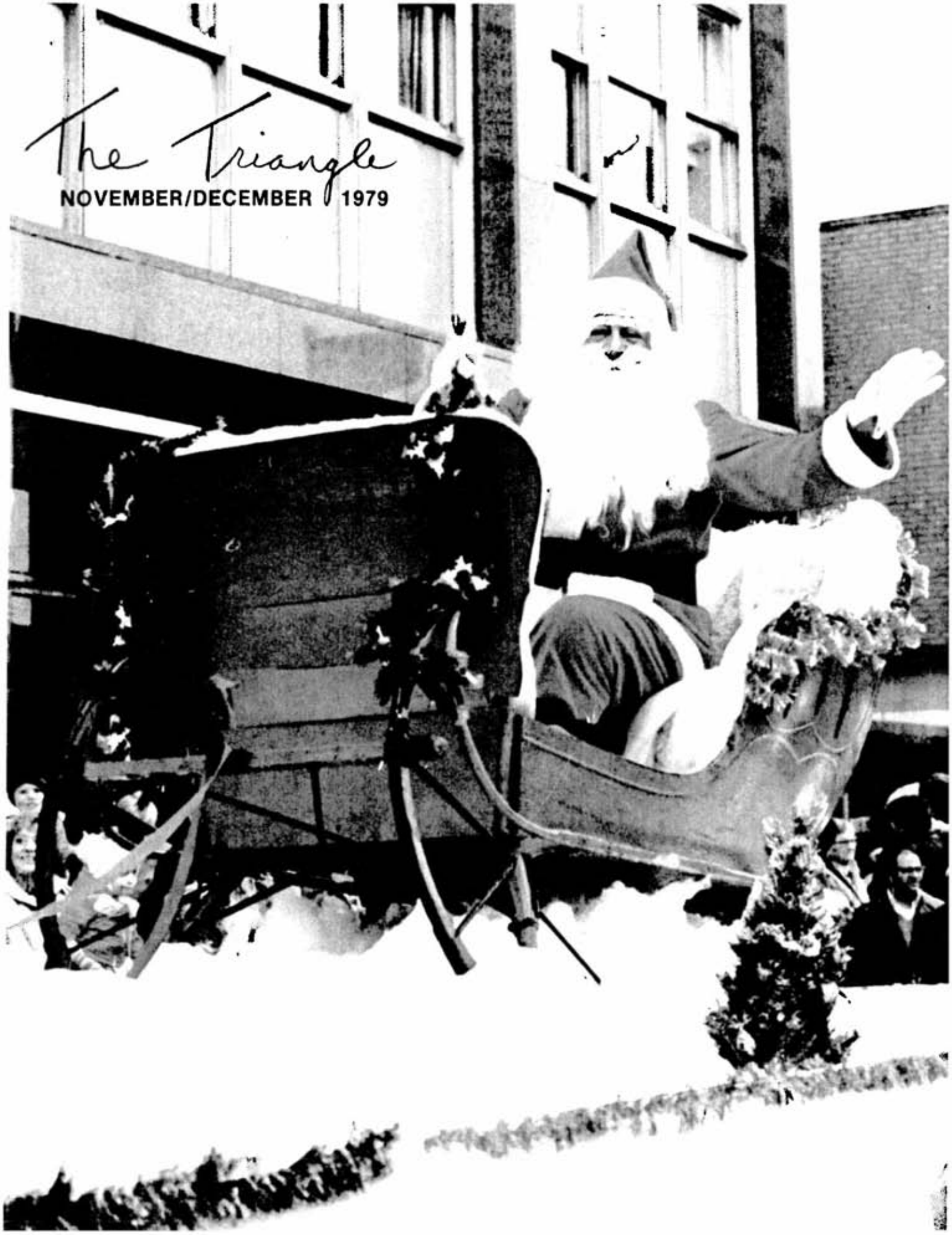
The Triangle

NOVEMBER/DECEMBER 1979



The Triangle

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On the cover
The annual Christmas Parade in Sudbury had many colorful and creative floats. But the most popular was saved for the last when jolly old St. Nick made his appearance, much to the delight of young and old alike.

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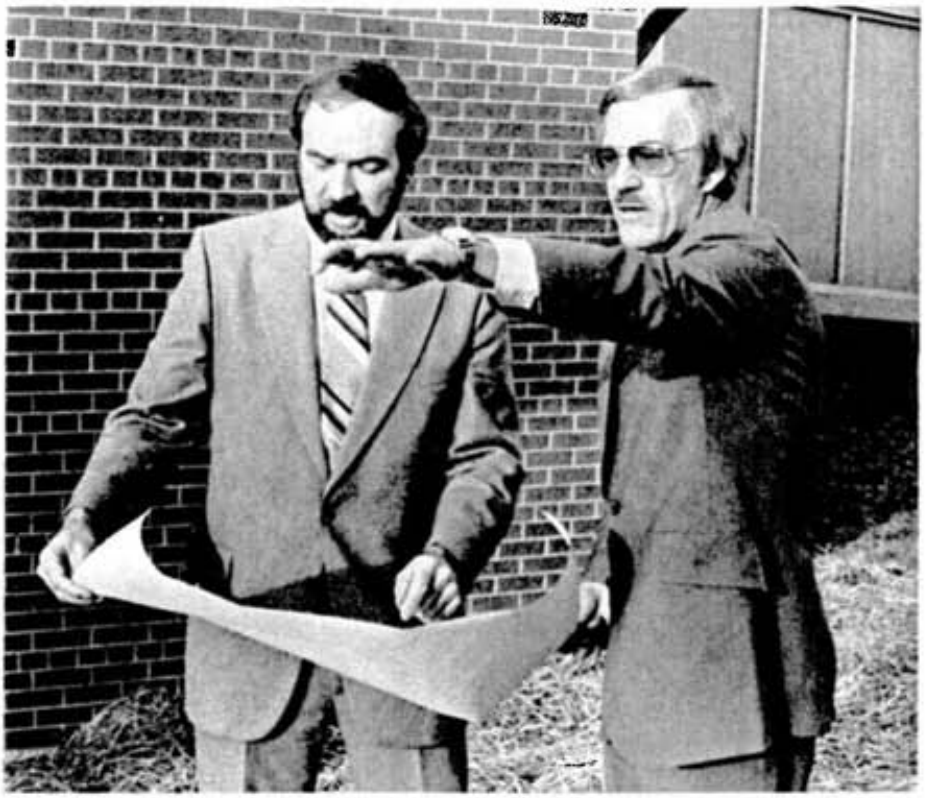
Inco Donates $400,000

Winton Newman, president of the Ontario Division of Inco Metals Company, recently announced that Inco is committing $400,000 in 1980 to assist the Sudbury General Hospital obtain a Computed Axial Tomography (C.A.T.) Scanner.

The C.A.T. Scanner is a sophisticated piece of diagnostic medical equipment that is capable of producing a detailed cross-sectional picture of a patient's body. And, among other things, is useful in the early and accurate diagnosis of cancer. It is considered to be the most significant invention in diagnostic medicine since the original discovery of the x-ray machine.

The Sudbury General Hospital has been designated by the Ministry of Health as the C.A.T. Scanner site for all of Northeastern Ontario.



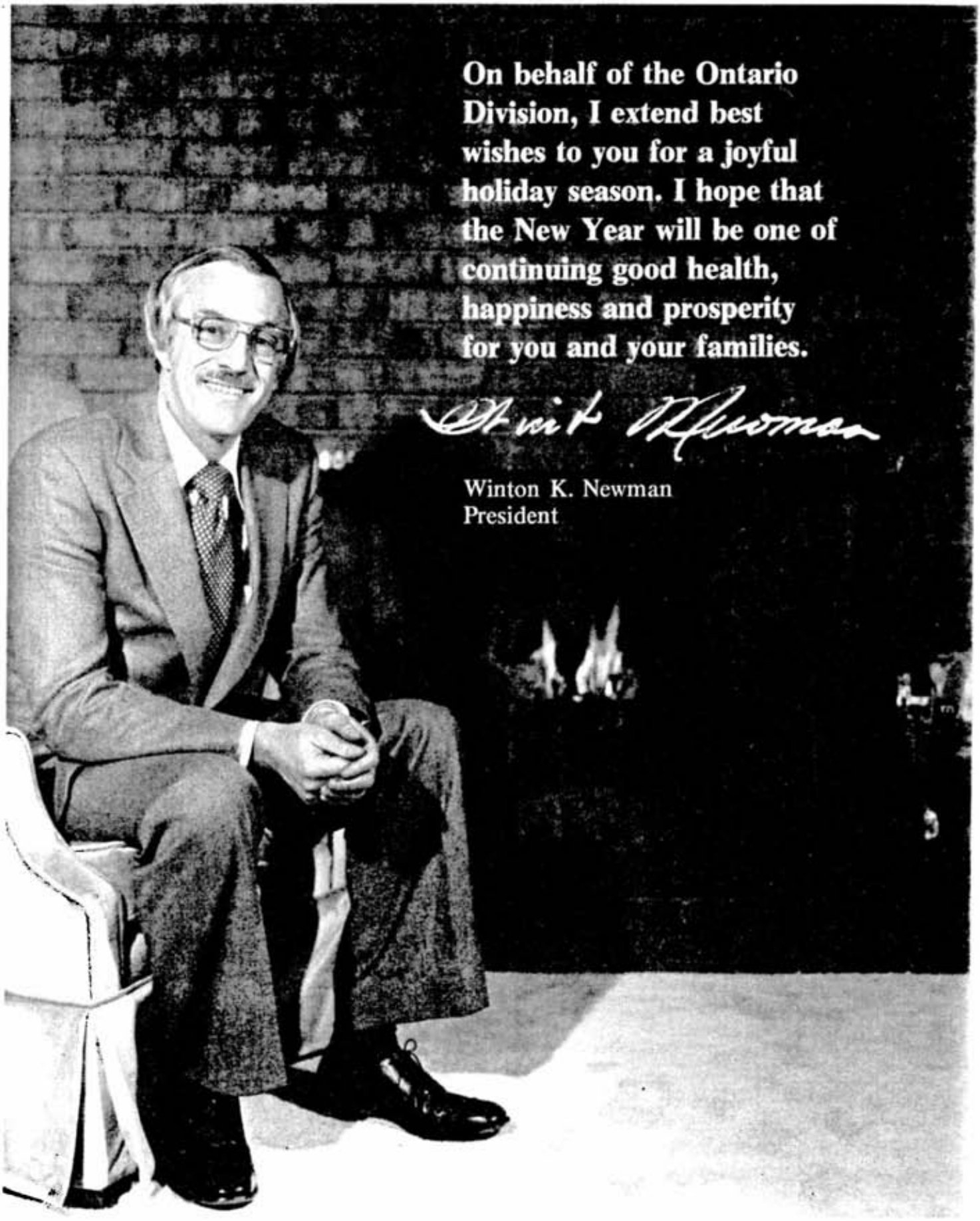
Ontario Division President Wint Newman, right and Hugh Judges, Chairman of the Board of the Sudbury General Hospital, look over the plans at the proposed site of the new C.A.T. Scanner wing at the Sudbury General Hospital.

