INCO TRIANGLE

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Operation Last Spike

(STORY ON PAGE 4)

INCO TRIANGLE

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Historic Occasion as Queen Opens Canada's Parliament

It was a glittering moment in Canada's history as Queen Elizabeth opened the first session of the 23rd parliament on October 14. No monarch had ever before in a Canadian parliament read the speech from the throne. Following tradition, it was a brilliant and stirring occasion, but in the midst of it all the Queen chose to express the humble hope that she may so reign as Canada's sovereign that when one day her rule comes to a close, Canadians will remember her with love. Photograph shows the scene in the Senate, Her Majesty resplendent in her white satin Coronation gown, Prince Philip on her left wearing the blue, gold and red uniform of colonel-in-chief of the Royal Canadian Regiment, and on her right Canada's prime minister, John Diefenbaker.

Had 27 Years of Service at Mill

After 27 years' employment in the dewatering section at Copper Cliff mill Joe Costa put aside his lunch pail recently and retired on an Inco service pension. "A real good place to work" was his comment about the mill, "and the bosses I worked for were the best." In excellent health, he has already embarked on a pleasant life of active leisure.

Born in Italy in 1891 Joe came to Montreal with his parents in 1903. After he left school he put in two years on railway section gangs before settling in Espanola and a job in the paper mill in 1911. When an all-Italian brigade was formed in Canada during the first world war Joe was one of the early recruits. He saw service in Italy, France and Germany and was a prisoner of war in the latter country from 1917 until the armistice.

Joe and Mrs. Costa with part of the harvest from their fine garden.

He returned to Espanola in 1919 and remained there until the mill closed in 1930. After that he worked for a short time with Fraser Brace, which soon led to his job with Inco.

Before returning to Canada in 1919 Joe visited Italy and while there married Rosalba Domenique. They have two daughters, Melba (Mrs. S. Dack) and Lina (Mrs. T. Lang), both of Toronto. They have eight grandchildren.

Joe is very proud of his fine garden at his home on Eyre Street, Sudbury. His skyscraper pole beans were so successful this year that he has saved some of the seed for next season's planting and has already ordered taller poles.

Have New Home on Lake Penage Road

After living for over 28 years in the same house on Balsam Street in Copper Cliff Urho Juhola is not sure how he'll take to his new home on the Penage Road near Whitefish. Retiring on early service pension he decided he wanted to live out in the country and what better place was there to build than near his only daughter and grandchildren, who live in that area.

Urho came to Canada from Finland in 1924 and after a couple of years on the railroad and in bush camps landed a job at Copper Cliff with the fitters. He moved over to the blast furnaces shortly after, and then to the converters, spending his remaining years in that department. Known as a capable, dependable workman he could handle just about any job to which he was assigned.

Mr. and Mrs. Juhola

Born on a farm in Finland in 1896, Urho married Fanny Uusikaka there in 1921. Their daughter Laila (Mrs. Ojanpera) lives near Whitefish and has two children.

Admitting he misses the gang at the plant Urho hopes this lonesomeness will wear off some when he gets busy fixing up his new place and seeing more of his grandchildren. The boys all send him best wishes for his well-earned retirement.

INCO FAMILY ALBUM

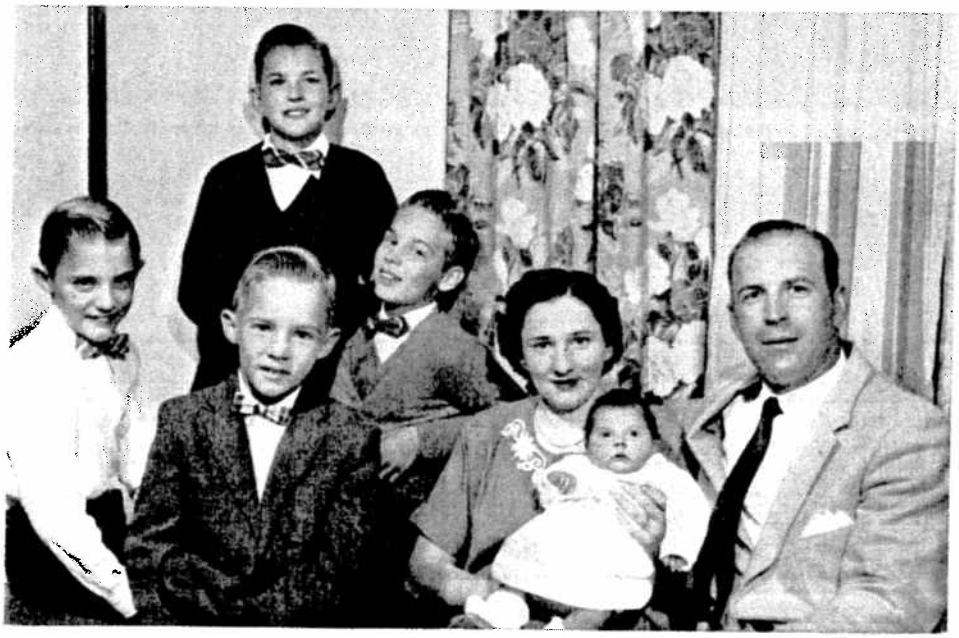
PORT COLBORNE: Mr. and Mrs. V. Marcon with Doris, 3, and Fred, 7.

FROOD MINE: Mr. and Mrs. Eddie Henry and Linda, 7. They live at McRae Heights on the Capreol Road.

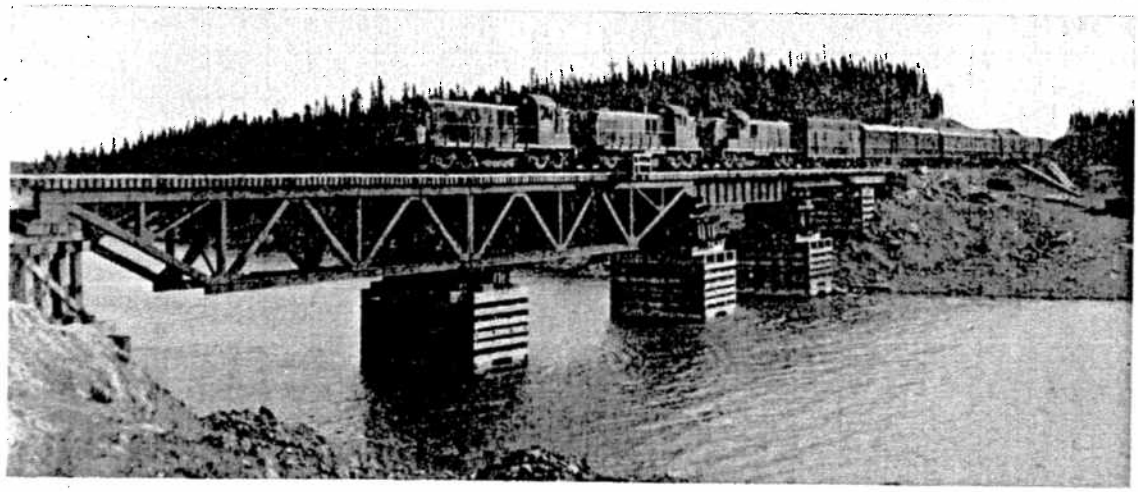
RON ORE PLANT: Mr. and Mrs. Romeo Laramboise, who live in Lo Ellen Park, Sudbury, with heir son Don, 12.

CREIGHTON MINE: Mr. and Mrs. Clifton LaBrash of Lively with Keith, 3, Blain and Brian, 9, Carol, 11, and Brenda, 13.

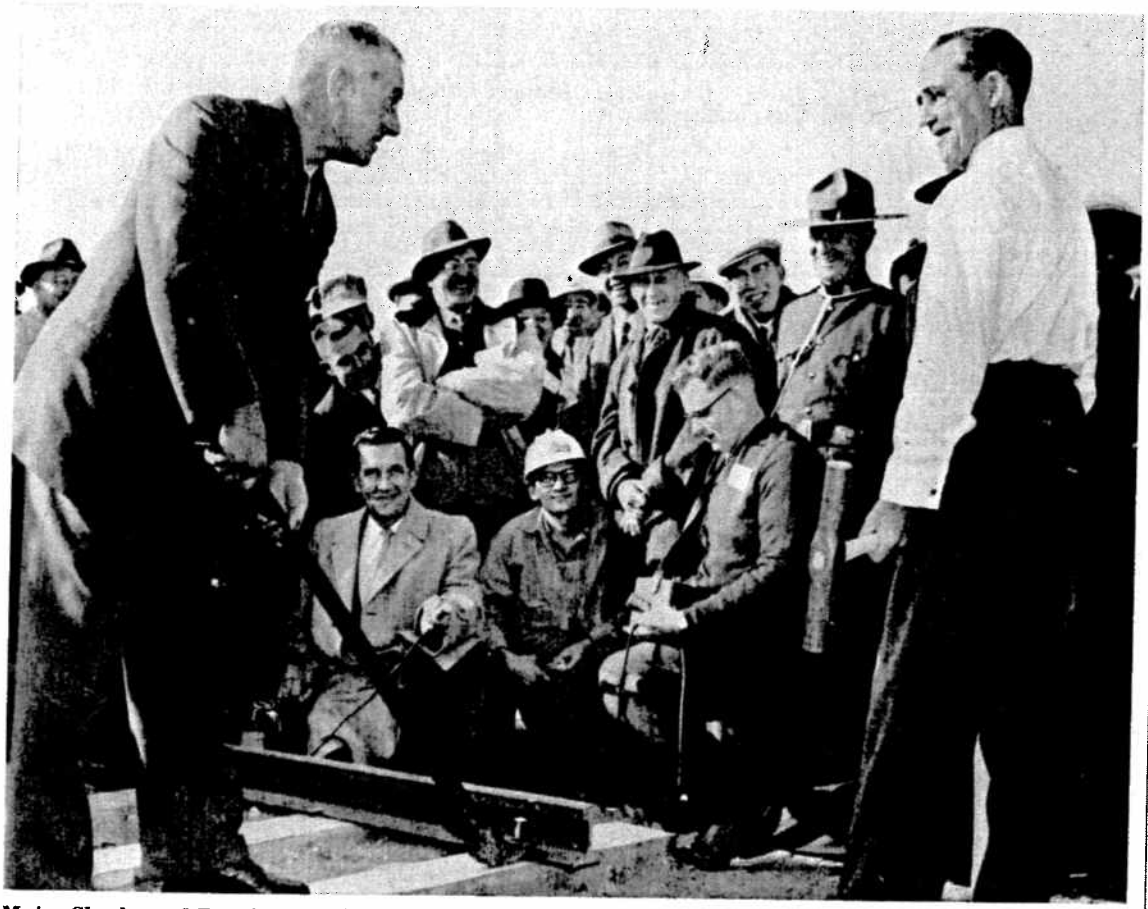
COPPER CLIFF SMELTER: Mr. and Mrs. K. S. McDonald of Gatchell with Colleen, 5, Heather, 2, Raymond, 4 months, David, 4, Virginia, 10, Donald, 11, Barbara, 12. (Not shown, Connie, 17.)



