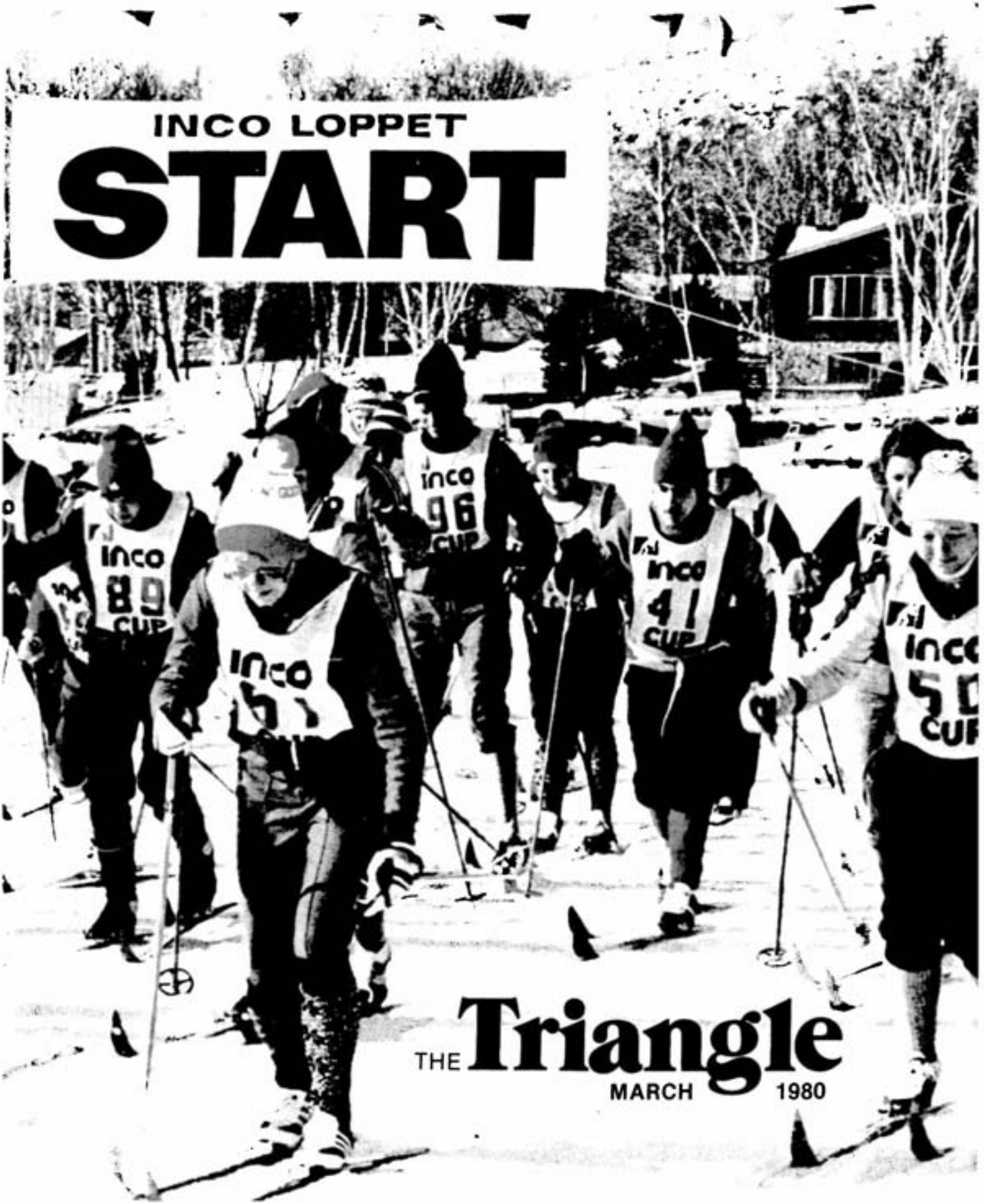
INCO LOPPET

START



THE Triangle
MARCH 1980

THE Triangle

Publications Editor:
Peter vom Scheidt

Writer:
Meribeth Dingwall

On the cover

They're off! Cross country skiers leave the starting line at the Inco Loppet. A day in the fresh air and sunshine, despite poor snow conditions, made everything worthwhile.
See story on page 14.

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Inco Honours John McCreedy

Inco Metals Company's Levack West mine was renamed McCreedy West mine in honour of the late John McCreedy, former vice-chairman of Inco Limited, who died December 7, 1979. J. Edwin Carter, Chairman and Chief Executive Officer of Inco Limited, announced the name change during his recent visit to the Sudbury operations.

"John McCreedy associated his mining career with Levack," said Mr. Carter. "The company has decided to rename the mine McCreedy West in recognition of this and his close association with the company. When the Levack East mine comes into production in the years ahead, it will be called McCreedy East."

It is interesting to note that Mr. McCreedy worked at Levack Mine from 1954 to 1959 as a safety engineer, divisional foreman, — mine miscellaneous, and general foreman. In 1962, he became superintendent of mines for the Ontario division.

Some 175 employees work at McCreedy West mine. Development work at the mine started in 1973, with the first production of ore in 1974.

Introducing Meribeth Dingwall

Writer Meribeth Dingwall has joined the publications section of the public affairs department. She is a graduate of Cambrian College and was born and raised in the Sudbury area. She will be working primarily on the Triangle and IN Touch magazines.

New Corporate Magazine

A new quarterly publication will soon be distributed to all employees. It will cover all areas of Inco Limited's world wide operations which include 54,000 employees in 27 countries around the world.

The magazine is part of Inco's new employee communication program and will be made available to all Ontario division employees in the same way that the Triangle is presently distributed. It will also be available to pensioners if they request it. Details on how pensioners can receive a copy will be in the next edition of IN Touch.

The new magazine will be edited by Ken Cherney, who was formerly the editor of IN Manitoba, the employee publication for the Manitoba division of Inco Metals Company.

Annual Report Available

Copies of Inco's 1979 annual report are available to all employees. They can be picked up at the public affairs department in Copper Cliff, the employee relations department at Port Colborne and at the time office at Shebandowan.

Highlights from Inco's 1979 annual report

The following four pages contain excerpts from Inco Limited's 1979 annual report and deal specifically with Inco Metals Company. Inco Limited is a diversified company engaged in three principal businesses: primary metal, electrical energy and related products and formed metals products. Inco Metals Company is a major operating unit of Inco Limited and is the world's leading producer of primary nickel and substantial producer of copper and precious metals.

Outlook

The past few years have been difficult for Inco. Stringent financial constraints have been required to insure your Company's future good health. These constraints have imposed severe strains on employees and shareholders alike, but we have survived with our basic strengths intact and with the feeling that better days lie ahead.

In assessing 1980 we are encouraged by the fact that our primary metals business is off to an especially good start. Nevertheless, forecasts of recession, political instability in many areas, and continuing high inflation are reasons for caution.

We see the decade of the eighties, however, as a period of substantial growth for Inco: a growth that will reflect increased utilization of existing production capacity, a more diversified range of products, and an early return to satisfactory levels of profitability.

Improved communications with employees and the public and continuing advances in our occupational safety, health and environmental control programs, are high priority corporate goals. We expect to achieve them all.

INCO METALS COMPANY

Operating highlights

Operating earnings ($millions)	**1979**	1978
Net sales to customers	**$1,054**	$ 866
Intersegment sales	**135**	135
Total	**1,189**	1,001
Costs and expenses	**849**	834
Operating earnings, including equity in affiliates	**$ 340**	$ 167

Sales by product ($millions)				
Primary nickel	**$ 807**	**77%**	$615	71%
Refined copper	**115**	**11**	135	16
Precious metals	**87**	**8**	81	9
Other metals	**45**	**4**	35	4
Net sales to customers	**$1,054**	**100%**	$866	100%

Deliveries (in thousands)		
Primary nickel and intermediates	**332,090**	319,070
Nickel contained in formed metal products	**61,540**	58,360
Total nickel (pounds)	**393,630**	377,430
Copper (pounds)	**129,090**	224,560
Platinum-group metals* and gold (troy ounces)	**326**	468
Silver (troy ounces)	**790**	1,140
Cobalt (pounds)	**1,240**	1,700
Iron ore (long tons)	**166**	355

*Platinum, palladium, rhodium, ruthenium and iridium.