No Summer Shutdown

The Ontario Division of Inco Metals Company advised officials of the United Steelworkers of America, Local 6500, that there will be no summer vacation shut down in 1980 in its mining and processing operations in the Sudbury District, with the exception of the Iron Ore Recovery Plant.

As the year proceeds, periodic meetings will be held with the union to keep them advised of market conditions and of any significant change in production levels.

The Iron Ore Recovery Plant will have a vacation shut down from July 14 to August 10 to allow Canadian Industries Limited to perform major repairs to its sulphuric acid plant. Due to environmental control restrictions, the Iron Ore Recovery Plant cannot operate while the Canadian Industries Limited plant is closed.


On behalf of the Ontario Division, I extend best wishes to you for a joyful holiday season. I hope that the New Year will be one of continuing good health, happiness and prosperity for you and your families.
Winton K. Newman
President

Big Brothers · Understanding the

Once a year we indulge in unbridled displays of love and giving that make Christmas the joyous occasion that it is. As each Yuletide ends, we inevitably wonder why the warmth and friendship that came with it cannot remain with us throughout the entire twelve months. For one group of men, the Big Brothers of Sudbury, giving a little time and a whole lot of friendship is a perpetual concern.

Don Doiron and his Little Brother Derek Cunningham are concentrating on putting together a model car.

Unlike various other organizations who are geared to working with groups of boys, Big Brothers' efforts are directed to the special needs of the fatherless, individual lad. Each Big Brother shares the conviction that though a single mother may provide a good home, a young boy requires the male influence so important to his development.

Study after study shows how the products of "broken homes" surface years later as society's "problem children". By taking an interest in the lives of boys between the ages of 6 and 16, men in Big Brothers are offering a very inexpensive ounce of prevention that will eliminate a very expensive pound of cure down the road.

Men from all walks of life come to join Big Brothers: executives, civil servants, miners and smelter workers. Currently there are 48 Big Brothers throughout the Sudbury area with a waiting list of 67 Little Brothers.

A good number of the volunteers, like Ronald Babin and Donald Doiron (both control room operators in the F.B.R. Building) are Inco Metals Company employees. Ask either man and he will tell you that there is more to life than just work and watching the "boob tube". Though both are family men they are willing to make some time for a young person in need of a friend.

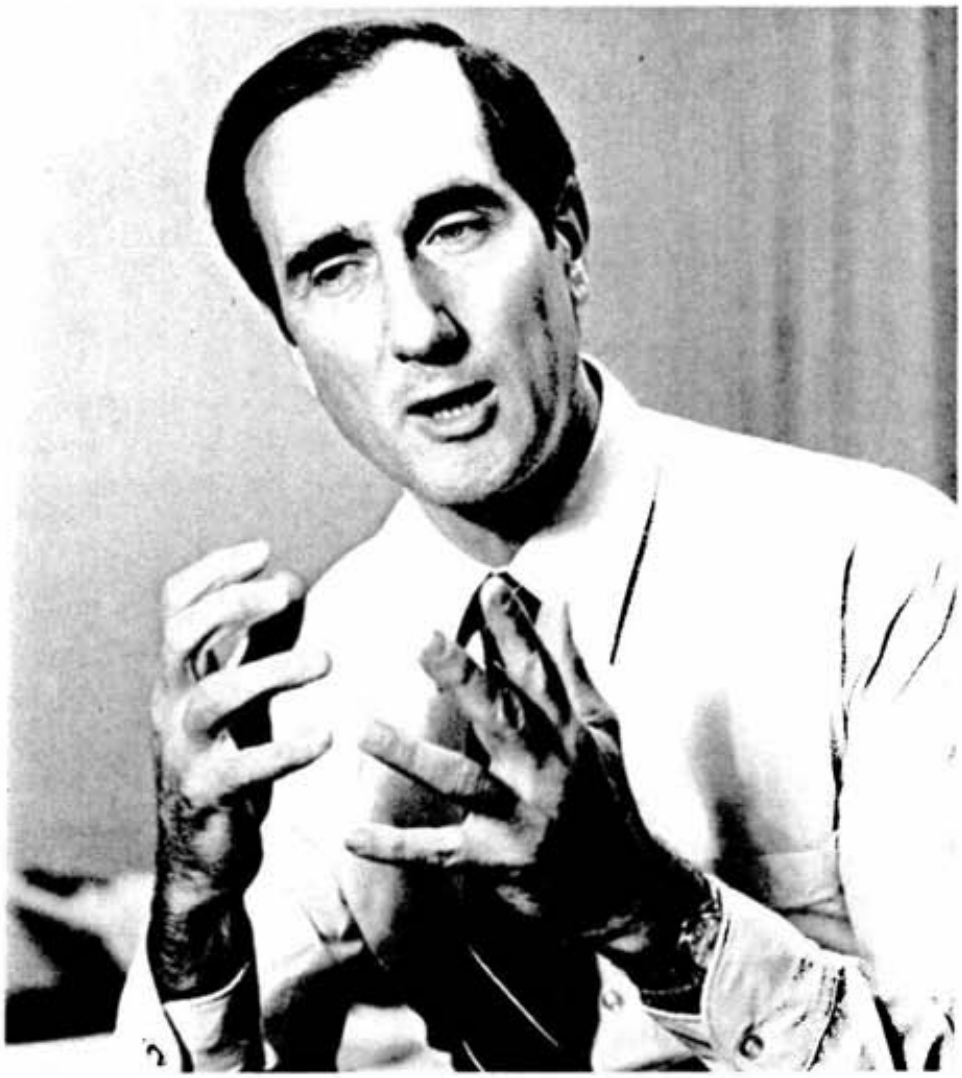
All Big Brothers are expected to spend three to four hours per week with their Little Brothers. Since they are matched according to interests,

Little Brothers value of Friendship

the pair usually pursue mutually satisfying activities. In the case of Babin and Doiron, an afternoon with their Little Brothers may mean a fishing trip, taking in a hockey game, helping to build a model ship, working on the car or just taking a walk and chatting. Nothing, of course, is done without the mother's approval.

For the few hours a week these and other Big Brothers invest, there will be no renumeration. The rewards they reap will not be subject to income tax, COLA clauses or inflation rates. Their payment will lie in the knowledge they have helped a young fellow down the road of life and to an understanding of the value of friendship.

Big Brother Ron Babin picks out a tune on his banjo while his Little Brother Robert Urwin supplies back-up on harmonica. Little Brother Barry Allan and his Big Brother Gerry Lepage are an appreciative audience.



Acid Rain
A Complex Issue

Acid rain is a controversial subject that has made news headlines around the world. In an effort to better understand this complex subject the Triangle recently talked with Dr. J. Stuart Warner, a vice-president with Inco Limited who has corporate responsibility for environmental and occupational health policies and programs.

He joined Inco in 1966 and was director of the Company's J. Roy Gordon Research Laboratory from September, 1969 until April, 1976 when he was appointed assistant vice-president, Inco Limited. He was appointed vice-president in November, 1976.

Dr. Warner has recently appeared as an expert guest on several national TV programs including, "Canada AM", "The Fifth Estate", and "Point Blank". He holds several degrees from Columbia University including a Doctor of Engineering Science. He was an instructor and an assistant professor at Columbia's Henry Krumb School of Mines from 1960 until 1968, where he specialized in teaching thermodynamics and kinetics as applied to extractive metallurgy.

Dr. Warner is also the author of various technical papers and is co-inventor of pyrometallurgical processes for the recovery of nickel from sulphide ores.

Triangle
Just what is "acid rain"?

