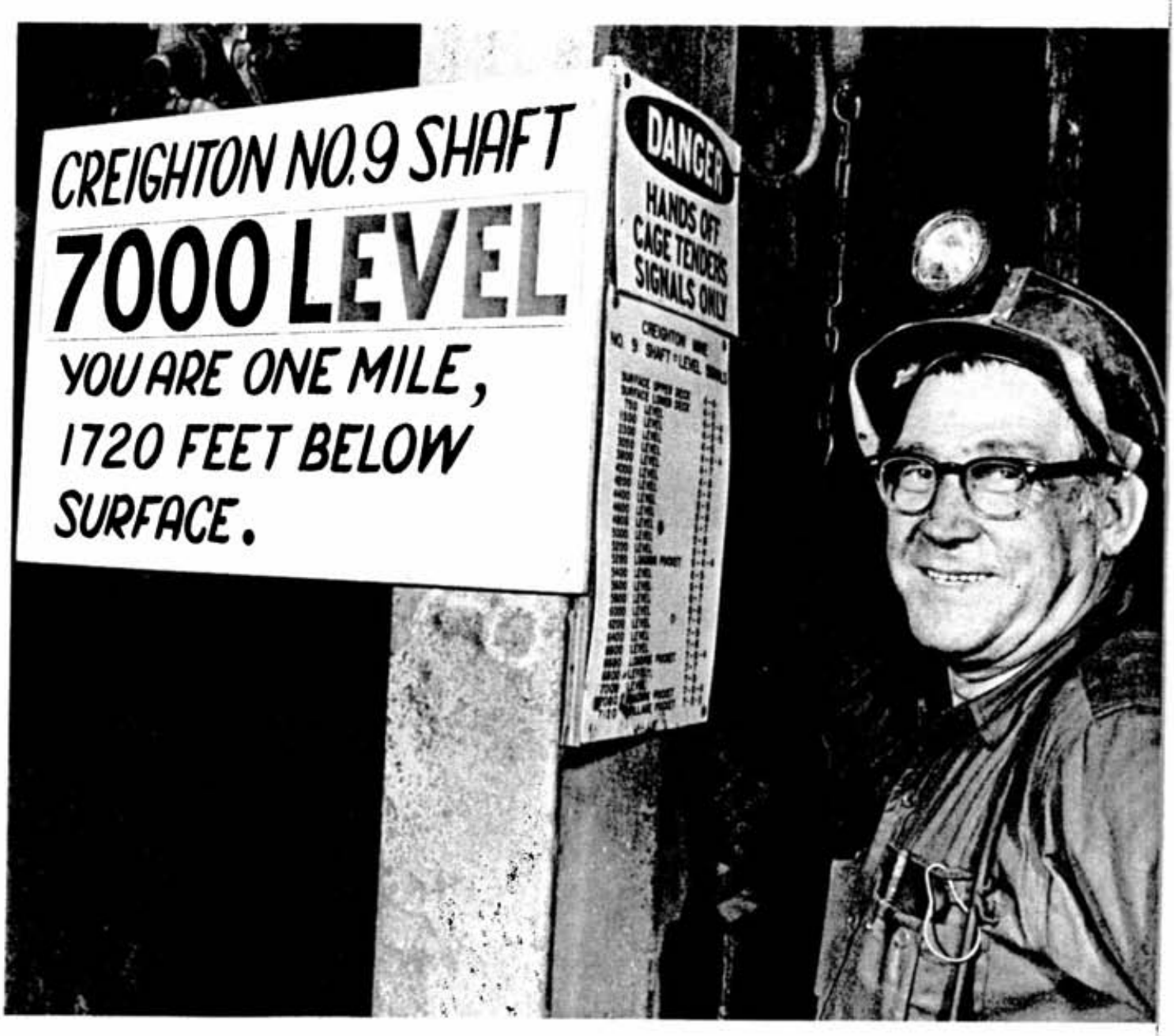
INCO TRIANGLE



AUGUST/SEPTEMBER 1972

INCO
TRIANGLE

Volume 32 Numbers 8 and 9

Published for Ontario employees and pensioners of The International Nickel Company of Canada, Limited.

Peter Marshall, Editor
(705) 682-0631

Photographic contributors

Derek Wing, Chief Photographer, Ontario Division; Mary Sitko, Les Lewis, Gus Macoritto, Don Young, Dan Dionne.

To contribute suggestions for articles, call the above telephone number, or write to:

Inco Triangle, Copper Cliff, Ontario.

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Cover story

What's it like to go up and down the west's deepest mine shaft? Andy Flynn knows. He's a cagetender at Inco's Creighton No. 9 shaft. Join us on a visit to Andy's work world.

Circulation
Additional copies (705) 682-0631

Triangle photographs available

Prints of most photographs appearing in the Inco Triangle may be ordered direct from: Rene Dionne, 170 Boland Ave., Sudbury. Or call: 674-0474. Cost: $2 each.

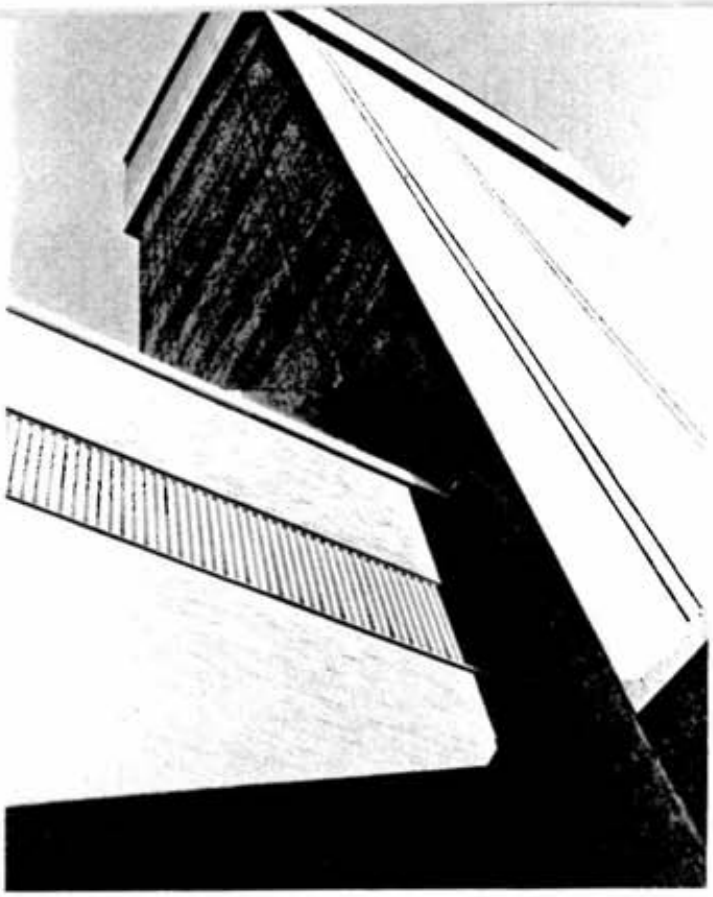
UP AND DOWN AT CREIGHTON NO. 9

If Creighton Mine's Andy Flynn tells you his job has its ups and downs, he's not kidding. Andy is one of four regular cagetenders at No. 9 Shaft which, at 7,137 feet, is the deepest mine in the western hemisphere. His job is a vital one because the shaft is the mine's main artery: without him and his conveyance, men and supplies can't be moved safely and efficently to their working locations underground.

Besides being the deepest shaft, Creighton 9 also boasts one of the largest cages in service at an Inco mine. It's a 21,718 pound double-deck monster. Each deck can hold 48 men or alternatively, 17,500 pounds of supplies on the top deck or 21,000 pounds on the bottom deck, or a maximum combined load of 24,000 pounds.

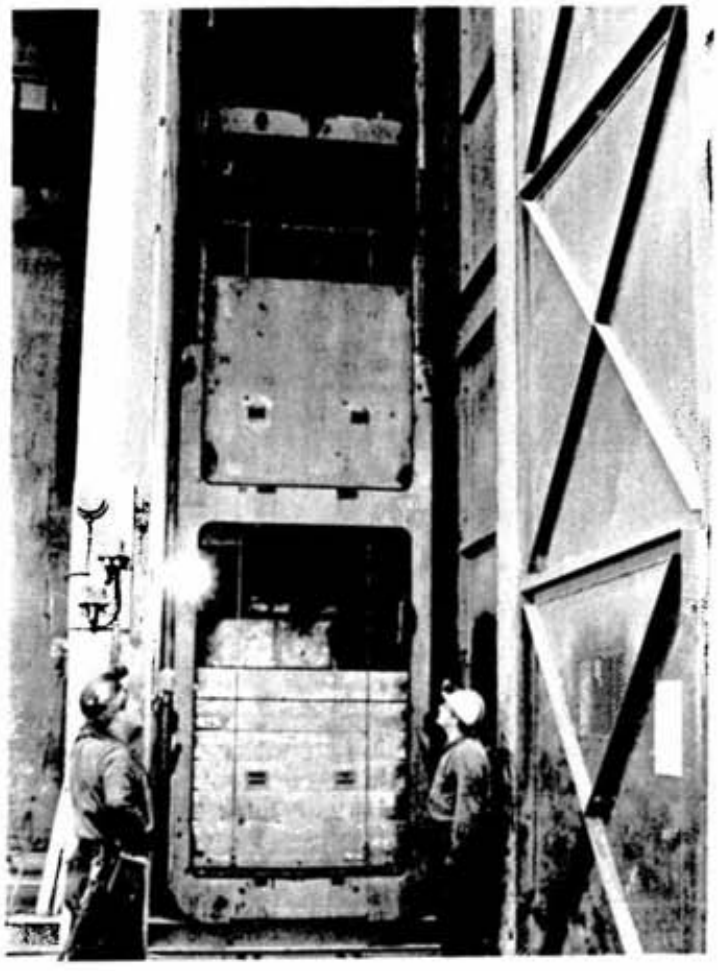
A day in the life of a cagetender goes like this: at the start of shift, Andy and his regular partner, Rico Scopaz, relieve the previous cage crew, and start their scheduled runs. For the next 90 minutes, they bring the men underground back to surface, and deliver the new shift to their working levels. It's a carefully timed operation which avoids the least amount of production downtime.

Communications are an important part of getting things done in mining and the cage is no exception. Requests for cage service underground come by telephone to the operating shaft boss who is in charge of the cage. He contacts the cagetenders by the telephones installed at each station underground, or he can wait for the conference on surface which follows each trip underground when he issues his instructions to the cage-



180 feet high: Creighton 9's concrete and steel cladding headframe.

Riggers Julius Ranta and Don Spurr complete their daily test of Creighton 9's double deck cage. Big cage towers 21 feet above them.



tenders. Teamwork is important to keep men and supplies moving and it's the operating shaft boss' job to coordinate the supplies on surface waiting to be moved with the calls from underground.

The variety of supplies moved illustrates the big organization waiting to be fed underground: locos, ore cars, fuel, timber, mucking machines, crusher parts, tools, spare parts for jumbo drills and load-haul-dump machines, light bulbs, drill steel, fabrene for sandfill, etc. A regular cargo is the heavy metal screening and steel roof bolts which are standard overhead protection underground in all Inco mines.

Next door to the headframe is another member of the shaft team: the hoistman. Heard but not seen, he communicates with the cagetenders through bell signals which indicate the level the cage is to reach or any other action to be taken, such as "chairing". It's a job which requires concentration and a sure hand on the controls. To ensure no mistake, the hoistman repeats the cagetender's bell signals before the cage moves.

Because of the extreme depth of 9 Shaft, a special procedure is used to avoid stretching the cage rope whenever heavy supplies are carried. Called "chairing", it requires coordination between cagetender and hoistman on surface. Heavy chains, located at each station underground, are hooked onto the cage as it is lowered slowly. This prevents the cage from bouncing as the heavy cargo, such as a loco or supply truck loaded with heavy roof bolts, is removed. Andy says the whole chairing procedure takes less than a minute to complete but makes a big difference to the safe operation of the cage.

The cagetenders load and unload the supplies underground themselves. It's strenuous work, but Andy points out that each station has tugger hoists and locos are usually available on request to move heavily loaded cars on or off the cage.

Backing up the cagetenders are two more important members of the underground team: the riggers and the shaft inspectors. Both are interested in the safe and efficient operation of the cage. Every day the riggers stage a "free fall" test on surface to check the dogging mechanism, a safety device which digs into the wooden shaft guides to stop the cage if there is a rope or hoist failure. The shaft inspectors do a regular weekly check of the shaft walls, cage guides, and general shaft condition.

Creighton 9 is one of the newest shafts amongst the 11 operating mines in the Sudbury District: Inco employees took it over from the contractors only last April. Since then, major emphasis has been on improving ventilation and servicing of the lower mine area by driving connection drifts through to No. 8 Shaft, and on installing crushers, ore bins, and conveyor belts for muck handling via No. 9 Shaft.

Over the years the need to mine at ever deeper depths meant the addition of internal shafts, 6 Shaft to cover the 4000 and 5400 level horizons, and 8 Shaft for 5600 to 6600 level horizons. The multitude of shafts, however, meant a complex ore and supply handling system. Improved technology particularly in the design of higher strength hoist ropes made 9 Shaft not only feasible but necessary to simplify hoisting.

Mining in the 9 Shaft area is by cut-and-fill, first introduced at Creighton in the 1930s. Now widely used at other Inco mines, cut-and-fill involves the removal of ore in horizontal "slices" as mining proceeds upwards. After drilling, blasting, and mucking, using modern mechanized equipment, sandfill is poured to fill in the excavated area. The sandfill supports the walls of the stope and acts as a floor for the men and machines to mine the ore above.

No stranger to mining, this is a familiar day-to-day scene for Andy Flynn. He moved to 9 Shaft in April, the same month he became a full-time cagetender. Born in Newfoundland, he worked for 10 years at the island province's Buchans lead, copper and zinc mine, before joining Inco 23 years ago. Andy gained all his experience in the Creighton complex, working underground as a slusher operator as well as a loaderman diesel. His first taste of shaft work came when he started working as a shaft inspector several years ago.

