GROUND-WATER-QUALITY DATA FROM THE POWDER RIVER STRUCTURAL BASIN AND ADJACENT AREAS, NORTHEASTERN WYOMING

By L. R. Larson and Richard L. Daddow

U.S. GEOLOGICAL SURVEY

Open-File Report 83-939

Not reviewed or edited for conformity
with U.S. Geological Survey
stratigraphic nomenclature

Cheyenne, Wyoming

1984

UNITED STATES DEPARTMENT OF THE INTERIOR

WILLIAM P. CLARK, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information
write to:

District Chief
U.S. Geological Survey
2120 Capitol Avenue
P.O. Box 1125
Cheyenne, Wyoming 82003

Copies of this report can
be purchased from:

Open-File Services Section
Western Distribution Branch
U.S. Geological Survey
Box 25425, Federal Center
Denver, Colorado 80225
(Telephone: (303) 236-7476)

CONTENTS

ILLUSTRATIONS

TABLES

CONVERSION FACTORS

The following factors may be used to convert the inch-pound units used in this report to metric units:

Multiply	By	To obtain
acre	4047	square meter
foot (ft)	0.3048	meter
square mile (mi^2)	2.590	square kilometer

Temperature, in degrees Celsius (°C), can be converted to degrees Fahrenheit (°F) by the following equation:

$$°F = 9/5(°C) + 32$$

GROUND-WATER-QUALITY DATA FROM THE POWDER RIVER STRUCTURAL BASIN AND ADJACENT AREAS, NORTHEASTERN WYOMING

By L. R. Larson and Richard L. Daddow

ABSTRACT

Water-quality data for wells and springs in the Powder River structural basin and adjacent areas in northeastern Wyoming are presented in three tables. The first table lists results of analyses of common constituents for 748 ground-water sites. The second table presents dissolved trace-metal data for 220 ground-water sites. Radiochemical data are listed in the third table for 65 ground-water sites. The locations of the sites listed in the tables are shown on a map of the area.

INTRODUCTION

The purpose of this report is to make available to the public a compilation of selected ground-water-quality data for the Wyoming part of the Powder River structural basin and adjacent areas. The data are stored in the U.S. Geological Survey computer files. Similar data from the Montana part of the Powder River basin were published previously (Lee, 1979). An earlier report (Hodson, 1971) contains ground-water-quality data from the Powder River basin in Wyoming, but it is now out of print. Because of continued public interest in ground-water quality in the Powder River basin and the near-doubling of available data since Hodson's report, an updated report for the same area is needed.

The study area consists of approximately 25,000 square miles in the northeastern part of Wyoming and includes Campbell, Crook, Johnson, Weston, Converse, and Niobrara Counties and parts of Sheridan and Natrona Counties (fig. 1). The divide along the Bighorn Mountains forms the western boundary. The Laramie Mountains and the Hartville Uplift form the southern boundary. The Wyoming-Montana, the Wyoming-South Dakota, and the Wyoming-Nebraska State lines form the northern and eastern boundaries.

The Powder River basin is rich in energy minerals. In the past, oil and gas production caused population booms in the area. More recently, coal mining, and to a lesser extent uranium mining, have spurred a rapid growth in population. The basin's huge coal reserves have become especially important in view of the Nation's growing use of that fuel.

Although the Powder River basin is richly endowed with energy minerals, water, especially good-quality water, is not abundant. Ground water must meet the water needs for much of the basin because the limited amount of surface water in this semiarid area already has been appropriated. Water quality is an important factor in assessing the availability of ground water for specific uses.

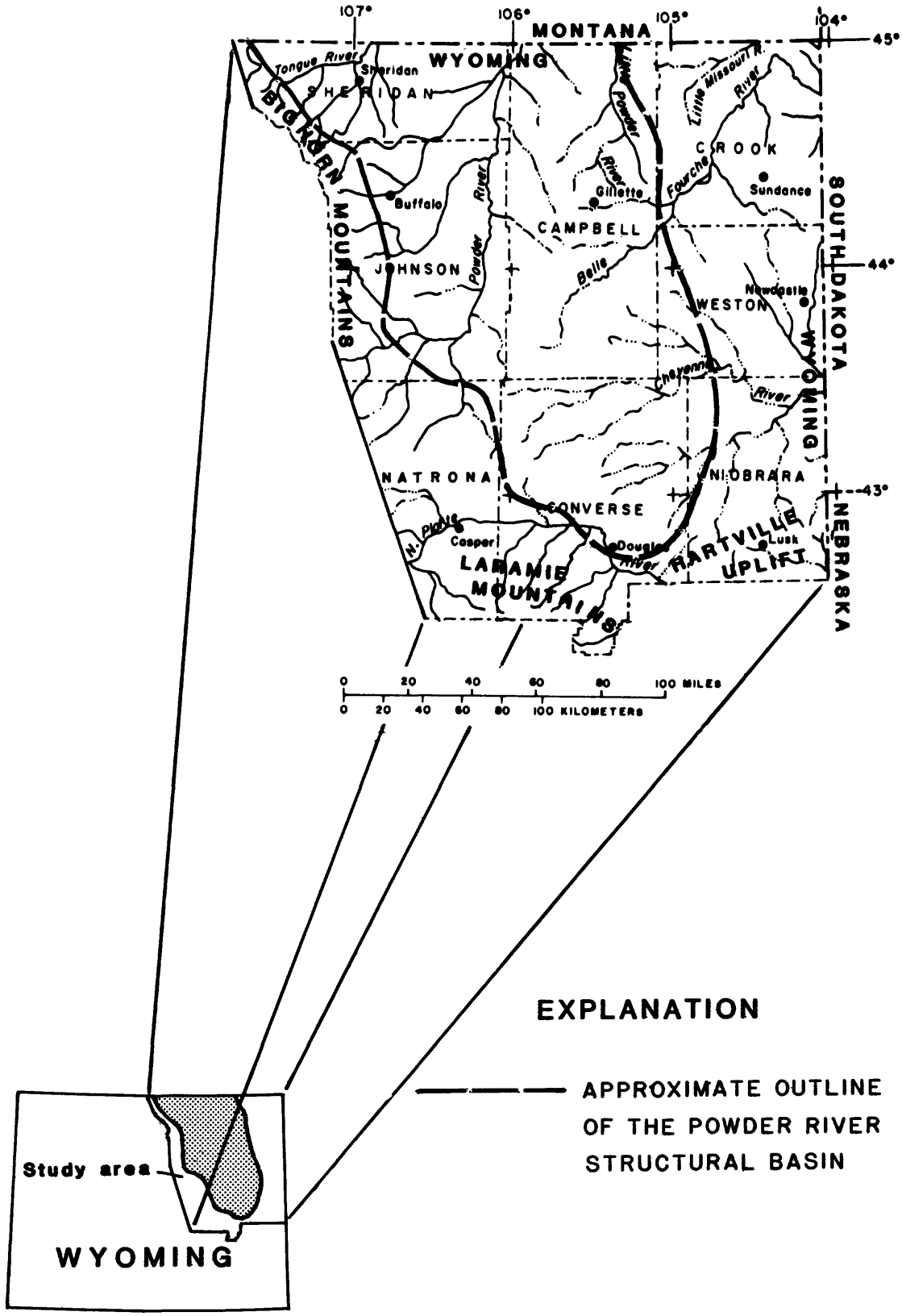


Figure 1.--Location of study area.

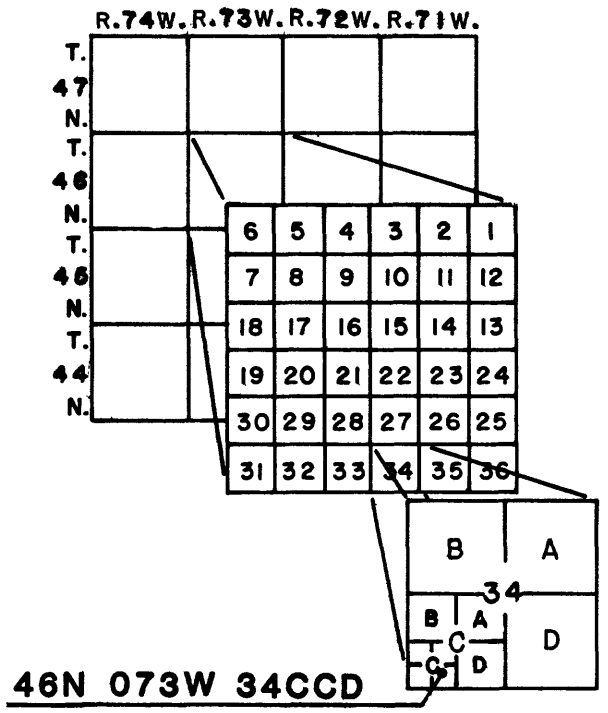
PRESENTATION OF DATA

The ground-water-quality data are presented in tables 1-3 at the end of the report. The locations of the data-collection sites (wells and springs) are shown in plate 1. Data retrieval from the water-quality file was made on March 26, 1982. Analyses entered into the file by that date are included in the tables. For sake of reasonable size and ease of use, the tables do not include all of the chemical-quality data available. Instead, constituents were selected on the basis of their relative abundance in the file and their inclusion in current water-quality criteria. Data not included are available from the files of the U.S. Geological Survey, Cheyenne, Wyoming or published in the annual reports of water-resources data for Wyoming. (For example, see U.S. Geological Survey, 1978.) Water-quality data listed in table 1 include specific conductance, pH, temperature, dissolved-solids concentration, and concentrations of the major ions (calcium, magnesium, sodium, potassium, alkalinity (as bicarbonate), sulfate, chloride, fluoride, and nitrate) plus silica, boron, and iron. These constituents generally are the ones most frequently included in available analyses. Concentrations in this table are expressed in milligrams per liter (mg/L), except boron and iron which are expressed in micrograms per liter (µg/L).

Two constituents listed in table 1 require explanation: specific conductance and alkalinity. Specific conductance is listed in microsiemens, which is equivalent to and replaces the traditional unit, micromho. All specific-conductance values are reported at a standard temperature of 25° Celsius. Alkalinity concentrations (reported in terms of bicarbonate) are listed instead of individual concentrations of bicarbonate and carbonate ions. When the pH value is 8.3 or less, the alkalinity value shown also represents the bicarbonate value. The carbonate concentration in that case would be 0 mg/L. At pH values higher than about 8.3, some of the alkalinity is due to the presence of carbonate ions.

Selected dissolved trace metals are listed in table 2. Concentrations are expressed in micrograms per liter (µg/L). The amount of data available for trace metals (except for iron and boron) is much smaller than the amount of data available for the more common constituents listed in table 1. Radiochemical data, presented in table 3, are expressed in micrograms per liter or picocuries per liter (pci/L). The trace-metal and radiochemical tables contain some data that are qualified by remarks. The "ND" (not detected) remark means that an analysis was made, that the detection limit of the analytical technique was unknown, and that the constituent was not detected. A numerical value of 0 is assigned for the concentration. The "<" (less than) remark means that the analysis was made, that the detection limit was known, and that any readout from the analytical device was within two standard-deviation units of background noise, indicating insufficient confidence in the readout to assign a real, numerical value to the concentration.

A well-numbering system based on the Federal system of land subdivision is used to indicate the location of wells and springs for which chemical analyses are given in the tables. The first number denotes the township, the second number denotes the range, and the third number denotes the section. One or more letters follow the section number and denote the location within the section. The section is divided into quarters (160 acres each) and, beginning with the northeast quarter, are lettered A, B, C, D in a counterclockwise direction. Similarly, each quarter may be further divided into quarters (40 acres) and again into 10-acre tracts and lettered as before. The first letter following the section number denotes the quarter section, the second letter denotes the quarter-quarter section, and the third letter, if shown, denotes the quarter-quarter-quarter section, or 10-acre tract. For example, in the illustration below, well number 46N 073W 34CCD is in the SE¼ of the SW¼ of the SW¼ of sec. 34, T. 46 N., R. 73 W.



The aquifers listed in the tables are described by an alpha-numeric code consisting of two parts. The numbers (numeric code) indicate the geologic age, and the letters (mnemonic code) are an abbreviation of the geologic-unit name. For example, an aquifer designation of 124 WSTC indicates the Wasatch Formation of Eocene age. The aquifer codes are explained in the following table.

Geologic age		Geologic unit	
Numeric code	Name	Mnemonic code	Name
111	Holocene	ALVM	Alluvium
120	Tertiary	INTV	Intrusive Rock
122	Miocene	ARKR	Arikaree Formation
123	Oligocene	WRVR	White River Formation or Group
124	Eocene	WSTC	Wasatch Formation
125	Paleocene	FRUN	Fort Union Formation
		TGRV	Tongue River Member of Fort Union Formation
		TULK	Tullock Member of Fort Union Formation
210	Cretaceous	CRCS	Cretaceous System
211	Upper Cretaceous	CODY	Cody Shale
		FXH	Fox Hills Formation
		FRNR	Frontier Formation
		LNCE	Lance Formation
		LWIS	Lewis Shale
		MVRD	Mesaverde Formation or Group
		PIRR	Pierre Shale
217	Lower Cretaceous	CLVL	Cloverly Formation
		FLRV	Fall River Formation
		INKR	Inyan Kara Group
		LKOT	Lakota Formation
		MWRY	Mowry Shale
221	Upper Jurassic	GPSP	Gypsum Spring Formation[1]
		MRSN	Morrison Formation
		SNDC	Sundance Formation
231	Upper Triassic	CGTR	Chugwater Formation or Group
237	Lower Triassic	GSEG	Goose Egg Formation
		SPRF	Spearfish Formation
317	Lower Permian	CSPR	Casper Formation
		MNKT	Minnekahta Limestone
		MNLS	Minnelusa Formation
		OPCH	Opeche Shale
		TSLP	Tensleep Sandstone
331	Upper Mississippian	CRLS	Charles Formation of Madison Group
		MDSN	Madison Limestone
		MSNC	Mission Canyon Limestone
337	Lower Mississippian	LDGP	Lodgepole Limestone
		PHSP	Pahasapa Limestone
361	Upper Ordovician	RDRV	Red River Formation of Bighorn Group
374	Middle Cambrian	FLTD	Flathead Quartzite or Sandstone
400	Precambrian	PCMB	Precambrian Erathem

[1] Now designated Middle Jurassic by the U.S. Geological Survey

The chemical-quality data presented have been listed alphabetically by county, then numerically by sample-location number. If a well or spring has been sampled more than once, only the analysis for the first sample is listed in the tables. Identical sample-location numbers in a table indicate either the presence of more than one well or spring at that particular location or one well sampled at different intervals, for example well 57N 065W 15DA in Crook County. The samples from these wells represent the ground-water quality at specific intervals, although they share a common well head.

The numerous Campbell County wells designated 47N 072W 07CBC, 47N 072W 07CBD, and 47N 072W 07CCA were drilled and sampled as a result of three coal-gasification experiments where coal was burned underground. These wells have been sampled frequently. Because the analysis of only the initial sample from each well is given in the tables, preburn conditions generally are represented. However, certain wells at these experimental sites were not sampled until after a burn; these wells are indicated in the table by above-normal water temperatures. Samples from these wells do not represent normal aquifer water-quality nor water temperatures. The normal water temperature for relatively shallow wells in this area is 10° to 12° Celsius. Ground-water temperatures generally increase approximately 0.75° Celsius per 100 feet of depth.

REFERENCES

Grose, T. L., 1972, Tectonics, in Geologic atlas of the Rocky Mountain region United States of America: Denver, Colorado, Rocky Mountain Association of Geologists, p. 35-44.

Hodson, W. G., 1971, Chemical analyses of ground water in the Powder River basin and adjacent areas, northeastern Wyoming: Wyoming Department of Economic Planning and Development report, 20 p.

Lee, R. W., 1979, Ground-water-quality data from the Northern Powder River basin, southeastern Montana: U.S. Geological Survey Open-File Report 79-1331, 55 p.

U.S. Geological Survey, 1978, Water resources data for Wyoming, water year 1976, v. 1, Missouri River basin: U.S. Geological Survey Water-Data Report WY-761, 631 p.

GROUND-WATER-QUALITY DATA

Table 1.--Chemical analyses of wells and springs in the Powder

[Analyses from the files of the U.S. Geological Survey; concentrations in milligrams microsiemens per centimeter at 25 degrees Celsius; °C,

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			CAMPBELL COUNTY					
42N 069W 07BAC	07/08/68	125FRUN	120	951	8.4	-	613	32
42N 070W 05DDD	07/09/68	124WSTC	233	7,660	8.1	12.0	8,200	414
42N 070W 32AA	07/08/68	124WSTC	280	1,460	8.4	13.0	929	66
42N 071W 26BBC	07/15/68	124WSTC	110	2,290	8.2	11.0	1,720	179
42N 074W 06AC	06/29/68	124WSTC	225	1,310	-	10.0	941	146
43N 069W 19AB	08/07/68	125FRUN	170	2,080	8.5	11.0	1,490	61
43N 070W 11DA	08/07/68	124WSTC	45	1,720	8.1	11.0	1,440	244
43N 071W 21ADB	06/22/78	124WSTC	100	1,550	8.2	11.5	1,320	96
43N 071W 21ADB	06/22/78	124WSTC	200	1,700	8.8	12.5	1,560	110
43N 072W 11BDD	08/11/49	124WSTC	485	-	8.1	-	314	31
43N 072W 11BDD	03/16/49	124WSTC	160	-	7.3	-	2,700	506
43N 072W 11BDD	08/05/49	124WSTC	240	-	8.2	-	1,780	206
43N 072W 16CC	07/09/68	124WSTC	345	2,130	8.5	12.0	1,790	340
43N 072W 18BD	07/09/68	124WSTC	261	1,360	8.3	12.0	1,030	202
43N 072W 21CA	07/09/68	124WSTC	550	617	8.3	13.0	367	12
43N 072W 36BCC	06/21/78	125FRUN	693	2,300	7.9	11.5	2,570	310
44N 070W 28CBC	08/07/68	124WSTC	261	1,180	8.5	11.0	785	40
44N 071W 10DD	07/08/68	124WSTC	124	2,040	7.9	11.0	1,710	299
44N 072W 15BA	05/10/66	124WSTC	145	2,960	7.2	-	2,660	448
44N 073W 35CC	10/14/68	124WSTC	205	1,520	7.8	11.0	1,070	75
45N 071W 02AAA	06/05/68	124WSTC	155	1,740	7.5	13.0	1,240	100
45N 071W 05BAD	10/21/77	125FRUN	400	1,300	7.3	10.0	792	30
45N 072W 36BCC	06/21/78	124WSTC	218	4,150	7.7	10.0	3,760	460
45N 074W 17CB	06/29/68	124WSTC	259	2,070	7.8	-	1,520	136
45N 075W 34BB	10/11/68	124WSTC	160	755	7.9	10.0	487	92
46N 072W 01BCC	07/15/68	124WSTC	90	3,600	8.2	11.0	3,660	594
46N 072W 27AAC	08/30/68	124WSTC	125	1,060	8.0	12.0	705	55
46N 073W 06DDD	07/12/68	124WSTC	233	1,740	8.1	13.0	1,350	210
46N 073W 34CCD	07/19/68	124WSTC	200	1,820	8.1	12.0	1,300	130
46N 074W 09CB	10/09/68	124WSTC	281	1,090	7.9	-	726	34
46N 075W 09BD	10/09/68	124WSTC	400	1,400	7.4	12.0	983	44
46N 076W 10DA	10/09/68	124WSTC	90	2,340	7.9	12.0	1,890	198
47N 072W 07CBC	11/05/80	124WSTC	-	1,901	8.0	12.0	1,300	55
47N 072W 07CBC	11/12/80	124WSTC	-	2,733	7.7	10.0	2,160	270
47N 072W 07CBC	11/11/80	124WSTC	-	2,218	9.4	10.0	1,480	42
47N 072W 07CBC	10/24/79	124WSTC	-	1,590	8.8	11.0	1,220	31
47N 072W 07CBD	10/04/77	124WSTC	-	2,220	6.8	10.5	1,620	200
47N 072W 07CBD	10/05/77	124WSTC	-	1,420	8.3	10.0	1,000	31
47N 072W 07CBD	11/10/80	124WSTC	-	1,849	6.7	13.0	1,600	310
47N 072W 07CBD	11/11/80	124WSTC	-	975	6.5	11.0	629	150

River structural basin and adjacent areas, northeastern Wyoming
per liter (mg/L) or micrograms per liter (µg/L) except as indicated; microsiemens, degrees Celsius: Aquifer: see page 5 for aquifer codes]

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				CAMPBELL COUNTY						
17	161	7.8	396	186	4	0.4	-	7.7	50	550
919	720	6.8	254	5,940	35	1.0	-	37.0	60	1,300
30	241	7.4	745	185	23	.6	-	8.2	30	700
35	310	7.8	197	1,080	7	.1	-	8.5	40	170
33	112	6.9	210	515	16	.3	-	7.6	20	80
30	385	9.2	333	828	4	.6	-	5.6	10	490
66	83	18.0	227	885	3	.9	-	28.0	-	30
23	310	8.0	240	750	9	.1	0.01	9.6	-	150
29	350	11.0	207	940	8	.3	.02	7.6	-	40
6	-	-	267	50	11	-	-	-	-	-
163	-	-	271	1,800	13	-	-	-	-	-
65	-	-	169	1,150	13	-	-	-	-	-
100	68	8.6	318	1,100	2	.0	-	17.0	100	890
46	54	7.2	247	584	3	.1	-	15.0	90	400
3	137	2.3	389	1	12	.7	-	8.3	70	210
180	180	9.5	320	1,600	4	.3	.20	6.5	-	120,000
10	221	5.2	366	306	13	1.0	-	8.9	10	440
110	74	7.0	242	1,080	6	.4	-	14.0	60	30
157	122	13.0	340	1,730	7	1.0	-	17.0	310	1,030
17	238	3.3	118	672	3	.3	-	6.8	10	30
26	268	6.3	361	630	19	.8	-	7.4	60	2,300
12	240	10.0	790	62	41	1.1	-	5.4	160	700
250	300	12.0	410	2,500	16	.3	.03	11.0	-	3,200
19	309	5.1	82	1,000	5	.4	-	7.2	20	60
36	26	4.1	358	135	2	.2	-	15.0	10	970
218	167	14.0	296	2,480	19	1.9	-	12.0	110	8,800
8	176	5.2	268	308	12	.5	-	8.4	30	-
48	160	7.1	308	755	5	.1	-	11.0	40	320
31	271	4.9	573	555	12	.3	-	8.8	50	610
8	195	1.9	120	410	9	.4	-	7.4	10	40
11	250	2.6	88	604	18	.2	-	9.4	20	520
123	231	4.4	274	1,160	15	.2	-	10.0	120	20
14	360	11.0	293	680	25	.3	.00	13.0	30	1,600
67	320	16.0	329	1,300	9	.1	.01	13.0	80	190
23	380	63.0	317	780	26	.2	.01	7.4	300	90
20	350	9.0	268	670	9	.2	.01	2.5	60	10
63	190	6.7	290	860	7	-	.04	-	50	40
13	280	5.1	293	520	7	-	.01	-	50	30
100	100	13.0	817	620	23	.2	.01	28.0	110	2,000
41	19	6.9	646	64	4	.3	.01	23.0	80	1,800

