

# INCO TRIANGLE

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*Clarabelle Open Pit*

Story on Page 8



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## Nickel in the Telephone

Nickel's contributions in the intriguing development of modern, efficient telephone service was discussed by the chairman of the board, Mr. Wingate, in another of his broadly informative periodical letters to the shareholders of the Company. The text of the letter follows:

From the first smoke signal to the latest message transmitted by a space satellite, man has sought new and better ways to communicate beyond the range of his speaking voice. A momentous step was the invention of the telephone less than a hundred years ago. This permitted conversation at the speed of electrical energy, almost a million times faster than sound. Continued improvements — created through the resourcefulness of the communications industry in adapting better materials and developments in new areas of science — have made the telephone one of our most necessary and technologically sophisticated conveniences.

A striking recent example of progress in telephone communications is the new "see-as-you-talk" telephone. These picture-phones — which were this summer installed in public booths in Washington, Chicago and New York — require numerous nickel-using electron tubes and special-property alloys.

As in so many other advances of modern civilization, nickel serves a whole range of telephone operations. Except for some wire and cable, it finds important applications in virtually every major piece of telephone equipment.

### A Pound of Nickel per Telephone

Approximately one pound of nickel is used in the world's telephone systems for every telephone in service. Altogether, they number about 160,000,000. In the United States, which has over 85,000,000 telephones, about 11,500 additional new telephones are installed each day. There is similar expansion in other parts of the world, particularly in Europe including the United Kingdom, which has some 50,000,000 telephones, and in Canada itself with almost 6,500,000. In addition, each year the industry uses about one ounce of nickel per telephone to improve service and to maintain its existing facilities.

In the average home or office telephone the only visible nickel application is the occasional stain-

## Now It's 'Picture Phoning'

A striking example of progress in telephone communications is the new "see-as-you-talk" telephone, which was recently installed in public booths in three major American cities. Nickel-containing materials are used in the operation of this picture-phone.



less steel finger stop on the dial. Once a telephone is lifted from its cradle and a call initiated, however, a myriad of nickel-containing components goes to work. First of all, nickel silver spring members supporting palladium contacts signal a telephone user's desire for service. They convey the number he wants to reach, route his call through switches and relays, and carry his voice. In the central office, thousands of incoming and outgoing wires are connected to nickel-containing relay springs and conductors.

When excited by the human voice the telephone transmitter can generate only enough power for calls within a radius of about 30 miles. Long-distance calls — whether routed by radio or by surface or submarine cable — depend on "repeaters" which use electron tube elements of nearly pure nickel to amplify a spoken message. These calls are switched through complicated circuits utilizing many nickel-containing magnets, relays and electrical resistance wires.

The transformers also, which feed messages into and out of a repeater, use nickel alloys. Nickel-using repeaters have made it possible to contact by telephone the most remote areas. One major system reaches over 170 countries and territories. More than 100 repeaters are used in the underwater cables connecting North America and England.

Nickel materials are equally important to the instruments and equipment which shift the frequency of a speaking voice so that it can accompany other messages by wire or wireless over a single broad-band "carrier" facility. This innovation eliminates the almost impossible task of allotting a separate line for every conversation.

Furthermore, a nickel alloy helps to produce one of the most familiar sounds in the world — the ring of the telephone. Thanks to a special nickel "glass sealing" alloy, a small electric light can signal an operator when a caller needs her assistance. Even the sturdy and dependable equipment used by workmen in wire installations is usually made from nickel alloy steels. In all, the uses of

nickel in telephone communications are as diverse as the components of the system themselves.

**Nickel and New Developments**  
Each new development that makes it easier to place a call has, at the same time, made behind-the-scenes communications systems more intricate and in greater need of dependable materials with special properties.

In direct-dialing systems, for example, the number of relays and switches has been substantially increased. Most of these have magnetic cores formed from alloys that contain up to 80 per cent nickel. In some parts of the world, over 98 per cent of the telephones can be reached locally without the help of an operator, and one-third of these can directly dial long distance. With the assistance of highly sensitive yet durable nickel alloys, telephones that can be dialed by a mere touch are coming into use.

On public trial in the United States, under temporary developmental authorization by the Federal Communications Commission, is a personal radio-paging device. Not much bigger than a pack of cigarettes, it notifies a user — whether walking or riding a car — of an incoming call which he can obtain by contacting his home or office from the nearest telephone. Easily portable, the device is powered by a nickel-cadmium battery.

Nickel magnetic alloys will be featured in the totally electronic central office switching systems for the future. Completely unattended, they will even be able to concentrate a number of outlying telephone lines into a smaller number of lines connected to the central office. In another development, nickel alloys will help "memory devices" to route, expedite and keep a record of our telephone calls of tomorrow.

These advances are some very recent examples of a continuing effort by the telephone industry and others to bring to peoples everywhere the most useful and commercial communications service. Over the years, International Nickel — through the activities of its research and development staffs — has co-operated in this program. We are confident that as the greatest advances in com-

munications equipment are adapted to everyday use, they will reflect the contributions of our organization and of its principal product, nickel.

HENRY S. WINGATE,  
Chairman of the Board.

## Mike Goga

A popular member of Aubrey Wright's Cottrell gang at Copper Cliff, Mike Goga has taken an early service pension. In good health, Mike would have liked to continue working but feels that his wife, who has a heart condition, needs him more around the house.

Mike has lived on Cross Street in Sudbury for 25 years and each summer produces one of the best-kept lawns and gardens in the neighborhood. Across the road from his home runs Junction Creek which was the setting for an act of heroism by Mike in March of 1947. That spring he



Mr. and Mrs. Goga

rescued three youngsters from an icy death in the creek and is very proud of the Royal Canadian Humane Society award he received.

Mike came from Czechoslovakia in 1927, worked a few months in Manitoba, then spent eight years in the bush near Kapuskasing. Coming to Sudbury in 1935 he got a job at the smelter and after working a year on the reverbs moved up to the Cottrells.

Mrs. Mary Cooper and Mike were married in 1939. They have three daughters, Annie (Mrs. J. Kluckawa) in the old country, Mary (Mrs. J. Pado) of Toronto, Helen of Sudbury and five grandchildren.

Mike hopes to make a trip back to the old land either this summer or next.

# INCO FAMILY ALBUM



A lucky seven turned up for the Triangle camera in the S. A. Berkovich family, certainly a "natural" in looks as well as in number. Dr. Berkovich, assistant to the superintendent of research at Thompson, has for his hobbies fishing, photography, and all outdoor life; he used to do a lot of mountain climbing before he came to Canada. His wife Maria enjoys reading and sewing. Their children are Judy, 9, Karlo, 5, John Simon, 3 weeks, Edward, 15 months, and Robert, 13.



Alberto Squarzola has worked at Coniston for 11 years and has a nice home there. He came over from Italy in 1952. With him here are his wife Maria, Renato who will be 11 on October 5, Franco, 9, and Marco, one year young.



The Stinson family is really an all-Inco family. Leslie is a plateworker at Copper Cliff, his wife Julie is dietetic supervisor at the Copper Cliff hospital where daughter Isabelle is a nurse, and young Jim works at the Iron Ore Plant. And to wrap it up neatly Isabelle is married to James Allan of the Iron Ore Plant staff whose father Marlow Allan is a long-service Open Pit man.

A member of Froad's engineering staff for many years and a Quarter Century Club member of the class of '63, George Fleming with his wife Roma celebrated their 25th wedding anniversary on August 16. Along with daughter Helen, 15, and son Wilfred, 13, they are our Froad family for this month.



Roy and Sadie House and their two fine children, Darlene, 4, and Rannie, 5, have a lovely home in the country just outside Port Colborne, within sight of the Inco Stacks. Roy grows a big garden which takes up most of his spare time from spring to fall, and his wife is an expert cook. He is a member of the accounting department staff at the Nickel Refinery.



