

INCO TRIANGLE

VOLUME 30

COPPER CLIFF, ONTARIO, SEPTEMBER, 1970

NUMBER 6

Topping off the World's Highest Chimney
(STORY ON PAGE 14)





Published for employees of The International Nickel Company of Canada Limited

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Editorial Office, Copper Cliff, Ont.

Authorized as second class mail by the Post Office Department, Ottawa, and for payment of postage in cash.

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PROBLEMS OF LATERITICS

"Lodestar", writing in The Financial Times, recently had an interesting discussion of the difference between sulphide and lateritic nickel ores and how it affects the share market, with which he is primarily concerned.

In referring to nickel as "a number one share market catalyst", "Lodestar" writes:

"This brings me round to a subject about which there still seems to be a good deal of misunderstanding. It is, broadly speaking, the difference between a sulphide and a lateritic nickel find, and why the latter tends to cause less of a share market stir than the former.

"The facile explanation is that the lateritic variety of ore is more difficult and expensive to treat. Yet it lies mostly at shallow depths and can thus be extracted by open-pit methods, whereas sulphide orebodies are being happily and profitably extracted from over a mile below surface. The reasons for this apparent anomaly are twofold.

"By their very nature the near-surface lateritic deposits tend to be situated in the earth's equatorial belt. They thus mostly occur in remote places. This provides one of the reasons why these vast — and they are vast — future sources of nickel supply, which will have to be worked if the world's nickel demands are to be met, have remained practically unexploited.

"Far more importantly, even if such deposits had been found to exist on the doorstep of civilization, there would still have been the primary problem of extracting the nickel metal content profitably therefrom. How difficult this can be is strikingly illustrated by the fact that none other than the world's biggest nickel giant, International Nickel, has been working on the problem, with all its vast technical resources, for some 30 years.

"The simple basic difference between the sulphide and lateritic



A FLORAL SALUTE to International Nickel's Manitoba division on their province's Centennial has been the showpiece in Nickel Park at Copper Cliff this summer, extending greetings and congratulations from the Company's Ontario division. The white background is Carpet of Snow alysium, the buffalo and the name Manitoba, as well as the borders, are deep blue Crystal Palace lobelia, and the dates are Rusty Red marigold. The display was arranged by the agricultural department's parks foreman, Alex Gray.

ores is that in the latter, being of the surface oxide variety, the metal is chemically disseminated throughout the material. And from here on, I must explain, I am quoting an Inco specialist writer, Mr. Joseph R. Boldt. When ground, every particle of the ore contains nickel. Hence every particle has to be processed. This is not so with hard-rock sulphide ores.

"This necessitous treatment of virtually the whole of an oxide ore means a bigger plant, no smaller say than 10,000 tons a day, with greater capital and operating costs. There is also the wetness problem. Nearly half the content of lateritic ores is water. A lot of heat energy has thus to be expended in just drying the initial material.

"But what seems to be the most complicating factor of all is that the mineral structure and chemical composition of oxide nickel ores vary with depth, often with no clear demarcation line. So the whole orebody is not necessarily suitable for one particular extraction process. The presence of iron, cobalt or chromium also offers problems.

Every Deposit a Riddle

"Mr. Boldt thus understandably reaches the conclusion that every lateritic deposit is an individual riddle with its extractive metallurgy processes subject to geographical, technical and economic influences that vary considerably from one to another. This is why there are almost as many ways of treating nickel laterites as there are deposits being worked commercially.

"I have no space to detail how Inco is coping with this lateritic riddle. But I can certainly say that it is being done in accordance with a meticulously arranged plan which even includes monthly

meetings in Toronto of the teams working in such far distant places

as Guatemala, Australasia and New Caledonia."

Harry Bowler Is New Treasurer of Company

Harry Bowler, C.A., A.C.I.S., formerly vice-president — administration and finance of Continental Can Company of Canada Limited, has been elected treasurer of The International Nickel Company of Canada, Limited. Henry S. Wingate, chairman, announced August 24.

Harry Bowler

Effective September 23, Mr. Bowler will succeed Felix M. A. Noblet, who will retire at that time after 28 years with International Nickel. Mr. Noblet joined the Company in September 1942 as assistant treasurer, and has been treasurer of the parent organization since

April 1954. Before joining Inco, he was associated with the Bank of Montreal for 15 years.

Mr. Bowler has held senior financial and administrative positions in various primary and secondary industries in Canada.



Born in Edinburgh, Scotland, in 1925, he emigrated to Canada after World War II service in the British Merchant Navy and became a Canadian citizen. He completed his professional studies at the University of Toronto, receiving his C.P.A. of Ontario in 1959. He is a member of The Institute of Chartered Accountants of Ontario, The Chartered Institute of Secretaries, and The Financial Executives Institute.

Mr. Bowler is married to the former Helen Darling of Toronto. They have three children.

Indonesian Exploration Results Encouraging



Exploration is proceeding rapidly on the Indonesian island of Sulawesi, where International Nickel is investigating lateritic nickel deposits in a 25,000-square-mile area. Results so far have been encouraging. Dr. Soemnantri Brodjonegoro, Indonesian minister for mining, is seen here (centre) at a conference in New York with Inco's chairman Henry S. Wingate and president Albert P. Gagnebin.

INCO FAMILY ALBUM



WALTER MARONSKI, sub-station operator at the nickel refinery in Port Colborne, was born in Poland. He came to Canada in 1949 and worked two years in the paper mill at Kapuskasing before becoming employed with Inco in 1951. He manages to squeeze in a little fishing and hunting occasionally and tends a substantial vegetable garden. Pictured with him and his wife Nadzia are their happy family: Sandra, of the nickel refinery shipping department, Helen, Walter Jr., 19, Irene, 15, Jeanine, and Christine, 1.

"BEING A NEWFOUNDLANDER, I might feel more at home if they'd stock the lake with codfish," reflected Don Butler when photographed with his family at his Ramsey Lake home. Don came to Inco in 1950 from St. John's, and is now a shift boss at Murray mine on the 4,000 level. Water sports and home restyling keep him active in his spare time. Standing left to right are Gerry, 18, who worked this summer at Copper Cliff smelter, Marvin, 16, and Jim, a Creighton miner. Seated with Don and his wife, Belle, are Cathy, 9, Michael, 18 months, and Pat, who is with the Department of National Revenue in Sudbury.

ALTHOUGH HE HAS worked all his 26 Inco years at Copper Cliff smelter in the reverbo department, J. P. (Charlie) Rousselle and his family have always lived in Coniston. His wife is the former Alice Martin of St. Charles, and their attractive children are Gary, 12, Nancy, 8, Claudette, 15, and Paulette, 16. Charlie enjoys bowling, along with his wife, but his favorite sport is baseball, and he is one of Coniston's best in the league with Markstay, Wahnapiitae and East End.



LEN KAATTARI first started his Inco career in 1950 but left in 1965 to work on construction in Labrador and in Saskatchewan. He returned to the Company in 1969 and is now a general foreman in planned maintenance at Creighton No. 5 shaft. The Kaattaris who live in Garson, enjoy camping, and Len has a cottage well under way at Lake Agnew. Snowmobiling and home-renovation projects round out Len's activities. Standing left to right in the picture are Karch, 17, Wendy, 13, and Doug, 15; seated with Len and his wife Irma is 11-year-old Larry. Mrs. Kaattari is originally from Semans, Saskatchewan.



BOTH OME LANDRY and his wife Estelle grew up in Noelville, within easy reach of the popular French River. Although now living in Blezard Valley, they often go back to "the route of the voyageurs" for family tenting and fishing holidays on Hartley Bay. Another favorite fishing spot is the Gogama area, where Ome once caught a 14-lb. pickerel. Joining the Company in 1950 he is now a shift boss at Stobie mine. His recreational activities in winter centre around the rink in Blezard Valley's Pinecrest subdivision, of which he is supervisor. The Landry children are Guy, 8, Marc, 13, and Michelle, who is 15.

APPOINTMENTS

By G. R. Green, assistant general manager (mining), effective August 7:

R. C. McDonald, mines project supervisor, Copper Cliff;

C. McAfee, underground superintendent, Froid mine;

C. F. Gray, underground superintendent, Levack mine;

J. D. McLeod, mine engineer, Little Stobie mine;

H. Soltendieck, mine engineer, Murray mine.

By J. B. McConnel, manager of reduction plants, effective August 1:

J. R. Shore, superintendent, Creighton mill.

R. C. McDONALD

Underground superintendent at Froid mine since June 1969, Robert McDonald joined International Nickel in the engineering office at Garson mine following his graduation from McGill University in mining engineering in 1951.

He transferred to Creighton in 1955, spent a year as mines production engineer at Copper Cliff, then returned to Creighton as a divisional foreman. He was safety engineer at Froid, then general foreman at Creighton, and in 1967 became general foreman at Stobie.

His marriage to Alice Sumner took place at Fort Erie in 1952; he has two sons. He was born in Winnipeg.

Skiing, gardening and photography are his special diversions.

C. McAfee

A farm near Meaford, Ontario, was the birthplace of Clair McAfee, who graduated from business college in Owen Sound and joined International Nickel at Froid mine in 1935.

A shift boss in 1941, he became a divisional foreman in 1948, and in 1950 moved over to the Stobie section of Froid-Stobie mine as a general foreman. He returned to the Froid section in 1968.

Ruby Johnston of Milnet became his wife at Sudbury in 1939. He has two children.

Golf, hunting and fishing are his recreations. He has had a summer camp at Lake Penage since 1951.

C. F. GRAY

Born in London, England, Charlie Gray came to Canada in

1914, and started his continuous service with International Nickel in 1938 as a shoveller at Froid mine.

He was promoted to shift boss at Creighton, where he was transferred in 1942, and seven years later moved over to the blast-hole operations at Murray. He was appointed a divisional foreman at Froid in 1951. Transferred to Levack mine in 1958, he became a general foreman in 1961.

His marriage to Sylvia Kauppi took place at Sudbury in 1938.

His chief recreation since 1954 has been his summer camp at Lake Wanapitae.

J. D. McLEOD

Since he joined International Nickel in 1961, following his graduation in mining engineering from Queen's University in 1961, Donald McLeod has seen service at most of Inco's mines in the Sudbury district.

He was appointed assistant mine engineer at Stobie in 1969, and mine engineer at Murray in May of this year.

Born at Rainy River, Ontario, he was married to Betty Bromley at Atikokan in 1960 and has three children.

H. J. SOLTENDIECK

Graduating from McGill University in 1960 with a mining engineering degree, Herman Soltendieck came straight to International Nickel and was largely employed on mine development projects and data processing applications until his appointment in January of this year as assistant mine engineer for Copper Cliff South mine.

He was born in New York but moved to Germany at an early age, coming to Canada in 1952 to enrol at Loyola College in Montreal.

His marriage to Norma Medina took place at Montreal in 1961; he has four children. Philately is his hobby.

J. R. SHORE

Assistant superintendent at Creighton mill since January last, Ralph Shore had three years' experience in milling with Consoli-



J. R. Shore

Says Harry Tarkin:

IF THE VIOLIN DOESN'T SUIT — JUST MAKE ONE

Unable to find a violin with a tone that just exactly suited his sensitive ear, Inco pensioner Harry Tarkin took the bull by the horns and decided to make one of his own.

Recently retired from Froid, where he worked underground for all of his 33 Company years, Harry first commenced his project in 1966 by starting to collect all the information he could re-



garding violin making. He unearthed a book on the subject that was first printed in 1884, and studied his findings for three years before going to work on his first instrument.

Completed in six weeks, the violin was a success, but being a perfectionist, Harry was not completely satisfied, and is now making another. "There's always the possibility that I'll make a better one," said he.

45 Separate Pieces

A great deal of patience and skill is required in the preparation and assembly of a violin's 45 pieces, during which many hand-made jigs and forms are used.

The back is made from sliced maple, the front from sliced spruce, and both are hand-carved with chisels and small hand planes from 3/4-inch stock to form the 1/8-inch gently curved finished product. Depending on grain appearance—referred to in the trade as "flame pattern"—cost of a blank top or back can vary between \$10 and \$50.

To Harry, appearance is sec-

ondary to tone, and materials for one complete instrument cost him around \$45.

Introduced to the violin at the tender age of four, two years before his family left the Ukraine for Canada and a homestead near Winnipeg in 1911, Harry recalls that, "In those days I was more interested in wrecking an instrument than playing it."

Played in Sudbury Orchestras

However, he applied himself, and in later years played at school and barn dances, and after coming to Sudbury was a member of both the Ukrainian National Federation and Sudbury Symphony orchestras.

Content now to serenade his wife Lena or visiting family and friends, Harry has found a hobby that keeps him both happy and active. "My violins may not challenge the masterpieces of Stradivarius," was his cheerful comment, "but I'm sure I get as much satisfaction from my creations as he did."

Inco Offers Its First Canadian Debenture Issue

International Nickel's \$75-million offering of Canadian dollar 20-year 9.25% debentures, issued at par, was quickly taken up. The preliminary prospectus was filed with the Ontario Securities Commission on August 5.

