

Appendix E.1 Magma Behavior 1 modeling results and estimated masses

Flow to Flow Variation		JJ65-JJ66	JJ51-JJ52	JJ67-JJ68	JJ76-JJ77	JJ82-JJ83	JJ91-JJ92	KG7-KG8	JJ38-JJ39	JJ53-JJ54
<b>Magma Behavior</b>		Red 1	Red 1	Red 1	Red 1	Red 1	Red 1	Red 1	Red 1	Red 1
<b>Hypothesized Process</b>		Recharge	Recharge	Recharge	Recharge	Recharge	Recharge	Modal Diff.	FC	FC
<b>Modeled Masses</b>	Recharge	0.25		0.75	0.75	1.65		0	0	
	Assimilation	0		0	0	0		0	0	
	Frac. Xtal	0		0	0	0		0	0.12	
<b>Hypothesized Masses</b>	Recharge		0.25				1.65			0
	Assimilation		0				0			0
	Frac. Xtal		0				0			0.12
<b>SiO2 Excursion</b>		-0.04	-0.14	-0.20	-0.11	-0.51	-0.68	0.01	0.07	0.04
<b>TiO2 Excursion</b>		-0.14	-0.30	-0.25	-0.47	-0.16	-0.18	-0.14	-0.05	-0.19
<b>Al2O3 Excursion</b>		0.13	0.15	0.06	0.31	0.29	0.24	0.16	0.16	0.10
<b>FeO* Excursion</b>		-0.20	-0.20	-0.05	-0.29	0.00	0.28	-0.19	-0.12	-0.16
<b>MgO Excursion</b>		0.07	0.21	0.16	0.18	0.18	0.22	0.03	-0.14	0.02
<b>CaO Excursion</b>		0.08	0.04	0.27	0.21	0.25	0.20	0.05	0.14	0.05
<b>Na2O Excursion</b>		-0.03	-0.11	-0.04	-0.18	-0.02	-0.01	-0.04	0.03	-0.09
<b>K2O Excursion</b>		-0.10	-0.08	-0.43	-0.37	-0.52	-0.53	-0.08	-0.10	0.04
<b>P2O5 Excursion</b>		-0.04	-0.10	-0.25	-0.38	-0.14	-0.20	-0.10	-0.05	-0.05
<b>Ni ppm Excursion</b>		0.06	0.26	0.09	0.23	0.17	0.17	0.06	0.53	0.03
<b>Cr ppm Excursion</b>		0.03	0.15	0.10	0.04	0.09	0.07	0.00	0.54	0.08
<b>La ppm Excursion</b>		-0.08	-0.11	-0.24	-0.37	-0.31	-0.32	-0.08	-0.20	-0.03
<b>Eu ppm Excursion</b>		-0.13	-0.27	-0.30	-0.53	-0.19	-0.28	-0.17	--	-0.12
<b>Nb ppm Excursion</b>		-0.14	-0.27	-0.36	-0.58	-0.43	-0.55	-0.17	-0.26	-0.10
<b>Zr ppm Excursion</b>		-0.13	-0.25	-0.35	-0.57	-0.48	-0.54	-0.16	-0.06	-0.10
<b>Sr ppm Excursion</b>		0.07	0.01	0.06	0.13	0.20	0.44	0.07	0.03	0.01

