



Slide3, RS3, Slide2, RS2

Slope Stability – 3D Index by File

Verification Manual

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1. 3D Slope Stability Verification Index

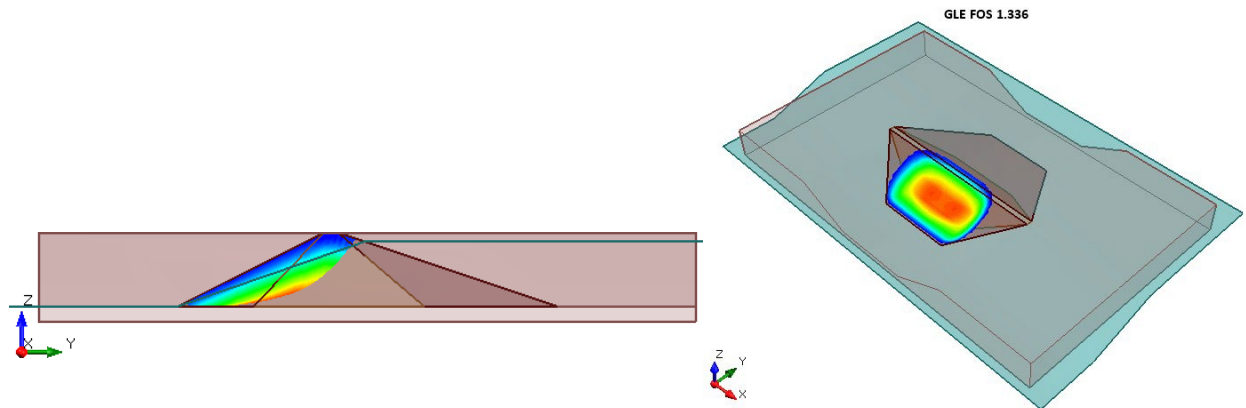
The Slope Stability Verification of programs Slide³, RS³, Slide, and RS² is separated into three different types of models which create three separate verification documents and their corresponding indexes.

These model types are 2D extruded models, 2D swept models, and 3D models. Each example contains its model type as the first part of its keyword description. The verification is separated by model type for easier identification of specific models or specific types of models. This is the index for the 3D models.

Generally, a 3D model is a model that cannot be classified as either a 2D extruded or 2D swept model. These models have mostly been created by lofting different 2D cross sections to each other, so their cross sections are not consistent throughout the model, which is what differentiates these models from the other two model types. Models with more complex geometries, such as open pits, have also been included in this index. These models have mostly been taken from reference material such as journal and conference proceedings; however, some examples are verified by comparing the safety factors from the programs to each other.

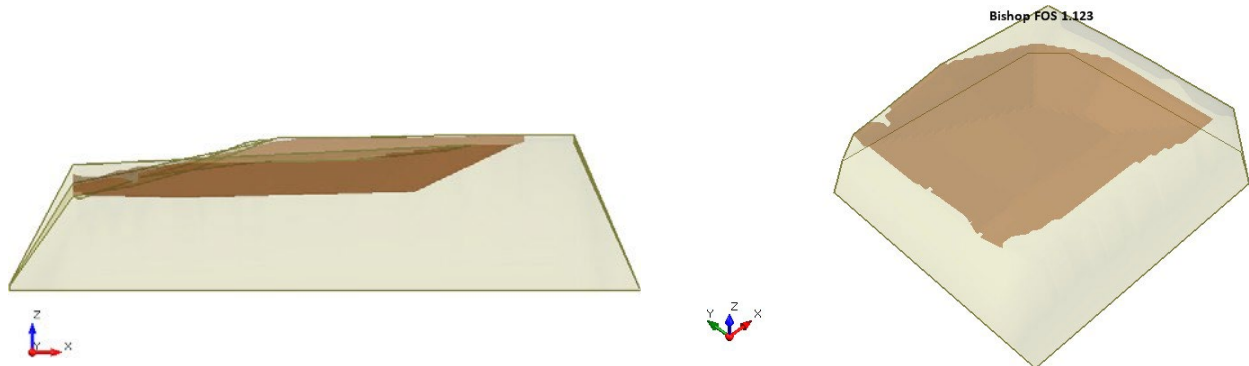
This index contains the name of each 3D verification example, its keyword description, and two pictures of the example. The keyword description for each of these models will start with '3D,' to easily identify the type. The numbers of the verification examples found in this index match the number of the example found in the Verification document. The keyword description generally describes the most important elements of the model, and can also be found in the Table of Contents of the Verification under the name of the given example, and under the title of the example in the main body of the Verification. The verification titles only give their number, not a description of the model, so these keywords are useful for identifying specific models. The pictures given in this index show one of the three plane views in Slide³, as well as an isometric view of the 3D Slide³ model both of which include the slip surface. The pictures are useful for matching an example's appearance with its number and description.

1.1.1. 3D Verification #001



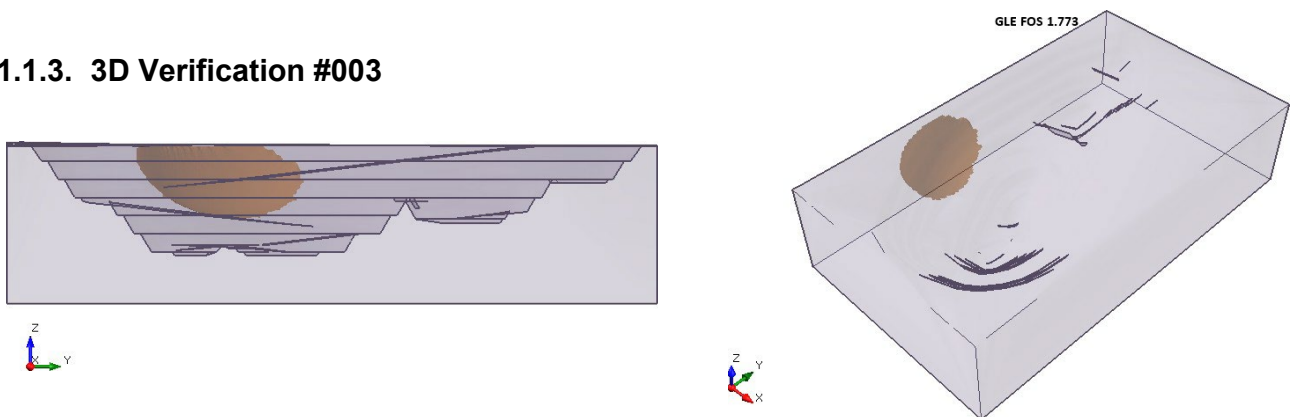
3D valley, (4) materials, water table, ellipsoidal with SA

