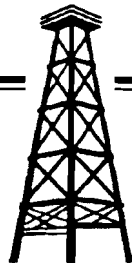


Midday



PETROLEUM HISTORY SOCIETY

ARCHIVES

Newsletter of the Petroleum History Society

May, 1990; Volume V, Number 2

The Leading Edge

At our luncheon meeting on January 31, 1990, The Petroleum History Society was privileged to have Earl Miller present an account of the interesting career of Dr. John Campbell Sproule. Mr. Miller knew Dr. Sproule from 1958 through his role as auditor for Sproule Associates. In 1963, Mr. Miller became the Treasurer of the firm, a position he still holds today.

Mr. Miller entitled his talk *The Leading Edge* because Dr. Sproule was on the leading edge throughout his career. Following an education in geology, culminating with a Ph.D. from the University of Toronto in 1935, Cam Sproule worked for the Geological Survey of Canada and then joined Imperial Oil in 1939. In 1941, Cam was placed in charge of Imperial's new exploration program in southern Saskatchewan. Starting from scratch, as no drilling had been done, Cam clearly established the oil bearing potential of the Mississippian formation and his theories were finally confirmed in 1951 with discoveries in Manitoba, and later at Midale, Steelman and Weyburn in Saskatchewan. In 1945, Cam was stationed in Calgary head-

(Cont'd, p. 2)

Tar on His Boots

Dr. Gordon Hodgson addressed the Petroleum History Society's luncheon meeting on November 29, 1989, providing an account of the career of Dr. Karl Clark, pioneer oil sands scientist. Dr. Hodgson first met Dr. Clark in 1944, when he took a summer job at the Research Council of Alberta under Dr. Clark's direction. Recently, Dr. Hodgson assisted author Mary Clark Sheppard to edit her book about her father - *Oil Sands Scientist The Letters of Karl A. Clark, 1920-1949*.

Dr. Karl A. Clark was born in Ontario in 1886 and received his Ph. D. in Chemistry from the University of Michigan in 1915. When his application for war service was turned down because of his glasses, Dr. Clark took a job with the Geological Survey of Canada in Ottawa. He worked in the road material laboratory, classifying soils of central Canada used in road building, and designed their new laboratory. He was asked by his supervisor to evaluate an unfinished report on the oil sands by engineer Sidney C. Ells, who was working for the federal government's Department of Mines before he went to war. This was

(Cont'd, p. 3)

Luncheon Presentation:

Time: 12 noon
Date: Wednesday, May 30
Place: Palliser Hotel
Cost: \$16 for members;
\$20 for non-members
RSVP: Rhonda Boorman,
269-6721 by noon, May 29

"The Edmonton Outdoor Oilfield Equipment Museum"

by Stan Kondratiuk

A slide presentation on the 132 years of petroleum history represented by the museum. The speaker is founding chairman of the museum, a veteran oilman and director and past president of the Oilfield Technical Society.

ing up Imperial's subsurface group on the program which eventually led to the Leduc discovery. In 1946, Cam was transferred to Imperial's foreign subsidiary - International Petroleum - and moved to South America in 1947 where he helped increase International's production materially. Cam returned to Toronto in 1950 but when International was sold to Standard Oil of New Jersey, he decided to cast his future with the industry in Canada. He opened his consulting firm **Sproule Associates** in Calgary in 1951.

Cam had faith that Canada's future would be good. He would point out the continuity of the Western Sedimentary Basin from the Gulf of Mexico up through the western states and provinces, to the McKenzie River, the Alaskan North Slope and the Arctic Islands. He repeatedly stated that the drilling successes in the U.S.A. would be followed up throughout the Basin in Canada. Following his words with action, Sproule field parties worked their way north through Alberta and the McKenzie Valley during the 1950's. Over the years, discoveries followed the route taken by those field parties.

