

The Stanley Slipper Gold Medal for 2023 is awarded to Dr. Brian Zaitlin, in recognition of his outstanding career as a technical geological leader in the Canadian oil and gas industry, as well as his role as a mentor and teacher. Dr. Zaitlin has worked for over 45 years as an innovative researcher, stratigrapher, sedimentologist, exploration and development geologist in the oil and gas industry, both in Canada and internationally. His career has covered a diverse spectrum of projects involving clastic and carbonate reservoirs, and complex stratigraphy and structural plays, particularly in the Western Canadian Sedimentary Basin (WCSB) and Northern USA. He has proposed, presented, and published technical ideas and concepts, that have led directly or indirectly to significant drilling and economic exploration and development. He is well known throughout the global geology community for his pioneering ideas on incised-valley fills (IVF) and facies models for estuaries.

Inspired by teachers in high school, Brian decided to attend geology classes at Loyola College/Concordia University, which prioritized geological field work with small classes. He graduated with a B.Sc. in Geology in 1979. During his undergraduate and later graduate/post-graduate years, Brian followed his passion for field work and spent 10 seasons in the field in areas ranging from the Quebec Eastern Townships to Baffin Island in Northern Canada. He graduated with his M.Sc. in Geology from the University of Ottawa in 1981 and began his oil and gas industry career with Gulf Corporation in Calgary. Brian first met an influential mentor, Gerry Macey, at Gulf Corporation. Gerry encouraged his staff to be creative in their exploration efforts and supported Brian in using experience from outcrops, modern analogs along with subsurface mapping techniques. In 1982, Gulf Corporation sent Brian on a field trip in the Bay of Fundy led by Dr. Bob Dalrymple. Brian realized he was seeing the same estuarine processes that he had identified in the Lower Cretaceous Senlac Lloydminster oil pool in Saskatchewan. As Brian had always planned to obtain his doctorate, he applied and was accepted for graduate studies with Dr. Dalrymple at Queen's University (1983-1987). Along with Dr. Ron Boyd from Dalhousie University, Dr. Dalrymple and Brian brought their respective unique experiences together which led to a seminal paper on estuarine facies: *Dalrymple R.W., B.A. Zaitlin, and R. Boyd, 1992, Estuarine facies models: conceptual basis and stratigraphic implications: Journal of Sedimentary Petrology, v.62, p. 1130-1146*. This paper was selected in 2017 by the American Association of Petroleum Geology (AAPG) as one of the "Top 10 Landmark Papers in Siliciclastic Sedimentology" in petroleum geoscience over the last 100 years. Dr. Dalrymple writes that the paper "is based entirely on a set of fundamental concepts that Brian originated." The publication was timely as industry activity was accelerating in the estuarine reservoir rocks in the McMurray Formation, and the number of field trips to the Book Cliffs outcrops were increasing as research interest intensified about incised valley and estuarine-influenced depositional systems.

Brian received the outstanding Ph.D. Thesis Award from the Canadian Society of Petroleum Geology (CSPG) in 1987 for his doctorate work on the Salmon River Estuary in the Bay of Fundy. His subsequent publication on incised valley systems (IVF) in 1994 is considered a

standard reference for the architecture of incised valleys and estuarine systems. Brian's Ph.D. was followed by a year of post-doctorate work at the University of Sydney in Australia. Industry came calling when a telex arrived from Calgary with a job offer with Esso Canada Resources, initiated by Dr. David James. Brian left Australia shortly afterward, returning to Canada.

Brian joined Esso Canada Resources in 1987 and worked in exploration geology for six years, mapping prospects in the Belloy, Montney, Halfway, Doig, Falher, Basal Quartz, Glauconite and Viking Formations in Northern Alberta/Northeastern British Columbia (NEBC), as well as providing training for clastic reservoirs with a variety of field trips, and workshops. Dr. Tom Moslow writes that "Brian led the sedimentologic and stratigraphic efforts of a team of geoscientists at ESSO (Imperial) Research (with David James and Henry Posamentier) that conducted a regional evaluation of the Montney Formation which led to one of the first discoveries of the Montney turbidite play in west-central Alberta ... an economically successful pool at Manir."

In 1993, Brian left Esso and began working at PanCanadian Energy (later known as Encana Corporation) in various roles including technical specialist, team lead, and Exploration Advisor. Dr. Ian McIlreath and Gerry Macey brought Brian together with an outstanding group of geologists that included Drs. Lorne Rosenthal, Roger Walker, and Ron Boyd. Brian became the team lead for various task forces pursuing Viking, Basal Quartz, Glauconite, Belly River, and Bears paw Formation prospects. Dr. Tom Moslow writes that "Brian led a successful and economic drilling program pursuing the IVF (incised-valley Fill) reservoir model within more poorly understood Mannville reservoirs in Southern Alberta." Brian expanded the mapping and drilling program to cover the entire Mannville succession in southern and central Alberta. The subsequent publications and technical presentations resulted in the IVF model becoming well known and applied successfully by geologists around the world. Brian was also the geological lead on an integrated team that quantified the reserves component of the successful \$702MM Canadian/USA Montana Power acquisition for which he was subsequently awarded the PanCanadian Presidents Award.

