Good roads don’t cost money—they make money

When a highway department builds a new road or replaces a bad road with a good one, many of us tend to think of it as a regrettable but probably necessary burden on our pocketbook. This is one reason why we are not modernizing our roads fast enough to keep pace with the growing demand.

What we need to learn is that a good highway built to fill a need is a moneymaker, not an expense. It can generate enough revenue to pay for itself and actually add to our provincial and national wealth by increasing land values, lowering automobile operating costs, reducing accidents and saving time.

Highways properly built and located are income-producing investments just like factories or commercial properties. All highways, not merely toll roads, collect an admission for from their users. For every mile a vehicle travels, its owner pays money to the builders of the road, in the form of gasoline taxes, vehicle registration fees, and excise and sales taxes on cars, tires and other auto accessories. In 1956 for the average of Canadian highway users, these payments amounted to one-and-one-half cents a mile.

The better the road the more money it collects, for a good road outdraws a bad one just as a good movie outdraws a grade B feature. A good road that replaces a bad one doesn’t just rob some other highway of traffic; it generates new traffic by relieving congestion and making travel more pleasant, and therefore creates more income.

We don’t know how much new traffic a good highway generates but we do know that in 1956 Canadians travelled 38.8 billion vehicle miles; four years earlier they drove only 26.8 billion vehicle miles. Part of this increase was undoubtedly due to the post-war road building programs.

In 1956 Canadians paid nearly $600 million—in gasoline taxes ($295 million), registration fees ($128 million), vehicle excise ($72 million) and sales ($98 million) taxes. This is slightly less than was reported spent by all governments (federal, provincial and municipal) on new road construction and highway maintenance and administration. On this basis our highways would seem to be paying for themselves in admissions charged.

But highways do more than merely pay for themselves in admission fees. They create wealth. Where a good highway replaces a bad one adjacent property values rise. In many cases, for instance Ontario’s Queen Elizabeth Way, factories and housing developments are established along the highway route, far from the city in distance, yet close to it in time. Such highways increase land values over an ever-widening area.

Good roads are also money savers for motorists. It costs less to operate cars on good highways than on bad: less gear-shifting, fewer bumps, less oil and gasoline consumption and smaller repair bills. The Ontario Department of Highways, after tests, estimated that it costs two cents a mile less to operate a car on a four-lane divided controlled-access highway than on a congested two-lane highway. In 10,000 miles of driving this is a saving of $200, or enough to pay for nearly 2,000 miles extra driving. In addition these tests showed a 30 percent saving in time, and time is often money, especially in the trucking business.

Studies both in Canada and the United States suggest that the accident toll can be cut by 25 percent through improved highways. A lower accident rate would, in turn, almost certainly reduce insurance premiums and produce further savings.

All these factors suggest that we should learn to regard and build our roads as income-earning investments.
It was five below and six miles to the nearest homestead. The cold actually felt good on my burned hands and face but the pain was growing worse. Nevertheless, behind me was a sloop-load of heavily-lumbered men, in need of a doctor. It was my job to ride ahead and flash the alarm...

But that’s not a day I like to think about. I would rather describe the still, clear mornings, the silver ringing of the sleigh bells, the creak of the sled runners on the frozen snow—and most important—the true pioneer spirit of the people. But when I realize how the wildcat well near Pouce Coupe in British Columbia was the first gas discovery in what has become the Peace River natural gas field, I feel a warming sense of achievement and memories, good and bad, flooding back.

It was the middle of June in 1921. I was 28 years old, freshly arrived in Edmonton after seven years as a roughneck, toolpusher and driller in the southern United States. I had been hired as a driller by Imperial Oil and was to join a drilling crew that was leaving for the wilderness in northern British Columbia near the Alberta border. A small oil seepage had been spotted near the intended drilling site. We were to see what could be found.

On the fourth of July we climbed on the train at Edmonton. There were eight of us. Homer "Pee" Bradley, our head driller and about 60, was from Pennsylvania. Glen Fogg, a toolpusher, and I lived in Chante, Kansas, when we weren’t out in the field. Harry Javons, our second toolpusher, was a gifted old fellow who owned a ranch near Edmonton. His son, Charlie, was one of our licensees. The other was "Chris" Christofferson, a homesteader in the Pouce Coupe region. The company clerk was 24-year-old Fred Cameron from Petrolia, Ont. Our cook was known as "Dirty Old" Brown. He didn’t deserve the nickname—he was an immaculate man and kept his kitchen absolutely spotless.

It was an incredible train ride north. For the first 50 miles we moved at a reasonable speed. Then the roughed grew rougher and the train began to slow. Every mile brought bigger bumps until it became almost impossible to stand up although the train was plodding. With the other passengers— commercial fishermen, loggers, prospectors and homesteading families—we crouched around in those crowded coaches like penguins in a miasma.

Later we learned the reason for our jolting ride—meekeep. As the train passed over the tin the truck would sink into the soft ground, then spring back into place when the train moved on. Two days and two nights out of Edmonton, we reached Grande Prairie, 400 miles away.

Dusk came early that far north. At five the next morning the sun was heating down strongly and we were on our way to Pouce Coupe (it rhymes with "house cooper") in a Model T Ford loaded down with baggage and extra gasoline. I had never seen such country before—virgin prairie, dotted with lakes and small stands of poplar and spruce that had somehow escaped the forest fires that so frequently burn all summer in the prairies.

