GEOMELETI

GEOTECHNICAL ENGINEERS & GEOLOGISTS

OFF-SHORE INVESTIGATIONS AND DESIGN FOR MARINE PROJECTS

...committed to the Art and Science of Geotechnical Engineering

...aiming for maximum quality through simple and cost-effective solutions

GEOMELETI

GEOMELETI

GEOTECHNICAL INVESTIGATION & DESIGN - CONSULTING SERVICES
44, Michalakopoulou str., 115 28 Athens, Greece
Tel: +30 210 72 52 085
e-mail: geomeleti@geomeleti.gr, www.geomeleti.gr

GENERAL

GEOMELETI is a Consulting Engineering Company managed and operated by experienced engineers / geologists committed to the art and science of Geotechnical / Infrastructure engineering, always aiming in giving high quality, simple and cost-effective solutions to the projects undertaken.

GEOMELETI, is staffed with experienced Engineers and Engineering Geologists and managed by P. Laskaratos and T. Katsoularis, having extensive experience respectively, among others, in all aspects of Geotechnical / Infrastructure Engineering (Railway Projects, Hydraulic works, Road and Bridge design, Building foundation design, Tunnels, Slope design etc).

The Company owns modern equipment including drilling-rigs, in situ and laboratory testing devices and with the use of specialized software, can give reliable, fast and economical design solutions to all Geotechnical Problems.

OUR CLIENTS - COLLABORATIONS

GEOMELETI provides design, supervision and consulting services to the main organizations, managing infrastructure projects in Greece and abroad, such as:

- Greek Ministry of Public Works and Transportation,
- Greek Railways and Metro Authorities,
- Greek Highway Authorities,
- Infrastructure, Building and Industrial Contractors (Hochtief, AKTOR, GEK, TERNA, J&P, ABENGOA, etc)

Our collaborations also include major international engineering firms, such as, W.S. Atkins (UK), Faber-Maunsell (UK - USA), Hocthief (Germany), 3P (Austria), SSF and ISP (Germany), DBI International (Germany, Qatar), etc.

MANAGEMENT

Petros Laskaratos:
Geotechnical - Civil Engineer M.Sc, having more than 35 years of working experience in Geotechnical Engineering Projects, offered Consulting Services to the owners of the major highway authorities (Attiki Odos, Athens - Thessaloniki Highway, Egnatia Odos) in Greece, the Athens Metro and having an extensive experience in design of all types of infrastructure engineering projects, including building foundations, ground improvement, tunnels, bridges, dams, motorways, etc.

Tassos Katsoularis:
Engineering Geologists, having more than 25 years of working experience in investigations, quality control and geological and geotechnical design for all types of infrastructure engineering projects, including buildings, tunnels, open-cuts, dams, bridges, motorways, railway lines, etc.

OFFERED SERVICES

GEOTECHNICAL INVESTIGATIONS

- Programming of Investigations
- Inspection of Geotechnical Works
- Interpretation of Investigation Results
- Sampling Boreholes: On-shore / off-shore
- Trial Pits
- Special Sampling Works
- In situ permeability Testing
- Standard Penetration Tests (S.P.T.)
- Plate Loading Testing
- Wagon Drillings
- Cone Penetrometer Testing
- Pressuremeter Testing
- Trial Embankments
- Borrow Areas Investigations
- Geophysical Investigations
- Physical Properties Laboratory Testing
- Engineering Properties Laboratory Testing
- Chemical Properties Laboratory Testing