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			CAMPBELL COUNTY--Continued					
47N 072W 07CBD	11/12/80	124WSTC	-	2,100	6.5	10.0	1,390	260
47N 072W 07CBD	11/12/80	124WSTC	-	1,350	6.9	10.5	891	140
47N 072W 07CBD	11/12/80	124WSTC	-	1,400	7.0	14.0	852	140
47N 072W 07CBD	10/10/76	124WSTC	156	1,150	7.4	10.5	799	43
47N 072W 07CBD	10/09/76	124WSTC	156	1,020	7.9	12.0	649	35
47N 072W 07CBD	10/10/76	124WSTC	156	960	7.7	10.5	630	32
47N 072W 07CBD	10/09/76	124WSTC	156	980	7.9	10.5	632	27
47N 072W 07CBD	10/09/76	124WSTC	156	1,000	7.6	11.0	645	30
47N 072W 07CBD	10/22/76	124WSTC	-	1,700	10.7	10.5	1,060	66
47N 072W 07CBD	10/09/76	124WSTC	172	980	7.6	14.5	619	27
47N 072W 07CBD	01/19/77	124WSTC	172	2,400	7.1	24.5	2,010	-
47N 072W 07CBD	08/04/77	124WSTC	172	1,660	7.8	17.0	1,160	61
47N 072W 07CBD	10/29/76	124WSTC	172	2,400	7.2	29.5	1,230	110
47N 072W 07CBD	10/23/76	124WSTC	172	1,850	7.8	13.0	-	-
47N 072W 07CBD	08/04/77	124WSTC	156	1,650	7.4	17.0	1,400	150
47N 072W 07CBD	01/20/77	124WSTC	156	1,950	7.3	19.0	1,700	220
47N 072W 07CBD	01/19/77	124WSTC	156	-	-	-	1,540	190
47N 072W 07CBD	08/04/77	124WSTC	-	2,650	9.4	18.0	2,320	350
47N 072W 07CBD	08/04/77	124WSTC	156	-	7.3	12.0	877	41
47N 072W 07CBD	01/04/78	124WSTC	-	2,100	7.0	17.0	1,080	98
47N 072W 07CBD	01/04/78	124WSTC	-	2,500	7.0	15.0	1,670	160
47N 072W 07CBD	08/05/77	124WSTC	156	1,490	7.2	11.5	978	51
47N 072W 07CBD	11/15/77	124WSTC	-	3,200	6.5	11.0	1,670	180
47N 072W 07CBD	08/05/77	124WSTC	156	-	-	-	719	29
47N 072W 07CBD	08/05/77	124WSTC	156	1,080	6.8	11.5	688	31
47N 072W 07CBD	10/05/77	124WSTC	-	1,440	8.5	10.0	985	46
47N 072W 07CBD	02/14/78	124WSTC	-	2,400	9.3	84.0	1,480	170
47N 072W 07CBD	01/17/78	124WSTC	156	-	7.7	55.0	1,650	140
47N 072W 07CBD	12/01/78	124WSTC	-	1,700	6.8	24.0	1,030	190
47N 072W 07CBD	03/22/79	124WSTC	-	1,580	7.1	11.5	1,170	200
47N 072W 07CBD	12/01/78	124WSTC	-	1,780	6.7	10.0	1,590	240
47N 072W 07CBD	07/11/79	124WSTC	-	1,200	7.7	12.5	746	34
47N 072W 07CBD	07/11/79	124WSTC	-	1,400	6.7	10.0	1,050	190
47N 072W 07CBD	03/07/80	124WSTC	-	2,140	6.6	18.0	1,200	290
47N 072W 07CBD	03/07/80	124WSTC	-	2,160	7.0	14.2	1,300	300
47N 072W 07CBD	03/07/80	124WSTC	-	1,910	6.7	22.0	1,070	250
47N 072W 07CBD	08/13/80	124WSTC	-	1,080	6.8	13.8	-	180
47N 072W 07CCA	11/12/80	124WSTC	-	3,183	6.8	12.0	2,240	220
47N 072W 07CCA	07/10/79	124WSTC	-	-	-	-	1,610	120
47N 072W 07CCA	11/07/80	124WSTC	-	3,200	7.8	50.0	2,450	92
47N 072W 07CCA	03/23/79	124WSTC	-	2,500	7.8	10.5	2,090	350
47N 072W 07CCA	06/10/81	124WSTC	-	-	-	-	2,370	310

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				CAMPBELL COUNTY--Continued						
70	140	11.0	1,499	430	12	0.1	0.01	18.0	90	810
37	140	12.0	820	99	32	.1	.01	21.0	80	710
44	130	9.2	880	31	28	.4	.01	20.0	100	3,800
11	230	5.7	501	260	10	-	.03	-	80	10
8	200	4.9	475	98	11	-	.01	-	70	10
8	200	4.9	496	95	12	-	.11	-	70	10
8	210	6.1	514	77	11	-	.02	-	80	10
8	210	5.0	542	75	11	-	.02	-	80	10
20	300	28.0	501	400	9	-	.01	-	60	200
8	200	4.6	484	100	15	-	.03	-	120	10
-	-	-	475	1,100	22	-	.01	-	-	-
23	300	14.0	380	550	14	-	.10	-	170	110
27	310	45.0	1,930	260	13	-	.02	-	350	300
-	-	-	-	-	-	-	-	-	-	-
44	230	19.0	260	790	11	-	.01	-	230	1,200
49	220	15.0	337	940	13	-	.01	-	230	3,500
60	190	7.5	347	820	7	-	.01	-	60	580
19	280	33.0	50	1,500	19	-	.10	-	2,400	30
11	260	5.0	430	350	7	-	.04	-	120	60
24	380	7.9	1,120	65	8	-	.02	-	100	1,900
40	460	9.3	1,710	140	7	-	.05	-	110	8,500
12	270	4.8	380	440	7	-	.01	-	60	740
49	560	9.4	1,810	120	7	-	.10	-	140	27,000
7	230	3.8	551	200	7	-	.10	-	60	1,500
7	230	3.9	600	110	8	-	.10	-	60	1,300
11	300	5.4	390	470	7	-	.02	-	70	10
14	180	98.0	427	980	50	-	.96	-	2,900	500
26	280	100.0	200	950	48	-	.03	-	2,800	60
53	130	9.2	1,140	0	0	-	.04	23.0	140	720
55	140	7.9	990	240	15	.2	.10	22.0	80	860
79	140	8.5	730	690	9	-	9.30	24.0	80	1,700
8	250	5.4	790	41	9	.3	.01	8.3	60	20
60	78	6.6	730	310	5	.2	.10	41.0	100	3,200
86	34	8.0	1,158	170	4	.2	.04	34.0	80	1,400
85	38	11.0	1,134	270	4	.2	.10	36.0	80	1,100
75	42	8.6	1,158	76	7	.2	.02	35.0	160	1,200
58	44	6.1	-	170	8	.3	.00	13.0	130	3,700
54	510	13.0	1,268	750	39	.1	.01	23.0	100	720
30	370	6.5	360	890	8	.2	.10	10.0	70	510
100	520	86.0	430	1,400	41	1.0	.00	18.0	2,000	590
20	290	13.0	300	1,200	57	.2	.10	12.0	130	220
68	470	12.0	1,256	860	14	.1	-	17.0	290	540

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			CAMPBELL COUNTY--Continued					
47N 072W 07CCA	03/23/79	124WSTC	-	2,500	7.3	10.5	2,140	230
47N 072W 07CCA	05/09/80	124WSTC	-	3,600	6.5	24.5	3,390	430
47N 072W 07CCA	07/10/79	124WSTC	-	1,100	7.7	11.5	799	27
47N 072W 07CCA	07/11/79	124WSTC	-	1,050	8.0	11.5	693	28
47N 072W 07CCA	07/11/79	124WSTC	-	2,300	7.4	11.5	1,840	160
47N 072W 07CCA	10/24/79	124WSTC	-	1,990	6.8	11.3	1,440	170
47N 072W 07CCA	07/11/79	124WSTC	-	2,250	7.7	10.5	1,730	140
47N 072W 07CCA	07/10/79	124WSTC	-	850	7.9	-	558	19
47N 072W 07CCA	03/23/79	124WSTC	-	1,370	7.8	10.5	948	43
47N 072W 07CCA	03/23/79	124WSTC	-	1,200	7.8	11.0	802	56
47N 072W 07CCA	10/25/79	124WSTC	-	2,240	6.6	10.7	1,950	200
47N 072W 07CCA	12/05/79	124WSTC	-	3,170	7.1	12.7	2,380	300
47N 072W 07CCA	03/07/80	124WSTC	-	4,000	6.8	-	2,810	310
47N 072W 07CCA	03/07/80	124WSTC	-	4,960	7.5	59.4	3,400	240
47N 072W 07CCA	05/06/80	124WSTC	-	1,600	8.2	14.0	1,140	49
47N 072W 07CCA	08/15/80	124WSTC	-	3,980	7.0	48.0	-	400
47N 072W 08CBB	07/10/79		-	1,450	7.6	13.5	952	110
47N 072W 09BDC	01/06/78	124WSTC	-	1,150	7.4	11.0	1,950	230
47N 072W 09DBC	10/07/76	124WSTC	-	2,600	7.4	11.0	2,520	290
47N 072W 12BCC	10/08/76	124WSTC	-	1,900	7.8	11.0	1,430	81
47N 072W 17AAB	10/08/76	124WSTC	-	2,400	7.5	10.5	2,040	180
47N 072W 18BBC	10/08/76	124WSTC	-	1,500	7.2	6.5	1,340	170
47N 072W 18CA	08/18/75	125FRUN	-	2,025	7.1	13.0	1,430	180
47N 072W 18DA	08/18/75	125FRUN	-	1,020	7.9	12.0	697	35
47N 072W 24CD	06/05/68	124WSTC	40	3,590	7.4	11.0	3,420	482
47N 073W 08DDC	07/12/68	124WSTC	311	1,200	8.3	11.0	766	33
47N 075W 06DCA	10/10/68	124WSTC	200	1,200	7.4	11.0	773	25
47N 075W 13BCC	10/10/68	124WSTC	355	1,630	7.6	13.0	1,310	225
47N 076W 26CD	10/09/68	124WSTC	300	1,580	7.6	11.0	1,040	61
48N 069W 11DC	07/20/76	125FRUN	420	1,650	8.4	13.8	1,210	8
48N 069W 22AC	07/20/76	125FRUN	400	1,780	8.4	11.4	1,260	8
48N 069W 28DCC	07/02/68	111ALVM	40	753	8.5	-	467	84
48N 069W 35ABD	07/02/68	125FRUN	170	1,780	8.7	11.0	1,190	15
48N 070W 17BC	06/20/68	125FRUN	300	2,160	6.8	12.0	1,950	367
48N 071W 11BCC	06/20/68	124WSTC	180	1,470	8.2	23.0	924	53
48N 071W 34CB	06/05/68	124WSTC	114	2,020	7.3	11.0	1,450	151
48N 072W 13AA	06/17/68	124WSTC	122	2,270	7.7	12.0	1,880	300
48N 073W 31AD	07/12/68	124WSTC	305	2,000	7.9	11.0	1,520	151
48N 075W 06BAA	07/11/68	124WSTC	300	658	8.1	12.0	384	6
48N 075W 14BD	07/27/76	124WSTC	195	510	8.8	13.0	312	5
49N 069W 07AC	02/08/72	211FXHL	2,700	1,540	8.3	28.5	971	3
49N 071W 18DCC	05/26/49	124WSTC	204	514	7.0	-	227	36
49N 071W 29DCA	06/04/68	124WSTC	263	1,010	7.8	17.0	655	24

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				CAMPBELL COUNTY--Continued						
40	410	9.3	460	1,200	9	0.1	0.10	12.0	260	600
100	580	23.0	1,463	1,500	8	.1	.02	21.0	140	6,800
7	250	4.2	510	200	50	.3	.10	7.2	70	1,200
7	220	6.7	530	130	30	.3	.10	8.7	60	480
37	390	9.6	490	980	8	.1	.10	11.0	50	1,600
33	340	8.7	1,195	260	23	.2	.00	12.0	90	2,100
34	370	10.0	420	940	8	.1	.04	15.0	50	9,100
5	200	4.0	570	25	15	.4	.10	8.5	70	170
11	280	5.1	430	320	67	.3	.10	7.9	90	730
7	230	27.0	510	160	61	.3	.10	8.8	260	110
43	420	9.9	792	870	8	.2	.00	12.0	70	1,300
52	500	10.0	1,755	550	33	.2	.02	17.0	110	48,000
84	560	18.0	1,365	1,100	43	.1	.01	17.0	90	1,700
75	600	120.0	80	2,200	95	2.3	.09	16.0	4,400	30
12	310	5.5	195	640	12	.2	.02	8.5	10	40
83	520	36.0	-	1,800	36	.4	.01	29.0	1,900	40
31	160	8.1	590	330	9	.1	.10	11.0	100	10
100	180	9.6	170	1,200	5	-	.01	-	60	1,300
92	310	11.0	138	1,500	5	-	.01	-	80	1
20	360	5.8	232	810	5	-	.01	-	40	10
55	320	9.7	17	1,300	5	-	.01	-	40	10
48	160	11.0	158	760	12	-	.09	-	110	10
52	210	8.3	340	790	7	.1	-	13.0	50	630
11	210	10.0	515	160	8	.3	-	7.8	60	40
252	173	12.0	273	2,300	50	1.1	-	13.0	130	5,830
6	205	2.9	98	457	5	.4	-	7.3	20	80
3	220	2.4	78	461	15	.3	-	8.1	20	30
74	96	5.1	350	720	3	.2	-	10.0	30	40
10	257	2.6	90	656	5	.4	-	6.8	0	130
3	400	2.6	542	510	8	.7	-	5.8	120	50
3	410	2.6	408	610	13	1.3	-	7.3	90	110
23	58	4.7	422	74	1	.4	-	13.0	80	60
5	410	3.6	590	440	7	.7	-	7.3	80	70
81	78	6.7	32	1,360	9	.3	-	35.0	50	670
19	305	8.7	1,060	1	5	.9	-	8.2	80	770
51	307	12.0	984	412	10	.9	-	14.0	90	4,860
156	62	8.4	375	1,110	7	1.1	-	14.0	150	180
31	285	6.0	180	948	2	.2	-	7.8	30	20
1	135	1.4	220	111	12	.4	-	7.9	20	140
1	110	1.1	223	61	16	.6	.10	7.4	40	90
1	391	1.6	793	132	30	5.2	.20	15.0	570	30
19	9	3.2	123	80	4	.8	-	13.0	110	14,600
7	213	4.1	437	177	5	.8	.00	9.5	40	-

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			CAMPBELL COUNTY--Continued					
49N 072W 04AB	08/07/49	124WSTC	387	2,030	7.5	-	1,250	58
49N 072W 05AAB	06/14/49	124WSTC	120	2,210	7.0	-	1,940	365
49N 075W 29CAC	01/01/58	125FRUN	2,111	-	8.0	-	1,290	15
49N 075W 31CCC	07/11/68	124WSTC	420	539	8.1	14.0	330	5
49N 075W 32DCC	08/05/58	125FRUN	2,737- 2,832	-	8.2	-	1,010	19
49N 075W 32DCC	08/09/58	211LNCE	5,297- 5,362	-	8.5	-	2,630	13
49N 075W 32DCC	08/09/58	211FXHL	5,918- 6,050	-	8.4	-	3,200	19
49N 075W 32DD	07/11/68	124WSTC	160	442	8.4	11.0	263	3
49N 075W 34CA	07/21/76	124WSTC	515	993	8.8	14.2	646	9
49N 075W 34CA	07/21/76	124WSTC	520	680	8.7	12.6	-	-
49N 076W 27AAA	07/11/68	124WSTC	1,000	1,140	8.1	17.0	726	9
50N 071W 20ADC	05/23/49	124WSTC	6	1,890	7.3	-	1,490	195
50N 071W 21BBB	10/24/74	125FRUN	220	3,700	7.6	10.0	2,790	330
50N 071W 27AAC	10/22/74	111ALVM	18	3,020	7.7	10.5	2,180	260
50N 071W 27ABA	03/04/75	125FRUN	-	535	8.3	17.1	333	6
50N 071W 27BAD	03/05/75	111ALVM	19	7,270	7.5	9.5	6,610	370
50N 071W 27BAD	05/15/75	125FRUN	-	480	7.7	14.0	289	5
50N 071W 27BCB	05/21/49	125FRUN	540	471	7.7	-	270	8
50N 071W 28AAC	05/24/76		-	1,550	8.0	14.0	-	160
50N 071W 33BAC	10/22/74	125FRUN	152	4,000	7.6	8.5	3,070	290
50N 071W 33BAC	10/22/74	125FRUN	65	3,200	7.5	9.5	2,500	380
50N 071W 33BAC	03/06/75	111ALVM	26	4,230	7.5	8.0	2,950	370
50N 072W 08BBB	05/20/49	124WSTC	380	1,180	7.5	-	734	25
50N 072W 14AAA	05/20/76		-	825	7.4	19.0	-	-
50N 072W 20CAA	05/21/49	124WSTC	160	667	7.6	-	430	85
50N 072W 21AAC	05/25/76		-	950	7.9	38.0	831	2
50N 072W 21ACC	06/14/49	124WSTC	210	2,280	7.6	-	1,940	341
50N 072W 21ACC	05/31/49	211FXHL	3,445	1,830	-	43.9	1,150	5
50N 072W 22CAC	05/31/49	125FRUN	840	1,190	7.7	-	745	50
50N 072W 26AAC	05/26/76	124WSTC	207	4,000	6.9	12.5	-	-
50N 072W 26ACB	07/06/76	124WSTC	280	1,220	7.3	14.9	712	30
50N 072W 26BBB	05/26/76		-	3,000	6.8	12.0	-	500
50N 072W 28ABB	08/13/76	124WSTC	232	3,100	6.5	13.0	2,830	530
50N 072W 34AAA	07/06/76	124WSTC	1,106	604	7.5	21.2	347	11
50N 072W 35BA	05/23/68	124WSTC	340	1,230	7.7	11.0	782	34
50N 072W 35DD	05/09/68	124WSTC	305	4,140	7.3	11.0	4,060	448
50N 073W 01AA	08/13/76		-	3,000	7.0	12.5	2,690	530
50N 073W 27BCB	05/25/76		-	1,700	6.9	10.0	2,150	430
50N 074W 25ACC	07/10/68	124WSTC	270	689	8.3	-	415	13
50N 074W 31CB	05/21/68	124WSTC	290	1,740	7.4	11.0	1,220	50
50N 075W 30BD	10/15/68	124WSTC	400	635	7.9	11.0	395	7
51N 069W 20BD	07/01/68	125FRUN	206	1,980	8.7	-	1,340	28

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				CAMPBELL COUNTY--Continued						
45	311	11.0	627	476	21	1.2	-	8.7	70	20
114	40	9.2	46	1,370	4	.6	-	12.0	270	11,000
9	510	-	1,231	118	34	-	-	-	-	-
0	123	1.2	229	68	10	.8	-	8.6	30	70
5	380	-	781	150	70	-	-	-	-	-
5	997	-	1,256	600	380	-	-	-	-	-
-	1,290	-	1,914	200	720	-	-	-	-	-
2	100	1.7	267	1	13	.5	-	9.2	30	130
2	190	2.1	180	330	16	.3	.03	7.9	40	90
-	-	-	194	-	-	-	-	-	-	-
2	300	3.3	779	7	10	2.0	-	9.3	110	460
112	58	67.0	304	856	8	.9	-	30.0	630	10
150	380	40.0	753	1,500	11	.5	-	9.8	80	20
130	290	14.0	443	1,100	160	.5	-	6.7	280	50
1	130	4.7	354	3	5	1.2	.10	8.3	50	-
520	980	18.0	746	4,300	38	.7	.10	12.0	480	-
2	110	4.0	301	1	8	.9	.02	8.0	40	-
4	91	2.8	283	3	7	1.0	-	11.0	190	50
81	290	21.0	-	1,100	39	.6	-	4.6	-	30
160	500	23.0	895	1,600	44	.6	-	8.8	120	430
180	180	23.0	675	1,300	90	.5	-	12.0	120	-
250	280	16.0	846	1,400	200	.8	.04	13.0	240	-
14	254	5.6	823	2	8	.8	-	12.0	80	850
-	-	-	-	-	-	-	-	-	40	140
32	9	5.6	249	149	4	.9	-	17.0	0	270
0	350	3.3	848	7	28	5.4	.01	16.0	190	30
150	43	14.0	373	1,170	7	.2	-	22.0	220	3,300
1	473	5.2	1,217	2	31	8.0	-	20.0	260	10
24	177	7.6	432	238	15	1.4	-	13.0	150	510
-	-	-	311	-	-	-	.02	-	100	3,700
15	240	7.2	800	6	10	.8	.06	8.8	80	20
180	88	16.0	-	1,900	8	.1	-	18.0	160	2,600
150	46	6.2	274	1,900	8	.5	.01	23.0	110	21,000
4	120	5.1	363	2	8	1.0	1.30	10.0	60	170
19	269	7.3	859	13	7	.6	-	8.5	100	10
443	104	10.0	311	2,880	3	3.2	-	15.0	230	6,000
150	45	6.1	210	1,800	8	.4	-	22.0	120	20,000
110	86	7.2	363	1,300	24	.4	-	13.0	230	10
1	158	2.3	444	1	12	.5	-	8.7	60	90
17	312	3.0	123	768	2	.7	-	7.8	20	0
2	138	1.5	217	121	9	.8	-	8.2	20	20
4	450	4.9	620	530	1	2.8	-	6.9	100	90

