

# INCO TRIANGLE

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NUMBER 6



A Break Off Tackle

(STORY ON PAGE 15)



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Don M. Dunbar, Editor  
EDITORIAL OFFICE COPPER CLIFF, ONT.

## Process of New Iron Ore Plant Makes History

The International Nickel Company of Canada, Limited, announced at Copper Cliff on September 17 that in an historic mining development it was undertaking the production of by-product iron ore from nickel ores in the Sudbury District.

Outlining plans for the project, J. Roy Gordon, vice-president and general manager of Canadian operations, said the Company was beginning immediately the construction of a \$16,000,000 plant in the Copper Cliff area as the first unit in an operation which will ultimately yield about 1,000,000 tons of high-grade iron ore a year, in addition to nickel, from Sudbury ores.

A trail-blazing new process, developed by the Company's research staffs, made the undertaking possible, Mr. Gordon stated. A most important feature of the project is the resultant release of smelter capacity which permitted Inco to assume the five-year contract it recently signed with the United States Government for delivery of 120,000,000 pounds of defense-vital nickel without diversion of regular supplies from industry. Pending construction of the new plant, the Company has taken emergency measures to expedite deliveries against this large commitment which represents output over and above its current peak nickel production.

The new plant will supply iron ore higher in grade than any now produced in quantity in North America. Containing at least 65 per cent iron natural and less than 2 per cent silica, this ore will command a premium price for direct use in open hearth and electric furnace steel production in Canada and the United States. By comparison, ore from the famed Mesabi pits of Minnesota contains 51.5 per cent iron natural. The North American steel industry is presently largely dependent on imports from such countries as Brazil, Venezuela, Sweden and Liberia for its requirements of ore as high in grade as Inco will produce.

Initially the plant will treat 1,000 tons a day of nickel-bearing pyrrhotite removed from ore in the early stages of processing at Copper Cliff. Its smoke stack will be among the tallest in the world.

The new process, with its yield of iron ore, now makes possible the treatment of lower grade Sudbury ores hitherto considered uneconomical. Among several important contributions made to metallurgy by Inco since the end of World War II, it is one of a series of carefully planned developments by which the Company's ore treatment processes are being revolutionized. Copper-nickel separation by controlled cooling and flotation of matte, and oxygen-flash smelting of copper-nickel concentrates, are two other recent Inco developments of far-reaching significance.

Demand for nickel by the Allied Nations in World War II and during the Korean conflict, coupled with increasing commercial requirements and rising costs, spurred a



This picture of Serpentine Street at Copper Cliff is from the collection of F. P. Bernhard, retired comptroller of the Company. It was taken in the year 1900 from the general office, which stood in front of where the hospital is now. The first building on the left was the staff house, on the site now occupied by the Bank of Toronto. Next to it was the general store of Hamilton Bros., which also contained the post office. The third building was the restaurant of Fred Smith, which was continued for many years after his death by his widow and daughters. On the right the site of the present McIntosh Block was vacant but there was a small cottage on the back of this lot, not shown in the picture, which was occupied as a residence by Bob Wiseman, the barn boss. The first building shown on the right was Boyle's boarding house and the second one Boyd's boarding house.

vast conversion program for which Inco has so far allocated over \$160,000,000 of its own funds. High on the list of the Company's post-war technical studies was this latest improvement. Inco has proven the process through several years of exhaustive investigation including elaborate pilot plant operation. In March, 1953, the Company was able to advise the Defense Materials Procurement Agency of the United States Government that this phase, essential in proving any new process, had been completed and that it was in a position to guarantee prompt additional supplies of nickel for the defense effort. The contract with the United States Government followed.

The recovery of iron ore as a by-product is considered one of the outstanding advances in nickel extraction metallurgy. Nickel production throughout the world, both in presently operating plants and in plants under construction, is based on processes in which the iron content of the ore is rejected in slag or in tailings. Ferro-nickel production, in which iron is an undesirable impurity, involves recovery of only a minor portion of the ore's iron content.

The Inco method, in addition to being the first to permit the recovery of high-grade iron ores, is of great importance in opening the way for increased recovery of other elements, including sulphur when its production is economically feasible, from the complex Sudbury ores.

### DEAL ME IN!

A woman was called for jury duty, but refused to serve because she didn't believe in capital punishment. Trying to persuade her, the judge explained:

"This is only a case where a wife is suing her husband because she gave him \$1,000 to pay down on a fur coat, and he lost the money in a poker game."

Thereupon the woman said:

"I'll serve. I could be wrong about capital punishment."

## Sudbury Paddlers Take Four Titles

Sudbury Canoe Club celebrated its best paddling season on record this summer by bringing home two Canadian and two North American championships.

Louis Lukjanovich of Creighton Mine and Tony Petrovich of Coniston Smelter teamed with Rusty Hubbs and Al Duval to capture the  $\frac{1}{2}$ -mile title at the Canadian Canoe Association meet in Ottawa and the North American 1,000 meter crown at Toronto.

The quartet added a third impressive victory by capturing the  $\frac{1}{2}$ -mile event in the Dominion Day Regatta at Toronto.

Don Stringer was the other member responsible for bringing titles to Sudbury. He retained his senior  $\frac{1}{2}$ -mile single blade singles championship at Ottawa and then went on to win the 1,000 meter singles at the North American meet. He also showed the way in the  $\frac{1}{2}$ -mile singles at the Dominion Day Regatta.

The Sudbury club also paraded a junior member into the winner's circle who may make his presence felt next year. He is John McMoran, who finished second in the kayak singles at the Canadian championships.

### ANCIENT DOCUMENT

A visitor at Copper Cliff last month, L. P. Gates brought along an interesting souvenir of the early days, the pass or "card of admission" as it was called, issued to him on February 28, 1906 so that he could enter the plant as a representative of Nordberg Manufacturing Co. to erect some new equipment. It was signed for the Canadian Copper Company by A. P. Turner, president, and R. Kirkwood. Now 72, Mr. Gates resides at Bakersfield, California.

The most popular labor-saving device for women is still a husband with money.