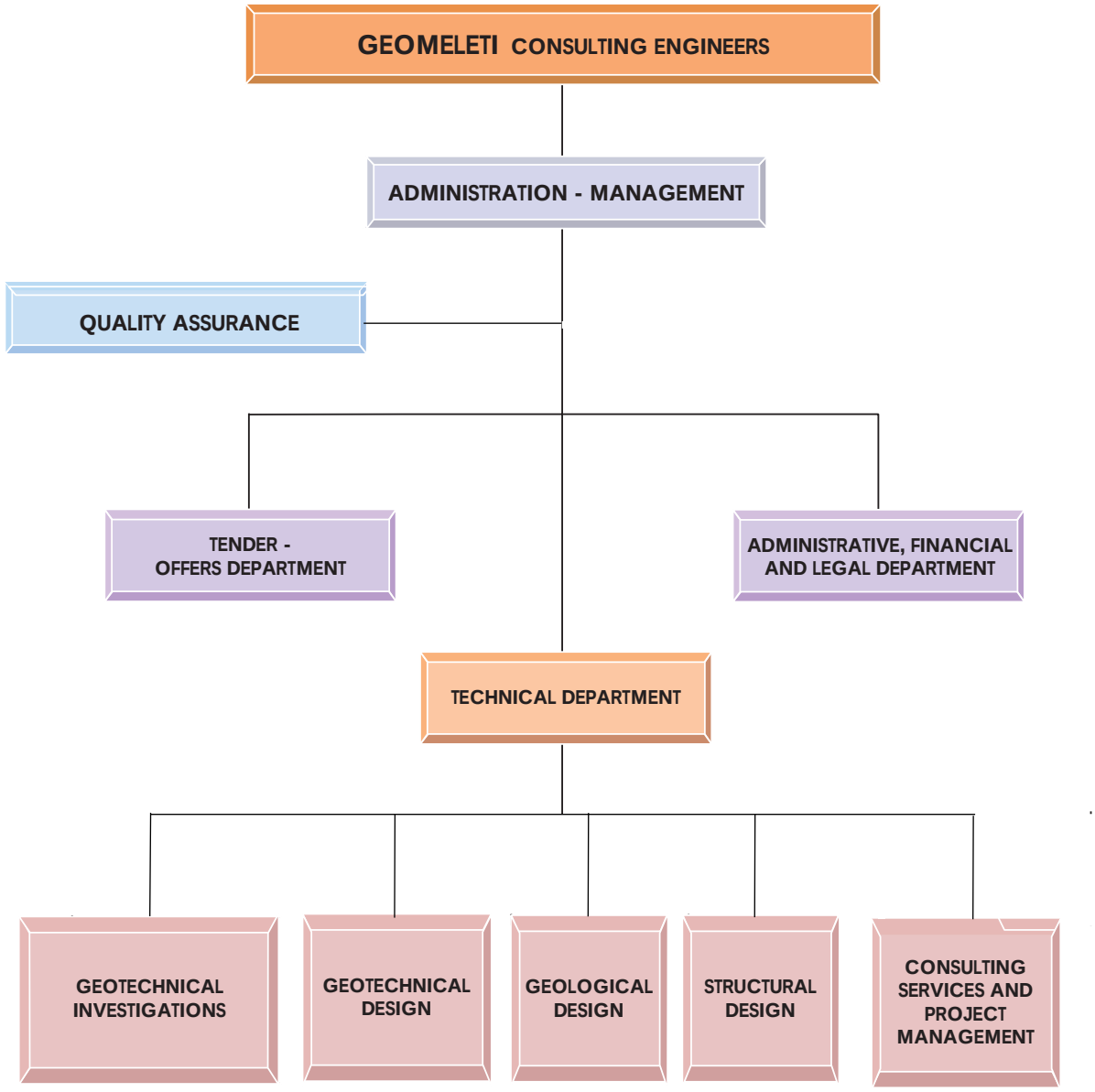
GEOTECHNICAL -STRUCTURAL ENGINEERING DESIGN

- Shallow - Deep Foundations
- Ground Improvement / Treatment
- Underpinning
- Dams - Hydraulic Projects
- Borrow Areas - Damping Sites
- Embankments
- Excavations
- Slopes and Landslides
- Geosynthetics (Design and Application)
- Retaining Structures
- Road / Airfield Pavements
- Tunnels - Underground structures
- Water Filtration and Drainage
- Port Structures / Offshore Geotechnics
- Instrumentation
- Landfills
- Bridges
- Industrial / Residential Buildings
- Ground Water Management

