7-55

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From: "George Bernath" <viceroygold5@earthlink.net>
To: "Teresa Newkirk" <newkt@rb7.swrcb.ca.gov>
Date: 4/3/01 4:11PM
Subject: Piute Spring data

Teresa,

Attached are two Excel files, one is the Piute Spring flow measurements as well as water level measurements from several monitor wells in the Lanfair Valley and the other is the water analysis results from Piute Spring. If you need the locations of the monitor wells, we can send you a map. Also, if you need any other information concerning this data, contact us.

I will be leaving Viceroy Gold on April 11 to take a job at Molycorp, Mountain Pass so if you need more information contact Al Johnson who will be taking over my duties. His email address is ajohnson@viceroygold.com .

George Bernath

Viceroy Gold Corp.

--- George Bernath

--- viceroygold5@earthlink.net

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Summary of Piute Spring flow and water levels in monitor wells in Lanfair Valley

Date	Spring Outlet Flow (gpm)	Flow Upstream of Concrete Dam (gpm)	Depth to Water in PS-2 (feet) (e)	Depth to Water in W-3 (feet) (f)	Depth to Water in W-19 (feet) (h)	Depth to Water in W-37 (feet) (h)	Depth to Water in W-38 (feet) (h)
#########	41	(l)	(l)				
#########	37	21	431.57				
#########	41	37	431.14				
#########	45	(l)	431.05				
#########	45	90	430.79				
#########	45	121	430.49				
#########	41	121	430.44				
#########	45	73	430.21				
#########	41	84	430.16				
#########	37	84	430.33				
#########	45	37	430.33				
#########	41	21	434.4 (g)				
#########	37	37	434.39				
#########	41	95	433.95				
#########	37	135	432.67				
#########	45	114	432.18				
#########	45	84	432.15				
#########	37	102	431.79				
#########	45	105	431.50				
#########	45	84	431.27				
#########	34(a)	63(a)	(b)				
#########	42	84	431.10				
#########	47	74	430.73				
#########	41	45	430.76				
#########	37	41	430.72				
#########	41	41	430.69				
#########	41	54	430.44				
#########	30	73	430.44				
#########	41	92	430.26				
#########	45	90(c)	430.14				
#########	45	92	430.16	489.70			
#########	45	95	430.09	489.82			

##########	49	108	429.79	488.32			
##########	47	114	429.82	488.61			
##########	45	105	429.87	488.51			
##########	34	56	429.36	488.54	365.06(i)		
##########	34	78(j)	429.30	488.56	365.13		
##########	37	45	428.59	488.53	365.02		
##########	41	78	428.77	488.19	364.92	(k)	757.57(d)
##########	37	63	428.90	488.41	365.03	616.35	756.48
##########	(l)	(l)	(l)	(l)	(l)	615.36	756.87
##########	45(a)	45(a)	428.93	488.68	365.13	614.86	757.16
##########	(l)	(l)	(l)	(l)	(l)	614.04	756.73
##########	45	75	429.25	488.64	365.11	613.62	756.95
##########	(l)	(l)	(l)	(l)	(l)	613.42	756.94
##########	45	81	429.30	488.93	365.45	613.17	757.24
##########	(l)	(l)	(l)	(l)	(l)	612.81	757.12
##########	45	81	429.34	488.37	364.98	612.19	756.77
3/20//91	(l)	(l)	(l)	(l)	(l)	(l)	756.86
##########	45	189	428.24	488.87	365.32	612.07	757.28
##########	37	68	428.42	488.76	365.27	611.52	757.19
##########	30	40	428.68	488.71	(l)	611.01	757.11
##########	30	40	428.55	488.66	(l)	610.43	757.21
##########	30	40	428.81	488.76	365.73	610.34	757.22
##########	27	37	428.92	488.75	365.88	610.11	757.16
##########	37	37	428.95	488.80	366.00	609.57	757.25
##########	21	30	429.21	488.70	366.09	608.84	756.89
##########	39	24	428.33	488.27	365.76	607.58	755.81
##########	37	21	428.36	488.10	365.95	607.35	755.89
##########	37	29	428.37	488.16	365.91	607.08	755.95
##########	41	47	428.44	488.33	366.13	606.60	756.13
##########	39	56	427.65	488.38	366.31	606.24	756.00
##########	37	45	426.85	488.40	366.41	606.11	755.72
##########	35	27	427.12	488.54	366.83	605.20	755.84
##########	41	21(m)	427.37	488.30	367.03	609.20	755.10
##########	37	29(n)	428.32	489.63	368.12	608.51	756.80
##########	37	28(n)	428.46	489.67	368.60	606.86	756.57
##########	34	30(n)	428.55	489.96	367.94	605.59	756.90
##########	37	34(o)	428.68	490.29	369.58	604.61	757.07

