Gustavo Martins, M.S.

Curriculum Vitae

University of Kentucky/Department of Earth and Environmental Sciences
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1. SUMMARY

Interested in Earth Sciences from very young age. Creative idea generator and a problem solver. Committed to diversity, inclusion, communication and collaboration. Currently working on Ph.D. project targeting the Barents Sea and Appalachian basins. Obtained industry experience across the United States, United Kingdom, Norway and Brazil. Acquired diverse training background. Strong communication and negotiation skills. Experienced working in multi-cultural and stressful scenarios.

2. RESEARCH INTERESTS

Tectonics; stratigraphy; basin analysis; basin development; depositional systems; sequence stratigraphy; CO2 storage; carbonate and clastic geology; petroleum geoscience; metalogenesis; and deep-sea minerals.

3. EDUCATION

2019 – 2022 (December): **Ph.D. Geology** (GPA: 4.0/4.0), University of Kentucky, United States

- **Emphasis:** modelling, log interpretation, public speaking, and technical writing.
- **Project:** Tectonostratigraphic development of the Barents Sea shelf, analogues, and hydrocarbon implications: When Arctic meets the Appalachian Basin.
- **Advisor:** Dr. Frank Ettensohn (Full Professor, UK Earth & Environmental Sciences, Lexington, US).
- **Methods and results:** For the first time, the tectonostratigraphy and geodynamics of the Appalachian system of basins and platforms were used to build regional analogues to the Barents Sea in terms of flexural modelling and collisional tectonics.
- **In partnership with:** the Norwegian Petroleum Directorate (NPD).
- **Funded by:** The Norwegian Petroleum Directorate (NPD).

2017: **M.S. Geology/Petroleum Geoscience**, University of Tromsø, Tromsø, Norway

- **Emphasis:** seismic interpretation, petroleum prospecting, and subsurface mapping.
- **Project:** Seismic interpretation and stratigraphy of the Paleogene in the Bjørnøya Basin, Barents Sea.
- **Advisor:** Dr. Stig-Morten Knutsen (Assistant Director, Norwegian Petrol. Directorate, Harstad, Norway).
- **Methods and results:** Seismic stratigraphy and well-log data were used to study the sedimentary response of Barents Sea Paleogene strata to North Atlantic tectonics.
- **In partnership with:** the Norwegian Petroleum Directorate (NPD), the Research Centre for Arctic Petroleum Exploration (ARCEx) and Spectrum Geophysics (TGS).
- **Funded by:** The Research Council of Norway.

2016: **M.S. Geology/Petroleum Geoscience**, University Centre in Svalbard, Longyearbyen, Norway

- Selected for one M.S. level course in sequence stratigraphy, which included lithologic analysis and logging in remote Arctic field areas.
- Learned how to use sequence stratigraphy in terms of basin analysis, reservoir characterization, tectonostratigraphy, and depositional systems.

2012: **B.S. Geology**, Federal University of Bahia, Salvador, Brazil

- **Emphasis:** mineral exploration, mapping, and resource evaluation.
- **Project:** Study of titanomagnetite occurrences in gabbro-anorthosites, Tancredo Neves, Bahia, Brazil.
- **Advisor:** Dr. Johildo Barbosa (Full Professor, UFBA Geosciences Institute, Salvador, Brazil).
- **Methods and results:** Lithologic, petrologic, and geochemical analyses were performed to better understand the metallogenesis of titanomagnetite and implications to collisional tectonics.
- **In partnership with:** The Rio Tinto Mineral Development Company.
- **Funded by:** The Rio Tinto Mineral Development Company.

4. PROFESSIONAL EXPERIENCE

University of Kentucky/Earth & Environmental Sciences May 2020 – present
Research Assistant, Lexington, United States

- Coordinated core and wireline-data analysis, basin modeling, subsurface mapping, and technical writing.

University of Kentucky/Earth & Environmental Sciences Jan 2019 – May 2020
Graduate Teaching and Field Camp Assistant, Lexington, United States

- Helped students with mapping, stratigraphic interpretation, and structural analysis in remote field areas of the Colorado Rocky Mountains.
- Collaborated with faculty to prepare meetings and gather training material.
- Encouraged students to think critically and to have professional integrity.

University of Tromsø Sep 2016 – Nov 2016
Scientific Assistant, Tromsø, Norway

- Taught seismic interpretation, attribute usage, and reservoir characterization using Petrel to 27 M.S. level students.
- Assisted students in well-log correlation and play evaluation.

