PETROLEUM HISTORY SOCIETY

ARCHIVES

Newsletter of the Petroleum History Society *January 2013; Volume XXIV, Number 1*

P.H.S. Lunch and Learn Meeting – Wednesday, January 30, 2013

A Life in the Western Canadian Oil Patch including Recollections of the Oilfield Technical Society

by Gordon "Gordie" Rowan, oilpatch veteran

Gordon ("Gordie" to his friends) Rowan experienced it all – from the glory days at Redwater in 1948 following the Leduc discovery through to the mature period of industry activity only recently. Sixty-four years in all – and what a panorama of companies, places and jobs! A list of outfits worked for or with reads like a phone book of industry players: Shell Oil, Parker Drilling, McKivor Drilling, Halliburton, Dowell, Chevron, Eskimo, Trimble Drilling, Thompson Drilling, Jennings Drilling, Cactus Drilling, Speedy Trucking, Transco and many more. Gordie will share some of his many stories with us.

The second aspect that will be described is the formation and growth of the Oilfield Technical Society, founded in 1951as a vehicle for the sharing of industry operational experience and safety practices. Its many branches and related social events including curling and golf tournaments made it a central feature in Western Canada's petroleum industry. In 1967 the Edmonton OTS established a Historical Park, just west of Ellerslie, as a way of celebrating Canada's centennial. It soon became a focus for the showcasing of donated petroleum-related equipment. The list of ex-Presidents of the OTS as well as of its award winners is a comprehensive who's who of Canadian petroleum history. Many of the names will be familiar to the members of the P.H.S. due to their membership in our group, by reputation or due to their extensive contributions to both the industry and to Western Canada.

TIME: 12 noon, Wednesday, January 30, 2013.
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: Micky Gulless, 403-283-9268 or micky@fuzzylogic.ca by noon, Monday, January 28, 2013, 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: Our luncheon slate is just shaping up for this coming Spring. 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.

Publications Available at Luncheons: Director Neil Leeson has undertaken to promote the important work that members of the P.H.S. have done to document the history of the petroleum industry through the publication of books. A variety of oilpatch classics authored by P.H.S. members will be in display at our luncheons - with free copies to all attendees.

The Disaster that Keeps on Giving: Two additional books have appeared related to the Macondo incident and are available at DeMille Technical Bookstore. They are:

Lehner, P. with Deans, B. 2010. In Deep Water – The Anatomy of a Disaster, the Fate of the Gulf and Ending our Oil Addiction. The Experiment, 154 p. $15.50

Lustgarten, A. 2012. Run to Failure – BP and the Making of the Deepwater Horizon Disaster. W. W. Norton and Co., 384 p. $29.50

Licence to Drill: The airing of the third season of this reality series began on January 8. It can be seen on the Discovery Channel on Tuesday evenings at 9:00 p.m. Calgary Herald columnist Eric Volmers wrote a column about it in the January 7 issue. Unlike Seasons 1 and 2 that had significant Frontier content (Mackenzie Delta and Norman Wells regions), this season examines two drilling operations in Alberta. Licence to Drill was awarded the P.H.S. Preservation Award in 2010, following in the footsteps of the earlier series “The Rig”.

Isn’t it Ironic – or – J. Howard would be turning in his Grave: In mid-2012 it was announced that Sunoco Inc. was being purchased by Energy Partners LP for US$5.35 billion, primarily for its oil and refined products pipelines and crude oil storage facilities. Sunoco was the parent company of Suncor, its Canadian subsidiary that was spun off several decades ago as being a non-core asset. Suncor has since grown into an oil sands behemoth while Sunoco has withered on the vine through a gradual dissolution. To make things worse, much of the money that J. Howard Pew made through Sunoco, then Sun Oil Company, went into charitable trusts whose main activities these days include opposition to many oil projects such as Keystone XL, Northern Gateway and the oil sands. History has many ironies but few as striking as these two.

