50 W of Mexican Springs	/34	Narrow valley	6,390	39.5	31	39.5	Concrete caisson	P, Ta
89	None											
105	do.											
106	Drilled well	14A-79	10.45-2.20	13 NNE of Gallup	3/37	Broad valley	6,240	873	10 8 5	245 745 873	Perforated 712-873	Tr
	Drilled well	14K-313	3.85-5.70	13 NE of Gallup	5/53	Broad valley	6,950	622	8	605	Perforated 560-600, open hole below	W, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 14—Continued															
		Alluvium		Dry	5/25/55						Un	No			
		do.		Dry	11/ 5/54						Un	No	Bad		Abandoned, poor quality.
		do.		15.7	5/25/55						D, S	Yes	Good	56	
		do.		14	5/25/55						D, S	Yes	Good	65	
		do.				.5 E	5/25/55				S	Yes	Fair	66	
		do.										No			
		do.				Dry	5/26/55				S	No			No flow, damp ground May 26, 1955.
		Landslide and talus				5 E	11/ 4/54				S	No	Good	54	
		do.				30 E	11/ 4/54				D, S, Irr	Yes	Good	49	
		do.									D, S	No			Black Water Spring.
		Chuska				2 E	11/ 3/54				D, S	No	Good	47	
		do.				6	11/ 4/54				D, S	No	Good	52	
		do.				3 R .5	11/ 3/54				D, S	Yes	Good	47	
		do.									S	No			Fenced-in spring.
		do.				2 E	11/ 3/54				D, S	No	Good	48	
		do.				3 E	11/ 4/54				D, S	No	Good	48	
		do.				.2	11/ 4/54				D	No	Good	53	
		do.				3 R .2 E	11/ 4/54				D, S	Yes	Good	52	"Pine Spring."
		do.				.2 E	11/ 4/54				S	No	Good	52	
		Alluvium				60 R 12 E	7/15/49				D, S	Yes	Good	42	Originally piped to Tohlakai School; abandoned, contaminated.
		do.				3 E	11/ 5/54				S	No	Good	57	Bed of Tohatchi Wash.
		Chuska				.2	11/ 4/54				S	No	Good	52	
		do.				160	11/ 4/54				D, S	Yes	Good	44	
		do.				150 E	11/ 3/54				D, S, Irr	No	Good	49	Irrigation ditches.
		do.				250 E	11/ 3/54				D, S, Irr	No	Good	49	Do.
		do.				30 E	11/ 3/54				D, S, Irr	No	Good	50	Do.
				Dry	7/20/52						Un	Yes	Bad		Dry oil-test hole; Humble Oil 1; abandoned.
		Alluvium		30.3	9/23/48			2 R			Un	Yes	Good		Mexican Springs old water supply; not used now.
753	120 P	Crevasse Canyon (Dalton)		Flow	6/25/52	82 30	5/23/51 6/29/55				D, S, Irr	Yes	Good	70	
470	152 P	Gallup	LL	235	5/ 2/53	2-3		20	128	¾	D, S	Yes	Fair	55	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 14—Continued							
106 con.	Drilled well	14K-318	14.00-5.55	10 N of Gallup	9/54	Plain	6,340	365	6	359	Perforated 297-305	W, Tr
	Drilled well	14T-306	13.75-4.30	11 N of Gallup	6/51	Plain	6,330	266	7	255		W, Tr
	Dug well	14A-12	11.30-4.25	11 NNE of Gallup		Bank of wash	6,380	21	4 x 4	21	Rock cribbed	Tr
	do.	14A-14	8.20-3.65	12 NNE of Gallup		Bed of wash	6,470	7	5	7	do.	Tr
	Spring	14A-56	14.00-6.85	8 N of Gallup		Side of cliff	6,500				Collection well	N
	do.	14A-57	13.75-7.00	8 N of Gallup		do.	6,490				do.	N
	do.	14A-59	13.00-6.40	8 N of Gallup		do.	6,450				None	Re
	do.	14A-60	12.35-6.20	8 N of Gallup		do.	6,500				Collection gallery	C
	do.	14A-61	11.75-5.85	9 NNE of Gallup		do.	6,490				Collection well	Tr
	do.	14N-57	7.90-3.75	12 NNE of Gallup		Bed of wash	6,530				None	N
	do.	14N-70	4.45-6.65	12 NE of Gallup		Small valley	7,010				Collection gallery	Tr
107	Drilled well	14K-300	1.45-2.90	12 N of Gallup	9/46	Broad valley	6,370	1,550	7 5	330 1,510	Open hole below 1,510 feet	P, Ta
	do.	14K-300A	1.40-2.80	12 N of Gallup	10/46	do.	6,340	326	6	294	Perforated 174-184 142-143	N
											open hole below	
	Drilled well	14K-314	2.90-2.75	13 NNW of Gallup	10/54	Hillside	6,440	254	6	254	Perforated 205-230	W
	do.	14Y-9	1.15-6.40	8 N of Gallup		Broad valley	6,580	337 R	6			W
	do.	14Y-9A	1.15-6.35	8 N of Gallup	9/53	do.	6,580	575 R	8			P
	Dug well	14N-61	3.30-3.20	12 NNW of Gallup		Bank of wash	6,440	9.5	5 x 5	9.5		
	do.	14Y-14	4.25-0.50	15 NNW of Gallup		do.	6,390	19	5	19		H, Tr
	do.	14Y-14A	6.30-1.50	15 NNW of Gallup		Bed of wash	6,770	3		3	None	Tr
					DISTRICT 15							
65	Drilled well	15B-24	8.35-4.70	8 SE of Bisti	1/36	Plain	6,220	500	6	384	Open hole	W, Ta, Tr
	do.	15B-25	8.25-14.30	17 SSE of Bisti	1/36	Broad valley	5,940	358	6	316		W, Tr
	do.	15K-302	8.70-11.10	14 SSE of Bisti		do.	5,990	962	8 6	526 700	Perforated	P, Ta
	do.	15K-337	12.30-14.45	16 S of Bisti	4/53	Hillside	6,070	334	8	335	Perforated 226-245 290-300 300-317	W, Ta, Tr
66	Drilled well	15A-18	6.35-12.20	15 SSW of Bisti	11/20	Hillside	5,750	550	4	405		W
	do.	15B-23	1.35-10.90	12 SW of Bisti	8/28	Small valley	5,970	3,063	15, 12, 10			P
	do.	15K-311	3.10-6.60	8 SSW of Bisti		Narrow valley	5,850	980	8 6	550 862		
	do.	15T-339	2.70-6.90	8 SSW of Bisti	8/55		5,850	987	8 6	460 910	Perforated 967-987	W
	Dug well	15A-20	1.10-6.20	8 S of Bisti		Bank of wash	5,740	13	4 x 4	13	Masonry cribbed	H, Tr
	do.	15A-21	3.30-3.85	6 SSW of Bisti		do.	5,680	8	4 x 4	8	do.	H, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 14—Continued									
0	365 P	Menefee		48	9/10/54	3-4		3			D, PS	Yes	Fair	61	Original depth, 605 feet; salt water at 590 feet; Tohlakai Trailer School well.
8	258 P	Menefee		79	6/20/51	3-4		20	68	2	D, S	Yes	Fair	59	
		Alluvium		15.8	5/17/55						S	Yes	Fair	56	
		do.		5.7	5/13/55						S	Yes	Bad	58	
		Menefee				.5 E	5/17/55				D	Yes	Good	48	Temporary.
		do.				.2 E	5/17/55				D	No	Good		
		do.				.2 E	5/17/55				S	No	Good		
		do.				<.1	5/17/55				D, S	Yes	Good	59	
		do.									D, S	Yes	Fair	58	
		Alluvium				.5 E	5/13/55				D	No			
		Crevasse Canyon (Dalton)				.5 R .2 E	5/12/55				D, S	Yes	Good	52	Pump test Oct. 25, 1951.
1,350	200 P	Gallup	DL	Flow	12/21/54	4	/51	38	375		D, S, PS	Yes	Good	77	Deepened from 1,497 to 1,550 feet in 1951; Twin Lakes water well.
20	306 P	Menefee		189 R	10/ 8/46			4		8	Un	Yes	Bad		Twin Lakes old water well.
0	254 P	Menefee	LL	180	10/28/53	3-4		6	12	¾	D, S	Yes	Good	60	
0	337 P	do.		334 R				12			D	Yes	Good	72	
0	575 P	do.		75 R							D, S	Yes	Good	48	Replaces 14Y-9.
		Alluvium		8.3	12/21/55			2.5 R			D, S	No	Good	45	
		do.		14.6	2/22/54						D, S	Yes	Good	46	
		do.		2.1	12/22/54						D, S	No	Good	38	
						DISTRICT 15									
240	230	Cliff House	DL	375 R		2-3					D, S	Yes	Fair	62	Tongue of Menefee at 375 to 385 feet.
0	358 P	Menefee		13.9	5/18/54	3-4		30	85		D, S	Yes	Fair	64	
0	962 P	do.	DL	Flow	5/18/55	3.3	9/12/49				D, S	Yes	Fair	66	Lake Valley School well.
0	334 P	do.	LL	122	4/ 8/53	3-4		6	75	2	S	Yes	Fair		
10	540 P	Menefee	DL	Flow	2/10/55	1.2	2/10/55				D, S	Yes	Fair	66	
		Menefee, Point Lookout, and Morrison(?)		Flow	2/10/55	175 R 25.7	9/12/49				D, S, Irr	Yes	Fair	96	Supplies trading post; Midwest Refining Co. well.
		Menefee		50 R								No			Casing plugged at 45 feet; drilled by oil company.
0	987 P	do.	LL	191	8/31/55			20	194	¾	D, S	Yes	Fair	68	Oil at 450 feet.
		Alluvium		11.9	2/16/55						D, S	No	Fair		
		do.		6.3	2/16/55						D, S	Yes	Fair	40	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 15—Continued							
66 con.	Dug well	15A-22	8.15-5.15	10 SW of Bisti		Bank of wash	5,580	12	4 x 4	12	Masonry cribbed	H, Tr
	do.	15R-15	7.70-5.10	10 SW of Bisti	6/32	do.	5,590	16	4 x 4	16	do.	H, Tr
	do.	15R-16	6.75-4.15	8 SW of Bisti	6/32	do.	5,620	10.5	4 x 4	10.5	Rock cribbed	H, Tr
	do.	15R-17	5.20-4.90	8 SW of Bisti	7/28	do.	5,650	10	4 x 4	10	Masonry cribbed	H, Tr
	do.	15R-18	2.55-4.35	6 SSW of Bisti		do.	5,700	7.5	4 x 4	7.5	Rock cribbed	Tr
	do.	15R-19	1.40-5.85	8 S of Bisti		do.	5,730	10.5	4 x 4	10.5	Masonry cribbed	H, Tr
85	Drilled well	15K-309	6.55-8.55	15 ENE of Standing Rock D.S.		Broad valley	6,310					
	do.	15K-309A	7.0-8.3 A	15 E of Standing Rock D.S.		Hillside	6,350					W
	do.	15K-336	9.70-9.20	12 ENE of Standing Rock D.S.	1/52	Plain	6,310	730	6	667		W
	do.	15Q-25	9.10-13.35	11 E of Standing Rock D.S.	6/39	Broad valley	6,530	1,230	12 8	95 820	Open hole	W, Ta, Tr
	do.	15GS-85-1	12.90-10.50	8 ENE of Standing Rock D.S.		do.	6,270	250 R	8			W
	do.	Earl Becenti well	8.15-17.20	13 ESE of Standing Rock D.S.		Hillside	6,710	707				W
	do.	Little Boy well	5.30-6.70	16 ENE of Standing Rock D.S.	/50		6,200	361	5	361	Perforated 238-356	W
	do.	Pitt Ranch	0.80-14.40	19 E of Standing Rock D.S.	4/53		6,480	628				
	Dug well	McGee well	12.50-7.45	10 NE of Standing Rock D.S.		Broad valley	6,150	12.5		12.5		W
86	Drilled well	15A-12	1.20-1.60	13 NNE of Standing Rock D.S.	10/24	do.	5,990	900	6, 4			W, Ta, Tr
	do.	15A-27	6.20-13.50	Standing Rock D.S.		do.	6,310	750 R	18			P, Ta
	do.	15B-1	7.75-9.50	4 NNW of Standing Rock D.S.		do.	6,000					Tr
	do.	15B-7	2.05-13.35	4 E of Standing Rock D.S.	7/21	Narrow valley	6,320	596	6	504		Tr, Re
	do.	15B-9	3.60-8.00	6 NNE of Standing Rock D.S.		Broad valley	6,150					Tr, Re
	do.	15B-10	0.60-14.35	6 ESE of Standing Rock D.S.		do.	6,420	1,540				
	do.	15B-26	6.65-2.50	11 N of Standing Rock D.S.	11/36	Hillside	5,870	972	10 6	543 848	Perforated 618-635 695-715 812-820	Tr, Ta
	Spring	15A-5A	10.65-11.25	5 WNW of Standing Rock D.S.		Small valley	6,040				Collection well	
	do.	15A-9	7.60-6.70	7 NNW of Standing Rock D.S.	5/38	do.	5,900				Collection gallery	C, Tr
104	Drilled well	15B-6	11.70-2.50	4 NW of Crown Point	6/22	Broad valley	6,700	745	6			P, Re
	do.	15B-6A	11.50-2.70	4 NW of Crown Point	/22	do.	6,710		10			P, Tr, Re
	do.	15B-6B	11.70-2.60	4 NW of Crown Point	6/22	do.	6,700	1,196	8	836		N
	do.	15B-19	6.25-4.85	2 E of Crown Point		do.	6,770					W, Tr, C
	do.	15B-33	5.75-1.50	4 NE of Crown Point	3/35	do.	6,700	650	8 6	110 486	Open hole	W, Tr
	do.	15B-34	0.4-3.6 A	8 E of Crown Point	3/35	do.	6,680	640	8 6	47 417	Perforated	
	do.	15B-35	1.5-6.4 A	7 ESE of Crown Point	2/35	do.	6,790	715	8	390	do.	
	do.	15K-300	11.70-2.70	4 NW of Crown Point	/38	do.	6,700	1,196	12 6	5		P, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 15—Continued															
		Alluvium		9	2/16/55						D, S	Yes	Good	40	
		do.		12.4	2/16/55						D, S	No	Fair		
		do.		10	2/16/55						D, S	No	Fair		Hand pump is broken.
		do.		8.2	2/16/55						D, S	Yes	Good	62	
		do.		6.2	2/16/55						D, S	No	Fair		
		do.		9.3	2/16/55						D, S	Yes	Good	62	
		Menefee		Flow	8/ 4/49	4.4 5 E	8/ 4/49 7/ 6/55				D, S	Yes	Fair	66	
		do.		160	10/13/49	3-4					S	No			
0 550	550 180 P	Menefee Point Lookout	LL	68.6	1/ 4/52	3-4		13.6	30	3	D, S	Yes	Fair	63	Burnham well.
55 1,180	1,125 50 P	Menefee Point Lookout		Flow	5/19/55	3 R	6/16/39				D, S	Yes	Good	70	
		Menefee		68	1/ 5/50	3-4					D, S	Yes	Fair		
470	233 P	Crevasse Canyon (Dalton)	LL	Flow	5/19/55			15	98	1	D, S	Yes	Fair		
		Menefee		60	/50			15	100		S	No			
490	138 P	Point Lookout	LL	Flow	4/ 7/53	27	4/ 7/53				S	Yes			
		Alluvium		6.7	11/17/48						D, S	No	Bad	50	
		Menefee						15			D, S	Yes	Fair	65	
		Point Lookout		Flow	2/ 9/55	27.5	8/14/53				D, S, PS	Yes	Fair	64	Shut-in pressure, 25 psi; Standing Rock D.S. well; sump.
		Menefee		Flow	2/10/55	15	2/10/55				D, S	Yes	Fair	64	Standing Rock sheep-dip well.
4 530	526 66 P	Menefee Point Lookout		Flow	2/ 9/55	10 R 5.6	7/18/21 2/ 9/55				D, S	Yes	Fair	68	
		Menefee and Point Lookout		Flow	3/26/53	1.5 3.5	3/26/53 7/ 6/55				D, S	Yes	Fair	65	Yield of 4 gpm Aug. 3, 1949; "Little Stacher well."
634 1,120	211 280	Point Lookout Crevasse Canyon (Dalton)	DL	Flow	3/26/53	100	3/26/53				D, S	Yes	Good	73	"Mulholland flowing well."
0	972 P	Menefee	DL	Flow	2/10/55	3.5	2/10/55	28	123		D, S	Yes	Fair	58	
		Menefee				25 E	2/10/55				S	Yes	Fair	44	
		do.				1.5	2/10/55				D, S	Yes	Good	33	
0 680	680 65 P	Crevasse Canyon Gallup		Flow	1/12/49	9 5.6	1/12/49 6/29/55				D, S	Yes	Good	52	Crown Point School Farm well.
		Crevasse Canyon and Gallup		Flow	1/12/49	3	1/13/49	145	55	8	D, S	Yes	Good	63	Pump test Feb. 23, 1951; Crown Point School Farm well.
0 687	687 148	Crevasse Canyon Gallup	DL	Flow R	6/30/22	1 R 17 R	6/30/22				Un	No			Crown Point School Farm well; abandoned.
		Crevasse Canyon and Gallup		Flow	5/19/55	3 R 1.9	6/29/55				D, S	Yes	Good	62	
485	165 P	Crevasse Canyon (Dalton)		Flow	5/19/55	3 R 5.6	/39 7/ 6/55				S	Yes	Fair	65	211 feet of 5-inch liner.
425	200	do.		Flow	8/ 2/49	6.4 15	8/ 2/49 7/ 6/55				D, S	Yes	Fair	62	13 gpm reported Mar. 7, 1935; 5-inch liner to 640 feet, perforated.
10	705 P	Crevasse Canyon and Gallup	DL	20 R	2/10/35			20				Yes	Good	64	7-inch liner to 631 feet, perforated.
		do.		Flow	1/12/49	10 4.4	1/12/49 6/29/55	60			D, S	Yes	Fair	52	Government Farm, Crown Point.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 15—Continued							
104 con.	Drilled well	15K-301	8.70-5.10	Crown Point		Narrow valley	6,960	575				P
	do.	15K-303	8.70-5.15	Crown Point	6/32	do.	6,960	2,496	10 8	1,200 2,300	Perforated	N
	do.	15K-332	8.7-5.2 A	1 W of Crown Point	7/25	Broad valley	6,960	575	7	540	do.	
	do.	15K-335	8.65-5.20	Crown Point	11/48	Narrow valley	6,960	750 R	10	700	Perforated 525-576 560-680	P
	Spring	15B-21	6.50-9.40	5 SSE of Crown Point	5/32	Base of cliff	7,090				Collection gallery	C, Tr
105	Drilled well	15B-2	1.45-2.00	8 WNW of Crown Point	10/21	Edge of cliff	6,730	1,014	6 4	530 840	Open hole	P, Ta
	do.	15T-303	12.70-5.25	5 NNW of Pinedale T.P.	1/52	Broad valley	6,990	614	7	537		W
	Dug well	15A-2	4.75-0.45	11 WNW of Crown Point		Bank of wash	6,710	14	4 x 5	14	Rock cribbed	N
	Spring	15A-3	4.85-2.00	11 WNW of Crown Point		Small valley	7,120				Collection gallery	Tr
	do.	15B-5	1.40-2.70	7 WNW of Crown Point		do.	6,890				do.	Ta, Tr
	do.	15B-15	1.50-2.90	7 WNW of Pinedale T.P.	11/31	do.	6,830				do.	Tr
					DISTRICT 16							
104	Drilled well	16K-325	7.45-14.65	10 S of Crown Point	5/52	Broad valley	7,240	696	8 6	93 669	Cemented at 669, open hole 669-696	W
	do.	16K-332	10.60-8.45	4 SSW of Crown Point	4/54	do.	7,450	340	10	128	Perforated 130-132 245-250 liner 300-310	W, Ta, Tr
	Drilled well	Hassel well	5.65-15.45	11 SSE of Crown Point		Broad valley	7,200	1,000	6			W
	do.	Smith Lake Mission	7.85-15.60	11 S of Crown Point		do.	7,250	679	4			P
	do.	Smith Lake T.P.	7.75-15.60	11 S of Crown Point		do.	7,240	1,100 R				P, W
105	do.	16K-318	0.00-14.40	4 SE of Mariana Lake T.P.	10/48	do.	7,400	292	5	292	Perforated	N
	do.	16K-319	12.95-7.10	4 NW of Pinedale T.P.	10/48	Small valley	7,160	963	5	956	Open hole	W, Ta, Tr
	do.	16T-323	3.60-8.90	2 N of Mariana Lake T.P.	10/51	Broad valley	7,150	941	6	780	do.	W, Ta, Tr
	do.	Iyanbito D.S. 1	12.40-15.15	Iyanbito D.S.	2/52	do.	6,930	1,540				N
	do.	Iyanbito D.S. 2	12.50-15.15	Iyanbito D.S.	5/55	do.	6,930	1,610	10 8	1,070 1,440	Perforated 1,440-1,530	P, Ta
									6	1,530		
	Drilled well	Mariana D.S.	3.90-11.60	Mariana Lake D.S.	3/52	Broad valley	7,040	1,000	6	1,000	Perforated	P
	Dug well	16GS-105-1	1.30-13.85	3 SE of Mariana Lake T.P.		Small valley	7,450	9.5	$5\frac{1}{2}$	9.5	Masonry cribbed	H
	do.	16GS-105-2	4.30-11.55	2 W of Mariana Lake T.P.		Broad valley	7,020	21 R				N
	do.	16GS-105-3	11.15-9.85	0.25 WNW of Pinedale T.P.		Small valley	6,960				Masonry cribbed	
	do.	16GS-105-4	11.35-9.85	1 W of Pinedale T.P.		do.	6,970	30	7	30		P, Ta
	do.	16GS-105-6	11.10-9.65	1 NW of Pinedale T.P.		do.	7,000	7	5	7	Masonry cribbed	N
	do.	16GS-105-7	11.10-14.90	2 ENE of Iyanbito D.S.		do.	6,950	14	6	14	do.	Tr
	do.	16GS-105-8	3.20-11.25	0.25 NW of Mariana Lake T.P.		Lakeshore	6,950	9	$6\frac{1}{2}$ x $8\frac{1}{2}$	9	do.	Tr
	do.	16GS-105-9	13.30-14.90	1 WNW of Iyanbito D.S.		Small valley	7,000	11.5	$8\frac{1}{2}$	11.5	do.	H

