

Within The

INCO TRIANGLE

VOLUME 2

FEBRUARY, 1938

NUMBER 3



Second only to the undefeated Toronto Goodyears in the O.H.A.'s "Big Five" loop, Port Colborne Sailors showed themselves a classy, well-balanced, well-coached club in their exhibition tilt with Conreco Aces at Stanley Stadium, January 15. Both clubs were saving themselves for regular schedule play, but this tilt between INCO North and INCO South made the fans wish Sailors lived closer and could come oftener. Upper's beautifully executed solo dash in the third period netted the only goal of the game, although Conreco were literally robbed half a dozen times by the crafty Brownlee. The pre-game photo shows, left to right: Back row, Sailors, R. Morrison, defence; V. Upper, defence; J. Connell, defence; Aces, D. Cairns, centre; A. Webster, wing; W. Hart, defence; W. Zuke, wing; P. Atkinson, wing; middle row, Sailors, A. Thompson, wing; L. Fitzgerald, wing; R. Jasmin, wing; J. Le'ch, wing; G. McGowan, centre; Aces, D. Stack, wing; C. Marshall, wing; V. Price, defence; L. Fletcher, centre; front row, Sailors, Bert Corbeau, coach; R. Waldriff, wing; R. Reynolds, wing; D. Runions, centre; A. Brownlee, goal; Aces, C. Burlingham, goal; W. Lemieux, wing; N. Carriere, wing; J. Seymour, wing; Herb. McMunn, coach.

Fine Range of Facilities At INCO Employees' Club

On or about March 1st is the time at which the new INCO Employees Club in Sudbury is expected to be ready for use, and membership application blanks will be in the hands of employees February 4th, according to arrangements as Triangle goes to press.

The new Club, handsomely designed and appointed, will open a wide range of facilities to Sudbury-residing INCOites, for whose convenience it is being built. The large auditorium will be the dominant feature and hub of activity, with its fully-equip-

ped stage for concerts and theatricals, its big seating accommodation, its smooth dance floor, its four regulation badminton courts, its volley ball and table tennis outfits.

In the comfortably furnished lounge will be tables for bridge, tea, or light lunches, with kitchen service in connection. The library will be supplied with newspapers, leading magazines and periodicals, and Nickel Information Bureau publications.

Downstairs the gymnasium will have boxing and wrestling equipment, a handball court, and showers in connection. In the billiard room will be three billiard-

snooker tables, and in the bowling alley there will be six fine alleys and an observation gallery.

TO HAVE INSTRUCTOR

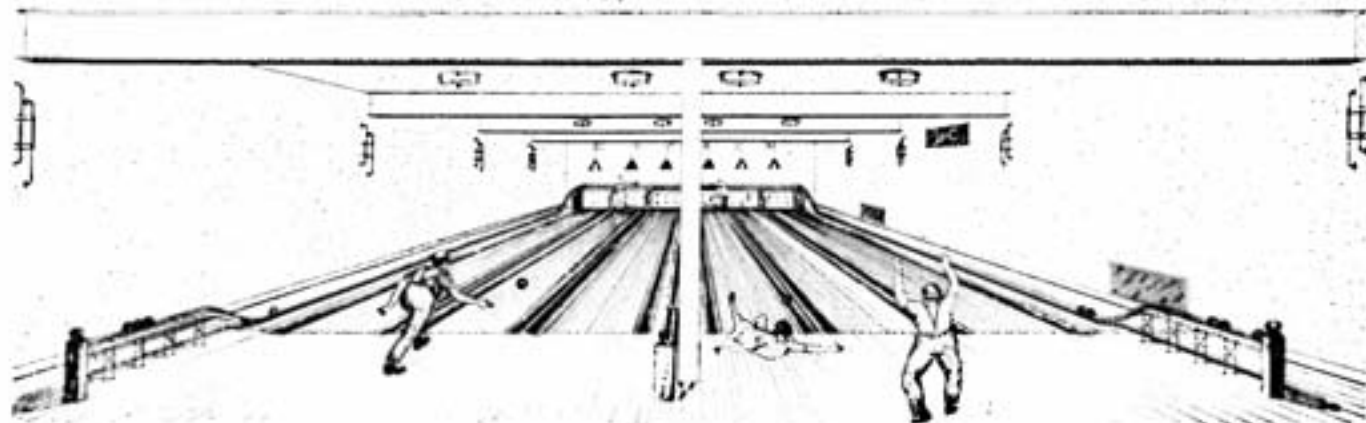
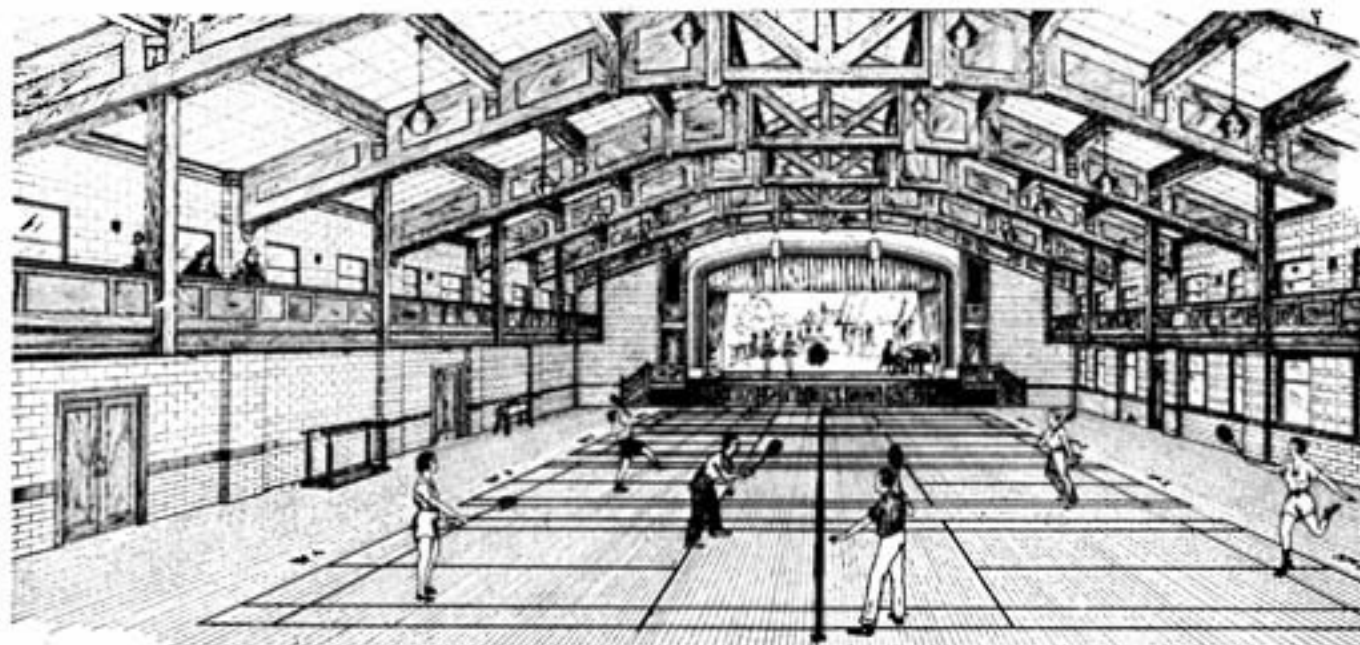
A gymnastic instructor will be engaged, and physical training classes will be organized for the young people in members' families as well as for members and their wives. Dances, concerts, and other events for members will be regular features at the Club, as well as billiard, badminton, and bowling tournaments, etc.

The Club kitchen will be prepared to supply tea or light lunches to members, and to cater for dances and other entertainments.

The Club will be administered by a Board of Directors, and special committees will be struck to organize activities. Membership fees, payable three times a year, will be 50 cents per month, and wives of married members will receive cards entitling them to all Club privileges.

Artists' Conceptions of Some of the Features in the New INCO Employees' Club, Sudbury

By F. COWLING and J. B. SUTTON, Copper Cliff





Published for all employees of The International Nickel Company of Canada, Limited.

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

VOL. 2, No. 3

FEBRUARY, 1938

PRIZE CONTEST

The leading question these days seems to be, "When will the new Club be open?"

Few indeed are those among INCO employees residing in Sudbury who are not looking forward keenly to the many advantages provided for them by the Company in its latest and very handsome gesture of goodwill. Obviously eager to anticipate wherever possible all needs for the security and happiness of those who work for it, INCO is rounding out what is generally regarded as one of the finest employee-benefit set-ups on the continent.

By enthusiastic use of its facilities the Sudbury INCOites will demonstrate their appreciation of their new Club. In the meantime, anyone with an artistic flair is cordially invited to assist in one feature of the arrangements.

The Club needs a suitable crest, and to the employee of any INCO plant submitting the best original design for this purpose it will pay a prize of \$10.00. Entries must be mailed to J. W. Gemmell, Copper Cliff, before March 1.

HARD WORKERS

About once a year is none too often, we think, to remind INCOites of the splendid part played in brightening our leisure hours and maintaining our "esprit de corps" by the officers and executives of the many organizations within our ranks.

Too often we fail to appreciate the work these fellows are doing, and the substantial personal sacrifices they are constantly making to carry out their duties.

