

Claudio PASQUA

Key Qualifications: *Team Leader Senior Geologist* participating in projects of exploration and assessment of natural resources for production of renewable energy in all phases of development, from initial reconnaissance up to exploitation.

Involved since 2010 -as Team Leader/Project Manager and Senior Geologist- in several prefeasibility, feasibility studies and detail design for Geothermal, Hydro, Irrigation and Water Resource assessment Projects, in Africa, East Asia, Europe, Latin America and Oceania, with full responsibility for the liaison with the Authorities, Client and Lending Institutions, contract negotiation, elaboration of progress and final reports, subcontractor coordination, integrated interpretation of the data. Development of transfer of technology and training of local personnel programs. Coordinator for the international bidding process. Since 2023 responsible for the technical development of the Edison's hydroelectric projects (i.e., large dams, mini hydro, pumping storage plants).

Date of Birth: 21/07/1975

Citizenship: Italian

Education:

- Registration at the geological professional register of Piedmont n.887 until 2023
- Ph.D. in Earth Science - Genova University (Italy) - Department of Earth, Environment and Life Sciences (DISTAV), 2019
- M.Sc. in Earth Science - Milan University (Italy), 2004
- B.Sc. in Earth Science - Milan University (Italy), 2000
- Degree in Land Surveying at ITSG P. L. Nervi, Novara (Italy), 1994

Other training:

- 2013: Course on Geothermal Reservoir Engineering and Modeling - SAIPEM (ENI Group)
- 2010: Course on Drilling, completion and testing of oil and geothermal wells - WGC 2010, Bali (Indonesia)
- 2009: First aid Course
- 2009: Fire-fighting Course (high risk)
- 2008: Smith System - Defensive Driving Course
- 2007: OSHA (Occupational Safety and Health Administration) Course and Annual Refresh
- 2002: Seminar MIR 2002 (Barla G. and Barla M.) "Rock Mechanics and Rock Engineering: Tunnels and environment issues"

Employment Record Relevant to the Assignment:

From: 03/2023	To: date
Employer:	EDSISON S.p.A. - Italy
Position held:	<i>Technical Services Leader of the Hydropower Development - Power Asset Business Unit</i>
Activities performed:	Project management and coordination and of all the hydroelectric development projects (large dams, mini hydro, pumping storage plants). Member of the renewal of hydroelectric concessions task force.
From: 08/2021	To: 03/2023
Employer:	Frosio Next s.r.l. - Italy (Eng. Luigi Papetti, luigi.papetti@frosionext.com)
Position held:	<i>Team Leader/Project Manager/Senior Engineering-Geothermal Geologist</i>
Activities performed:	Feasibility Study and Detail Design of Pumping Storage Power Plant projects as well as of Hydro/Geothermal Power Projects.
From: 2009	To: 2021
Employer:	ELC Electroconsult S.p.A. - Italy (Dott. Guido Mazzoleni, guido.mazzoleni@elc-electroconsult.com)
Position held:	<i>Team Leader/Senior Engineering-Geothermal Geologist</i>
Activities performed:	Exploration and Assessment of hydro, groundwater, and geothermal resources, as well as implementation of HV transmission line projects.
From: 2006	To: 2009
Employer:	AECOM (ex URS Italia), Milan, Italy (Dott. Gianmarco Lucchini, gianmarco.lucchini@aecom.com)
Position held:	<i>Project Manager/Senior Geologist</i>
Activities performed:	Soil & groundwater investigations; Geotechnical survey; Environmental hazards identification/remediation
From: 2004	To: 2006
Employer:	Presspali S.p.A., Milan, Italy (Eng. Giannino Falciola, presspali@presspali.com)
Position held:	<i>Senior Engineering Geologist</i>
Activities performed:	Field construction supervision; Data acquisition and interpretation; Reporting preparation relevant to special foundations/jet grouting treatment; Supervision of tunnels excavation with TBM techniques
From: 2003	To: 2003
Employer:	Hedins Hjulgrävmaskiner AB, Kiruna, Sweden (Dott. Peter Huuva, p.huuva@gmail.com)
Position held:	<i>Junior Engineering Geologist</i>
Activities performed:	Design of mining activities; Design of grouting and dewatering treatments
From: 2000	To: 2003
Employer:	Department of Earth Sciences "A. Desio", University of Milan (Dott.ssa Paola Tartarotti, paola.tartarotti@unimi.it)
Position held:	<i>Junior Geothermal Geologist</i>
Activities performed:	Geological mapping; Geochemical survey in geothermal areas; Structural survey; Microstructural study

