The Imperial Oil Review

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Our Drilling Campaign

The extended and unusually severe winter which has handicapped operations in Western Canada for the past four months shows signs of an early break and an end to the office of the production department there is a stirring which indicates the arrival of spring.

A somewhat expensive experience during the next two winters has demonstrated that except under unusually favorable conditions and only in certain localities can drilling be carried along at all advantageously during the extremely cold weather. By restating that "it is cold, but you don’t feel it," prairie province residents have brought upon themselves a laugh which has run around the province in the brevity of the assertion that gives it the humorous twist. Had the declaration been that "you do not feel it in the same way," it would have been literally and scientifically correct, for in the dry and rarified air of the plains and the northern woods an unbelievably low temperature produces never a shiver nor a chattering of the teeth. To the properly-clothed and well-fed man the ozone of 40 below is as exhilarating as a draught of de luxe wine, a tonic that would have made more De Leon count the screw concluded. But there is a kick to it that is deadly; a bludgeoning impact that knows no mercy. As Robert Service said, "it slams like a driven nail."

The slightest exposure is searched out and the penalty is a quick frostbite. Handling metal or running water in such a temperature is inconvenient, exasperating and dangerous to the man, and, in the case of drilling operators, to the tool, by losing the hole entirely. So that in localities where the risk was greater, operations were suspended in November, to be renewed probably early in April.

The principal of these locations was that near Portage la Prairie, the Pouce Coupe country, Pouce Coupe is in the north-east corner of British Columbia, and north-west corner of Alberta. The drilling location is ninety miles from end of steel at Spirit River, over a very bad road. Promising oil seepages and a satisfactory geological exposure together with the westward trend of the foothills" territory. An exceptionally powerful rig was gotten in over the trail just at the break-up of the winter in 1921, and Homer Bradley, a veteran, of the imperial’s drilling force, entrusted with the operation of sinking the hole. Homer has a record which is excelled by few and he performed consistently with advance notices in this case. Construction and other preparations having been completed, actual drilling operations were commenced on June 16, and by October 1st the hole was down 1730 feet. At this level a flow of gas was encountered which, could it be moved to the environs of Toronto, would balance the outlay for a lot of drilling, but in its present location constitutes only a serious problem for the drillers. It was late in November when this gas flow was finally brought under control and the revelations which had shaken the valley of the Pouce Coupe for a month and a half toned down to silence. But with the approaching winter the danger of losing the hole by mere mishap in the extreme cold was too great to be lightly engendered and operations were suspended until spring. In the meantime casing to carry the hole to a greater depth is going forward and in the forthcoming summer the riddle of what lies below the now harnessed gas force will probably be answered one way or another.

At Coalspur, in the forest reserve on the east flank of the Rockies, where a drilling location to test a promising oil field area at great depth has been chosen, a very heavy rig was placed in position late in the autumn and start made to prepare the way for a result-getting season next summer. From the crown block of the tall dead trees back the blackfoot-dotted hills over the continent is to be seen stretching along the western skyline in a panorama of awe-inspiring grandeur. In the two coal mines which are doing much to corroborate Alberta’s claim to the proprietorship of one-seventh of the world’s known coal, underground is a contorted wrinkle of the earth’s surface which geologists say is a promising area and which drillers will soon be saying that Sherman should have tried drilling first before being so darned dogmatic.

The answer to the riddle here is so far down toward the centre of the planet, and the outer covering of this old world at that particular point.
The Imperial Oil Review
April, 1922

Wms Gold Medal

Paper on "Search for Oil in the West" by John Ness;
Awarded First Honors by Institute of Mining and Metallurgy

A paper, read at the annual meeting of the Canadian Institute of Mining and Metallurgy by Mr. John Ness, of Imperial Oil Limited, was awarded the Leonard (gold) Medal, for the best paper presented to the Institute during the year 1921.

In presenting the medal at the annual meeting of the Institute held at Ottawa on March 3rd, Dr. C. V. Corless, President of the Organization, said: "The 1921 Leonard Medal has been awarded to Mr. John Ness of Imperial Oil Limited for his paper entitled, 'The Search for Oil in the West.' (Applause.) I remember saying to a number of geologists in the audience at the time this paper was read that it was one of the most interesting which I had ever heard. Civilization can only advance with knowledge, and Mr. Ness' paper was a most valuable contribution to our knowledge concerning the unknown resources of the great North-West."
The Lure of the Trail

A Few Glimpses of Scenes and Events of a Geologist’s Expedition in the West.

By Geo. Sheppard, Imperial Oil Geologist, Edmonton

The settlement of Lovett, the mute inglorious end of a coal branch line which winds its way from Truck and Coalfield, gives one an immediate feeling of peculiar depression. It stimulates a desire to get away with as much speed as decorum and due deference to the susceptibilities of the inhabitants will permit.

The surroundings of the village are suggestive of a great industrial past. But now, the dismantled machinery and depopulated buildings give one a feeling of sadness. It is the ashes of a once glorious past.