Andy's first local home was in Sudbury, but he moved in 1952 to a company house in Lively only 10 minutes from work. He recently purchased his home from Nickel Basin Properties, Inco's real estate subsidiary. Andy's wife died in 1967 and since then he has raised his five children, three sons and two daughters, alone. All of them

Continued next page

Coming off shift, these men represent about half a load for one of the cage's two decks.

Andy Flynn and partner Rico Scopaz manhandle a fuel truck onto the cage.

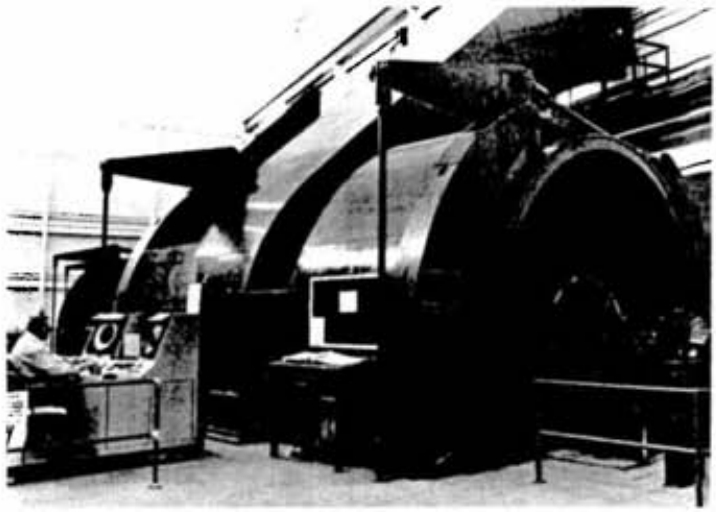
When the cage carries heavy supplies, such as this truck loaded with roof bolts, Andy chairs the cage to avoid damage to the rope.

now, with the exception of 10-year-old Andrew, Junior, have left home for college or employment out-of-town.

"I like the job," he says of cagetending, "because the time goes fast. You're busy all the time and you're on your own with no one looking over your shoulder." Andy's cage travels at 2,000 feet per minute, almost 30 miles per hour, and takes about four minutes to go from 7000 level to surface. He reckons he travels about 45 miles vertically each shift serving the 24 stops underground.

It takes about a week to qualify as a cagetender. Andy spent six days on-the-job training aboard the cages in the other Creighton shafts, and then wrote a comprehensive exam. He has to know the Ontario Mining Act, the company's safety rules and operating practices, hoisting signals, mine fire regulations and emergency procedures.

The job of cagetender has come a long way from that described by Georgius Agricola in 1556. He reported that miners reached the bottom of the shaft by being "lowered into them while sitting on a stick or wicker basket, fastened to the rope of one of the three drawing machines. . . ." A 16th century drawing shows a crude winch arrangement, much like an old fashioned well, with two men turning the handles. By contrast, Andy Flynn's 20th century cage needs an 18-foot diameter double drum hoist and a 3,750 hp. motor to lift it.

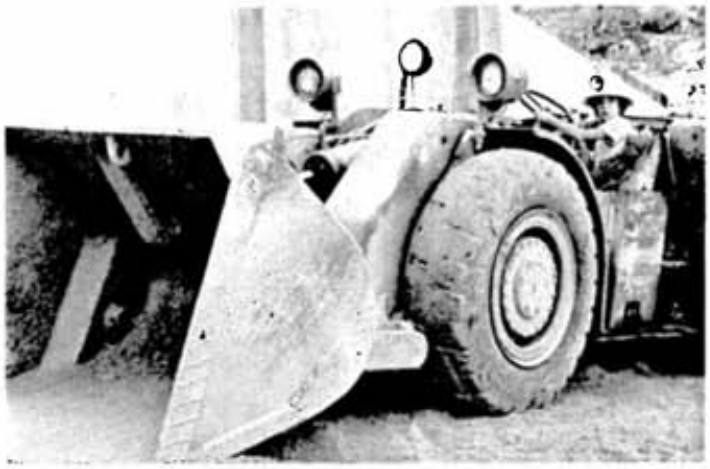


Hoistman Gerry Wagner is the unseen member of the shaft team. Levers at his fingertips control the 3,750-h.p. motor which drives the double drum hoist. The large dials show the cage's location underground and hoist speed.

Operating shaft boss Rolly Richards checks with the hoistman while Rico and Andy wait for orders. Rolly's job would be impossible without good communications between all members of the shaft team.

After church, Andy and his 10-year-old son Andy Jr. enjoy a game of "Hearts". Andy recently bought his home in Lively, about 10 minutes from the mine.

Four hundred years ago, this was the latest in underground transportation. Note the man descending on rope in the centre. Miners also climbed, slid and walked underground.



Young visitor gets a thrill behind the controls of an L-H-D machine.

Visitors picnic in the shadow of the headframe.

Shebandowan's open house

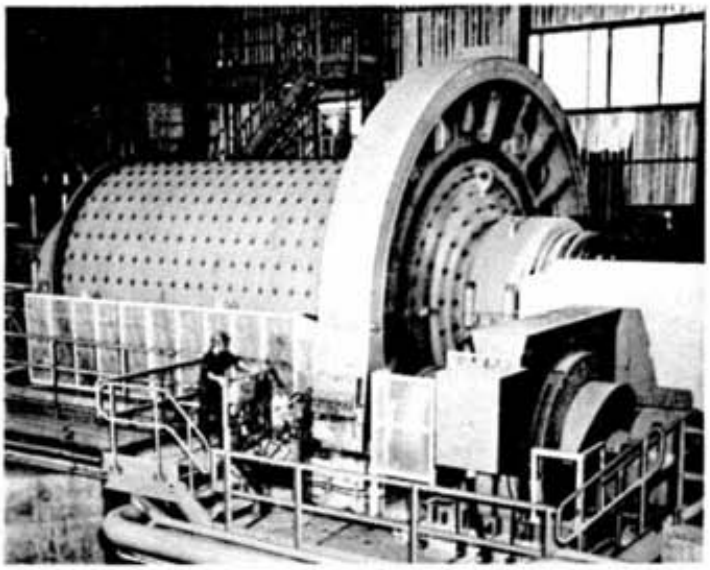
More than 1,000 visitors, most of them members of the Lake Shebandowan Campers Association, turned up recently to see what their new neighbour, Inco, is doing. What they saw at a special open house at the new Shebandowan site apparently pleased them. Visitors were taken on a tour of the mine headframe and mill and were treated to a picnic on the lakeshore.

Shebandowan is an unusual "first": the development of a hard-rock mining operation that will perform in complete accord with its environment. After exploration activity in the mid-1960s had proven an orebody of sufficient commercial size, Inco made the decision to mine it.

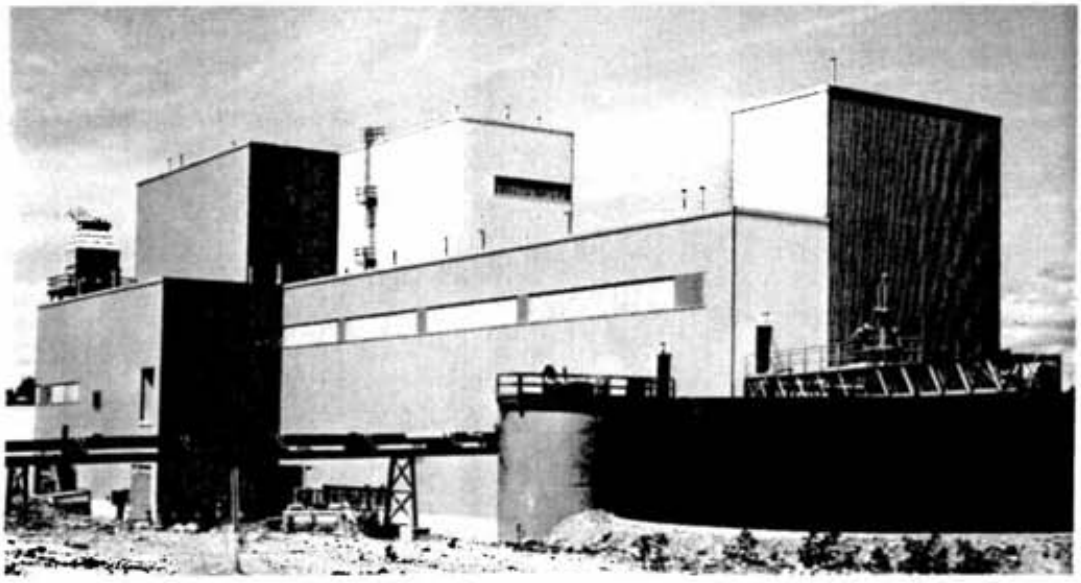
In the case of the Shebandowan project, the company faced a new and difficult problem: the Shebandowan area is a Mecca to camp owners in northwestern Ontario. The development had to proceed with as little disturbance as possible to the scenic and historic significance of the area.

In order to do this the designers had to develop a unique system. Since the mill would use a wet process, air pollution was not a threat. To preserve water, the mill was designed to use only recycled water, something that had not been done before. In addition, water seeping into the mine would be clarified underground, using a system that has proven successful in other Inco mines. And, to be sure that the whole system worked, consultants determined the "baseline" conditions of the lake before operations began.

Ore handling on surface, at the waterfront, has been avoided due to possibility of excessive noise. Instead, an underground storage bin has been installed to receive hoisted ore. From the bin an inclined ramp allows a belt conveyor to deliver ore to the mill, a half-mile inland. A long-range plan has also been developed by the company's agricultural department for landscaping the complete site.



Shebandowan's single ball mill has a 13½-foot diameter and 22-foot length, the largest in any Inco mill.



In keeping with the company's objective of building an attractive complex, the mill building uses steel cladding of contrasting colors.

BLUEPRINT FOR LEADERSHIP

Recently there have been a number of significant changes in the organizational structure of the company following the company's annual meeting in April. To find out more about these changes, and to put them into

John McCreedy

perspective, the Inco Triangle spoke to John McCreedy, president of the Ontario Division.

"As president of the Ontario Division, one of my responsibilities is to ensure that the Division operates as an efficient, economic and profitable unit. To achieve this, the Division has been organized into responsibility areas in the mines, plants and administrative sectors.

"This month the assistant general managers were appointed vice-presidents, and the responsibility for milling was coupled with mining under Gar Green. Gordon Machum is responsible for smelting and refining, and Roy Aitken's engineering and maintenance group also includes the enlarged environmental control department. Walter Curlook, vice-president, administration, has been building up a strong and effective administrative function since he joined us in April.

"Last month Mel Young was appointed assistant to the president. Mel is helping me with those jobs that extend beyond the day-to-day activities of the Division. Because we are part of many municipalities which will be affected by regional government, I have asked Mel to help me sort out the problems that will naturally arise.

"Mel and the four vice-presidents serve with me on the Division's management committee. Through our weekly meetings we are able to keep each other fully informed on the progress of developments in each area, and thus achieve a higher degree of co-ordination between major functions."

The Triangle went on to talk to the vice-presidents to find out more about their sphere of activities. Gar Green, vice-president, mining and milling:

"Tom Parris and Rudy Regimbal have been appointed assistants to the vice-president to assist me with the mining and milling operations, respectively.

Garfield Green

"Originally there was one mill at Copper Cliff that handled the ore from all mines. As ore grades declined and transportation costs increased, and with the development of mine backfilling using classified mill tailings, we built mills at several mine sites. Coordination of mining and milling operations at each such location is essential, and, to better achieve this, we have given the former area superintendents full responsibility for the total operation at their location and the title of manager to recognize this added responsibility. Thus, as manager, Frood-Stobie, Bill Collis is responsible for the operations at Frood, Stobie, and Little Stobie and for the Frood-Stobie Mill. It was obvious from the outset that Shebandowan would best be operated under this system, and George Johnston has been manager there since April. Dave Lennie, manager, Levack, and Ron Brown, manager, Creighton, are also responsible for the mills at their locations. Milt Jowsey has been appointed manager, Garson area and Norm Creet, manager, Copper Cliff mines.

"Clarabelle Mill handles ore from many mines and the Copper Cliff concentrator treats concentrates from several mills. Many of their functions are interrelated and they are located close together. To manage these plants, Hilton Fowler has been appointed manager, central mills.

"Maintenance, a common concern at all mines, comes under the general direction of Charlie Hews, manager, maintenance. He is also responsible for introducing new equipment into the mines.

"Mines engineering and mines geological exploration are also closely linked and I have combined them under Bob Hall, director, mines technical services. Chief Mines Engineer, Jack O'Shaughnessy and Chief Mines Geologist Carl Gourley both report to Bob. As an added benefit, I expect that the men in this group will gain experience in each other's fields. Geologists will pick up a working knowledge of mines engineering and engineers the basics of local mine geology."

In the smelting and refining plants, Gordon Machum, vice-president, has appointed Bud Feick, Hugh Judges and Jack Lilley as his staff assistants. Other new appointments include Syl Merla, manager, Copper Cliff Smelter; Bill Buchanan, manager, matte processing; Ken Johnston, manager, transportation and traffic; Fred Burchell, manager, maintenance; and Mike Sopko, manager, process technology. Gordon Machum:

Gordon Machum

"Bud will be helping me with the coordination of production and controlling costs in the smelting and refining plants. Hugh will look after the internal administrative problems of the group and assist with employee relations and safety. Jack is going to look after the capital projects and major engineering activities within the smelting and refining plants. He will be looking for more ways to effect cost savings and achieve greater efficiencies within the plants.

"Over the years the matte processing plants have grown as a result of the development of new products, nickel oxide sinter 75 and more recently, nickel oxide sinter 90, which go directly to market. The appointment of Bill Buchanan as manager recognizes these plants as a major area of responsibility and accountability.

"In another change in reporting relationships, I have appointed Ian Laing as division metallurgist, reporting to me. He will direct and organize the preparation of metallurgical evaluations, cost evaluations and production schedules for current and proposed processing operations.

"As manager, maintenance, Fred Burchell will be responsible for overseeing maintenance at

all the smelting and refining plants, including Port Colborne.

"There has been little change in the refining areas as the Port Colborne and Copper Cliff Nickel Refineries, the Copper Refinery and the Iron Ore Recovery Plant have been under separate managers for some time."