#########	41	37(o)	428.70	489.89	369.48	603.64	756.53
#########	41	37(o)	428.74	490.09	369.81	603.29	756.72
#########	49	58(o)	428.75	490.33	370.04	602.83	756.89
#########	54	49	428.21	490.24	369.98	601.48	756.57
#########	54	45	428.24	490.12	370.18	601.70	756.37
#########	45	54	428.24	490.31	370.43	600.42	756.57
#########	54	54	428.25	490.21	370.51	600.28	756.44
#########	45	111(n)	428.23	490.35	370.91	600.35	756.52
#########	45	108(n)	428.24	490.55	371.22	599.42	756.72
#########	49	129(n)	428.26	490.60	371.58	599.08	756.73
#########	45	148(n)	428.26	490.80	371.86	599.11	756.82
#########	49	144(n)	428.26	490.51	371.99	598.16	756.67
#########	45	145(n)	428.27	490.61	372.50	597.23	756.71
#########	58	155(n)	428.30	490.04	373.09	597.93	757.10
#########	54	125	428.29	490.80	373.43	597.39	756.64
#########	54	145	428.28	491.21	374.04	596.59	756.95
#########	49	163	428.28	491.35	374.38	595.78	757.13
4/28-29/94	30	78(p)	428.23	491.50	374.87	595.32	756.97
#########	45	121(p)	428.28	491.40	375.18	595.16	756.93
#########	49	101(p)	428.27	491.53	375.55	595.03	757.02
#########	49	128(p)	428.27	491.61	375.93	595.18	757.05
#########	41	84(p)	428.26	491.71	376.42	595.23	757.00
#########	41	95(p)	428.27	491.83	376.72	593.83	757.05
#########	54	180(p)	428.30	492.12	377.20	595.80	757.33
#########	45	215(p)	428.31	492.24	377.55	593.36	757.41
#########	54	233(p)	426.52	492.33	377.95	593.36	757.27
#########	49	314(p)	(q)	492.48	378.25	592.80	757.44
#########	41	282(p)	426.80	492.46	378.62	595.38	757.25
#########	45	303(p)	426.53	492.62	378.88	592.70	757.27
#########	49	314(p)	426.70	492.70	379.22	592.85	757.25
#########	37	262(p)	426.90	492.95	379.61	591.89	757.49
#########	37	224(p)	427.02	493.00	377.89	591.73	757.40
#########	41	142(p)	427.14	493.08	380.22	590.87	757.31
#########	41	149(p)	427.25	493.18	380.47	590.20	757.34
#########	37	164(p)	427.36	493.31	380.82	591.23	757.30
#########	45	172(p)	427.49	493.42	381.10	589.53	757.24
#########	41	164(P)	427.60	493.67	381.42	590.20	757.50