GEOTECHNICAL CONSULTING SERVICES

- Checking of Design
- Expert Evaluations
- Inspection of Geotechnical Works
- Material Quality Control
- Observation / Interpretation of Instruments
- Modification of Design During Construction
- Preparation of Tender Documents
- Evaluation of Contractors' Offers

ORGANIZATION CHART



EXPERIENCE IN

PORTS / OFF-SHORE STRUCTURES

GEOMELETI

25 Port Structures and Participation in the Design of 2 Oil Platforms.

IMPROVEMENT AND EXTENSION OF EXISTING HARBOR FACILITIES SIFNOS ISLAND, GREECE

Client:
KYKLADES PREFECTURE

Geotechnical Investigation with off-shore Boreholes and Geotechnical Design of the Foundation Conditions for the improvement and extention of the existing port facilities in Kamares Bay, Sifnos Island.

a) Alignment and expantion of the existing pier and construction of new deeper platforms for the docking of the larger ships
b) Construction of a leeward and an internal pier for the better service of fishing and turist vessels and
c) Enlargement of the land area for the better management of vehicle traffic

Pier: 5m in width, 170m in length

IMPROVEMENT AND EXTENSION OF EXISTING HARBOR FACILITIES SIROS ISLAND, GREECE

Client:
KYKLADES PREFECTURE

Geotechnical Investigation with off-shore Boreholes and Geotechnical Design of the Foundation Conditions for the improvement of the 75m long and 5m wide Ermoupolis Port for the harboring of Cruise Ships, in Siros Island.

NEW PORT IN "PSATHI"", KIMOLOS ISLAND, GREECE

Client:
KYKLADES PREFECTURE

Geotechnical Investigation with off-shore Boreholes and Geotechnical Design of the Foundation Conditions of the new Port Facilities.
Elongation of commercial and passenger vessels pier of total length 90.35m and width 9.80m
Platforms for the anchoring of fishinv vessels of total length 83.90m.

NEW FISHING SHELTER IN "AGIOS MINAS", KIMOLOS ISLAND, GREECE

Client:
KYKLADES PREFECTURE

Geotechnical Investigation with off-shore Boreholes and Geotechnical Design of the Foundation Conditions of the Fishing Shelter Facilities.

Pier: 5m in width, 25m in length

NEW FISHING SHELTER IN "KARAVOSTASI", FOLEGANDROS ISLAND, GREECE

Client:
KYKLADES PREFECTURE

Geotechnical Investigation with off-shore Boreholes and Geotechnical Design of the Foundation Conditions of the new Fishing Shelter Facilities.

EXPANSION OF "KARAVOSTASI" PORT, FOLEGANDROS ISLAND, GREECE

Client:
KYKLADES PREFECTURE

Geotechnical Investigation with off-shore Boreholes and Geotechnical Design of the Foundation Conditions of the expansion of the existing Port.

CONSTRUCTION OF "MAKRONISOS" MARINA IN AGIA NAPA AREA, CYPRUS

Client:
M.M MAKRONISOS MARINA LTD

Geotechnical Investigation with 8 off-shore boreholes, in 21m depth from sea-bed and maximum sea depth of -6.5m,using a jack-up barge platform

Pier: 23-110m in width, 800m in length

FOUNDATION IMPROVEMENT FOR THE "KIMA" BUILDING IN LOUTRA EDIPSOU, EVIA ISLAND, GREECE.

Client:
EVIA PREFECTURE

Geotechnical Investigation with off-shore boreholes and Geotechnical Design for the restoration of the historical, preservable building "KIMA" founded on a grid of columns embedded to the sea-bed. The restoration project included architectural designs for the superstructure formation, reconstruction and expansion of the existing platform, structural design of the bearing structure and the necessary designs-works on the foundation of the building.

