Site 1256, Table T17. Whole-rock major and trace element compositions, Expedition 309.

	309-1256D-							
Core, section, piece, interval (cm):	75R-1 (Piece 20, 131–133)	76R-2 (Piece 1, 0–4)	77R-2 (Piece 8, 55–58)	79R-2 (Piece 7, 42–46)	80R-1 (Piece 10, 55–56)	80R-1 (Piece 12C, 103–107)	84R-1 (Piece 7, 54–58)	85R-1 (Piece 1F, 120–123)
Unit:	1256D-27	1256D-27	1256D-28	1256D-29a	1256D-29b	1256D-29b	1256D-29b	1256D-30
Subdivision:	Sheet flow	Sheet flow	Sheet flow	Sheet flow	Sheet flow	Sheet flow	Sheet flow	Breccia
Depth (mbsf):	753.32	753.5	760.76	771.54	779.75	780.23	802.32	812.58
Thin section:	2	3	5	9	10	11	18	21
Alteration (%):	16	4.5	4	5	1	0.5	1	0.5
Major element oxide (wt%):								
SiO_2	50.00	49.36	50.07	50.82	51.87	49.65	52.53	52.42
TiO_2	1.50	1.47	1.59	1.90	1.40	1.26	1.37	1.13
Al_2O_3	14.44	14.66	14.68	13.76	15.69	15.61	13.79	14.67
FeO	12.31	13.43	11.80	13.92	11.06	11.05	10.93	10.29
MnO	0.28	0.23	0.28	0.31	0.11	0.20	0.27	0.21
MgO	7.16	7.30	7.13	6.32	7.60	6.86	7.37	7.70
CaO	10.86	10.53	11.53	9.73	9.65	12.84	10.72	11.07
Na_2O	3.26	2.86	2.74	2.98	2.26	2.36	2.83	2.29
K_2O	0.13	0.08	0.09	0.08	0.23	0.06	0.11	0.12
P_2O_5	0.06	0.08	0.1	0.19	0.14	0.11	0.08	0.10
LOI	–0.58	0.39	–0.85	3.17	–0.12	2.86	0.99	0.79
Trace element (ppm):								
Ba	19.5	17.6	23.0	27.4	105.7	14.7	16.2	26.4
Sr	105.0	105.7	108.0	129.4	188.4	114.4	98.4	105.3
Zr	76.2	76.8	87.9	132.8	82.1	74.0	77.6	64.1
Y	38.1	39.2	41.0	45.9	29.4	31.5	32.6	29.4
Sc	44.5	50.2	42.1	51.0	33.3	38.3	37.3	34.0
V	374.9	385.8	370.9	420.9	314.7	313.5	339.8	315.3
Cr	52.2	55.4	152.5	20.7	202.1	205.0	70.3	205.0
Co	53.0	55.5	55.0	49.7	49.6	45.9	53.9	56.2
Ni	46.7	51.8	53.8	33.7	95.2	101.0	50.2	100.6
Cu	81.3	86.0	87.3	64.6	124.7	91.6	116.0	99.8
Zn	87.4	87.4	96.4	126.3	100.7	101.7	89.4	100.5
Mg #	50.8	49.1	51.7	44.6	54.9	52.4	54.5	57.0
Total alkalis	3.4	2.9	2.83	3.1	2.5	2.4	2.9	2.4
CaO/Al_2O_3	0.75	0.72	0.79	0.71	0.61	0.82	0.78	0.76
K_2O/TiO_2	0.09	0.06	0.06	0.04	0.16	0.05	0.08	0.10
Zr/TiO_2 (ppm/wt%)	50.7	52.4	55.2	69.8	58.6	58.9	56.5	56.6
Zr/Y	2.0	2.0	2.1	2.9	2.8	2.3	2.4	2.2
Sr/CaO (ppm/wt%)	9.7	10.0	9.4	13.3	19.5	8.9	9.2	9.5
Sr/Ba	5.4	6.0	4.7	4.7	1.8	7.8	6.1	4.0
K_2O/Ba (wt%/ppm)	0.007	0.005	0.004	0.003	0.002	0.004	0.007	0.004

	309-1256D-							
Core, section, piece, interval (cm):	85R-3 (Piece 9B, 78–81)	85R-4 (Piece 2F, 42–45)	85R-5 (Piece 3B, 76–82)	86R-3 (Piece 5, 94–99)	87R-2 (Piece 6, 61–68)	88R-1 (Piece 15, 77–86)	89R-1 (Piece 14, 69–73)	94R-1 (Piece 10, 45–50)
Unit:	1256D-30	1256D-31	1256D-31	1256D-31	1256D-31	1256D-32	1256D-33a	1256D-33a
Subdivision:	Massive flow	Massive flow	Massive flow	Massive flow	Massive flow	Sheet flow	Sheet flow	Sheet flow