We know that society expects more of a corporation than earning a profit, but it must be understood that profitability enhances a company's capacity to provide other social benefits. In fact, we can accomplish nothing unless we maintain Inco's profitability and thus its financial good health.

J. E. Carter

Chairman and Chief Executive Officer

Charles F. Baird

President

February 14, 1980

The year 1979 was one of recovery for Inco Metals Company — a recovery from very low nickel prices, continued recovery in nickel demand, and recovery from the long strike at the company's Sudbury, Ontario operations. Prices improved for other products, with copper, cobalt, platinum-group metals, gold and silver all averaging substantially higher levels than in the previous year.

These other products are principally associated with Ontario Division production and, due to the Sudbury strike, their availability in 1979 was severely limited. Significantly higher quantities are expected to be available in 1980.

Highlights from Inco's 1979 annual report continued . . .

At the Sudbury smelter a furnace was brought into operation to test a process to improve cobalt recovery from converter slag.

n 1979 operating earnings increased 104 per cent from $197 million in 1978 to $340 million.

Marketing

Marketing results for Inco's primary metals during the year compared with 1978 are shown in the tables on page three.

Nickel Inco's total nickel deliveries in 1979 were 394 million pounds (including nickel in intermediate products), an increase of 5 per cent over 1978.

Nickel demand in the non-communist world in 1979 is provisionally estimated at about 1,350 million pounds, 13 per cent higher than the 1,200 million pounds in 1978. Production of stainless steel in 1979 set an all-time record and industrial activity worldwide was at a high level. Strong demand and curtailed production of nickel, due in part to the Sudbury strike, resulted in a reduction of total producer inventories of primary nickel by year-end to about 300 million pounds from 550 million pounds at the end of 1978.

Inco Metals' inventories of nickel at year-end 1979 stood at 89 million pounds, a reduction of 141 million pounds from year-end 1978.

Prices for primary nickel recovered throughout the year. Inco's average net realized price, including deliveries of intermediate products, was $2.43 per pound compared with $1.98 per pound in 1978.

Copper Deliveries of ORC* copper in 1979 were severely affected by the Sudbury strike. Following resumption of production in June, deliveries for the balance of the year totalled 139 million pounds. Inco Metals, which markets ORC* copper in Canada and in Europe, realized an average price of 91 cents per pound in 1979 compared with 61 cents per pounds in 1978.

Precious metals Higher world prices for all precious metals resulted in record sales even though deliveries of platinum, palladium, gold and silver were adversely affected by the Sudbury strike. Sales of $87 million in 1979 exceeded the previous high of $81 million in 1978.

Cobalt Inco Metals' deliveries of cobalt decreased 27 per cent from 1978 as a result of the Sudbury strike and a strike at the Clydach, Wales operation. Despite these production difficulties, higher prices increased sales 85 per cent to $38 million. Cobalt recoveries were increased substantially at the Thompson and Sudbury smelters.

Production

During the year production was reduced primarily by the Sudbury strike and, to a lesser extent, by technical problems in Indonesia, a strike at the Clydach nickel refinery and a short work stoppage at the Exmibal operations in Guatemala.

Nickel production for the year totalled 344 million pounds in 1979 compared with 357 million pounds in 1978 and 417 million pounds in 1977.

Production of copper, which originates mainly from Ontario ores, was 146 million pounds compared with 197 million pounds in 1978 and 328 million pounds in 1977.

Production in the Ontario Division was close to planned levels within two months of the end of the strike in June. Eleven mines are now in operation in the Division, including Shebandowan, which was brought back on stream in June.

Significant technical problems at P.T. International Nickel Indonesia impeded production. Nevertheless, output in 1979 was 19 million pounds of nickel matte, up from 15 million pounds in 1978.

By the second half of the year operations at the Exmibal facility in Guatemala had operated at or near design throughput rates. Production for the year was 14 million pounds of nickel in matte form compared with four million pounds in 1978.

A drop in supplies of precious metals concentrates from Sudbury due to the strike reduced production of precious metals at the Acton, England refinery.

Throughout all of our production operations the main goals continued to be improvements in occupational safety and health programs, employee relations, metal recoveries, productivity, environmental control and energy conservation.

Research and development

Six years of basic research at Inco's J. Roy Gordon Research Laboratory at Sheridan Park, Ontario revealed a possible method of further decreasing Inco's sulphur dioxide emissions to the atmosphere. It involves a new process for physically separating additional pyrrhotite, a sulphur-bearing waste material, from nickel concentrates prior to smelting. The process is now being tested on a pilot scale in Sudbury. Preliminary results are encouraging.

In addition, a novel process for smelting nickel concentrates has been developed. It has the potential for producing a continuous stream of high strength sulphur dioxide gas suitable for the production of sulphuric acid, thereby permitting a reduction of emissions of this gas to the atmosphere. This technology also has the important potential for improving workplace conditions and metals recovery. The process is now

* Inco Trademark

Highlights from Inco's 1979 annual report continued . . .

...ommercially tested at the Research Stations in Port Colborne, Ontario, and plant modifications are underway in Thompson, Manitoba to permit evaluation on a commercial scale. It is planned to complete the testing and a technical and economic feasibility study by the end of 1981.

A new process to improve Inco's gold, silver and platinum metals recovery in Canada has been developed by the J. Roy Gordon Research Laboratory. Further pilot scale tests are scheduled for 1980.

Expenditures on research and development at Inco Metals' process laboratories and research stations in 1979 were $14 million, compared with $12 million in 1978.

Environmental control

The Sudbury smelter continues to operate under an Order, dated July 27, 1978, issued by the Ontario Ministry of the Environment which, in part, limits emissions of sulphur dioxide to 3,000 tons per day on an annualized basis. The company is in compliance with this requirement and substantially in compliance with other requirements of the Order, which expires June 30, 1980. Inco Metals has intensified its continuing investigations aimed at making additional reductions in sulphur dioxide emissions. If the test programs described produce favorable results, further significant reductions in sulphur dioxide emissions could be achieved. Implementation of the new processes would require substantial capital expenditures, and in the case of the smelting process, a solution to the problem of disposing of large quantities of ammonium sulphate.

Occupational safety and health

Occupational safety and health are receiving increased attention. In Ontario, a major occupational safety and health law passed in 1978 was proclaimed in 1979 and new regulations applicable to mining were passed.

Inco Metals Company continues to comply with the occupational safety and health guidelines and standards applicable to all its operations. Workplace exposures are being monitored in each operating unit.

In the United States, the Occupational Safety and Health Administration (OSHA) has announced its intention to establish new standards for workplaces where nickel is present. The company has undertaken three epidemiological studies of its workers and has encouraged other producers and consumers of nickel to do the same. Altogether, 18 epidemiological studies have been initiated. Results from most of these should be available in 1981 and should play an important role in OSHA's rulemaking.

In 1979 considerable improvements were achieved in safety performance in the Ontario Division. These improvements reflect continuing attention to safety organization and efforts, as well as a massive re-instruction program undertaken to reacquaint employees with the safety aspects of their jobs, prior to return to work following the Sudbury strike.

Exploration

Inco Metals spent $12 million on exploration in 1979, the same as in 1978. About 70 percent of these amounts were spent in Canada. A large portion of exploration was in the vicinity of Inco's Canadian mines with some geological targets being drilled to a depth of 10,000 feet.

Ore reserves

At year-end Inco had proven ore reserves in Canada of 436 million short tons, containing 4.9 million short tons of nickel and 4.2 million short tons of copper. This compares with reserves at year-end 1978 of 397 million short tons containing 5.6 million short tons of nickel and 4.2 million short tons of copper. Only material that has been sampled in sufficient detail to enable a reliable calculation is classified as reserves.

Industrial relations

In the Ontario Division a new three-year agreement covering production and maintenance employees in the Sudbury area was ratified on June 3, 1979, ending a strike of 21 months. Staff employees continued to work during the shutdown of the Sudbury operations. During the strike, the Port Colborne nickel refinery continued operations under a one-year agreement which expired July 10, 1979. This contract was renegotiated prior to its expiry date.

Both the Sudbury and Port Colborne agreements terminate on May 31, 1982.

Nearly 99 per cent of the production and maintenance workforce reported to work at the end of the Sudbury strike. Special training programs for an orderly start-up on July 5 and recovery from the strike proved successful.

Efforts to restore positive company-union relations continued through joint, co-operative committees active in the areas of occupational safety and health, drug and alcohol counselling, employee training and financial counselling.