1.1.2. 3D Verification #002



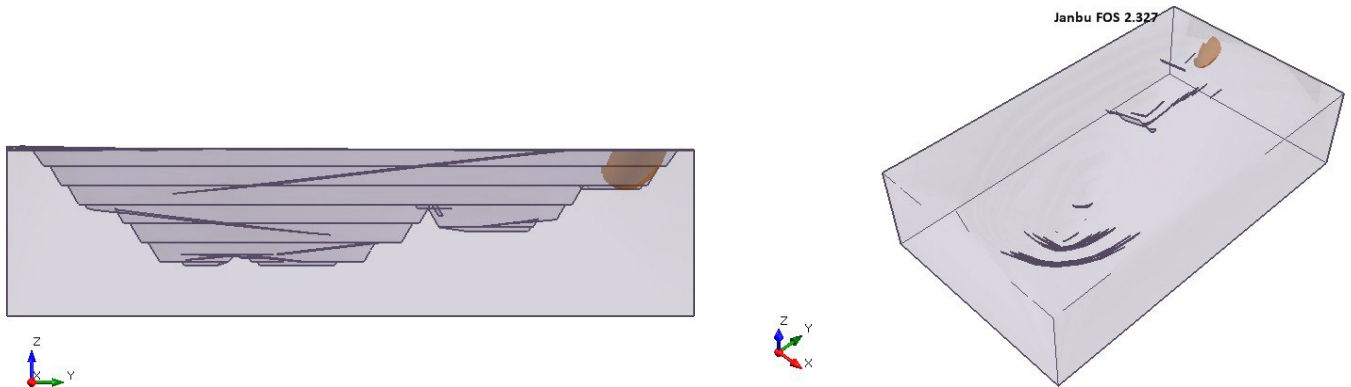
3D landfill, weak plane defined slip surface

