The Imperial frontier

Searching for the unexplored promise

BY WYNE THOMAS

PHOTOGRAPHS BARRY DURSLEY

His colleagues will tell you that Al Hutchinson is one of the best mechanics in the oil business. The first time I met him, last summer, he was playing horseshoes while keeping a wary eye out for polar bears. That was on Brossard, a sliver of rock lying off the east coast of Baffin Island, which was serving as the site of an advance base for an exploration well that Esso Resources Canada (an Imperial Oil subsidiary) was drilling in the Davis Strait.

I ran across Hutchinson again a few months ago. This time he was repairing a diesel generator aboard a supply barge locked in the winter ice of the Beaufort Sea in the western Arctic, and he was still watching for polar bears. From the barge, helicopters were ferrying supplies to a drilling rig that had been erected on an artificial island 20 kilometres to the north. There, a 75-man crew was about to start drilling on Imperial’s 16th man-made island. On the mainland near Tuktoyaktuk, some 100 kilometres to the southeast, drilling at another well had been proceeding for two weeks. That morning on the supply barge had not been without its problems for Hutchinson. He had been forced to improvise a part for the broken-down generator, since the nearest replacement unit was in Edmonton, four hours flying time to the south. A journey that would have held up operations for a full day. It was bitterly cold and, at noon, the sun, edging over the southern horizon, scarcely provided enough light to work by. Still, said Hutchinson, things were “pretty routine.”

From the Atlantic Ocean to the Beaufort Sea and from the 48th parallel to the islands of the High Arctic, coping with the difficult, the unusual, and the unexpected has become the daily routine of the hundreds of men and women — geologists, geophysicists, drillers, engineers, seismic crew, landmen, and support staff — who find themselves in the front line of Imperial’s search for more oil and gas. It’s a quest that has taken the company’s exploration teams into every corner of Canada’s land mass and, more recently, over much of its seas as well.

It wasn’t, however, always the case. When Imperial was founded in London, Ont., in 1880, it was with the essential purpose of getting into the new but lucrative business of refining and marketing crude oil, although its directors had been prudent enough to include in the company’s letters patent their intention of “sinking and putting down salt and oil wells and otherwise developing salt and Petroleum Oil Lands…”

For the first 30 years of its existence Imperial was too busy refining and selling the crude it bought from others to worry about looking for any of its own. There was little inducement for it to do so. The limited quantities of oil that had been developed in southern Ontario were readily available from local producers, and the balance was imported from the United States. Nor did the directors of Standard Oil of New Jersey, with which Imperial had joined forces in 1899 after failing to raise additional funds in Canada or Britain, have much of an appetite for exploration. They were not impressed with Canada’s oil prospects.

Imperial’s first entry into oil exploration came, in a somewhat half-hearted fashion, in 1912 when the company, via its Calgary marketing manager, commissioned a study of reported oil seepages near Calgary. Nothing appears to have come of this one-man exploration effort. Enthusiasm for the oil potential of Alberta was briefly rekindled in 1914 following news of an oil strike in the Turner Valley, but a subsequent survey by two Standard Oil geologists imported for the occasion was discouraging. They concluded that “there is very little probability of an oil field being developed in this part of Alberta.”

It was not to the plains of western Canada but to the jungles of South America that Imperial first turned to find the oil it required in increasing quantities to feed the refineries the company was building to meet a booming demand for gasoline. In 1914 it incorporated a subsidiary company, International Petroleum, which bought a 347,000-acre estate in Peru. In the following 33 years International Petroleum drilled no fewer than 2,200 oil wells on this property and produced 290 million barrels of oil.

With Peruvian operations under way, International turned its attention to Colombia. In 1920, through a subsidiary, Tropical Oil, it acquired a 2,000-acre concession in that country, building (via yet another subsidiary) a 560-kilometre pipeline through the jungle to move oil to the port of Cartagena. By 1947 Imperial had produced more than 300 million barrels of oil from Colombia.

Imperial’s South American venture constituted a major milestone in the
company's history. It generated badly needed capital to see Imperial through some lean years in Canada. It provided an assured and steady flow of crude for its refineries, and it gave many employees some valuable exploration and production experience that was to stand them in good stead back at home.

It also, of course, represented adventure for Canadians on their first overseas posting, and company publications of the early 1920s are full of their wide-eyed discoveries (A Trip to Colombia; Romance at Talara; A Visitor's Impression). Colombia could certainly not be confused with Calgary: "the derricks of the drillers reared amidst the mighty monarchs of the jungle in clearings painfully hewn out from amongst the dense growth of creepers, exotic blooms, and bloated vegetation which characterize those soggy swamps." Among the expatriate Canadians to find themselves in this uncustomed environment was a young exploration geophysicist, Jack Armstrong. He returned to Canada in 1949 to resume an Imperial career that today sees him as chairman and chief executive officer.

In Canada, Imperial's early search for oil proved less successful. But at least, under the presidency of Walter Teagle, who strongly believed that oil would be found in the West, the search was under way by the end of World War I. Imperial's production and exploration department had been established in 1914, and three years later a subsidiary, the Northwest Company, had been formed for the sole purpose of looking for oil. By 1918 the company had no less than 14 geological parties in the field and had embarked on an ambitious exploration program, ranging from the American border to the Arctic.

The following year came success — at Norman Wells in the Northwest Territories. It was the first commercially important field to be discovered in western Canada and Canada's first major oil find since the discovery of Oil Springs in southern Ontario 60 years earlier. During World War II, under an agreement signed between the Canadian and U.S. governments to assure oil supplies for Alaska, Imperial increased production at Norman Wells, and by the end of 1943 oil was being pumped across the mountains via a 960-kilometre pipeline to a refinery at Whitehorse.

Recent exploration work by Imperial at Norman Wells has confirmed the existence of major additional reserves in the field, and Norman Wells, one of Canada's earliest discovered sources of oil, could provide this country with further much-needed supplies.

To geologists, the Norman Wells discovery was of particular importance. It demonstrated for the first time the oil-bearing potential of the Paleozoic rocks that underlay more than a million-and-a-quarter square kilometres of western Canada. More than a quarter of a century was to pass before its significance was to be properly realized.

