



**PETROLEUM
HISTORY
SOCIETY**

ARCHIVES

Newsletter of the Petroleum History Society

September 2013; Volume XXIV, Number 6

P.H.S. Lunch and Learn Meeting – Wednesday, September 25, 2013

**Lassoing the Dream:
A Memoir about Ranching, Oil, Community and Family
by Stan Grad, Oilpatch Entrepreneur and Executive**

Stan Grad recently published his autobiography with this title in which he discusses, amongst many other things, his former oil company, Grad & Walker, his involvement with the highly successful Canyon Services Group and his role in another venture in Papua New Guinea. In this publishing initiative he was ably assisted by P.H.S. Award Winner Paul Grescoe. Stan will speak about his life and his book and has kindly agreed to bring along some copies that will be made available.

NOTE: This talk is a re-scheduling of the event originally booked for June 25 that was cancelled due to the flood. We ask that you please re-register even if you had called in for the earlier date.

Stan Grad graduated from the Southern Alberta Institute of Technology with a Diploma in Petroleum Technology. He then earned a Petroleum Engineering Degree from the University of Wyoming. He was later awarded an Honorary Bachelor of Applied Technology degree from SAIT for his extraordinary contributions to the petroleum industry and his commitment to improving the social well-being of Alberta residents. Stan was the President and CEO of Grad & Walker Energy Corporation, a company that he founded with his partner Willard Walker. Grad & Walker was an oil and gas exploration and production company which reached the TSE 300 index before being sold to Crestar Energy in 1997. He has subsequently founded additional oil and gas initiatives, and currently serves as a Director on the board of a number of other energy companies.

TIME: 12 noon, Wednesday, September 25, 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, September 23, 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.**

THE PETROLEUM HISTORY SOCIETY THE BULL WHEEL



Next Luncheons: Our luncheon slate shaping up for the January-June 2014 window. 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.

Canadian Centre for Energy Information: The P.H.S. has a "Content, Marketing and Traffic Partnership" with the Centre. This arrangement is an expression of the mutually beneficial cooperation that exists between our two organizations. Please see www.centreforenergy.com for more details. Of particular interest to our members is their on-line historical volume "Evolution of Canada's Oil and Gas Industry" that can be downloaded free of charge.



Canadian Centre
for Energy Information

www.centreforenergy.com

Canadian Petroleum Hall of Fame Dinner: The 2013 Honoured Members of the Canadian Petroleum Hall of Fame will be inducted at a celebration dinner at Calgary's Westin Hotel on Sept. 26, 2013. Guest speaker will be Jim Ellis, new head of the Alberta Energy Regulator. For more information: On the inductees and the Canadian Petroleum Hall of Fame: Bill Whitelaw, bwhitelaw@junewarren-nickles.com, (403) 209-3503, and for tickets to or information about the Sept. 26 induction dinner: Margaret Gates, cphf@junewarren-nickles.com, 1-800-563-2946, Ext. 4256. Please see page 6 for details of this year's inductees.

Origins of the North American Natural Gas Industry: Most people think about the roots of the North American petroleum industry in terms of Oil Springs in Ontario (1858) and Titusville in Pennsylvania (1859). However the natural gas side of the ledger goes much farther back. As described in an article by Ken Milam in the September 2011 issue of the AAPG Explorer, Fredonia in the Appalachian Basin in upstate New York can stake its claim to this "first". Based on research by area geologist Gary Lash, "Gas seeps in the area were well known to natives and settlers. William Aaron Hart, a tinsmith, drilled a well 27 feet into a slate formation in 1825, hoping to tap the gas below the surface. He succeeded and soon began piping gas to the village, metering and selling it to local businesses for lighting." Almost 200 years later – the Marcellus.

Oilpatch Reality Shows: This past winter we were treated to Season 3 of “**Licence to Drill**” on the Discovery Channel, as produced by Montreal-based Pixcom. An earlier season of this series has been given a “Preservation Award” by the Petroleum History Society for the quality of its depiction of our industry. Lately there have been some U.S.-based imitators of the program that unfortunately are very poor contenders but merit mention if only to provide contrast. First is “**Blood and Oil**” – a series that involves the Cutter family in Ohio that seems to have some hundreds of acres of freehold acreage that need to get drilled up. How locations are selected is very suspect and the resulting disappointments cause disharmony in the family. Second is “**Backyard Oil**”, set in Kentucky that is even more ridiculous, if that is possible. It is in part a cross between Honey Boo-Boo and Duck Dynasty with episode names like “Barons of the Backyard”. Wells are drilled to 4000 feet with air and no surface casing or BOPs. Costs are \$25,000 to \$60,000 and expected oil rates are about 40 bbl/d. Fun to watch but please don’t tell me that anyone takes this seriously or forms their opinion about the industry based on the antics portrayed on these programs.

