A hundred years ago there was no law in western Canada. In the vast prairie grasslands between Manitoba and the Rockies there were hardly more than 30,000 people, most of them Indians living on the rapidly diminishing buffalo herds. Save for a few honest settlers and missionaries the white men were ruffians; sharp traders pushing whisky among the Indians, horse-thieves and outlaws from Montana – all the elements for an era as vicious and violent as the American Wild West.

Barrels of salt meat and strings of traps show what Lower Fort Garry was like when NWMP recruits arrived in 1873

Canada's story was different due in part to a band of young men who were steadfast and persevering almost beyond belief. The Canadian Mounties have become a legend, a synonym throughout the world for stamina and integrity. Scotland Yard means painstaking persistence; the FBI suggests glamorous daring; the French Sûreté personifies cool braininess, but the Mounties have a reputation based on character and justice. No police force in the world commands greater respect and admiration.

The beginning of the Force was an epic thousand-mile march across the unmarked plains by 318 scarlet-coated horsemen, none of whom had seen the territory before. Part of their assignment was to find a gang of Montana renegades who had massacred a band of innocent Assiniboine Indians in the Cypress Hills. To those drunken horse traders, killing an Indian was sport; they murdered all but a few terrified women and left the chief's head impaled on a post. The grisly episode brought an outcry from missionaries and honest traders, and hastened the organization of the North-West Mounted Police.

The Mounties' destination was Fort Whoop-Up, an enclave of notorious outlaws on the Oldman River about eight miles upstream from today's Lethbridge. Their orders were to round up the killers, suppress the whisky traffic, protect the Indians and collect...
customs duties along the newly-marked international boundary.
But they did something more significant. The opening of the American
West was marked by bitter and bloody Indian wars. In Canada, during the
first five years of NWMP administration, not one Indian or policeman
died at the hand of the other.
With a combination of integrity, courtesy and raw nerve this unique
company of men upheld the law, won the respect of the Indians and made
agricultural settlement possible. Their heritage is a saga that can still be read
in the old forts and cairns that mark their adventures in Western Canada.

It all began at Lower Fort Garry, the Stone Fort that still stands on the
west bank of the Red River, 20 miles north of Winnipeg. The fort was built
by George Simpson, governor of the Hudson’s Bay Company in 1831. The
Big House where Simpson lived still stands; so do two stone three-storey
warehouses.
It was to this fort that the first small band of recruits came on Oct.
22, 1873. Here was the real birthplace of the North West Mounted
Policemen — here, on November 3, 1873, the Oath of Office was administered
to 150 men.
Today Lower Fort Garry is a National Historic Site, restored to look
as it did when the NWMP arrived. A stone wall with round bastions at
each corner surrounds grounds landscaped in the 1850s. The Big House
is furnished as it was then, and a wooden trading store erected in 1873
and razed in 1929 has been rebuilt. On its top floor there is a museum of
Indian artifacts.

On June 7, 1874 the NWMP
arranged in three troops of 50 men,
left the Stone Fort and rode 83 miles
south to Fort Dufferin, the departure
point for their march west. Dufferin
had been the headquarters of the
International Boundary Commission,
whose work was almost finished. Its
buildings were habitable, and it was
a convenient place for the Force to
await the return of Commissioner
George Arthur French, who was
bringing 150 new men from Toronto.
French was a young Irishman with
experience in both the Royal Irish
Constabulary and the British army. He
had quickly discovered that 150 men
were too few for the task ahead. He
asked for double the number; then recruited them himself.
The newcomers arrived on June 19
and pitched their tents near the
Boundary Commission quarters. A
few hours later there was a terrific
thunderstorm and the horses stampeded. Troop Sergeant Sam Steele,
who became superintendent in 1883,
write: "A thunderbolt fell . . . Tenfolded
the animals broke their fastenings.
The six men on guard were trampled . . .
and the maddened beasts overturned huge
wagons . . . dashed through a row of
tents. Crazed with fright, the majority
were 30 to 50 miles into Dakota
before compelled by sheer exhaustion
to halt. All the horses were recovered,
but the Force lost several precious days.
In the late afternoon of July 8,
bugles sounded and six shilling
divisions entered into place. The
great trek was about to begin, and
French recorded the picture in his
diary: "A" troop first on dark bay
horses; "B" rode dark browns; "C"
on bright chestnuts had the artillery
and munitions wagons; "D" on bays
and buckskins, "E" on blacks and "F"
on light bays — the whole procession
covered about one and a half miles. The going was heavy. A diary
record for July 13, the fifth day,
notes: "Marched at 5 a.m. Many delays
owing to parts and wagons breaking
down. Traveled till eight in the
evening. Distance from Dufferin 89 mi."
French returned to Dufferin with
"D" troop in December, leaving the
other five scattered across the plains.
He reported to Ottawa. "These men
gave little cause for complaint . . .
working at high pressure during four
months from daylight to dark. Horses
falling and dying never stopped them . . . We left with the thermometer
at 98 to 100 degrees, returned with
the thermometer at —20 to —30 having
marched 1,959 miles without a single
loss of life or limb."

Gold in a creek bed, a murder and resentful Indians were responsible
for the creation of British Columbia's first NWMP post in 1877.
In 1864, hordes of prospectors, dreaming of gold, arrived at the
junction of the Kootenay River and
Wild Horse Creek, where a settlement
called Galbraith's Ferry began. The
shallow diggings were soon exhausted
and most of the miners left. But some
stayed on.
Kootenay Indians had ruled here
for centuries and they resented the miners.
For years white and red men existed
in a state of tension. Two miners were
murdered in 1884 and two years
later a suspected Indian named
Kapula and his accomplice were jailed. The Kootenay's Chief, Isadore, afraid that his people were soon to be forced on reservations and spoiling for a fight, raised the settlement with some of his braves and released the prisoners.