Expeditions to the Arctic began in 1958 and Sproule subsequently negotiated with the federal government to introduce an exploratory permit system. There was a rush of applicants for the first permits in June 1960, which covered 50 000 acres each and required expenditures of \$2.60 per acre over a 12 year period. Through the early 1960's, Sproule mounted two to four Arctic field parties per year but could not obtain sufficient clients to cover the costs. Over a five year period, Sproule's costs exceeded revenues by an estimated \$1 million. The staff in the regular consulting business at Sproule toiled long and hard to offset the Arctic losses.

Not much work was being done on these Arctic permits. By the end of 1965, less than \$8 million had been spent by industry in total and \$3 million of that was shot on three rank wildcats wells. It became apparent to Sproule that a large joint operation - of oil and mining companies and the government - was the only way to achieve his vision for the high Arctic. Thus the concept of Panarctic was born. Eric Connelly was enlisted to assist with financing and corporate structure. The initial plan was to raise \$20 million from industry and \$10 million from the federal government, but no more than \$5 million from industry ever appeared to be firm at one time. Dr. Gordon Jones was assigned the task of negotiating farm-ins from the permit holders, but they proved to be difficult to negotiate with for this high risk area. Meanwhile Cam continued his effort with Ottawa and Arctic permits, pending the government's decision on participation in Panarctic.

Finally the government committed to an investment of \$9 million for a 45% equity, providing industry invested \$11 million. Sproule's intrepid band set forth to raise that last \$4 to \$5 million required. Meanwhile John Taylor, representing a \$3 million investment from Canadian Pacific Oil & Gas and Cominco, combined forces with Jack Gallagher, whose company - Dome - was a tenta-

Archives

ive investor, to assume a dominant and controlling position in Panarctic. Taylor negotiated with Ottawa offering to underwrite any shortfall in the industry investment if they would support Cam's removal from authority in the company.

Sproule was offered \$350 000 for his extensive Arctic work and a small net profits interest which he shared with Connelly, Jones and staff. Cam knew this interest was something to put away for his grandchildren, as it will only pay after production revenues exceed all Panarctic expenditures. However, Cam accepted the conditions rather than jeopardize his Arctic dream and continued to expound the merits of Panarctic and the future of the North. Panarctic was incorporated in 1967.

Cam Sproule also contributed unsparingly to the many technical and professional groups to which he belonged. He served terms as President of the C.I.M.M., the Association of Professional Engineers of Alberta, and the American Association of Petroleum Geologists - the first Canadian-born member to be so honored. He received many awards for his contributions to Canada and the professions of engineering, geology and geophysics, and was a fellow of the royal Society of Canada, the Geological Society of America and the Geological Association of Canada. His consulting professionalism and worldwide reputation which he established. Cam passed away in 1970, while in Jasper to present a paper on the geology of the Canadian Arctic to the Western Conference of Engineers.

And what of Panarctic? After 125 wells, of which 28 were capable of production, the discovery of two huge gas fields and modest oil reserves, today's logistics and prices still leave these Arctic reservoirs out on the edge....a sleeping giant waiting to be reawakened by a man with the vision and determination of John Campbell Sproule.

Panarctic incorporated May 27/66 by Fed.

The Publisher

Archives is published periodically by the Petroleum History Society, 3800, 150 6th Ave. S.W., Calgary, T2P 3Y7; (403) 269-6721. Editor: Peter McKenzie-Brown.

Submissions on historical topics related to Canada's petroleum industry are welcome. For information on membership or society activities, contact society president W.R.S. McLellan (403) 290-2840.

firm, Sproule Associates, con...
to merit the stature,

Letters
Present
from
Brian
Jones
June 19/68

succeeded in achieving a moratorium on work commitments on the

Drilling Don'ts

The following "don'ts" for cable tool drilling were taken from a book, copyrighted in 1914, called *Oil Prospecting, Drilling and Extraction*, by F.J.S. Sur, E.M., Petroleum Geologist, Calgary, Canada. If you want to read the rest of the book, it is available in the Archives of the Glenbow Museum.

