

I am a geoscientist with experience in many facets of the oil business, including execution and planning of existing positions as well as exploration of prospective plays. I have a particular passion for data science and have continue to leverage skills in programming languages (such as Python) to uplift my organizations quality and speed of analyses. Additionally, I strive to be able to not just do the science that is necessary, but communicate it in a way that is understandable by all.

PROFESSIONAL EXPERIENCE

Cimarex Energy: Tulsa, Oklahoma Dec. 2020 - present (4 months)
Geo-data scientist - *“Data scientist and developer with geoscientific emphasis”*

- Lead developer of automated formation top interpretation software used by 30+ in-house geoscientists
- Develop in-house Machine Learning tools to predict production
- Advise regional teams on data science techniques and methodologies

Cimarex Energy: Tulsa, Oklahoma 2018 - 2020 (3.5 yrs)
Region Geoscientist - *“Anadarko Basin asset development”*

- Coordinate planning and operations of Anadarko Basin Woodford and Meramec assets with asset team
- Evaluate and pursue exploration prospects within the region (4 evaluated, 1 drilled)
- Manage OBO investment decisions and associated acreage trades

Cimarex Energy: Denver, CO; Tulsa, Oklahoma 2016 - 2018 (1.5 years)
Geophysicist (Technology Group) - *“Geophysical analysis and project management”*

- Plan and execute microseismic acquisition for multi-well developments
- Plan and control seismic processing and analysis (attribute analysis, inversion, etc) for use in regional business development

Graduate Research: Golden, Colorado 2015

Schlumberger Western GeCo: Westchase, Houston, Texas 2014
Petrotechnical Intern (Full-time): *“General Deterministic Waterlayer Demultiple with NMO and RTI synthetics”*

- Developed a processing algorithm for use in the processing of 3D marine seismic data.
- Present findings to regional management and recommend path toward implementation of algorithm.

Chevron NA, Gulf of Mexico Business Unit: Covington, Louisiana 2013
Data Management Intern (Full-time): *“Develop processes to manage well log databases”*

- Develop an automated organization scheme for well log databases for the Gulf of Mexico.
- Deploy scheme and observe improvements in data organization and accessibility.
- Present findings to the regional management

EDUCATION

Master of Energy Business July 2021 (*in progress*)
University of Tulsa, Tulsa, OK GPA: 4.00

- MBA with emphasis on management of energy businesses
- Collins College of Business - Showman Scholarship Grantee

Master of Science, Geophysics May 2017
Colorado School of Mines, Golden, CO GPA: 3.83

Research Group: Reservoir Characterization Project

- Thesis research focused on geoscientific data integration and interpretation
- Society of Geophysics Graduate Students (President)

- Bachelor's of Science focused on geophysical techniques and analytical concepts.
- Dean's List (2 Semesters) and Honor Roll (5 Semesters)
- George Meredith Award for Leadership in Geophysics
- Society of Student Geophysicist (President)

PUBLICATIONS

Bailey, Austin*. "Examination of Anisotropy Using Amplitude Variation with Angle and Azimuth (AVAZ) in the Woodford Shale, Anadarko Basin, Oklahoma." Colorado School of Mines (Master's Thesis). 2017.

Description : Utilize the Amplitude Variation with Angle and Azimuth (AVAZ) technique on 3D seismic data to classify anisotropy within the Woodford formation. The results show localized stress changes around major faults and potential secondary stress trends within the Woodford.

Jamie Rich, Austin Bailey*, Samir Jreij and Doug Klepacki. "High resolution insights into hydraulic fracturing strike-slip seismicity: Hypocenter uncertainty, depth of initiation, and genesis mechanisms." Society of Exploration Geophysicists (89th Annual Meeting). 2019.

Description : An examination of relationships between hydraulic fracturing of 10 horizontal wells and earthquakes through the use of microseismology, regional seismology, and remote sensing techniques. The results suggest that shallow faults intersecting the reservoir were reactivated by direct fluid communication to the hydraulic fracturing operations. This challenges past works which assert that hydraulically reactivated faulting must be related to basement faulting or structural features.

AWARDS/RECOGNITIONS

Collins College of Business Showman Scholarship (2019)
George Meredith Award for Early Leadership in Geophysics (2015)
Texas All-State Swim Team - 400 yard medley relay (2011)
Texas All-Region Swimming Finalist (2009 - 2011)
Denton High School Team Captain - Swim and Water Polo Teams (2007 - 2011)

RELEVANT SKILLS

Data Science/Programming: Spotfire, Python, Excel, Statistica, MATLAB, R, AzureML, Azure DevOps
Geospatial Analysis: IHS Kingdom, QGIS, ArcGIS, ENVI, Petra, Petrel
Other Software: Microsoft Suite, MS Project, Teams, Palisade Decision Suite, LaTeX

CERTIFICATIONS

PADI Open Water (2006 - 2009) and Advanced Open Water (2009 - Present)

- US, Belize, Mexico, UK, Spain
- Approx. 50 dives, depths from 30 - 100 ft

American Red Cross First Aid and CPR (2011 - 2019)

ORGANIZATIONS

Positions:

- Geophysical Society of Tulsa - Webmaster May 2019 - Present
- Geophysical Society of Tulsa - 1st Vice President May 2018 - May 2019
- Society of Geophysics Graduate Students - President August 2016 - May 2017
- Society of Geophysics Graduate Students - Vice President August 2015 - May 2016
- Society of Student Geophysicists - President August 2014 - May 2015
- Society of Student Geophysicists - Webmaster August 2013 - May 2014
- Society of Exploration Geophysicists - Member 2012 - Present
- Society of Petroleum Engineers - Member 2018 - Present

OTHER INTERESTS

Geospatial Analytics, SCUBA Diving, Game Development, Value of Information, Economic Modelling, PC Gaming, Space Exploration, Biology/Zoology, Travel, Outdoors, Programming, Music