The securities, International Nickel's first debenture issue in Canada, were offered by a syndicate headed by Wood Gundy Securities Limited of Toronto. Proceeds from the sale of the large offering of debentures will be used by Inco to help finance its \$1.1 billion expansion and modernization program that began in 1966 to raise its Canadian nickel production capability by 30 per cent to 600 million pounds in 1972.

Progress in the Company's expansion program was reflected in capital expenditures of \$111,213,000 for the first six months of 1970, compared with \$90,964,000 for the first half of 1969.

Canada the Leader

New Caledonia in the South Pacific was the largest source of nickel from 1875 to 1905, when Canada took the lead with increasing production from the Sudbury district. In 1960, Canada produced 373 million of the slightly more than 500 million pounds consumed in the free world, and in 1969, 447 million pounds of a free world total of 820 million pounds consumption.



BOB BRAWLEY demonstrates the strength of stance that helped win him first prize at the Nickel Belt Bowmen's annual invitational tournament held at the club range in Garson and attended by 20 archers from Southern Ontario. Bob shoots in the bare bow category, unaided by sights or other attachments. He works at Stobie as a 2nd class garage mechanic. The targets in the background vary in size to suit different archer-to-target differences.

Nickel Belt Bowmen Find Archery a True Challenge

If the original bowmen, many centuries ago, had attained the proficiency seen among the ranks of Nickel Belt Bowmen, history would surely have been written differently. For unlike their predecessors, who depended on a deluge of arrows for a successful attack, the Nickel Belt Bowmen, armed with modern archery equipment, can "zero in" on a target with the accuracy and the destructive force of a good firearm.

Fine Range Near Garson

Organized as a club nine years ago, Nickel Belt Bowmen have developed a range just outside of Garson on acreage kindly loaned by International Nickel, which is perfectly suited to archery.

Present targets are located throughout the range, similar to a golf course, so as to offer a variety of shooting situations with varying degrees of difficulty in yardage, elevation, obstacles in the line of fire, and light levels in the target areas. Target distances vary from a minimum "bunny shot" of 35 feet to distances of from 20 to 80 yards. The targets vary from six to 18 inches wide.

Three quarters of the club members fall into the "free style" category of archers in that they use sights, which make a night-and-day difference in the degree of accuracy of any bow on which they are used by the average bowman. The remaining one-quarter of the membership are archery's purists, who shoot without the aid of sighting devices or any related gadgetry. This places them in the bare bow category, considered by many in the sport as "true" archery.

Manitoulin Deer Hunt

As well as the conventional target course, the range also features a hunting course on which a gasoline motor pulls a life-size cardboard deer on a wire line through the bush. This "one-horse deer" is shot at from different distances through varying degrees of obstacles. Scoring is based on the proximity of hits in strategic "kill" areas on the target. The hunting course is always heavily entered in club tournaments, and serves as good practice for the club's annual deer hunt from its own lodge near Silverwater on Manitoulin Island. Fifteen bowmen are planning to take part in this fall's hunt, which they regard as a more sporting challenge than with guns.

Weather permitting, the range sees action every night in the summer season, and once a month there's a member's tournament with prizes. During the winter the members keep a fine edge on their shooting twice a week on 20-yard targets in the gym of Garson-Falconbridge secondary school through the co-operation of the Sudbury Board of Education.

Strict Safety Rules

In all activities the potential lethal aspect of archery is always kept in mind, and safety rules are rigidly enforced.

The age span in Nickel Belt Bowmen runs from 8 to 45 as archery steadily becomes more popular as a family sport. There are now 10 ladies on the roll.

Archery equipment can be expensive (\$400 bows, and arrows at \$80 a dozen, are not uncommon) but a person can get started for as little as \$40. Equipment varies according to its intended use. For example, in target shooting, arrows are usually of aluminum construction and the bows have an average pull of 35 pounds; hunting equipment, on the other hand, usually includes wooden or fibre-glass arrows and shorter bows to facilitate movement and accurate shooting in forested areas. Hunting bows usually exert a stronger pull, the average being 50 pounds.

The club's executive for this year consists of president Gerry Baronette, vice-president Bob Lambert, secretary Pat Huot, and treasurer Patricia Martin. Tournament chairman is Christa Baader while Bob Brawley is in charge of field and grounds upkeep. The club is affiliated with both federal and provincial archery associations.

On Championship Team

At the 1970 Canadian archery championships held in Ottawa, all but two provinces were represented. Nine Nickel Belt Bowmen helped Ontario win the free-style and bare bow divisions.

For the first time in the history of the Olympics, archery will be scheduled at the 1972 Munich games. Nickel Belt Bowmen hope that this precedent will result in greater interest in the sport at the high school level in the Sudbury area.

Anyone interested in organized archery is encouraged to come



RICK PHILLIPS, another "true" archer, takes careful aim on an elevated, dimly lit 65-yard target. The device protruding from the bow toward the target is a stabilizer, which helps to minimize bow movements during shooting. Rick is a timberman at Creighton No. 5 shaft.

out and watch the club members in action. The range is located near the Kirkwood mine and can most easily be found by driving west on O'Neil Drive from Garson. A sign indicates the turn-off. Persons wishing information can write Nickel Belt Bowmen, 95 Sable Street, Sudbury, or by telephone the club secretary, Pat Huot, at 673-7650.



FIVE NICKEL BELT BOWMEN pose with two of the club's junior members at their Garson range. The seniors from left to right are Bob Brawley, Gerry Baronette, Dan Belanger, Rick Phillips and Moose Kelly. The two junior enthusiasts are children of Rick Phillips, Lynn, 13, and Danny, 9.



SAURO CAMILETTI



ANNA CASERA



BEVERLEY CHAPMAN



SUSAN HENDERSON



IRENE HRAMIAK



JUDITH JACKSON



ALDO PALMA



BEVERLY SAWICKI



RAYMOND SAWKIW



STEPHEN TAYLOR



BYRON WHEATON

\$5,000 Inco Scholarships to 11 Children of Employees

Scholarships valued at approximately \$5,000 each, based on a four-year university course, have been awarded to 11 sons and daughters of employees by The International Nickel Company of Canada, Limited. The announcement was made by F. Foster Todd, executive vice-president, Toronto.

In addition to tuition and fees, each scholarship annually provides \$300 to the recipient and a grant of \$500 as a cost-of-education supplement to the university. The awards are made on a one-year basis and are renewable for three additional years or until graduation, whichever is the shorter period, providing the winners satisfy the academic and conduct requirements of the universities where the scholarships are held. A total of 134 children of Inco employees have received awards since the plan was begun in 1956.

The new recipients of scholarships are as follows:

Sauro Camiletti, whose father, Maurizio Camiletti, is employed at the Copper Cliff crushing plant and resides at 747 Ste. Clair Street, Sudbury, is a graduate of St. Charles College. He has enrolled at the University of Windsor and will study mathematics and chemistry.

Anna Casera is the daughter of Primo Casera, a drill boss at the Frood-Stobie mine, residing at 4694 Desmarais Road, Val Theres. A graduate of Marymount College, Sudbury, she will study nursing at the University of Toronto.

Beverley Chapman, a graduate of Lockerby Composite School, Sudbury, will enroll in the faculty

of Arts and Science at Carleton University. Her father, David F. Chapman, is supervisor of hourly employment at Copper Cliff and resides at 1395 Southview Drive, Sudbury.

Jean Susan Henderson, whose father, David Henderson, is assistant mine planning engineer at Thompson, Manitoba, and resides at 88 Granite Crescent, is a graduate of R. D. Parker Collegiate, Thompson. She has enrolled at Carleton University and will major in English.

Susan has the distinction of being the first student to have received all her primary and secondary school education in Thompson, starting in Grade 1 and continuing through to Grade 12 there. Her ambition is to become a high school librarian. Her father was transferred to Thompson in January 1959. He is a graduate of the University of Aberdeen, Scotland.

Irene Hramiak, a graduate of Lockerby Composite School, Sudbury, will study natural sciences at the University of Western Ontario. Her father, Peter Hramiak, is employed in the maintenance department at Creighton mine and resides at 265 Drinkwater Street, Sudbury.

Judith Jackson is the daughter of Clarence A. Jackson, a miner at Frood-Stobie mine and resides at 13 Spruce Street, Parry Sound. A graduate of the Parry Sound High School, she will study social sciences at McMaster University.

Aldo Palma is the son of Rafael Palma, an employee at the Port Colborne nickel refinery, residing at 641 Fielden Avenue, Port Colborne. A graduate of

the Port Colborne High School, he will study engineering at the University of Waterloo.

Beverly Sawicki is the daughter of Edward Sawicki, divisional foreman at the Thompson mine, Thompson, Manitoba, residing at 155 Greenway Crescent. She is a graduate of R. D. Parker Collegiate and will major in social sciences at the University of Manitoba.

Raymond Sawkiw, a graduate of Sudbury High School, will study natural sciences at the University of Western Ontario. He is the son of Harry Sawkiw, a mechanic at the Copper Cliff smelter, and resides at 26 Kelsey Street, Sudbury.

Stephen Taylor, a graduate of the Oakville-Trafalgar High School, Oakville, has enrolled at the University of Toronto to study engineering science. He is the son of Ronald R. Taylor, director of exploration for International Nickel with headquarters in Toronto, and resides at 72 Parke Avenue, Oakville.

Byron Wheaton, whose father, Chester W. Wheaton, is a maintenance mechanic at the Copper Cliff smelter and resides at 1868 Armstrong Street, Sudbury, is a graduate of Lo-Ellen Park Secondary School, Sudbury. He has enrolled at the University of Western Ontario and will study mathematics.

Share \$1,000 Suggestion Plan Award



The four happy faces in this picture confirm that both giving and receiving can create a great deal of satisfaction — especially so when the occasion is the presentation of an Inco Employees Suggestion Plan major award. Frood maintenance mechanic Stuart Dickson and Stobie area maintenance foreman Harry Murdock put their heads together and came up with an improved method of installing tippie car liner bars that netted them a joint award of \$1,000.00.

The two deserving gents are seen receiving their check from Frood-Stobie area superintendent S. J. Sheehan (right). Assistant manager of mines C. F. Hewes was present to offer his congratulations. By coincidence, Stuart and Harry each has a family of eight, and both say they expect no problems in getting rid of their windfall.



Extending up the side of the electrolytic tank in the foreground are the strap-like copper risers, which have been increased from four to six in an important innovation to increase the pure nickel production rate at the Port Colborne refinery by speeding up the plating process. Andrea Lopera, the unitman shown, is taking ampere readings of the nickel cathodes in the tank to check on the power input.

Innovation on Plating Tanks Boosts Port Colborne's Potential

A modification in the plating tank electrical system, to supply additional power and speed up the plating process, has made possible a significant increase in the production of pure electro-

lytic nickel from part of Inco's Port Colborne refinery.

No. 9 Unit, consisting of 156 tanks, has now been equipped for the new high current operation, which is expected to boost the unit's production capacity by 500,000 lbs. of nickel per month. This section of the refinery has a total of 784 tanks, some or all of which could be adaptable to the innovation at a future date.

Attaching to each tank two additional vertical copper conductors, making a total of six, permits the increase in current throughput from the normal 7,400 to 10,000 amperes. The copper conductors are bars four inches wide and half an inch thick, extending up the side of the tank, and they carry the low-voltage current from the rotary converters to the plating process.

Long Experimentation

The boost in production potential is the pay-off on a long program of experimentation dating back to 1961 at Port Colborne. In the final successful test, alterations were made in the bus bar system of a tank and the number of starting sheets, on which pure nickel cathodes grow in the electrolytic transfer from impure anodes, was reduced to 22 from the customary 30. This produced a simulated 10,000-ampere circuit operating off the normal 7,400 amperes of electrical current, and resulted in good quality cathodes at the increased rate of nickel deposition. Careful study of all

aspects of the plating cell operation led to the conclusion that the same gratifying result would be obtained on a full production basis. All that would be required would be to enlarge the bus bar system and provide 10,000 amperes of current from the existing power sub-station equipment.

Smooth Co-ordination

Electrical, mechanical and production departments co-ordinated smoothly in progressively carrying out the alterations to the plating tanks without shutting down the unit or loss of production. The electric current to a pair of tanks under alteration was short-circuited, the electrolyte was drained off, and anodes, cathodes, and cathode boxes were removed. After the tanks were thoroughly cleaned, new concrete spacer slabs were placed on the tops of the outside walls. Then the extra

To Our Readers:

The Triangle is seeking the opinions of its readers on its contents, style, and readability. Enclosed with this issue is a questionnaire which we ask you to fill out and return within the next week.

It may be dropped in the mailbox or left at your plant time office. If an employee's wife wants to express her own opinions, additional copies of the questionnaire may be obtained by telephoning the Triangle at 682-2604 or -2702.

Your prompt co-operation in this reader survey will be of great assistance in publishing the Triangle.

risers were fitted into place and gas-welded to the bus bar system. The tanks were then put back into production.

