10/2/90
AREA
SALT LAK
20 MILE
BOMBING RANGE
NO 1
BOX ELDER COUNTY
TOOELE COUNTY
SPECIAL
WEAPONS
BOMBING
RANGE NO 1
Floating Island
Needle Point
Bonneville Salt Flats Race Track
SALT LAKE
Salt
Bonneville Limited Potash Plant
Wendover
Saldura Station
WESTERN PACIFIC
Arinosa Station
Micro Wave Relay Tower
Barro
SALT LAKE BASELINE
AND MERIDIAN
SONNEVILLE
WENDOVER SPECIAL WEAPONS
NO 1 AIR FORCE RANGE
NEVADA
UTAH
ELKO COUNTY
TOOELE COUNTY
Patters Spring
T 8 N
T 4 N
T 3 N
T 2 N
T 1 N
T 1 S
T 2 S
R 19 W
R 18 W
R 16 W
R 15 W
R 14½ W
4650
4260
4580
4215
4220
4245
4253
4315
4217
4210
4209
4242
4233
4240
4230
4224
4223
4212
4195
4200
4400
5000

Minerals for Industry

Northern Nevada & Northwestern Utah

Summary of Geological Survey of 1955–1961

Volume I

Southern Pacific Company

1964

Geology: 10-20' thickness of perlite

Conclusions: shows limited promise

Location: *N½N½ Sec. 12, and Sec. 14, T.32N., R.51E., MDBM, Eureka Co. (1)

Description: trenches

Geology: perlite intercalated with rhyolite

OCCURRENCES

Location: SE¼SE¼SE¼ Sec. 9 and E½E½ Sec. 11, T.32N., R.51E., MDBM, Eureka Co. (1)

Geology: NE-striking perlite crops out in area 500-600' long by 200' wide in E½NE¼ Sec. 11; 50-60' thickness of perlite between rhyolite flows in E½SE¼ Sec. 11; small outcrop of perlite in Sec. 9; perlite in both sections locally overlain by tuff, welded tuff, sand and gravel

Conclusions: shows limited promise

POTASSIUM [K]

OCCURRENCES

Location: W½ Sec. 1, Secs. 3, 9, 11, and N½ Sec. 15, T.4N., R.18W., and Sec. 31, T.5N., R.18W., SLBM, Box Elder Co. (1,17,25)

Geology: saline lake and playa; reported analyses of near-surface brine indicate minimum of 0.674% K_2O in areas fringing playa; potassium content increased toward lake where 0.867% K_2O was reported at lake edge indicating possible higher concentrations at lower levels in playa; compares with potassium content of surface brines at Salduro deposit where potash is produced near Wendover, Utah

Conclusions: source of potassium compounds

Location: *Secs. 2, 4, 5, 6, 7, 8, 10, NW¼ Sec. 14, S½ Sec. 15, Secs. 16, 17, 18, 19, 20, 21, 22, N½ Sec. 28, N½ Sec. 29, and NE¼ Sec. 30, T.4N., R.18W., and SE¼ Sec. 20, S½ Sec. 21, SW¼ Sec. 26, Secs. 27, 28, 29, SE¼ Sec. 30, Secs. 32, 33, 34, and W½ Sec. 35, T.5N., R.18W., SLBM, Box Elder Co. (1,7,25)

Geology: saline lake and playa (see analytical data above)

