

INCO TRIANGLE

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Young Man in a Hurry
(Story on Page 9)



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Deliveries Down But Inco Making Strong Comeback

Nickel deliveries by The International Nickel Company of Canada, Limited in 1969 were 382,170,000 pounds, compared to 480,840,000 pounds in 1968, according to the Company's annual report, issued March 9.

"The 128-day strike at the Company's Ontario facilities severely affected deliveries in 1969," the report states. It points out, however, that "because production was resumed more rapidly than anticipated, these losses are less than originally estimated."

"Factors favorably affecting 1969 deliveries," the report notes, "were the record level of production during the first half of the year and uninterrupted production at the Manitoba division throughout the year; a sharp drawdown in inventories at the Company's rolling mills, and the delivery of purchased nickel to customers on a no-profit basis."

11 Mines Producing in '69

The Company's nine producing mines in Ontario and two in Manitoba yielded 18,800,000 wet short tons of ore in 1969, compared with 1968's record yield of 24,900,000 tons.

Deliveries of other metals during the year, and the comparative figure for 1968 follow: copper, 208,220,000 pounds compared to 314,160,000; platinum-group metals and gold, 421,500 troy ounces against 440,900; silver, 1,111,000 troy ounces compared to 1,607,000; iron ore, 758,000 long tons against 654,000; and cobalt, 1,870,000 pounds compared to 1,790,000.

The Company reported net sales in 1969 of \$684,232,000, compared with \$767,330,000 in 1968. Net earnings, which were reported on February 2, were \$116,543,000, or \$1.56 per share, compared to \$143,745,000, or \$1.93 per share, a year ago. During 1969, International Nickel paid dividends of \$89,282,000, or \$1.20 per share, as compared to record 1968 dividends of \$91,475,000, or \$1.23 per share.

\$185 Million for Canada

"Because of the halt in most construction work in the Ontario Division during the strike, capital

Saw Trackless Mining Underground at Creighton No. 3 Shaft



In another in the series of tours arranged by Sudbury branch of the Canadian Institute of Mining and Metallurgy to establish better understanding between the schools and industry, a large group of public school principals and area superintendents of the Sudbury board of education were guests of Inco on an inspection of the impressive trackless mining operations at Creighton mine No. 3 shaft.

In the above photograph are shown: back row, Vic Jamieson, Whitefish; Fred Staffen, area superintendent; Mickey Sandblom, Onaping; Mal Wilson, area superintendent; Steve Telenka, Capreol; Bob Sissons, Sunnyside Road;

Centre row, Will Moore, assistant superintendent, Creighton mine; Fred Hibbard, Markstay; Nick Sajotovic, Livey; Jack Wells, Chelmsford; Ray Besse, Monerville; Wallace Campbell, Leacock; Ian Kirkby, Algonquin Road; Robert Campbell, Copper Cliff; Jeff Dunthorne, Falconbridge Nickel Mines, Limited; Charles Hewt, Inco safety superintendent and president of the Sudbury CIMM; Frank Kelly, underground superintendent, Creighton;

Kneeling left to right: Michael Betty, Wanup; Ralph Learn, area superintendent; Bill Lukon, Garson; Bill Strachan, Val Caron; Bill Watt, McLeod school; Ray Wasylenko, Prince Charles school; George Bergh, Churchill School.

expenditures, which were expected to be \$200,000,000 in 1969, were \$175,182,000," the annual report states. This compares with capital expenditure of \$175,384,000 in 1968. In 1969, most of the expenditures were for the Company's mines and plants in Ontario and Manitoba, and reflect its program to modernize and expand its Canadian facilities to increase its annual production capability there some 30 per cent to 600,000,000 pounds of nickel in 1972. Capital expenditures for 1970 are expected to reach \$250,000,000, of which \$185,000,000 will be spent in Canada.

Three New Mines in 1970

"As part of the expansion program, work continued in 1969 on International Nickel's eight new mines, three of which are scheduled to start, or reach full, production in 1970," according to the annual report. "These three are Copper Cliff North and Kirkwood in Ontario, and Soab in Manitoba. All eight new mines are expected to be in production in 1972." At that time, International Nickel's approximate daily capacity will increase from 100,000 to 150,000 tons of ore, of which 118,000 will be produced in Ontario and 32,000 in Manitoba.

"During 1969, the Company continued to expand and modernize its surface facilities so that it can process the increased tonnages of ore resulting from the mine development program," the report states. Construction work was begun on the large Clarabelle mill in Copper Cliff, which will be able to process 35,000 tons of ore a day, and work was continued on the new Inco Pressure Carbonyl refinery in Copper Cliff. The new refinery will have an annual capacity of 100,000,000 pounds of nickel

pellets and 25,000,000 pounds of nickel powders. These facilities will be completed in late 1971 and in 1972, respectively.

In a message to shareholders, Henry S. Wingate, chairman, points out that International Nickel is "working in close collaboration with the Department of Energy and Resources Management of Ontario to determine an effective and rational program" for environmental control in the Sudbury area. "For the near term," he reports, "we are taking further and costly steps to decrease pollutants and their adverse effects. These will bring about a significant improvement in the area's environment."

Mr. Wingate also reports that "projects outside of Canada drew closer to realization in 1969. No precise timetable nor forecast is possible, but investments by us and by our associates in them could be in excess of \$500,000,000 over the next half decade." The principal areas of activity are in Australia, Indonesia, New Caledonia and Guatemala. Work also continued on properties held by the company in Minnesota and the British Solomon Islands Protectorate.

70% of Exploration in Canada

A record \$19,896,000 in exploration expenditures were made by International Nickel in 1969 as it intensified its worldwide search for nickel. This compares to \$17,028,000 spent in 1968. More than 70 per cent of the 1969 expenditures were made in Canada, mostly on the Company's properties in Ontario and Manitoba, where work was carried out in 47 working places in 20 mines.

Mr. Wingate points out that the future of Inco's mine development activities in Canada could

be affected by the outcome of the Canadian Government's White Paper proposals for tax revisions. "The proposals would result in mining being more heavily taxed than other industries. As far as our Company is concerned, a significantly increased tax burden would quite seriously affect the economic viability of the low-grade properties we are developing or are contemplating in Canada... we are hopeful that reasonable provisions will emerge that will recognize the unique risks of the industry and its need to compete successfully with other industries for capital."

Closing the Supply Gap

Mr. Wingate also reiterates that "the greatest need we face today is for increases in production to close the gap between supply and demand. The world cannot count on Canada alone for the production increases the long-term future will require. Large increases must come from the lateritic ores found in the tropical and sub-tropical areas." He states that "in 1972, we may see the beginning of a closing of the gap between supply and demand. This outlook of itself will stimulate further market growth and should make it unlikely that over any long term the nickel industry will suffer from an excess of production."

The number of shareholders of record as of December 31, 1969 was 84,219, an increase of more than 8,600 over the number at the end of 1968. Company records indicate that 58 per cent of the shareholders have addresses in Canada, and 39 per cent in the United States, while Canadian residents held 31 per cent of the shares outstanding and United States residents held 55 per cent.

INCO FAMILY ALBUM



Posing with their family for the Triangle camera just one hour before the wedding of their elder son Butch, are Copper Cliff mill receiving bins foreman Bert Carding and his wife Mickey. In the back row are Doe (Mrs. Tom Helm), now a resident of Toronto, Diane, 18, and Gerry, who is the wife of copper refinery welder Frank MacKinnon. Seated are Pat, 21, Butch the bridegroom, and Chris, 8. Bert has worked for Inco since 1940.



Proud parents of these four lovely children, Debbie, 8, Gregory, 7, Randy, 4, and Linda, 3, are Merle Martin and his charming wife Barbara. The family enjoy picnics at Byng Park, a natural setting on the Grand River near Lake Erie, and are slowly working up to over-night tenting. Merle is a keen novice golfer, shooting in the low 90s last season. He is a unitman at the Port Colborne nickel refinery with service dating back to June 1966.

The lone male in his family, Creighton mechanical foreman Ivan Spring has few objections to the situation, for obvious reasons. A native of Belmont, Manitoba, Ivan came east to Inco and Frood in 1946, and transferred to Creighton in 1951. His wife Audrey hails from Sundridge. Their three belles are Linda, 19, Candy, 15, and Suzanne, 17. Livelyites since 1951, the Springs enjoy tent trailer holidays.



The power plant village of High Falls, on the Spanish River, is home to electrical supervisor Ray Taylor and his wife (the former Barb McGlashen of Creighton) and their family of five: Christopher, 4 months, Susan, 6, Diane, 11, Scott, 10, Debbie, 15, and Vicki, 13. Born in Copper Cliff, Ray started with the Company as an electrical apprentice in 1948, and has worked at his trade at many of the mines and plants in the district.



It was in 1965 that Peter Norbury vacated the driver's seat on a double-decker bus in Manchester, England, for Thompson mine where he works as a driller. Those happy smiles belong to his wife Winnifred, Robert, 12, Mary, 11, Angela, 8, Julie, 9, and Mark, 5. A one-time soccer goalie, Peter enjoys teaching the game to youngsters at the Thompson recreation centre; his wife is leader of Thompson No. 1 Brawny pack.



Stobie mine divisional foreman Martin Marincow and his wife Lola came to Canada from the Ukraine in 1951, and are seen here with their good-looking family at their comfortable home on Jeanne D'Arc Street in Sudbury. Son Harry, 22, is studying medicine at the University of Ottawa, and has worked underground and as a first aid man at Inco for the last four summers; young James is 12; Alla, 18, attends grade 13 at Sudbury High School.

Governor General's Visit Memorable Event for All

During their official two-day visit to the Nickel Belt on February 27-28, Governor General and Mrs. Roland Michener easily made friends wherever they went with their warmth, quiet informality, and genuine interest in all about them.

