

LAMBAYEQUE

United States
Department of the Interior
Geological Survey

INCEMMET
BIENES CULTURALES
54.810 04908
INVENTARIO 1996



Hydrologic Data for the Lambayeque Valley,

Northern Peru

Basic Records



Prepared under the auspices of the
United States Agency for International Development
Mission to Peru

Open-File Report

Hydrologic Data for the Lambayeque Valley,

Northern Peru

Basic Records

by

Stuart L. Schoff
United States Geological Survey

and

Juan Luis Sayán M.,
Servicio Cooperativo Interamericano de Irrigación,
Vías de Comunicación, e Industrias



Lima, Peru

Contents

	Page
Introduction-----	1
Location and area-----	3
Topography-----	5
Climate-----	6
General geology-----	7
Economic development-----	8
Irrigation-----	9
Well-numbering system-----	10
Fluctuations of ground-water level-----	11
Chemical composition of ground water-----	14
Logs of wells-----	17
Records of wells-----	21

Illustrations

Page

Figure 1.--Index maps. A, Map of Peru showing the location of Lambayeque Valley. B, Map showing principal features of the area covered in this report (with- in rectangle) and surrounding area-----	3
2.--Map showing the geology and hydrology of Lambayeque Valley-----	3
3.--Hydrograph of average water levels in wells of Negociación Tuman-----	11
4.--Hydrograph of water-level fluctuations in well 32W-1 compared with changes of barometric pressure at the town of Lambayeque-----	11

Tables

Page

Table 1.--Chemical analyses of ground water from wells in the Lambayeque Valley, Department of Lambayeque, Peru-----	15
2.--Logs of representative wells in Lambayeque Valley-----	23
3.--Records of wells in Lambayeque Valley, Department of Lambayeque, Peru-----	43

Hydrologic Data for the Lambayeque Valley,
Northern Peru
Basic Records

by

Stuart L. Schoff

and

Juan Luis Sayán M.

Introduction

This report presents records of wells, drillers' logs of wells, chemical analyses of water, and fluctuations of ground-water level for the Lambayeque Valley, northern Peru. These data were collected by the authors during an investigation of the ground-water resources of the valley in 1955-59, and they are released here in order to make them available in advance of publication of an interpretive report to be based on them.

The investigation was made under the auspices of the United States International Cooperation Administration (later the Agency for International Development) Mission to Perú, of which John R. Neale and Vance Rogers, successively, were country directors. The U. S. Geological Survey in Peru, headed by Frank S. Simons and Wilds W. Olive, successively, and the Servicio Cooperativo Inter-Americano de Irrigación, Vías de Comunicación e Industrias, headed by Charles R. Whipple, were the action agencies under the Mission. The senior author of this report is a member of the Survey, and the junior author was a member of the Servicio.

Location and area

The area covered in this report is about 1,670 square kilometers of the coastal belt of Peru in the Department of Lambayeque, about 650 kilometers northwest of Lima, the national capital (fig. 1). It includes

Figure 1.--Index maps. A, Map of Peru showing the location of Lambayeque Valley. B, Map showing principal features of the area covered in this report (within rectangle) and surrounding area.

a few kilometers of the canyon of the Chancay River, together with the alluvial fan of that river extending to the Pacific shore. One of the distributaries of the Chancay River is the Lambayeque River, from which the area takes its name. Chiclayo, the largest city, has a population of about 46,000 and is the departmental capital. Most of the wells are upstream from Chiclayo, and most of the data in this report therefore relate to that part of the area (fig. 2).

Figure 2.--Map showing the geology and hydrology of Lambayeque Valley.

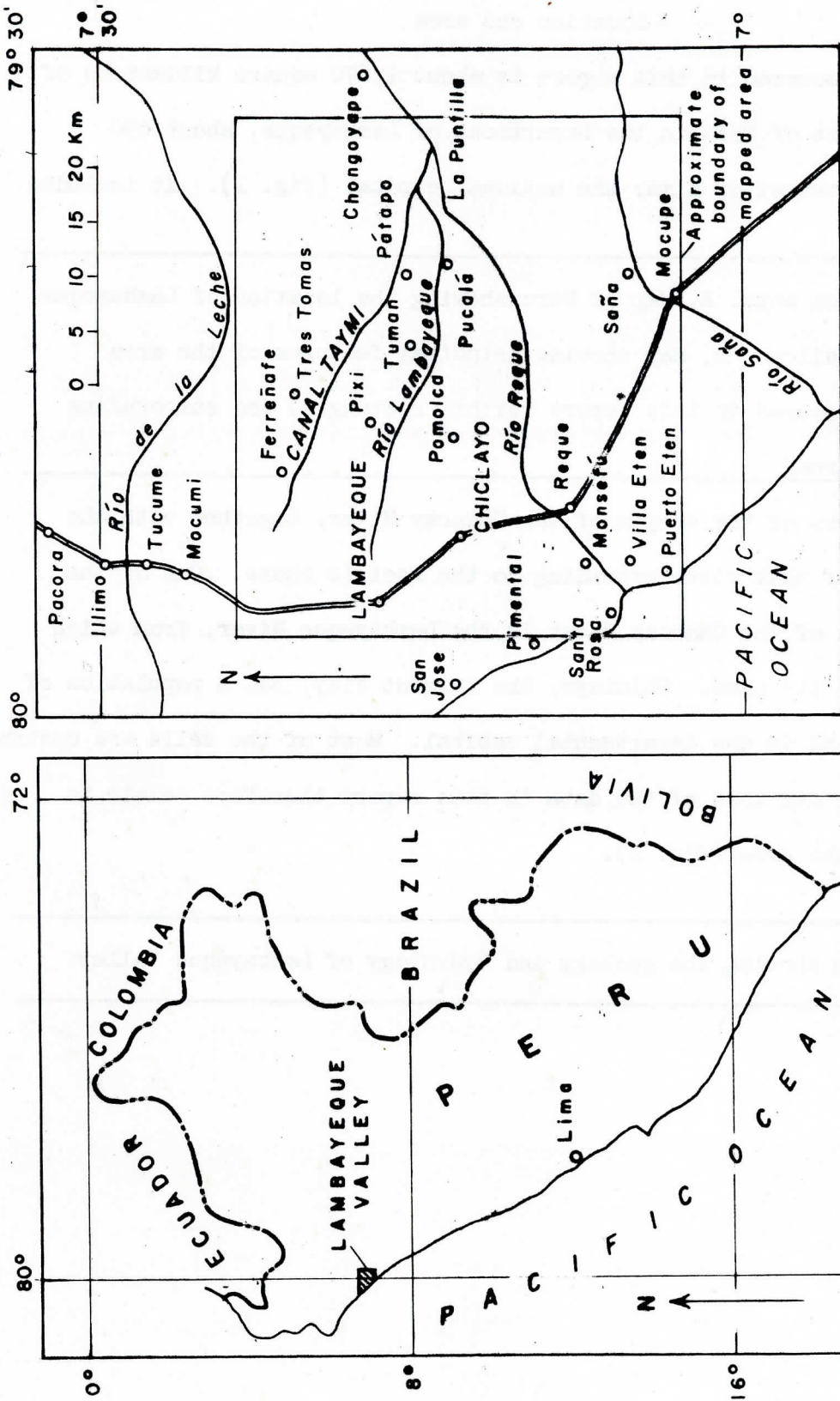


Figure 1.--Index maps. A, Map of Peru showing the location of Lambayeque Valley. B, Map showing principal features of the area covered in this report (within rectangle) and surrounding area.

Topography

The surface of the alluvial fan of the Chancay River is a vast plain that slopes seaward at rates ranging from 1 to 4 meters per 1,000 meters. The fan is bounded on the south by a string of bedrock hills extending nearly to the Pacific shore, but its limit on the north is ill defined. There it merges imperceptibly with the fan of another river, the Leche. The monotony of its surface is relieved here and there by bedrock hills, which project like islands 100 to 150 meters above the general land surface, and in several localities by sand dunes 5 to 10 meters high. The major aquifers of the area are in the alluvial sediments that make up the fan.

The Andean foothills that limit the fan on the east and form the walls of the Chancay canyon are rocky, precipitous, and largely devoid of vegetation. Important ground-water supplies have not been developed in the foothills.

Climate

The climate of the Lambayeque Valley is characterized by low precipitation and relatively high temperatures. The annual precipitation for the years 1950-56, as recorded at the town of Lambayeque by the Ministry of Agriculture, ranged from 3 to 14 millimeters; the maximum in any month was 3.65 millimeters. The mean annual temperature for the same period was 21°C. The warmest month was February, with a mean temperature of 25°C, and the coolest was August, with a mean temperature of 18°C. Evaporative capacity, based on evaporation records for only 34 months, was about 3 millimeters per day.

General geology

Part of the rocks at and near the land surface within the area covered by this report are igneous in origin, part are sedimentary, and part are metamorphic. The rocks range in age from Jurassic to Quaternary. The bedrock generally is dense and relatively impermeable and therefore yields but little water. The principal aquifers are in the alluvium, which is represented in the drillers' logs given elsewhere in this report.

Economic development

The economy of the Lambayeque Valley is dominantly agricultural. Most of the land under cultivation is devoted to sugar cane and rice, although many other crops also are grown. Some of the larger haciendas have their own plants for making sugar and alcohol and for polishing rice.

According to reports of the regional office of the Ministry of Agriculture in an area, including that covered by this report but slightly larger there were 39,512 hectares in cultivation and agricultural products totaled nearly 1,700,000 metric tons during 1956. Sugar cane and rice each were cultivated in areas of about 15,700 hectares. The tonnage of sugar cane in 1956 was more than 1,500,000, and of rice, more than 53,000.

Irrigation

Agriculture in the area is made possible by irrigation. The irrigation water comes principally from the Chancay River, which over a 44-year period had an average annual discharge of 917 million cubic meters (data from Servicio Hidrológico). River water is supplemented by ground water pumped from wells, most of which tap the first 20 meters of alluvium below the land surface. One of the sugar haciendas by 1958 had developed 81 wells for irrigation use. Two other haciendas each had about as many wells, and several haciendas had one or two wells each. New wells still were being drilled when field work was terminated about mid-1958. The total pumpage for 1957, including relatively small amounts of water pumped for municipal and industrial use, is estimated to have been about 81 million cubic meters.

Well-numbering system

The numbers assigned in this report to wells and test holes are keyed to an arbitrary grid of north-south and east-west lines spaced 1 kilometer apart (fig. 2). Each square in this grid is 1 square kilometer. The squares are numbered from west to east and are lettered from north to south. The numbers run from 1 to 53 and the letters include a full alphabet of capitals (except 0, which can be mistaken for zero) plus about half an alphabet of lower-case letters (including l and o). The well and test-hole numbers consist of the number of the square in which the well or test hole is located, followed by the appropriate letter: 15E, for example. A well that falls on a north-south grid line takes the number of the square to the west; and one that falls on an east-west grid line takes the letter of the square to the north. Where only one well or test hole occurs in a square, no further identification is needed. But where several are in the same square, serial numbers are added and these are placed on the map adjacent to the well symbol. If there were three wells in rectangle 15E, they would be numbered 15E-1, 15E-2, 15E-3.

Fluctuations of ground-water level

The ground-water levels were measured periodically in the wells of Negociación Tumbán for about two and a half years. The average of these water levels rose and fell several times over the period of record (fig. 3).

Figure 3.--Hydrograph of average water levels in wells of Negociación Tumbán. Decline during pumping and rise during nonpumping seasons are shown.

The declines occurred during protracted pumping of ground water for irrigation; the rises occurred when pumps were idle.

Short-term fluctuations, registered by an automatic water-stage recorder, are superimposed on a seasonal rise of water level (fig. 4).

