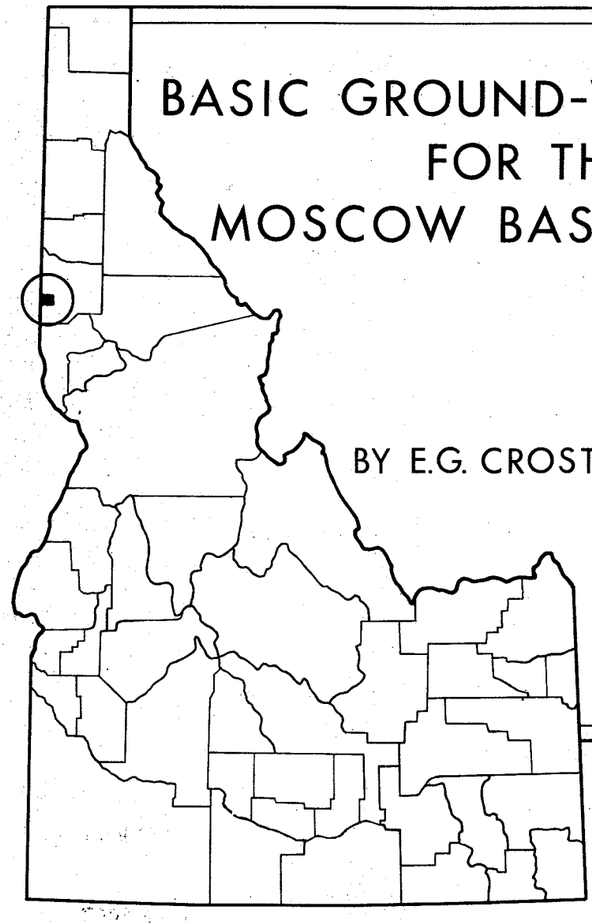
BASIC GROUND-WATER DATA FOR THE MOSCOW BASIN, IDAHO



BY E.G. CROSTHWAITE

OPEN-FILE REPORT

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Prepared in cooperation with the

IDAHO DEPARTMENT OF WATER RESOURCES

Boise, Idaho
1975

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BASIC GROUND-WATER DATA FOR THE MOSCOW BASIN, IDAHO

by E. G. Crosthwaite

INTRODUCTION

The Moscow basin encompasses an area of 65 square miles (170 square kilometres) in Latah County and borders the Idaho-Washington State line (fig. 1). The basin is along the eastern edge of the "Palouse Country" where the rolling Palouse hills merge with the low mountains of northern Idaho. It is drained by the South Fork Palouse River, Paradise Creek, and Missouri Flat Creek, and their headwater tributaries.

All water supplies for the basin are derived from wells and springs. Virtually all large-capacity wells are owned by the City of Moscow and the University of Idaho. These wells are open to the basalt of the Columbia River Group and the interbedded sands in the Latah Formation (Stevens, 1960, p. 335; Jones and Ross, 1972, p. 12-13, fig. 4). Many domestic and a few commercial wells are also open to these same formations. Most of the City and University wells tap thick sections of these water-bearing formations. However, only about 25 percent of the total basin area is underlain by basalt. The approximate subsurface extent of the area underlain by basalt, as determined by well logs and geophysical data, is shown in figure 2.

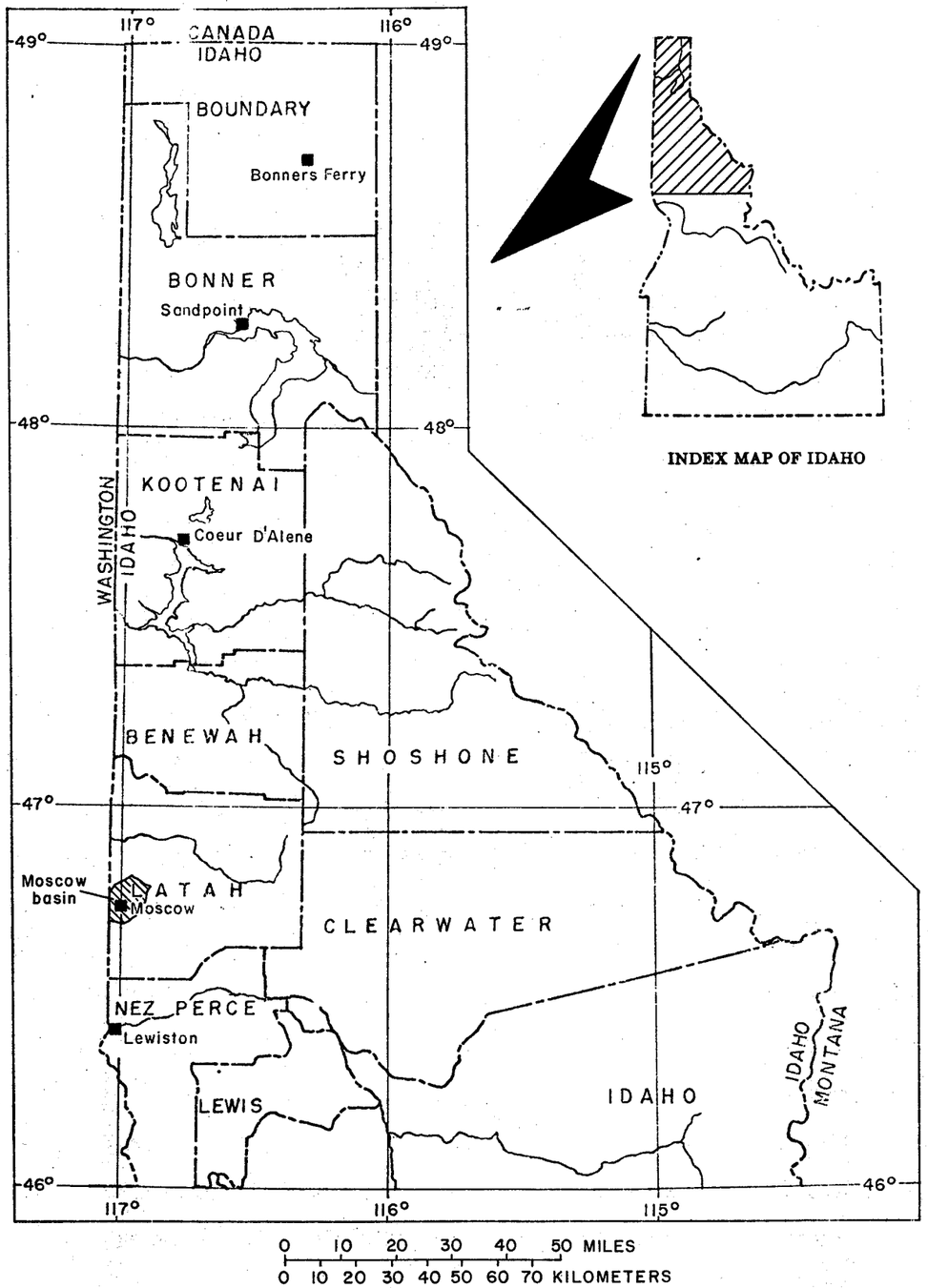

FIGURE 1.-- Index map showing location of area covered by this report.

The purpose of this report is to present basic geologic and hydrologic data that are available in the basin. Included are a table of well records, well logs, a table of annual ground-water withdrawals, water levels in observation wells, a contour map showing the approximate elevation of the water-level in the upper series of basalt flows and interbedded sediments in the southern part of the area (fig. 2), and a bibliography of the more important reports pertaining to ground water in the area. More than 90 percent of the wells tapping basalt were visited, but only a representative number of wells tapping other rocks were visited. Data that may have become available after December 1972 are not given except for water-level measurements made in March 1973.

WATER SUPPLY

All the large-capacity wells in the Moscow basin are open to the basalt of the Columbia River Group and Latah Formation of Miocene age; thus, most of the ground water is withdrawn from these rocks. Of the 164 wells in this report, 117 were used in 1972 for domestic supplies, 17 for public supplies, 7 for irrigation supplies, 6 for commercial supplies, 1 for stock supplies, 11 were unused, 3 were destroyed, 1 was used as an anode well (39N-5W-7ddc1), and 1 was a test well (table 1). All the wells listed in the table were visited in the summer of 1972. When data were available, the well records were updated to reflect changes in use, pump changes, and other changes from previous inventories.

The basalt of the Columbia River Group and the sedimentary deposits of the Latah Formation make up a poorly understood aquifer system. However, three important water-bearing zones within these groups of rocks are presently being utilized by the city of Moscow and the University of Idaho. They are known as the upper, middle, and lower artesian zones. The city wells produce water from the upper and lower zones, and the University well obtains water from the middle zone. Figure 3 is an idealized geologic section showing the general relation of the artesian zones and the basalt and interbedded sediments.

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TABLE 1.--SELECTED WELL RECORDS, MOSCOW BASIN, LATAH COUNTY, IDAHO
(See Figure 2 for Map Showing Well Locations)

R - Data reported by driller or owner.
Well number - See text for well-numbering system.
Use of well - Use or contemplated use at the time the wells were visited in the summer of 1972.
A, Anode; C, Commercial; D, Well apparently destroyed; H, Domestic; I, Irrigation; P, Public supply; S, Stock; U, Unused; T, Test.
Well depth - Well depth after completion of well. Most well depths are reported. Completed well depth may not agree with log because some wells have been backfilled.
Casing depth - Length of unperforated casing or depth to first perforations.
Casing diameter - Diameter of casing at top of hole
Altitude of LSD - Altitude of land surface datum above mean sea level. Altitude from topographic maps is estimated to the nearest 1 foot. Altitude from spirit leveling is (estimated) to the nearest 0.1 foot.
Water level - Depth to water below land surface datum. Reported water levels are to the nearest foot. Measured water levels are to the nearest (0.1) foot. An asterisk means the water levels are in the section on water levels in observation wells.
Length of well open to aquifer - Includes the length of open hole and screened or perforated intervals.
Major aquifer - OA, Alluvium; LA, Latah Formation; CR, Basalt of the Columbia River Group and Latah Formation; OB, Basement Complex; U, upper artesian zone; L, lower artesian zone; M, middle artesian zone
Note: Some wells produce from more than one water-bearing zone.
Remarks: Log - Log is listed in section on Well Logs.

WELL NUMBER	OWNER AND LOCAL NO.	USE OF WELL	WELL DEPTH (FT.)	CASING DEPTH (FT.)	CASING DIAMETER (IN.)	DATE DRILLED (YEAR)	ALTITUDE OF LSD (FT.)	WATER LEVEL (FT.)	DATE WATER LEVEL MEAS.	MAJOR AQUIFER AND ARTESIAN ZONE	LENGTH OF WELL OPEN TO AQUIFER (FEET)	REMARKS
40N 06W 24cad1	Allan Gillespie	H	60R	-	6	-	2740	48.5A	6-72	OB	-	
40N 06W 24dcc1	Loyal Fleener	H	25.3	-	36	-	2718	5.6	6-72	OA	-	
40N 06W 25dad1	John O'Donnel	H	130 R	-	6	-	2665	50.6G	11-72	OB	-	
40N 06W 36aca1	W. O'Donnel	H	204 R	-	6	1948	2608	-	-	CR-U	-	Log
40N 05W 17aba1	Elvin Erickson	H	455 R	73 R	6	1971	3305	162.8	6-72	OB	382	Log
40N 05W 18acd1	Gerald Coomes	H	351 R	83 R	6	-	3075	57.5	6-72	OB	268	Log
40N 05W 20cab1	E. A. Widman	H	234 R	-	6	1960	2725	-	-	OB	-	
40N 05W 25ddb1	Roy E. Williams	H	173 R	20 R	6	1971	2855	92.0	6-72	OB	153	Log
40N 05W 26dcc1	Orrin Frink	H	90 R	-	8	-	2755	47.1	6-72	OB	-	
40N 05W 27cba1	Leo Bosse	H	99 R	34 R	8	1971	2760	11.1	6-72	OB	65	Log
40N 05W 29aab1	R. K. Bonnett	U	152.2	-	6	-	2715	*	-	OB	-	
40N 05W 29ccb1	John Naylor	H	260 R	-	6	-	2745	-	-	CR-U (?)	-	
40N 05W 30cad1	N. Niehanki	H	308.9	94 R	6	1953	2636.0	132.2	6-72	OB	215	Log
40N 05W 31cad1	N. T. Carson	U	20.6	-	30	-	2620	*	-	OA	-	
40N 05W 31cad2	N. T. Carson	H	180	160 R	6	-	2627.4	93.5	6-72	CR	20	
40N 05W 32aad1	C. A. Heick	H	96 R	-	16	-	2720	-	-	LA	-	
40N 05W 32bcc1	C. N. Carter, Jr.	H	100 R	-	6	-	2690	53.1	6-72	LA	-	
40N 05W 32ccb1	C. A. Heick	H	259 R	-	6	-	2717.0	216.5	6-72	CR-U	-	
40N 05W 33bda1	A. E. Koster	H	193.1	-	6	-	2663.7	163.5	6-72	CR-U	-	
40N 05W 33bda2	A. E. Koster	H	92 R	25 R	8	1964	2670	-	-	LA	40	Log

TABLE 1.--SELECTED WELL RECORDS, MOSCOW BASIN, LATAH COUNTY, IDAHO--CONTINUED

WELL NUMBER	OWNER AND LOCAL NO.	USE OF WELL	WELL DEPTH (FT.)	CASING DEPTH (FT.)	CASING DIAMETER (IN.)	DATE DRILLED (YEAR)	ALTITUDE OF LSD (FT.)	WATER LEVEL (FT.)	DATE WATER LEVEL MEAS.	MAJOR AQUIFER AND ARTESIAN ZONE	LENGTH OF WELL OPEN TO AQUIFER (FEET)	REMARKS
40N 05W 33dbb1	S. O. Gibbs	H	28 R	-	42	-	2645	-	-	OA	-	
40N 05W 35aaa1	Richard Preece	H	365 R	-	-	-	2787	-	-	OB	-	
40N 05W 35bca1	Ralph Havens	H	200 R	-	6	-	2748	-	-	OB	-	
40N 05W 35bcb1	Ralph Havens	H	130 R	-	-	-	2790	-	-	OB	-	
40N 05W 36acc1	Harold Lyon	H	a/120 R	90 R	6	1946	2848	-	-	-	30	
40N 05W 36acc2	Harold Lyon	H	220 R	151 R	6	1967	2848	90 R	11-67	OB	69	Log
40N 05W 36acd1	Dave Headrick	H	195 R	73	6	1963	2765	-	-	OB	122	Log
40N 04W 31cbb1	Chas Bockmier	H	92 R	-	6	-	2810	-	-	OB	-	
39N 06W 12bdd1	Vic Montgomery	H	122 R	-	6	1963	2609.9	73.1	6-72	-	-	
39N 06W 12daa1	Univ. of Idaho	P	b/ -	-	-	-	2538	-	-	-	-	
39N 06W 13aac1	Ernest Hartung	H	119 R	-	6	-	2752.4	92.8	7-72	-	-	
39N 06W 13cad1	H. Hattrup	H	141 R	138 R	6	1947	2745	104.8	5-54	-	-	
39N 06W 13cad2	Mi Lew	H	114 R	-	6	1963	2745	-	-	-	-	
39N 06W 13cad3	Lennard Chinn	P	625 R	-	10	1967	2700	243.2	3-73	CR-?	-	
39N 06W 13cca1	Ray Williams	H	355 R	165 R	6	1961	2748	-	-	CR-U	35	
39N 06W 24cba1	Richard Gooby	H	155 R	95 R	8	1968	2610	76.5	3-72	CR-U	-	Log
39N 06W 24ccd1	Chet Canode	H	232 R	26 R	6	1969	2519.9	8.8	6-72	CR-U	48	Log
39N 06W 25baa1	Ralph Jennings	H	276 R	82 R	6	1969	2538	-	-	OB	194	
39N 05W 02bdc1	Wilson Jasper	H	212 R	-	6	-	2662	61.1	6-72	OB	-	
39N 05W 03cca1	Wayne Darby	H	65 R	-	10	1972	2690	46.9	7-72	LA	-	
39N 05W 04bda1	F. L. Kennard	H	50 R	-	6	1958	2658	20.1	6-72	LA	-	
39N 05W 04bdb1	William Lampke	H	75 R	-	-	-	2685	-	-	LA	-	
39N 05W 04ccb1	James Parkes	H	170 R	114 R	8	1968	2655	49.9	11-72	CR-U	56	Log
39N 05W 04ccc1	Carl Bendel	H	75 R	53 R	8	1965	2662	16 R	-	LA	-	Log
39N 05W 04ccd1	G. Mendenhall	H	76 R	55 R	8	1963	2565	56.4	7-72	LA	21	Log
39N 05W 04ccd2	H. Carleton	H	220 R	159 R	6	1952	2665	175 R	-	CR-U	-	Log
39N 05W 04cdc1	John Foy	H	70 R	-	-	-	2658	46.8	6-72	LA	-	
39N 05W 04cdc2	Floyd Trail	H	188 R	125 R	8	1969	2628	131.9	7-72	CR-U	63	Log
39N 05W 05acd1	W. L. Yocke	H	120 R	-	8	1955	2682	60.8	6-72	LA	-	
39N 05W 05adc1	Jack Marineau	H	405 R	395 R	6	1966	2685	190 R	-	LA	10	Log
39N 05W 05bbb1	John Wallen	H	230 R	210 R	6	1952	2750	220 R	-	CR-U	-	
39N 05W 05bbb2	John Wallen	H	118 R	98 R	6	1971	2705	55.2	6-72	LA	20	Log
39N 05W 05bcb1	W. R. Loney	H	200.0	-	8	-	2675	80.0	6-72	-	-	
39N 05W 05bcb2	W. R. Loney	P	-	-	-	1970	2683	-	-	CR-U	-	
39N 05W 05bcc1	Dr. Gordon Law	H	200 R	-	6	-	2675	177.4	6-72	CR-U	-	
39N 05W 05bcd1	Bill Smith	H	265 R	-	6	1953	2625	130 R	11-53	CR-U	-	Log
39N 05W 05bda1	James Pavel	H	204 R	-	6	-	2670	171.2	6-72	CR-U	-	
39N 05W 05bdb1	Robert McGahan	H	74 R	47 R	6	1971	2635	10.4	6-72	LA	27	Log
39N 05W 05bdc1	Gerald Rich	P	172 R	102 R	6	1969	2627	121.4	6-72	CR-U	70	Log
39N 05W 05cbc1	Pat Terrells	H	c/ 75 R	-	-	-	2660	42.2	6-72	LA	-	

a/ Original depth reported as 137 feet.
b/ Well not completed 6/72.
c/ Original depth reported as 90 feet.

39N 05W 05bcd1	Bill Smith	H	265	R	-		6	1953	2625	130	R	11-53	CR-U	-	Log
39N 05W 05bda1	James Pavel	H	204	R	-		6	-	2670	171.2		6-72	CR-U	-	
39N 05W 05bdb1	Robert McGahan	H	74	R	47	R	6	1971	2635	10.4		6-72	LA	27	Log
39N 05W 05bdc1	Gerald Rich	P	172	R	102	R	6	1969	2627	121.4		6-72	CR-U	70	Log
39N 05W 05cbc1	Pat Terrells	H	c/ 75	R	-		-	-	2660	42.2		6-72	LA	-	

a/ Original depth reported as 137 feet.
b/ Well not completed 6/72.
c/ Original depth reported as 90 feet.

TABLE 1.--SELECTED WELL RECORDS, MOSCOW BASIN, LATAH COUNTY, IDAHO--CONTINUED

WELL NUMBER	OWNER AND LOCAL NO.	USE OF WELL	WELL DEPTH (FT.)	CASING DEPTH (FT.)	CASING DIAMETER (IN.)	DATE DRILLED (YEAR)	ALTITUDE OF LSD (FT.)	WATER LEVEL (FT.)	DATE WATER LEVEL MEAS.	MAJOR AQUIFER AND ARTESIAN ZONE	LENGTH OF WELL OPEN TO AQUIFER (FEET)	REMARKS
39N 05W 05dab1	Ken Hedglen	H	-	-	8	-	2635	19.1	6-72	LA	-	
39N 05W 05dab2	Ken Hedglen	H	186 R	-	8	-	2642	20.7	6-72	LA	-	
39N 05W 06aad1	A. E. Franklin	H	260 R	-	-	-	2725	-	-	CR-U	-	
39N 05W 06daa1	W. L. Randle	H	232 R	-	8	1961	2700	203.0	6-72	CR-U	-	
39N 05W 06dad1	C & L Lockers	C	90 R	-	8	-	2650	61.0	6-72	LA	-	
39N 05W 06dbc1	R. E. Harden	H	150 R	-	8	-	2630.6	127.8	6-72	CR-U	-	
39N 05W 06dca1	Dick Harden	H	376 R	190 R	8	-	2682.0	180.0	6-72	CR-U	186	Log
39N 05W 06dcd1	Dr. E. L. Boas	I	376 R	40 R	6	-	2655	147.1	6-72	LA-U	336	Log
39N 05W 07bda1	City of Moscow #7	U	667	426 R	20	1962	2614 R	*	-	CR-?	-	Log
39N 05W 07bda2	City of Moscow #8	P	1458 R	1047 R	20	1964	2617 R	*	-	CR-L	-	Log
39N 05W 07cbb1	Univ. of Idaho #3	P	1336 R	661 R	30 R	1963	2558 R	*	-	d/ CR-M	240	Log
39N 05W 07cc 1	Univ. of Idaho	D	-	-	6	-	2540	47	11-55	CR-U	-	
39N 05W 07cdc1	Univ. of Idaho #2	P	354 R	60 R	20	1951	2552	*	-	CR-U	160	Log
39N 05W 07dad1	City of Moscow #1	P	245 R	-	12	1882 R	2568	*	-	CR-U	-	
39N 05W 07dad2	City of Moscow #2	P	240 R	40	20	-	2568	*	-	CR-U	e/ 180	Log
39N 05W 07dad3	City of Moscow #3	P	235 R	-	18	1936	2568	*	-	CR-U	-	Log
39N 05W 07dcd1	Louis Olsen	C	238 R	54 R	8	1972	2560.3	56.8	11-72	CR-U	-	Log
39N 05W 07ddc1	Garrett Freight	A	240 R	-	8	-	2560.9	*	-	CR-U	-	
39N 05W 08abd1	f/ City of Moscow	T	341 R	-	6	-	-	-	-	-	-	
39N 05W 08abd2	City of Moscow #5	U	372 R	144	20	1948	2660	163	-48	CR-U	220	Log
39N 05W 08bdb1	City of Moscow #6	P	1308 R	905 R	24	1959	2588	*	-	CR-L	-	Log
39N 05W 08ccc1	City of Moscow	D	140 R	-	6	1945	2575	*	-	CR-U	-	Log
39N 05W 08dad1	R. W. Jones	U	11.5	8	2	1964	2605	*	-	OA	-	Log
39N 05W 08ddd1	City of Moscow #4	g/ U	790 R	-	-	1941	2596	-	-	-	-	Log
39N 05W 09abb1	A. A. Flack	H	184 R	150 R	8	1969	2623.5	120.7	7-72	CR-U	34	Log
39N 05W 09bba1	W. L. Purnell	H	70 R	50 R	8	1970	2644	-	-	LA	20	Log
39N 05W 09bba2	F. Del Valle	H	75 R	75 R	8	1971	2646	48.0	6-72	LA	-	Log
39N 05W 09bba3	James Bosse	H	230 R	36 R	6	1967	2632	120.2	6-72	CR-U	194	Log
39N 05W 09bba4	Clyde Youmans	I	95 R	94.5R	8	1969	2664	52.4	6-72	LA	-	Log
39N 05W 09bbb1	Dave Cosner	H	220 R	30 R	6	-	2650	151.7	11-72	CR-U	-	
39N 05W 09bbd1	Glen Keesler	H	144 R	138 R	8	1970	2618	114.9	6-72	LA	6	Log
39N 05W 09bca1	Leda Scrimsher	H	167 R	163 R	8	1970	2615	-	-	LA	4	Log
39N 05W 09bca2	Willis Estes	H	164 R	164 R	8	1969	2615	-	-	LA	-	Log
39N 05W 09bcc1	Frank Eveland	H	25 R	25 R	60	-	2610	*	-	OA	-	
39N 05W 09bcd1	C. A. Binkley	H	180 R	115 R	8	1963	2602	104.9	6-72	LA	65	
39N 05W 10abc1	Syringa Trlr Ct	P	247 R	235 R	8	1966	2640	50	-66	OB	12	
39N 05W 10abd1	Syringa Trlr Ct	P	210 R	100 R	8	1967	2630	122.2	6-72	OB	110	Log
39N 05W 10abd2	Syringa Trlr Ct	P	600 R	-	8	-	2640	15.7	6-72	OB	-	
39N 05W 10aca1	U.S. Geol. Survey	U	21.5	-	1.5	1934	2628	*	-	OA	-	
39N 05W 10cac1	Roy Bell	H	275 R	222 R	8	1964	2650	-	-	OB	53	Log

d/ Lower artesian aquifer not as productive as middle artesian aquifer at this site.
e/ Approximate length.
f/ Test well at site of City Well #5.
g/ Well yield inadequate.

