
The Triangle
MAY 1977

The Triangle

Editor,
Rudolph Kneer

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ON THE COVER . . .

At last, spring has come. Slowly, but with the certainty of sunrise, it has renewed the joy and laughter in the hearts of many. Bright and saucy daffodils, symbols of this jocund season, have exalted themselves above the persistent winter cold and unexpected late snowstorms. Vibrating with the innocence of their cheerful hue, the daffodils represent also the explosion of spring in the hearts of men of all ages. Harmony is restored, and mankind's faith in a better world is full and beautiful once more. Those fortunate enough to have found a new love are overflowing with excitement. Flowers and people, given the hope of a new beginning, reach out in time and touch the sun.

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Appointments

Orest Andrews, visual aids co-ordinator, mining and milling, Stobie mine.

Gail Assmann, travel and communications supervisor, personnel, Copper Cliff.

Raymond Brisebois, project leader, Copper Cliff copper refinery.

Donald Cameron, crushing plant foreman, Clarabelle mill.

Gerald Chartrand, survey party leader, mines engineering, Stobie mine.

Gary Chicquen, general safety foreman, Stobie mine.

Robert Coulter, planner, mines engineering, Crean Hill mine.

Raymond Czerkas, grade control assistant, Copper Cliff North mine.

Mario DaPonte, planner, mines Frood mine.

John Darrach, safety foreman, Frood mine.

Shane Desjardins, maintenance general foreman, Iron Ore Recovery Plant.

Lloyd Doucette, supervisor of inventory, monitoring and projects, purchasing-warehousing, Clarabelle mill.

Arnold Dowdall, grade control technologist, Creighton mine.

Ronald Dupuis, grade control assistant, Frood mine.

Jim Elliott, supervisor of surplus disposal, Stobie mine.

Charles Gates, grade control assistant, mines exploration, Crean Hill mine.

Richard Gelineau, grade control assistant, Frood mine.

Bruce Hall, grade control assistant, Copper Cliff North mine.

Eric Jacobson, mine general foreman, Garson mine.

Paul Koth, mill foreman, Clarabelle mill.

Maurice Leroux, grade control assistant, Coleman mine.

John Lynn, salary administrator, Copper Cliff.

Claude Mailloux, grade control assistant, Copper Cliff South mine.

Jerry Maki, process foreman, Copper Cliff smelter.

Douglas McDonald, grade control assistant, Copper Cliff North mine.

Alexander Nowgabow, mill foreman, Clarabelle mill.

John Peattie, incentives administrator, mines engineering, Crean Hill mine.

Duncan Risk, safety foreman, Copper Cliff South mine.

Edward Schmidt, grade control technologist, Garson mine.

Jack Serpell, maintenance general foreman, Clarabelle Open Pit.

Graham Skelton, electrowinning foreman, Copper Cliff copper refinery.

Adeodat Sonier, smelter foreman, Copper Cliff smelter.

Donald Stephenson, geologist, mines exploration, Copper Cliff South mine.

Brian Stoddart, safety foreman, Clarabelle mill.

Spencer Sutton, grade control assistant, Copper Cliff South mine.

In This Issue:

J. Edwin Carter Elected Chairman And Chief Executive Officer—Charles F. Baird Is New President Of Inco Limited

J. Edwin Carter was elected chairman and chief executive officer and Charles F. Baird was elected president of Inco Limited at a meeting of the board of directors in Toronto on April 20. Mr. Carter was president of Inco Limited. Mr. Baird was vice-chairman. Mr. Carter succeeds L. Edward Grubb as chairman. Mr. Grubb retired April 20 as chairman and chief officer upon reaching the company's mandatory retirement age.

J. Edwin Carter

J. Edwin Carter has been a director of Inco Limited since 1973. He had been president since 1974. From 1972 until his election as president, he was executive vice-president of the company.

Mr. Carter joined Inco in 1937 as a metallurgist at Huntington Alloys, Inc., the company's rolling mill subsidiary, in West Virginia. He served in a wide variety of positions at Huntington. At the time of his transfer to the parent company as a vice-president in 1971, he was president of Huntington Alloys.

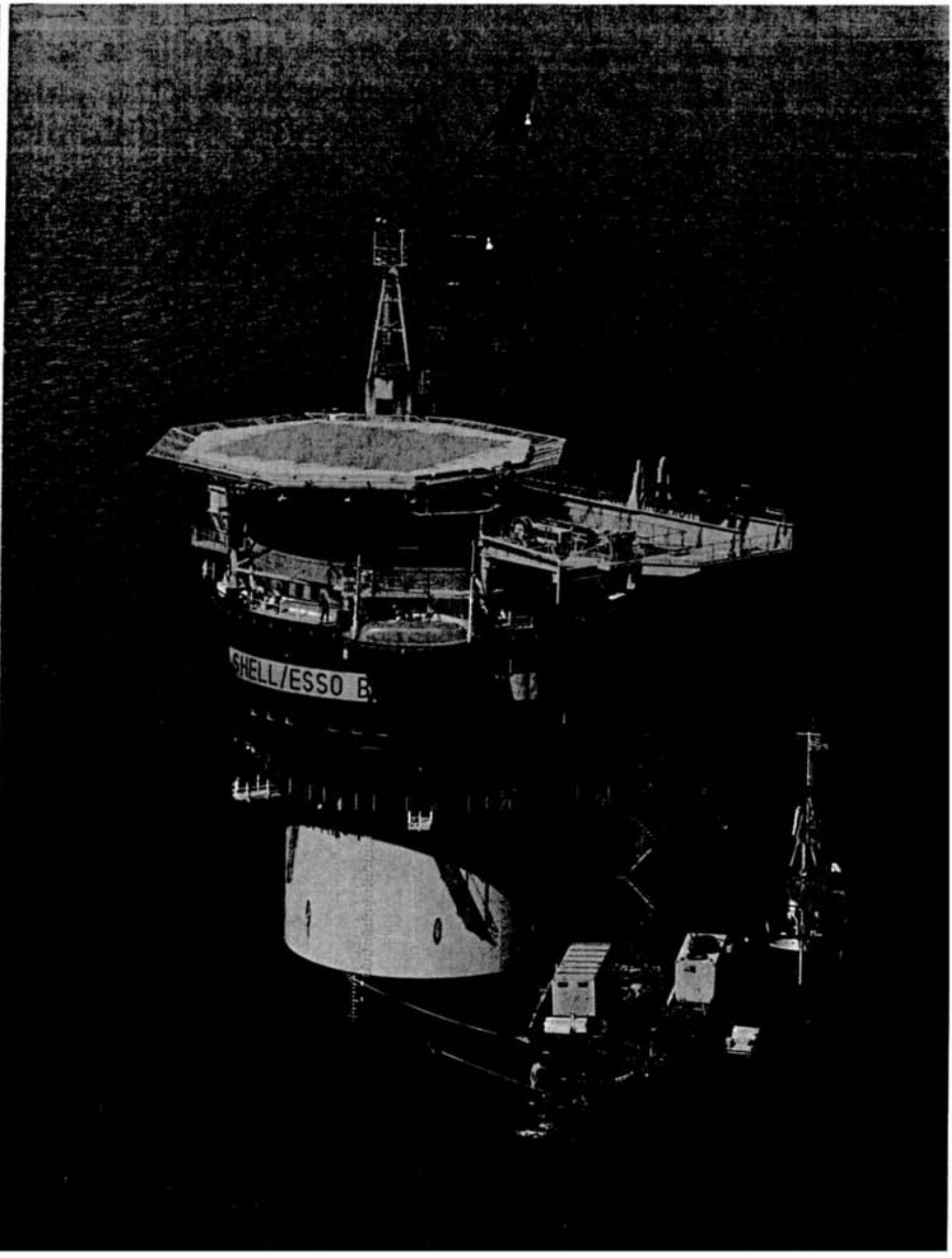
Mr. Carter is a director of the Toronto-Dominion Bank, the C. D. Howe Research Institute, and the International Copper Research Association, Inc. He is a member of The Canadian Institute of Mining and Metallurgy, the American Society for Metals, the American Chemical Society and the Economic Club of New York.

Charles F. Baird

Charles F. Baird has been a director of Inco Limited since 1974. He had been vice-chairman since 1976. He joined Inco in 1969 as vice-president - finance, and became a senior vice-president in 1972.

Mr. Baird was Under Secretary of the United States Navy from August 1967 to January 1969, having joined the government in November 1965 as Assistant Secretary of the Navy (Financial Management). Prior to his government service Mr. Baird had been an executive with the Standard Oil Company of New Jersey (now Exxon) and its affiliated companies for 17 years.

Mr. Baird is a director of the Bank of Montreal and ESB Incorporated, a wholly owned Inco subsidiary, and a trustee of the Union Dime Savings Bank. He is chairman of the board of trustees of Bucknell University and a member of The Council on Foreign Relations, the Economic Club of New York and The Canadian Institute of Mining and Metallurgy.


SHELL/ESSO B.

Giant North Sea Oil Tank Regulates Its Buoyancy With The Help Of Copper-Nickel Alloys

Getting North Sea oil ashore is a major problem because of the depth of the water and the violence of the winter weather conditions. One solution is to anchor a giant Spar floating storage tank over the oil well, connect it to the manifold and then discharge the oil on demand into oil tankers.

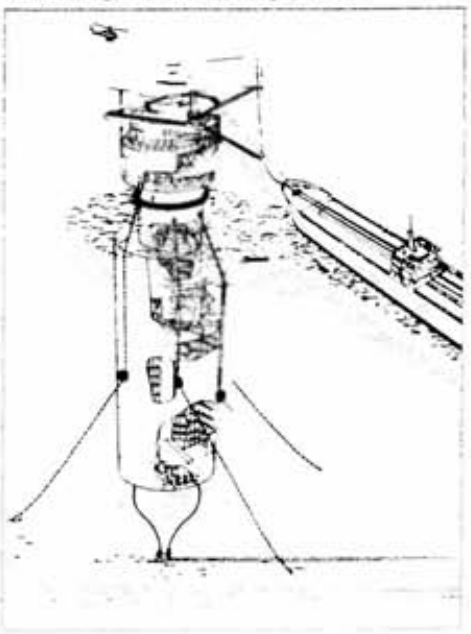
The stability under all weather conditions of this tall, floating tank depends on a correct sea water ballasting procedure. Initially, the storage tanks are filled with sea water and the Spar floats at a stable depth. As oil flows in at the top of the storage tanks, sea water is displaced from the bottom and passes through oil separators before being pumped overboard. Because of the difference in specific gravity between sea water and oil (approximately 1 against 0.85), the buoyancy of the Spar increases as the oil flows in and, if no adjustments were made, the Spar would rise about 23 m (75 ft.). Such an alteration in balance would seriously affect the stability of the Spar in rough weather and the extra height would make tanker mooring difficult under any conditions. Compensating adjustments to the buoyancy are made by filling 12 ballast tanks situated above the oil storage tanks with up to 7260 metric tons (8000 tons) of sea water. Later, as oil is withdrawn, the reverse process operates and the ballast tanks are discharged to compensate for the extra weight of water flowing into the oil tanks.

Since very large quantities of sea water are being transferred back and forth as the Spar is loaded and unloaded with oil, absolute reliability of pumps, valves and pipelines is necessary. Based on experience with ships' sea water circulation systems and land-based heat exchangers in desalination plant and power stations, the designers chose an all non-ferrous system with copper-base pumps and valves and a 90-10 copper-nickel alloy pipeline. Such a system is galvanically compatible, resists biofouling and is designed to last the life of the Spar with no more than routine maintenance of valves and pumps.

The Shell/Esso Spar oil storage tank designed by Shell/IHC Holland was built in two parts. The 93 m (300 ft.) tank section which includes the pumps and water treatment plant was constructed in a dry dock by Wilton Fijenoord and the 44 m (145 ft.) upper section containing the crew accommodation, machine shops and the helipad was built by IHC Holland, Rotterdam. The two halves were floated to a Norwegian fjord where the tank section was up-ended and the upper section lifted into position and joined by welding. In the summer of 1975, the Spar was towed to the Brent oil field and anchored over the well manifold.

The stability of this floating oil tank in all sorts of weather depends on a correct sea water ballasting procedure. Since very large quantities of sea water are being transferred back and forth as the Spar is loaded and unloaded with oil, absolute reliability of pumps, valves and pipelines is necessary. That's the reason the designers chose an all non-ferrous system with copper-base pumps and valves and a 90-10 copper-nickel alloy pipeline.

The diagram shows a giant Spar floating storage tank in place over an oil well ready to discharge oil to a waiting tanker.



Welcome Wagon

In the bygone days of frontier settlers, it was customary for a party of men and women to get together in their wagons and ride out to welcome new arrivals.

The purpose of the visit was to give the newly-arrived pioneers a helping hand . . . to see that their immediate wants were provided for.

This kind of hospitality is still with us today, in the form of Welcome Wagon. The Welcome Wagon hostess, with her basket of gifts, has been a familiar figure since 1928, helping families overcome the problems of moving to new and unfamiliar cities and communities. Presently, there are 8,000 hostesses in North America.

The service is available at no charge, and is sponsored by the merchants, civic organizations, and service clubs of any given community. Recently, Welcome Wagon has increased its service in the Sudbury area, and now offers the help of four hostesses — Kay Burton, Shirley Nevella, Janet Pearson, and Dorothy Bouchard.

Dorothy, a veteran Welcome Wagon hostess, mentioned that all hostesses go through a three-day indoctrination course, then report once a week to an area supervisor, and once a month to the Toronto head office.

Items in the Sudbury area's Welcome Wagon baskets include Inco's book, "Man and Nickel", the Chamber of Commerce's Sudbury book, information on Rainbow Country, a map of the city, and greetings from our mayor and members of parliament. Participating organizations include CNIB, Red Cross, our Fire Department, the Big Brothers Association, and VON. Also in the basket are bus schedules, metric converters, change of address cards, library cards, and cards from various local merchants introducing themselves to the newcomer and offering a free gift plus an invitation to stop by.

Dorothy's husband, Hubert ("Butch") is a plater at Frood mine, and two of their five daughters have past experience with Inco . . . Carol was a medical secretary at the Copper Cliff Hospital for five years, and Judy worked in the general office for about the same length of time.

Welcome Wagon makes it easier to get settled after moving, by helping to locate clubs, libraries, clinics, daycare centres, and shops. If you're new to Sudbury, or know someone who is, call Welcome Wagon at 566-9547 or 674-7189 . . . the hostesses will be glad to assist in any way possible.

Welcome Wagon hostess, Dorothy Bouchard, right, welcomes newcomer, Edna Harding, to the Sudbury area. Included in the special basket are gifts, brochures, and general information regarding various facilities of the city.

Karen Turpin, left, provides Dorothy with numerous CNIB brochures for inclusion in her basket.

At the CNIB crafts centre, Dorothy is shown some of the current CNIB projects by Irene Hamm.

Dorothy visits with longtime Welcome Wagon sponsor, Gordon Brown, of Robert Brown Jewellers.