1.1.3. 3D Verification #003

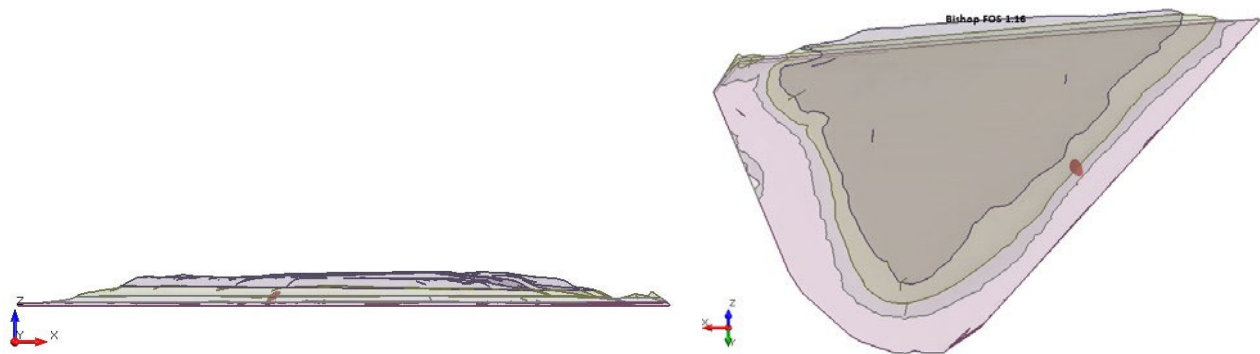


3D open pit mine, homogeneous, slope limits, ellipsoidal with SA

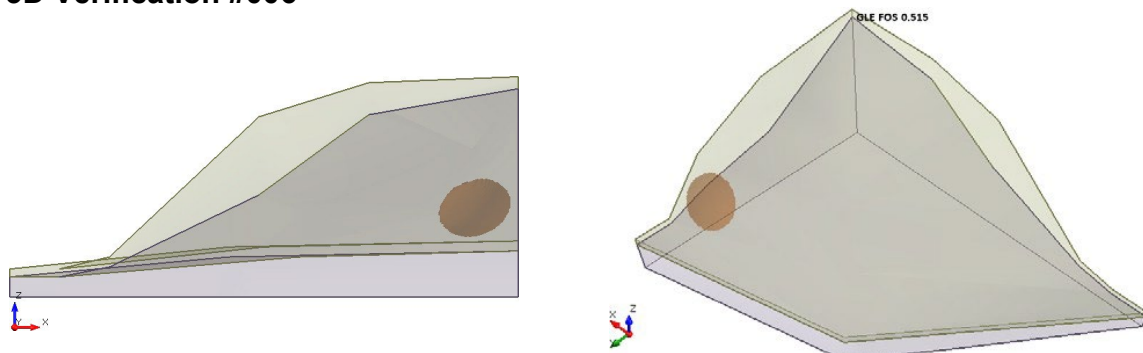
1.1.4. 3D Verification #004



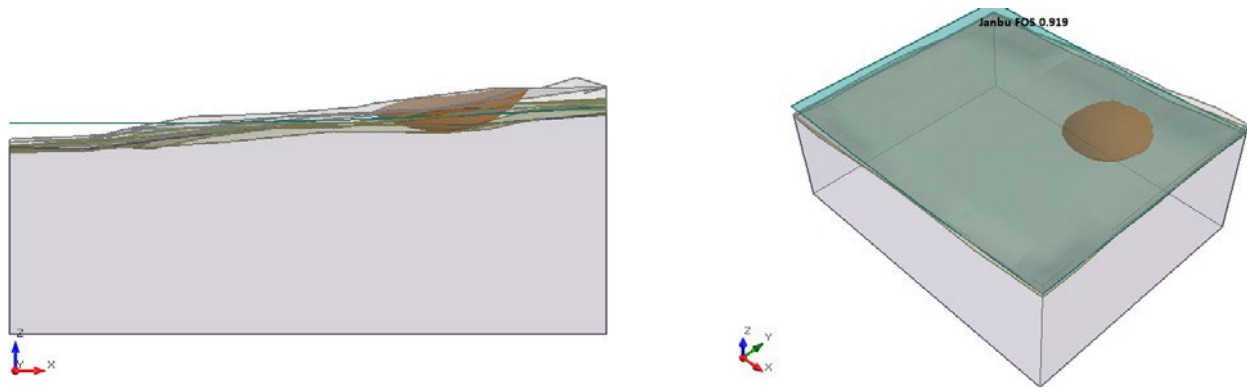
1.1.5. 3D Verification #005



1.1.6. 3D Verification #006

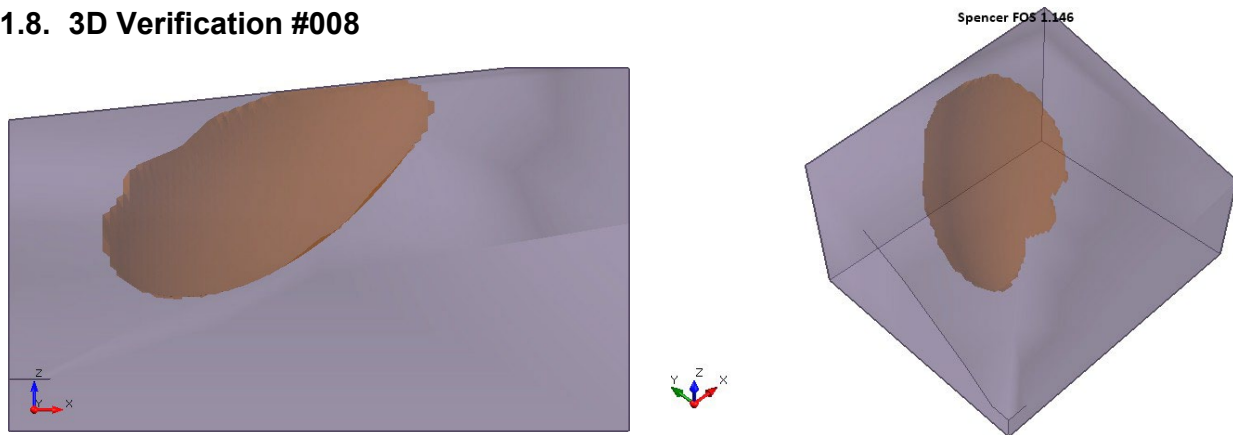


1.1.7. 3D Verification #007



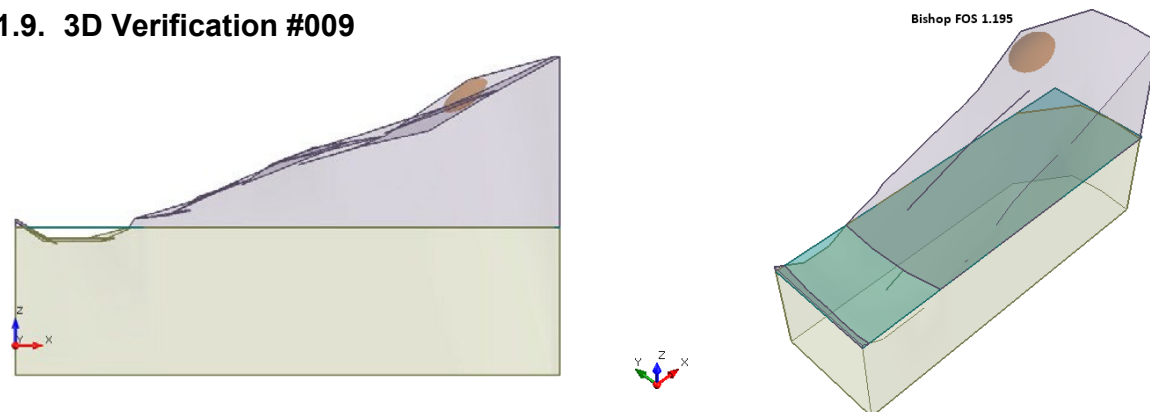
3D lofted, (3) materials, water table with ponded water, ellipsoidal with SA

1.1.8. 3D Verification #008



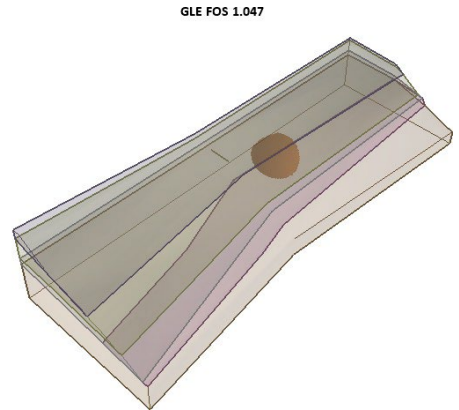
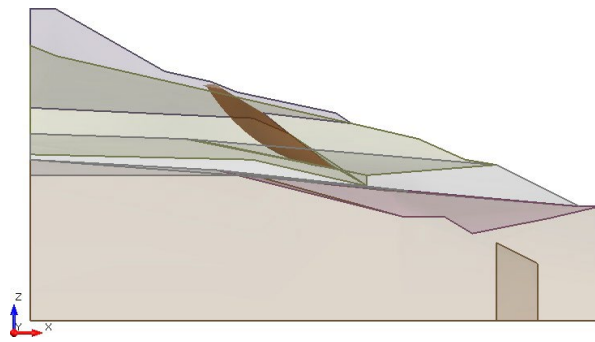
3D lofted, homogeneous, ellipsoidal with SA

1.1.9. 3D Verification #009



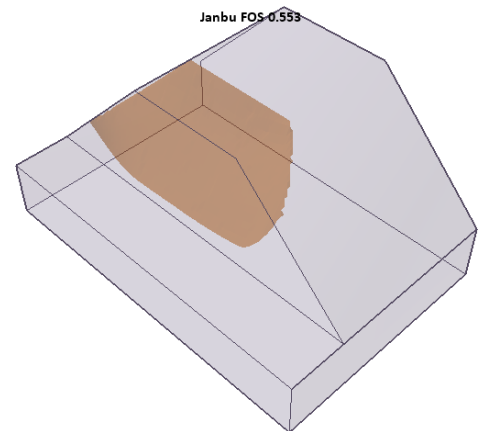
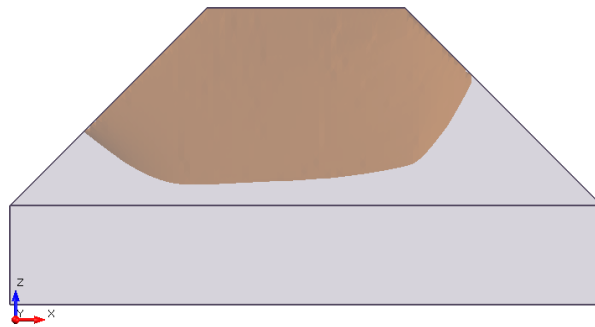
3D lofted, (2) materials, water table with ponded water, ellipsoidal with SA

1.1.10. 3D Verification #010



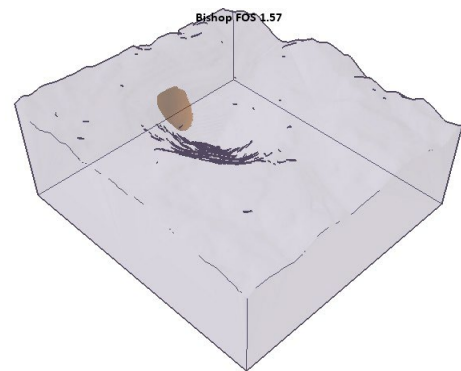
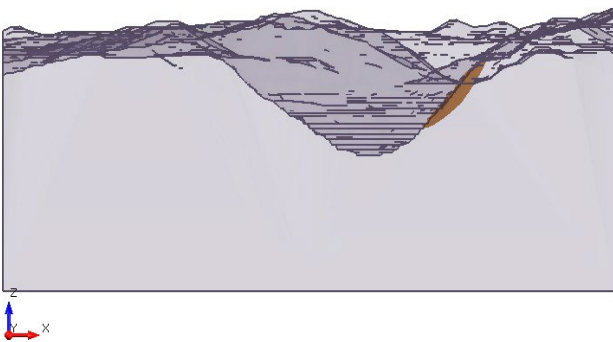
3D lofted, (5) materials, slope limits, ellipsoidal

