



**PETROLEUM  
HISTORY  
SOCIETY**

**ARCHIVES**

*Newsletter of the Petroleum History Society*

*March 2012; Volume XXIII, Number 3*

**P.H.S. Annual Meeting and Awards – Wednesday, March 28, 2012**

**Petroleum History Society Annual Meeting with speaker  
Robert McClements Jr. and the 2011 P.H.S. Awards**

We will be continuing a tradition of combining our annual Society business with a highlighting, through our annual awards program, of individuals and organizations that have made significant contributions to the preservation of Canadian Petroleum History during 2011.

Our Keynote Speaker will be legendary Suncor oilman Robert McClements Jr. speaking to us on **“The Great Canadian Oil Sands (G.C.O.S.) Story – from Dream to Reality”**.

The schedule for the meeting will be:

- 4:00 p.m. Meeting commences – call to order
- 4:05 p.m. President’s Report
- 4:20 p.m. Treasurer’s Report and related business
- 4:30 p.m. Election of P.H.S. Officers and Board for the 2012-2013 term
- 4:45 p.m. 2011 P.H.S. Awards
- 5:15 p.m. Keynote Speaker: Robert McClements Jr. (see page 3)
- 5:45 p.m. Questions, Answers and Discussion
- 6:00 p.m. Mix and Mingle with snacks and cash bar - Please come out and join us!

- TIME: 4:00 p.m., Wednesday, March 28, 2012.
- PLACE: Calgary Petroleum Club, 319 – 5th Avenue S.W.
- COST: Members and Guests (most welcome) - free of charge
- DRESS: Business casual at minimum, ties not required

**For the sake of our snack planning, please  
R.S.V.P. if you wish to attend to: Micky Gulless at 403-283-9268 or  
[micky@petroleumhistory.ca](mailto:micky@petroleumhistory.ca) by noon Monday, March 26**

**Note: A variety of classic oilpatch books authored by P.H.S. members will be on display at this event with complimentary copies available to attendees. Thanks to Director Neil Leeson.**

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



**Next Luncheons:** Following the Annual Meeting, our next event is our luncheon scheduled for May 2. Our speaker will be Ian McGregor who will be describing his extensive collection of industrial machinery, in part related to the petroleum industry. 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.

**Call for Nominations – Board and Executive:** In preparation for the Annual Meeting, this is a final call for anyone who might be interested in joining the Board or Executive of the Society. If you would be interested in running, please contact Clint, as above, who is coordinating the assembly of the slate for the election.

**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](http://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.



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for Energy Information

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

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## Profile: Robert McClements Jr.



**1928:** Born in Philadelphia.

**1952:** Degree in Civil Engineering.

**1952 to 1954:** Project Engineer for Foster-Wheeler.

**Korean War:** Served with the U.S. military.

**1956 to 1965:** Project Manager for Catalytic Construction Company in Philadelphia, a builder of oil processing plants and a subsidiary of The Sun Company.

**Briefly:** Chief Field Project Engineer at the Atomic Energy Commission's Nevada Test Site.

**1965:** Plant Manager and Vice-President of Great Canadian Oil Sands Project (GCOS ~ was Master of Ceremonies at the Opening on Sept. 30, 1967), later of Suncor Energy (Canadian company).

Vice-President of the Alberta plant.

Director and Materials Manager for Sun Inc., in **Philadelphia**.

**1972-1974:** Director of Engineering for Sun Inc.

**1974-1975:** Vice-President of Energy Ventures of Sun Company in Dallas.

**1975-1977:** President of Sunoco Energy Development in Dallas.

**1977:** Advanced degree from Harvard University.

**1977-1981:** Vice-President of Sun Company Inc., in Radnor, PA.

**1980:** Elected President and C.O.O. of Sun Company Inc.

**1985:** Elected Chairman and C.E.O. of Sun Company.

**1992:** Retired.

Saw Sunoco become the **third-largest independent oil refiner and marketer** operating five refineries in the US, which have a combined processing capacity of 730,000 barrels a day.