Modal Diff=Modal differences between flows, FC=Fractional crystallization

Appendix E.1 cont. Magma Behavior 1 modeling results and estimated masses

Flow to Flow Variation		JJ87-JJ88	JJ19-JJ20	JJ79-JJ80	JJ1-JJ2	KG13-KG14	JJ73-JJ74	JJ11-JJ12	JJ63-JJ64
<b>Magma Behavior</b>		Red 3	Red 3	Red 2	Red 2	Red Minor 1	Red 1	Red 2	Red 1
<b>Hypothesized Process</b>		Recharge	Recharge	Plag Addition	Plag Addition	AFC	Recharge	Recharge	Recharge
<b>Modeled Masses</b>	Recharge	0.5		0		0	0.25		
	Assimilation	0		0		0	0		
	Frac. Xtal	0		0		0	0		
<b>Hypothesized Masses</b>	Recharge		0.5		0			0.25	0.25
	Assimilation		0		0			0	0
	Frac. Xtal		0		0			0	0
<b>SiO2 Excursion</b>		-0.04	-0.02	0.19	-0.01	0.01	-0.13	-0.20	-0.17
<b>TiO2 Excursion</b>		-0.33	-0.34	-0.18	-0.23	-0.050	-0.09	-0.08	-0.06
<b>Al2O3 Excursion</b>		0.20	0.20	0.38	0.50	0.05	0.11	0.13	0.05
<b>FeO* Excursion</b>		-0.26	-0.34	-0.33	-0.26	-0.08	-0.02	0.04	0.05
<b>MgO Excursion</b>		0.08	0.16	-0.21	-0.24	0.00	0.05	0.00	0.01
<b>CaO Excursion</b>		0.17	0.05	0.07	0.21	0.02	0.08	0.12	0.16
<b>Na2O Excursion</b>		-0.05	-0.01	0.04	0.02	0.01	-0.04	0.02	-0.04
<b>K2O Excursion</b>		-0.17	-0.10	-0.02	-0.14	-0.01	-0.16	-0.13	-0.11
<b>P2O5 Excursion</b>		-0.17	-0.13	-0.06	-0.07	-0.018	-0.09	-0.05	-0.08
<b>Ni ppm Excursion</b>		0.10	0.10	-0.14	-0.05	0.01	0.04	-0.34	-0.04
<b>Cr ppm Excursion</b>		-0.03	-0.14	-0.08	-0.01	0.00	0.03	-0.47	0.01
<b>La ppm Excursion</b>		-0.19	-0.45	-0.04	-0.05	-0.03	-0.10	-0.06	-0.10
<b>Eu ppm Excursion</b>		-0.26	--	-0.12	-0.10	-0.05	-0.13	--	-0.07
<b>Nb ppm Excursion</b>		-0.33	-0.17	-0.10	-0.16	-0.01	-0.14	-0.24	-0.13
<b>Zr ppm Excursion</b>		-0.31	-0.29	-0.10	-0.13	-0.03	-0.14	0.04	-0.12
<b>Sr ppm Excursion</b>		0.19	0.02	0.17	0.16	0.04	0.06	0.33	0.09

Plag=plagioclase, AFC=Assimilation and fractional crystallization

Appendix E.2 Magma Behavior 2 modeling results and estimated masses

<b>Flow to Flow Variation</b>	JJ48-JJ49	JJ89-JJ90	JJ60-JJ61	JJ85-JJ86	JJ36-JJ37	JJ46-JJ47
<b>Magma Behavior</b>	Orange 3	Orange 3	Orange 3	Orange 3	Orange Min 2	Orange Min 4
<b>Hypothesized Process</b>	Recharge	Recharge	Recharge	Recharge	FC	FC
<b>Modeled Masses</b>	Recharge	1.5	0.55		0	0
	Assimilation	0	0		0	0
	Frac. Xtal	0	0		0.16	0
<b>Suggested Masses</b>	Recharge		0.55	0.55		
	Assimilation		0	0		
	Frac. Xtal		0	0		
<b>SiO2 Excursion</b>	-0.23	-0.25	-0.25	-0.46	0.13	0.05
<b>TiO2 Excursion</b>	-0.49	-0.04	-0.05	-0.04	0.12	-0.02
<b>Al2O3 Excursion</b>	0.20	0.05	0.06	0.16	-0.10	0.08
<b>FeO* Excursion</b>	-0.30	0.08	0.03	0.10	0.00	-0.08
<b>MgO Excursion</b>	0.34	0.17	0.14	0.19	-0.14	-0.02
<b>CaO Excursion</b>	0.21	0.26	0.13	0.20	0.11	-0.04
<b>Na2O Excursion</b>	-0.26	-0.38	-0.07	-0.17	0.03	0.03
<b>K2O Excursion</b>	-0.30	-0.36	-0.26	-0.36	0.04	-0.02
<b>P2O5 Excursion</b>	-0.27	-0.48	-0.12	-0.23	0.04	0.00
<b>Ni ppm Excursion</b>	0.40	0.13	0.07	0.21	0.42	-0.01
<b>Cr ppm Excursion</b>	0.25	0.07	0.01	0.07	0.17	-0.01
<b>La ppm Excursion</b>	-0.27	-0.34	-0.14	-0.18	-0.17	-0.02
<b>Eu ppm Excursion</b>	-0.46	-0.23	-0.05	-0.05	--	-0.03
<b>Nb ppm Excursion</b>	-0.52	-0.26	-0.29	-0.19	-0.46	0.00
<b>Zr ppm Excursion</b>	-0.44	-0.22	-0.16	-0.20	-0.23	-0.06
<b>Sr ppm Excursion</b>	-0.07	-0.33	-0.08	-0.04	-0.04	-0.01