Tom Antonioni, left, superintendent of the Copper Cliff smelter furnace department, checks the "specs" of a transformer with Jim Elliott, supervisor of surplus disposal.

A steam compressor from the number one powerhouse at High Falls received special attention from Mel Roberts, left, a planner at the Copper Cliff nickel refinery, and Ted Gamble, a graduate engineer also from the nickel refinery. Material controller, Joe Barnes, right, mentioned that the compressor was constructed in the early 1930's, and is still ship-shape.

Investment Recovery Group

The company's Investment Recovery Group, a section of the Purchasing and Warehousing Department, recently invited all Division managers and employees involved in the planning, procurement, and use of materials to visit the Central Surplus Disposal Depot at the Frood-Stobie complex.

The occasion was a six-day "open house", part of a continuing program designed to encourage greater awareness and more extensive use of the company's surplus equipment and materials. The affair attracted over 150 visitors, many of them expressing interest in the wide variety of items available, which run the gamut from nails and stainless steel valves, to large electric motors and pumps. Other items, too impractical to move from their locations at various plant sites, are also included on the surplus sales listings; all items are available to any company installation that has a requirement. The depot itself consists of two large warehouse buildings and an extensive yard complex, staffed by seven people.

Project planners, Ed Leblanc, left, and Denis Noel, from the planning and scheduling department of general engineering, inspect one of a number of globe valves available at the Central Surplus Disposal Depot located at the Frood-Stobie complex. Over 150 people visited the depot during a recent "open house", hosted by the company's Investment Recovery Group.

Advantages to using the surplus materials are many, and include lowered costs for "using" departments, no further outlay of funds for the company, and immediate availability.

While company usage is the primary goal of the Investment Recovery program, external sales are certainly not ignored, and contribute significantly to the section's overall sales picture.

As well as satisfying company requirements locally, major pieces of equipment, such as crushers and conveying systems, have been provided for our operations in Guatemala and Indonesia.

The Investment Recovery Group welcomes all inquiries for material and information, and feels that the use of surplus material can certainly save the company a great deal, both in money and in time.

In the Salvation Army's kitchen, chief cook Bob Trahan, right, is assisted by retired Inco employee, Milford Kellier, centre. 45,927 meals were provided last year.

At the Army's alcoholic treatment centre in Sudbury; Captain Marilyn Moulton, centre, discusses an individual's problem with counsellor Don Breault.

Eva Burlock, right, a volunteer Salvationist and wife of an Inco employee, chats with Uno Dahlvic, a resident of the Sudbury Salvation Army hostel.

Red Shield Appeal

The Salvation Army operates 26 men's hostels, three children's homes, 33 hospitals and women's homes, 21 homes for the aged, 11 homes for probationers, and provides many more facilities and services across Canada. To help offset financial obligations, the Army holds an annual drive to raise the needed funds for the coming year.

May is Red Shield Appeal month across Canada; for Sudbury, it means a fund-raising objective of $55,100, as well as a very busy time for Kenneth Dalrymple, captain and public relations officer.

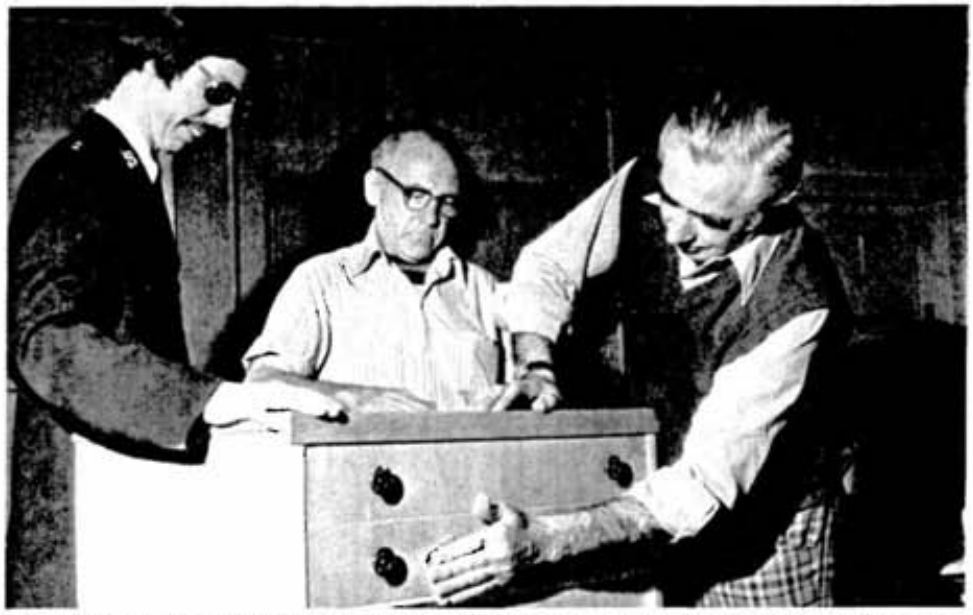
Kenneth has been with the Salvation Army for 18 years — three of them in Sudbury. Last year his organization provided 21,699 beds, served 45,927 meals and, in all, spent $335,607.41 for lodging, food, direct welfare, clothing, and furniture.

The functions of the Salvation Army are many; counselling is offered to broken families, unwed mothers, troubled teenagers, lawbreakers, and victims of crime; advice and assistance are given to the drifter, the homeless, the alcoholic, the aged, and our poor children.

The Salvation Army works on the shadowy side of affluence; problems may change as society changes, but problems still exist. The Salvation Army exists to help lessen and solve the problems.

Remember, May IS Red Shield Appeal month.

Don't wait to be asked.



A special area has been set aside to refinish furniture for the Army's Thrift Shop. Involved in a current project are Captain Ray Moulton, left, Steve McGrath, centre, and Peter Duffy, right, supervisor of the workshop.

Emily Weiman, left, and Mary Ushey, manager of the Thrift Shop, sort out the "latest arrivals" in clothing.

Many Friends Gather To Bid Fond Farewell To Gar and Bernice Green

A large contingent of friends and business acquaintances were on hand recently to extend good wishes and bid a hearty farewell to Garfield Green, retiring Ontario Division vice-president, mining and milling. Gar retired after 40 years with the company.

Master of Ceremonies, Tom Parris, newly appointed vice-president, mining and milling, recalled Gar's earlier days with Inco, adding that his many talents and vast experience in the mining field will be sadly missed. He expressed his personal congratulations to Gar and his wife, Bernice, for a job well done.

The guest of honor, Gar Green, right, accepts a wood carving of a 61R raise borer from Master of Ceremonies, Tom Parris. Inco's Charles Paxy, of Creighton mine, created the carving.

Ontario Division president Ron Taylor, left, in conversation with Bernice and Gar Green, while Ron's wife, Vi, second from right, lends an attentive ear.

Jack Pigott, left, vice-president of Teledyne Canada Limited, and Scott McCann, right, president of Teledyne Canada Limited, exchange niceties with Gar.

Recalling a humorous incident from the past with the guest of honor, centre, are, from left, vice-presidents Gord Machum and Charlie Hews, president Ron Taylor, and vice-president Tom Parris.

Among the many guests on hand for the occasion were Conrad and Sheila Houle, of Sudbury, pictured here chatting with Harry Tompkins, left, director of public affairs, Ontario Division.

Hoisting rope plays a key role in the everyday activities of any underground mining operation and, at Inco, they transport approximately 9,000 people each day. At Frood mine's No. 3 shaft, a substantial amount of hoisting rope is kept on hand to replace cables in operation.

Prior to an installation, rigger boss Doug Prestage, inspects a new hoisting rope with rigger Gene Monaghan.

Learnin

This group of riggers from Frood mine are, front row from left, Joe Pinard, Ray Bruneau, Barney Sloan, and Vic Boyd; back row from left, Doug Prestage, rigger boss, Eddie Barrett, Moe Roy, Maurice Seguin, and Jeff Griffiths, rope-testing technician.

"Learning the ropes" is a must, especially when you have 65 miles of hoisting ropes hanging in Inco's sixty-six shaft compartments in the Ontario Division. The 98 hoisting ropes that are in regular service range in size from ¾" to 2¼" in diameter and are connected to 34 mine hoists. They come in various lengths, with the longest — 8,150 feet — currently in service at Creighton No. 9 shaft. Rope-breaking strengths vary from 54,000 pounds to 540,000 pounds.

There are round strand ropes, flattened strand ropes, and locked coil ropes, with each designed for a specific type of application. Although all ropes are suspended in the shaft compartments and are connected to a conveyance, not all ropes are directly attached to the hoist drums. On Inco's friction hoists, (elevator-type) the ropes lie in plastic grooves on the hoist drum; each end of the rope is connected to a conveyance, which could be a cage, counterweight, or skip. In this arrangement, torque from the drive motor is transmitted to the ropes via the plastic rope treads. On drum hoists, the ropes are attached

Clean equipment is reliable equipment, and reliable equipment is the only kind our riggers use. Here, Frood riggers Barney Sloan, left, and Raymond Bruneau, clean up a cappel rope attachment before returning it to service. Each day, riggers examine, lubricate, and replace ropes when required.

Hoisting specialist, Largo Albert, right, points out the advantage of different cable to rope-testing technician, Jeff Griffiths, left, and Doug Prestage, rigger boss.

the ropes

directly to the hoist drums, and are wound on the drum in layers.

Most ropes used at Inco are made in Canada and are manufactured in the required lengths using a special high-quality steel designed especially for hoisting ropes.

Some ropes will remain in service for only six months, while others will last for as long as six years. The type of service, rope speed, operating conditions, and quality of maintenance all have a great influence on rope life.

Hoisting ropes are very expensive and cost an average of $4.00 per foot. The rope in use at Creighton No. 9 shaft, for example, costs approximately $60,000.00 per length and is therefore deserving of the finest care possible.

The hoisting rope plays a very key role in the everyday activities of an underground mining operation. At Inco, they transport approximately 9,000 people each day to their various working places; they move tons of supplies, blasting agents, and machinery to all areas of a mine, for daily mining activities; and, in addition to thousands of tons of waste rock, they hoist the daily ore production which, at Inco, amounts to 70,000 tons in a 24-hour period.

These ropes, therefore, must be maintained in top condition at all times. Inco's riggers, who perform essential maintenance, each day examine, lubricate, and replace the ropes when required. On a regular basis, short pieces are cut from each rope end for shipment to a test laboratory, where a destructive test will determine the rope's breaking strength. In addition, our rope-testing technician, Jeff Griffiths, tests each rope with an electro-magnetic testing instrument on a programmed basis for loss of metal caused by corrosion, wear, or broken wires. Government regulations require that, in addition to the above tests, all ropes operate above a minimum factor of safety. As the ropes work and wear, the rope condition is constantly monitored and the factors of safety are checked to ensure complete safety. Ropes are replaced when predetermined conditions require them to be changed.

To ensure continuity of hoisting service and to avoid costly mine shutdowns, Inco maintains rope spares so that a substitute rope is always available for each rope that is in service. In some cases, two spares are kept on hand. In total, there are approximately 80 miles of rope stored on 130 steel rope reels, with an inventory value of $1½ million!

Rope changing is a frequent occurrence, and requires a high degree of skill and experience. A crew of riggers can replace a rope in from four to 18 hours, depending on size, length, and type of hoist and rope. Special techniques and procedures are employed for each type of hoist rope change because of the different conditions that prevail.

Some hoisting ropes operate with mine cages that carry a passenger load equal to that of a DC-9 jetliner and, for this reason, are deserving of the same high level of care and attention.

Hoisting ropes are indeed a vital link in Inco's 42-mile vertical transportation system and, because of this, receive one of the highest priorities from our maintenance crews and technical personnel.

Lining up the men prior to shift.

Ensuring proper drilling procedure.

Checking in before beginning shift.

Inco'

Inspecting life lines near an ore pass.

Visuals from the "Supervisory Induction Program" for mines—a synchronized-sound-slide presentation produced by the A/V department to help familiarize first-line supervisors with daily job functions.

Taking inventory of explosives.

Whether on slides, film, or videotape, the sights and sounds of Inco are being captured by the company's audio-visual department.

Located at the training and development institute in Sudbury, the A/V department has been fulfilling the Ontario Division's audio-visual needs for going on six years, and continues to have a great impact on operations in Port Colborne, Shebandowan, and the Sudbury area.

To touch briefly on its wide variety of services, the A/V department provides visuals for the company's annual report; videotapes are produced for training programs; speeches by company representatives are recorded on videotape or film, as are official openings of new plants; equipment and assistance is provided for mining-related meetings such as the CIM; visuals are created to back up the presentation of company "papers"; a bi-monthly course is offered to staff personnel on the proper utilization of audio-visual aids; and consultations are arranged for plants and mines that want to set up their own training programs. And perhaps this is one of the major functions of the audio-visual department — the preparation of audio-visual requirements for the many training programs Inco makes available to its employees.

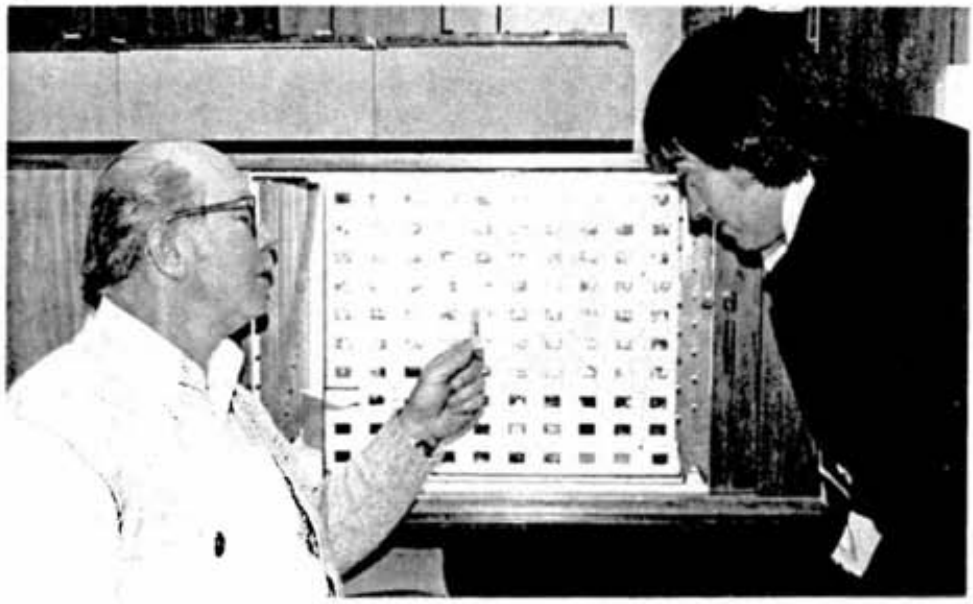
How are these various assignments handled? Well, for example, a request will come in from any one of the Ontario Division's various operations, directed to the training and development institute. After assessing a need and establishing justification for an audio-visual presentation the A/V department is brought into the picture; discussions will determine actual needs and establish goals. Working closely with the department that's made the request, the A/V section then begins work on the actual production. Currently, the most popular presentations are comprised of demonstrative slides with synchronized sound, which explains the content of the slide. The program can then be placed on videotape.

