



INCO Triangle

NOVEMBER/DECEMBER

1984

Special supplement
on Royal visit included

Publications
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On the cover

This month's cover is an aerial view of Science North, Sudbury's new world class science centre. A special supplement on the science centre and its official opening by Queen Elizabeth II is included with this edition of the Triangle.

Distinguished award.



Tom with the distinctive trophy he was presented by the Canadian Land Reclamation Association.

Tom Peters is almost lost in the grass of this revegetated tailings area. The lush grass shows graphically the effectiveness of Inco's tailings revegetation program.

Tom Peters from Inco's agriculture department has been awarded the Noranda Inc. trophy for outstanding achievement in land reclamation in Canada.

The award is presented annually if a worthy contribution to land reclamation has been made. The award presented to Tom was for Inco's work on revegetating sulphide tailings.

Tom is the fourth recipient of the award and was presented with the distinctive trophy at the annual convention of the Canadian Land Reclamation Association. This is the first such award presented for work on sulphide tailings. The three previous recipients of the award were for research at the university level and for the reclamation

of coal mine spoils.

Inco pioneered work on tailings revegetation starting in the 1950's and is a world leader in this field.

Tom had the honor of meeting with Prince Phillip during the recent visit by the Queen and Prince to Sudbury. He was one of seven people who met the Prince at Laurentian University. The Prince had requested a meeting with members of the scientific community so he could get an update on the rebuilding of the land ecosystem in the Sudbury district.

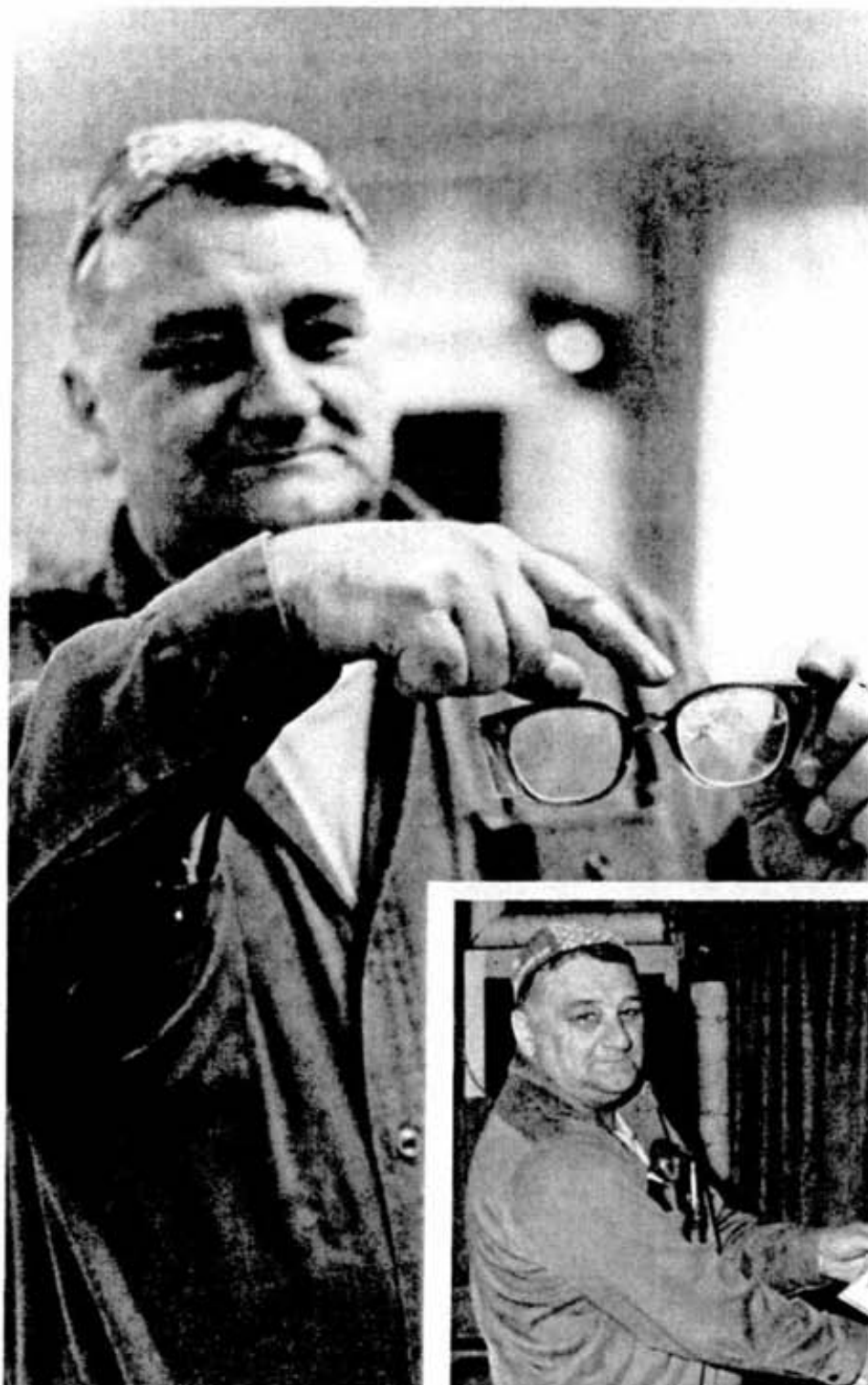
Tom, who was representing industry, briefed the Prince on the tailings revegetation program and the Company's management of renewable forest resources.

Down Memory Lane Contest

The entries for the "Down memory land contest" were still arriving when this issue of the Triangle was being assembled. The winner will be

announced in the next edition of the Triangle which will be published in mid December.

"I would have lost an eye for sure"



It happened so suddenly one day last January, that Claude Degagne, a mason in the Copper Cliff smelter, didn't even realize that he had been struck.

"I was replacing tuyere blocks on number 19 converter," he recounts. "Operations was plugging out some of the older tuyere blocks. I guess a piece of steel broke off of the plugging bar and hit me on the glasses on the left side and shattered them."

"I didn't even know they were broken," Claude continues. I took them off to clean them. I thought they were frosted." He was surprised to find that it was not frost but rather the countless cracks of a shattered lense that was obstructing his vision.

It wasn't until a little while later that Claude reflected on his good fortune and the invaluable service provided by his eye protection. "I started to think about it. I was very lucky. I would have lost an eye for sure."

Claude was presented with his Wise Owl of Canada award by Jose Blanco, manager of the Copper Cliff smelter.



Claude points to the shattered lense that saved his eye.

Claude Degagne is welcomed into the Wise Owl Club of Canada by Jose Blanco, manager of the Copper Cliff smelter complex.

Co-operation most important factor



For six weeks this spring a large number of tradesmen at the machine shop were occupied with filling another major job for Indonesia in record time. Their quality performance in filling a previous request to manufacture copper cooling fingers for Indonesia had won them some new admirers...and new work orders.

This time the project involved machining 125 tons of copper into 340 pieces for Indonesian furnaces including matte lintel cooler assemblies, slag hole cooler assemblies, copper cooling fingers and dog leg coolers. The dog leg coolers formed the largest and, as far as divisional shops was concerned, the most important part of the order. These coolers are an improved version of the water cooled jackets.

The dog leg coolers were cut from 9 12 foot-long copper billets at divisional shops and the Copper Cliff copper refinery into various lengths. Most, however, were 23½ inches long by 18 inches wide. They were then machined into their dog leg shape, drilled, tapped, cleaned and tested.

Modifications were made to the horizontal boring mill to enable it to operate a 40 inch saw blade borrowed from the copper refinery used to cut copper. A new jig was designed which allowed expansion cuts to be made with the machine shop's horizontal cut-off saw.