FC=Fractional crystallization

Appendix E.3 Magma Behavior 3 modeling results and estimated masses

<b>Flow to Flow Variation</b>	<b>JJ68-JJ69</b>	<b>KG1-KG2</b>	<b>KG10-KG11</b>	<b>JJ7-JJ8</b>	<b>JJ10-JJ11</b>	<b>JJ14-JJ15</b>	<b>JJ22-JJ23</b>	<b>JJ20-JJ21</b>	<b>JJ24-JJ25</b>
<b>Magma Behavior</b>	<b>Green 1</b>	<b>Green 1</b>	<b>Green Min 2</b>	<b>Green 4</b>	<b>Green 4</b>	<b>Green 6</b>	<b>Green 6</b>	<b>Green 7</b>	<b>Green 7</b>
<b>Hypothesized Process</b>	Recharge	Recharge	AFC	AFC	AFC	Recharge	Recharge	Recharge	Recharge
<b>Modeled Masses</b>	Recharge	1.25	1.25	0		2.75			
	Assimilation	0	0	0		0			
	Frac. Xtal	0	0	0		0			
<b>Suggested Masses</b>	Recharge			0	0		2.75	2.75	2.75
	Assimilation			0	0		0	0	0
	Frac. Xtal			0	0		0	0	0
<b>SiO2 Excursion</b>	-0.08	-0.08	0.03	0.10	0.00	-0.19	-0.25	-0.02	-0.16
<b>TiO2 Excursion</b>	-0.14	-0.11	-0.15	-0.31	-0.22	-0.07	-0.12	-0.30	-0.16
<b>Al2O3 Excursion</b>	0.05	0.06	0.19	0.40	0.54	-0.25	-0.22	-0.18	-0.09
<b>FeO* Excursion</b>	-0.12	-0.11	-0.17	-0.41	-0.36	0.10	0.12	0.02	0.06
<b>MgO Excursion</b>	0.15	0.13	-0.03	-0.06	-0.08	0.34	0.42	0.33	0.26
<b>CaO Excursion</b>	0.12	0.12	0.04	-0.03	-0.09	-0.02	-0.10	-0.05	-0.04
<b>Na2O Excursion</b>	-0.02	-0.07	0.01	0.10	0.09	-0.13	-0.13	-0.23	-0.08
<b>K2O Excursion</b>	-0.34	-0.29	-0.05	0.05	-0.04	-0.06	-0.16	-0.14	-0.15
<b>P2O5 Excursion</b>	-0.14	-0.14	-0.09	-0.02	0.04	-0.03	-0.04	-0.12	-0.03
<b>Ni ppm Excursion</b>	0.07	0.00	0.01	0.07	0.40	0.41	0.47	0.38	0.22
<b>Cr ppm Excursion</b>	-0.03	-0.06	0.00	-0.08	0.36	0.25	0.48	0.44	0.20
<b>La ppm Excursion</b>	-0.09	-0.09	-0.06	-0.04	-0.01	-0.04	-0.05	0.21	-0.05
<b>Eu ppm Excursion</b>	-0.12	-0.08	-0.11	-0.14	--	-0.09	-0.12	--	-0.10
<b>Nb ppm Excursion</b>	0.02	0.06	-0.11	-0.14	0.02	-0.07	-0.10	-0.37	-0.11
<b>Zr ppm Excursion</b>	-0.15	-0.14	-0.10	-0.12	-0.28	-0.07	-0.10	-0.20	-0.17
<b>Sr ppm Excursion</b>	0.02	0.05	0.12	0.05	0.01	-0.04	-0.06	-0.12	0.01