Depth (mbsf):	815.17	816.38	819.74	824.95	832.73	841	850.5	879.04
Thin section:	24	25	26	28	31	32	33	35
Alteration (%):	7	6	5	5	12	6.5	7	5
Major element oxide (wt%):								
SiO_2	52.02	51.21	51.74	51.82	50.16	50.36	51.12	50.25
TiO_2	1.28	1.29	1.20	1.31	1.65	1.55	1.32	1.20
Al_2O_3	14.98	14.54	14.73	14.26	14.03	15.86	14.56	14.85
FeO	10.47	11.37	11.20	11.54	12.25	10.25	10.42	9.95
MnO	0.20	0.21	0.21	0.21	0.21	0.16	0.21	0.19
MgO	7.05	7.48	7.08	7.03	7.32	7.12	7.73	8.37
CaO	11.46	11.41	11.37	11.36	11.37	11.83	11.17	12.59
Na_2O	2.39	2.33	2.34	2.34	2.64	2.68	3.18	2.39
K_2O	0.06	0.08	0.09	0.07	0.15	0.07	0.16	0.10
P_2O_5	0.08	0.09	0.06	0.06	0.22	0.14	0.12	0.12
LOI	3.45	0.26	2.71	3.05	1.25	1.68	3.58	1.35
Trace element (ppm):								
Ba	18.1	17.6	18.4	18.0	37.0	17.3	34.9	21.5
Sr	113.2	104.8	109.6	105.4	116.5	107.8	109.0	109.6
Zr	79.5	70.9	75.7	71.9	96.9	88.1	88.8	73.0
Y	32.3	33.4	33.4	33.0	37.9	34.7	30.8	27.5
Sc	37.1	38.4	39.7	39.2	39.2	37.3	36.1	34.8
V	329.3	334.9	326.4	329.3	332.5	382.8	301.3	275.8
Cr	102.7	111.2	94.5	93.7	100.7	103.2	151.2	323.9
Co	48.3	47.2	46.9	55.1	44.4	44.2	59.6	34.8
Ni	44.2	49.3	42.1	36.8	49.7	31.2	65.3	78.1
Cu	89.6	79.1	84.4	55.9	108.0	126.9	104.5	108.6
Zn	90.9	103.3	91.8	89.8	97.7	97.0	88.3	80.8
Mg #	54.4	53.9	52.9	52.0	51.5	55.2	56.8	59.9
Total alkalis	2.5	2.4	2.4	2.4	2.8	2.7	3.3	2.5
CaO/Al_2O_3	0.77	0.78	0.77	0.80	0.81	0.75	0.77	0.85
K_2O/TiO_2	0.05	0.06	0.07	0.05	0.09	0.04	0.12	0.09
Zr/TiO_2 (ppm/wt%)	61.9	55.1	63.2	54.9	58.7	56.9	67.1	60.8
Zr/Y	2.5	2.1	2.3	2.2	2.6	2.5	2.9	2.7
Sr/CaO (ppm/wt%)	9.9	9.2	9.6	9.3	10.2	9.1	9.8	8.7
Sr/Ba	6.2	6.0	6.0	5.9	3.1	6.2	3.1	5.1
K_2O/Ba (wt%/ppm)	0.003	0.005	0.005	0.004	0.004	0.004	0.005	0.005

	309-1256D-							
Core, section, piece, interval (cm):	96R-1 (Piece 6B, 30–35)	99R-2 (Piece 11C, 82–86)	102R-1 (Piece 16, 73–76)	102R-3 (Piece 6, 22–31)	106R-1 (Piece 18, 76–80)	108R-2 (Piece 16, 99–102)	110R-2 (Piece 5C, 58–66)	111R-1 (Piece 9B, 80–87)
Unit:	1256D-33a	1256D-33b	1256D-34b	1256D-35a	1256D-35b	1256D-36a	1256D-36b	1256D-36c
Subdivision:	Sheet flow	Sheet flow	Massive flow	Sheet flow	Sheet flow	Massive flow	Massive flow	Massive flow
Depth (mbsf):	893.29	909.68	927.3	929.62	951.18	961.3	971.7	975.2
Thin section:	37	41	44	47	49	54	56	57
Alteration (%):	4	3.5	3	2	1	1	1	1
Major element oxide (wt%):								
SiO_2	50.20	50.84	50.78	51.88	51.09	51.83	51.26	51.84
TiO_2	1.24	1.26	1.36	1.40	1.11	1.39	1.29	1.34
Al_2O_3	14.99	14.20	14.23	13.91	14.75	14.02	14.34	13.81
FeO	10.05	11.61	11.51	11.48	10.64	11.28	11.47	11.95
MnO	0.18	0.19	0.21	0.20	0.23	0.24	0.21	0.20
MgO	8.39	7.86	7.76	7.40	8.22	7.74	7.44	7.38