Welding the risers into place was perhaps the trickiest part of the installation. Because it is such a rapid conductor of heat, copper is notoriously difficult to weld. Fortunately Port Colborne has a specialist in intricate and unusual welding, Dominic Missett, a senior employee with Inco service dating back to 1935, and he handled the job.

The refinery's existing electrical capacity will provide the extra current required and the present electrolyte purification capacity will not need to be augmented.

OH, THAT SMITH

A woman approached the pearly gates and spoke to Saint Peter.

"Do you know if my husband is here? His name is Smith."

"Lady, we have lots of them here. You'll have to be more specific."

"Joe Smith."

"Lots of those, too. You'll have to be more definite."

"Well, when he died, he said that if I was ever untrue to him, he'd turn over in his grave."

"Oh, you mean 'Pinwheel Smith'."

Earned Top Honors at Police College

Constable Gary Zadow of the Copper Cliff Police department was named "top police student of Ontario" after graduating with an average of 93% from the 10-week Police College at Aylmer. Mayor Richard Dow is shown presenting him with a week's pay and a week off on behalf of the town. Centre is police chief Bert Hague proud of his man, who joined the force in 1964.



Sudbury Daily Star

Inco welding specialist Dominic Missett (right) is seen at the tricky job of welding one of the additional copper risers to the electrolytic bus bar system. Assisting him is Dave Roberts, a recent graduate of the Company's four-year ironworker apprenticeship program at Port Colborne.



Uneven Weather Made It Tough For Gardeners

Wet weather prevailing during July, followed by the prolonged dry period in August, adversely affected the quantity of bloom in gardens in the Company towns of the Sudbury area, it was noted in the agricultural department's annual report to general manager J. A. Pigott. Judging was done prior to the storm.

"In general the number of householders improving their home surroundings increased this year, but there tended to be fewer show gardens than in past years," commented agriculturist C. A. Young. "This was particularly true in Coniston and Copper Cliff."

Veteran horticultural expert Tom Vickers of Sudbury, assisted by members of the agricultural department, judged the gardens in the annual Inco competition, and announced awards as follows:

CONISTON

G. Fedat, 106 Caruso St., \$20.00; V. Brunatto, 18 Thomas St., \$15.00; D. Oliver, 8 Thomas St., \$10.00; M. Martinelli, 504 Caruso St., \$8.00; R. Cecchin, 21 Walter St., \$6.00.

The following awards of \$5.00 each: J. DiBenedetto, 118 Caruso St.; P. Baran, 14 Walter St.; G. Venedetto, 42 Allan St.; S. Wasilchuk, 32 Rideau Ave.; M. Gurodam, 42 Caruso St.; P. Benedetti, 17 Walter St.; A. Brenolin, 35 Caruso St.; G. Adams, 35 Edward Ave. N.; J. V. Poretti, 58 Second Ave.; P. Gossio, 14 John St.; W. Drill, 80 Edward Ave. S.; W. Belous, 132 William Ave.; J. Sotki, 118 William Ave.; J. Sholegry, 14 Walter St.; C. Tellizari, 48 Allan St.; R. Dennis, 52 Second Ave.; W. M. Burke, 94 Fourth Ave.; Gordon Chisholm, 36 Concession St.; J. Holman, 528 William Ave.; E. Kowal, 78 William Ave.; M. Bedrij, 50 William Ave.; D. Battista, 23 Walter St.; F. LaFreniere, 102 Caruso St.; J. Desjardins, 46 Edward Ave. N.; W. Haddon, 34 Edward Ave. N.; V. A. Price, 23 First Ave.; S. Jeffrey, 23 First Ave.; G. Gagnon, 57 First Ave.; E. Deforge, 64 Fourth Ave.; E. D. Everett, 42 Fourth Ave.; G. W. Evershed, 54 Fourth Ave.

C. Bray, 57 Fourth Ave.; J. Barnes, 12 John St.; C. Walker, 3 King St.; P. Szywchuk, 80 East St.; P. Lucio, 62 East St.; A. Desocio, 40 East St.; W. Spencer, 62 Edward Ave. S.; D. Myrcay, 130 William Ave.; J. Bronicheski, 122 William Ave.; J. Halushenka, 64 William Ave.; W. Jabluchuk, 60 William Ave.; H. Nulunga, 54 William Ave.; P. Saltillo, 18 William Ave.; G. Evershed Jr., 16 William Ave.; L. Silvestri, 14 William Ave.; E. Poirier, 13 William Ave.; A. Hugh, 9 William Ave.; N. Zanatta, 6 William Ave.; A. Florent, 4 William Ave.; A. Zanatta,



"Oh well, we'll just have to start from scratch again," cheerfully said Mrs. Bert Squirell of Lively after the August 20 storm literally tore their prize-winning home grounds up by the roots. "Bert's been working hard putting up new fences and lattices and getting things in ship-shape to start again next Spring." The Squirell grounds were a saddening sight (right), strewn with the remnants of their garage and fencing. But they had already been awarded first place in Lively in the Inco competition for the umpteenth time.



8 William Ave.; L. Visentin, 20 Walter St.; R. Visentin, 22 Walter St.; A. Silvestri, 28 Walter St.; D. Chesi, 20 Walter St.; R. Leonard, 42 Walter St.; J. Moron, 19 Walter St.; W. Smalczynski, 13 Walter St.; J. Waronec, 7 Walter St.; G. Podulski, 5 Walter St.; M. Brousseau, 12 Nickel St.; A. LaPalme, 28 Nickel St.; A. Argente, 6 Thomas St.; U. Comacchio, 20 Caruso St.

B. Comacchio, 20 Caruso St.; S. Pavrin, 24 Caruso St.; A. Limarilli, 26 Caruso St.; E. Oliver, 50 Caruso St.; M. Ordendoff, 94 Caruso St.; L. Marcom, 100 Caruso St.; D. Goggo, 102 Caruso St.; L. Milani, 81 Caruso St.; A. Facchin, 89 Caruso St.; A. Pansotto, 88 Caruso St.; R. Parolin, 90 Caruso St.; A. Pilotte, 83 Caruso St.; G. Bon, 79 Caruso St.; J. P. Cormier, 74 Caruso St.; A. Gosselin, 67 Caruso St.; V. Battistuzzi, 39 Caruso St.; T. Oliver, 37 Caruso St.; W. Zaharowski, 8 Rideau Ave.; W. Sholegry, 14 Rideau

Ave.; K. Conlon, 16 Rideau Ave.; N. Grinard, 28 Rideau Ave.; W. P. Conlon, 2 Hillside Cr.; D. Totino, 7 Hillside Cr.; B. Forestell, 1 Hillside Cr.; G. Sartor, 16 Allan St.; T. Fioriani, 18 Allan St.; L. Piolet, 28 Allan St.; A. Lemieux, 40 Allan St.

COPPER CLIFF

C. W. Wulkin, 20 Cliff St., \$20.00; L. Hamilton, 16 Jones St., \$15.00; R. T. Gauthier, 4 Evans Rd., \$10.00; A. Nickle, 7 Granite St., \$8.00; C. W. Ferguson, 34 McNevin St., \$6.00.

The following awards of \$5.00 each: R. A. Stoddart, 4 Clarabelle St.; J. N. Metcalfe, 8 Cobalt St.; G. Chartrand, 98 Balsam St.; L. Marier, 15 McNevin St.; S. Sargis, 10 Finland St.; R. C. White, 4 Church St.; W. A. Beatty, 19 Power St.; G. D. Watson, 1 Cobalt St.; J. R. Clark, 6 Granite St.; F. Mathe, 40 Nickel St.; H. Rossier, 105 Balsam St.; T. D. Gladstone, 17 Power St.; D. F. Boyd, 36 Park St.; L. Bonania, 61 Diorite St.; O. Longarini, 38 Diorite St.; N. Shrigley, 4 Union St.; R. D. Leask, 3 McNevin St.; N. Temple, 15 Poplar St.; J. C. McQuillan, 41 Evans Rd.; P. Lowney, 5 Evans Rd.; M. W. Lemke, 38 Power St.; T. C. Robertson, 27 Cobalt St.; N. A. Creel, 5 Granite St.; H. M. Montgomery, 2 Oliver St.; R. A. Corless, 10 Power St.; R. Ludzke, 29 Cobalt St.; W. G. Chandler, 6 Cobalt St.; R. D. Kelly, 21 Diorite St.

R. Canapini, 63 Diorite St.; R. P. Zanetti, 37-B Diorite St.; P. E. Semler, 39 Evans Rd.; W. Montgomery, 6-B Peter St. S.; E. W. Savage, 34 Power St.; R. Bell, 12 Oliver St.; K. E. Fletcher, 19 Nickel St.; D. Young, 23 Nickel St.; K. L. Prillhauser, 25 Nickel St.; W. J. Gladstone, 25 Nickel St.; G. A. Bruce, 22-A Nickel St.; J. Myher, 81 Balsam St.; S. Lewis, 71 Balsam St.; M. Bowers, 32 Balsam St.; J. Kassa, 92 Balsam St.; W. E. O'Brien, 34 Balsam St.; E. Lamp, 17 Succo St.; A. Rulo, 2 Poplar St.; M. O'Reilly, 28 Poplar St.; J. A. Phillips, 32 Poplar St.; H. P. Knight, 37 Poplar St.; G. McQuarrie, 31 Poplar St.; J. L. LeBorgne, 8 Finland St.;

E. Bedesky, 28 Finland St.; T. Duff, 13 Finland St.; T. Crowther Jr., 7 Finland St.; J. Konturri, 4 Temperance St.; J. L. Roy, 50 Evans Rd.; W. W. Guthrie, 10 Church St.; B. J. Alderson, 13-B Church St.; R. Doherty, 7-A Peter St. S.; A. F. Oliver, 3-B Peter St. N.; J. Swicki, 12 Poland St.; W. J. Yrjola, 14 Poland St.; W. Livingstone, 18 Orford St.; N. Myronuk, 16 Orford St.; R. Grooms, 13 Orford St.; S. H. McBeth, 7 Orford St.; J. J. Martin, 5 Orford St.

C. Mathe, 31 Power St.; R. J. Poirier, 29 Power St.; P. J. Minsky, 21 Power St.; J. R. Elliot, 15 Power St.; N. Stromberg, 13 Power St.; J. Shrigley, 11 Power St.; P. H. Burchell, 40 Power St.; W. McNeice, 48 Power St.; M. H. Dickhout, 50 Power St.; A. A. King, 49 Power St.; S. Merla, 21 Cobalt St.; G. D. Henry, 23 Cobalt St.; L. H. Garber, 3 Market St.; J. G. Hickaby, 3 Market St.; P. W. Parker, 19 Market St.; L. A. Crema, 9 Balsam St.; R. Cave, 10 Balsam St.; F. Courchesne, 42 Serpentine St.; G. Dempsey, 8 Rink St.; G. Robb, 15 Diorite St.; E. Zinko, 34 Diorite St.; J. Wharton, 6 Union St.; G. J. Denomme, 8 Union St.; R. Spencer, 3 Union St.; E. Maron, 22 Union St.; B. Bartolucci, 6-A Maroon St.; A. Perato, 6-B Maroon St.; W. Silvestri, 1 Lombardy St.; R. Paxon, 21 Domenico St.; A. Delbenedet, 34 Domenico St.; T. Dominato, 26 Domenico St.; E. Minardi, 6 Milan St.; O. Mel, 1 Craig St.; G. Sutton, 15-B Florence St.; W. S. Lawson, 1 Jones St.; R. Heale, 14 Cliff St.; J. H. Urwin, 13 Cliff St.; R. M. Buschardt, 18 Cliff St.; E. A. Foster, 4 Oliver St.; C. Wine, 4 Kent St.

CREIGHTON

R. Barbeau, 19 French St., \$20.00; T. B. Murphy, 55 Wavel St., \$15.00; H. H. Smith, 15 Churchill St., \$10.00; A. Silverman, 24 Copper Cliff Rd., \$8.00; A. Ostafin, 19 Lake St., \$6.00.

The following awards of \$5.00 each: H. Bily, 22 Albert St.; J. E. Moore, 63 Wavel St.; J. Grivich, 11 Albert St.; J. Myernick, 18 Snider St.; J. Hulton, 21 George St.; J. Fortune, 12 Churchill St.;

Rose Expert

A beautiful display of roses beautified the home grounds of Ivine Essensa at 26 Snider Street, Creighton. Here his wife Shirley poses with some of the full-blown blooms on which her husband lavishes care and pride.



Swept the Board



Ed and Helvi Thurtson of Waters Township again made a big sweep in the annual show of the Sudbury & District Horticultural Society, capturing five trophies as well as a third prize for vegetable plots. They won the Eaton trophy for "annuals", the Society trophy for cut flowers, the Star trophy for gladioli, the Gamthier trophy for sweet peas, and the Agnew trophy for most points in the show. Ed works at No. 6 shaft, Creighton mine, as a tool fitter.