Dr. J. Stuart Warner
i think it would be helpful to talk about "normal rain" first. This is rain which has absorbed small amounts of the carbon dioxide in the air. As a result, normal rain contains 25 times more acid than does pure water. "Acid rain" is rain that contains even more acid than does normal rain. Rain falling in large areas of northeastern North America is frequently 25 times more acidic than normal rain. This acid may be present as sulphuric, nitric or hydrochloric acids.

Triangle
Do these three acids play equal roles in making rain more acidic than normal rain?

Warner
No. Their roles vary from place to place and from time to time but, in general, it is found in eastern North America that sulphuric acid is responsible for roughly two-thirds of the acid in acid rain. Nitric acid usually contributes only about one-third of the acid but its contribution is growing rapidly. In fact, some studies indicate that the increased amount of nitric acid in the air is responsible for most of the increase in the acidity of the rain that has been observed in the last two decades. Hydrochloric acid usually contributes five per cent or less of the acid in acid rain.

Triangle
Where do these acids come from?

Warner
They are sometimes emitted directly into the atmosphere as a byproduct of various human activities. However, most of the sulphuric and nitric acids are formed from airborne sulphur dioxide and oxides of nitrogen. Just how these gases are changed into acids is not well understood but the reactions seem to depend on factors such as temperature, humidity, the intensity of sunlight and the presence of other substances such as metallic compounds, ammonia, urban smog, etc.

On a global basis, man and nature may be equally responsible for the airborne sulphur dioxide. However, in heavily industrialized areas such as

eastern North America and western Europe, man is probably responsible for 90 per cent of these gases.

A recent report of the United States-Canada Research Consultation Group estimated that in 1975, Canada emitted 5 million metric tons of sulphur dioxide while the US emitted 25.7 million metric tons. During the same period oxides of nitrogen emissions were estimated to be 1.9 million metric tons for Canada and 22.2 million metric tons for the US. The largest source of sulphur dioxide in Canada was the non-ferrous smelting industry (44 per cent) while coal and oil fired electrical generating stations in the US accounted for 65 per cent of its sulphur dioxide emissions. Transportation is the largest source of oxides of nitrogen in both countries - 43 per cent in Canada and 45 per cent in the US but electrical generating stations contributed 27 per cent of the US oxides of nitrogen emissions.

Triangle
Do emissions from the Copper Cliff smelter contribute to the acidity of the rain?

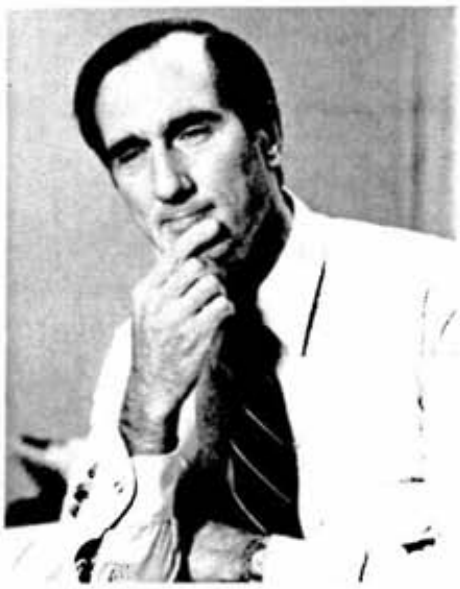
Warner
The sulphur dioxide we emit at Copper Cliff is no different from the sulphur dioxide which anyone else emits so it can be oxidized to sulphuric acid and thus contribute to the acidity of rain and snow. Chemical theory suggests and actual measurements made in the superstack plume indicated our sulphur dioxide is not oxidized as rapidly as it would be if it has been emitted in, say, the Ohio River Valley. However, this is a result of the atmospheric conditions that usually prevail in Ontario.

It is important to recognize that the smelter emits essentially **no** oxides of nitrogen.

Triangle
A recent Scientific American article said the smelter emits about 1 per cent of the total annual emissions of sulphur throughout the world. Is this so?

Warner
It's impossible to be precise but I believe that estimate is reasonable. The smelter is, so far as we know, the largest point source of manmade sulphur dioxide in the world. Triangle readers may be interested to know that nature has at least one point source of comparable size - Mount Etna, a volcano in Sicily.

Another interesting fact is that Inco is not the largest corporate emitter of sulphur dioxide. I raise the point because if it's acidic rain you're concerned about, it doesn't matter whether pollutants are emitted from one stack or from many. Even if you add the emissions from the Thompson and Copper Cliff smelters, they are considerably smaller than the combined emissions of the 14 fuel fired electric generating stations operated by the Tennessee Valley Authority, an agency of the US government. The American Electric Power Co. Inc., a private US company, is roughly comparable to Inco relative to sulphur dioxide emissions. Both these utilities emit large quantities of oxides of nitrogen where Inco emits essentially none.



Triangle
Inco's emissions may be small on a global or a continental scale but they are a very large proportion of the sulphur dioxide emitted in Ontario or in Canada. Don't they have a major influence on the acidity of rain in the province?

Warner
The Ontario Ministry of the Environment sampled the precipitation around Sudbury and in the Haliburton-Muskoka area during the 1978 summer shutdown of Inco and Falconbridge. The acidity of the rain did not decrease even in the absence of the Sudbury emissions. The Ministry gathered a lot more data during the strike but has not published it yet. I am guessing it will show the rain will still be quite acidic even with no emission from Inco. This is not to say that we make no contribution to the acidity of the rain. It does, however, clearly establish that we are not the **major** source of acid.

Triangle
Well then where did the acid come from?

Warner
The Ministry's data indicate that most of the acid in rain falling in the Haliburton-Muskoka area came from US sources. That is why both Dr. Parrott, (Minister of the Environment, Ontario) and Mr. Fraser, (Minister of the Environment, Canada) have emphasized that Canada is unable to solve its problem alone. International cooperation is essential.

Triangle
Are you sure Inco's sulphur dioxide wasn't oxidized and deposited as acid rain in locations outside Ontario?

Warner
One of the reasons it is so difficult to plan effective strategies to control acidic precipitation is that we don't know how to link acid rain in one area with a specific source of sulphur dioxide or oxides of nitrogen a long distance away. We may never know the ultimate fate of our emissions.

I did however, examine the acidity of precipitation in samples collected by the federal government at numerous stations in Quebec and the Maritime provinces during Inco's shutdown and strike. The data is not conclusive because of the way it was collected but I did not observe any decrease in acidity when Inco was not emitting.

Triangle
What effect does acid rain have on the environment?

Warner
We have talked exclusively about acid rain but this might be a good time to point out that snow can also

be acidic. It may produce more serious environmental impacts than acid rain in the cold Canadian climate. That is because it accumulates for long periods and then releases all its stored acid to the environment in one surge when it melts. It is probably better to talk about "acidic precipitation" meaning both rain and snow.

The most obvious environmental impact of acidic precipitation is on fish and other aquatic life. It can affect them in at least two ways: by making the water too acid or by leaching toxic metals from rock and soils. Lakes in the Canadian shield are susceptible to this kind of damage because the underlying rock is not able to neutralize the acid in precipitation - at least not without releasing toxic amounts of metals such as aluminum and manganese.

It also seems clear that acidic precipitation can hasten the deterioration of metal, masonry, paint, etc., exposed to it.

There is a **potential** for reductions in forest productivity and for damage to agricultural crops but so far such effects have been observed only under laboratory conditions and at pH levels well below those normally observed in the field.

Confusing statements are being made in the literature about health effects. Most of the quoted studies and reports actually deal with sulphur dioxide and oxides of nitrogen, the raw materials from which acidic precipitation is made. So far as I know, the only possible health effects that could stem from acidic precipitation itself would be due to contamination of drinking water by metals released from rock, soil or plumbing.

Triangle
Is the problem going to diminish now that there is widespread awareness of the adverse effects of acidic precipitation?

Warner
No. As a matter of fact, it may get worse before it gets better. The US Environmental Protection Agency has projected that even with tight emission controls on new plants, sulphur dioxide emissions will actually increase for the next couple of decades. This increase is the expected result of increased reliance on coal to generate electrical power. Sometime in the next century sulphur dioxide emissions are expected to begin to decrease as old plants are replaced by new ones subject to stringent emission controls.

The EPA also forecasts a significant increase in oxides of nitrogen emissions so nitric acid will contribute increasingly to the acidity of precipitation. If more attention isn't paid to this problem, we might solve the sulphur dioxide problem and find that acidic precipitation carries on almost as it does now.

I don't know what Canadian projections for oxides of nitrogen emissions are but I believe sulphur dioxide emissions have decreased substantially over the years and will continue to do so.

If damage is occurring at present emission rates, it does not appear that things will improve for at least two decades. We could expect to see continued damage to aquatic systems in Canada during this period.