A communications program, which was introduced in the Manitoba and Ontario Divisions, entails presentations to all employees, union leaders, government representatives and the communities at large. The program reviewed aspects of Inco's operations and was designed to give a better understanding of the company's operations, policies and objectives.

Employees

At year-end 1979, Inco Metals had a total of 24,376 employees. Of this total 17,922 were in Canada, 2,649 in Indonesia, 1,426 in the United Kingdom, 967 in Guatemala, 299 in the United States, and 109 in other countries. At year-end 1978, Inco Metals employed 23,795.

Family Album

This is the Novacic family from Sudbury. Father, Steve, is a balling-disc operator assistant in the matte processing department at the Copper Cliff smelter. Steve and his wife Mary have two sons, Anthony, 19 and Steve Junior, 16. Both boys are busy pursuing their secondary school studies, but take some time out to play hockey at the local hockey rink and swing the baseball bat in the spring and summer months. Looking after a family and household takes up most of Mary's time. Steve and Mary visited relatives and friends in their native Croatia three years ago and are making plans to visit their native country again.

From the Port Colborne nickel refinery we have the Brian Scott family. Brian has been with Inco for 13 years and was recently given new responsibilities as a preventive maintenance co-ordinator. Brian's interest in sports makes him an active participant in both hockey and baseball as well as an umpire and a referee. Brian's wife Jo-Ann is a bowling enthusiast and spends as much time as she can on her hobby of ceramics. Children are, Sandy, 8, Allison, 6 and Greg who is 4.

Marcel Ayotte, a planner at Copper Cliff South mine, is out numbered by females in his family. He and his wife Rachel have four daughters. They are, Cynthia, 7, Debora, 11, Diane, 15 and Louise, 17. The family is quite involved with guiding as you can see by their uniforms. Rachel is a guide leader, Louise is a former guide, Diane is a pathfinder and Cynthia is a Brownie. Ringette also scores high on their list of activities. Marcel is a coach and director of ringette at the Adamsdale playground and most of the girls play. Marcel also manages to get in the odd hockey game in the oldtimers' league at Carmichael Arena.

PEOPLE

At the new divisional shops, senior mechanical specialist **Gerold Heinze** does a final quality check on the first ST8 scooptram to be totally rebuilt at Inco's Sudbury operations by its own employees. According to Gerold, the scooptram required some 950 man hours to re-assemble and will be used at Stobie no. 7 shaft.

Gerry Dinel, a safety assistant at Inco's safety and plant protection department in Copper Cliff, gave the company's first aid awards - the H.J. Mutz (left) and the R.D. Parker Trophy (right) a major facelift recently.
Gerry, who makes wooden furniture in his spare time, says he accepted a suggestion to reconstruct the trophies which were in need of repair. Each trophy required a month to remake, Gerry says. The new trophies are made of solid oak and have more space for nameplates.
"I took the original block of wood from the Mutz Trophy and attached it to a solid oak shield. The oak for the shield of the Parker Trophy had to be cut in two inch strips, then glued together. After shaping the wood to the shield design, I sanded it. An oil finish was then put on the wood. Each trophy received about 10 coats of tung oil which is applied by bare hand," Gerry explains.
"It's gratifying to see the wood take shape and to see the grain of oak coming out. I am very pleased with the results," says Gerry.
It's easy to see why.

Miner's talk

At the invitation of a class of some twenty students at Franco Cite Ecole Secondaire in Sturgeon Falls, **Bernard Filion**, general mine safety foreman at Garson mine and **Gerry St. Louis**, general mine safety foreman at Levack mine, recently presented a general mine safety review of Inco's Sudbury operations.

In "miners' talk" as they termed it, the safety foreman presented slides of Levack west mine operations as well as a display board illustrating all the protective equipment available to miners.

"The presentation was very interesting. It didn't last long enough," said student Janine Amyotte. Janine's teacher, Gerry Latulippe, expressed surprise at the changes being made in the mining industry since he worked underground some years ago. "The presentation was very informative and interesting," the teacher said.

Safety foremen Bernard Filion and Gerry St. Louis were pleased with their visit to Franco Cite Ecole Secondaire. "We enjoyed very much explaining the safety aspects of mining to the students. They were very attentive and asked many pertinent questions."

PEOPLE

Three members of Inco's bowling team check their team's lineup at the "Celebrity Day - Bowl for Millions" tournament sponsored by the Big Brothers Association of Sudbury. The bowlers are, from left to right: **Claude Kerr,** senior field engineer, **Hugh Judges,** manager of matte processing and **Dick Bontinen,** senior process technology assistant at the copper refinery.

Inco's celebrity bowling team beat its opposition from Falconbridge Nickel Mines Limited recently at the "Celebrity Day - Bowl for Millions" tournament at Notre Dame Bowl sponsored by the Big Brothers Association of Sudbury. "We cleaned them," said bowler **Hugh Judges,** manager of the matte processing department at the Copper Cliff smelter. The Inco team and other Inco employees who obtained pledges from their own plants, raised over $500 for the Big Brothers Association. Members of Inco's bowling team are, from left to right: **Claude Kerr, Dick Bontinen, Dave Scott, Hugh Judges, Ron Santala** and **Pat McNamara.**

Back the Cat

A special x-ray film card, signed by the staff of the radiology department at the Sudbury General Hospital was sent to Ontario division president, **Wint Newman**. The card said in part; "please find our thanks in the form of a special card . . . with respect to the recent commitment by Inco Metals Company of $400,000 towards the cost of the C.A.T. scanner. The scanner will prove to be an invaluable aid in the diagnosis of many diseases and conditions of northeastern Ontario patients, and will be a big change for our staff and the x-ray department of this hospital."

We're five generations! Leo Frappier, a first aid man at Clarabelle Mill, smiles with four other generations at a recent family get-together. With Leo are from left: daughter **Mrs. Claudette Grexton** (formerly Mrs. Laurence McKerral) from Fredericton, New Brunswick and grand-daughter **Lorraine St. Germain** (nee **McKerral**). Seated is the oldest generation, Leo's mother **Mrs. Juliette Frappier,** who is 87 years young with the newest generation, great-great-grand-daughter **Crystal Sue-Anne Marie St. Germain,** 10 days old when the photo was taken.

The boys at Clarabelle mill known as the **Clara Bell Mill Crushers** played a game of pick-up hockey against the boys from the Copper Cliff mill, known as the **Over the Hill Mill Gang.** The game was played at Centennial Arena in Hanmer but no one is saying what the score was. The boys hope to arrange other games with the Frood-Stobie mill.

PEOPLE

The Walden Figure Skating Club recently presented "SEASONS" at its 5th annual winter carnival of stars at the Walden Community Centre. Junior, intermediate, senior and guest skaters dazzled a large crowd with a colorful display of skating talent. Many of the skating stars were children of employees of Inco Metals Company. Picture here, from left are junior skating stars — **Allison Fex** as Minnie Mouse, whose dad Alex works at Inco's sales tax and customs office in Copper Cliff, **Lyn Nadeau** as a baby duck, whose father Jim works in the transportation and traffic department in Copper Cliff, **Mark Fritz** as a goblin, whose dad Tony works in the converter department at the Copper Cliff smelter and **Peter Longo** as Mickey Mouse. Peter's father Aldo works in the I.P.C. department at the Copper Cliff nickel refinery.

The Inco Trophy, emblematic of supremacy in the main event of the Port Colborne Business Girl's Ports of Call Bonspiel was presented to Joyce Ruetz's rink from the Kitchener Granite Club. In the photo, from the left are: second, **Rose Movold,** skip, **Joyce Ruetz,** supervisor of public and community affairs at the Port Colborne nickel refinery **Elaine Arnold,** vice, **Janet Sherk** and lead, **Barb Noll.**

A large crowd of supporters were on hand at the Levack complex first aid competitions. The eventual winner of the three-team competition was Coleman mine, maintenance. **Eric Kossatz,** manager of the Levack complex, presented the trophy to team members, **Carmen Quevillion, Danny Hull, Marcel Henri, Rodd Burns, Nick Schatalow** and **David Nichols.**

There are many people involved behind the scenes at the R. D. Parker safety competition. Among them are those people who make the props and graphics. Making final adjustments to the "pitcher" prior to the competition are, clockwise from left, **Ellard Belter,** plant protection supervisor, **Lino Filippini** from the safety and plant protection department, **John Piazza** and **Armando Urso,** both from the transportation and traffic department.

