

INCO Triangle

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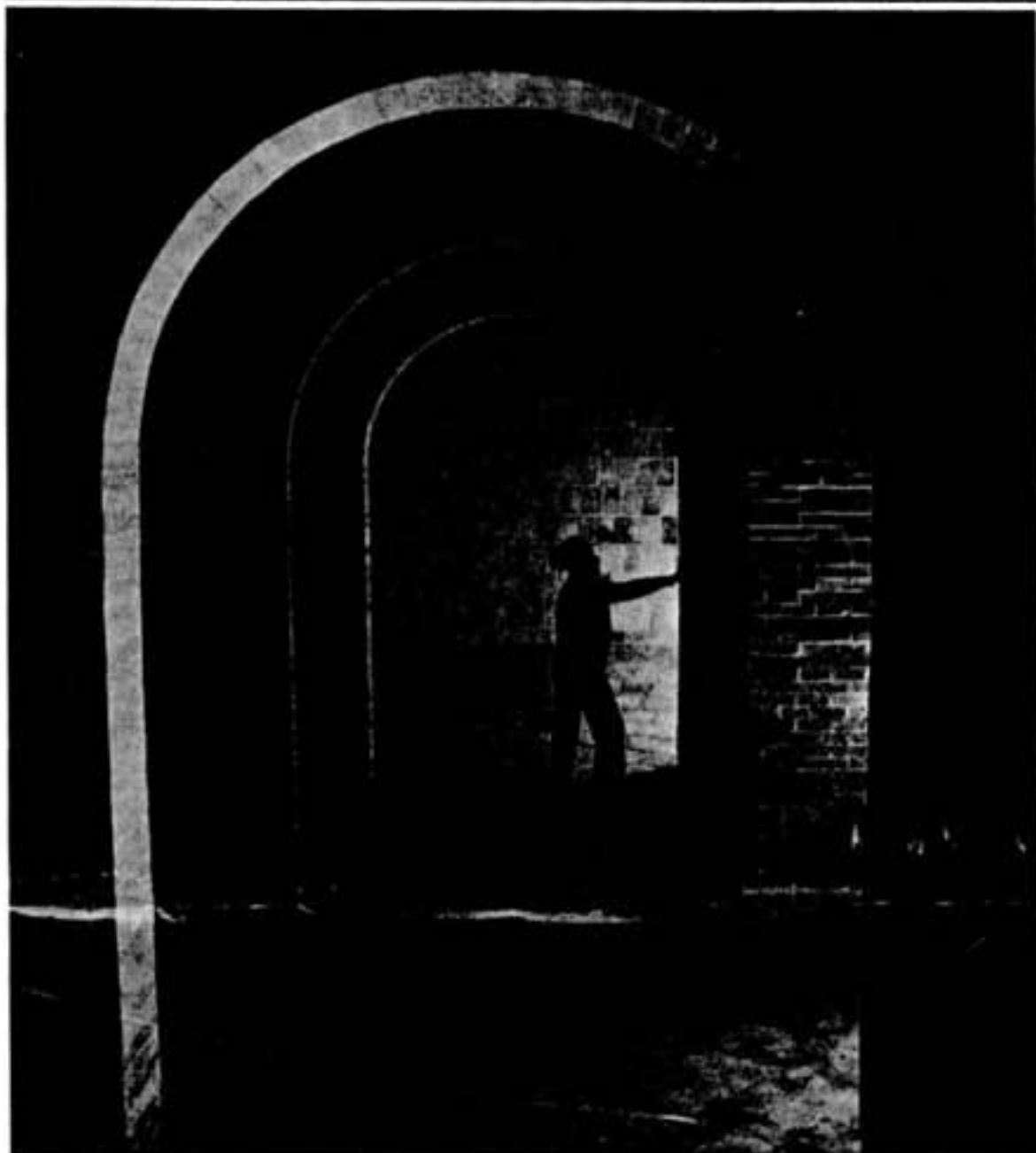
February

Ontario Division

1991



Dressed to do Division's dirtiest dusting. See pages 4 and 5 for pictures, story.



Acid Test

It looks like Theseus going through Minos' labyrinth in the ancient city of Cnossos on the Island of Crete, but it's all part of the Sulphur Dioxide Abatement Project. The hardhatted figure is an employee of project subcontractor Stebbins Engineering checking out his handiwork. The structure is part of the acid plant absorber tower. SO₂ gas will go through the arches that are made with acid-proof brick.

Trespassing snowmobilers playing dangerous game

Warning: No business like snow business at tailings

Inco is urging snowmobilers to stay out of the Copper Cliff tailings area for their own safety.

Marty Puro, superintendent of Copper Cliff Mill, reclamation and water management, warns that snowmobilers racing through the tailings site are trespassing on private property and putting themselves at risk of injury.

"It hasn't been a big problem this year only because of the low volume of snow," he said. "But now with the snow building up it's apparent the problem hasn't gone away."

"We're not trying to scare people but this is an active working area where we're disposing of better than 40,000 tons of tailings daily.

"It's a dynamic area in so far as what may be perfectly safe today may have changed the next day. Things are happening all the time. We may have installed a piece of equipment or we may have moved a piece of machinery. This area is active 24 hours a day, seven days a week."

Tailings are the waste rock material left after valuable nickel and copper are removed from the ore.

About 90 per cent of the ore coming from the mines is tailings.

The Inco tailings site covers 5,000 acres stretching along Highway 17 between Lively and Copper Cliff, and north to the CPR tracks from Creighton to Copper

Cliff. It is the disposal site for all the Sudbury district milling operations.

"It's incumbent on the company

to warn snowmobilers, but it's up to the snowmobilers to heed that warning," said Puro. "If we catch somebody our only option is to

press trespassing charges. I don't think we want to do that and the snowmobilers don't want us to do that, but we may not have a choice."

U.S. environmentalist will examine Inco's ecological accomplishments

Dr. Richard Steckel, president and chief executive officer of AddVenture Network, Inc., will be visiting Inco this April to get a first-hand look at what the company has accomplished in its environmental efforts.

The Colorado-based AddVenture Network is a company that promotes sustained development

through sound environmental practices. Dr. Steckel helped bring Inmetco (an Inco company) together with the United Nations Environmental Program in a project that will promote Inmetco's contribution to the environment.

He's described as a man with "strong environmental convictions," who has developed his

convictions into a thriving commercial enterprise.

Enthusiastic about Inco's environmental policy, Dr. Steckel is in contact with both the United States and United Nations environmental establishments.

He will conduct a workshop in Sudbury in April and will tour Inco facilities.

Sopko is President in corporate moves

Eighteen months after leaving the Ontario Division for the Inco corporate world in Toronto, Dr. Mike Sopko is the new President of the company.

And Dr. Sopko, a Montreal native who started with Inco 27 years ago in research and process technology, believes his five years as head of the Ontario Division have prepared him well for his new job. He was president of the Ontario operations from 1984 until mid-1989.

"The challenges of running the Ontario Division, which is the largest division in the company, are very similar to the challenges facing the other divisions. And the Ontario Division challenges have prepared me for this job. However, in addition to the operations side, my responsibilities now include marketing and technology. Both are essential to the long-term viability of our company," he said.

Elevated to the corporate presidency in a series of executive changes last week, Dr. Sopko will report to Donald J. Phillips, who relinquishes the title of President and continues as Chairman and Chief Executive Officer.

Moving from Vice-President, Human Resources, Dr. Sopko, 52, will have the responsibility for primary metals production, marketing and technology. He was also elected a Director of Inco Limited at last week's Board of Directors meeting.



Dr. Mike Sopko

"I'm very appreciative of this opportunity," he said. "At the same time, I recognize the many challenges this responsibility brings with it. These range from maintaining the Inco leadership tradition to looking after our shareholders and the interests of our employees while continuing to be a good corporate citizen."

"Such a challenge can only be met by the combined efforts of all of our employees throughout the world. I look forward to working with them in the pursuit of our common goals."

In announcing the changes in senior executive positions and titles, Mr. Phillips, 61, a director of the company since 1980, said they were

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New duties, responsibilities for Inco executives



Donald Phillips



Dr. Walter Curlook



Ian McDougall



David Balchin



Scott Hand



Peter Salathiel



Roy Aitken

Continued from Page 1

being made to strengthen the senior management group and provide for executive development. They become effective this April 1.

In the new look of Inco's senior executive team are:

* Dr. Walter Curlook, 61, will become Vice-Chairman responsible for Environmental Affairs, Government and Public Affairs, Human Resources, Exploration, Technical Services, Inmetco and Continuous Mining Systems. He is currently Executive Vice-President responsible for primary metals production, exploration and mineral resource development and technology. Dr. Curlook was elected a Director of the company in 1989. He will continue to report to Mr. Phillips.

* Ian McDougall, 60, will become Vice-Chairman and continue as Chief Financial Officer, also having responsibility for venture capital and certain other administrative functions. He is currently Executive Vice-President and was elected a Director of the company in 1977. Mr. McDougall will con-

tinue to report to Mr. Phillips.

* David Balchin, 50, continues as Executive Vice-President responsible for the company's alloys and engineered products business. Mr. Balchin will continue to report to Mr. Phillips.

* Scott M. Hand, 48, will become Executive Vice-President reflecting a larger role in corporate strategic planning. Mr. Hand will continue as General Counsel and Secretary of the company. He will also have the responsibility for new business programs. He, too, continues to report to Mr. Phillips.

* Peter B. Salathiel, 50, will become Executive Vice-President and will continue to be responsible for primary metals marketing. Mr. Salathiel will report to Dr. Sopko.

* James D. Guiry, 57, who is currently President and Managing Director of P. T. International

Nickel Indonesia, will become Vice-President, Human Resources of Inco Limited and will relocate to Toronto. He will report to Dr. Curlook.

The company's Management Committee will consist of Messrs. Phillips, Curlook, McDougall, Sopko, Balchin, Hand and Salathiel.

In addition, Inco Limited announced that Roy Aitken, 58, will become President and Chief Executive Officer of P. T. International Nickel Indonesia following his election at P. T. Inco's annual shareholders' meeting in mid-March. Mr. Aitken will be located in Jakarta.

Mr. Aitken has been appointed President of International Nickel Japan Ltd. and in this role will perform stewardship activities for the Inco group of companies in the

Pacific Rim region.

Mr. Aitken is currently Executive Vice-President of Inco Limited with responsibility for Environmental Affairs, Government and Public Affairs and Human Resources.

Owl's highwire hoot shuts down facilities

A leisurely lunch interrupted by a fatal fireball brought Inco operations at Creighton and Leveck complexes and all of Inco's 60-cycle hydro generating plants to an abrupt halt.

And the diner didn't even give a hoot.

"The power went off at 7:01 a.m. on January 30, and we sent crews out to see what the trouble was," said Ron O'Shell, line foreman with the Power Department. "They found an overhead wire hanging low across the road at Crean Hill and an insulator destroyed on one of the poles."

At the bottom of the pole, the crew found an owl with a partially-eaten rabbit still in its talons.

"The owl had apparently perched on one of the wires while

A different rock video

A five-part video series on ground control has been developed by the Ontario Centre for Ground Control Training at Cambrian College.

The 10 to 20 minute films examine the major issues of ground control education and are designed for production employees in hard rock mines. The videos were developed in close consultation with training production personnel at several mines in Ontario.

For further information, contact the OCGCT, Cambrian College or call 566-8181.

lunching on the rabbit when it touched another wire," said Ron. "That means about 69,000 volts went to ground from the wire, through the owl and his lunch, to the ground wire."

About 100 volts is enough to kill a human being.

"With that much power there must have been quite a fireball," he said. "That much juice gives quite a flash. It must have been mercifully quick," he said. "The owl never knew what hit him."

Power Department crews immediately rerouted the circuit around the problem and restored power.

Leveck was back in operation in nine minutes, Creighton in seven, and Crean Hill in an hour and seven minutes.

The 10 generating plants were out for about four hours.

The crew at the scene consisted of linemen Ron Pagan, Gary Ackland, Allan Becks, Paul Leplante, Bill Gorham and Mark Paajanen.

"The boys did an excellent job in restoring power," said senior systems operator Harley Moulton. "We were back in business in a flash."

