Tropical Oil Company's Plants, and Industrial Area, El Centro, Colombia.

SEPT.-OCT., 1933
Up along the English River, about 75 miles from Fort Arthur, lies the timber reserve of Charlie Green, timber operator. The cook at one of the camps, which by the way are operated on Imperial products, took pity on a moose calf which at the tender age of 52 weeks was a gift of its mother. The baby moose is shown above proffering friendship to the grim Belgian which had been trained to bring down a fullgrown deer. The ventures were accepted and the strange pair became chums.

J. R. Simpson, of the Manufacturing Department, brought back this snapshot as a souvenir of his holidays.

**Wholesale Price Indexes - Canada**

Compiled by the Dominion Bureau of Statistics

**Year 1913 - 100**

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(Indices for 1912 and 1913 are subject to final revision by Canada.)
A WHALE HUNT AT CHURCHILL

ALTHOUGH J. G. Simnie, Imperial Oil salesman, may not be aware of the fact, he is kin to one of the greatest characters of fiction. For he, like Herman Melville's Captain Ahab, has hunted the white whale. But, unlike Ahab whose tortured imagination made the quest of Moby Dick a lifelong mania culminating in the death of the man and the whale, Jack Simnie regards the pursuit of Leviathan as a casual afternoon outing. And his adventures instead of befailing him on board a whaler scouring the seven seas happened in an outboard motor on the Churchill River near where it empties into Hudson Bay. The whale, too, was a minnow compared with the supernatural monster that haunted the poor captain. Nevertheless, it was a white whale and whale hunting has always been considered one of the harder types of sport. This is the story of the hunt, more or less as Mr. Simnie relates it.

Two trappers called at the Imperial Oil warehouse at Churchill to purchase gasoline for their outboard motor. They had the eager look of men about to embark on an undertaking of doubtful success but certain excitement. On being questioned, they said they were going to try to shoot white whales for dog meat.

"You don't say," remarked Mr. Simnie admiringly. "Have you shot many?"

"It's our first experience," confessed the trappers. "You wouldn't like to come along and help us, would you?"

Mr. Simnie was thrilled at the prospect and without further ceremony the three novices set out. Their craft was a canoe, an eighteen-foot freighter equipped with an outboard motor. For weapons they had a 303 rifle and a homemade harpoon to which was attached 25 feet of rope with an empty one-gallon Marvelube tin on the other end to act as a float.

Up and down cruised the hunters, "stalking" their prey which sported in the clear, cold waters of the Churchill River. Finally they got close enough to throw the harpoon. The "harpooneer", in the bow of the canoe, threw his dart and hit his mark. Away rushed the whale, the rope paying out like lightning. In the excitement no one thought to look after the Marvelube can float. It caught on the gunwale, and the canoe at a precarious angle, shipping water, was towed swiftly in the erratic wake of the wounded whale. By the intervention of Providence the can was released before the whale dived and the hunters' hearts beat once more. When the whale came up to blow, they shot it and towed it ashore.

By this time the trio realized that their rope was too short. The river is 40 or 50 feet deep and the whale appeared to be dead, so dead that they approached confidently, attached a tow rope to its tail and to the cross beam of the canoe. Then they headed for shore. After proceeding a short distance they realized, quite violently, that the whale was not dead. No outboard motor can pull a whale; even if it could, no canoe is built to stand the strain. Mr. Simnie says that the next few minutes were among the most exciting he has ever known and until the tow rope was cast off (more likely cut off) results were uncertain. The whale's temporary renunciation was probably what is technically known as its "death flurry", for after an interval the huge animal really old die. It was towed ashore by the harpoon rope.

This third whale was pure white, 16 feet 8 inches long and weighed about 1,600 pounds. It was a female, which perhaps accounts for its inconsistency in the matter of expiring.

The skin of these whales, Mr. Simnie goes on to explain, is about 3/4 of an inch thick. Beneath this is a layer of yellow fat, four or five inches thick, of a sponge-like texture and saturated with oil. Under this is a dark red meat with no fibre or sinew, very similar to liver. The adventurers boiled some of the skin for their lunch. Our salesman's very words are, "It resembles cooked mushrooms in texture, was palatable, not fishy, and did not resemble anything I had ever tasted." He doesn't state that they themselves enjoyed it, but the dogs were quite enthusiastic. Each dog is fed about 1 1/2 pounds of fat and the same amount of red meat—raw of course.

The whaling industry is still carried on but is confined to the South Seas. The oil, once esteemed highly as an illuminant, is now used in manufacturing the finer grades of soap. The white whales of Churchill are small and, so far, of no commercial value. Their flesh, however, has proved excellent food for the dogs still used extensively as transport in the north country by trappers and prospectors. The frozen carcasses of several of these white whales have been exhibited at the Canadian National Exhibition at Toronto and the World's Fair in Chicago.
FIRST FLIGHTS

By WELLINGTON JEFFERS

In 1910, crews travelled to Weston to see the first flights made in Ontario by heavier-than-air machines.

NEARLY every Canadian has heard an aeroplane humming in the sky; to most of us it has become an everyday occurrence, so usual indeed that we do not follow the flight for more than a brief few seconds with our eyes. The first flight each of us ever saw was one of soul-stirring significance but after seeing hundreds of flights as more and more aeroplanes rose into the air with each succeeding year, it has come to mean no more than the far away sound of a locomotive whistle or the raucous scream of a blatant horn on a charging truck.

But there comes a time when all the old glamor is renewed, when once more the aeroplane is greeted enthusiastically as the marvel of the age, and when air travel assumes a far greater importance and more poignancy than it can ever have again; that time is when each man makes his first flight. Though flights are no longer marvellous things to read about, it is "the great adventure" for the man who steps into an aeroplane for the first time and a few minutes later finds the earth receding farther and farther from him.

This tale of two hours of flying in Northern Ontario (quite ordinary to the seasoned traveller) is not intended for the tens of thousands of Canadians who either habitually or occasionally travel by air but for the millions of Canadians who have not yet known the experience of getting away for an hour from the earth and its pressing concerns. Many of these, probably most of these, especially of the younger generation will sooner or later take to the air, and whatever their trimmings and trepidations may have been before "the take-off" about leaving solid ground or the friendly surface of a Northern lake, their chief concern once they are up will be that they shall not return too quickly. Even that background of unfamilial apprehension, against which the earth is seen as a possible enemy which may launch itself as a projectile against the frail craft winging its way across the sky, soon fades away to a pin-point of cloud on the horizon of the mind. The feeling, learning to fly, flutters from its nest in all probability with something like the same distrust of the solid earth beneath it but later learns to appreciate that earth as a handy resting-place.

The flight here described, in August last from Collins on the Canadian National Railway which was itself a great Canadian adventure into the wilderness when first conceived and executed, has in retrospect as its most significant and startling side that it is the usual thing not alone at Collins but at scores of hopping-off places throughout Canada.

Every day, sometimes several times a day, that same aeroplane flies over countless lakes, hills and forests on the important concerns incident to the triumph of civilization over the wilderness, and pilots, passengers and even Indians of those regions take it for granted as they do the railroad, the automobile and the horse. The pilot is looking for business, for freight, for passengers wherever and whenever he can get them and the very recollection of the idea that there is something marvellous in air travel is a measure of the advance the aeroplane has made and a portent of what it will become.

I well remember being sent for a week to Weston, Ontario, by the Toronto Globe in 1910 to cover the first flights ever made in Ontario by heavier-than-air machines. Many thousands travelled out to that first Ontario air field every day to watch Count de Lesseps take to the air in his monoplane, powered by a Gnome engine, and to see Walter Johnston take a Wright biplane into the air in a series of breath-taking stunts which, strangely enough, have not been improved on much by most of the exhibitionists of to-day.

When Count de Lesseps took his aeroplane over the city of Toronto and circled the City Hall there was scarcely a well citizen of that day and year who did not leave his desk or her kitchen to follow with fascinated eyes and open mouth the progress of that pioneer in the sky.

The pilots of those two aeroplanes, one from Europe and the other a product of North America, demonstrated even then the differences that might be expected to develop between the airmen in great countries like France and England and those trained in the United States and Dominions like Canada to fly over huge areas of wilderness. Count de Lesseps, slim, graceful, courteous, highly-strung, serious—a cavalier of the air—had with him three or four French mechanics whose most meticulous attention to every part of 'plane and engine before and after each flight. He was the gentleman flyer, well-supported by mechanics who knew their jobs. But Walter Johnston, handsome, devil—may—care, laughing pilot of Wright Bros., was pilot, mechanic, and every other sort of employee needed to operate or service his machine.

A great war with armies of fighting 'planes has intervened, oceans have been spanned and the world circumnavigated by daring airmen since that time, but somehow the two significant and unforgettable personal experiences with aviation are: first, those flights from Weston, with eyes of all Canadians within ten miles glued on the scene and saying, "How wonderful!" and, second, that other flight from Collins with casual citizens saying to Pilot Barbarar, "How many trips are you making to-day?" Or it may be, "Mr. Barbarar, will you take half a ton of hay into Pickle Lake this afternoon?" Or, "Can you drop some workmen 50 miles to the southwester in White Thrust Lake when you come back?"

The miracle of yesterday in the everyday fact of to-day. The foundation has been laid for an advance that cannot be estimated to-day. No longer is there any doubt but that any Canadian can be taken to almost any landsizable spot in Canada in quick time by aeroplane. Wherever the need arises, the aeroplanes will be there. Some day soon it will be said that there are no wild animals, no Indians who have not lusted their eyes to see the aerial voyagers. In fact, already thousands upon thousands of native Canadians, who have never seen a locomotive, a steamer or an automobile, find the aeroplane a familiar spectacle. Over the Indians still travel by canoe and dog train and leave the sky for the most part to the white man but the "great birds" are nevertheless...
familiar facts in their existence. They do not take pot-shots with their rifles at the new high-flying game as the Bedouins are reported to do in Persia and Arabia because white men are their market and often, as missionary or doctor, their friends.

Those who have not yet flown may not realize that there is no sensation of great speed except when one is near the water "taking off" or alighting. He notices more the occasional bumpiness of travel as the plane climbs over bits of rough airy road on its way to higher altitudes and is preoccupied for a little while with efforts to restore the equilibrium of the "plane which he imagines is disturbed as its wings dip either to right or left. The canoeists, used to distributing weight carefully with reference to the centre line of the canoe, bottom gasps to see a hardy traveler step to one side of the travelling 'plane to get a suitcase or adjust a window to allow more ventilation. Even though no evil results follow, the fact that there is stable equilibrium takes a long time to permit his consciousness.

These are only incidents of accommodating one's self to the new mode of travel. They do not necessarily betoken nervousness in the passenger who cannot be but reassured by the entire matter-of-factness of all the preparations. He is weighed, along with all the other passengers and the freight, in order that there shall be no overload. He talks to people who travel constantly by aeroplane; he steps in with others just as he would into a waiting automobile; taxi-ing along the water is as easy as in a motorboat, and he is in the air some 50 or 75 feet before he is really aware of it.