GARSON MINE: Mr. and Mrs. Maurice Joly of Garson with Eddie, 7, Richard, 13, Donald, 10, Raymond, 12, and Lillian, 1 month.



The first passenger train to run between Sipiwesk and Thompson crosses the bridge over the Grass River.



Major Charles and Premier Campbell exchange quips as they prepare to drive in the last spike of the new railway.

Among those attending the historic ceremony were J. S. Anderson, deputy minister, treasury department; Ralph D. Parker, Inco; James C. Parlee, Inco; D. Stephens, chairman Manitoba Hydro; S. F. Dingle, vice-president CNR; Honorable F. C. Bell, minister of mines and natural resources; Honorable C. E. Greenlay, minister of labor; Honorable Paul Comtois, federal minister of mines; Honorable Douglas Campbell, premier.

New Railway Is Completed To Thompson

On October 20 the steel came to Thompson, Manitoba.

In a frontier setting 400 miles north of Winnipeg, ringed by an assembly of construction workers and leaders of state and industry Premier Douglas Campbell hefted a tracklayer's maul and drove home the final spike of a railway link with the outside world.

The spike was made of pure nickel, like Thompson's future.

Marking official completion of a 30-mile branch of the Hudson Bay Railway from Sipiwesk, the ceremony signalized a new era in Manitoba's development. Freight and supplies brought in over the new line will speed completion of the $175,000,000 nickel mining project launched late last year by Inco and scheduled for production in 1960.

The weatherman smiled on the auspicious occasion, sending bright warm sunshine.

Chairman was Ralph D. Parker, vice-president and general manager of Inco's Canadian operations, who had personally directed the company's activity in Manitoba from its first geological exploration 10 years ago.

In the Last Spike ceremony the spike fork was held by Major J. L. Charles, retired Canadian National Railways engineer who was in charge of the branch line's construction. A proud observer of the proceedings was "Red" Dutton, one of the all-time greats of the National Hockey League, whose Aklavik construction company of Edmonton built the line six weeks ahead of schedule.

Premier Campbell drew hearty handclapping and shouts of approval as he drove the gleaming nickel spike into the last railway tie.

In his remarks he referred in glowing terms to the International Nickel enterprise, which he said would be the greatest single investment in the province of Manitoba. He read a cablegram which he received that day from London from Dr. John F. Thompson and Henry S. Wingate, respectively chairman and president of Inco:

"Congratulations and greetings to you and the others at the Thompson 'Last Spike' ceremonies.

"The completion of this new spur linking the Thompson area with the Canadian National Railways' system represents another significant step in broadening the economy of Manitoba and Canada.

"All other phases of our mine and plant development project are going forward with the same urgency and success as the opening of this railway.

"We regret that matters in connection with our industry's trade with Great Britain and the Continent have made it necessary for us to be abroad at the time of this historic occasion.

"On behalf of all divisions of the Company we express admiration and appreciation to all who have

Waybills of the first freight train into the Thompson plant site are turned over by CNR vice-president S. F. Dingle to James C. Parlee, manager of Inco's Manitoba division, in the picture on the left. At the luncheon given in the big cafeteria at Thompson following the last Spike ceremony, R. D. Parker described the huge Inco project to an attentive audience, partly shown on the right above.

contributed to this major milestone in northern Manitoba's future. International Nickel is proud of being part of this program."

Honorable Paul Comtois, federal minister of mines, and Honorable F. C. Bell, provincial minister of mines and natural resources, expressed their pleasure and satisfaction at witnessing such an important event in Manitoba's history.

When the final spike was well and truly driven the first freight train was moved in over the new railway. S. F. Dingle, vice-president of the Canadian National Railways, presented the waybills to James C. Parlee, manager of the Manitoba division of Inco. "This marks the end of the Snowball Express," Mr. Parlee said, referring to the fleet of cat trains which raced 30,000 tons of equipment and supplies into Thompson ahead of last spring's thaw so Inco could launch its project without delay.

A 15-car special train from Winnipeg brought 100 guests to Thompson for "Operation Last Spike". Many of them were newspapermen representing leading daily and trade papers of Canada and the United States.

They were joined by staff members of the Inco project at a luncheon in the large cafeteria that serves construction workers at Thompson. An excellent meal was served, after which R. D. Parker described the size and scope of the enterprise, in which Inco will open two mines and build a mill, smelter, refinery, and modern townsite.

The guests were then taken on a tour of the area, stopping at a vantage point from which they could watch a scene of highly concentrated activity as powerful earth-moving equipment prepared the site for the 9,000-ton mill. They

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The plant area at Thompson was a scene of great activity as powerful earth-moving equipment cleared the site for the 9,000-ton concentrator. The smelter will stand on ground immediately to the right of the picture. In the left background is the temporary headframe of the Thompson mine production shaft.

Nick Kozak of Creighton mine is welcomed into membership in the Inco Quarter Century Club by J. Roy Gordon and Ralph D. Parker in a ceremony held at the arena prior to the club's annual meeting. Next in the line of new members are Andy Macko and Frank Marolt, also of Creighton, on the right are T. M. Gaetz, superintendent of mines, and R. Saddington, acting manager of reduction plants, who assisted in the ceremony.

1,200 Attend Quarter Century Club Meet, Hear J. R. Gordon

"You men are the backbone of The International Nickel Company, and it is your experience, loyalty, and continued effort that make our Company the great Company that it is," said J. Roy Gordon, executive vice-president of Inco, when he addressed the annual meeting of the Quarter Century Club at Sudbury Arena on September 25.

More than 1,200 sat down for dinner at the impressive gathering. Roast turkey with all the traditional trimmings was served by the general women's auxiliary of St. Andrew's United Church, who once again received many compliments on the smooth efficiency with which they handled the huge catering assignment.

The 80 men from Inco's Sudbury district operations qualifying this year for the Quarter Century Club received their membership buttons at a ceremony held prior to the dinner. Each man was warmly congratulated by Mr. Gordon and by Ralph D. Parker, vice-president and general manager of Canadian operations. Many amusing incidents of old times were recalled as they paused to chat during the presentations.

The stirring music of O Canada, played by the Coniston Band with Chrissie Nemis as soloist, opened the program of the general meeting. The band played an enjoyable selection of marches and overtures while a small army of waitresses moved swiftly among the tables serving the piping hot meal.

There was rousing applause when the new members, who had places immediately in front of the head table, were introduced by the chairman, R. H. Waddington.

In proposing a toast to the Company's pensioners Richard Dow remarked on the pride they take in their share of pioneering in the nickel industry. He said he often hears them speak of how tough it was in the old days, but he has never heard one wish he could start his career again under the much easier working conditions of today. He paid a sincere tribute to the important contribution made toward Inco's progress by its veterans now retired.

Replying to this tribute A. F. Brock said, "We pensioners are glad to know that we are still a part of the Inco organization, and we're glad too that we now don't have to work any more." He spoke in appreciation of Inco's retirement plan for its employees, which he said is a model for other companies to follow.

Lights were dimmed in the arena and a silver spot focussed on the big Quarter Century Club crest while the gathering stood in silent remembrance of its members who have died.

A keenly enjoyed variety concert was given by a group of artists which included Lisa Landi, velvet-voiced soprano, and Johnnie Franks, clever young impressionist who delighted the audience with his voice imitations of musical instruments. Sensational acrobatic dancing by Carol Joy, and the singing of Les Gais Lurons, conducted by Maurice Gravelle, were other features of the splendid program.

Before introducing Mr. Gordon as the speaker of the evening, Mr.

Ernie Dixon of Frood is congratulated by Mr. Gordon while Primo Cerantola of Coniston shakes hands with Mr. Parker.

In the picture on the left Jean Marion of the Copper Refinery is the new member receiving congratulations after being introduced by R. Hewgill (right), manager of the copper refining division. The second picture shows Steve Schvarczkopf of Copper Cliff smelter getting a hearty welcome; following him are Paul Pitura of the Open Pit and Joe Myher of Copper Cliff.

Wives of New 25-Year Men Receive Messages of Appreciation

Wives of the new members of the Quarter Century Club received bouquets of roses and a letter of appreciation from Ralph D. Parker, vice-president and general manager of Inco's Canadian operations. He assured them that the Company at all times fully realizes the importance of "the other half of the team" to the success of its operations. Shown above with her bouquet, on the left, is Mrs. Nick Kozak of Creighton mine, where her husband is a clayman; in the centre picture with her daughter Lollie is Mrs. George Gribble of Sudbury, whose husband is a skimmer in the smelter at Copper Cliff; on the right is Mrs. Walter Maki of Sudbury, whose husband is a member of the mechanical department at Frood mine.

