

Diana Valencia, from the Center for Scientific Research and Higher Education at Ensenada (CICESE), located in Ensenada, Baja California, Mexico, her project titled: *"Depth of Fluid Circulation and Hydrothermal Alteration at the Los Humeros Geothermal Reservoir, Puebla, Mexico."*

Diana is a third-year Ph.D. candidate in the Department of Earth Sciences at CICESE, under the supervision of Dr. Efraín Gómez Arias. Her research focuses on the Los Humeros Geothermal Field (LHGF), the third largest geothermal field in Mexico. Situated within the Los Humeros caldera, dated at less than 0.51 ka and measuring between 14 and 21 km in diameter, the LHGF presents temperature anomalies exceeding 300°C.

The main objective of her project is to estimate the depth and identify the circulation pattern of geothermal hydrothermal fluids. To achieve this, she is developing a conceptual and numerical 2D model to evaluate fluid circulation depth based on geochemical data from well discharges, heat flow analyses, and their correlation with faults and fractures present in the field. The study also aims to establish relationships between mineral alteration, heat flow, and fault configuration, which are key features in geothermal systems. This research will contribute to improving the accuracy and efficiency of temperature estimations using geothermometers, as well as enhancing the conceptual model of the LHGF.

Diana is deeply grateful to the Geological Society of America and the Howard and Jean Lipman Foundation Student Research Grant for their support. With this funding, she will acquire high-resolution satellite imagery to identify and analyze surface hydrothermal alteration zones, providing insight into new areas of interest within the geothermal field.

Diana holds a B.Sc. in Geology from the Autonomous University of Guerrero and an M.Sc. in Applied Geology from Center for Scientific Research and Higher Education at Ensenada.

