PETROLEUM HISTORY SOCIETY

ARCHIVES

Newsletter of the Petroleum History Society *September 2011; Volume XXII, Number 5*

P.H.S. Lunch and Learn Meeting – Wednesday, September 21, 2011

P.H.S Film Festival (Part 2)

Facilitated by the Glenbow Museum and Archives

This event will feature the 1925 silent movie gem *Petroleum, Alberta's Newest Industry*, as well as amazing film footage of the wildly-spewing Atlantic #3 oil well blowout at Leduc in 1948. The former was initially identified by Irene Kerr of the Museum of the Highwood while the latter was flagged by Imperial Oil archivist Lynette Walton at the Glenbow.

Marvel at the ingenious (and not so ingenious!) attempts to cap Atlantic #3 well with cement and even chicken feathers!

When these films were shown at the Glenbow Museum in the Fall of 2010, Part 2 of the 1925 film was not available for viewing as it had never been transferred from its original fragile nitrate stock. This situation inspired six individuals and one company to contribute a total of $3250 to help preserve the Glenbow's archival collection of nitrate films. Several of these individuals were Petroleum History Society members.

This showing is sure to be popular as it was with the 220 people who attended the "sold-out" performance in the Fall. See you there.

TIME: 12 noon, Wednesday, September 21, 2011.
PLACE: Calgary Petroleum Club, 319 – 5th Avenue S.W. – Viking Room
COST: Members $30.00 and Guests $35.00 (most welcome) (cash or cheque only)

R.S.V.P. if you wish to attend to: Clint Tippett, 403-691-4274 or clinton.tippett@shell.com by noon, Monday, September 19, 2011, if not sooner.

Individuals who indicate that they will be attending - but do not materialize - will be considered "no shows" and will be invoiced for the cost of the luncheon. Individuals who do not R.S.V.P. by the deadline cannot be assured of seating.

Next Luncheons: Following the September 21 luncheon, our next event is scheduled for October 19 and will feature well known historical author Frank Dabbs speaking about "The Craigleith Oil Shale Plant and Canadian Unconventional Oil Development in the 19th Century". For subsequent luncheons we are always seeking speakers and interesting subjects. If you are considering making a presentation, please contact Clint Tippett, President P.H.S., at 403-691-4274.

Canadian Petroleum Hall of Fame: 2011 Inductees to be honoured at September 22 ceremony:

Edward (Ned) Gilbert is a name many outside the industry don't recognize, but as a geologist and Sun Oil**'s** first employee in Western Canada, he was witness to the Leduc No. 1 gusher in 1947 and has been instrumental in the development of Western Canada's oilsands regions ever since. In 1949, Ned began scouting locations for a Sun Oil oilsands processing plant, and the following year directed a three-year core-hole drilling program before acquiring Lease 86 -- current site of Suncor's existing oilsands operation. **Charles Fischer** built a 40-year career in the Canadian oil and gas industry that would take him from the gas fields of central Alberta to the storm-tossed waters of the North Sea; from the frozen tundra of the Canadian Arctic to the searing heat of the North African desert. That career culminated in 2001, when he was named president and chief executive officer of Nexen Inc.**,** and for much of the next eight years, his face -- and his distinctive handlebar mustache -- was the face of Nexen as it expanded internationally and consolidated its holdings in Canada. **Charles Fairbank** is synonymous with the oil history of Lambton County and Petrolia in southwestern Ontario and is a member of one of the world's longest-producing oil families. In 1862, his great-grandfather John Henry Fairbank (inducted into the Canadian Petroleum Hall of Fame in 1997) discovered oil at Oil Springs, Ontario, and that same year invented the jerker line system for producing oil -- a system Charles still uses at the Oil Springs properties. Charles also operates Van Huyl and Fairbank Hardware in Petrolia, which opened in 1865 and is considered the oldest hardware store in Ontario. **Alfred von Hammerstein** is inducted into the Pioneer category, as much for his colourful involvement in the early days of bitumen exploration as for his achievements in the industry. Calling himself a German count, von Hammerstein first arrived in the Athabasca region of Alberta in 1897, having detoured there en route to the Klondike gold fields. He had not come looking for oil but he was eventually drawn to the immense economic potential of the oilsands, and he was among the first, at the turn of the century, to actively explore the oilsands region of northeastern Alberta, drilling dozens of core holes along the Athabasca River between 1903 and 1909. **Ernest C. Manning is being recognized by the Hall this year with a Lifetime Achievement Award**, recognizing the tremendous contributions he made to the industry as a seven-term premier between 1944 and 1967. Born in Saskatchewan in 1908, he was first elected to the Alberta legislature in 1935 as a Social Credit MLA from Calgary, and was re-elected again in 1940, this time serving an Edmonton constituency. He was named leader of the Social Credit party and became premier of Alberta following the death in 1943 of William Aberhart and went on to dramatically change the focus of the Social Credit party.