Canadian Petroleum Hall of Fame – 2012 Inductees: On October 4, the C.P.H.F. added five new names to their roll of honour. They were, along with their partial citations:

Hal Kvisle: Canada's pipeline sector owes much of its success to Kvisle, recently retired in 2010 as the head of TransCanada. Under Kvisle's leadership, TransCanada was transformed from a largely domestic entity into one of North America's most important energy companies. In a recent profile, the Globe and Mail described Kvisle as "one of the unsung superstars of Canadian business'.

Roger Soucy: As the President of the Petroleum Services Association of Canada (PSAC) since its founding, Soucy capped a career with the association that lasted 29 years. PSCA was born of the service sector's response to the national Energy program and Soucy guided its evolution and growth, with the result being a consolidated and authoritative voice for the industry's service and supply sector.

Doug Ramsay: Known as one of the most authoritative voices on the Canadian and international service sector landscapes, Ramsay was on of the founders of, and currently heads, Calfrac, a leading company that went from $4 million in annual sales in 1999 to more tha$1.5 billion in sales in 2011.

P. John Aldred: The gas compression industry is what it is today, thanks in large measure to Aldred, founder of Enerflex Systems in the 1980's. Aldred built Enerflex's competencies in compression on both the domestic and international fronts, where gas compression, processing and power generation solutions found homes in many countries.

Robert Fitzsimmons: A gamble in 1922 on a 600 acre lease marks Fitzsimmons as one of Canada's true oil sands pioneers. That acreage is also home to Bitumount, which he named, and is now listed as one of Canada's historically significant places. Fitzsimmons's efforts in refining various extraction techniques and finding markets for various bitumen-based products in the 1920s and 1930s characterize the early entrepreneurial spirit of the industry. Fitzsimmons died in 1971, having seen the fruition of his efforts in the opening of the Great Canadian Oil Sands plant in 1967.

Another fracin' Movie!: There has been lots of media coverage for the movie "Promised Land" staring Matt Damon. This feature, according to reports "digs into the fierce debate over fracking, the technique that's generated a boom in North American natural gas production while also stoking controversy over its possible impact on the environment and human health".

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
Contacts: info@petroleumhistory.ca
President: Clint Tippett – clinton.tippett@shell.com 403-691-4274
Secretary: Helen Turgeon – heldon@telus.net 403-239-4863

Jacob Masliyah on the evolution and future of oilsands R&D

By Adriana A. Davies

(article appeared in the May 2012 issue of Oilsands Review, thanks to JuneWarren)

The history of the oilsands fits into a number of eras. The first saw entrepreneurs hoping to drill through reservoirs of bituminous sand crust to hit oil in a pool below. This, of course, was not possible, and when evidence demonstrated that the oil mixed with the sand and water was the only target, various separation methods were explored. The move from drilling to science—much of it academic—had occurred.

It was Karl Clark, a physical chemist who made the major breakthroughs that resulted in the first commercial-scale production. He was assisted by colleagues including D. S. Pasternack and E. H. Boomer, who were also chemists. Whether in the lab at the University of Alberta, test plants at the Dunvegan railway yards outside Edmonton, or later at the Clearwater and Bitumount facilities in northern Alberta, by today's standards the equipment used was primitive. The science of separation, however, was complex.

In September 1947, Clark and Pasternack published a paper titled Elimination of water from wet crude oil obtained from bituminous sand by the hot water washing process. An abstract of the paper notes that "the authors deal with this problem from two angles, by continuous settling at atmospheric pressure and settling under pressure with evaporation; they have carried out much laboratory work towards its solution." This is the science perfected and tested between 1945 and 1949 at the Research Council of Alberta and Oil Sands Limited, the Lloyd Champion/Government of Alberta joint venture at Bitumount.

Research and development was then and remains today central to the success of the oilsands industry. But the characteristics and focus of the research has evolved significantly. Since the 1980s, Jacob Masliyah, distinguished professor emeritus at the University of Alberta, has been an example of the newer breed of oilsands scientist, whose work stretches across a range of disciplines and ideas. Masliyah is an officer of the Order of Canada, a recipient of the ASTech Leadership Award, and the former Natural Sciences and Engineering Research Council of Canada (NSERC) industrial research chair in oilsands engineering.