But in those early years successes were few and far between. In 1922, in the Pincher Creek area of Alberta, Imperial drilled the deepest well in Canada, but it was dry. Company management, already contemplating getting out of the exploration business, was unimpressed. In April of that year the Imperial Oil Review noted sourly that the production office in Edmonton "has so far produced nothing but holes in the ground and the bank account." However, the article concluded, with only the faintest suggestion of forced optimism: "Some day [oil] will be found. Money, science, experience, and every appliance known to petrology is being used in the search. And in the finish — such is the hazard of the game — it may be discovered by a rancher seeking water for his stock."

Then, just in the nick of time, another success — and a major one. In 1921 Imperial had bought control of Calgary Petroleum Products, which had made a small oil discovery in the Turner Valley near Calgary in 1914, and reorganized it as Royalite Oil. In 1924 Royalite No. 4 well hit deep gas in Turner Valley. Astutely named the Wonder Well, within five years it had produced close to a million barrels of naptha, a light, high-grade oil, and immense quantities of natural gas. Ten years later it was dead, but a grateful oil industry erected a plaque to its memory.

For the next several years Imperial, preoccupied with its production facilities in the Turner Valley, engaged in relatively little exploration. Such exploring as was done found nothing. With the coming of World War II the pace of exploration quickened but to no avail. Between 1940 and the beginning of 1947 Imperial explorers had surveyed 20 million acres in Alberta and Saskatchewan. In 1943 they had discovered the first pentad deposits to be found in Saskatchewan, but even the new seismic equipment that was coming into general use failed to find any oil.

Gas was another story. Numerous gas discoveries had been made in Alberta to the point where supply far exceeded demand. For all practical purposes it was worthless. By 1946 Imperial had virtually decided that finding oil in western Canada was a lost cause and was giving serious consideration to building a plant to synthesize oil products from natural gas, a process that had been used by the Germans during the war. Imperial's discovery of the Leduc field near Edmonton in February 1947, of course, changed those plans as it was to change the history of the oil industry in Canada. Leduc No. 1 was the first in a series of "last-chance" holes reluctantly agreed to by Imperial's directors before admitting defeat. Former Imperial chairman and president Bill Twatts remembers the meeting. "I recall," he said recently, "there was a major argument on the Imperial board, ending in a reluctant agreement to proceed with the last rather than immediately developing final design on a gas-synthesis plant . . . . The word was that after $23 million, this is final!"

Leduc No. 1 came in on a bitter February day in 1947 — Canada's first major oil find in 11 years. It was, indeed, a winner, producing more than 300,000 barrels of oil before being abandoned in 1974.

But it was the Leduc No. 2 well, relegated to second place in the Leduc saga, that was of real significance. For it was Leduc No. 2 that penetrated to the Devonian reef formation. It was the first confirmation of the fact that Devonian reefs existed in western Canada (in fact, this type of structure had been encountered but not recognized at Norman Wells) and the first realization of their oil-bearing potential in this country. Douglas Layer, a Leduc historian who was a well-site geologist at the field, has noted: "It was several months before everyone involved at Imperial believed it was a reef structure and even longer before some of our competitors began to understand." Even so the Canadian oil boom was under way, and so was the mythology and legend of Leduc.

Mythology and legend notwithstanding, Leduc was the turning point. In his history of the Alberta oil industry, Dynamic Decade, Eric Harmon wrote: "The importance of the Leduc discovery can hardly be exaggerated . . . . It
is not every day that a field with more than 200 million barrels of recoverable crude oil is discovered: indeed, such discoveries have become a rarity in the United States. . . . During the years following 1947 many Devonian reef limestone fields, so difficult to discover because they give practically no surface clues to indicate their existence, have been discovered . . .

Leduc, with the head start it gave Imperial geologists in the identification of reef structures, was to trigger a succession of exploration successes. In 1948 came the 800-million-barrel Redwater field, 64 kilometres northeast of Edmonton. A Devonian reef structure, much of it lay under leases that had been dropped by another oil company two years before. In 1949 another Devonian discovery: the 208-

million-barrel Golden Spike field 24 kilometres southwest of Edmonton. Other discoveries of a less spectacular nature continued to be made as Imperial extended its operations throughout the prairie provinces and British Columbia during the 1950s and 1960s. With the early pioneering work over and western Canada firmly estab-

lished as a major oil-producing area, competition from the rest of the indus-
iy continued to mount and Imperial had no monopoly on success. How-

ever, Judy Creek was a major success of the mid-1960s, and by 1970, a year that saw the Boundary Lake field in northwestern Alberta added to the company's reserves, dry holes were becoming the exception rather than the rule. Since 1971 Imperial had drilled 4,690 wells.

In eastern Canada, Imperial had been exploring with equal enthusiasm but conspicuously less success. On its home ground in southwestern Ontario, the company maintained a modest but successful oil-and-gas exploration program for 20 years after the end of World War II. If successes were small by western standards so were the risks. It was unexciting but profitable.

Exploration activities in Quebec's Gaspé and St. Lawrence lowland regions during the 1960s and 1970s were discouraging. Five holes were also drilled on Anticosti Island — all dry. It was the same story in Prince Edward Island, New Brunswick, and Nova Scotia. By 1965 Imperial had abandoned mainland exploration in Quebec and the Maritimes.

By the early 1960s Imperial again found itself looking to the Arctic, as it had in its early days of exploration: it was becoming increasingly apparent that the oil potential of southern Alberta, promising though it was, was unlikely to meet all of Canada's future oil and gas requirements. Indeed, the march northward had already started with extensive exploration in the area of Great Slave Lake in the Northwest Territories. Beyond lay the unexplored promise of the Mackenzie Delta and the Arctic Islands.

Imperial was under no illusions about the size of the job it would be tackling: after all, it had been operating in the Arctic for many years. Once again it had found itself in a pioneer-
ing role: devising new drilling methods to minimize damage to the delicate Arctic environment, new techniques of island construction in the Beaufort Sea, new ways of doing a hundred-and-one different tasks that would present no problems in southern Alberta.

To date results have been a frustrat-
ing mixture of success and disappoint-
ment. Considerable reserves of natural gas have been found — Imperial's Taglu pool is among Canada's biggest — and oil in quantities that in more accessible areas would be commercial. It means can be found of moving these reserves to market economically — a problem that is receiving considerable attention — these finds hold high promise. And, in exploration terms, the hydrocarbon potential of the Arctic has scarcely been scratched.

