



**PETROLEUM  
HISTORY  
SOCIETY**

**ARCHIVES**

*Newsletter of the Petroleum History Society*

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**P.H.S. Lunch and Learn Meeting – Wednesday, November 30, 2011**

**Canadian Oil and Gas Policy: From the National Energy Program  
to the Free Trade Agreement**

**by Kelly J. Ogle - Oil Industry Veteran and Historian**

Following the September 1984 federal election, the new Conservative government moved quickly to establish better rapport with provincial governments, the energy industry, and the United States. With the subsequent dismantling of the National Energy Program (NEP), a new era of federal-provincial relations began. Previously, while in Opposition, Brian Mulroney had appointed Patricia (Pat) Carney as the Conservative energy critic and tasked her with developing a Canadian energy policy to replace the NEP. Over the next several years, consultation, rather than confrontation, resulted in the Atlantic Accord, the Western Accord, deregulation of the oil and gas industry and collaborative bilateral trade relations resulting in the Canada-U.S. Free Trade Agreement (FTA), and the North American Free Trade Agreement (NAFTA). The period 1984-1989 formed a watershed in Canadian oil and gas policy development, an era of compromise that provided the lynchpin for the formation of the continental oil and gas industry as it exists today.

*Kelly Ogle has more than 30 years of petroleum industry experience, resulting in significant value creation in the junior oil and gas sector. His career has spanned the gamut from field operations as a battery operator to becoming the CEO and/or President of several junior oil and gas companies and subsequent growth in production rate from zero to greater than 3,000 boepd several times. He has participated in the arrangement of more than \$100 million of financings. Kelly is currently a director of a mid-sized oil sands producer, Connacher Oil and Gas Limited. He enjoys military and Canadian history, golf and physical fitness. He is enrolled at the U. of C. in the Center for Military and Strategic Studies (CMSS) as a Master's candidate with the goal of thesis defence in the fall of 2012. Kelly is also the winner of the P.H.S. U. of C. scholarship for 2010.*

TIME: 12 noon, Wednesday, November 30, 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: Micky Gulless, 403-283-9268 or  
[micky@fuzzylogic.ca](mailto:micky@fuzzylogic.ca) by noon, Monday, November 28, 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.**

*THE PETROLEUM HISTORY SOCIETY*  
**THE BULL WHEEL**



**Next Luncheons:** Our luncheon slate is as yet not established for the period following the November 30 luncheon. We are always seeking speakers and interesting subjects. If you are considering making a presentation, please contact Clint Tippet, President P.H.S., at 403-691-4274.

**Turner Valley Field – retrospective and update:** Thanks to David Finch for some interesting insights into the Turner Valley area plants during the war years and later: “Although the plant at the south end might not have been deemed at risk, evidence points to quite a lot of security at the more northerly Turner Valley Gas Plant, including a fence, two guard shacks, regular patrols, identity cards that had to be shown to get into the plant (one guy pasted a picture of Hitler on top of his own image as a joke), the searchlight up on the hill that played over the plant (another guy liked to freak out the search light operator by running around the plant and seeing if he could dodge the light), and numerous other corroborating details. Numerous informants talk about the security at the TVGP.”

David also added “A review of my interview with Ed Nichols, who eventually became superintendent at the gas plant, shows these details: The Boiler House operator had a small desk. Most operators had to have a steam operator’s ticket and obtain a Third Class steam operator’s ticket. The operator in the Boiler House had to have a high pressure steam ticket - a First Class ticket. Ed has several plant passes from World War II and every man had to have a pass to get into the gas plant. Some passes were for Plants No. 1 and No. 2 and others were passes for just one of the plants or for parts of the field. In 1950 Ed was an oiler at the Compressor Plant and he got paid \$1.12 per hour. He had started at 76 cents an hour as a labourer, shoveling gravel and digging ditches. He did not have any special training, no formal education and he never got a steam ticket. Ed eventually worked in every part of the plant - and got to know the plant operations very well. He spent a week with someone who knew how to run an operation, learned how to operate each part of the plant and then he became a designated operator for that part of the plant. He did not, however, work in the steam plant - Boiler House. Stu Ewen was a chief steam operator and he is still alive and living in Black Diamond.”