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 15—Continued									
		Gallup									D, S	No			Crown Point School well.
1,635 1,755	120 741 P	Dakota Morrison		225 R	6/ /32			120			Un	Yes	Good		Old well at Crown Point.
525	50 P	Gallup						35				No			Well 3, Crown Point School.
520	230 P	do.	LL	245 R	2/ 2/49			51	71	4¼	D, S	Yes	Good	65	Original depth, 1,630 feet; Crown Point School well.
		Crevasse Canyon (Dalton)				.8 R .2 E	5/ /32 5/19/55				S	Yes	Bad	54	
820	100	Gallup		Flow	7/31/49	1	7/31/49				D, S	Yes	Good	70	Used by trailer school.
480	134 P	do.		303	1/11/52	2-3		23	50	1	D, S	Yes	Fair	59	
		Alluvium		Dry	2/ 9/55						Un	No			Destroyed.
		Hosta Tongue of Point Lookout				Dry	2/ 9/55				S	No	Fair		
		Gallup				<.1	2/ 9/55				S	No	Bad		
		do.				<.1	2/ 9/55				S	No	Bad		
						DISTRICT 16									
650	46 P	Dakota	LL	399	6/ 3/52	2-3		11	134	1¼	S	Yes	Good	67	
220	120 P	Crevasse Canyon	LL	272	3/30/54	2-3		2	68	¼	D, S	Yes	Bad	58	Drilled to 563 feet, but plugged back to 340 feet; bailed hole dry; 8-inch liner to 340 feet.
		Dakota and Morrison									D, S	No			
		Dakota		335	6/ 8/55						D	Yes	Good		
		Dakota and Morrison		8.4	6/ 8/55	3-4					D, S	Yes	Good		
0 154	154 138 P	Dakota Morrison		230	10/ 3/48			4.5 R		8	Un	Yes	Good	56	Drilled to 494 feet, plugged to 292 feet; Tidewater Oil Co. water well.
953	10 P	Dakota	LL	320	12/16/48	2-3		7	490	2½	D, S	Yes	Good		Oil-prospect well.
710	231 P	Dakota and Morrison (Westwater Canyon)	LL	184	6/ 9/55	3-4		11	211	2½	D, S	Yes	Good		
1,510	30 P	Glorieta	LL	Flow	2/27/52	4	2/27/52	34	155	¼	Un	Yes	Good	64	Abandoned December 1954.
1,410	200 P	Moenkopi and Glorieta		Flow	5/27/55	4	5/27/55	20	25	2	PS	Yes	Good	60	Iyanbito School well.
365	525	Morrison (Westwater Canyon, Recapture)	LL	495	6/ 9/55			11	5	½	D, S	Yes	Good	57	Pump test May 14, 1953; Mariana D.S. well.
		Dakota		9.2	6/22/54						D, S	Yes	Good		
		Alluvium		17	6/ 9/55						D, S	No			
		do.		10.5	8/30/49						D, S	Yes	Good		
		do.		26.1	6/ 9/55						D	Yes	Good	60	Pinedale D.S. well.
		do.		6.2	6/21/54						S	No			
		do.		13.1	5/24/54							No			
		do.		Dry	6/21/54						S	No			Temporary.
		Chinle (Owl Rock)		6.3	5/24/54						D, S	No			

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 16—Continued							
105 con.	Dug well	16GS-105-10	13.75-14.80	2 WNW of Iyanbito D.S.		Small valley	6,970	11	7	11	Masonry cribbed	
	do.	16GS-105-11	12.25-14.85	1 NNE of Iyanbito D.S.		Bank of wash	6,950	10 E		10 E	Rock cribbed	
	do.	Pinedale T.P.	10.95-10.00	Pinedale T.P.	/49	Small valley	6,970	44		44	Masonry cribbed	W, Ta
	Spring	16GS-105-5	2.25-13.55	2 SSE of Mariana Lake T.P.		do.	7,450				None	N
	Oil test	Mariana 1	0.00-13.80	4 SE of Mariana Lake T.P.	10/38	Broad valley	7,600	4,695	11	398		N
106	Drilled well	16B-12	0.55-16.15	12 E of Gallup	4/32	Alluvial plain	6,810	1,188	10 4	100 1,188	Perforated	Tr
	do.	16B-40	5.35-14.75	8 E of Gallup	7/33	Broad valley	6,650	1,675	10 3	140 1,650		
	do.	16K-336	7.60-12.10	6 ENE of Gallup	10/53	do.	6,670	122	6	122	Perforated 82-120	W, Tr
	do.	16K-340	5.45-10.80	9 ENE of Gallup	5/54	do.	6,650	141	8	141	Perforated 133-138	P, Ta
	do.	16T-335	12.90-10.30	5 N of Gallup	12/53	Small valley	6,890	550	8	550	Perforated 383-415 502-528	W, Ta, Tr
	do.	City of Gallup 3	13.55-15.20	Gallup	3/17	Broad valley	6,500	1,580	12			P
	Drilled well	City of Gallup 6	11.85-14.95	Gallup		Broad valley	6,540	435				N
	do.	City of Gallup 7	12.15-14.90	Gallup	4/30	do.	6,550	145	5			N
	do.	City of Gallup 8	11.70-14.75	Gallup	/30	do.	6,560	325	8			P
	do.	City of Gallup 9	11.60-15.00	Gallup	4/30	do.	6,550	425	18	85		N
	do.	City of Gallup 10	12.30-15.05	Gallup	8/42	do.	6,540	320	12	320		N
	do.	City of Gallup 11	12.15-15.05	Gallup	10/42	do.	6,550	355	16	355		P
	do.	City of Gallup 12	12.25-15.10	Gallup	7/42	do.	6,530	344	12	344		P
	do.	City of Gallup 13	11.70-14.90	Gallup	/44		6,560	320	10	221		P
	do.	City of Gallup 14	11.75-14.55	Gallup	10/44	Broad valley	6,580	335	10	187		P
	do.	City of Gallup 15	11.70-13.60	Gallup	/46	do.	6,660	850	12	650		N
	do.	City of Gallup 16	11.45-14.90	Gallup	/48	do.	6,560	505	12	190		P
	do.	City of Gallup 17	11.35-14.90	Gallup	/48	do.	6,560	515	10	225		P
	do.	City of Gallup 18		Gallup	6/49	do.	6,550	535	12	170		N
	do.	City of Gallup 19	11.60-13.55	Gallup	10/49	do.	6,550	850	10	447		N
	do.	El Rancho Hotel	13.00-15.25	Gallup		do.	6,580	2,154	6	2,100		P
	do.	EPNG-W1	7.55-14.75	6 E of Gallup		do.	6,550	1,950	12	1,600		
	do.	EPNG-W2	7.55-14.70	6 E of Gallup		do.	6,550	1,941	12			
	do.	EPNG-W3	7.95-14.75	5 E of Gallup		do.	6,550	2,012				
	do.	Gibson 1	13.50-13.15	2 N of Gallup		Small valley	6,680	710	6			P
	do.	Gibson 2	13.35-12.95	2 N of Gallup		do.	6,720		7			N
	do.	Perea T.P.	0.95-16.85	12 ESE of Gallup	/37	Alluvial plain	6,790	400	8			P, Ta

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 16—Continued															
		Alluvium		8.3	5/24/54						D, S	No			
		do.		6 E	7/13/55						D, S	Yes	Good	55	
		Mancos		33.6	6/ 9/55						S	Yes			Temporary.
		Dakota				.5 E	5/24/54				S	No			
												No			Tidewater oil test; abandoned; no water data.
1,065	123 P	Glorieta		Flow	6/29/55	2.7	5/ 9/52				S	Yes	Good	67	
1,650	25 P	do.		Flow	4/28/53	75	4/28/53				D, S	Yes	Good	85	Navajo Church Chapter House.
0	122 P	Alluvium		33.8	6/ 9/55	3-4		15	28	1	D, S	Yes	Good		
0	140	do.	LL	37	6/22/54			23	68	1	D, S	Yes	Good		Springstead Trailer School.
0	550 P	Menefee and Crevasse Canyon	LL	358	12/16/53	2-3		10	42	2	D, S	Yes	Good	60	
200 1,260	320 110	Gallup Dakota		198	7/10/56	116	7/ /56			24	D	No	Good		Depth, 1,417 feet July 10, 1956; electric jet pump.
1,370	150	Morrison (Westwater Canyon)													
		Gallup		Dry	9/12/55	24	/39				Un	No			Depth, 134 feet Sept. 12, 1955; abandoned.
82	63 P	do.		Dry	1/11/56	250	/39				Un	No	Good	76	Abandoned.
194	131 P	do.		162	2/14/56	45	9/ /55				D	No	Good	58	Depth, 253 feet June 28, 1956.
175	250 P	do.		143	12/ 9/55	120	8/ 4/42				Un	No	Good		Depth, 375 feet Sept. 2, 1955.
106	214 P	do.		123	9/ 2/55			52	58	96	D	No	Good		Depth, 304 feet Sept. 2, 1955.
81	274 P	do.		136	2/13/56	300	10/ /42	11	41	6	Un	No	Good		Old well deepened in 1942; abandoned; pump test Feb. 13, 1956.
55	240	do.		110	7/17/46	10±	/55				Un	No	Good	58	Abandoned.
219	101 P	do.		174	2/20/56			150	31	8	D	No	Good		
247	88 P	do.		195	10/ /44	62	6/ 5/56				D	No	Good		
500	240	do.		129	9/ 2/55	35	/54	116		48	Un	No			Depth, 617 feet, Feb. 6, 1956; abandoned.
190	275	do.		140	/48	41	6/15/56				D	No	Good	58	
222	278	do.		155	10/19/55	70	3/30/56	103		24	D	No	Good	60	
155	270	do.		171	7/ 6/56			68		67	Un	No			
425	265	do.		182	4/ 2/56			60		48	Un	No			Depth, 489 feet Mar. 8, 1956.
		Dakota and Morrison		Flow	6/ 9/55			35			Un	No	Good		Well is to be plugged; well has set of tools at bottom.
1,750	200 P	Moenkopi and Glorieta		Flow	8/ 5/53	29	8/ 5/53		144			Yes	Good	79	Shut-in pressure of 203 feet above land surface.
		do.		Flow	8/ 5/53							Yes	Good		Shut-in pressure of 200 feet above land surface.
		do.		Flow	8/ 5/53	1	8/ 5/53					Yes	Good		Shut-in pressure of 204 feet above land surface.
		Gallup		292 R	/44			62 R			Un	No			
		do.		293 R	/44						Un	No			
		Chinle (Petrified Forest, upper)		150 R							D	Yes	Good	58	

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 16—Continued							
106	Drilled well	Rehoboth Mission	8.45-15.20	4 E of Gallup	/29	Broad valley	6,590	1,569	5	1,569		P, Ta
	do.	Santa Fe 5		Gallup	8/25	do.		1,400	16	1,251		N
	do.	Santa Fe 6		Gallup	7/10	do.		400				N
	do.	Santa Fe Wingate Station	2.30-16.25	8 E of Gallup	/26	Alluvial plain	6,740	1,305	6	1,305	Perforated 925-1,305	
	do.	Shamrock Oil Co. 1	11.15-15.25	2 E of Gallup	9/52	Broad valley	6,570	275				P
	do.	Springstead T.P.	4.30-11.60	9 NE of Gallup		Small valley	6,850	550	6	550		
	do.	Wingate Ordnance 1	5.10-16.40	9 E of Gallup	1/42	Broad valley		1,125				Ta
	Dug well	16GS-106-1	1.15-14.70	12 E of Gallup		Deep canyon	6,950	13	8	13	Masonry cribbed	W
	do.	16GS-106-2	1.10-14.60	12 E of Gallup		do.	6,950	14.5	6	14.5	do.	N
	Spring	Kit Carson Spring	4.65-12.80	9 ENE of Gallup		Side of cliff	7,000				None	N
107	Drilled well	16A-259	3.40-15.05	4 W of Gallup		Small valley	6,550	280 R				W, Ta, Tr
	do.	16A-260	4.25-14.85	5 W of Gallup	/07	Hillside	6,590	300 R	6			P
	do.	16K-328	4.45-9.80	8 NW of Gallup	8/53	Broad valley	6,630	372	6	372	Perforated 190-210 250-360	P, Ta
	do.	16T-333	0.25-8.55	6 N of Gallup	12/53	Hillside	6,780	641	6	641	Perforated 495-505 577-625	W
	do.	16T-334	4.75-7.20	10 NW of Gallup	12/53	Broad valley	6,730	442	6	450	Perforated 430-443	W, Ta, Tr
	do.	16T-339	8.55-16.70	9 W of Gallup	8/54	Hilltop	6,410	314	6	314	Perforated 270-314	W
	do.	16GS-107-3	1.65-8.45	7 NNW of Gallup	12/48	Narrow valley	6,620	400	8			W
	do.	16GS-107-4	9.15-8.50	12 NW of Gallup	12/46	Broad valley	6,700	350	7			W
	do.	Allison N. M.	2.05-15.55	2 W of Gallup		do.	6,590	1,017 R				P
	do.	Clark Dairy	2.75-16.70	4 WSW of Gallup	/38	do.	6,470	820 R	6			P
	do.	Gallup Airport	1.65-16.20	2 WSW of Gallup		do.	6,470	150 R	6			N
	do.	Gallup Electric Power Co.	0.90-12.25	3 NNW of Gallup		do.	6,740	2,882	14	2,882	Perforated	P
	do.	Lockhart 1	1.00-12.40	3 NNW of Gallup	7/23	do.	6,720	2,265 R	15	1,430		
	do.	Mentmore 1	5.30-16.15	6 W of Gallup	/22	Narrow valley	6,400	303	6	270		N
	do.	Mentmore 2	5.25-16.10	6 W of Gallup		do.	6,400	480	6			P
	do.	Santa Fe 1	0.30-15.30	Gallup	7/17	Broad valley	6,500	2,315	12	2,315		P
	do.	Santa Fe 2	0.10-15.25	Gallup	10/16	Broad valley	6,500	1,345	10	1,090		N
	do.	Santa Fe 3	0.35-15.35	Gallup	3/17	do.	6,490	2,300	10	1,980		P
	do.	Santa Fe 4	0.40-15.40	Gallup	9/23	Broad valley	6,480	2,110	10	1,862		P