Although the incident isn't common, it's happened before. "We had the same thing happen with a raven a couple of years ago," said Ron. "It's the kind of thing you can't really do anything about."

"Educate 'em," piped in General foreman Jimmy Harber. "They're supposed to be wise."



Ron O'Shell holds the offender, the partially-eaten rabbit still in the owl's talons.



Sudbury MPP Sharon Murdock, flanked by Central Mills manager Mick Throssell and mill operations superintendent Lloyd Strong, watch Clarabelle control room operators do their work. They are, from front to rear, Gaston Daoust, Clarke LaFlamme, Tom McDonald and Edward Lew.

Energy conservation project wins praise

At Clarabelle, hydro bills can be a real crusher

An experimental project at Clarabelle Mill could prove another victory in Inco's ongoing energy conservation battle as well as save the company an annual \$220,000 in electricity costs.

In the Clarabelle experiment, the speed of the test crusher was increased by 50 per cent through the use of a variable speed drive on the crushing motor.

Preliminary results from the plant scale demonstration test show promise and technicians on the project say a five per cent energy savings in the crushing and grinding

circuit could result from the new technology.

Ontario Hydro contributed \$150,000 toward the project and the Ministry of Energy's Ensearch program and Energy, Mines and Resources Canada kicked in another \$120,000 each. Inco funded the balance of the \$805,000 project.

The province's encouragement of such energy conservation projects was highlighted with a visit to Clarabelle recently by Sudbury MPP Sharon Murdock. She presented a cheque for \$75,000 to Inco

as the final installment of the grant.

Energy Minister Jenny Carter hailed the development as one of the many ways the ministry works to help Ontario industry reduce energy consumption and thus improve productivity and competitiveness. "The Ministry of Energy is pleased to have taken part in this project," she said.

The project has been in the works for three years, according to mill operations superintendent Lloyd Strong. "We came up with the concept three years ago and there were several delays from problems that had to be overcome. That's expected in a research project like this."

He lauded Hydro and the Ministry of Energy for their financial help. "I don't think it would have been possible without their assistance. We couldn't justify doing such a project because of the enormous risk involved."

If the initial estimated energy savings prove realistic, further applications in other Inco operations could mean an even greater drop in power drawn from the provincial energy tap, an aim of both government and industry. Lloyd said that since much of the research and development has been completed, adapting the technology at other operations should be less expensive.

"Once the tests have been made and all the problems have been ironed out, the technology will be much more cost efficient elsewhere."

"Elsewhere" also means industry-wide, since the technology will be shared with other mining companies and industry in general.

The project involved more than simply installing the variable speed motor, according to Lloyd. "We had to design and install a new control system. To test a range of speeds, a 300-horsepower motor on the seven foot short head cone

crusher on one of the six operating crushing lines had to be replaced with a 600-horsepower motor. Also, an instrumentation system was installed to choke feed the crushing by controlling a variable speed feeder conveyor to draw maximum power on the short head crusher and return to normal speed if the feed stopped."

Slowing the crusher was crucial, he said, to prevent crusher bearing damage and oil loss if the feed was interrupted.

Snags developed that demanded rethinking several aspects of the project. The experiment was delayed a year when the original high efficiency low slip motor failed because of severe dynamic load changes that caused speed drops. The drive could not change frequency (speed) quickly enough to match speed drops and control motor slip.

Vibration tests on crusher foun-

dations and structures revealed no apparent problems. Although crusher liner life appeared to be reduced by about 10 per cent, other maintenance on the machine proved normal.

A report on the project concludes that it demonstrates that higher speeds on a crusher will produce a finer product and reduce energy consumption in the overall circuit.

"It also appears that the savings in energy and grinding media will justify the cost of converting equipment to run at higher speeds," the report concludes.

Lloyd said the energy-saving experiment is just the latest in a series of conservation efforts carried out at Clarabelle. "There's always been an energy savings project underway since I came here six years ago," he said. "I'd estimate that we've saved about two kilowatt hours per ton in that time."



Sharon Murdock presents cheque to Lloyd Strong.



Sharon Murdock gets a quick lesson in crushing ore from Lloyd Strong and Mick Throssell.

Inco's baghouse design earns



Lloyd Graham, dressed for one of Inco's dirtiest jobs.

The people who should know said it couldn't be done.

General Engineering's Tom Price said it could.

Tom was right.

Spending millions of dollars on bag houses to protect employees from airborne pollutants and then sending crews inside the dust collecting equipment to clean it up

didn't make sense to the engineering technologist.

"It's roughly equivalent to cleaning your vacuum cleaner bag by jumping inside the machine," he said.

With the company's emphasis on the health and welfare of its employees, the Engineering Department has adopted a "Clean Plant" design philosophy. The hundreds of baghouses (dust collecting facilities) at Inco sites and the method of changing bags have been a prime concern for Inco and are not consistent with the Clean Plant philosophy.

"This is an area that obviously needed some rethinking," said Tom. "It is obvious to us, but apparently not to the manufacturers of the equipment."

At least that's the impression he got when he posed the challenge of designing an environmentally safe baghouse to manufacturers at

an Air and Waste Management conference in 1988.

"They said it can't be done, and if it could, Inco couldn't afford to install it. At General Engineering, we don't like to be told it can't be done."

During a break at the Toronto

"Things often sound good until you put them down on paper," he said. "Once some accurate drawings have been made, you can get some idea if the idea is feasible."

"We knew right away that the idea was good," he said. "Two weeks later, we could show that it

the concept to a marketable product.

There are hundreds of baghouses at Inco operations, ranging from closet sized enclosures that hold three or four bags to huge house-sized facilities that filter a quarter-million cubic feet of air a minute through 2,000 bags.

"That's roughly equivalent to cleaning the air in ten 2,000 square foot homes every minute," said Peter.

Existing baghouse designs work much like a home vacuum cleaner. Air is sucked into a chamber and escapes after filtering through a fabric bag where the dust is removed. Unlike a home vacuum cleaner, baghouses can contain thousands of filter bags that are stretched over wire "cages" and suspended in the structure. High volumes of air are drawn into the chamber where the bags are suspended, escaping through an outlet

"At General Engineering, we don't like to be told it can't be done."

conference, Tom and engineer Richard Walli of Walli Engineering in Oshawa put their pencils together and scribbled some rough sketches on a piece of paper in an effort to flush out a concept that would work.

Back at his General Engineering building office, Tom enlisted the help of concept designer Peter Phipps to bring his sketches into some kind of order.

was feasible."

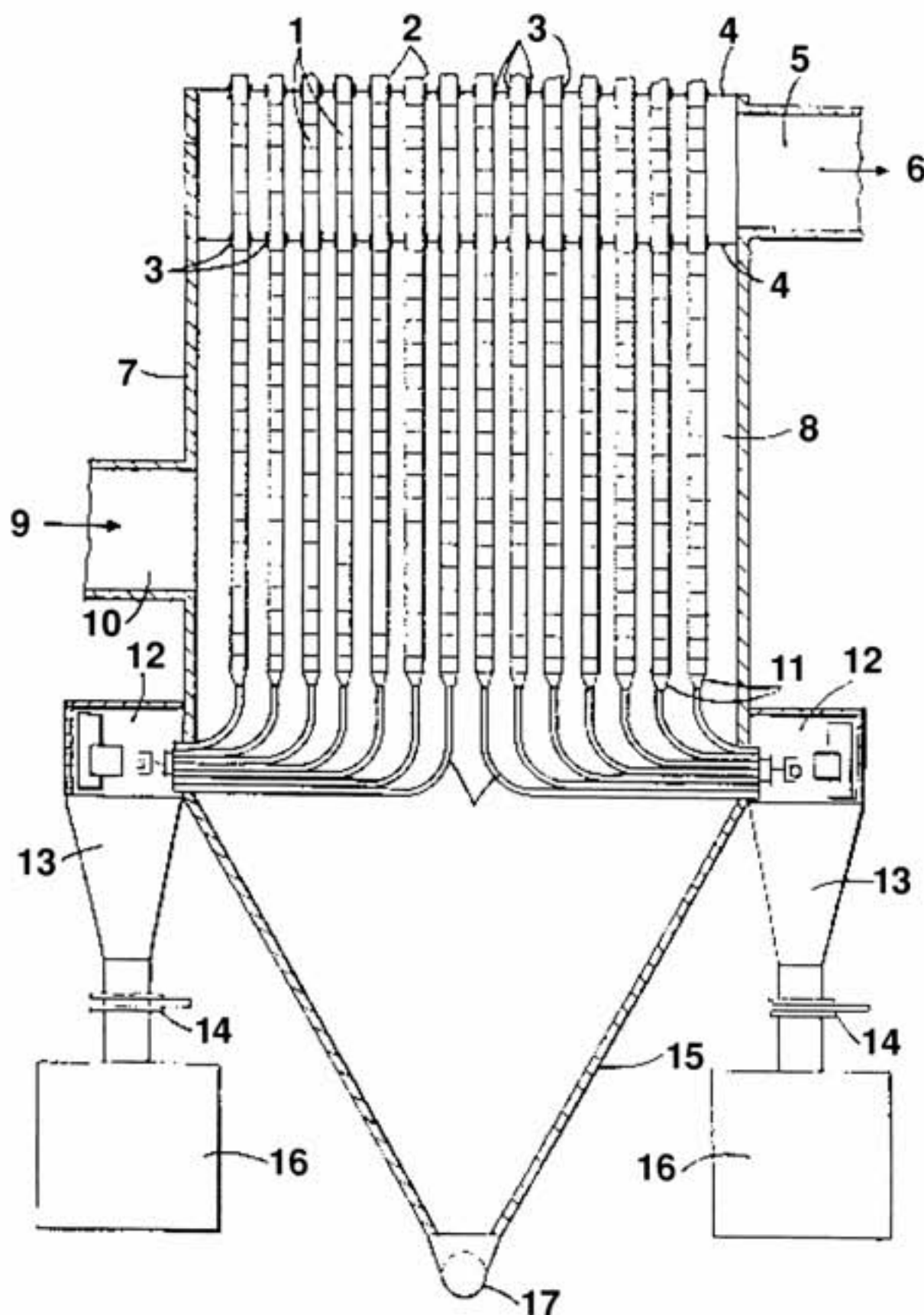
By March 1989, the innovative design was detailed enough to apply for a patent.

December of last year, Tom got the word that the patent had been granted.

Baghouse manufacturers have already expressed an interest in the unique design, and Tom, Peter and Richard Walli are now working with one baghouse supplier to bring

Patented Baghouse Design

- 1 Filter bags
- 2 Extension of filter bags
- 3 Doughnut seals
- 4 Top & bottom sheets
- 5 Clean air outlet
- 6 Clean air flow out
- 7 Dirty air plenum
- 8 Main chamber
- 9 Dirty air flow in
- 10 Dirty air intake
- 11 Bag funnels
- 12 Bag removal equipment
- 13 Auxiliary chambers
- 14 Isolation valves
- 15 Dust hopper
- 16 Portable compartments
- 17 Dust conveyor



patent and supplier attention

port in a second chamber only after passing through the cage-mounted bags.

Baghouses are cleaned regularly by reversing the air flow and dislodging dust caked on the bags, then collecting it in a bin at the bottom of the baghouse. At the No. 9 Flash Furnace where the two huge 40 foot by 16 foot baghouses act as part of the processing (the "dust" is concentrate), about 1,600 tons of concentrate dust a day are returned from the bin to the furnace for smelting via a conveyor.

The biggest snag in current baghouse design is that crews must

people are happy about the prospect of eliminating a dirty job. Other unique features include a cleaner environment for others who work in the plants because of a doubling of the filtration process inherent in the new design. There's also a reduction in the adverse effects of bag rupture, a common, ongoing problem and the elimination of operational downtime while baghouse maintenance is carried out.

"We don't have to shut the plant down while the bags are changed," said Tom. "They can be changed while the baghouse is in operation.

"Doing baghouse maintenance is one of the dirtiest job left at Inco, and a lot of people would like to eliminate it."

be sent inside for regular maintenance, cleaning and bag replacement. In huge baghouses with thousands of bags, the job can mean days in a hot, dusty and dirty environment. Protective clothes and breathing apparatus are mandatory for the work, but Inco would rather not send people into such an environment at all.