Parker extended Inco's best wishes to all present. "The Company is proud of your achievements and grateful for your loyalty," he said. He offered his congratulations to the new members "on joining that very select group, the Inco Quarter Century Club."

Mr. Gordon's Address

"It gives me a great lift to see so many pensioners in attendance tonight, and to renew acquaintance with so many of my oldest and best friends," Mr. Gordon said in his opening remarks. "To each one of you pensioners I would like to say, 'May you continue to enjoy the fruits of your years of active service and have a full measure of good health for a long time to come'."

Tracing the growth of the Quarter Century Club in the Sudbury district, Mr. Gordon said, "in the past five years membership in your club has grown by leaps and bounds. I believe the total membership now is 1,261, and of that number 964 are employees, with the balance of 297 in the pension group. One gets a true comparison of the growth of the club when you compare these figures with the corresponding ones for 1952. At that time the total membership was 572, consisting of 385 employees and 187 pensioners. That represents a growth of more than double. Twenty years ago, in 1937, the membership was 129. On the other hand, the total membership in the Company's seven chapters of Quarter Century Club is just under 4,000, and the total membership in the Canadian chapters, which includes Sudbury, Port Colborne and Toronto, is just under 1,500, or nearly 40% of the total.

Turning to a general discussion of the Company's affairs," Mr. Gordon said, "now it occurred to me that you might be interested in some of the things that are happening in the Company outside of the immediate Sudbury area, and to some extent outside of the realm of production. You have heard a great deal of the Company's new Northern Manitoba project. All I wish to say about it at this time is that production from Manitoba will supplement our Sudbury nickel production by 1960 and, depending on our success in discovering ore bodies in that area, it will become increasingly important in the years ahead. During our optimistic daydreams, some of us hope it will become a second Sudbury.

"Figures are not very interesting but I must run the risk of boring you with a few, but only a very few. Last year Inco's total nickel production for sale in all forms was about 285 million pounds. That included 24 million pounds of nickel produced for a United States stockpile contract from low-grade ores at a premium price. Our goal for mid-1960 is a production rate of 385 million pounds per year, which is 100 million pounds higher than last year's production. However, since the stockpile contract I referred to ends in December next year, we must from a production standpoint replace that 24 million pounds as well as produce the additional 100 million pounds. Most of the additional nickel will come from the new mines in Manitoba.

"Since the beginning of World War II in 1939, production from Inco's Sudbury ores has been at a very, very high level indeed. With the exception of a 6 month's period in 1946, and an even shorter breathing spell in 1949, the demand for nickel has been greater than our ability to produce. Many times those of us who have had responsibility for future planning have felt that we were producing at too rapid a rate for the orderly efficient operation of the ore deposits. It is of course unnecessary for me to tell this audience that the mining industry is one dealing with a wasting asset. Each ton of ore taken from a mine can only be replaced by the discovery of another ton of ore somewhere else, and whether or not it is the Creighton Mine which has been in operation for the past 57 years and still has a long, long life ahead, or the Cornwall Mine of the Bethlehem Steel Company at

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Louis Pagan, veteran Copper Cliff painter, exchanges greetings with J. R. Gordon and R. D. Parker as he receives his 25-year button; next in line are Ernie Frattini and Paul Seguin, also of Copper Cliff. On the right big Ted Dash, assistant chief electrician at Stobie, gets a jovial welcome.

Among Those Present

How many do you recognize among these faces at the annual Inco Quarter Century Club dinner at the Sudbury Arena on September 25.

1,200 Hear J. Roy Gordon

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Lebanon, Pennsylvania, which has been producing iron ore since 1742 and still has a life of probably two more decades, there will come a day when there just isn't any more ore to be found and exploited in any particular mine.

Protects Sudbury Deposits

"Now I trust that I will not be considered a harbinger of doom and the forecaster of the early exhaustion of the Sudbury nickel ores. What I am trying to say is that the discovery of the Manitoba deposits was a most important event in our Company's history because not only did it permit the expansion of our production capacity to 385 million pounds a year but, of even greater importance, it relieved us of the necessity of expanding production from this area to a perilous level which might seriously shorten the life of these Sudbury deposits. Indeed, we are hopeful that future expansion of our nickel production can be accommodated in Manitoba or elsewhere and that Sudbury production can in time be brought back to a more comfortable level. There are, of course, factors other than production capacity that could affect our position here, factors such as the climate taxation-wise, and the demand or lack of demand for our by-products such as copper. We can only hope they will not seriously disturb our long-range plans for our Sudbury district operations.

"The Sudbury area has been suffering severe growing pains in recent years. Housing, sewage disposal and schools are only a few of the many problems. I feel that the super-optimists who see this area growing into a second Greater Toronto should be cautioned that such an expansion of population due to increased nickel production from Inco's mines is highly improbable. The great increase in population in the Sudbury area in recent years has been due in part to increased production from the district mines and also in a large measure to the advent of the 40-hour week. Don't misunderstand me — I am not arguing the merit or demerit of the 40-hour week, but simply stating that it is the most important single factor in the population growth and the resulting problem.

"Now to get back to Manitoba for a moment — we will in the course of time have a fully integrated operation consisting of two mines, a concentrator, a smelter using electric power for fuel in place of coal or coke, and a nickel refinery. The copper content of the Manitoba ores is so low that copper production will be unimportant and while it will be recovered it will not be refined in Manitoba.

"Many people, including some of our best customers, have felt that the nickel industry has been asleep since the end of World War II. That, of course, is far from true. In 1946 the free world production of nickel was 226 million pounds. In 1956 that production figure had been almost doubled to just under 450 million pounds. The real difficulty has been, of course, the very heavy defence and stockpile program in the United States which has drawn off a substantial portion of that production and as a result the civilian uses of nickel have been severely restricted. Due to the shortage of nickel, encouragement has been given to new producers as well as to current producers to open up new areas for production and to increase the output from existing areas.

Developments in Cuba

"During World War II a plant was erected in Cuba with United States government financing to produce nickel from the lateritic ores of that country. The initial capacity of the Nicaro plant was 30 million pounds per year. This plant has recently been enlarged and this year is producing at the rate of 50 million pounds per year. A few months ago the Freeport Sulphur Company completed arrangements with the United States stockpile authorities which made it possible for them to proceed to erect a new plant in Cuba in a second area of that country which will, it is said, by 1959 have a production capacity of 50 million pounds of nickel per year. They have an agreement with the stockpile authorities which assures them of a market for their full output of nickel and, as well, nearly 4½ million pounds of cobalt per year at current market prices until 1965. The technology of treating ores such as those in Cuba has improved with the passing years, and when one considers this along with the low wage levels of that country and also the United States government's very considerable assistance, one can foresee in Cuba the development of a strong competitor of Inco. It behooves all of us to do everything in our power toward increased efficiency and consequent lower operating costs, to meet this challenge.

"The French Nickel Company (Le Nickel) have planned in New Caledonia and Le Havre to raise their production from the current rate of about 20 million pounds per year to 50 million pounds per year. Our very good friends and neighbour, Falconbridge, are increasing their production. The same is true of Sherritt Gordon and the newcomer to the local field, Eastern Mining & Smelting, which now includes Arcadia, Nickel Rim and Rankin Inlet, have their own production plans. All in all, the forecasted production of nickel in the free world will probably rise by late 1960 or in 1961 to something on the order of 650 to 675 million pounds per year from the 1956 production level of just under 450 million pounds. This will represent a 50% increase in production. Furthermore, of the 225 million pounds increase most of that additional metal will reach the market at about the same time.

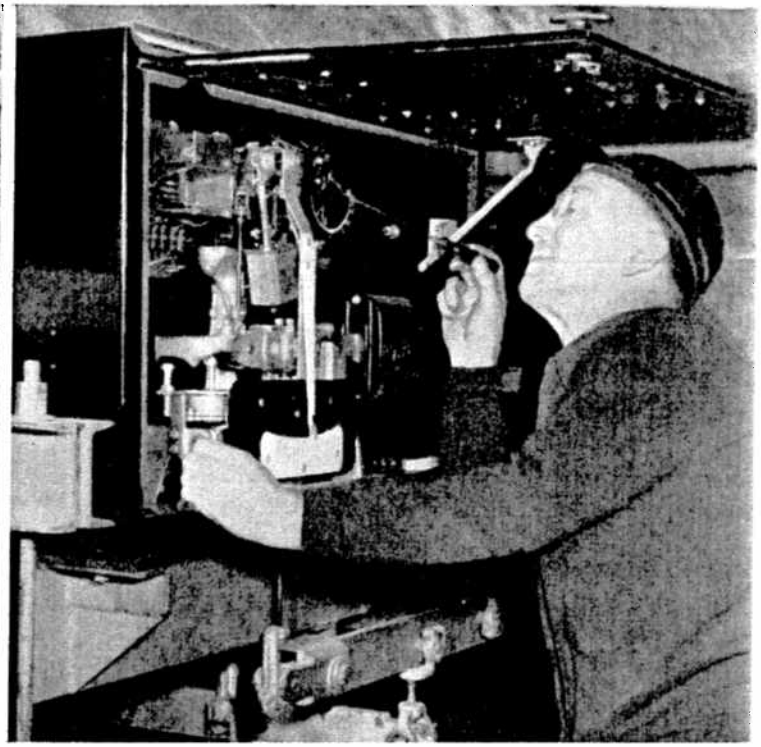
Calls for Redoubled Efforts

"Recent statements by our chairman, Dr. Thompson, and our president, Mr. Wingate, have stressed the marketing problem which will face the nickel industry at that time. The press and public interpretations of these statements were varied and in many cases inaccurate. What we were trying to say was that this very large increase in production would call for redoubling of the efforts of our sales department to sell more nickel and for our research and development people to get busy and discover new and wider applications so that our sales might be increased. Without saying so in so many words we were trying to tell our old and valued customers who have been short of nickel in late years that relief was in sight — such customers as the automotive industry — we were telling them in effect that they can now proceed to restore nickel to the former uses and that they should include nickel in their forward planning for new products. In brief, don't engineer away from nickel, but rather towards its use. If and when gas turbines are used in motor cars and trucks we confidently expect that they will each contain a sizeable chunk of nickel. If our customers' development and research programs are properly integrated with those of our own development and research groups the job of marketing can be accomplished. Another point which was not expressed but rather inferred was the hope that the other producers of nickel would see the light and devote some of their efforts and talents to the development and marketing problems associated with the increased production of nickel.

