



**the
triangle**

JUNE 1973

the triangle

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On the cover . . .

Out of the blue of the western sky comes the agriculturalist's latest solution to the dust problem on the tailings area. The company chartered this airplane to spray a chemical binder to seal the surface to prevent blowing dust.

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Future Search

Underneath the Sudbury Basin lies a treasure-trove: the nickel-copper ores. We've been mining that treasure for 96 years, but no mine lasts forever. In time, either the ore itself may be exhausted, or the grade dips to a level where even modern methods cannot make its removal economical. Each year, however, we learn more about the geological make-up of the basin and corporately find more than we extracted.

If there were ever any doubt about the Ontario Division's opinion of the future, these should be laid to rest by the expensive new tailings area being built to accept more waste rock from its mills, which concentrate the ore from local mines.

The reason for this optimism is partly based on the specialized talents of the mines exploration department. Based in Copper Cliff, they are responsible for all surface and underground exploration within 10 miles of the basin rim.

Through exploration, we've been able to unlock the underground store house to find the raw material to stay alive as a division. Since 1966, we've opened eight new mines, and a ninth, Levack West, is under development to open in 1974. At other locations, such as the Frood-Stobie complex and Garson, exploration has found new blocks of ore which have permitted continued operation for these older mines.



Surrounded by drill cores, Inco geologist Waldo Clarke and Bill Dorval of Heath and Sherwood discuss a sample retrieved by the diamond drill. Inco alone has drilled over 25,000 bore holes in the Sudbury area. At left, is a two-inch core sample from Copper Cliff North mine.

The Sudbury Basin is at least two billion years old. Geologists believe that much of the ore they are finding was released after a huge meteor crashed and formed the basin. The "big blast" cracked the crust allowing the host rock for nickel and other ores contained in the earth's crust to escape and rise closer to the surface. Over millions of years since then, several miles of rock have eroded, bringing the ore closer to surface where man could extract it.

Carl Gourley, chief mines geologist, describes exploration as a jig saw puzzle. "We're unravelling the story of the basin and building a model as we go. Every bit of information adds to that model and allows us to build on the relationship of the ore to find new deposits."

The search for new ore is an expensive gamble of hide-and-seek. But if the risk is great, the stakes are high for the successful, if an ore body suitable for mining can be discovered.

A mining company is only as good as its reserves of ore. Surface exploration,



On 2000 level in the South exploration area of Copper Cliff South mine, mine geologist Don Brown chips a sample from the stope face to assay later on surface.

tion, therefore, is a never-ending task. The Ontario Division holds about 250,000 acres of land, 210,000 acres of

which are in the Sudbury district. Surface drilling crews are constantly moving in to follow up an "anomaly",



Although South mine has been in operation for about a year, development is continuing to define the future potential of the ore body. This diamond drill is set up on 2000 level where mine geologist Don Brown is discussing some of the core samples with drill foreman Charlie Kirby. In the background, Rudy Jolicoeur greases the drill for operator Val Gionet.



Preparing ore outlines so the mine's engineers can design mine layout is a continuing task at Creighton No. 9 shaft. Here mine geologist Dick Adlington discusses drill patterns with Dick Worthington.

or alteration in rock patterns, which suggests minerals are present underground. Surface oxidation, geophysical anomalies, and geological structures provide targets to be probed for new ore bodies.

Modern diamond drills, with a tripod of large timber legs or steel towers, have penetrated to depths greater than 9,000 feet.

The drill cores give geologists samples to compare with other ore-bearing samples taken from existing mines in the district. These "assays" or analyses give a rough idea of the tonnage and grade of ore, but not its exact location underground.

The Ontario Division, along with other mining companies, drills thousands of such holes each year. Usually they show traces of ore but in such minute quantities that mining is not viable. Less than one in every 1,000 exploration

prospects ever becomes a mine.

Occasionally, as was the case at Levack West, Copper Cliff South, Creighton No. 9 Shaft and Shebandowan in recent years, the grade looks good. If detailed drilling around the site indicates more potential, the geologists recommend an exploration shaft be sunk over the deposit.

Sinking a shaft is no guarantee that the ore will be mined. Development of a mine usually takes several years. The drifts and crosscuts driven for exploration purposes are converted for actual production. In others, exploration drilling to locate and outline the ore continues for years, sometimes unsuccessfully if the average grade, a percentage figure expressing so much mineral per ton of rock, drops rather than increases. This is what makes exploration such an expensive and risky business.

Diamond drilling continues even after a mine is brought into production. At Copper Cliff South, for instance, the development shaft has been sunk to over 4,000 feet where development drilling is continuing to determine the outline of the ore at the mine, which began production last year. Much is being learned about ore at great depths at Creighton No. 9 which, at 7,137 feet, is the western hemisphere's deepest continuous mine shaft from surface.

The mine geologist is a key member of the team at every Inco mine. He's always working on the fringe of the unknown. He has been compared to a detective, a sort of "super sleuth", who's always searching for more clues to track the path of the ore as it twists in and out of the rock. They are the men-on-the-spot and their reports are combined to chart the direction of Inco's future at each of its mines.

At a new mine, the mine geologist draws an ore outline which shows where the ore is compared to worthless rock. His drawings are used by the mine's engineers who design an efficient mine layout for the production department. His research is used to plan the best locations for drifts, raises and ore passes.

At both old and new Ontario Division mines, the mine geologist spends about half his time underground, estimating grades and marking the limits of the ore at working slopes, providing an "ore map" for the miners to follow. The observations he makes underground are used to draw up production goals for each Inco mine and to estimate the ore delivered to the mills.

Exploration is the cornerstone on which the future of the Ontario Division is being laid. It's a dynamic and challenging task in which the unknown is faced every day.

"When you get right down to it," Carl Gourley pointed out, "we've only drilled down to about 10,000 feet. The future is boundless. It only depends on how deep you can mine economically."

That's the challenge for our geologists. They keep looking and sampling because, one day, the search may produce an overlooked mineral strike or a new body of ore at an established mine. It's why Frank Zurbrigg, Inco's vice-president of exploration, said: "That's the intriguing thing about exploration. You don't know this morning what may break this afternoon."



Keeping track of ore grades and tonnages trammed is another responsibility for mine geologists, who report the figures to the mines exploration department in Copper Cliff. Stobie grade control geologist Borden Dowdall examines this boxhole and mine geologist Bob Martindale records his comments as the two take a production assay. The men spend half their time underground visiting stopes again and again to stay on top of production.



On 3600 level in Levack, area geologist Ellwood Wohiberg and mine geologist Al Smeeth mark the breast of a slope to indicate where the ore is for the miners.

Air raid on tailings

After persistently trying to eliminate wind-blown dust from the tailings disposal area, Inco's agriculturalists are still fighting the problem with new solutions. Their latest idea is to use an airplane to spread "Curasol AH" to stabilize the dust.

During its two-day stay, the aircraft applied almost 36,000 pounds of the chemical solution to more than 40 acres, inaccessible to wheeled vehicles. Truck-mounted sprayers are used in other parts of the tailings area.

The aerial treatment was adopted from an agricultural crop-dusting technique and proved "very accurate", according to Alex Gray, agricultural department foreman and coordinator for the project.

Attempts to stabilize the tailings areas near Copper Cliff began during World War II with test plots of grains and grasses. Since then, perseverance and experimentation have converted over 800 acres of dustland into green fields.

Inco's agricultural department has been testing Curasol for three years. The glue-like chemical is mixed with water and when applied spreads a thin membrane over the ground. The adhesive membrane binds the powdered earth,

yet allows water to soak through.