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 16—Continued															
1,398	171 P	Moenkopi	LL	Flow	6/ 1/55	10	6/12/52				S, PS	Yes	Fair	81	
938	222	Dakota		204	8/ /25	40	9/16/31				Un	No			Depth, 1,300 feet in July 1927; abandoned.
		Alluvium										No			Plugged at 270 feet to shut out iron sulfate water.
870 1,049	180 27	Chinle (lower red) Moenkopi		Flow R	/26			126 R	260			No			Information of 1926.
1,076	152	Glorieta													
150	125 P	Gallup		30	9/29/52			50 R	None	2	PS	Yes		60	
		Morrison and Cow Springs						5 R				No			
1,075	50 P	Glorieta		Flow	6/ 9/55	260	1/25/42				D, PS, Ind	No			
		Alluvium		11.2	5/24/54						D	No	Good		Private well.
		do.		12.7	5/24/54							No			Do.
		Morrison (Westwater Canyon)				< .1	7/13/55				D	Yes	Good		"Kit Carson Spring."
		Gallup									D, S	No			Windmill broken June 22, 1953.
		do.		106 80	3/ 2/56 6/22/55						D, S	Yes	Good	62	
80	292 P	Menefee	LL	161.7	6/ 2/55			18	75	1	D, S	Yes	Good		
0	641 P	Menefee and Crevasse Canyon		380	12/11/53	2-3		13	120	1	D, S	Yes	Good	60	To be deepened.
0	442 P	Menefee		270	6/ 2/55	2-3		12	130	2	D, S	Yes	Good		
240	74 P	Gallup	LL	77	8/ 7/54	3-4		32	47	1	D, S	Yes	Good	59	
		Menefee		61.3 61.1	3/22/56 7/ 9/49						D, S	No	Good		Windmill broken.
		do.		175	12/ /48	1-2					D, S	Yes	Bad	44	Deepened in 1953, not enough water.
		Gallup		200 R				40 E				Yes	Bad	58	
		do.		60 R				80 R			Ind	No	Good	62	Clark Dairy well.
		Crevasse Canyon		77	11/ 4/55						D, PS	Yes	Good	60	Gallup Airport well; abandoned.
		Crevasse Canyon, Gallup, Dakota, and Morrison		209 R				230		72	PS, Ind	No	Good	89	Gallup Electric Co. well.
		Morrison (Westwater Canyon), Cow Springs, and Entrada		30 R	/38							No			
265	38 P	Gallup		26.3 29 R	3/ 2/56 /55			20 R			Un	No			East well.
380	100 P	do.		18.4 29 R	3/ 2/56 /55			20 R			S	No	Fair to bad	62	West well.
1,000 1,980	350 110	Gallup Dakota	DL	386	5/14/56			116	412	48	D	No	Fair	78	Depth, 1,338 feet Aug. 14, 1956.
2,090	150	Morrison (Westwater Canyon)													
980	320	Gallup		261 400	1/25/56 6/25/56	117	10/ /16				Un	No			Depth, 951 feet July 9, 1956.
990 1,985	350 115	Gallup Dakota		421	7/ 5/56	160	7/ 7/56				D	No	Fair	77	Depth, 1,980 feet July 3, 1956.
2,100	150	Morrison (Westwater Canyon)													
980 1,980	380 160	Gallup Dakota		506	10/12/55			160	301		D	No			Depth, 1,870 feet Aug. 16, 1956.
2,040	70 P	Morrison (Westwater Canyon)													

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 16—Continued							
107 con.	Drilled well	Santa Fe 7	0.45-15.45	Gallup	/42	Broad valley	6,480	2,313	15			P
	Drilled well	Santa Fe 9	0.60-15.50	Gallup	/46	Broad valley	6,480	2,308	15	2,100		P
	Dug well	16K-304	5.85-16.40	6 WSW of Gallup		Broad valley	6,440					W
	Spring	16A-226	9.75-8.95	12 NW of Gallup		Small valley	6,750				Collection gallery	C
	do.	16GS-107-1	10.30-14.05	11 W of Gallup		do.	6,480				do.	C
	do.	16GS-107-2	10.25-14.15	11 W of Gallup		do.	6,480				do.	C
108	Drilled well	16A-80	1.20-7.50	3 SE of Window Rock		Broad valley	6,900	150 R	6			W, Ta, Tr
	do.	16A-81	2.55-6.35	1 SSE of Window Rock	/33	do.	6,820	100	4			W
	do.	16A-81A	2.55-6.45	1 SSE of Window Rock	/33	do.	6,820	120	4			P
	do.	16K-322	2.30-6.55	2 SSE of Window Rock		do.	6,850	200				P
	do.	16K-323	2.30-6.65	2 SSE of Window Rock		do.	6,850	300	6	300	Perforated	P
	do.	Tse Bonito Mission new well	2.30-6.65	2 SSE of Window Rock	8/56	do.	6,850	148	8	148		P
	Spring	16A-178	1.45-14.75	10 SSE of Window Rock		Small valley	6,520				Collection gallery	C, Tr
	do.	16GS-108-1	2.15-6.35	2 SE of Window Rock		Bed of wash	6,860				None	N
120	Drilled well	16B-39	12.05-5.55	1 N of Thoreau	11/32	Broad valley	7,200	730	12 10	95 637	Perforated	W
	do.	16K-302	12.05-6.55	Thoreau	6/52	do.	7,150	505	10	365	Perforated 343-363	P
	do.	16K-302A	12.00-6.45	Thoreau	6/52	do.	7,150	1,250 R	6	1,080	Cemented 1,079	
	do.	16K-303	7.45-4.20	6 NE of Thoreau	2/41	Small valley	7,240	430	8 6	80 246	Open hole	W
	do.	16K-317	10.40-7.65	2 ESE of Thoreau	7/44	Broad valley	7,100	215	8	180	Perforated 98-106	W
	do.	16K-326	11.95-6.55	Thoreau	1/51	do.	7,150	420	6	420	Perforated 240-263 365-397	P
	do.	16GS-120-1	12.30-6.25	Thoreau		do.	7,150	235 R	5			W
	do.	16GS-120-2	12.45-6.45	Thoreau	/37	do.	7,150	227 R	5	227 R	Perforated	W
	do.	ATSF Chaves	7.80-7.00	4 SSE of Thoreau		do.	7,020	715 R				
	do.	ATSF North Chaves 1	8.10-6.80	3 E of Thoreau	12/02	do.	6,980	707 R	10 12			
	do.	ATSF North Chaves 2	8.10-6.80	3 E of Thoreau	5/11	do.	6,980	725 R				
	do.	ATSF North Chaves 3	8.10-6.80	3 E of Thoreau	11/18	do.	6,980	930 R	16 12		Perforated 60-95	
	do.	Baca D.S.		35 ESE of Gallup	6/43	Hillside	7,180	475	8	475	Perforated 195-225	P, Ta
	do.	San Antone Mission	7.35-4.20	6 NE of Thoreau	/53	do.	7,240	731			None	N
	Spring	16K-303A	7.75-4.50	4 NE of Thoreau		Small valley	7,200				Collection gallery	C, Tr
121	Drilled well	ATSF Guam	6.5-1.8 A	10 WNW of Thoreau		Broad valley	7,000 E	600 R				
122	do.	16K-341	9.40-6.60	8 SE of Gallup	7/54	do.	7,400	360	6	334	Open hole	P

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
				DISTRICT 16—Continued											
965 1,965	350 125	Gallup Dakota				225	6/14/56				D	No	Fair	76	
2,090	150	Morrison (Westwater Canyon)													
960 1,960	350 120	Gallup Dakota		299	9/30/55	167	6/14/56				D	No	Good	78	
2,080	150	Morrison (Westwater Canyon)													
		Gallup										No			Windmill broken June 10, 1955.
		Menefee				.2 E	6/ 2/55				D, S	Yes	Good	58	
		Crevasse Canyon				13.2	9/14/51				S	No	Good	57	Formerly developed by ATSF.
		do.				5.6	9/14/51				S	Yes	Good	57	Do.
		Alluvium									D, S	Yes	Fair	56	Private well.
		do.		50 R	10/26/48	3-4					S	Yes	Good		
		do.		50 R	5/12/55	3.5 R		3.2			D	Yes	Good	43	Supplies Tse Bonito T.P.
		Morrison (Westwater Canyon) and Cow Springs		170 R	5/11/55			5	30	1½	D, S, PS	No	Good	58	Tse Bonito Mission old well; pumps dry after 1½ hours at 5 gpm.
60	240 P	do.		178	5/11/55			5	120	1½	D, S, PS	Yes	Good	58	Tse Bonito Mission well; pumps dry after 1½ hours at 5 gpm.
		Alluvium		69	8/22/56			50	79			No			
		do.				Dry	5/11/55				Un	No			Temporary.
		Landslide and talus									Un	Yes	Fair	58	Tse Bonito Mission well.
605	91	Chinle (Sonsela)		280	5/26/55	2-3		9 R	320			Yes	Good	62	Deepened Dec. 31, 1934.
130 288	158 75	Chinle (Petrified Forest, upper) Chinle (Sonsela)		126	6/19/48			22	74	6	D	Yes	Good		Thoreau D.S. well.
1,080	90	Glorieta	LL	Flow	6/21/52	2.1	6/21/52	17	310	1	D	Yes	Good		Pump test June 21, 1952; Thoreau D.S. well.
49	381 P	Chinle (Petrified Forest, upper)		95 R	2/ 1/41			1			D	Yes	Fair	54	San Antone Mission well.
37	119	Chinle (Sonsela)		74	12/ 3/48	3-4		4 R			S	No			Three separate holes shot together.
360	30	do.		119	1/27/51			12	240	5	D	Yes	Good	58	Thoreau D.S.
		Chinle (Petrified Forest, upper)				3-4		18	To 160	½	D, S	Yes	Good		
		do.		60	12/ 5/48	3-4		8 R			D	Yes	Good		
600	115	Glorieta		Flow	/10	50 R	/10				Ind	No	Good		Plugged; drilled to 900 feet; all information from ATSF records.
45	662 P	Chinle (Sonsela), Moenkopi, and Glorieta		Flow	12/18/02	55 R	/36	29 R			Ind	No	Good		All information from ATSF records.
50	675 P	do.		Flow	5/12/11	13 R	5/12/11	50 R		24	Ind	No	Good		Do.
55	780	do.		Flow	11/17/18	5 R	11/17/18	50 R	200		Ind	No	Good		Plugged at 850 feet; all information from ATSF records.
114	99	Chinle (Sonsela)	DL	80 R	6/ 4/41			4.5 R		5	D	No	Good		Drilled to 1,987 feet, plugged at 475 feet.
100	631 P	Chinle (Petrified Forest, upper)	LL	400 R	12/ 8/53							Yes			Abandoned, low yield, bad quality.
		Wingate (Rock Point)				1 E	5/26/55				D, S	Yes	Good	45	
145	65	Chinle (Sonsela)	DL								Un	No			Abandoned.
130	230 P	Crevasse Canyon	LL	80	7/27/54			21	247	1	D, PS	Yes	Good	60	Brad Springs Trailer School.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 16—Continued							
122 con.	Drilled well	Fort Wingate School	1.95-2.20	Fort Wingate	7/53	Hillside	6,900	348	10		Open hole	P
	do.	Wingate Ordnance 2	4.40-0.20	10 E of Gallup	/50	do.	6,800	900	7	900		
	Spring	16A-299	11.00-5.95	8 SSE of Gallup		Bank of wash	6,860				Collection gallery	C, Tr
	do.	16GS-122-1	2.50-2.55	1 W of Fort Wingate			6,900				do.	S
	do.	16GS-122-2		2 WSW of Fort Wingate		Narrow canyon						
	do.	Fort Wingate Spring	2.10-2.40	0.25 S of Fort Wingate		Hillside	7,000					
	do.	Santa Fe Spring	4.15-2.35	2 W of Fort Wingate		Narrow canyon	6,900					
	do.	Sheep Lab Spring	3.85-3.10	2 WSW of Fort Wingate		do.	7,000				Collection gallery	S
123	Drilled well	16A-240	1.40-2.25	4 SSW of Gallup		Hillside	6,590	225 R				W, P
	do.	16A-241	1.10-2.50	4 SSW of Gallup		Broad valley	6,650					N
	do.	16K-321	0.35-3.40	6 S of Gallup	5/51	Hillside	6,670	734	8	533	Open hole	W, Ta, Tr
	do.	16K-338	8.75-3.50	3 S, 2 E of Rock Point T.P., 4 S of U.S. Highway 66	3/54	do.	6,500	269	8 6	224 269	Perforated 150-165 180-200 249-269	W, Tr
	Drilled well	Dean Kirk T.P.	12.4-3.4 A	16 WSW of Gallup		Broad valley	6,300	450	10, 6			
	do.	Mutual mine	1.30-4.10	6 SSW of Gallup		do.	6,850	667	6	603		P
124	do.	16K-337	1.80-5.70	5 NNE of Lupton	2/54	do.	6,420	299	6	299	Perforated 238-280	W, Ta, Tr
	Dug well	16A-222	1.35-5.60	6 NNE of Lupton		Bank of wash	6,360	9.5	5 x 5	9.5		
	Spring	16A-305	1.00-8.55	4 NE of Lupton		Side of cliff	6,330				None	Re
	do.	16A-306	2.30-9.50	2 NE of Lupton		do.	6,280				do.	C
	do.	16A-221	2.35-7.95	3 NNE of Lupton		Edge of cliff	6,300				do.	C
136	Drilled well	Cheechilgeetho D.S.	8.70-0.30	22 SSW of Gallup	8/51	Broad valley	6,810	1,607	12 8	80 1,056	Perforated 40-80	P, Ta
137	Spring	16A-107	1.70-1.70	8 S of Lupton		Side of cliff	6,500				Collection gallery	C, Re
					DISTRICT 17							
89	Dug well	17GS-89-1	13.85-10.90	6 SW of Sawmill		Small valley	7,740	4.5	4	4.5	Corrugated-steel culvert pipe	N
	Spring	17GS-89-2	13.70-10.85	6 SW of Sawmill		do.	7,740				Earth dam	N
	do.	17GS-89-3	13.75-12.20	7 SW of Sawmill		do.	7,700				Collection gallery	C
	Combination spring	17K-337	13.30-12.55	7 SW of Sawmill		Small canyon	7,680				None	N
	do.	17M-37	12.40-11.65	6 SW of Sawmill		Small valley	7,750				do.	N
90	Drilled well	17K-344	13.05-14.50	6 NNE of Ganado	10/39	Hilltop	6,640	525	6	480	Open hole	W, Ta, Tr
	do.	17M-44	13.85-17.00	4 NE of Ganado	6/36	Broad valley	6,530	105	6	78	Perforated 76-78, plugged at 20	W, Ta, Tr
	do.	17M-45	13.80-15.90	5 NNE of Ganado	5/36	Hillside	6,560	116	6	58	Perforated 40-46	W, Tr
	Dug well	17M-49A	10.30-13.55	9 NE of Ganado		Bed of wash	6,730	4.5	5	4.5	Rock cribbed	Tr
	do.	17M-60	5.90-14.70	13 WSW of Sawmill		Bank of wash	6,970	9.5	6	9.5	Masonry cribbed	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 16—Continued															
300	48 P	Glorieta	LL	Flow	7/16/53	45	7/16/53				PS, Irr	Yes	Good	55	Other aquifers: Chinle (lower red), 40-45 feet; Moenkopi, 181-254 feet.
		do.		Flow	/50	55 R	/50					No	Fair	66	Information from Quality of Water Branch records.
		Alluvium				.5	6/ 2/55				D, S	Yes	Good	63	
		Chinle (lower red)				2.2	6/ 5/56					Yes	Good	55	Cast-iron-lined sump.
		do.				29 R					D, S	Yes	Good		
		do.				180 R 104	6/ /56				D	Yes	Good	54	Fort Wingate Spring.
		do.				2.3					D	Yes	Good	55	
		do.				33 R 12	6/ /56				D, S	Yes	Good	56	Sheep Lab Spring.
		Crevasse Canyon									D, S	Yes	Good	60	Windmill not used.
		do.		22.6	6/ 2/55						Un	No			Windmill destroyed.
530	110	Gallup	LL	52.6	6/ 2/55			72	118	3	D, S	Yes	Good	58	
114	155 P	do.	DL	135	3/ 3/54			4	134	2	D, S	Yes			Bailed hole dry.
372	78 P	Dakota	DL	Flow	6/10/55						D	Yes	Good	55	
594	73 P	Gallup									D, S	Yes	Good	61	NE¼SW¼ sec. 30, T. 15 N., R. 18 W.; well used by one Indian family.
210	89 P	Morrison (Westwater Canyon)	LL	80.5	2/15/56			26	76	½	D, S	Yes	Good		
		Alluvium		7.5	5/10/55							No			Well filled with sand.
		Entrada				.2 E	5/13/55				S	No	Good		
		Cow Springs				.5 E	5/13/55				D, S	Yes	Good	51	
		Morrison (Westwater Canyon)				.1 E	5/10/55				D	No	Good		
1,350	190	Glorieta	LL	1,146	8/ 7/51	18 R	/51	5	22	2	Un	Yes	Bad	74	Pump test Dec. 17, 1952; hole plugged at 90 to 100 feet; no water.
		Entrada				.2	5/13/55				D, S, Irr	No	Good		
DISTRICT 17															
		De Chelly		2.5	11/13/54						D	No	Good		Indian owned.
		do.				2 E	11/13/54				S	Yes	Good	52	
		do.				.2	11/13/54				D	No	Good	49	
		do.				11 E	10/13/54				D, S	No	Good	52	
		do.				3 E	11/13/54				D, S, Irr	No	Good	50	Irrigation ditches.
480	45 P	Chinle (Shinarump) and De Chelly	DL	470	10/10/39	2-3	6/23/49	17			D, S	Yes	Good		
0 78	78 27 P	Alluvium De Chelly	DL	12 R	6/20/36			33			Un	No			Abandoned Mar. 9, 1954.
0	40	Alluvium		20.5	11/12/54	3-4	11/12/54	3			D, S	Yes	Good	55	
		do.		3	11/12/54						D, S	Yes	Good	47	
		do.		5.3	11/13/54						D, S	No	Good	50	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 17—Continued							
90 con.	Spring	17M-41A	0.30-7.65	5 W of Sawmill		Hillside	7,920				Rock wall	C
	do.	17M-49	10.40-13.60	9 NE of Ganado		Bed of wash	6,730				None	N
	do.	17M-51	9.20-11.65	10 NE of Ganado		do.	6,840				do.	N
	do.	17M-52	7.95-10.50	13 NE of Ganado		do.	6,940				do.	N
	do.	17M-54	1.90-11.65	8 WSW of Sawmill		Deep canyon	7,400				do.	N
	do.	17M-58	7.00-16.20	4 ENE of Kin Li Chee		Shallow canyon	6,930				do.	N
	do.	17GS-90-1	1.40-9.95	7 WSW of Sawmill		Small valley	7,650				do.	Re
	do.	17GS-90-2	0.40-9.60	6 WSW of Sawmill		do.	7,750				do.	N
	Stream	17M-53	4.1-8.7 A	9 W of Sawmill							do.	N
	do.	17M-57	4.00-15.00	12 SW of Sawmill		Shallow canyon					do.	N
	do.	17M-59	9.6-17.0 A	1 ENE of Kin Li Chee							do.	N
91	Drilled well	17K-364	11.95-10.75	12 NW of Ganado	1/54	Broad valley	6,120	108			do.	N
	do.	17K-364A	12.05-10.65	12 NW of Ganado	2/54	do.	6,120	119			do.	N
	do.	17M-66	6.60-12.50	8 NNW of Ganado	7/36	Alluvial plain	6,220	130	6	128	Perforated 124-128	W
	do.	17R-180	11.0-8.7 A	14 NW of Ganado	2/35	Broad valley	5,980	690			None	N
	do.	17T-354	11.55-11.50	11 WNW of Ganado		Terrace	6,150	1,860			do.	N
	do.	17T-354A	11.90-11.50	11 WNW of Ganado		do.	6,150	1,200 R			do.	N
	do.	17T-365	13.50-12.45	12 WNW of Ganado	2/54	Hillside	6,250	125			do.	N
	do.	17T-366	10.10-12.20	10 NW of Ganado	3/54	Broad valley	6,150	127			do.	N
	Dug well	17M-64A	6.60-16.65	4 NW of Ganado		Side of mesa	6,470	4.5		4.5	Rock cribbed	Tr
	do.	17M-65	6.35-16.45	5 NW of Ganado		Bank of wash	6,450	9.5	7	9.5	do.	Tr
	do.	17M-70	10.20-7.25	15 NNW of Ganado		Dry lakebed	5,970	14	4 x 4	14	do.	
	do.	17M-72	11.55-8.00	15 NW of Ganado		do.	5,990	18	6 x 6	18	Masonry cribbed	Tr
	Spring	17M-64	6.65-16.70	5 NW of Ganado		Side of mesa	6,470				Collection gallery	Tr
	do.	17M-65A	6.35-16.40	6 NW of Ganado		do.	6,450				None	N
92	Drilled well	17K-345	4.65-13.80	4 NNE of Steamboat	10/39	Edge of cliff	6,700	450	12 6	18 450	Perforated and gravel packed	W, Ta, Tr
	Drilled well	17M-78	2.70-10.50	7 NNE of Steamboat		Small valley	6,410	240	8 6	21 180	Open hole	W, Ta, Tr
	do.	17M-239	6.85-13.25	4 NNW of Steamboat	12/37	Broad valley	6,490	243	8 6	201 245	Perforated 210-230	W, Ta, Tr, Re
	do.	17T-363	1.35-16.15	4 ENE of Steamboat	1/54	Small valley	6,730	522			None	N
	do.	Steamboat D.S. well	5.50-17.10	Steamboat D.S.	11/34	Broad valley	6,400	608	6	608	Perforated	P, Ta
	Dug well	17M-79	0.95-15.80	5 ENE of Steamboat		Bed of wash	6,700	10.5		10.5	Log cribbed	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 17—Continued									
		Alluvium				.4	11/13/54				D	Yes	Good	47	At Fluted Rock range cabin.
		do.				2 E	11/12/54				S	No		47	
		do.				2 E	11/13/54				D, S	No	Good	60	Bed of Lone Tule Wash.
		do.				8 E	11/13/54				D, S	No	Good	57	Do.
		De Chelly				.5 E	11/13/54				D, S	No	Good		
		do.				1 E	11/13/54				D, S	No	Good	48	
		Chinle (lower red)				2 E	11/13/54				D, S	No	Good	48	
		do.				2	11/13/54				D, S	No	Good	48	
											D, S, Irr	No	Good		
						2 E	11/13/54				D, S	No	Good	50	
											S, Irr	No			"Kin Li Chee Creek."
0	105	Alluvium		Dry	1/29/54							No			Dry hole.
0	110	do.		Dry	1/29/54							No			Abandoned, very little water.
0	128	do.	DL	67.8	12/13/52	3-4	12/13/54	27			D, S	Yes	Bad	62	
10 410	400 280 P	Wingate (Rock Point) Chinle (Owl Rock)		Dry	2/26/35							No			Dry hole; lost tools.
350		Chinle	LL	Dry	3/23/54							No			Dry hole.
350		do.		Dry	3/23/54							No			Do.
0 85	85 40 P	Alluvium Wingate (Lukachukai)		Dry	2/ 2/54							No			Bidahochi Formation dry; dry hole.
0	65	Alluvium		Dry	3/ 8/54							No			Dry hole.
		Chinle (Owl Rock)		2.5	12/ 3/54						D, S	No			
		do.		2.5	12/ 3/54						D, S	No	Good		"Snake Springs."
		Alluvium		Dry	12/10/54						D, S	No			
		do.		Dry	12/10/54						D, S	No			
		Chinle (Owl Rock)				< .1 E	8/30/52				S	Yes	Fair	68	"Lizzard Springs."
		do.				.1 E	12/ 3/54				S	No	Good		"Snake Spring," probably a ceremonial spring.
220	230 P	Tongue of Cow Springs in Morrison		420 R	10/23/39	2-3	10/23/39	15			D, S	Yes	Good		Two holes drilled at this location, 570 and 450 feet deep; holes were shot together with 100 pounds of dynamite, reported increase 3 gpm.
180	60 P	Cow Springs		124	12/17/54	3-4	12/17/54	8	50		D, S	Yes	Fair		
168	75 P	do.		190	12/17/54	3-4	12/17/54	3			D, S	Yes	Fair		
240	265	do.		300	1/15/54			.5			D, S	Yes	Good		Abandoned, insufficient yield.
258		do.	DL	134	7/28/53	25 R		25		14	PS	Yes	Fair	58	Cleaned Sept. 11, 1953; three holes shot together; pump test Aug. 17, 1953; original depth, 664 feet; cleaned to 608 feet.
		Morrison (Westwater Canyon)		3	7/10/49						D, S	Yes	Good	60	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 17—Continued							
92 con.	Spring	17M-261	5.05-16.55	2 NE of Steamboat	10/50	Head of canyon	6,600				Collection gallery	C, Ta
108	Dug well	17M-221	11.50-1.45	8 NW of St. Michaels		Stripped plain	7,690	13	3	13	Masonry cribbed	Tr
	do.	17GS-108-1	11.70-3.45	6 WNW of St. Michaels		do.	7,640	3	3	3	Log cribbed	
	Spring	17M-221A	11.65-1.50	8 NW of St. Michaels		Bed of wash	7,680				Collection gallery	
109	Drilled well	17K-362	4.55-11.00	13 NE of Klagetoh	1/54	Stripped plain	7,340	591	10	9	Open hole	W, Ta, Tr
	do.	17K-374	5.30-2.85	6 ESE of Kin Li Chee D.S.	7/56	do.	7,220	345	8	72	do.	W
	do.	17K-375	4.75-6.00	6 SE of Kin Li Chee D.S.	7/56	do.	7,300	385	8	31	do.	W
	do.	17M-34	8.35-2.25	5 SE of Kin Li Chee	/34	do.	6,950	310 R	6			P, W
	do.	17T-368	11.50-16.45	4 E of Klagetoh D.S.	11/55	Small valley	6,710	605	8	40	Open hole	N
	do.	17T-378	8.85-16.10	7 E of Klagetoh D.S.	5/56	Stripped plain	7,000	702			do.	N
	Dug well	17B-248	11.00-0.40	2 WSW of Kin Li Chee		Bank of wash	6,550	25	8	25	Masonry cribbed	P, Tr
	do.	17M-2	1.80-5.95	10 SE of Kin Li Chee		do.	7,400	11	6	11	Rock cribbed	Tr
	do.	17M-9	8.00-4.35	4 SSE of Kin Li Chee		Bed of wash	6,950	3	3	3	do.	N
	do.	17M-11	9.10-5.35	6 S of Kin Li Chee		Hillside	6,940	15.5	7	15.5	do.	H, Tr
	do.	17M-13	6.15-11.40	11 NE of Klagetoh		Bed of wash	7,080	5	5	5	do.	Tr
	do.	17M-19	11.50-9.95	8 NNE of Klagetoh		Small valley	6,900	13.5	6	13.5	Masonry cribbed	
	do.	17M-29	2.95-8.15	10 SE of Kin Li Chee		Bank of wash	7,280	11	5	11	Rock cribbed	H, Tr, A
	do.	17M-31	0.50-9.35	17 NE of Klagetoh	10/36	do.	7,420	9.5	6 x 6	9.5	do.	Tr
	do.	17M-32	6.35-4.35	6 SE of Kin Li Chee		do.	7,040	4	3	4	do.	
	do.	17M-32A	6.55-4.25	6 SE of Kin Li Chee		do.	7,050	5	5	5	do.	
	do.	17M-35A	2.75-2.90	8 ESE of Kin Li Chee		Shallow canyon	7,200	3.5	6	3.5	do.	
	do.	17M-35B	2.75-2.95	8 ESE of Kin Li Chee		do.	7,200	4	3	4	do.	
	do.	17M-162	3.15-17.15	13 E of Klagetoh		Bank of wash	7,310	13.5	8	13.5	Masonry cribbed	H, Tr
	do.	17M-249	11.45-15.30	4 ENE of Klagetoh	10/33	Small valley	6,780	13	6	13	Rock cribbed	Tr, A
	do.	Kin Li Chee D.S.	10.65-0.40	Kin Li Chee D.S.		Bank of wash	6,570	41 R	8	41 R	Concrete caisson	P, Ta
	Spring	17M-7	2.30-5.05	9 SE of Kin Li Chee		Stripped plain	7,470				None	Re
	do.	17M-18	11.45-10.10	10 S of Kin Li Chee	9/36	Shallow canyon	6,890				Collection well	Tr
	do.	17M-35	2.60-3.00	8 ESE of Kin Li Chee		do.	7,200				None	N
	do.	17M-36	0.15-3.20	10 ESE of Kin Li Chee		Stripped plain	7,460				do.	N
	do.	17M-238	10.50-14.85	6 ENE of Klagetoh		Hillside	6,850				do.	N
	do.	17GS-109-1	12.80-13.80	5 NE of Klagetoh		Small valley	6,550				do.	Re
110	Drilled well	17K-2	0.75-4.50	2 SE of Ganado	5/39	Hilltop	6,660	275	6	254	Open hole	W, Ta, Tr
	do.	17K-348	3.20-2.75	1 W of Ganado	3/41	Broad valley	6,320	85	8	60	do.	P, Ta