Late that afternoon we reached Pouce Coupe, a tiny village about 40 miles south of the Peace River near the Alberta border. It was little more than an overgrown trading post—a huddle of unpainted log buildings dominated by the general merchandice store, the police post and the hospital. I was later to know so well. We didn’t stay long but pushed on to Rolla, 28 miles north. Compared to Pouce Coupe, Rolla was a thriving metropolis with drugstore, police station, bank, telegraph station, livery biax, general store and the two-storey log "shopping place", all newly built on the assumption that oil discoveries would bring prosperity to the region.

The next morning we changed our Model T for a home and wagon and set off for our location over a rough trail that had been freshly hacked out of the bush. We moved eastward over rich, rolling farm lands into Alberta and the Pouce Coupe River country. We began to meet the bush-country pioneers—tough characters with names like Bad-Eye Brown and One-Eye Jones. And there was John Taylor, who headed drilling equipment between Grand Prairie and his spread near Rolla. Mild, uncomplaining Mrs. Taylor cooked for perpetual relays of cowhands and passengers—whose language would curl your hair.

As a young driller back in 1921, Ed Parr went looking for oil along the northern B.C.-Alberta border. Instead he found a gas field, adventure and—finally—disaster.

But most of these men became our very good friends.

Fourteen miles east of Rolla, in a picturesque setting 30 yards from the river we found the camp built for us in the winter before by an Imperial construction crew. It was simple but adequate—a cookhouse, two-room bunkhouse and a warehouse. A cool spring flowed nearby.

Our equipment was waiting and we went to work right away. It took us 10 days to rig up. Then we spudded in. Working 12 hours a day, six days a week, we hammered in our drill-bit. It was a cable tool drill, a sort of enormous chisel that is repeatedly hoisted by steam power and dropped back to the bottom of the hole. You don’t see cable tool rigs out west any more (cable rigs are used) but they’re still popular in southern Ontario where they are more suited to shallow drilling conditions. Keep...
The abundant wildlife was a novelty to most of us. We tossed two bear cubs, an eagle and assorted chipmunks. Once a huge brown bear lounged up across the river. Cameron and Charlie Javers brought it down with rifle fire.

Hunting was our chief diversion. Mosquitoes were our worst enemy. I had been told there were more mosquitoes in the Canadian north than anywhere else in the world. Now I believed it. We slept under netting during the height of the mosquito season we worked with netting over our heads and shoulders. Even with these precautions we were often badly bitten.

Just after the middle of December, after six months of steady drilling, we closed the camp for the winter. It was March when we started and the ground was frozen solid, making transportation easier. Now we could walk across the river on the ice to the east side where game was even more plentiful than on our side. Then one morning spring broke with a rear and the normally placid stream became a fast-moving, ice-choked current.

One memorable day in April Charlie and I decided to build a raft and cross the river at a spot near camp, where the river was not only relatively quiet. We underestimated it; in mid-stream we found it too deep to see poles. Suddenly we were drifting into rapids between steep narrow cut-offs. The Ricky raft nosedived, bounced off rocks and bobbled like a cork. We lost our poles. Waves drenched us. We were completely at the mercy of the 10-mile-per-hour current and we could only pray the raft would veer over to the west bank, the side our camp was on.

Six miles downstream we managed to beach the raft. We plodded home miserably, in below-freezing weather, our wet clothes stiffening around us. We were lucky, except for chilblain skin we emerged from the experience without ill effect.

Late in April the weather turned dry, leaving the mosquito population but increasing the fire hazard. As a precaution we cut a strip of ground between the camp and the road. As it turned out, we were to owe our lives to that fireguard.

On a Saturday afternoon we were on our way to meet a rig coming in from Rolla. There were forest fires to the south and to the west of us and the smoke hung thickly in the air. We were climbing out of the cutline when we saw that the sky was much closer than we had suspected—It had broken out over the rim of the fire and camp was burning. Our only course was to cut the 150-yard strip as fast as possible. We couldn't pull it open. Pop Bruley smashed a window. The pressure eased and simultaneously the gas-filled dingus clunked ex-

ploded. We were literally blown out of the pad.

It was a bright crisp five below zero. Burning and bleeding skin hung from our faces and hands. We rolled in the snow and put out the fire in our clothing and with bare burned hands slapped out the flames on each other. Then we turned to the blazing cookhouse.

In that pioneer age wilderness wildfires boasted no fire-fighting equipment and no adequate first aid kits. We wrapped torn-up sheets on our hands, threw snow on the bunkhouse roof and dashed back for buckets of water. There was nothing we could do about the cookhouse; it burned to the ground, destroying our entire food supply. But we managed to save the bunkhouse. Our next task was to drain the equipment, a painful job when it involved working with burned hands near the hot boiler.

If the year had been 1958 or even 1948 our situation would have been so desperate. We would have simply radioed for help, and an aircraft would have been dispatched within minutes. Or, at worst, we would have loaded our injured into a modern trailer and driven to the nearest town.
However, we had one lucky break. Two of John Taylor's men with team and sleigh happened by and galloped over to help us. Some of us could hardly see, so swillun were our eyes. Our fireman's hair was hurned away and his head a dooter of bluts. Elderly Pinn Bekyll, held to begin with, soon became delirious with pain. Taylor's men rook seven of the crew into the sleigh. Someone had to go ahead and have a relay team made ready to speed them into Rolla. I'm no hero but I was better off than some of the others. I crawled onto Cameron's horse and painfully rode six miles to the first homestead.

I slid out of the saddle and fell against the door. They helped me into the house but I couldn't stand the warmth of the room and had to go outside again. They realted fresh horses and, when the sleigh arrived, raced us into Rolla.

There the telegraph operator wired Pouce Coupe for a doctor and I sent a telegram to company headquarters in Edmonton. The long distance medical person arrived. About midnight a doctor and nurse arrived and spent much of the night working on me.

