

Table S3 Calculation conditions and estimated best fit parameters for the Formation 2 (short depth interval).

Fomation	Analysis BSL [m]	Estimated Parameters	Freshwater			Saline Water			Range
			ol.: 0%	ol.: 5%	Honda	ol.: 0%	ol.: 5%	Honda	
Formation 2 12.73 m BSL - 142.73 m BSL	27.73 - 97.73	RMS of Temperature Residuals [K]	0.16	0.16	0.15	0.16	0.16	0.15	
		Darcy Velocity V [m/s] ([mm/year])	1.3×10^{-9} (41)	1.4×10^{-9} (44)	1.3×10^{-9} (41)	1.3×10^{-9} (41)	1.4×10^{-9} (44)	1.3×10^{-9} (41)	$(1.3-1.4) \times 10^{-9}$ (41-44)
		Total Heat Flux q^{total} [W/m ²] (Reference Temperature: 15 °C)	0.73	0.69	0.64	0.69	0.72	0.64	0.64-0.73
		Vertical Permeability K [m ²]							
		Average	3.6×10^{-15}	3.9×10^{-15}	3.6×10^{-15}	3.8×10^{-15}	4.1×10^{-15}	3.8×10^{-15}	
		Viscosity Minimum	3.1×10^{-15}	3.3×10^{-15}	3.1×10^{-15}	3.3×10^{-15}	3.6×10^{-15}	3.3×10^{-15}	$(3.1 - 4.9) \times 10^{-15}$
		Maximum	4.3×10^{-15}	4.6×10^{-15}	4.3×10^{-15}	4.6×10^{-15}	4.9×10^{-15}	4.6×10^{-15}	