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D. M. Dunbar, Editor
H. L. Meredith, Assistant Editor
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Exciting Future For Nickel Told By U.S. Magazine

Under the heading "New Uses Boost Nickel's Future", the metalworking industry's authoritative weekly magazine "STEEL" predicts big things for nickel in a sweeping variety of applications.

Excerpts from the "STEEL" article follow:

Nickel has become a growth metal.

Free World consumption this year is expected to top last year's estimated 475 million lb. by 5 to 7 per cent, spurred for the most part by the U.S. In 1962, consumption in this country totaled a record 235 million lb. A new high is expected this year.

In perspective, such growth is remarkable. Ten years ago, few forecasters would have tagged nickel as a growth metal. The Korean War was about to end. Nickel had been on allocation since the start of the war. The industry's sales and marketing arm was weak because of years of inactivity. Designers were turning to other materials. Research was lagging.

Two factors stand out in the resurgence: The industry has created new markets, and it has exploited the sales potential in new technologies.

• **Example**—One of the most dramatic new applications is the nickel-cadmium battery. It's being used in a number of cordless products, such as power tools, radios and TVs, hedge clippers, flashlights, medical instruments, adding machines, portable typewriters, refrigerators, night lights, military and space products, motion picture cameras, electric toothbrushes, shavers, and mixers.

Says Union Carbide Consumer Products Div. of Union Carbide Corp., a major producer of these batteries: "The market . . . has barely been tapped . . . high cost is the major deterrent to use today. However, as interest, production, and sales volume are increased, these costs will be correspondingly lowered."

The industry is pushing to make this day come as soon as possible. International Nickel Co. Inc., for example, is working with product designers to stimulate usage and is investigating ways to cut production cost. Inco is also promoting customer products in its own ads.

• **Nickel Powders**—Sherritt Gordon Mines Ltd. is banking on nickel powders as the wedge to open big new markets. It produces a high purity nickel strip (rolled from nickel powder) which it believes is

President Gordon on National Magazine Cover



Nickel Uses Grow As Jobs Get Tougher 54

Cover picture of STEEL, weekly national magazine of the metalworking industry published in Cleveland, was a full color portrait of Inco president J. Roy Gordon taken against an illuminated transparency showing the casting of nickel sulphide anodes at the Thompson plant. A copy of the striking portrait is shown above, and excerpts from the magazine's feature on the nickel industry appear on this page.

more ductile, softer, and offers better electrical conductivity than "strip produced by conventional methods." The Royal Canadian Mint makes 5 cents pieces from powdered metal blanks supplied by Sherritt.

The company is researching new types of nickel powders and the combination of nickel powders with other materials. Last year, it introduced five grades of spherically shaped powders for the production of pressed, high purity, porous pressed parts, such as battery and fuel cell electrodes, bearings, and filters.

Sherritt's work on composite powders is a new area of research. A pure film of nickel is placed around an inner core of foreign material like iron, carbide, graphite, or plastic. The result, says Sherritt, is a family of completely new materials. One of the new markets that have opened up: Nickel clad phosphorus for a specialized brazing application.

Ferrous Products

It's in ferrous products, however, that the nickel industry looks for its biggest advances in tonnage.

Use of maraging steel should climb rapidly over the next decade. Introduced by Inco two years ago, these high strength materials contain 18 to 25 per cent nickel. The best markets now are in the aircraft-missile and marine industries. Also promising: hydrofoil applications.

"We also foresee a large potential in less spectacular uses, such as pressure vessels, extrusion dies, fasteners, and machinery parts,"

says Inco's president, J. Roy Gordon. "The ability (of these steels) to be readily worked and then hardened without distortion may offer economy in terms of finished parts for which less expensive materials are now being used."

• **Subzero**—The cryogenic field is also promising. Three years ago, Inco introduced 9 per cent nickel cryogenic steel. Steel producers say demand for it is steadily improving. Some of the code groups have approved it for pressure vessels in the ordinary quenched and tempered state (before, the codes required the material be double normalized and stress relieved). This opens the door to more extensive use, believe steel-makers.

Another potential: Inco is working with foundries and others on the application of Ductile Ni-Resist for cryogenic fittings, valves, and pumps.

• **Stainless**—"We think nickel stainless has as much spectacular growth ahead as it has displayed in the past," says Inco's Mr. Gordon. Certainly, this will be a strong volume year (but not necessarily for profits because of weak prices). Steelmen are forecasting shipments around 660,000 tons vs. 625,000 tons in 1962.

Breakdown: Good, but not record shipments to autumakers; possible record shipments to the construction industry; and "surprisingly" good sales to capital equipment manufacturers.

Inco has developed a stainless tank trailer (see photo, Page 54) for the chemical industry which it believes will be fully competitive

with aluminum. Under development is a stainless street light pole. The latest project is a lightweight stressed skin structural beam fabricated from sheets (see photo, Page 57). Inco has not released design details on the beam, but it hopes a market can be developed in crossover bridges for the interstate highway system.

On The Horizon

What new uses and technical developments are ahead?

Mr. Gordon gives this evaluation:

"The ever increasing performance demands of industry, by virtue of higher loads and speeds and higher temperature requirements, offer opportunities for nickel containing materials. For example, in general and heavy duty machinery, there is a continued upgrading of the alloy steels, particularly for carburized parts.

"The process industries are pressing the metals people for higher strengths at increasing temperatures. The gas turbine builders are pressing for blade materials with higher operating temperatures. We have developed cast high-temperature materials such as IN-100 and are working on still other promising new materials, both wrought and cast. If combustion temperatures in the gas turbine are increased the opportunities for nickel are increased throughout the turbine.

"The old art of electroforming has been continually improved, and we are finding many applications where this process can be an attractive and economical way to manufacture finished articles, particularly where design is complex, finish intricate.

"The iron-nickel alloys hold promise for substantial growth in the rapidly expanding electronics industry and the fields requiring controlled expansion of alloys. For example, we are working with Invar (a 36 per cent nickel low expansion alloy) for cryogenic pipelines.

"While cast iron may not seem as glamorous as some of these other materials, we look upon it as a promising market. Ductile Iron has opened up a new vista for cast iron, in which alloying is an important factor. One example is in sheet metal forming dies where nickel alloyed Ductile Iron is turning in very satisfactory performance. Other areas for which we have hope for nickel in cast iron include heavy duty brake drums and lighter engine blocks."

• **Higher Temperatures**—Technical developments have been coming thick and fast in recent months. Ling-Temco-Vought Inc. reports it has developed a laboratory process for increasing the tensile strength of nickel alloy sheet materials subjected to temperatures up to 1900° F. "New high temperature sheet materials made possible by this process should permit the design and construction of lighter and more reliable aerospace vehicles," says the company. Superalloys previously available only in castings can be rolled into sheets and foil with no loss in strength and often with an improvement in room temperature ductility, claims the firm.

• **Plating Advances**—Two recent developments reportedly reduce the cost of nickel plating. Last month, Udyline Corp. De-

troil, announced a bright nickel plating finish that withstands 144 hour Cass tests (Steel, June 24, p. 31). Called Dur-Ni, it's a variation of the company's Satylite process, but it provides bright satin instead of hazy to dull satin finishes. It's used between the base nickel coating and final chrome strike. Udyline claims the bright satin finish plus lower cost makes the process a natural for automakers. Improved corrosion resistance also makes it a possibility for part-makers who now use only a single bright nickel strike. Company engineers say most present plating equipment can be converted to handle the process.

The second development: Use of electrolytic nickel shapes in baskets for plating rather than the traditional anode baskets. Reason: The shapes cost about 20 cents a pound less than bar types.

The process became possible with development of a titanium basket which resists corrosion. The shapes are put into the basket and lowered into the bath.

One nickelman estimates that 9 out of 10 companies that do any substantial amount of nickel plating are testing the process.

