# STATE OF MONTANA BUREAU OF MINES AND GEOLOGY

E. G. Koch, Director

#### **BULLETIN 71**

# WATER LEVELS AND ARTESIAN PRESSURES IN OBSERVATION WELLS IN MONTANA THROUGH 1968

by

T. E. Reed and R. G. McMurtrey
U.S. Geological Survey



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# WATER LEVELS AND ARTESIAN PRESSURES

IN

# OBSERVATION WELLS IN MONTANA,

1966 - 68

by

T. E. Reed and R. G. McMurtrey

#### INTRODUCTION

A continuing program of systematic collection of records of water levels in selected observation wells is part of a cooperative program between the U.S. Geological Survey and the Montana Bureau of Mines and Geology to investigate the ground-water resources of Montana. This report is the third annual waterlevel report for all permanent observation wells in Montana. It includes three years of data (1966-68) for 120 wells included in last year's report and data for the period of record on 34 additional wells. The second report (Reed and McMurtrey, 1968) included all measurements through the 1967 water year. Reports subsequent to the second may contain data for 1 to 5 years, depending on which year the report is written. In each year evenly divisible by five (1970, 1975, 1980), the report will be a compilation of the previous 5 years. Other reports will include records from the last 5-year compilation to the year of the report. For example, the 1969 report will contain 4 years of records (1966-69), the 1970 report, 5 years (1966-70), and the 1971 report, 1 year (1971).

The intent of the water-level measurement program is to record long-term water-level fluctuations in various aquifers throughout the state. Recognized uses of such records are: (1) to predict trends in ground-water levels and thereby forecast changes in

storage; (2) to serve as a framework to which shorter records from project studies may be related; (3) to aid in prediction of base flow of streams; (4) to appraise the relationship between water-level fluctuations and precipitation, pumping, or other factors; (5) to identify areas of detrimentally low or high ground-water levels; and (6) to provide information for research. Records for these and other uses need to be compiled and published in a manner that will assure their current and future availability.

The systematic measurement of ground-water levels in Montana was begun in 1947 under a federal program to develop a nationwide observation-well network. Measurements continued under this program until 1964, when the network was expanded with funds from the State Engineer. In 1965 the observation-well network was made a part of the cooperative ground-water program of the Montana Bureau of Mines and Geology. Before 1956, water-level measurements were published annually by the U.S. Geological Survey as water-supply papers. Since 1956, the records of water levels in the federal network of observation wells have been published in 5-year increments. Watersupply papers, which contain measurements of water levels in federal observations wells in Montana, are listed in Table 1.

Table 1.-U.S. Geological Survey Water-Supply Papers that contain water-level measurements in federal observation wells in Montana.

Year	Water-Supply Paper	Year	Water-Supply Paper
1935	777	1948	1130
1936	817	1949	1160
1937	840	1950	1169
1938	845	1951	1195
1939	886	1952	1225
1940	910	1953	1269
1941	940	1954	1325
1943	990	1955	1408
1944	1020	1956-60	1760
1947	1100	1961-65	1845

In addition to permanent observation wells, project observation wells are established during each areal study, and the measurements are published in project reports. When a study is completed, selected wells are added to the network of permanent observation wells. Figure 1 shows study areas for which the published reports contain periodic water-level measurements.

The reports are numbered on Figure 1, and the corresponding number is listed in "References Cited".

Figures 2, 3, 4, and 5 show the locations of wells included in this report, and Table 2 contains the water-level measurements from 1966 through the 1968 water year.

#### DESCRIPTION OF WELLS

The tabulation of water-level data is preceded by a description of the well (Table 2). Each well is assigned a number based on its location within the system of land subdivision used by the U.S. Bureau of Land Management. The well number shows the location of the well by quadrant, township, range, section, and position within the section. This method of well numbering is shown in Figure 6. The first letter of the well number gives the quadrant of the Montana principal meridian and base-line system in which the well is located. The first numeral indicates the township, the second the range, and the third the section in which the well is located. Lower-case letters that follow the section number show the location of the well within the quarter section (160-acre tract) and the quarter-quarter section (40-acre tract). These subdivisions are designated a, b, c, and d in a counterclockwise direction, beginning in the northeast quarter. If two or more wells are located within the same 40-acre tract, consecutive digits beginning with 1 are added to the well number. For example, well B-9-20-21ad1 is in the SE¼ NE¼ sec. 21, T. 9 N., R. 20 W., and is the first well inventoried in that 40-acre tract.

The well number is followed by the latitude-longitude location of the well (in parenthesis), the owner's name, the type of well (water-table or artesian), and the geologic setting or geologic formation. The diameter is reported in inches (in.) and the depth in feet (ft.) below land-surface datum (lsd). All levels are read from a measuring point (MP), which is related to either lsd or mean sea level (msl). Altitude of MP, where known, is given in feet above msl. Water levels are in feet below lsd, except where a plus (+) sign indicates a level above lsd.

#### OCCURRENCE OF GROUND WATER

The initial source of most ground water is precipitation, which varies widely over Montana. The averages for the seven climatological divisions used by the U.S. Weather Bureau in the state range from 13.07 inches in the north-central division to 19.04 inches in the western division. The lowest long-term average at an individual station is 9.79 inches, and the highest is 34.38 inches; precipitation at a station in Glacier

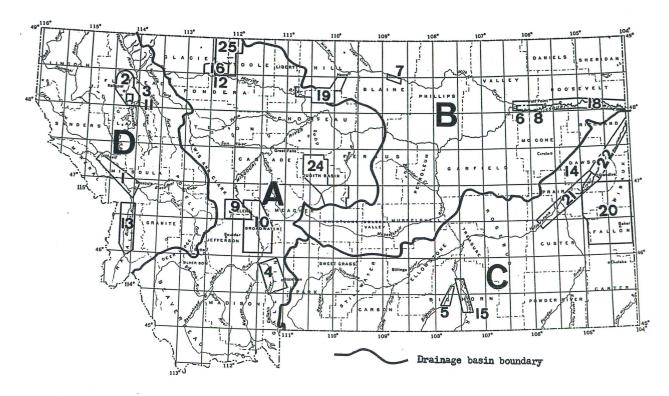


Figure 1.—Drainage basins and areas for which project reports contain periodic water-level measurements. (Numbers correspond to the report reference number shown in "References Cited"; letters identify drainage basins: A, Upper Missouri; B, Lower Missouri; C, Yellowstone and Little Missouri; and D, Columbia.)

National Park exceeded 100 inches in seven of nine seasons, however. Much of the precipitation returns to the atmosphere by evaporation and transpiration or flows overland; part seeps into the soil zone and percolates downward into the underlying rocks. Water in these rocks occurs in voids, interstices, pore spaces, joints, fractures, or solution channels. The size, shape, character, and distribution of the open spaces determine, to a great extent, the occurrence of ground water. The open spaces are generally interconnected and act as minute conduits through which the water moves slowly until it is discharged to the earth's surface through springs, wells, and effluent streams, or to the atmosphere by evaporation and plant transpiration. Under natural conditions, over a long period of time, the amount of water that is added to groundwater storage is in approximate equilibrium with the amount that is discharged.

Ground water in Montana occurs under a wide range of conditions. Throughout most of the state, wells drilled into one or more of the numerous aquifers produce water, but not necessarily at a reasonable cost or in the quantity or of the quality desired. An aquifer is a geologic formation that transmits water in sufficient quantity to supply pumping wells or springs. In some areas of the state, ground water is relatively difficult to obtain, and aquifers yielding only a few gallons of water per minute to wells are of considerable importance. In other areas where aquifers may yield several hundred gallons per minute to wells, formations capable of yielding only small amounts may be classed as nonproductive.

Aquifers may be classified as water-table or artesian, A water-table aquifer is exposed at the surface and contains a saturated zone and an unsaturated zone. The surface within the saturated zone at which the pressure is atmospheric is known as the water table. The water level in a well hydraulically connected with the aquifer coincides with the water table. An artesian aquifer is overlain by relatively impermeable material (material through which water does not move readily) and contains water under sufficient pressure to rise above the top of the aquifer if penetrated by a well. If the pressure is sufficient to raise the water above the land surface, the well will flow.

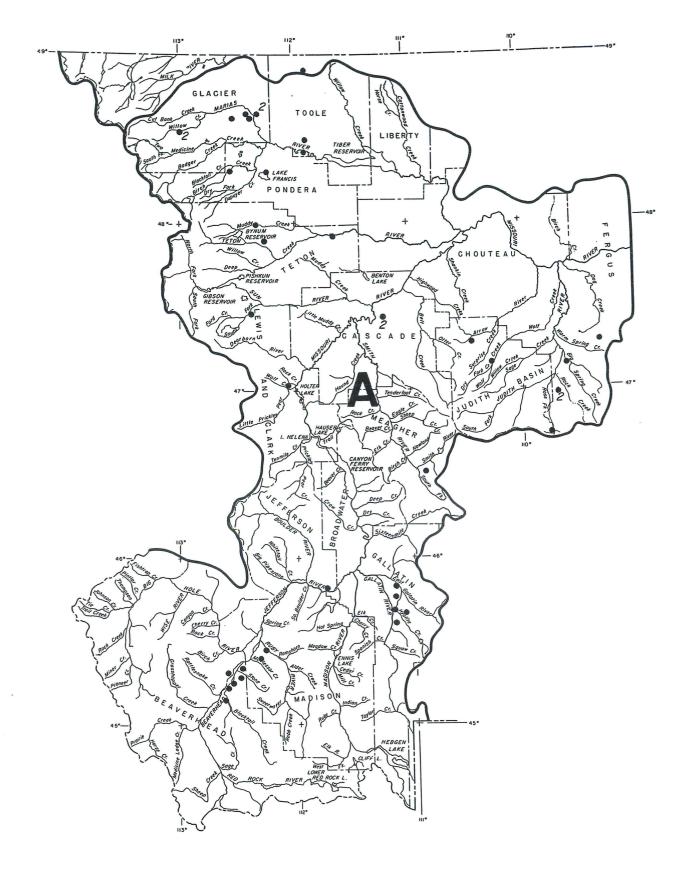


Figure 2.-Location of observation wells in upper Missouri River drainage area.

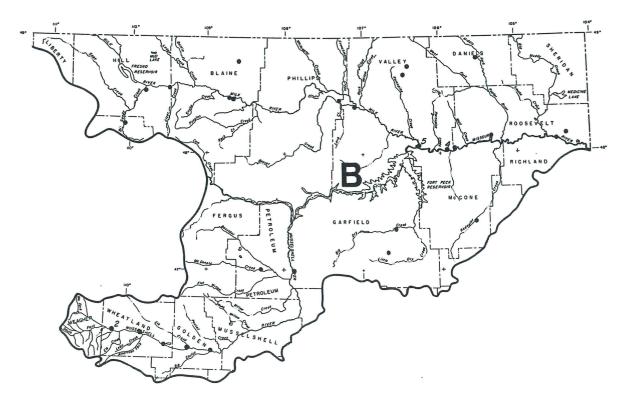


Figure 3.-Location of observation wells in lower Missouri River drainage area.

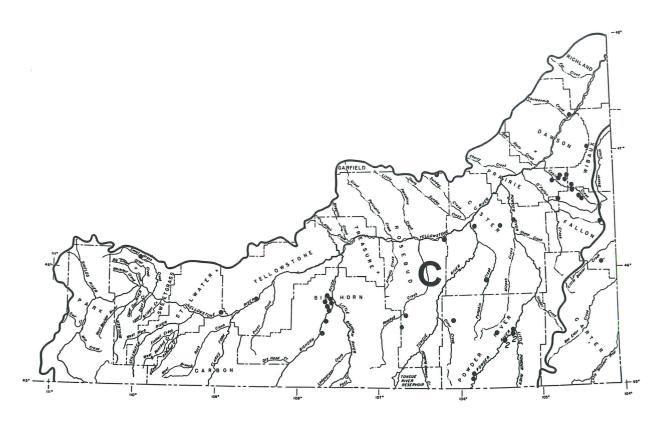


Figure 4.-Location of observation wells in Yellowstone and Little Missouri River drainage areas.

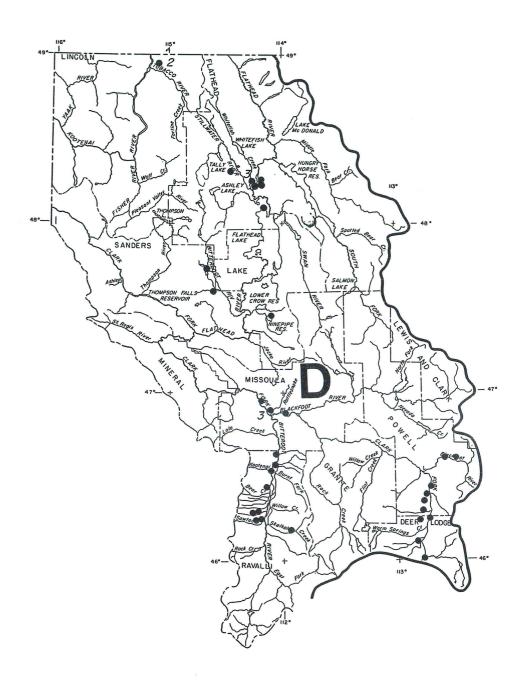


Figure 5.-Location of observation wells in Columbia River drainage area.

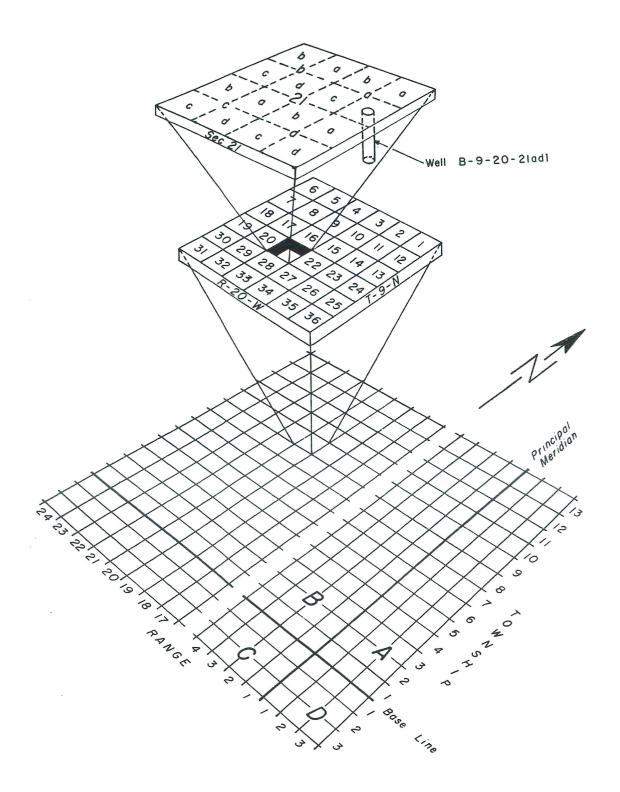


Figure 6.-Well-numbering system.

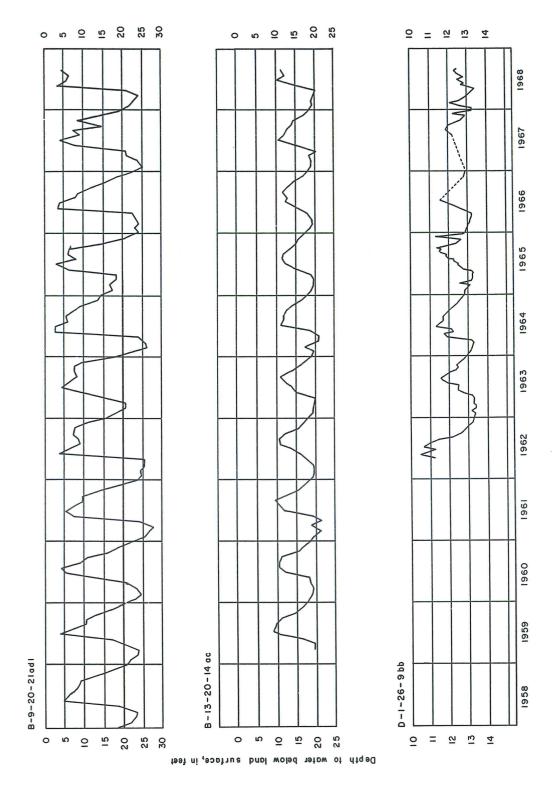


Figure 7.-Water levels in wells B-9-20-21ad1, B-13-20-14ac, and D-1-26-9bb.