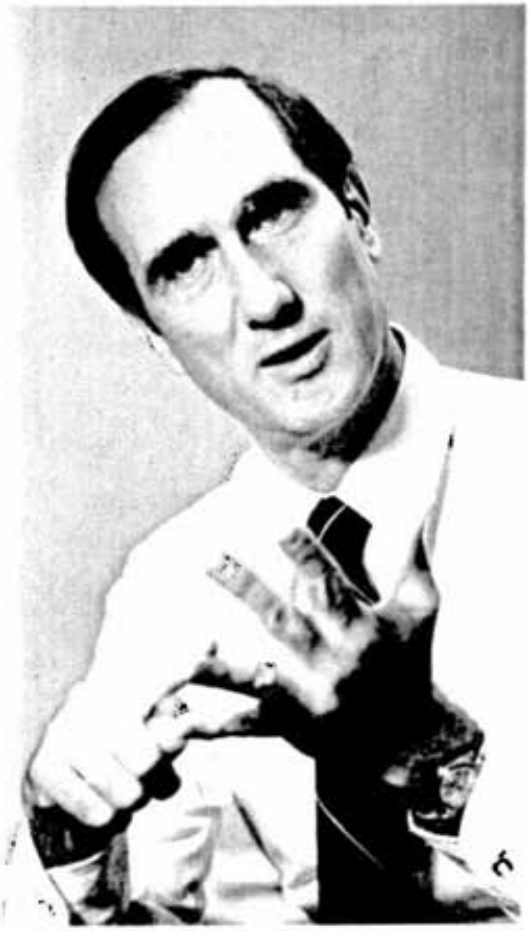
Triangle
What do you think should be done?

Warner
There are a number of actions that should be taken. First of all, a treaty between Canada and the US is an absolute must. Secondly both countries should establish and rigorously enforce stringent emission performance standards for new plants of all kinds. Third, existing sources of sulphur dioxide and oxides of nitrogen should be examined on an individual basis to see whether additional abatement is technically and economically feasible. Fourth, we must also develop new technology to control oxides of nitrogen emission.

However, these actions will not happen soon enough to prevent further damage to our lakes if the preliminary estimates of their capacity to withstand further acid inputs are correct. I believe measures must be developed and implemented to protect the lakes until the source of the problem, excessive emissions of sulphur dioxide and oxides of nitrogen are resolved.

"Inco is not the largest corporate emitter of sulphur dioxide."

"Some people say that what we've done in the past doesn't matter. I say it does matter."



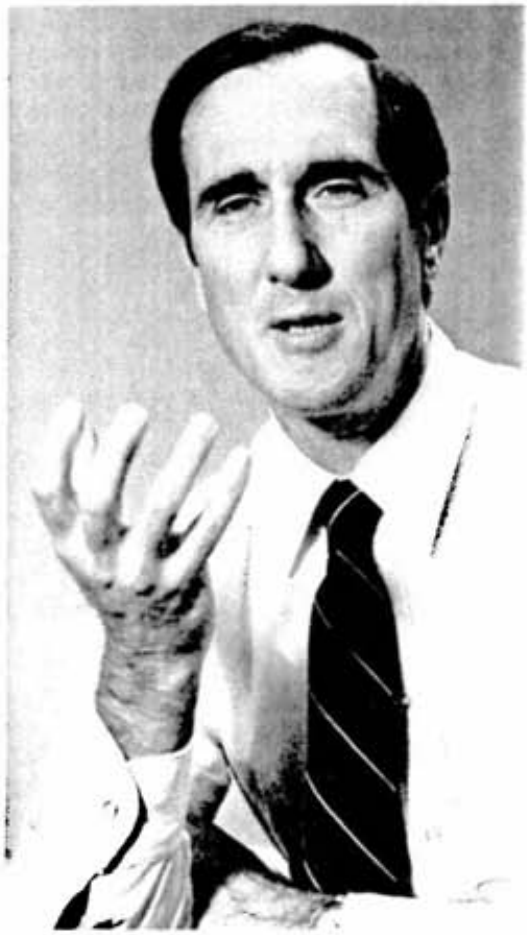
Triangle
What will Inco do to help solve this problem?

Warner
Let's talk for a moment about what Inco has already done. Some people say that what we've done in the past doesn't matter - that all that counts is that the smelter is still the largest manmade point source of sulphur dioxide in the world. I say it does matter. If we had never been able and willing to reduce our emissions in the past, it would be harder to believe our stated intention to find a way to do it again in the future.

Control of suphur dioxide emissions began at Copper Cliff before environmental concern became a popular public issue and long before anyone was aware of acidic precipitation. Development of the Inco oxygen flash furnace technology for copper smelting provided a strong gas stream for the production of liquid sulphur dioxide. About 100,000 tons of liquid sulphur dioxide has been produced each year since the early 1950's.

Also during the 1950's development of the technology to separate pyrrhotite from the nickel and copper concentrates led to a major secondary industry - the Iron Ore Recovery Plant and CIL's associated sulphuric acid plants. Currently more than 500,000 tons per year of sulphur dioxide are converted to sulphuric acid. Completion of the Clarabelle mill in 1972 led to further pyrrhotite separation from smelter feed and a 40 per cent reduction in our sulphur dioxide emissions, a major achievement by any standard. At present, only 30 per cent of the sulphur in the ore is discharged from the smelter as sulphur dioxide.

Inco also worked hard at some projects that did not pay off. We spent nine years and $14 million on a hydrometallurgical process that would avoid the formation of sulphur dioxide but were forced to conclude it would not be a satisfactory solution. We also spent $9 million on developing methods to capture strong sulphur dioxide from the existing converters in order to make sulphuric acid from it. However, the water-cooled hoods and special flue systems installed on three converters have not lived up to our expectations.



"On a global basis, man and nature may be equally responsible for airborne sulphur dioxide."

"It is important to recognize that the smelter emits essentially no oxides of nitrogen."

Triangle
What is Inco trying now that will reduce emissions in the future?

Warner
We continue to hope that more pyrrhotite can be rejected with no significant penalty in metal losses. We have spent more than six years on basic flotation research at the J. Roy Gordon Research Laboratory and it has provided some promising leads. These are now being tried out in the Mineral Dressing Test Centre in Copper Cliff. If these developments work it would mean a 25% reduction in emissions.

Even if more pyrrhotite can be rejected, we will still have lots of sulphur to contend with in the nickel and copper concentrates. The only practical way we see to deal with this is to convert it to sulphuric acid. We are looking for other ways to conduct the roasting-smelting-converting. processes so as to provide access to essentially all the sulphur dioxide at a strength suitable for making acid. Another of our goals is to improve the environment inside the smelter at the same time.

When we find out how to do these things - and we will find a way - we will be faced with the difficult problem of marketing sulphuric acid. We have asked the government to think about ways to ease this problem as we have so far not been able to find customers for this large tonnage of acid.

Triangle
Is there any danger that production at Copper Cliff will be cut back in order to reduce our sulphur dioxide emission?

Warner
We do not think this is an attractive option. We believe we can find ways to make further reductions in emissions and still keep the Sudbury operation competitive with other producers of nickel. This will not happen over night and it will not be cheap, but we are confident it can be done

Santiago Gomez Garcia

South Mine Employees Adopt New Son

Thanks to the employees at Copper Cliff South mine, six-year old Santiago Gamez Garcia, of Honduras, situated in the heart of Central America, stands at the brink of a new life - a life which will be considerably better for him and his family. Santiago has become a foster child, adopted by South mine employees.

Around Santiago's collection box are, kneeling, from left, Wayne Kennedy and Bill Dyck. Back row, John Smith, Bob Lalonde, Ken Pollock, Arnie Hoppe and Tony Harek. In addition to the monthly commitment, a sizeable cheque was forwarded to the foster child in time for this year's Christmas season.

"We wanted to provide help for needy children by becoming participants in the Foster Parents Plan of Canada," said Elwood Wohlberg, chairman of the foster child committee at Copper Cliff South mine. "Our approach to safety is the same as our approach to a foster child. We try to develop a team spirit whereby each employee is aware of his fellow employee's problems."

The idea of adopting a foster child soon spread throughout the mine, and before long an application, accompanied by an initial payment, was forwarded to the Foster Parents Plan of Canada.

A reply wasn't long in coming, informing South mine employees that they had adopted Santiago. Along with this information came the history and general information on South mine's new foster child:

"Santiago Gamez Garcia is a very energetic child. He has blue eyes, brown hair, a fair complexion and a strong build. He has no handicaps, deficiencies nor malformations. He is bright and alert.

"He will soon be going to Adan Canales Primary School; meanwhile, he helps around the house doing small chores, such as fetching water. The rest of the time he plays with his five brothers and three sisters or other little friends. Like many children in Honduras, he likes to play soccer."

Santiago's parents are hard workers. His father is a peasant farmer, and his mother remains at home, dedicated to her children and household duties. The parents live a

quiet and harmonious life, with understanding on both parts. The father is the sole provider. He earns approximately $1.25 per day or $7.50 each week. He does not own any land but rents a few acres on which he cultivates beans and corn which barely produce enough for the family needs.

Santiago's house is very poor and inadequate for the size of the family. the house has adobe walls which are in bad shape, a tiled roof and cemented floor. Their household furniture consists of two wooden chairs, a foot stool and a bed. The dwelling lacks running water and electricity. Water is obtained from a pit well. At night, pitch pine torches are used to illuminate the dwelling. There are no lavatory facilities.

According to Elwood, voluntary participation in the plan has been most encouraging, with mine employees enthusiastically contributing their share to cover the monthly payments.

"Our foster child's photograph, along with other pertinent data, has been posted on the display board in the warm room, and our people stay informed of Santiago's development by referring to the board," says Elwood.

The cost of the program is $19 per month, plus a $1.50 bank service charge. A plexiglass container has been set up in the warm room to accept contributions.

Elwood says that more children may be adopted if the money builds up. Also, the committee may look for an opportunity to contribute to worthwhile organizations in the Sudbury area.