AFC=Assimilation and fractional crystallization

Appendix E.3 cont. Magma Behavior 3 modeling results and estimated masses

<b>Flow to Flow Variation</b>		<b>KG5-KG6</b>	<b>JJ3-JJ4</b>	<b>JJ70-JJ71</b>	<b>KG12-KG13</b>	<b>KG14-KG15</b>	<b>JJ44-JJ45</b>	<b>JJ13-JJ14</b>
<b>Magma Behavior</b>		<b>Green 9</b>	<b>Green 9</b>	<b>Green 5</b>	<b>Green 9</b>	<b>Green Min 3</b>	<b>Green Min 2</b>	<b>Green Min 8</b>
<b>Hypothesized Process</b>		Recharge	Recharge	Recharge	Recharge	AFC	FC	Recharge
<b>Modeled Masses</b>	<b>Recharge</b>	0.75			1.5	0	0	0.25
	<b>Assimilation</b>	0			0	0.16	0	0
	<b>Frac. Xtal</b>	0			0	0.04	0	0
<b>Suggested Masses</b>	<b>Recharge</b>		0.75	0.75				
	<b>Assimilation</b>		0	0				
	<b>Frac. Xtal</b>		0	0				
<b>SiO2 Excursion</b>		-0.05	-0.05	-0.09	-0.68	0.13	0.02	0.15
<b>TiO2 Excursion</b>		-0.45	-0.12	-0.44	0.30	-0.14	-0.39	-0.01
<b>Al2O3 Excursion</b>		-0.02	-0.03	0.36	-0.01	0.04	0.42	-0.29
<b>FeO* Excursion</b>		-0.13	-0.02	-0.16	0.53	-0.15	-0.37	0.02
<b>MgO Excursion</b>		0.31	0.09	0.08	0.19	-0.04	-0.03	0.10
<b>CaO Excursion</b>		0.09	0.15	-0.05	0.35	0.05	0.09	-0.01
<b>Na2O Excursion</b>		-0.18	-0.14	0.06	-0.42	0.00	-0.03	-0.06
<b>K2O Excursion</b>		-0.27	-0.15	-0.19	-0.57	0.02	-0.05	0.03
<b>P2O5 Excursion</b>		-0.35	-0.14	-0.24	-0.62	-0.05	-0.12	-0.07
<b>Ni ppm Excursion</b>		0.28	0.08	0.15	0.21	-0.10	0.03	0.08
<b>Cr ppm Excursion</b>		0.12	0.14	-0.04	0.05	0.01	0.03	0.15
<b>La ppm Excursion</b>		-0.32	-0.11	-0.23	-0.42	-0.01	-0.09	-0.02
<b>Eu ppm Excursion</b>		-0.52	-0.15	-0.38	-0.16	-0.05	-0.28	-0.02
<b>Nb ppm Excursion</b>		-0.52	-0.25	-0.45	-0.17	-0.10	-0.28	-0.02
<b>Zr ppm Excursion</b>		-0.50	-0.11	-0.48	-0.05	-0.07	-0.21	0.02
<b>Sr ppm Excursion</b>		-0.07	-0.14	0.51	-0.45	0.01	0.12	-0.35

