

GEOMELETI



GEOTECHNICAL ENGINEERS & GEOLOGISTS

LANDFILL PROJECTS

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

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





COMPANY PROFILE

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), 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

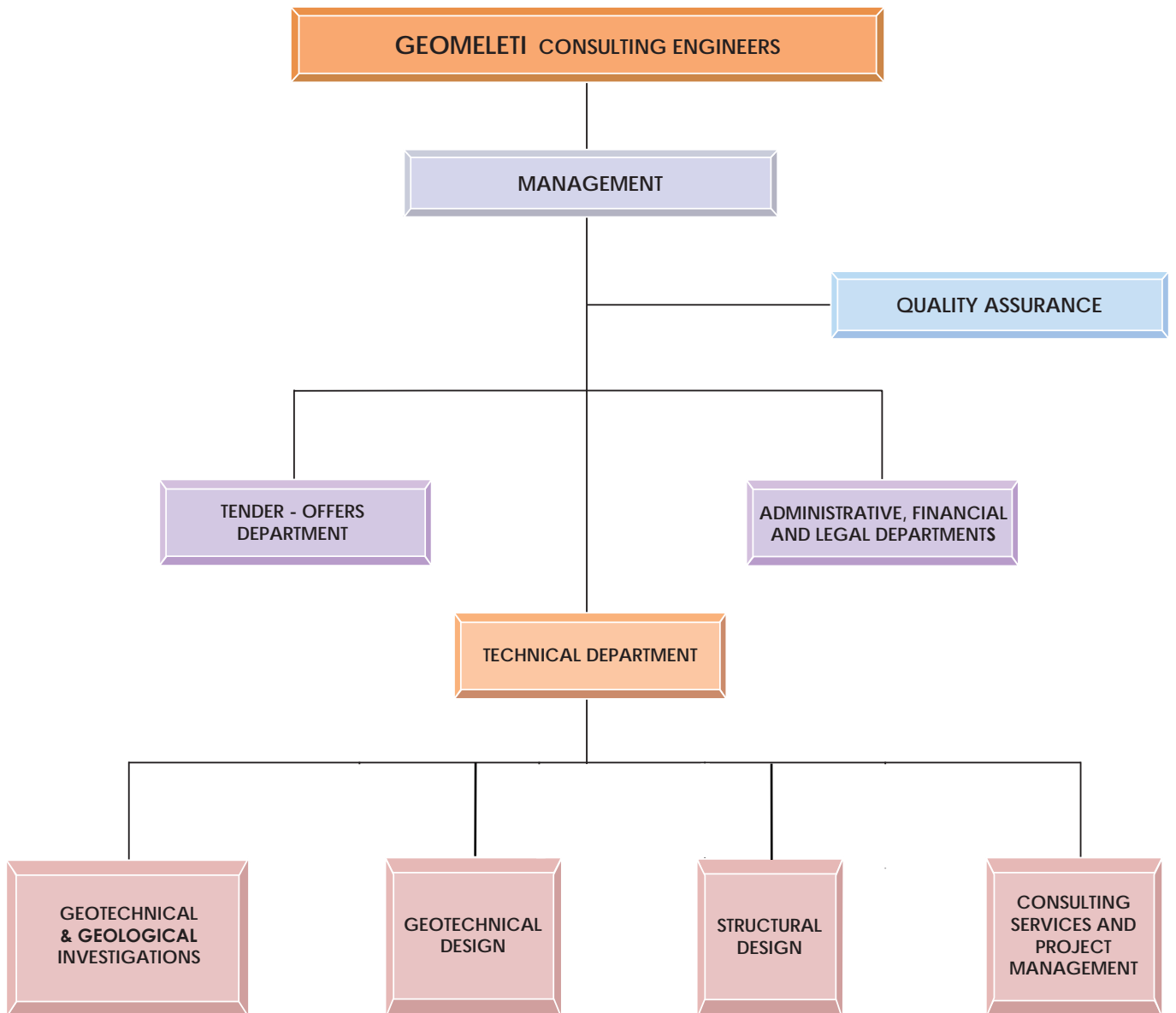
**GEOTECHNICAL
INVESTIGATIONS**

- Shallow - Deep Foundations
- Ground Improvement / Treatment
- Underpinning
- Dams - Hydraulic Projects
- Borrow Areas - Damping Sites
- Embankments
- Excavations
- Slopes and Landslides
- Geosynthetics
- 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
ENGINEERING DESIGN**