LOOKING BACK

THROUGH THE PAGES OF THE TRIANGLE

35 Years Ago

Employees flipping through the pages of the Triangle's March issue 34 years ago realized that their considerable efforts had contributed to the successful defence of the free world. They read how the company was shifting production from a war orientation back to peacetime activities. The March, 1946 Triangle carried a story on how phosphorous deoxidized tube billets produced at the Copper Cliff refinery and used during the war for the fabrication of shell driving bands, were now back to their pre-war use, the manufacture of seamless tubing.

In another post-war development, International Nickel announced the formation of a Toronto based Development and Research Section staffed by Dr. Gordon S. Farnham, A.S. Tuttle and H.J. Butterill. The function of this department was, according to the Triangle: "to extend to Canadian industry a complete consulting and technical service on metal problems." The new Canadian Section would have at its disposal all the facilities and the expertise of the company's American and British Divisions.

20 Years Ago

Fifteen years later Inco, in its annual report to the shareholders, gave indications that it had recovered from the recession of 1958. More nickel was mined, and more importantly, more nickel was sold than ever before. A total of 16,768,000 tons of ore were dug out of Sudbury and district mines. With the aid of vigorous marketing programs which included product research, advertising, technical and trade literature and special promotions and development work with present and potential nickel users, 351,880,000 pounds of nickel were sold largely to Western European nations. Reflecting the optimistic outlook for the future of the nickel industry, Inco announced that its Manitoba operations were nearly ready for production.

Examining the recreational front in Sudbury and area the Triangle of March, 1961 carried a story on the local hockey boom. The article revealed that over 3,000 kids participated in the sport in playgrounds across the district. With the accent on participation all children were welcomed. One playground even featured a young female goalie. Amazingly enough, in light of the controversy sparked in recent years by girls playing on boy's teams, no one complained about little Peggy Oja's performance between the pipes. The only problem reported with this extensive playground and school hockey system was a lack of parental interest.

5 Years Ago

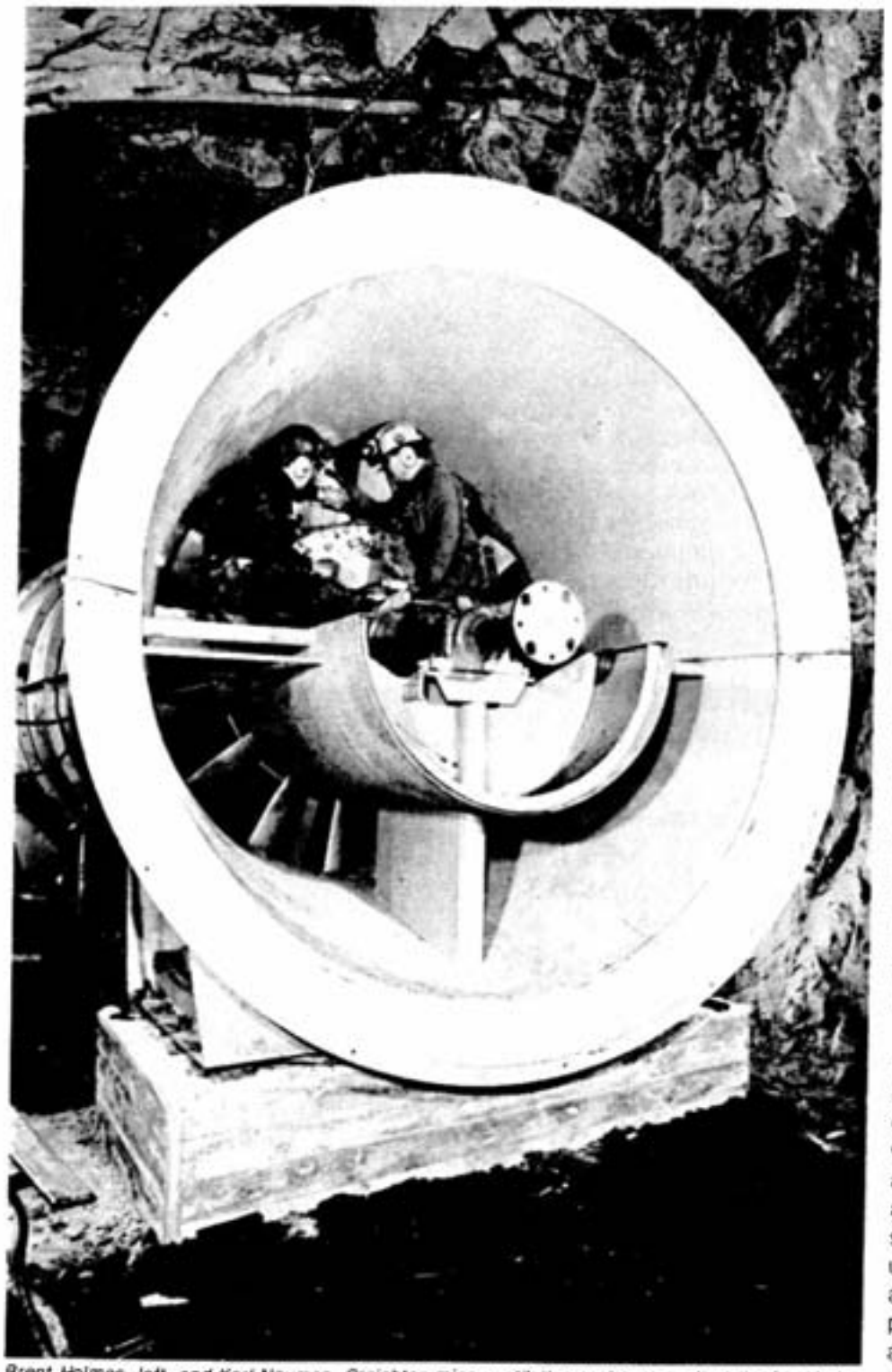
Triangle readers learned of the part played by nickel in man's newest extra-terrestrial adventure - the space shuttle. Called the harbinger of a new age of flight, the space shuttle would replace the "one-shot" launches of conventional space craft with a reusable delivery system.

A high-performance liquid propellant rocket engine that develops 470,000 pounds of thrust is the key to the shuttle program. With such a massive thrust capacity and an expected lifespan of 55 starts, the engine commands a construction which is both strong and durable. Space engineers found the answer to their needs in nickel alloys. High nickel alloys developed by Huntington, INCONEL nickel-chromium alloy 718 INCOLOY nickel-chromium alloy 903 are both used extensively throughout the engine.

In the evolution of history, nickel had accompanied man from the days of the horse drawn carriage right into the age of space.

Phosphorous deoxidized tube billets produced at the copper refinery were used in the fabrication of shell driving bands during the war.

Ventilation update at Creighton



Brent Holmes, left, and Karl Neuman, Creighton mine ventilation assistants, adjust the fan blade settings, one of the methods of controlling fan performance.

At the 7,000-foot level, the lowest level of Creighton mine no. 9 shaft, the rock temperature is warm. As the rock temperature increases with the depth of the mine, good ventilation must be maintained for a proper work environment. This ventilation has been further improved with the installation of new axial-flow fans at the 2,600-foot level.

"As Creighton mine operations deepen, the mine ventilation system has to be improved continually," explains Milt Jowsey, Inco's assistant vice-president of mining and milling. "The fresh air that is drawn into the mine is used to remove noxious fumes and at the same time cools the working environment, making it more comfortable."

The installation of two new ventilation fans at the 2,600-foot level at Creighton nine shaft is part of a long-range plan to significantly increase the mine ventilation volume, according to Maurice Coulter, Inco's mines ventilation engineer. "We plan to increase the volume of air in the lower levels of the mine from 600,000 to 1,400,000 cubic feet per minute," Maurice says. "That volume of air is equivalent to air in a 30-foot diameter tunnel travelling at a velocity of 1,980 feet per minute or 22½ miles per hour."

The new axial-flow fans, some 90 inches in diameter and 25 feet long, operate on a principle similar to that of an airplane propeller. Fresh air, which is heavier than the warm moist air in the mine, is picked up by the air-foil blades and passed through to straightener vanes which force the air under pressure down the intake airway. "The axial fans boost the pressure of the air, forcing it through an air circuit," Maurice explains.