CaO	12.59	11.74	11.90	11.29	11.80	11.09	11.63	11.10
Na_2O	2.19	2.18	2.14	2.29	2.03	2.26	2.19	2.23
K_2O	0.04	0.03	0.02	0.06	0.05	0.04	0.07	0.06
P_2O_5	0.14	0.09	0.09	0.10	0.08	0.11	0.09	0.08
LOI	0.32	–0.82	–0.67	1.44	4.47	0.86	0.46	0.78
Trace element (ppm):								
Ba	10.9	7.5	7.0	11.1	16.1	14.0	13.8	15.8
Sr	116.5	92.0	91.0	90.8	96.8	100.4	95.7	99.0
Zr	78.7	68.0	77.0	76.1	61.5	78.8	75.0	75.3
Y	28.8	30.4	34.9	34.9	27.3	33.4	33.7	34.9
Sc	34.2	39.7	40.1	39.3	37.8	36.0	47.0	34.2
V	283.6	324.4	358.4	348.6	306.0	357.2	352.6	354.7
Cr	322.2	134.8	160.7	192.1	236.6	65.8	158.3	64.6
Co	46.2	49.5	46.4	51.8	46.6	49.4	54.2	43.4
Ni	89.5	61.4	59.9	70.8	81.6	67.1	80.3	71.0
Cu	110.6	96.4	85.2	78.6	93.5	86.7	67.5	82.6
Zn	81.7	92.3	92.7	87.8	82.2	94.5	97.8	88.5
Mg #	59.7	54.6	54.5	53.3	57.8	54.9	53.5	52.3
Total alkalis	2.2	2.2	2.2	2.4	2.1	2.3	2.3	2.3
CaO/Al_2O_3	0.84	0.83	0.84	0.81	0.80	0.79	0.81	0.80
K_2O/TiO_2	0.03	0.02	0.02	0.04	0.05	0.03	0.05	0.04
Zr/TiO_2 (ppm/wt%)	63.4	54.1	56.7	54.3	55.4	56.7	58.1	56.0
Zr/Y	2.7	2.2	2.2	2.2	2.3	2.4	2.2	2.2
Sr/CaO (ppm/wt%)	9.3	7.8	7.6	8.0	8.2	9.1	8.2	8.9
Sr/Ba	10.7	12.3	13.0	8.2	6.0	7.2	7.0	6.2
K_2O/Ba (wt%/ppm)	0.004	0.003	0.003	0.005	0.003	0.003	0.005	0.004

	309-1256D-						
Core, section, piece, interval (cm):	112R-1 (Piece 20, 141–150)	114R-1 (Piece 6, 81–84)	114R-2 (Piece 8, 54–56)	115R-1 (Piece 14B, 69–71)	118R-1 (Piece 5, 50–56)	119R-1 (Piece 13, 55–60)	122R-1 (Piece 13B, 90–100)
Unit:	1256D-37	1256D-38	1256D-39a	1256D-39b	1256D-40	1256D-41	1256D-42a
Subdivision:	Sheet flow	Sheet flow	Massive flow	Massive flow	Sheet flow	Sheet flow	Massive flow
Depth (mbsf):	980.6	989.63	990.85	994.3	1008.42	1013.4	1028.23
Thin section:	59	62	64	65	70	71	77
Alteration (%):	1	0.5	11.5	1	6	2	
Major element oxide (wt%):							
SiO_2	51.19	51.97	52.40	52.30	52.41	52.31	48.94
TiO_2	1.25	1.29	1.13	1.37	1.17	1.61	1.47
Al_2O_3	14.39	14.06	14.45	13.78	14.14	13.99	13.58
FeO	10.98	10.94	10.85	11.69	10.57	11.04	20.76
MnO	0.27	0.21	0.14	0.21	0.19	0.25	0.21
MgO	7.91	7.8	7.73	7.18	8.18	7.28	8.00
CaO	11.68	11.39	11.22	11.02	11.30	11.0	2.95
Na_2O	2.18	2.16	1.96	2.25	1.88	2.35	3.89
K_2O	0.03	0.04	0.04	0.08	0.04	0.04	0.06
P_2O_5	0.13	0.13	0.08	0.12	0.11	0.15	0.14
LOI	1.64	2.01	0.68	–0.10	1.52	1.19	0.00
Trace element (ppm):							
Ba	14.2	14.5	19.3	22.5	12.9	11.4	16.7
Sr	88.6	89.8	91.2	99.5	85.3	97.6	52.1
Zr	68.7	70.6	66.8	80.5	66.8	97.8	95.9
Y	31.8	31.9	27.4	34.0	29.1	36.2	38.6
Sc	38.4	38.2	37.5	40.1	34.4	38.6	69.1
V	325.9	330.9	306.0	340.7	313.4	356.3	392.9
Cr	200.1	165.6	256.0	63.7	250.6	137.8	61.6
Co	54.2	50.9	78.1	61.4	52.1	46.0	53.7
Ni	54.9	58.2	99.0	38.3	96.9	56.9	39.8