The terrified settlers appealed for help, and the NWMP was sent in. Superintendent Sam Steele and 'D' troop responded, arriving on Aug. 1, 1897. Steele quickly sent for the chief and demanded the return of the two men. "The Force has come to bring peace and fair treatment for all," Steele told him. "Murder must be punished." The impressed Isadore handed them over and the two men were charged. The evidence against them was flimsy, however, and they were acquitted.

Friendly relations were quickly established between the NWMP and the Kootenays; within weeks inter-racial hostility disappeared. A year later it was possible to close the post and a grateful citizenry renamed their village Fort Steele.

When the railway went to Cranbrook, 10 miles east, Fort Steele became a ghost town. In 1961 it became a historic site, and the town is returning to life. There are 32 original or restored relics of the past there now, including the Fort Steele barracks, and the Perry Creek water wheel, an East Kootenay mining curiosity.

Fort Battleford, at the junction of the North Saskatchewan and Battle Rivers, was one of the hot spots of the last great frontier drama, the Riel rebellion. Superintendent James Walker built it in 1876 and for a time it was not only the Force headquarters but the seat of the Territorial Government into the bargain.

Walker's men patrolled a vast area dominated by two powerful Cree chiefs - Poundmaker and Big Bear. Poundmaker had signed a treaty with the Canadian government; Big Bear had refused. By 1879 Walker feared trouble and built a 10-foot stockade, using Indian labor.

Over the next five years unrest grew. Both Indian and Métis had good reason for discontent. Settlers were seizing land, the buffalo had gone and crops had failed.

The police repeatedly urged the government to act but nothing was done about their advice. The frustrated Métis turned for help to Louis Riel. Since the Red River rebellion he had been in Montana, but at the urging of Gabriel Dumont and others he came to Batoche in 1884. For a year rumors of an impending uprising flew. Finally, on March 19, 1885 Riel set up a provisional government with himself as head. Rebellion had begun!

Six days later, in an attempt to retrieve supplies cached at Duck Lake, Superintendent L. F. N. Crozier fired on the people for the first time in the NWMP's 11-year history. The Mounties were forced to retreat and 400 terrified settlers from miles around rushed to Fort Battleford. Marauding Indians pillaged and burned Battleford town, but the fort was not attacked.

When the rebellion collapsed three months later it was at Fort Battleford that Poundmaker surrendered and was arrested.

Dumont escaped to the United States but Riel gave himself up. He was imprisoned in the Mounted Police barracks in Regina and hanged there on November 16, 1885. Dumont travelled for years with a

Residents renamed Galbraith's Ferry Fort Steele after the Mounties brought order there in 1887

Sick horses were tended in this 1898 stable at Fort Battleford
Wild West show but at last he grew homesick and quietly returned to Batoche under an amnesty. He found it sadly changed. His rifle pits were grass grown and most of his friends were dead. Two years later he too died, and lies buried among his people.

On June 30, 1882 the site of the present city of Regina—then called Pile o’ Bones—was chosen as the capital of the Northwest Territories. A week or so later Commissioner A. G. Irvine received a order to erect the NWMP headquarters there also. For 38 years Regina was the base of this growing Force and it is still a major training centre. In 1920 headquarters was moved to Ottawa and the Force’s name changed to Royal Canadian Mounted Police.

The building in Regina known as ‘C’ block has a splendid museum where the whole saga of the opening of the West is captured. The field guns, drawn over trackless prairie in 1874 are on display: so are photos of Crowfoot, Poundmaker and Big Bear. The charter enrollment roll from Stone Fort days is preserved here, and there is a large map of the fatal journey to Fort Whoop-Up. The chapel walls are lined with memorial tablets to the intrepid North West Mounted Police officers who shaped the life of the West.

‘Only a post could do justice to the site,’ recorded a young constable after ‘F’ division pitched its tents one August day in 1875 in the angle between the Bow and the Elbow rivers, where the city of Calgary now stands. Although it began as a police post and was named by Macleod, all that marks Fort Calgary today is a boulder at the corner of Sixth Street and Ninth Avenue SE.

One of the most exciting episodes in the police story was played out here. In 1879 the Sarsens—a branch of the Blackfoot confederacy—were destitute, as the Sioux had been at Wood Mountain. Goaded by hunger, 400 Indians descended on the fort demanding meat. The commanding officer, C. E. Denny, was away at Fort Macleod; four Mounties held the post. One rode furiously to get Denny, and the inspector and 10 police galloped back. Fortunately no blood had been shed. Denny went straight to the chief. ‘Go to Macleod,’ he said. ‘You’ll get beef there.’ But the Indians stayed.

Two days later Denny delivered an ultimatum: ‘Move tomorrow by this time or I’ll move you,’ he ordered.

At the specified hour Inspector Denny and a sergeant, flanked by 13 armed police, walked into the camp. The constables stood in a quiet line while Denny and his assistant calmly took down tepees. The Indians reeled but Denny kept steadily on. He said nothing and no shots were fired, but slowly the Indians began to load up. By noon the entire tribe was on the march.

Only Denny’s coolness and, in his own words, ‘bluff and the grace of God’ had prevented a massacre.

One of the most heart-breaking episodes in the history of the Canadian West took place at Wood Mountain a one-time Boundary Commission post that Commissioner French bought along with the depot, two corrals and eight tons of hay for the horses for $100 in 1874.

Wood Mountain was in Cree and Assiniboine country but it was the Sioux who made it famous. In 1876 Chief Sitting Bull’s braves from Montana annihilated Custer’s army and many Indians fled north. By December, nearly 3,000 were camped near the post. Inspector James Walsh confronted them: ‘Only if they obeyed the Great White Mother’s laws could they stay.’ His attitude was friendly but firm and during the winter Sioux and police learned mutual respect.