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Country of Experience: Burkina Faso, Commonwealth of Dominica, United Arab Emirates (UAE), Ethiopia, Iceland, Indonesia, Italy, Kenya, Malawi, Mauritius Island, Morocco, Mozambique, Nepal, Republic of Fiji, Spain, Sweden, Tajikistan, Tanzania, Turkey, Uganda, Zambia

Membership in Professional Associations: International Geothermal Association; Italian Geothermal Association

Publications: Author or co-Author of over 30 scientific papers on international scientific magazine

Languages:	<u>Speaking</u>	<u>Reading</u>	<u>Writing</u>
English	Excellent	Excellent	Excellent
Spanish	Good	Good	Fair
Indonesian	Good	Fair	Fair
Italian	Mother tongue		

MOST RECENT AND OUTSTANDING PROJECTS	
Project:	Development of Pumping Storage Power Plants in Southern Italy
Year:	2021 - 2023
Location:	Italy (Basilicata, Calabria, Lombardia, Piemonte, Puglia, Sardegna, Sicilia)
Client:	EDISON Power Asset Division
Main project features:	<ul style="list-style-type: none"> • Detail Design of n. 5 Pumping Storage Power Plants • Feasibility Study of n. 11 Pumping Storage Power Plants • Scouting activities of potential Pumping Storage Power Plant in whole Southern Italy • Development of n. 2 Run-of-river HPP in Northern Italy
Position held:	<i>Project Manager - Technical Services Leader</i>
Activities performed:	Full responsibility for the liaison with the Client, Authorities, Consultants and Lending Institutions. Elaboration of progress and final reports, coordination of the team of designers and of the subcontractors, contract negotiation, integrated interpretation of the data.
Project:	Qualtra Geothermal Technical and Financial Due Diligence (10 MW)
Year:	July-September 2022
Location:	Tuscany Region - Italy
Client:	IREN S.p.A.
Main project features:	The Due Diligence study included the following three steps: Step 1: collection of all existing data/documents; Step 2: review and comments of available information and documents; Step 3: issue of a final Due Diligence report, including an overall risk matrix and recommendations to IREN in relation to the possible investment.
Position held:	<i>Project Coordinator - Senior Geothermal Geologist</i>
Activities performed:	Review of overall available geoscientific data. Participation to the technical meetings with the Developer. Responsible in the elaboration of the Due Diligence Report
Project:	Consultancy Services as Project Implementation Consultant for the Kumbih-03 HEPP, Indonesia
Year:	2019 - 2021
Location:	Indonesia - North Sumatra
Client:	PT. PLN (PERSERO), financed by Kreditanstalt für Wiederaufbau (KfW)
Main project features:	The objectives of the assignment are: i) to review the Feasibility Study -Stage 1-; ii) to provide Detailed Design and Contract Documents and assist PLN in the tendering phase to select a Contractor -Stage 2- iii) to supervise the construction -Stage III-.
Position held:	<i>Deputy Project Manager/Senior Engineering Geologist</i>
Activities performed:	<ol style="list-style-type: none"> Planning, supervision, and evaluation of geological field. Preparation of the investigation programs Assisting the Client in the preparation of bidding documents for EPC contractor and in the relevant contract negotiations.
Project:	Hululais Geothermal Power Plant (2x55 MW)
Year:	2017-2021
Location:	Sumatra - Indonesia
Client:	PT. PLN (JICA ODA loan)
Main project features:	New 2x55 MW geothermal power stations in South Sumatera (power plant, switchyard, infrastructures, 150 kV overhead transmission line). Consultancy services concerning bankable Feasibility Study (resource feasibility and engineering feasibility), conceptual study, engineering design of the power plant and TL, preparation of the bidding documents for EPC contract, assistance in the procurement of the EPC contractor, project management, design review, supervision of construction and commissioning, assistance during the warranty period, quality control, environmental monitoring, transfer of knowledge.

