

Supplementary Information

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Parameters employed in the simulations

Table S1: Input data for the boundary element dike simulations that led to the results shown in Fig. 3. #Run is the number of the corresponding simulation run; n is the number of dikes injected in that specific run; D is the depth of the basin; T is the thickness of the sedimentary layer; x_{inj} is the horizontal coordinates at which dikes are injected; z_{inj} is the depth at which dikes are injected.

#Run	n	D (km)	T (km)	x_{inj} (km)	z_{inj} (km)
1	4	0.1	0	7.9, -32.7, -10.8, 18.6	40
2	4	0.2	0	7.9, 18.1, -1.6, 17.9, -5.1	40
3	6	0.2	0	17.9, 40.2, -12.2, 25.8, 18.2, -7.6	40
4	6	0.4	0	7.3, -19.7, 22.2, -28.7, 26.7, -20.2	40
5	6	0.5	0	-2.6, -6.0, 8.0, 17.8, -21.6, 0.8	39
6	6	0.6	0	-4.1, 15.7, 27.3, -27.7, 21.6, 1.9	38
7	8	0.7	0	-5.6, 27.9, -27.2, 0.8, 13.8, 17.5, -38.6, -2.1	36
8	8	0.8	0	-37.3, -18.6, -26.5, 58.8, -15.4, 18.7, -4.8, 22.2	36
9	8	0.9	0	1.9, -2.7, -20.1, 3.2, -0.7, -11.1, 5.4, 1.1	34
10	8	1	0	-10.9, -44.8, 21.0, -2.2, 2.5, -13.6, 7.6, -15.0	32
11	8	1	0.1	-28.7, 2.6, 18.1, -4.6, -1.6, 4.7, -2.1, -48.3	31
12	8	1	0.2	25.5, -3.3, -17.9, 3.7, -5.6, -14.7, 7.3, -21.2	30
13	8	1	0.3	-0.5, 20.7, -8.2, 11.7, -11.2, -15.6, 14.6, 25.7	29
14	8	1	0.4	3.2, 7.7, -13.4, 12.9, -6.5, -23.5, -2.1, 21.7	28
15	8	1	0.5	2.8, -6.2, -26.6, 14.1, -0.8, -15.7, 27.6, 5.4	27
16	8	1	0.6	-2.8, -1.1, -6.5, 11.1, -19.8, -31.3, 23.7, 1.5	26
17	8	1	0.7	-2.3, -1.0, 0.6, 2.7, -1.4, 3.1, -2.7, 1.3	24
18	8	1	0.8	0.8, -1.7, -0.6, 1.1, 0.1, 2.1, -2.5, 1.0	24
19	8	1	0.8	-1.4, -0.3, 1.8, 0.7, -2.3, 1.9, 2.6, -3.5	24
20	8	1	0.8	1.4, -2.6, -1.0, 0.1, -0.6, -2.4, 2.1, 1.3	24