PUMICE, PUMICITE, AND TUFF

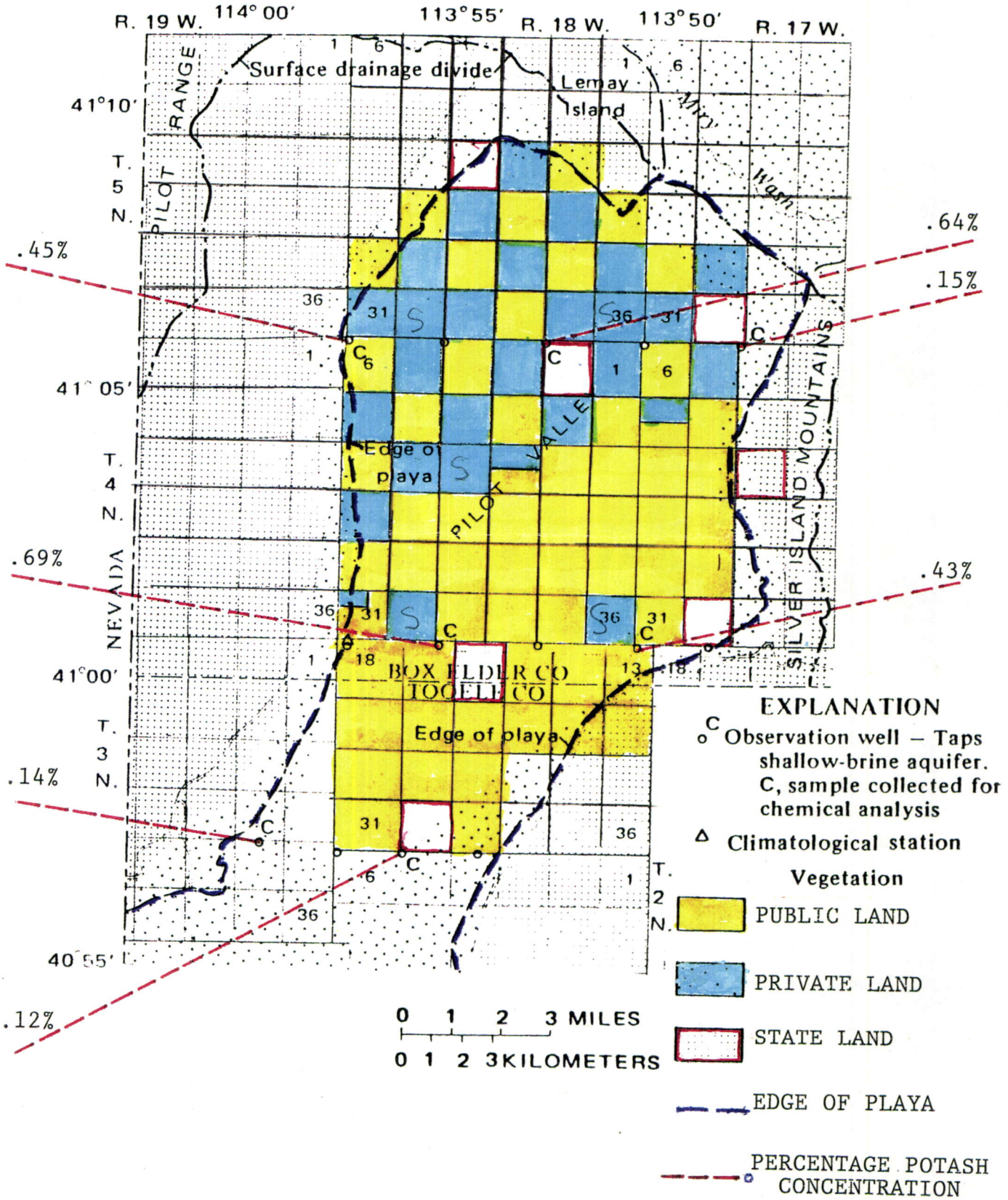
MINES AND PROSPECTS

Location: *W½W½ and NE¼NW¼ Sec. 2, NE¼NE¼ Sec. 3, and SE¼NE¼ and NE¼SE¼ Sec. 10, T.38N., R.65E., MDBM, Elko Co. (1)

Description: pits and adits in Sec. 2

Geology: pumice containing tuffaceous and calcareous impurities

PILOT VALLEY
MAP



UNITED STATES
Department of the Interior
GEOLOGICAL SURVEY

SELECTED GROUND-WATER DATA, BONNEVILLE SALT FLATS AND PILOT VALLEY, WESTERN UTAH

By Gregory C. Lines

UTAH BASIC-DATA RELEASE NO. 30

Prepared in cooperation with the
U.S. Bureau of Land Management

Salt Lake City, Utah

1978

Table 3.--Chemical analyses of water from selected wells and springs

Solids: Residue on evaporation at 180°C except c, calculated, or u, method of determination unknown.
Analytical data: AE, U.S. Army Engineer Office; GS, U.S. Geological Survey; K, Kaiser Aluminum and Chemical Corp., San Leandro, Calif.

