

INCO TRIANGLE

VOLUME 27

COPPER CLIFF, ONTARIO, DECEMBER, 1967

NUMBER 9

Merry Christmas and Happy New Year to All





Published for all employees of The International Nickel Company of Canada Limited

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Editorial Office, Copper Cliff, Ont.

Authorized as second class mail by the Post Office Department, Ottawa, and for payment of postage in cash.

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Appointments



A. E. Johnstone

M. H. Dickhout



H. R. Jarrett

J. M. O'Shaughnessy

G. R. Green, manager of mines, announced the following appointments effective November 1:

A. E. Johnstone, assistant to the chief mines engineer, in charge of miscellaneous mines;

M. H. Dickhout, area engineer, Frood-Stobie and Little Stobie mines;

H. R. Jarrett, area engineer, Creighton, Crean Hill, and Totten mines;

J. M. O'Shaughnessy, area engineer, Murray, Copper Cliff North, Clarabelle, and Copper Cliff South mines.

A. E. JOHNSTONE

Born in Weymouth, England, Andrew Johnstone received his preliminary schooling there and his mining engineering degree from the University of Toronto in 1938.

During his university vacations he was employed at Macassa gold mine, Kirkland Lake, the Dark-water mine on Sturgeon Bay, and International Nickel.

On graduation he joined Inco at Frood mine, first working underground and then after a few months moving to the engineering office. He was transferred to the mines department at Copper Cliff permanently in 1943.

His appointment as assistant to the chief mines engineer was made in 1965.

He was married in 1939 to "Monty" Anderson of Kitchener.

He is vice-president of Idylwyld Golf & Country Club.

M. H. DICKHOUT

Dunnville, Ontario, was the birthplace of Mervin Dickhout, who graduated in 1948 in mining engineering at the University of Toronto.

He joined International Nickel in the mine engineering office at Creighton, and has since served as ground control engineer, mines planning engineer, and engineer of miscellaneous mines.

He was appointed Stobie mine engineer in August of this year.

His marriage to Phyllis Hefferman, a nursing graduate of Kingston General Hospital, took place in 1948. He has three children.

H. R. JARRETT

The career of Harvey Jarrett, since he joined International in 1949 on his graduation from Queen's University with a mining engineering degree, was reviewed in the August 1967 issue of the Triangle following his appointment as mine engineer at Creighton.

J. M. O'SHAUGHNESSY

Following graduation from Queen's University in 1943 with his mining engineering degree, Jack O'Shaughnessy served for three years as a lieutenant in the Royal Canadian Engineers.

He was employed at Timmins.



AT COPPER CLIFF

THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED

May Happiness Abound
for You and Yours
at Christmas
and throughout
the Coming Year

Harvey L. Wright
CHAIRMAN

Arthur P. Gagnier
PRESIDENT

J. J. Fodor
EXECUTIVE
VICE-PRESIDENT

J. S. Rigatt
ASSISTANT VICE-PRESIDENT
GENERAL MANAGER
ONTARIO DIVISION

J. M. McCreedy
GENERAL MANAGER
MANITOBA DIVISION

then joined International Nickel at Levack in 1948 but left the Company in 1955 to work for Consolidated Sudbury Basin. Returning to the Inco mines department at Copper Cliff two years later, he was transferred to Clarabelle Open Pit engineering office in 1960, was appointed mine engineer of Copper Cliff North in 1965.

He was married to Mildred Bennett of Oshawa in 1945, has three children. He was born in Cobalt.

On Our Cover

Mother and Child, symbolic of the sacred event at Bethlehem almost 2,000 years ago, is once again the theme of our Christmas cover picture.

The mother and child gracing the quaint fireside setting with its touches of Yuletide are Adrienne Banbury of Copper Cliff and her daughter Jane Elizabeth.

Before her marriage in 1963, the charming Mrs. Banbury was Adrienne Chisholm of Niagara Falls. She and her husband Larry met at Queen's University. He later received his doctorate in chemistry from the University of Toronto, and since February of this year has been a member of the research laboratory staff at Copper Cliff.



With irreplaceable 13-months-old Jane joyfully directing the proceedings, this Christmas morning will bring a depth of happiness to Adrienne and Larry like none they have ever known.

NO BRIBES

Mother — "Were you a good little girl at church?"

Dianne — "Oh yes. A man offered me a big plate of money and I said, 'No, thank you'."

Got a Match?

By Bruce West in the Toronto Globe and Mail

Each year, during the hunting season, those who go out into the woods are warned to take along at least a compass and some matches, besides their guns and ammunition. And each year a number of hunters neglect to heed this advice and get lost, often with tragic results. Recently an experienced, 64-year-old Sudbury hunter had an experience of this kind which could have cost him his life. Edwin Mills was later interviewed by two representatives of the Department of Lands and Forests, who made the following report on the incident: Mr. Mills usually carried into the woods, along with his rifle and shells, a kit containing a whistle, compass, waterproof matches, some chocolate bars and a map of the area. But this day, while hunting with his son just north of Lake Wanapitei, he noticed that his compass didn't seem to be working properly. However, because he intended to make only a short circle in the bush and return to meet his son at their car, he didn't bother to take along his emergency kit. Two hours after entering the woods, he realized that he was lost. As sundown began to arrive, he knew he would have to spend the night in the woods. He didn't panic. He had no matches with which to light a fire, so he prepared to keep warm during the hours of darkness by moving about. This can be extremely dangerous in the pitch black of a cloudy night in the woods. But Mr. Mills carefully prepared a short walking trail on the top of a knoll, which he marked with white birch limbs.



Garson mine pensioner Ed Mills: a happy ending to a frightening experience.

Late on the next afternoon, he made a shelter of spruce branches and stayed there for the night. He removed his boots and wet socks, placing the socks around his waist next to his skin to help dry them. If only he had one match, he thought—but he was a non-smoker and didn't ordinarily carry matches except those in his emergency kit. He is a diabetic and had also run out of his pills. He had heard once that the Indians used a tea brewed from the roots of blueberry bushes in the treatment of diabetes and he hoped to try this option if he could find some way of making a fire.

The next day—on a Monday—he found an abandoned camp. Although at first he could find no matches he did discover two stale slices of bread and a couple of charred crusts in the stove. With this food and shelter, he believed he should be able to last for at least another 24 hours. He then combed the cracks of the floor, desperately looking for just one match that might have fallen between them. And he found one! It was a paper one. Knowing that this one small match might save his life, he took elaborate care in preparing a fire in the stove. He shredded some paper and poured coal oil from a lamp over it. Then, with a prayer, he set about trying to light the match and succeeded. The fire caught.

Half-an-hour later, Mr. Mills heard a plane overhead and rushed out to signal it. He was spotted and the aircraft landed in the lake. It was a Lands and Forests patrol plane. It took him back to Sudbury. The smoke from his fire had caught the eye of the pilot.

"I would not go to the cow pasture now," said Mr. Mills fervently, "without matches, a compass checked for accuracy, some chocolate bars and a knife."

He lost 14 pounds during his two-day ordeal.

PARTNERS

A motorist whose car broke down one night on a lonely road found humble but hospitable accommodation at a farm. Next morning his breakfast consisted mainly of a large bowl of porridge.

During the meal he was astonished to find himself rather

popular with a small pig, which nuzzled against his legs in a most affectionate and persistent manner. At last he remarked to his host: "Your pig seems to have taken a great liking to me. I didn't know a pig could be so affectionate."

"Oh, it's not you he likes, it's just that you're using his bowl."

Executive Changes In U.K. Operations

John O. Hitchcock, managing director of International Nickel Limited, London, has been elected vice-president—international marketing of the parent company. The International Nickel Company of Canada, Limited, it was announced by Henry S. Wingate, chairman and chief officer.

Mr. Wingate also announced that



J. O. Hitchcock

L. E. Grubb

L. Edward Grubb has been elected managing director of International Nickel Limited, the Company's United Kingdom subsidiary, succeeding Mr. Hitchcock.

In addition, Mr. Hitchcock was elected vice-president of The International Nickel Company, Inc., the Company's United States subsidiary. He will continue as a director of International Nickel Limited. In his new capacity, Mr. Hitchcock will be in charge of the parent company's overseas commercial and sales activities. He will carry out his various responsibilities in London, New York, Continental Europe and elsewhere. He joined the Inco organization in 1927.

Mr. Grubb, an assistant vice president of the parent company, is also the managing director of Henry Wiggin and Company Limited, a subsidiary of International Nickel Limited, a position he has held since 1964. He continues as chief officer of Henry Wiggin. He joined Inco in 1934 and served in various capacities in the alloy products division at Huntington, West Va., before becoming a vice-president of International Nickel Company, Inc., in the United States.

Appointments

The following appointments have been announced in connection with the phasing in of the planned maintenance system, a realignment of the maintenance organization at Inco plants in the Sudbury district:

By J. B. McConnell, manager of reduction plants:

J. R. Ferguson, maintenance superintendent, Coniston;

H. N. Goodspeed, chief maintenance planner, Coniston.

By E. G. Stoneman, manager of iron ore recovery plant:

J. G. Cullain, senior powerhouse engineer, will be in charge of powerhouse and plant utilities, iron ore recovery plant.

By G. R. Green, manager of mines:

R. A. McAllister, maintenance superintendent, Creighton mine;

F. R. Roberts, chief maintenance planner, Creighton mine;

R. H. Pearson, maintenance

superintendent, Murray, Charabelle, and Copper Cliff North mines;

A. Wiehle, chief maintenance planner, Murray, Charabelle, and Copper Cliff North mines;

R. E. Condie, maintenance superintendent, Crean Hill and Totten mines;

W. Bell, chief maintenance planner, Crean Hill and Totten mines;

R. Bench, maintenance superintendent, Levack and Coleman mines;

G. T. Secker, chief maintenance planner, Levack and Coleman mines;

J. Brodie, maintenance superintendent, Garson and Kirkwood mines;

R. A. Moir, chief maintenance planner, Garson and Kirkwood mines.

Canadian Economist Is Elected Director of Inco

Dr. John J. Deutsch, professor of economics and principal-elect of Queen's University, Kingston, has



Dr. John Deutsch

been elected a member of the board of directors of The International Nickel Company of Canada, Limited.

A prominent Canadian economist, Dr. Deutsch has taught economics at the university level and practiced it as a government official ever since his graduation from Queen's University in 1935.