And His Excellency, happily exercising his vice-regal prerogative, scored an instant hit with

5,000 children at Sudbury Arena by promising a school holiday for all on March 6.

Address of Welcome

At Copper Cliff, where they were entertained at luncheon at the club, Their Excellencies were welcomed in brief addresses with historical background by J. A. Pigott, vice-president and Ontario division general manager on behalf of International Nickel, and by deputy mayor R. R. Saddington on behalf of the Town of Copper Cliff.

Mr. Saddington mentioned the deep relief felt by himself and the town council when they learned that protocol would not require them to go jogging with the Governor General at dawn, a humorous reference to His Excellency's well known enthusiasm for physical fitness.

Their Excellencies then visited the municipal building where they signed the civic guest book in the presence of the town council. The Governor General became the first visiting dignitary to receive the town's award of merit, usually given to local residents for outstanding service to the community. It was presented by deputy mayor R. R. Saddington, in the regrettable absence through illness of the mayor, Richard Dow. In return, to mark the special occasion, the Micheners gave a photographic portrait of themselves to the town.

Admired Town's Library

The Centennial Library, built (Continued on Page 18)



Their Excellencies exchange cordial greetings with James C. Parlee, senior executive vice-president of Inco, and Mrs. Parlee.



Wherever he went in the plants His Excellency was eager to meet the men on the job. Here he talks with Claude Paquet and Tony Maccarone, crane followers at the copper refinery.



Mrs. Michener is welcomed at a luncheon at the Copper Cliff Club by Inco vice-president and general manager J. A. Pigott, Mrs. Pigott, Copper Cliff deputy mayor R. R. Saddington, and Mrs. Saddington. Next to arrive is Mrs. Jack Raftis, wife of Sudbury's deputy mayor.



At the Copper Cliff mill Mrs. Michener chats with pyrrhotite operator Joe Valentini and (centre) R. R. Regimbal, superintendent of mills.



At the Copper Cliff municipal offices Their Excellencies signed the official visitors' book. Shown with them are members of the town council (from left), E. G. Stoneman, C. F. Wilson, L. N. Pearce, deputy mayor Saddington, G. A. H. Sims, and Donald B. Taylor.



Meets Old Classmate

Visiting the Copper Cliff Centennial Library, Mr. Michener was delighted to meet an old college friend, Ralph Cleland, who brought along a photograph of their class at the University of Alberta. Shown with them are library board members T. H. Peters, J. H. Bruce, and chairman A. Crossgrove. On the right Mrs. Michener chats with the librarian, Miss Enid Holden.



Mrs. Michener was obviously pleased with the gleaming tray fabricated from Inco copper presented to her by Mr. Pigott. His Excellency received a paperweight of polished ore, suitably inscribed.



Copper Cliff mill superintendent Robert Browne (right) introduces flotation operator Walter Grillanda and Marcy mill man Johnny Van Laaten to the Governor General.



His Excellency chats with Leo Dallaire about his job as tapper helper. At left is J. R. Felck, superintendent of smelters.



In the shipping department of the FBR building Mr. Michener examines a tin of nickel oxide sinter 90. With him is assistant superintendent of smelters Silvio Merla.

Bar of Gold at End of Tour

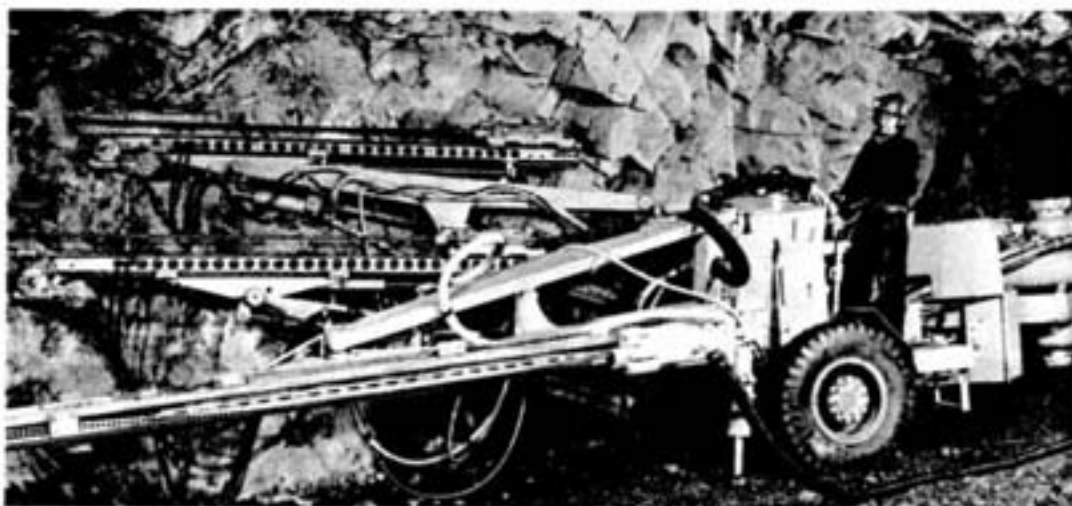
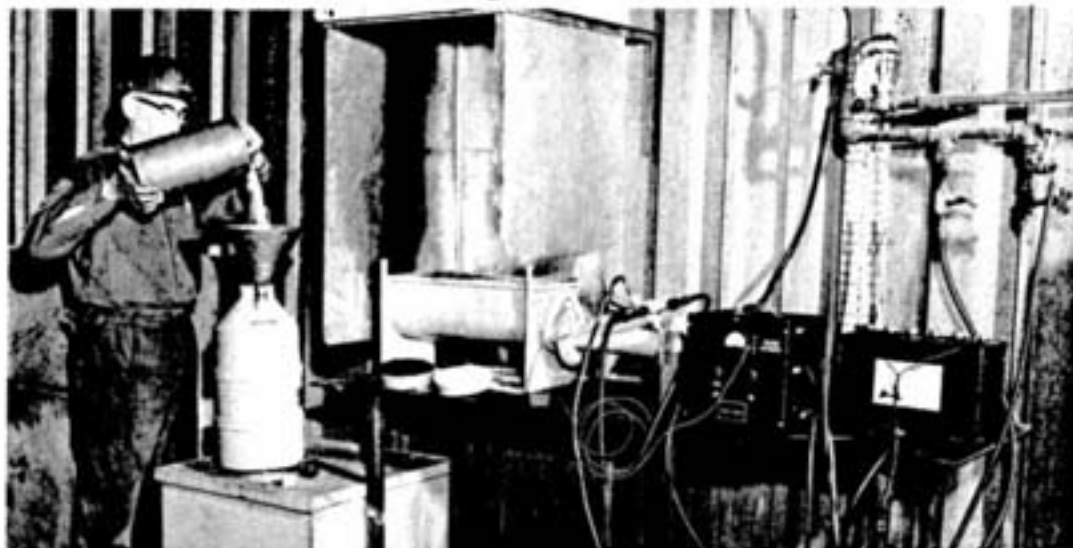
The vice-regal tour ended at the copper refinery where His Excellency hefted a 35-pound bar of gold and smilingly suggested it would make a nice souvenir if it weren't so bulky to carry around. He also showed keen interest in a sample of osmium, the rare 15th element to be extracted by Inco from its ores. At left is D. A. Fraser, assistant general manager (administration), and on the right G. A. Dick, copper refinery manager.



Here and There on the Underground Mining Scene

Keeps Mine Air Safe

A very important piece of equipment installed on all Inco diesel-powered trackless mining machinery is the oxy-catalytic scrubber which removes unburned noxious and toxic materials from the exhaust gases. A scrubber, seen here being recharged with platinum-impregnated alumina pellets by garage mechanic Albert Morin, is inspected and tested for efficiency on the machine weekly by the ventilation department. At regular intervals the units are brought to surface for recharging. The equipment shown regenerates the pellets by burning off accumulations of deposited carbon and tar. Seen below the burner are before-and-after samples of the pellets which return to their original white after an oil burner roasting at 1,000 degrees F.



New Drilling Jumbo

Slashing for the start of a development drift on 5 level tramway on the Creighton 3 shaft ramp, this machine is a Paramatic jumbo drill, one of seven in operation at the mine. Mobile to the face under power from its 78-hp diesel motor, the 20-ton rig is designed so that all drills remain parallel and do not require directional adjustment following boom swing to start the next hole. The operator is trackless jumbo driller John Kirouac.



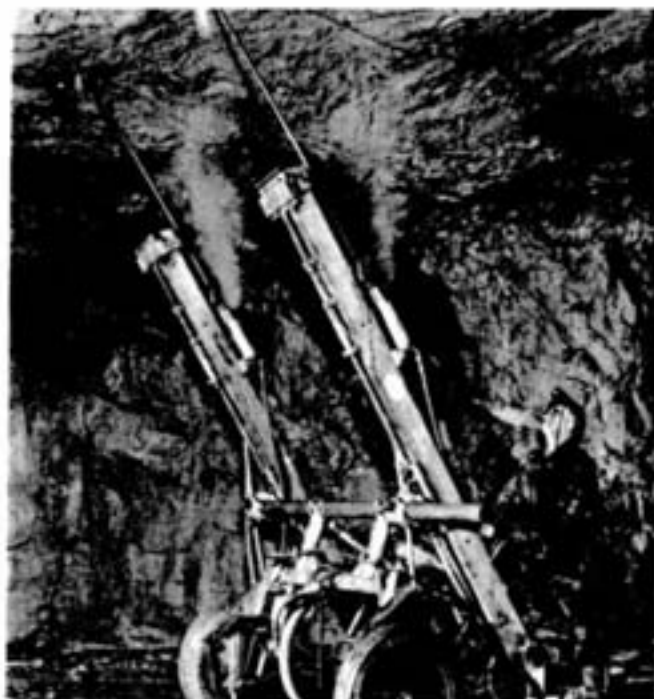
Serviced in Underground Garage

Load-haul-dump machines burn up a lot of rubber moving the muck, and one is shown here undergoing a tire change in one of the six bays of the garage on 20 level at Creighton mine. Brightly illuminated, the underground service station is well equipped to handle the tire and rim combinations that weigh as much as 1,800 pounds. At the hoist is driller Fred Cleary, while in the background divisional foreman Ed Poirier checks for correct tire pressure, an important factor for maximum efficiency and tire life. Diesel loaderman Rene Barbe is using the pneumatic impact wrench to secure the nuts on the wheel bolts.

