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Waiting for the Opening Pitch



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Don M. Dunbar, Editor

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Dr. Thompson's Review of the Nickel Industry

When current expansion programs are completed, total annual production of nickel in the free world will be roughly 375,000,000 pounds, an increase of 150,000,000 pounds, or more than 65 per cent above that of the pre-war years, it was disclosed by Dr. John F. Thompson, chairman and president of Inco, at its 50th annual meeting of shareholders at the Royal York Hotel in Toronto.

In his address, Dr. Thompson outlined progress of Inco's huge underground development program, as well as other programs to expand nickel production. He stated that Inco is now mining ore at a record rate. "The volume of ore we are mining from underground and surface combined," he said, "is now over 1,000,000 tons a month, or a present annual rate of 12,000,000 to 13,000,000 tons." This compares with the 10,500,000 tons yearly average for World War II mined from underground and surface combined, and with the 13,000,000 tons expected to be obtained "solely from underground when we complete our underground expansion and discontinue open pit mining. This will insure our ability to maintain the 21,000,000 pounds of monthly nickel production which we reached at mid-year, 1951, through the installation of emergency facilities."

He said that Falconbridge Nickel Mines Limited, Canada's second largest producer, is reported engaged in a program to increase its refined nickel production to 35,000,000 pounds annually. Sherritt Gordon Mines Limited has plans for construction of a refinery near Edmonton, Alberta, with an annual capacity of 17,000,000 pounds of refined nickel. The Nicaraguan nickel project in Cuba is expected to be producing at an annual rate of about 30,000,000 pounds of nickel later this year. A new cobalt, nickel and copper separation plant of National Lead Company, in Missouri, is expected to add further quantities to the world supply. According to trade reports, increased output is anticipated from the nickel mines in New Caledonia, in the South Pacific.

"When these programs are realized," Dr. Thompson stated, "the total annual production in the free world will be roughly 375,000,000 pounds, an increase of over 150,000,000 pounds, or more than 65 per cent, above the corresponding production of the pre-war years."

Total production of nickel in Canada is currently at the annual rate of over 275,000,000 pounds. This equals the average production during the five war years (1940-1944) and exceeds the average production of the five pre-war years by more than 80,000,000 pounds. "Canada's production alone is over five times the amount estimated for Russia which the United States Bureau of Mines figures to be of the order of 50,000,000 pounds per annum. The increase in Canadian production alone since pre-war is greater than the total nickel production of Russia."

"A half century ago, at the time of Inco's formation, the town of Sudbury had a popu-

Moe and Bill and a Fine Day



A light summer breeze was whispering through the birches, great fleecy clouds sailed the bright blue of the sky, and the rolling fairways of Idylwyld called irresistibly to Moe Keaney of the Copper Refinery and Bill Regan of Garson Mine. So instead of fixing the screens, or planting the garden on that "morning off" they slipped away to have a round of golf. The camera caught them at the 6th green just after noon; Moe was putting and he certainly needed to sink it because Bill tossed three birdies at him in the nine holes.

lation of approximately 2,000. It has grown with its nickel industry so that it now is a city of upwards of 50,000. Practically all residents of the entire Sudbury mining area, about 70,000, derive their living directly or indirectly from nickel."

Nickel in Defence

Although International Nickel's production was increased in 1951, its deliveries of 243,800,000 pounds of nickel were some 12,500,000 pounds less than in 1950. "In that year," according to the address to shareholders, "the company was able to draw on stocks of refined nickel accumulated from operations in 1949 when demand was slack and governments were limiting their purchases for stockpile. Deliveries to the trade in 1951 in the form of primary nickel increased almost 8,000,000 pounds, while nickel in our rolling mill and foundry products decreased over 20,000,000 pounds as our mills in England, Scotland and the United States progressively converted to defence production."

"With the expansion of defence requirements, the National Production Authority at Washington took over the allocation of all the nickel supplies in the United States, beginning at mid-year," Dr. Thompson said. "Under its direction, somewhat less than one-half of the supply which the company provided in the United States was delivered for direct defence and atomic energy requirements. A portion of the balance was for the national stockpile and industrial programs which gave support to the defence production. The amount remaining each month since the beginning of allocations has been delivered to the civilian economy in accordance with government instructions. Distribution in Canada and the United Kingdom was also carried out under direction from the Governments concerned. Beginning in the fourth quarter, distribution on an international basis proceeded in accordance with the allocations recommended by

the International Materials Conference and concurred in by the Canadian Government."

International Nickel's plants and research organizations in England, Scotland and the United States have been devoting much effort to meeting the demands of the builders of airplane gas turbines and jet engines for regular and special high temperature alloys, such as the Nimonic and Inconel alloys. "The volume of high nickel alloys supplied by our United States subsidiary from its Huntington Works in West Virginia to the aircraft field was more than two and a half times that furnished in 1950. . . . The quantities of Nimonic supplied by our United Kingdom subsidiary from its plants in Birmingham and Glasgow were doubled."

Conservation and Restrictions

"In all fields the distribution and consumption of nickel have felt the impact of the defence efforts of the free world," he said. "Certain of our long-established uses have been restricted by conservation measures, the percentages of nickel in various steels and alloys have been reduced, and the normal ratio of distribution between the company's primary nickel and other forms of nickel has been disturbed."

"Furthermore, new market developments have had to be restricted or temporarily suspended. These conditions ultimately will impose on our sales and development departments the burden of readjustment and re-establishment of normal industrial uses. We faced this situation at the ends of both World Wars and, while this readjustment will require a major sales and development effort, we feel confident that most of the older uses can be re-established or can be more than replaced by new ones."

"It is to be hoped that as the industry returns to a normal market the various restrictive measures to which we have just referred will be wisely and promptly dropped," Dr. Thompson added.