A year later Sitting Bull himself arrived with more Indians. His first encounter with Walsh was dramatic. ‘Yesterday,’ the chief said, ‘I was fleeing from the white man, cursing them… The White Forehead Chief walks into my lodge alone and unarmed. He gives me the hand of peace.’ That night Inspector Walsh slept peacefully in the Sioux camp.

By 1880 the buffalo had almost disappeared. Ottawa, its hands full caring for starving Cree and Assiniboines, refused to take on the Sioux. The United States had agreed to accept them back, but Sitting Bull refused to go. The Mounties did what they could for the refugees. Walsh wrote: ‘The conduct of these destitute people would reflect credit on the most civilized community.’ He continually urged their return south. Finally hunger accomplished what words couldn’t. A broken Sitting Bull sent this message ahead. ‘Once I was strong and brave. (Now) my women are sick and my children freezing. My arrows are broken and I have thrown my warpaint to the winds.’ He returned to the U.S. in 1881, became involved in another uprising and was killed in an attempted arrest in 1890. Since 1966 Wood Mountain has
been a Saskatchewan Historic Park 26 miles southwest of Assiniboia, Sask. There are reconstructed barracks, a museum, good picnic facilities and—who knows—perhaps the ghost of a mighty chief.

The earliest of the NWMP posts is Fort Macleod, built in 1874, 33 miles northwest of Lethbridge. It is only 21 miles from the site of Whoop-Up, the destination of the Mounties’ long march. Whoop-Up was reached on October 18, 1874. Assistant Commissioner J. F. Macleod ordered a cautious approach expecting a fight, but the traders had cleared out. Instead of bullets, an unkempt caretaker gave the Mounties a hearty meal.

This was Blackfoot country, a four-tribe confederacy ruled by Chief Crowfoot. Macleod’s task was to enforce the law. He moved unostentatiously, establishing firm and cordial relations by consistent fair-dealing.

During the winter of 1876-77 Macleod, now commissioner, was instructed to negotiate terms for a Government-Blackfoot Treaty. It was signed Sept. 22. At the ceremonies Crowfoot praised the Force in these words: ‘If the police had not come to this country, where would we be now? Bad men and whisky were killing us. The Mounted Police have protected us as the feathers of a bird protect it from the frosts of winter. I will sign. The treaty was significant in retaining Blackfoot loyalty during the Riel rebellion.

Today Fort Macleod is a historic showcase. Two ornamented teepees stand within the stockade and a large museum is full of Mountie lore. A camleng shed holds buckboards, travois and other old conveyances. The chapel, the smith, and dental and medical offices still stand with their original (or reproduced) equipment.

A striking example of North West Mounted Police fortitude took place at Fort Walsh in the Cypress Hills 30 miles southwest of Maple Creek. There, 23-year-old Constable Daniel ‘Peach’ Davis single-handedly escorted 1,100 unwilling Crees and Assiniboines to a reservation 200 miles north of the fort.

His only real asset were the Cree language and three week’s food supply. He alternately prodded and cajoled them, sustained by courage and pretended nonchalance, though he feared that one error in judgement would cost his life.

It was at Fort Walsh in 1879 that the first Mountie died violently. The victim was Marmaduke Graburn, a boy of 19. He was ambushed and murdered by a Cree Indian who had made himself obnoxious by persistent begging. A few days earlier Graburn had scolded him and this was his revenge. An Indian named Star Child was arrested and tried for the murder, and acquitted.

Graburn is buried in the little cemetery whose stones testify to the youth of NWMP personnel—none was more than 32. Captain E. Dalrymple Clark, who died of fever in 1880 shortly after he had brought his eastern bride to the post, is also here—the first Force officer lost.

Walsh is the site of the last recorded buffalo kill in 1882 and more recently was the breeding ground for RCMP horses. It sits in a sheltered valley, its stockade and several of its log buildings whitewashed and red-roofed, still intact. It is now a federal historic site.
Present on the Prairies

and Past, too. Imperial was there when Saskatchewan and Alberta were still districts of the Northwest Territories

When Louis Riel was hanged for treason at the North West Mounted Police barracks in Regina on Nov. 16, 1885, where was Imperial Oil? It was 225 miles to the north, in an office in Prince Albert, and it had been in business there for a whole year.

The passage of 86 years since then has buried any description of that Prince Albert office too deep for recall, but an even older office had opened in Winnipeg in 1881, when Imperial Oil itself was only a year old. The Winnipeg office was a single upstairs room, 14 by 18 feet, with a roll-top desk for the manager, a high desk and stool for the bookkeeper, a table, a sofa, a box stove, half a cord of wood, and a pair of hip-length rubber boots for those days when the delivery wagon sank to its hubs in the spring mud.

Which is by way of saying Imperial has been a part of prairie life for 90 years, through spring floods and winter blizzards, rebellions, plagues, summer droughts, the Great Depression, good years and bad years. It has grown from that upstairs office to an enterprise with a gross investment in plant and equipment in the region that amounts to $711 million. It was there before Alberta and Saskatchewan became provinces, before the railroads came, before the sod-busting pioneers arrived in tides of immigration. In fact, when the pioneers did arrive, they found that the typical prairie pioneer outpost was a railroad siding with a grain elevator, a boxcar station, and an Imperial Oil storage tank made in Sarnia and railroaded west with a shipment of oil.

By 1895 Imperial was doing a quarter of a million dollars worth of business in the Canadian West, and the complaint that has bedevilled the area ever since was beginning to be heard. 'A third of that business,' an early report stated, 'was in freight costs.'
In the last century, the oil for Canada's West went in barrels and cans by ship to Fort William at the head of Lake Superior, and it all had to be there 'before the last coal', as the expression had it in the days before oil heating. From Fort William it went to Winnipeg by rail, and from there to customers on the Prairies, often by Red River cart. The cans were equipped with a spigot and the customers were expected to keep them, but the wooden barrels were something else. A deposit of $1.25 was required on every one, but the western farmers often forfeited the deposit and kept them.