Perched on the top of a hill sloping over looking the valley is the small log shack of Elder Land. This gentleman is the most experienced packer and the most expert hunter in the whole of that large uninhabited area of western Canada known as the Brazeau Forest Reserve. His right knee, a mere framework, is a prospector of no mean reputation. He spent the greater part of his forty-five years of life travelling through the unknown; from the bleak and inhospitable tundras of Alaska, through the mineral belt of British Columbia and along the coal bearing fields of the Canadian west, down to the international boundary.

On one occasion, we awaited the assembling and the fixing up of our outfit for the journey. Three saddle horses and three pack horses were being equipped whilst one gentleman of the party was tending away industriously at a pair of “kitchen boxes,” each of which when filled with provisions constituted a “side pack” for a horse.

Finally we were all ready. The provisions were loaded into the kitchen boxes and the blankets, tents, cooking outfit and the other necessary impediments of the packer’s provisions were similarly adjusted upon the horses. We “pulled” out along the valley of the picturesque little Penchina.

On stop was made about half a mile out of town at the neat looking residence of the forest ranger. From this gentleman, an Irishman (from the north of Ireland, he would have understood) we obtained our permit. After a few minutes of conversation, which by the way, resolved itself into a virtual monologue carried on in a rich brogue, we departed as he shouted: “So long as there’s no Sinn Feiners amongst ye, allright.”

Curiously how these disturbing factors of modern history are not forgotten even out in the wildest backwoods.

The first few miles of the trail were cut through the thickly wooded timber of the valley, though occasionally wide flats of ample pasture ground and refreshing meadows by the river side broke the monotony of the woodlands.

With the exception of the occasional noisy chatter of squirrels (who were already thinking about the preparation of their winter’s cache of pine-nuts), the startled flutter of water-birds, and the occasional murmur of the stream, very little sound broke the stillness of the surroundings.

In the western perspective of parallel ridges merged into one bight range of hills which abutted the snow-clad peaks of the Canadian Rockies beyond. After twelve miles of this we reached our camping ground.

A few yards away from the camp a small stream meandered through the undergrowth of its valley. Although so small that one could walk across it almost at any point, it was plentiful stocked with trout (big speckled beauties) half a dozen of which were soon appropriated by the commissariat department. In regard to fishing, we feel that Isaac Walton never would have written his “Complete Angler” had he spent a few seasons in the foothills of Western Canada. Certainly he would turn in his grave to see the science of angling so simplified. Here, the elaborate rod, reel, artificial flies and mysterious ground-bait are jettisoned absolutely and in their stead a crudely bound (usually carried in the brim of the hat) a piece of line and a small clump of bacon constitute the whole works. The process of fishing simply consists of spotting your trout in the clear waters of the creek, dropping the bait in front of his nose, and pulling him out.

Throughout the whole extent of this forest reserve much trout fishing has been selected by the forest ranger, the game warden, or the few trappers who travel this country in the winter time. These are usually located near the best used trail which is kept in good condition by the officials of the forestry department. Two important conditions are necessary for a campy-water and feed for the horses.

And here it must be pointed out that in these wild regions it is possible to ride mile after mile without seeing any growth suitable for horse feed. Very occasionally, however, flats or hay meadows occur which have been used for many years by travellers.

One often said that the white man can teach the Indian very little in the art of living in these comparatively unknown outdoors. This, however, is only partially correct. The trick of science of packing horses, we believe, was introduced to the Indian. It was, it is certainly not originated by the Indian. But one thing, the tepee, is probably a true Indian contrivance. And it would be incorrect to make an opinion about that. The tepee is no doubt coeval with the primitive bow and arrow of the North American Indian. Certainly it is the most picturesque thing (from a distance) about an Indian encampment.

Next morning, in a blaze of brilliant sunshine, we set out across a tableland (which interchanges between the Little Penchina and the majestic Brazeau range) for a beautiful picturesque but little-known stream, we struck at a point where a giant elbow swings the course from easterly to southerly. So steep was the bank that a boldier kicked hose by the horses rolled into the rushing torrent four to five hundred feet below. Gazing westward, our eyes beheld a drop-curtain panorama of hills and rising behind foothills, in the distance, the dazzling snow-clad peaks of the Rockies. Cutting down through the centre of the picture was the winding stream of the Brazeau. The roar of the stream came up subdued and sibilant. The wind that stirred the pines seemed to be the only reminder that the whole thing was not a picture on some giant canvas.

Following the stream we began gradually to lose our high altitude and the river level was approached after first traversing a thickly wooded flat or bench. "River" had to be crossed or "forded," a little operation which is part of the everyday life of the hunter.

On account of the rapid melting of the snow in the mountains at this time of the year, the river was high, and was discharging a large volume of water which seemed past the rate of some eight miles per hour.

We all collected together at the water's edge and Hill, who was in the lead, gave us his views and advice on the matter.

"Can you swim, Bob?" he asked, "and have you lots of nerves?" To both queries Bob replied in a very unconvincing negative.