The Piper Pawnee aircraft, chartered from Midair (Canada) Ltd., used the South mine sandfill road as an airstrip. Powered by a 235-h.p. engine, the aircraft flew 110 m.p.h. at near-zero altitude when spraying. Pilot John Inman took about 20 seconds each run to drop 1,350 pounds of solution on the tailings. A complete spraying sortie took less than three minutes, including filling

the chemical hopper.

Tom Peters, Inco's agriculturalist, stressed that aerial application of Curasol is only in the experimental stages. "We know that we can vegetate the tailings areas when they're finished. But what we need, however, is something to hold the dust before our reclamation work begins. We're constantly looking for methods such as this to help us control inaccessible difficult areas."



It took less than 65 seconds to fill the aircraft between flights. The truck was used to agitate the mixture of Curasol and water and pump the chemical into the aircraft's hopper.



Agriculture foreman Alex Gray and pilot John Inman talk over the area to be sprayed and the line of the drop before John takes off.



Always trying new methods to control the dust on the tailings areas, the agricultural department chartered this aircraft to spray a chemical binder to seal the surface.

Gala night coming

It's going to be another big year for the Quarter Century Club. Over 730 new members will join its ranks when the Class of '73 gathers this month. They will swell the ranks of the Copper Cliff chapter to almost 5,400. It will be the local chapter's 24th meeting.

Wives of the new members will receive a dozen red roses from division president Ron Taylor.

Dinner will be served to new members on two successive nights at the Italian Club in Copper Cliff. On June 11, new members from the mines and mills departments will receive their gold pins, while the reduction group will be presented with theirs on the following night. The Jimmy Macdonald Duo will accom-

pany singer and accordionist Nancy McCaig who will provide singalong entertainment during both nights.

An evening of exciting entertainment is lined up for June 14. Both old members and new, together with pensioners will gather at the Sudbury Arena for a two hour show. An invitation is also extended to club members' and pensioners' wives to attend.

Tommy Hunter will be the feature act that evening. Well-known as a CBC-TV entertainer, the "country gentleman" is bringing his entire troupe to Sudbury. The popular Rhythm Pals, the Allan Sisters and banjo-player Maurice Beaulieu will share the spotlight with Tommy.

Also starring that evening will be master of ceremonies Billy Davis. Besides jokes and impersonations, Billy will also entertain as a ventriloquist. Bilingual songstress Marie André returns to delight Quarter Century Club members. Marie will be looking again for volunteers in the audience to sing with her. The famous Henkle Family promise to amuse the audience with their singing and dancing. Canada's Trampchamps, who are living proof that show business has its ups and downs, will be another repeat act.

Over 3,300 attended last year's gala evening of entertainment at the arena. This year's show is being organized by the computer systems and employee relations departments who are predicting an even larger turnout.



Tommy Hunter leads his entire show into the Sudbury Arena June 14 for an hour of country music entertainment.



Jackie and Coralie, the Allan Sisters, are part of the Tommy Hunter hour.



The seven Henkles, aged 8 to 17, sing in both English and German, besides performing traditional German folk dances.



SPEND A DAY WITH PAUL BIDAL

A light drizzle was falling when Paul Bidal stepped out of his home one afternoon last month. It's a 20-minute drive from his New Sudbury duplex to the employee's parking lot in Copper Cliff. Paul knows exactly how long it will take him — day, afternoon or graveyard shift — because he's been making the drive for 34 years as an employee of Inco's transportation department.

Paul came up through the ranks and worked at every job on Inco's railway — trackman, brakeman, and conductor included. Now he spends his working days at the controls of a 100-ton electric locomotive, with 1,100 hp. at his command.

Paul and his regular crew, conductor Sid Pickel and brakeman Flo Martel, have been together for five years. "We're like a hockey line because we think alike and know exactly what each other will do, when and how," Paul said.

"One thing about the railway is that the work isn't monotonous and you're always on the move," he said. A typical shift begins when Paul checks with the dispatcher for instructions on his first run. Then he collects Sid and Flo and takes over the locomotive assigned to them that day.

Safety is a way of life with this crew. Even though they are required to carry out a visual inspection before starting off, Paul's crew give their loco a searching walk-around. These men "check-off" each other regularly with regard to safety.

Working out of the upper marshalling yard, one mile north of the smelter, Paul shuttles back and forth between the iron ore plant, Copper Cliff North and South mines, the CIL plants and Clarabelle mill. Once he's underway, the dispatcher keeps in contact with him by radio.

The cargoes Paul hauls are varied. On one trip, it may be a 40-car ore train to be spotted on Clarabelle mill's huge tandem rotary tippie. There are over 1,200 of the 80-ton ore cars



It's 2:25 p.m. and time to set off for work. Paul Bidal says goodbye to his wife Hélène and granddaughter Danièle.



Paul catches up with his son Marc and both men show their passes to security guard Bert Fallu as they enter the changehouse.

in circulation around the Copper Cliff complex, and Paul spends a lot of time shunting them. Another regular run is moving tank cars of sulphur dioxide and sulphuric acid from the CIL plant, adjacent to the smelter, to the iron ore plant. On return trips, he often transfers cars full of nickel oxide to CNR or CPR sidings near Clarabelle mill.

Inco's railway is its operational lifeline and Paul delivers ore, flux, sand-fill, fuel, materials such as iron ore plant sludges, and acid, throughout the

Copper Cliff complex. Other crews handle the hot metal cars to the copper refinery and slag trains.

Born in Sturgeon Falls, Paul came to Inco looking for a temporary job in 1939. He's been here ever since. He started in the Coniston transportation department and moved to Copper Cliff in 1946.

He and Hélène, his wife of 32 years, have six children. Guy works for the CPR; Lise is the wife of Roger Gordeau; Marc is a conductor in the transportation department; Gilles works for Great

Lakes Paper Company in Thunder Bay; Nicole is married to North mine loader man Mike Laurin; and Liette is a registered cardiologist technician. The couple enjoy nine grandchildren.

Music has played a big part in the couple's life. They met in church where Hélène was playing the organ and Paul was singing in the choir. Today the couple are joint choir masters in their home church in Garson and are in such demand to sing at weddings that summer holidays are an impossibility. Paul has a baritone voice while Hélène, who taught music until three years ago, is a



At 3:30 p.m., Paul's crew has their first job, pulling a unit train of tank cars loaded with acid from the CIL plant, near the smelter, to the iron ore plant.



Between their first job and lunch at 5 p.m., Paul's crew covered a lot of ground, returning to the Clarabelle yard with nickel oxide cars, then back to the iron ore plant with empty cars. The locomotive cab is roomy and most crews prefer to eat their meals there.



Time to go to work. At 3 p.m. foreman Bernie O'Neill briefs his on-coming crews, including Paul and his son Marc, who is a conductor.

soprano. They sing duets at weddings where she also plays the organ. "That way we can work together and we still love being together," H el ene said.

When they do manage to get away for a weekend, Paul and H el ene head for their camp on Ratter Lake, just north of



Paperwork is a chore that everyone has to face. About 7 p.m., and a few hours before the end of his shift, Paul snatches a few moments to begin his report on the shift's activities.

Hagar. Enthusiastic travellers, they have pulled their 21-foot trailer from coast-to-coast. There'll be little time for travel this year, however, because Paul will be busy painting and putting finishing touches to his new home in New Sudbury. They moved in at the end of February.