- 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
CONSULTING SERVICES**



SELECTED PROJECTS RELATED TO LANDFILLS

EXPERIENCE IN

LANDFILLS

Design of more than 15 landfills

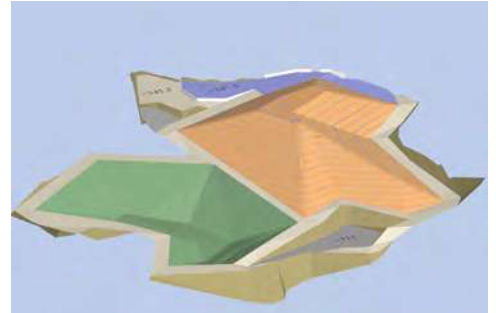


LANDFILLS

DESIGN OF 2nd REGIONAL UNIT OF IPIROS LANFILL, GREECE

Client:
IPIROS PREFECTURE

Design of landfill with the following characteristics:
Construction budget: 12,500,000 Euros
Number of Cells: 2
Cell Volume: 486,552m³ (A) and 306,901m³ (B)



DESIGN OF KERKYRA ISLAND LANDFILL, GREECE

Client:
MUNICIPALITY OF KERKYRA

Design of landfill with the following characteristics:
Construction Budget: 4,200,000 Euros
Number of Cells: 2
Cell Volume: 280,000m³
Cell Area Coverage: 31,467m² (A) and 11,809m² (B)



DESIGN OF TRIKALA LANDFILL, GREECE

Client:
TRIKALA PREFECTURE

Design of landfill with the following characteristics:
Construction Budget: 9,500,000 Euros
Number of Cells: 1
Cell Volume: 630,000m³
Cell Area Coverage: 76,000m²



**DESIGN OF NAXOS ISLAND
LANDFILL, GREECE**

Client:
KYKLADES PREFECTURE

Design of landfill with the following characteristics:
Construction Budget: 6,000,000 Euros
Number of Cells:1
Cell Volume: 463,400 m³
Cell Area Coverage: 44,000m²



**DESIGN OF XYLOKASTRO (3rd
PELOPONNESE REGIONAL
UNIT) LANDFILL, GREECE**

Client:
PELOPONNESE REGION

Design of landfill with the following characteristics:
Construction Budget: 4,650,000 Euros
Cell Volume: 312,500m³



**DESIGN OF KARPATOS ISLAND
LANDFILL, GREECE**

Client:
MUNICIPALITY OF KARPATOS

Design of landfill with the following characteristics:
Construction Budget: 3,000,000 Euros
Number of Cells: 2
Cell Volume: 159,000m³
Cell Area Coverage: 16,405m² (A) and 7,278m² (B)



LANDFILLS

DESIGN OF 2nd AETOLOAKARNANIA AND THERMOY LANFILL, GREECE

Client:
IRIA TECHNIKI SA - N. NIKOLOPOULOS
S.A. - MESOGEIOS SA /
AETOLOAKARNANIA PREFECTURE

Design of landfill with the following characteristics:
Construction Budget: 3,740,000 Euros
Number of Cells: 2 Cell
Volume: 180.000 m³
Construction Completion: 2010 / 2009
Project Location: Monodendri / Vlachomandra



DESIGN OF CHIOS ISLAND LANDFILL, GREECE

Client:
OMIROS ATE / CHIOS PREFECTURE

Design of landfill with the following characteristics:
Construction Budget: 7,940,000 Euros
Number of Cells: 2
Cell Volume: 220,000m³
Cell Area Coverage: 55,000m²



DESIGN OF SERIFOS ISLAND LANDFILL, GREECE

Client:
SERIFOS MUNICIPALITY

Design of landfill with the following characteristics:
Construction Budget: 1,500,000 Euros
Number of Cells: 2
Cell Volume: 50,000m³
Cell Area Coverage: 10,000m²
Construction Completion: 2014
Project Location: Katano Cape



DESIGN OF KOZANI LANFILL, GREECE

Client:
KOZANI MUNICIPALITY

Design of landfill with the following characteristics:
Construction Budget: 4,541,000 Euros
Cell Volume: 654,904m³
Cell Area Coverage: 54,000m²
Construction Completion: 2010



DESIGN OF ARGALASTI LANDFILL, MAGNISIA PREFECTURE, GREECE

Client:
PRISMA DOMI S.A.