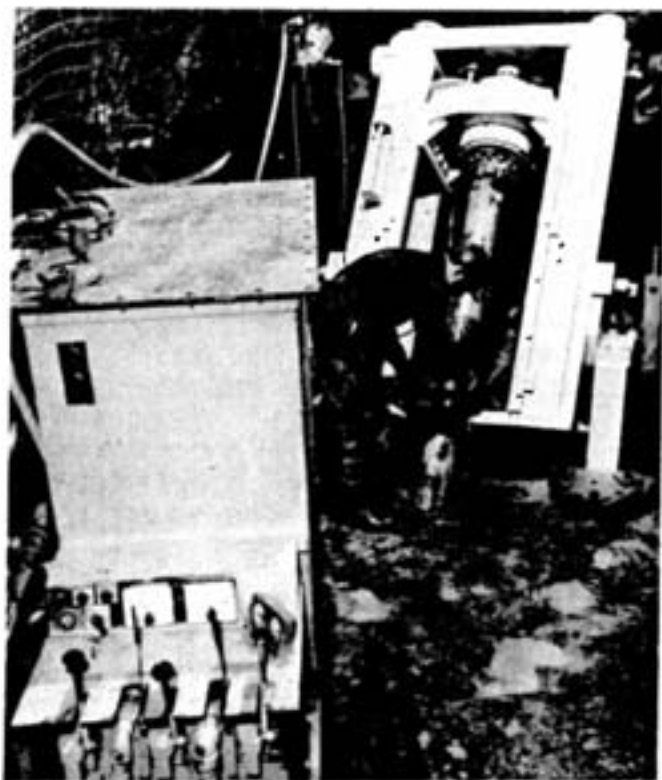


A Willing Little Worker

In use as a versatile workhorse at several of Inco's Sudbury district mines, the Unimog serves as a personnel carrier, supply vehicle, and, as seen here, ramp grader at Creighton 3 shaft, with Eldon Munroe behind the wheel. Powered by a four-cylinder diesel motor and packing 48 hp through its four wheel drive, the unit is governed to a top speed of 10 m.p.h. for underground operations.



STOPEWAGON: On the job at Garson, Creighton, and Levack, twin-drill Jay stopewagons are used for up-hole drilling in cut-and-fill stopes. Pneumatically powered, the machine is self-propelled by two independently operated chain-driven wheels. The two standard airleg drills are muffled to reduce exhaust air noise, and their movements are controlled by preloaded cable drive to assure steady, even feed pressure. Hydraulic jacks at each of the drive wheels level and stabilize the machine when in operation. Designed for easy transportation from one part of the mine to another, the stopewagon can be dismantled into small sections that will pass through an opening two feet square. At the controls in this picture, taken in the 32.53 stope on 2200 level at Garson, is driller Vern Kallio.



ROTARY DRILL: Another newcomer to Inco's wide range of drilling and boring equipment, this Remco rotary drill is demonstrating its capabilities at Garson, with the primary job of cutting drainage holes between levels. Equipped with a 7½-inch three-cone cutter with tungsten carbide studs, turning at 95 rpm and thrusting with a force of 30,000 pounds, the machine has a penetration rate of from 8 to 14 feet an hour. The power and control unit (foreground) contains a 50-hp electric motor which provides the 2,500-psi oil pressure required to operate the drill's hydraulic motors. Photographed on the 2600 level of the mine, drilling department raise borer operator Addison Richardson is adding a rod section during the drilling of an angled 225-foot drainage hole.



With victory smiles on every face except that of feline model "Black Paw" Gauthier — only just visible perching reluctantly between the ears of his gigantic likeness — these winners of first prize for ice sculpture at Lively's winter carnival are Wayne Marois, brothers Gerry, Wayne, and Bruce Gauthier, and John Wotton.

Six months old and growing fast, Molly the Saint Bernard poses with her two mistresses, Judy and Linda Bolger, and their amusing and original ice sculpture that won them second prize in the Lively ice sculpture contest.



Ice Sculpture Feature of Lively Winter Carnival

A huge bonfire lit by mayor Len Turner, followed by a display of torchlight skiing by members of the Lively-Creighton Ski Club, led by their racing coach Garry Poy, touched off the festivities on the eve of Lively's second annual winter carnival.

Carnival day dawned cloudy, cold, and windy, but didn't dampen the spirits of either skaters or spectators during a morning which included a figure skating display and hockey games featuring Mothers vs. Pee-wees, Fathers vs. Daughters, and New Sudbury Squirts vs. Lively All-Stars (the latter winning by two goals).

Novelty events filled out the program, and the hot-dog and hot chocolate stand did a land-office business.

A town-wide ice sculpture contest attracted many colorful entries, and judge Leo Pevato had a hard time choosing the best from many artistic creations.

A sit-down bean supper was held at one of the local churches, and later in the evening some 115 couples finished the day in high style at a dinner dance held in Copper Cliff.

Lively Athletic Association's carnival committee responsible for the organization of the event included president Al Este, chairman Jack Cooper, John Paterson, John Taylor, Mason Logan, Bud Meaden, Bob Burke, and Bob Hay, who extended hearty thanks to the many willing volunteers who pitched in to make the day a gratifying success.

50 Times as Much Nickel In Giant Modern Airliner

One of the simplest and most graphic illustrations of the value of nickel in today's technology is the increasing use of nickel in aircraft. The familiar DC 3 airplane of the 1930s used about 350 pounds of nickel, mostly in landing gear, propellers and gearing. By way of contrast, the latest of the big jets scheduled for introduction in the 1970s will contain more than 18,000 pounds of nickel — almost three-quarters the weight of the entire DC 3.

Today Inco is concentrating on

increasing nickel production to meet current customers demands in Canada and abroad. But the Company is also keeping an eye on the future, and markets that will exist when supply eventually catches up with demand. The use of nickel in the aircraft of tomorrow is one example. Other areas include equipment for use in controlling air and water pollution, the desalination of sea water, the production of nuclear power. Increasing use of nickel and increased production of nickel translates into more employment for Canadians and a substantial contribution toward Canada's position in world trade.



Ernie Sawatzky

Expert Coaching At Hockey Clinic

Super-thrill for 350 young puck-chasers in the Thompson minor hockey league was the two-day coaching clinic held by a five-man delegation from Hockey Canada in its long-range campaign to improve Canadian playing and coaching skills.

Led by Buck Houle, vice-president of Hockey Canada, the group visiting Thompson included Terry O'Malley, a veteran of four world tournaments and two Olympics as a member of Canada's national team, Billy Harris, former pro with Toronto and Chicago, also of the national team, and Wayne Stephenson, one of the Nats' goalies. Also along were assistant coach Gary Alcorn and trainer Rick Noonan.



To top off the very valuable series of coaching sessions the youngsters later saw the national team in action in two excellent exhibition games against an all-star Thompson lineup. The arena was jammed to capacity for both matches, with 2,200 people at-

tending; "termites league" players got in free.

Popular Thompson recreation director "Red" Sangster (left in the second picture) brought Terry O'Malley and Billy Harris out to the Inco offices for a visit with vice-president and divisional gen-

eral manager John McCreedy, a hockey buff from away back. Member of the Toronto Maple Leafs during two Stanley Cup triumphs, he regaled them with his recollections of incidents and personalities in Canadian championship hockey 30 years ago.

Paul Queneau Will Enter Teaching Career

Paul Queneau, whose resignation as assistant to the chairman of International Nickel was received with regret by the board of directors in February, will continue a part-time association with the company as consulting engineer to the chairman.

He will enrol at the University of Delft, Holland, to complete studies for his doctorate in science commenced originally as an Evans Fellow at Cambridge University, England, after which he will take a teaching post at a New England university. He received degrees in arts, science, and mining engineering from Columbia University, New York.

His brilliant career as an Inco scientist began at the Huntington, W. Va. plant in 1934. In 1937 he was transferred to the new research department at Copper Cliff, of which he was director from 1941 to 1948, after which he became metallurgical engineer in the executive department, New York.

During the succeeding years he has been a frequent visitor to Copper Cliff and Port Colborne, involved in major innovations and improvements in plants and processes.

He is author and editor of many published technical books and papers, among them "The Winning of Nickel", the most comprehensive review of the geology, mining, and extractive metal-

lurgy of nickel in the past half century.

Of the honors he has received for distinguished achievement and leadership in metallurgy, the most recent was the James Douglas medal awarded to him in 1968 by the A.I.M.E. He holds numerous patents in the metallurgical field.

During his presidency of the Copper Cliff Rod & Gun Club he became interested in the Canadian North, and was subsequently a member of several scientific expeditions to the Arctic and chairman of the U.S. Navy's Arctic Research advisory committee. He had an outstanding war record.

He brought his bride, the former Joan Hodges of Rochester, N.Y., to Copper Cliff in 1939. They have two children, and reside in New Hampshire. Their son Paul is following in his father's footsteps, having obtained his doctorate in chemical metallurgy and scored his first success as an inventor.

Trappers Festival Queen

Barbara Sangster, charming daughter of Mr. and Mrs. "Red" Sangster of Thompson, was chosen queen of the famous annual Trappers Festival at Le Pas in February, from a large entry of northern Manitoba beauties. Among her prizes was a mink jacket. She and her two princesses went to Winnipeg for a week-long round of public appearances and social engagements, including a visit with the premier of the province, Ed Schreyer.