Born in Baghdad, Iraq to a Jewish family, various members of his family left the country after his early education to escape sectarian violence. After completing a bachelor's degree at University College, University of London, Masliyah came to Canada and completed a Master's degree at the University of New Brunswick and a PhD in Physics at the University of British Columbia. In 1972, he went to the University of Saskatchewan to teach chemical engineering. The University of Alberta hired him in 1977 following a consulting position in the area of heavy oil with the Research Council of Alberta. He knew very little about the oilsands. "I was much on theory. I was on the theory of sand particles in water, in liquids, in air. So, I probably didn't even know how to spell bitumen at the time," Masliyah says. "But, once you are trained in fundamentals essentially you can speak to many areas. When I came here, I had no inclination to get involved in oilsands at all." His knowledge of fluid mechanics led to an invitation from oilsands researchers at the university to work on creating lab models to mimic bitumen separation processes.

He describes his early research: "You have a system of particles that are heavier than water and different sizes, [and] you have other bitumen of different sizes, lighter than water, how do they separate? We know how [materials] the same density, the same size, how they separate; but,

what about a different sizes? We knew nothing. I remember struggling to put theory to it. I published a paper in 1979 on that. Three pages, that's all it was, and it became the most quoted paper in my career." At the university, Masliyah quickly established a reputation as one of the top researchers in extraction of bitumen from oilsand. Much of his work focused on increasing the efficiency of the extraction process. As a result, energy use to extract a barrel of bitumen has been halved from the 1970s.

He is quick to acknowledge the work of others: "What Clark did, and [Alberta Oil Sands Technology and Research Authority founding chair Clem] Bowman, the work done at the Alberta Research Council, at Syncrude and other places, that was incredibly important. We simply carried on from where they left off. These individuals really laid the foundation for oilsands research and oilsands understanding."