Because most of our plants and mines have, or are being equipped with, videotape playback machines, the A/V department is often called upon to loan out its taped training programs. And the medium

Audio-Visual Department

Discussing requirements and checking current inventory of prepared visual aids prior to tackling an upcoming project are, from left, Aurel Courville, Mike Barrette, audio-visual technician, and Vic Theriault, graphics designer.

Orest Andrews, left, visual aids co-ordinator with central mines training, and Aurel Courville, audio-visuals co-ordinator at the training and development institute, join forces to produce a synchronized sound-slide presentation for the safety department.



is also used to communicate general information now, rather than using printed literature and long memos.

The department operates with over $115,000 in equipment, which includes a four-camera black-and-white videotaping system, a single-camera colour system, audio recording and mixing facilities with an accoustically-treated recording room; 35mm photographic equipment; a library of approximately 75 training program videotapes and over 70 synchronized sound-slide programs, plus high-speed audio cassette duplicating equipment.

Aurel Courville, who's been with the A/V department for three years and now co-ordinates its activities, is also kept busy attending seminars and workshops, which keeps him fully aware of new developments in his field.

Hit and Run

A recent victim of a hit-and-run driver, Gerry Bradley, left, of Inco's transportation and traffic department, points out damage on his vehicle, while Sergeant Joseph Lavoie takes down the details, which will be forwarded to the hit-and-run investigative section of the Sudbury Regional Police.

We've probably all heard, at one time or another, of the often tragic results of automobile accidents. But there can be nothing more frustrating, nothing more offensive to our sense of responsibility and fair play, than the destruction wreaked by the hit-and-run driver.

In the Regional Municipality of Sudbury alone, there were 258 such offenses in 1975, with total damages in excess of $65,000 — not to mention personal injury involved.

The investigator of hit-and-run crimes faces considerable difficulty in identifying a suspect vehicle and its owner. The offender can usually explain damages on his vehicle to the satisfaction of both the insurance company and the repair shop.

However, repair shop owners and the police are in constant contact; the investigative section, headed by Constable Syl McInnes, reaches into all of our surrounding communities, where offenders travelling to and from the city might be found. In the course of his duties, Constable McInnes makes frequent inquiries of repair shops within Sudbury jurisdiction, in an effort to discover hit-and-run vehicles. Often the results are positive, and the offender is apprehended. When undetected, though, the violator goes about his business without attracting suspicion, leaving the victim and/or his family to their losses and disillusionments.

"With greater co-operation from the public, we could greatly reduce the number of unsolved hit-and-run accidents," says Sergeant Joseph Lavoie of the Sudbury Regional Police. Any and all pieces of information can help, whether it be part of a licence number, the vehicle's colour, make, or year, the sex of the driver, or the damaged section of the missing car.

Sergeant Lavoie further mentions that "many people are reluctant to get involved, for fear their names will be mentioned. If that's the case, I'd urge them to get in touch with Constable McInnes or myself personally, and we guarantee that the information will be treated confidentially. Even an anonymous phone call can often put us on the right track".

Couple excellent public communcation with the co-operation received from the Sudbury OPP and outlying police forces, and it would seem that the law has the advantage over hit-and-run offenders. Yet good evidence needs thorough investigation and boundless determination on the part of the officer.

One of the best pieces of evidence is debris left at the scene of the crime. Analysis of the debris and paint samples from the damaged areas of the vehicles give a good indication of the type of automobile involved. Tests conducted at the Forensic Science Laboratory in Toronto can detect the microscopic fragments of paint, and can further give information regarding the paint manufacturer and the year of the car.

Facilities of the Sudbury Regional Police identification section are availabl to the hit-and-run investigative section a round-the-clock basis, providing necessary photographic, fingerprinting, and sample preparation equipment. Ti casts can be made, from which the Forensic Lab can determine the tire mak size, manufacturer, flaws in the tire, apparent mileage, and year the tire was made . . . handy evidence in placing a car at the scene of the accident.

Psychologically, each violator has his own motive for leaving the scene. A recent reflective survey of hit-and-run offenders indicated that neither social nor economic status could categorize these offenders. A predominant motive, in addition to panic, was the belief by th violator that no one would be able to place them at the accident scene. In the absence of witnesses, the hit-and-ru driver would rather flee than face up to the responsibility for damage or persona injury.

There are, of course, those less aggravated instances where the hit-and-run violation involves only the offender's vehicle and perhaps some sort of struc-

What may go unobserved by the naked eye may be spotted through the microscope at the Forensic Science Laboratory. Even tiny flecks of paint can indicate the vehicle involved.

Through the combined efforts of the investigating officer, witnesses to the accident, evidence obtained at the scene, and information from area body shops, the hit-and-run driver stands little chance of escaping justice. The Regional Municipality of Sudbury reported 258 hit-and-run offences in 1975, with total damage in excess of $65,000.

ture. This type of accident is generally reported by the violator himself, and is not considered to be a hit-and-run offense in the same sense as situations in which a person deliberately flees the accident scene in order to conceal his involvement.

Leaving the scene of an accident without making the proper moves is a serious offense. When a driver leaves the scene, he is possibly moving himself from an offense under the Highway Traffic Act to an offense under the Criminal Code. Under the Criminal Code, a driver could be liable to up to two years in prison, suspension of his driver's licence, a fine, and a criminal record that will follow him for life. If charged under the Highway Traffic Act, a hit-and-run driver could face a fine of between $100 and $500 and/or not more than six months in prison, or both. He could also face a possible driving suspension for not more than two years.

Determination of whether the driver will be charged under the Highway Traffic Act or the Criminal Code is up to the police, and depends on the particulars of the offense and whether or not the hit-and-run driver was aware that the offense took place.

Much of the decision-making, however, is up to the driver. The decision to leave the scene is up to him.

Debris found at the scene of hit-and-run accidents can give a good indication of the type of vehicle involved. Analysis of the debris can help point the way to the offenders. Constable Syl McInnes of the Sudbury Regional Police handles the hit-and-run investigations.

Garson Mine Crusher Replacement Scheduled During Summer Shutdown

Richard St. Denis, left, machinist apprentice, and Tom Mohan, first-class machinist, clean and measure frame bolt holes.

Yves Lariviere, specialist welder, carefully welds a small crack on the upper frame section of the Kirkwood crusher, which will be used as a replacement unit at Garson mine.

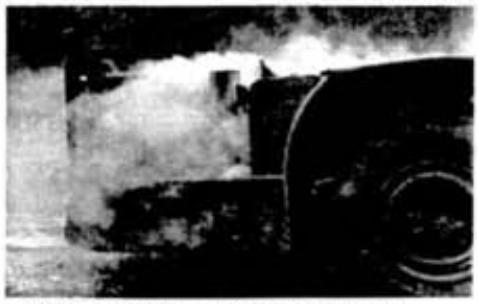
Following the shutdown of Kirkwood mine, it was found that a 36" x 48" jaw crusher from Kirkwood would ideally serve as a replacement unit for Garson mine. As a result, the crusher was brought to surface, cleaned by sand-blasting, and then ultrasonically tested to determine the extent of repairs necessary. Results indicated that the crusher was in good condition, and wo need only limited repairs.

The crusher was then brought to the Garson shop and assembled for further measurements. Garson maintenance people wil complete the necessary repairs, and the crusher is to be made ready for installation at the 4000 level of Garson mine, with actual replacemer occurring during the scheduled 1977 summer shutdown at Garson.

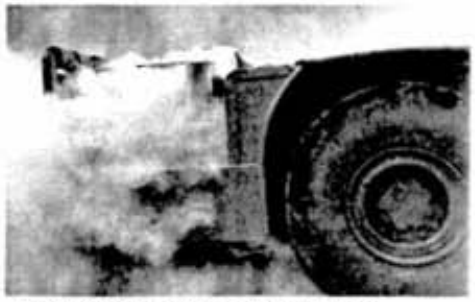
Tom Mohan sets up an air drill to ream out frame bolt holes prior to installing bushings in holes. The crusher will be installed at the Garson 4000 level during the mine's scheduled 1977 summer shutdown.

As part of the repair program for the Kirkw crusher, Tom Rollins, rigger, positions one the upper frame sections for welding.

Prior to testing, the engine compartment of an ST8 scooptram is covered by four nozzles.



First stage of "blanketing" the engine compartment with the dry chemical fire powder.



The special fire suppression system increases personnel safety and reduces equipment damage.

Fire Suppression System Will Increase Safety, Avoid Damage

Following installation and testing, Chuck Briggs, foreground, and scooptram operator, Terry Short, adjust the fire suppression system's main supply tank.

A special program of fire suppression has been introduced and is now being established throughout the company's various surface and underground operations.

Designed to increase safety and avoid equipment damage, the program basically consists of supplying diesel-operated equipment with a fire suppression system which, when activated, will discharge dry chemical powder through nozzles, thus effectively smothering any fire that might occur.

The system can be activated from two different locations . . . from the operator's cab, and secondly, from a remote station strategically positioned on the outside of the machine.

The system was recently installed and tested on an ST8 scooptram at Creighton number 3 shaft; "The Triangle" caught some of the action.

At the Creighton mine complex, Chuck Briggs, left, first-class garage mechanic and Bert Blackwell, maintenance general foreman, adjust a nozzle.

Sudbury area CB radio buffs have probably spoken to Bob Potter at some time or another. Bob, a first class garage mechanic at Stobie mine, is a dedicated fan of the CB radio and enjoys it so much that he's installed a radio in his home, car and boat. He and Christa, his wife, have three children, Bob Jr., 18, Debbie, 10, and Randy, 16.

This is the Tom Gravestock family from the Port Colborne nickel refinery. Tom is an operations project leader in the electro nickel refining department and enjoys fishing, hockey and softball in his spare time. Wife Margaret takes great pleasure in sewing for her children, Garrett, 7, Marcy, 2, and Lori, 5.

Family Album

Summer or winter, friends of Jim Armstrong and his family are bound to find them outdoors, partaking in their favorite activities. Jim, a switchman-conductor at Copper Cliff North mine, enjoys hunting and fishing when the weather permits, and snowmobiling in the winter. At their new Sudbury home, Jim and his wife, Isabell, are raising their five children: Barbara, 19, Sharon, 13, Jim, 12, Beverly, 20, and Greg, 4.

Well known at Copper Cliff South mine where he works as an operating shaft boss, Barry Johnston enjoys spending time with his family at their home in Hanmer. He and his wife, Susan, are raising two children, Robert, 11, and Jennifer, 8.

"Mouseketeers" are, from left, Melissa O'Connor, Stacey Hofford, and Karen Kerr.

Walden Fantasia

"Chimneysweeps" were represented by club juniors, from left, Shawn Gillespie, John Jamieson, Mark Taylor, Patrick McNeil, Damon Kachan, and Andy Hodgens.

Last month, it was proven beyond a doubt that "fairy tales can come true", when the Walden Figure Skating Club hosted its second successful skating carnival at the Walden Arena.

Over 150 club members were eager participants in a surprisingly realistic depiction of many Disney characters . . . a wonderful world of fantasy that provided the theme for this year's carnival.

The arena was filled to capacity, and audiences delighted in the performance of excerpts taken from such renowned fairy tale classics as Snow White, Peter Pan, Mickey Mouse, Mary Poppins, and Cinderella.

Walden's two club professionals, Cathy Ann De Diana and Lori Clements, displayed their versatile talents in the careful planning of each routine, showing originality both in choreography and in music selection.

Guest skaters from the Sudbury Figure Skating Club included dance champions Heather Arnett and Darcy Grewall; guest soloist was Cathy Savage from the Woodbridge Skating Club.

Preparing for a Mary Poppins scene — ice captain, Jo-Anne Hofford, left, gives a pep talk to Keri Gillespie, Lana Latramboise, Diane Hayder, and Nicole Giroux.

"Little skunks" are, from left, Shelley Cox, Kathryn Zelinsky, and Jennifer St. Jean.

Modular Training At Inco:

Detailed Training Manuals Proven Successful At Nickel Refinery

The Copper Cliff nickel refinery was successfully commissioned in March 1973, due largely through results achieved by some very careful attention to the area of personnel training.

The nickel refinery utilizes two radically new techniques: top blown rotary converters for non-ferrous smelting and the Inco pressure carbonyl (IPC) process for the recovery and pure refining of nickel from copper nickel sulphide feed materials. The process stream is more complex and sophisticated than any of Inco Limited's existing world wide developments.

Preparation for start-up of the process involved considerable study to ensure personnel safety and future continuity of effective operations. To this end many months of work were devoted to the development of detailed training materials. The material was structured to the plant and processes and not to any jobs that were anticipated or required. This task called for the initial sub-division of the plant into its component subsystems or "manufacturing steps". Having the manufacturing steps thus grouped into the main process functions allowed operator and supervisory functions to be fitted to an overall standardized plant training program.

Job functions were fitted to the training rather than the training fitted to a job. This concept forms the innovation of manufacturing step modular training. Jobs are developed from functional knowledge, with emphasis placed on operating from a position of overall process understanding.

The modules or training manuals start with an overview of a particular process. This gives the 'big-picture' look and basic understanding of the reason for the process subsystem and how it fits into the overall process.

Detailed modules are then studied so that a thorough understanding of the equipment, instrumentation and procedures is gained. Each detailed module allows the trainee to learn what the manufacturing step does, what the equipment does, what the equipment consists of, how the equipment works, how to tell if the step is doing its job, how the step and equipment is controlled and what the operating procedures are.

Modular training as a means of developing and maintaining a safety-conscious and efficient workforce is gaining wide acceptance within the Ontario mining industry. The advantage of the system, as demonstrated through the safety records and technical expertise of the Copper Cliff nickel refinery, is soon to be applied to other Inco operations.

Preparation of the modules is an extensive undertaking, and to cover all Inco equipment and processes involves preparing 800 to 1,000 different manuals. Cataloguing of equipment has been completed, and with the assistance of Management and Training Systems Technics, some 30 Inco personnel are engaged in preparing the manuals. It is estimated that this part of the project will require 18 months to complete.

The actual use of training modules will commence as groups of modules for specific plant locations become available.

At the Copper Cliff nickel refinery, however, modular training is continuing as it has since the plant opened in March of 1973. "We have a system that lets the employees know exactly what they're doing," says Jon Nichols, nickel refinery training supervisor. "Each employee fully understands the effect of his job on the other processes down the line. By gaining a better overall view of the process, a man gains more confidence in his job, does it better, and, more important, does it safer. I'd say modular training has helped make the nickel refinery a very safe plant."

Modular training at the Copper Cliff nickel refinery has so far been confined to the IPC (Inco Pressure Carbonyl) process and the NRC (nickel refinery converters) process. It will soon be expanded to include the nickel refinery maintenance section as well.

When first assigned to work at the nickel refinery, employees transferring from other Inco departments are given three days of basic safety training relating directly to the nickel refinery operations. A new employee will also receive an extra two days on Inco's basic safety procedures. When the induction training has been satisfactorily completed, the employee, after some time in the plant to familiarize with his surroundings, can move to a designed modular program which will show him, with the help of a qualified instructor, what his job is and how it is done, and, most importantly, why it is necessary. Each job is associated with a required number of manuals.