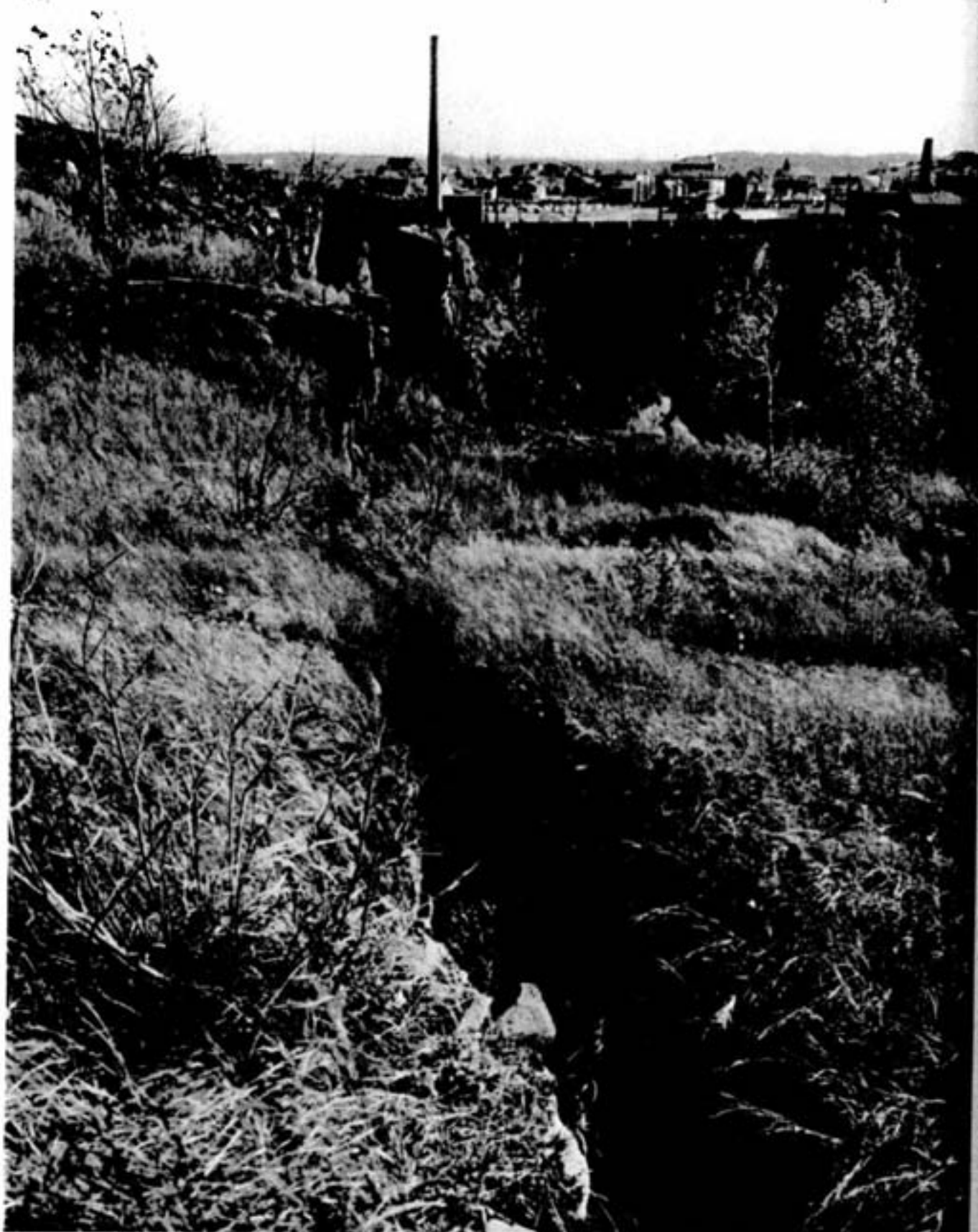
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INCO FAMILY ALBUM

Here and there around the family circle the Triangle camera picked up these heart-warming shots of Inco people and their bairns: (1) Mr. and Mrs. A. MacDonald (Garson) with Greg, 8, Ann, 10, and Sandy, 4. (2) Mr. and Mrs. Frank Sandelli (Port Colborne) with Christopher, 11 mos., Richard, 9, Maureen, 5. (3) Mr. and Mrs. Ron Silver (Copper Cliff) with Ronnie, 11, Michael, 3, Freddie, 6, Dale, 8, and Timmy, 8 mos. (4) Mr. and Mrs. A. Coulter (Creighton) with Margaret Ann, 7, Gerald, 5, and Catherine, 3. (5) Dr. and Mrs. A. W. Chisholm (Levack) with Peggy, 2, and Susan, 3. (6) Mr. and Mrs. Albert Maddison (Copper Refinery) with June, 20, and Gerald, 11. (7) Mr. and Mrs. George Hammond (Frood-Stobie) with Billy, 9, Patsy, 4, and Robert, 11.