While at PanCanadian Energy, Brian was also responsible for mentoring and training new hire geologists and organizing core workshops and field courses for the staff. Shelley Leggett was mentored by Brian beginning in 1997. She writes that "Brian was the clastics expert in the company and ... had a very methodical workflow that fully integrated the macro-basinal view, sequence stratigraphy, facies analysis, and petrograph[y], chemostr[atigraphy], petrophysics analysis." In 2001 Brian became Exploration Advisor in PanCanadian Energy's Great Plains Business unit and directed the exploration/development team in evaluating opportunities in southern Alberta, northern Montana and various US Rocky Mountain Basins. This resulted in a number of successful exploration and acquisition opportunities that were followed by extensive drilling programs. After the merger of PanCanadian and Alberta Energy Company Brian became the New Plays' team lead where he directed efforts looking for high-risk conventional exploration opportunities in Yukon, NWT, PEI, and New Brunswick. The team was

responsible in identifying a new multi-BCF Mississippian Basin Centered Gas play in Liard Basin.

Following his years at PanCanadian Energy/Encana Corporation, in 2004 Dr. Zaitlin joined Suncor Energy Inc. as a Senior Exploration geologist in the Prospect Generation Services team (PGS), led by Roger Smith, another mentor. Brian credits Roger with having incredible strategic vision, a positive attitude, and understanding what made plays successful. Roger gave Brian the latitude to pursue creative exploration ideas and prospects during this time. Brian developed many drill-ready opportunities in Saskatchewan (Lower Mannville), NEBC (stacked Cretaceous to Triassic), Southern Alberta, and NW Alberta (Triassic).

Dr. Zaitlin subsequently moved to Enerplus (Enermark) Resources Fund in 2008 as Chief Geologist and was responsible for helping develop the exploration portfolio (Canadian/USA) for two years. He was also responsible for training and mentoring of all geological staff. Shelley Leggett was also working at Enerplus Resources Fund at the time and writes that “Brian had a tremendous impact on new ideas and concepts adopted into various business units extending from the NE BC regions in the Charlie Lake and Halfway units south and eastwards into the Mississippian units of SE Saskatchewan.” Brian also vetted many opportunities, land sales, and A&D activity in the Bakken, Marcellus, and Doig/Montney Formations. Shelley remarks on the positive influence Brian had on future playmakers: “Many of the geologists that worked on these task force projects under Brian’s leadership went on to senior exploration leadership roles in various Calgary based oil and gas companies.”

In 2010, Dr. Zaitlin made a radical career move and accepted the Chief Geologist position with the Bank of Montreal (BMO) Capital Markets A&D Advisory Group in Calgary. His role was to provide technical evaluations for acquisitions, dispositions, and mergers in the energy sector. Brian attended many technical presentations with private clients and published three technical evaluations on behalf of BMO. His geological work and public presentations on the structurally complex Southern Alberta Wabamun – Exshaw – Bakken (WEB) play was closely followed by many companies seeking success outside the Williston Basin.

Brian had a personally rewarding experience working with Indigenous groups. In 2011 Brian became Chief Geologist with Native American Resource Partners (NARP) and he describes his role as “providing technical, operational and strategic analysis for their portfolio and new investments.” His advice for those who wish to develop good relationships with Indigenous communities is to understand that they have a story to tell, and that “it is our responsibility to provide the time for the first Nations to tell their story.” Brian also served as a member on the Board of Directors for the Kainai Energy Limited Partnership.

In late 2013, Dr. Zaitlin joined EOG Resources Canada as an Exploration Advisor with a mandate to identify new play opportunities for the company. Shelley Leggett writes that Brian’s skills helped EOG “develop some predictive models to help EOG pursue leading

edge ideas that moved our efforts forward in identifying unconventional targets.” Brian mapped several Devonian and Triassic play fairways while also mentoring junior staff.

Dr. Zaitlin started up his own consulting business, Zaitlin Geoconsulting Ltd., in 2015 to provide new venture and prospect evaluation as well as expertise in development to interested energy clients. He worked on many projects for large and small clients, for projects ranging from Devonian/Mississippian-aged carbonates to Triassic - and Cretaceous-aged clastic systems. He also worked internationally, completing exploration reports on areas such as the Northwest Australian Shelf, the North Sea, Columbia, and New Zealand in conjunction with Dr. Brad Hayes at Petrel Robertson Ltd (PRCL).