In engineering and maintenance, Roy Aitken points to the creation of the environmental control department as being one of the most significant changes:

"Previously environmental control was handled by a variety of people in the mining, processing and engineering groups and coordination of these efforts was not easy. People within the group had multiple reporting functions, both formal and informal, and communications were difficult. With Bob Saddington as director of environmental control and Charlie Ferguson as superintendent of an integrated department, coordinated and consistent environmental control expertise will be provided for our plants and mines. Operational details for the new organization are being completed now.

"Engineering, with John MacDougall as director of engineering, has an organization that can handle any job, large or small. While most of the major projects associated with the expansion program begun in 1966 are near completion, the continuing development of the area generates a steady flow of work. John's department has been reshaped over the past year and is now organized on a project basis, increasing the emphasis on cost control and scheduling. Harry Mulligan has the project management responsibility while Don Bradley looks after the design activities.

"In-plant maintenance is primarily an operating responsibility and significant changes are being made in the organization of a number of operating areas. These changes are aimed at developing the experience gained from the maintenance control systems introduced a few years ago and tailoring these to suit our specific plant needs. Also we are developing a central maintenance group to back up the in-plant groups on an area-wide basis. Already functioning in this way are maintenance engineering under Leo Roininen, and

Roy Aitken

maintenance construction under Alf Richards.

"Our fourth area covers the utilities. Clayton Robertson continues to direct the supply and distribution of power."

Finally, the Triangle spoke to Walter Curlook, vice-president, administration. The administration group has undergone a considerable change recently, and Walter explains what was behind the change:

"When I moved into the administration area in April, my first approach was to find out what people were doing, and why. Proceeding from there, the task is to ensure that the different functions undertaken by the various administrative groups contribute to efficient and successful operation of the Division.

"With Warner Woodley, director of administration, I studied the existing departments making up the section known as administration, with the view that they be designed to conform with our company's current drive towards improved efficiency, more exacting cost control and preparedness for the challenge from increased competition from the ever-increasing number of new nickel producers.

"In the accounting area, under the leadership of Jim Fowler and as part of a program begun some 12 months ago, strong emphasis is being placed on instituting a budget-cost control system for all sections of the Division. The accounting department, besides helping in the development of budgets, plays an active role in providing quick feedback and analysis of costs to the operating departments, as well as to corporate offices.

"An area given immediate attention was the organization of an industrial engineering department. Three departments, mines projects, special projects, and mine standards had been operating independently in the past. These groups have been combined into one department under Peter Souter, and strengthened. The tasks of the industrial engineering people are to work in close conjunction with supervision of the various operating and maintenance departments, assisting them in the analysis of work methods and procedures with the objective of devising better procedures and more satisfying job assignments.

"Basic to all efficient operations is a need for planning, and it was considered important to assign one man the responsibility for the coordination of production planning, review of capital appropriation requests and the assembly and review of annual capital budgets and long-range capital forecasts. Bob Neal has been appointed division planner, replacing Ron Brown who was recently appointed manager, Creighton.

"As for reorganization, our studies confirmed earlier recommendations that the various functions related to the operations of the divisional offices, such as mail room receiving and distribution services, stationery and printing, office equipment and supplies, and general office services, would be more efficiently carried out if consolidated under a single manager. Accordingly, the department of office services was created, and George Burns was recently appointed its first manager.

"The employee relations department, previously known as industrial relations and personnel, continues to hold a position of prime importance in the Division. Art Bennett, the newly-appointed manager, believes that closer cooperation between the company and all of its employees, and with the Union will be beneficial to all.

Walter Curlook

"Bill Thorpe, manager of purchasing, has a concerted program underway for lowering our inventories, and other programs for facilitating the movements of equipment and materials from suppliers to the operating departments. Jim Grassby's role was broadened by appointing him manager of computer systems, and giving him the added responsibility for coordinating the investigation, development and implementation of all computer-related systems and procedures in the Division.

"Safety administration under Eric Kossatz, manager, continues to have its predominant influence on operations. Our objective in this area is to continually improve our working conditions and further improve our safe working habits. Dr. Brent Hazlewood who directs the Copper Cliff Hospital has a continuing program for improving hospital equipment and services. Dick Dow continues as administrative assistant taking direct charge of such activities as the Quarter Century Club and pensioner relations.

"We feel that the administration section is now properly organized and oriented for providing the Division with the administrative service necessary for efficient operation."

GREEN THUMB

What Inco does by

DON YOUNG

This series has been concentrating on personal achievements in gardening, and on providing a source of basic knowledge so that the average home gardener can reap the maximum possible rewards from his efforts. Landscaping on a grand scale throughout the Nickel District is the job of Inco's agricultural department.

They are responsible for over 1,200 acres of grounds in various stages of landscape development. Inco's efforts are directed at using vegetation to improve the human environment in this district as much as possible, through a continuing program of land maintenance and development.

Work is divided into two broad categories: one being the landscaping of areas around Inco plants and townsites, and the other being the reclamation of barren areas under company jurisdiction in the Sudbury District. All areas designated as either landscaped or reclaimed must receive regular maintenance in the form of fertilizer and lime applications, cutting, cultivating, flower planting, etc, depending on the particular requirements of each location.

The program of land reclamation began very modestly back in 1917 when the old roast yards were filled in Copper Cliff. Over the years this area was graded, planted and maintained and now exists as the Copper Cliff Nickel Park. Work on this area continues even today in the form of a strong maintenance schedule to keep grass, flowers and trees growing. One of the biggest problems is keeping ahead of deliberate vandalism which lays waste many of the park's young trees each year and necessitates replanting where possible. Projects are underway now in the park to improve soil conditions and surface drainage of grassed areas so that they will be better able to support a top quality vegetative cover.

After 1917, work was continued, mainly in areas within Inco townsites, as efforts were made to revegetate open areas with plantings of grass and trees.

1956 was a major turning point, as continuing advancement in techniques and increasing concern for the environment focussed more attention on the vegetation, or lack of it, in certain areas.

Experiments to develop new procedures and to adapt existing methods to our peculiar needs began to show definite signs of success. With increased knowledge and funding, the agricultural department has begun a new era of land reclamation and environmental enhancement.

A young Red Pine, its roots firmly embedded in tailings, reaches above the grass.

The department's projects are many and varied. As well as regular maintenance of all reclaimed areas, it is involved in a continuing program of improvement to reclaimed and landscaped sites to bring them up to a high standard. Increased use of fertilizer and lime is showing a marked effect on the color and quality of grassed areas.

New projects are scheduled to fit in with existing maintenance and improvement programs, bearing in mind our short working season and the optimum climate conditions necessary to successfully establish growth.

Tailings farm born

Attempts to stabilize the tailings areas near Copper Cliff began in 1947 when test plots were initiated in the abandoned CD area. Perseverance and experimentation led to the formulation of a

The South Dam is no longer a source of blowing sand as it now greets the eye with acres of green grass.

successful planting program which has converted over 700 acres of tailings dustlands into fields of grass and legumes.

The yearly cycle of plant growth has created a buildup of organic matter in the older established areas forming a layering effect in the earth.

Seedling birch trees have been evident in the older areas for several years, and now many of these have reached a height of 10 feet and more, while thousands of others can be found in all sizes from seedlings to young trees.

The volunteer growth of trees led to experimentation in 1971 with the planting of forestry seedlings. The results were surprising even to Inco's agriculturists, as the seedlings took hold and growth equalled or surpassed growth of similar seedlings on native soil. The success of this program has resulted in an annual seedling planting program. Red Pine, Jack Pine and White Spruce will soon be found in groves on our formerly barren tailings dumps.

Our agricultural department is confident that within a few years we will have a soil environment better than the original layer which covered the area years ago.

Landscaping of Inco installations has become a major job, particularly because of recent expansion programs. Winter months are spent drawing up and revising practical and sound landscape plans for new buildings. The project is phased within the limitations of completion of heavy construction and the working season. Materials are ordered so that they will be available when required.

The agricultural department is always striving to achieve plans which are more people-orientated by examining such things as pedestrian circulation at any early stage in the planning sequence.

Projects currently under way include the landscaping of the nickel refinery, Creighton No. 9 Shaft, Copper Cliff South Mine, Levack West Mine and Shebandowan.

Maintenance of these areas is a critical consideration in the planning and development phases. All of our landscaped sites require constant maintenance.

Over 100 acres have been grassed in Coniston. This is beside Highway 17.

This machine is simultaneously seeding and rolling.

Coniston

The program of rehabilitating barren areas around Coniston is showing definite signs of progress, with over 100 acres now established in grass. Hundreds of trees are planted annually with the eventual goal of reforesting these areas to provide a maintenance-free ground cover.

The technique for establishing grass in Coniston is similar to that used on most soil areas which Inco revegetates.

An average acre of ground requires the following preparation. Two months prior to seeding, the area is limed with five tons of agricultural limestone and disced. In early August, the area is again disced and fertilized with 600 pounds of 10-20-20 fertilizer. Sixty pounds of rye is broadcast on the ground which is then harrowed. A special seeder applies 60 pounds of grass seed and rolls it into the surface. The seed is a custom blend which has been developed by Inco for our conditions. In certain light soil or sandy areas, it has been necessary to apply a binding chemical to the soil surface after seeding to prevent erosion until the rye can germinate and protect the seedling grasses.

Landscaping of the new Garson Mine office was completed in 1971. Wire mesh was laid under the sod on the steep slopes to prevent slippage until the roots took hold.

Shrubs, flowers and grass enhance the Copper Cliff general engineering building's entrance.

S ROUNDS ARE PRIDE OF PORT

If the Port Colborne Nickel Refinery were human, it would be a proud parent today, boasting about its new "baby". The excitement is all about the plant's new product, christened "S Nickel Rounds". Production reached full capacity this month, marking the successful completion of a research and development program extending back to work by Dr. Louis Renzoni in the 1940s and earlier work by W. A. Wesley at Inco's Bayonne Research Laboratory.

They recognized that nickel, used by many electroplaters as anode material in their plating cells, might be produced in divided forms, thus eliminating the expense of shearing full-size cathode slabs to sizes required by our customers. Widespread adoption of titanium baskets to contain nickel cut to small squares in the plating industry provided new impetus to seek a practical method of achieving this in 1966.

From the outset this project has illustrated the degree of cooperation possible between widely spread divisions and departments of the company and the benefits which can accrue from such coordination of efforts. Much of the preliminary investigation was carried out at the Paul D. Merica Research Laboratory in Sterling Forest, New York, followed by further development and pilot plant studies at Port Colborne by process technology personnel. This work resulted in a patent for the present process being awarded to Dr. B. B. Knapp, supervisor of the electrochemical section at the Paul D. Merica Research Laborary and L. E. Cupp, superintendent of process technology at the Port Colborne refinery.

S Rounds are produced by plating pure nickel containing a small amount of sulphur on stainless blanks or "mandrels". Printing the mandrels with a masking material or "dielectric" coating leaves a pattern of circular areas of stainless steel exposed onto which the nickel is plated.

The first stage of the operation is the surface preparation of the stainless steel mandrels to produce a surface finish to which the deposited nickel adheres, preventing the internal stresses created during deposition from causing the nickel to peel off during plating.

The pattern of circular areas is next imprinted on the mandrels using a unique screen printing machine capable of coating both sides of the mandrel simultaneously with a heat-curing paint. After printing the coatings are cured in an infra-red heat oven in groups of three mandrels. Following cooling to room temperature by passing through a forced air cooling tunnel, the mandrels are then ready for the plating cells.

Mandrels prepared in this manner last for several weeks after which time the dielectric coating has deteriorated. The coating is then removed along with any residual nickel and the process for mandrel preparation is repeated.

In the plating cells the mandrels are placed as cathodes between impure nickel anodes and the familiar electroplating process continues depositing pure nickel on the circular areas of the cathodes for six days. At the end of the plating period the nickel deposit has formed S Rounds about one inch in diameter and 3/16-inch thick. The mandrels are then removed to racks and sent to the new section of the plant for removal of the Rounds.

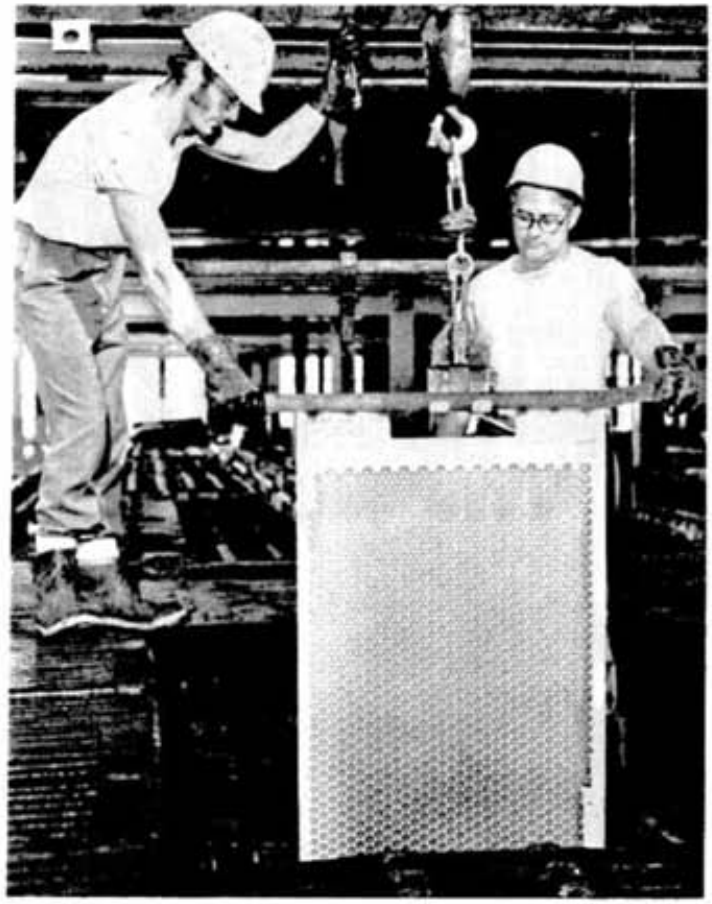
The system for product handling is highly mechanized and automated for maximum efficiency and minimum manual handling. Mandrels are removed from the racks to a "power and free" overhead conveyor which carries them to a pneumatic hammer. By rapping the suspension bar, the sheet is vibrated and the Rounds dislodged. They drop to conveyors which carry them to transfer buckets. After cleaning by tumbling in water in a "Harperizer" mill, the product is packed in drums for shipment.