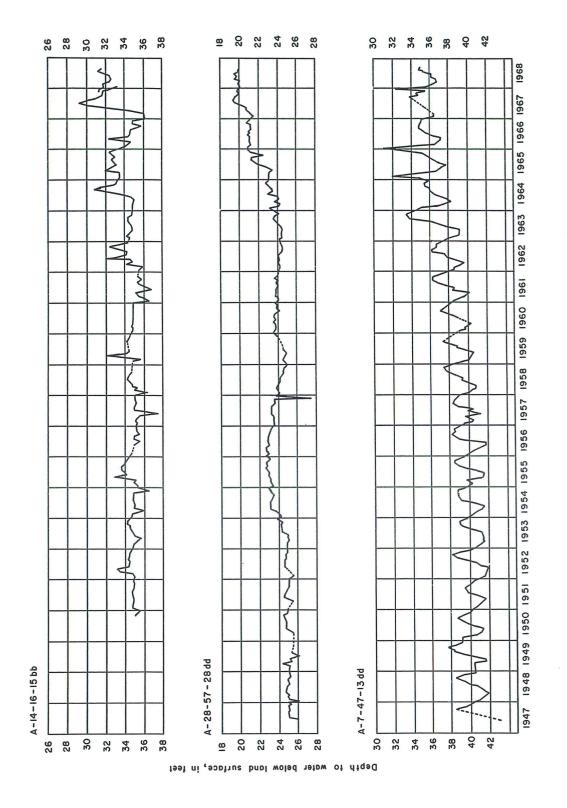


Figure 8.-Water levels in wells A-14-16-15bb, A-28-57-28dd, and A-7-47-13dd.

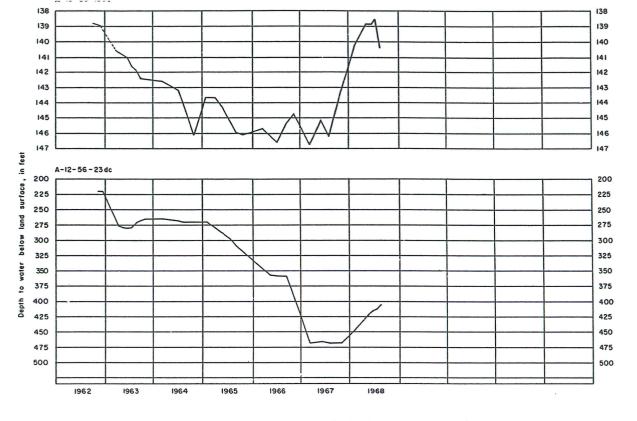


Figure 9.-Water levels in wells A-10-58-18dc and A-12-56-23dc.

#### FLUCTUATIONS OF THE WATER LEVEL

Water levels in wells are almost constantly fluctuating, and may decline or rise a fraction of an inch or many feet in a relatively short time. Factors that influence water levels include seasonal changes in rate of recharge and discharge, local geology, recharge from precipitation, local irrigation, pumping from nearby wells, evaporation and transpiration, and changes in water levels in nearby lakes, streams, or drains. Temporary influences on the water levels in artesian wells result from earthquakes, earth tides, changes in atmospheric pressure, changes in surfacewater stage, and changes in surface loading. In artesian wells, changes in water level may occur quickly over large areas as a result of pumping.

In Montana, water-level fluctuations generally are cyclic, reflecting seasonal changes in the amount of water in storage. Variations are caused by differences in rates of recharge and discharge (Fig. 7, 8, and 9). The water levels generally rise during the spring and summer and decline during the fall and winter. Long-term trends in water-level fluctuations may be impressed locally on the seasonal cycle. These trends reflect changes in storage over a period of years, owing to natural climatic variations or to maninduced variations such as a change in irrigation pattern, land drainage, or pumping from wells.

The cyclic trend is illustrated by the graphs of water levels in Figure 7. Two of the wells (B-9-20-21ad1 and B-13-20-14ac) are in intermontane basins of western Montana and the third is in the Yellowstone River basin in eastern Montana. The pattern of water-level fluctuations is similar in all three wells, because the aquifer near each well is recharged at about the same time. The magnitude of fluctuation differs, owing to differences in the quantity of water available for recharge, the capacity of the aquifer to store water, and the permeability of the aquifer tapped by the well.

Water-level fluctuations impressed on the seasonal cycle are shown in Figures 8 and 9. The graph of water-level measurements for well A-14-16-15bb shows sharp peaks caused by heavy precipitation on snowmelt and some sharp lows probably caused by pumping. The graph for well A-28-57-28dd shows the effect of above-normal precipitation for 1953-55 and below-normal for 1956-58. Increased recharge from irrigation from 1957 to 1968 is shown by the graph for well A-7-47-13dd. Pumpage of water from nearby wells is reflected in the graphs for wells A-10-58-18dc and A-12-56-23dc.

#### Water levels are reported in feet below land-surface datum

Date	level	Date	Water level	D	ate		Water level	D	ate		level
	Beaverhea	d County			C-7-	8-3bd2-	-Continued				
Reclamation. terrace deposite depth 107.1 for feet above lack Aug. 30, 1968; Records availa	Drilled observits of Tertiary et, cased with d. Highest wat ; lowest 67.54 able: 1965-68		le well in 1 1/4 inches, of pipe, 2.8 below 1sd, 29, 1965.	June July Aug. Oct. Dec. Feb. Apr. June	3 4 6	1966 1967	13.76 g14.3 12.34 15.75 17.97 18.80 19.10 16.08	Aug. Oct. Dec. Feb. Apr. June Aug.	3 5	1967 1968	15.36 15.67 17.77 18.80 18.71 15.74 14.63
Reh 10 1066	65 57	Aug 1 1067	62 40								

g Measured by U. S. Bureau of Reclamation.

Feb.	10,	1966	65.57	Aug.	1,	1967	62.49
Apr.	6		66.58	Oct.	4		60.64
June	8		64.53	Dec.	7		62.86
Aug.	4		62.88	Feb.	7,	1968	64.73
Oct.	5		61.84	Apr.	4		65.64
Dec.	7		64.56	June	6		64.87
Feb.	6,	1967	66.01	Aug.	30		58.65
Apr.	3		66.66				
June	22		65.53				

C-6-7-30cc. (451636N1123100) U. S. Geol. Survey. Drilled observation artesian well in terrace deposits of Tertiary age, diameter 1 1/2 inches, depth 270 feet. MP top of pipe, 2.0 feet above 1sd. Highest water level 241.10 below 1sd, June 6, 1968; lowest 248.94 below 1sd, Aug. 8, 1965. Records available: 1965-68.

Jan.	5.	1966	g246.6	Apr.	5,	1967	244.80
Feb.	10		245.84	June	21		244.72
Mar.	4		g246.8	Aug.	2		244.03
Apr.	5		246.11	Oct.	4		243.76
June	8		246.19	Dec.	6		243.32
Aug.	2		246.04	Feb.	7,	1968	244.10
Oct.	5		246.06	Apr.	9		242.23
Dec.	6		245.50	June	6		241.10
Feb.	6.	1967	245.42				

g Measured by U. S. Bureau of Reclamation.

C-6-8-18cc. (451820N1123825) U. S. Bureau of Reclamation. Drilled observation water-table well in alluvial deposits of Quaternary age, diameter 1 1/4 inches. MP top of pipe, 2.7 feet above 1sd. Highest water level 7.69 below 1sd, Aug. 3, 1966; lowest 15.55 below 1sd, Apr. 9, 1968. Records available: 1965-68.

Feb. Apr. June Aug. Oct.	5 8 3 5	1966	11.03 12.32 12.15 7.69 10.35	Aug. Oct. Dec. Feb. Apr.	3, 4 6 7, 9	1967 1968	9.99 12.00 11.75 13.72 15.55
Dec.	7		10.80	June	6		14.77
Feb.	8,	1967	12.78	Aug.	30		11.89
Apr.	5		14.69				
June	22		11.26				

C-7-8-3bd2. (451524N1123420) U. S. Bureau of Reclamation. Drilled observation water-table well in colluvium, diameter 1 1/4 inches, depth 40.5 feet. MP top of pipe, 2.0 feet above 1sd and 5,032 feet above msl. Highest water level 11.05 below 1sd, Aug. 4, 1965; lowest 25.29 below 1sd, Apr. 5, 1966. Records available: 1965-68.

Jan.	5, 1966	g18.7	Mar.	3, 1966	g19.2
Feb.	9	18.74	Apr.	5	25.29

C-7-9-24dd. (451820N1123825) U. S. Bureau of Reclamation. Drilled observation water-table well in alluvium. MP top of pipe, 2.0 feet above 1sd. Highest water level 7.34 below 1sd, Aug. 2, 1965; lowest 23.57 below 1sd, Apr. 9, 1968. Records available: 1965-68.

Jan.	4, 1966	g18.6	Apr.	4,	1967	23.05
Feb.	8	21.70	June	12		15.76
Mar.	2	g22.9	Aug.	3		g11.4
Apr.	4	23.30	Oct.	3		11.49
June	7	11.66	Dec.	5		17.45
July		g12.7	Feb.	6,	1968	22.60
Aug.	2	9.99	Apr.	9		23.57
Oct.	4	8.20	June	6		15.23
Dec.	6	18.36	Aug.	30		8.19
Feb.	7, 1967	22.95				

g Measured by U. S. Bureau of Reclamation.

C-8-9-1cc. (450937N1123937) U. S. Geol. Survey. Drilled observation water-table well in alluvial fan deposits, diameter 6 inches, depth 47 feet, cased with pipe. MP top of recorder shelf, 3.0 feet above 1sd. Highest water level 13.90 below 1sd, Aug. 30, 1968; lowest 28.02 below 1sd, Apr. 4, 1967. Records available: 1966-68.

Aug.	4,	1966	15.37	Oct.	3,	1967	16.66
Oct.	4		18.65	Dec.	5		23.09
Dec.	6		23.59	Feb.	6,	1968	26.11
Feb.	2,	1967	24.34	Apr.	9		26.12
Apr.	4		28.02	June	6		17.55
June	22		21.19	Aug.	30		13.90
Aug.	1		17.03				

#### Big Horn County

A-1-33-31cd. (454706N1073948) Wm. Moore. Dug unused water-table well in terrace deposits, diameter 48 inches, depth 27.3 feet, cased with wood, concrete top. MP top of cover, 1.0 foot above 1sd and 2,991 feet above msl. Highest water level 19.09 below 1sd, May 10, 1966; lowest 22.09 below 1sd, Aug. 6, 1958. Records available: 1957-68.

	4, 10	1966	19.19 19.09	June Sept.		1967	19.40 19.16
Sept.	1		19.12	Nov.	15		19.54
Dec.	29		19.68	June	20,	1968	19.46
Mar.	27,	1967	19.26				

	Water		Water	
Date	level	Date	level	

D-1-33-10cd. (454522N1073801) U. S. Geol. Survey. Drilled observation water-table well in terrace deposits, diameter 4 1/2 inches, depth 46 feet. MP top of casing, 0.50 foot above 1sd and 2,923 feet above ms1. Highest water level 12.34 below 1sd, Sept. 1, 1966; lowest 18.03 below 1sd, Apr. 25, 1963. Records available: 1958-68.

Feb.	4,	1966	16.64	June	30,	1967	14.24
May	10		14.80	Sept.	20		12.77
Sept.	1		12.34	Nov.	15		16.43
Dec.	29		16.05	June	20,	1968	13.57
Mar.	27,	1967	16.79				

B-1-33-19da. (454350N1074100) L. J. Torske. Dug stock water-table well in terrace deposits, diameter 60 inches, depth 25.1 feet, cased with concrete. MP 1.18 feet above 1sd and 3,034.1 feet above msl. Highest water level 17.59 below 1sd, Mar. 3, 1965; lowest 22.18 below 1sd, Oct. 4, 1960. Records available: 1957-68.

Jan.	4,	1966	18.63	July	27,	1967	20.19
May	10		19.19	Sept.	20		19.35
Sept.	1		19.56	Nov.	15		17.65
Dec.	29		18.67	Feb.	13,	1968	19.17
Mar.	27,	1967	18.76	June	20		18.61
June	30		19.06				

D-1-33-24bc. (45440<u>1</u>N107360<u>3</u>) Mrs. Henry Kray. Drilled irrigation water-table well in alluvium, diameter 4 inches, depth 28 feet, cased with pipe. MP top of pipe at 1sd and 2,898 feet above ms1. Highest water level 6.47 below 1sd, Sept. 10, 1962; lowest 8.94 below 1sd, Feb. 4, 1966. Records available: 1962-68.

Feb.	4,	1966	8.94	June	30,	1967	7.58
May	10		7.80	Sept.	20		7.61
Sept.	1		7.91	Nov.	15		8.44
Dec.	29		8.70	June	20,	1968	6.86
Mar.	27,	1967	8.39				

D-1-33-33ab. (454233N1073908) U. S. Geol. Survey. Drilled observation water-table well in alluvial fan deposits. Diameter 4 inches, depth 37.5 feet, cased with pipe. MP top of pipe, 1.2 feet above 1sd and 2,339 feet above msl. Highest water level 5.18 below 1sd, June 12, 1958; lowest 13.87 below 1sd, Nov. 15, 1967. Records available: 1958-68.

Feb.	4.	1966	11.10	June	30,	1967	11.58
	10		10.19	Sept.	20		13.72
Sept.	1		12.04	Nov.	15		13.87
Dec.	29		12.28	June	20,	1968	12.12
Mar.	27.	1967	12.47				

D-2-33-9dd. (454000N1073830) Owner unknown. Drilled unused water-table well in alluvium, diameter 3 inches, depth 20 feet, steel casing. MP top of casing, 1.2 feet above 1sd and 2,935 feet above msl. Highest water level 2.24 below 1sd, June 5, 1958; lowest 8.93 below 1sd, Apr. 25, 1963. Records available: 1956-68.

Feb. May Sept. Dec.	10 1 29		7.16 4.48 2.94 6.41	June Sept. Nov. June	20 15	4.58 3.07 6.75 5.14
Mar.	27,	1967	6.96			

p-3-33-9dc. (453441N1073855) U. S. Geol. Survey. Drilled observation water-table well in terrace deposits, diameter 6 inches, depth 74 feet, cased with pipe. MP top of pipe, 2.0 feet above 1sd and 3,024 feet above msl. Highest water level 41.02 below 1sd, Sept. 22, 1966; lowest 43.52 below 1sd, Apr. 29, 1966. Records available: 1966-68.

Date

Water

level

Date

Water

leve1

Apr.	29,	1966	43.52	Dec.	13,	1966	41.64
May	4		43.15	Jan.	20,	1967	41.63
	10		42.45	Feb.	17		42.52
July	7		41.94	Mar.	17		42.83
Aug.	25		41.09	Apr.	10		42.80
Sept.	22		41.02				
Oct.			41.45				

D-4-32-23ac. (452809N1074340) U. S. Bureau of Indian Affairs. Drilled unused water-table well in terrace deposits, diameter 6 inches, depth 31.2 feet. MP top of casing, 0.3 foot above 1sd and 3,056 feet above msl. Highest water level 11.70 below 1sd, Sept. 3, 1958; lowest 17.60 below 1sd, July 9, 1957. Records available: 1957-68.

Jan.	11.	1966	16.70	Nov.	1,	1966	14.93
	10		16.70	Dec.	19		15.55
Mar.	15		16.73	Jan.	19,	1967	15.89
Apr.	5		17.58	Feb.	16		16.23
May	3		17.32	Mar.	17		16.56
July	8		16.15	Apr.	10		16.79
Aug.	25		14.79	•			
Sept			14.72				

#### Blaine County

A-31-24-6bcl. (482823N1084011) C. Bear estate. Drilled observation water-table well in alluvium, diameter 6 5/8 inches, depth 69.7 feet, steel casing. MP top of casing, 2.3 feet above 1sd and 2,330.5 feet above msl. Highest water level 5.10 below 1sd, Aug. 29, 1960; lowest 9.98 below 1sd, Apr. 14, 1961. Records available: 1960-62, 1966-68.

May	25.	1966	6.49	Nov.	2,	1967	8.50
Sept.			6.94	Feb.	21,	1968	8.51
Mar.		1967	8.74	May	15		8.15
June			5.18	Aug.	7		5.32
-			6.23				

A-31-24-16ad4. (482640N1083638) U. S. Geol. Survey. Drilled observation water-table well in glacial gravel, diameter 4 inches, depth 80 feet, cased with pipe. MP top of casing, 1.2 feet above 1sd and 2,328.5 feet above msl. Records available 1961-62, 1967-68.

June June		1961	4.05 4.00	Sept.			5.71 6.78
July	21		4.99	Feb.	21,	1968	8.23
Aug.	9		5.09	May	15		7.21
Oct.			6.86	Aug.	7		5.86

A-35-24-9ca. (484700N1083530) J. Billmayer. Brilled irrigation water-table well in Flaxville Formation, diameter 16 inches, depth 52 feet, cased with corrugated culvert. MP at 1sd. Records available: 1966-68.

