

MATTHEW L. BELOBRAYDIC

Principal Geoscientist, Geoscience and Engineering Group
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Principal Areas of Expertise

Mr. Belobraydic's principal areas of interest and expertise include stratigraphic and structural interpretations, geologic characterization, data science, process automation, geostatistical analysis, geomodeling, and uncertainty analysis.

Qualifications

M.S., Geology, Ball State University, 2006. Thesis: "Drainage Basin Analysis and Fluvial Geomorphic Reconstruction Plan for the Killbuck–Mud Creek Subwatershed, Delaware County, Indiana."

B.S., Geology, University of Idaho, 2003. Senior Project: "Drainage Analysis for Colfax South, Diamond, Dusty, Thera, Thornton Quadrangles and an Experimental Quadrangle of Eastern Washington."

Professional Experience

December 2020–Present: Principal Geoscientist, Geoscience and Engineering Group, EERC, UND. Mr. Belobraydic collaborates with EERC subject matter experts, principal investigators, and leadership to prepare proposals and pursue new business opportunities and leads and manages projects in the areas of enhanced oil recovery (EOR) in conventional and unconventional formations; CO₂ and produced gas storage; natural resource management; critical materials resource characterization and recovery; geologic and synthetic materials characterization; produced water management, and the environmental aspects of energy development. Specific activities included the following. He has created static geomodels in support of exploration and development for fields and basins located in North America, South America, and the Middle East for conventional reservoirs, both clastic and carbonate, and unconventional resources.

September 2008–April 2020: Senior III Reservoir Geologist, Schlumberger, Denver, Colorado. Mr. Belobraydic produced data-driven client solutions as part of a multidisciplinary consulting team, improving internal technical processes and workflows to increase efficiency and maximize profits. Specific activities included the following:

- Managed team of petrophysicist, geophysicist, geologist, and reservoir engineers from proposal to project close as technical lead for more than ten client projects.
- Introduced Agile and Scrum project management to local consulting team, changing work processes, shortening turnaround times by 66% and increasing bottom line.
- Reviewed green energy workflows and processes for internal geothermal and carbon capture and storage teams as subject matter expert to mitigate risk and uncertainty.
- Initialized and maintained backlog for basin interpretation cloud subscription service as Scrum product owner to capture previously inaccessible market share.
- Adapted working style and deliverables to become trusted technical advisor for more than 20 client organizations, each with unique business priorities.

- Coordinated stakeholders and potential clients for four cloud subscription service offerings to maximize value, drive communication, and quantify feedback of results.
- Created harmonious and integrated team environments for technical staff from both Schlumberger and client organizations for project collaborations.
- Characterized petroleum systems and depositional environments for client acreage to maximize reservoir understanding and minimize development risk.
- Interpreted structure and stratigraphy for full 3D models, combining seismic data for conventional and unconventional plays in more than ten basins and 30 fields globally.
- Analyzed raw and interpreted data to generate geostatically accurate static reservoir models in Petrel on more than five projects per year for worldwide clients.
- Published and automated uncertainty optimization technique, reducing dynamic simulation iterations by 80% and generating a positive feedback loop to initial inputs.
- Built custom Python, SQL, and Petrel workflows, increasing productivity by up to 900%.
- Coached and mentored more than 30 individuals through organized team-building activities and formal career development.
- Created advanced modeling curriculum and training programs in Petrel for more than 25 junior geoscientists.
- Published results and methodologies for select client work as posters and papers to technical conferences and professional societies.
- Requested presenter to professional societies for geology, data science, and machine learning.
- Prepared and reviewed proposals, reports, and project documentation, effectively communicating technical results and methodology to clients and working teams.

September 2006–August 2008: CO₂ Enhanced Oil Recovery Research Assistant, UND. Mr. Belobraydic researched CO₂ enhanced oil recovery and sequestration potential for the Williston Basin alongside the EERC. Specific activities included the following:

- Generated systematic approach for assessing enhanced oil recovery and carbon dioxide sequestration for fields of interest.
- Produced 3D reservoir models to simulate enhanced oil recovery and carbon dioxide sequestration potential.

May 2005–May 2006: National Science Foundation GK–12 Fellow, Ball State University, Muncie, Indiana. Mr. Belobraydic provided in classroom support to Indianapolis Public Schools (IPS) teachers through inquiry-based lessons and assisted in professional development for K–8 science standards. Specific activities included the following:

- Developed middle school Earth science curriculum and lessons for IPS.
- Provided aid in the professional development of IPS teachers as a knowledge resource.

Professional Memberships

American Association of Petroleum Geologists
Rocky Mountain Association of Geologists

Publications and Presentations

Has authored or coauthored numerous professional publications.