AFC=Assimilation and fractional crystallization, FC=Fractional crystallization

Appendix E.4 Magma Behavior 4 modeling results and estimated masses

<b>Flow to Flow Variation</b>		JJ37-JJ38	JJ32-JJ33	JJ35-JJ36	JJ6-JJ7	JJ50-JJ51	JJ18-JJ19	JJ2-JJ3	JJ8-JJ9
<b>Magma Behavior</b>		Blue 1	Blue 4	Blue 5	Blue 2	Blue 2	Blue 3	Blue 1	Blue 1
<b>Hypothesized Process</b>		Recharge	Recharge	Recharge	EC	EC	EC	Modal Diff	Modal Diff
<b>Modeled Masses</b>	Recharge	1.5	1	3			0		
	Assimilation	0	0	0			0		
	Frac. Xtal	0	0	0			0		
	Equil. Xtal	0	0	0			0.10		
<b>Suggested Masses</b>	Recharge				0	0		0	0
	Assimilation				0	0		0	0
	Frac. Xtal				0	0		0	0
	Equil. Xtal				0.10	0.10		0	0
<b>SiO2 Excursion</b>		0.00	0.14	-0.14	0.06	-0.01	-0.03	-0.03	0.01
<b>TiO2 Excursion</b>		-0.17	-0.23	-0.37	0.30	0.35	0.35	0.13	0.26
<b>Al2O3 Excursion</b>		-0.28	-0.02	0.17	-0.09	-0.18	-0.38	-0.76	-0.38
<b>FeO* Excursion</b>		0.07	-0.30	-0.19	0.18	0.26	0.39	0.35	0.31
<b>MgO Excursion</b>		0.39	0.13	0.28	-0.20	-0.18	-0.03	0.48	0.03
<b>CaO Excursion</b>		-0.32	0.07	-0.06	0.01	0.04	-0.01	-0.28	-0.01
<b>Na2O Excursion</b>		-0.08	-0.12	-0.09	0.05	0.10	-0.06	-0.13	-0.04
<b>K2O Excursion</b>		0.10	0.04	-0.12	0.08	0.06	0.06	0.16	0.04
<b>P2O5 Excursion</b>		0.00	-0.07	-0.11	0.05	0.11	0.11	0.11	0.03
<b>Ni ppm Excursion</b>		-0.29	-0.10	0.00	-0.28	-0.24	-0.07	0.36	-0.08
<b>Cr ppm Excursion</b>		-0.02	0.02	-0.06	-0.21	0.01	0.19	0.41	0.07
<b>La ppm Excursion</b>		0.31	0.26	0.23	0.08	0.12	0.11	0.09	0.03
<b>Eu ppm Excursion</b>		--	--	--	0.21	0.30	0.26	0.10	0.12
<b>Nb ppm Excursion</b>		0.19	0.34	0.28	0.22	0.26	0.26	0.22	0.11
<b>Zr ppm Excursion</b>		0.06	0.23	0.06	0.19	0.26	0.27	0.12	0.05
<b>Sr ppm Excursion</b>		-0.03	-0.03	-0.03	-0.03	-0.03	-0.10	-0.21	-0.07