W. A. Mitchell, 58 Churchill St.; C. E. Briggs, 57 Waverly St.; G. Stephens, 27 Waverly St.; E. Corrigan, 33 Copper Cliff Rd.; A. S. Peters, 6A Lake St.; A. Janthi, 13 Lake St.; B. Kaczynski, 15 Lake St.; I. Essena, 26 Solder St.; W. C. Moore, 17 Solder St.; A. Antoni, 7A Solder St.; J. Traskowski, 21 Alexandra St.; R. K. Phillips, 33 George St.; M. Lonsa, 6A Albert St.; I. Gasiorowski, 9B Albert St.; M. Hrivnjak, 13 Albert St.

GARSON

A. Lye Jr., 329 Pine St., \$15.00; R. Levesque, 333 Pine St., \$6.00; V. L. Stone, 27 McDougall St., \$6.00; E. G. Wohlberg, 6 Rale St., \$6.00.

The following awards of \$5.00 each: A. P. Moir, 60 McDougall St.; J. Grassman, 38 Henry St.; A. Brethauer, 38 Henry St.; L. E. Thompson, 100 Henry St.; H. D. MacKinnon, 64 Henry St.; O. Mahon, 315 Church St.; E. C. Merkle, 15 Rale St.

LEVACK

H. Kittgaard, 23 Church St., \$26.00; W. C. Bruce, 52 Birch St., \$5.00; J.

Bare Rocks A Challenge

Right smack up against the bald rock at 10 Thomas Street Mr. and Mrs. Vic Brunatto have displayed the "green thumbery" that has produced so many beautiful home settings in Coniston. This won second prize in the 1970 Inco Coniston competition. The thriving tree at the left is a favourite Italian variety of willow. Vic and Argia Brunatto have two children.



Kondewski, 49 Pine St., \$6.00; G. Tallock, 16 Third Ave. N., \$40; A. B. Wyer, 48 School St., \$6.00.

The following awards of \$5.00 each: A. Cuckey, 8 Third Ave. N.; E. Elliott, 28 Cedar St.; M. Tuoni, 32 Third Ave. N.; P. Laitinen, 15 Fourth Ave.; H. Ferguson, 40 Church St.; N. L. Anderson, 103 Oak St.; P. P. Gross, 48 Pine St.; B. F. Forest, 8 Copper St.; A. Kochinski, 118 Warsaw St.; J. Deshan, 32 Fourth Ave.; R. H. Pettit, 106 Pir St.; S. Emileff, 110 Warsaw St.

R. Aetick, 8 Riversview St.; E. A. Taylor, 16 First Ave. N.; M. Brach, 39 Poplar St.; C. Shaller, 85 Poplar St.; A. L. Armstrong, 18 Third Ave. N.; L. O. Puro, 17 Third Ave. N.; P. Maryczak, 26 Third Ave. N.; M. M. Otto, 58 Third Ave. N.; A. Kaczmarek, 4 Fourth Ave.; R. Bruce, 24 Fourth Ave.; R. Purvis, 130 First Ave. N.; R. Armstrong, 38 Willow St.; M. Picotte, 59 Oak St.; L. C. Munley, 38 Mountain St.; N. Davis, 10 Copper St.; N. Holic, 8 First Ave. S.; P. Jasulemas, 713B Warsaw St.

LIVELY

H. J. Squalzer, 241 Twelfth Ave., \$20.00; R. Panceo Sr., 334 Tenth Ave., \$5.00; W. J. Koch, 246 Eleventh Ave., \$10.00; J. C. Bingham, 273 Birch St., \$6.00; R. A. Elliot, 238 Tenth Ave., \$6.00.

The following awards of \$5.00 each: J. E. Treasure, 256 Tenth Ave.; S. P. Caul, 258 Twelfth Ave.; S. Rothinka, 250 Tenth Ave.; E. Crezman, 303 Birch St.; R. Coates, 265 Tenth Ave.; V. P. Kofu, 320 Tenth Ave.; H. T. Howes, 259 Seventh Ave.; E. Kuchinski, 238 Ninth Ave.; G. P. MacDonnell, 317 Eleventh Ave.; S. R. Maggs, 190 Sixth Ave.; R. Williams, 262 Sixth Ave.; P. H. Waller, 240 Tenth Ave.; J. Archibald, 192 Ninth Ave.; S. E. Dunn, 563 Main St.; R. Lyons, 244 Eighth Ave.; E. McMullen, 562 Main St.; J. Dyck, 205 First Ave.; J. E. Jennings, 203 Second Ave.; R. W. Brown, 209 Second Ave.; D. E. Crouse, 208 Fourth Ave.; J. W. Jewell, 235 Sixth Ave.; R. K. Young,

297 Sixth Ave.; O. W. Andrews, 301 Sixth Ave.; C. Boyd, 272 Sixth Ave.; A. Lampl, 281 Seventh Ave.; C. R. Byers, 283 Seventh Ave.; P. Jack, 340 Seventh Ave.; P. Clendenning, 263 Eighth Ave.; J. R. Oliver, 245 Ninth Ave.; H. D. Cameron, 254 Tenth Ave.; R. D. Burke, 258 Eleventh Ave.; J. C. Hunter, 248 Eleventh Ave.; G. Curry, 260 Twelfth Ave.; J. L. Hueston, 293 Ash St.; W. E. Pizell, 287 Birch St.; D. Rickard, 297 Birch St.; D. Mahaffy, 301 Birch St.; R. T. Blanchard, 297 Pine St.; V. Burling, 284 Pine St.; H. Haddock, 190 Margaret St.; D. J. Wing, 184 Sixth Ave.; A. Simpson, 182 Sixth Ave.; N. Utley, 368 Charles St.; C. J. Bothwell, 523 Queen Elizabeth St.; E. W. Nozian, 609 Queen Elizabeth St.; S. Rewega, 277 Birch St.

MURRAY

C. A. Bennett, 4 Holmes St., \$10.00.

AWARDED FELLOWSHIP

John A. Foote, a graduate of the University of British Columbia, has been awarded an International Nickel fellowship for graduate study in U.S.—Canadian affairs at the School of Advanced International Studies, Johns Hopkins University, Washington, D.C.

Mr. Foote is the fifth recipient of the award and the second Canadian to receive the fellowship since it was initiated in 1962 by a grant of \$18,000 from The International Nickel Company, Inc.

Waste Treatment at Shebandowan Outlined

At a public hearing at Thunder Bay September 4 International Nickel outlined its plans for the treatment of waste from its Shebandowan property. The hearing was called by the Ontario Water Resources Commission to whom the Company has made application for approval of its plans.

Two types of effluent from the complex are planned—mine waste water and sanitary waste. The mine water will be collected, chemically treated and clarified in an underground treatment system developed by International Nickel in its Sudbury area mines. The system is believed to be unique. The treated effluent will then be pumped one mile for release into Gold Creek.

Sanitary sewage will be treated in a stabilization lagoon based on O.W.R.C. design parameters. The effluent from this lagoon will be equivalent in quality to effluents from municipally-operated secondary treatment plants and will join the mine effluent.

The mill has been designed to be in complete closed-circuit with the tailings area. The tailing from the mill will be sized, the coarse fraction being returned to the mine for use as sandfill. The fine fraction will be pumped to a tailings area where the solids will settle out. No effluent from the tailings area will be released; instead it will be used as process water in the operations.

Presto!

Nickel seems to have magical properties when it is joined with other metals. Both nickel and low-carbon steel have tensile strengths of about 50,000 pounds per square inch. However, when nickel is added to steel in amounts ranging to 20 per cent, the results is an alloy with strengths to 350,000 psi after proper alloying and heat treatment.

Enjoy Their Beauty Spot

A lovely garden in which roses occupy a large share of the spotlight is a constant pleasure to Mr. and Mrs. Cliff Briggs of Waverly Street, Creighton. They are seen here enjoying a quiet time with their daughters Rachelle and Deborah.



Four Unforgettable Minutes of Fear and Fury



Partial view of Lively, where the tornado slashed a quarter-mile swathe across the town.



Lloyd Prowse's house on 11th



House trailer was flipped over on top of a garage in which a construction worker had sought shelter; he was killed.



Home of Blanchard Bell on 9th Avenue was one of six in town so badly wrecked by the storm they had to be demolished.



Walls were flattened in heavy damage to \$1¼-million extension under construction at Lively High School.



Back yards were left a mess of shattered garages and other debris. A brick chimney blew off a house and crushed a car.



The storm tore down 2,500 feet of the trestle carrying the pyrrhotite pipeline to Inco's iron ore plant over the railroad tracks and Highway 17, scattering pipes and twisted ironwork. A minute later the CPR diesel dayliner, brakes screaming, crashed into fallen pipes and overturned. At the copper refinery coal plant (right) 1,500 window panes were smashed.





Avenue was twisted 90 degrees and driven back off its foundations.



The clubhouse at the Lively Golf Club was completely destroyed and the pretty course strewn with up-rooted full-grown trees.



Wes Davey's family were about to move into their new home. "We're lucky it wasn't ready a few days sooner," said Wes.



Community Spirit Conquers Disaster

A maverick storm of hurricane force, with winds estimated up to 100 miles an hour, struck savagely at the Sudbury area about 8.40 a.m. August 20, and during the four or five minutes of its peak caused three deaths and over \$5-million in damage.

In ominous darkness and torrential rain the totally unpredicted storm tore at sections of Lively and Sudbury, its winds of both horizontal and somewhat vertical direction smashing with explosive power.

About 350 people were injured, several critically, but it was a miracle that there was not a greater toll of life. An hour later many children would have been in the streets and playgrounds, the air filled with lethal flying debris.

Hospital emergency wards were crowded and doctors and nurses worked throughout the day and night. Blood donors flocked to answer the Red Cross radio appeal within minutes.

Huge Hydro Breakdown

Extra crews were flown in from as far distant as Orillia and Sault Ste. Marie to help cope with the biggest Hydro breakdown ever in northern Ontario.

Bell said more than 3,000 telephones were knocked out, and 42,600 feet of cable and 120 poles had to be replaced.

Forty boxcars were overturned on the CPR tracks. In the industrial area near Kelly Lake some warehouses were devastated. Both sidewalls of a big new church were blown in. Roofs were lifted from houses and hurled unbelievable distances. In one home where the windows were smashed a pair of scissors was picked up and driven full length into a wall stud. Hundreds of cars had all windows crushed and many were flipped over or struck by heavy flying objects.

At Inco mines, mills, smelters and refineries the production facilities were substantially unaffected. Approximately one day's production, 1 million pounds of nickel and 1,000,000 pounds of copper, was lost due to power failures. Building damage was mostly confined to the copper refinery, where about 5,000 panes of window and monitor glass were shattered and sections of walls and roofs ripped off. Temporary repairs were swiftly carried out. The 2,500-foot break in the pipeline to the iron ore plant, when the trestle was knocked down, was relaid underground in a minimum of time.

Lively An Inspiration

The spirit of community helpfulness in time of disaster was brought to focus in the little town of Lively, where it was an inspiration to see. About 60 homes were heavily damaged, another 250 less so. But there was no wringing of hands. Once the shock wore off, everybody, adult

and youth alike, just pitched right in to help himself and his neighbor clean up the mess. Thousands of yards of polyethylene gradually covered gaping windows and gouged roofs in the half-mile strip of the storm.