For example, in order to qualify as a reactor assistant operator, 31 modules must be completed. To qualify as an NRC operator, 19 modules must be studied and completed.

So far the modular training has provided employees with an in-depth study and understanding of the machinery and processes they work with daily. The result has been a knowledgeable team of efficient operators, equipped with a process understanding and capability to contribute much in the way of trouble shooting and problem solving.

Operations of the most complex and sophisticated of Inco's existing developments have been compiled into 70 training manuals which break down the system to a number of tasks, enabling employees to study the system in it's entirety. Selecting the appropriate module for the day's training is Joe Nicholls, right, Copper Cliff nickel refinery training supervisor, and training instructor Harry Armbruster.

Modular training at the Copper Cliff nickel refinery is now being extended to include the maintenance department. Here, training instructors Percy Larocque and Chris Nadjiwan inspect top-blown rotary converter hydraulics while preparing information concerning the IPC building's maintenance program. The information will be forwarded to manual writers for inclusion in the training modules.

A combination of the theoretical and the practical has resulted in an educated work-force at the Copper Cliff nickel refinery. Here, Tom Graham, training instructor for the decomposer area, instructs Bill Rogers, a decomposer assistant trainee, in the IPC training room. Modular training at the plant will soon be expanded to include the nickel refinery maintenance section, with special emphasis on overall process understanding.

Preparation of the training modules is an extensive undertaking. To cover all Ontario Division equipment and processes, involves preparing 800 to 1,000 different modules. With the assistance of Management and Training Systems Tectonics, some 30 Inco personnel are presently engaged in preparing the manuals; a project that will require 18 months to complete.

Concise explanations accompany the diagrams found in training modules. When writers have compiled the information in a satisfactory form, it is prepared for print. Co-ordinator for surface plants information, Al Este, looks on as typesetter Linda Samuels sets type on a selectric composer.

Accuracy of diagrams in Modular Training manuals is essential, and a quick glance at a good diagram often indicates the area concerned in a clear manner. Here, writers Al Scruton and Albert Sasseville indicate the areas of major importance to graphic artist Janice Bolton.

Good communication between writers and co-ordinators helps to clarify the message being conveyed through the Modular Training program. Writer Tom Poulin confers with Bob Moss, co-ordinator of mines operation information, concerning a manual he's developing.

Biagio Crognale feeds a nickel cathode sheet through as Tony DiNunzio "walks" another sheet from the rack. The cut strips then travel by conveyor belt to No. 6 shear where they are cut into squares and packed into drums.

Port Colborne Ni
Major Storage /

Although the major function of the Port Colborne plant is to refine nickel, its rise to prominence as Inco's major storage and shipping facility in North America is becoming more and more evident.

In addition to shearing and packaging nickel refined at the plant, products arrive daily from both Copper Cliff and Thompson, Manitoba, for storage or distribution to the world markets. From Copper Cliff come nickel pellets, nickel oxide 75, Incomet and nickel powder 123, pre-packed and ready for transhipping.

Electrolytic nickel from Thompson comes in full sheets, 28" x 38", and is sheared and packed along with Ontario nickel. "S"* nickel rounds, produced at the Port Colborne nickel refinery are also prepared and
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*Trademark

Tony Sceppacerqua loads customer's truck with a variety of different products. Shown here with a pallet of Incomag Alloy, Tony and the other members of the shipping department can ship nearly two million pounds of nickel in one day.

Strapping drums of "S" rounds to a pallet are Tony DiLorenzi, right, anc Silvio Betteto. Last year nearly 360 miles of strapping were used, along with 20,000 pallets. In the background are drums filled with "S"* nickel rounds, ready for shipment.*

el Refinery Is Inco's d Shipping Facility

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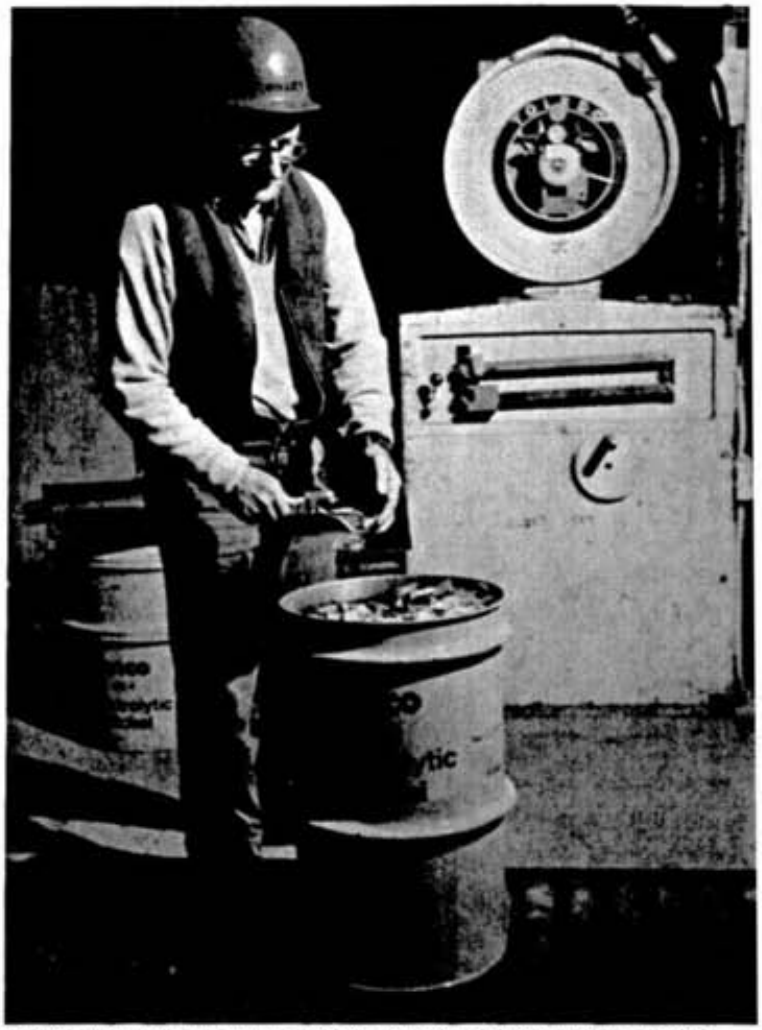
customers' orders. They find the product among the millions of pounds of stock in the warehouse, bring it to the scales to be check-weighed and then loaded for transport.

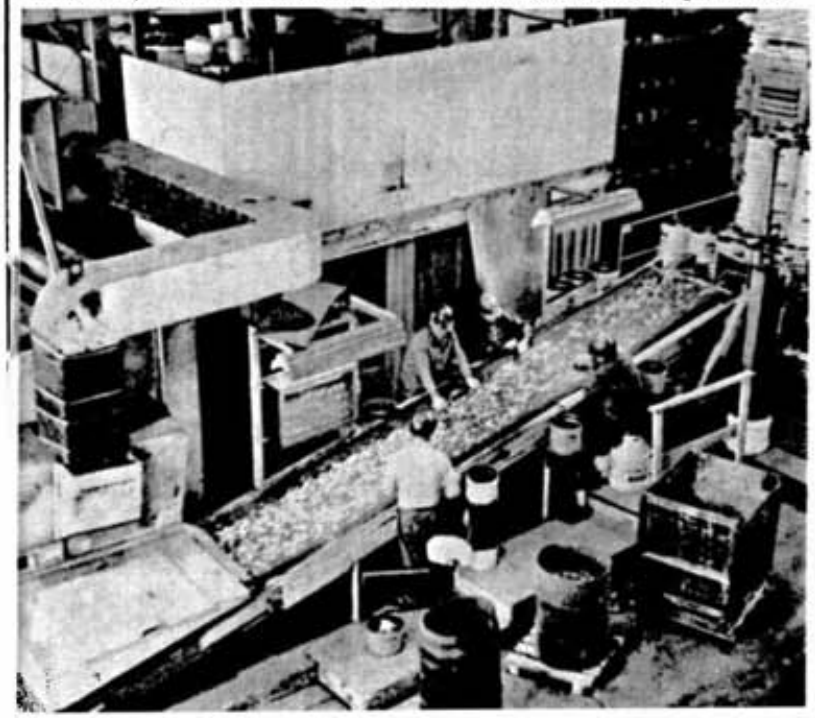
Nearly all nickel products sold in North America are trucked directly to their destination. Customers' names scale the entire alphabet from A and A Bumper Plating to Zenith Metal Products; their locations world-wide range from Tophane, Istanbul, to Kokomo, Indiana.

Some 95 percent of all nickel shipped from the Port Colborne warehouse in 1976 went directly to customers, with the remainder being shipped to other Inco warehouses in Swansea and Hereford, England, Kaosiung and Keelung, Japan; Chile, Brazil and Uruguay.



Bob Conley adds to a drum of 1"x1" electrolytic nickel, making sure the weight is exactly 625 lbs. before sending it off to be sealed. Hundreds of drums are weighed each shift. The exact number of drums varies with the size of nickel being packed.

Removing unacceptable "S" rounds from the sorting conveyor at the Harperizer are, from left, Basil Leclech, John Defelice, Carl Farnan and Vittoriano Cotrufo. Some of the rejected "rounds" are used to make different alloys in the Foundry Additives Plant; others are melted in the anode casting furnaces.*



Roy Garbari, left, puts shipping sticker on a drum while Allan Hardy writes down the weight of the pallet and the customer order number. Ray Lafreniere is recording the weight on the daily tally sheet inside the scalehouse.

Star of Numerous Musical Extravaganzas:

Jane Powell Headlines Quarter Century Club Variety Show

It's going to be another big year for Inco's Quarter Century Club. Some 724 new members will join the ranks when the class of '77 gathers this month. They will swell the ranks of the Copper Cliff Chapter to well over 8,000. It will be the Chapter's 28th annual gathering.

Some 490 new members from the mining and milling department will receive their gold pins at a dinner and dance at the Walden Arena on Monday, May 16. For this occasion, Sudbury's "Big Band Sound" will be in attendance.

Also, on May 17, inductees from the administration and engineering groups and the smelting and refining division will be welcomed at a dinner and dance at the Walden Arena. Again, the "Big Band Sound" will be there.

This year, the very number of the new members of the club again forces organizers to plan for two evenings of entertainment at the Sudbury Arena when all Quarter Century members, old and new, will gather on Wednesday, May 18, and Thursday, May 19.

A well-rounded two-hour variety show will be staged, headlining Jane Powell, star of numerous musical extravaganzas, along with banjo player Maurice Bolyer, "Mr. Sound Effects", Wes Harrison, and the multi-talented Paul Lennon.

The show will start at 7:30 P.M. and is expected to wind up by approximately 10:00 P.M.

Jane Powell

Jane Powell is the personification of a Hollywood star!

Lovely, talented, versatile, she has maintained her peak success, not from changing her style and looks with every voguish whim, but by retaining the vibrancy and vivaciousness that were her hallmarks when she was one of Metro-Goldwyn-Mayer's top stars.

She starred in twenty musicals for MGM — and some of these films have been described by critics as among the finest musicals Hollywood has ever made, most notably, "Seven Brides For Seven Brothers," in which she starred with Howard Keel, and "Royal Wedding," which co-starred Jane and Fred Astaire.

When she felt that the time had come for her to progress to more "mature" roles, L. B. Mayer, then the studio head, thought otherwise, and Jane made the most difficult decision of her life, she left MGM after eleven years and didn't have the slightest idea what she would do.

Almost immediately, however, she was engaged for a concert at the famed Hollywood Bowl and for the first time in her life found herself singing to a live audience — an SRO crowd of twenty thousand people.

With her new found acclaim, Jane Powell's name has become synonymous with "standing room only" at the nation's top clubs, and her appearances on important television programs have brought her an even greater following, in addition to her heavy concert tours which she headlines annually.

Choosing to spend a great deal of time with her growing family, Jane has played on the Summer Stock Circuit in such shows as "My Fair Lady", "Meet Me in St. Louis", "Sound of Music", etc.

Paul Lennon

This is to serve as your introduction to a most unique young entertainer, who, in the first thirty years of his life, has developed his varied talents to their fullest. Today, Paul Lennon is respected throughout show business as a top comedian, satirist, impressionist, actor, singer, and writer. Born in Kitchener, Ontario, his parents are of Swiss, German and Scottish extraction. The Lennon family moved across the Canadian-American border to Dearborn, Michigan, and it was here, at thirteen years of age, that Paul first stepped on a professional stage, and became deeply involved in U.S.O., and service clubs around the state of Michigan.

On his twenty-first birthday, he married a Michigan girl, the former DeAnna Galley, and proceeded to establish his adult family life with a daughter, Jana Lynn, and a St. Bernard (the dog was adopted).

In recent years, he has appeared with such stellar stars as, Sonny and Cher, Doc Severinson, Lorne Greene, The Supremes, Paul Anka, The Jackson Five, Anne Murray, John Davidson, Jack Jones, Lynn Anderson, and an endless list of others. He considers Frank Sinatra Jr. one of his closest show business friends.

Writing has become a major part of Lennon's career.

Audiences, night after night, agree that his material, his approach, and attitude are delightfully refreshing, and completely unique from other comedic talents of our day.

Wes Harrison

Wes Harrison — man with a mike — presents a world of "sound" entertainment. He's an unusual and different comedian. He needs no music, no special lights, carries his own sound equipment, and a Shure microphone. Wes performs the most unusual novelty act in the world at Sports Shows, Conventions, Banquets and Clubs all over the nation.

A showstopper, he's had to beg off to allow the headliners to come on. His funny apt comments in between the sounds add up to an off-beat turn that should keep him in demand at the better spots. Wes also provides sounds for Tom and Jerry cartoons.

On the National Sports Show circuit his amazing sound effects routine 'The Big Duck Hunt' has made him the favourite performer of sportsmen from coast to coast.

Maurice Bolyer

One of the world's best banjo players is a Canadian — Maurice Bolyer of CBC-TV's The Tommy Hunter Show, seen coast to coast every Friday night at 9 p.m. Maurice Beaulieu (Bolyer is his professional name) was born in Edmunston, N.B., December 1, 1920. His first language was French since his people were Acadians, and he still carries a noticeable accent even today. He learned to speak English after he met his wife, the former Eveline Davis in Toronto in 1947. They have a son, a daughter and a grandson.

At 18, Maurice was playing the piano, violin, guitar, bass, accordion, mandolin, harmonica and played in a small western band.

In 1942, Maurice played regularly in a group with Hank Snow over radio station CKCW.

In 1949 Gordie Tapp was the host of a radio show called Main Street Jamboree. Gordie and Maurice moved to Toronto after that for CBC television's series Country Hoedown. From Country Hoedown he went with Tommy Hunter and has worked with Tommy ever since.

Maurice has played nearly all over Europe and the Middle East, for our troops — Egypt, Gaza, Cyprus, France, Germany. He's also played with Peewee Hunt and Victor Borge and in nearly every big concert hall and small town in Canada.

