

MARK MILLARD

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Geoscience Manager/Business Development Geologist

Business Development, Exploration, and Development/Operations Geologist with 15 years' experience in the Williston (Bakken/Three Forks), Powder River (Niobrara, Turner), Gulf Coast (Eagle Ford), Midland Basin (Wolfcamp/Spraberry), Uinta, Green River, northern DJ, and San Juan basins. Award-winning communicator and author of 28 technical publications. Motivated prospect generator with creative scientific solutions for sweet spot identification in resource plays throughout the Rockies. Thrives in a multi-disciplinary environment and thus has an excellent understanding of how well placement and fracture stimulation design impact well results.

Technical Skills – Cradle to Grave Experience

Acquisitions and Divestitures	Dataroom Evaluation	Development Planning
Exploration Portfolio Management	Petrophysical Calculations	Federal Well Permitting
Exploration Strategy	Facies Modeling	Core Acquisition
Development	Geochemistry	Development Geology
Prospect Generation	Sequence Stratigraphy	Operations Geology
Basin Scale Petroleum System Analysis	Data Analytics	Horizontal Geosteering
Resource Play Sweet Spot Analysis	Core Analysis	Wireline Logging
	Pore Throat Analysis	Seismic Interpretation

Rockies Basin Experience

Powder River Basin	Big Horn Basin	Greater Green River Basin
Williston Basin	Uinta Basin	Midland Basin
DJ Basin	San Juan Basin	Gulf Coast
Wind River Basin	Paradox Basin	

Top to Bottom Petroleum System Experience

Bakken	Codell	Lewis	Sussex	Tyler
Three Forks	Eagleford	Almond	Green River	Mancos
Niobrara	Austin Chalk	Mowry	Wasatch	Parkman
Turner	Edwards	Shannon	Gallup	

Rockies Resources LLC (Denham Capital Backed Private Startup)

2017 – 2020

Geoscience Manager

Sep 2018 – March 2020

Evaluated exploration and acquisition opportunities in the Williston Basin (Bakken/Three Forks), Powder River Basin (Niobrara, Turner, Shannon, Sussex), Uinta Basin (Green River, Wasatch), Green River Basin (Lewis, Almond), and northern DJ Basin (Codell). As part of multi-disciplinary team, acquired ~12,000 acres prospective for the Turner in the Powder River Basin, and ~65,000 acres prospective for the Lewis/Almond in the Green River Basin.

Senior Geoscientist

Nov 2017 – Sep 2018

Senior Geologist in a startup E&P company focused on building value through resource plays in the Rocky Mountain Region. Tasks varied from well planning and operations to full prospect evaluations of emerging plays in the Rockies. Responsible for the planning and drilling of RRLLC's 1st company well in the Turner Sandstone of the Powder River Basin.

SM Energy Company

2011 – 2017

Senior Exploration Geologist - Permian Basin

Oct 2016 – Nov 2017

Evaluated multiple significant acquisition datarooms. Worked as a multidisciplinary team to build an integrated core to log facies model over entire Wolfcampian and Leonardian section. Identified additional potential interval over recent \$2.6B acquisition. Test well was a success. Consistently ranked in the top quartile for annual performance evaluations 2011-2017.

Senior Exploration Geologist – Rockies

Oct 2014 – Nov 2016

Lead basin-wide petroleum systems evaluations of Uinta and San Juan Basins (mentored new-hire on the San Juan), identifying and mapping geologic drivers of resource play sweet spots and integrated engineering analysis. Proposed basin entry strategy to upper management (decision to not pursue due to corporate strategy change). Provided geologic input for multiple acquisitions and divestitures in the Williston Basin including divestiture of conventional oil wells in Williston basin for \$111 MM.

Senior Geologist – Williston Basin

June 2011-Oct 2014

Mapped Bakken/Three Forks across entire Williston Basin, including full core-calibrated petrophysical model to identify acquisition and drilling opportunities. Developed a novel geochemical approach for estimating hydrocarbon yields in the Bakken Shales (award winning presentation at Regional AAPG conference). Applied new geochemical approach to gain management approval for new exploration concept (ultimately did not pursue due to budget constraints and corporate strategy change). Provided geologic input for \$330 MM acquisition of Baytex Bakken assets in Divide County.

Pioneer Natural Resources

2007 – 2011

Development Geologist II - South Texas Eagle Ford Asset Team

Nov 2008 – July 2011

Performed regional mapping for Pioneer's entrance in the Eagle Ford shale play (logs and 2D/3D seismic). Created development plans, geosteered wells, performed ELAN petrophysical analysis, and screened acquisition opportunities. Planned and drilled Pioneer's third well in the emerging Eagle Ford play with highest 24 hour IP in the play (at the time). Provided geologic input for \$1.2 B joint venture with Reliance Industries.

Operations Geologist I – South Texas Asset Team

Aug 2007 – Nov 2008

Coordinated and supervised logging and coring operations, and provided remote geosteering. Evaluated remaining potential, proposed locations, and created development plans for the Edwards Reef trend. Consistently ranked in the top quartile for annual performance evaluations 2007-2011.