Copper Cliff Plate Shop Ball a Real Winner



"Biggest and best yet" was the unanimous verdict of 120 couples who danced away a happy evening to the music of the Troubadours at the annual Copper Cliff Plate Shop Ball, held at the Sorrento. In the above group of merrymakers are John and Isabelle Fraser, Murray and Gladys Duncanson, Leo and Nellie Dupuis, and Army and Inez Tesoro. On the right are seen Eugene and Claire Sylvestre, Vica and Evelyn Midena, and Fred and Aileen Mansfield; Fred was chairman of the very successful dance.



On the Cover

Zooming into a gate in smooth style during Nancy Greene League competition, 13-year-old Tom Bell of the Lively-Creighton team is seen in our cover picture at the upper end of a giant slalom run on the Leveck Ski Club hill. A skier since he was five, Tom turned in the fastest time for all six events in which his club competed in the local tests.

Lively-Creighton Came in Second

Lively-Creighton team ranked high in northern Ontario junior skiing after finishing in second place in the Nancy Greene northern zone finals at New Liskeard March 7-8. Top honors went to the Larder Lake Gold entry, third spot to Raven Mountain Ski Club, and fourth to the St. Bernard Club of New Liskeard.

Other teams in the ski-off were Sault Ste. Marie, North Bay, Nordic Greene from Sudbury, and Kanasuta from Noranda-Rouyn, aggregating more than 100 young contestants.

Lively-Creighton coach Gary Foy, who was one of the stars of the early days of Ellis Hazen's Nickel-teen Ski Club, was naturally elated by the showing of his young squad. He had high praise for the organization and hospitality arranged for the meet by the host St. Bernard Ski Club under coach Jack Willers.

Unprecedented Interest

Inspired by their honorary chairman — none other than the dashing queen of the ski slopes, Canada's own Nancy Greene Raine — young skiers have been taking to the slopes in unprecedented numbers and enthusiastically competing in the Nancy Greene Ski League.

With its formation sparked by

Nancy's dramatic performance during the 1968 Olympics, the league has generated interest and effort amongst youngsters beyond all expectations.

Organized by the Canadian Amateur Ski Association in 1968, the league has solved many of the problems which have long complicated juvenile racing programs, by eliminating complex and unmanageable day-long events which were causing lack of interest on the part of both parents and young skiers alike.

The Nancy Greene League movement has changed all this. During the season, the weekly events involve only two teams at any one time, and under the scoring system each competitor makes a contribution to the team, provided only that he or she com-

pletes the course. The league race is confined to a giant slalom event.

Areas of activity are restricted to zones, within which travelling distances between divisions are minimal.

Seven Teams in Sudbury Area

The Northern Ontario zone has five divisions, Sault Ste. Marie, Sudbury, North Bay, and Timmins, the latter stretches into Quebec to include Noranda-Rouyn. In the Sudbury division the seven teams competing for top honors include Espanola, Copper Cliff, Leveck, Lively-Creighton, Nordic Nancy, Nordic Greene, and Onaping. There is no inter-zone competition.

League rules state that a team shall consist of not more than 13

members, none of whom shall be older than 14, and that at least five members be under 12 years. Rules are strictly enforced — the Copper Cliff team was disqualified from going to the New Liskeard meet because one of its members was five days over the age limit.

With an eye to encouraging young ladies to follow in the victorious ski tracks of Nancy, the rules suggest that organizers should strive to form a team that includes both boys and girls.

Speedy Stainless

A new 150 miles-per-hour train is expected to go into service between New York and Washington later this year. The train's cars are sheathed in nickel stainless steel.



Sudbury Division Champs: This is the victorious Lively-Creighton Junior Ski Club racing team that won six straight events to become champs of the Sudbury division of the Nancy Greene Ski League. Seen at the foot of the Leveck Ski Club hill following their final victory, the young skiers are Kevin Komarnickie, Jane Marlow, Tom Bell, Bill Stephens, Tim Tuuri, Gordon Gourley, Richard Moore, Jim Gauthreau, Gordon Milleur, Don Morrison, Robbie Walker, William McCrae, and John Mullock. In the back row are Forest Goodyear, Leveck team coach, timekeepers George McCrae and Ron Petit, George Keast, the Sudbury division league convener, and Gary Foy, proud coach of the victorious team.



Another young hot-shot on the slippery slabs is Bob Goodyear of the Leveck team.



Runners-up: One of the two Nordic ski hill entries competing in the Sudbury division, the Nordic Greene team finished in the runner-up spot following a ski-off to decide a three-way tie between themselves, Leveck, and Nordic Nancy. Shown after their victory under the lights on the Lively hill are Mary-Lou Jerome, Stephanie Bateman, Christine Heikkila, Tad McNab, Doug Cayen, Ian Mossop, Jim Jerome, Paul Heikkila Jr., Stephen Paulsen, David Ghent, Lance Collins, Paul Jerome, and Stephen Bateman. Standing behind are assistant coach Paul Heikkila and coach Bob Bateman.

IN THOMPSON

The Name of t Game Is Grow



Newest of the seven Polaris Lodges, single men's residences accommod



Attractive apartments, on Centennial Drive, named for Manitoba's 100



Groups of town houses in a residential section called The Vill



There are 120 dwellings in this one block of new row housi



Thompson's first high-rise apartment block, Highland Towers, has 10 floors with 97 suites. A second high-rise, with 135 suites is now in the planning stages.



Typical of new commercial development is Churchill Place.



These new single family residences are on Pike Crescent.

the
with



ating over 900.



h anniversary.



400.



2.



If the micro-wave tower seems to be wearing a halo in this picture, that's okay with Thompson people, to whom it has been a great blessing.

1,300 New Dwellings In 69-70 Program

You can't blame Brandon if it's looking anxiously over its shoulder these days. Coming up fast on the outside, in the race to be Manitoba's second-largest city, is the burgeoning town of Thompson, which is nudging the 23,000-mark in population and taking on all the sophistication of a fully modern metropolis.

Broad expansion of International Nickel's Thompson operations, second only to those in Sudbury district as the world's largest nickel complex, has launched a development boom that astounds a visitor and even has many of the natives gasping.

\$4.2 Million Shopping Centre

Latest boost to Thompson's swelling civic pride was the announcement of a new \$4.2 million shopping centre to be completed within a year on 18½ acres of land purchased from the town in the Kelsey Bay section. Principal building in this complex will be

(Continued on Page 18)

A delight to the photographer's eye is the artistic design of the stairway of re-inforced pre-cast concrete in the new addition to Ralph D. Parker Collegiate.

PHOTOS BY
FRED SHEPHERD



Bright spaciousness in the library-study area of the high school.



View from the stage in the high school theatre. Bright panels flanking the projection booth are folding doors which increase seating capacity to 500 when removed. Acoustics are excellent.



SHAFT INSPECTORS TALK TO SURFACE

Seen passing the 3,000-foot level during weekly shaft inspection at Murray mine, shaft leader Wilf Laurin is using the portable hoistphone to communicate with personnel on surface. Others in the inspection crew are shaft inspectors Nick Evaniuk, Gilles Pelland, and Bill Kowbosniuk.



CAGE HOISTMAN KEEPS IN CLOSE TOUCH

At the controls of the cage hoist at Murray mine, hoistman Bob Dumeah is in direct radio contact with the inspection crew working atop the cage in the shaft 3,000 feet below him.

RADIO

*plays important role
in Inco operations*

IN POWER DEPARTMENT'S RADIO CENTRAL

In Copper Cliff No. 1 substation, system operator Jim McQuillon is seen at radio central of the power department's elaborate communication network.



RADIO REACHES ALL AREAS IN OPEN PITS

Through a powerful repeater station all areas of the Clarabelle open pits are within radio contact. Here shift boss George Quigley, at No. 2 pit, co-ordinates ore haulage schedules with No. 1 pit, over two miles distant.



Easy Communications Vital to Industry's Pace

Communications have taken giant strides since the grunts of the cavemen, the warnings of jungle drums, and the smoke talk of the Indians. Inco's Sudbury district operations are an excellent example of the way modern industry has benefited since electronics entered the picture and messages took to invisible wings in the form of radio waves. Sophisticated radio equipment is extensively used in mining, milling, smelting and refining operations.

Transportation Expediting

The Copper Cliff transportation department back in 1951 installed a two-way radio hook-up between a control centre at the west scales and the trains on the slag circuit, and now has 25 locomotives tied into this system.

With the west scale as radio central, the department's transmitter with an 80-foot antenna is now in direct contact with all Inco rail traffic at the Coniston smelter on the east, the Iron ore plant on the west, and Levack mine on the north.

The transportation department also uses portable transceivers for on-the-spot reports during repairs on the 100 miles of Inco track in the Sudbury area, and for fast handling of equipment problems that could snarl traffic movement.

Open Pit Communications

More recent communication innovations include a two-way radio system installed at Clarabelle open pits for close co-ordination of ore and rock haulage with ore car schedules.

Since the varying depth and

irregular shape of the pits eliminate a low wattage line-of-sight or bounce signal swap, a powerful repeater station has been installed in the nearby North mine headframe, with an antenna reaching 40 feet above the top of the 180-foot structure.

High enough to receive transmissions from most parts of the pits, the repeater station picks up the 15-watt mobile equipment signals and those from two-watt personal portable units, boosts them to 30 watts, and re-transmits from the elevated antenna, making reception possible in places where the original signal could not reach.

Feed-back problems are overcome by using one transmission frequency for mobile and portable equipment and another for the boosted signal.