This is Eric Mayo, his wife Marie and their two cute daughters, 4-year-old Kimberley and 2-year-old Beverly. Eric is an electrician at Levack, has lived there over eight years and likes it. The Mayos also have a camp at nearby Windy Lake and during summer months Eric commutes to work.



John Ricketson recently moved from Froad to Creighton where he is chief efficiency engineer. His wife Pamela holds 3-months-old Cheryl Lynn and the two active boys are Daryl, 3 1/2, and Tracy, 1 1/2. The Ricketsons are from Nova Scotia and regularly visit their homes on vacation each year.





Idylwyde's beautiful new clubhouse, in its lushly turfed setting of pine and birch, was the hub of the 21st annual Inco golf tourney. Trophies and prizes were distributed at the banquet which followed conclusion of the day's play, after which the golfers were joined by their ladies for a much enjoyed social evening and dance.



Norman Kearns presented the E. C. Lambert trophy for the best 18-hole net to the Frood-Stobie entry of John Lennie, Ted Flanagan and Fred Silver. Art Silver was the other team member.



Alex Godfrey presents his trophy to the Copper Cliff Smelter no. 3 team, with Con Walker receiving. On the left is Jim Daley, on the right Jack Noonan, the other member of the team was Lloyd Squires.



Runners-up in the main event, the smiling members of General Mines no. 1 team receive their awards. From the left are Ron Silver, Sandy McAndrew, Jim Dewey and John McCreedy.



Veteran Merle Noyes for the seventh time received the championship trophy on behalf of the Port Colborne team, assistant vice-president T. M. Goetz making the presentation. Other members of the victorious Nickel Refinery foursome, left to right, were Don Nicks, Bob Noyes, and Elmer Anger.

## Port Colborne Team Inco Golf Champions For the Seventh Time

A record field of 229 assorted golfers teed off in the 21st Inco golf tournament held on Saturday, August 15 at the Idylwyde.

A wet morning failed to dampen the enthusiasm and fun of the early devotees or the accuracy of Port Colborne's steady foursome, who turned in a team total of 321 strokes, eight better than their arch rival mines team, and walked off with the coveted R. L. Beattie trophy.

With a solid 78 Elmer Anger put victory in the bag for the Port Colborne team of Don Nicks (80), Merle Noyes (83) and Bob Noyes (80). Runners-up were the General Mines no. 1 team of John McCreedy (89), Jim Dewey (85),

Sandy McAndrew (75) — best score of the meet and Ron Silver (80).

The Frood-Stobie team of Art and Fred Silver, John Lennie and Ted Flanagan had the best 18-hole net and won the E. C. Lambert trophy. Garson's Bill and Jim Regan, John Sleede and Mike Shea were runners-up in this event.

Winner of the nine-hole net and



Bill Hutchison.



Ed Mayer of Coniston receives the prize for best low gross among the nine-hole competitors.



Eight father-and-son combinations played in the tournament, five of them pictured above. From the left are Bob and son Sandy McAndrew, Bill and son Bob Armstrong, Archie and son Allan Massey, Ron and son Fred Silver, Merle and son Bob Noyes. The other three were Bill and Jim Regan, Ray and Norman Bouclin, Dave and Maurice Simpson. Carrying on the family golfing tradition, Fred Silver this season won both the Idylwyde and the City of Sudbury championships.



Sudbury Star

## Present Awards to Outstanding Cadets

Presentations were made to outstanding cadets who participated in the five-week student militia training program held in Sudbury this summer. At the "passing out parade" Major F. R. Dionne of 58th Sudbury Field Artillery Regiment is shown on the left, above, presenting the best gunner trophy to Gnr. R. T. Spivak, with commanding officer Lieut.-Col. A. Falzetta looking on; on the right Major Les Ramsey, commanding officer of 33rd Technical Squadron RCME congratulates Cfn. A. E. McVittie on winning the best craftsman award. Major Dionne is plate shop foreman at Frood-Stobie; Major Ramsey is sample house foreman at Copper Cliff.

the Godfrey trophy was the Copper Cliff Smelter no. 3 team of Con Walker, Jack Noonan, Jim Daley and Lloyd Squires. The Copper Cliff Mechanical foursome of Robbie Robertson, Roger Hull, Daryl Balson and Fraser Fields wound up in second place.

With both Sandy McAndrew (75) and Elmer Anger (78) on winning teams, the low gross prize went to young Bill Hutchison who came in with a highly respectable 79. Ed Mayer's 41 was tops for the 9-holers.

Coniston's Ed Traill scored an eagle on the 11th hole. A long drive took him close to the front of the green from where he canned a beautiful chip shot.

This marks the seventh time a team from Port Colborne has won the R. L. Beattie trophy, and playing on each of those teams has been that very fine shotmaker Merle Noyes. Only man to beat his record is the Stan Musial of the local fairways, reliable Ron Silver who has played on eight winning teams. Jim Dewey and Ted Flanagan have shared the spotlight on six winners and Art Silver on five.

In its 21 years of competition the Beattie trophy has been won 11 times by mining department teams, seven times by Port Colborne, twice by the Copper Refinery and once by the Copper Cliff General no. 1 team.

Interesting features of this year's tournament included the appearance of no fewer than eight father-and-son combinations. Also for the first time a team from the Toronto offices was entered, composed of Clarence Beach, Flat Elves, Bill Armstrong and Paul Wegrich; brightest spot of their performance was Bill Armstrong's 39 on his first round.

Norm Kearns, again acclaimed as the meet's best-dressed golfer, presented the Lambert trophy and

noted that he had played in all 21 Inco tournaments.

The shotgun system of starting was used again this year and proved its worth in accommodating such a large field of golfers. Hugh Judges and Ron Wood were responsible for the smooth handling of all details that made the day a success.

## Nelson Doan

Born and raised in Humberstone Township, Nelson Doan first worked for the Grand Trunk Railway, then with the former Humberstone Village where he operated steam roller and other machinery. In 1935 he started his career at

## World Fair Official Saw Inco Plants

Developing plans for the Canadian government's participation in the 1967 World's Fair at Montreal is the king-sized job of commissioner - general H. Leslie Brown. In preparing for this vast opportunity to enhance Canada's international prestige and promote foreign trade Mr. Brown will draw on the broad knowledge he gained during 34 years as a Canadian trade commissioner in various parts of the world. On a tour to familiarize himself with main pillars of the nation's economy he visited the Inco works at Copper Cliff in August.



He is pictured here at the Copper Refinery, where assistant manager C. C. Dunkley is showing him etched sections of three of the many copper shapes produced.

the Port Colborne Nickel Refinery, where almost all of his 29 years have been spent in the electrolytic



Mr. and Mrs. Doan

department looking after the presses; for the past 15 years he has been head pressman. He has

now retired on early service pension.

In 1927 Mr. Doan married Lyntke Muelinburg, who died in 1961 leaving him four sons and two daughters: Audrey (Mrs. Russell Neal) and Pauline at home; Alfred, an Incoite with 14 years' service in the electrolytic department; Frank in the mechanical department with 13 years' service; Grant and Larry at home. He has nine grandchildren. In 1956 he married Pearl Petro.

On his departure Nelson Doan was presented a purse of money from J. H. Walter on behalf of his fellow workmates, and was thanked for his long service to the Company.

From the Cannibal hit parade: "Roast Marie I love you."



Creighton mine safety engineer Harry Narasnek congratulates Joe Menican on his fine safety record and presents him with a purse of money and a copper tray as retirement gifts.

Joe Menican was a safety engineer's dream man. From the day he started at Creighton in 1938 until retirement this summer, Joe's safety department record was a complete blank — no accidents, no dressings, no penalties. "In fact," glowed Creighton safety engineer Harry Narasnek, "we showed him the inside of the first aid room for the first time the day he left us."