Detective Work on the Canol Pipeline: Most of us are at least marginally familiar with the Canol Project during WWII and the construction of a pipeline from Norman Wells across the mountains to a refinery in Whitehorse in the Yukon to fuel the war effort. However one puzzling aspect of this was how oil was transported from the field on the east side of mighty Mackenzie River at Norman Wells to the west side of the river. A visit to the Museum in Norman Wells, as profiled in a recent issue of Archives, provided the answer. In their literature collection we found a small brochure entitled “Oil to Alaska” that contains a chapter called “Pipe Across the Mackenzie” and the following (paraphrased) text: *“At Canol the Mackenzie is four miles wide and from fifty to seventy feet deep, depending on the season. Norman Wells is on the east side of the river. There the pipeline begins. The Mackenzie is the first formidable barrier to overcome. The problem was to lay a length of 30,000 feet of pipe on the riverbed below. Pipe was welded in single lengths of about a fifth of a mile. A cable was hooked to the first length of pipe and a tractor on the far side pulled it into the water with additional lengths welded on until the full length was spanning the river on the bottom. Trenches were dug on both banks of the river to protect the pipe from the actions of ice during freeze-up and breakup. However the action of the river current on the unanchored pipe caused friction against rocks on the bottom and breaks continually developed. Boats with grappling hooks had to go out into the river and lift the entire four mile length out of the river to find the break and repair the line and lower it back in again. The solution came with a deep sea diver who walked the line on the river floor, reported spots where the pipe rested on the rocks. Once these spots were known, anchors could be put down to hold the pipe in place and render it relatively secure from the current action of the river.”* How much oil was spilled in this way was not reported but the overall project did experience quite a high level of loss.

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

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Back issues are archived on our website at www.petroleumhistory.ca

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PASSINGS

Bill Cummer, July 6, 1922 - May 7, 2013: In his 91 years, oilman Bill Cummer nurtured a remarkable array of friendships through his achievements in business and community service. Long before "globally competitive" became a buzz-word, Bill helped transform a small Calgary drilling company into a multi-national enterprise. Bill was born in Drumheller, the eldest of three sons of Jack and Laurine (Jackson) Cummer. He attended Central High School in Calgary, where an optional course in accounting unveiled a talent for finance that would help shape his career in business. Following a medical discharge from the army in 1943, he found work in the oil patch as a payroll clerk for a small drilling company, General Petroleum of Canada. The business grew and evolved and so did his career. From 1976 he directed the global operations of Westburne International Drilling Ltd. from his home in Bermuda. While working in Leduc in the late 1940s, he met Marion Murray of Edmonton, and the two eloped to California. That trip began a lifetime of travel for Bill and Marion, and the two explored the world together, including a trip to China in 1981 to help promote the American Stock Exchange. After his retirement as Vice Chairman of Westburne, Bill and Marion returned to Calgary in 1990 where he resumed his work with charitable organizations. As sidelines, Bill embarked on several business ventures of his own, including part ownership of Elkana Ranch in Bragg Creek. Bill was a quiet, private and gentle man - and a gentleman - well respected for his ethics and acumen, and beloved for his wisdom and sense of humour. Following a brief illness, he died quietly in his home, in the company of his family. Bill was a longtime member of the P.H.S.

Bev Pfeffer, April 22, 1937 - April 22, 2012: Beverley (Bev) James Pfeffer passed away in the morning of Sunday, April 22, 2012, the day of his 75th birthday, at his home in Calgary. Bev grew up on a sandy farm near Elbow, Saskatchewan, together with his twin sister Barbara. His mother always insisted "Bev, you are NOT going to be a farmer," so a prestigious career in geology followed a B.Eng. (1959) and M.Sc. (1963) in Geology from the University of Saskatchewan. His persistence and drive took him through the ups and downs of forty-five eventful years in the Alberta Oil Patch, the final decades of which were spent as a respected independent consultant. Bev's many interests reflected his love of company, ideas, history, and the great outdoors, and they included biking, cross-country skiing, travelling the world with his wife, and reading. He had a lively interest in politics that sometimes made him a rebel to the conventional cause and that led him to serve in a variety of positions at the riding level. Bev was a member of the Friends of Science and a lifetime member of APEGGA. He had recently semi-retired and had started to volunteer at The Military Museums of Calgary. Bev was a longtime member of the P.H.S. He always called in late for our luncheons but was always found a way to fit him in.