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			CAMPBELL COUNTY--Continued					
51N 069W 20DB	07/01/68	211FXHL	2,250	1,660	8.7	10.0	1,110	18
51N 069W 34DCB	10/15/71	211FXHL	2,396	1,280	9.0	16.0	824	2
51N 071W 22CDC	06/09/49	124WSTC	SPRING	438	7.7	-	286	53
51N 071W 23CD	06/28/68	125FRUN	219	1,990	8.1	12.0	1,440	119
51N 071W 29AD	06/28/68	125FRUN	130	1,390	7.3	9.0	1,070	192
51N 071W 30BAD	06/08/49	124WSTC	SPRING	1,380	7.4	-	1,080	193
51N 071W 32CDC	06/28/68	125FRUN	311	1,620	7.6	14.0	1,020	57
51N 072W 22CB	06/06/68	124WSTC	100	1,660	7.5	12.0	1,070	79
51N 072W 23AB	11/22/76	125FRUN	1,100	-	7.7	-	3,480	500
51N 072W 29BDD	05/20/49	124WSTC	34	2,690	7.5	-	2,320	275
51N 072W 32CCC	09/18/50	124WSTC	433	3,040	7.3	13.5	-	-
51N 076W 09BB	10/15/68	125FRUN	1,800	1,790	8.4	15.0	1,160	24
52N 070W 02AB	07/01/68	125FRUN	750	1,210	8.8	13.0	781	7
52N 070W 11CA	06/27/68	125FRUN	635	1,310	8.7	12.0	825	5
52N 070W 25DB	07/01/68	125FRUN	505	1,390	8.8	12.0	948	5
52N 073W 25DD	05/14/68	124WSTC	210	437	7.2	12.0	273	58
52N 074W 01BA	07/22/76	125FRUN	-	4,080	7.5	12.5	4,050	460
52N 075W 17AD	07/17/68	124WSTC	938	831	8.4	16.0	506	10
52N 075W 27CBA	07/17/68	124WSTC	160	679	8.2	11.0	415	6
53N 070W 13AA	07/05/76	125FRUN	810	1,240	8.3	15.0	755	3
53N 070W 21DC	06/27/68	125FRUN	710	1,320	8.8	14.0	833	7
53N 070W 26CC	06/27/68	125FRUN	720	1,250	8.7	15.0	790	5
53N 070W 33BD	07/10/68	211FXHL	2,128	1,450	8.6	21.0	888	3
53N 070W 34DCC	07/10/68	211FXHL	2,700	1,550	8.6	16.0	978	2
53N 071W 12DD	06/30/68	125FRUN	780	1,300	8.8	13.0	820	3
53N 073W 12AB	05/14/68	111ALVM	108	935	7.8	13.0	566	19
53N 073W 20BD	07/23/76	125FRUN	407	1,500	7.6	13.8	967	35
53N 073W 24AC	05/14/68	125FRUN	173	3,430	7.5	12.0	2,740	379
53N 074W 07BCC	07/16/68	124WSTC	120	4,190	8.3	11.0	4,080	440
53N 074W 35AB	07/22/76	125FRUN	210	3,750	7.4	12.5	3,220	300
53N 075W 04AC	08/29/68	124WSTC	130	3,850	7.8	-	3,180	153
53N 076W 22AB	07/12/76	124WSTC	1,050	1,260	8.0	25.3	891	7
53N 076W 26AAA	07/17/68	125FRUN	1,043	1,840	8.8	21.0	1,160	22
54N 070W 09DCC	07/30/68	125FRUN	900	1,170	8.4	16.0	740	3
54N 070W 19DC	06/26/68	125FRUN	305	1,590	8.8	12.0	1,070	11
54N 071W 01CD	06/26/68	125FRUN	270	1,410	8.7	12.0	924	10
54N 071W 01CD	06/26/68	111ALVM	37	1,190	8.7	14.0	757	25
55N 069W 35BB	07/30/68	125FRUN	320	2,230	8.3	10.0	1,650	145
55N 070W 02ACC	07/18/68	125FRUN	555	1,430	8.5	14.0	932	4
55N 070W 14ADC	07/18/68	125FRUN	930	1,110	8.5	13.0	701	3
55N 071W 32BC	08/21/75	125FRUN	105	432	8.5	14.2	399	9
55N 072W 25CA	08/21/75	125FRUN	SPRING	217	7.8	15.2	209	36
55N 072W 32CDD	07/31/68	111ALVM	60	1,520	8.4	9.0	992	35

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				CAMPBELL COUNTY--Continued						
1	390	3.8	597	384	3	1.8	-	8.0	120	100
0	320	1.1	545	198	18	4.0	0.10	11.0	170	60
11	14	11.0	164	79	3	1.0	-	25.0	230	10
65	261	16.0	519	703	8	.6	-	7.7	250	80
47	62	20.0	257	612	3	1.1	-	5.9	960	340
56	43	27.0	191	636	3	.9	-	25.0	710	30
29	320	11.0	1,150	1	10	.9	-	27.0	70	600
38	306	10.0	1,120	73	1	.7	-	12.0	360	370
220	200	65.0	337	2,300	6	.6	-	21.0	3,200	10
204	144	14.0	266	1,480	21	.6	-	19.0	200	2,200
-	-	-	424	-	6	.4	-	-	-	45,000
3	455	17.0	1,231	0	21	1.1	-	14.0	100	60
1	300	1.9	629	144	6	1.8	-	7.4	150	70
5	325	1.9	702	123	10	2.4	-	8.4	180	270
2	360	2.1	594	266	7	2.6	-	7.9	70	160
13	10	1.9	146	100	1	.9	-	16.0	10	1,400
150	570	14.0	268	2,700	6	.1	.04	9.1	100	2,700
4	198	3.1	549	1	9	.7	-	10.0	30	40
0	167	1.8	435	1	14	1.6	-	8.2	50	50
1	290	1.6	577	160	4	1.9	.02	8.5	180	220
0	340	1.9	763	89	8	2.3	-	9.2	160	240
3	309	1.7	655	130	7	3.4	-	8.8	160	120
7	340	1.0	664	167	25	7.0	-	10.0	360	160
0	370	1.1	597	259	37	3.3	-	11.0	540	120
1	320	2.1	729	117	6	2.3	-	9.4	140	110
9	205	6.1	604	7	11	.9	-	9.9	40	990
13	330	6.2	1,030	58	9	.8	.10	7.9	70	340
102	431	17.0	1,350	1,120	9	.7	-	7.6	30	580
159	640	15.0	366	2,630	5	.1	-	9.6	100	2,600
130	480	9.8	259	2,100	6	.4	13.00	9.8	120	190
145	660	12.0	236	2,070	7	.3	-	3.3	60	20
3	350	7.2	970	15	18	1.1	.01	11.0	110	190
10	440	14.0	1,304	0	13	1.3	-	15.0	110	1,400
0	285	1.4	580	148	4	2.8	-	10.0	130	60
2	385	2.7	601	349	5	1.1	-	8.9	60	160
1	335	2.1	569	281	6	1.1	-	8.1	30	210
12	241	3.5	513	204	7	.8	-	8.6	60	120
92	280	9.0	652	781	14	.5	-	8.9	120	1,000
1	340	1.7	536	306	5	1.6	-	8.2	240	90
0	268	1.0	524	151	6	2.3	-	9.9	280	100
6	140	4.2	415	16	9	1.5	-	9.2	80	120
12	14	8.6	177	24	3	.8	-	24.0	160	50
40	262	18.0	709	258	13	.9	-	15.0	120	410

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			CAMPBELL COUNTY--Continued					
55N 073W 26	10/19/77	125FRUN	465	1,850	7.4	14.0	1,120	49
55N 075W 09BC	06/30/68	125FRUN	1,095	1,950	8.7	12.0	1,220	12
55N 075W 29BB	10/17/68	125FRUN	415	1,080	8.1	11.0	671	9
56N 070W 34BDA	07/18/68	125FRUN	580	1,230	8.5	14.0	792	3
56N 071W 15DD	10/16/68	211FXHL	2,036	1,330	8.9	18.0	832	2
56N 071W 30DBB	10/19/77	111ALVM	23	2,750	7.0	10.0	2,110	280
56N 071W 30DBB	10/25/76	111ALVM	30	3,350	6.8	9.0	-	-
56N 071W 32BC	08/21/75	125FRUN	-	432	8.5	14.2	399	9
56N 072W 19CDC	10/29/76		SPRING	1,900	8.2	13.0	1,500	170
56N 072W 21CCC	10/30/76	125FRUN	SPRING	530	7.8	9.0	402	68
56N 072W 29ACC	10/30/76	125FRUN	280	2,350	7.4	6.0	2,030	260
56N 072W 29ACC	10/30/76	125FRUN	SPRING	2,350	7.4	6.0	2,030	260
56N 072W 30ABB	10/29/76		SPRING	2,600	6.7	11.0	2,270	250
56N 072W 31DDA	10/25/76	125FRUN	683	1,325	7.1	9.5	891	33
56N 072W 32AC	10/18/77	125FRUN	465	2,300	7.5	13.0	1,400	61
56N 072W 33BCD	10/18/77	125FRUN	338	2,000	7.8	13.0	1,250	42
56N 072W 34BD	08/21/75	125FRUN	SPRING	439	8.0	10.0	443	76
56N 072W 36AB	08/21/75	125FRUN	SPRING	655	6.5	11.3	655	100
56N 073W 21AB	10/17/77	125FRUN	405	1,550	7.9	15.0	862	17
56N 073W 25BBA	10/18/77	125FRUN	442	3,100	7.6	15.0	1,940	73
56N 073W 25CC	10/17/77	125FRUN	422	2,050	7.2	10.5	1,280	37
56N 073W 25CC	10/26/76	125FRUN	175	2,210	7.6	10.0	1,740	62
56N 073W 25CC	10/12/77	125FRUN	175	1,900	7.8	11.0	1,130	32
56N 073W 27DDC	10/17/77	125FRUN	509	1,950	7.5	13.0	1,190	31
56N 073W 29BDB	08/01/68	125FRUN	179	2,100	8.0	11.0	1,540	100
56N 074W 04AA	08/11/76		-	1,750	8.4	41.5	1,080	1
56N 074W 04CB	08/11/76	125FRUN	3,850	1,750	8.4	41.5	1,330	1
56N 076W 25CB	07/08/76	125FRUN	850	3,800	7.5	16.0	2,060	26
57N 069W 25AAA	08/06/68	211PIRR	100	490	8.4	-	294	35
57N 069W 26AC	08/06/68	211PIRR	180	866	7.9	12.0	554	81
57N 070W 19DD	07/24/76	125FRUN	606	1,210	8.9	15.0	657	2
57N 070W 22DD	10/08/68	211FXHL	600	1,030	8.1	14.0	655	2
57N 071W 14BD	08/06/68	125FRUN	615	1,060	8.8	13.0	661	2
57N 074W 08BA	07/09/76	125FRUN	212	1,920	7.2	12.5	1,210	16
57N 074W 18DAA	08/01/68	125FRUN	400	5,890	8.3	13.0	5,620	444
58N 069W 31CC	10/08/68	211FXHL	625	1,040	8.2	12.0	676	7
58N 071W 25DC	09/24/68	111ALVM	18	4,190	7.9	-	3,460	225
58N 071W 26DA	09/10/68	125FRUN	350	1,080	8.0	13.0	668	3
58N 073W 24DC	07/31/68	125FRUN	12	2,770	8.1	11.0	2,380	268
			CONVERSE COUNTY					
29N 075W 21DCD	08/25/62	400PCMB	SPRING	53	6.2	10.0	53	6

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				CAMPBELL COUNTY--Continued						
34	360	12.0	1,290	8	6	0.7	-	8.7	90	20
7	490	8.0	1,377	1	16	1.6	-	12.0	120	460
5	264	2.1	760	0	8	1.0	-	8.2	70	260
1	300	1.5	539	206	6	.7	-	8.7	190	60
0	330	.6	669	130	26	4.5	-	9.0	440	180
120	160	27.0	370	1,300	8	.6	-	30.0	500	120
-	-	-	-	-	-	-	-	-	-	-
6	140	4.2	415	16	9	1.5	-	9.2	80	120
100	130	29.0	289	900	6	.4	-	17.0	1,200	30
26	19	14.0	216	140	3	.8	-	25.0	360	20
130	140	27.0	106	1,400	4	.6	-	14.0	1,000	80
130	140	27.0	106	1,400	4	.6	-	14.0	1,000	80
140	220	24.0	423	1,400	8	.4	-	19.0	440	2,900
19	260	10.0	542	290	8	.7	-	3.4	-	60
55	420	12.0	1,220	220	26	.7	-	6.3	80	320
46	390	13.0	1,090	200	10	.7	-	8.0	90	50
23	16	16.0	156	210	3	.8	-	21.0	530	40
43	40	6.3	191	350	3	.8	-	16.0	410	1,900
9	320	7.6	960	23	7	.5	-	4.6	90	210
83	480	15.0	580	990	6	.2	-	1.7	100	60
27	450	8.2	1,410	48	5	1.0	-	8.0	90	170
42	520	11.0	1,250	480	5	.5	-	6.3	80	40
22	390	8.3	1,160	87	7	.9	-	7.8	80	110
23	440	9.6	1,340	7	7	.6	-	7.9	100	60
62	330	8.0	592	724	6	.4	-	11.0	80	1,000
0	440	2.1	1,121	20	40	6.6	-	17.0	370	40
0	450	2.1	1,609	24	41	6.5	-	17.0	380	40
18	800	12.0	2,330	24	21	.9	.02	9.0	160	160
18	41	3.7	229	65	2	.5	-	15.0	20	150
38	52	7.4	353	183	2	.2	-	16.0	30	350
0	220	1.1	380	230	7	.5	.03	8.9	110	110
1	230	1.0	306	256	3	.3	-	11.0	60	20
1	254	1.1	521	129	5	2.3	-	9.6	130	150
9	470	5.7	1,370	11	9	1.0	.10	7.4	120	230
319	890	21.0	753	3,560	10	.2	-	7.1	330	80
0	231	1.2	306	272	2	.1	-	11.0	30	40
129	712	21.0	688	1,980	25	.6	-	25.0	240	20
0	252	1.2	433	183	4	2.0	-	9.0	160	90
68	370	52.0	585	1,310	5	.8	-	18.0	5,400	50
				CONVERSE COUNTY						
1	3	2.8	24	5	2	0.0	2.30	12.0	-	200

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			CONVERSE COUNTY--Continued					
31N 071W 08CDD	07/19/63	317CSPR	SPRING	983	7.6	-	659	83
32N 071W 17DDB	08/16/50	111ALVM	40	726	8.2	-	505	39
32N 071W 29BDB	08/16/50	123WRVR	110	2,410	8.0	-	1,520	18
32N 071W 30CBD	08/16/50	123WRVR	35	3,320	7.6	10.0	2,370	80
32N 073W 21ABB	08/15/50	317TSLP	SPRING	316	7.9	18.5	204	37
33N 071W 18BDB	08/17/50	125FRUN	210	685	8.2	-	414	16
33N 072W 07DBC	08/17/50	111ALVM	12	2,120	7.6	12.0	1,510	139
33N 073W 23ACA	08/18/50	125FRUN	100	3,620	7.7	13.9	3,030	353
33N 073W 25BBB	08/17/50	123WRVR	SPRING	1,030	7.8	11.0	701	20
33N 073W 27BDB	08/17/50	123WRVR	92	1,450	8.1	10.0	1,040	25
33N 073W 27DCC	08/17/50	123WRVR	30	5,450	7.8	11.0	4,540	263
33N 073W 27DCD	08/17/50	123WRVR	160	5,200	7.2	12.0	4,490	157
33N 073W 32CD	08/12/81		-	1,620	7.1	-	1,250	190
33N 073W 32CD	04/18/74	331MDSN	6,654	1,610	7.2	59.5	1,160	160
33N 073W 34BCC	08/17/50	123WRVR	8	5,350	7.8	13.5	4,490	305
33N 074W 08B	06/04/57	211LNCE	27	-	7.0	-	410	53
33N 074W 08B	07/19/57	211LNCE	48	-	7.9	-	621	76
33N 074W 08B	09/15/57	211LNCE	33	-	7.8	-	445	47
33N 074W 08B	09/13/57	211LNCE	42	-	7.0	-	449	74
33N 075W 08DBB	07/20/72	331MDSN	8,591	4,140	7.6	65.5	2,950	335
33N 075W 20AAC	07/24/72	331MDSN	9,154	1,450	7.9	64.5	1,010	156
33N 076W 16CAA	07/25/72	331MDSN	6,954	4,600	7.4	60.0	3,350	411
33N 076W 33CBD	07/24/72	331MDSN	8,770	658	7.8	-	440	69
34N 068W 09CCD	06/04/69	125FRUN	190	1,380	7.7	12.0	1,030	55
34N 068W 12BBD	06/04/69	125FRUN	650	1,030	8.3	12.0	669	3
34N 069W 10DD	06/05/69	125FRUN	206	1,570	8.0	12.0	1,170	151
34N 074W 02DD	07/29/69	125FRUN	165	925	8.0	11.0	710	142
34N 074W 09CC	07/29/69	125FRUN	206	673	8.7	-	417	1
34N 076W 08BC	09/30/69	211MVRD	3,576	2,650	8.5	33.5	1,790	1
35N 070W 04BA	06/19/69	125FRUN	415	708	8.1	14.0	475	10
35N 071W 26BBD	06/11/81	211LNCE	-	-	-	-	640	7
35N 071W 27CC	02/05/75	211FXHL	6,330	1,000	8.5	55.8	635	7
35N 074W 35CAA	10/30/75		-	675	8.6	11.5	-	-
36N 069W 24DD	05/06/69	125FRUN	434	605	8.3	13.0	558	5
36N 070W 09CCB	06/03/68	124WSTC	217	1,830	7.6	12.0	1,340	93
36N 072W 09DD	06/06/69	124WSTC	212	877	7.7	11.0	568	36
36N 072W 21BAD	07/01/80	124WSTC	80	505	8.2	16.0	326	13
36N 072W 27BDB	07/01/80	124WSTC	95	4,000	5.6	13.0	3,310	500
36N 072W 29BA	07/22/69	124WSTC	400	-	6.6	-	424	45
36N 073W 21DCC	05/08/80	124WSTC	15	925	7.6	6.0	473	100
36N 073W 21DCC	05/08/80	124WSTC	165	1,050	7.8	10.0	582	83

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				CONVERSE COUNTY--Continued						
21	102	8.8	198	243	73	0.8	0.30	28.0	240	0
7	115	8.9	266	124	17	.5	5.20	39.0	230	70
2	512	10.0	372	475	277	3.2	1.60	27.0	1,400	-
21	690	26.0	708	1,080	96	.8	.70	24.0	660	6,900
5	20	4.0	144	34	3	.4	1.40	23.0	290	340
7	137	4.6	363	43	13	1.1	3.20	9.9	300	40
33	332	8.6	510	700	31	.6	.52	17.0	420	-
98	432	38.0	432	1,830	52	.3	.40	13.0	200	1,700
1	216	9.4	478	105	29	.8	2.80	72.0	200	40
1	309	16.0	616	205	32	.7	18.00	64.0	450	1,800
57	1,060	42.0	464	2,650	26	1.0	33.00	64.0	1,200	40
13	1,130	46.0	343	2,500	41	.6	83.00	59.0	820	40
39	140	21.0	146	620	130	1.6	-	39.0	310	170
32	140	20.0	154	590	100	2.3	.09	32.0	230	2,600
49	995	37.0	388	2,750	30	1.1	19.00	43.0	1,300	2,800
7	77	-	195	145	12	-	-	20.0	-	-
19	105	-	219	286	12	-	-	15.0	-	-
14	91	-	280	122	12	-	-	21.0	-	-
21	36	-	119	228	10	-	-	21.0	-	-
82	488	37.0	95	1,370	556	4.0	.00	30.0	710	-
30	103	12.0	124	512	100	1.7	.20	35.0	110	-
64	537	51.0	112	1,560	623	4.4	.00	37.0	1,200	-
22	192	4.0	129	59	18	1.2	.00	11.3	80	-
34	224	9.8	220	575	2	.2	2.26	7.6	40	-
4	274	2.7	683	28	10	2.6	.05	9.0	60	-
64	120	10.0	178	725	3	.2	.10	6.8	0	120
17	28	8.6	301	178	24	.3	33.00	18.0	80	50
0	162	.4	285	104	3	.3	.10	5.4	80	60
2	670	2.2	1,063	515	52	3.1	.10	22.0	1,400	80
0	161	29.0	307	100	8	1.5	2.70	2.0	40	20
1	250	5.2	606	12	39	3.6	.09	25.0	-	-
1	250	4.1	600	24	21	3.8	.02	29.0	230	-
-	-	-	-	-	-	-	-	-	70	30
3	134	2.8	250	102	2	.8	40.00	7.9	20	110
29	304	4.0	301	745	9	.7	.00	11.0	50	-
9	146	2.4	184	278	5	.3	.00	1.0	10	10
3	97	2.9	158	120	1	.4	.36	9.7	-	170
220	220	11.0	27	2,000	230	.1	.02	3.0	-	110,000
7	94	6.0	219	160	4	-	-	-	-	-
20	11	6.0	134	110	24	.3	28.00	12.0	-	40
13	81	7.7	115	300	25	.3	.46	13.0	-	20

