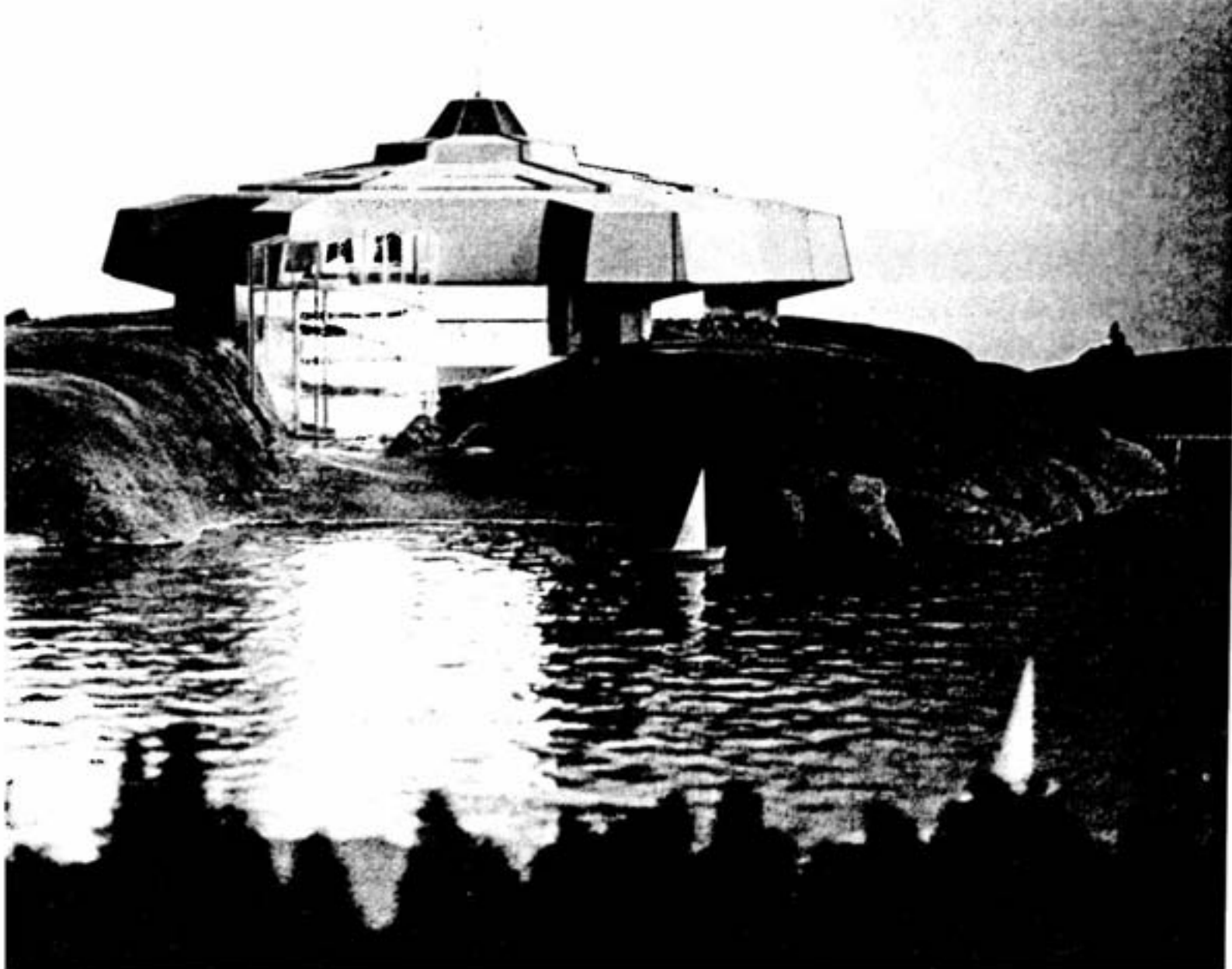


# INCO **Triangle**

JUNE 1981



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**In this issue**

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Publications  
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Letters and comments are welcomed and should be addressed to the editor at Inco Metals Company, Public Affairs Department, Copper Cliff, Ontario P0M 1N0. Phone 705-682-5425.

**22 tons of solid steel**

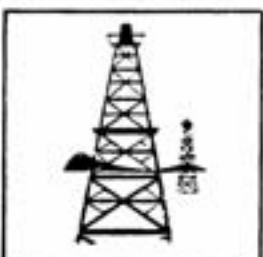
The machinists at Inco's divisional shops complex have fabricated a massive support trunnion or roller for a kiln at the Iron Ore Recovery Plant. Originally these trunnions had to be ordered from England and it took up to a year to get them.

**4****Fire brigade to the rescue**

The Ontario division has over 700 employees involved in fire brigade practice, sharpening their fire fighting skills. The Triangle takes a look at one such fire fighting drill held at the copper refinery.

**16****Inco nickel in space**

The recent success of the U.S. space shuttle, Columbia, has heralded the arrival of a new space age. Many of the components on the shuttle were made from Inco nickel mined, milled and smelted in Sudbury.

**20****Saving energy**

As a result of work by plant energy committees, the Ontario division has reduced energy costs by \$5 million in 1980.

**23****Our Cover**

This month's cover is a photograph of the Sudbury Science Centre scale model taken by Nelson Pau. When the Science Centre is completed in 1983, it will look exactly like this model constructed by Ed Cotten of Minniken Scale Models of Toronto. For an update on this project see story on page 10.

# Recent Staff Appointments

**Peter Bartuska**, senior draftsman, central maintenance

**Richard Beauchamp**, research and development project engineer, mines research, Copper Cliff

**William Caughill**, supervisor budgets and cost control, division comptroller, Copper Cliff

**Neil Dekoning**, superintendent of engineering, Port Colborne nickel refinery

**Roger Delvecchio**, senior chemist, process technology, Copper Cliff

**Eric Fenton**, superintendent industrial relations, employee relations, Copper Cliff

**Anthony Fritz**, superintendent of services, Copper Cliff smelter

**Jim Giles**, technical support analyst, computer services, Copper Cliff

**Stephen Gorecki**, programmer analyst, computer services, Copper Cliff

**Joseph Hanuska**, instrumentation foreman, Port Colborne nickel refinery

**Royston Harrington**, maintenance superintendent, Port Colborne nickel refinery

**Robert Hayden**, shift foreman-IPC, Copper Cliff nickel refinery

**Harold Heale**, supervisor of maintenance contract services, central maintenance

**John Lafleur**, supervisor ledger accounting - sales invoicing, division comptroller, Copper Cliff

**Joanne Landry**, clerk stenographer, employee relations, personnel and office services

**Wayne Lavallie**, maintenance foreman, Copper Cliff South mine

**Bruno Malvaso**, maintenance foreman, Copper Cliff South mine

**Arthur Martel**, maintenance foreman, Creighton nine shaft

**Allan Massey**, superintendent employment, training and development, employee relations

**Anthony Mitchell**, supervisor - hourly job evaluations, employee relations, Copper Cliff

**Vincent Orlando**, superintendent safety and administration, Port Colborne nickel refinery

**Raymond Parker**, mine foreman, Levack mine

**Robert Ranger**, industrial evaluator, central maintenance

**Robert Rappolt**, research and development project engineer, mines research, Copper Cliff

**Gordon Revey**, research and development project engineer, mines research, Copper Cliff

**Robert Sandberg**, plant engineer, Copper Cliff smelter

**Linda Schmidt**, secretary, process technology, Copper Cliff

**Donald Sitch**, shift supervisor, Shebandowan mine

**Graham Skelton**, section leader, Copper Cliff smelter.

**Wayne Smith**, superintendent safety and administration, Copper Cliff smelter

**Ken Unwin**, maintenance assistant, Levack mine

**Linda Webber**, technical support analyst, computer services, Copper Cliff

**Egle Wennerstrom**, clerk stenographer, Copper Cliff

**Jack Wyman**, industrial evaluating analyst, central maintenance

## Employees' Golf Tournament

**JUNE 20, 1981**

*(Club Privileges for the day)*

**ENTRY FEE \$15.00**

*(No refunds after June 12, 1981)*

**WINNERS' DINNER AND PRIZE PRESENTATIONS**  
**June 24, 1981 at the Copper Cliff Club**

*Top 4 Low Gross Golfers will play in the President's Trophy tournament in Sudbury.*

### DRAWS:

Shotgun start 7:30 am and 1 pm sharp

### LUNCH:

1 pm to 3 pm, 6:30 pm

held at Idylwyld Golf & Country Club

**ENTRY FORMS AVAILABLE AT  
EMPLOYEE RELATIONS IN YOUR AREA**

**First 256 entries accepted**

**Mail Entries to:**

Public Affairs Dept., General Office, Copper Cliff



# Machinists at divisional shops Meet latest challenge



Showing off the 22 tons of mild steel they fashioned into a brand new trunnion, are, from left, standing, Owen O'Reilly, Bianco Pegoraro, Tony Marolt, Louis Fantasia; kneeling, John Sloboda and Jim Angove.

