

ARCHIVES

Newsletter of the Petroleum History Society

January 2020; Volume XXXI, Number 1

P.H.S. Luncheon – Wednesday, January 29, 2020

Lady with the Iron Ring – An Engineer’s Memoir of Hope, Luck and Success

by Nattalia Lea, Engineer and Oilpatch Veteran

In 1978, Nattalia Lea became the first woman to graduate from the University of British Columbia with a bio-resources engineering degree – an era when less than 0.5% of Canadian Professional Engineers were female. Then, twenty-six years later, in 2004, after four engineering job terminations and a 16 year journalism stint, this working-class woman made a comeback into Alberta’s oil patch boardrooms. Her 2019 book, *“Lady with the Iron Ring”*, is a heartwarming, witty and tell-all memoir of a woman with a mission who didn’t recognize it as one at the time.

Please see page 2 for Nattalia’s bio. Her book will be available for purchase and autograph..

Time:	12 noon, Wednesday, January 29, 2020
Place:	Calgary Petroleum Club 319 - 5 Avenue SW, Calgary; Trophy Lounge (but check marquee). Dress – business casual.
Cost:	P.H.S. Members and Student Members \$35 and Guests \$40 (most welcome). Only cash or cheque at the door. Payment can be made in advance by credit card or by e-mail. Please advise payment method with reply.
Lunch:	Soup, sandwiches and cookies. Gluten-free? Vegan? Advise with reply.

NOTE: Instructions for registering for the Luncheon:

Reply, if you wish to attend, to: Micky Gulless at 403-283-9268 or micky@petroleumhistory.ca by noon, Monday, January 27, if not sooner.

Those who register but do not come, or cancel after the deadline, will be invoiced.

Those who do not register by the deadline may not get a seat.

The Bull Wheel



Call for contributions and speakers: The Petroleum History Society values your input. If you have an article that you'd like to see in *Archives* or if you have a talk that you'd like to give, please get a hold of us. Contact President Clint Tippett at the address indicated on page 3.

Luncheon Speaker bio: Nattalia Lea, P. Eng., was born in Vancouver and worked in leadership roles at major engineering and oil companies. An internationally published writer, award-winning screenwriter and filmmaker, she has written for numerous publications including *The Globe and Mail*, *Calgary Herald* and *Oilweek*. She was recently flagged as one of the *Calgary Herald's* "20 Compelling Calgarians" for 2020. A link to this recognition is: <https://calgaryherald.com/news/local-news/compelling-calgarians-nattalia-lea>

Annual Meeting Presentation: This meeting will occur on March 25. We have been fortunate enough to have arranged for our speaker to be Dr. Sabrina Peric, Associate Professor in the Department of Anthropology and Archeology at the University of Calgary. Sabrina has been conducting research on Dr. Ted Link, one of the giants of Canadian petroleum history. Link is credited with the discovery of the Norman Wells Field in the Northwest Territories in 1920 (so this will mark its centennial) and was Imperial Oil's Chief Geologist when Leduc was discovered in 1947. Between those dates, Link was very active in trying to pull together the geological history of Western Canada, for example trying to figure out how the structure creating the Turner Valley Field evolved. This promises to be an excellent talk!

Membership Renewals: Yes – it is that time of year again. For those whose memberships are expiring (please refer to your email or mailing label for that status), renewals are due in January. You can renew with an Interac e-mail transfer from your bank to micky@petroleumhistory.ca - preferred (no fees to P.H.S.). You can also renew on our website via PayPal with only an email address and a credit card - <http://petroleumhistory.ca/about/member.html#pay>. Or you can pay cash at an event, or mail a cheque to Petroleum History Society c/o 1638 Broadview Rd. NW Calgary T2N 3H1. Thanks.

Donations to the Society: We would like to recognize and thank all of our members who were generous enough to provide some increments to our financial resources. In 2019 the Society received a total of \$6840 in donations from 15 individuals and companies. Our thanks to Josh Groberman (Barrel Oil Corp/BOE Report and Grobes Media), James Gray, Rick Green, Micky Gulluss, Gordon Holland, Ian Kirkland, Ian McGregor (Canadian Museum of Making), Bert MacKay, Jeffrey Mackie, Earl Martin, Bill McLellan, Doug McNeill, Nick Taylor, Uldis Uptis and Christian Viau. We will make sure that your support is well spent on petroleum history.

Donations and endowments: As mentioned last year and after due consideration by the P.H.S. Board, we would also like to ask members to consider adding a small donation to our Society as a part of your estate planning to ensure the preservation of Canadian petroleum history and enable us to promote the contributions made to the Canadian economy by our petroleum industry and by the many dedicated individuals who have been and are involved in it. As you are aware, the P.H.S. does not have charitable status with the Canada Revenue Agency and therefore cannot issue tax receipts – but that does not detract from the worthwhile nature of our endeavors. Thank you for your consideration.

Election: The election of the P.H.S. Executive and Board takes place at our Annual Meeting. This year it will be held, as mentioned above, on March 25 at the Petroleum Club. If you would like to volunteer in any capacity, please let us know.

P.H.S. Awards: We have initiated the process of selecting our 2019 winners with the ceremony to be held in conjunction with our Annual Meeting on March 25. The categories are Book of the Year, Article of the Year, Multimedia, Preservation and Lifetime Achievement. If you have any suggestions, please let us know. The committee consists of P.H.S. Members Doug Cass and Ian Kirkland together with President Clint Tippett.

Free Student Memberships Available: The Petroleum History Society offers free membership to full-time students until the end of the year in which they graduate. They will receive the same benefits as regular members – *Archives* newsletters and invitations to our events. Membership applications are available at: www.petroleumhistory.ca/about/index.htm#join.

Continuing Perspectives: It came to my attention that prior to his forays into bitumen, local author Andrew Nikiforuk had cut his teeth in other scary investigations and in 1991 published “The Fourth Horseman – A Short History of Plagues, Scourges and Emerging Viruses”. One wonders if his historical mindset was established at that time and was transferred into his perspectives on the oil sands. In a similar way, historian David Breen had co-authored “Vancouver’s Fair – An Administrative and Political History of the Pacific National Exhibition” in 1982. This examination of a complex public-private organization set him in good stead for his later landmark history of Alberta’s Energy and Resources Conservation Board.

Editorial Comment: Please note that unless otherwise indicated, all contents of this newsletter have been created or assembled by P.H.S. President and *Archives* Editor Clinton Tippett.

Archives is published approximately eight times a year
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Canadian Rockies Earth Science Resource Centre, Canmore



Rick Green, P.H.S. Member, is President/Owner of this facility in Canmore. Rick Green has a B.Sc. in Physics – Honours (1971) and a M.Sc. in Physics (1978), both from the University of Victoria (Victoria, B.C.). He started his work as a geophysicist with the Earth Physics Branch, Department of Energy, Mines and Resources in Mould Bay, NWT and Resolute, NWT (1972 – 1976). He worked for Amoco Canada Petroleum Company Limited (1978 – 1985) in Calgary, Denver, New Orleans and Houston. He was then employed by Talisman Energy Inc. in Calgary (1985 – 2009), mostly drilling prolific gas wells in the Monkman area of N.E.B.C. Rick is now a semi-retired geophysicist. He has been a volunteer with the Canmore Museum and Geoscience Centre since 1998 in various positions and as President from May 2005 to June 2014. He was still active as the Past President until June 2018. The highlight of his time at the Museum was the unveiling of the Operation Bow-Athabasca exhibit in May 2012 detailing the 1960's 1:50,000 geological mapping by the Geological Survey of Canada roughly between the Bow River (Banff) and the Athabasca River (Jasper). Rick has made the independent C.R.E.S.R.C. facility a passion in his life. The centre contains many petroleum-related displays, cores and seismic panels, in part donated to Rick from contacts in the industry. As such it is a unique window into our understanding of the Rockies. In that connection, Rick worked with Bert Bally (pictured together below) to try to pull together documentation related to Shell's early mapping in the Rockies. Rick is particularly interested in presenting the geology of the mountains in the vicinity of the Bow Valley in a way engaging to students and the general public. The Centre is set up with microscopes and other equipment to allow students to investigate geology. Its address is Unit 111, 829 – 10 Street, Canmore, Alberta. Contact Rick at vrgreen1@telus.net if you'd like to visit as the Centre has restricted hours.