TABLE 1.--SELECTED WELL RECORDS, MOSCOW BASIN, LATAH COUNTY, IDAHO--CONTINUED

WELL NUMBER	OWNER AND LOCAL NO.	USE OF WELL	WELL DEPTH (FT.)	CASING DEPTH (FT.)	CASING DIAMETER (IN.)	DATE DRILLED (YEAR)	ALTITUDE OF LSD (FT.)	WATER LEVEL (FT.)	DATE WATER LEVEL MEAS.	MAJOR AQUIFER AND ARTESIAN ZONE	LENGTH OF WELL OPEN TO AQUIFER (FEET)	REMARKS
39N 05W 10ccc1	Kenworthy	H	65 R	-	42	-	2640	-	-	LA	-	
39N 05W 11bbd1	Everett Olson	H	150 R	-	8	1961	2655	24.0	6-72	OB	-	
39N 05W 14dca1	Wayne Oleson	H	140 R	99 R	6	1971	2682	13.1	6-72	OB	41	Log
39N 05W 15acc1	Elks Golf Crs #2	I	203 R	-	8	1945	2590	37.6	6-72	LA	-	Log
39N 05W 15adb1	Elks Golf Crs #1	I	155 R	-	4	1927	2618	-	-	-	-	Log
39N 05W 15adc1	Elks Golf Crs #3	I	270 R	64	10	1968	2606.0	45.5	6-72	LA-U	125	Log
39N 05W 15bca1	h/ Univ. of Idaho	I	278 R	113 R	16	1957	2610	*	-	CR-U	165	Log
39N 05W 15caa1	Bennett Lumber	C	252 R	-	10	1959	2590	90	-	CR-U	-	
39N 05W 15cbb1	Oscar Nelson	H	140 R	102 R	8	1970	2600	104.1	6-72	CR-U	38	Log
39N 05W 15dbb1	John Eldridge	H	186 R	98 R	6	1971	2593.5	56.1	6-72	CR-U	88	Log
39N 05W 15dbb2	Cliff Latham	H	156 R	88 R	6	1971	2591.6	53.9	6-72	CR-U	68	Log
39N 05W 16aaa1	Jim Carrico	H	80 R	-	6	-	2672	57.1	6-72	LA	-	
39N 05W 16aac1	L. Schierman	C	243 R	-	8	1971	2635.6	134.5	11-72	CR-U	-	
39N 05W 16aca1	Tom Mitzimberg	H	63 R	60 R	8	1969	2618	5.4	6-72	LA	3	Log
39N 05W 16adc1	C. C. Warnick	H	246 R	-	6	1956	2696.7	196.1	6-72	CR-U	-	
39N 05W 16add1	Roland R. Reid	H	285 R	277 R	8	1968	2628	-	-	CR-U	8	Log
39N 05W 16bab1	Gerald Wendt	H	160 R	-	6	1960	2625	-	-	-	-	
39N 05W 16caa1	John Mix	H	390 R	-	6	-	2690	-	-	CR-U	-	Log
39N 05W 16caa2	James E. Richey	H	425 R	419 R	6	1966	2693.3	184.5	6-72	CR-U	6	Log
39N 05W 16cad1	Harry Sampson	H	120 R	-	6	-	2650	-	-	LA	-	
39N 05W 16cba1	City of Moscow (CEM)	U	315 R	125 R	8	1962	2630	113.8	6-72	CR-U	190	Log
39N 05W 16daa1	R. McAllister	H	246 R	104 R	6	1971	2617	112.1	6-72	CR-U	142	Log
39N 05W 16daa2	L. Hagadorn	H	-	-	6	1972	2610	35.2	7-72	LA	-	
39N 05W 16dbd1	A. Markstaller	P	288 R	-	8	-	2615	117.4	6-72	CR-U	-	log
39N 05W 16dca1	W. F. Smith	H	-	-	8	-	2613	119.3	6-72	CR-U	-	
39N 05W 16dcc1	J. Mengelkamp	H	175 R	63 R	8	1972	2580	74.6	7-72	CR-U	112	Log
39N 05W 16dcd1	Don Law	P	210 R	73 R	8	1971	2595	102.6	6-72	CR-U	125	Log
39N 05W 16ddd1	Eldon Bingman	H	214 R	71 R	8	1970	2590	-	-	CR-U	143	Log
39N 05W 16ddd2	J. M. Atkinson	H	160 R	54 R	-	1968	2590	80.8	7-72	CR-U	91	Log
39N 05W 17cdd1	Everett Hagen	H	247 R	236 R	8	1958	2600	54.6	6-72	OB	11	Log
39N 05W 17daa1	Sunset Mem. Gdns	I	508 R	461 R	8	1955	2608	-	-	LA-U	47	Log
39N 05W 17dbc1	Eugene Thompson	H	150 R	-	6	-	2620	-	-	-	-	
39N 05W 17ddc1	Frank Bennett i/	U	300 R	95 R	8	1972	2598	51.7	7-72	OB	160	Log
39N 05W 18aac1	John Bond	U	190 R	40 R	-	-	2570	80	-	CR-U	-	
39N 05W 18bad1	Univ. of Idaho #1	P	330 R	98 R	16	1920	2601	*	-	CR-U	217	Log
39N 05W 19aaa1	Pete Fountain	H	140 R	-	8	1970	2547.1	16.3	7-72	CR-U	-	
39N 05W 19aac1	Bailey	H	-	-	6	-	2545	-	-	-	-	
39N 05W 19aac2	Dexter Bailey	C	120 R	20 R	8	-	2554.0	20.0	11-72	-	-	
39N 05W 19aba1	Terrace Gardens	P	70 R	29 R	8	-	2562	38.2	7-72	CR-U	41	
39N 05W 19aba2	Lloyd George	H	60 R	37 R	6	1960	2562	-	-	CR-U	23	

h/ Parker Farm Well

39N 05W 19aaa1	Pete Fountain	H	140	R	-		8	1970	2547.1	16.3	7-72	CR-U	-
39N 05W 19aac1	Bailey	H	-		-		6	-	2545	-	-	-	-
39N 05W 19aac2	Dexter Bailey	C	120	R	20	R	8	-	2554.0	20.0	11-72	-	-
39N 05W 19aba1	Terrace Gardens	P	70	R	29	R	8	-	2562	38.2	7-72	CR-U	41
39N 05W 19aba2	Lloyd George	H	60	R	37	R	6	1960	2562	-	-	CR-U	23

h/ Parker Farm Well
i/ Well yield inadequate

TABLE 1.--SELECTED WELL RECORDS, MOSCOW BASIN, LATAH COUNTY, IDAHO--CONTINUED

WELL NUMBER	OWNER AND LOCAL NO.	USE OF WELL	WELL DEPTH (FT.)	CASING DEPTH (FT.)	CASING DIAMETER (IN.)	DATE DRILLED (YEAR)	ALTITUDE OF LDS (FT.)	WATER LEVEL (FT.)	DATE WATER LEVEL MEAS.	MAJOR AQUIFER AND ARTESIAN ZONE	LENGTH OF WELL OPEN TO AQUIFER (FEET)	REMARKS
39N 05W 19aba3	Elmer Anderson	H	198 R	-	-	1946	2575	-	-	CR-U	-	
39N 05W 19adc1	Bill Williams	C	85 R	-	6	1972	2566.4	13.6	7-72	OB	-	
39N 05W 19baa1	C. L. Nielsen	H	134 R	58 R	6	1964	2586.2	52.9	6-72	CR-U	76	
39N 05W 19baa2	O. O. Oiler	H	84 R	-	6	-	2575	52.7	6-72	LA	-	
39N 05W 19bab1	E. B. Kirkland	H	106 R	-	6	-	2570	-	-	LA	-	
39N 05W 19bbb1	C. Anderson	H	130 R	7 R	6	-	2567.2	35.7	6-72	-	123	
39N 05W 19dab1	Fred Hobbs	H	45 R	17 R	6	1961	2575	5.3	6-72	OB	28	
39N 05W 19dcd1	Martin Deesten	H	-	-	6	-	2640	49.6	7-72	OB	-	
39N 05W 20add1	Eddie Tous	H	295 R	99 R	6	1966	2590	35.2	11-72	OB	-	Log
39N 05W 20bdd1	Jack Morse	H	94 R	-	6	-	2564	16.1	3-73	-	-	
39N 05W 21aad1	Clinton Lyons	H	50 R	-	6	-	2600	-	-	OB	-	
39N 05W 21cbb1	Jack Morse	H	207 R	-	6	1932	2630	-	-	OB	-	
39N 05W 21dbb1	Elmer Guske	H	190 R	-	6	-	2638	70.4	6-72	OB	-	
39N 05W 22acc1	Donald R. Oleson	H	i/140 R	-	6	1919	2665	-	-	OB	-	
39N 05W 22bcb1	Wesley Johnston	H	85 R	65 R	6	-	2598	47.6	6-72	OB	20	
39N 05W 23ccc1	Albert Oleson	H	105 R	-	6	1944	2820	-	-	OB	-	
39N 05W 27bdc1	John Gamble	H	87 R	-	8	1943	2830	-	-	OB	-	
39N 05W 27dbc1	George Roberts	H	164 R	-	6	-	2985	35.6	6-72	OB	-	
39N 05W 30aab1	Donald Sinclair	H	400 R	-	6	-	2625	-	-	OB	-	
39N 05W 30acc1	Murphy Estate	H	87 R	-	6	1938	2735	18.3	6-72	OB	-	
39N 05W 30acc2	Sherman Clyde	S	185 R	-	4	1951	2750	41.8	6-72	OB	-	
39N 05W 30acc3	Sherman Clyde	H	210 R	-	8	1969	2718	7.2	6-72	OB	-	
39N 04W 06abb1	Sam Wilder	H	200 R	27	8	1972	2865	47.9	7-72	OB	174	Log
39N 04W 06abb2	Sam Wilder	D	425 R	-	-	1972	2840	68	7-72	OB	422	Log

i/ Original depth reported as 200 feet.

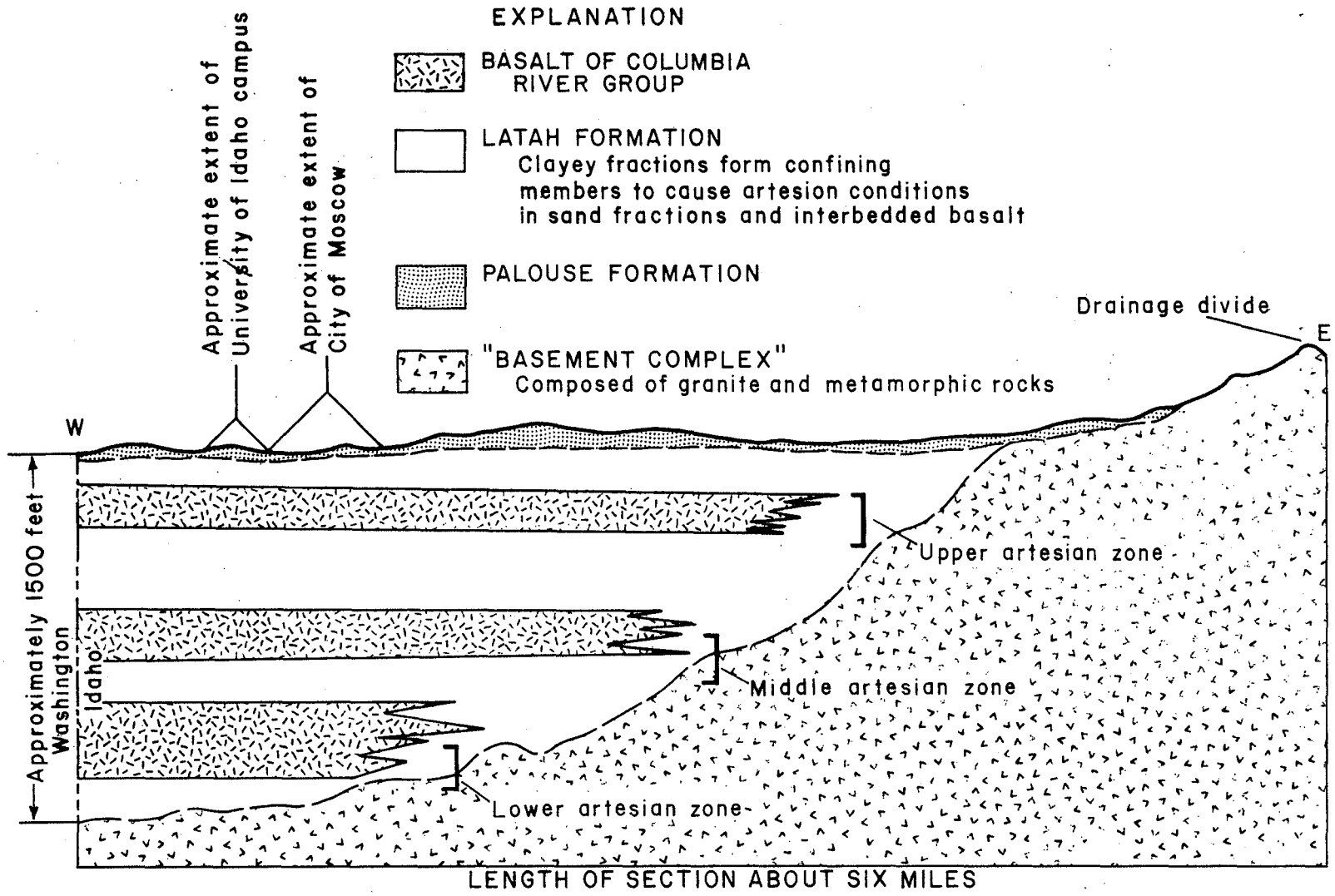

FIGURE 3.-- Idealized geologic section through the Moscow basin. Only the approximate location of

FIGURE 3.-- Idealized geologic section through the Moscow basin. Only the approximate location of the artesian zones are shown.

The first large-capacity wells, 500 to 3,000 gallons per minute (30 to 200 litres per second) were drilled 100 to 200 feet (30 to 60 metres) into the upper artesian zone in the late 1890's or early 1900's (Laney, Kirkham, and Piper, 1923, p. 6). Water in this zone commonly contained large quantities of dissolved iron and manganese, which cause encrustation of pipes, stain bathroom fixtures, and impart an unpleasant taste to the water. Increasing demands for water, consequent water-level declines (see fig. 6) and the undesirable chemical quality of the water caused the city of Moscow to explore for a more desirable water supply. In 1960, the city tapped the lower artesian zone, and in 1964, the University of Idaho tapped the middle zone. According to the city of Moscow and the University of Idaho, the water in the middle and lower artesian zones is of acceptable quality for most uses, but there may have been some lowering of water levels in the lower artesian zone. Water levels in well 39N-5W-7bda2 (city well 8) indicate some decline, but water levels in well 39N-5W-8bdb1 (city well 6) do not indicate much change. Data are not adequate to show water-level changes in the middle artesian zone.

The deeply weathered portions of the granite and metamorphic rocks (commonly called the basement complex) that underlie and rim the basin commonly yield small supplies of water to many domestic wells in the basin. Joints in the nonweathered portion of these rocks also yield small water supplies. In addition, silty, sandy, and, locally, gravelly beds in the Latah Formation, yield small supplies to domestic wells. Much of the Palouse soil that blankets the area is above the water table, but a few small springs and seeps discharge from the soil (Ross, 1965, p. 49-50 and pl. 4). Alluvial deposits along stream channels are thin, but a few wells obtain water from these sediments. In general, these rocks and materials yield less than 20 gallons pe minute (1.3 litres per second) to wells, and in many, the yie is on the order of 1 to 2 gallons per minute (0.06 to 0.13 litres per second). Jones and Ross (1972, p. 11-12) and Ralston, (1972, p. 2-4) discuss the yields of wells in these formations.

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CHEMICAL QUALITY OF WATER

Many chemical analyses are available for several wells in the basin, and a large number of iron and manganese analyses have been made of water from the city and University wells. Also, many analyses for iron and other chemical constitutents have been made of water from domestic wells. The samples have been collected by and the analyses for iron and manganese have been made by many different people and laboratories. The samples have been handled in several different ways, and different methods have been used for making the analyses. Some samples were collected from the pump discharge, some from taps at various places in the distribution system, and various amounts of time elapsed between the sampling and the analysis. Because of these inconsistencies and the lack of a standard procedure for collection and analysis, the iron and manganese determinations are not necessarily comparable as indicators of the amounts of each constituent in the ground water being pumped. For these reasons, a comparison of the chemical constituents reported as found in different wells and of changes of constituents with time in a single well cannot be made. Therefore, no chemical data are included in this report, even though such data are available from the University of Idaho and the city of Moscow. The report by Ross (1965) indicates that consistent sampling and analytical procedures were used for the water samples collected for that study.

GROUND-WATER WITHDRAWALS

The largest users of water in the area, the City and the University, meter the water pumped by them from wells (table 2). Withdrawals for rural domestic use in the basin can be estimated by the use of population figures and by assuming a per capita use rate. Although the average per capita use in most rural areas may be somewhat less, the estimate used in this report for the Moscow rural area is about 150 gallons (570 litres) per person per day because livestock use and lawn watering are included. According to the U.S. Bureau of Census, the population of the basin is as follows:

Year	City	Rural	Total
1950	10,593	-	10,593
1960	11,183	1,692	12,875
1970	14,146	2,629	16,775

Assuming that all the rural inhabitants supplied their own water, rural use is on the order of 150 million gallons (570 million litres) annually. Irrigation of the Elks Club golf course (wells 39N-5W-15adc1 and 15acc1) and the University's Parker Farm (well 39N-5W-16bca1) requires an estimated 60 million gallons (230 million litres) annually, most of which is pumped during the summer months. Using the data presented, the total quantity of ground water withdrawn for use in the basin in 1972 was about 1 billion gallons (4 billion litres or about 3,100 acre-feet). The records of the city and University indicate a relatively large variation in withdrawals from one year to the next, but the overall trend has been an increase in use as shown in table 2.

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Table 2.--Ground-water withdrawals by the University of Idaho and the city of Moscow. From records furnished by the University and the city. Quantities in millions of gallons.

Year	University	City	Total	University				City			
				Minimum	Month	Maximum	Month	Minimum	Month	Maximum	Month
1947	-	281	-	-	-	-	-	-	-	60.8	July
48	-	350	-	-	-	-	-	23.5	Feb.	38.6	Aug.
49	-	464	-	-	-	-	-	28.6	Feb.	62.8	July
50	-	437	-	-	-	-	-	23.0	Mar.	64.2	Aug.
51	-	468	660*	-	-	-	-	26.0	Feb.	63.6	Aug.
52	-	383	675*	-	-	-	-	19.0	Feb.	56.0	July
53	-	382	685*	-	-	-	-	21.6	Apr.	64.1	July
54	-	399	700*	-	-	-	-	26.3	Feb.	53.2	July
55	215	531	746	-	-	-	-	23.3	Dec.	68.3	Aug.
56	143	a/298	441	-	-	-	-	-	-	47.9	Aug.
57	195	354	549	-	-	-	-	18.4	Mar.	57.0	July
58	190	372	562	-	-	-	-	20.6	Jan.	51.0	Aug.
59	179	423	602	-	-	-	-	27.5	Feb.	65.5	July
60	154	455	609	8.3	Dec.	17.6	June	23.3	Dec.	97.0	July
61	152	456	608	8.6	Feb.	21.4	Aug.	22.3	Feb.	68.0	Aug.
62	376	513	889	12.2	Feb.	27.7	July	27.9	Feb.	82.2	July
63	192	583	775	8.2	Apr.	27.1	July	29.7	Feb.	75.5	July
64	167	386	553	7.5	July	21.4	Sept.	18.0	Jan.	58.4	July
65	243	495	738	8.5	Feb.	24.0	Sept.	26.3	Apr.	72.5	July
66	176	505	681	10.2	Feb.	24.4	July	14.1	Oct.	74.6	July
67	190	539	729	10.4	Mar.	31.5	Aug.	27.3	Feb.	97.8	July
68	176	533	709	4.1	May	34.9	July	31.2	Feb.	94.0	July
69	343	a/490	833	14.0	Dec.	52.2	Aug.	29.7	Feb.	72.9	Aug.
70	206	568	774	8.3	Jan.	34.0	Aug.	21.9	Feb.	86.5	Aug.
71	178	560	738	-	-	31.2	July	34.0	Feb.	90.9	Aug.
72	264	577	841	12.8	Jan.	42.5	Aug.	35.6	Dec.	82.9	Aug.

a Record incomplete.
* Estimated from Stevens (1960).

ACKNOWLEDGMENTS

The Pullman-Moscow Water Resources Committee contributed funding to the Idaho Department of Water Resources in support of the Department's cooperative study with the U.S. Geological Survey. City and University officials provided well data, water levels, and pumpage information. Well owners and well drillers provided much useful data. The cooperation of all officials and other persons is gratefully acknowledged.

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USE OF METRIC UNITS

The International System of Units (SI Units) is being adopted for use in reports prepared by the U.S. Geological Survey. To assist readers of this report in understanding and adapting to the new system, many of the measurements reported herein are given in both units. The factors listed below are presented as an aid to conversion from one system of units to another.

Multiply English units	By	To obtain SI units
Length		
:et (ft)	.3048	metres (m)
.les (mi)	1.609	kilometres (km)
Area		
:res	4047	square metres (m^2)
	.4047	hectares (ha)
uare miles (mi^2)	2.590	square kilometres (km^2)
Volume		
llons (gal)	3.785	litres (l)
	3.785×10^{-3}	cubic metres (m^3)
.llion gallons (10^6gal)	3785	cubic metres (m^3)
:re-feet (acre-ft)	1233	cubic metres (m^3)
Flow		
bic feet per second (ft^3/s)	28.32	litres per second (l/s)
	.02832	cubic metres per second (m^3/s)
llons per minute (gpm)	.06309	litres per second (l/s)
.llion gallons per day (mgd)	.04381	cubic metres per second (m^3/s)

WELL-NUMBERING SYSTEM

The well-numbering system used by the Geological Survey in Idaho indicates the location of wells within the official rectangular subdivision of the public lands, with reference to the Boise base line and meridian. The first two segments of the number designate the township and range. The third segment gives the section number, followed by three letters and a numeral, which indicate the quarter section, the 40-acre (16.2 hectares) tract, the 10-acre (4.0 hectares) tract, and the serial number of the well within the tract, respectively Quarter sections are lettered a, b, c, and d in counterclockwise order from the northeast quarter of each section (fig. 3). Within the quarter sections, 40-acre (16.2 hectares) and 10-acre (4.0 hectares) tracts are lettered in the same manner. Well 39N-5W-8bdb1 is in the NW¼SE¼NW¼ sec. 8, T. 39N., R. 5W., and was the first well inventoried in that tract. The water-level tabulations and hydrographs of the appendix were printed by computer, thus, all letters necessarily appear in upper-case form.

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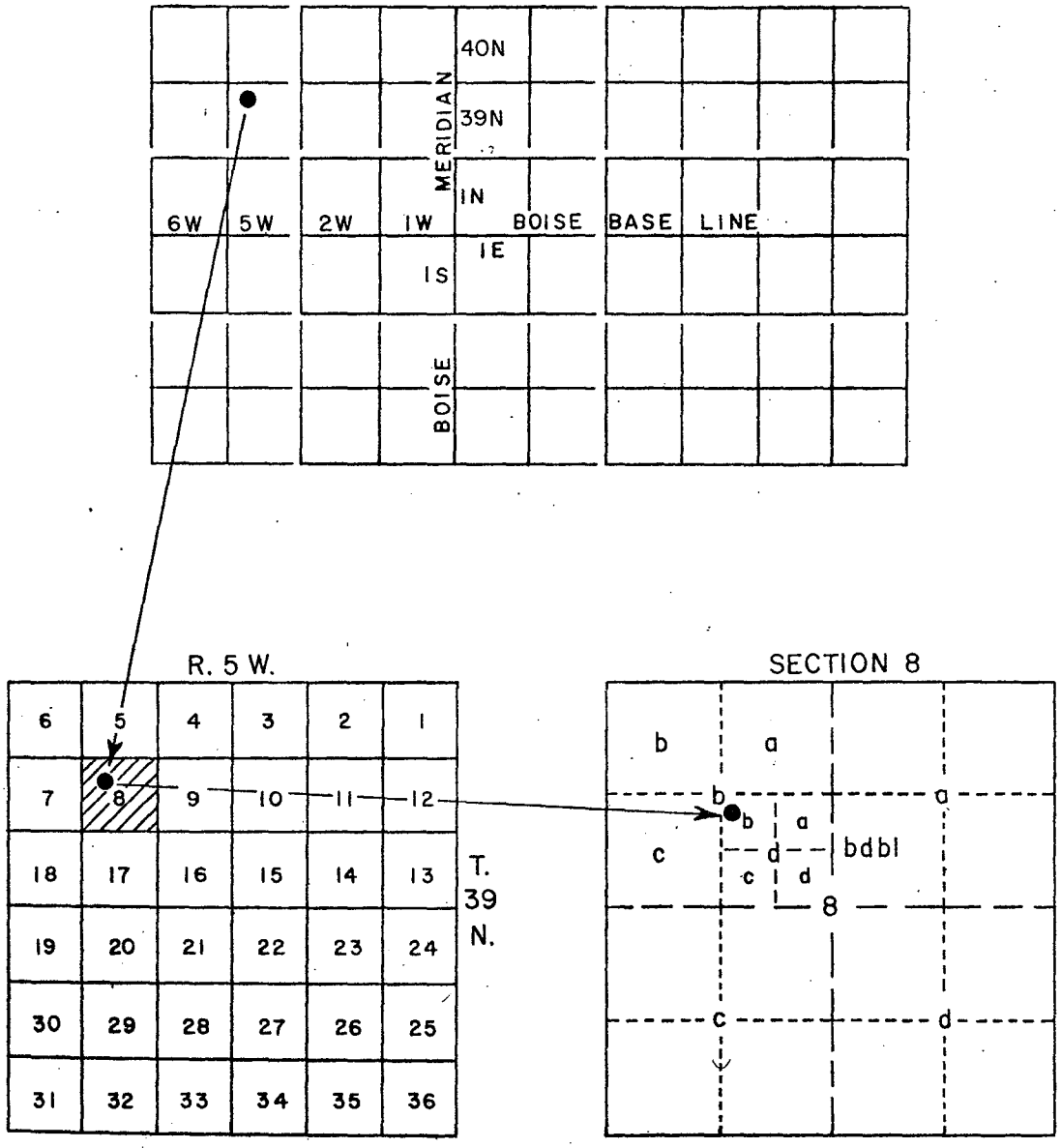

FIGURE 4.-- Diagram of well numbering system used in Idaho. (Using well 39N-5W-8bdbl)

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APPENDIX

LOGS OF WELLS

Most of the following well logs were obtained from drillers' records, but a few are from files of the city of Moscow and from reports prepared by the University of Idaho and the Idaho Bureau of Mines and Geology. The drillers' terminology in the logs is slightly modified to achieve a degree of uniformity. For example, if the driller's log shows "sandy yellow clay," the terms were rearranged to "clay, yellow, sandy." Where the driller may have made an inadvertent mistake in terminology, a note has been added at the bottom of the log suggesting the correct term. All well logs that are known to be available are contained herein. The locations of wells for which logs are available are shown in figure 5.

40N-6W-36acal. W. O'Donnel

Material	Thickness (feet)	Depth (feet)
Unknown	120	120
Rock, hard	80	200
Crevice	4	204
Rock, hard	-	-

40N-5W-17abal. Elvin Erickson

Clay	65	65
Granite, firm	56	121
Granite, soft zone	5	126
Granite, decomposed, soft	15	141
Granite seams at 425 feet with water.	314	455

40N-5W-18acdl. Gerald Coomes

Granite, decomposed, soft	84	84
Granite, light, solid, very little water	267	351

40N-5W-25ddbl. Roy E. Williams

Dirt, black	1	1
Clay, mountain	3	4
Sand and clay	4	8
Granite, hard and soft layers	2	10
Granite, medium hard	12	22
Granite, hard	13	35
Granite, soft	1	36
Granite, hard	20	56
Granite, hard and soft layers, water.	117	173

40N-5W-27cbal. Leo Bosse

Dirt, black	2	2
Clay, brown	12	14
Granite, soft	18	32
Granite, hard	20	52
Granite, hard and soft layers, water.	4	56
Granite, hard	27	83
Granite, hard and soft layers, water.	16	99

40N-5W-30cadl. Norbert Niehanki

Material	Thickness (feet)	Depth (feet)
Sand	90	90
Basalt, hard	190	280
Clay, blue	30	310
Granite, decomposed micaceous, water bearing	16	356
Measured depth 308.9 by R. L. Washburn, USGS, Oct. 29, 1953		

40N-5W-33bda2. A. E. Koster

Dirt, black	4	4
Clay, brown	19	23
Clay, blue, water	5	28
Clay, brown	27	55
Clay, blue, water	30	85
Basalt, soft	7	92

40N-5W-36acc2. Harold Lyon

Dirt	3	3
Sand and clay	11	14
Granite, soft	16	30
Granite, medium	17	47
Granite, hard	23	70
Granite, soft	3	73
Granite, hard	62	135
Clay and granite, white	11	146
Granite, soft	5	151
Granite, hard	49	200
Granite, soft	20	220

40N-5W-36acdl. Dave Headrick

Granite, pink, solid	50	50
Granite, pink, rotten, caving	23	73
Granite and sand, white, quartz	122	195

39N-6W-24cbal. Richard Gooby

Material	Thickness (feet)	Depth (feet)
Topsoil	1	1
Clay, broken	43	44
Clay, broken, sandy	20	64
Basalt, broken, and clay	30	94
Basalt, hard	13	107
Basalt, broken	36	143
Clay, black.	12	155

39N-6W-24ccdl. Chet Canode

Clay	19	19
Scoria	55	74
Granite, white, decomposed	12	86
Granite, orange, decomposed.	15	101
Granite, gray, decomposed.	67	168
Granite, pink, decomposed, water	64	232

39N-6W-25baal. Ralph Jennings

Clay.	50	50
Granite, decomposed	31	81
Granite, gray and white, decomposed	171	252
Granite, pink, decomposed, water.	24	276

39N-5W-4ccbl. James Parkes

Dirt, black	2	2
Clay, brown	83	85
Clay, yellow, and gravel	5	90
Clay, blue.	3	93
Clay, black, and wood	2	95
Clay, gray.	5	100
Clay, blue.	14	114
Basalt, soft, some water	8	122
Basalt, hard	48	170

39N-5W-4cccl. Carl Bendel

Material	Thickness (feet)	Depth (feet)
Dirt, black.	4	4
Clay, brown.	31	35
Clay, gray	26	61
Clay, blue, and layers of coarse gravel, water	14	75

39N-5W-4ccdl. Gilbert Mendenhall

Dirt, black.	3	3
Clay, brown.	29	32
Clay, gray	28	60
Clay, blue, and layers of coarse gravel, water	16	76

39N-5W-4ccd2. Herb Carleton

Dirt, black.	3	3
Clay, brown.	81	84
Clay and wood.	12	96
Clay, brown.	42	138
Shale and basalt	2	140
Basalt, hard	9	149
Clay, blue	10	159
Basalt, hard	51	210
Basalt, black and brown, soft, water	10	220

Note: Two logs on file for this well. The other log is similar to this log.