Most recently, **Legacy Oil and Gas** has become a major player at Turner Valley, having taken over the operations of Talisman on the southern end of the field. They are investigating ways of increasing recovery from the oil leg in the field, currently sitting at about 12%. Plans involve application of horizontal well drilling technology and multi-stage fracturing. They are also having a look at the remaining hydrocarbon potential of the uphole Jurassic and Cretaceous sections.

**Passings:** The following, somewhat in contrast to previous columns on this subject, is not intended to be comprehensive but rather is intended to give a flavor for those who have been a part of the Canadian oilpatch in one way or another.

**Robert S. Bruce** (b. March 16, 1936, d. July 28, 2010). He left school at an early age and then joined his father in the oil and gas industry, starting as a purchasing agent for Commonwealth Drilling. In 1962 he advanced his career with a move into sales with Comanche Drilling. Full of confidence, he then started his own company – Capri Drilling, followed by Brimstone Drilling and finally Command Drilling, from which he retired in 2001. He is said to have been an industry leader with various innovative ideas that subsequently became industry standards.

**Ruth Axford** (b. 1924, d. 2001). Ruth was born in Markinch, Saskatchewan and grew up in Saskatoon and Winnipeg during the Depression and the war years. In Winnipeg she met and married Don Axford after a three month courtship. They then moved to Calgary where Don began his long career in the oil industry. Over the years they moved amongst Calgary, New York, Texas and Connecticut. Ruth and Don raised four children and “relished these hectic family years and the many lifelong friends they made along the way”. Many of our members will remember Ruth who often accompanied Don, who predeceased her, to P.H.S. functions.

**Marie Alice Barroll** (b. January 14, 1925, d. July 27, 2010). Marie was born in Calgary “in a bitter Alberta winter”. She became a Registered Nurse in 1946. “After years of nursing in small towns and Calgary, Marie’s search for wider horizons led her to become an air stewardess for Trans-Canada Airlines, one of the pioneers in the post-war Canadian airline industry. Her exciting career working in DC-3 aircraft led to her meeting the love of her life, Ed Barroll, who, upon seeing her, was so enamored as to change his seat to sit next to her on the plane so that he could meet her. Ed was an ex-RCAF pilot, petroleum engineer and rig manager in northern Alberta. During their courtship, her pilots would often alert her on the intercom when landing in Edmonton “Marie, your roughneck’s waiting for you” whenever they saw a familiar red plaid jacket on the tarmac. They soon married and began a life together that took them from an oilfield skid shack to the family house in Mount Royal in Calgary with stops along the way – France, Edmonton, Denver and Houston. But Calgary always remained their true home.”

**Thomas Jack Hall** (b. September 26, 1923, d. July 26, 2010). Jack was born in Minitonas, Manitoba and graduated from the University of Alberta as a chemical engineer. He discovered the Waskada Field for Omega Hydrocarbons in 1981 and was later inducted into the Oilmen’s Hall of Fame in Virden, Manitoba.

**Archibald MacSween Stalker** (b. 1924, d. November 20, 2010). Archie was born in Montreal and attended McGill University. He was best known in Calgary for his long tenure with the Geological Survey of Canada (1945-1987), including 42 field seasons. He worked on Pleistocene deposits including the Foothills Erratic Train and the Big Rock near Okotoks.

