Table 1. Supporting Data: Whole-Rock Major Element (wt%) and Trace Element (ppm) Data

Sample	AFN-1	AFN-2
SiO_2	47.20	50.09
TiO_2	1.86	2.15
Al_2O_3	16.89	18.04
Fe_2O_3*	6.50	8.39
MnO	0.16	0.12
MgO	1.11	1.64
CaO	10.87	6.68
Na_2O	4.13	4.12
K_2O	3.85	3.37
P_2O_5	0.80	1.94
LOI	6.04	2.95
Total	99.38	99.47
Rb	75	50
Ba	1154	1137
Th	4.37	4.49
U	1.15	1.41
Nb	32	38
La	40.0	55.0
Ce	85.4	94.3
Pr	8.70	11.1
Sr	619	670
Pb	12.1	7.3
Nd	36.7	45.4
Zr	267	292
Hf	6.30	6.95
Sm	7.78	9.40
Eu	2.30	2.78
Gd	7.29	9.13
Tb	0.98	1.23
Dy	5.45	6.85
Y	31	42
Ho	1.05	1.35
Er	2.75	3.61
Tm	0.39	0.50
Yb	2.23	2.94
Lu	0.32	0.43
Sc	13	14
V	145	174
Cr	56	68
Ni	59	36

LOI = weight loss on heating to 1000°C. Major elements and Rb, Ba, Sr, Zr, Y, Sc, Cr, and Ni determined by X-ray fluorescence at the University of Edinburgh (see Fitton and Dunlop, 1985). Other elements analyzed by inductively coupled plasma mass-spectrometry at the University of Notre Dame (see Knaack et al., 1991). Note: the high P_2O_5 in AFN-2 probably reflects a small amount of amygdular phosphate inadvertently included in the bulk sample prepared for chemical analysis.

Table 2. Supporting Data: Isotopic and Isotope-Dilution Data

Sample		$\varepsilon_{Nd}(t)$	$(^{87}Sr/^{86}Sr)_t$	$(^{206}Pb/^{204}Pb)_t$	$(^{207}Pb/^{204}Pb)_t$	$(^{208}Pb/^{204}Pb)_t$	Nd (ppm)	Sm	Sr	Rb	Pb	U	Th
Afanasy-Nikitin Seamount (t = 80 Ma)													
AFN-1	U	-8.0	0.70650				37.16	7.614	638.7	86.1			
	L	-7.6	0.70641	16.772	15.408	37.079	12.19	2.400	609.6	55.9	3.955	0.289	1.39
AFN-2	U	-8.0	0.70686	16.801	15.416	37.056	48.25	9.580	687.3	52.6	6.320	1.21	3.98
	L		0.70662						968.8	29.3			
Crozet Archipelago (t = 0 Ma)													
CE27-4		+3.5	.70404	18.936	15.600	39.216							
CE13-1		+4.2	.70404	18.892	15.583	39.034							
CE31-2		+3.6	.70408	18.857	15.573	38.973	36.3	7.27	490	28.4	3.51	1.28	5.07
CE42-4		+3.9	.70404	18.902	15.571	39.007							
CE8-3		+3.5	.70403	18.793	15.568	38.956							
CP9-1		+3.7	.70406	18.846	15.572	38.984	37.1	7.76	383	23.5	2.44	0.824	3.48
CP30-3		+4.0	.70400	18.930	15.588	38.913	45.5	8.91	589	34.8	6.24	1.52	6.29
CP36-5		+4.1	.70399	19.019	15.607	39.089							
CE48-3		+4.3	.70396	19.184	15.623	39.160							

L = strongly acid-leached powder; UL = powder not leached, but handpicked, phenocryst-free chips were acid-washed prior to grinding. Afanasy-Nikitin data are age-corrected for t = 80 Ma; Crozet values are present-day. $\varepsilon_{Nd} = 0$ today corresponds to $^{143}Nd/^{144}Nd = 0.512640$; $\varepsilon_{Nd}(t) = 0$ at 80 Ma corresponds to $(^{143}Nd/^{144}Nd)_t = 0.512537$ for $^{147}Sm/^{144}Nd = 0.1967$. Afanasy-Nikitin samples were analyzed at the University of Hawaii (see Mahoney et al., 1995, and references therein for leaching and analytical methods) and the Crozet samples in Mainz. Data are reported relative to a La Jolla Nd standard $^{143}Nd/^{144}Nd$ value of 0.511850, NBS 987 $^{87}Sr/^{86}Sr$ of 0.71024 and NBS 981 Pb ratios of Todt et al. (1984). Estimated uncertainties are <0.2% on Nd and Sm abundances, <0.5% on Sr, ~1% on Rb and U, ~2% on Th, and <1% on Pb. Uncertainties for Crozet and Afanasy-Nikitin isotopic ratios, respectively, are: ±0.000020 (±0.4ε) and 0.000012 (±0.2ε) on $^{143}Nd/^{144}Nd$, ±0.000035 and 0.000022 on $^{87}Sr/^{86}Sr$, ±0.010 and ±0.012 on $^{206}Pb/^{204}Pb$, ±0.013 on $^{207}Pb/^{204}Pb$, ±0.038 on $^{208}Pb/^{204}Pb$.

Additional References for Supporting Data

Fitton, J. G., and Dunlop, H. M., 1985, The Cameroon Line, west Africa, and its bearing on the origin of oceanic and continental alkali basalt: Earth and Planetary Science Letters, v. 72, p. 23-38.

Knaack, C., Cornelius, S., and Hooper, P. R., 1991, Trace element analysis of rocks and minerals by ICP-MS, Open File Report., Washington State University.

Todt, W., Cliff, R. A., Hanser, A., and Hofmann, A. W., 1984, $^{202}Pb + ^{205}Pb$ double spike for lead isotopic analyses: Terra Cognita, v. 4, p. 209.