Plenty Of Metal

From the standpoint of availability, the nickel consumer is in a good position. Free World annual capacity (excluding Cuba) stands at a record 600 million lb. The bulk of the capacity is in North America:

- Inco hiked capacity by 15 million lb. in 1962—to 400 million lb. yearly, two-thirds of the Free World's total. Inco's proved ore reserves exceeded 299 million tons at the beginning of 1963.

- Falconbridge Nickel Mines Ltd., Toronto, Ont., is the Free World's second biggest producer. Its capacity is 70 million to 75 million lb. yearly. Traditionally, the company concentrated its sales efforts in Europe, but it is making a strong bid for a greater share of the U.S. market. Until recently, U.S. deliveries ran 4 million to 5 million lb. yearly. "They are substantially more than double that now," says George S. Jewett, vice president-sales. Falconbridge delivered 200 million lb. of nickel to the U.S. stockpile between 1953 and August, 1962—the reason it has only recently had metal available to expand commercial markets.

- Sherritt Gordon, Toronto Ont., has a refined nickel capacity of 32 million lb. yearly. It specializes in nickel powders. Its bulk nickel de-

liveries are in the form of compacted and sintered briquets.

- Hanna Mining Co., a subsidiary of M. A. Hanna Co., is the only commercial nickel operation in the U.S. Hanna produced 21 million lb. of ferronickel last year at its plant at Riddle, Oreg., and expects to turn out a like amount this year.

- Freeport Sulphur Co.'s Louisiana refinery has been idle since the seizure of its Cuban mines and concentrate plant by Castro.

- National Lead Co.'s Fredericktown, Mo., smelter was closed down in early 1961.

- Societe le Nickel, the French producer with deposits on the island of New Caledonia, has an estimated capacity of 55 million lb. of nickel a year.

- **Reds Running Niore**—Reports indicate Cuba is continuing to produce nickel oxide sinter at the U.S. government facilities seized by Castro. Output is probably 25 million to 30 million lb. annually, about half of capacity. Small quantities have been offered for sale in the European market.

More Growth

The nickel industry is confident it can substantially boost markets over the rest of the decade. Last week, Inco unveiled a program to merchandise stainless steel in building and construction (the second biggest market for stainless). The program, beginning this fall, breaks down into three parts:

- Inco and the American Iron & Steel Institute's committee of stainless steel producers will distribute to accredited architectural schools a "sample case" containing samples of gages, finishes, tubing, bar stock, extrusions, roll form and brake form sections, and a stainless steel data sheet.

- Inco will produce a four volume Architect's Stainless Steel Library that will include finish and gage samples, architectural data sheets, specifications for stainless products, and a design manual. These libraries will be distributed to about 1,000 key architectural firms responsible for the bulk of non-residential building in the U.S.

- Symposiums on better ways to design with stainless will be held in major cities.

The negligible minority of men who had been believing they understood women changed their feeble minds upon reading that the first thing a woman who suffered a broken leg in a traffic accident said to those who came to her aid was, "Is my face smudged?"



If your car swings over the embankment and plunges into the lake...

What Should You Do?

Wait until the car interior nearly fills with water. Open the doors easily because pressure will then be equalized. The water that comes swirling into a sinking vehicle may become, in effect, the key to escape.

If you must wait to open the doors, look for the air pocket which generally will form in the highest position inside the car. Since most North American-made cars have the engine in front, they will usually sink front first and the air pocket will be near the roof in the rear.

Use of the air pocket does have its risks, however. The trapped air bubble may be pushed into the trunk if the car sinks front first. Or, if the car happens to sink bottom up—a possibility in deep water—the air pocket may escape and very little air will be left. Thus, safety specialists advise that escape through a window should be sought as soon as possible.

Before leaving the submerged car, take a deep breath, then exhale slowly in your ascent to the surface. Otherwise, the compressed air inhaled in the air pocket will expand internally as you rise, damaging the lungs and possibly causing paralysis or death.

These suggestions are based on

reports from safety specialists who have purposely driven cars over embankments into deep water in safe driving experiments.

Before you can escape from a submerged vehicle you must survive the plunge from land into water without disabling injury. Safety belts will increase your chances. If you don't have a belt, brace yourself in a crouched position with your head below the top of the front seat for protection from flying glass and debris. This is important because the windshield will probably shatter in a drop of five feet or more.

Once a car hits the water it will usually remain afloat for up to three minutes if it's a regular-sized sedan, slightly longer if it's a compact model. Best means of escape is through an open window before the vehicle submerges. Passengers physically unable to get out by this method often panic when they find the doors jammed shut by water pressure as the car sinks.

If you drive safely, chances are you'll never find yourself suddenly off the road and into a lakeful of trouble. But if it does happen you can probably escape if you react calmly, quickly and correctly. Keep your head and your car won't become your coffin.

It Was Basement Again in Port Colborne 10-Pins

The Basement team seem to have a life appointment to the 10-pin championship in the plant bowling league of the Inco Recreation Club in Port Colborne. Here they are again this year: front, Andy Voiko, captain Leo Julien and Mickey Pine; back, Ferd Kezen, Steve Kovich, Will Thompson and Al B. Bianco.





John Abbott
Copper Refinery



Wilfred Andrews
Frood-Stobie



Matti Aunmaa
Levack



James Austin
Levack

All Together Again for Dinner At Quarter Century Club Sept. 19

Thursday, September 19 is the big date, Sudbury Arena is the place, and the 15th annual dinner meeting of the Inco Quarter Century Club, Sudbury district, is the event.

Although the number of new members to be presented with their gold badges will be less than in recent bumper years, there'll still be a healthy 172, whose photos appear on this and the next two pages.

More than 2,300 are expected to sit down at 6:00 o'clock to the hot chicken dinner served by the ladies of St. Andrew's and St. Paul's auxiliaries. To make it possible for everybody to dine in the same hall at the same time, it will be necessary to serve about 750 with trays in the regular arena seats opposite the stage. Younger members of the club, from the classes of '62, '61, and '60, will take these seats and the older members will dine at tables on the floor of the arena.

Canada's greatest television star, Juliette, will headline the outstanding program of entertainment to follow the banquet. A dance team, a hootenany duet, a gorgeous accordionist, and two sensational novelty acts that are currently the hottest things in show business will round out the evening's enjoyment.