"Oh well, let your horse have his head all the time, and if he gets into a fix slip quietly off the back of the saddle and catch hold of his tail—you'll see it float away down the stream."

The next stage of our travelling was the most arduous part of the whole trip, as the trail was in execrable condition. A few years ago a devastating fire of considerable magnitude had swept over this district; a fire which has been cut through an almost impenetrable area covered with the charred and blackened poles of dead trees. Mile after mile of fallen timber! And through this the horses laboriously pick their way, stepping over the low logs, jumping the higher ones and generally making the impossible ones.

Imagining in conjunction with a steep up-hill climb and a pouring rain, then you have the last word in real, outdoor occupation.

From the sound of that kitchen box horse, we knew that all was not well with our supply de...
Construction Work

By L. A. Gregg, Construction Dept., Edmonton

To many of the Imperial Oil employees who are more or less familiar with office routine, the words estimate and appropriation are vague and perhaps meaningless. To this end that they may be somewhat enlightened, we will endeavor to explain some of the things that have to be done in connection with construction.

In a country that is developing so rapidly as Western Canada it is necessary, each year, to build warehouses and store construction that Imperial Oil Limited may more expeditiously market its products and render Imperial Service to the ever-increasing array of consumers. It should be a source of gratification to every Imperial Oil employee that whenever any new district is opened up by railway extension, Imperial Oil Limited is always in the forefront, as the Red Bill signs will indicate.

Before any warehouses are built, or storage tanks installed, or in fact, any extension to buildings, purchasing equipment, involving $100,000 or more, an estimate has to be made up and forwarded to the Toronto office for approval. Form S-40 is provided for this purpose, upon which must be shown (in case of building a new substation plant) the number of barrels of refined oil and gasoline marketed for a certain period, usually twelve months, and the probable increase for the following year; the number of automobiles and tractors in the district, the estimated cost of the warehouse, tanks, pipes and fittings, pumps, barrel fillers, scales, fense, and other items required for an up-to-date oil warehouse.

Moreover it must also give the location of the town the plant is to be built, with a description of the surrounding country tributary to the place, indicating the existence or non-existence of necessary, in order that the Toronto office may intelligently pass their approval of these estimates.

When an estimate is approved, an appropriation number is forwarded to us, covering the expenditure asked for, and requisitions are then placed with the purchasing department, Toronto, for the different materials required for the construction of the warehouses; storage tanks are ordered from Sarnia.

Most of the materials required for connecting up tanks, pumps and barrel fillers are carried in stock at divisional points, and those are distributed to the various appropriations through the Dandyn material account which is checked up once a month and a copy forwarded to treasurer's office.

It is essential that all material is shipped and on the ground in ample time for the construction gang, who unload the tanks and install them. By keeping in touch with the company for notifying the railway company it enables us to have a man on hand when the tanks arrive, to unload promptly and thus avoid demurrage. Care must be exercised in unloading or tanks may be strained, thereby causing leaks and endless trouble for the agent and the stock department. It may be interesting to some of our readers to know that this Division has eighty-three (30 X 30) and ten (30 X 40) warehouses, and one-hundred and ninety storage tanks with a capacity of approximately 62,000 barrels, or almost ninety miles of track.

Sixty-seven of these tanks having been erected during the year 1922.

During the past winter we have erected a 38 X 60 warehouse at Fort McMurray, the most northerly railway point in Alberta, and we shall have two or three more of the above tanks installed there very soon. This is only one of the many instances where Imperial Oil Limited keeps reaching out into the case "bitterland" so dear to our heritage, and bringing light, heat, power and fabrication to the threshold of the far north.

Recently Constructed Warehouses, Storage Tank and Pump-house at Athol, Ontario.
### Editorial - Business Conditions Improving

Comments regarding improved conditions and the outlook for better business have been very frequent in recent issues of both farm and city papers throughout the Dominion. The papers in agricultural sections point out the increased prices of wheat and other products and commodities and mention the big acreages to be put in crop again this Spring. Papers in industrial centres speak of increased activities in other lines.

Automobile manufacturing concerns are extremely busy, the sales organization and many of them are planning to increase the number of cars they will build this year. Agricultural implementers are finding it easier to secure retail outlets than last year and are looking forward to a substantial increase in business during the season.

Conditions in the steel industry are greatly improved and better prices are being obtained on steel. Contractors and builders are more inclined to make advances for active season and a considerable advancement is expected in the spring. Steel and construction work is already under way. With the increased activities in many lines of industry and with the splendid outpouring of Canadian capital and the optimism of the Canadian press, the future is bright and all are looking forward to an up-to-the-trend of business.

### Message from Mr. Mayer

Toronto, March 6th, 1922.

To my friends, the Imperial Oil Organization:

I am sorry to leave Imperial Oil, but my regret would be greater if I could not, before leaving, express my thanks to everybody for the many kindnesses and favors shown me while I have been with the Company.

No one could wish the Company or Mr. Wolfe anything better than to wish that the splendid co-operation given us by the Company in the past will continue and I am sure it will.