John Canning, left, Copper Cliff South mine safety foreman, and Elwood Wohlberg, geologist, examine the latest financial statement. If contributions increase, an additional foster child may be adopted.

Checking the latest correspondence from Santiago are Copper Cliff South mine employees Wayne Kennedy, left, and John Smith. Letters received from Santiago are translated and forwarded to the mine by the Foster Parents Plan of Canada.

Remembrance Day 1979

In Flanders Field

In Flanders Field the poppies grow
Between the crosses, row on row,
That mark our place, and in the sky,
The larks, still bravely singing, fly,
Scarce heard amid the guns below.

We are the dead; short days ago
We lived, felt dawn, saw sunset glow,
Loved and were loved, and now we lie
In Flanders Field.

Take up our quarrel with the foe!
To you from failing hands we throw
The torch; be yours to hold it high!
If ye break faith with us who die,
We shall not sleep, though poppies grow
In Flanders Field.

John McCrae

In a solemnly impressive memorial service in Copper Cliff on Remembrance Day, citizens and civic, military and service club organizations joined in tribute to those who gave their lives in defence of their country.

At the service in front of the Copper Cliff Legion, veterans of the war marched with youth from the modern military establishment and then stood silently to renew a solemn pledge: "We shall not forget".

At the Copper Cliff cenotaph, Copper Cliff cadets joined other organizations to reaffirm their memory of those who gave the ultimate sacrifice

Inco pensioner, Dick Dow, was one of many who participated at wreath laying ceremonies at the Copper Cliff cenotaph

It was another big year for Inco's Quarter Century Club as 301 new members join the class of '79. In Copper Cliff 268 new members swelled the ranks of the Copper Cliff chapter to 8,643 while in Port Colborne 41 new members brought their chapter up to 879.

New members at both locations were entertained by top Canadian talent. Mary-Lou Collins and Marg Westfall headlined the entertainment portions of the program.

Dinner and dance music was supplied by Eddie Graf who delighted his audience with a selection of tunes ranging form the big band sound of the 40's to today's disco tunes.

It is interesting to note that, back in 1954 when this year's 25-year employees first joined the Company, several events were reported in the Triangle. Among them were: the blasthole mining method was introduced at Levack mine to excavate a slusher station; work started on a new 400-foot chimney at the Coniston smelter; and a great crowd gathered at the Sudbury Arena to welcome home the Sudbury Wolves from their gallant quest of the Allen Cup. The spring of 1954 saw one of the largest tree plantings at Inco homes in the Sudbury area, and, last but not least, Inco's Quarter Centry Club, with chapters in Canada, the United Kingdom and the United States, boasted a membership of 2,033.

The following two pages are a visual impression of this year's proceedings.

Greenhouse Christmas

Laurie Van Allen talks to the Larabie sisters, from left, Tammy, Shelley and Sheryl. They are the daughters of Arthur Larabie from the transportation department.

The cold wind cuts across the parking lot like a double edged sword - first one way and then the other - driving the snow against the building, where it collects in ever growing piles. People clutch at their collars trying in vain to keep the wind out as they scurry to the door.

A quick pull on the door and suddenly another world materializes before their eyes. A world of warmth, color, beauty and life - totally different from the stark, cold, white world of snow outside. For a brief moment they stand stunned, and do nothing but blink their eyes and take in the surroundings.

There are hundreds of begonias, chrysanthamums, azealas, poinsettas and cyclamens in all the colors of Christmas. The chirping of birds can

Carolyn Veccia from the agricultural department gives the Morrison family a tour of the greenhouse. That's Clifford and his wife Colleen with daughter Wendy. Clifford is a fitter at the flash furnace in the Copper Cliff smelter.

Anne Moors, left, and Janice McLaren are just two of the pretty hostesses that will be happy to show you the greenhouse.

Show

be heard in the background as can the sound of water trickling from fountains. It's as good as going on a winter holiday without the trip.

All this and more can be yours if you visit the Inco greenhouse in Copper Cliff during the Christmas season. The greenhouse is open from 1:00 p.m. to 9:00 p.m. Monday through Saturday and from noon until 9:00 p.m. on Sunday with the exception of December 24 and 31, when the greenhouse closes at 6:00 p.m. It will also be closed New Years Day.

"This is the sixth Christmas in a row that we've put on a Christmas show at the greenhouse," said Tom Peters, the head of Inco's agricultural department. "The greenhouse as we know it today was opened in 1974 and the first Christmas show was held that year. However, Inco has had a greenhouse since 1944 but it was much smaller than the one we now have."

Every year there is always something about the Christmas show that is different from the year before. This year is no exception. In addition to the plants, there are also several displays showing some of the activities of the agricultural department.

A scale model of the experimental greenhouse at Copper Cliff South mine is on display and that, along with drawings will give you a pretty good idea of how waste heat from the mine's ventilation system is used to provide heat for growing plants.

There is also a simulated underground growing area, complete with special lights to give visitors an idea of how Laurentian University and Inco are doing a joint study of growing plants underground.

Planning for this year's Christmas show started shortly after last year's show was finished. "It is a group effort involving all members of the agricultural department," said Tom. "Everyone pitches in to make the show a success. Even after the show is finished the whole area has to be cleaned up, and in fact most of the plants are given away to places like hospitals and senior citizen residences. After all it's only a few more months until summer and we have to start planning for that."

A maintenance mechanic at the Copper Cliff smelter, Clifford Morrison has been with the Company for over 12 years. Cliff is an avid sports enthusiast and enjoys hunting, fishing and bowling in his spare time. He and his wife Colleen have one daughter Wendy, 6.

This is Fred Gervais and his wife Brenda with sons Joshua, 2 and Christoper, 6 months. Fred is a motorman at Creighton five shaft and has been with Inco for six years. He is a member of the Knights of Columbus, is active in sports and enjoys listening to his stereo.

Family Album

From Port Colborne this month we have the Leon Smith family. Leon is a nine year veteran of Inco service and is a laboratory technologist at the research station complex. He is an avid football fan and enjoys doing chemical experiments with cosmetics. Leon and his wife Maureen have six children, they are; Keith, 19, Elizabeth, 16, Anthony, 14, Shawn, 13, Kaye, 12, and Charlton, 10.

Morris Hucal and his wife Sonia have four children. They are; Katherine, 4, John, 10, Morris Junior, 14 and Peter, 15. Morris is a maintenance general foreman at the converter building in the Copper Cliff smelter and has been with Inco for 24 years. The Hucal family have a summer cottage on Whitewater Lake and have spent many a warm summer day enjoying themselves there.

Art Wilcox
Memories from a Century of Experience

His steel blue eyes glow with an intensity that seems to look right through you when he speaks. Like a smoldering fire that suddenly bursts into flame when fanned, Art's eyes flash with their own inner fire when he talks about any of his favorite subjects, such as the sea.

The son of a ship's master, Art Wilcox was born in Cardiff, Wales during the era of the great ocean liners. "Ships were the only way to travel between continents," said Art. "I wanted to see the world so I followed in my father's footsteps and went to sea at the age of 11."

Art can recall sailing the North Atlantic on one of his first voyages. "We arrived at the city of Odessa in the southern Ukraine and I can remember an old lady with a child trimming the ship's cargo while we were docked," Art stated. "She was working very hard in the ship's hold and you could tell that she was almost starving to death. The ship's steward slipped her some food when no one was watching and the look on that woman's face was a sight I never forgot."

Art also spent many years working in shipyards and one of his first jobs was that of a heater boy. "The job of a heater boy was to hold hot rivets used in the construction of ships. I learned to hold the glowing rivets in a special ladle and would toss them up to the riveters when they required them.

"I was making half-a-crown a week as an apprentice ship-builder in the port of Sunderland on the east coast of England."

Acetylene torches were just coming into use and Art was one of the first pioneers to learn this new technology while attending Cardiff Technical College.

Art would probably still be living in the British Isles if the economic situation at the time had been different. But in the years prior to the depression there was a slump in ship-building and there was no work to be found so Art was forced to look elsewhere for employment. By this time he had a family of his own and was desperately in need of a job.

"I had an uncle living in Garson," said Art, "and I wrote him from England to inquire about the job situation in Canada. My uncle wrote back stating that I could probably get a job with Inco and that was all I needed to hear. So in 1925 I packed up the family and came to Canada."

Art's risk paid off for him when he was hired to work for Inco at the powerhouse. He spent virtually all of his Inco service at the powerhouse and proudly admits that he passed his exams qualifying him as a power house engineer when he was 60. He retired in 1946 at the age of 66 with 21 years of service.

Art's wife died in 1968 and of all the things that happened in his long life this is the only thing he regrets. His three surviving children are: Isabella Stone in Sudbury, Margaret Holywell in Toronto and George in Sudbury. He has seven grand-children, 14 great-grand-children, and two great-great-grandchildren.

Outside of diminished hearing capacity, Art is in good health and is quite content to remain in Sudbury. When asked if there were any secrets he could pass on about his longevity he replied: "I never abused my body. I saw too many people do things in excess when I was aboard ships, so I decided at a young age to take care of my body and do things in moderation. I have also led an active life and I think that that had a lot to do with it."

Art is an avid reader and likes nothing better than to curl up with his favorite reading material which is the National Geographic. Even though he can no longer physically travel the world as he did in his sea-faring days he travels with his mind through the pages of National Geographic. "I guess the sea will always be in my veins," he said.