Figure 4.--Hydrograph of water-level fluctuations in well 32W-1 compared with changes of barometric pressure at the town of Lambayeque. The barometric fluctuations have been inverted and amplified as if recorded by a barograph employing water instead of mercury.

These fluctuations correspond closely in time with fluctuations of barometric pressure, and are due to changes in load caused by the changes in barometric pressure.

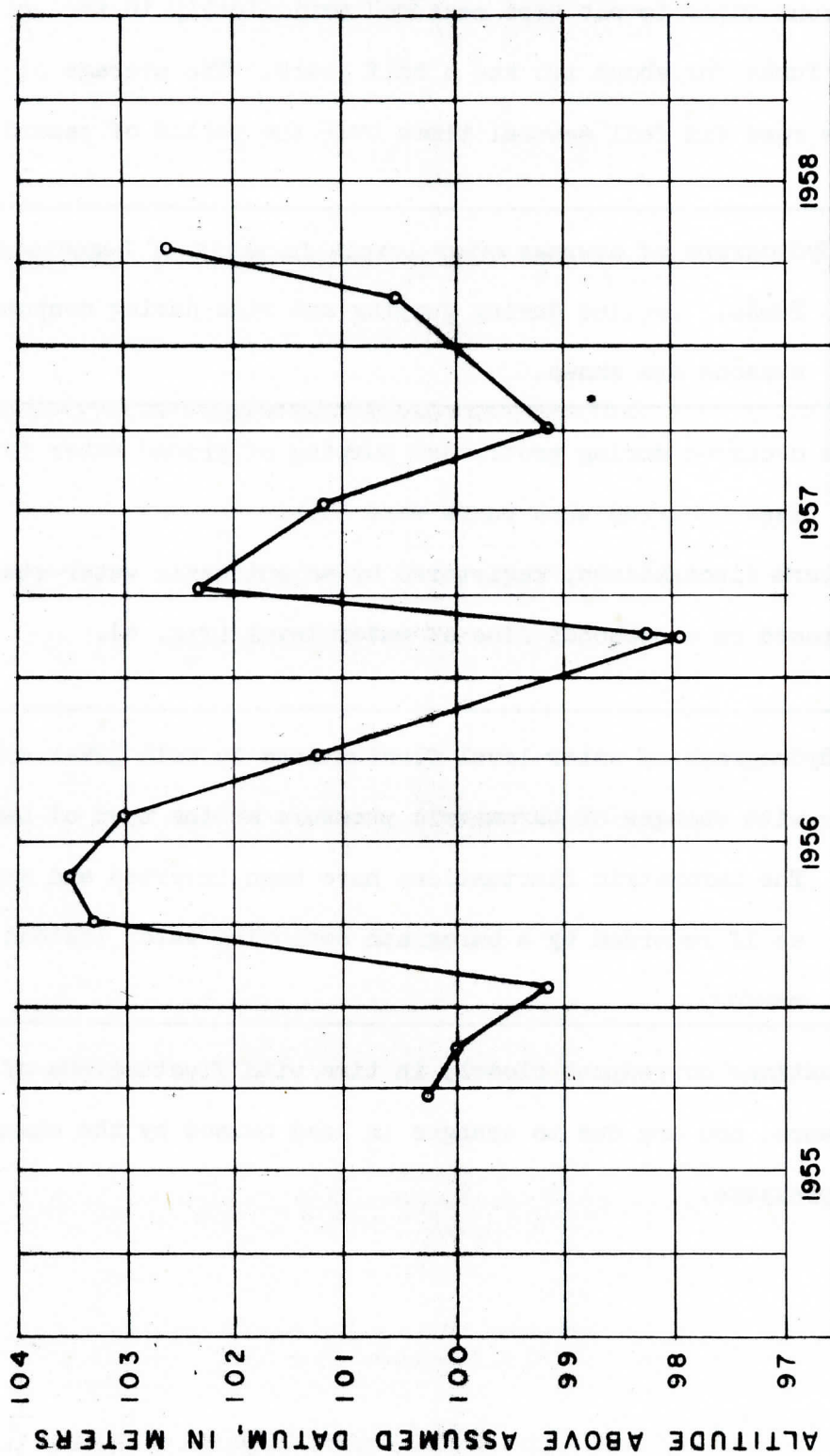


Figure 3.---Hydrograph of average water levels in wells of Negociación Tután.

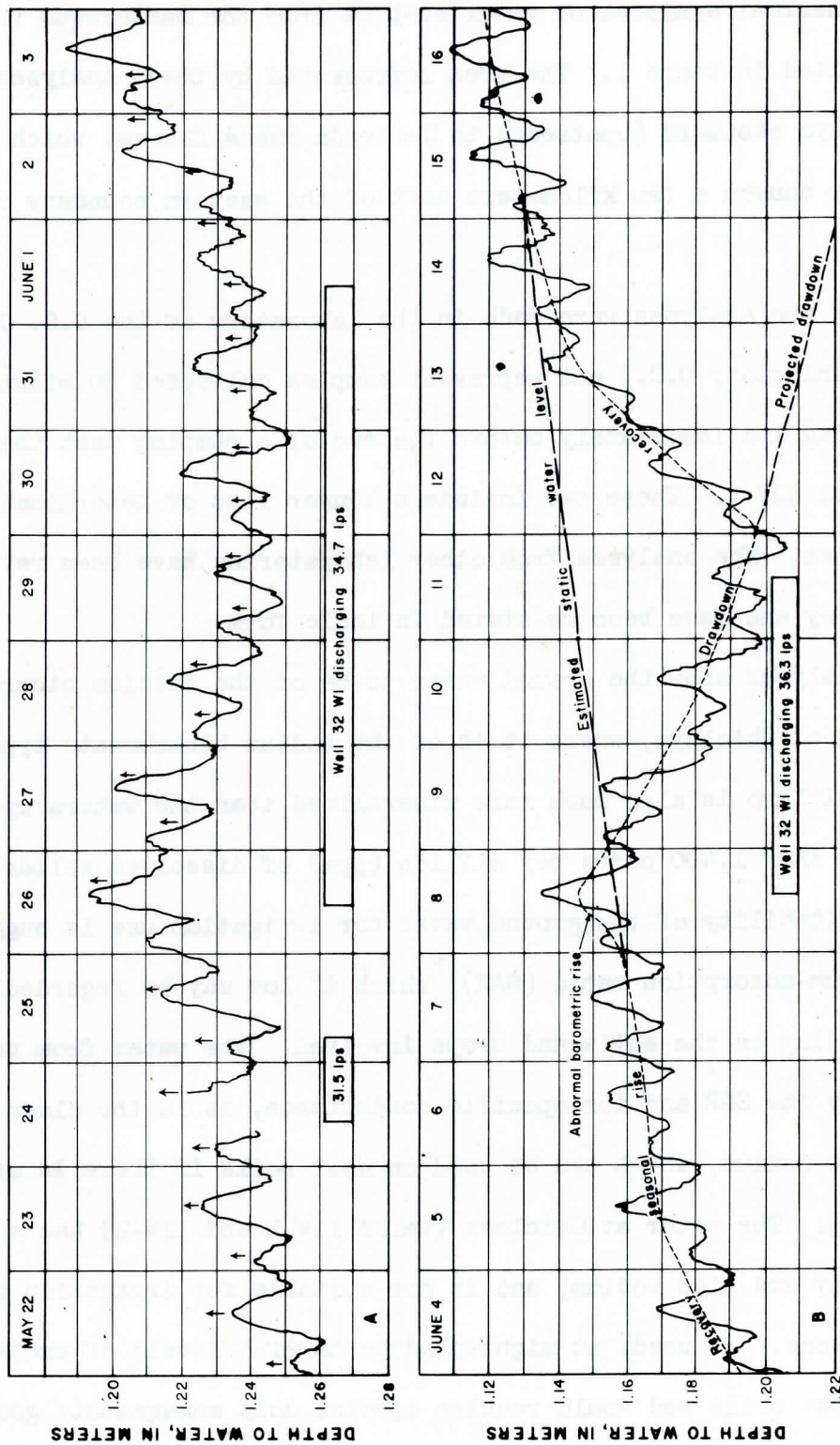


Figure 4.--Hydrograph of water-level fluctuations in well 32W-1 compared with changes of barometric pressure at the town of Lambayeque.

Chemical composition of ground water

Ten chemical analyses of water samples from the Lambayeque Valley are summarized in table 1. The area represented by these analyses extends from Chiclayo eastward (upstream) to Hacienda Huaca Blanca, which is in the Chancay canyon a few kilometers east of the eastern boundary of figure 2.

Two of the analyses were made in the laboratory of the U.S. Geological Survey, Washington, D.C., and represent samples collected 30 minutes after the beginning and immediately before the end of a pumping test that was made in well 32W-1. These two include a longer list of determinations than the rest. The analyses from other laboratories have been reviewed in the Survey and have been re-stated in ionic form.

The analyses show the ground water to be of the calcium bicarbonate type except at Chiclayo, where it is of the sodium bicarbonate type. The water at Chiclayo is also much more mineralized than the waters upstream, having more than 1,400 parts per million (ppm) of dissolved solids.

The suitability of the ground water for irrigation use is suggested by the sodium-adsorption ratio (SAR), which if low may be regarded as favorable, depending on the soils and crops involved. The water from well 32W-1, as judged by its SAR and its specific conductance, is in the class medium salinity-low sodium, which can be used on most soils if there is opportunity for leaching. The water at Chiclayo (wells 11W-1 and 11W-2) has a very high salinity and high sodium, and is not suitable for irrigation under ordinary conditions. If used, it might produce harmful levels of exchangeable sodium in most soils and would require special soil management: good drainage, high leaching, and additions of organic matter.

Notes to accompany Table 1.

(Results in parts per million except as indicated. Well numbers are those used elsewhere in this report, except HB 3 and HB 8, which are wells beyond the map area. Owner: Perulac, Compañía Peruana de Alimentos Lácteos, S. A.; Tumbán, Negociación Tumbán; Pucallá, Sociedad Agrícola Pucallá. Date for USGS sample is date of collection; others, date of analysis. Analysis no.: FCC, Ferrocarril Central; Perm, Permutit Co., New York; SAPL, Servicio de Agua Potable de Lima; USGS, U. S. Geological Survey, Washington, D. C. Limit for domestic use: U. S. Public Health Service Drinking Water Standards, 1946, except nitrate, which is from Maxey, K. F., National Research Council, 1950).

