

## COMPANY PROFILE

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# About us

**IdroGeo Engineering & Consulting** was founded in February 2001 with the aim of providing customers with a series of complete services in the field of **environmental engineering, hydrogeology, hydrology and hydraulic engineering, geology, geotechnics, environmental geology** and **decontamination**.

The company is made up of 10 senior geologists specializing in the fields of **geology applied to engineering, geothermal and hydrogeology** with a high level of know-how in the **search for thermal and geothermal resources**.

Ahead of the creation of **IdroGeo** there are over 20 years of professional and business experience of the founding members.

**IdroGeo Engineering & Consulting** is member of **A.N.I.PA.** (Associazione Nazionale Imprese Pozzi per Acqua), **U.G.I.** (Unione Geotermica Italiana/Italian Geothermal Union), **Rete Geotermica Italiana**, participates in European projects aimed at the development of geothermal energy (GEOELEC - KP7) , **GEOENVI** and a **HORIZON-2020 project, SOTACARBO FAULT LAB** for **CO<sub>2</sub>** storage, **Master in Green Economy 2019** University of La Sapienza Roma – geothermal energy and district heating topics.

**IdroGeo Engineering & Consulting** is now organized with a solid and competent team of geologists, who successfully work on different projects on the Italian and International contest.

**Idrogeo is certified according to the ISO Standards for Quality (9001)**

# group

## founding members

**SIMONE FIASCHI**

**ALESSANDRO MURRATZU**

## Coordinator

**LAILA TADDEI**

*Geotechnics &  
Geochemistry*

## Senior Geologists

**ELENA PELLEGRINI**

*Hydrogeology &  
mining sites*

**ALESSIO CALVETTI**

*GIS cartography &  
modelling*

**ALICE CIULLI**

*Environment &  
Geothermal*

**GIADA DE ANGELIS**

*Geotechnics &  
Environment*

**GABRIELE BOSCHI**

*Geotechnics &  
Geochemistry*

**LORENZO DONINI**

*GIS cartography &  
Geochemistry*

**IRENE GELLI**

*Geochemistry &  
Environment*

# services



## GEOCHEMISTRY & CO<sub>2</sub> RESEARCH

projects covering vast areas or specific research for:

- georesources,
- spa waters,
- geothermics,
- district heating
- environmental decontamination.

Geochemical analysis in particular, coupled with in-depth geophysical surveys, constitute the basis for the research and correct exploitation of underground and/or geothermal fluids.

Technical gas geocapture research and rely on geochemical and geological studies as the starting point for the development of strongly growing industrial initiatives.

We are able to conduct chemical analysis of water and gas to reconstruct geochemical and isotopic anomalies, hydrogeology courses, water dating, support studies for the origin of natural and/or artificial pollutants, geothermal anomalies, etc.

We draw upon the experience and skills acquired in geology and underground gas flow dynamics to manage research projects and the exploitation of new initiatives.



## CITY PLANNING, HYDROLOGY AND & SEISMIC DANGER

We carry out support studies for Structural Plans, City Planning Regulations and in general for municipal town planning, town planning tool variants and Executive City Planning Projects (revitalisation plans, land parcelling, etc.).

We conduct surveys and studies for Catchment Area Plans and territorial planning for vast areas such as territorial coordination plans at provincial or interprovincial level, plans coordinated between municipal administrations and regional guidance plans.;

We perform seismic, geomorphological, hydraulic and hydrogeological availability surveys with data confirmation and comparison with vast area studies (regional, catchment area and provincial projects).

We also carry out seismic micro-zoning studies.

We coordinate and prepare Municipal Civil Defence Plans and provide round-the-clock support for the monitoring and management of hydrogeological danger situations.



## GEORESOURCES, NATURAL GAS & HYDROCARBONS

IdroGeo Engineering & Consulting offers a complete service for:

- studies in support of research and exploitation
- environmental impact studies for the research and exploitation of georesources
- field surveys to acquire geophysical, structural and fluid data
- results analysis and reconstruction of the logical deposit site model
- planning of research and exploitation works (wells, mines, quarries, etc.)
- assessment of exploitable resources and post-exploitation environmental recovery and restoration plans
- digital modelling using dedicated software for deposit exploitation
- vast area studies to optimise resource exploitation and monitoring plans
- planning and management of open quarry works and mining exploitation

# services



## GEOENGINEERING, GEOTECHNICS & ENVIRONMENTAL GEOLOGY

We implement integrated geology, engineering and environmental projects, planning for risk situations and safeguarding the ecosystem of the work site.

We provide data analysis and interpretation of geognostic, geophysical and laboratory surveys to reconstruct the geological model and geotechnical model of the foundation ground.

We apply the geological information to know-how and to solving environmental problems deriving from human influence on the environment and environmental influence on humans.

We perform digital modelling and reconstructions, simulating action plans and timing.