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## **“A Farewell to the Desk and Derrick Club of Calgary”**

***By Helen R. Turgeon, Secretary, P.H.S.***

***As reported November 2, 2011***

In 1950, Mary Goulding of Imperial Oil learned from a friend in Los Angeles about a new women's organization called Desk and Derrick that was causing excitement in the U.S. Mary spread the word and on December 9, 1950, 23 women from 21 different oil companies, met at the home of Eleanor Crockett to discuss the possibility of organizing a branch in Calgary. These 23 women were to become Charter Members of the Desk and Derrick Club of Calgary. A temporary council was elected and Eleanor Crockett of Royalite Oil Co. became the first President. The first general meeting was planned for January 29, 1951 at the Al San Club. 421 women paid \$1.50 for dinner and attended the first Desk and Derrick meeting. Two hundred and sixty of these women also paid a \$4.00 membership fee to join the organization. Bernice McIvor and Marguerite Mosher who attended this first meeting have remained members of the Club to this day.

Two men attended the first general meeting: the guest speaker, Carl Nickle of Nickle Publications and Clifton Cross, a prominent Calgary oilman. Mr. Nickle's talk was entitled “**Black Gold Future**”. Thus the Desk and Derrick Club of Calgary was launched; the motto of the organization: “**Greater Knowledge, Greater Service**”.

The first Calgary Club Bulletin, appropriately titled “**Black Gold**” was published the following month. Carl Nickle continued to be the Club's “good friend” and its January meeting speaker for 27 consecutive years. Clifton Cross sponsored the Club's first field trip in June 1951. Three busloads of women, eager to learn about the industry, travelled to Pincher Creek to tour the Pincher Creek Gas Fields.

On May 29, 1952, the Desk and Derrick Club of Calgary affiliated with the Association of Desk and Derrick Clubs of North America (as it was then known). Enthusiasm continued and, in 1953, the Calgary Club bid to host the third annual Association Convention scheduled to take place in 1954. The Convention held at the Banff Springs Hotel attracted 565 registrants, representing 79 of the 96 Clubs that comprised the Association at that time. In 1955, the first Bosses' Night was held (later renamed “**Industry Appreciation Night**”).

1966 was an exciting year when Marguerite Mosher, a member of the Calgary Club, was elected Association President. - the first Canadian to attain this position. To follow as Canadian Association Presidents were Polly Tilley in 1981, Helen Turgeon in 1988 and Lynne Grose in 1994, all members of the Calgary Club. There have only been these four Canadian Presidents since the inception of the Association.

In 1983, Ward Brandow of the Canadian Petroleum Magazine (a Southam Business Publication), met with members of the Desk and Derrick Club of Calgary. Southam Publications was interested in instituting an Award to recognize the contributions of members of Desk and Derrick. The Award was to be called “Canadian Oil Woman of the Year Award” and was specifically created for the purpose of recognizing outstanding contribution to the oil and gas industry by a

member of Desk and Derrick. The Award included a suitably engraved plaque for the member recipient. In addition a \$1,000 cheque was donated in the name(s) of the recipient to the Association of Desk and Derrick Clubs' Education Trust and/or Educational Foundation. In 1989, this Award was expanded to include a U.S. Oil Woman of the Year. Over the years, 28 Canadian members and 22 U.S. members were recipients of this prestigious Award.

Since its inception 60 years ago, the Calgary Club also hosted four international Association Conventions attracting hundreds of members from across the U.S. and Canada. Members of Desk and Derrick are noted for being avid shoppers, therefore, we can confidently state that these Conventions represented a hefty boost to Calgary's economy at those times.

The benefit to the thousands of members who chose the Desk and Derrick Club of Calgary as a means to help them gain invaluable knowledge about the industry they served is immeasurable.

Over the past few years, it became more difficult to recruit members to the Club, especially members who were willing to devote time and effort needed to keep an organization such as Desk and Derrick operating. Although the decision to disband the Club was made early in the year, members wished to continue until the Club's 60<sup>th</sup> Anniversary was reached. On Tuesday, October 18, 2011, a celebration was held at the Calgary Petroleum Club attended by over 100 past members and friends of the Desk and Derrick Club of Calgary. The celebration was joyful and upbeat, focusing on the successes of an organization that touched and improved the lives of so many.