From 2016 to present day, Brian has also taken on a very different role as one of the Hearing Commissioners with the Alberta Energy Regulator (AER). Their responsibilities include conducting hearings for energy applications and regulatory appeals and helping to develop the AER’s hearing procedures, rules, and processes for alternative dispute resolution. Their mandate is to ensure the safe, efficient, orderly, and environmentally responsible development of oil, oil sands, natural gas, and coal resources over their entire life cycle. This includes allocating and conserving water resources, managing public lands, and protecting the environment while providing economic benefits for all Albertans. This work gives Brian a strong sense of accomplishment as Hearing Commissioners are independent adjudicators, appointed by the Government of Alberta’s Orders in Council.

In addition to his industry work, Dr. Zaitlin has been a prolific contributor to published journals and presented and co-authored over 120 different talks at petroleum geology conventions and core conferences across Canada and internationally, sharing his knowledge and enthusiasm for sedimentology and geological exploration. His work has been published in journals including the CSPG Bulletin, Journal of Sedimentary Research, Sedimentology, SEPM Special Publications, AAPG Bulletin and the Canadian Journal of Earth Sciences. He has been a co-editor for three sedimentary geology books. The breadth and depth of topics of his published work are vast, including most of the stratigraphy across Canada and northern United States.

Dr. Zaitlin has also regularly taught courses during his career, beginning as an adjunct lecturer at Queen’s University while undertaking his Ph.D. He currently teaches through various societies and Zaitlin Geoconsulting about incised valleys, estuarine models, sequence stratigraphy and various formation specific courses including the Mannville Formation. Brian has been an instructor or co-instructor for over 60 courses, field guides, workshops and core conferences presented to companies, universities, geological societies, and government bodies. He has volunteered his time with many technical committees and as editor with CSPG and SEPM publications. Since 1983, Brian has been co-convenor or

committee member for 19 geological conferences held in Calgary. He served as Vice-Chair for the CSPG-AAPG-SEPM convention in Calgary in 2005. Most recently, he has been the co-convenor of the Skill Fundamentals 101 and Case Studies course at Geoconvention 2019-2021 with Shelley Leggett. She writes that “Brian has a passion for teaching and delivering ideas and concepts to the geoscience community to continue standards of high technical excellence and as a way of giving back and sharing his knowledge.”

Brian has received many industry awards and honours. He has been recognized by the CSPG several times (Service Awards 1991, 1992; Co-Author Best Oral Paper 1995; Tracks Award 1999; Lead Author Medal of Merit 2002; Honorable Mention Best Oral Paper 2003; Volunteer Award 2008; CSPG Ambassador Program 2019). Brian has also won awards from international geological societies including SEPM for oral presentations (Co-author, Excellence of Oral Presentations 1997, 1999) and from AAPG as one of its roving speakers (Distinguished Lecturer 1996/1997). He has also received Enerplus Resource Fund’s President Award in 2009, as well as the Canadian Society of Unconventional Resources (CSUR) Sproule Achievement Award in 2011.

Many geologists have praised Dr. Zaitlin’s technical depth and breath, as well as his outstanding innovation. Dr. Bob Dalrymple writes that Brian “has used his deep insight into how depositional systems operate to make important hydrocarbon discoveries and increase reserves in known fields.” Dr. Tom Moslow adds that Brian’s “insight into subsurface sedimentologic and stratigraphic reconstructions is legendary ... his creativity in solving complex geological problems is remarkable.”

Looking over his career, Dr. Zaitlin feels that his success is due to “always being a learner, moving around a lot, drilling a lot, working in teams ... seeing a lot of geology, and networking.” Brian’s philosophy is that success in understanding a geological prospect or play relies on having a good foundation and knowledge of a “three-legged stool,” with the three legs represented by modern sedimentological processes and depositional systems, preservation and 3D geometry as displayed in field outcrop examples, and subsurface mapping skills. He believes in following Dr. Guy Plint’s advice: “Take every opportunity to get into the field.” Brian also wishes to acknowledge his career was not possible without the overwhelming support of his wife Beryl, and their three daughters, while he juggled a very busy career and travels to outcrops and modern settings to pursue his passion in geology.

Dr. Brian Zaitlin’s outstanding advancement of major hydrocarbon plays in the Western Canadian Sedimentary Basin through pioneering and publishing of geological concepts, his passion and extensive technical leadership for detailed petroleum geology exploration and development, as well as his ongoing mentorship



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to the geological community, make him the deserving recipient of the CSPG Stanley Slipper Gold Medal for 2023.