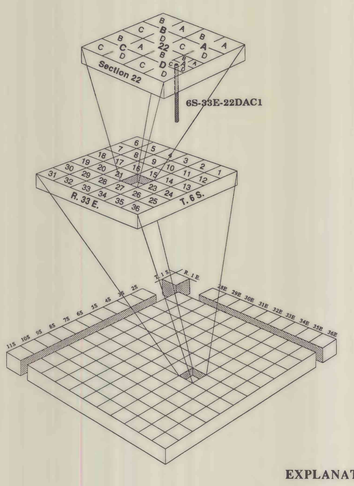
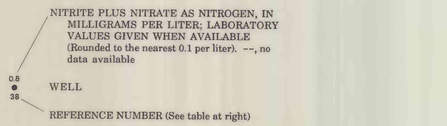


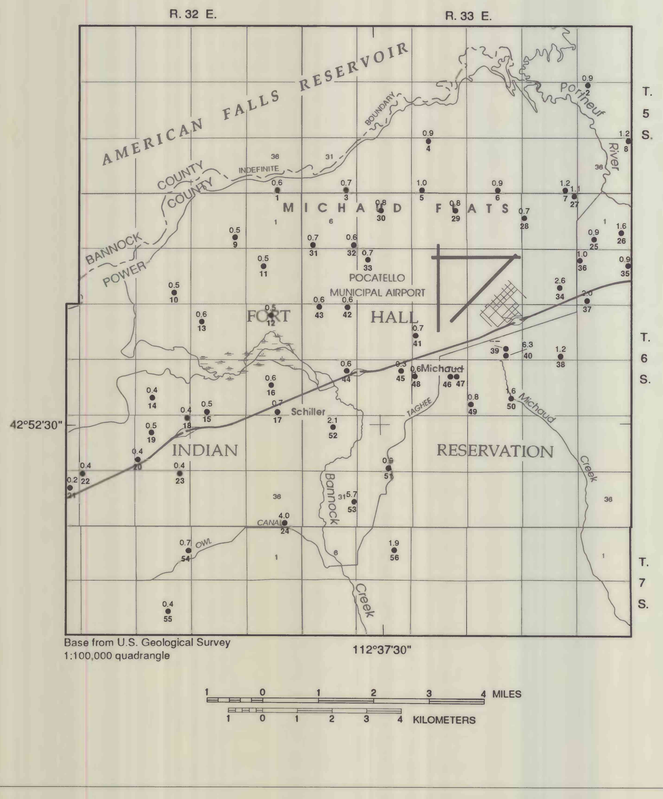
WELL-NUMBERING SYSTEM

The well-numbering system used by the U.S. Geological Survey in Idaho indicates the location of wells within the official rectangular subdivision of public lands, with reference to the Boise base line and Meridian. The first two segments of the number designate the township (north or south) and range (east or west). The third segment gives the section number; three letters, which indicate the $^1/_4$ section (160-acre tract), $^1/_4$-$^1/_4$ section (40-acre tract), and $^1/_4$-$^1/_4$-$^1/_4$ section (10 acre tract); and serial number of the well within the tract.

Quarter sections are designated by the letters A, B, C, and D in counterclockwise order from the northeast quarter of each section. Within the quarter sections, 40-acre and 10-acre tracts are lettered in the same manner. Well 6S-33E-22DAC1 (example at left) is in the SW$^1/_4$NE$^1/_4$SE$^1/_4$ sec. 22, T. 6 S., R. 33 E., and was the first well inventoried in that tract.

EXPLANATION





Base from U.S. Geological Survey
1:100,000 quadrangle

1 0 1 2 3 4 MILES
1 0 1 2 3 4 KILOMETERS

The purpose of this report is to present concentrations of nitrogen compounds analyzed in ground water in the southern part of the Fort Hall Indian Reservation. The study area included that part of the reservation southeast of American Falls Reservoir and north of the Owl Canal. The scope of the study was limited to inventorying 56 wells and making onsite determinations of depth to water, specific conductance, pH, water temperature, and concentrations of total alkalinity, dissolved chloride, and dissolved nitrite plus nitrate (as nitrogen). When onsite nitrite plus nitrate concentrations exceeded about 4 mg/L nitrogen, ground-water samples were collected for nitrite plus nitrate (as nitrogen) ammonia, and ammonia plus organic nitrogen (as nitrogen) analyses at the U.S. Geological Survey National Water Quality Laboratory.

Locations of wells and concentrations of nitrite plus nitrate (as nitrogen) are shown on the map at lower left. Selected well-inventory and water-quality data for the 56 ground-water samples collected in July 1989 are shown in the table at right. A statistical summary of selected water-quality data is shown in the table at lower right.