An Update on the Oil Sands Oral History Project: After almost a year of planning and fundraising, the P.H.S. Oil Sands Oral History Project got off the ground at the beginning of 2011 with core project researchers Bob Bott, Adriana Davies and Peter McKenzie-Brown volunteering their time to get the project rolling. Since then, excellent progress has been made.

The research team began by consulting with P.H.S. Board members, sponsors, and other experts and advisors to develop a preliminary list of potential interviewees. Meanwhile, the team and two Board committees worked to establish standards and best practices for the conduct of oral history interviews, including: consent forms, draft list of questions, technical standards, editorial standards, and contracts for researcher/writers, videographers and transcribers.

By May 2011, contracts were in place so that interviewing could begin.

For Phase 1, the team has identified about 100 significant pioneers from all aspects of oil sands operations. To date, 25 interviews have been completed. Those interviewed have included a wide-ranging group of experts and other contributors – for example, former Premier Peter Lougheed; Suncor CEO Rick George; former Syncrude CEOs Brent Scott and Eric Newell; former Syncrude President and COO Jim Carter; former federal Energy Minister and Deputy Prime Minister Anne McLellan; Dr. Jacob Masliyah, OC, former NSERC - IRC Chair in Oils Sands Engineering; Dr. Maurice Dusseault, professor of Geological Engineering at University of Waterloo; and Dr. Clement Bowman, founding chair of the Alberta Oil Sands Technology and Research Authority.

Background

Last year the Petroleum History Society began this project with a fundraising effort that raised $111,000. The purpose of the project is to capture, through face-to-face interviews, the personal stories of the pioneers of the Canadian oil sands enterprise and to present those stories in a manner that can both capture the living history of the oil sands for important archival purposes while creating high-quality materials that can be used to share those personal stories in a variety of public contexts. For example, *The Oilsands Review* – a business magazine that specializes in the oil sands – has already commissioned a series of monthly columns based on project research. Thus, the project is already contributing to greater understanding of the industry's past. The project also includes an archival research component that will seek out materials such as oral history interviews conducted in the 1970s. Wherever possible, these materials will be digitized and made available to present and future historians. An enhanced catalogue of oil sands historical resources will be one of the results from this work.

(project update continues on page 4).

Archives is published approximately eight times a year by the Petroleum History Society for Society members.

Back issues are archived on our website at www.petroleumhistory.ca
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President: Clint Tippett – clinton.tippett@shell.com 403-691-4274
Secretary: Helen Turgeon – heldon@telus.net 403-239-4863

Last spring, the Society's executive structured a task force to put all the pieces in place for this ambitious project. As a result, we now have a project team which includes researcher-writers, videographers and transcribers. The research team, which includes Robert Bott, Adriana Davies, Gordon Jaremko, and Peter McKenzie-Brown, has developed a research plan that identifies and ranks candidates for interview.

