

Earth
Volumetric
Studio™

connectivity assessment module

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CONNECTIVITY ASSESSMENT APPLICATIONS

- **connectivity assessment can be beneficially applied to:**
 - **Analytical (e.g., chemistry data)**
 - **Selectively remove errant regions such as plume fragments projected beyond the data extents**
 - **3D lithologic models**
 - **Clearly assess discontinuous regions of materials**
 - **Home in on ore bodies of sufficient volume to exploit**
 - **Stratigraphic models with pinched layers which result in discontinuous regions (pieces).**
 - **Remove tiny fragments of layers following subsetting by layer thickness.**

CONNECTIVITY ASSESSMENT WITH ANALYTICAL DATA

- When a 3D analytical model is subsetted, the *plume* which is created is often not a single "blob" but rather a group of large and small regions which meet the subsetting criteria.
- connectivity assessment has several options which:
 - Allow you to add *Region ID* data so regions can be further subsetted or analyzed.
 - Subset the regions to output the largest or user specified regions.
 - Output the region closest to a provide X-Y-Z coordinate
 - Allow you to *Merge Cell Sets* prior to assessment, if you want to identify regions independent of stratigraphic or lithologic materials (cell sets). The next slide has Merge Cell Sets off and the following has it on.

Note: This is not applicable to overburden computations since connectivity assessment makes no changes to the original model data.

CONNECTIVITY ASSESSMENT USER INTERFACE

Properties ⌵ 📌 ✕

Choose Object to Edit

Editing: **connectivity assessment** 📄

Run ⌵ Execute

Search for Property... (Ctrl+P) 🔍 ⌵ 📄

Connectivity Settings

Merge Cell Sets	<input checked="" type="checkbox"/>
Assessment Mode	Add Region ID Data ⌵
> Point Coordinate	(0,0,0)
Region IDs	