The latest challenge to the machinists at divisional shops came in the form of a request to fabricate a new support trunnion for a kiln at the Iron Ore Recovery Plant. Two weeks after Owen O'Reilly, Tony Marolt, Louis Fantasia, Bianco Pegoraro, John Sloboda, Jim Angove and Allen Bellefeuille started on the project, a gleaming trunnion was ready for delivery to the IORP.

Made with 22 tons of solid, mild steel, the new piece represents a significant departure from traditional design practice. Originally, these trunnions or rollers, were manufactured in England as castings, hollow metal pieces poured in a mold. Not only are the castings expensive, but they also take an entire year to be delivered after they have been ordered, according to Bruce Warren, machine shop coordinator.

Designed by Fred Henschel, a designer at Inco's maintenance engineering department, the new trunnion is made of five layers of eight inch mild steel, sandwiched together. Not unlike a wood



Bruce Warren points to the hollow construction of the old variety of trunnions and the cracks and other wear that it has suffered over the years of service supporting a kiln in the IORP.



lamination, the strips of steel are bonded together. Rather than using some bonding agent, Bruce points out, the mild steel pieces are machined so they will lock into one another. The solid construction required by the new design accounts for the greatly increased weight. The old castings model weighed 13 tons, about half as much as the Inco trunnion.

An important part of the trunnion's creation was the machining and installation of its huge shaft. It was the handiwork of Allen Bellefeuille. Once Allen had finished making the shaft it had to be inserted through the

roller. Bruce says this was accomplished by heating the roller to a temperature of 300 degrees. This allowed the hole in the roller to expand by 30 thousandths of an inch. This seemingly insignificant expansion was enough to allow the men to slip in the shaft with no trouble. Once the roller cooled and the metal contracted, the shaft was locked into place.

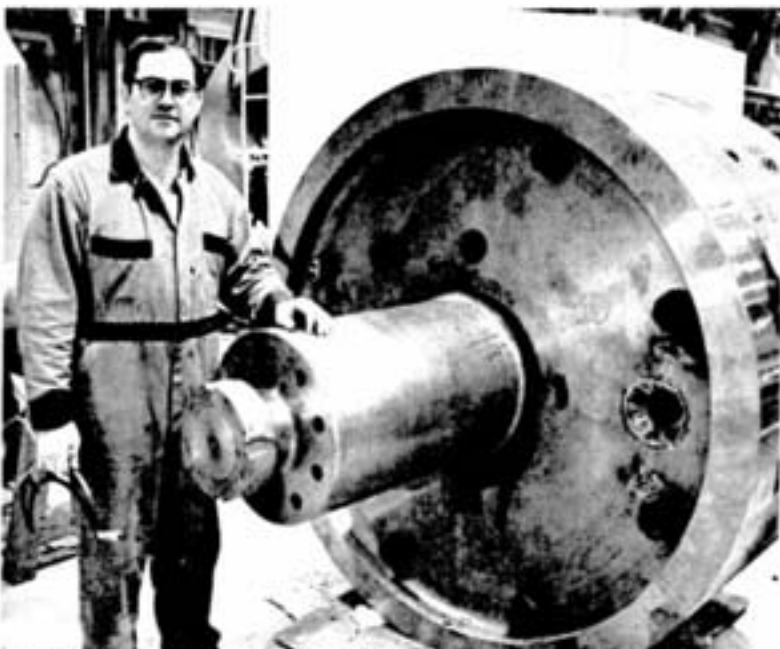
This trunnion will replace one of four trunnions on an IORP kiln. Kilns are huge cylinders, 175 feet long and 13 feet in diameter that weigh about 250 tons. They serve to dry feed into a metallic nickel form.

With the great weight the trunnions must bear, officials will be monitoring the progress of the divisional shop's new baby on a daily basis. Notes Bruce: "This is an experiment and all that is left is to put this devil in and see how it stands up." The hope is that the new roller will last longer than the old kind, showing less of a tendency of cracking and breaking up.

While design people scrutinize the progress of the new trunnion, the machinists who fashioned it take pride in the fact that they have accomplished a "first" at the company; a "first" that may well prove to be best.



Happy faces reflect a job done well and safely. Flanking the newly installed trunnion are, from left, Earl Dorey, Pettibone driver, Gino Oliver, maintenance mechanic, Cliff Boomhower, maintenance mechanic, Ilario Toniolo, maintenance general foreman, Henry Bazinet, maintenance mechanic, John Buchowski, maintenance foreman and Jim Mallett, scoop operator from South mine.

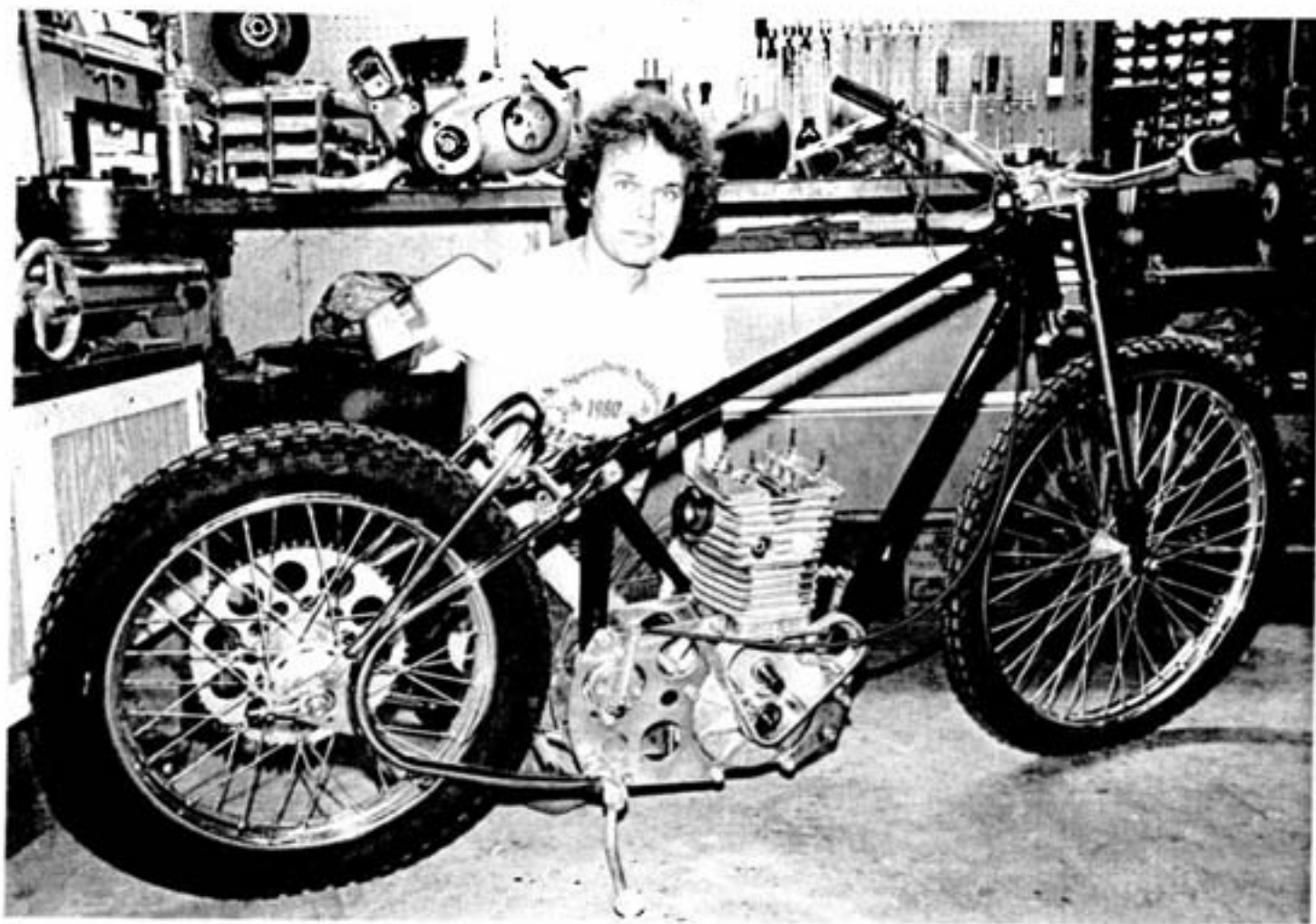


Allen Bellefeuille stands near the shaft he machined for the trunnion.



Maintenance mechanics Gino Oliver, left, and Henry Bazinet unhook the support trunnion from the Pettibone boom just before it is rolled into place under the roaster kiln.

# When you're number



# two-you try harder!

"There is something about being second in anything — it gives you incentive to try harder," said Jim Orosz, a 15-year veteran of the sport. Jim finished second in points in the Canadian Motorcycle Association "speedway" division.

When he's not racing motorcycles, Jim is an assistant mechanical coordinator in the research stations at Port Colborne and has been involved in motorcycle racing for about 15 years.