# INCO FAMILY ALBUM

Well, school's in again and the frost is on the punkins and the good-looking people we have here with us this month are: (1) Mr. and Mrs. William Mornaska (Coniston) with Sandra, 4, Peter, 3, and Katherine, 1. (2) Mr. and Mrs. Michael Harrietha (Port Colborne) with Sara, 9, Michael, 8, Linda, 5, Patricia, 5 mos., Debra, 2, Virginia, 3, and Kevin, 7. (3) Mr. and Mrs. Fred Nicholas (Creighton Mine) with Pauline, 2, and Margaret, 10 mos. (4) Mr. and Mrs. Eddie Owens (Garson Mine) with Michael, 2, and Danny, 8 mos. (5) Mr. and Mrs. Wm. Charette (Copper Refinery) with Bonnie, 2½, Wayne, 5, and Johnny, 7½. (6) Mr. and Mrs. Bill Townsend (Copper Cliff Smelter) with Anne, 14, Wanda Joan, 11, Calvert, 9, and Francis, 4. (7) Mr. and Mrs. Michael R. Tatry (Frood-Stobie Mine) with Lloyd, 7, Gloria, 10, and David, 3.



## Lively People Show Pride in Home Grounds



Excellent progress was made during the past season in beautifying home surroundings in the new town of Lively. Winner of one of the Inco awards was the Don Wright home, at the left in this view of Third Avenue.



AN INVITING CORNER AT HUGHIE ALLEN'S PLACE

A high scorer in the judging at Copper Cliff was Hughie Allen's attractive home grounds on Balsam Street, which won third award in Class II.



COMBINED VEGETABLE AND FLOWER GARDEN

Fourth-best in the competition for Lively was Denis Yawney's lovely lawn and garden layout which for a first-year effort was really outstanding.

## Judges Report Very Gratifying Garden Results

"The number of people in Inco towns taking pride in their lawns and gardens this year was very gratifying," wrote C. D. Ferguson, chief of the Agricultural Department, reporting to Vice-President Gordon the results of the gardening contests conducted annually by the Company.

At Copper Cliff, he said, the judges found increased interest was shown and competition was very keen in the top brackets of both classes. Special mention was made of the good lawns at Coniston, several of which were "truly outstanding". At Creighton the sum total of good gardens was about the same as last year, and at Levack most people looked after their places quite well. The town of Lively, included in the contests this year for the first time, had made a very good showing, and there were some attractive places this year also at Murray and in the Company section at Garson.

Judges this year were F. H. Cotton, representative of the provincial Department of Agriculture at Gore Bay, and C. A. Young and T. H. Peters of the Inco Agricultural Department staff. Awards were as follows:

### COPPER CLIFF — CLASS I

H. Stavang, 35 Evans Rd., \$20.00; T. Wheatley, 37 Evans Rd., \$15.00; E. Foster, 30 Power St., \$10.00; J. McQuillan, 41 Evans Rd., \$8.00; A. Nickle, Kent St., \$7.00; M. Sharko, 21 Orford St., \$6.00; and the following awards of \$5.00 each: E. Tigert, 5 McKeen St.; S. Martin, 16 Orford St.; H. L. Cleary, 7 McKeen St.; Alton Browne, 1B McKeen St.; L. M. Ramsay, 44 Evans Rd.; Geo. Burns, 2 McNevin St.; R. J. Swain, 23 Nickle St.; Wm. Kuhl, 13 Power St.; J. Siwicki, 13 Poland St.; J. E. Wilson, 3A Peter N.; I. Klassen, 26 Nickle St.; T. Moland, 21 Nickle St.; F. Matte, 7 Power St.; G. McKay, 1A Orford St.; M. Bennett, 25 Succo St.; Y. Vesunen, 29 Poplar St.; G. Hildebrandt, 95 Balsam St.; Alex. Iillis, 93 Balsam St.; J. R. Clark, 6 Granite St.; Norman Meaden, 19 Nickle St.; F. Listeski, 19 Orford St.; T. Meehan, 6 McKeen St.; J. Livingstone, 18 Orford St.; D. G. MacPhail,

3 McKeen St.; Wm. Zinkie, Oliver St.; A. Stoddart, 10 Clarabelle; A. A. Watson, 3A Union St.; P. Lowney, 5 Evans Rd.; Pete Aakanen, 46 Balsam St.; Robt. Bell, 12 Oliver St.; M. Kavanagh, 8B Peter St.; B. H. Mulligan, 13 Nickel St.; Fraser Fields, 33A Nickel St.; W. E. O'Brien, 14 Norite St.; Elliott Lawson, 3B Peter St.; Joe Sanchioni, 1 Craig St.; G. Henry, 23 Cobalt St.; A. J. Simmonds, 12 Cliff St.

#### COPPER CLIFF — CLASS II

W. W. Chapman, Kent St., \$20.00; Wm. Rogers, 3 Market St., \$15.00; Hugh Allen, 101A Balsam St., \$10.00; P. Steadman, 5 Cliff St., \$8.00; Ross Clark, 4 McNevin St., \$7.00; M. J. McDonell, 51 Poplar St., \$6.00; and the following awards of \$5.00 each: M. Kostash, 28 Nickel St.; P. Ogilvie, 48 Evans Rd.; G. Adams, 12 Norite St.; A. Digby, 7 Balsam St.; E. Stoddart, 10 Jones St.; D. Thom, 15 Power St.; A. Thorsborough, 55 Power St.; C. B. Mathews, 44 Finland St.; Chas. Stemp, 18 Orford St.; J. T. Forythe, 8 McKeen St.; L. Hamilton, 5 Clarabelle St.; L. Maltby, 5B Peter St.; E. Howard, 45 Serpentine St.; R. Heale, 14 Cliff St.; E. Crouse, 17 Rink St.; W. Jessop, 8 Balsam St.; E. Marcon, 22 Union St.; V. Pollesel, 15 Florence St.; R. Deacon, 17 Diorite St.; D. Ghett, 8 Basilio St.; M. Lemke, 38 Power St.; T. Morello, 36 Craig St.; A. Harrison, 19 Cobalt St.