##########	49	215(p)	427.65	493.59	381.47	589.51	757.31
##########	45	224(p)	427.76	493.81	381.86	588.44	757.24
##########	45	197(p)	427.87	494.13	382.30	587.89	757.55
##########	45	172(p)	427.91	494.21	382.54	588.67	757.56
##########	49	142(p)	427.94	494.22	382.61	588.67	757.63
##########	37	149(p)	427.98	494.40	382.98	588.00	757.58
##########	37	164(p)	428.05	494.48	383.22	587.69	757.55
##########	41	180(p)	428.08	494.61	383.46	588.44	757.65
##########	27	149(p)	428.13	494.85	383.84	587.67	757.75
##########	37	164(p)	428.17	494.82	383.85	586.68	757.70
##########	45	197(p)	428.23	494.89	384.10	585.99	757.72
##########	49	233(p)	428.28	495.33	384.47	586.29	757.97
##########	45	262(p)	428.28	495.32	384.63	586.27	757.90
##########	37	324(p)	428.31	495.72	385.02	585.65	758.02
##########	41	314(p)	428.34	495.15	384.79	584.56	757.54
##########	49	233(p)	428.35	496.05	385.43	584.66	757.97
##########	37	197(p)	428.35	496.31	385.64	584.35	757.86
##########	41	149(p)	428.36	496.51	385.72	585.58	757.86
##########	41	189(p)	428.37	496.83	386.03	585.72	757.90
##########	41	172(p)	428.38	497.15	386.24	584.96	757.91
##########	41	206(p)	428.41	497.53	386.45	584.04	757.99
##########	45	197(p)	428.41	497.88	386.57	584.97	757.91
##########	45	215(p)	428.53	497.76	387.04	584.65	758.18
##########	54	197(p)	428.50	498.40	387.28	584.35	758.15
##########	114	224(p)	428.52	498.67	387.44	583.81	758.16
##########	84	242(p)	428.51	498.62	387.39	582.80	758.03
##########	78	242(p)	428.52	498.96	387.65	582.53	757.96
##########	41	206(p)	428.54	499.17	387.81	582.41	757.91
##########	49	189(p)	428.51	499.56	388.17	581.54	757.99
##########	30	149(p)	428.53	500.19	388.81	580.43	757.97
##########	30	206(p)	428.56	500.42	389.23	579.85	757.96
##########	45	189(p)	428.56	500.52	389.49	579.52	757.82
##########	49	149(p)	428.55	501.08	390.08	579.28	757.76
##########	37	180(p)	428.58	501.63	390.78	578.97	757.58
##########	63	224(p)	428.60	502.15	390.88	581.46	756.90
##########	58	262(p)	428.61	502.38	391.08	577.54	756.83
##########	90	189(p)	428.60	502.54	391.63	575.41	756.80

##########	73	189(p)	428.38	503.86	392.03	573.40	756.98
##########	90	262(p)	428.43	504.12	392.24	574.72	757.07
##########	90	303(p)	428.33	504.20	392.88	573.80	756.85

(a) Flow measurement probably too low due to leakage around flume.
(b) The probe became stuck and no measurement was obtained.
(c) A light rain was falling during gauging (at this site only).
(d) Measured prior to well development. Temporary reference point.
(e) Reference point is the top of the 2-inch PVC casing. TOC is 0.3 feet below land surface. Measured with a calibrated Solinst Probe. Readings prior to 1990 were made with an Olympic well probe.
(f) Reference point is the bottom of a torch-cut slot near the top of the steel casing. Measured with a calibrated Solinst Probe
(g) Previous reports used a land surface datum for the measurement on this date. This value has been corrected to top of casing. Measured witha calibrated Solinst Probe.
(h) Reference point is the top of casing on the side opposite the lock. Measured with a calibrated Solinst Probe.
(i) Measured 6/30/90.

(k) A measurement of 345.48 feet was made on this date. This measurement was made prior to complete removal of drilling mud and does not represent static water level of the aquifer.
(l) Not Measured
(m) Stream channel split, measurement taken at usual sampling point, secondary flow not measured.
(n) Combined stream flow, channel split into two channels, two measurement locations; 1) at the usual measurement station, and 2) at the northmost channel, adjacent to usual measurement station.
(o) Some secondary flow outside the usual stream channel not measured because thick tule grasses, very slow flow and 20 to 25 foot width
(p) Spring measured approximately 20 feet upstream of where the stream splits into two channels.
(q) Not able to measure because probe became stuck at about 300 feet due to an apparent cave in or shifting of well casing.

