



ARCHIVES

Newsletter of the Petroleum History Society

November 2016; Volume XXVII, Number 8

P.H.S. Lunch and Learn Meeting – Wednesday, November 30, 2016
Tectonic Shifts in Geoscience Education
by Leslie Reid, Associate Dean – Teaching and Learning, U. of Calgary

Leslie's presentation will focus on her self-described "serendipitous journey" from a disengaged undergraduate student in biology to Associate Dean for Teaching and Learning in the Faculty of Science. She will touch on key moments and experiences that influenced her career path and highlight how geoscience education has both changed and stayed the same.

Dr. Leslie F. Reid is the Tamaratt Teaching Professor in the Department of Geoscience at the University of Calgary, a position that she has held since 2007. She earned her B.Sc. (Hon.) in Geology from the U. of Ottawa in 1994, her M.Sc in Geoscience from the U. of Calgary in 1997 and her Ph.D. in Geoscience from the U. of Calgary in 2003. Her engagement with the U. of C. on a teaching level began in 2001. In 2011 she was awarded a 3M National Teaching Fellowship in recognition of her excellence in teaching and her commitment to the improvement of university teaching. Leslie's specific geological interests are in the fields of structural geology, tectonics and deep crustal processes in orogenic belts.

Time: 12 noon, Wednesday, November 30, 2016
Place: Calgary Petroleum Club
319 – 5 Avenue SW, Calgary; Cardium Room (but check marquee)
Business casual dress.
Cost: P.H.S. Members and Student Members \$30 and Guests \$35 (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, November 28, 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.

Free Student Memberships Now 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.

Members Alternate E-mail Addresses: We like to keep more than one e-mail address in your membership record in case you change e-mail suppliers or work e-mail addresses. However, if you wish, we can stop e-mailing to both your addresses. Just send an e-mail to micky@petroleumhistory.ca advising which is your preferred address and we will stop sending to the secondary one.

Updated Petroleum Bibliography: P.H.S. Director Doug Cass has recently updated his voluminous bibliography that focusses on the history of the Canadian petroleum industry. It is accessible through the P.H.S. website. Subdivisions by type of material – book, articles and audiovisuals with alphabetic sorting by author or creator make it a very valuable research source. Check it out if you haven't done so already.

P.H.S. Scholarship at the University of Calgary: We have recently concluded the latest screening exercise for our scholarship, as coordinated by the university. This cycle's winner is Jessica Weber. Her project is entitled "*Alberta Oil Politics: A Story of Canadian Federalism*". Her work is in the Political Science Department under the supervision of Dr. Ted Morton. As Ted is a former minister in the Alberta Government, she will have some excellent guidance.

Jessica describes her approach as follows: "My methodology is to examine peer reviewed academic articles and books, the Canadian Constitution Act of 1982, and the royalty and tax regimes of Alberta and Newfoundland with the purpose of bringing to light political issues concerning jurisdictional issues, royalties and taxes as they apply to the Albertan oil sands industry." In the past we have encouraged recipients of the scholarship to make a luncheon presentation to our membership and we hope to be able to do that again with Jessica.

100th Anniversary of the Southern Alberta Institute of Technology: This learning institution has a long and colourful history that has very recently been celebrated with time capsules, a car show, fireworks and a 700-pound birthday cake. A proud achievement is to have graduated over 227,000 students over the period. That they went from 11 students in 1916 to 50,000 today is a major testament to the growth of the Alberta economy over the intervening century. Petroleum technology has been an integral part of their curriculum over the years.

A centerpiece of the anniversary was the production of a significant volume authored by P.H.S. Director Dave Finch. It is entitled “*Shapers, Makers, and Originals – The Story of SAIT’s First 100 Years*”, Kingsley Publishing Services, 154 p. Distribution has been limited but if you are really interested, please contact David via the P.H.S. website.