Just recently, Maurice recorded a two-disc LP album of banjo tunes called Golden Banjo Classics, distributed by Cachet Records.

DOWN MEMORY LANE . . . DOWN MEMORY LANE . . .

First winners of the new R. D. Parker Shield for the Inter-Plant First Aid Championship was the Copper Cliff team, seen here in action. Left to right, E. Lawson (captain), W. McNeice, G. Guthrie, T. Gladstone. The "patient" for the occasion was the fifth member of the team, N. Crawford.

* * *

Here's the Frood First Aid team which captured the Inco inter-plant championship and the R. D. Parker Shield for 1947 with a convincing all-around display of St. John Ambulance work. Standing are V. Laporte, captain, N. Morrow, F. Southern; seated, Mel Young and W. Herlein, with George McPhail, coach, holding the shield. Presentation of the coveted award was made by J. R. Gordon in the absence of R. D. Parker.

Grace and Beauty Adorned Miners' Fiesta

Gasps of incredulous delight broke from the guests at the first annual Miners' Fiesta at Memorial Community Hall April 9, when these eight exquisite "filles de danse," the Nickel Nimfs, went through the graceful motions of their ballet. The girls, left to right, back row: "Twinkletoes" Trefiak, of Creghton; "Sweet Sue" Smith, of Frood; "Alice the Goon" Cole, of Copper Cliff; "Babyface" Missler, of Creighton; "Fifi" Heale, of Creighton. Front row: "Cutie" McNeil, of Copper Cliff; "Lulubelle" Heglar, of Copper Cliff; "Blondie" White, of Frood.

A full-fledged carnival in the gymnasium, a dance for which the auditorium was very artistically decorated, a tasty supper in the clubroom, and the original manner in which the mining motif was carried out, made the Fiesta a standout.

Hilarious Antics at Refinery Athletic Association Party

In a dressing room preview of the dire events to follow, "actors" from the Copper Refinery gave the Triangle camera an unusual lensful at their Athletic Association's annual party in the Inco Employees' Club.

Piece de resistance of a great evening's fun was the stage skit in which an unfortunate citizen, surrounded by sundry domestic and transient disturbances such as a baby and an inebriate, developed a nocturnal toothache and underwent heroic treatment for same.

The picture gives some idea of the hilarious slapstick. On the left is the obstreperous infant, Charlie O'Reilly. About to strike dental ore with a wicked-looking drill is none other than the angel Gabe himself, complete with wings and rather convincingly impersonated by Herb Grattoni. In the top hat is the gent who, supposedly in his cups, wandered by and compli-

cated proceedings; taking this attractive role was Dave Scott. The patient in this instance was the winsome little maid with the mop of hair, Jimmy Tosto. Largely responsible for the script was Ted Harber.

Program at the annual party was opened by popular President Mel Luck with a brief address of welcome. The Cowcill Shield for bowling was presented by the donor, affable Don Cowcill, to the Tankhouse Nomads: Fred Cooper (captain); Fred Sheridan, John Tallevi, Bill Solomon, Jim Tosto, Jimmy Smith, Mark Lawson, and Ernie Holgate. In the absence of donor Alex Kerr, the Kerr bowling trophy was presented by Mel Luck to the Millwrights: Albert Ross (captain); George Blais, J. Twardy, J. Dion, J. Luptak, and R. Howard.

Refinery's first aid champions came in for some well-merited recognition. Gordon Hubbard, coach of the team which represented the plant in the surface semi-finals for the R. D. Parker Trophy, received a pencil set from the Athletic Association, presented by Frank Scott. Presentations were also made to the first aid team which won the F. Benard Trophy, emblematic of the plant championship: Frank Scott, Jack Latreille, Gilbert Walsh, Bill Toleck, Connie Smythers, and Gordon Hubbard (coach).

Dancing followed the entertainment and presentations. There was a splendid turnout, and no refunds were requested.

Exceeding the roslest hopes of its sponsors, the modern square dancing jamboree staged at the Sudbury Arena was a spectacular success, gathering a total of 850 dancers from several points in northern Ontario as well as from the clubs in the Sudbury district. About 1,500 spectators enjoyed the colorful sight as the squares moved through an endless variety of swiftly changing patterns at the direction of the guest caller, "Jonesy" Jones of Glendale, California, who can be seen in the upper left of the photo on his platform. He was much impressed by the performance of the dancers, saying that in another year they would be unexcelled anywhere. The jamboree was staged jointly by the Sudbury Canadian Legion, sponsors of the original modern square dance group organized by Les McDougall, and the arena commission.

* * *

Some of the branch officers and volunteer ambulance personnel of Levack-Onaping Legion are shown with their $6,000 Centennial ambulance: standing, Ray Holm-Andersen, originator of the project; branch president Cec Douglas, vice-president Maurice Beauchamp, Harvey Nadeau; front, Syd Kemp, Hank Derks, Bill Petryshen, past-president Ron MacNeill, Hector Barr.

24-Hour Volunteer Ambulance Service Is Centennial Project

A voluntary round-the-clock free ambulance service for Levack, Onaping, Cartier, Dowling Township and parts of Balfour Township has been established by Levack-Onaping branch of the Royal Canadian Legion as a Centennial project.

Reflecting high ideals of community service, the Legion project became a reality on March 13.

To furnish drivers and attendants for the ambulance, the membership set up a rotational six-hour shift system. All personnel involved have received a 12-week first aid course. Six registered nurses residing in the area have volunteered their services in the event of emergencies.

Funds for the purchase of the $6,000 ambulance were provided by the Legion branch, the Legion ladies auxilliary, and the Levack Lions Club. A fully equipped first-aid kit was donated by local pharmacist Frank Polumbo.

The project was sparked by the Legion branch treasurer, Ray Holm-Andersen, who got the idea while vacationing in the U.S. He is chairman of the ambulance committee.

Calls for the ambulance are answered at the discretion of Dr. C. P. Jessop of Levack, Dr. H. Jalkotzy, of Onaping, and the local and provincial police.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS .

Sudbury news reporters **Jim Marchbank,** left, of CKSO-TV, and **Joe Cook,** of CKNC-TV, in conversation with **J. Edwin Carter,** Chairman and Chief Executive Officer of Inco Limited. The photograph was taken during a television interview prior to the recent annual meeting, held at the Royal York Hotel in Toronto.

* * *

After many years of absence from the local hockey scene, Inco's Port Colborne nickel refinery has again entered a team in the Port Colborne Industrial Hockey League. It did not take long for the team to establish itself as a contender, winning its first seven games before giving up a single point in a tie. As the regular season ended, they won the league championship and showed their supremacy in the league by defeating their arch-rivals, the Union Carbide team from Welland, in three straight games, winning the playoffs also. Team members are, from left, front row, **Roger Coopman, Dante Brema, Allan Benn, Paul Conn, Gerry Garbutt, Bill Teal, Ivan Smith, Tony Dibartolomeo, Gus Desjardins.** Back row, from left, **Alan Climenwage, Fred Eutiere, Gary Hoffman, Clint Minor, Don Peresotti, Dave Kuhn, John Lacroix, Paul Slipak Jr., Brian Scott, Charlie Gatt, Peter Robitaile** and **Lloyd Goss.**

While the old method used in fluid drive cooling systems incorporated a copper tube with running water inside to cool the oil, maintenance crews at the Frood-Stobie mill have reversed the process and now use the water to surround the copper pipe containing the oil. This method of cooling pumps has now been applied to all the Frood-Stobie mill concentrate and tailings systems. Here **Frank Boyd,** a maintenance mechanic, inspects one of the newly installed units.

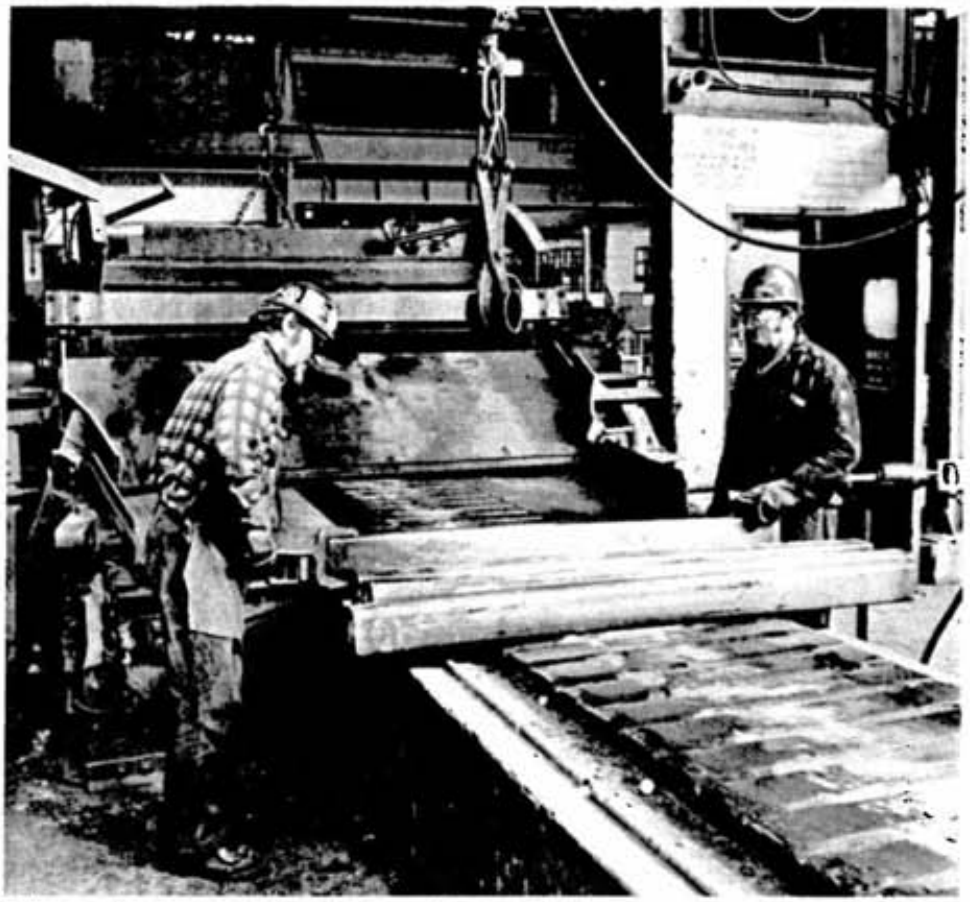
* * *

Surface operations play a vital role in the continuing operation and upkeep of underground equipment. Training is conducted in the surface shops as well, and **Joe Brunet,** left, an underground track boss, undertakes to learn the proper use of a cutting torch from plater **Ed Black,** of the Garson mine plate shop. Since the mine requires qualified burners to cut rails, bolts and fishplates, men are being trained to do the job by the experienced plate workers. Here Joe prepares to cut washers for the 4,000 foot level crusher at Garson mine.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS . . .

A request for 975 copies of a 13 page booklet to the stationery department at the main office in Copper Cliff is not unusual, but when the order is completed two hours later, people begin to take notice. The high-quality copies were ready in a fraction of the time, thanks to this newly installed 9200 copier, which is nearly completely automatic and should prove an asset to the general office staff. At the control board of the new copier, printer **Art Wennerstron,** left, completes another assignment under the watchful eye of **Jim Oliver,** stationery department supervisor.

Charles Ramsay, right, stores foreman at the Port Colborne nickel refinery, receives a certificate honoring him for 75 donations to the Red Cross blood donors clinic. Presenting the certificate is Port Colborne Red Cross blood donors clinic chairman, **Joe Rossi.** Joe is safety supervisor at the Port Colborne nickel refinery.



Following the casting and quenching of horizontal wire bars at the Copper Cliff copper refinery, inspectors **Tom Large** and **Werner Althans** inspect and grind out minor surface flaws which occur in the casting process. Below, grinder operator **Brian Dixon** and process assistant **Stephen Brydges** inspect part of the vertical casting wire bars stockpile prior to shipment.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS . .

The real benefits of working safely every day come from completing an accident-free shift, but a conscientious attitude does not go unnoticed at the Frood-Stobie complex where a trophy is presented every two months to the surface maintenance department with the best overall safety record. Recent winners of the trophy were members of the Frood No. 3 shaft machine shop, above, headed by foreman **Ken Leach,** for their excellent safety performance in February and March. Another award was presented to the Stobie No. 7 shaft operating department, below, for succesfully completing February and March without a dressing of any kind. The operating crew picked up this award which is presented to the crew from Stobie No. 7 shaft with the best overall record. This crew, led by foremen **Adam Cooke** and **Tom Jelenic,** had a perfect record that was hard to beat.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS . . .

The 79th general meeting of the Canadian Institute of Mining in Ottawa drew representatives from many aspects of the mining industry. Two of the delegates representing Inco Metals Company were **Charlie Ferguson,** left, director of environmental control, and **Gerry Cullain,** manager of central utilities. Mr. Ferguson's paper dealt with the company's recycle strategy to reduce water consumption. Mr. Cullain's paper, compiled with a co-effort by internal energy committee chairman **Berno Wenzl,** deals with energy management at Inco's Ontario Division.

* * *

That's **Harold Glover,** Inco's coinage consultant, outside Buckingham Palace with the insignia of the C.B., which he received from the Prince of Wales at a recent investiture. At the investiture, Prince Charles joked that, as controller of H.M.S.O., Mr. Glover had been responsible for stopping the Prince's free stationery. Mr. Glover stands with his wife, Olive, and their sons, Tim, left, and Crispin.

"Principles of Buying," a course offered by Cambrian College in Sudbury, attracted a number of people anxious to get better acquainted with purchasing, supply and materials management. Diplomas were recently presented to 16 graduates of the course, several of them from Inco. In appreciation for their diplomas, the graduating students presented course instructor **Ted Nicholson,** of Inco's purchasing section, with a shiny apple. Those participating in the program included, front row, from left, **Bob Leblanc,** of inventory control; Ted Nicholson; **John Saddington,** purchasing. Back row, from left, **Wally Lamondin** and **Al Kerr,** of inventory control; **Sidnie Lawton, Henry Salach** and **Arne Kallio,** of the purchasing section.

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The best time to catch up on the latest news and happenings takes place just before the cage leaves. Swapping a few tall tales at Copper Cliff North mine are, from left, **Norm Maatta,** raise bore helper, raise bore operators **John Humgert** and **Ernie Pelissier; Roger Perreault,** raise bore helper, and **John Baker,** garage mechanic.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS . .

This is an aerial view of the new nickel-processing facilities of P.T. International Nickel Indonesia near Soroako, on the island of Sulawesi. In a recent ceremony, **President Suharto,** of the Republic of Indonesia, dedicated the Soroako nickel project, a majority owned subsidiary of Inco Limited. Employees and some 80 guests from Jakarta and the provincial capital of Ujung Pandang attended as President Suharto unveiled a plaque commemorating the occasion.