The mandrels after having the Rounds removed are directed automatically to storage conveyors to be either returned to racks for transfer to the tankhouse or to be repaired and reprinted.

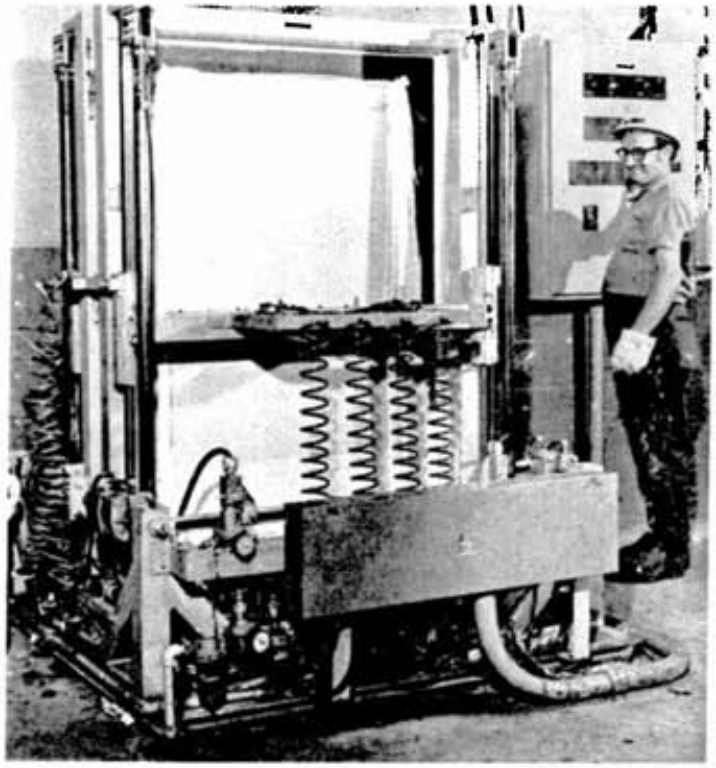
Again, the system for processing mandrels through the various stages is highly automated. Electronically programmed hoists transport mandrels in pairs through the system allowing them to remain for predetermined times at each stage while the hoist proceeds to other stations.

The S Rounds have received unanimously favorable comments from selected customers who have evaluated it during pilot plant development. Now that full production has been achieved it is expected that most electroplaters will choose to purchase S Rounds. S nickel has been used for some time in basket anodes comprising titanium mesh baskets filled with sheared pieces of refinery nickel. This form of nickel is highly active in plating baths resulting in lower costs and increased efficiency for the plater by lowering operating voltages and decreasing anode sludge. The additional advantages of S Rounds are their convenience and ease of handling and elimination of bridging which can occur in the baskets if ordinary nickel squares are used.

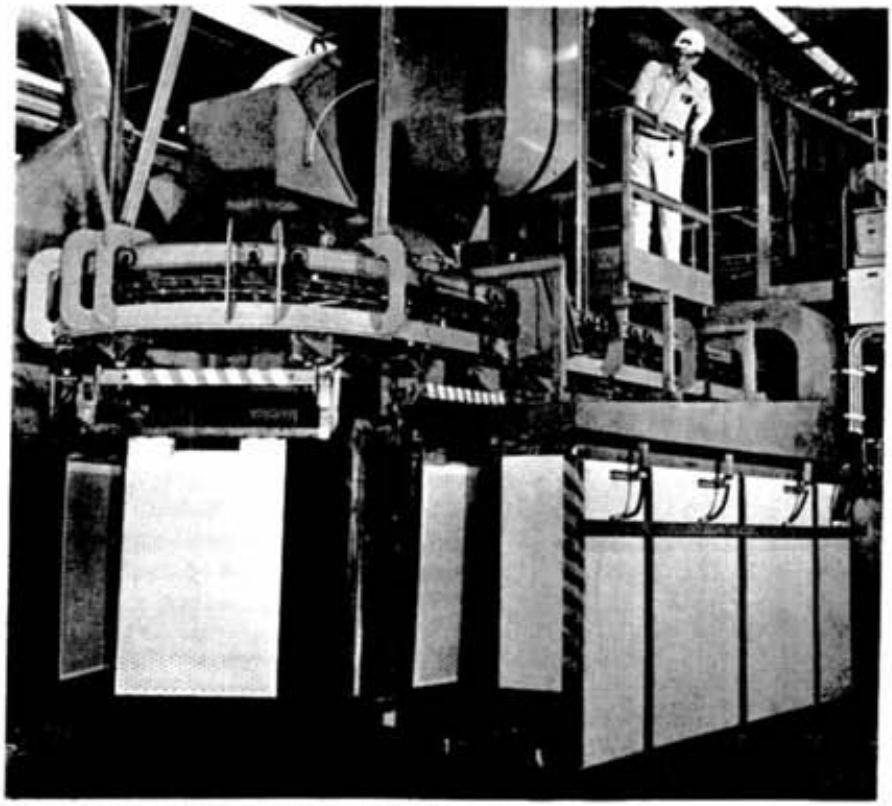
Batton-like new S Rounds feature easier handling.



Plating tankmen Lanfranco Francescangeli and Paul Dion remove a mandrel from one of the four lines in the tank-house. It takes only six days to grow a crop.



The unique vertical double screen printing machine takes but a minute to paint both sides of a mandrel. Mandrel preparation man Don Lapointe is in charge of the machine.



The painted mandrels are cured inside this infra-red oven. Day Foreman Les Wheatley observes the operation.

Harvesting a crop of S Rounds.

BIG DAY FOR GOLFERS

One of the last male bastions left in Inco (next to the dries) has fallen. The annual Inco golf tournament has become a mixed event. The quartet of charming ladies from the general office who liberated it were Marge Martin (staff payroll), Bernice Larouche (safety), Raija Luoma (data processing) and Mary Sitko (public affairs). Marge and Raija even walked off with individual awards. Marge's for being the most honest golfer and Raija for a hidden hole award. Marge used 195 strokes for the 18 holes and won a ball retriever, practice hole and driving ball kit.

Organized by the process technology department, this year's event also fielded a record number of players, 297.

Despite miserable wet weather during the week prior to the tournament, the organizers made a deal with the weatherman and the big day was a perfect one. The always beautiful Idylwylde course was in excellent shape; a tribute to that club's hardworking grounds-keepers. Several regular Idylwylde members commented, however, that the wet weather did change the fairways and greens and made for quite a challenging and interesting game of wits to select the right club, compared with their usual games over the course.

Big winners were the Reduction team of Bill Buchanan, Ted Flanagan, Don Ripley and Roy Maud, who took home the R. L. Beattie trophy for low gross. They were presented with camp stoves by Ontario Division president John McCreedy. The team's combined score was 325; individual scores were Bill 84, Ted 81, Don 81, and Roy 79. Runners up for low gross were a team from maintenance. Their score of 361 earned them two lawn chairs each. Team members were John Turnbull, who carded 93, John Newel 103, Joe Sharp 75, and Henry Lewandowski 90.

Polaroid cameras went to the low net team in group "A", who won the E. C. Lambert trophy. Scoring 292, the "miscellaneous" team from all plants was composed of Brian Crowder, Don MacKay, Hurley Hreljac, and Graham Squirell. Their net scores were Brian 72, Don 73, Hurley 73 and Graham 74. Three strokes off as runners up were the iron ore plant team of John Buchowski, Yves Beauchamp, Gerry Laforge and Jim Stinson. Their net score was 295.

The Alex Godfrey trophy was won by the safety team, who netted 293. One stroke off was a team from Little Stobie. Members of the safety team and their net scores were: Joffre Perras 76, Ken Glynn 74, Jack Rickaby 73, and Norm Lessard 70. The team from Little Stobie was: Don Peloquin, Norm Urwin, D. Vaillancourt, and Larry Chasse. The safety team took home polaroid cameras, and the Little Stobie team won picnic jugs.

Joe Sharp won the individual low gross award for "A" section and an electric drill. He used only 75 strokes. Best in "B" section was Roy Maud who also won an electric drill for his score of 79. Battery lanterns were won by low gross runners-up Hurley Hreljac and Don Peloquin.

Claude Kerr from general engineering won the individual low net award in "A" section with a 68. Don Ripley was tops in "B" section with a 70. Both won clocks. Don Ticalo and Norm Lessard won butane torches as runners-up.

Dr. Mike Sopko, general superintendent of the process technology department, emceed the evening awards program. Only the major awards were presented at that occasion. Winners of hidden holes were contacted individually after the event: Wes Davey and Glen Wilson on No. 1; Jim O'Neil and Leonard Faulkner on No. 3; Tei Sanmiya and Hugh Third on No. 6; Terry True and Aime Chartier on No. 8; Pete Dozzie and Raija Luoma on No.

Dave Lugil tries to blast his way out of a sand trap.

Pensioners Ed Racicot and Archie Massey tour the course in style.

Making Inco golf history are Bernice Larouche, Mary Sitko, Raija Luoma, and Marge Martin. The quartet were the first women to ever compete in the tourney.

Carefully lining up his putt is Morris Marunchak. He missed.

11; John Turnbull and David Scott on No. 16; Dick Agar and Bob Haworth on No. 17; and John O'Shaughnessy and G. Dennie on No. 18. Zippo lighters, tie clips, and stainless steel pens were their rewards.

Mike Sopko chaired a hard-working committee composed of John Patterson, Janet Paquette, Dave Kilp, prize master Brian Lyons, and Lawrence Mochizuki, who ably handled the draw and compilation of statistics. Bert Meredith, chairman of last year's industrial relations golf tournament committee, was special advisor and willingly shared his department's experience. Next year it's general engineering's turn.

John McCreedy presents the R. L. Beattie Trophy to Bill Buchanan, Don Ripley, Ted Flanagan and Roy Maud.

Don MacKay, Brian Crowder, and Graham Squirell receive the E. C. Lambert Trophy from Warner Woodley.

The beautiful Idylwylde course was in good shape, despite wet weather this summer.

Garfield Green presents the Alex Godfrey Trophy to Norm Lessard, Joffre Perras, Jack Rickaby and Ken Glynn.

Reporting their scores to Gerry Laforge are Jim Stinson and Jack Dube.

Busy registering golfers are Dave Kilp, Mike Sopko, Janet Paquette, John Patterson and Willard Koski.

Garden awards announced

"The late frost on June 10, coming after an unseasonable warm spell in May which promoted early growth, had quite an adverse affect on gardens," Clare Young, Inco agriculturist, noted in his annual garden competition report to division President, John McCreedy. "This was coupled with an early frost on August 2 in some areas, which made for one of the shortest frost-free growing periods on record.

"Although the greater than normal rainfall experienced in August promoted grass growth and meant improved lawns, the quality of bloom of most flowers was poorer than usual," he said.

Happily, the upsurge in gardening in Coniston has continued, and this is reflected in the increased number of awards there, Mr. Young noted. Copper Cliff and Lively remain on much the same level as in past years. Fewer gardens at Levack and none at all at Murray Mine, however, were deemed worthy of prizes this year.

Well-known Sudbury horticulturist Tom Vickers, assisted by members of the agricultural department, judged the gardens in the annual competition and recommended over 310 gardens for awards as follows:

CONISTON

M. Martinello, 108 Caruso St., $20.00; G. Pedat, 106 Caruso St., $15.00; D. Oliver, 8 Thomas St., $12.00; V. Brunatto, 10 Thomas St., $10.00; N. Benedette, 17 Walter St., $8.00; G. Benedette, 42 Allan St., $7.00; J. DiBenedetto, 110 Caruso St., $6.00.

The following awards of $5.00 each: C. Pellizzari, 48 Allan St.; E. Albert, 56 1st Ave.; A. Zanutto, 8 William St.; M. Orendosff, 94 Caruso St.; G. Pedutti, 5 Walter St.; J. Warbeck, 7 Walter St.; G. Cecchin, 21 Walter St.; B. Demarchi, 23 Walter St.; A. Silvestri, 28 Walter St.; L. Visentin, 20 Walter St.; P. Baron, 16 Walter St.; P. Gobbo, 14 John St.; W. M. Burns, 66 4th Ave.; L. Roy, 47 3rd Ave.; D. A. Cresswell, 62 1st Ave.; L. Boyer, 40 2nd Ave.; V. Baldisera, 57 Edward North; G. E. Adams, 55 Edward North; E. D. Everitt, 62 4th Ave.; G. W. Evershed, 58 4th Ave.; C. Bray, 57 4th Ave.; M. L. Berry, 55 4th Ave.; H. Gervais, 4 George St.; N. Holunga, 54 William St.; D. Chezzi, 30 Walter St.; G. Bon, 79 Caruso St.; A. Gosselin, 67 Caruso St.; D. Totino, 7 Hillside Ct.; L. Piotto, 28 Allan St.; F. Argentine, 6 Thomas St.; O. Halverson, 3 Hillside Ct.; W. Conlon, 2 Hillside Ct.; S. Wasylchuk, 32 Rideau St.; N. Grimard, 30 Rideau St.; G. Geoffrey, 28 Rideau St.; P. Behun, 26 Rideau St.; K. Conlon, 16 Rideau St.; W. Shelegey, 14 Rideau St.; W. Zahosouski, 8 Rideau St.; T. Oliver, 37 Caruso St.; V. Battisuzi, 39 Caruso St.; A. Facchin, 89 Caruso St.; V. Milani, 91 Caruso St.; L. Kuzorowski, 104 Caruso St.; P. Lafreniere, 102 Caruso St.; L. Marcon, 100 Caruso St.; L. Goegan, 98 Caruso St.

Norm Silverson's wife, Anne, looks over her pride-and-joy, a bush of perennial flox. Attractively landscaped, their home took top honors in Creighton.