Books of interest: Several other interesting volumes have recently been identified:

- **Inman, M. 2016. The Oracle of Oil – A Maverick Geologist’s Quest for a Sustainable Future.** Norton, 413 p., \$38.95. [*This is the story of King Hubbert of Peak Oil fame. Hubbert was involved in many other movements, as capably described here.*]
- **Brasch, W.M. 2015. Fracking America – Sacrificing Health and the Environment for Short-Term Economic Benefit.** Greely and Stone, 668 p., \$34.95. [*While this volume obviously does not purport to be objective, it does contain a tremendous amount of information about many of the current controversies related to fracing, the term itself having been “evil-ized” by adding the “k”.*]

Canadian Content: As you may have noticed in “the papers”, the Canadian Radio-television and Telecommunication Commission (CRTC) continues to wrestle with the issue of how to protect Canadian culture in the face of ever-changing technologies and competition from non-Canadian sources. If you take the time to dig into what is considered “Canadian content” you will quickly see that this is an extremely complicated piece of business. Broadcasters are mandated to carry a certain proportion of it. Levies are raised on our telecommunications bills to fund the creation of this content. “Content” isn’t a simple matter of whether something “seems Canadian-ish” but rather is a very complex formula involving the nationalities of all the people involved, the locations at which the programs are shot/recorded and the origins of the vast array of materials that are used. The reason that this is important to us in petroleum history is that the financial underpinnings of many of the programs including such content are provided by these Canadian content regulations. Their diminishment would be our diminishment.

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 Tippet.

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REMEMBRANCES

(with thanks to the Calgary Herald)

BROWN, Philip "Phil" Rodney. Born August 19, 1929 in Manthorpe, England and passed away November 11, 2016. At the age of ten Phil and his parents moved to Liverpool where he became a lifelong Liverpool Football Club supporter. He attended the Waterloo-with-Seaforth Grammar School before completing his national service with the Royal Air Force following the war. Phil completed a B.Sc. in 1953 and B.Sc. (Hons.) in Geology in 1954, both at the University of Liverpool and then moved to southern Alberta for three years as a site geologist. He fell in love with southern Alberta but returned to the University of Liverpool where he completed a Ph.D. in Geology in 1961. While at the University, he met Margaret Strong and they were married in 1962. After their marriage, Phil and Margaret immigrated to North America – arriving in Toronto via the Empress of Britain. Phil took a position with Conoco in 1963 and relocated to Ponca City, Oklahoma. In 1968 the family was able to return to Alberta when he accepted a position with the Hudson's Bay Oil and Gas Company and moved to Calgary. They settled for a time on Valiant Drive in Calgary's NW and then moved into the family home in Varsity once it was built. Phil remained in this home and was an active community member. He retired from Petro-Canada in the early 1990s but continued to consult for several years for companies such as Inuvialuit Petroleum. Phil was an avid and skilled woodworker and he and Margaret were, for many years, keen participants in Scottish Country Dancing. He was also an avid fan of the Big Rock Lecture series. Phil was a kind and gentle man, a wonderful father, and will be greatly missed by all who knew and loved him. *Phil was a long-time member of the P.H.S. and had joined our Board only last Spring.*

RANKIN, Alexander McLaren. Born June 18, 1927 in Edmonton, Alberta and passed away October 31, 2016. Alex was a resident of the Fairview Community since 1959. He worked as a reporter at CKUA, CFCN and Oilweek Magazine. Alex volunteered in the Fairview Community and McDougall United Church. *According to former P.H.S. Director Bob Bott, Alex was "Oilweek's long-time statistics guru".*

MUNNOCH, Keith Barclay. Born January 3, 1934 in Polmont, Scotland and passed away October 30, 2016. Keith attended George Watson's College in Edinburgh, Scotland from the age of seven years old and remained there until graduation. Following his school years, he apprenticed with Geoghegans, an Edinburgh-based firm of chartered accountants. He then joined the Royal Air Force as an officer and pilot for two years before joining Shell International. On one of his early assignments with Shell, he was posted to Nairobi, Kenya, where he met his loving wife, Elizabeth, who was a flight attendant with a London-based chartered airline. They were married and lived an extraordinary life travelling the world as ex-pats and raising their four girls. Throughout his successful thirty-seven year career with Shell International and Shell Canada, he successfully rose through the company to the position of Treasurer and General Manager. During his career, he made some wonderful friends and continued to remain friends with them long into his retirement.

