Oil & Gas Pipeline — What WaiMAP Does at Every Stage

From empty site to operation · the modules behind each step

What WaiMAP does
#08 · Construction

1 Site Screening

- Earthquake, flood, slope, land use along 1–150 km
- Grid, roads and services nearby
- Satellite history and data trust level

▶ **Project Brain · Data Trust**

2 Ground & Hazards

- Rock head, groundwater, boreholes
- Trenching classes along the route
- Seismic, flood and climate loads

▶ **Ground model · Hazards**

3 Survey & Base Map

- Strip map along the route
- Field GPS, drone orthophoto, LiDAR
- DXF / DWG / IFC in and out

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

4 Route Selection

- Least-cost corridors, 3–5 alternatives
- Side-hill vs fall-line terrain rules
- Protected areas and settlements

▶ **Corridor routing**

5 Crossings

- Roads, rivers, rail, power lines
- HDD candidates
- Block valve positions

▶ **Corridor routing**

6 Earthworks & Trench

- Trench and backfill volumes
- Steep sections
- Haul and spoil

▶ **Terrain · Mass haul**

7 Hazards

- Landslide and erosion
- Flood and scour at crossings
- Seismic zones

▶ **Hazards · Stress test**

8 Cost, Schedule & Cash

- Quantities by km
- Earned value, cash flow, payments
- Technical due diligence

▶ **BoQ · Schedule · EVM · TDD**

9 During Construction

- Drone progress along the right of way
- Stockpile volumes, count on site
- Progress and photo log

▶ **Orthophotos · Point cloud · Progress**

10 Observations

- Sentinel-2 old map / new map
- Right-of-way watch, encroachments
- Sentinel-1 radar flood mapping

▶ **Observations · Area watch**

Questions WaiMAP answers on the map

1. Which corridor is cheapest and least sensitive?
2. Where do we need HDD?
3. Where are the block valves?
4. Which km are steep or unstable?
5. How much trench excavation?
6. Is anyone building on the right of way?

Honest limits & coming

- Quantities only — no invented prices
- Coming: hydraulic and stress analysis of the pipe
- Screening level on open data and your inputs