Location	Water-bearing zone (See table 1)	Date of collection	Temperature (°C)	Milligrams per liter: Dissolved calcium (Ca)	Dissolved magnesium (Mg)	Dissolved sodium (Na)	Dissolved potassium (K)	Bicarbonate (HCO_3)	Dissolved sulfate (SO_4)	Dissolved chloride (Cl)	Dissolved bromide (Br)	Dissolved boron (B)	Dissolved lithium (Li)	Hardness as $CaCO_3$	Noncarbonate hardness as $CaCO_3$	Dissolved solids	Density (g/mL at 20°C)	Source of analytical data
BONNEVILLE SALT FLATS																		
(B-1-16)7dda-1	QM	9-23-76	20.0	1,300	1,900	100,000	3,800	38	4,100	170,000	22	1.9	32	11,000	11,000	297,000	1.186	GS
19aaa-1	QM	9-23-76	17.5	1,500	1,900	85,000	3,100	53	4,600	130,000	22	1.9	26	12,000	12,000	228,000	1.145	GS
(B-1-17)9dbb-1	QM	9-22-76	20.0	1,100	4,400	110,000	8,000	125	5,400	180,000	60	6.8	70	21,000	21,000	314,000	1.195	GS
11aaa-1	QM	9-24-76	16.5	1,100	4,900	100,000	7,500	195	5,700	170,000	56	5.6	68	23,000	23,000	300,000	1.187	GS
11aaa-3	QS	9-24-76	17.0	1,300	3,000	110,000	6,400	29	4,300	190,000	37	3.4	54	16,000	16,000	329,000	1.204	GS
12dcb-1	QM	9-23-76	23.0	1,100	4,900	100,000	7,700	164	5,700	180,000	60	4.9	73	23,000	23,000	313,000	1.193	GS
22aaa-1	QM	9-23-76	23.5	1,100	4,700	100,000	7,900	148	5,700	180,000	60	4.7	68	22,000	22,000	314,000	1.194	GS
24bbb-1	QM	9-23-76	23.5	1,800	1,200	71,000	2,600	57	4,600	120,000	10	2.2	21	9,400	9,400	204,000	1.129	GS
28bbb-1	QM	9-24-76	18.5	1,000	5,500	100,000	9,600	193	6,200	180,000	72	7.5	88	25,000	25,000	319,000	1.197	GS
28bbb-2	QS	9-24-76	18.5	960	5,500	110,000	9,300	99	5,900	200,000	68	6.8	43	25,000	25,000	336,000	1.201	GS
34ddd-1	QM	9-23-76	23.5	1,000	5,200	100,000	7,900	156	6,300	180,000	56	5.9	70	24,000	24,000	310,000	1.194	GS
35dcc-1	QM	9-23-76	22.0	1,700	2,400	63,000	3,800	123	6,100	110,000	26	3.4	33	14,000	14,000	195,000	1.124	GS
36ddd-1	QM	9-23-76	22.5	1,300	2,900	100,000	5,100	85	5,200	170,000	36	2.8	45	15,000	15,000	295,000	1.186	GS
(B-1-18)[illegible]d-1	QM	9-22-76	20.5	330	330	24,000	1,800	195	1,600	40,000	11	4.0	11	2,200	2,000	70,200	1.045	GS
13ccc-1	QM	9-22-76	21.0	1,200	1,900	88,000	3,600	42	4,500	150,000	32	1.9	30	11,000	11,000	249,000	1.156	GS
25aaa-1	QM	9-24-76	18.5	1,300	2,800	110,000	4,900	90	4,400	190,000	30	4.2	43	15,000	15,000	317,000	1.198	GS
25aaa-2	QS	9-24-76	19.0	1,800	1,700	120,000	4,000	40	3,800	190,000	14	3.1	29	12,000	11,000	324,000	1.202	GS
29ccc-1	QG	3-29-72	28.0	91	71	2,200	130	180	240	3,400	--	.96	--	520	370	6,260c	-----	GS[1]
31ddd-1	QM	9-22-76	18.0	840	930	26,000	1,500	261	3,800	42,000	17	4.0	14	5,900	5,700	76,100	1.049	GS