Bill Baldwin
Copper Cliff



James Barlow
Copper Cliff



Henry Beauchamp
Copper Cliff



Victor Bertrand
Clairabelle



Thomas Biggs
Copper Refinery



Peter Boluk
Copper Refinery



Elmore Bartolotti
Copper Cliff



Art Baulion
Copper Refinery



Dr. J. C. Bowen
Sudbury



Elmer Branning
Frood-Stobie



Marlin Bries
Levack



Charles Branson
Copper Cliff



Wilfred Branson
Levack



Leonard Brousseau
Garrison



Paul Boring
Frood-Stobie



Leo Cariglio
Copper Refinery



Moon Carroll
Copper Cliff



Leonard Cartier
Frood-Stobie



Joe Chamberland
Copper Cliff



Joseph Charbonneau
Copper Refinery



Arthur Chevreton
Garrison



George Chew
Frood-Stobie



Jack Cleaver
Coniston



Angelo Condotta
Copper Cliff



Robert Davis
Copper Cliff



Jack Dawson
Copper Cliff



Wilfred Deasbais
Frood-Stobie



Graham Dirk
Copper Refinery



Eugene Donnelly
Creighton



Wray Donnelly
Frood-Stobie



Allan Donough
Garrison



Eric Dunn
Frood-Stobie



Maurice Enright
Levack



Lloyd Fahner
Copper Refinery



Clifford Fenske
Copper Cliff



George Fleming
Frood-Stobie



Albert Forrier
Frood-Stobie



Adam Frohlich
Levack



Joe Funnell
Clairabelle



Wilfred Gauthier
Frood-Stobie



Vic Gaszola
Creighton



Geno Gobbs
Coniston



Robert Graham
Copper Cliff



Jean Groulx
Creighton



Ted Harber
Copper Refinery



Frank Hawkins
Copper Cliff



Willard Hearnack
Levack



Lucien Henri
Levack



Chester Hersberger
Levack



Ed Hickey
Frood-Stobie



George Hornby
Frood-Stobie



Joe Hughes
Pensioner



Ray Johns
Open Pit



David Johnston
Copper Cliff



Vern Johnston
Copper Cliff



Andy Johnstone
Copper Cliff



Otto Kalle
Frood-Stobie



Bruce King
Garrison



Stanley Kippen
Frood-Stobie



Nick Koropatnick
Frood-Stobie



William Koski
Levack



Arthur Lacle
Copper Cliff



Ben Lachance
Frood-Stobie



Bill Lake
Frood-Stobie



Albert Landry
Clairabelle



Harvey Larson
Frood-Stobie



Pacifico Lavel
Copper Refinery



Rosalre Lauson
Levack



Leonard Leroux
Levack



John Lewandoski
Clairabelle



William Lister
Copper Cliff



Daniel Locke
Creighton



Joe Lora
Copper Cliff



Nick Loupelle
Creighton



Matti Luomanho
Copper Cliff



Andy Lunkko
Pensioner



Archie MacKinnon
Frood-Stobie



Eino Maanpaa
Frood-Stobie



Jerry Mahon
Copper Cliff



Louie Martel
Copper Cliff



Frank Massel
Copper Cliff



Ronald McFarlane
Levack



John McGuire
Copper Cliff



Jack Melnars
Copper Refinery



Edgar McLellan
Copper Cliff



Murray McMaster
Garrison



Ernie Meisler
Copper Refinery



Tom Merrick
Copper Cliff



Norman Mitchell
Levack



Ewing Morrison
Copper Cliff



Floyd Mosler
Levack



Almo Mossey
Copper Cliff



Ben Moxam
Copper Refinery



Hugh Munro
Frood-Stobie



Larry Munro
Clairabelle



Murdoch Murray
Copper Cliff



Andy Nesbitt
Creighton



Bill Noble
Copper Refinery



Eusebio Nari
Frood-Stobie



Dolor Obensawin
Open Pit



Jack O'Hara
Copper Cliff



Angus Osborne
Prood-Stobie



Walter Paul
Copper Cliff



Norman Pearce
Copper Cliff



Ed Peel
Prood-Stobie



Vincent Perko
Copper Cliff



Joffre Perkas
Copper Cliff



Willard Peterson
Levack



Lionel Picard
Levack



Bill Pigski
Coniston



Milanij Pilja
Prood-Stobie



Charles Platt
Clairabelle



Joe Polrier
Copper Refinery



Fred Prodon
Murray



Samuel Pridham
Iron Ore Plant



Frank Pugliese
Copper Cliff



John Quance
Copper Cliff



Syrio Quenville
Copper Cliff



Henry Quiring
Creighton



Ralph Regimbal
Copper Cliff



Art Reid
Prood-Stobie



Michael Ripka
Prood-Stobie



Arvo Ristimaki
Copper Cliff



Vern Ritzi
Levack



Olivier Robillard
Levack



William Ryan
Garrison



Sam Samanish
Iron Ore Plant



Fred Samchuk
Creighton



Leo Sauve
Prood-Stobie



Harry Schuffeld
Clairabelle



Eddie Schuller
Clairabelle



John Serpell
Prood-Stobie



Cecil Shaller
Levack



Bill Simpson
Open Pit



John Slack
Prood-Stobie



Nelson Skinner
Iron Ore Plant



Roy Smith
Coniston



Walter Sokolowski
Creighton



Red Sprague
Levack



Pat Sullivan
Murray



Vince Suresk
Clairabelle



Dick Swanson
Garrison



Alex Switlick
Open Pit



Ilse Trammolini
Copper Cliff



Gordon Treasure
Creighton



Emil Tremblay
Prood-Stobie



Elwood Trezise
Copper Cliff



Jim Turton
Prood-Stobie



Peter Ushey
Prood-Stobie



Etienne Villeneuve
Copper Cliff



Joseph Violino
Iron Ore Plant



Ivan Vrbancic
Creighton



Oscar Walberg
Copper Cliff



George Westley
Prood-Stobie



Amos Wherry
Copper Cliff



Leonard White
Levack

William Wickenden
Iron Ore PlantRay Wilson
CreightonSid Woodley
Frood-StobiePreston Wright
Copper CliffJohn Yankowski
Frood-StobieSteve Zielak
Copper Cliff

AND THE FOLLOWING WHO WERE NOT PHOTOGRAPHED:

Copper Cliff: F. Bodson, G. E. Evans, O. Martin, P. J. Forster; Creighton: J. Davidson; Levack: J. Yando.

Mike Kacher

Well-known pit miner Mike Kacher has retired on disability pension and he's not too happy with his enforced leisure "I liked it better when I could work hard," he said.

He started with Inco at Levack in 1928 and after the fire there in 1930 came to Frood. "I loaded cars with Wally MacKay at Frood rockhouse," he recalled. He went underground in 1933.

When the great Frood Open Pit was at its peak Mike was a production man and for several years was drill boss. He went to Clarabelle when that pit began preparing for production and worked there until retirement. "That's a good place to work too."



Mr. and Mrs. Kacher

said Mike. "All oldtimers and everybody knows his job."

Mike came to Canada in 1927 and, as he relates it, was locked in a westward-bound immigration train with several hundred of his countrymen. "I jumped the train at Montreal, Ottawa and North Bay," he grinned, "but they caught me each time. At Sudbury though I got through a window and beat it down to Lake Ramsey where I hid till the train left."

Hard pressed for a job in Sudbury he hitchhiked to Hamilton, hopped a freight there, and ended up on an extra gang near Ottawa. He spent a short time in a paper mill and several months in the bush at Blind River before hitting Sudbury again.

A familiar figure in the Donovan section of Sudbury where he and his wife, the former Milka Manojlovich whom he married in 1924, operated a small store for many years. Mike is now planning a move to Southern Ontario or possibly to California where he has several relatives.

Joseph Stajduhar

With arthritis giving him rather a hard time Joe Stajduhar decided a disability pension would be a good thing for him.

His continuous service dates from 1942 but Joe first worked at Creighton in 1928. "Charlie Lively hired me," he recalled, "and I was trackman at all shafts for many

years." He has worked as salvageman on surface since 1951.

He went back to Yugoslavia for a couple of years in 1931 when he was laid off at Creighton but returned in 1934. Eight years later he decided on a fling at farming



Mr. and Mrs. Stajduhar

so bought a place near Delhi, Ontario, but that didn't pan out too well so Joe came back to Creighton once more.

His wife, the former Mandy Frankovich whom he married in 1921, joined Joe at Creighton about five years ago. Their eldest son Joe is still in the old country, their daughter Anne works in Creighton, and another son John is in Hamilton. They have three grandchildren.

A long time-resident of Creighton, Joe will still live there and hopes to do all the gardening his arthritis will allow.

Nick Halowchuk

A small man but a good one, Nick Halowchuk has reluctantly retired from the yard gang at Frood on service pension. "I worked in the yard since 1942," he said. "I liked it and everybody was good to me."



Nick Halowchuk

Nick was born in Austria 68 years ago and has been in Canada since 1928. Before arriving in Sudbury he operated a restaurant in Winnipeg, worked in the bush and harvested pulpwood at Kenora, and mined for gold in Northern Ontario.

He has not heard from his wife and three sons since 1940. "The Russians moved my village to make an aerodrome," said Nick, "and I don't know what happened to my family."

Nick lives in the home of another Inco pensioner, Enrich Brinjak, in the Donovan section of Sudbury and while he enjoys daily walks and visits with friends, readily admits that he was happier at work. "And I felt better too," he said.

Harold Basso

Another transportation department oldtimer who recently joined the pensioners is Harold Basso, conductor on the Frood ore train for many years and a highly regarded member of Inco's railroaders. He has had to bow out with a disability pension.