May Sept.		1966	29.81 29.82	Nov. May		1967 1968	29.56 34.12
June Aug.	23,	1967	38.23 29.86	Aug.	7		29.58

#### Water Water Date leve1 Date level

#### Cascade County

A-20-4-25ad. (472741N1110919) U. S. Geol. Survey. Drilled observation water-table well in alluvium, diameter 1 1/4 inches, depth 42 feet, cased with pipe, finished with continuous-slot drive point. MP top of pipe, 3.0 feet above 1sd. Records available: 1967-68.

Nov.	15,	1967	j22.76	Aug.	8,	1968	4.25
Feb.	21,	1968	2.59				
May	16		2.84				

#### j Well just completed.

A-20-4-25cd. (472704N1110957) Great Northern Railroad. Drilled unused water-table well in alluvium, diameter 6 inches, depth 53 feet, cased with pipe. MP top of pump base plate, 0.3 foot above 1sd. Records available: 1967-68.

Nov. 15, 1967 10.33 Aug. 8, 1968 10.09 May 16, 1968 9.98

#### Chouteau County

A-29-13-21aa2. (481542N1100235) U. S. Geol. Survey. Drilled unused artesian well in deposits of Pleistocene age, diameter 2 inches, depth 210 feet, cased to 167 feet. MP top of pipe, 0.4 foot above 1sd. Highest water level 15.78 below 1sd. May 17. 1949; lowest 26.53 below 1sd, Oct. 25, 1966. Records available: 1947-68.

Jan.	24,	1966	17.15	Apr.	17,	1967	16.94
Feb.	21		17.13	May	13		16.79
Mar.	31		16.98	June	21		24.60
Apr.	29		24.75	July	23		24.50
May	24		25.70	Aug.	31		25.32
June	23		17.76	Oct.	4		25.42
July	25		25.19	Nov.	29		17.04
Sept.	1		25.76	Jan.	11,	1968	16.96
Sept.	26		26.38	Feb.	28		16.65
Oct.	25		26.53	Apr.	10		16.47
Nov.	30		18.10	May	7		22.93
Dec.	19		17.78	June	5		22.81
Jan.	25,	1967	17.49	July	11		24.28
Feb.	15		16.26	Aug.	7		25,17
Mar.	21		17.08	Sept.	10		17.09

#### Custer County

A-2-49-4ac. (455731N1053750) Owner unknown. Drilled stock water-table well in alluvium, diameter 4 inches, depth 37.5 feet, cased with pipe. MP top of pipe, 2.4 feet above 1sd. Records available: 1967-68.

Aug.	14, 1967	13.52	Feb.	13, 1968	13.46
Oct.	30	14.55	May	6	13.30

A-7-47-13dd. (462120N1054700) Owner unknown. Drilled unused water-table well in Fort Union Formation, diameter 1 1/4 inches, depth 50.1 feet, cased with pipe. MP top of pipe, 1.1 feet above 1sd. Highest water level 31.10 below 1sd, Dec. 23, 1965; lowest 43.10 below 1sd, June 6, 1947. Records available: 1947-68.

Jan.	21, 1966	36.63	July 13, 1966	35.63
Feb.	17	36.70	Aug. 3	35.63
Mar.	16	36.82	Sept. 7	35.25
Apr.	6	37.28	Oct. 4	34.86
June	3	36.53	Nov. 3	34.97

	4-1-	4/ -13dd	CONCINCE				
Dec.	12,	1966	35.03	Feb.	28,	1968	36.50
Jan.	9,	1967	36.22	Mar.	21		36.83
Feb.	8		36.42	May	6		36.72
Aug.	18		34.92	May	16		36.72
Sept.	7		34.74	June	18		36.18
Oct.	10		34.51	July	9		36.18
Oct.	30		34.67	July	17		35.98

Date

Aug. 19

6

4 Sept.

Aug.

Water

level

35.21

34.78

34.90

Water

level

35.58

32,28

35.65

36,30

4-7-47-1244--Constant

Date

Nov.

Dec.

Jan.

Feb. 13

9, 1968

A-7-50-8ba. (462250N1053030) L. J. Rolf. Drilled unused artesian well in Hell Creek Formation, diameter 4 inches, depth 700 feet, cased with pipe. MP top of casing at 1sd and 2,944 feet above ms1. Highest water level 396.17 below 1sd, Feb. 13, 1968; lowest 402.54 below 1sd, Oct. 30, 1967. Records available: 1965-68.

Nov.	30,	1966	397.81	Feb.	13,	1968	396.17
June	20,	1967	396.36	May	6		396.46
Aug.	15		396.65	Aug.	19		396.54
Oct.	30		402.54				

A-8-51-23dd. (462545N1051800) Glenn Lowry. Drilled domestic and stock water-table well in terrace deposits of the Powder River, diameter 4 inches, depth 54.3 feet, cased with pipe. MP top of casing, 0.3 foot above 1sd. Highest water level 39.71 below 1sd. June 20, 1967; lowest 40.83 below 1sd, Sept. 27, 1966 and Aug. 19, 1968. Records available: 1965-68.

Sept.	27,	1966	40.83	Feb.	13,	1968	40.72
Mar.	27,	1967	39.99	May	6		40.28
June	20		39.71	Aug.	19		a40.83
Aug.	9		40.45	Sept.	18		40.05
Oct.	30		40.68				

a Well being pumped.

A-10-55-25dc. (464530N1044440) Bill Almy. Drilled stock artesian well in Fox Hills Sandstone and Hell Creek Formation, diameter 4 inches, depth 1,150 feet, steel casing. MP top of casing, 1.3 feet above 1sd. Elevation of 1sd 2,609 feet above msl. Highest water level 54.25 below 1sd, Oct. 4, 1962; lowest 62.04 below 1sd, Aug. 20, 1968. Records available: 1962 and 1966-68.

May Sept.		1966	58.82 (a)	Oct. Feb.		FIRE THE RES. 1997	(a)
Nov.	16		58.84	May	6		60.74
Mar.	22,	1967	61.15	Aug.	20		a62.04
Aug.	15		59.68				

a Well being pumped.

#### Daniels County

A-35-47-12cd. (484755N1053035) State of Montana. Dug unused water-table well in deposits of Pleistocene age, diameter 48 inches, depth 31 feet, cribbed with wood and stone. MP top of plank cover, 1.5 feet above 1sd. Highest water level 12.79 below 1sd, June 14, 1967; lowest 16.24 below 1sd, Jan. 2, 1964. Records available: 1947-68-

Feb.	28, 1966	14.88	June	7, 1966	14.17
Mar.	30	14.84	July	5	14.23
Apr.	13	14.76	Aug.	8	14.40
May	3	14.61	Sept.	6	14.58

Date		Water level	Date			Water level	
	A-35	-47-12c	dContinue	ed			
Oct. Nov. Dec. Jan. June July Aug.	25, 9 29 27, 14 17	1966 1967	14.79 14.73 15.62 14.94 12.79 12.96 13.43	Sept. Oct. Dec. May June July Aug.	12, 31 13 3, 13 15 27	1967 1968	13.77 13.84 (j) 14.97 13.64 13.68

i Ice in well.

#### Dawson County

A-15-58-26bb. (470150N1042040) Owner unknown.
Drilled unused water-table well in alluvium, diameter
8 inches, depth 18.8 feet, cased with pipe. MP top of
casing, 1.0 foot above 1sd. Records available: 1966-68.

May	24, 1966	5.05	Oct.	31,	1967	7.24
Nov.	17	7.94	May	8,	1968	6.32
June	21, 1967	2.82	Aug.	20		7.52
A110.	15	6.88				

A-18-56-25cb. (471730N1043135) Mrs. Bud Stevenson. Dug unused water-table well in terrace deposits, diameter 30 inches, depth 28 feet, cribbed with concrete. MP top of curb, 1.0 foot above 1sd. Highest water level 22.25 below 1sd, Jan. 4, 1966; lowest 26.37 below 1sd, Sept. 27, 1960. Records available: 1947-68.

#### Deer Lodge County

B-4-10-10dc2. (460632N1124935) Village of Opportunity. Driven water-table well in alluvium, diameter 4 inches, depth 20.0 feet, steel casing. MP bottom of 6-inch outlet pipe, 1.3 feet above 1sd and 4,980 feet above msl. Highest water level 3.50 below 1sd, June 7, 1967; lowest 4.72 below 1sd, March 9, 1967. Records available: 1960-68.

Mar. Sept.	_	1966	4.08 4.27	Sept. Dec.	14, 1	1967	3.80 4.05
Dec.	2		4.58	Mar.	8,	1968	4.07
Mar.	9.	1967	4.72	May	27		3.86
Tune	7		3.50	Aug.	20		3.64

B-4-10-36abl. (460342N1124704) Lewis Wertz. Drilled water-table well, diameter 6 inches, depth 73.0 feet, steel casing. MP top of casing, 2.0 feet above 1sd. Highest water level 40.47 below 1sd, Dec. 1, 1967; lowest 54.60 below 1sd, Aug. 1, 1961. Records available: 1960-68.

200			20.00	_		
1	B-4-	10-36ab	lContinued			
Mar. Sept. Dec. Mar. June	10, 8 2 9,	1966 1967	46.52 46.90 43.50 47.20 50.68	Sept. Dec. Mar. May Aug.	14, 1 8, 27 20	 43.92 40.47 44.10 47.40 44.88

Date

Water

level

Date

Water

B-6-9-21cdl. (4615<u>15</u>N11244<u>12</u>) Wallace Beck. Drilled domestic and stock artesian well in deposits of Tertiary age, diameter 6 inches, depth 150 feet, steel casing. MP top of well cap, 0.5 foot above 1sd. Highest water level 88.97 below 1sd, Aug. 20, 1968; lowest 92.28 below 1sd, Mar. 6, 1962. Records available: 1960-68.

Mar.	10.	1966	90.64	Dec.	1,	1967	90.14
Sept.			89.50	Mar.	8,	1968	90.50
Mar.		1967	90.58	May	27		90.81
June	7		90.60	Aug.	20		88.97
Sept.	14		90.00				

B-6-10-27cc. (461420N1125045) Mount Haggin Livestock Co. Drilled unused water-table well in deposits of Tertiary age, diameter 6 inches, depth 88.8 feet, steel casing. MP top of casing, 0.5 foot above 1sd. Highest water level 36.70 below 1sd, Sept. 7, 1965; lowest 65.62 below 1sd, May 27, 1968. Records available: 1960-68.

Mar.	10,	1966	57.85	Sept.	14,	1967	43.23
Sept.	8		43.96	Dec.	1		49.68
Dec.	2		47.63	Mar.	8,	1968	59.68
Mar.	9.	1967	58.54	May	27		65.62
Time	7		65.05	Aug.	20		51.65

#### Fallon County

A-3-60-2aa. (4603<u>1</u>2N10413<u>4</u>0) Roy Crawford. Drilled unused water-table well in alluvium, diameter 5 inches, cased with pipe. MP top of casing, 0.6 foot above lsd. Highest water level 15.92 below lsd, May 20, 1968; lowest 23.80 below lsd, Sept. 12, 1966. Records available: 1965-68.

May	23.	1966	17.00	Sept.	27,	1967	17.82
Sept.			23.80	Oct.	31		17.64
Nov.	16		19.17	Nov.	21		16.18
Mar.	20.	1967	17.53	May	6.	1968	17.20
June	20		16.06	May	20		15.92
Aug.	15		23.58	June	17		16.27
Aug.	23		16.30	Aug.	21		(j)

j Plugged at 17.95.

A-7-59-2cd. (462300N1041730) H. Beckman. Dug unused artesian well in Fox Hills Sandstone and Hell Creek Formation, diameter 30 inches, depth 27 feet. MP top of culvert, 1.15 feet above 1sd and 2,955 feet above msl. Highest water level 13.44 below 1sd, May 27, 1965; lowest 24.33 below 1sd, Nov. 21, 1962. Records available: 1962-68.

Nov.	17, 1966	20.15	May 7, 196	8 18.52
	21, 1967	20.03	June 18	17.24
	21	13.49	July 18	17.70
Aug.	15	17.36	Aug. 20	19.39
Oct.	31	18.02	Sept. 21	19.65
Reh	14. 1968	19.31	_	

A-10-58-18dc. (463654N1042750) Owner unknown. Drilled unused artesian well in Fox Hills Sandstone and Hell Creek Formation, diameter 4 inches, depth 166 feet. MP hole in pump base, 0.2 foot above 1sd and 2,782 feet above msl. Highest water level 137.62 below 1sd, Sept. 21, 1968; lowest 146.72 below 1sd, Mar. 21, 1967. Records available: 1962-68.

Mar.	15,	1966	145.68	Oct.	31,	1967	143.30	
July	6		146.58	Feb.	14,	1968	140.31	
Sept.	13		145.35	May	8		138.86	
Nov.	17		144.73	June	18		138.62	
Mar.	21,	1967	146.72	July	18		138.56	
June	21		145.13	Aug.	19		140.21	
Aug.	15		146.18	Sept.	21		137.62	

A-10-58-32dbl. (463430N1042645) Shell Oil Co. Drilled industrial artesian well in Fox Hills Sandstone and Hell Creek Formation, diameter 5 inches, depth 464 feet. MP top of casing, 0.3 foot above 1sd and 2,912.3 feet above msl. Highest water level 206.44 below 1sd, Sept. 21, 1968; lowest 217.17 below 1sd, Nov. 21, 1962. Records available: 1962-68.

Mar.	15,	1966	214.95	Oct.	31,	1967	207.81
July	6		215.98	Feb.	14,	1968	207.48
Sept.	13		214.03	May	7		206.82
Nov.	17		213.06	June	18		206.98
Mar.	21,	1967	211.59	July	18		207.06
June	21		208.68	Aug.	19		206.56
Aug.	15		208.11	Sept.	21		206.44

A-11-57-32bb. (464012N1043500) A. McNaney. Drilled domestic artesian well in Fox Hills Sandstone and Hell Creek Formation, diameter 4 inches to 160 feet, 2 inches from 160 feet to 980 feet, depth 980 feet. MP top of culvert at 1sd. Highest water level 37.5 below 1sd, Feb. 2, 1963; lowest 86.82 below 1sd, Sept. 13, 1966. Records available: 1963-68.

Jan.	17,	1966	g63.75	Aug.	15,	1967	69.54
Feb.	21		g64.83	Oct.	31		70.84
Mar.	15		g65.42	Feb.	14,	1968	72.03
July	6		68.86	May	7		72.13
Sept.	13		86.82	June	18		72.22
Nov.	17		71.92	July	18		73.35
Mar.	21,	1967	70.33	Aug.	20		b74.19
June	21		69.68	Sept.	21		74.51

g Measurements by Shell Oil Co. b Well pumped recently.

#### Fergus County

A-12-16-30de. (464600N1094500) U. S. Geol. Survey. Drilled observation water-table well in alluvium, diameter 1 1/4 inches, depth 16.1 feet, cased with pipe, finished with continuous-slot drive point. MP top of pipe 1.4 feet above 1sd. Records available: 1967-68.

Nov. 14, 1967 j10.17 Aug. 8, 1968 3.03 May 16, 1968 1.86

j Well just completed.

A-14-16-15bbl. (465852N1094115-1) J. J. Pospisil. Dug domestic water-table well in alluvium, diameter 4 feet, depth 39 feet, cribbed with concrete. MP top of curb at lsd. Highest water level 29.25 below 1sd, June 30, 1967; lowest 37.52 below 1sd, May 29, 1957. Records available: 1950-68.

#### A-14-16-15bbl--Continued

Jan.	27, 1966	34.02	Mar. 28, 1967	34.56
Feb.	24	34.45	Apr. 2	34.06
Mar.	22	32.25	June 6	30.16
Apr.	26	34.38	June 30	29.25
May	24	34.60	Aug. 1	30.19
June	22	34.62	Aug. 24	30.94
July	19	34.70	Sept. 28	31.56
Aug.	24	35.77	Nov. 1	31.76
Oct.	11	34.84	Dec. 1	32.21
Nov.	9	34.89	Jan. 15, 1968	33.20
Dec.	14	35.13	Measurements disc	continued
Mar.	3, 1967	35.01		

A-14-16-15bb2. (465852N1094115-2) U. S. Geol. Survey. Drilled observation water-table well in alluvium, diameter 1 1/4 inches, depth 42 feet, cased with pipe, finished with continuous-slot drive point. MP top of casing, 2.9 feet above 1sd. Records available: 1967-68. (Replaces A-14-16-15bbl.)