P. Daypuk, 92 Caruso St.; E. Parolin, 90 Caruso St.; A. Parisotto, 88 Caruso St.; G. Girolametto, 42 Caruso St.; B. Comacchio, 20½ Caruso St.; U. Comacchio, 20 Caruso St.; P. Simeoni, 5 Samuel St.; A. Lapalme, 26 Nickel St.; W. Shalatynski, 13 Walter St.; F. Battistuzzi, 53 Walter St.; J. Wilgosh, 83 Walter St.; L. Gervais, 66 Walter St.; A. Lemarilli, 60 Walter St.; G. Visentin, 46 Walter St.; R. Visentin, 22 Walter St.; M. Shelegey, 14 Walter St.; D. Hugil, 9 William St.; G. Roy, 29 William St.; J. Roussele, 35 William St.; V. Boyd, 32 William St.; O. Clever, 62 William St.; J. Halushenski, 64 William St.; E. Kowal, 70 William St.; W. Drill, 60 Edward St. S.; W. Spencer, 62 Edward St. S.; H. Salski, 118 William St.; J. Holunga, 128 William St.; W. Belows, 132 William St.; J. Chwyk, 136 William St.; A. Deciccio, 40 East St., Old Coniston; P. Lucci, 62 East St., Old Coniston; P. Slywchuk, 60 East St., Old Coniston; J. M. Bidal, 10 Aubrey St.; O. Chisholm, 36 Concession St.; P. Fitzgerald, 36 Balsam St.; E. Deforge, 64 4th Ave.; J. E. Smith, 54 3rd Ave.; S. Jeffrey, 33 1st Ave.; E. J. Strom, 43 1st Ave.; E. Johnson, 53 1st Ave.; R. Dennie, 53 2nd Ave.; J. V. Forestell, 50 2nd Ave.; E. Barbe, 48 2nd Ave.; J. Desjardins, 46 Edward St. N.; A. McLean, Sr., 71 Edward St. N.; W. Haddon, 34 Edward St. N.; L. Silvestri, 14 William St.; M. Bray, 11 William St.; M. Cataford, 78 Edward St.; L. Olivier, 48 Concession St.; P. M. Rousselle, 51 Edward St. N.; A. Desloges, 53 Edward St. N.

COPPER CLIFF

C. Wing, 4 Kent St., $20.00; C. Wilkins, 29 Cliff St., $15.00; J. N. Metcalfe, 8 Cobalt St., $12.00; F. Matte, 40 Nickel St., $10.00; E. A. Porten, 4 Oliver St., $8.00; G. D. Watson, 1 Cobalt St., $7.00; E. Marconi, 22 Union St., $6.00.

The following awards of $5.00 each: P. J. Minsky, 21 Power St.; J. R. Clark, 6 Granite St.; A. Nickle, 7 Granite St.; L. Zanetti, 37B Diorite St.; W. A. Beatty, 19 Power St.; T. C. Robertson, 27 Cobalt St.; R. Canapini, 63 Diorite St.; A. Debebedst, 34 Dominico St.; T. Dominato, 36 Dominico St.; W. E. O'Brien, 94 Balsam St.; R. D. Leask, 2 McNevin St.; C. W. Ferguson, 14 McNevin St.; N. Stromberg, 13 Power St.; P. Lowney, 5 Evans Rd.; R. A. Wing, 16 Nickel St.; H. Roisen, 105 Balsam St.; Mrs. Charland, 96 Balsam St.; W. Montgomery, 6B Peter St.; R. C. White, 4 Church St.; J. C. McQuillan, 41 Evans Rd.; P. E. Semler, 39 Evans Rd.; S. Sarlin, 10 Finland St.; N. Temple, 15 Poplar St.; N. F. Ostilvie, 30 Power St.; F. W. Savage, 34 Power St.; T. D. Gladstone, 17 Power St.; J. R. Elliott, 15 Power St.; W. J. McDonagh, 11 Market St.; G. D. Henry, 23 Cobalt St.; T. F. Simms, 3 Oliver St.; H. M. Montgomery, 2 Oliver St.; I. Hamilton, 16 Jones St.; G. Robb, 15 Diorite St.; V. Smania, 61 Diorite St.; G. Longarini, 38 Diorite St.; A. Santi, 2A Craig St.; O. Mei, 1 Craig St.; J. Vuorensyrja, 73 Balsam St.; B. J. Alderson, 15B Church St.; J. L. LeBorgne, 8 Finland; C. Mathe, 31 Power St.; R. Laidgate, 29 Cobalt St.; D. Saville, 5 Nickel St.; D. Young, 23 Nickel St.; K. L. Prillisauer, 25 Nickel St.; W. J. E. Gladstone, 35 Nickel St.

M. B. O'Connor, 39 Nickel St.; E. Fenton, 30 Nickel St.; W. Guthrie, 75 Balsam St.; J. Bowers, 32 Balsam St.; J. L. LeBorgne, 64 Balsam St.; L. Marier 15 McNevin St.; U. Riutta, 9A Peter St.; W. W. Guthrie, 10 Church St.; C. Provincial, 11A Church St.; K. Salo, 21 Succo St.; E. Lampi, 13 Succo St.; J. L. Roy, 50 Evans Rd.; G. B. MacMillan, 48 Evans Rd.; A. Conroy, 27 Evans Rd.; G. Renaud, 3 Evans Rd.; M. Dubien, 4 Temperance St.; J. Konturi, 6 Temperance St.; T. Duff, 13 Finland St.; T. Crowther, 7 Finland St.; A. Hague, 6 Power St.; R. A. Corless, 10 Power St.; R. J. Poirier, 29 Power St.; Mrs. L. H. Garber, 3 Market St.; J. G. Rickaby, 5 Market St.; N. Myronuk, 16 Orford St.; S. H. McBeth, 7 Orford St.; J. Siwicki, 13 Poland St.; W. J. Yrjola, 14 Poland St.; M. D. Head, 19 School St.; Dr. J. H. Jones, 14 Granite St.; N. A. Creet, 3 Granite St.; W. A. Brown, 19 Granite St.; R. Bell, 12 Oliver St.; D. Stickles, 8 Oliver St.; W. Taylor, 6 Kent St.; W. S. Lawson, 1 Jones St.; P. Courchense, 43 Serpentine St.; R. Lemieux, 22 Norite St.; G. J. Denomme, 8 Union St.; J. Wharton, 6 Union St.; N. Shrigley, 4 Union St.; R. D. Kelly, 21 Diorite St.; T. H. Chellew, 27 Diorite St.; F. Pigorzo, 65 Diorite St.; G. Didone, 54 Diorite St.; A. Zillo, 50B Diorite St.; G. Adams, 14 Florence St.; O. Bulfon, 15 Florence St.; P. Bettio, 25 Craig St.; A. Pederiva, 14 Craig St.; U. Signorette, 8A Craig St.; M. Conte, 4 Venice St.; R. Pawson, 21 Dominico St.; A. Valentini, 24 Dominico St.; A. Talamelli, 13 Pietro St.; E. Minardi, 6 Milan St.; D. Ghetti, 8 Basilio St.; J. R. Urwin, 13 Cliff St.; N. Katsanos, 8 Clarabelle; N. Busschaert, 18 Cliff St.

One of the nicest gardens in Coniston this year belongs to Nick and Pia Benedette, seen here watering some of their geraniums.

CREIGHTON

N. E. Silverson, 34 Copper Cliff Rd., $20.00; A. McMahon, 19 French St., $15.00; H. H. Smith, 15 Churchill St., $10.00; J. E. Moore, 63 Wavell St., $8.00; J. Hutton, 31 George St., $6.00.

The following awards of $5.00 each: S. Bilyj, 23 Albert St.; J. Grivich, 15 Albert St.; J. B. Murphy, 55 Wavell St.; V. Gotro, 25 Wavell St.; J. B. Smith, 7 Lake St.; G. W. Ross, 17 Snider St.; J. Mynerick, 18 Snider St.; M. Kotanen, 20 George St.; M. Hreljac, 13 Albert St.; M. Saftic, 11 Albert St.; D. Seceni, 5 Miller St.; J. Quinn, 29 George St.

LIVELY

H. J. Squirell, 241 12th Ave., $20.00; R. K. Young, 297 6th Ave., $15.00; B. A.

Mrs. Josephine Shuparski and her daughter, Mrs. Anne Unwin, share a large vegetable garden and flower plot in Levack. Josephine's husband Andrew is now deceased but was an Inco pensioner. Anne's husband Doug works in the Coleman Mine efficiency office.

Elliott, 238 10th Ave., $12.00; J. E. Treasure, 236 10th Ave., $10.00; G. Caul, 258 12th Ave., $8.00; J. C. Bingham, 279 Birch St., $7.00; R. Coates, 265 10th Ave., $6.00.

The following awards of $5.00 each: G. Curry, 260 12th Ave.; W. Hayduk, 282 7th Ave.; R. Williams, 262 6th Ave.; J. Kleber, 275 Birch St.; E. Cretzman, 303 Birch St.; N. Uttley, 566 Charles St.; H. Wiggeshoff, 216 2nd Ave.; C. R. Byers, 263 7th Ave.; E. Arndt, 276 7th Ave.; S. Roshinka, 238 9th Ave.; P. Pascoe, 334 10th Ave.; V. Koivu, 320 10th Ave.; J. P. Couper, 165 3rd Ave.; A. McMullen, 620 Main St.; P. D. Bugg, 275 10th Ave.; J. Duck, 205 1st Ave.; J. Perry, 219 1st Ave.; K. A. MacDonald, 222 2nd Ave.; J. D. Holliday, 208 2nd Ave.; J. Brake, 227 3rd Ave.; R. Silko, 229 3rd Ave.; D. R. Robertson, 229 4th Ave.; J. R. Moore, 224 4th Ave.; D. E. Crouse, 208 4th Ave.; J. A. Hickey, 229 5th Ave.; H. P. Coffin, 248 6th Ave.; C. McFarlane, 256 7th Ave.; H. R. Dinnes, 245 7th Ave.; N. L. Anderson, 247 9th Ave.; R. C. Spriggs, 234 9th Ave.; M. Henney, 246 10th Ave.; P. Mihalchuk, 244 10th Ave.; R. Truszkoski, 317 11th Ave.; W. J. Koch, 244 11th Ave.; J. Cushnir, 287 Ash St.; A. Timerinki, 323 Maple St.; R. T. Blanchard, 287 Pine St.; V. Surins, 284 Pine St.; L. Pevato, 196 9th Ave.; D. J. Wing, 184 6th Ave.; R. Bowhey, 571 Charles St.; R. E. Sandberg, 476 Queen Elizabeth St.; S. Maggs, 595 Queen Elizabeth St.; D. Taylor, 617 Queen Elizabeth St.; J. R. Shore, 562 Main St.; G. J. Legault, 227 4th Ave.

GARSON

A. Lyle, Jr., 329 Pine St., $10.00; O. Matson, 335 Church St., $7.00; R. Levesque, 353 Pine St., $5.00; D. Mayhew, 35 Henry St., $5.00.

LEVACK

H. Klitzgard, 23 Church St., $12.00; J. Klenlewski, 49 Pine St., $8.00; P. Jusulenas, 719B Warsaw, $8.00.

The following awards of $5.00 each: R. G. Tullock, 16 3rd Ave.; J. Drohan, 33 4th Ave.; D. A. Corke, 37 1st Ave.; A. Cucksey, 8 3rd Ave.; P. Maryschak, 26 3rd Ave.; M. Tuomi, 32 3rd Ave.; W. Poletek, 5 5th Ave.; C. Shaller, 85 Poplar St.; W. J. Moffatt, 94 Willow St.; Mrs. Einoff, 20 10th Ave.

Copper Cliff pensioner Frank Matte specializes in Peace Roses and carnations. Frank had 46 years' service when he retired as assistant smelter superintendent in 1969.

Josephine Jusulenas, whose husband Paul is a Levack pensioner, sits in a garden full of flox, petunias, and mixed flowers.

camera class

In these days when everything seems to be going faster and faster, until the whole pace of living is in a state of constant acceleration, it's nice to sit back, relax and savor the quiet joys of life.

So take up your camera and try some time exposures.

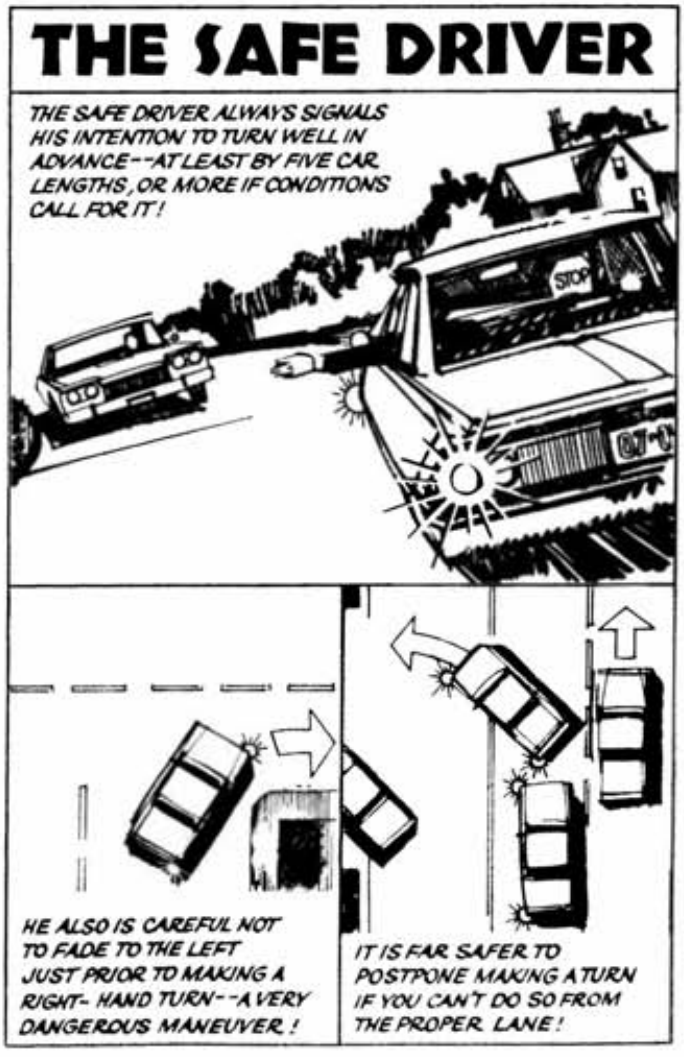
You will need a firm support such as a tripod or a table top.

Try arranging a grouping of gracefully shaped glassware. Adjust the lighting for maximum appeal rather than brightness, and pick up your camera.

You might try lighting your favorite piece of bric-a-brac with three or four candles of varying heights for an interesting pattern of shadows.