Joe came to Canada from Yugoslavia in 1927 and worked in the bush near Kapuskasing for a time. Before coming to Sudbury and a

job at Frood in 1934 he had also worked on railroad and road construction. He quit in 1938 to make a trip to his homeland, but was back the same year working at Creighton. He worked in stopes and pillars at 5 and 6 shaft and for the last 10 years was a level timberman.

Joe was married in 1919 and has two daughters, a son, and a grandson with his wife in the old land. Next year he hopes to make a trip back and see them.

At present he is quite happy in Creighton, which in his opinion is "a very good place to live or work."

## 26 Years of Perfect Safety



# Nickel Belt Beauty

DESPITE the unseasonably cool wet weather in August, Sudbury district gardens made a remarkably fine showing this year. Inco families were again in the forefront of district gardeners and herewith is a small photographic sampling of some of their beauty spots.

On the right is the lush back area of Carl Sartor's home garden on Queen Elizabeth Drive in Lively. Bounded by beautiful glade, the patio, rose arbor and greenhouse are set neatly around the colorfully bordered lawn. In the picture Carl is tending his roses.



Ted Fasten of Copper Cliff grows all his own annuals and in August they turn his rock garden and borders into a riot of colour. Mrs. Fasten is seen enjoying the afternoon sun.

Joe Fedat's home garden on Caruso Street in Caniston boasts a beautiful lawn, hedge, flower borders and a vegetable plot in back. Daughter Gabrielle adds to the decorative effect.



The home grounds of Lively's ex-mayor and popular pensioner Albert Elliott on Tenth Avenue in Lively is one of the finest formal gardens in the district. Carefully trimmed Koster blue spruce, set above and attractive white-painted stone wall, border the street while hedges, shrubs and fruit trees invitingly set off the Elliott home.



Joe Grabish of Frood has an idyllic garden sitting at the back of his Hillside Avenue home in Sudbury, with shade area, lawn and rock garden set right in the natural rock formation. Mrs. Grabish and her two grandsons Erron and Derek, enjoy the sun.



The Bob Ryans of CPR Bay on Lake Ramsay in Sudbury have a lovely outdoor living room complete with landscaped surroundings. Mrs. Ryan and daughters Kerry and Kathy are about to raise the flag to salute another brilliant summer's day at their lakeside paradise.

Here is one of the several magnificent flower beds that decorated Nickel Park at Copper Cliff, and it would almost appear that parks foreman Alex Gray and his staff even surpassed their efforts of previous years. Of the many thousands of annuals grown in the Copper Cliff greenhouse more than 10,000 are used to beautify the park and club grounds. Other locations that enjoy the agricultural department's magic wand of beauty are Clarabelle, Murray, Frood, Coniston where a major project is underway in conjunction with the municipality, Garson, Copper Refinery and the Iron Ore Plant.



Jack Rohan uses a neat driveway fence, flower borders and individual flower boxes to produce a clean, tasteful effect at his Fourth Avenue home in Levack.



From the bare, bald rock on the hill at Creighton, John Bolint has created a remarkable flower garden that is a real eyeopener to anyone passing. The low picket fence adds a nice touch.

## Largest Oxygen Plant Now Being Built for Inco

A new oxygen plant of huge capacity, larger than any now in operation in the world, is being designed and built by Air Liquide, Montreal, for The International Nickel Company of Canada, Limited, Copper Cliff. This Oxyton, with a nominal capacity of 750 tons day of oxygen and costing about \$4 million, also is the largest unit ever built by Air Liquide at their Montreal works.

International Nickel pioneered the large scale use of oxygen in the metal industry on this continent. Soon after World War II, the Company developed a process for the direct flash smelting of sulphide concentrates and by 1951 it had been placed in commercial operation for the production of copper matte. The oxygen required, in volumes unprecedented at that time, was produced by a 300-ton day Oxyton built by Air Liquide, Montreal for Inco. This unit, the forerunner of numerous big tonnage oxygen plants since built by Air Liquide for steel and chemical industries, has been in continuous successful operation at Copper Cliff for over 13 years.

At a recent annual shareholders' meeting in Toronto, Henry S. Wingate, Inco's chairman of the board, referred to the tripling of Inco's oxygen producing capacity

as part of a major program to extend the use of oxygen at the Copper Cliff smelter. As a result, Inco will increase the efficiency of fuel utilization in their smelting operations and in addition will initiate other important process improvements. Inco also anticipates that the greater use of oxygen will materially assist them in counteracting the upward trend of overall costs.

Air Liquide's engineering and construction division has begun designing and building the cryogenic units for this contract, awarded on a turnkey basis by Inco. The process vessels for the Oxyton will be prefabricated in Air Liquide's Montreal works, containing large amounts of Inco's own products, nickel and copper. Field construction will start this fall at Copper Cliff, where the new unit will be erected adjacent to the present oxygen plant. The big new Oxyton is planned to go on stream in the summer of 1965. It will be operated in conjunction with the original unit to provide capacity of well over 1,000 tons day.

### Mike Gurka

In 1926 Mike Gurka decided to emigrate from Austria to Canada, where his first job was working on the railroad at Edmonton. Next he took a try at farming. During the depression he found his way to Port Colborne where in 1930 he got a job with the Quality Bakery.

In 1935 he started with Inco and almost all of his 29 years with

the Company have been in the anode department where he has



Mr. and Mrs. Gurka

worked as a chagemixer, crane-man, gasman furnace helper and, for the past 13 years a furnace-man. His work was always done to the satisfaction of his supervisors and associates. Mike is now taking a well-earned rest on early service pension.

In 1923 Mike married Mary Palansky. Their son, Emil is with Canadian Furnace and their daughter Mary is Mrs. George Hook of Port Colborne. They have one grandchild.

At a gathering in the anode department Mike was presented with a purse by N. C. Hillier from his fellow workers. C. H. Ott thanked Mike on behalf of the Company and expressed the wish that he and Mrs. Gurka would long enjoy his retirement.

### John Concessi

In 1923 John Concessi left Villa St. Lucia, Italy and came to Canada, where he joined Antonio

Domenico and Giuseppe Concessi at Port Colborne. John's first and only place of work has been with Inco at the Nickel Refinery.

From 1923 to 1954 he was a member of the anode department where he was a crane operator for 25 years with a reputation as a conscientious and safe worker.

Due to ill health he worked prior to his retirement in the mechanical department and the changehouse. A heart condition has slowed him down and he has taken his doctor's suggestion of retiring on a disability pension.

In 1931 John married Antoinette Concessi. Their daughter Eleanor



Mr. and Mrs. Concessi

is Mrs. Lloyd Balogh of Port Colborne. They have one grandchild.

At a gathering of his workmates at the Concessi home, John was presented with a purse of money as a token of their esteem. Their many friends wish them a long and happy retirement and hope that John's health will improve.

"The best way to prevent a nervous breakdown is to work hard," says a psychiatrist. What's the next best way?