"When I first started racing we could use the same motorcycle to ride on the streets and race in several different classifications. Today competition is so close that every type of racing calls for a different style of motorcycle," stated Jim.

In his early racing career he tried a variety of things; flat track, trials, enduro, but settled on hill climbing. He became very successful at getting up hills in very fast times but local courses closed and he had to travel long distances in order to compete.

"Travelling as far as 400 miles one way to a race meet nearly every weekend during the summer got to be too much, so I decided to try oval track racing. There are several tracks just a short driving distance from Port Colborne and that was quite an advantage after doing so much

travelling to go hill climbing," he recalled.

His first dirt-track bike was home built with a Honda engine. It was good enough for Jim to come second in Canada in seasons points in the "speedway" division. He actually led the division for most of last season but missing one night of racing late in the season and having mechanical problems the very last race meet, resulted in his dropping to second place by one point at the end of the season.

This year Jim is starting with a new motorcycle especially built for this type of racing. The total weight of the motorcycle is much less than the previous one. The engine drives the rear wheel directly without the added weight of a transmission. The engine also has two intake valves and two exhaust valves that should make it superior to the old motorcycle. None

of the "speedway" motorcycles have brakes.

To be competitive in just about any type of racing is an expensive proposition and Jim has some help with expenses. Bill Rafter, a one time race car driver owns the new motorcycle, although Jim was free to make any changes he thought were necessary. Lapp Cycle, a local motorcycle dealership and Peter Shuringa, an Inco employee and long time race fan, also help out with expenses.

"I've always liked motorcycles and I do like racing, so to me it wouldn't make sense to race cars or boats," stated Jim. His wife Robin and their three children often go to the race and it becomes a family outing. "To me, racing motorcycles is exciting. I'm glad that some people get a thrill from watching us race," he concluded.

1 Jim's motorcycle is imported from Czechoslovakia, and although it was brand new, he felt it was necessary to make several changes before he felt comfortable with it. Here he re-assembles some engine parts that he modified earlier.

2 Leading the pack in this race Jim is closely followed by Len Dillon.

3 Jim uses a home-made hydraulic press to straighten the front forks of his motorcycle. He can spot a deviation of only 1/1,000 of an inch using a test dial indicator.

4 The "Speedway" motorcycles have no brakes. The classic style of negotiating corners is to power through in a controlled skid off the back tire. The Triangle camera caught Jim in the classic position in number three and four corner at Welland County Speedway.





# Inco in the community

*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.*

Roman Catholic Separate School Board  
Sudbury Board of Education  
The Bel Canto Chorus  
Sudbury Regional Science Fair  
Military Police Fund for Blind Children  
La Fête à Baptiste  
The Salvation Army Red Shield Appeal  
Sudbury YMCA

Rotary Club of Sudbury  
Warren Agricultural Society  
Ontario Crafts Council  
Sudbury Horticultural Society  
Service des Malades  
Northern Regional Recovery Home for Women  
Ontario March of Dimes  
Sudbury YWCA

Sudbury and District Kiwanis  
Music and Dance Festival  
Association des Scouts du District  
du Sauff Ste. Marie  
The Finnish Golden Age Club  
Rockhaven  
Club des Bons Amis  
Royal Canadian Air Cadets  
Lively YMCA



Inco recently donated crating material to the Azilda Lions Club for use in packaging medical supplies being sent to the island of St. Lucia. The Azilda chapter has also sent children's clothing, books and medical supplies to the island including an x-ray machine and x-ray table which Inco donated last summer. Supplies for St. Lucia are being collected on a province wide basis by various Lions Clubs and other volunteer organizations in an effort to assist the needy country. **Bob McAllister**, Lions Club International Aid Chairman, seated on the Inco crate, is giving directions to **Alain Jollette** who is operating the forklift, while **Rheal Carriere**, left, and **Gary Riehl**, top, look on.



Inco recently made a contribution to the Sudbury Branch of the YWCA. **Joan Babil**, Inco's assistant comptroller, right, presented the company's \$10,000 donation to, from left, **Maureen De Stefano**, the YWCA's public relations officer, and **Lorraine Evans**, campaign chairman for the YWCA.



**Bill Collis**, right, on behalf of Inco Metals Company, recently presented a cheque for \$2,500 to **John Weglo**, Chairman of the Sudbury branch of St. John Ambulance. The money is earmarked for general use by the organization. Last year alone, the Sudbury Brigade provided over 33,000 hours of voluntary service to the Sudbury area at various functions and also participated in the training of some 2,000 people in first aid.





**Jim Wilkinson**, treasurer of the Sudbury YMCA, left, accepts a \$20,000 donation presented on behalf of Inco Metals Company by **Dr. Mike Sopko**, vice-president of smelting and refining. The money is a contribution to the Y's annual fund-raising campaign. This year's target is \$70,000.



At the recent Sudbury and District Kiwanis Music and Dance Festival held at Sudbury Secondary School, the Inco Metals scholarship was awarded to a member of the Ida Sauve Dance Studios. On behalf of Inco Metals, **Al Cruthers**, superintendent of operations at the copper refinery, presented the \$500 scholarship to 18 year old dancer **Joanne Gervais**. Joanne plans to study dance in New York City this summer.



**Ron Stevens**, executive director of the Sudbury and District Association for the Mentally Retarded, left, **Carol Topo**, program director of the Ann Stafford Center, middle, accept an \$8,000 contribution presented on behalf of Inco Metals Company by **Morry Brown**, director of public affairs. The funds will be used by the Ann Stafford Center and the Sudbury Development Center to meet the cost of teaching mentally retarded and physically handicapped children.



# Sudbury Science Centre

## An Update:

"It's a bit like riding Secretariat, you have to be a pretty poor jockey to lose." With those words, David Pearson, the Laurentian University professor who was nominated project coordinator of the Sudbury Science Centre, described the feeling of being associated with a project that will have the best of everything poured into it, to produce something that will rival other science museums across the continent in originality, content and excitement.

Blasting will begin this month at the Science Centre's Bell Grove site to excavate the foundations for the network of unique snowflake shaped buildings that will house many scientific exhibits. By the time it is scheduled to open in the summer of 1983 during Sudbury's Centennial, the Science Centre is expected to cost about \$19 million. Earlier this year Donald J. Phillips, president of

Inco Limited, announced that the company would contribute \$5 million toward the capital cost of the Science Centre.

The concept of this type of museum for Sudbury is not exactly a new one, notes Professor Pearson. As long ago as the mid-1960's local businessmen were talking about establishing a large park which would tell the scientific tale of the Sudbury Basin, its mineral wealth and its people. Since then science centres have sprung up throughout North America, the Ontario Science Centre in Toronto being among the most notable.

With the success of the Ontario Science Centre it was felt that similar centres should be erected in other parts of the province. Many envisioned a science centre as something that could draw tourists, enrich the cultural fabric of the region

and help change the image of Sudbury. States Professor Pearson: "It was an idea that made sense and was floating around in a number of people's minds."

In 1979 the Regional Municipality of Sudbury undertook the initiative to investigate a science centre project with the support of community and Inco officials. The company announced, in May of the following year, that it would fund a \$200,000 study to examine the content, scope and cost of such an establishment in Sudbury.

Led by a pair of very reputable architects, Raymond Moriyama of Moriyama and Teshima Architects of Toronto and John Stefura, of Townend, Stefura, Baleshta and Nicholls Architects of Sudbury, the investigation was presented in December of 1980. It was accepted as the basis for going ahead with the

project. Shortly afterward, Professor Pearson was hired by the Sudbury Regional Development Corporation to oversee the implementation of the study.

Rather than produce a miniature clone of the Ontario Science Centre for Sudbury, the creators of the local science centre wish to develop something different. Consultants have scoured science museums throughout North America to observe how others have presented the message of science. They have come up with an approach that includes some of the best from other centres as well as something new.

"We wanted to give people an overview of science," states Professor Pearson, alluding to the fact that most other science centres tend to break sciences down into disciplines such as biology, physics or chemistry for exhibit purposes. "We also wanted to add something to the 'hands-on' gadgets that are very popular in science centres. We wanted to add exhibits that made people think more, the type that involved people more deeply."

So, in addition to the gadgets that serve to demonstrate scientific principles through participation, Professor Pearson says that the Sudbury Science Centre will feature science theatre, object theatre and laboratories.

The science theatre developed for the Sudbury Science Centre will consist of a small, short production that might explore and give insights into the lives of important scientists through the ages. Edison and Faraday are examples of people which this theatre may investigate. Elaborates Professor Pearson: "It will give people some sense of science in the past and of scientists in the past. It's something you don't get in most science centres."

Professor Pearson envisions object theatres in the Science Centre being darkened rooms where spot-lit displays give visitors some idea of scientific concepts such as evolution. A progression of these dramatically lit exhibits, he adds, would be



Professor David Pearson, project director of the Sudbury Science Centre, explains features of the centre using a scale model.

"something a bit more thought provoking."