Nov.	14,	1967	j30.38	Apr.	24, 1968	32.58
Nov.	17		31.38	May	16	32.39
Nov.	29		31.36	July	15	31.14
Jan.	15,	1968	31.88	Aug.	8	31.34
Feb.	21		31.74	Aug.	28	31.47
Mar.	27		32.29	Sept.	27	31.53

j Well just completed.

A-16-17-19dc2. (470747N1091648) Spring Creek Hutterite Colony. Drilled unused artesian well in the Colorado Shale, diameter 4 inches, depth 255 feet, steel casing. MP top of casing, 0.7 foot above 1sd. Records available: 1966-68.

Aug. Sept. Sept. Oct. Nov. Bec. Jan. Mar. Mar. Apr. May June	2, 7 28 30 29 25 30, 6 30 30	1966	42.65 42.78 42.66 42.83 43.08 42.90 42.91 43.17 42.65 42.29 41.85	Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. Hay June July Aug.	31 30 21	1967 1968	40.82 41.01 41.06 41.40 41.58 41.58 41.69 41.73 41.67 41.63
June					31		
July Aug.	31		40.83	achr.	50		71.27

A-17-19-7bbl. (471517N1092130) The Milwaukee Railroad. Brilled unused artesian well in the Eagle Sandstone, diameter 8, 6, and 4 inches, depth 510 feet, steel casing to 366 feet 10 inches. MP top of 6-inch casing, 1.8 feet above 1sd. Records available: 1966-68.

July	26,	1966	72.13	Sept.	30,	1967	71.73
Aug.	26		72.24	Oct.	31		71.82
Sept.	30		72.53	Nov.	30		71.58
Oct.	28		72.63	Dec.	20		71.68
Dec.	8		72.50	Jan.	30,	1968	71.43
Jan.	9,	1967	72.58	Feb.	29		71.35
Jan.	30		72.38	Mar.	26		71.10
Feb.	27		72.33	Apr.	26		71.24
Mar.	30		71.67	May	30		71.15
Apr.	28		71.58	June	30		71.18
May	30		71.44	July	31		71.45
June	21		71.35	Aug.	31		71.66
July	28		71.63	Sept.	30		71.70
Aug.	25		72.04				

# Water Water Date level Date level

### Flathead County

B-27-20-17cc. (480544N1141045) U. S. Geol. Survey. Bored observation water-table well in alluvium, diameter 1 1/2 inches, depth 9.6 feet, cased with pipe. MP top of casing, 1.5 feet above 1sd and 2,896.6 feet above msl. Highest water level 1.82 below 1sd, Mar. 1, 1965; lowest 5.75 below 1sd, Aug. 8, 1949. Records available: 1928-44, 1946-49, 1963-68.

Jan.	5,	1966	3.85	June	8,	1967	3.84
Feb.	2		3.87	Aug.	31		4.99
Mar.	2		3.86	Nov.	27		4.47
Aug.	25		4.67	Mar.	4,	1968	3.70
Dec.	5		3.20	June	10		3.45
Mar.	1,	1967	2.65				

B-28-21-3ab. (481327N1141506) U. S. Geol. Survey. Driven observation water-table well in alluvium, diameter 3/4 inch, depth 9.4 feet, cased with pipe. MP top of casing, 1.2 feet above 1sd. Highest water level 0.70 above 1sd, June 11, 1964; lowest 6.01 below 1sd, Dec. 3, 1963. Records available: 1963-68.

Jan.	5.	1966	4.96	Mar.	1,	1967	5.80
Feb.	2		5.46	June	8		3.26
Mar.	2		5.89	Aug.	31		5.94
Apr.	6		5.44	Nov.	27		5.52
May	2		5.12	Mar.	4,	1968	5.87
Aug.	25		5.80	June	10		5.05
Dec.	5		5.40				

B-29-20-18aal. (481653M1141149) William Anderson. Bug unused water-table well in acolian deposits, diameter 56 inches, depth 18.0 feet, concrete casing. MP top of 3/4-inch pipe, 0.7 foot below 1sd. Highest water level 15.22 below 1sd, June 1, 1965; lowest 17.38 below 1sd, Apr. 1, 1964. Records available: 1963-68.

Jan.	5, 1966	15.88	Mar.	1,	1967	15.50
Feb.	2	15.98	June	8		15.38
Mar.	2	16.08	Aug.	31		15.92
Apr.	6	15.40	Nov.	27		16.25
Aug.	25	15.45	Mar.	4,	1968	15.90
Dec.	5	15.95	June	10		16.54

B-29-20-29bd. (481458N1141117) John Byrne. Drilled unused artesian well in glacial deposits, diameter 5 inches, depth 151.5 feet, cased with pipe. MP top of recorder floor, 2.5 feet above 1sd. Highest water level 20.86 below 1sd, June 25, 1965; lowest 27.02 below 1sd, Apr. 7, 1964. Records available: 1963-68.

Jan. Is 1700 mme.	23.72
Feb. 1 22.87 May 1	23.77
Mar. 1 23.35 May 16	24.29
Apr. 1 23.70 June 1	23.83
Aug. 25 23.63 June 27	21.99
Oct. 1 22.70 July 1	22.58
Nov. 7 22.84 July 21	23.40
Dec. 1 23.07 Nov. 27	23.68
Jan. 1, 1967 23.29 Mar. 4, 1968	24.97
Feb. 1 23.49 June 10	23.21
Mar. 1 23.62	

B-29-21-17ccl. (481617N1141824) James Murphy. Bug stock water-table well in aeolian deposits, diameter 56 inches, depth 6.8 feet, concrete casing. MP top of concrete, 2.0 feet above 1sd. Highest water level 1.81 below 1sd, Apr. 20, 1965; lowest 4.02 below 1sd, Nov. 20, 1964. Records available: 1964-68.

#### B-29-21-17ccl--Continued

Date

Water

level

Jan.	6, 1966	3.26	Mar.	1,	1967	2.37
Feb.	1	3.32	June	8		2.56
Mar.	3	3.34	Aug.	31		3.77
Apr.	1	2.00	Nov.	27		4.00
Aug.	25	3.50	Mar.	4,	1968	3.20
Dec.	1	3.40	June	10		3.31

Date

Water

level

B-29-21-20cc. (481519N1141825) Lutheran Cemetery. Drilled irrigation artesian well in glacial deposits, diameter 6 inches, depth 278 feet, cased with pipe. MP top of casing, 5.0 feet below lsd. Highest water level 100.00 below lsd, July 1, 1964 and June 28, 1965; lowest 102.07 below lsd, Apr. 1, 1964. Records available: 1963-68.

Jan.	5, 1966	101.10	June	8,	1967	100.18
Feb.	2	101.44	Aug.	31		101.80
Mar.	2	101.70	Nov.	27		101.65
Aug.	25	101.40	Mar.	4,	1968	102.05
Dec.	5	101.03	June	10		101.16
Mar	1 1967	101.67				

B-29-21-33cc. (481340N1141729) U. S. Geol. Survey. Driven observation well in alluvium, diameter 3/4 inch, depth 9.4 feet, cased with pipe. MP top of casing, 1.2 feet above 1sd. Highest water level 0.62 above 1sd, June 10, 1964; lowest 8.56 below 1sd, Sept. 28, 1965. Records available: 1963-68.

Jan.	5, 1966		Mar.		1967	6.82
Feb.	2	6.93	June	8		3.85
APT.	6	6.50	Aug.	31		7.00
May	2	6.13	NOV.	27		6.97
Aug.	25	6.87	Mar.	4,	1968	(t)
Dec.	5	6.70				

### j Plugged.

B-29-22-8dd. (481702N1142500) Sparks School. Brilled unused water-table well in glacial deposits, diameter 7 inches, depth 70 feet, cased with pipe. MP top of casing, 1.0 foot above lsd. Highest water level 51.52 below lsd, July 8, 1965; lowest 57.97 below lsd, Mar. 3, 1965. Records available: 1964-68.

					1067	55.75
Jan.	1, 1966	55.08	Mar.	10	1967	
Feb.	1	55.42	June	8		54.47
Mar.	ī	55.83	Aug.	31		54.28
Mar.	28	56.20	Nov.	27		55.62
Apr.	7	56.04	Mar.	4.	1968	55.28
Aug.	25	54.11	June	10		56.28
Dec.	5	55.48				

### Gallatin County

A-1-4-25dc. (454809N1110954) U. S. Geol. Survey. Drilled observation water-table well in alluvium, diameter 6 inches, depth 101 feet, cased with pipe. MP floor of recorder shelter, 3.0 feet above 1sd. Highest water level 5.92 below 1sd, Aug. 6, 1952; lowest 15.90 below 1sd, Apr. 16, 1964. Records available: 1951-54 and 1963-68.

Jan.	5, 1966	12.09	July 2, 196	6 7.62
Feb.	1	13.46	Sept. 3	8.57
Mar.	4	14.76	Oct. 3	9.25
Apr.	2	15.39	Dec. 14	12.43
May	4	15.09	Feb. 10, 196	7 10.36
hine	11	9.75	Apr. 6	16.05

Date	water level	Date	Water level	Date	Water level	Date	Water level
A-1-	4-25dcContinued			D-2-5-22cc	Continued		
June 24, Aug. 5 Oct. 6 Dec. 8	1967 10.03 7.98 7.89 11.21	Mar. 1, 1968 Apr. 10 June 4 Aug. 26	13.25 14.66 11.06 7.26	Aug. 5, 1967 Oct. 6 Dec. 8 Mar. 1, 1968	9.35 9.20 9.52 8.14	Apr. 10, 1968 June 4 Aug. 26	7.78 9.11 9.92

D-1-4-25aa. (454311N110951) U. S. Geol. Survey. Brilled observation water-table well in alluvium, diameter 6 inches, depth 50.5 feet, cased with pipe. MP top of pipe, 0.6 foot above 1sd. Highest water level 2.6 below 1sd, July 2, 1966; lowest 19.89 below 1sd, Apr. 6, 1967. Records available: 1953-58 and 1963-68.

Jan.	5,	1966	14.5	Feb.	10.	1967	16.92
Feb.	1		15.3	Apr.	6		19.89
Mar.	4		16.9	June	24		9.69
Apr.	2		17.9	Aug.	5		3.54
May	4		17.1	Oct.	6		9.51
June	11		5.5	Dec.	8		11.29
July	2		2.6	Mar.	1,	1968	11.78
Sept.	3		4.9	Apr.	10		10.61
Oct.	3		9.41	June	. 4		13.34
Dec.	9		13.72	Aug.	26		6.15

D-2-4-13cc. (453937N1111103) H. Nicely. Dug observation water-table well in alluvium, diameter 12 inches, depth 11 feet, cased with tile. MP top of casing, 0.5 foot above 1sd. Highest water level 2.54 below 1sd, June 27, 1952; lowest 10.37 below 1sd, Feb. 28, 1963. Records available: 1947-68.

Jan. Jan. Feb. Feb. Mar. Apr. May May Jun July Sept. Oct. Nov. Dec.	3, 5 1 4 23 4 28 2 4 24 20 26 3 5 25 21 9	1966	8.36 8.60 8.80 8.71 8.93 8.9 9.07 9.1 10.0 8.00 5.61 5.27 5.8 6.48 6.43 7.63 8.48	Dec. Jan. Feb. Apr. May May June June Aug. Oct. Dec. Har. Apr. June Aug. Sept.	28, 29, 10 6 3 27 14 24 27 5 6 8 1, 10 4 26 4		8.59 8.89 9.11 8.24 9.25 7.98 5.62 5.39 5.22 3.88 4.25 8.27 8.36 6.80 3.46 4.29
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D-2-5-22cc. (454833N1110600) U. S. Geol. Survey. Drilled observation artesian well in alluvial fan deposits, diameter 6 inches, depth 165.0 feet, cased with pipe. Perforated from 90 to 165 feet. MP top of pipe, 0.9 foot above 1sd and 4,993 feet above msl. Highest water level 6.35 below 1sd, June 20, 1953; lowest 13.4 below 1sd, Mar. 30, 1958. Records available: 1953-58 and 1963-68.

Jan.	5,	1966	11.6	Sept.	3,	1966	10.6
Feb.	1		11.3	Oct.	3		10.11
Mar.	4		11.4	Dec	9		10.96
Apr.	2		9.6	Dec.	14		10.96
May	4		10.7	Feb.	10,	1967	10.89
June	11		9.0	Apr.	6		8.68
July	2		9.1	June	24		9.99

D-3-4-11bd. (453537N1111204) Huntley Hardgrowe. Dug domestic water-table well in alluvium, diameter 12 inches, depth 18.5 feet, cased with tile. MP top of casing, at 1sd and 4,922 feet above msl. Highest water level 5.26 below 1sd, June 24, 1967; lowest 17.63 below 1sd, Dec. 4, 1966. Records available: 1952-54 and 1963-68.

Jan.	5,	1966	15.3	Apr.	6,	1967	15.37
Feb.	1		15.7	June	24		5.26
Mar.	4		16.4	Aug.	5		9.27
Apr.	2		14.7	Oct.	6		8.78
May	4		16.7	Dec.	8		13.90
June	11		7.4	Apr.	1,	1968	13.56
July	2		5.8	May	10		12.40
Sept.	3		13.0	June	4		9.91
Oct.	3		13.19	Aug.	26		6.57
Dec.	4		17.63				

### Garfield County

A-14-30-11bd. (465936N1075303) Bud Shaw. Dug unused water-table well in terrace deposits, diameter 5 feet, depth 10.5 feet, cribbed with rock. MP top of rock curb, 0.5 foot below 1sd. Highest water level 0.73 below 1sd, May 13, 1965; lowest 9.24 below 1sd, Mov. 19, 1966. Records available: 1965-68.

May	26,	1966	7.50	Oct.	10,	1967	9.17
Sept.	14		8.21	Feb.	19,	1968	(i)
Nov.			9.24	May	13		7.83
May	9,	1967	9.18	July	17		5.33
June	6		8.54	Aug.	27		7.87
Aug.	21		8.40	Sept.	26		6.11

j Ice in well.

A-16-40-18aa (470845M1064200) Owner unknown. Bug unused water-table well in alluvium, diameter 42 inches, depth 15.2 feet, cribbed with rock. MP top of plank cover, 0.3 foot above lsd. Highest water level 4.13 below lsd, May 14, 1965; lowest 7.90 below lsd, Aug. 28, 1967. Records available: 1965-68. (Formerly A-16-40-17ca.)

Sept. Nov. Mar.	24, 13 18 22,	1965 1966 1967	4.13 6.04 7.58 7.72 5.86	Aug. Nov. Feb. May Aug.	1 19, 13	7.90 7.19 5.86 5.36 7.47
June	22		4.92			

A-18-40-ldb. (472046N1063346) Garfield County School Board. Drilled unused artesian well in Fort Union Formation, diameter 4 inches, depth 158.5 feet, cased with steel pipe, finished with 30 feet of perforated pipe. MP top of casing, 0.9 foot above 1sd. Highest water level 33.56 below 1sd, May 16, 1965; lowest 34.07 below 1sd, Aug. 5, 1968. Records available: 1965-68.

Date	Water level	Date	Water level	Water Date level Date
A-18-40-	ldbContinued			B-33-6-12aal. (483 <u>8</u> 00M1121 <u>9</u> 00-1) Survey. Drilled artesian observation v
May 24, 196 Sept. 13	6 33.85 33.69	Aug. 28, 1967 Nov. 1	34.01 33.80	Sandstone, diameter 4 inches, depth 400 with pipe. MP top of pipe, 2.42 feet

33.70

33.79

34.07

### Glacier County

33.96

33.80

33,67

Nov. 18

June 22

Mar. 22, 1967

B-32-11-3ad. (483345N1130045) U. S. Geol. Survey. Drilled water-table observation well in glacial drift of Pleistocene age, diameter 1 1/4 inches, depth 12.1 feet, cased with pipe, finished with continuous-slot drive point. MP top of pipe, 3.3 feet above 1sd. Records available: 1968.

Feb. 13, 1968

May 13 Aug. 5

Jan.	30, 1968	6.07	May	24, 1968	6.09
Feb.	19	6.92	July	25	7.40
Feb.	27	6.68	Aug.	7	7.52
Mar.	27	6.83	Aug.	12	7.54
Apr.	24	6.91	Aug.	30	5.59
May	15	7.06	Sept.	17	7.32

B-32-11-3dd. (483330N1130038) Bureau of Indian Affairs. Dug unused water-table well in deposits of Pleistocene age, diameter 24 inches, depth 9 feet, corrugated culvert easing. MP top of concrete curb, 0.3 foot above 1sd. Highest water level +0.10, May 31, 1967; lowest 3.69 below 1sd, Sept. 12, 1960. Records available: 1947-68.