Table 1.--Chemical analyses of ground water from wells in the Lambayeque Valley, Department of Lambayeque, Peru

Well numbers

	11W-1 & -2	11W-1	11W-2	32W-1	32W-1	35S	37S-3	39Q-2	HB 3	HB 8	Limit for domestic use
Owner	Perulac	Perulac	Perulac	Tumán	Tumán	Pucallá	Pucallá	Pucallá	Pucallá	Pucallá	
Depth (m)	27.5, 30	27.5	30	20.2	20.2			24.5	18.3	15.0	
Date	July 1948	2-9-52	2-9-52	5-24-56	6-11-56	2-2-57	2-2-57	2-2-57	9-10-57	10-22-57	
Analysis no.	SAPL	Perm 5062	Perm 5062-1	USGS 52851	USGS 52848	FGC (Pa 14)	FGC (Pa 5)	FGC (JP9)	FGC 108232	FGC 108234	
Silica (SiO ₂)	41			30	30				19	8	
Aluminum (Al)	.2			0	0				{ 4	{ 9.6	
Iron (Fe): dissolved total	.2	0.1	0.1	.01	.01						
				.12	.04						
Manganese (Mn): dissolved total				.06	.63						.3
				.95	.83						
Copper (Cu)				0	0						3.0
Zinc (Zn)				0	0						15.0
Calcium (Ca)	65			77	98	98	118	57	93	75	
Magnesium (Mg)	13			28	15	7.7	9.3	7.8	10	5.6	125
Sodium (Na)	{ 375	396	386	33	29	{ 18	{ 8	{ 14	10	11	
Potassium (K)				.8	.4						
Lithium (Li)				.2	.1						
Bicarbonate (HCO ₃)	486	522	517	411	409	321	378	173	310	233	
Carbonate (CO ₃)	0	0		0	0				0		
Sulfate (SO ₄)	205	250	240	51	16	25	27	31	24	23	250
Chloride (Cl)	299	191	190	11	12	15	7.2	18	11	11	250
Fluoride (F)				.2	.2						1.5
Nitrate (NO ₃)	tr			.1	0	5.2	1.4	6.2	8.1	3.1	44
Phosphate (PO ₄)				0	.1						
Boron (B)				.16	.16						
Dissolved solids	1,470			388	371	367	400	259			a500
Sum				433	402				331	261	
Hardness as CaCO ₃	192	120	120	307	306	263	310	142	273	209	
Noncarbonate	0	0	0	0	0	12	22	32	19	18	
Alkalinity as CaCO ₃				337	335						
SAR	11	16	.15	.8	.7	.5	.2	.5	.3	.3	
Specific conductance				739	733						
pH		7.45	7.5	7.5	7.6	7.0	8.0	7.5	7.2	8.6	

a 1,000 ppm permitted

Logs of wells

The logs of 36 wells in the Lambayeque Valley, given on pages at the end of the text (Table 2), have been selected from 336 logs that were collected during this investigation. Included are logs of the deepest wells drilled in the area to 1958, the deepest well in each of several parts of the area, and wells of special significance, such as the one used as discharge well in a pumping test. The geographic distribution of the selected logs necessarily depends on the availability of logs, which in turn depends partly on the number of wells drilled in different parts of the area. However, no locality having a significant well log lacks representation among the logs selected.

Logs of both test holes and production wells are included. At some sites only a test hole was drilled; at other sites, only a production well was drilled; and at still other sites, both test and production wells were drilled. Where both were drilled at the same site, the logs provide an opportunity for comparing the results of two methods of well drilling, inasmuch as test holes generally were drilled by the hydraulic-rotary method and production wells by the percussion method. To a considerable degree, the logs paired in this way afford a comparison of drillers, also, because different drillers were in charge of the different machines. Several pairs of logs are among those selected for presentation in this report.

The logs are drillers' logs except that for well 17S, which was prepared by the junior author of this report on the basis of drill cuttings saved by the drillers. The drillers' logs have been translated from Spanish to English and have been edited for uniformity in style, but depths and thicknesses, given by the drillers in metric units, have been left in the original units. Where in a few logs the drillers reported in feet, the depths and thicknesses have been converted to the metric system.

Most of the details of casing, screening, and equipping the wells and of testing them are summarized in table 3 of this report, and the headings for the well logs therefore are intended mainly for identification. Each heading begins with the well number, which is keyed to the grid lines of figure 2 as explained in the section on "Well numbering system". Next is the type of well represented; that is, whether it is a test hole, irrigation well, or industrial- or public-supply well. This distinction is important where logs of both a test hole and a production well at the same site (and therefore under the same number) are presented. Then follow the name of the owner, the date of drilling, and the static water level as recorded by the driller.

Production wells were drilled by Agrícola Comercial Industrial, S. A. (ACISA), of Lima; the Servicio Cooperativo Inter-Americano de Producción de Alimentos (SCIPA), of Lima; the Empresa Perforadora, S. A. (EPSA), of Chiclayo; the Sociedad Agrícola Pomalca, on its own property; and the Sociedad Agrícola Pucallá, on its own property. Where owner and driller are the same organization, the driller is not identified in the heading of the log. However, the omission of the driller's name does not necessarily mean that the owning organization did the drilling, for this information is lacking for some of the older wells, including those of Pucallá and Pomalca prior to 1954.

The test holes, except hole 12X, were drilled by the Servicio Cooperativo Inter-Americano de Producción de Alimentos, using the rotary-hydraulic method. As there is only the one exception, the name of the drilling organization is not given in the headings for test-hole logs.

The date of drilling given in the headings of the logs is for some wells merely a repetition of the date given in table 3. For others both the date of starting and the date of completing the well are available, and both are given, as March 19-21, 1955; thus the approximate amount of time required for the drilling operation is suggested.

The drillers mention water in their descriptions of only a very few strata. Many logs contain no mention whatever of water, although the wells yield water abundantly. The authors of this report therefore have identified the probable aquifers from the lithologic descriptions recognizing that the logs are not complete.

Records of wells

The records of 322 wells are given in table 3. The well numbers are keyed to figure 2 as explained in the section headed "Well-numbering system". Only the production wells are included in this table, as the test holes are described as completely as possible in the logs. If the first number for a given square kilometer of figure 2 ends in "-4" ____ 26T-4, for example ____ the numbers ending in "-1", "-2", and "-3" have been assigned to test holes.

Well diameters are inside diameters of the well casing and generally are stated in inches because much of the casing is from United States supplies. Consequently, the well drillers and owners in the area commonly use inches when describing well casing up to diameters of 16 or 18 inches. Dug wells, however, are commonly described in meters. Hence, both inches and meters are given in the column for diameter in table 3.

Nearly all the wells in the Lambayeque Valley are equipped with pumps driven by electric power. Where another kind of power is used, it is indicated in the Remarks column.

Yields of wells as recorded in table 3 are uneven in accuracy because they were not determined under uniform conditions. Some wells were tested by pumping to exhaustion, and the maximum discharge was reported. Some were tested when nearby wells were being pumped, and others when no nearby well was being pumped. Some wells probably would have yielded more if equipped with a larger pump; but many under protracted pumping probably would yield less than is indicated. The reported yields, accordingly, are to be regarded as indicating the approximate capacities of the wells.

The drawdown figures given in table 3 are from the reports made by well drillers to the owners, or from tests made by the owners.

Table 2.--Logs of representative wells in Lambayeque Valley

9B. Irrigation well, Fundo Las Lomas, drilled by EPSA.

Lithologic Description	Thickness (meters)	Depth (meters)
Soil-----	1.8	1.8
Clay-----	6.7	8.5
Gravel with rounded cobbles; water-bearing-----	3.4	11.9
Clay with sand-----	3.3	15.2
Clay-----	11.6	26.8
Sand, water-bearing-----	2.8	29.6
Clay with gravel-----	16.1	45.7
Gravel with sand; water-bearing-----	5.5	51.2
Clay with chunks of cemented sand-----	11.9	63.1

11A. Irrigation well, Hacienda Los Cocos, drilled by EPSA. Static water level, 4.3 m.

Soil-----	3.4	3.4
Clay-----	5.7	9.1
Sand, clayey-----	1.3	10.4
Sand with rounded cobbles; water-bearing-----	1.5	11.9
Clay, sandy-----	7.9	19.8
Clay, with lime-----	2.5	22.3
Gravel, with rounded cobbles, and sand; water-bearing	6.4	28.7
Clay, yellow, with gravel-----	3.0	31.7
Clay, gray, with gravel, rounded cobbles and sand----	7.3	39.0
Gravel, with rounded cobbles and sand; water-bearing-	.9	39.9

Table 2 Cont'd

11A Continued

Lithologic Description	Thickness (meters)	Depth (meters)
Clay-----	6.1	46.0
Clay, with gravel and sand-----	6.4	52.4
Clay with a little sand-----	15.3	67.7
Gravel, with sand and rounded cobbles; water-bearing-----	5.8	73.5
Clay-----	1.5	75.0

11V. Well for institutional supply, Hospital del Seguro Social del Empleado, Chiclayo, drilled by Compañía de Captación de Aguas, in 1953.

Static water level, 2.66 m.

Soil; water-bearing-----	1.8	1.8
Clay-----	3.7	5.5
Clay with gravel; water-bearing-----	1.0	6.5
Gravel, clayey-----	1.2	7.7
Sand, clayey-----	1.0	8.7
Clay; water-bearing-----	2.1	10.8
Gravel, coarse; water-bearing-----	1.5	12.3
Clay with gravel-----	1.7	14.0
Clay-----	3.3	17.3
Clay with gravel-----	1.7	19.0
Clay; water-bearing-----	1.5	20.5
Gravel, clayey-----	6.1	26.6
Clay-----	6.9	33.5
Clay with gravel; water-bearing-----	6.8	40.3

Table 2 Cont'd

11V Continued

Lithologic Description	Thickness (meters)	Depth (meters)
Gravel, clayey-----	1.9	42.2
Clay with gravel; water-bearing-----	8.65	50.85
Gravel, clayey-----	1.15	52.0
Clay; water-bearing-----	6.3	58.3
Gravel, clayey-----	2.1	60.4
Clay; water-bearing-----	1.6	62.0
Gravel, clayey-----	1.7	63.7
Clay-----	.3	64.0

11W-1. Well for industrial water supply, Compañía Peruana de Alimentos Lacteos, S.A., (company well 1), drilled in 1941 by Compañía de Captación de Aguas.

Soil-----	0.9	0.9
Clay, dry and hard-----	.9	1.8
Clay with sand-----	.2	2.0
Clay, hard, dry-----	2.0	4.0
Clay with sand-----	.5	4.5
Clay, yellow, with stones-----	1.1	5.6
Clay, with sand-----	.5	6.1
Clay, with gravel and some water-----	.2	6.3
Conglomerate-----	.4	6.7
Gravel, sand, and some water-----	.6	7.3
Conglomerate, gravel, and stones; water-bearing-----	1.6	8.9
Gravel, sand and some very hard water-----	.8	9.7

Table 2 Cont'd

11W-1 Continued

Lithologic Description	Thickness (meters)	Depth (meters)
Granite, weathered, and sand-----	4.3	14.0
Sand, compact-----	2.3	16.3
Gravel, some very hard water-----	1.5	17.8
Gravel, with hard clay-----	1.9	19.7
Gravel, with very hard water-----	.7	20.4
Clay, pure-----	2.7	23.1
Clay, of which the last 0.1 m is blue-----	4.5	27.6

11W-2. Well for industrial supply, Compañía Peruana de Alimentos Lacteos, S.A., (company well 2), drilled in 1941 by Compañía de Captación de Aguas.

Soil-----	1.0	1.0
Sand-----	1.5	2.5
Clay, hard, brown-----	1.5	4.0
Clay, hard, yellow-----	1.5	5.5
Gravel, clay, some water-----	1.5	7.0
Marl, with sand streaks and detritus from eruptive rock-----	6.5	13.5
Sand, compact-----	.8	14.3
Conglomerate-----	3.2	17.5
Gravel with dirty sand, and water-----	1.7	19.2
Conglomerate-----	2.8	22.0
Clay, pure, dry-----	3.0	25.0

Table 2 Cont'd

11W-2 Continued

Lithologic Description	Thickness (meters)	Depth (meters)
Gravel and clean sand; water rose nearly to the surface-----	1.5	26.5
Sand, dirty, and a little water-----	.5	27.0
Gravel and clean sand; seems to be plenty of water-----	1.5	28.5
Clay, pure, dry-----	.5	29.0
Sand, fine, with a little water-----	1.0	30.0
Gravel and clean sand, water-----	4.5	34.5
Sand, coarse, with clay-----	.6	35.1
Clay, blue-----	-	-

11W-3. Well for industrial supply, Compañía Peruana de Alimentos Lacteos, S.A., (company well 4), drilled in 1953 by Compañía de Captación de Aguas.