When the barrels were empty the last traces of kerosene were burned out and they were cut in half for washtubs, or mounted outside as rain barrels. Before Regina got its municipal water system about 1904, residents used the empty oil barrels to cart water to their homes.

Heavy wooden barrels were used until steel barrels were introduced in 1911, in two gauges. The heavier barrels carried deposits, too, of $8 each and were the despair of marketing managers, who couldn't convince their salesmen that the barrels had to be returned.

The salesmen had other things on their minds anyway, like where to spend the night. In 1912 the northern part of Saskatchewan was served by 10 Imperial Oil salesmen working out of a divisional office in Saskatoon. A selling trip then would cover hundreds of miles over very bad roads in a horse and buggy, and could last six weeks. The salesman often spent the night rolled in a buffalo robe on the floor of a granary or, if he was lucky, in the hospitality of a lonely farmhouse.

But the market was there, and Imperial served it. In fact, it was the growth of the Prairie market, coupled with the introduction of new refining techniques, that forced Imperial Oil to seek the money it required for the expansion that had to take place if Imperial was to meet its competition. After a fruitless two-year search in Canada and England, it got the money from the Standard Oil Company, and went after Canadian sales wherever they could be found. The company opened its first bulk plant in Calgary in 1902, three years before Alberta became a province; by 1909 there were 40 distributing stations in the Prairies and British Columbia. Today there are 600 agents and other kinds of distributors, and more than 1,800 service stations serving a population of 3½ million in a region that covers 753,000 square miles.

In this vast area lies the best wheat-growing region in the world — flat, dry, fertile plains — and the Prairies are still thought of as the breadbasket of the world. But the Prairie provinces are not all prairies; fully half the region is rocky bushland, full of lakes and tumbling rivers, and the western boundary of Alberta is the Rocky Mountains, capped with snow. The Prairie economy still turns on the price of wheat, but not everybody is a wheat farmer — or a cattleman either, although some of the ranches in Alberta are vast and their grain-fed beef is justly famous. But as you go north the fields give way to rocks and trees and the farms to mines and forest industries. In Saskatchewan, that most agricultural of provinces, the value of mineral production reached $397 million last year — hardly a rival for agriculture's $691 million, but not bad for a breadbasket.

In the region as a whole, agriculture accounts for only 13 per cent of the economy; the rest — something like $10.8 billion in 1969 — comes from the other things that Prairie people do: teaching, manufacturing, mining, the tourist industry, book publishing, tax collecting, brewing and distilling, running the railroads, building dams, building homes, building big buildings.

And oil, of course.

Oil has been present in the Prairie region for literally millions of years, seeping to the surface occasionally along river banks or eroded valleys. It was known to the Indians and Eskimos before Columbus ever came to North America; it was there before man evolved as a species.
The wealth of oil and gas lying under the prairie soil was first tapped in 1883 at Alderson, 40 miles northwest of Medicine Hat, and it was the CPR that tapped it. The crew was drilling for water at the time, and hit a gas pocket. From that first haphazard strike has grown a natural gas producing industry that has extracted 14½ trillion cubic feet of gas out of proved reserves that stood at the end of 1970 at almost 67.5 trillion cubic feet—enough remaining to last at the 1969 rates of consumption for more than 29 years.

The region's first liquid hydrocarbon came from a gas well in the Turner Valley, drilled to a depth of 2,700 feet on May 14, 1914. The gas was saturated with a light, straw-colored naphtha that the cars of the day could operate on, and did. The Canadian Geographical Journal quotes a newspaper story of the day reporting that a car got 41 miles to the gallon on the stuff 'and went up the hills like a shot, exhibiting the great energy contained in the crude gasoline taken directly from the well.'

The well, known as Dingman No. 1 after an Ontario driller named Archibald Wayne Dingman, set off a feverish speculation in oil shares in Calgary, but little or no drilling. The boom collapsed in August due, historians believe, to a combination of investor timidity (it cost more to drill a well than most speculators realized—it still does) and to the beginning of World War I. The Dingman well and a few others continued to operate, extracting the naphtha and burning off the natural gas—there was no market for the gas and no way then known to store it. Later, in the 1920s, more wells were drilled to tap the gas in the valley for its naphtha, by drillers who were unaware of a large reservoir of oil beneath it. That oil was found in 1936 at 8,300 feet but by then so much of the gas above it had been flared—some estimates put it at a trillion cubic feet, worth about $1 billion—that the energy needed to produce the oil was lost. As a result, only about 130 million barrels of the billion in place have been recovered to date.

Even if the gas had not been burned off, all the oil in the reservoir could not have been taken out. The nature of oil and the conditions of the rock in which it is found combine to make it impossible to recover all the petroleum in any deposit, at least with present technology. Oil doesn't lie in pools underground, like water in a pond; a 'pool' of oil is really a region of packed sand or porous rock, with the oil filling the spaces between the sand grains or the pores in the rock. No matter how hard
you try to get it all, some is bound to remain behind, stuck to the grains of sand or smeared in a thin film on the pore walls. In some cases you are doing well to recover one barrel for every 10 in place, although one reservoir in Canada—the Redwater field in Alberta—is expected to produce, unassisted, 60 per cent of the oil in the reservoir.

Redwater’s recovery is high. A more characteristic field is at Boundary Lake in northwestern Alberta. Its unassisted recovery level is about 12 per cent; with a waterflood to help produce the oil, the level rises to 35 per cent, which is a bit above the 31 per cent average recovery level for the Canadian oil industry. In one case, however, Imperial Oil expects to recover 90 per cent of the oil in place, using a highly complicated system of flushing the reservoir with solvents to extract every possible drop.