Add Remove

Properties ⌵ 📌 ✕

Choose Object to Edit

Editing: **connectivity assessment** 📄

Run ⌵ Execute

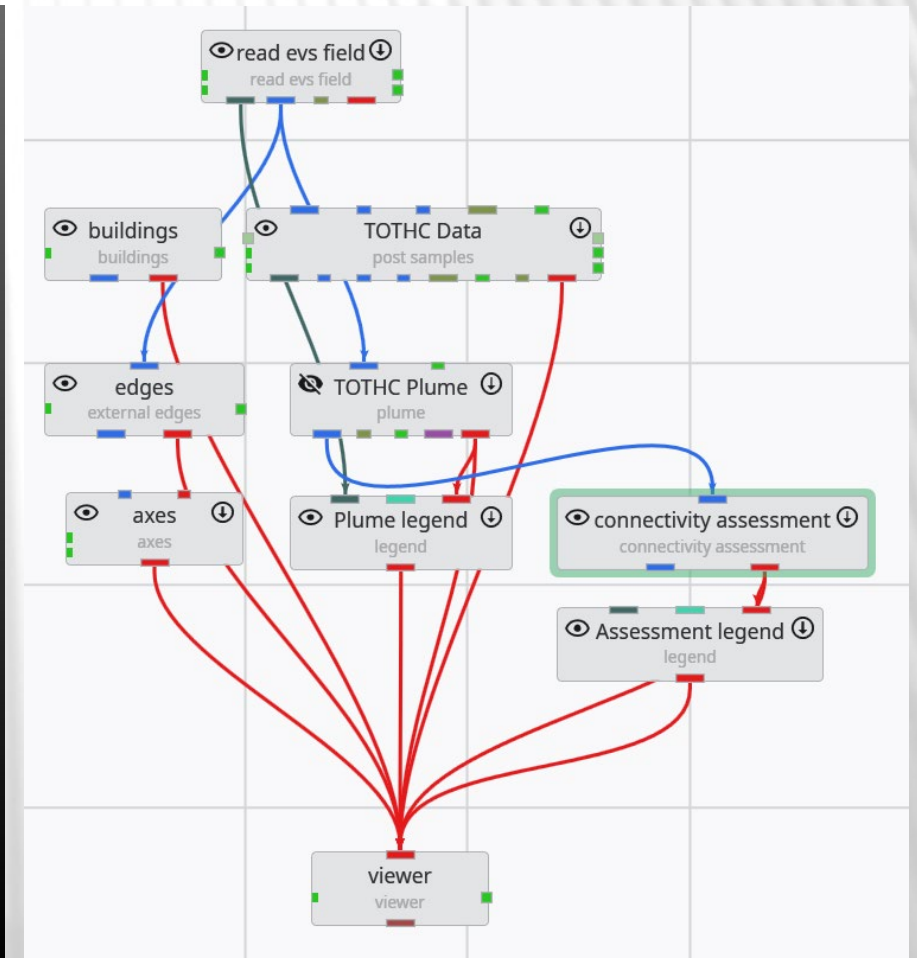
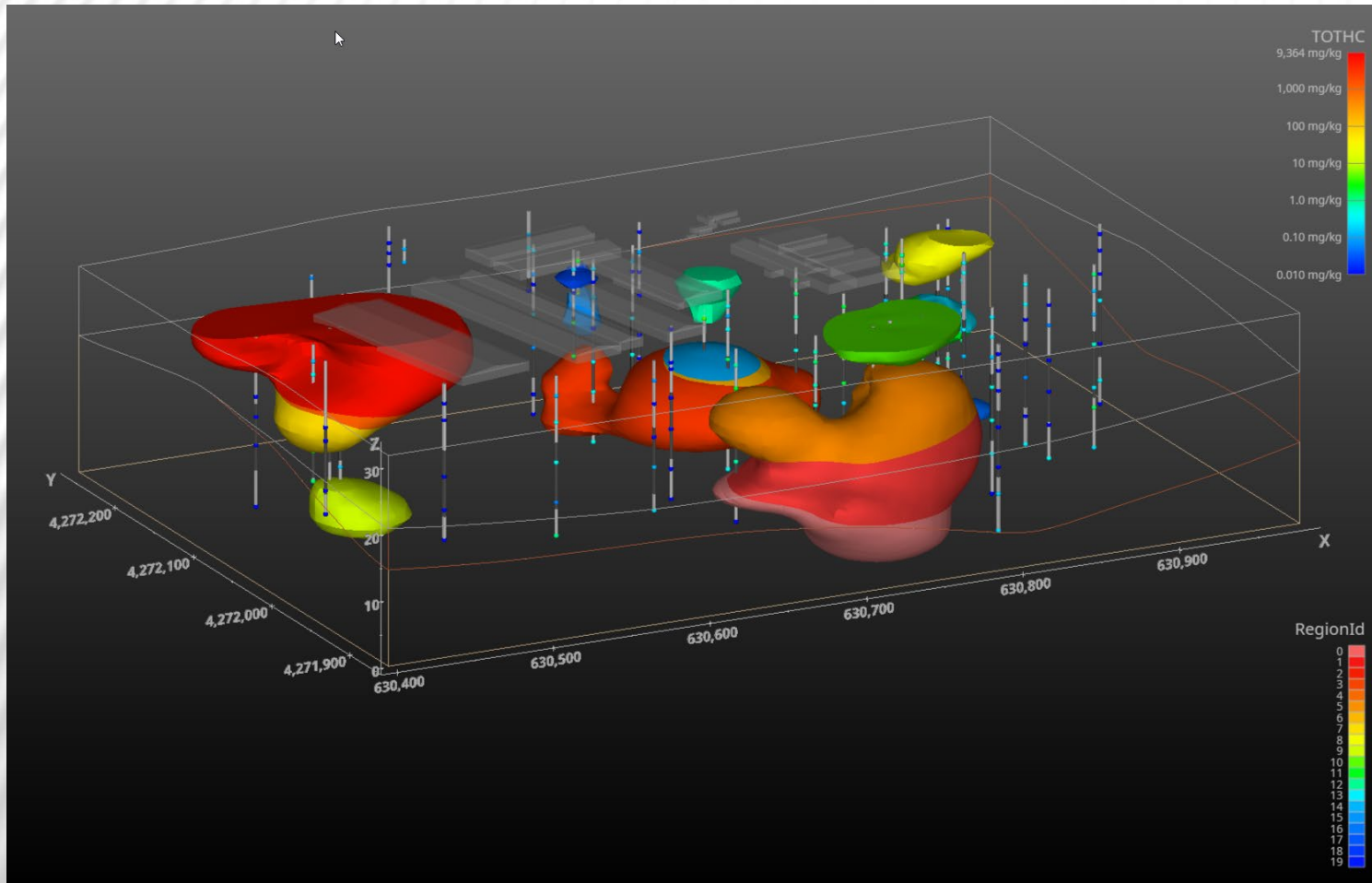
Search for Property... (Ctrl+P) 🔍 ⌵ 📄