Stop and consider the overtime which, in the course of a week, the secretary of your plant's Welfare Association puts in on your behalf,—or the secretary of your Athletic Association,—or any other of the dozens who hold similar responsibilities.

These men accept such positions because they have a sound sense of citizenship. They give unselfishly of their personal time, efforts, and acumen because they are glad of the opportunity to do something constructive for their fellow employees.



"Just before the battle, Mother," in a Coniston shift league engagement. The McMullen and Geoffrey shift lineups were thicker than thieves when the photo was taken, but five minutes later when the game was under way they were about as chummy as the Iroquois and the Sioux.

JORDAN TOPS SHIFT LEAGUE

Copper Cliff:—Frank Jordan's Concentrator team is on top of the heap with 10 points, closely followed by Frank Matte of Copper Converters and Frank Wolfe of Orford with 8 each, in the best balanced shift league yet played here.

Jim Closs, of the Crushing Plant, and Johnson-Montgomery-Crawford are tied in third place with 5 each, and Smith of Reverbs has 2. The other Reverb lineup in the seven-team loop, Somers, has been the "fall guy" for the other clubs to date, and has failed to click for a win.

IT'S FAST COMPANY

Good fast hockey, sparkling with neat combination plays and defence work that at times is plenty rugged, has made the league a hotbed of competition. There have been a couple of deeply-regretted serious injuries to players, and many minor bumps and bruises.

Jordan's payoff mail is being carried chiefly by "Black Hawk" Smith, defence; Johnny Faught, 1937 Copper Cliff Redman, at left wing; and Webster at right wing, although the entire team is clicking nicely. Matte has a very well-balanced club, with two standouts in Reid, who plays both defence and forward, and Hashie of last year's Redmen.

MURRAY VALUABLE

Howard Murray is again a tower of strength on Frank Wolfe's Orford Aces. This husky defence star is still taking 'em all on. Blake Stuart at centre ice and Webster, a Toronto boy, in goal, are two other Orford stars.

The inimitable Jim Closs, one of shift hockey's inveterate boosters, is looking to these three for his chief support: Ozzie Miller, centre or left wing; Lorne Shaw, right wing; Norman Rowley, defence or left wing.

Red Porter is rounding into real shape on defence for J.M.C., and expects to have his best season in three years. The former Cub Woofer still flings a hefty hip. With him as standouts on this club are Jack Gladstone at centre and "Wire" Corelli, also a centre ice man. The Sid Smith Reverb

team has produced three valuable performers in Jack Kidd at centre, Red Path on right wing, and Albert Mallet at centre, while Somers of the Reverbs is depending a good deal on Geno Juliana at centre, Fred Scanlon on defence, and Bert Piccini at left wing.

NAME PLAYOFF CLUB

An all-star team for the Nickel Belt intermediate playdowns will be picked within the next few days. Shift league playdowns will probably not get under way until late in March, however, as there's a heavy schedule to run off, with Major Domo Bill Nelan in charge of that end of the business.

"SHOPS" IN FIRST PLACE

Coniston:—With three wins and no defeats, Shops are leading the Shift hockey league, closely pressed by Geoffrey's Shift, which has dropped the decision in one of the three matches it has played. Stevenson's team is in third place, with one win in three, and McMullen's lineup languishes in the "cellar," defeated in all games to date.

Barazzuol, Shops' right winger, has been a very consistent performer with his club, and Geno Olivier, at left wing for Geoffrey's, is another outstanding player. G. Gobbo, Stevenson's centre ice man, and A. Farnel, on left defence for McMullen, are other prominent players.

READY FOR ACTION

The intermediate team which Sam Cresswell has been foxily grooming well in advance for the Nickel Belt playdowns, has won all four of its exhibition games to date, the last victory being over Chapleau, 4-1. This lineup will certainly be a powerful contender when the eliminations get under way within the next few days: Goal, Snell Blake; defence, J. Stacey, L. Cresswell; centre, S. Phillips; wings, L. Legris, P. Morgan; subs, H. Morgan, D. Cresswell, E. McCracken, A. Gobbo.

Herbert Mendelsohn's "Notre Dame," winner of the Gold Cup and the President's Cup—the nation's outstanding racing motor boat awards—is equipped with a Monel propeller shaft.

LOCAL BOYS MAKING GOOD

By JIM COWAN

Down the years, Stanley Stadium is likely to be the alma mater of many a big leaguer. The evidence before the high court of hockey at the present sessions consists of Exhibits A & B, Chamberlain and Kampman. One result is certain to be a scattering of hard-eyed strangers among the Nickel Belt railbirds, since it is now no more necessary to tell the ice-lane moguls where these newcomers hail from than it is to post a notice at Froot explaining that Murphy and the Bingo are with the Maple Leafs. The best indication of the way the boys are registering among the puck-chasing elite is this report that the talent scouts are working double shifts in the Copper Cliff sector this season as well as doing more than the usual amount of talking about Conny Smythe and his habit of plucking promising rookies out of a hat.

STUDIOUS BUSINESS

Breaking into the N.H.L. is an education in itself. The studious looks of the Froot graduates, if you peer at them in the Gardens dressing room following practice, are most impressive. They have the same absorbed look as a young anthropologist, whatever he is. Both Murphy and Bingo revealed to The Triangle that they are collecting material for an interview on the finer points of the monied pastime which will cover such things as who is hockey's smartest goalie, hardest shot, trickiest stick-handler, what is the toughest defense to puncture and the hardest line to check along with a variety of other useful and educational information. They have promised The Triangle one of the first chances at these reminiscences and they are not going to waste any time in gathering the data. They expect to have the first batch ready in from three to five years, if not more.

This is a good sign and a fine omen for their future careers in pursuit of the rubber biscuit. Many a smart rookie has stepped into hockey's upper set as if he were some sort of a special model wired for sound, usually departing shortly afterward the same way, probably to become a Chautauqua lecturer.

BOSTON NO TEA-PARTY

Neither of the INCO products cares to sound off regarding their profession at this juncture, an attitude which is very pleasing to their management. But both admit, on questioning, that they have very vivid memories of Boston. That is the stop-over on the N.H.L. merry-go-round where the going, so far, has been heaviest for both of them. But this is just their experience to date and they have plenty more coming. They don't think that they have been around long enough to be too positive.

Talking to them just after they came off the ice from one of the daily work-outs, they had one point to make on which Conny Smythe, who came along a few minutes later, gave them hearty support. Their new jobs call for plenty of work. They doubt that anybody ever climbed into hockey's high-salaried ranks without discovering that he had a lot to learn. The Chamberlain-Kampman duo is taking up these studies in a big way and that is one thing about the two of them which gives the powers in the front office particular satisfaction. They realize that it isn't the dramatic act of breaking into a major league line-up which is the trick on which they pay off in this business, but the much less dramatic task of staying there.

BINGO GOOD NODDER

Murphy has been acting as spokesman



INCO hockey fans need no identification to help them recognize these two familiar figures. Bingo Kampman and Murphy Chamberlain, both of last year's Froot Allan Cup team, are making good in a big way with Toronto Maple Leafs in their first National Hockey League season. Coach Red Stuart, of Froot, will agree that it wouldn't really be a picture of Murphy without a strip of plaster over his eye.

for the two of them in their contacts with the press. Bingo, since he came up much later and suddenly, has been largely taking it out in nods. So far, there is no danger whatever of him talking himself out of the league. They, according to speaker Chamberlain and nodder Kampman, have to go on record as reporting that the pace in the N.H.L. is much faster. That, rather than any other angle, was their No. 1 comment on the difference between simon-pure and pro brands of the world's fastest sport. Everything is stepped up a couple of notches. On top of that, it isn't enough for an N.H.L. player to know his hockey. He has to try and know every other player's individual strengths and weaknesses just as a baseball pitcher tries to catalogue in detail the eccentricities of all the batters who face him in a season. That, the boys indicate, is much more the case in the big-time version than it is in playing amateur. In fact, it's an essential for success in their present surroundings, as is to be expected when a season is a 48-game grind.

MURPH IS CONVERTED

It was while this question of speed was before the meeting that Conny Smythe

stopped by. It appears, from his remarks, that at the time when Murphy was deliberating over his contract with the Leafs and considering whether to make the jump, there was some debate on the subject: Resolved that N.H.L. hockey is no faster than high-class amateurs produce. On that occasion, Mr. Chamberlain upheld the affirmative. Mr. Smythe was neither surprised nor displeased to find that the "Farmer" has now switched his support to the negative.

"It's as big a jump from minor league to major league in pro hockey as it is from junior to intermediate or intermediate to senior in amateur," he said. "To jump right from amateur into the N.H.L. is a leap that very few can make and one that most good players should never even try."

This was as much a piece of information for the up-and-coming young performers now doing their stuff in the nickel country as anything else, but also it was a left-handed, Smythian compliment to the two exceptions to his rule who confronted him at the moment. He added that many a great player found a Syracuse season of great advantage to him in his later and



The Triangle camera catches Bingo and Murph in a huddle with their new boss, Conny Smythe, at Maple Leaf Gardens. It looks like serious business. Both these lads are being mentioned as prospects for the annual award given the best N.H.L. rookie of the year.

He Scores!

Murph Chamberlain's scoring jinx, which was rapidly becoming a national issue and which was explained to Jim Cowan by Conny Smythe in the accompanying article, was busted wide open the night of January 22.