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 17—Continued															
		Dakota									D, S, Irr	Yes	Good	64	"Tsa Binito Spring."
		De Chelly		8.3	11/ 9/54						D, S	No	Good	46	
		do.		Dry	11/10/54						D, S	No			Temporary.
		do.				< .1 E	11/ 9/54				D, S	No	Good	46	
50	541 P	do.	LL	361	11/11/54	2-3	11/11/54	20	25		D, S	Yes	Good	54	
8	337 P	do.	DL	210	7/11/56	2-3		25	100	2	D, S	No	Good	60	
142	243 P	do.		324	7/30/56			18	39	1	D, S	No	Good	58	Chinle Formation dry.
		do.		65	11/12/54	3-4	11/12/54	3	10 R		D, S	Yes	Good		
310	295 P	Supai	LL	450	11/20/55			.3			Un	No	Good		Capped, insufficient yield.
340	362 P	do.		410	5/ 8/56			1	292	1½	Un	No	Good	58	Bailed hole dry; abandoned; insufficient yield.
		De Chelly		19	11/12/54						D, S	No	Good	50	
		do.		7.3	11/10/54						D, S	No	Good	48	
		Alluvium		2	11/12/54						D, S	No	Good	45	Temporary.
		Chinle (Shinarump)		14	11/12/54						D, S	Yes	Good	55	
		De Chelly		3.5	11/11/54						D, S	No		47	
		Bidahochi		11.2	11/11/54						D	No		47	Retainer wall below well.
		De Chelly		9	11/11/54						D, S	Yes	Good	51	Two holes drilled 5 feet into bottom of dug well.
		do.		Dry	11/11/54						D, S	No			
		do.		2	11/10/54						D, S	No	Good	48	
		do.		Dry	11/10/54						Un	No			
		do.		2	11/10/54						D, S	No			
		do.		3	11/10/54						D, S	No			
		do.		11.2	11/18/54						D, S	Yes	Good	52	
		do.		10	11/17/54							No			
		Alluvium		18 R	11/12/54	47 R					D, S	Yes	Good	51	
		De Chelly									D, S	No	Good	55	
		Bidahochi				.5	11/11/54				D, S	Yes	Good	47	"Salt Springs."
		De Chelly				.2 E	11/10/54				S	No	Good	39	
		do.				2 E	11/10/54				D, S	No	Good		
		do.									S	No		47	"Bear Spring."
		do.				.2 E	11/11/54				D, S	No	Good		
154	121 P	Chinle (lower red)		225 E		3-4	6/23/49	9			D, S	Yes	Good		Bidahochi Formation dry; water level estimated from records.
60	25 P	De Chelly		6 R				80			D	Yes	Good		Ganado D.S. well.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 17—Continued							
110 con.	Drilled well	17K-349	1.45-16.95	Klagetoh	12/39	Small valley	6,380	132	8	130	Perforated 101-115	P
	do.	17K-355	4.25-16.65	2 W of Klagetoh	7/53	do.	6,590	1,838	10 8	744 1,146	Open hole	N
	Drilled well	17K-367	13.45-10.00	Sunrise Trailer School	7/54	Bank of wash	6,050	213	12	210		P, Ta
	do.	17K-373	13.00-5.70	11 W of Ganado	6/56	Hillside	6,570	500				
	do.	17M-44A	0.55-1.40	2 NE of Ganado	6/36	Hilltop	6,470	125	6	123	Perforated 96-101	W, Ta
	do.	17M-44P	1.65-2.30	0.25 NE of Ganado		Hillside	6,420	118 R				W, H, Ta
	do.	17M-86	1.75-16.80	Klagetoh	12/34	do.	6,380	1,060	6	731	Open hole	P, Ta
	do.	17M-91	10.20-6.85	Cornfields	6/38	Broad valley	6,140	112	6	112	10-foot screen	W, Ta, Tr
	do.	17M-99	8.65-3.60	4 NNE of Cornfields	6/38	do.	6,190	82	6	66	Perforated 63-65	W, Ta, Tr, Re
	do.	17T-358	4.65-1.10	2 NW of Ganado	11/52	Hillside	6,380	676	6	415	Open hole	W, Ta, Tr
	do.	17T-360	5.05-2.95	2 W of Ganado	1/54	Broad valley	6,270	249	8 6	95 249	Perforated	W
	do.	17T-369	2.50-12.40	5 N of Klagetoh	11/55	Small valley	6,830	315 R				
	do.	17T-379	5.25-14.25	12 S of Ganado	1/56	Hilltop	6,660	320			None	N
	do.	EPNG-N1	11.90-13.60	4 SSE of Sunrise T.P.	4/51	Top of mesa	6,520	2,306	10 7	1,550 2,102		P, Ta
	do.	EPNG-N2	11.70-13.60	4 SSE of Sunrise T.P.	4/51	do.	6,520	2,327	9	2,113		P
	do.	EPNG-N3	13.40-10.40	1 SSE of Sunrise T.P.	/54	Bank of wash	6,040	180	16	180	Perforated 0-180	P
	do.	EPNG-N4	13.45-10.45	1 SSE of Sunrise T.P.	/54	do.	6,040	160	16			P
	do.	Consolidated Ganado School	2.05-2.55	Ganado	4/53	Broad valley	6,400	602	10	265	Open hole	P
	do.	GPM 1	2.40-2.40	Ganado		do.	6,370	120	6	54		P
	do.	GPM 2	2.45-2.40	Ganado		do.	6,370	398	6	54		P
	do.	Presbyterian Field Mission	10.25-7.00	1 SSW of Cornfields		do.	6,140	77		73		P
	Dug well	17K-342	3.35-2.80	1 W of Ganado		Bank of wash	6,320	22 R	4 x 4	22 R		P, Ta
	do.	17K-343	4.90-3.65	2 WSW of Ganado		do.	6,250	8	4 x 4	8	Log cribbed	Tr
	do.	17M-22	2.50-9.85	7 S of Ganado		do.	6,640	18	6	18	Masonry cribbed	Tr, A
	do.	17M-87	1.55-16.60	Klagetoh		Bed of wash	6,360	12	5	12	do.	Tr
	do.	17M-88	4.80-9.30	7 SSW of Ganado		Bank of wash	6,490	31	6	31	do.	Tr, A
	do.	17M-92	9.00-9.85	4 SSE of Ganado	2/32	do.	6,350	20	6	20	do.	Tr
	do.	17M-98	9.75-4.80	2 N of Cornfields		do.	6,150	8	3	8	do.	Tr
	do.	17M-102	13.55-10.15	0.25 SE of Sunrise T.P.		do.	6,040	16.5	5	16.5	do.	P, Tr
	do.	17M-103	13.70-10.40	0.50 S of Sunrise T.P.		do.	6,040	10	4 x 4	10	Log cribbed	Tr
	do.	17M-253	4.50-9.30	7 SSW of Ganado	12/36	Bed of wash	6,510	16	6 x 6	16	Rock cribbed	Tr
	do.	17M-255	8.75-4.60	2 NNE of Cornfields		do.	6,180	12	4 x 4	12	do.	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 17—Continued															
0	115	Alluvium	DL	95.5	8/ 9/50			29 R 10			PS	Yes	Good	64	Cleaned and recased in 1949; pump test, 10 gpm in 1949, 29 gpm in 1939.
945 1,240	295 598 P	De Chelly Supai	LL	1,424	7/13/53			2.5	400	6	D, S	Yes	Good	68	Not in use Mar. 25, 1955; see BIA record for exact casing; Bidahochi and Chinle Formations dry.
0	210	Alluvium	LL	20	7/ 7/54			30	120	1	D	Yes	Fair	48	Sunrise Trailer School well.
315	185 P	Cow Springs	DL	358 R	6/25/56			1.5			Un	Yes	Good	62	Abandoned, low yield.
50	75 P	De Chelly	DL	52	6/29/36	3-4	6/29/36	10			D, S	Yes	Good		Ganado Maintenance Station.
		do.		111	8/30/52	3-4	8/30/52				D	Yes	Good	70	Round Top T.P. well; storage tank underground.
742	318 P	Supai		755	4/ 2/54			7			PS	No	Good		Bidahochi and Moenkopi Formations dry; Klagetoh D.S. well.
0	88	Alluvium	DL	30	6/ 8/38	3-4	6/ 8/38	15			D, S	Yes	Good		
0	82 P	do.		30	6/16/38	3-4	6/ 8/38	15			D, S	Yes	Bad		
402	274 P	De Chelly		426	12/ 3/54	2-3	12/ 3/54	10			D, S	Yes	Good		Chinle Formation dry.
140	109 P	do.		132	1/ 5/54	3-4	1/ 5/54	29	None	½	D, S	Yes	Good		Do.
10	275	Bidahochi	DL	Dry	11/28/55							No			Bidahochi Formation dry.
30	215	do.		Dry	1/27/56							No			Dry, abandoned.
2,175	131 P	De Chelly	LL	1,631	6/30/53	35	5/15/51	35			D, Ind	Yes	Good		El Paso Natural Gas Co. well; 4-inch tubing to 2,234 feet.
2,175	152 P	do.		1,633	5/15/51			83			PS, Ind	Yes	Good		El Paso Natural Gas Co. well; Bidahochi Formation dry.
0	180	Alluvium		15	4/ 2/54			150	88	12	D, Ind	No			El Paso Natural Gas Co. well.
0	160	do.		15	4/ 2/54			65	135	12	Ind	No			Do.
60	542 P	De Chelly	LL	48.4	4/14/53			39	110	8	PS	Yes	Good	62	Pump test Apr. 14, 1953; Chinle Formation dry.
58	62 P	do.		25	12/ /50			20			D, PS	No	Good	52	Ganado Presbyterian Mission 1.
55	343 P	do.		25	12/ /50			200	75		D, PS	Yes	Good	52	Ganado Presbyterian Mission 2.
0	77 P	Alluvium		22.6	1/14/54						D	No	Good		Presbyterian Field Mission Station.
		do.		19.9	2/ 4/55						D	Yes	Good	56	
		do.		3	5/20/54						D, S	No	Good		
		do.		9	11/19/54						D, S	Yes	Good	62	
		do.		3.2	8/30/52						S	No	Fair		
		do.		Dry	11/19/54						Un	No			
		Bidahochi		12	11/19/54						D, S	No	Good		
		Alluvium		5	12/ 9/54						D, S	Yes	Good		
		do.		11.5	6/30/51						S	Yes	Good	60	
		do.		8.2	2/ 3/55						D, S	No	Good		
		do.		9.5	11/19/54						D, S	No			
		do.		5.6	12/ 9/54						D, S	No			