39N-5W-4cdc2. Floyd Trail

Dirt, black.	3	3
Clay, yellow	27	30
Clay, brown.	15	45
Clay, yellow	34	79
Clay, white.	9	88
Clay, brown.	7	95
Clay, blue	12	107
Clay, blue, and shale	18	125
Basalt, hard, water	16	141
Basalt, black, hard	47	188

39N-5W-5adcl. Jack Marineau

Material	Thickness (feet)	Depth (feet)
Clay, yellow	158	158
Shale, blue	10	168
Clay, brown	18	186
Basalt, very hard	170	356
Clay, blue, soft	34	390
Quartz sand, water	15	405

Note: Two logs on file for this well. The other log is similar to this log.

39N-5W-5bbb2. John Wallen

Clay	60	60
Granite, decomposed, and clay	37	97
Granite, coarse, decomposed, water	19	116
Clay, white	2	118

39N-5W-5bcdl. Bill Smith

Clay	20	20
Granite, decomposed; hit two logs at 95 ft	80	100
Basalt, black	165	265

39N-5W-5bdbl. Robert McGahan

Clay	60	60
Granite, decomposed, water	14	74

39N-5W-5bdcl. Gerald Rich

Clay, brown	59	59
Sand and gravel, water	28	87
Clay, brown	9	96
Scoria, dark	46	142
Scoria, seamed, water	22	164
Scoria, solid	8	172

39N-5W-6dcal. Dick Harden

Material	Thickness (feet)	Depth (feet)
Sediments	190	190
Basalt	168	358
Sand, black	18	376

39N-5W-6dcdl. Dr. E. L. Boas

Soil	5	5
Clay, sandy	115	120
Basalt, black	253	373
Sand, water	3	376

39N-5W-7bdal. City of Moscow #7

Clay, yellow	34	34
Clay, brown, and sand	9	43
Clay, yellow, and quartz sand	27	70
Clay, yellow, and sand	35	105
Clay, sandy	20	125
Clay, brown	5	130
Clay, medium brown	15	145
Clay, yellow	10	155
Clay, gray, some yellow clay	4	159
Clay, gray	4	163
Basalt	5	168
Clay, brown	7	175
Basalt, water bearing	91	266
Basalt	17	283
Basalt, soft	22	305
Basalt, medium	55	360
Basalt	6	366
Sand	20	386
Sand and clay	40	426
Sand	38	464
Sand, gray, muddy	11	475
Clay, brown, sticky	4	479
Clay, green	3	482
Clay, gray, sticky	11	493
Shale, dark, hard	118	520
Basalt, hard	27	638
Basalt	29	667

39N-5W-7bda2. City of Moscow #8

Material	Thickness (feet)	Depth (feet)
Clay, brown	22	22
Clay and gravel	25	47
Gravel	7	54
Clay and gravel	31	85
Clay, white	23	108
Basalt, broken	2	110
Clay, brown	50	160
Clay, yellow	7	167
Basalt	13	180
Clay, black	4	184
Basalt	200	384
Sand	12	396
Sandstone	17	413
Clay, sticky	4	417
Clay, sandy	17	434
Clay, gray, sticky	47	481
Shale	3	484
Clay, brown, sticky	128	612
Basalt, black	38	650
Basalt, gray	41	691
Clay, brown, sticky	39	730
Basalt, broken	49	779
Clay	42	821
Sand, cement	30	851
Clay, sticky	67	918
Clay, gray	32	950
Basalt	8	958
Basalt with clay	7	965
Basalt, black, dense	189	1154
Basalt, gray, hard	104	1258
Clay, sticky	45	1303
Clay, sandy	10	1313
Clay, sticky	55	1368
Clay, gray, sandy	23	1391
Granitic rock	67	1458

39N-5W-7cbb1. University of Idaho #3

Topsoil	18	18
Basalt, broken	79	97

39N-5W-7cbb1--Continued

Basalt	69	166
Sedimentary	331	497
Basalt	83	580
Sedimentary	30	610
Basalt	21	631
Sedimentary	19	650
Basalt	187	837
Sedimentary	52	889
Basalt	307	1196
Sedimentary	47	1243
Quartz sand, dirty	10	1253
Sedimentary	69	1322
Granite	14	1336

39N-5W-7cdc1. University of Idaho #2

Material	Thickness (feet)	Depth (feet)
Clay, yellow	17	17
Clay, blue, and gravel	12	29
Basalt, vesicular	36	65
Basalt, vesicular, and basalt glass	45	110
?	8	118
Basalt, vesicular, and basalt glass	7	125
Basalt	17	142
Basalt, vesicular	3	145
Basalt	29	174
Basalt, vesicular	9	183
Clay, gray, and silt	12	195
Clay, gray, and silt, some small quartzite pebbles	12	207
Sand, quartz, coarse	7	214
Quartz sand, gravel, some argillite pebbles	8	222
Sand, quartz	8	230
Sand, gray, granitic, with silt	15	245
Silt, gray, some sand	13	258
Sand, gray, granitic, and silt	12	270
Clay, chocolate to dark blue, carbonaceous	40	310
Clay, greenish gray	25	335
Claystone, gray, partially cemented	5	340
Clay, brown and greenish gray	8	348
Granitic sand and silt, some clay and pebbles of basalt, and argillite	3	351
Granitic sand and silt, some green clay and basalt pebbles	2	353
Granitic sand, silt, and clay	1	354

39N-5W-7dad2. City of Moscow #2

Material	Thickness (feet)	Depth (feet)
Topsoil	36	36
Basalt	36	72
Gravel	5	77
Basalt	82	159
Shale seam (stringer)	0+	159
Basalt	65	224
Clay, blue-gray	30	254
Sand, granitic	19	273
Shale, sandy	6	279
Sand and pebbles	26	305
Sand, cemented	7	312
Slate	2	314
Soil, brown	11	325
Soil and pebbles	30	355
Shale, micaceous	40	395
Shale, sandy	49	444
Sand, cemented	18	462
Shale, brown	38	500
Shale, micaceous and pebbles	25	525
Shale, brown	28	553
Quartzite	7	560

Well backfilled to 240 feet.
Note: Last 7 ft of log may be basalt and not quartzite

39N-5W-7dad3. City of Moscow #3

Topsoil and clay	32	32
Basalt, hard	151	183
Basalt, soft	11	194
Basalt, porous	4	198
Basalt, broken	10	208
Shale, blue, dense	30	238
Sand	23.5	261.5

Concrete plug at 235

39N-5W-7dcd1. Olsen's Bestway Carpet & Lindsay Water Serv.

Soil	1	1
Clay	11	12
Sand	7	19
Clay	29	48
Basalt	175	223
Basalt, porous	5	228
Clay, brown	10	238

39N-5W-8abd2. City of Moscow #5

Material	Thickness (feet)	Depth (feet)
Clay, yellow	80	80
Clay and gravel	5	85
Clay, yellow	10	95
Clay, light gray, sticky	35	130
Clay, gray	10	140
Rock, black, broken, and clay	6	146
Basalt, black	21	167
Basalt, porous	5	172
Basalt, black, broken (material sticking badly at 197 feet)	33	205
Sand and gravel	6	211
Basalt, black	35	246
Basalt, and large boulders	2	248
Boulders, large	2	250
Basalt, hard	29	279
Basalt, gray	32	311
Basalt, hard	25	336
Basalt, dense, fractured	5	341
Basalt	13	354
Basalt, showing water	4	358
Clay	1	359
Basalt, some water	13	372
Granite	a	-

Well abandoned
a - probably about 1 foot

39N-5W-8bdb1. City of Moscow #6

Topsoil and clay	17	17
Gravel, loose unconsolidated	4	21
Clay	34	55
Clay, brown, some wood in clay	15	70
Basalt, dark brown	34	104
Basalt, medium black	7	111
Basalt, dark, broken	7	118
Basalt, dark, very hard	66	184
Basalt crevice	2	186
Basalt, dark, very hard	4	190
Basalt, very hard, first water in basalt	10	200
Basalt, dark gray, crevice	5	205
Basalt, dark, hard	31	236
Basalt, dark, medium hard	5	241
Basalt, dark, broken; may be some water here	4	245
Clay, blue gray, sandy	35	280
Sand, white ("salt-and-pepper" sand)	20	300

39N-5W-8bdbl--Continued

Clay, blue-green, sandy	13	313
Clay, blue-green	4	317
Sand, cemented	3	320
Clay, blue-green, sandy	50	370
Sand	2	372
Clay, brown, and sand	4	376
Clay, brown, sticky	31	407
Clay, blue, sticky	5	412
Clay, blue, and granite sand	18	430
Granite sand, cemented	15	445
Clay, brown, sticky	35	480
Clay, brown and sand, gray	43	523
Clay, brown, sticky	23	546
Clay, blue	4	550
Clay, blue, and sand	18	568
Basalt, black	28	596
Sand	5	601
Basalt, black	14	615
Clay, brown, heavy	30	645
Shale, brown, very firm	55	700
Shale, blue	10	710
Shale, brown, and sand, white	5	715
Shale, blue, brown, and sand, white	19	734
Sand, white, cemented	1	735
Shale or clay, brown	29	764
Shale, blue-green	23	787
Quartz sand, cemented	3	790
Shale, blue-green	4	794
Quartz sand, cemented	4	798
Shale, blue and brown	8	806
Sand, cemented.	10	816
Shale, brown	64	880
Shale, brown, firm	10	890
Shale, blue, brown, sticky	16	906
Bottom of casing		
Basalt, black	19	925
Basalt, black, water-bearing	5	930
Basalt, black	52	982
Basalt, black, water-bearing	9	991
Basalt, black	10	1001
Basalt, black, water-bearing	2	1003
Basalt, black	125	1128
Quartz sand, white	23	1151
Mud, red	4	1155
Quartz sand, white	18	1173
Shale, blue with fine sand	90	1263
Quartz sand	45	1308

39N-5W-8cccl. City of Moscow (former Arden Dairy)

Material	Thickness (feet)	Depth (feet)
Dirt and sand.	40	40
Basalt	100	140
Well either covered or destroyed		

39N-5W-8dadl. R. W. Jones

Clay and soil.	5.35	5.35
Sand and clay.	3.55	8.9
Clay, blue, and sand	1.6	10.5
Silt, brown, with mica at 11.5	1	11.5

39N-5W-8dddl. City of Moscow #4

Dirt	4	4
Clay	6	10
Clay and gravel.	10	20
Gravel	1	21
Clay, yellow	34	55
Clay, brown.	5	60
Clay, black.	15	75
Basalt, black.	33	108
Basalt, gray	129	237
Basalt, black, porous.	9	246
Basalt, black, solid	4	250
Basalt, porous, and clay	8	258
Clay, black, brown, and wood	2	260
Clay, yellow	5	265
Clay, blue	22	287
Clay, blue-gray.	9	296
Shale, blue.	4	300
Clay, gray	30	330
Clay, brown.	2	332
Clay, gray	8	340
Clay, brown.	20	360
Clay, mixed colors	6	366
Rock, black.	4	370
Clay, blue	10	380
Clay, brown.	40	420

39N-5W-8ddd1--Continued

Clay, blue	5	425
Clay, sandy	10	435
Clay, brown	15	450
Clay, blue	18	468
Clay and sand	127	595
Basalt, gray, with pyrite	5	600
Basalt, gray	95	695
Clay, brown	25	720
Clay mixed with granite sand	15	735
Clay, gray, mixed with green shale	20	755
Clay, brown	10	765
Clay, gray	3	768
Clay, mixed	22	790
Well covered		

39N-5W-9babl. A. A. Flack

Material	Thickness (feet)	Depth (feet)
Dirt, black	3	3
Clay, yellow	25	28
Sand	4	32
Clay, white	13	45
Granite, decomposed	32	77
Clay, blue	2	79
Basalt, soft	8	87
Basalt, hard	1	88
Sand and clay, black	10	98
Clay, blue	40	138
Dirt, black	9	147
Basalt, soft	37	184

39N-5W-9bbal. W. L. Purnell

Soil	10	10
Granite, decomposed	45	55
Sand, white, water	10	65
Clay, white	5	70

39N-5W-9bba2. Fernando Del Valle

Material	Thickness (feet)	Depth (feet)
Dirt, black	4	4
Clay, yellow	37	41
Clay, white	6	47
Clay, brown	8	55
Clay, whitish brown	10	65
Clay, brown, and gravel, coarse	10	75

39N-5W-9bba3. James Bosse

Loam, black	6	6
Clay, yellow	130	136
Granite, very hard, and basalt, mixed	44	180
Basalt, very hard	46	226
Basalt, soft, water	4	230

39N-5W-9bba4. Clyde Youmans

Dirt, black	4	4
Clay, brown	8	12
Clay, brown, and sand	6	18
Clay, yellow	47	65
Clay, brown, and sand	13	78
Clay, yellow	6	84
Clay, yellow, and sand	10	94
Clay, red, and gravel, water	1	95

39N-5W-9bbdl. Glen Keesler

Topsoil	1	1
Clay, brown	25	26
Sand, coarse	2	28
Clay, light gray	9	37
Clay, yellow	13	50
Clay, yellow, sandy	19	69

39N-5W-9bbdl--Continued

Clay, gray	17	86
Clay, yellow	6	92
Clay, gray, some wood	3	95
Clay, gray, and sand	35	130
Sand, white, coarse, and clay	6	136
Basalt, broken	1	137
Granite, decomposed, water	7	144

39N-5W-9bcal. Leda Scrimsher

Topsoil	2	2
Clay, brown	24	26
Sand, coarse, water	4	30
Clay, light gray	7	37
Clay, yellow	11	48
Clay, yellow, sandy	22	70
Clay, gray	13	83
Sand, fine, water	1	84
Clay, yellow	8	92
Basalt, broken	13	105
Clay, tan, sandy	9	114
Clay, green, sandy	5	119
Clay, blue, sandy	46	165
Sand, light brown, water	2	167

39N-5W-9bca2. Willis Estes

Dirt, black	3	3
Clay, yellow	22	25
Sand and gravel	10	35
Granite, decomposed, and clay, yellow	15	50
Granite, decomposed, and clay, red	10	60
Granite, decomposed	7	67
Granite, decomposed, and clay, yellow	9	76
Clay, black, and wood	6	82
Clay, blue	11	93
Basalt, hard	10	103
Basalt, soft	17	120
Clay, blue, and soapstone	40	160
Basalt	3	163
Sand and gravel, water	1	164

39N-5W-10abdl. Syringa Trailer Court

Material	Thickness (feet)	Depth (feet)
Overburden	36	36
Granite, decomposed	70	106
Granite, firm	34	140
Granite, hard	70	210

39N-5W-10cacl. Roy Bell

Clay, yellow	109	109
Clay, yellow, mucky, some water	71	180
Clay, gray, mucky, and sand	30	210
Clay, gray, and sand, tight formation	10	220
Granite, broken, quartz sand and clay	5	225
Granite	5	230
Granite, hard, quartz rock	25	255
Granite, medium hard, quartz rock, water	20	275

39N-5W-14dcal. Wayne Oleson

Clay and granite, decomposed	54	54
Granite, decomposed, hard streaks	39	93
Granite, decomposed, hard, water	47	140

39N-5W-15accl. Elk's Golf Course #2

Soil and clay	61	61
Basalt	139	200
Sand, red, quartz, partly consolidated, water	3	203

39N-5W-15adc1. Elk's Golf Course #3

Material	Thickness (feet)	Depth (feet)
Topsoil	2	2
Clay, gray, soft	10	12
Clay, white, soft, and sand, fine	28	40
Clay, white, soft, and sand	5	45
Clay, brown, soft	6	51
Basalt, broken	94	145
Clay, brown	6	151
Basalt, broken, and clay	17	168
Clay, brown	8	176
Clay, white and brown	9	185
Clay, white	3	188
Clay, tan	12	200
Clay, white, sandy	38	238
Clay, brown, sandy	16	254
Clay, gray, sandy, water	16	270

39N-5W-15bca1. University of Idaho (Parker Farm)

Palouse silt loam	20	20
Sand, coarse	10	30
Clay, light gray, sandy	5	35
Clay, dark gray, sandy	10	45
Clay, light gray, sandy	25	70
Clay, dark gray	10	80
Clay, dark brown, silty	25	105
Basalt, dark	178	283
Clay, light blue	11	294
Clay, yellow	16	310
Clay, reddish-yellow	15	325
Sand, argillaceous	35	360
Clay, dark brown, silty	30	390
Clay, reddish-brown	20	410
Sand, reddish-brown, argillaceous	10	420
Clay, dark brown, sandy	50	470
Sand, coarse	10	480
Clay, dark brown, sandy	8	488
Quartzite	4	492
Backfilled and cement plug set at 278 feet		

39N-5W-15cbb1. Oscar Nelson

Material	Thickness (feet)	Depth (feet)
Clay, yellow, water	30	30
Clay, white	60	90
Clay, brown,with wood, water	12	102
Basalt, very hard, water	38	140

39N-5W-15dbb1. John Eldridge

Clay and sand	86	86
Basalt	91	177
Scoria, porous, water	2	179
Basalt	7	186

39N-5W-15dbb2. Cliff Latham

Clay	25	25
Gravel	3	28
Sand and clay	56	84
Basalt, black	42	126
Scoria, porous	16	142
Basalt, black, water	14	156

39N-5W-16acal. Tom Mitzimberg

Topsoil	2	2
Clay, brown	33	35
Sand	4	39
Clay, gray	11	50
Clay, white	5	55
Granite, decomposed	8	63

39N-5W-16add1. R. R. Reid

Material	Thickness (feet)	Depth (feet)
Clay, yellow	140	140
Basalt,and clay, blue, mixed	32	172
Basalt, very hard.	110	282
Basalt, soft, water.	3	285

39N-5W-16caa1. John Mix

Clay, brown.	28	28
Shale, brown	90	118
Granite, decomposed.	4	122
Shale, white	12	134
Shale, gray.	8	142
Shale, blue.	22	164
Shale, black	4	168
Shale, gray.	12	180
Shale, dark brown.	7	187
Shale, gray.	3	190
Lava rock.	20	210
Basalt, blue	164	374
Shale, blue.	16	390

39N-5W-16caa2. James E. Richey

Clay, yellow	188	188
Basalt, very hard.	186	374
Clay, blue	45	419
Quartz sand and then clay, white, blue	6	425

39N-5W-16cba1. City of Moscow (nr cemetery)

Clay, yellow	55	55
Clay, white, and quartz sand, water	8	63
Clay, dark brown	58	121
Basalt, medium-hard, water	39	160

39N-5W-16cba1--Continued

Basalt, very hard.	97	257
Basalt, very, very hard, dense	46	303
Basalt, medium-hard.	7	310
Clay, blue, stands open against rock	5	315

39N-5W-16daa1. Ralph McAllister

Material	Thickness (feet)	Depth (feet)
Clay and sand.	99	99
Basalt, black, very solid, water bearing seams at 230 feet	147	246

39N-5W-16dbd1. A. Markstaller

Clay, (wood at 100 feet)	108	108
Basalt, (crevice at 284 feet)	180	288

39N-5W-16dcc1. Joe Mengelkamp

Soil	2	2
Clay	28	30
Sand and gravel.	18	48
Basalt	97	145
Clay, brown.	2	147
Basalt, porous	16	163
Clay	12	175

39N-5W-16dcd1. Don Law

Clay, yellow	38	38
Sand and gravel, water	4	42
Clay, brown, with vegetation	31	73
Basalt, hard, water.	125	198
Clay, brown, water	7	205
Clay, blue	5	210

39N-5W-16ddd1. Eldon Bingman

Material	Thickness (feet)	Depth (feet)
Dirt, black.	5	5
Clay, yellow	10	15
Clay, yellow, and sand	5	20
Clay, white.	13	33
Clay, yellow	8	41
Clay, black.	2	43
Clay, brown, and wood	12	55
Clay, gray, and wood	11	66
Clay, gray	4	70
Basalt, hard, water.	135	205
Basalt, soft, water.	9	214

39N-5W-16ddd2. J. M. Atkinson

Topsoil, soft	2	2
Clay, gray, soft	13	15
Clay, brown, soft	10	25
Clay and gravel	7	32
Clay, brown, soft	28	60
Granite, decomposed	9	69
Basalt, medium hard	21	90
Basalt, hard	58	148
Basalt, medium hard	10	158
Basalt, hard, water	2	160

39N-5W-17cddl. Everett Hagen

Clay, yellow	11	11
Granite, decomposed	76	87
Quartz	3	90
Granite, decomposed	157	247

39N-5W-17daal. Sunset Memorial Gardens

Topsoil, black, soft	5	5
Clay, light gray, sticky	16	21
Clay, light brown, with small gravel . .	8	29
Clay, yellow, with small gravel, water .	10	39
Gravel, coarse, with yellow clay	14	53
Clay, light brown, with wood	16	69
Clay, dark brown	13	82

39N-5W-17daal--Continued

Clay, blue	5	87
Basalt, dark brown, broken, decomposed .	4	91
Basalt, black, very dense, hard	163	254
Basalt, broken, and clay, blue	18	272
Clay, light green, sticky	6	278
Clay, light yellow with basalt chips . .	3	281
Clay, green	76	354
Clay, light brown, and sand	17	371
Clay, light brown, sticky	38	409
Clay, blue, sticky	5	414
Clay, chocolate brown	33	447
Granite sand, light gray, decomposed . .	66	513
Clay, chocolate brown, sticky	37	550
Basalt, black	2	552

Well backfilled to 508 feet

39N-5W-17ddc1. Frank Bennett

Material	Thickness (feet)	Depth (feet)
Soil	2	2
Clay	73	75
Basalt	30	105
Clay	5	110
Basalt	17	127
Clay, brown, some wood	3	130
Basalt	10	140
Granite, decomposed.	160	300

39N-5W-18badl. University of Idaho #1

Clay	36	36
Quicksand.	4	40
Clay, white.	35	75
Clay, white, soft, driftwood	23	98
Lava rock, very hard	207	305
Sand, rock, soft, very porous	15	320
Clay, blue, lava mud	10	330

39N-5W-20addl. Eddie Tout

Granite, decomposed, caving	99	99
Granite.	196	295

Material	Thickness (feet)	Depth (feet)
39N-4W-6abb1. Sam Wilder #2		
Soil	1	1
Clay, brown.	19	20
Sand, white, dry	6	26
Granite, decomposed.	34	60
Sand	16	76
Granite, hard.	124	200
39N-4W-6abb2. Sam Wilder #1		
Soil	3	3
Granite, hard.	277	280
Quartz, water	5	285
Granite, hard.	45	330
Quartz, water	6	336
Granite, hard.	89	425
Well destroyed, yield inadequate		

Water levels in observation wells

All periodic water-level-measurement data for wells in the Moscow basin known to be available as of 1973 are included in the following tabulations. The tabulations, given here in computer-printout form, contain measurements made by the U.S. Geological Survey and various outside agencies or persons. The non-Survey data are identified by footnote symbol, G, and were collected by various individuals using equipment and measuring procedures that are poorly documented and for which accuracy standards are not known. The tabulated data for some wells show anomalous values possibly related to airline malfunction, and others are thought to be the result of changes in equipment and/or measurement-reference point. The data are tabulated here as reported, and the U.S. Geological Survey accuracy standards apply only to those measurements not identified by footnote G

Additionally, it is presumed that all measurements reported by outside agencies or persons are nonpumping water levels, as are those of the Geological Survey unless otherwise indicated by footnote.

To facilitate visualization of the magnitude and character of water-level changes over long periods, figures 6 and 7 provide hydrographs for two wells for which long-term records are available. Figure 6 shows water-level changes

in the upper artesian zone, and figure 7 shows water-level changes in an alluvial aquifer. Records of water levels in the middle and lower artesian zones are either too short to show long-term trends, or the changes can readily be seen by inspection of the tabulations.

Many of the water-level data contained herein were compiled by Dr. R. W. Jones, Department of Geography and Geology, University of Idaho, and are from his unpublished records. The Physical Plant Division, University of Idaho, and the Engineering and Water Departments of the city of Moscow furnished their data to Dr. Jones. Additionally, Dr. Jones and S. H. Ross collected the water-level data on most of the private domestic wells listed herein. Their contribution is gratefully acknowledged.

464709N1165702.1 40N 05W 29AAB1 R K BONNETT LATAH COUNT

DRILLED UNUSED WATER-TABLE WELL IN WEATHERED MATERIAL OF THE BASEMENT COMPLEX, DIAMETER 6 INCHES, DEPTH 152.2 FEET, CASING DEPTH NOT AVAILABLE. LAND-SURFACE DATUM 2,715 FEET ABOVE MEAN SEA LEVEL ESTIMATED FROM TOPOGRAPHIC MAP. MEASUREMENTS FROM JANUARY THROUGH MAY 1965 ARE TAPE MEASUREMENTS. DATA FROM JUNE 10, 1965, THROUGH MARCH 31, 1966, ARE FROM RECORDER CHARTS ON APPROXIMATELY EVERY FIFTH DAY AND ARE THE HIGHEST READING FOR THE DAY. MEASURING POINT IS TOP OF CASING 0.5 FEET ABOVE LAND SURFACE.