In the newly-patented design, the ends of the filter bags are extended through the top of the main chamber. Specially-designed seals keep dust from escaping. Reminiscent of the tear-off plastic produce bags used in grocery stores, a new bag is attached to the protruding end of the old bag and is pulled onto the wire cage into the main chamber as the old bag is removed.

At the bottom end of the operation, the old bag is removed from the main chamber automatically as well. The old bag (pulling the attached new bag into place as it is removed) is routed through specially designed dirty bag tubes to auxiliary chambers.

Even the disposal of the bags, cut up during the removal operation, is done without exposing employees to dust. The cut pieces of filter bags are deposited automatically into portable compartments.

"The entire operation is carried out without anyone getting dirty," said Peter. "The entire bag replacement is done automatically. The only hands-on part of the operation is where the end of the new bag is attached to the old bag, and that operation takes place outside the chamber.

"To say our people are enthusiastic about the design is an understatement," said Tom. "We've already had calls from maintenance people at the Smelter asking us how soon the new baghouse design can be installed. Doing baghouse maintenance is one of the dirtiest job still left at Inco, and a lot of people would like to eliminate it."

Although it's been only weeks since the design was patented, there have been several inquiries about the technology. Cominco, a lead and zinc mining company, has written Inco to ask how soon they can get their hands on the technology.

Not only Inco maintenance

been no incentive to come up with a better idea, or they thought existing designs were good enough."

"And they don't have to go inside and change the bags," said Peter. "Maybe they didn't see it as a problem."

Tom and Peter estimate it may be a year or two before a commercial unit is available and on the market. One company, Procedair Industrie of Montreal, has embraced the idea and has committed to a Research and Development program during 1991 in cooperation with Inco to develop the idea into a commercial product.

"We have to wait until some technology is proven sound and the design bugs are worked out. A two tube test unit will have to be built to check the system out and correct any hidden problems," said Tom.

Although initially more expensive to build, the new baghouse design should soon make up for the additional expense with savings in maintenance and operating costs.

The two are optimistic about further improvements in the workplace.

"I figure this is just the beginning, there's a lot more to be done and there's a lot more things that industry is working on to improve the workplace. We are on the eve of an environmental revolution that will require a similar revolution in the engineering thought process," said Tom.

The main reason for the promised improvement in performance is a design feature that divides the main chamber into a dirty and clean air plenum. The bags pass through a separation sheet that divides the two plenums, and doughnut-shaped seals around the individual bags are flexible enough that the bags can be replaced by sliding them through the seal, but airtight enough so dust can't escape.

The design feature means air is filtered twice before leaving the main chamber, once as it passes through to the inside of the bag in the dirty air plenum, and once as it leaves the bag in the clean air plenum. In the existing system, air is filtered only once.

"Bag rupture has always been a major problem," said Tom. "This way, even if there's a rupture, the air will be filtered a second time. The feature also simplifies the procedure for detecting any leaks."

In existing baghouses, bags will sometimes bend, touching an adjacent bag. Where the bags touch, filtration is blocked. The new design eliminates the problem since each bag is 100 per cent rigidly aligned.

Tom and Peter say the new design should provide cleaner environments throughout industry. "Baghouses are not just a feature in the mining industry, although we are only one of a few industries that uses some baghouses as part of our product process. Baghouses are used by industries that have dust to deal with," said Tom, "and that's just about all of them. In many cases, dust protection provides a better human environment since some kinds of dust can be not only inconvenient, but dangerous to humans."

Tom is quick to point out that the final design is a cooperative effort. "It's like the light bulb people use to denote an idea. The brighter the idea is, the more people were contributors."

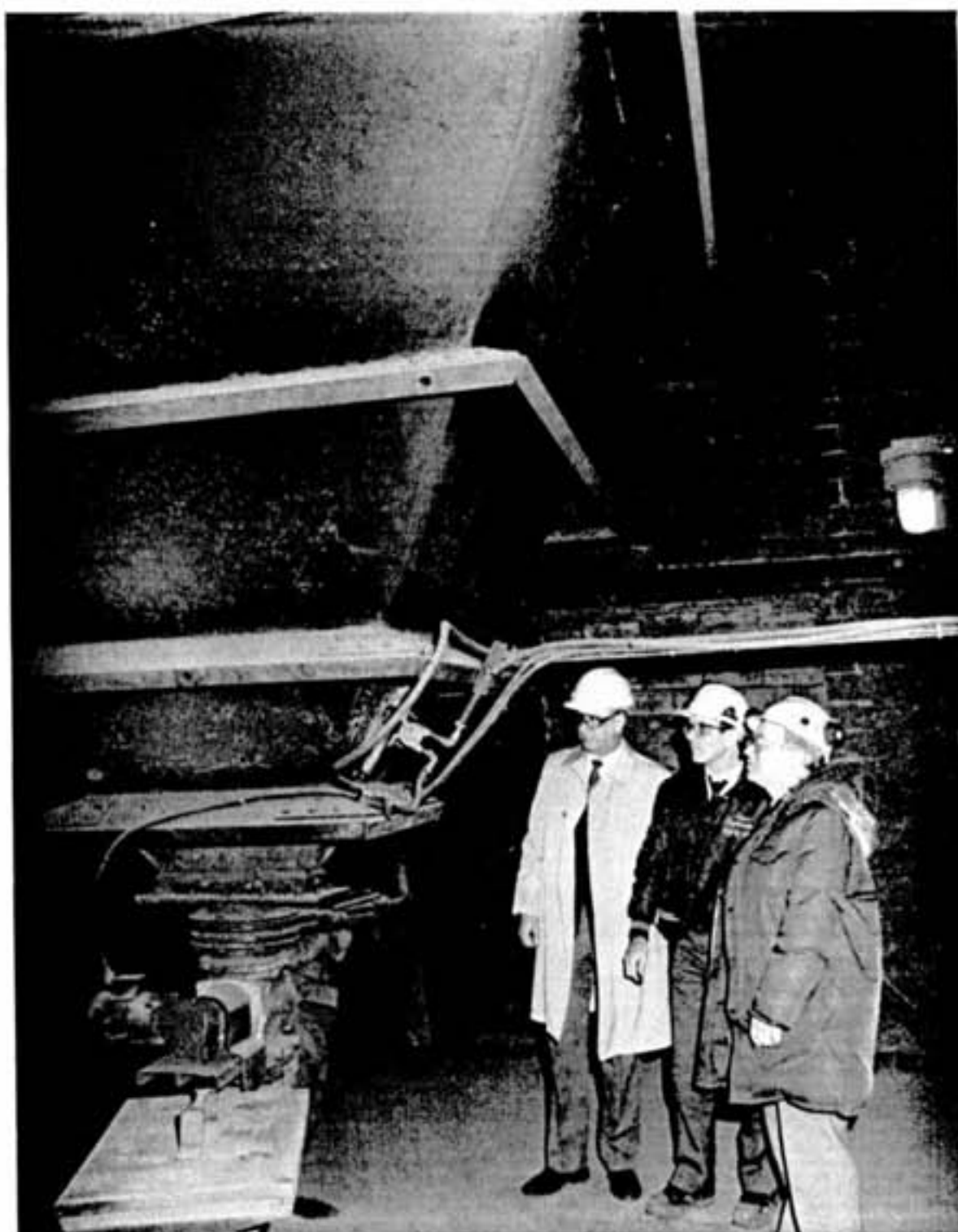
He said the main problem in coming up with a new idea is identifying the real problem rather than treating the symptoms.

Why wasn't a better design generated by suppliers?

"They don't have Inco people," quipped Tom. "I suppose they're too close to the problem, there's



Lloyd Graham and Darcy Chenard prepare to enter the flash furnace baghouse at the Copper Cliff Smelter to do an inspection. The dirty job could soon be a thing of the past.



Richard Walli, Peter Phipps and Tom Price examine a Smelter baghouse hopper.



Cadets set up camp in the snow and freezing temperatures at the Crean Hill Gun Club.



Patsy Guitard, daughter of retired Creighton miner Edgar Guitard, gets ready to brave the cold and hit the sack.



Jim Lochschmidt and daughter Kelly help plan the weekend cadet activities.

Inco volunteers teach good citizenship, not guns

Cadet winter exercise:

It's cold enough to numb exposed skin in minutes, yet the 12-year-old cadet, strapped to a backpack that's almost bigger than he is, sweats as he yanks a sled piled high with equipment through waist-deep snow.

Nearby, a group of cadets shovel a huge mound of the powdery snow and prepare to hollow out the inside. They hoot with enthusiasm and redouble their efforts when cadet instructor Brian Smith gives his permission for them to forego the tents and spend the night in the makeshift igloo.

"They love it out here. It isn't for everybody, but these kids thrive out here," said the mobile monitor operator with Inco's Environmental Control, a training officer for the last four years with 2964 Walden Irish Army Cadet Corps.

It was a winter training session for more than 50 young Walden cadets, more than half of them children or grandchildren of Inco employees and pensioners.

The outdoor overnight exercises are seen as the best part of cadets' activities and cadet leaders try to provide them at least one weekend a month.

"Last night it was too cold and

we had to insist they sleep inside," said Brian. "You should've heard them complain."

For the cadets, the winter outing at the Crean Hill Gun Club was a welcome change from the weekly sessions at their Naughton Community Centre headquarters. Eager to share the outdoor fun, the corps hosted another 50 cadets from Air Cadet squadrons in Sault Ste. Marie and Elliot Lake.

The equipment, clothing, camping and cooking gear are military, and the camp has the look of a staging area for an invasion on Kuwait, but that's where the similarities stop.

"We are not recruiters in disguise," said Crean Hill drill fitter Jim Lochschmidt. "We want to teach good citizenship, leadership and self-reliance. No guns. No fighting. When parents send their kids here, they don't get a soldier back."

Jim should know. He was drawn into the corps four years ago by his daughters Kelly and Tracy, the first two years as a parents committee member and the last two as the training officer of the corps.

"The girls were always over here, so I figured I might as well join them."

His wife, Carol Anne, is the unit's supply officer.

"And she outranks me," lamented Jim.

He said the cadet corps is heavily infiltrated by both children of Inco employees and Inco instructors like South Mine miner Ken Bolton, the duty and pipe band officer for the corps.

"Adult support as well as participation of the youngsters has always been good here," he said. "We have never been short of volunteers."

Brian Smith insists that aside from target practice at the Crean Hill Gun Club range, guns are out. "We try to stay away from the military aspect as much as possible," he said. "We try to build good character here, community involvement and responsibility,

Our kids get involved in a range of community activities and events, either raising funds or helping out."

He's not one who feels all young people should be initiated to society through military training. "Clearly some people wouldn't get any advantage out of what we have to offer. It should be strictly voluntary. But many kids thrive here. I've seen some amazing changes in kids after only a few weeks with us. They develop self esteem, responsibility, teamwork and self-reliance for the first time in their lives. And they make good friends here."

Among other things, cadets learn such skills as outdoor survival, orienteering, map reading, fieldcraft, first aid and even cooking.

"Much of what they learn here will be valuable for the rest of their lives," he said.

"We get a good cross-section of kids, some from disadvantaged backgrounds. There's no doubt that they change when they get involved."

Experiencing a downturn in participation during and immediately after the turbulent '60s, the cadet movement is beginning to grow again.

One reason, he said, is the wide range of activities, opportunities and even travel that's offered by cadet corps.

"We've had kids (pipe band members) go to Scotland to take part in a Military Tattoo. Cadets have gone to the Yukon as instructors for an Outward Bound-type adventure course."

Cadets from the corps have qualified as parachutists and instructors in various fields of training. Qualifying cadets can even get summer jobs training other cadets. Senior cadets can move to staff positions and earn up to \$2,400 working as instructors during summer camp.

The Walden corps has a good record in both competition and calibre of cadet. Walden cadet Cindy VanHorne, granddaughter of South Mine's Clayton Van-



Steven Drisdelle, son of Nickel Refinery machinist Lorne Drisdelle, puts his back into it.



Mandy Brideau, Lisa Gutjahr and Natalie Locke prepare to cook supper on the camp stove.

C-C-C-Cold camping!

Horne, was picked from among all instructors for the prestigious Regimental Sergeant Major rank when she instructed cadets at Camp Upperwash last year.