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 17—Continued							
110 con.	Dug well	17M-258	12.20-8.95	2 NE of Sunrise T.P.		Bed of wash	6,100	22 R	2½	22 R	Masonry cribbed	Tr
	do.	Cornfields D.S.	9.80-6.65	Cornfields	6/38	Broad valley	6,150	36	10	36	Concrete caisson	P, Ta
	Spring	17M-85	1.60-16.90	Klagetoh	11/29	Small valley	6,360				Collection well	H, Tr, Re
	do.	17M-257	12.60-6.30	3 W of Cornfields		Base of cliff	6,350				Collection gallery	C, Tr
	do.	Sunrise T.P.	13.75-10.10	Sunrise T.P.		do.	6,090				do.	C
111	Drilled well	17K-305	7.70-11.65	4 NNW of Greasewood T.P.	2/35	Terrace	6,100	655			None	N
	do.	17K-338	0.75-11.45	6 NE of Greasewood T.P.	6/39	Bank of wash	6,010	101	6	101	Gravel packed and perforated	W, Ta, Tr
	do.	17M-201	9.0-11.0 A	6 NNW of Greasewood T.P.		Terrace	5,940 E	100 R	3			
	do.	17M-203	9.95-13.45	5 WNW of Greasewood T.P.	2/38	Broad valley	5,900	132	6	132	10-foot screen	W, Ta, Tr
	do.	17M-207	7.80-5.05	6 SSW of Steamboat	1/39	Bank of wash	6,180	185	6	155	do.	W, Ta, Tr
	do.	17M-240	7.10-0.30	1 WSW of Steamboat	10/37	Broad valley	6,310	186	6	186	Screen 152-162	W, Ta, Tr
	do.	17M-241	5.90-0.25	0.25 SW of Steamboat	6/22	do.	6,390	348	6			N
	do.	17M-246	3.55-5.90	4 SSE of Steamboat	3/35	Hillside	6,550	363	6	352	Open hole	W
	Dug well	17M-165	5.00-14.95	1 ENE of Greasewood T.P.		Bank of wash	5,900	21.5	6	21.5	Rock cribbed	W, Tr, Re
	do.	17M-166	5.75-15.80	0.25 E of Greasewood D.S.		Alluvial plain	5,870	11	8	11	do.	N
	do.	17M-166A	5.65-15.75	0.25 E of Greasewood D.S.		do.	5,870	16	8	16	Concrete caisson	P, Ta
	do.	17M-167	5.60-15.65	0.25 E of Greasewood D.S.		do.	5,870	8.5	3 x 5	8.5	Rock cribbed	Tr
	do.	17M-168	6.05-15.95	0.25 SSW of Greasewood D.S.		do.	5,860	10.5		10.5		Tr
	do.	17M-169	6.05-16.05	0.25 SSW of Greasewood D.S.		do.	5,860	15 R	7	15 R	Masonry cribbed	N
	do.	17M-169A	6.00-16.05	0.25 SSW of Greasewood D.S.		do.	5,860	7.5	4 x 4	7.5	Rock cribbed	Tr
	do.	17M-188	5.90-16.90	2 S of Greasewood D.S.		do.	5,840	10 E	5	10 E	do.	N
	do.	17M-189	5.90-16.75	1 S of Greasewood D.S.		do.	5,840	15.5	5	15.5	Masonry cribbed	Tr, A
	do.	17M-190	3.90-13.15	3 NNE of Greasewood T.P.		do.	5,940	16		16	Rock cribbed	Tr
	do.	17M-192	2.75-12.15	4 NE of Greasewood T.P.	8/31	do.	5,960	18.5		18.5	Masonry cribbed	Tr
	do.	17M-193	0.10-10.95	7 NE of Greasewood T.P.		Bank of wash	6,040	8		8	Log cribbed	N
	do.	17M-194	1.05-11.80	6 NE of Greasewood T.P.		Alluvial plain	5,990	16		16	do.	Tr
	do.	17M-196	1.25-5.75	10 NNE of Greasewood T.P.	10/31	Dry lakebed	6,350	16	7	16	Masonry cribbed	W, Tr
	do.	17M-196A	1.20-5.60	11 NNE of Greasewood T.P.		do.	6,350	12 E	3 x 6	12 E	Log cribbed	N
	do.	17M-196B	1.40-5.40	11 NNE of Greasewood T.P.		do.	6,350	12	6 x 6	12	do.	Tr
	do.	17M-196C	1.15-5.50	11 NNE of Greasewood T.P.		do.	6,350	12 E	3 x 6	12 E	do.	N
	do.	17M-197	1.10-4.60	12 NNE of Greasewood T.P.		Bank of wash	6,360	12	4 x 4	12	Log and rock cribbed	N
	do.	17M-202	9.55-11.30	6 NW of Greasewood T.P.	4/32	do.	5,930	23 R	6	23 R	Rock cribbed	N
	do.	17M-204	8.00-7.10	8 NNW of Greasewood T.P.		Bed of wash	6,160	9	7	9	do.	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 17—Continued															
		Alluvium		17	8/30/52						D, S	Yes	Good	68	
		do.		22.5	6/30/49			15			D, S, Irr	Yes	Good		
		do.				< .1	8/30/52				D, S	No	Good		Klagetoh Spring.
		Cow Springs				< .1 E	11/ 9/54				D, S	No	Good	42	Temporary.
		Bidahochi				.5 E	6/30/51				D	Yes	Good		
		Wingate (Lukachukai)		185 R	2/ 2/35						Un	No			Bidahochi Formation dry; abandoned.
0	61	Alluvium		4.3	8/ 9/49	3-4	8/ 9/49	15			D, S	Yes	Good	57	
		do.		79	5/24/24						Un	No			Abandoned.
0	95	do.	DL	80	2/21/38	3-4	8/22/49	35			D, S	Yes	Bad	59	
86	99 P	Cow Springs	DL	38.5	12/ 3/54	3-4	12/ 3/54	6			D, S	Yes	Fair		
145	41 P	Morrison (Westwater Canyon) and Cow Springs		53.5	12/ 3/54	3-4	12/ 3/54	10			D, S	Yes	Good		Nitrate content, 14 ppm.
76	272 P	do.		82.4	4/ 3/52			3			Un	No			Steamboat sheep-dip area.
22	341 P	Bidahochi				2-3	8/23/49	4			D, S	Yes	Good		
		Alluvium		15.9	12/ 2/54	3-4	12/ 2/54				D, S	No	Good		
		do.		7.6	12/ 2/54						Un	No			Old day-school well; abandoned.
		do.		5.8	12/ 2/54			45	4	14	D, S	Yes	Good	57	Greasewood D.S. well.
		do.		4.6	12/ 2/54						D, S	Yes	Good	59	
		do.		5.6	6/30/51						S	Yes	Fair	61	At Greasewood dipping vat.
		do.		4.5	12/ 2/54						S	No			In frame house at Greasewood dipping vat.
		do.		3	12/ 2/54						D, S	No	Fair	61	
		do.		2.5	12/ 2/54						Un	No			Abandoned.
		do.		.4	12/ 2/54						D, S	Yes	Good	50	
		do.		7.7	12/ 2/54						D, S	Yes	Good	59	
		do.		14.1	6/19/53						D, S	Yes	Good	41	
		do.		4	2/ 3/55						D, S	No	Fair		
		do.		11.1	6/30/51						D, S	Yes	Good	61	
		do.		10.5	12/10/54	3-4	12/10/54	53 R			D, S	Yes	Good	48	53 gpm reported by trader to BIA.
		do.		8.5	12/10/54						D, S	No			
		do.		9.5	12/10/54						D, S	No			
		do.		8.5	12/10/54						D, S	No			
		do.		6.5	12/10/54						D, S	Yes	Good	57	
		do.		19.5	3/ 8/54						D, S	No			
		do.		6.2	12/ 3/54						D, S	No	Good	50	Abandoned.

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 17—Continued							
111 con.	Dug well	17M-205	7.85-7.65	8 NNW of Greasewood T.P.	3/32	Bed of wash	6,150	15	5	15	Masonry cribbed	Tr
	do.	17M-206	7.85-6.60	9 NNW of Greasewood T.P.	8/28	Bank of wash	6,190	12.5	6	12.5	Rock cribbed	Tr
	Spring	17K-319	6.55-4.90	10 N of Greasewood T.P.		Head of canyon	6,300				Collection gallery	C, Tr
	do.	17M-170	6.35-16.45	1 SSW of Greasewood D.S.	7/30	Edge of terrace	5,920				do.	C, Tr
	do.	17M-171	6.60-17.15	2 SSW of Greasewood D.S.		do.	5,880				do.	C, Tr
	do.	17M-191	3.90-13.75	2 NE of Greasewood T.P.		Bed of wash	5,900				None	N
112	None											
125	Drilled well	17K-307	13.85-5.65	Wide Ruins D.S.	10/34	Small valley	6,220	870	8 5	44 671	Perforated 655-832	N
	Drilled well	17K-356	8.85-13.00	6 W of Burntwater T.P.	2/53	Top of mesa	6,260	323	16 8	284 296	Perforated 275-296, open hole	W, Ta, Tr, Re
	do.	17M-133	5.90-11.70	2 WNW of Burntwater T.P.	4/35	Small valley	6,420	563	6	478		W, Ta, Tr
	do.	17M-145	1.95-6.45	Pine Springs School		Stripped plain	6,990	302	8	10	Open hole	P, Ta
	do.	17M-145A	1.85-6.55	Pine Springs School	8/51	do.	6,990	760 R	8	688		N
	do.	17M-145B	2.00-6.30	0.25 NE of Pine Springs	4/54	do.	6,990	362 R				
	do.	17M-145C	2.45-6.15	1 NE of Pine Springs	10/54	do.	7,020	404	10	80	Open hole	P, Ta
	do.	17M-148	5.75-8.15	4 WSW of Pine Springs T.P.	6/35	do.	6,770	524	10 6	130 406		W, Ta, Tr
	do.	17M-263	12.0-16.0 A	10 S of Wide Ruins T.P.	11/34	Top of mesa	6,100 E	1,000			None	N
	do.	17M-264	10.0-14.0 A	9 SSE of Wide Ruins T.P.	1/35	do.	6,200 E	1,000			do.	N
	do.	17M-265	11.0-12.0 A	7 SSE of Wide Ruins T.P.	3/35	do.	6,300 E	587			do.	N
	do.	17T-361	2.05-5.85	1 N of Pine Springs T.P.	12/53	Stripped plain	7,010	546	8	21	Open hole	W, Ta, Tr
	Dug well	17K-312	13.30-7.30	2 S of Wide Ruins T.P.		Small valley	6,200	6.5	6 x 6	6.5	Masonry cribbed	Tr
	do.	17K-313	8.65-4.70	5 ENE of Wide Ruins T.P.	9/36	Bank of wash	6,720	10	6 x 7	10	Rock cribbed	Tr
	do.	17M-146	4.30-8.20	3 SW of Pine Springs T.P.		Hillside	7,020	7.5	10	7.5	do.	N
	do.	17M-153	12.60-7.90	2 SSE of Wide Ruins T.P.		Bank of wash	6,210	19.5	5	19.5	do.	Tr
	do.	17M-156	9.90-6.10	4 E of Wide Ruins T.P.	9/32	do.	5,970	11.5	6	11.5	do.	Tr
	do.	17M-227	13.75-2.60	3 N of Wide Ruins T.P.		do.	6,350	5.5	6	5.5	do.	N
	do.	17M-230	13.65-3.90	2 N of Wide Ruins T.P.		Small valley	6,410	8.5	6	8.5	Masonry cribbed	Tr
	do.	17M-241B	13.35-2.45	4 N of Wide Ruins T.P.		Bank of wash	6,390	9	6 x 8	9	do.	N
	do.	17M-244A	13.70-5.70	0.25 W of Wide Ruins T.P.	3/31	do.	6,220	17.5	6	17.5	Rock cribbed	Tr
	do.	17M-248	2.60-0.30	6 N of Pine Springs T.P.		Stripped plain	7,310	12	6	12	Masonry cribbed	N
	do.	17M-251	13.85-4.65	1 N of Wide Ruins D.S.		Small valley	6,320	8	6	8	Rock cribbed	Tr
	do.	Pine Springs 1	1.90-6.50	Pine Springs T.P.		Bank of wash	6,990	9	3	9	Concrete cribbed	A
	Spring	17M-154	12.10-7.95	2 SSE of Wide Ruins T.P.	12/29	do.	6,240				Collection gallery	C, Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 17—Continued									
		Alluvium		9.5	12/ 3/54						D, S	No	Good		
		do.		7	12/ 3/54						D, S	No	Good	50	
		Bidahochi				1 R 1 E	12/ 3/54				D, S	Yes	Good	50	"Bear Springs."
		Terrace				<.1 E	12/ 2/54				D, S	Yes	Good	65	
		do.				<.1 E	12/ 2/54				D, S	No	Good	46	
		Alluvium									S	No			
382	339 P	De Chelly and Supai	DL	670 R	10/ 6/34			10 R	80		Un	No			Plugged February 1952 at 610 feet; USGS gamma-ray log: 4-inch liner from 655 to 832 feet; Bidahochi and Chinle Formations dry.
0	290	Bidahochi	LL	262	2/20/53	2-3	2/20/53	4	28	$\frac{3}{4}$	D, S	Yes	Good		Pump test; 40-foot earthen dam.
375	188 P	Supai	DL	454	11/18/54	2-3	4/18/54	5	35	$1\frac{1}{4}$	D, S	Yes	Fair		Bail test June 9, 1953; drilled additional 10 feet in 1953.
0	298	De Chelly		295							D, S, PS	Yes	Good	65	Pine Springs School.
330	430 P	Supai	LL	558	7/30/51			5	202	$1\frac{3}{4}$	Un	Yes	Good		Bailed hole dry; abandoned, insufficient yield.
0	362 P	De Chelly		292 R	4/10/54			2		2		Yes	Good		Original depth, 448 feet; plugged to 362 feet.
60	344 P	do.		295	10/ 1/54			17	30	$2\frac{1}{4}$	D, PS	Yes	Good	56	Chinle Formation dry; Pine Springs School supply.
130	394 P	De Chelly and Supai		160 R	6/21/35	3-4	6/24/52	3			D, S	Yes	Good	58	
0	1,000 P	Bidahochi, Chinle (Shinarump), and De Chelly	DL	Dry	11/13/34							No			Dry hole.
0	1,000 P	Bidahochi, Chinle (Shinarump), De Chelly, and Supai		Dry	1/28/35							No			Dry hole; lost tools at 925 feet.
0 310	190 277 P	Bidahochi De Chelly		Dry	3/30/35							No			Dry hole.
0 350	350 196 P	De Chelly Supai		308	12/23/53	2-3	12/23/53	9	230	2	D, S	Yes	Good	54	
		Bidahochi		5	11/22/54						D, S	No	Good	53	
		Alluvium		Dry	11/24/54						D, S	No			Temporary.
		De Chelly		5.5	11/18/54						D	No			
		Alluvium		12.5	11/22/54						D, S	No	Good	57	
		De Chelly		8.2	11/24/54			6 R			D, S	No	Good	50	
		Alluvium		3.7	11/19/54						D	No			May be abandoned.
		do.		3.8	11/19/54						D, S	No	Good	48	
		Chinle (Shinarump)		5.1	11/19/54						D	No	Good	57	
		Alluvium		12.6	11/16/54						D, S	No	Good	59	At Wide Ruins sheep dip.
		De Chelly		Dry	11/18/54						D, S	No			Temporary.
		Alluvium		4.2	11/24/54						D, S	Yes	Good	48	
		De Chelly		4	11/18/54						Un	No			At Pine Springs D.S.; not used now.
		Bidahochi				.2	11/22/54				D, S	Yes	Good	49	

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 17—Continued							
125 con.	Spring	17M-228	11.85-2.90	4 NNE of Wide Ruins T.P.		Bed of wash	6,570				Collection gallery	C, Tr
	do.	17M-241A	13.45-2.45	4 N of Wide Ruins T.P.	4/30	Small valley	6,390				do.	C, Tr
	do.	17M-243	13.50-5.70	Wide Ruins T.P.		Hillside	6,240				Collection well	N
	do.	17GS-125-1	10.50-6.75	4 WSW of Wide Ruins T.P.		Small valley	6,440				None	N
126	Drilled well	17K-347	0.30-5.80	1 W of Wide Ruins T.P.	2/40	Bank of wash	6,170	105	8	61	Open hole	P, Ta
	do.	17K-353	2.5-2.0 A	2 SSW of Klagetoh	1/35	Small valley	6,600 E	1,000			None	N
	do.	17M-111	10.40-3.10	10 WSW of Klagetoh	3/35	Hilltop	6,260	238	6	235		W, Ta, Tr
	do.	17M-117	5.90-8.80	8 WSW of Klagetoh	6/38	Broad valley	6,100	143	6	143	10-foot screen	W, Ta
	do.	17M-118	6.70-6.45	8 WSW of Wide Ruins T.P.		do.	6,210	150	5			W, Ta, Tr
	do.	17M-124	4.70-11.20	8 SW of Wide Ruins T.P.		do.	5,910		6			W, Ta, Tr
	do.	17M-125	5.90-11.95	10 SW of Wide Ruins T.P.	/33	do.	5,890	140 R	6			W, Ta, Tr
	do.	17M-187	13.90-2.50	8 ESE of Greasewood T.P.	3/35	Top of mesa	6,250	411	8	375		W, Ta
	do.	17M-245	2.85-9.30	4 SW of Wide Ruins T.P.	/33	Broad valley	5,980	189	6			W, Ta, Tr
	do.	17M-262	1.75-8.90	4 SW of Wide Ruins T.P.	10/36	do.	6,030	131	12 6	28 131	Perforated 85-131	W, Tr, Re
	Dug well	17M-127	3.95-10.10	6 SW of Wide Ruins T.P.		do.	5,940	32	4 x 4	32	Log cribbed	Tr
	do.	17GS-126-1	0.50-3.85	2 NNW of Wide Ruins T.P.		Bank of wash	6,230	12	6	12	Rock cribbed	Tr
	do.	17GS-126-2	12.45-13.00	15 SW of Wide Ruins T.P.		Side of mesa	6,040	7.5	5 x 8	7.5	do.	Tr
	Spring	17K-311	0.10-6.50	1 SSW of Wide Ruins T.P.		Side of bluff	6,160				Collection gallery	C, Tr
	do.	17M-126	10.60-14.60	14 SW of Wide Ruins T.P.		Hillside	5,790				Collection well	C, Tr, Re
	do.	17M-126A	9.80-14.00	13 SW of Wide Ruins T.P.		do.	5,850				None	Re
	do.	17M-126B	11.15-14.95	15 SW of Wide Ruins T.P.		do.	5,790				do.	N
127	Drilled well	17H-146	8.05-10.30	12 S of Greasewood T.P.		Broad valley	5,680	189 R	6			W, Ta, Tr
	do.	17K-306	7.80-6.30	8 S of Greasewood T.P.	5/38	do.	5,750	160	6	150	10-foot screen	W, Ta, Tr
	do.	17K-340	6.65-0.50	2 S of Greasewood T.P.	9/39	do.	5,830	186	6	118	Perforated 38-58, open hole below	W, Ta, Tr
	do.	17K-350	1.30-17.10	19 SW of Wide Ruins T.P.	9/42	do.	5,620	115	6		Perforated 83-93	W, Ta, Tr
	do.	17K-351	2.5-17.0 A	20 SW of Wide Ruins T.P.	7/42	do.	5,600 E	340			None	N
	do.	17K-372	7.70-2.80	2 NNE of Twin Butte T.P.	8/55	do.	5,790	113	6	99	Open hole	N
	do.	Mennonite Mission 1	7.10-1.05	2 S of Greasewood T.P.	/51	do.	5,810	18 R	6			W, Ta
	do.	Mennonite Mission 2	6.95-1.10	2 S of Greasewood T.P.	4/53	do.	5,810	104	12	104	Perforated	P
	do.	Mennonite Mission 3	7.00-1.10	2 S of Greasewood T.P.	/51	do.	5,810	50	7		do.	N
	Dug well	17K-341	1.50-1.95	5 SE of Greasewood T.P.		Bank of wash	6,120	12.5	7	12.5	Rock cribbed	Tr
	do.	17M-174	8.35-3.65	6 SSW of Greasewood T.P.		Edge of terrace	5,820	8.5	5 x 8	8.5	None	Tr
	do.	17M-175	9.00-5.15	8 SSW of Greasewood T.P.		do.	5,800	13	5	13	Rock cribbed	Tr