Getting the most oil that is economically feasible to extract is an aim both governments and industry in the Prairie region agree upon, although differences may arise from time to time on the best way to accomplish it. The characteristics of oil reservoirs are as individual as the personalities of people, and you have to treat each one differently to get the most out of it. In some formations the engineers will inject natural gas to maintain reservoir pressure as the oil is withdrawn, in others they will advise flushing it out with water as Imperial is doing at Judy Creek. In a few very special cases they may suggest dissolving it in solvents, in much the same way Imperial is producing the Golden Spike formation where the company expects to recover 90 per cent of the oil. Experiments have shown that viscous oil can be thinned out with carbon dioxide to make it flow, and oils nearly as thick as asphalt can be made runny by injecting steam into the rock formation, or even by setting the formation on fire deep underground—engineers believe the force exerted by the small amount of oil that burns will drive the remaining oil out of the formation and up the wells to the surface.

Imperial has carried out some field research experiments by setting the formation on fire, and it is presently carrying on experiments with steam injection at Cold Lake, Alta., to see if the heavy oil in the deposits can be thinned out sufficiently to get it to the surface. The installation cost $8 million in wells and surface facilities, and a further $800,000 to $1 million a year to operate. If the experiments result in a production method that is commercially successful, they will provide access to a deposit of oil variously estimated to contain from 80 to 100 billion barrels—although not all of that would be recoverable.

One of the biggest deposits of oil in the world lies locked in the Athabasca tar sands, an area covering 10,000 square miles straddling the Athabasca River, 200 miles northeast of Edmonton. Until recently its heavy oil has defied efforts at economic recovery, but the grip of the sands is slowly being pried loose: a company has been operating a plant there for three years. The project cost $280 million to bring into commercial production, and is permitted to produce oil at the rate of 45,000 barrels a day.

Such large numbers characterize the oil industry in the Prairie region. Imperial’s gross investment in property, plant and equipment in the three Prairie provinces stands at $711 million—which is 44 per cent of Imperial’s total investment in those assets in all Canada.

The activity of all the oil companies in the Prairies has resulted in the production of nearly 5 billion barrels of oil and natural gas liquids, and just over 14½ trillion cubic feet of natural gas at the end of 1970, with a cumulative value of something like $13 billion. Even so, the Canadian oil industry has spent $1.2 billion more on exploring for and producing oil than it has taken out. Imperial has produced a fifth of Canada’s oil and gas through its 3,551 producing oil and gas wells in the region. Since Imperial first began exploring in the Prairies at Conklin, Alta., in 1917, the company has sunk 4,600 wells. If they were drilled in one spot, the hole would go about 4,000 miles deep, more than half the way to Australia.

The most famous hole of recent times is the one drilled at Leduc, Alta., in February, 1947. The name means little to people who don’t follow the activities of the oil industry very closely, and after 24 years perhaps little even to people who do. But Leduc was the closest town to the oil discovery that marked western Canada’s sedimentary basin as an oil producing region of importance.

Imperial made the discovery, culminating a search that ranged over all three provinces, from the wheatlands of Manitoba to the Alberta foothills, under conditions that today’s geologists would find intolerable.

Here’s how an Imperial geologist named R.J. Forrest described it: “The soil, which is the farmer’s fortune, is the geologist’s misfortune. They have had to delve down into diused mines and scramble into farmers’ wells to find out what rock formations
lie underneath the surface (for) Saskatchewan lacks outcroppings of rock. It was too much for some; geologists in those days were as temperamental as television conversationalists are today. John Ness, himself a geologist, recorded their foibles and reported that one of them, a professor from McGill University who had come west, ‘set off on the Saskatchewan River at Edmonton and followed it all the way across Alberta to Saskatchewan at $600 a month, plus expenses, mailed back his notebook and kept on going back to Montreal.’

Nevertheless, Imperial drilled 133 wells in their search, all dry, starting with the duster at Conklin, 80 miles north of Lac la Biche in 1917. The company persevered for 30 dry years and it spent $23 million before oil was finally found in quantity at Leduc. The day that well came in was one of giddy excitement for Imperial people in the West. Preliminary tests convinced the drillers they had found a significant pool, and the company took the unheard-of step of issuing invitations – to government officials, the press, almost anybody – to a public coming-in of an oil well. Imperial figured the well could be brought in at 8 a.m.; the invitations said 1 p.m., just to be on the safe side, but the well itself had the last word. At 4 o’clock in the afternoon of Feb. 13, with the temperature at 14 degrees above zero and a brisk wind blowing, the well came in and the western oil producing industry was born.

Since that historic day, other fields have been discovered, many of them far bigger than Leduc. Curiously, the price of Imperial’s shares dropped on the stock market immediately after Leduc – from a high of $17 3/4 in 1946 to $15 3/4 in 1947. If you had bought 100 shares in 1947 for $1,550 they would be worth $10,000 today. Ah, hindsight! Part of the reason for the increase in its price has been the steady procession of new Prairies discoveries – the last near Boundary Lake in northwestern Alberta last year.

Oil pools contain natural gas as well as oil, and the gas is produced with the oil. Since Imperial’s oil production is increasing, the company has undertaken an expansion of gas producing facilities in Alberta that will add 65 million cubic feet of gas to its daily production. Imperial is spending $18 million on the facilities this year alone.

In some fields, gas is produced alone. One such field is at Quirk Creek, Alta., where Imperial has leases. The company is half owner and operator of a $17 million plant there that removes 240 tons of sulfur from 90 million cubic feet of sour gas each
day before sending it on the gas distribution pipe lines.