Later on, glancing down, one wonders why the wilderness below is unexplored until suddenly he realizes that what he took for blades of grass are individual trees. He begins to distinguish between trees, to know when he is passing over swamps, to wonder at the amount of burned-over country for 10 miles around the travelling plane including the pillars of smoke which show the areas still burning.

With a reconnaissance map on my knee I glanced from map to earth and back again. I could almost fancy that through the window I was looking at the map and when gazing at the map that I was looking through the window. Indeed the earth beneath was spread out like an airplane parking field. As the plane passed apparently featurily, above scores of lakes and rivers whose constantly varying series of patterns aid the pilots to find their way. There are isolated lakes, strings of lakes, lakes that are round and lakes that are long and undulating. Some lakes are full of islands and some have unbroken surfaces; there are shallow lakes, deep lakes, lakes with wonderful places to land and lakes that are simply flanked with jutting rocks.

Then a thrill. By the map I suddenly realized I was passing over the great Albany river which in my boyhood days was supposed to represent the boundary between civilization and an unknown and inhospitable North.

Another thrill! Below me swang into view a symphony in white and red on a peaceful hillside which might have been in well inhabited parts of Canada.

"Onahurgh House. Hudson's Bay post," shouted my fellow passenger, A. J. Anderson, mine manager of Central Patricia Gold Mines. "We may drop in for tea with the factor on the way back."

Well, well, afternoon tea! At the North Pole next!

"And you might circle our camp until we take a picture," suggested Mr. Anderson to the pilot. And so it was done. I took a picture also but missed that identifiable sixteenth of a second which would have made the picture valuable. And then over to Pickle Lake where I glimpsed the regulation safety belt around me against the bump I expected when the plane took the water. My company did not bother and he was right. It was an excellent landing.

Going back one week later we dropped into and hopped out of three lakes, had the promised tea with the assistant factor at Onahurgh House, and returned to rail. I sat in the cockpit for a while with the pilot, and was astonished for a moment to note that we had a clear view. The propellers, whirling at the rate of 1,800 revolutions a minute (30 times a second) were not there for human vision and offered not the slightest obstruction to the sight. One could see all the various gauges by which a pilot knows that plane and passengers are "on the level" and just how high he is above the ground. I could follow every detail of the steering and could get an admirable view above and on both sides. When I was a lad, boys longed to be locomotive engineers; but give me another chance to grow up and I will long to be an air pilot.

On the same day and at the same hour when I took this jaunt of one hour for 100 miles north of Collins, Canadian Airways alone had either rising into the air or capable of rising 53 aeroplanes from Atlantic to Pacific. To the east there were 23 other "planes and to the west 28 "planes. In the Maritimes they flew between Moncton and Charlottetown, in Quebec they rose from Quebec, Seven Islands, Anticosti, Montreal, Blue Sea Lake, Rouyn, Senneterre, Pauce, Chibougamau; in Ontario from Chapleau, Swayze, Wawa, Haileybury, Monroe, James Bay and Hudson Bay points, Sioux Lookout, Red Lake, Narrow Lake, Collins, Kenora; and in the western provinces from Lac du Bonnet, Wadhope, Bassett, Winnipeg, The Pas, Holford, Edmonton, Fort McMurray. Great Bear

About Town in

El Centro

From Barraona-Bermeja, the port of El Centro, the Tropical Oil Company’s steamers ply up and down the Magdalena. There have been steamers on this historic river for over a hundred years, but the "Tico" boats, similar to those used on the Mississippi, have revolutionized river traffic, as they push the town ahead of them instead of carrying them alongside. These, the highest-powered boats on the Magdalena, are operated exclusively by Colombians whose eyes are almost cut-out in their ability to discern the ever-shifting sandbanks and snags in the southern half of the river.

At Barraona-Bermeja the crude oil is refined and shipped to marketing points. The equipment is as efficient and up-to-date as that in any North American refinery. Care in handling products is emphasized and the safety prevention program undertaken by the Company to safeguard its employees has had most gratifying results.

Loading refined products at the Tropical Oil Company’s refinery at Barraona-Bermeja. Near the safety poster with its grim reminder of the penalty of carelessness.

(Continued on Page Twenty-Six)
On the outskirts of the colony of El Centro and also within its area are modern compressor plants for the extraction of gasoline from natural gas. Equipment such as this indicates that the Company is endeavoring to achieve maximum efficiency in the operation of its fields and in the conservation of gas.

The workmen with families live in well-built, commodious quarters, somewhat on the community principle. The dwellings face a wide central court in which the laundry is located, and are completely equipped, electrically lighted, with natural gas for cooking purposes, and running water.

Interesting able to oil men and layman are Colombian drilling operations. Here are an expert Colombian driller and his crew who have learned their vocation in the Company's employ. Colombia may well be proud of these active, energetic citizens who pose for us politely but who are obviously eager to get on with the job.

One of the compressor plants.

Colombian Drillers at work.

Workmen's family quarters.

If it were not for the trestle derricks in the background, this recreation ground might be in the suburbs of any Canadian city. The dense, tropical forest has been pushed back, the land cleared and adapted to the uses of civilization.

Basketball in the tropics.

One of the turbo-generators.

Filtration beds which ensure a clean water supply.

Electricity for the requirements of all producing field camps and industrial shops, as well as for domestic use, is generated in the power plant at El Centro. This is one of the 3,000 k.w. turbo-generators. Besides it stands the Colombian operator whose immaculate appearance is indicative of his alertness and his ability to superbly care for this great mechanism.

In the transport of the massive eastings and machinery for the power plant, the river boats played an important part. Overland travel was impossible on account of the great weight, so when the vessel with this machinery arrived at Cartagena, barges were placed alongside and the machinery reloaded by ship's tackle. These barges were then towed through the Dique Canal to Galan and thence up the Magdalena to El Centro.

Highly important in a tropical community is the water problem. The Tropical Oil Company has taken steps to ensure a clean and abundant supply for the entire field. Water is piped from a tributary of the Magdalena to El Centro, where it is treated with chlorine and filtered in accordance with the best modern practice. Incidentally, the field uses about 1,400,000 gallons of water daily.
The children are never overlooked. Good surroundings, comfortable and sanitary homes, recreation grounds and schools help them to grow into useful citizens. The school curriculum is under the control of the Colombian educational authorities and the company provides buildings and equipment, and contributes towards books and tuition. Four schools are maintained for the workers' children at the various camps, with a total attendance of 179. The buildings have wire netting instead of glass in the windows, to exclude mosquitoes and other insect pests. A broad overhang keeps out sun and rain. In front of the boys' school will be noted a tropical tree bearing exotic fruit at nuts which the small boys of Colombia, like those in Canada, despise long before the fruit is fit to pick. The group of healthy, happy little girls, with their teacher, hears out the story that in Colombia children like to go to school.

Fire fighting equipment is a necessary adjunct to a producing oil field, to combat oil fires and for camp fire protection. The excursions of this fire truck, of the classic color and with bright metal trimmings, are attended by the usual following of thrilled small boys.

A familiar scene in the tropics is the sanitary squad. Experienced doctors are responsible for sanitary conditions in El Centro, and there are 88 Colombians, under the supervision of an inspector, constantly working around the camps, maintaining sanitation at the high standard demanded by the Company. Here the squad is seen spraying oil on a pond which is difficult to drain, in order to kill mosquito larvae before they become a menace. The dreaded malaria carrier is distinguished from its less malignant cousins by its curious habit of standing on its head while biting its victim.

The pride of El Centro fire department.

A two-story wing recently added to El Centro Hospital.

The operating room.

The hospital is a substantially constructed edifice. It has a capacity of 85 beds, with a maximum of 125 in emergency. On the staff are six doctors, one assistant and five nurses, all graduates, two technicians, two clerks, two pharmacists, five proficient practical nurses, a chauffeur, and 17 orderlies, cooks, maids and other help. The hospital equipment, like that in other parts of the field, is fully modern and efficient. A brave attempt has been made to beautify the grounds, but this entails tremendous amount of work and a constant fight against the ravages of insects.

And last, but not least, we see the Club Unión. The Company believes in play as well as work and has dedicated this spacious club house to its Colombian employees. The official inauguration took place on April 3rd of this year, and the club numbers some 1,300 members. The club house is equipped with talking pictures (free movie each week), radio, phonograph, billiard table, comfortable furniture and plenty of reading matter. To permit the workmen in distant locations to enjoy the facilities of the Club, the Company provides a free bus service to and from the outlying camps. Night classes have been started and the subjects taught are decided by the employees themselves. The Club sponsors all sports activities. Football is the most popular sport. The Company is very proud of its team which participated in the 1932 Medellin Olympics.

At the Club's Inauguration ceremony.

The Club Unión.
When A. W. Dingman drilled his wells along Sheep Creek and erected his ambitious little absorption plant, he, to employ a stock phrase of the periphrastic politician, "built better than he knew."

When the Royalite Oil Company entered into the Dingman heritage and its absorption and compression plant rose, phoenix-like, from the verdant ashes of the Dingman venture, it seemed that the drudgery had been pronounced on Turner Valley development, and that Western Canada's "freak" oilfield would pursue the even tenor of its way along well defined lines until exhaustion wrought final to its activities.

But, when Royalite's No. 4 well punctured the epidermis of the "Madison" limestone and its roaring gas sent a panoply of victory echoing over the Foothills, estimates had to be revised and prophecies rewritten, as is so often the case when dealing with that elusive and erratic substance, petroleum.

The torch lit by Royalite No. 4, literally and metaphorically, was a fiery cross that brought oil men flocking to the field; that caused derricks to spring up like mushrooms; that sent the pounding drills deeper and deeper into the rocks; that constrained men to form companies, buy leases, sell stocks and get on board the band wagon; that drove trucks and tractors laden with drilling material through mud and snow, that laid pipe lines; that erected tanks, bunkhouses and warehouses; that turned a quiet pastoral scene into a frenzied inferno of hissing steam, clashing metal, roaring gas and hammering machinery; and that reached its culmination in "Hell's half-acre" where leaping and twisting flames gave lurid testimony to the unriveted industry and wasteful energy of man.

Royalite No. 4, with its modest 3,185 feet of hole, was the precursor of 172 wells which penetrated a total depth of 135 miles into the earth's crust. Royalite No. 4, with its 20 million cubic feet of gas a day and its 400 barrels of naphtha, was the first fruits of the 400 billion feet of gas and the 6 million barrels of crude oil and naphtha which the Turner Valley has since contributed to Canada's non-metallic production.

Oil development in the Turner Valley is an apt illustration of the kaleidoscopic changes which the industry has to make from day to day in order to meet unexpected problems and conditions as they arise.

