

RUTH X BELTRAN PAEZ

rxbeltra@cougarnet.uh.edu | +1 3463675786 | www.linkedin.com/in/ruth-ximena-beltran-paez

SUMMARY

I am a graduate Geologist with fourteen years of experience in the oil and gas industry, with expertise in seismic interpretation and basin modeling across salt basins, passive margins, foreland basins, and convergent margins, as well as developing exploration concepts, defining fairways, and proposing new play concepts. One such concept, in clastic environments, led to drilling four wildcat wells and successful oil testing. Through my Ph.D. research, I am investigating the crustal structure and tectonic evolution of the southern Brazilian margin to evaluate the pre-salt petroleum system, focusing on complex carbonate reservoirs and organic-rich lacustrine source rocks. These results aim to reduce exploration risk and support play and prospect assessment at the distal margin of the Campos basin. I seek to contribute as a geoscientist by leading challenging exploration projects in high-potential petroleum regions.

WORK EXPERIENCE

2007-2022 Ecopetrol S.A. Geoscientist (Exploration & Seismic Interpretation), Bogota, Colombia

Expertise in seismic interpretation and exploration workflows for Upstream projects across Colombian and Brazilian basins.

- **2022. Offshore Brazil (Santos Basin)**
Contributed to technical evaluations to support strategic exploration decisions regarding the Company's long-term presence in the evaluated asset.
- **2019 – 2021. Eastern Llanos Foreland Basin, Colombia – Northern Area**
Led technical evaluation of exploration blocks, resulting in the addition of 150 MMBO (Mean) of prospective resources to the company's portfolio.
- **2016-2018. Eastern Llanos Foreland Basin, Colombia – Southern Area**
Led technical sessions and presentations for the farm-out in the Eastern Llanos Foreland Basin exploration blocks.
Developed a new exploratory concept supported by peer reviews and drilling monitoring of the wildcat well.
- **2015. Sinu Offshore Basin, Colombia**
Led a technical assessment of an exploration block to support strategic decisions regarding the continuation of the asset.
- **2010, 2012, 2019. Eastern Llanos Foreland Basin, Colombia.**
Contributed to successful technical evaluations for Colombia Bid Rounds, resulting in the award of six new exploration blocks.
- **2013-2014. Eastern Llanos Foreland Basin, Colombia – Southern Area**
Developed the exploratory concept, supported it in technical committees, monitored, drilled, and planned three successful wildcat wells, unlocking new exploration potential.
- **2007-2012. Eastern Llanos Foreland Basin, Colombia – Southern Area**
Led technical evaluation of exploration blocks, resulting in the addition of 107 MMBO (mean) of prospective resources to the company's portfolio.

RESEARCH EXPERIENCE

2022-2026. Research Assistant. CBTH consortium, University of Houston, TX, USA. Defined the nature of intruded, thinned, continental crust as its transition into oceanic crust based on seismic reflection and potential fields data for the Campos basin, Brazil.

2005-2007. Geologist. Characterization of Discrete Fracture Networks, Ecopetrol-ICP-Bucaramanga, Colombia. Delivered the discretized reservoir levels by integrating sedimentological data and description of natural fracture networks from core analysis.

INDUSTRY LEADERSHIP EXPERIENCE

2018. Regional Technical Leader for Orinoco Basin, leading the exploratory activities of 12 E&P blocks in the Foreland Llanos Basin and managing a team of 18 people. ECOPETROL S.A. - Bogota, Colombia.

Spring 2023. Student coordinator for Structural and Tectonics Seminar, Department of Earth & Atmospheric Sciences. The University of Houston – Houston, TX.