(B-2-16)19ccc-1	QM	9-21-76	20.0	1,500	980	89,000	2,000	37	4,600	140,000	16	1.4	16	7,800	7,800	251,000	1.158	GS
(B-2-17)23ccc-1	QM	9-21-76	21.0	1,300	1,300	59,000	3,400	49	3,200	96,000	33	3.0	16	8,600	8,600	171,000	1.109	GS
33cdd-1	QM	9-21-76	22.0	780	990	48,000	1,900	66	2,200	76,000	11	1.1	17	6,000	6,000	133,000	1.086	GS
(C-1-17)5aaa-1	QM	9-24-76	22.0	1,100	5,300	100,000	8,000	167	5,800	180,000	58	5.7	75	25,000	24,000	305,000	1.192	GS
8ccc-1	QM	9-23-76	22.5	1,100	5,700	100,000	9,200	140	5,300	180,000	64	6.8	90	26,000	26,000	312,000	1.196	GS
12cbb-1	QM	9-23-76	23.0	1,100	3,400	110,000	5,700	75	5,500	190,000	44	3.9	51	17,000	17,000	329,000	1.205	GS
21aba-1	QM	9-28-76	23.0	1,400	2,100	95,000	4,200	53	4,500	160,000	48	2.6	36	12,000	12,000	280,000	1.175	GS
(C-1-18)3bbb-1	QM	9-27-76	20.5	1,200	4,600	100,000	8,400	128	5,000	180,000	34	7.7	75	22,000	22,000	323,000	1.198	GS
3bbb-2	QS	9-27-76	21.5	1,300	3,000	110,000	7,000	60	4,300	190,000	44	6.8	55	16,000	16,000	328,000	1.204	GS
11ccc-1	QM	9-27-76	22.0	1,400	1,400	120,000	2,900	42	4,000	190,000	8	2.5	22	9,300	9,200	324,000	1.202	GS
11ccc-2	QS	9-27-76	22.5	1,500	960	110,000	2,400	33	4,100	180,000	10	1.7	17	7,700	7,700	302,000	1.189	GS
16dac-1	QM	9-27-76	22.0	1,100	3,900	110,000	7,000	122	5,000	190,000	40	6.6	61	19,000	19,000	321,000	1.199	GS
17bdb-1	QM	9-27-76	21.5	1,100	4,100	110,000	7,600	101	5,100	180,000	52	7.0	69	20,000	20,000	317,000	1.195	GS
19adc-1	QM	9-28-76	16.0	1,200	2,900	110,000	5,100	52	4,600	190,000	31	5.1	53	15,000	15,000	322,000	1.199	GS
(C-1-19)2adb-1	QG	3-29-72	24.5	79	63	2,000	120	212	190	3,100	--	---	--	460	280	5,700c	-----	GS[2]
10bac-1	QG	9- 8-67	31	100	80	2,100	100	---	300	3,700	--	---	1.2	------	------	-------	-----	K[3]
23cbc-1	QC	9-13-67	24.5	1,650	1,540	50,800	2,210	---	6,840	80,300	--	---	8.8	------	------	-------	-----	K[4]
34bdc-1	QC	9-13-67	28	1,760	1,540	45,400	1,980	---	6,590	76,800	--	---	17.6	------	------	-------	-----	K[4]
(C-2-17)4aac-1	QM	9-28-76	21.0	1,200	980	70,000	1,900	37	3,600	110,000	8.4	1.5	16	7,000	7,000	196,000	1.125	GS
16caa-1	QM	9-28-76	22.5	1,300	2,600	100,000	4,700	88	5,000	170,000	36	2.2	44	14,000	14,000	292,000	1.182	GS
18abb-1	QM	9-28-76	21.5	1,100	6,900	88,000	11,000	171	6,500	160,000	76	7.4	110	31,000	31,000	291,000	1.180	GS
(C-2-18)1baa-1	QM	9-28-76	18.0	910	8,500	93,000	12,000	254	7,100	180,000	84	13	120	37,000	37,000	306,000	1.194	GS
24ddd-1	QM	9-28-76	22.0	1,200	4,000	100,000	6,300	170	5,700	170,000	52	5.2	61	19,000	19,000	295,000	1.184	GS
27cbb-1	QM	9-28-76	22.0	1,100	8,000	96,000	13,000	206	6,300	180,000	110	8.1	140	36,000	36,000	314,000	1.194	GS