Soil-----	1.0	1.0
Clay-----	1.0	2.0
Conglomerate-----	3.2	5.2
Clay, white, with pebbles-----	4.1	9.3
Clay, white-----	2.7	12.0
Conglomerate-----	1.0	13.0
Clay, sandy, grayish-----	2.9	15.9
Conglomerate-----	2.1	18.0
Gravel with sand, clayey-----	3.5	21.5
Conglomerate-----	1.5	23.0
Clay, gray-----	2.0	25.0

Table 2 Cont'd

11W-3 Continued

Lithologic Description	Thickness (meters)	Depth (meters)
Gravel with sand, yellowish; water-bearing-----	5.3	30.3
Clay, grayish-----	1.8	32.1

12X. Test hole drilled before 1954 in search of water for public supply of Chiclayo, 2 km south of city beside Panamerican highway.

Soil-----	3.0	3.0
Clay, and gravel-----	22.0	25.0
Gravel, coarse; water-bearing-----	3.0	28.0
Clay and compact sand-----	16.0	44.0
Sand; water-bearing-----	.5	44.5
Clay-----	19.8	64.3
Gravel, clayey-----	1.0	65.3
Clay-----	2.7	68.0
Gravel, clayey-----	1.0	69.0
Clay-----	7.0	76.0
Gravel, clayey-----	1.5	77.5
Clay-----	18.0	95.5
Gravel, fine; water-bearing-----	2.0	97.5
Clay-----	2.5	100.0

Table 2 Cont'd

16K. Irrigation well, Hacienda Mocopuc, drilled in 1954 by EPSA. Static water level, 1.2 m.

Lithologic Description	Thickness (meters)	Depth (meters)
Soil-----	3.0	3.0
Clay with sand-----	2.2	5.2
Gravel with rounded cobbles; water-bearing-----	1.8	7.0
Clay with a little calcareous material-----	6.1	13.1
Gravel with rounded cobbles; water-bearing-----	5.5	18.6
Clay with a little gravel-----	1.5	20.1
Gravel with rounded cobbles and sand; water- bearing-----	3.7	23.8
Clay with sand-----	17.7	41.5
Gravel and sand; water-bearing-----	2.1	43.6
Clay with gravel-----	6.7	50.3
Cobbles, rounded with gravel and sand; water- bearing-----	13.7	64.0
Clay with a little gravel-----	2.1	66.1

17N. Irrigation well, Hacienda Capote, drilled in 1955 by EPSA. Static water level, 4 m.

Soil-----	3.0	3.0
Clay with fine gravel-----	2.8	5.8
Sand with a little clay; water-bearing-----	1.8	7.6
Sand, with rounded cobbles; water-bearing-----	.9	8.5
Sand, clayey-----	2.2	10.7
Clay-----	1.5	12.2

Table 2 Cont'd

17N Continued

Lithologic Description	Thickness (meters)	Depth (meters)
Gravel, fine, with sand; water-bearing-----	3.0	15.2
Gravel, fine with rounded cobbles and a little clay; water-bearing-----	3.7	18.9
Clay-----	7.9	26.8
Gravel and broken rock; water-bearing-----	1.5	28.3
Clay and a little gravel-----	9.8	38.1
Gravel and rounded cobbles; water-bearing-----	4.0	42.1
Clay-----	2.4	44.5
Gravel with clay-----	7.9	52.4
Cobbles, rounded, and coarse sand; water-bearing---	3.1	55.5
Clay with gravel-----	15.2	70.7

17S. Irrigation well, Hacienda Vista Alegre, drilled in 1957 by EPSA.

Clay-----	4.6	4.6
Gravel with clay-----	1.5	6.1
Gravel with coarse sand; water-bearing-----	1.2	7.3
Clay with a little fine gravel-----	1.8	9.1
Sand, clayey-----	3.1	12.2
Gravel, fine, with sand; water-bearing-----	2.1	14.3
Gravel, coarse; water-bearing-----	1.5	15.8
Gravel, fine, with a little clay; water-bearing---	.7	16.5
Gravel, coarse, with clay-----	1.8	18.3
Clay-----	6.1	24.4
Clay, white, with a little sand-----	1.8	26.2

Table 2 Cont'd

17S Continued

Lithologic Description	Thickness (meters)	Depth (meters)
Sand with clay-----	1.2	27.4
Gravel, coarse, with clay-----	6.7	34.1
Gravel, fine; water-bearing-----	1.0	35.1
Clay-----	3.9	39.0
Sand, clayey-----	4.6	43.6
Clay-----	.6	44.2
Clay, sandy-----	.3	44.5
Sand, coarse, clayey-----	1.2	45.7
Sand, fine, clayey-----	1.5	47.2
Gravel, fine; water-bearing-----	5.8	53.0
Gravel, fine to coarse; water-bearing-----	1.0	54.0
Gravel, fine; water-bearing-----	.3	54.3
Gravel; water-bearing-----	5.1	59.4
Gravel, medium; water-bearing-----	1.0	60.4
Gravel with sand; water-bearing-----	1.5	61.9
Gravel, fine; water-bearing-----	6.1	68.0
Clay-----	2.4	70.4

19K. Irrigation well, Hacienda Mocopuc, drilled in 1955 by EPSA. Static water level, 2 m.

Soil-----	3.0	3.0
Clay with a little gravel and chunks of calcareous material-----	7.1	10.1
Cobbles, rounded, and gravel and sand; water-bearing-----	4.2	14.3

Table 2 Cont'd

19K Continued

Lithologic Description	Thickness (meters)	Depth (meters)
Clay with a little gravel-----	20.5	34.8
Clay with a little gravel and sand-----	18.5	53.3
Gravel with rounded cobbles and sand; water- bearing-----	21.7	75.0
Clay-----	3.4	78.4

19M. Well for public water supply at Ranchería San Miguel, Negociación Tumán, drilled by ACISA January 28-February 1, 1955. Static water level, 4.1 m.

Sand, fine; water-bearing-----	9.0	9.0
Sand, fine, with a little clay; water-bearing-----	2.0	11.0
Clay with fine and coarse sand-----	2.0	13.0
Gravel with coarse sand and a little clay; water- bearing-----	2.0	15.0
Clay with a little coarse sand-----	6.7	21.7

21G. Irrigation well, Hacienda Mamape, drilled in 1955 by EPSA. Yield only 8 lps, hence abandoned for irrigation but used for watering garden. Static water level, measured by authors of this report, 3.49 m., January 25, 1956.

Gravel and clay-----	18.0	18.0
Gravel, some clay, and a little water-----	11.9	29.9
Gravel, fine, and clay-----	7.3	37.2
Gravel, coarse and fine, and some clay; water- bearing-----	3.9	41.1

Table 2 Cont'd

21G Continued

Lithologic Description	Thickness (meters)	Depth (meters)
Clay-----	18.9	60.0
Gravel and clay-----	5.5	65.5
Sand and clay-----	3.4	68.9

24R. Test hole, Negociación Tután, drilled October 16-November 4, 1954;
water loss in drilling, 120 gal. Static water level, 1.22 m.

Soil, very clayey-----	0.61	0.61
Clay-----	3.96	4.57
Gravel, fine and coarse, with fine and coarse sand and layers of clay; water-bearing-----	3.36	7.93
Gravel and white clay-----	7.01	14.94
Gravel, coarse, with white clay-----	11.88	26.82
Clay with gravel-----	36.58	63.40
Boulders, weathered, with clay and a little gravel-----	19.51	82.91
Clay with weathered boulders-----	19.20	102.11

25T-1. Well for public water supply at headquarters, Negociación Tután,
drilled by ACISA January 24-26, 1955. Static water level, 2.95 m.

Soil-----	4.0	4.0
Clay with a little fine sand-----	3.0	7.0
Clay with fine gravel-----	2.5	9.5
Gravel, coarse, and fine to coarse sand with a little clay; water-bearing-----	8.0	17.5

Table 2 Cont'd

25T-1 Continued

Lithologic Description	Thickness (meters)	Depth (meters)
Clay with little fine gravel-----	5.7	23.2

25T-3. Test hole, Negociación Tuman, drilled September 21, 1954; water loss in drilling, 0 gal. Static water level, 2.74 m.

Soil, sandy-----	1.52	1.52
Clay-----	8.54	10.06
Gravel, fine to coarse, cemented by somewhat sandy clay-----	2.74	12.80
Gravel, coarse, with considerable clay-----	9.15	21.95

27V-5. Test hole, Negociación Tuman, drilled February 9-11, 1954. Static water level 1.83 m.

Soil, sandy-----	1.52	1.52
Sand, fine to coarse, a little fine to medium gravel, and a very little coarse gravel; water- bearing-----	5.19	6.71
Clay with a little gravel and sand-----	1.52	8.23
Gravel, fine to coarse, and a little fine to coarse sand; water-bearing-----	4.57	12.80
Gravel, coarse, with clay-----	5.49	18.29

Table 2 Cont'd

27V-5. Irrigation well, Negociación Tután, drilled by ACISA March 5-9, 1955. Static water level, 2.55 m.

Lithologic Description	Thickness (meters)	Depth (meters)
Soil-----	3.0	3.0
Sand, fine, with a little clay-----	7.0	10.0
Gravel, with coarse sand, a little clay; water- bearing-----	4.3	14.3
Sand, coarse to fine with a little clay; water- bearing-----	3.7	18.0
Clay with a little fine gravel-----	4.6	22.6

29Q. Test hole, Negociación Tután, drilled August 16-17, 1954; water loss in drilling, none. Static water level, 2.44 m.

Soil-----	1.22	1.22
Sand, fine, with clay-----	1.52	2.74
Clay, yellow, with thin layers of fine gravel with a little sand-----	2.14	4.88
Clay, white, with smooth fine to coarse gravel, well compacted-----	12.49	17.37
Gravel, coarse, with a very little fine gravel, all cemented and compacted with fine sand-----	2.44	19.81
Gravel with clay-----	3.05	22.86

Table 2 Cont'd

29Y-4. Test hole, Negociación Tután, drilled March 30-31, 1955; water loss in drilling, 0 gal. Static water level, 0.91 m.

Lithologic Description	Thickness (meters)	Depth (meters)
Soil-----	1.83	1.83
Sand, cemented, with traces of clay-----	.30	2.13
Clay-----	3.66	5.79
Clay with cemented sand-----	4.57	10.36
Gravel, fine to coarse, cemented with clay-----	4.58	14.94
Gravel, coarse, and a little fine gravel; with clay-----	5.48	20.42

29Z-2. Irrigation well, Negociación Tután, drilled by ACISA April 19-20, 1955. Static water level, 6.80 m.

Soil-----	4.0	4.0
Clay with a little fine sand-----	4.0	8.0
Sand, fine, with a little clay; water-bearing-----	4.0	12.0
Sand, fine, and gravel; water-bearing-----	1.0	13.0
Gravel, coarse, fine to coarse sand, and a little clay; water-bearing-----	1.0	14.0
Gravel, coarse, with a little clay; water-bearing--	4.0	18.0
Clay, white, with a little fine gravel-----	4.7	22.7

Table 2 Cont'd

30U-1. Test hole, Negociación Tuman, drilled September 15-16, 1954; water loss in drilling, 230 gal. Static water level, 1.52 m.

Lithologic Description	Thickness (meters)	Depth (meters)
Soil-----	1.52	1.52
Clay, gray-----	.92	2.44
Sand, fine, cemented-----	2.74	5.18
Clay, gray-----	1.83	7.01
Clay with fine to coarse gravel-----	3.35	10.36
Gravel, medium to coarse, with a little fine sand, and thin layers of clay; water-bearing----	2.75	13.11
Gravel, with clay-----	7.31	20.42

30U-1. Irrigation well, Negociación Tuman, drilled by ACISA December 23, 1954-January 3, 1955. Static water level, 2.30 m.