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			CONVERSE COUNTY--Continued					
36N 073W 26ADA	05/08/80	124WSTC	198	810	7.6	10.0	308	78
36N 073W 27ABB	05/07/80	124WSTC	180	810	7.6	10.0	420	71
36N 073W 27BA	06/06/69	124WSTC	180	645	7.7	10.5	700	69
36N 073W 35DAD	05/07/80	124WSTC	20	950	7.6	10.0	467	84
36N 074W 04DCD	05/06/80		SPRING	870	8.9	15.0	564	110
36N 074W 18CA	07/29/69	124WSTC	35	627	7.8	-	388	82
36N 074W 26BA	05/28/80	124WSTC	149	1,000	7.6	10.5	516	120
36N 074W 36ABB	05/08/80	124WSTC	474	550	7.7	12.5	228	46
36N 075W 09CC	09/29/69	125FRUN	360	326	6.9	11.0	227	40
37N 068W 12CB	06/05/69	125FRUN	200	538	8.1	13.0	326	32
37N 073W 10BAC	05/28/80	125FRUN	300	500	8.1	12.5	304	20
37N 073W 14ADA	05/08/80	125FRUN	250	640	8.0	11.5	237	13
37N 074W 02DCA	07/01/80	124WSTC	120	613	7.7	-	377	75
37N 074W 14AB	07/02/69	124WSTC	140	409	-	11.0	242	50
37N 074W 35DC	07/03/69	124WSTC	118	743	7.5	-	768	101
38N 073W 14BCB	05/09/80	124WSTC	322	1,750	7.6	12.0	1,090	200
38N 073W 17AB	07/02/69	124WSTC	515	417	8.1	-	257	13
38N 073W 27CDB	05/09/80	124WSTC	370	570	7.9	14.5	323	39
38N 073W 33CCB	05/29/80		310	650	8.1	12.5	329	28
38N 074W 13DB	07/02/60	124WSTC	160	2,000	7.9	10.5	2,100	343
39N 069W 33AB	07/02/69	125FRUN	370	1,860	8.2	12.0	1,300	53
39N 070W 29AA	07/02/69	125FRUN	498	514	7.9	14.0	320	18
39N 072W 06BD	06/17/68	125FRUN	1,104	458	8.4	19.0	287	9
39N 072W 30CA	07/03/69	125FRUN	1,020	385	7.4	19.0	239	10
39N 073W 23CCA	05/07/80		310	1,950	8.2	12.5	1,490	310
39N 073W 23DCD	05/07/80	125FRUN	1,092	560	7.9	-	351	47
39N 073W 24BDD	05/07/80	125FRUN	730	680	8.2	13.0	404	41
39N 074W 34BDD	10/11/77	124WSTC	541	480	8.2	10.5	291	33
40N 068W 23DD	07/30/69	125FRUN	433	619	8.2	-	377	3
40N 072W 18BDA	06/17/68	125FRUN	530	603	8.3	18.0	376	9
40N 073W 07BBC	07/03/69	124WSTC	537	624	7.5	-	399	12
40N 073W 08CD	07/03/69	124WSTC	310	901	7.8	13.0	588	30
40N 074W 21AC	07/03/69	124WSTC	30	628	7.5	13.0	395	100
41N 068W 28DB	09/17/74	125FRUN	99	2,100	7.5	10.0	1,840	180
			CROOK COUNTY					
49N 062W 22DC	09/15/69	317MNKT	150	904	8.0	-	648	148
49N 063W 05DA	09/15/69	317MNLS	1,450	2,640	7.5	12.0	2,450	615
49N 068W 29BC	08/16/56	125FRUN	155	1,810	8.2	10.5	1,200	10
50N 062W 02CAA	09/13/69	317MNLS	445	426	8.0	9.5	237	50
50N 067W 04CC	10/02/56	111ALVM	39	1,640	7.8	9.5	1,000	52
50N 067W 31DCD	10/02/56	211LNCE	406	1,830	8.1	12.0	1,190	6
50N 068W 14CD	08/16/56	211LNCE	97	1,440	8.2	10.0	900	11

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				CONVERSE COUNTY--Continued						
17	9	2.7	341	11	3	0.2	1.80	11.0	-	80
17	50	5.8	244	110	7	.3	5.50	15.0	-	70
15	53	5.7	260	136	4	.3	62.00	15.0	20	30
25	49	1.1	390	100	4	.3	.15	10.0	-	70
48	21	2.2	390	160	13	.5	.07	16.0	-	60
21	21	1.2	236	98	13	.9	.90	31.0	30	40
31	15	1.5	280	100	24	.2	17.00	11.0	-	100
13	10	4.7	158	46	4	.4	2.00	17.0	-	60
11	3	3.6	94	75	2	.5	4.40	27.0	20	50
12	68	7.6	252	70	3	.7	.10	7.8	20	43
3	86	2.9	183	87	3	.2	.07	11.0	-	90
2	75	2.5	195	36	4	.6	.11	7.7	-	20
17	29	7.9	256	110	2	.3	.00	9.5	-	170
8	21	5.9	199	41	3	.3	.10	14.0	50	10
29	9	4.1	221	92	29	.3	86.00	14.0	-	30
30	81	9.0	195	650	5	.1	.12	14.0	-	510
4	79	2.3	226	33	2	.2	.00	12.0	50	40
7	58	4.6	195	100	2	.2	.06	15.0	-	90
5	85	3.7	207	91	3	.2	.00	11.0	-	490
8	62	10.0	1,352	980	14	.3	.00	12.0	90	1,200
23	360	6.3	399	640	12	.6	.05	7.2	10	-
5	107	4.2	332	7	6	1.3	.00	8.3	50	40
1	94	1.4	176	81	3	.2	.10	11.0	50	30
3	72	1.9	162	56	3	.2	.20	13.0	50	40
55	63	12.0	293	880	11	.1	.05	18.0	-	490
6	60	4.7	207	110	4	.1	.02	16.0	-	490
10	84	4.7	207	140	4	.1	.07	18.0	-	160
30	23	6.4	170	100	12	.5	-	1.4	70	250
2	152	2.1	400	4	7	1.2	.00	8.7	20	-
1	124	1.7	180	137	4	.3	.10	9.6	50	80
5	126	1.5	198	140	5	.3	.20	11.0	50	30
4	165	2.1	189	277	4	.2	.20	12.0	40	20
22	8	4.3	295	102	2	.3	.30	10.0	10	10
87	290	16.0	288	1,100	4	.2	2.90	7.5	70	790
				CROOK COUNTY						
37	4	2.4	295	261	3	.4	7.50	13.0	210	30
86	5	2.4	234	1,600	1	.9	1.90	13.0	70	60
5	400	3.3	480	510	9	1.6	4.20	7.4	180	180
26	4	1.7	284	6	2	.4	.00	7.6	40	170
19	281	7.1	648	295	9	.4	.30	19.0	330	11,000
3	440	1.6	722	365	4	.0	.00	9.3	190	20
6	315	3.6	550	275	10	.8	.10	6.7	230	690

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			CROOK COUNTY--Continued					
51N 063W 09AD	01/18/65	317MNLS	413	622	7.8	10.0	359	102
51N 063W 09DB	01/18/65	317MNLS	400	691	7.5	10.0	539	120
51N 063W 10BD	01/18/65	317MNLS	525	596	8.0	9.0	355	85
51N 063W 12ADB	11/05/75		-	390	7.6	14.0	222	56
52N 060W 05CA	09/16/69	317OPCH	65	855	7.8	14.0	582	136
52N 061W 24AAC	12/01/63	331MDSN	SPRING	911	-	-	561	140
52N 062W 12BC	09/16/69	317MNLS	812	1,590	7.9	-	1,300	273
52N 062W 18C	07/22/78	337PHSP	-	760	7.3	12.0	503	120
52N 062W 26DB	06/08/67	317MNLS	620	1,300	7.7	9.5	1,000	213
52N 063W 25DC	05/31/63	317MNLS	530	-	6.8	-	230	65
52N 063W 29BAD	06/06/67	120INTV	SPRING	2,540	7.2	10.5	2,260	469
53N 061W 05AD	06/08/67	237SPRF	143	674	7.5	-	459	66
53N 061W 26DAB	06/08/67	317MNLS	852	834	7.5	-	564	112
53N 062W 19DBB	11/05/75	317MNLS	-	358	7.6	10.0	241	69
53N 065W 07DDA	06/06/67	237SPRF	50 - 52	2,540	7.2	11.0	2,250	469
53N 065W 17BAC	04/01/60	317MNLS	590 - 675	-	6.7	-	1,690	251
53N 065W 18BAC	06/01/56	317MNLS	574 - 608	-	7.0	-	1,880	255
53N 065W 18BBD	08/24/61	237SPRF	260 - 340	3,370	7.2	-	3,020	570
53N 067W 08CC	11/05/56	111ALVM	60	1,890	7.7	-	1,280	70
54N 064W 07BC	01/02/56	317MNLS	628 - 663	794	7.5	13.5	512	113
54N 065W 11AB	08/16/56	221GPSP	52	2,500	7.7	9.0	2,090	318
54N 065W 13BA	10/18/56	111ALVM	42	1,940	7.2	9.5	1,620	365
54N 065W 13BD	07/01/59	317MNLS	640	-	7.9	-	534	65
54N 065W 29DD	04/01/59	317MNLS	630 - 792	-	7.0	-	622	118
55N 061W 08DC	08/16/56	217INKR	315	1,160	7.3	14.0	787	113
55N 064W 21CD	08/16/56	237SPRF	150	2,620	7.7	11.0	2,390	518
55N 064W 32CB	08/16/56	111ALVM	32	1,720	7.6	9.5	1,360	260
56N 062W 28BB	08/16/56	217INKR	333	624	8.0	11.0	375	38
56N 063W 07BD	08/16/56	221MRSN	300	1,400	8.2	10.5	922	23
56N 063W 15AD	10/02/56	221SNDC	60	1,330	8.0	12.0	890	37
56N 066W 11CA	10/28/56	217INKR	125	2,530	7.6	-	1,870	58
57N 064W 03DB	10/30/56	217INKR	390	1,200	7.7	13.5	781	39
57N 065W 15DA	10/18/76	374FLTD	4,354	1,320	6.9	47.0	802	70
57N 065W 15DA	07/28/77	361RDRV	3,290- 3,480	640	7.0	46.5	461	83
57N 065W 15DA	07/29/77	361RDRV	3,290- 3,480	640	7.0	51.5	468	81
57N 065W 15DA	07/29/77	361RDRV	3,100- 3,280	650	7.0	50.5	461	86
57N 065W 15DA	07/30/77	361RDRV	3,100- 3,290	650	7.0	49.5	459	87
57N 065W 15DA	08/01/77	337LDGP	2,945- 3,095	734	7.2	50.0	503	97
57N 065W 15DA	08/02/77	337LDGP	2,805- 2,955	797	7.1	50.0	487	92
57N 065W 15DA	08/02/77	337LDGP	2,805- 2,955	720	7.1	50.0	489	94
57N 065W 15DA	08/05/77	331MSNC	2,600- 2,835	1,230	7.3	47.0	902	180
57N 065W 15DA	08/06/77	331MSNC	2,600- 2,835	1,230	7.0	48.5	893	170
57N 065W 15DA	08/07/77	331MSNC	2,425- 2,600	1,240	7.0	46.5	929	180

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				CROOK COUNTY--Continued						
22	3	-	402	6	6	0.1	2.00	13.0	-	10
22	3	-	412	47	3	.1	4.80	10.0	-	30
28	10	-	353	43	1	.2	.60	12.0	-	630
14	2	1.8	150	48	15	.4	-	11.0	30	10
35	5	2.0	296	235	2	.4	.68	17.0	120	-
29	2	1.9	274	228	3	.0	1.90	13.0	0	-
82	5	2.2	248	795	1	.7	.80	14.0	60	20
30	3	1.4	270	200	1	.3	-	13.0	30	10
65	5	2.4	156	625	5	1.2	.70	7.5	70	50
16	-	-	206	20	1	-	-	11.0	-	-
77	120	8.5	283	1,400	22	1.0	.70	15.0	390	1,400
43	13	9.2	312	84	13	.6	15.00	10.0	100	50
45	3	1.6	214	276	6	.7	.90	10.0	50	60
15	3	1.1	273	8	1	.3	-	9.3	20	10
77	120	8.5	283	1,400	22	1.0	.16	15.0	390	-
93	42	-	675	1,040	24	-	-	-	-	-
124	-	-	351	820	40	-	-	-	-	-
102	182	12.0	280	1,980	14	.4	1.22	13.0	860	-
37	332	5.6	733	450	8	.4	.80	14.0	280	360
36	4	2.2	280	203	1	1.8	.10	12.0	50	490
130	129	13.0	310	1,310	7	1.3	.23	24.0	310	-
73	27	6.8	305	970	4	.5	.50	19.0	260	3,000
43	62	-	293	212	8	-	-	-	-	-
42	5	-	280	276	4	-	-	-	-	-
49	70	15.0	356	350	5	.2	.02	8.0	70	-
94	59	7.0	304	1,490	13	.9	3.70	36.0	470	1,900
60	69	6.2	256	815	5	.4	.10	19.0	210	210
16	68	9.2	258	105	2	.3	.10	9.0	180	230
10	276	8.7	250	460	6	.8	.80	9.2	1,800	320
19	222	7.2	231	475	3	.3	.40	11.0	220	360
21	486	10.0	339	1,020	7	.4	20.00	9.6	270	740
15	206	12.0	385	305	5	.4	.00	8.8	210	870
15	180	23.0	224	74	290	4.5	-	31.0	340	80
39	7	2.6	220	190	3	.9	-	21.0	40	2,600
39	8	2.5	220	200	3	.9	-	23.0	30	800
40	5	2.5	220	190	3	.9	-	22.0	30	1,200
40	5	2.5	207	190	3	.9	-	22.0	30	1,600
40	7	3.2	200	220	7	1.4	.22	22.0	40	3,900
38	7	2.9	210	210	5	1.2	.23	23.0	30	1,200
37	7	3.0	210	210	5	1.2	.22	23.0	30	2,000
48	35	8.3	190	450	51	3.2	.17	23.0	90	3,600
44	36	8.5	200	450	51	3.3	.20	26.0	90	210
44	36	7.6	210	460	55	2.9	.21	31.0	90	2,600

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			CROOK COUNTY--Continued					
57N 065W 15DA	08/08/77	331MSNC	2,425- 2,600	1,230	7.0	46.2	930	180
57N 065W 15DA	08/08/77	331CRLS	2,260- 2,435	1,240	7.1	45.5	934	180
57N 065W 15DA	08/09/77	331CRLS	2,260- 2,435	1,220	7.1	40.5	919	180
57N 065W 15DA	08/11/77	337LDGP	2,835- 2,945	805	7.1	47.5	574	110
57N 065W 15DA	08/12/77	361RDRV	3,095- 3,205	-	-	50.0	460	84
57N 065W 15DA	08/12/77		4,354	1,020	7.1	50.0	458	82
57N 065W 15DA	08/16/77		4,354	840	7.0	50.1	564	100
57N 065W 15DA	08/16/77		4,354	854	7.1	51.0	593	110
57N 065W 15DA	08/16/77		4,354	873	7.0	52.0	593	110
57N 065W 15DA	08/18/77		4,354	894	7.0	52.0	557	110
57N 065W 22CA	10/03/56	111ALVM	80	4,450	8.2	11.0	3,200	34
58N 064W 35AC	10/30/56	217INKR	280	1,600	7.6	-	1,100	74
			JOHNSON COUNTY					
41N 077W 05CCB	09/05/69	211LNCE	750	1,440	8.1	10.0	980	63
41N 078W 01BC	07/19/72	331MDSN	10,020	3,980	7.3	72.0	2,640	289
41N 080W 22AC	10/02/65	211FRNR	1,150	2,170	8.9	-	1,340	0
41N 080W 30BD	10/13/65	217CLVL	1,292	4,850	8.2	-	2,920	6
41N 081W 09CDB	12/29/65	331MDSN	2,682- 2,882	-	-	-	1,560	178
41N 081W 25AD	08/15/69	217CLVL	1,016	4,510	8.2	17.0	3,110	3
42N 077W 24CAB	08/22/69	124WSTC	530	579	8.4	14.0	358	10
42N 078W 06DAC	08/20/69	125FRUN	230	770	8.1	12.0	483	93
42N 078W 14DBD	08/22/69	125FRUN	358	1,840	8.2	-	1,300	61
42N 078W 15CAB	08/12/69	211LNCE	630	2,110	8.7	20.0	1,450	12
42N 078W 21BAD	08/12/69	211LNCE	1,950	1,220	8.8	22.0	769	1
42N 080W 30BDB	07/19/72	331MDSN	4,689	3,850	7.7	43.0	2,600	289
42N 081W 25CBD	07/19/72	331MDSN	4,246	3,800	7.8	38.0	2,590	283
42N 082W 14CAD	08/20/69	217CLVL	640	2,490	8.5	15.5	1,650	2
43N 077W 34BDB	09/04/69	124WSTC	655	533	8.2	14.0	340	5
43N 079W 02DD	09/01/50	124WSTC	270	1,180	9.6	11.1	758	2
43N 079W 09DAC	08/13/69	124WSTC	85	2,280	7.9	13.0	1,660	84
43N 079W 11DD	09/22/50	111ALVM	12	3,780	7.4	-	3,320	395
43N 080W 20CC	08/19/50	211FXHL	140	4,570	7.4	11.0	3,930	318
43N 080W 20CC	08/19/50	111ALVM	16	1,880	7.4	-	1,400	137
43N 080W 20DC	08/19/50	210CRCS	140	4,570	7.4	10.5	3,930	318
43N 080W 34DAD	07/18/72	331MDSN	8,755- 9,300	4,010	7.6	68.5	2,740	330
43N 081W 01CBA	08/20/69	211LNCE	300	1,160	7.9	14.0	867	152
43N 081W 10CA	08/19/50	211MVRD	400	3,120	7.8	-	2,340	55
43N 082W 12AA	08/19/50	111ALVM	24	4,500	7.1	-	4,000	395
43N 082W 12AD	09/22/50	111ALVM	17	1,670	7.4	-	1,250	171
43N 082W 15BC	08/19/50	317TSLP	1,925	9,970	6.7	-	6,820	430
43N 082W 21DC	08/14/69	211FRNR	329	1,750	8.8	17.0	1,140	1

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				CROOK COUNTY--Continued						
44	36	7.6	210	460	54	2.8	0.19	30.0	90	5,800
47	35	8.0	210	460	55	2.7	.19	28.0	90	8,300
47	35	7.9	210	450	54	2.4	.17	26.0	80	7,000
38	12	4.6	190	270	11	2.2	.15	21.0	40	5,800
39	5	2.4	220	190	3	0.9	.21	22.0	30	1,900
39	5	2.4	220	190	3	.9	.22	22.0	30	1,900
40	14	4.3	210	250	21	1.6	.20	26.0	50	10
40	14	4.4	210	270	18	1.7	.22	27.0	50	40
39	14	4.4	210	270	19	1.7	.23	27.0	50	90
40	14	4.4	210	230	20	1.7	.25	27.0	50	90
28	970	17.0	379	1,950	6	.6	.10	3.9	950	1,300
32	232	19.0	356	545	8	.4	.00	8.2	220	5,500
				JOHNSON COUNTY						
31	256	3.6	-	312	9	.3	-	10.0	200	1,200
56	498	35.0	110	937	696	3.4	.00	74.0	400	-
0	550	5.4	-	13	122	1.2	-	9.7	620	0
4	1,180	12.0	-	0	1,080	2.2	-	12.0	3,600	20
60	260	18.0	207	593	350	-	-	-	-	-
3	1,260	3.9	-	341	278	2.7	-	12.0	3,800	30
2	119	2.6	-	110	4	.6	-	10.0	70	210
44	13	6.8	-	102	1	.3	-	18.0	130	1,300
26	350	4.1	-	630	4	.3	-	13.0	290	670
9	480	3.8	-	770	5	.9	-	4.4	280	100
1	312	1.3	-	112	16	3.9	-	9.8	520	110
72	450	26.0	115	1,090	590	3.9	.00	25.0	420	-
80	450	28.0	117	1,080	583	4.3	.00	26.0	560	-
2	615	2.0	-	565	117	3.2	-	12.0	780	110
2	121	1.7	-	96	1	.6	-	9.5	180	110
3	257	3.2	-	330	23	1.4	-	2.5	-	140
27	422	6.8	-	940	10	.7	-	19.0	110	720
197	355	13.0	-	1,820	207	.5	-	14.0	200	140
116	780	8.0	436	2,320	157	.4	.20	13.0	100	2,400
69	218	7.5	-	668	119	.4	-	14.0	100	1,500
116	780	8.0	436	2,320	157	.4	.20	13.0	100	2,400
59	460	26.0	98	1,110	646	3.9	.10	52.0	350	-
49	39	10.0	-	525	3	.4	-	9.1	180	-
9	692	2.2	-	1,430	36	.3	-	7.1	0	12,000
197	610	6.8	-	2,280	215	.4	-	13.0	200	7,000
58	149	6.4	-	608	106	.4	-	12.0	100	610
129	1,830	29.0	116	1,500	2,830	1.6	-	14.0	300	160
1	415	4.7	-	446	14	5.5	-	7.4	1,800	240

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			JOHNSON COUNTY--Continued					
43N 082W 29AC	08/19/50	111ALVM	18	4,970	7.5	-	4,320	305
43N 083W 05CC	08/20/69	317TSLP	SPRING	493	8.1	11.0	295	52
43N 083W 31BC	08/19/50	221SNDC	365	4,970	5.6	-	4,080	111
43N 084W 04ADD	08/18/69	317TSLP	750	430	8.2	11.0	238	50
43N 084W 26CBB	08/31/65	317TSLP	761	407	8.0	-	231	38
43N 084W 35CC	08/19/50	317TSLP	740	408	7.7	16.0	247	49
44N 076W 08CDC	09/04/69	124WSTC	760	664	8.2	55.0	420	8
44N 078W 24ACA	09/03/69	124WSTC	265	1,160	8.1	13.0	781	17
44N 079W 20DAC	08/21/69	124WSTC	103	1,080	8.4	12.0	720	53
44N 081W 05CA	08/14/69	211LNCE	60	704	7.8	-	445	97
44N 082W 17DD	08/12/69	111ALVM	12	2,330	8.1	-	1,550	280
44N 083W 04BB	08/13/69	231CGTR	185	2,380	7.8	10.0	2,200	508
44N 083W 08BB	08/13/69	317TSLP	400	485	8.4	10.0	252	40
45N 078W 14CD	09/22/50	124WSTC	70	783	8.3	-	479	7
45N 078W 14CDD	08/15/69	124WSTC	480	504	8.2	16.0	320	1
45N 078W 33AD	09/22/50	111ALVM	22	3,920	7.4	-	3,380	403
45N 078W 34BA	09/22/50	125FRUN	473	600	8.6	-	383	4
45N 079W 20BD	08/19/69	211LNCE	4,760	854	8.4	42.0	546	8
45N 080W 01DAC	08/14/69	124WSTC	141	2,530	8.0	12.0	1,690	60
45N 081W 18DB	08/19/69	211LNCE	200	412	8.1	10.0	251	59
45N 083W 07AB	08/12/69	317TSLP	SPRING	419	8.2	-	230	43
45N 083W 18DCD	08/12/69	317TSLP	260	457	7.9	10.0	260	38
46N 077W 31BA	05/23/61	124WSTC	203	583	8.3	-	359	4
46N 080W 19AB	10/24/61	124WSTC	225	1,800	7.3	-	1,230	52
46N 080W 20BB	10/24/61	124WSTC	370	2,840	7.1	-	2,150	118
46N 082W 09AD	05/24/61	211MVRD	150	1,930	8.1	-	1,340	62
46N 082W 14AD	10/30/62	125FRUN	205	3,150	7.5	-	3,250	600
46N 083W 03BD	10/24/60	317TSLP	SPRING	411	7.7	8.0	230	43
46N 083W 13CA	10/24/60	211FRNR	70	2,430	7.1	-	1,920	177
46N 083W 22DDB	04/21/61	237GSEG	258	1,260	7.5	-	956	135
47N 082W 13DB	10/20/61	125FRUN	323	3,270	7.0	-	2,740	325
47N 082W 27DB	10/01/62	211LNCE	-	1,850	7.8	-	-	167
48N 077W 25DB	10/27/60	125FRUN	605	879	7.6	-	540	6
48N 082W 02CC	10/30/62	125FRUN	250	1,750	7.8	8.0	-	78
48N 082W 09AD	10/19/61	211LNCE	186	3,160	7.0	10.6	2,800	481
48N 082W 11BB	10/29/62	125FRUN	420	1,560	8.1	-	1,090	78
49N 077W 20BA	10/27/60	111ALVM	31	2,860	7.4	-	2,240	302
49N 077W 21BA	10/27/60	125FRUN	600	1,030	8.8	-	633	6
49N 081W 33BB	10/20/61	124WSTC	255	1,400	7.0	11.7	1,010	117
49N 082W 02BB	10/20/61	124WSTC	318	779	7.5	-	486	75
49N 083W 27BDC	10/01/73	331MDSN	SPRING	99	-	5.5	65	11
49N 083W 27DBA	03/30/74	331MDSN	1,636	284	7.9	11.0	159	31