The radio-anxious Nickel Belt crowd with delight as Foster Hewitt's voice came in over the ether: "He shoots—HE SCORES, Chamberlain!"

Murph's first N.H.L. goal came in a bitter match against Boston Bruins. "The Farmer" was going like a house afire all night, and wound up his performance by being selected as the outstanding man on the ice, despite the fact that his team was whipped 9-1.

higher undertakings, but even from Conny Smythe himself, that idea didn't get a nod from Bingo.

THE CHAMBERLAIN JINX

Murph Chamberlain brought up the subject of his own goal-scoring hoodoo. He has been carrying the disc across enemy frontiers in style and laying over score-producing passes to his colleagues which give him a neat harvest of assists. But he hasn't bulged the twine on his own account and it worries him. His brand of worry is the stubborn kind, born of a decision to break the jinx very thoroughly, and not the moody sulkeness which occasionally afflicts some of the prima donnas of the arenas when their shooting is off-color. Conny Smythe offered him an explanation which doesn't seem to have been reported elsewhere and which sounds logical.

"You're playing much faster hockey this year than last," he told Murph, "and that means that you're cutting both the time you have to make your shot and the size of the target. A player who steps up his speed to keep pace with faster company will often skate himself right out of the play without realizing it. If you're traveling faster but haven't changed your shooting, the goals won't come. The only treatment for it is lots of work and you can't change it in ten minutes."

BINGO EARNS RESPECT

The Kampman problem is somewhat different while the Chamberlain one is causing the Smythe-Irvin-Selke combination no loss of sleep or appetite. Chamberlain's play-making has increased the effectiveness of both Metz and Kelly while his checking has made a scramble of even come of Lester Patrick's well-rehearsed passing manoeuvres. Mr. Kampman has a surprisingly large number of people taking a direct personal interest in his further hockey education. The alleged hole in the Leaf defense was widely advertised and he was plumped into it without warning. Then an enterprising watcher discovered his facial resemblance to King Clancy. As a result, the Sudbury Basin blonde found his co-workers on the indoor ice ponds at the Boston, Montreal, Chicago and other branches, waiting to give him special attention. In fact, at Boston, a tendency was noted to lay it on specially for his benefit. If Boston made an impression on him, it was mutual. The word has been going round that Bingo accepts every offering in the spirit in which it is given and that it is his habit to give receipts on all these transactions.

PLENTY 'OLD OOMPH'

Leafs always want box-office appeal as well as hockey ability in their players and both the Froom contributions to the N.H.L. have the color that appeals to the cash customers. They have what the cultured fans of Toronto refer to as "the old oomph."



"Eyes" for INCO fans who can't be there to see Murph and Bingo do their stuff at Maple Leaf Gardens is Foster Hewitt, whose name is a household word throughout Canada. Sixty feet above the ice he sits in his gondola, which he reaches in a hair-raising 15-minute climb on ladders and catwalks spun far above the ice. "My system is a combination of observation and memory," Foster recently wrote in MacLean's Magazine. "You may think I am 'stretching it' a bit when I say that after seeing a player once in action I could forevermore name him, no matter what uniform he wore or where he played. It may be the way he stickhandles, the manner in which he extends his arms, how he skates, or perhaps the shape of his head. Somehow, every player has a peculiarity registered in my mental index file that, to me, is as sure as fingerprints are to a police specialist."

This is a little difficult to describe in non-technical language. It is a quality largely composed of aggressiveness and a willingness to give the paw-holders action without adulterating it with a lot of grandstand stuff. The size of the chorus which greets them during the games has been increasing both in quality and volume at Maple Leaf Gardens. Young Mr. Chamberlain's mucking-in tactics now produce whoops of joy from the blue-and-red hillside of hockey followers which gladden both the coaching and treasury departments. At Montreal, during that surprising 6-3 affair when the Maroons suddenly came alive, there was even a select coterie of loyal souls loudly abusing Murph every time he came out on the ice. Anyone who can arouse anything but apathy in Montreal this season is certainly no ordinary player. It was a rare tribute.

LIKES OUR PREP SCHOOL

Conny Smythe likes the fact that this pair shows, every time out, that each has the stamina needed for the long N.H.L. pull. In fact, he thinks, generally speaking, that Nickel Belt hockey is as good training for top-notch pro timber as there is anywhere. "Some places have it fast," he says, referring to the hockey in vogue throughout the land, "and some places have it tough. But there they have it both fast and tough. There aren't many spots where a player can get that experience."

Both of the Leafs who migrated from Froom in one jump are being prominently mentioned as candidates for the Calder Trophy to be awarded to the season's best rookie. What impresses the Leaf management is the fact that no matter what happens, these two new stars can be expected to appear in public wearing their usual hats or at least their usual size of hats.

Murph and Bingo—they'll do okay for themselves.

Standard practice classes have commenced at ORCO, with Safety Engineer Lionel Roy in charge.

New Club Pays Real Dividends

Port Colborne:—The "Dad" may be in No. 2, teaching sulphide; or calcining in No. 3, making shot in No. 4, or attending to his duties in No. 5. It's no matter, because—"My Dad works with INCO, and so I am here to enjoy myself."

That seems to be the general sentiment among Port Colborne kiddies at the new Recreation Club, which is now operating "on all eight."

BUSY INSTRUCTOR

Jack Taylor, the gym instructor, has a busy time these days with his big contingent of healthy young charges. There are all sorts of games, from leap-frog to medicine ball, with shouts and squeals of delight ringing through the building and every youngster hard at high jinks. Suddenly a whistle blows, and the boisterous fun ceases. A few spoken words and an echelon is begun, groups form in horizontal or perpendicular lines, and still another form of exercising fun is under way.

Jack, or "Mr. Taylor" to the young ones, certainly knows his gymnastics, as well as how much and what kind of games are good for growing girls and boys. Dads and mothers can place their children under his supervision with absolute confidence, and are wise in not allowing their kiddies to miss a wonderful opportunity for healthful, happy sport.

NOT A DULL MOMENT

Ladies and men are chasing after their activities keenly, and there's rarely a quiet moment in the Recreation Club. Bowling, badminton, billiards, volley ball, basketball, and even cribbage are all going full swing. The membership to date shows: 941 men, 689 ladies, 226 girls, 235 boys, or a total of 2,091.

the CANDID- CAMERA



VAINO AHO

The Candid Camera steps up into a stope on Frood's 2800 level and finds Vaino Aho busy with his drill, a long jump from his native Finland and very satisfied about it too.

The only son of an employee in a farm-implement factory, Vaino was born January 11, 1912, and attended public school until he was 15. Then he worked in a lumber camp for two years.

WITH ANYOX CO.

At 17 he came to Canada, making the trip alone, and crossed the country to



British Columbia to join an uncle there. After two years in a logging camp, during which he developed a hefty pair of biceps and a tremendous appetite, he landed a job as a blockholder with the Anyox Mining and Smelting Co., which mined copper, silver, lead and zinc at a depth of 800 feet.

When Anyox closed down in August of 1935 Vaino headed straight for Sudbury, where he'd heard there were jobs to be had for hustling young men. He was taken on at the Frood, mucked for three weeks, then became a driller because he'd had experience as a driller's helper at Anyox. And a driller he has been ever since.

LIKES KEMP BEST

On February 13 of last year at Sudbury he was married to May Darby. He's glad that happened, likes his job, and smiles at the idea of anyone wanting to go back to Finland. Dave Kemp is his favorite hockey player since Bingo Kampman left. He excels at the shotput and the javelin, placing second in both these events at the Athletic Park meet last summer.

If he had a lot of money he would buy a nice little hotel some place and just sit in a leather chair and watch the business roll in.

★ ★ ★

HENRY CLEMENTS

Henry Clements of ORCO, isn't fussy about fishing, or golf, or picture shows, or card games, or anything—except his work. His idea of a cozy evening's entertainment is an electrical magazine, the Standard

Handbook for Electrical Engineers, or the latest G. E. Catalogue. His good wife and family, he says, have long since reconciled themselves to this state of affairs.

TO CANADA IN 1911

Born in Leeds, England, July 10 of 1888, and brought up in Sheffield, Henry had his first job as an apprentice electrician when he was just past 16. In 1911 he came to Canada and a few weeks after his arrival was an electrician at Cobalt. Two years later he went to the Gaspé Peninsula as chief electrician for the St. Lawrence Pulp and Paper Corporation, then caught a boat for Scotland and put in a year at mechanical electrical work for the British Navy.

West Africa was his destination in 1916, and for a little better than two years he was mines electrician for a large Gold Coast operation. By this time his work was beginning to catch up with his education, so he returned to England and took his third year course in electrical engineering at Sheffield University. Then he was offered a job in Brazil, handling the electrification of a manganese mine. It was a two-and-one-half-year proposition, and Henry says it was a bit of paradise down there. Nearby was the big St. John Del Rei gold operation, the deepest in the world.

AT CHUQUICAMATA

The depression stepped in and the mine closed down, so Henry hied himself back to Canada and located at Timmins with the Northern Canada Power Co. But South America called again, and he grabbed at a three-year contract with the Chile Copper



Co., at Chuquicamata. This was an open-pit operation, pulling out an average of 76,000 tons of low-grade ore on a two-shift day with 22 electric shovels. Henry liked it so well he accepted a three-year contract

renewal. At the smelter nearby was Norm Kearns, now a member of the Copper Cliff Engineering Dept. staff.