TOUR OF THE MUSEUM OF MAKING – Sept. 15, 2019



This tour at Ian McGregor's facility west of Cochrane was organized by P.H.S. Director Judy Frame and Ruth Paterson, Ian's Executive Assistant. It was hosted by Japheth, Ian's resident blacksmith (being peppered with questions by P.H.S. Member Alejandro Rodriguez above). It involved a combination of indoor and outdoor exhibits including Japheth's forge area and provided additional insights to complement what we'd learned in a previous tour several years ago. Thanks to all for making this a very successful venture. Please also refer to the picture and diagrams on page 22.

RECENT DRILLING IN THE TURNER VALLEY AREA



All kidding aside, it is pretty quiet in the Turner Valley (a.k.a. Diamond Valley - combo with Black Diamond) region these days. Some abandonment work is going on as well as a few workovers.

A service rig was in action on an old Royalite location (Royalite 21 at 1-13-20-3W5) last Fall when this picture was taken. Crescent Point, the area operator that was doing the workover, doesn't even mention Turner Valley in its business announcements any more.

NOTHING TO BRAGG ABOUT



MOWBRAY STENHOUSE BERKELEY

In late 2017 the P.H.S. was contacted via the Bragg Creek Historical Society about a well named Mowbray-Berkeley drilled near the Elbow River allegedly in 1913. P.H.S. Director Doug Cass had covered off some material related to this in his 1985 M.A. thesis at the U. of C. (*Investment in the Alberta Petroleum Industry 1912-1930*). In our February 2018 issue of Archives (pp. 8-9) we reported what had been found to date. At that point, however, details of the well drilled by Mowbray Berkeley (pictured above) had not been found. More recent investigation have discovered additional material that is reported here.

“Mowbray Stenhouse Berkeley was President and Governing Director of Mowbray S. Berkeley Limited, Herald Building, Calgary and Union Bank Building, Winnipeg. Brokers and Managing Agents, representing large English interests in the development of the natural gas resources of Canada.” (This extract is from *“Who’s Who in Canada”* via Doug Cass). In the 1930’s he was described as a *“wealthy New York and London stockbroker”* so presumably he wasn’t completely wiped out by the stock market crash. The well that was drilled was called Mowbray-Berkeley #1, located in the SE quarter of Section 23, Township 23, Range 5 West of the 5th Meridian. This is near the Wintergreen Ski Area. It spudded in 1914 and rig released in 1915 (no specific dates given). It was drilled to a total depth of 3148 feet (960 m). Slight oil and gas shows were reported. It is said to have spudded in the Benton shales (Late Cretaceous Alberta Group), intersected the Early Cretaceous Blairmore Group and faulted back to the Benton before TD. Outcrops are poor in that area, near the south end of the much deeper (3000 m plus) Jumping Pound West Field, but such faulting is typical of the Outer Foothills Belt. Having said that, there is a major surface anticline in the Cretaceous in this area so the prospect would have been an analogy to the Turner Valley discovery. To the extent that this activity was based on British capital, however, the onset of WWI in 1914 probably led to a drying up of that source of funds. Given the discouraging technical results it is not surprising that no follow-up occurred.

BOOKS OF NOTE

A wide range of publications come to my attention as I compile material for each issue of Archives. Some are newly issued – others are golden oldies. Some provide fresh perspectives while others remind us that many of the issues that we face today were also present in the past and had to be addressed at that time. Here is a selection:

Gill, T. 1940. *Wildcat 13 – A Tom Gill Tropical Romance*. Triangle Books. 278 p. This novel is set in a fictional country in South America where German operatives are trying to gain control of that continent's oil and gas resources for use by the Fatherland against the decadent West. The usual mixture of adventure, romance and suspense together with an interesting window on petroleum technology at that time.

Medicine Hat Oilmen's Association 25th Anniversary History Book 1998. 95 p. An interesting and somewhat informal volume with information back into the late 1940's about petroleum activities in southeastern Alberta, the companies that operated there, the social and professional activities of folks involved and an array of stories from the field.

Ball, R. and Forbes, M. 2008. *A Passion for the Land – Public Lands in Alberta 1930-2005*. Published by Alberta Sustainable Resource Development. 286 p. This is a beautiful and comprehensive book full of sepia-toned illustrations. This government department spared no expense in producing a landmark treatment of Alberta's land-related history.

Sherwood, J. 2017. *Surveying the Great Divide – the Alberta/BC Boundary Survey, 1913-1917*. Caitlin Press. 176 p. This large format volume, created in black and white, describes a major field operation that took place mainly during WWI. On a regional scale, the boundary to the south lies along the drainage divide between the Pacific Ocean to the west and the Atlantic and Arctic Oceans to the east. To the north it is defined by the 120th line of longitude. But I guess it is more complicated than that in detail and needed to be pinned down. The connections with the petroleum industry may seem distant but are not. Surveying itself is integral to exploration and production through the need to properly locate seismic lines, drilling leases and production facilities, in particular as they relate to land ownership. As well, in the 1950's and 1960's exploration and regional geological mapping extended far west into the mountains encompassing the position of the Continental Divide.

Shields, C. (editor). 2019. *Impressionism in the Age of Industry*. Art Galley of Ontario – DelMonico Books – Prestel. 243 p. This volume was created in tandem with a major exhibit at the AGO in 2019 that examined the works of the French impressionist school of painting that were related to the depiction of industrial activities in the broad sense of the word – agriculture, shipping, domestic work, construction, manufacturing and transportation. An article by Terence Corcoran in the May 3, 2019 issue of the Financial Post contrasted this exhibit with an earlier one in the same venue by Edward Burtynsky entitled "Anthropocene" that cast a very different light on the impacts of industrial activities on our landscapes.

Maddow, R. 2019. *Blowout – Corrupted Democracy, Rogue State Russia and the Richest, Most Destructive Industry on Earth*. Crown. 406 p. Maddow is a well-known MSNBC talk show host. The title obviously refers to the petroleum industry and the theme is obvious.