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Position held:	<u>Deputy Project Manager and Senior Geothermal Geologist</u>
Activities performed:	Review of the available documents and Elaboration of the Updated Feasibility Study. Definition of the integrated Conceptual Model of the Field. Collaboration in the 3-D mathematical modelling of the reservoir natural state and exploration response.
Project:	Dewa Phase III - 800 MW PV Solar Power Project. Review and Update of the Hydrological Study and Flood Risk Assessment of the Saih Al Dahal, Dubai
Year:	2020
Location:	United Arab Emirates
Client:	Zollet Engineering s.r.l.
Main project features:	Following the flooding event incident happened in January 2019, a review of the overall Project and in particular the flood risk analysis, as well as of the drainage system design.
Position held:	<u>Senior Geologist/Hydrogeologist</u>
Activities performed:	Review of the available geological and topographic documents. Preparation of the Hydrogeological Integrated Model. Assistance in updating the existing hydrological model. A Comprehensive technical analysis illustrating the main outcomes of the study and, if necessary, suggesting additional site investigations.
Project:	Consultancy Services for Detailed Design and Construction Supervision of (A) Bundibugyo Water Supply and Sanitation System; (B) Design Review and Construction Supervision of Kyenjojo-Katoke Water Supply and Sanitation System (Assignment 1) or Expansion of Kapchorwa Town Water Supply and Sanitation System (Assignment 1), Uganda
Year:	2020
Location:	Western Uganda
Client:	SARI Consulting Ltd. (Project funded by AfDB, on behalf of Ministry of Water and Environmental of Uganda)
Main project features:	Design, Design Review and Construction Supervision of the water supply and sanitation systems in the Bundibugyo and Kyenjojo-Katoke Districts.
Position held:	<u>Senior Geologist/Hydrogeologist</u>
Activities performed:	Review of the Hydrogeological reports from Lahmeyer concerning Bundibugyo and Kyenjojo districts. Analysis of geological maps of the project areas and any other relevant data provided by the Company (i.e. rainfall data, temperature data, boreholes yield). A Comprehensive technical analysis illustrating the main outcomes of the desk study and, where appropriate, suggesting supplementary site investigations (geophysics) along with a tentative work schedule.
Project:	Feasibility Study Update of Dieng 2 & 3 and Patuha 2 & 3 Geothermal Power Plants
Year:	2019
Location:	East and West Java - Indonesia
Client:	PT. Geo Dipa Energi
Main project features:	Feasibility Study Update, addressing the technical and cost aspects at a sufficient level of detail to meet the lender requirements at this stage and provide the technical inputs for drilling, steam field layout, Steam Above Ground Gathering System (SAGS), Power Plant selection, Basis of Design (BoD) and Front-End Engineering Design (FEED) tenders.
Position held:	<u>Senior Geothermal Expert</u>
Activities performed:	Review of all geological aspects of the two projects. Water Balance Study of Dieng Field. Definition of the future well targeting and drilling program.
Project:	Geothermal Surface Exploration in Meteka
Year:	2018 - 2019
Location:	Meteka - Ethiopia
Client:	ICEIDA, NDF, Geological Survey of Ethiopia (GSE)
Main project features:	Geoscientific investigations (geology, geochemistry, MT/TEM, gravimetry), elaboration of the conceptual model, definition of drilling program
Position held:	<u>Team Leader / Lead Field Geologist</u>
Activities performed:	Geological survey, organization, and supervision of all the field activities, coordination of the training program. Participation in the elaboration of the conceptual model and definition of the future drilling campaign.
Project:	Rogun Hydroelectric Power Plant (3,600 MW), Republic of Tajikistan
Year:	2014 - 2018
Location:	Region of Republican Subordination - Tajikistan
Client:	OJSC Rogun HPP (National Project Agency)
Main project features:	HPP Construction Project (Vakhsh River). The project includes a zoned embankment dam, 335 m high, with a total volume of 71.7 Mm ³ , six headrace tunnels 460 to 570 m long, 7.5 to 5.4 m diameter, feeding an underground powerhouse 220 m long and 25 m wide, with a final capacity of 3,600 MW.
Position held:	<u>Senior Engineering Geologist</u>