**Directorships:** Continued membership on several corporate and non-profit boards. **Member:** Presidents' Advisory Council at Eastern College. **Chairman:** Greater Philadelphia Chamber of Commerce. **Chairman:** Drexel University. **Visiting Professor:** Graduate School of Management, University of California, Davis.

*Our thanks to Bert MacKay of Fort McMurray for the use of this profile.*

## **The Captain takes a Bow: *Suncor Energy starts the long goodbye to Rick George, the Man who built it from Broken to Megaweight***

By Peter McKenzie-Brown, P.H.S. Director and petroleum historian;  
With our thanks to Oilsands Review in which this article was originally published Feb. 2012

Bob McClements has had a long association with the oilsands industry. He was construction manager for Sun Oil Company's (Sunoco) original Great Canadian Oil Sands plant and the first plant manager when it went on stream in 1967. When it commissioned that pioneering plant, Sunoco was one of the largest integrated oil companies in the world. In the 1980s McClements rose to its highest ranks, becoming President and Chief Executive Officer.

When Sunoco was near the top of its game, McClements asked American-born Rick George - who at the time was in charge of Sunoco's North Sea development and production, and had overseen construction of Europe's first purpose-built offshore production platform - to take charge of the company's Canadian subsidiary, Suncor Energy Inc. "I flew over to London and asked him whether he would give up his position with an established operation in the U.K. and move to a totally different environment in Canada. After only a day, he agreed," says McClements. "You have never met a more unassuming, low-key but brilliant executive in your life. He's quiet and unassuming, but when he speaks you listen. He knows what he's doing because he came up the ranks. He was given increasing responsibilities and he did well in every one of them."

Headquartered in Toronto until 1995, George became Suncor's President and Chief Operating Officer in 1990; the following year the board appointed him Chief Executive Officer. In 1992 McClements retired and Sunoco accelerated its policy of divesting upstream assets so it could focus instead on refining and marketing. Accordingly, it spun off Suncor as an independent entity. Big mistake: Suncor had market capitalization of \$1 billion when George took over. Today it's about 48 times bigger, and 12 times larger than Sunoco. Rick George, who recently announced that he will fully retire at the end of July, was the architect of this spectacular business achievement. In his years at the helm of Suncor, McClements said with some understatement, "he has become the number one executive in the oilsands."

Why did its owners divest Suncor? According to George, "We were actually going through a recession back in 1991-92, both here in North America and in Europe. It was a period of time at which the Government of Ontario [75 per cent owner] was struggling with paying their bills. This was an area they could liquidate. Sun Company had some issues around debt as well. It was just fortunate that both of them actually needed money at the time and decided to sell Suncor to the public." When George took over, Suncor's primary assets included the money-losing oilsands plant, some service stations and a small refinery in Ontario. The oilsands business "really struggled with return on capital well into the mid-1990s [because of] high costs relative to low oil prices," George said in a recent interview conducted for the Petroleum History Society's Oil Sands Oral History Project. "There were 20 to 25 years of real struggle between when this industry got its first plant online and when it actually started to make enough money to make sense." Assisted in the early years by Dee Marcoux, executive vice-president, oilsands, the first items of business during George's presidency were to restructure the 60,000-barrel-per-day plant, deploy truck-and-shovel technology for mining, make major improvements to the processing plant, and expand capacity to 130,000 barrels per day by 2001.

In 1998 Suncor filed its regulatory application for Project Millennium, comprised of mining capacity increases and a new upgrader. The project was a dramatic expansion designed to increase production to 210,000 barrels per day.

George recalls that, "about the time our board approved the Millennium Project, which was 1997, *The Economist* had a front page view that they expected prices to be at \$5.00 a barrel for a long period of time ... I think what they lost track of is that this industry moves through cycles and it will continue to roll through cycles as we invest, as we try to figure out where the next investments should be." Millennium was a good investment, he added. "We started the project when there were low oil prices. When we got the project done in 2002, oil prices rose and it was obviously a great win for our shareholders. I always think of oil companies as big deployers of capital. And I think the management and leadership of oil companies is really about making right choices at the right time."