Radio In Shaft Inspection

Increased efficiency and safety are the bonuses from a radio device called a hoistphone that is proving its usefulness at Murray

(Continued on Page 19)



RADIO CONTACT WITH SMELTER CRANEMEN

Directing the movements of the six 60-ton cranes in the converter aisle in Copper Cliff smelter, slag boss Ed Dubuc uses a portable transceiver with hat-mounted mike and earphone to instruct the cranimen in their cabs above him.



REMOTE CONTROL OF MILL AISLE CRANE

Labor boss Stan Bidochka manoeuvres the Frood-Stobie mill aisle crane by remote radio control while Oliver Simard attaches a sling for hoisting a mill sound box.



25 LOCOS IN TRANSPORTATION HOOK-UP

A vast improvement over the old days when a locomotive engineer had to walk to a yard phone for information or change orders, the transportation department uses a radio hook-up to co-ordinate its service to Inco mines and plants in the Sudbury area. Engineer Gordon Villeneuve is shown at the microphone in one of the 25 Inco locos.

Carl Lewis, driller on Frood's 2000 level and a second-year curler, lays one right on the line for his skip, assistant mine superintendent Bill Collis (right), while the rival skip, mine engineer Nick Trefiak, anxiously awaits the result.



"A Bunch of the Boys Were Whooping It Up . . ."



With Dar Anderson at the ivories, and Ken Hoop and Stan Snider beating it out on their banjos, a non-stop singsong in the downstairs clubroom was a popular feature of the Frood-Stobie 'spiel. Among the vocalists can be seen Rod MacDonald, Guy Arsenault, Gary Prior, Chris Bell, Len Marion, Jack Guest, Keith Rogerson, Paul Siren, Bob Patterson, John Hanes, Bill Collis and Glen Plaut.



Area superintendent Sid Sheehan presents the Frood-Stobie A.A. trophy and prizes to skip Ken Fitzgerald, Bill Demkiw, Wayne Withers, Tom Boyd.



Frood-Stobie A.A. secretary Eldred Dickie presented draw prizes to skip Jack Watkins, Bob McDonald, Rene Blais, Mike Kenny.

KEN FITZGERALD SKIPS VICTORS IN FROOD-STOBIE BONSPIEL

As an exercise in fun and good fellowship, not unmingled with some very good curling, the annual Frood-Stobie Athletic Association bonspiel gets full marks on the Nickel Belt sports scene.

This year's outing at the Copper Cliff curling emporium drew a total of 35 rinks and went off without a hitch under the careful planning of drawmaster Dick Williams and his assistant, Bob Patterson.

Ken Fitzgerald, Stobie maintenance mechanic, led his rink to triumph in the first event; in addition to the historic Frood-Stobie A. A. curling championship trophy they received individual trophies and prizes of propane torches. Gord Milne, a slope leader on 2200 level at Frood, skipped the winners of the second event, whose prizes were hunting lamps, and Lorne Rowe, pillar leader on Frood's 1800 level, was the helmsman of the third event winners, who received neat little travelling clocks.

For those who didn't make it into the money out on the ice, there was still a chance to win a smile from Lady Luck in the prize draw. In addition to Jack Watkins' rink, pictured above, three other fortunate foursomes shared in this added attraction: K. Rogerson (skip), R. Maki, A. Tessler, L.

Suchoplas; A. Demkiw (skip), H. Edwards, P. Reynolds, D. Gibson; W. Jarrett (skip), G. Chartrand, H. Kuz, R. Toffoli.

The muscles that mine the ore aren't necessarily much help in curling, as many an aching Frood-Stobie husky realized before the 'spiel was over, but everybody managed to sustain strength to the end with the help of a bountiful fried chicken buffet dinner served by Mrs. Estelle Johnston and her helpers.

During the prize presentations, area superintendent Sid Sheehan congratulated the curlers on the friendliness and good sportsmanship that prevailed throughout the 'spiel. He thanked all who helped make it a success, including Garnet Milks, Bill Prince, and Nick Haggerty.

Nickel Silver

Nickel silver, an alloy of nickel, copper and zinc, which for decades has been used primarily as a base for silver-plated tableware, is now used extensively in contacts for electronic equipment.

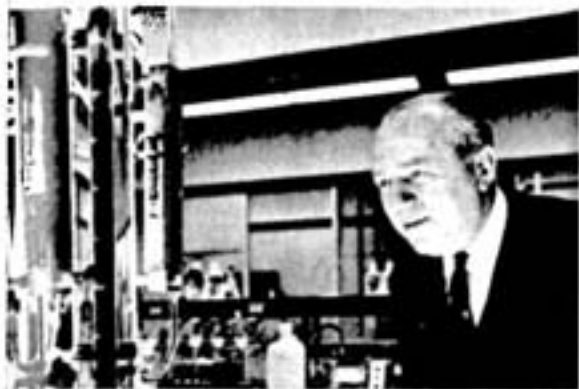
Running into debt isn't so bad. It's running into creditors that hurts!



Frood assistant mine superintendent Bill Collis presents second event prizes to skip Gord Milne, Al Buer, Jim Turton, Bill Seaman.



Stobie assistant mine superintendent Ted Flanagan congratulates the third event winners, skip Lorne Rowe, Bill Deacon, Gordon Evans, Berk Keane.



Mr. Gagnebin observes the operation of a solvent extraction column wherein cobalt is being selectively recovered as a high-purity cobalt solution from an impure leach solution containing both nickel and cobalt. The chemical similarity of these two metals has long made their separation an involved chemical procedure, but the new process does the job with relative ease.



Research chemist Gerald Glaum, left, assisted by senior research technician Einar Walli, uses a high-pressure laboratory autoclave as part of a simulation of an entire flowsheet for the treatment of sulphidic materials. In the background, Dr. Philip Distin, group leader, hydrometallurgy, studies a report at the laboratory work bench.

President Sees Progress In Top Process Research

Inco president Albert P. Gagnebin visited the J. Roy Gordon Research Laboratory at the Sheridan Park research community just west of Toronto to observe the progress of several highly important research investigations. Among these were two processes to be used in the residue plant of the new IPC refinery at Copper Cliff, one a new technique for the recovery of cobalt from an impure solution containing nickel, another the electro-winning of high purity copper cathodes from leach solutions.

Mr. Gagnebin was accompanied by William H. Sparr, vice-president, International Nickel Inc., of New York, and conducted on a tour of the laboratory by Dr. William Steven, vice-president, process research and technology, Inco Canada, Dr. Charles E. O'Neill, assistant vice-president, process research, both of Toronto, and by Dr. J. Stuart Warner, director of the laboratory.



Dr. R. Sridhar, group leader, pyrometallurgy, outlines some of the current applications of the mini-plant fluid bed reactor. To the left of President Gagnebin is Dr. Malcolm Bell, section head of the pyrometallurgy section, a brother of Dr. J. A. E. Bell, superintendent of Inco's Port Colborne research complex.



Research chemist Shin Abe (in white lab coat) pauses while logging electrical data so that Dr. Victor Ettel, group leader, electrochemistry, can explain to Mr. Gagnebin the operation of the mini-plant copper electro-winning tankhouse which is producing high purity copper cathodes from leach solutions.



Research engineer George Reschke uses a laboratory flotation machine to conduct a flotation test on a sample of Australian sulphide nickel ore, employing a new and effective depressant for silicate minerals. On the president's left are Lou Bernard, group leader, minerals beneficiation, and Dr. John Morrow, section head, minerals engineering. Dr. Morrow is well known in Copper Cliff, where he received his early schooling.

Retired on Inco Pension

Life and Times of an Employment Officer



The packed audience at Alton Browne's retirement party got a big kick out of a series of projected cartoons depicting his Canada-wide career as an Inco employment officer. Two are shown above: (1) Alton, loud-hailer in hand, arriving at an outpost on Newfoundland to regale the natives with news of job opportunities at Inco and (2) patiently touring the prairies in a Conestoga wagon laden with survival gear of one kind or another, hunting hardy Westerners who would make good nickel producers. Inco artist Orest Andrews excelled himself with the humor and skill of these drawings.

ALTON BROWNE

Nobody in the country has covered more of Canada than Alton Browne, who during his quarter-century of service in the personnel department has visited more than 150 cities and towns from coast to coast, interviewing and hiring men to keep Inco's steadily expanding work force up to requirements. Over the years he hired more than 20,000 men for the Ontario and Manitoba divisions.

With his genial manner and flair for organization he made friends for himself and the Company wherever he went, and became known as Inco's "ambassador at large".

The Italian Hall at Copper Cliff was packed to capacity for his retirement dinner, indicating his popularity throughout the Company. Executive officials at Thompson, Toronto and New York sent telegrams of congratulations and good wishes.

Alton started his Inco career in 1935 as a puncher and then skimmer on the converters at Copper Cliff smelter. He transferred to the personnel department in 1943.

Born at Victoria Harbor, Ontario, he was at one time deputy sheriff of Wayne County, Michigan, and often had the distressing duty of pouring contraband booze into the Detroit River.

An ardent sports enthusiast, he was for eight years manager of the Copper Cliff Redmen in the old Nickel Belt Baseball League. He



Mr. and Mrs. Browne

was the Company's representative on the Sudbury board of the Canadian National Institute for the Blind.

His marriage to Jessie Cunningham took place at Detroit in 1924. They have an all-year home on the French River.

ALEX WINN

The year Alex Winn was born, 1907, his father owned and operated the Commercial Hotel on the site that later became the middle of the Welland Canal in Port Col-



Mr. and Mrs. Winn

borne. It catered to commercial travellers coming into the area to show their wares.

Upon completing his formal education at Central Tech in Toronto, Alex joined the nickel refinery in Port Colborne in 1933. Almost all of his service was in the electrical department; he worked as a substation operator, and was an electrician at the time of his early service retirement.

Alex and his wife, the former Anne Elizabeth Teasdale, were married in Port Colborne in 1936. They have two daughters and four grandchildren.