"Some of our detractors saw fit to read other and ulterior motives back of these recent statements — Was Inco trying to discourage prospective competitors? Is Inco about to draw back from their reported 385 million goal because of their inability to get a "put" to the United States stockpile, and, as a matter of fact, is there a layoff in Sudbury planned for the immediate future? Are the United States authorities and Inco mad

Ladies Graced Head Table at Annual 25-Year Banquet

Among the head-table guests at the annual Quarter Century Club banquet were (top left) Miss Mary Whalen, W. T. Waterbury, and Miss Ivy Reynolds, all pensioners; A. F. Brock replying to the toast to the pensioners (top right) and R. H. Waddington, chairman; Miss Louise Schofield, Richard Dow, Miss Rosemary Ovens, H. J. Mutz, and Miss Agnes Colquhoun a pensioner whose home is now in Toronto.



At the west scalehouse at Copper Cliff, while Henry Norris weighs in a car of ore on the big track scale, Eddie Saville checks an adjustment he has just made to the scale's recording device. Picture on the right shows Eddie at the Creighton mill, making a correction in the delicate mechanism of one of the four electrically controlled chronoflo scales that measure the feed to the grinding section.

with each other? Finally, one report had it that we were going to double or treble our Huntington facilities and that these extended facilities would take up all our increased production and as a result nickel would be in as short supply as ever. Well, let me reassure you that no lay-off or curtailment of our nickel production in Sudbury is imminent. Our goal of 385 million pounds remains the same as when first announced. We are not mad with Uncle Sam's stockpile people. It is true that we are disappointed that we were not afforded some measure of protection of a market for our increased production during the critical couple of years following 1960. We can understand the United States government wanting to encourage another supplier to get into the field and while we feel as I say, disappointed, nevertheless we are not mad at anybody. On the other hand we feel that the recent statement of a member of the Office of Defence Mobilization in Washington that the U.S. government was no longer interested in nickel made it abundantly clear that plenty of nickel will be available in the near future. This should reassure our customers to proceed with confidence and use the metal for which no real substitute has yet been found. We are continuously modernizing our plants and facilities and the Huntington plant is, of course, in that category. There is no intention whatever to consume our increased production in Huntington, or for that matter in our other rolling mills at the Henry Wiggin Company plants in England. And finally, we are not trying to discourage new competition from entering the field of nickel production. We only hope, albeit somewhat prayerfully, that they will help sell their production if and when it is ready for marketing."

Scale Maintenance at Inco Plants Is Roving Assignment of Eddie Saville

Keeping tab on the huge daily tonnages of material handled at Inco smelters is a formidable task that requires the services of several types of weighing machinery. These in turn require the services of nimble fingered Eddie Saville and his assistants, George Heale and Don MacLennan. They carry out regular inspections, maintenance, calibrations and repairs on this precision equipment.

Largest by far of these weighing devices are the standard gauge, plate fulcrum, railroad track scales that weigh loaded ore cars plus incoming and outgoing merchandise. These scales have a capacity of 200 tons. At Copper Cliff there are two, familiarly known as the east and west scales. The west scale, where Frood-Stobie, Open Pit and Murray ores, are handled, has weighed in excess of 500 cars on a busy day. The Iron Ore Plant and Coniston also have scales of this type.

Three smaller standard gauge track scales weigh matte in the converter building at Copper Cliff and five narrow gauge track scales are located on the charge floor at Coniston.

The weighing of crushed ore and feed in transit is carried out at many points in the operations by a variety of weighing devices. The Copper Cliff crushing plant has four weightometers that accurately weigh the crushed ore as it is transferred on conveyor belts to the mill. Creighton mill has two such machines to weigh the ore arriving from No. 5 and No. 7 shafts. Five other weightometers are located in the mill at Copper Cliff. These weigh the feed conveyed to roasters or storage. This particular type of scale operates mechanically. Creighton mill also has four electrically controlled chronoflo scales which measure the feed to the grinding section. These are similar in principle to weightometers.

In the matte separation process another type of scale, the conveyoflo, measures the feed to the grinding mills. This is similar in principle to other conveyor scales but is controlled pneumatically.

At the blast furnaces two narrow gauge track scales are located. They have a capacity of 16,000 pounds. The sinter plant and coal plant each have four platform scales and the separation plant one.

All these scales are kept in good shape by Ed. and his crew. The large track scales are calibrated to comply with government standards of 1½ pounds per ton tolerance. A special 64,000-pound Inco test car is used for this purpose. Periodically this car is checked with the CPR test car which strictly adheres to standards set by the federal department of weights and measures. The smallest gradation on this scale is 20 pounds. A loaded ore car weighs in the neighbourhood of 90 tons. The weighbridge of the scale is 50 feet long and weighs a whopping 43,900 pounds.

Weightometers and chronoflo scales straddle the conveyor belts. A 10-foot section of the conveyor, called the weigh span, is divorced from the whole and suspended separately from the weighing mechanism. As the ore passes over this span it is continuously and accurately weighed.

In the conveyoflo system the weigh span is not suspended from the scale but the weight of the feed crossing the span depresses a diaphram causing air displacement which in turn activates the recording device.

The conveyoflo can weigh up to 42 tons per hour, the chronoflo up to 200 tons. The weightometers, operating on the large conveyors, can weigh from 1,000 to 1,200 tons per hour.

All conveyor scales are checked and tested regularly, using a special set of test chains, and are calibrated to a tolerance of .5%. The major part of their repair work Ed. said, is in changing worn out parts before they quit. Pivots on the track scales require changing frequently as dull pivots reduce accuracy. Installation of new equipment is made by the manufacturer but all maintenance and repairs are handled by Ed. and his mates.

Eddie's first job back in England was with a scale manufacturer, so he was a logical choice for the job of servicing Inco's scales. He has been with the company since 1933, and in his present work for about 15 years. He is well known to thousands of district residents as that nimble fingered pianist who can play any song, in any key for anybody — another manifestation of his talent for "scales."

SMALL STORAGE CELLS

Nickel-cadmium type storage cells, not much larger in diameter than a United States dime, are now being used as low-voltage sources for hearing aids and small portable radios.

HAPPINESS BY THE DAY

If we would know peace of mind, we must learn to find contentment in our daily tasks. Happiness is not something to anticipate at the end of a year or the end of a lifetime. It is something to live into each day. — Furrow.

League president George Grace presents the Monell trophy to Bill Kasepchuk and Jack Howe after Creighton's final victory over Coniston Red Sox.

Those Indians Did It Again

For the second consecutive year Creighton Indians have won the Monell cup, emblematic of senior baseball supremacy in the nickel district, defeating Coniston Red Sox in a thrilling series 4 games to 3.

It was the 10th time in the cup's 44-year history that Creighton won it. Only club to beat that record is Copper Cliff who have copped the trophy 17 times.

Last season the Indians overran their neighbouring tribe. Copper Cliff Redmen, in the playoffs with four straight wins, big Bill Kasepchuk parking one over the fence in the 11th inning of the final game to cinch it. This year Kasepchuk again had a large part in Creighton's victory. Besides pitching a 6-hit shut out he contributed two of his team's seven hits in the final game. Another standout was Jack Howe, who poled three home runs in consecutive games in the series and drove in 11 runs. With Frank Herljac he accounted for more than half of Creighton's runs.

While Coniston got good pitching during most of the series, including the final game, Creighton hitters were just too deadly. Such Coniston reliables as Fox, Boyd, Mandy, Veno and Halverson, while making a good show at the plate, could not come up with the right hitting combination to take that extra game.

Wet weather postponements and other delays made the series the latest in history; the final game was not played until October 3. Latest previous finish on record was September 29, 1950.

If Johnny Herljac had pitched in final game, three brothers would have been performing on each team. Coniston's line-up had Bert Boyd behind the plate, brother Keith on the mound and brother Vic in left field. Creighton had young Eddie Herljac at shortstop, brother Frank in centre field, and brother Johnny in the bullpen.

New Railway

(Continued from Page 5)

also visited the attractive location on the banks of the Burntwood River, two miles distant, where the town of Thompson will be built. The beauty of this spot by the Manason Rapids was a pleasant surprise that drew much comment.

It was not until the beginning of this year that The International Nickel Company gave the green light for construction of the 30-mile branch line from Sipiwesk on the Hudson Bay Railway.

Completion of the line a full six weeks ahead of schedule provided a fittinfi climax to a smoothly engineered operation which was remarkable for the efficiency and foresight of its planning and the wholehearted efforts of all concerned.

The survey work for the new line had taken three months to complete. Then, with all plans laid, the contract for clearing, grading, and construction of culverts and timber bridges was awarded on January 9, 1957, by Inco to Aklavik Constructors Limited of Edmonton.

In the brief three-month period left before the spring break-up it was necessary to organize the job, ship to Sipiwesk all equipment, materials and fuels to be required, and then haul them by tractor trains to points along the route of the projected line. No second guesses were allowed. Planning and placement of camps and supplies had to be 100% accurate, since there would be no roads or water routes once the break-up came. The only practical summer transportation — for limited weights — was by aircraft.

Clearing of right-of-way was started on February 13 and grading of rock cuts on March 1. Although the contractors encountered considerable solid rock and perma-frost which had to be excavated, they managed to stay well ahead of their schedule.

The timber trestle bridge spanning the Wintering River was completed by the end of March, so that equipment could be moved over it after the spring break-up.