Dr. Deutsch was the first chairman of the Economic Council of Canada, serving from 1963 until this past summer. From 1946 until 1956 he held high positions in the department of finance, Ottawa, attaining the rank of assistant deputy minister and secretary of the treasury board. In 1956, he joined the University of British Columbia, Vancouver, as head of the department of economics.

Dr. Deutsch first became associated with Queen's University as a lecturer in economics in 1940. He returned in 1950 in the dual position of vice-principal (administration) and professor of economics. He will become principal of Queen's in September, 1968.

Dr. Deutsch has received honorary degrees from McGill University, Montreal; York University, Toronto; the University of Windsor; St. Mary's University, Halifax, and Sir George Williams University, Montreal.

AN EAGER BEGINNER

They're telling about the English plumber who became wealthy, and one day bought a second hand piano for his cottage. Next morning his neighbors saw him wheeling the piano out on a hand cart and starting down the road.

"I knowed you wouldn't keep that thing long, Tom," cried one of his friends.

"You're wrong," replied the plumber, with dignity. "I'm off for my first lesson."

Patio Luxury

Outdoor furniture now made with frames of strong, lightweight nickel stainless steel requires practically no care and lasts for decades.



John Langin is congratulated by comptroller Walter McCadden on becoming a member of the Quarter Century Club. Standing on either side of him are the other two new members of the Thompson chapter, I. P. Klassen and A. R. Thornborough, and at the right is division general manager John McCreedy.

W. A. McCADDEN IS SPEAKER AT THOMPSON'S QC BANQUET

Membership in the Thompson chapter of the Inco Quarter Century Club increased to 24 when I. P. Klassen, A. R. Thornborough and J. Langin were presented with their gold 25-year badges at a dinner meeting in the Burnatwood Hotel on November 11.

Making the presentations was W. A. McCadden of New York, Inco comptroller, who conveyed greetings to the gathering of 100 from the chairman of the Company, Henry S. Wingate, executive committee chairman J. Roy Gordon, president Albert P. Gagnebin, senior executive vice-president James C. Parlee, and executive vice-president F. Foster Todd.

Division comptroller J. Ross Hawkins was master of ceremonies at the greatly enjoyed function. A troupe of performers from Winnipeg, led by the irrepressible Len Andree, provided some spicy entertainment.

Mr. McCadden, who recently had conferred on him the honorary de-

gree of doctor of commercial science by Pace College, New York, was introduced by general manager John McCreedy.

"Two Solitudes"

He drew laughter and applause at the start of his address with a description of an engineer as seen by an accountant, and vice versa. Among other things the engineer, as viewed with jaundiced eye by the accountant, "talks in astronomical figures and abhors details; his limits of accuracy are plus and minus \$10,000, and he brags if he stays within these limits; he is the despair of auditors, only exceeded in this respect by social workers." On the other side of the coin, the engineer's conception of an accountant includes "a man past middle age, spare, wrinkled, intelligent, cold, passive, non-committal, with eyes like a cod fish, composed as a concrete post or a plaster-of-paris cast, a human petrification with a heart of feldspar."

Mr. McCadden briefly traced the history of International Nickel, commencing with the original discovery of ore bodies near Sudbury in 1883, and the formation of the Canadian Copper Company. A process for separation of nickel and copper was developed by the Orford Copper Company of Bayonne, New Jersey in 1900, and the two companies were joined in 1902 with the incorporation of the International Nickel Company of New Jersey. In 1928 the International Nickel Company of Canada, Limited, a subsidiary which had been formed in 1916 to include all Canadian assets, became the parent company with International Nickel Company Inc., as the American subsidiary. In 1929, through an exchange of stock, Inco Canada acquired the assets in



Much to their pleasure, the wives of the three new members received roses and a letter of appreciation from general manager John McCreedy. Here Ellen Langin poses with her bouquet.



Clarence Beach (second from right), assistant to the comptroller, Toronto, chats with Harry Banauik, Bill Clement, and Shirley and Tom Moodie.

SOME OF THOSE ENJOYING THE PARTY

Marion and Lloyd McDonald, Racetha and Gene Winter.



Herb and Marguerite Blain, Jim and Mae Harvey.



Jill and Lucien Villeneuve, Betty and Wini Newman.



Johnny and Ann Jones, Gerry and Irene Gibson, Estelle Puro.

Canada and England of the Mond Nickel Company, now International Nickel Limited, and Henry Wiggin & Company, Limited, its subsidiary.

Today, Mr. McCadden said, there are 63 companies in the International Nickel corporate group, of which 50 are wholly owned and inter-related, the other 13 being from 20 to 80% owned. As a result of recent changes in name, 20 of these companies are now designated "International Nickel" in the various countries in which they function.

Getting More "International"

"We are very 'International', and we are getting more so every day. We are developing or expect to develop properties as rapidly as possible in Guatemala, New Caledonia, Australia, Minnesota, and other areas as they show promise."

"The area here at Thompson is most essential to our production requirements, but even as rapidly as we expand here and at Sudbury we are not able to meet world requirements. Wherever there are nickel-bearing ores in the rest of the world it is essential that we broaden out as rapidly as we can and develop any of these areas that come to our attention in order to keep our business expanding with the times. If we don't do this, others will."

Mr. McCadden, who completed 25 years with the Company in 1960, said he considers it a great privilege to become a member of the Quarter Century Club. He congratulated the members of the Thompson chapter, saying "I am

sure that with your long experience you are all proud that your knowledge can be extremely beneficial to the continuing growth of our organization."

Frank Curhalek

Frank Curhalek made a promise to his brothers and sisters in Mostec, Yugoslavia. When he retired he would pay them a visit. As good as his word, Frank has just returned after a six-week reunion following his departure from Froid on service pension after more than 37 years with the Company.

Frank was one of a family of 10, with little prospect of inheriting the family farm, so in 1928 he set sail for Canada and the wide open spaces. He travelled to Regina, and after three weeks of harvesting figured that maybe he had had enough of farming and headed for the Mond at Garson mine, where he started in the rockhouse.

He joined Inco to work underground at Froid the same year, was a chute blaster, and came to surface as a sign painter in 1945. He held the job until retirement.

A confirmed bachelor, Frank figures he's safe now, and plans to settle back, relax with his books, and dream about the huge lake trout that he hopes to pull out of Emerald Lake next summer.



Frank Curhalek



Governor General Roland Michener officially opened the new mineralogy gallery on November 13. Here he and Mrs. Michener view a life-size cave of stalactites and stalagmites with James C. Parlee (left), Inco's senior executive vice-president.

NEW LIFE IN AN OLD SUBJECT AT ROYAL ONTARIO MUSEUM

A new gallery of mineralogy, the world's first to feature a major explanation of the principles of the science, has been opened at the Royal Ontario Museum in Toronto.

Described by mineralogy curator J. A. Mandarin as a "three-dimensional textbook", the jewel-like permanent gallery covering 6,000 square feet of floor space took four and a half years to complete. Construction was made possible by grants totalling \$150,000 from the International Nickel Company of Canada, Limited.

The new gallery with its dramatic lighting, sculptured walls that peak and dip like a mountain range, and many scientific experiments for visitors to perform, was designed by John Hillen, assisted by Miss Frances Brittain. Hillen, whose Dutch ancestors were designing furniture as early as the 16th century, also was responsible for designing the ROM geology gallery, completed in late 1962 after 10 years' work.

From the ROM collection of 150,000 mineral specimens, about 2,500 of the finest or most representative were selected for inclusion in the exhibits. The majority are in systematic displays along two sweeping walls of the gallery. The others are featured attractions in the section of 30 teaching displays — the heart of the gallery — and in the spectacular entrance area.

Iran Crown Jewels Shown

Situated off the main ROM rotunda, the entrance creates a mood for the entire gallery. A gleaming stainless steel stalactite is the focal point of a fountain where water from a thousand tiny spouts in the ceiling patters into a lighted pond below. Huge, colorful samples of minerals fill one case, a sparkling representation of a crystal structure another. Through a porthole is seen a continuous slide show, with commentary, of the fabulous crown jewels

of Iran, which were first catalogued in 1965 by an ROM team.

A series of displays shows the properties and many uses by man of precious and semi-precious gems.

Just beyond the gallery entrance is a life-size cave of stalactites and stalagmites. Half the stalactites in the diorama are genuine, a gift from Washington's Smithsonian Institution. The others were moulded of fibreglass, plastic and plaster by Gerald O'Connor, who confesses he now cannot tell the real from the fake.

The teaching section, which explains step-by-step what a mineral is, how it is formed, its properties and how to identify it, is the pride of curator Mandarin.

Visitor Does Experiments

As the visitor progresses through the teaching area he is invited to actually perform a number of experiments. By pushing buttons or twirling dials, he may measure the interfacial angles of crystals, compare symmetry, test specific gravity of specimens, study refraction by operating light beams, set a gel counter clicking furiously with a specimen of uraninite, and peer through microscopes to examine tiny crystals.

One entrancing display demonstrates fluorescence of certain minerals by bathing them alternately in normal light and in ultra-violet light. Under the black light, such common minerals as rock salt glow eerily.

At the end of this short course in mineralogy is a special "computer" board. By turning dials on the board for such properties as lustre, color, hardness, cleavage and specific gravity, the visitor may identify unknown mineral samples.

To amuse and occupy youngsters while their parents are absorbed by the displays, special child-height exhibits are set below many of the cases.

Was Outstanding As School Stope Instructor

As official poet laureate of Levack mine, school stope instructor Gordon Tulloch has composed many a clever ode to men who, through the years, have retired from the mine. But, alas, there was no poet on hand to record Gordie's past in verse when he reached his 65th birthday recently and retired on service pension after more than 33 years with the Company.

"I was deeply moved," said Gordie, "when, at the end of my last shift, my friends gathered and presented me with a Bible. They



Mr. and Mrs. Tulloch

couldn't have selected a more thoughtful and appropriate gift, and I'm most grateful to them."

As a lay preacher, Gordon was the moving force that resulted in the construction of the Larchwood Bible Chapel in 1956, which now attracts as many as 70 children to regular Sunday school classes.

Born in Iron Bridge, Ontario, Gordie left the farm for Detroit in 1925, couldn't stand the pace down there, and returned to the North to work in the sawmill at Blind River.

His move to Inco was made in 1934 when he started on the 2600 level at Frood. Soon his leadership talents were noticed and he was promoted to relieving shift boss; he was given a shift of his own after transferring to the 900 level at Levack in 1938. He was appointed mine safety engineer in 1948, and became instructor in the school stope in 1957. His work has been an important factor in Levack mine's fine safety record.