Note: *A recent obituary for Glen Joseph Knaus noted that "Glen was employed by Alberta Gas Truckline and later by Nova Corp. for thirty-five years". Those who know the industry will recognize that this should have been "Alberta Gas Trunkline", the predecessor to Nova. Please ensure that someone knowledgeable proofreads your obituary lest you be misrepresented.*

CANADIAN PETROLEUM HALL OF FAME INDUCTION CEREMONY – NOVEMBER 10, 2016

This prestigious event took place in the Johnson-Cobbe Energy Centre on the campus of the Southern Alberta Institute of Technology. It was attended by your President, Director David Finch and P.H.S. members Gordon Jaremko and Loreen Sherman. The event was chaired, as per the norm, by JuneWarren's Bill Whitelaw. Bill was gracious enough to provide a plug for the P.H.S. and its work in his welcoming remarks. In a new twist, each inductee was allowed several minutes for some personal remarks, as opposed to having just one of them say a few words on behalf of the group, as had been the practice in the past. In addition to the eight inductees, Jim Gray (a 2001 inductee) gave a short talk on both the current industry situation and some of the innovations that are on the horizon. As the latter involved significant reductions in hydrocarbon usage, it was a strange note on which to end the evening! Detailed profiles of the inductees are contained in the November 2016 issue of Oilweek and on the Hall's website.



Canadian Petroleum Hall of Fame 2016 inductees (and others). From the left: Greg Stringham, John Ellis (grandson of inductee Albert Mayland), Jim Gray (Special Honoree), George Goruk, Dave Collyer, Don Hunter (representing the Hall), Peter Tertzakian, relatives of inductees William Donald Hunt and Troy Ducharme, and inductee Brett Wilson.

ALBERT MAYLAND (1874-1947)

Albert Mayland was inducted into the Canadian Petroleum Hall of Fame on November 10, 2016. His nomination was made by P.H.S. member Gordon Jaremko and was supported by your President. His citation reads in part:

Born in Faribault, Minnesota in 1874, Albert started work at the age of 13 as a miner and a cowhand. His work ethic stayed with him for the rest of his life. He was neither an earth scientist nor an engineer but rather a deal maker and a leader of a highly disciplined, competitive organization. A pioneer of the Alberta oil and gas industry, Mayland was instrumental in the development of the oil and gas fields south of Turner Valley and was one of the first independent businessmen to build a vertically-integrated operation from the well to the gas pump. On the upstream end of the value chain, Albert explored and produced as Mayland Oils, Mercury Oils and Miracle Oils. Downstream, his Oil and Gas Products built a refinery at Hartell, in the south end of the Turner Valley Field, in the mid-1930's using hardware imported from Texas. By 1938, the refinery was processing nearly 600 bbl/d and volumes eventually grew to around 2000 bbl/d. The refinery supplied his company's own retail network of more than 700 service stations across Alberta, Saskatchewan and Manitoba. Under the Purity 99 banner, sales grew by 50 percent between 1938 and 1939 to 3.3 million gallons from 2.2 million gallons. In the depths of the Great Depression, Albert stood as a key job creator across western Canada from wells to refinery to the service stations. Albert's Turner Valley wells faded with the rest of the field and his refinery was eventually replaced by industry consolidation into bigger, more efficient plants. His retail network, however, has lived on as assets with changing names through a series of corporate takeovers: Anglo American Exploration in 1953, British American Oil in 1963, Gulf Canada in 1970, Petro-Canada in 1985 and, finally, Suncor Energy in 2009.