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 17—Continued															
		De Chelly				.2 E	11/19/54				D, S	No	Good	52	
		Chinle (Shinarump)				.8	11/19/54				D, S	Yes	Good	57	
		Bidahochi				.5 E	7/ 7/49				D, S	Yes	Good	65	
		De Chelly				.1 E	11/24/54				S	No	Good		
55	60 P	Chinle (lower red)	DL	50 R	2/14/40			20			PS	Yes	Good		6-inch liner for 56 feet; Wide Ruins D.S.
0	1,000 P	Bidahochi, Chinle (Shinarump), De Chelly, and Supai		Dry	1/14/35							No			Dry hole.
0	238 P	Bidahochi		179	11/17/54	3-4	11/17/54	10			D, S	Yes	Good		
55	71	do.	DL	75 R	6/31/38	3-4	8/24/49	12	19	16	D, S	Yes	Good	62	Originally drilled in 1935; revamped in 1938.
		do.		72	11/17/54	3-4	11/17/54				D, S	Yes	Good	53	Private well.
		Alluvium				3-4	11/17/54				D, S	Yes	Good	55	Probably a dug well developed by drilling.
		do.		40 R		3-4	11/17/54				D, S	Yes	Good	45	Private, Chee Dodge property.
0	411 P	Bidahochi	DL	287	12/ 2/54	2-3	12/ 2/54	30			D, S	Yes	Good	60	
0	140	Alluvium		48	11/17/54	3-4	11/17/54				D, S	No			Little Judges well.
0	125	do.	DL	79.2	11/17/54	3-4	11/17/54	23	30	4	D, S	Yes	Good	60	
		do.		26	11/17/54						D, S	No			
		do.		Dry	11/16/54						D, S	No			Abandoned when visited.
		Bidahochi		5.4	11/23/54						S	No		50	
		do.				.4	11/16/54				D, S	No	Good	47	
		do.				14	11/17/54				D, S, Irr	Yes	Good	58	Tanner Spring.
		Alluvium				<.2 E	11/17/54				S	No			
		Bidahochi				10 E	11/17/54				D, Irr	Yes	Good		
0	189 P	Alluvium									D, S	Yes	Bad	56	Saybito well.
0	160 P	do.		108	11/30/54	3-4	11/30/54	10			D, S	Yes	Bad	60	
0	116	do.	DL	16.3	1/21/53	3-4	1/21/53	90			D, S	Yes	Fair	61	Gravel packed from 30 to 118 feet.
0	86	do.	DL	63.2	8/26/49	3-4	8/26/49	9	26	336	D, S	Yes	Fair	64	
22	318 P	Chinle (Petrified Forest)		30 R	7/21/42			.5			Un	No	Bad		Abandoned, salty.
		Alluvium		20				13	93	1	Un	Yes	Fair	64	Bailed hole dry. Abandoned, casing pulled.
0	18 P	do.		10 R	5/20/54	3-4	5/20/54	50			D	Yes	Fair	60	Stovepipe casing, pumps sand.
0	104 P	do.		14.2	6/ 9/54			30-50			Irr	Yes	Fair	60	Pump test June 9, 1954.
0	50 P	do.		17.5	5/20/54						Un	Yes	Fair	57	Abandoned.
		do.		4.4	12/ 2/54						D, S	Yes	Good	53	
		Terrace		7.4	12/ 1/54						D, S	No	Good		
		Wingate (Rock Point)		9.2	6/28/51						S	Yes	Fair	61	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 17—Continued							
127 con.	Dug well	17M-177	3.45-11.75	14 SSE of Greasewood T.P.		Small valley	5,800	9.5	4	9.5	Rock cribbed	H, Tr
	do.	17GS-127-2	6.85-0.70	2 S of Greasewood T.P.		Alluvial plain	5,820	14.5	4 x 5	14.5	Plank cribbed	Tr
	Spring	17M-172	7.35-1.35	3 S of Greasewood T.P.	7/31	Edge of terrace	5,830				Collection gallery	C, Tr
	do.	17M-176	9.05-4.95	8 SSE of Greasewood T.P.		do.	5,810				do.	C
	do.	17GS-127-1	7.55-9.25	11 S of Greasewood T.P.		do.	5,730				do.	C
128	None											
139	do.											
140	Drilled well	17K-352	7.45-1.65	20 S of Greasewood T.P.	10/42	Bank of wash	5,580	78	6	78	Perforated 30-38	W, Ta, Tr
	do.	17M-128	7.55-1.65	21 S of Greasewood T.P.	10/42	do.	5,580	41	6	40	Screen	W
	Dug well	17M-129	12.10-4.90	24 SSW of Greasewood T.P.		do.	5,420					
	do.	17GS-140-1	12.30-5.00	25 SSW of Greasewood T.P.	/53	do.	5,400	10	3 x 2	10	Plank cribbed	H, Tr
141	None											
					DISTRICT 18							
68	Spring	18A-2	7.35-11.55	5 ENE of Crystal		Bed of wash	8,360				None	N
	do.	18A-26	12.90-14.65	1 SW of Crystal		Small valley	7,430				do.	N
	do.	Crystal D.S.	10.55-13.00	2 NE of Crystal		Hillside	7,800				Collection gallery	C
	Combination spring	18A-14	11.45-12.05	2 N of Crystal		Bed of wash	7,780				None	N
	do.	18A-14A	11.75-13.00	1 N of Crystal		Small valley	7,610				do.	N
	do.	18A-15	12.60-10.90	3 NNW of Crystal		Bed of wash	7,950				do.	N
	do.	18A-16	13.70-11.50	3 NW of Crystal		do.	7,540				do.	N
	do.	18A-16A	13.40-12.10	2 NW of Crystal		Small valley	7,480				do.	N
	do.	18A-24	10.50-15.20	2 SE of Crystal		Bed of wash	7,700				do.	N
	do.	18A-25	11.10-13.90	1 E of Crystal		do.	7,650				do.	N
	do.	18A-28	11.65-17.10	3 S of Crystal		do.	7,530				do.	N
	Stream	18A-1	10.00-12.00	2 NE of Crystal								
69	Drilled well	18K-330	9.70-16.55	8 N of Sawmill	5/53	Small valley	7,530	775	8	195	Perforated at 70 and 140	W, Ta, Tr
	do.	Chee Dodge	4.35-13.50	6 W of Crystal			7,220	300 R			None	N
	Dug well	18A-21	4.60-13.30	7 W of Crystal		Hillside	7,230	6.5	4	6.5	Rock cribbed	Tr
	Spring	18A-18	2.35-9.15	6 NW of Crystal		Bed of wash	7,600				Collection gallery	Tr
	do.	18A-19	1.80-11.05	4 NW of Crystal		do.	7,350				None	N
	do.	18A-19A	3.50-13.30	6 W of Crystal		do.	7,260				do.	N
	do.	18A-22	4.80-11.95	7 WNW of Crystal		do.	7,280				do.	N
	do.	18A-36	0.25-15.25	3 SSW of Crystal		Broad valley	7,270				do.	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 17—Continued									
		Chinle (Owl Rock)		6	6/28/51						D, S	Yes	Fair	61	
		Alluvium		12	12/ 1/54						Un	No			Probably abandoned.
		Terrace				.2 E	7/ 6/51				D, S	Yes	Good		
		do.				Dry	11/30/54				Un	No			Appears to be abandoned.
		Windblown sands				.1	11/30/54				D, S	Yes	Good	51	
0	70	Alluvium	DL	6	11/23/54	3-4	11/23/54	12		8	D, S	Yes	Fair	64	
0	41 P	do.		5	11/23/54	3-4	11/23/54	10		4	D, S	No	Good	64	Bottom of casing is welded shut and sits on top of salt water.
		do.									Un	No			Filled with sand, abandoned.
		do.		5.4	11/23/54						D, S	Yes	Good	55	
						DISTRICT 18									
		Chuska				0.8 R .1 E	11/10/54				S	No	Good	32	
		Entrada				1 R 1 E	11/10/54				S	No	Good	32	
		Chuska				25	1/27/54				D	No	Good		Piped to school.
		do.				10 R 10 E	11/10/54				D, S	No	Good	34	
		do.				20 R 30 E	11/10/54				D, S	No	Good	34	
		do.				1 E	11/10/54				S	No	Good	34	
		do.				1.5 R 1 E	11/10/54				S	No	Good	35	
		Alluvium				3 E	11/10/54				S	No	Good	35	
		Chuska				1 R 8 E	11/10/54				S	Yes	Good	32	
		do.				15 R 15 E	11/10/54				D, S	No	Good	32	"Little Crystal Creek."
		do.				15 R 15 E	11/10/54				S	No	Good	32	
		do.				200	11/10/54				D, S, Irr	Yes	Good	32	"Crystal Creek."
0 60	60 715 P	Chinle (Shinarump) De Chelly	LL	114.5	11/16/54	3-4	11/16/54	10	146	1¼	D, S	Yes	Good	51	
		Chinle (Sonsela)		12	6/ 6/56						Un	No	Good		Abandoned.
		Alluvium		Dry	11/16/54						Un	No			Dry and abandoned.
		Wingate (Rock Point)				< .1	11/16/54				D, S	No	Good	44	
		do.				5 R 3 E	11/16/54				S	Yes	Good	41	
		Chinle (Sonsela)				< .1 E	11/16/54				S	No	Good	39	
		do.				2.5 R 10 E	11/16/54				D, S	Yes	Good	47	
		Alluvium				.8 R .5 E	11/16/54				S	No	Good	37	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 18—Continued							
69 con.	Spring	18A-37	0.35-15.20	3 SSW of Crystal		Bed of wash	7,260				None	N
	do.	18A-40	8.30-15.35	8 N of Sawmill		Narrow valley	7,350				do.	N
	do.	18A-40A	8.60-15.10	9 N of Sawmill		do.	7,330				do.	N
	do.	18A-43	9.05-11.80	12 N of Sawmill		Head of canyon	7,160				do.	N
	do.	18A-44	8.35-12.60	11 N of Sawmill		Bank of wash	7,150				do.	N
	do.	18A-46	3.20-16.45	10 NE of Sawmill		Broad valley	7,400				do.	N
88	do.	18A-71	13.10-14.05	9 W of Mexican Springs		Side of cliff	7,860				Collection gallery	Tr
	do.	18A-84	13.85-9.85	11 WNW of Mexican Springs		Bed of wash	7,300				None	N
89	Drilled well	18K-306	8.10-8.10	2 SSE of Sawmill	3/42	Broad valley	7,630	845	13	16	do.	N
	do.	18K-321	9.05-6.65	Sawmill	2/44	do.	7,680	38	6		Perforated 8-16, gravel packed to 16	P
	Drilled well	18K-326	5.50-16.75	1 NW of Fort Defiance	3/51	Deep canyon	6,910	23	8	21	Perforated 8-21	N
	do.	18K-327	5.50-16.75	1 NW of Fort Defiance	3/51	do.	6,910	30	8	28	Perforated 8-28	P
	do.	18T-337	2.90-0.60	9 NE of Sawmill	10/55		7,200	489	10 8	21 126	Perforated at 115 and 123	W
	do.	18T-343	8.20-9.40	3 SSE of Sawmill	7/55	Small valley	7,510	145	12 8	22 30	Perforated 25-30, gravel packed	P
	do.	18T-344	8.20-9.40	3 SSE of Sawmill	7/55	do.	7,510	225	12 8	22 31	Perforated 22-28, gravel packed	
	Dug well	18A-30	3.15-8.25	9 NNE of Fort Defiance		Broad valley	7,010	15	2 x 4	15	Rock cribbed	Tr
	do.	18A-32	3.05-9.45	8 NNE of Fort Defiance		Bank of wash	6,980	10.5	2	10.5	do.	N
	do.	18A-34	2.35-12.85	5 NNE of Fort Defiance		Small valley	6,900	8	3 x 3	8	Plank cribbed	H, Tr
	do.	18A-38	7.00-1.35	6 NNE of Sawmill		do.	7,650	2.5			None	Tr
	do.	18A-39	8.40-1.35	6 N of Sawmill		Bed of wash	7,800	7	3	7	Rock cribbed	Tr
	do.	18A-53	5.35-13.70	4 NNW of Fort Defiance		Bank of wash	7,250	18.5	4	18.5	do.	H, Tr
	do.	18A-62	9.10-13.60	6 NW of Fort Defiance		Bed of wash	7,570	10.5	3	10.5	do.	N
	do.	18A-66	8.55-6.95	1 ESE of Sawmill		do.	7,610				Collection gallery	P, C
	do.	18A-69	9.20-6.70	Sawmill		Broad valley	7,680	13	5	13	Rock cribbed	W, H, Tr
	do.	Sawmill 1	9.15-6.70	Sawmill	/30	do.	7,690	15.5	10	15.5	do.	N
	do.	Sawmill D.S.	9.30-6.85	0.25 WSW of Sawmill		do.	7,690	20				N
	Infiltration gallery	Fort Defiance caisson 1, 2, 3	5.55-16.80	1 WNW of Fort Defiance	2/47	Deep canyon	6,910	24	8	24	Concrete caisson	P
	do.	Fort Defiance caisson 4	5.45-16.85	1 NW of Fort Defiance		Bed of wash	6,910	27	8	27	Steel caisson	P
	do.	Fort Defiance caisson 5	5.40-16.85	1 NW of Fort Defiance		do.	6,910	29	8	29	do.	P
	Spring	18A-31	4.50-7.45	5 ESE of Sawmill		do.	7,150				None	N
	do.	18A-35	0.85-10.80	8 NNE of Fort Defiance		Head of canyon	7,080				do.	N
	do.	18A-48	7.75-4.70	2 NNE of Sawmill		do.	7,790				do.	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 18—Continued									
		Alluvium				.2 R .2 E	11/16/54				S	No	Good	37	
		Chinle (Shinarump)				.8 R 1 E	11/16/54				S	No	Good	40	
		do.				3 E	11/16/54				S	No	Good	40	Continuation of 18A-40.
		do.				.5 R < .1 E	11/16/54				S	No	Good	42	
		do.				1 R 1.5 E	11/16/54				S	No	Good	39	
		Alluvium				1 R < .1 E	11/16/54				S	No	Good	36	
		Gallup				.8 R 2 E	5/11/54				D, S	No	Good	51	White Clay Spring.
		Dakota				.2 R .2 E	11/ 9/54				S	No	Good	45	
0	15	Alluvium	DL	< 1	3/16/42			30 R			Un	No			Completely covered over; abandoned.
0	15	do.		7.5	11/17/54			40 R	12	2	Ind	No			Pumps into 10- by 50-foot infiltration gallery; Navajo Tribal Sawmill.
0	23 P	Alluvium		< 1 R	3/13/51			35 R	18	4	Un	No			Water at surface Mar. 13, 1951; abandoned test hole.
0	26	do.	DL	4.8	3/20/51			150	2	4	PS	Yes	Good		Fort Defiance domestic supply.
0 170	170 140	Chinle (Petrified Forest, upper) Chinle (Sonsela)	LL	Flow	10/ 5/55	3-4		9	125	1	D, S	Yes	Fair	56	Cave catchers at 112, 113, and 114 feet.
0 22	22 123 P	Alluvium Supai		16	7/ 7/55			60	120	2	D, Ind	Yes	Good	58	Casings welded together at top; Navajo Tribal Sawmill.
0 25	25 162 P	Alluvium Supai	DL	16	7/31/55			225	44	6	D, Ind	Yes			Do.
		Alluvium		13.4	11/ 9/54						D, S	No	Fair	50	
		do.		7.5	11/ 9/54						D, S	No	Fair	50	
		do.		1.2	11/ 9/54						D, S	No	Fair	59	
		do.		Dry	11/17/54						Un	No			Dry and abandoned.
		do.		4.8	11/17/54						D, S	Yes	Good	42	
		Supai		12.6	11/18/54						D, S	Yes	Good	51	
		do.		Dry	11/18/54						Un	No			Dry and abandoned.
		Alluvium				3 R 3 E	11/17/54				Un	Yes	Good	40	Buell Park 4, combined dug well and spring.
		do.		Dry	11/17/54						Un	No			Dry and abandoned.
		do.		7.5	11/17/54						Un	No			Abandoned.
		do.		5.5	10/25/48			30 R			Un	Yes	Good	62	Old school well.
		do.		10.5	4/24/50			100 R			PS	Yes	Good		All three have same location, depth, etc.; gravity flow to Fort Defiance.
		do.		7.4	11/18/54						PS	No	Good	35	Standby well for Fort Defiance.
		do.		7.4	11/18/54						PS	Yes	Good	58	In pumphouse; supply well for Fort Defiance.
		Volcanic				15 R 60 E	11/ 9/54				D, S	Yes	Good	42	Buell Park 3.
		Summerville				1.5 R 4 E	11/ 9/54				D, S	Yes	Good	40	
		De Chelly				1.5 R 1.5 E	11/17/54				S	No	Good	40	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 18—Continued							
89 con.	Spring	18A-48A	8.45-5.75	1 NNE of Sawmill		Side of cliff	7,750				None	N
	do.	18A-50	4.90-6.45	4 E of Sawmill		Broad valley	7,210				do.	N
	do.	18A-51	5.25-6.90	4 E of Sawmill		Bed of wash	7,210				do.	N
	do.	18A-53A	5.25-14.95	2 NNW of Fort Defiance		do.	7,030				do.	N
	do.	18A-54	9.75-8.15	2 SSW of Sawmill		Hillside	7,740				Collection gallery	C, Tr
	do.	18A-54A	9.60-8.00	2 S of Sawmill		do.	7,730				None	Re
	do.	18A-55	8.60-9.40	2 S of Sawmill		Bed of wash	7,550				Collection gallery	P, Ta
	Spring	18A-60	9.35-11.00	4 S of Sawmill		Bed of wash	7,640				None	N
	do.	18A-61	8.70-12.85	6 S of Sawmill		do.	7,500				do.	N
	do.	18A-64	8.75-14.90	5 WNW of Fort Defiance		do.	7,440				do.	N
	do.	18A-67	9.15-6.20	1 N of Sawmill		Head of canyon	7,730				Collection gallery	C
	do.	18A-67A	9.75-6.45	1 NW of Sawmill		do.	7,790				None	N
	do.	18A-68	9.40-6.00	1 NNW of Sawmill		do.	7,750				do.	Re
	do.	18GS-89-2	5.20-8.10	4 ESE of Sawmill		do.	7,450				do.	N
	do.	Bonita Spring	5.40-15.90	2 NNW of Fort Defiance		Bed of wash	6,960				do.	N
	do.	Supai Spring	5.90-16.60	2 WNW of Fort Defiance		Small valley	6,980				do.	N
	Combination spring	18GS-89-1	6.75-6.10	2 ENE of Sawmill		do.	7,450				do.	N
	Stream	18A-33	0.30-4.90	9 ENE of Sawmill			6,900					
	Test hole	18K-325	5.40-16.80	1 WNW of Fort Defiance		Deep canyon		25 R			None	N
	do.	Fort Defiance 1, 2, 3, 4	5.50-16.85	1 WNW of Fort Defiance	5/47	do.	6,900	18			do.	
107	Drilled well	18K-308	12.20-3.75	5 ENE of Window Rock	1/32	Small valley	7,150	710	4	419		P
	do.	18K-320	12.20-3.75	5 ENE of Window Rock	3/46	do.	7,140	715	6	663	Open hole	N
	do.	18K-329	12.75-3.95	4 ENE of Window Rock	6/52	Narrow valley	6,960	567	8	567	Perforated 473-567	W, Ta, Tr
	Dug well	18A-73	11.70-2.90	6 ENE of Window Rock		Bank of wash	7,120	24	$2\frac{1}{2}$	24	Masonry cribbed	H, Tr
	Spring	18A-354A	13.90-1.50	5 ESE of Fort Defiance		Narrow valley	7,060				Dam	Re
108	Drilled well	18A-134	5.65-6.55	0.25 NE of St. Michaels Mission		Hillside	6,830	200 R	6			P, W, Ta
	do.	18A-152	6.00-11.10	6 SSW of Window Rock		Small valley	6,740	550	10	651	Perforated	P, Ta
	do.	18A-174	4.25-6.30	2 SW of Window Rock	7/34	Broad valley	6,690	700	15 12 10	38 273 527	Perforated 560-660	P, Ta
	Drilled well	18A-174A	4.20-6.25	2 SW of Window Rock	/34	Broad valley	6,690	793	15 12 10	92 282 763	Perforated 256-340 700-763	P
	Drilled well	18A-174B	4.15-6.20	2 SW of Window Rock		Broad valley	6,690	100	8			N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 18—Continued									
		De Chelly				<.1 E	11/17/54				S	Yes	Good	40	
		Volcanic				5 R 15	11/ 9/54				D, S	Yes	Good	42	Buell Park 1.
		do.				30 R 35 E	11/ 9/54				D, S	Yes	Good	42	Buell Park 2.
		Supai				.5 E	11/18/54				S	No	Good	48	
		De Chelly				.8 R 2	11/17/54				D, S	No	Good	40	Tohnalhchai Spring.
		do.				.2 E	11/17/54				D, S	No	Good	40	
		Supai				30 E	11/18/54				D, Ind	Yes	Good	44	Pumped from storage tank at spring to storage tank on hill; Buell Park 6.
		Supai				1 R <.1 E	11/18/54				S	No	Good	51	
		do.				1 R 1 E	11/18/54				S	No	Good	51	
		do.				10 E	11/18/54				D, S	No	Good	48	
		De Chelly				.2 R .5 E	11/17/54				D, S	No	Good	40	
		do.				1 E	11/17/54				S	No	Good	40	
		do.				1.5 R 2 E	11/17/54				D, S	No	Good	40	
		Supai				20 E	4/16/49				Un	Yes	Good	48	Yield varies with season; Buell Park 11.
		do.				314 301	4/22/48 6/12/49				D	Yes	Good	50	Yield varies greatly with season; "Bonita Spring."
		do.				75	8/24/48				Un	Yes	Good	64	"Supai Spring."
		Supai and De Chelly				178	4/16/49				Un	Yes	Good	58	Yield varies greatly with season; Buell Park 10.
											D, S	No			Seasonal; "Black Creek."
0	21	Alluvium		0	3/ /51			60 R				No			Casing pulled; abandoned.
0	15	do.	DL	8	5/ /47			100-350				No			All four test holes in alluvium and all abandoned.
		Gallup		340 R				7.2	160		Ind	Yes	Good	49	Window Rock coal mine.
665	50 P	do.		357	11/19/54			13 R			Un	No			Do.
485	82 P	do.	LL	437	11/19/54	2-3	11/19/54	13	13	1	D, S	Yes	Good	63	
		Alluvium		21.5	11/19/54						S	No	Fair	47	
		Gallup				.1 E	11/19/54				S	No	Good	45	
		Chinle (Shinarump)		46	11/22/54						D	Yes	Good	50	Karigans T.P. well.
12 139	127 411 P	Chinle (Shinarump) De Chelly	DL	10.8	6/17/49			65 R	37		D, PS	Yes	Good	58	Plugged; original depth, 842 feet; Hunters Point D.S. well.
492	208 P	Chinle (lower red) De Chelly		Flow				23 R	90		D, PS	Yes	Good		Plugged at 700 feet; Window Rock 1.
521	272 P	Chinle (lower red) De Chelly		7 R				24 R	168		D, PS	No	Good		Window Rock 2, in pumphouse.
		Alluvium									Un	No	Bad		Salty.