Alex has been an ardent hunting, fishing and boating enthusiast for years and hopes to continue his outdoor pursuits. "I look forward to an annual fishing trip north of Montreal for brook trout. There's not too much game left around here but I enjoy the exercise."

Mr. and Mrs. Winn are planning trips to both the east and west coast in the near future.

JOHN BOJUK

A stope boss at Frood for most of his 36 Inco years, and a locomotive battery serviceman there



Mr. and Mrs. Bojuk

since 1966, John Bojuk has retired on disability pension.

Born in the Ukraine, he came to Canada in 1929, and joined the Company in 1930. He and his wife, Irene Romanuk when they were married in 1940, have a family of three daughters.

A visit with brothers and sisters in the old country heads the list of activities that John is planning for his well-earned retirement.

SAM DELKUS

Ending his mining career after more than 34 Inco years in the stopes at Garson mine, service pensioner Sam Delkus describes himself as "in the pink of condi-



Mr. and Mrs. Delkus

tion, and capable of continuing at the mine for at least another 30 years."

A Lithuanian, Sam came to Canada in 1928, and started with the Company in 1935. He and his bride of 1956, Mrs. Eva Venkus, have one daughter.

The couple will continue to reside in Sudbury, the place that Sam describes as "the only place to live."

MURRAY FRASER

Entering the ranks of Inco pensioners after 20 years with the Company at the Copper refinery,



Mr. and Mrs. Fraser

Murray Fraser has retired on disability pension.

Born in Pembroke, Murray started at the refinery in 1947, and was with the yard and transportation department until his move to the mechanical department in 1968.

He and Veronica Bertrand were married in Pembroke in 1940 and have a family of five. Daughter Marietta is the wife of Copper Cliff maintenance mechanic Peter Bell.

GORDON LINDSAY

Gordon Lindsay came over to the accounting department at Port Colborne on loan from the stores office in 1948. He was to return immediately the accounting project terminated. Twenty-one years later as chief accountant — cost, is



Mr. and Mrs. Lindsay

finally leaving the accounting group, not to return to the stores, but on early service retirement.

Gord was born in Ridgeville, Ontario, in 1908. After graduating from Welland High and Vocational School he was with the Imperial Bank of Canada, at Fonthill, and later at Niagara Falls, Port Colborne and Windsor.

In 1929, he returned to Port Col-

borne to take employment with Dell and Merton, funeral directors. He obtained his license in embalming in 1933 and remained with that firm until 1941, when he became an Incolite at the Port Colborne refinery.

Erma Chambers and Gord were married in Ridgeville, Ontario, in 1935. They enjoy travelling, having made 16 trips to Florida alone, but expect to maintain a permanent residence in Port Colborne. Gord's interest in food extends beyond the mere eating of it — he is a chef of no ordinary skill.

BERNIE MCGUIRE

A mason since he joined Inco at Copper Cliff in 1940, Bernie McGuire has spent 30 years working on the Company's refractory-lined furnaces and converters. He was at the iron ore plant for the six years prior to his recent retirement on early service pension.

Born in Bristol, Quebec, Bernie was married to Mary Olivers in 1939, and she presented him with two daughters. Mrs. McGuire died in 1969.

Keeping house for himself and his daughter Colleen, and visiting his two grandsons, will keep Bernie busy during what it is hoped will be many happy retirement years.

ADELARD GOUDREAU

A bush camp cook before he joined Inco in 1943, pensioner Adelard Goudreau has resumed his acquaintance with the pots and



Mr. and Mrs. Goudreau

pans, and is spending his new-found leisure time between his favorite arm chair and the kitchen stove.

A skimmer for the last nine of his 26 Company years at Copper Cliff Smelter, Adelard has retired on service pension.

A native of Cutler, Adelard exchanged marriage vows with Olivia Joncas in 1930. Inco representation is maintained through two of their family of five. Son Emile is a motorman at Levack, and daughter Germaine is the wife of Copper Cliff scale clerk Gerry Dandenau.

CHARLES SANDBERG

Ending a mining career that started in the 1920s at Crean Hill and took him to Victoria, Murray, and Levack mines before he joined Inco in 1928, Frood maintenance foreman Charles Sandberg has retired on service pension after nearly 41 years with the Company.

A native of Copper Cliff, Charlie was the well-known and well-liked foreman of the Frood steel shop for 20 years.

He and his wife, Sadie Huhtala before their marriage, have a family of three sons, one of whom,



Mr. and Mrs. Sandberg

Bob, is a project engineer at the copper refinery.

Visiting their five grandchildren and keeping a fire going in their Long Lake cottage steamboat, together with fishing expeditions which they both enjoy, will keep the couple as busy as they wish to be during Charlie's well-earned retirement years.

JOHN STOFEG

A powderman on the 3200 level at Creighton for the last nine of his 35 years with Inco, John Stofeg has retired on service pension.

It was in 1928 that John came to Canada from his native Czechoslovakia, and he joined the Company as a timberman at Creighton in 1934.

John married Annie Poroznik in the old country in 1934, and they were blessed with a family of two daughters. Mrs. Stofeg died in 1968.

A keen hockey fan, John will be spending much of his new-found leisure time rooting for the Wolves at Sudbury Arena and following the National Hockey League via the TV screen.

WILBUR HERMAN

"You might call me chief beaver chaser at Crean Hill," said Wilbur Herman, who in retirement is still carrying on the battle to protect the mine water supply from the



Mr. and Mrs. Herman

pesky and persistent rodents that kept him hopping during his three years as surface foreman at Crean Hill mine.

Early service pension for Wilbur ends a 41-year partnership with Inco that started at Frood in 1928, and included 29 years there as a construction shift boss before his move to Crean Hill in 1966.

Erma Mumford became Wilbur's wife in 1929, and one of their family of two, Ron, is an electronics technician with the exploration department. Five grandchildren complete the family.

GRANT FRETZ

The unusually heavy snow made it difficult for the doctor to drive his horse and cutter the four miles from Stevensville to Ridgeway on February 20, 1905, to help bring Grant Fretz into the world. It was an unusually severe winter.

After leaving school, Grant

learned the carpentry trade from his father and uncle, and worked at various construction jobs. He also worked for a year at the Pierce-Arrow automobile plant in Buffalo. He has memories about helping as a youngster to operate a steam-powered threshing machine which his father owned for



Mr. and Mrs. Fretz

10 years. They would move the rig from farm to farm, covering the area from Sherston to the Niagara River. The fuel consisted mainly of fence rails and occasionally coal, provided by the farmers.

Viola Fretz (no relation) became Mrs. Grant Fretz in 1929 in Ridgeway, Ontario. They have three sons and three grandsons.

Grant started to work at the Port Colborne nickel refinery and worked as a carpenter up to his recent service retirement.

ED McLELLAN

With 32 Inco years behind him, Copper Cliff electric furnace shift boss Ed McLellan has retired on early service pension.



E. McLellan

Ed was born and grew up on a farm near Arnprior, came to the Sudbury area to work on the construction of a power line between Coniston and Crystal Falls, joined the Company at Copper Cliff in 1937, and has been a shift boss since 1960.

Single, and without a care in the world, Ed is planning to celebrate his retirement by treating himself to three months of lazing in the Arizona sunshine.

JOHN DAVISON

John Davison, popular anode department foreman at the Port Colborne Nickel refinery, has retired on disability pension. His company service, dating back to January 30, 1929, has all been in the anode department, where he was promoted to foreman in 1963.

Sherkston, Ontario, was John's birthplace in 1910. He did farm



Mr. and Mrs. Davison

work until he was 15, then butchered for three years with the late Bill Schoenburn at Gas Line and worked on lake drilling and dredging for a year before becoming an Incolite. The Davison name has been a familiar one in the Port Colborne plant over the years, always associated with high competence and dependability.

John was married to Elsa Kramer

at Port Colborne in 1939. They have two children, and two grandsons.

BILL HARJU

Bill Harju can remember when there were 25 milking cows wandering the fields where the Inco iron ore plant now stands, but



Mr. and Mrs. Harju

which then was part of a 300-acre dairy farm belonging to his father. A crane man for the last 10 of his nearly 23 Company years at the copper refinery, Bill has retired on service pension.

Bill and his wife — Inga Maki when they were married in 1935 — have a family of two with nine grandchildren. Mrs. Harju is the daughter of Inco pensioner John Maki, who retired in 1945. A hale and hearty 85, the old timer lives in Copper Cliff.

DONALD MacKAY

A career with the Copper Cliff police force that started in 1937 has come to a close with the retirement on service pension of Corporal Donald MacKay.

A native of Inverness, Nova Scotia, Donald left the Maritimes for Inco in 1936, worked a few months at the Copper Cliff smel-



Mr. and Mrs. MacKay

ter, and after transferring to the constabulary pounded his first beat at Levack. Since then he has become a familiar figure at several Inco plants in the Sudbury area.

His marriage to schoolteacher Nellie Fraser, also from Inverness, took place in Quebec, in a ceremony conducted by the bridegroom's brother.

Donald's heart is still in the East, and he and his wife plan to travel that way at every available opportunity.

BERT DIBENEDETTO

A confirmed bachelor, with travel as a hobby and time on his hands since his recent retirement on disability pension, Bert DiBenedetto has his sights set on a leisurely tour of Europe.

Employed at the Coniston smelter since 1935, Bert's 34 Company years included 11 as a crane man, and the remainder with the transportation department.

He was a trackman at the time of his retirement.



B. DiBenedetto

Appointments

TORONTO

Dr. William Steven, vice-president, process research and technology, The International Nickel Company of Canada, Limited, has announced the appointment of Daniel Kelly as director, process development.

Mr. Kelly, assistant to the manager of process research (Canada) from 1966 to 1970, will continue to be located in the Company's Toronto office reporting to Dr. C. E. O'Neill, assistant vice-president, process research.