Design of landfill with the following characteristics:
Construction Budget: 2,200,000 Euros
Cell Volume: 100,000m³
Cell Area Coverage: 17,700m²
Construction Completion: 2009
Project Location: Kavala - Rouga



DESIGN OF MYKONOS ISLAND LANDFILL, GREECE

Client:
CYCLADES PREFECTURE

Design of landfill with the following characteristics:
Construction Budget: 4,888,000 Euros
Number of Cells: 1
Cell Volume: 422,000m³ (B)
Cell Area Coverage: 80,000m²
Construction Completion: 2009
Project Location: Messaria



EXPERIENCE IN

GEOSYNTHETIC APPLICATIONS



Design of various structures incorporating all modern-technology geosynthetic materials (geogrids, geotextiles, geomembranes, etc).



GEOSYNTHETIC APPLICATIONS

CONSTRUCTION OF RESERVOIR IN GREENHOUSE INSTALLATION AT DRAMA CITY AREA, THRACE PREFECTURE, GREECE

Client:
LINKCHART HELLAS S.A.

Geotechnical Design, Inspection and Consulting Services during construction of the reservoir required for the 100.000m² Greenhouse with special geotextiles and geomembranes.



REINFORCED EMBANKMENT AT CH. 247+880 OF THE NEW ATHENS - THESSALONIKI MOTORWAY, THESSALY, GREECE

Client:
MINISTRY OF PUBLIC WORKS /
THESSALIKI S.A.

Geotechnical Design and Dimensioning of a reinforced embankment (length=150m, height=15m) with geogrids.



RESTORATION OF SXISTOS LANDFILL AREA, GREATER ATHENS AREA

Client:
MINISTRY OF PUBLIC WORKS /
PRISMA DOMI S.A.

Geotechnical Design and Dimensioning of the protection measures at the western slope area of the landfill by special geotextiles, geomembranes and geogrids in order to restore the landfill.



IKARIA ISLAND RESERVOIR GREECE

Client:
MINISTRY OF AGRICULTURE

Consulting Services during the construction of Ikaria reservoir, including application of geomembrane/geotextile waterproofing system. Volume of the reservoir is 150.000m³.