"Safety and teaching safety — was my full-time business," enthused Gordie. "It's my opinion that as long as a man works to the rules and regulations there is absolutely no excuse for underground accidents whatsoever."

Gordon married Verna Trivers of Kynoch, near Iron Bridge, in 1930, and they have been blessed with a family of four. Donna is Mrs. Elmer Guse of Dowling, Joan is Mrs. Arnold Spears and also lives in Dowling. Darwin lives in Sudbury, and Andrew, 13, attends grade 9 at Levack high school. They have nine grandchildren to complete the family.

His family held a retirement party for him at Cassio's Restaurant, and presented him with a large snow scene painting. Another gay party took place at his fine new home on Third Avenue in Levack when some 65 of the boys from the mine dropped in unexpectedly to wish him all the best for his retirement years, and presented him a set of hand-wrought fireplace irons.

Everyone at the mine hopes that Gordon will long enjoy his retirement.

William Fulbrook

A new pensioner at Port Colborne is William Fulbrook, who was employed in the leaching, calcining and sinter department from start to finish of his 31 years with the Company. He worked on the ball mills, calciners and as a weigher and tankman.

William was born and brought up on a farm in Wainfleet Township, and on leaving school worked as a mail carrier. Prior to joining



Mr. and Mrs. Fulbrook

Inco in 1936, he was employed with John Deere Welland Works and Fraser Brace Construction Company. Now after 31 years' service with Inco, he's going to take things easy.

Married in 1922 to Frances White, he has three daughters and two sons: Betty (Mrs. Allan Day-boll), Joan (Mrs. Frank Sabo), Molly (Mrs. Kirk Mitchener), residing in Port Colborne, and Joseph and Jack, with John Deere Welland Works and residing in Wainfleet.

A presentation of a purse of money was made to William by C. H. Ott, on behalf of his fellow employees in his department, along with best wishes for health and happiness in his retirement.

Peter Kubisa

Stobie service pensioner Peter Kubisa has a very pleasant problem. Having made up his mind to move to a warmer climate, he's trying to decide between Florida or the place of his birth, Vienna.

Born in 1902, Peter moved with his family in 1914 to Chropov in Czechoslovakia, and at age 12 was



Mr. and Mrs. Kubisa

doing a full day's work making wagon wheels as an apprentice wheelwright.

He downed his spokeshave in 1928 to come to Canada, worked in Saskatchewan and Manitoba, and joined Inco for the first time in 1929 at Frood.

During the following years he broke his service with the Company and was rehired three times, returning for good in 1935. He was employed at the Frood carpenter shop until 1944, moved to the open pit, and finished the last nine of his 32 years of service as a nipper at Stobie.

He married Sophia Fric in 1925. Their son Vladimir and daughter Annie (Mrs. Anton Vavra) both live in Czechoslovakia. Mrs. Kubisa joined Peter in Sudbury in 1948.

Hoist at Creighton 9 Inco's Most Powerful

The most powerful hoist in International Nickel's operations has been installed at Creighton mine to hoist ore in the deepest single shaft in the Western Hemisphere.

A direct-connected parallel drum hoist with an allowable rope pull of 110,000 pounds, the \$1,200,000 Creighton No. 9 shaft skip hoist is driven by a 6500-hp 563-rpm dc motor.

It will lift 15-ton skips of ore from the loading pocket, 6700 feet straight down, at the rate of 3300 feet per minute.

The huge drums on which the hoisting rope is wound are 18 feet in diameter with an 80-inch face.

Rope Alone Cost \$30,000

The \$30,000 hoisting rope, 8000 feet long, is 2.26 inches in diameter and weighs 8.55 pounds per foot. Made of ultra-high tensile flattened strand steel with a nylon core, the rope has a breaking strength of 530,000 pounds.

Another unusual feature of this powerful new installation is the size of the headframe sheaves over which the hoisting rope travels — they are 19 feet in diameter.

Built into the hoist is a highly sophisticated braking system, the heart of which is a free piston valve which pneumatically controls the hydraulic pressure supplied to the brake engines. Automatic compensation is provided for the differing winding conditions governed by the direction of travel and the location of the skip in the shaft. In addition, of course, the hoist is

Trim lines and compact design conceal the tremendous power and highly sophisticated mechanism of the new skip hoist at Inco's \$17 million Creighton No. 9 shaft development. A second hoist, identical except for smaller drive motor and slower speed, will transport men and supplies in the 7100-foot shaft.

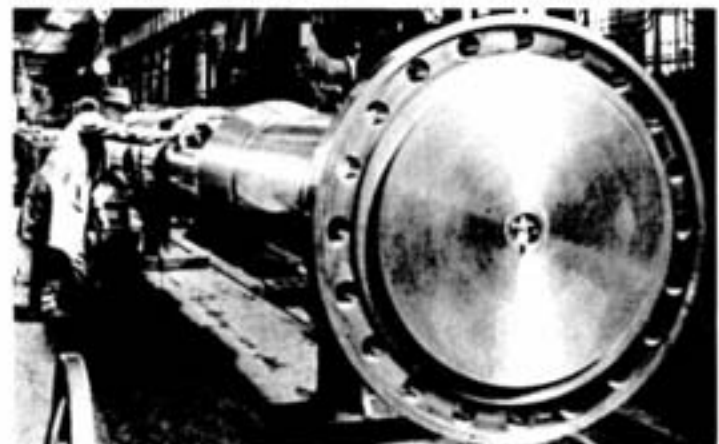
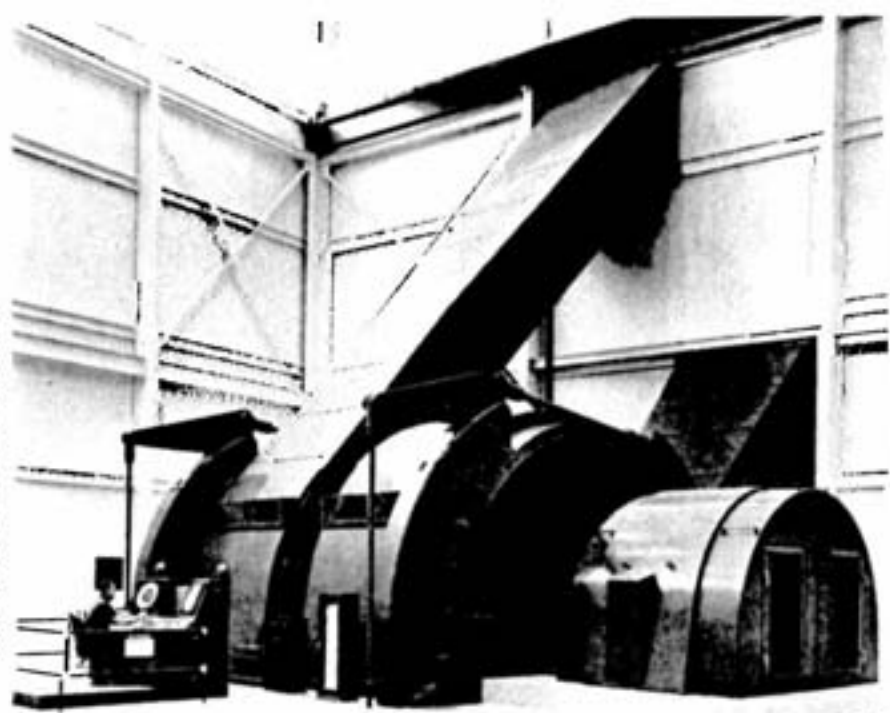
equipped with a full complement of the standard safety devices to activate the braking system in the event of an emergency.

Behind the building of a major hoist installation lies long and careful study of many factors. To provide safety and reliability the Creighton 9 shaft hoist, with its unusual length of rope, required the best possible winding conditions, which involved relatively large diameter drums and headsheaves, short and steep flight ropes, and small rope fleet angles, along with parallel drum grooving with half-pitch crossovers. These and other

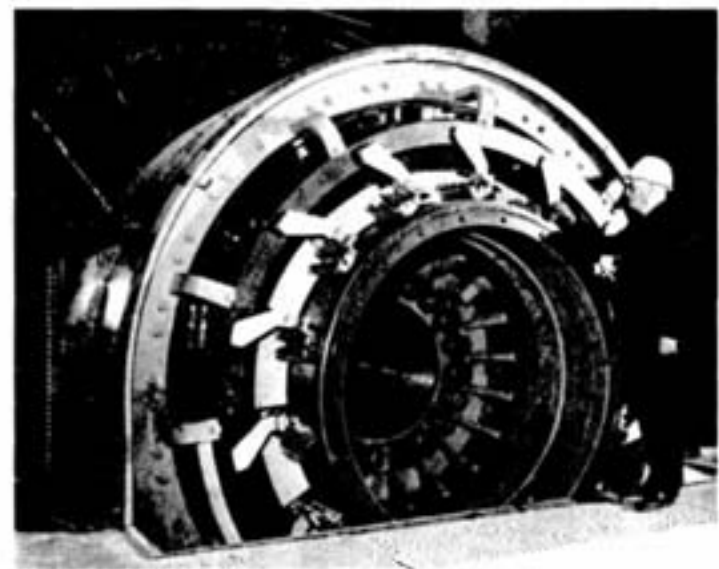
basic features of the design were worked out by Inco mechanical engineers in collaboration with the manufacturers, Pullerton, Hodgart

and Barclay, Limited, of Paisley, Scotland.

A second hoist, identical to the
Continued on Page 13



The 34-ton drum shaft of the new hoist is shown as it underwent ultrasonic testing at the manufacturers' plant in Scotland. Made of 3½ per cent nickel steel, it is 30 inches in diameter and 30 feet long.



With the casing removed, Bert McAllister inspects the commutator of the 6500-hp hoist motor.



George Passi stands beside one of the hoist's two huge drums, each 18 feet in diameter with an 80-inch face, on which winds 8,000 feet of ultra-high tensile steel rope. Surrounding him are some of the safety devices which activate the braking system in the event of an emergency.



Typical of the young men on their way to careers as tradesmen is this Inco 1st year machinist apprentice, Tony Cirillo, seen operating a shaper in the machine shop at Murray mine. He attended Sheridan Technical School in Sudbury. His father, Carlo Cirillo, is employed in the tankhouse at the Copper Refinery.

AT LAST THE BIG MOMENT ARRIVES!



Two machinist apprentices in the reduction section of the mechanical group are shown here as they completed their fourth and final year. While general foreman Lloyd King beams his approval, John Beaudry receives his diploma and hearty congratulations from Copper Cliff maintenance superintendent Fred Burchell. Second from the left, Alan Makala proudly shows his diploma to supervisor of apprentices Dave Chapman.