Research Plan

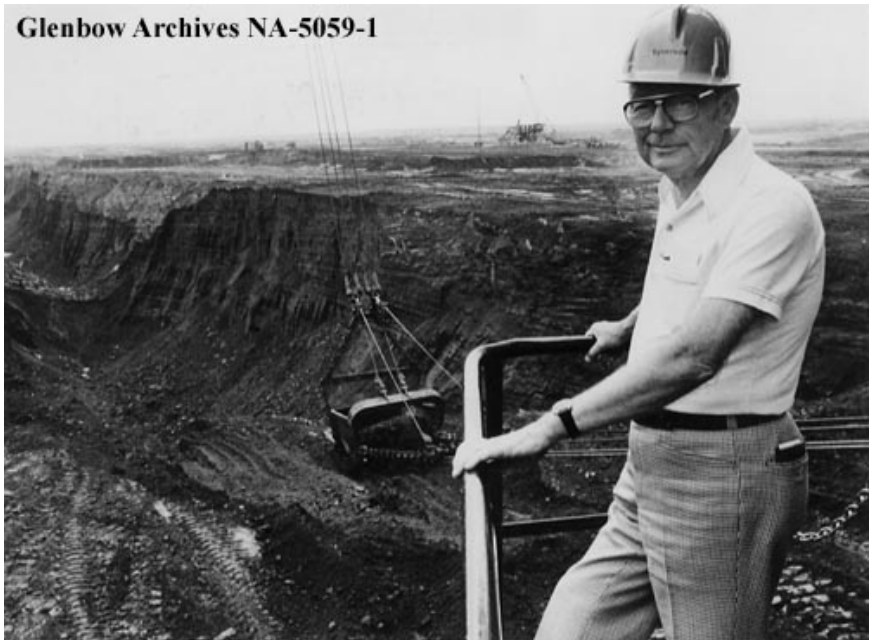
These interviews have been digitally recorded and transcribed, and many of them have also been recorded in high definition video. This material will all be donated to the Glenbow Archives, along with photos, articles and other material collected from the interviewees during interviews. At present, members of the research team have clocked almost 50 hours of recordings.

The master list of candidates includes individuals from the following broad categories: History (pre-1980); Government and Regulation; Management and Finance; Operations; Technology; Science; Academia; Environment; Aboriginal Communities; Northern Communities; and Suppliers. The team has also prepared standard approaches for conducting the interviews and systems for review and quality control for project activities.

To date, the P.H.S. has received cash contributions for this project from the Alberta Historical Resources Foundation, Athabasca Oil Sands Corp., Canadian Natural Resources Limited, Canadian Oil Sands Limited, Connacher Oil and Gas Limited, Imperial Oil Limited, MEG Energy Corp., Nexen Inc. and Syncrude Canada. We also have a number of non-financial sponsors.

We believe we can interview up to 100 oil sands pioneers during this project. By doing this, we will create a comprehensive web of information for oil sands historians. With that in mind, the PHS Board has already initiated a second round of fundraising.

- *Submitted by Director Robert Bott, Adriana Davies and Director Peter McKenzie-Brown*



Frank Spragins, President of Syncrude, viewing a dragline at work at the Syncrude Mine, Fort McMurray, Alberta in July 1977.

AUGUST 2011 OILSANDSREVIEW.COM
Hourglass

Reflections from the Oilsands Oral History Project

HOW PUBLIC MONEY SAVED SYNCRUDE

By Peter McKenzie-Brown

The Syncrude project was threatened more than once and was eventually initiated successfully because the government stepped in.

A quarter-century after Peter Lougheed retired as Alberta's first Progressive Conservative premier, he is sitting in Calgary's historic Lougheed House (a mansion built by his grandfather a century ago), reflecting on his government's impact on the oilsands industry. Lougheed won a seat in Alberta's legislature in 1967, the year the doors opened on the Great Canadian Oil Sands Limited (now Suncor Energy Inc.) mine and upgrader. He became premier four years later. During 14 years at the helm, Lougheed made sure the Alberta government took an active role in oilsands development. "It was obvious that the oilsands were owned by the people of Alberta," he says. "We consistently and constantly made sure that the industry understood that the Government of Alberta was the owner and we weren't just there in a supervisory or regulatory way. We were extensively involved because we were the owners."