In the meantime, Imperial has been tackling yet another challenge: explor-
ing the deepwater Atlantic. While the company's offshore exploration efforts in the shallow water off Newfoundland and Nova Scotia in the 1960s provided disappointing results, its deepwater acreage off Newfoundland and Labra-
dor does hold promise.

Esso Resources' first two deep Atlantic wells, drilled last year from a semi-submersible drilling rig, were dry, but the geological information they yielded is currently being evaluated. And two dry holes, as anyone asso-
ciated with the Leduc discovery will tell you, don't mean a thing.

Imperial's activities in the Arctic and in the deepwater Atlantic typify another kind of exploration in which the company finds itself increasingly engaged: exploration of the scientific and technological as well as the physi-
cal frontiers. Undersea exploration, for example, demands the development of new techniques in well-drilling.

Similarly, the development of Alberta's oil sands, in which Imperial is playing a prominent role, calls for the exploration of hitherto unknown methods of oil production. At Cold Lake, near Edmonton, where Esso Resources is planning to build an oil-sands plant, the company has spent 16 years developing a system for producing oil by a steam-injection method. This is exploration of a differ-
ent but high order.

Are there any more challenges left for a company that has explored in every province of Canada, that has spent considerably more than half a century and drilled more than 5,000 wells in figuring out the country's geology? Are there really any major discoveries to be made, any elephants still lurking out there in the sedimen-
tary underbrush?

"The answer to all these questions," says Dr. Cal Evans, Esso Resources' vice-president and general manager of exploration, "is an emphatic 'Yes.'" Take Alberta, for example: Imperial has been exploring here for 70 years, and we're learning more about its geology every day. We believe that there's an enormous amount of gas still to be discovered. New oil addi-
tions will probably come in smaller packages, but there's lots still to be found. The industry knows scarcely anything about the geology of the eastern offshore and a limited amount about the Arctic, both prime pros-
pects. And the oil sands have their own challenges. The secret of success in the Cold Lake project is going to lie in an effective combination of good geology and good engineering.

"And who knows where the next challenge is going to come from? At a conservative estimate I would say that we certainly have enough to keep us on our toes for many years to come."

Imperial's own plans lend corrobor-
ation to Dr. Evans' forecast. If condi-
tions are right, the company proposes to spend $15 billion during the next 10 years on energy-related projects, much of it on exploration. And even that kind of massive investment will only represent a modest start on developing Canada's remaining oil and gas potential.

The Canadian Petroleum Association has estimated that this country's oil industry has the physical capacity and the resource opportunities to spend up to $200 billion during the next 10 years on the exploration, development, and production of hydrocarbon energy. Who knows how many more Leducks would result from a new era of exploration pursued on such a scale? ☞
OLD FRIENDS

We're at home in each other's world

BY ROBERT THOMAS ALLEN

I read the other day that the very latest thing in therapy is having friends, and it startled me thinking of some old friends I run into three or four times a year — a former workmate or someone I went to school with, leaving a restaurant or standing on a curb or coming around a corner outside a tobacco store, perhaps on a sunny, mild winter noon hour, beneath dripping icicles — and of the therapeutic effect of seeing someone who rather approves of you the way you are, missing teeth, wrinkles, abandoned ambitions, even peculiar quirks like, say, the style of your hat — a model you haven't changed since 1929. I run into one man on Dundas Street in Toronto — often on a socked-in, shifty, late afternoon — with whom I took a commercial-art course 50 years ago, and I just need to see him and I'm waited back to the days when the world smelled of linseed oil and tempera colors and hope and everything seemed possible. Often we don't speak when we meet. I just notice a faint ruffling of his features, like a breeze crossing a pond. We stand sideways to one another looking across Dundas Street, juggling the change in our pockets. If we bump one another we don't apologize. It's as if we had just dreamed the past 50 years and had met on the front steps of Central Technical School on one of those June days when voices were drawly and you couldn't believe anyone expected you to do anything except feel what it was like to be alive. Then someone says, "Do you ever hear of Hilde?" referring to a quiet, congenial, golden-haired, freckled girl (she must be nearly 70 now) whom I still see peering over the top of a drawing board. I always part from him feeling more settled and adjusted and bemused by life and ready for another 50 years.

I can understand why modern psychiatry recommends having friends like this. One time he looked along the street through a faint mist and said, "You know, I'm a very wealthy man, now," a remark you could make only to an old friend or a psychiatrist without embellishment or explanation or apology. It wasn't a boast or a triumph. It was said the same way as, 50 years ago, he might have said, "I think I'll try to get a job on the lake boats this summer." It was somehow like reaching home base, taking a moment to look around amid life, dust, cherrys, and flying beer tins.

Other times I see a little guy I always liked, who has the habit of stamping his feet when he laughs, sitting over by the big windows in the corner of an eighth-floor cafeteria in late afternoon, silhouetted against the city skyline and some low, late-afternoon purple cloud, having a coffee. He stands up to make sure I see him and he orders another coffee and we sit there talking until the waitresses are turning the chairs upside down on the

ILLUSTRATIONS: ALAN PYN
honest. "Two things you can depend on when you go to lunch with Allen," a tall English friend of mine who, except when he's with me, never goes into the places where I am announced to his office staff a while ago as we left for lunch together. "The food will be cheap and the service good." Another very close friend I've known for a long time is on a diet regime that we had in my early twenties said to me once, "I had to make a hill near me. I was one for another for a couple of years. I was on a diet in our lives when we first became aware of the process of aging. You know, Allen, this is hard to believe, but you look even worse than I do." 

Some of the conversations I have with people I've known for a long time are more relaying than hot tubs or jogging. One time, a while ago, I was with a man I've known for a long time and was having a conversation. "I had to make a mountain near me. I was one for another for a couple of years. I was on a diet in our lives when we first became aware of the process of aging. You know, Allen, this is hard to believe, but you look even worse than I do."
On thinner slices of the national pie

BY DIAN COHEN

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job will not be created to build new facilities and, ultimately, because the new facilities won't exist in the future to expand production. In the short run the severs' defensive action aggravates unemployment; in the longer run it aggravates inflation.