I sincerely hope that I may have the opportunity of seeing you all again often.

G. W. MAYER.

### Oil Production

A statistical survey of the oil production of the world in 1900 showed that nearly ninety per cent of the world's oil was produced on the North American continent.

Figures showed that a total output of 694,843,000 barrels produced in 1920, 443,402,000 barrels were produced in the United States while Mexico produced 165,540,000 barrels.

Russia ranks third as producers of oil with 25,429,000 barrels. This however, is not quite comparable with the United States as a result of the war, which was approximately 80,000,000 barrels annually.

### Road Construction Programme

The good roads movement has been given an impetus this Spring, by the plans and agreements that have been entered into between the various Provincial and the Dominion Highways Government. These agreements call for the construction of approximately 2383 miles of road under the Federal Aid so far appropriated is about $7,700,000.

The various provinces forwarded programmes to the Dominion Highways Commissioner, calling for the construction and improvement of roads to the total of 17,951 miles throughout the Dominion. These programmes have now been approved by the government and work in many localities has already commenced.

### The Opportunity for Promotion

What chance has a man in the ranks to reach the top and to eventually help direct the destinies of the industry in which he now works?

This is a question everyone asks himself at one time or another. It is answered by the number of men who rose from the ranks and are today occupying responsible industrial positions. The executive who has worked his way up from the bottom is the rule rather than the exception.

Edward M. Wooley, in a recent magazine article, points out the interesting fact that out of a group of five hundred prominent men in the manufacturing, wholesale, purchasing, and retail trade, sixty-two per cent began their careers as office clerks. In subsequent years they went up the ladder as bookkeepers, salesmen, purchasing agents, auditors, traffic managers, superintendents, secretaries, and so on. More than eighty per cent of these men are still in the same lines of work in which they first became interested. About half of them are officials of the companies with which they began, and the other half work with or with firms which grew out of these original concerns.

A similar investigation of a large group of plant foremen, machine operators, and foremen, showed that ninety per cent of them began as laborers or factory hands.

In a preceeding article, the work of the credit department was covered, showing how credit limits were arrived at, how records were kept and how money was collected. For such errors as it is his duty to "double-check," the credit man in the pricing department and the comptometer were referred to.

However all these workers have a wide field of activity which requires attention. In fact it might be correct to call each one a department by itself.

### Ledger Department

The ledger keepers perform one of the most important works connected with our business, as it is through them that a complete record of the volume of business done on credit is kept. The outstanding qualifications of a successful ledger keeper is accuracy, neatness, and a ledger should be complete in every detail, the whole history of every account should be neatly and accurately recorded so that every little detail can be read at a glance.

Needless to say, in order to achieve this, accuracy is essential. Every account must be "cross-checked" and every item must be posted correctly. After the accounts are on the voice are posted, they should be checked off to see that the figures are correct.

Extensions have to be carefully made before statement is taken off, then the balance shown on the statement should be checked with the balance appearing on the ledger. This will correct any errors occurring in posting and extension.

Examination of the accounts is a rather lengthy process and involves several operations on the comptometer. Errors here are more likely to occur. However, these can be avoided by checking the machine work back with the ledger, thus making sure that the final figures are right. By following this method a "sight" balance which eliminates endless overtime work in checking figures made through neglect and too much haste.

### Index Department

The index is virtually a part of the ledger, for one is entirely dependent upon the other. With the main station and the ledger keeper can confidently post each item without fear of duplication.

Not only does the index affect the ledger alone but it affects the credit department, the Personnel, the Clerks, and the customers.

Duplicate accounts and errors in index cause an enormous amount of work, and returned drafts marked "correct." This involves much work for the office and often causes friction with customers. An adjusting entry has to be made and a letter of apology written to the customer. However, the ledger keeper is responsible for such errors as it is his duty to "double-check" all accounts. The ledger keeper in the pricing department should be consulted, as the ledger keeper must check each item in order to make sure that it is correct.

Names are important. If a ticket to be followed indicates the customer's name as J. Smith every effort should be made to find out if J. Smith is the "John" Smith appearing on the index. Reference should be made to the credit and ledger departments to find out who should look up the ratings.

Agents and salesmen sending in orders will see from this, the tremendous amount of work they cause to the office force when they fail to write out the customer's name in full. Often it means holding up an order until more information can be obtained through correspondence with the agent or salesman who took the order. All of which causes delay in shipment, loss of time, stationery and postage, and often loss of customers. Price clearly and give names in full.

### Pricing Department

All invoices passed to the index department are scrutinized by the pricing department to check prices, barrell limits, and errors.

Errors in prices often occur; an agent may make out an invoice for a certain quantity of gasoline and erroneously mark it "Royalties," extending this with the price of gasoline. This has to be investigated. In other cases, the prices may be wrong, either too high or too low, likewise barrel credits may have been omitted.

In regard to barrel tickets care is to be exercised in seeing that the value of the barrel ticket has been deducted by the agent from the credit invoice. Should the customer's account be closed, then the barrel ticket certified and certified for payment through the decimal department.