The original Royalite plant seemed quite adequate to handle the low pressure gas from the existing wells and extract from it a modest percentage of gasoline, but when Royalite No. 4 blew in, with a pressure of perhaps 2,000 pounds to the square inch, compressors were installed and the Smith Separator made its first appearance in the field.

Subsequent producing wells were all equipped with separators which, with the high initial pressure prevailing, gave practically 100 per cent recovery of the crude naphtha with which the gas was contaminated.

It was only logical that the City of Calgary should be interested in the disposition of the natural gas being produced at her doors and arrangements were promptly made to connect the field with the mains which carried domestic and industrial heat and power to this thriving center. But there were obvious reasons which made Turner Valley gas unpopular in Calgary and again the industry had to wave its magic wand and erect an imposing plant which eliminated the noxious sulfur content from the gas and made it fit for domestic use.

This is a picture of Turner Valley in its hey-day. Drilling wells constantly reaching down to the prolific limestone, batteries of separators distilling the volatile naphthas from the gas, the Royalite scrubbing plant cleansing gas for Calgary's use, and a roaring conflagration on the banks of Sheep Creek where the surplus gas was wantonly and wastefully destroyed. There is a sweet phrase about three generations from shirt-sleeves to short sleeves. It might easily have become applicable to Turner Valley had it not been recognized that action must be taken to curb prodigality and conserve the resources of the field. Steps to this end included curtailing of drilling, provision of production, and the repressurizing of the Bow Island sands with surplus gas from Turner Valley.

Information that the field, in spite of these measures, was on the wane, was conveyed by decreasing pressure on a majority of the wells. This led to a loss of efficiency on the part of the separators and consequent evaporation in naphtha recovery. As a result the gas leaving the separators carried an appreciable percentage of naphtha, a percentage which, in the middle-squandering days, commonly referred to as "The Depression," was too valuable to lose.
and procedure, the operations being in accordance with elaborate formulae governing the separation of the various hydrocarbon components. The process, briefly and non-technically, is as follows. Absorption oil is cycled through the absorbers in contact with the gas and then is passed through the distilling apparatus. In the absorbers the moisture in the gas (natural gasoline) is absorbed by the oil and in the distillation unit, the natural gasoline is removed from the oil and transferred to storage tanks.

This product must be treated for corrosion and blended with heavier petroleum constituents in order to make it usable and, due to its highly volatile nature, the quantity of natural gasoline which can be included in motor spirits is definitely limited.

The plant was placed in operation during May of this year and results were gratifying from the start. At the present time, approximately 90,000,000 cubic feet of gas is passing through the plant daily and such is the efficiency of the process that the stripped gas which now goes up in flame is estimated to be as dry as the Sahara desert, all of the natural gasoline having been recovered.

It was a simple and comparatively inexpensive process to link up a producing well to a separator and let nature take its course, but, when the construction of such an elaborate and intricate plant was involved, it became necessary to have the assurance of a sufficient gas to keep the plant in operation. This was immediately available from wells which showed a loss of efficiency in production due to lowering pressures—though the wells of the Royalite Company itself, and those of companies subsidiary to or associated with Imperial Oil. As time goes on and pressures drop the necessary gas will arise for processing gas from other sections of the Turner Valley, and the plant has been so constructed that sufficient votes can be added to care for the entire production of the field.

TALARA

by Harriett Harris, in The Grace Lag

Oil properties, sugar estates, vast and rich are deposits and coton plantations distinguish Peru as a country of unlimited natural resources.

FROM a boat anchored in the harbor of Talar a there is little in sight to make one believe that this tiny town, creeping around a cove, nestled at the foot of an earthy shelf which brushes with tapering derricks above a flat brow, is of real importance to the world. The possibility that the flat tablazo running along the shore holds anything more charming than the rude, uncompromising implements of man's search for flowing gold and the grim of sun-baked soil seems slim indeed. Early morning risers who like to taste the damp salt wind as they make the rounds of the deck see little different here from the other barren wrinkled miles of lifeless mountain slopes which have greeted them on every other morning of the week, except perhaps that here the mountains end in a scummy plateau before dropping abruptly to a level strip of shore which makes a gradual descent to the sea. As their liner halts for a few hours in the placid green bay they see a harbor two miles long and protruding from the waters of the harbor the masts of one or two sunken boats. A few freighters swirled in smoke enter or leave the port and ashore there are the everpresent dark dappled sandcliffs. Upon a point which juts into the sea a brown and white barnack house rears a corpulent form and one lone palm tree waves half-heartedly in the yard. Below it a handful of red-roofed houses sprawl beneath a tufted blue sky whose color reminds one of the pigments on a Mayfield Parish palette. One look at Talar town makes the boat infinitely more desirable than the land, and almost any land more desirable than this. It requires a stretch of the imagination to believe that life goes on in anything but the raw.

But Talara is deceiving. And a close inspection is not advisable if one wishes to continue unmodified by vague longings to return. Beneath a grim exterior there is a gay and carefree current of life, unburied, wholesome, comfortable, and fascinating as only life in the shadow of those serrated Andes can be. Under the red roofs there are cozy homes and under others...
sleek machinery huns a steady drone while oil, in being brought from the secret places of the earth, keeps thousands of persons from knowing the bleak meaning of bread-lines and park benches. Here at the very door-step of domestic life the desert comes down to clamp the sea and the eternal mystery of the desolate sand dunes with the everlasting romance of the unfathomable ocean. Talara is the centre of all this glamour, the hub of Peru's oil industry (which is the oldest in South America) and the seaport and refinery for the International Petroleum Company, Limited. As a port Talara ranks second in importance to Callao, Peru's great gateway further south, and here just below the equator where the Southern Cross is the sailor's guide, modern industry stands upon a shifting stage whose back-drop is the eternal Andes, their hoary headless blessing the clouds. The people who live in this little pocket of activity and pleasure are entire series of three Anglo-Saxon nations, Canada, England and the United States, and, of course, the native Peruvians whose heritage in the land and a traditional longdom so well organized that all our economic efforts look stupid by comparison. These lands so rich in history have witnessed the march of the Conquistadores on their journey to the City of the Sun. These same parched fields, now so productive of oil, have lain for forty years at a time without a drop of moisture to shake their containing thirst. No water, for this length of time, fell from celestial spigots and other than the Pacific brine which lapped and foamed about its shores it knew no moisture; and yet these same glassy sands have felt torrential rains which did not cease for three months, leaving ruin and rank growth behind. A parade of contrasts, a paradox in itself, Talara is a strange and haunting combination of old and new. Its delightful town and mission and a lazy, indolent country club where tea-time music floats from wide-opened windows. A spreading seaport and a silent desert rolled into one, it has emerged from a small settlement into the chief doorway to the oil fields of Negritos, Lagunitos, La Brea, and Lobitos. Talara, rich in folk lore and the history of life as it was in the days of the Inca and the Spaniard, is today a paragon of healthful working and pleasant living. For more than a thousand miles along the west coast of South America an unbroken desert stretches. Good authority has it that the Humboldt Current is responsible for this arid littoral. It is true that when this current, flowing north, holds rendezvous with the warm waters of the Japanese Current flowing south, strange things happen to the marine life of each, such as the marine native to one current which cannot exist in the other. Parinas Point, the most westerly tip of South America, is the meeting place of the currents and it is along the ridge of converging currents that shrimp come to feed on fish which die in passing from cold water to warm, or vice versa. Guano birds and whales find plentiful meals here, too, and what have learnt to seek their prey while they are feeding at Nature's singular dinner table. Now, as long as the two currents meet correctly, which they manage to do for forty years at a stretch, the desert remains a desert. But when they go astray, then Peru is flooded. It happens something like this. The Humboldt Current rises in the frozen lands of the Antarctic and it flows north making the waters that wash the long Chilean coasts like so much ice cold water. It continues north to Parinas Point where it swings sharply westward following the contour of the coast. At the tip of Parinas Point it comes face to face with the Japanese Current, flowing south and warm from the coast of North America. Both currents turn west into the Pacific and it is on this watery ridge that fish die and fish. Life is preserved by the currents carried by man. As has been said, when the Humboldt and Japanese Currents meet according to tradition, all goes well. But when they deviate in any way Peru is flooded as she was in February, 1925. The meteorological explanation is that as the Humboldt Current proceeds along its northward journey it increases in coldness in contrast to the ever warmer water which tells that "there are no cooling air currents assoile to condense the vapor, and no electrical disturbances to shake it to earth in the form of raindrops". So these vapors sail along until they find the cold Andean heights blocking their way and then they fall as snow. But the shore remains as dry as an autumn leaf. Above Parinas Point, where the currents are deflected, the Japanese Current, warm and fecund, is the main reason why the rainfall is abundant and Ecuador and Colombia are luxuriant "Green Hells," while the coast of Peru and that of north Chile are sterile deserts. Somehow, in February 1925, the Japanese Current managed to enter the waters of Barón von Humboldt's Current and Peru experienced one of those phenomenal precipitations which have come to be looked for every half hundred years or so. The ribbon of desert was turned into a running river which rushed here and there seeking a resting place for its liquid burden. The town of Talara was no more prepared for the onslaught of the elements than the unprotected oil fields surrounding her. The next one may be expected about 1965 or 1975, unless the Humboldt and Japanese Currents decide to play as they were meant to and not go encroaching on one another's watery domains. The history of the oil fields of northern Peru goes back to the 17th Century when the Spanish Crown gave this territory to Captain Martin Alonso Grande. It consisted of what is now known to be an oil belt 150 miles wide which reached from Ecuador on the north to the Lober Islands. From the hands of Captain Grande the territory between the Tambes and Other Rivers went through a succession of owners: Juan Benito de los Heros, the Hospital de Puno, Antonio de Quintana, Diego de Luna, and then to his thirteenth son. It was Senor de Luna who in 1862, brought in the first Peruvian well. One of his grandchildren, Joseph de Luna inherited that part known in La Brea and Parinas and in 1876, she sold this land to Genaro Helguero, W. H. C. Twedde acquired the property and transferred the mineral rights to the London & Pacific Petroleum Company which in 1914, came under the control of the International Petroleum Company with headquarters in Toronto. The sands of northern Peru being rich in oil, drilling was successful and a small refinery was ventured at Talara. Today the refinery's capacity is 15,700 barrels daily. The International Petroleum Company is Canadian by nationality but it recognizes no civic distinction when proportioning the benefits of life under its proprietary eye. Under its guidance the refineries, port, and town of Talara maintain a sort of modern municipal government all its own. Model schools and a hospital where free treatment is given to employees are all in the scheme of things, and upgradation of 10,400 employees is singularly happy and well-secured with its city fathers and its way of doing things. Aven Street is a broad thoroughfare bordered with markets, markets, moving picture houses, a hotel, a plaza and a bandstand. The picnic grounds, golf links and early by moonlight are not far away in an easy trip and tangled flowers which spread along the river bank. Boy Scouts, native and foreign, are taught to do a good deed daily while their elders, with a splendid golf course, Rugby Club, football teams, tennis courts, and Talara Club, built on a high bluff with a veranda overlooking the bay, find life a pleasant interlude in Talara. Horse-back riding, ocean fishing and bridge are thrown in for good measure. Bungalows, completely equipped, are rented the married couples, while the single men quarters are occupied by young alabaster and white birawhools which we noted behind the harbor. It has been cuffed the Casa de Locomotivas because of the weird, uncanny nocturnal noises which have been known to emanate from it. But fascinating and vital as is the daytime experience, one receives, the sight which rests itself in the memory in indelible lines is that of Talara at night. Mysteries lights and shadows play upon the harbor, the fishermen's huts bob on the waves and the quinca dwellings crouch deeper into the sand. The moon is a large bowl of pale honey which overflows and envelops the land in waves of soft light. The turkeys and thrashers become rose-colored drums and silvered shafts and the red-roofed houses twinkle with hammerlike lights. The heavy clock ticks to the melancholy thump and then send out to sea, weird and beautiful so silent flight.
The Price of Crude Oil

By J. R. Simpson, Imperial Oil Refineries, Limited

Canada’s crude oil production is found in very limited quantities and is confined to three geographical areas: New Brunswick, Western Ontario, and Alberta. The production during the past three years has been as follows: 1930—1,577,723 barrels; 1931—1,583,327 barrels; 1932—1,056,344 barrels; and it is steadily decreasing.