The government's interest in the industry was made especially clear in 1974, when it helped revive the massive Syncrude Canada Ltd. project during a near-death experience. Syncrude had received regulatory approval in 1968, but by 1974 the projected cost had more than doubled to $2 billion. At the end of the year, 30 per cent owner Atlantic Richfield Corporation, which was developing assets at Prudhoe Bay, Alaska, sent its partners a telegram saying that it was pulling out. The remaining participants - Cities Service Petroleum Corporation Canada, Imperial Oil Limited and Royalite Oil Company Ltd. - were paying $666 per minute for an increasingly dicey-looking project.

Lougheed recalls how the project went from uncertain to commercial.

Energy shock and energy war

In 1973, the world's first energy shock was in high gear. During the previous three years, global oil prices had more than tripled to $11.50 per barrel. While this should have created an energy boom, it didn't in Canada. The environment was one of high inflation and rising oil prices, and in September, Prime Minister Pierre Trudeau asked the western provinces to agree to a voluntary freeze on domestic prices. Nine days later, his government imposed a 40 cent tax on every barrel of exported oil. The tax equaled the difference between domestic and international prices, and the revenues were used to subsidize imports for refiners in eastern Canada.

Outraged that Ottawa would tax a provincial resource, Alberta retaliated in early October. The province cancelled the Alberta Oil Revenue and Royalty Plan effective at year-end, eliminated maximum royalty provisions in all leases and introduced a price-related royalty system. Days later came the Arab/Israeli Yom Kippur War and an embargo by Arab states on oil deliveries to the United States and Western Europe. As international prices skyrocketed, so did Ottawa's export tax. For the rest of the 1970s, OPEC sat in the oil-price driver's seat.

In December 1973, Trudeau announced a National Oil Policy "designed to reach Canadian self-sufficiency in oil and oil products before the end of this decade." Among other measures, this policy added fuel to the crude oil firestorm by making royalties a non-deductible expense for corporate income tax calculations and putting price caps - euphemistically called "made-in-Canada prices" - on oil production for domestic use. Alberta responded with plans to implement a 65 per cent royalty on oil. The 1974 federal Liberal budget made some concessions but retained in principle the right of the Canadian government to tax provincial royalties. As Canadians worried about the country "running out of oil," the producing provinces felt hoodwinked and betrayed. In effect, they argued, the feds were arrogating the fiscal benefits of rising oil prices to themselves and encroaching on provincial resource ownership. These moves precipitated one of the bitterest intergovernmental conflicts in Canadian history. The first of two political wars had begun, and battles would rage for a decade. The political environment was toxic, and it remained so during the Syncrude crisis. According to Hans Maciej, who was technical director of the Canadian Petroleum Association at the time, "The first energy war did not end until the end of 1975, after the federal government introduced price increases for crude oil and natural gas and, most importantly, recognized the role of royalties paid prior to the price upheaval as a legitimate business expense."

Syncrude meets the government

At the beginning of the Syncrude crisis, the consortium created two new management teams: one team of executives to plan ways to deep-six the project, another to find ways to keep it alive. In addition to two top executives from each of the three partners, the life-support team included an executive vice-president from Cities Services, Calgary-based Bill Mooney. According to Lougheed, "Everybody knew Bill, and he just had a way with him of getting people involved, and he's one of the funniest guys I've ever met. Mooney played a major behind-the-scenes role in getting people together."

Though the political environment was toxic, these men had the task of getting government participation in the Syncrude project. Absent other industry partners, public money was the only alternative to a shutdown. The team of seven made a dozen cross-country trips in 17 days. One breakthrough came toward the end of January, when Mooney walked unannounced into the office suite of Minister of Energy, Mines and Resources Donald Macdonald. Hearing that Macdonald was too busy to see him as he was in meetings all day, Mooney decided to wait him out.

When Macdonald returned from cabinet, Mooney accosted him, saying, "I've got to see you."During a brief meeting, the minister outlined the concessions the federal government was willing to make. As Mooney was leaving, Macdonald said, "If you tell anyone about this, I'll call you a goddamned liar."

