

**Name: Jesse Turk**

*Position: Project Geologist*

*Technical Expertise: Geothermal Geologist*

*Wellsite Geology*

*Computer-Based Mapping and Modeling*



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### **EXPERIENCE SUMMARY**

Jesse Turk has more than nine years of experience in the Geothermal Resource and Energy Industries. Mr. Turk specializes in wellsite geology and management, well prognoses, chip and core logging, sampling of geothermal fluids, well log correlation, technical reporting and geologic mapping. Mr. Turk has participated in stages of geothermal project development including exploration, wellfield drilling and development, and reservoir assessment. He provided geologic consultancy and site management on drill sites in a wide variety of geologic basins and environments including the first ever Thermal Gradient Hole drilled on Saipan. He has also monitored and consulted on drilling operations during multi-rig drilling campaigns, conducted resource exploration through geologic mapping, geophysical surveying and geochemical sampling and utilized various software packages to create and update geologic and conceptual models. His broad work experience across multiple disciplines in 9+ years provides a practical understanding of the facets of geothermal exploration and drilling including wellsite geology, geophysics, geochemistry, conceptual modeling, well targeting and design, well logging and well testing. He has consulted on energy projects in all stages of development in Pennsylvania, West Virginia, Texas, North Dakota, Colorado, California, Nevada, and Idaho, the Northern Mariana Islands, Turkey, the Philippines, East Africa and Indonesia.

### **EXPERTISE**

Wellsite Geology

Well Logging

Wireline Logging Oversight and Interpretation

Production Well Drilling

Vertical, Deviated, and Lateral Well Design

Geothermal Well Test Planning and Supervision

ArcGIS, Leapfrog Geothermal, and Other Computer Based Mapping and Modeling

Geologic Mapping

Geophysical Surveying

Fluid Sampling

Technical Reporting

Capacity Building

### **EDUCATION**

B.S. in Geology 2010, University of Pittsburgh, Pittsburgh, PA.

P.G. Certificate in Geothermal Energy Technology 2017, University of Auckland, Auckland, New Zealand.



## AWARDS AND CERTIFICATIONS

First in Course Award, Spring 2017 - Geothermal Project

National Geothermal Academy 2018 – Geothermal Resource Decision Making

## PUBLICATIONS

**Turk et al.**, A Comparison of Alteration Mineralogy and Measured Temperatures from Three Exploration Wells in Fiale Caldera, Djibouti. *Proceedings 43<sup>rd</sup> GRC Annual Meeting and Expo*, Palm Springs, California (2019).

**Turk, J.** and Luketina, K., Insights into the Chemistry of Waters beyond the Te Aroha Domain. *Proceedings 40<sup>th</sup> New Zealand Geothermal Workshop*, Taupo, New Zealand (2018).

## REPRESENTATIVE PROJECT EXPERIENCE

PT Sokoria Geothermal Indonesia

- Geothermal consultancy and evaluation for multiple exploration and development wells on the island of **Flores, Indonesia**. On-site support including wellsite geology and management, capacity building, and completion testing procedure design and oversight.

Sorik Marapi Geothermal Power

- Geothermal consultancy and evaluation for multiple exploration and development wells in **North Sumatra, Indonesia**. On-site support including well targeting, drill cuttings characterization, and capacity building

Energy Development Corporation (EDC)

- Independent review of existing conceptual model, geochemistry, production and injection strategies, and resource characteristics. Develop strategy to mitigate enthalpy declines due to changes to reservoir chemistry, and injection/cold water intrusion in **Leyte, Philippines**.

Electricite de Djibouti

- Geothermal consultancy and evaluation for multiple exploration wells in the **Lake Asal region of Djibouti**. On-site support including wellsite geology and management, capacity building, and completion testing procedure design and oversight.

4i's CNMI

- Wellsite geology and management, core logging, static formation temperature test surveying, geothermal resource exploration in **Saipan, Northern Mariana Islands**.

Ormat Technologies, Inc.

- Geoscience resource evaluation, geologic field mapping, geophysical surveying, 3-D Modeling and GIS mapping of key resource parameters, and well targeting for the **Colado Prospect, NV**.
- Well Flow Test Supervisor during the test set-up and production, and reservoir pressure data collection in the **McGinness Hills Geothermal Project, NV**.
- Magnetotellurics surveying field crew, geologic mapping, and sample collection for the **New York Canyon Prospect, NV**.



## Selected Oil and Gas Development Projects

### Arsenal Resources

- Proposed locations for multi-lateral well pads; prepared well plans, plats, permits and prognoses to optimize acreage position in **Central West Virginia**.
- Evaluated data to steer lateral wells, advise operations and update stakeholders with technical reports.

### Terra Guidance, LLC

- Correlated Measure While Drilling data for lateral production wells in **Western Gulf** and **Appalachian** basins.
- Advised on drilling operations to optimize in-zone percentage, drilling rates and well productivity.

### Talisman Energy

- Geologic consultancy for multi-lateral drilling in the Eagle Ford Shale in **Southern Texas**.
- Wellsite geology and management, geosteering, petrophysical analysis and technical reporting.