*Thanks to Helen for this summary of Desk and Derrick activities in Calgary. During Helen's speech at this closing meeting, it was apparent that her dedication to this organization and to her fellow members was still very strong.*



On August 29, 1955, 9 of the 37 members of D&D going from Calgary to New York by train for a Convention.

## The U.T.F.

### An Hourglass series article

*by Peter McKenzie-Brown, Director P.H.S.*

The year was 1976 and the place was a small town called Yarega – about 600 miles northeast of Moscow, near the Arctic Circle. A group of Albertans had gone there to observe a Soviet “oil mine.” The Soviets had constructed shafts and tunnels into a heavy oil reservoir. Local workers were pumping steam into the reservoir through angled drill holes and production was taking place within the mine. A mining engineer among the Canadians, Gerry Stephenson, describes the project: “The wells that were injecting steam were drilled from an upper level of tunnel, which was above the heavy oil reservoir. So the injection wells were drilled from above but from tunnels. The recovery wells were drilled from tunnels below.”

According to Maurice Carrigy, vice-chair of the Alberta Oil Sands Technology and Research Agency (AOSTRA), “They had a tap, you know like a tap you would see in plumbing, a bathroom tap, and they would turn that on and off to get the oil out.” Chronically short of cash, the U.S.S.R. was hoping to sell the technology to the Canadian oil industry. The visit in part reflected a 1972 technology-sharing agreement between Canada and the USSR – one that collapsed in ‘78 when Canada expelled 13 Soviet officials for trying to infiltrate its security services.

The Canadians were not impressed with the oil mine but they were intrigued. According to Carrigy, it led to a “total revolution in the concept of what you could do with bitumen that you couldn’t do in a traditional reservoir.... You got (the bitumen) into a form where it was either emulsified or liquefied so that you could produce it.”

At least one other group of Canadians had visited a Soviet oil mine. Hugh Leiper, who chaired Canada’s petroleum committee for the technology sharing agreement, also visited one in 1976. He describes being hoisted 800 feet into the mine in an elevator that swung wildly from side to side. At the bottom of the shaft, he found that oil was being collected in a large open pit on the operations floor. “When I asked whether the electrical motors on the site were explosion-proof, no one knew what I was talking about.”

AOSTRA’s Carrigy puts the impact of his group’s visit to the Yarega oil mine in perspective. While Canada didn’t use the primitive Soviet technology, it gave credibility to “the idea that we could go below (an oilsands reservoir) instead of working from above.” That way “we could use gravity as the driver in getting the oil out. That would be natural. It would come down and flow in and then we’d take it from below rather than pulling it up to the surface.” Adds Stephenson, “the system was definitely working, but the mine was very, very primitive. The tunnels were tiny. They weren’t mechanized at all. The piping systems were not much better than you would find in your garden. But it demonstrated that if you heat heavy oil, it will mobilize, it will be possible then to drain it, and if you put in wellheads below the reservoir, you will get production without pumping.”

A few years later, the legendary Roger Butler began developing the two-well SAGD concept, which eventually took the form in use today: injecting steam into a horizontal well and collecting oil through a parallel well below. Clem Bowman, who worked at Imperial Oil with Butler, says he actually developed the theoretical model for SAGD in the early 1970s. A decade later the time was ripe for radical experimentation.

## **The Mac of SAGD**

The AOSTRA's first chairman, Bowman picks up the story. According to him, one day Gerry Stephenson came into his office and said "The oil companies have got it all wrong. The idea of drilling vertical wells into the oilsands and only contacting the pay zone for the few metres where there's bitumen and having to put multiple wells down in these grid patterns just doesn't make sense. I'm a mining man and the logical thing to do in a mine is to put down a shaft and to drill horizontal wells from that shaft and then every foot of well that's drilled is in the pay zone." Stephenson added that he had gone to the oil companies with this idea without success. "And so he came to my office and sat there and made his plea that we should build a facility, put down a shaft and he had worked out what the costs would be," Bowman continued. "According to his numbers, drilling a shaft into the deposit is not an expensive operation and the coal companies know how to handle methane in spades. So we put together a concept called the Underground Test Facility. No oil company would put any money into it but (petroleum executives on AOSTRA's board) said they would support it technically and they'd have people help us on it." For the only time in its history, the government agency paid full fare – and for what seemed a most speculative idea. Total budget for shafts, tunnels and infrastructure was about \$30 million.