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 18—Continued							
108 con.	Drilled well	18K-301	4.60-6.50	2 SW of Window Rock	3/40	Broad valley	6,730	811	15 13 10	127 265 811	Perforated 260-770	P
	Drilled well	18K-353	4.50-6.90	2 SSW of Window Rock	6/56	Hillside	6,720	290	10	192	Perforated 180-187	P
	do.	18K-357	3.45-6.25	1 SSW of Window Rock	8/56	Alluvial plain	6,760	129	8		None	N
	do.	18T-328	5.10-16.70	12 SSW of Window Rock	12/51	Small valley	6,760	1,358	7	1,344		W, Ta, Tr
	do.	18T-338	4.90-7.75	3 WSW of Window Rock	10/55	Broad valley	6,700	237	10 8	64 190	Open hole	
	do.	18T-342	4.05-5.50	1 W of Window Rock	10/55	do.	6,750	1,293	14	662	do.	P
	do.	Black T.P.	4.00-1.05	1 SE of Fort Defiance		do.	6,810	555 R				
	do.	Fort Defiance Consolidated School	3.65-0.85	1 SE of Fort Defiance	5/53	do.	6,790	901	10	765	Perforated liner to 901	
	Drilled well	Mission Farm	4.40-5.45	2 W of Window Rock		Broad valley	6,690	400 R	5			W, Ta
	do.	Morman Mission	6.25-6.50	4 WSW of Window Rock		Hillside	6,830	200 R	4			P, Ta
	do.	Navajo Evangelistic Mission	5.85-11.20	6 SSW of Window Rock	/53	do.	6,750		6			H
	do.	St. Michaels Mission	5.95-6.80	St. Michaels Mission	7/32	Small valley	6,780	130	10			P, Ta
	do.	St. Michaels School	5.50-7.30	St. Michaels School	1/50	do.	6,750	375	10			P, Ta
	do.	Two Story T.P.	6.35-6.45	4 WSW of Window Rock		Hillside	6,880	230	6			P, Ta
	do.	Window Rock old well 6	4.35-6.20	2 SW of Window Rock	9/54	Broad valley	6,690	895	16 12 10	68 150 298	Perforated 260-298 open hole below	P, Ta
	Dug well	18A-128	3.90-1.30	2 SE of Fort Defiance		Bank of wash	6,800	14	3	14	Rock cribbed	N
	do.	18A-131	3.95-1.10	1 SE of Fort Defiance		do.	6,800				do.	N
	do.	18A-132	4.80-1.90	2 S of Fort Defiance		Small valley	6,770	17.5	2	17.5	do.	N
	do.	18A-135	6.15-7.30	4 SW of Window Rock		do.	6,780	12.5	3	12.5	do.	N
	do.	18A-135A	5.85-6.80	3 WSW of Window Rock		Bank of wash	6,780		9		do.	H
	do.	18A-137A	6.20-6.20	4 WSW of Window Rock		do.	6,800	22.5	4	22.5	do.	N
	do.	18A-138	5.85-6.45	3 WSW of Window Rock		Small valley	6,800	11	3	11		P
	do.	18A-138A	5.85-6.35	3 WSW of Window Rock		do.	6,800	8		8	Rock cribbed	N
	do.	18A-144	10.10-15.85	13 SW of Window Rock		do.	7,350	12	4	12	Masonry cribbed	W, Tr
	do.	18A-144A	11.10-14.70	13 SW of Window Rock		Bank of wash	7,350	13	2 x 3	13	Rock cribbed	Tr
	do.	18A-144B	11.15-14.75	13 SW of Window Rock		do.	7,350	10	4	10	do.	N
	do.	18A-182	5.55-9.80	5 SSW of Window Rock		do.	6,650	6.5	2	6.5	do.	Tr
	do.	18A-182A	5.65-9.95	6 SSW of Window Rock		Broad valley	6,650	5.5	3 x 3	5.5	Plank cribbed	Tr
	do.	18A-183	5.35-9.60	5 SSW of Window Rock		Bank of wash	6,650	9.5	3	9.5	Rock cribbed	N
	Spring	18A-128A	3.80-1.35	2 SE of Fort Defiance		Bed of wash	6,790				None	N

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 18—Continued															
250	561 P	De Chelly		Flow	3/31/40			25 R			D, PS	Yes	Good		Window Rock water supply.
35	255 P	Chinle (lower red, Shinarump)		23	6/15/56			53	31	¾	D, PS	No			
0	105	Alluvium						25 R			Un	Yes	Good	55	Abandoned, too dirty to develop; lost 65 feet of 8-inch casing.
1,270	88 P	Morrison (Westwater Canyon)	LL	292	11/23/54	2-3	11/23/54	16	135	1½	D, S	Yes	Fair	58	
110	127 P	Chinle (lower red, Shinarump)		Flow	10/18/55	3.5	10/20/55	45	16	2	D, S	No			
656 910	254 383 P	Chinle (lower red) Chinle (Shinarump), De Chelly		11.7	10/27/55			20	890	17	PS	Yes	Good		Window Rock 5.
		Chinle (Shinarump) and De Chelly		Flow	11/18/54	2	11/18/54				D	Yes	Good	52	Black T. P. well; flows directly to house.
750	151 P	De Chelly	LL	Flow	5/ 5/53	3.5	5/ 5/53	50	419	12¾	D, PS	Yes	Good		Pump test May 6, 1953.
		Chinle (lower red, Shinarump)									Un	No	Fair		St. Michaels Mission; abandoned; information from H. Miller.
		Chinle (Shinarump)		57.2	11/23/54						D	No	Good	37	
		Chinle (lower red, Shinarump)		3	11/23/54						D	No	Good	57	At Hunters Point.
		Chinle (Shinarump)		Flow	11/23/54	18 6	7/ /32 11/23/54	60	50	4	D	Yes	Good		
43 130	65 245 P	Chinle (Shinarump) De Chelly	LL	Flow							D	Yes	Good	56	
		Chinle (Shinarump)									D	No	Good	36	
310 430	120 465 P	Chinle (Shinarump) De Chelly	LL	139	9/ 3/54			36	585	3	PS	Yes	Good	63	
		Alluvium		11.9	11/18/54						Un	No	Fair	50	At Fort Defiance dipping vat.
		do.									Un	No	Bad		At Black T. P.; abandoned.
		do.		13.3	11/18/54						D	No	Good	48	Private well for one family.
		Chinle (lower red)		10.7	11/24/54						Un	No			At St. Michaels Mission; abandoned.
		Alluvium		8	11/22/54						D, S	No	Good	50	Franciscan Mission.
		do.		Dry	11/23/54						Un	No			
		do.		8.3	11/23/54						D	Yes	Good	34	In pumphouse behind Carson's T. P.
		do.		7.1	11/23/54						Un	No	Fair	35	
		De Chelly		1.7	11/24/54	3-4	11/24/54				D, S	Yes	Good	47	
		Alluvium		13	11/24/54						D, S	No	Good	46	
		do.		Dry	11/24/54						Un	No			Dry and abandoned.
		do.		5.1	11/23/54						D	No	Fair	42	
		do.		5.3	11/23/54						D	No	Fair	43	
		do.		Dry	11/23/54						Un	No			Dry and abandoned.
		do.				1 E	11/18/54				S	No	Fair	48	

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 18—Continued							
108 con.	Spring	18A-136	5.65-7.25	4 SW of Window Rock		Bed of wash	6,750				None	N
	do.	18A-137	6.05-6.30	3 WSW of Window Rock		do.	6,780				do.	N
	do.	18A-139	3.65-3.00	2 NNW of Window Rock		Small valley	6,770				do.	N
	do.	18A-140	3.90-3.10	2 NNW of Window Rock		Bank of wash	6,760				Collection gallery	Tr
	do.	18A-142	1.55-1.85	4 ESE of Fort Defiance		Small valley	6,890				None	N
	do.	18A-153	5.85-12.95	8 SSW of Window Rock		do.	6,890				Collection well	N
	do.	18A-157	4.85-15.25	10 SSW of Window Rock		do.	6,580				None	N
	do.	18A-162A	13.60-15.55	15 SW of Window Rock		Bed of wash	7,200				do.	N
	do.	Hunters Point T.P.	5.85-13.15	8 SSW of Window Rock		Small valley	6,730				do.	C
	Combination spring	18A-135B	6.80-7.50	4 WSW of Window Rock		Bed of wash	6,800				do.	N
109	Drilled well	18K-332	0.25-15.60	16 SW of Window Rock	9/53	Stripped plain	7,310	405	10	7	Open hole	W, Ta, Tr
	do.	18K-333	1.45-12.00	14 SW of Window Rock	1/54	do.	7,500	615	8	43	do.	W, Ta, Tr
	Dug well	18A-161	0.95-12.80	14 SW of Window Rock		Bank of wash	7,380	8	5 x 5	8	Rock cribbed	Tr
	do.	18A-161A	1.00-13.10	14 SW of Window Rock		Bed of wash	7,370	16	4	16	do.	Tr
	do.	18A-161B	2.25-14.00	16 SW of Window Rock		Stripped plain	7,460	5	3	5	do.	N
124	Drilled well	18A-111	8.95-15.15	1 SSW of Allentown	7/38	Broad valley	6,070	95	5	95	10-foot screen	W
	do.	18A-187	3.50-10.10	1 NE of Lupton		do.	6,190		4			P
	do.	18K-305	13.65-15.50	2 WSW of Houck	1/42	Hillside	5,990	350	6	206	Open hole	W, Ta, Re
	do.	18K-324	12.50-14.95	1 SW of Houck		Hilltop	6,040	380	6			P
	do.	18T-334	12.65-13.75	1 NW of Houck	9/54	Broad valley	6,030	106	12	86	Open hole	W, Ta, Tr
	do.	18T-336	12.70-13.75	1 NW of Houck	10/54	do.	6,030	120	10	120	Perforated 100-120	N
	do.	18T-339	6.30-12.25	3 WSW of Lupton	1/56	Narrow valley	6,220	1,000			None	N
	do.	18GS-124-1	7.25-4.35	7 NNW of Lupton		Broad valley	6,480	85	4			W, Ta
	do.	Arizona Inspection Station	3.80-10.50	Lupton		do.	6,180		4			P, Ta
	do.	ATSF Houck A	12.70-15.40	2 NNW of Houck	5/28	Bank of wash	5,960	210	20 12 10	46 116 210	Perforated 67-124	
	Drilled well	ATSF Houck B	12.70-15.40	2 NNW of Houck	7/26	Bank of wash	5,960	115	16	113	Perforated	
	do.	ATSF Houck C	12.70-15.40	2 NNW of Houck	6/28	do.	5,960	210	20 12 10	63 135 210	Perforated 67-124	
	Drilled well	ATSF Lupton	3.70-10.60	Lupton		Broad valley	6,180		6			W, H
	do.	Box Canyon T.P. 1	2.20-8.15	2 NE of Lupton		Bank of wash	6,210	70 R	6			P
	do.	Box Canyon T.P. 2	2.30-8.20	2 NE of Lupton		do.	6,210	100 R				P
	do.	Cliff Dwelling T.P.	1.55-0.75	4 NE of Lupton		do.	6,220					P

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 18—Continued															
		Alluvium				15 E	11/23/54				S	Yes	Good	39	Infiltration sump for St. Michaels springs.
		Chinle (lower red)				5 E	11/23/54				S	Yes	Good	36	"St. Michaels Spring."
		Alluvium				3 E	11/19/54				S	No	Good	45	
		Chinle (Petrified Forest, upper)				2 R 5 E	11/19/54				D, S, Irr	Yes	Good	48	
		Alluvium				2 R 1 E	11/19/54				D, S	Yes	Good	33	
		Chinle (Shinarump)				3 R 2 E	11/23/54				D, S, Irr	Yes	Good	43	"Jerome Mike Spring."
		Gallup				4 R 1 E	11/23/54				S	No	Good	47	In Black Creek.
		De Chelly				<.5 E	11/24/54				S	No	Good	45	
		Chinle (Shinarump)				1 E	11/23/54				D	Yes	Good	43	"Hunters Point Spring"; piped to trading post.
		Chinle (lower red) and De Chelly				15 E	11/23/54				S	Yes	Good	38	Other aquifer, Chinle (Shinarump).
0	360	De Chelly	LL	230	9/14/53	2-3		25	18	1	D, S	Yes	Good	57	
120	380	do.		462	1/20/54	2-3		13	118	1½	D, S	Yes	Good	61	
		do.		4.1	11/24/54						D, S	Yes	Good	46	
		do.		11.6	11/24/54						D, S	No	Good	46	
		Chinle (Shinarump)		4.7	11/24/54						D	No	Good	46	
0	95 P	Alluvium		79.5	11/ 3/54	3-4		3 R			D, S	Yes	Good	54	Slight salty taste.
		do.									D	No	Good		In pumphouse.
150	200 P	De Chelly		275	11/ 3/54	2-3		10 R		5	D, S	Yes	Good	60	Slight salty taste.
282	98 P	Chinle (Shinarump)	DL	327	12/ 2/54						D	Yes	Good	67	Tegakwitha Mission.
0	87	Alluvium		42.7	10/22/54	3-4		57	33	1	D, S, Irr	Yes	Good		
0	104	do.	DL	41.9	10/22/54			52	33	2¾	Un	Yes	Good	54	
190	210	De Chelly	LL	Dry	1/ 9/56							No			Dry hole; other aquifers, Chinle, Moenkopi, and Supai.
		Chinle (Sonsela)		13	12/ 2/54	3-4					D	No	Fair		
		Alluvium		29.7	11/ 4/54						D	No	Good		
0 118	118 92 P	Alluvium Chinle (Shinarump)		32	6/18/28			275	36	24		No			
0	108	Alluvium	DL	30 R				188	74	24		No			
0	116	do.		32	6/18/28			275	45	24		No			
		Alluvium		19.7	11/ 4/54						D	Yes	Fair	56	Windmill disconnected, hand pump used.
		do.		40	9/14/55						D	Yes	Good	70	
		do.		8	9/14/55						D	Yes	Bad	75	
		do.						4 R			D	Yes	Good	73	