Sudbury Science Centre "laboratories," Professor Pearson explains, will be areas where people will be able to spend more time exploring some aspect of science through actual hands-on experimentation than they would on the gadgetry. While adults might like to try their hand at a programming a

computer, kids might like to head for a trading post where they would find information on natural things they might have collected. It would, Professor Pearson notes, serve to heighten powers of observation, collection and research, all important scientific skills.

While the Science Centre will endeavour to show visitors the dynamics of sciences, special



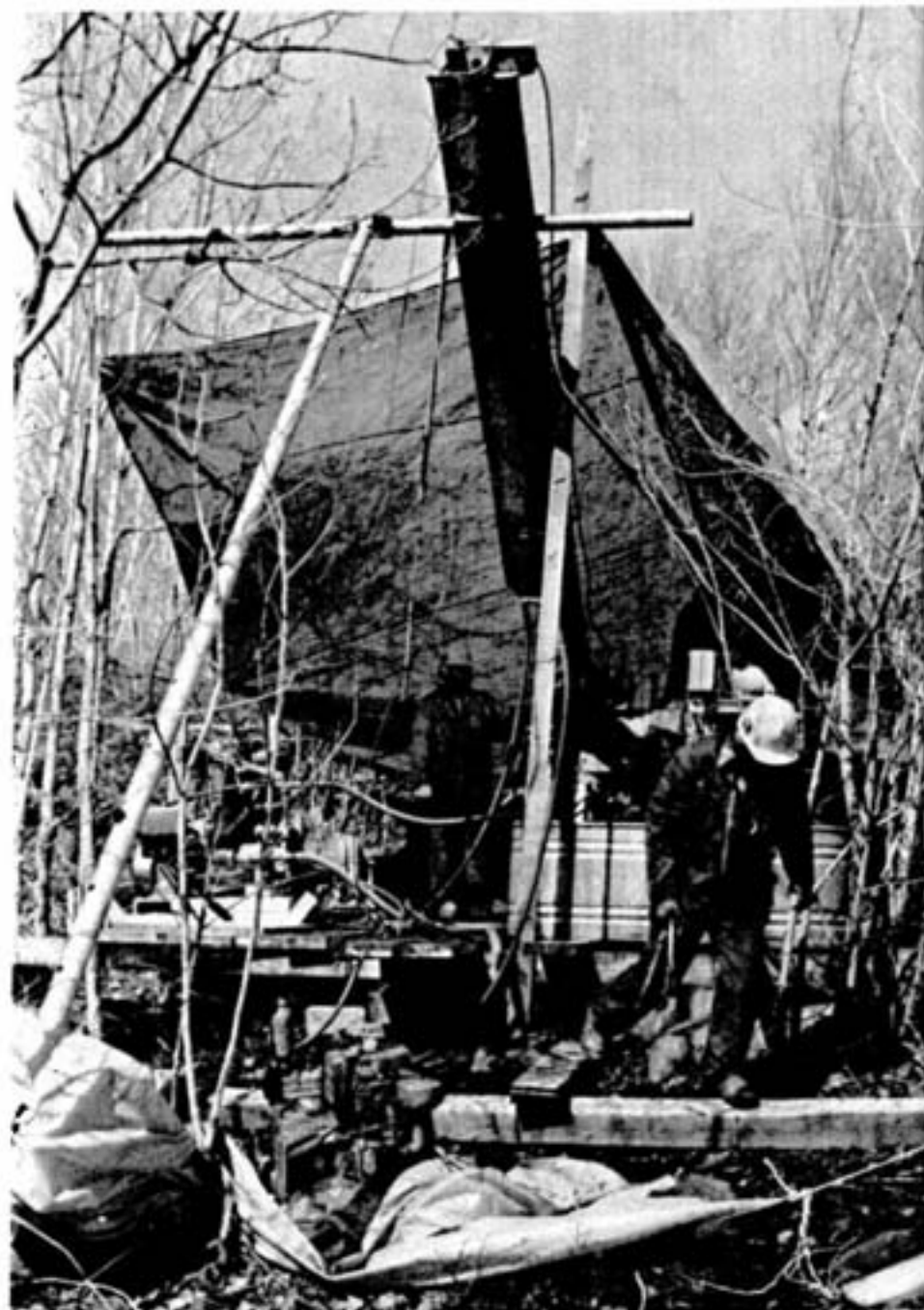
attention will be paid to the unique geology of the Sudbury Basin as well as the people who have settled it over the centuries. Professor Pearson stresses that the Centre will also enlighten visitors to the natural phenomena of other Northern Ontario places. The introductory experience it will give them, might inspire visitors continue on to these other northern towns and cities and explore things first hand.

Professor Pearson is convinced that the Science Centre will prove economically beneficial to the region. He estimates that over 1,500,000 tourists by-pass Sudbury each summer on their way to other destinations. The Science Centre, he is convinced, will prove such an attraction, that many of these tourists will be pulled from the highway into the city. The money they spend will create jobs. This will have a ripple effect on the entire north as people are persuaded to travel to other places in Northern Ontario.

A second benefit of the Science Centre will be that it will enrich the culture of the region. "It will greatly enrich the life of people up here, in the same way theatres do, in the same way libraries do," stresses Professor Pearson. "I am one of those who believes that there is much more to life than shopping centres and hockey arenas."

As work begins on the Science Centre's Bell Grove site, fundraising for the \$18,000,000 project continues. In addition to the corporate grants of \$5,200,000 and \$1,000,000 given by Inco and Falconbridge respectively, Science Centre officials have received a \$10,000,000 commitment from the province and are awaiting word from the federal government. They will continue trying to sell the idea of "the most exciting project on the continent" to other corporations with the hope of securing more funding.

Other than the donations Inco has already made to the Science Centre, the company has helped with its progress in other ways. Inco people



*A pair of field exploration employees man the Inco drill rig that extracted core samples from the rock upon which the Science Centre will sit.*

and equipment drilled the core samples at the construction site and helped engineers and architects evaluate the rock structure upon which the Centre will eventually sit. Throughout each stage of construction Inco people will be available to help with advice on the erection of the complex.

Professor Pearson says the

company has played an important role in establishing the Science Centre above and beyond making the largest donation in Canadian corporate history. Inco was instrumental in making the project a reality. Says Professor Pearson: "Inco made reality out of an idea. There is no more important role than that."



# **TOUR TOUR TOUR**

## **INCO METALS**

**May 18, 1981 - September 7, 1981**  
**Continuous Tours from 9:00 a.m. til 2:30 p.m. daily**

**From May 18 - June 19**  
**Monday thru Friday**

**From June 22 - September 7**  
**Monday thru Saturday**

**Including Public Holidays**

*Tour Consists of Mill, Smelter and Refinery*  
*Tours approximately 1 1/2 hours in duration*

***Age restriction: twelve and over***

————— **For more information call:** —————

**682-2001**

**INCO METALS COMPANY**

# Family Album

## Family Album Photos

If you are an Inco employee and would like your family to appear in the Family Album section of the Triangle please let us know by calling 682-5425, or send in your name to the address on the masthead.



Walking into the Chmielak home is a little bit like walking into a greenhouse. Diane, a process clerk in the IPC department at the Copper Cliff nickel refinery, figures she has some 30 to 40 plants in the house alone. Diane's husband Neil, employed at Canadian Alloys in Walden, enjoys playing baseball and watching sports. The couple is shown with their children, from left, Stephanie, 5, Ryan, 3, and Erin, 1.



Rene Berthiaume, a stop leader at Levack mine, and 24 year veteran at Inco, is kept busy with his active family. Rene and wife Rolande enjoy taking their family camping, and it gives Rene the opportunity to pursue his favorite sports - fishing and hunting. Daughters Linda and JoAnne spend some of their spare time modeling and dancing while Don, the musician of the family, keeps everyone entertained with his guitar playing. The children are, from left, Donald, 19, Linda, 12, and JoAnne, 17.



Desjardins is a specialty welder in the maintenance department at the Port Colborne nickel refinery and has been an Inco employee for more than 16 years. During the winter months, hockey and ice fishing take up a lot of his spare time, while in the summer, he is active in baseball. Wife Sally also works full time in a bank and enjoys volleyball and ceramics as hobbies. Both Ronnie and Robbie are avid sports fans and especially like to ride their motor bikes in the fields surrounding their rural home.

# LOOKING BACK

## THROUGH THE PAGES OF THE TRIANGLE

The "tallest chimney in the British Commonwealth" caught the eye of the Triangle's roving reporter in June of 1954. Workmen were busy pouring concrete in the structure that would soon tower 615 feet above its 22 foot base. The stack was part of the new iron ore plant that would make metallurgical history by producing high-grade by-product iron ore from nickel ores mined in the Sudbury District.

The \$16,000,000 plant, the Triangle reported, would release smelter capacity enabling the company to deliver 120,000,000 pounds of defense-vital nickel to the United States over the next five years

without diverting regular supplies from industry.

