Table 1. Borehole Data Summary

Bore-hole	Location	Drill Dates	Total Drill Days[1]	Average Daily Drill Rate (ft)	Drill Rig	Latitude/ Longitude	WA State Plane, NAD83 (Northing/ Easting)	Ground Surface Elev. (ft)[2]	Total Borehole Depth (ft)	Approx. Borehole Tip Elev. (ft)	Borehole Direction (Azimuth)	Borehole Inclination (Below Horizontal)	Casing Depth (ft)	Downhole Imaging Depths (ft)	Packer Test Depths (ft)	VWP Tip Elev. in ft	VWP Tip Depth in ft	Min. Groundwater Elev. (ft)[4]	Max. Groundwater Elev. (ft)[4]
B-1	G2T Portal by Gorge Powerhouse	7/30/2009 to 8/12/2009	13	40	Burley 5500-3	48.67669/ -121.24074	611888.07/ 1541982.15	542.35	360.8	532.9	55°	1.5°	15.6 (4.5-inch OD[3])	89 to 102, 169 to 360	N/A	N/A	N/A	N/A	N/A
B-2	Approximately 800 feet upslope from surge tank to northeast	8/17/2009 to 9/12/2009	26	44	Burley 5500-1	48.67958/ -121.23478	612935.81/ 1543427.74	1227.96	800	535.1	34°	60°	N/A	59 to 86, 119 to 221, 254 to 301, 379 to 391, 524 to 621, 659 to 671, 710 to 797	285 to 305, 701 to 800	535.1	800	808.16[5]	854.92
B-3	1,180 feet inside Devil's Elbow Adit (westbound borehole)	9/2/2009 to 9/16/2009	14	40	Burley 5500-3	48.68678/ -121.22320	615547.5/ 1546237.17	712.74	399.2	677.9	233°	5°	N/A	247 to 399	356 to 376, 270 to 290	678	398	739.80	779.59
B-4	1,180 feet inside Devil's Elbow Adit (eastbound borehole)	8/18/2009 to 9/2/2009	15	36	Burley 5500-3	48.68680/ -121.22316	615557.76/ 1546248.44	712.20	397.6	698.3	43°	2°	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B-5	Adit access road	9/26/2009 to 10/14/2009	18	32	Burley 5500-3	48.69352/ -121.21694	617999.62/ 1547761.35	793.18	450.7	769.6	91°	3°	N/A	86 to 151, 248 to 452	N/A	769.6	450.7	794.021[6]	794.136[6]
B-6	Adit access road, south of bridge	9/22/2009 to 10/13/2009	21	22	Burley 5500-1	48.69588/ -121.21333	618858.11/ 1548638.15	784.19	379.3	784.2	90°	0°	49.5 (4.5-inch OD[3])	229 to 270	279.3 to 299.3, 244.3 to 273.3	N/A	N/A	N/A	N/A

NOTES: Unless otherwise specified, all "depths" represent total length of drill core and are not corrected for borehole drill angle. They do not represent actual depth below ground surface.
All "elevations" are corrected for borehole drill angle and do represent actual projected elevations.

[1] Includes all days in which any drilling occurred for a particular borehole.

[2] Referenced to NAVD88 vertical datum.

[3] OD = Outside Diameter.

[4] For more details regarding groundwater levels, see Appendix D.

[5] Water level is likely related to Gorge reservoir water levels and tunnel flow (see Appendix D).

[6] Maximum and minimum groundwater levels for B-5 were recorded only one minute apart as a result of lack of recorded data due to instrument failure.

Table 2. B-2 Groundwater At-Time-of-Drilling (ATD) Summary

B-2 Groundwater Measurement	Date	Groundwater Elevation[1] in ft	Groundwater Depth in ft	Borehole Tip Elevation in ft	Borehole Tip Depth in ft
ATD Measurement 1	9/8/2009	924.9	350	*681.5*	631
ATD Measurement 2	9/9/2009	968.2	300	654.7	661.9
ATD Measurement 3	9/10/2009	878.1	404	624.4	696.9
ATD Measurement 4	9/12/2009	881.5	400	*542.9*	*791*

NOTES: "Depths" represent total length of drill core and are not corrected for borehole drill angle. They do not represent actual depth below ground surface.

All "elevations" are corrected for borehole drill angle and represent actual projected elevations.

[1] Referenced to NAVD88 vertical datum.