Leaving Chuquicamata (we like writing that word) Henry returned to England to complete his university course, and then came to Canada again, joining the ORCO force in 1930. He's chief electrician there now, and likes the job the best of any he's had. Triangle's candid shot shows him—foreground—puzzling over a problem with two of his accomplices.

He was married in Birmingham in 1919 to Alice Smith, and they have one daughter, who was born at Chuquicamata (there it is again.)

★ ★ ★

HERMAN THOMPSON

Imagine a fellow who is happily married and is still able to get honey-worded letters from girls, right in the old family post office box, without any questions asked.

As a matter of fact, up at Levack, Herman Thompson and his wife read these letters over together, and get a big kick out of them. Herman sings a regular program of cowboy, mountain, and western music



over CKSO, and his fan mail comes from all over the East. The radio sweeties go for this stuff in a big way and, not knowing there's a Mrs. Herman, write him notes that would melt a gangster's heart.

Gravenhurst was Herman's birthplace, but shortly after he had given vent to his first yodel, the family moved to Sellwood, about 45 miles north of Sudbury, and there he acquired his love for the outdoors.

PROSPECTING AT 16

At 16, with an old-time northerner, Jack Johnson, he set out prospecting for gold through the area from Sudbury to Kapuskasing. They staked the property which became the Copenhagen Lead Syndicate, and still hold the stock which they took as their compensation. They uncovered what looked like a pretty good gold proposition on Mesepekanda Lake, but the assays weren't anything to get excited about.

After four years with Johnson, Herman started prospecting on his own, and his first venture was in the Whiskey Lake gold rush, during which he staked several claims and later turned them over to wildcaters, but it was a precarious sort of a life and finally, in 1931, he got himself a job at Frood. In March, 1937, he was transferred to Levack where he is topman.

HE GETS AROUND

He was married in Sudbury on October 10, 1932, to Muriel DeRusha, and they have one son. He is vice-president of the Levack Welfare Association, manager of the Community Hall, president of the Boxing and

Wrestling Club, etc., etc. Fishing and hunting are his hobbies. He's 30 this month.

He bought that ten-gallon hat and cowboy outfit of his about three years ago, and has had a lot of fun with them. When he went to Toronto with the INCO amateurs last year, and marched along King Street in full range regalia, he just about paralyzed traffic. A newspaper-woman, told he worked at Frood, dubbed him "The only underground cowboy in the world."

Lots of Action In ORCO Loop

ORCO:—Opening January 4 at the Palace Rink with a tough tussle between Tankhouse and Office-Lab, ORCO's shift hockey league has been steaming along at the same high pressure ever since. Great work by Freddie Jennings, who rapped home three goals, was chiefly responsible for Tankhouse's win, 5-3.

Shops came through with a 4-0 triumph over Casting-Yard in the second scheduled engagement. It was a memorable match for Al Tupling, who parted with three of his front molars as a generous donation toward the success of the affair. Elmer Baird in goal for Shops was a standout.

CLOSELY MATCHED

Tankhouse and Shops tangled on January 11, and this was such a tightly-played game that many immediately prophesied one of these clubs will win the C. H. Aldrich Cup for 1938. Shops came off best 4-3, but the break in the game was supplied for them by Butchard of Tankhouse, who deflected the biscuit into his own goal.

On January 13 Yard whitewashed Office-Lab 4-0, and the losers absorbed another coat of the white stuff on the 18th at the hands of Shops, 3-0. Tankhouse trimmed Yard 6-2 January 20.

HOW THEY LINE UP

Office-Laboratory: L. Keegan, R. Lipcombe, M. Shambly, R. Heale, W. Keegan, P. Nazar, Phil Nabar, L. Thompson, E. Harber, D. MacArthur, J. F. Aurie.

Casting-Yard: A. Stewart, R. Hammond, E. Brown, E. Bernard, H. Thornton, H. Chomysyn, Rene Picard, Roly Picard, B. Hunter, H. Baluk, E. Mulvihill.

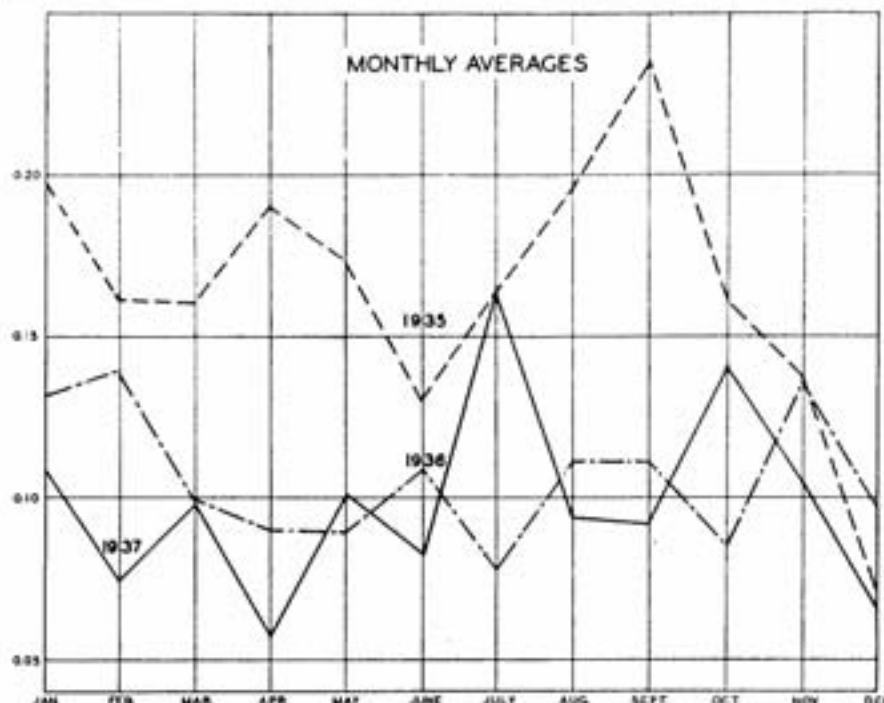
Tankhouse: M. Chomysyn, A. Walford, H. Haddow, F. Jennings, O. Osmack, K. Osland, D. Butchard, B. Caswell, F. Cecutti, B. Graham, J. Hodgson.

Shops: E. Baird, A. Tupling, E. Belfry, R. Currie, J. Ramsay, H. Currie, A. Watta, L. Desilets, P. Boluk, E. Bedard, J. Sadick, W. Lavery, C. Gentiles.



Five very good reasons why Port Colborne General Office is such a pleasant place to work: left to right, Dorothy Gallinger, Bertha Singer, Alice Sidney, Madeline Matthews, Dolma Godfrey.

1937 Best Safety Year



In its effort to chalk up a big improvement over 1936 in accidents-per-1,000-shifts-worked, the Mining and Smelting Division staged a strong finish in December, achieving the second-best month in years with the mark of .066, which was only excelled by April's .052. As for 1937 as a whole, it was decidedly better than 1936, and goes down as the best Safety year in the Company's history, despite the fact that the number of men employed reached an all-time high.

By G. S. JARRETT

December brought to a close the most active operating year in the history of the International Nickel Company. The year 1937 was marked by the return of Levack mine to the list of operating plants; it saw Garson again reach full production and all other departments increase their man-power beyond previous high marks. In the Mining and Smelting Division the aggregate average monthly shifts increased from 180,000 in 1936 to 220,000 in 1937.

The most interesting feature from a Safety angle was that the old adage, "Increased force—increased accident frequency" was again convincingly disproved. The Safety department met with the greatest possible co-operation from both workmen and foremen, and all have shared equally in the fine achievement of lowering 1936's splendid frequency of .104 accidents per 1000 shifts to a new low of .099 for 1937.

Outstanding accomplishments of the year were noted at Creighton, Coniston, and Copper Cliff concentrator, where the following excellent frequency improvements were recorded:

	1936	1937
Creighton142	.106
Coniston048	.030
Concentrator057	.068

Frood mine and the Copper Cliff smelter, where larger forces contribute the greatest weight to the aggregate record, also show very gratifying improvements. Frood mine frequency was reduced from .155 in 1936 to .143 in 1937, while at Copper Cliff smelter the 1937 figure was .054 as against .071 for the previous year.

However, to rest on the laurels of past performances would be to lose ground immediately. We must not only maintain the high standard we have attained, but

also bend every effort toward further improvement. While we can afford to look back on our record with pride, we can still look forward to even greater accomplishments. In this respect, let me leave just one figure as an illustration: Estimates based on the 1937 accident experience indicate that workmen have and will suffer a financial loss of more than \$85,000 due to decreased earnings resulting from 1937 accidents.

ORCO Pucksters Trim Parry Sound

ORCO:—An all-star team from Ontario Refinery's shift league won 10-5 over Parry Sound Juniors in an exhibition game at Parry Sound last Wednesday night. Benard led the Refinery point-getters with three goals. Nazar and Chomysyn each picked up a pair and Desilets, Haddow and Jennings notched singletons.

Ontario Refinery: Goal, Baird; defence, Elliott, Desilets; centre, Benard; wings, Chomysyn, Thornton; alternates, Lavery, Gentiles, Nazar, Haddow, Jennings.