Spare time is a scarce commodity for Paul and H el ene. "Music takes just about all our time," but when a quiet moment does present itself, Paul likes to watch television, especially sports and soap operas, and H el ene knits and sews for her grandchildren.

An interesting, enjoyable job, and an active involvement in their community, make a rewarding life for Paul and H el ene Bidal.



Inco's transportation department has a standing order that each crew check over a locomotive before starting off on shift. Paul picked up conductor Sid Pickel and his brakeman Flo Martel a few minutes after 3 p.m. and the men spent a busy 10 minutes completing a safety check. Paul even climbed the roof of the locomotive to check the pantograph, the boom which maintains the contact with the overhead electric wires.

Music is what the Bidal family lives for, and after work or on weekends the family gathers for a sing-song: Guy, Marc, Gillies, Mike holding his daughter Rollande, Nicole, Liette and Danielle, H el ene and Paul.



Old craft lives on

Keeping the machines running in the Ontario Division plants requires the talents of many different men in the mechanical departments on surface and underground. Among them are a select group who can trace their craft's heritage back thousands of years to man's earliest attempts at working with metal: the blacksmiths.

Most of Inco's smiths learned their art on-the-job where skill and experience are more important than brawn. Ronald Davey, Creighton No. 5, for example, worked for his father Ben, who was Creighton mine's blacksmith for 33 years. Terry Kozemchuk, of the Copper Cliff



Terry Kozemchuk rushes from the forge with a white-hot steel billet.

blacksmith shop, has worked there for 22 years, five of them as a helper learning the job. The training pays off because it takes experience to recognize when the

various metal materials are at the right temperatures for shaping.

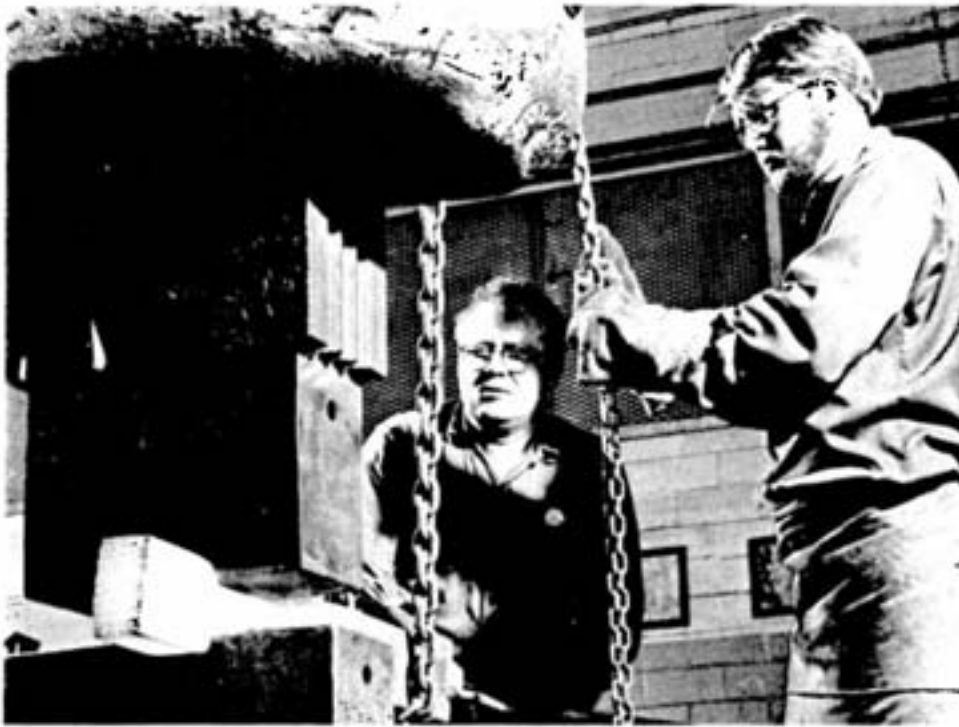
The blacksmiths turn out a tremendous variety of forgings for the division's

Garson mine's Bob McFarlane is hard at work hammering half of a crusher tong.



John Akkanen and Carl Baeide use tongs and an anvil-mounted template to form safety shackles for crane hooks used in the Orford building.





Helper Ken Sittle controls the tigger hoist to lift the billet for Terry as the one-ton air hammer forms it into a crane bale clevis.



Paul Oleksiw removes a blank from an oil-fired forge where it is being heated to become a crusher wedge for the Copper Cliff casting building.

mines and plants, such as shaft gear and pulley blanks, bales, bale hooks and tail chains for cranes, and the handles for the heavy underground ventilation doors. They also handle die work, such as matte hooks for the casting building, punch bars, and loader teeth for the converter building. They're also called upon for other jobs which can't be done by machine methods, which might damage the part, such as straightening ho-ram booms bent by underground crushers. Tools, too, including chisels, punches, picks and pins, are finished in the blacksmith's tempering baths or annealing forges.

The mining industry embraces a range of skills undreamed of by the average man. Teamwork, experience and enthusiasm are the ingredients common to most. Dressed in his leather apron and asbestos gloves, the blacksmith is far from being a man of the past. He's an important member of the Inco team today.

Below left, That's not a horse shoe that Ronald Davey is making. The Creighton mine blacksmith is forge-welding links for a chain. Using a blacksmith's welding compound, Ronald hammers the links into shape on his anvil, then fuses the ends together in his forge. At Frood mine, helper Roger Trudel and smith Omar Chayer form the red-hot metal into a chain shackle.



Little businesses have big year

Thirty local teenagers have a better understanding today of what it takes to keep production lines humming. They should because for the past 30 weeks they were in business for themselves as participants in Sudbury's first Junior Achievement program. The group was recruited from grades 10 to 13 at Lo-Ellen, Marymount, Sheridan Technical and Sudbury High Schools.

Sponsored by the Sudbury & District Chamber of Commerce, the high school students formed two companies, Chips-Away and Seasons Blipz. Meeting one evening a week for two hours, they went through all the basic operations of a General Motors or an IBM. They sold stock, elected officers, manned assembly lines, kept financial books and sold their output, with the aid of volunteer advisors from the Chamber. The advisors offer the benefit of their business expertise but do not make decisions for the "junior executives" who run the J.A. companies. The Junior achievers determine the course of action for their companies themselves. "They learn from their own mistakes, as well as successes," Andy Durnford of Carrington's, one of the adult advisors, said.

Chips-Away manufactured two products: a Christmas candle as a starter project last fall, and finally 400 cigarette lighters mounted in a beer can. Using artificial fur, felt, plastic eyes and wire, Seasons Blipz created 2,000 of the cute creatures.

Each member of the mini-companies bought a share of stock at \$1 a share. The rest of the stock was sold to family, friends, relatives, neighbours and teachers.

Besides using the proceeds from the sale of shares to buy materials and to meet the costs of manufacturing their products, each firm paid its members 25¢ an hour for labor on the assembly lines and a 10 per cent commission on sales.

The teenage shareholders also served on their company's board of directors.



Making 2,000 blipz kept a full crew hard at work every meeting night. Keeping the production line moving are: Bob Desjardins, John Glass, Chris Vandervliet, Darlene Hagen, Lise Gagnon, Kim Yeomans, Hilary Segger and Jim Thompson.



The executive committee of Chips-Away discuss sales of their product, a bar lighter: Jim Todd, vice president sales, son of Stan Todd, Flood-Stobie, ventilation engineer; vice president personnel, Marilyn Brick, and president Virginia Triff.