PEMBINA FIELD PRIDE



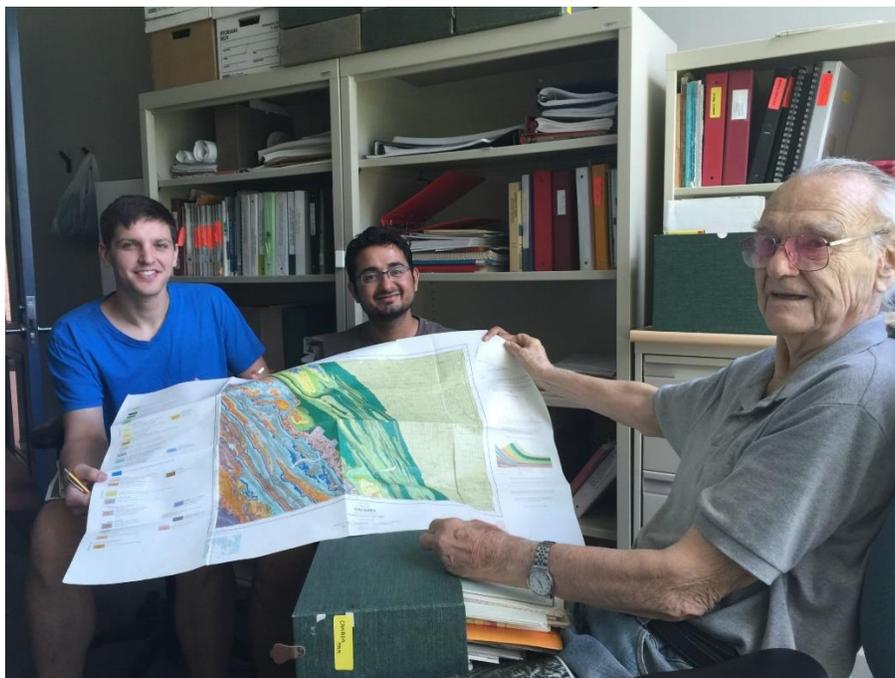
This undated candy dish features a drilling rig in the forests of the Pembina Oil Field, discovered at Socony Seaboard #1 in 1953. The excitement and pride associated with this major source of employment and revenue generation would have made souvenirs a natural deliverable for visitors. Past P.H.S. Book of the Year Award winner Arne Nielsen is credited with the discovery.

BOB BRAWN RENAISSANCE



Previous P.H.S. Annual Meeting speaker, prominent oilman and noted philanthropist Bob Brawn seems to be everywhere these days. The picture above is taken from the protective cladding on Old City Hall where it is captioned "*Vincent Massey, Governor-General of Canada presents the Queen's Scout certificate to Bob Brawn, age 16, at Historic City Hall. Photographer Jack Delorme for The Albertan. May 18, 1953.*" Bob has also just been featured in this year's "Top 7 Over 70" and in Calgary Prime Times newspaper commending his support for the revamp of the resources-related area of Heritage Park.

ALBERT (BERT) BALLY – A GEOSCIENCE LEGEND



While working at Rice University, Bert Bally (right) examines a Geological Survey of Canada geological map of the Front Ranges and Foothills along with some of his students.

Albert Walter (Bert) Bally was born in Den Hague, the Netherlands on April 21, 1925 and passed away July 30, 2019. Bert spent his early years in Indonesia, Italy and Switzerland. He began as a paleontologist and mapped in the Central Apennines for his Ph.D., graduating from the University of Zurich in 1952. He then undertook a post-doctoral appointment at Lamont-Doherty Geophysical Laboratory at Columbia University.

For a major part of his career, starting in 1954, Bert was employed by the Shell Group. He was considered to be part of the famous “Swiss Mafia” that dominated Shell’s global geological staff. In the late 1950’s and early 1960’s he worked for Shell Canada in Calgary as Chief Geologist and spent several summers mapping the Rocky Mountains and Foothills of Alberta. In 1966 Bert, together with Shell’s Calgary staff geologist Pete Gordy and geophysicist Gordie Stewart, published their seminal paper on the evolution of the Rockies and the methods used to map the subsurface. This contribution revolutionized exploration in the Foothills, where Shell was the dominant player. The explosion of understanding also meshed well with the concurrent work being carried out in the region by the Geological Survey of Canada, led by Ray Price and Eric Mountjoy. In 1966 Bert was transferred to Shell Oil in Houston and became Manager of Geologic Research at Shell’s Research and Development Laboratory in the suburb of Bellaire. He progressed over time to Chief Geologist and finally to Senior Consultant. With T. Cook he published the Stratigraphic Atlas for North and Central America (1975), complete with more than 250 maps showing the entire Phanerozoic stratigraphy of North America.

Bert joined Rice University in Houston in 1981 as Chairman of what was then the Department of Geology and Geophysics. His technical investigations continued unabated. He recognized the importance of combining seismic reflection records with geologic maps to reconstruct the

histories of mountains and basins. One of his greatest and longest lasting contributions is his three-volume set of seismic atlases published through the American Association of Petroleum Geologists in 1983 that popularized the use of industry reflection techniques for scientific purposes. Bert was considered the world's leading expert in using seismic records to interpret regional geology, particularly in fold and thrust belts. Bert had an amazing ability to synthesize regional geologic and geophysical data into a continental-scale framework. He made enduring contributions to the structure and orogenic evolution of the North American Cordillera by demonstrating how regional seismic data could be used to understand fold belts. This included outlining many of the principles for making balanced cross sections, showing that the fold belts are underlain by large decollements, and revealing the intimate relationship between foredeep subsidence with tectonic activity in the fold belt. As a counselor for the Geological Society of America, it was Bert who proposed the Decade of North American Geology (D.N.A.G.) project, that produced a large multivolume encyclopedia on the geology of North America with a multitude of contributors. To this day, the D.N.A.G. volumes represent the most comprehensive geologic study of a continent ever done. In 1988 Bert became President of the G.S.A..

In 1990, along with two other Rice structural geologists, John Oldow and the late Hans Ave Lallemand, Bert recognized that there was a severe deep lithosphere mass balance problem in Cordilleran type orogens and was one of the first to suggest the importance of large-scale delamination before it became popularized in the early 2000s.

More impressive than his scholastic achievements were the life-changing impacts he had on his students and anyone who had the fortune of interacting with him. His former students remember him as not just a scientific mentor but a mentor in life. His curiosity was never satiated. It was so contagious that when anyone was around him, everything seemed interesting. He was an encyclopedia of geology, having seen and read so much during his long and productive life. Faculty and students, whenever they wanted to explore a new area (of research or geography), did well to pick Bert's brain. Going on a ride with Bert, however, meant that sometimes discussions would digress into stories of his life, such as being forced to watch Mussolini march by when he was a boy, or visiting Tibet as one of the first western geologists to enter China. Then it would turn back to some of his favorite unsolved science problems, one of them being "the unconformity".

In recognition of his contributions, Bert received many honors, including the William Smith Medal (Geological Society of London), the Gustav Steinmann Medal (1987, Geologische Vereinigung), the Sidney Powers Medal from the A.A.P.G. (1998), the O.T.C. Career Contribution Award for Structural Geology (2003) and many others. After retirement from Rice in 1996, Bert continued at full speed ahead. He engaged with the department, showing students how to look at geologic maps. At the time of his passing he was in the midst of finishing up a new seismic atlas for the A.A.P.G. Bert never stopped. Sadly he was predeceased by his wife by only five days.

Citation primarily from Cin-Ty Lee, Rice University, 2019. Footnote: In 1996 Bert's retirement from Rice was celebrated at "Ballyfest", a geological gathering in Houston attended by numerous current and former Bally students and co-workers. P.H.S. Member Rick Green (see p. 4) and I, amongst many other Canadian fans and friends of Bert, were fortunate enough to attend. At the closing banquet held at the River Oaks Country Club I presented Bert with an engraved memento containing a sample of Cambrian shale and carbonate that symbolized his contributions to Canadian petroleum geology and our understanding of the Rockies.

REMEMBRANCES (with thanks to the Calgary Herald and Legacy.com)

This month we continue our tradition of recognizing individuals who contributed to the growth and success of the Canadian petroleum industry. This is quite a long section this month but it reflects not just the last few months but rather all of those who have been identified as being associated with the industry over the last year and were not published here before. Rest assured that our community is not passing away on this scale!