Another example of destructive behavior in the face of rapidly rising prices concerns the corporation. When the stock market is performing badly companies have difficulty raising money for modernization or expansion by issuing new stock. When interest rates are as high as they are, companies are reluctant to float new bond issues. At the same time company profits -- on which taxes are paid -- seem abnormally high because the dollar value of inventories is rising. So many corporations are caught in a financial squeeze: on one side, taxes on illusory profits are being forwarded to the government and, on the other side, capital for expansion is difficult to attract. The company officers would seem to be thinking of what they decided not to expand, but simply to raise prices as much as they can.

Wage earners also make decisions that may protect their individual purchasing power, but which may be detrimental to them in the long run. In the early 1970s many wage earners faced with smaller income raises than they expected, began demanding higher settlements to compensate them not only for what they expected to get in the past, but for what they anticipated they would receive in the future. Employers who refused faced strikes, which had the effect of reducing the productive capacity of the economy as a whole. Employers who paid the demands (chief among whom were government employees) tried as much as possible to pass on the additional costs, in the form either of higher prices or higher deficits. The result was the wage-price-wage-deficit spiral, which was interrupted only when controls were introduced late in 1975. Wage earners in Canada have accepted increases in the last two years that have only barely kept pace with the cost of living. But there is no guarantee that prices continue to rise, that this will remain the case.

Several economic problems are created when the national income pie doesn't grow fast enough to allow each member to get the share he thinks he deserves. The chief problem, which will plague succeeding generations unless it is solved, is this: so many claims are being made on the output of the society by so many Canadians that not enough money is being invested in basic industries to ensure the maintenance of our present standard of living. This problem is bound to be aggravated by the fact that our standard of living will not fall uniformly. It is not difficult to imagine the increasing animosity that is even today palpable between business and labor, unionized and nonunionized workers, politicians and the general public, and other groups, as each tries to maintain or increase its slice of a slow-growing pie.

A British-North American task force recently conducted a survey of investment projects in basic industries in the United Kingdom, the United States, and Canada. They chose "basic" industries -- such as steel, energy materials, chemicals, and forest products -- because without their continuous output at adequate volumes and reasonably stable prices, economic activity would slow.

What the task force discovered was that so many investment projects had been deferred or abandoned in all three countries that "there are likely to be shortages of a number of basic products in the 1980s." A project may not seem important now, during a period of slow economic growth, but there exists, nevertheless, a serious risk of eventual shortages that would severely disrupt economic development. This disruption comes, in the first instance, because potential construction jobs are not created, and later, when demand for basic products revives, because the inevitable shortages lead to sharply higher prices or lineups or rationing or all three.

The solution to the problem is obviously to stimulate investment in these basic industries. But the combination of the inappropriate demands on the output of society, the diversion of savings from productive to unproductive investments and the inability of corporate managers to justify the cost of new capital investment suggests that such stimulation will have to be part of a conscious and sustained effort to change our collective behavior.

The demise of the seven-month-old Conservative government was precipitated by a budget that proposed a period of restraint, hard work, and self-deprivation for Canadians. And, at the time of writing, many Canadian politicians from all political parties maintain that the 1980s will be painful.

Psychiatrist Vivian Rakoff, in the CBC program Master Alive, observed that what has never been acknowledged in North America is that the process of acquiring individual liberty is both good and bad. "The right to be different from what your father was, the concept of one man-one vote, the right to leave the Country and not accept your place in the world -- these are very good things. But in Europe, by the end of the 19th century, the pain of this ethos was making itself felt: people began to feel lonely. When you step out of history to make your own fate, you're alone.

"People no longer trust any of the perceived institutions. But unfortunately the one that was supposed to take the place of these institutions, namely the sense of self, isn't enough to sustain life. The consequence is a curious frivolity of belief systems. People are turning from the long-established churches and grabbing for substitutes.

Young people seem to be latching on to any system of belief, as long as it is a system -- and the simpler and more authoritarian, the better. There seems to be a yearning for some tyrant, some savior, because it's so hard to be alone." Canadians, as they enter the 1980s, seem stuck on a treadmill. Unemployment and inflation are high and rising. Economic growth is stagnating. The institutions created to solve economic problems have no proven solutions. Indeed, the public attitude toward economists and their self-esteem has never been lower. In the marketplace, as in other areas of their lives, many Canadians are looking out for No. 1.

It is not clear in these early months of the 1980s that the "me" generation has learned the lesson Henrik Ibsen taught so clearly in his 19th-century classic Peer Gynt. Peer Gynt decides he is going to be his own man and define himself only in his own terms. He leaves his village and travels the world, searching for himself. As an old and broken man he returns home. At the end of the play he walks along peeling an onion and thinking that he's gone through his life as though it were an onion, layer by layer, looking for the perfect essence of himself. But there is nothing in the middle of the onion. "Identity," as Rakoff says, "is not something you discover. You don't find yourself, you are yourself in everything you do." Canadians owe it to themselves to recognize how serious are the problems they face. We have a fantastic potential but, as New York Times columnist Eric Bentley has said, "not only are hope and intelligence necessary; nothing can be achieved unless they work hand in hand."

Canadians will have to work hand in hand if we are to make the transition to a healthier, more prosperous decade.

Canada's marathon
Taking the national dream in stride

BY DAN PROUDFOOT

Their goal, this fresh spring day, is to run the 122-kilometre (76 miles and 285 yards) Ottawa National Capital Marathon. They stand, almost 1,000 of them, milling shoulder-to-shoulder in the street behind the starting line at Carleton University, a panorama of red and yellow and blue shorts and shoes in constant motion, poised in the anticipation before the gun.

Go slowly, strangers are advising each other earnestly, or pay the price in the final four. Remember that it's not how you feel turning around at the halfway mark; everything is in finishing. They've trained 80 to 200 kilometres a week for the past three months or more, working their way beyond all ordinary definitions of fitness. Running a mile may be considered an achievement in today's
Drayton has bumbled almost three times as fast. Poor guy, he has no competition on this particular day, and he probably isn’t enjoying himself nearly as much as we are.

The Loneliness of the Long Distance Runner is a myth.

Most follow the recommendation of never running so quickly that conversation becomes impossible. Even the fastest runners, such as Drayton or Ottawa’s 1978 winner, Brian Maxwell, may chat briefly, though their competitiveness does tend to clip their conversations.