Millions of cubic feet, millions of barrels, millions of dollars. What does it all mean?

Well, for Canada, it means that this country is one of the few industrialized countries in the world that is virtually self-sufficient in oil. Not that Canada doesn’t import oil; it does. But the material we exported brought us more money than the imports cost us – $200 million more in 1970 – and economists expect this amount to grow to over a billion dollars a year by 1975.

The impact of the oil industry on the Prairie provinces has been enormous, both directly and indirectly. Payments by Imperial of royalties alone last year in the Prairies came to nearly $28 million, and the total spent on acquiring, developing and operating the company’s petroleum properties came to another $57 million. Taxes paid to and generated for the three Prairie governments were even greater – more than $74 million.

The number of people working directly for the oil industry in the Prairies comes to something over 10,000, of which nearly 4,000 are employed by Imperial. Not very many in a labor force that numbers 1,382,000 in the three provinces, perhaps, but there’s something else you can say about the oil industry. It exerts what economists call a multiplier effect; that is, for every job in the oil industry, there are roughly two other jobs created.

On that basis, the oil industry gives employment to roughly 30,000 people in the Prairies, making everything from mobile living quarters for drilling crews, to the drilling rigs themselves. Some are at work in pipe mills, making pipe mainly for the trunk pipe lines, but also for the lines that gather oil at the wellheads and carry it to central distribution points. There are five pipe mills in the Prairies – one each in Edmonton, Camrose and Regina, and two in Calgary and together they can employ about 1,500 people.

The Saskatchewan potash industry is another direct offshoot of the petroleum industry. The first potash deposits were discovered in 1943 by an Imperial crew who were exploring for oil at the time. The industry will employ 7,000 people in 1975; already it sends its products all over the world. If you go to Esterhazy, you can’t miss the installations over the potash deposits – they soar 240 feet above the plains.

But the evidence of the petroleum industry is harder to spot. Drilling rigs with their flimsy-looking derricks are rare – oilmen use them to drill
A well, then dismantle them and move on. When an oil field has been 'drilled up'—that is, when the number of wells necessary to produce the oil have been drilled, all you can see at the surface is a collection of valves known as a Christmas tree, or a nodding horse-head pump diligently drawing up oil. Once the drillers have gone, the land goes back to agriculture and you would hardly know they had ever been there. Even in the case of the most spectacular accident on record, the land has been reclaimed and gone back into production.

That incident began when the most horrendous wild well in the history of the Prairies blew out of control on March 8, 1948, spouting oil 150 feet into the air and heaving bubbles of mud and oil out of the ground that burst in splatters 50 feet high. The oil was driven up through cracks in the ground by the pressure of expanding natural gas. Oil spurted and gurgled up at the rate of 15,000 barrels a day, turning the 10 acres around the wild well into a greasy, green-black quagmire. What oil couldn't be held by hastily-constructed holding dikes or storage tanks was pumped back into the formation through neighboring wells.

All production in the area stopped while crews fought for three months to control the spouting well, fearing every moment that a careless spark might ignite the gas that was hissing out at 100 million cubic feet a day. In May the job of controlling the well was given to an Imperial specialist named Tip Moroney, although the well was owned by another company. Moroney and his men worked another three months and were close to winning the fight when the worst happened. Somehow a spark ignited the gas, and what had been an ugly mess became a roaring inferno that raged flame and bellowed smoke more than any fire in Canada had ever done before. It brought reporters, broadcasters and cameramen from all over the world, and made the oil field at Leduc famous.

The fire raged for five days before it was choked off—and another two months passed before the wild well was sealed. It left a ghastly scar of oil-soaked earth in the 10-acre patch surrounding the well, but you can't tell that today. The scar has healed, and grain grows where the oil once bubbled up and the flames roared.

Half a century of operation on the Prairies has instilled in oilmen a sensitivity to the land as well as to the people who live on it. When drillers explore in settled areas of the region, they inevitably find themselves on private property, usually in a grain field. Their permits give them the right to explore, but it is the arrangements that oil companies make with the farmers for access roads, land rental and cleanup that retain their good will. Farmers receive compensation for any damage that is done by the oil men, and the land is returned to its original condition after they leave. Imperial's practice is to lease four or five acres to drill a well; after the well comes into production the company retains the lease, but the farmer uses the land, cultivating all but a small area around the well-head.

The amount spent on such compensation isn't much compared to the totals spent on exploration, but last year alone Imperial Oil paid out $608,000 to Prairie farmers for the privilege of working on their lands.

Imperial's decades of operation on the Prairies have affected the region, but the effect has worked both ways, and the Prairies have affected Imperial. One effect has been the creation of a pair of fertilizer manufacturing plants whose primary market was expected to be the Prairie grain farmers.

The plants were built near the town of Redwater, Alta., and completed in the spring of 1969 at a cost of more than $50 million, to supply phosphatic and nitrogenous fertilizers. Prior to their completion a chain of 398 fertilizer warehouses had been established, at a cost of another $7 million; agents were trained in the marketing of fertilizer products, and a team of agronomists recruited to take soil samples and interpret the results of their analysis to Prairie farmers. The prospect for fertilizer sales looked good, and the industry expected to sell more than a million tons on the Prairies in 1969, the year that the Redwater plants came into production. But the world market for Prairie wheat suddenly slumped, and the market for fertilizer turned out to be only 460,000 tons. The long-term outlook was still good, but to keep the industry going until Prairie demand picked up again, more fertilizer had to be exported than the marketers had counted on. Now, Prairie demand for fertilizer is rising—the industry sold more than 600,000 tons in the fertilizer year that ended June 30 this year, and hopes to sell something like 700,000 tons by next June.