In the morning they gave me hyps, bundled us into sleighs and packed hot rockes around us. Though we couldn't see, we could hear, and the jingle of the sleigh-bells was music that lulled us to sleep.

Every five minutes someone would ask the driver, "How much farther?" It is only 28 miles from Rolla to Pouce Coupe but I still remember it as one of the longest journeys I ever took.

At Pouce Coupe the little Red Cross hosp-

ital was in an upstairs. They already had a handful of male patients and four or five maternity cases. They moved in extras. They ran out of bandages and used strips of boiled sheets. Some of us were like bu-

bees, buzzing from the bed to the bath-

room. But the doctor, two nurses and some volunteers worked around the clock, treat-

ed us expertly and we convalesced, at var-

ious rates of recovery, with the company paying all expenses and salaries.

After six weeks I was ready to go home.

Kansas. I will never forget that final

morning in Pouce Coupe. It was 28 below and the air was still and clear as crystal. The rising sun stretched long shadows be-

hind the log buildings. Smoke from the chimneys lastly spiraled up. Over every-

thing hung a deep wintry silence broken only by the occasional Yelp of a dog. As I climbed into the sled that would take me to Spirit River, I had the feeling I would never see Pouce Coupe again. It was a little like saying good-bye to an old friend.

After my convalescence I headed for the tropics. I had moved to Colombia, then moved on to Venezuela, Ecuador and Peru.

Perrick, wounded by blust, was taken down some time later by another crew.

Unidentified creosote stands beside remnants of cookhouse. Note bandage on his head.

Pair and "one that didn't get away." Hunting was crew's chief diversion.

I was a toolpusher, then a drilling foreman and finally a general drilling superinten-
dent. Then after 24 years in South America I retired from the oilfields.

Last fall, from my home in Chanute, Kansas, I went to Alberta for the ceremony marking the completion of the Pan American Transmission Company's gas pipeline, which links the Peace River district with Vancouver and the U.S. Pacific coast. At last there was a market for the natural gas we discovered 35 years earlier near Pouce Coupe.

Naturally my mind went back to those pioneer days. Once again I could feel the panic that gripped us the day the cook-

house exploded. I remembered the entry ride down the river on the runaway raft. I recalled vividly the day we had to crawl through the forest fire.

And yet I could feel no bitterness. There were so many good memories—the sweet fresh taste of vegetables grown on virgin prairie, the friendliness of those courageous homesteaders and the indescribable plaisancefulness of the Canadian north—that the hardships all seemed worthwhile. Par-
ricularly I remembered the old men who had come to visit me in the hospital. "I got up to the Pearly Gates once," he told me in his gravel voice. "They were busy so the gatekeeper said, "'Go on home. Pouce Coupe is a good place to be here.' I think I know what he meant.

Bill MacPherson

Another article in this issue which we regard in a rather special way is the opening piece, The Wildcat That Blew Up In Our Faces. We'd never even thought of doing a story on this old wildcat while until the day manuscript landed on our desks from Chanteau, Kansas, along with a letter from the author, E. R. Parr, explaining that he'd described these adventures to friends quite often in the past and that now—after more than 35 years—he thought it was time they appeared in print. We thought so, too, and we doubly delighted when we found that he and another of the original crew members, Charles Javens of Edmonton, were able to provide plenty of authentic photographs to illustrate the story.

We almost felt like breaking open a new box of cigars when we picked up a newspaper in mid-March and read that a young Eskimo couple, Simonie and Marta, had just become parents of twin daughters in Ottawa (theoretically setting what is believed to be a precedent for the federal capital). The proud papa is the Simonie, who was featured prominently in our December issue on his "home town," Frohberht, NWT. The twins have two older sisters, Sarnamik and Flementsine, one of whom was photographed with her father especially for our story (see photo). Oh, yes, the twins! Marion and Zenne, weighing five pounds, nine ounces and six pounds, four ounces, respective-

ly, were doing fine when we last heard.

Sarnamik and Zenne.

WE STAND CORRECTED: Along with a hefty batch of complimentary letters and requests for more information, all arising out of our two recent articles on town planning, came a letter from Major R. J. P. Dawson of Mount Revelstoke, B.C., expressing some understandable indignation over a statement contained in the earlier article of the two (They're Changing the Face of Canada, December). As the mayor pointed out, the article credited in saying that the Town of Mount Royal has provided "no place for motor-

able to buy gasoline and some (drivers) have to travel up to two and a half hours to get to a service station." Mayor Dawson provided a map to show that his town has no less than 13 service stations within its boundaries.
THE MEDICINE HAT TRICK:

3 YEARS WITHOUT A TRAFFIC DEATH

It began as a newspaper gimmick but this safety campaign caught on. Today this Alberta city holds a record for all North America.

This is a story which can be outdated in much less time than it takes for the magazine to be transferred from the press into your hands. It was published long before I finished writing this sentence. It can be validated in the split second it takes the last breath to leave the body of a traffic victim.

This is the story of a city’s struggle to save the lives of people who would otherwise be written off as inevitable statistics in the annual roll of traffic death.

At the moment of writing, the city—Medicine Hat, Alberta—has been almost 3½ years without a traffic fatality. It is proudly, yet serenely, aware that in this respect it stands alone among all the cities of North America with populations of 25,000 or more—a category into which it fits with about 1,000 to spare.