Don't drill with dull tools.

Don't use corroded casing.

Don't use under-reamers any more than is absolutely necessary - better to drill a larger hole, if possible.

Don't use a hemp or manila cable for deep drilling, as it stretches too much. Wire is much more satisfactory after the first few hundred feet.

Don't let your tools get too far ahead of your casing.

The top of the tools should not be permitted to get below the bottom of the casing. Keep your casing as close to the bottom of the hole as possible without its being so close that the shoe will be broken with the tools. Wells drilled where the formation has series of soft sand be-

tween harder strata of rock are subject to caves. If the casing is not kept as close to the drilling tools as possible, trouble is sure to occur. Soft formations cave in on the bailer or other tools when not cased off.

In anticlinal and synclinal structures the location of the well is the all-important point to be considered.

Don't drill in a syncline unless you want salt or sulphurous water.

Don't drill for oil on the apex or crest of a sharp anticline.

Don't drill for gas on the limbs or flanks of an anticline if you want maximum gas production.

Don't drill for anything in horizontal strata.

Don't drill where the oil occurs too deep for commercial production.

Don't drill too close to the outcrop of the oil sand, or you will find out that the oil is inspissated and only residue remains.

Don't drill any more when you get hot water from the drill hole at depth. This is a very bad indication for oil.

New History Society Members

Institutional

Pan-Alberta Gas Ltd.
The Petrolia Discovery

Individual

Albert Baines
Antony Edgington

Colin Havers
Fred Hildenbrand
Barbara Howes
John Maughan
Darlene Rogers
Vicky Williams

Recent Acquisitions at the Glenbow

1. Canadian Association of Petroleum Landmen. Records, 1948-1987. 2.75 meters.
2. Canadian Petroleum Association. Additional records, 1977. 2 meters.
3. James Francis Melville Moodie (1878-1943). Additional papers, 1900s-1940s. 2 meters.

Frank Moodie was actively involved in the promotion of exploration companies in the Coultts-Sweetgrass and Turner Valley fields of southern Alberta.

4. Lorraine Johnson, collector. Views of Dingman (Calgary Petroleum Products) wells, Turner Valley, c. 1914-1916.

Presumed to be photos from a Dingman family collection. Anyone knowing of Dingman family descendents please call Andrea Garnier at Glenbow Archives, (403) 264-8300.

5. Senator Harry Hays (1909-1982). Business papers, 1913-1986. 11 meters.

Harry Hays was a director of Home Oil in the 1970s and his papers contain files relating to his activities with this company.

6. Charles Dunkley (1920-). Business papers, 1960s-1980s. 2 meters.

Charles Dunkley was a senior official with Dome Petroleum.

Clark's first involvement with the oil sands and, as his review was somewhat critical, led to a career-long enmity between the two men.

After the end of World War I, Dr. Clark moved to Edmonton, in 1919, to become the first employee of the newly created Research Council at the University of Alberta and undertake studies on the oil sands. He was inspired by the concept of building rainproof prairie roads, where the clay in the soil made it unsuitable for permanent road building. Clark thought that a road could be plowed, covered with clay, sprayed with oil to waterproof the clay and packed down. Others thought that the Athabasca tar sands would be ideal for building pavement roads and it was Clark's job to reconcile the two ideas. The use of tar sands posed two difficulties. It was not practical to transport a substance that was 85% sand and the quality of the tar sands varied from site to site in the deposit. It would be much easier to separate out the 15% natural asphalt, and so began Dr. Clark's extraction research.