Len Hills, January 3, 1933 - August 04, 2013: Len was born in Judah, Alberta on, and passed away peacefully in Calgary, Alberta. Len was an accomplished scholar, having received a B.Sc. with honours in Geology in 1960 and a M.Sc. in Geology in 1962 at the University of British Columbia. He continued his academic pursuits with the completion of his Ph.D. in Geology (Palynology) from the University of Alberta in 1965. Much of Len's career was spent as a Professor of Geology at the University of Calgary and his academic achievements were numerous. Dr. Hills received the Order of the University of Calgary in 2003 for his exemplary and distinguished service to the University. He served as the President of the Canadian Society of Petroleum Geologists in 1979, and was an Adjunct Research Scientist to the Royal Tyrrell Museum of Paleontology, and a Fellow of The Arctic Institute of North America. Len influenced many with his incredible breadth of knowledge and his true passion for teaching which was surpassed only by his love for his family.

Arne Nielsen, July 7, 1925 - July 2, 2013: Arne Nielsen passed away in the Rockyview Hospital in Calgary five days short of his 88th birthday. Arne was born on a farm near Standard, Alberta of Danish settlers, Aksel and Marie Nielsen on July 7, 1925. After years on the farm he was rescued by the outbreak of WWII which gave him the opportunity to join the Canadian Army where he was in the tank corp. and eventually to gain an education at the taxpayer's expense. He attended University of Alberta and received his B.Sc. and M.Sc. in Geology and commenced working in the oil and gas industry. Arne was a success in that industry being credited with leading the teams that discovered some of the largest fields in Western Canada (including the Pembina Oilfield), offshore Canada and the Gulf of Mexico. He was The C.E.O. of a number of corporations including Mobil Oil Canada, Canadian Superior Oil, POCO Petroleum and Shiningbank Energy. He served as a director for various organizations including The Toronto-Dominion Bank, Aetna Insurance, Vaalco, Rockwell International Canada, Phillips Cable and many small oil and gas corporations. Arne acted as Chairman of the Canadian Petroleum Association on two occasions including leading the industry response to the National Energy Program. He also raised money for United Way, Council for Canadian Unity and The Calgary Cerebral Palsy Foundation. Arne received much deserved recognition during his long career including numerous lifetime memberships, admission into the Canadian Petroleum Hall of Fame (1998) and an Honorary Ph.D. from the University of Alberta. Arne never forgot his Danish roots and acted as Consul in Alberta for the Danish Government for many years. Despite living in New York, Houston, Regina, Toronto and Denver and travelling the world on business and for pleasure, Calgary was always home and Arne was always a proud Albertan. In his spare time he enjoyed reading everything (especially newspapers), watching the news and rooting for the New York Yankees and Montreal Canadiens - he was a lifetime fan of both of those teams. In his eighties Arne wrote a book "We Gambled Everything" about the oil and gas industry that was a non-fiction number one bestseller in Calgary. Above all he was a dedicated family man, a good friend to many and a great guy. Arne will be missed. Arne was also a long time member of the P.H.S. and his book was awarded the "P.H.S. Book of the Year Award for 2012".

Ian Doig – A tribute extracted from an article by Stephen Ewart in the Calgary herald, March 14, 2012: Ian Doig, the longtime publisher of Doig's Digest, was once described in the Calgary Herald as the "official curmudgeon of the oilpatch" and "an opinionated contrarian" whose newsletter afflicts the comfortable and holds conventional wisdom up to ridicule. As a journalist, I dream of that kind of billing. Starting in 1983, Doig wrote the independent monthly newsletter that bore his name for 29 years until his death last Saturday at age 80. And "independent" would be the optimal word to describe Doig's chronicle of the Canadian oil and gas sector. "The main thing about the Digest was my dad told it like he saw it," said Doig's youngest son, David. "People found that refreshing . . . (but) he definitely made some people mad." Doig's Digest, with its distinctive blue banner, was held in much the same esteem as The Daily Oil Bulletin and Oilweek as longtime must-reads in Calgary's oil and gas industry. The straight talk, keen insights and sense of history will unquestionably ensure Doig's consideration for inclusion in the Canadian Petroleum Hall of Fame.