Son of the late Dan Kelly, an Inco pensioner, Mr. Kelly was born in Copper Cliff and attended school there. He graduated from Queen's University in 1945 in metallurgy; during summer vacations he worked in the shops, mill, smelter research and geological departments at Copper Cliff.

Joining the smelter research department in the fall of 1945, he was engaged in various process improvement projects. From 1955 to 1959 he was assistant superintendent of the Iron Ore Plant, after which he became assistant to the manager of reduction works. He was married in 1945 to Frances Jennings of Quebec City, and has four children.

MANITOBA DIVISION

J. McCreedy, vice-president and general manager, announced the following appointments:

W. R. Cook, superintendent of smelter;

G. A. Romanis, assistant superintendent, refinery;

S. Prusak, purchasing agent.

W. R. COOK

St. James, Manitoba, was the birthplace of William Ralph Cook, who attended the University of Manitoba, graduating in 1950 as a bachelor of science in chemistry.

He joined International Nickel at Copper Cliff that same year, working in the research department until 1960 when he was transferred to the new Thompson plant as refinery metallurgist. In January, 1966, he was appointed chief metallurgist and in August, 1967, became assistant superintendent, nickel refinery.

He was married in 1950 to Bernice Del Bigio of Winnipeg, and has two children.

GRAHAM ROMANIS

Born and educated in Scotland, Graham A. Romanis immigrated to Canada in January 1964 as a metallurgical trainee at International Nickel Company's at Thompson.

Two years later he became refinery metallurgist, and in January, 1968 was appointed administrative assistant. He became assistant

smelter superintendent in May, 1969.

He graduated from the University of Edinburgh with a bachelor of science degree in chemical technology in 1961.

He is married to the former Heather Ann Wilson, and has one son.

S. PRUSAK

Born in Lethbridge, Alberta, Steve Prusak graduated from high school at Port Macleod, and holds a certificate in purchasing from the Canadian Association of Purchasing Agents.



S. Prusak

He joined International Nickel at Winnipeg in 1959, and was resident buyer at Thompson until the purchasing department was moved there in 1961. He later assumed the position of senior buyer. He was appointed assistant to the purchasing agent in March 1969.

In his new capacity he will report directly to W. J. Thorpe, superintendent, material control. Prior to joining Inco he held purchasing positions with Algoma Ore Properties at Wawa and Denison Mines Ltd. at Elliot Lake.

He was married at Winnipeg in 1959 to Olga-Ann Halluk.

Don MacKinnon Drives In Sports Car Rallies

Don MacKinnon, buyer in the purchasing department at Copper Cliff was one of the drivers in the "Mad Hatter Rally" recently staged by the Sudbury Sports and Light Car Club. A deep-dyed rally enthusiast, he's shown below at the wheel beside his navigator, Al Parsons of the Canadian Forces base at Falconbridge.

Starting from the New Sudbury Shopping Centre, 10 driver-navigator teams negotiated the tricky 125-mile course in and around Sudbury. It took two gals to show



the way—the team of driver Pat Whitehouse and navigator wound up with the least deducted points.

The "Mad Hatter Rally" was one of a full slate of events planned for this year, with Don Nelson of the Inco general engineering office at the club's helm.

Paced this year with a large influx of beginner and novice rally drivers, the club is sponsoring a rally school in the month of April. Through expert counselling in driving and navigating, beginners should now progress more quickly to competition readiness. The school will culminate in a graduation rally.

1,300 New Dwellings In 69-70 Program

(Continued from Page 11)

The F. W. Woolworth department store, with 80,000 square feet on the main floor and 11,000 on the mezzanine. A Safeway store, the second of this chain in Thompson, will occupy 30,000 square feet; other allied stores and possibly the town's fourth hotel are included in the planning for the centre.

Thompson now has two major shopping plazas, which includes a Woolworth's and several smaller centres in its commercial development.

It is in new privately financed housing that the town is showing its most spectacular growth. Of the 799 dwelling units of all types started in 1969, 204 were completed and occupied by the end of the year, and an additional 595 will be completed by July 31 of 1970. New starts now projected for 1970, some of which are already underway, will add at least another 500 dwelling units.

Most prominent in housing development, of course, is the 10-floor 97-suite high-rise apartment, Highland Towers. A second high-rise of 135 suites is now on the planning boards. Row or town houses, 120 of them now under construction in one block, and smaller walk-up apartment blocks, are also on the building list, as are club accommodations for single men, now over 900. The number of single family residences in the town, including new starts, is expected to top 1,900 in 1970.

Micro-Wave Great Boon

Construction of the Manitoba Telephone System's micro-wave tower at Thompson added a whole new dimension to living for its citizens, bringing in live the full television service of the CBC as well as such other services as IBM data and TWX communications. Last month Thompson became the first community in Manitoba north of Brandon to have direct dialing of long-distance telephone calls to any place in North America. The micro-wave tower has a capacity of 960 circuits in anticipation of large future development of northern Manitoba.

Thompson is doing its best to keep its school facilities abreast of its rapid growth in population, but despite the pressure no concessions are being made in following the most modern concepts of educational advantages. The \$500,000 addition to the R. D. Parker Collegiate Institute, completed at the year-end, is a model in its field. The new 27-classroom Burnwood, Thompson's fifth elementary school, will be constructed in the open-area concept, with specialized art and science areas.

All In About 12 Years

The visitor to Thompson today, arriving by plane at the smartly designed airport, then touring the huge nickel operations and a town teeming with growth, learns with pardonable disbelief that as recently as 1957 this bustling centre was an untamed land completely devoid of industrial production and almost without human habitation.

G. W. Milne of Toronto, Canadian director of the giant Woolworth organization, who came to make plans for his firm's big new

shopping complex, recalled his early visits to Thompson in 1959, when "high rubber boots were necessary to walk down the main street."

He expressed great confidence in the continued high level of growth in the area.

Brandon really has something to worry about.

Vice Regal Tour Memorable Event

(Continued from Page 4)

In 1967, was the next stop on the vice-regal tour. There the Micheneres were welcomed by the chairman of the library board, A. Crossgrove, and the librarian, Miss Enid Holden. They admired two original A. Y. Jackson paintings hanging in the foyer, and were impressed to learn that the library has the largest per capita circulation in Ontario.

Donald B. Taylor, chairman of town's 1967 Centennial committee, presented two of the town's specially struck Centennial medallions to the Governor General.

Accompanied by Inco executives, the Micheners then embarked on an extensive tour of the Company's operations at Copper Cliff. To the great credit of its planners, the tour proceeded to its conclusion exactly as scheduled.

From the lookout point at Clarabelle No. 1, the open pit mining operations were explained to them by G. R. Green, assistant general manager (mining).

Processes Described

At each section of the reduction plants which they visited in turn, the processes were described to them with the aid of large flow sheets and samples of intermediate products. At the Copper Cliff mill Their Excellencies were received by R. R. Regimbal, superintendent of mills, and Robert Browne, the mill superintendent. At the smelter J. N. Lilley, assistant manager of reduction works, and J. R. Felck, superintendent of smelters, were their hosts. At the fluid bed roaster building, where they saw the final nickel products of the smelter being packed for shipment, they were escorted by Silvio Merla, assistant superintendent of smelters, and Marshall Kostash, superintendent of separation and sintering.

Travelling over to the copper refinery, the vice-regal party was met by the manager, G. A. Dick, and assistant manager E. F. Rabeau. A display of refined copper shapes and precious metals produced in this plant held their attention, as did the explanation of the processes.

Left Lasting Memory

The handsome grey-haired Governor General, with his youthful vigor and enthusiasm, missed no opportunity to meet as many people as he could, several times waiving formality to stride across and introduce himself to men on the job in the plants and enquire about their work. His gracious and charming lady also enjoyed opportunities of chatting briefly with supervision and employees at the various plants. Their visit will long be remembered with pleasure by all with whom the distinguished couple came in contact.

Easy Communications Vital to Industry's Pace

(Continued from Page 13)

and will be installed at other Inco mines.

Used by repair crews, and in the weekly inspection of mine shaft and guides, the holophone provides an important audio link between men working from the tops of the cages and skips in the shaft, and personnel at the shaft collar and in the holstroom on surface.

Operating on the principal of induced current, a radio transmitter installed at the shaft collar induces a signal into the steel hoist ropes via a wire loop antenna encircling the cage and skip compartments.

The signals travel down the ropes to permanent antennas on the skips and cages, which are in turn connected by plug attachments to a portable transceiver operated by repair and inspection crews.

Under mining regulations the holstman can respond only to bell signals, the traditional means of mine-hoist communication, but the holophone provides valuable additional contact between the inspection or repair crew in the shaft, and the holstroom on surface.

Radio control of underground locomotives is now under investigation by the mines research department.

Power Department Network

With a distribution network supplying electrical power to a total of some 30 Inco operations and townsites, from Levack on the north, the iron ore plant on the south, Totten mine on the west, and Coniston on the east, the Company's power department is very dependent upon its comprehensive radio communications system.

Installed in 1967, the system provides voice communication between Inco's generating station at High Falls and switching stations at Levack, Crean Hill and Copper Cliff, and between these stations with supervision or repair crews in the field equipped with mobile or portable two-way radios.

The system has an 80-watt base station, Inco's most powerful, located near Murray mine on the highest ground in the area. A single frequency receiver and two-frequency transmitter, it is operated by ground line from the smelter No. 1 substation at Copper Cliff.

The 30-watt base stations at Levack and High Falls operate on one frequency for receiving and two for transmitting. Boosting the system, the 60-watt Crean Hill automatic repeater base station operates on two receiving frequencies and one transmitting frequency.

The power department's mobile and portable equipment units have one frequency for receiving and two for transmitting, enabling the operators to communicate on one frequency with base stations and mobile and portable equipment within range, and on the other frequency (boosted by the repeater station) with other re-

ceivers which are out of range for direct communication.