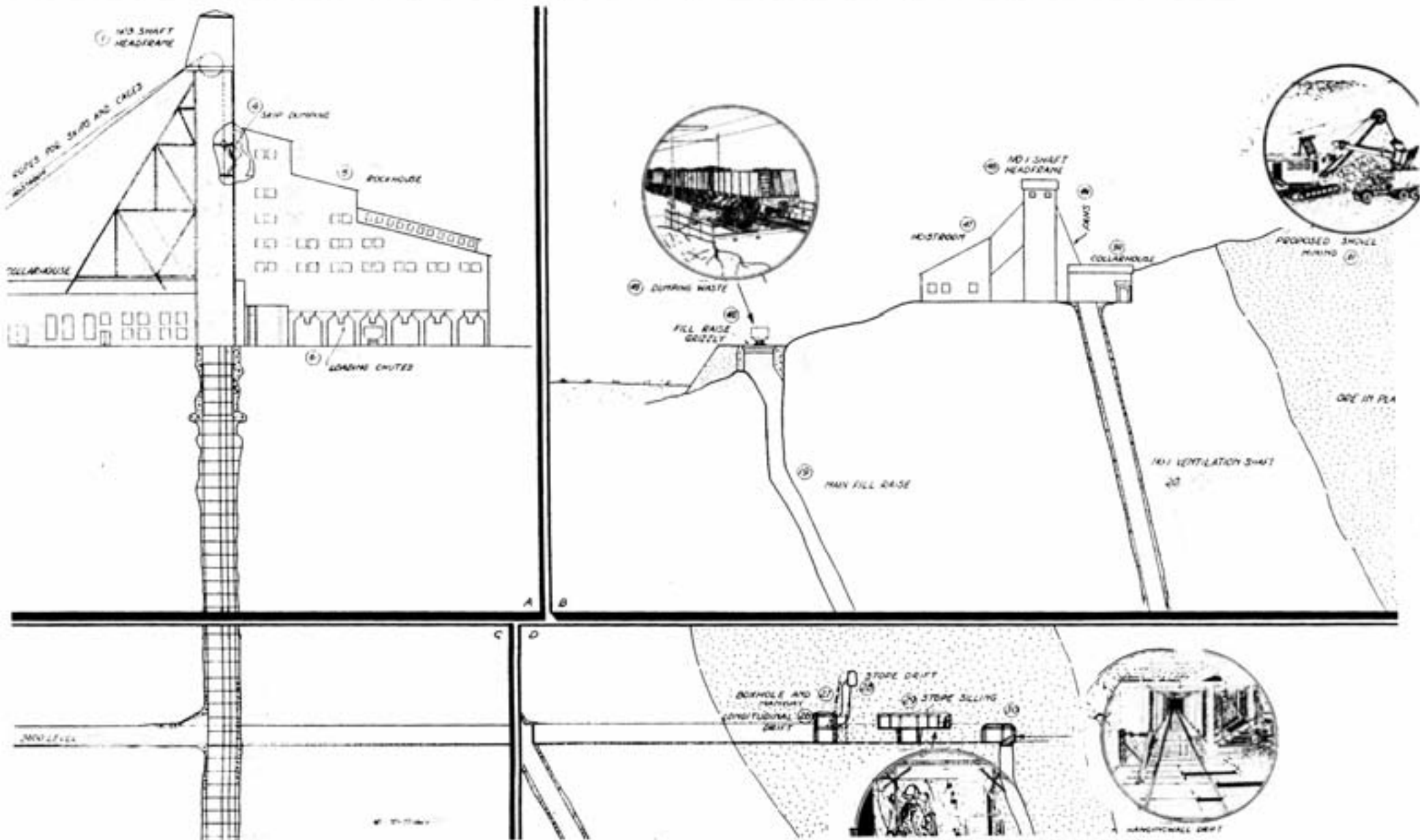
Copper Cliff:—Undefeated in all their games to date, Sudbury Cub Wolves are upholding Canada's fair name in their European hockey tour. Nearest they have come to defeat was at Arosa, Switzerland, on January 19, when a fast team had them on the hip, 1-0, until smooth-driving little Roy Heximer came through with the tying goal.

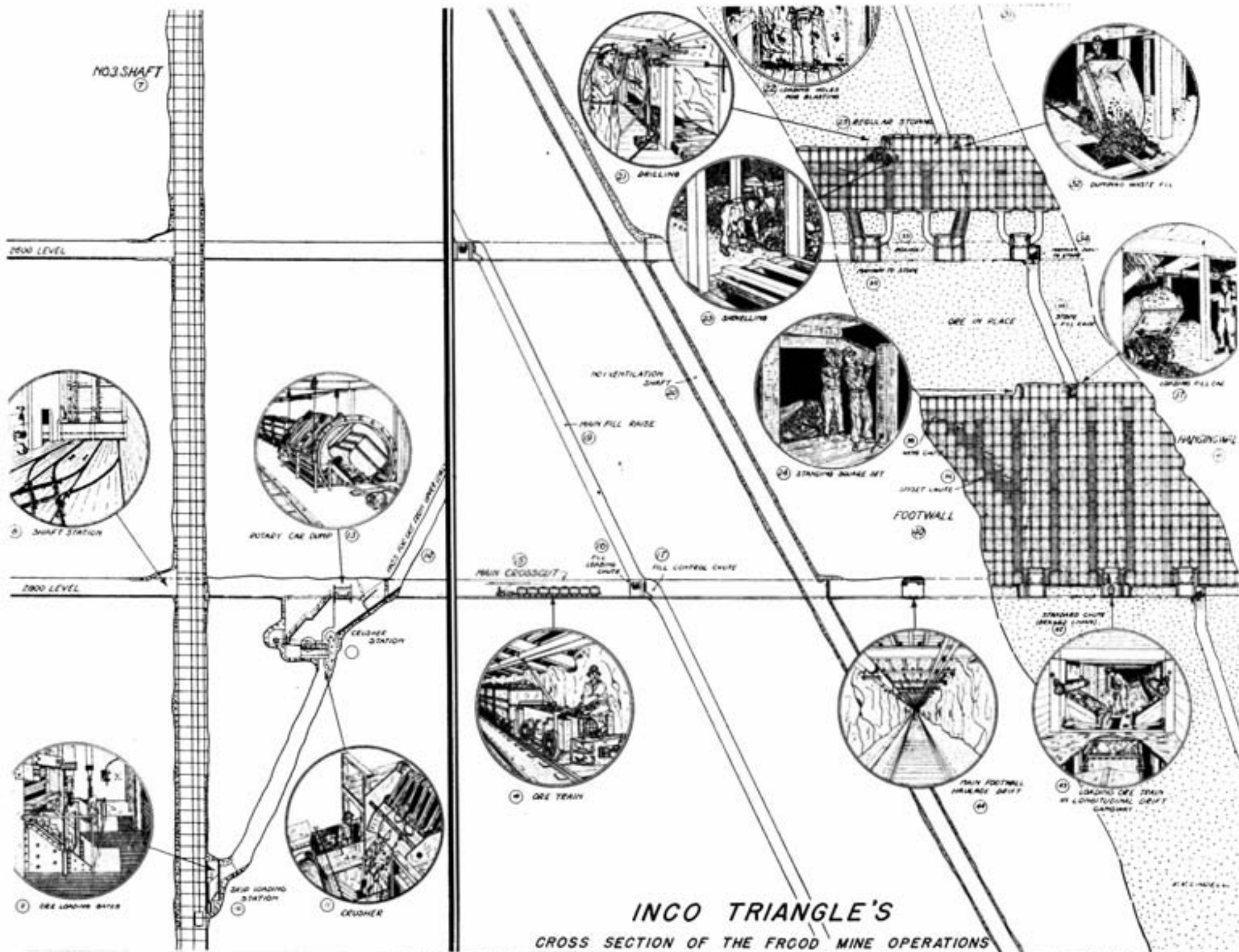
Mel Albright, Johnny Godfrey, Heximer, Pat McCreavy and Buster Portland are among the members of the team.

An "X-Ray" View of the Frood Mine Operations

Triangle presents herewith an illustrated cross-section of the operations at Frood Mine, drawn by K. V. Lindell in connection with his article on Page 11 of this issue. We believe that if our readers will follow the drawing closely with the article, even those who have no knowledge of mining will gain a sound insight into the Frood operations. We suggest you bend back the wire stitches and lift out these two pages so that you may follow them more conveniently when reading.

It should be noted that the drawing is done in four blocks or sections, A, B, C, D, and that while for the sake of enlargement they are grouped closely together, C is actually many hundreds of feet below A, while D is many hundreds of feet below and to the right of B.





INCO TRIANGLE'S
CROSS SECTION OF THE FROOD MINE OPERATIONS

Talbot's VALEDICTORY

Leaving for Distant Pools and Streams, a Leading Nickel Belt Angler Says Farewell to Fond Associations

By HAROLD TALBOT

Seven years of beating the waters to a foam in the district have indeed brought many interesting experiences. Chief among many choice fishing spots is the "Jumbo" pool, credit for the discovery of which goes to Jim Parlee. The picture is clear, a riffle of fast water spreading out into a long quiet pool about 75 feet wide by 250 feet long, with an old dead tree leaning out at an angle over the western bank. The time to fish this pool is toward evening, as the lengthening shadows cover the sheltered bank holes; then the trout start to feed. Wading out to boot top, the fly should be cast toward the base of the tree, 50 to 60 feet distant. Four to six trout are the usual bag, but none was ever taken less than a pound in weight.