These are not just dry testimonials but rather records of the accomplishments of those who made a difference. Many stories and personal quirks are mixed in with their professional accomplishments. Some aspects of people's lives are quite similar – hard work (early and throughout), trout fishing (middle), golfing (later) and travel. But others took very different paths. The industry attracted talented people both locally and from across Canada and the world (but apparently mainly from Saskatchewan!). It is obvious that this was a male-dominated sector although there are a number of females who made a difference. Perhaps if we are compiling obituaries from the petroleum industry 50 years from now (yes – it will still exist), that gender profile will have changed substantially.

A couple of “philosophical” comments are probably in order. These obituaries, as we have selected them, are by their nature a biased sample. The oilpatch has treated some people well and others, not so much. The latter may choose to omit their petroleum connections from their chronology – or may no longer have lived in Calgary and hence their passings will not be noted in the Calgary Herald. I'm sure that we all know lots of people who we used to work with that have left in the aftermath of one downturn or another. In this regard, if you value or valued your time in our industry, you might want to give some thought to writing your own obituary. Quite often family are not really aware of what one does when we leave every morning – and in any case passings are a stressful time and a testament composed by the individual relieves the family of the need to scramble to pull one together.

BARTH, Muriel Norton. Born September 12, 1941 in Calgary, Alberta and passed away July 24, 2019. Muriel was raised in Calgary, Alberta, Canada. Her job as a map colourist for British Petroleum was the start of a long career in the seismic industry. When her department was transferred to California in the 1960s, Muriel jumped at the opportunity. She attended California Lutheran University and graduated with a Bachelor's degree in Geology. Muriel's next major career move was as a geologist for McClelland Engineers in Oxnard. At McClelland she was part of a team that collected and interpreted marine geophysical data for numerous clients worldwide. In the early 80's she requested to be part of a shipboard research team that was working in the Bering Sea. She was the first woman to go offshore for the company. Muriel worked offshore for several years and, when McClelland was bought by another firm, she was laid off. Shortly thereafter Muriel teamed with a colleague Michael Barth to start Geoquip Corporation, an innovative company that acquired and interpreted high resolution marine seismic data. Muriel managed the field crews for projects in the contiguous United States, Alaska and South America. After operating in Houston for several years in the 90's, Muriel and Mike returned to their home in California and started a new company, Subsea Systems, Inc. At long last Muriel and Mike married in 2001. The M&M team partnered with Silicon Valley-based Geometrics to develop the first digital high resolution multichannel marine seismic streamer; the two companies have had a long and successful arrangement since. Muriel managed the Subsea office until she retired in 2013.

Muriel loved to travel and participated in local and international geologic field trips to China, South America, Galapagos and New Zealand. She shared her passion for travel with her extended family, trekking through her beloved Canadian Rockies whenever she could find the time. Business took Muriel and Mike all over the United States, as well as to Norway and Turkey. Her office was always a source of inspiration, full of newspaper and magazine clippings about places she hoped to visit and explore. For 25 years she volunteered at the Coast Geologic Society where she saw the passage of 30 C.G.S. presidents. She served with great care, humility and dedication and was the thread of continuity and comfort at C.G.S., for which she received numerous awards. Muriel was an avid golfer, watching and playing, and practiced yoga for over 30 years until just this past May. She appreciated nature and loved walking the Ventura pier seashore and the canyons of the Pacific Coast. Her smile was contagious. You could walk into the room a stranger and before you knew it she would be over to say hi, give a big smile and welcome you as a friend.

BISSETT, Kenneth Richard (Dick). Born October 27, 1938 in Wheeling, West Virginia and passed away May 15, 2019. Dick graduated from Cameron High School, Cameron, West Virginia and immigrated to Canada in 1956 at the age of 17. Later he studied at the universities of Oklahoma and Texas. Dick met his dear wife, Chris, in Calgary where they were married in 1959. Dick was born to a family of drilling rig builders and cable tool drillers in West Virginia and Pennsylvania and a drilling contractor in Kansas and Oklahoma. Dick started his oil and gas career working on drilling rigs in Alberta. Over the years he worked in various different capacities such as production clerk, geological/engineering trainee, field engineer, production/drilling superintendent, chief engineer and eventually becoming Vice President of Operations for a mid-sized production company. He also worked as Vice President of a geological/engineering consulting firm. In 1984, Dick and Chris created Bissett Resource Consultants Ltd., a petroleum engineering consulting firm stationed in Calgary. Company personnel, including Dick, have worked in Canada, USA and 17 countries around the world for over 35 years. Dick never retired - he semi-retired in 2012, but dearly loved to be in the consulting firm that he and Chris started all those many years ago. Dick maintained memberships in many oil and gas industry associations and worked tirelessly on industry committees to improve safety and worker competency throughout the oil and gas industry. He was a past chairman of the Petroleum Services Association of Canada. Dick was the kind of man that was intimidating, inspiring and welcoming with his incredible sense of humour. Never would a day at the office go by without a good heckling from him, and in the same, never would a day go by that you could one up him (as hard as one tried)! He was known to take you under his wing and always teach you something new, leaving you to walk away feeling honoured he'd shared it with you. Having accomplished through hard work and dedication all of what he did, you couldn't help feeling inspired after a good chat with him. This had almost as much of an impact as when he would purposely sneak up behind you to terrify you, where right after, his laughs would be endless. Dick was a true friend and mentor who you just knew would always be there at any given chance, which will always be a blessing never forgotten.

BURKE, Stanley Gordon. Born 1928 and passed away November 21, 2019. Stan had a long and distinguished career as a Landman in the oil industry and retired to the Okanagan.

COFLIN, Kevin Carroll. Born February 28, 1955 in Saskatoon, Saskatchewan and passed away December 17, 2019. Kevin's family lived on the Coflin homestead near Blaine Lake, north of Saskatoon. Soon after his birth the family moved to Saskatoon where they lived until 1965.

They then moved to Calgary and remained there, except for a brief return to Saskatoon from 1967-71. Kevin started high school at E.D. Feehan in Saskatoon and finished at Bishop Grandin in Calgary. He attended the University of Calgary and achieved a Doctor of Philosophy in Geophysics and Seismology. After graduation he took a position with the Geological Survey of Canada in Dartmouth, NS. It was while living in Halifax that Kevin met Connie. In 1998 Kevin and Connie moved to Calgary when Kevin took a position as a Project Coordinator for Shell Canada. He continued to work for Shell in Calgary and Houston, Texas, until he retired in November 2018 as Regional Discipline Lead, Geophysics. Throughout his life, when he could find the time, Kevin would pick up his fly-fishing gear and head to a river to study the art of fly-fishing. He walked, waded and floated thousands of kilometers of river from sea to sea in Canada and into the USA in his quest for the perfect cast, the perfect hit and the perfect trout. To Kevin, fishing was more than a pastime it was a science. He would agree with Izaak Walton who said "Angling may be said to be so like the mathematics that it can never be fully learned." Kevin was also a storyteller. He loved to tell stories of the life that surrounded him - especially of his three cherished cats.

FRALEIGH, Robert (Bob) Bruce. Born November 1, 1930 in Petrolia, Ontario and passed away May 26, 2019. Bob spent his childhood growing up in Petrolia. He studied Geology at the University of Western Ontario and graduated in 1954. Upon graduation he took a job in Talara, Peru. Soon thereafter the young family moved to Bogota, Colombia. Bob thoroughly enjoyed his time in the jungles of South America, exploring for oil and gas deposits, much to the chagrin of Margaret. In 1960 they returned to Canada and landed in Edmonton with Bob continuing his work with Imperial Oil. In 1966 the growing family moved to Calgary where Bob took a job with Dome Petroleum and soon became the Chief Geologist. Bob left Dome in 1978 and moved on to a number of smaller junior oil and gas companies. He enjoyed working in a smaller business environment. Bob also enjoyed dabbling in the hard rock mineral sector. He was a long-standing member of A.P.E.G.A. Bob took pleasure in the great outdoors whether it was fishing, gardening, hunting, branding cattle or traveling. Bob was fascinated with the natural world and he could identify/discourse any kind of rock, animal or plant.