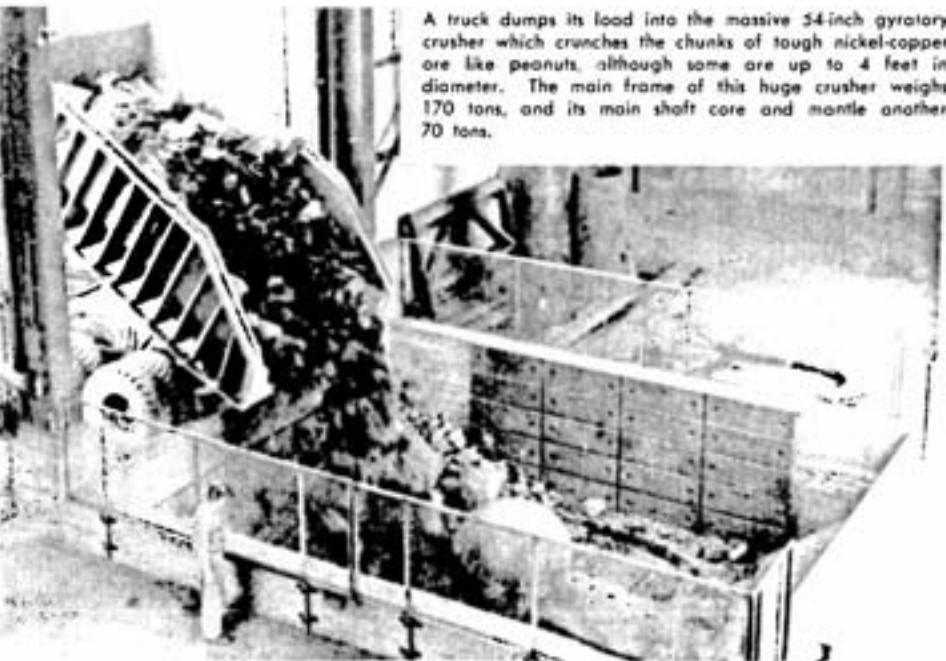




The view from the observation point at Clarabelle Open Pit, looking southeast toward the mine surface plant and Copper Cliff reduction works. Until Lady MacDonald Lake was dammed and a haulage causeway built, the area in the immediate foreground was under water. It was the site of the old No. 4 mine, operated prior to the turn of the century. The long dark-colored heap is a stockpile of ore mined then.



One of Clarabelle's four electric shovels is seen filling a haulage truck with a 30-ton load of ore. The shovel is operated by four motors with a total of 560 hp, weighs in at 170 tons. It has a cutting height of 31 feet and a maximum dumping radius of 38 feet. Mounted on a caterpillar truck with 72 3-foot treads, it has a normal propelling speed of .91 miles per hour.



A truck dumps its load into the massive 54-inch gyratory crusher which crunches the chunks of tough nickel-copper ore like peanuts, although some are up to 4 feet in diameter. The main frame of this huge crusher weighs 170 tons, and its main shaft core and mantle another 70 tons.

## Powerful Equipment Used Big Clarabelle Open Pit

About a mile north of Copper Cliff, and not far distant from the site of the first nickel discovery in the Sudbury district in 1883, lies the ore outcrop which now supports the operations of the Clarabelle Open Pit.

There had been no mining there for 60 years. Around the turn of the century the Canadian Copper Company glory-hoed the high grade ore pockets at what were then called the No. 4 and No. 6 mine areas. At No. 4 mine an 80-degree winze was sunk to a depth of 180 feet and a rockhouse was built, but the operations were

short-lived.

It was not until modern open-pit methods metallurgical in nature were within economic grade ore an mining could be completed.

Since the Cl MacDonald Lake the mining area (Continued)



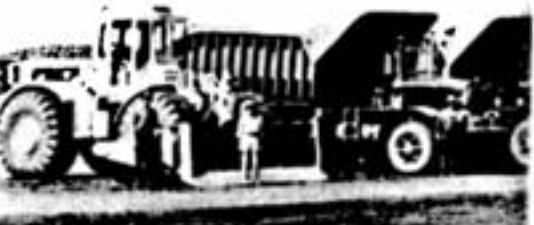
Aerial view of the cleanly designed surface plant which shares with its neighbor, Copper Cliff North mine.



Half of Clarabelle Pit's daily production of 16,000 tons is sent to a high dump now containing 2 million tons.



There are already more than six miles of roads at the Cl maintenance is done with this grader and 20-ton roller.



Fifteen of Clarabelle's 18 haulage trucks are shown in this the new 280-hp 36-ton wheeled tractor dozer which has a trucks, which weigh 30 tons and carry 30 tons, have an a



# in Inco's Operation

as the richer ore runs

until improved open  
is and advances in  
processes brought  
some range the low  
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it be resumed. Follow-  
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May 1960 that surface  
of commence at Clara-

Clarabelle and Lady  
Lakes overlay parts of  
area preparatory work  
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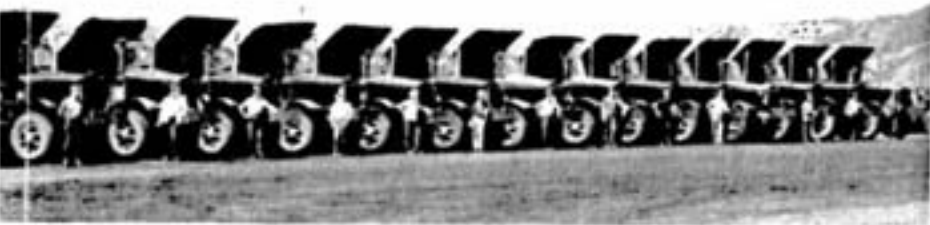
ich Clarabelle Open Pit



is rock which is hauled



r Clarabelle Pit. Road



this lineup along with  
a 13-foot blade. The  
average haul to the



One of Clarabelle's two new rotary drills which have put 10 old-style churn  
drills out of business. The rotary drill cuts a 9-inch hole at the rate of 130  
feet per shift as compared with the churn drill's average of 18 feet per shift.  
It has a down pressure capacity of 45,000 pounds, and can drill a hole 90  
feet deep, ejecting the cuttings with compressed air. It weighs 40 tons, and  
is 48 feet to the top of its derrick.

Stelly McIsaac,  
Clarabelle's effi-  
ciency engineer,  
displays two of the big  
blast hole bits used  
by the rotary drill.  
The knobs on the  
three rotating cones  
are tungsten-carbide  
inserts which give  
the bit its bite. The  
bit on the left has  
drilled over 2700  
feet, the one on the  
right is new.



crusher of 4100 feet and to the high dump of 4900 feet, much of it on 10%  
grades at 5 miles per hour. Each averages 500 tons per shift.



As at all Inco mines and plants, safety is an integral part of  
the operation. Seen here conducting a regular safety demon-  
stration is blaster boss Metro Rosko, who is showing bench blaster  
Frank Kangas the correct way to insert a primer in a 50-pound  
bag of explosive. Watching the demonstration are shift boss  
George Quigley, blaster Tony Muzzin, and pit foreman Bill  
Vaananen. During blasts all men remain in a blasting shelter.



Clarabelle superintendent Norman Creet (right) discusses the pit  
mining program with two of the engineering staff, pit engineer  
Mike Opoleychuk and Russ Barker.

The 275-hp diesel engines in the pit haulage trucks are com-  
pletely rebuilt after 2600 hours of service. As the pit deepens  
this interval will be shortened. Mechanics Mel McNichol and  
Joe Austin are shown installing a rebuilt engine in a truck.



## Mechanical Department Are First Millionaires at Copper Cliff Plant



Proudly displaying the statistics proclaiming their fine safety record, this group of Copper Cliff mechanical department men and supervision are representative of the more than 1200 men in that department who contributed to a big safety "first" — the first 1,000,000 consecutive safe man hours recorded at the Copper Cliff reduction works since the adoption of this new standard of safety achievement at the beginning of the year.

One million man hours is the safety yardstick approved by the American Standards Association and now used generally throughout industry.

Left to right in the above picture are: back row, Jim Shrigley, Diston Greig, Tom Harkins, Alf Mash, Joe Kania, Joe Myher, Guerrino Lugli, Guido Gobbo, Lloyd King (general foreman, shops), Alan Clarke (safety engineer), Alex McDonald.

Middle row, Aldo Desanti, Gordon Telford, Ian McLay, Sam Tremblay, Lou Perron, Elmer Zinkie, Archie Organ, Holden Villemere, Lionel Bourcier, Sid Stone (mechanical foreman, mill).

Front row, mechanical superintendent Fred Burchell, Holly Hyland and Jack Clark (general mechanical foremen), Louis Martel, John Camilucci, Ralph Boyter, Alf Pinaud, Amelio Pevato, Jim Davidson (machine shop foreman), and Lino Crema (assistant to mechanical superintendent). All longtime Inco men their combined Company service adds up to 880 years.