The Winnipeg Agreement of Feb. 3, 1975, was the outcome of the Syncrude rescue team's countless phone calls and meetings, and it represented an early thaw in the political climate. The participants convened to reach consensus in the 12-hour session that included many of Canada's key decision- makers. The chairmen of Cities Service, Imperial, Gulf Canada Resources Ltd. and Shell Canada Ltd. were there, along with other executives from their companies. Three provincial ministers accompanied Premier Lougheed: Energy Minister Bill Dickie, Federal and Intergovernmental Affairs Minister Don Getty and Attorney General Merv Leitch. Ontario Premier Bill Davis also brought key ministers to the negotiations. Federal players included Macdonald and Jean Chretien, president of the Treasury Board.

There was give-and-take from everyone except the Shell delegation, which stormed out of the meetings after an hour. They would have considered taking an equity stake in the project, but chief executive officer Bill Daniel first wanted a government-guaranteed base price for production. His team went home empty-handed.

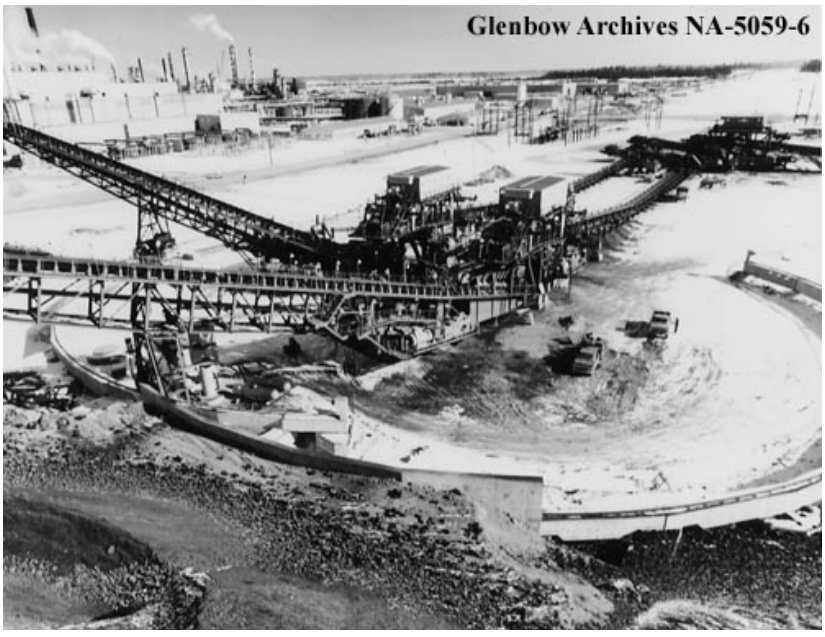
Many people remember the Winnipeg Agreement as a successful effort to replace with government money the 30 per cent equity vacuum created by the departure of Atlantic Richfield: Ottawa took 15 per cent, Alberta 10 per cent and Ontario five per cent. The private partners agreed to take a $l.4-billion interest in the project, but Cities Service and Gulf gave Alberta the option to convert a $200-million loan into equity. The province also agreed to construct a pipeline and a power plant, which were risk free.

Particularly innovative was a royalty structure reflecting technological risks. "When Syncrude came along and we got into the negotiations," says Lougheed, "it was clear we could not approach [royalties] from a gross-revenue point of view. It wasn't really fair because of the risk element involved in such a new process."

It took 18 months to prepare legal documentation for the Winnipeg Agreement, and signing took two days. The second day of signing, for dignitaries, was planned for the Saskatchewan Room in Edmonton's Westin Plaza hotel. For the occasion, Bill Mooney used a pair of table knives to pry off the room's nameplate. He replaced it with the one that said "The Alberta Room."

The official opening of the Syncrude project occurred on Sept. 15, 1978. It is currently the single-largest source of synthetic crude oil in Canada.