HIGHEST WATER LEVEL 45.80 FT (13.960 M) BELOW LSD, JUNE 28, 1972.
LOWEST WATER LEVEL 50.75G FT (15.469 M) BELOW LSD, NOV. 4, 1966.
RECORDS AVAILABLE 1964-66, 1972-73.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV. 4, 1964	50.29G	SEP. 15, 1965	49.43G	JAN. 20, 1966	49.63G
DEC. 7	50.55G	SEP. 20	49.48G	JAN. 25	49.55G
JAN. 4, 1965	50.33G	SEP. 25	49.36G	JAN. 31	49.51G
FEB. 1	50.39G	SEP. 30	49.45G	FEB. 5	49.59G
MAR. 1	50.24G	OCT. 5	49.50G	FEB. 10	49.54G
APR. 5	49.48G	OCT. 10	49.56G	FEB. 15	49.56G
MAY 3	49.28G	OCT. 15	49.47G	FEB. 20	49.56G
JUNE 10	49.23G	OCT. 20	49.60G	FEB. 25	49.55G
JUNE 15	49.17G	OCT. 25	49.66G	FEB. 28	49.52G
JUNE 20	49.10G	OCT. 30	49.63G	MAR. 5	49.65G
JUNE 25	49.05G	NOV. 5	49.54G	MAR. 10	49.51G
JUNE 30	49.12G	NOV. 10	49.54G	MAR. 15	49.48G
JULY 5	49.40G	NOV. 15	49.50G	MAR. 20	49.44G
JULY 10	49.34G	NOV. 20	49.52G	MAR. 25	49.74G
JULY 15	49.36G	NOV. 25	49.44G	MAR. 31	49.59G
JULY 20	49.38G	NOV. 30	49.60G	APR. 2	50.16G
JULY 25	49.48G	DEC. 5	49.63G	APR. 30	50.22G
JULY 31	49.55G	DEC. 10	49.58G	MAY 28	50.17G
AUG. 5	49.54G	DEC. 15	49.64G	AUG. 5	50.14G
AUG. 10	49.55G	DEC. 20	49.70G	SEP. 8	50.14G
AUG. 15	49.60G	DEC. 25	49.63G	OCT. 7	50.13G
AUG. 20	49.53G	DEC. 31	49.50G	NOV. 4	50.75G
AUG. 24	49.42G	JAN. 8, 1966	49.47G	DEC. 15	50.12G
AUG. 31	49.53G	JAN. 10	49.55G	JUNE 28, 1972	45.80
SEP. 5	49.46G	JAN. 15	49.61G	MAR. 22, 1973	46.31
SEP. 10	49.44G				

G MEASURED BY OUTSIDE AGENCY OR PERSON.

464547N1170042.1 40N 05W 31CAD1 N T CARSON LATAH COUNTY

DUG UNUSED WATER-TABLE WELL IN ALLUVIUM, DIAMETER 30 INCHES, DEPTH 20.6 FEET. LAND-SURFACE DATUM 2,620 FEET ABOVE MEAN SEA LEVEL ESTIMATED FROM TOPOGRAPHIC MAP. MEASURING POINT IS TOP EDGE OF CONCRETE COVER AT LAND SURFACE.

HIGHEST WATER LEVEL 2.22G FT (0.677 M) BELOW LSD, FEB. 1, 1965.
LOWEST WATER LEVEL 9.60G FT (2.926 M) BELOW LSD, NOV. 5, 1965.
RECORDS AVAILABLE 1964-66.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
AUG. 3, 1964	5.4 G	MAY 3, 1965	3.16G	FEB. 5, 1966	5.91G
SEP. 28	6.93G	JUNE 1	4.22G	MAR. 5	4.98G
OCT. 5	7.08G	JULY 2	4.83G	APR. 2	4.02G
NOV. 2	7.00G	JULY 30	5.35G	MAY 28	5.27G
DEC. 7	6.73G	SEP. 3	6.02G	AUG. 5	6.64G
JAN. 4, 1965	4.68G	OCT. 1	7.08G	SEP. 8	7.26G
FEB. 1	2.22G	NOV. 5	9.60G	NOV. 4	7.58G
MAR. 1	2.72G	DEC. 4	6.68G	DEC. 15	7.21G
APR. 5	3.02G	JAN. 8, 1966	5.94G		

G MEASURED BY OUTSIDE AGENCY OR PERSON.

464425N1170044.1 39N 05W 07BDA1 CITY OF MOSCOW #7 LATAH COUNTY

DRILLED UNUSED ARTESIAN WELL, PROBABLY IN THE LOWER PART OF THE UPPER INTERBEDS OF THE UPPER ARTESIAN ZONE OF THE COLUMBIA RIVER GROUP; DIAMETER 20 INCHES, DEPTH 667 FEET, CASING TO 426 FEET. LAND-SURFACE DATUM REPORTED 2,614 FEET ABOVE MEAN SEA LEVEL. DATA FROM RECORDER CHARTS ON APPROXIMATELY EVERY FIFTH DAY AND ARE THE HIGHEST READING FOR THE DAY (SOKOL, 1966). MEASURING POINT IS TOP OF CASING AT LAND SURFACE.

HIGHEST WATER LEVEL 216.66G FT (66.038 M) BELOW LSD, MAR. 20, 1966.
LOWEST WATER LEVEL 220.16G FT (67.105 M) BELOW LSD, NOV. 15, 1964.
RECORDS AVAILABLE 1963-66.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV. 1, 1963	218.10G	JUNE 10, 1964	219.50G	JAN. 15, 1965	219.30G
NOV. 5	217.83G	JUNE 15	219.69G	JAN. 17	219.31G
NOV. 10	217.80G	JUNE 22	219.85G	JAN. 20	219.09G
NOV. 15	217.74G	JUNE 25	219.65G	JAN. 25	219.00G
NOV. 20	217.82G	JUNE 30	219.84G	JAN. 31	218.96G
NOV. 23	217.97G	JULY 5	219.65G	FEB. 5	218.80G
DEC. 6	218.03G	JULY 10	219.86G	FEB. 10	218.99G
DEC. 10	218.05G	JULY 15	219.68G	FEB. 15	219.02G
DEC. 15	218.20G	JULY 20	219.78G	FEB. 23	219.04G
DEC. 20	218.31G	JULY 25	219.86G	FEB. 25	219.00G
DEC. 25	218.54G	JULY 31	219.80G	FEB. 29	219.07G
DEC. 31	218.55G	AUG. 5	219.94G	MAR. 5	219.02G
JAN. 4, 1964	218.65G	AUG. 10	219.94G	MAR. 10	219.01G
JAN. 16	218.59G	AUG. 17	219.85G	MAR. 15	218.97G
JAN. 20	218.50G	AUG. 20	219.85G	MAR. 20	219.03G
JAN. 25	218.67G	AUG. 25	219.68G	MAR. 25	218.90G
JAN. 31	218.78G	AUG. 31	219.70G	MAR. 31	218.87G
FEB. 5	218.90G	SEP. 5	219.70G	APR. 5	218.87G
FEB. 10	218.76G	SEP. 10	219.81G	APR. 10	218.89G
FEB. 15	218.75G	SEP. 15	219.95G	APR. 15	218.78G
FEB. 20	218.99G	SEP. 20	219.88G	APR. 20	218.80G
FEB. 25	218.72G	SEP. 25	219.84G	APR. 26	218.78G
FEB. 29	218.10G	SEP. 30	219.90G	APR. 30	218.68G
MAR. 5	218.02G	OCT. 5	220.01G	MAY 5	218.62G
MAR. 10	217.99G	OCT. 10	219.85G	MAY 10	218.70G
MAR. 15	217.20G	OCT. 15	219.82G	MAY 15	218.61G
MAR. 20	217.06G	OCT. 20	219.98G	MAY 20	218.60G
MAR. 22	217.00G	OCT. 25	219.96G	MAY 25	218.61G
MAR. 25	217.20G	OCT. 31	219.96G	MAY 31	218.51G
MAR. 31	217.26G	NOV. 5	220.10G	JUNE 5	218.54G
APR. 5	217.34G	NOV. 10	219.88G	JUNE 10	218.56G
APR. 10	218.01G	NOV. 15	220.16G	JUNE 15	218.53G
APR. 15	218.32G	NOV. 20	220.08G	JUNE 20	218.44G
APR. 20	218.56G	NOV. 25	219.73G	JUNE 25	218.40G
APR. 25	218.62G	NOV. 30	219.76G	JUNE 30	218.46G
APR. 30	218.81G	DEC. 5	219.88G	JULY 5	218.45G
MAY 5	218.80G	DEC. 10	219.51G	JULY 10	218.31G
MAY 11	219.24G	DEC. 15	219.29G	JULY 15	218.28G
MAY 15	219.20G	DEC. 20	219.32G	JULY 20	218.22G
MAY 20	219.28G	DEC. 25	219.20G	JULY 25	218.18G
MAY 25	219.59G	DEC. 31	219.18G	JULY 31	218.24G
MAY 31	219.59G	JAN. 5, 1965	219.07G	AUG. 5	218.22G
JUNE 5	219.64G	JAN. 10	219.20G	AUG. 10	218.18G

464425N1170044.1 39N 05W 07BDA1 CITY OF MOSCOW #7 LATAH COUNTY

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
AUG. 15, 1965	218.19G	FEB. 20, 1966	216.93G	JULY 20, 1966	217.38G
AUG. 20	218.15G	FEB. 25	216.82G	JULY 25	217.32G
AUG. 25	218.08G	FEB. 28	216.80G	JULY 31	217.40G
AUG. 31	218.13G	MAR. 5	216.92G	AUG. 4	217.42G
SEP. 5	218.05G	MAR. 10	216.82G	SEP. 7	217.40G
SEP. 10	218.05G	MAR. 15	216.72G	SEP. 10	217.33G
SEP. 15	218.03G	MAR. 20	216.66G	SEP. 15	217.43G
SEP. 20	218.03G	MAR. 25	216.82G	SEP. 20	217.50G
SEP. 22	218.02G	MAR. 31	216.87G	SEP. 25	217.45G
NOV. 5	217.08G	APR. 5	216.85G	SEP. 30	217.54G
NOV. 10	216.98G	APR. 10	216.78G	OCT. 5	217.54G
NOV. 14	216.86G	APR. 15	216.94G	OCT. 10	217.50G
NOV. 15	216.89G	APR. 20	216.88G	OCT. 14	217.62G
NOV. 27	217.78G	APR. 25	216.91G	OCT. 15	217.60G
NOV. 31	217.69G	APR. 30	216.95G	OCT. 20	217.41G
DEC. 5	217.64G	MAY 5	216.92G	OCT. 25	217.50G
DEC. 10	217.54G	MAY 10	216.86G	OCT. 31	217.61G
DEC. 15	217.56G	MAY 15	216.93G	NOV. 5	217.35G
DEC. 20	217.48G	MAY 20	216.89G	NOV. 10	217.38G
DEC. 25	217.43G	MAY 25	216.96G	NOV. 15	217.37G
DEC. 31	217.25G	MAY 28	217.00G	NOV. 20	217.24G
JAN. 5, 1966	217.08G	JUNE 13	217.10G	NOV. 25	217.30G
JAN. 15	217.20G	JUNE 15	217.02G	NOV. 30	217.30G
JAN. 20	217.11G	JUNE 20	217.04G	DEC. 4	217.16G
JAN. 25	217.01G	JUNE 25	217.10G	DEC. 15	217.24G
JAN. 31	216.90G	JUNE 28	217.10G	DEC. 20	217.13G
FEB. 5	216.98G	JULY 5	217.28G	DEC. 25	217.13G
FEB. 10	216.96G	JULY 10	217.22G	DEC. 31	217.13G
FEB. 15	216.96G	JULY 15	217.28G		

G MEASURED BY OUTSIDE AGENCY OR PERSON.

464425N1170043.1 39N 05W 07BDA2 CITY OF MOSCOW # 8 LATAH COUNT

DRILLED PUBLIC-SUPPLY ARTESIAN WELL IN THE LOWER ARTESIAN ZONE OF THE COLUMBIA RIVER GROUP, DIAMETER 20 INCHES, DEPTH 1,458 FEET, CASING TO 1,047 FEET. LAND-SURFACE DATUM REPORTED 2,617 FEET ABOVE MEAN SEA LEVEL. MEASUREMENT OF DECEMBER 11, 1964, MADE BEFORE BEGINNING OF PUMPING TEST. MEASUREMENTS FROM MARCH 15 THROUGH APRIL 19, 1965, ARE WEEKLY HIGHEST WATER LEVELS FROM RECORDER CHARTS (SOKOL, 1966). MEASUREMENTS FROM JULY 1965 THROUGH DECEMBER 1970 ARE MONTHLY AIRLINE MEASUREMENTS. MEASUREMENTS IN 1972 AND 1973 MADE BY U.S. GEOLOGICAL SURVEY. MEASURING POINT FOR MEASUREMENTS PRIOR TO 1972 IS TOP OF PLATE WELDED TO CASING. MEASURING POINT FOR 1972-73 MEASUREMENTS IS TOP OF 1-INCH PIPE NIPPLE 1.65 FEET ABOVE LAND-SURFACE DATUM.

HIGHEST WATER LEVEL 304 G FT (92.659 M) BELOW LSD, NOV. , 1967.
LOWEST WATER LEVEL 352 G FT (107.290 M) BELOW LSD, JULY 24, 1967.
RECORDS AVAILABLE 1964-70, 1972-73.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC. 11, 1964	320 G	DEC. 1966	319 G	APR. 1969	320 G
MAR. 21, 1965	308.05G	JAN. 1967	328 G	MAY 11	315 G
MAR. 26	307.53G	FEB.	326 G	JUNE	315 G
APR. 2	307.46G	MAR.	327 G	JULY 29	335 G
APR. 13	307.25G	APR.	324 G	AUG.	325 G
APR. 16	307.82G	MAY	326 G	SEP.	320 G
JULY	326 G	JUNE	328 G	OCT. 27	320 G
AUG.	325 G	JULY 24	352 G	NOV. 29	315 G
SEP.	326 G	AUG.	337 G	DEC.	322 G
OCT.	326 G	SEP.	324 G	JAN. 1970	325 G
NOV.	327 G	OCT.	320 G	MAR.	320 G
DEC.	326 G	NOV.	304 G	APR. 27	320 G
JAN. 1966	327 G	DEC.	313 G	MAY 22	325 G
FEB.	327 G	JAN. 1968	323 G	JUNE	325 G
MAR.	326 G	FEB.	312 G	JULY	330 G
APR.	328 G	MAR.	318 G	AUG. 29	335 G
MAY	330 G	APR.	318 G	SEP. 20	325 G
JUNE	325 G	MAY 28	306 G	OCT.	330 G
JULY	320 G	AUG.	320 G	NOV. 25	335 G
AUG.	318 G	SEP.	321 G	DEC.	340 G
SEP.	321 G	OCT. 27	320 G	JUNE 20, 1972	388.50A
OCT.	321 G	NOV.	320 G	JULY 27	388.37A
NOV.	320 G	DEC. 11	320 G	MAR. 22, 1973	339.51L

A WELL BEING PUMPED.
G MEASURED BY OUTSIDE AGENCY OR PERSON.
L ELECTRIC TAPE, M-SCOPE.

464414N1170114.1 39N 05W 07CBB1 UNIV OF IDAHO #3 LATAH COUNTY

DRILLED PUBLIC-SUPPLY ARTESIAN WELL IN BASALT OF THE MIDDLE ARTESIAN ZONE OF THE COLUMBIA RIVER GROUP, DIAMETER 30 INCHES, DEPTH 1,336 FEET, CASED TO 661 FEET. LAND-SURFACE DATUM REPORTED 2,558 FEET ABOVE MEAN SEA LEVEL.
MEASUREMENT OF SEPTEMBER 5, 1963, IS THE STATIC LEVEL AT THE BEGINNING OF THE PUMPING TEST. DATA PRIOR TO SEPTEMBER 28, 1964, ARE AFTER SOKOL (1966, FIG. 5). MEASUREMENTS FROM DECEMBER 14, 1963, THROUGH MAY 7, 1964, ARE WEEKLY HIGHEST WATER LEVELS FROM RECORDER CHARTS, ADJUSTED TO 30.00 INCHES MERCURY ATMOSPHERIC PRESSURE. (SEE SOKOL, 1966) MEASUREMENTS FROM MAY 7, 1964, TO DECEMBER 15, 1960, ARE PERIODIC TAPE MEASUREMENTS. MEASUREMENTS FROM JUNE 1967 TO OCTOBER 1971 MADE WITH AIRLINE. MEASURING POINT IS TOP OF CASING 3.98 FEET ABOVE LAND-SURFACE DATUM FROM SEPTEMBER 5, 1963 TO MAY 6, 1964. MEASURING POINT SINCE MAY 7, 1964, IS TOP OF PUMP FLANGE 2.00 FEET ABOVE LAND SURFACE.

HIGHEST WATER LEVEL 251.00G FT (76.505 M) BELOW LSD, JAN. 19, 1964.
LOWEST WATER LEVEL 273 G FT (83.210 M) BELOW LSD, OCT. , 1970.
RECORDS AVAILABLE 1963-71.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
SEP. 5, 1963	257 G	SEP. 8, 1964	253.19G	NOV. 5, 1965	261.25G
DEC. 12	256 G	SEP. 15	253.58G	NOV. 19	262.58G
DEC. 14	252.10G	SEP. 28	253.31G	NOV. 27	256.76G
DEC. 20	251.82G	OCT. 5	253.67G	DEC. 4	256.69G
DEC. 25	251.75G	NOV. 9	252.93G	DEC. 11	256.65G
DEC. 26	251.95G	DEC. 7	253.68G	JAN. 15, 1966	256.98G
JAN. 6, 1964	251.40G	JAN. 4, 1965	253.28G	FEB. 5	256.60G
JAN. 7	251.55G	JAN. 18	253.85G	FEB. 12	256.89G
JAN. 19	251.00G	JAN. 25	253.33G	FEB. 26	256.85G
JAN. 22	251.27G	FEB. 1	253.61G	MAR. 12	256.94G
FEB. 1	252.02G	FEB. 9	254.07G	MAR. 22	256.81G
FEB. 15	251.82G	FEB. 15	253.95G	MAR. 26	256.99G
FEB. 27	251.65G	FEB. 23	253.86G	APR. 2	256.95G
MAR. 2	251.57G	MAR. 1	254.19G	APR. 9	256.86G
MAR. 12	251.45G	MAR. 15	253.75G	APR. 23	256.74G
MAR. 22	251.50G	MAR. 29	253.64G	APR. 30	257.25G
MAR. 29	251.50G	APR. 5	253.54G	MAY 7	257.44G
APR. 5	251.65G	APR. 12	253.71G	MAY 14	257.28G
APR. 11	251.71G	APR. 19	253.70G	MAY 21	257.27G
APR. 22	251.38G	APR. 26	253.97G	JUNE 4	257.98G
APR. 30	251.58G	MAY 3	253.74G	SEP. 7	259.20G
MAY 5	251.43G	MAY 10	253.99G	OCT. 7	258.62G
MAY 11	252.17G	MAY 17	253.59G	NOV. 4	260.51G
MAY 18	251.96G	MAY 24	253.98G	DEC. 15	260.44G
MAY 24	252.17G	JUNE 7	254.20G	JUNE 1967	261 G
JUNE 2	252.03G	JUNE 14	254.10G	OCT.	263 G
JUNE 8	251.72G	JUNE 21	254.40G	JUNE 1968	263 G
JUNE 22	252.52G	JULY 16	256.88G	OCT.	265 G
JUNE 28	252.46G	AUG. 13	259.25G	JUNE 1969	266 G
JULY 6	252.59G	AUG. 20	256.50G	OCT.	268 G
JULY 14	252.63G	AUG. 27	256.25G	JUNE 1970	272 G
AUG. 9	253.10G	SEP. 3	256.18G	OCT.	273 G
AUG. 17	253.30G	SEP. 15	256.62G	JUNE 1971	271 G
AUG. 24	253.42G	SEP. 24	257.67G	OCT.	271 G
AUG. 31	253.14G	OCT. 29	260.55G		

G MEASURED BY OUTSIDE AGENCY OR PERSON.

464352N1170059.1 39N 05W 07CDC1 UNIV OF IDAHO # 2 LATAH COUNTY

DRILLED PUBLIC-SUPPLY ARTESIAN WELL IN THE BASALT AND SEDIMENTARY BEDS OF THE UPPER ARTESIAN ZONE IN THE COLUMBIA RIVER GROUP, DIAMETER 20 INCHES, DEPTH 354 FEET, CASED TO 60 FEET. LAND-SURFACE DATUM REPORTED 2,552 FEET ABOVE MEAN SEA LEVEL. MEASUREMENTS ARE ASSUMED TO BE AIRLINE READINGS. MEASURING POINT IS PUMP BASE 5.4 FEET ABOVE LAND-SURFACE DATUM.

HIGHEST WATER LEVEL 50 G FT (15.240 M) BELOW LSD, FEB. 24, 1951.
LOWEST WATER LEVEL 104 G FT (31.699 M) BELOW LSD, AUG. , 1959.
RECORDS AVAILABLE 1951-53, 1955-65.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB. 24, 1951	50 G	DEC. 17, 1958	93 G	NOV. 1961	83 G
MAY 13, 1952	52 G	JAN. 1959	89 G	DEC.	77 G
AUG. 1953	85 G	FEB.	89 G	JAN. 1962	75 G
SEP.	83 G	MAR.	89 G	FEB.	75 G
OCT.	75 G	MAY	85 G	MAR.	65 G
AUG. 1955	85 G	JUNE	89 G	APR.	73 G
SEP.	90 G	JULY	90 G	MAY	75 G
OCT.	90 G	AUG.	104 G	JUNE	75 G
DEC.	85 G	SEP.	93 G	JULY	89 G
JAN. 1956	78 G	OCT.	87 G	AUG.	85 G
FEB.	85 G	NOV.	85 G	SEP.	85 G
JULY	75 G	JAN. 1960	81 G	OCT.	97 G
AUG.	75 G	FEB.	83 G	NOV.	89 G
SEP.	80 G	MAR.	89 G	DEC.	91 G
JUNE 1957	69 G	APR.	87 G	JAN. 1963	89 G
AUG.	81 G	MAY	88 G	FEB.	83 G
SEP.	83 G	JUNE	90 G	MAR.	83 G
OCT.	79 G	JULY	102 G	APR.	79 G
NOV.	72 G	AUG.	90 G	MAY	78 G
DEC.	78 G	SEP.	84 G	JUNE	81 G
JAN. 8, 1958	70 G	OCT.	86 G	JULY	89 G
FEB.	70 G	NOV.	87 G	AUG.	85 G
MAR.	69 G	DEC.	85 G	SEP.	85 G
APR.	68 G	JAN. 1961	83 G	OCT.	97 G
MAY	71 G	FEB.	85 G	JUNE 1964	69 G
JUNE	77 G	APR.	75 G	JULY	69 G
JULY	75 G	MAY	72 G	AUG.	69 G
AUG.	91 G	JUNE	73 G	SEP.	75 G
SEP.	97 G	JULY	83 G	OCT.	75 G
OCT.	93 G	AUG.	85 G	NOV.	97 G
NOV.	92 G	SEP.	89 G	FEB. 1965	89 G
DEC.	89 G	OCT.	85 G	AUG. 27	88 G

G MEASURED BY OUTSIDE AGENCY OR PERSON.

464405N1170005.1 39N 05W 07DAD1 CITY OF MOSCOW #1 LATAH COUNTY

DRILLED PUBLIC-SUPPLY ARTESIAN WELL IN BASALTS OF THE UPPER ARTESIAN ZONE IN THE COLUMBIA RIVER GROUP, DIAMETER 12 INCHES, DEPTH 245 FEET, CASING DEPTH NOT AVAILABLE. LAND-SURFACE DATUM REPORTED 2,568 FEET ABOVE MEAN SEA LEVEL. MEASUREMENTS TO THE WHOLE FOOT ASSUMED TO BE AIRLINE READINGS. MEASURING POINT IS TOP OF PUMP BASE, WHICH IS ASSUMED TO BE AT LAND-SURFACE DATUM.

HIGHEST WATER LEVEL 00 G FT (0.0 M) ABOVE LSD, , 1895.
LOWEST WATER LEVEL 96 G FT (29.261 M) BELOW LSD, AUG. , 1956.
RECORDS AVAILABLE 1895, 1923, 1930-32, 1934-40, 1947, 1955-56, 1971-73.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL	
1895	00	G	JAN. 26, 1938	62	G	DEC. 11, 1939	64	G
1923	44	G	FEB. 28	60	G	DEC. 21	58	G
1930	50	G	MAR. 8	60	G	JAN. 6, 1940	61	G
1931	55	G	MAR. 23	60	G	JAN. 20	60	G
DEC. 1932	54	G	APR. 5	60	G	FEB. 6	60	G
AUG. 9, 1934	58	G	APR. 19	60	G	FEB. 20	61	G
SEP. 16	56	G	MAY 3	60	G	MAR. 5	60	G
DEC. 13	56	G	MAY 17	60	G	MAR. 19	60	G
DEC. 18	57	G	JUNE 1	60	G	APR. 3	61	G
FEB. 18, 1935	56	G	JUNE 15	60	G	APR. 16	58	G
APR. 4	56	G	JUNE 28	60	G	APR. 30	66	G
APR. 26	56	G	JULY 11	63	G	MAY 14	65	G
MAY 8	56	G	JULY 30	64	G	MAY 30	60	G
MAY 29	57	G	SEP. 16	62	G	JUNE 10	80	G
JUNE 26	57	G	SEP. 30	62	G	JUNE 24	80	G
MAY 22, 1936	57	G	OCT. 15	64	G	JULY 19	86	G
MAY 28	58	G	OCT. 28	66	G	AUG. 22	86	G
JUNE 4	59	G	NOV. 11	62	G	SEP. 18	81	G
JUNE 11	59	G	DEC. 3	60	G	OCT. 3	80	G
JUNE 18	58	G	DEC. 16	60	G	MAY 2, 1947	67	G
JUNE 24	59	G	DEC. 29	60	G	AUG. 1955	94	G
JULY 2	59	G	JAN. 14, 1939	61	G	SEP.	95	G
JULY 8	59	G	JAN. 27	62	G	OCT. 25	94.38	
JULY 23	60	G	FEB. 10	62	G	OCT.	92	G
JULY 29	60	G	FEB. 24	62	G	NOV.	94	G
JUNE 9, 1937	61	G	MAR. 10	62	G	DEC.	92	G
JUNE 23	61	G	MAR. 24	62	G	JAN. 1956	90	G
JULY 7	62	G	APR. 3	62	G	FEB.	90	G
JULY 21	63	G	APR. 21	62	G	MAR.	90	G
JULY 27	64	G	MAY 5	62	G	APR.	90	G
AUG. 5	63	G	MAY 19	62	G	MAY	90	G
AUG. 18	62	G	MAY 31	62	G	JUNE	90	G
SEP. 3	62	G	JUNE 26	62	G	JULY	94	G
SEP. 15	63	G	JULY 19	66	G	AUG.	96	G
OCT. 1	62	G	AUG. 1	66	G	SEP.	95	G
OCT. 15	62	G	AUG. 16	64	G	NOV.	95	G
NOV. 12	62	G	SEP. 3	65	G	DEC.	93	G
DEC. 2	61	G	OCT. 29	63	G	APR. 1971	68.61	G
DEC. 30	61	G	NOV. 11	62	G	JUNE 20, 1972	65.74	
JAN. 13, 1938	61	G	NOV. 25	62	G	MAR. 21, 1973	64.78	

G MEASURED BY OUTSIDE AGENCY OR PERSON.