The mobile radio unit installed in the Company's ambulance operates on the power department network.

Emergency gasoline generators are installed at Crean Hill, Levack, and Copper Cliff base stations to ensure network operations in the event of power failure, during which radio communication is of the utmost importance in quickly locating and rectifying the malfunction.

Many Other Radio Benefits

Other applications of two-way radio at Inco include a converter department system with base station in the smelter superintendent's office and transceivers in the cabs of the six main converter aisle cranes. Crane movements are controlled through a unit carried by the operating slag boss in the converter aisle, supplemented by the hand signals of the balemen.

The overhead cranes in the grinding, crushing plant, and flotation area at Frood-Stobie mill are remotely controlled by radio, enabling a floor-based crane man to position himself to the best advantage for handling and hoisting loads. The copper refinery makes good use of a similar installation.

The mill also has a 30-watt base station and five portables in a network used for start-up and instrument calibration, and also for trouble-shooting on the 2,200- and 3,800-foot conveyors that bring ore to the mill from Frood and Stobie mines. The new Clarabelle mill will have similar facilities.

At Creighton mine the trucks providing transportation on surface are directed through transceivers by a dispatcher at a 30-watt station.

Preventive Maintenance

The preventive maintenance department at Copper Cliff have a 30-watt base station set up in their new quarters at the smelter, and two portable two-way units which keep them in touch with on-the-job shift supervision.

For calibration of the many remotely controlled and automatic electrical systems in the smelter, the instrument department also use a 30-watt base station in conjunction with portable equipment.

Selected for their dependability and economy, rechargeable nickel-cadmium batteries are used to power all Company portable two-way radios.

All Inco's radio equipment is of solid state design (transistorized), and operates on VHF (very high frequency) FM (frequency modulated) carrier waves.

The use of FM units assures almost complete freedom from atmospheric or man-made interference, thereby permitting the transmission of a much greater volume range and a wider audio frequency range than is possible with AM (amplitude modulation) transmission.

Birth of a Giant

The first truckload of concrete was poured in early March to start construction of the world's tallest chimney at Copper Cliff smelter.

By September the concrete stack will have reached its full height of 1,250 feet. It is one phase of an air pollution control program for the smelter costing \$15 million, designed to give the Sudbury area the purest air of any industrial centre in Ontario while Inco continues its intensive research on other processes for sulphur recovery.

Port Colborne to Host First Aid Semi-Final

For the first time in the history of Inco inter-plant first aid competitions, Port Colborne nickel refinery as defending champions will host the annual semi-final showdown for surface plant teams, with the Duncan Finlayson shield at stake.

Four teams from the Sudbury area operations, representing the Copper Cliff reduction works, iron ore plant, Coniston smelter, and copper refinery, will travel by bus to Port Colborne for the big event to be held in the Inco Recreation Hall on April 9. Judges will be Joffe Perras and Leo Legault of the safety department, and Tom Crowther will be master of ceremonies.

The other semi-final, for mines teams, will be staged on April 6 at the Inco Club in Sudbury for the H. J. Mutz shield. The grand finale for the R. D. Parker shield will be staged at the Inco Club on April 23.

Rugger Football Club Plans for Big Season

Anticipating the April opening of the rugby season, Sudbury Exiles Rugger Football Club publicity chairman Jim Ashcroft and secretary Bob Mark are shown below discussing gear plans for the season.

Both are assistant layout engineers in Inco's mines department at Copper Cliff.

Formed in 1967, the Exiles R.F.C. boasts a total of 45 playing mem-



bers, and as a member of the Ontario Rugger Union is one of the six clubs in the Northern League. Current local club president is Gordon Whittaker.

Spring training has already started, with members turning out for calisthenics, ball-handling, and rules and tactics sessions held Tuesday nights in the gym at Lassalle Secondary School, and Thursday nights at Nickel District Collegiate.

Annual playing member fees are \$12, with the club providing sweaters and socks.

Many Snowmobiling Trophies Won By Wayne Fraser



As the many handsome trophies festooning his machine in this picture demonstrate, Wayne Fraser is a snowmobiling champion.

A winder apprentice in the Copper Cliff electrical department, Wayne started snowmobiling in 1966.

Presently running a 40-hp machine capable of 75 mph, Wayne has raced at Mosport, Peterboro, Sudbury and the two Soos in the 640-cc class.

A member of professional racing

associations in both Canada and the U.S.A., Wayne's proudest accomplishment is having won the cross-country race three years running at the Bon-Soo winter carnival snowmobile derby.

With safety always in mind, Wayne avoids lake crossings at the beginning or end of the season, never goes in the bush alone, and always carries spare parts and fuel. He especially avoids travel on or near any public thoroughfares.



BEHIND THE SCENES AS CURTAIN TIME APPROACHES

LEFT: Lynn Henry, a member of the chorus, and Karen Trezise prepare Ed Rumney for his title role as The Mikado; CENTRE: Nancy Kidd, also of the chorus, watches the results in the mirror as Diane Roy makes up for her part as Pimi-Sing; RIGHT: One of the co-directors, Mrs. Stella Billings, gets Bob Hall ready for his part as Poo-Bah.

High School Group Chalks Up Another Success with "Mikado"

With a company of 50 and a talented cast of leading players, Copper Cliff High School's versatile dramatic and operatic group renewed its long string of Gilbert & Sullivan successes with a repeat performance of "The Mikado".

The excellent acoustics and lighting arrangements of the school's new auditorium contributed greatly to the performance, as they did last year in its initiation with the group's notable presentation of "Brigadoon".

It's hard to beat the droll humor and infectious melodies of Gilbert & Sullivan for an amateur production, and "The Mikado" as staged by the Copper Cliff players was certainly a case in point. On stage as well as in the audience, the enjoyment was mutual.

With the velvet tenor of vice-principal Ed Rumney in the role of the Mikado himself, a highly competent and thoroughly rehearsed cast and chorus rounded out the musical side of the show in fine style, and the book was equally well handled.

AUTOMATIC INSULATION

A "red-hot" electric motor that runs at 1,400°P has been built by General Electric. It survives this level—hot enough to melt many metals—even though ordinary insulation starts smoking at a mere 150°P. How? The field windings of the new synchronous motor are made with a special wire of silver palladium alloy coated with nickel. At high temperatures, the nickel changes to nickel oxide, sheathing the wire in its own electrical insulation.

GOOD WORD FROM GORD

Hello Mr. Editor:

Long time no see. Greetings and thanks again for all the good reading and pictures we get in the Triangle. It is now three years since I retired, and the Triangle is a happy link between the old and the new way of life.

I would also like to congratulate whoever is responsible for the nice magazine called "Family Safety" that is sent out by the Company to all employees. I happened to see a copy the other day and it's really tops.

R. Gordon Tulloch,
Levack.

Others in the cast were Gary Blais (Nanki-Poo), Craig Henry (Ko-Ko), Robert Hall (Poo-Bah), William Charland (Pish-Tush), Natalina Orasetti (Yum-Yum), Beth Brown and Diane Roy (Pimi-Sing), Joan Massecar (Peep-Bo), Jane Syer (Katisha), Reg Deacon (Go-Go), and Megan Brown (page).

The production was co-directed with Mr. Rumney by Miss Gertrude Wilson and Mrs. Stella

Billings. Miss Jean Hunter and Mrs. June Brown expertly played the piano accompaniment. Make-up assistance was given by Mrs. Eileen Lerpiniere of the Sudbury Little Theatre Guild and Mrs. Gordon Thompson, and choreography direction by Miss Ida Sauve.

The show played to two capacity audiences as well as a dress rehearsal attended by pupils of Copper Cliff Public School.

Stobie Angling Champs

Winners in the 1969 Stobie fishing contest, these two expert anglers are seen receiving trophies and prizes for last summer's efforts from assistant mine superintendent Ted Planagan.

On the left, maintenance mechanic Dominic Bertrand won in



the lake trout class with a 21-pound lunker he hooked in Lake Manitou on Manitoulin Island.

Subject for a "believe-it-or-not" column, the mounted 12-pound pickerel in the picture was landed by Vic Desormeau of the rock-house while fishing for trout with a small hook and an eight-pound test line in a creek near Cartier. The ensuing battle lasted for 20 minutes.

Garson Scores "Hat Trick" in Safety Awards



GARSON'S RECENT completion of one million man hours without a lost-time accident is the mine's third major safety achievement attained during the last nine months.

Call it what you will—Garson's glorious "grand slam", or Garson's safety "hat trick"—it's a record of which all the mine's personnel can be justifiably proud.

Compiled between May 14, 1969, and February 18, 1970, the million comes hot on the heels of Garson's capture of the Inco All-Mines safety trophy which made them 1969 champions, and their winning of the John

McCreeedy trophy for Inco mine rescue teams in the Ontario division.

Commenting on Garson's most recent accomplishment, Inco's safety superintendent C. F. Hews stated:

"The million-safe-man-hour award is further evidence of the excellent spirit of co-operation which exists among men and supervision at the mine. They are to be highly commended for their efforts in accident prevention."

"A suitably inscribed award commemorating their achievement will be presented to all at Garson mine who contributed to it."

Posing proudly with the evidence

of their three big feats, and representing the various areas of the mine's operations are:

Standing: Milt Jawsey, area superintendent; Garson and Kirkwood mines; Jim Pettigrew, safety supervisor; Diane Marcotte, secretary to the superintendent; Walter Collis, divisional foreman; Harvey Bangle, assistant superintendent; John Hughes, diesel loaderman and mine rescue team captain; John Brodie, maintenance superintendent; Jack Stewart, stope yeader; Ed Laporte, 1st class plater; kneeling are: Denis St. Aubin, machinist apprentice, and miron McCormick, driller.