JUST 25 BEAUTIES

The best catch was taken on a Labor Day week-end, and the shared total amounted to 25, of which 17 were over a pound apiece, and none under 12 inches. The curious incident on this trip was a 14-lb. fish taken without ever hooking him. I had cast to a rise in a back eddy, followed by an immediate strike. After the initial rush, it was noticed that the fly was about three inches from his mouth, plainly visible. When landed, it was found that the fly had been caught in the projecting loop of a snelled hook deeply imbedded in his stomach. Apparently the trout had not suffered unduly, since he was in excellent condition, and the corroded appearance of the hook indicated at least two weeks' lodgement.

My best fish was a large male weighing 21 lbs., with a prominently hooked under-jaw. Our camp was on the edge of a large pool, and while we were eating breakfast, he started chasing small minnows under a partially submerged fallen tree. A bucktail curled under the edge of the limbs brought him up, plainly visible in the clear green water as he rose and rolled to the strike.

FISHING DELUXE

By no means uncommon, but always exciting, was the subsequent hooking of two large fish on the same cast from this identical location. The accompanying picture of a typical pool will readily identify this stream, which lies over the hill from Copper Cliff.

The inimitable Ben Merwin provided my first de luxe fishing trip. Our party of six left early one morning, and travelled until afternoon when the Transcontinental halted while the Division Superintendent's car was shunted off on a small siding. After checking the baggage, there was general consternation to find that the worms had been left behind in an ice cooler for better keeping. This was remedied by the D. S., who merely stepped into his car, telephoned to have the train flagged ahead, and in a short time a putt-putt brought them back safely—the only time in recorded history that a dew worm stopped a limited train.

AN ANXIOUS MOMENT

The most amusing incident occurred during the following day's fishing around the dam. Several large logs were in the pond, and one of the party started fishing from them. Suddenly he pitched headlong into the log chute, through which the water was racing. Pop-eyed we watched him shoot at express train speed toward a quarter mile rapid full of rocks. By sheer luck his hooked arm caught over a stub



The author, Harold Talbot, with the evidence.

at the end of the chute, where he clung waist deep in water. His hand travelled over his ribs, as he anxiously probed. Suddenly a grin spread out, widened more as he examined his cigars more closely, and then he shouted joyously, "Cellophane saved every damn one." Such is the miner turned fisherman.

Penage Lake is justly noted for its fishing, particularly bass. Week-end trips to the small bordering lakes brought many fine fish, as these shallower waters are ideal for fly and bug casting with trout tackle. Not to be forgotten is the memorable return trip one evening when the pilot succumbed to an excess of strong waters, held in the starter with the engine going, and left the party idly drifting 12 miles from the dock. Our combined exhortations and anathemas produced nothing but a lusty snore, and it was not until after midnight that we were rescued due to alarm over our tardy return.

MEMORABLE MANITOULIN

The fishing and scenery of Manitoulin Island will always remain vividly in my memory, particularly the large rainbow trout in the mill pond which jumped three times in rapid succession, wrapped himself up in the leader on his last roll, and then disappeared forever under a submerged log jam.

The clear cold waters of Lake Manitou produce big lake trout at shallow depths, not the least of which was a 28½ lb. specimen 3½ feet long and 22 inches in girth. Ask Joe Cawthorpe at the Refinery about the spring bathing.

Rainbow trout are not plentiful, but their habit of jumping after being hooked is spectacular. My best single catch was the limit of five, three of 1½ lbs., and one of 2 lbs., 17 inches long. They are a handsome fish with brilliant coloring including the broad crimson streak along the sides. No trout takes a fly more readily, the smaller one of 3 and 4 inches often being caught.

Even pike may be readily taken on a fly, but in warm water they do not put up a long sustained fight. Six were taken at the base of the Onaping Falls on a bucktail, without losing either fly or leader. Incidentally, this should be an ideal stream for stocking with brown trout, because of the abundance of trout foods, and they can

take care of themselves with pike. A 12 lb. maskinonge taken in the French river at George Valin's camp was an event, as they are a true game fish in all respects. Pet groundhogs are an added attraction at this camp.

HIS FAVORITE BAIT

Where to go and how to get them? Although there are several trout streams in the vicinity, none of them have more than fair fishing. My most successful wet flies have included the bucktail, Royal Coachman, Dark Montreal, Gold Ribbed Hare's Ear, (wound with round rather than flat gold wire), and Parmachenee Belle, mainly in sizes 6 and 8. Big trout require large feed, of which crawfish are the most important, large minnows if available, and even frogs and field mice.

Evening casting from a boat into shallow water along the shore for bass is fine sport. An excellent and easily made lure consists of a small cork split lengthwise and tied over a long shanked hook, with or without the addition of hackles or deer tail at the ends. Cast with trout tackle, alternately twitched and rested on the surface, an exploding strike has given me shaking palsy for weeks.

IT'S ALL GOOD

What is the fascination in fishing? The pursuit as much as the capture. My earliest recollections include being tied to a tree and provided with a pole and baited hook to fish quietly by myself until my elders returned from more extensive explorations. Repeated experience cannot dull the enjoyment of the first rig up in the spring, with an early mist rising from the water, and the splash of a rising trout in the pool below you. My opinion is a paraphrase on the Scotchman's reply to the query on whiskey, "All fishing is good, only some is better than others."

Frood: With Frank Lavigne in charge, and dishing out some sage instruction to these future stars, more than 50 young lads have been launched in organized hockey by the Welfare Association. Competition with other INCO plants and Sudbury teams will bring out the best in the budding talent.

Another outstanding activity at Frood is broomball, which seems to be coming into its own again. Underground Superintendent O. B. O'Brien and the foremen have donated a handsome trophy.



One of Talbot's favorite trout-fishing haunts, over the hill from Copper Cliff.

MINING — Past and Present

Sixth of a Series of Articles by K. V. LINDELL, Copper Cliff

Returning you once again to the Flood Mine operations, we will endeavor to depict for you, with the aid of the INCO Triangle's Cross Section shown on pages 8 and 9, the method of mining at the Flood.

In our previous articles we have discussed the method of driving drifts and crosscuts, the hoisting operation, and the rockhouse (5, 6), while in a recent article on the new Levack No. 2 Shaft you were told how a big shaft is pushed down into the bowels of the earth. We will therefore pick up the story again at the No. 3 Shaft (7) and outline briefly the procedure in opening up a new level and placing it into production.

REACHING ORE-BODY

The first step is to open up the level at the shaft station (8). Then the Main Crosscut (15) is driven 9 feet by 10 feet to intersect the ore-body. Having intersected the ore-body, a combination boxhole and manway (27) is driven from the crosscut to an elevation 30 feet above the level. Here the ground is broken out to start the exploration or stope drift (28) toward both ends of the ore-body. After the stope drift has advanced sufficiently far ahead, holes are drilled every 80 feet to the footwall (40) and the hangingwall (41) with a diamond drill to determine the exact outline of the ore-body at the foot and hangingwalls. With the ore-body outlined, the hangingwall longitudinal drift (30, 31) is started. This drift will connect with the stope fill raises (36) from the stopes on the level below, and will provide an outlet for the foul air from the stope below, a means of access for men and supplies, and a means of passing fill into the stope, of which we will say more later.

OPENING THE STOPES

Following close behind the hangingwall drift, the other longitudinal drifts (26) are started at 44-foot intervals from the footwall in order that stope chutes (42) may be constructed at the proper position to draw the ore by gravity from the stope above. The longitudinal drifts are first driven 11 feet by 11 feet and timbered with 10-inch by 10-inch Fir timber sets (31), 4 feet 8 inches apart. After the drift has advanced far enough to permit opening up several stopes, it is enlarged to 11 feet by 16 feet and is also timbered with 10-inch by 10-inch Fir sets superimposed on the sets below. It is from here then that the stope silling (29) commences. Stopes are opened up five sets wide, about 30 feet, with a pillar of ore remaining between each stope for a width approximately 14 feet. We say approximately, as hard rock work cannot be done closer than the nearest foot of the dimension required.

ASSURING VENTILATION

The silling is carried to the footwall and the hangingwall one set high (7 feet) for its width of five sets and then the stope fill raise is driven to the level above, usually from a position near the hangingwall. This position is chosen so that fresh air, (30), which enters the stope from the footwall manway, (35), must sweep the length of the stope before exhausting up the raise (36) in the hangingwall. The second floor, or cut, is then mined; the stope chutes (42) are erected into the gangway and up to the floor of the second cut; the first floor is filled (32) with waste and the stope is then ready for production in the regular stoping cycle.

Following the regular stope operation

(25), we will be able to see much more clearly the movement of the ore from the mine to the surface.

The regular stoping cycle is divided into a two-shift operation, carried on simultaneously in adjacent stopes. The first is the drilling and blasting shift and the second is mainly a timbering shift, though mucking, or shovelling, is carried on during both shifts. The drilling shift is the larger crew and includes timbermen for miscellaneous timbering, such as raising chutes, building gob fence, repairs, etc., and fill men for spreading waste.