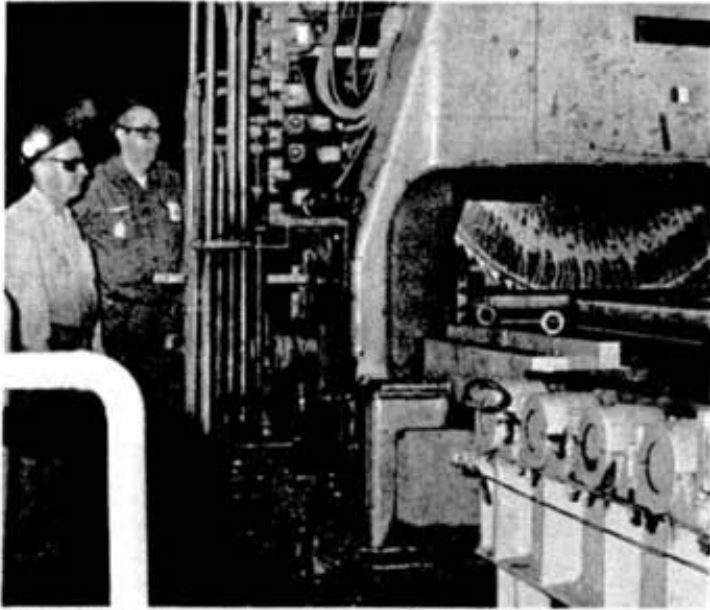
This special rush order was filled in

Berno Wenzl, divisional shops controller, and Ed Kotyluk, machine shop planner, examine prints for the Indonesian project.

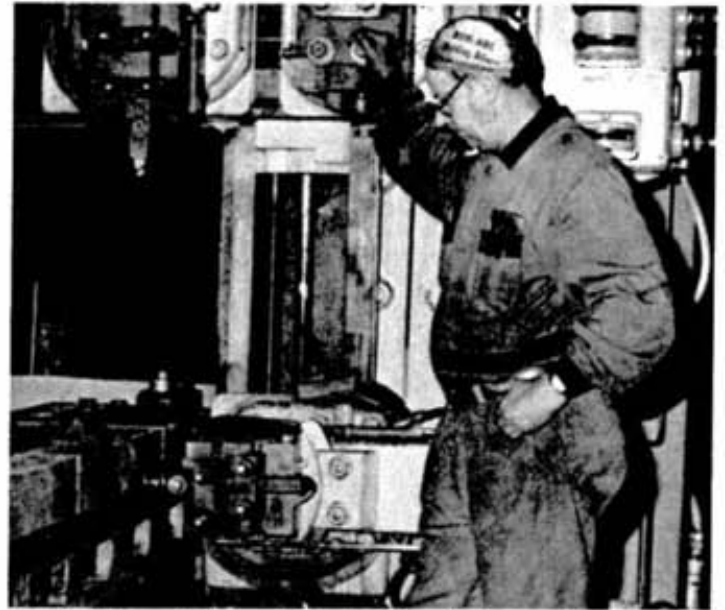
time and the pieces were in New York by June 29 where they awaited transport to Indonesia. While this project would not have realized a successful conclusion without the

efficient, safe effort of employees in the machine shop, they readily share any credit with many other employees involved. The cooperation between the machine shop, the copper refinery, the

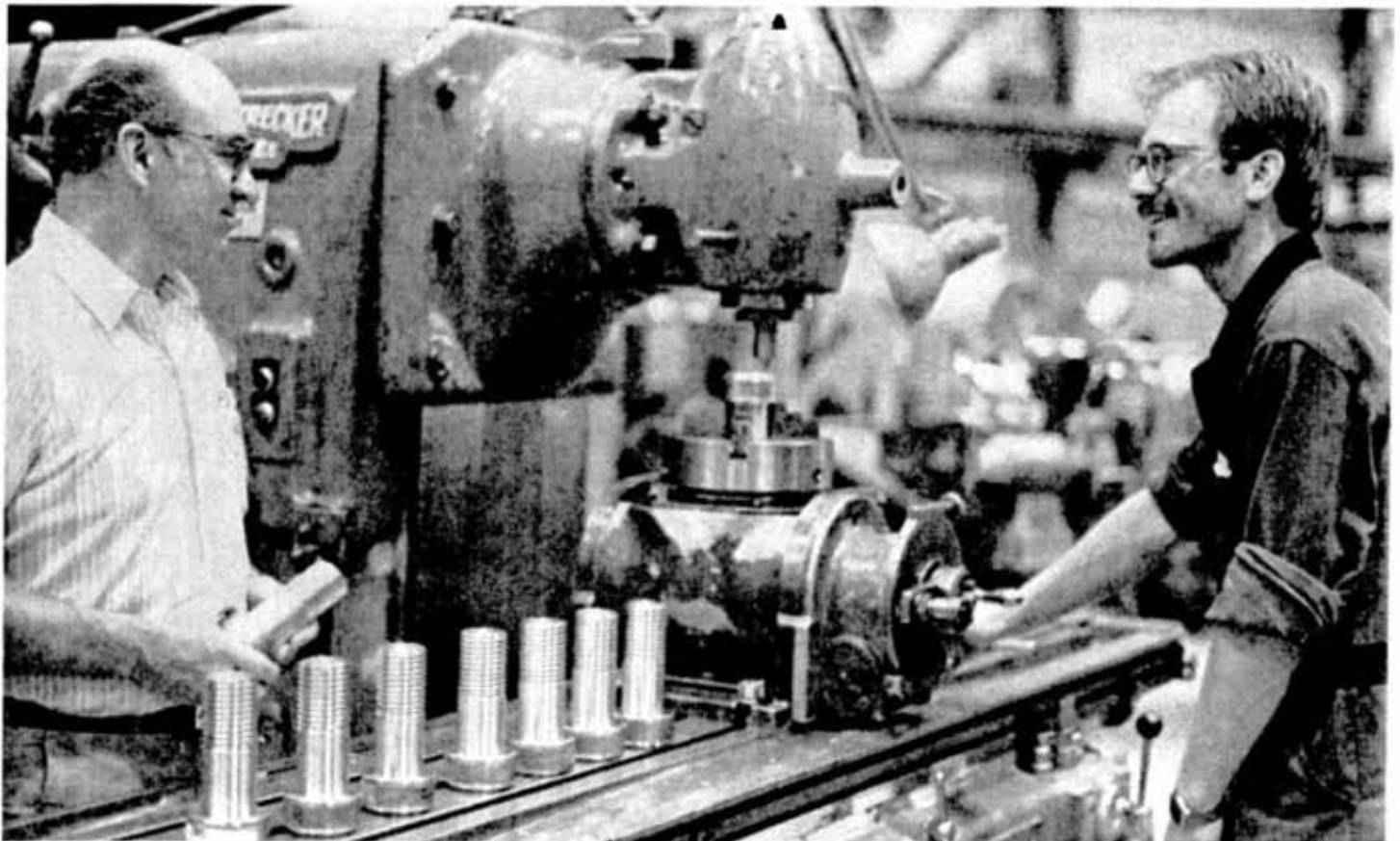
purchasing and warehousing department and the shipping department was the single most important factor in getting the job done, they say.



Some of the copper sections for the manufacture of dog leg coolers were cut at the Copper Cliff copper refinery. Here, Joe Vezina, left, saw operator, and Ed Kavanagh, foreman, watch the huge saw cut off a length of copper.



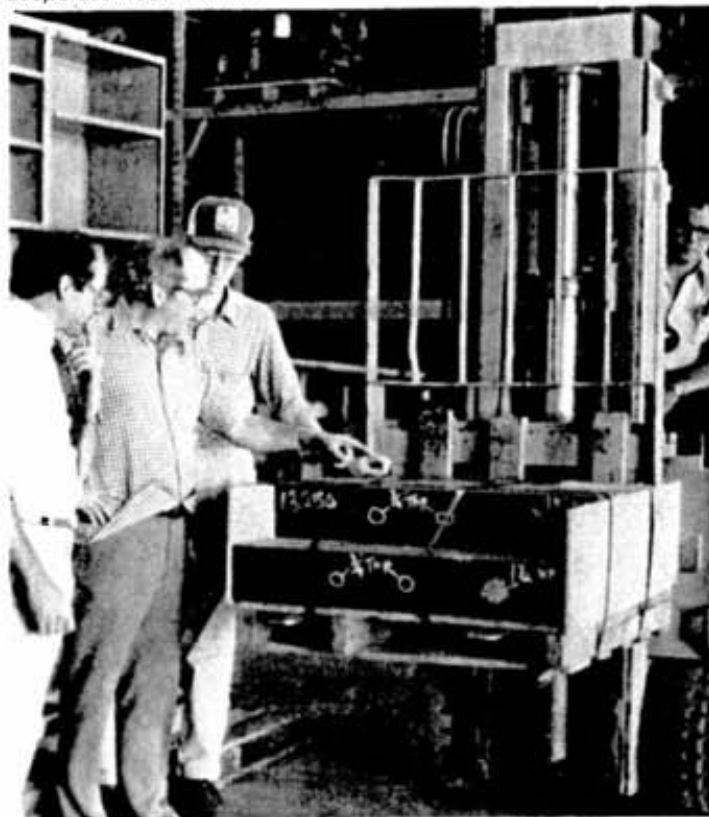
Arni Konturi, machinist, machines dog leg coolers to size on the Rockford open side planer.