GUTHRIE, Donald Campbell. Born July 15, 1927 in Sarnia, Ontario and passed away December 5, 2019. Don graduated from the University of Western Ontario in Geology (Hon.). He was the first member of his family to go to university. Don and his wife Pat married in Petrolia, Ontario, in 1950 and moved to Calgary in June of 1951. Don started his career in the petroleum industry as a scout for Pacific Petroleum in 1951, before joining Amoco as a geologist for the rest of his career. He retired in 1986 after thirty-four years with Stanolind, Pan American, and Amoco as Exploration Systems Coordinator. Don was an avid reader, golfer and was interested in history and genealogy. He enjoyed meeting and talking to people.

HEID, Don. Born October 2, 1962 and passed away December 16, 2018. Don was born in Winnipeg, Manitoba where he lived until he was 10 years old. In 1972, The Heid family moved to Courtenay, B.C., where Don found his true home by the ocean. He left the coast in his early 20s and headed east to Calgary where he resided since. He started his career path as a surveyor, and eventually developed his own company: Sygnus Exploration. He then became a geophysical consultant for a number of national and international companies, holding senior positions with Pathfinder Geoservices, Devon Inc., and lastly with Canadian Natural Resources. His career took him around the world, including time in The United Emirates.

HENDERSON, Ian Gordon. Born August 11, 1948 in Winnipeg, Manitoba and passed away December 1, 2019. Ian was raised in Winnipeg and graduated from the University of Manitoba in 1969 with a B.Sc. in Civil Engineering, returning for his M.Sc. in Engineering in 1972. He moved west to Alberta and commenced a 26 year career with Shell Canada and Shell International, where he travelled the world, including expatriate opportunities in Texas, The Netherlands, Syria and Peace River, Alberta, before retiring in 1998. Upon retirement, Ian joined CSC Project Management Services where he consulted on every major oil sands project. Ian had a passion for sports and was active in various activities over the years, with curling being his favourite. His involvement with curling included playing on and coaching international curling teams, running technical training camps, and volunteering as Chair of the 2002 Nokia Brier and the 2009 Tim Horton's Brier hosted in Calgary. He will always be remembered for his quick wit and wicked sense of humour, which he carried through to the end.

HENDERSON, Thomas Roger. Born June 1, 1931 and passed away December 16, 2018. Tom was born on the family farm in the Horse Hills district east of Edmonton. He attended high school in Bon Accord. In 1950 he went to work for Imperial Pipeline Limited in the rapidly expanding Redwater oilfield. In 1955 Tom left Imperial to join Pembina Pipe Line Ltd., beginning a 38-year mutually beneficial association with what is respectfully referred to as 'the outfit', until he retired in 1993.

HINDMARCH, Kenneth John. Born February 28, 1932 and passed away December 11, 2019. Ken was a graduate in mining engineering from the University of British Columbia. He spent most of his work life in the oil and gas industry. Ken's career as a professional engineer was largely built over 32 years with Shell Canada Limited. Various positions Ken held with Shell took him to many parts of the United States as well as to Holland. He influenced the development of many professional lives and was widely respected by peers and co-workers. Ken formed many lifetime friendships with people he worked with, a testament not only to his presence on the job but the ways in which he conducted himself in others' presence. Before retiring to Qualicum Beach, Ken spent the last few years of his work life in the public service of the Government of British Columbia. Ken's love and respect for nature and the enjoyment he derived from being outdoors were reflected in his love for hunting, fishing and hiking. Travel was often involved in the pursuit of these activities and allowed Ken and Nancy to spend many winters in Yuma while in retirement. Ken also enjoyed golf and played into his eighties.

HOWELL, William David. Born September 22, 1940 in Calgary, Alberta and passed away February 5, 2019. He graduated in Commerce from the University of Alberta in 1961. He joined Price Waterhouse in Calgary and earned his Chartered Accountant designation in 1963, then transferred with the firm to Caracas, Venezuela in 1967. While there he moved to Schlumberger, where he spent the rest of his career. Bill's talents, both interpersonal and mathematical, propelled him through increasingly responsible roles with the company. His adventurous spirit and innate curiosity accompanied him on his moves around the world from Caracas to London, Calgary, Athens, Dubai, Paris, and Bermuda.

LINES, Lawrence (Larry) Richard. Born March 7, 1949 in Athabasca, Alberta and passed away November 25, 2019. After eighteen years growing up on the family farm, Larry went on to earn degrees from the University of Alberta (B.Sc. 1971, M.Sc. 1973) and the University of British Columbia (Ph.D. 1976), and then began his career in exploration geophysics. He married Shirley Pritchard in Calgary in 1978, and they moved to Tulsa, Oklahoma. In 1993, his work

shifted from industry to academia, and he moved from Amoco's Research Center to Memorial University of Newfoundland as a Chair in Applied Seismology. With his return to Alberta, Larry's career continued to flourish as a professor at the University of Calgary. Larry successfully led numerous research grants and consortia, educated hundreds of students, and brought deep integrity and enjoyment to his academic and professional communities. He had an exceptional blend of skills and values: his love and knowledge of science, his insatiable curiosity and enjoyment of learning, his unmatched way of connecting with people from all walks of life, and his uncanny ability to share a song in his soothing bass voice (in choir or in the classroom). We are all stronger for knowing him and he will be deeply missed.

MADDOCK, Douglas Wright. Born July 3, 1928 in Toronto, Ontario and passed away December 20, 2019. Growing up during World War II allowed him to have a driver's license at the age of 15 and he remembers his first car having a rumble seat. He was a graduate of Lawrence Park Collegiate High School and obtained a Bachelor of Arts with a major in Political Science and Economics from University of Toronto (Victoria College) in 1952. During this time, he met Joyce and they were married in 1954. Douglas enjoyed a long and successful career with Texaco Canada Inc. He held many different positions within the company over 37 years that brought him and his family to live in the cities of Toronto, Vancouver, Montreal, Calgary, and Ottawa. He was a distinguished businessman and he retired in Ottawa in 1989 as the Director of Federal Government Affairs for Texaco Canada Inc. After retirement Douglas and Joyce moved to Calgary to be close to their grandchildren. They spent every February in Maui, Hawaii, at their cherished Hale Pau Hana. In later years they also enjoyed cruising together to the Caribbean and Alaska.

MATTHEWS, H. David. Born in 1933 in Romford, England and passed away June 20, 2019. Following graduation in Geography in 1957 at Cambridge, Dave moved to Calgary in July and joined Dome Petroleum's Land Department where he remained for 21 years. For the other 14 years of his 35-year career in the petroleum land business, he worked mainly as a consultant and with Canadian Hunter and Gulf Canada. Dave always believed in a balance between work and other activities and was involved with the Calgary Tennis Club, rugby, rowing, horticulture, the Daylight Saving Society and his community. Parks and pathways were always key interests and Dave was involved with citizens' groups that lobbied successfully for the preservation of Fish Creek and Nose Hill as major parks. Dave was particularly pleased to see that Calgary's pathway system has become one of the best in Canada, if not North America. He also wrote freelance gardening articles and, in more recent years, assisted with the effort to rejuvenate the historic Reader Rock Garden.