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Lectures and readings are still a valuable source of information in the educational process, but many teachers throughout the Sudbury area are learning that the best way to view the dynamic progress in the area mining industry is a visit to Inco's plants. Accompanied by teacher **Rosemary Webster,** and led by tour co-ordinator **Sam Laderoute,** this group of youngsters from the enrichment program of Cyril Varney School toured the surface operations and enjoyed every minute of it. "They came prepared with plenty of questions," Mr. Laderoute said, "and I'm sure they left with a better understanding of the mining industry."

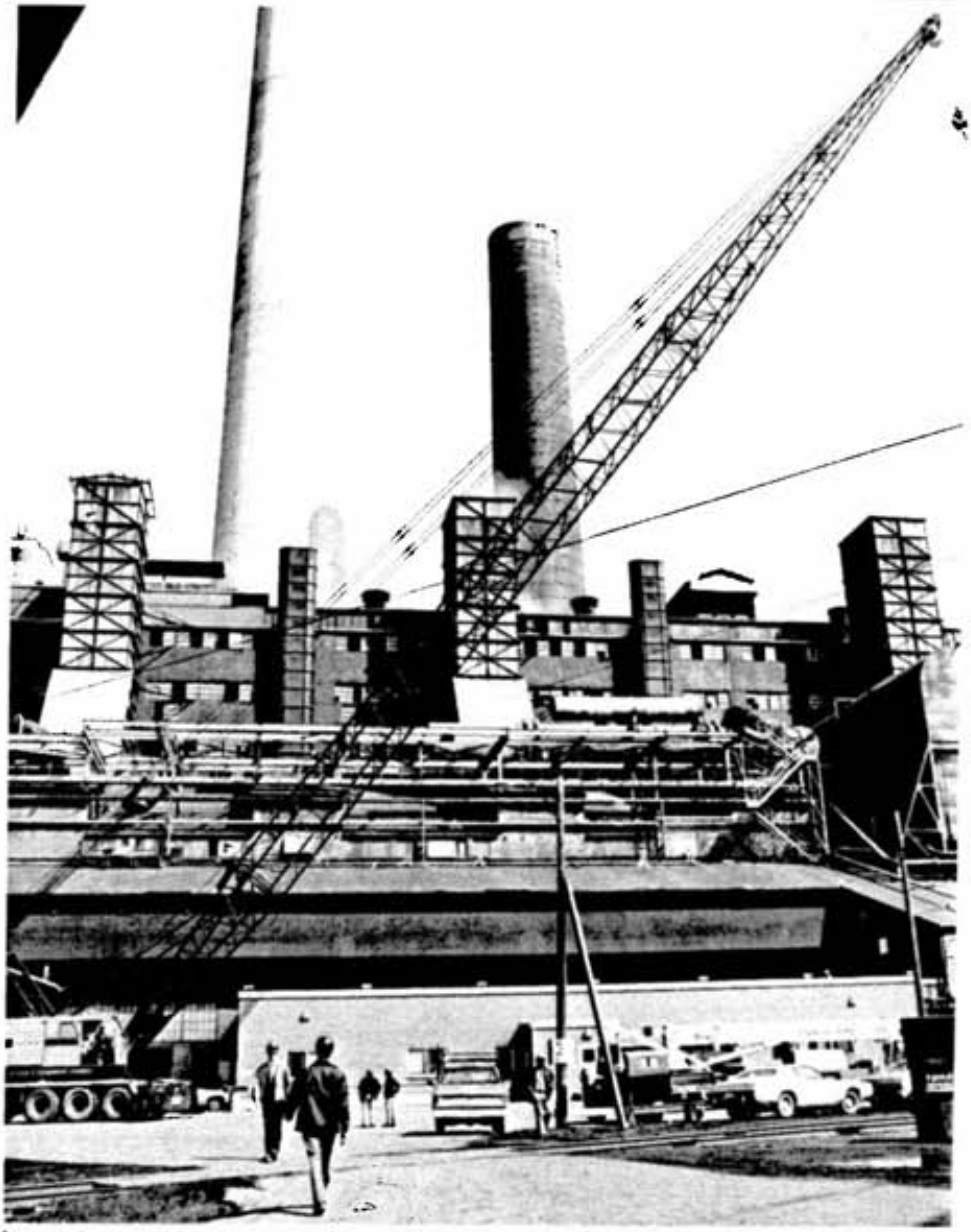
Assurance of high quality is a must at the Copper Cliff copper refinery, and the entire system is closely monitored from start to finish to ensure that the product reaches the exacting standards. Even after the product is completed, the testing continues, as with these phosphor billets. Process assistant **Ray Barbeau** monitors the chemical composition of the copper bars with a magnatest, a conductivity measuring instrument, which determines the phosphor content of the bars.

* * *

Presented each year for an outstanding effort toward conservation in the Sudbury District, the W. Barry Memorial Trophy was awarded to **Gerry Courtemanche,** a relief clerk in matte processing, Copper Cliff. It is the second time Gerry has captured the award since 1974, when he was the youngest person ever to be honored with the prize. Gerry was also co-winner of the Carlings Conservation Trophy, an honor he shares with **Jerry Vollick,** of Orillia. Gerry is a dedicated member of many conservation clubs in and around the Sudbury area.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS . . .

Daily broadcasts by community radio stations provide us with entertainment, news and public service announcements, but in times of emergency, the radio station takes on a much broader role, providing information often important to human survival. One example of this was the emergency service provided by **Radio Station CHOW** during the "blizzard of '77" in the Port Colborne area. In less hectic times, however, CHOW plays an entertaining role as well, one of their popular features being the Inco-sponsored program **"Our Past"** which gives detailed accounts of historical events of the Niagara Peninsula. Above, announcer **Jim Thompson** records a session of "Our Past". Below, news director **Frank Sernack** edits tapes from an interview recorded at a meeting the previous evening.



A recent request to move some heavy equipment at the Copper Cliff smelter presented little problem to this mobile crane, equipped with a 200-foot boom. The unit has a maximum lifting capacity of 64 tons, to a height of 204 feet. It weighs over 175 tons. A 40-ton counterweight at the rear of the unit ensures proper balance. The operator has to exercise all precautionary measures to avoid contact with overhead obstructions when operating the unit.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS

The Frood mine carpenters, well acclaimed for the excellent work they have carried out in the past, have pulled off another success with this newly renovated first-aid room at the mine. Along with new walls, ceiling and floors, the first aid room will also be equipped with a new key cabinet for employees' lockers. Carpenter shop foreman **Ed Hickey,** left, looks on approvingly as first class carpenters **Jim Fitzgerald** and **Mike Brosseau** install the cabinet, the idea of which was originated by the two installers. The cabinet will hold 4,000 keys.

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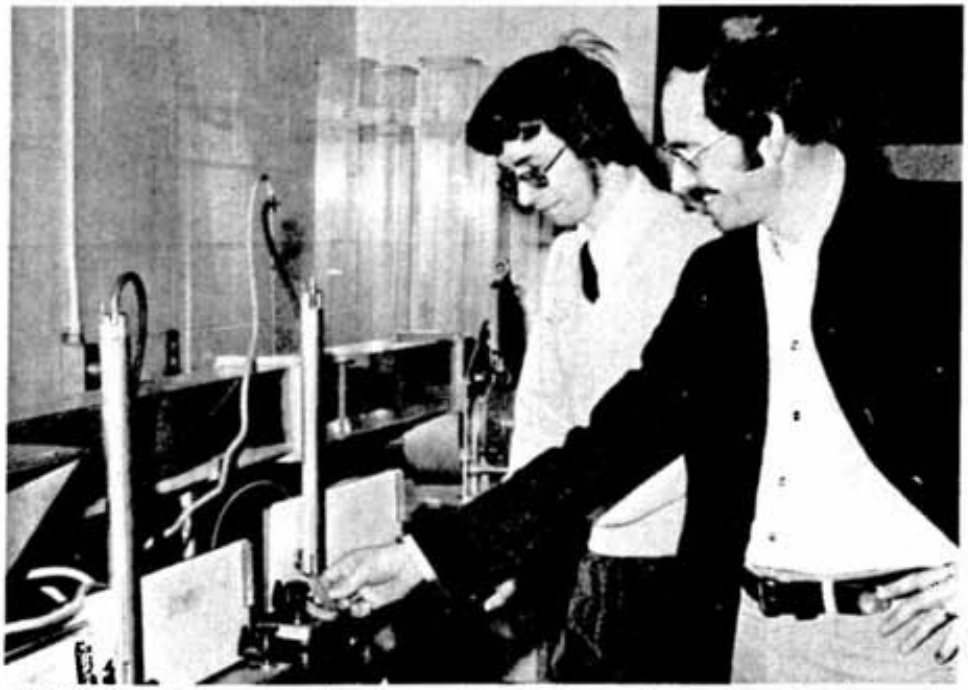

Bill Elliott, right, supervisor of environmental control, recently served as a faculty member during the Second Annual Ventilation Systems Design Course, held at the Haileybury School of Mines campus of Northern College, Haileybury. The course drew participants from as far east as Nova Scotia and as far west as Saskatchewan. Also in attendance was **Bob Pierrynowski,** left, ventilation technician of Cape Breton Development Corporation, of Sydney, Nova Scotia.

At first glance, many people think that al rocks look alike, but visitors to Inco's genera engineering offices in Copper Cliff may be lucky enough to see a cross-section of the polished ore samples taken from area mines. The mineral-rich samples give a good indication of the various types of ore being removed from the ground in the district. Looking over a sample from Creighton mine are **Larry Coderre,** left, a laboratory clerk in geological research, and **Richard Bruser,** a draftsman with field exploration.

* * *

When the Northern Ontario contingent marches into the Youth Bowling Council finals in Winnipeg this year, part of their uniform will be reflecting their area's major industry. Inco has supplied the Northern Ontario team with visitors' caps, the hardhats worn by the thousands of visitors who tour the Inco surface plants each year. For Inco's interest in the progress of the young bowlers, YBC chairman **Ed Champagne,** right, presented **Ken Thompson,** an estimator with Inco's engineering section, with a plaque commemorating the company's effort toward promoting amateur sport. Ken is an active participant in the YBC, having worked as a director for the program for many years.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS . . .

Jim Fowler has been appointed Deputy Comptroller, Inco Metals Company, effective May 1. In his new position, he will report to W. I. Gordon, Comptroller, and will transfer from the Ontario Division to the Inco Metals Toronto offices. After attending Peterborough Collegiate and Vocational School, Mr. Fowler obtained his Bachelor of Commerce degree from the University of Toronto. He then became a student in accounts with Price Waterhouse & Co. where he obtained his Chartered Accountant's degree. He continued with the firm until joining Inco as an accountant in 1964. He held positions of increasing responsibility with the company prior to his appointment as Division Comptroller in July of 1972. Mr. Fowler is married to the former Margaret Martyn. The couple have four children.

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"The Canadian Mining Journal" recently visited Inco facilities in the Sudbury area, and took photographs at the company's various mines and plants. The magazine plans to feature the Sudbury operations in its next issue. Here photographer **Art James** sets up for a shot of the main control room at the Copper Cliff smelter. Control room operator is **Brian Smith.**

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With summer on the way, the Inco employment office in Sudbury is busy processing area students for summer jobs. Above, **Harvey Nadeau,** employment representative, briefs the first group of students on job placement. Over 1,400 students will be employed by the Ontario Division during the summer months.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS .

Smiling faces and social graces greeted those attending the Copper Cliff Mines Association retirement party, held recently at the Caruso Club in Sudbury. Above, welcoming the guests were, from left, **Len** and **Connie Bouillon,** and **Fran** and **Bob Croteau.** Both men are employed at Copper Cliff North mine, Len as a garage mechanic and Bob as an electrician. The receptionists greeted 265 couples to the affair, organized by Copper Cliff Mines Association president, **Gunter Jakelski.** At left, **Bob Ludgate,** area manager of the Copper Cliff mines, presents the traditional gold watch to **Greg Roy,** formerly of Copper Cliff North mine. A total of 16 retirees were honored.

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These dies were used to strike the medallions commemorating the recent dedication of Inco's Indonesian mining project. The medallions were struck by the Royal Canadian Mint, Ottawa, from **Nickel 201** coinage strip, produced at **Huntington Alloys, Inc.,** Inco's process rolling mill, of Huntington, West Virginia.

It's a long haul from the United Kingdom to the Copper Cliff nickel refinery, and this new shell for the top-blown rotary converter building made the trip unscathed. Sample processers **Ray Vallee** and **Tom Lamorie** give an indication of the size of the new shell, scheduled for installation in the near future.

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Tom Haraj, 19 year old son of **Kaz Haraj,** a second class carpenter at the Port Colborne nickel refinery, recently won the Ontario Federation of Badminton championship. Competing against nearly 300 others at McMaster University in Hamilton, Tom emerged as the champion in the 25 years and under age group. He is a member of the Niagara Falls and Port Colborne badminton clubs and plays four or five times per week.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS . . .

Dick Beaver has been appointed the Ontario Division comptroller of Inco Metals Company, effective May 1. Born and raised in the Sudbury area, Mr. Beaver attended the Sudbury High School prior to obtaining a Chartered Accountant's degree with the local firm of Arthur A. Crawley and Company. Mr. Beaver joined Inco as a cost clerk in May of 1966 and held positions of increasing responsibility, including assistant to the comptroller, comptroller of the Manitoba Division, and assistant comptroller, Ontario Division. An active participant in community youth activities, Mr. Beaver is also an avid golfer and fisherman. Married to the former Gail Hashey, of Copper Cliff, the couple have four children.

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Unwinding like a giant ball of yarn, this conveyor belt was recently placed into operation at the Clarabelle mill. Here laborers **Harvey Meilleur,** left, and **Dave Cockburn** look over the massive giant prior to installation.

St. John Ambulance, Sudbury Branch came a step closer to their appeal campaign target of $10,000 with a donation from Inco Metals Company. The $2,000 donation was presented to **Charlie Hews,** right, immediate past chairman of the St. John Ambulance and Appeal Campaign Chairman, by **Joffre Perras,** of the Inco Safety Department. The appeal target is required to support branch activities during 1977. During 1976, St. John Brigade members provided over 10,000 hours of service to the general public throughout the Regional Municipality of Sudbury. The first-aid service is maintained in the high standards set by St. John and is carried out on a volunteer basis by Brigade members and cadets. Throughout 1976, a reorganized training staff within the branch extended its activities to give 51 classes in which 1,005 people were trained in first aid.