A wide range of competition helps keep young people motivated, said Brian. "There's a lot of competition involved and our cadets have done well."

Among other awards, the corps won the Best Ontario Cadet Corps competition in 1989/90. The year before, they placed second-best in the category. Individual cadets have won top honors in First Aid and other competitions as well.

Perhaps one of the most noticeable changes in the cadet movement is the number of females involved today. "Membership is about 50 per cent female these days," said Brian. "It's only been about 15 years since females were allowed to join."

Eighteen-year-old Kelly

Lochschmidt, a six-year veteran of the corps, is the cadet commander. She doesn't see herself as the "traditional" woman. "I guess I tend to be independent," she said. "If the crowd was to say black, I'd say white."

She bristles at the suggestion that nepotism earned her the rank. It was Kelly and sister Tracy who drew her father into the corps, she points out. "Believe me, there's no difference out there when we have to rough it. You can't pick the girls out from the boys. Everybody's equal."

The Grade 13 Marymount College student wants to get into law and security when she graduates and she feels her cadet corps experience has helped her with her education and many other areas of life.

"You set your own values after being here. You know you can accomplish anything you want to."

There's nothing like the friends she's made in the corps, she said. "Friends outside don't knock me for what I'm doing, but they tell me they wouldn't do it themselves."

Warrant Officer Cindy VanHorne has been a member for four years and she admits there's more to being a cadet than she ever imagined.

"You have to drive yourself. It's quite a challenge," she said. "I never imagined that I'd be doing some of the things I'm doing today... and liking it, like sleeping outside in the winter."

Brian Smith said he enjoys working with young people. "I like to see the end product. You get a sense of accomplishment seeing a change for the better in a kid's life."

He credits his employer for making his volunteer work possible. "Inco's been very understanding in being flexible about scheduling my holidays, allowing me to fit cadet activities in. They've allowed me to take a few hours off from time to time, but I've always tried to make it up. If you abuse it, you'll lose it," he said. "It has to be give and take."



Brian Smith radios co-ordinates back to base while Shannon Parry of Naughton takes a compass reading.



Visiting Air Cadet Mike Lewis carries lunch back to base.



Cindy VanHorne, granddaughter of South Mine's Clayton VanHorne, lugs lantern and stove.

Inco breaking new ground

*"We've Been On The Tip Of Your Tongue For The Past 75 Years."
"If You Want To Know Why We Make Batteries Rechargeable, Give*

*Us A Call."
"When It Comes To Writing
About Ruthenium We Had To Ask
Ourselves 'What's The Point?'"*

states David Allen, Inco's corporate communications director and the creative force who helped shape Inco's startling turnaround in the public's mind.

In Sudbury in late January for the annual meeting of Inco public affairs managers, Allen said Inco entered the 1980s with an image among the public of Ontario that he called "horrible." In Manitoba and the United States, he contends Inco does not suffer so much from a negative image as having no image at all. However, that will likely change this year in Manitoba where Inco's Manitoba Division will launch an advertising thrust in Winnipeg.

the mere mention of the Inco name, people polled offered some derivative names. Polluter. Exploiter. Profiteer. Arrogant. Profitable.

Ah, profitable!

Even that became history early in the decade when Inco struggled through 13 consecutive quarters of financial losses.

By the middle of the decade, as the company recovered from the recession, the thinking was that Inco had to resurface before the public. There were always many exciting technological and human resource stories around Inco but the public wasn't aware of them.

To capitalize on new technology, new opportunities and Inco productivity, a new series of ads was struck in the mid-1980s. Alex Gray, the venerable Inco "gardener", was featured in one memorable print ad with a tray of his Jack Pine seedlings grown from seed 1,400 metres down historic Creighton Mine.

"The new series was designed to overcome the image of Inco being stuck in the donkey age, of the days of the pick and shovel," said Allen, who later worked with some of the best creative minds in Canadian advertising to change the way Ontarians thought of Inco. "The ads were designed to show that Inco was not just a smokestack in Sudbury, that Inco was all about new technology and people."



**INCO BREAKS NEW GROUND
IN THOMPSON, MANITOBA.**

Allen said four company-commissioned public opinion polls in the early 1980s on Inco and the mining industry gave company officials grim news. Inco didn't compare well with other large organizations.

"We finished last. Dead last. Nowhere," he noted.

Given a chance to volunteer at

Occasional readers of some of Canada's leading magazines and business journals can be forgiven for wondering just whose corporate ads those were in past publishing seasons.

Decidedly offbeat with catchy turns of phrase tout-ing little known facts of life we all live with daily, the ads—surprise, surprise!—were created by the western world's largest nickel producer.

Yes, the same Inco Limited that was once known as Mother Inco.

Shedding light on the many positive stories about Inco's key mining and processing facilities and the products enhanced by Inco resources, the sophisticated ads have become a potent tool in helping change Inco's corporate image in Ontario.

In fact, the company's corporate image in influential southern Ontario on key issues such as the environment, workplace safety and commitment to its employees has risen dramatically in the past three years.

"I believe our public image is one of our most precious assets and I believe we have to keep nourishing it,"



Now, we don't mean to disparage the virtues of this valuable metal. Only to point out what precious little is known of it and its applications.

The role of fine fountain pens, for example. Or for contacts in thermostats and voltage regulators. It's also alloyed with a variety of metals for improved corrosion resistance and hardness.

Ruthenium is part of a larger family called the platinum group, including such metals as rhodium, cobalt, iridium, palladium, and, of course, platinum. Fine enough also to embellish

the features of Egyptian Pharaohs, today platinum's popularity is rapidly gaining speed.

In automobiles, an catalytic converter's role in cleaning exhaust gases into fresh air and water. And, because it's good for life, it can be recycled time and again.

In Inco, as a major producer and recycler of specialty metals, we make it our business to keep up with such matters.

Admittedly, we're not as well known for our ruthenium as we are for our nickel. Which is exactly why it deserves a little extra ink.

**WHEN IT CAME TO
WRITING ABOUT RUTHENIUM
WE HAD TO ASK OURSELVES
"WHAT'S THE POINT?"**

Inco
STRONGER FOR OUR EXPERIENCE



To coin an old phrase, "It's what we lack." Because, though technology has progressed significantly since five cents covered the cost of a phone call, nickel is still very much a part of telecommunications.

Take our work with rechargeable batteries. By refining nickel into a remarkably pure powder, then compressing it, we've helped develop batteries that will store and discharge electricity, again and again.

So today, portable telephones are more than just talk, they're really. Likewise, laptop

computers, portable TVs, radios and countless appliances all use nickel-rechargeables to supply lasting power in a limited space. While also allowing utilities to function when solar energy is unavailable.

Little wonder then, that we're the western world's largest nickel producer. From mining innovations to deep sea exploration, architecture to aerospace, our metallurgical ingenuity has come up with the answers. If you'd like to learn more, contact us at (416) 301-7670. And we'll take care of the charge.

**IF YOU WANT TO KNOW WHY
WE MAKE BATTERIES RECHARGEABLE,
GIVE US A CALL.**

Inco
STRONGER FOR OUR EXPERIENCE

Chamber president sees

For many people outside Sudbury, particularly people in southern Ontario, the image of this northern community has often been "fused" with Inco, says Greg Miller, owner of Miller Publishing and president of Sudbury's Chamber of Commerce. Actively involved in the community for well over a decade, he's enthusiastic about the changes he's seeing in the public perception of the mining giant. ...and the community. But it wasn't always like that.

Just a few years ago, promoting Sudbury was something of an uphill battle, according to Mr. Miller. "I remember a conference I attended in Ottawa back about 10 years ago. When I introduced myself as being from Sudbury, one guy told me he'd been in Sudbury once and

described it as the most devastated, ugly place he'd ever seen in his life. Inco was in the public eye back then. That was in the days of labor/management problems, environmental concerns and layoffs. I think a lot of people from outside the area saw Sudbury as being synonymous with Inco. All that bad press for Inco meant a bad image for Sudbury.

"There's a saying in advertising that bad publicity is better than no publicity," said Mr. Miller. "I don't think that worked for us. No publicity was much better than the bad publicity we were getting."

All that's changed today, he said, not only because of the community's successful efforts toward the diversification of its economic base, but also because of Inco's successful attempts to educate the public.

Inco supports community

Sudburians, he said, have always been more aware of the contributions Inco makes to the community than people from outside

the region.

"I think that, generally, Inco is seen here as a good corporate citizen, more so today than ever before," said Mr. Miller. "Inco has done their part in supporting the community and most people know it."

"Inco will always be looked upon as a giant in the community," he said. "And there will always be those who will say Inco could do more."

The difference between Inco's local image and its perception outside the region isn't so much a matter of Inco's salesmanship as it is one of example.

"Local people can see first hand Inco's environmental efforts like the Sulphur Dioxide Abatement Project, the work on the tailings area and the general revegetation going on," he said.



Greg

d on corporate image

That early experience spurred another series of print ads that linked Inco and a host of consumer products with the public. Rechargeable batteries, stainless steel cutlery, fine fountain pens, spacecraft and architecture.

Buoyed by that success and knowing the company had to confront the issue of the environment, the next series in the late 1980s looked at the environment but with a gentle tone.

"One of the problems trying to deal with the general public is the public will accept a certain amount of environmental damage if they get something for it," Allen reasoned. "The positives will eat up the negatives and the ordinary consumer can make the decision of comparisons. But you can't with nickel. You can't go to the corner store and buy some nickel."

Those first environmental ads touched on acid rain and re-greening efforts. Certainly the most successful was the one depicting Canada geese nesting on the tailings ponds at Copper Cliff. With the slogan, "Officially, we call it the Inco tailings reclamation program. Others simply call it home," this ad became the most popular poster produced by public affairs.

But the announcement in late 1989 that the company was spending \$500 million to clean up its sulphur dioxide emissions gave the opportunity for a major public impact.

With one single, 15-second

television commercial highlighting Inco's concern for clean air, Inco jumped in the forefront of international industry on the environment.

An award-winning newspaper insert took the environmental message into 1,000,000 Ontario homes.

Bolstered by dozens of public speeches, hundreds of media interviews, a direct mail campaign to opinion leaders and educators and mail response to thousands of letters and phone calls, the ad campaign paid off.

Dramatically,

Public opinion polling tackled some key questions.



AN INCO BRANCH PLANT

Is Inco concerned about reducing pollution? Is Inco concerned about maintaining good employee relations? Is Inco concerned about safety in the workplace?

Although Allen is quick to note other factors such as employee bonuses and a new three-year labor agreement were at work, the public response to the employee relations issue, for instance, was strongly positive. Seventy-nine per cent of the respondents felt Inco was either

very concerned or somewhat concerned about maintaining good employee relations. There were similar improvements on workplace safety and reducing pollution.

On the environmental question, Inco's initiatives had obviously reached people. In 1988, only 37 per cent of those polled felt the company was either very or somewhat concerned about reducing pollution and 26 per cent felt the company was not very or not at all concerned. In 1989, 52 per cent now believed Inco was very concerned or somewhat concerned. Only 18 per cent felt Inco was not very or not at all concerned.

"Generally, the more people know about us, the more they like us," Allen observed, adding that the pollsters found 79 per cent of Sudbury respondents felt Inco was doing a good job.

Sudbury and Ontario television viewers can now see the latest Inco communication aimed at reminding Ontarians that the company is "working away like beavers" to make the 1994 deadline on reducing sulphur dioxide emissions in Sudbury. This 30-second commercial will be seen by 7.7 million Ontarians between 7.1 and 9.3 times in four weeks.

Allen said the role of the public affairs campaign

is to help the public understand that Inco not only shares its concern about pollution but is aggressively doing something about the environment.

These years have passed since Operation Greener Lake was the goal. We were the first to make a commitment to the environment.

Being Canada Goose Lake, we've been able to create a beautiful environment. Like our efforts to reduce sulphur dioxide emissions, we've been able to create a beautiful environment.

Officially, we call it the Inco tailings reclamation program. Others simply call it home.

Inco
STRONGER FOR OUR EXPERIENCE

Inco's image brighten



Miller

"We've made great strides here over the past few years in our re-greening program, and Inco has participated in that as well as revegetated a lot of their own land. It tells people here that the company is committed to doing its fair share of cleaning up the environment."