EXPANSION OF "FIKIADA" PORT, MILOS ISLAND, GREECE

Client:
KYKLADES PREFECTURE

Geotechnical Investigation and Evaluation of the Subsoil Conditions, for the Expansion of the existing Port in Fikiada Settlement, Milos Island. Geotechnical Investigations and Evaluation of the Subsoil Conditions

NEW "POLONIA" PORT, MILOS ISLAND, GREECE

Client:
KYKLADES PREFECTURE

Geotechnical Investigation and Evaluation of the Subsoil Conditions, for the Construction of the New Port in Polonia Settlement, Milos Island. Geotechnical Investigations and Evaluation of the Subsoil Conditions

NEW FISHING SHELTER IN PARIANOS BAY, KOUFONISSI ISLAND, GREECE

Client:
KYKLADES PREFECTURE

Geotechnical Investigation and Evaluation of the Subsoil Conditions, for the Expansion of the Existing Quay Wall and the Construction of a New Pier at Parianos Bay in Koufonisia Island.
Geotechnical Investigations and Evaluation of the Subsoil Conditions.
Pier: 15m in width, 100m in length

NEW "KOUFONISSI" PORT, KOUFONISSI ISLAND, GREECE

Client:
KYKLADES PREFECTURE

Geotechnical Investigation and Evaluation of the Subsoil Conditions, for the Expansion Works of the Koufonisi Port Facilities.
Geotechnical Investigations and Evaluation of the Subsoil Conditions

Pier: 5-17m in width, 90m in length

NEW FISHING SHELTER IN ANTIPAROS ISLAND, GREECE.

Client:
KYKLADES PREFECTURE

Geotechnical Investigation and Evaluation of the Subsoil Conditions, for the New 130m long Fishing Boats and Yachts Pier, as well as new Quay Wall vertically to which tow floating bays 50m long each will be placed.
Additionaly the construction of a New Pier at Pounta is considered.
Geotechnical Investigations and Evaluation of the Subsoil Conditions.

EXPANSION OF PORT "NAXOS" PIER, NAXOS ISLAND, GREECE

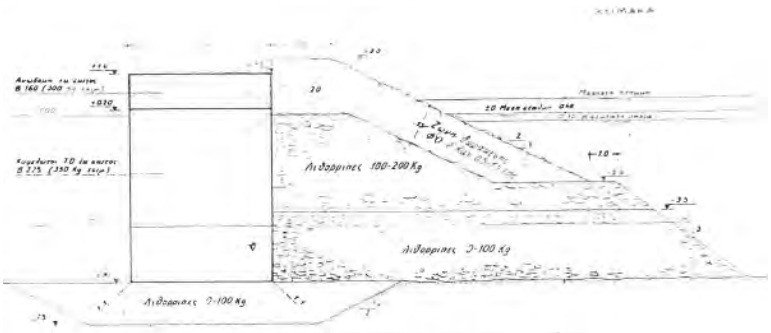
Client:
MUNICIPALITY OF NAXOS ISLAND

Geotechnical Investigation and Evaluation of the Subsoil Conditions, for the Expansion of the Existing Pier for 150m in length for the construction of Yachts Shelter.
Geotechnical Investigations and Evaluation of the Subsoil Conditions

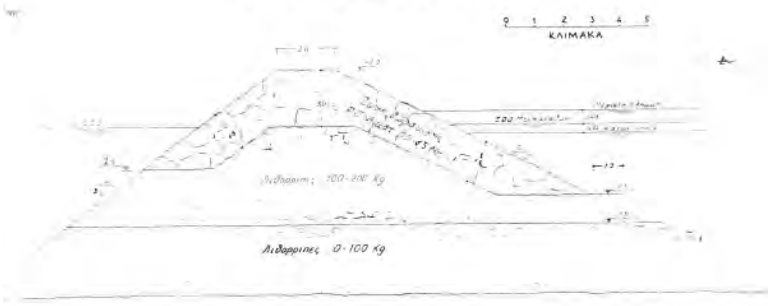
NEW PORT OF "LIGIA", LEFKADA ISLAND, GREECE

Client:
LEFKADA PREFECTURE

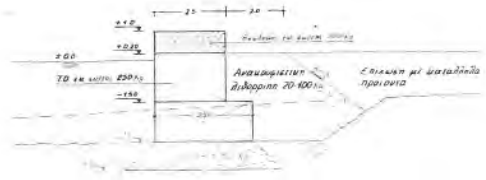
Geotechnical Investigation with offshore boreholes and laboratory tests, Geotechnical Interpretation Report and Geotechnical Foundation Design Report of 220m long Lygias Pier that will operate as fish auction as well as Quay Walls and specialized facilities for the mooring of yaughts.