Cu	91.4	71.2	101.4	82.9	97.5	78.2	60.7
Zn	88.7	96.2	148.6	89.8	105.0	111.8	487.6
Mg #	56.1	55.9	55.8	52.1	57.9	53.9	40.6
Total alkalis	2.2	2.2	2.0	2.3	1.9	2.4	4.0
CaO/Al_2O_3	0.81	0.81	0.78	0.80	0.80	0.79	0.22
K_2O/TiO_2	0.03	0.03	0.03	0.06	0.04	0.03	0.04
Zr/TiO_2 (ppm/wt%)	55.1	54.7	59.2	58.8	57.3	60.9	65.4
Zr/Y	2.2	2.2	2.4	2.4	2.3	2.7	2.5
Sr/CaO (ppm/wt%)	7.6	7.9	8.1	9.0	7.5	8.9	17.7
Sr/Ba	6.3	6.2	4.7	4.4	6.6	8.5	3.1
K_2O/Ba (wt%/ppm)	0.002	0.003	0.002	0.004	0.003	0.004	0.004

	309-1256D-						
Core, section, piece, interval (cm):	122R-1 (Piece 17, 125–130)	123R-1 (Piece 11, 55–60)	124R-1 (Piece 63, 60–63)	128R-1 (Piece 9, 59–65)	129R-1 (Piece 5B, 75–82)	130R-1 (Piece 3, 8–13)	131R-1 (Piece 4, 20–25)
Unit:	1256D-42a	1256D-42b	1256D-43	1256D-43	1256D-44a	1256D-44b	1256D-44c
Subdivision:	Massive flow	Massive flow	Sheet flow	Sheet flow	Massive basalt	Massive basalt	Massive basalt
Depth (mbsf):	1028.56	1032.65	1037.49	1056.68	1061.67	1065.78	1070.7
Thin section:	79	83	85	90	93	97	99
Alteration (%):	10	1	0.5	3	2	1	3
Major element oxide (wt%):							
SiO_2	52.95	54.51	52.45	54.57	51.42	50.98	52.28
TiO_2	1.90	1.67	1.39	1.57	1.52	1.54	1.34
Al_2O_3	12.99	12.12	13.72	13.11	14.01	14.32	13.78
FeO	11.47	12.52	11.54	9.95	11.39	11.48	11.76
MnO	0.30	0.23	0.21	0.19	0.20	0.19	0.22
MgO	7.08	6.58	7.10	8.27	7.03	7.21	6.96
CaO	8.98	7.13	11.33	7.05	12.06	11.53	11.23
Na_2O	4.07	5.05	2.13	5.13	2.23	2.54	2.29
K_2O	0.06	0.05	0.03	0.05	0.04	0.04	0.03
P_2O_5	0.20	0.15	0.10	0.12	0.11	0.16	0.11
LOI	1.44	2.17	2.58	3.55	0.19	1.64	0.47
Trace element (ppm):							
Ba	22.7	9.7	4.0	6.0	3.1	7.0	11.3
Sr	66.2	86.3	88.4	90.2	93.6	92.0	87.9
Zr	113.8	96.8	78.5	88.0	96.8	100.7	80.9
Y	46.4	38.8	31.8	36.0	35.8	37.8	32.5
Sc	40.9	41.8	38.3	35.3	38.1	37.6	38.8
V	473.7	409.2	340.0	382.9	356.3	356.5	342.9
Cr	86.8	58.0	68.2	166.7	187.2	173.6	73.7
Co	48.5	50.4	47.3	40.0	49.9	48.4	51.5
Ni	44.0	44.4	48.9	67.7	72.4	75.2	48.6
Cu	59.0	76.0	88.4	78.3	75.3	70.7	86.5
Zn	75.0	109.8	109.1	145.7	91.9	83.1	95.8
Mg #	52.3	48.2	52.2	59.6	52.3	52.7	51.2
Total alkalis	4.1	5.1	2.2	5.2	2.3	2.6	2.3
CaO/Al_2O_3	0.69	0.59	0.83	0.54	0.86	0.81	0.82
K_2O/TiO_2	0.03	0.03	0.02	0.03	0.02	0.03	0.03
Zr/TiO_2 (ppm/wt%)	60.0	57.9	56.4	55.9	63.6	65.2	60.3
Zr/Y	2.5	2.5	2.5	2.4	2.7	2.7	2.5
Sr/CaO (ppm/wt%)	7.4	12.1	7.8	12.8	7.8	8.0	7.8
Sr/Ba	2.9	8.9	22.3	15.1	30.2	13.1	7.8
K_2O/Ba (wt%/ppm)	0.003	0.005	0.008	0.008	0.012	0.006	0.003

Notes: LOI = loss on ignition. Total alkalis = K_2O + Na_2O. Mg# = MgO/(40.3111)/[(MgO/40.311) + (FeO/71.846)]. Degree of alteration as percentage of total volume was estimated visually under microscope on thin section.