Dr. Clark's first pilot plant in the University Power Plant worked quite well at extracting oil from 100 pound batches of oil sands. A larger plant was needed to scale-up the process, so the Dunvegan Plant was built at the railway yard where the trains arrived from Fort McMurray. This plant did not work at all well. It turned out that the more-spacious premises were at fault. In the Power Plant the feed was brought in at ground level and elevated, whereas at Dunvegan the feed was brought in high in the building. The method of elevating the feed from ground level proved to be the critical key in the process and when the Dunvegan Plant was so modified, it worked. In 1929 the Clearwater River Plant was built in Fort McMurray and it didn't work well either, producing much lower yields. It was eventually determined that the plant was built at a site of groundwater discharge and the salts, calcium and sulphates contaminated the plant's water supply, lowering the pH and spoiling the efficacy of the process. The Clearwater

River Plant was abandoned when the Research Council lost its funding, after the Stock Market crash and the ensuing hard times. However, both of these site-specific problems proved fortuitous in isolating conditions that facilitated the extraction process.

Between 1920 and 1935 Dr. Clark was the only scientist conducting research on the oil sands and he refined the hot water separation method of obtaining production from the Athabasca oil sands, which is still used today. He determined that each sand particle was surrounded with water and the oil was trapped in the interstices. His extraction process was to add hot water to enlarge the interstices and allow the sand to settle, froth the oil/water mixture so it would float over the sand and then separate the oil from the water. When the Research Council lost its funding, Dr. Clark stayed on with the University, often working on oil sands projects, until the mid 1930's. Then, through his lifelong friend and engineering assistant, Sid Blair, Dr. Clark worked in Trinidad consulting on heavy oil fields.

The first large plant using Dr. Clark's process was located at Bitumount. Originally built in the 1920's by entrepreneur, R. C. Fitzsimmons, the demonstration plant was taken over by the Alberta government in 1948 to investigate Alberta Research Council extraction methods with large scale equipment. By 1949, the plant was processing 450 tonnes of oil sand a day. However it was closed shortly thereafter, as the government was not prepared to launch a commercial venture. The data from the experiments were used as the basis for a major study of the viability of a commercial production.

During his own interesting career, Dr. Hodgson spent 23 years with the Petroleum Division of the Alberta Research Council and has worked as a resource scientist, pipeline engineer, geochemist, space scientist for NASA, environmentalist, engineering lecturer and editor of Arctic. The Petroleum History Society is grateful to Dr. Hodgson for sharing with us this chapter of Alberta's petroleum history.

Canada's oil history offers lessons

By Frank Dabbs

If Canadian oil has an anniversary date, it is certainly Feb. 13, the day in 1947 when Imperial Oil brought the Leduc No. 1 discovery into production.

Sentiment and a paucity of historical research has distorted the Leduc story and elevated it to legendary status, at the expense of the contribution made to Canadian exploration by other companies and events.

This takes nothing away from the magnitude of Leduc - which was drilled between Nov. 20, 1946 and Feb. 5, 1947. It was one of those moments in time when history changed.

It had an instant impact on the international oil community and it drew major league investment into an exploration backwater.

The basics of this story are deeply ingrained in the Canadian business psyche. It bears retelling this year because so many crucial oil projects - Hibernia, the Arctic Islands, the Beaufort Sea, the OSLO oil sands project - face, in 1990, the same question on their fate that faced Imperial Oil at the end of the Second World War, when it looked at Western Canada.

The decision makers today need that same visceral vision of future possibilities that, when all the sober, realistic data were in, tipped the balance at Imperial in favor of going ahead with one last shot at the brass ring.

On the hard, cold evidence, Imperial and its parent Standard Oil, had better places in the world to spend their money than in central Alberta in the years between 1945 and 1947.

It was instinct more than sensibility that brought the company to that bitter, grey afternoon in February.

As recorded by petroleum journalist Carl O. Nickle, it was a long, cold day for the senior Alberta government and Imperial officials who gathered at the wellsite, a 30-minute drive from downtown Edmonton.

Bringing Leduc on production was a public relations event - Imperial had known for weeks what had been found, and the rumor mills had been grinding for days.

But that day saw a frustrating few hours for the drilling crew. Leduc No. 1 was no gusher. It had to be "swabbed in," a process best compared to sucking on a straw.