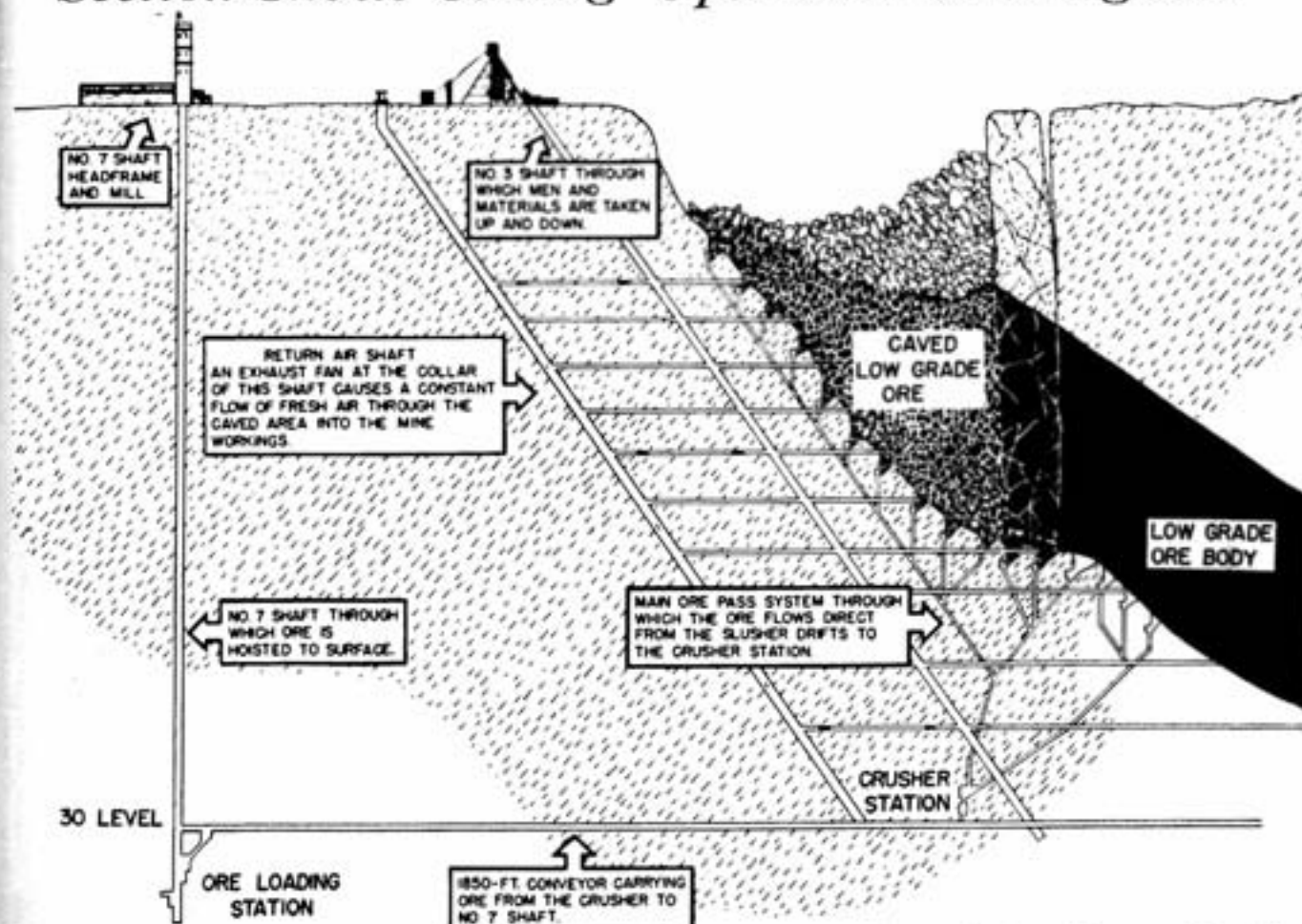


Undercutting of Orebody Indicated by Subsidence



Induced by undercutting of the lower grade orebody deep underground, a crack has been opened here at surface along a side of the Creighton open pit as another large slice of overburden commences to crumble. The thickness of the slices as they break away from the solid corresponds to the width of the stope area from which ore is being withdrawn, and the subsidence at surface extends only to a point above the end limits of the area mined out by open stopes far below.

Section Shows Caving Operation at Creighton



This section shows the position of the lower grade orebody and the caving operation at Creighton Mine, as well as the various services established to carry on the big new project. Leading off from the orebody are the boxholes through which the ore is drawn into the slusher drifts where it is scraped into ore passes feeding the crusher. A uniform tonnage is drawn from each boxhole in rotation to maintain an even line dividing ore from waste. Mining of the higher grade orebody continues at Creighton through No. 5 Shaft; the caving project is serviced through No. 3 Shaft and the ore is hoisted through the new No. 7 Shaft.

Caving Method Is Romance of Modern Mining

A triumph of mining skill is the program which is unfolding at Creighton Mine as huge quantities of lower grade ore, previously considered economically useless, become part of the supply of nickel so vital to the defence of freedom.

There is no measuring the amount of study and experiment which went into the project of making this ore worth mining. Some of the problems were solved in the laboratory with scale models embodying the factors anticipated in actual underground mining, while others incapable of solution on a laboratory scale were worked out in pilot operations underground.

Recovery of the lower grade ore was finally proved economically feasible by adapting a low-cost bulk method of mining called induced caving and by concentrating the ore at the mine to reduce transportation costs. Consequently when the need arose for quick expansion of underground ore production on account of the advanced date of concluding Frood-Stobie Open Pit operations, planning and development of the large scale caving

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Typical Subsidence at Creighton Pit



In this view of one side of the Creighton open pit a slice of overburden which has broken away from the solid is seen at the right as it gradually subsides, vegetation still growing on its surface. Mining commenced at Creighton in 1901 by the open pit method, the final depth of the pit before operations went underground being 200 feet.



DR. J. F. THOMPSON



DR. P. D. MERICA



R. L. BEATTIE



J. R. GORDON



R. D. PARKER



H. C. F. MOCKRIDGE, Q.C.

Dr. Paul D. Merica Becomes President of Our Company

Dr. Paul D. Merica, executive vice-president and a director, was elected president of The International Nickel Company of Canada, Limited, at the annual organization meeting of the board of directors, May 5. Dr. John F. Thompson, chairman of the board and retiring president, announced.

Dr. Thompson, who was elected chairman of the board of directors in February, 1951, upon the death of Robert C. Stanley, continues as chairman and chief officer of the company.