Table 2 - Piute Spring Summary of Water Quality Data

	12/31/1987 Results (2)	03/28/1988 Results (2)	06/11/1988 Results (2)(3)	10/06/1988 Results (2)	12/27/1988 Results (2)	04/27/1988 Results (4)	08/30/1989 Results (4)	03/29/1990 Results (2)(5)
Arsenic	0.005	0.006	0.007	0.008	0.007	0.008	0.006	0.010
Calcium	26.0	25.0	30.0	24.5	26.0	32.0	29.0	25.3
Magnesium	12.1	13.8	14.3	12.0	12.8	13.0	13.0	13.4
Potassium	5.80	7.30	7.60	5.80	6.00	6.00	6.00	6.50
Sodium	31.2	32.1	34.1	29.7	33.8	31	36	28.5
Copper	---	---	---	---	---	<0.02	<0.02	<0.02
Iron	---	---	---	---	---	<0.05	<0.05	<0.01
Manganese	---	---	---	---	---	<0.01	<0.01	<0.01
Zinc	---	---	---	---	---	<0.01	<0.01	<0.01
Chloride	17	16.2	16.9	18.5	16.7	23	19	17.5
Fluoride	0.6	<0.5	0.5	2.7	0.6	0.52	0.04	0.5
Nitrate (NO_3)	1.6	3.2	1.9	0.16	2.8	3.5	2.4	2.9
Sulfate (SO_4)	20.2	19.4	17.7	18.6	18.4	17	18	17.9
Silica	---	---	29.4	31.3	62.5	59	36	---
Carbonate (as $CaCO_3$)	---	---	<5	<5	0	3	<5	<5
Bicarbonate (as $CaCO_3$)	---	---	153	154	155	186	174	147.5
Total Alkalinity (as $CaCO_3$)	---	---	153	154	155	153	148	147.5
Hydroxide	---	---	<5	<5	<5	---	---	<5
pH (pH Units)	7.85	7.6	7.96	7.67	7.81	806	824	7.98
Conductivity (umhos)	400	400	375	375	384	372	391	379
Total Dissoved Solids	252	271	306	270	240	251	263	256
Total Hardness (as $CaCO_3$)	---	---	---	---	---	135	128	118.5

(1) All units mg/L unless noted.

(2) Analysis by Analytical Technologies, Inc. of San Diego, California

(3) Sample was filtered during collection.

(4) Analysis by Atlas Chemical Laboratories, Inc. of Las Vegas.

(5) The following individual results are the average of the reported values from two samples taken

(6) Analysis by Lockheed Analytical Laboratory, Las Vegas, Nevada.

(7) Sample taken approximately 150 feet downstream from the washed out concrete dam.

(8) Analysis by NET Pacific, Inc. of Burbank, California.

Table 2 - Piute Spring Summary of Water Quality Data

	01/03/1991 Results (2)(5)	04/04/1991 Results (2)(5)	07/02/1991 Results (2)(5)	09/25/1991 Results (2)(5)	01/02/1992 Results (6)	01/02/1992 Results (6)(7)	03/30/1992 Results (8)	07/01/1992 Results (5)(8)
Arsenic	0.007	0.007	0.006	0.008	<0.010	<0.010	0.006	0.005
Calcium	26.8	26.4	25	26.9	27	44	29.8	28.4
Magnesium	14.1	13.9	14.4	14.2	12	16	14.8	14.15
Potassium	7	6.9	6.2	6.7	5.8	6	6.91	6.05
Sodium	28	31.9	28.6	33.3	29	36	38	33.6
Copper	---	<0.02	<0.02	<0.02	<0.025	<0.025	<0.02	<0.02
Iron	---	<0.01	0.05	<0.01	<0.010	<0.10	0.02	<0.01
Manganese	---	<0.01	<0.01	<0.01	<0.015	<0.015	0.04	<0.01
Zinc	---	<0.01	<0.05	<0.05	<0.020	<0.020	<0.02	<0.05
Chloride	16.9	13.1	20.5	17	15	18	18.2	17.5
Fluoride	0.6	0.6	0.05	0.25	0.54	0.059	0.66	0.67
Nitrate (NO_3)	2.8	3.5	209	3.9	2.7	1	2.7	2
Sulfate (SO_4)	22.1	20	18.5	10.6	16	14	20	18.6
Silica	57.9	62.1	66.1	84.4	74	77	54.5	84.4
Carbonate (as $CaCO_3$)	<5	<5	<5	<5	<30	<30	<10	<5
Bicarbonate (as $CaCO_3$)	142	139	172	148.5	150	230	156	145
Total Alkalinity (as $CaCO_3$)	142	139	148	148.5	150	230	156	145
Hydroxide	<5	<5	<5	<5	<30	<30	<10	<5
pH (pH Units)	7.83	8.16	8.69	7.92	8.4	8.5	7.8	7.7
Conductivity (umhos)	405	404	440	399	400	520	420	400
Total Dissoved Solids	282	251	298	290	280	350	286	337
Total Hardness (as $CaCO_3$)	---	---	122	125.5	120	180	137	129

(1) All units mg/L unless noted.

(2) Analysis by Analytical Technologies, Inc. of San Diego, California

(3) Sample was filtered during collection.