The 24 operating refineries in Canada process approximately 13,000,000 barrels of crude oil annually to supply the needs of the farm, factory and motoring public of this Dominion. From the foregoing, it will be seen that the annual Canadian crude oil production will only supply about ten days requirement which is approximately 3.5 per cent.

Purchases from foreign sources are therefore necessary. The logical sources are the United States and South America, where a variety of the desirable crudes is available for the manufacture of Canadian requirements not only of gasoline but of such products as candles for your birthday cake, asphalt shingles for your roof, the cement you use to cure sunburn, or the pavement along which you ride.

In the oil fields, the producer generally sells his product either to a pipe line company or to some large refiner who has transportation and storage facilities. This is necessary for two reasons. In the first place, wide fluctuations between production and consumption have necessitated the erection of great reservoirs where oil from many hundreds of wells can be stored until the refiners need it. Secondly, economy has led to the construction of a vast network of pipe lines for transporting the great bulk of the crude oil. It is estimated that there are some 120,000 miles of pipe lines in the United States drawing oil from the various producing fields, delivering it to centralized storage (known as tank farms) and loading it from these, as occasion demands, to refineries. Few producers have either the capital sufficiently large producing properties to warrant the construction of their own pipe lines or tank farms. In this respect they are similarly situated to our grain-growing farmers in Western Canada who deliver their wheat to the elevators. The immense pipe line systems and tank farms have been built by independent concerns and represent a tremendous outlay of money.

The trunk pipe lines are classed as common carriers in exactly the same sense as the railroads and, as such, they operate under rulings of the Interstate Commerce Commission in the United States or of the Canadian Railway Board in this country.

From the tank farms, the distributing lines lead either directly to the refineries or to points where shipment by tank cars or by tank steamers can be made to refineries located in areas where no pipe line facilities have been provided.

Crude oil from wells is run directly into well storage and allowed to settle in order to remove water and sand. In some cases the water accompanying the oil forms an emulsion. This requires special treatment to separate the water and make the oil ready for sale. In many cases a large percentage of the oil is of no commercial value and must be excluded from the tank capacity, which means a considerable monetary loss.

In the early days, crude oil was shipped from field storage by rail to the refineries which were usually built as close as possible to large producing districts. The oil was barrelled at the well and carted to railheads. It was a common sight to see hundreds of teamsters in line waiting for their load of barrels. But such great economies can be realized by pipe line shipments of crude oil that today practically all producing areas are connected with gathering lines which carry oil to main trunk lines and thence to tank farms where it is stored awaiting sale.

As pipe lines and tank farms are usually owned by the same companies and since the oils from various producing properties are mixed during transportation and storage, it becomes customary for pipe line companies to purchase oil outright from producers.

The selling price of crude oil is set, naturally, by the pipe line company. They must add to the price they pay the well owner, a charge to cover the heavy expenses for maintenance and operating costs.

The price of crude oil in any field will, under normal conditions, reflect the desirability of the crude from the refiner’s point of view and the cost of getting it to a market. For instance, premium prices may be paid for a crude that is particularly suitable for the production of lubricating oils because it may be more economical for the refiner to pay more for this crude than to install the apparatus necessary to make equally good lubricants from non-premium crude. On the other hand, the extra cost of getting such crude to a market—if the field is remotely situated—may in itself be the equivalent of a premium.

Under normal conditions, when there is a reasonable balance between production and consumption, the price of crude oil naturally adjusts itself to a level that affords a fair return to the producer and permits of a fair structure of prices for products. But normal conditions have not prevailed for several years. East Texas production demoralized the industry, depressing prices to such low levels that producers could not realize even enough to pay taxes. Canadian refiners could not take advantage of these bankrupt prices because they have limited storage capacity and are forced to buy on a day-to-day basis and must have dependable sources of continuous supply.

Demoralized by overproduction of crude, the petroleum industry in the United States has had an unhappy existence. Millions and millions of dollars have been lost; thousands of people have been ruined; wages of labor have been driven down to levels incompatible with the cost of living. Hand in hand with the reckless extravagance and waste of overproduction have gone misery and bankruptcy and an appalling dissipation of resources that should have been carefully conserved for future generations.

To meet this situation, Secretary of the Interior, Harold L. Ickes, recently promulgated an official order and schedule of prices for crude oil and for petroleum products in the United States. A price of $1.11 per barrel has been set for 36-gravity Mid-Continent crude and differentials have been established to govern prices of different products in different parts of the country. There is some diversity of opinion among the petroleum interests in the United States as to the outcome of this measure. Some welcome it as affording badly-needed relief to the hundreds of thousands of persons who have invested in the oil industry and who have seen their investments depreciated by cut-throat, uneconomic competition. Other groups of producers and refiners contend that with adequate regulation of production, prices would naturally adjust themselves to a fair level and price-fixing would be unnecessary. Time will test these contentions. For the present, it looks as though the era of distress gasoline is drawing to a close.

Soon the Canadian consumer, comparing prices here with prices in districts of the United States where bankruptcy methods have hitherto prevailed, will have evidence that in Canada he has consistently enjoyed a fair and equitable price for gasoline.

The programme arranged for the recent visit of the Earl and Countess of Bessborough at Sarnia included a trip through the Imperial Oil refinery. His Excellency expressed surprise at the neatness of the buildings and the excellent storage facilities. He remarked on the clean and neat appearance of the whole property, commenting favourably on the large number and fine types of people employed. In the above photograph the Viscountess’s car is seen passing the cracking ovens at No. 2 Plant.

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HOW MANY MILES DID IT TRAVEL?

GUESSING contests seemed to be a feature of the Canadian National Exhibition this year. The confirmed or incorrigible guesser had numerous outlets for his ruling passion, with rewards for accuracy or back numbers, from floods to olive oil services. The glowing thought, “My guess may win it,” spurred on the enthusiast to noble efforts in arithmetic, higher algebra, trigonometry, or just plain out, as he gazed on the memorandum can, the multitude of small objects or the swiftly revolving wheel.

One of the most popular was the Atlas Tire Contest at the Imperial Exhibit in the Automotive Building. In the centre of the attractively decorated booth was a revolving Atlas Tire, and forms were distributed on which visitors set down their estimates of the number of miles this wheel travelled during the 14 days of the Exhibition. A sealed speedometer was attached to the wheel and exactly at the close of the Exhibition, 10.30 P.M. on Saturday, September 9th, this was opened by Warren Hastings, M.S.A.E. The speedometer reading was 912.43 miles and the ten closest estimates were each rewarded with an Atlas Tire and tube. Just before the speedometer was opened, however, the two big steel Marvelube drums, filled to capacity with “guesses” were closely sealed.

On the Monday morning following, the drums were opened and a staff of workers sorted and checked the avalanche of slips. Whole families had conferred apparently making a mathematical evening of it and some of these united efforts were very close to the answer. Others seemed to put down their favorite numerical combinations, such as groups of seven or a row of nine. The back of one slip was covered with close calculations which, alas, resulted in a figure very wide of the mark. Some excited folks gave name and address and completely forgot to enter the estimated mileage. The lowest estimate was 6.7 miles. One skeptic was of the opinion that it didn’t make any mileage, an optical illusion? Next came a hyperbolic estimate, 45,000,000 miles. There were several in the million class, a goodly number in the hundred thousands and a surprising proportion of guesses within ten miles of the correct answer. Toronto addresses predominated, of course, but the rest of Ontario was well represented, with several from farther away. One Northern Ontario man mailed his answer and although it arrived in time it was “miles out.”

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MANY CHANGES IN OIL BUSINESS AT HALIFAX

by OLD TIMER in The Halifax Mail, July 20, 1933.

IN WALKING down Young Avenue some few nights ago and attracted by the brilliant lights at Imperi-

al, I could not refrain from recalling the changes that have taken place in the oil business during the last fifty years and the changes it has wrought in Halifax Harbor, in fact throughout the Province of Nova Scotia.

Next to the changes in the railway terminals from North to South Halifax, the oil business has been responsible for more changes on the harbor front and throughout the city than any other business factor. Bedford Basin, Richmond and last but not least, Imperoyal with its town, tankts, refinery, wharves and frequent visits of large steamers with cargoes and the introduction of elaborate gasoline service stations on the chief thoroughfares in the city bespeak the importance of the industry to the life of our city.

My reflections went back fifty-three years ago when the Imperial Oil Company was organized at Petrolia, Ontario, as a Canadian oil unit—producing, refining and marketing. At that time the oil business in Nova Scotia was confined to illuminating oil or what was known as “kerosene.” In the upper provinces it was called “coal oil” and this is yet the familiar name in the West.

The Canadian product of illuminating oil was not popular in Nova Scotia, and the United States product was in demand by dealers and consumers, imported chiefly from Boston and occasionally from New York in small quantities.

During 1884, J. D. Shatford, of Halifax, then engaged in New York, visited Nova Scotia as the representative of the Standard Oil Company and from that date on the tide of shipments changed. New York supplied Halifax, Saint John and Charlottetown requirements of illuminating oil, but owing to the contract with Boston by small sailing vessels from different points of our coast the Boston dealers maintained shipments to all outside points. Messrs. Lawson, Harrington and Company and Alex. Duffield were the chief importers in this city. The householder was supplied by pedlars with small tanks on their wagons and by the retail grocers.

The oil usually came to Halifax in the New York steamers, but in the autumn the coal carrying sailers usually brought a deck load.