Table 3. Borehole Flow Summary[1]

Borehole	Date	Depth of Flowing Conditions Encountered (ft) and Notes	Rate of Flow Discharge (gpm)	Cumulative Volume (gallons)	Discharge Temp. (°C)
B-1	8/6/2009	260	0.75[2]	0	--
	8/11/2009	320	10[2]	38,700	--
	8/11/2009	325	20[2]	41,400	--
	8/11/2009	332	55[2]	52,650	--
	8/12/2009	360.8 BOB[3]	30	829,530	--
	8/25/2009	Post-drilling	27	1,363,050	8.5
	8/28/2009		26	1,477,530	8.6
	8/29/2009		27.2	1,515,834	--
	8/30/2009		26.7	1,554,642	--
	8/31/2009		31	1,596,186	--
	9/1/2009		27	1,637,946	--
	9/2/2009		24	1,674,666	8.2
	9/3/2009		22	1,707,786	--
	9/12/2009		19	1,973,466	--
	9/15/2009		22	2,062,026	--
	9/16/2009	Begin grouting	22	2,093,706	--
	9/17/2009	Successfully grouted	0	2,109,546	--
B-3	9/15/2009	360	2.6[2]	0	--
	9/16/2009	399.2 BOB	3	4,032	--
	9/17/2009	Post-drilling	3	8,352	11.7
	9/22/2009		3	16,992	12.4
	9/24/2009	Successfully grouted	3	38,592	--

[1] Groundwater flow out of boreholes measured during drilling and prior to borehole abandonment. See Section 4.5 for discussion.

[2] Indicates rate measured at time of drilling.

[3] BOB = Bottom of borehole.

Table 4. In Situ Hydraulic Conductivity (Packer) Testing Summary

Borehole	Depth Interval Tested (ft)	Hydraulic Conductivity (cm/s) [1]
B-2	285.0 to 305.0	$K = 2x10^{-6}$
	701.0 to 800.0	K exceeds capacity of test [2]
B-3	270.0 to 290.0	$K > 3x10^{-3}$ [3]
	356.0 to 376.0	$K > 4x10^{-3}$ [4]
B-5	221.7 to 245.7	$K < 4x10^{-6}$ [5]
	305.7 to 325.7	$K > 1x10^{-1}$
B-6	244.3 to 273.3	$K > 1x10^{-1}$
	279.3 to 299.3	$K > 1x10^{-1}$

NOTE: For further discussion on results and notes on limitations of packer testing, see Section 4.6.

[1] cm/s = centimeters/second

[2] Borehole test interval took 20 gpm for a duration of 15 minutes with no pressure response.

[3] Minimum K value does not include last seven minutes of test. See Section 4.6 for details.

[4] K value for this interval is derived from data from first 5 minutes of test, prior to observed decrease in water take.

[5] K value value was below the measurable limit of the test.

Table 5. Petrographic Analysis Results Summary

Borehole	Depth (ft)	Laboratory-Designated Rock Type	Designated Rock Type	Mineral Percentages																Remarks
				Plag	Quartz	Biotite	Actinolite	Garnet	Clay	Apatite	Sphene	Chlorite	Leucoxene	Zircon	Opaques	Carbonate	Hornblende	Dolomite	Sericite	
B-2	133.4	Biotite-Quartz-Plagioclase Schist[1]	Migmatitic Biotite Quartz Plagioclase Gneiss[1]	50	32	15			1	1					1					Same as sample at 133.6 ft (Table 6)
B-2	421.9	Biotite-Quartz-Plagioclase Schist	Biotite Quartz Plagioclase Gneiss	40	27	15	10		1	1	4	<1	<1	<1	2					Same as sample at 421 ft (Table 6)
B-2	587.9	Biotite-Quartz-Garnet-Plagioclase Schist	Migmatitic Biotite Quartz Plagioclase Gneiss	30	20	20	5	22		1		<1		<1	2	<1				Same as sample at 586.9 ft (Table 6)
B-2	787.8	Altered Andesite Poryphyry	Andesite	65	2	20					1				2		10			Same as sample at 786.9 ft (Table 6)
B-3	281.0	Altered Cataclasite[2]	Biotite Quartz Plagioclase Gneiss (highly altered)[2]	50	15								15					15	15	Same as sample at 279.8 ft (Table 6)
B-4	47.8	Biotite-Plagioclase-Quartz Schist	Migmatitic Biotite Quartz Plagioclase Gneiss	39	39	13		5	1	<1		1		<1	1			1		
B-4	200.8	Garnet-Biotite-Actinolite-Quartz-Plagioclase Schist	Biotite Quartz Plagioclase Gneiss	40	21	10	20	5		1					3					
B-5	310.7	Cataclasite[3]	Pegmatite[3]	50	41	8			<1	1		<1								
B-5	385.7	Garnet-Biotite-Actinolite-Quartz-Plagioclase Schist	Biotite Quartz Plagioclase Gneiss	45	29	18	7	<1		<1					1					
B-5	410.7	Biotite-Quartz-Plagioclase Schist	Biotite Quartz Plagioclase Gneiss	48	25	25			1	<1		<1			1	<1				
B-6	281.9	Biotite-Quartz-Plagioclase Schist	Biotite Quartz Plagioclase Gneiss	55	25	15				2				<1	<1					

[1] The term "gneiss" was chosen as a root descriptive term over "schist" due to a closer fit of predominant texture and generally-accepted regional lithologic descriptions. See Section 4.1 for details.
[2] The term "cataclasite" indicates that crystals have been partially crushed and re-healed. See Section 4.1.1 for explanation.
[3] Petrographic result is likely not representative of overall rock unit due to small size of thin section sample. See Section 4.1.3 for more explanation.