Sand with a little clay-----	10.0	10.0
Sand, fine; water-bearing-----	2.0	12.0
Gravel, fine, coarse sand, a little clay; water- bearing-----	3.0	15.0
Sand, coarse with clay; water-bearing-----	2.5	17.5
Clay-----	5.2	22.7

Table 2 Cont'd

30W-4. Irrigation well, Negociación Tumán, drilled by ACISA June 14-20, 1955. Static water level, 0.70 m.

Lithologic Description	Thickness (meters)	Depth (meters)
Soil-----	4.8	4.8
Clay with fine to coarse sand and a little gravel-----	8.1	12.9
Clay with fine sand-----	3.1	16.0
Clay, yellow with a little fine gravel-----	5.5	21.5

30X-3. Test hole, Negociación Tumán, drilled September 14-15, 1953.

Soil-----	6.40	6.40
Sand, cemented; water-bearing-----	2.74	9.14
Clay-----	1.53	10.67
Gravel, fine, and clay-----	3.35	14.02
Sand and fine gravel; water-bearing-----	.61	14.63
Gravel, fine, and clay-----	1.53	16.16

30X-3. Irrigation well, Negociación Tumán, drilled by ACISA April 2-5, 1955.

Static water level, 2.80 m.

Soil-----	5.0	5.0
Clay-----	5.0	10.0
Clay with fine sand-----	2.0	12.0
Sand, fine with a little gravel and clay; water- bearing-----	2.0	14.0
Gravel with a little coarse sand and clay; water-bearing-----	4.0	18.0
Clay, white, with a little fine gravel-----	4.7	22.7

Table 2 Cont'd

32V-6. Irrigation well, drilled in 1940. Static water level, 1.5 m.

Lithologic Description	Thickness (meters)	Depth (meters)
Clay-----	0.5	0.5
Sand; water-bearing-----	4.5	5.0
Clay-----	3.7	8.7
Gravel, coarse sand; water-bearing-----	8.3	17.0
Clay and gravel-----	2.5	19.5

32W-1. Irrigation well, Negociación Tumán, drilled in 1940. Static water level, 1.2 m.

Clay-----	3.6	3.6
Clay and sand-----	3.4	7.0
Gravel and coarse sand; water-bearing-----	11.0	18.0
Clay and gravel-----	2.2	20.2

32W-2. Irrigation well, Negociación Tumán, drilled by ACISA April 17-20, 1954. Static water level, 0.97 m.

Soil-----	4.5	4.5
Sand, fine, with clay-----	3.3	7.8
Clay with fine gravel-----	2.2	10.0
Gravel with clay; water-bearing-----	5.0	15.0
Clay, sandy, yellow-----	5.5	20.5

Table 2 Cont'd

32Y-1. Irrigation well, Negociación Tumbán, drilled by ACISA March 10-16, 1954. Static water level, 3.08 m.

Lithologic Description	Thickness (meters)	Depth (meters)
Soil-----	6.1	6.1
Sand, gravel, and clay; water-bearing-----	3.4	9.5
Gravel and coarse sand; water-bearing-----	7.0	16.5
Gravel and clay; water-bearing-----	5.0	21.5

33W-2. Irrigation well, Negociación Tumbán, drilled in 1940. Static water level, 1.0 m.

Sand-----	6.0	6.0
Clay-----	2.0	8.0
Sand, gravel; water-bearing-----	6.5	14.5
Clay and gravel-----	.5	15.0
Sand and gravel; water-bearing-----	2.0	17.0
Clay with gravel-----	3.0	20.0

36Q. Irrigation well, Sociedad Agrícola Pucalá, drilled in 1955.

Soil, clay and sand-----	16	16
Sand, fine-----	1	17
Gravel, fine and coarse, and sand; water-bearing-----	1	18
Gravel and coarse sand; water-bearing-----	2	20
Clay-----	2	22
Gravel, fine, and clay-----	23	45

Table 2 Cont'd

36T-1. Irrigation well, Sociedad Agrícola Pucalá. Static water level, 6.3 m.

Lithologic Description	Thickness (meters)	Depth (meters)
Soil-----	13.0	13.0
Sand, coarse, and fine gravel; water-bearing-----	4.5	17.5
Sand, fine; water-bearing-----	3.0	20.5
Sand, fine, and fine gravel; water-bearing-----	4.0	24.5
Sand, fine, and clay-----	2.0	26.5
Clay-----	3.0	29.5

37W-1. Irrigation well, Sociedad Agrícola Pucalá. Static water level, 3.5 m.

Soil, clay, and sand-----	7.5	7.5
Gravel and coarse sand; water-bearing-----	2.0	9.5
Gravel, fine, and cobbles and sand; water- bearing-----	4.3	13.8
Gravel and coarse sand; water-bearing-----	6.2	20.0
Gravel, fine, and clay-----	2.75	22.75
Clay-----	52.25	73.0

47T-1. Irrigation well, Sociedad Agrícola Pucalá, drilled in 1956. Static water level, 6 m.

Soil-----	6.0	6.0
Sand, coarse, and gravel; water-bearing-----	2.0	8.0
Sand and fine gravel; water-bearing-----	3.5	11.5
Sand, fine; water-bearing-----	2.5	14.0

Table 2 Cont'd

47T-1 Continued

Lithologic Description	Thickness (meters)	Depth (meters)
Clay and fine sand-----	2.0	16.0
Clay, green-----	2.0	18.0

50T-3. Irrigation well, Sociedad Agrícola Pomalca, drilled in 1955.

Soil-----	8	8
Broken rock-----	2	10
Gravel, rounded; water-bearing-----	8	18
Clay-----	4	22

51N. Irrigation well, Sociedad Agrícola Pucalá. Static water level, 3 m.

Soil, clay, and sand-----	3.0	3.0
Sand, fine; water-bearing-----	1.0	4.0
Gravel; water-bearing-----	2.0	6.0
Gravel and coarse sand; water-bearing-----	2.0	8.0
Gravel; water-bearing-----	1.0	9.0
Gravel and coarse sand; water-bearing-----	.8	9.8
Gravel; water-bearing-----	1.2	11.0
Gravel and coarse sand; water-bearing-----	1.0	12.0
Clay-----	6.0	18.0

Notes to accompany Table 3

Well number: see "Well numbering system" for explanation.

Owner: Agric, agrícola; H, hacienda; Ho, hospital; N, Negociación;
P, Perulac, Compañía Peruana de Alimentos Lácteos, S.A.;
Soc, sociedad

Type: D, drilled

Diameter: in, inches; m, meters

Principal water-bearing bed, character: G, gravel; S, sand; C, clay

Static water level: All prior to Sept. 1955 and those having only
month-and-year dates are from reports by driller or owner.

The rest were measured by the authors.

Method of lift: C, centrifugal; Cy, cylinder; S, submergible; T, turbine

Drawdown, duration: h, hours

Use of water: A, abandoned; D, domestic; H, hospital; I, industrial;
Ir, irrigation; P, public supply

Remarks: hp, horsepower; DWL, dynamic water level

Table 3.--Records of wells in Lambayeque valley, Department of Lambayeque, Peru

Well no.	Owner	Date completed	Type	Depth (m)	Diameter	Principal water-bearing bed		Screen		Static water level		Method of lift	Yield		Drawdown		Remarks		
						Depth to top (m)	Thickness (m)	Character	Depth to which cased (m)	Total length (m)	Inclusive depths (m)		Depth below measuring point (m)	Date	Rate (lps)	Date of measurement		Amount (m)	Duration of test (h)
9K	Servicio Público		D	30	12 in	18	8	G			2.3			16			P		
9B	Enrique Baca		D	63.1	16 in	45.7	5.5	G,S	63.1	14.9	36.3-51.2			40			Ir		
11A	Gabidia		D	75	16 in	22.3	6.4	do	75	17.9	22.3-73.5	5.19	1-25-56	T	50		Ir		
11V	Ho del Empleado	1953	D	64	17 in	10.8	1.5	G	64			2.66	Dec. 1953	T	10	11-18-53	30	5	H
11W-1	Perillac	1941	D	27.5	15 in	16.3	1.5	do						T	7	May 1941	4		I
11W-2	do	1941	D	30	15 in	27	1.5	G,S						T	7	do	15		I
11W-3	do	1953	D	32.1	17.15 in	25	5.3	do	32	9.2	17.8-29.8			T	5				I
11W-4	do	1952	D	37.5	17 in	17.2	2.3	do	37.5	4.4	17.2-30.3			T	7				I
12V	Air Base	1956	Dug	5.5	1.5 m			C				2.57	2-19-57	C					P
12W-1	do		Dug	15	2 m			S,G				2.50	2-19-57						Ir
12W-2	do	1948	Dug	5.7	1.5 m	3	3	S				2.78	2-19-57	C					P
12X	Servicio Público		D	100	17.12 in	25	3	G				2.80			16				A
16K	H Mooyuc	1954	D	64.18	16 in	50.3	13.7	G,S	64.18	23.2	39.8-63.0	1.22	1954	T	65		42.98		Ir
17W	H Capote	1955	D	70.7	16 in	38.1	4	G		32.0	26.8-68.0	4.66	4-28-58	T	70				Ir
17S	H Vieste Alegre	1957	D	70.4	15 in	53	15	do						None					Ir
18V	Soc Agric Pomalea	old	D		12 in									C	6.5				Ir
19K	H Mooyuc	1955	D	78.4	16 in	53.3	21.7	G,S	78	34.0	41.0-75.0	2	Aug. 1954	T	45		40		Ir
19M	N Tumán	1955	D	21.7	15 in	13	2	G,S	19.7	3.1	12.9-16.0	4.3	Feb. 1955	Cy	6.4	9-14-55	11.75	24	P
19V-1	Soc Agric Pomalea	old	D		12 in									S	6.5				Ir
19V-2	do	old	Dug		1.5 m									C					Ir
19W-1	do	old	Dug											C	6.5				Ir
19W-2	do	old	Dug		30.5 in									C	6.5				Ir
20H	H Mameye	1947	Dug	18	4 m									T	23				D
20V-1	Soc Agric Pomalea	1957	D		15 in									None					Ir
20V-2	do	1957	D		15 in									None					Ir
20V-3	do	1957	D		15 in									None					Ir
20V-4	do	1957	D		15 in									None					Ir
20V-5	do	1957	D		15 in									None					Ir
20V-6	do	1957	D		15 in									None					Ir
20V-7	do	1957	D		15 in									None					Ir
20V-8	do	1957	D		15 in									None					Ir
20V-9	do	old												None					Ir
20V-10	do	old												None					Ir
20V-11	do	old												None					Ir
20V-12	do	old												None					Ir
20V-13	do	old	Dug	8.5	1.58 m														Ir
20V-14	do	old	D		12 in									S					A
20V-15	do	old	D		12 in									S	6.5				Ir
																			Power disconnected

Power disconnected

Table 3.--Records of wells in Lambayeque Valley, Department of Lambayeque, Peru cont'd