As Bowman continues, "It seemed this was the obvious time to test (Roger Butler's) principle of gravity drainage." Butler had left Imperial oil to become part of AOSTRA, and he became a member of the technical team. Maurice Carrigy was the project executive. Another significant player was Chi-Tak Yee, who had worked with Butler as a graduate student at the University of Calgary. Today a vice president of MEG Energy, he says that "one of the most fortunate things that I was involved with was the Underground Test Facility project that was essentially the birthplace of SAGD. Think of (the UTF) as the Mac of SAGD development."

According to Carrigy, "although we did contemplate going right into the oil sands, we thought it would be better to go down below the oil sands, put the tunnels in a secure and safe place" – a layer of limestone – "and then drill upwards" into the reservoir.

The magnitude of the UTF is hard to imagine. Sinking the shafts was done with a drill bit almost four metres in diameter weighing 230 tonnes. The two shafts were 223 metres deep and neither one deviated from the vertical by more than an inch. As a safety measure, AOSTRA constructed two parallel tunnels through the limestone. More than a kilometre in length, the tunnels were five metres wide by four metres high.

### **A Subway to the Wellhead**

At the UTF's official opening on June 29th 1987, a senior executive at Shell Canada – up to that time he had been a critic of the project – went to Stephenson and said, "It's really not a mine, Gerry, is it? This is really impressive. It's like a subway to the wellhead."

Then came the tests. The Phase A pilot involved three well pairs 70 metres in length, each with 40-50 metres of exposure to the McMurray formation. According to Stephenson, "steam was injected and the first experiment with SAGD wells began. After a year or so, it was obvious the system was working."

That was the beginning of a turnaround within the industry, which soon decided to get financially involved. Ten companies each contributed \$16 million to the project. That funding enabled the test crew to complete Phase A and to move on to Phase B. It also funded several years of

additional experimentation. Phase B involved another three well pairs, 70 metres apart. According to Stephenson, “the effective length in the reservoir was 500 or 550 metres. They resembled a commercial development” despite having only three producing well pairs. Project engineers expected production to reach about 1,800 barrels a day.

What was the result? “AOSTRA’s staff had estimated that the recovery might be somewhere between 30 percent and 45 percent of the bitumen in place,” he says. “We actually got 65 percent recovery. The steam chambers formed by mobilization of the bitumen spread way beyond the area that we’d expected, so obviously we didn’t need to drill the well pairs as close together on Phase B as we did on Phase A, so we opened them up. Anyway, on Phase A the figures were 65 percent recovery – way beyond what we’d estimated. Over the 10-year life of the well pairs, Phase B got a steam/oil ratio, the most critical figure of all, of 2.3 to one.”

The petroleum industry soon began to develop SAGD projects from well pads. According to Stephenson, however, there are many reasons why SAGD is better done from tunnels underground. “You don’t disturb the surface to the same extent. You can use gravity to your full advantage.” And, he adds, surface schemes require a high-capacity, expensive pump for each producing well. They cost a lot to buy and a lot to service.

Also, he says, “it costs more to pump through an 8-inch pipeline than it does through an 18-inch pipeline and a shaft. Another advantage is that you can drill more accurately from underground, and you get better recovery because you can use lower steam pressures. Your production might not be quite as high, but your recovery of the bitumen is going to be better, because you’re allowing a slow process of heat soaking upwards by thermal conductivity.” He claims still other advantages for the system. “You’re operating in an underground climate in a tunnel. You’re doing all your drilling down there, you’re doing all your process manipulation work down there, and you’re completing wells at a temperature of 58°F. You do not have to clear snow or clear ice. You can operate 24 hours a day, 365 days a year, instead of being confined with your drilling and your completions to those periods when you can drill on the muskeg and so on. You can do all these things in a safe environment that allows you to work all year long.”