Yet outside the immediate Sudbury area, said Mr. Miller, Inco must continue to put its case before the public.

"I believe Inco is seen differently outside the region," he said. "The image of Inco and Sudbury has vastly improved, but a lot of work still has to be done to clear up the misconceptions that are still prevalent."

He said Sudbury has matured in many ways and is more able than ever to stand on its own as a community. "We've become the medical and educational centre of the

north, as well as the retail and recreation hub. Diversification has made the community much more independent than in the past and people outside this community are starting to look to us as an example of what can be done and how to do it."

More work to be done

Still, Sudbury is often perceived as the city with the stack and neither Sudbury nor Inco can do anything about it, he said.

"There was a time a few years ago when we took stock of all our promotional material. We removed everything that showed the stack. I think it's going to take a lot more effort on Inco's part to educate the public on how much the company has cleaned up what's coming out of the stack before we can put the stack back on our advertising material."

It's one area, he said, where even more information should be made available to the local public. "Our people are Sudbury's best ambassadors," he said. "They're

eager to tell people from outside how the face of Sudbury is changing and how Inco is an acting partner in that. To do it, they need information."

Perhaps the second major improvement he's seen is a change in labor/management relations. "Inco's image was terrible," he said.

"Today, Inco and labor seem to be working together more than ever before, trying to come up with solutions before there are problems."

Although less dependent on Inco for its economic health than ever before, he nevertheless welcomes the company's continuing attempt to put its case before the public.

"The harder Inco is working to improve its image, the better it will be for all of us," he said. "We should all be partners in progress."

Harry Bradley isn't exactly a household name. But back in 1914, he introduced a remarkable rust-proof product that today is found in almost every Canadian home. And it was he who first coined the familiar term "stainless steel."

Since its initial use in cutlery, Inco nickel has made stainless steel stainless. What's more, as the western world's largest nickel producer, our metallurgical know-how has put it to work in a host of applications.



Like kitchenware, architecture, deep-sea submarines, jet engines, spacecraft - just to name a few. Because, like its intrinsic enduring qualities, its uses are nearly endless.

This year marks the 75th anniversary of stainless steel. At Inco, we're proud to be part of it. And while we've already made a name for ourselves with products like stainless steel, we have every intention of bringing more good ideas to the table in the years ahead.

**WE'VE BEEN
ON THE TIP OF YOUR TONGUE
FOR THE PAST 75 YEARS.**

Inco

STRONGER FOR OUR EXPERIENCE

Engineering building bleeding once more

The tap has been turned on again at the General Engineering building.

It's been about three years since Red Cross nurses have set up shop at the General Engineering building and siphoned the inhabitants for their life-giving blood, but judging from the results at last month's blood donor clinic here, they'll be back on a more regular basis.

"We'd like to come back," said Red Cross Clinic Assistant Kelly Studiman as she kept an eye on an a prone, punctured Inco geologist. "We've had a good turnout for the first visit here in a long time and it can only increase in the future."

The clinic was arranged by Engineering Services supervisor Joan Rickard and Geology personnel assistant Nina Leroux. "We had a Red Cross representative visit us here recently," said Joan. "He was a guest speaker for our monthly safety program session and it was suggested that we hold a clinic. That got the ball rolling."

She said blood clinics used to be held annually at the Engineering building, but not in the past few years.

"That doesn't mean our people haven't continued to give blood," she said. "A lot of them gave blood at other clinics."

Donating at work is not only more convenient, she said, but tends

to provide better motivation and get co-workers involved as well.

Joan said the clinic has managed to attract a good percentage of first-time donors. "We hope these new volunteers will keep it up in the future."

The participation of first-time donors was also noticed by registered nurse Elaine Babcock who was in charge of the clinic for the Red Cross.

"It's always hard to get people out to give blood for the first time," she said. "Once they give blood they realize it isn't as bad as they've imagined and they tend to come back. Let's hope it becomes a habit."

Back in the fold

Geologist Leo Thompson of Inco Exploration and Technical Services was one of those who "lost track" of the Red Cross for about 10 years.

"I donated a dozen or so times in Thompson, but when I moved here they lost track of me. The clinic prompted me to volunteer again."

One of Leo's children was the recipient of donated blood at one time, but he said that's only one of the reasons he's giving blood.

"I know how much it is needed, perhaps more so now with the war in the Gulf."

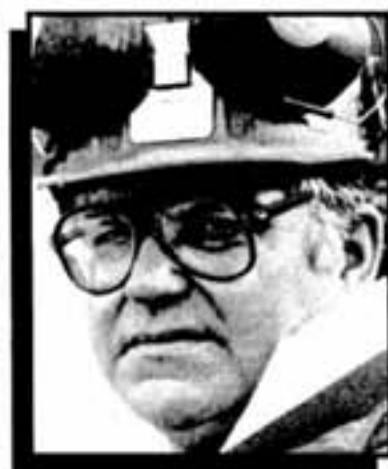


Leo Thompson exchanges blood for a warm smile from clinic assistant Kelly Studiman.

Will the war in the Gulf affect us at Inco?



Ed Visneskie, boom truck operator, Transportation: "I don't think it will adversely affect us much. If anything, it might help drive up the price of nickel with all the stuff they're using over there. If it lasts, it won't hurt us, that's for sure."



Edward Fredette, maintenance mechanic, McCredy West: "I don't think so. It's lasting longer than a lot of people expected and if it lasts much longer it would be to our advantage. It won't be a disadvantage. We use oil, but not all that much."



Austin Burns, garage mechanic, Copper Refinery: "I guess eventually it might be good for us if it lasts long enough. They have to replace all the weapons they use. I don't think we're responsible for the end use of the products we sell."



Bill Wickenden, instrumentation technician, Utilities: "If it lasts long enough it will affect us by the impact on the stock market. If it drags on the market could take a downturn and that could affect us badly. If Israel enters the war, that would do it."



Ted Callaghan, acid plant operator, Nickel Refinery: "I believe in the long run it will affect Inco. The weapons that are being used up now will have to be replaced when the war is over. Countries will have to rearm and more metals will be needed."



Basil Sauve, electrical leader, McCredy West: "I hate war, especially war for profit. I'd like to see profits frozen so war becomes unattractive financially. They need nickel in war materials, but I wouldn't want us to profit from it."



Frank Pozdyk, scooptram operator, Levack: "I don't know if it will affect us. In the long run they need materials, and that will affect us to the good. It's unfortunate when you base war on the dollar, thinking money, not people."



Terry Larouche, apprentice garage mechanic, Copper Refinery: "I don't think it will affect Inco in the short term, but maybe if it lasts much longer it could affect us. It's a matter of supply and demand if they're looking for materials."



Andy Poitras, instrumentation technician, Utilities: "You'd think that a lot of materials go into those tanks, aircraft and other materials. That's good for us. But the average guy in Iraq, he's not very happy about it and I don't blame him."



Bob Power, Acid Plant operator, Nickel Refinery: "The need for more war materials could affect us, but it's sad that people have to die for what's good for others. We certainly shouldn't celebrate, but then, we're in the metals business."

Hunting with a paintbrush means hitting every shot

Frood Mine Scooptram operator Terry Short held up his winter scene of three deer jumping a fence. "I'm a hunter," he said with a broad grin. "I got to know what deer look like as they run away from me after I missed them."

Terry "bags" deer and other wildlife with a paint brush these days, a sideline that gives him as much pleasure as slogging through the bush with rifle in hand.

"I've been interested in art since I was a kid," said the 25-year Inco veteran. "I did a lot of sketching when I was a kid, but I got down to painting about five years ago."

Sticking together

His winter scene that sits on display at Frood is only the latest of a number he's painted for benefits and fund-raisers, this one serving as a draw prize to raise money for

injured fellow miner David Dempsey.

"I don't know the man, but that doesn't matter. There's a lot of team spirit out here and I figure the more we can do for the man the better. All of us are here to do a job and to see that we don't get hurt. When something like this happens, we need to help one another."

Terry downplays his contribution as no great sacrifice. He loves to paint, he said.

"I guess this one took me three or four evenings of spare time. I find it very relaxing. Once I get started, I can go on forever and hardly notice the time go by."

Above all an outdoorsman, Terry particularly enjoys sitting outside with brush and canvass and painting. "Being outdoors and painting is what I enjoy the most. I guess I'm inspired by the surroundings."

Although only now beginning

to paint, Terry credits the encouragement of his school teachers for his artistic interest and drive.

"I won a few art contests while I was still in school, but then dropped art when I became a teenager."

"I figured I was too cool for that at the time."

He thinks his recaptured interest in art may have been a rekindled enthusiasm picked up from his children. Once he began to experiment with watercolors and oils, his newfound enthusiasm fed itself.

"I get a real joy out of it. I get a thrill from the comments I get from people, or seeing my paintings on people's walls."

Although he's sold some paintings, the money he's earned is way down on the list of motivations.

"I donate a lot of my work," he said. "That's led to some sales. But I'm not interested in the money. It's not my angle."



Terry Short with the painting he donated for a Frood draw.

Everybody wants treasure, but fun comes with the hunt

If there is a pot of gold at the end of the rainbow, Richard Jacobs and George Prusila are just the guys to find it.

For several years, Richard, George and a number of treasure-hunting enthusiasts have uncovered old coins, jewelry and other long-lost items throughout the Sudbury area and beyond.

Hunting for treasures - valuable or otherwise - is a favorite pastime for Richard and George, who are president and vice-president, respectively of the Northern Ontario Relic and Treasure Hunters (NORTH).

The club was formed in 1982 by Sudbury area residents who, armed with metal detectors, scour beaches, parks and just about anyplace else, looking for valuables

and just enjoying the fun of it.

"It's a hobby, it's enjoyable and that's about all it is," says Richard, a maintenance mechanic at the Copper Cliff Smelter.

While bonafide treasures uncovered by metal detectors have been reported on occasion, "the big find is a one-in-a-million thing," he says.

"A lot of people get into metal detecting with that kind of thing in mind, but then they find out that you can drive 30 miles to a site and come back home with 30 cents."

"People very easily get misconceptions about what it (metal detecting) is all about," says George, an Inco pensioner from the Frood machine shop.

"Sure, there is the allure of searching for valuable coins or

jewelry, but what many people enjoy is just the fresh air and sunshine you get when you're out there."

Generally, the two dozen members of NORTH can be best described as "collectors," says Richard.

"The majority collect coins, others collect bottles, rocks, military items, openers, stamps, postcards and other paper collectibles," he says.

"There's no stipulation that you have to have a metal detector. If you're interested in collecting anything you can join our club. The club is set up as much for social gatherings, for meeting people and sharing information as it is for anything else."

NORTH members -- "about half of them are Inco people," Richard says -- hold monthly meetings to discuss their hobbies and to organize social events such as barbecues and treasure hunts.

Club members also have worked to promote their hobby and dispel any negative images related to metal detecting, he says.

"It used to be at one time that people would see a guy with a metal detector over one shoulder and a shovel over the other and they would think that the guy was going to dig up the whole park. But we don't do that."

In fact, aside from their metal detectors, the only other tool carried by club members to uncover the items they detect is a small ice pick.

"I've had hunts in my backyard where there were 20 people digging for coins I had hidden and when they were done there was no visible damage to my yard," Richard says.

The club also offers a free public service, providing metal detector searches for lost valuables such as keys, rings and other jewelry. "A couple of years ago, a fellow from



George Prusila and Richard Jacobs hunt for "treasures."

the Sault was in town and he lost a valuable ring in the snow, downtown," George recalls. "I found it for him after 15 minutes." On other occasions, George, Richard and other club members have used their metal detectors to help local residents recover long-lost family heirlooms, keys and other valuables.

Over the years club members have scoured local beaches so thoroughly, Richard says, that "I guarantee you that if we're notified of a gold ring lost at any beach in town, we'll find it in 15 minutes."

"It's always a pleasure to be able to help out people like this," adds George. "Our members are free to do what they wish with what they find, but we encourage them to return things if they know who the owner is."

Depending on the quality of the metal detector and the size of the

buried "treasure," metallic items can be found up to three feet underground, Richard says. "But in general, up to six inches down you can find the common items, like coins, jewelry and other small pieces."

After several years of "hunting," Richard and George each have assembled large collections of the pieces they have uncovered.