R. Leslie Beattie, vice-president and general manager of the company's Canadian operations, who is moving his headquarters from Copper Cliff to Toronto, has been elected a member of the executive committee of the board and a director of the company's United States subsidiary, The International Nickel Company, Inc. H. C. F. Mockridge, Q.C., of Toronto, was also elected to the executive committee of the board.

With Mr. Beattie's move from Copper Cliff, J. R. Gordon, assistant vice-president, has been appointed to the further post of assistant general manager, and in these capacities will manage all activities in the

Canadian operations under the direction of Mr. Beattie.

Ralph D. Parker, assistant vice-president, has been elected vice-president and a director of the company's subsidiary, Canadian Nickel Company Limited, which conducts the company's vital exploration and prospecting program throughout the world.

William F. Kennedy has been named secretary of the company, succeeding Henry S. Wingate, who will devote his full time as vice-president and a director of the company.

Dr. John F. Thompson

Dr. Thompson joined the company as a metallurgist in 1906, becoming manager of operations in 1921 and assistant to the president in 1928. In 1931 he became a vice-president, director and a member of the executive committee and in 1938 executive vice-president. He succeeded Mr. Stanley as president in February, 1949, and as chairman in February, 1951. Dr. Thompson is a director of The American Metal Company, Limited, Texas Gulf Sulphur Company, Inc., American Bank Note Company and other

companies, and a trustee of The Bank of New York.

Dr. Paul D. Merica

Dr. Merica first became associated with the company in 1919, becoming director of research and subsequently assistant manager of the development and research department. He became assistant to the president in 1932, a director in 1934, vice-president in 1936, and executive vice-president in February, 1949. Dr. Merica, who has long been identified with research activities of the company in Canada, the United Kingdom and the United States, has evolved numerous iron-nickel and copper-nickel alloys. For his contributions in the field of metallurgy, he has been awarded a number of medals from engineering and other groups. He is a director of The American Metal Company, Limited, Babcock & Wilcox Company and other companies.

R. Leslie Beattie

Mr. Beattie joined International Nickel in 1911. After becoming works auditor of the operations in the Sudbury District of Ontario, he was appointed assistant general manager of Canadian operations in 1935, an assistant vice-president in 1940, vice-president and general manager in 1942 and a director in 1943. Besides his overall responsibilities as a vice-president, his position embraces the management of the company's mines, mills, smelters, refineries and auxili-



Copper Cliff Curling Club Elects Its Officers

lary operations in Canada. He is president and a director of a number of Inco's Canadian subsidiaries and is also a director of The Bank of Toronto.

J. R. Gordon

Mr. Gordon, who was formerly associated with the Ontario Research Foundation at Toronto, came to the company in 1936 when its new research laboratory was opened at Copper Cliff, assuming direct responsibility for all research activities in Canada. In 1946 he became technical assistant to the vice-president at Copper Cliff and in 1947 was promoted to his position as assistant vice-president.

Ralph D. Parker

Mr. Parker came to International Nickel in 1928, from McIntyre Porcupine Mines, becoming superintendent of Inco's Creighton Mine. In 1930 he was appointed general superintendent of the Mining and Smelting Division and in December, 1947, to the additional post of assistant vice-president of The International Nickel Company of Canada, Limited. During his connection with Inco, Mr. Parker has had world-wide experience in the search for and examination of nickel occurrences involving active use of many of the most modern types of geophysical instruments for geological exploration.

William F. Kennedy

Mr. Kennedy, formerly with Sullivan & Cromwell, the company's general counsel, joined International Nickel in 1945 in the capacity of general solicitor and assistant secretary.

OFF TO WICKED BOSTON

The little girl was moving from California to Boston with her parents, and was greatly excited. The night before the departure, saying her prayers as usual, she finished off with, "God bless mommy and daddy and my little brother Tommy; and this is goodbye God — we're moving to Boston tomorrow."

Only those who have the patience to do simple things perfectly will acquire the skill to do difficult things easily.—Schiller.

Chosen to direct activities at Copper Cliff Curling Club next season was the above executive, elected at the annual meeting held at the Italian Hall. Front row, left to right, Clarence Beach, secretary-treasurer; Jim Parlee, past president; Mac Forsythe, president; Norman Kearns, vice-president; George Ferguson, chairman of the competition committee. Back row, Alvin Nickel, assistant secretary; Specs Telford, chairman of shift curling; Jack Lilly, Red Planos, and Ernie Rabeau, executive members; Earl Stoneman, chairman of the house committee.

Honorary presidents of the club are R. L. Beattie and J. R. Gordon, and honorary vice-presidents are W. T. Waterbury, George Hudson, and Dunc Finlayson.

Excellent food and lively entertainment rounded out the success of the annual get-together, which was largely attended.

President Mac Forsythe promised that his executive would do its level best to operate the club to the complete satisfaction of the membership. He bespoke the co-operation of the members in staging the annual NOCA bonspiel, to which Copper Cliff will be the host club next year. He also urged all to do their part in extending a warm welcome to out-of-town visitors who will be competing in the Dominion curling championships to be held in Sudbury next season.

Trophies, accompanied as usual by handsome prizes, were presented as follows:

Inter-rink event, presented by Dunc Finlayson — Winners, E. C. Harber, Guy Hashey, R. Taylor, P. Birchell; runners-up, A. T. Wright, J. A. Latreille, A. C. Wulff, M. Falconi.

Single rink event, presented by Arne Boyd — Winners, Johnny McCreedy, Guy Hashey, L. F. Kitchener, W. E. McDonald; runners-up, R. Boyter, A. R. Bray, H. Mooser, C. Atkinson.

Colts event, presented by Alex Godfrey — Winners, R. H. Heale, H. J. Jones, R. H. Squires, J. N. Lilley; runners-up, H. M. Diebel, P. R. Stephenson, J. S. McGill, E. F. Rabeau.