In an industry increasingly devoid of personalities, Doig represented a bygone era.

He was born in affluent Montreal, educated in Atlantic Canada and moved to Calgary as an oil industry economist in 1960. He made his career-defining move into journalism during Canada's tumultuous era of the National Energy Program in 1983. He never looked back and never stopped.

Canadian Petroleum Hall of Fame – 2013 Inductees

The Canadian Petroleum Hall of Fame has inducted six new builders of the oil and gas industry. They bring to more than 140 men and women inducted since the Hall of Fame was established in 1997. From more than a dozen nominees, the Hall of Fame selection committee, chaired by Gerry DeSorcy, a former chairman of the Energy Resources Conservation Board, recommended to the Hall of Fame's Board the following inductees:

- **Clement Willis Bowman:** With a long career in Canada's oil and gas industry, Dr. Clem Bowman is best remembered as the first chairman of AOSTRA in the late 1970s and as president in the 1980s of the Alberta Research Council. Under his leadership, AOSTRA created the Underground Test Facility, which was the proving ground for steam assisted gravity drainage (SAGD), the step-change and now-dominant technology that unlocked billions of barrels of previously stranded oilsands resources for commercial development.
- **James Edward Clarke Carter:** Jim Carter was president of Syncrude Canada Ltd. from 1997 until his retirement in 2007. On his watch, Syncrude replaced draglines and conveyor belts with electric shovels and massive dump trucks for overburden removal and ore mining, and the technology is now used in all bitumen mining operations. Carter also advocated for responsible development, and was instrumental in establishing Syncrude's model working relationship with Aboriginal stakeholders.
- **Sidney Clarke Ells (1878 – 1971):** Sidney Ells was an early surveyor of the oil sands region around Fort McMurray, first undertaking a detailed survey of the oil sands along the Athabasca River in 1913 and later experimenting with hot water separation of the oil sands. He also played a key role in supporting the first bituminous sand permit issued under federal regulations before resource development was turned over to Alberta in 1930.
- **Eric Lafferty Harvie (1892 – 1975):** A Calgary lawyer and philanthropist, Eric Harvie won the ultimate lottery in 1947 when a cow pasture south of Edmonton on which he held mineral rights was home to Imperial Oil's iconic Leduc No. 1 discovery well. The resulting windfall helped Harvie establish the Glenbow Museum, the Banff School of Fine Arts, the Calgary Zoo, Heritage Park and the Devonian Foundation.
- **Donald Franklin Hunter:** Don Hunter's connections to the western Canadian oil and gas industry go back a long way: his father was Vernon (Dry Hole) Hunter, the now-legendary toolpush on the now-legendary Leduc No. 1 well that ushered in the modern oil and gas industry in Alberta. A petroleum engineer by vocation, Don worked for Imperial Oil in Saskatchewan, the Northwest Territories and Alberta before launching his own oil company, Resman Oil and Gas Ltd. Since his retirement in 1996, Don has committed his efforts to the development, maintenance and growth of the Leduc #1 Energy Discovery Centre, the largest of its kind in Canada and one of the largest in the world.
- **David Paul Werklund:** An entrepreneur, oilfield industry leader and dedicated philanthropist, Dave Werklund established Canadian Crude Separators in 1984 and grew it into a \$3.7 billion enterprise before consolidating all its moving parts under the Tervita banner in 2012. He was named Ernst & Young's Canadian Entrepreneur of the Year in 2005 and his Werklund Foundation is dedicated to supporting initiatives that empower students and educators with the leadership skills needed to realize their potential.

"Once again, our selection committee has done a tremendous job putting forth names of quality inductees" said Bill Whitelaw, chairman of the Canadian Petroleum Hall of Fame. "The board is very pleased with the calibre of the six individuals who will join other key industry builders." Added Whitelaw: "Anyone who has concerns about the future of our industry need only spend some time poring over the stories of Hall of Fame inductees to understand how solid the foundation they have built is."

Please see page 2 of this issue for information on the 2013 Induction Dinner in Calgary.