Trade Careers Launched By Inco Apprentice Training

Opportunity is right on the doorstep for young men of the Sudbury district who wish to become full-fledged tradesmen.

International Nickel's apprentice training program provides complete training in trades essential to its operations in the district.

Some 137 young men, several from distant points in the area, are now enrolled in the four-year training program, which involves all Inco's mines and plants. According to the supervisor of apprentices, Dave Chapman, they show a high degree of aptitude, interest and enthusiasm, and are making excellent progress.

Apprentice training is being conducted in three groups of trades. In the electrical group are apprentice electricians, winders and instrument men; in the mechanical group are apprentice machinists, plateworkers, and pattern-makers; in the general group are apprentice lead welders and garage mechanics.

Candidates applying for entry into the program are required to show evidence of having successfully completed grade 12 in the Ontario secondary school system or its equivalent and have an

aptitude for and interest in the trade they wish to enter.

Candidates may apply at any time, either to the personnel department in the general offices at Copper Cliff or through the personnel officer at any of the plants.

Practical On-Job Training

An apprenticeship entails four years of practical, on-the-job training supplemented by a Company-approved home-study course undertaken by the apprentice in the early part of his apprenticeship.

The initial training of the apprentice is designed to familiarize him with his working location, with the equipment involved and with the working practices of his department. Safety is emphasized throughout the apprenticeship period.

Following the familiarization stage, the apprentice receives training in the fundamentals of his trade, then, over the four-year period, progresses to more advanced stages of training to reach eventually the status of a qualified tradesman.

Throughout the apprentice's training he is encouraged to think constructively about his work and discuss with his supervisors any



Presentation of diplomas to three graduate electrician apprentices was made by electrical superintendent Art Prince in the office of Stobie mine assistant superintendent Milt Jawsey (left). The young men who successfully completed the four-year course are Lionel Bissonette, Richard Laframboise, and Roger Janikewicz.

problem he may have regarding the practical or theoretical aspects of the job.

The apprentice is expected to apply himself diligently to his training, respond well to direction from his supervisors and show a high degree of co-operation toward other employees.

Supervision of Training

The selection, training and general supervision of apprentices, including discipline and counselling, are the responsibility of the supervisor of apprentices and the superintendents of the departments concerned.

The training of the apprentice is under the immediate supervision of his foreman and the qualified tradesmen under whom he works. In the early stages of training the apprentice works, almost invariably, under the guidance of a tradesman. As his training progresses he is expected to carry out an increasing number of assignments with little or no assistance.

A detailed record is kept of the progress of each apprentice by the supervisor of apprentices. To make this possible, department superintendents provide progress reports

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Classified as a lead welder apprentice in the general group, Ron Renaud is completing his fourth year of training at the Copper Refinery.

Regular on-the-job instruction periods are held for apprentices in the electrical group. Shown holding a class in the instrument shop at Copper Cliff is instrumentation engineering supervisor Leo Kilpinen, assisted by shop supervisor John Taylor. From the left the apprentices are Cliff Corelli, Jim Bolger, Cornel Miglioranza, Jack Kosmerly, Enrie Hywarren, Eric Kallio, and Don Ushick.



Inco Steps Up Research with \$4 Million Sheridan Park Lab

A new \$4 million laboratory devoted to research in extractive metallurgy and equipped with the most advanced instruments and techniques has been opened by International Nickel in the Sheridan Park research community, 17 miles west of Toronto.

The main function of the laboratory will be to develop fundamental information that will lead to new and improved production and process methods as well as new primary forms of nickel and associated elements. Improved cast ferrous alloys containing nickel will also be sought. In addition, a geology section will pursue research projects related to exploration techniques and basic studies into the origin of various ores and their mineral constituents.

Participating in the opening ceremonies were Henry S. Wingate, chairman and chief officer of the Company, Hon. John P. Roberts, Premier of Ontario, and Hon. Mitchell Sharp, federal minister of finance.

The new laboratory is named in honor of J. Roy Gordon, a distinguished Canadian scientist and former president of the Company who currently serves as chairman of the executive committee. His outstanding achievements are reflected in the growth of International Nickel and the Canadian nickel industry. Mr. and Mrs. Gordon and members of their family were present for the ceremonies.

Many Significant Strides

The J. Roy Gordon research laboratory is now the worldwide process research centre in the Company's group of individual plant laboratories and pilot plant facilities at Port Colborne, Thompson and Copper Cliff in Canada, and at Clydach and Acton in the United Kingdom.

Each unit has contributed substantially to the many new metallurgical techniques and processes which have been developed. The most significant include:

- matte separation for production of nickel, copper and precious metals concentrates;
- oxygen flash smelting of sulphide concentrates;
- direct electrolysis of nickel sulphide;
- automated, high capacity, nickel carbonyl decomposers;
- development of fluid bed techniques for roasting and reduction recovery of high-grade iron ore from nickeliferous pyrrhotite;
- use of oxygen-enriched air in smelting and converting of non-ferrous metals;
- production of acid-soluble, high-density nickel oxide;
- production of high purity osmium.

Imaginative New Methods

Over the years, International Nickel's research in extractive metallurgy has largely centred on the sulphide ores, following the discovery and development of the large sulphide deposits in the Sudbury district of Ontario in the latter part of the 19th century. As ore grades gradually declined, and world demand for nickel and by-product metals increased, imaginative new methods of mining and ore treatment were developed to handle the greater quantities of lower grade ore. The Company continues to vigorously pursue new techniques to make marginal grade sulphide deposits economic to mine and process.

Today, as industrialization be-

comes more intensive around the globe, the consumption of nickel and associated metals steadily increases and will continue to do so into the foreseeable future. To meet these growing needs, International Nickel has stepped up its research activities into the treatment of oxide ores. Much of this important work is being done at the J. Roy Gordon research laboratory.

Although the research centre operates as an integrated unit, staff personnel are organized, for functional purposes, into four main groups: geology, extractive metallurgy, product development and supporting service departments.

The primary objectives of extractive research are to find new ways to economically recover more

Continued on Page 16



The lights of research glow brightly in this night view of the facade of International Nickel's new laboratory at Sheridan Park.

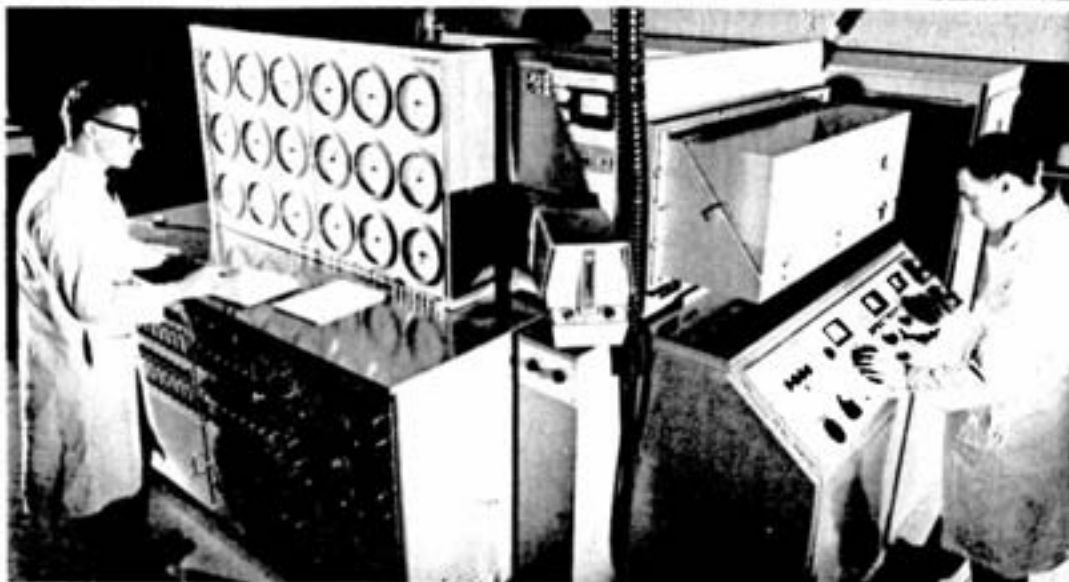


The \$4 million facility is named in honor of a distinguished Canadian scientist, J. Roy Gordon, shown (right) at the official opening with Inco chairman Henry S. Wingate (holding the dedication plaque), federal finance minister Mitchell Sharp, and Ontario premier John Roberts.

Typical of the highly sophisticated instruments in the new lab are these units for atomic absorption spectrophotometry, one of the latest chemical analysis techniques. Seen operating the units are St. John H. Blakeley, chief analytical chemist, and Nelson Zelding, technologist, chemical analysis section.



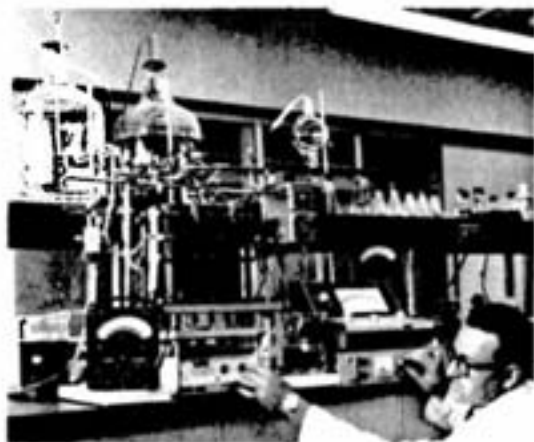
The J. Roy Gordon research laboratory opens a new era in Inco research with the establishment of a facility remote from operations which centralizes and coordinates the Company's worldwide process research activities. An example of its extremely versatile equipment is the direct-reading spectrometer which chemist Frederick Alcock and a colleague are operating on the right; in less than two minutes it will produce a complete quantitative analysis of up to 17 different elements in a specimen.



Technologist Anna Jaremkow uses the metallograph for examining microstructures of metals at magnifications of up to 1700x.



Louis Bernard, group leader, minerals beneficiation section, is shown with a cyclosizer, which separates ground ore into fractions of different size.



Chemists at the new laboratory probe into the fundamental principles of electrochemistry in search of improvements in nickel, copper and cobalt electrodeposition. Studies include new methods to increase anode activity and new electrolyte purification techniques. Here technologist Doug Hope uses an experimental electro-winning unit for the recovery of nickel from crude nickel salts.