It may seem a far cry from kerosene in wooden barrels to fertilizer in Kraft paper bags, but for Imperial on the Prairies it's just a new chapter in an old story: recognizing a market and working to serve it.
The Saskatchewan River
by Arthur Black

It rises in the glaciers of the Rockies, waters all the prairie provinces, and ends in roaring union with Lake Winnipeg

The river's been called a lot of names in the 280 years since Henry Kelway stood at its mouth looking west, wondering about Indian tales of the massive surge of white water he saw. The name was mispronounced - Highway of Furs; Route to the Northwest Passage; Gateway to the West; Lifeline of the Prairies. The Cree, who rode the river long before any white man saw it, called it Kiisaskahewin - the river that flows rapidly. That name, Gallicized and Anglicized and worn down by the tongues of countless explorers, traders, trappers and settlers, became Saskatchewan, and the name stuck.

And the Indians were right; the river does flow swiftly. The Saskatchewan is rarely more than 12 feet deep but the current is strong, punctuated frequently by shoals and rapids. During the trip from the Rockies to Lake Winnipeg, the waters of the North Saskatchewan drop more than 7,000 feet; the South Saskatchewan drops about a mile. Where the united river crosses the Manitoba-Saskatchewan border, approximately 18 million acre-feet of water flow past annually. That's an average of 56 million tons a day.

The Saskatchewan is not a single stream but gathers its waters in two main branches that have their principle sources in Banff and Jasper National Parks, high in the Eastern Rockies. The two streams then tumble across the prairies for more than a thousand miles before they join in Saskatchewan and race down into Lake Winnipeg. Their glacial water flows through the northern end of the lake and continues as the Nelson River to Hudson Bay.

The Saskatchewan River drainage basin looks like a huge irregular funnel lying on its side. The wide mouth of the funnel catches the runoff from the Rockies from just below the Canada-U.S. border all the way up to a point west of Edmonton. The stem of the funnel feeds into Lake Winnipeg. The North Saskatchewan is the main river and together with its lowland sister, the system drains 150,000 square miles of land including almost all of the fertile
farms land of Alberta and Saskatchewan. Excep
to Regina, Brandon and Winnipeg all the major cities of the Prairies are located on the Saskatchewan River or its tributaries. Most of them began as flourishing trading posts during the fur trade. Others came into being as tiny farming settlements, homesteaded by the traders who followed the traders and explorers. But it’s safe to bet that none of them — Calgary, Edmonton, Leth
bridge, Medicine Hat, Swift Current, Saskatoon, Prince Albert — would exist if the Saskatchewan hadn’t been there first.

Henry Kelcey was the first white man to see the Saskatchewan, back in 1691, and he reported it to his employers, the Hudson’s Bay Company. Some sixty years later a French explorer and trader named Louis-Joseph La Verendrye paddled all the way up to the confluence of the north and south branches, opening the Saskatchewan River to the fur trade.

Inevitably, the search for fresh beaver country took the traders farther inland. Seasons after season the rival fur companies — chiefly the Hudson’s Bay Company and the North West Company — established trading posts deeper and deeper inland, leapfrogging over one another along the Saskatchewan and its tributaries. By the 1780’s there were posts all the way up to the Eagle Hills, near present-day Battleford, Sask.

With the beginning of the 19th century the North West Company had established Rocky Mountain House, southwest of the present city of Edmonton. For the first time, white men were living in sight of the Rockies — the source of the Saskatchewan. During this period, rivalry between the fur trading companies became fierce and the Saskatchewan River was host to countless canoe sinkings, tent burnings and cargo thefts as agents of one company tried to discourage others from pursuing the beaver.

The fending probably reached its height in 1819, when William Williams, an unusually crusty governor-in-chief of the Hudson’s Bay Company, installed two cannons at the foot of Grand Rapids, where the Saskatchewan empties into Lake Winnipeg. Any North West Company canoeists that tried to pass, announced Williams, would be blown right out of the water. As it turned out, the cannons were never fired; the Nor’westers decided to portage around the rapids and were arrested at gunpoint on shore. They were under

standably furious. What right had the Hudson’s Bay Company to arrest them? “Legal proceedings” snapped Williams, “are all done nonsense in the North

west.” Still, Williams’ brace of cannon was considered a trifle high-handed, even by fur traders’ standards. The Nor’westers retaliated by kidnap

ping several Hudson’s Bay Company personnel at the same rapids the following spring.

Squabbling on the Saskatchewan makes colorful history but it was ruin

ous financially for the companies involved. At the supply of beaver shrunk westward, the cost of getting them become higher and higher. Such hostilities made the situation unbearable. By 1821 there was just one company left — the Hudson’s Bay Company.

With the disappearance of the North West Company, the fur trade lost much of its romance. Gone were the days when canoe fleets of traders pitted them

selves against their rivals, trying to get to the spots first. The French voyageurs may have looked aspiring as their canoes swept up and down the river, paddles blashing, but the canoe had its limitations. It was fragile, had a limited cargo space and required expert paddlers. And now that there was only one fur company, the canoe’s biggest asset — speed — became unnecessary.

The Hudson’s Bay Company was a no-nonsense enterprise more concerned with profit margins than magnificent tableaus. What it needed was a sturdy boat that could take more punishment, carry more furs and still get up and down the Saskatchewan. Company engineers studied the problem and came up with the York boat. Huge and ungainly, the York boats would hardly make anyone’s pulse quicken. They were shaped like a caricature of a canoe with sharply pointed bows, a wide mid

section and a low draught. They were slow but they were safe. And they carried a larger cargo with less manpower than the canoe.

As the fur trade settled down the homesteaders started to come. Many of them chose to travel up the Saskatchewan because it was one of the few routes that penetrated the vast prairies — the many

west. In addition, the Hudson’s Bay Company was already there, with its farms and forts along the river and the homesteaders

havens in the wilderness. More and more York boats travelling up the river carried plows, oxen, and families of

homesteaders as well as supplies and trading goods for the fur traders.