GAS & OIL EXPO JUNE 11-13, 2013, Calgary Stampede Grounds –

Summary Report from P.H.S. Director and Organizer Neil Leeson

First and foremost, I was overwhelmed by quality and quantity of support in preparing our P.H.S. booth displays and volunteering at our booth, particularly: Clint, Micky, Cimmy, Penny, Don, Ned, Leroy, Jeremy, and Peter. If I have left anyone out, please forgive me.

If you are curious, Paula Arnold of dmg.events (EXPO host) delivered above and beyond for our PHS Booth - solid white wall enclosure, large overhead PHS sign, storage cabinet, carpet, ideal indoor BMO Centre Hall "A" - location near crowd-attracting USA and Korean pavilions, power - could not have asked for, nor expected, more.

I hope all our volunteers experienced the satisfaction I did from this adventure.

To put our accomplishment in perspective, here are our final numbers for our handouts:

"LEDUC" by David Finch: 5

"GREAT OIL AGE" by Peter McKenzie-Brown, Gordon Jaremko and David Finch: 41

"SAMPLING OF SEARCHERS" by Aubrey Kerr 378

"OILPATCH JEOPARDY: TORN IN THE USA": by Neil Leeson 564

TOTAL Books handed out: 988

PHS Brochures: (each book recipient promised to read it) 768

"ARCHIVES" Newsletter: - 5 months from 2012 and 2013 (estimate only) 100

On the first day we allowed visitors to take either 1 copy of the Great Oil Age OR 1 Sampling + 1 Oilpatch, thus the difference in book totals versus brochures. By start of the second day we were already running short of Aubrey's book so we insisted on one book only. All of the Great Oil Age copies went during the morning of the 1st day.

Response from most visitors was a combination of genuine interest to informed curiosity. We really **pushed our Website** which, in this computer-oriented age, captured considerable interest.

As far as I can tell, everything from set-up Sunday to tear-down Thursday went smoothly and on target with expectations. **We are now fully equipped with banners, signs and displays (and experience) to readily participate in future events.**

I can't speak for all Booth volunteers, but I was surprised at how unknown the P.H.S. role is in our marketplace - the oilpatch.

Recognition is a steep ladder, but this step was a valuable start....

Cheers and thanks to all for a job well done!

- Neil

Ace up the sleeve: Alberta regulatory architect George Govier and the oilsands' rise from a science project to a commercial force

by Gordon Jaremko

Reprinted from the July 2012 issue of HOURGLASS: Reflections from the Oil Sands Oral History Project, a regular column in the JuneWarren magazine **Oilsands Review**

How big is Big Oil? As an engineering professor, chairman of Alberta's Energy Resources Conservation Board (ERCB) and the province's first deputy energy minister, George Govier translated woolly numbers into clear pictures. "Figures for liquid hydrocarbons are given in billions of barrels. A billion—1,000,000,000—is so large as to be difficult to visualize," Govier acknowledged in the Society for Chemical Industry's 1974 spring Le Sueur Lecture in Montreal. "Think of a billion barrels as the contents of a tank about three-eighths of a mile in diameter and three-eighths of a mile high," he suggested. That would be a colossal ring with both a height and distance across of 600 meters (1,980 feet). The Empire State Building would fit inside with room to spare above its 443-meter (1,453-foot) spire. The tank's lid would also easily fit over the top of Toronto's 553-meter (1,815-foot) CN Tower.

At the time of the Montreal lecture, which taught petrochemical industry leaders about Alberta's potential as a raw material supplier and location for manufacturing projects, development was in its infancy in the northern bitumen belt. Great Canadian Oil Sands (GCOS—now Suncor) was the only plant, and its 50,000 barrels per day would have taken 55 years to fill Govier's gargantuan tank. But war in the Middle East, the Organization of Petroleum Exporting Countries and Canadian corporate affiliates of international Big Oil gave Alberta leaders reasons to think big. Early stages in the 1970s "energy crisis" stirred fears of global shortages and quadrupled oil prices in a single year, into a spectacular range for the time of \$10-\$11 per barrel (\$48-\$53 in 2012 purchasing power). With Govier at the helm, the ERCB gave the Syncrude consortium approval to triple Alberta bitumen production, and construction of the Syncrude plant was beginning north of Fort McMurray.