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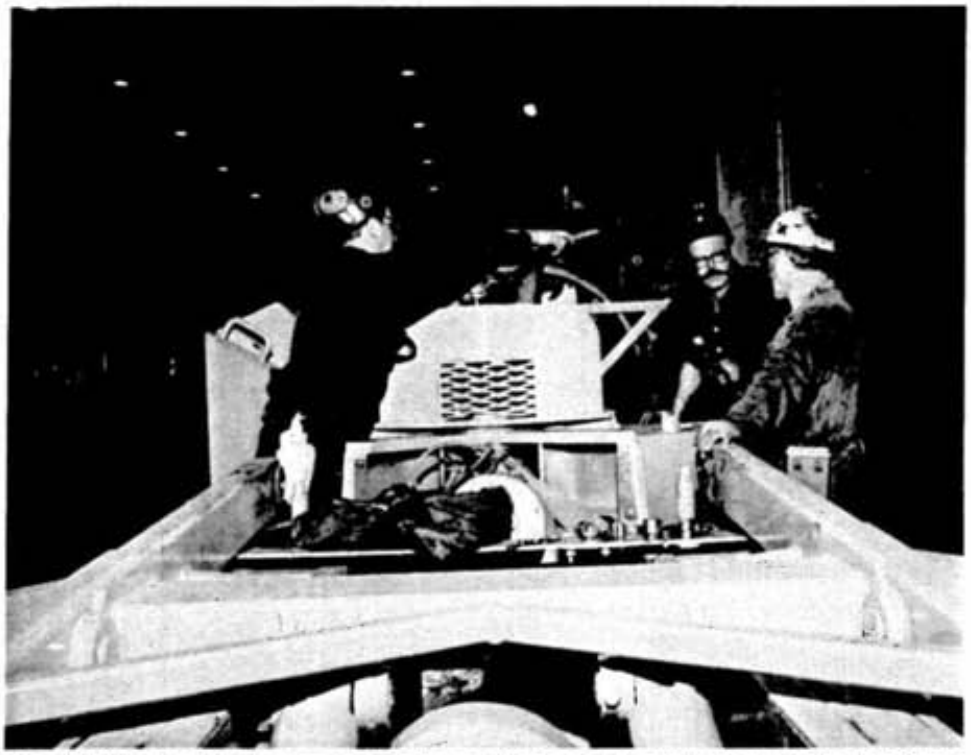
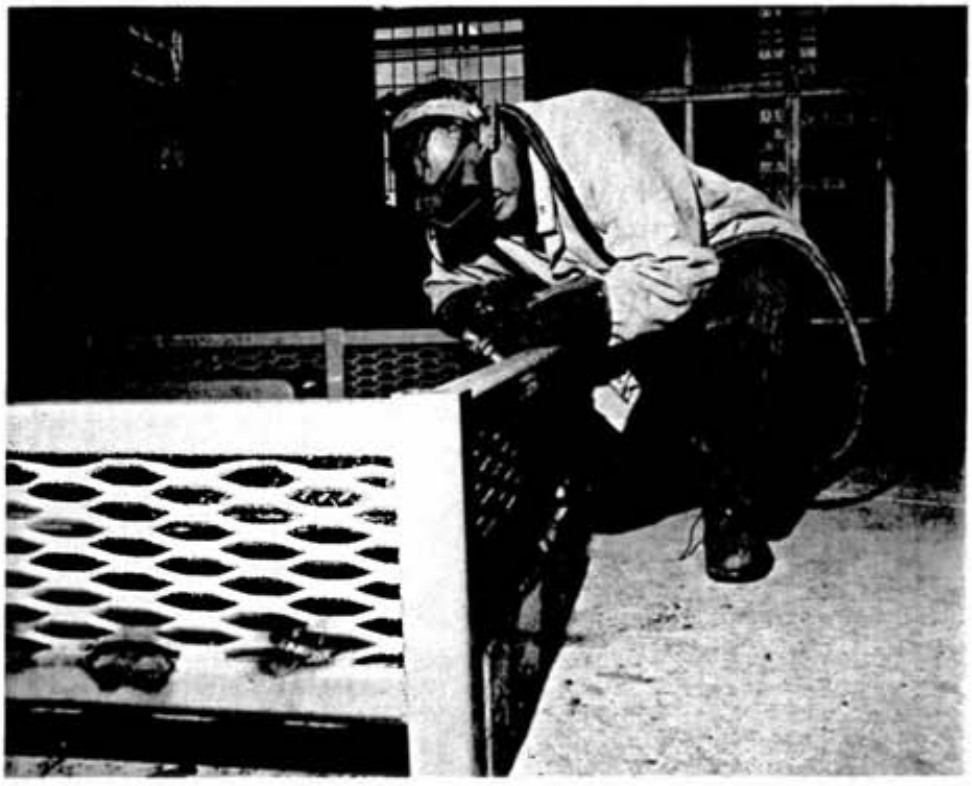
The coveted honor of North American Silver Stick Champion in the "A" division was recently captured by the Garson Northern Ontario Hockey Association Pee-Wees in Port Huron, Michigan. Team members are, front row, from left, **Jim Hinds, Ted Boyd, Steven Abma, Robby Charron, Pat Lizotte, Garryown Lacey, Guy Desjardins, Gerry Potvin** and **Alain Demers.** Back row, from left, **Jim Clarke,** manager, **Jamie Nadjiwan, David Paquette, Chris Noonan, Kevin Giambattista, Darrin Guenette, Jamie Clarke, Herbie Horner, Roger Paquette,** coach, and **Moe Henry,** trainer



This JUT41 scissorlift is being prepared by maintenance crews at Levack mine for transfer to a 3400-foot level cut-and-fill stope where it will be used for installation of roof bolts, wire mesh, ventilation pipe, compressed air and water lines and for the loading of explosives. Fitted with an elevating platform, eight feet wide and 12 feet long, the deck has a 2,000 pound carrying capacity when in the elevated position, which reaches as high as eight and a half feet from the ground. Above, maintenance mechanics **Robert Dionne, Don Shannon** and **Bert Houle** prepare the unit for its move underground. Below, plater **Clifford Cardinal** puts the finishing touches on the platform.



Recently installed dry facilities at the Coniston location of the Central Shops Machine Shop are providing employees with a comfortable space to keep their clothes when changing for work. **Tony Kobuziak,** left, a maintenance mechanic, shares a story with **Domenico Belfiore** after a day's work. Below, **Tom Zuliani,** a machinist helper, makes use of one of the sinks supplied in the temporary location.

Providing a faster link in Inco's communications system is this computer terminal, recently installed in the main office of the Iron Ore Recovery Plant in Copper Cliff. The terminal provides a direct link to the company's computer in Toronto, and is used to record metal production figures, inventories and shipments. Office Supervisor **Bill Costello** instructed clerk-stenographer **Donna Moore** and stenographer **Shelley Jack** on the operation of the new unit.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS . . .

Levack area art patrons were out in full force to view the Annual Art Show, sponsored by the Onaping Falls Art Club. Many local works were featured, a number of them created by wives of Inco employees. Above, **Helen White,** left, **Debbie Graham** and **Joe Dumont** inspect one of the items on display. Debbie's husband, **Roy,** is a driller at Garson mine. Below, **Terry Demers** and Art Club president **Mary Jowsey** admire the raffle prize, painted and donated by **Alex Steward,** of Onaping. Mary is the wife of **Milt Jowsey,** assistant to the vice-president, mining and milling, Ontario Division.

A group of over 200 friends and neighbours, many of them Inco employees, gathered at the Italian Club in Copper Cliff recently to bid a fond farewell to **Jim** and **Marg Fowler,** who will be leaving for Toronto where Jim will take up duties as deputy comptroller of Inco Metals Company. While acting as division comptroller in Copper Cliff, Jim came to know many prominent citizens of the community. Above, Jim Fowler, left, swaps stories with former Copper Cliff mayor **Richard Dow,** and **Chris Dunkley,** manager of the Copper Cliff nickel refinery. Below, **Kay Peters,** left, wife of **Tom Peters,** Inco's agriculturalist, says her goodbyes to Jim and Marg.

MEMORIES AND MUSIC

Each Sunday, at 12 noon, Inco presents the program "Memories and Music" over CIGM, 92.7 on your FM dial. Tune in and enjoy a visit with one of our pensioners as he recounts some of his early experiences and other activities.

Here's the schedule for the month of May, 1977.

May 8 — Len Brousseau
May 15 — Tom Turgeon
May 22 — Cecil Corrigan
May 29 — Maurice Lavoie


Andy Lacroix


Harold Koivula


Robert Fournier


Fred Serafini

Suggestion Plan Awards Come In Handy For Summer Vacations

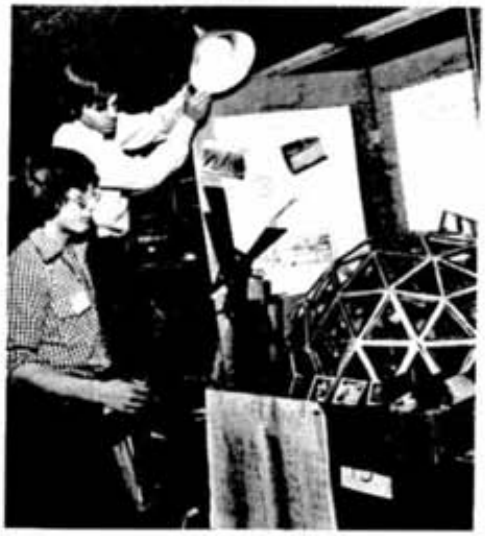
Extra cash always comes in handy, and with summer vacations just around the corner, many employees successfully tried their hand at the company suggestion plan this past month. Top award for the month went to **Andy Lacroix,** of Stobie mine, whose suggestion to use a fork clamp mounted on a scoop bucket for installation of vent pipe gave him $990. Taking second spot was the team of **Harold Koivula** and **Robert Fournier,** of the Copper Cliff copper refinery. They were presented with $375 for a recommendation to replace the reversing drum controller on the machine shop planner with a button-operated reversing type contactor. **Fred Serafini,** of the Copper Cliff copper refinery, won a $220 award for suggesting the fabrication of an air and water machine to clean out Kidney filter cups. A suggestion to delete anfo loader valve code 28-37495 from stock put $115 in the pocket of **Roderick Furchner,** of Coleman mine. At the Copper Cliff smelter, **James Stillar** won $115 for suggesting to replace 18-inch tracks on the No. 76 Gradall with 15-inch tracks. **Vic Favret,** of the Copper Cliff copper refinery, pocketed $100 for a recommendation to fabricate a wrench to facilitate the easier removal of cups. A $90 award was presented to **Rene Leduc,** of Little Stobie mine, for a suggestion to cancel purchase orders and obtain credit from the supplier of wipers. At the Copper Cliff copper refinery, **James Bolger** picked up $80 for recommending the installation of pressure gauges on burners of the No. 5 vertical furnaces. **Guido Ceccheto,** of the Copper Cliff smelter, took home $75 for suggesting removal of a lip from one side of the ladles in the converter building. **Vic Samuels,** of central utilities, recommended the installation of varistors across the input of paging amplifiers at the Clarabelle mill and was awarded $60.

A recommendation to fabricate plywood spacers for warehouse shelves resulted in a $60 award for **Keith Shields** and **Jack Cleland,** of Creighton mine. In the $50 category, awards were presented to **Gaston Berthelot,** of Copper Cliff North mine; the team of **Dieter Blaffert** and **Joe Johnson,** of the Copper Cliff smelter; **Don Gibson,** of Stobie mine; **Donald Morrison,** of Copper Cliff North mine; **Cliff Morrison** and **Ken Rylan,** of the Copper Cliff smelter; **Branko Rebic,** of Copper Cliff North mine; **Gerald St. Amant** and **Fred Seniuk,** of matte processing.

Suspend a basket overhead through use of ropes and pulleys, and you've got a good place to keep your work clothes between shifts. The baskets are a common sight in most of the area drys as they eliminate the problem of keeping work clothes and street clothes in a confined space. Copper Cliff North mine dryman **Jack Theodos,** left, repairs one of the baskets while **Rick Nault,** a chute blaster on the 600 level, looks on.

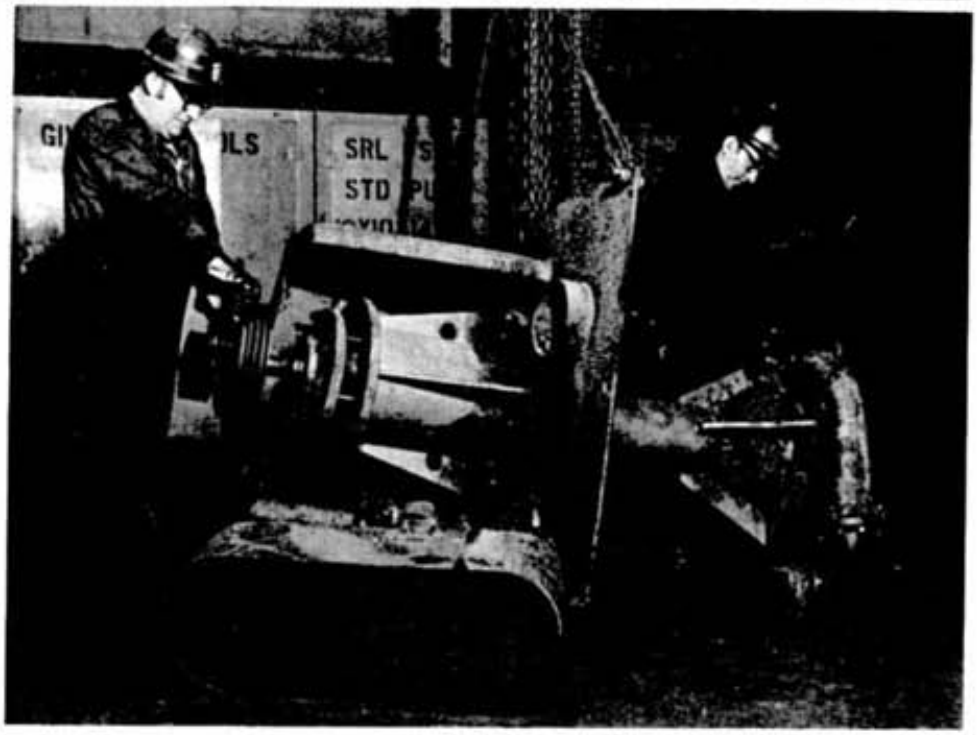
Save At Disney World

Inco employees and their families planning to visit Florida this summer are in for plenty of excitement and special benefits at the Walt Disney World Vacation Kingdom and Florida Cypress Gardens, courtesy of the **Magic Kingdom Club.** If you're already a member of the Magic Kingdom Club, you probably already know about the special vacation plans; if you're not, why not join right now? Simply send a written request for your FREE membership card to MKC Director, "The Triangle", Inco Limited, Copper Cliff.



Their topics were as varied as imagination would allow, but their interest was purely scientific, and the 96 entries in the Regional Science Fair at Sudbury Secondary School were as sophisticated as the thinking that spawned it. Above, the geodesic dome was assembled by **Jeff Birmingham** and **Philip Sawyer,** of St. Charles College. It demonstrates a method of obtaining a totally controlled atmosphere through use of solar heating. The windmill is intended to generate electricity for the dome's inhabitants. The project won first place in life-science intermediate competitions. Below, **Robert Eng,** a Grade 13 student of Sudbury Secondary School, took second place in the over-all judging, good enough to take him to the Canada-Wide Science Fair in Vancouver. Robert's "Colorimetric Analysis with a Filter Photometer" consisted of studying light absorption in different solutions.

There is nothing so easy but that it becomes difficult when you do it with reluctance.