Waterbury event, presented by W. T. Waterbury — Winners, Wally Johnstone, A. R. Bray, R. Skinner, T. Harkins; runners-

up, J. Morrison, J. Hall, L. Brooks, H. Mulligan.

J. R. Gordon event, presented by J. R. Gordon — Winners, Basil O'Brien, W. Pakkala, J. McGuire, J. MacDougall; runners-up, E. G. Stoneman, W. R. Koth, J. A. Latreille, R. S. Buntin.

Junior event, presented by G. M. Ferguson — Winners, A. McGehee, W. B. McGruther, M. H. Dickhout, R. W. Campbell; runners-up, P. Mackey, P. I. Ogilvie, F. Berchell, W. McNeice.



LOCAL BOY MAKES GOOD

A young fighter who is going places in the flat game is Gordon Wallace, whose father Nick works at Creighton Mine. Born in Creighton, Gordon is 23 years old. His pal Boito Oja of Frood-Stobie time office tells us that in the 14 months since Gordie turned pro he has had 21 fights, winning 19, 14 of them by the kayo method. As an amateur he fought 105 times, winning the Canadian middleweight title in 1949. Now a light-heavy, his goal is to win the Canadian pro crown and then take a crack at British Empire laurels.

Banquet and Dance End Garson Bowling Season

Garson Employee Club men's bowling league and ladies bowling league wound up a very successful season with a banquet and dance held at the Club Allegri, Coniston.

Over 200 members and their guests were present at the banquet where the winners of the various sections and the league champions were awarded trophies.

In view of the fact that the men's bowling loop is just a young league, having been in operation for only two years, there were some very good scores posted during the season's play, with George Morin's 425 single topping them all. There were no fewer than nine triples of 900 or over, with Vernon Haluschak and Mickey Stahan sharing the top honors with 987 each.

See the accompanying layout for pictures of the winning teams: (1) Mine Stores were presented with the Garson Mine Athletic Association trophy, emblematic of the league championship. In

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81 Levack Kids Get a Lesson From Ball Stars

Out of a possible 98 kids in the town who qualified within the 10-17 age limits, no less than 81 turned out to a baseball school staged by the juvenile sports committee of the Levack Athletic Association. That's a measure of the enthusiasm for this wise-headed move to teach the fundamentals of baseball to the youngsters of the district. The school idea was launched by Gerry Wallace, peppery perennial of the Copper Cliff Redmen and as slick an operator as ever capered around second base. He enlisted the aid of other players in the Nickel Belt League, and they got the thing going by holding a session at Queen's Athletic Field. "I just figured that it was about time some of the seniors pitched in to give the kids a helping hand," says Gerry. "We really haven't got a definite organization — we're just available if any of the local associations are interested in sponsoring an instructional session. There's no expense to it except for furnishing the equipment, which they will need anyway."

Ray Fraser, chairman of the juvenile sports committee of Levack's hustling Athletic Association, was quick to catch on. He invited Gerry and three other Nickel Belt stars to come over any time. And the players were tickled to go: Herb Perigoe said it was one of the most enjoyable evenings he'd spent in a long time, and both Jack Duvysten and Moose McQuarrie enthusiastically agreed. As for the Levack kids, they were really thrilled at learning some of the fine points of the game from name players.

Accompanying photos show some of the action: (1) Professor Duvysten shows the pitching class how he holds the old apple. (2) Professor McQuarrie demonstrates a proper throw-in from centre field. (3) Professor Wallace shows how he snaffles a hot grounder in the infield. (4) Professor Perigoe is seen in action at his old familiar position at first base.

Gerry Wallace opened the session with some general remarks about the necessity these days for education as well as loving the game, wanting to play it correctly, and the basic fundamentals of baseball.

"Once a player gets the fundamentals of the game through his noggin, then the rest comes easy," says Gerry.

"For instance, it takes time to show a boy how to throw a ball . . . but it doesn't take much time to teach him to look first, and then throw it. It's just one of the fundamentals that you look first, and then throw it . . . his speed and accuracy will develop later."

"It's not difficult to get a young fellow to field a ball correctly," said Gerry. "You'll notice a short-stop going down on one knee right at the crack of the bat. Naturally he can't move either way because he's rooted to the one spot."

"I tell the kids to keep their eye on the ball right into their glove . . . then look . . . then throw. Those are fundamentals that aren't too hard to master."

There was also a tendency on the part of outfielders to try to peg the apple a mile into the air on a throw to the plate. "It hurts to see a kid doing that," said Gerry. "In the first place it takes a lot longer to get there, and then it's never very accurate."

"The best peg to home is a flat throw aimed straight at the plate. Even if it bounces in the infield it will still get to the plate faster than those skylarks," he said.





**A Bumper Crowd at the
Queen's Athletic Field**





Danny Cuomo of Garson Gets Season's First Single

First man up and first man to hit in the 1952 Nickel Belt baseball season was Danny Cuomo of Garson Greyhounds, seen here as he whacked out the bingle that started Garson away to an 8-5 victory over Frood Tigers in the opening game. Danny had a great day at bat with three for four, and also started a nifty double play.

Senior League Baseball Away To Flying Start

A happy crowd of close to 4,000 watched Garson Greyhounds score a solid 8-5 win over Frood Tigers in the opening game of the Nickel Belt baseball league for 1952. The 1951 champs looked full measure for their triumph.

The curtain-raising ceremonies, in which Mayor Dan Jessup, J. Leo Gauthier, M.P., and League President George Collins took part, were carried out in traditional style.

Norm Johnson, the rangy new Frood coach, caught the eyes of the fans with his tremendous hitting. He slammed out two mighty triples that would have gone for home runs if the snow fence had been up around the outfield, and he also rapped an infield single.