1.1.11. 3D Verification #011



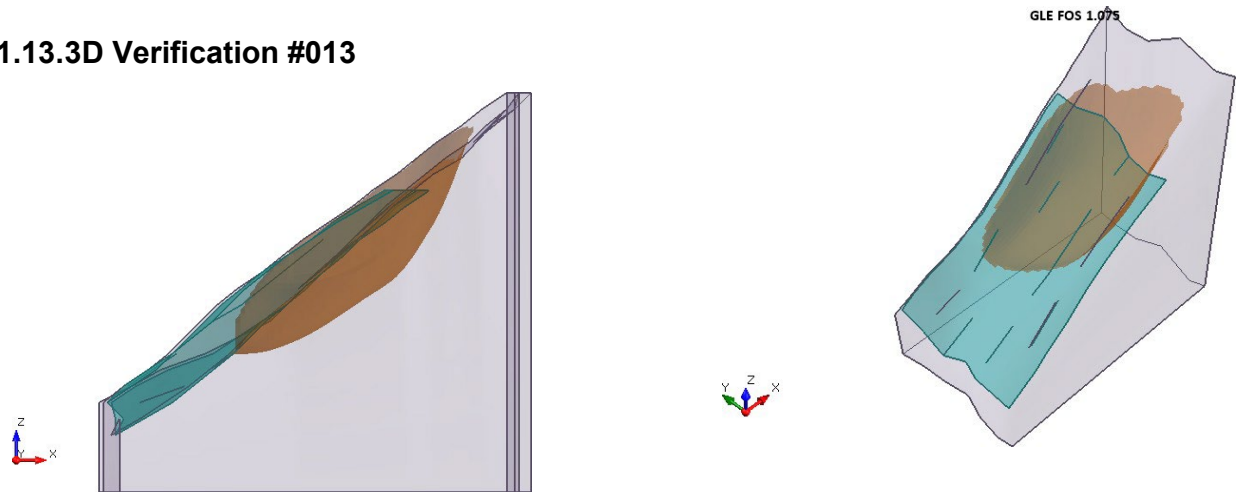
3D embankment, vertical cut, homogeneous, ellipsoidal with SA

1.1.12. 3D Verification #012



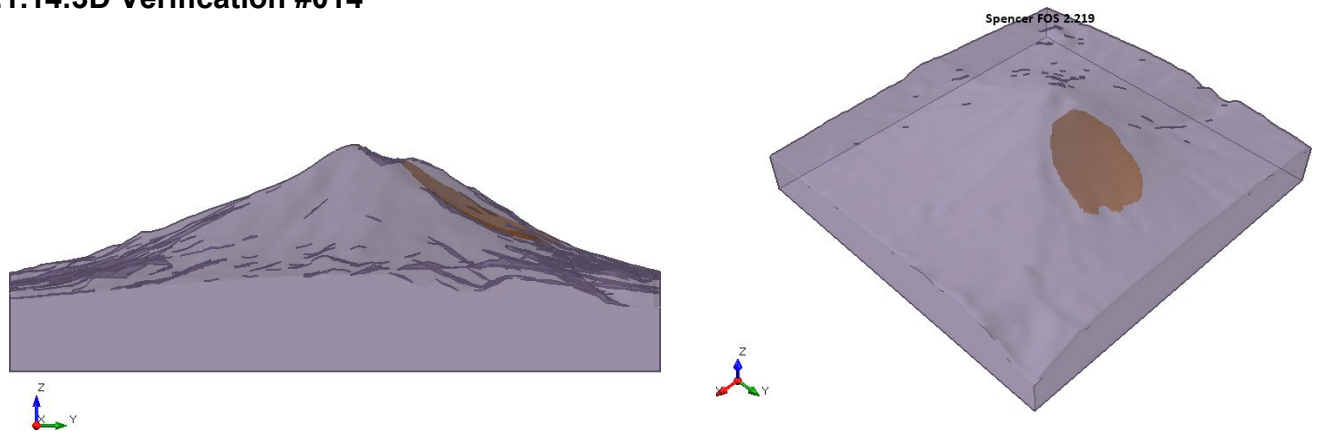
3D open pit mine, homogeneous, ellipsoidal with SA

1.1.13.3D Verification #013



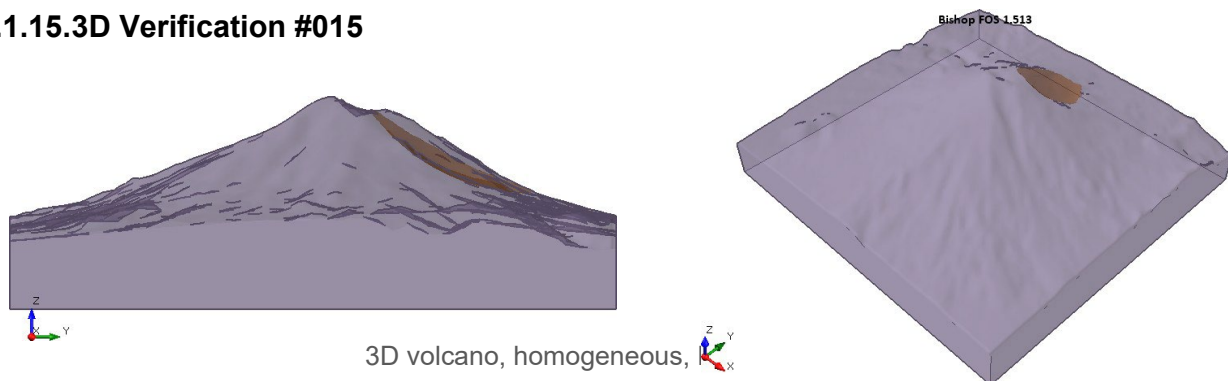
3D catchment, homogeneous, water table, ellipsoidal with SA

