SUMMARY OF THE INVENTION

[0004a] In accordance with one aspect, there is provided a method for generating a custom reservoir from multiple compartments representing one or more geological structures, which comprises: selecting two or more compartments from the multiple compartments; selecting one of union, intersect some and intersect all as a combination type; and combining the two or more compartments based on the selected combination type into a combined compartment representing a custom reservoir using a computer processor, wherein union is a combination of the selected compartments, intersect some is a combination of a section of each selected compartment that intersects another selected compartment, and intersect all is a combination of only a section of each selected compartment that intersects each of the other selected compartments.

[0004b] In accordance with another aspect, there is provided a non-transitory program carrier device tangibly carrying computer-executable instructions for generating a custom reservoir from multiple compartments representing one or more geological structures, the instructions being executable to implement: selecting two or more compartments from the multiple compartments; selecting one of union, intersect some and intersect all as a combination type; and combining the two or more compartments based on the selected combination type into a combined compartment representing a custom reservoir, wherein union is a combination of the selected compartments, intersect some is a combination of a section of each selected compartment that intersects another selected compartment, and intersect all is a combination of only a section of each selected compartment that intersects each of the other selected compartments.

[0004c] In accordance with yet another aspect, there is provided a non-transitory program

carrier device tangibly carrying computer-executable instructions for generating a custom reservoir from multiple compartments representing one or more geological structures, the instructions being executable to implement: selecting two or more compartments from the multiple compartments; selecting intersect some as a combination type; and combining the two or more compartments based on the selected combination type into a combined compartment representing a custom reservoir, wherein intersect some is a combination of a section of each selected compartment that intersects another selected compartment.