How has this record been achieved? Even the citizens of Medicine Hat and environs don’t agree on the answer. One view was expressed emphatically by a district rancher after a minor accident. The grill of the rancher’s car had been struck by an oncoming car whose driver had paid scant attention, if any, to a “Yield Right of Way” sign. “It’s not through carelessness that Medicine Hat’s gone twelve hundred and whatever-it-is days without a traffic fatality,” the rancher declared. “It’s through the grace of God!”

Others give local motorists a lot more credit than that for helping the city perform “the Medicine Hat trick”, E. A. “Red” Ames, a big, square-faced man who has been dealing in cars for 30 years and in traffic safety matters for nearly 20, says: “Our drivers are aware that they’re working on quite a traffic record, and I think it’s showing them down. They’re still bumping, but they’re not hitting hard and smashing things up.”

Ames can back up his observations by pointing to the city’s traffic record. Despite a steady rise in population and motor vehicle registrations, Medicine Hat got through 1957 with only one more traffic injury—for a total of 58—than it had the previous year. Furthermore, it was the only place in Alberta that managed to reduce its total number of accidents over the same period—down to 287 from 312.

On the face of it, this traffic record might seem to be the result of nothing more than a smart gimmick, for that is certainly how it began. The local newspaper, The News, realizing the city had gone a considerable time without a fatality, published a front page “box score” and added days to the score as the fatality-free period lengthened. After that, it might appear, motorists and pedestrians simply gave in on the “game” of establishing a national safety record.

But it developed into much more than a game or a gimmick. It became a matter of civic pride that gave momentum to the hard, relentless progress of safety officials. Soon they were fighting against dangerous traffic practices with the strongest possible weapon—social disgrace for those who cause accidents.

The thought of being to blame for even a minor accident is enough to send a shiver up the spine of the average citizen of Medicine Hat. Much of this safety consciousness also seems to rub off onto incoming visitors. The moment they reach the city limits, where a huge white sign tells how many death-free days the city has had and warns: “Don’t You Be Our First.”

As the number of deathless days increases, so does the social pressure against traffic offenders. Says Red Ames: “If I caused a fatal accident but didn’t get hurt myself, the people of Medicine Hat would probably shoot me down anyway.”

Most people in Medicine Hat are accustomed to this safety atmosphere now, and it’s still something to make Ames shake his head in wonderment. He remembers back in 1940, when he and a few others were struggling to get a bunch of the Alberta Safety Council organized in the face of formidable public apathy. They “caded” what publicity they could and scraped together a promotional dollar or two by selling motorists coupons for a dollar prize which could be redeemed in the form of a car safety check at a city garage. The safety council paid the garages 75 cents per coupon and kept 25-cents.

It was discouraging work, but they stuck with it—and just before Christmas, 1955 they struck promotional gold. Out to “cudgel” some publicity, they approached Fred McGuinness, then assistant publisher, now publisher of the Medicine Hat News, and asked him to do what he could to get a safe-driving message across to the public for the holiday season. Somebody—either McGuinness or Bruce Hogle, then city editor—remembered a news item which said Fort William had just ended a record 628 days without a traffic fatality. The obvious question was, “How are we doing?”

The files showed that Medicine Hat was doing pretty well. The last traffic fatality had occurred some 400 days earlier, on November 12, 1954, when a 2½-year-old girl had toppled from a milk truck and been killed. Onto page one went the story and the challenge—in the form of a fatality-free box score that has appeared daily ever since.

The challenge caught the public’s fancy immediately, and The News followed through with a hard campaign which produced at least one traffic safety story, editorial, or photograph almost every day. The first target was 500 fatality-free days, and when it was reached, on March 26, 1956, The News published a special edition to mark the event. In the meantime, the revitalized safety council had been hard at work on a block-by-block hunt for traffic hazards, and on “500 Days” presented to a special meeting of city council a 10-point program to eliminate them. The program was approved in toto.

The News promptly upped the target to 1,000 fatality-free days, added to its box...
score a summary of traffic violations and adopted an iron-clad rule that the name of every person convicted of a traffic offense would be published. (Not long after that, the name of a prominent member of the safety council was included among the day’s “catch” of offenders.)

As the box score increased, so did traffic safety activity in Medicine Hat. The safety council realized from the outset that public education was the greatest force it could use, and there was no practical way of reaching more than a small fraction of the adult population. So they concentrated on school—talking to students, showing films and organizing safety patrols. For one school year, youngsters at Connaught School conducted their own unofficial safety court, “trying” fellow students for such offenses as riding bicycles on the school grounds and failing to heed the signals of a school patrol. A typical penalty for a careless cyclist was a 50-cent fine and the impounding of his bike in the school basement for a week. Safety still is uppermost in the minds of Connaught School students, but the job of warning or punishing the few offenders there is in the hands of the teacher in charge of the school’s safety patrol.

The Alberta Motor Association, through its Medicine Hat branch secretary-manager, Larry King, is also deeply involved in the safety program. The AMA regularly offers driver-training courses at less than cost to high school students and adults, provides all the equipment for school patrols, and generally gives strong support to all safety programs involving youngsters, such as the annual Teen-Age Safe Driving Road-e-o (sponsored by Imperial Oil, the All Canada Insurance Federation, and Junior Chambers of Commerce). This year the Road-e-o finals are to be held in Medicine Hat, thanks to the city’s well-publicized safety record.

King also sits on a civic safety committee which was set up by city council as part of the emphasis on traffic safety. It was through his membership on the committee that an unusual type of school-zone warning sign was introduced. While driving through a town in Wyoming, he saw a battery-operated, flashing amber traffic signal on a pole, which could be wheeled out on a street by a school safety patrol during peak periods of activity around the school. The AMA rounded up the materials for the device, and Mr. King had one of his garage mechanics put it together. Medicine Hat safety patrols now have three of those portable caution lights in use, and they have proved a most useful answer to the problem of motorists who ignore permanent school-zone signs on routes they are accustomed to taking when school grounds are occupied.