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Activities performed:	Survey of the existing underground works; this task implies the evaluation of the status of more than 35 km of tunnel, of the underground powerhouse complex and of the gate chamber caverns. Study and classification of the rock mass formations for the Rogun HPP across Vakhsh River.
Project:	Gesto Italia Geothermal Portfolio - Due Diligence, Italy
Year:	2017
Location:	Tuscany Region - Italy
Client:	ECS s.a.s., on behalf of ZOUK CAPITAL LLP
Main project features:	The Due Diligence study included the following steps: Step 1: mobilization, collection of all existing data/documentation made available by the Developer; Step 2: review and comments of available information and documents, and issue of an Inception Report; Step 3: feedback from the Developer, and meetings with the Developer and its consultant for a joint discussion on the status of the projects and on any critical topic identified in the Inception Report; Step 4: issue of a final Due Diligence report, including an overall risk matrix and recommendations to Zouk in relation to the possible investment.
Position held:	<i>Project Coordinator / Senior Geothermal Geologist</i>
Activities performed:	Review of overall available geoscientific data. Participation to the technical meetings with the Developer. Responsible for the elaboration of the Due Diligence report.
Project:	Update of the Feasibility Study for the 105 MW Menengai Geothermal Project
Year:	2015 - 2016
Location:	Nakuru - Kenya
Client:	Geothermal Development Company (GDC)
Main project features:	GDC contracted 3 IPPs for the Menengai 105 MW power plants development and signed a PISSA with the IPPs. The IPPs signed a PPA with Kenyan electric power operator (KPLC) and were in the process of negotiating for financing with their own lenders. GDC engaged the services of ELC Electroconsult to undertake a substantial update of certain sections of the previous Feasibility Study Report.
Position held:	<i>Team Leader / Geothermal Geologist</i>
Activities performed:	In charge of overall project management and interface with the Client. Responsible for the geoscientific section of the Conceptual Model of the field and for the review of all project's reports.
Project:	Due Diligence on 48 MW Green Field Yılmazköy/Kalfaköy Geothermal Project, Turkey
Year:	2014 - 2015
Location:	Aydın Province - Turkey
Client:	IFC, Infrastructure and Natural Resources
Main project features:	The Project subject of the Due Diligence consists in the exploitation of two geothermal concessions (Yılmazköy - Kalfaköy), by installing two Organic Rankine Cycle units with a total capacity of 48 MW.
Position held:	<i>Team Leader / Environmental Expert</i>
Activities performed:	Organization and supervision of the field activities, both from the technical and logistic viewpoints, participation in the elaboration of the geological report and of the EIA report, presentation, and discussion of the findings with the Client.
Project:	Preliminary Study of the Geothermal Potential in Mauritius
Year:	2012 - 2015
Location:	Mauritius Island
Client:	Ministry of Energy and Public Utilities, on behalf of AdF
Main project features:	Execution of a detailed appraisal of the volcanic sectors of the island on the basis of geo-volcanological mapping and of hydrogeochemical sampling, analysis of all the existing drilled water wells (both for urban supply and agriculture uses), performing of pumping tests, borehole thermal logs, in order to rank the groundwater resources and to discover any potential geothermal prospects for future geoscientific investigations and gradient drilling. Siting of n.1 gradient well and integration of its data in the final report.
Position held:	<i>Project Manager / Geothermal Expert</i>
Activities performed:	Geological and hydrogeological mapping of the area of potential interest. Data modelling. Elaboration of the geological/hydrogeological integrated model. Responsible for liaison with Client and Financier (AdF).
Project:	Feasibility Study for the 400 MW Menengai Phase I Geothermal Power Project and Associated Overhead Transmission Lines
Year:	2012 - 2014
Location:	Nakuru - Kenya
Client:	Geothermal Development Company (GDC)
Main project features:	Analysis of available data from geoscientific investigations and deep drilling, elaboration of the conceptual model of the field, assessment of the resource through 3D natural state and exploitation numerical models; optimization of the power generation scheme; network and transmission lines studies; environmental and social impact scoping; financial and economic feasibility evaluation.