Bud MacDonald, left, machine shop material coordinator, looks on as Richard St. Denis, machinist, mills the slots in heads of copper slag hole cooler assembly bolts.

more photos on next page

cooperation continued...



From left, Ron Poirier, warehouse foreman, John Saddington, divisional shops buyer, and Bill Beaver, warehouse storeman, inspect a pallet load of coolers destined for Indonesia lifted on a forklift operated by Al Smith, warehouse storeman.



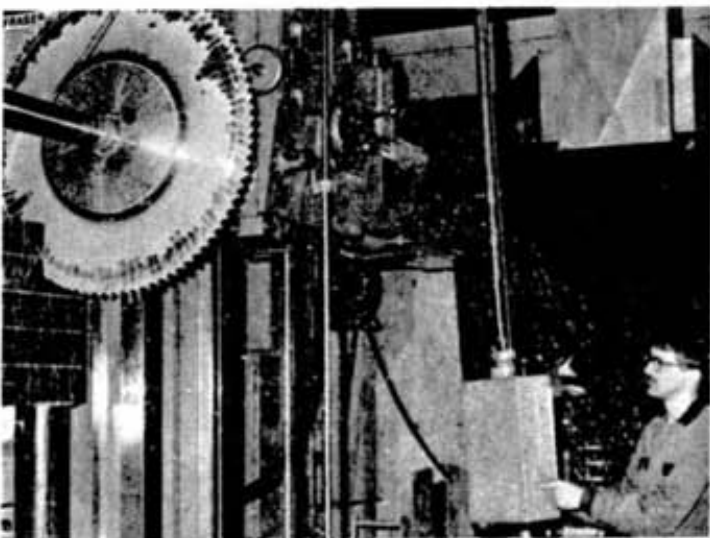
John Prudhomme, left, a machinist, checks the performance of a special jig he designed for sawing dog leg coolers with maintenance mechanic John McLaren who operates the horizontal cut off saw.



Warehouse storemen, Jim Severin, left, and Al Smith band pallets securely for their long voyage to the South Pacific.



John Sioboda, maintenance mechanic, taps lifting holes in copper coolers on the radial arm drill with a high speed tapping attachment.



Tim Morse, a machinist, guides the large saw mounted on the horizontal boring mill as it cuts through the copper to form the corner section of the dog leg cooler.

Family Album

A clerk in the training department at Creighton mine, Peter Keegan has been with the Company for the last 14 years. He and his wife Gloria have three children, Kevin, seven, Jody, five and Michael, two. The Keegans make their home on Eugene St. in Hanmer. Cooking, working on cars and puttering around the house are among his favourite pursuits. Gloria enjoys reading, sewing and being a wife and a mother.



Rick and Donna Rose live on Woodland Avenue in Lively not far from Creighton 9 shaft where he is a preventive maintenance coordinator. He has been with Inco for 17 years. Their two sons are Jarrett, seven, and Brandon, two. The family enjoys camping and involvement in the Lively 1st Beavers and the Walden minor sports scene. Rick is secretary of the Walden Kinsmen Club. Both he and Donna are active members of the Creighton-Lively Elks and the Order of Royal Purple.



A veteran of 13 years with Inco, Barry Wall is an instrument man with the mechanical utilities department. Living on St. Michel St. in Hanmer, he and his wife Muriel have two children, Vanessa, four and Curtis, 18 months. Camping, fishing and hunting are among the favourite family pastimes. Muriel does needlecraft and plays badminton and squash regularly. Barry enjoys outdoor activities such as blooperball and icefishing.

Baird Keynote Speaker In Sudbury At Chamber's Annual Meeting



Glen Crombie, president of Cambrian College, presents Chuck Baird with an original drawing on behalf of the Chamber of Commerce. The drawing was given to Mr. Baird as a token of appreciation for delivering the keynote address at the Chamber's annual meeting.

Charles Baird, chairman and chief executive officer of Inco Limited was in Sudbury on October 24 at the invitation of the Sudbury and District Chamber of Commerce. He was asked to address the Chamber's 89th annual meeting.

While in Sudbury, Mr. Baird also took the opportunity to meet with Local 6500 president Ron MacDonald. Later in the day he met with members of Regional Council.

The theme of this year's Chamber of Commerce meeting was "The Challenge for Tomorrow - The Next Five Years". Mr. Baird gave his analysis of this subject and excerpts from his speech follow:

Inco with about 9,300 employees at year end and Falconbridge continue as the two largest employers in the region but together employ less than 20 per cent of the labor force - a far cry from the days when they were virtually "the only game in town".

It is my belief that there is a new maturity in the realization that the region is part of a great interdependent world and that to compete in it Sudbury products must be cost competitive.

The safety and productivity improvements continue to have

very positive results in the Sudbury mines and surface operations. Increasing use of the much safer vertical retreat mining method has reduced overall mining cash costs from Cdn. \$40 to Cdn. \$25 per ton, almost 40 per cent, since 1981. In the smelter, a 45 per cent improvement in operating productivity has largely eliminated reductions in manpower that would result from a new smelter. These tremendous improvements are major contributions to the survival of the Company and I commend the Division's management, the union and all employees who have contributed to them.

In 1982, we advised the union and the government of prospective employment reductions over the next five years. We were conservative in our projections of productivity improvements and, in fact, the required employment levels are below the forecasts given at that time in spite of higher than anticipated attrition rates. We, and the union, want to avoid layoffs and are determined to retain younger, shorter service men on the payroll. The special retirement incentive programs that have been carried out have been highly successful and have prevented the need for layoffs in 1984. Our 1985 plans are not complete but, based on the current market outlook, we do not foresee any layoffs of unit personnel. Should market conditions dictate lowering production levels we would plan to adjust the length of the summer vacation shutdown or take other production shutdowns rather than resort to layoffs.



I had predicted at our annual meeting in April that we would be profitable later this year if we were able to get some reasonable price improvement. Our nickel price realizations have increased only five per cent and are still almost 30 per cent below the 1980 level. Copper realizations are about 40 per cent below. There have been recent signs of some upward movement in nickel prices. My April projection is still barely realizable, unless this price trend reverses, but only because of the progress we have made in cutting costs.

The competitive marketplace will not be a bed of roses for the industry or Inco but it is a far better scenario than the wrenching adjustment and downsizing that has been essential in the past four years. The odds would appear to favor a more rational marketplace, but one in which producers can expect lower prices than we enjoyed three or four years ago. To operate profitably, producers must control costs carefully. Inco must operate profitably to generate the money required for investment in the new technology needed to continue our productivity improvements, at least to absorb inflation. We must also provide an adequate return to our shareholders who have suffered with us through four years of reduced dividends and a sharp drop in the value of their investment in Inco stock.



Finally I must say that I recall with pride the credit given Inco by president George Lund at the Science North dedication. I am also proud of the part we played in bringing Laurentian University into being and in launching the new mine equipment manufacturing company Continuous Mining Systems Ltd. We have made many other significant contributions and I'm sure the Company and its employees will continue to do our share in every possible way to help the Sudbury Region diversify and prosper. Make no mistake, however, Inco and the mining industry will never be the force they once were in Sudbury. Long run, this is a good development. The leaders of the region have responded positively to the downsizing of the mining industry that was essential if it was to survive.

Inco will be an important factor in the Sudbury region's progress as it has been for over 100 years.

Smelter family day

Family Days at various Company operations have proven to be an excellent means of introducing an employee's work to his family and friends. The popularity of these events was evident in September when over 1,500 visitors attended the Copper Cliff smelter's Family Day.