King, who arrived from the AMA’s Calgary office only last July, says he’s found the city a wonderful place for a safety official to operate. The secret, he feels, is in the people who make up the civic traffic committee.

“You’ve got everything right at hand on that committee,” he said. “If it’s a problem of enforcement, you’ve got the police chief right beside you to take action; if it’s a traffic engineering problem, you’ve got the city engineer; if it’s street layout, you’ve got the city planner. I’ve found that to be a unique aspect of the setup here. In other places safety committees are usually made up of persons deeply interested but with no authority to do anything about specific problems. Medicine Hat’s arrangement is something other centers might well copy.”

Another man who finds his job made easier by Medicine Hat’s traffic-conscious citizens is Sgt. Bill McKenzie, head of the city police traffic squad which was formed a year ago on the recommendation of the safety council. (Before then, traffic work was handled by police who had other duties as well. The official strength of the squad is three, but it has hundreds of part-time “officers”—ordinary citizens who are willing to report any traffic violations they see. Such citizen reports are welcomed by McKenzie, who issues warnings on first reports and summonses if the warnings are ignored. Citizen complaints were responsible for at least two dozen traffic convictions last year. (The police are now carefully watching one motorist who was named in a typewritten, unsigned citizen complaint which read: “Why is So-and-So ever allowed to drive a car? When I saw him coming to an intersection, I crossed on a green light. I did not hit back into the grocery store on the corner and cover my head!”)

Says McKenzie: “We catch up with young bad-attitude fellows. They’re the ones we want particularly—and they’re the ones we’re getting.”

But he is just as anxious to catch young drivers before they develop bad attitudes. It’s a job that has taken him into every school in the city. “The response has just been 100 per cent,” he reports. “Before we started giving talks and showing films in the schools, you could sense the antagonism the kids felt toward us. Now we can’t drive down the street without kids waving at us and smiling.”

All these forces were at work in Medicine Hat as The News box score kept rising. The city claimed a national record when Fort William’s fatalism-free mark of 628 days was broken, only to discover that Prince Albert, Sask., combining fine

But private citizens and safety officials alike insist that it has not been all luck, that there HAS been a considerable heightening of safety-consciousness. Alberta’s minister of highways, Hon. Gordon E. Taylor, summed up the lesson the entire continent can learn from Medicine Hat’s experience when he said: “Too many people today view as inevitable a number of accidents in every part of the country every year. In other words, people have come to look upon death on the highway as something about which we can do little or nothing. Medicine Hat showed that this was definitely not the case when a city of some 20,000 people is able to achieve a record without one fatal accident over a period of six months of heavy travel in all seasons of the year and in all the various types of weather.”

And what of Medicine Hat if its vaunted traffic record fails? Will it then be simply the end of a gimmick, with nothing left to show for it?

“Definitely not,” says Chief Constable A. R. Bull. “I think the people of Medicine Hat have enough gumption that they’d start at the bottom again. And I’m convinced that there is a considerable degree of permanency to the safety-consciousness that has already been built up.”

“Look,” says Ald. Phil Carry, the youthful chairman of the civic safety committee, “we’re not out to set records—we’re out to save lives. It’s been established that from a certain number of accidents the law of averages demands a certain number of deaths. We’ve already saved lives by holding down accidents, but our objective is zero accidents. Maybe we’ll never reach it but we’ve got to keep trying. It depends on the attitude of the people.”

Police Sergeant McKenzie lectures on traffic safety to Medicine Hat W.O. Cub pack
An Airport After Dark

The most dramatic scenes played in the everyday world of air travel are enacted not in the plane but on the ground. That’s the contention of Review staff photographer Roy Nicholls, whose photographic testimony is presented on the cover and on these and the succeeding five pages. Biding his time until darkness closed in, Nicholls used his camera to depict an airport at night as a half-real world of arrivals and departures, excitement and boredom, activity and listlessness, artificial light and nocturnal gloom. With the permission of the Department of Transport and Trans-Canada Air Lines he prowled around until he had captured on film that odd combination of mechanical discipline and human comedy to be found only at a big, busy airport. His scenes are all laid at Malton, which serves the most populous region of Ontario, including Toronto and Hamilton. But, except for a few superficial details, it could be almost any airport anywhere in the world. For planes are planes and people are people no matter where you go.

At night an airport is a world of contrasts: brightness and gloom, excitement and boredom, split-second timing and hours-to-kill. Photographs by Roy Nicholls
"Hurry up and wait"—the old army slogan—would seem to belong now to airline passengers. Most of them choose to fly because it’s fastest, but few escape less than 20 minutes in the waiting room and many spend an hour or more. For some it’s a time to go over the details of the business conferences they will face at the end of the journey. Others have nothing better to do than close their ears to the babble of the crowd, the bark of the public address system and the confused shuffle of hundreds of feet—and naps. Some buy magazines. Some telegraph flowers. Some—pessimistic or just wisely cautious—sign up for short-term insurance at the mechanical vendor. In one person’s hand a paper cupful of pop is a treat for a tiny relative come out to say goodbye; in another’s it’s a sorry substitute for dinner.