For a time, things did not go according to plan. But at 4 p.m. the well whooshed once, paused, whooshed again. The oil surged through a pipe into the sump and was flared with great, black smoke rings that quickly grew to a pillar 30 metres high.

Nickle recalls that he put his hand on the pipe that ran from the well head to the sump and felt the oil surging along. It was an incredible moment; he knew he had his hand on the pulse of oil history.

In an Energy Resources Conservation Board record of the event, Premier E.C. Manning, also present that afternoon, commented: "It wasn't until Leduc in 1947 - and Redwater (another similar oil discovery) the next year - that there was any real recognition of the size of the province's oil and gas resources.

"Before that time, some of the companies had spent a lot of money on geophysical exploratory work and there had been a lot of optimistic talk. But nothing tangible seemed to be coming of all the work and task."

Remembering that the province was "for all practical purposes bankrupt in the mid-1930s," Manning says that the government was always "very hopeful that large petroleum resources" would be found.

"Our hope was always tempered with a natural caution, for we had nothing to base our hopes on than the conviction of a few oil industry optimists that the oil was there, if they could just find it."

It is part of Imperial's corporate legend that Leduc was the company's last look at the Western Canadian Basin, after almost 30 years of trying to find an Alberta follow-up to the company's August, 1920, discovery of light crude oil at Norman Wells on the Mackenzie River.

The Norman Wells field produced 3,000 barrels of crude a day during the Second World War and the production was shipped to the Alaska Highway at Whitehorse through the hastily-laid Canol pipeline.

Canol was literally thrown down on the surface of the ground. The imperative in 1942 when it was constructed was to get oil to the U.S. Army, which was preparing to defend Alaska from what was considered to be an almost-certain Japanese invasion.

The war also brought a rush of exploration in Alberta to find a second Turner Valley, the only major light oil field in Western Canada.

In 1945 there was nothing to show for any of the effort. Norman Wells had been purely a military venture that made no peacetime economic sense.

From Imperial's point of view, the 58 years of exploration since pioneering wildcatters drilled the first well in Western Canada at Vermillion River, Man. in 1887, was a bust.

The total investment of all companies for nearly six decades was \$200 million - 1,000 wells had been drilled - and all there was to show for it was reserves of 250 million barrels of oil and 5.5 trillion cubic feet of gas in a scattering of minor-league fields.

Most of the oil was heavy. The gas was useful only as a local domestic fuel in Calgary and Medicine Hat and the only good field, at Turner Valley, was well on the way to being depleted. Imperial was importing costly Wyoming fuel to feed the West's only significant refinery at Regina.

Imperial was actually looking at the possibility of the liquefaction of synthetic crude as the only possible return it might get from its huge investment in 150 wildcat wells across the west. Research had begun on an adaptation of the Fischer-Tropsch process for producing liquid oil from coal.

It is also part of the legend that, when drilling was under way on Leduc No. 1 in January, Imperial's charismatic geologist, Dr. Ted Link, kept the bit turning for several days after the company ordered the well abandoned, until Test No. 18 drew Devonian oil out of a Nisku limestone reef in a 16-foot interval between 5,023 and 5,039 feet.

It is said that Link pulled off the ruse with relatively simple tactics such as not answering his telephone or opening his mail.

Perhaps that part of the story is apocryphal, but it illustrates how close the best oil finders in the world at the time came to just walking away. In a very real sense, oil and gas exploration is a game of inches.

But it is also true that had Imperial thrown in the towel, someone else would have cracked the problem of Leduc. There were several companies close to a breakthrough concept of deep drilling in central Alberta.

But oil is also a game for winners; in the end Imperial made the right decisions at the right time. And to the victor go the spoils.

No doubt you will have to take my word for it that the oil industry, for all its sentimentality, has a poor sense of its own history.

Yet the best way of seeing the future is often by knowing the past. It is only in knowing where we are coming from that we can know in what direction we should go.