(α) Τυπική Διατομή Προσήνεμου Μώλου



(β) Τυπική Διατομή Υπήνεμου Μώλου

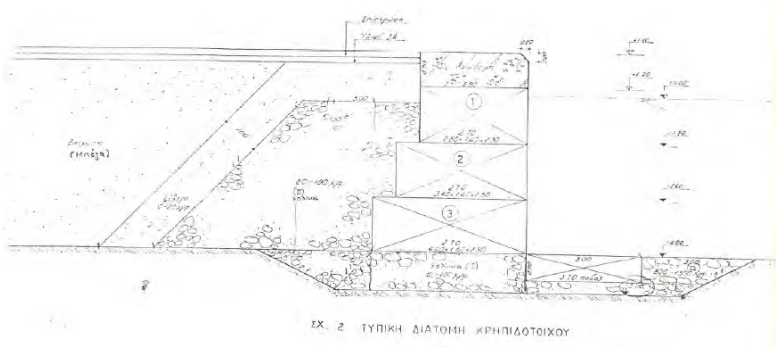


(γ) Τυπική Διατομή Κρηπιδότοιχου

NEW PIER IN THE PORT OF LINARIA , SKYROS ISLAND, GREECE

Client:
GREEK NATIONAL TOURIST ORGANIZATION

Geotechnical Investigation with offshore boreholes and laboratory tests, Geotechnical Interpretation Report and Geotechnical Foundation Design Report of two Piers, 450m in total lengh and Quay Wall 530m long



ΣΧ. 2 ΤΥΠΙΚΗ ΔΙΑΤΟΜΗ ΚΡΗΠΙΔΟΤΟΙΧΟΥ

EXPERIENCE IN

GEOTECHNICAL INVESTIGATIONS

GEOMELETI

More than 50,000m of coring boreholes, both on-shore and off-shore with laboratory and in-situ testing, for more than 500 different projects.

GEOTECHNICAL INVESTIGATIONS

Our company has the capability and experience to execute a wide range of field and laboratory testing / investigations.

Our experience includes execution of more than 50,000m of coring boreholes, both on-shore and off-shore, for more than 500 different projects, with corresponding laboratory testing and evaluation of their results. For these projects programming and inspection of the works were included in our scope.