#### CREIGHTON LAWNS AND GARDENS

Wm. Oja, 2A George St., \$20.00; E. Kaukonen, 10 Victoria St., \$15.00; J. Koskinen, 18 Alexandra St., \$10.00; Charles Platt, 63 Wavell, \$8.00; J. Thomas, 37 Wavell, \$7.00; Clifford Briggs, 57 Wavell, \$6.00; and the following awards of \$5.00 each: J. Gilebe, 7 George; N. McDonald, 6 Victoria; K. Suntarinen, 20 George; E. H. Mosher, 51B Wavell; G. G. Harley, 34 Wavell; Chas. Drenan, 24 Wavell; Gordon Luck, 59 Wavell; L. Murphy, 55 Wavell; N. E. Silverson, 48 Alexandra; C. Johnson, 33 Wavell; A. Koskela, 62 Wavell; Emil Pera, 22 Wavell; L. Gilmour, 45 Wavell; L. Brownlee, 47 Wavell; J. Takala, 34 Copper Cliff Rd.; W. Lagista, 8 Victoria; J. Hutton, 31 George; H. Grant, 10 McNaughton; H. H. Smith, 15 Churchill; W. McCormick, 42 Alexandra; W. Greer, 1B Algoma; Louis Debek, 20 Alexandra; R. L. Hawkins, 16 Churchill; E. C. Speers, 10 Churchill; W. McKee, 19 Churchill; R. A. McAlister, 19 McNaughton; H. Bobbie, 51A Wavell; M. Dennis, 43B Wavell; D. Brown, 13 Wavell; E. McLean, 8 George; J. C. Currie, 11 Wavell; J. E. Reeves, 43A Wavell; J. Sandre, 7B Albert; M. Jalsick, 58 George; W. Linholm, 12 Edward; R. Jefkin, 10A Albert; G. W. Lynn, 16 Edward; S. Arelio, 6 George; M. Davies, 20 Edward; A. Maenpaa, 14 Grey; Leo McLaughlin, 34 Alexandra; J. Moore, 7 Grey; E. Tahvandinen, 61A Wavell; A. Ruitta, 8 Connaught; J. Craigen, 15 Wavell; J. F. Nicholls, 4 Connaught.

#### LEVACK LAWNS AND GARDENS

Ed Hilton, 14B Sixth, \$20.00; W. Gunn, 21 Third, \$15.00; Merlin Briese, 21 Fourth, \$10.00; F. T. Cromie, 7 Riverside, \$8.00; J. D. Wright, 52 Third, \$6.00; and the following awards of \$5.00 each: J. C. Shillington, 19 Third; Alex. Lefebvre, 44 Mountain; Fred Bishop, 20 Fourth; R. Lauzon, 18 Fourth; J. Austin, 36 Church; J. H. Kennedy, 37 Cedar; D. Gallant, 20 Third; R. E. Gross, 52 Pine; W. J. Hykins, 50 Pine; L. V. White, 24 Third; C. Terry, 12 Riverside; F. Spencer, 39 First; A. H. Palmer, 48 Cedar; M. Koski, 49 Balsam; E. W. Mayhew, 72A Nickel; S. Williams, 17 Fourth; D. Storey, 46 Mountain; W. D. Kennedy, 18 Third; Albert Hague, 42 Nickel; L. Mallette, 21 Fifth; R. Boisclair, 50 Third; W. Wiorzyn, 24 Nickel; G. Ruller, 38 First; John Dohran, 33 Fourth; Waldo Clarke, 62 Nickel; Bruce Moir, 24 Fourth; K. Belter, 5 Riverside; M. Palij, 39 Cedar; Henry Roy, 52 School; R. C. Gemmell, 42 Church; Gordon Hurley, 48 School; W. A. Pretty, 19 First; P. Miller, 51 Third; Gordon Tulloch, 53 Third; D. Simpson, 64 Nickel; J. Campeau, 49 Pine St.; Alf Armstrong, 40 Church; Lloyd Davis, 38

(Continued on Page 10)



EVANS ROAD HOME AMONG THE BEST

A black-and-white picture does no justice to the beautiful development carried out by H. Stavang at the rear of his home on Evans Road, Copper Cliff.



CONISTON LAWNS DRAW SPECIAL PRAISE

This view along First Avenue from the grounds of Eugene Bracken indicates why the lawns at Coniston drew high praise from the competition judges.

# Baseball Spoils Well Divided in Nickel Belt Play

Creighton, Coniston, Sudbury and Copper Cliff all came in for a share of the spoils in this year's Nickel Belt baseball play.

Creighton Indians won the senior crown when they overpowered Garson Greyhounds four games to one in the NBBA final series. They won their way to the finals by ousting Coniston in six games, while Garson entered the last round by downing Copper Cliff Redmen in five.

In the junior division, a strong Coniston nine outlasted the hot Falconbridge Legion to win in seven games. Falconbridge downed last year's champion Frood Tigers in the semis and Coniston turned the trick against Copper Cliff for the right to advance to the finals.

Sudbury Pepsis had a tough time in winning their juvenile title. The Pepsis started no less than 15 games against Coniston before they captured the best-of-seven series four games to three. Eight of the contests were halted by rain. Pepsis had little trouble getting by Frood in five games while it took Coniston the same number of contests to eliminate Copper Cliff.

Coach Goose Gosdich's winning juvenile team was composed of Ed Zanetti, Cummy Burton, Gino Pinn, Chuck Smith, Rudy Biassutti, Jerry Lake, Doug Fabro, Al Koth, Al Armstrong, Moe Bartoli, Bill Kennedy, Glen Eady, Delki Dozzi and Carl Nurmi.

Copper Cliff compiled one of the best records in years by taking the midget championship in their first season of play. They lost only one game during the regular schedule and had a comparatively easy time in knocking off Frood in six games for the title. Copper Cliff beat Kiwanis in the semis while Frood edged out Foresters.

With coach Owen O'Reilly on the Copper Cliff team were Bruno Poilese, Louis Visentin, Nick Nicoli, Bob Fuller, Billy Baker, Jim Pappin, Ray Talamelli, Leo Pevato, David Crouse, David Ahonen, Bob Paddick, Bob Stemp, Don Lowney, Art Robertson, Wayne Kinkley, Fred Gilpin (manager) and Richard Nicoli (bat boy).

In the athletic association shift leagues two winners have been declared.

At Levack, Town knocked off Office in straight games to take the championship. They defeated Laidlaws in four games in the semis while Palumbos battled Office to the limit before falling by the wayside.

Members of the winning Levack team were Naish Farrow, Dave White, "Fergy" Ferguson, Bert Mallette, Ernie Mallette, Alfie Mallette, Syd Kemp, Doug Anderson, Eddie Luoma, Ken Belter, Bob Harvey, Archie Tucksey, Ray Purvis, Art Pendergast, Dr. Al Knight and manager Champ Plaskoski.

Dunns won their second straight championship at Frood-Stobie by turning back Glagaloffs in two straight games. Dunns got by Marcottes in the semis and Glagaloffs eliminated Stelmackowich.

On the winning Dunn team were L. Souliere, A. MacDonald, D. Dunn, N. Morrow, E. Turcotte, H. Bagnell, R. Day, E. Ethier, M. Smirke, R. Bue, J. Watkins, H. Grenon, J. Mannisto, J. Killah and S. Taylor.

Warehouse and Roasters are still fighting it out for the championship of the Copper Cliff shift league, with the former holding a 2-1 edge in games at press time. Warehouse entered the finals by eliminating the Machine Shop while Roasters downed Flyers.