It was in spanning the Grass River, a deep waterway 240 feet wide, with high rock hills at both approaches, that the contractors tackled one of their biggest obstacles.

Normally this would have required the designing, fabricating and delivery of a special steel bridge. To short-circuit this delay the engineers used rock from the heavy approach cuts to build an embankment in the river up to an elevation of 10 feet below water level. Then rock-filled timber cribs were erected on this embankment as piers to support a steel superstructure available at the time the project was planned. Timber required for the cribs, as well as the four steel spans and the hoisting and other equipment for construction, were of course delivered to the site before break-up. The steel spans were erected by Dominion Bridge Company by August 8.

Gravel ballast for the track had to be hauled from Mile 256 of the Hudson Bay Railway, 86 miles from Thompson. Ironically enough, a good supply of ballast was available in large gravel deposits just beyond Thompson, but this was of no use to the railway builders until their line was completed.

Laying of track commenced early in August.

Inco vice-president Ralph Parker hands to Premier Douglas Campbell of Manitoba the pure nickel spike which he then drove into the last tie of the new 30-mile railway from Sipiwesk to Thompson.

Renowned Cyclist

A familiar sight on the Copper Cliff Road at shift change time is Paul Jensson, zipping along on his bicycle. Except in stormy winter weather when he takes to his skis and comes over the hills, Paul pedals the 12 miles to and from his Trout Lake home every day. Icy roads bother him not a bit — he just rubs a little ski wax on his tires. He's head janitor in the general offices at Copper Cliff, fit as a fiddle, and popular with everybody.

Bill Still Has His Scottish Burr-r-r-r

With his fine Scottish burr and broad Highland humour untouched by the passing of the years, Bill Buchan retired recently on an Inco early service pension.

Coming to Canada in 1920 from Aberdeen, where he was born in 1893, Bill has lived the good life and looks back with few if any real regrets. Working in the reverbs for most of his Inco service he left a host of friends at the smelter where, as bin boss, he was highly regarded, both on and off the job, by all concerned.

After leaving school Bill worked at pop bottling and baking before he joined the army in 1914. He was with the 51st Highland division of the RASC and spent most of the war transporting ammunition to front line units, a highly hazardous assignment.

Mr. and Mrs. Bill Buchan

A chance meeting in France with a fellow Aberdonian attached to a Canadian unit changed the course of Bill's life. This friend, who had emigrated in 1913, sold Bill completely on Canada. The upshot was Bill's arrival at Copper Cliff and a job at the blast furnaces in 1920. Running into the slack period he was laid off toward the end of that year and spent the next three years in Toronto.

He returned to the smelter in 1923, working in the old reverbs, the roasters, and finally in 1933, at the bins where he remained until retirement.

Bill married Mrs. Jessie Alfrey in 1937 and has since been privileged to enjoy some of the finest cooking in the district. He has two step-daughters, Molly (whose husband Jim McGuire is a mechanic at Copper Cliff and recently became a Quarter Century Club member), and Phyllis (Mrs. Robert Graham) of Philadelphia. There are five grandchildren.

Having just returned from a five-week trip to Philadelphia and other points Bill feels a spell at home is now in order. He made a trip back to Scotland in 1936 but is not planning another at this time. With plenty of odd jobs to do around his comfortable home on Gribble Street he intends to ease gradually into his new-found leisure.

MINING TIMBER

Over 50 million board feet of timber and lumber are used annually by International Nickel, world's largest nickel producer, in its mining operations in the Sudbury district.

Paul Dyer Merica

An Appreciation

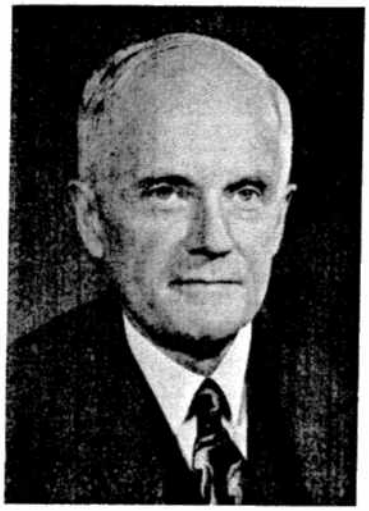
By

John F. Thompson, chairman

Henry S. Wingate, president

In the death of Paul Dyer Merica on October 20, the world of science lost a distinguished leader whose contributions have made possible many of the advances that have been achieved in modern metallurgical practices.

Starting in research, metallurgy and technical development, Dr. Merica's rare skill and adaptability became apparent as he later developed as an executive, which led to his election as president of International Nickel in May, 1952. He was a source of great strength for the Company. When he became associated with Inco shortly after World War I, its fortunes were at a low ebb. New peacetime markets and applications for its principal product, nickel, had to be created. He was one of a team of men who dedicated themselves to this cause. To this great task, Dr. Merica addressed himself with characteristic vigor and determination and the success the Company has achieved is evidence of the solid foundation which was laid at that time.



Dr. Paul D. Merica

Dr. Merica came to International Nickel from the Bureau of Standards in Washington, D.C., where he had served as assistant physicist with the division of metallurgy. Much of his work there had to do with non-ferrous alloys, in particular nickel, copper, and light alloys for airplane construction. First associated with the Company in 1919 as physical metallurgist at its Orford Works in Bayonne, New Jersey, Dr. Merica served as superintendent of research and subsequently as director of research. During this period he had general supervision of the development of the Company's research activities in Canada, the United Kingdom and the United States, as well as the establishment of Nickel Information Bureaux in Paris, Brussels, Frankfurt-am-Main, Milan and Tokyo. Dr. Merica served in various technical and management capacities as well as a director of the Company before assuming the presidency. He retired as president in 1954, but continued as a director and served on important projects and as consultant to the officers, devoting himself chiefly to matters of policy and to major research and technical activities.

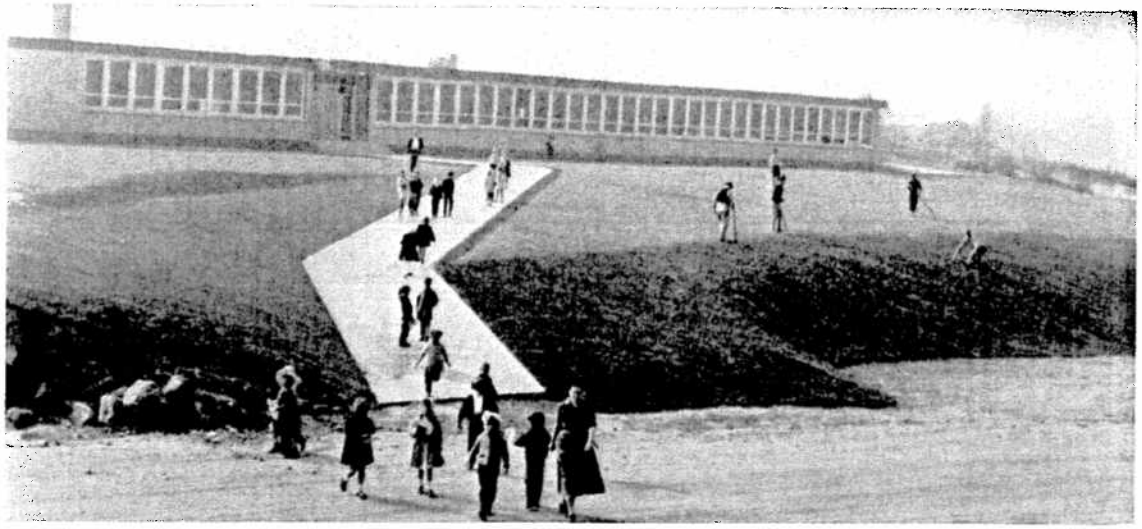
The hardening of the aluminum alloy, Duralumin, was known but until Dr. Merica developed a rational explanation of why this occurred, it was merely a puzzling anomaly in metallurgy. The breadth of this conception of precipitation hardening opened up a new frontier in physical metallurgy which made possible the successful application of this principle to the most widely diverse alloys, and properties previously thought unattainable became realities. Indeed, the nickel-chromium alloys which made possibe the successful development of gas turbines for aircraft were a direct descendant from his conception, Dr. Merica was personally and deeply concerned in the development of hardenable nickel-copper alloys, an example being Inco's "K Monel".

In an entirely different area, Dr. Merica has left a lasting imprint. It was largely due to his clear vision and indefatigable guidance in research that alloy cast irons have risen to their present-day dominance. His patient development of the intricate variables governing the properties of nickel cast irons may well be said to have ushered in the rapid expansion of this whole class of materials.

For his contributions in the field of metallurgy and outstanding leadership in physical metallurgy, he was awarded such high honors as the James Douglas medal in 1929; the John Fritz medal in 1938; the Institute of Metals medal in 1941; and the Franklin Institute medal in 1942. Dr. Merica was the 1951 recipient of the American Society for Metals gold medal. He received the rare distinction of honorary membership in the American Institute of Mining, Metallurgical, and Petroleum Engineers in 1942, and the American Society for Metals in 1955. The honorary degree of doctor of science was bestowed upon him in 1934 by De Pauw University, in 1938 by Lehigh University and in 1942 by Stevens Institute of Technology.

We have suffered the great loss of a devoted business associate, valued counsellor and close friend.

Last Project of the Season in Beautifying Inco Towns



Landscaping of Lively's smartly designed second public school got a good start before the cold weather set in. Picture shows an Inco agricultural department crew laying the sod on the spacious rolling grounds. Shrubs and trees will be planted next spring.

High Class Pug Gets A High Class Name

Nickel has long been known through its advertising as "your unseen friend" and now a home in Sudbury boasts of Inco as "man's best friend."

Searching for an unusual name for his recently acquired registered pug dog, George Trudell of Cedar Street came up with "Inco."

George says Inco is intelligent and makes an excellent pet.

"We thought it was a pretty appropriate name, the dog being a real gilt-edged variety, smart, friendly and valuable," said George.