464406N1170005.1 39N 05W 07DAD2 CITY OF MOSCOW # 2 LATAH COUNT

DRILLED PUBLIC-SUPPLY ARTESIAN WELL IN BASALTS OF THE UPPER ARTESIAN ZONE IN THE COLUMBIA RIVER GROUP. DIAMETER 20 INCHES, DEPTH 560 FEET, BACKFILLED TO 240 FEET, CASED TO 40 FEET. LAND-SURFACE DATUM REPORTED 2,568 FEET ABOVE MEAN SEA LEVEL. MEASUREMENTS TO THE WHOLE FOOT ASSUMED TO BE AIRLINE READINGS. MEASURING POINT IS BASE OF PUMP, WHICH IS ASSUMED TO BE AT LAND SURFACE.

HIGHEST WATER LEVEL 60 G FT (18.288 M) BELOW LSD, JAN. 27, 1939.
LOWEST WATER LEVEL 121 G FT (36.881 M) BELOW LSD, AUG. , 1963,
SEP. , 1963.
RECORDS AVAILABLE 1938-40, 1951-60, 1962-69, 1971.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL	
SEP. 16, 1938	64	G	JULY 19, 1940	68	G	JUNE 1954	82	G
SEP. 30	64	G	AUG. 22	69	G	JULY	83	G
OCT. 15	66	G	SEP. 18	68	G	AUG.	84	G
OCT. 28	67	G	OCT. 3	66	G	SEP.	83	G
NOV. 11	63	G	JAN. 1951	84	G	OCT.	85	G
NOV. 16	62	G	APR.	84	G	NOV.	76	G
NOV. 29	61	G	JUNE	83	G	DEC.	76	G
DEC. 3	62	G	JULY	85	G	JAN. 1955	76	G
DEC. 16	62	G	AUG.	85	G	FEB.	76	G
DEC. 29	61	G	SEP.	84	G	MAR.	78	G
JAN. 14, 1939	62	G	OCT.	83	G	APR.	78	G
JAN. 27	60	G	NOV.	82	G	MAY	78	G
FEB. 10	62	G	DEC.	82	G	JUNE	92	G
FEB. 24	62	G	JAN. 1952	82	G	JULY	90	G
MAR. 10	62	G	FEB.	82	G	AUG.	93	G
MAR. 24	62	G	MAR.	82	G	SEP.	95	G
APR. 3	62	G	APR.	82	G	OCT.	92	G
APR. 21	61	G	MAY	82	G	NOV.	90	G
MAY 5	62	G	JUNE	83	G	DEC.	92	G
MAY 19	64	G	JULY	83	G	JAN. 1956	88	G
MAY 31	63	G	AUG.	85	G	FEB.	96	G
JUNE 26	64	G	SEP.	84	G	MAR.	106	G
AUG. 1	67	G	OCT.	84	G	APR.	90	G
AUG. 15	68	G	NOV.	84	G	MAY	90	G
SEP. 3	67	G	DEC.	82	G	JUNE	92	G
NOV. 11	64	G	JAN. 1953	82	G	JULY	94	G
NOV. 25	64	G	FEB.	81	G	AUG.	96	G
DEC. 11	64	G	MAR.	82	G	SEP.	95	G
DEC. 21	64	G	APR.	82	G	OCT.	94	G
JAN. 6, 1940	63	G	MAY	82	G	NOV.	95	G
JAN. 20	64	G	JUNE	82	G	DEC.	93	G
FEB. 6	62	G	JULY	82	G	JUNE 1957	95	G
FEB. 20	64	G	AUG.	86	G	JULY	97	G
MAR. 5	63	G	SEP.	86	G	AUG.	98	G
MAR. 19	63	G	OCT.	85	G	SEP.	96	G
APR. 3	63	G	NOV.	84	G	OCT.	95	G
APR. 16	63	G	DEC.	83	G	NOV.	95	G
APR. 30	63	G	JAN. 1954	82	G	DEC.	95	G
MAY 14	64	G	FEB.	82	G	JAN. 1958	90	G
MAY 30	66	G	MAR.	82	G	FEB.	88	G
JUNE 10	66	G	APR.	82	G	MAR.	89	G
JUNE 24	68	G	MAY	82	G	APR.	89	G

464406N1170005.1 39N 05W 07DAD2 CITY OF MOSCOW # 2 LATAH COUNTY

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL	
MAY 1958	89	G	JULY 1962	118	G	MAY 1965	100	G
JUNE	92	G	AUG.	120	G	JUNE	100	G
JULY	92	G	SEP.	120	G	JULY	100	G
AUG.	94	G	OCT.	118	G	MAY 1966	91	G
SEP.	90	G	NOV.	118	G	JUNE	91	G
OCT.	90	G	DEC.	117	G	JULY	91	G
NOV.	110	G	JAN. 1963	116	G	AUG.	90	G
DEC.	110	G	FEB.	115	G	SEP.	91	G
JAN. 1959	110	G	MAR.	115	G	OCT.	91	G
FEB.	110	G	APR.	115	G	NOV.	91	G
MAR.	110	G	MAY	115	G	DEC.	91	G
APR.	110	G	JUNE	118	G	JAN. 1967	91	G
MAY	110	G	JULY	120	G	FEB.	91	G
JUNE	112	G	AUG.	121	G	MAR.	91	G
JULY	116	G	SEP.	121	G	APR.	85	G
AUG.	116	G	OCT.	120	G	MAY	85	G
SEP.	110	G	NOV.	120	G	JUNE	84	G
OCT.	110	G	DEC.	101	G	JULY	84	G
NOV.	109	G	FEB. 1964	100	G	AUG.	84	G
DEC.	108	G	MAR.	100	G	SEP.	84	G
JAN. 1960	108	G	APR.	100	G	OCT.	84	G
FEB.	109	G	MAY	100	G	NOV. 26	84	G
MAR.	108	G	JUNE	99	G	DEC. 26	83	G
APR.	108	G	JULY	100	G	JAN. 28, 1968	83	G
MAY	109	G	AUG.	100	G	FEB.	82	G
JUNE	111	G	SEP.	100	G	MAR.	81	G
JULY	110	G	OCT.	100	G	APR.	81	G
AUG.	110	G	NOV.	100	G	MAY 26	82	G
SEP.	109	G	DEC.	100	G	JUNE 6	82	G
OCT.	108	G	JAN. 1965	100	G	JULY 2	93	G
MAR. 1962	110	G	FEB.	100	G	MAY 31, 1969	89	G
APR.	114	G	MAR.	100	G	JUNE 24	86	G
MAY	114	G	APR.	100	G	APR. 1971	68.70	G
JUNE	114	G						

G MEASURED BY OUTSIDE AGENCY OR PERSON.

464407N1170004.1 39N 05W 07DAD3 CITY OF MOSCOW #3 LATAH COUNT

DRILLED PUBLIC-SUPPLY ARTESIAN WELL IN BASALT OF THE UPPER ARTESIAN ZONE IN THE COLUMBIA RIVER GROUP, DIAMETER 18 INCHES, DEPTH 235 FEET, CASING DEPTH NOT AVAILABLE. LAND-SURFACE DATUM REPORTED 2,568 FEET ABOVE MEAN SEA LEVEL. MEASUREMENTS TO THE WHOLE FOOT ARE ASSUMED TO BE AIRLINE READINGS. MEASURING POINT IS BASE OF PUMP, WHICH IS ASSUMED TO BE AT LAND-SURFACE DATUM.

HIGHEST WATER LEVEL 60 G FT (18.288 M) BELOW LSD, MAY 22, 1936, JUNE 4, 1936, JUNE 11, 1936, FEB. 28, 1938, MAR. 8, 1938, MAR. 23, 1938, APR. 5, 1938, APR. 19, 1938, MAY 3, 1938, MAY 17, 1938.
LOWEST WATER LEVEL 145 G FT (44.196 M) BELOW LSD, OCT. 14, 1963.
RECORDS AVAILABLE 1936-40, 1951-60, 1962-64, 1966-67, 1972-73.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL	
MAY 22, 1936	60	G	OCT. 28, 1938	67	G	OCT. 3, 1940	67	G
MAY 28	61	G	NOV. 11	63	G	JAN. 1951	81	G
JUNE 4	60	G	DEC. 3	62	G	FEB.	82	G
JUNE 11	60	G	DEC. 16	62	G	MAR.	83	G
JUNE 18	61	G	DEC. 29	61	G	MAY	84	G
JUNE 24	61	G	JAN. 14, 1939	62	G	JUNE	84	G
JULY 2	61	G	JAN. 27	61	G	JULY	82	G
JULY 8	62	G	FEB. 10	62	G	AUG.	85	G
JULY 23	63	G	FEB. 24	62	G	SEP.	86	G
JULY 29	63	G	MAR. 10	62	G	OCT.	84	G
JUNE 9, 1937	61	G	MAR. 24	62	G	DEC.	86	G
JUNE 23	61	G	APR. 3	62	G	JUNE 1952	86	G
JULY 7	62	G	APR. 21	62	G	JULY	82	G
JULY 21	64	G	MAY 5	62	G	AUG.	83	G
JULY 27	64	G	MAY 19	64	G	SEP.	84	G
AUG. 5	63	G	MAY 31	63	G	MAY 1953	84	G
AUG. 18	63	G	JUNE 26	64	G	JUNE	84	G
SEP. 3	63	G	JULY 19	68	G	JULY	84	G
SEP. 15	64	G	AUG. 1	67	G	AUG.	88	G
OCT. 1	64	G	AUG. 16	68	G	OCT.	88	G
OCT. 15	64	G	SEP. 3	67	G	MAY 1954	82	G
NOV. 12	64	G	OCT. 29	65	G	AUG.	88	G
DEC. 2	62	G	NOV. 11	64	G	MAY 1955	88	G
DEC. 30	62	G	DEC. 11	64	G	JUNE	88	G
JAN. 13, 1938	62	G	DEC. 21	64	G	JULY	97	G
JAN. 26	62	G	JAN. 6, 1940	63	G	AUG.	97	G
FEB. 28	60	G	JAN. 20	64	G	SEP.	101	G
MAR. 8	60	G	FEB. 6	63	G	OCT.	100	G
MAR. 23	60	G	FEB. 20	64	G	NOV.	100	G
APR. 5	60	G	MAR. 5	63	G	JAN. 1956	96	G
APR. 19	60	G	MAR. 19	63	G	FEB.	94	G
MAY 3	60	G	APR. 3	63	G	MAR.	94	G
MAY 17	60	G	APR. 16	63	G	AUG.	102	G
JUNE 1	61	G	APR. 30	63	G	SEP.	102	G
JUNE 15	62	G	MAY 14	64	G	OCT.	101	G
JUNE 28	62	G	MAY 30	64	G	NOV.	100	G
JULY 20	63	G	JUNE 10	66	G	DEC.	100	G
JULY 31	64	G	JUNE 24	68	G	JUNE 1957	100	G
SEP. 16	64	G	JULY 19	69	G	JULY	100	G
SEP. 30	64	G	AUG. 22	69	G	AUG.	100	G
OCT. 15	66	G	SEP. 18	68	G	SEP.	99	G

464407N1170004.1 39N 05W 07DAD3 CITY OF MOSCOW #3 LATAH COUNTY

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL	
OCT. 1957	98	G	NOV. 1959	117	G	JAN. 1964	138	G
NOV.	98	G	DEC.	116	G	FEB. 15	138	G
DEC.	98	G	JAN. 1960	116	G	JUNE	139	G
JAN. 1958	98	G	FEB.	120	G	JULY	139	G
FEB.	98	G	MAR.	120	G	AUG.	139	G
MAR.	98	G	APR.	123	G	SEP.	139	G
APR.	98	G	MAY	126	G	OCT.	139	G
JUNE	100	G	JUNE	129	G	NOV. 18	139	G
JULY	100	G	JULY	138	G	AUG. 1966	81	G
AUG.	103	G	AUG.	138	G	SEP.	81	G
SEP.	101	G	SEP.	138	G	OCT.	84	G
OCT.	100	G	OCT.	138	G	NOV.	84	G
NOV.	100	G	JUNE 1962	131	G	DEC.	84	G
DEC.	98	G	JULY	131	G	JAN. 1967	84	G
JAN. 1959	98	G	AUG.	131	G	FEB.	84	G
FEB.	98	G	SEP.	131	G	MAR.	84	G
MAR.	98	G	MAY 1963	130	G	APR.	84	G
APR.	98	G	JUNE	138	G	MAY	84	G
MAY	98	G	JULY	138	G	JUNE	84	G
JUNE	98	G	AUG.	138	G	JULY	84	G
JULY	108	G	SEP.	138	G	AUG.	84	G
AUG.	122	G	OCT. 14	145	G	JUNE 20, 1972	65.48	
SEP.	119	G	NOV.	138	G	MAR. 21, 1973	64.67	
OCT.	118	G	DEC.	138	G			

G MEASURED BY OUTSIDE AGENCY OR PERSON.

464349N1170013.1 39N 05W 07DDC1 GARRETT FREIGHT LATAH COUNT

DRILLED ANODE ARTESIAN WELL IN COLUMBIA RIVER GROUP, DIAMETER 8 INCHES, DEPTH 231.0 FEET, CASING DEPTH NOT AVAILABLE. LAND-SURFACE DATUM 2,560.93 FEET ABOVE MEAN SEA LEVEL DATUM OF 1929. JUNE 6, 1968, WELL WAS DEEPENED TO A DEPTH OF 240 FEET. MEASUREMENTS FROM MAY 29, 1937, THROUGH OCTOBER 7, 1940, FROM WATER SUPPLY PAPERS 845, 886, AND 910. MEASUREMENTS FROM NOVEMBER 27, 1960, THROUGH JULY 27, 1964, MADE BY U.S. GEOLOGICAL SURVEY AND UNIVERSITY OF IDAHO. MEASUREMENTS FROM AUGUST 3, 1964, THROUGH MAY 24, 1965, MADE BY UNIVERSITY OF IDAHO. MEASUREMENTS FROM JUNE 1, 1965, THROUGH DECEMBER 14, 1969, MADE BY IDAHO BUREAU OF MINES AND GEOLOGY. MEASURING POINT NO. 1 TOP OF CASING SOUTHEAST SIDE, AT LAND-SURFACE DATUM (SINCE MAY 2, 1947).

HIGHEST WATER LEVEL 50.10 FT (15.270 M) BELOW LSD, APR. 19, 1938.
LOWEST WATER LEVEL 89.21 FT (27.191 M) BELOW LSD, DEC. 17, 1958.
RECORDS AVAILABLE 1937-40, 1947-74.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 29, 1937	50.76	AUG. 31, 1938	54.31	MAR. 19, 1940	53.60
JUNE 2	50.11	SEP. 16	53.44	APR. 3	53.18
JUNE 9	50.97	SEP. 30	53.39	APR. 16	54.01
JUNE 23	50.48	OCT. 15	53.30	APR. 30	54.15
JUNE 30	50.54	OCT. 22	53.47	MAY 30	53.81
JULY 7	50.60	NOV. 11	53.14	JUNE 10	54.51
JULY 13	50.95	DEC. 3	51.81	JUNE 25	56.46
JULY 21	52.32	DEC. 16	52.23	JULY 19	57.49
JULY 27	52.13	DEC. 28	51.89	AUG. 22	57.98
AUG. 5	52.55	JAN. 14, 1939	51.89	SEP. 18	56.14
AUG. 19	52.47	JAN. 27	51.71	OCT. 7	57.07
SEP. 3	52.28	FEB. 10	52.22	MAY 2, 1947	63.10
SEP. 15	52.83	FEB. 24	52.90	AUG. 24, 1948	64.33
OCT. 1	51.87	MAR. 10	51.71	MAR. 21, 1949	64.52
OCT. 15	51.65	MAR. 24	52.85	APR. 29	64.99
OCT. 27	51.72	APR. 3	51.99	JAN. 4, 1950	65.48
NOV. 12	51.91	APR. 21	52.78	MAR. 29	65.41
DEC. 2	51.76	MAY 5	53.74	APR. 14	67.21
DEC. 15	51.67	MAY 19	53.48	AUG. 29	69.95
DEC. 30	51.31	MAY 31	53.85	OCT. 27	68.30
JAN. 26, 1938	51.57	JUNE 26	53.37	DEC. 18	70.00
FEB. 28	51.33	JULY 17	54.98	FEB. 14, 1951	67.55
MAR. 8	51.09	AUG. 1	56.00	APR. 10	67.40
MAR. 22	50.98	AUG. 17	56.27	JUNE 18	71.33
MAR. 23	51.13	SEP. 3	55.67	AUG. 14	74.70
APR. 5	50.83	OCT. 22	55.08	AUG. 25	74.90
APR. 19	50.10	NOV. 18	54.70	OCT. 20	72.63
MAY 3	50.23	DEC. 2	54.42	NOV. 19	72.72
MAY 16	50.21	DEC. 21	54.14	DEC. 13	72.10
JUNE 1	50.66	JAN. 6, 1940	53.67	FEB. 15, 1952	71.38
JUNE 15	51.79	JAN. 20	53.90	APR. 14	71.70
JUNE 28	52.57	FEB. 6	53.19	APR. 15	71.40
JULY 20	53.68	FEB. 20	54.15	APR. 21	72.00
AUG. 11	54.21	MAR. 5	53.71	APR. 28	72.70

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUNE 4, 1952	73.60	AUG. 23, 1957	88.26	JULY 25, 1963	84.98G
JUNE 5	73.61	OCT. 24	88.18	MAR. 24, 1964	83.75
JUNE 16	72.7	OCT. 31	85.68	APR. 13	82.05G
JUNE 23	72.5	FEB. 23, 1958	82.54	MAY 20	81.53G
JUNE 30	72.4	JUNE 25	86.30	MAY 21	81.73
JULY 7	73.2	SEP. 12	87.01	JUNE 29	84.04G
JULY 14	74.4	OCT. 20	88.32	JULY 6	83.41G
JULY 21	74.6	DEC. 17	89.21	JULY 10	85.38G
JULY 28	74.5	OCT. 29, 1959	84.71	JULY 20	83.77G
AUG. 11	73.1	MAR. 29, 1960	84.94	JULY 25	85.11G
AUG. 15	73.86	MAY 24	85.89	JULY 27	87.04
DEC. 9	72.19	SEP. 30	84.47	AUG. 3	84.28G
FEB. 18, 1953	72.14	NOV. 27	79.29G	AUG. 8	85.09G
APR. 25	72.46	DEC. 1	78.82	SEP. 5	85.38G
MAY 1	72.41	DEC. 31	77.53G	SEP. 14	84.52G
JUNE 19	70.35	JAN. 26, 1961	76.97	SEP. 22	84.58G
AUG. 23	77.35	JAN. 31	76.81G	SEP. 28	84.42G
OCT. 23	76.67	FEB. 26	76.02G	OCT. 5	84.54G
FEB. 17, 1954	75.85	APR. 3	75.15G	OCT. 12	82.43G
MAY 18	76.36	MAY 4	74.16G	OCT. 19	82.72G
JUNE 8	77.72	JUNE 11	78.55G	NOV. 2	82.38G
AUG. 3	80.01	JULY 26	79.85	NOV. 9	83.52G
SEP. 2	79.57	AUG. 19	83.80G	NOV. 23	84.07G
OCT. 6	79.68	SEP. 23	83.25G	NOV. 30	83.50G
NOV. 10	80.67	SEP. 26	83.51	DEC. 7	83.75G
DEC. 8	80.56	OCT. 30	83.41G	JAN. 4, 1965	83.26G
JAN. 4, 1955	80.18	DEC. 1	81.46	JAN. 18	83.40G
APR. 26	82.12	DEC. 5	81.71G	JAN. 25	82.94G
JUNE 22	84.25	JAN. 4, 1962	80.41G	FEB. 1	83.02G
JULY 7	83.59	JAN. 29	79.88G	FEB. 15	82.80G
AUG. 3	84.30	FEB. 27	80.11G	FEB. 23	82.67G
OCT. 4	85.65	MAR. 26	77.99	MAR. 8	82.66G
NOV. 1	84.69	APR. 4	78.67G	MAR. 15	82.36G
DEC. 7	85.38	MAY 3	78.71G	MAR. 22	82.22G
JAN. 11, 1956	83.03	MAY 26	77.31	MAR. 29	82.13G
FEB. 8	82.23	JUNE 9	79.56G	APR. 5	82.11G
MAR. 6	78.79	JULY 26	84.37	APR. 12	81.80G
APR. 3	78.38	SEP. 20	83.93G	APR. 19	81.19G
MAY 10	78.00	NOV. 13	82.42G	APR. 26	81.70G
JUNE 6	78.67	NOV. 30	81.74	MAY 3	81.68G
JUNE 29	79.37	DEC. 5	82.54G	MAY 10	84.38G
JULY 25	81.71	JAN. 4, 1963	81.06G	MAY 17	83.23G
AUG. 24	83.69	FEB. 10	79.93G	MAY 24	81.42G
OCT. 3	85.11	MAR. 9	79.46G	JUNE 1	82.41G
DEC. 18	83.62	MAR. 27	79.42	JUNE 14	82.80G
APR. 27, 1957	82.84	APR. 4	79.13G	JUNE 21	81.92G
MAY 21	83.54	MAY 17	80.93G	JULY 2	83.23G
JUNE 25	83.13	MAY 29	81.42	JULY 9	80.76G

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JULY 16, 1965	79.87G	FEB. 1, 1967	69.31G	AUG. 2, 1969	65.54G
JULY 23	79.68G	MAR. 3	68.67G	AUG. 14	64.98G
JULY 30	80.69G	APR. 11	67.95G	SEP. 1	63.67G
AUG. 6	78.92G	MAY 1	68.19G	SEP. 16	63.47G
AUG. 13	78.76G	JUNE 3	67.54G	OCT. 1	62.39G
AUG. 20	84.13G	JULY 3	67.89G	OCT. 15	62.83G
AUG. 27	77.84G	AUG. 2	68.78G	NOV. 3	62.70G
SEP. 3	77.34G	SEP. 1	69.19G	NOV. 15	62.08G
SEP. 15	76.79G	OCT. 1	68.28G	DEC. 14	62.12G
SEP. 24	76.47G	OCT. 16	68.11G	JAN. 14, 1970	61.51
OCT. 1	80.66G	NOV. 1	67.63G	FEB. 15	61.34
OCT. 8	76.02G	NOV. 15	67.43G	MAR. 15	61.28
OCT. 15	75.77G	DEC. 1	67.44G	APR. 17	60.66
OCT. 22	75.84G	DEC. 24	67.26G	MAY 15	60.75
OCT. 29	75.52G	JAN. 15, 1968	66.32G	JUNE 17	60.43
NOV. 5	75.41G	FEB. 1	66.50G	JULY 15	60.85
NOV. 12	76.95G	FEB. 15	66.31G	AUG. 15	60.55
NOV. 19	76.49G	MAR. 1	65.87G	SEP. 16	61.35
NOV. 27	75.02G	MAR. 15	65.66G	OCT. 22	59.80
DEC. 4	74.63G	APR. 1	65.16G	NOV. 24	60.27
DEC. 11	74.41G	APR. 15	65.68G	DEC. 16	59.07
DEC. 17	74.39G	MAY 1	65.50G	JAN. 20, 1971	59.38
DEC. 24	73.95G	MAY 15	65.88G	FEB. 16	58.79
JAN. 8, 1966	75.31G	MAY 18	66.02G	MAR. 15	59.16
JAN. 15	73.92G	MAY 21	66.47G	APR. 21	58.49
JAN. 22	73.36G	MAY 25	66.85G	MAY 20	58.34
JAN. 30	73.92G	JUNE 14	65.98G	JUNE 18	57.94
FEB. 5	73.01G	JULY 1	68.54G	OCT. 22	58.90
FEB. 12	73.20G	JULY 14	67.49G	NOV. 29	58.09
FEB. 19	72.71G	AUG. 2	68.38G	MAR. 9, 1972	56.93
FEB. 26	73.05G	AUG. 19	67.27G	APR. 3	56.68
MAR. 5	72.69G	SEP. 3	67.91G	MAY 3	56.34
MAR. 12	72.34G	SEP. 20	67.63G	JUNE 7	55.90
MAR. 22	72.72G	OCT. 1	68.80G	JULY 15	57.03
MAR. 26	72.23G	OCT. 15	65.68G	SEP. 25	58.15
APR. 2	72.35G	NOV. 3	65.35G	OCT. 16	57.67
APR. 9	71.17G	NOV. 16	65.30G	NOV. 27	57.20
APR. 16	71.91G	DEC. 10	64.40G	JAN. 16, 1973	55.55
APR. 23	72.37G	JAN. 26, 1969	65.82G	FEB. 12	55.79
APR. 30	73.32G	APR. 1	63.78G	APR. 2	56.06
MAY 7	73.30G	APR. 15	63.12G	APR. 24	55.45
MAY 14	72.42G	MAY 2	62.82G	MAY 21	55.28
MAY 21	72.57G	MAY 6	62.83G	JUNE 11	55.39
MAY 28	72.44G	MAY 15	64.04G	JULY 26	61.07
JUNE 4	72.39G	JUNE 2	65.10G	SEP. 22	58.85
AUG. 5	73.25G	JUNE 15	65.65G	OCT. 20	58.07
SEP. 8	71.63G	JULY 1	64.68G	NOV. 18	57.48
OCT. 7	71.27G	JULY 16	64.54G	DEC. 16	57.02

464349N1170013.1 39N 05W 07DDC1 GARRETT FREIGHT LATAH COUNT

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 14, 1974	58.55	MAR. 15, 1974	55.26	APR. 19, 1974	54.84
FEB. 18	55.25				

G MEASURED BY OUTSIDE AGENCY OR PERSON.

464427N1165940.1 39N 05W 08BDB1 CITY OF MOSCOW #6 LATAH COUNT

DRILLED PUBLIC-SUPPLY ARTESIAN WELL IN THE LOWER BASALTS AND LOWER INTERBEDDED SEDIMENTS OF THE LOWER ARTESIAN ZONE IN THE COLUMBIA RIVER GROUP, DIAMETER 24 INCHES, DEPTH 1,305 FEET, CASED TO 905 FEET. LAND-SURFACE DATUM REPORTED 2,588 FEET ABOVE MEAN SEA LEVEL. MEASUREMENTS TO THE WHOLE FOOT ARE AIRLINE READINGS. MEASURING POINT IS TOP OF PUMP BASE 0.6 FEET ABOVE LAND-SURFACE DATUM.