Harold recalled the first shift he worked for the department back in 1933. "Ab Elliott sent me out on the slag dump," he said, "and going home that night the soles of my brand new shoes fell off. The stitching had burned through. I decided to quit then and there but next day Mr. Elliott changed my mind and I've never been sorry."

Born and raised near Sundridge, Harold worked at all phases of lumbering in that area and at one time had several trucks of his own. The depression changed things however and in 1933 he came to Copper Cliff and a job with Inco.

A good workman, Harold has always taken pride in doing his job well. "I brought in one of the



Mr. and Mrs. Basso

biggest trains ever hauled from Frood," he said. "Fifty seven cars of ore."

Forty years ago he married Gladys Hornbrook at Sundridge and they are still regular visitors to that community. "It's an easy trip now to what it was in 1933," commented Mrs. Basso.

The Basso's have three sons, Fred in the machine shop at Frood, Calvin with the mechanics at Copper Cliff, Earl with the Bell Telephone in Sudbury, and one daughter Helen (Mrs. B. Walker) also of Sudbury. Their 10 grandchildren are a constant delight to them. They live on Wembley Drive in Sudbury.

An active and able gardener, Harold plans on spending most of his time now at this rewarding hobby. And in the winter? "I guess I'll just shovel snow, read, watch TV and enjoy my family," smiled this happy man.

The person who uses a lot of big words isn't trying to inform you — he's trying to impress you.

Frank Grubic

Frank Grubic is another Frood oldtimer who will be missed at that mine now that he is on pension. Frank was a member of the rather select group of miners



Frank Grubic

who helped drive the many drifts and raises at Frood when that great operation was just in the early development stage.

Frank has taken a disability pension, his legs have been giving him trouble,

but if he had his life to live over, mining would be his choice. "I really liked mining," he grinned, "and today it's a lot easier than when I started."

It was at Garson in 1931 that he first worked for Inco and in 1934 he went to Frood. After a couple of years in stopes he drove drifts and raises until 1945, then became a level timberman, the job he held at retirement.

Born in Yugoslavia in 1904, Frank came over in 1928. He was married in 1922 but his wife died last year. His married daughter Barbara and two grandchildren in the old land are three reasons why Frank is seriously thinking of returning there to live. He made a trip back in 1955.

Meanwhile he is taking life easy, enjoying the sun but missing the gang at work.

Cleophas Vezina

Cleophas Vezina is another Incoite who joined the Company during the war years and is now enjoying a service pension. He had worked for the most part as helper, tripperman and conveyorman on



Cleophas Vezina

the reverberating furnaces at Copper Cliff. He was with the track gang on the slag dump at Coniston for almost a year after he started with Inco in 1942.

He was born 68 years ago at Field, Ontario, and worked at

farming and construction before coming to Inco. He was in the army in the first war for a time.

"I think the smelter was the best place I ever worked," he said. "I liked it there."

Still single, Cleophas says that when he was a young man times were too tough to get married and now he's too old to change. He intends living in Sudbury, enjoying his pension and this new life of ease.



Mine Rescue Men At Skull Practice

One of the four mine rescue teams at Thompson was photographed by the Triangle during a regular training session conducted by safety superintendent Harry Bonasuk (right) and mine safety engineer Gordon Vivion (third from right). Members of the team, shown with their McCaa breathing apparatus, are Jim Valentine, Bill Work, Neville Menard, Carl Jensen, Bob Stierle, Don Doritsansky, and Charlie Schifano.

Wilfred Quesnel

Retired on disability pension with close to 37 years of credited service, Wilfred Quesnel had been with the paint gang at Coniston for 35 years. He started at the Coniston smelter in 1925 and first worked in the sinter plant.

A heart condition has slowed him down somewhat of late and he agreed with his doctor's sug-



Mr. and Mrs. Quesnel

gestion that a disability pension was a wise move.

Wilfred was born 62 years ago at Mattawa when it was a big lumbering town. His parents later moved to Montreal and in 1912 to a homestead near Markstay. He worked on the farm, the railroad and in the bush, and also spent a couple of years at the O'Donnell roast yard, then in the C.N.R. shops at Capreol.

Married 47 years ago, Mary Grimard and Wilfred are a happy couple who enjoy their family and count them as blessings. Jeanine (Mrs. R. Conti) is the eldest and the others are Leo, a crane man at Coniston, Norman, Pauline, 18, and six grandchildren.

Recalling the depression days when the plant was down Wilfred said his family all lived quite comfortably on the old homestead. "There were seven of us," he said, "and the only cash we had was my small compensation cheque. We lived well, too, we never needed to buy any meat or fish and my wife did all the own baking."

Why is there always more parking space on the left side of the street than on the right side?

Paul Tomchek

One of the Copper Refinery's original tankhouse employees, Paul Tomchek has retired on full service pension.

Chief inspector for nearly all his 33 years at the refinery, Paul was one of a small group which included P. Benard and W. R. Koth, who came from Carteret, New Jersey, to start up the plant. Paul helped train men for the tankhouse in those early years.

Born on a farm in Slovakia 65 years ago, Paul served seven years in the army and worked at farming before coming to this country in 1926. After working for a time at a Timiskaming paper mill he joined a cousin at Carteret and soon had a job in the refinery there. "Mr. Benard was superintendent," Paul recalled.

Ann Saro became Mrs. Tomchek in 1921. Their daughter Emily, herself a former Incoite, is mar-



Mr. and Mrs. Tomchek

ried to Joe Mihelchik of the geological department, and their son Alex, 18, is still at school. The three grandchildren and their grandparents enjoy a mutual admiration society.

Paul has no desire nor intention of returning to the old country, even for a visit. "This is my country," he said. "I like it, and I'm satisfied." Fond of gardening he keeps the grounds at his Sudbury home in show class shape.

It's a moot question as to which builds up the most intense thirst in a small child—going to a movie or going to bed.

Paul Demkiw

"I think I'll take a vacation for about one year," Paul Demkiw announced smilingly. "I've been working long enough." Paul can take a vacation for the rest of his



Jack Griss (centre) poses with four of the guests at his retirement party. Jim Dewey, Sam Szilva, Red Porter and Jack French.

Jack Griss

"Presented to Jack Griss, 1930-1963. A memento of many pleasant associations on the largest grinding aisle in the world".

This was the inscription on a miniature grinding mill made by the boys in the machine shop and presented on his retirement at age 63 to one of the few originals who helped start up the Copper Cliff concentrator in July, 1930.

Because Jack Griss is a great sportsman, hockey was the theme of the stag given in his honor at the Italian Hall. Guest speaker was former coach Max Silverman, and among the guests were old hockey types like Cam Gardwood, Freddy Stevens, Red Porter and Jim Dewey. Joffre Perras ran off a color film of a 1962 Toronto-Chicago playoff game.

Telegrams of best wishes to Jack were received from retired mill superintendent Herb Rose, and retired shift bosses Ivan Bowman and Bob Boehmer, as well as from Rudy Regimbal at Thompson, Gordon Keast at White Rock, B.C., and George Claire of the crushing

life if he wishes since he is now retired on an early service pension.

First working for Inco in 1942 at Creighton he moved to Frood that same year and after a time in the timber yard transferred to the mechanical department in the rockhouse. He went to the Open Pit via Murray and when the Pit was reduced to a one-shift operation returned to Frood as crusherman, a job he liked.

Born 63 years ago in the Ukraine, Paul, as a new Canadian, did the customary western tour of farm, railroad and harvest before settling on a dairy farm near Winnipeg. He stayed there 15 years, tried the gold mines at Red Lake, then in 1942 went to Winnipeg where Inco employment agents were hiring for the Sudbury mines. "Best move I ever made," he declared.

Paul was married in 1923 and has a son Walter in the old country whom he hopes to see when he makes his first trip back this year. Later he expects to settle near Winnipeg where has a brother and many friends.

plant, who was on holidays.