	309-1256D-							
Core, section, piece, interval (cm):	132R-1 (Piece 18, 110–124)	135R-1 (Piece 5B, 31–33)	137R-1 (Piece 2, 27–29)	138R-1 (Piece 2, 9–14)	139R-1 (Piece 8, 48–55)	140R-1 (Piece 7, 74–79)	141R-1 (Piece 11, 48–65)	142R-1 (Piece 14B, 118–125)
Unit:	1256D-44c	1256D-44d	1256D-45	1256D-46a	1256D-46b	1256D-47	1256D-48	1256D-48
Subdivision:	Massive basalt	Cataclastic massive basalt	Massive basalt	Massive basalt	Massive basalt	Altered	Massive basalt	Massive basalt
Depth (mbsf):	1076.42	1090.03	1099.62	1104.2	1109.38	1114.45	1118.98	1124.49
Thin section:	10	105	112	113	115	117	119	121
Alteration (%):	2	9	15	1.5	15	72	48	32
Major element oxide (wt%):								
SiO_2	52.12	52.14	51.48	51.42	50.77	51.77	49.88	50.75
TiO_2	1.30	1.59	1.68	1.62	1.69	1.44	1.40	1.23
Al_2O_3	13.86	13.45	13.88	13.62	14.12	12.00	15.67	15.44
FeO	11.67	13.26	11.42	12.78	11.73	22.30	10.08	9.37
MnO	0.21	0.28	0.26	0.29	0.25	0.33	0.23	0.18
MgO	6.93	6.34	7.31	6.92	7.39	7.51	8.14	8.44
CaO	11.59	9.73	10.93	10.52	11.22	3.88	12.00	11.19
Na_2O	2.20	2.98	2.76	2.68	2.64	0.67	2.44	3.14
K_2O	0.03	0.06	0.17	0.07	0.06	0.03	0.03	0.13
P_2O_5	0.09	0.16	0.11	0.08	0.15	0.08	0.11	0.13
LOI	1.13	–0.17	7.78	0.07	1.17	6.34	–0.02	0.00
Trace element (ppm):								
Ba	9.6	6.6	20.0	11.3	7.7	2.9	2.7	7.8
Sr	87.5	94.8	104.8	88.4	107.5	37.5	103.1	105.8
Zr	80.0	99.9	105.4	107.6	112.7	86.2	97.7	87.6
Y	32.2	41.6	36.2	42.7	38.1	30.7	32.0	29.3
Sc	39.6	44.1	37.9	41.3	39.4	65.3	34.4	33.1
V	342.9	406.2	344.5	360.2	356.0	337.6	296.7	282.7
Cr	74.4	61.5	195.3	101.7	202.4	70.7	305.5	316.1
Co	49.4	54.4	45.6	52.5	49.3	144.3	49.1	46.3
Ni	50.2	42.8	60.8	57.5	65.5	47.5	110.0	105.5
Cu	84.5	76.3	78.4	60.0	81.3	22498.7	83.5	69.7
Zn	90.8	175.2	111.8	116.6	126.5	292.8	70.8	85.6
Mg #	51.3	45.9	53.2	49.0	52.8	37.4	58.9	61.5
Total alkalis	2.2	3.0	2.9	2.8	2.7	0.7	2.5	3.3
CaO/Al_2O_3	0.84	0.72	0.79	0.77	0.79	0.32	0.77	0.72
K_2O/TiO_2	0.02	0.04	0.10	0.04	0.03	0.02	0.02	0.10
Zr/TiO_2 (ppm/wt%)	61.3	62.8	62.8	66.4	66.6	59.9	69.8	71.4
Zr/Y	2.5	2.4	2.9	2.5	3.0	2.8	3.1	3.0
Sr/CaO (ppm/wt%)	7.5	9.7	9.6	8.4	9.6	9.7	8.6	9.5
Sr/Ba	9.1	14.4	5.3	7.8	14.0	12.8	37.6	13.5
K_2O/Ba (wt%/ppm)	0.003	0.010	0.008	0.006	0.007	0.010	0.012	0.016

	309-1256D-							
Core, section, piece, interval (cm):	143R-2 (Piece 2, 6–10)	144R-1 (Piece 19, 101–109)	145R-2 (Piece 7, 51–55)	146R-3 (Piece 9, 81–84)	147R-1 (Piece 16, 74–80)	149R-1 (Piece 11A, 54–57)	149R-1 (Piece 19, 93–96)	150R-1 (Piece 3, 10–13)
Unit:	1256D-49	1256D-50	1256D-50	1256D-50	1256D-51	1256D-52	1256D-52	1256D-52
Subdivision:	Massive basalt	Massive basalt	Massive basalt	Massive basalt	Massive basalt	Dike	Dike	Massive basalt