Norm Flowerday, who was credited with the Garson win, was in his old opening-day form: in the eight times the opening game has been played as a Sunday afternoon event, he has been the winning pitcher four times, three of them when he was with Frood.

If Garson could see an easy road to another league championship, after their smart showing over Frood, they were due for a rude awakening. Already the dope pot has been upset and kicked around several times, and even the guys with the inside info are going around admitting it's anybody's league—just like it almost always is.

All five clubs have been strengthened with some very likely looking imports, and until these gents get into the groove it's much too soon to start predicting. But look out for Coniston in '52! And look forward to a season of first-class baseball entertainment worthy of every fan's support!

It is easier to get a smattering of many subjects than to master a few.—The Sphinx.

Tomorrow a Life Will be Saved

Tomorrow a life will be saved. Tomorrow an accident which would have happened will not happen.

Tomorrow a car will approach a stop street—and stop.

A driver will glance at his speedometer and ease his foot off the accelerator—and an accident will have been prevented.

A child will dart from behind a hedge or a parked car. An approaching driver will see him in time because he will have been looking for him.

A pedestrian will start across a busy street, remember and wait—and the morgue will have been cheated of another victim.

Somewhere at a party tomorrow night a man will drink a final high-ball, sway a little and ask his wife to drive. He'll be drunk but alive. Death may not take a holiday tomorrow but there will be one less story in the paper, one less headline to write, one less figure to add to a mounting total.

It is not possible to tell where this accident which could have happened did not happen.

It could have been on a long, level, wide highway or a hedge-marked intersection. It could have been in the busy center of a city. It could have been on a dark, narrow, winding country road. No one knows—or will ever know. There will be no sign to mark the spot where the death car which was not a death car drove quietly by.

But tomorrow night, somewhere, a human being, a man, a woman or a child—will go about his everyday affairs, never knowing death passed him by.

Someone will remember these words tomorrow and be a little more careful.

It could be anyone able to read and able to drive.

This life which will be saved may be that of a workman or a person of wealth, it may be that of a baby or a debutante, a

ne'er-do-well or a youth of promise. It may be your mother's or your wife's. It may be your son's or your neighbor's. It may be yours!—Editorial, West Frankfort, Illinois.

Garson Bowling

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the final game they rolled up a total of 6443 pins to defeat the Wild Cats. Front row, left to right, are V. H. Maki, Clyde Dunsmore (captain), N. Jarmovitch; back row, M. Chepesiuk, D. Teahen. Not shown, D. St. Germaine, R. Elliott.

(2) Wright's lineup captured the Pidutti trophy for the American League championship. Left to right are W. Ashick, F. Felske, D. Wright (captain), E. Maki, F. Dittburner. Not shown, C. Allan, C. McPhee.

(3) The F. F. Todd trophy for the championship of the National League was won by the Royals, shown here: front row, Primo Pidutti, Orville Cull, Joe Cull (captain), Taisto Rintala; back row, Pete Jack, Bill Hansen, George Christie.

(4) The Wild Cats, who wound up at the top of the Canadian League were presented with the Tuffy Davis trophy. In the front row are G. Sidore, M. Stahan (captain), A. Spencer, and S. MacLean; back row, R. Murphy, P. Michaud. Not shown, J. Fedorovich.

5. Muck Hounds of the Canadian League were winners of the consolation series and were presented with the DeMarco trophy. Seen here are D. Tahen, R. O'Neill, V. Kreko (captain), C. Tullock. Not shown, A. Melanson, D. Manning.

(6) Members of the winning team in the Garson mixed league were: front row, Violet Jouppi, Irene Tolvola, R. Bonneville; back row, Matti Jouppi, Roy Bonneville (captain), John Silede.

(7) Champions of the ladies' section are pictured here: left to right, Doris Laking (captain), Ede Matson, Sigrid Spencer, Jenny Maenpas, Theresa Malin, Grace Brankley.

2,000 Guides and Brownies Watched Impressive Ceremony



Creighton Students Again Had a Wonderful Trip



An educational tour by chartered bus to Ottawa was the big thrill again this year for 30 students of the Creighton Mine Public School, headed by Miss Ursula Black, principal.

For months, the students held bake sales, bazaars, concerts and two tag days to raise \$800 to finance the trip, and augmented the figure with donations from the Knights of Columbus, the library board at Creighton and a friend in Sudbury.

The youngsters were given great support by residents of Creighton, who aided them in all their projects.

The group of 30 students, the school principal, the school music director, Mrs. J. Trembley, and the school nurse, Mrs. A. McLean, left Sudbury by chartered bus bound for the capital.

En route to Ottawa, the young adventurers visited the North Bay airport, Des Champs power development, Deep River, Petawawa, and then registered at the Lord Elgin Hotel in Ottawa. Next day saw the party tour the Parliament Buildings, the mint, archives, war memorial and then lunch in the House of Commons dining room as guests of J. Leo Gauthier, Sudbury MP. A period of free time to shop was allowed.

Next day the group visited the art museum, points of interest around the city and drove to the experimental farm and Uplands RCAP station. That night, as guests of Ed Carter, of Sudbury, the group saw an International League baseball game at Lansdowne Park.

It was the fourth such annual trip to be made by students of the Creighton school. The group included Richard Anderson, Lorne Behenna, Douglas Bryan, Donald Cassell, Lydia Cimmerman, Thomas Earl, Katherine Farrell, Marilyn Goto, Joan Hostrower, Eddie Hreljac, Anita Huhtala, Murray Jalsich, Aileen Maki, Stanley Marchishyn, Nancy Mattinen, Merle McIsaac, Larry McLaughlin, Gail Moore, Beverley Murphy, Rose Ribic, Olein Smith, Alex Stephenson, Richard Stephenson, Arnold Suutarinen, Gael Stephenson, Violet Tokaryk, Richard Trembley, Edward Zanier, Bertha Zelonski and Kenneth Miron.