Said mechanical superintendent Burchell, "I am very proud of this record. It definitely resulted from the very fine efforts of mechanical department supervision, the safety department and the response and cooperation of all our men. And," he added, "I am sure that all men in our department realize the necessity of and the benefits of being a safe worker."

In announcing the mechanical department's achievement Inco safety superintendent M. E. Young stated that this was the best safety

(Continued on Page 16)



A class of technical trainees from Hindustan Steels, Limited, representatives of Atlas Steels, Limited, Welland, and their Inco hosts are shown in this group photograph at the Nickel Refinery, Port Colborne.

## Indian Steelmaking Trainees See Nickel Production at Port Colborne

Hindustan Steels, Limited, a Government of India undertaking, is building an alloy steel plant at Durgapur, scheduled to go into operation next January. To provide technical personnel for this significant development, Atlas Steels Company of Welland has a contract to train 100 Indian engineers for key positions in all phases of steelmaking, and is also advising on plant layout, processing details, and equipment requirements.

On August 20 the current class of Indian trainees spent the day at Inco's Nickel Refinery at Port Colborne, where they were welcomed by Kenneth H. J. Clarke, manager of Canadian sales and market development, Toronto, and Warren R. Koth, manager of the

nickel refining division.

The young Indian engineers showed keen interest in the refining of nickel, which will be of such importance to them in the production of specialty steels. During a two-hour technical session held in the Inco Recreation Hall they were brought up to date on Inco stainless steel market developments by K. B. Young, assistant manager for Canadian development and research, Toronto and heard a technical talk on stainless steel fabrications by A. S. Tuttle, mechanical engineer, stainless steel section, Inco Toronto. A film, Corrosion in Action, was presented by R. J. Law, chemical engineer, corrosion engineering section, Inco Toronto, and a film on Nickel Refining by W. V. Bar-

ker, assistant manager of the Port Colborne plant.

B. P. Sharma spoke on behalf of the Hindustan Steels trainees, in appreciation of the day's program, and Leslie Nernethy, senior technical consultant and manager of the Atlas-India project, conveyed the thanks of Atlas Steels Limited.

Also attending the seminar from Inco's Toronto office were J. D. McLean, assistant manager, Canadian sales and administration; H. A. Skelton, administrative assistant-sales; T. R. Dodgson, administrative assistant; from Atlas Steels Limited, P. Adams, J. Evans, W. Anderson, N. Friesen, T. Blackwell, R. Patterson, P. Klopburg; from the Nickel Refinery, Charles Ott, asst. to the manager,

## Some Very Determined Expressions in These Closeups of Sudbury and Port Horseshoers



Leo Julien, P.C.



Dan VanClief, S.



Cliff Villeneuve, S.



Dan McNiel, P.C.



Ike Mercer, S.



Alf Huffman, P.C.



Elmer Lancaster, P.C.



Harvey Beech, long-time star in Nickel Belt horseshoes, shows his smooth style watching his team-mate Jim Seawright.

"Close doesn't count except in horseshoes" goes an old saying. Even in horseshoes sometimes it doesn't make the difference between winning and losing. Sudbury and Port Colborne, in their annual exchange of home - and - home matches, were so close they wound up in a tie. Sudbury went to Port Colborne July 18 and was defeated 8-7. In the return engagement, played on the Inco Club courts, Sudbury won 8-7. So they'll have to split the Carling Shield between them.

As usual when these two groups



Getting away a ringer here is Arny Dupuis, who with Cliff Villeneuve won four out of five games for Sudbury. On the right, Gord Kutchke and Bill Johnson of the Sudbury team congratulate each other after racking up a win.

meet, the best of fellowship prevailed despite the keen rivalry, and the pitching was of real championship calibre.

## High Praise for Sam's Pipe Band

Copper Cliff Highland Cadet Corps pipe band did itself proud last summer at the National Cadet Camp at Banff, to which it was invited as official pipe band.

Assistant vice-president T. M. Gaetz has received the following letter of praise from Lt.-Col. S. E. Hunter, commanding officer of the National Cadet Camp:

"Lt. Sam Laderoute and your Highland Band have served with us in this Cadet Camp for the past month.

"Their performance, discipline and turnout on every occasion has been of the highest order.

"We here are proud of them as young cadets and musicians. They are a credit to themselves, your Cadet Corps, the town of Copper Cliff, Ontario and to Canada.

"Lt. Laderoute has cared for and managed the band with excellence. His every interest and effort was directed to their personal well-being and standard of performance.

"During their stay here they have had the opportunity to perform on several occasions at the Banff Springs Hotel and the Chateau at Lake Louise. These performances have endeared many visiting Americans and Canadians toward us.

"They have a right to be proud of the standard they have strived for and achieved while serving here with us.

"We all wish them success and happy piping in their future endeavours."

## Milt McLaren

Milt McLaren left a host of friends at Frood when he retired on service pension. Outspoken and able Milt has a fine sense of humour. He was also recognized as a top man on sandhill, having worked in that phase of mining since its introduction back in 1928.

Milt joined the Company in 1937 after spending the previous winter in the bush near Hearst. "I started at Frood on Easter Sunday," he recalled. "I don't think there are many at Inco who can say that."

Born and raised in the Ottawa Valley he first came to Sudbury in 1916 and worked a season in the bush and on the river drive. "We drove logs across Lake Wahnapitae and down the river to Georgian Bay where they were towed to the mill," he said.

In 1918 he joined a harvest excursion to the west. "I landed at Unity, Saskatchewan," related Milt, "and worked there for Ron and Art Silver's father. I spent several years between that place and British Columbia." He filed on a homestead in Northern Saskatchewan in 1918 but the influenza epidemic was so bad he got out. "I was afraid I'd die there," he grinned. "No doctors in that area."

Several years later he landed in Regina and worked as a carpenter for a dozen years. He also met the future Mrs. McLaren who was Arnette Klemp at that time. "By 1936," Milt said, "the depression had pretty well starved me out of the west so I headed for Timmins. He never did make it however and came to Sudbury the following year and a job at Frood. He was a sandhill boss for many years.

One of the best hunting or fishing companions a fellow could wish for, Milt's first love is the bush and Mrs. McLaren shares much of his enthusiasm. His

current project is the building of comfortable living quarters on a new truck body and in it they plan to fish lakes all across Canada on their proposed trip back to British Columbia.

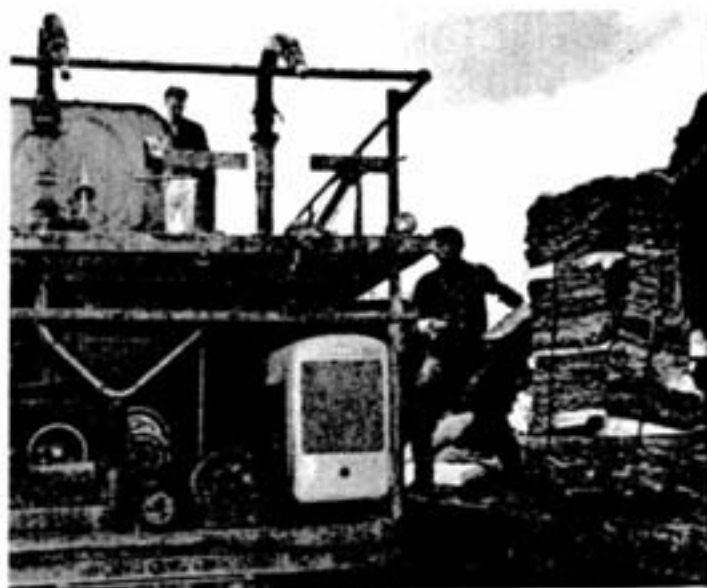
A handy man with tools, Milt built his own home in Sudbury. Their son Grant, who works at Copper Cliff, lives with them.

After Milt's last shift underground a bunch of his friends gathered on deck to wish him well. Underground superintendent Norm Anderson presented him with a replica of a sandhillman's wrench along with his old tool bag — well-lined with money.