(4) Analysis by Atlas Chemical Laboratories, Inc. of Las Vegas.

(5) The following individual results are the average of the reported values from two samples taken

(6) Analysis by Lockheed Analytical Laboratory, Las Vegas, Nevada.

(7) Sample taken approximately 150 feet downstream from the washed out concrete dam.

(8) Analysis by NET Pacific, Inc. of Burbank, California.

Table 2 - Piute Spring Summary of Water Quality Data

	12/04/1992 Results (5)(8)	03/30/1993 Results (5)(8)	06/30/1993 Results (5)(8)	09/30/1993 Results (5)(8)	12/29/1993 Results (5)(8)	03/30/1994 Results (8)	06/29/1994 Results (5)(8)	09/27/1994 Results (5) (8)
Arsenic	0.007	0.006	ND	0.009	ND	0.007	0.006	0.007
Calcium	26.4	29.8	26.7	29.3	30.7	27.1	28	28
Magnesium	13.6	14.9	13.9	13.4	14.4	13.2	13.7	13.3
Potassium	6.16	6.93	6.56	6.15	6.99	6.07	6.5	6.88
Sodium	32.4	38.1	33.5	31.1	33.1	32.4	35.9	34.1
Copper	ND	ND	ND	ND	ND	ND	ND	ND
Iron	0.04	0.02	0.09	0.06	0.07	ND	ND	ND
Manganese	ND	0.05	ND	ND	ND	ND	ND	ND
Zinc	ND	ND	ND	ND	0.08	ND	ND	ND
Chloride	19.5	18.3	17.5	16.5	22	18.9	18.5	17
Fluoride	0.62	0.67	0.53	0.51	0.58	0.47	0.56	0.5
Nitrate (NO_3)	2.5	2.8	2	2.3	3	2.8	2.8	2.9
Sulfate (SO_4)	18.2	20	17.6	12.3	24	17.8	18.5	17
Silica	52	54.6	58.4	63.9	67.9	65.2	63.4	48.9
Carbonate (as $CaCO_3$)	0	0	0	0.4	0	0	0	0
Bicarbonate (as $CaCO_3$)	145	156	138	136.5	163	150	162.5	150
Total Alkalinity (as $CaCO_3$)	145	156	138	137	163	150	162.5	150
Hydroxide	0	0	0	0	0	0	0	0
pH (pH Units)	7	7.8	7.2	8	7.5	7.7	7	7.8
Conductivity (umhos)	372	420	363	349	365	379	363.5	375
Total Dissoved Solids	282	286	386	337	276	312	285	225
Total Hardness (as $CaCO_3$)	123	137	157	129	123	118	130	115

(1) All units mg/L unless noted.

(2) Analysis by Analytical Technologies, Inc. of San Diego, California

(3) Sample was filtered during collection.

(4) Analysis by Atlas Chemical Laboratories, Inc. of Las Vegas.

(5) The following individual results are the average of the reported values from two samples taken

(6) Analysis by Lockheed Analytical Laboratory, Las Vegas, Nevada.

(7) Sample taken approximately 150 feet downstream from the washed out concrete dam.

(8) Analysis by NET Pacific, Inc. of Burbank, California.