EC=Equilibrium crystallization, Modal Diff= Modal differences between flows

Appendix E.4 cont. Magma Behavior 4 modeling results and estimated masses

<b>Flow to Flow Variation</b>		JJ45-JJ46	KG15-KG16	KG8-KG9
<b>Magma Behavior</b>		Blue Min 1	Blue Min 1	Blue Min 3
<b>Hypothesized Process</b>		FC	AFC	AFC
<b>Modeled Masses</b>	<b>Recharge</b>	0	0	0
	<b>Assimilation</b>	0	0	0
	<b>Frac. Xtal</b>	0	0	0
	<b>Equil. Xtal</b>	0	0	0
<b>Suggested Masses</b>	<b>Recharge</b>			
	<b>Assimilation</b>			
	<b>Frac. Xtal</b>			
	<b>Equil. Xtal</b>			
<b>SiO2 Excursion</b>		-0.01	-0.12	0.51
<b>TiO2 Excursion</b>		0.38	0.37	-0.20
<b>Al2O3 Excursion</b>		-0.55	-0.28	-0.06
<b>FeO* Excursion</b>		0.48	0.32	-0.39
<b>MgO Excursion</b>		0.06	0.06	-0.02
<b>CaO Excursion</b>		-0.10	-0.16	-0.13
<b>Na2O Excursion</b>		-0.08	0.03	0.03
<b>K2O Excursion</b>		0.16	0.12	0.25
<b>P2O5 Excursion</b>		0.14	0.16	-0.12
<b>Ni ppm Excursion</b>		-0.04	0.07	-0.01
<b>Cr ppm Excursion</b>		0.02	0.01	0.14
<b>La ppm Excursion</b>		0.15	0.14	0.05
<b>Eu ppm Excursion</b>		0.30	0.24	-0.08
<b>Nb ppm Excursion</b>		0.28	0.33	0.05
<b>Zr ppm Excursion</b>		0.27	0.30	0.08
<b>Sr ppm Excursion</b>		-0.14	-0.18	-0.13

Min=minor, FC=Fractional crystallization, AFC=Assimilation and fractional crystallization

Appendix E.5 Magma Behavior 5 modeling results and estimated masses

<b>Flow to Flow Variation</b>		<b>KG6-KG7</b>	<b>JJ62-JJ63</b>	<b>JJ64-JJ65</b>	<b>JJ90-JJ91</b>	<b>JJ69-JJ70</b>	<b>JJ83-JJ84</b>	<b>JJ88-JJ89</b>	<b>JJ94-JJ95</b>	<b>JJ58-JJ59</b>	<b>JJ71-JJ72</b>
<b>Magma Behavior</b>		Purple 1	Purple 1	Purple 1	Purple 1	Purple 1	Purple 1	Purple 1	Purple 1	Purple 1	Purple 1
<b>Hypothesized Process</b>		AFC	AFC	AFC	AFC	AFC	AFC	AFC	AFC	AFC	AFC
<b>Modeled Masses</b>	<b>Recharge</b>	0			0			0			0
	<b>Assimilation</b>	0			0.13			0.29			0.04
	<b>Frac. Xtal</b>	0.33			0.49			0.60			0.10
	<b>Equil. Xtal</b>	0			0			0			0
<b>Suggested Masses</b>	<b>Recharge</b>		0	0		0	0		0	0	
	<b>Assimilation</b>		0	0		0.13	0.13		0.29	0.29	
	<b>Frac. Xtal</b>		0.33	0.33		0.49	0.49		0.60	0.60	
	<b>Equil. Xtal</b>		0	0		0	0		0	0	
<b>SiO2 Excursion</b>		-0.12	0.13	-0.11	0.38	0.01	0.30	0.74	0.94	0.70	0.16
<b>TiO2 Excursion</b>		0.27	0.28	0.40	0.23	0.49	0.43	0.20	0.02	-0.09	0.52
<b>Al2O3 Excursion</b>		-0.11	-0.17	-0.22	-0.22	-0.22	-0.14	-0.26	-0.03	-0.04	-0.39
<b>FeO* Excursion</b>		0.30	0.13	0.38	-0.09	0.40	0.09	-0.06	-0.42	-0.28	0.23
<b>MgO Excursion</b>		-0.11	-0.07	-0.05	-0.16	-0.20	-0.29	-0.38	-0.34	-0.33	-0.13
<b>CaO Excursion</b>		-0.05	-0.19	-0.14	-0.18	-0.23	-0.23	-0.52	-0.54	-0.34	-0.07
<b>Na2O Excursion</b>		0.10	0.08	0.08	0.11	0.16	0.20	0.44	0.49	0.33	-0.10
<b>K2O Excursion</b>		0.10	0.19	0.09	0.42	0.35	0.37	0.73	0.64	0.60	0.38
<b>P2O5 Excursion</b>		0.18	0.19	0.18	0.30	0.30	0.37	0.61	0.56	0.26	0.30
<b>Ni ppm Excursion</b>		-0.13	-0.03	-0.03	-0.12	-0.09	-0.18	-0.41	-0.36	-0.16	-0.19
<b>Cr ppm Excursion</b>		-0.09	-0.02	-0.05	-0.07	-0.02	-0.09	-0.05	-0.07	-0.06	-0.02
<b>La ppm Excursion</b>		0.11	0.21	0.13	0.31	0.23	0.34	0.58	0.43	0.32	0.30
<b>Eu ppm Excursion</b>		0.27	0.24	0.28	0.30	0.44	0.46	0.44	0.23	0.12	0.39
<b>Nb ppm Excursion</b>		0.24	0.39	0.26	0.57	0.22	0.58	0.48	0.34	0.48	0.52
<b>Zr ppm Excursion</b>		0.24	0.35	0.23	0.51	0.45	0.55	0.52	0.34	0.33	0.53
<b>Sr ppm Excursion</b>		0.00	-0.09	-0.07	-0.14	-0.12	-0.08	0.14	0.31	-0.11	-0.49