Milt McLaren receives farewell gift from Frood underground superintendent Norman Anderson on his retirement on pension.





The mulch of low grade pulp paper, asphalt, fertilizer, grass seed and water is sprayed from a tank truck in the latest experiment in tailings stabilization at Copper Cliff. Picture on the right shows the low grade paper being fed

in cokes to the mixing tanks; it combines with the asphalt to form a bonded crust which it is hoped will hold the tailings down until the grass gets started.

## Sprayed "Paper Blanket" Ties Down Tailings Until Seed Gets Foothold

Inco's long-fought campaign to stabilize with vegetation the surface of the tailings disposal areas west of Copper Cliff has progressed to the point where more than 400 acres of this barren rock waste has been transformed into lovely rolling pasture land.

Full credit for the remarkable restoration goes to the Company's agricultural department whose continued efforts and experiments, in the face of most discouraging setbacks, have written a new chapter in agriculture.

Despite their almost unbelievable success however, they have been waging a losing battle with certain sections of the tailings areas that have stubbornly resisted all treatments and inducements to grow grass. And so this summer still another phase of this great experimental program was entered upon with the trial of a spray mulch method of seeding.

The recalcitrant areas are high plateaus invitingly exposed to the

prevailing westerly winds. Conventional attempts at seeding failed as the seed was either buried or blown away before it had time to germinate. Two successive seedings were blown away last spring. Now the latest wrinkle is to tie down such areas with a

mulch while seed is germinating.

A target area of some 80 acres was selected for this experiment and a commercial concern named Sprayturf, Limited, moved in with its equipment and blanketed the area with a wet mulch. It is hoped that the bonded crust formed over the surface by the mulch will baffle the wind action on the sandy tailings until vegetation gets a foothold.

The mulch, a mixture of water, asphalt, low grade pulp paper,

fertilizer and grass seed, was agitated in tanks on a specially constructed truck and sprayed under pressure from a pair of hose nozzles.

The area had been carefully prepared before mulching. It was disked, limed, then seeded with rye and harrowed. The rye will provide a protective "nurse" crop for the more delicate and slower growing grass seed. Although no results are yet apparent in this recently completed project, the



Another phase of the current tailings stabilization program is illustrated above; banks of tailings areas are being faced with crushed rock. The area shown is sown to grass but the banks were too steep for this treatment and were at the mercy of the wind until tied down with development rock from Copper Cliff North mine.



A fine crop of over 4,000 bales of hay was harvested last month from old tailings areas now converted from a dusty desert to productive grassland. Inco assistant agriculturist T. M. Peters is seen watching the hay baler in action. With a shortage of hay in the Sudbury district this year, the Inco



crop was quickly sold. Picture on the right shows Bernie Scharf, shipping shift boss at Copper Cliff, assisted by a couple of his sons and their pals, stacking a truckload of winter feed for the two riding horses at his ranch home on Highway 17 west.



## Imperial Defence College Group Visits Copper Cliff

High ranking officers of the military establishments in England, Australia, India and Pakistan were among the group from Imperial Defence College, London, which visited the Inco works at Copper Cliff during a North American familiarization tour of key defence industries. In the above pictures

taken during a luncheon in honor of the Commonwealth's distinguished military men at the Copper Cliff Club three of the guests are shown with assistants to the general manager of Inco: centre, the commandant of the Imperial Defence College, Brigadier O. F. McGill, OBE, with A. Godfrey; left, Air Commodore D. L. G. Douglas, OBE, DFC, with G. O. Machum; right, Group Captain J. O. Gale with W. Curlock.

agricultural department is highly optimistic.

The rye seed used in the mulch experiment and in other sections of the tailings area sown this summer was strictly a home-grown product having been harvested from this year's "nurse" crops. It went straight from the combine to the seed drill.

Another successful project in the vast tailings control program has been the application of waste rock to steep slopes of the tailings dams. Thousands of tons of rock hauled from the Copper Cliff North mine now blanket former trouble spots and effectively control any movement in these areas.

From the experimental farm this summer came a special bonus feature with the harvesting of some 4,000 bales of hay from the established tailings grasslands. With a shortage of hay in the Sudbury district, agriculturalist T. H. Peters told the Triangle, this was a very welcome crop and will likely be repeated in future years.

Experiments and attempts by Inco at stabilizing the tailings area over the years have seen many different projects undertaken including windbreaks of willows, snow fencing, water spraying, oil spraying, dressing slopes with slag, both crushed and granulated, and also with limestone chips combined with sodium silicate spray, mulching with straw, and using pyrrhotite spray.

However on the basis of findings to date at Inco and at mining companies in other countries where extensive experiments have been carried on, it appears that vegetation is the best practical answer to the problem of permanent tailings stabilization. Experiments in better methods of dealing with steep slopes and similar trouble areas continues at Inco.

In discussing the seeding of experimental plots Inco's chief agriculturalist C. A. Young was quoted in the June 1961 issue of the Triangle as follows: "While it is of course too soon to make any definite statement, you can say that we are very much encouraged by present progress, particularly in the areas which have been retired from active disposal service."

Today Mr. Young's conservative optimism has been amply justified and the time seems surely approaching when this dusty "Sahara", hane of Copper Cliff

There were 15 in the visiting party, which toured Copper Cliff mill and smelter, then was shown through the Copper Refinery. The above photograph was made in the refinery tank-house; in the foreground copper anodes are on display, while in the background is a train of pure copper cathodes ready for transport to the electric furnaces for melting and casting into various shapes.



housewives for many years, will have been conquered.

## Diamond Wedding

The 60th anniversary of their marriage at Warren was celebrated by Mr. and Mrs. Isidor Pilon of Coniston at a large family gathering at the home of one of their daughters, Mrs. Albert Legault, Coniston.

An Inco pensioner since 1947, Mr. Pilon had almost 32 years of service when he retired. Both he and his wife are in very good health; he is 83 and she is 80. They have 35 grandchildren and 40 great grandchildren.

Four of their sons are employed at Inco. Leonard at Coniston, Lionel at Thompson, Henry at Coniston and Gerry at Lively, and two of their daughters are married to Inco men, Albert Legault of Frood and Rene Boucher of Garson.

Other members of their family



Mr. and Mrs. Isidor Pilon

## Lively Gardeners Took Lion's Share

At the conclusion of Sudbury Horticultural Society's 43rd August exhibition the three smiling couples pictured here walked off with most of the silverware and a large portion of the honors. Well-known Lively gardeners, each year brings further recognition of their horticultural prowess. Nearest camera are Mr. and Mrs. Bill Koch, then Mr. and Mrs. Bert Squirell and Mr. and Mrs. Carl Sortor. Together they took home 17 major trophies plus dozens of individual awards. Mrs. Squirell received the Agnew trophy for the most points in the show and her husband Bert, a past president and tireless worker for the Society, was presented with a diploma "for meritorious service to horticulture." Many other Inco gardeners were exhibitors at the flower show held in the Sudbury Arena.



are Isidor Pilon Jr., Coniston, Mrs. Niagara Falls, Irene of Buffalo, H. Lavery of Welland, Romeo of Sister Evangeline of Sudbury.



## Bill McLaughlin Farewelled at Coniston

The men on his shift at Coniston smelter paid converter foreman Bill McLaughlin a special compliment when they waited after work to line up and shake his hand as he stepped into retirement after 38 years of service.



Mrs. McLaughlin

Picture shows the farewell group with Bill receiving congratulations and good wishes from general foreman Reg MacNeil; on the right are general foreman Aldege Blake and plant superintendent Roy Smith.

Born on a farm in Ross Township, near Renfrew, Bill completed his schooling in Renfrew and at the age of 16 got his first job in a knitting mill. He worked in the lumber camps above Chapleau for four years before coming to Coniston in 1926. He was feeder boss on the charge floor before becoming blast furnace and converter foreman.