Andy Durnford said that directors' meetings were lively as members debated such problems as lagging production, potential sales exceeding stock on hand, and dwindling bank balances.

Over 15,000 high school students across Canada are enrolled in Junior Achievement companies. Each J.A. company is formed in the fall, at the start of the school term, and is wound up in May. The first Junior Achievement program was launched in Massachusetts in 1919 and the concept now operates in 10 countries. Next year, the Sudbury Chamber plans to sponsor five companies and hopes over 100 local teenagers will participate.

The junior achievers learn book-keeping is important if a company is to stay in business. Lori Barazzuol, Chips-Away's treasurer and daughter of Custer Barazzuol of the Copper Cliff machine shop, accepts some sales receipts from Sue McCrory.



VISITORS HELP OUT

Helping hands are what 15 employees from Inco's nickel refinery in Clydach, Wales, and the Port Colborne research station are to the Copper Cliff nickel refinery. The new plant is completing

its shake-down trials, prior to beginning full-scale market production of nickel powders and pellets later this year.

The Inco Pressure Carbonyl process for recovering pure nickel is the heart of

the plant and both the Clydach and Port Colborne visitors are helping Copper Cliff operators and supervisors to become adjusted to operating techniques associated with the process.



To a team from Port Colborne's research station fell the exacting task of leak-proofing the Copper Cliff nickel refinery. Climbing over this pipeline are John Gagnon, Rick Biederman, reactor supervisor, Al Shaubel, Bob McGowan, Peter Race, Bill Fordy, decomposer supervisor.



The Clydach group's long experience with carbonyl proved invaluable to the Copper Cliff nickel refinery, during start-up trials. Discussing some of the instrumentation which monitors one of the decomposers are Al Sherlock, process supervisor, John Rees, David Evans and Bob Howes.

From Clydach, which produces similar products, came John Rees, Tom Power, Bob Barrat, Wynford Japp, Bob Howes, and Des Webb, who has since returned to Wales. A seventh expert, David Evans, recently retired as Clydach's production manager after spending most of his working career dealing with carbonyl. He has been retained as a consultant for the entire Copper Cliff refinery. The others are advising on decomposer technology, which is the same here as in Clydach. There are 28 decomposers in the Copper Cliff plant, 18 of which will produce pellets, and 10 of which will be assigned to powder production.

David Evans described the Copper Cliff decomposer plant as "a darn fine plant. It's a copy of Clydach with all the improvements we suggested. It's a beautiful, well-ventilated plant with lots of room," he enthused.

The Port contingent, composed of research station superintendent Dale Robinson, and John Gagnon, Al Shaubel, Bob McGowan, Peter Race, Emile Smythe, Gerry Corey, and Leo Lange, worked on the IPC process in the pilot plant stage. While here, they handled the exacting task of inspecting the miles of process pipeline to ensure a leak-proof plant.

John Gagnon described the Port group's reactions: "We were all awestruck by the size of the plant when we walked in. We just never imagined it would be that big and complicated."

Chris Dunkley, manager of the Copper Cliff nickel refinery, praised both groups. "The Clydach group have been of invaluable help. They're very experienced people and they've been through plant start-up problems before.

"The research station people made a great contribution to settling down the plant and we are deeply indebted to them for offering their help to our people, and for the work they did for us at the pilot plant stage."



Pensioner Sam Chyz spends a lot of time in his loft training his birds. This is one of his favorite pigeons.

Flying high



On the outside looking in: training the birds to enter the loft as soon as they come home is important because loitering outside can cost valuable seconds in a race.

What do a group of Inco employees and pensioners in Sudbury and Port Colborne have in common with Genghis Khan? They raise pigeons, that's what. The Khan used his for communications with his troops in the 12th century, but the Incoites race theirs.

The hobby of pigeon racing dates back to 1818 when the first race was run in Belgium. The sport caught on in North America with the advent of the railways which transport the birds to distant release points.

Most pigeon fanciers keep at least three dozen birds in backyard lofts they built themselves. The large number is necessary because most owners enter up to 10 in each race and in Sudbury, for example, there are two races weekly.

The raising and training of the birds has become quite a science. As in horse racing, they strive to hit the right combination which will result in a super champion. The fanciers try to breed birds with long wings and flight feathers, together with a lean, muscular body. Pedigrees are important and when consistent winners become old, they are pensioned off to breed future winners. Club members trade and sell "squeakers", as 20-day old chicks are called, and one with a documented blood-line can cost over \$100.

All racing pigeons are registered with the Canadian Racing Pigeon Union. The national organization issues a metal leg band for each pigeon when it's three days old. The numbered band enables the hobbyists to establish pedigrees and identify their birds.

Training starts when the pigeons are



An anxious hen looks on as her "squeaker", or 20-day old chick, is man-handled gently by a fancier.

three months old. Sam Chyz, secretary of Sudbury's Valley Centennial Club, begins by releasing his birds about 50 miles from home. With each outing, the bird faces progressively greater distances. Sam uses the same system when "spring training" starts for his older birds after the long winter lay off. Some birds are specially trained for short flights, while others such as Don Lemaga's, are long distance champions. Don is president of the Sudbury club.

Getting the birds to return on command is a feat which Martin Maxemuck of Port Colborne has developed. Prior to feeding any of his birds, he rattles the grain mixture in the feeding can. Releasing the birds for the morning and evening training flights before feeding time, plus Martin's homemade recall device — buckshot rattling in a tin can — soon has the birds back in his loft.

Scientists have been working unsuccessfully for years to discover why pigeons return home. When released, the birds climb out, orient themselves, and then head directly for their loft along the line of least resistance.

To "arrive" at the end of a race, the pigeons have to enter the loft as soon as they land. Any time spent loitering outside, even on the roof of the loft, is counted as flying time. A rubber identification band is removed from the bird's leg and placed in a sealed clock which stamps the arrival time. The owners meet after every race when judges open the clocks to compare arrival times and declare a winner.

Sometimes sponsors are found to donate modest prizes, but most men race for the satisfaction of seeing their bird win and for a share of the "pool" which most clubs organize.

Pigeons can stay aloft for up to 16 hours, and even young ones can reach speeds of 60 mph. with a tailwind. "My birds can beat many fast cars," Sam Chyz pointed out, adding that the world's fastest pigeon was clocked at almost 80 mph. in England.

The birds are shipped in special cages which the railway station agent at the destination opens. He telephones the clubs to confirm the time of release. The Sudbury club ships its birds to Foleyet, Nakina, and Souix Lookout, 560 miles away. The Sudbury birds have also raced from Montreal, Niagara Falls, and Kitchener. The Port Colborne Racing



Martin Maxemuck of Port Colborne takes his pigeons out for a practice flight.

Pigeon Club also uses Foleyet, about a 400-mile trip, as well as Sudbury and Montreal.

Casualties can be high during racing season, and Incoltes such as Peter Lackowski, Alex Psuik, and Charlie Pagnutti, have all lost birds to Falcons

and trigger-happy hunters. The birds can drink on the fly and sometimes poison themselves by drinking from an oil slick. "Birds which do arrive safely, often enter the loft battered and soaking wet," Dan Lemaga said. "Oh, what a story they could tell."



Martin's heavy duty cage can hold up to 25 pigeons. The birds are packed into the cage and then shipped to a distant point by railway. The station agent releases them and the race is on.



As soon as his bird entered the loft, Sam grabbed it and removed the rubber band on its leg. When he drops it into the sealed clock, the date and time of the pigeon's arrival will be recorded.