At Garson, Little Giants and Mills have one more game to play before the championship is decided.



Some members of the Nickel Belt Senior Baseball League champion Creighton Indians are shown above: front row: Bob Fortin, Paul Girard, Tommy Howe, Early Boyd, Art Pearce, John Bala; back row: E. E. Mumford (superintendent of Creighton Mine) Maurice Kinkley (coach), Art Wilson, Joe Stelmach and Jim Hutton (manager); not shown: Bill Kasephuk, Jack Howe, Jim Smith, Art Carbone, Frank O'Grady, Tommy Davies, Frank Hreljac and Andy Zacharosky.



Coniston's Junior Red Sox are, from left to right, 1st row: Bob D'aloisio, Gino Caver-son, Foster Zanutto, George Paradis, Ron Zanutto, John Flinn; 2nd row: Lorne Chew, Richie Caver-son, Norm Zanutto, Harold Oliver, John Luptak; 3rd row: Frank Zanatta, Bill Morrison (assistant coach), Tony Zanutto (manager), Guy Caver-son (coach), Joe Barbe. Missing when the picture was taken were Joe Halverson, Morris Blake, Morris Duhalme and John Barbe.



Members of the Warehouse team, who won the Copper Cliff shift softball league and were leading Roasters 2 games to 1 in the final playoff when Triangle went to press, are shown above, left to right: front row, Red Dunn, Bucky Basso, Yacker Flynn, Bernard Leclair, Howard Longfellow, Paul Mesaros; back row, Joe Suave, Billy MacDonald, George Rafuse, Wally Urwin, Dick Fuller, Lawrence Kavanaugh and Tom Acheson.



1 — PUTTING OUT DECOYS — In dim light of dawn Bill Hudgins drops five or six decoys in reedy bay of Sudbury District lake.



2 — IN THE WEEDS — Bill and his 2-year-old Labrador Retriever, Paddy, crouch in blind. Bill hopes for mallards or blacks.



3 — FIRST OF SEASON — Bill gets opening shot away as duck is decoyed down. Paddy eagerly awaits command to retrieve.



4 — GENTLE MOUTH — If bird were still an egg Paddy wouldn't break it, so gentle is his mouth as he brings in nice mallard.



5 — BLACK BOMBER — When Bill speaks his name and points in direction duck fell, Paddy bursts from blind and hits water running.



6 — WELL TRAINED — Paddy displays good manners as he delivers duck to hand. Bill is proud of shot but prouder of his dog.

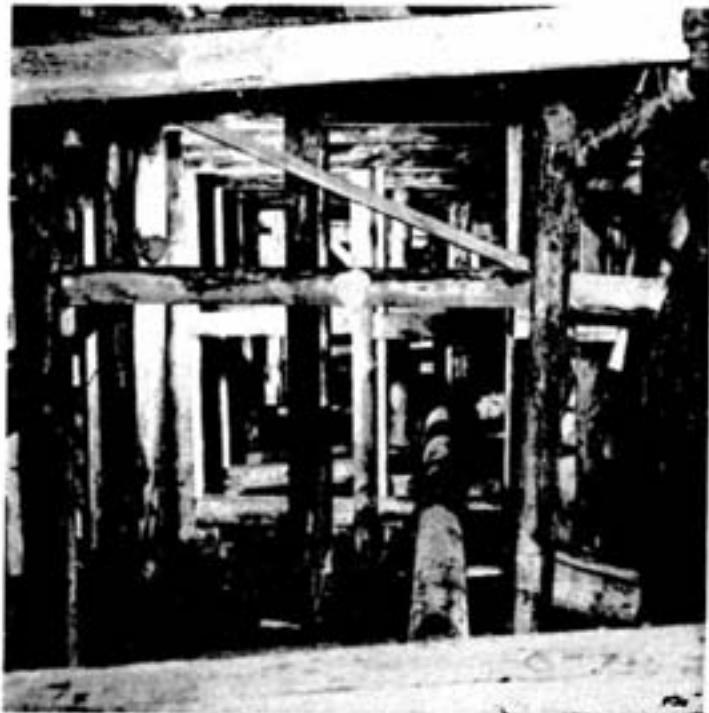
## "By the Dawn's Early Light"

Oh say can you see what goes on here?

Not too well perhaps, since it's still practically the middle of the night for most people, but dimly discerned as the characters of the piece are Bill Hudgins of the Research Department at Copper Cliff and his dog Paddy.

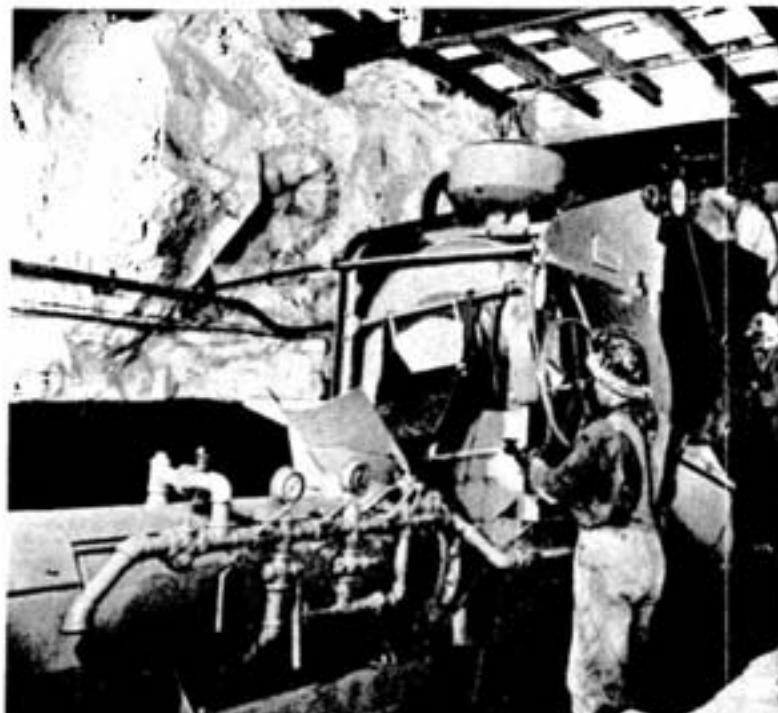
The place was the shore of a district lake, the time was very early on September 19, and the occasion was the opening of the duck-hunting season, which lasts until November 17.

A steady cool drizzle and scattered mists hampered visibility for the first few hours of opening day but some of the luckier hunters bagged their limit by noon, getting some black ducks and mallards but mostly "butter-balls". There'll be more blacks and mallards as the cold weather sweeps across the northern watershed, and local nimrods are anticipating one of the best seasons in years.



