

NUREMBERG SUSTAMINING WORKSHOP May, 16th 2015

9.00 – 9.10h Welcome and Opening (DNV)

- Brief Partners & people Presentations.
- General overview of SUSTAMINING project.
- Main Objectives

9.10 – 9.15h SUSTAMINING methodology for selective and sustainable natural stone exploitations (CTM)

- Monitoring of non-destructive techniques use in the project.

9.15 – 9.45h Ground Penetrating Radar, GPR. (AITEMIN)

- Brief description of method.
- Examples PENIDO (Granite), HITUSA (Dolostone) and GHIRARDI (Limestone) quarries.
- Conclusions
 - o Main advantages / disadvantages of georadar technique.
 - o Utility / applicability in different natural stone quarries.

9.45 – 10.15h Electrical Resistivity Tomography, ERT (MIRO)

- Brief description of method.
- Examples PENIDO (Granite), HITUSA (Dolostone) and GHIRARDI (Limestone) quarries.
- Conclusions
 - o Main advantages / disadvantages of ERT technique.
 - o Utility / applicability in different natural stone quarries.

10.15 – 10.45h Reflection, Refraction and MASW (CTM)

- Brief description of method.
- Examples PENIDO (Granite), HITUSA (Dolostone) and GHIRARDI (Limestone) quarries.
- Conclusions
 - o Main advantages / disadvantages of reflection, refraction and MASW technique.
 - o Utility / applicability in different natural stone quarries.

10.45 – 11.00h Coffee-break

11.00 – 11.15h Geological models (AITEMIN)

- Brief description of method.
- Examples PENIDO (Granite), HITUSA (Dolostone) and GHIRARDI (Limestone) quarries.
- Conclusions: utility / applicability in different natural stone quarries.

11.15 – 11.30h Geostatistical models (MIRO)

- Brief description of method.
- Examples PENIDO (Granite), HITUSA (Dolostone) and GHIRARDI (Limestone) quarries.
- Conclusions: utility / applicability in different natural stone quarries.

11.30 – 11.45h SUSTAMINING expected benefits. Quality indexes (CTM/AITEMIN)

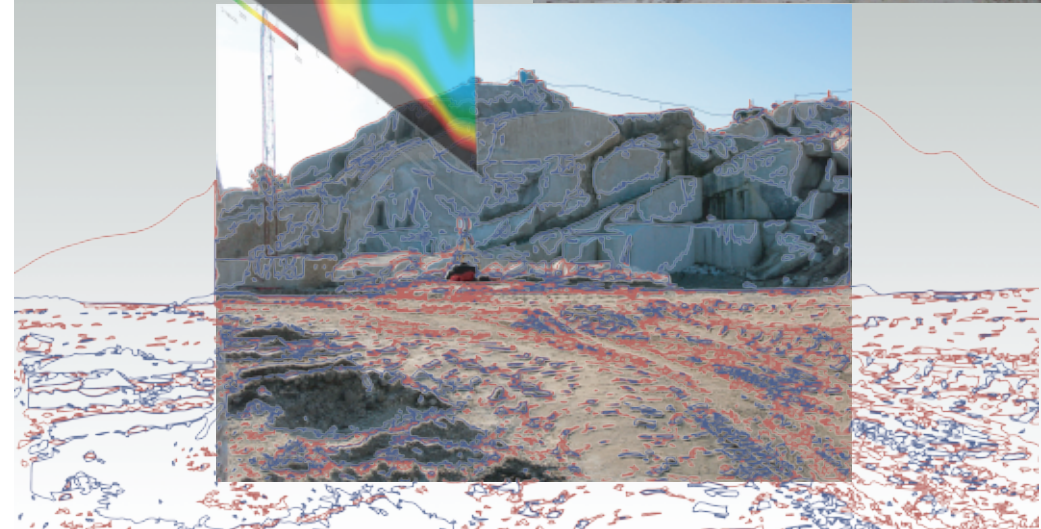
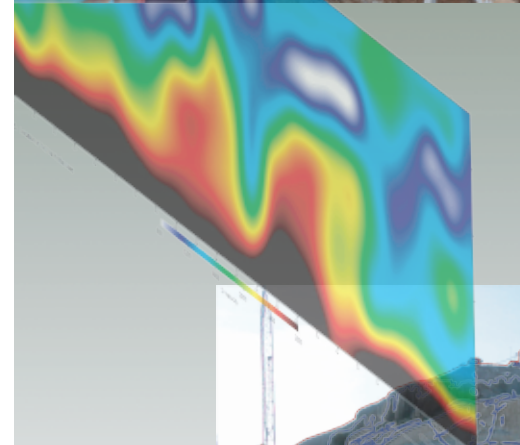
- Brief description of selection quality indexes.
- Expected benefits for natural stone exploitations.
 - o Resource estimation
 - o Waste reduction.
 - o Safety in quarrying.