Yellowknife, a 39-year-old

Ottawa housewife, running with a YHMA group known as the Wolf Pack. She tells friends her husband has just had an operation, but she decided to come because running passes her mind at rest. The friends know what she means. They know that until she started running several years ago she was never able to sleep because of the nightmares of her childhood in Auschwitz.

The last-place shufflers are perhaps 14 kilometers along their way when they sigh Drayton, across the median on the eastbound highway, easing his way home 200 metres ahead of his nearest pursuer. He was bored, he will tell reporters later, and not really awake. It’s his opinion that Ottawa will never produce a world-class running time until the start is shifted from 9 a.m.

Spotting Drayton prompts conversation, for many of the runners are quick to display their masters of the lore of the sport. The greatest Canadian marathon, most agree, was at St. John’s, Nfld., in 1975. Drayton winning in two hours, 15 minutes, and 27 seconds, only 13 seconds ahead of Brian Armstrong. The closest was here at Ottawa in 1978, with Brian Maxwell and Paul Bannan timing in the same second. Drayton is the fastest Canadian, at 2:10 in Japan in 1975.

Drayton is near the finish as Dr. Terry Keravanagh’s team of 13 heart-attack victims make their turn at the Parliament Buildings. It is Dr. Kavanagh who sneaked members of his cardiac-running club into the Boston marathon in 1973, changing forever the once-accepted medical view that no vigorous exercise was possible after a heart attack. His men are doing fine, Dr. Kavanagh tells me, as he runs along with white socks on his hands (we runners accept certain peculiarities among ourselves, and we are) prepared had the weather turned cold, but he says many are suffering from sore ankles and knees because of the high-crowned road.

We’re reaching the point, in fact, when many troubles start. Aching lower backs. Blistered feet. Exhaustion. Between 25 and 35 kilometers, the vans that runners call Most Wagons find most of their passengers. “I hurt my knee about a month ago,” a high-school teacher
from Toronto named Paul Counterman tells me, as we find ourselves slowing together. "But I was so determined, I thought I'd come and try to get the thing out. When the pain started today, I told myself that if my wife could go through 25 hours of labor, then I could take this. But I can't. My knee's locking up. It isn't just the pain; my knee feels as though it has plaster of paris on it."

I'm not victimized by any particular joint. Rather, my entire body feels fatigued. I hadn't expected to finish, nor with only 40 kilometers of training each week, and so I submit, with Counterman, as a Meat Wagon approach. We talk about next time.

Inside the van, a dozen long faces. I expected people bent over with cramps, wracked by dehydration, sick to their stomachs. All I see is disappointment. "Moons are tough to beat," says the slogan on the T-shirt worn by Anne McDonnell, 30, from Vancouver, Ont., who appears completely beaten. "Never again," she allows to her fellow travelers.

Many drop out at The Wall, just past the 30-kilometre mark. It's the distance at which all-encompassing fatigue develops among those who haven't trained adequately. The physiological cause isn't fully understood, but most doctors explain it's something to do with the body exhausting its supplies of glycogen and being forced to switch to burning fat. Suffice to say, The Wall might as well be brick.

Carl Amvaz, a 52-year-old clerk from a running-shoe store in Hull, Que., hears The Wall after a 12-year-old girl sprints ahead of him, saying she's sorry she can't encourage him any longer, but she has to leave. "How could I quit after that?"

The final kilometres are full of friends talking each other home to the finish, others lingering alone, and still others amazed to find new reserves of strength, sprinting in an effort to move up a place or two, say from 1,013th to 999th, in the process cutting a minute or two off their finishing times.

The final kilometres also see the crowds growing again, after thinning along the way from the half-way mark. Ottawans know the significance of finishing in less than four hours, or three hours, or under two and a half. Everyone gets cheered; everyone hears the time being yelled out; everyone is told, again and again, that they can do it.

A newcomer might consider it remarkable that runners of vastly different ages are capable of the same speeds. Training time, not age, determines results. So a 25-year-old novice might be delighted to finish in 1:30, but 68-year-old Dave Kaufman, with many marathons behind him and 20 kilometres of training a day come rain or shine, won't be happy settling for anything more than four hours. Severe Hirtanen, a longshoreman from Vancouver, celebrated his 58th birthday by winning his age category in two hours and 57 minutes.

Hiroshi Ono, 12, a professor of psychology from King City, Ont., has cramps in his side with 500 metres to go. Doubts he can make it, after 41,700 metres of relative comfort. Falters, but goes on. He finishes in three hours, 28 minutes, his best time in his three marathons.

The most significant accomplishment is Jacqueline Garneau's. She wins the women's division in two hours, 47 minutes, and 58 seconds. As recently as 1975 the Canadian Track and Field Association didn't recognize the marathon as a women's event. When Garneau ran the distance for the first time, in the Île d'Orléans Marathon in 1977, it took her almost four hours. But in 1980 the Montreal hospital technician would establish herself as one of the world's best women runners by winning the women's division of the Boston Marathon in two hours, 31 minutes, and 26 seconds, a record for women in the famous 42-kilometre run.

The finishers, and some of the 600 who failed to finish, fill the Carleton gymnasium for the trophy presentation. "There came a point, as there always does," Jerome Drayton tells us, "when I said, 'What am I doing here?'

Cheers, Hoots. Everyone knows what their fellow runner means. He kept going, and so did 2,932 of the almost 4,000 starters. And while Drayton takes the trophy, all 2,932 are triumphal, if you accept what Dave Kaufman says. "Just finish, and you feel like a winner," the oldest man in the race tells anyone who asks what keeps him running. And that, in the end, may be the point. In a society that no longer is always sure what amounts to winning and losing, the marathoner knows.
Majoring in the future

The university greets the end of affluence

BY LÉON DION

The university — its present performance and its future role — has been scrutinized intensively across Canada in the past few years. Judging from the number of studies carried out by various commissions and task forces, interest in the many facets of university life runs very high. Dozens of reports have been published by commissions at the federal and provincial levels, by various government research agencies, and by many study groups set up by the universities themselves.

The third in a series of six essays by well-known Canadian writers on aspects of culture in Canada . . .