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Position held:	<i>Project Manager / Senior Geothermal Geologist</i>
Activities performed:	Overall coordination of project activities, interface with Client's staff and monitoring of the project progress, participation in the preparation of all project's reports; support in the elaboration of the conceptual model of the field: development of the Natural State Numerical Model and analysis of physical constraints.
Project:	Lumut Balai 2 x 55MW Geothermal Power Plant Project
Year:	2011 - 2013
Location:	South-West Sumatra - Indonesia
Client:	PERTAMINA Geothermal Energy
Main project features:	Assessment of the geothermal resources of the field (geology, geochemistry, geophysics, reservoir engineering and well production, conceptual model, 3D steady state and exploitation mathematical simulation of the reservoir), engineering design, project management and supervision during power plant construction and commissioning.
Position held:	<i>Senior Geothermal Geologist</i>
Activities performed:	Review, analysis and interpretation of available geological and hydrogeological data. Study of the effects of geothermal fluids extraction on the subsidence and micro-seismicity of the area.
Project:	Technical Assistance for Geothermal Power Development, Commonwealth of Dominica
Year:	2009 - 2013
Location:	Commonwealth of Dominica
Client:	Ministry of Public Utilities, Energy and Ports
Main project features:	Main objective of the project was the assessment and possibly the exploitation of the Geothermal Resources of the Island. Following a surface geoscientific exploration, ELC studied the further development of the project, from deep exploration to power generation feasibility study, including electric interconnection with neighbouring Islands (Guadeloupe & Martinique).
Position held:	<i>Deputy Project Manager and Senior Geothermal Geologist</i>
Activities performed:	Responsible for geological and hydrogeological investigations of the priority area. Assessment of the geotechnical conditions of the proposed drilling pads. Responsible in the Feasibility Report preparation.
Project:	Site Characterization Plan of the Tamoil Refinery, Italy
Year:	2007 - 2008
Location:	Northern Italy
Client:	Tamoil Italia S.p.A.
Main project features:	Development and realization of the Site Characterization Plan - Construction of the Hydraulic Barrier
Position held:	<i>Project Manager / Senior Engineering Geologist</i>
Activities performed:	Organization and coordination of the characterization activities, in accordance to the recent national laws on soil & groundwater and remediation issues (DM 471/99 and D.lgs. 152/06). Preparation of the geological report, synthesis report and geochemical maps. Supervision of construction of the hydraulic barrier (drilling activities and installation of pumps/ancillary equipment)
Project:	Variante di Martignano Tunnel, Italy
Year:	2005 - 2006
Location:	Northern Italy
Client:	Provincia Autonoma di Trento (Autonomous Province of Trento)
Main project features:	Excavation of a twin tunnel (2750 m long) by a 12 m diameter TBM
Position held:	<i>Project Manager/Engineering Geologist</i>
Activities performed:	Interpretation and reporting preparation relevant jet grouting treatment. Supervision of tunnels excavation with TBM techniques.

In compliance with the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance with art. 7 of the above-mentioned decree


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Date: November 24, 2025