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				JOHNSON COUNTY--Continued						
146	895	4.0	693	2,540	70	1.2	-	14.0	300	240
31	8	2.4	240	63	7	.4	-	9.8	40	140
18	1,150	17.0	-	2,750	18	1.4	-	1.7	0	5,000
24	3	2.0	-	28	1	.3	-	9.4	10	50
31	3	1.2	-	2	6	.2	-	10.0	20	0
25	4	1.0	256	21	2	.1	1.60	11.0	100	30
1	141	1.5	-	201	2	.2	-	9.0	80	30
4	246	3.2	-	413	7	.7	-	7.7	140	160
19	182	5.2	-	232	4	.3	-	9.6	120	1,400
29	14	4.5	-	94	4	.5	-	15.0	150	60
95	200	3.8	373	712	58	.3	-	13.0	140	50
93	15	2.5	-	1,460	8	.6	-	26.0	170	10
42	2	1.2	-	6	1	.1	-	8.7	10	30
3	186	1.5	-	8	42	1.1	-	7.1	0	670
2	112	1.5	-	92	6	1.0	-	9.6	40	180
137	495	8.8	418	1,890	177	.6	-	13.0	100	-
1	141	1.1	-	90	8	.8	-	9.7	0	30
4	188	4.7	-	141	16	1.8	-	18.0	210	150
16	459	1.5	-	1,040	18	.5	-	7.3	110	500
14	8	2.4	-	33	2	.5	-	12.0	70	50
26	4	1.9	234	26	1	.1	-	12.0	10	70
37	3	1.5	-	12	13	.4	-	13.0	30	40
0	121	1.2	-	149	10	.5	-	9.6	100	150
14	330	4.0	-	690	33	.4	-	7.4	70	110
35	510	5.4	-	1,360	22	.2	-	7.4	60	70
14	366	3.3	-	690	12	.3	-	11.0	480	220
198	39	-	-	1,870	8	-	-	-	-	19,000
30	1	.8	279	5	0	.1	.90	7.8	20	40
70	299	6.2	-	1,250	4	1.5	-	29.0	580	2,900
60	70	2.8	343	415	13	-	-	-	130	1,100
110	358	11.0	-	1,800	63	.1	-	6.8	160	8,800
58	200	-	337	756	5	-	-	-	-	2,800
0	216	2.1	-	16	10	1.4	-	9.8	70	260
35	282	-	320	596	39	-	-	-	-	600
125	191	5.6	-	1,780	64	.1	-	12.0	140	5,100
31	236	-	-	568	22	-	-	-	-	60
87	287	8.5	-	1,220	194	.4	-	11.0	210	5,000
2	256	2.1	-	2	11	1.6	-	11.0	90	560
44	141	5.4	-	593	12	.1	-	10.0	90	720
40	36	5.0	-	139	4	.0	-	12.0	100	1,600
4	2	.5	52	6	2	.2	.20	13.0	20	-
17	2	1.2	178	5	1	.2	.46	12.0	3	-

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			JOHNSON COUNTY--Continued					
49N 083W 27DC	07/31/62	317TSLP	245	477	8.0	-	255	35
50N 077W 29DC	07/31/62	125FRUN	575	1,300	8.3	-	804	6
50N 079W 19BC	10/27/60	124WSTC	600	1,670	7.5	-	1,210	156
50N 082W 06AD	10/30/62	111ALVM	26	174	7.3	-	106	22
50N 082W 11CB	10/19/61	124WSTC	460	1,710	7.3	-	1,350	183
50N 083W 36AA	04/25/61	211CODY	270	12,980	8.0	-	12,580	298
50N 084W 10DA	10/27/60	400PCMB	SPRING	92	7.0	-	63	10
51N 077W 09CB	10/26/60	125FRUN	743	2,090	8.1	-	1,300	18
51N 077W 20CA	10/27/60	125FRUN	580	860	7.9	-	528	5
51N 077W 20CC	10/31/61	125FRUN	758	1,600	8.0	-	1,000	7
51N 079W 16BA	10/26/60	124WSTC	164	1,060	7.7	-	668	27
51N 082W 26BB	02/06/67	124WSTC	135	1,610	8.0	-	1,020	27
51N 082W 26BB	02/15/67	124WSTC	60	1,250	8.1	-	814	119
51N 082W 33DD	10/27/60	124WSTC	145	1,650	8.0	-	1,130	76
51N 083W 04BC	08/31/61	211LNCE	205	2,800	7.7	-	2,380	389
52N 077W 03AB	10/26/60	125FRUN	828	1,900	8.0	-	1,220	14
52N 079W 12CC	10/26/60	124WSTC	160	960	7.6	-	581	5
52N 082W 13DB	10/23/61	124WSTC	246	5,060	6.8	-	4,620	321
52N 083W 22CA	10/20/61	124WSTC	510	1,140	7.5	-	679	100
53N 082W 33BB	10/23/61	124WSTC	60	1,290	7.5	-	814	93
53N 086W 27CD	10/28/60	111ALVM	SPRING	99	6.7	-	72	10
			NATRONA COUNTY					
29N 081W 05BBB	09/14/66	217LKOT	1,014	779	8.3	-	489	1
30N 080W 30ABD	06/15/67	111ALVM	64	2,050	7.7	-	1,640	228
31N 081W 07ABB	08/10/66	111ALVM	35	1,820	7.9	-	1,420	141
32N 079W 06BB	09/01/81		SPRING	-	-	-	170	36
32N 079W 06BB	09/01/81		-	-	-	-	190	41
32N 079W 06BB	09/01/81		SPRING	-	-	-	170	37
32N 079W 06BB	09/01/81		SPRING	-	-	-	180	39
32N 079W 06BB	09/01/81		SPRING	-	-	-	160	36
32N 081W 12ACB	09/03/75	237GSEG	160	950	7.7	10.0	554	100
33N 077W 03BDC	08/25/67	111ALVM	20	1,900	7.7	11.5	1,380	140
33N 077W 15BCB	04/18/64	331MDSN	7,615	3,660	7.4	-	2,920	338
33N 079W 18BAB	08/10/67	111ALVM	38	786	7.6	11.5	513	82
33N 079W 24ACC	03/23/67	217CLVL	5,101	538	8.0	31.0	396	1
33N 079W 33BBA	09/19/67	211CODY	100	3,470	7.8	10.5	2,660	145
33N 080W 06CBC	12/06/66	211FRNR	204	4,110	8.3	23.0	3,020	42
33N 080W 08AAD	06/13/67	211FRNR	147	3,670	8.3	18.0	2,460	4
33N 081W 33DDA	06/14/66	111ALVM	42	8,280	7.8	14.5	8,950	412
33N 081W 36AAD	06/26/79	317TSLP	3,600	4,400	7.8	27.0	2,930	510
34N 077W 09BCC	11/10/65	211LNCE	90	1,710	7.8	10.0	1,270	174

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				JOHNSON COUNTY--Continued						
41	3	1.5	-	13	3	0.2	-	9.5	-	20
0	333	2.4	-	5	14	3.6	-	9.8	-	240
45	181	3.2	-	569	19	.3	-	12.0	90	420
5	6	-	96	10	0	-	-	-	-	-
48	175	4.3	-	780	7	.1	-	15.0	210	2,700
573	2,350	17.0	-	7,830	227	-	-	-	2,000	-
2	4	1.2	47	5	0	.1	-	17.0	10	50
3	537	4.3	1,450	0	17	.7	-	10.0	80	910
1	213	2.8	-	2	13	1.3	-	9.3	60	180
3	410	4.5	-	0	13	3.1	-	10.0	140	180
11	202	2.9	-	183	10	.6	-	8.7	90	190
4	391	2.8	-	1	5	.3	-	18.0	20	290
25	159	2.2	-	97	4	.0	-	20.0	20	-
10	296	1.9	479	484	8	.1	-	13.0	80	720
134	172	4.2	-	1,430	7	.3	-	15.0	160	6,300
3	500	4.6	-	1	23	.6	-	11.0	70	450
2	235	1.6	-	1	12	1.3	-	7.9	120	200
313	660	25.0	-	3,020	19	.3	-	13.0	530	13,000
51	61	6.4	-	243	6	.2	-	9.3	100	1,600
59	104	8.5	-	284	4	.4	-	15.0	150	870
3	5	1.0	58	3	0	.0	-	21.0	10	220
				NATRONA COUNTY						
0	184	.2	-	98	11	1.6	-	12.0	340	60
65	180	18.0	-	950	25	.9	-	29.0	280	150
68	215	4.3	-	774	31	1.0	-	33.0	490	-
10	10	2.5	180	7	4	.2	.42	15.0	-	-
12	8	1.5	170	24	5	.0	.65	16.0	-	-
10	7	1.7	170	7	4	.3	.64	16.0	-	-
12	8	1.9	171	13	9	.0	1.50	15.0	-	-
11	6	2.2	150	8	6	.0	1.30	16.0	-	-
43	10	1.9	221	260	5	1.1	-	23.0	50	20
44	250	3.7	328	738	32	.7	.00	14.0	100	200
55	452	58.0	124	1,560	322	5.0	5.00	40.0	710	4,800
21	57	4.6	210	206	16	.5	70.00	13.0	70	-
0	149	.3	278	74	7	.7	.00	27.0	70	-
80	600	3.3	481	1,470	75	4.0	6.60	11.0	930	430
21	963	2.4	705	1,620	12	.7	.05	8.8	1,100	-
1	984	2.8	1,768	425	149	12.0	.00	9.0	3,100	30
735	1,140	13.0	563	5,320	119	1.1	207.00	13.0	700	100
120	160	23.0	108	2,000	56	3.0	.12	11.0	-	-
97	78	9.2	305	712	37	.7	.00	15.0	40	0

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			NATRONA COUNTY--Continued					
34N 079W 17DBC	06/12/67	211CODY	405	4,840	7.8	13.0	3,720	14
34N 079W 36DBB	07/18/61	111ALVM	37	-	7.5	-	628	97
34N 080W 21CAD	12/21/66	217CLVL	3,100	453	8.5	35.0	284	0
34N 080W 29ADD	06/13/67	111ALVM	SPRING	3,590	7.7	11.5	2,890	223
34N 080W 30ADD	06/13/67	111ALVM	11	1,740	7.6	11.5	1,400	139
34N 080W 32CBC	05/25/67	211FRNR	735	2,830	8.5	10.0	1,780	0
34N 081W 23DDD	05/24/67	111ALVM	48	7,180	7.4	11.0	6,610	469
34N 083W 09CAB	07/12/67	211FRNR	80	1,250	7.4	18.0	862	141
35N 083W 05DAC	07/12/67	111ALVM	61	3,160	7.6	16.0	2,440	178
37N 078W 07DCD	08/24/67	211MVRD	1,796	3,080	8.3	22.0	2,120	15
37N 079W 19DDA	08/15/66	211MVRD	210	1,950	6.7	12.5	1,490	82
37N 079W 30DCD	08/17/66	211MVRD	511	625	8.9	13.0	374	0
37N 082W 36DDD	02/02/67	217CLVL	1,275	2,540	8.2	11.0	1,780	10
38N 079W 34BDA	04/26/66	211MVRD	100	5,000	7.5	11.5	4,430	146
39N 078W 26CDC	08/11/67	331MDSN	7,180	4,940	7.5	88.0	3,240	307
39N 079W 11AAD	07/25/72	331MDSN	5,688	3,310	7.3	82.0	2,260	264
39N 082W 09CBC	02/02/67	211FRNR	1,030	3,230	8.7	13.0	2,270	3
39N 083W 05AAD	09/09/66	221SNDC	SPRING	671	8.1	-	463	55
39N 083W 07AAB	08/21/66	231CGTR	SPRING	1,570	7.9	9.0	1,300	188
39N 083W 13BDD	02/02/67	217MWRY	117	1,140	7.3	9.0	765	36
39N 083W 18CAD	10/19/65	317TSLP	1,540	809	7.9	16.0	562	124
39N 084W 03BBC	09/09/66	221MRSN	SPRING	1,920	7.9	9.0	1,520	205
40N 078W 11ACB	04/09/57	211FXHL	950	735	8.5	11.0	451	2
40N 078W 11DBA	08/12/65	211FXHL	733	1,790	8.5	-	-	17
40N 078W 26CBA	07/13/67	211FXHL	90	2,850	7.9	-	2,000	20
40N 079W 02ADA	07/25/72	331MDSN	7,467	4,360	7.3	-	3,130	448
40N 079W 13C	11/17/71	211FXHL	-	-	-	-	5,450	8
40N 079W 25CAA	10/26/62	317TSLP	4,400	-	7.3	-	2,600	328
40N 079W 26AAC	07/22/76		-	-	-	-	259	56
40N 079W 26CAA	11/18/66	331MDSN	4,889	3,980	7.5	84.0	2,780	366
40N 079W 31BCA	07/21/76	331MDSN	6,155	-	7.6	42.0	2,570	300
40N 079W 35CCC	10/26/62	331MDSN	4,968	-	7.3	-	2,600	328
40N 080W 27BA	07/13/67	211FRNR	1,150	1,460	8.9	21.5	962	1
40N 081W 20CAD	02/02/67	211FRNR	1,029	2,930	8.6	13.5	2,030	14
40N 083W 19CCA	09/09/66	317TSLP	SPRING	520	7.7	14.0	328	62
			NIOBRARA COUNTY					
31N 061W 04AB	10/07/52	122ARKR	200	370	8.1	9.4	271	50
31N 066W 26DA0	09/29/57	122ARKR	-	444	7.6	10.6	308	62
32N 061W 33CD	10/07/52	122ARKR	-	516	8.1	11.0	392	73
32N 062W 17CCD	06/25/68	122ARKR	-	926	7.5	7.0	678	122
32N 062W 28AD	12/02/59	122ARKR	110	730	7.3	6.7	487	102

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				NATRONA COUNTY--Continued						
4	1,260	4.0	509	2,130	46	1.0	0.30	8.1	420	80
29	77	-	244	273	32	-	-	-	-	-
0	112	.2	269	12	3	2.5	.00	20.0	1,400	70
195	411	7.1	389	1,510	295	1.0	8.10	15.0	740	40
82	151	11.0	426	596	44	2.8	31.00	26.0	510	60
1	752	1.3	1,499	64	208	7.3	.00	6.4	1,900	360
197	1,330	20.0	597	4,050	200	4.3	5.42	19.0	1,200	-
20	98	2.6	251	199	65	.4	35.00	14.0	0	70
56	510	4.7	321	1,490	29	1.0	.00	13.0	130	56
1	712	2.3	425	1,150	15	.9	.02	10.0	180	-
48	310	7.4	40	995	6	.2	.10	22.0	80	20,000
2	141	.8	269	89	4	.3	.02	1.8	150	-
1	600	1.3	351	958	18	.7	.20	19.0	380	120
46	1,100	9.2	662	2,040	73	2.5	35.00	10.0	420	350
40	738	73.0	133	900	1,050	5.0	.20	62.0	650	200
49	381	21.0	104	967	473	3.7	.00	49.0	420	-
1	766	1.2	390	1,280	12	.9	.20	9.8	370	210
36	40	2.5	236	156	5	.3	8.90	13.0	60	70
67	108	4.3	210	789	6	.3	4.20	11.0	210	60
10	196	1.7	141	424	2	1.3	.50	22.0	370	620
24	16	2.7	122	311	7	.6	.52	14.0	40	-
73	173	4.3	342	879	6	.4	.02	12.0	190	-
1	164	1.8	304	117	2	.2	1.00	9.1	-	180
3	374	3.0	489	456	12	.9	.60	-	180	260
1	655	2.0	466	1,070	12	.8	.90	7.9	320	50
60	440	35.0	96	1,430	620	4.7	.00	41.0	470	-
5	2,240	-	3,328	3	1,532	-	-	19.0	-	140
60	469	-	98	1,060	640	-	-	-	-	-
19	8	2.6	232	34	4	.3	-	19.0	20	20
38	492	36.0	112	1,120	619	3.2	.20	47.0	510	580
49	490	35.0	122	970	620	3.5	-	32.0	430	2,400
60	469	-	98	1,060	640	-	-	-	-	-
0	352	.6	574	286	5	1.0	3.30	19.0	270	80
11	703	1.7	767	884	21	3.5	.60	11.0	1,500	380
28	6	1.6	182	126	2	.2	.45	11.0	30	-
				NIOBRARA COUNTY						
13	10	7.6	214	16	5	.2	2.26	54.0	10	10
7	19	8.6	224	24	9	.2	3.16	54.0	40	480
16	15	6.9	275	30	12	.1	12.00	50.0	60	290
29	27	11.0	446	24	40	.5	34.00	54.0	0	250
21	14	7.8	270	21	29	.4	23.04	57.0	60	10

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			NIOBRARA COUNTY--Continued					
32N 063W 07BB	04/08/58	122ARKR	172	370	7.5	10.6	259	54
32N 063W 08AC	05/28/62	122ARKR	132	944	7.2	-	1,270	132
32N 063W 08AC	05/28/62	122ARKR	125	508	7.2	-	435	73
32N 063W 33BB	10/07/52	122ARKR	205	516	8.1	11.1	351	73
32N 064W 22AB	09/27/57	122ARKR	100	546	7.6	10.0	333	64
32N 065W 01BCA	12/02/59	122ARKR	200	477	7.2	2.8	310	55
34N 061W 06CD	09/14/57	123WRVR	9	553	8.0	14.4	387	9
34N 061W 17CA	10/02/57	123WRVR	50	720	7.7	-	479	73
34N 062W 29CBA	11/14/57	122ARKR	80	371	7.7	-	263	51
34N 064W 09DB	12/04/59	217INKR	145	565	7.5	-	350	53
34N 065W 01BC	10/13/59	217INKR	265	368	7.4	-	218	21
34N 065W 04CB	10/12/57	123WRVR	300	536	7.7	12.8	321	3
35N 062W 15AC	09/11/57	123WRVR	105	746	8.0	-	495	7
35N 064W 02CC	10/19/72		622	1,380	7.9	16.0	921	21
35N 064W 26CB	12/04/59	123WRVR	126	670	7.4	-	423	26
35N 065W 03CC	11/11/59	111ALVM	11	1,610	7.1	-	1,120	102
35N 065W 15AD	12/03/59	211PIRR	80	950	7.6	-	631	61
36N 062W 28AB	04/26/74	331MDSN	3,118	1,030	7.0	46.0	584	110
36N 065W 14DB	12/02/59	211LNCE	73	1,540	7.5	-	1,030	89
36N 066W 15BA	12/02/59	125FRUN	275	2,070	7.6	-	1,390	14
36N 067W 13AAA	10/06/77	125FRUN	-	5,550	8.0	13.0	338	31
37N 061W 19CD	10/19/72	217INKR	23	2,680	7.6	-	2,160	200
37N 063W 13CB	12/01/59	211FXHL	300	1,800	7.7	-	1,240	46
37N 065W 07BB	12/02/59	211LNCE	128	1,880	7.8	-	1,250	12
37N 066W 10CC	12/02/59	125FRUN	290	2,900	7.0	-	2,150	136
38N 062W 17AA	12/01/59	211FXHL	110	4,440	7.8	-	3,250	14
38N 063W 23DC	12/01/59	211FXHL	105	2,780	7.7	-	1,980	37
38N 063W 30CC	12/01/59	211LNCE	70	1,840	7.4	-	1,300	99
38N 063W 30CD	12/01/59	111ALVM	46	1,680	7.6	-	1,150	60
38N 066W 04AD	12/02/59	125FRUN	213	1,970	8.6	-	1,300	4
39N 063W 14BA	10/19/72	211LNCE	200	1,480	8.3	12.0	973	4
39N 065W 21CC	12/01/59	211LNCE	280	3,940	7.6	-	2,850	47
39N 065W 21DC	12/01/59	211LNCE	250	2,470	7.6	-	1,730	29
39N 066W 10AA	12/01/59	125FRUN	132	2,380	7.6	-	1,770	151
40N 061W 35BC	10/19/72	217INKR	-	1,620	8.0	-	1,080	12
40N 063W 33BB	12/01/59	211LNCE	400	2,270	7.8	-	1,400	4
40N 064W 01AA	12/01/59	211LNCE	112	2,720	7.7	-	1,840	13
40N 064W 01DC	12/01/59	111ALVM	21	2,670	7.5	-	1,900	37
			SHERIDAN COUNTY					
53N 077W 10CDC	10/26/60	125FRUN	424	2,420	8.0	-	1,540	22