For completely abstract pictures, try putting the camera flat on its back with a single light suspended over it. Set the light swinging, and press the shutter release. You take a chance on the final pattern, but the results can be spectacular.

Outdoors, the possibilities for time exposure are exciting. When city lights come on, particularly after a rain, they provide a wide range of color. On a city street with moving traffic, the moving lights blur, adding an impressionistic effect to the finished pictures.



Shutdown a busy time

While most of us were enjoying a three-week vacation with our families during the summer shutdown, several hundred members of the mechanical department were hard at work on a variety of projects. Many of these could only be accomplished during the shutdown.

The most significant job was the completion of work to tie in the 1,250-foot superstack which included dampering the three older stacks and pulling temporary bulkheads in the flues leading to the superstack. Hot gases were emitted by noon the first Monday of the shutdown.

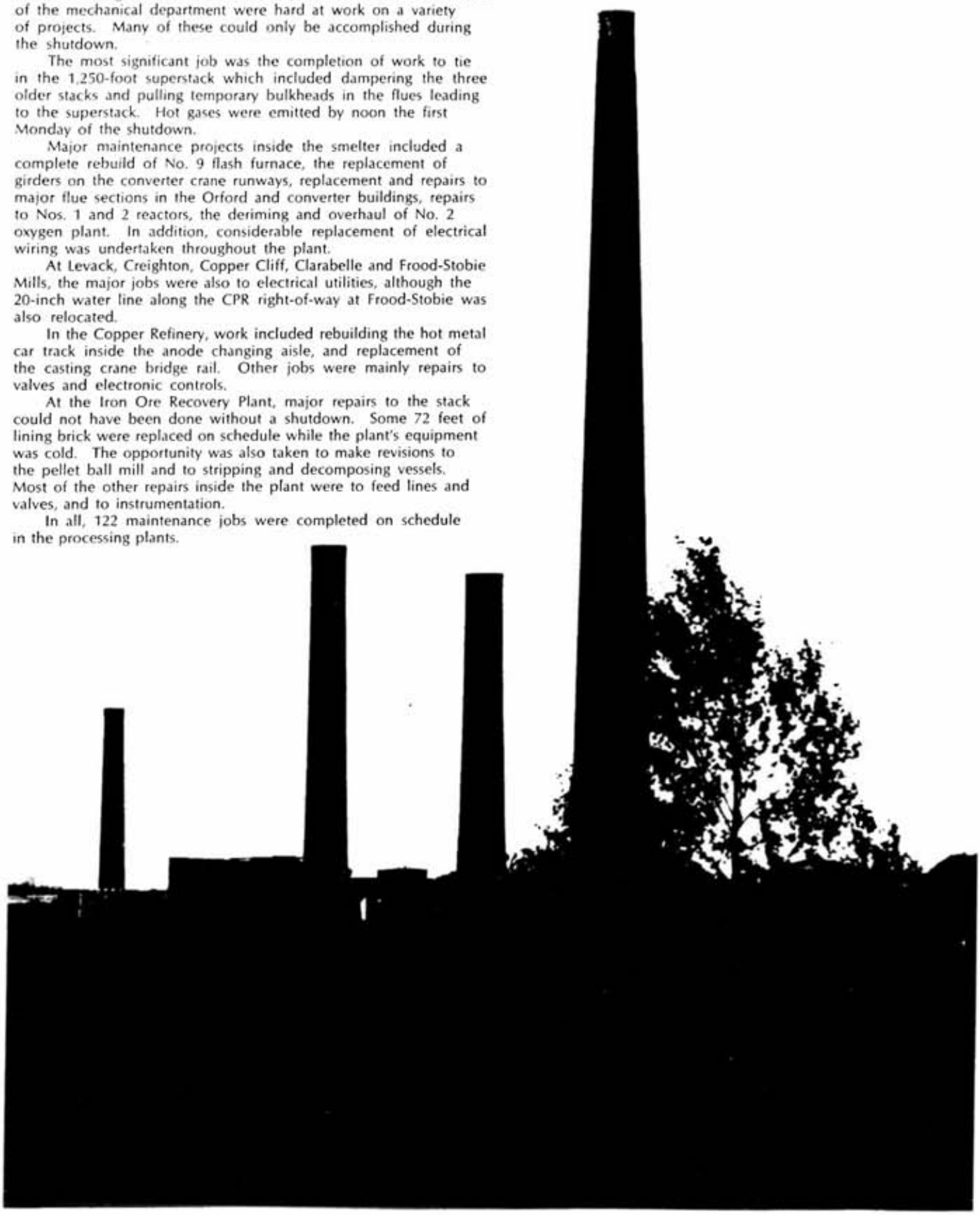
Major maintenance projects inside the smelter included a complete rebuild of No. 9 flash furnace, the replacement of girders on the converter crane runways, replacement and repairs to major flue sections in the Orford and converter buildings, repairs to Nos. 1 and 2 reactors, the deriming and overhaul of No. 2 oxygen plant. In addition, considerable replacement of electrical wiring was undertaken throughout the plant.

At Levack, Creighton, Copper Cliff, Clarabelle and Frood-Stobie Mills, the major jobs were also to electrical utilities, although the 20-inch water line along the CPR right-of-way at Frood-Stobie was also relocated.

In the Copper Refinery, work included rebuilding the hot metal car track inside the anode changing aisle, and replacement of the casting crane bridge rail. Other jobs were mainly repairs to valves and electronic controls.

At the Iron Ore Recovery Plant, major repairs to the stack could not have been done without a shutdown. Some 72 feet of lining brick were replaced on schedule while the plant's equipment was cold. The opportunity was also taken to make revisions to the pellet ball mill and to stripping and decomposing vessels. Most of the other repairs inside the plant were to feed lines and valves, and to instrumentation.

In all, 122 maintenance jobs were completed on schedule in the processing plants.



All sails set, the Dove leaves Little Current.

Bushnells set sail for Christmas in Florida

"Grab a chance and you won't be sorry for a might have been": engraved in wood, that homily faces the visitor to the cabin of the "Dove", Winston Bushnell's ferro-cement boat. It expresses neatly Winston's philosophy. He's just left Inco, where he was a mechanic at Levack Mine, and has embarked on the first stage of a trip which might take his family around the world.

"It's something I've always wanted to do," Winston said simply when asked why he decided to undertake the big adventure.

The story of the construction of his boat was featured in the March 1971 Triangle. When we last visited Winston, he was putting the finishing touches to the hull, and was working on his masts. His wife, Carolynne, was designing an interior for it, complete with a Cape Cod coal stove. The 32-foot ketch took three years to build and its ⅝-inch hull and deck are made of steel-reinforced concrete. After curing, the hull received a smooth finish with a coating of special epoxy.

Besides Winston and Carolynne, the couple's two children, Kimberly, 10 and Leslie, 8, are shipping out as crew. Carolynne plans to supervise her children's schooling which will continue by correspondence.

This is Winston's eighth boat—he built each one himself — so the whole family has had plenty of opportunity to become experienced sailors. Nevertheless, they're fully prepared for emergencies, and the Dove carries a small inflatable boat, life vests for the girls and inflatable jackets for the adults. The "Dove" is registered with Lloyds of London and is listed on that famous company's shipping lists. In that way the Bushnells can seek assistance from other ships on the high seas, pass messages along, etc.

Winston Bushnell keeps watch.

"There'll be times when it'll be rough and I'll be scared," Carolynne admitted, "but then I've been scared on the roads going into Sudbury with glare ice in winter. At least on the ocean it's just between you and the elements."

Winston plans a shake-down cruise along the Mississippi River to New Orleans, then to Florida where he plans to spend Christmas. His father, Bill Bushnell, a Levack Mine electrician, will retire next month and will meet them there. Later, Winston plans to cruise the Caribbean to practice his celestial navigation and gain confidence "and if all goes well, we'll head across the Atlantic and aim for Australia a few years hence."

Good moose and bear hunting ahead

Prospects look good for the 1972 moose hunt and better than normal for the fall bear hunt in Ontario.

The moose population of the province is estimated at 150,000. For each of the last three years, hunters have killed between 12,000 and 14,000 and the herd, wildlife officials say, could withstand an additional 10 per cent annual kill.

Severe winters of the past few years have apparently not harmed the herd. Moose, which in Ontario can reach a size of 1,000 pounds or more, and can attain an antler spread of more than 60 inches, seem to have little trouble foraging for food in deep snow.

Weather, however, is a factor in the prediction for an excellent fall bear hunt. While no suggestion has been made that the Ontario black bear population is substantially increasing, sightings this summer have reached the highest peak since 1968.

A late spring thaw and heavy frost well into June have made for a poor crop of wild blueberries — a staple summer food of the Ontario black bear. Consequently, the bruins have been appearing with more frequency around town dumps, vacation lodges, parks and logging camps.

Most forest districts have reported an unusually high number of nuisance bear complaints. While a few bears in the more populated areas have had to be destroyed, many are being live-trapped and transported to remote areas.

With the failure of the berry crop, the bears are going to be looking a bit harder for a full belly before hibernation time arrives. Fall hunters will have a better than average opportunity to entice a bruin to bait — a favorite bagging method of the spring hunter. Bears have been driven by hunger out of the wilderness towards civilization. The roadside moose hunter this year will also have increased chances of accidentally bagging a black bear while concentrating on the larger game.

Below is an appraisal of the local moose and black bear situation. Obviously, figures such as moose herd population, huntable range and annual kill, can be estimates only. But, the figures indicate just where to plan your next moose or bear hunt.

CHAPLEAU: Huntable range 8,000 sq. miles; herd 5,500; average annual kill 600; '71 non-resident success 19 per cent; '71 total hunter success 15 per cent; black bear population excellent.

NORTH BAY: Huntable range 4,850 sq. miles; herd 2,000; average annual kill 850; '71 non-resident success 40 per cent; '71 total hunter success 17.8 per cent; black bear population excellent.

SAULT STE. MARIE: Huntable range 8,000 sq. miles; herd 3,000; average annual kill 650; '71 non-resident success 35 per cent; '71 total hunter success 17.6 per cent; black bear population high.

SUDBURY: Huntable range 9,500 sq. miles; herd 6,000; average annual kill 1,000; '71 total hunter success 13.9 per cent; black bear population good.

Two win safety awards

Frood-Stobie's Safety Decal Contest has two new winners. The most recent contest ended July 27 when Marcel Bray, a loaderman diesel at Stobie, and Roger Prevost, a loaderman diesel at Frood, each received their fifth decal. At presstime, there had still been no winner declared from Little Stobie.

Sam Pataran, Stobie Mine superintendent, presented Marcel with a trophy at a small ceremony witnessed by Fern Albrechtas, Stobie safety supervisor and Ray Deredin, Stobie 600 level shift boss.

Ernie Charbonneau, a shift boss at Frood and Ray Beaulieu, Frood safety supervisor, gathered around as Roger Prevost received his award from Frood superintendent, Ted Flanagan.

Marcel Bray

Roger Prevost

Over 1,200 decals have been awarded since the latest contest began last February. The contest ends when the first employee receives five decals. The smart decals, in reflective colors, carry the slogan "safety is my business".

During the contest, working areas are spot-checked every month. In order to win a decal, the area must meet defined safety standards. To be a five-decal winner, the man must also have remained injury-free during the life of the contest. Both the recent winners worked over 130 safe shifts.

Gordon, Visentin still with us

As Mark Twain once cabled back from Europe: "The report of my death was an exaggeration." So was the mistake last issue when J. Roy Gordon (below) and Giovanni Visentin were labelled deceased. The error appeared on page four beside the photo of the Quarter Century Club's Class of '47.

Messrs. Gordon and Visentin are very much alive. Mr. Gordon continues his active career with the company as a director of The International Nickel Company of Canada, Ltd., and as a member of the company's executive and advisory committees. Mr. Visentin retired in 1957 after 30 years as a mason in the Copper Cliff Smelter. He still lives in Copper Cliff.

Port's Merle Noyes wins Canadian seniors title

It wasn't even five miles around the course, but it lasted more than five hours and an overlooked Merle Noyes came out of the background to "enjoy one of the nicest holidays I've ever had."

The 58-year-old plant personnel officer in the electrolytic department at the Port Colborne Nickel Refinery left Ontario for the Uplands Golf Course in Victoria, B.C., "looking more for a holiday than a championship." But he wound up with some extra baggage for the return trip when he won the Rankin Memorial Trophy.

How he brought the championship to Ontario for the ninth time in the 11 years of the tournament was as amazing as it was unexpected. Merle came out of nowhere in an incredible round to overhaul Dr. George Bigelow and then deprive the 1967 winner of a second championship on the second extra hole, after they both finished the 54 holes of scheduled play with scores of 224.

Merle started the final round of the medal play competition five strokes behind the leader, lost three strokes to par on the first two holes, was eight strokes back with 12 holes to play and five strokes in arrears with seven holes remaining. He finally caught Bigelow on the last hole by salvaging a par with a great chip shot, stiff to the pin, and sinking a curling three footer for the tie. Merle shot the last 12 holes in one under par in a charge reminiscent of Arnold Palmer in his prime.

Around 1928, Merle's interest in golf started as a caddie at the Cherry Hill Golf Club in Ridgeway, which recently hosted the 1972 Canadian Open. He joined the Port Colborne Country Club in 1934 and immediately became Club Champion. Merle has added 13 more since that time and won the Niagara District Champion of Champions three years in a row, 1957, 1958 and 1959. Another highlight was winning the Idylwylde Invitational in Sudbury in 1964 in the 18-hole match play final against Fred Silver.

In October of 1971, Merle was named by the Royal Canadian Golf Association as part of a four man team to represent Canada in the third world Amateur Senior Championship, which was scheduled to be played at the Fuji Golf Club in Kawana, Japan. At the last moment, however, Japan cancelled the tournament and this was the biggest disappointment in Merle's career.

The Copper Cliff baseball team recruited Merle in 1935 as a pitcher and outfielder for their senior ball team and he went north for two years. During this time he was employed in the concentrator building. Following his return to Port Colborne, Merle took about 10 years off the golfing trail to pursue his baseball career in the Niagara District.