Inco is registered under the name of Shiam Golden Lancer. His parents, Biscayne Betty Ginger and Canada's Pride are both pedigreed prize winners. George purchased him from a kennel at Niagara Falls and had intended showing him at the Royal Winter Fair but there was no dog show there this year so Inco will have to wait for another chance to strut in the spotlight.

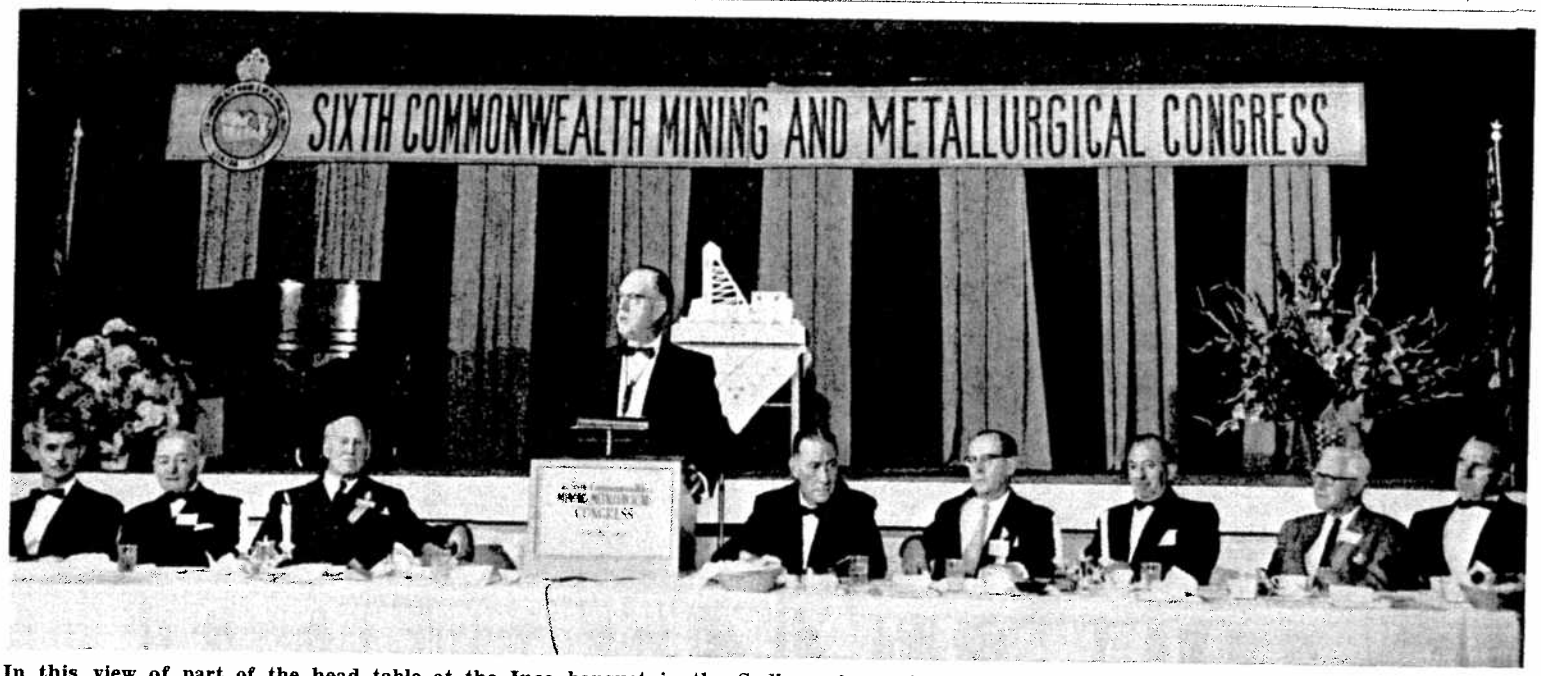
The breed is not too common in Canada and George believes Inco is the only pug in northern Ontario. An intelligent, well-mannered type of dog George says he makes an excellent pet.

Originating in China the pug became fashionable in England and the United States in Victorian times. They are a square, well knit animal, in colour black, silver or apricot fawn, and always with the black mask. Another distinguishing feature is the tightly curled tail over one hip. They are classed as a toy dog weighing between 12 and 16 pounds.

Inco is fawn in colour and for positive identification has his pedigree registration, EML - 9L, tatooed on the inside of his right ear.

Are 50 Years Married

Mr. and Mrs. Alphonse Arsenault of Sudbury have celebrated their golden wedding anniversary, both in excellent health. Meeting first at a picnic held on the old Levesque farm just west of Copper Cliff in the summer of 1907 they were married after a whirlwind courtship. An Inco employee for 20 years, Mr. Arsenault retired on service pension in 1949.



In this view of part of the head table at the Inco banquet in the Sudbury Arena for the Commonwealth Congress are Austin Smith, Inco, chairman of the Sudbury CIMM branch; H. L. Roscoe, vice-president, Noranda; Robert A. Bryce, Toronto, Congress chairman; Ralph D. Parker, Inco, speaker of the evening; R. H. Waddington, Inco, chairman of the banquet; W. Pyne-Mercier, Johannesburg; R. C. Mott, vice-president of production, Falconbridge; C. Gerow, Montreal, secretary-treasurer CIMM; D. E. Munn, Inco, secretary of Sudbury CIMM branch. The model of the mine headframe and surface plant seen in the background was a 35-lb. fruit cake made for the occasion by Cecutti's Bakery, Sudbury.

Brilliant Success of Research in Nickel Industry Told to Congress

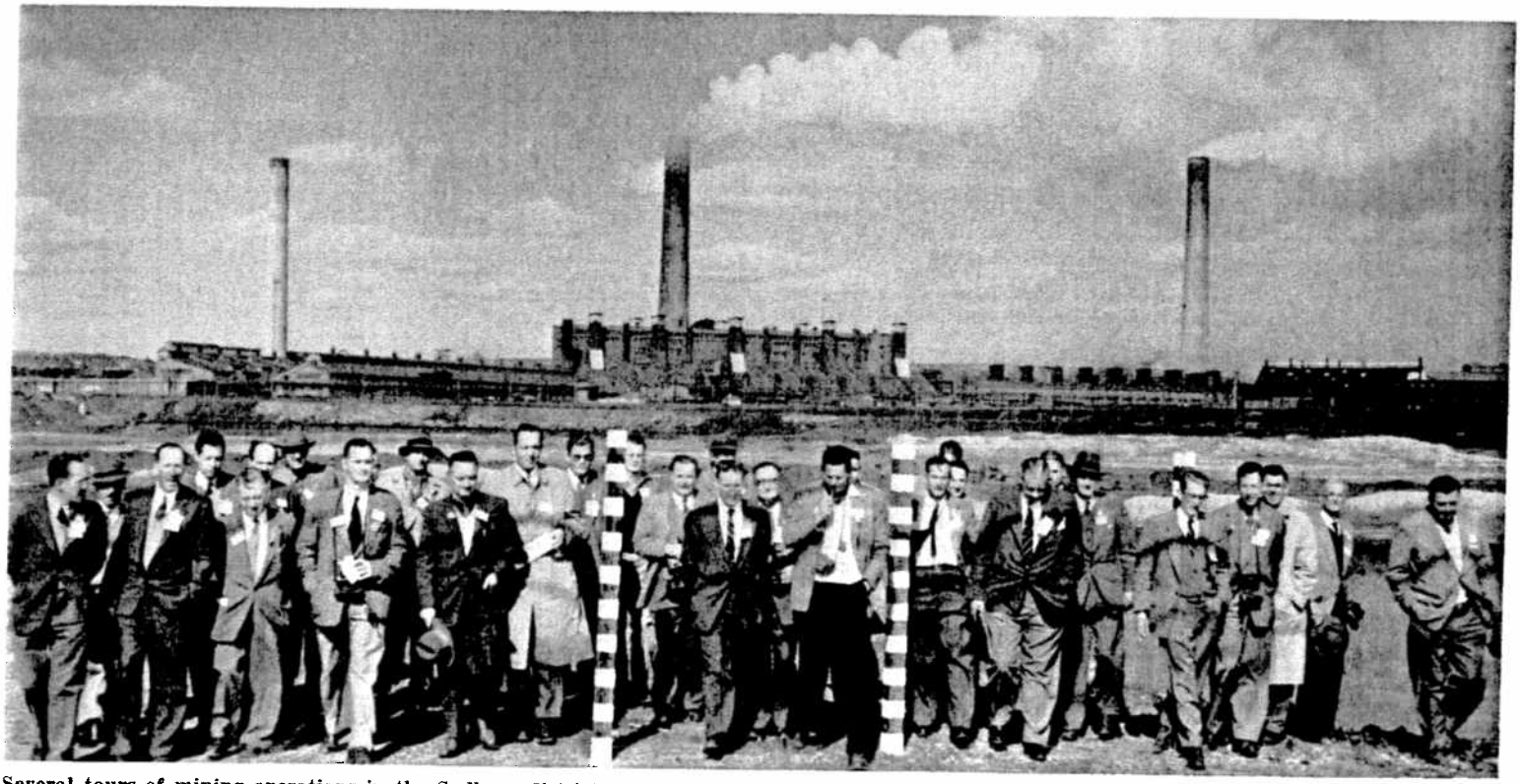
Four hundred delegates to the Sixth Commonwealth Mining and Metallurgical Congress heard a firm declaration of faith in the future of the nickel industry when they visited the Sudbury District.

Speaking at a banquet given in their honor at the Sudbury Arena by International Nickel, Ralph D. Parker, vice-president and general manager, stated his belief that "through research, the size of the world's nickel market is limited only by the imagination and the amount of capital, work, energy and skill which the world's nickel producers are prepared to put into its expansion."