11.45 – 12.00h Colloquium / Questions



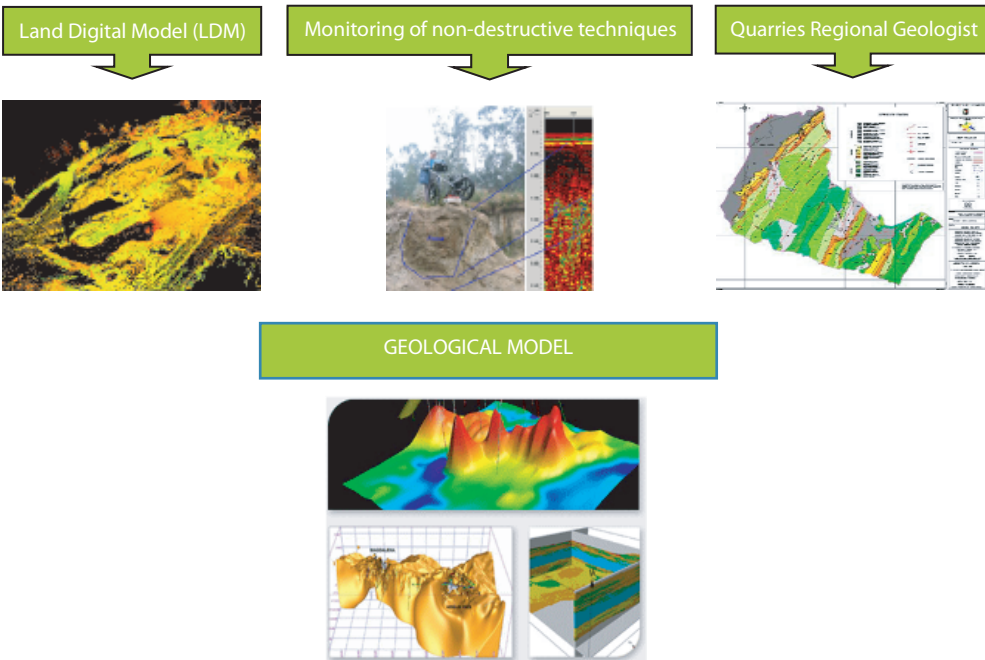
SELECTIVE AND SUSTAINABLE EXPLOITATION OF ORNAMENTAL STONES BASED ON DEMAND

Development of a new tool / methodology of natural stone quarrying taking into account the quality and control requirements by using non-destructive geophysical methods.

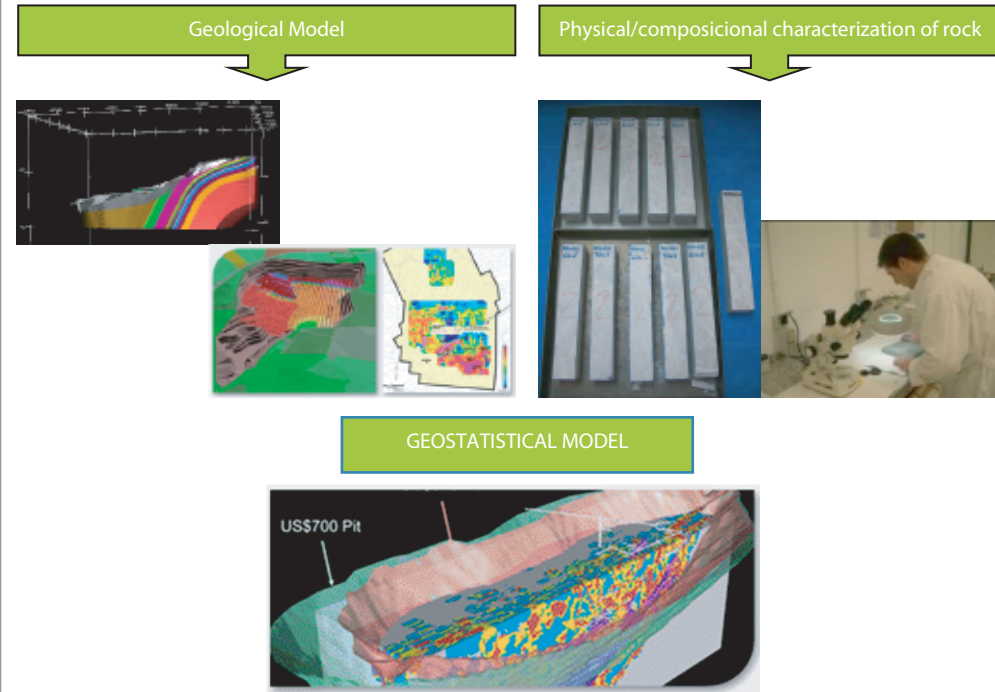


SCHEME OF THE PROJECT METHODOLOGY

Phase 1: Obtainment of the Geological Model of the quarry (LDM + Geophysical measurements + geological data).



Phase 2: Obtainment of Geostatistical model of quarry (Geological Model + Laboratory data).



Phase 3: Obtainment of Quality Indexes (and methodological guide for quarrying).