Mining for Nickel with a Camera

Don Haldane, director of Westminister Films Limited, Toronto, hands out final instructions for a filming sequence covering the newly developed vertical retreat mining method. The photograph was taken on the 950-foot level of Levack West mine.

It was some 20 years ago that the first of a five-film series, "Mining the Sudbury Nickel Ores", was shot and edited for viewing in schools by students and teachers.

With changing mining methods, it was decided in 1967 to update the film, and additional material was shot to cover the shaft sinking at Creighton's number nine shaft, open pit dredging, mine mechanization and other newly adopted mining innovations.

The revised film, while including much of its previous content, had to be cut to classroom length (36 minutes).

With an increasing demand from educational institutions for up-to-date information on Inco's mining operations, it was felt that a completely new approach should be taken and that a new version of the "Mining for Nickel" movie be shot with only the shaft sinking and open pit dredging sequences from the previous film included in the new version.

According to Bob Hamer, senior public relations advisor at Inco Limited's office in Toronto, the new "Mining for Nickel" film, in addition to covering exploration, will explain all the considerations that go into establishing a mining operation. Special emphasis is placed on environmental aspects, financing, marketing etc.

"Instead of filming from a detached point of view," says Bob, "we are attempting to introduce mining through the eyes of two mine beginners. This permits us to explain mining methods through classroom lectures. The instructor can explain the various mining techniques with blackboard drawings, plans or slides, accompanied by live-action footage."

Shooting of the new version of "Mining for Nickel" recently commenced at Inco Metals operations in Thompson, Manitoba. Director Don Haldane, of Westminister Films Limited, and his crews spent the better part of two weeks reshooting footage at T-1 and T-3 mines.

Following the completion of their shooting at Thompson, Don and his crew relocated to Levack West and Copper Cliff South mines, shooting thousands of feet of 35 mm film.

All of the film is shot on the 35 mm format and later reduced to 16 mm. This results in increased clarity and top quality.

Major photography has now been completed, and footage is presently being assembled to determine what animation and additional filming will be required.

It is expected that the final product will be available for public viewing sometime next summer.

Film crews carefully follow a charge of Hydromex, an explosive, as it is lowered into the 6½-inch diameter blasthole.

Westminister Film crews are getting ready to shoot a scene in this blasthole stope on the 950 level of Levack West mine. Standing next to the COP-6 "In-the-Hole" unit is driller George Patterson.

Getting a few pointers in the proper application of fire extinguishers are, from left, Shirley Houlahan, Maureen Mead, Barbara Taylor, Denise Turner, Colleen Edwards, Mary Squires and Deni McClosky. Supervisor of power plants, Ray Taylor, centre, and power plant operator Earl Beer are the instructors.

Ladies Take Ov

Getting set to don this Scott Air Pack is Barbara Taylor, right, with help from Maureen Mead, left, and Deni McClosky. The unit, standard equipment with most fire brigades, is used primarily in hazardous areas containing toxic gases.

Fire protection at company villages and plants has always been of prime importance and concern ever since the Huronian Company developed hydro-electric power in 1905 at High Falls and a new village to house the power plant personnel was born. Over the years, additional power plants were commissioned at Wabageshik and Nairn Falls. As in High Falls, villages were erected to house operating personnel.

In earlier years, fire protection was provided by the men who worked and lived in these villages, with practise and training co-ordinated by the chief fire inspector and his staff from Copper Cliff.

Over the years, the population of the village of High Falls has decreased from 60 to eight families. This is mainly due to the fact that the forestry industry no longer have timber drives on the river and there is no requirement to pass the logs through the log slides at the dam. As well, many employees have built their own homes away from the town site.

Mary Squires and Shirley Houlahan are getting ready to activate this portable Wajax fire pump at a demonstration at High Falls.

er at High Falls

With the decreased population, the shortage of men available for the voluntary fire brigade became alarming. It was at this stage that the Utilities Department invited the ladies of Inco employees of the three villages to join. The response was great, with a large majority indicating their willingness to participate.

The ladies have since been trained by Jack Hall and Fred Mansfield, of Inco's fire prevention department, in the theory and application of the chemistry of fire, portable extinguishers, hose handling, breathing apparatus, search and rescue and Wajax pumping equipment.

According to Gerry Cullain, manager of Central Utilities, this is the first time that such an undertaking has been adopted.

"Although they have as yet not been required to respond to a fire, thanks to the ladies, our voluntary fire brigade is ready to cope with any situation that may arise," he said.

Pulling the portable hose cart during a recent demonstration are Denise Turner, left, and Colleen Edwards. The cart contains 300 feet of 2½-inch hose, which may be hooked up to a hydrant or, equipped with a reducer, attached to a Wajax pump.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS . .

Walter Iwanow, a first year engineering student at the School of Engineering, Laurentian University, was the recipient of the CIMM bursary, Sudbury Branch, in the amount of $150 for the 1979-1980 academic year. Walter, who completed his first year of study with an average of 78.3 per cent, was presented with the award by Merv Dickhout, left, manager of mines engineering, Inco Metals Company, Ontario Division, at the October meeting of the Canadian Institute of Mining and Metallurgy.

Nancy Ailles, a member of the information services staff of Inco Limited, Toronto, spends much of her spare time designing and building fine furniture. She is shown here with her friend, **Steve Pengelly,** putting the finishing touches on this beautiful pine and mahogany coffee table which they plan to give as a wedding present to friends. Below, Nancy and Steve proudly display examples of their mutual, creative talents in this completed bedroom suite.

Buyers from the central offices of General Motors in New York recently toured the facilities of the Copper Cliff copper refinery. Pictured with **Stew Gendron,** second from left, Superintendent of Process Technology, are GM representatives **David Hartley, Debbie Melican, Bill Drerup** and **Ken Green.**

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

This is the new 5-ton boom truck which has recently been placed into service at the Levack West mine. Designed to handle supplies for underground workings, the unit here is being loaded with wire mesh screen. **Lucien Belanger,** left, a driller, signals to utility vehicle operator **Fabian Harnett.**

One of the many active volunteer groups performing outstanding service to their community is the Sudbury Chapter of the Canadian Red Cross Corps. Members contribute many hours each month to extending a helping hand to the less fortunate. High on the list of the Corps' many activities is helping the handicapped and assisting at regular Red Cross blood donor clinics. Throughout the years, Inco employees have responded generously at these clinics, held at Inco mines and plants throughout the Sudbury District, as evidenced in these photographs taken at the Copper Cliff copper refinery recently. Above left, clinical assistant **Sandy Blaze** tests **Pat Carter,** of the electrical department, for blood type and hemoglobin, while **Raymond Fournier,** of the warehousing department, awaits his turn. On the right, **Rocky Lazowik,** a garage mechanic, smiles his approval while **Sandra Ralston,** a registered nurse, and **Heather Ryan,** a clinical assistant, tend to their duties.

Honored at a testimonial dinner and dance was **Captain Alex Gray,** retiring commanding officer of the Copper Cliff Highlanders. Alex is shown here with his charming wife **Edlina,** admiring the handsome gift he was presented - an original oil painting of himself in the full dress highland uniform of commander of the cadet corps. Over 130 friends and relatives attended the celebration, which was held at Branch 224 of the Copper Cliff Legion.

Copper Cliff's Nickel Park was recently the scene of a change of command parade of the Copper Cliff Highlanders Cadet Corps. **Captain Alex Gray** of Inco's agriculture department handed over command of the Corps to **Captain Frank Twardy,** shown here signing the changeover documents. Frank, a former Highlander cadet and instructor, is sales manager at Journal Printing of Sudbury. Witnessing the proceedings are 2nd **Lieutenant Lorraine Davis,** the Highlanders' administration officer, right and **Lieutenant-Colonel R.L. Heath** of Timmins.

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS . .

This month's logo writer is **Joe Hickey,** supervisor of the stationery and printing department in Copper Cliff. Joe has been with the Company for 32 years. He lives in Lively where he is actively involved with the local Lions Club. The father of four children, Joe and his charming wife Audrey like playing bridge and euchre in their spare time. Says Joe: "Audrey and I enjoy travelling, and we are hoping to get away to the sunny South sometime this winter."

The Ontario Division of Inco Metals Company has awarded almost $17,000 worth of scholarships to 12 students at Laurentian University in Sudbury. The students received scholarships ranging from $750 to $2,500 for a total of $16,695. The Company recently hosted a luncheon at the Copper Cliff Club to present the students with the scholarships. Inco and Laurentian officials along with the students posed for a photo after the luncheon. Standing from left are: **Morry Brown,** Inco's director of public affairs, **T.L. "Spike" Hennessy,** vice president of administration for Laurentian, **Cordula Rubin, Paul-Emile Boileau, Michael Szymczak, Claude Ferron, Lisa Newman, Lorraine Longarini, Richard Oslund, Harjono Sugiharto, Wint Newman,** Inco's Ontario Division president and **Dr. Frank Turner,** academic vice president for Laurentian; seated from left are: **Dr. Henry Best,** president of Laurentian, **Vivian Shalla, Julie Gagnon, Carmen Prevost, Barbara Mulvihill** and **Dr. Peter Ryan,** manager of the Copper Cliff nickel refinery.