In case agents hold barrel tickets in their own name, a referee should be made to the stock department to learn of any stock shortages. In cash transactions, all remittance papers, tickets and checks should be mailed to the ledger keeper can confidently post each item without fear of duplication.

For every bill of lading, the index department shall call for a barrel ticket. In event of non-delivery of a barrel or return of barrels, the index department should then pass the bill of lading to the traffic
department before the expiry of the three months from date of shipment, so that claim for loss can be made against the railways.

In all this scrutiny and checking, the pricing department plays an important role and as in many cases the errors made are such that investigation cannot be made immediately, the pricing department has to make a "scientific" guess, make the necessary correction and investigate more fully afterwards.

**Comptometers**

As every one knows, a comptometer is a mechanical device used for adding, subtracting, etc., which were formerly done "by hands" or "by heads" of clerks. It is a sort of mechanical clerk that is mathematically exact and never makes any errors. The operator, however, is human and is therefore liable to strike the wrong key or think about last night's theatre play and then wonder why she should be thinking about the task in hand.

Extensions of orders and bills of lading are made, turned over to the stenographers for invoicing, after which the invoices pass through the various departments already referred to. They are then returned to the comptometerist for re-extension and sent on to the order clerk for mailing, the month end.

Miss Gladys Bevan, Comptometerist at Edmonton, sums up the work very clearly in the Edmonton Office Manager's column:

"This job is a 'worker,' especially in the busy seasons, of which we seem to have several. An operator must be supported to be a rapid reader, linguist and other things too numerous to mention. Our duty here is speed, of course, also to watch our expenses and interests, and to save as many corrected invoices as possible, consistent with good business.""}

Any corrected cash sales invoices are turned over to the pricing clerk, who mails the corrected paperwork to the respective comptometerists. The invoices are now ready for writing on to the sale sheets, which are sent to the accountant for posting, afterwards going to the recap department returning to us for addition.

"The sale sheets must be mailed the same day and we rely on the people ahead of us to keep us supplied to the sheets do not bunch up at the last moment, causing an unnecessary rush at the end of the day. Under these circumstances errors are bound to occur in, unless the operator is equipped with cast iron nerves. All this requires a lot of comptometer work, and needless to say our work must be absolutely accurate, otherwise several departments will be hunting for us with shot guns."

To safeguard ourselves as much as possible, the operator who totals these sheets will hand them over to the checker who will verify our work and not verify our own work. The new system of writing the sheets in pencil may be of great help to the sale sheets, but we find it very trying, as the pencil marks are affected by the light, and those who have bad experience of this kind of thing know what this means."

**Slow Accounts**

(Continued from page 5)

... customers, especially those who are habitually slow in paying bills. Though this line of action entails the risk of losing some of these few firms which might later be developed into desirable customers, it is by far the safest policy to follow.}

Collection letters should show plainly that the creditor is disposed to be sympathetic and patient, but that at the same time he will never be satisfied unless the purchaser explains his position and presents some idea as to when he believes he will be able to liquidate the debt. When the payment of a delinquent customer fails to arrive on the stipulated date, another collection letter should be mailed to him immediately, so that the purchaser will be impressed with the creditor's close attention to the matter. Since Canadian business is still in the period of readjustment it is essential that all sellers give close attention to the maintenance of our creditor structure, as the following of individuals and of companies should continue to be regarded as valuable assets in all considerations relating to the extension of credit. Like good breeding, good credit may be known by a few special characteristics, and which are: quiet dignity, and an absence of loud and impetuous assurances. As one has said: "The big boys play polo and the small boys play croquet."

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SAFETY FIRST

At Varian, R.C., a materials test to beat the train to the station. He didn't. The above photo shows the result. The "male" "talking blocks" always become evident after the accident occurs.

We have written about "General Oils and Greases," showing the characteristics of each, and the many requirements they meet, but before these lubricants are put in service, the user will refer briefly to the three lubricants worthy of special attention, Imperial Household Lubricant, Imperial Cream Separator Oil and Imperial Mica Axle Grease.

The processes involved in the recovery of these crude petroleum hydrocarbons have already been described in article No. V. It is their use and physical characteristics we will describe here.

**Imperial Cream Separator Oil**

Everyone owns and operates a cream separator knows how delicately balanced the skimming of cream must be. In modern equipment it is likely to be avoided. These conditions demand almost perfect lubrication. Should the spindle be worn, as it should be, and the lubrication neglected or an unsuitable oil used, the bowl would be thrown out of balance, which would render the machine useless as a separator.

The revolving parts of a cream separator run in very close-fitting boxes so the oil used must be of light consistency. It must be sufficiently fluid to enter into narrow spaces and spread over the metal-to-metal contact, which causes wear, will not be prevented. When one considers how thin this film must be, it is easy to realize that the oil must possess a high capillarity to work its way into the narrow space provided. The oil must also be pure—no foreign matter, no injurious acids or other chemicals can be used. In short, the basic quality of the oil must be of the highest. The great speed encountered in a cream separator calls for an oil which will resist heat. The oil must establish and maintain an unbroken film in the presence of the heat generated by the swift movement of the spindle. At the same time, it must possess sufficient tenacity to withstand compression pressure.