Tours were conducted through various parts of the smelter complex including the furnace department, the converter aisle, the casting building, matte processing and the superstack. There were also displays of mobile and safety equipment. People were most impressed by the converters and their spectacle of molten metal.

Refreshments were available to the visitors and children were invited to participate in a smurf colouring contest. The three top artists were Stephanie Thelland, 6, daughter of Dale Thelland of the maintenance department, Richard Dupuis, 9, son of Mike Dupuis of also of the maintenance department and Gregory Dikran, 11, son of Chris and Mary-Ann, both of the smelter.



One eager young tourist had Frank Dagget demonstrate the workings of a mobile sweeper.



Little Sheryl-Lynn Swant is up way past her knees in safety equipment. Lending her a hand with the safety gear is her dad, Dennis, left, and Don Dumontelle of the smelter safety department.



Frank Zanatta, right, fields questions about operations near a conveyor belt on the top floor of matte processing



This group of visitors was given a tour of the casting building by Gerry Boulanger, right.



A group of young visitors watch a skimmer do his work on the skimming platform of a furnace as Scott McDonald explains the process.



Visitors to the smelter during the complex's Family Days experience the immensity of the superstack.

"Largest handgun shoot in Canada"

Billed as "the largest handgun shoot in Canada", the 1984 Northern Ontario Handgun Championship hosted by the Sudbury Revolver Club at its range in Garson attracted 175 competitors from throughout North America. The diversity of the events it offers and the 84 trophies and the \$10,000 in prizes make this the premiere handgun

competition in the nation, says Wayne Tonelli, president of the SRC and a plant protection officer instructor.

According to Wayne, this was the 20th edition of the NOHC. Only in the last three years have the events and the prize board been embellished enough to attract some of the best shooters in the continent. The

ambitions and work of the SRC membership, a good number of which includes Inco employees, and the generosity of sponsors have accounted for its increasing popularity, he explains.

In order to accomodate different types and styles of shooting five different individual competitions were offered. There were also team events to add another interesting dimension to the affair for both competitors and spectators. Consider an event appropriately called "rolling thunder." A team of three shooters, one with a handgun, another with an autoloader shotgun and a third with a pump action shotgun, face three tables each lined with five wooden bowling pins. The object is for each shooter to clear the pins off the table with a limited amount of shots as quickly as possible. If one team member has successfully cleared his table, he is allowed to help his teammates.

A special guest at this year's shoot was Linda Thom, Olympic gold medalist in Los Angeles this past summer. She is no stranger to the NOHC having competed in it in previous years.

Local snipers fared well against high calibre competition. The top shot in the five pin main event was Ted Beaudry, SRC member and an officer with the Sudbury Regional Police. Wayne Tonelli along with Sid Wasitis, a clerk in the furnace department of the Copper Cliff smelter and Dave Derro took the three man "rolling thunder" event. Ted Beaudry and Sid Wasitis were titlists in the two man "rolling thunder event."

A portion of the proceeds from the

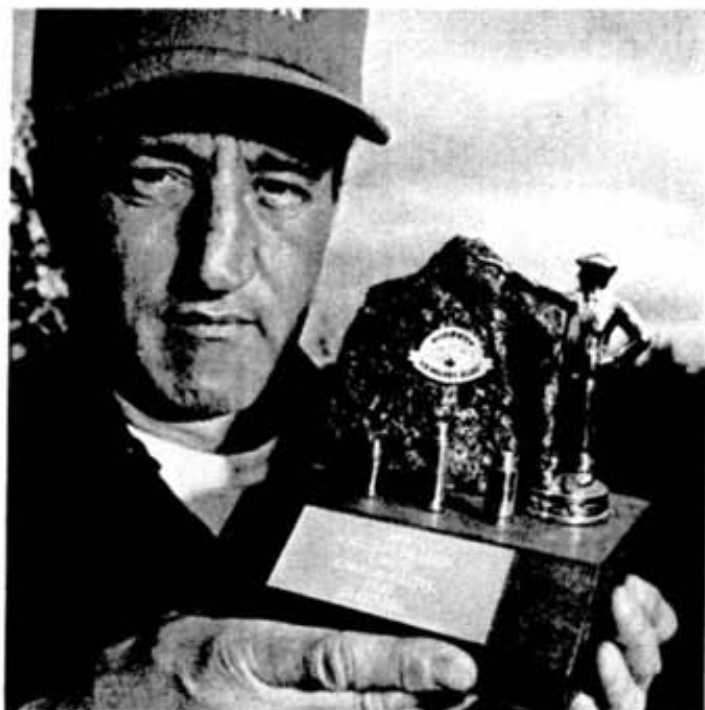
Ales Hubert, a driller at Creighton mine, prepares to squeeze off a round during the Northern Ontario Handgun Championship on Labour Day Weekend



pin events were donated to the Ontario Heart and Stroke Foundation. Wayne estimates that the SRC has given \$3,000 to this charity in the last three years.

The SRC is aiming for bigger and better things for this very popular event. Says Wayne, "Our future plan is to make it one of the biggest matches in North America." That plan will no

doubt include the formula that has spelled success up until now; a good range of events, lots of prizes and a very liberal dose of northern hospitality.



Bill Foster, a member of Inco's field exploration department, holds one of the beautiful and coveted Bert Bush Commemorative Trophies that he makes on behalf of the Sudbury Revolver Club as an award in the 2700 event.



Herb Wysocki, a clerk at the Copper Cliff smelter, took time off from competing in the Northern Ontario Handgun Championship to be chief cook for the big event that attracted shooters from throughout North America.



Sid Wasitis, vice-president of the Sudbury Revolver Club, left, and Wayne Tonelli, SRC president, listen to a few words of advice from Linda Thom, Olympic gold medalist who made a special guest appearance at the Northern Ontario Handgun Championships.



A pair of Inco pensioners, Jim Wasitis and Henry Berezowsky, inspect their scoring on a target in the .45 calibre competition.

PEOPLE

Pearl returns

A yearning to visit the place where she worked during World War Two, prompted **Pearl Janiuk** to return to Garson mine for a brief tour recently. She was particularly interested in seeing the lamproom where she had worked following a stint in the rockhouse. "I enjoyed it very much," she says. "I felt very much at home. It felt as if I never left the place."

Pearl remembers leaving her Saskatchewan home in 1942 to come to Sudbury where she had heard women were being hired to work at Inco as replacements for men who had enlisted in the armed forces. She stayed with a brother who was employed with the Company at the time. Eventually she was hired by Inco and she began collecting what at the time was considered a princely, or in this case, princessly, wage of 69 cents an hour. "I was very happy," she reminisces. "It was a real break for me."

Following stays in the

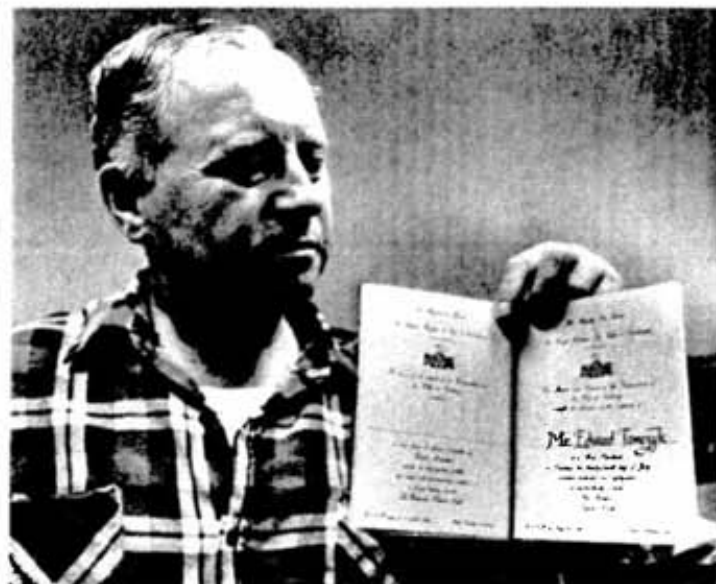
rockhouse and lamproom at Garson, Pearl moved to the Copper Cliff smelter until late 1945 when she and the other women at Inco were laid-off to make room for Inco employees returning from the armed forces.