The collections include silver coins dating back to the 1850s and rings, watches and other gold jewelry.

"If you have enough money, you can buy yourself a coin collection," George says. "But there's a lot more fun in it if you do it yourself. I've met people in this hobby who have a lot of money, but they still get pleasure in finding an old nickel or dime."



George Prusila and Richard Jacobs display some of the items uncovered in their many years of treasure hunting.



Cold Frames and Hot Beds

By Ellen L. Heale, P.Ag.

If you want to get a head start on spring vegetables, toughen up seedlings for transplanting or harvest lettuce at Christmas time you need a cold frame... or even a hot bed. Cold frames protect plants from frost, hard rains and heavy winds. Early in the spring you can enjoy fresh salads with radish, green onions and leafy lettuce. Cuttings may be rooted or plants started directly from seed outdoors in a cold frame. Transplants that have been started indoors or in containers from a greenhouse are moved into a cold frame and hardened off or acclimatized prior to planting out.

Outdoor temperatures and light intensities are much different, compared with indoor or greenhouse conditions. Plants are successfully hardened off by lowering temperatures, withholding water or limiting fertility - any method that reduces their growth. Hardening allows plants to better withstand cool temperatures, drying winds, a shortage of water or high temperatures. Plants that have been acclimatized also produce new roots faster than non-hardened plants. After one or two weeks in a cold frame, seedlings or transplants are moved to permanent locations outdoors.

Another potential use for a cold frame is as a summer food dryer. Ancient sun-drying techniques were used to preserve food. Late in the summer, before fall crops are planted, cover the inner walls of the cold frame and soil with black plastic to retain heat and keep food clean. Information on pre-treatment, food preparation, drying times and storage is available from reference books. Window screens, set on inverted plastic pots or on an inner frame, serve as food trays. Fruits and leathers require 55 to 60°C for drying, fresh herbs dry at 35°C. Careful attention to venting is necessary, as humidity increases foods take longer to dry and there is a potential for mould to develop - so an adequate air flow is necessary. Drying times vary according to the type and size of pieces.

Cold frame construction is identical to that of hot beds, except that no provision is made for supplying bottom heat. Cold frames use only the heat of the sun, retained by a transparent covering. In Victorian gardens, hot beds provided winter and spring produce from heat produced by fresh decomposing manure. Heat can also be provided by hot water or steam pipes, hot air ducts or infrared lights. Hot beds may also be constructed on the south-side of a house in front of a heated basement window. The temperature inside the hot bed is controlled by opening and closing the basement window. However, the most common method of supplying heat below the soil is with plastic covered (insulated) electric soil-heating cables.

Automatic temperature control with a thermostat is necessary. Some soil-heating systems are low-voltage and require a transformer. An outdoor electrical outlet and wiring should be installed by a qualified electrician. Electric soil-heating cables warm the soil relatively cheaply and efficiently. Root temperatures of 10 to 13°C are required for plant growth during colder months. To install, spread a five centimetre layer of sand evenly over the bottom of the frame. Lay the soil-heating cables in loops over the entire area to be heated. Avoid sharp bends in the wire. Lay the cable between 10 and 20 cm apart. Do not cross the cable over itself or over adjacent cables. Spread an additional 2.5 cm of sand over the electrical soil-heating cables, followed by eight cm of moist peat moss.

The ideal location for a cold frame or hot bed is a south-facing exposure, to intercept a maximum amount of sunlight. A well-drained site that will not flood in the spring is important, as well as protection from strong north winds.

Cold frames and hot beds are constructed in the same manner except for supplying bottom heat, as previously described, for hot beds. The size of the frame will vary based on the needs of the grower. The walls of permanent structures may be made of concrete, cinder blocks or brick. Temporary or portable frames tend to be made of wood. Avoid using wood treated with oil-based preservatives such as creosote or penta-chlorophenol. These materials are toxic to plants. The safest wood to use, that is resistant to decay, is 'pressure-treated' lumber. The preservative treatments bind tightly to the wood and have a very low tendency to leach into the soil. Frames may be set on the surface of the ground or set in a pit, with the roof exposed.

Parts of the frame are four walls and a roof. The south wall is usually 1.8 to 3.6 cm long and 25 to 30 cm high. The side walls (east and west) slope down towards the front/or south. Side walls are 1.2 to 1.3 meters wide, the same height as the south wall in the front and 0.6 to 0.9m tall at the back. The resultant slope for the roof, or angle, varies but is built to intercept a maximum amount of sunlight (up to 45°). The north wall is the same length as the south wall (1.8 to 3.6 meters long) and the same height as the back of the side walls (0.6 to 0.9 meters). The roof slopes down from the north to the south and is hinged along the back (or north wall). Glazing or covering materials may be glass (note - this may be very heavy), fibreglass or greenhouse polyethylene. The wider the frame, the more roof sections will be required (a maximum roof section width is typically 0.9 meters). The best heat retention is with a double layer of 4 to 6mil polyethylene with a 2.5 cm air space in between. That is one layer of plastic on each side of the roof frame. It is important for the roof to fit tightly to retain heat and obtain a high humidity. If there are gaps attach weather stripping to the frame.

The frame can be vented manually by opening and propping up roof sections. You may also purchase a solar-powered device that opens the roof automatically, at a set temperature, as the inside of the frame heats up. Temperature required for germination of many vegetable and flower seeds is approximately 18°C. The optimum temperature for cucumbers and squash, warm weather crops, is 24°C.

During sunny weather, temperatures may build up to excessively high levels inside closed frames (note - temperatures should never rise above 21°C). Avoid overheating, open the roof sections gradually to provide ventilation and water plants daily. Plants may also require shade protection with cloth, burlap, newspapers, etc. Be careful not to overwater plants when the weather is cool and cloudy - the frame retains moisture with soil evaporation and plant transpiration. If seeding, or growing directly in the cold frame, the bottom should contain 10 to 15 cm of good quality topsoil. The preferred soil mix is a light, porous loam containing organic matter such as well-rotted manure or compost.

Take advantage of reflected light by painting the interior of the frame walls with white gloss exterior latex paint or insulate walls with foil-sheathed insulation. During cool nights or late fall/early spring months provide additional protection by covering the roof with a heavy blanket or green garbage bags loosely filled with cellulose insulation or vermiculite. Another energy conservation method is to line the side and north walls with 2 litre transparent plastic pop bottles filled with water coloured dark blue or black (with ink). These bottles will radiate heat during the night.

Successful germination and growth in a cold frame requires attention to ventilation, watering, shading and winter protection. In the spring start with fast maturing leafy salad-type vegetables and other cold-hardy crops. Broadcast seeds of leaf lettuce, spinach, radish and carrots in blocks and thin them out as required. Plant onion sets for green bunching onions along the north wall - the taller plants must not shade the others. As the days lengthen and temperatures become warmer interplant with more tender vegetables. Transplants such as tomatoes, pepper and squash may need to be hand pollinated - gently shake them every day. When the night time temperatures are consistently above 13°C remove the roof sections, the rest of the frame may be left in place.

In the fall, to prepare for winter crops, remove any plant debris. Rework the soil with additional compost and add fertilizer based on soil test analyses and recommendations. When minimum night temperatures are approximately 7°C replace the roof sections. Seed cold hardy, lowlight tolerant crops. Winter lettuce such as endive, escarole and raddichio may be grown and harvested until Christmas.

LETTERS

Thanks for the memories

Dear Sir:

The Copper Cliff High School Alumni Association Steering Committee wishes to thank you for contributing to Copper Cliff High School Reunion 1990 with your generous donation of time and services as a corporate sponsor. The success of the three day weekend was due to the unselfish donations of time, talent and money by many individuals and organizations such as yourself. Letters have been received by the Steering Committee from former students who returned for the reunion saying they were overwhelmed by the emotion of renewing friendships from "The best years of their life."

As a result of your help and that of the many volunteers, we were able to meet all our expenses and incur a surplus of funds. The Committee has decided to disburse these funds by giving \$20,000 to the Laurentian Hospital Cancer Care Campaign, wherein two pieces of equipment will be purchased. Also a camcorder has been purchased for the Copper Cliff Public School and a fund will be established to award a prize each year to a deserving male and female graduating from there. In addition, bursaries in the name of Copper Cliff High School Alumni Association will be established at Cambrian College and Laurentian University for deserving students from our community.

As was demonstrated at the reunion, "A strong mind in a strong body" has no boundaries.

Bertha Mae Fournier
Chairperson

Manitoba's memos make better bunny bedding

Inco's Thompson, Manitoba employees are involved in a unique environmental project that reduces waste paper and gives rabbits a good night's sleep.

The project calls for the shredding of paper on Inco property, then transporting it to the Thompson Zoo where it is being tested as bedding for several types of animals.

Thompson recycling coordinator Wendy Hodgson said the idea has been tried elsewhere and has worked very well.

"The shredded paper makes a highly absorbent and warm bedding," she said. "We want to see how the critters at Thompson Zoo feel about it."

If the project is successful, the zoo could replace or mix its current bedding of shavings with shredded paper.

Big Brothers event needs Inco bowlers

The Sudbury and District Big Brothers organization is once again looking for competitors for its annual Bowl for Millions event.

To be held on Saturday, March 9 at the Notre Dame Bowling Centre, the event is promising to be the most successful to date.

Funds raised will ensure that the needs of the Big Brothers are met and that the "Little Brothers" will get the help they need.

Organizers say space is limited and suggest that anyone interested should call 673-6161 as soon as possible to reserve a spot on the lanes. If you feel particularly competitive, organizers will send a challenge to a friendly competitor on your team's behalf.



Which waste where?

A waste paper survey underway at Inco is part of an effort to reduce the amount of waste paper generated at Inco facilities in the Sudbury operation. Designed to reveal how much waste paper is recyclable, the survey was supported with enthusiasm by Inco personnel. At left, Fay Wafer of Purchasing gets into the spirit and reads the list at one of the monitoring sites at the General Office to find out which bin she should use to dispose of her apple core.

Unwanted pet breeds award-winning litters

John's dogs shed trophies, not hair

When John Veno first heard a suggestion from his wife that the couple buy a family dog, his response was an unequivocal "no."

Five years later, however, it would be a gross understatement to say John has relented on his initial reaction to having a pet around the house.

In fact, during these last few years, the welder-specialist at the Copper Cliff converters has seen about two dozen pups come and go at his home. And he's loved every minute of it.

It all began when Huguette Veno said a household pet would be a good companion, since her husband was out of town quite frequently hunting and fishing.

"Originally, I said 'no dogs,'" John recalls. "I had a dog before that shed its hair all the time and I didn't want another one."

But a friend who breeds German Shepherds suggested to John that he might consider a non-shedding breed known as the soft-coated Wheaten Terrier.

"I said 'maybe' and I talked to Wheaten breeders in Sudbury and the Sault," John says. Out of curiosity as much as anything, John and Huguette visited Waggish Wheatens, a Sault Ste. Marie breeder. They came home with Meggie, a Wheaten pup.

Four months later, John was back in the Sault to have his dog groomed. But the breeder was so impressed with the development of the dog that she suggested it be entered in a competition.

Much to John and Huguette's surprise, their family pet was selected as Canadian champion in its class. Before long, they found themselves immersed in a new hobby - dog breeding.

Since that first competition, the Venos have raised 23 Wheaten Terrier puppies and their dogs have earned numerous awards along the way. One of their pups recently was awarded a Canadian Championship title. Their pups have been

sold throughout Ontario, as far west as Saskatchewan and east as far away as Halifax.

"A number of people at work also have my puppies," John says proudly. Among those Inco workers are Bill Vickman (Industrial Relations), Alan Bellefeuille (Divisional Shop) and Denis Rivet (Iron Ore Plant).

While he acknowledges his bias, John says he believes there are few, if any dogs which make better family pets than Wheatens.

"They're non-shedding and hypo-allergenic, at least for most people," he says. "They're one of the most mild-mannered terriers and they're great with children."

Although it is simply a hobby, the care and attention John and Huguette devote to their dogs differs little from the approach of a professional breeder.

"It's not a business - we don't even recover our costs," John says. "We breed to improve the breed. When people buy our puppies, they know exactly what they're getting."