A visionary but not a dreamer, Stephenson acknowledges that the system also has disadvantages. One is that capital for shafts and tunnel construction is upfront capital: until you’ve constructed those shafts and tunnels you can’t do any drilling at all. Also, of course, some reservoirs simply don’t have the geological features needed to make the system work.

In the latter 1990s the UTF was acquired by Devon Energy, which then sold it to Petro-Canada. When Suncor Energy acquired Petro-Canada, it also acquired the UTF – now known internally as its “Devon Project.” Petro-Canada developed abandonment plans for the facility, and unconfirmed reports say the ERCB approved them. It’s still intact, ‘though its future is in question.

However, Suncor is a forward-looking company. Who knows? Perhaps experiments at that grand old site are still quietly opening doors for discovery.

*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. Peter McKenzie-Brown is part of the team of researchers/writers behind the project.*



**Oilsands Review November 2011: Hourglass  
Reflections from the Oil Sands Oral History Project**

**THE OILSANDS TORTURE TEST:  
NEIL CAMARTA ON STARTING THE 21ST CENTURY'S BITUMEN RUSH**

By Gordon Jaremko

As engineer in charge of Shell Canada Limited's 60 per cent ownership in and as operatorship of the Athabasca Oil Sands Project (AOSP), Neil Camarta ran a demanding obstacle course. "If you mentioned the oilsands in the early 1990s, people would spit on the floor," Camarta recalled in oral memoirs recorded by the Petroleum History Society's Oil Sands Oral History Project.

The sour majority view dwelled on harsher economic, political and operational realities than the industry's forefathers ever imagined. The AOSP followed two decades of disappointments after Syncrude Canada Ltd. started up as the second bitumen belt plant in 1978. At that time, provincial government and business planners expected more Fort McMurray mining and upgrading complexes to be built at a brisk pace of a new one every four years. But the next entries in the megaproject lineup, Alsands and OSLO, died of poor oil prices, high costs and unsympathetic energy policies. The first two plants, Suncor Energy Inc. and Syncrude, struggled to survive. Efficiency overhauls replaced the original high-tech icons -- imported European bucket wheels and drag lines -- with trucks, shovels and economy measures from pipe line advances, to limits on keeping parked staff vehicles warm by idling their engines through frigid northern winters. The AOSP team of Shell and minority partners Chevron Canada Ltd. and Western Oil Sands Inc. outgrew pioneer optimism that development was a case of making inventions. The early faith -- expressed by an old nickname for the bitumen belt, Industry's Technology Frontier -- dated back to the Alberta Geological Survey's annual report for 1920 to the provincial legislature. "The possibilities are unlimited," predicted chief geologist John Allan, who is immortalized by a peak named after him that overlooks the Kananaskis Country tourism magnet in the Rocky Mountains, west of Calgary. "The real problem in connection with the bituminous sands is one of treatment. Some process is necessary, which will extract the bitumen from the sand on a commercial scale," wrote Allan. "Even if only a small acreage can ever be utilized and a fair percentage of the bitumen content extracted, the quantity of oil in the deposit would be an important factor in maintaining the petroleum supply of the world."

