

GEOMELETI



GEOTECHNICAL ENGINEERS & GEOLOGISTS

AIRPORT PROJECTS

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

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





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 operates in accordance with and has been accredited in the following management systems:

- ISO 9001:2015 - Quality Management
- ISO 17001:2015 - Environmental Management
- ISO 45001:2018 - Occupational Health & Safety Management
- ELOT ISO/IEC 27001:2013 - IT - Information Security Management

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), Hochtief (Germany), 3P (Austria), SSF and ISP (Germany), DBI International (Germany, Qatar), etc.

MANAGEMENT

Petros Laskaratos:

Geotechnical - Civil Engineer M.Sc, having more than 30 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 20 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.

- 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

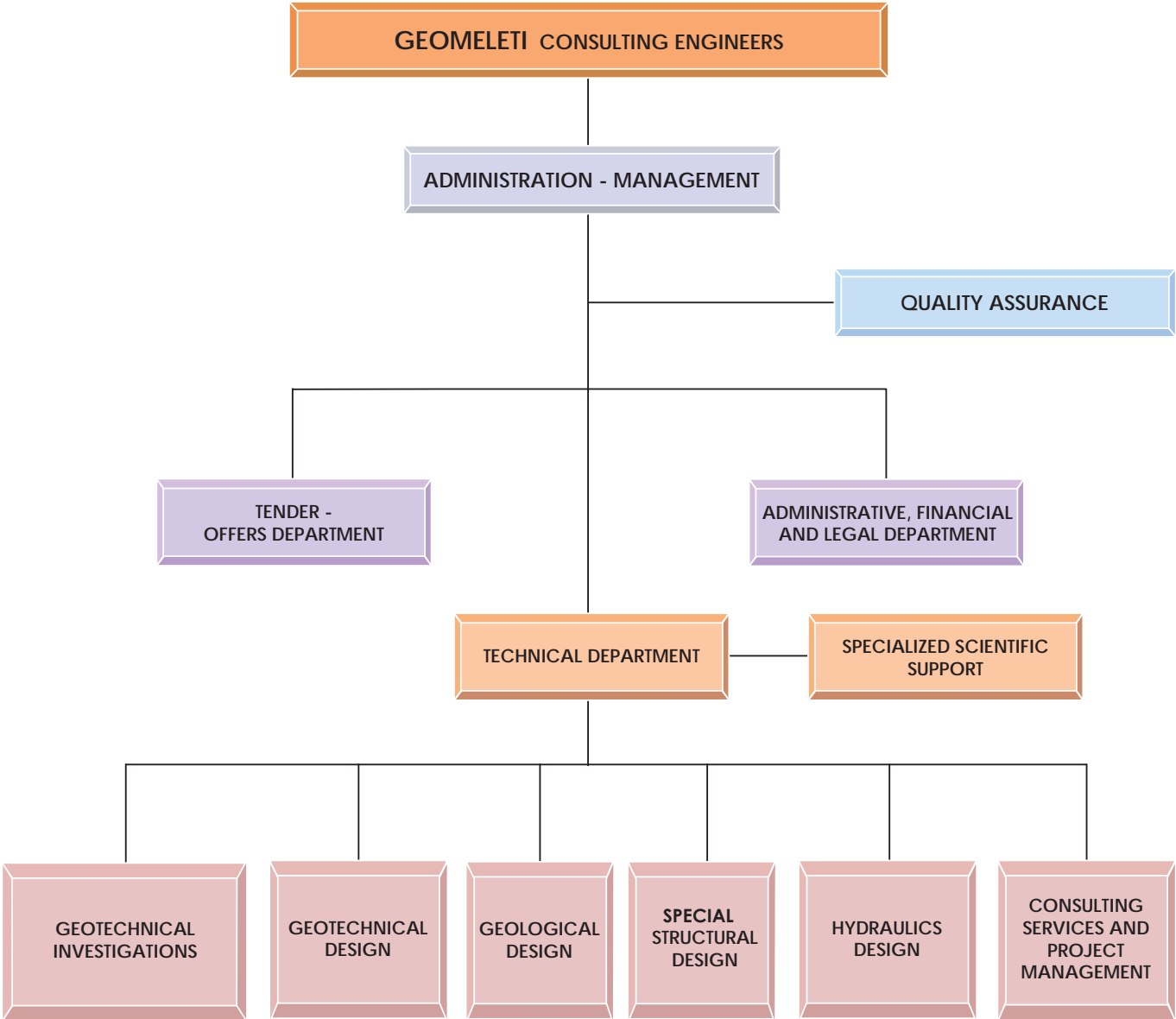
- Shallow - Deep Foundations
- Ground Improvement / Treatment
- Underpinning
- Dams - Hydraulic Projects
- Borrow Areas - Damping Sites
- Embankments
- Excavations
- Slopes and Landslides
- Geosynthetics (Design and Application)
- Retaining Structures
- Road / Airfield Pavements
- Tunnels - Underground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