### 1 - Transformation Scene

In the footwall of the old workings mined and abandoned 40 or more years ago at Creighton Mine's No. 3 Shaft, collapsed and broken timbers have been removed from this heading and bracing has been erected to support forms for lining a new slusher drift with concrete. The pipeline is also laid for bringing concrete from the mixing station located in another section of the mine.



### 2 - An Underground "Factor"

Here is one of the concrete mixing stations in operation underground at Creighton Mine. In the background a miner is loading the elevator hopper in which cement and measured for the next mix. In the foreground the operator manipulates the conveyor belt to pour a batch of concrete from the mixer into the long cylindrical placer, brought to the mixing station by the regular transportation system, and gravity from surface via a raise formerly used to deliver fill.



### 3 - Concrete Is Sent on Its Way

When the placer is charged the operator turns on the compressed air which blows the concrete through a 6-in. steel pipeline to a section of the mine, perhaps hundreds of feet distant from the mixing station, where construction forms stand waiting to be filled. The pipeline will take many turns, often at 90 degrees, and will travel for long stretches both vertically and horizontally, to deliver concrete swiftly into places it would be a difficult and laborious job to reach by any other means but which must be developed for the caving program.



### 4 - No Turn Too Sharp

At sharp turns along the route, as at this one in the manway leading to the next level of the mine, it would be natural to assume that the highly abrasive end of such a connection, but what happens is that the end of the T and the speeding concrete hoses leaving the pipe practically untouched.



## y" 5 - Down!

righton. In  
gravel are  
control to  
Cement is  
arrives

Down into the mine runs the pipeline. A miner travelling the ladder in the manway hears the concrete pinging and scraping against the steel pipe as it speeds to the forms.



## Difficult

nt where the pipeline heads down  
e. T-bends are installed. It would  
concrete would make short work  
an air cushion forms in the dead  
ees off it as it makes the turn.

# "Air-Borne" Concrete Big Help To Creighton's Caving Program

"Air-borne" concrete, blown through hundreds of feet of pipe from underground mixing stations directly into construction forms, is greatly expediting International Nickel Company's program of mining low grade ore by induced caving at Creighton Mine.

To stabilize areas of the mine worked and abandoned 40 or more years ago, and utilize old openings in which the timber supports have rotted and collapsed, extensive concreting is necessary. Very slowly and often only with the greatest difficulty could concrete be delivered to these locations until a "push button" system of blowing it there by compressed air was installed.

Several thousand bags of cement a month is now being used underground at Creighton to build slusher stations and drifts, box-hole brows, switchrooms, and other installations required to meet the caving project's quota of 12,000 tons of ore per day.

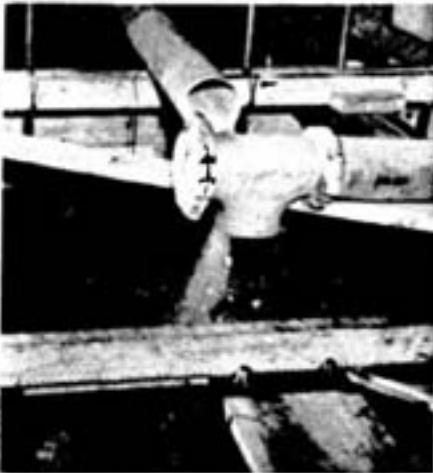
Concrete mixing stations are located on the 6th and 20th levels. Gravel for the concrete is received at the mixing stations by gravity from surface through a raise formerly used for bringing rock fill to the various levels of the mine. Control chutes have been installed in the raise for handling the gravel at each station. Cement is brought from surface by the mine's regular transportation system.

Located in large rooms which provide ample space for cement storage, the mixers can produce a 16-cu. ft. batch of concrete every three minutes. It is poured into the placer, a cylinder 2½ ft. in diameter by 10 ft. long, into which compressed air is then

introduced from the mine's main air line.

From the placer the concrete is blown through a line of 6-in. steel pipe which carries it along levels, up or down manways, and through twists and turns of the mine's workings until finally, perhaps a quarter of

(Continued on Page 10)



## 6 - Delivered!

The concrete reaches its destination and is blown right into the construction forms.



## 7 - Transformation Completed

And here's an example of what is wrought far beneath the earth's surface by this unique pneumatic delivery service. A heading of the old workings would hardly be recognized in this slusher drift. One of dozens to be developed, this particular drift has both walls and roof concreted to make it safe for use. Broken ore from the caved area above passes down through the boxholes in the sides of the drift and is slushed, or scraped, into an ore pass leading to one of the underground crushers where it is crushed before being hoisted to surface.

## Funny Faces, Fancy Dresses at Annual Field Day



Busiest people at Creighton Mine Athletic Association's annual field day, held on the public school grounds, were the two clowns who kept both youngsters and grown-ups giggling. In the first picture one of the funnymen spellbinds an audience. The three young charmers in the second picture were winners of the costume contest: Gayle Girard, 10, 3rd prize; Madeline Maloney, 5, 2nd prize; Jean Maloney, 10, 1st prize. Another popular feature of the field day was a tug-o-war between teams from No. 5 and No. 3 Shafts, the former getting the decision after some mighty tugging.

## Garden Results Very Gratifying

(Continued from Page 5)

Church; E. W. Gilchrist, 28 Church; H. Klitgaard, 23 Church; John Deveau, 35 First; D. White, 45 Cedar; R. D. MacNeil, 53 School; Alex. Didur, 52 Cedar; Urpo Koski, 47 Cedar; G. McCue, 38 Spruce; A. H. Dane, 44 Nickel; James Smith, 20 Nickel; A. Hartley, 14 Nickel; W. Billows, 8 Nickel; J. D. Rowlands, 11 Riverside; W. H. Lockhart, 9 Riverside; W. C. Neal, 37 First; A. Mehagie, 6 Third; A. Cucksey, 8 Third; W. C. McGowan, 40 Third; L. Villeneuve, 45 Third; Ted Laurence, 43 Third; H. Goodspeed, 54 Third; W. Bushnell, 14A Sixth.

