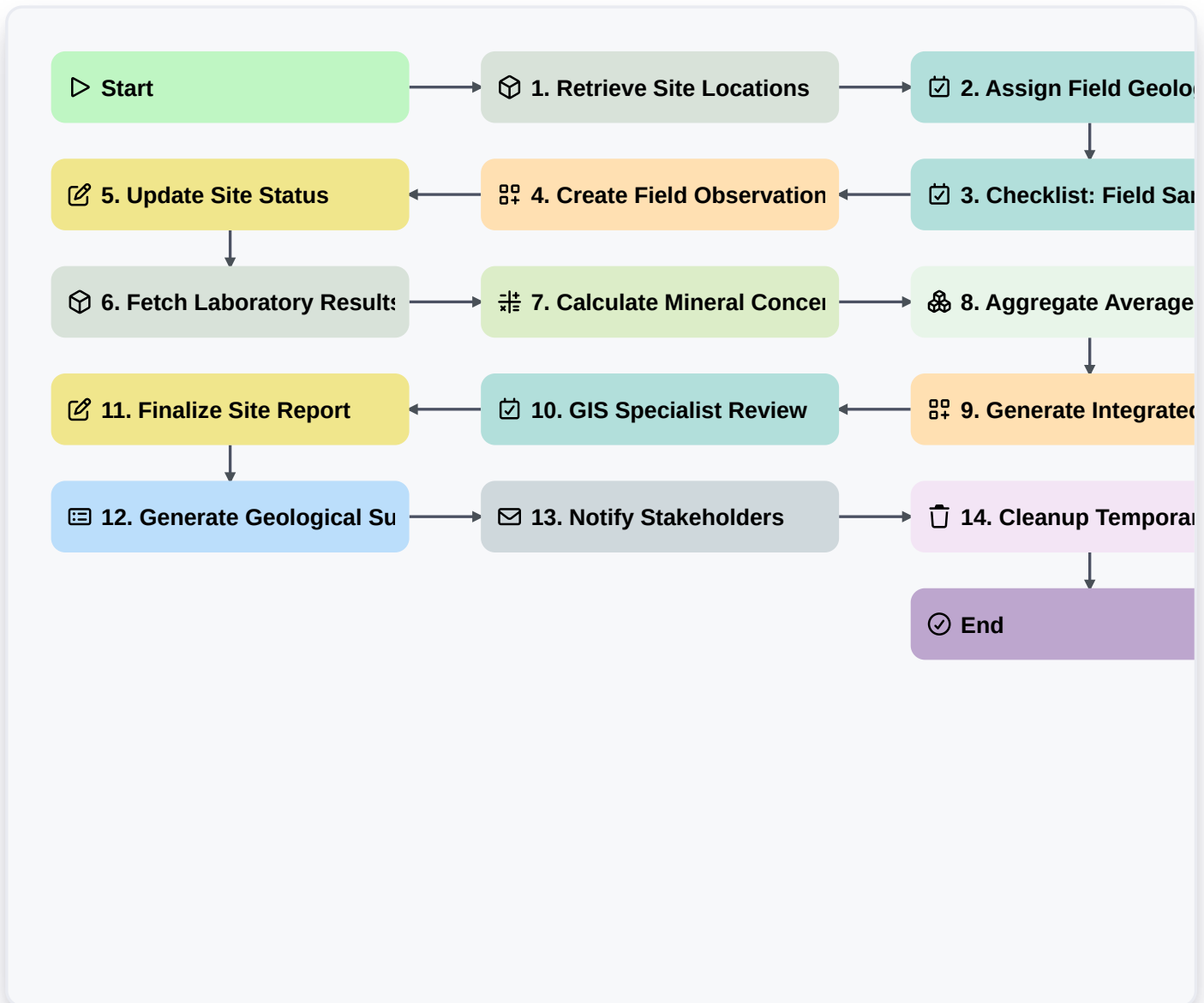


Geological Mapping & Data Integration



Start

Start of the Workflow/Process.

1. Retrieve Site Locations

Fetch all existing geological field sites and their metadata from the Site Location data model.

2. Assign Field Geologist

Create a task for a qualified geologist to perform the physical field mapping at the selected site.

3. Checklist: Field Sampling Protocol

Create a task containing a mandatory checklist for soil, rock, and mineral sample collection.

4. Create Field Observation Log

Generate a new entry in the Observation Log model to record real-time data captured during the survey.

5. Update Site Status

Update the selected Site Location entry status to 'In Progress' or 'Fieldwork Completed'.

6. Fetch Laboratory Results

Retrieve recent chemical assay results from the Lab Analysis data model associated with the site samples.



7. Calculate Mineral Concentration Index

Execute a formula to calculate the concentration index based on detected mineral mass and total sample volume.

8. Aggregate Average Metal Grade

Calculate the average grade of precious metals across all sample entries collected at the current site.

9. Generate Integrated Map Layer

Create a new entry in the Geospatial Layers model containing the processed spatial data.

10. GIS Specialist Review

Create a task for the GIS Specialist to verify the accuracy of the integrated digital map.

11. Finalize Site Report

Update the Site Report entry with the final validated geological findings and statistical summaries.

12. Generate Geological Summary Report

Compile all task completions, aggregated data, and field observations into a formal PDF summary report.

13. Notify Stakeholders

Send an email to the Project Manager and Exploration Director with the completed report attached.

14. Cleanup Temporary Field Notes

Delete temporary/draft entries in the Field Notes model once they have been successfully integrated into the permanent data model.

End

End of the Workflow/Process.