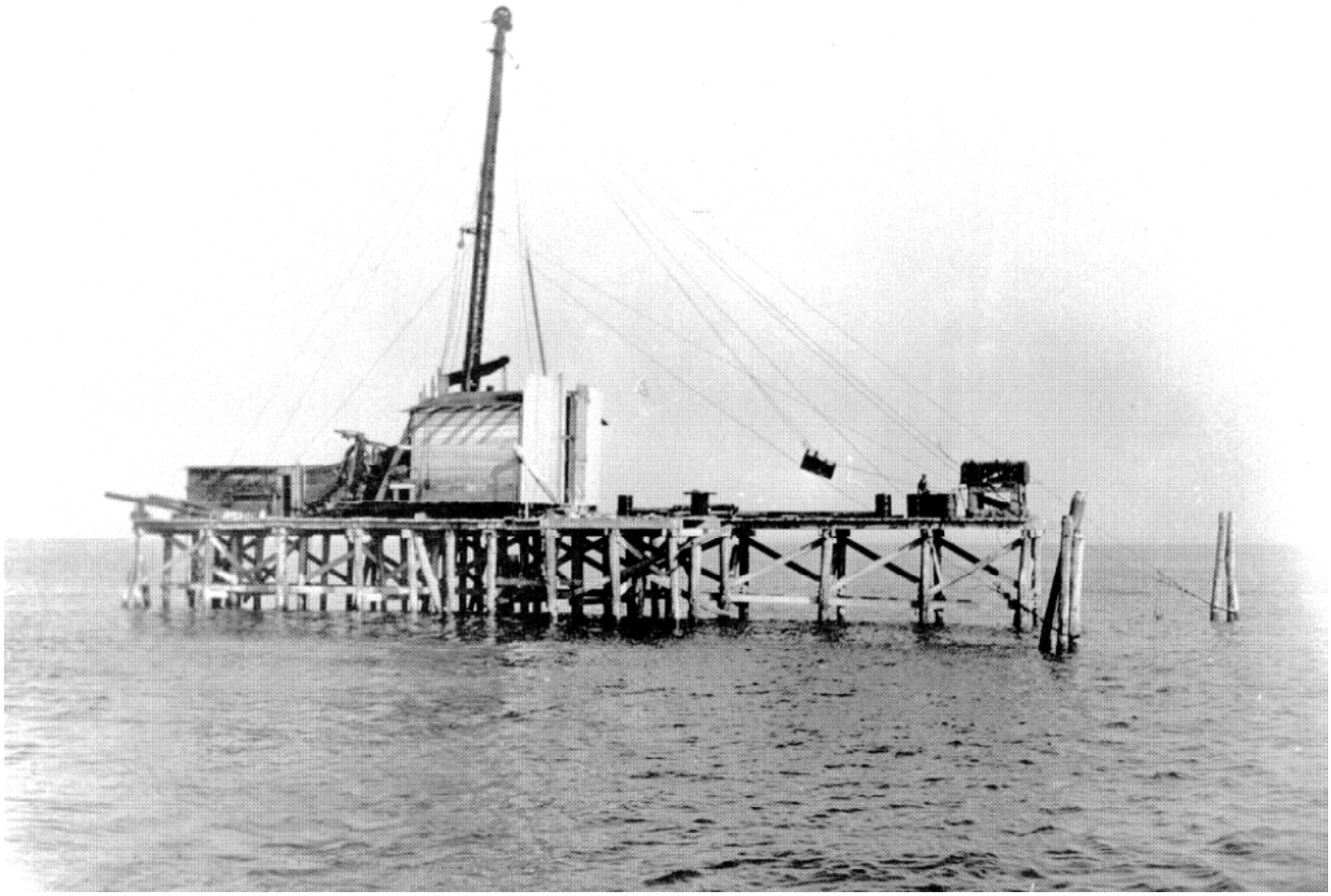
In the early 1990s, a McCalla Professorship allowed Masliyah to focus on research without any teaching or administrative responsibilities. He notes: "I went to the Alberta Research Council and they gave me an office—they had a beautiful library at the time and I really started learning. I truly was scared to open journal articles in the area of surface phenomena, like Langmuir, the surface chemistry science journal. I was afraid because I didn't even understand the title of it." But he became immersed in the science and after a year learned enough to write a book in the area, an event he says was a turning point in his career. "By the time Jan Czarnecki joined Syncrude, Tadek Dabros came to Canada working with CANMET, and later on Zhenghe Xu came, we were able to converse with industry. We were in a much wider range of research than before."

Oilsands research had become multidisciplinary involving chemical engineering, mineral processing engineering, chemistry, physics and more. This was also the era of "technology transfer" from academia to industry. Of the collaboration with commercial ventures, Masliyah says, "I think we developed tremendous trust and respect, [for example] between Syncrude researchers and the university researchers. And we very quickly realized it's a win-win situation. The industry is benefiting from us, and we're benefiting from them."

Industry and academia continue to work together on oilsands research and development, through industrial research chairs and other venues. That's because research and development remains a critical piece of this sector. For example, Masliyah notes that much research is happening today on tailings-related and environmental impact issues. And as evidence of the evolution of the science, he points out that while previous researchers were looking at the microscale, today, they are looking at the nanoscale.

"With the vast deposits of oilsands in Alberta, we have an energy resource that can fully supply Canada with its energy needs for the next two centuries. This energy resource should be exploited responsibly by maximizing oil recovery and meeting environmental needs. Fundamental understanding of the industrial processes leads to their improvement in terms of economics and environmental impact."

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



Glenwood Lake Erie #1 drilled in May 1913, by the Glenwood Natural Gas Co. Ltd. Photo from Newton (1958), Ontario Department of Mines, Geological Circular No. 7.