CYCLE IN STOPING

Though we have previously described the drilling operation, we might point out here that two drillers usually drill off the entire stope breast of five-set width (21), load the holes (22), and blast the whole lot, all in the one shift. While the drillers are busy putting in holes, the muckers are shovelling the ore into the chutes (23). In order to keep to a minimum the distance the muck must be cast, wing chutes have been erected (38) from the main chutes (42). There are usually three muckers on the drilling shift. The timbermen, as we have already told you, and of which there are usually two, are engaged in erecting chutes, wing chutes, gob fence, repairing chutes, etc. Gob fence consists of 2-inch plank nailed to the posts along the pillar wall to keep the fill from going into the pillar when mining of the pillars is carried on at a later date.

HANDLING FILL ROCK

In the meantime, the fill man or waste man, is employed in tramping the waste for fill from the stope fill raise chute (37) and dumping it into the open sets below the mining floor (the floor elevation at which the drilling is done), as shown in 32. The fill is obtained from various sources, but mainly from waste rock sorted out from the ore in the rockhouses at the various mines. The fill is brought to the mine in standard railway cars and dumped (45, 46) at surface into the main fill raise (19). The fill is then drawn off underground into side-dump cars at the main fill raise loading chute (16). The fill is released to any particular level by means of a control chute (17) at the level immediately above. A battery locomotive then whisks the cars of fill to the hangingwall longitudinal drift (30) and the cars are automatically dumped by a side ramp into a stope fill raise grizzly as shown in 31. The fill then passes down the raise and is loaded into the fill car by the fill man as previously described.

BLASTING PROCEDURE

As the shift nears its end, the drillers prepare to load and blast the breast they have drilled off, aided by a few of the other members of the stope crew, and the timbermen reinforce the timber sets under the breast to be blasted. Then the end of the shift is at hand so all the men, except those required for setting off the blast, leave the stope and proceed to the check-in board and move their brass tags over to the check-out board. The shift boss supervises the checking-out of his men, and is notified of the men to be engaged in blasting by written notice from the stope boss. When all men but blasters have checked out, the shift boss gives the word to fire at the time his section of the mine is scheduled to blast. The blasting schedule calls for the upper levels to fire first, and since the foul air moves upward through the fill raises no men are required at any

time to travel in the smoke arising from blasting. So ends the first shift. The men are all hoisted to surface in the large man-cages before any men are lowered for the next shift, thus providing ample time for the working places to clear of all foul air.

TIMBERING SHIFT

The second shift then enters the stope after checking-in and receiving instructions from its bosses. The first step taken by the crew is to make the working place safe after the blasting. The floor in the area in which they will work is cleaned up, and the fresh face at the breast is barred with scaling bars to remove any loose pieces of ore that might fall down while they are erecting the timber sets. Having scaled down, the timbermen proceed to erect head covering by sliding out to the new face boom timbers of 8-inch by 10-inch timber, previously left on top of the front sets, and to cover the booms with planks, thus preventing danger from pieces of ore that might loosen later. If the broken ore is piled higher than the floor of the top sets, it is barred down in order that the new floor can be laid and protecting timbers placed so the muckers can work safely below the timbermen, who will then start to erect the new sets.

STANDING SETS

The standing of the square sets may be seen in 24. The post at one pillar wall is first stood, then the cap is placed. The cap is that member running from the footwall to the hangingwall of the stope, and spaces the posts at 5 foot 6 inch centers. Timber dogs, or bars made staple-like, are used to hold the timber until properly blocked up. The girt, member running from pillar wall to pillar wall, is placed after the second post has been stood. The timbermen stand the entire five sets required to fill the area blasted and block and wedge them to the walls, face and roof. This usually takes up the entire shift, though often there is time for them to handle some other timber work to keep their stope in good order.

The work on each shift is in immediate charge of a stope boss who supervises two adjacent stopes, one of which is working on the drilling and blasting operation, or

(Continued on Page 14)



Swing, Big Apple, Chuck-a-boom, and everything else in the dancer's repertoire got musical backing par excellence at the Levack New Year's Ball. This was a bang-up party with Royal York Hotel trimmings, and everybody had a whale of a time. Members of the orchestra: Con. St. Marselle, Henry Dunphy, R. Woodcock and Ronnie Sweeney. Maestro Herman Thompson was there too, but the camera couldn't take it.

NICKEL... AND ITS USES

NICKEL IN THE PULP AND PAPER INDUSTRY A Major Canadian Industry Owes Much of Its Progress to the "White Metal of Sudbury"

Although nickel is generally considered one of Canada's principal exports, bringing wealth to the Dominion through its sales in world markets, this metal is coming to play an increasingly important part in equipping other home industries to produce for both domestic and foreign markets.

\$600,000,000 INVESTMENT

This is notably true in the case of the pulp and paper industry which makes Canada the world's largest producer of newsprint, and which is one of our country's largest employers of labor and purchasers of services and supplies. It is an industry in which nearly \$600,000,000 has been invested; and it is characterized by great producing units and heavy, complicated machinery and equipment in which increasing quantities of nickel alloys are being used for the vital parts.

So far as Canada's interest in paper production is concerned, it centres largely in the conversion of spruce logs either into finished paper or into pulp board for further processing elsewhere. The first step in such conversion, after the logs have been cut into the proper length and have been passed through great drums to remove the bark, is to reduce the wood to its component fibres. If mechanical pulp is to be produced, the logs are ground and this product is screened until the pulp is finally brought to the fibrous condition from which paper can be made.

USUALLY USE CHEMICALS

The largest production, however, is through one type or another of chemical treatment. In all these processes the logs are chipped rather than ground, and the chips are "cooked" with the specified chemical in a steam bath. Where calcium bi-sulphite and sulphurous acid are used in combination, the product is known as sulphite pulp. Caustic soda produces soda pulp, and a mixture of caustic soda and sodium sulphide makes sulphate pulp. Newsprint is manufactured from a combination of mechanical and sulphite pulps.

In whatever form the pulp is produced, nickel plays its part from the very beginning. Take, for example, the barking drums which are rotating cylinders fifteen feet in diameter and fifty feet long. A cylinder is composed of three sections, each of which is driven by a girth gear from a pinion; and the driving gears are made of nickel cast iron in order to provide sufficient ruggedness for this hard service.

Where mechanical pulp is being made, the logs must next be pressed against revolving stones. Here again strong materials are required; so the shafts are nickel alloy steel, and high strength nickel cast iron is used for the saddle supporting the grinding pockets. The grinding wheels require constant treatment with dressing devices to keep them sharp and true, and "Ni-Hard" has been found to be an excellent material for the knurls and burrs used in this service.

Similarly, in the case of the chippers which break up the logs for the chemical processes of pulp manufacture, great strength is required for the inset knives that slice the chips off the ends of the logs; and that strength is provided by nickel alloy steels.

CORROSION IS COSTLY

However, it is corrosion that is the worst enemy of paper mill equipment; for great

quantities of water, steam and chemicals are used in the manufacture of the pulp, and more water and other chemicals are employed in making, bleaching and sizing the paper. An indication of this problem is given in a report of the Corrosion Committee of the Technical Association of the Pulp and Paper Industry, which estimates that, as late as 1930, maintenance expense for sulphite pulp cooking equipment approximated \$100 per year per ton of daily production, or an average cost for all the sulphite mills of Canada and the United States of \$10,000 per mill per year. This has led in subsequent years to the increasing use of the stainless steels to replace the materials which made necessary this heavy annual maintenance cost.

NI-RESIST DOES JOB

For the many applications where cast iron is used in paper mill service, corrosion, heat and wear are the primary factors in the deterioration of this standard material; while such secondary factors as strength, stiffness, freedom from vibration, thermal conductivity, grain, density and the ability to take a high polish all influence the operation of mill equipment. Hence, "Ni-Resist" compositions, containing from 14 per cent. to 20 per cent. of nickel, are used increasingly for pipe lines, valve and plug cocks; and other alloy cast irons with lower nickel content are common for gears, clutch plates, dryer rolls and heads, calendar rolls and pump parts.

"Monel" is still another nickel alloy

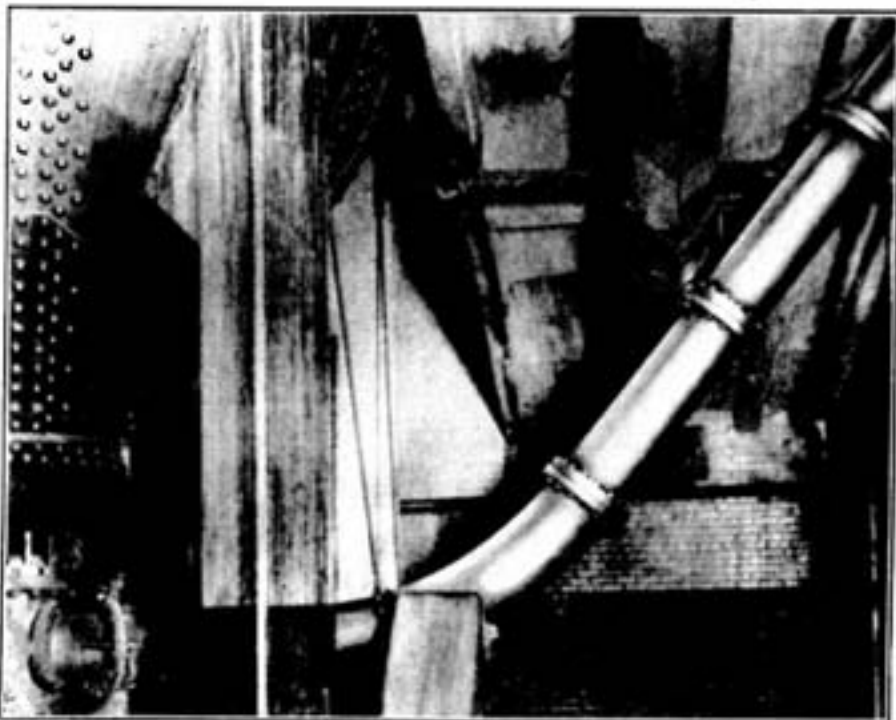
which is widely employed in various steps of the paper making process, in many instances because it is not subject to the dezincification which affects the brass compositions previously used. An example is that of the screws which hold in place the plates for screening mechanical pulp, the heads of brass screws becoming embrittled through the corrosion of their zinc content and tending to snap off when the flat plate screens are being removed.