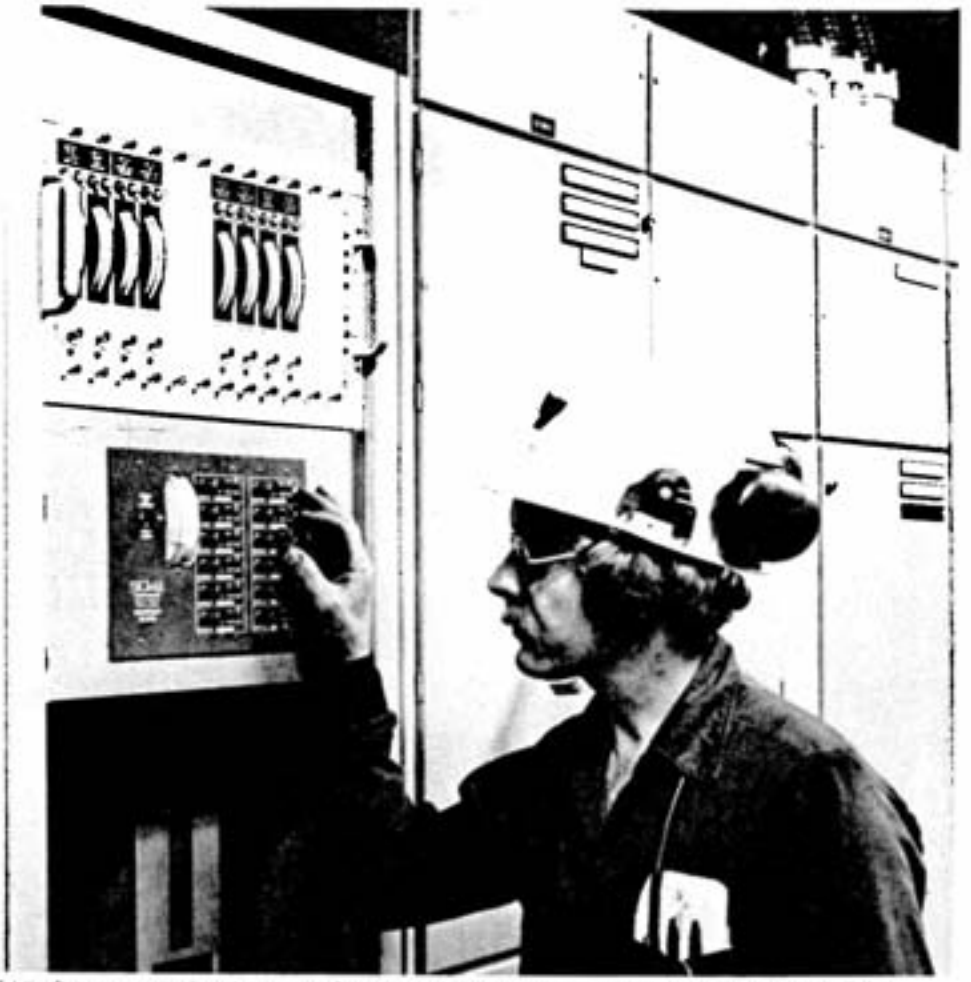
The new fans have 450 horsepower motors. They replace older fans

mine

presently operating at the 2,600-foot level and will handle 530,000 cmf as compared to 480,000 cfm for the older fans. "It's an overall updating of the ventilation system," says Maurice.

The axial-flow fans will drive air down to the bottom of the mine, to the 7,000-foot level Maurice adds. Four fans, identical to the new ones, are presently operating at the 5,000-foot level; two are on the intake airways, two on the exhaust airways.

The process of installing the fans began in November and was completed in March, according to the mines ventilation engineer. "The whole installation costs in the order of $300,000 and required a small Inco work force," Maurice says. "The new fans, along with the series of fans at the 5,000-foot level and a set of return air fans at the 1,900-foot level, will supply air through the main airways at Creighton mine."



Eddie Peters, central maintenance foreman, checks the fan control monitoring centre. This centre picks up fan vibrations as well as bearing temperatures. Excessive readings will automatically shut down the fan and in turn set off an alarm on surface.

Karl Neuman, Creighton Mine ventilation assistant, records the motor nameplate data for future reference. This 450 h.p. motor turns the shaft at some 880 rpm.

Art Bradbury, a maintenance mechanical leader, checks the shaft lineup, ensuring that the shaft is properly centered and the bolts are properly tightened. Even the slightest deviation will cause excessive vibration, resulting in rapid bearing wear.

Inco's Annual Lo

Bill Kovvu, plant protection officer at the Iron Ore Recovery Plant, relaxes after the 30 kilometer run. Bill is a member of the Voima Club and was one of the main organizers of the event.

This year's Inco Loppet was held under bright blue Northern Ontario skies and cold crisp temperatures at the Voima Athletic Club on Sunnyside Road in Sudbury.

There was a general lack of snow throughout most of the province and Sudbury was no exception. Because of this the regular Voima trails couldn't be used and the event was held on the frozen water of Long Lake.

Despite the poor snow conditions 237 people turned up for a day of recreation and comradeship. Most had their fill of steaming pancakes and sizzling sausages before they waxed their skis and headed out to await the starter's gun.

There were four distances you could ski. The 30, 15, 10 or five kilometer courses offered enough length to challenge everyone from a novice to an expert. Since this is not a competition, but a recreational outing, there was no pressure to beat anyone. The idea was to enjoy the day skiing with your friends.

The following is writer Meribeth's account of cross country skiing in the Inco Loppet.

By Meribeth Dingwall

I cross-country skied for the second time in my life at the 4th Annual Inco Loppet held February 10 on Long Lake. When I went out the first time I didn't ski five kilometers. I didn't even know how far five kilometers was. I sure do now.

The day was bright and alive and so was I as I donned my attire for the Loppet. A pair of long johns, three pairs of socks, three sweaters, two pairs of mitts, a ski jacket and a toque should suffice to ward off the creeping cold, I thought.

After a warm refreshment at the Voima Hall, the Loppet headquarters, with my skis freshly waxed and my never-worn-before boots snugly laced, I went for a practice run.

The trails on Long Lake were well established, stretching for miles (or shall I say kilometers?) in several directions. I headed west, travelling fast on my new skis. Once in awhile I stopped, either to catch my breath or wallow in the beauty of the day — in the sun, in the stillness, in the openness out there on the lake. Feeling totally invigorated, I turned back to the starting area for the Loppet.

ppet – Firsthand!

The 30 and 15 kilometer events began at 11:00 a.m. Just before the 10 kilometer event started at 11:10 a.m. I was in a quandary. "Should I enter the 10 kilometer event?" I asked myself. "I feel good, I think I can make it . . . no, it's better to play it safe. I'll enter the five kilometer, then I'll know what my endurance level is."

The sound from the starter's gun at the beginning of the five kilometer event felt like it had exploded in me. I was now in the event, my legs striding mechanically at a quick pace, my hands clenched to the ski poles trying to move in some kind of unison with my lower limbs.

With some 70 skiers in the five kilometer event, I raced east towards a rock island. Around it we went, heading across to the south shore of Long Lake. On the way my legs began to ache, my lungs tightened and my sunglasses fogged up. Many younger skiers passed, some glanced over and smiled at me. I tried to hasten but my lungs said: "NO!" An angry voice in my head yelled at me: "Keep going, you will make it!"

Along the south shore I plodded. Looking back, I saw only a handful of skiers, realizing my pace had drastically lessened. Around a second island I went. Two elderly participants chatted to each other as they passed.

Ah, the finish line was in sight. A sudden rush of energy to those semi-numb legs and I was there. With my time card (it took me a good 23 minutes to finish the five kilometer course) in one hand and my skis and poles in the other, I went back to the Voima Hall for a quencher of orange juice. For the next week my body informed me how far five kilometers is.

Wait til next year.

Pancakes and sausages were the order of the day. "Fuel for the ski ahead," was the excuse used by most participants in the loppet.

Nothing like a refreshment break after a rough ski to quench your thirst.

co in the mmunity

Inco, on behalf of all employees, supports a variety of community clubs, groups, organizations, institutions and projects by means of financial contributions and donations of goods and services. These worthy causes range from medical to recreational, and from educational to cultural, and are examples of Inco's commitment to the communities in which our employees and their families live and work. Listed here are a few of the many institutions and other establishments , who were assisted in numerous ways over the past few months.