Jan.	27,	1966	3.09	June	16,	1967	0.93
Feb.	23		1.94	July	26		2.61
Mar.	29		1.00	Aug.	14		3.10
Apr.	27		1.33	Sept.	13		3.50
May	16		1.54	Nov.	2		3.17
June	21		2.37	Nov.	28		3.14
July	7		2.35	Dec.	15		3.19
Aug.	30		2.98	Dec.	27		3.14
Sept.	29		3.43	Jan.	30.	1968	2.09
Nov.	27		3.09	Feb.	27		1.87
Dec.	21		2.31	Mar.	27		1.56
Jan.	11,	1967	2.91	Apr.	24		1.93
Jan.	19		1.73	May	24		0.88
Feb.	13		2.42	June	19		2.18
Mar.	28		1.66	July	15		3.05
Apr.	25		0.11	July	25		3.09
Apr.	26		0.17	Aug.	7		3.44
May	5		0.03	Aug.	12		3.42
May	15		0.44	Aug.	30		3.36
May	31		+0.10	Sept.	17		3.32
East A	- 1			Sebas			

B-33-6-6ab. (483859N1122618) Blackfeet Tribe. Drilled unused artesian well in Virgelle Sandstone, diameter 6 inches, depth 89 feet, cased with pipe. MP top of pipe, 1.6 feet above 1sd and 3,905 feet above ms1. Highest water level 6.10 below 1sd, May 31, 1967; lowest 11.42 below 1sd, May 15, 1968. Records available: 1956-57 and 1966-68.

Nov. Feb. May	10,	8.39 9.36 6.10	Nov. Feb. May	20,	9.99 10.90 11.42
A110.		9.66	Aug.	7	6.18

1) U. S. Geol. n well in Virgelle 400 feet, cased et above 1sd and 3,756 feet above msl. Records available: 1965-68.

Water

leve1

Aug.	10.	1965	53.90	June	15.	1967	55.75
Aug.	31		54.98	July	26	-	55.79
Sept.	23		52.00	Aug.	29		55.40
Oct.	18		52.04	Oct.	18		54.76
Jan.	12,	1966	55.67	Nov.	2		55.06
Aug.	18	2,000	56.04	Nov.	28		54.91
_	30		55.95	Dec.	27		54.66
Aug.	-		55.80	Jan.	29.	1968	54.71
Sept.	28		and the second second	Feb.	20	1700	54.56
Oct.	27		55.76				
NOA.	22		55.80	Feb.	27		55.08
Dec.	20		56.00	Apr.	24		56.58
Jan.	19,	1967	56.96	May	15		54.68
Feb.	14		55.52	May	24		54.35
Mar.	28		56.04	July	26		54.47
Apr.	26		56.12	Aug.	8		54.56
May	16		55.99	Sept.	25		54.56

B-33-6-12aa2. (483800N1121900-2) U. S. Geol. Survey. Drilled artesian observation well in Two Medicine Formation, diameter 4 inches, depth 250 feet, cased with pipe. MP top of pipe, 2.17 feet above 1sd and 3,755 feet above msl. Records available: 1965-68.

Aug. Aug. Sept. Sept.	31 1 23	1965	53.79 52.31 52.38 51.73	June July Aug. Oct.	15, 26 29 18	1967	48.28 45.33 43.15 40.59 40.60
Oct. Jan.	8 12,	1966	51.67 55.24	Nov.	28		39.60
Aug.	18 30		52.50 51.81	Dec. Jan.	27 29,	1968	39.20 40.11
Sept. Oct.	28 27		49.35 49.05	Feb.	20 27		<b>40.</b> 30 <b>40.</b> 74
Nov. Dec.	22		48.45 48.70	Mar. Apr.	27 24		38.33 40.83
Jan. Feb.	19,	1967	48.88 48.69	May July	24 26		40.10 38.74
Mar.	28		49.12	Aug. Sept.	8		39.01 38.64
Apr. May	26 16		50.33 49.55	sehr.	دے		20:04

B-33-6-16aa. (483726N1122322) Oil Field Lumber Co. Dug domestic and stock water-table well in deposits of Pleistocene age, diameter 24 inches, depth 18 feet, cased with wood. MP top of casing at 1sd and 3,855 feet above ms1. Highest water level 10.65 below 1sd, Aug. 7, 1968; lowest 13.89 below 1sd, May 30, 1957. Records available: 1957 and 1966-68.

Nov.	2.	1966	12.69	Nov.	20,	1967	12.08
		1967	13.58	Feb.	20,	1968	12.98
May			11.63	May	15		13.67
Aug.			11.12	Aug.	7		10.65

B-33-7-9cd. (483736N1123136) Don LaGrand. Bug unused water-table well in deposits of Pleistocene age, diameter 72 inches, depth 12.7 feet, cased with wood.
MP top of casing at 1sd and 3,993 feet above ms1. Highest water level 7.11 below 1sd, Aug. 30, 1967; lowest 10.02 below 1sd, Nov. 13, 1957. Records available: 1956-57 and 1966-68.

Date			Water level		Date		
	B-33	-7-9cd-	-Continued				
Nov. Feb. May Aug.		1966 1967	9.06 9.39 5.09 7.11	Nov. Feb. May Aug.		1967 1968	7.66 8.14 8.20 8.20

### Golden Valley County

A-6-20-5da. (461800N1091510) U. S. Geol. Survey. Drilled observation water-table well in alluvium, diameter 1 1/4 inches, depth 19 feet, cased with pipe to 17 feet, finished with continuous-slot drive point. MP top of casing, 1.4 feet above 1sd. Records available: 1967-68.

Nov.	13,	1967	j11.17	June	13,	1968	6.26
Feb.	21,	1968	7.93	Aug.	8		6.28
May	16		7.26				

j Well just completed.

A-6-22-2ac. (461745N1084844) U. S. Geol. Survey. Drilled observation water-table well in alluvium, diameter 1 1/4 inches, depth 35 feet, cased with pipe to 33.0 feet, finished with continuous-slot drive point. MP top of casing, 2.7 feet above 1sd. Records available: 1967-68.

Nov.	13,	1967	j33.55	June	13,	1968	23.39
Feb.	21,	1968	27.20	Aug.	8		19.97
May	16		27.71				

j Well just completed.

### Hill County

A-32-15-17dd. (4831<u>3</u>5N10948<u>0</u>6) U. S. Geol. Survey. Drilled unused artesian well in deposits of Pleistocene age, diameter 2 inches, depth 180 feet, cased to 152 feet. MP top of casing, 0.2 foot above 1sd. Highest water level 39.58 below 1sd, Sept. 10, 1968, lowest 52.56 below 1sd, June 18, 1947. Records available: 1947-68.

Jan.	25,	1966	40.40	May	13,	1967	40.02
Feb.	21		40.30	May	17		40.03
Mar.	31		40.23	June	21		40.11
Apr.	29		40.20	July	23		40.30
May	24		40.28	Aug.	30		40.73
June	23		40.21	Oct.	5		40.77
July	26		40.32	Nov.	29		40.75
Aug.	31		40.63	Jan.	11,	1968	40.72
Sept.	27		40.80	Feb.	28		40.85
Oct.	25		40.83	Apr.	10		40.35
Nov.	30		40.80	May	7		40.33
Dec.	19		40.70	June	5		40.32
Jan.	25,	1967	40.59	July	11		40.31
Feb.	15		40.29	Aug.	7		40.54
Mar.	22		40,40		10		39.58
Apr.	25		40.29				

A-32-17-3db. (483339N1093015) D. Sterrett. Drilled stock water-table well in Judith River Formation, diameter 6 inches, depth 75.5 feet, steel casing. MP top of casing, 1.4 feet above 1sd. Records available: 1968.

May 15, 1968 20.48 Aug. 7, 1968 19.66

### Judith Basin County

Date

level

WALGE

level.

Date

A-16-12-7da2. (470900N1101400) M. A. Groskopf. Dug unused water-table well in alluvium, diameter 24 inches, depth 9.5 feet, cribbed with wood. MP top of cover, 0.1 foot above 1sd and 4,304.9 feet above msl. Highest water level 4.23 below 1sd, June 21, 1965; lowest 9.46 below 1sd, Sept. 14, 1966. Records available: 1964-68.

Jan.	11,	1966	6.50	Jan.	15,	1968	6.37
Sept.	14		9.46	Feb.	21		5.51
Dec.	5		7.40	Apr.	25		5.35
	27.	1967	6.31	May	16		5.75
May	2		5.56	July	17		5.54
Aug.	8		7.30	Aug.	5		7.08
Sept.	22		7.76	Aug.	8		7.14
Now.	1		7.08	Sept.	25		6.99

A-17-10-5cc. (471530N1102900) U. S. Geol. Survey. Drilled observation well in alluvium, diameter 1 1/4 inches, depth 10 feet, cased with pipe, finished with continuous-slot drive point. MP top of pipe, 1.8 feet above 1sd. Records available: 1967-68.

Nov.	14,	1967	j4.20	Aug.	8, 1968	6.75
May	16,	1968	6.61			

j Well just completed.

### Lake County

B-20-20-26cc. (472733N1140656) State of Montana. Drilled unused artesian well in deposits of Pleistocene age, diameter 6 inches, depth unknown, cased with pipe. MP top of casing, 1.4 feet above lsd. Records available 1967-68.

May	16, 1967	167.20	May	28, 1968	160.60
Moor.		148,20	Aug.	22	156.22

# Lewis and Clark County

B-15-4-34bb. (470100N1120557) U. S. Geol. Survey. Drilled observation water-table well in gravel of Pleistocene age, diameter 1 1/4 inches, depth 8.4 feet, cased with pipe, finished with continuous-slot drive point. MP top of pipe, 2.2 feet above lsd. Records available: 1967-68.

Nov.	21,	1967	j1.44	Aug.	7,	1968	+0.27
May	15,	1968	+0.96				

j Well just completed.

B-20-6-17dd. (472900N1122308) U. S. Geol. Survey. Drilled observation water-table well in alluvium, diameter 1 1/4 inches, depth 13.3 feet, cased with pipe, finished with continuous-slot drive point. MP top of pipe, 2.2 feet above 1sd. Records available: 1967-68.

Nov.	21,	1967	j6.46	Aug.	7, 1968	5.37
May	15.	1968	7.68			

j Well just completed.

# Lincoln County

B-37-27-28cb. (485628N1150743) U. S. Geol. Survey. Drilled observation well in deposits of Pleistocene age, diameter 6 inches, depth 340 feet, cased with pipe. MP floor of recorder shelter, 3.0 feet above 1sd. Records available: 1967-68.

Da	te		level	D	ate		level	Da	te		level	Da	ate		level
	B-37	-27-28	cbContinu	ed				(	]-4-	6-27ba	Continued				
July Aug. Sept. Oct. Oct. Nov. Nov. Dec.	17	1967	j111.06 99.14 99.43 99.87 100.10 100.32 100.58 100.97	Dec. Jan. Feb. Mar. Apr. May	21, 23, 2 5 8 2 28	1967 1968	101.26 101.90 101.93 102.69 103.37 103.87 104.37	Feb. Apr. June Aug. Oct. Dec. Feb. Apr.	7, 7 6 1 6 8 6,	1966 1967	56.88 59.64 61.06 54.61 49.28 50.60 55.20 59.99	June Aug. Oct. Dec. Feb. Apr. June Aug.	1 2 4	1967 1968	60.25 58.06 48.83 48.29 52.99 56.15 57.42 44.04

j Well just completed.

B-37-27-33dc. (485513N1150703) Iowa Flats School. Drilled unused artesian well in deposits of Pleistocene age, diameter 6 inches, depth 300 feet, cased with pipe. MP top of recorder floor, 3.0 feet above 1sd. Records available: 1966-68.

Oct.	18,	1966	52.19	Sept.	23,	1967	55.27
Nov.	9		54.75	Oct.	7		54.73
Dec.	7		57.58	Oct.	17		54.80
Jan.	10,	1967	59.94	Nov.	6		56.51
Feb.	7		60.97	Nov.	28		58.45
Mar.	6		61.62	Jan.	23,	1968	61.01
Apr.	4		61.94	Mar.	5		61.87
May	4		62.75	Apr.	8		62.91
June	6		60.37	May	2		63.71
July	8		61.13	May	28		63.39
Aug.	5		56.48	July	2		59.85
Sept.	2		55.05				

#### McCone County

A-19-48-11bc. (472515N1053420) City of Circle. Drilled unused water-table well in alluvium, diameter 12 inches, depth 53 feet, cased with steel. MP top of casing, 2.2 feet above 1sd. Highest water level 27.25 below 1sd, Oct. 11, 1954; lowest 32.42 below 1sd, Jan. 22, 1962. Records available: 1954-68.

Jan.	3,	1966	30.19	Apr.	25,	1967	30.54
Feb.	1		31.25	May	23		30.51
Mar.	4		31.30	June	27		30.79
Apr.	5		30.79	July	24		31.06
Apr.	12		30.84	Aug.	30		31.34
May	5		30.50	Oct.	3		31.40
June	8		30.61	Nov.	6		31.96
July	6		30.84	Dec.	12		31.51
Aug.	23		31.18	Jan.	3,	1968	31.43
Sept.	13		31.27	Feb.	6		31.28
Oct.	4		31.20	Mar.	2		31.13
Nov.	9		30.90	Apr.	23		31.11
Dec.	21		30.61	May	21		31.17
Jan.	24.	1967	30.46	June	19		31.15
Feb.	7		30.63	July	17		31.16
Mar.	1		30.37	Sept.	17		31.34
Apr.	4		30.36	-			

# Madison County

C-4-6-27ba. (452758N1121944) U. S. Bureau of Reclamation. Drilled observation water-table well in terrace deposits of Tertiary age, diameter 1 1/4 inches, depth 131.5 feet, cased with pipe. MP top of pipe, 1.7 feet above 1sd and 4,781 feet above msl. Highest water level 44.04 below 1sd, Aug. 30, 1968, lowest 68.2 below 1sd, Apr. 10, 1963. Records available: 1962-68.

C-5-6-17ca. (452400N1122226) U. S. Bureau of Reclamation. Drilled water-table observation well in terrace deposits of Tertiary age, diameter 1 1/4 inches, depth 310 feet. MP top of pipe, 1.8 feet above 1sd and 5,082 feet above msl. Highest water level 77.5 below 1sd, Dec. 1962; lowest 234.9 below 1sd, Sept. 1964. Records available: 1962-68.

Feb.	7, 1966	233.40	June	23,	1967	233.74
Apr.	7	233.82	Aug.	1		233.34
June	6	233.78	Oct.	2		232.94
Aug.	1	233.77	Dec.	4		233.80
Oct.	6	233.57	Feb.	5.	1968	(j)
Dec.	5	232.97	Apr.	8		232,62
Feb.	6. 1967	233.52	June	5		232.34
Apr	3	233 54	•			

j Plugged.

### Meagher County

A-9-6-24da. (4631<u>1</u>0N11054<u>2</u>0) Clifford Shearer. Drilled artesian irrigation well in sedimentary rocks of Tertiary age, diameter 12 inches, depth 226 feet, steel casing, 1,000+ gpm yield. MP top of casing, 1.0 foot above 1sd. Records available: 1961 and 1968.

Sept. 11, 1961 66.11 Aug. 26, 1968 48.83 June 13, 1968 55.0

# Missoula County

B-13-19-22bcl. (4652<u>2</u>5N11400<u>5</u>2) Woolworth's. Drilled water-table well in alluvium, diameter 6 inches, depth 84 feet, cased with pipe. MP top of casing, 10.0 feet below 1sd and 3,179 feet above msl. Highest water level 36.05 below 1sd, June 20, 1964; lowest 54.00 below 1sd, May 20, 1967. Records available: 1962-68.

Jan.	19, 1966	49.75	May	20,	1967	54.00
Feb.	21	50.90	June	6		39.65
Mar.	24	50.55	Sept.	12		44.94
Apr.	21	47.95	Nov.	29		49.08
May	20	44.00	Mar.	6,	1968	50.00
Sept.	6	44.97	May	28		41.82
Dec.	1	49.90	Aug.	21		(j)
Mar.	7, 1967	52.47				

### j Plugged.

B-13-19-29dal. (465113N1140104) Montana Power Co. Drilled unused water-table well in deposits of Pleistocene age, diameter 10 inches, depth 84.4 feet, cased with pipe. MP top of pit curb at 1sd and 3,182.9 feet above msl. Highest water level 37.42 below 1sd, June 29, 1959; lowest 52.00 below 1sd, Mar. 2, 1964. Records available: 1958-68.