Canada's campuses
Top row: the University of Toronto Second row: (left and right) Law; University and (centre) the clock tower at the University of British Columbia Bottom row: the U.B.C. campus and (inset) library
This reappraisal, which is taking place both on and off the campus and is more thorough than anything we have seen in the past, certainly is no accident. Rather, it indicates that the university has reached a crucial crossroads. The people who have been analyzing the university readily agree that it must forsake the path it has been following for the past 20 years. They find it much more difficult, however, to map out the new direction our universities will have to take.

Another factor behind this wave of inquiries into higher education is the rising interest manifested by growing segments of the population. For one thing, taxpayers are footing a large part of the bill. Since World War II, Canadians have discovered all the cultural, social, and economic benefits of university training. However, the costs have jumped dramatically in the past 15 years, and more and more people are concerned. They worry particularly about the danger that a rising proportion of university graduates will be condemned to unemployment because of a glut on the labor market.

In Canada, the emergence of the modern university, involving a strong emphasis on postgraduate studies and research, goes back only one generation. Before then, the universities of the United States, Britain, and France easily met the demand for postgraduate studies among Canadians. In 1965, only five universities (Toronto, McGill, Queen’s, Manitoba, and Laval) granted doctorates in this country, and there was no indication that the situation would change. By 1950, six more universities had launched PhD programs, but only two of them (Western Ontario and British Columbia) had granted such degrees. In a report issued in 1978, a commission of inquiry set up by the Social Sciences and Humanities Research Council of Canada commented: “Even if the number of full-time students enrolled in universities jumped from 36,954 in 1941 to 85,458 in 1951, they only represented half of one percent of the population as a whole.”

The period of growth for Cana-
(OH) show that the number of post-secondary students is relatively high in Canada and that the growth rate exceeds the average of the five countries considered. Canada, the United States, France, Norway, and Britain. However, the ratio between government and private funding of education has decreased in Canada and elsewhere is now a thing of the past. In the 1956-1958 academic year, full-time enrollment in post-secondary education was 27.2 percent of the Gross National Product, five times the 1966 figure of 3.2 percent. And while Canadian universities are now a thing of the past, in the 1956-1957 academic year, full-time enrollment in post-secondary education was 5.1 percent. This is by no means unusual, the enrollment curve is not expected to bottom out and level off until the 1956-1957 academic year, 1960 and 1965 were seen as periods of growth and decline. The decline in post-secondary education in Canada is taking place even though the birth rate in Canada has been on the decline for some time. And that’s not all. The decline in enrollments means the end of an era for the future of the Canadian university. The government has been cutting the number of post-secondary students and the rate of growth in government funding for universities has been falling which will only exacerbate the problem. For example, the Ontario government has been cutting the number of post-secondary students by 50 percent since 1971. While some provinces, such as Quebec, were not affected until 1977-78, the same trend is evident in research grants and bursaries, which, taking inflation into account, have fallen sharply each year since the beginning of the seventies.

Due to the economic problems in Canada and the rising cost of health and welfare programs, the federal and provincial governments have gradually pulled higher education and university research toward the bottom of their list of priorities. This has led to the severe financial strain into play. University degrees are no longer an automatic ticket to the labor market. The once common belief said about unemployment among the more recent PhD graduates. Furthermore, the public and even at the government level have questioned the relevance of higher education and the future needs of society.

The relationship between university studies and the needs of the labor market has also been widely questioned in recent years. Finally, the SUO that grew out during World War II and the postwar years between science and the top economic, political, and military decision-makers in Canada and elsewhere is now over. The widespread protests of the late 1960s against the university’s role in society, and research agendas that are still highly visible.

Under pressure from all basic trends, Canadian universities must go through difficult transformations without delay. They will face enormous challenges, both in the coming decade, especially since they will be hampered by a financial squeeze and rapid aging of teaching staff.

One of the main consequences of the growth of Canadian universities between 1960 and 1975 was that their status changed. In practice, they have become public institutions and are now administered as part of the vast network of quasi-public bodies. This university sector is what is meant by the term “post-secondary education” and is held accountable to the taxpayers who subsidize it. No longer can it escape the political forces over which it has little control. The way it spends public funds and the manner in which it discharges its teaching and research responsibilities varies. Under the double pressure of public opinion and the theory of political options, the university will have to demonstrate its productivity much more clearly, like any corporation. It will have to provide a clear and valid criteria for this accountability, since the services provided by the university are not by any means impossible to impossible by traditional methods.

During the same period, an equally important trend was the provincializing of Canadian universities. Under the 1975 fiscal agreements between Ottawa and the provinces, provincial jurisdiction over post-secondary education was clearly recognized. Tax transfers simply reflect the province’s firm intention to assume the exclusive responsibilities in this field. Espe-

The Massey College crest and motto, sapere aude — "dare to be wise".

Leon Dion is a professor of political science at the University of Ottawa, Quebec.
Jack Shaw, a 36-year-old metallurgist, has a new job. He’s called the conscience of Cold Lake, the ombudsman and, less reverently, the guy who goes around looking for maple leaves on things. Officially he is Alberta-Canadian content manager of the $7-billion oil-sands project to be built by Syncrude Resources Canada Limited near Cold Lake, Alta. He’ll watch the spending of that $7 billion and help Canadian firms get the biggest possible share of it. It sounds like fun. Even rubbing shoulders with all that money must be a thrill. But why should Cold Lake or any other Imperial project need a Canadian “conscience”? Imperial has been a Canadian corporate citizen for a century and has a long-established purchasing policy that begins: “Give preference to Canadian manufacturers, provided they offer similar quality, delivery, service, and price, and encourage the manufacture in Canada of materials required in our operations.” It’s a policy that’s gone beyond just being a good corporate citizen; it has created a positive atmosphere for the development of Canadian manufacturing.

Of the nearly $600 million Imperial is currently spending on materials (exclusive of crude oil), nearly 90 percent is spent in Canada. But that doesn’t mean the purchases are 100 percent Canadian in content. They may have been manufactured from imported raw materials, assembled from imported parts, or designed and engineered elsewhere. How Canadian, for example, is a Canadian-made car? And how Canadian is a length of steel made in Canada from iron ore mined in Canada in a smelter fired by American coal? Dissecting every piece of “Canadian” equipment and tracing its ancestry would be extremely difficult and expensive, but as Canadian content regulations continue to expand and multiply, people like Jack Shaw will be trying to develop systems to track as many Canadian goods and services into various projects as possible.