Beyond the imagination of the layman is the capacity of this electron microprobe. With it, areas as small as one micron square (40 millionths of an inch) can be accurately located and the chemical constituents determined. The scientist shown is Aaron Batt, group leader, x-ray technology section.



When the family of Tony and Violet Holler first appeared in the Triangle in January 1949, Tony was a haulage truck driver at the Froad open pit. He's still driving the trucks, but has been operating at Clarabelle open pit since his move there in 1953. Daughter Shirley is married to Jim Fielding of Sudbury and is the mother of two; Max is also married, has one child, and lives in Toronto. The cute little bundle on his mother's lap, Norman, is now making automobiles in Windsor.



TWO NEW FACES have been added to the family of Della and Charlie McFarlane since they appeared in the June Triangle of 1949. A stoop leader at Creighton mine, Charlie has more than 31 years of service with Inco. Standing are Barney, 15, Bob, who works in the drafting room of the Copper Cliff general engineering department, Garry, who lives in Blind River, and Nancy, 17. Seated are Pat, now Mrs. Riho Pild of Toronto, and Peggy, a recent graduate of Laurentian University who is now a teacher.



THEN... and NOW



CONTINUED ON PAGE 12



IT WAS IN DECEMBER OF 1949 that Win and Tom Corneilwaite and their brood represented the Copper Refinery in the Family Album. During the following 18 years little Rona has grown into the pert and pretty lass seen in centre foreground, Anne became Mrs. Carl Smith of Sudbury, Neil, a teaching master at Cambrian College, North Bay, and Jack and Doug have developed into solid Sudbury citizens. New in the picture is young David, who joined the family 12 years ago. A shift foreman in the silver building, Tom is in his 40th year with the Company. He has made community service his hobby, has been chairman of the Sudbury Musical Festival, was recently elected division lieutenant-governor of Kiwanis International.



NOW

um

WE'LL LOOK AT THEM NOW! Upwards of 20 years have passed since these families were first photographed for our Album. In our favorite annual Christmas feature we show them as they are today. It gives us a nice warm feeling to see how those little tots became stalwart sons and gentle maidens, many of them now parents with youngsters of their own, and to see the new faces that have been added since the first photographs were taken and to sense the happiness and well-being that shines forth from them all. To them, and to the hundreds of other Inco families whose pictures it has been our pleasure to publish over the years, the Triangle Album extends a hearty "MERRY CHRISTMAS!"



HARRY AND HELEN GOUDREAU'S children were all on the scene when the family was photographed in February 1950, but what a change has taken place! Seated with their parents in the new picture are Cecelia, who lives at home; Cece, who is studying business administration at Ryerson in Toronto; Frances, now Mrs. Garnet Behnke of Willowdale; standing are Andrew of Sudbury; John, former commanding officer of Copper Cliff Highland Cadet Corps, now City of Sudbury safety inspector; Marie, now Mrs. Ken Gribbons of North Bay whose husband plays pro hockey for Port Huron, Michigan; Ed, a maintenance mechanic on the nickel converters at Copper Cliff. Proud father Harry is a shift boss in the reverb department at Copper Cliff, with upwards of 31 years with Inco; he has 20 grandchildren.



LEVACK'S MARY AND JOE RIBIC have had three blessed events since their family posed for the Triangle camera back in October of 1949. Standing, are Kim, 16, and Joey, a chemistry student at Ryerson. Jane is a graduate nurse and works at St. Mike's in Toronto. Ricky is 7, and Christine, 4. A 1st class maintenance electrician at the mine, and a talented handyman, Joe is very proud of the comfortable "rec" room that he recently finished in the basement of their home on First Ave.



CARMEN, NOW 18, and attending high school, certainly doesn't sit on her mother's knee these days like she did back in December 1949, and neither do the two new members of the family, Gilbert, 11, and Nicole, 9. Claude is with a Sudbury finance company, and Maurice (right) is studying philosophy at the University of Louvain, Belgium. Both the big brothers are married. The happy parents, Garson first aid man Leo Demers, over 26 years with Inco, and his wife Jeanne, are better looking than ever.



Family Album

(Continued from Page 11)



BIG FAMILIES like the Frank Forests of Port Colborne seem to enjoy a special kind of happiness when they gather together, especially when Christmas is in the offing. Two have been added to this group since their first picture taken just 20 years ago. Susan (Mrs. Yvon Nadeau) and Jack, both still in the old home town. Robert is now an Inco man and so is Claude, whose twin, Sister



Claudette, lives in Welland. Francoise is Mrs. Lorne Meldrum of Port Colborne and Gaston, who was one month old in the first picture, works at Dunnville. Nickel refinery crane-man Frank and his wife Simone have seven fine reasons for eagerly looking forward to Christmas Day.



The family of Coniston smelter maintenance electrician leader Joe Bloemen is seen in the same house on Fourth Avenue in Coniston in which Joe has lived since his parents moved there when it was new in 1914. The two little girls of 19 years ago, now mature young ladies, are both married. Next to Joe's wife Eva is Nora, now Mrs. MacDonald, with a three-year-old daughter, Donna-Lynn. Patricia, a graduate nurse at Sudbury Memorial Hospital, is married to Coniston smelter tuyere puncher Danny Nixon.



THE FAMILY OF Frood mechanical department 1st class plateworker Angus MacDonald and his wife Rita hasn't grown in numbers since they were photographed in April of 1949, but their representation at Inco has doubled. Young Ron joined the Company at the Copper Refinery in 1957, transferred in 1959, in Garson mine engineering department. Young Heather has blossomed into a lovely young lady, is married to Ron Pushkorenko, lives in Sudbury, and is the mother of two.



Nestled compactly against the base of the 637-foot Inco Iron Ore Plant stack, the new Canadian Industries Limited addition is the largest metallurgical gas-based sulphuric acid plant in the free world. Connecting metal pipes in the compact unit are as large as 10 feet in diameter.



C-I-L ACID PLANT CAPACITY NOW 1,500 TONS OF GAS DAILY

A major expansion of the sulphuric acid manufacturing operations of Canadian Industries Limited at Copper Cliff, in cooperation with International Nickel, has more than doubled the plant's former output capacity to over 2,000 tons per day.

Joshua Fitch, C-I-L works manager, states that the new unit, which uses roaster gas from Inco's Iron Ore Plant as its raw material, is the largest metallurgical gas-based sulphuric acid plant in the free world.

Total cost of the addition, built by Simon-Carves of Canada Limited, was more than \$6 million.

Located alongside the Iron Ore Plant, the new unit will utilize an additional 800 tons per day of sulphur dioxide gas, formerly dissipated to atmosphere through Inco's 637-foot stack, highest in the British Commonwealth. Total amount of gas used to make sulphuric acid by the C-I-L plant will now be 1,500 tons per day.

Result of Research

The new addition is the result of a continuing C-I-L research program into ways and means of recovering and utilizing sulphur dioxide, a program in which \$500,000 has been spent during 1966-67.

As part of its anti-pollution program, C-I-L has diverted the plant's own gas effluent back through the tall Inco stack, rather than dissipating it by conventional methods through a lower stack. The additional cost of ducting for this purpose was \$350,000. Considerable research and the expenditure of nearly \$100,000 has also been devoted to making any liquid effluent from the plant innocuous before discharging it to sewers.

Mr. Fitch stated that growth of the market for sulphuric acid, especially in agricultural chemicals, has provided the opportunity for the current expansion. All of the plant's output will be used in the production of chemical fertilizers, a large segment of the production being used at C-I-L's new \$50,000,000 agricultural chemicals plant at Courtwright, near Sarnia, Ontario.

In another plant adjacent to the Copper Cliff smelter, C-I-L also produces liquid sulphur dioxide from Inco's flash smelting furnace gas, and production has been increased by 7½ this year by the addition of a refrigeration process to improve extraction. Liquid sulphur dioxide has a big market in the papermaking industry.

Nickel Fights Corrosion

Nickel-bearing stainless steel was used extensively in construction of

the new sulphuric acid unit to combat the corrosion problem.

Sulphur dioxide is drawn from the big Iron Ore Plant stack through a short umbilical pipe to the "scrubber" of the compact new unit to begin its transformation into 93% (commercial grade) sulphuric acid.

The "scrubber" actually does wash the gas, with water. The scrubbed gas is then dried in a special tower, in which the drying agent is sulphuric acid. A huge fan driven by a 4,000 h.p. motor then forces the gas through a series of heat exchangers and converter beds, from which it emerges as sulphuric trioxide. The SO₃ then passes through the absorbing tower, containing 99% sulphuric acid, where it combines with water in the acid to make more sulphuric acid. After going through the "stripper" which strips it of dissolved sulphur dioxide, the acid moves to storage.

Although a new 15,000-ton storage tank has been built, the new unit's daily production of 1,200 tons doesn't stay there long. It's soon on the move in leased 100-ton railway tank cars, bound for C-I-L's agricultural chemicals plants in southern Ontario.

Creighton Hoist

(Continued from Page 6)

one already installed except for a smaller drive motor and lower speed, will be erected at No. 9 shaft to operate the cages transporting men and supplies.

For the next year or more the new skip hoist will service the sinking operations at No. 9 shaft, having taken over this work when the temporary hoisting facility reached its limit of 4000 feet. The shaft is now down 4800 feet toward its final depth of 7100 feet. Shaft stations are being cut at 200-foot intervals.

The hoist is fully automatic but during shaft sinking is being operated on manual control.

Trade Careers

(Continued from Page 7)

for the supervisor of apprentices at regular intervals.

Apprentices are interviewed on the job, as often as possible, by the supervisor of apprentices. Through these interviews he is able to maintain personal contact with them and discuss their progress to date, their later assignments and any problems they may have regarding the apprentice training program. If job related problems arise or the necessity for discipline appears, the supervisor of apprentices will meet with the apprentice concerned and his immediate supervisor.

Three-Month Probation

The first three months of an apprenticeship constitute the probationary period. During this time the progress of the apprentice is reviewed periodically so that a sound assessment may be made of the aptitude and interest he has for his trade. Any apprentice displaying lack of aptitude or interest will be removed from the program.

Apprentices considered satisfactory at the end of the probationary period are required to begin at once a Company-approved home-study course. Information on suitable courses is kept by the supervisor of apprentices and is available for discussion with the apprentice. Apprentices, on successfully completing approved home-study courses will be reimbursed by the Company for one-half of the cost of the course up to maximum cost of two hundred dollars, in keeping with the collective bargaining agreement.

Instead of taking the home-study course a large number of electrician apprentices enrol in the two-year night school course at Sheridan Technical School, Sudbury, which is accepted as the equivalent of an approved home-study program.