- 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

GEOTECHNICAL INVESTIGATIONS

GEOTECHNICAL ENGINEERING DESIGN

GEOTECHNICAL CONSULTING SERVICES



EXPERIENCE IN

AIRPORTS



10 Airport Investigation and Designs



IKARIA ISLAND AIRPORT, GREECE

Client:
MINISTRY OF TRANSPORTATION - CIVIL
AVIATION AUTHORITY

Geotechnical Investigations and
Design of new airfield pavement,
extension of the existing and
design of the new open cuts
and embankment of the airport
area, design of buildings
foundation and access roads.



"ARISTOTELIS" AIPIORT IN KASTORIA, GREECE - LANDSCAPING AND EXPANSION OF THE RUNWAY

Client:
MINISTRY OF TRANSPORTATION - CIVIL AVIATION AUTHORITY

Kastoria Airport (passenger terminal, Aircraft parking positions B737 sized aircrafts, 2,000m² parking space for light aircrafts, runways ID 12/30 2,698 x 45 meters).
Offered Services: Geotechnical survey (boreholes, trial pits, laboratory tests), connection of the new with the old runway, borrow pits investigation for the materials needed for construction, design of embankments and trenches, settlement checks, temporary design of the new runway needed for aircrafts with International Standards.



"DIMITRIOS VIKELAS" AIRPORT IN SIROS ISLAND , GREECE

Client:
MINISTRY OF TRANSPORTATION - CIVIL AVIATION AUTHORITY

Syros Airport "Dimitrios Vikelas" (Passenger terminal, fire fighting station, Airport fire protection category 3, aircraft parking positions, runway ID 18/36 1,080 x 30 meters).
Offered Services: Full Structural Design of the main building of the airport (approx. 780m², composite structure) and several auxiliary structures (with total area 1,150m²).



LARNACA INTERNATIONAL AIRPORT "GLAFKOS CLERIDES" , CYPRUS

Client:
CUNNINGHAM LINDSEY, CYPRUS

Larnaca International Airport (elevation 2 meters above mean sea level, annual capacity 4.5 million passengers, 1 passenger terminal, 1 cargo terminal, 21 aircraft stands, 48 check-in desks, 9 gates, 3 baggage claim belts, runways ID 04/22, 2,980 x 45 meters)
Offered Services: Consulting Services for the rehabilitation of the damaged taxiways. Works included in situ testing and laboratory tests.



"KASTELI" AIRPORT IN HERAKLION, CRETE, GREECE - AIRCRAFT HANGAR CHECK

Client:
MINISTRY OF DEFENSE

Kasteli Military Airport.
Checking of structural design of the main hangar (2,000m²) and auxiliary installations.