Probably what impressed Merle the most on his trip to the west coast was the super weather and especially the low humidity. "I really felt like playing golf when I got up in the morning," he says and "played five straight days without any trouble." "It sure would be some place to spend your retirement," he added. Merle and his wife, Edith, have two sons, Bob and Merle Jr. who are following in their dad's footsteps with Bob, also an Incoite, the current Club Champion at the Port Colborne Golf Club.

Newburns celebrate golden wedding

Stewart and Gwendoline Newburn marked 50 years of marriage in June with a quiet party with friends from all over the Port Colborne district.

Stewart met Gwendoline Newby in Niagara Falls and they were married there on June 28, 1922.

He retired in 1961 after a career with the engineering department at the Port Colborne Nickel Refinery. He started in 1941 as a field engineer.

In retirement, he's kept busy with Air Cadet and church work, as well as helping to set up the meals-on-wheels program in the Port Colborne area.

25 win suggestion awards

July awards

Name	Location	Subject	Award
A. Jerome	C.C. North	Change to underground tool bags	$1,585
R. Savignac	Creighton	Use of resin bolting for raise borer rods	500
A. Ouellet	C.C. North	Change to carriage bolt holes on Tampela Jumbo drill	210
G. Strutt	Little Stobie	Change method and equipment for greasing tail ropes on Cope hoist	135
N. Grimard	Garson	Improved skirting on sand plant cement belts	100
W. Deveau	Levack	Heat resistant window glass	45
A. Richardson	Garson	Use of a pneumatic steel puller for raise borer	35
H. Chase	Creighton	Change method of issuing cheques at No. 5 shaft	20
H. Larrett	C.R.D.	Changes to ladder in reclaim tanks	20
L. Brousseau	Garson	Changes to locking system at Garson pumphouse	15
N. Van de Kraats	C.R.D.	Installation of guards on electric switches	15
		TOTAL	$2,680

August awards

Name	Location	Subject	Award
E. J. Jean	Creighton	Hudson car anti-tip attachment	$ 45
R. Jefkins	Creighton	Improved punch arrangement for Punch Loc tool	45
F. J. Teed	Levack	Fluorescent markers for safety station underground	40
R. A. Brown	C.C. smelter	Changes to lime feeder in separation building	30
B. Martelli	C.C. smelter	Screen guard on S.S. Thomas Uniloader	30
M. Gribbons	C.C. smelter	Dust collector on brick cutting machine	25
J. Samuel	C.C. smelter	Handle for embossing machine in rehabilitation centre	25
F. Benoit	Stobie	Guard for trap door in No. 8 shaft hoistroom	20
H. Furmanic	C.C. smelter	Relocate automatic sampler in separation building	20
A. Jarbeau	Creighton Sand Plant	Rubber sleeve for sand fill distribution box	20
K. Lauzon	Levack mill	Light arrangement for mill dryer	20
T. R. Ross	Stobie	Platforms to facilitate sump cleaning	20
P. E. Lussier	C.R.D.	Drain between sections in tankhouse	15
T. Robertson	C.R.D.	Protection for main feed line in tankhouse	15
		TOTAL	$ 385

Better idea nets cheque

Alexander Jerome's family of Hanmer started the three-week summer shutdown with a windfall brought about by their bread-winner's ingenuity. Alex was the recipient of a $1,585 suggestion plan award. He told the Triangle that he planned to give some of the money to his wife as a treat, and to take the whole family, he has three daughters and a son, on a vacation to Manitoulin Island.

Alex suggested that the carrying strap for mechanical tool bags be issued separately enabling one strap to be used for several bags. As a result of his suggestion, the purchasing department in Copper Cliff began a thorough investigation into Inco tool bags. In January 1972, new tool bags for field testing were issued at Creighton Mine. Because of their success, these new bags have been recommended for use throughout Inco operations. The new bags have a nylon web strap and a vinyl bottom, in comparison to the previous canvas and leather bags.

Alex Jerome

Charles Hews, assisitant manager of mines, presented Alex with the cheque, one of the largest paid out under the company's suggestion plan award program, and congratulated him on his idea. Alex, 41, has been employed with Inco for four years and is a garage mechanic at Copper Cliff North Mine.

Appointments

G. M. Brake, superintendent, reverberatory furnace department, Copper Cliff Smelter;

T. L. Prior, maintenance superintendent, Copper Cliff Smelter;

U. A. Comacchio, maintenance superintendent, matte processing, Copper Cliff Smelter;

I. W. Laing, division metallurgist;

V. K. Segsworth, supervisor of air management, environmental control department;

H. R. Butler, supervisor of water management, environmental control department;

S. J. Sheehan, mining specialist;

J. E. Lee, milling specialist;

D. M. May, mining engineer, Levack West;

J. C. Henry, paymaster, staff payrolls.

Free book for rockhounds

The fourth in the very popular series of geological guidebooks will soon be available free of charge from the Mining Recorder Office, 118 Cedar St., Sudbury.

The new publication, Geology and Scenery — North Shore of Lake Huron Region, is designed to meet the interests of amateur geologists, rockhounds, the travelling public and to provide background for students and visiting geologists.

Guidebook No. 4 covers the country between Sudbury and Sault Ste. Marie, including "Rainbow Country", Manitoulin Island and the Elliot Lake area. The book comprises 224 pages. It is divided into three parts, the first of which deals with the general geology of the region including the ancient uranium-placer deposits of Elliot Lake and the immense nickel-copper deposits of Sudbury which are thought by many geologists to be associated with a meteoric impact. The fossiliferous rocks of Manitoulin Island are also studied in Part 1. Part 2 is made up of descriptions of specific localities. In Part 3 there is a list of mineral and rock collecting localities, a glossary of terms used and a short list of references. The book is richly illustrated with 10 colored maps and 146 photographs, 70 of them in color.

RETIREMENTS

HAMILTON SHEDDEN

Dalry, Ayrshire, in the land of the heather was the birthplace of Hamilton "Hammie" Shedden. Born in 1909 he has decided that after 33 years' service, it is time to take it easy.

Hammie came to Canada in 1928 and joined Inco in 1929. He worked in No. 1 Building,

prior to transfer of the Orford Process to Copper Cliff.

In 1931 he was laid off due to the depression and returned to Scotland for a Christmas visit. While back home, he met Martha Paterson and married her in 1933. They have two daughters and four granddaughters.

Returning to Port Colborne in 1937, Hammie joined Inco in the anode department. After nine years there, he transferred to the shop but was put into the power house as ash handler. Hammie took advantage of his practical experience in on-the-job training and studied for his engineer's papers. On retirement he was shift power house engineer with a 2nd class certificate.

Hammie was a soccer player of note in his younger days and captained the Inco team in the Niagara District Soccer League. He retired while still in his prime when one of the opponents inadvertently kicked him in the teeth.

JOHN KUNTO

Jack Kunto was born in Copper Cliff but raised in Selwood, north of Capreol. He joined the company in 1933, but broke his

service shortly after and returned in 1935 at Frood Mine. Jack has worked underground at Frood for 36 years, the last 22 of which he was a shiftboss.

Grace Hawes, a Sudbury girl, and Jack were married in 1938 and they have four children and seven grandchildren. Their son, Ron, is a shiftboss in the Copper Cliff Smelter, and daughter, Margaret, is married to Steve White who is at the Levack Mill.

Jack runs his own small repair business, but still manages to find time to hunt and fish at his cottage on Lake Wahnapitae.

ARTHUR CUMMING

Maintenance foreman Art Cumming completed 34 years' service with the company. He started at Creighton Mine in 1934 and later that year transferred to Frood

when the No. 5 shaft was being sunk. After working at the Frood Open Pit in the electrical department, he returned to Creighton Mine and was in the maintenance department until retirement.

Iona McCoshen and Art were married in 1935 at Sudbury, and they have four children and 11 grandchildren. Their son, Merv, is employed in the data processing department at Copper Cliff.

HUGH ROSS

After receiving his B.Sc. degree from Dalhousie University, Hugh headed north to work in the gold mines. But he decided to make a stop in Sudbury and was hired-

on by Inco to work in the research lab at Copper Cliff, and has been employed there since 1937.

His wife, the former Ruth Stitt, was born in Douglas, Ontario, and she came to the Sudbury area to teach school. She and Hugh were married in 1941. Two children and one grandchild round out the Ross family.

EDWARD JOHNSTON

Ed recently retired from Stobie Mine with 35 years' service. After coming to Canada from Scotland

in 1924, he did two different types of mining. In 1937 he joined Inco at Levack Mine. Ed also worked at Murray then transferred to Stobie where he was a shift boss for the last 22 years.

Chelmsford was the scene of the marriage between Laurence Vaillancourt and Ed in 1940. They are the parents of two sons and two daughters, and grandparents of six. One of their daughters, Nancy, is married to Ray Perfetto, who is a second class engineer at the Iron Ore Recovery Plant.

WES JOHNSON

Operating shaft boss, Wes Johnson, has relayed his last message

between underground and surface at Frood Mine. Wes joined Inco at Frood and has 31 years continuous service there.

The former Mary Ziniuk became Mrs. Johnson in 1940 at Sudbury. Wes and his wife look forward to many visits with their three daughters and five grandchildren during his retirement.

ALDO GIOMMI

"Smokey" Giommi recently retired from the Copper Cliff plate shop with 42 years service. He recalled that when he started in the plate shop in 1930 there were

only 19 men and during the years the number has expanded to 90.

The Giommis are a third generation Inco-family. Smokey's father worked for Mond and now his son, Don, is a foreman in the acid plant at the refinery.

He and Dilia Taus, who was also born and raised in Copper Cliff, were married in 1933, and besides their son Don, they have one daughter.

PETER PAKULAH

While Peter Pakulah was still living in his hometown of Winnipeg, he was interviewed by Inco for a job at Copper Cliff. He came to Sudbury in 1942 and started at the Coniston Smelter

working on the slag shute. A short while later he transferred to Copper Cliff and worked as a scale clerk in the transportation department. On retirement, Peter had the longest service of all the clerks in that particular department.

In 1950 he married Sophie Owchar, who also was from Winnipeg. Peter and his wife are planning to move west in the near future.

ARNOLD MAITLAND

Arnold Maitland has completed 43 years' service, all of which has been at Frood Mine. He started

out as a laborer in 1930 and has been a shift boss since 1937. He married a girl from Webbwood by the name of Cecilia Streich, in Sudbury. One of their three sons, Howard, is employed at the tankhouse in the Copper Refinery.

Not only is Arnold remodelling his own home, but he is also busy helping his son build a new one. The rest of his spare time is spent at his cottage on Butch Lake.

DES CLEMENT

Des Clement, who was born in Espanola, joined Inco in 1937 at the Copper Cliff Smelter. He worked at the Orford building, the sintering plant, the FBR and was at the separation building for the last 23 years.

Des was married to Laurette Lajambe in 1937 at Hanmer and they have seven sons, four

daughters and two grandchildren. Two of their sons followed their dad's footsteps; Clarence and Jacques both work at the reverbs in the Copper Cliff Smelter.

FRED STEEL

Surface foreman, Fred Steel has gone on pension after 35 years with the company. He started with Inco in 1936 at Frood Mine and was a shift boss there until 1964 when he transferred to the Clarabelle Open Pit and later to Copper Cliff North Mine.

Fred was married to Theresa Sadick at Copper Cliff in 1939. They have three children and three grandchildren. Two of their daughters are married to Inco men; Shirley is the wife of John Hood who works at the general engineering office and Jane is married to John Downey of the Clarabelle Open Pit.

The Steels enjoy travelling and Fred is an amateur rockhound.

FRANCOIS FOREST

One of a family of 12, Frank was born in 1917 near the town of Bouchette, Quebec. At the age of 13 and for the next 10 years, he worked in the bush during

the winter cutting pulpwood. In the summer months, he helped push the logs into the river for the journey to the mill.

He joined Inco in 1943 in the leaching section of the Port refinery. Frank was one of the first Butler Carscoop operators, unloading the nickel sulphide concentrates from the box cars on arrival from Copper Cliff to supply the sinter building and calciners.

Frank transferred to the electrolytic department in 1950 where he worked as a bridgeman in the tankhouse. In 1966, he moved over to the shearing department as a craneman.

Simone Auclair of St. Therese, Gatineau, and Frank were married in 1940. They have seven children and 11 grandchildren.

ANDREW KANERVA

Andy hails from Tampere, Finland, and he came to Canada in 1924. Before joining the company he drove a delivery truck

for local firm into the Inco plants and in 1935 he was hired on to work in the electrical department at Copper Cliff. When Andy retired he was a designer in the engineering department.

A Copper Cliff girl, Evelyn Hildebrant, became Mrs. Kanerva in 1936 at Sudbury and they have four sons, two daughters and 12 grandchildren. Their daughter, Cathy, is married to Bob McDonald who is a shift boss at Levack Mine.

ANTONIO NARDI

Tony Nardi emigrated to Canada in 1927 from Italy and settled in Rouyn for one year before coming to the Sudbury area. He re-

turned to his home town of Lauringano, in southern Italy, in 1933 to marry Anna Massilano. When they returned, Tony started at the Copper Cliff Smelter working in the concentrator. After 16 years he transferred to the tailings line and was a supervisor there until retirement.

Most of the Nardi's six children and 20 grandchildren are living all across Canada and they are looking forward to visiting them all.

JAAKKO VALLBACKA

Finnish-born Jack Vallbacka came to Canada in 1929 when he began working in the lumber camps in northern Ontario. Jack and his wife, the former Alma Eikkela, were school chums in

Finland, but met again in Toronto where they were married in 1942. This was the year that he joined the company at Garson Mine, later transferring to Murray and Copper Cliff North Mines as a motorman.

The Vallbackas have two sons, both of whom work for Inco; David is at the J. Roy Gordon Research Laboratory at Sheridan Park, and Harry is a party leader with the general engineering department. They also have one grandchild.

OVILA LATENDRE

"Opey" Latendre, who was born at Tweed, Ontario, originally joined the company in 1939 but broke his service in 1945 for one year, returning to work at Copper Cliff and later Frood Mine in 1946. A year later he transferred to Garson Mine and at retirement was a motorman there.

In 1943 he was married in Creighton to Vera Wallace and they have a family of four children and four grandchildren.

VICTOR TREMBLAY

Senior stores foreman, Vic Tremblay, has put in his last shift at the Creighton No. 3 warehouse

where he has worked for nearly 42 years.