The soft-coated Wheaten Terrier breed has been known in Ireland for more than 200 years, although it was not officially recognized as a distinct breed until the 1930s. Trade magazines describe it as a "bouncy, good-natured breed, with a soft, wavy coat in varying shades of gold." Males stand 18.5 inches at the shoulder and weigh 40 to 45 pounds, while females are slightly smaller.

The puppies bred by the Venos are offspring of prize-winning males and females. They have travelled to Sault Ste. Marie, Toronto and Pennsylvania to breed their females with top males.

Currently, they are breeding their award-winning female Canadian Champion Misty with a prized male American and Canadian Champion Firecracker from Holweit's Kennel in Mississauga.

"In our breeding we look for temperament first and foremost, then we look at the physical struc-



John Veno grooms one of his prize breeds, a soft-coated Wheaten Terrier named Will-O.

ture of the dog," he says.

The Venos' puppies are born at the family home in Hanmer, in a comfortable "dog room" John has built in his basement.

"It's draft-free and when the puppies are born the temperature of the room must be maintained at 85 degrees (F)," he says. "When puppies are born they need warm temperatures to help them digest their food."

After three days, a puppy's tail is cut and its dew claws (rear most claw on the pad) removed by a veterinarian to maintain the standard of the breed.

By the fifth week the puppies have been weaned from their

mother and are eating solid food. Generally, they are not sold until they have reached eight weeks, John says.

Throughout those first two months, John and Huguette provide considerable care and attention to the puppies.

"Huguette is like a second mother to them," John says. "She nurtures them when they're born and they're well handled and played with a lot. A lot of care goes into them before we sell them."

Such purebreds sell for hundreds of dollars - John is reluctant to discuss selling prices - and John says he has had no complaints from his customers. And he advises any

potential purebred owner to buy from a reputable breeder.

"You have to know what you're getting. You have to have somebody you can turn to if you have a problem or a question."

The numerous awards won by the Venos' dogs in recent years have been a great source of pride, John admits, but they don't match the satisfaction that comes from the reaction of new dog owners.

"The enjoyment of making somebody happy through this hobby, to see the look on a child's face when they're playing with one of our pups, that's what it's all about."



Huguette and John Veno relax at home with their award-winning dogs, Will-O (with Huguette) and Misty.



John Veno poses with the many awards won over the last five years for his dogs.

A Christmas with sand, not snow

A view of the Persian Gulf from Inco's own

On Page 16 of the Christmas issue of the Triangle we carried a story on Marilyn Harper of the Power Department whose daughter and son-in-law, Mary Catharine and Paul Bayliss, work in the Persian Gulf. Paul has written to give us a personal view of what it's like to live in an area that's been the focal point of world events. It was written before the Gulf war broke out.

Dubai Diary

The Gulf Crisis - a personal view by Inco's resident war correspondents.

It's Monday, December 24th, Christmas Eve, a working day like any other. Woken as usual by the haunting calls coming from the mosque as the faithful are called to prayer. As we stand breathing in the desert air drinking freshly brewed coffee a jet roars overhead heading who knows where and for

what purpose.

The drive to work is tricky. The roads are a throng of people on the move. I manage to grab a copy of today's paper from the vendor at the traffic lights. He has a problem hearing me but that's probably due to the fur hat with pulled down ear flaps he's wearing and not the jet roaring overhead. I sympathize with him as it gets pretty cold these winter mornings down to at least 60°F.

The paper is full of doom and gloom, the Maple Leafs have lost yet again and England was beaten by Papua New Guinea at soccer. Meanwhile on the front page George and Co. are concerned about the possibility of Saddam and his troops not sitting down to their Christmas turkey but launching a sneaky attack instead. There's even an extra special bonus, a sentence from Brian Mulroney. Now you know he's made it as an international statesman, quoted in the Gulf News.

Work is the same tedious process it's been for the past few weeks, digging ditches and helping with the reinforcement. At the present rate of progress it's unlikely we'll meet the January 15 deadline. Hopefully, however, all the men

will pull together and we can get the final concrete work finished. As we work, jets constantly pass overhead heading up the coast to the north.

Time passes slowly. Lunchtime comes and goes, and as the sun sinks slowly in the west the call to prayer rises from the mosque again. Lights come on briefly before drapes are hurriedly pulled across windows. The journey home is more treacherous than the morning as more people take to the road.

Once home it's time to settle down and maybe watch some T.V. The local channel, recognizing that it's Christmas, put on such programs as Wimbledon, golf, horse racing and other such wonderful summer events. I'm not complaining (much) but we get Star

Trek - the previous generation and last week it was Twin Peaks Part 3. This week Part 2 and probably Part 6 next week. Strangely enough they all seem to fit together but will we ever find out who killed Laura Palmer? The news is full of more doom and gloom, dramatic statements and ultimatums from George and Co. together with seasonal greetings, a bit like saying "Happy Christmas or else". Then there it was, a glimpse of Brian Mulroney peering over someone's shoulder at the back of one of those post press conference photo sessions. Meanwhile overhead more jets journey north.

The evening wears on and the T.V. fades. 'Tis the night before Christmas and a silence hangs over the desert. A bright light appears to the north. The camels shuffle uneasily and the goats bleat nervously. Is this what we've all been waiting for? Someone whispers "He's started early" and around us the sound of murmuring rises as people ask the inevitable question, "Has Santa's sleigh got stealth technology to beat the Iraqi radar?"

P.S. Whilst we appreciate the seriousness of the present situation and the concern shown by relatives and friends of those of us working out here and particularly those who are serving in the armed forces, the above article has been written tongue-in-cheek to show that life here continues as normal despite everything.

Dubai is in the United Arab Emirates (not Saudi). It is approximately 800 km from the Kuwaiti border in a direct line. Flying time is 1 1/2 days solid driving. When Iraq first invaded Kuwait on August 2, the U.A.E. was admittedly vulnerable as were Saudi Arabia and all the other Gulf states. Now we have the combined forces between ourselves and the Iraqis plus reinforcements in our rear in Oman and the Indian Ocean. We are out of range of the Iraqi long range missiles and the only remaining threat is if an Iraqi aircraft manages to get past the fighter aircraft and radar cover arrayed against Saddam's air force.

As a result of the military build up we feel safe enough to stay and wait and see what happens. We know that our respective embassies and consulates have sufficient time to put into effect their evacuation plans if the worst occurs unlike those in Kuwait who had no forewarning.

Business continues as normal despite a slight skitter at the start of the crisis and those airlines who reduced their flights or ceased their stopovers in Dubai have now returned to normal services again after recognizing that Dubai is fairly safe and stable. Hence the jets passing constantly overhead.

And so we sit and wait along with the rest of the world. We hope that peace will prevail because, in the words of one of Dubai's latest entrepreneurs, the T-shirt salesman, "No sane person want's a war... but who's sane?"



HERITAGE THREADS

Remembering the chief

by Marty McAllister

At 3 o'clock one Wednesday afternoon, 40 years ago this month, Andy Ranak turned down his copper converter and stood in the smelter's flickering shadows, head bowed. Mirrored again and again throughout our mines and plants, the solemn gesture coincided with a funeral service on Staten Island, New York - immediate family and Inco family sadly accepting that The Chief was dead.

Our own way to mourn

I hadn't yet turned 12, and we were still a couple of vehicles away from our first new car. We weren't poor, heaven knows, I mean we had electricity, indoor plumbing and our house was warm in the morning. A true child of the twentieth century, I welcomed the technological marvels of our little Inco town. Neither were we rich, but mother and dad could plan a life of steady improvement, on paydays, my dad's cheque never, ever bounced.

My folks weren't social gadflies and I doubt that my dad ever met Robert Crooks Stanley in person - but, around our house, his name was spoken in tones of admiration and respect. When those wise, bushy-browed eyes closed for the last time on February 12, 1951, my dad was one of the sad ones.

Diminutive giant

Mr. Stanley was a mining engineer for 50 years, after graduating from the Columbia School of Mines. He became part of the Nickel Family in 1902, long before the acronym 'Inco' was ever used. Twenty years later he became President. In 1937, he was also elected Chairman of the Board and carried that heavy double responsibility for fully 12 years, until 1949. Then seventy-two, after twenty-seven years as president, he handed that role to his long-time colleague Dr. John F. Thompson - and continued as Chairman until his death.

A eulogy in the March, 1951 Inco Triangle described Mr. Stanley as "a doughty general." Indeed so, but that doesn't mean he was a tall one. In fact, a 1930 photograph of Inco directors in the Engineering and Mining Journal showed him as the shortest among the distinguished group. On his right, the balding John L. Agnew stood about six inches above Stanley's lush, wavy locks.

Overleaf, however, a head-and-shoulders photo of the Inco president conveyed the keen intelligence, relaxed good humor and quiet confidence that made both the tall and the titled look up to him. Two decades, a massive expansion program, a depression, a World War and four honorary doctorates later, a photo portrait by Karsh of Ottawa could capture only one additional quality - An unmistakable aura of statesmanship.

Yep, he was a somebody alright - and something of a hero.

Bob Stanley attracted the loyalty of Inco people the same way he got his fame and fortune, he earned it. He liked to visit his people and they were glad to see him (as long as they were doing their jobs!).

In 1930, toward completion of the major expansion of Sudbury area

operations, an observation was made by James H. Brace, Vice-President of Fraser-Brace Engineering: "The work was carried out under the general direction of Robert C. Stanley... and with close personal supervision on the ground by J.L. Agnew, Vice-President. This direct contact between the chief executives and the work resulted in rapid progress."

Stanley's secret

In his book *For The Years To Come*, Dr. Thompson said: "I was assistant to Stanley for years. He was the man who saved the Nickel Company in 1922. He was the one in whom everyone had confidence. People had confidence in him and trusted him. I worked for him for 40 years on that kind of basis. Sometimes things went wrong but there never was any idea that they went wrong through any ill intention on his part, or mine. If you wanted to evolve a philosophy, or whatever you want to call it, of a company, I don't believe you could think in any better terms than in the terms of mutual aid and mutual confidence."

And where are they now?

Trust... mutual confidence... mutual aid. Those are pretty wholesome concepts and I'm sure we've all had days when we might wonder what happened to The Chief's bequests. We've been through high times and low times and sometimes we've gotten sidetracked by the confusing burden of change. But, we seem to be able to get back on track as solid families usually do. I think Bob Stanley would be proud of us - most days.

... and, a word on the "Snowball Express"

I love it when people stop me in the yard, or in a shopping centre, or when they call or write - with some comment on a piece I've written. Even points of disagreement are welcome because they usually prompt me to dig deeper and sometimes to eat crow. Sometimes not.

Last month, Grant Hambley of Winnipeg wrote to comment on my November article entitled "A Bridge From Heart To Heart." The well-known geologist recalled some of his own exciting days at the birth of Thompson, and added: "I would like to set the record straight on one point. The freight haul was never, ever, referred to as 'The Snowball Express'. That name was dreamed up by some reporter who probably thought it was cute and that was several years afterwards."

Well, let's have a look-see.

Grant's right, it was a reporter, but not just 'some reporter' and the time lapse was more like several weeks. The dastardly deed was done in cahoots with Sam Bates of The Saturday Evening Post for inclusion in the June, 1957 (that's not a typo) issue of INCO Magazine - then published out of our offices at 67 Wall St. in New York. The congratulatory article was called "Snowball Express."

I honestly can't say whether that "silly name" was actually coined by Mr. Bates. He did the magazine's cover illustration for sure and likely collaborated on the article. Inco had been dealing with The Saturday Evening Post since 1927 so there was surely a lot of friendly chatter before someone - Bates, Thompson, Wingate, Parker, a staff writer?? - came up with the tag. I guess it doesn't matter, Inco brass approved.

In all fairness to Grant, INCO Magazine didn't get very wide distribution in Canadian operations.

Anyway, as Walter Cronkite would say: "That's the way it is."

Control stick a joy for scooptram maintenance

Frood miner 'sticks' it to Inco and wins big!

For Frood Mine electrical leader Bob Neville, keeping the 23-ton underground trolleys hauling ore cars was often a pain in the neck.

Getting rid of the pain put \$10,000 in his pocket.

The huge trollies, "like underground streetcars," haul as many as 11 cars loaded with ore from Frood to Number 9 shaft for hoisting to the surface.