In addition to federal regulations, there are increasing demands by the provinces for regional content. How Alberta, for example, is a Canadian car made in Ontario? Obviously, following a simple buy-Canadian policy is not enough.

The content regulations of the 1970s and 1980s recall the surge of economic nationalism of the 1960s. The nationalists wanted to buy back Canada from the foreign investors who own a very large share of Canadian industry, particularly the oil industry. Their convictions—which seemed to gain ground all through the sixties—were widely discussed in the universities and vigorously supported by some of the country’s most influential editorial pages, such as those of Canada’s largest newspaper, The Toronto Star. Small wonder, therefore, that when the pollsters sampled the opinion of the public in the sixties and seventies, they detected, in varying degrees, clear support for the nationalist view. However, a majority of Canadians wanted to retain the benefits of foreign investment. In 1973 a University of Windsor group asked respondents if they would accept a lower standard of living in order to gain more control over their economy. Forty-four percent said yes, 48 percent, no.

Prime Minister Lester Pearson, a pragmatist, was probably right when he said, in 1966, that “nationalistic economic policies would reduce the Canadian standard of living by 25 percent to 30 percent,” adding that “not many Canadians are willing to do that, and I don’t think Canadians should have to do that.” By the mid-1970s there was less talk about “buying back” Canada. The watchword was “Canadian content.”
Attempts were made to stem the flood of mines and mining activity across the border by setting Canadian content standards in radio and television programming. It failed. By requiring stations to play a relatively high proportion of records made in Canada, the policy threatened the growing, booming Canadian recording industry, and the listeners didn’t complain. It hasn’t worked too well in television, since much of the Canadian content looks like watered-down American comedy. In fact, recent surveys indicate that the result was the elimination of the Canadian edition of Time, thereby reducing Canadian news and information about Canada to a few lines in the O. D. K. buy and advertise in the U.S. edition sold in Canada. The ghost of Time Canada fattens and prospers.

On the industrial side Canadian content rules demanded that Canadi- ans be given the first opportunity on a national basis to partake of the benefits of an industry whose product is sold in this country. But more recently this desire for control was accomplished by an upsurge in public enterprise and success in Quebec, western alienation, grumbling in the Maritimes, and shocked feelings of isolation in Ontario.

Canadian content became the issue that binds us together plus regional—Canadian content. Statutes and guidelines were discussed more often, and more frequently, and the adherents and hangers-on of politics yet to come. It was no longer enough for a Canadian company, especially one involved in resource development, to be a good Canadian citizen. It had to be a good regional citizen, and a local citizen as well.

There are two basic kinds of require- ments discussed in the resource develop- ment: one, that Canadian firms, individuals, or governments own, control, or manage a property to a predeter- mined extent; two, that firms obtain goods and services from Canadian companies.

These can be enforced in various ways. For instance, Canadian mining regulations allow the government to pay less for certain excep- tions will not be granted to any company incorporated outside Canada or to any corporation that isn’t at least 50 percent owned by Canadian citizens or that is not listed on a recog- nized Canadian stock exchange. A government can also demand a piece of the action as Newfoundland does under the Newfoundland and Labrador Petroleum Regulations (1977), which require companies to transfer a 40 percent interest in their projects to the province’s petroleum board.

There are various definitions of a Canadian corporation. British Columbia, for instance, restricts min- eral exploration and production to a Canadian resident or a corporation whose stockholders own at least 50 percent of its directors are Canadian residents. Alberta prohibits the sale of land to foreign-controlled petroleum or mining companies or non-residents but exempts pipeline and refinery lands as well as lands acquired for processing, manufac- turing, and marketing plants. There are several other exemptions, and it’s all very complicated.

Regulations covering materials and services are based on the feeling that companies, if left to their own devices, will bring in foreign materials from suppliers that their heads know and trust, as well as bringing in their own expert middle management, and key workers. There is little fear that these inputs will result in unskilled or semi-skilled labor. Since, from immigration policies, companies will always hire the underemployed, they usually pay the prevailing wages and maintain a stable work force. The federal and many provincial govern- ments want it to remain so.

Newfoundland, for instance, insists that oil companies provide training programs to increase workers’ skills, and across the North, companies are encouraged to hire native people where practicable.

In rules governing procurement, regionalism is increasing. The Saskatchewan government, for example, encourages northern Sask- atchewan projects to give first priority to the province’s firms, second to Saskatchewan suppliers, and third to Canadian ones. Its general policy on non-Canadian projects that, other Saskatchewan firms have pro- jects, that other Western firms come next, and the rest of Canada follows.

What are the other Canadian regional demands for Canada as a whole? Dr. Donald Eldon, a senior implementer of government regulations who has studied content policies across Canada, says: “On a nation-wide basis, content requirements may reduce the social product and the welfare of the nation as a whole. In policy terms, the content policy may lead to retaliation by other provinces and to a whole set of internal tariffs and restrictions on movement of capital, labor, and goods and services between provinces.” Eldon foresees further increases for the Canadas for the future—new laws not even proposed in formal format at the moment—accompanied by forms of pressure. “Route 10 Logistics,” he calls the “countermarket”—to work with four Canadian-owned compa- nies (Ottawa and Toronto, Canadian Western, Delta Projects Limited, Laval Services Inc., and SNC/FW Ltd.), in a common agreement on a major project under the supervision of Ecos Resources Canada. Fluor’s experts suggest that the marketing and marketing of the project now working on an upgrading project in Venezuela and on a $20-billion gas project in Saudi Arabia. By working with Fluor, the Canadian element in the joint venture could gain valu- able additional expertise.

Although Route 10 will use Canadian engineers for detailed work on the project, he’s concerned that there may not be enough of them available. There are about 3,500 engineers in Canada, the Fluor experts say, but he fears that if Shell’s Alands plant goes through at the same time as Cold Lake, both projects may have to look outside for engineers.

Materials, too, Bill Penhale, Cold Lake project manager, feels, is a concern. According to Canadian steel supply if Foothills (Yukon), Cold Lake, and Alands begin at the same time. Canadian content is a good objective, but the cold fact is that you have to have it in order to put up a plant. And at the end of the project the plant might have to close down, and the skills that had been acquired would be wasted.

