

# Sarah Compton, PhD

# GEOLOGIST

Sarahcompton07@outlook.com | 317-796-6516 | linkedin.com/in/skcompton

## SUMMARY

- ✓ Highly driven geoscientist with expertise in geology, numerical modeling, and product management.
- ✓ Results include reduction of up to \$2,500/day of potential financial liability risk by creating new processes/procedures supporting regulatory compliance with Sr. Regulatory Analyst, generating \$40,000/well or more of potential savings by creating and presenting visual analyses of temperature data during completions, and producing ~\$309 million worth of BOE by managing ~\$203 million CAPEX through real-time data analyses and decision making.
- ✓ Strong desire to learn and apply new things. Good interpersonal communication skills (don't let the doctorate fool you) and committed to ethical and honest business practices.

## WORK EXPERIENCE

*Compton Integrated Analytics, LLC*

2022 – present

### Principal

- Geologic exploration, prospect evaluation and/or development, and analysis work for mining, geothermal, and petroleum industries.

**Product Manager**, *Intelligent Wellhead Systems (left after acquisition)*

2023

- Utilize visualization and presentation skills to communicate customer needs, features, product timelines, and budget requirements to stakeholders across company functions.

**Geologist**, *Great Western Petroleum (left after acquisition)*

2019 – 2022

- Reduced up to \$2,500/day of potential financial liability risk by working across disciplines with Sr. Regulatory Analyst to create new processes/procedures supporting regulatory compliance.
- Improved allocation of ~\$840 million CAPEX by analyzing production data, tying them to operational inefficiencies, and communicating findings with engineers, regulatory, and operations groups.
- Conducted and presented research to defend company and explain geologic convention when state regulatory agency attempted to change precedent in the grouping of geologic formations.
- Expertly managed three to four projects at a time, plus extras with often nebulous goals and timelines delivered by Exploration Director on the fly.

**Geologist**, *TerraGuidance*

2018 – 2019

- Created Excel macro that updated redundant data fields by having the user fill out just one and clicking a button to fill the rest, reducing replication errors. Taught myself VBA to do this.

**Data Analyst/Engineering Tech**, *Liberty Oilfield Services (now Liberty Energy)*

2017 – 2018

- Managed and updated Excel, Access, and Tableau databases through mining, scrubbing, and correction of state databases, proprietary data, and third party data, including regular online publication of Tableau dashboards and workbooks..

**Data Transformation Analyst**, *IHS Markit (now S&P Global)*

2016 – 2017

- Directed three data entry teams in procedures and methods to mine, scrub, and organize all well and production data matters across UT, AZ, and NV.

- Curated, created, and displayed geologic and geophysical data crucial to asset development including structure maps and isopachs of four zones of interest as well as petrophysical logs used while collaborating with CEO and COO to pick perf locations in final (of five) San Juan well.

**Geologist**, *Noble Energy (part of company-wide ~30% layoff)*

2013 – 2015

- Generated \$40,000/well or more of potential savings by creating and presenting analyses and visualizations of fiber-optic distributed temperature survey data during completions.
- Produced ~\$309 million worth of BOE by managing ~\$203 million CAPEX associated with 24/7 drilling operations by planning well trajectory around subsurface hazards, directing vendors (3<sup>rd</sup> party steering) and engineers, and compiling pre- and post-drill evaluations and documentation.

---

## EDUCATION

### **The University of Alabama, Tuscaloosa**

*PhD: Geology/Geodynamics*

- Dissertation topic: using linear inversions to test sensitivities to different geologic inputs on 3-D finite element models of ground deformation during the 2000 eruption of Hekla volcano in Iceland

### **Indiana University-Purdue University at Indianapolis**

*Bachelors of Science and Masters of Science: Geology, focusing on Igneous Petrology*

- MS Thesis topic: Evolution of mid-Cenozoic silicic systems in the Chocolate Mtns, Arizona

---

## RELEVANT PUBLICATIONS

**Compton, S.**, Baier, K., Brand, J., Barhaug, J., Faye, L., Stinson, S., (2022) Using the Relationship Between Geochemical and Pressure Data to Elucidate Produced Oil Sources and Movement in the Subsurface., URTEC conference, OnePetro.

Agarwal, K., Kegel, J., Ballard, B., Lolon, E., Mayerhofer, M., Weijers, L., Melcher, H., **Compton, S.**, Turner, P., (2019) Evolving Completion Designs to Optimize Well Productivity from a Low Permeability Oil Sandstone Turner Reservoir in the Powder River Basin—One Operator's Experience. SPE-194350-MS

Haney, M., Nies, A., Masterlark, T., **Needy, S.**, Pedersen, R., (2011) Interpretation of Rayleigh-Wave Ellipticity Observed with Multicomponent Passive Seismic Interferometry at Hekla Volcano, Iceland. *The Leading Edge* **30**(5). 526-531.

**Needy, S.K.**, et al. (2009) Mesozoic Magmatism in an Upper-to-Middle-Crustal Section Through the Cordilleran Continental Margin Arc, Eastern Transverse Ranges, California. *Crustal cross sections from the western North American Cordillera and elsewhere: Implications for tectonic and petrologic processes: Geological Society of America Special Paper*, 456, 187-218.