Depth (mbsf):	1129.67	1133.54	1139.42	1145.55	1145.95	1156.64	1157.03	1160.38
Thin section:	124	125	127	129	130	132	134	135
Alteration (%):	0.5	5	11	0.3	15	1	0.5	42
Major element oxide (wt%):								
SiO_2	51.20	51.64	52.07	51.07	50.93	48.03	50.55	51.67
TiO_2	1.16	1.23	1.09	1.08	1.37	1.86	1.61	1.96
Al_2O_3	14.41	14.51	14.32	14.86	14.56	18.91	13.86	13.08
FeO	11.19	11.05	10.56	10.79	11.87	13.09	13.21	13.94
MnO	0.22	0.20	0.20	0.18	0.21	0.26	0.22	0.29
MgO	7.67	7.89	7.95	7.64	6.93	6.15	6.68	6.44
CaO	11.80	11.39	11.58	12.26	11.40	8.43	10.39	9.64
Na_2O	2.21	2.02	2.11	1.97	2.63	3.06	3.32	2.77
K_2O	0.02	0.03	0.03	0.03	0.06	0.05	0.04	0.04
P_2O_5	0.12	0.05	0.09	0.13	0.05	0.17	0.12	0.18
LOI	1.72	3.39	1.04	2.84	0.38	0.00	1.21	–0.45
Trace element (ppm):								
Ba	1.4	9.3	9.0	8.9	10.1	13.6	9.4	8.1
Sr	85.3	85.5	84.7	82.0	87.8	96.9	107.7	99.6
Zr	66.4	67.9	62.0	64.4	77.9	110.2	96.8	117.5
Y	30.7	29.0	25.9	27.2	34.3	43.2	39.9	46.8
Sc	38.4	37.3	36.1	36.2	42.1	43.5	44.8	56.8
V	334.0	327.5	301.4	306.6	349.8	397.6	385.2	439.4
Cr	193.1	147.1	241.1	280.6	178.7	56.9	80.4	61.6
Co	50.2	45.9	46.5	47.4	45.3	42.8	75.5	56.4
Ni	66.5	66.8	75.1	85.7	55.6	39.8	48.0	50.9
Cu	93.6	90.7	100.1	102.0	83.4	73.9	84.2	63.5
Zn	83.9	102.6	102.9	82.1	95.5	71.9	87.9	214.3
Mg #	54.9	55.9	57.2	55.7	50.9	45.5	47.3	45.0
Total alkalis	2.2	2.0	2.1	2.0	2.7	3.1	3.4	2.8
CaO/Al_2O_3	0.82	0.78	0.81	0.82	0.78	0.45	0.75	0.74
K_2O/TiO_2	0.02	0.02	0.03	0.03	0.04	0.03	0.02	0.02
Zr/TiO_2 (ppm/wt%)	57.1	55.4	56.8	59.6	57.0	59.4	60.0	59.8
Zr/Y	2.2	2.3	2.4	2.4	2.3	2.6	2.4	2.5
Sr/CaO (ppm/wt%)	7.2	7.5	7.3	6.7	7.7	11.5	10.4	10.3
Sr/Ba	59.3	9.2	9.4	9.2	8.7	7.1	11.4	12.3
K_2O/Ba (wt%/ppm)	0.015	0.003	0.003	0.004	0.005	0.003	0.004	0.005

	309-1256D-							
Core, section, piece, interval (cm):	151R-1 (Piece 2, 7–10)	153R-2 (Piece 14, 60–75)	154R-1 (Piece 2, 6–11)	154R-1 (Piece 14, 60–75)	157R-1 (Piece 8, 47–49)	157R-2 (Piece 2B, 10–14)	160R-1 (Piece 4, 12–23)	161R-2 (Piece 1, 1–9)
Unit:	1256D-52	1256D-54	1256D-54	1256D-54	1256D-55b	1256D-55a	1256D-56a	1256D-56b
Subdivision:	Dike	Massive basalt	Massive basalt	Massive basalt	Dike	Massive basalt	Massive basalt	Dike
Depth (mbsf):	1165.37	1180.16	1179.71	1180.16	1194.66	1195.82	1208.75	1211.7
Thin section:	136	139	141	142	146	146	150	151
Alteration (%):	4	13	1	3	1	2.5	1.5	4.5
Major element oxide (wt%):								
SiO_2	51.16	51.41	51.40	51.66	51.94	51.88	52.21	49.66
TiO_2	1.58	1.68	1.81	1.65	1.76	1.65	1.23	1.02
Al_2O_3	13.73	13.57	13.57	13.60	12.98	13.61	14.07	15.60
FeO	12.89	13.37	13.51	13.40	13.70	13.28	11.45	9.62