Mayor Len Turner said it in (Continued on Page 19)

500 Housing Units In Lively Project

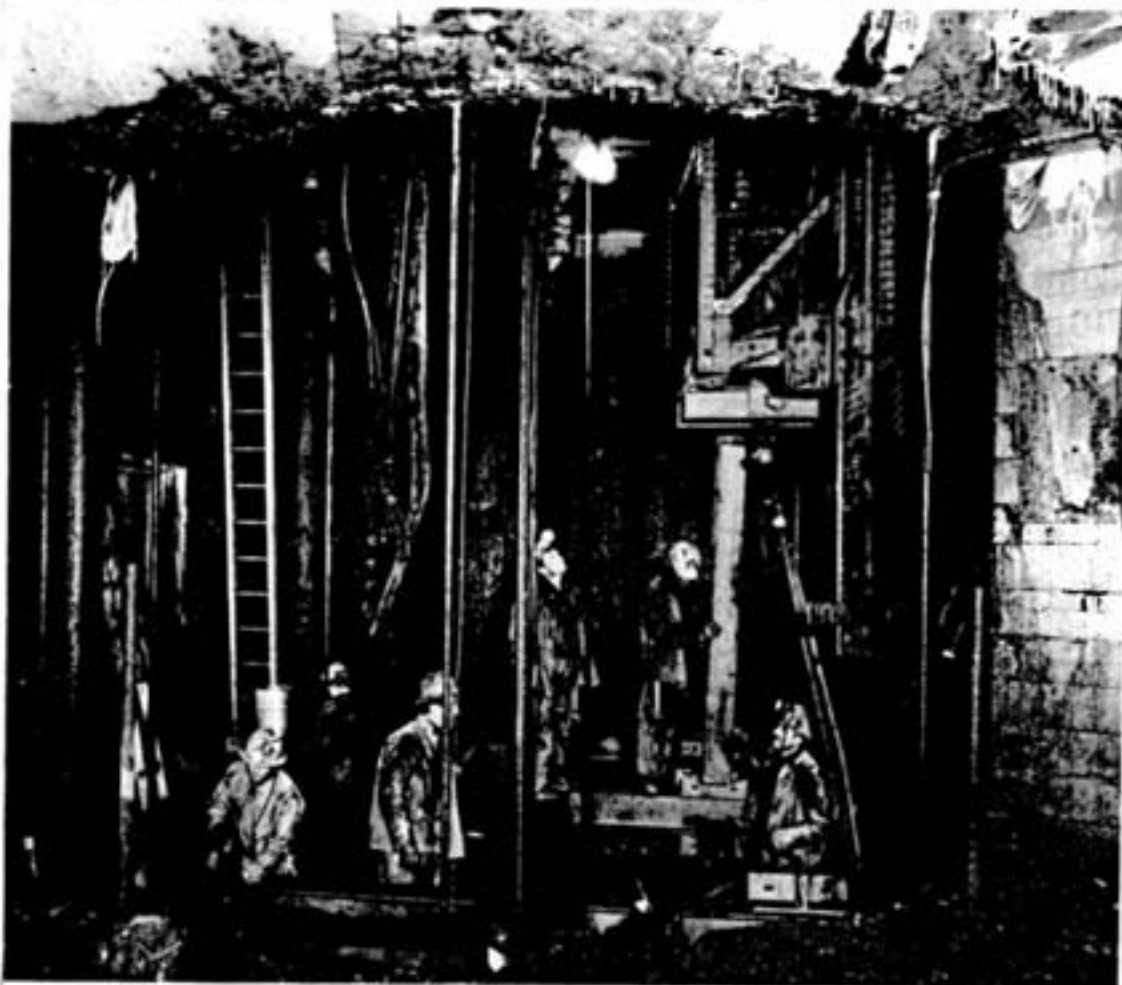
Work has already begun on the 500-unit housing development recently announced for the Town of Lively. It will include 130 units of high-rise apartments and, in a separate subdivision, 100 units of low-rise apartments and 84 three- and four-bedroom townhouses. J. A. Pigott, vice president, International Nickel, stated. Other units in the subdivision will consist of semi-detached and detached homes. First to be built are the 130-unit apartment building and 55 townhouses.

It will be possible for individuals earning less than \$8,000 per year to rent or purchase 60% of the units contemplated. Down payments on such units can be as low as \$900 to a single mortgage.

International Nickel is making serviced lots available to a private developer for this construction program. The lots will be sold to the individual homeowner at a cost that will represent on average approximately one half of the cost to the company of providing the services to the lot. Services include storm sewers, sanitary sewers, water, paved roads and sidewalks on one side of the street. It is not expected that any vacant lots in the subdivision will be available for sale. Central Mortgage and Housing Corporation is insuring the mortgages.

International Nickel is making certain necessary changes in the municipally-owned sewage plant, to provide service for the increased population and to comply with Ontario Water Resources Commission requirements.

The new development is another constructive step by the Company in its efforts to stimulate the private construction of good quality housing that can be purchased by the average working man in the area.

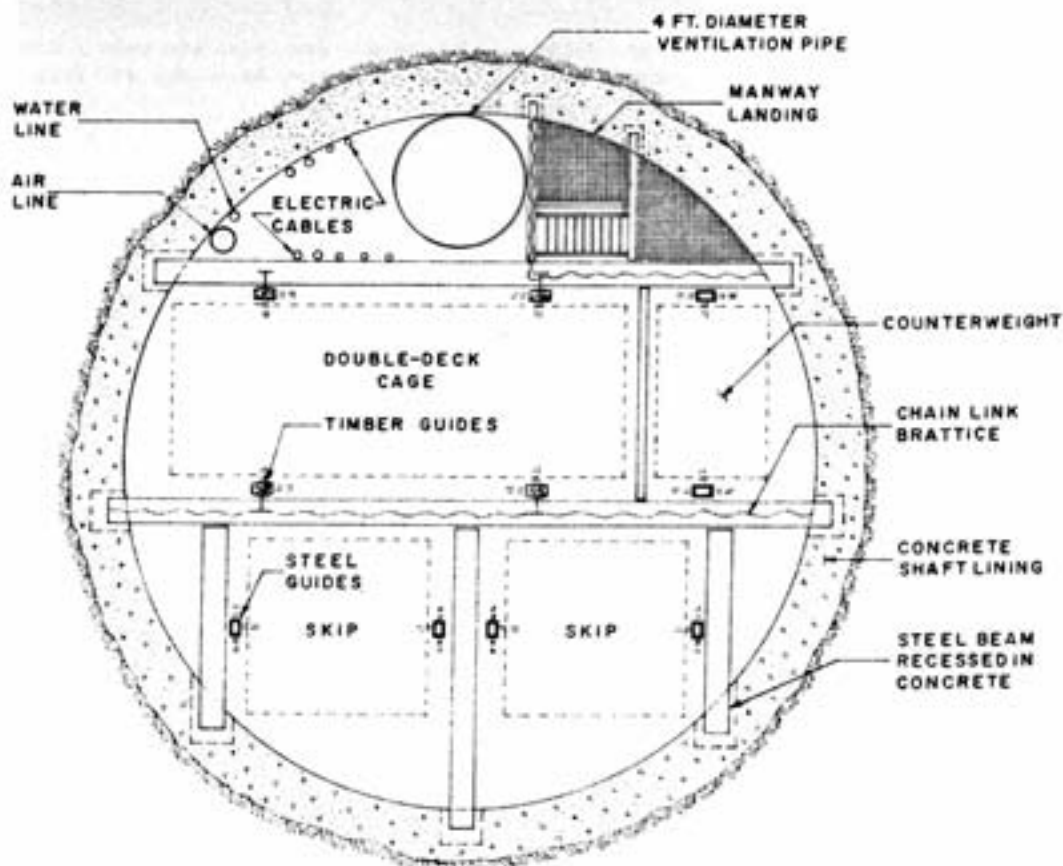


Action on the Jig

This general view, taken from a level station of Creighton's new No. 9 shaft, shows a crew busy on the equipping jig, the rigid pattern by which the various components of a steel set are assembled in precisely aligned positions for permanent installation. One of the four temporary equipping cages is seen lowering a 30-ft. section of a steel guide, which is being directed by shaft leader Jaques Dube into a guidance box on the jig. Shaftman George Pason stands ready with a wrench to bolt the guide to the cross beam after it has been shimmed into perfect alignment. The sections of tubular steel guides were consecutively numbered as they came off the rolling mill, for the greatest possible accuracy of fit. The equipping jig, a brilliant innovation in shaft engineering, is mounted on the top deck of the working stage which was used in sinking Creighton No. 9.

Shaft Layout Plan

Here's a plan showing the arrangement of the various installations in the circular concrete-lined Creighton No. 9 shaft, which is 21 feet in diameter and 7,137 feet deep. The heavy steel beams are cemented into recesses left in the concrete walls when the shaft was being sunk. A chain-link brattice the full depth of the shaft separates the skip and cage compartments, and also curtains off the manway. The double-deck cage, operating in balance with a counterweight, will carry 96 men.



Close Accuracy Vital In Installing 2,500 Tons of Shaft Steel

With all eyes turned on the spectacular rise of the world's highest chimney at Copper Cliff, there's been a tendency to forget about the big job that's going on in the western hemisphere's deepest continuous mine shaft at Creighton.

Matching the slip-form technique used in swiftly erecting the 1,250-foot super-stack — for engineering innovation and accuracy — is the system originated by Shaft Sinkers-Redpath for equipping the 7,137-foot Creighton No. 9 with the 2,500 tons of steel required to transform it from a huge concrete-lined circular hole in the ground into a modern mining facility.

Working to Tigh Tolerance

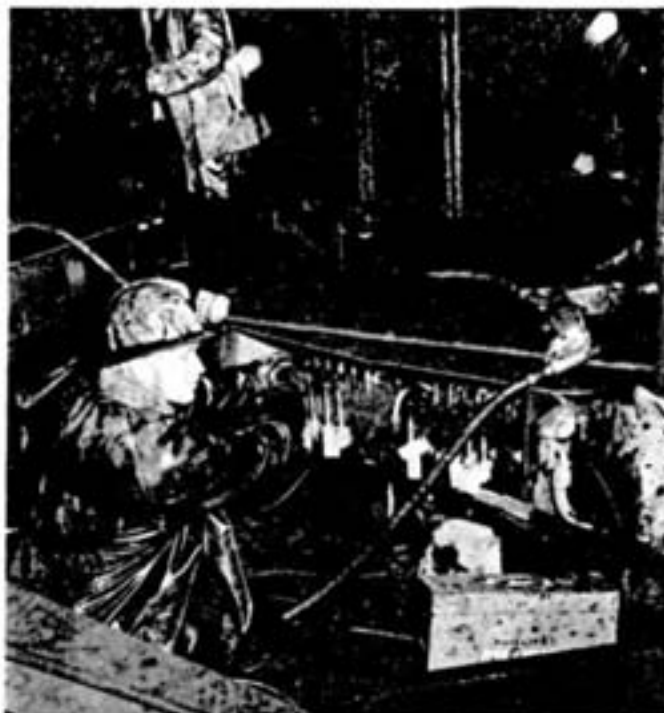
What's involved in "equipping" the shaft?

"Well, to put it briefly," says project manager Al Walsh, "we have to instal a complete steel set — what you might call a framework I suppose — every 15 feet from top to bottom.

"A set is made up of five 8x10-inch wide-flanged steel beams and dividers, ranging in length from 5 to 22 feet, to form the six compartments in the shaft — one compartment for the cage, two for the skips, and one each for the counterweight, manway, and services.

"Then we have to put in the six steel guides on which the ore skips and the counterweight will travel up and down, and the four timber guides for the man cage. We also put up chain-link brattice panels between the cage and skip compartments, and around the manway.

"And of course as we reach each level of the mine we have to instal the permanent electric cables that will operate the hoisting signals, telephone and pump controls, as well as skip controls at the three loading pockets and the main power supply. This adds up to a total of over 60,000



14 Cylinders in Hydraulic System

Shaft leader Teuvo Landin is at the console which controls the 14 hydraulic cylinders used to position the 6-ton equipping jig in perfect alignment both horizontally and vertically. Shaftmen are stationed at the calibrated tapes and the plumb lines to direct the movement of the jig when it is being positioned. The steel set assembled piece by piece on the rigid jig is thus placed in exact relation to the shaft.

feet of heavily armored cable transmitting power as high as 13,000 volts."

What Al Walsh doesn't mention, in his quiet professional equanimity, is the extreme accuracy with which the job must be done. In installing the 474 complete sets, each weighing about 5 tons, he and his men must work toward a tolerance of 1/16th of an inch.

Invented Better Method

It was obvious to the Shaft Sinkers-Redpath team, on which former project manager Bob

Dengler continues to function although now working out of the company's offices at North Bay, that if the record-depth shaft was to be equipped on schedule a better system would have to be developed than the conventional method of separately aligning every member of a set.

So out in the yard at the instigation of shaft captain Pete Graham, they built a 5-foot duplicate section of the shaft, 21 feet in diameter inside the concrete lining, and proceeded to instal a

(Continued on Page 20)



Fixing Skip Guides Exactly

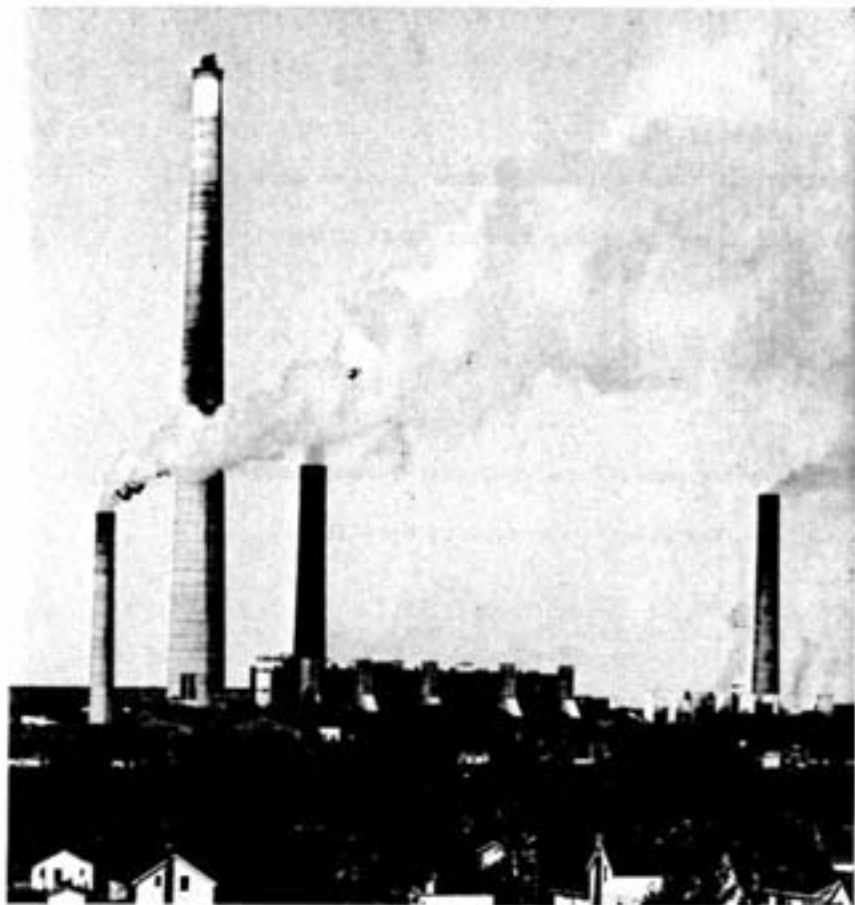
In this closeup, shaftman George Passon is placing shims to tighten a section of skip guide into exact position in the guidance box before it is bolted to the steel beam. Part of one of the hydraulic cylinders used in vertical adjustment of the equipping jig can be seen at lower right.