In the late 1800’s nautical romance returned to the Saskatchewan for a time. The era of steamboats came — and went. All of the steamboats used on the Sas

katchewan were screwshaws. The first one was launched in 1873, just above Grand Rapids. She struggled a grand total of 14 miles upstream before she lost the battle with the Saskatchewan current, struck a rock and sank. For the next three decades the big talk on the river was of steamboats holed, broached, grounded, beached, stuck in the ice or just plain sunk. There were still a few after the turn of the century, carrying passengers and trade goods as far west as Edmonton and Lethbridge, but most of them didn’t last long — partly because of the coming of the railroad, but mostly because of the Saskatchewan.

The river just wasn’t suited for steam

boats. For one thing, it was frozen over for a good six months of the year. Spring brought massive ice breakups followed by floods which made navigation hazardous. By autumn the river was often so low that boats ran aground even in the main channel. Add to all that the hundreds of gravel shoals and sand banks that shifted from one trip to the next and you have a pilot’s nightmare. Nowadays, people don’t use the river much to get around. There are highways, railways and airlines to handle transportation. The only transport boats still in use are car ferries, which cross the river at points where traffic is too light to justify a bridge.

As the river became less important as a highway, its usefulness to industry increased in other ways. Most manufacturing operations require a large

water supply and in the Canadian west, there is no better supply than the Saskatchewan.

The petroleum industry needs water two — Imperial Oil’s Edmonton refinery uses about 140 gallons for each barrel of oil processed. The refinery stands just south of the North Saskatchewan River, just east of the city. It’s part of an industrial area that includes a steel plant, pipeline terminals, chemical plants as well as other oil refiners.

More than two and a half million gallons of water are pumped into the river daily from the Imperial refinery. All of it is treated to remove impurities and comply with

Gardiner Dam at Outlook, Sask., created Lake Diefenbaker, with 475 miles of shoreline and enough water to irrigate 200,000 acres.
In 1951 an irrigation project was completed that revitalized nearly half a million acres of parched farmland around Lethbridge. But the biggest development was yet to come. In 1958 the province of Saskatchewan and the federal government got together to form the South Saskatchewan Development Project—designated to provide irrigation, hydro-electric power development, a reliable water supply and flood control, as well as improved recreation facilities for the southern portion of the province.

Other industries such as steel, chemical, pulp and paper and the potash industry need water in even greater volumes than the petroleum industry. The recent surge in development projects on the North and South Saskatchewan reflect in part an attempt by the Prairie Provinces to attract more industry.

Henry Kelcey and the traders who followed him saw the Saskatchewan as a route; the brute force of its mighty current was an obstacle. But to the engineers and scientists of the twentieth century, the astounding waters and the force of their flow was a challenge of a different kind. How could they harness the water and make it work for them? Many schemes were talked about over the years but they were either too expensive or too complicated for a relatively limited agricultural economy to undertake. Nevertheless, by 1943 a few successful power developments were operating on the Bow and Elbow rivers—two tributaries of the South Saskatchewan.

The showpiece of the project was completed in 1967—a gigantic reservoir near the town of Outlook, Saskatchewan. Both the South Saskatchewan and the adjacent Qu'Appelle river were dammed to create an immense reservoir covering nearly 110,000 acres.

The combined dams impound the high spring and summer flows of the South Saskatchewan, forming a freshwater lake with a shoreline of 475 miles. The stored water is released as needed, either for irrigation or power generation—there are three hydro-electric units, each with a capacity of 62,500 kilowatts. The reservoir is designed to supply enough water to irrigate 200,000 acres. Not all the farmers in the area were overjoyed however. A few with farms in the irrigation area preferred "dry land" farming. Switching to irrigated farming meant they would have to adopt new techniques and they preferred to stick with the methods they knew. They sold their land and moved away.

The provincial government bought these farms and resold them to farmers wanting irrigated acreage.

But most westerners welcome the results of the project. This one rain-made lake has increased the useable water resources of southern Saskatchewan by 75 per cent. And there are 400,000 westerners living within 100 miles of it.

The development at Outlook is only one link in a series of projects up and down the North and South Saskatchewan—all aimed at taming the river that has had its way since the last ice age.

Hydro development projects on the Saskatchewan run with the current—they started in the Rockies where the fast but manageable tributaries of the Saskatchewan could be harnessed and developed with relative ease. As technology advanced the engineers marched eastward with the river, damming it at favorable locations. It was inevitable that they would one day try to tame Grand Rapids where the full throat of the 1400-mile-long river gathers to hurl itself down the final three-mile run into Lake Winnipeg. Grand Rapids is the Saskatchewan at its most terrifying. Roaring and foaming the river drops 75 feet over the three miles. Travellers have always treated this part of the river with caution. Steam boats prudently began their voyage above the Grand Rapids and even the voyageurs preferred to portage around the run.

But in June, 1964 a curious thing happened. The Grand Rapids stopped. Engineers had built a dam as part of yet another hydro-electric project and on this spring day the gates were closed and the Grand Rapids simply ceased to exist—temporarily. The ages-old roar became softer and softer. The rush of water became a stream, then a trickle, then nothing. Where Henry Kelcey had stood gazing at furious white water there were now only a few quiet pools and many flopping fish. The quiet pools held thousands of pickerel, whitefish, northern pike, goldeye, bass and sturgeon. One commercial fishermen claimed he made a $1,400 catch that day.

But it was only a test, and the gates were opened to let the water flow through once more. Nevertheless, the point was made. From that time on the rapids would flow at the will of man, not the caprice of nature.

At Grand Rapids the river is 500' wide and flows at 80 m.p.h. between 25 weaks