All apprentices are required to complete four full years of practical, on-the-job training. If time is lost in any one year, in excess of the allowable minimum schedule, it must be made up later. Should the total time lost, in excess of one week, be more than one month for any yearly period the apprentice will be required to make up the time lost before being advanced to the next yearly period of his apprenticeship.

During January and February the supervisor of apprentices visits the eight Sudbury district second-

ary schools where shop training is given, to talk to the grade 12 students and explain the opportunities and details of Inco's apprentice training program.

Veteran Timekeeper 42 Years on Inco Work

Framed by the wicket at the main time office in the No. 1 dry at the Copper Cliff smelter, where he worked since 1944, the genial countenance and good-natured chuckle of chief timekeeper Staff Barry were familiar to the hundreds who passed that way twice a day.

Having reached his 65th birthday, Staff has retired after more than 30 years as an employee of the Company, and an extra 12 before that keeping time on various Inco construction projects.

Born the son of a lawyer in Bryson, Quebec, Staff was 10 years



Mr. and Mrs. Barry

old when half the town burned down, and his family moved to nearby Campbell's Bay.

He left home for Montreal and high school in 1916, returned four years later to be a bank clerk, and a year or so later left his \$76.00-a-month job to join four youthful friends on a prospecting jaunt to the Red Lake area. "We spent a whole summer in the bush, and when I came out in December, all I had to show for it was a pair of well frozen feet," recalled Staff with a grin.

He started his long timekeeping career when he joined the Fraser-Brace Construction Company in 1925 at Port Colborne, and later was posted to various Inco construction jobs in the Sudbury district. He joined Inco in 1937 to keep time at Frood, and during the next seven years saw service at Creighton, Garson and Levack. He was appointed assistant chief timekeeper at Copper Cliff main time office in 1944, and became chief timekeeper there in 1964.

It was in 1937 that Staff walked up the aisle with Anna McNally of Campbell's Bay. Their grown-up family of four are Bill of Sudbury, Frank in Coniston, Mary (Mrs. Jack MacInnis) living in Oshawa with the two Barry grandchildren, and Paula who lives at home.

Living on Nickel Street in Copper Cliff, within sight and sound of the smelter has been Staff's lucky break, he figures. "That one-mile hike four times a day has kept me in the pink of condition," he explained. "I hope it doesn't sound like bragging," he continued, "but during my 30 years with Inco I only missed one half day."

Staff has revised his working habits since retirement. With a part-time job with a Sudbury trust company, he now works two days a week and takes five off. "Suits me fine," he said, "just enough to keep me active."



A pair of delectable blondes, the Hansen Sisters, were a hit of the stage show with their superb musicianship.



Wives Honored Too



Like the wives of the other new QC Club members, Mrs. Dragon Sesto was very pleased with the bouquet of roses and letter of appreciation she received from plant manager W. R. Koth.



Mrs. Erma Lindsay, whose husband Gordon is an accountant, poses with her flowers.



Another delighted lady was Mrs. Flo Gravelle, whose husband Joe is an ironworker 1st class.



His famous stage namesake couldn't have kept his cool any cooler than did Ed Wynn when lovely songstress Peggy Neville turned on her glamour.

Port Colborne "Vital Link" in Inco's Activities

"It seems certain that Port Colborne will continue to be the largest electrolytic nickel refinery in the world for many years to come," executive vice-president F. Foster Todd told an audience of 450 at the annual dinner of the Quarter Century Club.

For over 45 years, he said, the refinery at Port Colborne has been the vital link between International Nickel's highly diversified activities in Canada, which involve exploration, mining, processing, research, sales and market development. "It is here that a complex process is finalized into the saleable product. From this plant shipments of refined nickel begin their journey to markets around the world to become a raw material for thousands of applications."

Company's "Greatest Assets"

A happy group of 62 new members received their gold Quarter Century Club badges in presentations by Mr. Todd and assistant vice-president Jack Pigott, the Ontario division general manager. They were introduced by assistant to the manager Charles Ott. In formally welcoming the new members the executive vice-president quoted the late chairman of the Company, Robert C. Stanley: "As a company we have prospered and become a great world enterprise. However, with all its ore reserves, mines, huge plants and financial resources, I still believe sincerely that the Company's greatest assets are the loyalty, devotion, and experience of this Quarter Century Club, built as it is upon a foundation of mutual respect and good fellowship."

"Like Good Wine"

"These annual get-togethers with old friends and workmates are like good wine — they become more and more enjoyable with the passing of the years," J. A. Pigott said in his brief remarks. He extended "my heartiest congratulations to the 62 new members who have attained the distinction of 25 years of service with International Nickel. This is a big night for them. I hope they will wear their gold badges with pride and satisfaction."

Mr. Pigott noted with pleasure
Continued on Page 17



The high point of 25 years' service with Inco arrived for pumpman Joe Nagy when he stepped forward to receive his gold Quarter Century Club badge from executive vice-president F. Foster Todd and a warm handshake of congratulations from assistant vice-president and division general manager Jack Pigott.



During a tour of the plant, general manager Pigott extended "on-the-job" congratulations to another new Quarter Century Club member, Willy Frank, in the shipping and shearing department. On the left are superintendents Charlie Bridges and plant manager Warren Koth.

The only lady member of the club present in the crowd of 450 was Miss Madeline Matthews, shown here looking over the program with assistant plant manager Vern Barker, one of the 62 new members joining the club, and assistant to the manager Bill Spence.



The four Rivers brothers are all members of the Quarter Century Club, largest family group in the Port Colborne chapter. Here they pose with plant manager Warren Koth (center): Bob (over 32 years' service), Jack (over 34 years), Vic (over 30 years) and Fred (over 26 years). Their father, the late Bob Rivers, had 23 years' service when he was pensioned in 1946, making a total of over 146 years for the family.



Shift foreman Jim Patyak is thanked by the program chairman, assistant manager Jim Walter, for a fine job in leading the singalong, always an enjoyable feature of the Port Colborne meetings.

Guides and Brownies Entertain Mothers at Banquet

Seven Brownies "flew up" to Guides and several new members were enrolled at the annual Copper Cliff Brownie and Guide mother-and-daughter banquet in the Royal Canadian Legion hall. Shown above is part of one table at the very successful affair, which was attended by more than 100. Chairman was Mrs. A. H. Montgomery, district commissioner, Copper Cliff. The flyup and enrolment ceremonies were conducted by Mrs. M. Beauchamp, district trainer, Mrs. G. Leask, Guide captain, and Mrs. D. Strickles, Brown Owl. Speaker of the evening was Sudbury district commissioner Alex Gray, who outlined the world-wide influence of the basic principles of the Scout and Guide movement as originally conceived by Lord Baden-Powell. A compire sing-song topped off the program.



Inco Steps Up Research with \$4 Million Sheridan Park Lab

(Continued from Page 8)
of the valuable elements present in the ores mined by the Company, to remove unwanted materials at the earliest possible stage, and to obtain products of the highest purity.

Start With Fundamentals
The research staff begins by applying fundamental principles in the various extractive processes to the treatment of ores, concentrates and various intermediate products. Basic methods employing these principles are minerals beneficiation, hydrometallurgy, pyrometallurgy, vapour metallurgy and electrochemistry. The aim is to improve, adapt or combine the processes to maximize the yield of values in the ores under treatment.

From theory, the principles are translated into practical techniques

in the laboratory, simulating, wherever possible, actual production conditions. Here the properties and behavior of the elements in the ores are studied for new clues in the development of a process. Projects may involve one or more of the process research groups and analytical services.

Once established on a laboratory scale, procedures are tested on a larger scale in a mini-plant adjacent to the laboratory to secure further data on feasibility and broadly to determine such factors as the type and size of equipment required in large scale operation.

The final step is the Company's pilot plant program in which the expected large scale treatment conditions are duplicated to secure more precise information on equipment design.

Because sulphide nickel ores can be treated in the initial processing steps to remove much of their rock content, research projects focus initially on the physical separation and concentration of the metal values. The amenability of the concentrates to the other basic methods is later investigated.

In the case of the oxide ores, chemical dissemination of the nickel minerals usually precludes physical concentration. For these the research emphasis is in pyrometallurgical, vapour metallurgical and hydrometallurgical techniques.

Regarded as a Trust

Speaking at the opening of the new laboratory, chairman Henry S. Wingate said the Company has long looked upon resource development as a trust with obligations to the nation far beyond narrow commercial exploitation.

"It would be betraying this trust to waste or inefficiently use these resources. It is an equal betrayal if we do not increase these resources through improved research—research devoted to more effective exploration, to better mining

methods, to better processing methods for the recovery of all valuable elements and to their most effective use. The fact is that literally, this type of research can, does, and will have the effect of increasing this nation's resources. It can, if you will, turn rock into ore. We regard this research activity as a vital part of our trust."

In the past 30 years, Mr. Wingate said, the grade of ore available to the Company in Ontario had declined to less than half what it was, yet production of nickel had been steadily increased. "As a result of advancements in mining and processing methods, we now recover metal from ores which not many years ago were considered not to be commercially feasible." In addition, the number of elements recovered by Inco has been increased to 15. "We must and shall continue to press forward relentlessly in our search for new techniques to make marginal sulphide deposits economically feasible," the chairman declared.

Praises "Unswerving Support"

Premier John Roberts referred to the Sheridan Park research community as "a partnership of government support and the initiative of private enterprise." The ability of Canadians to lead in the field of research has never been questioned, he said, but the prominence of Canadians as leading scientists in many fields "has unfortunately too often been reached in other countries."

"We in Canada must retain our scientists, our thinkers, our teachers. Industry has a role to play in this, just as has government. Sheridan Park is the answer to this need."

The premier praised the "unswerving support" of International Nickel in the development of the research community. He paid special tribute to P. Roy Gordon for his contributions to the science of smelting and refining nickel. "The dedication of this impressive research laboratory is a great honor to a great Canadian," he said.

Federal finance minister Mitchell Sharp, in his address at the for-

mal opening of the new laboratory, also stressed that Canada "can and must become a world research centre" in certain areas of science and technology dictated by the structure of her industry. This was essential to maintaining and advancing the Canadian standard of living in the face of increasingly intense world trade competition.

"I wish to congratulate all those at Inco associated with this project—the construction of these research facilities. Their far-sightedness is further evidence that the future of the (Canadian mining) industry is well assured," Mr. Sharp said.