The important oil exploration and development projects of 1990 are beset by indecision. The past teaches that, in situations like this, what makes winners isn't having cut and dried reassurance, what makes winners is vision.

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President's Report

Following is the president's report to the annual meeting of the Petroleum History Society

The final year of the 80s was a successful one for the Petroleum History Society, as we continue to grow and promote activities that increase awareness in the history of Canada's petroleum industry.

Membership in the Society has remained relatively constant over the past year, with the number of new members balancing the number of members who have let their memberships lapse. Two of our corporate members were lost through mergers with companies who were also members. However, five new companies joined our ranks and the number of Sustaining Institutional Members has doubled. There has also been a 14 per cent increase in the number of Sustaining Individual Members. This indicates that our members, both institutional and individual, are becoming increasingly supportive of the Society's objectives and programs.

During the year, the noon luncheon guest speaker program continues to be well attended and has proven to be useful in introducing new people to our Society. Over 300 copies of the Society newsletter, Archives, are distributed to the membership, the Canadian Petroleum Association board, and the media. As well, the Society is progressing with five significant projects:

- 1) the Oral History Project,
- 2) the Turner Valley Gas Plant Interpretive Centre,
- 3) a series of commemorative lapel pins,
- 4) the CKUA/PHS radio programming project, and
- 5) the establishment of publication guidelines.

Progress on the Society's Oral History Project is slow. However, during the past year we have, together with the Canadian Petroleum Association, formed a new association whose sole purpose is to "preserve the oral and documentary history of the Canadian Oil and Gas industry and to make available to the public, evidence of that history". The new group is called The Petroleum Historical Records Project Society and was formed to enable the project to obtain a Revenue Canada charitable agency number to assist in fundraising.

Betty Daly has worked very hard on this project and I wish to thank her for her efforts on our behalf. She has now handed the task of getting this valuable project off the ground to Tom MacKay. Hopefully we can get fundraising underway this year. The President of the petroleum History Society has been appointed by the Alberta Minister of culture and Multiculturalism to the Turner Valley Gas Plant Advisory board. The Alberta Government has acquired the old, decommissioned Western Decalta gas plant at Turner Valley and is intending to commence immediately to prepare a development/preservation strategy for the site. This project, also known as the Hell's Half Acre Interpretive Centre, has been championed by the Turner Valley oilfield Society and the towns of Turner Valley and Black Diamond. Alberta Culture and Multiculturalism considers this project to be of the same significance and importance as the interpretive centre at Head-smashed-In Buffalo Jump, the Remington- Alberta Carriage Centre, and the Ukrainian Cultural Heritage village.

To date, one organizational meeting of the Advisory Board has been held. Mid-April the Advisory Board will meet to define its Terms of Reference.

Together with INFO-TECH, a Maclean Hunter affiliate, the Society has developed a limited edition lapel pin series commemorating six significant events in the first 100 years of the petroleum industry in Canada. The six pins are of antiqued gold colour with an accent colour border, beautifully displayed in a red velvet carrying case. A pamphlet highlighting the significance of the events commemorated is enclosed. The sets sell for \$120 each. The Society will apply revenue generated from the sale of these pin sets to our Oral History Project.

The Petroleum History Society, together with the ACCESS NETWORK (CKUA Radio in Calgary) will produce two series of radio programmes as well as educational materials for use in public libraries and schools. The project will entail the interviewing of numerous oil industry pioneers and the use of selected segments of the oral history tapes stored in the Glenbow Archives, to produce a series of 26 half-hour radio episodes for broadcast in 1990. Subsequently, the research and accumulated interviews for this first series of programmes will be used to create a series of 13 "docudramas" of selected historical events. This shorter series will be broadcast in 1991, using actors, sound effects and innovative production techniques. In the fall of 1991, materials from the two radio series will be

used to develop audio materials, teaching aids, etc. for distribution to provincial schools and public libraries.