The lubrication of the separator is the lubrication of the separator separates, not just the lubrication of other machines. A special lubricating oil is, therefore, usually manufactured to meet the general requirements of hundreds of machines and different purposes. Imperial Cream Separator Oil is prepared for the specific purpose which its name indicates and for no other purpose. It has every characteristic needed for the correct lubrication of cream separators.

**Imperial Household Lubricant**

Imperial Household Lubricant is probably the most popular and it is by far the most extensively used of our lubricating oils. It is used to prevent wear and hill squeaks in bicycles, harvesting machines, pumps, engines, locks, firearms, phonographs, and is made in a number of standard sizes. It is also used as a rust preventer on edged tools and is now used on the metal-to-metal contacts and in the clean and brighten windows, mirrors and cutlery.

It is a pure, amber-colored oil. Every characteristic essential to a good lubricating oil is found in this product. It facilitates the free and easy movement of each and every part, be it a metal-to-metal contact in the finest rollers or a metal-to-metal contact in the finest rollers or a metal-to-metal contact where a small fragment of metal is continually removed. It is a product of the highest quality.

**Imperial Mica Axle Grease**

In the article dealing with "General Oils and Greases" we made reference to the various grades manufactured and how they were used, but there are many grades of this the known and distinctive product that it is worthy of special mention.

The Imperial Mica Axle Grease used on wagons and similar vehicles are often not very smooth or well finished. There are innumerable little corrugations and irregularities in the "run" and the "surface" on hundreds of different types of vehicles. Sometimes they are so large that they can readily be seen with the naked eye, but some others are so small that they can only be seen with a microscope. These vehicles have sharp edges and shoulders which will wear the metal with which they come in contact, and the lubrication of the Imperial Mica Axle Grease is obviously the most effective, and this metal-to-metal friction and wear is a distinct lubrication problem.

**Lubrication Problem**

Ordinary greases cannot blunt the sharpness of these edges. It requires something more solid and firm. Herein lies the virtue of the mica in Imperial Mica Axle Grease. It is the smoothest of the irregularities and rough places. It acts on the axles and in the lining of the hub. In time, it forms smooth hard surfaces, approach-
ing the finish of the finest high grade steel and, at the same time, being a lubricant in itself, it assimilates in the lubrication. The "oil content" of the grease lubricates the surfaces just as any other good lubricant.

**Petroleum Coke**

By C. C. Dinnott, Chemist, Haligza

When any kind of crude petroleum is distilled without the lighter fuels being driven off, the residue in the still is coke. All of the coke is sold by petroleum refiners is produced in this way. This coke ranges in size from 6 to 30 inches deep on the bottom of the still, depending on the grade of crude which has been distilled. After the fires under the still have been extinguished, the still is allowed to stand for several hours, then the cover plates of the manholes on the still are removed. The cleaners go into the still, break up the coke with picks and shovel it out into cars.

This, in brief, is the source of all petroleum coke.

The total production of petroleum coke in the United States and Canada is about 700,000 tons a year or about one cent of the crude oil refined.

One important use of petroleum coke is the manufacture of carbons for electric arc lights. For this purpose it is necessary that all impurities be removed from the coke and that nothing but carbon remains. To accomplish this, the coke must be "calcined" to remove the traces of sulphur and volatile matter which it contains.

The calcining of coke is similar in principle to the old method of making lime. The furnace used is shown in Fig. 1. It is about 35 ft. in height and 6 ft. in diameter. It is equipped with a bucket elevator "B" which is used in charging the furnace. The bucket carries up about 600 lbs. of coke which is dumped at the top and slides down a chute into the furnace. The walls of the furnace are lined with fire brick to resist the high temperatures. The bottom consists of a checker work of fire brick. After the furnace is filled with coke, a fire is started at the bottom. This fire can soon be shut off as the coke burns freely without the use of external heat. A forced draft of air is introduced through the three openings marked "C." This provides the oxygen for combustion and helps drive off the volatile impurities. A temperature of 2700 degrees is soon reached and this temperature is maintained throughout the process.

After heating for some time the doors "D" are swung open and the coke poured out on the brick floor surrounding the furnace. It is quenched with water and is then ready for shipment. In the manufacture of carbon, coke is being dumped into the top and raked from the bottom without shutting down the furnace.

After being calcined, the physical and chemical properties of the coke have greatly changed. It is hard, with a silvery lustre and is practically pure carbon.

When the carbon manufacturer receives the coke it is ground, mixed with a binder and formed into sticks or other forms.

**Imperial Oil Market**

As practically all readers are interested in the market prices of Imperial Oil stock through their connection with the Co-operative Investment Trust and as many are affected at considerable distances from the public Security Markets, we publish in this issue one, coke being dropped into the top and raked from the bottom without shutting down the furnace.