A recent visit to Garson mine brought back many fond memories for **Pearl Janiuk**, who worked there during the Second World War. Here she holds her initial certificate from her working days with the Company.



Pearl Janiuk paid a visit to the Garson mine lamproom where she worked during the war. **Antti Vakkuri**, surface serviceman, explains how battery lamps have changed since the 1940s.



Eddy Tomczyk, a mason at the Copper Cliff smelter, holds up the invitation requesting his presence at a Civic Luncheon held in honour of Queen Elizabeth II during her visit to Sudbury last month.

Royal invitation

Eddy Tomczyk enjoyed the experience of a lifetime last month when he accepted an invitation to a Civic Luncheon hosted by the City of Sudbury at Science North in honour of Queen Elizabeth II and Prince Philip, the Duke of Edinburgh. The reception was held after Her Majesty officially opened Science North, the city's new world class science center. A select few of worthy Sudburians were invited to the special occasion.

Prior to attending the event Eddy called the invitation to the luncheon "an honour." He said that he was looking forward to the event but that being in the presence of royalty would in no way make him nervous. He has been a prominent member of the local Polish community since his arrival here from Poland in 1952. He is the president of the Polish Combatants Association of Sudbury. He is also currently involved with an organization aimed at preventing drunk driving.



Eddy Tomczyk, shown here rebricking a converter, was one of the special citizens in the region invited to dine with Queen Elizabeth II at a Civic Luncheon held in her honour during her visit to Sudbury's Science North last month.

PEOPLE

Everybody cooperates

A land reclamation effort involving the resources of government and industry was carried out recently in the Nickel Center Falconbridge area. People hired under a makework project sponsored by the provincial government and the Town of Nickel Center limed, seeded and fertilized large sandy sections of land that had been the source of dust problems. Additional funding and

materials were provided by the Canadian Pacific Railway, Falconbridge Limited, the Ruff Family and Inco Ltd.

Inco donated a ton of grass seed to the project along with equipment and the expertise of **Jim Savage**, **Darl Bolton** and **Tom Peters** of the agricultural department to oversee the project. Land reclaimed included parts of the Company's old Garson gravel pit and adjacent areas.



Bob Henderson, left, coordinator of a joint land reclamation program and **Jim Savage**, grounds supervisor with Inco's agricultural department, examine seed donated by the Company to be used in revegetating land in the Nickel Center-Falconbridge area.



Wild cherry on the slag

Ron Bonas of Nickel Basin Properties sent us a photo of a very unusual sight. A while ago he noticed a tree growing out of pile of slag near the Fisher Dry Pack operation, off of Highway 144. The green leaves, he says, present a beautiful contrast against the dark slag. How what he calls a wild cherry

tree survives in this inhospitable environment, he's not sure. He surmises that the slag thinly covers the soil or clay that actually sustains the tree. "In addition to Rye on the Rocks," he quips, referring to the film about Inco's tailing reclamation efforts, "we also have wild cherry on the slag."



Little Stobie record

The steady night shift crew at Little Stobie established a new safety mark at that mine by working a year without incurring an injury of any sort. The best performance prior to this by any crew at this operation was three months of injury free work.

Mine foreman **Bruce Hoffard** explains the reason for this production team's excellent record thusly: "It is due to the fact that they are cooperative, experienced miners who are safety minded and who use common sense while working."

Little Stobie's steady night shift crew has worked a year without a reported injury. Its members are, back row, from left, **Ray Cousins**, **Dave Gaudette**, **Eric Jacobson**, safety foreman, **Bill Hawthorn**, **Al Chiswell**, front row, from left, **Bruce Hoffard**, mine foreman, **Viateur Major**, **Mike Cloutier**, **Morris Blais**.

PEOPLE



Stan Rogers, maintenance planner, and **Morris Hucal**, maintenance general foreman, tally their scores at the end of the round in the matte processing golf tournament.



Dick Hobden, a shift foreman at matte processing, attempts to sink a putt with the aid of his cheering section comprised of, from left, **Bob Scott**, safety foreman, **Ernie Brugos**, foreman and **Whipper Lawson**, process foreman, during the annual matte processing golf tournament.



Instrument electrical foreman, **Ernie Hywarren**, attempts to drill a long shot. **Weldon Cecile**, **Cliff Corelli** and **Bruce Cardinal**, all of the matte processing instrumentation department, wait their turns at the tee.

Matte processing golfers

The eighth annual matte processing golf tournament held in August at the Pine Grove Golf Course attracted 70 eager competitors. Included in that number were matte processing employees, pensioners and guests. The 18 hole tournament was followed by steak dinner and awards presentations.

Lawrence Mochizuki, general foreman in the separation building, was declared the overall champion after all the scorecards were tabulated. Many other presentations were made for feats and failures on the links that day making it a fun event for all.

Sudbury suggestion plan awards

Due to space limitations we are not able to publish all the names of suggestion plan award winners.

This edition of the suggestion plan saw 72 suggestions earn a total of \$17,805.



George Ammattil and William Wickenden
shared \$1,700



Bill Gagnon
\$1,530

- | | |
|---------|---|
| \$1,700 | George Ammattil and William Wickenden of the divisional instrument shop suggested that a modification be made to the oxygen determinator in the copper refinery lab. They found the sensitivity of the instrument to be poor. They corrected this problem by installing two stainless steel micrometer valves, one on the reference outlet, the other on the sample outlet. Reduced maintenance, increased cell life and better, more continuous operation resulted. |
| \$1,530 | At the Creighton mine drill shop Bill Gagnon recommended that the cylinders on LM-56 Copco air motors be re-ground and rebored. Worn cylinders had previously been disposed of and replaced by new ones. Material savings were realized. |
| \$1,420 | Ted Lafleur of Frood mine came up with a way of extending the life of chuck drivers in fan drills. This involved building up the worn areas of chuck drivers with weld. This resulted in a drop in the consumption of this item. |
| \$1,335 | At Shebandowan , Gordon Gerrish put forth the idea of installing an electric heater in the first aid room rather than employing the main furnace of the service building to heat that area. Once implemented this suggestion was found to greatly reduced the consumption of fuel oil. |
| \$1,205 | Norm Levesque and Oliver Barriault of the Creighton bucket shop proposed a method of fabricating shells for ST-4 and ST-8 scoop buckets that saved material and labour costs. |
| \$1,190 | At the Copper Cliff nickel refinery , Kelly Andress suggested that a bypass system be introduced between the nickel powder storage storage bin and the load out bin. By having nickel powder being packaged specifically for the nickel oxide process bypass the screening process, considerable cost savings will be realized. |
| \$1,185 | Joseph Lepage of Shebandowan discovered that the drive system on M & R locos was failing prematurely due to a lack of lubrication. He designed a lubricating system that provides proper lubrication and keeps gears and chains free of grit and sand buildup. |
| \$850 | A pair of employees at the Frood electrical shop , Paul St. Amour and Don Evershed , recommended that the fibreglass pole on trolleys be replaced with plastic pipe. This resulted in labour and material savings. |
| \$735 | At the divisional winding shop , Jack Dube proposed that the leads on 3 1/2 H.P. loco fan motor be insulated with vinyl sleeving from the soldered risen to about one inch inside the coil slot. This prevented heat from damaging the wire and causing shorting. |
| \$805 | Hector Poulin of Copper Cliff South mine cut costs by suggesting that sandfill drain pipes be fabricated out of wood according to his design rather than metal. |

Golden Anniversaries



Fred and May Lumley

It was on May 18, 1934 that Fred Lumley and May D'ath were married in the Anglican church in Copper Cliff. The ensuing 50 years together have been happy ones for this fine couple, although they admit like all things, there have been many ups and downs in that time.

Fred is the son of Fred Lumley Sr. who had come to Copper Cliff to look after the then new electric locomotives that Inco had bought. Young Fred started in the roundhouse at Copper Cliff on steam locos in 1928 and later went with Charlie Cummings to the locomotive shop. He eventually apprenticed in the machine shop and from 1940 to 1945 was mechanical general foreman under Bill Ripley. He later became mechanical shops superintendent, a position he held until his retirement in 1955.

"I had some radical surgery and later a heart condition," Fred recalled. "And the doctor told me if I didn't get out of this area he'd give me one year to live."

