

Daniel “Burke” Brunson

615 N. 39th St. Apt. 303A

Grand Forks, ND 58203

251-610-6536; burke.brunson@gmail.com or daniel.brunson@und.edu

Education

Doctor of Philosophy of Science	University of North Dakota	December 2020
Geographic Information Science Certificate	University of North Dakota	August 2019
Master of Science	University of North Dakota	December 2017
Bachelor of Science in Geology (B.S.G.-Track)	University of Alabama	December 2013
Bachelor of Science	University of Alabama	August 2006

Relevant Work Experience

Core Library Technician	North Dakota Geological Survey, Grand Forks, ND	June 2017 – Present
Image the cores sent for storage in the Core Library for posting on the North Dakota Geological Survey subscription services website, retrieve core for visitors of the Core Library, and place core boxes in the warehouse shelving for storage.		
Mud Logging Analyst	Schlumberger, Lafayette, LA	May 2014 – August 2015
Log the lithological properties of rock chips and monitor drilling data to help maintain structural integrity of the well, monitor hydrocarbon gas data to help ensure safety of the rig site and help in formation evaluation, receive training on site and during off-time in industry techniques and protocols.		
Tech Assistant	Mobile Infirmary Main Surgery Department, Mobile, AL	February 2009 – March 2011
Ensured patients got to the Surgery Prep Department, prepped patients for surgery, assisted hospital staff during the procedure, and ensured patients got from the Surgery Department to PACU.		

Work Projects

“Tahiti” Exploration Well	Green Canyon, Gulf of Mexico	July 2015
Operator: Chevron, Rig: Deepwater Asgard, Position: Mud Logging Analyst		
Data Analyst Training Program	Schlumberger, Sugar Land, TX	June 2015
Learned the theory behind and analysis of formation pressure, pore pressure, lithostatic gradient, effective static & circulating densities, bottom hole pressure and bottom hole circulating pressure, the theory behind and analysis of kick detection, and report the GSS standard deliverable services to the client		
“Gunflint” Exploration Well	Mississippi Canyon, Gulf of Mexico	May 2015 – May 2015
Operator: Noble Energy, Rig: Atwood Advantage, Position: Mud Logging Analyst		
“Thorvald” Exploration Well	Mississippi Canyon, Gulf of Mexico	March 2015 – April 2015
Operator: Statoil, Rig: Maersk Developer, Position: Mud Logging Analyst		
“Yeti” Exploration Well	Walker Ridge, Gulf of Mexico	January 2015 – March 2015
Operator: Statoil, Rig: Maersk Developer, Position: Mud Logging Analyst		
Acquisitions Training Program	Schlumberger, Sugar Land, TX	February 2015
Learned the setup and functions of the GeoNEXT4 hardware and software, the WITS and InterACT communication packages, and the Reserval Gas Analysis hardware		
FLAG Training Program	Schlumberger, Sugar Land, TX	February 2015
Learned about the proprietary technology developed by Schlumberger used in the rapid detection of drilling fluid gains or losses, along with other enhanced applications of the FLAG system		

Work Projects (Continued)

- “King” Exploration Well Mississippi Canyon, Gulf of Mexico January 2015
Operator: Freeport-McMoran, Rig: Noble Tom Madden, Position: Mud Logging Analyst
- “Perseus” Exploration Well DeSoto Canyon, Gulf of Mexico November 2014 - January 2015
Operator: Statoil, Rig: Maersk Developer, Position: Mud Logging Analyst
- “Tahiti” Exploration Well Green Canyon, Gulf of Mexico September 2014
Operator: Chevron, Rig: Discoverer Inspiration, Position: Mud Logging Analyst
- Full Mud Logger Training Program Schlumberger, Sugar Land, TX July 2014
Learned about the responsibilities of the Mud Logging Analyst and extended on the responsibilities of the Trainee Mud Logger.
- “Guadalupe” Exploration Well Keathley Canyon, Gulf of Mexico May 2014 – August 2014
Operator: Chevron, Rig: Discoverer Inspiration, Position: Mud Logging Analyst
- Oil Field Services Training Program Schlumberger, Sugar Land, TX June 2014
Learned the role of Schlumberger and its subsidiaries in the oil field services business sector of the Oil & Gas industry; learned the responsibilities of the Geoservices (GSS) segment