In 1885, Shatford Brothers opened business in Halifax and made an effort to secure the outside provincial trade in oils for shipment from Halifax and their success will be noted from the fact that ten or twelve years later Boston dealers had almost entirely abandoned the market in illuminating oils—save when a few dealers accepted fish in payment for oil at prices quite satisfactory to the Nova Scotia fish dealers.

At that time oil was handled in wood barrels, bulk importations were not permitted. The duty was seven and one-fifth cents per imperial gallon and twenty-five cents duty on the barrel. Every barrel on landing was weighed and gauged with the number of imperial gallons marked on one end of the barrel and duty was paid on this quantity. Every tenth barrel was tested for quality. These Customs weights and measures had to be removed from the package as soon as the barrel was emptied and the life of the oil dealer was kept in misery by shipments of these barrels from out of town sources being seized by the Customs and Inland Revenue officers because of non-erasure of these Canadian Customs marks. Country dealers unfamiliar with this regulation—as Halifax was the only point where facilities were supplied by the Customs for testing and weighing oil packages—would ship the empty barrels to Halifax to the different dealers without removing the Customs marks, and as the officers received a liberal portion of the fine they were constantly on the lookout for any departure from the letter of the law.

Right here I recall that Shatford Brothers’ trade kept on increasing and they found it necessary to import in larger quantities. A cargo of fifteen hundred barrels arrived by sailing vessel and she met at the Liverpool wharf by police and fire officials who refused to allow the captain to land his cargo. The danger to the city in case of fire occurring was considered too great to take the risk on such a large number of barrels of oil on the dock at one time. On explanations being made that the cargo was for immediate shipment outside of the city the full quantity was landed as fast as the Customs could handle it and in six days the schooner was fully discharged, the oil shipped to country points and another schooner in the harbor ready to land a similar quantity. This same trouble was experienced with every large cargo arriving.
On October 31, 1891, the big Water Street fire occurred, destroying over a thousand barrels of kerosene and lubricating oils belonging to the different dealers—a conflagration that for ferocity and rapidity had never been experienced in this province and has not since.

Meanwhile the Eastern Oil Company, Limited, had been formed by the Standard Oil Company of New York to cover all their interests in the Maritime Provinces and Shediac Brothers became the Eastern Oil Company, Limited, in 1899. A Dailet refinery.

The business continued with but little development for the next few years, when, awoke one morning to read in The Halifax Herald that the Standard Oil Company of New York had bought out every refinery in Petrolia, Ontario, thus giving them control of the Eastern Canadian market. The Queen City Oil Company was previously acquired, and owning the Daubell Oil Company of Montreal and the Eastern Oil Company in the Maritime Provinces, the entire field of Eastern Canada was theirs. Amalgamation of the above units took place under the name of the Imperial Oil Company, a chartered Canadian Company with Canadian officials.

A refinery was constructed on the Saint Clair River at Sarnia, Ontario, by C. O. Stillman, superintendent. Canadian and United States crude oils were used. Later a pipe line was laid from Cuyahoga, Ohio, to the same refinery for the transportation of crude oil to that point to satisfy the increased demand for oil products, including lubricating oils and tons of paraffin wax candles.

The duty on illuminating oil I mentioned was seven and one-fifth cents per gallon, but agitation from dealers and consumers to reduce the duty continued and in 1891 or 1892 the Finance Minister, Hon. George F. Foster, reduced the duty to six cents per gallon and the next year to five cents and at the time of the last reduction permitted the importation of oil in bulk in tank cars—not by water in bulk, but in large storage tank cars, and shipped without duty and at a lower rate of duty.

The growth of the oil business in the province became rapid and the difficulty in getting the City Fathers of Sydney to agree to the installation of bulk storage and the erection of a thousand gallon storage tank was well remembered by those who engaged in the struggle. The same difficulties were encountered in every incorporated town having by-laws in the province, and for the next ten years there were constant negotiations for the privilege. Today the scene has changed, gasoline tanks are now accorded installation privileges cheerfully where it was not thought advisable to solicit for the household oil tanks of the former days. Today the scene has changed, gasoline tanks are now accorded installation privileges cheerfully where it was not thought advisable to solicit for the household oil tanks of the former days. Today the scene has changed, gasoline tanks are now accorded installation privileges cheerfully where it was not thought advisable to solicit for the household oil tanks of the former days.

In 1898, the first large bulk tank in the Maritime Provinces was installed at Bedford Basin and still stands there sixty-six by thirty feet holding approximately one million gallons. Bulk storage throughout the province was supplied in tank cars from this storage tank, and about the same time importation of oil by water was permitted.

In 1914, came the tank steamer. The "Maverick," Captain Rubelli, came into Halifax harbor in 1899, bringing the first cargo of oil to a Canadian port in bulk. Thus Halifax received the first cargo of oil in bulk by water to reach a Canadian point, months ahead of Montreal and a year ahead of Saint John. This recalls the disastrous fire which occurred on board the "Maverick" some two trips later at Bedford Basin oil dock and her final sinking after her lines were cut from the oil wharf. A new brass elbow connecting the pumps with the pipe line to the shore and storage tank, splits while discharging her cargo, and before it was discovered the oil ran into the engine room, caught fire and then connected with the cargo below decks. The money spent and the facilities used to raise her kept the waterfront busy for many months. Finally Captain Farquhar and George Mahgrave succeeded in raising her, and a few weeks later she was on her way in tow of a Standards Oil tug to Brooklyn, New York, where she was repaired and put again in commission on the Pacific Coast.

Then the Canadian Oil Company Limited came into this market and competition in the Maritimes was established in the production of gasoline. The growth of the gasoline business has developed still further competition until today five major companies operate here.

In 1900-1910 gasoline began to increase in demand and the oil business became enlarged. Oil dealers who always looked forward to the warmer months as one of rest and holidays, owing to the long days and short nights when the sun held the lighting monopoly, were obliged to work harder than earlier supplying gasoline requirements than in the winter, as the oil consumption was decreasing owing to the introduction of electric lights throughout the province.

Industrial development in Nova Scotia added to the activities of the oil business during these years and lubricating oils were in large demand, thus adding to the increasing volume of oil products then marketed.

In 1914, an informed the Imperial Oil Limited purchased the George Cook wharf, formerly known as Power's wharf, and located their business there, where it has remained ever since. In 1925, they purchased the historic Duggan property, formerly the old "Pontiac Inn", the home of the famous Wolfe and his staff when on this station in 1753, and moved their offices to the new building.

In 1914, also came the Great War and with it a demand for large quantities of fuel oil. Halifax harbor, being used by the British fleet, was selected as the point for fuel oil storage and huge tanks were erected. Later the demand for both fuel oil and gasoline became so large and freight bills high and tonnage and tank cars scarce, the idea was suggested that Halifax would be a suitable point for a refinery. After some months the idea was developed and application was made to the Board of Control and City Council for the whole of Africville and other lands adjacent for the purpose of erecting an oil refinery. Many today will remember the "turn down", given to the proposition by the City Fathers and the Imperial Oil was obliged to turn elsewhere and finally located on the MacNab farm near Eastern Passage, now Imperoyal. Our city fathers now doubt regard their attitude at that time, but while Africville would have proved a better business site for Imperial Oil, the present is by far the better oil refinery site.

The amount of money spent by the Imperial Oil Refineries since 1917, for wages and materials would stagger the imagination even of those familiar with the operations and this had added to the prosperity of our city and province and will continue to add to it in years to come.

HIS many friends throughout the Imperial Oil organization were pleased to learn of the appointment of G. Gordon Bell to the directorate of the Anglo-American Oil Company Limited, of London, England, at the last annual general meeting of that company.

Mr. Bell came to Imperial Oil in 1924, and at the time of his resignation to join the staff of the English concern in 1931, was in charge of the motor equipment of both Imperial Oil and International Petroleum. He was also chairman of the committee on aviation in which he took a keen interest. One of his most valuable contributions to the cause of aviation was the "Aircraft Manual", a handbook for pilots, which, judging from the requests the Company receives, is one of the most useful of its kind.

Soon after Mr. Bell went to London, he was made assistant to F. J. Wolfe, Chairman of the Board of the Anglo-American. Mr. Wolfe, as many of our readers will recollect, was formerly Vice-president in charge of marketing, of Imperial Oil.

Mr. Bell was born in Ottawa, and is a graduate of McGill University. He enlisted at the beginning of the war and saw service on several fronts. He has a distinguished war record, among his decorations being the D.F.C., Legion d'Honneur, and Croix de Guerre avec Palmes.
by the Hindus. That it was spherical, however, was probably accepted at a very early period by the Chaldean and Egyptian astronomers, and this theory was introduced into Greece about the sixth century, B.C. Naturally enough each country considered itself the centre of the universe.

The shape of the earth agreed upon, the next question was its dimensions. To us, with our wealth of accumulated knowledge and a host of sensitive instruments, geodesy or earth measuring, seems a comparatively simple procedure. But to those early mathematicians, emerging from the legendary stage of things, it was a remarkable undertaking. One of them, Eratosthenes, who was born in Cyrene in 276 B.C., first devised the scientific method of ascertaining the size of the earth by measuring an arc of the meridian. His reasoning, over 2,000 years old, is still being followed by geodesists, to determine the earth's size. This interesting problem has occupied the attention of mathematicians down through the ages. Until the advent of Sir Isaac Newton, however, it was always supposed that the earth was a perfect sphere, whereas he proved that it bulged slightly at the equator and was flattened at the poles, which made a considerable difference in the calculations.

But to return to cartography, or map making—the art of transferring to paper the findings of philosophers, mathematicians, navigators and military men. The Romans, who journeyed more extensively than most of their contemporaries left only two maps. One of these is an itinerary scriptum, or road map of the world, apparently of the third century, and embraced their itineraries from Britain to India. It was copied by a monk at Colman, in 1261, who, fortunately, restrained his tendency to improve on the original beyond adding a few scriptural names.

This was a failing of the map makers of that era. The initial drawings of the mariner, explorer or general were embellished by the subsequent conceptions of astronomers and others whose theories or notions were deemed nearer to the truth, or by the copyist who had ideas of his own on the subject.

With the downfall of Rome, the black mist of the Middle Ages began to drift across the civilized world. Reason gave way to superstition; progress to persecution. Science, philosophy, and other intellectual pursuits were regarded as sorcery. A wholesale destruction of any evidences of advancement took place. Learning retreated to the monasteries where she marked time until the fifteenth century began to dawn in a clearer atmosphere.

With the Renaissance every country felt the surge of new energy. A spirit of daring, of adventure, entered into hearts long filled with dread and apathy. And the Atlantic once more sounded forth its challenge to come and see what was beyond it. John and Sebastian Cabot, Amerigo Vespucci, and Christopher Columbus took up the gaue. With Columbus sailed one who was destined to become the first cartographer of North America, Juan de la Cosa, of whom more later.