In 2001, Suncor announced its Voyageur growth strategy, a multi-pronged approach targeted to bring oilsands production to 500,000 barrels per day by 2012. The plan included a mine extension, a third upgrader, and in situ expansions at the Firebag steam assisted gravity drainage (S.A.G.D.) project. The Voyageur strategy was slowed by the global recession, but not derailed. Its most significant piece, the Voyageur upgrader - now a joint venture with Total E&P Canada - is expected to be re-sanctioned in the near-term. George says the upgrader should reduce business volatility. "It should improve reliability. It's going to be a project that will be online for 50 to 100 years...you've got to take a very long-term view of this business."

And that long-term view rests a lot on in situ development. In addition to undeveloped leases and the MacKay River S.A.G.D. project acquired through Suncor's 2009 merger with Petro-Canada, Suncor considers its Firebag assets to be a key piece of the future. "Firebag is in the middle of a lease we hold that has 9 billion barrels of recoverable oil," George says. "So this is again an asset base that will be on production for the next hundred years in some form or another."

In 2009, George announced a \$19.1-billion bid to take over Petro-Canada. With the merger's success, Suncor suddenly had a much bigger refining and marketing presence in Canada, light oil and gas properties around the world and significant additional oilsands properties. "If you look at it in a historic sense, we picked Petro-Canada off at the low point of the market, or pretty close to that," he says. "I'd thought for a period of time about putting the assets together, particularly their downstream with our upgrading and our upstream made a lot of sense. The opportunity to drive synergies, to drive costs out the system - all of that was there in spades. I think it was a great move, made at the right time. And, you know, most mergers actually don't drive shareholder value. This is one that did."

George is competitive when it comes to production systems and oilsands technology, but collaborative on environmental issues. As one of the founders of the Oil Sands Leadership Initiative, he believes the industry should share "anything to do with safety, the environment, environmental improvement, anything on reducing our air, land and water footprints. This is important, very important."

George says that even though he has been at the helm of Suncor for 20 years, the real excitement is yet to come. "I think the next ten years in this industry are going to be some of its best," he said, pointing specifically to technology around reducing the environmental footprint of operations. "It is going to astound people how quickly this happens and how well it happens."

The step-changes will come particularly in the in situ area, he says. “The important thing to remember about S.A.G.D. is that it is still a very, very young industry. [You’re going to see] a real take-off because of the critical mass of investment in technologies that will rapidly change how we do this. It will reduce water use. It will reduce energy intensity. It will make wells more productive. As wells get to the end of their life, we’ll figure out ways to extend that and recover more.”

George continues, “Listen, industry is looking at all kinds of ways to [improve efficiency], whether it’s use of solvents, surfactants, better downhole pumps, whether you eventually, once you get these caverns, use fire-flood. There are so many technologies out there that are being looked at, being researched, being tried in the field, you’re going to see this thing change rapidly, particularly over the next decade or so. It’s actually quite exciting.”

Suncor’s production has grown significantly under George’s leadership, and will continue as part of his enduring legacy. In the longer term, he notes that the company will “have production coming in from Fort Hills, eventually Joslyn, but also from Firebag, from MacKay River, from our two base mines. And this will feed this large upgrading complex that includes Upgrader number one [constructed in 1967], Upgrader number two (from the Millennium Project) and Upgrader number three which is Voyageur. The total capacity of that overall upgrading facility will be somewhere in the 550,000-barrel-a-day range.”

George leaves behind a strategic plan for Suncor to produce 1 million barrels per day by 2020. “We have the reserves to do it, the strategy to do it, and the environmental approvals for the projects. It’s really down to execution.”

