

Variable name	Description (rows \times columns)
nel	Number of elements in the model (1 \times 1)
nnod	Number of nodes in the model (1 \times 1)
Gcoord_c	Depth of element centers (1 \times no. of elements)
Ind	Internal nodal indexing of sedimentary layers and intrusions (no. of nodes \times 1); intrusions are negatively indexed
Ind_nel	Internal element indexing of sedimentary layers and intrusions (no. of elements \times 1); intrusions are negatively indexed
Ind_carb	Nodal indexing of carbonate layers (0–3) (no. of nodes \times 1)
Gcoord	Depth of nodes (no. of nodes \times no. of time steps)
Temp	Nodal temperature (no. of nodes \times no. of time steps)
Pres	Nodal hydrostatic pressure (no. of nodes \times no. of time steps)
Toc	Remaining TOC content at nodes (no. of nodes \times no. of time steps)
CO2_org	Organic carbon dioxide generated at nodes (no. of nodes \times no. of time steps)
Ro	VR at nodes (no. of nodes \times no. of time steps)
Tmax	Maximum temperature experienced at nodes (no. of nodes \times no. of time steps)
Active	Binary index of “deposited/expanded” nodes (no. of nodes \times no. of time steps)
CO2_release	Inorganic carbon dioxide generated at nodes (no. of nodes \times no. of time steps)
Time	Year count for time step (no. of time steps \times 1)