XTO Energy

2006 – 2006

Geologic Intern – Rockies

June 2006 – Aug 2011

Performed regional mapping and characterization of three-dimensional distribution of coal seams in fluvial deltaic successions in the Ferron Sandstone of central Utah.

Education

2002-2007

Baylor University, Waco, Tx

2006-2007

MS in Geology. GPA 4.00

Thesis – Linking onshore and offshore data to find potentially seismogenic faults along the eastern Malibu coastline.

Brigham Young University-Idaho, Rexburg, Idaho

2002-2005

BS Geology, Cum Laude. Full Academic Scholarship. GPA 3.90

Senior Thesis – Sediment diapirism and gravity sliding of the 2 Ma Huckleberry Ridge Tuff near the Teton Dam, Idaho: small-scale structural constraints.

Key Publications (28 Total - Full list available upon request)

2005 - 2019

- Millard, M.**, Hennes, A., Kerr, P., Brinkerhoff, R., and Brown, J., Great Scott! A homebrewed recipe for regional trend-based log normalization: Various examples from Rocky Mountain Basins. AAPG Datapages Article #90357, Cheyenne, Wyoming, Sept. 15-19, 2019.
- Millard, M.**, Dighans, M., and Fluckiger, S., Seeing the forest for the trees: A simplified workflow for target optimization utilizing correlation matrices: an example from the Bakken Formation. AAPG Datapages Article #90291, Houston, Texas, April 2-5, 2017.
- Brinkerhoff, A., R., **Millard, M. A.**, and Edwards, S., 2016. Pitfalls in geological mapping within unconventional plays: A case study from the Three Forks Play in the Williston Basin. 2016 AAPG Annual Convention and Exhibition, Calgary, AB, CA, June 19-22, 2016.
- Millard, M. A.**, Brinkerhoff, A. R., and Fluckiger, S. D., 2016, A Tale of two Three Forks: unravelling the intricacies of the Three Forks using a hybrid conventional/unconventional toolset. 2016 Houston Geological Society Applied Geoscience Conference, Houston, TX, March 6, 2016.
- Millard, M.**, and Ruble, T., 2014. Towards a more complete understanding of the Bakken/Three Forks Petroleum System through the integration of geochemistry, stratigraphy, and production results. AAPG Geosciences Technology Workshop. November 17-19, 2014.
- Millard, M.**, Poole, M., and Schmidt, K., 2010. Eagle Ford: Horizontal well planning, geosteering, and data integration. 2010 Midland College Shale Gas and Unconventional Resources Symposium.
- Clarke, P., Barzola, G., Poole, M., and **Millard, M.**, 2010. Shale Gas Exploration, Eagle Ford Trend of South Texas: Lessons learned from a Multi-Well Pilot Program. AAPG Search and Discovery Article #90108. 2010 AAPG International Convention and Exhibition, September 12-15, 2010 Calgary, Alberta, Canada.
- Waite, L., Loseke, T.; Stephens, A., **Millard, M.**, King, J., Burnett, N., and Barzola, G., 2010. Integrated Analysis of the Lower Cretaceous Edwards Reef, Stuart City Trend, South Texas, USA. AAPG Search and Discovery Article #90108©2010 AAPG International Convention and Exhibition, September 12-15, 2010 Calgary, Alberta, Canada.
- Millard, M. A.**, Campbell, R. D., Lindsay, R. D., Secrest, S. H., and Cronin, V., 2007. Further tests of the seismo-lineament method for recognizing seismogenic faults at the ground surface, Eos Trans. AGU, 88 (23), Jt. Assem. Suppl., Abstract T41B-04.

Manuscripts

- Millard, M.**, and Brinkerhoff, R., 2016. The integration of geochemical, stratigraphic, and production data to improve geological models in the Bakken-Three Forks Petroleum System, Williston Basin, North Dakota, in Dolan, M., Higley, D., and Lillis, P.e eds., Hydrocarbon source rocks in unconventional plays, Rocky Mountain Region: Rocky Mountain Association of Geologists guidebook, p. 190-211, 2016.
- Millard, M.**, and Ruble, T., 2014. Utilizing hydrocarbon yield determinations to evaluate source/reservoir relationships in the Bakken/Three Forks of the Williston Basin, ND. Unconventional Resources Technology Conference (URTeC) DOI 10.15530/urtec-2014-1903465.
- Cronin, V.S., **Millard, M.**, Seidman, L., and Bayliss, B., 2008. The Seismo-lineament analysis method (SLAM): A reconnaissance tool to help find seismogenic faults. Environmental and Engineering Geoscience; August, 2008; Vol. 14; No. 3; p. 199-219.

Professional Service and Awards

BYU-Idaho Geology Department Advisory Board – 2016 – Present

Technical Session Chair - 2017 RMS AAPG Annual Conference

AAPG House of Delegates – 2016-2019

Montana Geological Society Executive Committee - 2012-2016 – President 2015

A.I. Levorson Award – RMS AAPG – Best oral presentation at section meeting, 2014

Frank Kottowski Memorial Award – AAPG Energy and Minerals Division, 2014

References

Available upon request