Up until this time map making had been unscientific, and during the Dark Ages was left almost entirely in the hands of the monks. To the available records of short coastal voyages or inland explorations were added notations and outlines in accordance with the fancies or convictions of the artist. Such maps were of little practical use. However, Italian navigators had been making charts for themselves of the geographical details of areas covered in their voyages. These were often mathematically exact, and as far as they were, dependable. They were known as "portolani", and provided the foundation for the science of modern map making.

About this time, Prince Henry of Portugal, known as the Navigator, established at Sagres, Portugal, his famous school of Nautical Science. Prince Henry, a student and scientist by inclination, was also a soldier and explorer, and experience showed him the necessity for combining theory and practice. His school, therefore, brought together the mathematicians, astronomers, cartographers and navigators who originated scientific map making. The map which came from this school in 1459, has the exactness of a portolano, which was its model, but was constructed on a world scale. It is known as the Camaldolese Chart of Fra Mauro.

The next important step in the history of map making was taken in 1569, when Gerhard Kremer, of Flanders, generally known as Mercator, published a map of the world on which the lines of latitude and longitude were clearly marked. This is known as Mercator's projection and is the one used almost entirely to-day for marine charts because it is the only one upon which the line of constant bearing can be drawn between any two places as a straight line. The subject of projections can become quite an involved one, and will not be dealt with here. In a book published by the Royal Geographical Society of London, England, are illustrated some eight different projections, each of which has its advantages and drawbacks.

The science of map making was greatly hindered in the early days by the lack of co-operation between nations. Much of the interest in navigation was stimulated by stories of conquest and treasure trove, and consequently the seafaring men of the different countries endeavored to keep secret the knowledge they possessed. Marine charts were jealously guarded.
and territorial maps—history is full of vivid tales based on treasure maps and the lives they have cost. From this rivalry came many great navigators and explorers each striving to outdo the others in his quest into the unknown and hitherto feared element, for the honor and glory of God and his country. Our next article will be outlined the cartography of North America which with its sister continent drew like a magnet not only the conquerors but the minds, many of whom had emerged from their long seclusion as missionaries with a zeal as fierce as that of the military adventurers.

FIRST FLIGHTS

(Continued from Page Six)

Lake, Vancouver, Carcross, Swanson Bay and Nauholm.

These "planes" were taken into the air by as unique and talented pilots as exist anywhere in the world. When commercial flying first started in Canada, every pilot was a war pilot, and it was unheard of to have anybody else. But since then pilots have been created by the Air Force, by the Ontario Provincial Air Service and by flying schools.

No substantial company in Canada accepts a man as pilot who has not had at least 1,000 hours in actual flying to his credit, and some of them have many thousands of hours of their credit before taking service. Notwithstanding this, the act was successfully taken in 1917 by the Dominion Government when, by a matter of economy, it cancelled mail contracts. Flights from Montreal to Saint John, Toronto to Detroit, and Winnipeg to Calgary and Edmonton, once occurring daily, may be revived some day when the Government has more money.

But what a difference between flying in Canada and in countries of large populations! You do not find in Canada expensive aerodromes, round houses, hangars. Almost a new technique has been developed. The pilots are men who can operate in all kinds of weather over all kinds of country. They are ready to fly up to the Arctic, up and down the Mackenzie river along the entire coast, in the Maritimes, around James and Hudson Bay ports, and into any known or unknown where men want to go.

These pilots have to be good plainmen, good woods- men, as resourceful on the ground as in the air. Few repair jobs hundreds of miles from civilization daunt them. They are ready for any kind of work possible to an airplane. They "carry in" all sorts of supplies to mining companies anywhere from 30 to 1,200 miles from steel and have made possible operations which otherwise could not exist. No gold mine with rich iron need now worry about distance from transportation. The sick man or woman can be taken 100 miles in an hour to hospital and medical service. Criminals and lunatics are brought out to jails and asylum and mounted police are dropped near objectives that once took them months to reach. They drop into lakes that have never been explored and they enable prospecting parties to do in a few months what formerly took three times as long. They aid hunters, fishermen, exploring parties, mountaineers, fire fighters, forestry patrols, fishery patrols, Government inspectors and Hudson Bay posts. Some of them have flown over nearly every wild section of Canada.

Imperial Oil, Limited, financed the first flights on the Mackenzie river in 1921. The flights of two Junkers from Peace River Crossing at the end of steel 900 miles North to Fort Norman, the some of the Company's farthest North activities in drilling for oil, will always stand in aviation history as the pioneer effort in flying to and from the Arctic. From the Company's standpoint the enterprise has been justified by recent developments at Great Bear Lake which is supplied with petroleum products from Fort Norman.

Radio service was not then established and therefore in the Arctic winter there were landings in blizzards on ice-bound lakes, broken propellers, damaged wings and a whole host of adventures. One aeroplane came back with a home-made propeller two months later and in the interval used and experimented with the first skis for Arctic travel and with wooden floats for landing when the ice went out. One of the machines hit a sand-bar and turned over at Peace River as it returned. On the foundation of this experience a later organization avoided most of the unforeseen possibilities in Arctic trips. Skis and pontoons suitable for Arctic travel were evolved and the story of initiative and resource shown that first trip has been a standard for pilots and engineers ever since. The emergency equipment then evolved is still used on Northern planes. Now aeroplanes fly many thousands of miles every week and far beyond the distances covered by those pioneer Junkers and without mishap of any kind as a rule. Then it was a notable and daring attempt to conquer the Canadian wilderness, now it is the normal and customary thing.

A PROMISING ONTARIO GOLD PROSPECT

By G. L. Green, salesman, Imperial Oil, Limited

IT IS a little more than two years since Jack and Jay Kenty, brother prospectors, set out to search for gold in Swanzy Township, Northern Ontario. They used a canoe as their means of transportation, since an aeroplane, which is usually favored for exploration work in the north, would have cost too much even along much too swiftly to study a likely-looking formation. They paddled through the unnumbered lakes and up and down the rivers of the district. On one memorable day they took a "hook" inland and found the prospector's dream—spectacular showings of gold and favorable geological conditions.

Today, on this occasion, the Kenty mine, named in their honor, is one of Ontario's most promising gold prospects. The bustling activity in the Swanzy area at the present time makes it difficult to believe that such a short while ago there was nothing here but jack pine, birch and rock. All of Swanzy and the adjoining six townships have been sealed solid, and it is estimated that there are 300 men working on the various claims. The Kenty property, some 125 miles northwest of Sudbury, comprises about 600 acres, and two shafts are being sunk to tap the rich ores thought to lie below. Diesel engines supply power for these operations and rather ingenious arrangements had to be made to supply them with fuel oil as the nearest railway line is 18 miles distant. When a tank car of oil is bought, it is unloaded into a spur tank at Sault on the C.P.R. main line, then reloaded into barrels and transported over the wagon road which has been constructed into the Kenty mine. Reaching at last the end of its varied journey from the refinery, the oil is dumped into a second storage tank to await the final stage of its career—combustion in the diesels. Oil barrels standing about the property all bear the familiar Imperial Oil colors, for the Company supplies the entire fuel and lubricating needs of Kenty Gold Mines Limited.

The discovery of the Kenty prospect is but one of the latest of the many promising finds which have raised Canada to the position of the world's second largest producer of gold. At the present time Ontario contributes about 75% of this total and, in turn, the Porcupine and Kirkland Lake area supply 95% of the province's output.

The Porcupine area is situated in northeastern Ontario, about 450 miles north of Toronto. For 200 years a portage route used by the Hudson's Bay Company passed along by some of its auriferous outcrops but no one suspected that here was gold in such quantities that over $900,000,000 would be extracted in 21 years. In 1906, prospectors from the Colorado silver camp took some interest in a quartz vein
on what is now the Hollinger mine but after investigation decided that it was not rich enough. Two years later, however, further quartz veins were discovered on the shore of Poccupine Lake and in 1909 a rush to the district began, resulting in the development of the Hollinger, Dome and McIntyre mines.

Like Porcupine, the Kirkland Lake area first drew attention in 1906, and its possibilities, too, were not appreciated at once, most of the stakings being allowed to lapse. When the spectacular findings at Porcupine were made, interest spread to Kirkland Lake and retaking began. In 1913, proof positive of the potential wealth of the area was furnished when two carbide orts shipped from the Tough-Diakite realized about $7,003. From this time on, the success of the field seemed assured. It has gradually overtaken Porcupine and today produces over half of all the yellow metal of the province. In six years the population of Kirkland Lake, boom town of the area, has increased from 1,500 to 14,000.

Gold mining in Canada today is big business, and as such demands efficient organization and strong financial backing. Gone are the days of the great "placer" rushes when it was every man for himself, and soursough filtered the gold they had discovered through their own hardened fingers. In a placer deposit the native gold occurs in grains, scales and lumps found for the most part in the sand or gravel of a stream or a beach or a hillside. Only the simplest apparatus is necessary to sift out the yellow metal, and many a prospector has made a small fortune in a few days of 'panning.' Most of Canada's placers seem to have been discovered before the turn of the last century, the heyday for this type of mining. Nowadays gold is usually recovered from hard rock or lode deposits with the aid of costly and elaborate machinery for crushing the ore and separating the metal.

Many of the men who work in these vast Can-adian mines, where gold is turned out in such a business-like, routine and formal manner, never get a glimpse of the gleaming metal they are helping to produce. The rock often looks quite devoid of precious mineral. Here is an example. Up in Northern Ontario the government is building a new road. As filler for the bed some supposedly valueless rock from the Kemy Lake deposit was used. When dumped it was covered with muck and looked worthy of no better fate than the one it was meeting. Then a heavy rain fell and washed it clean, revealing surprising showings of gold. When the wash was made and the reason for paving a government road with gold at a time of depression, it was learned that a vein had been struck in a cross-cut, and that a few loads of rock had been taken away before it was noticed.

In addition to supplying thousands of men with work, the gold mining industry in Canada is opening up the hitherto inaccessible northland in a way equalled by probably no other agency.

First the prospector hits the trail. He travels on foot, by canoe or by plane, according to his individual preference or his financial support. His keen eyes are always on the lookout for the tell-tale outcappings which presage rich ore below. These may be visible to the naked eye but, more often, a microscope is necessary to pick out the fine threads and grains of gold in a vein. Prospectors usually search for years without success but occasionally one of them stumbles on a rich formation and experiences the thrill that only a "screamer" can give. Then he retires in favor of the technical men who carry on development of the property.

Sometimes the site of the mine is so far from a railroad that even the machinery must be flown in by plane, a job which the aerial freights of the north take in their stride. Houses, stores, churches, hotels—all the appurtenances of civilized life spring up magically in the wake of the steadily inflowing stream of workers. A wagon road is built which eventually becomes fit for motor travel. If the mine is a particularly successful one, even the railroad soon reaches it. And thus, almost overnight, a new town has been established in the wilderness.