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				NIOBRARA COUNTY--Continued						
7	11	5.2	219	10	3	0.3	0.88	57.0	-	0
24	23	11.0	275	65	40	.3	176.00	56.0	230	-
12	16	8.4	270	17	7	.4	25.00	57.0	60	-
16	15	6.9	275	30	12	.1	2.71	50.0	60	290
26	9	7.0	245	52	28	.3	.70	23.0	50	1,600
15	18	10.0	237	26	10	.5	1.15	54.0	70	10
0	121	9.6	307	25	12	1.2	.88	54.0	120	3,300
3	62	26.0	268	44	57	.4	4.97	60.0	80	10
10	9	7.5	-	10	4	.3	-	60.0	30	50
7	56	11.0	-	55	10	.3	-	9.8	70	10
2	57	6.6	-	15	3	.5	-	9.6	50	30
0	131	3.4	318	2	10	5.0	.02	9.2	370	110
0	167	10.0	360	40	33	1.9	2.26	49.0	280	60
9	270	2.6	195	500	9	.9	.05	11.0	140	10
4	124	11.0	386	25	11	.6	.09	31.0	60	5,700
31	230	15.0	419	495	19	.5	-	22.0	290	2,700
18	123	11.0	344	203	15	.4	-	29.0	140	10
35	36	6.1	242	120	130	3.6	.98	20.0	70	-
30	221	12.0	-	393	80	.5	-	15.0	230	30
5	486	3.5	-	583	4	.8	-	7.6	130	420
13	70	7.6	260	75	4	.7	-	8.3	60	460
75	350	15.0	275	1,400	9	.7	.07	18.0	270	-
37	325	4.1	-	543	9	.2	-	12.0	270	200
1	432	1.7	-	523	7	1.5	-	6.7	180	8,600
88	474	6.4	-	1,050	18	.9	-	11.0	150	130
3	1,040	2.9	-	1,970	23	.6	-	8.0	480	0
13	598	4.5	-	1,120	11	.3	-	9.8	310	140
32	301	7.6	-	553	10	.8	-	22.0	100	330
25	306	7.7	-	454	11	1.0	-	20.0	100	300
1	456	3.8	-	562	20	.7	-	9.5	60	6,900
1	370	1.4	679	240	7	2.5	.14	9.3	90	20
3	922	4.0	-	1,500	15	.2	-	17.0	140	10
11	574	3.1	-	752	7	.4	-	20.0	120	40
73	333	8.2	-	775	9	.0	-	12.0	90	680
2	340	5.4	256	560	21	.6	.02	12.0	60	-
0	596	2.0	-	0	110	5.4	-	9.9	620	70
3	675	2.3	-	611	6	.7	-	9.5	170	20
42	527	10.0	340	1,080	21	.7	-	7.7	110	1,900
				SHERIDAN COUNTY						
8	620	7.4	-	1	24	0.7	-	12.0	110	470

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			SHERIDAN COUNTY--Continued					
53N 079W 07BC	05/07/62	124WSTC	280	1,010	8.4	-	625	6
53N 080W 02DB	03/07/62	124WSTC	260	3,680	7.3	-	3,410	317
53N 080W 18CA	08/30/61	111ALVM	23	2,250	7.6	-	1,700	201
53N 080W 18CA	08/30/61	124WSTC	143	1,000	7.9	-	601	5
53N 082W 11CD	03/22/62	124WSTC	143	1,480	8.0	-	920	15
53N 083W 07DD	08/28/61	124WSTC	42	248	7.9	-	141	34
53N 084W 13BDC	05/09/75	331MDSN	728	3,900	7.8	8.0	191	52
54N 076W 05AC	08/29/61	125FRUN	710	1,990	8.0	-	1,290	19
54N 077W 05DB	08/30/61	125FRUN	1,185	1,570	8.3	-	981	6
54N 079W 21BDD	10/26/60	124WSTC	121	1,400	8.1	-	860	20
54N 080W 24BC	03/22/62	124WSTC	120	4,910	7.6	-	4,950	457
54N 081W 14BC	07/25/61	124WSTC	110	1,720	8.0	-	1,090	46
54N 082W 29BA	06/13/62	124WSTC	60	1,010	7.3	-	672	136
54N 083W 03BA	06/13/62	124WSTC	245	2,910	7.5	-	2,090	108
54N 083W 07AC	03/08/62	124WSTC	100	612	8.7	-	383	3
54N 084W 11AB	10/28/60	124WSTC	160	874	7.6	-	532	86
54N 084W 14BB	06/14/62	111ALVM	65	487	7.6	-	272	72
55N 077W 11BA	10/18/78	211FXHL	4,220- 4,340	4,802	8.3	31.5	2,390	4
55N 077W 11BA	10/22/78		3,338- 3,352	2,850	8.5	-	-	4
55N 077W 11BA	10/22/78	211LNCE	3,748- 3,810	3,296	8.5	26.0	1,440	4
55N 077W 11BA	10/22/78	125TULK	2,460- 2,486	4,163	7.8	27.5	1,940	8
55N 077W 11BA	10/22/78	125TULK	2,460- 2,486	3,000	7.8	27.5	2,290	9
55N 077W 11BA	10/24/78		1,344- 1,400	4,183	7.7	26.5	1,500	5
55N 077W 11BA	10/24/78	125TGRV	774- 806	3,000	7.8	16.5	-	8
55N 077W 11BA	10/24/78	125TGRV	774- 806	2,872	7.8	16.5	1,390	8
55N 077W 11BA	10/25/78		1,718- 1,740	3,450	7.9	25.0	-	18
55N 077W 28AD	03/07/62	125FRUN	380	863	8.4	-	530	5
55N 077W 28DD	03/06/62	125FRUN	500	1,440	8.1	-	915	12
55N 079W 30BBA	10/26/60	124WSTC	140	4,350	7.6	-	3,390	157
55N 079W 30BBA	10/26/60	124WSTC	200	1,320	7.7	-	821	8
55N 081W 02BC	06/14/62	124WSTC	SPRING	432	7.7	-	242	67
55N 082W 05DC	03/07/62	124WSTC	155	1,540	8.1	-	897	13
55N 084W 16BC	08/30/61	125FRUN	370	1,050	7.6	-	651	62
55N 084W 27CB	06/14/62	125FRUN	560	746	7.9	-	484	28
55N 089W 01DA	10/25/60	374FLTD	66	220	7.2	-	115	30
56N 078W 22AC	08/30/61	125FRUN	165	1,570	8.2	-	981	7
56N 081W 29BD	10/28/60	124WSTC	378	994	8.2	-	627	3
56N 082W 34DC	07/21/61	111ALVM	56	2,440	7.8	-	1,960	273
56N 082W 35AA	06/13/62	124WSTC	87	6,620	7.4	-	6,620	470
56N 085W 03AD	07/27/61	125FRUN	123	2,360	7.7	-	1,550	43
56N 085W 31BD	08/16/76	125FRUN	116	775	7.7	10.0	547	31
56N 086W 05AA	08/16/76		-	800	8.6	10.0	579	32
56N 086W 07DC	07/27/61	211FRNR	148	638	8.1	-	392	47

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				SHERIDAN COUNTY--Continued						
2	252	2.2	675	2	18	1.4	-	8.1	-	80
282	342	9.8	-	1,990	9	.7	-	10.0	-	410
124	181	13.0	-	883	9	.2	-	19.0	320	270
2	227	1.8	-	90	12	1.1	-	8.2	80	50
5	378	3.1	-	5	2	1.0	-	8.2	-	240
11	2	1.0	-	1	0	.1	-	13.0	10	10
15	1	.5	223	3	1	.1	.10	6.8	8	-
3	524	6.0	-	0	16	.7	-	12.0	70	720
2	400	5.3	-	0	17	.9	-	13.0	150	80
5	317	1.9	-	145	3	.9	-	8.8	110	260
403	450	26.0	-	3,010	8	.8	-	30.0	-	8,100
3	379	4.2	-	157	3	.4	-	11.0	70	10
36	49	7.2	-	157	1	.4	-	21.0	-	3,700
34	567	9.5	-	1,020	6	.0	-	11.0	-	1,200
0	155	.9	379	26	1	.6	-	9.1	-	30
62	22	2.4	-	64	2	.3	-	14.0	180	240
18	12	1.2	-	8	0	.1	-	12.0	-	80
1	1,200	11.0	1,007	40	610	3.7	.06	13.0	220	300
2	849	10.0	1,755	1	310	6.2	-	-	-	-
1	740	7.2	824	51	250	6.0	.01	19.0	910	70
4	1,100	14.0	1,415	4	100	2.3	.06	10.0	790	40
4	1,200	14.0	1,440	32	290	5.8	.06	21.0	820	70
4	650	9.4	1,427	1	110	2.5	.05	11.0	220	70
5	730	13.0	-	2	53	3.7	.03	13.0	210	90
5	760	12.0	976	23	72	3.6	.01	18.0	210	70
0	1,069	17.0	2,804	24	100	5.0	-	-	-	-
1	219	1.8	-	1	14	1.2	-	9.0	-	210
3	374	4.5	-	1	16	1.6	-	9.6	-	200
77	822	12.0	-	1,930	6	.3	-	9.0	280	930
2	336	4.6	-	3	11	.8	-	8.9	120	410
10	3	2.9	168	37	7	.6	-	31.0	-	30
3	405	3.4	-	1	11	.8	-	9.6	-	90
30	134	8.8	-	136	13	.4	-	8.6	80	3,200
8	141	6.5	-	30	7	.6	-	8.7	-	190
8	2	.2	128	3	0	.1	-	6.8	40	190
3	400	3.5	-	2	7	2.2	-	9.2	150	140
0	243	1.2	-	118	6	1.8	-	10.0	120	120
136	168	15.0	-	1,020	6	.5	-	35.0	220	4,300
519	800	13.0	-	4,080	45	.7	-	7.1	-	25,000
28	449	7.6	510	708	53	.4	-	9.2	160	910
14	140	3.9	390	150	7	.5	.22	7.5	140	20
15	150	3.9	390	170	7	.4	-	7.7	-	20
14	74	1.0	-	104	2	.3	-	10.0	530	20

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			SHERIDAN COUNTY--Continued					
57N 076W 20BD	10/26/60	125FRUN	265	2,080	8.2	-	1,340	12
57N 079W 25CC	08/30/61	124WSTC	95	5,880	7.8	-	4,920	220
57N 080W 31BB	08/29/61	124WSTC	160	3,920	8.1	-	2,880	106
57N 081W 07CB	03/08/62	124WSTC	510	1,320	8.2	-	834	6
57N 083W 03AB	03/08/62	125FRUN	120	1,790	8.1	-	1,160	8
57N 084W 19BD	03/06/62	125FRUN	126	3,180	7.6	-	1,900	31
57N 085W 19AA	03/06/62	125FRUN	180	1,460	8.2	-	888	14
57N 085W 19AB	08/28/61	111ALVM	30	1,220	7.7	-	828	103
57N 086W 30AC	10/25/60	211MVRD	115	823	7.8	-	531	97
57N 086W 34BB	08/28/61	211LNCE	315	1,980	8.0	-	1,300	33
57N 087W 01BD	08/28/61	211LNCE	195	712	8.5	-	434	6
57N 087W 21DBC	10/25/60	331MDSN	1,596	380	7.7	-	205	50
57N 088W 12BB	11/18/76	331MDSN	1,132- 1,910	-	7.6	9.0	219	40
57N 088W 12BB	11/18/76	331MDSN	940- 1,176	-	7.6	8.3	199	55
58N 082W 30AA	10/25/60	125FRUN	480	2,740	8.0	-	1,780	9
58N 084W 29CA	03/08/62	125FRUN	620	3,620	7.8	-	2,380	10
58N 084W 29CDD	03/08/62	125FRUN	1,260	1,250	8.3	-	742	3
58N 084W 29DB	03/08/62	125FRUN	-	5,020	7.2	10.0	4,630	297
58N 087W 32BBB	11/22/76	317TSLP	-	-	7.7	8.5	315	74
58N 087W 35CA	10/25/60	211LWIS	129	1,110	7.9	-	723	16
58N 088W 34CA	08/31/81	331MDSN	-	-	-	-	410	88
			WESTON COUNTY					
41N 060W 07BDA	07/11/72	217INKR	545	1,810	7.9	14.0	1,230	15
41N 060W 07DBB	05/14/69	217INKR	530	1,920	8.4	14.0	1,190	21
41N 061W 01ACC	05/14/69	217INKR	665	1,480	8.7	9.0	956	3
41N 063W 15AA	09/12/69	211LNCE	180	2,800	8.4	-	1,960	11
41N 067W 26AA	09/18/74	111ALVM	26	4,020	7.1	11.0	3,130	240
42N 060W 07CB	05/14/69	217INKR	1,469	2,540	8.1	26.0	1,570	234
42N 062W 30AA	09/12/69	211FXHL	210	1,730	8.2	12.0	1,160	50
42N 063W 28DA	06/20/74	217INKR	-	1,350	6.6	13.0	890	63
42N 064W 09CAD	09/10/69	211LNCE	198	972	8.2	12.0	629	106
42N 065W 06CAA	07/12/69	211FXHL	2,259	1,490	8.1	25.0	943	4
42N 065W 30BCA	09/09/69	211LNCE	114	1,010	8.3	12.0	670	70
42N 067W 14ACB	09/08/69	125FRUN	161	1,510	8.3	12.0	942	5
42N 068W 08DB	10/22/74	125FRUN	170	570	8.5	11.0	369	4
42N 068W 26DD	09/18/74	125FRUN	180	810	7.7	12.5	1,240	87
43N 060W 30DC	09/19/74	217INKR	SPRING	2,800	8.3	12.0	1,940	24
43N 065W 11AC	07/14/69	211FXHL	1,608	1,310	7.4	21.0	844	0
43N 066W 29CA	09/09/69	125FRUN	352	3,100	7.9	14.0	2,210	25
43N 067W 16DA	10/24/74	125FRUN	145	2,550	-	10.5	1,660	18
43N 068W 23AC	10/24/74	125FRUN	186	1,220	-	10.5	774	11

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				SHERIDAN COUNTY--Continued						
2	555	4.4	-	2	21	1.4	-	9.1	120	880
136	1,140	12.0	-	3,110	7	.2	-	5.7	190	40
10	816	6.2	-	1,690	8	.4	-	11.0	110	120
2	350	2.8	-	3	16	1.8	-	9.1	-	140
3	490	4.7	-	0	8	1.9	-	8.2	-	190
29	810	17.0	-	55	23	2.1	-	9.8	-	100
5	360	4.2	-	0	57	1.8	-	8.2	-	140
58	100	2.3	441	329	5	.2	-	12.0	180	10
40	29	2.0	-	186	2	.4	-	13.0	120	1,300
18	404	5.3	-	493	42	.3	-	8.4	120	130
1	150	.8	-	157	8	.6	-	9.7	130	20
19	0	.6	246	5	0	.2	-	8.0	20	580
29	1	1.1	237	22	1	.7	-	7.8	9	90
16	1	.5	240	3	0	.2	-	5.2	9	10
3	750	6.5	-	1	10	2.2	-	11.0	130	310
17	943	12.0	-	645	10	1.9	-	9.4	-	150
3	335	1.8	-	0	13	4.0	-	12.0	-	580
372	621	38.0	521	3,000	15	1.2	-	26.0	-	3,000
30	2	1.1	315	43	1	.3	-	8.9	9	10
3	236	.1	-	233	30	.2	-	38.0	60	440
30	0	2.0	230	160	2	1.2	0.84	11.0	-	-
				WESTON COUNTY						
3	391	2.3	209	693	13	.5	.10	8.4	70	-
11	365	3.3	216	660	13	.3	.00	8.1	90	230
3	330	2.1	272	454	22	.5	.00	8.6	70	150
1	712	2.0	1,017	705	9	.6	.00	12.0	210	0
120	610	24.0	767	1,700	32	.7	.27	22.0	130	3,600
66	150	9.4	153	985	18	.4	.00	11.0	70	17,000
37	315	3.7	556	460	11	.4	-	14.0	0	0
21	200	7.4	207	480	3	.1	.01	7.3	90	6,000
53	38	2.3	384	210	5	.2	.14	11.0	40	0
0	350	1.0	559	288	11	2.5	.00	11.0	210	0
28	132	1.9	444	0	13	.4	.13	9.0	70	170
4	385	1.9	956	33	30	2.2	.00	7.0	70	0
2	140	2.9	327	40	5	.7	1.20	8.3	70	400
35	290	9.6	574	510	13	.6	1.70	7.4	40	530
9	600	6.8	350	1,100	17	.7	.50	8.7	1,600	210
0	325	.1	525	238	8	2.0	.00	11.0	240	40
7	720	2.8	376	1,240	27	1.3	-	6.5	80	40
6	560	4.4	508	790	18	.7	1.80	7.1	80	860
3	280	3.1	572	170	11	1.7	1.10	7.4	40	500

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			WESTON COUNTY--Continued					
44N 062W 02DCA	05/19/69	217LKOT	6,227	3,290	8.1	32.0	3,200	603
44N 062W 11CC	11/14/74	217LKOT	3,467	4,000	7.1	41.0	2,620	410
44N 062W 22CCC	07/14/69	217LKOT	3,832	1,660	8.0	53.0	1,190	77
44N 063W 09CAD	07/12/69	217INKR	4,610	1,750	7.9	52.0	1,200	2
44N 063W 18DC	11/15/74	211FXHL	197	1,500	8.3	10.5	730	37
44N 063W 26CAC	05/13/75	337PHSP	6,881	550	7.5	35.0	374	73
44N 064W 27ACC	07/15/69	217INKR	5,331	1,700	8.2	50.0	1,120	1
45N 060W 17C	10/01/57	317MNKT	-	1,860	7.5	-	1,620	402
45N 060W 17CCB	09/06/74	317MNKT	SPRING	1,940	7.8	12.5	1,620	430
45N 060W 20BBB	11/11/75	317MNKT	SPRING	1,800	7.6	9.0	1,600	420
45N 060W 31A	10/01/57	317MNKT	-	2,190	7.7	-	1,970	472
45N 060W 31C	10/01/57	317MNKT	-	2,380	7.6	-	2,200	532
45N 061W 02BC	06/18/68	317MNLS	720	2,700	8.0	15.0	2,530	685
45N 061W 20CA	01/07/50	337PHSP	2,638	-	-	-	290	54
45N 061W 20DCA	07/15/80	331MDSN	-	615	7.7	27.0	370	75
45N 061W 21CBD	01/28/69	337PHSP	2,872	578	7.4	-	385	76
45N 061W 28AB	03/14/62	317MNLS	1,950	3,010	7.4	-	2,870	604
45N 061W 28AB	03/15/62	337PHSP	2,738	504	7.4	-	290	62
45N 061W 29CBA	10/24/74	217INKR	930	1,360	6.7	15.0	901	150
45N 061W 29CBB	03/15/62	337PHSP	3,073	642	7.4	-	379	76
45N 061W 30ADB	03/15/62	337PHSP	3,028	601	7.4	-	369	76
45N 061W 33AB	06/04/69	337PHSP	3,596	534	7.9	22.0	332	76
45N 062W 22CCC	05/19/69	217INKR	3,450	1,780	7.7	32.0	1,490	243
45N 063W 04CAC	05/22/69	217INKR	1,800	1,360	7.8	24.0	884	2
45N 064W 21BB	10/23/74	211LNCE	124	2,500	8.6	10.2	1,360	6
45N 065W 26CB	10/22/74	211LNCE	100	810	7.4	10.0	512	50
45N 067W 08CC	09/18/74	125FRUN	248	2,750	-	11.0	1,940	100
45N 067W 14DC	09/18/74	125FRUN	400	2,200	7.4	11.0	1,410	39
46N 060W 30AD	08/29/75	237SPRF	160	700	7.9	15.0	-	100
46N 060W 30AD	08/13/74	237SPRF	160	1,580	6.9	10.0	1,200	240
46N 060W 30AD	07/17/75	237SPRF	-	870	7.4	14.0	-	-
46N 060W 31BA	10/24/68	337PHSP	1,178	473	8.2	16.0	276	65
46N 061W 09BD	05/05/62	237SPRF	SPRING	86,300	8.2	-	64,100	1,440
46N 061W 10BA	06/27/74	217LKOT	SPRING	309	8.6	6.0	180	42
46N 062W 12BA	09/17/74	217INKR	55	1,740	7.5	9.0	1,240	150
46N 062W 18BDC	06/05/69	337PHSP	2,677	480	7.8	16.0	279	62
46N 062W 27DC	09/09/69	217LKOT	300	3,350	7.8	11.0	3,090	424
46N 063W 10DCA	04/08/58	337PHSP	2,592	563	7.5	-	342	80
46N 063W 15BD	07/11/72	337PHSP	3,072	496	7.7	-	283	64

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				WESTON COUNTY--Continued						
138	150	36.0	160	2,100	58	1.6	-	25.0	1,200	4,800
130	300	23.0	134	830	840	.2	0.01	21.0	20	-
19	270	14.0	162	690	13	.6	.00	26.0	60	420
0	400	1.7	194	655	14	.7	.00	32.0	70	220
16	200	3.3	369	260	10	.5	3.40	6.0	70	-
22	11	4.8	101	200	8	1.4	.10	4.5	40	-
1	405	2.1	472	382	58	2.8	.00	39.0	560	530
56	4	1.6	190	1,040	1	.2	1.40	13.0	50	40
50	4	1.9	233	1,000	2	.3	.38	12.0	50	-
51	3	1.9	256	980	1	.3	.34	11.0	50	10
78	6	2.6	227	1,260	5	.4	3.20	14.0	110	0
83	5	2.6	225	1,420	4	.4	4.70	16.0	70	0
37	35	4.8	141	1,680	9	1.2	-	9.2	280	0
33	-	-	-	34	5	-	-	9.0	-	-
32	5	2.4	280	110	0	.4	.00	12.0	50	10
29	3	2.2	276	87	1	-	-	-	30	-
161	29	6.7	127	1,980	19	.9	.00	10.0	150	0
29	3	1.8	289	37	1	.3	-	13.0	10	70
57	31	6.8	20	630	8	1.0	.06	7.2	40	46,000
33	6	2.6	257	117	2	.4	-	14.0	20	60
32	4	2.8	268	105	2	.4	-	14.0	10	40
26	3	2.3	276	74	1	.6	-	13.0	0	30
77	83	19.0	144	970	4	.2	-	20.0	10	5,100
1	304	1.4	197	456	9	.1	-	12.0	30	200
2	490	2.7	740	480	9	.5	.05	5.8	600	110
25	110	3.4	425	80	12	.1	2.90	8.7	50	100
80	450	9.4	564	990	13	.3	.47	8.7	110	2,900
21	440	6.6	774	510	8	.1	.03	8.1	90	170
44	12	1.7	-	230	2	.3	-	15.0	210	40
73	14	2.1	208	650	55	.3	9.80	17.0	170	340
-	-	-	234	190	3	-	-	-	370	-
24	3	1.5	318	12	0	.3	-	13.0	0	40
297	22,900	38.0	214	3,780	35,500	1.8	9.00	18.0	-	0
12	3	2.8	167	20	2	.2	.39	15.0	30	20
100	87	14.0	280	730	15	.3	.02	6.7	390	2,400
28	2	1.4	296	27	1	.3	-	12.0	0	30
248	172	18.0	376	2,000	26	.3	-	9.8	420	8,600
26	3	.6	298	69	1	.2	-	15.0	-	0
27	2	1.4	293	24	2	.5	1.00	13.0	10	-