Albert Mayland's meat packing plant on Nose Creek, NE Calgary. This was taken over by Swift Canadian in the mid-1950's following Albert Mayland's passing. His grandson commented that Mayland was not just vertically integrated in the oil and gas industry; his petroleum products powered his agricultural ventures right through to the production of the sausages!

DEEPWATER HORIZON *THE 2016 MOVIE – and related aspects*



This movie came out this Fall and is, in my opinion, a “must see” for everyone in the petroleum industry. I know that many people believe that as soon as Hollywood gets their hands on something it will be twisted towards an environmental agenda and/or be romanticized or demonized for “human interest” reasons. Those scenarios do not pan out for this production – and if I had a slightly critical comment, it would be that the movie verges on being a documentary, even going so far as to include explanations of certain technical processes and procedures. The timeframe is relatively short, encompassing only the period from the decision to plug back the well to the immediate aftermath of the blowout, fire and sinking of the rig. There are, of course, certain nit-picks that one could do but overall I think that they nailed it. Probably the most important parts are the depictions of the decision-making interactions between the people working on the rig for TransOcean and the company men of BP. Anyone who has been in a high cost working environment knows the pressures that are involved in trying to save time and money – and how that force can sometimes lead to imprudent decisions. In short – see this movie even if you have misgivings.

If you want more information on the Deepwater Horizon events, I refer you to a recent book by Earl Boebert and James M. Blossom entitled “*Deepwater Horizon – A Systems Analysis of the Macondo Disaster*”, Harvard University Press, 290 p., approx. \$35.00. There was a flurry of books on this subject in the immediate aftermath but they naturally suffered from a lack of hard information. Logically this most recent volume should be more thorough and complete.

I would also refer readers to reports and animations by the U.S. Chemical Safety and Hazard Investigation Board. Much of their work centered on the various malfunctions of the blowout preventer but this is only one aspect of the disaster. It is, as usual, the good old Swiss Cheese model of multiple causes that bears working level understanding of all of its facets.



The Brown No. 1 well testing on the south end of the Turner Valley Field, 1937.

TURNER VALLEY PHOTOGRAPH INVESTIGATION

In early 2016, we received an inquiry from Irene Kerr at the Museum of the Highwood about the photo on page 8. She said "We have recently received a donation of a Ray Lane photo of "Brown 1" (attached). We are still trying to find out exactly what is going on in the photo and what the date might be."

In response, some digging on our side revealed the following that was communicated to Irene.

According to the tabulation of wells in "In the Light of the Flares", Brown Oil Corp. No. 1 finished drilling on Sept. 19, 1937. The well locator (UWI) is 14-16-18-2W5. I think that this is the "well" in the picture. As of the 1979 publication date of that volume, the well was then operated by Home Oil and was still flowing oil.

This well is about two miles almost due south of the big oil discovery of the previous year (1936) that is generally attributed with being the discovery well of the oil leg in the Turner Valley Mississippian field. That well was Turner Valley Royalties 1 that finished drilling on June 16, 1936. The UWI is 13-28-18-2W5. It was also drilled by the Brown companies. Interestingly, both Royalties and Brown 1 penetrated the Turner Valley Mississippian reservoir right at the top of the oil column, near the gas-oil contact. This may help explain the very prolific nature of both wells.

As to the picture itself, I believe that we are just seeing the flare stack (the dark vertical streak in the whitish "tree-shaped" area at ground level) and the flare pit into which the oil was being poured as it burned. The light area is probably "live" flame (would be orange in colour) while the billowing clouds are also burning oil but less intensely. Think of the Kuwait fires.

The rig itself would be out of the picture and would be attached to the flare stack through a small pipe through which the oil being produced at the wellhead would have been flowing. I also suspect that the view is towards the north given that there is no obvious topography visible. The valley of the Highwood River is just south and west of the well's location.