A scroll making him an honorary life-member of the concentrator fire brigade was presented to Jack by fire inspector Bill Humphries. He also received a Gordie Howe no. 9 hockey sweater and a fancy fly swatter made by Jim Taus. The oldest man on shift, Sam Szilva presented him with a handsome emerald ring. His nephew, Group Captain Paul Peter of Ottawa, was present for the occasion.

Jack French was responsible for the nice touch to the proceedings.

Enlisting in 1939 with the Hamilton Light Infantry, Jack Griss was captured at Dieppe and spent three years in prison camp. He was hospitalized in England for six weeks following his liberation by the Americans.

Olga Cramer of Montreal, who he married in 1938, died of cancer in 1962. They had no family.

After 27 years as grinding boss, Jack decided he had a real holiday coming to him, so he's off to England this month with the best wishes of a host of friends following him.



A silhouette shot of small craft at anchor in the Colonial Marina bay.

Boating, Skiing, Beaching Keep Port Colborne's Waterfront a Busy Scene

Latest addition to Port Colborne's bustling water front scene is the new Colonial Yacht Marina which opened its slips and dockage to pleasure craft this spring.

Located at the foot of Elm Street on what is now called Marina Drive, a rockfilled, hardtop road extends several hundred feet out into the bay with rib-like slips runnings from it sufficient to accommodate more than 100 boats. A wide concrete ramp provides easy access to the water, and electricity is available at each berth. Gas, oil and service are provided at the large showroom and service building on the property. Anchorage for float-equipped aircraft is also provided.

There are now three boat liveries on the beach at Port Colborne, an indication of the great interest taken in this family pleasure by Nickel Refinery people and their neighbors.

Just a stone's throw back of the Nickel Refinery lies one of the finest sand beaches in the Port Colborne area. Appropriately named Nickel Beach, this wide stretch of smooth sand extends nearly a mile along Lake Erie's gently sloping shore. Here each summer the Port Colborne Recreation Committee conducts swimming classes for all local children of school age.

A swimming supervisor, assistant and 14 instructors hold classes throughout the day. Bus transportation to and from the beach is provided for those requiring it. "On a good day," said supervisor Ceri Hugill, "we will have up to 350 youngsters in our classes."

Classes are held five days a week for a period of six weeks, then the children are tested by members of the local Red Cross Society.

Canadian junior overall grand champion water skier in 1958 and 1959, and Canadian men's trick champ in 1960 and 1961, 20-year-old David Ott is one of Port Colborne's outstanding aquatic stars.

With the grace of a ballet dancer this young water skier performs the most difficult maneuvers with deceptive ease, and his slalom and trick runs are a delight to watch.

During 1960 and 1961 David was a member of the Aquanama Troupe, the group that provides waterfront entertainment and excitement for Canadian National Exhibition visitors. His specialty was trick runs and jumping, and an American film company made a color sport short of his act.

Last summer he worked as swimming supervisor for the town of Port Colborne and is working in a similar capacity this summer for the township of Humberstone. In

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Partial view of the mooring slips at the new marina showing some of the sizeable fleet of power boats and sailing craft kept there.



Ace of Port Colborne's water skiers is David Ott, shown here as he makes the tricky one-ski backward toe tow look as easy as pie.



It looks like the old "dead man's float" to us, but instructor Doug Grist calls this the prone glide. Explaining is supervisor Ceri Hugill.



Instructor Laurie Schmalz is showing a class how to do a "reaching assist" used to help a swimmer in trouble without dunking the helper.



Gus MacKinnon of Insurance section's Jim Donald Creighton drives off.



Insurance section's Jim Donald gets set to sink an 18-footer.



Pensioner Allan Brock flashes his Florida form on an approach shot.



Port Colborne champ Elmer Anger goes for the cup with a crisp chip.



Joe Sharpe and Harold Peltomaki at 19th hole.



Much of the credit for the success of the meet went to Ron Wood and Jim Daley, who kept the big field moving.



John Briedis and Dr. Charles Jessop of the Levoack team check as caddy Richard McIntosh adds up their scores.



Coniston's Jack Angove looks a little disgruntled as his tee shot sails for the woods like a homing pigeon.

Staples Stars In Golf Upset

Paced by that cool and crafty customer, Ev Staples of Creighton, who came in with a brilliant 74, the General Plant team shook up the annual Inco golf tournament with a gross of 317 and won the R. L. Beattie Rose Bowl.

Other members of the foursome that sprang the agreeable upset were Bill Allen (81), young Sandy McAndrew (78) and Don Ripley (84).

The highly touted General Mines squad, often the victor in previous years, had to settle for runner-up spot with a gross of 326. Ron Silver, Jim Dewey and John McCreedy all scored 80, Ted Flanagan had an 86.

Another perennial Rose Bowl contender, Port Colborne, was 18 strokes off the pace with 335, but came up with the Lambert handicap trophy. The Nickel Refinery men scored: Elmer Anger (87), Don Nicks (83), Merle Noyes (80), John Jamieson (85).

Runners-up for the Lambert were a firing squad from the accounting department, George McMaster (92), Spike Wormington (111), Sid Manley (107) and George Burns (87), who had a net of 299.

The Godfrey event, open to teams with a gross of 441 or more, brought joy to the hearts of a stroke-weary Copper Refinery entry, Louis Fay, Larry Martel, Andy Casas and Brooks Matthews. Runners-up were Accounting No. 2, Mason Logan, Merrill Paquette, Dick Cole and Jim Donald.

Art Silver's 77 was next best to Ev Staples' 74 for low gross of the meet, with Sandy McAndrew's 78 third. Other individual stars who

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General manager Ted Goetz presented the R. L. Beattie Rose Bowl to its proud winners, Don Ripley (holding trophy), Bill Allen, Sandy McAndrew and Ev Staples (whose 74 was the day's best score).



Former Copper Cliff works auditor Earle C. Lambert presents the Lambert trophy for handicap play to the Port Colborne team, Merle Noyes (holding trophy), Elmer Anger, John Jamieson, Don Nicks.



Here the Copper Refinery entry of Louis Fay (holding trophy), Larry Martel and Andy Casas receive the Godfrey trophy from assistant to the vice president Alex Godfrey. Not shown, Brooks Matthews.



Veterans of the fairways as well as of the nickel industry, these four Port Colborne pensioners gave a good account of themselves: from the left, Vic Lynden, Fred Willet, Earle Lambert, Bill Freeman.



Fraser Fields of Copper Cliff shops and Charlie Price of Frood look pleased with their prizes.

Copper Cliff Reception Staff Does Important Public Relations Job for INCO

Herman F. Ogrinc of the research department, General Electric Company, Cleveland, on July 30 wrote to Miss Ethel Walmsley, receptionist at Copper Cliff: "It was my privilege to make a tour through the smelting plant of International Nickel a short time ago. I was indeed amazed to witness the vastness of the entire operation. Moreover, I must compliment the manner with which Mr. Ted Bryant conducted our party through the plant. His courtesy and willingness to answer our questions was indeed appreciated. Further, I wish to comment that such personalities are indeed a tribute as well as a means to your growing success."

This summer the Copper Cliff plant will be visited by 5,000 tourists. It's a safe bet that the vast majority of them will take away the same impression as Mr. Ogrinc—a huge and fascinating operation represented at its "front door" by an interested, well-informed, courteous reception staff. Pictured above are Miss Walmsley and some of the plant guides, Danny Beltrame, Cleason Martin, Mike Costigan, Don Matthews, George Allen, Claude Brunet, Jim Wright, Gerry Bradley, Bill Dalyk, and George Flynn.



The Rover-BRM gas-turbine sports car is the first gas-turbine powered car to have entered the gruelling Le Mans Grand Prix d'Endurance. Its rear-mounted engine contains high-nickel, heat-resistant alloys in its turbine rotors and nozzles, hot gas ducting pipes, the inner lining of its combustion chamber and in other essential components.