On completion the stack would weigh 17,000 tons and contain over 500,000 pounds of reinforcing steel and nearly 100,000 pounds of insulating material. The stainless steel coping for the top of the shell would weigh 9,000 pounds. The firm that had built the stack at the Copper Cliff smelter and the one at the Port Colborne nickel refinery, the Canadian Custodis Chimney Company, was building the iron ore facility.

### Other June Events

#### 1944:

Inco employees and the residents

of Inco towns broke all their previous war-financing records in the Sixth Victory Loan campaign. Total subscriptions in the Sudbury District reached a new high of \$1,554,400 against a quota of \$1,200,000. Except for \$200,650 worth purchased by people dealing directly with their banks, all Victory Bonds ordered by employees or residents of Inco towns were bought outright by the company and were delivered to their purchasers as soon as the payments were completed, the company assuming the interest charges in the interval. The transaction for the Sudbury District necessitated writing the biggest cheque ever written up to that time. The cheque totalled \$1,289,100.

#### 1961:

At the first convocation of the only bilingual federated university in Canada, Laurentian University, honorary doctor of laws degrees were conferred on Ontario premier Leslie Frost and Ralph D. Parker, senior vice-president of Inco and chairman of the University's board of governors. Both men were honored for their part in bringing about the federation of the University of Sudbury, Huntington College and Thorneloe College.

#### 1975:

The grand old dame of Sudbury hotels, the Nickel Range, succumbed to the wrecking ball. Ageing and no longer financially viable, its fixtures were auctioned off and its walls were torn down. During the Nickel Range's long and illustrious existence it had been the home of all kinds of people from lumberjacks and prospectors to the well-to-do.

VOID IF DETACHED FROM VOUCHER OR IF ANY ALTERATIONS ARE MADE TO VOUCHER

No. A 60661



Copper Cliff, Ont. May 16th, 1944

The Bank of Toronto

Pay 1,289,100.00 Dollars

TO THE ORDER OF

The International Nickel Company of Canada Limited  
Mining and Smelting Division

The Receiver General of Canada,  
Ottawa, Ontario.

NEGOTIABLE WITHOUT CHECK AT ANY BRANCH OF THE BANK OF TORONTO IN CANADA

## FIFTY NEST-EGG FOR INCO EMPLOYEES AND TOWNSPEOPLE

Except for \$200,650 worth purchased by people dealing directly with their banks, all Victory Bonds ordered by INCO employees and the residents of INCO towns were bought outright by the Company and will be delivered to their purchasers as soon as payments are completed, the Company assuming the interest charges in the interval. It took the biggest cheque ever written at Copper Cliff to put through the transaction for Sudbury district. That little scrap of paper pictured above was worth just \$1,289,100 which isn't exactly hay in any man's language. The accounting department's cheque-writing machine was stamped and a typewriter had to be used. Another cheque was issued for employees' bonds purchased through the Canadian Bank of Commerce at Coniston; it was for \$64,650.00.

Members of the copper refinery shift fire brigade are, back row from left: Terry Greene, Fred Ward, Sam Enver, Bill Julien, Dennis Tucker, Gerry Limoges; front, from left: Ray Mathon, Paul Tidd, Earl Jones, Sam Semler, Ron Lavigne.



## Fire Brigade

A siren wailed in the distance while the flames danced higher in the wind. The wailing came nearer as a firetruck transporting men and equipment appeared around the corner. Off the truck came the brigade, eager to set up the necessary firefighting equipment to quench the blaze.

Some tackled the flammable liquid fire by spraying it with monoammonium phosphate powder, an all-purpose fire extinguishing powder; some ejected smoke from the building by ventilating the roof and spraying it with water, while others donned self-contained breathing apparatus to rescue a person stranded in the building.

In a matter of minutes it was all over; the flames disappeared, the smoke subsided and crew members delivered the uninjured man from the building. A job completed safely.

Such was the scene at the copper refinery recently as the copper refinery fire brigade applied its

knowledge of firefighting, apart from its routine fire practices, in both written and practical form during three days of special fire prevention drills developed by the fire inspection section of the safety and plant protection department.

"These upgrading exercises represent our commitment to the ongoing fire prevention program throughout the Ontario division," explained Jack Hall, Inco's chief fire inspector. "They are conducted by our assistant fire inspectors to test the capabilities of the fire brigades and to advise on improvements to firefighting procedures at that specific surface operation."

The upgrading sessions dealt with practical hands-on firemanship which included usage and handling of hoses, the proper placement and use of ladders as well as the proper operation of pumper vehicles. The sessions also involved the use of fire practice manuals accompanied by audio visual presentations and

classroom discussions on such topics as the chemistry of fire, electrical fires, the proper handling of portable fire extinguishers and the personal use of breathing apparatus.

At the end of the practical and classroom sessions, fire brigade members were tested by the fire inspectors. "The inspectors look for the proper method of safely handling an alarm situation," Jack commented.

All of the approximately 600 volunteer firefighters and 120 brigade officers within the Ontario division, some of whom belong to their municipal volunteer fire brigade, will have the opportunity to participate in these drills, according to Jack. "From the very positive response the program has received at the copper refinery, we are confident that all plant and mine surface properties will want to implement this upgrading program at their location in the near future."





*Fire inspectors, from left, Fred Mansfield, Phil Izzard and Bert Lecuyer assess the practical tests.*

## to the rescue



*Using proper dragging procedure, the firefighters take the victim from the burning building into the clean atmosphere.*



*Using an all-purpose powder, a member of the copper refinery fire brigade extinguishes the flammable liquid fire.*

# Levack first aid team Competes in St. John Provincial



Levack mine's Marcel Henri, left, completes the check list of injuries while team mate Michel Belanger applies a ring pad to the victim's injured ear.

An April 25, spectators at the Moss Park Armoury in Toronto witnessed high caliber first aid competition by teams from across Ontario during the eleventh annual St. John Provincial First Aid Competition.

Some 48 teams simultaneously displayed their expertise in first aid in the armoury auditorium while two judges per team carefully assessed their performance. Representing the Ontario division of Inco Metals Company was the Levack mine first aid team, recent winner of the coveted R.D. Parker Shield. The Levack team placed in the top five in the senior men's division.

A second honor bestowed on the Levack mine first aid team was the McCrea Trophy, presented to the top first aid team in the mining industry in Ontario by the Mines Accident Prevention Association of Ontario.

"Winning the McCrea Trophy is an honor," stated Hank Derks, Inco's chief first aid co-ordinator. "It indicates that you are the best in the Ontario mining industry. Our guys were confident they could win the title. They worked hard and did a very good job."

## Presented McCrea Trophy

Jim Hughes, executive director of the Mines Accident Prevention Association, presents the McCrea Trophy to the Levack mine first aid team. They are, from left: Tom Luoma, Reg Chartrand, Rod Burns, Michel Belanger, coach Merv McLaughlin and captain Marcel Henri.





Tom Luoma, left, helps team mate Rod Burns apply a pressure dressing to the victim's forehead.



Inco visitors from left, Gerry Dinell, Albert Magee, Jack Corrigan and Del Bertrim, look over the program prior to the competition. Gerry, Jack and Del, all from safety and plant protection, acted as judges.

## Inco named "Employer of the Year"



Linda Duguay, left, presents award to Gail Assmann.