1.1.14.3D Verification #014



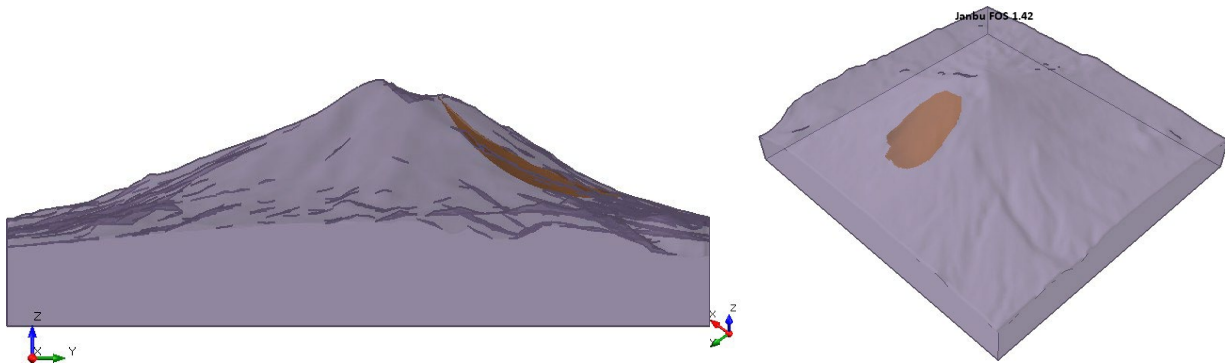
3D volcano, homogeneous, spherical

1.1.15.3D Verification #015



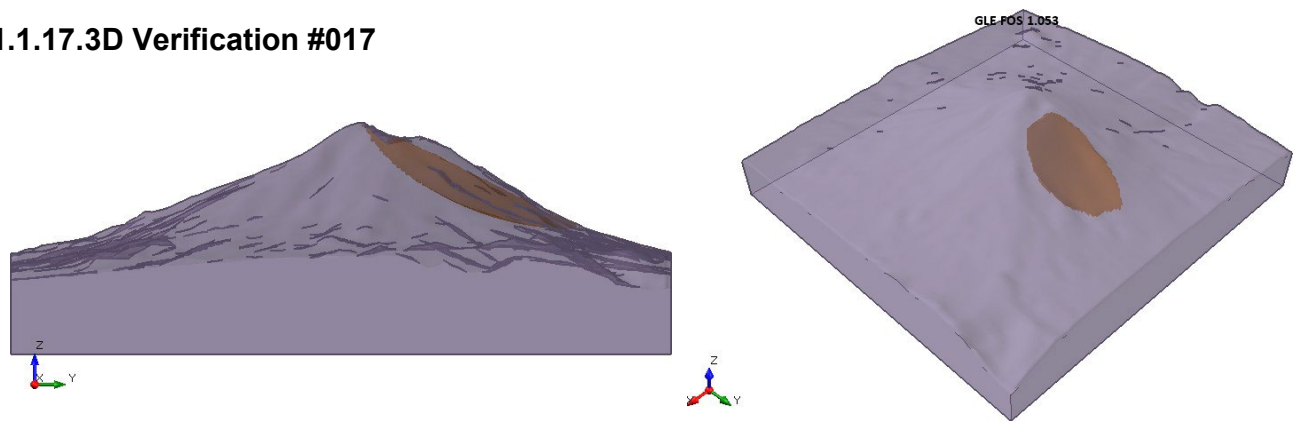
3D volcano, homogeneous,

1.1.16.3D Verification #016



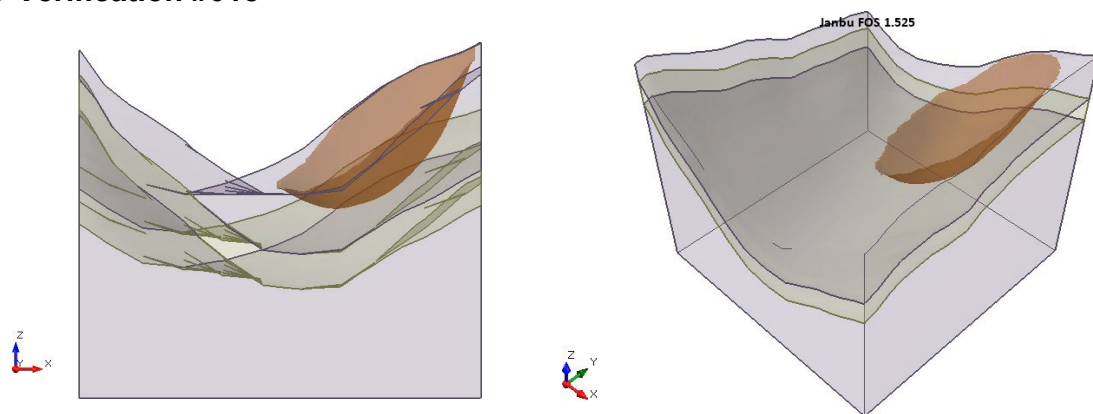
3D volcano, homogeneous, seismic loading, spherical

1.1.17.3D Verification #017



3D volcano, homogeneous, R_u coefficient, seismic loading, spherical

1.1.18.3D Verification #018



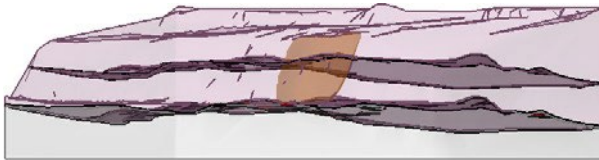
3D model, weak layer, ellipsoidal with SA

1.1.19.3D Verification #019



3D coal mine, (6) materials, ellipsoidal with SA

1.1.20.3D Verification #020

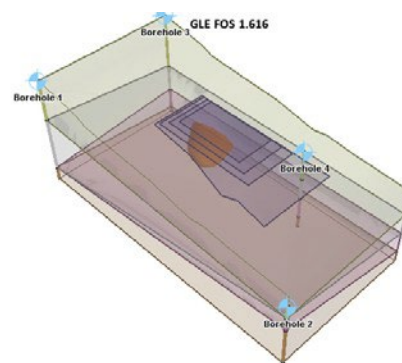
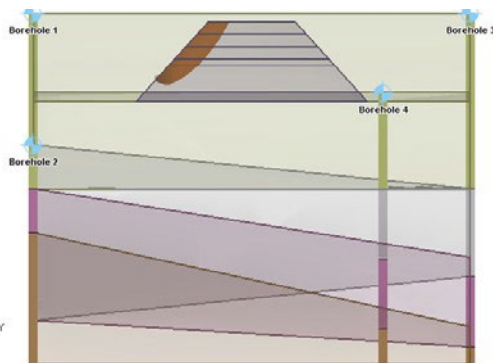