I should note that it is a common error to describe such pictures as a "blowout" or whatever - but they are not. Such "flaring" of oil was a standard initial step of bringing a well into production. It allowed the operator to gauge how productive the well would be and also to allow the well to "clean up" in the sense that residual drilling mud and completion fluids would be purged from the wellbore before the well was tied into tankage or pipeline.

This picture is also a bit unusual in the sense that many such shots (like the majority of the pictures in the lobby of the Twin Cities Hotel in Longview) are taken looking back towards the rig with the flare stack in the foreground. This tends to make it look like the rig itself is on fire but this is just an optical illusion.

Note: *Our readers are encouraged to try to get hold of a copy of "In the Light of the Flares". This classic "community" volume contains a tremendous amount of petroleum history in regards to wells, companies and people. Unlike many other Friesen-published volumes from the late 1970's and early 1980's, this one really does make an effort to include the industrial context of the family stories that form the core of this generation of history volumes.*

PETROLEUM HISTORY IN THE MAKING

We close this issue (and the year) with a quick look at some of the issues in the news that portend fundamental shifts in the industry and developments that we will look back to in the future as the first inklings of significant change.

Natural Gas Distribution Patterns: Sustained performance of the Marcellus and Utica plays in the NE U.S. had resulted in their ever-growing production. Western Canadian gas is being backed out of Eastern Canadian markets (in addition to the American ones lost some time ago). TransCanada's recent failure to obtain nominated volumes to sustain the eastern flow may signal an end to intra-Canadian dependence. We should note, however, that these new sources are from unconventional reservoirs that feature rapid well decline and require constant investment. If either a technical or a financial limit is reached on those plays, volumes may not be available to backstop them. Gas volumes in storage are not intended to meet baseload – they are more for peak-shaving. Things could get interesting in a very cold winter, in particular with the U.S. now exporting LNG to global markets.

Alberta Petrochemical Push? The most recent Alberta Government ad features “thousands of petrochemical jobs” as a part of the “Alberta Jobs Plan”. Based on industry coverage, these seem to be in the sector that uses propane as a feedstock, as opposed to the existing ethane-based sector. Growth in propane-based petrochemical production is based on low cost feedstock. Propane prices are indeed depressed. Unconventional gas production has focused on the “liquids-rich” part of the fairways with heavier liquids going to the diluent pool for bitumen and dry natural gas going as fuel. This has left the middle NGLs as oversupplied orphans – but is this sustainable? It is natural to see the Government claim credit for this possible push – but it really has nothing to do with their policies. Indeed the Joffre-based ethane crew are probably diminishing investment due to the onset of higher taxes, carbon-related and other.

First Nations Advocacy: The Federal Government has established some significant expectations. Major projects continue to face opposition from FN groups – although it might be argued that their “lack of consultation” stance really means “lack of accommodation” – i.e. lack of financial incentives for them. As has been said “something's got to give”. We will see how well “sunny ways” does in this impending gloom.

Rule Bending: The carnage in the auto sector continues to unfold as a number of other manufacturers have followed Volkswagen into the diesel emissions cheaters club. The upswing in “clean diesel” influenced refinery configurations and anticipated diets and will now have to deal with a smaller diesel market. Maybe, in hindsight, this was too good to be true. I would have to wonder, however, whether regulators in places like California simply got carried away by what they thought that could demand of the manufacturers and the later just played along with them with ever-increasing claims of low emissions and greater mileage.

Oil Pipelines: Four big contenders, all in trouble of one sort or another. Many political and FN aspects. However some claims need to be examined in light of industry economics. One story for Energy East is that it will make Canada more energy self-sufficient. However in a column by Claudia Cattaneo some months ago, an Irving Oil spokesperson stated that “*We will add Canadian crude to our portfolio as economics dictate but probably not at the expense of our Saudi barrels.*” Bottom line – heavy Canadian crude cannot displace light Saudi feedstock.