In Montreal, Govier pointed to two more proposals on the Syncrude scale of 100,000-plus barrels per day that were viewed as "just the head" of a long lineup of forthcoming projects. With no end in sight to the rising value of oil and natural gas, Peter Lougheed's Conservative government created the Alberta Heritage Savings Trust Fund as a nest egg for royalty surpluses and an investment vehicle to carry out grand designs of provincial economic diversification. The ERCB's reserves numbers suggested that shallow bitumen deposits in the mining district north of Fort McMurray alone could produce three million barrels per day. Industry was seen as capable of eventually building up to 30 plants, each one producing 100,000 to 150,000 barrels per day. Supported by Alberta and federal government research assistance programs, pioneer work on tapping deeper layers with in situ heat injection methods inspired big oil visions. The ERCB put a 212-billion barrel estimate on the "ultimate reserve" that foreseeable technology would bring within economic reach from the 140,200-square-kilometer bitumen belt spanning a Florida-sized arc from Cold Lake to Peace River. Govier's 1974 paint-by-numbers portrait of a global-scale giant awakening in northern Alberta became a familiar prop of the energy crisis scene. It stood out as a sharp contrast to the image of the oilsands for most of his 30 years in public office during 1948–1978. The resource, which Lougheed called the economic ace up Alberta's sleeve, had a reputation as a risky science project.

As a University of Alberta engineering professor in the 1940s, Govier's scholarly peers included Karl Clark, inventor of the industry's founding hot-water process for separating oil and sand. "He was very much a gentleman. He was quiet. He was conservative with a small 'c.' He was a good

scientist,” Govier recalled in oral memoirs recorded by the Petroleum History Society. “People were aware of his work. It was recognized as being important It was common knowledge that the oilsands were very extensive and the amount of hydrocarbons was enormous. The resource was well understood. It needed an economic production method.”

Until GCOS adopted Clark’s brainchild from the University of Alberta’s Edmonton campus and put it to an extended test in the woods north of Fort McMurray in the 1960s, even the best engineers and economists could only make guesses at whether the laboratory prototypes would work on a commercial scale. “I thought he had come up with something that was very promising,” Govier recalled. “I had made no appraisal of its economics,” he added. “It was a significant contribution, a genuine invention. But Dr. Clark didn’t pretend to be a project design expert; he was a scientist.”

During Govier’s first dozen years with the ERCB until 1960, “Oilsands was not a big deal in the work of the board. Our preoccupation was with the conventional oil industry.” His invention was a regulatory masterpiece of economic sharing known as prorationing. The system divvied up the market for oil among a host of companies. A fair rationing regime was essential in the era of rapid expansion that followed the 1947 Leduc oil discovery. In its exploration era, the industry had twice as much production capacity from new conventional wells as the pipelines could carry.

When GCOS proposed to build the first big oilsands plant in 1960, it took an act of political courage to make room for the project. The premier, Ernest Manning, staked his Social Credit regime’s popularity on creating an opening for bitumen development to start with a 1962 policy that gave five per cent of the crowded market to the new supply source. A GCOS team member, Joe Fitzgerald, described the heat behind gentlemanly political and regulatory duels over fitting the project into Alberta’s rationing regime in a lively book, *Black Gold with Grit*. When an acquaintance left Fitzgerald alone briefly as a lunch guest at the Calgary Petroleum Club, the conventional oil establishment bared its fangs. “A man joined me, asking if I was indeed ‘one of those guys from the tar sands.’ Assuming he was curious to learn more about our work, I assured him that I indeed was one of them. With that, he demanded proof of my membership in the club or one of its affiliates,” Fitzgerald wrote. When he admitted he was just visiting, the club member called the dining room master over to the table. “Now the manager was demanding some evidence that I was better than a ‘tar sands miner.’ Had my host not arrived at the right moment, I am sure I would have been promptly thrown out of the Petroleum Club.” The member made sure Fitzgerald got the message. “Very well for today, he said, but at the next meeting of the club he was definitely going to move a resolution to see that I, ‘and none of your kind,’ would ever enjoy privileges at the Calgary Petroleum Club.”

Four decades after Govier crafted his vivid image of Big Oil, his measurement standard shows that mega-achievement is emerging on its technical, economic and political frontier in northern Alberta. At today’s bitumen belt production rate of about 1.7 million barrels per day, the industry fills a billion-barrel tank that would dwarf the Manhattan skyline every 20 months. At the pace that current projects are poised to reach by the mid-2020s, five million barrels daily, the feat will be accomplished every 26 weeks.