Teaching and Mentoring Experience

- Teaching Assistant Department of Geology and Geological Engineering, UND Fall 2015 – Present
Taught and prepared lab materials for Geophysics, Structural Geology, and Seimentology/Stratigraphy courses while completing a Master’s thesis.
- Teacher (Full Time) St. Paul’s Episcopal School, Mobile, AL Jan 2011 – May 2012
Taught two High School Science courses – Human Anatomy & Physiology and Marine Biology; faculty advisor for the Science Research Club that explores the topic of modern scientific study and research.
- Teacher (Substitute) St. Paul’s Episcopal School, Mobile, AL March 2011 – May 2011
Taught three separate Alternative Instruction Program (AIP) classes of Mathematics while a teacher was away on maternity leave of absence; developed all course materials during position tenure.
- Teaching Assistant Department of Biological Sciences, University of South Alabama Spring 2007 – Fall 2008
Taught and prepared lab materials for Introductory Biology Lab Courses.
- Substitute Teacher St. Paul’s Episcopal School, Mobile, AL Fall 2006 – March 2011
Taught classes of scientific and mathematical subject material upon request.
- Teaching Assistant Department of Biological Sciences, UA Fall 2005 – Spring 2006
Taught Introductory Biology Lab Courses for Non-majors.
- Volunteer Youth Mentor Holt High School, Tuscaloosa, AL Fall 2004 – Spring 2006
Helped high school students in afternoon hours with homework assignments and class projects as a member of the UA JUMP mentoring program.

Research Experience

- Research Assistant Dept. of Geological Sciences, University of Alabama Summer 2013 – December 2013
Performed a study of a stalactite gathered from Ulupaka Cave of the island of Niue; collected isotopic compositions of carbon and oxygen via GC-Mass Spectrometry used in eliciting regional rainfall records

Research Experience (Continued)

- Lab Assistant Alabama Stable Isotope Laboratory, University of Alabama Spring 2013 – December 2013
Prepared and carried out GC-Mass Spectrometry analysis of research samples for determination of carbon and oxygen isotopic compositions; maintained lab materials and equipment as necessary.
- Research Assistant Department of Biological Sciences, University of South Alabama Spring 2007 – Fall 2008
Performed population genetics studies of two plant species, *Liquidambar styraciflua* and *Illicium parviflorum*.
- Research Assistant Department of Chemistry, University of Alabama Summer 2004 – Summer 2006
Performed a study involving the introduction of nanoparticles into biological systems as a novel RNAi System; performed other studies involving magnetic tape polymer chemistry.

Peer-reviewed Scientific Publications

- Brunson, Daniel; Gosnold, Will; Ho, I-Hsuan; and Nordeng, Stephan. 2017. Geophysical Analysis of the Paleogeothermal Gradient and Heat Flow in the Williston Basin, ND. 53 pp. University of North Dakota, Grand Forks, ND, December 2017.
- Gosnold, Will; Crowell, Anna; Keller, Kris; Brunson, Daniel; Tyler, Lindsay; Nwachukwu, Francis; Onwumelu, Chioma; Ogochukwu, Ozotta, Ruben Havsed and Joachim Karthäuser. 2017. Concept for a Distributed Baseload Binary Power Network. *GRC Transactions* **41**: 1814-1823.
- Morris AB, SM Ickert-Bond, **DB Brunson**, DE Soltis, PS Soltis. 2008. Intraspecific divergence time estimation reveals temporal complexity in phylogeographic patterns of American sweetgum (*Liquidambar styraciflua*). *Molecular Ecology* **17**: 3889-3900.

Professional Appearances & Speaking Engagements

- Brunson, Daniel. Untapped Unconventional Potential: Heat Flow & Source Bed Thermal Maturation. Speech presented at 2018 Williston Basin Petroleum Conference. Bismarck Event Center, Bismarck, ND, 23 May 2018.
- Brunson, Daniel. Sedimentary Geothermal Energy. Speech presented at 2018 Williston Basin Geothermal Considerations Incubator Workshop. University of North Dakota, Grand Forks, ND, 15 February 2018.

Poster Presentations

- Brunson, Daniel. Geophysical Analysis of the Paleogeothermal Gradient and Heat Flow in the Williston Basin, ND. Poster presented at 2018 SMU Power Plays Conference. Southern Methodist University, Dallas, TX, 09 January 2018.
- Brunson, Daniel. Geostatistical Analysis of Bottom-Hole Temperatures and Heat Flow in the State of Texas, USA. Poster presented at 2017 GIS Day Event. University of North Dakota, Grand Forks, ND, 14 November 2017.