Successful Gas-Turbine Sports Car Uses Nickel Alloys in Power Plant

The Rover-BRM Gas Turbine sports car, which recently won acclaim as the first turbine-engine car to compete in the world-famous Le Mans Grand Prix d'Endurance in France, relies substantially on nickel alloys in its unique engine.

Heat-resistant alloys, containing essentially between 60 and 80 per cent nickel with chromium, cobalt and molybdenum, are used in the engine's turbine rotors and nozzles, hot gas ducting pipes, the inner lining of the combustion chamber and in other essential components.

The mass-production of gas-turbine engines by automobile manufacturers, according to a spokesman for International Nickel, is of great interest to nickel producers. The abundant

world supply of nickel and the adaptability of nickel alloys to gas turbines have intensified International Nickel's research and market development efforts in this field in Canada, the United States, and Europe.

An affiliate in the United Kingdom, The International Nickel Company (Mond) Limited, worked in conjunction with the Rover Company in the development of such a turbine engine as used at Le Mans. Most of the work was done on development of means for large-scale production of both radial-flow and axial-flow types of turbine.

The radial turbine rotor is cast with integral blades of high-temperature, high-strength nickel-base alloy 713C. The free flow (or axial) turbine rotor is machined

from a solid forging of high nickel alloy (60 per cent nickel, 20 per cent chromium, 16 per cent cobalt and other alloying elements).

The engine in the sports car has evolved from the prototype Rover T4 saloon car, in production for only the last two years. Mounted at the rear of the racing car, the compact power-unit measures only two and one-half feet and, with all ancillary equipment, weighs about 200 pounds. The car is a product of nearly 15 years of research and development in gas-turbine car engines by the Rover Company.

In the Le Mans endurance test, held June 15 and 16, the car was among only 14 to complete the race, although 49 cars started. It completed the 24-hour test at an average speed approaching 108 mph, finishing seventh.

Noticeably quieter than other competitors in the Le Mans test, the turbine car was nicknamed "whispering ghost" by reporters. "It was like taking a car for a Sunday afternoon spin," said world champion driver Graham Hill

who, along with Richie Ginther of California, piloted the car in the race. The car ran the entire race, some 2,600 miles, without change of tires.

The turbine-engine car, although not an official entry, won 25,000 francs (about \$5,200) in special prize money. The Automobile Club de L'Ouest offered the special prize to the first turbine car to complete the Le Mans race at an average speed higher than 93 mph.

Antti Luuko

One of Inco's old-time shaft drillers, Antti Luuko has decided to turn in his lamp, throw away his hard hat and take life easy on an early service pension.

During the depression Antti picked up 150 acres of farm land on Nepawass Lake and that's where he'll spend much of his time now.

In his mining career Antti helped sink No. 6 shaft at Frood, No. 5 shaft at Creighton and No. 2 shaft at Levack, in addition to driving many raises and drifts.



Mr. and Mrs. Luuko

His first job in the Sudbury area was at the old Murray mine in 1924. He worked at Creighton in 1928, went to Frood in 1929, left in 1931 to try farming.

Returning to Frood in 1933 he transferred to Creighton in 1936 and the following year went back to the farm. He was soon back mining again though, this time at Levack, and in 1939 transferred to Garson. He was powderman there for the past 15 years.

Antti married Venla Lundgren in 1961. His first wife died in 1949; they had been married since 1927. The Luukkos have one son William of Garson.

Fishing is Antti's favorite sport and this summer he hopes to practically live on the lake. Something else he enjoys very much is keeping his home and garden in Garson always neat and tidy.

Gerry Is Smiling But Not Talking

Gerry Brase of the Copper Cliff machine shop isn't saying where he fished for this catch of small-mouth bass, except for some vague reference to Killarney which probably is in exactly the opposite direction, but aren't they beauties? The big one went just over five pounds, and will likely be a CKSO contest winner.



Beautiful Paint Lake Resort Is Ideal Summer Playground For Thompson



Over 30 summer cottages are built or are building at Paint Lake, the lovely resort playground where Thompson Inco people enjoy the beautiful northern Manitoba summer. Vic Algure of the warehouse and his wife Elsie bravely went for the real thing, cutting and peeling the logs for the cabin they are building themselves. It's their first experience with a do-it-yourself project, and they're doing a terrific job.



There's fishing for everybody at Paint Lake, which abounds with pike, pickerel, perch and whitefish. OUR COVER PICTURE shows a pair of devout outdoorsmen, Bill Thorpe and Jack Rosa, blissfully riding Cloud 9 as they pull in a pickerel on a dazzling summer's day. In the above picture Jack handles the net for another great Inco sportsman, Carl Hnatuk. All three are also dedicated hunters and conservationists.



The lands branch of the provincial department of mines and resources is developing about 150 acres of mainland and peninsula at Paint Lake into the hub of an ideal vacation land. Rustic furniture and stone barbecues are plentiful through the cleanly underbrushed park and along the shores from which holidayers catch



their fresh fish for a cook-out. Long curving sand beaches, cleared trailer and tenting areas, and full resort facilities are other attractions of this well-planned recreational development just 22 miles from Thompson.



With its countless bays, inlets and islands Paint Lake offers adventurous prospects to boating enthusiasts, and it's no surprise to find more than 200 power boats beached in the natural marina. Shoal markers and direction signs mark the main water routes, so that people like Maurice and Josie Desjardins (right), with their



alert navigator sitting up on the deck, can relax and enjoy mile after mile of magnificent scenery in safety. The Paint Lake resort is a fitting complement to Canada's most modern little city.



This is Anthony Augustino, his wife Nellie and their smiling son, 11-year old Gary. Anthony works in the yard department at the Nickel Refinery in Port Colborne. Mrs. Augustino's father, John Seliwanchik, recently became an Inco pensioner.



Well-known softball player Frank MacKinnon is spending less time on the diamond now that he has a new home in Waters township, but still coaches the Waters' team. With him are his wife Gerry, 3-year old Karen and Vicki who is 5 months old. Frank works at the Copper Refinery.



A Thompson miner for three years now, Mike Timchuk is shown here with his wife and their daughter Carolyn, 2, in their new home on Deerwood Drive. Mike was born on a farm near Dauphin, Manitoba. He thinks Thompson is a fine place to live.

INCO FAMILY ALBUM



Nick Chambers, his wife Betty and their 16-year old son Phil have lived in Lively for over 10 years, and like it very much. On their vacation this year they visited Nick's parents in New Brunswick. Nick is a blasting boss at Creighton 3 shaft.



A crane-man in the converter aisle at Copper Cliff, Donat Belisle has been an Inco man since 1948. Shown with him are his wife Jeanine, 15-year old Denise, Donald, 12, Rheo, 8, Lillian, 5, and Jacques, 15 months. The Belisles live in the McFarlane Lake area.



Well-known Frood miner Bill Fillator is pictured here with his wife Anne, son Jim who is being married this month, Linda, 15, Patsy, 12, Billy, 5, and Debbie who was three on July 21. The Fillators have a very comfortable home in New Sudbury.



Here are Mr. and Mrs. Gerard Gervais and their family. Gilles is 11, Ivan, 10, Suzanne, 7, and Alain, 2. Gerard is a familiar figure to residents of Azilda where he lives and has served as reeve the past two years. He works in the mill at Levack.



Assistant smelters superintendent L. N. Pearce with a group of the visitors in the Copper Cliff works.