I would like the report at the end of this project to say that we have assisted, say, a few suppliers to develop facilities in Canada — with perhaps two or three in Alberta and some others in other areas of Canada. Penhale says “we helped establish them by diligently working through our specifications with them, and we bought from them because we were competitive in price and they’re still in business.”

Some of the big items needed at Cold Lake may not be available in Canada. In theory they could be built here, but not quickly enough. Many of the thick-walled pressure vessels — approximately 50 of them with walls in excess of seven centimetres and some weighing up to 325 tonnes each—simply won’t be available in Canada when required by the project. The two 38,000 horsepower air blowers for the FLEXICOKING plant are another example of equipment that can’t come from outside Canada. Since they are crucial to a project’s success, oil-well pumps usually come from the United States, even though there are some Canadian manufacturers, because the U.S. suppliers have been in business longer and their products have been proven reliable. However, Russ Powell, And tail, lean and mean, 20 years’ experience in oil production, says, “We want to use new Canadian companies when possible. We’re using Canadian pumps at Cold Lake, for instance, and we’re currently run- ning tests to prove the equipment of other Canadian companies. The problem is that it takes five years or more to prove the durability of a pumping unit.”

Omines on the ground, with the oil alberta mud on their boots, tend to be blunt. A spade is a spade and a drill is a drill and it doesn’t matter if it costs as long as it does its job. They don’t have to be concerned, as Bill Penhale does, with requirements that a Canadian manufacturer to market to increase his capacity for small valves, or something that’s easy to make, and put up a plant. But at the end of the project the plant might have to close down, and the skills that had been acquired would be wasted. Penhale says, “This policy can become very costly.”

Jack Shaw begins at the beginning. Cold Lake’s $7 billion haven’t been spent yet: the maximum of $5.5 billion have been, and the supplies haven’t been set, and the suppliers haven’t bid. Seminars are planned after the project is approved by the federal govern- ment (first in western, then in eastern Canada), telling potential suppliers about the project and their companies. Penhale says “we helped establish them by diligently working through our specifications with them, and we bought from them because we were competitive in price and they’re still in business.”

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In Closing

In the city, rain may be a bother and a nuisance, but out here where we live, rain, especially in springtime, is something we wait for and welcome, not just for our gardens but for ourselves. It is not an intruder, spoiling the weekend or soaking the street so that we are splashed on the way to work, but an old companion who comes back, year after year, with something for everyone, a promise for farmers, a seasonal adventure for small children and, for many of us, certainly for me, a sound that falls upon the roof and upon the ear in ways that are as comforting as any sound I know.

Last evening, one of the best rains of the spring season came, very late, just before midnight, when the house was empty except for me, so that in the quiet I could hear it beginning, not upon the roof or against my window, but in the apple tree in the front yard. It fell softly at first, out of respect for the age of its old companion, but soon it began to come faster, as if the leaves had been waiting all along, so that between the rain and the tree seemed to talk to each other, freely, privately, like two friends who have been apart too long and have so much to say. For a while I just lay there listening—an eavesdropper on my own front yard—for there is no conversation more interesting than the conversation of the rain with the tree.

Then, on toward one in the morning, it became a downpour, spreading from the tree to the silent house, drumming on the roof, running in the eaves trough, and gurgling through the downspout. Since I was awake and all alone, and since a good spring rain is an event so pleasurable that no one should ever miss it, I got up, went downstairs, opened the front door, and just stood in the doorway, looking. It was a downpour alright, but not a rainstorm, for there was no wind at all, which meant that the water came straight down out of the sky, the drops large and heavy and glistening in the light from the street lamp at the corner. It seemed, even though it was heavy, to land on the ground softly, so that it did not so much strike it as enter it, as if the soil were thirsty and waiting to drink it. Soon I could hear it beginning to overflow the trough at the edge of the roof and then falling, with a steady drip, drop, drip, upon the stalks and weeds below and especially the privet which, just then, needed it so badly.

When I closed the door and went to the back of the house to look at the maples and the spruce and at the fields of corn beyond them, the air was starting to change, to stir. In the trees, the higher branches swayed and then shook so that their droplets fell with the rain and made it seem that everywhere you looked, in the sky above and in the dark, sheltered places of the trees, the whole world was drenched. The spruce, the proudest of my trees, seemed to droop to the ground, its boughs and needles soaked and heavy from the wattery night. Once, I used to think that the needles of a spruce tree were covered in wax and, therefore, when the rain fell upon them, it would immediately run off, leaving them dry as before. I was wrong, for while it is true that they have a coating of wax, it is also true that they have thousands upon thousands of pores, tiny and deep, into which the water descends as through a funnel, coming to rest within the needle. And so, when the rain strikes them, it lodges awhile before deciding which way it will go, into the pores or onto the ground. In time it decides in favor of the ground, but there is an interval while it makes up its mind, during which every needle on the tree holds water inside and is made heavier by it.

Standing there, just inside the door, looking at the soaked and drooping spruce, I thought about the stand of trees a mile beyond our house where, among the tangle of woods, the rain was by then being absorbed not just by the trees but by the ground cover: the leaf mold, the wild fern, and the litter of rubbish, yellowed paper, and cardboard boxes, left in the woods from the melting snow. I could not hear it, of course, but I knew all the same that elsewhere— in the field of corn to the south and on the low climbing hill that is well north of us—the rain was satisfying the thirst of the earth, dousing the young corn stalks that can hold so much of it, and on the hill, finding its way deep into the crevices and crannies to replenish the springs.

When I closed the door and went upstairs, I went into my study from where, in the daylight hours, I can often see the rain upon the lake, though of course in the dark I can only imagine how it is falling. It almost never falls in a steady and similar pattern all over the lake, but instead you can see it changing, dropping softly here and heavier there and crossing the surface of the water in a slow sweeping arc of its own free choosing. I have watched this spectacle on the lake for many years and have always been grateful for it, not merely because it is interesting to look at, but because it gives me some idea which I cannot get from the land alone about the form that the fall of rain is taking.

This morning when I awoke and looked out of my window it had let up, the sun was shining, and the steam was rising from the street like smoke. The rain was over. But I do not think it is too much to ask that once more before spring is past I may hear it again, the faint sound of its coming, the wet whisper upon the leaves, the invitation to its seductive reverie.
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