Mrs. Tremblay, the former Marie Ratchford, was married to Vic in 1931 at Sudbury. Their family is made up of one son, three daughters and 10 grandchildren. Their son, Richard, is in the engineering department at Copper Cliff South Mine; daughter, Frances, is married to Jack Wills of the Frood maintenance department and Joan is Mrs. Howard Ringer, whose husband is an electrician at the Copper Cliff Nickel Refinery.

Mrs. Tremblay is a familiar figure in the Creighton and Naughton areas where she taught school for many years.

ADELARD GAUTHIER

Since 1935 Adelard has been with the transportation department at Copper Cliff. He started

out as a brakeman and on retirement was a train conductor.

Both Adelard and his wife, the former Irene Dion, are from Whitefish. They were married at Victoria Mine in 1936. Along with their family of two sons and one daughter, they are the proud grandparents of 10 grandchildren. Their son, Rene, works underground at Copper Cliff South Mine.

Adelard is an ardent fisherman and one of his favorite spots is Lake Penage.

LESTER CLIMENHAGE

Lester "Red" Climenhage is calling it a day with the company and retiring after 32 years' service at the Port Colborne Nickel Refinery.

Red was born in 1916 in the village of Humberstone, in fact, right across the street from where he now lives. In 1937,

he worked on the Inco Recreation Club renovations at the Port refinery. In 1940 he joined Nordale Construction Company which was completing the addition of Nos. 11 and 12 Units in the electronickel refinery. Three weeks later, he joined Inco permanently working on the calciners.

In 1950 he was transferred to the electronickel refinery department. Starting at the bottom, he gradually worked his way upwards to sub-foreman, relieving foreman and finally foreman on the pachuca floor in 1963. He remained there until retirement.

Margaret Nie of Dunnville became his bride in 1938 and they have three children, including

Continued Next Page

RETIREMENTS

Continued from Previous Page

Robert, a second generation Incoite, now working as a carpenter in the mechanical department. They have four grandchildren.

FRASER J. FIELDS

After 37 years of service with Inco, Fraser Fields has retired from the maintenance department at Copper Cliff. His wife, whose maiden name was Lorita

Hall, was born in Manitoba but grew up in Copper Cliff. They were married in 1948 at Toronto. The Fields have one son and three grandchildren.

Fraser is keeping active by swimming each morning at the Richard Dow Pool in Copper Cliff. He is also becoming quite an expert at refinishing antiques.

JOSEPH BASHA

Joe Basha was raised in Curling, Newfoundland, and he later attended McGill University where he received a B.Eng. degree in mining. Before starting his career with Inco as a mines engineer in 1946, he worked in the gold mines at Kirkland Lake.

During his years with the company, Joe was at Frood, Garson and Crean Hill Mines.

While in Kirkland Lake he married Ann O'Connell, who was also from Newfoundland. The Bashas have two children and two grandchildren. Their son, Douglas, is a conductor underground at Stobie Mine.

RICHARD BARROW

Dick was born in Welland in 1914 but moved to Port Colborne with his family in 1919 where his dad was working at the Inco plant. Leaving school at an early age, Dick performed a variety of jobs.

In October of 1935, Dick got his first call to join Inco at the Port Colborne refinery but due to curtailment was laid off in

1938. He was rehired in 1946. He transferred to the mechanical department in 1950 and worked mostly as a bricklayer helper, except for the last five years until retirement when he was a carpenter.

Dick and Mildred Brands of Welland were married in Port Colborne in 1938. They have three children, and three grandchildren complete the family picture.

FRED SHELTON

Sometimes it is hard to remember how a nickname originated but such is not the case with Fred "Salty" Shelton. When Fred was in school, he was forever eating peanuts and the teacher started calling him "salted peanuts" which in time was shortened to "Salty" and has stuck with him ever since.

Salty was born in Port Colborne and was hired permanently in 1939 into the electronickel department. In 1943 he transferred to the boiler shop in the mechanical department and apprenticed as a welder. He remained with the ironworkers as a welder until 1968 and then transferred to the yard department as a janitor in the changehouse. On retirement, he had 32 years' credited service.

A Hamilton girl, Gladys Styles, became his wife in 1940 and they had two children. Two grandchildren complete the family picture. Mrs. Shelton was deceased in 1969.

JOSEPH SHATKOSKY

Joe was born in Oakburn, Manitoba, in 1919, but moved with his family to Kenora and finally to Port Colborne in 1928 when his father obtained employment at the nickel refinery which was expanding at that time.

In 1946 he followed his father's footsteps and was hired by Inco

at the Port Colborne plant, working mostly in the shearing department before transferring to the mechanical department in 1950. Fulfilling most of the helpers' jobs in the different shop sections, including 10 years as a bricklayer helper, Joe finished up in charge of the tool crib in the pipe shop.

A Port Colborne girl, Elizabeth Given, became his bride in 1949. They have one son.

LEO LACROIX

A familiar face around the power house at the Port Colborne Nickel Refinery, Leo Lacroix has retired on pension with 29 years' service.

Born in Maniwaki, Quebec, in 1912, Leo joined Inco in the anode department in 1943 and did most of the jobs there before transferring to the mechanical department in 1951. Due to seasonal curtailment, he was in and out of the shops a few times before returning permanently as power house wiper in 1964.

Being a bachelor, Leo does what he pleases these days and especially likes to see the horses run at Fort Erie.

EMMANUEL RUGGIER

Born in Malta, Emmanuel set sail for Canada in 1948. He landed at St. Thomas with 21 other Maltese. The next day they were interviewed by Jim Walter of the Port Colborne Nickel Refinery and then transported by bus to Port Colborne and employment at the refinery. He spent practically all his time working at various jobs in the shearing department.

In 1942, Emmanuel married Mary Portelli in Malta. They have four children.

Emmanuel plans to return to Malta soon for a visit. He is looking forward to once again catching and eating delicious "Lampuki" which abound in the seas in that locale.

Those Indian names and their meaning

The Manitoulin Islands are one of the most popular recreation areas in northern Ontario . . . and they are but a few miles from the Nickel District. Few people, however, know or appreciate what the lilting Indian names mean, or what other places used to be called before they were translated into English.

Manitoulin . . . originally Manitouminis; minis meaning island . . . Manitou, The Indian's God or Great Spirit. Manitoulin . . God's Island.

Waiebegewung . . . "Where the waters flow" . . . the Indian Name of Little Current; called by the early voyageurs "Petit Courant" . . . originally called Shaftsbury on early maps.

Sheguiandah . . . has a variety of meanings, depending on who translates: "Home of the Stork", "Place of the Grindstone", "Home of Seguin", "Bay of Gray Slate".

Assiginack . . . The Blackbird . . . name of a township . . . named after an Indian Chief . . . John Baptiste Assiginak.

Tehkummah . . . "rays of light flashing in the sky" . . . could mean lightning. Named after the Indian Louis Tekoma.

Shesigewaning . . . "place of rattlesnakes". It is said that the Mississaga rattler once was found here. If so they all have been exterminated.

Mindemoya . . . Indian name for "The Old Woman."

Manitowaning . . . "Den of the Spirit" . . . supposedly the home of the Great Manitou.

Wikwemikong . . . "Bay of the Beaver." Some will tell you it is "Bay with a Gravel Bottom." The best one is "Town built on a curving hillside over a beautiful bay."

Abejewung . . . "Where the water rises" . . . now called Indian Point Bridge.

Bebekodawangog . . . "Where sand curves around the water." Now Providence Bay.

Sagradawawong . . . "The Outlet." Now South Bay Mouth.

Takibiwikwet . . . "Cold Water." Now Spring Bay.

Pushkdinong . . . "The Barren Hill." Now Gore Bay, and no longer barren, one of the important beauty spots of the Island.

Kagawong . . . "Where mists rise from the falling waters."

Mitchiging . . . "place of the fish harpoon." Now West Bay.

FAMILY ALBUM

A new Quarter Century Club member, Hilary Fournier, joined the company in 1946 at Creighton. After transferring to a number of mines he is now a skip tender at Copper Cliff South Mine. Standing with Hilary in the back row are Lynn, 12, Frank, a driller at Coleman Mine, Rob, John, and Andre, 15. Seated with their mother, Annie, are Margaret (married to Coleman stope leader, Roger Timony), Mitch 7, and Monique, 11.

Doug Ogston, a safety supervisor in the PM department, is a second generation Incoite and has been with the company since 1955. His father, pensioner Bill Ogston, is well known in the Copper Cliff area. With Doug is his wife Mysa, who is from Gore Bay, and their son, Robbie, 8, and daughter, Kim, 13 months. Doug is very active with the Ontario Federation of Anglers and Hunters and was recently awarded a citation from Premier Davis for his work in conservation. The Ogstons take every opportunity to use their truck-camper for fishing trips to Manitoulin Island.

Raymond Graveline of the Port Colborne Nickel Refinery has his own built-in big brother movement. Not content with five boys of their own, Raymond and his wife, Laura, have added two extra boys, Marcel and John Goulet, to their family. Completely surrounding Mom and Dad are Marcel, 8, Elvin, 11, Ronnie, 10, John, 12, Dennis, 14, Roger, 15 and Darnell, 12. Raymond has 25 years' service with Inco and presently is a lift truck operator in the shearing department.

In the seven years that Luc Cote has been with the company he has been at Coniston, Stobie Mine, and is presently a loaderman diesel at Little Stobie Mine. Grouped around Luc are Linda, 13, Raymond, 14, his wife, Gabrielle, Gerald, 12, Carole, 9, and Denis, who is nicknamed "Batman", 8. Luc and his family live in Val Caron and all look forward to enjoying winter with their snowmobile.

A GUIDE TO

Pantry-Shelf Storage

Proper storage keeps foods safe to eat, high in nutrients, at its peak in flavor, texture. In this handy clip-and-save chart: tips on pantry-shelf food storage, plus storage times for many canned goods and staples.
Temperature: Store food in coldest cabinets—not over range or by refrigerator's exhaust. Use coolest spots (the cellar, etc.) for storing large amounts of potatoes, onions, etc., and for long-term storage of canned foods.
Time: Though most staples and canned foods will keep indefinitely, buy no more than you expect to use in the recommended storage times given below. While foods will be safe beyond the recommended storage times, flavors will fade and textures wilt. Date foods. Then check cabinets every six months and use up the oldest items.
Buying: Purchase the freshest-looking packages—messy or shopworn labels indicate old stock. Don't buy cans with swollen ends—food has gone bad. Dented cans may be purchased, provided they haven't been punctured.

FOOD	TIME	SPECIAL HANDLING
STAPLES		
Baking powder	18 months	Keep covered and dry.
Bouillon cubes	1 year	Keep covered and dry.
Bread crumbs, dried	6 months	Keep covered and dry.
Cereals, ready-to-eat	4 months	Keep covered and dry.
cooked	6 months	Keep covered and dry.
Chocolate		
semisweet	1 year	Keep cool.
unsweetened	1 year	Keep cool.
Coffee, cans (unopened)	1 year	Refrigerate after opening.
Coffee, instant (opened)	2 weeks	Keep lid tightly closed.
(unopened)	6 months	
Coffee lighteners (dry, opened)	6 months	Keep lid tightly closed.
Condensed and evaporated milk	1 year	Refrigerate after opening.
Flour (all types)	1 year	Put in airtight container.
Gelatin (all types)	18 months	Keep in original packets.
Honey, jams, syrups	1 year	Keep tightly covered.
Nonfat dry milk	6 months	Put in airtight container.
Pasta	2 years+	Keep tightly closed.
Pudding mixes	1 year	Keep in original packets.
Rice, white	2 years+	Keep tightly closed.
Rice mixes	6 months	
Salad dressing (all types)	3 months	Refrigerate after opening.
Salad oils	1-3 months	Keep tightly closed.
Shortening, solid	8 months	Refrigeration not needed.
Sugar, brown	4 months	Put in airtight container.
confectioners'	4 months	Put in airtight container.
granulated, molasses	2 years+	Keep tightly covered.
Tea, bags	18 months	Put in airtight container.
instant	3 years	Keep tightly covered.
loose	2 years	Put in airtight container.
MIXES AND PACKAGED FOODS		
Cakes, prepared	1-2 days	If butter-cream, whipped-cream or custard frostings, fillings, refrigerate.
Cake mixes	1 year	Keep cool and dry.
Casserole mixes	18 months	Keep cool and dry.
Cookies, homemade	1 week	Put in airtight container.
packaged	4 months	Keep box tightly closed.
Crackers	3 months	Keep box tightly closed.
Frosting, in cans or mixes	8 months	
Hot-roll mix	18 months	If opened, put in airtight container.
Pancake mix	6 months	Put in airtight container.
Piecrust mix	8 months	
Pies and pastries	2-3 days	If whipped cream, custard, chiffon fillings, refrigerate.
Potatoes, instant	18 months	Keep in original package.
Toaster pop-ups	3 months	Keep in airtight packet.
CANNED AND DRIED FOODS		
Fruits, canned	1 year	Keep cool.
dried	6 months	Put in airtight container.
Gravies, canned	1 year	
Meat, fish, poultry, canned	1 year	
Pickles, olives	1 year	Refrigerate after opening.
Soups, canned, dried	1 year	Keep cool.
Vegetables, canned, dried	1 year	Keep cool.
HERBS, SPICES AND CONDIMENTS		
Catchup (opened)	1 month	
Herbs and spices		Transfer from cartons to airtight containers. Keep away from sunlight. At times listed, check aroma; when it fades, replace.
whole spices	1 year	
ground spices	6 months	
herbs	6 months	
Tabasco, Worcestershire	2 years+	
OTHERS		
Coconut	1 year	Refrigerate after opening.
Metered-calorie products, instant breakfasts	6 months	Keep in cans, closed jars or original packets.
Nuts	9 months	Refrigerate after opening.
Onions, potatoes, sweet potatoes	2 weeks at room temperature	For longer storage, keep below 50°F., but not refrigerated. Keep dry, out of sun. Plan short storage in spring when sprouting is serious problem.
Parmesan cheese	2 months	Keep lid tightly closed.
Peanut butter (unopened)	9 months	Two months after opening. Refrigeration not needed.
Soft drinks	3 months	
Whipped topping mix	1 year	

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