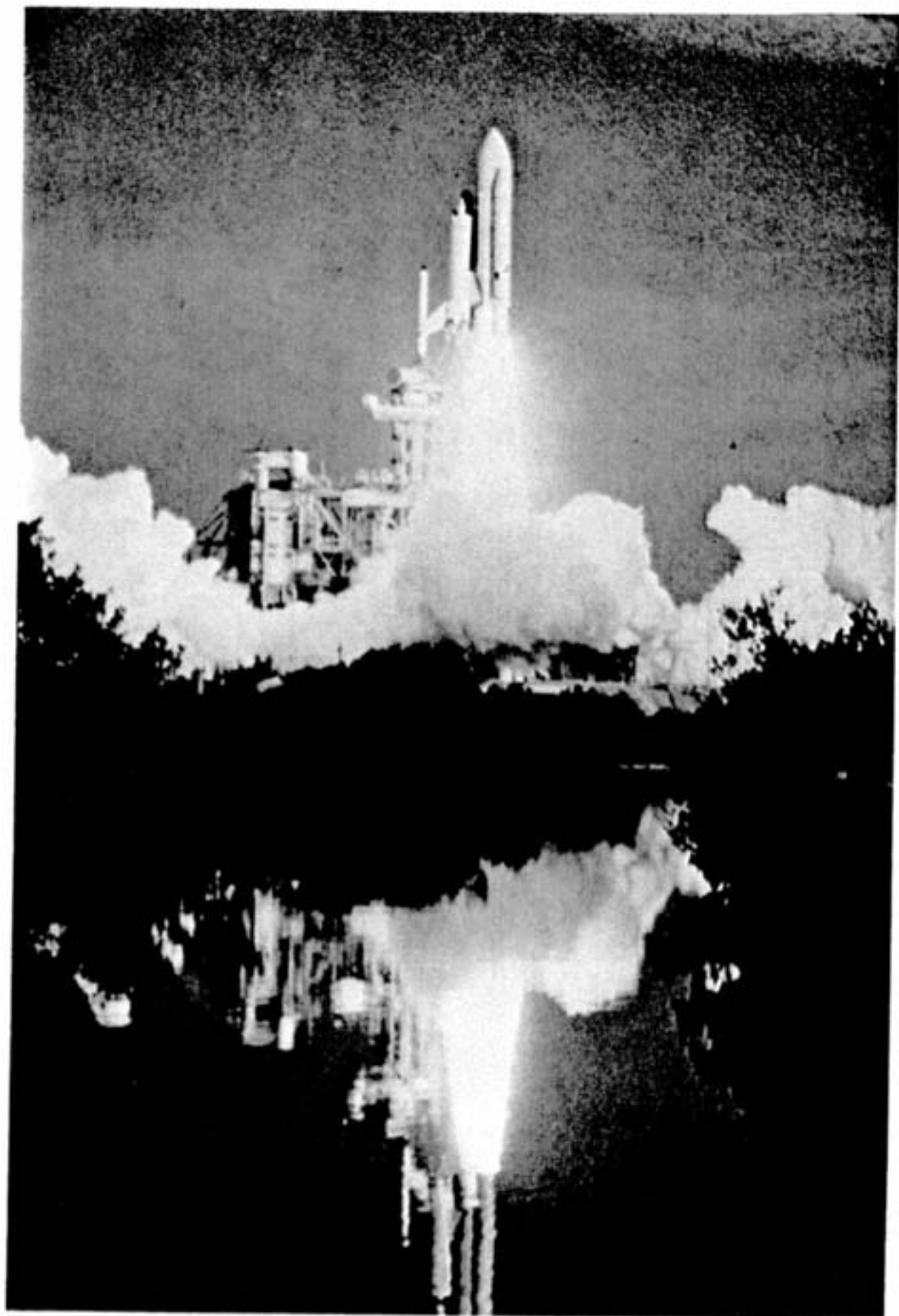
In May the Ontario Association for the Mentally Retarded announced that Inco Metals Company was the 1981 recipient of the "Employer of the Year" award. The purpose of the award is to recognize and encourage leadership on the part of businesses and other organizations in creating employment opportunities for the employable disabled.

Gail Assmann, supervisor of office services, accepted the "Employer of the Year" award on behalf of the company at ceremonies in Windsor and at the Vocational Assessment and Training Centre in Sudbury.

Opened in October of 1978, the VATC, through a program developed for vocational assessment, work training and built-in vocational support systems, assists employably disabled adults in developing or enhancing work skills necessary to allow independence, both vocationally and socially in a community setting.

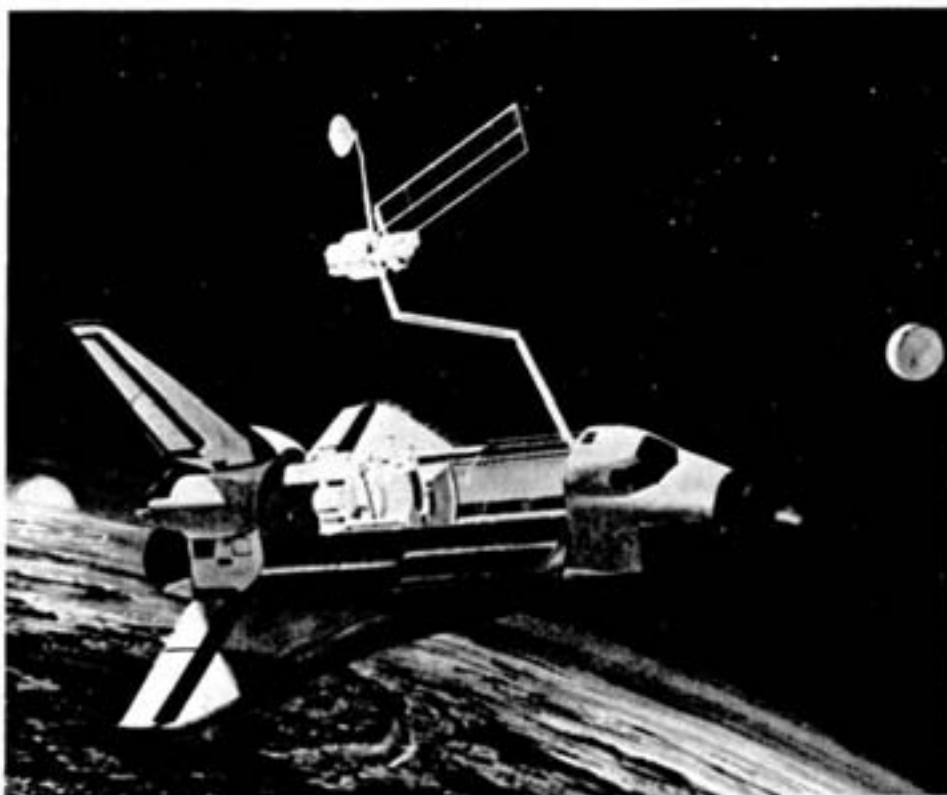
Linda Duguay, VATC job placement manager, said, "One of the main things that they (the Ontario Association for the Mentally Retarded) looked at was that Inco came to us looking for an employee. We didn't go knocking hard on their door for the first person they hired.

"They came to us and said we're interested in a worker and we would like to look at the workers that you have."





# The dawn of a New space age – And nickel will be there Every step of the way



*This is an artist's conception of the space shuttle with the remote manipulator arm extended. The arm was manufactured in Canada and some of the components are made from nickel mined, milled and smelted in Sudbury.*

On the morning of April 12, 1981, the NASA space shuttle Columbia, heaved itself slowly from the ground, enveloped in a fiery halo, as it made a bid to release itself from the earth's gravity. It marked the beginning of a 54 hour trip that took the ship out of the earth's atmosphere and on to the very first manned landing of a space ship.

The majestic looking craft, reminiscent of an airforce jet with its broad, stubby wings and rotund

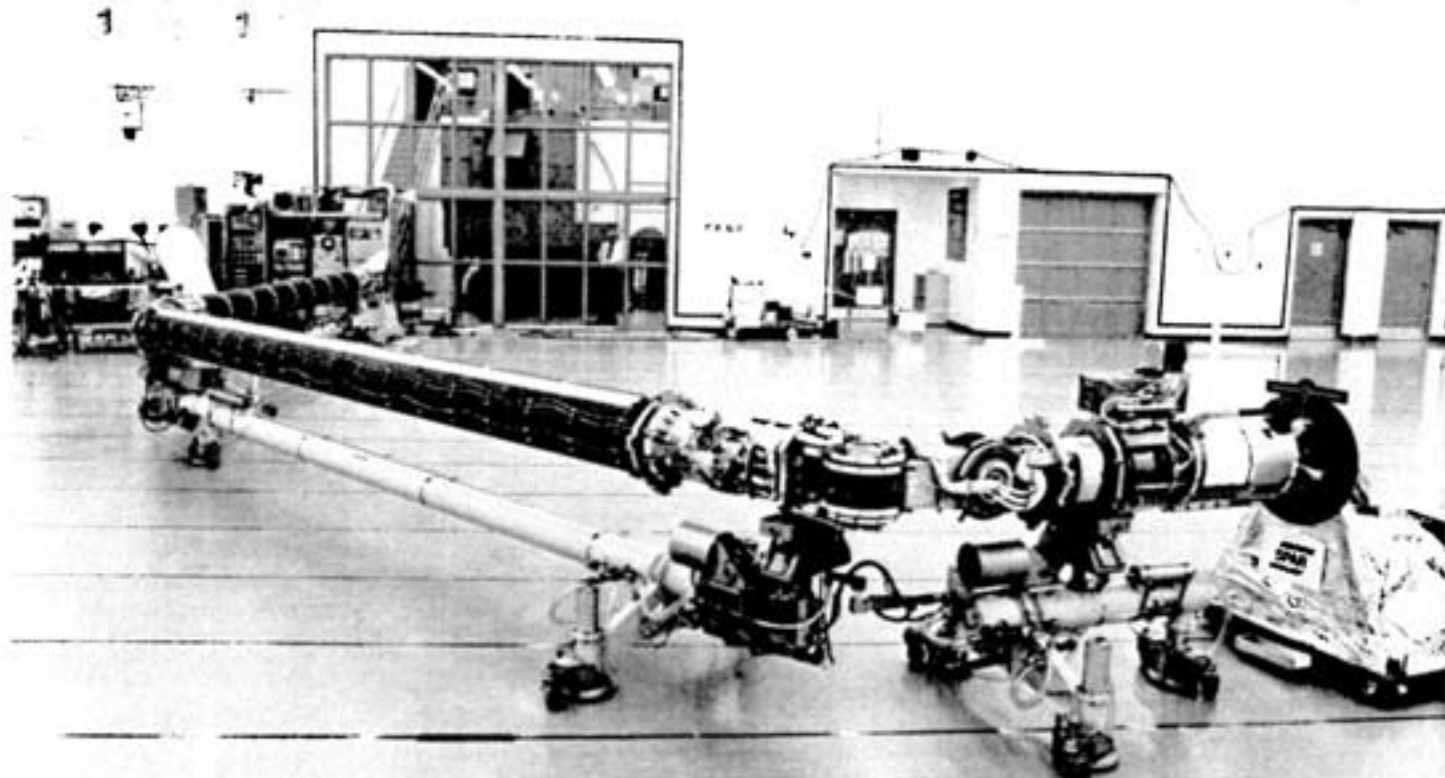
midsection, probably seems as far away and foreign to a mining, milling, or smelting and refining employee as a llama in South America, but it's not.