Always keenly interested in sports, he managed the shift hockey team and was a leader in the Canadian Legion's minor hockey league.

Gertrude Kenyon became Mrs. McLaughlin at Ottawa in 1923. They have a family of three, Beryl (Mrs. Alvin Palmer) of Sudbury, Billy, at home, and George of Montreal, and six grandchildren. Eight years ago they built a home on Rinfret Street in New Sudbury, where they will continue to reside.

At Bill's big retirement stag,

Three men were given an intelligence test, and one part of it was impromptu. Just to see what would happen, the examiner tore maps into pieces and handed each man the torn bits to put together.

After a while, two of the men gave up in disgust, but the third man had finished his.

"That's very good," the examiner told him. "But how did you do it?"

"It was really quite simple," the man said. "There was a picture of a bathing beauty on the other side."

held at Coniston's Club Allegri, they presented him with a lawn umbrella set, Aldege Blake making the presentation.

## Art Westfall

Big, jovial Art Westfall has found it necessary to take his ease on a disability pension. "I've got angina," he said, "so I guess I'll just have to behave myself."

A miner since coming to Sudbury in 1939 Art had his first taste of underground work many years ago at a small mine near Trenton. He liked it and has been happy at his work. Of his years at Inco, Art said: "This has been a good Company to work for and the men I worked with, and for, were good men. I have no complaints."

He worked underground at Frood until 1947, spent a year at the Open Pit and another at Garson before going to Stobie as a construction leader. He worked on

many of the big, underground construction jobs at that mine.

Art was born on a farm near Trenton in 1906. In 1929 their farm was one of twelve taken over by the RCAP for an air base. Before coming to Sudbury, Art worked at a number of jobs, including steamboating on the Great Lakes.

In 1932 he married Patricia



Mr. and Mrs. Westfall

Finger; they have a son Donald, in Sudbury, and a daughter Barbara (Mrs. E. Clarke) of Toronto, plus one granddaughter.

Art has given up bowling but still loves to fish. "We may move back down Trenton way," he said, "and I'll probably get some light work. I feel pretty good."

## GROWING LASER CRYSTALS

High-purity laser crystals of calcium tungstate are grown in crucibles made of iridium — one of the platinum-group of precious metals. Iridium is used because it can easily withstand the high temperatures, often more than 3200°F, necessary for laser crystal growth.

The Texas contractor was telling his Canadian counterpart of the wonderful fishing in the Lone Star State: "And they sure come big. Why, only last week I caught a 9-in. trout."

"In Ontario," said his visitor, "that's a pretty small fish."

"Yeah," said the Texan, "but down here we measure them by the distance between their eyes."



## British Students Keen

Once again Inco played host in August to 48 British students sent from Great Britain on the annual tour of the W. H. Rhodes Canada Educational Trust. The alert young scholars were making the most of their opportunity to learn about Canada and its people, and during their visit to the Copper Cliff reduction works and Copper Refinery they listened attentively to explanations by their guides of the various steps in the processes. Picture shows assistant smelters superintendent Norman Pearce explaining reverberatory furnace operation to Gerald Coyle, Glasgow, Mike Selby, Manchester, Alan Brown, London, and Roger Evans, Bradford; skimming slag is Victor Sukoluk. At a luncheon at the Copper Cliff Club the students were welcomed by A. Godfrey, assistant to the general manager, and chatted with members of supervision about what they had seen. In the evening they attended their first square dance, organized by Sudbury and District Chamber of Commerce.



## Appointments in Engineering Department

T. M. Gaetz, assistant vice-president and general manager of the Ontario division, Inco, announced the following appointments effective September 1:

J. E. Quance, chief engineer, Ontario division;

D. Duncan, assistant chief engineer, Ontario division.

John E. Quance succeeds Norman H. Kearns, who has retired after a career of 36 years with Inco. Born at Corwin, near Guelph, where his father operated a sawmill, he attended school in Delhi and Simcoe, and graduated from Queen's University, Kingston, in 1925 in civil engineering.

His first job in his profession was on a precise survey for the Welland Ship Canal. He later worked for structural steel companies in New York and Rochester.

He joined Inco at Copper Cliff in 1938 as a draughtsman. In 1953 he was appointed assistant chief engineer.

He married Jean Heslop of Port Robinson in 1928, and has two sons and one daughter: John, a member of the geological department staff at Copper Cliff; David, an editor of CBC television news, Toronto; Elizabeth, an Inco scholarship winner who has graduated from the University of Toronto and will now study for master's degree in physiology and biochemistry on a Province of Ontario bursary.

Mr. Quance is a member of the Copper Cliff Town Council and of



John Quance

David Duncan

the Junction Creek Conservation Authority. His recreations are curling and his summer camp at Dry Pine Bay.

A second generation Inco man, David Duncan was born in Dalnair, a suburb of Glasgow, Scotland. His family came to the Sudbury district 40 years ago; his father, the late David Duncan, was machine shop foreman at the Copper Refinery and a member of the Inco Quarter Century Club.

The new assistant chief engineer received his preliminary education in Sudbury and graduated in 1942 from Queen's University in mechanical engineering. On graduation he immediately joined Inco at Copper Cliff, where he had been employed during his summer vacations, and in 1956 was promoted to chief draughtsman in the engineering department.

He married Phyllis Rayner in 1945 and has one daughter, Janet, 15, and one son David, 11. He is an ardent fisherman and curler, and a playground hockey coach. He is president of the Sudbury Queen's Alumni Association.

## Open Pit

(Continued from Page 8)

involved building two dams which required 400,000 tons of rock and 70,000 cubic yards of clay. It was also necessary to drive a 750-foot tunnel, 4x6 feet, to replace the creek connecting the two lakes.

A surface plant was constructed, later to be used in conjunction with the neighboring Copper Cliff North mine which is now being developed for underground mining within the same geological formation, which is known as the Copper Cliff Offset. Sinking of the no. 1 shaft of the Copper Cliff North has been completed to the planned depth of 4134 feet.

Clairabelle Open Pit reached its scheduled production rate of 16,000 tons per day in April 1963 and hasn't looked back since.

Four electric shovels, churn drills, haulage trucks, crushers, bulldozers and other equipment were brought from the Frood Open Pit to Clairabelle. Servicing of equipment and minor repairs are done there, but the Frood Pit garage still handles major maintenance work such as rebuilding truck engines and overhauling shovel booms and dipper sticks. Rebuilding the huge truck tires is also done at the Frood vulcanizing shop.

The clanking and pounding of the old churn drills is heard no more at Clairabelle, however. The new sound is the roar of two big rotary drills, recently installed to replace the entire battalion of 10

churn drills. Where the churn drill lifted and dropped a set of tools weighing 4,000 pounds to drill a 9-inch hole, the sludge having to be bailed out every two feet, the diesel-electric rotary by a combination of rotation and down-pressure chips the bottom of the hole and ejects the cuttings to surface with compressed air. The bit of the rotary drill is a massive tool composed of three cones, with tungsten-carbide inserts, which rotate on roller bearings.

The rotary drill holes are loaded with AN-FO in combination with an aluminized slurry in 50-pound waterproof bags and detonated with 1/2-pound primers, primacord, and two no. 6 instantaneous caps. An average 60-foot bench blast has 18 holes and breaks about 70,000 tons. The caps are wired to a portable blasting station 500 feet distant, and the blast is fired at a scheduled interval in the pit blasting cycle.

Scooped up by the electric shovels at six tons a dipperful, the broken ore is hauled by the 275-hp diesel trucks to the crushing plant, 39 tons in a load, and first reduced to 9-inch size in a 54-inch gyratory crusher, then put through a secondary crusher to bring it down to 4 1/2-inch size. An inclined conveyor then carries the crushed ore to the 1500-ton circular concrete bin, from which it is loaded into railway cars and taken to the Copper Cliff reduction works.