We carry out environmental audits, characterisation plans, risks analysis and site decontamination projects (former industrial sites, landfills, mining areas, etc.).



## GEOTHERMICS, AIR CONDITIONING & RENEWABLE ENERGY

Single cycle, binary or HDR geothermics for:

- energy production;
- permit research;
- management services for concessions in the development of geothermal fields.

We implement integrated projects with professionals and expert researchers in the field and in drilling for energy production using:

- medium and high enthalpy systems,
- low environmental impact
- binary ORC cycle systems.

We complete integrated projects using thermal solar, photovoltaic panels and geothermal probes with heat pumps for energy saving and emission reduction purposes.

We carry out preliminary studies on the exploitation of geothermal resources, EIA studies, plan exploratory drilling, Air conditioning of buildings with the Earth's natural heat; Geothermal probes and down/upwelling for civic and industrial heating and cooling; geothermal probe/land/heat pump or groundwater/heat pump system.



## HYDROGEOLOGY, SPA & DEEP WATER CIRCULATION

We plan and provide technical support to contracting parties in the search for deep water resources and technical gases, with particular experience in the thermal and mineral sectors and for district heating.

We specialise strongly in the sector of spa water and geothermal deposit research. A unique know-how backed by important partnerships with universities and companies specialising in exploratory drilling.

We assess the renewable resources of a hydrogeological system, sources study and reconstruction of the depletion curve, well design and well fields, and assess the interference between catchment works and the studies of fractured rock and karst aquifers.

We perform digital reconstruction of the hydrogeological model of the groundwater using Ground Water Vistas software.

# References



# Projects

Main renewable (geothermal, solar..) and mining activities in the last 10 years

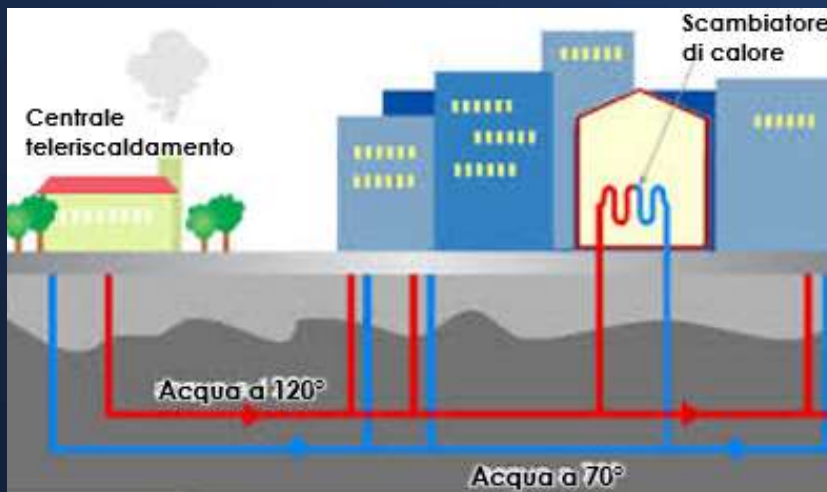
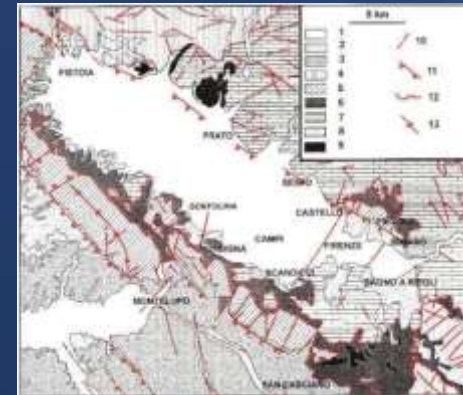
- ✓ Exploration Geothermal Permit Licences for electricity production with zero emission power plants and district heating projects;
- ✓ Environmental Impact Assessment studies for drilling geothermal wells, oil&gas wells, solar, wind and geothermal power plants; electric lines;
- ✓ Feasibility studies for thermal water researches, recognition of the geothermal and thermal waters;
- ✓ European projects: GEOENVI; Fault Lab; Geo Energy projects
- ✓ Low enthalpy geothermal projects for building air conditioning

# Projects



Florence, 2019

Feasibility study, 3D geological model and preliminary geothermal model to support the project for the construction of a city district heating plant in the city of Florence



Kyotherm - Parigi  
Tuscany, 2016



Preliminary geological, hydrogeological and geothermal study and geothermal exploration research Application for authorization to build a district heating plant in Castelfiorentino (FI)



# Projects



## Qualtra - Tuscany, 2018

Environmental Impact Assessment for the construction of the Qualtra power plant, Mensano Concession - for electricity production



## IMMOBILIARE SANTARLASCIO SRL Lucca, 2020

Exploration Permit "Sant'Arlascio";  
Environmental Impact Assessment for drilling well finalized to the Lucca city district heating realization;