### CONISTON LAWNS AND GARDENS

A. Blake, 21 First, \$29.00; R. Snitch, 22 First, \$15.00; Mrs. Percy Johnson, 76 Edward, \$10.00; A. Gobbo, 45 Third, \$8.00; W. Paterson, 46 Third, \$7.00; and the following awards of \$5.00 each: H. Creswell, 41 Second; E. J. Orendorf, 17 First; F. M. Agiss, 43 Second; O. Paradis, 31 First; Geo. Chisholm, 36 Concession; T. Tancredi, 21 Third; D. F. Totino, 49 Third; W. McLaughlin, 13 First; Eugene Bracken, 29 First; H. Gagnon, 32 Second; Mrs. Carlo Chezzi, 43 Third; A. Glibbery, 28 Fifth; Theo Fitzgerald, 47 Fourth; Leo King, 33 Third; G. Paquette, 30 Third; Ed McKerrol, 34 Second; O. L. Geoffrey, 16 First; X. Lalonde, 23 Second; Fred Spencer, 26 Second; J. C. Prevost, 18 Third; James McCalfe, 19 Balsam; R. Balantyne, 43 Fourth; Leo Martin, 39 Third; R. J. Conlon, 27 Third; John Farnel, 47 Third; Don Simmonds, 41 Third; Felix Plante, 47 Third; Don Simmonds, 41 Third; Felix Plante, 240 Seventh; P. Ransom, 277 Eighth; L. Wilson, 274 Ninth; R. V. Smith, 210 Fourth.

Strom, 30 Fourth; R. Muirhead, 23 Balsam; E. Poirier, 22 Third; W. Conlon, 21 Balsam; Dan Forestell, 31 Second.

### MURRAY MINE LAWNS AND GARDENS

Norman Creet, \$10.00; Harry Fraser, \$5.00; William Madill, \$5.00.

### GARSON MINE LAWNS AND GARDENS

E. Merkley, No. 6 Rule, \$10.00; A. G. Osborne, 33 Henry, \$5.00; R. B. Gresham, 15B Henry, \$5.00.

### LIVELY LAWNS AND GARDENS

D. Wright, 206 Third, \$20.00; J. Walker, 203 Third, \$15.00; J. Dingwall, 249 Ninth, \$10.00; D. J. Yawney, 276 Birch, \$8.00; C. Lyons, 244 Eighth, \$7.00; M. L. Brooks, 212 Third, \$8.00; and the following awards of \$5.00 each: G. Cummins, 284 Eighth; R. S. McMahon, 217 Third; J. F. Donoghue, 285 Pine; R. F. Goard, 283 Pine; P. Bugg, 275 Tenth; A. E. Heppner, 252 Tenth; S. Lane, 264 Ninth; W. Hayduk, 284 Seventh; C. Cuthbertson, 286 Birch; F. Huska, 203 Fifth; D. H. Cox, 205 Fifth; E. C. Eveline, 215 Fourth; R. Buntin, 250 Sixth; Karl Kudla, 212 Fourth; J. C. See, 254 Eighth; F. Kuchinski, 238 Ninth; F. W. Clapcott, 235 Eleventh; L. Chamberlain, 223 Fifth; T. J. Gibson, 246 Sixth; A. O. Ahonen, 277 Sixth; R. J. Blanchard, 287 Pine; Y. Laborgne, 271 Seventh; R. Davey, 260 Eighth; W. Tuttle, 275 Eighth; C. L. Denison, 232 Tenth; J. Martel, 276 Eighth; H. R. Dodd, 281 Eighth; K. R. McAdam, 258 Eighth; C. M. McFarlane, 256 Seventh; N. H. Lafoley, 285 Seventh; R. Hamill, 287 Seventh; P. Domencu, 283 Sixth; G. W. Andrews, 210 Third; G. F. Legault, 227 Fourth; W. McAlpine, 225 Fifth; Chas. Price, 289 Pine; I. F. McAdam, 278 Birch; H. Lehman, 280 Seventh; W. O. Sturgeon, 281 Seventh; C. Labrash, 233 Seventh; O. La- plante, 240 Seventh; P. Ransom, 277 Eighth; L. Wilson, 274 Ninth; R. V. Smith, 210 Fourth.

## Concrete by Air At Creighton

(Continued from Page 9)

a mile or more from the mixing station, it drops right into the forms at the construction site.

At 90-degree turns in the line T-bends are used; an air cushion which forms in the dead end of the T greatly reduces abrasion from the concrete. On long curves sections of 8-in. pipe are inserted, with ni-hard liners; standard steel elbows last as little as two hours under the impact of the concrete at these turns but the ni-hard liners, made of a very tough nickel alloy, were unchanged after six months of operation.

The men operating the concrete placers take pride in the astonishing performances racked up to date. Best "up" delivery so far was a total of 1,315 feet from the 20 level placer, consisting of 875 feet on 20 level, up 210 feet on a 47-degree incline, 100 feet on the horizontal, up 50 feet at 90 degrees, and finally 80 feet on the horizontal. The 6 level station takes credit for the longest "down" delivery to date, a total of 1,670 feet from the placer into the forms for a new slusher station on 14 level.

### NATURALLY

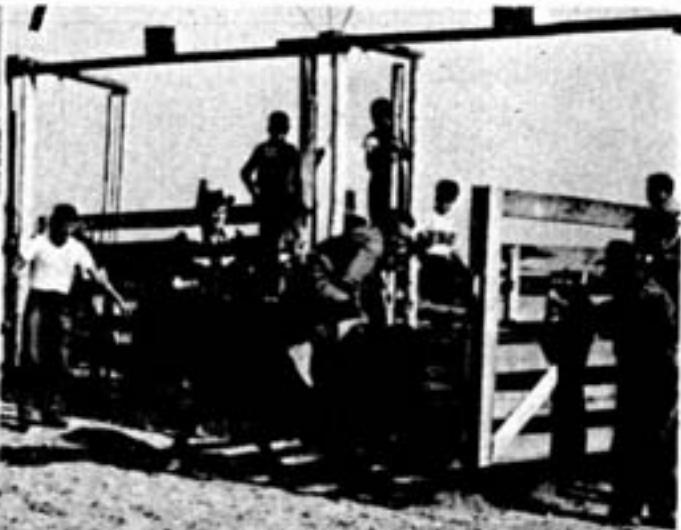
A patient was pleading with a doctor that he really didn't need an operation.

Patient: "There's nothing wrong with me, except my appendix itches. Do you have to take it out?"

Doctor: "Certainly. Have to take it out before we can scratch it."



Leo Mathe found this steer too spirited and hit the dirt seconds after leaving the chute. He was one of the day's best performers.



Jim Donison believes in doing things the hard way. Here he comes charging out of the chute riding backwards on a big bull.



Even the small fry got into the act. George Hebert, Jr., starts on a wild ride on a calf, but the animal couldn't shake the 10-year-old cowboy from its back.



Ride 'em cowboy! Alden Mantysaari holds on tight as his steer dashes into the stockade. It was the first ride of the day and proved to be one of the best.