On-Shore Boreholes

Off-Shore Boreholes

Wagon-Drilling

Laboratory Testing

Trial Excavation

Static Plate Load Test Equipment

Dynamic Plate Load Test Equipment

Dynamic Cone Penetrometer Equipment

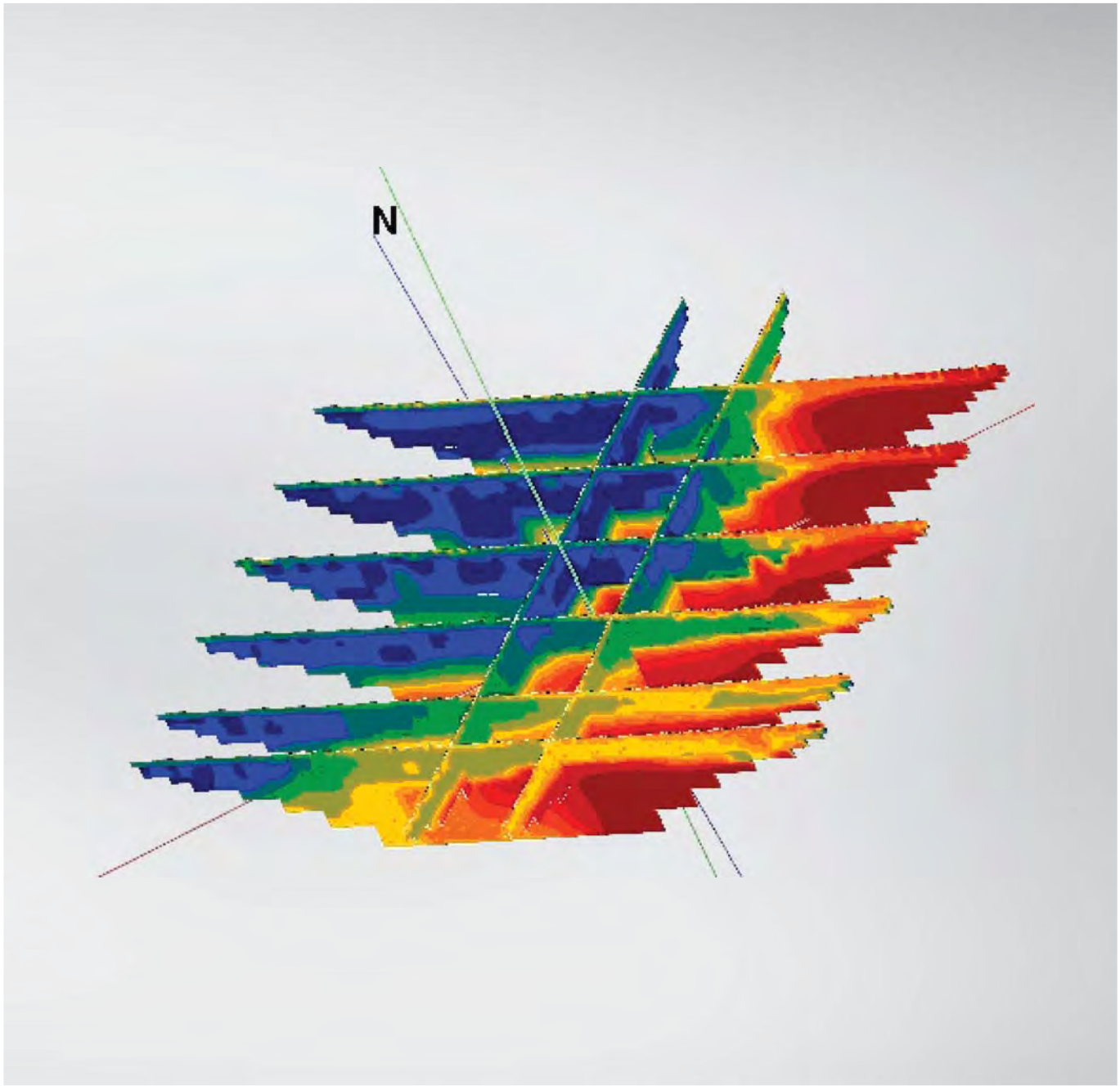
Soil Sampling

EXPERIENCE IN

GEOPHYSICAL INVESTIGATIONS

GEOMELETI

Karsts - Cavities - Sinkholes - Fracture Zones,
Utilities - Buried Structures,
Reinforcement - Voids of Concrete,
Seismic/Dynamic Properties of Subgrade Materials,
Unexploded Ordnances (UXO's), Marine - Hydrographic Services
Environmental Applications, Parameters for Grounding Design