Whether they spend their time sitting, standing, walking, eating, reading, sleeping or staring, they all have one thing in common—the thing that brought them together and which, paradoxically, keeps them apart: they’re people on the move, each with his own reason to hurry up and wait.
Even at its busiest, an airport waiting room is serene compared to the offices that operate beyond the public’s gaze. Back here is a strange little world of telephones, teletypes, radios, mountains of paper and dozens of people who talk in a jargon almost unintelligible to the outsider. While the “met” (weather) people are plotting the highs and lows across the continent according to the data pouring in over the teletypes, the men in flight despatch are deciding—subject to the pilot’s veto—whether it’s fit weather for flying. While the control tower is talking planes in and out of the airport, a separate radio office—the area control center—is policing a patch of sky extending 23,000 feet up and 300 odd miles over the horizon. While the mechanics out on the tarmac are making dozens of checks and whatever adjustments are necessary, a tank truck is pumping thousands of gallons of fuel into the aircraft. Few passengers know about more than a small fraction of the people who help get the plane safely into the air. But anonymity doesn’t discourage many airport personnel. One man from the control tower recently summed up the way most airport people feel about their jobs: “When you go home you feel you’ve done something important.”

Few passengers ever get a glimpse of all the work going on behind the scenes.
Fuel's in, so all aboard for takeoff...

Now, as the plane stands waiting, its wings laden with perhaps 10 or 20 tons of fuel, the passengers break from the waiting room exit. Some half-walk, half-run like impatient children who have been kept in after school. Others seem determined to make it a dignified walk, even if it costs them all chances of getting a good seat on the plane. Among them may be one of those increasingly rare creatures—the person who has never flown before. He feels alone in his excitement, but he is not. Some of the most nonchalant-looking passengers will always secretly regard the plane—any plane—as a magic and mysterious device and flight as a minor miracle. To them, the impending departure will be the beginning of an adventure in the sky. To the photographer who remains behind, it is already the end of a much more compelling drama on the ground.—H.W.T.

Chemists in Imperial's service labs at Sarnia spend most of their time finding ways of making new oil products and making oil products better. But every once in a while they get a letter that sounds just a little bit strange.

The "sabarunga" case will probably remain in the service labs' annals for years as the "wackiest" ever. But the lab men have received other bewildering questions and have found the answers in their test tubes.

Some questions, like the one from the Nova Scotia farmer, have little or nothing to do with the oil business, and a few are so odd that they're not really scientific questions at all. "Oh," says Len Whitchurch, the lab,pectacular head of the service labs and an assistant manager of Imperial's research department, "the only way to tell the valid requests from the worthless ones is to experiment. We can't afford to turn them down now because just because it looks strange, it could turn out to be an interesting discovery."

Farmers often send in samples of "oil discoverers" which usually turn out to be dirt and water. But there's always a chance that one of them will be oil. Then some
body else—perhaps a chemical company—writes in and says, "Here's a substance we've been putting in our fuel oil, and it seems to do this or that for it," and the lab men, after exhaustive testing, agree that it is indeed a useful additive and recommend that the refiners start using it.

Working in nine labs with about $750,000 worth of equipment the team of nearly 100 (including 22 chemists and chemical engineers) has three basic jobs: making sure Imperial's product is up to standard; finding better ways of making the products; and testing new gasoline and lubricants under everyday conditions.

One kind of work they don't do is long term research; they are busy "to the long-haired boys" in another section of the research department, which is housed in the same building.

Although their work thus lacks the glamour of long-range, scientific crystal-gazing, they do occasionally come up with some pretty fruitiful-blossoming answers to fundamental problems. A major airline wanted to know what was causing the filters in the engines of its jet planes to wear out so fast. The answer was "sun-beams"—dough Whitefield's men didn't put it quite that way in their report. Norman Shipley, head of the lab connected with jet engine filters manufacturing, had put some of the jet fuel under an expensive piece of machinery called a mass spectograph. It confirmed suspicions that the fuel was being polluted by dust particles, about one thousandths of a millimeter in size, which are always floating about in the air. They're the things that make a shaft of sunlight look like a "sunbeam." Any time the fuel was exposed to open air, it absorbed some of these particles. Shipley and his colleagues devised a test—which will probably be accepted soon throughout the world—for measuring the amount of these particles. To prevent jet fuels from getting with harmful quantities of them, specially-developed moisture filters were installed in fueling equipment across Canada.

The service lab men have found that even the most exhausting tests won't keep all the "bugs" out of every new oil product that goes onto the market, no matter how carefully the tests are made. The first batch of a new heating oil that went on the market recently in one eastern town caused a mysterious "pitting" of oil tanks. Lab tests showed that an additive was used to stabilize the oil was combining with the metal of the tank in an electrolytic action and corroding it. The lab men prescribed a second additive to prevent the first one from causing corrosion.

"Getting the bugs out of products" has sometimes been more than a figure of speech. Hector Tronier once got a complaint that a turbine oil being stored in one tank kept getting tiny lumps in it. None of the other tanks nearby were affected. Tronier and his colleagues sampled from the troublesome tank, then sent a telegram asking whether the tank was empty at the top and, if so, whether there was a light above it. The reply to their cryptic message contained the answer they had expected. Above the open-topped tank was a light bulb which burn continuously, attracting flying bugs that fell into the oil.

The labs have other reasons for keeping a continual check on all turbine and generator oils: both are made to last through 10 years of continuous operation and are often used in isolated spots where no one is around to inspect the machines for months at a time. Such is the case with the oils Imperial designed especially for use in the generators operating Canada's new micro-wave relay system for television and telephone transmission, which will soon reach coast-to-coast. If any of the fully automatic generators in the relay stations broke down, the television network and hundreds of long distance phone calls would be cut off.