Most common mineral
Second most common mineral
Third most common mineral (if at least 5%)
Fourth most common mineral (if at least 5%)

Table 6. Unconfined Compressive Strength (UCS) Results Summary

Borehole	Depth (ft)	Rock Type	UCS (psi)	Remarks
B-1	100.7	Biotite Quartz Plagioclase Gneiss	14,570	
B-1	285.3	Biotite Quartz Plagioclase Gneiss	5,000[1]	
B-1	312	Biotite Quartz Plagioclase Gneiss	8,880	
B-2	133.6	Migmatitic Biotite Quartz Plagioclase Gneiss	8,740	Same as sample at 133.4 ft (Table 5)
B-2	138	Biotite Quartz Plagioclase Gneiss	16,610	
B-2	168.3	Biotite Quartz Plagioclase Gneiss	9,830	
B-2	211.1	Biotite Quartz Plagioclase Gneiss	9,830	
B-2	236.9	Migmatitic Biotite Quartz Plagioclase Gneiss	7,910	
B-2	421	Biotite Quartz Plagioclase Gneiss	11,750	Same as sample at 421.9 ft (Table 5)
B-2	586.9	Migmatitic Biotite Quartz Plagioclase Gneiss	5530[2]	Same as sample at 587.9 ft (Table 5)
B-2	666	Biotite Quartz Plagioclase Gneiss	3020[3]	
B-2	786.9	Andesite	6,900	Same as sample at 787.8 ft (Table 5)
B-3	93	Biotite Quartz Plagioclase Gneiss	13,800	
B-3	279.8	Biotite Quartz Plagioclase Gneiss (highly altered)	7,960	Same as sample at 281 ft (Table 5)
B-3	295	Biotite Quartz Plagioclase Gneiss	12,330	
B-3	379.1	Biotite-Quartz-Plagioclase Gneiss (altered)	15,490	
B-4	47.8	Migmatitic Biotite Quartz Plagioclase Gneiss	8,430	
B-4	200.8	Biotite Quartz Plagioclase Gneiss	7,900	
B-4	215	Biotite Quartz Plagioclase Gneiss	16,160	
B-4	301.5	Pegmatite	10,460	
B-4	391.4	Biotite Quartz Plagioclase Gneiss	9,080	
B-5	109	Biotite Plagioclase Quartz Gneiss (partially altered)	11,480	
B-5	145.1	Biotite Plagioclase Quartz Gneiss (partially altered)	9,490	
B-5	310.7	Pegmatite	5,380	
B-5	385.7	Biotite Quartz Plagioclase Gneiss	8,770	
B-5	410.7	Biotite Quartz Plagioclase Gneiss	11,210	
B-6	149.3	Biotite Quartz Plagioclase Gneiss	10,350	
B-6	239.9	Migmatitic Biotite Quartz Plagioclase Gneiss	4,070	
B-6	281.9	Biotite Quartz Plagioclase Gneiss	7,760	

[1] UCS value probably low. Result not included in histogram data for Figure 10.
[2] UCS value probably low. Result not included in histogram data for Figure 10.
[3] UCS failure along bedding plane. Result not included in histogram data for Figure 10.

Table 7. Fracture Density by Borehole

Fracture Density	B-1	B-2	B-3	B-4	B-5	B-6	Subsurface Exploration Total
Intensely Fractured (Fractures spaced less than 2 inches apart)	10%	6%	4%	1%	10%	9%	**6%**
Highly Fractured (Fractures spaced 2 inches to 1 foot apart)	19%	13%	8%	2%	12%	15%	**12%**
Moderately Fractured (Fractures spaced 1 foot to 3 feet apart)	22%	16%	16%	7%	19%	23%	**17%**
Slightly Fractured (Fractures spaced 3 feet to 10 feet apart)	28%	28%	23%	20%	41%	40%	**30%**
Massive (Fractures spaced greater than 10 feet apart)	21%	38%	49%	69%	18%	13%	**36%**
Total	100%	100%	100%	100%	100%	100%	**100%**

Table 8. Fracture Density by Rock Type

Fracture Density	BIOTITE QUARTZ PLAGIOCLASE GNEISS	MIGMATITIC BIOTITE QUARTZ PLAGIOCLASE GNEISS	PEGMATITE	ANDESITE	Subsurface Exploration Total
Intensely Fractured (Fractures spaced less than 2 inches apart)	6%	6%	11%	12%	**6%**
Highly Fractured (Fractures spaced 2 inches to 1 foot apart)	11%	10%	15%	32%	**11%**
Moderately Fractured (Fractures spaced 1 foot to 3 feet apart)	16%	16%	18%	21%	**17%**
Slightly Fractured (Fractures spaced 3 feet to 10 feet apart)	31%	27%	20%	29%	**30%**
Massive	35%	41%	36%	6%	**36%**
Total	100%	100%	100%	100%	**100%**