INDEX MAP OF IDAHO

CONVERSION FACTORS

For readers who prefer to use metric units, conversion factors for inch-pound units used in this report are listed below. Constituent concentrations are given in mg/L (milligrams per liter), which is equal to parts per million. Specific conductance is expressed as µS/cm (microsiemens per centimeter) at 25 degrees Celsius.

Multiply	By	To obtain
acre	4,047	square meter
foot (ft)	0.3048	meter
mile (mi)	1.609	kilometer

Temperature in °C (degrees Celsius) can be converted to °F (degrees Fahrenheit) as follows:

$$°F = (1.8)(°C) + 32$$

Water temperatures are reported to the nearest 0.5 °C.

For additional information write to:

Jerry L. Hughes
District Chief
U.S. Geological Survey, WRD
230 Collins Road
Boise, ID 83702

Copies of this report can be purchased from:

U.S. Geological Survey
Map Sales
Federal Center, Box 25286
Denver, CO 80225

SELECTED WELL-INVENTORY AND WATER-QUALITY DATA

Reference number	Well location	Total depth of well (feet)	Sample date (1989)	Onsite: Depth to water (feet below land surface)	Onsite: Specific conductance (µS/cm)	Onsite: pH (standard units)	Onsite: Water temperature (°C)	Onsite: Alkalinity, total, (mg/L as $CaCO_3$)	Onsite: Chloride, dissolved (mg/L as Cl)	Onsite: Nitrogen, NO_2+NO_3, dissolved (mg/L as N)	Laboratory: Nitrogen, NO_2+NO_3, dissolved (mg/L as N)	Laboratory: Nitrogen, ammonia, dissolved (mg/L as N)	Laboratory: Nitrogen, ammonia plus organic, dissolved (mg/L as N)
1	5S-32E-36DCC1	225	7-12	--	427	7.7	11.5	139	24	0.6	--	--	--
2	5S-33E-25BBA1	--	7-28	50.70	468	7.8	12.5	170	27	.8	0.88	--	1.0
3	31DDC1	185	7-12	--	450	8.0	11.0	148	24	.7	--	--	--
4	33BAB1	--	7-12	--	485	7.9	10.5	169	24	.9	--	--	--
5	33CCD1	224	7-12	--	447	7.9	11.0	156	24	1.0	--	--	--
6	34DCC1	231	7-12	--	463	7.9	11.5	158	23	.9	--	--	--
7	35DDC1	260	7-12	--	478	7.8	11.5	188	20	1.2	--	--	--
8	36AAA2	216	7-27	60.25	458	7.6	13.5	184	18	1.2	--	--	--
9	6S-32E- 2DDB1	209	7-12	--	422	7.9	12.0	139	25	.5	--	--	--
10	10DCA1	192	7-12	--	416	7.9	12.0	134	26	.5	--	--	--
11	12BDB1	200	7-13	--	431	8.1	12.0	136	24	.5	--	--	--
12	13BAD1	183	7-27	--	386	8.0	12.0	130	23	.5	--	--	--
13	14BCA1	200	7-13	--	415	7.9	12.0	134	25	.6	--	--	--
14	22CAC1	207	7-18	--	411	7.9	12.5	140	24	.4	--	--	--
15	23CDC1	224	7-13	--	409	7.9	12.5	130	25	.5	--	--	--
16	24BDD1	--	7-13	--	418	8.0	12.5	137	23	.6	--	--	--
17	24DCC1	68	7-20	--	740	7.6	13.5	260	69	.7	--	--	--
18	27AAA1	75	7-27	32.81	406	7.9	13.0	130	22	.5	.44	--	.80
19	27BDB1	200	7-13	--	421	7.9	13.0	138	25	.5	--	--	--
20	27CCB1	--	7-18	--	524	7.5	11.5	200	38	.4	--	--	--
21	32ADB1	--	7-19	58.26	482	7.5	14.5	180	32	.4	.17	00	<.20
22	33BBB1	--	7-19	--	458	7.7	13.0	154	34	.4	--	--	--
23	34AAB1	202	7-19	--	613	7.4	11.0	234	52	.5	.36	--	<.20
24	36DCD1	--	7-20	37.45	1,920	7.2	11.5	216	423	2.8	4.0	<.010	.30
25	6S-33E- 1CDB1	265	7-18	--	454	7.9	11.5	152	21	.9	--	--	--
26	1DAC1	240	7-12	--	494	8.0	15.0	190	22	1.6	--	--	--
27	2AAA1	180	7-20	22.90	479	7.8	12.5	188	18	1.1	1.1	--	<.20
28	2BCC1	--	7-20	35.72	438	7.8	12.5	140	24	.7	.75	--	.40
29	4ADB1	340	7-18	--	455	8.0	11.0	150	26	.8	--	--	--
30	5BDA1	220	7-28	--	437	7.8	11.0	160	26	.8	--	--	--
31	6CCD1	193	7-13	--	429	8.0	11.5	140	23	.7	--	--	--
32	6DDD1	168	7-27	28.03	432	7.8	13.0	130	24	.6	--	--	--
33	8BBD1	190	7-13	--	433	8.0	11.5	145	23	.7	--	--	--
34	11DBD1	130	7-13	--	868	7.8	11.5	225	84	2.6	--	--	--
35	12ADA1	100	7-18	--	467	7.9	12.0	170	22	.9	--	--	--
36	12BBC1	213	7-18	--	509	8.0	12.0	166	32	1.0	--	--	--
37	12CCD1	103	7-19	--	1,190	7.4	16.5	229	180	2.0	--	--	--
38	14DCD1	234	7-20	163.95	508	7.6	16.0	164	46	1.2	--	--	--
39	15DCA1	205	7-19	87.69	--	--	--	--	--	--	--	--	--
40	15DCD1	--	7-19	--	1,050	7.3	12.0	330	102	6.6	6.3	--	.50
41	16CBB1	284	7-18	--	440	7.9	13.0	146	27	.7	--	--	--
42	18AAB1	174	7-27	27.14	418	7.9	12.5	120	26	.5	.59	--	<.20
43	18BAB1	--	7-13	--	421	8.0	12.0	132	26	.6	--	--	--
44	19AAC1	324	7-18	--	415	7.8	13.0	132	24	.6	--	--	--
45	20AAC1	151	7-19	--	444	7.7	13.0	160	29	.5	.29	--	<.20
46	21ACA1	300	7-19	--	674	7.7	15.0	154	93	1.3	1.7	--	<.20
47	21ADB1	158	7-19	75.83	--	--	--	--	--	--	--	--	--
48	21BCB1	227	7-18	--	482	8.0	15.0	160	39	.6	--	--	--
49	22CCB1	512	7-19	--	482	7.7	17.5	170	37	.8	--	--	--
50	22DAC1	250	7-27	150.21	1,030	7.6	13.0	200	173	1.6	--	--	--
51	29DCC1	--	7-20	34.54	1,200	7.5	14.0	243	198	.9	--	--	--
52	30ABC1	90	7-19	19.85	1,120	7.2	12.5	300	146	1.5	2.1	--	<.20
53	31DAA1	60	7-20	24.20	1,230	7.1	10.5	294	175	4.2	5.7	--	.20
54	7S-32E- 3ADD1	--	7-20	--	625	7.4	12.0	220	56	.7	--	--	--
55	10DBB1	450	7-18	--	562	7.4	17.0	220	43	.4	--	--	--
56	7S-33E- 5ACD1	--	7-20	--	1,340	7.3	10.0	264	285	1.9	--	--	--