Da		Water level	Date	Water
1	B-13-19-29	dalContir	lued	level
Mar. Sept. Dec. Mar. June	7, 1966 6 1 7, 1967	48.93 42.30 47.46 49.88 41.45	Sept. 12, 1967 Nov. 29 Mar. 6, 1968 May 28 Aug. 21	42.44 46.75 48.18 43.65 41.00

B-13-19-30bd. (465132N1140301) Montana State Forest Nursery. Drilled irrigation water-table well in 121.5 feet, cased with pipe. MP hole in casing, 0.2 foot above 1sd and 3,157.9 feet above ms1. Highest level 21.05 below 1sd, July 3, 1961; lowest 31.22 below 1sd, Mar. 23, 1961. Records available: 1961-68.

Mar.	7.	1966					1301-68
Sept. Dec. Mar. June	6	1967	30.15 24.40 29.08 30.70 22.60	Sept. Nov. Mar. May Aug.	29	1967 1968	24.10 28.60 29.60 24.36 23.07

B-13-20-14ac. (465320N1140520) Bonneville Power Adm. Drilled water-table well in terrace deposits, diameter 6 inches, depth 35.5 feet, cased with pipe. MP top of casing, 1.3 feet above 1sd and 3,146.3 feet above ms1. Highest water level 8.68 below 1sd, July 1, Records available: 1959-68.

		•	
Jan. 19, 196 Feb. 21 Mar. 24 Apr. 21 May 20 June 30 July 23 Aug. 27 Sept. 6 Sept. 27 Oct. 20 Nov. 19 Dec. 21 Jan. 26, 1967 Feb. 20 Mar. 27 Apr. 24 May 25 June 26	19.12 18.80 17.94 15.34 12.22 12.91 11.60 11.54 12.71 14.72 16.74 18.15 19.06 18.97 18.41 20.18 A	July 28, 1967 Aug. 28 Sept. 25 Oct. 24 Nov. 27 Nov. 29 Dec. 26 Jan. 25, 1968 Feb. 26 Mar. 6 Mar. 6 Mar. 26 Apr. 24 4ay 27 4ay 28 June 24 fuly 24 ug. 21 ug. 27 ept. 25	11.93 12.57 13.97 14.53 16.86 16.99 18.30 19.24 19.10 19.43 19.82 20.11 14.91 14.68 10.30 12.14 11.09 11.30 11.52

B-14-21-24db. (465726N1141134) John Hartwig. Dug and driven observation water-table well in alluvium, diameter 36 inches to 3/4-inch pipe, depth 33.4 feet. Mr top of casing, 0.9 foot above lad. Highest water level 7.48 below lad, July 30, 1959; lowest 30.24 below lad, Mar. 1, 1962. Records available: 1958-68.

Mar.	•				ore:	1928-	68.
Sept. Dec. Mar. June	6	1966 1967	28.95 16.10 24.28 28.33 24.40	Sept. Nov. May May Aug.	29	1967 1968	15.08 23.10 24.66 22.40 15.47

# Petroleum County

Date

Water

level

Water

level

Date

A-14-27-6cb. (4700]5N1082110) Kenneth Cole. Drilled irrigation water-table well in alluvium, diameter 5 inches, depth 40 feet, steel casing to 30 water level 7.41 below 1sd, Aug. 5, 1968; lowest 9.42 below 1sd, Sept. 14, 1966. Records available: 1965-68.

May	26	1966	_			1302-68
Sept.	14	2300	8.34 9.42	Aug. Aug.	1967 1968	8.67 7.41

# Phillips County

A-31-34-8ca. (482732N1072012) W. D. Miller. Drilled unused water-table well in alluvium, diameter 5 inches, depth 15 feet, cased with steel pipe. MP top of casing, 1.7 feet above lsd. Highest water level below lsd, July 18, 1963; lowest 6.90 below lsd, March 11, 1953. Records available: 1947-68.

	11 15 19 11 9 11 5 21 12 17 22	. 1966 1967	5.14 5.38 6.22 5.79 5.62 5.21 4.62 4.48 3.84 4.23 4.57 5.00 5.29 5.80 5.47 5.18	June 7, 1967 July 12 Aug. 8 Sept. 7 Sept. 27 Oct. 24 Nov. 22 Dec. 21 Jan. 12, 1968 Feb. 9 Mar. 15 Apr. 17 May 22 June 17 Aug. 22	5.11 4.67 4.54 4.46 4.41 4.54 4.53 5.15 5.44 5.77 5.92 6.15 6.08 4.75
		1967		Apr. 17	
				, 1,00	
				Ton to	
			1000		4.54
July					
June	-				
May					
Apr.					
Mar.	15				
Feb.		2,000		June 7, 1967	_
Jan.	21	1966			

# Pondera County

B=30-5-33dd. (481839N1121515) Town of Valier. Drilled public supply artesian well in Virgelle Sandstone, diameter 7 inches, depth 122 feet, steel casing. MP hole in pump base, 0.6 foot above lad and 3,820 feet above msl. Records available: 1968.

May 16, 1968 45.61 Aug. 7, 1968 47.38

B-30-7-32bb. (481900N1123200) U. S. Geol. Survey. Drilled observation water-table well in alluvium, diameter 1 1/4 inches, depth 10.6 feet, cased with pipe, finished with continuous-slot drive point. 1967-68.

Nov. May	21, 15,	1967 1968	j6.50 5.23	Aug.	7, 1968	5.36
	_					

j Well just completed.

# Powder River County

D-3-46-17ad. (453426N1060403) U. S. Forest Service. Drilled unused stock artesian well in Fort Union Formation, diameter 4 inches, depth 144.8 feet, cased with water level 39.66 below 1sd, May 6, 1968; lowest 48.07 below 1sd, May 5, 1965. Records available: 1965-68.

Dat	te		Water level	D	ate		Water level
1	)-3-4	46-17ad	Continue	d			
May	23,	1966	47.13	Oct.	30.	1967	45.36
Sept.	12		46.31	Feb.		1968	45.32
Nov.	16		47.20	Apr.	23		39.97
Mar.	20,	1967	46.49	May	6		39.66
June	20		46.15	May	21		39.68
July	27		45.85	June	18		39.91
Aug.	14		46.17	July	12		40.03
Aug.	24		41.72	Aug.	28		40.70
Oct.	18		45.47				

D-4-50-20ba. (452830N1053500) E. Barnhart. Drilled unused artesian well in Fort Union Formation, diameter 4 inches, depth 131.9 feet, cased with pipe. MP top of casing, 1.4 feet above 1sd. Highest water level 52.54 below 1sd, Sept. 12, 1966; lowest 63.58 below 1sd, May 3, 1965. Records available: 1965-68.

May	23,	1966	62.70	Mar.	20,	1967	62.86
Sept.	12		52.54	May	6,	1968	62.09
Moor.	16		61.02				

D-4-51-34ac. (452630N1052410) Powder River County. Drilled irrigation water-table well in alluvium, diameter 4 inches, depth unknown. MP top of casing, 0.3 foot above 1sd. Highest water level 11.46 below 1sd, Aug. 25, 1967; lowest 12.71 below 1sd, Nov. 16, 1966. Records available: 1965-68.

May	23,	1966	12.56	Oct.	5,	1967	12.38
Sapt.	12		12.58	Dec.	1		12.59
Hov.	16		12.71	Mar.	14,	1968	12.12
Mar.	20,	1967	12.44	Apr.	10		12.06
June	20		11.98	May	6		12.04
July	27		12.25	June	17		11.69
Aug.	14		12.44	July	17		11.88
Aug.	25		11.46	Aug.	28		12.13
Sept.	6		12.48				

D-5-50-26dal. (452150N1053040) Joe McDowell. Drilled irrigation water-table well in alluvium, diameter 18 inches, depth 42 feet, cased with corrugated metal pipe, gravel packed from 20 to 42 feet. MP top of casing, 2.9 feet above lsd. Highest water level 7.70 below 1sd, June 20, 1967; lowest 11.53 below 1sd, Sept. 12, 1966. Records available: 1965-68.

May	23,	1966	10.42	Oct.	30,	1967	9.71
Sept.	1.2		11.53	July	17,	1968	8.11
June	20.	1967	7.70				

p-5-50-26da2. (452154N1053040) Joe McDowell. Brilled irrigation water-table well in alluvium, diameter 18 inches, depth 42 feet, cased with corrugated metal pipe, gravel packed from 20 to 42 feet. MP inspection port in base of pump, 3.0 feet above 1sd. Highest water level 8.63 below 1sd, July 17, 1968; lowest 11.29 below 1sd, Sept. 12, 1966. Records available: 1965-68.

May Sept.		9.90 11.29	Oct. July		9.44 8.63
Tormo		9 59	-		

D-5-51-16bcl. (452400N1052640) Carl Shaffer. Drilled irrigation water-table well in alluvium, diameter 18 inches, depth 55 feet, cased with concrete. MF inspection port in pump base, 2.0 feet above 1sd. Highest water level 11.50 below 1sd, June 20, 1967; lowest 14.57 below 1sd, Sept. 12, 1966. Records available: 1965-68.

Date

Water

level

Date

Water

level

May	23,	1966	13.09	Oct.	30,	1967	13.55
Sept.	12		14.57	July	17,	1968	12.67
June	20,	1967	11.50				

p-5-51-16bc2. (452350N1052640) Carl Shaffer. Brilled irrigation water-table well in alluvium, diameter 18 inches, depth 47 feet, cased with concrete. MP inspection port in pump base, 1.5 feet above 1sd. Highest water level 10.17 below 1sd, June 20, 1967; lowest 14.84 below 1sd, Oct. 30, 1967. Records available: 1965-68.

May	23,	1966	12.78	Oct.	30,	1967	14.84
Sept.	12		14.23	July	17,	1968	12.34
June	20.	1967	10.17				

D=9-48-5ac. (450500N1055150) Leonard Somers. Drilled stock artesian well in Fort Union Formation, diameter 4 inches to 108 feet, 2 inches to 417 feet, total depth 420 feet. MP hole in base of pump, 0.8 foot above 1sd. Highest water level 6.24 below 1sd, July 17, 1968; lowest 7.21 below 1sd, Sept. 12, 1966. Records available: 1965-68.

May	23,	1966	7.20	Aug.	14,	1967	6.72
Sept.			7.21	Oct.	10		6.76
Mar.	20.	1967	6.97	Feb.	13,	1968	6.59
June	20		6.80	July	17		6.24

D-9-48-8ca. (450340N1055230) Florence Lawrence. Drilled stock water-table well in alluvium, diameter 4 inches, depth 34 feet, cased with pipe. MP top of casing, 1.0 foot above 1sd. Highest water level 15.09 below 1sd, May 4, 1965; lowest 18.20 below 1sd, Sept. 12, 1966. Records available: 1965-68.

May	23,	1966	17.36	Oct.	30,	1967	17.46
Sept.	12		18.20	Mar.	21,	1968	15.20
Mar.	20 .	1967	(a)	Apr.	10		16.63
	20		15.66	July	17		16.63
Aug.	14		16.96	Sept.	20		17.30
Oct.	5		17.38				

a Well being pumped.

### Powell County

B-6-10-15aa. (463730N1121940) Quinlan School. Dug unused water-table well in alluvium, diameter 38 inches, depth 12.6 feet, concrete casing. MP top of wood platform at 1sd. Highest water level 5.16 below 1sd, July 1, 1959; lowest 12.02 below 1sd, Mar. 5, 1962. Records available: 1957-68.

Mar.	9, 1966	11.15	Oct.	28, 1966	9.98
Sept.	_	9.45	Nov.	29	10.50
Oct.	5	9.77	Jan.	10, 1967	11.24

Date	Water level	n	Water
B-6-10-1	l5aaContinu	Date ed	level
Feb. 7, 196 Mar. 7 Apr. 4 May 3 May 23 July 12 Aug. 15 Sept. 6 Sept. 13 Mov. 7	7 11.43 11.72 11.89 11.85 11.46 8.08 10.30 10.60 10.75 10.10	Dec. 1, 1967 Dec. 12 Mar. 5, 1968 Mar. 8 Apr. 16 May 15 May 27 June 19 Aug. 20 Sept. 4	10.76 10.60 11.20 10.43 11.39 11.03 10.63 8.39 9.97 10.18

B-7-9-8ad. (462240N1124439) Thomas Woodard. Dug unused water-table well in alluvium, depth 12.7 feet. MP top of wood cover at 1sd and 4,550.5 feet above mel. He top or wood cover at 180 and 7,500. Lees and Highest water level 6.47 below 1sd, Sept. 3, 1957; lowest 10.99 below 1sd, Feb. 3, 1958. Records available:

ante	9, 1966	9.75	Sept. 13, 1967	7.50
	8	7.50	Dec. 1	8.65
	2	8.85	Mar. 8, 1968	9.68
	8, 1967	9.97	May 27	10.24
	7	9.57	Aug. 20	6.99

B-7-9-31cd. (461847N1124640) Lewis Johnson. Dug unused water-table well in deposits of Tertiary age, diameter 36 inches, depth 50 feet, cribbed with rock. MP top of cover at lsd. Highest water level 34.57 below 1sd, Sept. 9, 1963; lowest 49.05 below 1sd, May 3, 1960. Records available: 1957-68. 9. 1966

PMT.	9, 1966			
June	8 2 8, 1967 7	47.60 38.70 45.12 48.70 48.08	Sept. 13, 1967 Dec. 1 Mar. 8, 1968 May 27 Aug. 20	42.54

B-8-9-28ac. (462514N1124351) Don Waliton. Dug domestic water-table well in alluvium, depth 24.8 feet, cribbed with rock. MP top of concrete platform at lad and 4,509.5 feet above msl. Highest water level 18.80 below 1sd, July 1, 1958; lowest 21.96 below 1sd, Nev. 1, 1961. Records available: 1957-68.

Mar.	9.	1966		reple:	195	7-68.	200,
Sept. Dec. Mar. Jume	8	1967	19.78 20.26 21.05 20.86 20.42	Sept. Dec. Mar. May	1	1967 1968	20.3/

B-10-7-30bb (463540N1123203) School District. Drilled unused artesian well in deposits of Tertiary age, diameter 6 inches, depth 69.6 feet, cased with pipe. MP Time 27 1061

Apr. May June Aug. Sept. Oct. Nov.	5, 1 4 6	1962	32.00 34.60 34.10 32.66 31.45 31.90 32.35 32.90	Mar. 8	5, 1962 3, 1963 4, 1967 4, 1968	33.26 33.97 31.73 32.33 33.50 32.73 34.47
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Water Date leve1 Wate Date B-10-8-282a3. (463500N1123600) H. C. Young. leve

Drilled domestic water-table well in alluvium, diamete Drilled domestic water-table well in alluvium, clamete 6 inches, depth 23.4 feet, cased with pipe. Mp top of casing, 0.7 foot above 1sd. Highest water level 3.65 below 1sd, June 7, 1967; lowest 10.26 below 1sd, Mar. 9 1967. Records available: 1962-63 and 1966-68.

Dec.	8,	1966	0.0=	2702803	and	1966-68.	mar,
Mar. June Sept.	9, 7 1	1967	8.85 10.26 3.65 3.70	Dec. Mar. May Aug.	1, 8, 28 20	1967 1968	7.40 8.54 4.42 5.52

# Prairie County

A-12-55-25cd. (464530N1044420) Dave Strobel. Brilled stock artesian well in Fox Hills Sandstone and Hell Creek Formation, diameter 4 inches, depth 1,275 feet, cased with pipe. MP hole in side of pump, 3.6 feet above 1sd and 2,445.6 feet above mel. Highest water level 0.77 below lad, Nov. 6, 1964; lowest 23.56 below 1sd, Sept. 21, 1968. Records available: 1964-68.

Mar.	15, 1966	6		s SAS	ilable:	1964-68
Sept. Nov. Mar. June Aug.	13 17 21, 1967 21	6.70 9.01 11.30 (a) 13.49 14.83	Oct.	31, 14, 7 18 18	1967 1968	16.93 16.28 20.57 20.46 20.94 21.18
METT	Deing Dames					23.56

a Well being pumped.

A-12-55-27ba. (464610N1044710) T. Strebel. Drilled domestic and stock flowing artesian well in For Hills Sandstone and Hell Creek Formation, diameter 2 inches, depth 1,000 feet, steel casing. MP top of outer casing, 0.5 foot above 1sd and 2,334 feet above mel. Records available: 1962 and 1968.

A-12-56-19cd. (464618N1044310) D. H. Baggott. Brilled stock artesian well in Fox Hills Sandstone and Hell Creek Formation, diameter 2 inches, depth 1,140 feet. MP top of casing, 7.4 feet below 1sd and 2,424 feet above msl. Highest water level +9.67 above 1sd, Aug. 11, 1963; lowest 26.82 below lad, May 2, 1966.