That was when Fred and May made the biggest decision of their lives, and one they have never regretted. They packed up and moved to St. Petersburg, Florida where they lived for the next 22 years. About six years ago Fred built their present home at Seminole, just north of St. Petersburg. They live there year round but every couple of years make a trip back to

the Copper Cliff area where their son, Ted, still lives. Ted had worked for Inco but is now in business on Manitoulin Island. Daughter, Ann Hurd is in Atlanta, Georgia. She arranged a fine party for her parents on their anniversary.

Fred and May repeated their marriage vows and received congratulations from a host of friends that they have made down south, along with a congratulatory message from President Reagan. They were in Sudbury this summer when the Triangle caught up with them.

They are both very active in their church and May says that the church couldn't function without Fred. They attended a Canadian Day gathering in Florida recently and nearly 200 people from the Sudbury area were present.

In their youth, both Fred and May were quite musical, she as a singer and he with the local band. So it was only a matter of time before they met.

Fred was born in England but May is a Copper Cliff girl all the way. And she readily admits, "Fred was my one and only all the time."

Tom and Ida Bradley

Tom Bradley and Ida Lewis were married on August 25, 1934 at the United Church in Sudbury but have resided in Copper Cliff all their married years. Ida was born in Copper Cliff and her father, Charles, worked for Inco while she was growing up.

Tom was born on a farm near Powassan in 1904. He came to Sudbury in 1929 and his first job was with Fraser Brace. But it wasn't long after that he joined Inco. He started with the line gang and stayed in that department all his Inco years, retiring in 1969 as a foreman. "I worked mainly on installing new trolley lines," Tom recalled.

Tom and Ida met in 1933 when they were introduced by one of Ida's girl friends. After a short courtship and a honeymoon in Niagara Falls they settled in Copper Cliff.

They raised five children. Son Jimmy works at Creighton; Gary is with the mechanics at Copper Cliff and Brian is in Oshawa. Daughter



Dawn is married to Jack Levstek and Fay is married to Dick Collison. They have 13 grandchildren and four great-grandchildren.

Their 50th anniversary was celebrated with a family dinner where they received many gifts and cards from friends plus the customary greetings from leading political figures.

The Bradleys enjoy their family and usually spend some of the summer visiting Gary's or Fay's summer place. "We have a fine family who have been very good to us," said Tom speaking for both himself and his wife.

Tom and Ida are a happy and devoted couple who are in reasonably good health. They live in a well kept, neat home on Norite Street in Copper Cliff and Tom is proud of the fact that he had no trouble getting driver's license renewed at age 80.

Pensioners' and Employees'

IN MEMORIAM

Name	Age	Died	Service (Years)
Armstrong, Donald J.	67	October 1	41
Austin, James A.	78	October 13	28
Beaver, William G.	93	September 4	20
Carbone, Frank	62	September 8	27
Davey, Ronald	68	October 5	40
Delorme, Ronald E.	56	October 11	23
DeLuca, Carlo	75	September 12	31
Dutkewycz, Wasyl	69	October 13	22
Frantz, William E.	73	September 19	27
Gardiner, Gordon	55	October 2	32
Gardner, Edward	60	September 28	30
Gates, Charles	59	September 22	33
Godkin, Eugene	63	September 11	27
Grycko, Teodor	82	October 8	31
Hillier, Henry	53	October 13	15
Kovach, Bela	83	September 26	21
Krajacic, Nick	86	September 11	20
Kuczma, Fred	83	October 18	33
Laamanen, Arvo	62	October 7	30
Lariviere, Julien	47	October 12	17
Larocque, Laurier	52	October 19	20
LeBlanc, Hector J.	66	September 24	29
Lemieux, Emile	76	September 28	23
Maki, Eino	78	September 19	20
Marteniuk, Bill	72	September 23	30
McLellan, Edgar L.	77	September 15	31
Muraska, Peter	89	September 30	37
Piliste, John	65	October 2	25
Platt, Charles	76	August 30	32
Polulak, John	61	October 6	35
Rimas, Kazys	68	September 23	28
Saunders, Ernest A.	83	October 8	39
Slivinski, Nick	62	September 8	37
Spalding, Henry	88	September 28	33
Stempien, Nik	79	October 13	38
St. Onge, Emile	60	September 24	31
Wiltshire, William	79	October 7	30



When the Queen opened Science North one of the gifts that she was presented with was a one-of-a-kind pure gold medallion. This coin, made of pure Ontario gold, was donated by Inco and presented to her by Science North officials.

In honor of her visit this commemorative medallion has been reproduced using the unique gold on nickel process patented by Inco. It is on sale at Science North.

Queen Elizabeth II *Sudbury*



1984

Inco Limited is proud to have been involved in the development of Science North. This booklet has been produced to commemorate the visit of Queen Elizabeth II to Sudbury on the occasion of her officially opening Science North on October 4, 1984.

As many of you recall, the Queen was originally scheduled to open Science North in July but due to the Federal election campaign that visit was postponed until October. This postponement didn't appear to dampen the enthusiasm of Sudbury residents as thousands stood in the

cool, rainy weather to give her a warm Northern Ontario welcome. After a brief outdoor ceremony where she unveiled a plaque, the Queen and Prince Phillip toured Science North and then were guests at a civic luncheon given in their honor.



All photos of the Queen courtesy Canapress Photo Service

Previous Royal Visits

While Sudburians played host to Queen Elizabeth and Prince Philip during their brief visit to the city last month to officially open Science North, it was not the first time they have welcomed royalty.

The Prince of Wales, who later became Edward VIII, came to Canada in 1919 and returned in subsequent years to vacation in his Alberta ranch. Once his train stopped for a short period in Sudbury and he was welcomed by a throng of well-wishers at the train station.

In 1927 the Prince was making a similar trek to Alberta in the company of Prince George and Premier Baldwin of Great Britain. Sudburians were anticipating an opportunity to greet the trio in customary warm fashion but there was a change in plans. Reported the local newspaper:

"...owing to the strain to which they have been subjected since their arrival in Canada a week ago, a special request has been made that the visitors should be permitted to continue quietly upon their journey."

Sudbury's next contact with royalty came in 1939 when it was on the itinerary of a North American tour undertaken by King George VI and Queen Elizabeth, parents of the present Queen. Scheduled to attend a brief reception in the city, the royal couple, much to everyone's pleasant surprise, made a request to visit Frood mine, then the largest producing nickel mine in the world. Company officials obliged even though a mine holiday had been declared in honor of the royal visit. A skeleton crew was hastily assembled to man the mine.



Queen Elizabeth II, escorted by the then president of Inco, Henry S. Wingate, stepped off the cage at the 1,000 foot level of Frood mine to commence her underground tour in 1939.