(C-2-19)3bcd-1	QC	11-12-76	28.0	1,600	1,500	47,000	2,100	135	5,600	77,000	33	13	21	10,000	10,000	136,000	1.087	GS
PILOT VALLEY																		
(B-2-18)5	QM	9-30-76	18.0	270	410	20,000	1,200	447	1,100	34,000	8.4	6.8	11	2,400	2,000	56,500	1.036	GS
(B-3-18)8	QM	9-30-76	21.5	2,200	2,400	98,000	6,900	109	3,300	170,000	48	2.5	69	15,000	15,000	288,000	1.179	GS
12	QM	9-30-76	21.5	1,200	1,400	67,000	4,300	188	2,300	110,000	28	3.5	38	8,800	8,600	192,000	1.122	GS
(B-3-19)11aa-S	QG	3-13-43	----	-----	-----	-------	-----	---	-----	27	--	---	--	------	------	170u	-----	AE
22cd-S	QG	3-13-43	----	-----	-----	-------	-----	---	-----	520	--	---	--	------	------	1,130u	-----	AE
26baa-1	QM	9-30-76	20.0	490	330	16,000	1,400	424	450	28,000	15	2.6	13	2,600	2,200	48,600	1.030	GS
(B-4-17)4bbb-1	QM	10- 1-76	20.0	1,200	500	29,000	1,500	73	2,200	50,000	10	1.1	14	5,100	5,000	87,000	1.055	GS
(B-4-18)2bbb-1	QM	10- 1-76	19.5	2,200	2,200	88,000	6,400	74	3,500	150,000	44	2.7	63	15,000	15,000	262,000	1.163	GS
6bbb-1	QM	10- 1-76	18.5	2,000	1,300	78,000	4,500	37	2,900	130,000	26	1.8	41	10,000	10,000	225,000	1.142	GS
(B-4-19)13ddb-S1	QG	9-23-71	15.0	17	5.4	86	7.8	101	13	130	--	---	--	65	0	329c	-----	GS[5]
36acc-1	QG	9-22-71	16.0	100	24	180	5.4	115	13	520	--	---	--	350	250	918c	-----	GS[6]
36acd-S1	QG	1911	----	50[7]	-----	85[8]	----	45	<30	105	--	---	--	130	------	370u	-----	GS
36dcc-S1	QG	3-13-43	----	-----	-----	-------	----	---	-----	96	---	---	--	------	------	258u	-----	AE
(B-5-19)36aca-S1	QG	1911	----	50[7]	-----	65[8]	----	190	<30	50	---	---	--	130	------	320u	-----	GS

[1] Other constituents determined were (in mg/L): carbonate, 0; fluoride, 1.4; nitrite plus nitrate, 0.00; silica, 41; iron, 0.03. Specific conductance 11,000 micromhos per centimeter at 25°C. pH 7.7.

[2] Other constituents determined were (in mg/L): carbonate, 0; fluoride, 1.8; nitrite plus nitrate, 0.00; silica, 42; iron, 0.01. Specific conductance 10,200 micromhos per centimeter at 25°C. pH 7.5.

[3] Data from Turk (1973, p. 5).

[4] Data from Turk (1973, p. 9); converted from parts per million to milligrams per liter using average specific gravity of brine for each well.

[5] Other constituents determined were (in mg/L): carbonate, 0; fluoride, 0.1; nitrate, 0.22; silica, 19; iron, 0.04; manganese, 0.00. Specific conductance 594 micromhos per centimeter at 25°C. pH 7.4.

[6] Other constituents determined were (in mg/L): carbonate, 0; fluoride, 0.0; nitrate, 0.36; silica, 17; iron, 0.04; manganese, 0.03. Specific conductance 1,640 micromhos per centimeter at 25°C. pH 7.5.

[7] Calcium plus magnesium.

[8] Sodium plus potassium.