KOS AIRPORT, TERMINAL BUILDING GREECE

Client:
J/V PAPACOSTOPOULOS-KARAGIANNIDES

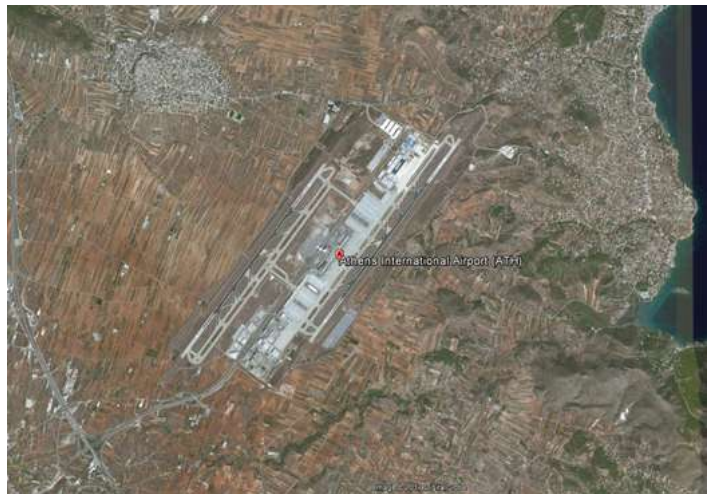
Canopies and Space Trusses of the Air Terminal Building, Island of Kos Airport. Offered Services: Structural Design and Shop drawings compiled for the Contractor



ATHENS INTERNATIONAL AIRPORT "ELEFTHERIOS VENIZELOS, GREECE - DESIGN OF OLYMPIC AIR HANGAR

Client:
OLYMPIC AIRWAYS

Athens International Airport "Eleftherios Venizelos" (runways 03R/21L 4000 x 45 meters and 03L/21R 3,800 x 45 meters). Offered Services: Tender Design of the main hangar of Olympic Air of a total area of 70,000m². The main hangar's roof is made of structural steelwork, is a 300m long (2 x 150m spans).

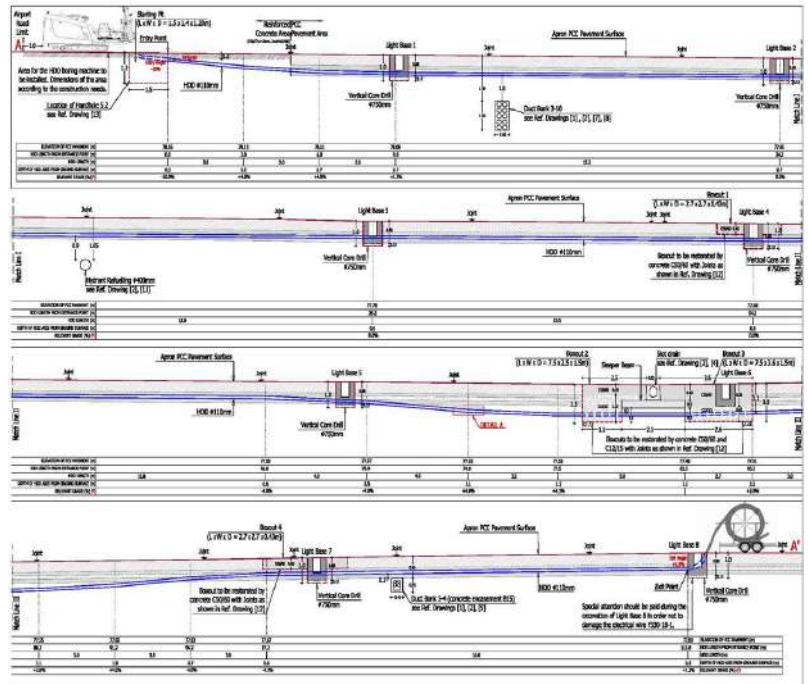


ATHENS INTERNATIONAL AIRPORT “ELEFTHERIOS VENIZELOS” – APRON AND AIRFILED LIGHTING

Client:
ATHENS INTERNATIONAL AIRPORT

Installation of the new Aircraft Stand Maneuvering Guidance Lights (lead-in) at stand A13 and A09 area at the Athens International Airport “Eleftherios Venizelos” in Spata, Greece. The new lights were required in order to enhance the Apron safety, and the pilots’ convenience providing visual aids on pavement during aircrafts docking procedure in conjunction with the new Visual Guidance Docking system.

Georadar method was used for underground utility detection. Horizontal Direction Drilling technique was used for conduit installation. Eight concrete light bases were designed at each area.



EXPERIENCE IN

GEOTECHNICAL INVESTIGATIONS



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.