Mar. 15, 1966 25.58 May 2 Oct. 31, 1967 26.82 Measurements discontinued

A-12-56-23dc. (464624W1043806) Shell 011 Co. Brilled unused artesian well in Fox Hills Sandstone and Hell Creek Formation, diameter 4 inches, depth 1,185 feet, cased with pipe. MP top of casing, 1.50 feet above 1sd. Highest water level 219.5 below 1sd, Oct. 5, 1962; lowest 468.92 below 1sd, Mar. 21, 1967.

2.0				- 0			-9 230/
Mar. May July Sept. Nov. Mar. June Aug.	2 6 13 17	1966	347.33 357.14 358.64 358.86 398.94 468.92 466.93 468.41	Oct. Feb. May June July Aug. Sept.	14, 7 18 18 20	1967 1968	468.55 446.36 423.18 415.47 412.35 405.96 404.84

A-12-56-34da. (464457N1043900) Shell 0il Co. Drilled observation artesian well in Fox Hills Sandstone and Hell Creek Formation, diameter 4 inches, depth 1,467 feet, cased with pipe. MP base of shelter house, 3.1 feet above lsd. Highest water level 224.89 below lsd, Dec. 13, 1962; lowest 363.48 below lsd, Apr. 4, 1967. Records available: 1962-68.

May	2.	1966	349.46	Oct.	31,	1967	361.76
July	6		354.08	Feb.	14,	1968	360.95
Sept.	13		359.69	May	7		361.70
Nov.	17		358.94	June	18		358.01
APE.	4.	1967	363.48	July	18		356.43
June	21		360.41	Aug.	20		355.05
Ang	15		359.95	Sept.	21		353.03

### Ravalli County

B-5-19-26bc. (460950N1135620) Bonneville Power Administration. Drilled observation water-table well in talus deposits, diameter 6 inches, depth 52 feet, cased with pipe. MP floor of recorder shelter, 3.2 feet above lsd. Highest water level 32.19 below lsd, June 30, 1964; lowest 38.60 below lsd, Nov. 28, 1966. Records available: 1962-68.

Jan. Feb.	2	1966	35.21 36.70	May June	25, 26	1967	34.07 33.04
Feb.	24		37.53	July	26 28		35.92 35.22
Mar.	30 28		37.45 36.18	Aug. Sept.	25		35.84
Apr.	26		35.74	Oct.	24		35.65
May June	29		35.91	Nov.	27		35.87
July	28		37.19	Dec.	26		35.99
Aug.	26		38.01	Jan.	25,	1968	35.48
Sept.	27		38.22	Feb.	26		34.66
Oct.	26		38.48	Mar.	27		34.56
Nov.	28		38.60	Apr.	24		33.73
Dec.	27		38.25	May	28		32.67
Jan.	26,	1967	37.92	June	24		33.74
Feb.	21		38.51	July	24		34.01
Mar.	28		38.14	Aug.	28		35.00
Apr.	25		37.57	Sept.	25		35.23

B-6-20-19cc. (461518N1140908) Ravalli County Fairgrounds. Bug and driven irrigation water-table well in alluvium, diameter 48 inches to 3/4 inch, depth 20 feet. MP top of 3/4-inch pipe, 0.6 foot above 1sd and 3,559.6 feet above msl. Highest water level 3.14 below 1sd, June 24, 1960; lowest, dry at 20.0 below 1sd, Mar. 28, 1967. Records available: 1956-68.

Jan.	3, 1	1966	12.27	Apr.	25,	1967	15.65
Feb.	2		13.38	May	26		13.92
Feb.	24		13.96	June	26		a8.88
Mar.	8		13.12	July	26		a5.11
Mar.	30		14.30	Aug.	28		4.00
Apr.	28		13.20	Sept.	25		4.47
May	26		5.58	Oct.	24		6.00
June	29		a4.66	Nov.	27		8.42
July	28		5.11	Nov.	30		8.65
Aug.	26		5.11	Dec.	26		10.28
Sept.	7		4.86	Jan.	25,	1968	11.41
Sept.	27		6.52	Feb.	26		12.66
Oct.	26		8.97	Mar.	7		13.02
Nov.	28		10.96	Mar.	27		13.57
Dec.	27		11.75	Apr.	24		14.24
Jan.	25,	1967	12.49	May	28		12.95
Feb.	22		14.10	June	24		9.79
Mar.	28		(f)	July	24		7.66

a Well being pumped

B-6-21-2ba. (461810N1141220) Jane Hauf. Drilled unused domestic artesian well in deposits of Tertiary age, diameter 4 inches, depth 84 feet, cased with pipe. MP top of casing, 1.3 feet above lsd. Highest water level 42.11 below lsd, July 5, 1961; lowest 61.00 below lsd, Mar. 3, 1961. Records available: 1958-68.

Date

level

Mar.	8.	1966	58.90	Sept.	11,	1967	48.52
Sept.	7		49.00	Nov.	30		53.35
Nov.	30		55.32	Mar.			57.32
Mar.	6,	1967	57.66	Measu	remen	ats dis	continued
June	5		53.52				

B-6-21-26db. (461450N1141050) Hamilton Cemetery. Drilled unused water-table well in deposits of Pleistocene and Tertiary age, diameter 8 inches, depth 365 feet, cased with pipe. MP top of casing, 1.4 feet above 1sd and 3,622 feet above ms1. Highest water level 6.49 below 1sd, Aug. 21, 1968; lowest 22.89 below 1sd, Mar. 11, 1960. Records available: 1958-68.

Mar.	8,	1966	17.55	NOV.	30,	1967	12.08
Sept.	7		11.04	Mar.	7,	1968	13.66
Nov.	30		13.23	May	28		7.85
Mar.	6,	1967	17.75	Aug.	21		6.49
June	5		8.05				
Cant.	11		10.95				

B-7-20-32ddl. (461840N1140640) Corvallis Rural Fire Dept. Dug water-table well in alluvium, diameter 48 inches, depth 12.7 feet, concrete casing. MP top of cover at 1sd and 3,471 feet above msl. Highest water level 3.54 below 1sd, Aug. 19, 1960; lowest 11.30 below 1sd, Apr. 29, 1960. Records available: 1958-68.

Mar. Sept. Nov. Mar. June Sept.	7 30 6, 5	1966 1967	11.02 4.18 8.00 11.18 9.08 3.73	Nov. Mar. Hay Aug.		1967 1968	7.75 10.83 6.98 3.75
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B-8-20-19ba3. (462620N1140840) U. S. Geol. Survey. Drilled observation well in deposits of Pleistocene and Tertiary age, diameter 6 inches, depth 52 feet, cased with pipe. MP top of casing, 0.5 foot above 1sd and 3,393 feet above msl. Highest water level 12.39 feet below 1sd, Sept. 2, 1961; lowest 18.03 below 1sd, Mar. 8, 1966. Records available: 1959-68.

Mar.	8,	1966	18.03	Nov.	30,	1967	15.70
Sept.	7		15.32	Mar.	7,	1968	16.70
Nov.	30		15.90	May	28		14.56
Mar.	6,	1967	16.87	Aug.	21		14.48
June	5		14.35				
Sept.	11		15.08				

B-9-20-12bb. (463340N1140340) Raymond Bell. Dug unused water-table well in alluvium, diameter 42 inches, depth 19.7 feet, concrete casing. MP top of cover at 1sd and 3,279 feet above msl. Highest water level 3.83 below 1sd, Aug. 14, 1958; lowest 18.53 below 1sd, May 10, 1961. Records available: 1958-68.

f Dry

Da	te		Water level	D	ate		Water level
	B-9-	20-12bb	Continued				
Mar. Sept. Nov. Mar. June	8, 7 30 6, 5	1966 1967	16.70 9.65 15.08 17.02 15.42	Sept. Nov. Mar. May Aug.	11, 30 7, 28 21	1967 1968	10.18 14.12 16.92 18.33 14.92

B-9-20-21ad1. (463140N1140640) Dan Shea. Drilled water-table well in alluvium underlying river terrace, diameter 4 inches, depth 32.2 feet, cased with pipe. MP top of casing, 0.8 foot above 1sd and 3,309 feet above msl. Highest water level 2.45 below 1sd, Aug. 21, 1968; lowest 27.99 below 1sd, Apr. 1, 1961. Records available: 1956-68.

Jan.	3,	1966	24.10	May	26,	1967	7.79
Jan.	31		23.10	June	26		4.26
Feb.	2		23.23	July	27		9.10
Feb.	25		24.49	Aug.	28		7.58
Mar.	30		23.54	Sept.	25		12.80
Apr.	28		22.53	Oct.	24		8.71
May	26		3.72	Mov.	27		13.50
June	29		4.33	Dec.	26		
July	28		7.77	Jan.		1060	19.44
Aug.	26		8.94	Feb.	25,	1968	21.76
Sept.	27		12.43		26		22.98
Oct.	25			Mar.	26		22.82
			15.68	Apr.	24		21.16
HOY.	28		18.62	May	28		3.46
Bec.	27		22.30	June	24		5.89
Jan.	26,	1967	25.03	July	24		6.61
Feb.	22		23.53	Aug.	21		2.45
Mar.	27		20.91	Aug.	27		5.52
Apr.	25		20.88	Sept.	25		10.27

B-10-20-13ba. (463750N1140330) Bonneville Power Administration. Drilled observation water-table well in alluvium, diameter 6 inches, depth 50.5 feet. MP top of casing, 0.5 foot above lad. Highest water level 2.48 below 1sd, June 15, 1959; lowest 7.03 below 1sd, Mar. 13, 1964. Records available: 1959-68.

Mar.	8,	1966	6.55	Sept.	11.	1967	6.44
Sept.	7		5.26	Nov.	30		6.10
Nev.	30		6.50	Mar.	7.	1968	5.94
Mar.	6,	1967	6.70	May	28		4.92
June	5		3.75	Aug.	21		5.30

# Richland County

A-27-56-3cc. (480713N1042850) U. S. Geol. Survey. Drilled water-table well in alluvium, diameter 1 1/4 inches, depth 75 feet, cased to 75 feet, finished with continuous-slot drive point. MP top of casing, 0.8 foot above 1sd and 1,903 feet above msl. Highest water level 8.15 Helew 1sd, Mar. 13, 1967; lowest 13.93 below 1sd, Mev. 18, 1963. Records available: 1963-68.

Jan.	25,	1966	9.13	Dec.	19,	1966	11.31
Feb.	25		8.56	Jan.	23.	1967	9.75
Mar.	20		8.35	Feb.	20		8.85
Apr.	18		9.29	Mar.	13		8.15
May	17		9.63	Mar.	24		7.61
June	20		10.44	Apr.	18		8.35
July	19		11.14	May	16		9.03
Aug.	22		12.28	June	20		9.03
Sept.	19		12.75		25		200 200 200 200 200
Oct.	24			July			10.75
	10000000		13.13	Aug.	22		11.14
Nov.	21		12.74	Sept.	19		11.05

1	Date		level	Date			level
	A-27	-56-3ce	Continued				
Oct. Nov. Dec. Jan. Feb. Mar.	20 27	1967 1968	10.80 10.54 10.06 9.27 8.64 8.78	Apr. May June July Aug. Sept.	15, 20 17 23 20 24	1968	9.69 11.50 12.06 11.83 11.85 11.39

Water

Water

### Roosevelt County

A-26-46-6cb. (480210#1055020) U. S. Geel. Survey. Drilled observation water-table well in alluvium, diameter 3/4 inch, depth 15.0 feet, cased with plastic pipe. MP top of casing, 1.3 feet above 1sd and 2,009 feet above msl. Highest weter level 5.19 below 1sd, Aug. 4, 1966; lowest 9.34 below 1sd, Feb. 20, 1968. Records available: 1962-68.

Aug.	13, 25 4 19 28	1966	7.92 7.66 5.19 6.41 5.51	Nov. Feb. June Aug.	20,		6.98 9.34 9.31 7.90
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A-28-49-36cb. (480805N1052025) U. S. Geel. Survey. Drilled water-table well in deposits of Pleistocene age, diameter 1 1/4 inches, depth 52 feet, cased with pipe, finished with continuous-slot drive point. MP top of casing, 2.5 feet above 1sd and 1,975 feet above ms1. Highest water level 15.40 below 1sd, Jan. 23, 1967; lowest 22.36 below 1sd, Oct. 20, 1964. Records available: 1963-68.

Jan.	25,	1966	21.11	May	16.	1967	18.26
Feb.	25		20.90	June	20	T. 7. 1. 1	
Mar.	20						18.62
			20.93	July	17		20.15
Apr.	18		20.92	Aug.	22		19.73
Mey	17		20.94	Sept.	19		19.14
June	20		21.35	Nev.	21		19.22
July	19		20.07	Dec.	27		16.04
Aug.	22		20.81	Jan.	22,	1968	16.72
Sept.	19		21.24	Feb.	20		16.70
Oct.	24		21.33	Mer.	20		18.78
Mov.	21		20.44	Apr.	15		21.08
Dec.	19		16.42	May	20		20.17
Jan.	23,	1967	15.40	June	17		20.42
Feb.	23		16.89	July	23		19.62
Mar.	13		16.29	Aug.	20		20.50
Apr.	17		17.74	Sept.	25		20.20

A-28-57-28dd. (48084011042140) Abandoned school. Drilled unused water-table well in alluvium, diameter 18 inches, depth 29 feet, cased with tile. MP top of platform, 0.2 feet, cased with tile. Hr top or platform, 0.2 feet above lsd. Highest water level 19.36 below lsd, July 17, 1967; lowest 27.52 below lsd, Apr. 25, 1946 and Nov. 19, 1957. Records available: 1946-68.

Jan. Feb. Mar. Apr. May June July July Aug. Sept.	25 20 18 17 20 6 19 22	1966	20.93 21.01 21.18 21.11 21.15 20.95 21.13 21.03 21.21 20.92	Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July	24, 21 19 23, 21 24 18 16 20	1966 1967	21.12 20.76 21.07 21.45 21.03 20.77 20.68 20.16 19.51 19.36
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### Rosebud County

A-6-44-14bb. (461640N1061140) Owner unknown. Dug unused water-table well in alluvium, diameter 36 inches, depth 21 feet, tile casing. MP top of pump platform, 0.2 foot above 1sd. Records available: 1968.

Feb.	15,	1968	12.11	Aug.	20,	1968	11.10
May	8		12.16				

A-12-44-18dd. (464710N1061430) Rosebud County School Board. Drilled unused artesian well in Fort Union Formation, depth 141 feet, cased with pipe. MP bottom of square hole in pump, 1.8 feet above 1sd. Highest water level 118.13 below 1sd, Mar. 22, 1967; lowest 124.92 below 1sd, May 14, 1965. Records available: 1965-68.

May	24,	1966	121.68	Aug.	9,	1967	121.67
Sept.	13		122.05	Nov.	1		121.52
Mov.	18		122.06	Feb.	15,	1968	121.19
Mar.	22.	1967	118.13	June	17		120.75
June	22		120.16	Aug.	19		121.26

p-2-41-3lac. (453731N1064306) Owner unknown. Brilled stock artesian well in Fort Union Formation, depth 168.0 feet, diameter 6 inches, cased with pipe. MP top of casing, 0.5 feet above 1sd. Records available: 1967-68.

Mer.	20, 1967	70.80	Feb.	13, 1968	75.85
June	20	70.76	May	24	b79.69
July	27	70.87	June	20	75.22
Aug.	14	72.38	July	10	ь81.16
Aug.	24	70.94	July	26	75.35
Oct.	18	75.79	Aug.	30	75.05
Oct.	30	73.82	Sept.	19	74.98
Bec	10	74.36			

b Well pumped recently.

p-4-41-6dd. (453053N1064248) R. Harris. Drilled water-table stock well in Fort Union Formation, diameter 6 inches, depth 113 feet, steel casing. MP top of casing, 0.5 foot above 1sd and 3,270 feet above ms1. Records available: 1968.

July 16, 1968 15.00 Sept. 19, 1968 14.51

### Sanders County

B-21-24-lcc. (473612N1143728) Wayne Watts. Drilled unused artesian well in deposits of Pleistocene age, diameter 4 inches, depth 185 feet, cased with pipe. MP top of casing, 1.4 feet above 1sd. Records available: 1967-68.

May	17, 1967	1.40	Mar.	6, 1968	2.50
Aug.	17	5.18	May	28	2.88
Nov.	29	4.22	Aug.	22	4.68

B-23-24-27cb. (474305N1143928) Harold Pedersen. Brilled unused artesian well in deposits of Pleistocene age, diameter 4 inches, depth unknown, cased with pipe. MP hole in pump base, 0.2 foot above 1sd. Records available: 1967-68.