A fine view of gold at Kemy Lake.
His extraordinary grasp of manufacturing details which so attracted him from the first had not been unnoticed by his superiors and in 1921, he was transferred to the executive offices of the Imperial Oil Refineries Limited, at Toronto. His expert knowledge of manufacturing problems brings him into constant association with the Board of Directors. His work at present is principally in connection with the purchase of the various grades of crude oil required by the Imperial Oil refineries. A great part of his time is spent in making up costs of crude oils, besides drawing up schedules of operations. He is considered an authority on the price structure of North and South American crudes, and in addition to the fund of useful information tucked away in his brain, he has detailed figures of crudes and crude prices dating from the time Drake discovered the first oil well.

He has never lost touch with his former associates. He visits Sarnia frequently and when any of the "old crowd" are in Toronto they drop in to see him and are accorded a royal welcome. It was his fair-mindedness and understanding of the view point of the men he worked with which were factors in his appointment in 1927 to the Annuities and Benefits Committee. A business associate at one time remarked of him that his sense of humor gave him a sense of balance and fitness which inspired in those with whom he dealt the feeling that here was a man who would give everyone a square deal.

To the hundreds of employees at 56 Church Street he is known as "Jack." His duties carry him all over the building and into many individual offices where he is always a welcome visitor. In hurrying through the corridors he is never too worried or preoccupied to exchange with those to whom he meets a cheerful greeting or the joke of the day. Nor is he ever too busy to listen to another's trouble and pass along some of his wholesome philosophy. His hobbies are golf, curling, fishing, and reading—all of which he enjoys equally. To know him is to admire him and his career may be summed up by "Who knows Jack Simpson?" to which is replied "Who doesn't!"

This beautiful Sheffield tea service was presented to A. M. McQueen on the occasion of his retirement from active service as Vice-President of the International Petroleum Company, Limited, as a token of high esteem and affection, by the members of the Talara and Negroes Island crews.

Mr. McQueen joined the Imperial organization in May, 1926, and in August 1927, made his first trip to Peru, visiting the International Petroleum property, the ports and refinery at Talara, and the producing fields of Negroes and Lagunillas. In December of that year Mr. McQueen was made Vice-President of International Petroleum which position he held until his retirement in June, 1933. During this time Mr. McQueen made annual trips of inspection of the Company's activities in Peru and Colombia where, because of his great interest in the work and in the individual efforts of the employees, he was always welcome. His visits were looked forward to by the staff as opportunities to discuss their difficulties both business and personal. His announcement, in 1929, that the international employees would be eligible to participate in the first Imperial Oil Co-operative Investment Trust was received with general welcome and universal response. Needless to say, Mr. McQueen will be very much missed by the personnel in the foreign field.

When he made his first visit to Peru in 1916, there were less than 600 oil wells on the Company's property. By the end of 1932, these had increased to nearly 1,000 producing wells. During 1916, the daily average crude output was at the rate of a little more than 5,000 barrels. The figures for the month of June, 1931, show over 90,000 barrels a day, with a potential of 87,500 barrels a day.

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IMPERIAL OIL REVIEW

IMPERIAL OIL REVIEW

MANITOBA GOODWILL AIR TOURS

By Allen H. Bell

In NO province of Canada is the rural population better posted on the developments of aviation than in Manitoba. The reason is the series of annual Goodwill Air Tours which started in 1931.

That statement takes in considerable territory and possibly will arouse a few skeptical "Oh Yes's!" in various other parts of the Dominion but I believe it can be proved.

Each year for three years a fleet of aeroplanes numbering about twenty has visited from ten to fifteen of the towns and smaller cities in Manitoba. Crowds ranging from a few hundred to eight thousand persons have gathered to see them. It is safe to say that before the Goodwill Tours were inaugurated, seventy-five per cent. of these thousands of Manitobans never saw an aeroplane at close range.

True, when the Prairie Air Mail was in operation, planes speeding eastward and westward were common sights, but to most rural residents of this province those mail planes, and the occasional "barn-stormer", were merely symbols of this great new industry of aerial transportation—fleeting evidence that man had conquered another obstacle in his forward march.

It was a realization of this, and a realization of the important part that aviation was destined to play in the development of Manitoba, that caused a group of air-minded and foresighted Winnipeg men to conceive the idea of a Manitoba Goodwill Air Tour. They were members of the Aviation Committee of the Young Men's Section of the Winnipeg Board of Trade.

They found no lack of support in Winnipeg for their plan. Here was a city which had one of the most active flying clubs in the Dominion; there were several commercial companies who could see well beyond their noses; there were private owners whose interests in matters aeronautical was a valuable asset; and there was business men who, while they didn't know a tail-skid from a joy-stick, knew that this province must keep in step with aviation if it was not to be left behind in the march of progress.

So J. L. Deering, chairman of the aviation committee of the Young Men's Section, went to work. Mr. Deering is assistant manager of the Ford Motor Company at Winnipeg and his interest in aviation is so keen that it is with difficulty he is restrained from putting wings on his Ford.

It did not take him long to discover that he had in Winnipeg, ready-made, the nucleus of a tour in the

Right: Touring planes tor- ing the parking line. Below: Serving the aerial visitors at a Prairie town.

person of T. N. "Pat" Reid, aviation representative of Imperial Oil. For some time Pat had been conducting a one-man tour of Canada in the interests of his company, astride CF-10L, the green
This year alone, the message of aviation was carried directly to more than 25,000 persons in rural Manitoba by the Air Tour. That is the number, by count of tickets sold, that turned out to the fields. Many thousands more saw the touring 'planes as they dropped overhead and learned something of the progress of the aviation industry. Considerably more than a thousand passengers were carried at the various towns, many of them making their first aeroplane flight.

For three years the Manitoba Goodwill Air Tours have been spreading the gospel of aviation throughout the province. The towns visited have been selected so practically every settled part has been covered. The writer has accompanied each of the three tours. He has been inspired in rural Manitobans an interest in aviation, a realization of its vital importance in the economic life of the western people, and faith in its future which ensures this province keeping abreast of the industry's development.

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Page Thirty-Three
THREE years ago the Canadian Government extended an invitation to all the countries of the world to participate in the first World's Grain Show and Congress which was held at Regina, Saskatchewan, from July 24th to August 5th of this year.

It took courage and faith to carry out the plans for this Exhibition, in the face of conditions on the Prairies, but its success justified this confidence. It brought to this country men of high standing in other nations, men who are acknowledged authorities on agricultural subjects. These visitors paid many compliments to the enterprise of the people of Canada, and the influence of the congress should be felt in many directions.

The building which housed the exhibits was completed in 1931, and the interior decoration and staging of exhibits was under the direction of the Canadian Exhibition Commissioner.

The show was opened by Rt. Hon. Arthur Meighen whose address was followed by speeches by the official representatives of the other nations participating. Rt. Hon. W. L. Mackenzie King replied briefly.

Exhibits were entered from all the Provinces of Canada, 24 States of the American Union, Burma, Queensland, Victoria, Western Australia, New South Wales, South Australia, New Zealand, South Africa, Southern Rhodesia, British Guiana, Japan, the Philippine Islands, Siam, Germany, England, Scotland, Northern Ireland and Mexico.

With 300 entries competing for the 50 prizes, Hard Red Spring Wheat was the largest class in the show. The first prize, $1,000, was won by a young Alberta farmer,Freelan Staveley, who was crowned wheat champion of the world.

In the oat class, with 182 entries, many from England and Scotland, Alberta again proved supreme, the highest award going to Fred Peach, Goodfellow.

Barley and corn were well represented, and the awards for rice were keenly competed for by eastern countries, Siam winning three firsts.

A portion of all prize-winning exhibits was mounted under glass for inspection and comparison. First prize exhibits were housed in a special four-sided showcase with a magnifying glass attached to each panel so that they could be closely examined.

Discussion groups and open sessions of the Conference attracted many of the delegates. About 200 papers were presented at the various sessions of the Congress and of the Canadian Society of Technical Agriculturists which held its annual convention in conjunction with it. Naturally a great majority of these papers dealt with some phase of the production and marketing of grains, but many of them were of wide general interest.

Some of the speakers were Sir Daniel Hall, Chief Adviser to the British Ministry of Agriculture; Sir Albert Humphries, president of the National Association of British and Irish Millers, one of the judges in the wheat classes; Sir John Russell, Director of the Rothamsted Experiment Station in England and Dr. G. I. Christie, President of the Ontario Agricultural College.

The Annual Provincial Exhibition was held concurrently with the Grain Show. One of its chief features was Machinery Row where was collected the most imposing array of implements and machinery ever exhibited in Western Canada.

To accommodate the great influx of visitors, Regina's housing resources were taxed to the utmost. The difficulty was overcome by the erection of a Tent City, which transformed the lonely prairie to a busy habitation of 6,000 people, almost overnight. Nothing was wanting. There were stores, dining hall, barber shop, even an Imperial Oil service station. The peak hours at this station, unlike those of the regular city station, were from 7:00 to 10:00 a.m., and during this three-hour period as much as 500 gallons of gasoline was dispensed to tourists. The Imperial Oil men were also kept busy in Machinery Row, as most of the tractors and combines on display used Imperial products.

Top: Imperial Oil Service Station at Tent City.
Centre: Part of Machinery Row.
Lower: Saskatchewan Government Exhibit.

Imperial Oil Exhibit at World's Grain Show and Congress.
HERE AND THERE

REGINA

From Regina comes news of the retirement, under the provisions of the Company's Amalgamation Plan, of George Leach who since 1922, has been superintendent of Regina refinery.

Mr. Leach was born in Petrolia, was a prominent public and private school in 1906, when the Nashville Oil Company purchased the Woodward refinery at Petrolia, Mr.

Leach was there to build the refinery. In the following year this company purchased a small refinery at Sarnia to which Mr. Leach was sent. In October, the plant began operating, under his management of G. C. Smith and M. Leach had charge of all oil stocks from the crude to the finished products.

In the summer of 1939, the Bushnell Oil Company was taken over by Imperial Oil and the Sarnia plant enlarged. This meant greater responsibilities for Mr. Leach and the opportunity of leaving all refinery processes, and when the Halifaxes were as bad as he spent two months there getting it under way on

In 1920, Mr. Leach was transferred to Regina refinery as assistant superintendent.

Mr. and Mrs. Leach are leaving for an extended trip that will eventually take them to Europe, but they will be returning to Regina to continue their residence here a few years hence. They will be warmly welcomed back.

C. E. Carson

Mr. Leach's successor is C. E. Carson, who has been transferred to Regina from Montreal East. He was graduated from McGill in Science in 1922, and in the spring of 1921 joined the staff of Imperial Oil's Montreal refinery, as laboratory assistant. In January, 1929, he was made assistant to the refinery superintendent, in charge of the technical section of Cracking and Vacuum Pipe Still operations, in which capacity he served until his recent promotion.