Telecare helps everyone

"People are lonely because they build walls instead of bridges," the American clergyman Joseph Fort Newton once said. In Sudbury, a group of dedicated volunteers want to provide a link between the lonely and the rest of the community.

Telecare celebrates its eighth birthday this year. Formed in 1965 by Rev. Bruce MacDougall, it was the first 24-hour call-in service in North America to be affiliated with the internationally-organized "Lifeline." Lifeline was started in Sydney, Australia in 1962 and now has affiliates in the United States, South Africa, Korea and Japan. There are seven other Canadian Telecares in Thompson, Sault Ste. Marie, Thunder Bay, Barrie, Hamilton, Kingston and Belleville.

Over 400 callers a month are dialing the Telecare number 675-1121 to talk about the loneliness they feel, marital problems, financial difficulties, alcoholism, parent-teenager conflicts, and suicide.

"As soon as people get into difficulties, they isolate themselves and don't communicate with others," Professor Mike Tulp, who is Telecare's director, said. "We're trying to get these people back into the mainstream by getting concerned people to help. We encourage people to call Telecare again and again. We're always there to listen.

"Telecare is unique because anyone can call to talk about anything under the sun," Professor Tulp said. "We often get babysitters who are lonely calling to talk

to us about boyfriend problems. We're the first contact with society that many people who really need help make."

Telecare volunteers adapt their techniques to each individual call. To some, they may just listen, for others, they may provide advice. One thing is common to all conversations: anonymity. Neither the caller or volunteer ever exchange names, and each conversation remains confidential.

If the caller wishes, Telecare can refer them to one of Sudbury's many service agencies which are related to their problem, or contact one of its own "standby" people who will phone or personally visit the person in distress. "It's amazing how involved our volunteers become," Professor Tulp said. "One of them has been guiding the same family for over five years and has helped them prepare for job interviews and to face family court."

Telecare volunteers are carefully screened to weed out those who lack maturity and ability. "In addition, we stress volunteers must have a Church affiliation and a basic commitment to life and God," Professor Tulp added.

Those that are accepted undergo a three month training course. Bell Canada has hooked up two telephones in adjacent rooms so the volunteers can play the roles of caller and listener for experience. Guest speakers from the university and local social service agencies visit to lead discussions about suicide, mental problems, alcoholism, etc.

Each volunteer is assigned to one of five daily shifts, lasting up to eight hours. They are on duty at least four times a month as part of Telecare's guarantee that there's always a voice at the end of its line around the clock.

It's a lonely vigil with only the TV set for company until the phone rings. But the volunteers must obtain personal satisfaction from their work because few drop out, Professor Tulp said. "Telecare is one of the best ways for an individual to become involved to help others," he added. For people who are in trouble, it must be reassuring to know someone is available to receive their S.O.S.



Listening intently to a caller's problems, Rosemary Stiles, wife of programmer-analyst Kent Stiles, is one of 60 Telecare volunteers.

Brewing better with nickel

Jack Bizley is a one-man booster for nickel products. Brew-master for Doran's Northern Ontario Breweries Limited in Sudbury, he manages a plant that is a tribute to nickel's long-lasting and corrosion-resistant qualities.

In 1940, Sudbury Brewing and Malting Company Limited celebrated its 37th anniversary by pioneering the first brewery to be equipped with nickel or nickel-alloy equipment. "A nickel-equipped brewery for the 'Nickel Belt'", they boasted. In 1973, Doran's, the successor to the early company, is still using the same equipment. And, after 33 years of hard use, "it's still as good as new," says Jack.

As in the processing of other food products, sanitary metal surfaces are a must in a brewery. The beer must be protected from any change in color, contamination, or impairment in taste,

even after long periods of contact with metal.

Nickel-clad steel, nickel-chromium plated steel, 15 per cent nickel-silver, and Monel, are widely used in the plant, serving for the brew-kettle, mash mixer which converts the barley and corn into sugar and the wort cooler. All pipe-lines for beer or wort, the unfermented beer, are made of Monel, and where non-nickel metals are used for water pipes, steam lines, etc., they are nickel-plated. Type 304 nickel stainless steel is also used for the kegs which contain draft.

"We take our nickel plant for granted. We don't have to worry much about maintenance. It's easy to keep clean and sanitary because nickel doesn't oxidize or discolor as other metals will," Jack said. "It always looks new and bright."



Jack Bizley pulls a sample from the brewing kettle.



Doran's brewmaster Jack Bizley checks a sample of his latest batch, in this view shot from inside the brewing kettle.



This was the most modern brewery on the continent in 1940. Then brewmaster John Clemens stands beside the kettle.



It took six weeks of hard work before Rocky Bivens was able to place the last brick on his kiln. Rocky, who built four smaller kilns before his major project, is delighted with the used roaster bricks he received from Inco.

New life for old bricks

Rocky Bivens is in business today because of some bricks. Rocky, who makes tea sets and hanging planters, built one of the largest pottery kilns in Ontario out of used bricks from one of the smelter's Nichols-Herreschoff roasters.

The artist contacted smelter manager Sil Merla shortly before last year's summer vacation shutdown. "It was just on a long shot that Inco might have some used bricks," Rocky recalled. "Mr. Merla told me a roaster was being rebuilt during the shutdown and I could have the bricks as long as I brought my own dump truck."

Located in St. Charles, Rocky's kiln is six feet high and wide and 10 feet deep. It took him six weeks to build the kiln, which contains over 1,500 bricks.

The kiln is wood-fired for economy; there is an abandoned sawmill, with plenty of scrap wood in its yard, less than

a mile away. Rocky also has a smaller propane kiln to handle small pieces or rush orders. It takes 16 hours of "stoking", or feeding, as well as a cord



Tea pots similar to this one, and giant floor planters, compose the largest part of Rocky's pottery work.

of wood, to get the big kiln to its cooking temperature of 2,350°F.

Being wood-fired has further advantages for him. The long stoking time gives plenty of opportunity to set his pots inside so wood ash will deposit on them. When the top temperature is reached, the ash flying through the kiln settles on his pottery to form an attractive natural glaze.

His pottery is made from a combination of clay, feldspar and color oxides containing nickel and copper. The wet mixture is placed on a rotating wheel and shaped by hand before it is cured in the kiln. All his work is original and hand-made. He uses no moulds.

Rocky is also a sculptor of what he calls "bio-morphic" forms. He uses marble, clay or plastics as the raw materials for his carvings which have flowing, free form, shapes. "I think of them as living things and try to make them appear to have some sort of internal structure holding them together," he said.

Born in Detroit, Michigan, Rocky lived in Toronto, where he built geodesic domes for industry, before moving to Sudbury. Interested in art since childhood, he has been sculpturing seriously for over 10 years and making pottery for five years. Later this year, he will have a one-man show of his best work in a Toronto gallery.

Rocky, who teaches ceramics in Cambrian College's extension division, adopted Sudbury as his home because of its ruggedness. He is so enthusiastic about the countryside, that he's applying for citizenship this month.

"The rocks are really incredible. Detroit, like most of Michigan, is flat. I notice the rocks all the time. It's an unusual experience still for me to walk around and see patches of green and then a rock appearing like a balloon suddenly blown up.

"The people are very friendly here, too," he added, "and it's an excellent place for me to work because the roughness and harshness of the land provide inspiration and help me concentrate on my work."

Faces & Places

28 share \$670 for good ideas

Twenty-eight employees made bright ideas pay off to the tune of \$670 awarded them for suggestions accepted by the company.