Date

Water

level

Water

level

May	18, 1967	21.60	Mar.	6, 1968	24.00
Aug.	17	25.28	May	28	27.17
Nov.	29	24.14	Aug.	22	27.48

### Stillwater County

D-2-23-29bd. (45380<u>1</u>N108550<u>4</u>) Alvin Southworth. Drilled domestic water-table well in alluvium, diameter 6 inches, depth 24 feet, cased with steel pipe. MP top of casing, 0.25 foot above lsd. Highest water level 2.73 below lsd, Sept. 23, 1949; lowest 12.93 below lsd, June 20, 1957. Records available: 1947-68.

Jan.	20, 1966	10.03	Mar.	23.	1967	10.89
Feb.	23	11.23	May	26		11.87
Mar.	25	11.85	July	26		7.93
APT.	21	12.51	Aug.	17		5.50
May	25	12.45	Sept.	22		5.26
June	30	9.17	Dec.	20		8.55
July	25	6.14	Jan.	25,	1968	9.76
Aug.	24	4.21	Mar.	14		11.27
Sept.	26	4.92	Apr.	24		12.31
Oct.	24	5.81	May	16		11.89
Word	29	7 06	-			

#### Sweet Grass County

A-4-14-14ba. (460610N1095655) Spike Van Cleave. Dug domestic water-table well in alluvium, diameter 30 inches, depth 16 feet, cribbed with stone. MP top of concrete curb, 1.2 feet above 1sd. Highest water level 3.58 below 1sd, June 13 and July 28, 1964; lowest 15.19 below 1sd, Mar. 28, 1962. Records available: 1947-68.

Jan.	19.	1966	14.05	May.	17,	1967	9.65
Feb.	25		14.56	July	26		4.54
Mar.	25		14.54	Aug.	28		9.63
Apr.	21		13.37	Sept.	29		10.10
May	25		9.70	Oct.	18		7.88
June	28		7.29	Nov.	27		11.90
July	25		6.59	Dec.	29		14.76
Aug.	24		11.23	Jan.	23,	1968	13.70
Sept.	26		8.87	Feb.	28		14.91
Oct.	25		11.45	Mar.	25		13.68
Mov.	30		13.53	Apr.	26		13.44
Jan.	4.	1967	13.43	May	27		13.56
Jan.	26		13.99	July	25		4.62
Mar.	10		14.40	Aug.	27		7.95
Apr.	14		13.65	Sept.	26		9.38

### Teton County

B-25-1-15ba. (475530N1134306) U. S. Geol. Survey. Drilled observation water-table well in alluvium, diameter 1 1/4 inches, depth 21.9 feet, cased with pipe, finished with continuous-slot drive point. MP top of pipe, 1.6 feet above 1sd. Records available: 1967-68.

Nov.	15.	1967	j16.58	May	16,	1968	9.20
Feb.			8.64	Aug.	8		10.55

j Well just completed.

	Water		Water
Date	level	Date	level

B-25-5-21bc. (475418N1121549) U. S. Geol. Survey. Brilled observation water-table well in terrace deposits of Pleistocene age, diameter 1 1/4 inches, depth 9.2 feet, cased with pipe, finished with continuous-slot drive point. MP top of pipe, 4.0 feet above 1sd. Records available: 1967-68.

Nov. 21, 1967 j3.09 May 15, 1968 3.64 Feb. 19, 1968 3.03 Aug. 7 3.22

j Well just completed.

B-26-6-24dc. (475923N1121902) U. S. Geel. Survey. Brilled observation water-table well in terrace deposits of Pleistocene age, diameter 1 1/4 inches, depth 14.4 feet, cased with pipe, finished with continuous-slot drive point. MP top of pipe, 3.0 feet above lsd. Records available: 1967-68.

Nov. 21, 1967 j6.25 May 15, 1968 10.13 Peb. 19, 1968 9.47 Aug. 8 10.03

j Well just completed.

### Toole County

B-31-2-20dc. (482520N1115330) U. S. Geol. Survey. Brilled observation water-table well in alluvium, diameter 1 1/4 inches, depth 27 feet, cased with pipe, finished with continuous-slot drive point. MP top of pipe, 2.3 feet above 1sd. Records available: 1967-68.

 Mev.
 15, 1967
 j16.99
 May
 16, 1968
 9.40

 Feb.
 20, 1968
 9.49
 Aug.
 8
 10.73

j Well just completed.

B-32-2-27dd. (482940N1115020) U. S. Geol. Survey. Brilled observation water-table well in silt and sand of Quaternary age, diameter 1 1/4 inches, depth 21.6 feet, cased with pipe, finished with continuous-slot drive point. MP top of pipe, 1.9 feet above lsd. Records available: 1967-68.

 Rev.
 15, 1967
 j6.36
 May
 14, 1968
 7.13

 Feb.
 20, 1968
 7.04
 Aug.
 7
 7.19

j Well just completed.

B-36-2-8cc. (485311W1115409) Cloyd Hannon. Bug demestic and stock water-table well in deposits of Pleistocene age, diameter 4 feet, depth 17 feet, cribbed with wood, 1 1/4-inch pipe driven inside dug well. MP top of 1 1/4-inch pipe, 1.0 foot above 1sd. Highest water level 1.22 below 1sd, May 16, 1967; lowest 10.89 below 1sd, Dec. 18, 1961. Records available: 1947-68.

Feb. Apr. May July Sept. Mov. Feb. Apr. Apr. May June Aug.	1 20 27 28 14 16, 12 26 16 12 20	1966	7.09 6.66 3.82 3.19 6.46 6.80 2.95 2.08 2.04 1.22 1.74 6.40	Oct. Nov. Nov. Dec. Jan. Feb. Mar. Apr. May July Aug. Sept.	3 28 11 29, 16 27 24 17 25 8	1967 1968	8.14 8.23 7.63 8.32 6.47 6.77 5.29 5.10 5.55 4.62 8.44 9.28
Aug. Sept.	20 13		6.40 7.39	Sept.	20		9.28

# Water level D Valley County

Date

A-26-43-3cb. (480215N1060950) U. S. Geol. Survey. Drilled observation water-table well in alluvial flood plain, diameter 1 inch, depth 15.5 feet, cased with plastic pipe. MP top of pipe, 1.5 feet above 1sd. Records available: 1966-68.

Date

Water

level

Nov.	19, 1966	12.57	Feb.	20, 1968	10.77
June	22	10.52	May	14	10.98
Aug.	29	11.26	Aug.	6	11.53
Mow.	2	11.35			

A-26-45-8ac. (480130N1055619) Scott Bros. Brilled observation water-table well in alluvium, diameter 6 inches, depth 16.3 feet, cased with pipe. MP top of casing, 3.5 feet above 1sd and 2,016 feet above msl. Records available: 1962-68.

May	28,	1962	2.76	June	10,	1965	5.9
June	11		3.75	Aug.	17		6.65
June	13		4.42	Nov.	12		6.95
July	17		4.35	Mar.	30,	1966	7.1
July	25		5.20	May	24		4.45
Aug.	14		1.59	Aug.	4		2.3
Aug.	25		3.56	Hev.	18		5.96
Aug.	29		4.09	Mar.	22,	1967	(t)
Sept.	21		5.31	June	22		5.86
Oct.	31		6.10	Aug.	28		3.47
Mar.	29,	1963	7.32	Mov.	1		5.61
July	4		5.88	Feb.	19,	1968	6.83
Nev.	19		7.25	May	13		5.00
Jan.	20,	1964	7.63	Aug.	5		1.02
Oct.	10		4.7				

i Ice in well.

A-26-45-8dd. (480105N1055548) U. S. Geol. Survey. Brilled observation water-table well in alluvium, diameter 3/4 inch, depth 42.0 feet, cased with pipe. MP top of casing, 0.7 foot above 1sd and 2,012.8 feet above msl. Highest water level 6.91 below 1sd, May 24, 1966; lowest 15.10 below 1sd, July 20, 1962. Records available; 1962-67.

Mar.		1966	8.94	June		1967	8.28
May	24		6.91	Aug.	28		8.49
Aug.	4		8.50	Mov.	1		(t)
	2.0		0 / 9				

### j Well destroyed

A-27-42-26aa. (480428N1061515) U. S. Geol. Survey. Brilled observation water-table well in alluvial flood plain, diameter 1 inch, depth 27.2 feet, cased with plastic pipe. MP top of pipe, 2.1 feet above lsd. Records awailable: 1966-68.

Sept.	28,	1966	25.64	Mov.	2,	1967	13,43
Nov.	19		20.14	Feb.	20,	1968	14.99
Mar.	23,	1967	17.01	May	14		14.81
June	22		15.08	Aug.	6		14.02
Aug.	29		13.55				

	Water		Water
Date	level	Date	level

A-27-42-33aa. (480336N1061746) U. S. Geol. Survey. Drilled observation water-table well in alluvial flood plain, diameter 1 inch, depth 33.0 feet, cased with plastic pipe. MP top of pipe, 1.5 feet above 1sd. Records available: 1966-68.

Oct.	6,	1966	17.84	Nov.	2,	1967	16.58
Nov.	19		17.55	May	14,	1968	16.73
June	22,	1967	15.91	Aug.	6		16.98
Aug.	29		16.94				

A-27-42-36cc. (480247N1061353) U. S. Geol. Survey. Drilled observation water-table well in alluvial flood plain, diameter 1 1/4 inches, depth 30.0 feet, cased with pipe. MP top of pipe, 3.3 feet above 1sd. Records available: 1966-68.

Sept.		1966	18.87 18.34	Nov. Feb.		17.67 17.49
Mar.		1967	17.90	May	14	18.23
June	22		17.28	Aug.	6	16.64
A112.	29		17.60			

A-27-43-32bb. (480339N1061230) U. S. Geol. Survey. Drilled observation water-table well in alluvial flood plain, diameter 1 inch, depth 30.0 feet, cased with plastic pipe. MP top of pipe, 3.2 feet above 1sd. Records available: 1966-68.

Oct.	6,	1966	24.47	Nov.	2,	1967	24.82
NOV.	19		15.34	Feb.	20,	1968	24.94
June	22,	1967	24.96	May	14		24.78
Aug.	29		24.92	Aug.	6		24.77

A-27-45-31dd. (48025\_2N1055705) U. S. Geol. Survey. Drilled observation water-table well in alluvium, diameter 3/4 inch, depth 30.1 feet, cased with pipe. MP top of casing, 2.9 feet above 1sd and 2,030 feet above msl. Highest water level 12.03 below 1sd, Aug. 21, 1962; lowest 18.16 below 1sd, Mar. 29, 1963. Records available: 1962-68.

Mar. May	30, 196 24	6 18.00 18.11	Aug.	28, 1	1967	(j) 15.80
Aug.	4 18	17.20 16.33		19,	1968	16.25 16.72
Mar.	22, 196		Aug.	5		15.20

### j Plugged at 11.8.

A=27-45-34dd. (480249N1055312) U. S. Geol. Survey. Drilled observation water-table well in alluvium, diameter 3/4 inch, depth 23.4 feet, cased with plastic pipe. MP top of casing, 0.6 foot above 1sd and 2,016 feet above msl. Highest water level 10.29 below 1sd, Aug. 6, 1968; lowest 13.47 below 1sd, Jan. 20, 1964. Records available: 1962-68.

	30, 25 4	1966	12.26 12.42 11.75	Aug. Nov. Feb.	1	1967 1968	10.63 11.51 11.82
Aug. Nov. Mar.	18	1967	12.08 12.23	May Aug.	13	1700	12.29
Tune	22		12.02				

Water Water
Date level Date level

A-31-35-36bd. (482410N1070650) Owner unknown. Drilled unused water-table well in alluvium, diameter 7 inches, depth 62.4 feet, cased with pipe. MP top of casing, 0.8 foot above lsd. Records available: 1968.

May 15, 1968 27.21 Aug. 7, 1968 25.90

A-34-40-laa. (484411M1062500) Owner unknown. Bug unused water-table well in glacial moraine, diameter 24 inches, depth unknown, cased with wood. MP top of board cover at lsd. Highest water level 24.92 below lsd, Mar. 23, 1967; lowest 26.91 below lsd, Aug. 6, 1968. Records available: 1965-68.

May	25.	1966	26.18	Aug.	29,	1967	25.41
Sept.			26.12	Oct.	30		25.69
Mar.	23,	1967	24.92	May	14,	1968	25.74
Tune	23		25.15	Aug.	6		26.91

A-34-40-28da. (484012N1062850) Owner unknown. Drilled unused water-table well in Fox Hills Sandstone, diameter 6 inches, depth 104.3 feet, steel casing. MP top of casing, 0.5 foot above 1sd. Records available: 1968.

May 14, 1968 74.90 Aug. 6, 1968 75.79

### Wheatland County

A-7-17-24dd. (462050N1093140) Owner unknown. Drilled unused water-table well in alluvium, diameter 6 inches, depth 22 feet, cased with pipe. MP top of casing, 2.5 feet above 1sd. Records available: 1967-68.

Nov.	7, 1	967	8.80	May	16,	1968	9.01
Nov.			8.93	Aug.	8		(i)

j Irrigation water ponded around well.

A-8-13-22da. (4626<u>15</u>N11004<u>1</u>5) U. S. Geol. Survey. Drilled observation water-table well in alluvium, diameter 1 1/4 inches, depth 16.0 feet, cased with pipe, finished with continuous-slot drive point. MP top of pipe, 1.8 feet above 1sd. Records available: 1967-68.

Nov.	14,	1967	j2.10	June	13,	1968	7.01
May	16,	1968	9.08	Aug.	8		5.56

i Well just completed.

A-8-13-23cb. (4626<u>1</u>5N11004<u>0</u>6) State of Montana, Highway Department. Drilled unused water-table well in alluvium, diameter 6 inches, depth 14.0 feet, cased with pipe. MP top of casing, 1.3 feet above 1sd. Records available: 1967-68.

Nov. June			7.43 7.20	Aug.	8, 1968	6.61
June	10,	1900	7.20			

A-8-15-26aa. (462540N1094800) U. S. Geol. Survey. Brilled observation water-table well in alluvium, diameter 1 1/4 inches, depth 17.2 feet, cased with pipe, finished with continuous-slot drive point. MP top of casing, 1.3 feet above lsd. Records available: 1967-68.

Nov.		j6.13 6.14	June Aug.	-	1968	5.50 6.47
May		6.18				

j Well just completed.

### Wibaux County

A-11-57-17abl. (464244N1043421) Union Texas Petreleum. Brilled unused artesian well in Fox Hills Sandstone and Hell Creek Formation, diameter 8 inches, depth 1,100 feet, cased with pipe. MP top of casing, 0.8 foot above 1sd and 2,634 feet above msl. Highest water level 81.65 below 1sd, Nov. 17, 1966 and May 27, 1965; lowest 82.89 below 1sd, June 18, 1968 and Sept. 21, 1968. Records available: 1962-68.

May	5.	1966	82.35	Oct.	31,	1967	81.93
July			82.34	Feb.	14,	1968	81.91
Sept.			81.85	May	7		82.02
Mey.			81.65	June	18		82.89
Mar.		1967	81.80	July	18		82.62
June		2,01	81.90	Aug.			82.32
Aug.			81.78	Sept.			82.89

### Yellowstone County

D-1-26-9bb. (484609M1083157) U. S. Geel. Survey. Augered observation water-table well in terrace deposits, diameter 3/4 inch, depth 15 feet, cased with steel pipe. MP top of casing, 0.9 foot above 1sd and 3,148 feet above msl. Highest water level 10.33 below 1sd, June 12, 1968; lowest 13.43 below 1sd, Mar. 13, 1963. Records available: 1962-68.

	11	1066	12.99	Mar.	4.	1968	12.78
Jan.		1966			11		12.86
Jan.	27		13.08	Mar.			
Feb.	7		13.13	Mar.	19		12.95
Feb.	21		13.22	Mar.	26		13.00
Mar.	28		13.24	Apr.	2		13.08
May	31		12.39	Apr.	17		13.22
July	15		11.57	APT.	26		13.35
Sept.	23		11.76	May	2		13.39
Moa.	29		12.80	May	13		13,19
	29		12.99	May	28		12.73
Dec.		1067	12.22	June	4		12.87
July	27,	1967			12		10.33
Aug.	30		11.88	June			
Sept.	22		12.01	June	20		12.55
Oct.	26		12.68	June	27		12.49
Nov.	16		12.91	July	3		12.45
Bec.	11		12.30	July	10		12.72
Dec.	20		12.41	July	16		12.81
Dec.	29		13.29	July	30		12.47
Jan.	8,	1968	13.34	Aug.	6		12.47
	22	2700	12.64	Aug.	13		12.25
Jan.					20		12.17
Feb.	5		12.14	Aug.			12.22
Feb.	13		12.57	Aug.	27		
Feb.	26		12.60	Sept	. 3		12.45

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