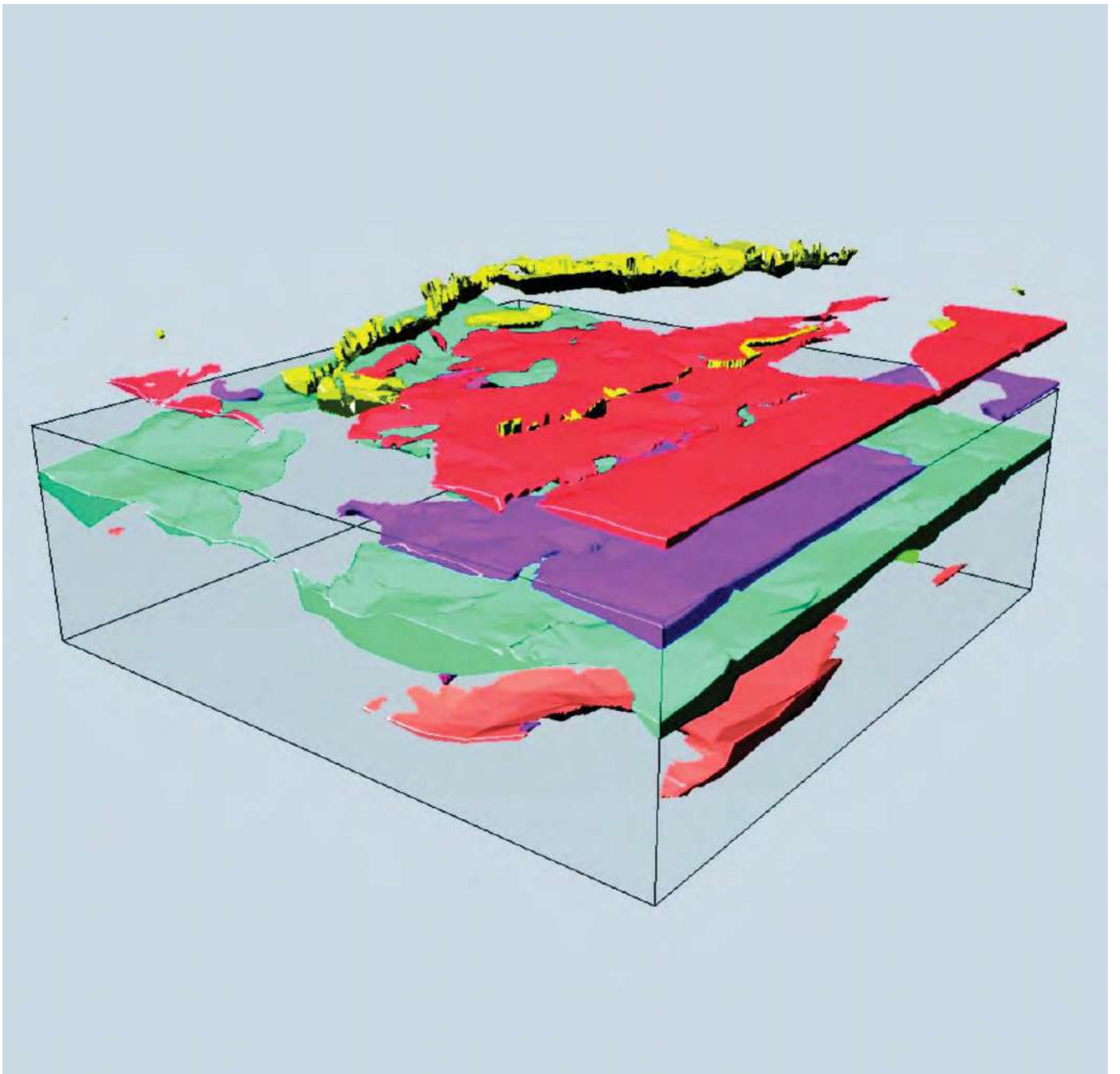


EXPERIENCE IN

GROUND WATER MANAGEMENT



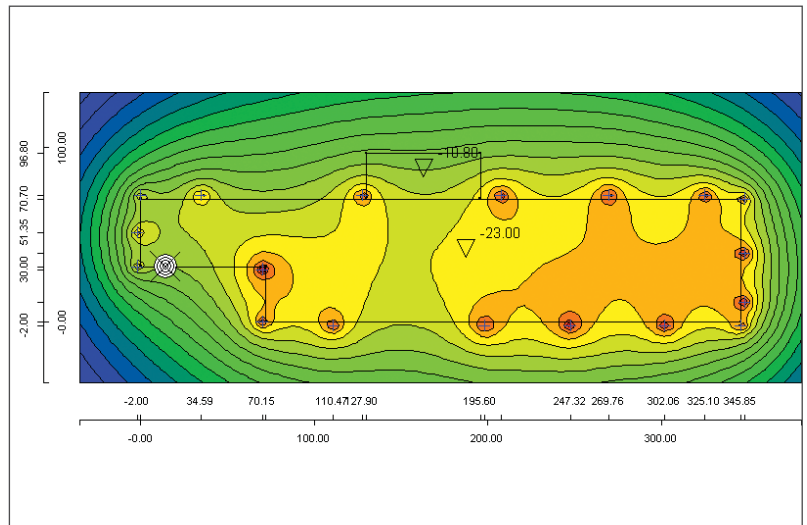
Geological - Hydrogeological Studies, 3-D Modeling,
Well Testing and Development, Dewatering Design,
Desalination Systems, Geochemical Analyses, GIS Applications.



DEWATERING DESIGN OF EDUCATION CITY STATION, DOHA METRO

Client:
SSF Ingenieure S.A.

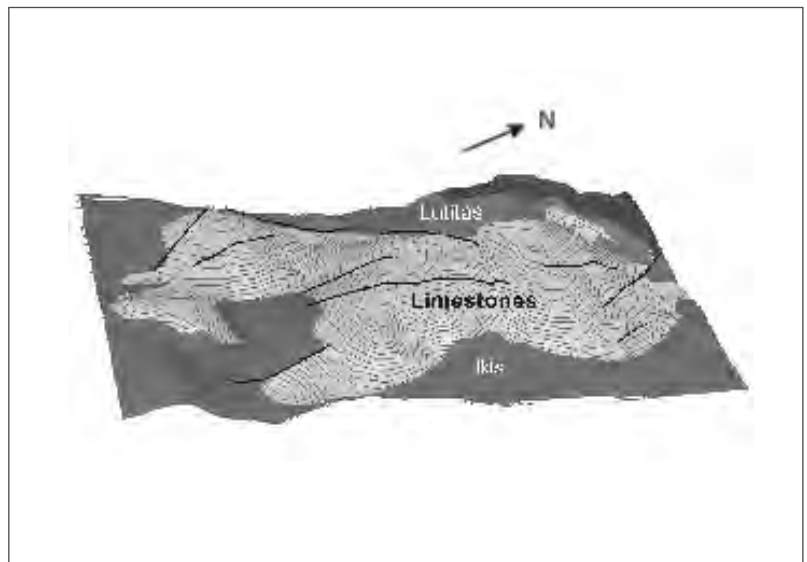
Assessment of the Geological & Hydrogeological data, Calculations, Modelling & Design of the Dewatering System of the Station for the Pre-Tendering Design.