FIRST IN CANADA was this regular meeting of the committee of stainless steel producers, AISI, held at the Nickel Range Hotel, Sudbury, in conjunction with the visit of the members to Inco. Around the conference table, from the left, are H. A. Brosman, manager stainless steel sales, Carpenter Steel Co., Reading, Pa.; D. M. Henderson, asst. to manager, sales division, Falconbridge Nickel Mines Ltd., Toronto; W. J. Long, vice-president, sales, Universal-Cyclops Steel Corp., Bridgeville, Pa.; C. T. Haller, steel industry sales manager, Inco, New York; L. W. Barber, product manager, stainless steels, Atlas Steel Company Ltd., Welland; T. S. Fitch, president, Washington Steel Corp., Washington, Pa.; M. J. Barry, manager, sales, Joslyn Stainless Steels, Chicago; W. Adamson, general sales manager, stainless, McLouth Steel Corp., Detroit; K. A. Matticks, product manager, flat rolled pro-

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Stainless Steel Producers Visit

The stainless steel industry consumes 30% of Inco's nickel production. A particularly auspicious occasion therefore was the visit to Copper Cliff July 24-26 of members of the stainless steel committee of the American Iron & Steel Institute. Accompanied by Inco vice-presidents R. H. Waddington and A. P. Gagnebin, and sales executives of the New York office, the distinguished and influential group saw mining at Creighton, milling and smelting at Copper Cliff, and the Iron Ore Plant and Copper Refinery. "The mine and plant visits were most interesting, and the members were greatly impressed by the facilities and the high type of the personnel encountered," said AISI's D. W. Pettigrew.



Inco vice-president R. H. Waddington with H. A. Brosman and D. M. Henderson, underground at Creighton.



ABOVE, LEFT: reduction works manager R. R. Saddington (centre) explains the milling process to W. H. Adamson, K. A. Matticks, H. A. Brosman and C. T. Haller.

ABOVE, RIGHT: Nickel oxide sinter, packed for shipment, made a backdrop for this group: Inco general manager T. M. Gaetz, C. E. Roberts, Inco vice-president A. P. Gagnebin, W. J. McCune and D. W. Kauffman.



IN THE SHAFT STATION on Creighton's 6600 level, deepest point in Inco mining, are A. P. Gagnebin, M. J. Barry, G. A. Pyle, W. J. McCune, W. J. Long, K. A. DeLonge, manager market development, Inco, New York, underground superintendent Grant Bertram, R. A. Biggs, divisional foreman Stan Allery, assistant general manager J. A. Pigott, Harold Larsen, manager nickel sales, Inco, New York, and administrative assistant D. Kelly.



Silver building buddies of Joe Hughes grouped for a photograph on the occasion of Joe's transfer to the pleasure-with-leisure department. He was presented with a purse of money which he acknowledged with his usual smooth flow of kindly words. Front row, Ralph Johnson, Aldema Proulx, Frank Cook, Pat Wabegijig, Paul Petahtegoose, Ernie Mercier; standing, Ralph Frank, Morris Samborski, Joe Spencer, Tony Usich, Tebor Banjar, Ed Jackson, Al Richer, Joe Hughes, Andy Martin, Wrenley Watt, Ralph Adams, Art Bouillon, Bill McBain, Grant MacDougall.

Joe Hughes

Joe Hughes was a school teacher for a number of years before coming to Inco and those acquainted with his pleasantly persuasive personality know that he was a good teacher. Now, with his birth certificate indicating he has seen 65 summers Joe must take a pension, but he has no intention of retiring. "I feel just great," smiled this affable gent, "and I already have several job offers."

Born in Bruce County Joe attended teachers' college at Stratford and one of his early teaching positions was at Larchwood. That was in 1929 and Joe admits the pay he got would look mighty small today. He was there five years, spent another three at Cartier, then joined Inco in the mill at Copper Cliff.

He transferred to the Copper Refinery shortly after as a sampler, then in 1941 went into the precious metals department where, for the past 20 years, his job has been the production of rhodium.

A good man at his job with a reputation for integrity, Joe was well regarded by all at the refinery. He became a member of the Quarter Century Club this year.

Joe married Gertrude Byrnes in 1939 and they have one daughter Eleanor who wrote her grade 13 this year, and two sons, Bob who works in Sudbury and 11-year old Owen.

Fond of bowling, dancing and gardening Joe is a happy man who enjoys working around his attractive home in Sudbury's west end.

Purity in Processing

Nickel alloy containers are used for processing drugs because the containers withstand corrosion, will not contaminate the product with metallic impurities and are easy to keep clean.

Murdo McIver

His distinctive Scottish burr, unblemished after 40 years in Canada, and the ties with his native Isle of Lewis still strong, Murdo McIver decided he'd worked long enough and is now enjoying an early service pension. And high on his priority list is a trip back to his native heath. "We're right next to the Isle of Skye," he said.

A miner since 1926 Murdo came to the Frood in 1928 when Martin Horne brought a gang down from Cobalt to deepen No. 4 shaft. Murdo later drove drifts at Frood



Mr. and Mrs. McIver

No. 3 shaft, became a shift boss there and moved over to Creighton No. 4 shaft in the same capacity. He later became a mine foreman and worked for some time at No. 5 shaft. He came to surface in 1941 and in later years worked as powderman.

He served with the British navy during the first world war, then joined the Glasgow police force in 1920. From there he was recruited into the RCMP and served at such remote spots as Aklavik and Victoria Island until 1926. "I was put through a rigorous test and attended the first murder trial held by the Mounties in the Northwest Territories," he told the Triangle.

Murdo came to the Cobalt-Timmins area in 1926 and began his mining career. He married Daisy Wilson in 1929. Her father William, who died recently, was a Creighton pensioner.

The McIvers plan on moving down to the Barrie area. "We have friends there and I think I'll be able to garden a little longer," said this new pensioner.

Sam Fields

When Sam Fields returned from France after the first world war, he worked around his home town of Folly Lake in Nova Scotia until 1923 when he came west as far as the Welland Ship Canal. After three years on the canal and six



Frood underground superintendent Norman Anderson (right) congratulates Sherwood Horner on his retirement and presents him with a wallet of money from the boys, some of whom are seen in the picture.

Sherwood Horner

"I come from Shawville, Quebec, the same town as Murph Chamberlain," said Sherwood Horner. "I used to chum with his brothers." Sherwood is retired now from Frood on early service pension.

A farmer most of his early life he came to Sudbury in 1934, worked a few months for C.I.L., then joined Inco at Creighton. The following year he went to Frood where he was a highly regarded stope boss and pillar leader for many years. "I silled out lots of stopes on 2200 and 2600 levels," he said. "Grant Baker was one of my first shift bosses."

During his final year Sherwood was a powderman on 1000 level and prior to that for a number of years was a level boss on the 12-8 shift.

years at Union Carbide he found other work until Fraser-Brace started to extend the International Nickel plant at Port Colborne in 1936. Sam was later transferred to Inco's payroll and started on the mastic gang, lining concrete tanks.

His duties were varied in his 26 years of service including the yard gang and the sinter department. He also did guard duty for three years during the second world war, and for 17 years was associated with the mechanical department, working in the power house with a fourth class stationary engineer's certificate.

In 1918 Sam married Eva Brenda in Wales, while he was a soldier in the Canadian Forces and they had two daughters, Gwendolyn (Mrs. D. Frame) now living in Hamilton and Christine (Mrs. J. Essex) of Peterborough and one son, Fred, who makes his home in Calgary. Mrs. Fields died in 1939. Sam married Zena Bett in 1961.

Mr. and Mrs. Fields have moved to Millbrook. At a going-away party, Sam received a wallet as a token of respect and esteem from his fellow workers. Ross Butler spoke of Sam's attention to his duties and J. H. Walter, assistant manager, thanked him for his faithful service to the Company and wished him and Mrs. Fields a long and healthy retirement. Mrs. Fields was presented with a bouquet of roses.

In 1926 he married Meryl Young and they have a fine large family: Ross in Trenton, Fred at Stobie, Gerald at the Soo, Floyd at Port Frances, Bill at Ottawa, Joan (Mrs. F. Agers) of Georgetown, Nora whose husband Ron Cook is an electrician at Copper Cliff, Linda and Richard at home and to top this, they have 14 grandchildren.

A happy man with an inherent love of the soil Sherwood has bought a home with three acres of ground near Chelmsford and there he is very happy raising chickens and growing fine vegetables. "This is the life," he grinned. "I have just enough work to keep me as busy as I want to be."

Trips to visit his family and also down to Shawville round out a very interesting life for this active pensioner.