Bishop FOS 1.1



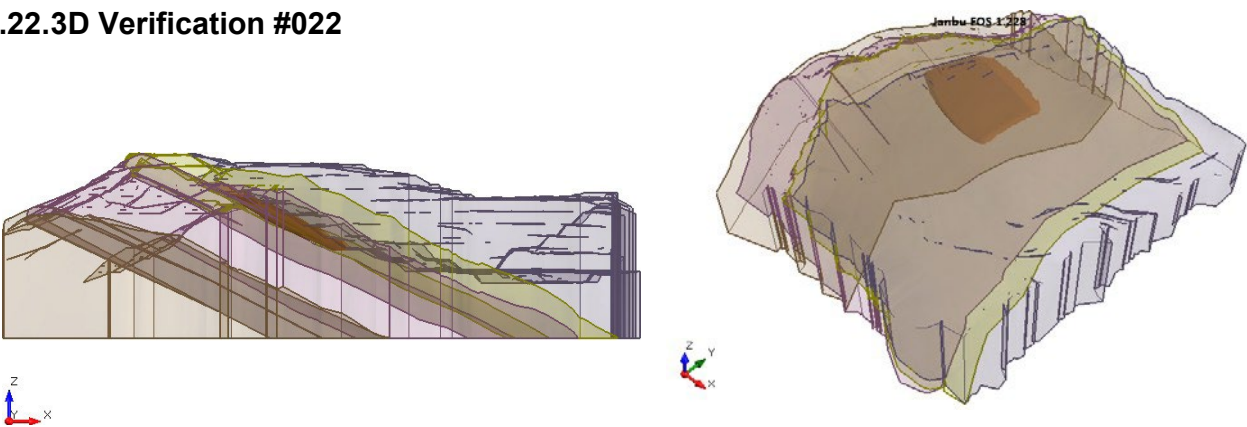
3D coal mine, (3) materials + anisotropic material, slope limits, ellipsoidal with SA

1.1.21.3D Verification #021



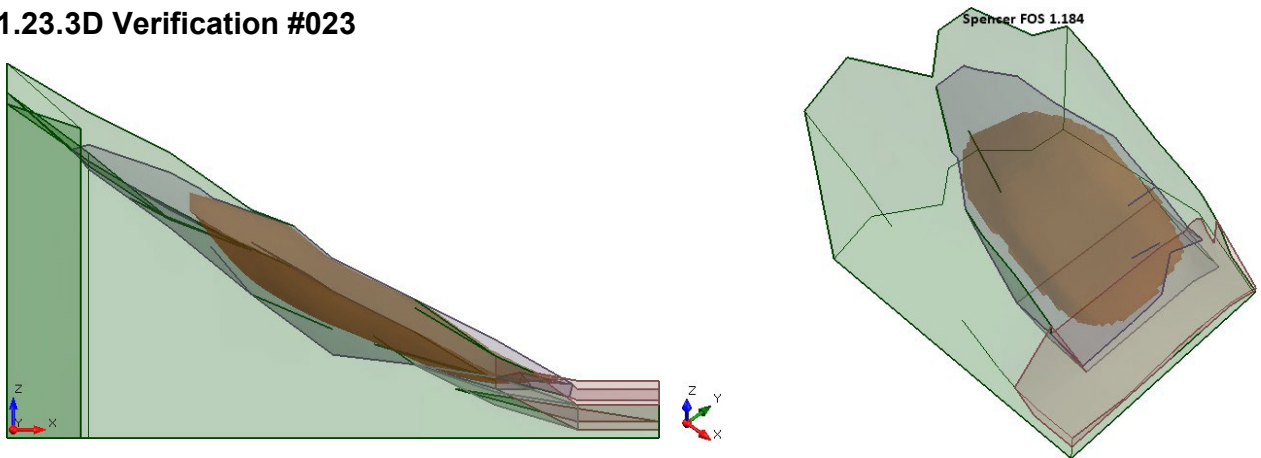
3D coal mine, (3) materials + anisotropic material, slope limits, ellipsoidal with SA

1.1.22.3D Verification #022



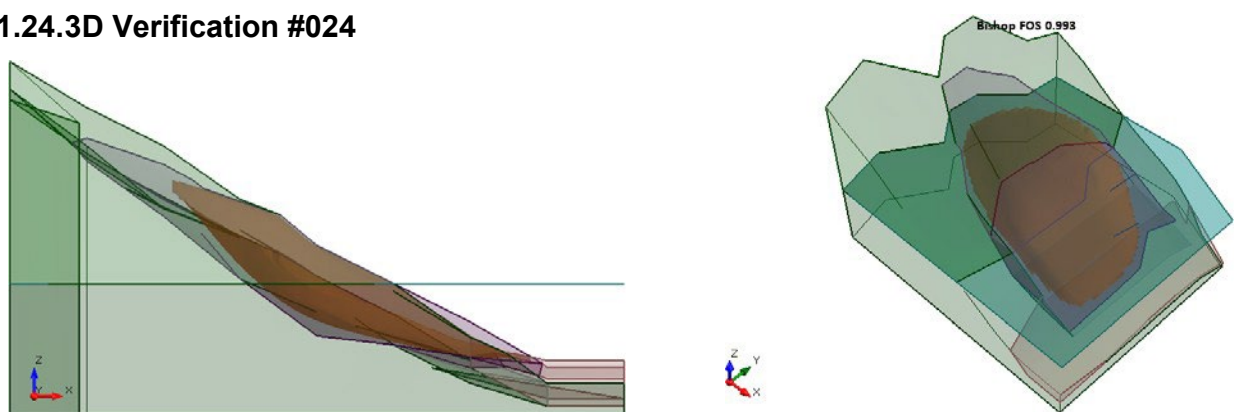
3D slope, (6) materials, anisotropic materials, ellipsoidal with SA

1.1.23.3D Verification #023



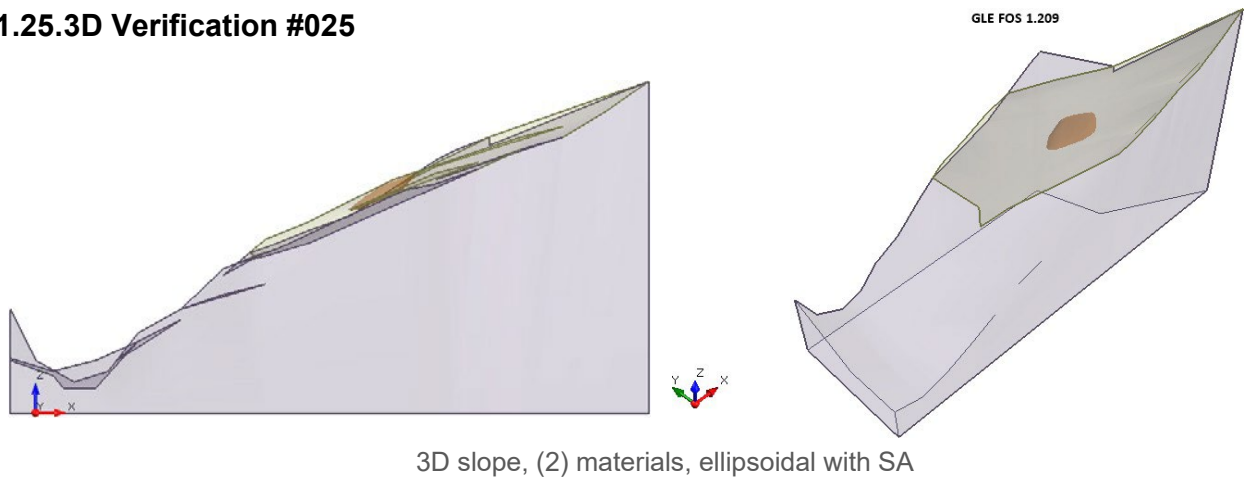
3D slope, (4) materials, ellipsoidal with SA