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 18—Continued							
124 con.	Drilled well	D. C. Truck Station	2.40-8.45	2 NE of Lupton		Bank of wash	6,240		6			P
	do.	Indian Trails T.P.	3.65-10.30	0.25 NE of Lupton	/49	do.	6,190	55 R	6			P
	do.	Lupton T.P. 1, 2, 3	4.00-10.20	Lupton		do.	6,170	35 R	20			P
	do.	Mike Kirk's T.P.	0.20-5.85	6 NE of Lupton		do.	6,280		6			N
	do.	Three Hogans T.P. 1	5.70-12.60	3 SW of Lupton		do.	6,220	130 R				P
	do.	Three Hogans T.P. 2	5.65-12.60	3 SW of Lupton		do.	6,220	185 R				P
	do.	Tomahawk T.P.	3.10-9.35	2 NW of Lupton	/53	do.	6,200	96 R	8			P
	do.	White Mtn. T.P.	12.10-14.50	Houck		do.	6,120	300 R				P
	do.	Whiting Bros. Station	3.20-9.40	2 NW of Lupton	/50	do.	6,210	80 R	24			P
	Dug well	18A-123	13.55-15.50	2 WSW of Houck	/39	do.	5,970	20	2 x 6	20	Rock cribbed	N
	do.	18A-124A	13.00-14.80	1 W of Houck		Broad valley	5,980	10	3 x 3	10	Plank cribbed	N
	do.	18A-185A	8.05-0.60	11 NNW of Lupton		Small valley	6,660	10	6 x 3	10	Rock cribbed	N
	do.	18A-186	4.45-9.65	1 NNW of Lupton		Bed of wash	6,250	4.5	4 x 4	4.5	Plank cribbed	Tr
	do.	18A-214	10.55-11.00	6 W of Lupton		Bank of wash	6,200	13	2 x 2	13	do.	N
	do.	18A-310	12.75-1.10	13 NW of Lupton	8/32	Stripped plain	7,170	21 R 10	5	20	Rock cribbed	Tr
	Spring	18A-106	3.75-17.05	6 S of Lupton		Side of mesa	6,430				Collection gallery	C, Tr
	do.	18A-115	11.25-15.80	2 SSE of Houck		Hillside	6,020				Collection well	Re
	do.	18A-124	13.30-15.55	2 SW of Houck		Bed of wash	5,960				None	N
	do.	18A-169	12.20-1.65	12 NW of Lupton		Shallow canyon	7,080				Collection well	C, Tr
	do.	18A-171	8.50-2.90	9 NNW of Lupton	7/32	Small valley	6,640				do.	N
	do.	18A-172	8.55-2.85	9 NNW of Lupton		do.	6,640				None	N
	do.	18A-215	11.95-14.20	1 N of Houck		Hillside	6,090				Collection gallery	C
	do.	18A-217	9.00-12.50	4 ENE of Houck		Small valley	6,240				None	N
	do.	18A-218	6.90-13.15	4 SW of Lupton		do.	6,130				Collection gallery	C, Re
	do.	18A-220A	7.10-5.25	6 NNW of Lupton		do.	6,700				Collection well	
	do.	18A-307	3.55-11.55	1 S of Lupton		Bank of wash	6,220				None	N
	do.	18A-308	3.15-13.95	4 S of Lupton		Side of cliff	6,370				Collection gallery	C
	do.	18K-313	9.20-1.35	11 NNW of Lupton		Small valley	6,670				None	N
	Combination spring	18A-109	7.50-16.65	5 ESE of Houck		Bed of wash	6,150				do.	N
125	Drilled well	18A-207	1.65-15.30	6 NE of Sanders		Small valley	6,030	200 R	8		Open hole	P
	do.	18A-208	3.35-12.70	7 NNE of Sanders		Hillside	6,420	120 R	8			W, Ta, Tr
	do.	18A-210	1.00-12.95	8 NNE of Sanders	5/35	Small valley	6,400	115	6	160		W, Ta, Tr
	do.	18K-335	6.45-16.15	4 NNW of Sanders	11/54	Top of mesa	6,210	748	5	748	Perforated 706-748	W

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
						DISTRICT 18—Continued									
				97.5	9/17/55						D	Yes	Fair	76	Slightly bitter taste.
		Alluvium		17.7	9/15/55						D	Yes	Good	69	
		do.		30	9/15/55						D	Yes	Good	72	Three wells.
		do.		< 1	9/14/55						Un	Yes	Bad	74	Salty taste; water at surface.
		Chinle (lower red)		110	9/14/55			3 R			D	Yes	Fair	72	
		do.		155	9/14/55			3 R		3	D	Yes	Fair	73	Bitter taste.
		Alluvium		50	9/15/55			26 R			D	Yes	Good	73	
		Chinle (Shinarump)		250 R	9/15/55						D	Yes	Good	73	
		Alluvium		30	9/15/55						D	Yes	Fair	70	
		do.		Dry	11/ 3/54						Un	No			Dry and abandoned.
		do.		6.5	12/ 2/54						D	No	Fair	47	
		Chinle (lower red)		Dry	12/ 2/54						Un	Yes	Good	42	Dry and abandoned.
		Alluvium		2.5	11/ 4/54						S	No	Fair	58	
		do.		7.5	12/ 2/54						D, S	Yes	Good	53	
		do.		Dry	12/ 2/54						Un	No			Dry and abandoned.
		Chinle (Owl Rock)				.8 R < .1	5/13/55				D, S	No	Good		
		Landslide and talus				1.5 R .1	11/ 3/54				D, S, Irr	Yes	Good	56	
		Alluvium				4 R 5 E	11/ 4/54				S	No	Good	56	Spring in Rio Puerco river bed.
		De Chelly				1	6/21/49				D, S	Yes	Good	44	
		do.				50 E	12/ 2/54				D, S, Irr	Yes	Good	45	Oak Spring.
		do.				20 E	12/ 2/54				D, S, Irr	No	Good	45	Do.
		Chinle (lower red)				.2 R < .1 E	12/ 2/54				D, S	No	Good	47	
		Chinle (Petrified Forest, lower)				< .1 E	12/ 3/54				S	No	Fair	58	
		Chinle (lower red)				.5 R < .1 E	11/ 4/54				D	No	Good	55	
		De Chelly				.5 E	12/ 2/54				D, S	Yes	Good	40	
		Entrada				< .1 E	11/ 4/54				S	No	Good	54	Private; semipermanent.
		Chinle (Petrified Forest, upper)				.2 E	5/13/55				D	Yes	Good	52	Private.
		Chinle (Shinarump)				5 E	12/ 2/54				D, S, Irr	No	Good	46	
		Alluvium				15 R 15 E	11/ 3/54				D, S	No	Good	56	In White Water Creek.
		De Chelly		170	12/ 1/54						D	No	Good		
		Bidahochi		38	12/ 1/54	3-4					D, S	Yes	Good	43	Burntwater Store well.
40	75	Moenkopi	DL	80 R	/35	3-4		3 R			D, S	No	Fair	46	Plugged; drilled to 1,100 feet; De Chelly and Supai dry.
400	345	De Chelly	LL	705	11/22/54	1-2		6	None	1	D, S	Yes	Fair		Show of Bidahochi water at 85 feet; Moenkopi Formation dry.

Records of ground-water supplies in the Navajo and Hopi

Quadrangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA: Depth of well (feet)	Casing or cribbing: Diameter (drilled well in inches, dug well in feet)	Casing or cribbing: Depth (feet)	Finish	Improvements
					DISTRICT 18—Continued							
125 con.	Drilled well	Big Arrow T.P.	0.10-14.40	2 W of Houck		Broad valley	6,040	204 R				P
	do.	Cedar Point T.P.	2.70-17.20	6 WSW of Houck		do.	5,970	130 R	6			P
	do.	Log Cabin T.P.	1.10-14.80	3 W of Houck		do.	5,980	135 R	6			P
	Dug well	18A-197	9.05-15.95	5 NW of Sanders		Hillside	6,050	6	5 x 5	6	Rock cribbed	C, Tr
	do.	18A-203	2.05-16.75	4 NE of Sanders		Bank of wash	5,860	20	6 x 6		None	Tr
	do.	18A-205	1.75-15.25	5 NE of Sanders		Bed of wash	6,010	8.5	6	8.5	Rock cribbed	N
	do.	18A-206	1.95-14.70	6 NE of Sanders		Bank of wash	6,080	9 R 6	2 x 2	6	Plank cribbed	Tr
	do.	18A-208A	3.60-12.70	7 NNE of Sanders		Small valley	6,400	27.5	4	27.5	Rock cribbed	W, Ta
	do.	18A-209	3.55-12.40	7 NNE of Sanders	2/40	Bed of wash	6,400	15	3 x 3	15	do.	Tr
	do.	18A-209A	3.45-12.35	8 NNE of Sanders		Bank of wash	6,420	9	4	9	do.	Tr
	do.	18K-303	0.75-6.20	2 E of Pine Springs T.P.		Small valley	6,920	3.5	3 x 2	3.5	do.	N
137	Drilled well	18A-112	9.90-0.20	10 ENE of Sanders	5/35	Top of mesa	6,350	314	10 6	40 277		W, Ta, Tr
	do.	18A-113	11.90-3.20	7 ESE of Sanders		Broad valley	6,020		6			W, Re
	do.	18K-331	6.80-4.40	13 ESE of Sanders	10/53	Small valley	6,620	600	10 8	365 442	Open hole	W, Ta, Tr
	do.	Roberts Ranch		11 ESE of Sanders				795		795	Perforated 747-795	
	Dug well	18A-114	11.10-3.40	8 ESE of Sanders		Hillside	6,110	9	6 x 6	9	Plank cribbed	W, Ta
138	Drilled well	18A-116	2.90-1.35	2 ENE of Sanders		Broad valley	5,910		8			W, Tr
	do.	18A-118	3.20-1.30	2 ENE of Sanders		do.	5,900		6			W
	do.	18A-315	0.5-1.5 A	4 E of Sanders		Top of mesa	6,230 E	1,051			None	N
	do.	18K-307	3.4-2.1 A	2 E of Sanders	12/42	Broad valley	5,900 E	130	8	73	Perforated 42-65, gravel packed	W
	do.	18T-341	4.10-0.65	2 NE of Sanders	10/55	do.	6,130	429	8	156	Open hole	W
	do.	ATSF Chambers 1	10.60-4.30	Chambers	3/02	do.	5,750	605	12 9	110 195	Perforated 75-90	
									8 6	285 525		
	Drilled well	ATSF Chambers 2	10.6-4.3 A	0.25 E of Chambers	11/05	Broad valley	5,750 E	303	12	272		
	do.	ATSF Chambers 3	10.60-4.30	0.25 E of Chambers		do.	5,750	91 R	16			P
	do.	Burt McCarroll	13.70-6.15	4 SW of Chambers		do.	5,750	110 R	6			W
	do.	C. A. McCarroll	12.90-5.65	2 SW of Chambers		do.	5,720	100 R	6			W
	do.	Chambers Store	11.05-4.30	Chambers		do.	5,760	85 R	6			W
	do.	Lee well	11.00-2.70	1 N of Chambers	3/53	do.	5,750 E	402			None	N
	do.	McDonald	10.75-3.50	Chambers		do.	5,780	235 R	6			W
	do.	Minyard's Station	12.30-4.80	2 WSW of Chambers		do.	5,760	110 R	6			P
	do.	Ranchers Supply	5.05-2.20	Sanders		do.	5,880	130 R	6			P
	do.	Rooks-Norris Texaco Station	10.50-4.20	0.25 E of Chambers		do.	5,760	60 R	6			P

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Draw-down (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
				DISTRICT 18—Continued											
		De Chelly									D	Yes	Good	72	
		Chinle (Shinarump)		70	9/15/55						D	Yes	Good	72	
		do.		55	9/15/55						D	Yes	Good		
		Bidahochi		Dry	12/ 1/54						Un	No			Dry and abandoned.
		Moenkopi		Dry	12/ 3/54						Un	No			Do.
		Alluvium		7	12/ 1/54						D	No	Fair		
		do.		5	12/ 1/54						D, S	No	Fair	42	
		do.		19	12/ 1/54						S	Yes	Good	42	Burntwater Store stock well.
		do.		11.9	12/ 1/54						D, S	No	Fair	43	Enclosed by wooden fence.
		do.		6.2	12/ 1/54						S	No	Fair	43	
		do.		2	12/ 1/54						D	No	Fair	40	Private.
0	314 P	Bidahochi	DL	185 R	5/10/35	3-4		3 R			D, S	Yes	Good		
		do.		13	11/ 4/54	3-4					D, S	Yes	Good	56	Burkett Ranch.
0	590	do.	LL	453	10/ 5/53	2-3		20	None R	½	D, S	Yes	Good	65	
35	760 P	do.		455 R	6/19/53			12 R		45		No			Chafin well.
		do.		4	11/ 4/54	3-4					S	No	Bad	59	Tolopai Ranch well.
		Alluvium		38.5	11/ 4/54	3-4					D, S	No	Good	57	
		do.		Dry	11/ 4/54						Un	No			Abandoned.
0	1,051 P	Bidahochi, Chinle (lower red, Shinarump), and De Chelly	DL	Dry	8/ 1/35						Un	No			Show of Bidahochi Formation water at 258 feet; dry hole.
0	49	Alluvium		30	12/ 1/42	3-4	12/ 1/42	80 R	50	8	S	No			Hole filled back to 75 feet with sand and gravel; Howell Ranch.
130	250 P	Chinle (Shinarump)	LL	259	10/31/55	2-3		5	41	2½	D, S	No	Fair		Moenkopi and Bidahochi Formations dry.
0 515	90 90 P	Alluvium Chinle (Shinarump)	DL	58 R	3/31/02			14 R	107	24	Un	No			Abandoned in 1902; casing pulled.
0	303 P	Alluvium and Chinle		58 R	11/23/05			75 R	107	24		No			Well caved to 202 feet in December 1907.
		Alluvium		38 R	3/28/56			110 R			D, S	No	Good		ATSF well.
		do.		75 R	3/29/56	3-4		5 R			D, S	No	Good		
		do.		80 R	3/29/56	3-4		5 R			D, S	No	Good		
		do.		45 R	3/28/56			7 R			D	No	Good		
0 298	80 20	Alluvium Chinle (Sonsela)	DL	Dry	3/ /53							No			Dry hole.
		Chinle (Sonsela)		160 R	3/28/56	3-4					D, S	No			Reported salty taste.
		Alluvium		80 R	3/29/56			20 R			D, PS	No	Good		
		Chinle (Shinarump)		70 R	9/15/55						D	Yes	Good		
		Alluvium		30 R	3/ /56			7 R			D, PS	No	Good		

Records of ground-water supplies in the Navajo and Hopi

Quad-rangle	Type of water supply or development	Bureau of Indian Affairs field number or name	Quadrangle location number	Approximate location (miles)	Date developed or completed (month, year)	Topography	Altitude above mean sea level (feet)	CONSTRUCTION DATA				
								Depth of well (feet)	Casing or cribbing		Finish	Improvements
									Diameter (drilled well in inches, dug well in feet)	Depth (feet)		
					DISTRICT 18—Continued							
138 con.	Drilled well	Tom Penlton	8.05-3.50	3 WSW of Sanders		Broad valley	5,820	340 R	6			W
	do.	White Elephant	7.85-3.40	3 WSW of Sanders		do.	5,820	238 R				P
	Spring	18A-120	1.70-0.65	4 ENE of Sanders		Bed of wash	5,980				Collection gallery	C
139	Drilled well	Grimes 1	0.65-6.95	2 NE of Navajo		Broad valley	5,710	100 R	6			P
	do.	Grimes 2	0.50-7.15	2 NE of Navajo		do.	5,700	100 R	6			W, Ta
	do.	Grimes 3	1.25-7.25	2 NE of Navajo		do.	5,720	80 R	6			W
	do.	Navajo Store 1	1.90-8.65	Navajo		do.	5,610	150 R				P
	do.	Navajo Store 2	2.50-7.60	2 NNW of Navajo	/55	do.	5,800	110 R	6			P
	do.	Spurlock 1	1.95-8.35	1 N of Navajo		do.	5,680	120 R	4			W, Tr
	do.	Spurlock 2	1.85-8.30	0.25 N of Navajo		do.	5,680	120 R	4	120		P
	do.	Spurlock 3	2.20-8.15	0.50 NNW of Navajo		do.	5,740	40 R	6	40		W, Tr
	Spring	Jones Spring	0.15-6.00	3 NE of Navajo		do.	5,670				Collection gallery	Ta

Indian Reservations, Arizona, New Mexico, and Utah—Continued

WATER-BEARING STRATA			Log	HYDROLOGIC DATA							Use of water	QUALITY		Temperature (°F)	Remarks
				Static water level		Yield		Bail or pump test							
Depth below land surface to top of stratigraphic unit (feet)	Thickness (feet)	Stratigraphic unit (aquifer)		Depth (feet)	Date measured	Rate (gpm)	Date measured	Rate (gpm)	Drawdown (feet)	Duration of test (hours)		Chemical analysis	Sensory test		
DISTRICT 18—Continued															
		Chinle (Sonsela)		180 R	3/29/56	3-4		8 R			D, S	No	Good	61	Supplies swimming pool.
		do.		165 R	3/29/56			6 R			D, S	No	Good		
		Bidahochi				.8 R .2 E	11/ 4/54				D, S	No	Good	56	
		Chinle (Petrified Forest, upper)		30 R	3/29/56						D	No	Good		
		do.		40 R	3/29/56			6 R			D, S	No	Good		
		do.		35 R	3/29/56	3-4		3 R			D, S	No	Good		
		do.		90.1	3/29/56			35 R			D, PS	No	Good		Old well.
		do.		70	3/29/56			30 R			D, PS	No	Good	62	New well.
		do.		70	3/29/56	3-4		15 R			D, S	No	Good		
		do.		110 R	3/29/56			15 R			D, S	No	Good		
		do.		35	3/29/56	3-4		4 R			D, S	No	Good		
		do.				3 R	3/29/56				D	No	Good		