Albert Ouellet of North mine received \$45 for his suggestion to revise the lock bolts on drill centralizer clamps.

Garson mine's Charles Hubacheck thought extending the rockhouse catwalk guardrail would make it safer. He was awarded \$40.

Alex Romich, smelter and Joe Goegan, matte processing, are both \$35 richer. Alex thought adding rock salt to the converter chute clay mixture would reduce freezing, and Joe suggested revisions to the FBR impingement doors.

Three men received \$30 cheques. They are Len Brosseau, Garson, John Hancock, Clarabelle mill, and Bill Killen, No. 1 smelter changehouse. Len recommended a chain be added to sand plant stairways, John suggested better lighting for the tippie pocket feeders, and Bill devised an improved remote control for the changehouse door.

Stan Picard and Arnold Anderson of Coleman mine were each awarded \$25. Stan invented improved guards for tigger hoists, while Arnold devised a way to reduce cement feeder dusting.

Perennial suggester Bert Behenna and Barry Van Horne, Creighton mine, split \$25 for their modifications to the side travel sensors for 36-inch conveyors.

Glen Smith and Gottlieb Kleinstuber, Little Stobie mine, also split \$25 for their idea to replace the bulbs in the Ramsey scale indicator light.

Five other employees also won \$25 awards. They were Joe Perichak, Copper Cliff concentrator, Peter Belanger, Levack mill, Peter Grant and Manfred Uhlig of Clarabelle mill, and John Bertrim, matte processing. Joe suggested changes to the electrical by-pass for his plant's No. 50 conveyor. Peter Belanger's idea was to reserve a locker for the labor gang. Peter Grant suggested revisions to conveyor belt safety cords, while Manfred devised better connections for the tippie

changing cylinder. John's idea eliminated a recurrent safety hazard caused by slamming doors.

Rounding off the list of awards were the following employees who received \$20 for their ideas: Lionel Bourcier (two), South mine; Lionel Spencer, Marian Samulak and Ed Taillefer, Froid mine; Bill Leach, oxygen plant; Aime Sabourin and Sid Wasitis, smelter; Roger Barrette, matte processing, and Bill Ingram, copper refinery.

Young inventors show off at Port



Trying to prove which came first, the chicken or the egg, are Mike Wilcox and Rodney Corkum. The boys were participants in the sixth annual Port Colborne public school science fair.

Budding Einsteins had their day in Port Colborne when the sixth annual public school science fair opened its doors. Sponsored by the Port Colborne Rotary Club, the fair exhibits the work of youngsters in grades 4 to 8.

Several employee's children had displays including Rodney Corkum, whose dad Richard, works in the shearing department; Alan Crawford, whose dad Walter is with the pipelitters; and John Gretton, whose dad, Wally, is the refinery's superintendent of administration.

Rodney teamed up with a partner, Mike Wilcox, to try to answer the problem which came first, the chicken or the egg. The boys, who built an elaborate egg

Appointments

Robert Reyburn, administrative assistant to the manager, iron ore recovery plant

Tony Johnstone, supervisor, capital expenditures, comptroller's department

Al Hickey, supervisor, operations cost control-mining and milling, comptroller's department

Gil Hamann, supervisor, operations cost control-division overhead and services, comptroller's department

incubation experiment, were defeated by the eggs which were a couple of days late in hatching.

Alan Crawford proved that music has a beneficial effect on plant life. He placed a runner bean on each of three flower pots. The first one was placed under sunlight for five hours a day and the rest of the time under his bed. The second spent full time on the window sill and the third one was placed on top of a stereo. This third plant grew the most.

John's experiment literally "blew a fuse" but that was supposed to happen. He wanted to see what factors effected the amount of amperage which could travel through the fuse before it failed.

Faces & Places

It's tourist season



Among the groups which have taken advantage of the company's plant tours was this orchestra from Yorkshire, England. The 80-member band were guests of the Sudbury Board of Education and while here entertained over 1,300 students at two performances.

Guided tours of company facilities in Copper Cliff began May 1 and will continue until September 3. "The tours leave the Copper Cliff Curling Rink at 9:30 a.m. and 1:30 p.m. each day, Monday to Saturday," tour coordinator Sam Laderoute said. The 2½-hour tours visit the Clarabelle open pit, Copper Cliff North mine hoist room, the Clarabelle mill, the Copper Cliff smelter, and the tailings reclamation area.

"Visitors must be over 16 years of age," he said. "We supply hard hats and safety glasses to all our visitors.

"Our guides are full-time employees,

Joint venture

American Copper and Nickel Company, an Inco subsidiary, has become a partner in a joint venture to explore native copper deposits in Michigan. American Copper and Nickel and the Homestake Copper Company will explore the Keweenaw Peninsula area, where Homestake holds options to lease mineral rights. Both companies will also investigate new methods for mining and milling such ores as may be developed.

The last issue of The Triangle was illustrated with a picture of a "Tele-tram" proceeding up an inclined ramp. The caption stated that this was taken at Levack West mine. This caption was in error, the picture was taken at the Copper Cliff South mine. Our apologies for the error in this photo illustration.

Port opens its doors too

A second round of tours were again organized at the Port Colborne nickel refinery and June 2 will be this year's final opportunity to visit the plant. Last year, the tours were open only to employees and their families, but this year, in cooperation with the Greater Port Colborne Chamber of Commerce, a third of the tickets were available to the general public.

Seventeen tours were run each of the two Saturdays in May. Visitors watched an anode furnace tapping molten metal, toured the general shops, the foundry additives plant, the "S" nickel rounds facility, as well as the tankhouse and shearing department.

so they're thoroughly familiar with the operations," he added.

"Anyone interested in touring our facilities should call 675-6907, to give us an idea of how many people to expect," Sam added. "Information will also be available from that number concerning the slag-dumping operations visible from vantage points in the area."



Every visitor to an Inco plant gets a hard hat and safety glasses and these visitors to Port Colborne's open house were no exception.



Painting the new Inco

Inco's new visual personality is slowly beginning to appear as equipment such as trucks and locomotives come due for repainting. Announced last fall, the key elements in the company's corporate identification program are the new "INCO" wordmark and distinctive color scheme. When completed, the program will make our plants, vehicles, products, stationery and advertising easy on the eye and easy to remember, as well as immediately recognizable as belonging to Inco.



Canadians buy more Inco shares

Inco is now as Canadian as maple syrup. That was found to be fact when company financial experts checked the shareholder register prior to the annual meeting in April. For the first time, Canadians hold the majority of Inco's shares.

President L. Edward Grubb told the annual meeting that 51 per cent of the shares are owned by Canadians, 30 per cent by U.S. residents and 19 per cent by persons living elsewhere.

At last year's annual meeting, Canadians owned 49 per cent of Inco and Americans 35 per cent. In 1970, the figures were 56 per cent U.S. and only 31 per cent Canadian.

Inco has 92,024 shareholders.

Port boys are fast talkers

Graham and Michael Browne of Port Colborne were honored with a presentation by Branch 56 of the Royal Canadian Legion for their achievements in public speaking competitions. The awards were presented by Branch 56 president, David Bell, who is a stationary engineer at the Port Colborne nickel refinery. The contests are sponsored by the local branches of the Legion throughout Ontario.



David Bell, president of the Port Colborne Legion, presents Graham and Michael Browne with awards for public speaking.

The boys are the sons of Bob Browne, the Port refinery manager.

After winning the branch zone and district eliminations, Graham, age 13, came first in the all-Ontario finals in Waterloo. He chose as his topic, "The Necessity of Organization".