THE WRONG ANSWER

Jones took his car to a garage for repairs. "Would you think this was a second-hand car?" he proudly asked the mechanic. "No," replied the mechanic. "I thought you made it yourself."

Caving Method Is Romance of Modern Mining

(Continued from Page 5)

project at Creighton could be immediately undertaken. No. 7 shaft, concrete-lined throughout and serviced by an automatic hoist with push-button control at the loading pocket, was sunk to handle the ore from the new operation, and a 10,000-ton concentrator, soon to be increased to 12,000 tons, was built to mill the ore on the spot. A unique pipeline system was set up to carry the concentrate to the reduction plants at Copper Cliff. Measured by ordinary standards, the big caving project was pushed into production in record time.

Underground the initial program included the construction of a crusher station, two concrete-and-steel-lined bins for crushed ore storage, and an 1850-ft. conveyor along with the driving of ore pass systems, slusher drifts, boxholes, service raises and ventilation drifts and raises needed before the first production could be obtained from the caving area. Further development includes the construction of a second crusher station with ore bin and conveyor, and the extension of the production workings along the strike and down the dip of the orebody.

An appreciation of the Creighton caving program cannot be complete without some knowledge of the history of the mine. Mining was started in 1901, and conformed closely to the general pattern followed throughout the Sudbury district. The first ore was produced from an open pit; when it became necessary to go underground the ore was mined first by open stoping methods, heading and bench for two levels below the pit, followed as the mine grew deeper by shrinkage stoping, then by cut-and-fill and square-set stoping.

The open pit reached a final depth of 200 feet; shrinkage stoping was carried on down to the 40th level, 2,600 feet below surface; below the 40th level all mining has been done by square-set stoping.

From surface to 30 level the higher grade ore has been completely mined out, and the lower grade ore overlying the mined-out

area from 28 level to surface will be recovered in the first stage of caving mining.

In this area no floor pillars were left. The vertical pillars were broken up while still surrounded with shrinkage ore. As the higher grade ore was drawn from the stopes the hangingwall caved gradually and the stopes became filled with broken lower grade ore.

Of particular significance to the caving operation is the relationship between subsidence of the hangingwall and mining in the shrinkage area.

Here there was rapid withdrawal of the ore, especially in the upper levels, so that lateral support was withdrawn from the hangingwall. Slices 100 to 200 feet wide and 400 to 800 feet long were cut off by cracks that developed and widened laterally with no appreciable vertical movement, indicating that failure was due to tensional stresses rather than shearing. Once the slice was broken clear subsidence began and far outstripped the horizontal movement.

At first the face of a slice was fresh and solid, but within a few months interlacing cracks developed within the slice and, as drawing continued, tension and torsion combined to open the slips and joints until the mass lost cohesion and disintegrated.

Surveys showed that the thickness of the slices that broke away corresponded to the width of the stoping area from which the ore was being withdrawn far underground. The hangingwall limit of a slice was always vertically above the hangingwall of these stopes. Subsidence at surface has never extended beyond the vertical of the hangingwall limit or the end limits of the area mined out by open stopes.

To induce caving beyond the present limits the lower grade ore is being undercut along the strike and down the dip of the orebody. Undercutting is being done by the blasthole method. Starting at the face of the caved area panels are undercut along the line of boxholes from the slusher drifts. The rib pillars between the panels are blasted out in sequence from the bottom of a section towards the top, along the dip of the orebody.

Fringe stopes are not considered necessary. Experience indicates that as the broken ore in the caved area is drawn, the ore above a new undercut will be put in tension and will crack through to surface, breaking away from the solid and disintegrating as drawing is continued.

Dr. Thompson's Review of the Nickel Industry

(Continued from Page 2)

High Platinum Production

Dr. Thompson reported that platinum, palladium, rhodium, ruthenium and iridium produced by the company continued in heavy demand with deliveries reaching 375,000 ounces, or 108,000 ounces more than in 1950. He reported that "the company's production of platinum was maintained at capacity and the entire output was sold. The bulk of our deliveries was made to the United States market."

Copper Refinery Operations

"Operations of the copper refinery at Copper Cliff were maintained at a higher rate than in 1950," stated Dr. Thompson. "Through changes in operating practice, the quantity of slag required to be returned to the smelter for further treatment was lowered considerably, resulting in substantial savings."

Port Colborne Operations

"At the Port Colborne nickel refinery output of electrolytic nickel showed an increase over 1950," he said. "Losses in production were cut considerably due to fewer power interruptions. Plans have been completed for construction of a new research laboratory building at this refinery."

50th Annual Meeting

In calling attention to the fact that this was the 50th annual meeting of International Nickel, which was formed in March, 1902, Dr. Thompson pointed out that the nickel industry then was a small unimportant business, producing materials chiefly for naval armament, coinage, nickel plating and nickel silver. Canada climbed to the acknowledged first place in nickel production in 1906, when its output "was at a rate of slightly over 1,500,000 pounds per month. Today International Nickel alone is producing 21,000,000 pounds per month and total Canadian production is over 23,000,000 pounds monthly."

Search for Nickel

"Stimulated by the demand for the metal," Dr. Thompson said, "there are a number of other nickel properties under development in Canada, Oregon, Alaska and elsewhere. Surveys are also under way of undeveloped sources of nickel, including those which are not regarded as commercial under present conditions. Our own company is continuing with increased vigor its search for new deposits of nickel in Canada and elsewhere. In 1951 more money was expended for this purpose and our exploration work was both more intense and more widespread than in any previous year."