Little Current Fire Department, Canada Summer Games 1981, Thunder Bay Symphony Orchestra, Four-Way Home & School, Big Brothers of Welland County, Jr. Achievement of Niagara Peninsula, Niagara Regional Science and Engineering Fair, Port Colborne High School exchange students, Ontario Heart Foundation (Port Colborne), Brock University, The Press Theatre, Sir John Colborne Youth Soccer Club, Canadian Red Cross (Port Colborne), Canadian Children's Authors, Illustrators and Performers, Ontario March of Dimes (Port Colborne) Ontario March of Dimes (Copper Cliff), Finnish Senior Citizens Club, Onaping Golden Age Club, Quanta Drama Festival, Northern Regional Recovery Home for Women, Cambrian Youth Orchestra Parents Association, Sudbury House.

Tom Rumley, right, a driller at Copper Cliff South mine, presented a $500 donation on behalf of Inco Metals Company to the Ontario Society for Crippled Children. Accepting the cheque was the Society's "Tammy", four year old **Tera-Lyn Hartley** and her father **Ivan** who works at McCreedy West mine. Tom was about to embark on a 100-mile snowmobile trip as part of "Snowarama" sponsored by the Levack-Onaping Lions Club. The event was used as a fund-raising project for the Ontario Society for Crippled Children.

Appointments

Rita Boisvert, maintenance clerk, matte processing.

Richard Bourget, senior drill technician, mines exploration, Copper Cliff.

Fi Ceppetelli, programmer, computer systems, Copper Cliff.

Ronald Colquhoun, mine foreman, Garson mine.

Gerald Dennie, maintenance foreman, copper refinery.

Mona Dusick, clerk stenographer, mines engineering, Levack mine.

Herbert Fines, engineer, engineering, Copper Cliff.

Harvey Flynn, maintenance foreman, Copper Cliff central shops.

Abel Gallo, process foreman, Copper Cliff smelter.

Marcel Gaumond, crushing plant foreman, Stobie mine.

Donna Halverson, programmer analyst, computer systems, Copper Cliff.

Jeffrey Prince, timekeeper, Creighton mine.

Kenneth Langille, supervisor estimating and cost control, Copper Cliff.

Jane Maki, process assistant, Copper Cliff smelter.

Tom McDonald, mill foreman, Copper Cliff central mills.

James Michlouski, maintenance assistant, Coleman mine.

Louis Mourot, smelter foreman, Copper Cliff smelter.

Patricia Neuman, clerk stenographer, personnel, Copper Cliff smelter.

Donald O'Brien, planner, Levack mine.

Robert O'Daiskey, chemist, iron ore recovery plant.

Gerald Paquette, shift foreman, matte processing.

Debra Presniak, programmer, computer systems, Copper Cliff.

George Huycke, survey party leader, Levack mine.

Ivan Thurlow, process foreman, Copper Cliff smelter.

Leonard Tremblay, training supervisor, Frood-Stobie No. 9 shaft.

Jan van Cruyningen, concept design specialist, engineering, Copper Cliff.

Len van Eyk, mine foreman, Coleman mine.

Bill Zawalnuk, senior draftsman, engineering, Copper Cliff.

South mine wins R.D. Parker Shield

The Copper Cliff south mine and the Copper Cliff copper refinery displayed their first-aid expertise at Inco Metals Company final first-aid competition for the R.D. Parker Shield at the Inco Club March 6.

The first-aid team from Copper Cliff south mine came up victorious in the tight contest. "It was a very close competition," said Hank Derks, Inco's chief first-aid co-ordinator and organizer of the Parker competition. "The teams were neck and neck all the way."

Inco's annual first-aid competition for the R.D. Parker Shield has been going on for 43 years. Winners of the Parker Shield represent the best first-aid team in the Ontario Division of Inco Metals Company.

"The Inco first aid competition for the R.D. Parker Shield instills an interest in first-aid among all employees within our division," says Hank. "When people get involved in first-aid training, they become more safety conscious. It makes them safer workers."

Before a crowd of over 400 people, the copper refinery and south mine had the opportunity to show their first-aid expertise in a simulated real life accident. The accident problem was designed by Hank Derks.

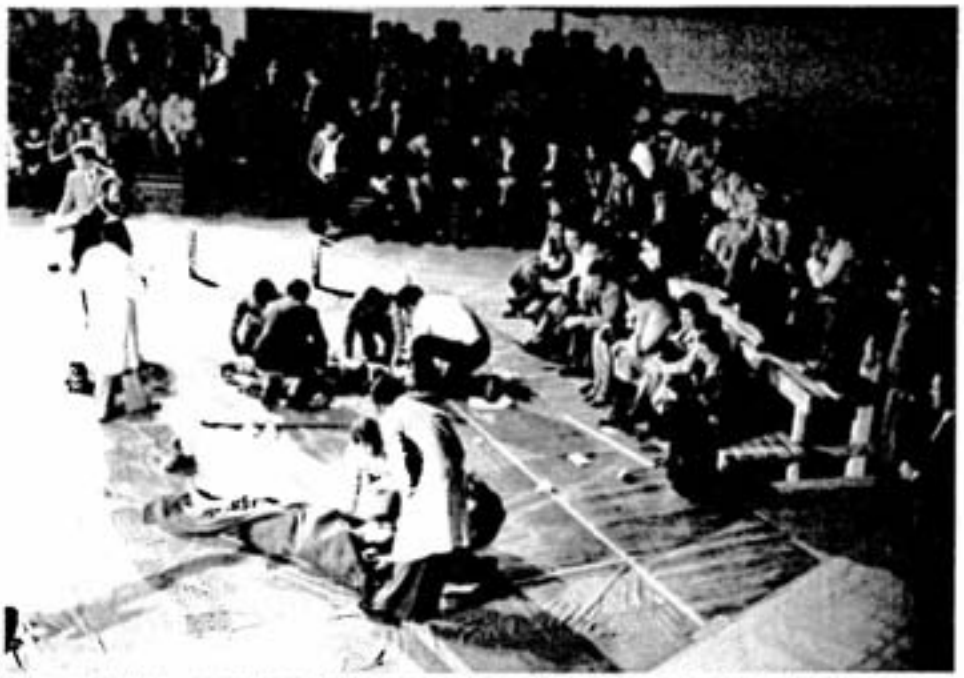
The accident occurred at a baseball stadium. The home team was up to bat with a runner on third base. At the crack of the bat, the runner headed for home plate and collided with the catcher. Four people were injured — the catcher (Jack Corrigan Junior, son of Jack Corrigan, an Inco safety assistant), the base runner (Paul Kenyon, son of Gerry Kenyon, an Inco electrical general foreman), a spectator struck on the head by the ball (Cris Kenyon, son of Gerry Kenyon) and a female (Janet Kenyon, a clerk-steno at Inco's safety office in Copper Cliff and daughter of Gerry Kenyon) as an hysterical companion of the injured spectator. According to Hank, it was the first time that a female was used as a casualty in the Parker competition.

Victorious South mine team, representing the Copper Cliff mines area, proudly display the R.D. Parker Shield. Team members are, from left, Stan Ojanpera, Willy Galipeau, George Jenkins (captain), Denis McGregor and Walter Mariga.

Amused spectators watch as Janet Kenyon, playing an hysterical lady, gives Stan Ojanpera from Copper Cliff South mine, a rough time. Judge is Jack Corrigan and "injured" spectator is Cris Kenyon.

Fifteen minutes later, a commotion erupted in the stands which were occupied by actual members of the audience. Realistic sound effects indicated that the stands were about to collapse. The crowd panicked and two spectators (Raymond Racicot, son of Gerry Racicot, Inco plant protection officer and Mike Dinel, son of Gerry Dinel, an Inco safety assistant) were trampled by a stampede of people rushing out of the stands.

Each team had a maximum of 45 minutes to complete the problem. "As the competitions continue, we try



Action on the floor as members of the copper refinery team attend to injured spectators.

to make the problems more difficult because the level of expertise improves. The problem is not a trick thing, it's an actual realistic situation in which the teams' first-aid skills are tested," Hank explains. "We stay away from anything related to a mining or surface plant scene. There must be no connotation of mining or smelting whatsoever." Hank explained that if there was a mining or surface plant accident, one of the teams would be at a disadvantage. They wouldn't be familiar with that working environment and the possible dangers that exist there. It would be unfair to the other team.