An Instrument Man Since He Was Eight

When he was eight years old Don Lawrence repaired an old telephone magneto, and he's been fascinated by fine mechanisms ever since.

During the four years he worked in the smelter at Flin Flon he took a course in electronics, and at the same time, as a hobby, apprenticed with the local watchmaker.

Now his job is foreman in charge of the maintenance and servicing of all automatic controls and instrumentation at Inco's highly automated Thompson plant. In the evenings he likes nothing better than to find what's wrong with an old watch or clock.

"Chimera or repeaters are the most fun," Don said, "but they're hard to come by these days. Some-



times I'm fairly starving for a good broken-down chimera. My mother-in-law wrote from Flin Flon one day that she had picked one up at a rummage sale for 50 cents, and I could hardly wait for it to get here."

He wishes he could get his hands on some of the old clocks he remembers in England, where he was born. Most of the time, for an evening's relaxation, he has to settle for a mere watch or a discombobulated record player.

His watchmaker's bench, where our picture shows him at work, is equipped with delicate tools for making instrument parts, including a lathe of extremely fine tolerance.

Don's hobby enthusiasm is contagious. His wife, the former Evelyn Zolinski, is taking a course in dress designing, and his son, 9, is experimenting with a chemistry set. "The house may blow up any day," he says happily.

Fathers Too Young

Most readers we heard from found it difficult to match the father-and-son photographs in last month's Triangle. One lady scored five of the 11 sets without peeking, but that was the best reported to us.

"Some of the fathers were too young," she and two other readers complained. "You couldn't tell which were sons. It would have been much easier if you had put all the fathers in one group and the sons in another."

So that's what we'll do next time.

Appointment

Appointment of F. G. Burchell to the position of superintendent, reduction mechanical department, Ontario division, was announced by general manager T. M. Gaetz, effective August 1.



F. G. Burchell

Mr. Burchell succeeds Walter H. Gibson, who has retired on service pension.

The new mechanical superintendent was born in Copper Cliff in a real "Inco family". His father, William H. Burchell, retired on pension in 1955 after 38 years of service in the mechanical department, and he has two brothers also Inco men. Percy in the tabulating department, and Wilfred with the first aiders.

After finishing high school in 1942 Fred Burchell completed his four years' apprenticeship in the Copper Cliff machine shop. He later enrolled in mechanical engineering at the University of Toronto, from which he graduated in 1950. During his summer vacations he worked as a machinist.

After graduation he worked for three months in the crushing plant and mill, then for a year in the Copper Refinery mechanical department, after which he returned to the Copper Cliff plant as mechanical general foreman. He became assistant master mechanic in April 1956. The following year he topped off his qualifications by obtaining his first class stationary engineer's certificate.

Curling, skiing, and a summer camp at Little Penage Lake are his recreations.

He was married in 1954 to Georgie Castonguay. They have one son, John, 3.

Ed Wintemute

Edwin Wintemute was born in Bertie Township and outside of working in Copper Cliff for a brief period has spent all his time in Welland County. After leaving school he did odd jobs around the country. His first job in industry was at the shipyard in Port Erie where he experienced the thrill of being aboard a ship as it was launched.

He came to Inco's Port Colborne refinery in 1928 and for the next 10 years spent most of his time working with Tommy Tallon repairing steam coils and other pipefitting around the electrolytic department. In 1938 he decided to quit but by 1942 he returned to Inco and for the past 20 years has worked in most of the classifica-



Mr. and Mrs. Wintemute

tions in the electrolytic department, the past 13 as a cementation man. He has now retired on a disability pension due to arthritis.

Hazel Michael became Mrs. Wintemute in 1928. They have a family of four: Donald, an Incoite and works in no. 5 building; Audrey (Mrs. W. Klauke); June (Mrs. G. Shiner); Grace (Mrs. R. Petersen) who is living in California where her husband is stationed with the U.S. Army. Eight grandchildren complete the Wintemute family.

At a gathering of workmates at the Wintemute home, Edwin was presented with a purse as a token of their friendship and esteem. Charles Ott, assistant to the manager, and Bert Lindenau, electrolytic department super., expressed the management's thanks for his years of service to the Company and hoped that his health will soon improve.

Appointment

Kenneth B. Young has been appointed assistant manager for Canadian development and research The International Nickel Company of Canada, Limited.

A graduate in metallurgical engineering from Queen's University, Kingston, Mr. Young served for



K. B. Young

four years as senior metallurgist and five years as chief materials engineer with Orenda Engines Limited. Previously, he was associated with the physical metallurgy research laboratories, Bureau of Mines, Ottawa.

In 1956 Mr. Young joined the Canadian development and research division of International Nickel in Toronto, where he was directly concerned with applications of nickel alloys for use in jet propulsion and gas turbines. In 1958 he became supervisor, application engineering, development and research division, The International Nickel Company, Inc., New York, and in 1962 returned to Canada as coordinator of market development in the Canadian development and research division.

Inco Fellowship

Ten postgraduate fellowships, each valued at \$3,000 annually, have been awarded to Canadian students by The International Nickel Company of Canada, Limited, as one phase of the Company's extensive educational-aid program.

Since the commencement of Inco's fellowship program in 1951, 58 awards of this type in science and engineering, many of which were tenable for more than one year, have been granted for postgraduate studies at Canadian universities.

Of the ten awards now announced, two are new fellowships and eight are renewals of previous awards. Each has a maximum tenure of three years and provides an annual stipend of \$2,500 to the student as well as an annual supporting grant of \$500 to the uni-

versity of attendance to assist in defraying costs of the recipients' research work.

The students are completing advanced studies in a wide range of subjects including metallurgy, physics, geology, geophysics and chemistry.

Stainless Steel

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ducts, Crucible Steel Co., Pittsburgh; J. P. Butterfield (committee chairman), manager, stainless steel products, Armco Steel Corp., Middletown, Ohio; D. W. Pettigrew, staff rep., American Iron & Steel Institute, New York; W. H. Sparr Jr., special assistant to A. P. Gagnebin, vice-president, Inco, New York; George Pyle, asst. manager of sales, American steel and wire div., United States Steel Corp., Cleveland; E. L. Singley, asst. manager stainless steel products, Armco Steel Corp.; D. W. Kaufman, manager, stainless steels, Crucible Steel Co., Pittsburgh; C. E. Roberts, manager of sales, alloy steel div., Republic Steel Corp., Massillon, Ohio; W. J. McCune, general manager, sales, Allegheny Ludlum Steel Corp., Pittsburgh; R. A. Biggs, Union Carbide Metals Co., New York.

Boating, Skiing

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In addition he gives some private swimming lessons and teaches a little water skiing at Crystal Beach. "I don't get much time for skiing myself though," he grinned.

David's dad Charlie, who is assistant to the manager at the Nickel Refinery, is no mean skier himself. He put young David on his first water skis back in 1950. "We were among the first people to do much water skiing around here," said Charlie. He himself made some of the first skis they used — "you couldn't buy them small enough for young David anyway" — but today David has several pairs of the best skis. The cost can run up to \$50 a pair, Charlie said.

A first-year student at the University of Western Ontario, David hopes to spend all his student summers on or near water.

Golf Upset

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shared in the loot distribution were Fraser Fields and Don Dumontelle. Charlie Price, with a notable 88, led the Sudbury district pensioners to victory over Port Colborne: his team-mates were Allan Brock (97), Jack McAndrew (100) and Ray Smith (101). The Port Colborne pensioners were Bill Freeman (95), Earle Lambert (102), Fred Willet (107) and Vic Lynden (93).

The first four-somes were spread out over the course in a "shotgun" start at 6.30 a.m., and the tournament moved through the day with surprisingly little delay considering the whopping entry of golfers.

Idyllically was in lovely condition and it was a beautiful day with just enough wind to make the proceedings interesting for both pros and tyros.

Post mortem lamentations and presentation of trophies and prizes took place following a banquet at Casino's.