KARSTS - CAVITIES - SINKHOLES - GROUND WATER TABLE - FRACTURE ZONES

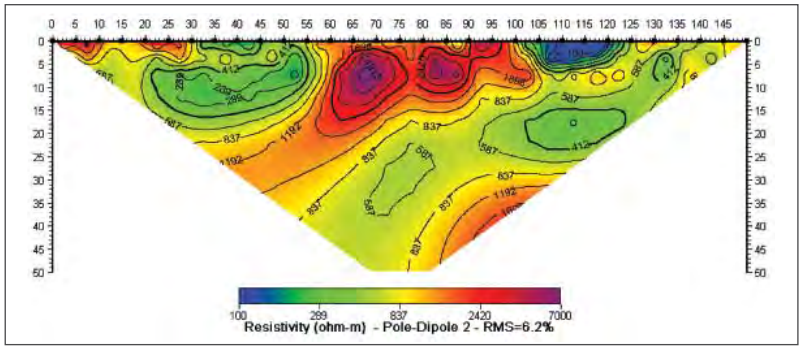
Project:
"KTENIAS", TRIPOLIS GREATER AREA, PELOPONESSE, GREECE

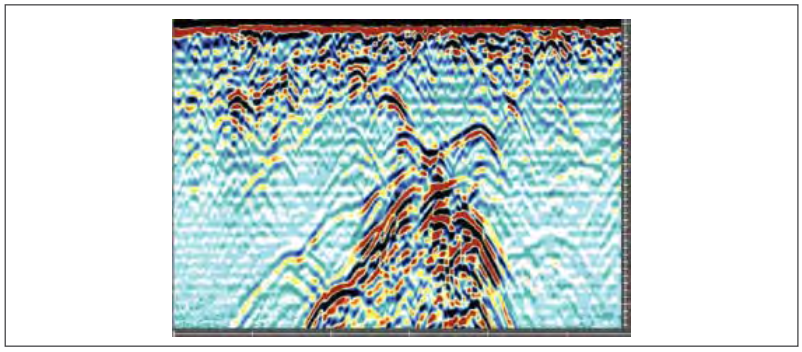
Scope:
- Detection of cavities-karsts, sinkholes and fracture zones with non-destructive geophysical methods

Geophysical Methods:
- Ground Penetrating Radar (GPR)
- Electrical Resistivity Tomography (ERT)

Geophysical Equipment:
- Mala Geoscience GPR (ProEx Control Unit, shielded antennas of 500, 250 MHz and unshielded of 100, 50 & 25 MHz central frequency, XV11 monitor, Trimple RTK GPS)
- Terrameter LS 16 channel resistivity meter, multicore cables, electrodes

Depth Range:
- 0 - 15m (GPR Method)
- 0 - 80m (ERT Method)





THESSALONIKI METRO, GREECE

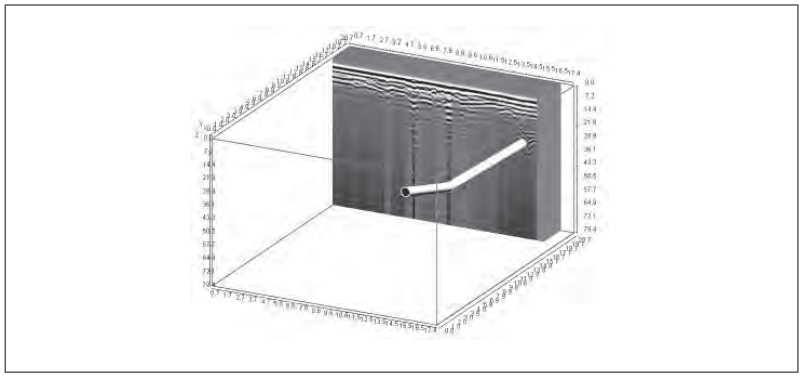
Project:
THESSALONIKI METRO, GREECE

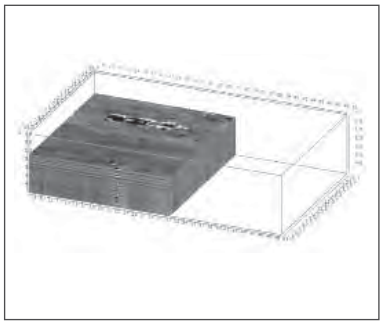
Scope:
- Detection of buried structures (water pipes, cables, sewer pipes, ancient remains, etc.), along the Metro Alignment using non-destructive methods