A total of 80 teams from the mining and milling and the smelting and refining section started out in the preliminary first-aid competitions which began in January. Five teams from the mining and milling section — Garson mine, Coleman mine, Creighton mine, Copper Cliff South mine and Frood mine — competed for the H. J. Mutz Trophy. Seven teams from the smelting and refining section — Port Colborne nickel refinery, Copper Cliff smelter, Copper Cliff copper refinery, iron ore recovery plant, matte processing, divisional shops and transportation and traffic — fought for the D. F. Finlayson Trophy. The finalists from each section then locked horns for the coveted R. D. Parker Shield.

The actual training for the first-aid competitions began in early December and has been going strong ever since. "The teams have a keen interest and a competitive spirit," Hank says. "They practice everyday and even get together on weeknights and weekends to practice. They develop a real camaraderie among themselves."

The training, of course, pays off. "The competitors are extremely competent in any illness or accident situation. Many of them in past years have been involved with mishaps in real life which required accident expertise. They've also acquired practical first-aid training where they work," says Hank.

Over 40 people were responsible for making the Parker competition a success. After the problem had been established, five prop and graphics people from Inco's transportation and traffic department (Armando Urso and John Piazza) and saftey and plant protection department (Lino Filippini, Ellard Belter and Fred Eng) were given the task to design an authentic set. A five-member team of medical doctors (Dr. Wally Woychuk and Dr John Jones) and first-aid people from Inco's safety and plant protection department (Gerry Dinel, Jack Corrigan and Ricky Cholette) were chosen to judge the competition.

Four casualty simulators or makeup people had the job of preparing six actors as accident victims. The competition also required two people as bystanders, two timekeepers, one scorekeeper and two sound effects people.

And of course, the 12 stars — members of the first-aid team from the Copper Cliff copper refinery — captain Len Leclair, Ray Cottin, Rick Barnes, Rick Shuart, Dave MacIsaac and coach Norm St. Amand; the first-aid team from Copper Cliff south mine — captain George Jenkins, Walter Mariga, Stan Ojanpera, Denis McGregor, Willy Galipeau and coach Kurt Fuerniss.

"It feels great to win the Parker Shield," says captain of the first-aid team from South mine, George Jenkins. "It was the best Parker competition I've ever witnessed. It was very well organized and quite exciting because of the audience participation. The props were fantastic, the simulation of the accident was so realistic."

The winning team of the R.D. Parker Shield will represent Inco Metals Company in the McCrae Trophy competition with other mining companies in the province. Winners and runner-up in the McCrae competition will have an automatic entry into the St. John Ambulance Provincial Open competition in Toronto.

The following three pages are dedicated to the 12 first aid teams who participated in the Mutz and Finalyson competitions. The winner of the H.J. Mutz Trophy - Copper Cliff South mine and the winner of the D.F. Finlayson Trophy - the Copper Cliff copper refinery, squared off for the R.D. Parker Shield to determine the best first-aid team at Inco's Ontario division.

Copper Cliff mines: top, from left; Stan Ojanpera, George Jenkins (captain), Denis McGregor. Bottom, from left; Willy Gallpeau and Walter Mariga. Coach Kurt Fuerniss is missing from photo.

Garson mine: top, from left; Gilbert Roy, Ivan Moore (captain), Keith Harris. Bottom, from left; Robert McFarlane and Stan Rice. Coach Fred Horner is missing from photo.

Creighton mine complex: top, from left; Robert Charron, Perry Kirkbride (captain), Paul Roy. Bottom, from left; Brian Murphy, Robert Boyer (coach) and Oscar Potvin.

Frood-Stobie complex: top, from left; Jean Daoust, Branko Adamovitch (captain), Tony Chouza. Bottom, from left; Peter Blais and Andy Frescura. Coach Robert Sallows is missing from photo.

"When people get involved in first-aid training they become more safety conscious."

Levack mine complex: top, from left; David Nichols, Marcel Henri (captain), Danny Hull. Bottom, from left; Carmen Quevillion and Rodd Burns. Coach Nick Schatalow is missing from photo.

Divisional shops: top, from left; Gord McCandless, Wayne Butler (captain), Pierce Latour. Bottom, from left; Percy Barriault, Gerry Regimbal (coach) and Don Demore.

Matte processing: top, from left; Ranoy Bouchard, Allan Burns (captain), Rick David. Bottom, from left; Ron Coleman, and Maurice Therrien. Coach Bill Myorniuk is missing from photo.

Port Colborne nickel refinery: top, from left; Caesare DiCarmine, Archie Ferguson (captain), Albert Schrader. Bottom, from left; Dan DeLuca, Orval Martin (coach), Joe Sammut.

"The teams practice everyday and even get together on weeknights and weekends to practice."

Copper Cliff copper refinery: top, from left; Rick Shuart, Len Leclair (captain), Rick Barnes. Bottom, from left; Dave MacIsaac, Norm St. Amand (coach), Ray Cottin.

Transportation: top, from left; Frank Grenier, Ivan Jardine (captain), John Filiatrault. Bottom, from left; Larry Stevenson, Vic Henderson (coach), Don Primeau.

Iron ore recovery plant: top, from left; Vince Wierzbicki, Jim Barclay (captain) Vic Walberg. Bottom, from left; Tom Fowler, Harold Glasby (coach), Richard Brown.

Copper Cliff smelter: top, from left; Ottavio Fredat, Gerry Benedetti (captain), Neville Moores. Bottom, from left; Norm Marcil, Reg Gareau (coach), Jim Moise.

Copper refinery bonspiel

The Copper Cliff copper refinery athletic association held its annual curling bonspiel February 15-16 at the Copper Cliff Curling Club. Forty teams - 160 men and women - competed in the curling bonspiel. According to Bud Ellis, a chemist at the copper refinery and secretary-treasurer of the copper refinery athletic association, the annual curling bonspiel has been a popular event at the copper refinery for over 25 years. Skip Sliver Marcon's team, consisting of vice Bob McDonald, second Jim Anson and lead Norm Urwin, came up the winner of the President's Trophy.

Creighton mine bonspiel

The Creighton mine employees association held its annual curling bonspiel at the Copper Cliff Curling Club February 24. Fourteen teams, 56 people including Inco pensioners from the Creighton mine complex area, participated in the curling event. The team of skip Ed Krezacek, vice Graham Ross, second Wilf Rochefort and lead Stan Bradbury won cribbage boards made at the Creighton mine complex and engraved Inco playing cards for its first-place finish.

Senior design engineer Dick McIvor, left, discusses the blueprints for the new cage with designer, Fred Henschel, centre, and senior draftsman, Norm Fredette.

The divisional shops were responsible for constructing the new cage. Some of the men who worked on it are, from left, Mike O'Neill, Gerry Guerin, Walter Plante, Rick Preseau and John Muron

Team effort produces an all Inco cage

Every day thousands of men at Inco's Ontario division mines are transported to and from their underground work places by underground elevators called cages. If you are one of these men you probably don't give your cage a second thought.

You know the cage tender and most of the guys on your level and your trip up or down the shaft gives you a chance to make small talk and maybe listen to a few jokes. But the cage itself usually doesn't concern you — it's something that is taken for granted.

This might not be the case if you use the cage at Stobie seven shaft, because that cage has a few changes that you are bound to notice. It was the result of a development and construction program that started back in June 1977. At that time it was determined that new cages would be required in the future to replace some of the existing cages. But the decision turned out to be just the beginning of the problem.

There has been no significant changes in cage design for a number of years and the mining equipment manufacturers didn't have the type of cage that would suit Inco's specific needs. "What was needed was a cage that was specifically suited to Inco's mines," said Largo Albert, Inco's hoisting specialist. "The only solution was to buy a custom designed cage or build the cage ourselves. It proved to be impractical to have someone design and build the cage, so we decided to take a crack at it ourselves."

A survey was taken to determine what features the new cage should have on it. "We questioned the people that actually used the equipment," said Dick McIvor, senior design engineer at maintenance engineering and one of the men responsible for the actual design of the cage. "We asked people like riggers, cage repair crews, operating and maintenance crews to give us their suggestions as to what they thought should be the features of a new cage."

All their suggestions were taken into account before the cage was even on the drawing board. Since the cage would be constructed by Inco it was also designed so it could be

Checking the results of the accelerometer at the drop test site are, from left, Jerry Lazurko from the Ministry of Labour, Inco's Largo Albert and Dick McIvor, and Charlie Trenka from the Ministry of Labour. This was the first time that the accelerometer was used on a free fall test and according to Largo Albert it was done to see if the theoretical results were backed up in practice.

