
Erratum to: Post-orogenic shoshonitic magmas of the Yzerfontein pluton, South Africa: the 'smoking gun' of mantle melting and crustal growth during Cape granite genesis?

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Erratum to: *Contrib Mineral Petrol* (2017) 172:72

DOI: 10.1007/s00410-017-1390-9

The published version of the original paper contained a Sr isotope analysis of Hornblende-pyroxene quartz monzodiorite sample H25, from the shoshonitic part of the Cambrian Yzerfontein pluton on the West Coast in South Africa. The value of $^{87}\text{Sr}/^{86}\text{Sr}$, calculated at our newly determined U–Pb zircon age of 535 Ma, was given as 0.70885 ± 2 (2σ). In the paper, this was reported as an anomalously high value and we hypothesised that this might have been due to the crustal component of this particular magma having been somewhat more radiogenic than for the rest of the shoshonitic samples from the Yzerfontein pluton.

We emphasise that the isotopic and elemental analyses were carried out on the same solutions. Nothing in the Rb/Sr ratio in the isotope results suggested analytical problems. However, this result was sufficiently surprising that we provided AEON Labs (UCT) with a second aliquot to dissolve and analyse. The redetermined value of $^{87}\text{Sr}/^{86}\text{Sr}_{535\text{MA}}$ is 0.70506 ± 2 , which is very similar to all the other determinations for the shoshonitic rocks of the pluton. Although we remain unable to explain the original result, we believe it to have been erroneous and that the correct initial Sr isotope ratio of sample H25 is 0.70506. Accordingly, we present a revised Table 1, showing the Sr and Nd isotope data, with the correction, and a revised version of Figs. 6 and 13 in the original paper, as Figs. 1 and 2 here, with the correct value for H25 plotted. This amendment has no impact on the main conclusions of the original paper.

Table 1 Whole-rock Rb–Sr and Sm–Nd isotope data for Yzerfontein samples

Sample no.	Rock-type	Rb (ppm)	$2\sigma_m$	Sr (ppm)	$2\sigma_m$	$^{87}\text{Rb}/^{86}\text{Sr}$	$^{87}\text{Sr}/^{86}\text{Sr}$	$2\sigma_m$	$^{87}\text{Sr}/^{86}\text{Sr}$ at 535 Ma	2σ
J1	Monzonite	178		777		0.663	0.71063	1	0.70566	4
J6	Monzodiorite	154		868		0.513	0.70956	2	0.70571	3
J15	Monzonite	166		810		0.593	0.71021	1	0.70576	3
J16	Monzodiorite	128		655		0.566	0.70980	2	0.70556	4
J27	Monzonite	159		891		0.516	0.70919	2	0.70532	3
H10	Monzonite	183	0.6	815	3.7	0.648	0.710567	12	0.70570	4
H11	Quartz monzonite	211	1.7	734	6.5	0.831	0.712006	10	0.70577	7
H12	Syenogranite dyke	213	0.4	441	1.1	1.397	0.715740	13	0.70526	8
H13	Quartz diorite	53	0.2	1287	1.5	0.120	0.705268	14	0.70437	1
822B	Hornblendite cumulate	16	0.3	820	19.1	0.057	0.704730	9	0.70430	1
H24	Monzonite enclave	188	1.5	948	12.6	0.575	0.709445	14	0.70513	3
H25	Monzodiorite	88	1.0	1378	30.8	0.185	0.706449	11	0.70506	2
H26	Monzodiorite	111	1.6	1458	9.1	0.219	0.706850	11	0.70521	1

Sample no.	Rock-type	Sm (ppm)	$2\sigma_m$	Nd (ppm)	$2\sigma_m$	$^{147}\text{Sm}/^{144}\text{Nd}$	$^{143}\text{Nd}/^{144}\text{Nd}$	$2\sigma_m$	ϵNd at 535 Ma	2σ	$t_{2\text{DM}}$ Ga
H10	Monzonite	13.6	0.1	69.3	0.8	0.1186	0.512268	10	-1.9	0.2	1.43
H11	Quartz monzonite	12.7	0.2	66.6	0.2	0.1153	0.512268	9	-1.7	0.2	1.41
H12	Syenogranite dyke	6.73	0.10	38.8	0.4	0.1049	0.512235	11	-1.6	0.2	1.40
H13	Quartz diorite	4.40	0.08	24.2	0.2	0.1099	0.512312	13	-0.4	0.2	1.31
822B	Hornblendite cumulate	12.43	0.06	62.3	0.2	0.1206	0.512354	9	-0.3	0.2	1.30
H24	Monzonite enclave	11.24	0.09	57.1	0.8	0.1190	0.512292	15	-1.4	0.2	1.39
H25	Monzodiorite	13.78	0.14	68.3	1.5	0.1220	0.512301	12	-1.5	0.2	1.39
H26	Monzodiorite	12.54	0.28	61.4	0.1	0.1235	0.512320	13	-1.2	0.2	1.37