HYDROGEOLOGICAL STUDY FOR THE PROTECTION OF THE GROUND WATER AQUIFER SYSTEM EL COLORADO AREA, EL SALVADOR

Client:
EL SALVADOR CEMENT INTUSTRY

Geological & Hydrogeological Study, Geochemical Analyses of the Ground Water System, 3-D Modelling.



ARTIFICIAL RECHARGE OF KARSTIC GROUND WATER USING 3-D MODELLING, ENIPEAS RIVER BASIN, THESSALY, GREECE

Client:
THESSALY PREFECTURE

Geological & Hydrogeological Model, Ground Water Model using 3-D CAD techniques for the delineation of the aquifer geometry.

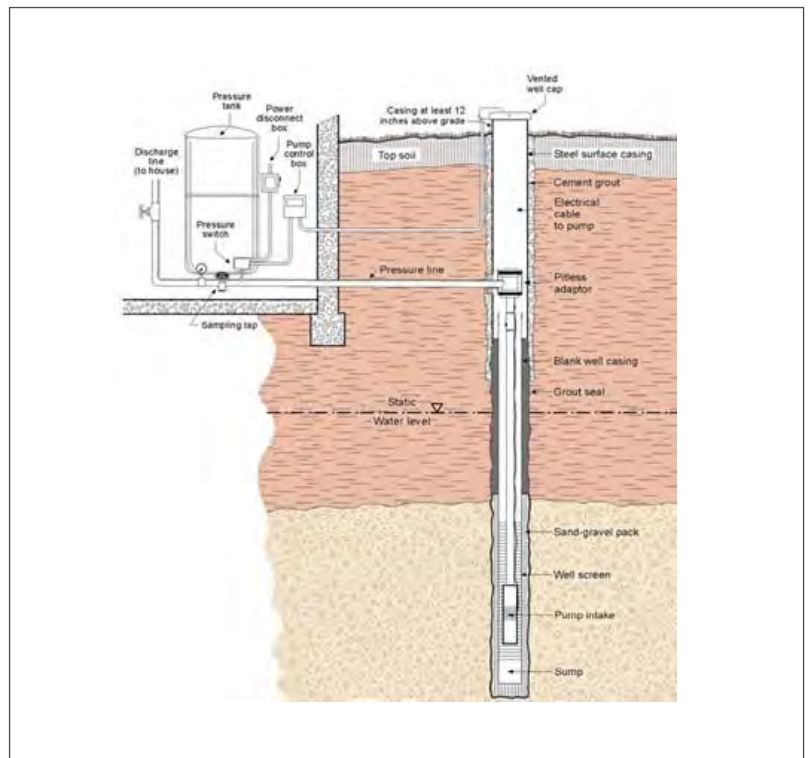


GROUND WATER MANAGEMENT

WELL REHABILITATION AND DEVELOPMENT AT 10 WELL FIELDS, NORTH THESSALY BASIN, GREECE

Client:
THESSALY PREFECTURE

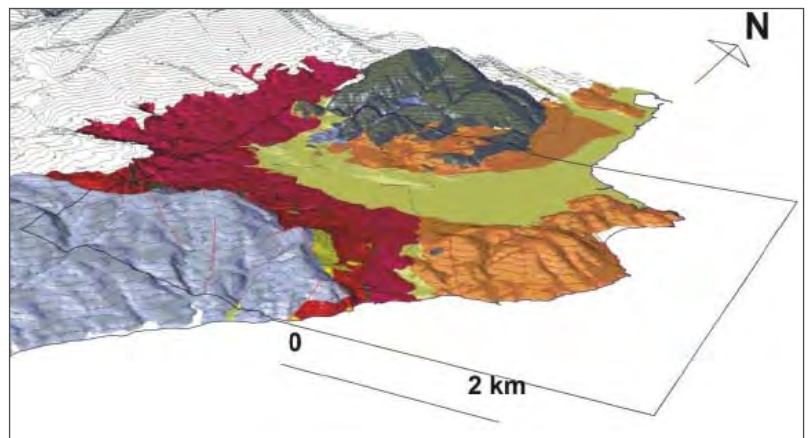
Data Collection, Field Observation, Pumping Tests, 3-D Ground Water Model for each Well Field, Well Development Studies.