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



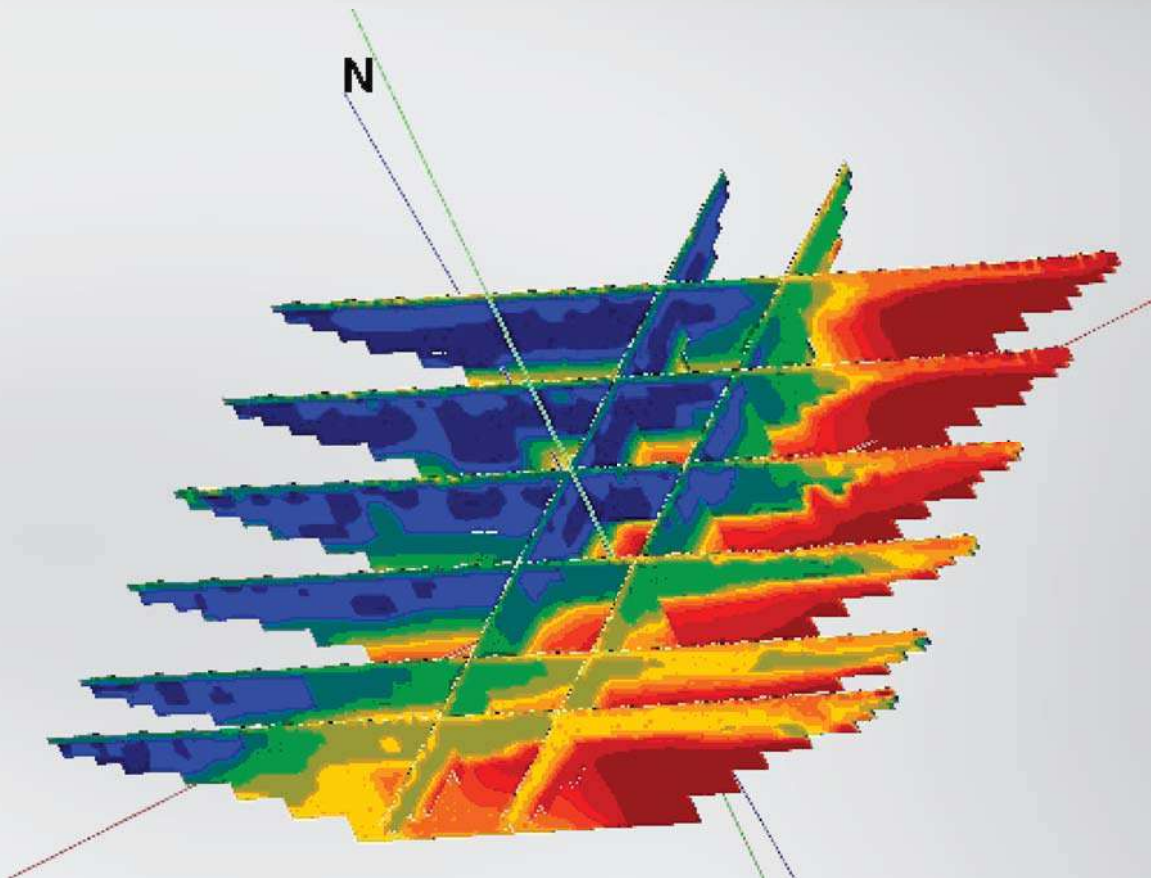
Soil Sampling

EXPERIENCE IN

G E O P H Y S I C A L I N V E S T I G A T I O N S



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,
PELOPONNESSE, GREECE

Scope:

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

Geophysical Methods:

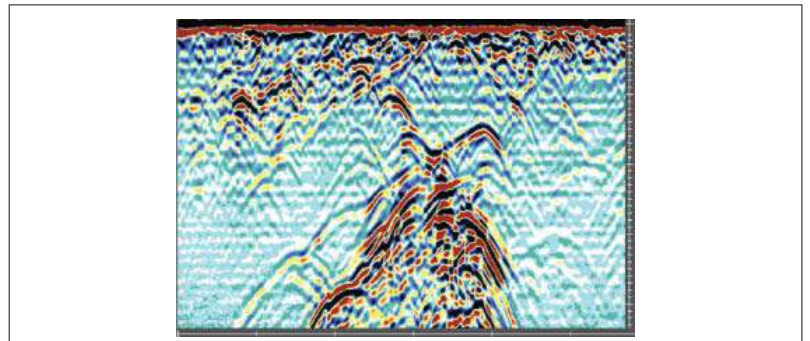
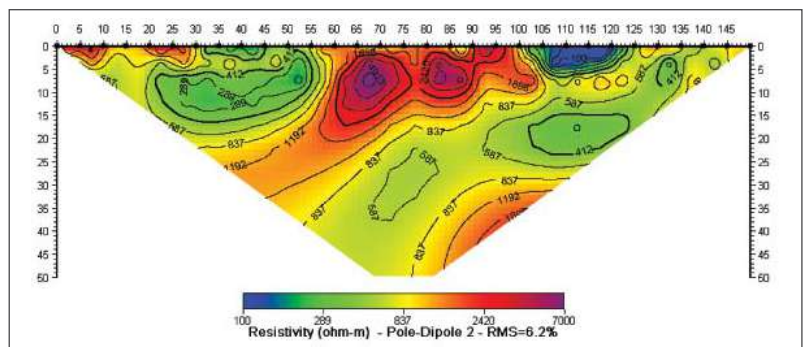
- Ground Penetrating Radar (GPR)
- Electrical Resistivity Tomography (ERT)

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, Trimble 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:

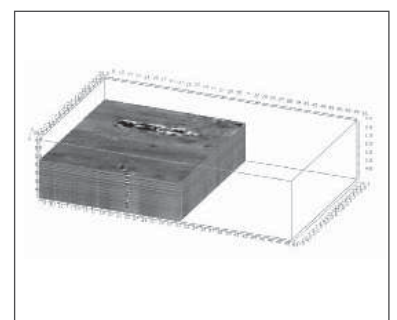
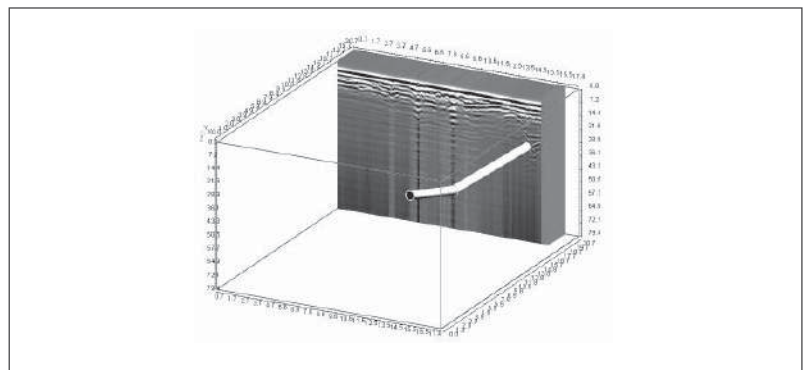
- Ground Penetrating Radar (GPR)

Geophysical Equipment:

- Mala Geoscience GPR (ProEx Control Unit, shielded antennas of 500, 250 MHz, 1.6 GHz central frequency, XV11 monitor, Trimble 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:

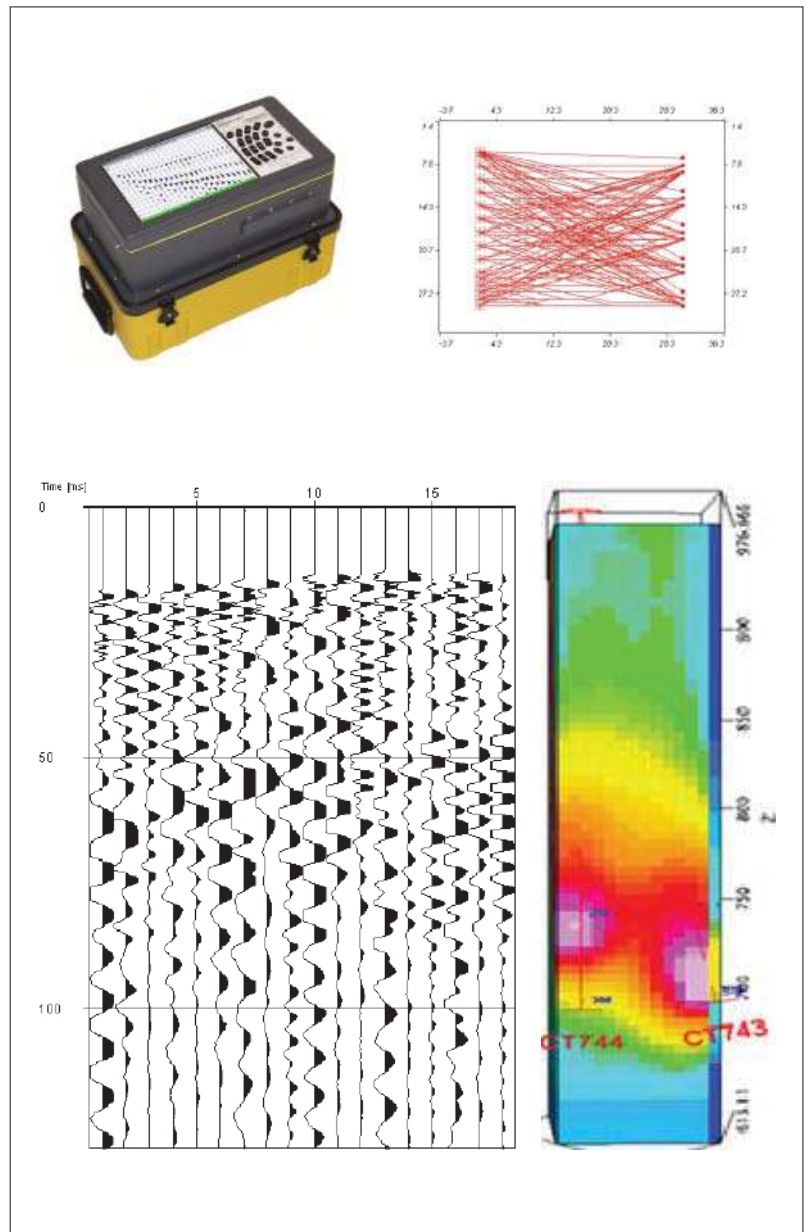
- Seismic Tomography (CSL Method)

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:

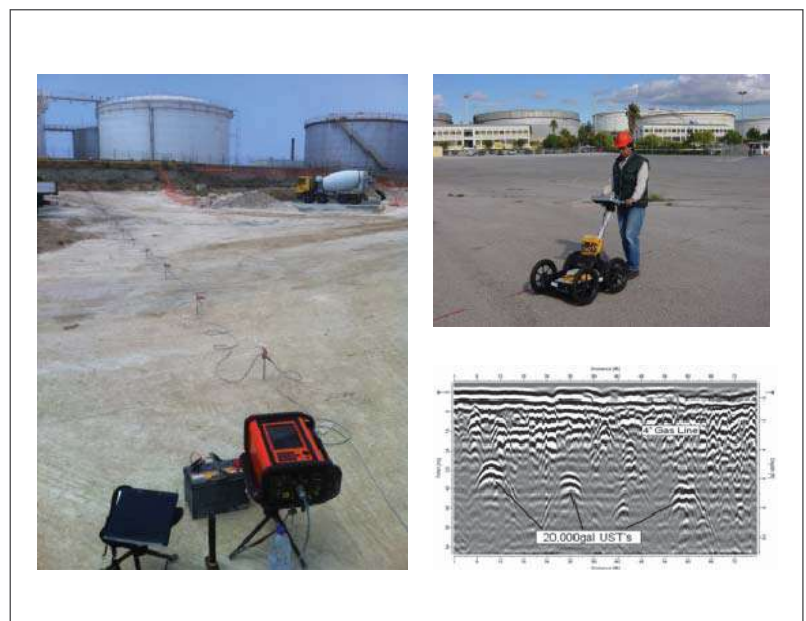
- Hazardous waste mapping, underground storage tanks (UST), Resistivity definition for Grounding Design

Geophysical Methods:

- GPR
- ERT

Geophysical Equipment:

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



EXPERIENCE IN

CONSULTING SERVICES



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