HIGHEST WATER LEVEL 276 G FT (84.125 M) BELOW LSD, JUNE , 1968.
LOWEST WATER LEVEL 315 G FT (96.012 M) BELOW LSD, MAY 26, 1968, MAR. , 1969.
RECORDS AVAILABLE 1960-69.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL	
APR. 27, 1960	287	G	JUNE 1963	286	G	APR. 1966	287	G
AUG.	284	G	JULY	288	G	MAY	288	G
SEP.	284	G	AUG.	288	G	JUNE	289	G
OCT.	285	G	SEP.	287	G	JULY	289	G
NOV.	286	G	OCT.	287	G	AUG.	297	G
DEC.	287	G	NOV.	287	G	SEP.	292	G
JAN. 1961	287	G	DEC.	287	G	OCT.	291	G
FEB.	287	G	JAN. 1964	287	G	NOV.	291	G
MAR.	288	G	FEB.	287	G	DEC.	289	G
APR.	288	G	MAR.	287	G	JAN. 1967	289.20	G
MAY	287	G	APR.	287	G	MAY 31	292	G
JUNE	285	G	MAY	287	G	JUNE 29	296	G
JULY	286	G	JUNE	287	G	JULY 26	309	G
AUG.	286	G	JULY	287	G	AUG. 31	304	G
SEP.	285	G	AUG.	287	G	SEP. 30	302	G
OCT.	285	G	SEP.	287	G	OCT. 31	304	G
NOV.	284	G	OCT.	287	G	NOV.	281	G
DEC.	285	G	NOV.	287	G	DEC.	280	G
JAN. 1962	285	G	DEC.	287	G	JAN. 1968	280	G
FEB.	285	G	JAN. 1965	287	G	FEB.	281	G
MAR.	285	G	FEB.	287	G	MAR.	283	G
APR.	285	G	MAR.	287	G	MAY 26	315	G
MAY	285	G	APR.	287	G	JUNE	276	G
JUNE	285	G	MAY	287	G	JULY 23	282	G
JULY	287	G	JUNE	287	G	AUG.	283	G
AUG.	286	G	JULY	289	G	SEP. 29	287	G
SEP.	286	G	AUG.	288	G	OCT.	290	G
OCT.	285	G	SEP.	287	G	NOV.	282	G
NOV.	285	G	OCT.	287	G	DEC.	285	G
DEC.	285	G	NOV.	289	G	JAN. 1969	300	G
JAN. 1963	285	G	DEC.	287	G	FEB.	300	G
FEB.	286	G	JAN. 1966	287	G	MAR.	315	G
MAR.	286	G	FEB.	287	G	APR.	285	G
APR.	286	G	MAR.	287	G	MAY	280	G
MAY	286	G				JUNE	*	

G MEASURED BY OUTSIDE AGENCY OR PERSON.
* AIRLINE BECAME INOPERATIVE

464357N1165959.1 39N 05W 08CCC1 CITY OF MOSCOW (FORMERLY ARDEN DAIRY) LATAH COUNTY

DRILLED ARTESIAN WELL IN THE BASALT AQUIFER OF THE UPPER ARTESIAN ZONE IN THE COLUMBIA RIVER GROUP, DIAMETER 6 INCHES, DEPTH 140 FEET, CASING DEPTH NOT AVAILABLE. LAND-SURFACE DATUM ESTIMATED 2,575 FEET ABOVE MEAN SEA LEVEL FROM TOPOGRAPHIC MAP. MEASURING POINT IS TOP OF CASING 0.5 FEET ABOVE LAND-SURFACE DATUM. WELL PROBABLY DESTROYED WHEN THE PRESENT CITY HALL WAS BUILT.

HIGHEST WATER LEVEL 83.56G FT (25.469 M) BELOW LSD, DEC. 15, 1966.
LOWEST WATER LEVEL 102.85 FT (31.349 M) BELOW LSD, OCT. 26, 1955.
RECORDS AVAILABLE 1955, 1965-66.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 26, 1955	102.85	DEC. 11, 1965	90.38G	APR. 2, 1966	85.87G
SEP. 8, 1965	91.46G	DEC. 17	88.00G	APR. 9	85.38G
SEP. 15	91.15G	DEC. 24	86.06G	APR. 16	85.52G
SEP. 24	90.74G	JAN. 8, 1966	87.44G	APR. 23	85.57G
OCT. 1	89.98G	JAN. 15	87.74G	APR. 30	85.55G
OCT. 8	90.10G	JAN. 22	86.99G	MAY 7	85.92G
OCT. 15	89.94G	FEB. 5	86.76G	MAY 14	85.65G
OCT. 22	89.36G	FEB. 12	87.00G	MAY 21	85.38G
OCT. 29	89.31G	FEB. 19	86.45G	MAY 28	85.74G
NOV. 5	88.95G	FEB. 26	86.39G	JUNE 4	85.84G
NOV. 12	91.17G	MAR. 5	86.43G	AUG. 5	85.65G
NOV. 19	90.15G	MAR. 12	86.24G	NOV. 4	83.86G
NOV. 27	88.92G	MAR. 22	86.37G	DEC. 15	83.56G
DEC. 4	88.36G	MAR. 26	85.93G		

G MEASURED BY OUTSIDE AGENCY OR PERSON.

464403N1165851.1 39N 05W 08DAD1 R W JONES LATAH COUN

DRILLED UNUSED WATER-TABLE WELL IN THE ALLUVIAL AQUIFER, DIAMETER 2 INCHES, DEPTH 11.5 FEET, CASED TO 8 FEET. LAND-SURFACE DATUM ESTIMATED 2,605 FEET ABOVE MEAN SEA LEVEL FROM TOPOGRAPHIC MAP. MEASURING POINT IS TOP OF CASING 0.50 FEET ABOVE LAND-SURFACE DATUM.

HIGHEST WATER LEVEL 1.46G FT (0.445 M) BELOW LSD, JAN. 25, 1965.
LOWEST WATER LEVEL 7.46G FT (2.274 M) BELOW LSD, NOV. 19, 1965.
RECORDS AVAILABLE 1964-66.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
AUG. 3, 1964	3.65G	APR. 19, 1965	1.59G	NOV. 19, 1965	7.46G
AUG. 8	3.66G	APR. 26	2.23G	NOV. 27	3.99G
SEP. 5	3.93G	MAY 3	2.72G	DEC. 4	4.14G
SEP. 13	4.05G	MAY 10	2.97G	DEC. 11	4.15G
SEP. 22	3.99G	MAY 17	3.15G	DEC. 17	4.17G
SEP. 28	4.10G	MAY 24	3.12G	DEC. 24	4.14G
OCT. 5	4.14G	JUNE 1	3.21G	JAN. 8, 1966	2.18G
OCT. 12	4.12G	JUNE 7	2.60G	JAN. 15	2.85G
OCT. 19	4.18G	JUNE 14	3.33G	JAN. 30	3.28G
NOV. 2	4.00G	JUNE 21	3.35G	FEB. 5	2.85G
NOV. 9	4.07G	JUNE 28	3.49G	FEB. 12	2.95G
NOV. 16	4.06G	JULY 2	3.70G	FEB. 19	2.95G
NOV. 23	4.10G	JULY 9	3.60G	FEB. 26	2.47G
NOV. 30	4.83G	JULY 16	3.75G	MAR. 5	2.88G
DEC. 7	3.47G	JULY 23	3.84G	MAR. 12	2.15G
JAN. 4, 1965	2.29G	AUG. 6	3.89G	MAR. 22	2.18G
JAN. 11	2.00G	AUG. 13	3.90G	MAR. 26	2.10G
JAN. 18	1.80G	AUG. 20	3.89G	APR. 2	2.69G
JAN. 25	1.46G	AUG. 27	3.96G	APR. 9	2.51G
FEB. 1	1.50G	SEP. 3	4.10G	APR. 16	3.15G
FEB. 9	1.96G	SEP. 15	4.23G	APR. 23	3.24G
FEB. 23	2.85G	SEP. 24	4.25G	APR. 30	3.32G
MAR. 1	2.93G	OCT. 1	4.34G	MAY 7	3.37G
MAR. 8	2.26G	OCT. 8	4.42G	MAY 14	3.47G
MAR. 15	2.22G	OCT. 15	4.39G	MAY 21	3.45G
MAR. 22	1.49G	OCT. 22	4.39G	MAY 28	3.60G
MAR. 29	2.28G	OCT. 29	4.40G	JUNE 4	3.65G
APR. 5	2.11G	NOV. 5	4.36G	AUG. 5	4.26G
APR. 12	2.22G	NOV. 12	6.41G	SEP. 8	4.81G

G MEASURED BY OUTSIDE AGENCY OR PERSON.

DUG DOMESTIC WATER-TABLE WELL IN THE ALLUVIAL AQUIFER, DIAMETER 60 INCHES, DEPTH 25 FEET, CASED TO 25 FEET. DATA ARE FROM RECORDER CHARTS ON APPROXIMATELY EVERY FIFTH DAY AND ARE THE HIGHEST READING FOR THE DAY. MEASURING POINT IS TOP OF CONCRETE CURB AT LAND-SURFACE DATUM. LAND-SURFACE DATUM 2,610 FEET ABOVE MEAN SEA LEVEL.

HIGHEST WATER LEVEL 0.93G FT (0.283 M) BELOW LSD, JAN. 30, 1965.
LOWEST WATER LEVEL 8.90G FT (2.713 M) BELOW LSD, OCT. 5, 1965.
RECORDS AVAILABLE 1964-66.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN. 11, 1964	8.79G	SEP. 17, 1964	7.50G	MAY 20, 1965	2.76G
JAN. 15	8.35G	OCT. 6	7.64G	MAY 23	2.80G
JAN. 20	7.92G	OCT. 10	7.59G	JUNE 5	4.10G
JAN. 25	7.35G	OCT. 15	7.57G	JUNE 9	4.18G
JAN. 29	6.86G	OCT. 20	7.69G	JUNE 15	4.20G
FEB. 5	5.34G	OCT. 25	7.74G	JUNE 20	3.50G
FEB. 11	4.90G	OCT. 31	7.67G	JUNE 25	4.25G
FEB. 15	4.79G	NOV. 5	7.74G	JUNE 29	4.64G
FEB. 20	4.49G	NOV. 10	7.54G	JULY 6	4.85G
FEB. 25	4.48G	NOV. 16	7.74G	JULY 10	5.60G
FEB. 29	4.36G	NOV. 20	7.70G	JULY 15	7.40G
MAR. 5	3.22G	NOV. 25	7.72G	JULY 20	6.46G
MAR. 10	3.03G	NOV. 30	7.17G	JULY 25	6.90G
MAR. 15	2.74G	DEC. 5	6.01G	JULY 31	7.19G
MAR. 18	2.34G	DEC. 10	5.60G	AUG. 5	7.40G
MAR. 20	2.42G	DEC. 15	5.59G	AUG. 10	7.66G
MAR. 25	2.78G	DEC. 20	5.74G	AUG. 15	7.75G
MAR. 31	3.02G	DEC. 25	2.82G	AUG. 20	8.08G
APR. 4	2.81G	DEC. 27	2.89G	AUG. 25	7.20G
APR. 10	3.03G	JAN. 11, 1965	2.92G	AUG. 31	7.22G
APR. 15	3.23G	JAN. 15	2.33G	SEP. 3	7.18G
APR. 20	3.50G	JAN. 20	2.33G	SEP. 10	8.08G
APR. 25	2.90G	JAN. 25	1.84G	SEP. 15	7.89G
APR. 30	2.95G	JAN. 30	0.93G	SEP. 20	7.70G
MAY 5	2.57G	JAN. 31	1.07G	SEP. 25	7.92G
MAY 9	2.94G	FEB. 5	1.10G	SEP. 30	8.00G
MAY 16	3.80G	FEB. 10	1.25G	OCT. 5	8.90G
MAY 20	3.71G	FEB. 15	1.20G	OCT. 10	8.39G
MAY 25	3.58G	FEB. 20	1.15G	OCT. 15	8.22G
MAY 31	4.36G	FEB. 25	1.17G	OCT. 20	8.22G
JUNE 5	4.22G	FEB. 28	1.15G	OCT. 25	8.21G
JUNE 10	3.67G	MAR. 5	1.26G	OCT. 31	8.40G
JUNE 15	5.57G	MAR. 10	1.27G	NOV. 5	8.41G
JUNE 20	4.86G	MAR. 15	1.27G	NOV. 10	8.32G
JUNE 25	4.42G	APR. 5	1.35G	NOV. 15	8.30G
JUNE 30	6.51G	APR. 10	1.31G	NOV. 20	8.51G
JULY 5	5.06G	APR. 15	1.69G	NOV. 25	8.30G
JULY 10	5.65G	APR. 20	1.00G	NOV. 30	8.00G
JULY 15	6.18G	APR. 25	1.27G	DEC. 5	8.10G
JULY 20	6.01G	APR. 30	1.50G	DEC. 10	8.03G
JULY 25	6.63G	MAY 5	1.75G	DEC. 15	8.19G
JULY 30	6.35G	MAY 10	2.29G	DEC. 20	8.20G
SEP. 14	7.46G	MAY 15	2.57G	DEC. 25	8.22G

464424N1165837.1 39N 05W 09BCC1 FRANK EVELAND LATAH COUNTY

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC. 31, 1965	8.13G	FEB. 26, 1966	4.26G	APR. 25, 1966	4.33G
JAN. 5, 1966	6.80G	FEB. 28	4.22G	APR. 30	4.82G
JAN. 8	5.57G	MAR. 5	4.51G	MAY 5	5.03G
JAN. 15	5.80G	MAR. 10	3.50G	MAY 10	5.23G
JAN. 20	5.80G	MAR. 12	3.79G	MAY 15	5.33G
JAN. 25	6.08G	MAR. 26	3.09G	MAY 20	5.90G
JAN. 31	5.98G	MAR. 31	3.30G	MAY 25	6.35G
FEB. 5	5.55G	APR. 5	3.60G	MAY 31	6.66G
FEB. 10	5.40G	APR. 9	4.45G	JUNE 5	6.31G
FEB. 15	5.40G	APR. 16	3.95G	JUNE 11	7.00G
FEB. 20	4.44G	APR. 20	4.11G		

G MEASURED BY OUTSIDE AGENCY OR PERSON.

BORED OBSERVATION WATER-TABLE WELL IN ALLUVIUM OF QUATERNARY AGE, DIAMETER 1.5 INCHES, DEPTH 21.5 FEET, CASED TO 21.5 FEET, SAND POINT 19-21.5 FEET. LAND SURFACE DATUM ABOUT 2,628 FEET ABOVE MEAN SEA LEVEL DATUM OF 1929. JUNE 22, 1972, WELL HAD FILLED IN TO A DEPTH OF 18.7 FEET. MEASUREMENTS FROM NOVEMBER 2, 1964, THROUGH NOVEMBER 4, 1966, MADE BY IDAHO BUREAU OF MINES AND GEOLOGY. 1934 THROUGH 1939 MEASUREMENTS FROM WSP 777, 817, 840, AND 886. MEASURING POINT IS TOP OF 1.5-INCH PIPE, 2.07 FEET ABOVE LAND SURFACE DATUM (SINCE OCTOBER 22, 1934). (PREVIOUSLY PUBLISHED AS WELL NO. 39/5W 10G1 AND 39N 5W 10ac1.)

HIGHEST WATER LEVEL 5.97 FT (1.820 M) BELOW LSD, MAR. 21, 1949.
LOWEST WATER LEVEL 18.51 FT (5.642 M) BELOW LSD, MAR. 22, 1973.
RECORDS AVAILABLE 1934-40, 1947-60, 1964-66, 1972-73.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 22, 1934	16.15	SEP. 3, 1935	14.26	JUNE 22, 1936	14.78
OCT. 29	16.21	SEP. 9	14.46	JUNE 29	15.04
NOV. 5	16.31	SEP. 16	15.03	JULY 6	15.19
NOV. 12	16.30	SEP. 23	14.81	JULY 13	15.67
NOV. 19	16.19	SEP. 30	15.08	AUG. 4	15.84
NOV. 26	16.18	OCT. 7	15.20	AUG. 13	16.25
DEC. 3	16.67	OCT. 14	14.85	SEP. 8	16.33
DEC. 10	16.65	OCT. 21	15.75	SEP. 14	16.41
DEC. 17	16.78	OCT. 28	14.93	SEP. 21	16.35
DEC. 24	16.46	NOV. 4	15.74	SEP. 28	16.54
JAN. 3, 1935	16.39	NOV. 12	15.78	OCT. 5	16.73
JAN. 7	16.41	NOV. 15	15.57	OCT. 12	16.66
JAN. 14	15.48	NOV. 18	15.83	OCT. 19	16.52
JAN. 29	14.23	NOV. 25	15.94	OCT. 26	16.78
FEB. 4	13.20	DEC. 2	16.00	NOV. 2	17.08
FEB. 11	12.53	DEC. 10	16.09	NOV. 9	16.82
FEB. 18	12.98	DEC. 16	16.33	NOV. 16	16.98
FEB. 25	12.28	DEC. 23	16.19	NOV. 23	17.16
MAR. 4	11.03	DEC. 30	16.14	NOV. 30	17.21
MAR. 11	11.05	JAN. 6, 1936	16.36	DEC. 7	17.12
MAR. 18	11.44	JAN. 13	16.26	DEC. 14	17.10
APR. 1	10.50	JAN. 20	16.40	DEC. 21	17.21
APR. 8	9.12	JAN. 27	16.31	DEC. 28	17.30
APR. 15	8.93	FEB. 3	16.34	JAN. 4, 1937	17.34
APR. 22	8.65	FEB. 10	16.43	JAN. 11	17.47
APR. 29	9.19	FEB. 17	16.63	FEB. 1	17.61
MAY 6	8.58	FEB. 24	16.45	FEB. 15	17.57
MAY 13	8.98	MAR. 2	16.34	FEB. 24	17.55
MAY 20	9.56	MAR. 9	15.35	MAR. 1	17.57
MAY 27	9.73	MAR. 16	16.89	MAR. 8	17.46
JUNE 4	10.45	MAR. 23	12.98	MAR. 15	16.78
JUNE 11	10.61	MAR. 30	12.74	MAR. 22	16.08
JUNE 17	11.14	APR. 6	12.88	MAR. 29	15.81
JUNE 25	11.64	APR. 13	12.29	APR. 5	15.31
JULY 2	11.86	APR. 20	12.61	APR. 12	14.94
JULY 9	11.64	APR. 27	12.70	APR. 19	14.22
JULY 15	12.44	MAY 4	13.09	APR. 26	13.05
JULY 22	12.75	MAY 11	13.44	MAY 3	13.09
JULY 29	13.29	MAY 18	13.59	MAY 10	13.35
AUG. 7	13.58	MAY 25	13.97	MAY 17	13.67
AUG. 12	13.80	JUNE 1	14.10	MAY 24	13.84
AUG. 19	13.87	JUNE 8	14.54	JUNE 1	14.66
AUG. 26	14.17	JUNE 15	14.58	JUNE 7	14.71

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUNE 14, 1937	14.94	JULY 6, 1938	13.30	AUG. 15, 1952	13.06
JUNE 21	15.16	AUG. 9	14.60	DEC. 9	15.37
JUNE 28	15.37	SEP. 6	15.29	FEB. 18, 1953	12.19
JULY 6	15.76	SEP. 7	15.61	APR. 25	10.67
AUG. 3	16.33	OCT. 25	16.98	MAY 1	11.11
SEP. 2	16.60	NOV. 29	16.34	JUNE 19	12.60
SEP. 14	16.82	DEC. 27	16.48	AUG. 23	13.92
SEP. 22	16.91	JAN. 24, 1939	16.94	OCT. 23	14.91
OCT. 1	16.94	FEB. 21	16.83	FEB. 17, 1954	10.54
OCT. 4	17.03	MAR. 28	9.50	MAY 18	12.37
OCT. 13	17.01	APR. 25	12.94	JUNE 8	12.84
OCT. 19	17.09	MAY 23	14.23	JULY 7	13.87
OCT. 27	17.12	JUNE 26	15.24	AUG. 3	14.50
NOV. 2	17.35	JULY 13	13.44	OCT. 6	15.08
NOV. 9	17.20	AUG. 15	16.22	NOV. 10	15.71
NOV. 16	17.29	SEP. 3	16.46	DEC. 8	15.89
NOV. 23	17.24	OCT. 15	16.77	JAN. 4, 1955	13.92
NOV. 30	17.43	DEC. 18	17.61	APR. 26	11.42
DEC. 7	17.40	JAN. 16, 1940	17.37	JUNE 22	13.72
DEC. 14	17.38	FEB. 16	16.92	JULY 7	14.29
DEC. 21	17.39	MAR. 21	12.26	AUG. 3	15.07
DEC. 28	17.46	APR. 16	11.37	OCT. 4	15.89
JAN. 4, 1938	17.25	MAY 18	13.32	NOV. 1	16.11
JAN. 11	16.96	JUNE 19	14.49	DEC. 7	14.83
JAN. 18	16.32	JULY 19	15.62	JAN. 11, 1956	10.54
JAN. 25	15.58	AUG. 21	16.13	FEB. 8	9.26
FEB. 1	15.33	SEP. 17	16.35	MAR. 6	8.89
FEB. 8	14.22	OCT. 2	16.39	APR. 3	6.39
FEB. 15	13.74	MAY 2, 1947	12.29	MAY 10	8.45
FEB. 22	13.08	AUG. 24, 1948	11.14	JUNE 6	10.01
MAR. 1	11.77	MAR. 21, 1949	5.97	JUNE 29	11.07
MAR. 8	11.52	APR. 29	7.63	AUG. 24	13.14
MAR. 15	11.06	JAN. 4, 1950	15.34	OCT. 3	14.08
MAR. 22	10.26	MAR. 29	9.00	DEC. 18	15.10
MAR. 29	9.64	APR. 14	9.12	APR. 27, 1957	9.49
APR. 5	9.27	AUG. 29	13.88	MAY 21	9.53
APR. 12	9.20	OCT. 27	14.76	JUNE 25	10.21
APR. 19	9.32	DEC. 17	15.24	AUG. 23	12.90
APR. 26	9.09	FEB. 19, 1951	8.86	OCT. 24	13.70
MAY 3	9.31	APR. 10	8.22	OCT. 31	14.42
MAY 10	9.80	JUNE 18	11.73	DEC. 16	14.35
MAY 17	10.07	AUG. 14	13.55	FEB. 23, 1958	10.33
MAY 24	10.76	OCT. 20	14.44	APR. 26	6.90
MAY 31	11.40	NOV. 19	13.39	JUNE 25	10.03
JUNE 7	11.75	DEC. 13	11.39	SEP. 12	10.89
JUNE 14	12.14	FEB. 15, 1952	7.63	OCT. 20	14.11
JUNE 21	12.44	APR. 15	7.20	DEC. 17	9.35
JUNE 28	12.74	JUNE 5	9.95	FEB. 27, 1959	6.27

464427N1165642.1 39N 05W 10ACA1 U S GEOL SURVEY LATAH COUNTY

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR. 25, 1959	7.49	JAN. 4, 1965	14.64G	JAN. 8, 1966	15.38G
JUNE 25	10.00	FEB. 1	12.28G	FEB. 5	15.54G
AUG. 26	12.96	MAR. 1	9.39G	MAR. 5	15.55G
OCT. 29	13.97	APR. 5	9.33G	APR. 2	14.79G
NOV. 29	15.27	MAY 3	8.55G	APR. 30	15.18G
JAN. 23, 1960	14.84	JUNE 1	9.67G	MAY 28	15.61G
MAR. 29	11.48	JULY 2	11.95G	AUG. 5	16.67G
MAY 24	11.38	JULY 30	13.14G	SEP. 8	16.80G
JULY 22	13.57	SEP. 3	13.83G	OCT. 7	17.26G
SEP. 30	14.67	OCT. 1	13.91G	NOV. 4	17.64G
DEC. 1	14.82	NOV. 27	14.50G	JUNE 22, 1972	18.46
NOV. 2, 1964	15.05G	DEC. 4	15.37G	MAR. 22, 1973	18.51
DEC. 7	15.45G				

G MEASURED BY OUTSIDE AGENCY OR PERSON.

464232N1165715.1 39N 05W 15BCA1 UNIV OF IDAHO (PARKER FARM) LATAH COUNT

DRILLED IRRIGATION ARTESIAN WELL IN THE UPPER BASALT AQUIFER OF THE UPPER ARTESIAN ZONE IN THE COLUMBIA RIVER GROUP, DIAMETER 16 INCHES, DEPTH 278 FEET, CASED TO 113 FEET. LAND-SURFACE DATUM 2,610 FEET ABOVE MEAN SEA LEVEL ESTIMATED FROM TOPOGRAPHIC MAP. MEASURING POINT IS TOP OF RIB IN PUMP BASE 2.8 FEET ABOVE LAND-SURFACE DATUM.

HIGHEST WATER LEVEL 107.73 FT (32.836 M) BELOW LSD, MAR. 22, 1973.
LOWEST WATER LEVEL 122.66G FT (37.387 M) BELOW LSD, AUG. 27, 1965.
RECORDS AVAILABLE 1957, 1965-66, 1972-73.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV. 26, 1957	122 G	DEC. 4, 1965	121.84G	APR. 2, 1966	120.89G
AUG. 27, 1965	122.66G	DEC. 11	121.76G	APR. 9	120.49G
SEP. 15	122.38G	DEC. 24	121.36G	APR. 16	120.67G
SEP. 24	122.36G	JAN. 15, 1966	121.95G	APR. 23	120.71G
OCT. 7	122.16G	JAN. 22	121.22G	MAY 7	120.52G
OCT. 8	121.81G	JAN. 30	120.86G	MAY 21	120.44G
OCT. 15	121.81G	FEB. 5	121.12G	MAY 24	119.99G
OCT. 22	121.15G	FEB. 19	121.96G	JUNE 4	120.52G
OCT. 29	121.10G	FEB. 26	121.97G	AUG. 5	120.11G
NOV. 5	121.01G	MAR. 5	121.17G	NOV. 4	119.01G
NOV. 12	121.49G	MAR. 12	121.04G	DEC. 15	119.11G
NOV. 19	121.70G	MAR. 22	121.01G	NOV. 7, 1972	108.32
NOV. 27	122.30G	MAR. 26	120.89G	MAR. 22, 1973	107.73

G MEASURED BY OUTSIDE AGENCY OR PERSON.

464338N1170041.1 39N 05W 18BAD1 UNIV OF IDAHO NO. 1 LATAH COUNTY

DRILLED UNUSED PUBLIC-SUPPLY ARTESIAN WELL IN BASALT AND SEDIMENTS OF THE UPPER ARTESIAN ZONE IN THE COLUMBIA RIVER GROUP, DIAMETER 16 INCHES, DEPTH 330 FEET, CASED TO 98 FEET. LAND-SURFACE DATUM REPORTED 2,601 FEET ABOVE MEAN SEA LEVEL. SOURCE AND METHOD OF MEASUREMENT BEFORE 1940 ARE NOT KNOWN. MEASUREMENTS SINCE 1940 WERE MADE WITH AIRLINE. MEASURING POINT IS BASE OF PUMP AND IS ASSUMED TO BE AT LAND-SURFACE DATUM.

HIGHEST WATER LEVEL 68 G FT (20.726 M) BELOW LSD, , 1921.
LOWEST WATER LEVEL 140 G FT (42.672 M) BELOW LSD, NOV. , 1956,
DEC. , 1956, JAN. , 1957, FEB. , 1957, MAR. , 1957, APR. , 1957.
RECORDS AVAILABLE 1921, 1935, 1938, 1940, 1953, 1955-59, 1961-63.

WATER LEVELS IN FEET BELOW LSD.

DATE	WATER LEVEL		DATE	WATER LEVEL		DATE	WATER LEVEL	
1921	68	G	APR. 1957	140	G	APR. 1961	109	G
NOV. 1935	89	G	MAY	135	G	MAY	109	G
FEB. 25, 1938	85	G	JUNE	135	G	JUNE	109	G
JAN. 1940	84	G	JULY	132	G	JULY	111	G
NOV. 1953	106	G	AUG.	138	G	AUG.	114	G
MAR. 29, 1955	110	G	SEP.	139	G	SEP.	115	G
FEB. 1956	128	G	OCT.	139	G	OCT.	113	G
MAR.	132	G	NOV.	137	G	NOV.	115	G
APR.	132	G	DEC.	138	G	DEC.	115	G
MAY	132	G	JAN. 1958	138	G	JAN. 1962	113	G
JUNE	132	G	FEB.	129	G	FEB.	111	G
JULY	132	G	MAR.	129	G	MAR.	111	G
AUG.	134	G	APR.	128	G	APR.	111	G
SEP.	138	G	MAY	128	G	MAY	111	G
OCT.	138	G	JUNE	128	G	JUNE	111	G
NOV.	140	G	JULY	128	G	JULY	113	G
DEC.	140	G	AUG.	128	G	NOV.	119	G
JAN. 1957	140	G	SEP.	128	G	APR. 1963	111	G
FEB.	140	G	DEC. 16	126	G	AUG.	134	G
MAR.	140	G	JAN. 1959	115	G			

G MEASURED BY OUTSIDE AGENCY OR PERSON.