Schlumberger/WesternGeco Oct 2012 – Oct 2014
Field Geophysicist, offshore Norway, United Kingdom and United States

- Promoted from Junior to Field Geophysicist. Ability to make decisions in time-sensitive situations.
- Performed 3D and 4D seismic acquisition, analysis, onboard processing, and quality control.
- Monitored data production both with the team and independently, and maintained client communication.
- Contributed to find solutions to complex technical issues, risk evaluation, and accident prevention.
- Removed seismic artifacts from large volumes of data in short periods of time.
- Collaborated with stakeholders during all phases of survey production.

SURVEYS

2014 3D survey with magnetic/gravity acquisition for exploration, BP, Southeast of the Clair field, North Sea, West of Shetland Islands, United Kingdom
2014 Triple Coil – Multiclient, Gulf of Mexico, United States
2014 ObliQ – Multiclient, Gulf of Mexico, United States
2014 Dual Coil Survey – Multiclient, Gulf of Mexico, United States
2013 WAZ (Wide Azimuth) – Multiclient. Gulf of Mexico, United States
2013 4D time lapse – Apache, North Sea, Norway
2013 4D time lapse – BP, Foinaven/Schiehallion North Sea, Shetland Islands, United Kingdom.

Rio Tinto Mineral Development Aug 2011 – Aug 2012
Geologist Intern, Salvador, Brazil

- Responsible for risk management and daily leadership of a mineral-prospecting team in high-risk field areas.
- Produced five high-resolution geologic maps illustrating and assessing resource distribution.

Caraiba Metals Jan 2011 – Mar 2011
Geologist Intern, Pilar, Brazil

- Assisted the geotechnical team in monitoring mineral exploitation in underground and open-pit mines.
- Handled core description, data management, and warehouse organization.

National Council for Scientific and Technological Development Aug 2009 – Jul 2010
Research Assistant, Salvador, Brazil

- Assisted with sampling, data analysis, field work, technical writing, and public speaking.

Petrobras S/A Jul 2008 – Aug 2008
Project Intern, Sao Paulo, Brazil

- Assisted the engineering team in the implementation and monitoring of a refinery plant project.

5. RESEARCH

REFEERED PUBLICATIONS

2020

Ettensohn, F.R., Seckinger, D. C., Eble, C. F., Clayton, G., Li, J., **Martins, G. A**., Hodelka, B. N., Lo, E. L., Harris, F. R., Taghizadeh, N., 2020, Age and tectonic significance of diamictites at the Devonian–Mississippian transition in the central Appalachian Basin. in Swezey, C.S., and Carter, M.W., eds., Geology Field Trips in and around the U.S. Capital: Geological Society of America Field Guide 57, p. 79–103. Doi: https://doi.org/10.1130/2020.0057(04).

2022

Martins, G., Ettensohn, F., and Knutsen, S. -M., 2022, The Appalachian area as a tectonostratigraphic analogue for the Barents Sea shelf: **Basin Research**, v. 00, p. 1–26. Doi: https://doi.org/10.1111/bre.12619.

MANUSCRIPTS IN PREPARATION OR SUBMITTED

Martins, G., Ettensohn, F., and Knutsen, S. -M., 2022, Use of backstripping in the Triassic–Middle Jurassic, southern-central Barents Sea shelf succession to understand regional tectonic mechanisms and structural responses: *Submitted to* ***Tectonophysics***.

(IN PREP) Martins, G., Ettensohn, F., and Knutsen, S. -M., 2022, Using the Appalachian tectophase model to interpret the evolution of the Late Triassic–Early Jurassic Barents Sea shelf in terms of compressional tectonics: *To be submitted to* ***Earth-Science Frontiers***.

(IN PREP) Martins, G., 2022, Tectonostratigraphy of the Novaya Zemlya Archipelago and regional implications: A review: *To be submitted to* ***Earth-Science Reviews***.

ABSTRACTS

2009

Drefahl, M., Moraes, S.S., **Martins, G. A.**, Machado, A.J., 2009, (In Portuguese language) Primeiro registro de paleomastofauna do Pleistoceno no Municipio de Quijingue, Bahia. Resumos PALEO NE 2009, 1, 10-10. (*Presented as a* ***talk*** *in the PALEO 2009 conference, Crato, Brazil*).

Martins, G.A., Drefahl, M., Machado, A.J., 2009, (In Portuguese language) Analise tafonomica preliminar da concentracao fossilifera em tanque situado no municipio de Quijingue, nordeste da Bahia. XXVIII Seminario Estudantil de Pesquisa e X Seminario de Pesquisa e Pos-Graduacao. 10-10. (*Presented as a* ***talk*** *in the X Seminario de Pesquisa e Pos-Graduacao-UFBA, Salvador, Brazil*).