Easier to handle for maintenance purposes, this pump recently received renovations, including removal of 30 inches of column shaft. The unit will be placed into service on the pump floor of the Frood-Stobie mill to pump fines and water back into the mill. Maintenance mechanics **Norm Willard** and **Stan Bidochka** completed work on the pump.

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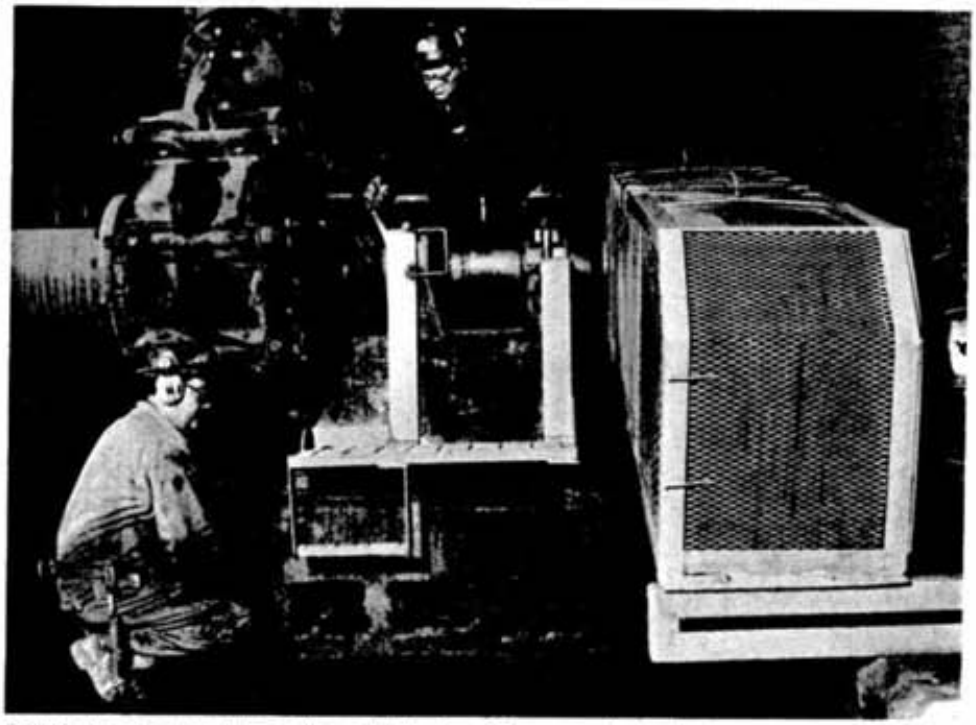
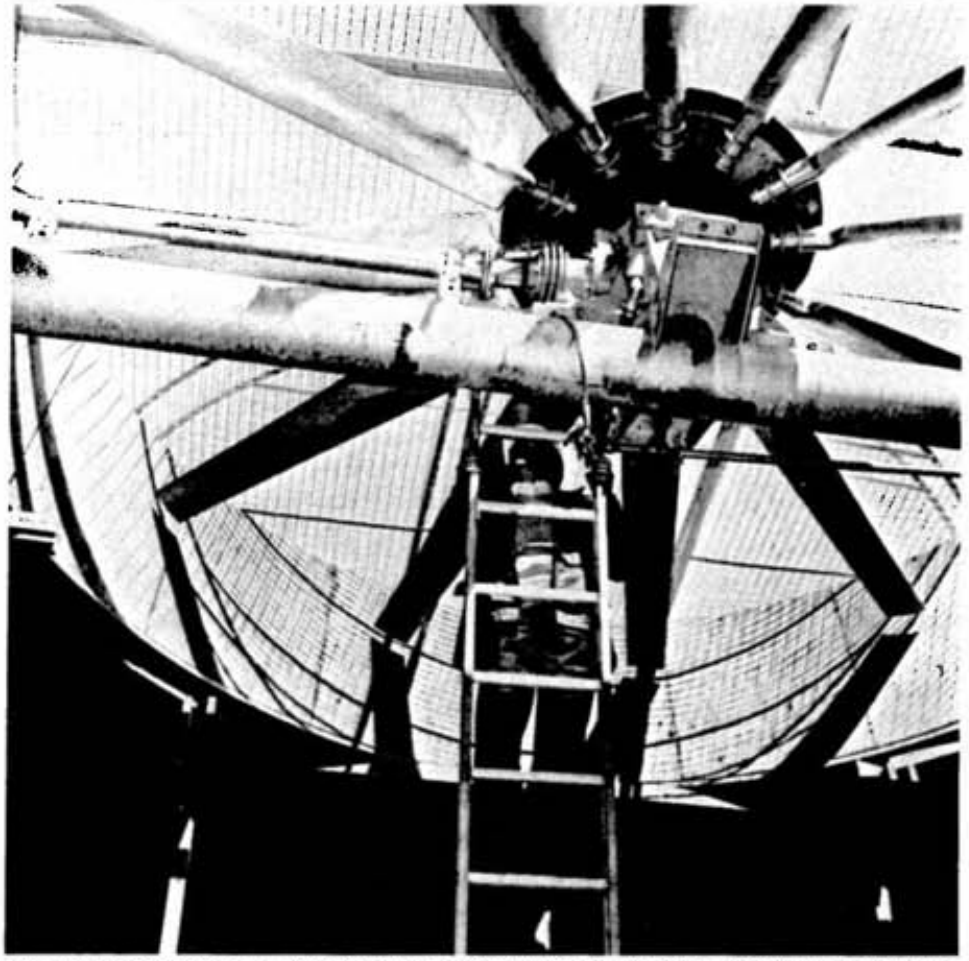
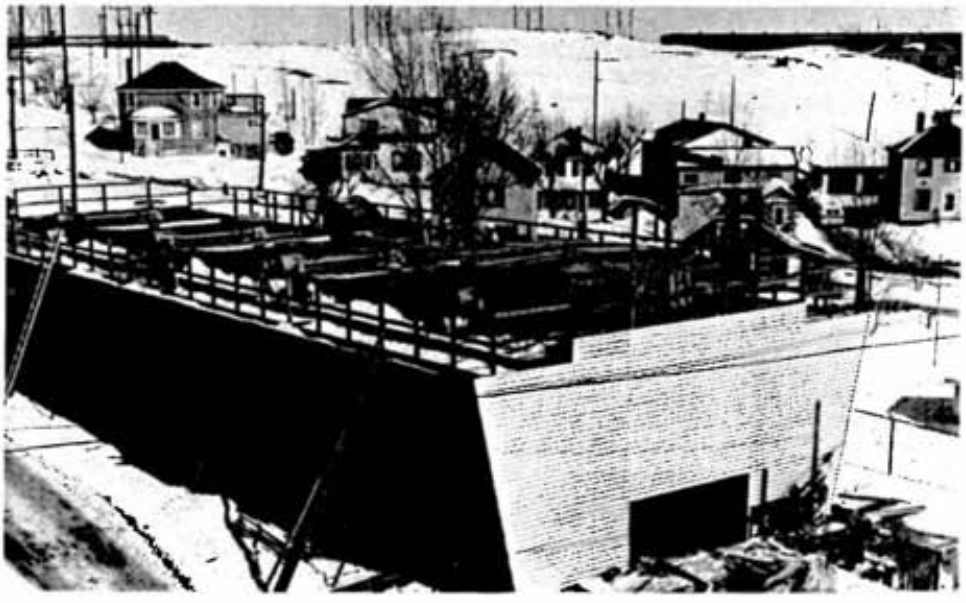


Solid footing is a good step in the right direction. To ensure that maintenance personnel at the Frood-Stobie mill have a solid footing when working on SRL pumps with high bases, platforms have been installed on either side of the pumps. The removable platform is handy while adjusting the packing gland or inserting oil for the pump. Maintenance mechanics **Al Belland** and **Alpo Punkkinen** here make the final adjustments on one of the newly installed platforms.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS .



Lowering the temperature of compressor cooling water from 106°F. to 80°F. at the Oxygen plant in Copper Cliff requires considerable know-how. Four of these 60-h.p. fans, recently installed in the new cooling tower, are slated to reduce the temperature of 9,000 gallons of water per minute. Above, **Karl Valnio,** a construction co-ordinator with general engineering's construction group, inspects the installation of the first fan, which has a low speed of 90 r.p.m. and a high speed of 180 r.p.m. Housing the four cooling cells is this 96 foot long building.



With an outstanding personal safety record to his credit and a crew that has gone for over a year without a dressing, mine foreman **Art Marson** recently retired from his job at Creighton mine, where he has been employed for 35 years, nearly all of it involved with underground operations. Creighton area manager **Paul Parker,** left, and mine superintendent **Ted Flanagan** thanked Art for his years of service and his outstanding safety effort.

Inco Tours

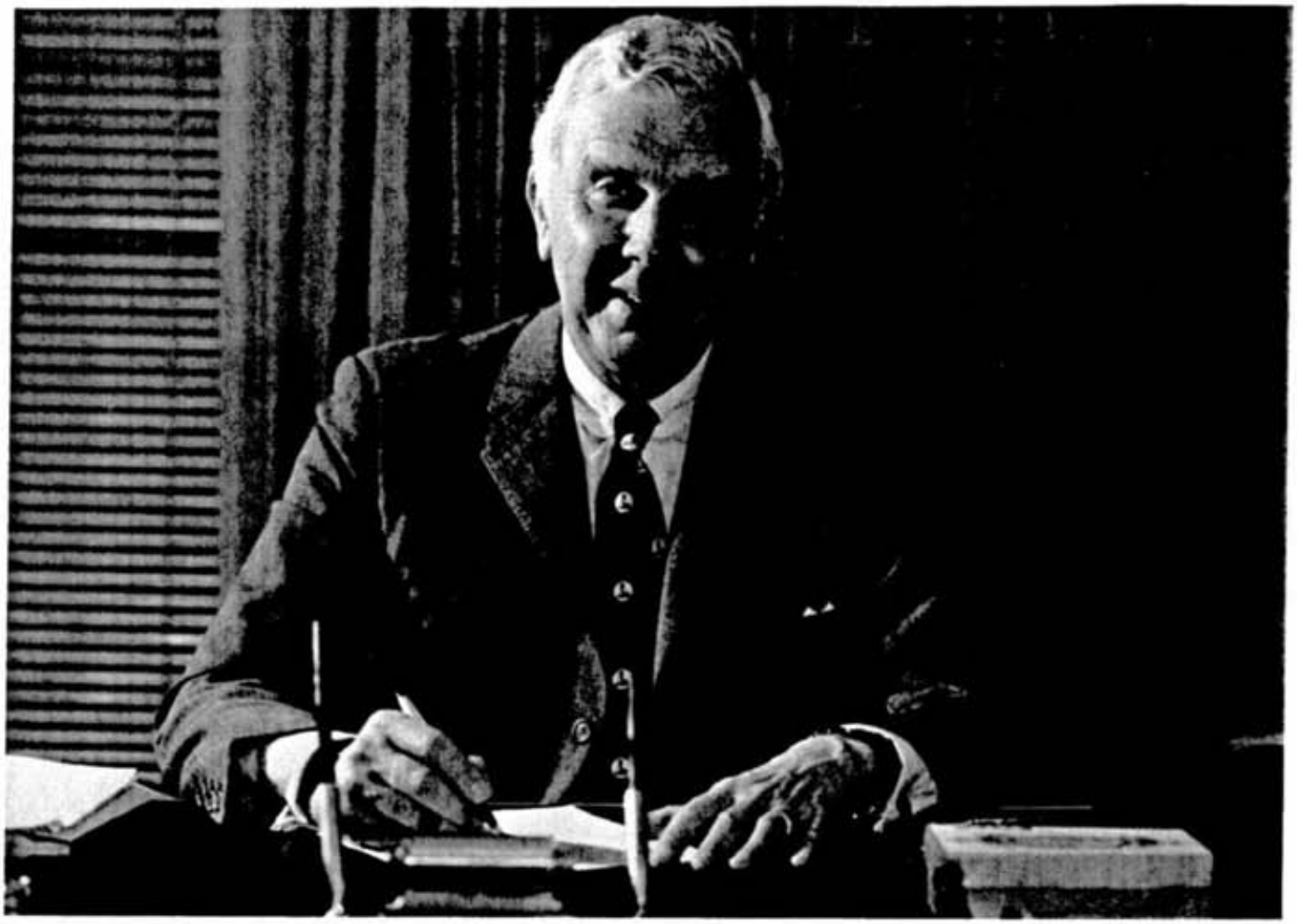
Regular public summer tours will start on Monday, May 2nd, 1977, and run through until September 3, 1977.

The tours will run continuously between 9:00 a.m. and 2:30 p.m. and will be offered Monday through Saturday.

Groups of 12 people or more must make reservations by calling

682-2001

All tours start from Nickel Park in Copper Cliff.



Logo Writer — L. Edward Grubb

"If I've done my job properly, I won't be missed. At the same time, I hope they call me once or twice." So stated L. Edward Grubb, following his recent mandatory retirement as chairman and chief officer of Inco Limited.

The first call came from The Triangle with the request that he pen the Logo for our May edition, in tribute to the man whose career with the company spanned over more than 40 years and steered the world's largest nickel producer into promisingly diversified fields while retaining the top spot in the nickel industry.

Mr. Grubb joined the Inco organization in 1934, becoming general superintendent of the company's former Bayonne Works in New Jersey from 1942 until 1953, when he was appointed general superintendent of Huntington Alloys, Inc., the company's rolling mill in West Virginia.

In 1957, he was elected assistant vice-president of The International Nickel Company, Inc., at which time he was transferred to New York and placed in charge of labor relations at all the company's United States plants. One year later, he was appointed general sales manager of Huntington Alloys, Inc., and was elected vice-president of sales for that subsidiary in 1960.

In 1961, Mr. Grubb was named vice-president of The International Nickel Company, Inc., with responsibility for primary nickel commercial activities in the United States. Shortly after his election in 1964 as an assistant vice-president of the parent company, he was transferred to Europe as managing director of Henry Wiggin and Co., Limited, in Hereford, England. Mr. Grubb was vice-president of Inco and chairman of the company's United Kingdom subsidiary, Inco Europe Limited, from 1968 to 1971. He had been managing director of Inco Europe since 1967 and was chairman of the Henry Wiggin rolling mill subsidiary from 1968 to 1971.

From 1972 until 1974, he was president of Inco Limited. He was chief officer of the company since 1972 and a director since 1971. Mr. Grubb was chairman of the board of directors and of the executive committee of Inco Limited since 1974.

When he made his move to Toronto, he brought with him an outstanding determination to be competitive in the tough business market of today. By 1973, management was seriously looking "at some sensible program of diversification", which would later include acquisition of the consumer-oriented ESB Inc., a Philadelphia-based battery company. Other ventures included the acquisition of Daniel Duncaster & Sons Limited which produces forged and machined products; oil, gas and uranium exploration, and formation of a venture capital group, geared to investing in fledgling companies and promising ideas.

Undoubtedly through the determination and foresight of L. Edward Grubb, these ventures became reality, shaped by the hand of good management. The same hand that penned this month's cover.