1.1.24.3D Verification #024



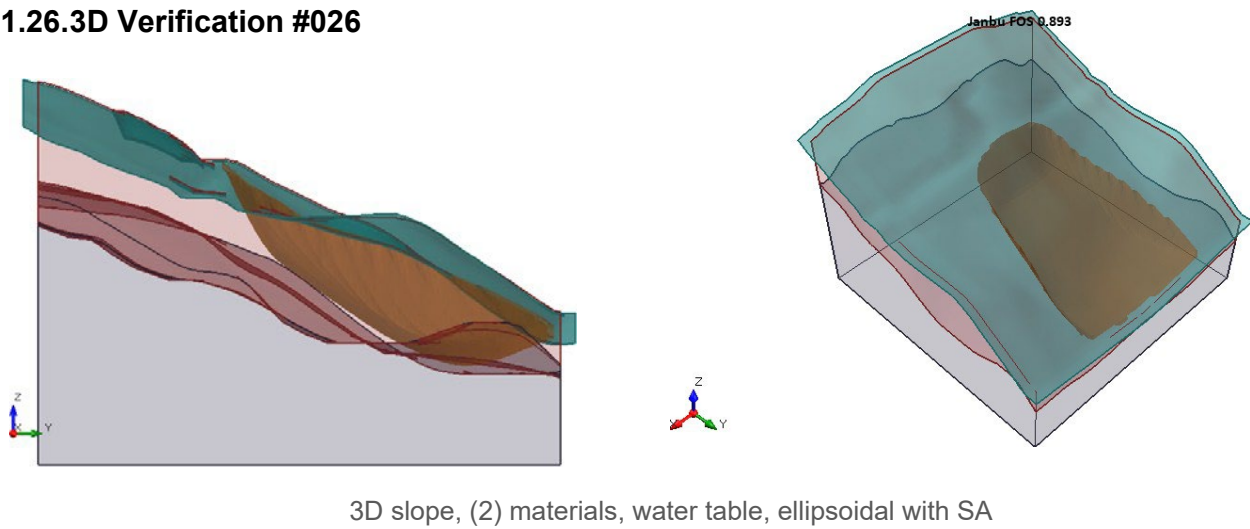
3D slope, (4) materials + (2) saturated materials, water table, ellipsoidal with SA

1.1.25.3D Verification #025



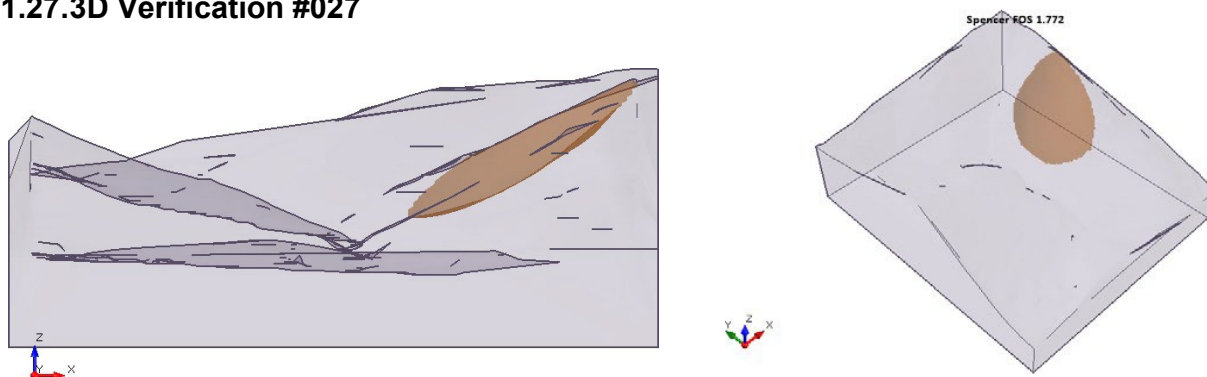
3D slope, (2) materials, ellipsoidal with SA

1.1.26.3D Verification #026



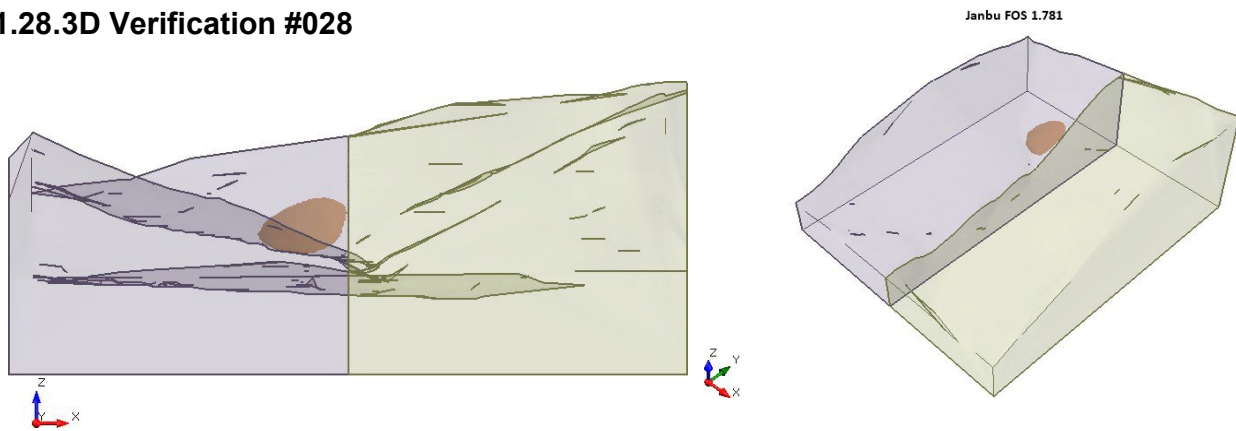
3D slope, (2) materials, water table, ellipsoidal with SA