2010

Martins, G.A., Drefahl, M., Machado, A.J., 2010, (In Portuguese language) Implicacoes paleontologicas e geologicas da primeira occorencia fossil em Quijingue, nordeste da Bahia. XXIX Seminario Seminario Estudantil de Pesquisa (SEMEP) e XI Seminario de Pesquisa e Pos-Graduacao. Livro de Programa e Resumos. 232-232. (*Presented as a* ***talk*** *in the XI Seminario de Pesquisa e Pos-Graduacao-UFBA, Salvador, Brazil*).

2021

Martins, G. A., Ettensohn,F. R., and Knutsen, S. -M., 2021, Appalachian-Basin analogs as a tool for understanding the geology of the Barents Sea shelf: Geological Society of America with Programs, v. 53 (2); doi: 10.1130/abs/2021SE-362211 (*Presented as a* ***talk*** *in the South eastern section 70th Annual meeting, Online*).

Martins, G. A., Ettensohn,F. R., and Knutsen, S. -M., 2021, Understanding the tectonostratigraphic development of the Upper Permian–Middle Jurassic clastic succession on the Barents Sea shelf: Geological Society of America with Programs, v. 53 (6). doi: 10.1130/abs/2021AM-365012 (*Presented as a* ***talk*** *at the GSA annual meeting 2021 connects, Portland, United States*).

EXTENDED ABSTRACTS

2022

Martins, G. A., Ettensohn,F. R., and Knutsen, S. -M., 2022, Tectonostratigraphic evolution of the Barents Sea shelf: Lessons from the Appalachian Basin: European Association of Geoscientists and Engineers, Conference Proceedings, v. 2022, p. 1–5; doi: https://doi.org/10.3997/2214-4609.202210604 (*Presented as a **talk** in the 83rd EAGE Annual Conference and Exhibition, Madrid, Spain*).

Martins, G. A., Ettensohn,F. R., and Knutsen, S. -M., 2022, Using the Appalachian superbasin as an analogue to the Permo-Carboniferous succession and petroleum-systems of the Barents Sea shelf: Second International Meeting for Applied Geoscience & Energy, v. 2022, p. 436–440; doi: https://doi.org/10.1190/image2022-3738174.1 (*Presented as a **poster** in the IMAGE: The International Meeting for Applied Geoscience & Energy, Houston, United States*).

6. GRANTS AND AWARDS
124590 USD Norwegian Petroleum Directorate (PhD project funding), 2020–2022
5000 USD Rio Tinto Minerals Development (B.S. project funding), 2011–2012
49750 USD University of Kentucky Graduate full tuition scholarship, 2019–2022
2600 USD Brown-MacFarlan Student Travel Grant, 2021–2022
500 USD Earth Rates Conference Support, 2021
1000 USD Pioneer Graduate excellence stipend, 2019
1800 USD National Council for Scientific and Technological Development scholarship, 2009–2010

7. HONORS
- Omicron Delta Kappa: The National Leadership Honor Society
- Sigma Gamma Epsilon: The National Honor Society for the Earth Sciences

8. FIELDWORK
2019 **Regional transect across Arizona, Utah and Colorado** (w/ University of Kentucky) (1 week)
2019 **Colorado Rocky Mountains** (w/ University of Kentucky) (6 weeks)
2019 **Appalachian Basin in Kentucky** (w/ Geological Society of Kentucky) (1 day)
2016 **Spitsbergen/Svalbard** (w/ the University Centre in Svalbard) (1 week)
2016 **Norwegian Barents Sea** (w/ the University of Tromsø) (2 days)
2013–2014 **Norwegian North Sea** (w/Schlumberger) (several 5-week rotations)
2013–2014 **Gulf of Mexico** (w/Schlumberger) (several 5-week rotations)
2013–2014 **British North Sea** (w/Schlumberger) (several 5-week rotations)
2012 **Menchen Vanadium Mine in Bahia, Brazil** (w/ Largo Resources and Rio Tinto RTDM) (1 week)
2011 **Bauxite/Vanadium Exploration Areas in Bahia, Brazil** (w/ Rio Tinto RTDM) (10 weeks)
2011 **Onshore Basement of the Campos Basin, Brazil** (w/ UERJ and Petrobras) (1 day)
2009 **Araripe Basin, Brazil** (w/ Federal University of Bahia) (2 weeks)
2008 **Chapada Diamantina, Bahia, Brazil** (w/ Baiana Company of Mineral Research) (1 week)
2008 **Reconcavo Basin, Bahia, Brazil** (w/Petrobras) (1 week)

9. TEACHING

COURSE APPOINTMENTS
Invertebrate Paleontology and Evolution (B.S. level, United States, 2019)
Earthquakes and Volcanoes (B.S. level, United States, 2019–2020)
Sedimentology (B.S. level, United States, 2019)
Field Geology and Summer Field Camp (B.S. level, United States, 2019)
Fundamentals of Geology I (B.S. level, United States, 2019)
Fundamentals of Geology II (B.S. level, United States, 2019)
Marine Geophysics (M.S. level, Norway, 2016)