**A Halifax Hero**

FREDERICK SPOOL, one of our Boy Scouts at Imperialoy, rescued an eight-year-old girl from drowning.

The little girl, Lottie Julian, was playing at one of the docks in Woodside, just adjacent to the Imperial Oil refinery, when she fell into the water. Frederick Spool saw the accident and jumping into the water brought the girl back to safety. Only for the cool-headed courage and prompt action of this brave lad, the child would surely have drowned.

The act of Scout Spool was brought to the attention of the local authorities and to the officers of the Imperial Oil, who forwarded the facts to Divisional Headquarters in Halifax.

At an entertainment given by the Imperial Oil in Halifax, Scout Spool was called to the platform and there presented with a bronze life-saving medal from the Boy Scout Headquarters at Ottawa. Lieutenant Governor MacCallum Grant, who presented the medal, stated that he was an honor and a privilege to be able to award this medal which would always distinguish Scout Spool as a splendid example of what is expected of the Boy Scout motto, "Be Prepared."—D. M. Allan.

**Scot Frederick Spool**

**Sports at Montreal**

The Imperial Oil Limited hockey team has occupied the season in net place. While we are naturally not satisfied until we capture premier honors we must say that the boys put up a game fight. On the two occasions that we met the winners of the pennant, they won by one solitary goal.

**Items of Interest**

**Menu**

1. Leather Oil Salad with roll.
2. Mera Sandwices.
5. Poland Ices.
6. Undertakers Twist Candies.
8. Toco Shake (Soonest drink on the market).
9. XXX Poladine (Makes a good man feel better).
10. Premier Egg Nog (If better could be had we'd have it).
11. Queen de Menthe (A good starter).
12. Royalite Highball (A real date)."
April, 1922

The Imperial Oil Review

The season was a success, probably greater than that of any other year. The visiting teams were truly representative of Imperial Oil this year as three of our fastest players came from the reftiny team. This cooperation between office and reftiny greatly strengthened our forces and enabled us to put up a real fight for the pennant.

The league standings at the end of the season were as follows:

Goodwits, 16 points Steel Co., 10 points Imperial Oil 12 points Sherrin-Williams 9 pts. Simmons 12 points W. Balser Co. 1 point

Prior to the final game in the hockey league, the office hockey team played a match with the reftiny team. The score resulting in a draw (3-3) proved that a very spirited battle was staged between equally-determined opponents.

The game was followed with refreshments and a dance. The Social Club of Montreal East Refinery know how to entertain.

The Montreal Main Office Bowling League has just completed a very successful series of games. The winners in the Men's League were the “Capitol” club who proved themselves to be real champions, leading by twelve points.

Another feature of the bowling this year was the Ladies League. We are sure the winning ladies' team are far more handsome than the men, but as we have no photo of them we will have to show you the smiling faces of the “Capitol” team instead. They are, reading from left to right:


Sarnia's Annual Social Event

The Royalite Club's annual social event, the fifth annual party of the club, was held in the auditorium of the Sarnia City Hall, at which over 150 couples participated. The annual parties of former years created for the Royalite Club a very at the bridle of one of the horses. She managed to bring the team to a slower rate of speed but was thrown to the ground and severely injured in the attempt. Her ankle was broken and she lost the third finger of her left hand. After recovering from her injuries, she returned to her house at Liverpool, N.S. The medal was forwarded to her.

William Harmonworth, the driver of the runaway horses, escaped with slight injuries. - J. H. Stolten.

Fatal Accident

No matter how much emphasis may be laid upon the absolute necessity of exercising caution when handling gasoline, many people carelessly ignore the danger and expose open lights or lighted matches in the vicinity of gasoline.

Accidents of this nature occur entirely too frequently. They often culminate in injury to the careless, but it is only when such accidents result in death that we are brought to fully realize the importance of observing caution in the handling of commodities like gasoline.

The Review regrets to announce the death of Mr. Emil Theoret as the result of an explosion in a tank car which was being unloaded at Hawkesbury, Ontario, February 9th. Our sincere sympathy goes to the mother and other relatives of the late Mr. Theoret.

That we may all be made a little more careful through reading it, we are giving below the report of the accident referring to this deplorable accident. The report is as follows:

Fatal Accident While Unloading 1000 L. Tank Car, Hawkesbury, Ontario, February 9th, 1942.

"Canadian National Railways, Montreal, Quebec, February 9th, 1942, covers 1000 L. tank car 2145 containing gasoline shipped by the Imperial Oil Limited, Montreal, Imperial Oil Limited, Hawkesbury, Ontario, C.N.R. and Grand Trunk deliverers.

"The above car arrived on train No. 97, February 15th, via Canadian National and was placed on Mr. Higgison's private siding for unloading on February 16th. On February 16th, Mr. Higgison advised that the valve under the tank was frozen and that they had not been able to get it thawed out and request was made to connect the steam hose on to the tank valve when engine was going to a nearby siding to do some work. This was agreed to and engine 1929, Conductor Meyers, with Trainmen Fletcher and McLean, thawed out the valve about 9.15 a.m., February 17th.