Thirty-five countries were represented among the delegates who stopped for a full day of their trans-Canada tour to see the Sudbury area's mining and metallurgical operations. Many were frankly amazed at the size of the nickel industry. "We keep in close touch with your mining and processing developments, of course," a member of the large South African contingent said, "but I for one had only a sketchy idea of the complete picture here. It's terrific — quite the most impressive thing we have seen yet."

Sudbury branch of the Canadian Institute of Mining and Metallurgy did itself proud in arranging the day's program for the visitors. Both International Nickel and Falconbridge gave full co-operation and assistance.

The commercial history of nickel covers only the last 75 years or so, beginning with the development of the New Caledonian deposits on a small scale in 1875, R. D. Parker said in his address to the distinguished gathering at the Inco banquet, but knowledge of nickel could be traced back for more than 2,000 years. Then it was that nickel first entered into its partnership with



Several tours of mining operations in the Sudbury district were arranged for the 400 Congress delegates, many of whom had visited the district previously and were deeply impressed by the developments that have taken place. Above is one of the groups with Inco's reduction works at Copper Cliff in the background.

research, when experimenters in metallurgy added zinc to the unworkable copper-nickel ore of Yunnan, in southwest China, producing an alloy called paktong, or white copper, which was workable, useful, and attractive in appearance.

"The sum of nickel's contribution to human progress, gathering steadily down through the years and increasing at compound interest during the past quarter century, has been reached by research. Now, day by day, continuing research is indicating great new ways in which nickel will serve humanity in the world of tomorrow," Mr. Parker declared.

He traced the growth of nickel's usefulness from the time it was first isolated as an element by Cronstedt in 1751. The introduction of German silver, the development of nickel plating through Farraday's studies in electromagnetism, the adoption by Belgium in 1860 of token money coinage, and Fleitmann's pioneering of nickel-clad steel, were some of the significant achievements along the way.

In 1922, when the ending of the war plus the Washington Naval Conference wiped out its market as an armament metal, nickel faced a desperate problem, Mr. Parker related. It was then that its age-old partnership with research took on great stature. Building on experience with the copper-nickel alloy monel, which had been introduced by Inco in 1905, there was launched a campaign which has been called "a classic example of the value of research, coupled with imagination and initiative, in the development of a successful industry."

Today in thousands of alloys and in countless ways around the clock nickel is the unseen friend of modern living.

A great deal of time, effort and money was spent in pursuing the development unprofitably in its initial years, Mr. Parker said, "but we were able to build up a group of men well skilled in all the different arts of making the metal, selling the metal, finding and working with the customers, advertising, and so forth — the real foundation of our later nickel development."

He told how the spirit of research had been carried into every phase of Inco's operations, from geological exploration through to refining, with outstanding results. Commencing originally with a production of nickel and copper, 14 elements were now produced. Mining and processing methods had been steadily improved all along the line.

Describing Inco's organization for nickel market development and research, Mr. Parker said the number of people directly engaged in this work, including scientists and other personnel, now totals more than 750.

"In this business of making metals to measure, the actual research is conducted in the three major research laboratories of the Company at Bayonne, Birmingham, and Copper Cliff. This research involves fundamental studies using all the modern tools of physical metallurgy, optical and electron microscopes, X-ray and electron diffraction instruments, spectrographic analysis, as well as original types of testing equipment, laboratory scale melting equipment, and standard and special tools, all guided by thoughtful men."

"I was interested to learn the other day," Mr. Parker said, "of the latest piece of equipment Inco has ordered for its Bayonne laboratory. It is called an electron probe microanalyzer. Whereas the electron microscope can tell the crystal structure and lattice spacing of a particle, the new analyzer will be able to tell the chemical composition of a particle, or of an area of the surface of an alloy specimen, even if it is only 80 millionths of an inch in diameter. You can readily imagine how useful this instrument will be in studying high temperature alloys, segregation, the metallurgy of welds, corrosion cracking, and hot shortness."

Using these highly specialized tools, the speaker went on, research work includes studies of the fundamental structure of alloys and the defining of laws which govern behaviour of the metals and alloys in the widest variety of environments, from extremely low to extremely high temperatures, and under destructively corrosive conditions.

Results obtained by International Nickel in the area of research include the broadest knowledge of corrosion that has been gathered together anywhere in the world, Mr. Parker stated. All variants of liquid and gaseous media, including the field of high temperature, have been explored. Other work has resulted in an understanding of the structure and behavior of a large group of alloys capable of being hardened by suitable heat treatment. Great advances have been made in the development of alloys for trouble-free welding, and of electrodes and welding rods for the same purpose. Valuable results have been achieved in studies of special properties or characteristics, such as the magnetic, magneto-strictive and expansion characteristics of alloys containing large and small amounts of nickel.. Studies of galling, thermal fatigue and shock have been carried out. Data on the characteristics of plastic flow at

(Continued on Page 16)

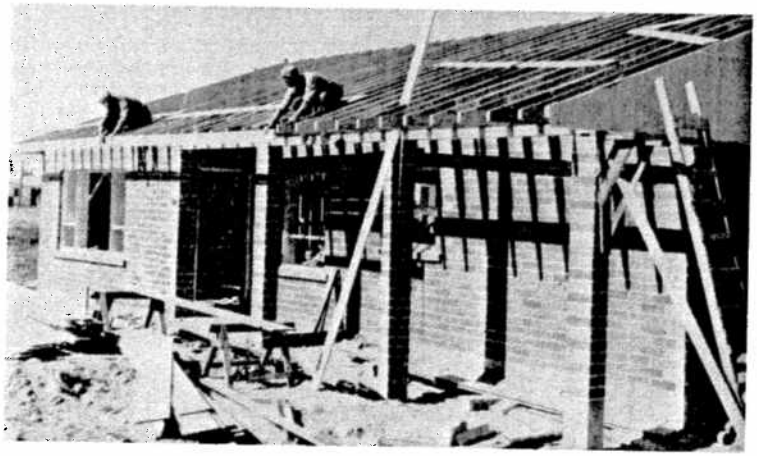
Some of Nickel District's Scout and Cub Leaders

At the very successful first annual Nickel District rally of Boy Scouts and Wolf Cubs, these leaders posed for a group photograph for the Triangle. Included are the district commissioner, Ainsley Roseborough, assistant district commissioners (ADC), scoutmasters (SM), assistant scoutmasters (ASM), cubmasters (CM), and assistant cubmasters (ACM):
Back row, left to right: Joe Basha, ADC; Don Pierce, CM 1st Sudbury; Don Castledon, ASM 1st Sudbury; Ted Crawford, ADC; Ed MacDonald, DSM; Ken Mitchell, SM 1st Burwash; Joe St. Amand, ASM 2nd Sudbury; Tom Pince, ASM 1st Falconbridge; Leo Villeneuve, SM 1st Neelon; G. Slade, ACM 1st Falconbridge; E. Pitchel, ASM 1st Falconbridge; M. Sabourin, ACM 6th Sudbury;
Centre row; Jim Taylor, CM 3rd Sudbury; Jim Scott, SM 1st Falconbridge; Bill Stevenson, DSM; P. Moncion, SM 2nd Sudbury; F. Pare, CM 2nd Coniston; Ken Leach, ACM 3rd Sudbury; J. Westman, CM 1st Broder; C. Severin, ACM 14th Sudbury; H. Bolton, CM 2nd Lockerby; W. Wickenden, CM 1st Lockerby;
Front row: P. Fletcher, ADC; Doreen Bowdidge, CM 5th Sudbury; Rina Vander Wielen, CM 6th Sudbury; Teena McCool, ACM 1st Neelon; Esther Clattenburg, CM 3rd Minnow Lake; Enid Mohns, CM 2nd Falconbridge; A. Roseborough, DC; Agatha Laoasse, CM 2nd Sudbury; Marion Armstrong, CM 1st Lockerby; John Thom, CM 1st Onaping; Jim Watts, ACM 1st Onaping.

Almost 400 Scouts and Cubs attended the big district rally at Queen's Athletic Field and pitched into the program of competitions and tests. Picture shows cub packs racing in a leap-frog relay.

Murray Miner Makes Machine

Adrien Lavallee in his one-man brick factory. He got the idea from a television show about brick-making.



Helped by his brother Herb, also a Murray miner, Adrien puts the finishing touches to his handsome new home at Azilda.

Murray Miner Makes Machine To Manufacture His Own Bricks

Murray miner Adrien Lavallee went the ancient Romans one better by fashioning a machine to make bricks. Some quibbler might argue they are building blocks and not bricks, since most bricks are baked while his are pressed. At any rate he made the bricks or blocks himself, enough to build his own home, and besides being economical and strong he claims they are faster to lay and require no exterior finishing.

Realizing that his growing family was bulging the seams of his present home Adrien decided to build a new one at Azilda. Seeking an economical form of construction he combined pointers he picked up from a brick-making display he saw on TV with his experience in making cement blocks at a Sudbury plant. His ingenuity produced a machine that proved to be a real money saver. To go with it he also built a stack of moulds, 270 in all, in which the bricks were cast, pressed and left for 48 hours to set. After removal they were allowed to cure for 7 to 10 days.

His machine is quite simple and consists of a frame which holds the moulds in place and a mechanism to release them after the brick is poured. An agitator, run by a small motor and attached to the form, ensures a solid brick each time. The mix is prepared in a small portable cement mixer and contains 4 parts finely screened sand to 1 part cement with colour and waterproofing added. This latter helps set the colour, Adrien explains. Each brick measures 3½ x 8 x 11½ inches, has two vent holes and weighs about 18 pounds. Conventional house bricks are of baked clay, and weigh 7 pounds. Building blocks measure 8½ x 15¾ inches and come in several thicknesses.

Adrien made over 3,500 bricks and with the help of his brother Herb, another Murray miner, constructed his house of them. They were cast in two colours so that a design or pattern could be used around windows and doors. Back in early May he cast the first brick and by the end of September had them all made and laid. The outside wall has a nice appearing finish and the inside will be strapped, insulated and plastered.