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			WESTON COUNTY--Continued					
46N 063W 17CBC	05/13/75	337PHSP	3,605	480	7.6	26.5	295	62
46N 063W 18ADD	03/14/58	217LKOT	1,030	-	7.9	-	1,560	5
46N 063W 18ADD	08/19/60	217LKOT	1,104	-	7.6	-	832	3
46N 064W 11DB	08/19/60	217LKOT	1,800	-	8.1	-	2,100	8
46N 064W 13CCA	08/19/60	217LKOT	1,927	-	7.7	-	653	3
46N 064W 13CCA	05/22/69	337PHSP	4,522	484	7.8	37.0	269	61
46N 064W 20BB	10/23/68	211FXHL	200	875	8.0	-	579	67
46N 064W 23CCB	07/22/80	331MDSN	5,125	470	7.1	46.5	263	57
46N 064W 24ADA	06/05/67	217LKOT	1,852	1,130	7.7	-	734	0
46N 064W 33AD	10/03/74	211PIRR	248	2,200	7.4	10.2	1,510	4
46N 065W 03DD	10/01/74	211LNCE	150	1,300	7.6	10.5	813	4
46N 065W 20CDD	07/18/80	331MDSN	-	925	6.5	42.5	654	96
46N 065W 23BAD	07/21/80	331MDSN	7,737	675	7.0	65.0	364	72
46N 065W 25A	05/14/75	337PHSP	-	750	7.3	25.0	444	88
46N 067W 09AD	06/26/74	125FRUN	130	1,560	7.2	10.3	1,030	210
46N 067W 29BBC	06/26/74	125FRUN	238	1,870	7.5	11.0	1,360	200
47N 060W 30AAA	06/03/69	317MNLS	425	463	7.9	16.0	272	68
47N 061W 01CBC	06/03/69	317MNLS	400	495	7.8	9.0	297	83
47N 061W 11CBB	06/03/69	317MNLS	410	432	8.0	10.0	250	70
47N 062W 11AA	09/09/69	237SPRF	140	2,760	7.7	-	2,540	533
47N 062W 24AD	09/17/74	217LKOT	180	413	7.3	14.0	251	45
47N 063W 25CB	08/15/74	217LKOT	140	1,210	4.2	11.0	757	68
47N 063W 31CDA	05/22/69	217INKR	800	3,360	7.7	18.0	2,510	47
47N 064W 12CCC	06/27/74	317MNLS	1,560	2,010	8.1	12.0	1,280	11
47N 064W 31BB	10/23/68	217INKR	3,850	1,780	8.1	19.0	1,170	2
47N 065W 13DD	06/04/74	217INKR	638	1,450	8.9	13.0	923	1
47N 065W 17CB	06/04/74	211FXHL	116	2,270	7.6	9.0	1,570	69
47N 066W 02CCB	07/15/69	211LNCE	240	951	8.5	12.0	592	7
47N 066W 22C	06/05/74	211LNCE	180	1,230	8.0	10.5	748	12
47N 066W 30DA	06/05/74	211LNCE	200	-	7.6	10.5	834	87
47N 067W 02BAA	07/15/69	211LNCE	160	2,020	8.2	11.0	1,340	13
47N 067W 03CA	06/05/74	211LNCE	240	2,120	8.9	10.0	1,370	13
48N 060W 08CC	09/10/69	317MNLS	SPRING	408	7.9	-	236	76
48N 061W 07AD	08/14/74	317MNKT	140	476	7.9	11.0	272	63
48N 061W 30AA	06/05/69	317MNLS	700	955	8.0	12.0	676	150
48N 062W 19DC	09/10/69	221SNDC	30	1,560	7.7	8.0	1,180	187
48N 062W 20AD	08/14/74	221SNDC	170	2,110	7.3	11.5	1,690	390
48N 062W 20DDD	07/09/69	221SNDC	98	2,040	7.5	11.0	1,750	393
48N 063W 30BD	09/10/69	217INKR	700	1,780	7.7	32.0	1,490	243
48N 065W 25CC	05/14/75	337PHSP	3,161	750	7.2	25.0	447	88
48N 065W 35CCB	07/11/69	337PHSP	3,198	724	7.7	2.8	469	93
48N 066W 01CCC	07/11/69	217FLRV	822	1,090	8.2	15.0	678	0
48N 066W 02DD	08/08/74	217FLRV	920	1,030	8.5	14.0	634	1

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				WESTON COUNTY--Continued						
27	2	1.6	329	27	2	0.3	0.19	11.0	20	-
1	-	-	194	861	13	-	-	-	-	-
-	-	-	219	403	14	-	-	-	-	-
-	688	-	183	1,270	32	-	-	-	-	-
-	-	-	195	307	12	-	-	-	-	-
26	2	1.4	273	29	1	.4	-	14.0	10	310
36	82	4.2	371	182	8	.2	-	12.0	110	4,900
26	3	1.7	268	31	4	.5	-	19.0	20	10
0	250	.5	207	361	7	.6	-	11.0	60	780
2	560	2.6	942	460	6	.7	.51	6.9	-	40
1	310	1.6	635	170	3	.7	.56	7.4	-	50
28	59	2.7	219	260	52	.0	-	39.0	190	580
31	3	1.9	232	120	2	1.2	-	24.0	30	10
39	2	2.4	273	160	2	3.0	.16	12.0	20	-
97	18	5.4	787	290	2	.2	.11	15.0	100	1,800
110	98	8.7	586	630	4	.1	.14	18.0	230	1,800
24	1	1.1	305	12	0	.0	.54	12.0	0	-
12	8	1.3	304	13	2	.0	3.61	11.0	0	-
15	2	1.4	254	19	1	.0	1.56	9.7	0	-
95	111	5.8	188	1,680	9	.1	1.40	12.0	400	-
22	7	5.5	172	63	3	.1	1.60	14.0	50	50
28	61	9.0	1	560	6	.4	.01	6.6	110	18,000
20	740	3.8	144	1,610	11	.0	.00	10.0	170	-
3	410	2.7	166	760	6	.1	.03	8.6	110	100
0	400	1.2	251	615	17	.0	.01	13.0	40	-
0	330	.9	422	330	39	.7	.82	8.9	220	-
34	410	4.8	446	810	9	.1	.33	12.0	480	-
5	227	1.9	505	92	2	.0	.25	7.6	230	-
4	270	3.0	636	130	4	.1	.11	11.0	100	-
38	150	5.4	439	300	17	.1	1.80	12.0	130	210
6	445	2.3	454	635	4	.0	.00	8.3	150	-
24	430	4.8	479	650	4	.1	1.20	2.1	170	-
8	1	.5	272	6	1	.1	.00	9.2	0	-
21	4	1.4	265	22	2	.2	4.60	8.6	20	10
45	3	2.0	23	335	2	.0	3.16	10.0	60	-
112	29	12.0	463	580	14	.0	2.71	8.8	310	-
88	17	8.9	354	1,000	5	.2	.04	9.7	160	350
87	19	7.7	296	1,080	7	.0	.00	8.8	120	-
77	83	19.0	144	970	4	.2	.00	20.0	10	-
39	2	2.4	273	160	2	3.0	.16	12.0	10	-
34	20	1.5	267	174	1	1.2	.01	12.0	20	-
0	244	.0	262	279	16	.1	.00	8.2	60	-
1	240	.8	446	120	39	1.4	.28	10.0	230	140

Table 1.--Chemical analyses of wells and springs in the Powder River

Sample location	Date of collection	Aquifer	Well depth or interval sampled (feet)	Specific conductance (microsiemens)	pH	Temperature (°C)	Dissolved solids (mg/L)	Calcium (mg/L)
			WESTON COUNTY--Continued					
48N 067W 05DB	05/22/74	111ALVM	40	1,600	7.9	8.1	1,070	40
48N 067W 25DB	05/21/74	211LNCE	160	1,010	8.1	10.0	635	21
48N 068W 26BAB	07/17/69	211FXHL	2,250	1,400	9.0	25.0	900	1

Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Alkalinity as bicarbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	Fluoride (mg/L)	Nitrate as nitrogen (mg/L)	Silica (mg/L)	Boron (µg/L)	Iron (µg/L)
				WESTON COUNTY--Continued						
17	310	3.6	531	420	5	0.4	0.05	8.5	140	-
8	210	2.5	486	140	2	.3	.32	9.2	150	-
0	330	1.0	472	310	11	.1	.00	12.0	380	-

Table 2.--Dissolved-trace-metal concentrations in the ground water of the Powder River structural basin and adjacent areas, northeastern Wyoming

[Analyses from the files of the U.S. Geological Survey; concentrations in micrograms per liter; <, less than; ND, not detected; Aquifer: see page 5 for aquifer codes]

Location	Aquifer	Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Zinc
					CAMPBELL COUNTY						
42N 070W 03CB	125FRUN	08/09/76	-	-	< 2	-	< 2	1	-	-	-
43N 070W 01BA	125FRUN	08/02/76	-	-	< 2	-	2	< 2	-	-	-
43N 070W 03BA	125FRUN	08/02/76	-	-	< 2	-	2	2	-	-	-
43N 070W 03CC	125FRUN	08/19/76	-	-	< 2	-	-	2	-	-	-
43N 070W 03CC	125FRUN	08/09/76	-	-	< 2	-	1	< 2	-	-	-
43N 070W 03DD	125FRUN	08/09/76	-	-	< 2	-	13	< 2	-	-	-
43N 070W 13BB	125FRUN	08/03/76	-	-	< 2	-	-	< 2	-	-	-
43N 070W 17BB	125FRUN	08/12/76	< 5	-	< 2	-	< 2	1	< 0.5	< 5	-
43N 070W 24BD	125FRUN	08/17/76	-	-	< 2	-	104	106	-	-	-
43N 070W 26AA	125FRUN	07/29/76	-	-	2	-	5	1	-	-	-
43N 070W 26BB	125FRUN	08/01/76	-	-	< 2	-	6	< 2	-	-	-
43N 070W 27CC	125FRUN	10/04/73	< 5	-	< 2	-	1	< 2	< .5	< 5	-
43N 070W 27CC	125FRUN	07/03/73	5	-	< 2	-	-	4	< .5	< 5	-
43N 070W 27CC	125FRUN	06/15/73	< 5	-	5	-	3	1	< 1	< 5	-
43N 070W 29BD	125FRUN	08/11/76	-	-	< 2	-	-	< 2	-	-	-
43N 070W 33DD	125FRUN	05/24/73	< 10	-	< 2	-	< 2	< 2	< .1	< 5	-
43N 070W 34AD	125FRUN	07/31/73	5	-	< 2	-	3	4	< .5	< 5	-
43N 070W 34CD	125FRUN	10/04/73	< 1	-	< 2	-	3	1	< 1	< 5	-
47N 072W 07CBC	124WSTC	11/05/80	1	-	< 1	0	1	4	.4	0	< 3
47N 072W 07CBC	124WSTC	05/09/80	1	-	< 1	0	0	0	.0	0	< 3
47N 072W 07CBD	124WSTC	10/04/77	< 1	900	ND	-	-	16	-	-	50
47N 072W 07CBD	124WSTC	10/10/76	1	< 100	ND	-	-	ND	-	-	550
47N 072W 07CBD	124WSTC	10/09/76	< 1	< 100	ND	-	-	ND	-	-	170
47N 072W 07CBD	124WSTC	10/10/76	< 1	< 100	< 2	-	-	ND	-	-	290
47N 072W 07CBD	124WSTC	10/09/76	< 1	< 100	ND	-	-	ND	-	-	60
47N 072W 07CBD	124WSTC	10/09/76	< 1	< 100	ND	-	-	ND	-	-	100
47N 072W 07CBD	124WSTC	10/22/76	1	< 100	ND	-	-	< 2	-	-	20
47N 072W 07CBD	124WSTC	10/09/76	1	< 100	ND	-	-	ND	-	-	40
47N 072W 07CBD	124WSTC	08/04/77	< 1	< 100	< 2	-	-	4	-	-	< 20
47N 072W 07CBD	124WSTC	08/04/77	< 1	< 100	2	-	-	12	-	-	4

Table 2.--Dissolved-trace-metal concentrations in the ground water of the Powder River structural basin and adjacent areas, northeastern Wyoming--Continued

Location	Aquifer	Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Zinc
					CAMPBELL COUNTY--Continued						
47N 072W 07CBD	124WSTC	10/29/76	21	1,100	ND	-	-	ND	-	-	20
47N 072W 07CBD	124WSTC	01/18/77	< 1	< 100	ND	-	-	ND	-	-	40
47N 072W 07CBD	124WSTC	08/04/77	< 1	< 100	< 2	-	-	5	-	-	ND
47N 072W 07CBD	124WSTC	01/20/77	1	< 100	ND	-	-	ND	-	-	< 20
47N 072W 07CBD	124WSTC	01/19/77	2	< 100	ND	-	-	< 2	-	-	40
47N 072W 07CBD	124WSTC	08/04/77	5	500	< 2	-	-	4	-	-	8
47N 072W 07CBD	124WSTC	08/04/77	< 1	< 100	3	-	-	9	-	-	50
47N 072W 07CBD	124WSTC	01/04/78	2	500	2	-	-	22	-	-	20
47N 072W 07CBD	124WSTC	01/04/78	4	200	< 2	-	-	20	-	-	30
47N 072W 07CBD	124WSTC	08/05/77	< 1	< 100	< 2	-	-	5	-	-	ND
47N 072W 07CBD	124WSTC	11/15/77	1	700	ND	-	-	2	-	-	40
47N 072W 07CBD	124WSTC	08/05/77	< 1	< 100	< 2	-	-	4	-	-	4
47N 072W 07CBD	124WSTC	08/05/77	< 1	< 100	< 2	-	-	2	-	-	ND
47N 072W 07CBD	125FRUN	10/05/77	< 1	200	ND	-	-	8	-	-	< 20
47N 072W 07CBD	125FRUN	02/14/78	120	200	< 2	-	-	7	-	-	< 20
47N 072W 07CBD	124WSTC	01/17/78	15	200	ND	-	-	ND	-	-	< 20
47N 072W 07CBD	124WSTC	12/01/78	1	400	2	ND	-	30	< 0.1	< 1	-
47N 072W 07CBD	124WSTC	03/22/79	1	< 100	ND	< 20	-	ND	< .1	< 1	-
47N 072W 07CBD	124WSTC	12/01/78	1	30	< 2	ND	-	2	< .1	< 1	-
47N 072W 07CBD	124WSTC	07/11/79	1	-	< 2	ND	ND	ND	< .1	< 1	< 3
47N 072W 07CBD	124WSTC	07/11/79	1	-	< 2	ND	ND	ND	< .1	< 1	4
47N 072W 07CBD	124WSTC	03/07/80	2	200	0	10	0	0	.0	0	0
47N 072W 07CBD	124WSTC	03/07/80	2	200	0	10	0	0	.0	0	0
47N 072W 07CBD	124WSTC	03/07/80	2	200	0	10	0	0	.0	0	0
47N 072W 07CBD	124WSTC	08/13/80	1	-	0	10	0	0	.0	0	50
47N 072W 07CCA	124WSTC	07/10/79	10	-	ND	ND	ND	ND	< .1	< 1	40
47N 072W 07CCA	---	11/07/80	2	-	0	10	0	2	.4	0	40
47N 072W 07CCA	124WSTC	03/23/79	< 1	< 100	ND	< 20	-	ND	< .1	< 1	-
47N 072W 07CCA	124WSTC	03/23/79	1	< 100	ND	< 20	-	ND	< .1	< 1	-
47N 072W 07CCA	---	05/09/80	6	-	0	0	0	0	.0	0	280

Table 2.--Dissolved-trace-metal concentrations in the ground water of the Powder River structural basin and adjacent areas, northeastern Wyoming--Continued

Location	Aquifer	Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Zinc
					CAMPBELL COUNTY--Continued						
47N 072W 07CCA	124WSTC	07/10/79	< 1	-	< 2	ND	ND	ND	< 0.1	< 1	20
47N 072W 07CCA	124WSTC	07/11/79	1	-	< 2	ND	ND	ND	< .1	< 1	7
47N 072W 07CCA	124WSTC	07/11/79	1	-	ND	< 20	ND	ND	< .1	< 1	30
47N 072W 07CCA	124WSTC	12/05/79	0	-	< 1	0	3	0	.0	0	-
47N 072W 07CCA	124WSTC	07/11/79	1	-	ND	ND	ND	ND	< .1	< 1	30
47N 072W 07CCA	124WSTC	07/10/79	1	-	< 2	< 20	ND	ND	< .1	< 1	7
47N 072W 07CCA	124WSTC	03/23/79	< 1	< 100	ND	ND	-	ND	< .1	< 1	-
47N 072W 07CCA	124WSTC	03/23/79	< 1	< 100	ND	< 20	-	ND	< .1	< 1	-
47N 072W 07CCA	124WSTC	10/25/79	1	-	0	4	0	0	.1	1	10
47N 072W 07CCA	124WSTC	12/05/79	1	-	1	0	0	5	.0	0	20
47N 072W 07CCA	124WSTC	03/07/80	3	100	0	10	1	0	.2	0	0
47N 072W 07CCA	124WSTC	03/07/80	2	100	0	10	1	0	.0	1	0
47N 072W 07CCA	124WSTC	05/06/80	1	-	< 1	0	0	0	.0	0	< 3
47N 072W 07CCA	124WSTC	08/15/80	9	-	0	0	0	0	.0	0	70
47N 072W 08CBB	---	07/10/79	< 1	-	< 2	< 20	ND	2	< .1	< 1	1,100
47N 072W 09BDC	124WSTC	01/06/78	< 1	< 100	2	-	-	10	-	-	20
47N 072W 09DBC	124WSTC	10/07/76	< 1	< 100	ND	-	-	ND	-	-	20
47N 072W 12BCC	124WSTC	10/08/76	< 1	< 100	< 2	-	-	ND	-	-	< 20
47N 072W 17AAB	124WSTC	10/08/76	< 1	< 100	ND	-	-	ND	-	-	270
47N 072W 18BBC	124WSTC	10/08/76	1	< 100	ND	-	-	ND	-	-	20
47N 072W 18CA	125FRUN	08/18/75	< 1	-	ND	ND	ND	ND	< .5	< 1	70
47N 072W 18DA	125FRUN	08/18/75	< 1	-	ND	ND	ND	ND	< .5	< 1	< 20
48N 069W 11DC	125FRUN	07/20/76	< 1	-	< 2	< 20	< 2	< 2	< .5	< 1	ND
48N 069W 22AC	125FRUN	07/20/76	< 1	-	< 2	< 20	< 2	< 2	< .5	< 1	< 20
48N 070W 17BC	125FRUN	07/27/76	2	-	ND	ND	ND	< 2	< .5	< 1	1,800
48N 075W 14BD	124WSTC	07/27/76	< 1	-	ND	20	< 2	2	< .5	< 1	< 20
49N 075W 34CA	124WSTC	07/21/76	< 1	-	ND	< 20	< 2	2	< .5	< 1	ND
50N 071W 21BBB	125FRUN	10/19/77	1	-	ND	< 20	ND	5	< .1	< 1	< 20
50N 071W 27AAC	111ALVM	03/05/75	< 1	-	-	ND	-	-	< .5	-	30
50N 071W 27ABA	125FRUN	03/04/75	< 1	-	< 2	-	4	3	< .5	-	ND

Table 2.--Dissolved-trace-metal concentrations in the ground water of the Powder River structural basin and adjacent areas, northeastern Wyoming--Continued

Location	Aquifer	Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Zinc
					CAMPBELL COUNTY--Continued						
50N 071W 27BAD	111ALVM	03/05/75	< 1	-	-	ND	-	-	< 0.5	-	30
50N 071W 27BAD	125FRUN	05/15/75	< 1	< 100	ND	< 20	2	2	.5	< 1	2
50N 071W 28AAC	---	05/24/76	3	-	< 2	ND	2	4	< .5	6	ND
50N 071W 33BAC	125FRUN	10/20/77	3	-	ND	< 20	ND	8	< .1	< 1	20
50N 071W 33BAC	125FRUN	10/20/77	1	-	ND	< 20	ND	3	< .1	< 1	< 20
50N 071W 33BAC	111ALVM	03/06/75	< 1	-	ND	-	7	4	< .5	-	20
50N 072W 14AAA	---	05/20/76	-	400	ND	< 7	< 2	< 7	-	-	ND
50N 072W 21AAC	---	05/25/76	< 1	200	ND	ND	2	4	< .5	< 1	20
50N 072W 21ACC	124WSTC	05/05/76	-	20	-	< 50	< 20	< 50	-	-	-
50N 072W 26AAC	124WSTC	05/26/76	-	20	ND	< 50	< 20	< 50	-	-	370
50N 072W 26ACB	124WSTC	07/06/76	< 1	-	< 2	ND	< 2	4	< .5	< 1	80
50N 072W 26BBB	---	05/26/76	< 1	-	ND	ND	2	7	< .5	< 1	100
50N 072W 28ABB	124WSTC	08/13/76	< 1	-	ND	ND	ND	< 2	< .5	< 1	140
50N 072W 34AAA	124WSTC	07/06/76	< 1	-	< 2	ND	2	2	< .5	< 1	30
50N 073W 01AA	---	08/13/76	< 1	-	< 2	ND	ND	ND	< .5	< 1	140
51N 072W 23AB	125FRUN	11/22/76	4	-	< 2	ND	2	< 2	< .5	9	60
52N 073W 25DD	124WSTC	07/10/76	< 1	-	ND	ND	ND	ND	< .5	1	20
52N 074W 01BA	125FRUN	07/22/76	< 1	-	ND	< 20	< 2	3	< .5	< 1	200
53N 070W 13AA	125FRUN	07/05/76	< 1	-	< 2	< 20	< 2	8	< .5	< 1	< 20
53N 073W 20BD	125FRUN	07/23/76	< 1	-	ND	ND	ND	3	< .5	< 1	ND
53N 074W 35AB	125FRUN	07/22/76	< 1	-	< 2	< 20	2	2	< .5	20	30
53N 076W 22AB	124WSTC	07/12/76	< 1	-	< 2	ND	3	3	< .5	< 1	< 20
54N 076W 27BC	124WSTC	07/26/76	-	300	ND	< 20	< 20	34	-	-	ND
55N 073W 26	125FRUN	10/19/77	1	-	< 2	ND	ND	6	< .1	< 1	ND
56N 071W 30DBB	111ALVM	10/19/77	1	-	< 2	< 20	ND	3	< .1	< 1	< 20
56N 071W 30DBB	111ALVM	10/26/76	1	-	< 2	ND	< 2	< 2	< .5	1	230
56N 072W 32AC	125FRUN	10/18/77	2	-	3	< 20	< 2	39	< .1	< 1	< 20
56N 072W 33BCD	125FRUN	10/18/77	1	-	2	< 20	ND	10	< .1	< 1	ND
56N 073W 21AB	125FRUN	10/17/77	1	-	6	< 20	14	72	< .1	< 1	ND
56N 073W 25BBA	125FRUN	10/18/77	1	-	ND	20	ND	3	< .1	< 1	< 20

Table 2.--Dissolved-trace-metal concentrations in the ground water of the Powder River structural basin and adjacent areas, northeastern Wyoming--Continued