"The above, age 44, who had been looking after the engine, was in the area while the valve was being thawed out and had a lighted lantern in his hands. He informed that Mr. Fletcher told him to keep away with his lantern and finally threatened to take the engine away if he did not do so. The thawing was completed in a few minutes and the crew went on with their work.

"The next day, February 16th, the gasoline was being unloaded, when about 8 p.m. Theorin and another man named Paul Joly went up on the tank car to see how much was contained with the lantern at the window in his hands. Theorin having the lighted lantern in his hand. It appears that he got in through the top of the dome and was about half way down into the car when an explosion occurred, which is stated to have blown him about 60 feet up into the air. He lighted about 20 feet from the tank car, where he was picked up and taken home. He died at 9.30 a.m. February 17th.

"There was no visible damage done to the car and no loss of gasoline. The tank, however, was not completely empty at the accident, there being about 14 inches of liquid in the bottom. The car was fully practiced "actuated" and no immediate concern passed that the local coroner reported to the criminal negligence on the part of any person, death occurring through carelessness or decreased. Theorin was buried on Feb. 21st, and the empty tank car returned to Montreal on train No. 206 the same date.

"On February 20th, an inspector from Imperial Oil Limited was summoned to investigate the matter on behalf of his company. Theorin, who is the only widower mother, was 44 years of age and I am advised by a person at Hawkesbury that this man had been engaged in the oil service for 15 or 20 years unloading tank cars and delivering by tank wagon and was therefore very familiar with the work and was slightly burned about the face is stated to have been in the oil business for about 10 years.

"We are anxious to learn more about the explosion in this case burned all the clothing from the body of the Theoret, nothing remaining excepting shoes and collar.

Death of J. P. Neven

Moveau, the President of Mr. Joseph Paul Neven at his home in Sarnia, Grand de Brandon, P.Q., on Feb. 24th, 1922.

Mr. Neven was known among the older members of the organization as being the first employee of the Montreal Division when he was retired on Annuity. On March 31st, 1920, he retired with thirty years' service.

Mr. Neven was one of the oldest and most popular members. He had an extensive circle of friends not only among his own organization but among business men in the city. His friendship was greatly appreciated by the Sarnia members of his family. - S. Chisholm.
Winter Scene at Halysbury Station.

Vancouver Mr. R. Kingsmill left us to take charge of the Brandon Office. We wish him much success in his new sphere.

There have been a number of changes owing to the death of our late assistant chief clerk, Mr. P. D. Lock. Mr. S. Elsey has become his successor. Mr. W. Lohman has been appointed cashier, while Messrs. Jones, Westover, Hunt, Hilliard, Fuller and Brown have assumed duties respectively in the following positions: general clerk, chief of credit department, assistant credit ledger, stock department and coupons. We congratulate our associates and wish them good luck.—A. Huggins.

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Goes to Miss Olive R. Smith, private steno-New York grapher and secretary to Mr. G. W. Mayer, has gone to New York where she will continue to act in the capacity of secretary to Mr. Mayer. Miss Smith was an universal favorite at 56 Church Street and will be greatly missed by her associates.

The Review joins Miss Smith's many friends in voicing regret at her departure and in wishing her every success and happiness in her new position.

Organization Mr. C. A. Mayer, formerly assistant Manager of the Hamilton Sales Branch, has moved to Winnipeg, where he will be assistant manager of the Winnipeg Sales Branch. The best wishes of friends and former associates go with Mr. Mayer to his new position.

Mr. Robert Kingsmill, chief clerk at Vancouver, has been transferred to the Brandon office. Mr. Frank Key, formerly chief clerk at Brandon, replaces Mr. Kingsmill at Vancouver.

Receives Mr. Ernest Palmer, who has been Presentation of the most popular members of the staff in the Toronto office accounting department, has been accepted at a position with a prominent financial organization. Before taking his leave, he was presented with a very attractive club bag and a set of pipes and tobacco pouch by the Imperial Oil bowlers and his former associates on the third floor.

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Imperial Service Delivering Imperial products is sometimes no easy task, but, no matter what the difficulties, they are always overcome by our agents and tank-wagon salesmen, as far as it is humanly possible to do so. The pictures at the top of this page show Winter conditions at Halysbury, Ont. Barrels and equipment are literally snowed in and roads almost impassable.

The pictures at the bottom of the page show some of the difficulties to be met when the first Spring showers come, indicating that delivery troubles do not end with winter storms. The fact that our delivery of needed Imperial products seldom fails, even under conditions like those shown in our illustrations, is something of which every member of our organizations may well be proud. — T. Hawks.

Delivering Imperial Products in the Spring Presents Many Difficulties.
Yourself!

O you and you alone must go the blame for failure to succeed. No one will try to prevent your success. No one can prevent it. You can reach any goal you set for yourself if you strive hard enough and long enough.

Your success is the result of your own energy, intelligence and effort. Other people can help you, other people will help you but no one but you can make you succeed. To you belongs the full credit for your own success.