This article is the first in a *series that reflects on information from the Petroleum History Society's current Oil Sands Oral History Project, which is recording the stories of oilsands pioneers in their own words. As with its previous oral history projects, transcripts and recordings will reside in Calgary's Glenbow Archives. Peter McKenzie-Brown is part of the team of researchers/ writers behind the project.*



Syncrude mine and plant, Fort McMurray, Alberta, late 1970s.

MARY CLARK SHEPPARD ON HER FATHER - KARL CLARK AND THE QUINTESSENTIAL OILSANDS RESEARCH BREAKTHROUGH

By Adriana A. Davies

The renowned "father of the oilsands," Karl Clark spent his entire working career technically outside of his discipline. An inorganic chemist by training, Clark's life work was in organic chemistry. His daughter and biographer, Mary Clark Sheppard, recently described his path.

After being awarded a PhD in chemistry by the University of Illinois in Urbana in 1915, Clark went to work for the Geological Survey of Canada. Because he had previously done soil surveying in Ontario, he was assigned to road materials research.

In July 1917, Eugene Haanel, Director of the Mines Branch, asked Clark to read a collection of working papers written by engineer Sidney Ells, titled *Notes on Certain Aspects of the Proposed Commercial Development of the Deposits of Bituminous Sands in the Province of Alberta.* Clark Sheppard notes that her father was uncomfortable reading a senior colleagues' work and critiquing and making sense of it, but, together with geologist/topographer J. Keele, he wrote a 5,000-word review.

In summer 1918, Clark went to Manitoba as part of his field work and was able to see first-hand the difficulty of road maintenance. He worked around Brandon and, in Clark Sheppard's words, "noted that the soil made wonderful roads in the summertime when it was hot and dry, but the clay, everything slipped apart when it got wet.... He thought if you could only, it sounds pretty simplistic now, waterproof the clay then that might be a way of preserving roads. Of course, after the war and certainly by the early 1920s, roads were big. Everybody had a car then, and farmers had to get things to the railway and all the rest of it."

WHILE INITIALLY KARL CLARK CONDUCTED HIS RESEARCH IN RELATION TO FINDING A WATERPROOF COATING MATERIAL FOR ROADS, EVENTUALLY HE REALIZED THE IMPORTANCE OF THE TAR SANDS AS A SOURCE OF OIL.

Clark began to ponder a solution involving the water-repellant properties of oil. This theory, in brief, was that if he could obtain oil from tar sands and mix it with the clay surfaces, he could waterproof them. Clark Sheppard continues, "Back in his lab, in Ottawa in the winter, he got some tar sands and he thought if he could emulsify them ... then you could put this emulsification on the road. Well, instead of getting an emulsion he got a separation. That was the big 'ah ha' moment. He got this separation. He got sand in the bottom, oil in the middle and water on the top. So he'd gotten these three things, but he had to get the oil out without the sand and the water; particularly, the sand. He tried everything possible but the oil and water got mixed up again."

In chemical terms, what Clark had succeeded in creating was a colloidal suspension (the suspension of a solid in a liquid, in this case two solids, since oil is thicker than water). This was a key step in the progress to establish a way to separate bitumen from sand, and commercialize the oilsands as an energy resource. Clark Sheppard notes that the discovery happened in 1919,

but Clark was told to stop the research. She believes this was because Ottawa and Alberta were fighting about the oilsands resources.

The feds had tried sinking a well at Athabasca Landing as early as 1894, but that and several other efforts had failed. Federal bituminous sands research was under the control of the Honorary Advisory Council for Scientific and Technical Research. The proprietary attitude of Ottawa, with respect to resource development, did not sit well with the Government of Alberta, or University of Alberta President Henry Marshall Tory, who was a supporter of oilsands development. In 1919, Tory visited Ottawa looking for someone who could take on research on oil and coal in Alberta. His vision was that the university that he helped to found would support province-building through research leading to economic development. In the Mines Branch, he heard of the great excitement about Clark's discovery and, according to Clark Sheppard, "he went straight to my dad and persuaded him to come out to Alberta." Correspondence between the two continued on Tory's return to Alberta and, by September [1920], my mom and dad were in Alberta." Clark became the first full-time member of the research department with a focus on tar sands. On Jan. 6, 1921, by an Order-in-Council, the Industrial Research Council of Alberta was established, an organization that is currently known as Alberta Innovates Technology Futures.