Meanwhile, Michael, age 11, progressed to the district finals and placed second with his appropriately titled subject, "The Power of Speech". He competed in the Oral Communications Festival sponsored by the Ontario Hydro and Public School Trustees Association and won the provincial finals for grades 1 to 8 in Toronto in March.

Last year, Michael represented Port Colborne Branch 56 at the provincial public speaking finals in Windsor and won the provincial title for his age group. Graham previously competed for the Copper Cliff Legion in 1969, and placed second in the Northern Ontario finals. In 1972, he represented Port Colborne, too, and progressed to the district level.

Faces & Places



Ontario Place becomes Sudbury for one day June 30.

Northern stars shine at Ontario Place

Queen Elizabeth will sample Northern Ontario hospitality June 30 when she visits Toronto. That's when Ontario Place becomes Sudbury for a day. Sudbury puts its best foot forward when the province's show place is the site of one of the largest cultural festivals ever staged.

The Northern Stars will be out all day when over 1,000 Sudburians gather to perform, display and exhibit their talents. Dancers, musicians, actors, artists, singers, and hobbyists, as well as industrial and tourist displays, will be exposed to the rest of the province. Sudbury's City Hall will also be based on the island for a day.

Who's who in Sudbury

Club secretaries or any individuals active in volunteer community work will find a book published by Laurentian University invaluable. The "Directory of Community Service" lists contacts and telephone numbers for services in the areas of health, education, welfare, recreation, and cultural development in Sudbury and surrounding areas. The book, which costs \$2.50, can be ordered from Laurentian University's School of Social Work.

Gerry Gauvreau, chairman of the Sudbury Day committee, said he hoped the show would awaken the rest of the province to the talented performers living in the Sudbury Basin.

A fleet of buses will carry the troupe to Toronto where most will be billeted for a night at the army barracks on the CNE grounds. Gerry hopes to lead the buses and other vehicles carrying instruments and props in a cavalcade through Toronto to promote the big show.

"The whole success of the day depends on Sudbury and region people getting behind us," he said. "We need their enthusiasm and cooperation, as well as more volunteers and donations to organize it."

No postal code, please

It's not necessary for pensioners to send in their postal code numbers. The company has made arrangements with the post office to obtain all the codes automatically later this year. We would appreciate continuing to receive all other changes of address.

Please ensure that the mailing label on the front of this magazine wrapper is correctly addressed. If there are any changes, please return both sides of the wrapper.

Nickel makes better seafood

An Inco-developed copper alloy will make it easier to harvest the sea, which someday may be one of the world's major sources of protein. Designated Copper Alloy 706, and composed of 90 per cent copper and 10 per cent nickel, the alloy is being used for cages to protect shrimp and other marine foods.

In cageculture, an important problem is fouling, which reduces water quality and slows down the growth of the fish. Based on experience obtained from the Copper Mariner, Inco suggested the alloy as a non-fouling screen material. The cages allow water and waste products to escape but, unlike plastic and other types of metal cages, have proven immune to damage from surging water and large fish and from corrosion. Six large cages are being tested by the State of Alabama at the state's Dauphin Island fish farm.



Sharpshooter Amonika Bass, Thompson print room, is the winner of the Manitoba Archers' Association trophy in the bare bow category. She won the award at the annual indoor championships held at Winnipeg's Red River College. The province-wide champ's husband, Mel, who works in the Thompson mill, came seventh in the men's free style.

Bunny tail has quite a story



Bartender Walter Radiccione looks on as Roger Cooke presents Dave Caswell with a Playboy bunny tail.

Hanging behind the bar of the Sheraton-Caswell's Keg and Candle lounge is a tail with a story. Bartender Walter Radiccione will tell you it was captured "live" at the London Playboy Club.

Roger Cooke, its donor, explains the capture: "There's an unwritten rule for Playboy Club members that the cottontails on the bunny girls aren't to be touched. So, if you want one, they'll provide it mounted on a plaque."

Roger, who is a senior operator in the Copper Cliff Nickel refinery's reactor section, spent three weeks touring Germany, Denmark, Sweden, Holland and England. He brought the tail home as a present for Dave Caswell, executive vice president of the Caswell Inns. Dave said he was delighted with the gift and brought it home to show to his wife before it went on display.

There's another twist to the tale because it has evened up the rivalry between the Caswell and its neighbour, the Mandarin. Ted Lange, the Mandarin's host, used to boast to Dave about the priceless painting hanging in his lounge.

Dave says his tail is "unique in Sudbury and possibly Northern Ontario" and it has given him the upper hand now.

Dog show coming

Man's best friend has his day July 28 and 29 when the Sudbury Kennel Club sponsors its first and second kennel club show at the Sudbury arena. The show is the first for Sudbury which has been sanctioned by the Canadian Kennel Club. Obedience trials, class finals and booster shows by enthusiasts of St. Bernards, German Shepherds and dachshunds, will be featured.

Membership in the local club isn't necessary, but show chairman Joe Pancel urges any dog owner interested to write for a "premium list" catalog before July 10. The booklet describes over 200 trophies which will be awarded, the competition classes, judges, and contains an entry form. It can be obtained free from the show organizers: Dog Show Associates, Box 11100, Station H, Ottawa K2H 2T8.



Nickel on the greens

It's summer and golfers are taking a long, hard look at last year's clubs. Maybe playing ability has outgrown the beginner's set bought last year, or perhaps hard use on the greens will mean an honorable retirement for some "favorites".

When they visit the pro shop, they'll find that almost without exception quality manufacturers have adopted nickel-chromium plating for protection. Offering durability, strength, and wear resistance, nickel-chromium clubs keep their "like new" look through years of use. The thin layer of chromium gives the club its hard abrasion-resistant surface, while the heavier nickel overlay over the steel shaft and heads protect them from rust and gives it a gleaming bright appearance.

Faces & Places



Inco's "ecological mine" at Shebandowan will be officially opened June 28.

Curtain up on Shebandowan

Shebandowan, Inco's "ecological mine", enters its proving stage this year. Designed to protect its local environment and blend in with the picturesque recreational area nearby, both the mine and mill will be officially opened June 28.

The mill started up last July using ore stockpiled on surface from the mine development. The mine started production later, when tests were completed on equipment such as the underground ore handling system and the special drainage system and clarifier.

The original mine shaft, across the lake from the permanent headframe, will become a return air raise for the mine's ventilation system. The temporary headframe is being dismantled.

Landscaping of the property is an ongoing priority. Last year, deadfall trees and construction debris were cleared, and this year, Inco agriculturalists will direct the start of the master plan which will, over several years, beautify the site.

Football famous carved in nickel

Stainless steel is a popular metal around the brand-new Canadian Football Hall of Fame in Hamilton.

Outside the entrance, a statue of two giant players impress most visitors, while inside are 20 busts of famous players, also hammered out of Type 304 nickel stainless steel.

Sculptor Tony Gsellmann worked more than 1,000 manhours to make the "action" statue outside, while each of the busts took an average of 70 hours of labor.

Fabricating the two giant players was too large a project for his garage and most of the work was finished in the driveway of his home.



These tackles, made of nickel stainless steel, are the first things visitors see at the Canadian Football Hall of Fame.



Far East project underway

Work has already begun on the lateritic nickel project that P.T. International Nickel Indonesia, an Inco subsidiary, is establishing at Soroako, on the Indonesian Island of Sulawesi.