Connectivity Settings

Merge Cell Sets	<input checked="" type="checkbox"/>
Assessment Mode	Add Region ID Data 📄
> Point Coordinate	Add Region ID Data
Region IDs	Subset By Region ID
	Region Closest to Point
	Region With Most Cells

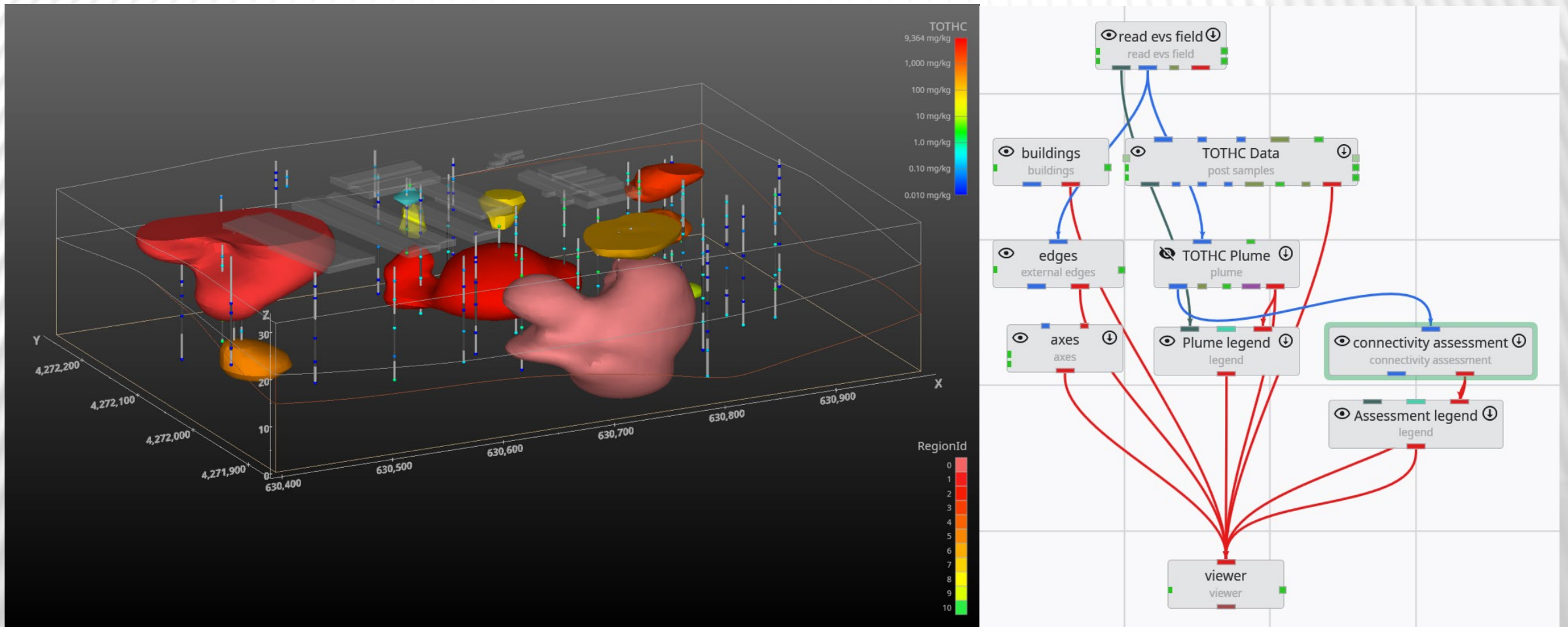
Add Remove

CONNECTIVITY ASSESSMENT WITH ANALYTICAL DATA



Analytic and Stratigraphic Modeling\railyard-tothc-connectivity-assessment.evs

CONNECTIVITY ASSESSMENT WITH ANALYTICAL DATA

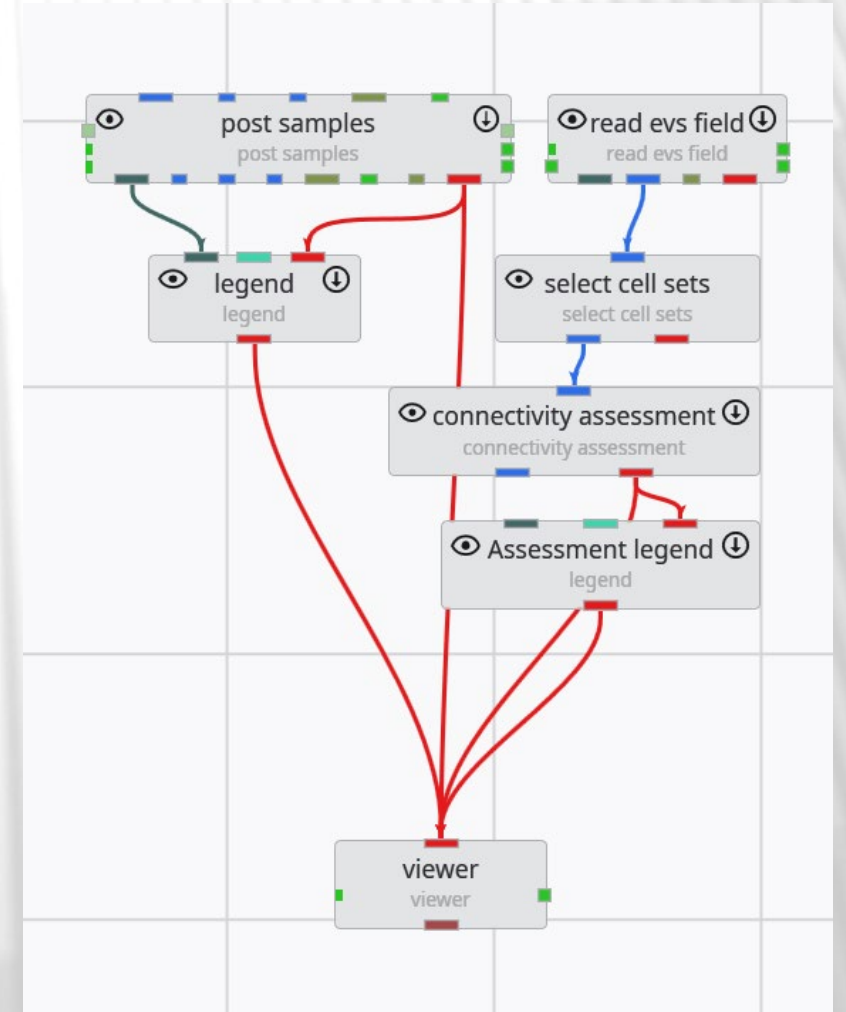
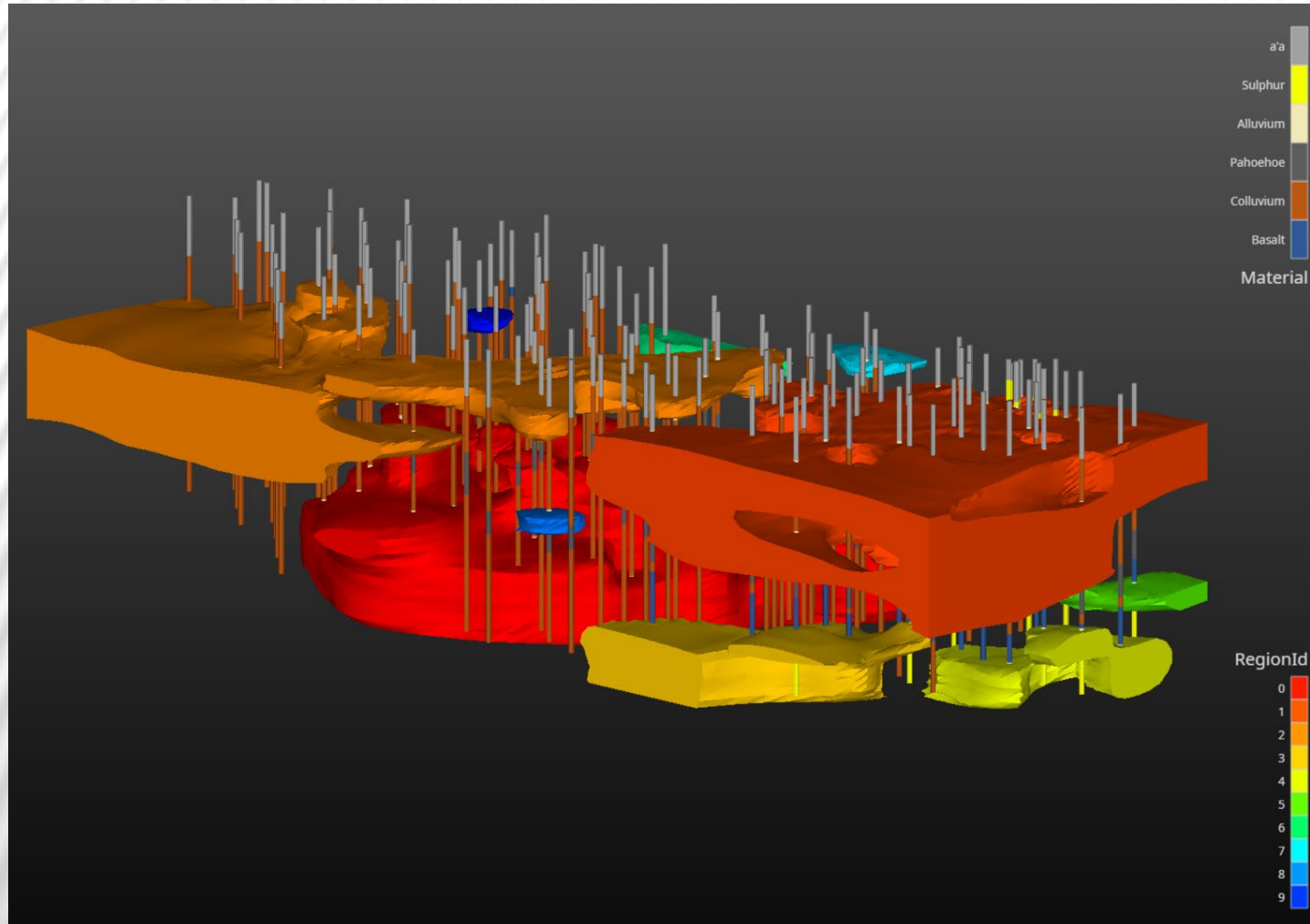


Analytic and Stratigraphic Modeling\railyard-tothc-connectivity-assessment-merged-cell-sets.evs

CONNECTIVITY ASSESSMENT OF LITHOLOGIC MODELS

- connectivity assessment will subset lithologic materials to focus on the largest region(s).
- The application in the next slide shows characterization and ranking for the 10 regions of Alluvium in this lithologic model.
 - It is clear that these regions are not contiguous.
 - Great for mining models where it is important to schedule exploitation of larger contiguous regions.