"When the trolley quits," he said, "it throws a monkey wrench into the works. There are three trollies but only one line. If one breaks down on the line in the drift, the other two can't get past and there's a stop in operations and productivity here."

If there's a major breakdown, the trolley is hauled away. Minor repairs can often be made on the spot in about 15 to 30 minutes. "But even minor repairs can create problems if they occur often enough," he said.

Although a highly efficient piece of equipment, the trolley has a weak point, the cab-mounted controller that regulated the speed and direction with a mechanical drum device. One stick directed forward and reverse, the second for speed.

Because of design, age, availability and number of parts, the controller was difficult to maintain. "We used to inspect and adjust them at least once a month, and two or three times during the month they would break down and repairs would have to be made."

"I got tired of fixing them over and over again."

Bob's solution to the problem was a steal from the video arcade and the cockpit of today's jet fighters. A joystick controller that combined all functions into one.

Adapting the trolley to the joystick mode was no easy task. He came up with the idea early in 1987, and it wasn't until after he looked

for a suitable controller that the idea was submitted to the Suggestion Plan a year later.

"It took three years from the original idea to a working model," he said. "The one we have installed now is working well, but it's the fourth variation of the original idea."

An electrical circuit had to be designed so the new joystick controller could be adapted to the trolley. Further delays resulted because each adaptation had to be tested and the problems worked out before a new controller could be installed.

Since being installed in a single trolley last April, there's been no service calls and maintenance has been virtually nonexistent. The new controller has very few parts and only a contact block is kept as a back-up.

The old controller consisted of some 70 parts that had to be kept in stock at the warehouse, and replacement part orders from the English manufacturer could take as long as two years.

The controllers, originally designed for head cranes, will be installed in the other two trollies at Frood early this year and Bob expects the equipment to be installed in all Inco trollies in the future.

Bob said he goes for Suggestion Plan cash in "fits and starts." He doesn't describe himself as a tinkerer, although nagging problems on the job drive him to the drawing board.

"I had a \$1,500 idea approved a year ago and I have another idea submitted right now," he said, "but I really don't go around looking for ideas to submit."

"I try to eliminate something to make my job and the jobs of others a little easier. That's the motivation."



Frood electrical leader Bob Neville with the joystick that will make his job a little easier.

\$25,000 in Creighton Reunion funds given to Anderson Farm Museum

Emotions were mixed as members of the Creighton Homecoming Association watched their chairman Jack Blackwell present a cheque for \$25,000 to Dave Tremblay, chairman of the Anderson Farm Museum's Board of Management.

"This is the first step," Blackwell said, "toward approaching the provincial government for additional funds."

The pledge represents the lion's share of proceeds from the much-loved and highly-successful Creighton Reunion of July, 1989.

Cold weather brought the January proceedings to the cheery comfort of Walden's Fielding Memorial Park, but the focus was on a generous boost for the Creighton Log Cabin — now located for posterity at the Anderson Farm Museum in Lively.

It was the coming together of two forces in a common cause, and on behalf of the Town of Walden, Mayor Charlie White led off with "thanks to both groups."

The log building itself was donated by Inco and moved from Creighton to its present site in 1988, where it was partially readied in time for the reunion.

During the past year, various physical plans and program concepts were reviewed by both the Homecoming Association and the museum's Board, all of which led to the agreement to proceed with the ongoing display and interpretation of the history of the village of Creighton Mine.

In his acceptance of the welcome pledge, Tremblay discussed the future utilization of the two-storey structure: "The building will be officially known as the Creighton Log Cabin and the main floor will be dedicated to the history of Creighton. The second floor will have rotating exhibits that will periodically feature the other Walden communities of yesteryear — places like O'Donnell, Victoria Mine, Cinottville, Crean Hill and so on. The basement will house archival

facilities for material relating to both Creighton and the museum's mandate as a whole."

In closing, Tremblay thanked James Fortin, curator of the Anderson Farm Museum, for his work in coordinating the ideas for the Creighton building's use, chuckling: "And he'll have to do most of the work putting the ideas in place."

A busy fellow, Fortin is also a member of the Board of Directors of the Ontario Historical Society and sits on the executive of the Voyageur Heritage Network, but he'll get the job done. Joking, out of Mayor White's earshot, he said: "I guess that's what I get the big dollars for!"

And the mixed emotions?

Three years before, Pat and Carmen Sharpe had entered a meeting together to see what they could do to help organize the party of all Creighton parties.

Alongside scores of others like them, they did plenty. What that Homecoming Association did will



Dave Tremblay gets a \$25,000 cheque from Jack Blackwell.

never be forgotten.

Now, as they prepared to leave this modest ceremony together, looking just a little sad that maybe another chapter had closed, Carmen

turned and laughed quietly: "You know what Walter Saftic (Exploration Services) said? He wondered when we're going to have another reunion"

Fourth quarter earnings \$72.6 M

Inco's 1990 earnings third highest in history

Inco Limited announced last month its unaudited results for 1990. Earnings for the year 1990 were \$441.2 million, compared with a record \$753.3 million for 1989. Net earnings for the fourth quarter of 1990 were \$72.6 million, compared with \$152.1 million in the fourth quarter of 1989.

In commenting on the results, Donald J. Phillips, Chairman, President and Chief Executive Officer, said: "The Company's performance in 1990 was a significant achievement. Net earnings of \$441 million were the third highest in the Company's history, surpassed only by the exceptional results achieved in 1989 and 1988, when nickel prices had surged to unprecedented highs. Return on equity was 26 per cent, exceeding our goal of 15 per cent, and the Company's debt/equity ratio improved from 42/58 at the beginning of 1990 to 37/63 at year end."

Results for the year 1990 include a gain, recorded in the second quarter, of \$112.2 million after tax or \$1.08 a share, from the sale by the Company of a 2.0 per cent common equity interest in its Indonesian subsidiary, P. T. International Nickel Indonesia. Results for the year 1989 included a gain, recorded in the fourth quarter, of \$47.1 million after tax or \$0.45 a share, from the sale by the Company of a 30 per cent common equity interest in a Japanese affiliate.

Operating earnings comprise earnings before income and mining taxes, interest expense, general corporate income and expenses, minority interest, and currency translation adjustments.

The decrease in operating earnings in the Company's primary metals business in the fourth quarter and year 1990, compared with the corresponding 1989 periods, is mainly due to lower realized nickel prices. Relative to the 1989 periods, primary metals operating earnings were also adversely affected by higher unit production costs and lower nickel deliveries, but benefited from higher realized prices for rhodium, principally in the second half of 1990. The higher unit production costs were principally due to lower ore grades and reduced production volumes. The higher costs also reflected higher employment and supply costs and the increased value of the Canadian dollar relative to the U.S. dollar. Sales and cost of sales reflect deliveries in 1990 of 99 million pounds of purchased nickel as compared with 87 million pounds in 1989. The Company's finished nickel inventories were 56 million pounds at December 31, 1990.

Capital expenditures were \$57.3 million in 1990, including \$15.7 million in the fourth quarter. These expenditures included \$2.97 million relating to the ongoing project to reduce sulphur dioxide emissions from the Sudbury, Ontario smelter, compared with \$65 million in 1989. The remaining expenditures were principally directed towards mine development in the Canadian operations and expansion at the

Company's Indonesian subsidiary, as well as for safety and productivity improvements. Total capital expenditures are expected to decline to approximately \$450

million in 1991, including some \$115 million on the project to reduce sulphur dioxide emissions in Sudbury.

The Company generated a cash

surplus, before financing activities, of \$14.3 million in 1990, which included proceeds of \$240 million in the second quarter from the sale of a 20 per cent

equity interest in P. T. International Nickel Indonesia. At December 31, 1990, the Company had total debt of \$1,008 million and its debt/equity ratio was 37/63.

Employees asked to repeat on the job environmental efforts in the community

The Regional Municipality of Sudbury is asking Inco employees, as well as other residents of the community, to participate in a Blue Box program designed to separate household wastes into recyclable and non-recyclable portions.

Introduced successfully in many other communities, the Blue Box program is just one of many environmental programs that will hopefully help to reduce pressure on the dwindling number of waste disposal sites in the province as well as improve the environment in general.

Inco is encouraging its employees to participate in the community-wide program.

To help the public participate in the Blue Box program, the Region has published and is out information on the project called Blue Box Facts.

Blue Box Facts

1. Household Wastes to be Recycled

• Newspapers, including all non-glossy inserts, steel and aluminum cans, glass food/beverage containers, plastic soft drink bottles.

2. Preparation of Recyclable Household Waste

• Steel/aluminum cans, glass containers and PET soft drink containers should be rinsed prior to being placed in the Blue Box. Labels should be left with the cans. Tops and lids should be removed from glass containers and PET soft drink containers and discarded.

• Newsprint and all non-glossy inserts should be balled or bunched and placed on top of the cans, glass and plastic soft drink containers in the Blue Box.

3. Processing of recyclables for shipment to market

• Newsprint and associated non-glossy inserts will be baled. Each bale will weigh approximately 2,000 lbs.

• Plastic soft drink containers will be baled into packages weighing 300-500 lbs.

Aluminum and steel cans will be separated and densified into briquets using a magnetic separator/densifier unit. Briquets of steel cans will weigh approximately 40 lbs. Briquets of aluminum cans will weigh about 20 lbs.

4. Markets for Recyclables

• Newsprint markets include Atlantic Packaging (Oshawa) and Ontario & Quebec Paper Co. (Thunderbolt).

• Container glass will be sold to Consumers Glass Co. (Toronto).

• Steel cans will be sold to the major steel companies i.e. Algoma, Dofasco, Stelco.

• Aluminum cans will be sold to Alcan.

• Plastic soft drink containers will be sold to Twingpak.

5. Implementation Schedule

Municipality	Boxes Delivered week of	Start up of Blue Box Collection-Week of
Sudbury	March 1	March 18
Valley East	March 18	March 25
Capreol	March 18	March 25
Nickel Centre	March 25	April 1
Walden	March 25	April 1
Raysside Barron	April 1	April 8
Ornaping Falls	April 1	April 8

6. Collection Schedule

Blue Boxes will be picked up on the same day as regular garbage pick-up. The Blue Box should be placed at the curb for pick-up by 8:00 a.m. on that day.

Telephone Hotlines:

Blue Box Program Information 673-BLUE

Blue Box Pick-up Complaints 524-BBOX

Tips on reducing waste

Reduce

1. Buy only what you need. Ask yourself if you really need it.

2. When you make a purchase, buy quality items that are long-lasting. Initially the cost may be higher, but in the long run you can save.

4. Rent items that you don't have a regular use for, such as tools or party ware.

5. Avoid products that have excessive packaging. Choose items that are packaged sparingly. Refuse to take additional packaging such as bags.

6. Purchase some items in large size containers to reduce waste. One large jar of peanut butter produces less waste than two small jars.

8. Buy fruits and vegetables "loose" rather than on a plastic covered tray.

9. Give your children a thermos for their school lunch rather than single serving soft drinks.

Reuse

1. Buy reusable grocery tote bags rather than accumulating and discarding plastic bags.

2. Reuse plastic containers for food storage at home and for buying bulk food.

3. Avoid buying paper towels by reusing old fabric as dust and cleaning clothes.

4. Give magazines and books that you no longer want to friends, local hospitals or doctors' offices.

Recycle

1. When the "Blue Box" recycling program starts in the Region of Sudbury, you will be recycling glass bottles and jars, aluminum and steel food and beverage cans, newspapers and inserts, and large plastic soft drink cans. (Please wait until the program begins to start collecting these materials.)

For more information about waste reduction measures,

call 673-BLUE.

Inco gates and parking lots out of bounds to salesmen

The distribution of literature, flyers, handouts, etc. at Inco parking lots and/or gates is prohibited except when authorized by the Public Affairs Department. The conducting of business (i.e. the sale of any commodity) is also banned.

Plant Protection Officers, who observe these occurrences will immediately report the incident to

the supervisor on duty (after hours, the supervisor on call). Every effort should be made to obtain descriptions of persons involved (licence numbers etc.) and a report outlining all the circumstances submitted to the supervisors.

The exception will be the distribution of union literature by members of Local 6500 of the Steelworkers of America.



5110 JRM, DOUBLE C, LUTHERY,
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