- Environmental Impact Assessment;
  - Preliminary project;
  - Archaeological report;
  - Acoustic Report;
  - Emissions report;
  - Landscape report;
  - Flora and fauna

# Projects



## Piombino, 2021 –SPV ENERGY 1 SRL

GEOLOGICAL, GEOMORPHOLOGICAL AND HYDROGEOLOGICAL REPORT OF HYDRAULIC FEASIBILITY SUPPORTING THE ENVIRONMENTAL IMPACT STUDY FOR THE ENVIRONMENTAL IMPACT ASSESSMENT PROCEDURE FOR A **SOLAR POWER PLANT - 9.800 KWP**



## Tuscany-Lazio interregional solar project, 2021 – IBERDROLA

GEOLOGICAL, GEOTECHNICAL AND HYDRAULIC SUPPORT FOR SOLAR POWER PLANT “MONTALTO-PESCIA” LAZIO REGION 65.286 kWp

# Projects



Tuscany, 2017

**Technical documentation** for geothermal resources Exploration Permits "La Pianaccia", "Casanuova" documents pursuant to Legislative Decree 22/2010

Tuscany, 2014

**Direction of Works of Reflection Seismic Investigations** (geothermal research permits called Montorio, Le Cascinelle, Poggio Montone, La Grasceta, Celle sul Rigo in the Tuscany and Lazio regions)

Tuscany, 2016

**geological assistance** on site (Legislative Decree 624/96) of 4 **thermometric wells drilling** in the geothermal research permits, Le Cascinelle and Poggio Montone in the Tuscany Region.



# Projects



Sardegna, 2021



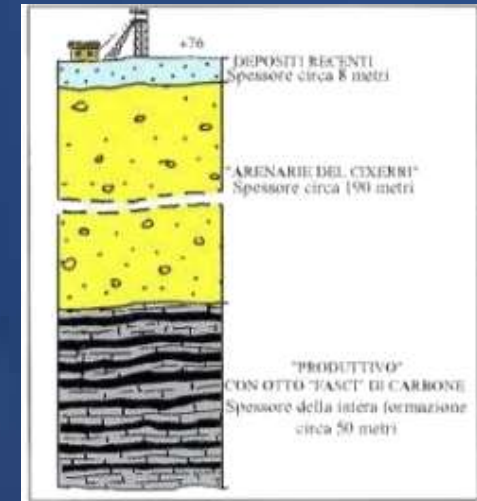
Hydrogeological consultancy for the design and construction supervision of seismic and geophysical monitoring wells and piezometers for the Fault lab project for the reintroduction of the final storage of CO2 into the subsoil in Matzaccara Carbonia Sardinia Region



Emilia Romagna, 2015

EIA procedure for drilling the well for hydrocarbons Armonia 1dir research permit for hydrocarbons Ponte dei Grilli- Ferrara-integrazioni.

Execution of geognostic and environmental investigations and geological report to support the drilling of the well for hydrocarbons Trava 2dir research permit for hydrocarbons Ostellato Ferrara.



Emilia Romagna, 2016

Drafting of additions to the EIA procedure for the "Gradizza" hydrocarbon mining concession in the Emilia Romagna Region.

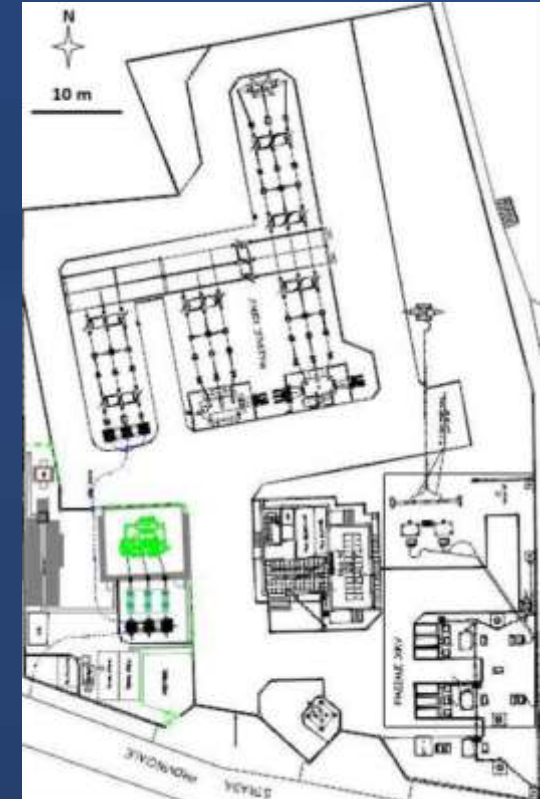
# Projects



TUSCANY, 2020

environmental documents for the authorization of the installation project in a reactor in C.P. San Giuseppe (Elba island)

- Hydraulic report;
- Geological report;
- Landscape report;
- Drone rendering and survey.





Thank you!

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