Table 2 - Piute Spring Summary of Water Quality Data

	03/28/1995 Results (5)(8)	06/28/1995 Results (5)(9)	09/27/1995 Results (5)(9)	12/20/1995 Results (5)(9)	03/26/1996 Results (5)(9)	06/26/1996 Results (5)(9)	09/25/1996 Results (5)(9)	01/28/1997 Results (5)(9)
Arsenic	0.008	0.003	0.015	0.001	0.018	0.004	0.009	0.007
Calcium	29.45	33.5	30.3	22	26.8	24.55	29.6	35.15
Magnesium	14.5	17	14.05	12.05	14	14.6	15.6	14.7
Potassium	6.86	9.72	7.69	5.21	6.13	5.56	6.79	5.94
Sodium	33.85	43.15	36.2	28.6	30.8	24.75	35.6	34.55
Copper	ND	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Iron	ND	0.218	0.025	0.008	0.007	0.016	0.038	0.012
Manganese	0.05	0.008	<0.002	0.003	<0.002	<0.004	0.087	0.015
Zinc	ND	0.0045	0.106	<0.005	0.014	0.395	0.004	<0.005
Chloride	16.5	24.8	19.6	21.65	17.55	20.95	21.75	17.7
Fluoride	0.56	0.705	0.6	0.46	0.51	0.52	0.43	0.46
Nitrate (NO_3)	4.65	2.375	2.55	0.9	2.12	1.25	2.4	1.94
Sulfate (SO_4)	18	21.25	17.7	5.12	17.95	19.7	21.25	16.65
Silica	63.25	29.65	61.6	58.3	50.05	50.4	53.2	62.9
Carbonate (as $CaCO_3$)	0	0	0	0	0	0	ND	ND
Bicarbonate (as $CaCO_3$)	160	235.4	241	177.5	181	188	173	242.5
Total Alkalinity (as $CaCO_3$)	160	235.4	241	177.5	181	188	173	242.5
Hydroxide	0	0	0	0	0	0	ND	ND
pH (pH Units)	7.6	7.775	7.9	7.16	7.46	8.1	7.89	7.79
Conductivity (umhos)	383	447.5	398	398.5	397.5	396	406	457
Total Dissoved Solids	279.5	286.5	387.5	255	272	276	268	292
Total Hardness (as $CaCO_3$)	140	170	144	113	128	130	143	148

ND=not detected at method detection limit

(1) All units mg/L unless noted.

(2) Analysis by Analytical Technologies, Inc. of San Diego, California

(3) Sample was filtered during collection.

(4) Analysis by Atlas Chemical Laboratories, Inc. of Las Vegas.

(5) The following individual results are the average of the reported values from two samples taken

(6) Analysis by Lockheed Analytical Laboratory, Las Vegas, Nevada.

(7) Sample taken approximately 150 feet downstream from the washed out concrete dam.

(8) Analysis by NET Pacific, Inc. of Burbank, California.

(9) Analysis by American Assay Laboratories, Inc. of Sparks, NV.

Table 2 - Piute Spring Summary of Water Quality Data

	06/30/1997 Results (5)(9)	09/24/1997 Results (5)(9)	01/06/1998 Results (5)(9)	03/31/1998 Results (5)(9)	06/23/1998 Results (5)(9)	09/22/1998 Results (5)(9)	12/15/1998 Results (5)(9)	03/30/1999 Results (5)(9)
Arsenic	0.007	0.007	<0.005	0.006	<0.005	0.008	0.012	0.022
Calcium	26.8	23.3	27.1	29.8	25.4	28.0	28.2	28.0
Magnesium	14.0	12.0	14.6	15.6	12.2	12.6	14.2	13.8
Potassium	5.50	5.12	6.32	6.22	5.42	5.91	7.75	6.33
Sodium	29.2	26.3	30.1	34.0	26.7	28.1	31.8	30.9
Copper	<0.020	<0.020	<0.010	<0.010	0.026	<0.010	<0.010	<0.010
Iron	0.058	0.11	0.031	0.067	0.086	1.406	0.09	0.068
Manganese	0.065	0.056	0.007	0.022	0.034	0.165	0.027	0.021
Zinc	<0.020	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloride	18.8	16.3	18.3	17.3	14.6	16.9	16.9	17.6
Fluoride	0.48	0.634	0.40	0.40	0.75	1.15	0.6	0.5
Nitrate (NO_3)	0.35	4.40	1.58	1.2	2.6	1.8	2.0	2.8
Sulfate (SO_4)	19.6	17.0	18.4	16.7	15.6	16.2	17.1	17.0
Silica	59.8	71.9	63.5	58.9	66.6	70.3	65.4	60.7
Carbonate (as $CaCO_3$)	ND	ND	ND	ND	3.4	ND	ND	ND
Bicarbonate (as $CaCO_3$)	183	158	156	151	142	151	149	146
Total Alkalinity (as $CaCO_3$)	183	158	156	151	144	151	149	146
Hydroxide	ND	ND	ND	ND	ND	ND	ND	ND
pH (pH Units)	8.06	8.12	7.96	7.79	8.41	8.23	8.07	8.11
Conductivity (umhos)	401	395	403	405	393	400	398	397
Total Dissoved Solids	214	272	240	222	304	246	258	155
Total Hardness (as $CaCO_3$)	188	120	122	140	115	123	141	127

ND=not detected at method detection limit

(1) All units mg/L unless noted.