STATISTICAL SUMMARY OF SELECTED WATER-QUALITY DATA

[*, onsite analysis; •, laboratory analysis; <, less than; ≥, greater than or equal to]

Water-quality constituent	Number of samples	Median (50 percent)	Mean	Range: Minimum	Range: Maximum	Number of samples with concentrations exceeding national drinking-water limits
*Specific conductance (µS/cm)	54	461	594	386	1,923	
*pH (standard units)	54	7.8	7.7	7.1	8.1	
*Temperature (°C)	54	12.5	12.5	10.0	17.5	
*Alkalinity, total (mg/L as $CaCO_3$)	54	160	176	120	330	
*Chloride, dissolved (mg/L as Cl)	54	26	58	18	423	2 ≥10 mg/L[2]
*Nitrogen, nitrite + nitrate, dissolved (mg/L as N)	54	.7	1.0	.4	6.6	0 ≥10 mg/L[2]
•Nitrogen, nitrite + nitrate, dissolved (mg/L as N)	13	.9	1.9	.2	6.3	0 ≥10 mg/L[2]
•Nitrogen, ammonia + organic, dissolved (mg/L as N)	13	<.2	.4	<.2	1.0	

[1]U.S. Environmental Protection Agency, 1987, Secondary maximum contamination levels (Section 143.3 of Part 143, National secondary drinking water regulations): U.S. Code of Federal Regulations, Title 40, parts 100-149, revised as of July 1, 1987, p. 593.

[2]U.S. Environmental Protection Agency, 1982, Maximum contaminant levels (subpart B of Part 141, National interim primary drinking water regulations): U.S. Code of Federal Regulations, Title 40, parts 100-149, revised as of July 1, 1987, p. 530-532.

SELECTED GROUND-WATER QUALITY DATA FOR THE SOUTHERN PART OF THE FORT HALL INDIAN RESERVATION, SOUTHEASTERN IDAHO, JULY 1989

By
H.W. Young and D.J. Parliman

1989