McDANIEL, Roderick "Rod" Rogers. Born March 18, 1926 in High River, Alberta and passed away March 6, 2019. After graduating from Oklahoma University in 1946 with a Bachelor of Science in Petroleum Engineering, he began his professional career as a Reservoir Engineer. Working at both Creole Petroleum Corp. and Imperial Oil until 1955; when he went out on his own and established McDaniel Consultants Ltd., which was the first reservoir engineering consulting firm in Canada at the time. He remained a vital part of the company he founded until his retirement in 1993. As Calgary was very good to Rod, Rod in return gave back. In 1970 Rod was asked to serve as a Director of the Calgary Chamber of Commerce, which he did and was then elected President of the Chamber from 1972-1973, while at the same time serving as President of the Calgary Petroleum Club. In 1973 Rod found he still had one or two hours left in

the day so he accepted the position of Chairman of the Board of Pacific Western Airlines Corp., and served in that role until 1991.

McDONALD, Michael Dean. Born September 17, 1951 in Gull Lake, Saskatchewan and passed away July 31, 2019. Michael was a successful international oil and gas executive, capping his career as Vice President of Finance and CFO of Talisman Energy.

MENELEY, Robert A. Born in 1933 in Maple Creek, Saskatchewan and passed away May 28, 2019. Following graduation from the University of Saskatchewan in 1958, he began his distinguished career in the oil industry with Imperial Oil, followed by Panarctic, Petro-Canada, and Meneley Enterprises. Throughout his career, Bob was known as a passionate and committed exploration geologist, dedicated to lifelong learning and sharing his knowledge with colleagues and others in the industry. In recognition of his contributions to the industry, he was inducted into the Canadian Petroleum Hall of Fame in 2004. As a bonus, he collected interesting rock samples to adorn our coffee tables and bookcases, geological maps doubled as wallpaper, and family road trips through the Badlands and Rockies included enthusiastic, unsolicited lectures about the surrounding geological formations! Bob was a committed and compassionate caregiver for his beloved wife Rose, who had Multiple Sclerosis. He dedicated himself to ensuring that her quality of life was the best that it could be, caring for her with the ultimate love and kindness.

MORISON, Doug. Born August 25, 1922 in Vermilion, Alberta and passed away January 17, 2019. Doug was raised in Ponoka, Alberta. During WWII he joined the R.C.A.F. where he served as a Halifax Bomber Pilot with RAF 77 Squadron. He completed 39 missions and was awarded the D.F.C. (Distinguished Flying Cross). Following the war, Doug married the love of his life, Yvonne and studied engineering at the U. of A. and received a degree in Mechanical Engineering from U.B.C. in 1949. They made homes in Edmonton, Houston, Woodward (Oklahoma), and Calgary. He worked 40 years in the oil patch with Perforating Guns and Dresser where he retired as a V.P. During this time he was a partner in both Premier and Ronaco metal building companies. In retirement Doug became VP of Noise Solutions, a N.A.S.A. contractor, and was N.A.S.A.'s guest several times including for the final shuttle launch. Doug worked into his 90's achieving great success in business at various positions of executive management. His expertise and passion for golf led him to be one of the founders and the first president of the Derrick Golf and Winter Club in Edmonton from 1957-59.

O'BRIEN, John (Jack) Owen. Born December 14, 1926 in Winnipeg, Manitoba and passed away January 31, 2019. Jack was raised in Winnipeg. After high school, he attended the University of Minnesota from 1945 to 1948 where he graduated with a Bachelor's of Geological Engineering Degree. While at University, he played hockey for the Golden Gophers (hear them roar). He led the team in penalty minutes each year he played. He always had a broken nose or a black eye from his rambunctious play that gave rise to his nickname of "Panda Jack". After University, Jack went to work in the oil business in Edmonton for Bay Petroleum, and then for Tenneco Oil and Gas. While in Edmonton, he met the love of his life, Joyce Cairns, and they married on June 9, 1951. They moved to Calgary in 1952 where they started their family. In 1965, the family moved to Denver, Colorado and in 1969 the family moved back to Calgary where Jack became the President of Tenneco Canada. Tenneco Canada later became the Canada Development Corporation Oil and Gas Division and subsequently Canterra Oil and Gas under his leadership.

O'BYRNE, James E. (Jim). Born September 15, 1933 in Arborfield, Saskatchewan and passed away February 1, 2019. Jim was one of the five “bush babies” born in northern Saskatchewan to complement his parent’s earlier five “prairie chickens”. He left the farm home in 1948 to complete his high school and university at Notre Dame College at Wilcox, Saskatchewan. Wilcox was his family’s prairie home before the drought of the 1930s drove them to northern Saskatchewan. In 1957 he made his way to Edmonton where he joined Pan American Petroleum Corporation, who helped him to develop as a landman. In 1963 Jim and his wife Leone followed Pan American to Calgary. Jim served as Director and President of The Canadian Association of Petroleum Landmen (C.A.P.L.), the American Association of Petroleum Landmen (A.A.P.L.) and the Canadian Petroleum Association. Jim’s daytime passion was the land management part of the petroleum business. Retirement was never considered. He was a noted guru regarding industry agreements and was responsible for driving the creation of many standardized documents widely used in the industry. He instructed courses and presented seminars for thousands of students, served as an expert witness in many court cases providing insight to industry practice, and has been a mentor for many oil and gas professionals. He was often invited to provide advice and counsel to First Nations communities across the country. He received numerous awards and honours recognizing his contributions to C.A.P.L. and A.A.P.L. Most recently, C.A.P.L. recognized his lifelong contribution and legacy with the dedication of the “J.E. (Jim) O’Byrne Classroom” in its new teaching facility. He truly respected the oil industry and touted its contribution to the health, education and civility of our communities. In 1991 Jim served as a special delegate to the United Nations Asia-Pacific Roundtable in Kuala Lumpur on fiscal and administrative strategies for petroleum exploration and development organized by the U.N. and Petronas. Jim admitted that this sounded a bit heady for a farm-boy from Saskatchewan but his Notre Dame mentor, Father Athol Murray, did not permit his students to think small, encouraging each of them based on his own mantra, “To him who does what in him lies, God will not deny His grace.”

PALMER, Douglas William. Born May 4, 1955 in Lethbridge, Alberta and passed away June 10, 2019. Doug was raised in Lethbridge and Medicine Hat. He graduated in 1978 from the University of Calgary at the top of his class, also having won the Third Year Gold Medal Award. With his B.Sc. Chemical Engineering (with Distinction) in hand, he had several choices for his first job in the oil patch. He immediately joined Norcen Energy Resources Ltd. as a Reservoir Engineer. In 1989, he and Janice moved to Houston, Texas, where Doug held the position of Vice President Production and Drilling (U.S.A.). They returned to Calgary in 1991 where he had been appointed as Vice President Exploration and Development (Canada). By 1995 he had risen to the position of Senior Vice President and Chief Operating Officer. When Norcen was sold to Union Pacific Resources in 1998, he took a short time off before being recruited to Numac Energy Inc. as President and Chief Executive Officer. When it was sold in 2001 to Anderson Exploration, he made the wise and enviable decision to retire and enjoy life. Doug met the love of his life, Janice, when they both worked at Norcen. They were married on March 22, 1986. As Janice herself says, she was the “yin to his yang”. Together they enjoyed travel to many exotic locales, some luxurious and others more adventurous, always accompanied by good food and good wine. Since they bought their townhome in Palm Springs in 2014, they had even more opportunities to do the things they loved, including coffee at the park, bike rides, yoga, the casino and golf, while still enjoying frequent excursions to their favourite destinations.