This article is one in a series, which reflect 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. Gordon Jaremko is part of the team of researchers/writers behind the project. Our thanks to Gordon and Oilsands Review for permission to reprint this article.

BUILD YOUR OWN CABLE TOOL RIG

No. Pieces	Dimensions	FOR	No. Feet
1	16 in. x 16 in. x 22 ft.	Bull wheel shaft (13 ft.), calf wheel shaft (9 ft.)	469
1	16 in. x 16 in. x 28 ft.	Main sill - - - - -	597
2	16 in. x 16 in. x 14 ft.	Samson post, jack and knuckle posts - - - - -	598
1	16 in. x 16 in. x 18 ft.	Sub sill - - - - -	384
4	14 in. x 14 in. x 16 ft.	Mud sills - - - - -	1,045
1	24 in. x 24 in. x 8 ft.	Engine block - - - - -	384
1	12 in. x 12 in. x 24 ft.	Tail sill and post, back brake and cap - - - - -	288
1	12 in. x 12 in. x 16 ft.	Engine pony sills - - - - -	192
2	12 in. x 12 in. x 12 ft.	Engine mud sills - - - - -	288
1	12 in. x 12 in. x 24 in. x 26 ft.	Walking beam - - - - -	624
2	10 in. x 12 in. x 24 ft.	Bull wheel and calf wheel posts - - - - -	480
1	10 in. x 10 in. x 12 ft.	Boiler hanger - - - - -	100
1	8 in. x 8 in. x 12 ft.	Top cap or plate - - - - -	64
1	8 in. x 8 in. x 14 ft.	Crane post - - - - -	75
10	8 in. x 8 in. x 20 ft.	Mud sills, floor joists, and posts - - - - -	1,068
1	6 in. x 6 in. x 2 ft.	Oak, pitman (sand reel lever) - - - - -	6
3	6 in. x 6 in. x 14 ft.	Headache post, back brake, jack post braces - - - - -	126
1	6 in. x 6 in. x 20 ft.	Bunting post - - - - -	60
2	5 in. x 5 in. x 12 in. x 12 ft.	Pitman and sand reel swing lever - - - - -	50
1	4 in. x 10 in. x 14 ft.	Boiler hanger - - - - -	47
2	4 in. x 6 in. x 14 ft.	Roof rafters (derrick) - - - - -	56
9	4 in. x 6 in. x 16 ft.	Braces and keys - - - - -	288
2	2 in. x 16 in. x 16 ft.	Crown block - - - - -	85
3	2 in. x 16 in. x 12 ft.	Crown block - - - - -	96
45	2 in. x 12 in. x 20 ft.	Walk, first girts and floor, forge house floor - - - - -	1,800
4	2 in. x 10 in. x 24 ft.	Derrick leg doublers - - - - -	160
2	2 in. x 10 in. x 20 ft.	Samson post side braces - - - - -	67
4	2 in. x 10 in. x 18 ft.	Derrick long starting legs - - - - -	120
14	2 in. x 10 in. x 16 ft.	Derrick long legs - - - - -	373
4	2 in. x 8 in. x 20 ft.	Derrick short starting legs - - - - -	107
19	2 in. x 8 in. x 16 ft.	Derrick legs, water table, and gin pole - - - - -	405
10	2 in. x 6 in. x 20 ft.	First braces, forge house floor joists - - - - -	200
1	2 in. x 6 in. x 16 ft.	Bull wheel spool arms - - - - -	16
10	2 in. x 4 in. x 20 ft.	Housing for bull wheel, engine, and rig - - - - -	134
4	2 in. x 4 in. x 12 ft.	Housing for bull wheel, engine, and rig - - - - -	32
6	2 in. x 4 in. x 18 ft.	Forge house joists and rafters - - - - -	72
4	2 in. x 4 in. x 16 ft.	Derrick roof frame - - - - -	43
8	2 in. x 3 in. x 16 ft.	Derrick ladder - - - - -	64
152	1 in. x 12 in. x 20 ft.	Girts, crown, forge house sides, housing for bull wheel and engine house - - - - -	3,040
100	1 in. x 12 in. x 16 ft.	Derrick roof and housing for bull wheel and engine house - - - - -	1,600
10	1 in. x 12 in. x 14 ft.	Boiler siding - - - - -	140
50	1 in. x 6 in. x 18 ft.	Derrick braces - - - - -	450
Total number of feet - - - - -			16,293

Estimated shipping weight, 55,000 pounds.