Mining & Quarry — What WaiMAP Does at Every Stage

From empty site to operation · the modules behind each step

What WaiMAP does
#11 · Construction

1 Site Screening

- Earthquake, flood, slope, land use
- Grid, roads and services nearby
- Satellite history and data trust level

▶ **Project Brain · Data Trust**

2 Ground & Hazards

- Rock head, groundwater, boreholes
- Excavation: common / ripping / blasting
- Seismic, flood and climate loads

▶ **Ground model · Hazards**

3 Survey & Base Map

- Repeat surveys by date
- Field GPS, drone orthophoto, LiDAR
- DXF / DWG / IFC in and out

▶ **Base map · Point cloud · CAD/BIM**

4 Volumes

- DTM / DSM from point clouds
- Stockpile volumes
- Pit volumes by date

▶ **Point cloud & survey**

5 Haul

- Haul distances and fleet
- Swell and compaction
- CO_2 of the fleet

▶ **Mass haul · Productivity**

6 Slopes & Water

- Slope stability checks
- Dewatering
- Drainage and settling ponds

▶ **Geotechnics · Drainage**

7 Rehabilitation

- Final landform
- Topsoil and vegetation
- Change records over years

▶ **Terrain · Observations**

8 Cost, Schedule & Cash

- Quantities and productivity
- Earned value, cash flow, payments
- Technical due diligence

▶ **BoQ · Schedule · EVM · TDD**

9 During Construction

- Drone surveys by date
- Stockpile volumes, count on site
- Progress and photo log

▶ **Orthophotos · Point cloud · Progress**

10 Permits & ESIA

- Permit, dust, noise, water
- Monitoring plan
- Bankability readiness

▶ **ESIA · Bankability**

Questions WaiMAP answers on the map

1. How much was mined this month?
2. How big is the stockpile?
3. Rip or blast?
4. Is the pit slope stable?
5. Where does the water go?
6. Is rehabilitation progressing?

Honest limits & coming

- Mine planning and reserves are outside WaiMAP
- Coming: blast design
- Screening level on open data and your inputs