

# Derek Foley

Geologist  
Writer

Aspiring Developer

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## Derek Foley

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## Experience

### Fireproof/ Bartender

2020 - Present, Grandview OH

- Created artisan cocktails to pair with a tapas menu

### Barrel & Taps/ Lead Bartender

2019 - 2020, Grandview OH

- Developed unique seasonal craft cocktails and trained new hires in their creation
- Regularly maintained cash drawers and petty cash, promptly resolving discrepancies for accuracy
- Took customer orders and capitalized on opportunities to sell special beverage options

### Gilson Company / Technical Support Specialist

2018 - 2019, Lewis Center OH

- Reviewed ASTM, AASHTO, and ISO methods to update materials testing equipment
- Represented the company at trade shows and conferences
- Supported sales and customers with technical problems related to materials testing equipment and methods

### Ohio Geological Survey / Geology

2017 - 2018, Columbus OH

- Researched and mapped critical formations for groundwater, environmental contamination and oil and gas in Ohio, providing QA/QC by updating outdated data
- Utilized applications such as ArcGIS and Petra and field techniques to study geophysical logs and produce structure and isopach maps, modeling geologic formations
- Presented research and gave educational talks about Ohio geology to government and industry professionals

## Experience

### **SEMCAL (OSU)/ Research Assistant**

2014 - 2016, Columbus OH

- Researched and mapped critical formations for groundwater, environmental contamination and oil and gas in Ohio, providing QA/QC by updating outdated data
- Utilized applications such as ArcGIS and Petra and field techniques to study geophysical logs and produce structure and isopach maps, modeling geologic formations
- Presented research and gave educational talks about Ohio geology to government and industry professionals

### **Black Wing Shooting Center / Sales Representative**

2012 - 2017, Delaware OH

- Delivered highest sales consistently at a five star shooting facility and proshop
- Provided expert firearm and sporting advice to customers
- Developed creative solutions to help the company adapt in a competitive and ever-changing industry
- Managed online sales for the entire company, boosting sales of difficult to move products

### **Strategy Group for Media / Executive Assistant to the CEO**

2012 - 2012, Lewis Center, OH

- Assisted the CEO in daily operation of the #1 political media company in the country.
- Assured clients' needs for success were met.
- Coordinated events for political and corporate clients.

### **Ohio Office of the Governor / Constituent Aide**

2017 - 2018, Columbus OH

- Interacted with the public on the Governor's behalf
- Assisted constituents in understanding the Governor's policies and position
- Helped review, recruit, and manage the Governor's appointees
- Planned a conference for 230 new boards and commissions members to educate them on duties and ethics

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## Education

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### Ohio State University / Geology M.S.

2014 - 2016, Columbus OH

Thesis entitled "Analysis of the Point Pleasant/Lexington/Trenton Formations: Sulfides, Mineralogy, and Trace Elements as Geochemical Proxies."

### Ohio State University / Geological Science B.A.

2008 - 2012, Columbus OH

### Ohio State University / Political Science B.A.

2008 - 2012, Columbus OH

*Honors with research distinction.* Thesis entitled "Why States Fail."

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## Research

### Mississippian-Pennsylvanian Unconformity

Ohio Geological Survey

2017-2018, Columbus OH

- Served as a principle geologist on a project to map the Mississippian-Pennsylvanian unconformity in Ohio, a critical marker for drillers of hydrocarbons and groundwater.

### Analysis of the Point Pleasant/Lexington/Trenton Formations: Sulfides, Mineralogy, and Trace Elements as Geochemical Proxies SEMCAL (OSU)

2014-2016, Columbus OH

- Carbonate is found to determine rock fabric. Clays and organic content are found to contain the bulk of connected porosity, as the majority of porosity is contained in <100 nm diameter pores. Pyrite morphology and location affects 34S/32S partitioning and sulfate reducing bacteria are suspected to play a mediating role in the partitioning.
- This study concludes the Point Pleasant, Lexington, and Trenton Formations formed in variable redox conditions, with oxygenated bottom waters followed by abrupt reducing, anoxic conditions.
- [Read my thesis here.](#)

### Neutron Gravity

Ohio State University

2014, Columbus OH

- Geologists measure variances in the gravitational acceleration on Earth to learn about the subsurface. The current method is to use a very delicate device called a gravimeter. The gravimeter is comprised of a dial, a quartz spring (that costs over fifty grand), and a lever. I developed a far more accurate method that measures the eigenstates of neutrons in a linear potential. [Read my paper here.](#)

## Research

### Why States Fail

Ohio State University

2011 - 2012, Columbus OH

- "State failure" denotes a complete or partial erosion of state authority, creating a security vacuum where the state once was. This "black hole" of global politics creates a breeding ground for terrorism, illicit drugs and arms trade, and crime. This paper looks at six case studies, Chad, Sudan, Somalia, Côte d'Ivoire, Democratic Republic of Congo (formerly Zaire), and Guinea, to determine why states fail. It finds that states fail when justice, security, and liberty are provided by the state unequally, creating marginalized groups and conflict. [Read my thesis here.](#)