Water levels measured March 20-23, 1973, and used in constructing water-level contour map, figure 2 (wells not pumping at time of measurement)

Well Number	Land Surface Altitude* (feet)	Depth to Water (feet)	Remarks
40N-5W-29aab1	2715	46.31	
40N-5W-30cad1	2636.0	131.14	
40N-5W-31cad2	2627.4	93.48	
40N-5W-32bcc1	2690	52.91	
40N-5W-32ccb1	2717.0	215.43	Electric tape
40N-5W-33bda1	2663.7	162.51	Electric tape
39N-6W-12bdd1	2609.9	72.88	
39N-6W-13cac1	2752.4	95.65	
39N-6W-13cad3	2700	241.18	Electric tape
39N-6W-24ccd1	2519.9	8.98	
39N-5W- 5bcb1	2675	108.7	Electric tape
39N-5W- 5bda1	2670	169.86	
39N-5W- 5bdc1	2627	120.03	
39N-5W- 5dab2	2642	23.24	
39N-5W- 6daa1	2700	201.75	
39N-5W- 6dad1	2650	61.42	
39N-5W- 6dbc1	2630.6	127.46	
39N-5W- 6dca1	2682.0	177.96	
39N-5W- 6dcd1	2655	146.32	
39N-5W- 7bda2	2617	339.51	Electric tape
39N-5W- 7dad1	2568	64.78	
39N-5W- 7dad3	2568	64.67	
39N-5W- 7dcd1	2560.3	55.47	
39N-5W- 9bab1	2623.5	119.31	
39N-5W- 9bba2	2646	46.47	
39N-5W- 9bba3	2632	118.42	
39N-5W- 9bbd1	2618	113.73	
39N-5W- 9bcd1	2602	104.80	
39N-5W-10aca1	2628	18.51	
39N-5W-15adc1	2606.0	32.65	
39N-5W-15bca1	2610	107.73	
39N-5W-15cbb1	2600	103.56	Electric tape
39N-5W-15dbb1	2593.5	41.48	
39N-5W-15dbb2	2591.6	39.17	
39N-5W-16aac1	2635.6	141.95	
39N-5W-16adc1	2696.7	194.63	
39N-5W-16caa2	2693.3	183.30	
39N-5W-16cba1	2630	112.73	Electric tape
39N-5W-16daa2	2610	39.25	
39N-5W-16dbd1	2615	116.44	
39N-5W-16dca1	2613	118.23	
39N-5W-16dcc1	2580	73.43	
39N-5W-16dcd1	2595	96.52	
39N-5W-16ddd2	2590	79.57	
39N-5W-19aac2	2554.0	21.08	
39N-5W-19adc1	2566.4	16.00	
39N-5W-19baa1	2586.2	52.35	
39N-5W-19baa2	2575	52.50	
39N-5W-19bbb1	2567.2	35.71	
39N-5W-20bdd1	2564	16.05	

*Altitudes given to one decimal place determined by University of Idaho, June 1973. Other altitudes interpolated from topographic maps.

LATAH COUNTY, IDAHO WELL No. 39N 05W 07DDC1 LAT-LONG NO. 464349N1170013.1

DEPTH OF WELL-231.0 FEET (70.4 M). ELEV. OF LSD-2560.93 FEET (780.571 M). AQUIFER-TM CR JI ART.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

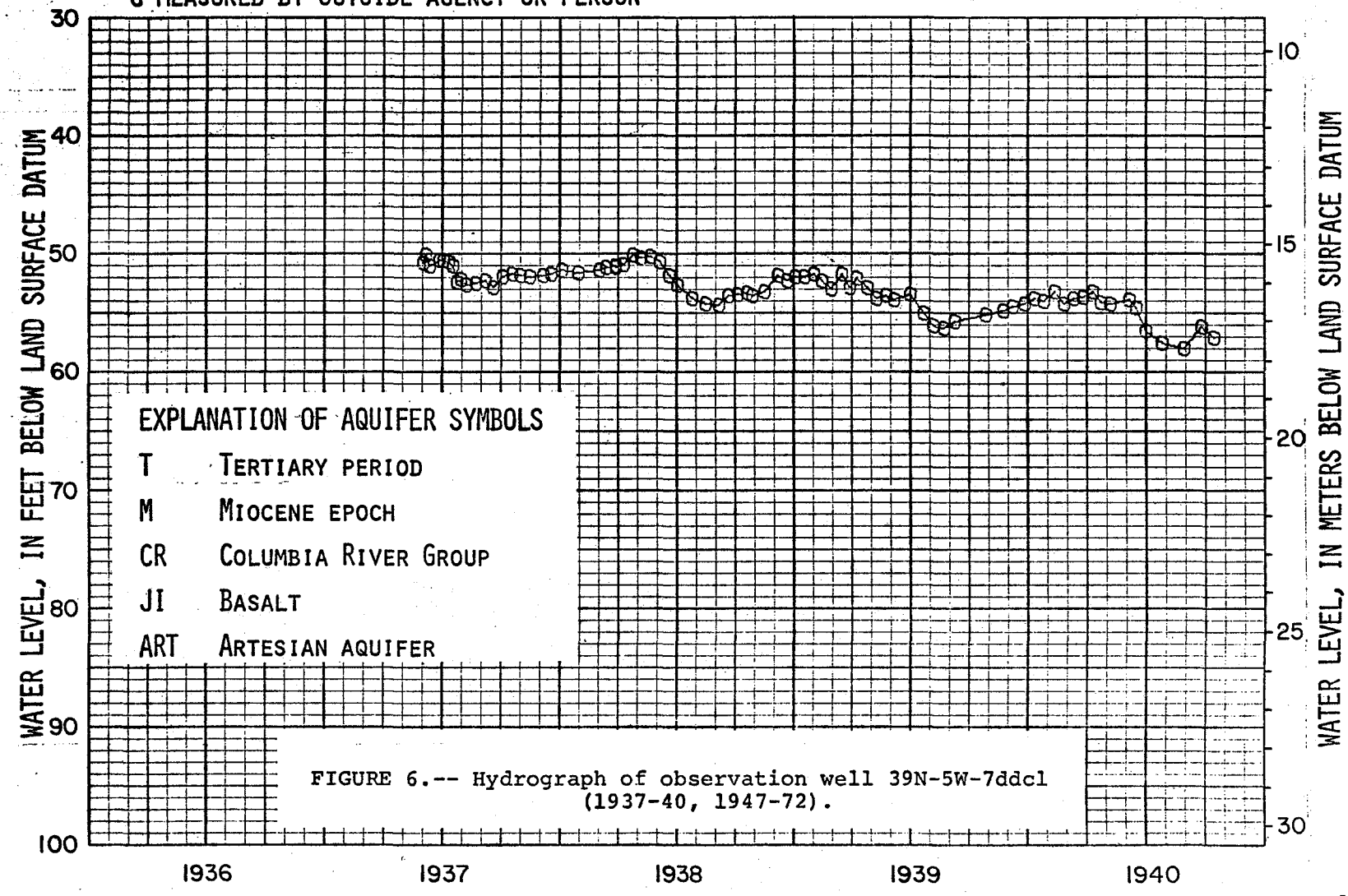

FIGURE 6.-- Hydrograph of observation well 39N-5W-7ddc1 (1937-40, 1947-72).

LATAH COUNTY, IDAHO WELL No. 39N 05W 07DDC1 LAT-LONG NO. 464349N1170013.1

DEPTH OF WELL-231.0 FEET (70.4 M). ELEV. OF LSD-2560.93 FEET (780.571 M). AQUIFER-TM CR JI ART.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

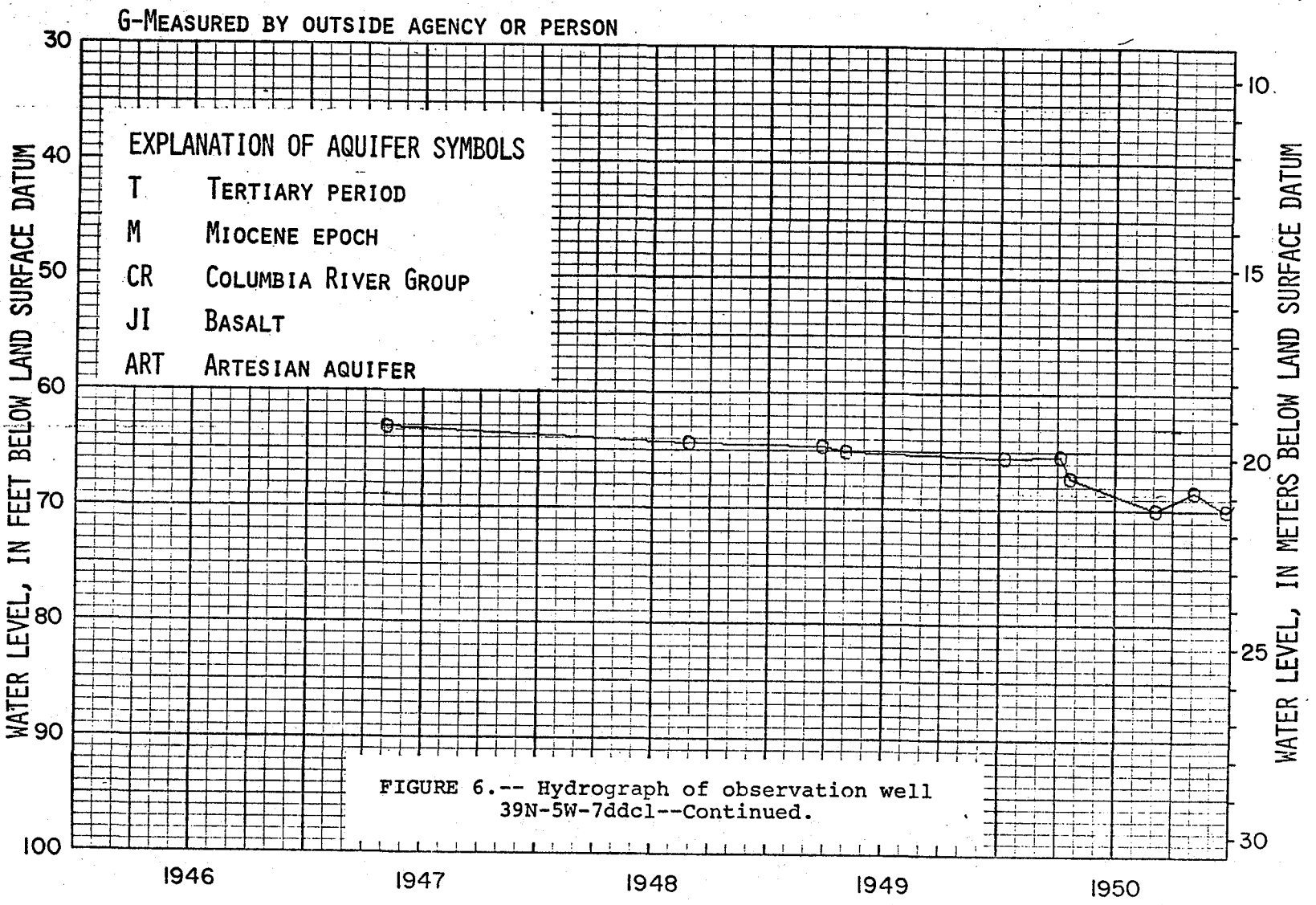

FIGURE 6.-- Hydrograph of observation well 39N-5W-7ddc1--Continued.

LATAH COUNTY, IDAHO WELL No. 39N 05W 07DDC1 LAT-LONG NO. 464349N1170013.1

DEPTH OF WELL-231.0 FEET (70.4 M). ELEV. OF LSD-2560.93 FEET (780.571 M). AQUIFER-TM CR JI ART.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

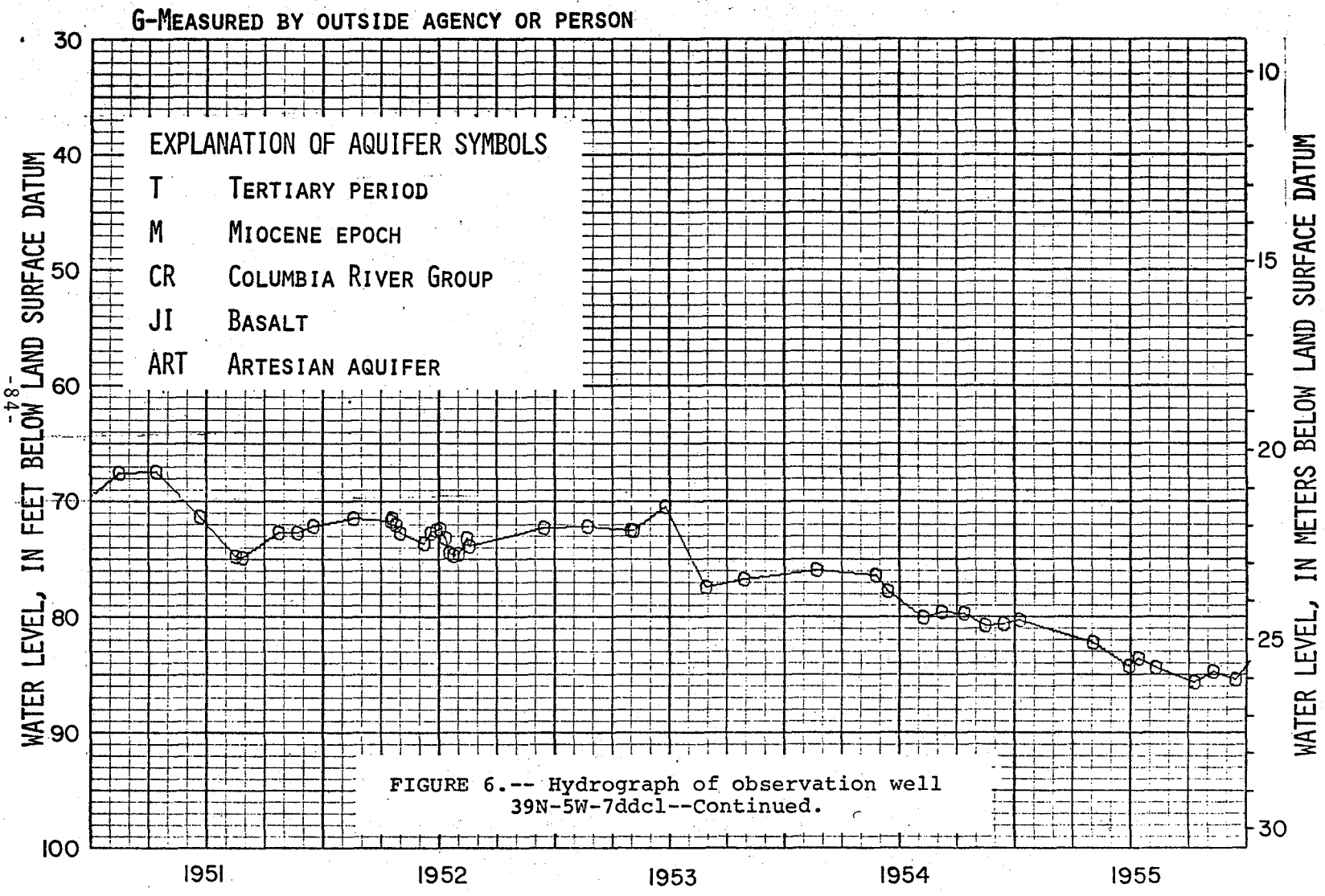

FIGURE 6.-- Hydrograph of observation well 39N-5W-7ddc1--Continued.

LATAH COUNTY, IDAHO WELL No. 39N 05W 07DDC1 LAT-LONG NO. 464349N1170013.1

DEPTH OF WELL-231.0 FEET (70.4 M). ELEV. OF LSD-2560.93 FEET (780.571 M). AQUIFER-TM CR JI ART.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

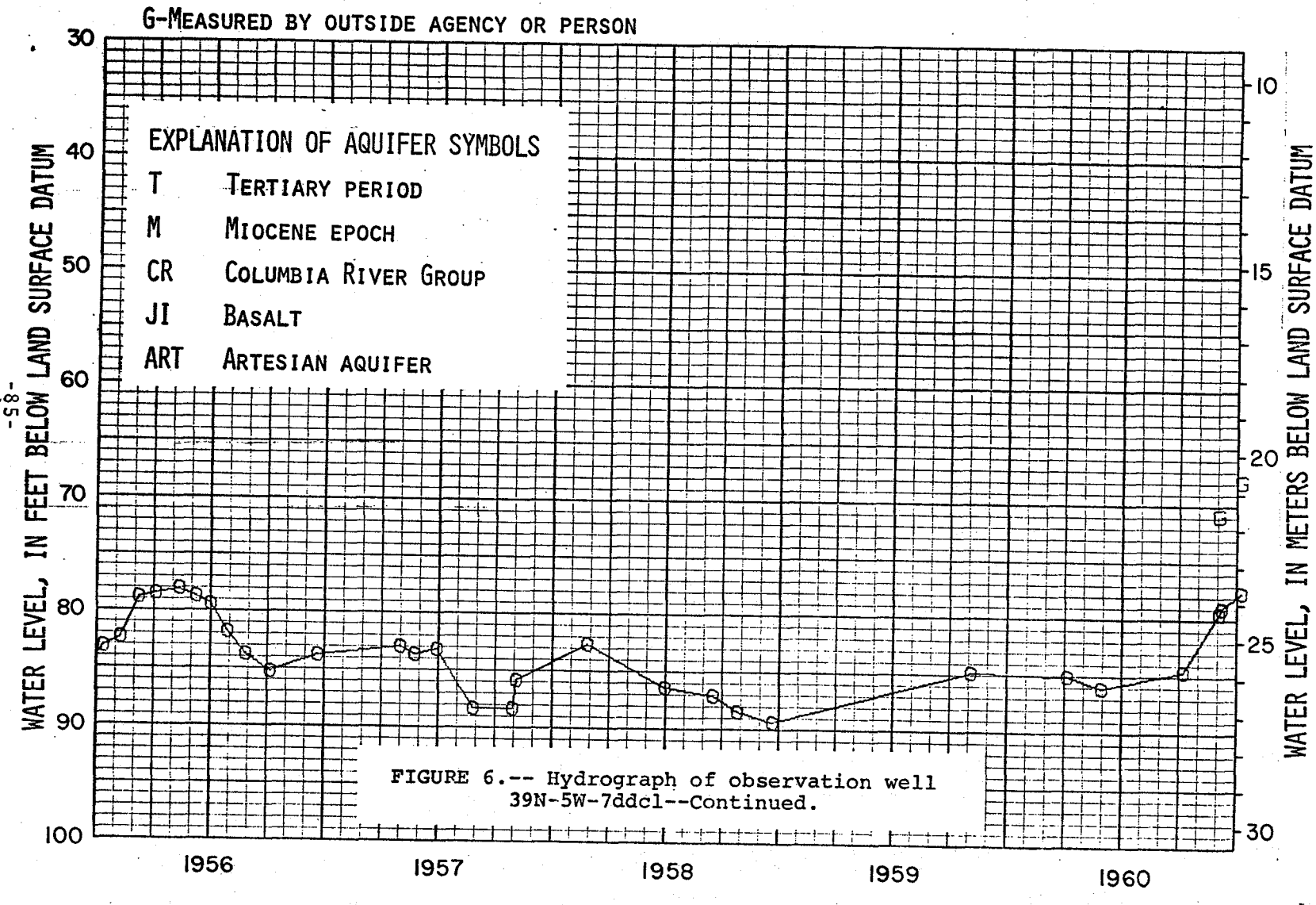

FIGURE 6.-- Hydrograph of observation well 39N-5W-7ddc1--Continued.

LATAH COUNTY, IDAHO WELL No. 39N 05W 07DDC1 LAT-LONG NO. 464349N1170013.1

DEPTH OF WELL-231.0 FEET (70.4 M). ELEV. OF LSD-2560.93 FEET (780.571 M). AQUIFER-TM CR JI ART.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

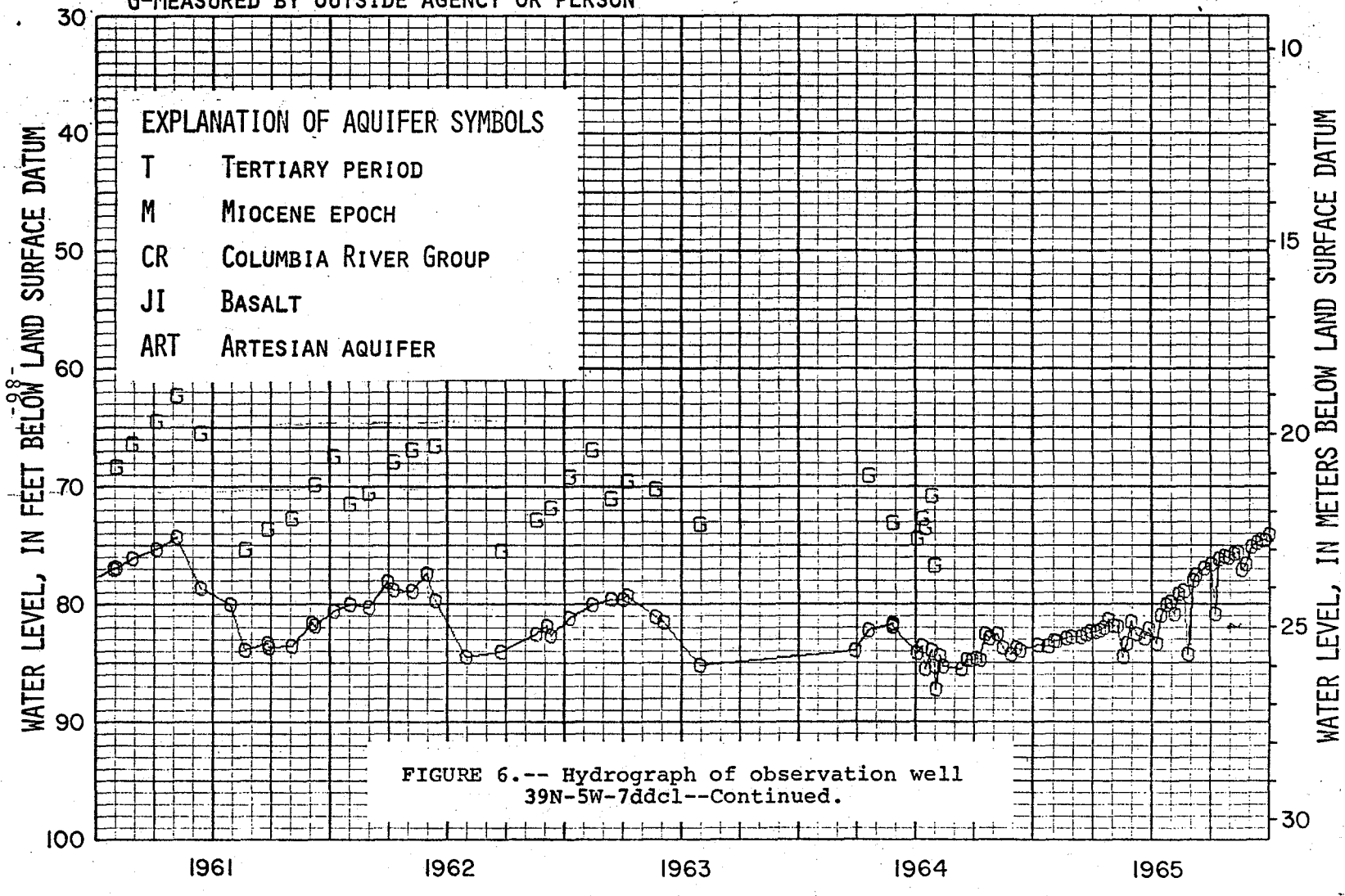

FIGURE 6.-- Hydrograph of observation well 39N-5W-7ddc1--Continued.

LATAH COUNTY, IDAHO WELL No. 39N 05W 07DDC1 LAT-LONG NO. 464349N1170013.1

DEPTH OF WELL-231.0 FEET (70.4 M). ELEV. OF LSD-2560.93 FEET (780.571 M). AQUIFER-TM CR JI ART.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

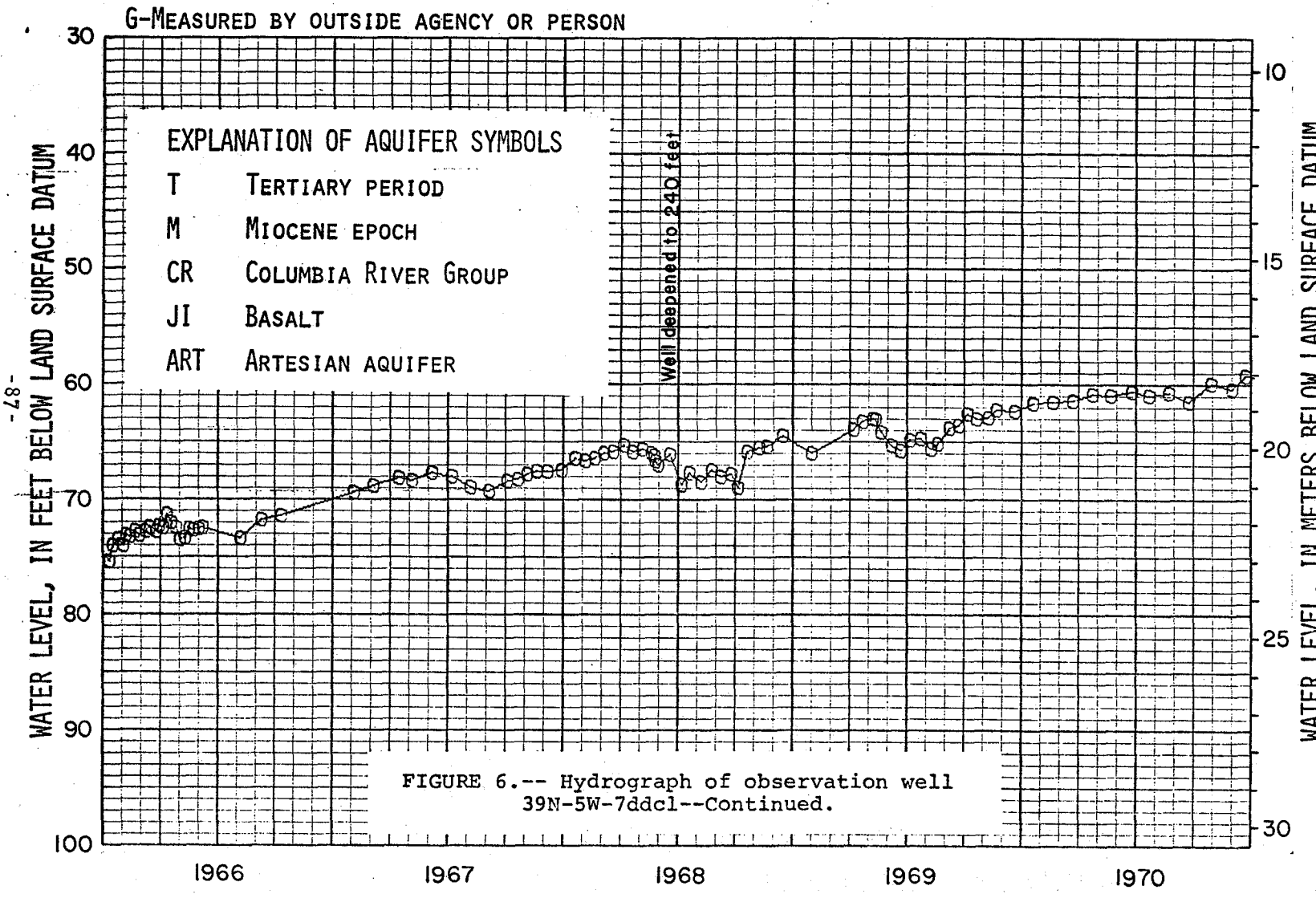

FIGURE 6.-- Hydrograph of observation well 39N-5W-7ddc1--Continued.