To produce 8,000 tons of ore per day the pit must also mine 8,000 tons of rock which is hauled to a

high dump area laid out for 5 million tons. Some pit rock is crushed in a cone crusher for road building.

The cover picture of this issue gives a good general view of current operations at the Clairabelle Pit, with one of the electric shovels operating in a typical sink cut for the third bench while up on the second bench a rotary drill is putting down 9-inch holes for the next blast. The bulldozer is constantly engaged in a cleanup program. One truck has just been loaded, another awaits its turn, and a third is well up the ramp on its way to the crushing plant, seen in the distance. The figure of the man just back of the shovel indicates the size of the operations.

Clairabelle Open Pit is being mined in 60-foot benches, and the planned final depth is six benches. Overall dimensions of mining will be 3500 feet in length by 1500 feet at the widest point. Thus Clairabelle will fall short of the size of the great Frood Pit, which wound up 6300 feet long and 600 feet deep, but the men who are mining it stoutly point out that size isn't everything — they're proud of their smooth-running operation, as they have every reason to be.

## Lewis Williams

It was a spell of tough times on Manitoulin Island that drove Lewis Williams to Sudbury in 1937 but he quickly added that the move proved a good one for him. "Fishing was so poor on the Island that I was only working part time in summer and almost no time in winter," he explained.

Born and raised on the Island, which he still fondly refers to as home, Lewis' source of livelihood was fishing, farming and the sawmill. He quickly adapted to min-



Mr. and Mrs. Williams

ing after getting a job at Garson and worked underground in stopes and pillars for many years. Since 1959 he has been with the motor crews.

Lewis married Mary McDonald in 1925 and they have two married daughters, Mae, whose husband Joe Bryant works at Copper Cliff, Iona (Mrs. M. Morrison) of Creighton, and 10 grandchildren.

The Williams have bought a home near St. Catharines and by next year, Lewis vows, "I'll have about half an acre of flowers."

The family camp on Manitoulin Island will still be the popular summer spot.

## Albert St. Amand

Albert St. Amand worked as a crane follower and pumpman in the tankhouse at the Copper Refinery, where he started with Inco in 1936 and where he was working when he went on early service pension this summer.

He liked his work and misses

the many close associations he had at the plant, although he's getting lots of pleasure from retirement.

Albert was born 60 years ago at Port Severn and raised around Midland. He worked in sawmills at Victoria Harbor, then for 10 years with the CPR at Port McNichol, and in 1936, when that job



Mr. and Mrs. St. Amand

had slowed down to one day a week, he came to Sudbury.

Ten years earlier he had married Jenny Grisdale and today they have a fine big family. Morley is at Kingston, Mildred (Mrs. P. Smith) in Windsor, Norman at the Copper Refinery, Margaret (Mrs. P. Clement) in the Ottawa Valley, William in Sudbury, Roland in Hull, Jean at high school. They have 21 grandchildren.

The St. Amands enjoyed a long motor trip down east this summer and also spent more time at the family camp on Lang Lake.

In good health and thoroughly enjoying his leisure, Albert plans on moving to Wabashene next summer. "I was raised around that part of the country and I like it," he said.

## Bill Muraska

Bill Muraska was born in a village in the Ukraine 65 years ago. In 1923 he came to Canada where a brother Pete was already working for Inco and in a couple of weeks the name Bill Muraska was added to the smelter payroll. Pete went on pension in 1960 and Bill joined him this year.

After working 40 years at the smelter Bill is not too sure yet how he'll handle all this new leisure. Mrs. Muraska hopes to get him to travel more. His home,



Mr. and Mrs. Muraska

garden and their camp at Fairbanks Lake provide plenty to do in summer and right now Bill is a pretty contented citizen.

Mrs. Muraska, who was Mary Siobojan before their marriage in 1929, was born and raised in Copper Cliff. Members of their family are Helen (Mrs. A. Biggins) of Falconbridge, Irene, Bill of the Copper Cliff pay office, Robert and Marilyn in school, and two very popular granddaughters.

Bill has worked on the reverberatory furnaces almost all his Inco years and has few complaints. The last 15 years he was tapper helper. Reliable and capable, Bill will be missed on the job.



Singing star of stage and television, lovely Shirley Harmer will headline the show at the Quarter Century Club.



Emerson, King of Balance, will be another of the outstanding performers.



Seppo Leivo, hailed as The Master Juggler, is one of the greatest.



The Cyclonians build their act to an exciting climax with an aerial adagio atop high chain-drive unicycles.



Two beautiful young violinists, the Hansen Sisters, have just returned from a highly successful European tour.



The Rhythm Pals, Mike, Marc and Jack, came east from the Pacific Coast some years ago to achieve stardom.

## Great Night in Store September 24 for Quarter Century Club at the Arena

A great night is in store for Sudbury and district members of the Inco Quarter Century Club when their 16th annual dinner meeting convenes at the Sudbury Arena on September 24. The meeting will start at 6:00 p.m.

The address of the evening, it has been announced, will be given by Henry S. Wingate, chairman of the board of International Nickel. A vigorous, magnetic speaker, Mr. Wingate always stirs enthusiasm in the Quarter Century Club audience with his reviews and discussions of the Company's affairs.

In a special ceremony prior to the dinner, gold buttons will be presented to the 239 men qualifying for membership in the Quarter Century Club this year. Joining Mr. Wingate in presenting the badges will be James C. Parlee, executive vice-president, and T. M. Gaetz, assistant vice-president and general manager of the Ontario division, who will also give brief addresses.



Billy Meek

The innovation last year of serving some of the members with trays in the regular arena seats, in order that the entire club might dine under the same roof, proved so successful that it will be repeated. Some 1,550 members will be seated at tables on the floor of the arena and the balance of about 700 will have their dinner in the regular arena seats opposite the stage.

With the big date drawing near, the ladies' auxiliaries of St. Andrew's and St. Paul's churches are in a flurry of preparation. Under the general convener'ship of Mrs. George Smith, Mrs. Jake Cope, and Mrs. Joe Bischoff, plans are well organized for putting a plate of hot roast turkey with all the trimmings at 2,200 or more places

with the same marvellous speed and dispatch that has marked this huge catering assignment for many years. A staff of about 350 ladies and 50 men will be on hand to serve the dinner.

The club will be led in the singing of O Canada by Chrissie Nemis, after which pensioner Jack Cullen of North Bay will ask the blessing.

Chairman of the meeting will be R. G. Dow, secretary of the Quarter Century Club, who will announce the moment of remembrance. The toast to the pensioners will be proposed by E. G. Stoneman, manager of the Iron Ore Plant, and the reply will be given by Norman H. Kearns, recently retired chief engineer.

The stage show promises to be bigger and better than ever. Impresario Paul Simmons has come up with sparkling program featuring some of the top acts of the night club circuit in Eastern Canada and the U.S. Star of the show will be the lovely singer, Shirley Harmer, and master of ceremonies will be a rapid-fire comedian with a Scottish accent a yard wide, Billy Meek. Some of the performers appear in the accompanying photographs.

## Mechanical Dept.

(Continued from Page 10)

record in the history of the Copper Cliff mechanical department. "Their program was sound and their efforts very noticeable," he said. At time of writing (September 8) the record showed the mechanical department with 1,110,832 safe man hours worked, a record which began on March 23, 1964 and passed the million-man-hour plateau on August 22, 1964.

### SHEER LOGIC

Teacher: "But Johnny, this essay on 'Our Dog' is exactly the same as your brother's."

Johnny: "Yes'm. It's the same dog."



Grand champion White turkeys from the farm of W. Allen Roder at Arkona, near London, will be the piece de resistance of the Quarter Century Club dinner. Red Pianos of Copper Cliff has ordered one ton of these birds from Mr. Roder and will bone and roll them for the banquet. The only exhibitor ever to win three grand championships at the Royal Winter Fair, Mr. Roder is shown above with a flock of his White turkeys at his 465-acre farm where he annually raises 80,000 birds.