Each and every employee at Inco Metals Company can be proud of the fact that some of the nickel mined, milled, and smelted in Sudbury is part of the space craft, Columbia.

Nickel alloys have long been known for their excellent properties such as strength, durability, and

temperature and corrosion resistance. These properties have made nickel an important part of the steel industry and the two metals together can be found in a wide area of usage such as in jet engines, operating room utensils, and even car bumpers.

But this time the nickel industry and all the people involved in it have outdone themselves and helped make a dream come true. Original space missions were so costly that they



*The remote manipulator arm during construction at Spar Aerospace in Toronto.*

were few and far between. The crafts were only good for a single trip and the expenses mounted.

Now, space shuttles like the Columbia can be re-used up to 100 times, bringing the costs for a flight down drastically and enabling scientists to consider research that was not previously possible. They are now making plans for a space telescope which will allow astronomers to see seven times further than they can now. There are also plans for a free floating platform in space to be used for various scientific studies.

The Shuttle's Remote Manipulator System (SRMS), a mechanical arm which will be used to move payloads in and out of the cargo bay in space. It was not only designed and built in Canada by Spar Aerospace Limited, but also used several types of nickel alloys. The nickel for many of these alloys was produced by Inco Metals Company. The alloys were used in several areas of the mechanical arm including the joints, which allows the arm to move various ways. They were also used in the gear train assemblies.

Spar Aerospace chose nickel alloys because of their good resistance to stress and corrosion and their fracture toughness, fatigue strength, and weldability. The SRMS is so sophisticated in nature that it has nearly the same flexibility and precision as a human arm.

Huntington Alloys, a division of Inco Limited, based in Virginia, had a hand in building the rocket engines. Some 75 percent of the material in each of the three orbiter engines (each costing \$500 million) was made from Inco invented alloys. This included some 1,200 pounds of INCOLOY alloy 903 and smaller amounts of both MONEL alloy k-500 and INCONEL alloy 625, which was produced by Huntington Alloys.

The primary material in the engines, each weighing 2,500 pounds, was INCONEL alloy 718. Huntington Alloys developed this particular metal also, but it was produced by other companies since Huntington could not make forging stock large enough for what the engines needed. Amazingly, the engines had to withstand temperature changes from -423 degrees

Fahrenheit to 6,000 degrees Fahrenheit, so they had to be tough, strong and durable. The engines will be used for as many as 55 flights.

Nickel alloys were also used for the bolts that held the booster rockets to the Columbia. These bolts were manufactured to explode after the shuttle had reached a certain altitude so that the boosters were released and could drop into the ocean for retrieval.

The Columbia, soon to be joined by three other shuttles called the Challenger, Discovery and Atlantis, has been touted by many as the vehicle to the second space age.

In an interview with Time Magazine, John Young, the fifty year-old commander of the Columbia said, "I think we have a remarkable capability here. We're really not too far — the human race isn't far from going to the stars."

Nickel, with its useful properties, and Inco, the company and people that remove it from the ground and change it to various wonder-working alloys, will literally be with the shuttles and astronauts — every step of the way.

# \$5 million saved Last year on Energy costs in Ontario division



*Members of the Internal Energy Management Committee discuss an energy-saving project. They are from left; Claude Kerr, Maurice Taylor, Ray Moskalyk, Guy Mallette and Bob Todd.*

Four times a year representatives from various operating areas within the Ontario division meet to discuss one subject which is of concern not only to industry but to the individual-energy conservation.

The representatives are members of the Internal Energy Management Committee which was established in 1975 to deal with energy management policies and projects in the Ontario division.

Chaired by the utilities department, the committee consists of some 20 representatives who report their area's energy performance at the internal energy management meeting. There, the reps assess their area's performance in reducing energy costs and discuss potential energy-saving projects applicable to their area of operation.

Leno Crema, senior mechanical maintenance engineer with central maintenance, has now joined the energy management team as a special advisor to the committee. In his new function, Leno will be reviewing the energy management program and recommending changes where feasible to increase its effectiveness in reducing energy costs and consumption.

"The meetings are held on a regular basis to exchange energy-saving ideas," explained Claude Kerr, Inco's energy management co-ordinator. "It's an opportunity to bring the representatives up to date on rising energy costs, and to examine other units of the Inco family as well as other companies to see how they are meeting their energy needs."

Discussions at the meeting also focus on energy-saving projects such as the energy test vehicles converted to run on propane gas, the conversion to a methanol/diesel fuel mixture in underground vehicles and a revision in the ventilation system at Stobie mill.

As well, the committee is revising the energy reporting system which involves the recording of energy consumed and the status of energy saving projects at each plant. It will include a report indicating the Ontario division's energy performance for the quarter as compared to that of the previous year. It is expected that this revised reporting system will be implemented by the beginning of 1982.

Promoting the employee awareness program is also a

## Members of Internal Energy Management Committee

**Dave Benner**, Port Colborne  
nickel refinery

**Clair Bracken**, central mills

**Lou Butler**, Levack complex

**Tom Callaghan**, Copper Cliff  
mines

**Bill Cartledge**, Iron Ore  
Recovery Plant

**Ray Condie**, Creighton complex

**Ken Conibear**, mines  
engineering

**Leno Crema**, Central  
maintenance

**Graham Hodder**, general  
engineering

**Claude Kerr**, energy  
management co-ordinator

**John LeMay**, central utilities

**Guy Mallette**, Copper Cliff  
smelter

**Ray Moskalyk**, copper refinery

**Joe Pancel**, industrial  
engineering

**Bill Steenburgh**, matte  
processing

**Ron Symington**, purchasing

**Maurice Taylor**, Frood-Stobie  
complex

**Ken Thompson**, process  
technology

**Bill Hawkes**, Shebandowan  
mine

**Bob Todd**, industrial  
engineering

**George Tyroler**, Copper Cliff  
nickel refinery

committee priority. The committee will also be dealing with presentations on energy conservation and reviewing the monthly suggestion plan as it pertains to energy savings.

As a result of the work by plant energy committees, the Ontario division has reduced its energy costs by \$5 million in 1980, according to Claude. This energy reduction is equivalent to a saving of 250,000 barrels of oil.

The Ontario division is a member of a voluntary mining and metallurgical energy conservation task force which was formed in 1974 at the request of the federal government. This task force established an energy reduction goal of 5.8 per cent per unit of production by 1980 and 15 per cent by 1985. The Ontario division exceeded the 1980 goal having reduced its energy consumption by 12.5 per cent. "We are confident that the division will also exceed the 1985 goal," Claude added.

"We as a committee are very enthusiastic about our role in helping to reduce energy consumption and costs in the Ontario division."



*Some of the reps in attendance at a recent energy meeting were from left; Ken Thompson, Bill Cartledge, Clair Bracken, Ken Conibear, Bob Todd, guest speaker Bob Boutilier, Ray Condie and Bill Steenburgh.*



# PEOPLE



The arrival of spring is the signal for Inco's agriculture department to carry out its tree planting activities. Last month a shipment of saplings arrived from Southern Ontario and were planted at various plant locations. Here students **Bob Brown**, left, and **Greg Topo** help loaderman **Emile Ojanpera** move a tree from a tractor trailer to a storage area. Meanwhile four other students give trees in the nursery some tender loving care before they are transplanted. They are, from left, **Cathy Laing**, **Mary Butler**, **Janet Homer** and **Deborah Bruyns**.



**Laurie Malleau**, daughter of McCreech West mine maintenance mechanic **Jerome Malleau**, will be one of the first people to work at Canada's Wonderland, the Canadian counterpart to Disneyland. The Hotel and Food Administration graduate from the University of Guelph will be assistant manager of the Alpine Restaurant at Canada's Wonderland. The amusement complex is situated on a half square mile of land just north of Toronto.

# PEOPLE



**Paul Lewis**, son of Copper Cliff Nickel refinery IPC superintendent **Clive Lewis**, won the coveted "most valuable player" award for his efforts on the Sudbury Minor Hockey Association Bantam BB league. Paul played center on his team and was the top scorer this year.