10. LANGUAGE AND COMPUTER SKILLS

LANGUAGE

- Portuguese: native
- English: fluent (University of Cambridge Level C1 certification)
- Norwegian: advanced
- Spanish: intermediate

COMPUTER

- Petrel E&P Software Platform
- Omega Geophysical Data Processing Platform
- QGIS
- Microsoft Office Suite
- Adobe Cloud Suite
- Python

11. PROFESSIONAL AND EXTRACURRICULAR TRAINING

2022 **Project Management Basics**, Project Management Institute (PMI), Virtual
- Preparation to the CAPM/PMI certification in project management

2021 **UiT**, Management of Norwegian Petroleum Resources, Tromsø, Norway
- Regulatory framework of the Norwegian continental shelf and project management.

2021 **URGE**, Unlearning Racism in Geoscience, Lexington, United States
- Exposed to anti-racist policies and mitigation strategies in the academia.

2021 **HGS**, How to Use Paleontology in the Oil and Gas Industry, Virtual
- Paleontological data applied to stratigraphic analysis, exploration, and prospect development.

2020 **AAPG**, Python Coding and Petroleum, Virtual
- Introduction to Python and its application to data analysis.

2020 **AAPG**, Beginner's Guide to Unstructured Data and Machine Learning in Oil, Virtual
- Introduction to machine learning and unstructured data.

2019 **SEG**, Structural Geology in Seismic Interpretation, San Antonio, United States
- Structural models, seismic interpretation, and seismic signatures of complex structures.

2016 **UNIS**, Logging and Reservoir Characterization, Svalbard, Norway
- Logging, formation evaluation and reservoir characterization in the field.

2015 **NorTex Petroleum Cluster/Schlumberger**, Petrophysics and Logging, Bergen, Norway
- Wireline log interpretation, formation evaluation, measuring tools, and case studies.

2014 **Schlumberger**, Small Boat Operations, Kristiansund, Norway
- Deployment, maintenance, and recovery of offshore equipment.

2014 **Schlumberger**, Processing Techniques II, Houston, United States
- Noise and multiple attenuation, Petrel usage, and advanced processing techniques.

2013 **Schlumberger**, Processing Techniques I, Houston, United States
- Noise attenuation, marine/land acquisition, and processing techniques.

2013 **Schlumberger**, Marine Seismic Acquisition, Asker, Norway
- Marine acquisition systems and quality control.

2013 **Schlumberger**, 3D Seismic and Project Management, Houston, United States
- Project management, data processing, and quality control from setting to production phases.

2012 Schlumberger, Introduction to Petrel and Omega, Abu Dhabi, United Arab Emirates
- Operations, quality control, seismic processing workflows, and project setting.

2012 **Schlumberger**, Seismic Processing, Abu Dhabi, United Arab Emirates
- Fundaments of seismic acquisition and processing.

2012 **Schlumberger**, Petroleum Geology and Seismic Processing, Abu Dhabi, United Arab Emirates
- Fundaments of petroleum geology.

2012 **Schlumberger**, Introduction to the E&P Industry, Rio de Janeiro, Brazil
- HSE, business, goals, and activities in the exploration and production industry.

2012 **Rio Tinto Mineral Development**, Applied Opaque Petrology, Brasilia, Brazil
- Mineralogical/Petrological work on opaque/polished thin sections.

2003 **Federal University of Minas Gerais**, Astronomy for Beginners, Belo Horizonte, Brazil
- Introduction to Astronomy. Basic theory and observation techniques.

2003 **Federal University of Minas Gerais**, Introduction to Speleology, Belo Horizonte, Brazil
- Theory of speleology and cave prospecting techniques.

12. HEALTH SAFE AND ENVIRONMENT

2019 **American Red Cross**, Adult CPR and AED, Lexington, United States
- CPR techniques and first aid.

2014 **Schlumberger**, Small Boat Operations, Kristiansund, Norway
- Equipment maintenance offshore and accident prevention.

2014 **British Petroleum**, Accident Prevention Care Workshop**,** Stavanger, Norway
- Risk observation and accident prevention.

2014 **British Petroleum**, Accident Prevention Care Workshop**,** Aberdeen, United Kingdom
- Risk observation and accident prevention.

2013 **Falck Alford**, HSE Certifications (US Coast Guard approved)**,** Houston, United States
- Basic firefighting, first aid, CPR, EBS, HUET, personal safety, and social responsibilities.

13. PROFESSIONAL AFFILIATIONS
- American Association of Petroleum Geologists
- Society of Exploration Geophysicists
- Project Management Institute
- Geological Society of Houston
- Geophysical Society of Houston
- Brazilian Association of Petroleum Geologists
- Geological Society of America