MnO	0.23	0.24	0.26	0.24	0.27	0.27	0.20	0.17
MgO	6.76	6.53	6.34	6.31	6.63	6.21	7.33	8.92
CaO	10.90	10.22	10.42	10.38	9.62	10.53	11.27	12.53
Na_2O	2.57	2.78	2.52	2.60	2.93	2.46	2.14	2.29
K_2O	0.03	0.03	0.03	0.03	0.03	0.02	0.04	0.13
P_2O_5	0.15	0.17	0.16	0.12	0.14	0.07	0.06	0.06
LOI	0.62	1.24	0.49	0.26	–0.29	1.71	0.13	1.07
Trace element (ppm):								
Ba	3.3	8.0	8.6	0.9	5.7	5.6	8.0	19.2
Sr	91.2	91.5	87.6	92.5	100.7	90.3	83.7	86.0
Zr	97.8	99.9	103.5	104.9	103.9	106.6	71.7	56.0
Y	41.0	33.2	42.9	42.1	42.9	42.8	29.8	26.0
Sc	43.3	44.8	44.5	44.3	44.8	44.1	39.7	34.3
V	377.3	411.6	417.8	410.9	414.1	418.6	327.0	291.4
Cr	60.2	53.1	66.0	66.5	62.2	72.5	100.3	367.1
Co	48.4	51.5	53.5	66.3	75.0	55.7	54.6	46.1
Ni	51.8	48.9	47.8	40.6	34.4	36.3	51.9	111.0
Cu	72.0	70.3	62.3	61.5	70.7	63.7	96.4	87.7
Zn	107.0	150.3	151.0	113.7	98.6	108.2	100.2	60.3
Mg #	48.2	46.4	45.4	45.5	46.2	45.3	53.2	62.2
Total alkalis	2.6	2.8	2.6	2.6	3.0	2.5	2.2	2.4
CaO/Al_2O_3	0.79	0.75	0.77	0.76	0.74	0.77	0.80	0.80
K_2O/TiO_2	0.02	0.02	0.02	0.02	0.01	0.01	0.03	0.13
Zr/TiO_2 (ppm/wt%)	62.0	59.4	57.3	63.6	58.9	64.7	58.1	54.9
Zr/Y	2.4	3.0	2.4	2.5	2.4	2.5	2.4	2.2
Sr/CaO (ppm/wt%)	8.4	9.0	8.4	8.9	10.5	8.6	7.4	6.9
Sr/Ba	27.9	11.5	10.2	98.4	17.8	16.2	10.4	4.5
K_2O/Ba (wt%/ppm)	0.009	0.004	0.004	0.033	0.005	0.004	0.005	0.007

	309-1256D-							
Core, section, piece, interval (cm):	162R-3 (Piece 2, 29–31)	163R-2 (Piece 6A, 25–27)	163R-3 (Piece 8B, 56–58)	164R-2 (Piece 19, 115–118)	165R-1 (Piece 4, 19–21)	165R-3 (Piece 13, 101–103)	165R-3 (Piece 4A, 40–42)	166R-1 (Piece 1, 1–5)
Unit:	1256D-57a	1256D-57c	1256D-58	1256D-59	1256D-60a	1256D-60a	1256D-60b	1256D-61a
Subdivision:	Massive basalt	Dike	Massive basalt	Massive basalt	Massive basalt	Dike	Massive basalt	Dike
Depth (mbsf):	1216.57	1219.94	1221.54	1225.65	1227.99	1231.07	1230.44	1232.6
Thin section:	154	156	157	160	161	164	163	165
Alteration (%):	2.5	3	2		1	2	2	2
Major element oxide (wt%):								
SiO_2	51.02	51.06	51.39	52.05	50.99	51.40	51.77	53.76
TiO_2	1.17	1.41	1.40	1.63	1.79	1.63	1.65	1.62
Al_2O_3	14.50	14.60	14.45	13.39	13.63	13.79	13.52	12.71
FeO	10.70	10.88	10.90	13.23	13.97	13.31	12.46	12.47
MnO	0.21	0.20	0.21	0.23	0.25	0.25	0.23	0.23
MgO	8.14	7.30	7.48	6.64	6.36	6.50	6.95	6.86
CaO	12.26	11.79	11.93	10.28	10.26	10.55	9.88	9.16
Na_2O	1.88	2.52	2.14	2.42	2.61	2.43	3.39	2.97
K_2O	0.03	0.09	0.03	0.03	0.02	0.03	0.05	0.06
P_2O_5	0.09	0.15	0.07	0.10	0.12	0.11	0.10	0.14
LOI	–0.33	0.77	1.55	1.28	1.91	0.88	1.04	2.66
Trace element (ppm):								
Ba	2.5	16.2	4.2	2.5	2.4	2.2	1.9	9.4
Sr	76.7	99.0	92.1	91.5	97.9	90.3	104.5	94.2