The J. Roy Gordon research laboratory is located on a 10-acre site and is one of nine industrial laboratories in the Sheridan Park



Dr. Charles E. O'Neill

research community. It consists of three connecting two-storey buildings containing 72,000 square feet of floor space linked by peripheral corridors.

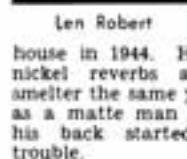
About 100 scientists, technicians and administrative personnel will eventually be employed. Director of the laboratory is Dr. Charles E. O'Neill. A feature of the steel frame building is the extensive functional and decorative use which has been made of stainless steel including the fascia on the administrative area; copings, trim and hardware; the walls of the entrance lobby; and the parking area and front entrance where colour-corrected vapour lamps are mounted on stainless steel standards.

The buildings are air-conditioned throughout with demountable metal partitions which permit maximum flexibility for current and future requirements.

Len Robert

A relief dryman at the Copper Cliff smelter since 1963, Len Robert misses the hustle and bustle that goes with a changehouse. He has retired on disability pension after 21 years with the Company.

Born in 1929, in Mattawa, Ontario, Len came to Inco to join the mechanical department at the



Len Robert

Garson rock-house in 1944. He moved to the nickel reverbs at Copper Cliff smelter the same year, and worked as a matte man until 1963 when his back started to give him trouble.

"About the only time I get out of the house now is when I go for therapy twice a week," explained Len. "That leaves an awful lot of time for thumb twiddling. I think I could manage a watchman's job, and that's what I'm looking for now to pass the time."

He and his wife Jackie St. Onge before their marriage in 1951, have a family of three: Ronald is 15, Lyse, 11, and Monique, 5.

LL.D. Degree from York



York University, Toronto, conferred an honorary doctor of laws degree on Henry S. Wingate (left above), chairman and chief officer of International Nickel, at its fall convocation November 10. The chancellor, Air Marshall W. A. Curtis, is seen congratulating Mr. Wingate.

Port Colborne

(Continued from Page 15)

the large number of pensioners present "who contributed so much during their working years to the success and efficiency of the Port Colborne plant." He also made special reference to the fine program of old favorites played on the organ by Reg Steeves, adding "You in Port Colborne are fortunate to have such a gifted musician as Reg in your ranks."

Now 371 25-Year Men

Plant manager Warren Koth, in expressing his felicitations, said that the responsibility of operating the nickel refining division efficiently and of training the new employees rests largely on the shoulders of the older men who make up the Quarter Century Club. He observed that of the 610 active members and pensioners now enrolled in the club at Port Colborne, there are 29 with service of 40 years or more, nine of whom are still on the job, and 82 with service of from 35 to 40 years, of whom 33 are still active. The number of active employees with 25 years or more of service now totals 371, which he termed a great asset in the operation of the plant.

Replying to assistant manager Vern Barker's eloquent tribute to the pensioners, Vic Simpson remarked that "It's still pretty nice to have that old cheque coming in, even if it's a little smaller." He got laughter and applause in referring to the pleasure of going up-town for some street-corner hobnobbing with old plant cronies — "These days there are a lot of interesting things going by, and I'm still young enough to appreciate them."

Effective Stage Setting

The gold Quarter Century Club crest and a "Big Nickel" fashioned in stainless steel by craftsmen in the plant made an effective stage setting. A spotlight illuminated the crest when the hall was darkened for the solemn moment of remembrance.

Peggy Neville, the Winnipeg television star who is now conquering the East, got a rousing reception with her song stylings. She was the headliner of an excellent bill arranged by S. C. Augustine and including the "queens of the violin", the vivacious Hansen Sisters, and dancer Sherry Moore. Clever Bill Arnott with his baffling sleight-of-hand stunts reached the ultimate when he had volunteer Harley Krainer obligingly coughing up 50-cent pieces into a tin can.

The dinner served by caterers Eddy and Margaret Zielski of Rathfon Inn was right up to their usual high standard.

Thanks for Help at Thompson

Former general manager of the Manitoba division, executive vice-president Todd in his address took the opportunity to thank the personnel from Port Colborne who had helped to set up, build and start the Thompson refinery, a considerable number of whom had remained to help operate the plant. "It would have been a long and difficult job to establish the refining operations at Thompson without the advice, guidance and know-how given by personnel from Port Colborne," he said.

He saluted Port Colborne as "the launching pad" of several major developments in the technology of

Charlie Brown and Snoopy Welcomed Guests at F & W Society's Ball



When the average person is in the doghouse there's usually not much cause for laughs and hi-jinks. Not so the guys and gals from the geological and geophysical department's Foot & Hangingwall Society when 118 couples entered the dog domain at the Sorrento Motor Hotel to enjoy the best attended ball in the society's history.

"Good old Charlie Brown" was the decoration theme this year, and along with an animated Snoopy, the lovable comic strip character was present to welcome one and all to his kennel party.

Making free with his canine kisses, Snoopy is shown above welcoming vivacious Elizabeth Sopher, while Charlie and Elizabeth's understanding husband, Foot & Hangingwall Society president Steve Sopher, stand by for the reaction. The other couples shown enjoying the spectacle are Rosamund and Ian Gray, Daphne and Norm Anderson, Ontario division chief geologist Bert Sauch and his wife Frankie, and Joyce and Jack Varieur, one of

the nickel industry, including the sulphide anode process for the direct electrolysis of nickel matte, chloride electrolyte, and cobalt recovery during the process of nickel refining.

With completion of its third research station at Port Colborne the Company would have broad purpose pilot plant facilities for developing extractive and refining processes for both sulphide and oxide ores of nickel.

Ivan Greig

Pensioner Ivan Greig has his eye on the new Sudbury-Timmins highway. "There must be some dandy spots along the route where a fellow could set up an overnight camping ground," said Ivan. "Maybe on a little lake where you could wet a line and relax when the business wasn't too brisk. Something like that would suit me just fine."

A heart attack back in 1964 has resulted in a disability pension

for sparkling originality was well maintained.

Co-chairmen Jack Varieur and Larry Coderre spent a month cooking up the decorations and organizing the affair, and ingenious Bud Savage and Dick Bruser combined papier-mache and washing machine motors to produce the larger-than-life dog and his master. The long-standing reputation of the F&W Society's annual blowout

for sparkling originality was well maintained.

Dancing to the soothing music of Johnny Kozlich and his five Chessmen was followed by a delicious buffet supper, after which Snoopy and Peanuts, together with a dozen or more amusing wall-plaque cartoon strips with geological leanings, were put on the auction block.

F & W Society Bonspiel Also a Great Success

Here's the team that hit the high-grade in the 13th annual Foot & Hangingwall Society bonspiel at the Copper Cliff Curling Club: skip Wayne Rodney, John Mullock, Walter Peredery and Jack Varieur, with the Mid-West Diamond Drilling trophy emblematic of first event honors. In the second event for the Heath & Sherwood trophy the victors were skip Dick Bruser, Wes Marsaw, Winston LeMay and Don Meredith, while in the third event the Marisette Diamond Drilling trophy went to skip Norm York, Tom Trattler, Murray Kinniburgh, and Trevor Blatchford. Eighty curlers of assorted styles and skills, including Inco assistant director of exploration Ron Taylor of Toronto, enjoyed the fun and fellowship of the popular event, of which Waldo Clarke was chairman.



Mr. and Mrs. Greig

for Ivan after his 27th year with Inco.

Born near Warton, on the Bruce Peninsula in 1910, he left the farm for Frood mine in 1940 to work as a driller. He was a pillar leader at the time of his retirement.

His marriage to Claire Speirs of Lions Head, near Warton, took place in 1939. They have a family of two. Daughter Carol is the wife of Stobie underground switch conductor Peter St. Amand, and adopted daughter Brenda is married to Peter Deveau of Levack mine.

The Legend of Lester the Goose

Centennial Year should not be allowed to pass without some record being made of the legend of Lester the Goose.

In the colorful annals of Canadian mining no figure has exerted a more profound influence on his sphere of activity than did Lester the Goose on the little geological exploration camp in the northern Manitoba wilds at Moak Lake, from which Inco conducted the saturation search that led to the historic nickel discovery at Thompson, 20 miles distant.

Vain, moody and arrogant, Lester ruled the small colony at Moak Lake with an iron beak. He singled out his favorites and treated them with a swaggering tolerance, accepting their tributes like a feudal lord. But few there were during



A childhood tragedy made him a bitter bachelor, grounded until death.

his brief but tempestuous reign who at one time or another did not get what Joe Church called "the royal treatment".

Then, because his dignity was ruffled by some irreverence toward his person like maybe a joke about his bobbed butt, or even just if his liver chanced to be out of tune, Lester would unpredictably fly into a towering rage and, honking and hissing like all hell let loose, suddenly charge his victim, neck out-thrust low and menacing, big wings beating furiously. It took courage bordering on madness not to turn tail and flee before this fearsome assault.

Lester was just a cute lovable little fellow when he arrived at Moak Lake early in the summer of 1936. Ernie Guiboche found four young goslings in a pond and brought them to the campsite, where they were installed in a wire pen near the lab. Two of the birds died but the remaining two took kindly to civilization and soon became pampered camp pets. Somebody with a nice flair for public relations christened them Hester and Lester.

All went along serenely until, one fine day in the fall, Chip Duncan's big black Labrador, Tojo, the hunting fever running hot in his blood, got into the goose pen. The result was no Hester, and a Lester with no tail feathers.

Looking back now, people realize that this was the beginning of Lester's embitterment. He pined

for sister Hester, and he mourned for his tail feathers, the loss of which crippled his ego as well as his aerodynamics, and gradually he soured on society.

Everybody in the camp sympathized with him. They didn't really blame Tojo, but they went out of their way to be nice to Lester. Doc Demera fixed him a private room in the helicopter hangar for the winter, and arranged with Karl Muzyka, the cook, to bring in some grain for feed. By spring the helicopter hangar smelled like a barnyard, but nobody complained.

Well, Lester emerged in the spring and soon had the run of the camp. He grew cockier and cockier. He'd sit by the cookhouse door in the mornings, waiting for his porridge, and nip at the ankles of the men he didn't like as they came in for breakfast.

As his anti-social attitude developed he perfected his charging technique, scaring the daylight out of all the children in the camp and most of the adults. He particularly enjoyed venting his spleen on some of the regular visitors from outside. For instance, whenever chief engineer Norman Kearns flew in from Copper Cliff, Lester invariably appeared on the dock to devastate that quiet gentleman with a blood-chilling charge that left him pale and trembling.