GEOCHEMICAL ANALYSIS MODEL AT THE KAVALA REGION GEOTHERMAL FIELD, MACEDONIA, GREECE

Client:
MACEDONIA PREFECTURE

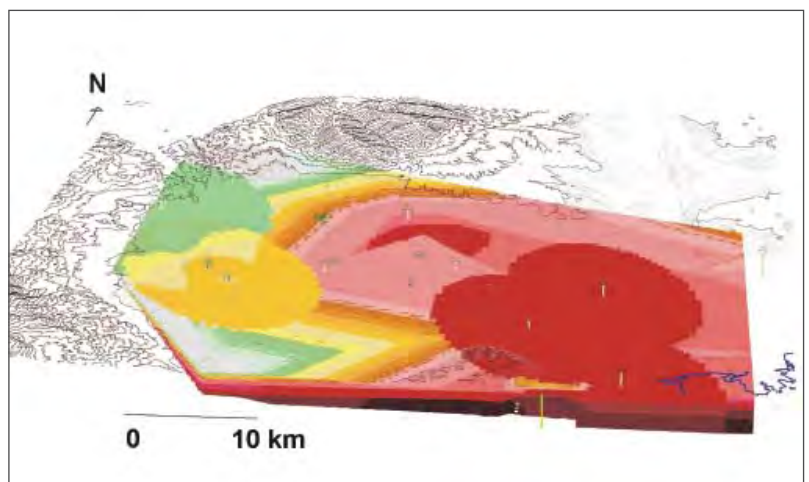
Geological Study, Geochemical Analyses, 3-D Modelling of the chemical elements scattering.



HYDROGEOLOGICAL STUDY FOR THE WATER SUPPLY OF THE INDUSTRIAL ZONE OF PATRAS, GREECE

Client:
HELLENIC BANK FOR THE INDUSTRIAL DEVELOPMENT (ETVA S.A.)

Geological & Hydrogeological Study, Artificial Recharge Study, Well Exploration, Pumping Tests, 3-D Modelling.



EXPERIENCE IN

GEOTECHNICAL INVESTIGATIONS



More than 30.000m of coring boreholes, both on-shore and off-shore with in-situ and laboratory testing for more than 500 different projects.



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

Our experience includes execution of more than 30.000m 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