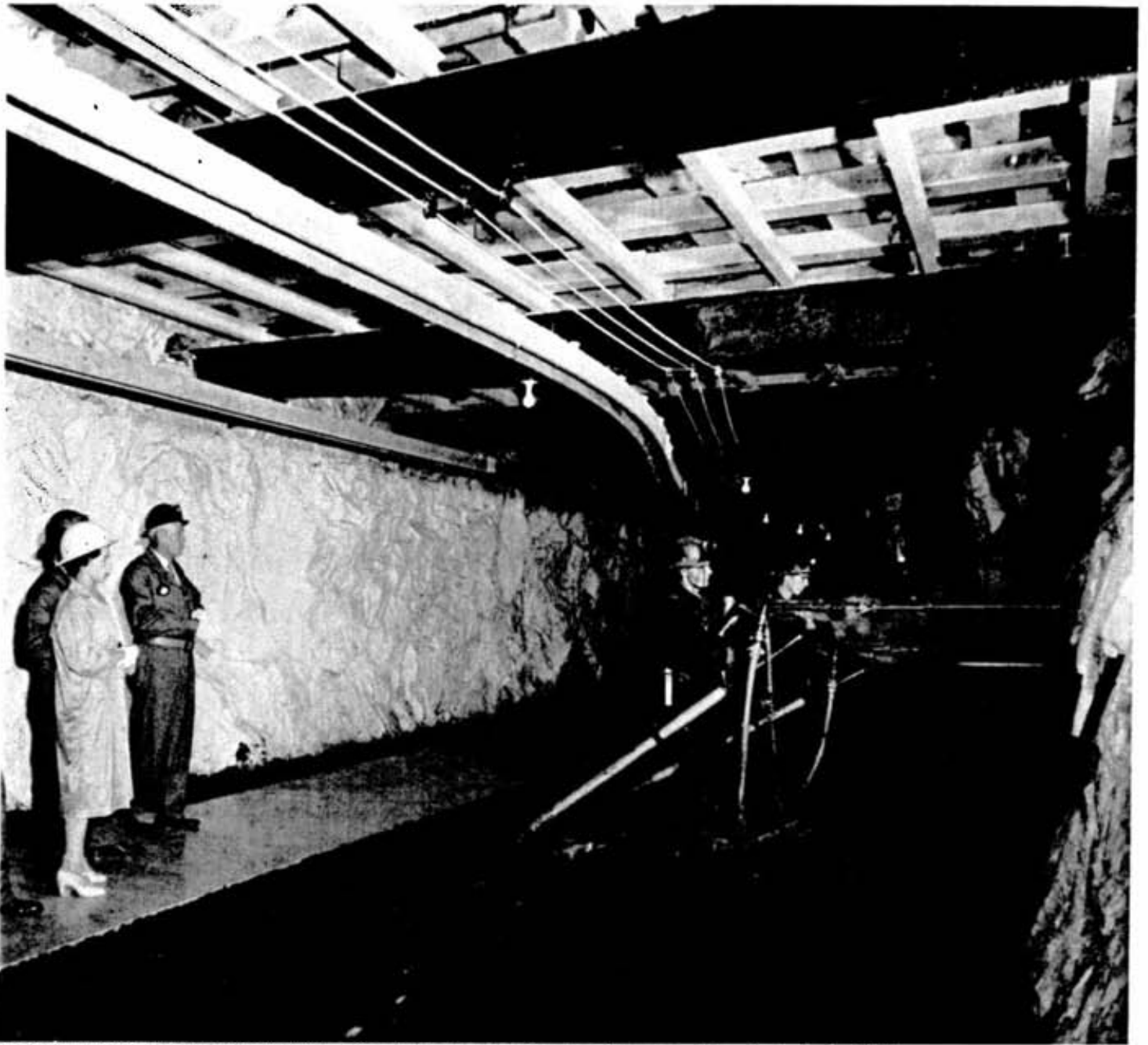
Dressed in appropriate garb, the King and Queen were escorted into the mine by Donald MacAskill, vice-president of Inco and Ralph D. Parker, general superintendent of mines and smelters. They toured 2,800 level from the rotary tippie near the cage to a crosscut on number one drift where men were mining ore. They also toured the hoist house on surface.

Everyone involved with the impromptu tour was favorably impressed by the King and Queen. Reported the Triangle: "Throughout the trip both the King and the Queen displayed absorbing interest in every

detail of their visit, constantly asking questions which showed how quickly they grasped the principles of the various operations they witnessed. Their Majesties left behind them an impression of instinctive charm and friendliness coupled with an amazing ability to absorb detail and atmosphere in the short time to which they must unfortunately be limited on such visits."

Twenty years later Queen Elizabeth and Prince Philip visited Sudbury as part of a Canadian tour. Frood mine once again attracted royal attentions. Greeted by Henry S. Wingate, president of Inco, Ralph D. Parker, vice-president, Ralph H. Waddington, general manager, Ontario division, T.M. Gaetz, manager of mines, S.J. Sheehan, superintendent of Frood-Stobie and Dr. H.F. Mowatt, chief surgeon, the Queen and Prince were taken to the 1,000 foot level. They saw demonstrations of drilling, mechanical loading and tramming, ore dumping and crushing and hoisting. At each demonstration they stopped to meet and chat with the operators.

The royal couple proved to be eager and interested visitors to the mine. They plied officials with questions about all facets of the Company's mining and smelting operations. Prior to leaving Frood mine for a motorcade through Sudbury, the Queen signed the mine's guest book. Her Majesty was presented by Mr. Wingate with the illuminated parchment scroll proclaiming an Inco fellowship established that day by the Company in collaboration with the Canada Council to honor the visit of the royal couple to Frood mine.



The Queen watched a demonstration of drilling at Froid mine put on by miners Len St. Amand and Jean Cyr during her 1959 tour.

Inco's committment

From the inception of Science North, Inco has been committed to supporting its evolution into a world class facility. The commitment to the cause began with a \$200,000 grant to complete a design, location and conceptual study of Science North in April 1980. A study team appointed by the Sudbury Regional Development Corporation delivered its recommendations concerning the construction of a science center in the city. These recommendations were accepted and Science North came into being.

In January, 1981 the Company announced it would donate \$5,000,000 towards the construction of the Science North complex on the shores of Lake Ramsey. This still stands as the largest corporate donation to a community project in Canadian history. Other corporate and government donations followed. The way to the start of construction had been paved.

Inco's support for the Science North cause went beyond grants of essential funding. Even before the ceremonial first blast to begin excavation of rock at the site was detonated on June 29, 1981, employees from the field exploration department extracted core samples at the construction site to help engineers and architects evaluate the structure of rock at the base of the buildings.

When excavation of the rock cavern beneath Science North was about to begin, Company experts were called upon to offer their advice on blasting the subterranean feature.

As the task of formulating exhibits for this world class centre began in earnest, the Company presented the Inco Coinage Collection to Science



Queen Elizabeth II, accompanied by George Lund, president of Science North, strolls through the tunnel leading into the science center complex that she officially opened on her recent visit to Sudbury.

North. Consisting of over 3,000 coins, the collection is a history of nickel minted coinage. One coin dates back to about 165 B.C. and features the head of King Agathocles of Bactria. The Mond Nickel Company, which eventually merged with Inco, started accumulating nickel coin 60 or 70 years ago. Many of the coins were acquired through the generosity of mint masters around the world. Others were purchased at auctions. They were used by the Company for exhibition and promotion purposes. The "book value" of the collection is \$30,000.

In the geosphere area of Science North a regular soapstone carving workshop is held. The soapstone used was donated by Inco. Over 1,500 pounds of the substance were

imported from the Company's Pipe Open Pit in Thompson, Manitoba.

After Science North purchased the Big Nickel Mine, work began on enlarging and improving the property and developing it into a working model of a producing mine. Some of the equipment used for expansion and special activities, such as the Miner's Festival, was supplied by Inco.

Science North also conducts a tour called the Path of Discovery, a two-and-a-half-hour trek throughout the Sudbury Basin that gives visitors an understanding of Sudbury's history, geology, and mining industry. Inco supports the Path of Discovery Tour by providing Science North with access to points of interest on its property such as the Frood open pit, the Clarabelle mill, the Copper Cliff mill, the Copper Cliff smelter and the Copper Cliff copper refinery. The Company also contributes with the advertising and promotion of the tour.

To help with its program of fundraising, Inco recently supplied Science North with 5,000 newly minted gold on nickel medallions at cost. The coin, which features Science North on one side and a mining scene on the other, is made through a unique, Inco developed gold plating process. A thin layer of gold is electrolytically plated to the nickel base to produce a surface that is beautiful and displays superior wear and corrosion resistance qualities. According to one Science North official, the coin has been well received by the public and "is selling like hotcakes."

Inco's commitment to Science North will continue as the facility strives to stay in the forefront of science centres in the world.



Queen Elizabeth charmed the thousands of Sudburians who thronged to see her. She once again showed her special magic with children.

Rosemary Ovens

It was a typically fine July morning in Copper Cliff 45 years ago.

Rosemary Ovens, then a member of Inco's accounting department, was taking advantage of the mine holiday that had been declared to honor the arrival of King George VI and his Queen to the area. Clad in overalls, armed with a brush, she applied liberal dashes of paint to the family garage. She had planned to join the rest of the region's populace later that day to view royalty as it passed by.

Her mother beckoned from inside the house. Mr. R.D. Parker, general superintendent of mines and smelters, was there to see her. "How would you like to go to Frood this afternoon and be lady-in-waiting for the Queen?", Rosemary recalls him asking in his typically direct fashion. A stunned look of surprise and a "that would be wonderful!" was her response.