Cementing the Beams

Brought down from surface in one of the temporary equipping cages, quick-set concrete is poured into a recess in the shaft wall to cement the end of a steel beam in place. Shaftman Esko Yla-outinen is handling the pouring hose.

The New Smelter Skyline at Copper Cliff



The familiar three chimneys are dwarfed by their giant new brother which eventually will take over their jobs as an anti-pollution measure, as well as usurping the prestige two of them enjoyed for many years as tallest in the Commonwealth. Big Brother, of course, is a world champion, and it may be some consolation to the old veterans to be associating in such high-class company.

Installing 2,000-Ton Liner Next Major Stage in Stack

Ahead of schedule by one full week, the final cubic yard of concrete required to top-off the 1,250-foot shell of Inco's super-stack was poured into the sliding forms at 8:03 p.m. on August 21.

Last of 21,564 cubic yards placed by Canadian Kellogg Company Ltd. during the 173 days since the first pour on March 21, the final yard took five minutes to travel from the base to the top of the slipforms.

The now familiar central tower and platform that has been visible both night and day during construction, inched upward by 52 climbing yokes, is now supported by steel cables from 52 steel stirrups embedded in the inside concrete face, 8 feet 6 inches below the top of concrete. It is steadied by six horizontal cables anchored to the stack top.

Dismantling Started

Their big job done, the yokes and slip-forms are now being lowered via the outside of the stack by the twin electric hoists and jibs located on the stack-top platform. Following completion of this operation, the twin hoists and jibs will be dismantled and lowered through the inside of the

stack by the ground-based hoist that was used to raise concrete to the slip-forms.

Since the topping off, the work crew has been reduced to 30 from 50, and working hours from a round-the-clock operation to a day shift only.

Kellogg will soon be installing the top-to-bottom vertical inside steel ladder with rest platforms, platforms for servicing the aircraft warning lights circling the stack at eight levels, and the permanent lightning arresters.

Liner in Huge Sections

Taking over from the central tower, a new steel structure will be installed on top of the stack by Dominion Bridge Company to hoist the sections of the 2,000-ton steel stack liner. Hanging from the new structure, the liner will be assembled from the top down. Each section, prefabricated and insulated, is 100 feet long and 45 feet in diameter.

Man cage sheaves now supported on the central tower will be relocated on the new structure, and the cage will operate inside the liner until it is complete.

Once the new hoisting framework is in position, the central

tower and platform, together with the existing concrete hoist sheaves, will be dismantled and lowered to the ground.

No Damage by Storm

There were 25 men aloft on the stack top when the August 20 storm's 90-mile an hour winds struck during the morning shift change. Undaunted by their hair-raising experience, all men either remained on the job or returned on their next shift as scheduled. Due to good general safety practices, including lashing down all loose equipment and material, no injuries or losses occurred. Eyewitness reports on the amount of stack top movement during the blow were inclined to exaggeration. Design calculations indicate an expected deflection of between 18 and 28 inches during winds of 100 mph.

Stack gazers have no doubt wondered why the top 75 feet is lighter in color than the lower section. A white undercoat of acrylic curing compound has been applied to protect the concrete. Two finishing coats remain to be put on.

Stainless Helps Keep Meat Fresh

Because they are non-porous and easy to clean, nickel stainless steel platters and preparation equipment in the meat departments of supermarkets help reduce bacteria that cause meat discoloration.

On the Cover

Feeling "on top of the world" in more ways than one, Inco and Canadian Kellogg Company engineers exchange congratulations in an informal topping-off after the last bucket of concrete was poured in Copper Cliff's 1,250-foot super-stack.

On deck at the world's highest chimney, Fred Svenson, Inco assistant chief engineer (construction), shakes hands with Zeddie Methany, Kellogg's job superintendent; standing on the right are shift supervisors Bill Black and Al Johnson. The honor of raising the Canadian flag at the end of one of the central construction tower jibs went to Kellogg project engineer Doug Sumner.

Don Forrest Had 78 In Inco Golf Tourney

Don Forrest, a research technician in the J. Roy Gordon Research Laboratory at Sheridan Park, turned in the second best score in the Inco golf tournament at Idylwyde on August 8.

Playing the course for the first time, Don rattled off a 42-36—



78, taking a back seat only to Sean Callahan of Creighton with 77. Through a regrettable oversight in the confusion caused by the storm that drowned out the tourney in mid-afternoon, Don's fine performance was not posted. He has since received a dozen golf balls as his prize.

Sheridan Park's lone entrant in the big Inco event, Don is a 3-handicap player who entered golfing's hall of fame on April 8 when he scored a hole in one with his three wood on the 282-yard dog-leg 15th of the Beddow course at Hamilton, going on to card a 68 on the par-70 layout.

Don's prize for this feat was a two-week all-expense trip to Hawaii for two, which fitted in very nicely with his honeymoon plans. He was married on September 12 to Dianne Peatfield and off they went to Waikiki.

Happy Life For 500 at Guide Camp

"It's been a great year for flies," was the candid comment of Paddy Bondy of Garson, one of the popular and efficient 1970 camp chiefs at the Girl Guide Association's lovely permanent campsite at Sudbury's MacFarlane Lake, but the pesky bugs were cheerfully endured. Blessed with glorious weather during July and August, about 500 Brownies and Guides enjoyed themselves to the hilt in organized instruction in swimming, lifesaving, handicraft, woodlore, tenting, cooking and other activities in the great outdoors. They had sleep-outs under the stars and nightly sing-songs around the campfire.

Five district Girl Guide divisions annually use the camp facilities, attending from Leavack on the north, Lively and Markstay in the east and the west, and Burwash in the south.

The girls in the accompanying pictures were among 80 from the Wildwood division attending a two-week camp at Hazelmere, and hail from Lively, Copper Cliff, Dowling, Onaping and Leavack.

PUTTING THE finishing touches to a nail-less but sturdy wash rack are mallet-wielding Rosemary McMullin knot-expert Mary-Lou Wuksinic. The two girls were Sudbury district representatives in a group of 30 selected from across Canada to attend "Carousel '70" a Jubilee celebration held in Saskatchewan to mark the 70th year of Girl Guiding in Canada.



THE DAILY SUNRISE FLAG-BREAK CEREMONY.



MORNING CHORES for these six Pioneers include airing their bed rolls and bell tent, laundry and replenishing their wood pile. Log splitter is Cathy Fleming, behind her are Rae-Ellen Jacobs, Sandra McCann, Janet Irving, Jane Skirda and Karen White.



SAMMY THE GARTER SNAKE made himself available for this impromptu nature study session. Note the contrasts in feminine reaction to the presence of the volunteer viper. In the group are Laurie Rowe, Helene Bergeron, camp chief Paddy Bondy, Jennifer Zeebregts and Cindy Laberge.



FRESH AIR and constant activity generate hearty appetites. Girls in this cook-pit detail readying (and sampling) mouth-watering corn on the cob for lunch are Cheryl Rowe, Suzanne Desabrais, Helen Bragg and Mary Miles.



THE WOODED COUNTRYSIDE around the campsite offers ample opportunity for nature study. Discussing a display they have assembled are Louise Hickey, Holly Chirka, Elaine Derouin, Debra Moore, Margaret Miles and Debra Menard.

THE DAILY DIP in the cool clear water of MacFarlane Lake for swimming and life-saving lessons is enjoyed by all. Swimming toward instructors Brenda Donaldson and Pat Lind are Debbie Oram and Lynne Venne.



Retired on Inco Pension

WITH 20 OR MORE YEARS OF SERVICE

HAROLD DEIGHTON

Harold Deighton remembers 1936 and for special reasons: that was the year he married a Walford girl, Nellie Gamble, in Sudbury, and it was also the year that Inco



Mr. and Mrs. Deighton

instituted paid vacations for its hourly work force.

He was born in Sturgeon Falls and joined the Company in 1935 at Frood mine, transferring in 1942 to Copper Cliff as a carpenter. He said one of the most interesting jobs he worked on was the periodical rebuilding of the flash furnace roof.

Harold plans to stay in Sudbury and make fuller use of the family cottage on Fairbank Lake, which his three children and seven grandchildren think is a great place to visit Grandpa and Grandma.

Prior to becoming an Incoite, Harold did some gold-mining at Kirkland Lake and then worked on the construction of the copper refinery at Copper Cliff.

GERARD ST. PIERRE

The effects of a fall from a ladder 10 years ago have finally sidelined Gerard St. Pierre on disability pension. Four bouts of sur-



Mr. and Mrs. St. Pierre

gery failed to control the spinal infection that resulted from his original injury.

He started with the Company in 1946 after a three-year hitch in the Canadian Army, and worked with the miscellaneous fitters in the Copper Cliff smelter until 1968, when he became a 1st class maintenance mechanic.

Gerard was born in Hull, Quebec, and took a Chelmsford girl, Delia Daoust, as his bride in 1947. They have a family of four girls and two boys. As much as his back condition will permit, Gerard intends to continue beautifying the property at his Chelmsford home. He hopes he can later

handle a job as a security guard. Fishing for bass and pickerel at the French River is one of his favorite pastimes.

ALDEGE JEANVEAU

Aldege Jeanveau was born in Estaire and is still working his farm there, "full time" now since his disability retirement. He started with the Company in 1949, working first in the Smelter at Copper Cliff, and then transferring to Frood where he was a chute blaster.

Six sons and two daughters have been born to Aldege and Jeanne d'Arc Jeanveau, whom he married at Estaire in 1945. Mrs. Jeanveau died in 1968.

One son, Jean-Paul, is following in his father's footsteps as a chute blaster at Stobie. Although a serious chest condition has slowed him down, Aldege is still the overseer at the family farm, where he gets lots of help from three younger sons raising their 50 head of beef cattle.

ALFRED ROBERGE

"I want to thank a company that treated me well," said Alfred Roberge on his retirement from Inco.

Alfred started at Creighton in 1941, transferring eight years later to Stobie, where, with the excep-



Mr. and Mrs. Roberge

tion of a two-year transfer to Frood, he worked the balance of his service with the Company. He was a timberman on construction for the last five years.

Amanda Dubois of Hanmer became his bride in Sudbury in 1939. Alfred's favorite pastimes are vegetable gardening and home renovation. Right now, building a recreation room in his Sudbury home is keeping him busy.

EMIL KANGAS

Emil Kangas has nickel industry service dating back to 1929, the year he arrived in Sudbury from Finland. Originally he worked at the Mond extension of the present Frood mine.

Laid off in 1931, he went to Kirkland Lake and was employed in a gold mine for 11 years. He

returned to the Company in 1947, this time at the Copper Cliff smelter's nickel converters, where



Mr. and Mrs. Kangas

he was a puncher throughout his service.

His marriage took place at Sudbury in 1932 to a Finnish-Canadian girl, Alice Gokela. Their daughter Helen is married to Le-vack mine divisional foreman Cal Kean. Bothered occasionally by arthritis, Emil plans to relax and "take things as they come" at his Sudbury home.

JOE LEMAY

Joe Lemay has retired from the Company with 22 years of service, all at the Copper Cliff



Mr. and Mrs. Lemay

smelter, where he was a flue cleaner on the nickel reverbs for the last 12 years.

He was born at Rockland, near Ottawa; Eliane Pharand, who became his bride at Ottawa in 1948, grew up in Hull. Of their three children, two sons work for Inco, Rheal at the iron ore recovery plant, and Gilles at the Copper Cliff smelter.

Enjoying excellent health, Joe plans to travel frequently to the Ottawa Valley to visit his relatives and old friends. Prior to coming to Inco, Joe worked for 20 years in the Ottawa area, winters in the lumber camps and summers as a house builder.

IWAN POLUTRANKO

Iwan Polutranko has retired on a disability pension as a result



Mr. and Mrs. Polutranko

of a 1967 injury. Active in the past as a fisherman, and as a bantam hockey coach in the Hanmer area, he also played as a star left-winger for the Ukrainian Soccer Club in Sudbury.

Iwan was born in Biloboznycia in the Western Ukraine and came to Canada in 1947. Two years later he became an Incoite, starting at Creighton No. 5 shaft. In 1954, he transferred to Garson, where he worked his last six years as a stope leader.