"Glenwood Natural Gas Company, Limited. Glenwood Natural Gas Company, Limited, the original pioneer in the lake, drilled three holes in 1913. The first well was 320 feet off the Township of Romney in Lake Erie, and was completed on May 15, 1913. It was completed at a total depth of 1,336 feet; the original open flow was 2,750 M cubic feet per day, and the original shut-in well-head pressure was 548 pounds. The second well, completed on May 20, 1913, was 300 feet off Tilbury East Township in Lake Erie. It had a total depth of 1,348 feet, an initial open flow of 3,500 M cubic feet per day, and an original shut-in well-head pressure of 530 pounds. The third well, completed on July 28, 1913, 200 feet off Romney Township in Lake Erie, had an original open flow of 2,100 M cubic feet per day; the initial shut-in well-head pressure of this well was 535 pounds. From 1913 to 1916 Glenwood drilled eight offshore wells, all of which were producers. None of these wells are operating now. Glenwood Natural Gas Company, Limited, amalgamated with Southern Ontario Gas Company, Limited, and the latter became an affiliated company with Dominion Natural Gas Company, Limited, in 1939. The production came from the Salina-Guelph formation on the lakeward extension of the Tilbury Field." *[M = thousand]*

This photo and caption were contributed by Al Phillips of Dundee Energy who let us know that May 301, 2013 commemorates the 100th anniversary of the first offshore well in North America – another Canadian first. He asks us whether we have any plans to recognize the event.

HISTORICAL CALENDARS – CANADIAN PETROLEUM INDUSTRY

Not just a pretty picture! Publisher Randal Kabatoff and Soul of Canada have once again outdone themselves in pulling together historical material about our industry into calendars, or as Randal has called them, “history showcases” or “wall books”. This year we are treated to two varieties concerning the oilpatch - one focused on “Petroleum Pioneers” and the other on “Oil Sands Pioneers”. Each calendar contains, in addition to normal “calendar stuff” as illustrated by a huge number of high quality B&W photographs, a large amount of industry data including discovery anniversaries, industry timeline, key references and websites, and a summary of other historical products available from Soul of Canada. In order to promote sales, the P.H.S. provides the following listing of the monthly focus within each of these calendars:

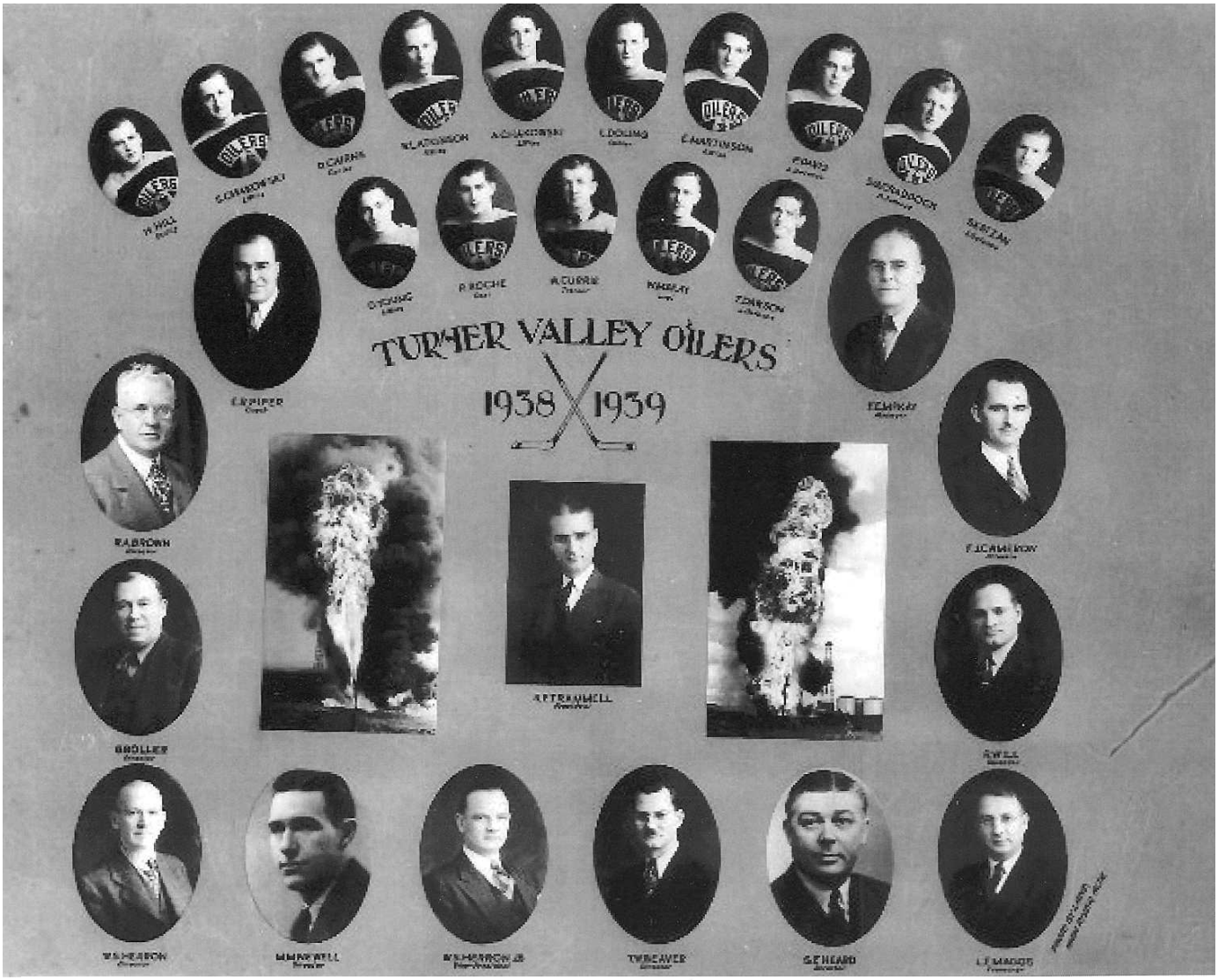
PETROLEUM PIONEERS

November 2012 – Leduc No. #1 gives birth to Oil Country
December 2012 – Frigid storms, excessive cold and blizzards
January 2013 – The reclamation of abandoned oil wells an ongoing process
February 2013 – Family life was not always easy in the oil patch
March 2013 – Atlantic No. 3 blew wild for six months
April 2013 – Land reclamation required by law for industry operators
May 2013 – Contaminated dirt from spills and waste gets cleaned
June 2013 – Natural resource exploration started many towns
July 2013 – Pembina – the largest oilfield in North America
August 2013 – In 1948 roughnecks in Redwater found a giant oil field
September 2013 – Lloydminster brought first gas well in Saskatchewan
October 2013 – Southeastern Saskatchewan’s first discoveries
November 2013 – Williston Basin gives up its bounty in 1951
December 2013 – The Peace Country was slow to yield its petroleum resources
January 2014 – Early surveys and drilling in northeastern B.C.
February 2014 – Gas industry launched at Medicine Hat

OIL SANDS PIONEERS

December 2012 - Athabasca oil sands known for centuries
January 2013 – Oil pioneer von Hammerstein’s fateful 1897 visit
February 2013 – Federal Mines engineer Sidney Ells arrives in 1913
March 2013 – Start of Alberta & Great Waterways Railway line
April 2013 – Thomas Draper and McMurray Asphaltum and Oil Ltd.
May 2013 – Alberta and the U. of A. initiate oil sands research
June 2013 – Steaming the oil out of the Tar Sands
July 2013 – Alberta Research Council pilot plant started in 1929
August 2013 – In 1923 Robert Fitzsimmons started drilling for oil
September 2013 – Engineer Max Ball and Abasand Oils Ltd. plant
October 2013 – Petroleum cannot be accessed without disturbing the land
November 2013 – Great Canadian Oil Sands plant opens in 1967
December 2013 – Synthetic crude from buried treasure

Calendars available in Calgary at the Glenbow Museum, the Calgary Petroleum Club, DeMille’s or directly from Soul of Canada at 14224 Stony Plain Road, Edmonton T5N 3R3 1-877-452-0601.



GLENBOW-ALBERTA INSTITUTE

Always a new car, ready to move. Main street in Turner Valley, Alberta, as it looked in the 1930s.