Rosemary, along with Rita Price (now Mrs. Murray Dennis), were nominated ladies-in-waiting for the visit of the King and Queen to Frood mine. It was their duty to prepare the Queen and her entourage for an underground tour.

Donald MacAskill, Inco vice-president and general manager, escorted the Queen to Frood mine office where Rosemary and Rita anxiously awaited. "Your Majesty," Mr. MacAskill began. "May I present Miss Ovens." Rosemary made the appropriate curtsy and the introductions continued. With Rita and Mrs. MacAskill helping the Queen's own ladies-in-waiting, she helped fit Her Majesty with a raincoat and galoshes.

"I was amazed she was so petite," Rosemary says remembering one of her first impressions of the monarch. "The impression I got from



Rosemary Ovens holds the gloves and handkerchiefs that were given to her by two British Queens she attended; Queen Elizabeth II in 1959 and the Queen Mother in 1939.

photographs was that she was a much heavier person."

The Queen's exceptionally high instep made it difficult for her to zipper her boots for the trip underground. After the Queen told her that, Rosemary didn't have to go through a lot of trouble, both monarch and lady-in-waiting tugged that zipper into place.

"She put you so at your ease," Rosemary smiles. "She was charming and friendly and she talked to you all the time." The Queen, she informs us, thoroughly enjoyed her underground excursion. "I could tell by her gloves that she was not just standing still," she remarks referring to the soil marks on the cloth that covered the royal hands. Obviously Her Majesty was quite literally getting a feel for the mine environment. The Queen

gave her those gloves. They are a cherished gift that she has kept all these years, soil marks and all.

"And to think that 20 years later, I was able to do the same thing for the present Queen, her daughter."

Rosemary continues. When the time came to find a lady-in-waiting for Elizabeth II's visit to Frood mine in 1959, Inco officials felt that Rosemary would be the right person because she had done such a good job on the last royal visit.

Once again Rosemary outfitted the Queen for a tour of Frood mine. Comparing the two Royal personalities she notes that mother and daughter were very different. "Her mother was a different type altogether. She was very friendly and chatted all the time. Queen Elizabeth was a little more reserved but very gracious and lovely," she elaborates.

During Rosemary's second encounter with Royalty, it was Henry S. Wingate, Inco president who introduced her to the Queen. "I had the honor and privilege of attending your mother when she was here with your father in 1939," she recalls informing the Queen. Upon the visit's completion, Elizabeth told her, "You have been most kind and I shall tell my Mother that you attended me, too." As souvenirs of the occasion she gave Rosemary her gloves and a handkerchief embroidered with the royal emblem.

At the Queen's luncheon held at Science North, Mayor Peter Wong introduced Rosemary to the Queen who remembered her. The Queen and her former lady-in-waiting chatted amiably. "It was short," Rosemary says of the conversation, "but I was so glad to have had a few words with her."



Rosemary Owens in 1959 as she awaited the return of Queen Elizabeth II from her tour of Frood mine.

Science North today

Define the horizons of your mind or the limits of your imagination and you get some idea of the scope of Sudbury's new world-class science centre — Science North.

Four years and \$27 million after its conception, Science North lies ready to exercise your imagination. It is situated on a 14-acre site at the west end of beautiful Lake Ramsey.

Your voyage into a vast scientific realm begins when you first set eyes upon the glistening glass and stainless steel structure. The unusual snowflake design was the concept of Raymond Moriyama, architect of the Ontario Science Centre, who worked in cooperation with Sudbury architect John Stefura. It represents the glacial forces that with unfathomable magnitude have cut, scraped, and gouged the earth's crust into what is now the northern landscape.

Inside, the encounter with ancient and incredible forces becomes more intimate. A tunnel blasted through some of the oldest rock on earth, (2.5 billion years old) gives one a look at its stark beauty and offers visitors a glimpse at such geological features as shatter cones.

The tunnel leads into a huge cavern under the main exhibit. It is symbolic of the crater left by that prehistoric catastrophe. There, out of the primordial darkness, unfolds a modern day drama, a three dimensional film about the flora and fauna of Northern Ontario.

The 15-minute film was shot on location in the Sudbury area, on Georgian Bay and the north shore of Lake Superior by Academy Award



Spectators watch mime actors demonstrate scientific principles through their silent, expressive art in the central theatre.

winning producers, Christopher and Francis Chapman, using a special 3-D camera system. Augmented by sound and music moving around eight speakers, the film captures the north country's rugged wilderness and delivers it sensationally to an appreciative audience. Viewers say that it alone is worth the price of admission.

From the cavern you follow a winding ramp that lifts you up past a four-metre-deep gap running through the rock. Known as the Creighton fault, this geological feature is a dramatic natural depiction of how the earth's surface has shifted over the eons. Further on you find yourself gazing out over Lake Ramsey, the largest city-contained lake in North America.

You are greeted at the first level by the centre theatre, an enclosure

surrounded by a steep embankment of seats. Mime actors use their silent but expressive art to illustrate various basic scientific principles.

Then it's on to the many and varied exhibits, workshops and object theatres. You embark on a voyage of scientific discovery that takes you quite literally over a universe of knowledge. At every stop, the key is participation, whether by using one of your senses or by inquiring. Those who take the time to participate and to ask, find the resulting experience rewarding and fulfilling.

Typical of this participation, is the Trading Post: an area containing a variety of collections - everything from insects to fossils. Collectors can come in and trade one of their samples or specimens for something that is stocked at the Trading Post. Through collecting, people learn. It involves observing, studying and researching. The most important commodity exchanged over the counter of the trading post is information. Science centre staff, always encouraging queries, eagerly supply the desired answers, whether they concern the life cycle of silk worms or the habits of the cicada (an insect that lives underground in the grub form for 17 years before surfacing for only a few days to mate and die).

Further along you find the biosphere area where the exhibits are small living creatures of Northern Ontario. There's a cute little shrew that you don't want to handle because it bites. There are snakes that you can handle because they are harmless.

Insects known as walking sticks, because that's what they look like,

occupy quarters in the same area. More often than not children are there getting photos taken with these creatures on some parts of their anatomy. In a nearby mini-theatre, people watch a video, explaining the role of predators in nature. The footage is excellent. The narrator, touching on the basic law of nature, survival of the fittest, explains: "There can not be a true nature without predators."

The atmosphere exhibit contains the nation's second most modern weather station. There you gaze upon a screen that features a satellite image of North America. Cloud fronts can readily be seen and you can get an idea of what kind of weather to expect. With staff assistance you can use a computer to alter the color of the image to enhance areas of varying temperatures. There are a number of weather related experiments in which you can participate. One, using a light, ice, water and purple dye, explains the Coriolis effect, the phenomenon of warm fronts moving towards cold fronts.

Wandering over to the human performance exhibit you find that you can have your blood type determined. Other devices measure reflexes, lung capacity, grip strength and fat content to name a few. After being tested by staff members, you can compare your fitness statistics against those of other athletes like Olympic swimmer Alex Baumann or national basketball team member Eli Pasquale.

The realm of science knows no bounds and neither does Science North. The more you explore — the more it has to offer. There are computers that talk and computers that help you compose music.

There's a reproduction of Faraday's laboratory in which you can conduct an experiment with static electricity. There's an optics centre where lenses for a big solar telescope are being ground, a telescope that will eventually provide visitors with a close-up view of the sun.

If you're tired, the staff will let you lie and rest — on bed of nails. While you're resting on top of hundreds of sharp nails you're informed that because your weight is well distributed over so many sharp objects, you can't be maimed.

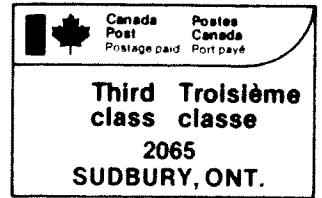
Just as science has no end, so Science North is in a state of constant evolution. Exhibits will change, new ones will be added. As it continues to develop, this showcase for science will simplify science for hundreds of thousands of visitors annually.



Visitors to Science North's extinction workshop discover how humans contribute to the ecological extinction of many species of animals.



It is not unusual for visitors to the physical sciences section of Science North to find themselves relaxing on a bed of nails while an attendant explains the scientific reason why they are able to do this without fear of extensive perforation.



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