Samples J1, J6, J15, J16 and J27 from Jordaan et al. (1995), with $2\sigma_m$ errors of 0.2 ppm assumed for Rb and Sr concentrations

Samples H10, H11, H12, H13 822B, H24, H25 and H26 from present work

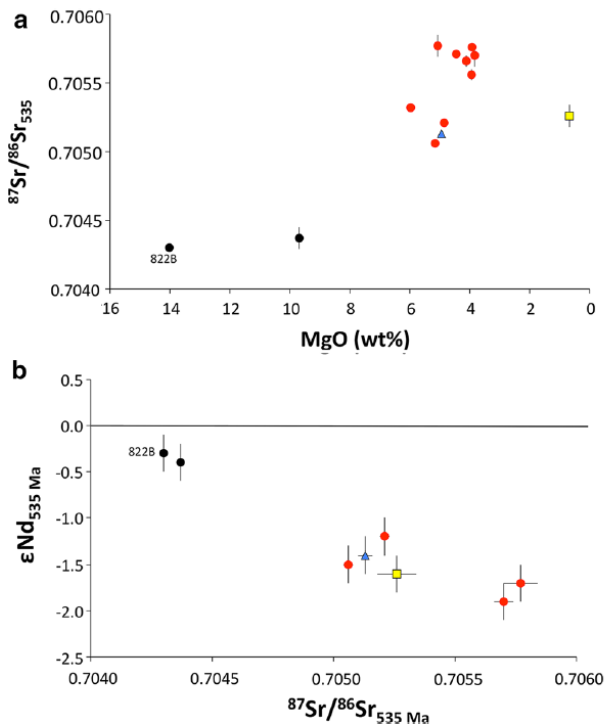


Fig. 1 Diagrams illustrating the Sr and Nd isotope variations in the rocks of the Yzerfontein pluton, **a** initial $^{87}\text{Sr}/^{86}\text{Sr}$ plotted against MgO (wt%), **b** ϵNd_t plotted against initial $^{87}\text{Sr}/^{86}\text{Sr}$. The colour coding is as given in Fig. 4, with the hornblende cumulate rock (822b) labelled. In **a**, the 2σ error bars for initial $^{87}\text{Sr}/^{86}\text{Sr}$ are plotted but are all smaller than the plot symbols. The same is true in **b**, except for the micromonzogranite sample H12 (yellow square). See the original paper for a discussion of these plots

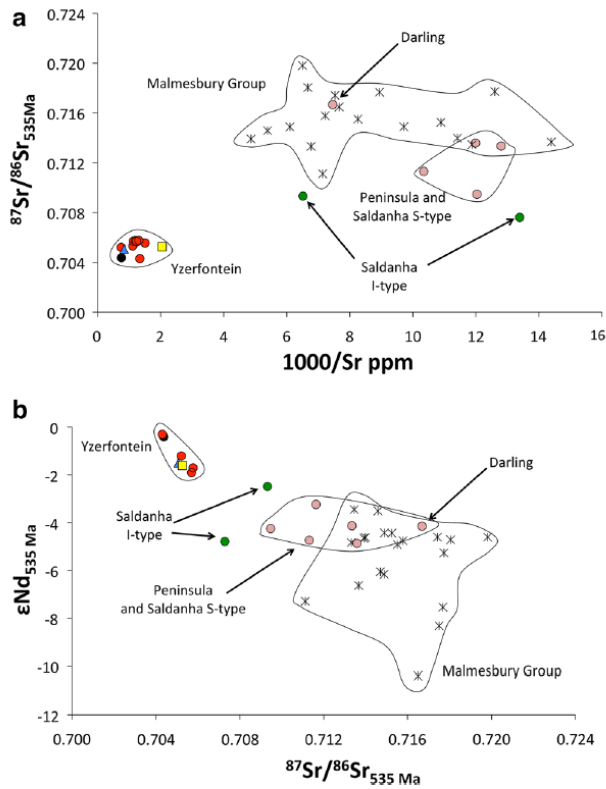


Fig. 2 Isotope plots illustrating the relationships between the rocks of the Yzerfontein pluton, the Cape Granite Suite granitic rocks (CGS) S-type (pink dots) and I-type (dark green dots) and the meta-sedimentary rocks of the Malmesbury Group (stars), with all isotope ratios normalised to the new 535 Ma age for the Yzerfontein pluton. **a** Sr isotope mixing plot, with initial $^{87}\text{Sr}/^{86}\text{Sr}$ plotted against $1000/\text{Sr}$, **b** isotope correlation diagram, with ϵNd_t plotted against initial $^{87}\text{Sr}/^{86}\text{Sr}$. See the original paper for data provenance and discussion