GEOTECHNICAL INVESTIGATIONS



Laboratory Testing



Trial Excavation



Pressuremeter Testing



Rock Sampling



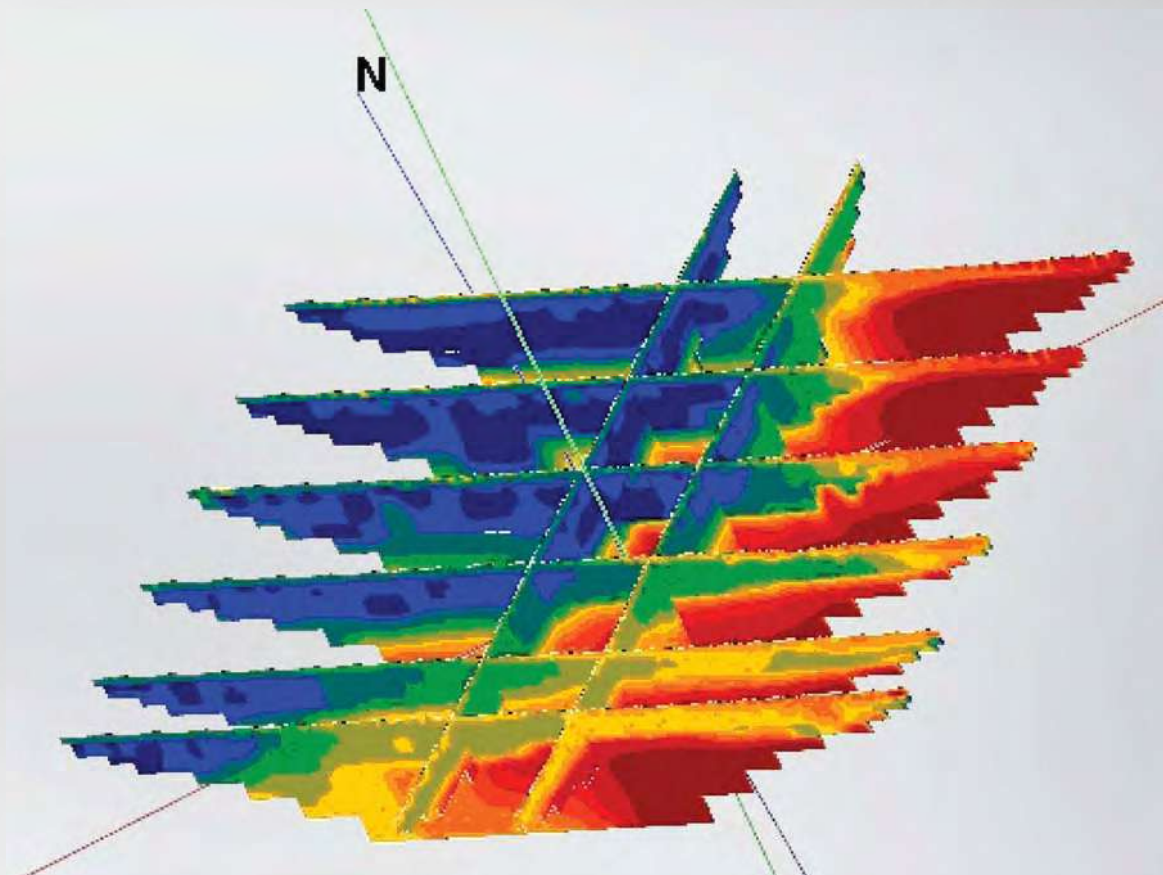
Soil Sampling

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



GEOPHYSICAL INVESTIGATIONS

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:

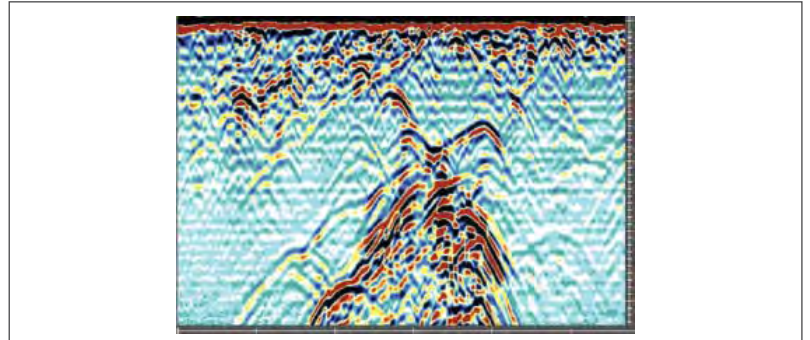
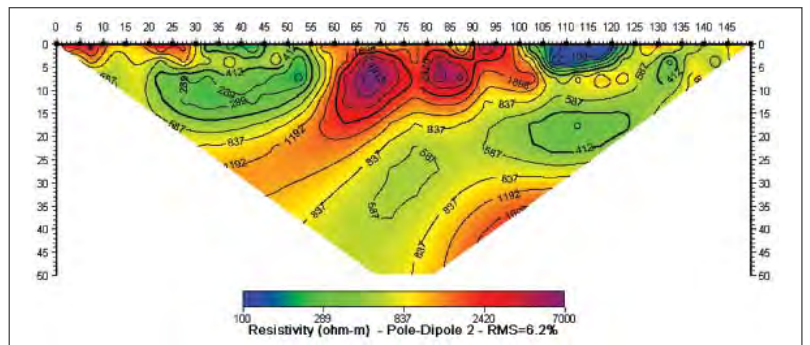
- Ground Penetrating Radar (GPR)
- Electrical Resistivity Tomography (ERT)

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:

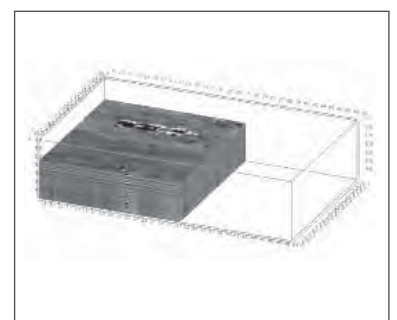
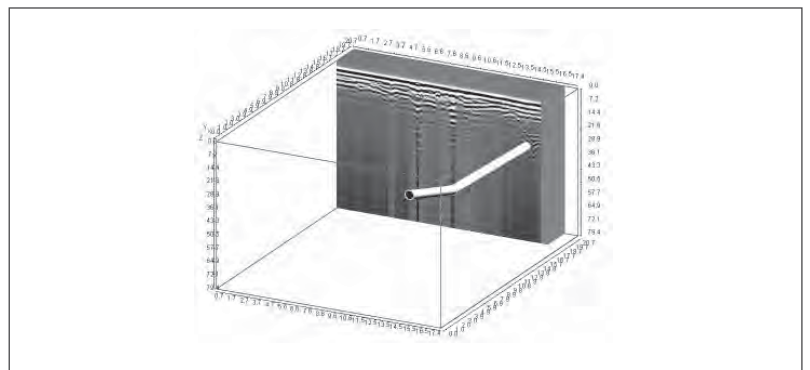
- Ground Penetrating Radar (GPR)

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:

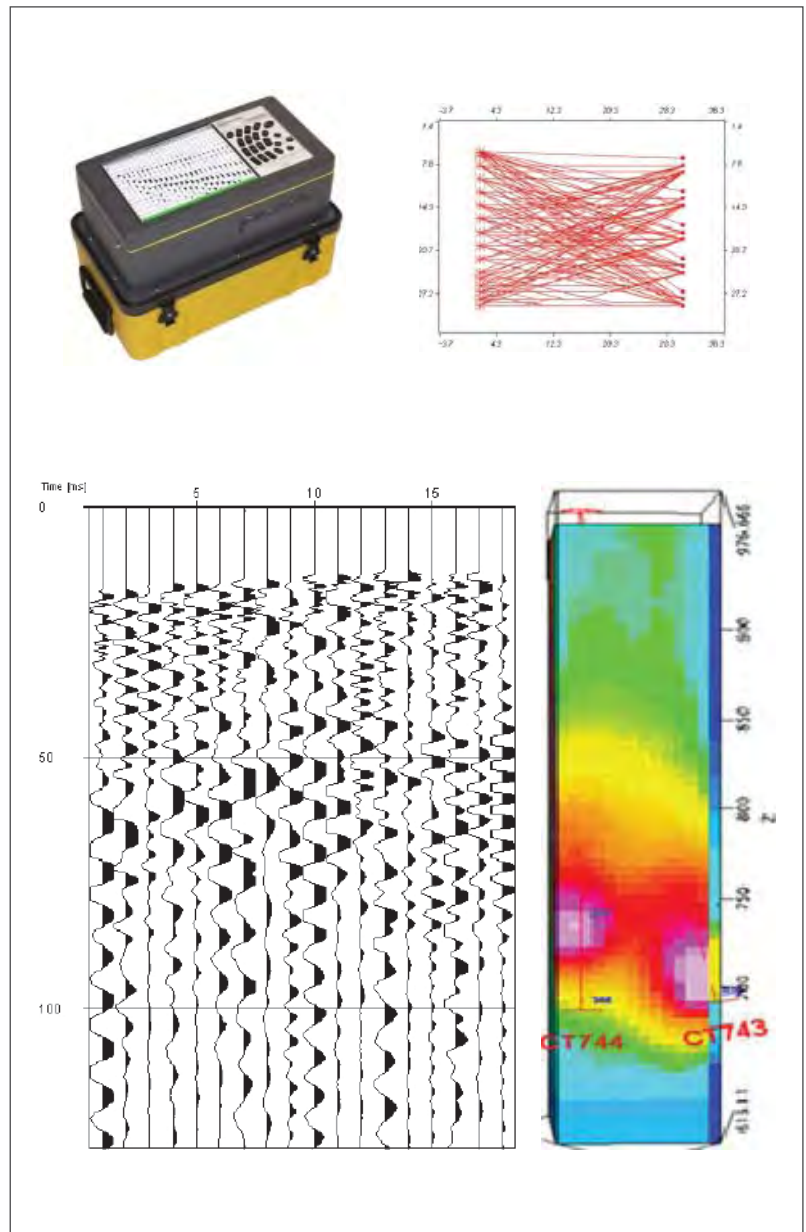
- Seismic Tomography (CSL Method)

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