Came fall again, and a flock of geese winged in from the North and landed on the lake for an overnight stop. Honking his excitement, Lester waddled down to the dock and swam out to greet them. Observers noted that he soon showed special interest in one particularly fine bird. Ralph Parker maintains that she sweet-talked him into flying to Florida for the winter against his better judgment. Anyway, that did it for poor Les.

Next morning the flock took off. Lester gamely with them. He managed to get airborne but, without any tail feathers, and softened by sedentary living, he rapidly lost altitude and finally crash-landed in the bush on the other side of the lake, while romance flew heart-breakingly on into the great blue yonder.

Battered of body, his wild goose yearnings cruelly thwarted, Lester swam sheepishly back to camp and was disconsolate for days. They gradually revived him with tempting delicacies and comforting words, and he resumed his position as overlord of the camp, but there was a new meanness in him, and he was very difficult to get along with. He brooded through the winter in his little shack near the butcher shop, where he got his grub regularly and on time.

Spring brought him out in fighting trim, apparently determined to fly. Les Arbuckle several times saw him with his bill into small spills of oil and gas at the hangar, probably reasoning that what was good for the helicopter would be good for what ailed him. Then he took to making short experimental flights, zooming through the air about five feet from the ground with a rocket-like speed that would have torn the head off anybody who didn't duck in time.

Finally, Joe Church says, he made the supreme effort one day and did get properly airborne along the road that ran back of

Doing a Land-Office Business



THOMPSON'S \$80,000 CENTENNIAL PUBLIC LIBRARY

As its ardent boosters confidently expected, Thompson's smart new Centennial public library is doing a land-office business. New books are arriving daily, but that's not fast enough to satisfy the demand in many reading categories.

As many as 300 books are being borrowed during the two-hour evening periods that the library is open, and the cheerful staff of volunteer librarians, while delighted with the booming popularity of the new facility, are often hard pressed to keep up with their duties.

More than 500 boys and girls have enrolled as new members since the beginning of September, and use the library regularly for both fiction and reference books. The junior department is already too small and additional quarters will probably soon have to be developed in the basement of the building.



The spacious reading area of the attractively designed library is always well occupied. Immersed in periodicals above are John Carroll, John Duerksen and Roger Baines.

Volunteer librarians Mrs. Brina Hellrung and Mrs. Pauline Paul assist Al Dutton and Ken Anderson in digging up reference material for school work.



In the busy junior department librarians Madeleine Baranyai and Mrs. Marguerite Angus take care of three "customers", Karen Geyton and Lenore and Glenda Goodman.

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Sweet World of Childhood Fantasy Fills the Inco Christmas Window



Happy Faces Lined Sudbury Parade Route



The best-loved fantasies of childhood, beautifully reproduced in detail and color, move through the Inco window this Yuletide in a dazzling Christmas parade that is delighting hundreds upon hundreds of children and parents alike.

There are 18 floats in the lovely display, passing through a cheery street scene over which spreads a big banner proclaiming Season's Greetings from the Company.

The window fronts the Sudbury and District Chamber of Commerce offices in the President Hotel on Elm Street West.

The Three Little Pigs, the Sleeping Beauty, Snow White and the Seven Dwarfs, Peter Pan, Mistress Mary and other beloved fairy tale people are in the cavalcade, along with Santa Claus and his prancing reindeer.

It's a sight to bring joy to tiny tots and gladden the hearts of their elders.

Lester the Goose

Continued from Page 18

the kitchen. Triumphant he proceeded up the road toward the homes on the hill at a bold rate, about four feet high, navigated the bend near Geregthy's house passed on over the point, made a wide circle and came back along the shore to land safely on the dock. That was his finest hour.

A few days later he was snoozing in the sun, dreaming of his goose

girl, when somebody backed up a truck and ran over him.

Released from its prison of bitterness and despair, his unconquerable spirit soared high and away into the boundless blue.

And that is the legend of Lester the Goose.

Christmas Music

Sudbury Philharmonic Society won resounding applause for its presentation of Handel's "Messiah" at its concert in Great Hall at Laurentian University, December 3.

A tape of this outstanding performance will be broadcast over CKSO-Radio on Christmas Day from 1:00 to 2:00 p.m. as a special treat for Sudbury and District listeners.

As it has for several years, International Nickel will sponsor the broadcast.

A crowd estimated at 20,000, faces alight with the growing joy of the Yuletide Season, lined Sudbury streets for the annual Santa Claus parade, which had 19 floats, 16 groups of cheerleaders, 12 bands, beauty queens, clowns, "giant" mechanical toys like an Inco ScoopTram, and all the old favorites like red-nosed Rudolph and Frosty the Snowman. The multitude cheered the splendid Santa Claus float built by the Police Association and Sheridan Tech students. Chairman of the hard-working citizens' committee that produced the wonderful procession was Ken Fyall of Copper Cliff.



Seven-Year Pull Puts Bolger Shift Over Million Mark



In the words of Ontario division safety superintendent C. F. Hews, the total of 1,000,000 man hours recently accumulated without a lost time accident by the Bolger shift at the Copper Cliff mill was, "An excellent performance and a shining example of what can be done by paying careful attention to safety rules and practices. I wish to convey my congratulations to all of those concerned."

It took the 64 men of the shift, about half of whom appear in the picture, exactly seven years to the day to roll up their million safe hours.

Shown receiving congratulations from manager of reduction plants J. B. McConnell on behalf of his men is shift foreman Frank Bolger. Standing beside Frank are two pensioners, both previous supervisors, shift foreman "Hop" Clark and general foreman

Bert Wood, who came out of retirement for the day to be photographed with the boys they worked with during the first six years of the safety achievement.

Also in the front row are assistant manager of reduction plants J. N. Lilley (right) and safety engineer John Gibbins (left). Mill superintendent Jim Lee is fifth from the left in the back row.

Bill Punyi

Bill Punyi has retired on full service pension from the Nickel Refinery in Port Colborne after having completed over 31 years of service.

Born in Szarvasko, Hungary, Bill farmed and quarried stone before setting out for Canada in 1938. He worked for American

keep Bill busy enough when he is not travelling.

Bill was presented with a purse of money at a gathering of his workmates. C. H. Ott thanked him on behalf of the Company for his long and loyal years of service.

George Pashko

A steady winner in the Inco gardening contests while a resident of Levack, George Pashko spent last summer turning the sod on the lot around his new home in Dowling.

Now a service pensioner after 25 years with the Company at

out next year and the one I didn't get will have grown that much bigger."

At a gathering on surface at the end of his last shift, George was presented with a transistor radio by his many friends at the mine, who added their best wishes for a long and happy retirement.

Joe Kasunich

Joe Kasunich, known affectionately as "Old Joe" to all and sundry at Creighton 5 shaft, has retired on service pension after 31 years with the Company.

His workmates gathered on surface to shake his hand and wish him well on his last day at the mine, and presented him with a purse. Then he was taken on a tour of the surface plants at Creighton, and saw many things which as an underground man he



Mr. and Mrs. Punyi

Cyanimid at Niagara Falls for a year and a half. While employed on construction of the Beauharnois power project he married Mary Merk.

He came to Port Colborne area in 1936 and was hired at the Nickel Refinery on September 9. All of Bill's Inco service was in the electrolytic department, where he worked as process labour, pressman, head pressman and finally boxman.

Mr. and Mrs. Punyi have three sons, Bill, Jr., Ernie, an Inco man, and Joe, and one daughter, Mrs. John DeNoble (Helen), all of whom reside in Port Colborne. Five grandsons and two granddaughters complete the family.

The Puniys are planning a trip to Hungary and Roumania in 1968. The well-kept lawns, hedges, vegetable garden and flower beds around their home are going to



Mr. and Mrs. Pashko

Levack, George came from Ruda in the Ukraine in 1928. Work at Saskatoon and Port William preceded his move to the Sudbury area in 1941, and he started at Levack the same year.

He has worked as a motorman for the past five years.

George was a confirmed bachelor until 1951 when he wooed and won the hand of a friend of his school days, widow Mrs. Katie Hrycyk. She has one son, Billie, who lives in the Ukraine.

An ardent outdoorsman, George loves to fish and hunt. "I didn't feel up to chasing the moose this season," said George, "but I'll be



Mr. and Mrs. Kasunich

had just taken for granted all these years. "I sure enjoyed it," he said.

Born in the town of Draga, in Croatia, Austria, in 1902, Joe left the old country in 1929 for the bright promise of Canada, and worked in Saskatchewan and in Hamilton until he joined Inco in 1936 at Frood. He transferred to Creighton in 1938, worked at most

of the underground jobs, and spent his last two years as a powderman.

Joe's wife, Helen Klokocki, whom he married in Draga in 1922, joined him here in 1961. Their family was completely reunited when their daughter Annie and her husband, Viktor Skot, and two grandchildren came to settle in Canada in 1959. Viktor works as a slag chute man at the Copper Cliff smelter.

NO TIME FOR TRAGEDY

An injury or death, grievous at any time, is even more poignant at Christmas than at any other time of the year.

Keep Christmas care free by guarding yourself and your loved ones from holiday hazards.

DECORATING YOUR TREE

1. Use a small tree—it is less hazardous. Make sure it is not dry. If needles fall from it when you touch it, then it is too dry.
2. Cut the trunk diagonally and place in a canister that will contain water.
3. Choose the proper location. Remember a tree can completely burn out in 27 seconds.
4. Check your tree lights carefully for broken sockets or hazardous wire conditions.
5. Use off-the-tree spot lights with a metallic tree.
6. Use fireproof decorations of glass or metal.
7. Gift wrapping should be discarded immediately after the presents are opened.

TOYS AND PLAYTHINGS

1. Be sure all toys are safe—in capable of causing fire, shock or explosion.
2. Good judgment is essential if you are going to buy a chemical set for your child.
3. Any electrical toy should carry a label on it with the C.A.S. approval.
4. Avoid buying shooting toys that could cause serious eye injuries.

GOOD CHEER AND GOOD SENSE

1. Follow the rule "one for one", no more than one drink per hour, and no drink one hour before you drive.
2. Offer your friends or guests coffee for that "one for the road".
3. Never press liquor or beer on a guest. If they say "no", take it for what it means.
4. Close the bar casually at least one hour before you expect your guests to leave.
5. If you feel a person cannot control his car properly, persuade him to take a taxi.
6. Remember that you are "First a friend and then a host".

RIGHT THINKING

Perhaps the most famous passage in the Bible about right thinking is Paul's familiar entreaty (Philippians 4:8): "Whatever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue, and if there be any praise, think on these things."