One of the most familiar complaints the labs get is from farmers who find their motor oil is turning grey. They write农场 chemicals manufacturers who find they can't make a profit from materials who find their motor oil is turning grey. They write their manufacturers for information. Analysis showed that the labs already have an answer. The grey men's oil is absorbing oxidized leaf salts from combustion gases. The oil retains them, keeping them from settling in the engine, which they may harm. Thus the oil is doing a good job, not a bad one.

One phase of the work in the labs is to make free tests on oils already sold, particularly for customers with heavy equipment that is highly dependent on fuels or lubricants. That way, the company can be aware of new problems that may arise under new operating conditions. New oils tested on major railway locomotives are checked every few months. Grass Lakes ships oil in and tests it for periodical testing.

One trucking fleet said its diesel engines weren't working properly. It wanted Hector Tronier's group to make a special check on one truck in its fleet to see if it was "the oil that was at fault. Nothing was wrong with the oil. The trouble was in the exhaust system. The driver had put in a radio and added an extra muffler to deaden the engine noise.

Not all the lab's problems can be solved that easily or with simple equipment. For more elaborate tests—a sort of a new refining process, for instance—the lab men work with a collection of miniature refining units designed by research chemists and built and operated by a group under a young engineer named Jack Garden. Where a large refinery might produce two million gallons of oil products a day, the output from Garden's Lippusian units could be measured in megacgs. In this, he and his men can try making a new product or test a new process in only a small fraction of the time a full-scale refinery would need to do the same job.

"We not only save time," Garden adds, "but we also can duplicate work which in a refinery would be extremely costly and would hold up production.

When not operating the miniature process units Garden's men can often be found directing a fleet of mobile modern cars testing new gasoline and lubricating oil on the highway. Each car carries 15,000 miles, then has its engine stripped and examined for signs of wear and tear. Some of the more advanced gasoline, such as those being tested as possible auto fuels for 1963, are checked in a special car powered by an engine with a 12:1 to 1 compression ratio.

Between tests on gasolines of the future, the service labs still find time to investigate strange requests from private citizens. A farmer in North Bay, Ont., sent in a bottle containing six teaspoons of mustardy liquid. He had found the liquid on his farm and believed it to be crude oil. In spite of the difficulties of testing such a small amount, the labs came up with the answer in one afternoon: part mud, part water, part sand, and a few drops of heating oil. Later, the disillusioned farmer found that his heating oil tank had been leaking into his field.

The chief constable of a small Ontario town sent a sample of oil with the comment: "Please find enclosed sample of oil taken from a vehicle which seized up. I have reason to believe that something was added by some person after the oil was in the motor." What the labs found in his oil was ethylene glycol, the base compound of most anti-freezes. Glycol, plus engine oil makes a gummy sludge, which often seizes the pistons. It could have been put there purposely, but it might also have gotten in through a leaky gasket.

An angry dossier in northern B.C. wrote in and asked why his anti-freeze was freezing in the box. If it froze in the can, what would it do in a radiator? He had obviously stored it outside, but that was not the point. The labs wrote back to explain that anti-freeze resists cold only when it is mixed with water.
Little wonder they called James Miller Williams of Hamilton, Ont., a business genius. Besides having a finger in a dozen other industrial pies, he dug the first commercial oil well and appears to have drilled others before Pennsylvania's celebrated Col. Drake even got started.
A spring pole was used to hoist and drop the drill bit in early oil operations in Ontario. Map shows Ontario oil-producing region and location of oil fields in Pennsylvania.

One of the first companies to drill for oil in North America, Father Gabriel Sagard, who died in 1650, included in his Histoire du Canada, a brief account of the first oil well in North America. It was drilled by a man named Charles, who told Sagard that he had been sent by the Governor to dig oil for the Indians. Sagard wrote, "To this day, there are wells in use in the area where Charles dug the well."
Canada's largest mural was too big for Quentin Brown's camera lenses, but that didn't stop him from making it the subject of a most unusual documentary.

by Jean Donard

in the summer of 1956, Quentin Brown, a husky, wavy-haired film producer from Ottawa, stood inside Imperial's empty executive office building in mid-town Toronto, skeptically eyeing the lobby.

Here was the location of his next film assignment. And yet the lobby was a clutter of sawhorses, trestles, wheelbarrows, scraps of lumber, cans of paint and pieces of tarps. Broken bits of plaster scrunched under his feet and dust tickled his nostrils as he stumbled back and forth in the gymnasium-like expanse. The street side was completely exposed to the elements, awaiting installation of windows as big as the side of a two-story house.

But Brown couldn't wait for anybody to clean up the debris or close off the building from the wind, dust and noise of the street. For on the two huge plaster panels facing the window openings, York Wilson and two assistant artists were about to start painting the largest mural ever executed in Canada. Brown's assignment was to document Wilson's work and, if possible, capture on film some of the meaning of the big two-part painting.

Thus the film was to be not only a permanent record of how Wilson did the job, but also a means of conveying the mural's message to thousands of Canadians who would probably never set foot in the 19-story office building. Wilson, who had painted and exhibited for years in Canada, the United States, Mexico, England and New Zealand, had chosen to represent the mural himself: the story of oil from its prehistoric beginnings to its present-day uses. He had planned and sketched his ideas for two years. Now that he was ready to transfer his ideas to the wall of the lobby, Brown had come down from Crawley Film studio in Ottawa to record the effort on celluloid.

Besides the debris of the lobby, there were plenty of other things to discourage Brown in this assignment. The mural's twin panels, each 32 by 21 feet, were too big for his camera to encompass in one view. The best he could hope for, when the painting was finished, was a panoramic sweep of the wall to pick up a few details at a time. He wondered if such a technique would do justice to Wilson and his work.