LATAH COUNTY, IDAHO WELL No. 39N 05W 07DDC1 LAT-LONG NO. 464349N1170013.1

DEPTH OF WELL-231.0 FEET (70.4 M). ELEV. OF LSD-2560.93 FEET (780.571 M). AQUIFER-TM CR JI ART.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

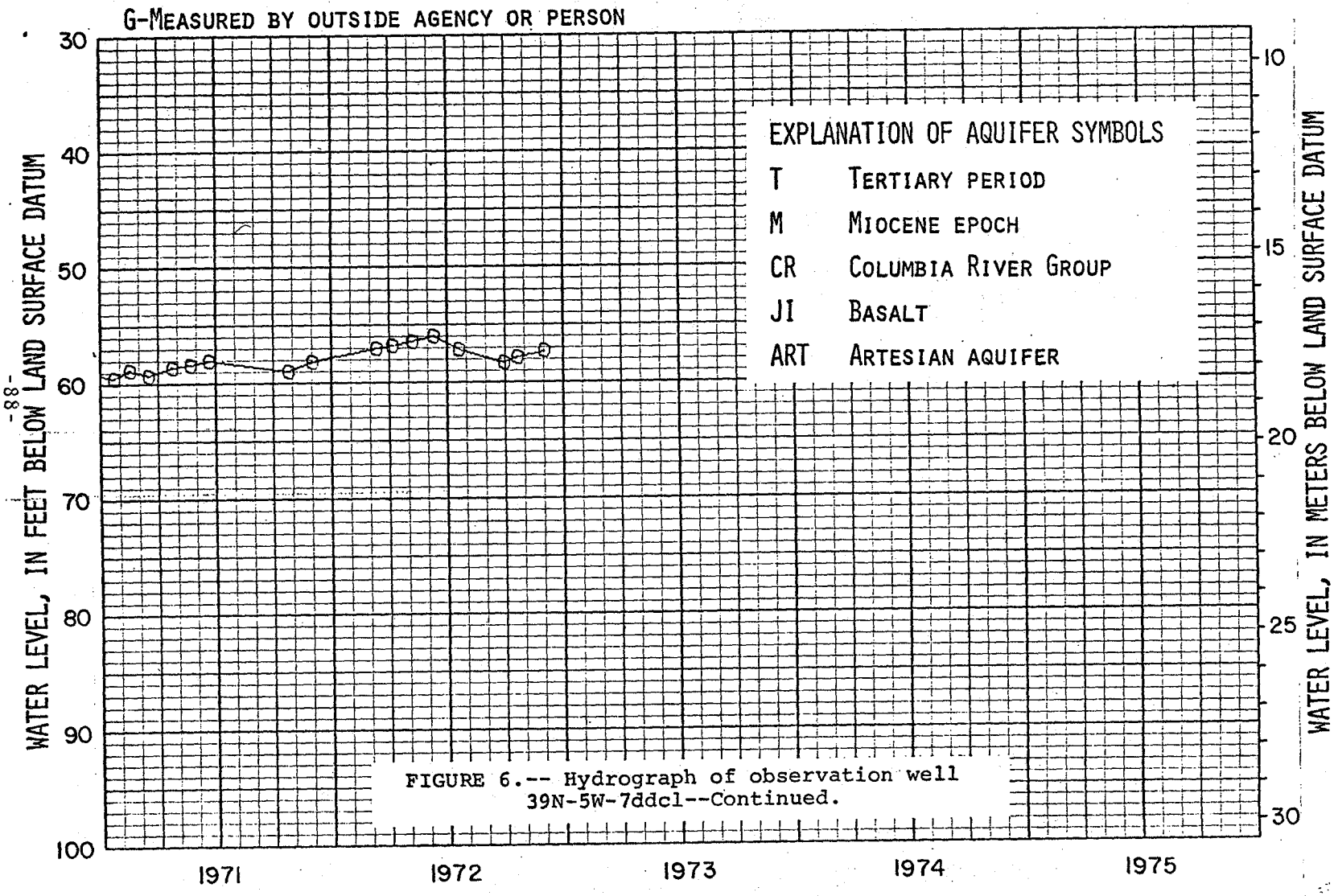

FIGURE 6.-- Hydrograph of observation well 39N-5W-7ddc1--Continued.

LATAH COUNTY, IDAHO WELL No. 39N 05W 10ACA1 LAT-LONG NO. 464427N1165642.1

DEPTH OF WELL-21.5 FEET (6.6 M). ELEV. OF LSD-2628 FEET (801 M). AQUIFER QR OA S W-T.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

FIGURE 7.-- Hydrograph of observation well 39N-5W-10acal (1934-40, 1947-60, 1964-66, 1972)

LATAH COUNTY, IDAHO WELL NO. 39N 05W 10ACA1 LAT-LONG NO. 464427N1165642.1

DEPTH OF WELL-21.5 FEET (6.6 M). ELEV. OF LSD-2628 FEET (801 M). AQUIFER QR OA S W-T.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

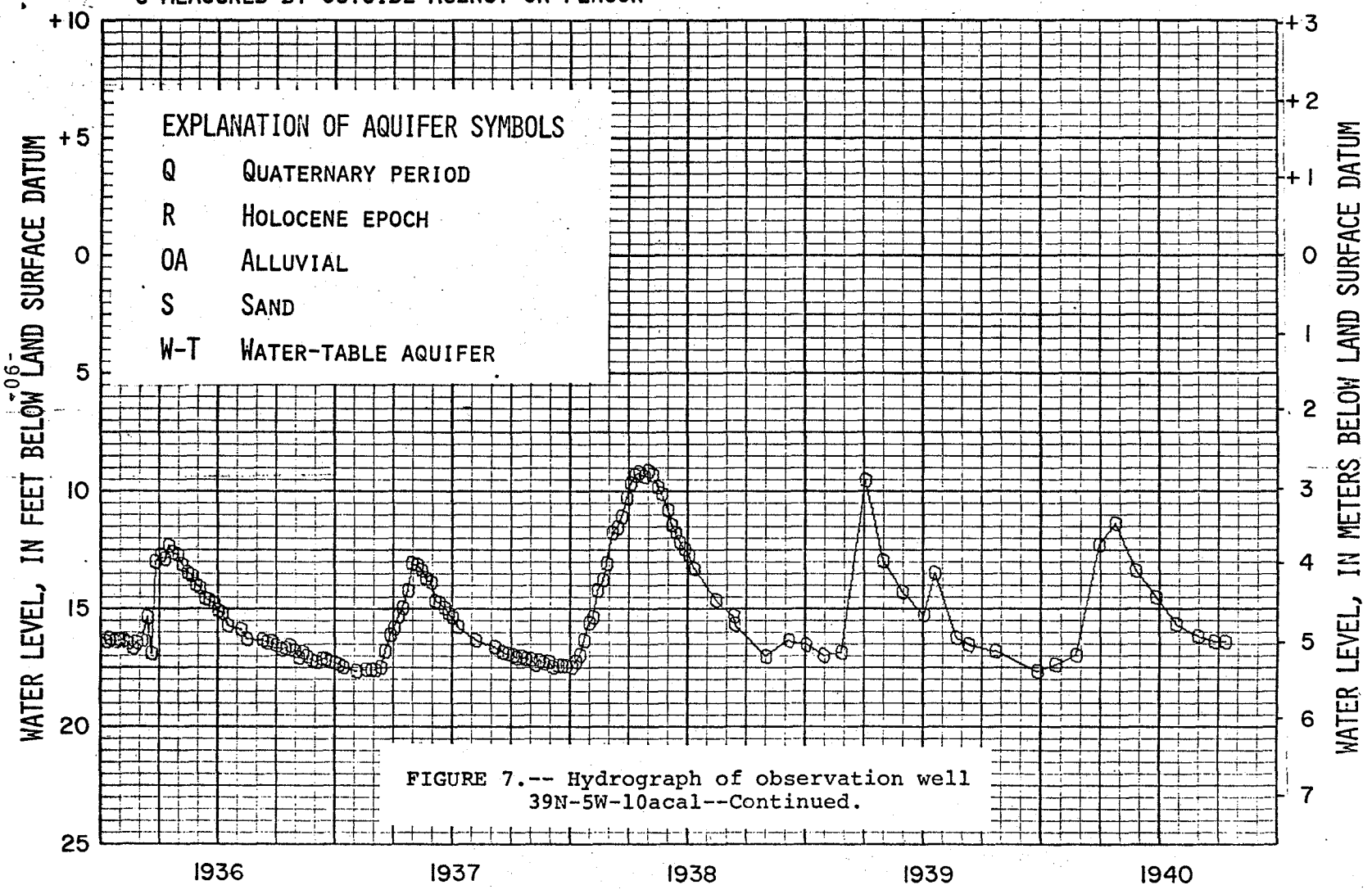

FIGURE 7.-- Hydrograph of observation well 39N-5W-10acal--Continued.

LATAH COUNTY, IDAHO WELL NO. 39N 05W 10ACA1 LAT-LONG NO. 464427N1165642.1

DEPTH OF WELL-21.5 FEET (6.6 M). ELEV. OF LSD-2628 FEET (801 M). AQUIFER QR OA S W-T.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

FIGURE 7.-- Hydrograph of observation well 39N-5W-10acal--Continued.

LATAH COUNTY, IDAHO WELL No. 39N 05W 10ACA1 LAT-LONG NO. 464427N1165642.1

DEPTH OF WELL-21.5 FEET (6.6 M). ELEV. OF LSD-2628 FEET (801 M). AQUIFER QR OA S W-T.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

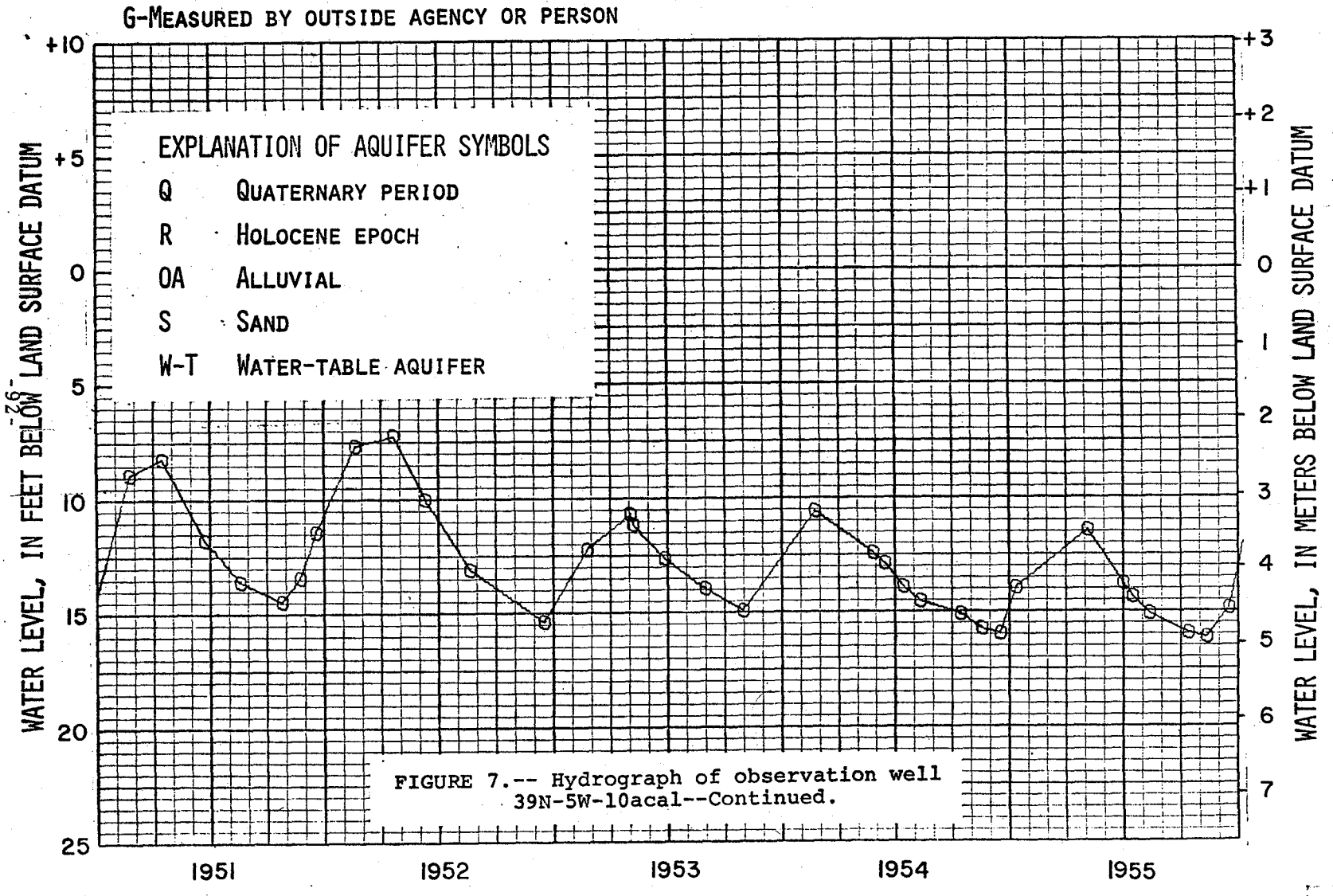

FIGURE 7.-- Hydrograph of observation well 39N-5W-10acal--Continued.

LATAH COUNTY, IDAHO WELL No. 39N 05W 10ACA1 LAT-LONG NO. 464427N1165642.1

DEPTH OF WELL-21.5 FEET (6.6 M). ELEV. OF LSD-2628 FEET (801 M). AQUIFER QR OA S W-T.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

FIGURE 7.-- Hydrograph of observation well 39N-5W-10acal--Continued.

LATAH COUNTY, IDAHO WELL No. 39N 05W 10ACA1 LAT-LONG NO. 464427N1165642.1

DEPTH OF WELL-21.5 FEET (6.6 M). ELEV. OF LSD-2628 FEET (801 M). AQUIFER QR OA S W-T.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

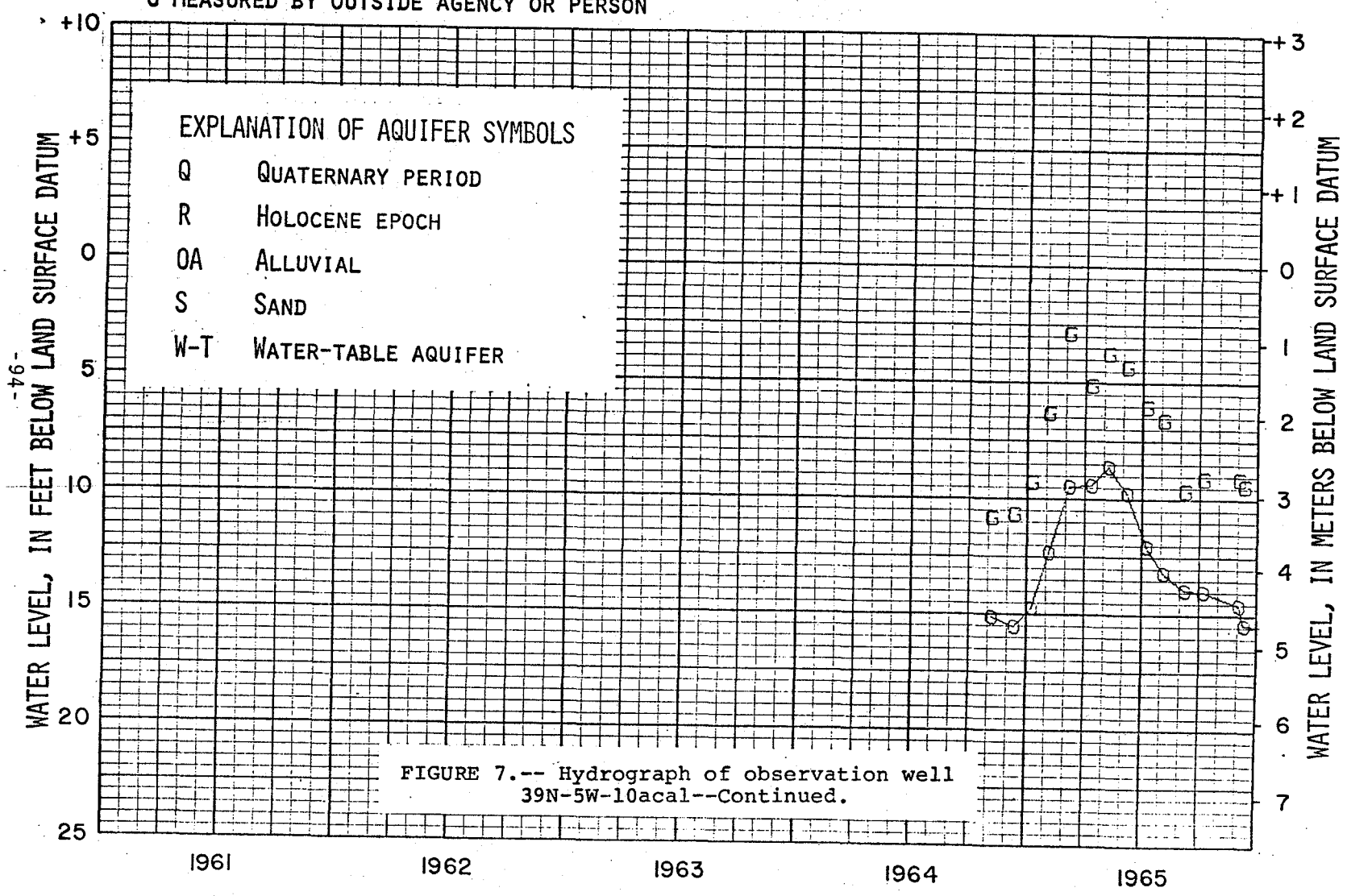

FIGURE 7.-- Hydrograph of observation well 39N-5W-10acal--Continued.

LATAH COUNTY, IDAHO WELL No. 39N 05W 10ACA1 LAT-LONG NO. 464427N1165642.1

DEPTH OF WELL-21.5 FEET (6.6 M). ELEV. OF LSD-2628 FEET (801 M). AQUIFER QR OA S W-T.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

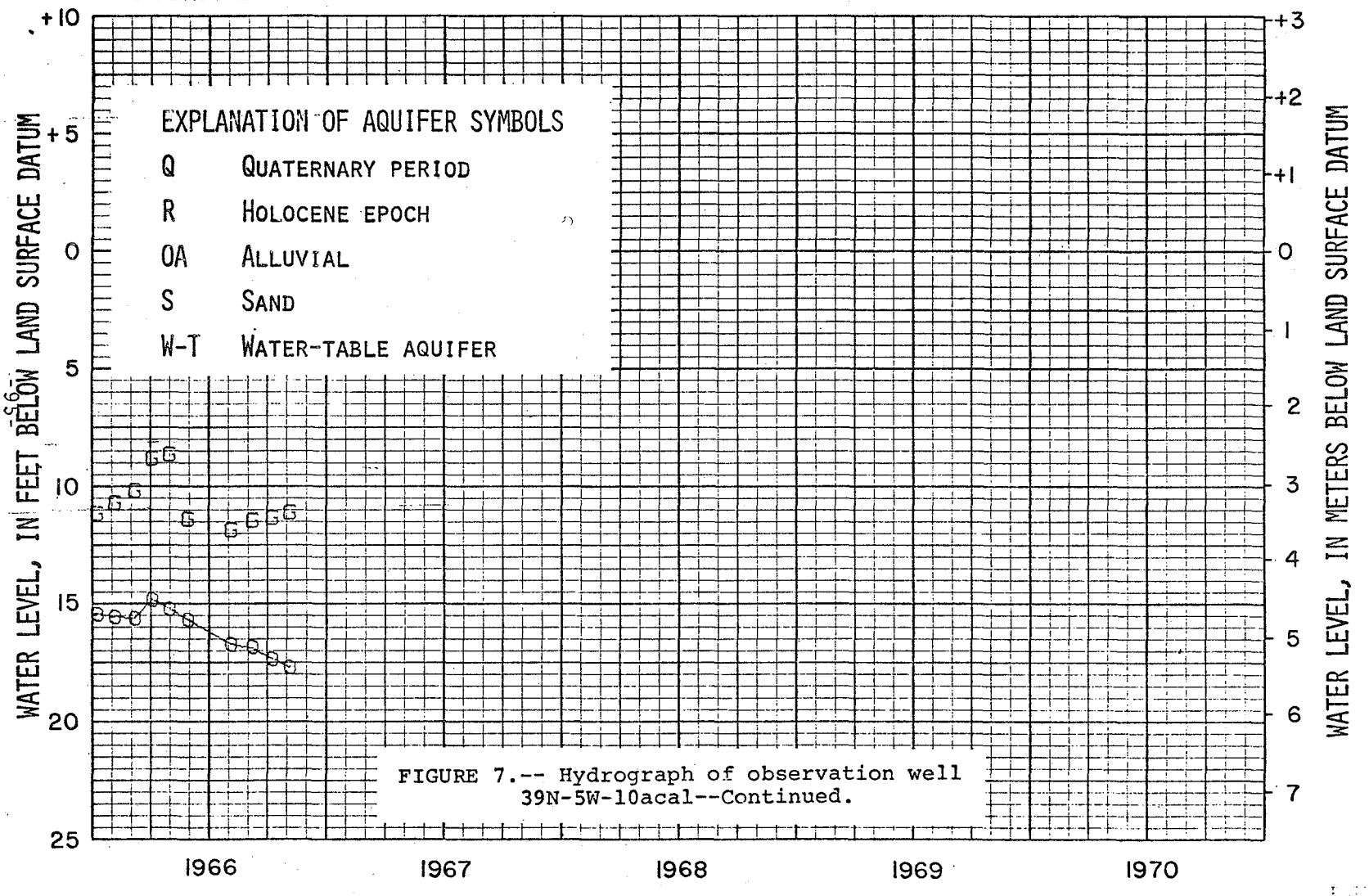

FIGURE 7.-- Hydrograph of observation well 39N-5W-10acal--Continued.

LATAH COUNTY, IDAHO WELL No. 39N 05W 10ACA1 LAT-LONG NO. 464427N1165642.1

DEPTH OF WELL-21.5 FEET (6.6 M). ELEV. OF LSD-2628 FEET (801 M). AQUIFER QR OA S W-T.

G-MEASURED BY OUTSIDE AGENCY OR PERSON

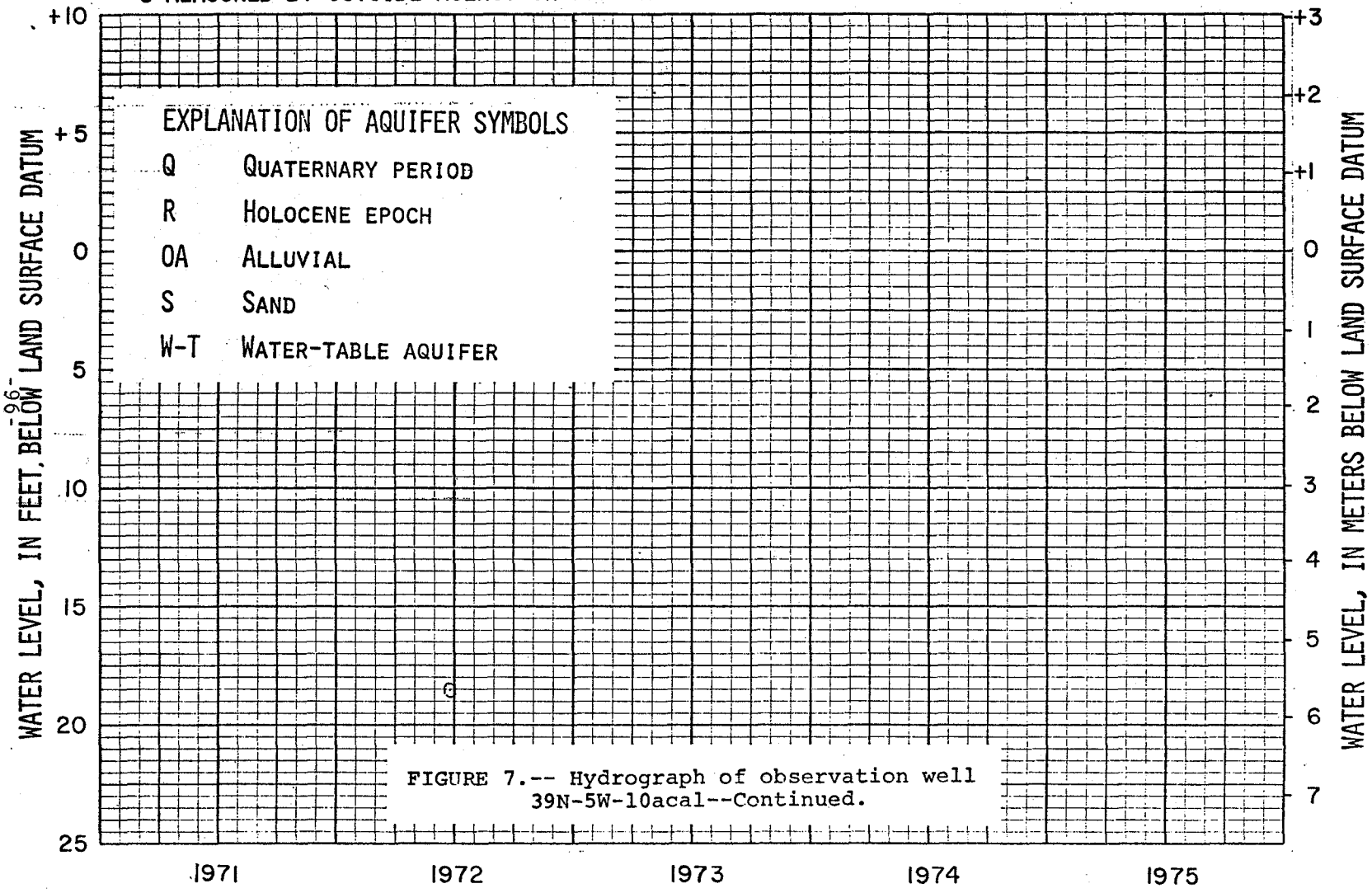

FIGURE 7.-- Hydrograph of observation well 39N-5W-10acal--Continued.