## Murray Picnic Features Rodeo

Wild horses and bucking bulls stole the spotlight from ball games and novelty races this year at the Murray Mine Athletic Association picnic.

The association went "Western", staging a rodeo on the Belanger farm, near Azilda, and almost 2,000 members and their families turned out to watch the fun.

Although no prizes were awarded to the riders, Jim Donison and Leo Mathe of Murray Mine and Alden Mantysaari of Copper Cliff Concentrator were three of the day's outstanding performers. Donison created quite a stir when he came out of the chute riding a bull backwards. Ten-year-old George Hebert, Jr., whose father George works at Copper Cliff Smelter, stuck to the back of a bounding calf as if he were glued there, and 9-year-old Richard Belanger performed like a veteran in taking his pony over the high jumps.

Carl Nesbitt, secretary-treasurer of the association, said that the big crowd went through 50 cases of soft drinks, 27 gallons of ice cream and 2,000 cones, 1,200 weiners and buns, 19 pots of beans, 1,500 paper plates and 34 quarts of milk.

The kids got their turn at riding when some of the cowboys put them on horses and led them around a small field adjoining the corral.



Carol Greig, 10, was guest of Alex Speirs. Her father is Ivan Greig of Frood-Stable.



A FRIENDLY HAVEN shining in the night is Sudbury Public Library, which has just completed the first year in its fine new home on Mackenzie St., reports a steady and substantial increase in the use of the many services it offers Sudbury District.



Aurele St. Laurent, Inco lab worker, frequently "drops in".



Helen Maki, scholarship winner, used library for research.



BY COINCIDENCE Jim Mulligan of Eaton's reads the Sudbury Star while its asst. news editor, John Marshall, browses at the periodical rack a few feet away.

## All Services At Library See Steady Increase

Circulation of books from Sudbury Public Library was up 4,000 for June, July and August as compared with the same period of 1952.

This remarkable increase during a season when interest in reading might reasonably be expected to lag, is a fair indication of the steady and substantial growth in use of the library's services since it moved into its new building on Mackenzie Street a year ago in September.

Thousands of Inco people are numbered among the members of this valuable community institution, many of them residing outside the city. People come regularly from widely distant points to get their books, magazines, musical recordings and educational films.

Up to the end of August the library had issued 59,000 books to children. There were 353 enrolled in the children's summer reading club, compared with 200 last year, and 187 of them read more than 10 books each.

At the end of August circulation of books to adults stood at 100,000, compared with 133,000 for all of 1952.

No record is kept of the casual readers who drop in at the library for part of an afternoon or evening, but the number of people who make this a regular habit has noticeably increased. The library's restful atmosphere encourages browsing.

"We are very pleased with the progress the library has shown, and certainly hope it will continue," said Miss Isabel McLean, the chief librarian. Discussing new features she mentioned particularly the reference



Ellene and Johnny Heino of Sudbury and their aunt, Mrs. Hugh Biggans of Burwash, choose records from the big selection available.

section, which has been greatly expanded; it has on hand, for loan to individuals or groups, large selections of maps, pictures and pamphlets covering a wide range of subjects. Another notable feature is the special collection of books on technical subjects, which is being built up with emphasis on mineralogy. The library's selection of some 1,800 music recordings is very popular with a district-wide clientele; its recorded language lessons in French, Spanish and English, and its discs of dramatic readings, are also much in demand. Many groups make regular use of the three projectors and film service.

In adult reading the trend away from fiction noticed over the past 10 years continues in Sudbury as in all Canada, according to Miss McLean. For the months of June, July and August 1,224 non-fiction titles were circulated to adults, compared with 688 fiction. Reason for the trend, she thinks, is that production of non-fiction best-sellers is consistently higher. Titles currently in great favor with Sudbury library members include Rachael Carson's "The Sea Around Us", Bruce Hutchison's "The Incredible Canadian", Donald Grant Creighton's "John A. MacDonald, the Young Politician" and "The Roman Papers".

To celebrate its first anniversary in its new building the library held an informal at-home at which the success of the past 12 months prompted mutual congratulations and high hopes for the future.

#### EDINBURGH STRATEGY

Macpherson had invited his friend McTavish to have a drink.

"Say when," he said, hopefully, and poured a wee drop into the glass. McTavish was silent.

Cautiously, Macpherson poured out another drop. Still only silence from McTavish.

"Did you hear about the fire at George's?" asked Macpherson, suddenly.

"When?"

Macpherson put the bottle down with a sigh of relief.



Miss Eleanor Wainwright of the Technical School staff talks new books with Miss Sheila Gow, children's librarian.



SMARTLY MODERN and functional in design the library nevertheless has a restful atmosphere, and is used by people from all walks of the community.



TYPICAL of the many youngsters who regularly visit the library to browse is Larry Hall, 14, whose father, Percy Hall, works at Frood-Stehle Mine No. 7 Shaft.

## Home-School Association Is Her Pet Project

When Mrs. Warren Koth became interested in home and school association work there was no such an organization in Sudbury — so she and a few other parents in her part of the city organized the first group at Alexander Public School.

That was nine years ago. Today the association has more than 1,000 members in Sudbury and district and is represented at Alexander, King George, Wembley, Princess Anne, Elm Street, Prince Charles, Sudbury High School, Minnow Lake, Bancroft Drive, MacLeod Road, Broder-Dill, Burwash and Espanola schools.

Mrs. Koth served as the first president of the Alexander School organization and was district chairman of the provincial home and school association from 1946 to 1950.

During her term as chairman she was largely responsible for organizing the association at Wembley, Prince Charles and King George schools, and helped lay the groundwork for the formation of the other groups.

Now "just a member" of the Alexander and Sudbury High School groups, she is still a keen supporter.

Mrs. Koth says she got interested in home and school work because she came from the United States and wanted to learn something about Canadian schools.

"I didn't know anything about the curricu-



MRS. WARREN KOTH

lum or grading here, and when my eldest son started school I had no idea how he was making out. In Michigan 75 per cent was a pass and the average was up near 90. I didn't know whether to spank him or pat him on the head for a 65 per cent mark when he brought home his report card."

She soon discovered that the organization had a great deal to offer. "I have found that by being a member of the association I can keep in touch with new subjects introduced, new methods of teaching and am able to keep abreast of the educational trends of the day.