Geophysical Methods:
- Ground Penetrating Radar (GPR)

Geophysical Equipment:
- Mala Geoscience GPR (ProEx Control Unit, shielded antennas of 500, 250 MHz, 1.6 GHz central frequency, XV11 monitor, Trimple RTK GPS)

Depth Range:
- 0 - 6m





SEISMIC/DYNAMIC PROPERTIES OF SUBGRADE MATERIAL

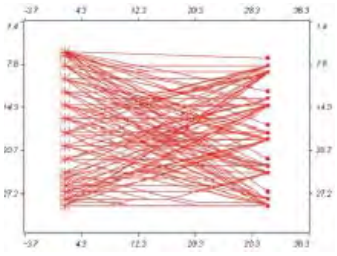
Project:
DESIGN OF "ASOPOS" EARTH DAM, GREECE

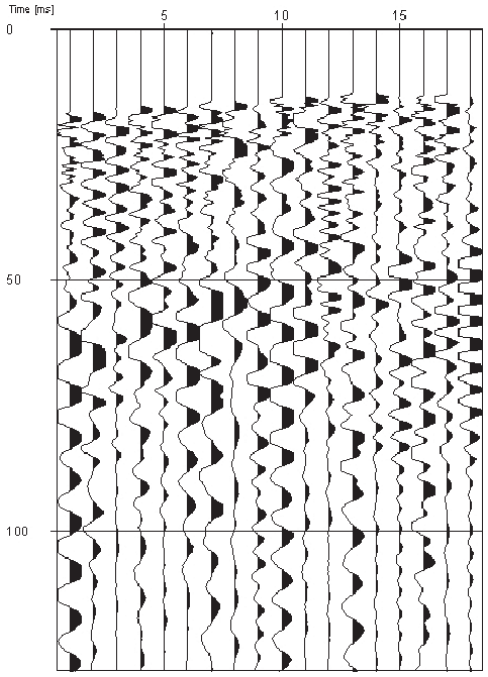
Scope:
- Detection of the dynamic elastic parameters of the subgrade materials in the foundation area for the a-seismic design of the dam (80m high)

Geophysical Methods:
- Seismic Tomography (CSL Method)

Geophysical Equipment:
- Digital Seismic recorder with 24 channels of GEOMETRICS Company, model SMARTSEIS, with sampling ability of 32 ms.
- Mechanical seismic source, automatic, with applicability within the borehole. Type MH 60 of company VIBROMETRIC OY.
- Wooden beam for the production of S-waves in the multi-offset VSP method.
- Chain of eight (8) tri-axial geophones, with 5 meters spacing between geophones and ability to attach them to the walls of the borehole.
- Control Box for controlling the seismic source. Control Box for controlling the geophones. Laptop to control the data quality and their preliminary processing.

Depth Range:
- 0 - 100m





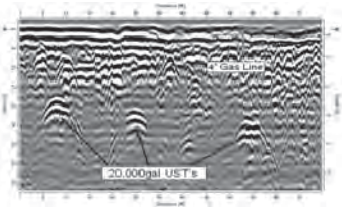
ENVIRONMENTAL APPLICATIONS - GROUNDING DESIGN

Project:
PETROLINA FACILITIES, CYPRUS

Scope:
- Hazardous waste mapping, underground storage tanks (UST), Resistivity definition for Grounding Design

Geophysical Methods:
- GPR
- ERT

Geophysical Equipment:
- Mala Geoscience GPR
- Terrameter LS 16 channel resistivity meter, multicore cables, electrodes



EXPERIENCE IN

CONSULTING SERVICES

GEOMELETI

Checking of Design, Expert Evaluation, Value Engineering, Tender Documents, Risk Assessment, Independent Engineer Services.

GEOMELETI

GEOTECHNICAL INVESTIGATION & DESIGN - CONSULTING SERVICES
44, Michalakopoulou str., 115 28 Athens, Greece
Tel: +30 210 72 52 085
e-mail: geomeleti@geomeleti.gr, www.geomeleti.gr