Well no.	Owner	Date completed	Type	Depth (m)	Diameter	Principal water-bearing bed			Depth to which cased (m)	Screen		Static water level		Method of lift	Yield		Drawdown		Remarks
						Depth to top (m)	Thickness (m)	Character		Total length (m)	Inclusive depths (m)	Depth below measuring point (m)	Date		Rate (lps)	Date of measurement	Amount (m)	Duration of test (h)	
21G	H Manape	1955	D	68.3	16 in	18	11.9	G				3.49	1-25-56	None	8			A	Casing pulled
21Q	N Tunán	1955	D	20	15 in													A	
21S	do	1955	D															A	
21V-1	Soc Agric Pomalca	1957	D		15 in									None				Ir	
21V-2	do	1957	D		15 in									None				Ir	
21V-3	do	1957	D		15 in									None				Ir	
21V-4	do	1957	D		15 in									None				Ir	
21V-5	do	1957	D		15 in									None				Ir	
22T	do	1957	D	25	15 in									None				Ir	
22V-1	do	1956	D		15 in									S	35			Ir	
22V-2	do	1957	D		15 in							1.95	7-6-57	None				Ir	
22V-3	do	old	D		1.44 m							2.24	7-6-57	C				A	Power disconnected
22V-4	do	1957	D		15.5 in							1.30	7-6-57	None				Ir	
22V-5	do	old	D		12 in									S	6.5			Ir	
22V-6	do	old	Dug		1.32 m									S				A	Power disconnected
23T-1	do	1957	D	25	15 in	14	2	G, S		3.0	14.0-17.0			None		10	7-6-57	Ir	
23T-2	do	1957	D	25	15 in									None				Ir	
23V-1	do	old	D									2.22	7-6-57	C				Ir	DWL, 6.28 m 7-6-57
23V-2	do	1957	D		15 in									S	12			Ir	
23V-3	do	1957	D		15 in							2.13	7-6-57	None				Ir	
23V-4	do	1956	D		15 in									S	12			Ir	DWL, 9.98 m 7-6-57
23V-5	do	1957	D		15 in							2.09	7-6-57	None				Ir	
23V-6	do	old	D		12 in							2.27	7-6-57	C				A	
23V-7	do	1956	D		14.5 in									S	20			Ir	
23V-8	do	1957	D		15.5 in							2.19	7-6-57					Ir	
23V-9	do	old	D		15.5 in													Ir	
23V-10	do	1957	D		15.5 in							1.43	7-6-57	None				Ir	
23V-11	do	1957	D		15.5 in							1.43	7-6-57	None				Ir	
23V-12	do	1957	D		15 in							2.14	7-6-57	None				Ir	Power disconnected
24V-1	do	old	D											C				A	
24V-2	do	old	D		15 in													A	
24V-3	do	1957	D		15 in									T	40			Ir	
24V-4	do	old	D	12	12 in									S	7.5			Ir	
24V-5	do	1956	D		15 in									S	7.5			Ir	
24V-6	do	1957	D		15 in									S	19			Ir	
24V-7	do	old	D		12 in									S	7.5			Ir	
24V-8	do	1956	D		14 in									S	18			Ir	DWL, 5.27 m 7-6-57
24V-9	do	old	D											C	3			Ir	

Table 3.--Records of wells in Lambayeque Valley, Department of Lambayeque, Peru cont'd

Well no.	Owner	Date completed	Type	Depth (m)	Diameter	Principal water-bearing bed			Depth to which cased (m)	Screen		Static water level		Method of lift	Yield		Drawdown		Remarks
						Depth to top (m)	Thickness (m)	Character		Total length (m)	Inclusive depths (m)	Depth below measuring point (m)	Date		Rate (lps)	Date of measurement	Amount (m)	Duration of test (h)	
24W-10	Soc Agric Pomalca	1957	D		15 in									S	20				Ir
24W-11	do	old	D		12 in									S	4				Ir
24W-12	do	1957	D	16.7	15 in							3.54	2-16-57	S					Ir
24W-13	do	1957	D		15 in							2.03	7-6-57	None					Ir
25W-1	N Tumbán	1955	D	23.2	15 in	9.5	8	G,S	22.12	9.0	9.0-18.0			None	24	1-29-55	14	36	P
25W-2	Soc Agric Pomalca	old	D		16 in							2.84	7-6-57	None					A
25W-3	do	old	Dug		1 m							5.20	1-26-56						Ir
25W-4	do	old	Dug	16	3.03 m									T					DMU, 10.18 m 1-26-56
25W-5	do		D									2.80	4-27-58	S					Ir
25W-6	do		Dug		2.96 m							2.46	4-27-58	S					Ir
25W-7	do		D		16 in							3.96	4-27-58	S					Ir
25W-1	do	old	Dug	15.7	3 m									T					DMU, 10.78 m 1-26-56
25W-2	do		D		15 in							5.40	4-27-58						Ir
25W-3	do	old	Dug	13	2.97 m									T					DMU, 9.89 m 1-26-56
25W-4	do		D		15 in							3.20	1-26-56						Ir
25W-5	do	1957	D		16 in									S					Ir
25W-6	do	1957	D		16 in							5.80	4-27-58	S					Ir
26W-4	N Tumbán	1954	D	22.7	15 in	14.5	4.5	G,S	22.12	7.0	15.0-22.0	3.87	9-24-55	S	37	10-19-55	11.55	24	Ir
27W-2	do	1955	D	23.5	15 in	14	4	do	22.12	7.8	4.5-18.0	3.36	11-17-55	S	19	1-25-55	2.15	36	Ir
27W-2	do	1955	D	22.7	15 in	9.5	3.5	do	22.12	9.5	9.5-19.0	2.69	9-26-55	S	39	10-29-55	8.15	24	Ir
27W-5	do	1955	D	22.6	15 in	10	8	do	22.12	8.2	10.7-19.6	2.65	9-26-55	S	45	6-16-55	11.2	24	Ir
27W-6	do	1955	D	22.5	15 in	6.5	2	S,G	22.12	9.5	8.5-18.0	2.60	9-26-55	S	15	3-5-55	11.7	36	Ir
27W-7	do	1955	D	29.5	15 in	16.5	2.5	G,S	23.16	9.5	9.5-19.0	2.15	11-17-55	S	46	3-9-55	10.2	36	Ir
27W	do	1956	D	25	15 in	15	3.5	G	24.66	14.0	6.0-20.0	3.66	10-6-56	S	28	5-28-56	7.45	52	Ir
28W	do	1955	D	25	15 in	17	3.5	do	24.56	6.4	14.1-20.5	1.66	9-28-55	None	2	1-27-55	15.2	36	A
28W-1	do	1954	D	21	15 in				19.68	4.6	14.9-19.5	2.89	1-20-56		11	8-13-54	12.45		A
28W	do	1954	D	22.7	15 in				22.12	7.0	13.5-20.5	2.50	9-28-55	S	4	12-13-54	10.2	36	Ir
28W-1	do	1956	D	23.5	15 in	3.97	7.62	S	22.81	12.0	9.5-21.5	3.70	9-7-56	S	19	9-13-56			Ir
28W-2	do	1956	D	25	15 in	12	7	G,S	24.66	13.0	6.0-19.0	1.05	5-29-56	S	54	5-24-56	9.15	51	Ir
28W-2	do	1955	D	20.2	15 in							6.90	11-16-55	None					A
29W-1	do	1955	D	23.2	15 in	1.4	0.9	S	22.12	7.0	15.0-22.0	1.38	9-28-55	None	4	1-21-55	13.55	36	A
29W-1	do	1954	D	22.8	15 in	17	1.0	S	22.12	4.1	15.9-20.0	2.39	9-26-55	S	16	Jan. 1958	3.55		Ir
29W-2	do	1954	D	20.2	15 in	13	4.50	S,G	19.68	5.0	14.5-19.5	2.50	7-18-54	None	10.5	7-18-54	15.8	48	A
29W-3	do	1954	D	22.7	15 in				22.12	6.6	13.9-20.5	3.82	9-26-55	None	10	8-2-54	11.5		A
29W-4	do	1954	D	23	15 in	12.5	5.50	S,G	22.12	7.6	12.9-20.5	3.40	9-26-55	S	20	11-9-55	8.2	24	Ir
29W-1	do	1954	D	24.3	15 in	12.5	6.50	G,S	23.56	7.0	13.0-20.0	3.23	9-28-55	S	24	6-30-55	10.2	24	Ir
29W-2	do	1956	D	23.17	15 in	12.8	3.05	S,G	22.21	7.9	13.1-21.0	4.06	2-15-57	S	22	10-23-56	8.1	36	Ir
29W-3	do	1956	D	23.47	15 in	9.45	5.18	do	22.57	19.4	2.6-22.0	3.33	10-12-56	S					Ir

Low yield, casing pulled

Table 3.--Records of wells in Lambayeque Valley, Department of Lambayeque, Peru cont'd

Well no.	Owner	Date completed	Depth (m)	Diameter	Principal water-bearing bed			Screen		Static water level		Method of lift	Yield		Drawdown		Remarks
					Depth to top (m)	Thickness (m)	Character	Depth to which cased (m)	Total length (m)	Inclusive depths (m)	Depth below measuring point (m)		Rate (lps)	Date of measurement	Amount (m)	Duration of test (h)	
294-4	N Tuman	1956	23.47	15 in	13.11	7.62	S,G	22.21	11.0	9.7-20.7	2.97	S	66	11-8-56	7.4	41	Ir
294-6	do	1956	24.08	15 in	15.24	2.44	do	23.24	16.8	4.7-21.5	1.74	S	32	9-22-56			Ir
294-7	do	1956	25.45	15 in	16.80	3.90	G	24.66	18.6	5.4-24.0	1.71	S	70	4-24-56	10.1	60	Ir
294	do	1956	23.47	15 in	6.1	7.62	S,G	22.21	9.9	11.6-21.5	1.20	S	28	11-12-56			Ir
297-2	do	1955	25.7	15 in				24.42	10.3	12.0-22.5	1.77	None	11	10-22-55	13.85	24	A
297-7	do	1955	22.7	15 in	14	4.50	S,G	22.12	5.5	13.0-18.5	3.72	S	30	4-25-55	10.6	48	Ir
297-8	do	1955	23.2	15 in	12.5	5.50	G,S	22.12	6.1	11.9-18.0	6.77	S	15	11-26-55	8.2	24	Ir
292-1	do	1954	22	15 in	12.5	2	do	19.82	12.0	7.0-19.0	6.66	S	45	3-5-55	5	24	Ir
292-2	do	1955	22.7	15 in	12	6	S,G	22.12	6.6	11.9-18.5	8.30	S	15	10-25-55	2.65	24	Ir
300-1	do	1955	22.7	15 in	10	5	do	22.12	5.5	12.4-17.9	1.77	S	10.5	1-12-55	14.3	48	A
300-3	do	1955	22.7	15 in	15	2.5	do	22.12	6.0	12.0-18.0	1.64	None					A
300-1	do	1954	23	15 in	12	2	G	22.12	7.6	12.9-20.5	3.69	S	17	Feb. 1958	11.45		Ir
300-2	do	1955	20.7	15 in	12	2	do	19.68	4.0	12.0-16.0	2.79	S	28	Feb. 1958	9.4		Ir
300-3	do	1954	20.6	15 in				19.68	5.6	13.9-19.5	2.52	S	10	Feb. 1958	5.1		Ir
300-4	do	1954	22.3	15 in				22.12	7.8	12.7-20.5	2.29	S	31	8-5-55	10.3		Ir
300-5	do	1954	22.3	15 in	15.1	1.0	G,S		4.1	15.4-19.5	3.0	None	8	11-6-54	15.45	36	A
300-6	do	1954	20.6	15 in	15	5	do	19.68	8.1	9.9-18.0	3.95	S	14	Feb. 1958	5		Ir
300-7	do	1954	24	15 in	12	6	do	22.12	6.9	13.6-20.5	4.27	S	16	Feb. 1958	8.65		Ir
300-1	do	1939	19	17 in	7.55	4.85	do	18	4.9	7.5-12.4	1.42	T	18				Ir
300-3	do	1956	26	15 in	9.50	13.50	G	24.66	14.0	9.0-23.0	.30	S	43	5-10-56	16.15	48	Ir
300-4	do	1955	21.5	15 in				19.68	10.0	9.0-19.0	1.39	S	45	10-28-55	10.15	24	Ir
300-2	do	1956	26.5	15 in	20	2.50	G	24.66	10.0	12.0-24.0	.35	S	36	5-2-56	11.4	48	Ir
300-3	do	1955	22.7	15 in				21.96	6.1	11.9-18.0	2.62	S	16	4-15-55	10	48	Ir
300-4	do	1955	22.7	15 in				22.12	8.6	10.4-19.0	2.54	S	20	5-24-55	10	24	Ir
300-5	do	1955	22.7	15 in	13	5	G,S	22.12	6.0	12.0-18.0	3.28	S	81	4-2-55	9	96	Ir
301-1	do	1955	22.7	15 in				22.12	16.8	3.9-20.7	3.56	None	13	7-18-55	15	36	A
301-4	do	1955	22.7	15 in	12	5	S,G	22.12	6.1	11.9-18.0	8.03	None	7	6-4-55	9.55	24	A
310	do	1954	22.7	15 in	18	1	G	22.12	5.8	13.7-19.5	2.46	S	28	10-3-55	11.5	24	Ir
310-2	do	1954	23.6	15 in				23.34	10.2	12.5-22.7	4.04	S	17	Feb. 1958	10.7		Ir
310-3	do	1954	23	15 in				22.12	7.0	13.0-20.0	3.79	S	12	Feb. 1958	8.2		Ir
310-4	do	1954	20	15 in				19.35	4.3	15.1-19.4	4.67	S	9	Feb. 1958	5.9		Ir
310-1	do	1954	23	15 in	8	5.50	G,S	22.12	12.5	9.2-21.7	4.25	S	28	Feb. 1958	5		Ir
310-2	do	1954	21.85	15 in	10	7.80	S,G	20.9	13.7	7.0-20.7	1.68	S	34	Feb. 1958	7.58		Ir
310-3	do	1954	21.0	15 in	9.2	1.3	S	19.68	9.1	10.4-19.5	1.37	S	18	Feb. 1958	10.5		Ir
310-4	do	1954	20.0	15 in				19.68	9.8	9.7-19.5	1.66	S	27	Feb. 1958	4		Ir
310-5	do	1954	20.7	15 in				20.29	5.0	15.0-20.0	2.55	S	12	Feb. 1958	8		Ir
310-6	do	1954	22.5	15 in	16	2	G	22.12	7.5	14.5-22.0	3.73	S	23	Feb. 1958	8.65		Ir
310-7	do	1954	20.8	15 in	16	2.5	G,S	19.68	8.1	11.4-19.5	2.97	S	37	Feb. 1958	14.32		Ir