Tribute to Canadian Government

In recalling that Canada during 1951 had abolished foreign exchange control, Dr. Thompson said that "from the standpoint of those engaged in foreign trade this may well be considered the major event of 1951." He paid special tribute in his address to the policies of the Canadian government which have created "an atmosphere favorable to foreign investment in Canada's resources."

Expanding Future Markets

In his concluding remarks, Dr. Thompson observed: "I think that it is not generally recognized that no mineral deposit, great or small, has any real value until the metals in the ground have been brought to the surface, refined and sold with profit. For many metals, such as gold, silver, copper, lead and zinc, the vital problem ends with the production of refined metals ready for the market. For a relatively new metal such as nickel the problem is entirely differ-

ent. Even after the nickel is refined and ready for sale there is no large ready market except the one which has been, in large part, created by this company."

"Beginning in an organized way some 30 years ago, the company started to create a peace-time market for nickel. That this effort was successful is evidenced by the steady growth of the market since that time. In fact it can be stated that the present stringency is due in part to our efforts to convert to profitable use a great mineral deposit which had only a limited value until the company expended the time, money and effort necessary to create the markets where-in nickel could be sold to the profit of producer, consumer and Canada alike."

"Sooner or later we will see a recession in

general business which will affect the nickel trade. I have full confidence—supported by the experience of the past—that the nickel industry is capable of emerging from this recession stronger than ever with new, important peace-time applications. But this will not happen by itself. This company must continue to search out, win and hold markets for nickel in all parts of the world. I trust that other producers and those newly coming into the field will feel, as we have, that production carries with it the responsibility for developing and expanding the market for nickel."

Really great people never think they are great. Really small people never think they are small.

Frood Bowling Banquets Again Popular With Large Crowds



Some of the prize-winners for outstanding individual performances in the Frood bowling league are seen here: Rolly Roy, Fred Fiorotto, Bob Elliott, Cam Faulker, and Johnny Vaillancourt.

With Eldred Dickie and Albert Stone handling the arrangements in their usual smooth manner, Frood bowling league's two annual banquets and presentations of prizes were staged at the Caruso Club.

Jack Romanow's lineup were the big winners, receiving the C. H. Stewart trophy for the championship of the "A" section league and also the Eldred Dickie trophy for going on to win the "A" section playoffs. Members of this standout team were Jack Romanow (captain), E. Belfrey, W. Bosanac, E. Boyd, J. Vaillancourt, E. Moore, and F. Dowse.

The F. McAteer trophy for the championship of the "B" section was awarded to Morris Martin (captain), D. McCuaig, E. Daley, P. O'Connor, S. Winget, W. Cresswell, and J. Wiltshire.

Winners of the "B" section playoffs, who received the Bruce King trophy, were Bill Aykroyd (captain), C. McGregor, E. Marsolais, B. Marsolais, N. Barnes, J. Witty, and A. Dines.

Also rating the spotlight were the men who won the Inco Club inter-league trophy for Frood: Fred Fiorotto (captain), Eric Dunn, Eli Simon, Marlow Allen, and Cliff Collins.

Individual prizes for some very fine scoring were presented as follows: No. 1 group, Cam Faulker, high average, 237 for 32 games and high single, 396; Fred Fiorotto, high triple, 861. No. 2 group, Bob Elliott, high average, 224 for 41 games; J. Vaillancourt, high triple, 859; Red McLelland, high single,

359. No. 3 group, Charlie Smith, high average, 209 for 43 games; Rolly Roy, high triple, 813 and high single, 356.



HONORED BY LEAGUE

At one of the Frood bowling banquets Mr. and Mrs. Albert Stone were honored by a presentation. Ab is the hard-working secretary of the league. Also receiving an expression of appreciation from the league were President Eldred Dickie and his wife.

Trophy Night Successful at the Copper Cliff Club



Trophy Night at the Copper Cliff Club saw the presentation of awards for proficiency in various club activities. Tom Peters, chairman of the entertainment committee, arranged the successful evening during which the guests took part in a round-robin of doings of one kind and another.

Pictured above are some of the winners who were on deck to receive their booty:

1. Winners of the Best Flynn trophy for men's 5-pins: A. McAllister, Bert Flynn, who made the presentation, J. Sauve and W. Hodgins. Absent was the captain, A. Longfellow.

2. This quartet captured the Rosemary Owens trophy for ladies' 5-pins: Amy Wolff, Helen Boyle, Isabel Boyle (captain) and Barbara Hodgins.

3. I. J. Simcox (centre) president of the Copper Cliff Club, presents the E. C. Lambert trophy for mixed 5-pins to Mr. and Mrs. A. McAllister and Mr. and Mrs. W. Hodgins.

4. This group of young people received bronze medallions for Life Saving after taking the regular course in the club pool: left to right, D. Finlayson, Dorothy Clark, K. Morden, R. Armstrong, Susan Dunbar, and M. Harry. Absent was A. Gemmell.

5. The award of merit in Life Saving was presented by A. Godfrey (centre) secretary of the club, to K. Harrison, Dorothy Jarrett, Catherine Armstrong, and R. Matte.

6. Mr. and Mrs. I. M. Ritchie, who with Mr. and Mrs. G. B. Sullivan won the season's bridge championship, are seen with the club trophy. Mr. and Mrs. Ritchie have been

members of bridge championship teams several times at the club.

CONFIDANT

A favored man, in truth, is he
Whose window fronts a growing tree,
Who, looking out, can sense the good
In sturdy, living, upright wood.
He knows the lambent mood of spring,
Expectant boughs, and birds a-wing.
In buds hard-set against the frost
He sees the hold of winter lost.
He sees a full-tide wave of green
Come surging upward on the scene.
His tree confides that all is well
And holds him in a springtime spell.
Convinced, on seeing winter go,
That he has helped to make it so.

—Florence Pedigo Jansson