Relevant Coursework

Computer Science II	Summer 2019
Introduction to Statistics	Spring 2019
Computer Science I	Spring 2019
Field Methods & Analysis	Fall 2018
Remote Sensing	Fall 2018

Relevant Coursework (Continued)

Cold Region Hydrologic Modeling	Fall 2018
Isostasy and Flexure of the Continental Lithosphere	Spring 2018
System Dynamics II	Spring 2018
Advanced Techniques in GIS	Spring 2018
Sedimentology	Fall 2017
Reservoir Geophysics	Fall 2017
Introduction to GIS	Fall 2017
Geothermics II	Spring 2017
Research	Spring 2017
Thesis	Spring 2017
Geomechanics	Fall 2016
Research	Fall 2016
Thesis	Fall 2016
Geothermics I	Spring 2016
Advanced Structural Geology	Spring 2016
GIS & T in the GeoSciences	Spring 2016
Heat Flow	Fall 2015
Topics in Advanced Stratigraphy	Fall 2015
System Dynamics I	Fall 2015
Visual Presentation for Geologists	Fall 2013
Environmental Isotopes (Graduate-level Course)	Fall 2013
Hydrogeology	Fall 2013
Undergraduate Research – Geology	Fall 2013
Calculus II	Fall 2013
Field Geology Course	Summer 2013
Igneous and Metamorphic Petrology	Spring 2013
Sedimentology/Stratigraphy	Spring 2013
Invertebrate Paleontology	Spring 2013

Relevant Coursework (Continued)

Structural Geology	Fall 2012
Geophysics	Fall 2012
Mineralogy	Fall 2012
Calculus I	Fall 2012
The Dynamic Earth	Spring 2012
The Earth Through Time	Spring 2012
Biology of Environmental Resource Development	Summer 2006
Elementary Organic Chemistry II	Fall 2005
Elementary Organic Chemistry Lab II	Fall 2005
Quantitative Analysis	Summer 2005
General Physics w/ Calculus II	Summer 2005
Elementary Physical Chemistry	Spring 2005
Elementary Physical Chemistry Lab	Spring 2005
Undergraduate Research II – Chemistry	Spring 2005
Elementary Organic Chemistry Lab I	Fall 2004
Undergraduate Research I - Chemistry	Fall 2004
General Physics w/ Calculus I	Fall 2004
Elementary Organic Chemistry I	Spring 2004
General Chemistry II	Summer 2003
General Chemistry I	Fall 2002

Scholarships, Awards, and Honors

Geothermal Resources Council Graduate Award Scholarship Geothermal Resources Council	Fall 2017
Student Council President and Ex-Officio Member of Board of Directors Geothermal Resources Council	Spring 2016
Geothermal Resources Council Student Chapter President University of North Dakota	Spring 2016
Sigma Gamma Epsilon Geology Honor Society University of North Dakota	Fall 2015

Scholarships, Awards, and Honors (Continued)

NDIC Teaching Assistantship Appointment University of North Dakota	Fall 2015
Top HSE Performer – FLAG Training Program Schlumberger	Spring 2015
Top HSE Performer – Acquisitions (AQ-2) Training Program Schlumberger	Spring 2015
Dean’s List University of Alabama	Fall 2013, Fall 2003
Alacare Hospice “Student Volunteer of the Year” University of Alabama	Spring 2006
Geothermal Resources Council Graduate Scholarship Award University of North Dakota	Fall 2017
Phi Eta Sigma Freshman Honor Society University of Alabama	Spring 2003
Capstone Summer Honors Program Scholarship University of Alabama	2002-2006
Paul “Bear” Bryant Scholarship University of Alabama	2002-2006

Test Scores

GRE Score: 313 (Verbal: 163, Quantitative: 150, Analytical Writing: 4.0)	December 2013
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Certifications

U.S. Birth Certificate State of Alabama October	1983
U.S. Social Security Number Social Security Administration October	1983
U.S. Passport CTC/US Department of State	May 2014 to May 2024
U.S. Global Entry U.S. Customs and Border Protection	June 2014
Transportation Worker Identification Credential (TWIC) TSA	July 2014 to July 2019
RigPass (Includes SafeGulf and SafeLandUSA) International Association of Drilling Contractors	June 2014 to June 2017
Tropical Helicopter Underwater Egress Training (T-HUET 5195) OPITO	June 2014 to June 2018

Certifications (Continued)

Personnel Transfer Basket / Swing Rope
Falck Safety Services (US)

June 2014

Professional Associations

Student Member	Geothermal Resources Council	2020
Student Member	Society of Exploration Geophysicists	2020
Student Member	American Association of Petroleum Geologists	2020
Student Member	Geological Society of America	2020
Student Member	American Institute of Professional Geologists	2020