The 1979 dinner meeting of the Toronto Area Chapter of the Quarter Century Club recently inducted five new members and welcomed three transferees from the New York and Port Colborne Chapters. Joining the ranks of the Toronto Chapter were new members **Wayne Mason,** chemical analyst, J. Roy Gordon Research Laboratory; **Lawrence Roach,** purchasing agent; J. Roy Gordon Research Laboratory; **Terry Podolsky,** vice-president, Inco Metals Company; **D. Ross Morrison,** executive assistant, Inco Metals Company, and **Dr. Walter Curlook,** senior vice-president, Inco Metals Company. Members transferred to the Toronto Chapter included **Jim Grassby,** executive assistant, Inco Limited; **Malcolm Dunn,** group leader, chemical analysis, J. Roy Gordon Research Laboratory, and **Bernardus Brandt,** senior hydro-metallurgical specialist, J. Roy Gordon Research Laboratory. **Anna Langley,** supervisor of treasury services in the Toronto office, acted as program chairman while **John McCreedy,** vice-chairman, Inco Limited, inducted the new members. Proudly posing for the Triangle photographer are, from left, **Jim Grassby, Anna Langley, Terry Podolsky, Wayne Mason, Malcolm Dunn, John McCreedy, Bernardus Brandt, D. Ross Morrison, Dr. Walter Curlook,** and **Lawrence Roach.**

Approximately 20 history teachers from the Sudbury district were recent visitors to Inco's Stobie mine as part of their professional development day. One of the areas they visited while at Stobie was this powder magazine on 2,000 level. Stobie mine superintendent, **Frank Kelly,** right, gives teachers a close up look at Amex blasting agent.

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

The Levack Elk's Lodge was the scene of much activity recently as 36 retirees from the Levack complex were honored by their fellow workers, families and friends. The evening was organized by the Levack Complex Retirement Committee, comprised of a cross-section of employees from the Levack area. Mementos and gifts were presented to each retiree and his spouse on behalf of the Levack area employees, in recognition of their years of association with the people of Levack. **Harry Koski,** a retiree from May 1977 acted as MC for the evening, relating many interesting and humorous incidents involving the retirees. **Alex Didur,** one of the 1979 retirees, expressed the sentiment of the honored guests when he thanked the committee, the employees of Levack and everyone present for making the evening such a resounding success. Posing for the Triangle photographer are retirees, front row, from left, **Karlo Rudlavicz, Ken Gibbs, Adelarde Lavoie, George Sharpe, Ed Luoma, Hank Bagnell, Wilf Voutier** and **Gerald Blais.** Second row, **Wilfred Lafleur, Alex Didur, Joseph Blais, Mel Corkal, Murray Kenwell, Eugene Charlebois, Jim Hubley, Hilliard Johnston, Voldemare Zvalgzne, Bill Schesnicky, Guy Forest, Bill Morley, Laine St. Onge, John Winn** and **Ross Jackson.** Back row, **Mike Seniuk, Art Byrnes, Walter Gorham, Hector Barr, Ross Butterworth, Valere St. Louis, Stan Mason, Matti Tuomi** and **Charles MacLeod.** Pictured below are Mr. and Mrs. **Alex Didur,** proudly displaying their retirement gifts to Mr. and Ms. **Eric Kossatz.** Eric is the manager of the Levack area complex, comprised of Levack West, Levack and Coleman mines.

Inco scholarships valued at over $3,100 were recently presented to deserving Cambrian College students at a luncheon held at Inco's Copper Cliff Club. Posing for the Triangle photographer following the presentation ceremony are, front row, from left, **Thomas Parris,** Ontario Division vice-president, Inco Metals Company; **Denise Cote, Slobod Golubovich, Mary-Ann Pugliese,** and **Frank Sorochinsky,** assistant vice-president, Ontario Division, Inco Metals Company. Back row, from left, **Bas Morrison,** who accepted the scholarship on behalf of **Dennis Kukoraitis, Chris McGauley, Jean-Guy Lebel, Roger Morin, Michael Haavisto,** and **Dave Wroe,** dean of student and academic services, Cambrian College.

Allan Akerman, left, an employee of Inco's Iron Ore Recovery Plant, recently received his membership certificate from the Association of Professional Engineers of Ontario. The presentation was made by **Don Bradley,** manager of engineering, Ontario Division, Inco Metals Company, at a joint meeting of the Sudbury Branch of the Canadian Institute of Mining and the APEO.

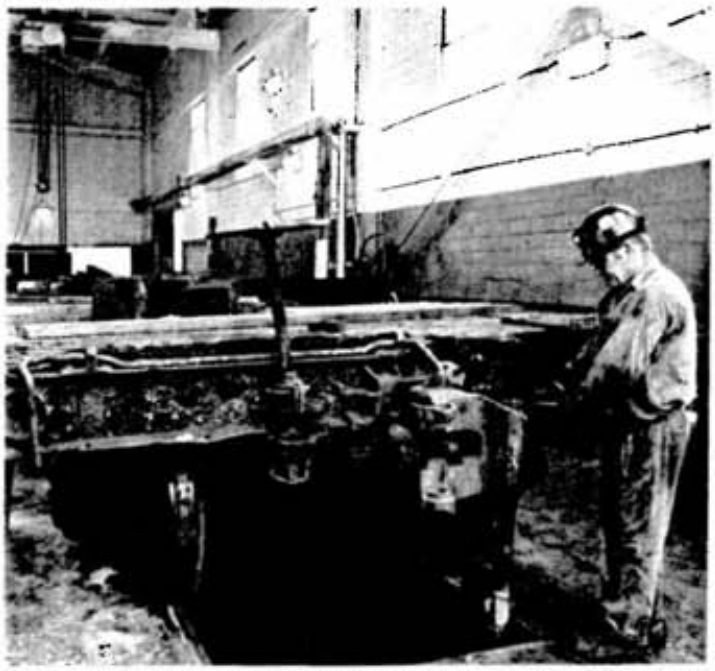
NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS . .

Gordon McDermid, left, of North Cobalt, and **Robert Lewis,** right, of Ottawa, were recent recipients of the Inco Metals Company Scholarship of $700 each for obtaining a grade point average of 3.54 and 3.49 respectively at the conclusion of their first year mining technology program at the Haileybury School of Mines campus of Northern College. The presentation was made by **George Johnston,** area mines engineer, Frood-Stobie complex, and an advisory committee member for the school. As well, six students of the board curriculum mining technology program were awarded Inco Technology Bursaries. Pictured below at the presentation ceremony are, front row, from left, **Richard Stransky,** of Kirkland Lake; **Larry Zuccherato,** of Cambridge; **Arthur Slaght,** of Cobalt. Back row, from left, **Robert Whipple,** of St. Catherines; **Leonard Therrien,** of Penetanguishene, and **Keith Watson,** of Rosemere, Quebec.

INCO CUP SCHEDULE

January 12-13	Rouyn
February 8-9	North Bay
February 15-16	Sault Ste. Marie
March 6-7	Sudbury

Of its many opportunities to draw attention to worthwhile community activities, none gives the Triangle keener satisfaction than a salute to gardeners. Inco people who make a hobby of beautifying their home grounds not only give pleasure to themselves and their families; they also gladden the eyes and hearts of their neighbors and visitors to whom a well-groomed lawn is a sure sign of civic pride and sound citizenship. The Triangle this month salutes **Maurice Coulter,** mines ventilation engineer, who is pictured accepting his trophy for coming up with the most improved lawn in Lively for 1979. Making the presentation is **Gloria Trezise,** a senior clerk with the accounts payable department in Copper Cliff.



That's maintenance mechanic **Gerald Wilson,** checking an air valve on this flat car in the newly refurbished locomotive repair shop at Levack mine. In the foreground is the pit from which electricians service the locomotives and mechanics work under the cars when necessary. An overhead hoist provides plenty of lifting power.

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

A unique cultural and educational program, **"Up with People",** an independent, non-profit, educational corporation, recently toured the Sudbury District where they performed at the Sudbury Arena as part of Spectrum 1979. In addition, the cast of 109 young people between the ages of 16 and 25, representing 14 countries from around the world, toured the Chelmsford Valley School, Prince Charles, Lansdowne and St. Francis Schools, made possible by special funding from Inco Metals Company's Ontario Division. "Up with People", according to one of its travelling members, is high energy showmanship with a positive outlook on man. Much of the material is about brotherhood and universal feelings. The show has been reviewed as the "highest calibre family entertainment available today". Photographs above and below show the versatile and dynamic group during the performance at St. Francis Separate School in Subbury.

Dr. Brian Mackenzie, centre, a research associate of the Centre for Resource Studies and a professor in the department of Geological Sciences at Queen's University, Kingston, was the guest speaker at the recent meeting of the Sudbury Branch of the Canadian Institute of Mining and Metallurgy. Dr. Mackenzie's talk, "Looking for the improbable needle in a haystack: the economics of base metal exploration in Canada" examined the cost, risk and return parameters of mineral exploration, the necessary ingredients for successful exploration, the assessment of required future exploration efforts and the implications concerning public policy. Pictured with the guest speaker following his informative address are CIM members **Conrad Houle,** left, and **Thomas Parris,** vice-president, Inco Metals Company, responsible for mining and milling. Below, **Largo Albert,** left, Inco's senior hoisting specialist, discusses future exploration efforts with **Pat Crossan,** foreman at Stobie mine, and **Don MacKeigan,** superintendent at Inco's Little Stobie mine.

INCO LOPPET
February 10, 1979
Details in January

NEWSMAKERS . . . NEWSMAKERS . . . NEWSMAKERS . .