AFC=Assimilation and fractional crystallization, FC=Fractional crystallization, EC=Equilibrium Crystallization



Appendix E.5 cont. Magma Behavior 5 modeling results and estimated masses

<b>Flow to Flow Variation</b>		JJ75-JJ76	JJ80-JJ81	KG9-KG10	JJ43-JJ44	JJ66-JJ67	KG4-KG5	JJ16-JJ17	JJ4-JJ5
<b>Magma Behavior</b>		Purple 1	Purple 1	Purple 1	Purple 1	Purple 2	Purple 2	Purple 2	Purple 2
<b>Hypothesized Process</b>		AFC	AFC	AFC	FC	AFC	AFC	EC	EC
<b>Modeled Masses</b>	<b>Recharge</b>	0	0	0	0	0	0	0	
	<b>Assimilation</b>	0.01	0.51	0.01	0	0.06	0.12	0	
	<b>Frac. Xtal</b>	0.26	0.42	0.15	0.53	0.29	0.19	0	
	<b>Equil. Xtal</b>	0	0	0	0	0	0	0.24	
<b>Suggested Masses</b>	<b>Recharge</b>								0
	<b>Assimilation</b>								0
	<b>Frac. Xtal</b>								0
	<b>Equil. Xtal</b>								0.24
<b>SiO2 Excursion</b>		0.08	0.47	-0.43	0.10	0.41	0.19	-0.09	-0.06
<b>TiO2 Excursion</b>		0.18	0.29	0.89	0.51	-0.20	0.16	0.22	0.16
<b>Al2O3 Excursion</b>		-0.13	-0.52	-0.41	-0.02	0.08	0.16	0.13	0.06
<b>FeO* Excursion</b>		0.19	0.18	0.83	0.37	-0.29	-0.12	0.29	0.10
<b>MgO Excursion</b>		-0.11	-0.07	-0.16	-0.40	-0.13	-0.22	-0.30	-0.10
<b>CaO Excursion</b>		-0.20	-0.42	-0.12	-0.22	-0.13	-0.11	-0.03	-0.11
<b>Na2O Excursion</b>		0.15	0.09	0.17	0.27	-0.12	0.10	0.13	0.16
<b>K2O Excursion</b>		0.27	0.58	0.17	0.24	0.44	0.19	0.08	0.08
<b>P2O5 Excursion</b>		0.25	0.36	0.61	0.24	0.05	0.18	0.11	0.14
<b>Ni ppm Excursion</b>		-0.08	-0.16	-0.22	-0.42	-0.10	-0.18	-0.39	-0.05
<b>Cr ppm Excursion</b>		-0.06	-0.07	-0.18	-0.38	-0.05	-0.13	-0.28	-0.12
<b>La ppm Excursion</b>		0.21	0.48	0.36	0.23	0.10	0.18	0.09	0.12
<b>Eu ppm Excursion</b>		0.29	0.44	0.76	0.45	0.00	0.25	0.18	0.19
<b>Nb ppm Excursion</b>		0.32	0.63	0.70	0.42	0.06	0.26	0.14	0.26
<b>Zr ppm Excursion</b>		0.33	0.59	0.64	0.37	0.07	0.26	0.11	0.16
<b>Sr ppm Excursion</b>		-0.10	-0.22	-0.11	0.18	0.03	0.04	0.21	0.17