In addition to brick-making Adrien also made his own door and window frames. He intends doing all the work on the house himself with the exception of the more intricate wiring and plumbing installations. With Herb's help he hopes to have the new 8-room home ready as a Christmas present for his family.

Adrien has five children: Soulanges, Diane, Eileen, Gerald and Daniel, who while not actually helping with the building, have kept him company on the job. He has been with Inco since 1943, working first at Copper Cliff then transferring to Murray in 1948.

Brilliant Success

(Continued from Page 15)

high temperatures have been assembled. Thousands of experimental alloys have been melted on a laboratory scale and tested.

Research in the fields of electroplating, alloy cast iron and ductile cast iron, originating in customers' needs, have led to great advances in these fields also, he said.

"Today the nickel indutry's research engineers continue their ceaseless quest on a constantly widening frontier ranging from the most prosaic everyday uses of metal to the innermost secrets of the atom. They are developing ultra high-strength steels for aircraft parts and other high stress services, with tensile strength now running to 300,000 and 340,000 psi. and the end nowhere in sight. They are working on other high-strength steels for heat resistance at supersonic speeds, where skin temperatures up to 800 degrees Fahrenheit are encountered. They are developing more protective composite electrodeposits on steel, such as a four-layer coating of Cr—Ni—Cr—Ni. They are working on the production of sheet metal of outstanding high temperature strength available in extremely light thickness as well as heavy plate, and capable of being welded into intricate structures, such as expansion bellows, without loss of that high temperature strength. And at the same time they are establishing careful quality control on the finalized products emerging from this development work, to establish methods of testing and standards for specification."

Turning to the subject of production, Mr. Parker said that as a result of the industry's tremendous efforts to assure an adequate supply of nickel for the defense of the free world, its total production capacity by 1961 will approximate 650,000,000 to 675,000,000 pounds. "Assuming that defence demand remains at its present (sharply reduced) level, and that nickel is not taken in 1961 for government stockpiling, the 1956 rate of world civilian consumption will have to be increased by more than 75 per cent in order to absorb the output resulting from the expected expansion in nickel-producing capacity."

Thus the nickel industry faces one of the greatest challenges in its history, Mr. Parker said in conclusion. "It is evident that a huge new demand for nickel must be stimulated. That we can do it through aggressive research, with all the nickel producing companies contributing their fair share of effort, I have no doubt."

He cited "the relentless appetite of corrosion," costing more than six billion dollars a year throughout the world, as a yardstick by which to measure the tremendous opportunities awaiting nickel in various fields of usefulness to mankind.

Leon Gervais Got His Start in Bush Camps

Leon Gervais can never quite decide whether it was tougher working on the farm or in the bush camps and on river drives back in the days before he joined Inco. Reflecting on his river driving days he said it was an exciting enough life but also a rugged one. But the long, wet hours of work were balanced by the huge quantities of good food a man put away when back safe and dry in camp at night.

Born on a farm near Warren in 1896 Leon went to the bush each winter from an early age. He took part in the river drives from north of Chapleau for eight years and proudly told the Triangle that his father had been on drives for 28 years.

Mr. and Mrs. Gervais

Before coming to Coniston to join Inco in 1930 he spent several years on construction work, part of it at Rouyn. He started in the carpenter shop at Coniston and returned there in 1934 after working in some of the other departments of the plant.

In 1921 he married Anna Martin and they have a family of six. Their sons Hector and Paul work at Coniston as do Deinege's husband, Alcide Morin, and Isobel's husband, Ray Laderante. Armand and Mary-Rose (Mrs. Leo Cousineau) are their other two children. A total of 16 grandchildren help keep life happy and interesting for the Gervais'.

The family camp near Stinson is home to Leon from April to November. With good hunting and fishing right at hand there he considers himself a very lucky hombre. An enthusiastic hockey fan he intends following the Wolves again this year. He is still an active bowler and hopes this year to start curling at the new rink now under construction in Coniston.

All in all it looks like Leon is due for a full cup of contentment in his years as an Inco pensioner.

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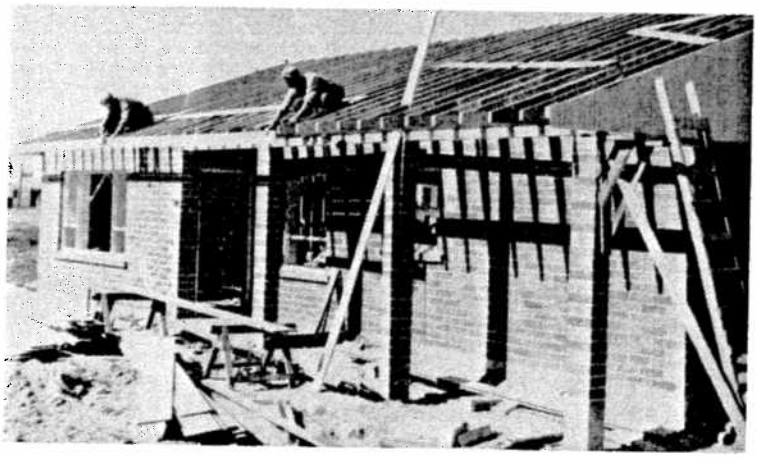

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His machine is quite simple and consists of a frame which holds the moulds in place and a mechanism to release them after the brick is poured. An agitator, run by a small motor and attached to the form, ensures a solid brick each time. The mix is prepared in a small portable cement mixer and contains 4 parts finely screened sand to 1 part cement with colour and waterproofing added. This latter helps set the colour, Adrien explains. Each brick measures 3½ x 8 x 11½ inches, has two vent holes and weighs about 18 pounds. Conventional house bricks are of baked clay, and weigh 7 pounds. Building blocks measure 8½ x 15¾ inches and come in several thicknesses.

Adrien made over 3,500 bricks and with the help of his brother Herb, another Murray miner, constructed his house of them. They were cast in two colours so that a design or pattern could be used around windows and doors. Back in early May he cast the first brick and by the end of September had them all made and laid. The outside wall has a nice appearing finish and the inside will be strapped, insulated and plastered.

In addition to brick-making Adrien also made his own door and window frames. He intends doing all the work on the house himself with the exception of the more intricate wiring and plumbing installations. With Herb's help he hopes to have the new 8-room home ready as a Christmas present for his family.

Adrien has five children: Soulanges, Diane, Eileen, Gerald and Daniel, who while not actually helping with the building, have kept him company on the job. He has been with Inco since 1943, working first at Copper Cliff then transferring to Murray in 1948.

Brilliant Success

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high temperatures have been assembled. Thousands of experimental alloys have been melted on a laboratory scale and tested.

Research in the fields of electroplating, alloy cast iron and ductile cast iron, originating in customers' needs, have led to great advances in these fields also, he said.

"Today the nickel indutry's research engineers continue their ceaseless quest on a constantly widening frontier ranging from the most prosaic everyday uses of metal to the innermost secrets of the atom. They are developing ultra high-strength steels for aircraft parts and other high stress services, with tensile strength now running to 300,000 and 340,000 psi. and the end nowhere in sight. They are working on other high-strength steels for heat resistance at supersonic speeds, where skin temperatures up to 800 degrees Fahrenheit are encountered. They are developing more protective composite electrodeposits on steel, such as a four-layer coating of Cr—Ni—Cr—Ni. They are working on the production of sheet metal of outstanding high temperature strength available in extremely light thickness as well as heavy plate, and capable of being welded into intricate structures, such as expansion bellows, without loss of that high temperature strength. And at the same time they are establishing careful quality control on the finalized products emerging from this development work, to establish methods of testing and standards for specification."

Turning to the subject of production, Mr. Parker said that as a result of the industry's tremendous efforts to assure an adequate supply of nickel for the defense of the free world, its total production capacity by 1961 will approximate 650,000,000 to 675,000,000 pounds. "Assuming that defence demand remains at its present (sharply reduced) level, and that nickel is not taken in 1961 for government stockpiling, the 1956 rate of world civilian consumption will have to be increased by more than 75 per cent in order to absorb the output resulting from the expected expansion in nickel-producing capacity."

Thus the nickel industry faces one of the greatest challenges in its history, Mr. Parker said in conclusion. "It is evident that a huge new demand for nickel must be stimulated. That we can do it through aggressive research, with all the nickel producing companies contributing their fair share of effort, I have no doubt."

He cited "the relentless appetite of corrosion," costing more than six billion dollars a year throughout the world, as a yardstick by which to measure the tremendous opportunities awaiting nickel in various fields of usefulness to mankind.

Leon Gervais Got His Start in Bush Camps

Leon Gervais can never quite decide whether it was tougher working on the farm or in the bush camps and on river drives back in the days before he joined Inco. Reflecting on his river driving days he said it was an exciting enough life but also a rugged one. But the long, wet hours of work were balanced by the huge quantities of good food a man put away when back safe and dry in camp at night.

Born on a farm near Warren in 1896 Leon went to the bush each winter from an early age. He took part in the river drives from north of Chapleau for eight years and proudly told the Triangle that his father had been on drives for 28 years.

Mr. and Mrs. Gervais

Before coming to Coniston to join Inco in 1930 he spent several years on construction work, part of it at Rouyn. He started in the carpenter shop at Coniston and returned there in 1934 after working in some of the other departments of the plant.

In 1921 he married Anna Martin and they have a family of six. Their sons Hector and Paul work at Coniston as do Deinege's husband, Alcide Morin, and Isobel's husband, Ray Laderante. Armand and Mary-Rose (Mrs. Leo Cousineau) are their other two children. A total of 16 grandchildren help keep life happy and interesting for the Gervais'.

The family camp near Stinson is home to Leon from April to November. With good hunting and fishing right at hand there he considers himself a very lucky hombre. An enthusiastic hockey fan he intends following the Wolves again this year. He is still an active bowler and hopes this year to start curling at the new rink now under construction in Coniston.

All in all it looks like Leon is due for a full cup of contentment in his years as an Inco pensioner.