Armand Lemieux, left, maintenance mechanic at the Copper Cliff nickel refinery, recently renewed acquaintances with **Leo Labine,** second from left, sales representative for Husband Transport, of North Bay. It was back in the early 50's that the duo first played against each other on opposite teams of the American Hockey League. Needless to say that the recent reunion at the Copper Cliff nickel refinery covered all facets of hockey back "in the good old days." **Kerry Size,** right, a packaging and shipping operator, took the hockey enthusiasts on an extended tour of the refinery.

co in the mmunity

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

Bel Canto Chorus • Alcohol and Drug Concerns • Cambrian College Scholarships • Haileybury College Scholarships • Unicef Ontario • Meals on Wheels • Sudbury Little Theatre Guild • Multiple Sclerosis • Salvation Army Alcohol and Drug Centre.

APPOINTMENTS . . . APPOINTMENTS .

October Appointments

Richard Barrett, acid plant foreman, Copper Cliff copper refinery.
Kalman Biro, programmer analyst, computer systems, Copper Cliff.
Andrejs Bite, research geologist, geological research, Copper Cliff.
George Canapini, cost analyst, division comptroller's office, Copper Cliff.
Dorothy Cayen, data control clerk, division comptroller's office, Copper Cliff.
Angela Gagnon, clerk stenographer, Clarabelle mill.
Bruce Goard, industrial evaluator, industrial engineering, Creighton mine.
Keith Jones, specialist assistant, Copper Cliff central shops, Copper Cliff.
Gary Lott, safety foreman, safety and plant protection, Copper Cliff.
Hubert Mackowiak, chemist, geological research, Copper Cliff.
Margaret Minard, clerk stenographer, field exploration, Copper Cliff.
Percy Morrison, incentives administrator, mines engineering, Coleman mine.
Terry Polkinghorne, engineer, central maintenance, Copper Cliff.
Barrie Price, industrial evaluating analyst, central maintenance, Copper Cliff.
Eric Proudfoot, ventilation assistant, mines engineering, Coleman mine.
Richard Roach, senior draftsman, engineering, Copper Cliff.
Frank Sottile, instructor, personnel, Sudbury offices.
Conrad Tetreault, mine foreman, Levack mine.
Ross Tyndall, design engineer, central maintenance, Copper Cliff.
Paul Yearwood, ventilation supervisor, mines engineering, Levack West mine.
Egon Zohar, systems analyst, computer systems, Copper Cliff.

Port Colborne Appointments

Jules Gaboury, maintenance planner.
Edgar Madsen, chemist.
Gary Sargus, senior chemist.
Morris Shatkosky, carpenter foreman.
Richard Staniszewski, project leader.

November Appointments

Allan Akerman, maintenance foreman, Iron Ore Recovery Plant.
Anna Bampton, clerk stenographer, public affairs.
Donald Burke, tank house foreman, copper refinery.
John Galbraith, research and development project engineer, mines engineering.
John Hawes, maintenance foreman, Copper Cliff central shops.
John Hughes, rockhouse foreman, Garson mine.
Richard Lalonde, senior process assistant, Copper Cliff mill.
Dave Landriault, research and development project engineer, mines engineering.
Edward Lew, process supervisor mills, Clarabelle mill.
Gilbert Lux, process assistant, Clarabelle mill.
Glen Lyle, research and development project engineer, mines engineering.
Rod MacDonald, planner, mines engineering, Frood mine.
Colette Malvaso, secretary, public affairs.
James McGhee, protection supervisor, safety & plant protection, Iron Ore Recovery Plant.
Vincent Perdue, water treatment technician, utilities.
Gerald Potvin, mines equipment co-ordinator, mines engineering, Copper Cliff.
Gerald Ready, survey party leader, mines engineering, Frood mine.
John Tricco, process assistant, Iron Ore Recovery Plant.
Robert Tyers, senior construction co-ordinator, engineering.
Harry Vallbacka, party leader, mines exploration.
Jack Wyman, maintenance personnel clerk, Copper Cliff central shops.

Inco Cup

The 1979-80 edition of the Inco Cup is slated to get underway in January. This year's edition will consist of four events and brings together the best young skiers in Northen Ontario under competitive racing conditions.

The Inco Cup ski competition was started in the winter of 1973-74 and has been held every year since then The ski series is sponsored by the Ontario Division of Inco Metals Company but the competition is run under the auspices of the Northern Ontario Ski Division.

The Inco Cup is designed to develop the skills of Northern Ontario skiers and over the years many of its participants have graduated to Canada's national ski team. If you would like to participate, contact your local ski club for more information.

Inco Cup
January 12-13 Sudbury
February 8-9 North Bay
February 15-16 Sault Ste. Marie
March 8-9 Sudbury

Inco Loppet

The fourth annual Inco Loppet will be held February 10, 1980 at the Voima Club on Sunnyside Road in Sudbury. The Loppet is a recreational event that invites family participation in cross-country skiing. It gives skiers a chance for a family outing in the fresh air and beauty of a Northern Ontario winter.

Further details concerning registration and course length will be announced in January. Watch for them.

"Christmas" There Are Two Reasons

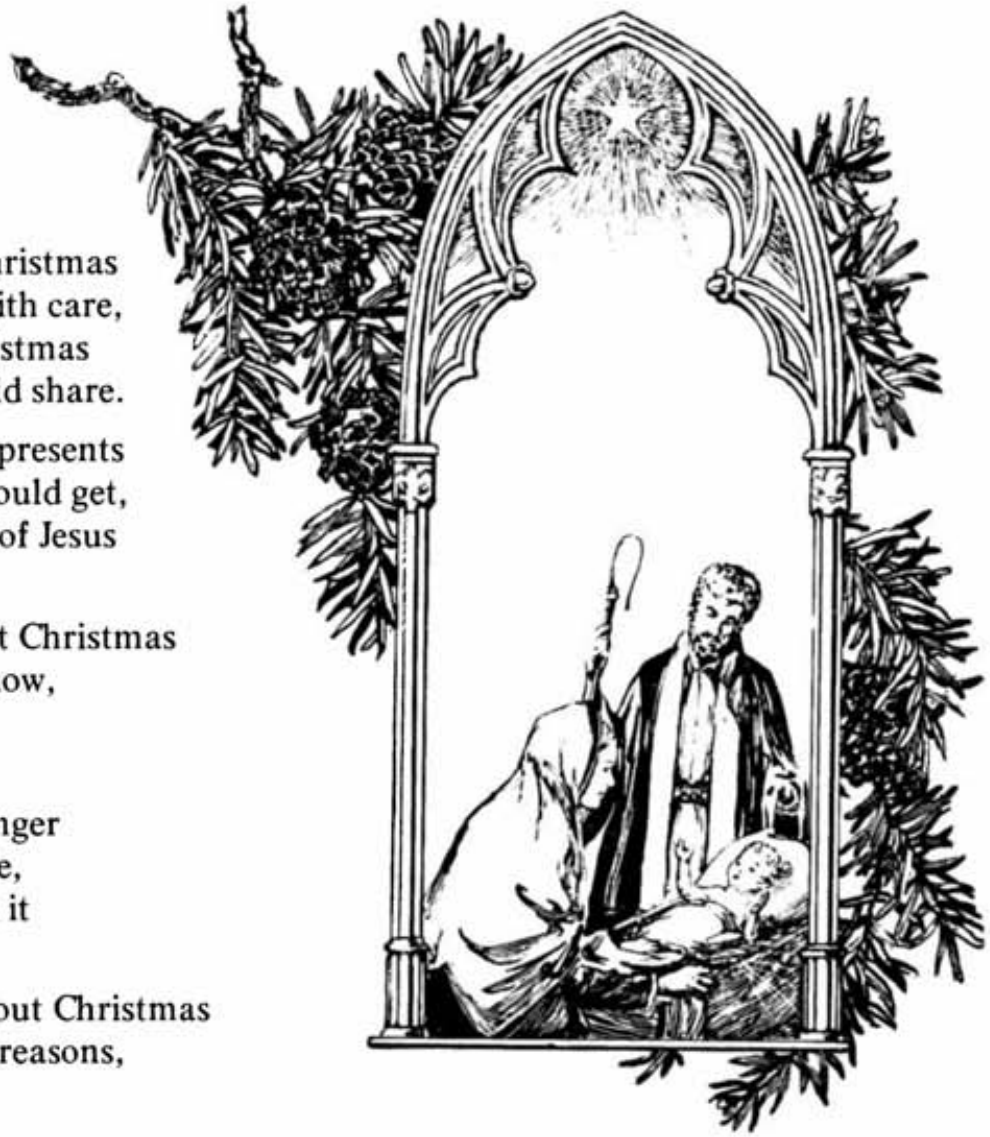
On the day before Christmas
We were wrapping with care,
And thinking of Christmas
In what way we should share.

We were thinking of presents
And how much we would get,
No one was thinking of Jesus
No one not yet.

When we think about Christmas
Every man should know,
Jesus was born then
A long time ago.

He was born in a manger
In a Bethlehem stable,
There was nothing in it
Not even a table.

So when we think about Christmas
Think about the two reasons,
One is the presents,
One is Jesus.



Denise Fournier is a grade seven student at Pinecrest Public School in Val Caron. She is the daughter of Ernest and Giselle Fournier. Ernest is a dryman at the Frood-Stobie complex and is a 15 year employee.

Her poem was written two years ago and is Denise's interpretation of the meaning of Christmas.

Denise Fournier
Grade 7