Location	Aquifer	Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Zinc
					CAMPBELL COUNTY--Continued						
56N 073W 25CC	125FRUN	10/17/77	1	-	9	20	2	92	< 0.1	< 1	< 20
56N 073W 25CC	125FRUN	10/26/76	< 1	-	< 2	ND	< 2	2	< .5	< 1	170
56N 073W 25CC	125FRUN	10/12/77	1	-	17	< 20	2	70	< .1	< 1	< 20
56N 073W 27DDC	125FRUN	10/17/77	2	-	7	< 20	< 2	63	< .1	< 1	< 20
56N 074W 04AA	---	08/11/76	< 1	-	3	ND	< 2	3	< .5	< 1	< 20
56N 074W 04CB	125FRUN	08/11/76	< 1	-	3	ND	< 2	4	< .5	< 1	< 20
56N 076W 25CB	125FRUN	07/08/76	< 1	-	ND	ND	< 2	2	< .5	< 1	ND
57N 070W 19DD	125FRUN	07/24/76	< 1	-	< 2	ND	< 2	8	< .5	< 1	ND
57N 074W 08BA	125FRUN	07/09/76	< 1	-	ND	ND	ND	ND	< .5	< 1	980
					CONVERSE COUNTY						
31N 071W 08CDD	317CSPR	06/29/79	-	-	-	-	-	-	-	< 1	-
33N 073W 32CD	331MDSN	04/18/74	-	80	< 9	< 20	14	20	-	-	60
33N 075W 20AAC	331MDSN	07/22/76	25	< 100	ND	ND	ND	ND	< .5	< 1	30
35N 071W 27CC	211FXHL	02/05/75	2	-	ND	ND	ND	< 2	1.5	-	20
35N 074W 35CAA	---	10/30/75	-	300	< 8	< 3	< 2	< 3	-	-	< 8
36N 072W 27BDB	---	07/01/80	-	-	-	-	-	-	-	0	-
36N 073W 21DCC	---	05/08/80	-	-	-	-	-	-	-	9	-
36N 073W 21DCC	---	05/08/80	-	-	-	-	-	-	-	2	-
36N 073W 26ADA	---	05/08/80	-	-	-	-	-	-	-	3	-
36N 073W 27ABB	---	05/07/80	-	-	-	-	-	-	-	24	-
36N 073W 35DAD	---	05/07/80	-	-	-	-	-	-	-	0	-
36N 074W 04DCD	---	05/06/80	-	-	-	-	-	-	-	1	-
36N 074W 26BA	---	05/28/80	-	-	-	-	-	-	-	31	-
36N 074W 36ABB	---	05/08/80	-	-	-	-	-	-	-	23	-
37N 068W 12CB	125FRUN	10/06/77	< 1	-	< 2	20	2	9	< .1	< 1	ND
37N 073W 10BAC	---	05/28/80	-	-	-	-	-	-	-	1	-
37N 073W 14ADA	---	05/08/80	-	-	-	-	-	-	-	0	-
37N 074W 02DCA	---	07/01/80	-	-	-	-	-	-	-	0	-
37N 074W 14AB	124WSTC	10/07/77	< 1	-	ND	20	ND	2	< .1	< 1	ND
38N 073W 14BCB	---	05/09/80	-	-	-	-	-	-	-	0	-

Table 2.--Dissolved-trace-metal concentrations in the ground water of the Powder River structural basin and adjacent areas, northeastern Wyoming--Continued

Location	Aquifer	Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Zinc
					CONVERSE COUNTY--Continued						
38N 073W 27CDB	---	05/09/80	-	-	-	-	-	-	-	0	-
38N 073W 33CCB	---	05/29/80	-	-	-	-	-	-	-	0	-
39N 073W 23CCA	---	05/07/80	-	-	-	-	-	-	-	0	-
39N 073W 23DCD	---	05/07/80	-	-	-	-	-	-	-	0	-
39N 073W 24BDD	---	05/07/80	-	-	-	-	-	-	-	0	-
39N 074W 34BDD	124WSTC	10/11/77	1	-	9	< 20	ND	22	< 0.1	< 1	ND
					CROOK COUNTY						
51N 063W 12ADB	---	11/05/75	2	-	ND	2	4	ND	< .5	1	ND
52N 062W 18C	337PHSP	07/22/78	1	50	< 2	ND	ND	< 2	< .1	1	370
53N 062W 19DBB	317MNLS	11/05/75	2	-	ND	ND	6	2	< .5	1	20
53N 065W 18BBD	337PHSP	08/30/75	3	-	ND	ND	5	< 2	< .5	1	240
57N 065W 15DA	374FLTD	10/18/76	7	200	ND	< 20	< 2	ND	< .5	1	< 20
57N 065W 15DA	361RDRV	07/28/77	< 1	< 100	< 2	ND	< 2	2	< .5	8	170
57N 065W 15DA	361RDRV	07/29/77	< 1	< 100	ND	ND	ND	2	< .5	6	4
57N 065W 15DA	361RDRV	07/29/77	< 1	< 100	< 2	ND	ND	2	< .5	8	6
57N 065W 15DA	361RDRV	07/30/77	< 1	< 100	< 2	ND	< 2	< 2	< .5	8	4
57N 065W 15DA	337LDGP	08/01/77	< 1	< 100	ND	ND	< 2	5	< .5	1	8
57N 065W 15DA	337LDGP	08/02/77	< 1	< 100	ND	ND	< 2	5	< .5	10	< 20
57N 065W 15DA	337LDGP	08/02/77	< 1	< 100	ND	ND	ND	2	< .5	2	30
57N 065W 15DA	331MSNC	08/05/77	< 1	< 100	ND	ND	ND	2	< .5	2	20
57N 065W 15DA	331MSNC	08/06/77	< 1	< 100	ND	ND	ND	ND	< .5	5	ND
57N 065W 15DA	331MSNC	08/07/77	< 1	300	< 2	4	ND	ND	< .5	9	6
57N 065W 15DA	331MSNC	08/08/77	1	200	ND	-	ND	ND	< .5	8	4
57N 065W 15DA	331CRLS	08/08/77	< 1	400	2	4	ND	< 2	< .5	6	20
57N 065W 15DA	331CRLS	08/09/77	< 1	300	ND	4	ND	ND	< .5	5	2
57N 065W 15DA	337LDGP	08/11/77	< 1	400	ND	ND	ND	< 2	< .5	4	< 20
57N 065W 15DA	361RDRV	08/12/77	< 1	200	ND	ND	ND	ND	< .5	4	ND
57N 065W 15DA	---	08/12/77	< 1	200	ND	ND	ND	ND	< .5	5	2
57N 065W 15DA	---	08/16/77	< 1	300	ND	4	< 2	ND	< .5	6	< 20
57N 065W 15DA	---	08/16/77	< 1	300	ND	4	ND	ND	< .5	6	6
57N 065W 15DA	---	08/16/77	< 1	300	ND	ND	ND	ND	< .5	6	8
57N 065W 15DA	---	08/18/77	1	500	< 2	ND	ND	2	< .5	5	20

Table 2.--Dissolved-trace-metal concentrations in the ground water of the Powder River structural basin and adjacent areas, northeastern Wyoming--Continued

Location	Aquifer	Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Zinc
JOHNSON COUNTY											
41N 081W 09CDB	331MDSN	09/16/76	< 1	< 100	ND	< 20	< 2	ND	< 0.5	< 1	ND
49N 083W 27DBA	331MDSN	09/14/76	1	< 100	ND	ND	< 2	5	< .5	1	20
NATRONA COUNTY											
32N 081W 12ACB	237GSEG	09/03/75	2	-	ND	< 20	2	2	< .5	4	220
33N 077W 15BCB	331MDSN	05/03/75	18	< 100	ND	ND	< 2	2	< .5	< 1	ND
33N 080W 06CBC	211FRNR	09/04/75	2	-	ND	ND	< 2	2	< .5	< 1	20
33N 081W 36AAD	317TSLP	06/26/79	-	-	-	-	-	-	-	< 1	-
39N 078W 26CDC	331MDSN	07/21/76	12	< 100	ND	ND	ND	ND	< .5	< 1	140
39N 079W 11AAD	331MDSN	09/02/75	7	-	ND	< 20	< 2	< 2	< .5	< 1	20
40N 079W 26AAC	---	07/22/76	5	< 100	ND	ND	< 2	3	< .5	1	40
40N 079W 31BCA	331MDSN	07/21/76	2	< 100	ND	< 20	ND	ND	< .5	< 1	20
40N 079W 35CCC	331MDSN	09/02/75	9	-	ND	ND	< 2	< 2	< .5	< 1	< 20
NIOBRARA COUNTY											
36N 067W 13AAA	125FRUN	10/06/77	< 1	-	ND	20	ND	3	< .1	< 1	< 20
SHERIDAN COUNTY											
53N 084W 13BDC	331MDSN	05/09/75	1	< 100	ND	ND	20	< 2	< .5	< 1	< 20
55N 077W 11BA	211FXHL	10/18/78	1	700	< 2	< 20	30	4	-	< 1	20
55N 077W 11BA	211LNCE	10/22/78	1	700	2	ND	< 2	9	< .1	< 1	20
55N 077W 11BA	125TULK	10/22/78	1	700	3	ND	ND	26	< .1	< 1	20
55N 077W 11BA	125TULK	10/22/78	1	600	2	ND	ND	10	< .1	< 1	20
55N 077W 11BA	---	10/24/78	2	500	3	ND	3	17	< .1	< 1	< 20
55N 077W 11BA	125TGRV	10/24/78	1	500	< 2	< 20	ND	29	< .1	< 1	20
55N 077W 11BA	125TGRV	10/24/78	1	400	2	< 20	ND	24	< .1	< 1	20
55N 089W 01DA	374FLTD	08/14/75	< 1	-	ND	ND	< 2	ND	< .5	< 1	90
56N 085W 31BD	125FRUN	08/16/76	< 1	-	ND	ND	ND	< 2	< .5	< 1	280
56N 086W 05AA	---	08/16/76	< 1	-	< 2	ND	ND	< 2	< .5	< 1	270
57N 087W 21DBC	331MDSN	05/08/75	2	400	ND	ND	< 2	ND	< .5	3	ND
57N 088W 12BB	331MDSN	11/18/76	< 1	< 100	ND	ND	5	ND	< .5	3	< 20
57N 088W 12BB	331MDSN	11/18/76	< 1	< 100	ND	ND	< 2	< 2	< .5	1	ND
58N 087W 32BBB	317TSLP	11/22/76	< 1	< 100	ND	ND	< 2	< 2	< .5	1	< 20

Table 2.--Dissolved-trace-metal concentrations in the ground water of the Powder River structural basin and adjacent areas, northeastern Wyoming--Continued

Location	Aquifer	Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Zinc
					WESTON COUNTY						
44N 063W 26CAC	337PHSP	05/13/75	2	< 100	ND	ND	ND	ND	< 0.5	< 1	ND
45N 060W 20BBB	317MNKT	11/11/75	2	< 100	< 2	< 20	< 2	9	-	2	50
45N 061W 02BC	317MNLS	08/29/75	3	-	ND	20	ND	ND	< .5	8	< 20
45N 061W 20CA	337PHSP	05/13/75	3	< 100	ND	ND	< 2	ND	< .5	2	ND
45N 061W 28AB	337PHSP	05/12/75	4	< 100	ND	ND	< 2	ND	< .5	3	ND
45N 061W 29CBB	337PHSP	05/13/75	4	< 100	< 2	ND	< 2	ND	< .5	6	ND
45N 061W 30ADB	337PHSP	08/29/75	2	-	ND	20	18	ND	< .5	5	20
45N 061W 33AB	337PHSP	08/29/75	2	-	ND	ND	ND	< 2	< .5	4	< 20
46N 060W 30AD	237SPRF	08/29/75	2	-	ND	30	ND	ND	< .5	2	490
46N 062W 18BDC	337PHSP	07/13/76	3	< 100	ND	ND	< 2	ND	< .5	1	20
46N 063W 17CBC	337PHSP	05/13/75	2	< 100	ND	ND	60	2	< .5	1	ND
46N 064W 13CCA	217LKOT	05/14/75	2	< 100	< 2	ND	3	ND	< .5	1	ND
46N 065W 23BAD	337PHSP	05/14/75	4	< 100	ND	ND	20	2	< .5	5	30
46N 065W 25A	337PHSP	05/14/75	1	< 100	ND	ND	11	< 2	< .5	6	4
47N 060W 30AAA	317MNLS	08/30/75	< 1	-	ND	ND	4	< 2	< .5	2	300
48N 061W 07AD	317MNKT	08/30/75	3	-	ND	< 20	180	< 2	< .5	< 1	200
48N 065W 25CC	337PHSP	05/14/75	1	0	0	0	11	1	.0	6	4

Table 3.--Radiochemical analyses of ground water in the Powder River structural basin and adjacent areas, northeastern Wyoming

[Analyses by U.S. Geological Survey; concentrations in micrograms per liter (µg/L) or picocuries per liter (pci/L); <, less than. Aquifer: see page 5 for aquifer codes]

County	Location	Aquifer	Date	Gross alpha, dissolved (µg/L as natural uranium)	Gross alpha, suspended (µg/L as natural uranium)	Gross beta, dissolved (pci/L as cesium 137)	Gross beta, suspended (pci/L as cesium 137)	Radium 226, dissolved radon method (pci/L)	Radium 226, dissolved precipitation method (pci/L)	Uranium, dissolved-extraction method (µg/L)	Uranium, dissolved direct fluorometric method (µg/L)
CAMPBELL	43N 070W 27CC	125FRUN	10/04/73	-	-	-	-	-	-	< 0.85	-
CAMPBELL	43N 070W 27CC	125FRUN	07/03/73	-	-	-	-	-	-	< .85	-
CAMPBELL	43N 070W 27CC	125FRUN	06/15/73	-	-	-	-	-	-	< .85	-
CAMPBELL	43N 071W 21ADB	124WSTC	06/22/78	-	-	-	-	-	-	.00	-
CAMPBELL	48N 075W 14BD	124WSTC	07/27/76	< 5.2	-	2.1	-	-	< 0.1	.04	-
CAMPBELL	49N 075W 34CA	124WSTC	07/21/76	< 9.2	-	< 1.9	-	-	< .1	< .01	-
CAMPBELL	50N 071W 28AAC	---	05/24/76	< 25	< 0.4	24	< 0.4	0.15	-	-	1.1
CAMPBELL	50N 072W 14AAA	---	05/26/76	< 13	< .4	9.8	< .4	1.1	-	-	.6
CAMPBELL	50N 072W 21AAC	---	05/25/76	< 16	< .4	5	< .4	.25	-	-	-
CAMPBELL	50N 072W 21ACC	124WSTC	05/05/76	< 30	< .4	29	< .4	.11	-	-	1.1
CAMPBELL	50N 072W 26AAC	124WSTC	05/26/76	< 62	< .4	22	< .4	.6	-	.3	-
CAMPBELL	50N 072W 26BBB	---	05/26/76	< 57	< .4	23	< .4	.77	-	.09	-
CAMPBELL	50N 072W 28ABB	124WSTC	08/13/76	< 37	-	< 8	-	-	.1	.06	-
CAMPBELL	50N 073W 01AA	---	08/13/76	< 30	-	< 7.7	-	-	.1	.1	-
CAMPBELL	52N 074W 01BA	125FRUN	07/22/76	< 36	-	12	-	-	.3	.03	-
CAMPBELL	53N 073W 20BD	125FRUN	07/23/76	< 13	-	6.1	-	-	.5	.04	-
CAMPBELL	53N 074W 35AB	125FRUN	07/22/76	< 47	-	11	-	-	.3	-	14
CAMPBELL	53N 076W 22AB	124WSTC	07/12/76	< 12	-	8.9	-	-	.8	< .01	-
CAMPBELL	57N 070W 19DD	125FRUN	07/24/76	< 9.7	-	< 2.4	-	-	< .1	.02	-
CONVERSE	33N 073W 32CD	331MDSN	04/18/74	< 20	-	51	-	-	-	-	-
CONVERSE	33N 075W 20AAC	331MDSN	07/22/76	1,900	110	350	12	-	-	-	-
CONVERSE	35N 074W 35CAA	---	10/30/75	120	13	20	7.8	2.2	-	-	19
CONVERSE	36N 072W 21BAD	124WSTC	07/01/80	< 4.4	-	< 2.3	-	.26	-	-	-
CONVERSE	36N 072W 27BDB	124WSTC	07/01/80	< 55	-	< 22	-	9.9	-	-	-

Table 3.--Radiochemical analyses of ground water in the Powder River structural basin and adjacent areas, northeastern Wyoming--Continued

County	Location	Aquifer	Date	Gross alpha, dissolved (µg/L as natural uranium)	Gross alpha, suspended (µg/L as natural uranium)	Gross beta, dissolved (pci/L as cesium 137)	Gross beta, suspended (pci/L as cesium 137)	Radium 226, dissolved radon method (pci/L)	Radium 226, dissolved precipitation method (pci/L)	Uranium, dissolved-extraction method (µg/L)	Uranium, dissolved direct fluorometric method (µg/L)
CONVERSE	36N 073W 21DCC	124WSTC	05/08/80	12	-	5.9	-	0.39	-	-	-
CONVERSE	36N 073W 21DCC	124WSTC	05/08/80	37	-	7.7	-	.27	-	-	-
CONVERSE	36N 073W 26ADA	124WSTC	05/08/80	21	-	5	-	.94	-	-	-
CONVERSE	36N 073W 27ABB	124WSTC	05/07/80	34	-	4.4	-	.26	-	-	-
CONVERSE	36N 073W 35DAD	---	05/07/80	81	-	8	-	.13	-	-	-
CONVERSE	36N 074W 04DCD	---	05/06/80	150	-	12	-	.28	-	-	-
CONVERSE	36N 074W 26BA	124WSTC	05/28/80	120	-	12	-	.35	-	-	-
CONVERSE	36N 074W 36ABB	124WSTC	05/08/80	40	-	7.7	-	.88	-	-	-
CONVERSE	37N 073W 10BAC	---	05/28/80	< 4.9	-	4	-	.35	-	-	-
CONVERSE	37N 073W 14ADA	---	05/08/80	3.4	-	< 1.8	-	.12	-	-	-
CONVERSE	37N 074W 02DCA	124WSTC	07/01/80	< .7	-	10	-	.89	-	-	-
CONVERSE	38N 073W 14BCB	124WSTC	05/09/80	57	-	7.7	-	3.7	-	-	-
CONVERSE	38N 073W 27CDB	124WSTC	05/09/80	< 4.4	-	3	-	.6	-	-	-
CONVERSE	38N 073W 33CCB	---	05/29/80	< 5.7	-	3.6	-	.33	-	-	-
CONVERSE	39N 073W 23CCA	124WSTC	05/07/80	< 16	-	< 10	-	1.4	-	-	-
CONVERSE	39N 073W 23DCD	125FRUN	05/07/80	7.6	-	3.6	-	.58	-	-	-
CONVERSE	39N 073W 24BDD	125FRUN	05/07/80	< 4.4	-	4.2	-	.55	-	-	-
CROOK	52N 062W 18C	337PHSP	07/22/78	< 8.1	< 0.4	< 3.4	< 0.4	-	-	0.00	-
CROOK	57N 065W 15DA	374FLTD	10/18/76	25	-	19	-	14	-	-	< 0.4
CROOK	57N 065W 15DA	361RDRV	07/28/77	< 7.2	< .4	2.9	< .4	-	-	-	-
CROOK	57N 065W 15DA	361RDRV	07/29/77	8.7	< .4	2.3	.5	-	-	-	-
CROOK	57N 065W 15DA	337LDGP	08/01/77	< 7	.5	3	< .4	-	-	-	-
CROOK	57N 065W 15DA	337LDGP	08/02/77	12	< .4	2.9	.6	-	-	-	-
CROOK	57N 065W 15DA	331MSNC	08/05/77	50	5	13	1.2	-	-	-	-
CROOK	57N 065W 15DA	331MSNC	08/06/77	44	4.9	18	.7	-	-	-	-
CROOK	57N 065W 15DA	331MSNC	08/08/77	< 15	< .4	8.9	1.2	-	-	-	-
CROOK	57N 065W 15DA	331CRLS	08/09/77	< 12	.8	8.1	.9	-	-	-	-

Table 3.--Radiochemical analyses of ground water in the Powder River structural basin and adjacent areas, northeastern Wyoming--Continued

County	Location	Aquifer	Date	Gross alpha, dissolved (µg/L as natural uranium)	Gross alpha, suspended (µg/L as natural uranium)	Gross beta, dissolved (pci/L as cesium 137)	Gross beta, suspended (pci/L as cesium 137)	Radium 226, dissolved radon method (pci/L)	Radium 226, dissolved precipitation method (pci/L)	Uranium, dissolved-extraction method (µg/L)	Uranium, dissolved direct fluorometric method (µg/L)
CROOK	57N 065W 15DA	337LDGP	08/11/77	< 8.4	1.7	5.8	< 0.4	-	-	-	-
CROOK	57N 065W 15DA	361RDRV	08/12/77	11	.4	4.4	.6	-	-	-	-
CROOK	57N 065W 15DA	---	08/12/77	< 6.2	< .4	3.4	.8	-	-	-	-
CROOK	57N 065W 15DA	---	08/18/77	19	< .4	7.8	.5	-	-	-	-
JOHNSON	41N 081W 09CDB	331MDSN	09/16/76	350	3.1	68	.7	-	-	-	-
JOHNSON	49N 083W 27DBA	331MDSN	09/14/76	< 3	-	1.5	-	-	-	-	-
NATRONA	39N 078W 26CDC	331MDSN	07/21/76	190	18	93	3.9	-	-	-	-
NATRONA	40N 079W 26AAC	---	07/22/76	18	< .4	4.1	.4	-	-	-	-
NATRONA	40N 079W 31BCA	331MDSN	07/21/76	270	7.5	69	2	-	-	-	-
SHERIDAN	56N 085W 31BD	125FRUN	08/16/76	< 8	-	7.9	-	-	0.4	0.1	-
SHERIDAN	56N 086W 05AA	---	08/16/76	< 5.8	-	10	-	-	.5	.2	-
SHERIDAN	57N 087W 21DBC	331MDSN	07/19/76	3	< .4	3	< .4	-	-	-	-
WESTON	45N 061W 33AB	337PHSP	07/13/76	20	< .4	5.4	< .4	-	-	-	-
WESTON	46N 062W 18BDC	337PHSP	07/13/76	5.6	< .4	2.1	.5	-	-	-	-

AGRICULTURE ☆ U.S. GOVERNMENT PRINTING OFFICE 1984—781-239