PETERSON, Kenneth Andrew. Born April 6, 1931 in Mortlach, Saskatchewan and passed away December 10, 2019. Ken attended high school in New Westminster, B.C. His first job

experience was summer work in the BC logging industry, which was instrumental in teaching him valuable life skills that served him well throughout his work history. Following graduation, Ken was employed by the Royal Bank and Canadian Forest Products, which kindled his love for numbers and accounting and his desire to pursue further education in this field. Ken enjoyed a successful career in the oil industry beginning with Texaco, followed by a lengthy career with Mobil Oil in various management positions. A career highlight was a posting to Indonesia that he would recall fondly. Ken enjoyed and played hockey, curled, and spent retirement playing golf at Silver Springs Golf and Country Club. As an avid golfer into his mid-80s, Ken still loved the challenge golf offered and was proud of his achievement of three holes-in-one.

PIET, Henry John William. Born October 19, 1926 in Den Haag, the Netherlands and passed away May 26, 2019. Harry married the love of his life, Engeline, and then immigrated to Canada to gain opportunities for their future family. Harry had a keen aptitude for mechanical engineering and utilized his education and practical skills throughout his life. Harry could fix cars, small engines, teach math and enthusiastically completed home repairs. Harry worked throughout Alberta in the early days of oil and gas discoveries. As a respected specialist at Energy Resources Conservation Board, he was highly sought after by industry offering advice and guidance for oil and gas development. Following his career of more than 30 years, he continued to offer strategic advice as a trusted consultant. Upon retirement, Dad and Mom traveled through much of North America camping, hiking and exploring. Harry was a train enthusiast, rock collector, auto mechanic, geographer, tour guide, master cook-out chef, passionate camper, and engaged and proud Canadian. Harry, a good-natured family man, was married to Engeline for 65 years. Harry was loving, kind, honest and a source of strength to his family and those around him.

ROSE, Murray Alexander. Born April 24, 1926 in Sibbald, Alberta and passed away June 13, 2019. Murray spent his early years on the farm and graduated from West Jasper Place High School. In 1944, he joined the army and was demobilized in 1946, at which point he moved to Mannville, Alberta, to help his family as a heavy duty mechanic for farm equipment and motor vehicles. In 1948, he started his career in the oil industry as a mechanic on drilling rigs with Shell Oil and ended his career as a sales and service manager with Hughes Offshore International. Throughout his career he worked from the west to the east coast of North America, including the Arctic. His most gratifying experiences were with offshore drilling, which allowed him to travel throughout Europe and the Middle East. His retirement gave him the time to indulge in his favourite leisure activities of carpentry, car mechanics, and golf. Besides enjoying family activities and events, he maintained contact with his many friends and associates through his membership with Inglewood Golf Course and monthly meetings of the Oilmen's Old Timers.

RYAN, Cornelius Patrick. Born April 10, 1930 in Maidstone, Saskatchewan, and passed away August 13, 2019. As a young lad Cornelius left Saskatchewan for the oil and gas fields of Alberta and worked for the General Petroleum Drilling Company (G.P.)'s Cody Spencer for twenty-one years. One fateful day in October 1954, Pat was the Driller on the Texaco Pigeon Lake 12-26 drilling rig, which blew out and caught fire. Myron Kinley, along with trainees Red Adair, Boots Hansen and Coots Matthews, came up from Texas to extinguish this massive fire. Pat was injured and had a hospital stay, reconstruction surgery, rehabilitation and a subsequent move to Calgary. Pat upgraded his education at S.A.I.T. and become a Heavy Duty Mechanic; working on the rigs and in the Calgary G.P. shop. In later years Pat worked on Nodwells and

Foremost Tracked Vehicles, Grain Pushers and the like. In retirement Dad was a gardener extraordinaire and at night on his CB Radio, when the skip rolled in, would talk to folks as far away as Madagascar, New Zealand and Hawaii.

SEMBO, Jack. Born December 9, 1923 in Moose Jaw, Saskatchewan and passed away January 25, 2019. Jack grew up during some of Canada's most difficult times, the "dirty thirties", and then World War Two. Those times left an indelible mark upon him, and he valued being able to care for his family thanks to steady employment and his own hard work. He served his country in the service of the Royal Canadian Air Force from August 1943 to January 1945. After the war, Jack began his business career with Henderson Insurance as an accounting clerk. He moved on to British American Oil (BA) in 1946. Over the subsequent thirty-seven years, Jack worked for BA and its successor Company, Gulf Oil Canada, in Moose Jaw, Toronto, Montreal and Calgary.

SKALINSKI, Mark. Passed away November 24, 2018. Mark had an incredible zest for life, and he has served as an inspiration to all that have met him. Mark made outstanding professional contributions to the petroleum industry. Not only was Mark regarded as the top petrophysicist in Chevron, he was considered an industry leading expert in his field of petrophysical characterization of difficult geology.

STUART, Alfred (Al) John. Born February 23, 1924 near Cabri, Saskatchewan and passed away July 31, 2019. Al was born on the family farm. He remained in the Cabri area until joining the Royal Canadian Air Force in September 1943, serving in multiple locations before moving to Saskatoon, Saskatchewan, in 1946. He attended the University of Saskatchewan, graduating in 1951 with a B.Sc. in Electrical Engineering. Following graduation he moved to Edmonton, Alberta to begin what proved to be a long career with Imperial Oil Limited. It was while in Edmonton that he met and married the love of his life, Leone. Al and Leone moved to Calgary in 1955 where Al continued to work in Exploration Research (Geophysical), before retiring from Esso Resources Canada in December 1982. He also volunteered with the Calgary Speed Skating Club, serving as President. Al will be most remembered for being a dedicated hard-working man, who consistently put the needs of his family above his own.

TAYLOR, Donald James. Born September 7, 1934 in Edmonton, Alberta, and passed away December 16, 2018. Donald received his Bachelor of Commerce from U. of A. He continued his education and received his CA (now CPA) before starting his long career at Shell. Starting at \$50/week, he worked in many departments at Shell, gathering the skills and knowledge that would eventually lead him to be Executive Vice President of Shell Canada Limited. He was an innovative thinker with a keen business sense and was key in introducing incentive programs to consumers; gift glasses and children's books when you purchased your gas at Shell. He was a committed oilman, dedicated to collaboration and opening up new opportunities. Don retired on June 1, 1990 from the position of President of Shell Canada Products Limited and as a Director of Shell Canada Limited, Shell Canada Products Limited and Shell Investments Limited. He shared his vast knowledge of the oil and gas industry by serving on numerous boards including IPL Energy/Enbridge, Numac Energy, Total Petroleum, Interhome Energy, the Canadian Petroleum Products Institute, Silcorp, Computalogue and CenTex. He quickly rose to the role of Chair on many of the boards he served.

TAYLOR, Donald Byron. Born December 10, 1934 in Newcastle, New Brunswick, and passed away December 17, 2018. Don grew up in a close-knit family. As a boy, he loved baseball, all

things outdoors and had many friends with whom he would reconnect in his golden years. Don attended the University of New Brunswick and, as often told in a much-loved family story, got a degree in playing Bridge his first year. A year of hard physical work on the railroad convinced him to return to U.N.B. to complete his B.Sc. in Geology. He was hired by Chevron Canada Resources immediately upon graduation and headed west, settling in Calgary. Don worked for Chevron Canada Resources for 35 years. He was a respected senior manager and took great pride in treating those he managed with respect and care.