He married Helen Gack in 1952; they have one son, and reside in Sudbury.

Iwan does a lot of reading, particularly history books on the old American west and the Ukraine. For a little variety, he does some leathercraft, a hobby he learned while convalescing.

D. R. MEREDITH

A graduate of the University of Toronto in geology and mineralogy in 1929, Don Meredith was a teacher at Hamilton College, Clinton, N.Y., before starting with International Nickel in 1934.

He was on the staff of the Creighton geological department until 1937, and was then transferred to Garson where he later became mine geologist. He was



Don Meredith thanks his exploration department colleagues for their gift and good wishes.

engaged at intervals in exploration work at other mines in the area and at Thompson.

In 1962 he came in to the exploration department at Copper Cliff, where he remained on special projects until his recent retirement on full service pension.

He was born in Toronto, and it was there that his marriage took place in 1938 to Margaret Moffat. He has one daughter.

At a meeting of the Foot & Hangingwall Society, he was given a warm sendoff with "Paddy" Laine of the exploration department at Toronto as speaker and was presented with a set of golf clubs. Jack Chalmers of Garson made the presentation. His other hobby is oil painting. He will continue to reside in Sudbury.

Crushing Plant Pals Farewell Tom Pogue



Making the rounds on his last shift, retiring crushing plant operator Tom Pogue received a watch and purse from his workmates. Doing the honors in the presentation was E. H. "Cappy" Capstick (left), assistant mill superintendent. Tom worked 27 of his 28 Company years at the Copper Cliff crushing plant.

TOM POGUE

Coming east to Sioux Lookout from his home in Winnipeg, Tom Pogue mined for gold and worked in a sawmill for four years. He joined the Company in 1942, initially at Creighton No. 5 shaft but transferring a year later to the crushing plant at Copper Cliff where he remained for the balance of his service.



Mrs. Pogue

Mary Ann Carter, a Sioux Lookout girl, became Mrs. Pogue in her home town in 1939. Of their two children, Don is in his third year of an electrical apprenticeship at Copper Cliff. The family has a summer cottage on Fairbank Lake, and a group of their friends there presented them with a movie projector.

Mr. and Mrs. Pogue intend spending the coming winter in British Columbia, to which they may retire.

MIKE BOHUSH

Mike Bohush has no trouble remembering when he started with the Company, for 1928 was the year of the cave-in at Mond



Mr. and Mrs. Bohush

Nickel's Worthington mine. Mike was living in Worthington at the time, having emigrated with his mother from Poland in 1923 to join his father.

Mike broke his service twice but returned permanently to the Company in 1945 at Creighton, working throughout the mine as a pipelitter.

In 1955, he married a Mattawa girl, Ida Mae Mackay, in Sudbury, where they reside.

Although now severely curtail-

ed in his activities by emphysema and a heart condition, Mike was once noted in the area as a long-distance swimmer, having swum the length of Ramsey Lake many times. On July 5, 1969, he made his 50th blood donation to the Sudbury Red Cross; counting his unrecorded wartime donations, he feels the total figure would be well over 100.

Mike plans to "stay out of trouble" by utilizing a skill he developed while convalescing from an emphysema attack. Using wooden coffee-stir sticks, he assembles lamp-ashtray units. One floor lamp took one month to complete and consisted of 11,000 sticks. Mike enjoys his new hobby and has no difficulty finding buyers for his handicraft.

LAURI RAJALA

When Lauri Rajala transferred to Garson in 1955, eight years after starting with the Company at Frood, he was a timberman on 2400 level. Between the time



Lauri Rajala

of his 1929 immigration to Canada from Kurikka, Finland and his 1947 Inco start, he had worked a couple of winters cutting timber near Wawa, and had spent three discouragingly lean years as a tailor in Sudbury.

Lauri has retired "in very good health" on early service pension, and recently returned to his Garson home from a trip to Finland with his wife, the former Mrs. Ellen Mannista, whom he married in Sudbury in 1961. Lauri has a set of 12-year-old twin boys by his wife's former marriage.

Lauri likes to hunt deer and moose and go fishing for lake trout in the Wahnapiet area. He always has a nice flower garden.

STEVE FADOCK

When Steve Fadock began work for the Company in 1935, he wasn't setting any precedent in the Fadock family. His father, Mike, had come to Canada in



Mr. and Mrs. Fadock

1911 from the Ukraine and worked at the Crean Hill mine, which had been opened by the Canadian Copper Company in 1906.

Steve followed him to this country in 1923, and arrived at Sudbury in 1929 to work for Fraser-Brace as a carpenter on the great plant expansion at Copper Cliff. He joined Inco in 1935 on the nickel reverber department and worked on the roasters until 1957. Then he became an operator on the cottrell dust precipitators, the job he held until his retirement on full service pension.

Steve married Jean Campbell in Sudbury in 1952; she was born in Detroit, but moved to Sudbury as a child. They have two sons.

Steve is enjoying excellent health and busies himself with renovations and landscaping at his Haig Street home in Sudbury. Hockey is his favorite television fare.

FRED STRONG

Fred Strong was born in Copper Cliff a very few years after the turn of the century. He remembers getting the dickens once in his boyhood days from a man



Fred Strong

named Saunders, who used to deliver water in a horse-drawn wagon to the houses from a spring behind the present Engineers' Club on Park Street. One day little Freddie turned on the barrel tap just as Mr. Saunders was leaving the spring with a full barrel. When he finally discovered the trick, Mr. Saunders was not at all pleased.

Fred started with the Company in 1930 in the Copper Cliff mill, and in 1938 became chief mill sampler, the job he held until retirement. Before coming to Inco he had worked eight years as an electroplater in southern Ontario, which led to his present hobby — the plating of baby shoes.

Good times are had when Fred with his alto sax gets together for a jam session with sons George on drums and Gerald on tenor sax.

Fred married a former Espanola girl, Josephine Kehoes. They have a family of seven children and 18 grandchildren. Son George works in the Copper Cliff mill and two daughters are married to Inco employees: Edith is the wife of Harry (Mickey) Thompson, a planned maintenance foreman at the Copper Cliff mill, and Diane is married

to 2nd class maintenance mechanic John Bossey.

Fred and his wife, who live in Sudbury, are looking forward to a European tour next summer.

JACK RODDA

A picturesque old stone schoolhouse about five miles west of Sundridge, Ontario, is the retirement address of Mr. and Mrs. Jack Rodda of Levack, who pur-



Mr. and Mrs. Rodda

chased it four years ago and have gradually remodelled the interior into a very attractive and cosy home, complete with a sauna in the basement.

The Rodda family came to Sudbury from Lake Linden, Michigan in 1913 when Jack was about five years old.

As a youth he served his apprenticeship as a baker under Edward Howlett on Edmund Street.

He started his Inco career in 1928 at Frood mine as a steel-sharpener helper, and in 1949 was transferred to Levack where he became a maintenance mechanic.

His marriage to Toini Sandberg took place in Sudbury in 1933. They have one son.

His chief interests now, he says, are gardening part of his 1½ acres, fishing, hunting and "enjoying the Triangle".

WILFRED LECLAIR

Pity the fish in the Ministic Lake area, Wilfred Leclair is going to do full-time battle with them, now that he has retired on pension. Wilf has a summer cottage on Ministic and nothing delights him more than wetting a



Mr. and Mrs. Leclair

line for the speckled, lake trout, pickerel or bass that can all be found within easy reach of his cottage headquarters.

Born in Eganville, south of Pembroke, Ontario, Wilf started with Mond Nickel at Coniston in 1923. Laid off in 1929, he joined Inco in 1933, again at Coniston, in the transportation department, where he remained throughout his service.

Married to a Chapleau girl, Alice Michaud, in her home town in 1937, Wilfred is the father of six children and "grandpa" to

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Retired on Inco Pension

WITH 20 OR MORE YEARS OF SERVICE

(Continued from Page 17)

eight. Of his own six children, Margaret is married to Creighton 1st class welder Joe Melanson; two of his sons work at Creighton No. 5 shaft — Roger is an underground car repairman, and Jean-Paul is a shift boss on 4600 level. Will's future plans include residing in Sudbury, where he is finishing a second house, and snowmobiling at Ministic, on the way (he hopes) to a fish-fry.

ALDO BARDEGGIA

Aldo Bardeggia distinguished himself in two big ways as an Inco employee: he retired with 40 years' service, and twice he reaped \$1,000 awards from the Company's employee suggestion plan.



Aldo Bardeggia

Aldo first started with Inco in 1929 at Frood, two years after he came to Canada from Urbino in central Italy. He broke his service but rejoined in 1930 at the Copper Cliff smelter blacksmith shop, where he remained throughout his long service.

He was married to Lalla Galanti in Italy in 1929, who died suddenly the following year. He remarried in 1931, taking Margaret Vampa as his bride in Sudbury. Of the six Bardeggia children, Laurie is a senior draftsman with the Inco general engineering department at Copper Cliff, Mary is the wife of Lino Antonazzi, a 1st class machinist at Copper Cliff, and Elia is married to Louis Sartori, a 2nd class maintenance mechanic also at Copper Cliff.

Aldo, who has a summer cottage on Hannah Lake, near Espanola, takes great pride in his 12 grandchildren. On his retirement his family presented him and his wife with airline tickets for a holiday in Italy.

PERCY McLACHLAN

Percy McLachlan worked with his blacksmith father from an early age until he was 20. Born



Mr. and Mrs. McLachlan

at Commanda in the Parry Sound district, he became an Incoite in 1936, working his first five years with the Company in the Copper Cliff smelter. In 1941, he transferred to Frood-Stobie, where he

worked at the open pit and then for 14 years at No. 3 shaft as a welder.

Blanche Campbell became Percy's wife at Copper Cliff in 1937; they have two children and five grandchildren.

The McLachlans, who reside in Sudbury, plan a trip to British Columbia this fall; one thing Percy particularly wants to watch is the epic voyage of the salmon up the rivers to spawn.

FRED SALIWONCHYK

"The old order changeth", as the saying goes, and Fred Saliwonchik's stepping down at Stobie is a case in point; Fred's



Mr. and Mrs. Saliwonchik

last day on the job marked his son Stanford's first day underground at the same mine.

Fred was born in the Ukraine and came to Canada as a teenager, settling with his parents on a farm near Brandon, Manitoba. Before coming to Inco in 1936, he worked for two years on construction of the last 108 miles of the CNR north to Churchill.

He started with the Company at Frood and transferred in 1953 to Stobie, where he was a construction leader on 1800 level.

A former North Battleford girl, Helen Lucyk, became Fred's bride in Sudbury, where they will continue to reside. They have two sons.

Fred enjoys pickerel fishing and vegetable gardening. He and his wife plan to travel to British Columbia, where Fred has relatives at Nanaimo.

ATTILIO FLOREANI

Attilio Floreani split his 40 years' service on the Coniston



Mr. and Mrs. Floreani

nickel converters between two jobs, the first 20 years punching and the last 20 years skimming.

Attilio had come from Udine, Italy to Coniston, and in 1927 the next year he started working for Mond Nickel Co., which merged with Inco in 1929.

In 1944 he was married at Fort

Erie to Olga Narduzzi, whose birthplace was near Attilio's home town in Italy, to which he plans a visit next year. One son and one daughter make up the Floreani family.

He is an ardent gardener and an expert wine-maker, as his friends gladly testify.

JOHN H. JOHNSON

John Johnson was born in Fargo, North Dakota, but came to Canada in 1919, settling in Big Beaver, Saskatchewan. He was a grain farmer for some 20 years



Mr. and Mrs. Johnson

but, after the hard times of the depression, came East and eventually joined Inco in 1947 on the nickel converters at the Copper Cliff smelter, where he was a puncher. He was married at Copper Cliff in 1955 to Erica Schuster, who came from Heidelberg, Germany.

At their Copper Cliff home the Johnsons enjoy working on their vegetable garden; this year their strawberry crop went well over 40 quarts. Enjoying good health, John and his wife are considering a trip to Germany to visit relatives.

ROMAN WOLOSZCZUK

Roman Woloszczuk's locating in Sudbury was actually a dream come true. When he first arrived



Mr. and Mrs. Woloszczuk

in Sudbury in 1930 from the Ukraine, he was to have met his brother-in-law, but unfortunately, he had lost the address.

Short of money, he pushed on west to Prince Albert, Saskatchewan, and farmed as a hired hand at \$10 a month. One night, he dreamed his brother-in-law's address, wrote him, and soon was on his way to the nickel capital. He started with Inco at the copper refinery in 1934, and completed his service as a stripper in the tankhouse.

Roman married Patricia Radniak, also of the Ukraine, at Sudbury in 1940. Their son, Richard works at Copper Cliff as a clerk in the accounting department.

"BILL" BOYER

Anastase "Bill" Boyer joined the Company in 1939 at Levack mine near his Blezard Valley



Mr. and Mrs. Boyer

birthplace. He had grown up on the farm but decided the nickel industry suited him better for a lifetime career. After four years at Levack, Bill transferred to Murray and stayed there for the remainder of his service, working mostly as a loaderman underground, and residing in Sudbury.