AFC=Assimilation and fractional crystallization, FC=Fractional crystallization, EC=Equilibrium Crystallization

Appendix E.5 cont. Magma Behavior 5 modeling results and estimated masses

<b>Flow to Flow Variation</b>		JJ77-JJ78	JJ21-JJ22	JJ23-JJ24	KG11-KG1	KG2-KG3	JJ54-JJ55
<b>Magma Behavior</b>		Purple 3	Purple 3	Purple 3	Purple 4	Purple 1	Purple 1
<b>Hypothesized Process</b>		AFC	AFC	AFC	AFC	AFC	AFC
<b>Modeled Masses</b>	<b>Recharge</b>	0			0	0	
	<b>Assimilation</b>	0.63			0.21	0.00	
	<b>Frac. Xtal</b>	0.36			0.40	0.29	
	<b>Equil. Xtal</b>	0			0	0	
<b>Suggested Masses</b>	<b>Recharge</b>		0	0			0
	<b>Assimilation</b>		0.63	0.63			0.00
	<b>Frac. Xtal</b>		0.36	0.36			0.29
	<b>Equil. Xtal</b>		0	0			0
<b>SiO2 Excursion</b>		0.12	0.17	0.25	0.57	-0.16	-0.03
<b>TiO2 Excursion</b>		-0.12	0.18	0.09	-0.63	0.28	0.14
<b>Al2O3 Excursion</b>		0.45	0.15	0.15	0.22	-0.04	-0.13
<b>FeO* Excursion</b>		-0.39	-0.09	-0.12	-0.56	0.30	0.37
<b>MgO Excursion</b>		-0.21	-0.38	-0.31	-0.08	-0.10	-0.03
<b>CaO Excursion</b>		0.05	0.13	0.01	-0.34	-0.16	-0.26
<b>Na2O Excursion</b>		0.13	0.12	0.13	0.30	0.12	0.16
<b>K2O Excursion</b>		0.04	0.17	0.15	0.36	0.22	0.02
<b>P2O5 Excursion</b>		0.02	0.06	0.02	0.34	0.12	0.10
<b>Ni ppm Excursion</b>		-0.16	-0.33	-0.37	-0.02	0.02	-0.15
<b>Cr ppm Excursion</b>		-0.01	-0.28	-0.40	0.00	0.05	-0.19
<b>La ppm Excursion</b>		0.03	0.08	0.03	0.22	0.04	0.06
<b>Eu ppm Excursion</b>		-0.02	0.18	0.08	-0.20	0.14	0.11
<b>Nb ppm Excursion</b>		0.03	0.14	0.09	-0.25	-0.07	0.09
<b>Zr ppm Excursion</b>		0.02	0.18	0.09	-0.34	0.12	0.10
<b>Sr ppm Excursion</b>		0.20	0.02	0.04	0.50	0.06	0.09

AFC=Assimilation and fractional crystallization, FC=Fractional crystallization, EC=Equilibrium Crystallization