TOWILL, Douglas "Blair". Born January 31, 1929 in Moosomin, Saskatchewan and passed away March 17, 2019. He worked as a Park Warden in Banff and a School Teacher in Indian Head, Saskatchewan before he began his final career as a Petroleum Landman, starting out with British American Oil in Regina and then being transferred to Calgary in 1967. He retired with Gulf Canada in 1985 (a successor company to B.A.).

WATSON, George William. Born May 31, 1947 in Leamington, Ontario and passed away November 30, 2018. George grew up on a 100-acre working dairy farm in Wheatley. He always excelled with numbers and graduated from Queen's University with a Bachelor of Science in Engineering (1970) and an M.B.A. (1972). In work as in life, George was fiercely driven and competitive, always striving to succeed. George started his career in banking with CIBC in Toronto, where amongst other duties, he had responsibility for the Dome Petroleum account. Liking what they saw in the talented young man, Dome hired George away from CIBC as the Vice President of Finance in 1981 where he assumed responsibility for Dome's restructuring effort, one of the largest in Canadian history at the time. In 1988, concurrent with Amoco's purchase of Dome, George assumed the role of Treasurer of Amoco Canada. Facing the prospects of moving his family away from Calgary, George left Amoco for the role of President and C.E.O. of Intensity Resources. His tenure at Intensity was short-lived as he then accepted the role of C.F.O. for TransCanada Pipelines (June 1990) and later was promoted to President and C.E.O. (March 1993 to July 1999) at only 45 years of age. The TransCanada role had an enduring impact on George's career, personal life and health, but with no regrets. After TransCanada, George would go on to co-found a company with his oldest son Eric. The company was merged into what is now Critical Control Energy Services Corp. where George served as C.E.O. from 2002 to 2007, and Chairman from 2007 to June 2018. George's impact on the energy industry in Canada, and to those who knew him, was broad and deep. George also didn't miss a chance to save a buck (or two). Throughout his entire career, George would religiously pack and bring his own brown-bagged lunch to work every day because he thought eating out was wasteful. Rooted in his upbringing, George always lived modestly and well within his means.

WEIR, Frederick (Fred). Born August 17, 1934 in Regina, Saskatchewan and passed away August 7, 2019. Fred attended high school at Central Memorial in Moose Jaw, Saskatchewan. He graduated with his Petroleum Engineering degree from the University of Oklahoma. Fred enjoyed a long and successful career in the oil industry. The majority of his years were spent working with Mobil Oil around the world. This included Tripoli, Libya; New York; Tehran, Iran;; Lagos, Nigeria; London, England; Aberdeen, Scotland; and Stavanger, Norway. After Mobil, he took a job as C.E.O. of the Canada-Nova Scotia Offshore Petroleum Board and enjoyed living in Halifax for many years. He eventually retired in Calgary and spent many winters travelling to his favourite spots in Key West, Florida, and the Grand Cayman Islands. He loved his American football and the Saskatchewan Roughriders (Ruffies). He was also an avid news junky.

WILLIAMS, Michael Allan Howard. Born May 29, 1933 in Vancouver, British Columbia and passed away January 30, 2019. Mike grew up in Burnaby. Following completion of a Commerce degree at U.B.C. in 1956 he became a chartered accountant. He moved to Calgary in 1956 to article with Peat Marwick. Mike began his career in accounting with Husky and Home Oil and was well respected in the oil and gas industry. In 1969 he joined CanDel Oil, eventually becoming President. After Sulpetro Ltd. acquired CanDel, Mike became its President in 1985. Following Sulpetro, he was active in various ventures including Gobi Oil and Walking Horse Energy. He retired in 2013.

WOOD, Thomas Edward. Born March 2, 1931 in Gull Lake, Saskatchewan and passed away November 19, 2018. Tom was educated at St. Mary's Boys School in Calgary. He attended Washington State University on a track scholarship, graduating as a Geologist. During this time he met the love of his life, Frances, and married her in 1954. After working for Sun Oil Company and Bailey Selburne Oil and Gas, he started his own oilfield consulting firm. He later started Round-Up Well Servicing and Shelby Drilling, which he expanded into the U.S. and ran successfully for over 20 years.

WRIGHT, Brian. Born November 5, 1949 in Montreal, Quebec and passed away January 2, 2020. Brian grew up in Lachine. He met the love of his life Peggie at Lachine High School in 1966 and they became inseparable. They were married on September 16, 1972. He attended McGill University and graduated in 1973 with degrees in Physics and Physical Oceanography, with a specialty in ice formation in the St. Lawrence River. In 1973 he took a job in Davos, Switzerland, to study avalanches in the Swiss Alps and there he fell in love with the mountains. In 1974 he took a job in Calgary with Gulf Canada working on and managing various Arctic offshore oil exploration teams, often travelling to the Canadian Arctic until 1992 when he started the consulting firm B. Wright & Associates Ltd. Brian and Peggie moved to Canmore in 1999 where he continued his career working on Arctic offshore projects around the world until his semi-retirement in 2018. Brian enjoyed skiing and hiking, and was an avid fisher. He was never happier than when off somewhere in the Rockies with his fly rod and a pair of hip waders. Never one to sit still, he spent his free time coaching his boys in hockey and baseball. When the boys had left the home, he and Peggie built their second dream home on the shores of Bonavista Bay. They restored a historic property in the town of Bonavista and spent evenings watching icebergs in the bay.

WRIGHT, William Lawrence. Born October 8, 1939 in Windsor, Ontario and passed away May 4, 2019. Bill grew up in Amherstburg, Ontario. He was in the second graduating class of the University of Waterloo, with a degree in Engineering Science. After being recruited from his M.A.Sc. studies at U.B.C. by Shell in 1965, his professional career was based mostly in Calgary. He worked for several companies, applying his control systems expertise to pipeline development. His work took him on contract or assignment to many countries, including Russia, China, Kazakhstan, India, Colombia, Iraq, Sudan, Gabon, and for two and a half years with his family to London, England. In retirement, Bill kept very fit, mainly so he could aggressively ski with his buddies. He also enjoyed being the ski tuner for the group. He spent many hours at the Glencoe Golf practice facility where he liked to practice golf more than he liked to play it. He travelled extensively with Laura to many parts of the world that he had not seen during his working years. Whatever he did, he did thoroughly; for example, he acquired an encyclopedic knowledge of the world's birds. Bill was an avid reader, with wide-ranging interests.



Spudder Rig at the Museum of Making (above). This vintage piece of oil field hardware was brought up to the Museum from Montana. Plans are to repair it and hopefully get it working again. Diagrams below are from *Brantly, J. E. 1971. History of Oil Well Drilling. Gulf Publ. 1525 p. Chapter 13 – Portable Cable Tool Rigs* and show some similar equipment from the 1920's and 1930's. These sorts of units were in use almost from the beginnings of the petroleum industry.

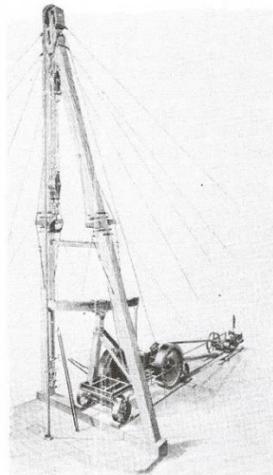


Figure 13.62 (above). Ideco-Leidecker portable drilling machine, drilling under Leidecker A-mast.



Figure 13.63 (right). Fort Worth spudder Model Super-J, 1935.



Figure 13.64 (right). Fort Worth Jumbo-J spudder, 1943.