Low yield, casing pulled

Table 3.--Records of wells in Lambayeque Valley, Department of Lambayeque, Peru cont'd

Well no.	Owner	Date completed	Type	Depth (m)	Principal water-bearing bed			Depth to which cased (m)	Screen		Static water level		Yield		Drawdown		Remarks		
					Diameter	Depth to top (m)	Thickness (m)		Character	Total length (m)	Inclusive depths (m)	Depth below measuring point (m)	Date	Method of lift	Rate (lps)	Date of measurement		Amount (m)	Duration of test (h)
31W-8	N Tumbán	1939	D	22	21.17 in	12	9	G,S	22	8.1	12.2-20.3	2.13	4-5-56	T	55			Ir	
31W-9	do	1940	D	21.3	21.17, 15 in	11	8	do	21.30	9.5	9.3-18.8	2.14	4-5-56	T	18			Ir	
31W-10	do	1955	D	22.5	15 in	12	6	do	22.12	6.3	11.7-18.0	3.58	9-24-55	S	11	Feb. 1958	4	Ir	
31X-2	do	1955	D	22.5	15 in	11	7	do	22.12	5.5	13.5-19.0	1.53	9-24-55	S	11	Feb. 1958	15	Ir	
31X-3	do	1954	D	20.7	15 in	17	2.5	G	19.68	4.6	14.9-19.5	1.70	9-27-55	S	16	Feb. 1958	7.9	Ir	
31X-5	do	1956	D	26	15 in	13	9	do	24.66	11.0	11.0-22.0	0.36	8-3-56	S	57	5-7-56	14.65	Ir	
31X-6	do	1955	D	22.2	15 in	12	5.5	G,S	21.96	6.1	11.9-18.0	2.49	9-24-55	S	20	10-1-55	9.7	Ir	
31X-7	do	1954	D	23	15 in	15	3.3	G	22.12	7.9	12.1-20.0	1.70	9-27-55	S	32	Feb. 1958	6.65	Ir	
31X-8	do	1954	D	22.8	15 in	15	4.5	G,S	22.12	6.4	15.6-22.0	1.66	9-24-55	S	11	Feb. 1958	3	Ir	
31X-9	do	1954	D	22.3	15 in	13	2.5	do	22.12	7.0	13.0-20.0	4.23	9-24-55	S	27	10-7-55	8.2	Ir	
31Y	do	1955	D	22.7	15 in	10	8.5	do	22.12	7.6	11.4-19.0	4.87	9-27-55	S	17	10-7-55	9.4	Ir	
32R	Soc Agric Pucallá	1956	D	23.53	18 in	12	8	S,G	23.53			8.3	1956		12			P	
32V-1	N Tumbán	1954	D	22.5	15 in	7.8	7.2	S	22.12	14.8	7.0-21.8	3.50	9-26-55	S	28	Feb. 1958	5	Ir	
32V-2	do	1954	D	20.5	15 in				19.68	9.7	9.6-19.3	4.06	9-26-55	S	16	Feb. 1958	4.5	Ir	
32V-4	do	1954	D	21.06	15 in				19.68	8.5	11.0-19.5	3.50	9-26-55	S	28	Feb. 1958	5	Ir	
32V-5	do	1954	D	20.3	15 in				19.68	8.5	11.0-19.5	4.01	9-28-55	S	37	Feb. 1958	4	Ir	
32V-6	do	1940	D	19.5	21.17 in	8.70	8.30	G,S	19.50	8.0	19.1-17.1	2.85	4-5-56	T	30	14		Ir	
32W-1	do	1940	D	20.2	17.15 in	7	11	do	20.20	10.5	7.1-17.6	2.04	4-5-56	T	30	13		Ir	
32W-2	do	1954	D	20.50	15 in	10	5	G	19.68	11.6	7.9-19.5	3.69	9-26-55	S	23	Feb. 1958	5	Ir	
32W-3	do	1954	D	20.50	15 in				19.68	11.6	7.9-19.5	2.97	9-26-55	S	24	Feb. 1958	6.5	Ir	
32W-4	do	1939	D	24.5	17.15, 12 in	10	5	G	24.50	12.2	9.0-24.2	2.59	4-5-56	T	23	16		Ir	
32W-5	do	1939	D	19.05	21.17 in	11	6.6	S,G	17.85	5.2	11.8-17.0	2.68	4-5-56	T	25			Ir	
32W-6	do	1939	D	26.4	21.17 and 14 1/2 in	12.5	6	do	26.40	15.4	9.5-26.0	3.32	4-5-56	T	14			Ir	
32W-7	do	1940	D	19.5	21.17 in	8.7	8.3	G,S	19.50	8.1	9.0-17.1	2.77	4-5-56	T	13	15.5		Ir	
32W-8	do	1954	D	20.30	15 in	14.5	3.5	do	19.68	5.5	14.0-19.5	1.93	9-24-55	S	19	Feb. 1958	4.5	Ir	
32W-9	do	1954	D	23.0	15 in	16.5	2	do	22.12	11.5	9.0-20.5	4.48	11-16-55	S	25	10-18-55	9.4	Ir	
32W-10	do	1954	D	27.6	15 in	16	2	S	27	12.0	10.0-22.0	2.52	9-28-55	S	15	6-14-55	8.7	Ir	
32X-1	do	1955	D	25	15 in	12.5	6.5	G	22.12	6.3	12.7-19.0	1.82	9-24-55	S	19	Feb. 1958	7	Ir	
32X-2	do	1954	D	22.7	15 in	14	4.5	G,S	22.12	6.4	13.1-19.5	1.42	9-24-55	S	11	Feb. 1958	8.15	Ir	
32X-3	do	1954	D	29.31	15 in	9.5	11	do	24.56	11.0	9.0-20.0	2.16	9-27-55	S	11	Feb. 1958	4.65	Ir	
32X-4	do	1955	D	22.70	15 in	9.5	8	do	22.12	8.0	10.0-18.0	1.82	9-24-55	S	20	Feb. 1958	4	Ir	
32X-5	do	1954	D	23.1	15 in	17.00	1.50	do	22.73	7.5	15.0-22.5	3.51	2-16-55	S	15	Feb. 1958	10	Ir	
32X-6	do	1954	D	25.7	15 in	15.00	1.00	G	23.95	10.0	10.0-20.0	1.96	9-27-55	S	15	Feb. 1958	5.5	Ir	
32X-7	do	1954	D	23.2	15 in	16.00	2.50	do	22.12	5.5	14.5-20.0	3.84	9-24-55	S	12	Feb. 1958	2	Ir	
32X-8	do	1954	D	23	15 in	15.50	1.50	do	22.12	9.5	10.5-20.0	4.12	9-24-55	S	16	Feb. 1958	2.75	Ir	
32X-9	do	1954	D	23.8	15 in				22.73	10.1	11.9-22.0	1.91	9-24-55	S	11	Feb. 1958	2.8	Ir	
32X-10	do	1955	D	22.5	15 in				22.12	6.5	12.5-19.0	1.76	9-24-55	S	5	Feb. 1958	10	Ir	

DWI, 11-27 m 9-28-55

Table 3.--Records of wells in Lambayeque Valley, Department of Lambayeque, Peru cont'd