On a cautionary note, he noted some worries the industry should think about. “You’ve got to be very concerned right now about whether we have enough labour in this part of Alberta. The one difficult thing we have is this oilsands resource in a very remote area. You don’t have a nearby port, you have to bring everything in by truck or by rail. You always have to worry about these inflationary cycles, that we have seen and that we’re likely to see on a go-forward basis. So we just came through a big inflationary period, that 2005 and 2008 period. It’s been calm since the market collapsed in 2008 but...”

George’s final year in the company saw record production, record cash flow and earnings, and total debt way down, to \$7 billion. Twenty years ago, could he have imagined that Suncor would become the largest oil company in North America? “No. That would have been the most improbable thing. But you know what? It’s been an exciting ride. What I would say is, the potential to do those kinds of things is still out there. If I were, you know, 20 years or 30 years younger than I am today.... Opportunities still exist to do those kinds of things.”

Rick George will continue to innovate and lead. As he told the press when he announced his retirement, he won’t be leaving the sector. He’ll still be involved with the oilsands and technology development, but through smaller companies.

*This article is an outgrowth of the Oil Sands Oral History Project, an initiative undertaken by the Petroleum History Society with the financial support of many of the companies involved in this sector of the petroleum industry. The prime drivers of the project who have spent many hours on the creation of the project and its execution are Peter McKenzie-Brown, Robert Bott and Adriana Davies. They have been joined more recently by Gordon Jaremko and Brian Brennan.*

## Environmental safeguards are as old as the oilsands sector itself

An Hourglass column article from Oilsands Review by Gordon Jaremko – March 2012

A department of an oil giant that sported a new-age title - alternative fuels - sent Erdal Yildirim on his first trip to Alberta 40 years ago from a New Jersey industrial research laboratory. But the energy expert from Turkey did not have orders to turn algae into oil, restaurant waste into diesel or crops into ethanol. The firm that dispatched the doctor of engineering science to Edmonton was a founding partner in the Syncrude project: Cities Service Co. It evolved into CITGO, now a subsidiary of state-owned Petroleos de Venezuela S.A. When Yildirim saw construction starting on Syncrude north of Fort McMurray, Cities Service was an independent refining, marketing and transportation empire with 98 subsidiaries run from a New York headquarters on Wall Street. In 1918 the company had supplied half the oil used by the Allies, including the United States, to win the First World War.

“I said, ‘Where’s Edmonton?’” Yildirim recalled in an interview recorded for the Oil Sands Oral History Project of the Petroleum History Society. “I didn’t know Edmonton from St. John’s.” But industry and government leaders were in the know. Yildirim began his oilsands career in the winter of 1972-73 because the Alberta resource had a rising profile on the global economic scene. In the 1970s “energy-crisis” era the northern bitumen belt beckoned as a route to recover energy security, which had been shaken by Middle East warfare that included Arab use of oil as a political weapon in an embargo against sales to Israel’s supporters. Also, U.S. Texas production was known to be past its prime. The famously accurate “peak-oil” forecast of American supply growth and decline by geophysicist M. King Hubbert dated back to 1956. Alberta leaders rightly predicted that western Canadian conventional wells were headed for natural depletion after their total flows of light oil hit their all-time high of 1.5 million barrels per day in 1973. Then-Alberta premier Peter Lougheed often warned that the province had as little as 10 years to diversify its economy and reduce reliance on a depleting natural treasure chest. He built the idea into the founding legislation and investment structure for the province’s nest egg of surplus non-renewable resource revenues, the Alberta Heritage Savings and Trust Fund.

Supply security, at times taken to the extreme of self-sufficiency, was a declared aim of U.S. and Canadian oil policy for a generation, including Ottawa’s 1980 National Energy Program. The theme figured in official justifications for controversial Alberta, Federal and Ontario Government investments in Syncrude after an American partner, Atlantic Richfield, dropped out to switch into Alaskan drilling.