1.1.27.3D Verification #027



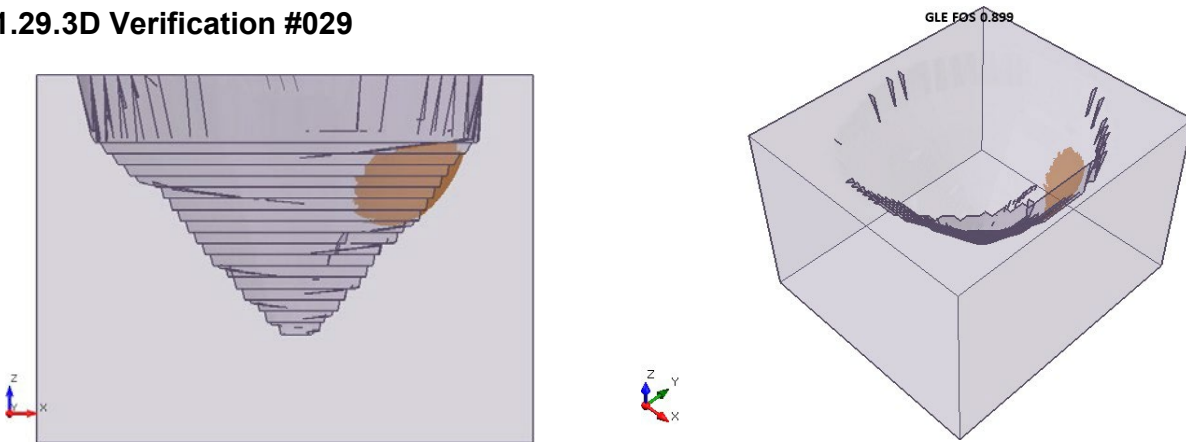
3D tailings facility, homogeneous, ellipsoidal with SA

1.1.28.3D Verification #028



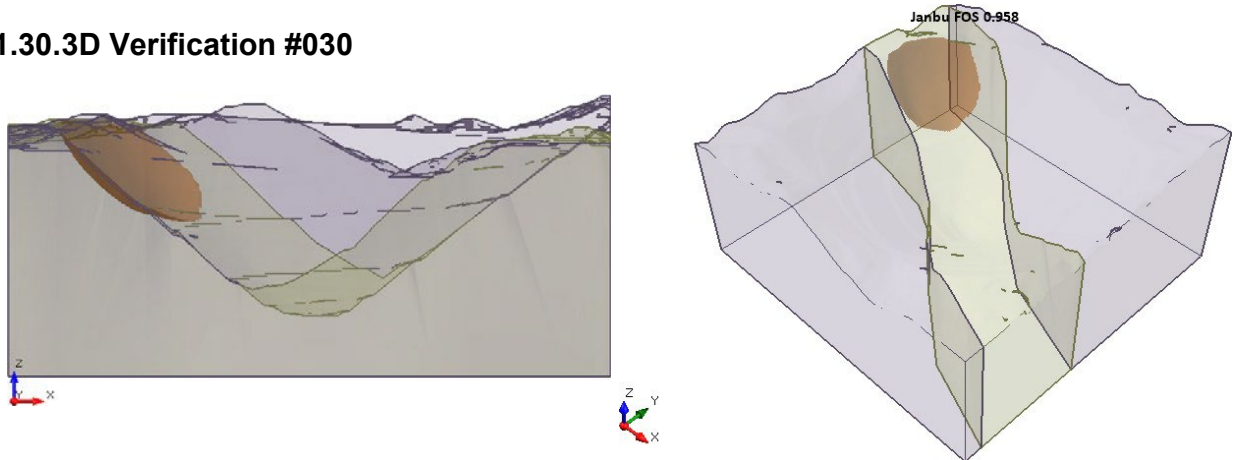
3D tailings facility, (2) materials, ellipsoidal with SA

1.1.29.3D Verification #029



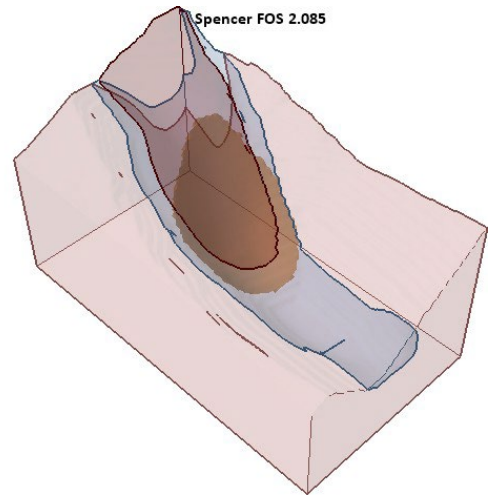
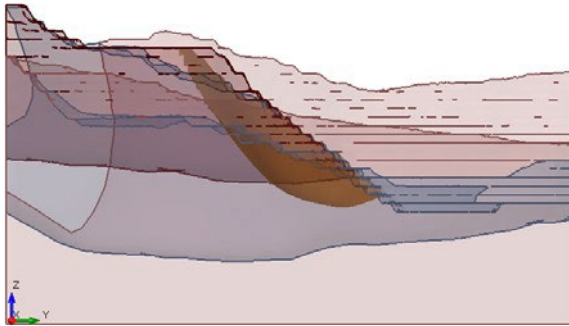
3D open pit, homogeneous, ellipsoidal with SA

1.1.30.3D Verification #030



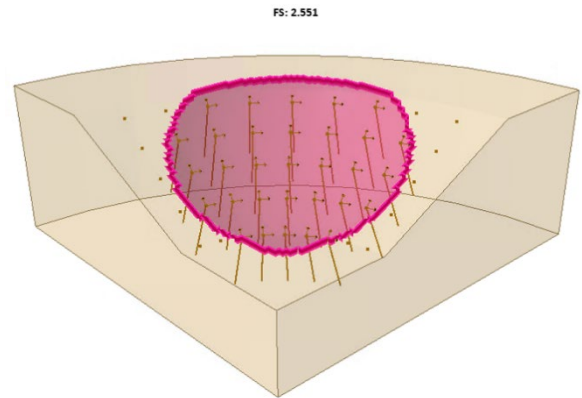
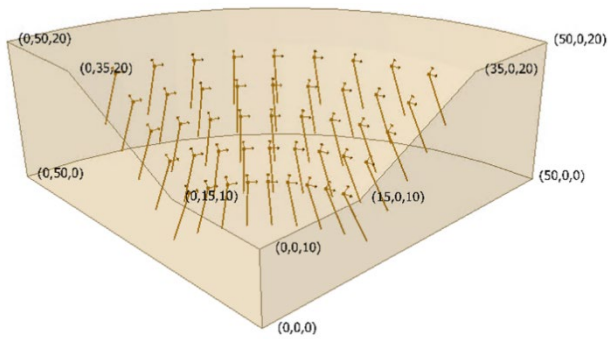
3D open pit, (2) materials, ellipsoidal with SA

1.1.31.3D Verification #031



3D coal mine, (3) materials, ellipsoidal with SA

1.1.32.3D Verification #032



RSPile model, homogeneous, ellipsoidal