The new cage is now installed at Stobie seven shaft. Cage tender George Jolicoeur gets ready to "take her down".

fabricated using men and equipment available at Inco's divisional shops in Copper Cliff.

When the design drawings of the cage were approved it was then the job of the divisional shops to construct it. A group of dedicated and experienced tradesmen at the machine shop, welding shop and plate shop translated the design into reality.

"In many cases the men who built the cage were able to come up with improvements in the assembly by using alternate construction methods. We asked for their input during the construction stage. They were able to change certain procedures and find better and less expensive ways of doing things," said Dick McIvor.

"What we have now," said Largo Albert, "is a 1980 model cage that was designed and built by Inco people. It provides special features suited to our own needs and combines the ultimate in safety, comfort and efficiency."

Some of the features included on this cage are; improved ventilation, inspection ports for slinging operation, replaceable wear shoes that can be removed from inside the cage, provision for tying down equipment, a superior safety mechanism and cage "chairs" for holding the cage steady when loading or unloading heavy loads at deep levels.

After the cage was constructed it was subjected to rigorous testing procedures. Three specific tests were carried out at Creighton five shaft. A drop test and two free fall tests were performed on the cage to ensure that the safety mechanism operated properly. Needless to say the cage passed the tests with flying colors.

"All cages must be certified by the Ministry of Labour," said Largo Albert. "This is done by the manufacturer and since Inco was the manufacturer this meant that we had to look after getting the proper certification for both materials and design."

From the conception right through to the installation the new cage was a 100 per cent Inco project, and is a tribute to the team work and resources that are to be found within the company. All people involved should be justifiably proud of this accomplishment.

Over $9,000 paid out this month in Inco's suggestion plan

This month's suggestion plan paid out a total of $9,370 for 113 suggestions. Why not get in on the money and submit a suggestion to the suggestion plan office? Another thing to keep in mind is that energy saving ideas can also be submitted to the plan and if accepted can put some extra money in your pocket. You never know until you try.

Osyp Sus — $1,095

Melville Ferris — $320

John Vargo, left, and Ellis Rogers — $260

$1,365	Gerald Fraser	C.C. Mill	Method to convert power source for No. 1 & No. 2 fire pumps to 60 Hertz feed
$1,095	Osyp Sus	Stobie Mine	Rebuild G.D. fan drill centralizer brackets in Inco Shops
$675	Hubert Bouchard	Frood Mine	Improved method of changing bottom door rollers on loading pockets
$320	Melville Ferris	Creighton Mine	Install electrical heat gauges on scooptrams and Clayton locos
$260	John Vargo Ellis Rogers	Divisional Shops	Bolt longer plates on both sides of multiple sheave crane blocks instead of welding half plates
$175	Luke Dukal	C.C. Mill	Modifications for mechanical seal replacement on the 3" x 3" S.R.L. lime pump
$170	John Kruk John Armstrong	Frood Mine	Revisions to 20 ton Goodman locomotive brake cylinders
$150	Louis Cole	C.C. Smelter	Design a tool to machine unifin tubing used in fabricating condensor and evaporator coils
$150	Edgar Dore	I.O.R.P.	Modifications to reduce sulphation in bed draining pipes and SO_2 leaking into building
$150	Felix Foisy Bernard Cusack	I.O.R.P.	Weld extra lug in center of No. 5 & No. 6 cottrell doors
$150	Robert Gauthier Alban Reid	I.O.R.P.	Modifications for safer switching of pregrind ball mill feed sump pumps
$150	Fred Gignac	C.C.C.R.	Use Perlite around piers and tank instead of Mastic
$150	Emidio Rusciolelli Andrew Quesnelle	Divisional Shops	Install adjustable spindle to secure shafts.

$140	Ernie Chenier	Creighton Mine	Fabricate steel box to protect fittings and valve blocks on scissor truck jack cylinders
$135	Joe Fabris	Creighton Mine	[illegible] for open/close position of [illegible] pipe valves
$130	Conrad Potvin	Divisional Shops	Design a circle cutter for plasma arc cutting machine
$120	Oscar Mascotto	Divisional Shops	Use inserted tips for powerhouse blowers
$115	Phil Convey	Divisional Shops	Fabricate lifting device for arch bars on electric locos
$115	Sean Powers	Creighton Mine	Improved method of handling crusher shim plates
$110	Aubrey Boucher	Shebandowan Mine	Attach [illegible] to pay loader to grade roads
$105	Ernest Schroeder Michael Lewis Lionel Behnam	I.O.R.P.	Install a [illegible] D.C. motors for [illegible] [illegible]
$100	Fred Ebsy Bernard Cusack	I.O.R.P.	Replace [illegible] on bucket elevators with [illegible] dampers
$100	Robert Darrow	C.C. Smelter	Keep spare machined parts for [illegible] and [illegible] ladles in warehouse stock
$100	Sylvio Wagner Al Stewart	Levack Mine	Install gussets around [illegible] to reinforce top plates

$85 awards were presented to:
Harold Ross — I.O.R.P.
Ralph Bosschaert

$75 awards were presented to:
Jean Beauparlant — I.O.R.P.
John Goodhand — I.O.R.P.
Reid Lemieux — Creighton Mine
Danny Loughridge — Levack Mine
Alvin Scott — Creighton Mine
Maurice Ferris
Conrad Potvin — Divisional Shops

$70 awards were presented to:
Wardon Asnick — Divisional Shops
Roy Ruddy
Robert Bouchard — Little Stobie Mine
Andre Cusson — C.C. Smelter
Wilfred Cohen — C.C.C.R.
Robert Turner — I.O.R.P.
Gaetan Perreault
Barry VanHorne — Creighton Mine

$65 awards were presented to:
Andre St. Jacques — C.C.C.R.
Marcel Marcotte
Bruno Tremontini — Divisional Shops

$60 awards were presented to:
Norman Dewar — C.C.C.R.
Lewis McNaught — C.C. Smelter
Roy Renaud — C.C.C.R.
[illegible] Phelps
[illegible] Bernard

$55 awards were presented to:
Darren Cashmore — C.C.N.R.
Stewart MacKenzie — Levack Mine
Walter Netzsky — Transportation
Vincent Vermeulen — Creighton Mine

$50 awards were presented to:
Wardon Asnick — Divisional Shops
Roy Ruddy
Sylvio Desormeaux — Frood Stobie Mine
Fred Ebsy — I.O.R.P.
Ross Franklin — I.O.R.P.
Robert Lachance — Transportation
John Linkiewicz — C.C. Smelter
Pasquale Matarazzo — I.O.R.P.
Randy McBain — Creighton Mine
Walter Smorhay — Creighton Mine
Al Stewart — Levack Mine

$45 awards were presented to:
Harry Armbruster — C.C.N.R.
Douglas Hache — Creighton Mine
Dennis Ridgen — C.C. Smelter

$40 awards were presented to:
Bert Brunelli — Creighton Mine
Bill [illegible] — Creighton Mine
Fred Ebsy — I.O.R.P.
Bernard Cusack
Maurice [illegible] — Transportation
Rene [illegible] — Garson Mine
Roger Caron
Ronald Schinkel — C.C. Smelter

$35 awards were presented to:
Maurice Albert — C.C. Mine
Denis Brosseau — Levack Mine
Larry Cusson — Divisional Shops
Hank Eden — C.C. Mine
Gerard Lafleur — Levack Mine
Steve Semeniuk — Creighton Mine
Robert Smith — Divisional Shops

$30 awards were presented to:
Paul Hufferd — C.C.C.R.
John Reid
William Whitehead — Creighton Mine

$25 awards were presented to:
Rene Bradley — Levack Mine
Alan Brown — Transportation
Robert Cameron — Divisional Shops
Michael Carey — C.C.C.R.
Darren Cashmore — C.C.N.R.
Jean Dumont — Frood Stobie Mine
Harold Kovacs — C.C.C.R.
Vincent Lands — Divisional Shops
Alf Masotti — Levack Mine
Tim McDonald — Levack Mine
Ray Newman — C.C. Smelter
Henry Nicholas — Creighton Mine

$25 awards were presented to:
Ron Powell — C.C.N.R.
Stan Picard — Levack Mine
Robert Pearson — Creighton Mine
Primo Santoro — C.C.C.R.
Walter Smorhay — Creighton Mine
Gilbert Spencer — Divisional Shops
Gerald Wagner — Creighton Mine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