Energy markets were not willing to pay much for more oil when Camarta returned to Calgary from six years of overseas postings in the global Shell network. Oil traded at US\$12- \$13 per barrel as he launched the AOSP. That was equivalent to \$1.44 - \$1.56 per barrel at the time of Allan's report, and would have been considered meagre in his day too. Camarta had to show that high production volumes using improved technology would spread expenses thin enough to run the AOSP in the black and recover its construction costs even if oil stayed weak. "It was a very close thing to actually get this approved," he recalled. Shell's Dutch world headquarters was bearish on oil, predicting that Middle East exporters would flood international markets rather than take chances on prices falling even lower. "Nobody looked at the demand side." Growing Asian, and especially Chinese, consumption was not understood. Camarta knows of no one who foresaw oil climb to annual averages of \$41.40 per barrel by the time AOSP started full production in 2004, then \$57 in 2005, \$66.22 in 2006, \$72.39 in 2007 and \$99.64 in 2008, followed by respectable showings during the global economic contraction at \$61.78 in 2009 and \$79.42 in 2010. "The increase in the oil price saved our bacon," Camarta said. As the industry heated up, AOSP construction costs jumped 50 per cent to \$6 billion. But oil rose faster.

The project had plenty going for it that offset price unknowns. Camarta got his oilsands assignment because Shell's prime bitumen property, known as Lease 13, contained five billion barrels and was about to expire unless development started. After 20 years of stumbles, the Alberta government wanted a mining success. A mid-1990s agreement with the federal government, on a "generic fiscal regime" of favourable royalties and taxes, helped greatly. So did a company advantage, Camarta said. Shell also already owned an oilsands refinery northeast of Edmonton at Scotford. Building an upgrader next door came naturally, to turn bitumen into the synthetic crude used by the established plant. And in Camarta, the AOSP had Alberta-grown entrepreneurial breeding and zeal. He was the first boy to make it into university from an extended family of transplanted Italian farmers, ranchers and handymen in the Edson area west of Edmonton. His oilsands inspiration dates back to his high school years in the early 1970s. He saw peers cash stunning paychecks and buy pickups after only a dozen weeks of Syncrude construction work. While an engineering student at the University of Alberta, he went on class field trips to the mega-project. "It was all kinds of astonishing. It was exciting stuff," he recalled.

"My parents really wanted me to be a welder." He learned the basics of the trade helping uncles maintain farm machinery. A friend's family persuaded him to try engineering when he finished high school at the top of his class. Early experience with a torch helped him when he had to hold together an AOSP construction army of up to 10,000 workers. "I learned [that] you can learn from those guys. They have their hands on what's happening," Camarta said. Showing respect for blue-collar brigades and rubbing shoulders with them helps an industry captain, "if you want to have a bit of rapport. You don't just look like a suit from Calgary, prancing around." To make the AOSP fly, Camarta also had to learn to think big on wider fronts than oil prices. In global Shell's home of Europe, environmental concerns over climate change, carbon emissions, hazardous waste, community effects and native rights hit fever pitch a decade earlier than in Canada or the United States. "I spent more time talking to The Hague [Shell headquarters] about carbon dioxide, First Nations and tailings ponds than I did about economics," Camarta said. The ecological issues intensified an AOSP cost control drive that cut the operating temperature of the oilsands production line, reduced emissions, improved tailings management and advanced wild life protection. Camarta voices no hard feelings against groups that demand reasons for industrialization. "It's a lot harder now," he said. "But it should be. That's part of the job. You should have to do that."

His experience tells him that good explanations and decent conduct still generate balanced views. "Most people will listen to you," he said. "Your quest is to have more good than bad. This is good, hard work. It's not like the history of Spanish gold causing hyperinflation and making Spain miss the industrial and agricultural revolutions." In the oilsands, "You have to be a hard-working, educated, skilled person. That's good for any society." In early retirement at age 58, Camarta still takes on industry roles in a budding next generation of oilsands projects intended to use new technology and reduce environmental effects. He is also courting support for a new medical research foundation that he plans to launch with his own money, to work on a cure for a genetic form of muscular dystrophy that runs in his family.

*This article is fourth 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 the own words. As with its previous oral history projects, transcripts and recordings from the project will reside in Calgary's Glenbow Archives. Renowned energy journalist Gordon Jaremko is one of the oral history researchers.*