TECHNICAL SKILLS

- Decision Space – Subsurface software
- Petrel - Subsurface software
- ArcGIS – Geographic information system
- Structural solver – 2D structural analysis

- Oasis Montaj, Seequent
- 2D Move – 2D kinematic modeling
- ZetaWare, Genesis – Petroleum system analysis

• MS. Application Office: Excel, Word, PowerPoint, Microsoft Publisher

EDUCATION

Ph.D. in Geology, 3.7 GPA – Expected graduation: Dec 2026. The University of Houston - Houston, TX

- *Dissertation focus areas*: Tectonic evolution of the continental rift system of the southeastern Brazilian margin to evaluate risk play elements of the petroleum system and deliver a basin modeling of Cretaceous source rocks.

MS in Geology, GPA 3.7, 2015-2018. The University of Houston - Houston, TX

- *Capstone project*: Hydrocarbon Signature in AVO as an Exploration tool for a Foreland Basin in Colombia.

MBA with emphasis in Project Management, 2014-2016. Universidad de Viña del Mar, Chile

Certified in Petroleum Geology, 2010. Petroleum Geology Foundation, Bogota, Colombia

B.Sc. in Geology, 1997-2002. Universidad Industrial de Santander, Bucaramanga, Colombia

PUBLICATIONS

Tectonics.

2026. Beltran, R. X., & Mann, P. Crustal structure and tectonic evolution of Early Cretaceous continental rift and its transition to oceanic crust in the ultra-deepwater Campos basin, southeastern Brazil. doi.org/10.1029/2025TC009051

CONFERENCES

- 2025. AAPG IMAGE25, Houston, Texas.

Structural evolution of the Brazilian rifted passive margin in Campos basin: Timing and kinematic relationship of the rift system and salt tectonics. **Beltran, R.**, Mora, A., and Mann, P.

- 2025. AAPG IMAGE25 Post-convention Workshop, Houston, Texas.

New Insights and Methods in Basin Modeling for Predicting Hydrocarbon Play Fairways: Structural Restoration to Improve Basin Models, Campos Basin, Brazil. **Beltran, R.**

- 2019. SEG Technical Program Expanded Abstracts, San Antonio, Texas.

Integrated Near-surface Characterization, Onshore Colombia – The Avila 3D Experiment. Wiarda, E., Santamaría, F., Rodríguez, D., Morales, H., Jimenez, E., Quintero, J., **Beltran R.**, and Soldo J.

- 2018. AAPG Annual Convention and Exhibition, Salt Lake City, Utah.

Stratigraphic Traps in the Llanos Basin of Colombia – Styles and Petroleum Systems. Mora, A., Villamizar, C., Cardozo, E., Caballero, V., Gelvez, J., Gomez, R., Lozada, S., Valencia, A., **Beltran, R.**, Franco, M., and Tejada, M.

- 2008. AAPG Annual Convention and Exhibition, San Antonio, Texas.

Fracture modeling based on lithologic controls, geometry, and tectonic evolution in the Llanos Foothills, Colombia. Ortiz, A., Mesa, G., and **Beltran, R.X.**

Other publications and involvement

- 9 poster presentations (AAPG-SEG IMAGE23, IMAGE24, GeoGulf23, HGS Sheriff Lecture 2023, 2024, and 2025, EAS Research Day 2023, 2024, and 2025)
- Session Chair and Reviewer in AAPG IMAGE24
- 15 technical presentations to industry (Total Energies, CNOOC, Chevron, TGS, Woodside, Petrobras, CBTH sponsor meetings)
- 7 technical presentations to UH EAS faculty and the geoscientist community through the Structure and Tectonics Seminar led by Dr. Paul Mann.

Three awards for conference presentations

2nd Place Student Poster Competition – EAS Research Day, 2025

1st Place Student Poster Competition – EAS Research Day, 2024

3rd Place in Student Poster Competition - GeoGulf23, 2023

Scholarships

2022 ECOPETROL S.A. - Scholarship awarded to the best 15 projects among 125 proposals.

2016 Ministry of Science and Technology - First place nationwide for scholarship calls for a master's degree program abroad.

PROFESSIONAL AFFILIATIONS

American Association of Petroleum Geologists (AAPG), Student member, 2023

Houston Geological Society (HSG), Student member, 2023