In conjunction with the safety and plant protection department, a representative of the Sudbury Regional Police Force recently presented films on child abuse and child molestation. The films were presented to process technology employees as part of the safety and plant protection department's off-the-job safety program. "We are not here to alarm people," explained **Officer Mike McKinny** from the Youth Bureau, Morality Division of the Sudbury Regional Police. "We are here to educate people, to make them aware of suspicious persons which will make our job easier. We live in a good community and we want it to stay that way." Looking over program information are from left, **Officer McKinny**, **Gary Lott**, safety foreman with safety and plant protection, **Jim MacDonald** and **Bill Ziniuk**, both from the process technology department.



**Hank Derks**, chief first aid coordinator at safety and plant protection, recently held an emergency first aid workshop for the Ontario Association of School Business Officials at the Holiday Inn. Hank covered such topics as foreign objects in the eye, concussions and choking.

# PEOPLE



Shebandowan mine was presented with the **Levitt Safety Trophy**, an annual award given to industries in the Lakehead Safety Group showing the most improved safety performance in one year compared to its previous five year average. Shown here is a representative group of Shebandowan employees responsible for earning the safety honor.



A love for horses has sent **Robert Donaldson**, son of **Marg Donaldson** who is a keypunch operator in computer services, to places far from home. This year, Rob will be visiting a very different land some 8,000 miles from home - Saudi Arabia. Rob has accepted an offer from the Royal Family of Saudi Arabia to work for a minimum of one year as instructor/manager at the Equestrian Club of the Royal Family in Riyadh, Saudi Arabia. Rob has been horseriding and competing for 14 years, seven of which were spent riding and training professionally. He worked for the Canadian Olympic equestrian team as well as the Canadian show jumping team a few years ago. He has also taught riding at several riding clubs in Ontario and the U.S. Rob will have the privilege of instructing members and relatives of the Royal Family. Other duties will include maintaining stables and possibly going on buying trips for horses to Europe and America. "I also plan to help establish a Saudi national jumping team for the Olympics," Rob added.



Two members from the Froid Stobie complex mine rescue team retired recently from the team after a combined total of 42 years service. Ed Johnston, shaft leader at Stobie mine, retired after 20 years service while Carl Lahti, pillar leader at Froid mine, retired after 22 years of service. The men were presented with plaques and a gift from fellow members of the Froid Stobie mine rescue crew. Pictured from left, are, **Ed Johnston**, **Harry Moorehouse**, retired superintendent of Mine Rescue, **Ray Ferguson**, superintendent of Froid mine, **Carl Lahti**, and **John Hallows**, present superintendent of Mine Rescue.

# PEOPLE



The Joint Annual Conference of the Ontario Section of the Air Pollution Control Association and the Pollution Control Association of Ontario was held for the first time in Sudbury last month. The three-day conference, which attracted approximately 180 members from across the province, was held to discuss air and water pollution problems and their abatement. Among those in attendance were Inco employees who helped organize the conference. The agenda included underground tours for members and their spouses at Little Stobie mine, tours at the Copper Cliff nickel refinery and the Vermilion River water treatment plant as well as presentations and seminars on environmental concerns.

In above photo, members of the conference's organizational committee review topics for discussion in the program booklet. They are from left: Inco's supervisor of environmental control **Bob Butler**, **Erv McIntyre** of the Ministry of the Environment and consulting engineer **Bob Gladding**.

In photo at right, conference committee members from left, Inco's environmental analyst **Jeff Grieve** and **Ed Nevala**, supervisor of sewage and water operations, and **John Moore** from the Ministry of the Environment, look over some literature available to conference members.



Coleman mine recently held the first tour of four to be given for the wives, daughters or girlfriends of Coleman mine employees. The 18 women who embarked on the tour were given a thorough view of the mine. The tours were held as a result of interest shown by some 85 ladies. Shown from left, tour guide **Colin Flett** adjusts **Cathy Jone's** battery pack while **Darlene Holatko** watches the procedure.





# PEOPLE



Training and Development held their Third Annual Curling Bonspiel at the Copper Cliff Curling Club, where 10 teams participated in an evening of recreation. There were prizes awarded to the top three teams, and a booby prize for the trailing team. The winning team consisting of, from left, **Elio Flora, Frank Moss and Alex Skelley** look on as, far right, **John DeWolf** tries to sweep the opposition's stone out of the house.



The Second Annual Sudbury Stamp Show was held at Civic Square recently. Stamp dealers from throughout the province displayed their collections to the public. In addition to selling and trading stamps, the dealers gladly offered tips on stamps to novice collectors. One of the dealers at the show was **John Frith**, a roaster helper at the Iron Ore Recovery Plant and proprietor of Sudbury Stamps. He has been collecting stamps for over 30 years and says he can't begin to count the number of stamps he has gathered. Lately John has been specializing in military postal history and boasts a fine collection of military cancellations. Here John shows off some of the stamps he had for sale at the exhibit.



Shebandowan mine offers an underground mill tour monthly for the wives and friends of its employees. Appropriately dressed for the tour, this group of ladies paused to have their photograph taken before entering the mine cage. From left are **Maureen Otto, Karen Cserged, Louise Hill, Lenore Cats and Linda Heiskanen.**

## **Suggestion Plan Awards**



*Nikolaus Hawryszczyn \$415*



*John Boggio \$400*



*William Morton \$255*

## Major Winners

- \$1,605** The suggestion plan's leading award this month went to **Mike Yaltowega** of **Levack mine** for recommending that heavy wall pipe be installed at the out end of the knees and valves of the sandline pipe. The light wall pipe in use previously, would wear out, causing the pipe to kink after pouring 100 tons of sand. Now considerable savings are being realized in material costs as the pipes last six times longer.
- \$415** **Nikolaus Hawrysczyszyn** of the **Clarabelle mill** thought that the sampler stainless steel cutter blades should be lined with sharp-edged ceramic strips. As a result, wear on the edge of the cutter has been reduced dramatically. Also they are safer to install than the razor sharp stainless steel cutter blades.
- \$400** **Port Colborne's** top award went to **John Boggio** for suggesting that the company be credited for unused propane left in containers, particularly 47 pound cylinders. Significant amounts of the gas were being left in the containers representing a big cost to the company.
- \$265** **Benson Mullen** of the **Clarabelle mill** noticed that the existing supports for the hot water system circulating pumps, placed unnecessary stress on pump seals, motor bearings and couplings causing breakdowns. The award winning suggestion was to install a threaded rod in the top section of the pipe with nuts so that all units can be adjusted to proper levels to eliminate stress. Not only has this adjustable system meant fewer breakdowns but it also allows for an easier means of removing units when maintenance is required.
- \$255** When he found that lead would build up on the side of MK filters, **William Morlon** of **matte processing** submitted plans for some alterations to the interiors of the filters that solved the problem. Now the lead falls off the wall, saving material and labor costs.
- \$195** Three **Levack mine** men, **Wilfred Lagace**, **Robert Wood** and **Marcel Lalontaine** shared in this suggestion plan award. They saw that when the libre gear in the torque converter broke it often caused the impeller cover on the torque or the hub on the flywheel which used in each other, to wear down. The hub, they proposed, should be made of a harder material and have a wider bore diameter to fit on the stem and in or to the hub. This eliminated a need to change and install a new hub and impeller cover cap each time the libre gear breaks. Time and money has been saved and the job made a lot easier to perform.
- \$150** **Kalevi Hollsten** of **transportation** came up with the idea of using sheets of aspenite to cover windows during the winter rather than plywood. Aspenite, it was found, was much less expensive than plywood and nearly as strong.
- \$150** A lack of information and training on electrical systems at **Copper Cliff South mine** inspired **Dennis Bean** to suggest that the data package system be implemented. It is designed to give complete files on any given system. The system can be used for training, research, job planning and general reference.
- \$135** When the sleeves of G.W. pump barrels had to be removed they were burned off and then replaced. **Roger Zazulak** and **Raymond Lachance** of the **Clarabelle mill** submitted a proposal to pack the sleeves with ordinary grease. Money and labor has been saved as the sleeves come off easier and can be reused.
- \$130** **Robert Norton** of **Frood mine** developed a means of holding back pressure on the hole rods that allows the rod weight to be controlled well over 3,000 pounds. Now men can drill smoother and slower he said the bit to cut better and last longer.
- \$120** Modification of the existing Nelson slag welder used to repair insulation, learned **William Cook** of the **Iron Ore Recovery Plant** a nomination to the suggestion plan awards. Cost savings were realized because it is now doing work that rental equipment used to perform.
- \$120** Rather than continue to allow cooling water from number one pump house, **Laurier Dupuis** of **matte processing** proposed a way of recycling it back to the pump house. The idea reduced the make-up of Vermont water, saving millions of gallons a year. It also diminished the amount of chemicals used in the cooling tower.
- \$100** **Ugo D'Onofrio** of **Port Colborne** found that archbrake knifings on the number nine grate did not last as long as they should have because the brake shoes were not properly centered. He offered a solution for the problem, recommending that an adjustable spring be used to centre the brake shoe. Now the life of knifings has been extended.

