

# Monica Erdman

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## SUMMARY

I am a geoscience PhD candidate seeking employment in the energy industry. My experience performing original research, volunteering on the AAPG Student Expo planning committee, and interning at two oil and gas companies has helped me develop strong analytical and communication skills and a passion for teamwork. I seek a career working on integrative projects, with the opportunity to draw on varied datasets and to collaborate with industry experts.

## EDUCATION

- 2016 December, Ph.D., Earth Science, Rice University 4.02 GPA  
Dissertation title: "Origin and evolution of continental crust: Insights from igneous and metamorphic processes in subduction zones"
- 2011 M.S., Geology, University of California at Santa Barbara 4.0 GPA  
Thesis title: "Seismic anisotropy of Basin and Range lower crust from electron-backscatter diffraction"
- 2009 B.S., Paleobiology, University of California at Santa Barbara 3.86 GPA

## EXPERIENCE

### Hess Corporation, Geoscience Intern, GOM Regional Exploration—Houston, TX, Summer 2016

- Interpreted sub-regional horizons to update the current understanding of Miocene potential in the outboard Walker Ridge protraction area (350 GOM blocks)
- Performed seismic well ties, regional surface mapping, sediment fairway analysis, and preliminary play analysis to detect Miocene play trends
- Related structures to salt tectonics and sediment depositional history
- Presented results to senior management and recommended next steps for the project

### ConocoPhillips, Geoscience Intern, Atlantic Margin Exploration—Houston, TX, Summer 2015

- Matured an oil and gas prospect in the frontier deepwater Shelburne Basin, Nova Scotia
- Analyzed the petroleum system at prospect level, utilizing a combination of horizon and fault mapping in 3D seismic, salt interpretation, structural analysis, seismic facies observations, seismic amplitude extractions, and risked volume calculations
- Partnered with Gulf of Mexico geoscience experts to draw meaningful conclusions based on analog systems
- Presented my results to senior management for technical review and recommended a path forward

### Rice University, Field Methods Teaching Assistant—Houston, TX, Spring 2015

- Co-taught undergraduate and graduate students how to construct geologic maps, cross-sections, and lithostratigraphic sections
- Awarded the 2015 Outstanding Teaching Assistant Award for my efforts

### **AAPG/SEG Student Expo Planning Committee, Volunteer**—Houston, TX, April 2014–present

- Cooperated with industry professionals to organize the annual AAPG/SEG Student Expo
- Assisted in the organization and execution of short courses and field trips
- Coordinated logistics with local companies to implement floorplan layouts

### **CIDER workshop, Invited Participant**—Berkeley, CA, July 2013

- Aligned a multi-disciplinary group of peers to propose, design, and execute an original research project; collaborated with senior research scientists

### **Rice University, Ph.D. Candidate**—Houston, TX, 2011–2016

- Teamed up with 2 Rice professors to draw from their expertise in seismic tomography and geochemistry in drafting an academic publication
- Presented research extensively: 3 times at international conferences attended by 5,000+ scientists, 4 times to Rice department of 70 scientists, and over 5 times to my lab group
- Prepared, presented, and defended novel research proposals on 3 different topics (geochemistry, fluid dynamics, and LA-ICP-MS lab methodology) to 4 experts in the field

## **SELECTED PUBLICATIONS**

Erdman, M., Lee, C-T., Levander, A., Jiang, H. (2016) Dual uplift history of the former Nevadaplano due to arc magmatism and lower crustal foundering: A case study of pyroxenitic lower crust from central Arizona, USA. *Earth and Planetary Science Letters*, 439, 48–57.

Erdman, M. and C-T. Lee (2014) Oceanic- and continental-type metamorphic terranes: Occurrence and exhumation mechanisms. *Earth Science Reviews*, 138, 33–46.

Erdman, M., Hacker, B., Zandt, G., Seward, G. (2013) Seismic anisotropy of the crust: electron backscatter diffraction measurements from the Basin and Range. *Geophysical Journal International*, 195(2), 1211–29.

## **TECHNICAL SKILLS**

- Excellent interpersonal, writing and presentation skills
- Advanced user of Adobe Illustrator, Microsoft Office applications
- Proficient user of Petrel, DSG, Petrosys, GeoX, and RokDoc software

## **LEADERSHIP ROLES**

- Co-president, AAPG Student Chapter, Rice University 2014–15
- President, Geology Student Union (GeoUnion), Rice University 2012–13
- Mentoring undergraduates in lab techniques (2 of 3 began PhD programs) 2011–14

## **AWARDS**

- 2<sup>nd</sup> Place Poster Presentation, IRESS Conference, Rice University 2016
- 1<sup>st</sup> Place Poster Presentation, AAPG/SEG Student Expo, Houston 2015
- Douglas and Martha Lou Broussard Fellowship, Rice University 2015
- Carl D. Speed Memorial Scholarship, SIPES Foundation 2014