The project, which will produce 30 million pounds of nickel annually in the form of a 75 per cent nickel matte, will begin operation early in 1976.

Inco has conducted, under a contract with the government of Indonesia, exploration, evaluation and engineering studies of the Soroako deposits. Pilot plant testing of 4,000 tons of ore has

also been carried out at the Port Colborne research stations.

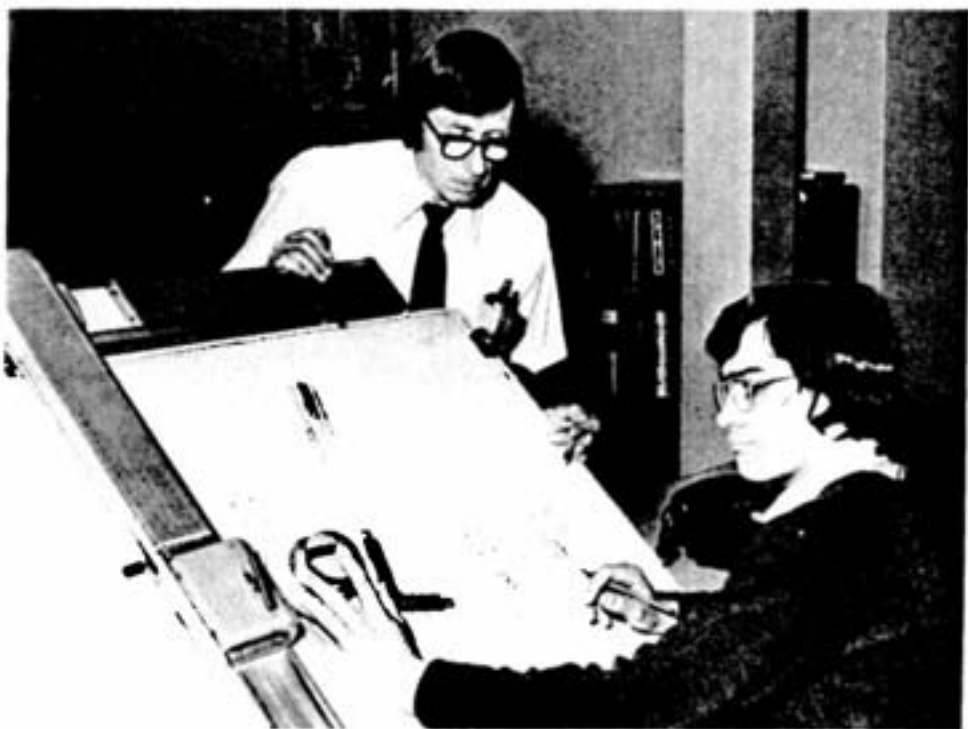
About 1,300 Indonesians will be employed during the construction phase, while a local work force of about 1,100 will be needed to operate the plant.

An aerial view of the village of Malili, on the Indonesian island of Sulawesi, site of the exploration and geological headquarters for P. T. International Nickel.

Students try Inco on for size

Seven Port Colborne high school students have a better appreciation of the working conditions and career requirements in industry. The Port Colborne nickel refinery assisted in their technical and commercial training during the annual work experience program, organized by the Chamber of Commerce.

Sampling Inco's refinery for 10 days were Mario Costabile and Frank DeFazio, who worked in the mechanical department, John Sardella and Dave Rotella in the electrical department, Edward Fabbro in the engineering department, and Debbie Moore and Gina McNeil, in the steno pool.



Edward Fabbro, one of seven Port Colborne students to obtain work experience at the Port Colborne nickel refinery, works under the watchful eye of Chuck Keith of the refinery's engineering department.

Faces & Places



Roddy Lalonde, of the Valley Association for the Mentally Retarded, hands over a year's rent for the Levack Community Hall to Dave Lennie, Levack area manager.

\$1 bargain in Levack

The Levack community hall nestles at the base of a tree-covered ridge that surrounds the town of Levack and the Inco operations which support it. For years, the company has operated the community hall, renting it to area groups for their functions. That practice came to an end in April.

Inco wanted to give the hall to the Valley Association for the Mentally Retarded, but a subdivision plan for the town has yet to be approved. The best alternative was a long-term lease, an arrangement completed recently when Roddy Lalonde, chairman of the association's building and fund raising committee, paid one dollar to International Nickel's area manager Dave Lennie for a one year lease on the premises.

Rental income from the hall will go to the association, which founded a school for trainable retarded at Chelmsford in 1965. The school has since been absorbed by the Sudbury Board of

Education, but the association still supports Grandview Residence at Azilda with proceeds from regular bingos.

The \$105,000 debt incurred for the Azilda Residence in 1969 was recently paid off, and with their increased income the association plans to build two more residences on its 79 acres of land.

Gadinia sails

The world's largest liquefied natural gas tanker, the Gadinia, has completed its maiden voyage. The huge ship, which carries about 14.8 million gallons, is the fourth cryogenic tanker to be constructed using a tank made from Type 304L stainless steel.

Liquefied natural gas (LNG) was first shipped commercially by sea in 1965 and since the worldwide demand for more of the clean-burning fuel has spurred the construction of specialized tankers.

LNG is transported at -260°F . and conventional steel plates are too brittle. One solution is to build the tanks of 9 per cent nickel steel which has been tested down to -320°F . Another, Type 304L stainless steel, containing 18.5 per cent chromium and 10 per cent nickel, also has become popular.

The Gadinia's tanks use the principle of a thin membrane (.048 inch) of stainless steel which acts as a liquid-tight barrier. This is supported by insulation which rests against the hull. The tank panels are 4 x 10 feet with waffle-like grids set at a 90-degree angle to reduce stresses from temperature changes.

Cryogenics, the world of the super cold, has been under research by Inco scientists since 1937. To date, 9 per cent nickel steel and Type 304L have been selected for over 75 per cent of the LNG tankers under construction or in service and over 60 per cent of all land-based tanks.



The tanker Gadinia, the world's largest carrier of liquefied natural gas, recently completed its maiden voyage.

House has stainless steel "stack"

A teepee-shaped house near Wainfleet, about 12 miles west of Port Colborne, has been collecting double-takes from motorists for more than a year. Assembled in one day, the prefabricated home has two bedrooms and over 1,000 square feet of living space on its two floors. The walls, partitions, stairs and floors are bolted together and the room partitions can be rearranged at any time to family requirements.

Owner Percy Elsie likes his so much he'd like to build a second one as a garage and storage shed. The house has

12 identical sides, each made of four trapezoidal panels of diminishing size. The panels are made of cedar plywood with asphalt shingles. Because of its construction, the house is virtually hurricane and earthquake proof.

Heated by oil, the house also stands out because of its stainless steel chimney. An attractive asset to the interior decor, the chimney was also selected because of its proven durability and resistance to weathering and corrosion, an important feature in the Port Colborne area's damp climate.



Percy Elsie's unusually shaped house is a curiosity for many motorists.

Better Earnings

Inco's net sales for the first quarter were \$232.5 million, compared with \$195.9 million in the first quarter of 1972 and with \$244.2 million in the fourth quarter of that year.

First-quarter earnings were \$36.1 million, equivalent to 48 cents a common share. First-quarter earnings compare with \$18.7 million, or 25 cents a share, for the first quarter of 1972 and with \$27.8 million, or 37 cents a share, for the fourth quarter of last year.

The increase in sales and earnings over the first quarter of last year was due to increased deliveries, at higher prices, of primary nickel, copper and the platinum-group metals.



Percy's nickel stainless steel chimney.

