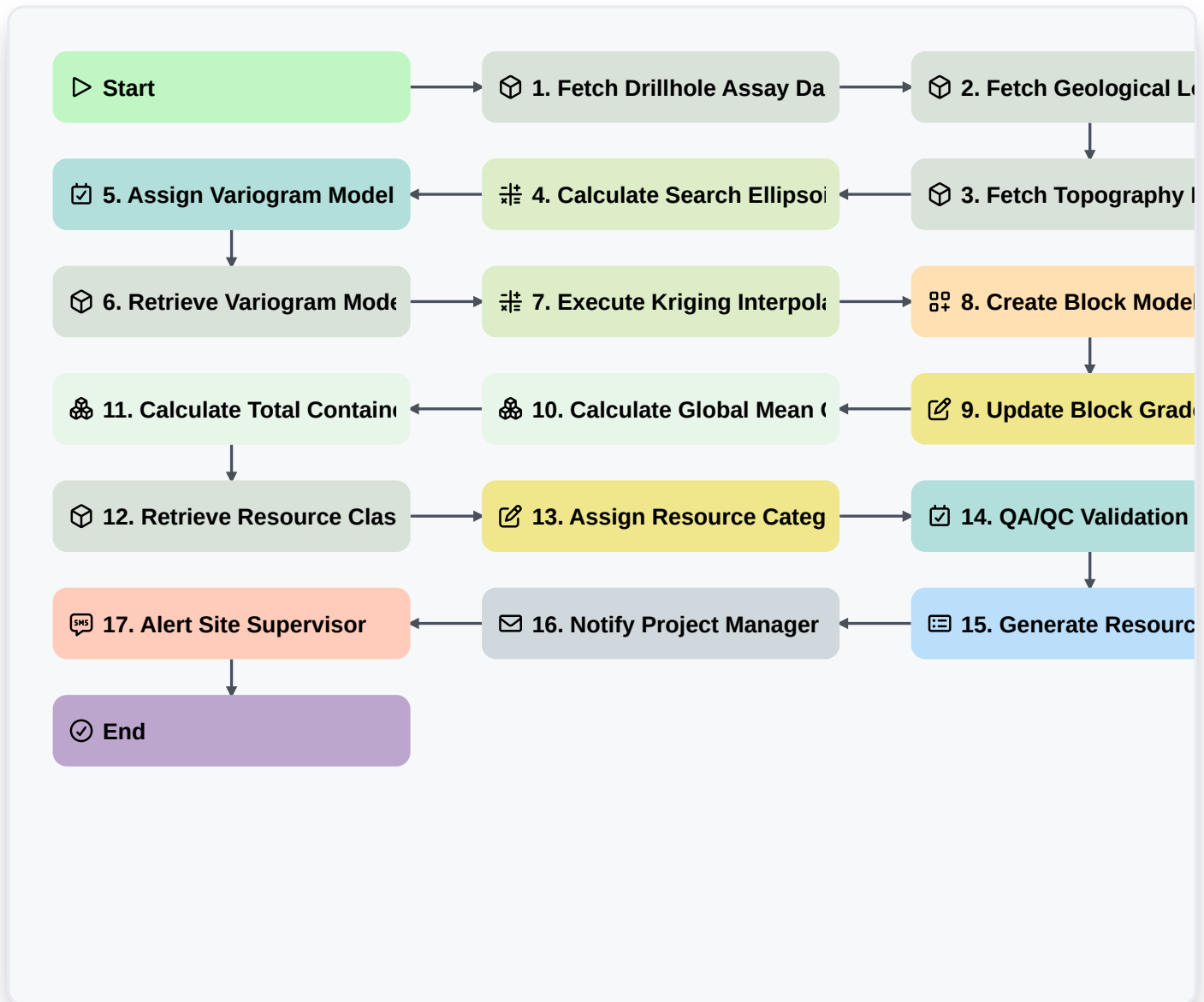


Real-Time Mineral Resource Estimation



Start

Start of the Workflow/Process.

1. Fetch Drillhole Assay Data

Retrieve chemical composition and grade data from the Assay Results data model.

2. Fetch Geological Logs

Retrieve lithology and alteration data from the Geological Logs data model.

3. Fetch Topography Data

Retrieve surface elevation and digital elevation model (DEM) coordinates.

4. Calculate Search Ellipsoid Parameters

Execute formula to determine anisotropy and search radii based on variogram models.

5. Assign Variogram Modeling Task

Assign a task to a Geostatistician to perform spatial continuity analysis.

6. Retrieve Variogram Models

Fetch processed spatial continuity parameters from the Geostatistics data model.



7. Execute Kriging Interpolation

Execute the core Ordinary Kriging algorithm using assay values and variogram parameters.

8. Create Block Model Grid

Generate the 3D block model entries (nodes) containing estimated grades.

9. Update Block Grade Attributes

Populate the newly created block grid with calculated mineral grades and densities.

10. Calculate Global Mean Grade

Aggregate all block entries to calculate the average grade of the entire estimated volume.

11. Calculate Total Contained Metal

Sum the product of (Volume * Density * Grade) across all blocks to find total tonnage.

12. Retrieve Resource Classification Criteria

Fetch threshold values for Measured, Indicated, and Inferred resource classification.

13. Assign Resource Category

Update each block entry with its classification (Measured/Indicated/Inferred) based on kriging variance.

14. QA/QC Validation Review

Assign a task to the Senior Geologist to validate the estimation against raw data.

15. Generate Resource Estimation Summary

Create a technical report summarizing grades, tonnage, and classification by domain.

16. Notify Project Manager

Send an email to the Project Manager with the summary of the new resource estimate.

17. Alert Site Supervisor

Send an SMS alert to the Site Supervisor regarding the availability of the new estimation update.

End

End of the Workflow/Process.