Among bitumen belt pioneers like Yildirim, the vision of the oilsands as an alternative fuel had a green tinge. “It was a very creative period,” he recalled. Then, as now, he saw no conflict between developing the resource and protecting the environment: “I wouldn’t say it was a concern. It was an opportunity.” The industry builders’ outlook grew out of 1960s and ‘70s elaborations on the original engineering idea of conservation, as making the most of resources by preventing waste. The widened concept added that cleanliness was a natural ingredient of efficiency and profit. The birth of oilsands production coincided with the first clean air and water legislation and creation of environment ministries across North America. Alberta’s Social Credit regime appointed the first Canadian environment minister: Jim Henderson, who previously had the Cabinet’s health portfolio. Lougheed’s Conservatives kept the title and expanded the office into a government department after they won power in 1971. The early link between oilsands development and environmental thinking showed in regulatory approval decisions on the pioneer plants by Alberta’s Energy Resources Conservation Board (E.R.C.B.).

Decades of measuring production efficiency gave the E.R.C.B. the eye for potential hazards required by environmental safeguards. Well before greenhouse gases and climate change became global concerns, Board rulings on the first Fort McMurray bitumen mining and upgrading scheme included carbon emissions data. A 1960 decision calculated that questionable byproducts of the daily synthetic crude output of 31,500 barrels planned by the original Great Canadian Oil Sands (G.C.O.S.) project would include 7.5 million cubic feet of carbon dioxide every 24 hours. Controls on mine tailings and sulphur emissions were issues from the start. After interveners and E.R.C.B. staff challenged G.C.O.S. at public hearings, the board increased the project's cost forecast by about 10 per cent to cover environmental expenses. "It was quite probable that anti-pollution requirements would likely become more stringent with time," the 1960 ruling said. The environmental questions contributed to a two-year postponement of final approval for construction, until G.C.O.S. cleared up "serious doubts" about its economic feasibility by increasing Sun Oil's financial commitment.

The E.R.C.B.'s second big oilsands decision, on Syncrude in 1969, again showed the evolution of environmental accountability as part of conservation efficiency policy. Construction approval conditions required a tidy operation. The project had to assure that bitumen ore would not be left behind by being stranded under tailings ponds or waste dumps liable to be too messy to clean up economically. Off the mine and plant site, pollution was outlawed: "Syncrude shall dispose of any liquid wastes ... in a manner that ensures no oily or contaminative materials flow over the land or into any body of water," the ruling said.

Environmental concerns also pervaded a 1972 survey of bitumen belt issues that E.R.C.B. and government department officials, working as the Alberta Conservation and Utilization Committee, wrote for Lougheed's first Conservative cabinet: *Fort McMurray Athabasca Tar Sands Development Strategy*. The paper anticipated and inspired policies such as: land reclamation legislation, tailings pond regulation, government-supported participation by Alberta investors, technology advancement partnerships between government and industry, expansion of technical training, highway improvements, and adaptation to strains on the province's labor force, consumer prices and public services. The 81-page document foreshadowed 21st century concerns. "Alberta's primary objective should be to regulate, guide and control bituminous tar sands development in order to meet growing socio-economic needs of Albertans as well as Canadians." An orderly approach was urged, with construction governed at a moderate pace of one new plant every four years. Forecast effects of bitumen mines and upgraders, if they hit the 1972 production target of one million barrels per day, made environmental and community concerns top priorities. Alberta's population was projected to grow by 80,000. Land disturbance was expected to average 2.4 hectares per day, with the "denuded area" expanding to 81 square kilometers before reclamation could offset its growth. "The volume of waste being disposed to the tailings areas will be in the order of two million cubic yards [1.5 million cubic meters] daily, or an amount equivalent to about 17 Legislative Buildings," the report warned.

The issues raised by the E.R.C.B. and the government committee were and remain priorities of institutions that Yildirim had a prominent role in leading over his four decades in the industry: the Alberta Chamber of Resources, its national oil sands task force that inspired the 1990s federal-provincial policy agreement which helped light the fire under current development, and C.O.N.R.A.D., the Canadian Oilsands Network for Research And Development. "Companies are doing their best to make improvements," he said. "All this dirty-oil noise is really unfair."

*Our thanks to Gordon and to Oilsands Review for his article.*