Well no.	Owner	Date completed	Type	Depth (m)	Diameter	Principal water-bearing bed			Screen		Static water level		Method of lift	Yield		Drawdown		Remarks
						Depth to top (m)	Thickness (m)	Character	Depth to which cased (m)	Total length (m)	Inclusive depths (m)	Depth below measuring point (m)		Rate (lps)	Date of measurement	Amount (m)	Duration of test (h)	
32X-11	N Tumbán	1954	D	23	15 in	17	1	G	22.12	8.7	11.3-20.0	4.20	9-24-55	S	10	Feb. 1958	2.6	Ir
32X-12	do	1954	D	24.2	15 in	14	6	S	22.12	4.6	14.9-19.5	2.36	9-24-55	S	23	Feb. 1958	3.3	Ir
32Y-1	do	1954	D	21.5	15 in	9.5	7	G,S	19.72	8.8	10.7-19.5	3.94	9-24-55	S	39	Feb. 1958	5	Ir
32Y-2	do	1955	D	22.3	15 in	14.30	3.7	do	22.12	7.0	12.0-19.0	5.54	9-27-55	S	23	Feb. 1958	2.2	Ir
33V-1	do	1954	D	20.5	15 in				19.68	5.8	13.5-19.3	5.64	11-16-55	S	17	Feb. 1958	8.5	Ir DML, 15.5 m 9-26-55
33V-2	do	1940	D	19.7	21,17 in	10.00	5	G	19.70	7.7	10.0-17.7	2.35	4-5-56	T	19			Ir DML, 16.76 m 9-29-55
33W-1	do	1940	D	26.7	21,17,14 in	9	9	S,G	26.70	13.9	10.5-26.4	2.05	4-5-56	T	45			Ir DML, 16.76 m 9-29-55
33W-2	do	1940	D	20	21,17 in	8	6.5	do	19.5	7.2	10.7-17.9	2.71	4-5-56	T	35			Ir DML, 15.24 m 9-29-55
33W-3	do	1940	D	19.3	21,17 in	10	7	G,S	19.3	5.5	12.5-18.0	2.29	4-5-56	S	24			Ir DML, 15.24 m 9-29-55
33W-4	do	1940	D	19.5	21,17 in	9	8.5	do	19.5	8.4	9.1-17.5	2.58	4-5-56	T	60		13.72	Ir DML, 15.24 m 9-29-55
33W-5	do	1954	D	26.8	15 in				24.56	9.5	11.0-20.5	1.85	9-24-55	S	34	Feb. 1958	6.60	Ir DML, 15.24 m 9-29-55
33X	do	1954	D	23	15 in	15	2	G	22.12	7.0	13.0-20.0	1.77	9-24-55	S	12	Feb. 1958	8.50	Ir
34U-1	Soc Agric Pucallá		Dug															Ir
34U-2	do		Dug															Ir
34Y	Soc Agric Pucallá		D		15 in									T				Ir
34Z-1	do	old	D		11.5 in									None				A
34Z-2	do	old	D		15 in									T				Ir
34Z-3	do	old	D		15 in									None				A
34Z-4	do	old	D		15 in									T				Ir
34Z-5	do	old	D		15 in									T				A
35S	Soc Agric Pucallá		Dug									5.50	7-8-57	T				Power disconnected
35T-1	do		Dug											T	235			Ir
35T-2	do		Dug												112			Ir
35V	do		D	18.50		8	10.5	G,S				4.5			50			Ir
35W-1	do		D	21.29		6	12	do				4			45			Ir
35W-2	do		D	18.30								4.8			65			Ir
35W-3	do		Dug												28			Ir
35X	do		D	21.29		7	11	G,S				4.5			20			Ir
36Q	do	1955	D	45	15.5 in	17	3	do				19.68	4-27-58	None	50			Ir
36R	do		Dug															A
36S-1	do		Dug															A
36S-2	do	1956	D	24	17.5 in	12.5	8	S	24			7.50	1956		90			Ir
36S-3	do		Dug												70			Ir
36T-1	do	1956	D	29.50	15.25 in	13	11.5	S,G	29.5			6.30	1956		90			Ir
36T-2	do		Dug												80			Ir
36U	do		Dug	17.40								3.5			80			Ir
36W-1	do		D															Ir
36W-2	do		D															Ir

Low yield

Table 3.--Records of wells in Lambayeque Valley, Department of Lambayeque, Peru cont'd

Well no.	Owner	Date completed	Type	Depth (m)	Principal water-bearing bed			Screen			Static water level		Method of lift	Yield		Drawdown		Remarks
					Diameter	Depth to top (m)	Thickness (m)	Character	Depth to which cased (m)	Total length (m)	Inclusive depths (m)	Depth below measuring point (m)	Date	Rate (lps)	Date of measurement	Amount (m)	Duration of test (h)	
36W-3	Soc Agric Pucallá	1956	D	17.50	15.25 in	9	4.5	S,G	17.84			3	1956	20		13.34		DWL, 16.34 m
36X	do		Dug	14.40								9.5		34				Ir
37P	do	1955	D	36	16 in	24	6	G,S				21	1955					Ir
37Q-1	do		D	68	12 in							16	1955					Ir
37Q-2	do	1958	D	27.06	18 in	18.5	5.50	S,G										Ir
37R	do	1915	Dug		7.3 x 3.8 in													Ir
37S-1	do		D															Ir
37S-2	do		D															Ir
37S-3	do		Dug															Ir
37T	do	1957	D	21.06	18 in	8	8.5	S,G				8	1957	50				Ir
37V	do		D	14.20		6	6	G,S				6		50				Ir
37W-1	do		D	73		7.5	12.5	do				3.5		40				Ir
37W-2	do		D	18		7.8	8.05	do				3.5		63				Ir
37W-3	do		D	19.8		8.5	11.30	do				4.5		35				Ir
37W-4	do		D	23.48		8	15	do				6		80				Ir
37X	do		D	20.78		9	11.75	do				5		110				Ir
38P	do		D	50+	15.4 in													A
38Q-1	do	1958	D	30.06	18 in	21	8	S,G				17	1958					Ir
38Q-2	do	1957	D	26.95	18 in	15.5	3	S				13	1957	70		7		DWL, 20 m
38Q-3	do	1957	D	26.91	18 in	14	10	S,G				12.3	1957	70		9.5		DWL, 21.8 m
38R	do	1956	D	24.18	18 in	18.5	4.5	do				11	1956	53		11.7		DWL, 22.7 m
38S	do		D											25				Ir
38U	do		Dug	12.20								4.75		70				Ir
38W	do		Dug	14.90										60				Ir
39R-1	do	1956	D	24.0	18 in	12	4	S,G	24.0			9.30	1956	50				Ir
39R-2	do	1956	D	24.5	17.5 in	10	2.5	S	24			6	1956	35				Ir
39S-1	do		Dug															A
39S-2	do		D	23	12 in	10.8	9.2	S				8						Low yield
39U	do		Dug	12.5								2.5		60				Ir
39W	do		D	21.25		9	11.75	G,S				6		100				Ir
40P	do	1958	D															A
40Q	do	1958	D															Ir
40R	do	1957	D	24	18 in	9	3.50	S				6.7	1957	28		14.8		DWL, 21.5 m
40T	do		D	23	12 in	9.5	7	do				9						Ir
40U	do		D	20.7		8	6.5	G,S				5.5		80				Ir
40V-1	do		Dug	8.6								4.75		50				Ir
40V-2	do		D	20.85		11	3	G,S				5		50				Ir
41S	do		Dug											52				Ir

Table 3.--Records of wells in Lambayeque Valley, Department of Lambayeque, Peru cont'd

Well no.	Owner	Date completed	Type	Depth (m)	Diameter	Principal water-bearing bed			Depth to which cased (m)	Screen		Static water level		Method of lift	Yield		Drawdown		Use	Remarks
						Depth to top (m)	Thickness (m)	Character		Total length (m)	Inclusive depths (m)	Depth below measuring point (m)	Date		Rate (lps)	Date of measurement	Amount (m)	Duration of test (h)		
41U-1	Soc Agric Pucallá		Dug	11.32								2			100				Ir	
41U-2	do		D	15.16		4.5	9.75	G,S				4.5			34				Ir	
41U-3	do		Dug	16.50								2.5			57				Ir	
41V	do		D	22		5	11	G,S				5			78				Ir	
42U	do		Dug	10.68								3.25			50				Ir	
43S	do		Dug												45				P	
43T	do		Dug																A	
44U	do		D	18.10	16 in	4	9	G,S				4			20				Ir	
45U	do		D	18	16 in	8	5	do				8			17				Ir	
46U-1	do		D	15	16 in	6	6	do				4							Ir	
46U-2	do		D	18	16 in	8	6	do				8			20				Ir	
47S	do	1956	D	21	15.25 in				21			4	1956		25				Ir	
47U-1	do	1956	D	18.0	17.5 in	6	8	S,G	18.0			6	1956		23		9.5		Ir	DWL, 15.30 m
47U-2	do	1956	D	17.0	18 in	7	5.5	S	17.0			5	1956		45				Ir	
47U-3	do		D	20.89	16 in	6	8.25	G,S	20.0			6			24				Ir	
47U-4	do	1956	D	17.0	17.5 in	6	6	S,G	17.0			4	1956		40		9		Ir	DWL, 13 m
47U-5	do		D	17.69	16 in	7	4.75	G,S				6.5			43				Ir	
47U-6	do		D	17.20	16 in	8	4.75	do				8			20				Ir	
48U-1	Soc Agric Pomalca	1955	D		15 in							5.55	1-24-56	S					Ir	
48U-2	do	1955	D		15 in							5.29	1-24-56	S					Ir	
48U-3	do	1955	D		15 in							5.31	1-24-56	S					Ir	
48U-4	do	1955	D		15 in							5.54	1-24-56	S					Ir	
48V	do	1955	D		15 in							5.90	1-24-56	S					Ir	
49T-1	do	1955	D	22	15 in	10	8	G	21	8.0	10.0-18.0	6.22	1-24-56	S	20				Ir	
49T-2	do	1955	D	24	15 in	10	8	G	23	8.0	10.0-18.0	6.24	1-24-56	S	30				Ir	
49T-3	do	1955	D		15 in									S					Ir	
49U-1	do	1955	D		15 in									S					Ir	
49U-2	do	1955	D		15 in									S					Ir	
49U-3	do	1955	D		15 in									S					Ir	
49U-4	do	1955	D		15 in									S					Ir	
50P	Soc Agric Pucallá		D	15	16 in	9	4	S,G				3							Ir	
50S-1	Soc Agric Pomalca	1955	D	22	15 in	9	8	G	21	8.0	9.0-17.0	3.49	1-23-56	S	50				Ir	
50S-2	do	1955	D	22	15 in	10	8	G	21	8.0	10.0-18.0			S	58				Ir	
50S-3	do	1955	D	22	15 in	10	7	G	21	7.0	10.0-17.0	4.77	1-24-56	S	83				Ir	
50T-1	do	1955	D	28	15 in	10	7	G	27	7.0	10.0-17.0	4.79	1-24-56	S	67				Ir	
50T-2	do	1955	D	22	15 in	10	8	G	21	8.0	10.0-18.0			S	26				Ir	
50T-3	do	1955	D	22	15 in	10	8	G	21	8.0	10.0-18.0	5.54	1-24-56	S	33				Ir	
50T-4	do	1955	D	22	15 in	10	8	G	21	8.0	10.0-18.0	6.04	1-24-56	S	23				Ir	

Table 3.--Records of wells in Lambayeque Valley, Department of Lambayeque, Peru cont'd

Well no.	Owner	Date completed	Type	Depth (m)	Diameter	Principal water-bearing bed			Depth to which cased (m)	Screen		Static water level		Method of lift	Yield		Drawdown		Remarks
						Depth to top (m)	Thickness (m)	Character		Total length (m)	Inclusive depths (m)	Depth below measuring point (m)	Date		Rate (lps)	Date of measurement	Amount (m)	Duration of test (h)	
51M-1	Soc Agric Pucallá		Dug																
51M-2	do		D	18	12 in	4	8	G,S				4			35				Ir
51N	do		D	18	16 in	3	9	do				3			30				Ir
51R-1	Soc Agric Pomaica	1956	D	22	15 in									S					Ir
51R-2	do	1955	D	22	15 in									S					Ir
51R-3	do	1955	D	22	15 in									S					Ir
51R-4	do	1955	D	22	15 in									S					Ir
51R-5	do	1956	D	22	15 in							3.53	1-23-56	S					Ir
51R-6	do	1956	D	22	15 in									None					Ir
51R-1	do	1956	D	22	15 in									None					Ir
51R-2	do	1956	D	22	15 in									S					Ir
51R-3	do	1955	D	22	15 in									S					Ir
51R-4	do	1955	D	22	15 in							2.63	1-23-56	S					Ir
51R-5	do	1955	D	22	15 in	9	9	G	21	9.0	9.0-18.0	1.15	1-23-56	S	20				Ir
52R-1	do	1956	D	22	15 in	9	8.5	G	21	8.5	9.0-17.5	2.92	1-23-56	S	67				Ir
52R-2	do	1956	D	22	15 in							5.88	7-10-57	None					Ir
52R-3	do	1956	D	22	15 in									None					Ir
53L-1	Soc Agric Pucallá		D	21	16 in	4	5	G,S				4							Ir
53L-2	do		D	21	16 in	15	6	do				4							Ir