(2) Analysis by Analytical Technologies, Inc. of San Diego, California

(3) Sample was filtered during collection.

(4) Analysis by Atlas Chemical Laboratories, Inc. of Las Vegas.

(5) The following individual results are the average of the reported values from two samples taken

(6) Analysis by Lockheed Analytical Laboratory, Las Vegas, Nevada.

(7) Sample taken approximately 150 feet downstream from the washed out concrete dam.

(8) Analysis by NET Pacific, Inc. of Burbank, California.

(9) Analysis by American Assay Laboratories, Inc. of Sparks, NV.

Table 2 - Piute Spring Summary of Water Quality Data

	09/28/1999 Results (5)(9)	12/14/1999 Results (5)(9)	03/28/2000 Results (5)(9)	06/27/2000 Results (5)(9)	09/26/2000 Results (5)(9)	12/19/2000 Results (5)(9)		
Arsenic	0.007	0.007	0.0045	0.007	0.008	0.008		
Calcium	27.9	28.7	29.2	26.65	28.6	26.35		
Magnesium	14.0	14.5	14.4	13.7	14.35	13.2		
Potassium	6.40	6.09	5.71	5.71	7.52	5.845		
Sodium	31.9	33.0	28.8	31.55	33.95	28.7		
Copper	<0.010	0.011	<0.010	<0.010	<0.010	<0.010		
Iron	0.033	<0.020	0.035	0.299	0.0545	<0.020		
Manganese	0.018	0.013	0.0135	0.0565	0.017	0.006		
Zinc	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050		
Chloride	17.8	16.3	17.55	19.2	25.6	24.25		
Fluoride	0.6	0.5	0.5	0.55	0.55	0.7		
Nitrate (NO_3)	2.9	3.1	2.8	3.6	1.75	3.5		
Sulfate (SO_4)	17.5	16.0	16.35	17.9	22.1	20.3		
Silica	65.7	66.5	54.4	75.45	74.15	78.1		
Carbonate (as $CaCO_3$)	ND	ND	ND	ND	ND	ND		
Bicarbonate (as $CaCO_3$)	147	153	147	160	146.5	149.5		
Total Alkalinity (as $CaCO_3$)	147	153	147	160	156.5	149.5		
Hydroxide	ND	ND	ND	ND	ND	ND		
pH (pH Units)	7.94	8.00	8.08	7.76	7.92	7.88		
Conductivity (umhos)	392	394	411	403	377	404		
Total Dissoved Solids	246	258	264	264	295	265		
Total Hardness (as $CaCO_3$)	128	132	132	123	131	120		

ND=not detected at method detection limit

(1) All units mg/L unless noted.

(2) Analysis by Analytical Technologies, Inc. of San Diego, California

(3) Sample was filtered during collection.

(4) Analysis by Atlas Chemical Laboratories, Inc. of Las Vegas.

(5) The following individual results are the average of the reported values from two samples taken

(6) Analysis by Lockheed Analytical Laboratory, Las Vegas, Nevada.

(7) Sample taken approximately 150 feet downstream from the washed out concrete dam.

(8) Analysis by NET Pacific, Inc. of Burbank, California.

(9) Analysis by American Assay Laboratories, Inc. of Sparks, NV.

06/28/1990 Results (2)
0.007
29.0
14.6
6.80
32.9
<0.02
<0.01
<0.08
<0.01
15
0.6
2
18.5

<5
85.7
85.7
<5
7.82
392
258
133

09/03/1992 Results (5)(8)
0.009
27.4
13.4
6.2
33.6
0.04
ND
0.02
ND
20.5
0.55
2.7
18.6
51.2
0
137
137
0
8.1
381
269
126

12/27/1994 Results (5) (8)
0.007
31.8
15
18.2
34.9
ND
0.14
0.04
ND
18.5
0.6
1.9
20.2
57.9
ND
165
165
ND
7.5
386
284.5
137.5

03/25/1997 Results (5)(9)
0.012
36.3
17.0
7.20
39.0
<0.020
0.165
0.141
<0.020
17.4
0.52
2.96
19.6
69.2
ND
175
175
ND
7.99
404
220
360

06/29/1999
Results (5)(9)
0.012
27.4
13.6
6.49
32.3
<0.010
0.049
0.017
<0.050
17.2
0.5
2.5
17.1
74.7
ND
143
143
ND
8.09
392
295
124