"The association is good from the teachers' viewpoint, too. They become acquainted with the parents and through that can learn the limitations of a child, his needs or potentialities. The parents and teachers are able to discuss common educational problems at meetings and difficulties such as matters of

## Staged Ornamental Swimming



More than 300 children of members were enrolled in the annual swimming and life-saving classes held at the Copper Cliff Club pool this summer, and many of them entered the meet which brought the schedule to a close. A display of ornamental swimming, photographed above, was an outstanding feature of the meet; taking part were Sandra McDonald, Harriet Maddock, Diane Godfrey, Carolyn Godfrey, Barbara Silver, Mary Nelan, Patsy Nelan, and Carole Orr. Master of ceremonies was T. H. Peters, seen standing on diving board, who is chairman of entertainment at the club.



Some of the junior girl contestants in the Copper Cliff Club's annual swimming meet await their events: Judith Wilkie, Marilyn Colgrove, Susie Godfrey, Bonnie Forsythe, Judy McClelland, Gwen Ferguson, Lynn Morrison, and Janie Sutherland. Instructor at the club's swimming and life-saving classes was Shirley Elliott, assisted by Susan Dunbar.

discipline can often be ironed out more easily.

"I have found, too, that through home and school groups a community becomes more closely knit. You get to know your neighbors and can discuss common problems and interests.

"Not only have I found my work with the association educational but also enjoyable and a very pleasant way of meeting people. It is amazing how much you can learn

about the schools by attending association meetings once a month. I think they offer a wonderful opportunity to anyone who needs to become better acquainted with the Canadian system of education."

"Did you see how pleased Mrs. Smith looked when I told her she didn't look a day older than her daughter?"

"I didn't notice. I was too busy watching the expression on her daughter's face."

## Garson Gunners Star Cup Representatives



Although fourth place was the best they could do in regular scheduled play of Sudbury District Football League this season, Garson Gunners turned on the heat in the Star Cup series and won the right to represent the loop against North Bay and the Soo in the playoff for the Northern Ontario championship. The Gunners, who flashed some lovely soccer in their cup triumph, are seen above: front row, Morris Chyka, forward; Gordie Young, forward; Nick Gadjek, forward; Lobo Bojicic, forward; Bobby Elliott, half; Andy Muir, forward; Joe McCauley, half; (seated) Ronnie Watson, mascot; back row, Mel Young, chairman; Danny Parker, trainer; Bobby Weston, forward; Bill Rowarth, forward; Hughie Morrison, forward; Jerry Schuram, goal; Tauno Perala, back; Peter Kolundzic, back; Taffy Axis, back; Ollie Matson, manager; not shown, Jeff Wilkinson, half, and Bob McCauley, asst. manager. Croatian-Adria topped the standing in regular league play, followed by Ukrainians, Italia, Polish Eagles, Garson, Hungaria, and Black Devils.

### APPOINTMENTS ANNOUNCED

The following appointments effective October 1 have been announced by Vice-President J. R. Gordon:

#### Mining & Smelting Division

Alex. Godfrey, assistant to the vice-president.

Mills Austin, works auditor.

Russell J. Henderson, assistant works auditor.

#### Nickel Refining Division

C. A. Beach, assistant works auditor.

## North Bay Looks Like Team to Beat

Bob Tate, charging young fullback with the Sudbury High School Wolves, goes through the hole for a large gain in the football action shown on the cover of this month's Triangle.

With only one hold-over from last year's Sudbury High squad back in harness, Bob is one of many juniors playing senior football for the Wolves this season. Despite this lack of experience on his team, coach Tom Cooney is optimistic and predicts better things for his charges than the 16-2 loss suffered at the hands of Sudbury Tech Bluedevils in the season's opener.

The hold-over from last year is Cameron Smith, who looks after High's quarterback duties. Up from the juniors with Bob Tate are such last year standouts as Bob Martilla, Jack Hiscock, Jimmy Gorday, Paul Oiscamp, Red Graham, Norm Anderson, Keith Dunn, John Foster and Buddy Van Santvoort.

Where High School is short on experience, Alex MacPherson's Bluedevils have lots of it. Tech has a number of veterans back and has brought up a strong contingent

from its junior team of last year.

Leading the Tech attack in the quarterback slot is Polly Dinan. He gets his support from such top-rate performers as Arne Haldin, Jim Cook, Ken Lynott, Bill Olyowski, Mauno Makela, Ray Charbonneau, Charlie Furchner, Lloyd McChesney, Bill Kennedy, Bob Craig, Ron Noble and Dick Bell.

Of the other four teams in the Northern Ontario Secondary School Association circuit, North Bay Collegiate is rated as the team to beat. The Collegians opened the

season by trouncing the last year NOSSA champion Scollard Hall team 30-0. Farther north, Timmins and Kirkland Lake battled to a scoreless tie in their first meeting.

The winner of the six-team league will represent Northern Ontario in the Red Feather football tournament in Toronto later this month.

If our world is to survive in any sense that makes survival worth while, it must learn to love, not to hate; to create, not to destroy.

—King George VI

## Sultans of Softball at "Port"



In a best-of-three playoff series with Stores, the Machine Shop softball team won the plant league championship of the Nickel Refinery at Port Colborne. Back row, left to right, Jim Porter, Paul Radzikoski, Bob Fleming, Mike Harrietha, Reg Breton, Basil Hollingsworth, Russell Beauchamp, Bob Duke (umpire in chief); front row, George Sathmary, Sam Buffa, Steve Siba, Gino Favero, Joe Apolcer, Jack Eden; not shown, Paul Quesnel, Romeo Gaspari, Bob Thompson.

# SNAPSHOTS OF LIFE WITH INCO



Mickey Smurke, who is well known throughout the Sudbury district as a softball player, was snapped at his work in the machine shop at Frood-Stobie, machining a gear for the Ross feeder at Stobie rockhouse. The Smurkes have two children, John, 3, and Tony, 4. Mickey's father, Tony, will soon complete a quarter century of service with the Company; he is also employed at Frood-Stobie.



A hint that winter is just around the corner is this snap of Bob Crawford, of the Inco police at Garson, putting up his storm windows. Bob says he is taking no chances this year on getting caught with his windows down.



Herk Flynn, of the Copper Cliff electrical department, showed his 4-year-old son John around the Sudbury Fire Department one Sunday afternoon.



Nice work if you can get it is taking pictures of people like the Accounting Department stenographers at Copper Cliff: seated, Dina Minardi, Eva Hakojarvi; back row, Kay Smith, Maureen Brannigan, Helen Clark, Dolly Leclair, Emily Tomechik, Shirley Knight.



All lit up is the station on 1,000 level at Frood-Stobie No. 7 Shaft as Film Graphics gets ready to shoot sequences of miners going on shift for the new colored motion picture it is making describing underground mining methods at Inco.