Mr. Carson although a comparatively young man for his new and heavy responsibilities, has won the esteem of his associates by his ability to carry the load. The office staff at Montreal, as well as the refinery, will miss him greatly, although they wish him all success in his new duties. During the farewell dinner in which both staffs took part, there were many speeches expressing

popularity and his qualities as a technologist, presenting him with several tokens of regard--two fitted travelling cases, a silver tea service (for Mrs. Carson) and a fountain pen and pencil set, mention was made of his fairness to those under him and associated with him, his large fund of general knowledge and exceptional information about his own particular line of work. At an oyster supper given in his honour by his immediate fellow-workers the expression was enjoyed that his breadth of mind was in proportion to his physical height of six feet five inches.

GASOLINE TAX COLLECTIONS

Texans officials, aided by a new gasoline tax collection system, and by a gasoline tax collection more complete.

The state put into the field a "gas tax enforcement army" of 70 trained men working out of eight district offices. Within a few weeks they obtained felony indictments against 36 alleged violators of the gasoline tax law and three convictions. There were owing in receivables, this amount of sales at $500,000 a month. It is estimated that as much as $4,000,000 a year is pretaxed escaped collection in Texas alone!

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GASOLINE-DRIED RAIL VEHICLE TRAINS

A HIGH-SPEED gasoline-dried railway bus of new design recently tried out on the Long Island Railroad matched speed with a crack steam-operated express run of the same route. Riding in pneumatic tires enclosed in steel flanged wheels the rubber never touched the road. The new train made its check in a test run near New York City. Two gasoline motors controlled with a throttle resembling a steering wheel drive the car at speeds up to 90 miles an hour. It seats 42 passengers, weighs only 10 tons, and its economy of operation is expected to adapt it especially to branch-line service.

Through this design, the shock-absorbing qualities of pneumatic tires are secured, with the certainty of a puncture. The steel wheels

SKIRT FREE ON THE CAR FRAME, the two axles under the vehicle occur, then they take the full load after the car has dropped three-fourths of an inch.

COLOMBIA

Floyd Crawford Lantz

who since 1922, has been superintendent of the Tropical Oil Company's refinery at Barranca-Bermeja, has been transferred to Barrancas.

Mr. Lantz was born at Halifax, N.S. He attended public and high school in Halifax, then entered Dalhousie University to study engineering. While there, he was called to duty in the army, a call he accepted. He purchased his release at the end of the World War. But on his return, he went to McGill University and continued his education at McGill University. After his graduation as a mechanical engineer, he worked for a short time on the staff of the Bell Telephone Company in New York, and was later returned to the staff of Imperial Oil at Sarnia in 1921. Upon completion of the Company's amalgamation in the beginning of last year, at Calgary, Mr. Lantz was transferred to the refinery manager here, and he has been an all-round good citizen.

most formidable players of the Club, many of whom represent the Toronto Golf Club in championship matches in Regina and Mclellan. However, the victory came as no surprise to the throng of spectators, or to the winner himself, as he is reported to have admitted to some of his closest friends. The champion, reluctantly allowed himself to be photographed shortly after his victory, but declared that he had no public statement to make at this time.

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Page Thirty-Seven
The above reproduction shows the certificate of life membership in the 56 Church Street Club presented to Mr. G. C. Stillman.

TORONTO
56 Church Street Club

The 56 Church Street Club started on its seventh year of activity with a record of steady progress and the possibility of catering still further to the social, intellectual, and athletic activities of its members in the future.

The reports submitted by the various officials for the year just ended showed a gratifying increase in the membership, a comfortable bank balance, and an increased enthusiasm in certain of the club’s ventures, although it appears that the taste of the membership varies from time to time almost as drastically as do the styles in feminine attire.

As an example, alley bowling, which at one time occupied a central role in the centre of the stage, is relegated to a very minor role whilst badminton, which formerly was the pastime of those who found checkers too strenuous, is now looked upon as the prime winter activity of the athletically inclined youth.

Some sports continue to hold their own. Our softball league battled with undiminished enthusiasm which was not abated when the Royalite team, representatives of Princess Street with some pinch-hitting assistance from the office, defeated the all-conquering Marvels from our Service Stations and gained the Victor Ross trophy.

Mr. Ross attended the annual meeting of the Cołu and presented the spoils to the winners. At the same time, he commented on the successes of the Club in fostering in the realm of sport the friendly relations that had always existed amongst the Imperial employees in all branches of the service.

If, too, showed a return to popularity which had been waned and abated by the five-day week and the Saturday morning games throughout the season were greatly enjoyed. The competition for the G. H. Smith trophy, although not as widespread as in former years, was keener than ever and in this handsome piece of silverware for the third time, Mr. Jas. A. Pope performed no small feat. On his way to the finals he eliminated such formidable opponents as Rexeimer (The Baron), Jimmie Walker, last year’s champion and J. N. Fitzgerald, the dark horse of the tournament. The final, over thirty-six holes, was contested between Mr. Pope and Mr. O. B. Hopkins and although the battle was all square at the end of the first round, the ultimate winner improved at the day were on whilst Mr. Hopkins’ geological instinct led him from the fairways into water courses and bunkers where he made a study of the rock exposures and subsoil to the detriment of his score.

In accordance with Mr. G. H. Smith’s promise, the trophy now goes to the hands of Mr. Pope “for keeping”, he having won it in the years 1929-31-33, the other successful champions being S. F. Heard, 1930 and Jas. Walker, 1912.

In addition to the trophy and monograph, Mr. Pope received a Sheffield plate serving tray as a club prize whilst handsome pieces of silverware fell to the lot of Mr. O. B. Hopkins, runner-up, and Mr. J. N. Fitzgerald and Good. Neill, semi-finalists.

A new incentive has been given to the golfers by the presentation of a trophy by Charlie McNair to be competed for annually by the various departments. This season the Service Station team carried all before them and this beautiful cup will repose, along with the E. H. Smith trophy, on “Captain” Jimmie Pope’s sideboard.

The Club has just completed arrangements for fifty of its members to enjoy the facilities of the Y.M.C.A. for the winter months under a group membership plan. These arrangements coincided with a membership drive of the Y.M.C.A. in which the Imperial Oil team made a very creditable showing. One of our members, who could not take part in the “Y” activities personally, provided the wherewithal to allow three boys to enjoy its privileges for a year. These youngsters are to be selected by Mr. Kneall of the Central Y.M.C.A. from a large number of boys who are declared from enjoying such luxuries at the present time, owing to financial stress in the home. They are to be designated as “The Three Stars” and the Imperial Oil group will keep a fatherly eye upon their progress.

The badminton section has again resumed occupancy of the Metropolitan Church Courts with an increased membership and bright prospects for a successful season. If this group continues to progress as in the past, more commodious premises will have to be secured.

Plans for other winter activities are maturing and it is expected that the House Hockey League will again function. While there may not be a regular schedule for the bowling leagues, competitions will be carried out for the C. O. Stillman and F. J. Wolfe trophies.

The highlight of the annual meeting was the unanimous adoption of the following motion submitted by the Secretary: “That in consideration of the high esteem and regard held by the members of the 56 Church Street Club for the following members who have contributed greatly to the success of the Club’s endeavors, Messrs. C. O. Stillman, A. M. McQueen and E. A. Oiler be elected Honorary Life Members with full privileges.”

In pursuance of this motion, tastefully-designed certificates of life membership were prepared and delivered to those gentlemen who have each expressed their appreciation of the honor and their kindly sentiments towards the Club.

It was also agreed that, in order to keep in touch with the annu- 

tants of the company, all retiring employees who have been identified with the Club’s activities during their service would be continued as life members of the organization.

The Club drew attention to the fact that there are only 50 more shopping days till Christmas prize drawings...
hockey) and assembled in the library of the Chemical Laboratory at the refinery.

Here a lecture was given by Messrs. Bradley and McIntyre using flow sheet diagrams and explaining the progress of the crude oil in its pilgrimage from pipeline to package, from well to aeroplane, from nascess to perfection, De Profundis ad Astra.

After explanations had been made and numerous questions answered (we were particularly impressed with the intelligence of the questions) the party broke up into smaller groups, each under the guidance of an experienced refinery technician. In the limited time it was impossible to touch more than the spots of outstanding interest. The operation of clearing the Coking Stills aroused a great deal of interest. It is a most stirring and thrilling sight to watch the ejection of huge masses of flaming coke from the huge gaping mouth of the stills apparently untouched by human hands.

The Crude Stills and Flash Coal created a certain amount of interest and stimulated pertinent questions.

Vacuum Stills and Clay Plant were then visited, and we passed on to the Cracking Coil, Asphalt Plant and Phenol Plant. The Phenol Plant aroused a lot of comment and speculation. The object of the operation was explained and our guests were particularly interested in the methods of laboratory control.

At the Debutanizing and Stabilizing Plant, the whole party was treated to an exhibition of the high pressure fire fighting equipment, consisting of hose nozzles erected on fixed swivels like anti-aircraft guns. When these nozzles are all in action, the whole of the Debutanizing and Stabilizing Plant may be covered with a mantle of water or the streams from the nozzles may be concentrated wherever fire breaks out.

The Asphalt Plant was then visited and just as the guides were getting well into their stride, it was announced that it was time for the guests to hurry to the station.

The comment of one of the staff, whose pleasure it was to answer innumerable questions asked by the boys, was, "There goes a gang of intelligent kids, there will be no railway problems in this country when those hogs are running things."

**Obituary**

**THOMAS WILSON CREEMLAN**

FROM Sarnia comes word of the death, from sleeping sickness, of Thomas W. Creelman, September 22nd, at the Sarnia General Hospital. Mr. Creelman contracted this strange and terrible malady in June. His condition became serious in August and he was taken to the Hospital, but the case proved hopeless.

Mr. Creelman was born at Halifax, Nova Scotia, on September 25, 1879, and received his primary and secondary education in the schools of that city. Later he entered Acadia University and graduated as a chartered accountant.

He entered the employ of Imperial Oil Limited, on January 7, 1901, at Halifax. He was transferred to the office at Sarnia, refinery in July, 1914. Two years later Mr. Creelman was sent to the plant at Regina, and ten months after that to Montreal office. In October of the same year he went to Colombia, South America, with the International Petroleum Company Limited. He remained in Colombia for five years and then came to the Toronto offices of International Petroleum. On May 16, of last year, Mr. Creelman was transferred to the Treasurer's Office of Imperial Oil at Sarnia.

Throughout his 12 years of service with the Company Mr. Creelman was a trusted and valued employee, winning the admiration and confidence of those with whom he was associated.
Part of the Italian Air Armada anchored at Shediac Bay, N.S. The meteoric
wake at the left is that of a seaplane landing across the formation
of visiting 'planes.