Zr	64.0	88.0	85.6	96.5	104.7	92.9	95.9	98.1
Y	29.1	33.0	33.5	39.2	43.2	40.8	40.1	40.5
Sc	37.2	36.3	37.2	42.7	45.0	42.9	41.3	40.9
V	328.0	331.9	324.9	399.2	415.9	403.2	393.0	394.9
Cr	259.0	233.6	233.7	58.7	68.4	58.1	59.3	60.7
Co	44.6	46.9	50.8	48.7	53.8	44.6	45.3	50.0
Ni	88.5	62.8	70.9	41.4	45.8	41.8	40.3	39.8
Cu	74.3	91.4	75.3	65.7	75.8	75.1	20.5	72.7
Zn	96.0	80.8	86.3	80.9	86.9	129.4	88.1	106.8
Mg #	57.5	54.3	54.9	47.1	44.7	46.4	49.7	49.4
Total alkalis	1.9	2.6	2.2	2.4	2.6	2.5	3.4	3.0
CaO/Al_2O_3	0.85	0.81	0.83	0.77	0.75	0.77	0.73	0.72
K_2O/TiO_2	0.02	0.06	0.02	0.02	0.01	0.02	0.03	0.03
Zr/TiO_2 (ppm/wt%)	54.9	62.4	61.1	59.1	58.4	56.8	58.2	60.4
Zr/Y	2.2	2.7	2.6	2.5	2.4	2.3	2.4	2.4
Sr/CaO (ppm/wt%)	6.3	8.4	7.7	8.9	9.5	8.6	10.6	10.3
Sr/Ba	30.4	6.1	21.9	35.9	40.3	41.1	55.7	10.0
K_2O/Ba (wt%/ppm)	0.010	0.005	0.007	0.012	0.009	0.012	0.024	0.006

	309-1256D-					
Core, section, piece, interval (cm):	166R-2 (Piece 1, 4–6)	167R-3 (Piece 8B, 54–56)	168R-2 (Piece 1B, 10–15)	168R-5 (Piece 3A, 30–35)	170R-2 (Piece 10, 90–93)	170R-2 (Piece 12, 107–110)
Unit:	1256D-61b	1256D-62	1256D-63	1256D-63	1256D-64	1256D-65
Subdivision:	Massive basalt	Massive basalt	Massive basalt	Massive basalt	Massive basalt	Massive basalt
Depth (mbsf):	1234.08	1239.58	1243.63	1248.21	1252.71	1252.88
Thin section:	166	168	169	169	172	173
Alteration (%):	0.5	1	5	5	2	1
Major element oxide (wt%):						
SiO_2	53.25	52.39	52.34	52.07	52.96	51.76
TiO_2	1.66	1.12	1.57	1.59	1.20	1.03
Al_2O_3	13.04	14.38	13.76	13.71	14.03	14.86
FeO	13.00	10.46	12.04	11.62	11.17	9.47
MnO	0.25	0.20	0.21	0.22	0.20	0.17
MgO	6.26	7.89	6.71	6.92	7.41	8.59
CaO	10.07	11.66	11.08	11.33	10.9	12.11
Na_2O	2.25	1.82	2.10	2.35	1.96	1.91
K_2O	0.03	0.02	0.03	0.04	0.06	0.03
P_2O_5	0.18	0.06	0.15	0.15	0.09	0.07
LOI	0.75	1.57	2.28	1.26	1.89	1.26
Trace element (ppm):						
Ba	8.8	6.4	9.5	11.5	11.8	7.7
Sr	82.4	70.5	86.7	93.7	76.3	72.4
Zr	101.4	64.0	96.7	93.0	73.1	58.3
Y	40.7	28.5	37.2	36.4	28.6	25.5
Sc	42.2	35.2	40.5	41.3	39.5	32.7
V	398.7	314.2	356.4	350.9	317.2	278.3
Cr	58.3	244.6	85.6	91.8	171.0	334.5
Co	49.6	46.3	50.1	48.8	50.5	46.3
Ni	45.7	82.4	54.1	49.7	65.6	109.9
Cu	94.3	83.5	85.3	63.6	105.5	78.4
Zn	116.8	78.1	99.5	121.0	84.6	62.4
Mg #	46.1	57.2	49.7	51.4	54.1	61.7
Total alkalis	2.3	1.8	2.1	2.4	2.0	1.9
CaO/Al_2O_3	0.77	0.81	0.81	0.83	0.78	0.82
K_2O/TiO_2	0.02	0.02	0.02	0.02	0.05	0.03
Zr/TiO_2 (ppm/wt%)	61.1	57.0	61.6	58.7	60.8	56.6
Zr/Y	2.5	2.2	2.6	2.6	2.6	2.3
Sr/CaO (ppm/wt%)	8.2	6.0	7.8	8.3	7.0	6.0
Sr/Ba	9.4	11.1	9.1	8.1	6.5	9.4
K_2O/Ba (wt%/ppm)	0.003	0.004	0.003	0.003	0.005	0.004