Funding for the project will be obtained from industry and government sources by Access Network, with a modest contribution by the Petroleum History Society. Your Society, as underwriter of the project, will primarily provide advice and background material on the people and events involved. Copies of all taped interviews and programmes will be donated to the Glenbow Archives.

The Publications Committee, under the able chairmanship of Doug Cass, is preparing policies and procedures for the Society to govern our publication of books and articles, and to provide guidelines under which the So-

ciety may assist independent authors, researchers and publishers. These guidelines are necessary particularly as the Society has been asked on a number of occasions to co-sponsor, underwrite or assist in financing books and other publications by both Society members and non-members. From the foregoing, it can be seen that the Petroleum History Society is quite active. All indications are that the Society will continue to grow both in activity and in membership, and that the coming year will be even more exciting and successful than the one just passed.

W.R.S. McLellan,
President.

*+ how they put
the fire out.*

Book Review

Tiny's Scribblers Enter the Mainstream of History

John Schmidt, *Growing Up in the Oil Patch* (Toronto: Natural Heritage Inc., 1989) 180 pages.

When he was a young journalist fresh from Ontario, John Schmidt had a chance meeting at Calgary's Elks Club with a man named Tiny Phillips. Eighty-five years old at the time, Phillips entrusted Schmidt with his scribblers - diaries about his lifetime working in the North American oil industry.

More than three decades later, Schmidt has returned Phillips' trust by turning those scribblers and a host of other sources into a tale about two unsung heroes from the yeasty, brawling early years of Canada's petroleum industry.

The tale is about Tiny Phillips and Frosty Martin, two American-born drillers whose fathers were active in the Pennsylvania oilfields in the 1860s and 1870s. These two men became best friends and working partners, and each spent a lifetime working the oil industry. Drilling took them to southern Ontario in 1904, where they met up with the legendary Eugene Coste. Coste later hired them to drill in Alberta, and in 1908 and 1909 they drilled the Old Glory discovery well (officially known as Bow Island #1) - the first major discovery in Alberta's earliest commercial gas venture.

Phillips' account of Old Glory includes new details. For example, the crew had accidentally set up the rig for the discovery well on Crown land rather than on CPR holdings. Against Coste's better judgement, the two men drilled there anyway. After the well came in, the railroad wangled a swap with the federal government for the quarter section of land.

From headquarters in Ontario, Coste telegraphed them in mid-January, 1909, to abandon the well. But the crew kept drilling, Coste's telegrams mysteriously getting lost between town and drill site. In mid-February, the well came in at an estimated 4.5 million cubic feet per day. (Later, Bow Island #4 came in at 29 million cubic feet per day; #6 came in at 42 million per day.)

After the crew had completed the #1 well, one of a group of visiting farmers put a match to a leaking valve to see what would happen. Not surprisingly, the gas caught fire. Other leaks also caught fire, gaskets burned and brass valves melted. Eventually, the wellhead tubing burst from the heat. It took nearly two weeks to bring the fire under control.

And on the story goes. Schmidt follows the careers of the two men to the ends of their lives. Frosty Martin became a highly successful businessman and a power to contend with in southern California. He died there in 1954, age 81.

Not so successful, Tiny Phillips nonetheless played pivotal roles in early developments in Alberta. And at the time of his death in Calgary in 1964, age 91, he was a well-respected industry elder.

Schmidt's writing is folksy, and often shows the need of a good editor. But he appears to have researched his book carefully. And his story gives a face to a period of history which we have mostly sketchy details about. As the men who created history in the pre-Leduc era die off, books like *Growing up in the Oil Patch* will become more and more a rarity. We should savour this one, because it's there.

*The Petroleum History Society gratefully
acknowledges financial support from the
following institutional members:*

Alberta Chamber of Resources
Alberta Natural Gas Company Ltd.

Alberta Patch Work
BP Canada Inc.

Canada Northwest Energy Limited
Canadian Oilfield Stimulation Services Ltd.

Canadian Western Natural Gas Company Limited
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and the Canadian Petroleum Association