CONNECTIVITY ASSESSMENT OF LITHOLOGIC MODELS

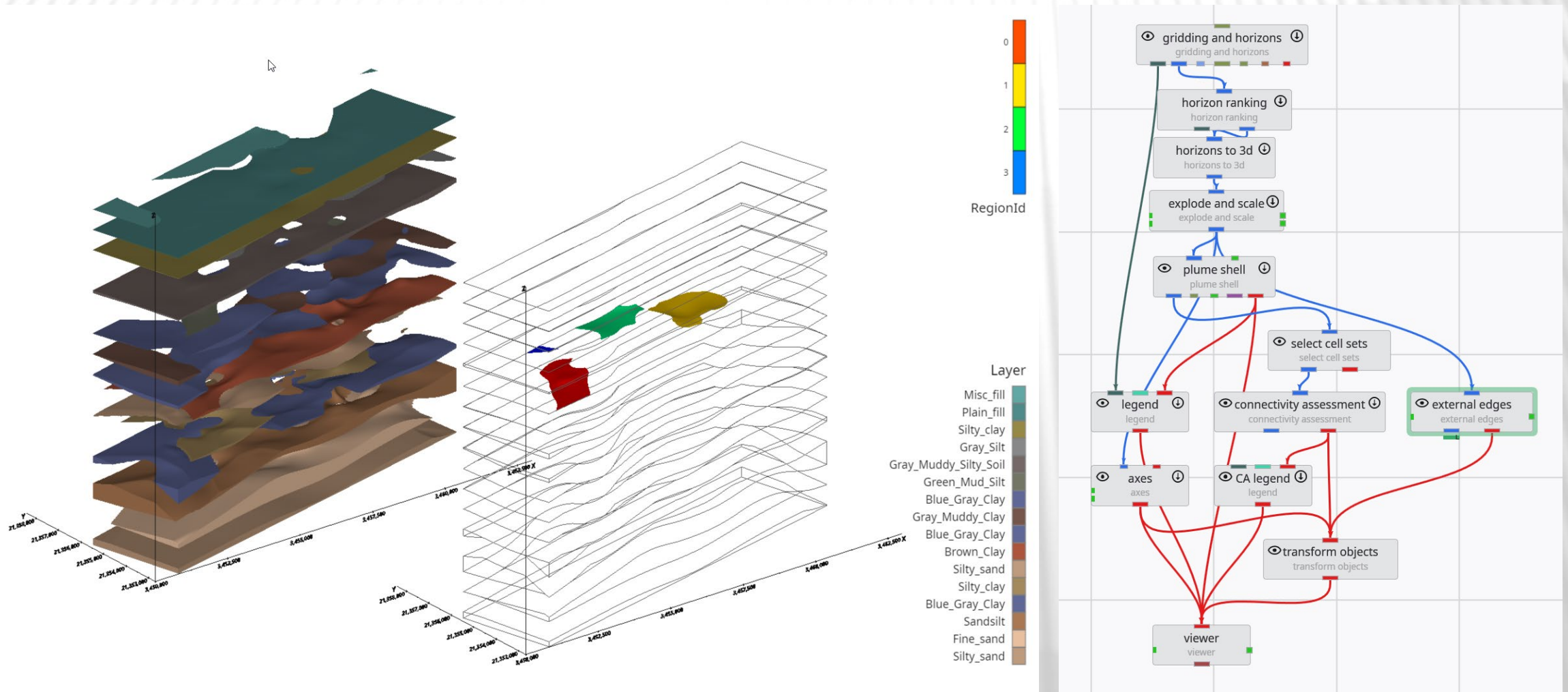


Lithologic Geologic Modeling\volcanic-lithology-connectivity-assessment-efb.advanced.evs

CONNECTIVITY ASSESSMENT OF STRATIGRAPHIC MODELS

- connectivity assessment will subset stratigraphic layers to focus on the largest non-contiguous region(s) of layers due to the removal of pinched areas.
- The application in the next slide shows characterization and ranking for the 4 disjoint regions of the *Green Mud Silt*.

CONNECTIVITY ASSESSMENT OF STRATIGRAPHIC MODELS



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