But there were tougher problems than that. Only once would Wilson and his assistants put their 45 gallons of paint on the wall. If Brown and his crew missed or muffed any important step in the operation, they would have no second chance to shoot it.

Furthermore, Brown had no say about casting, as he often had while writing, directing or producing some 60 films in the previous 10 years. Wilson and his assistants, Jack Bechtel and Bob Patterson, were willing to co-operate, but they were not professional actors: they were artists, busy—even anxious—ones at that. Yet the success of the film would depend a lot on how they performed in front of the camera.

In four days, Wilson would be putting his break to the wall for the first time. Brown readied a rough script immediately. He strode out of the building and headed for Union Station.

On the train back to Ottawa, he pondered his problems. He had been successful in making a film in the north when the mercury hovered around 30 below and neither his ears nor his camera could work efficiently. He had produced his first major film in only three months, despite the need for six locations—three in Canada, two in the West Indies and one in Wales. He had overcome dozens of other equally tough problems on other assignments. But never before had he contemplated a film about something which was little more than an idea in another man's mind. But if all went well, the film would be a serious appreciation of a significant work of art and as such would have wide public appeal.

Brown made the most of his train ride to Ottawa and outlined in his mind how he would handle the film. To indicate Wilson's two years of planning and sketching he decided on a flashback of the artist working in his studio. There he would also have Wilson explain the mural to his two assistants as they studied the work sketches. Later the camera could examine details of the finished work while an original musical score "describes" its story. This final examination of the finished work would be the climax of the film, and Brown decided that music alone should complement the visual. To give this descriptive music extra significance he chose to use it only at the end of the film. That meant he would need something else on the earlier parts of the sound track. Since the artists were working so close to the street, why not record the actual noises of St. Clair Avenue traffic and use them as a background?

Four days later, rough script in hand, Brown was back in the lobby with a film crew. For the next three nights Wilson, Brown and their respective assistants worked to work as soon as the construction men were finished for the day. Shooting went on until two a.m. or later. By now Brown was brimming with enthusiasm. When the artists went home to bed, Brown returned to his hotel room and began snapping up the most minute details of the next night's shooting. Often he was still up and working when most Torontonians were having breakfast. During his first night's work he ran into the biggest shooting problem of the whole assignment. He had foreseen that the preliminary outlines thrown on the wall by a slide projector would not register in color and would have to be shot in black and white. The final film could show the opening scenes in color and still move into black and white for this projection sequence provided the film was printed in a

Muralist Wilson goes to work under strong lights as cameraman crouches to scaffold

Movie maker Brown (right) discusses a film sequence with artist York Wilson

Impartial Oil Review, June 1958
warm sepia tone. The sepia would help soften the transition by preparing the eyes of the audience for the change. But this trick of the film lab wouldn’t be enough, in itself, to keep the switch from being a possible distraction for the audience. Brown hit on the idea of making the switch from color to black-and-white seem like part of the film story. He had Jack Bechtel pull the plug for the work lights while the camera, loaded with color film, recorded the darkening of the room. Then the camera was reloaded with black and white to film the end of the sequence, with Bechtel laying down the plug in the semi-darkness and moving back to work on the mural. Brown shot this sequence again and again until he was sure he had it perfect (and until Wilson’s assistant had earned the nickname “Plug” Bechtel).

With the earlier part of the muralists’ work safely in the cans, Brown and his crew headed back to Ottawa, prepared to return whenever the job reached a new stage. Between September and April they made six trips to Toronto—four to shoot film and two to record sound. But by December Brown had enough footage to show the artists what he had been trying to do. “From then on,” Bob Patterson recalls,

“we were just as excited to see the finished film as the completed mural.”

To show what had gone on before the artists went to work on the wall, Brown spent three days shooting simulated scenes of Wilson planning and sketching in his studio. More than in any other part of the motion picture, here Brown was faced with a problem of “thinning ideas.” To convert Wilson’s thoughts about a theme into visual scenes, Brown used a double exposure technique, with Wilson in the lower half of the frame and the subjects of his thoughts—such as trains, planes, cars and industrial machines—in the upper half.

When he had all but the final sequence shot and edited, Brown began work on the sound track. To retain the natural echo of the lobby the crew decided to put up with the coincidental noises from the street. But, because the street noises were usually either too faint or too loud (all voice recording had to stop whenever a street car rattled by), the sound crew had to make separate recordings on St. Clair Avenue for spots where the street noises are featured on the sound track.

Finally Brown went to work on what has time proved to be the most popular part of the film—the 45-minute sequence in which the camera roves slowly across the mural to pick up all its minute details while a 27-piece orchestra plays interpretive music written especially for the film by William McCauley, Crosby’s musical director.

In July, 1957, 11 months after the film was commissioned, a small group of Imperial people viewed the first print of the movie, titled simply “Mural.” Since then the 275-minute film has been previewed in six major Canadian cities before art teachers, students, education officials and industry officers. Prints have been placed in National Film Board and Imperial offices for loaning to the public, and each provincial department of education has been sent a copy.

Says Dr. C. D. Guittard, director of art for the Ontario department of education: “I know of no other film in the world that presents the problems and technique of a mural artist so clearly. It fits magnificently into our program.” Canadian artist Cleave Horne, describes it as “an excellent documentary showing that a mural of any importance goes through many stages and consumes a lot of the artist’s time and thought.”

But perhaps the most complimentary comment of all came when a group of industrial editors, many of whom had already seen the wall mural itself, were attending a special screening of the motion picture in Toronto. “I didn’t really understand the mural before,” said one of them, “but this is going back for another look.”

Even Brown himself could scarcely have hoped for more.