Three children are the happy result of his 1942 marriage in Levack to Yvette Sabourin, a Sudbury girl. Although Bill is very interested in travel, he still must stay close to home while recuperating from a 1969 operation for a back condition.

Bill has two brothers who are with Inco: Napoleon is a trackman at Murray with 18 years' service, and Stobie motorman Oscar has 27 years.

WALTER ADAMS

The last time Walter Adams started to work for the Company was in 1940 at the Nairn Falls plant of Inco's Huronian power system west of Copper Cliff. The first of four times he started was



Mr. and Mrs. Adams

in 1914 as a youth at Levack, as a rockpicker for the Mond Nickel Company.

He remembers being part of a work crew that was pressed into a search for two gun-toting desperadoes who had held up Mond paymaster Harry Stephenson in a futile payroll robbery attempt on the way to Levack.

He was a shaft-sinker at the MacMillan mine near Espanola, then went north to the Hollinger gold fields for a year and drove mules on underground inclined shafts.

He worked for the Inco twice more for short periods, at Frood as a motorman and for George Robb building the hydro line from Nairn to Wabegashik, before returning permanently to the Company as a floorman at the Nairn plant.

Walter married a Copper Cliff girl, Irene Whitford, in 1935. Five children and 10 grandchildren make their Nairn Centre home a happy place. Walter's health is good, and he plans to enjoy retirement fishing and hunting from his Lake Agnew cottage.



A STANDOUT OF THE SOCCER SEASON was the exhibition match between Sudbury United and the polished Munichs, a touring team from Munich, West Germany. In this action shot United players left to right (in striped jerseys), are right fullback Emmanuel Mba, inside left Bill Turner, left fullback Jim Thompson, and centre half Roland Weber. The Munich team won the game 3-1, but Sudbury gave an excellent account of themselves, with Derek Parmley getting the United goal.



SUDBURY UNITED star centre forward Ferruccio Deni, shown taking a "throw-in", is a hot contestant in the soccer league's scoring race with nine goals, one less than Ray Korkiala, centre forward of Polish White Eagles. Ferruccio is a 2nd class mechanic at Copper Cliff, Ray was a summer student at the Froid-Stobie personnel office.

Nobody Kicking Except the Players in Soccer Circles

The official classification of the Sudbury Soccer Association's playing status is amateur, but nonetheless, soccer fans of the Nickel Capital have been treated to another summer's entertainment of often professional calibre by the league's seven teams. Nobody is kicking but the players.

Executive members of the association are: president Frank Musico, vice-president Angus MacDonald, treasurer Julius Dubis and secretary George MacDonald. John Ward is referee-in-chief of the league's seven arbiters, while Greg Pierce keeps track of statistics.

There are 150 registered players on the seven teams, which in order of standing at press time were: Cleanol Hawks, Polish White Eagles, Sudbury Shamrocks, Sudbury United, Croatian Adria, Tridents, and Ebony United.

Cleanol Hawks have good credentials for their first-place with an all-win record in the five games they have played so far.

White Eagles are holding down a very close second place although the Hawks have a game in hand. Each team plays each other twice in the schedule that runs from June through October. The team finishing first at the end of the regular season wins the Anderson cup, a trophy offered for local soccer competition since 1928. A post-season playoff is held between the four top teams to contest the Centennial cup.

Apart from the race for the Anderson cup, the league members also contest the McRae cup, often called the Charity cup. Gate proceeds from these games go into a fund to provide compensation to injured players.

At the two-day tournament on Labor Day week-end Polish White Eagles emerged victors while

Cleanol Hawks won the consolation round in the Labatt-sponsored affair.

The league's two top scoring aces as the season's end approaches are Ray Korkiala with 10 goals for the Polish White Eagles, and Sudbury United's Ferruccio Deni close behind with nine goals. Both men play centre forward for their respective team and both have been selected "Player of the Week" since the season began. Ray worked as a summer student at Froid-Stobie in the personnel department, while Ferruccio is a 2nd class maintenance mechanic on the Copper Cliff smelter's silica bins.

Ferruccio further distinguished himself by scoring four of his team's seven goals in a game against Ebony United.

Gianni D'Agostino has been a standout in goal for the Cleanol Hawks, racking up an impressive five shutouts in eight games played.

Joe Presta centre of Sudbury United who was voted outstanding sportsman in the 1969 season, works on the nickel converters at Copper Cliff smelter.

The league maintains affiliation with three outside governing bodies. The Ontario Soccer Association Council and the Canadian Soccer Football Association promote soccer and enforce standards of play in inter-league play, while the Ontario Soccer Referees Society co-ordinates rules enforcement and referee training.

Next year's loop may see teams from North Bay and Elliot Lake adding to the action at Queen's Athletic Field, Sudbury's only available soccer facility.

Epitaph on a pessimist's headstone: "I expected this, and here I am."

Community Spirit

(Continued from Page 11)

a statement of thanks to "the hundreds of people and dozens of organizations who helped us through a very trying time".

"We received help from everywhere. Loads of lumber, unrequested, were donated within hours and unloaded in the town. Heavy equipment contractors and operators drove in off the highway to offer their help. Bakeries supplied bread for sandwiches and milkmen were on the scene to provide the workers with a pleasant relief. Trucks with radios were left with us for days so we could establish a communications network and co-ordinate our efforts. The Salvation Army, always present when it counts, did an admirable job.

Ladies Were Wonderful

"And we all offer thanks to the ladies who made sandwiches and served hot coffee to tired workmen, and the ladies who served the hot meals, and all the others who without question did the many jobs so necessary in such a crisis.

"We wish to thank the army of Inco personnel, both general labor and skilled tradesmen, who volunteered to work in the town after putting in their eight hours at the plant or mine. We would especially like to thank International Nickel, which opened its warehouses for badly needed supplies, and provided 3,500 hot meals as well as workmen and staff personnel for clean-up and co-ordination.

"The people of the various public utilities and the police did an exemplary job. And the citizens of Lively were magnificent.

"The task before us now is that of rebuilding our community and making it lovely once again. As we do this, we will remember with warm hearts all those who helped and offered."

Dame Fortune Smiles on Port Colborne Employees

Inco nickel refinery employees have been prominent among the prize-winners in draws conducted at various recent events in their area, several of them held in conjunction with Port Colborne's Centennial celebrations.

Merle Noyes, the golfing great, picked off \$1,000 in a Centennial draw held by the local Canadian Legion, and Dominic Missett, the racehorse fancier, also won a cool "grand" in a St. Catharines draw.

Anton Sivec was the lucky winner of a Maverick car in the local Lions Club draw, and Bill Kantymir won a set of lawn furniture in a Wainfleet draw.

A pair of Inco men hit the jackpot in a church draw. Andrew Tomas collecting the first prize of \$1,000 and Dave Stremila the second prize of \$500.

Close Accuracy Vital

(Continued from Page 13)

complete set in it. Then they gradually devised a unique steel equipping jig, or permanent pattern, with which each component of the set could be positioned accurately when being installed in the shaft.

This jig was mounted on the top deck of the working stage used in the shaft sinking operations. The second deck was retained to accommodate the sheaves for the stage hoisting ropes, such gear as the hydraulic power rack, impact wrenches and chippers, and lines for compressed air, lighting, telephone and hoisting signals. The other two decks of the original stage were dismantled.

Accuracy by Hydraulics

In the procedure for installing each set, the stage is lowered 15 feet and jacked firmly against the stack walls by four hydraulic cylinders. The jig is then brought into vertical alignment to calibrated steel tapes hung from the bench marks established every 200 feet, these adjustments being carried out through the set of hydraulic cylinders on which the jig stands. With still another set of hydraulic cylinders the jig is then horizontally adjusted to the four plumb lines fixed at intervals of 2,000 feet from the top to the bottom of the shaft. All the hydraulic adjustments are made from a central console on the jig.

The various components of the set, which have been slung beneath four temporary equipping cages while the stage and jig are being aligned, are then lowered to the jig. The cages operate on the permanent guides now installed above in the skip, cage, and counterweight compartments. Each component is delivered by the cage closest to its final position.

First down are the steel beams. It took a good deal of trial and error to devise the safest and most efficient way of slinging these unwieldy members, the largest of which weigh 700 lbs. The ends

of the beams fit into pockets left in the concrete lining of the shaft when it was being sunk, and when they are correctly positioned and a final check made on alignment, they are cemented into place.

Installing the Guides

The 30-ft. guides and panels of chain-link brattice follow in turn. One of the many special features of the jig are the guidance boxes that lock the tubular steel guides in exact position while shims are installed and bolts tightened. The four cage guides, which are placed by the same method, are of heavy timber to allow the safety dogs to bite into them and stop the cage in the event of a hoisting failure.

The stage is operated by its own special hoist, as it was throughout the shaft sinking, but the four temporary equipping cages are operated by Creighton No. 9's own two big hoists, both of which have been installed in the huge permanent hoistroom.

The steel is now down 5,600 feet, and the target date for completion of equipping the shaft is late December. "The jig has certainly simplified and speeded up the job," Al Walsh says. "On a big day we handle the installation of five complete sets, along with the auxiliary work. As far as we know this is the first time a jig has ever been used for installing steel in a shaft."

Before equipping could commence, the upper 1,000 feet of the shaft had to be grouted to seal off points where surface water was seeping through the walls at joints in the concrete lining. Below 1,200 feet no seepage has been encountered.

Once installation of steel is done, completion of shaft station and loading pocket facilities will be started, and the permanent conveyances will be put into service.

In the meantime construction is proceeding of the crushing plant, collarhouse, changehouse and offices of Creighton No. 9's big permanent surface plant.

convenience of the trainees. An employee may attend the centre closest to his residence, but is encouraged to attend the centre closest to his mine or plant.

Classes will be attended during an employee's own time. He will be paid for half the number of hours spent in class up to a maximum of seven hours.

Lecture centres, together with class days and times are listed below. All classes start during the week of October 19 except at Espanola Legion Hall, where the starting date is November 16.

Courses consist of one a week except for Whitefish, Espanola, and Levack where there will be two per week. The schedule follows:

Inco Employees Club, Sudbury:
Monday 7-9 p.m., Tuesday 10

Cliff Highlanders on Inspection



DIMINUTIVE Cadet John McGill maintains a stern "attention" under the sharp-eyed scrutiny of Lieut.-Col. William Becket, commanding officer of the Irish Regiment, Sudbury, during the 53rd annual inspection of Copper Cliff Highland Cadet Corps. In the inspection party are Captain Gordon Walker, cadet commanding officer; Lieut. Michael Coates, and Lieut.-Instructor Ted Beaudry. Congratulating the corps on its fine parade, Lieut.-Col. Becket said it was an honor and a privilege for a boy to belong to the nationally known Highlanders with their splendid traditions. The corps commanding officer, Capt. Geoff Hervey, presented trophies on the year's activities, including the shield for the best cadet rifle team in the Sudbury district, won by Lieut. Coates (also best all-around cadet), and Corporals Michael Carr, Brian Bolton and Ken Nolan. The inspection was attended by DND Master Warrant Officer Mulhern of Oakville.



FOR the third time the Cliff Highlanders pipe band was this year judged the best in Ontario, edging out St. Andrew's College band of Aurora and winning the honor of playing for the Cadet '70 Tattoo at Hamilton. Directed by Captain Sam Laderoute, of the Inco public affairs department at Copper Cliff, the 26-member band in 1964 won the Canadian championship. Picture shows Lieut.-Col. Becket inspecting them, accompanied by Cadet Pipe Major Brian Menard and Lieut. Beaudry. On the right is Piper John Walker.

a.m. - 12 noon, Thursday 7-9 p.m., Tuesday 7-9 p.m.

Copper Cliff Community Hall:
Wednesday 7-9 p.m.

Garson Employees Club: Wednesday 10 a.m. - 12 noon, Wednesday 7-9 p.m.

Creighton Mines Employees Club: Thursday 10 a.m. - 12 noon, Thursday 7-9 p.m.

Coniston Community Centre: Tuesday 7-9 p.m.

Whitefish Legion Hall: Monday 7-9 p.m., Tuesday 10 a.m. -

12 noon, Thursday 10 a.m. - 12 noon, Thursday 7-9 p.m.

Espanola Legion Hall: Monday 10 a.m. - 12 noon, Monday 7-9 p.m., Thursday 10 a.m. - 12 noon, Thursday 7-9 p.m.

Levack Employees Club: Tuesday 10 a.m. - 12 noon, Tuesday 7-9 p.m., Thursday 10 a.m. - 12 noon, Thursday 7-9 p.m.

Inco First Aid Classes Organized

Organized by the general safety department, and an annual Inco activity since 1931, first aid classes for Company personnel in the Sudbury district will commence during the week of October 19.

The course consists of seven two-hour lectures followed by an oral and practical examination.

The more than 1,000 who are expected to take the St. John Ambulance Association training will enrol at the first aid stations at the plants or mines where they are employed.

Eight lecture centres have been designated in major employee residential areas for the greater