To facilitate Clark's research, in the winter of 1919, Tory had secured about six tons of bituminous sand and stockpiled it on campus. He instructed Clark to begin his research from scratch without reference to the previous work of Ells, who was interested in the use of super-heated steam for separation. Clark would focus his research on separation, based on the use of a chemical reagent. In 1922, Sidney Blair came to the University of Alberta and was hired by Clark as his assistant. Blair began surveying up north as a part of his master's degree program. Clark Sheppard has described her father as "a quiet self-effacing intellectual" while Blair was "worldly, self-confident and aggressive." Together they forged a solid team working together for three-and -a-half years. Clark's oilsands research continued throughout the Great Depression of the 1930s when most of the research staff at the council were let go.

KARL CLARK AND SIDNEY BLAIR HELPED USHER IN THE FIRST ERA OF COMMERCIAL OILSANDS DEVELOPMENT. THE PROTOTYPE SCIENCE AND TECHNOLOGY WERE IN PLACE TO BE SHARED WITH INDUSTRY; THE GOVERNMENT OF ALBERTA WANTED TO SEE THE RESOURCE DEVELOPED; AND, DESTABILIZATION IN THE MIDDLE EAST MADE OIL COMPANIES LOOK MORE SERIOUSLY AT THE TAR SANDS.

While initially Clark continued his research in relation to finding a waterproof coating material for roads, eventually he realized the importance of t he tar sands as a source of oil. He had his separation facilities in the university power plant. Everything was carefully tested, from the amount of sodium silicate used as a surface-active agent or soap, to the temperature of the water, amount of power consumed and duration of heating period. His separation process and technology was eventually piloted at two sites in the Athabasca region, Bitumont and Abasands.

In December 1949, just after the Abasands plant closed for the winter, Blair was commissioned by the Government of Alberta to make a comprehensive study of both the technical and economic viability of actual mining, separation, delivery and sale of oil derived from tar sands to southern Ontario refineries. Now known as the *Blair Report,* but officially *The Development of the Alberta Bituminous Sands,* was published a year later. Clark Sheppard says, "Blair concluded, even though the price of oil was only $3 a barrel - it seems hard to believe - his reckoning was that you could produce it for $2.50. That was challenged later as they said he didn't take into account all the capital investment for background things like roads and whatnot. That was assuming

everything was in, which of course it wasn't." The next step was the convening of an international symposium in September 1951 on all aspects of the oilsands, which was attended by 120 delegates.

Clark and Blair helped usher in the next era of development. The prototype science and technology were in place to be shared with industry; the Government of Alberta wanted to see the resource developed; and, finally, destabilization in the Middle East (the Suez Crisis in 1956) made oil companies look more seriously at the tar sands.

Clark Sheppard has a final observation on the name oilsands: "They were always known as bituminous sands officially. They were known as tar sands colloquially. It was like a nickname-a loving nickname. But that's all it was, after the *Blair Report* came out, and they knew that they could produce a crude oil because refining techniques had so improved. "Then, Dad and Blair said they should no longer be called bituminous sands, or tar, because we now know they are a source of crude oil. That's when they were officially re classified as oilsands."

This article is the second in a series that reflects information from the Petroleum History Society's current Oil Sands Oral History Project, which is recording the stories of oilsands pioneers in their own words. As with its previous oral history projects, transcripts and recordings will reside in Calgary's Glenbow Archives. Adriana Davies is part of the team of researchers/writers behind the project.

Interior view of shack with samples of tar sands and extractions. Taken in Fort McMurray, Alberta on March 3, 1020. Daniel Driver sits in his shack with a pail on the stove holding tar sands, a bottle showing oil and another bottle containing a milk-like substance. Gas comes from the tube at the other end. Glenbow caption states that eight pounds of sand produce 12 ounces of oil.