In another screening process "Monel" is widely used for all the vital parts. Where it is desirable to remove excess water from pulp stock, the material is passed through a "decker," or thickener. This consists of a series of spiders on which are placed rods about six inches apart to form a cylindrical frame over which a winding wire is wound in a continuous strand from one end of the cylinder to the other. Over the winding wire is placed a 14-mesh backing wire, and over this a fine mesh facing wire. The rods and the three types of wire are now generally "Monel," as this alloy has been found to last from two to six times longer than brass or bronze.

SPECIAL IRON ALLOY

As the finished pulp moves into the final steps of paper-making, it may be subjected to bleaching with a chlorine solution, and here "Hastelloy C," a special iron alloy containing molybdenum, chromium and a high percentage of nickel, is an important material for the equipment, because of its resistance to the corrosive attack of chlorine. Once bleached, the pulp must be carefully washed and thickened, and "Monel" or stainless steel is used for the thickening equipment.

Then come the beaters, stock chest, stock pump, flow box, Jordan engine, Fourdrinier machine, press rolls, smoothing rolls, dryer rolls, calendar rolls and, finally, the winding rolls which produce the great cylinders of paper that are fed to the printing presses of the world. Together they form a long array of pipes, valves, tanks, screens and



Heavy corrosion and abrasion costs were checked when nickel alloys were called in by Canada's pulp and paper industry. Corrosion alone was costing an average of \$100 per year per ton of daily production in the maintenance of sulphite pulp cooking equipment alone. Photo shows the bottom of a pulp digester in a large Canadian paper mill. The blow pit pipe shown is of Ni-Resist alloy cast iron, which contains about 15% nickel and 6% copper.

rolls supplemented with a multiplicity of gadgets that convert by a continuous, automatic process a wet, amorphous mass of wood fibre into one or another grade of paper. It is a very long jump from the primitive processes of making rag paper by hand, and it is a considerable jump from the paper-making machinery of even a generation ago. In this last advance nickel alloys play their several parts just as effectively as they do in the earlier stages of grinding, chipping and pulp making.

CLYDE NEAR LEADS INCO'S

Port Colborne:—With Port Colborne supporting a Senior A and a Junior team in the O.H.A., it appeared as if there would be no intermediate hockey in town until the INCO Athletic Association came to the rescue and decided to sponsor a team in the Intermediate B series. When the group was organized, we found ourselves rated not as an Int. B team, but as Senior B in the Big Five Niagara District group along with Niagara Falls, St. Catharines, Thorold and Grimsby. This looked like a pretty tough assignment for a first year team, but at the present time we find ourselves in second



Clyde Near

place with a play-off position practically assured, and this is all the more creditable due to the fact that every player is a local boy with not a single import playing on the team and all employees of The International Nickel Company.

A STRONG LINEUP

Chapdelaine in goal, Gallinger and Brown on defence, the Concessi Brothers, Roy, Wells, Boyer, Minor, Huffman and O'Neill are all products of local juvenile and junior teams, while George Wade and Walter Horne are former stars of the Sailor club. Gordon and Morrison are the other members of the team.

A large share of the credit for any success we have had should go to the members of the executive of the hockey branch of the INCO A.A. Hugh Ellsworth, Ed Noyes and Finley Lymburner have worked tirelessly in the interests of the team, and win or lose, the INCO A.A. have done something worth while in sponsoring this team and giving local boys a chance to develop in O.H.A. competition.

ENERGETIC COACH

Clyde Near, the energetic coach of our INCO's, is a local man. Clyde was born in Humberstone, attended local schools and played his hockey in the local arena. Clyde played right wing and defence in the Port Colborne "Lions" Juvenile hockey league, stepping up to the Port Colborne Junior, Intermediate, Senior B, and Senior A teams. His playing attracted the Old Country scouts for hockey talent, and he packed his grips to visit England, playing under the colors of "Brighton Tigers."

To protect the wire cable on their miners' lamps from being bent too sharply at the point where it enters the battery case, Thomas A. Edison, Inc. protect it with a heat-treated "K" Monel spring.



Frank Jordan, of the Concentrator, and Jim Closs, of the Crushing Plant, first and third from the left, pose with their Copper Cliff shift league teams. Jordan's crew are leading the seven-team league as Triangle goes to press.

STACK AND HARDY SHINE

Frood:—Frank Stack, skating for Frood Mine, placed second with 100 points in the men's championship in the sixth annual Ten Thousand Lakes skating meet January 16, at Minneapolis, losing to Vic Ronchetti, 21-year-old Chicago flash, who had 130.

Frank Stack, Sudbury's ace speedster, treated Minneapolis skating fans to the greatest exhibition of grit seen on the ice at Minneapolis in many a moon. Stack whirled through a field of the fastest blade stars of Canada and the United States to snatch two first places and one second in three starts, Sunday, as the meet roared to a spectacular conclusion.

HAD TOUGH LUCK

Stack had some of the hardest luck that ever beset a skater in Saturday's three opening events. He managed to salvage only one second place—in the half mile—out of a heart-breaking day of spills and battling, to fight his way out of disastrous pockets in the midst of a fast and clever field. He saw Vic Ronchetti win that race and the 220, then add a third in the two mile for a total of 70 points, 50 more than Stack and 30 more than Eddie Schroeder, Chicago Olympic skater.

But, the Canadian veteran, undaunted by Ronchetti's seeming invincibility, raced him into the ground to snatch a second place behind him in the 440, Sunday's opening event, and then showed the Chicago champion his heels with a blazing finish that won Stack the mile and three mile championships.

GREAT THRILLER

That three mile event, finale of the meet, was a real thriller that will never be forgotten. Stack lost a stroke rounding the last turn with a sizzling sprint, but recovered his balance in time to fight off a challenge by Schroeder and Ronchetti that gave the Canadian the victory by inches.

Ab Hardy, Sudbury's second entrant in the meet, paced the field most of the way

in the three mile, breaking the wind for Stack, and finished a creditable sixth in the fast field. Hardy was spilled in several other starts during the meet. Stack captured the fourth annual John S. Johnson Memorial championship at Powderhorn Park but the Canadian Olympic team star was crowded all the way and had to stage a garrison finish in the final race of the day to win.

SHOWED COURAGE

Stack and his team mate, Ab Hardy, of Levack Mine, near Sudbury, both displayed rare courage in coming back to skate the gruelling two-mile finale after both suffered knee injuries in a near disastrous spill as they sprinted around the final turn in the men's half mile.

Public Health Nurse Appointed

Copper Cliff:—Miss Marian Plaunt, of Sudbury, is the new INCO Public Health nurse. She will assist the Company's medical staff in a systematic inspection of all children in schools in Company towns, commencing February 1. Vaccination for smallpox and immunization against diphtheria will be carried out.

Miss Plaunt's duties will also include general Public Health work.

RETURNS TO THE FOLD

Old friends recently welcomed back Norman Lahti, who was picked in September of 1936 by Supt. J. B. Fyfe of Garson, to supervise shaft-sinking and instructing native labor at Arston Mine, African Gold Coast. Also picked for the job by Mr. Fyfe at the request of Arston officials for trained miners were: E. J. Lahti, W. Blanco and T. Peltonen.

Norman Lahti was an INCOite for eight years, the last three of which were spent at Creighton Mine as a shift boss. He has many interesting tales to tell of mining methods on the Gold Coast.

PUNCHING OUT

with

JOE the DRY MAN



After six years at what his friends solemnly declare has been "practice golf," Joe Charland of Port Colborne, has decided to change his hand at driving. He must have had a desperate slice the Saturday night INCO and Thorold were playing their basketball match at the Recreation Club, because he drove his ball from the practice net (which is on the stage) on to the gym floor. The basketball game was stopped while the referee retrieved Joe's ball. Perseverance overcometh all things.

Ralph Armstrong's shift lineup was the first team organized and practicing in the Levack hockey league, but other teams were being recruited, and a Crawley & McCracken entry was expected.

Another Levack activity is broomball, with Football Czar Alex Killah handling one of the teams. Fred Thornton reported other lineups being organized for a lively schedule.

C.C.E.B.A. members are drawing a peppy season's entertainment from the parties arranged at the Community Hall by Chairman Gordon Adams and his committee of Keith Harkins, Jack Gris, Dave Coleman, Pat Bradshaw and Arthur Whissell. Although not much of a financial success at the outset, these entertainments are now more than paying their way. When the new Employees' Club gets underway in Sudbury, it is hoped to have similar shows there for Sudbury members who do not find it convenient to go to Copper Cliff.

Some people seem to get a corner on the luck. "Shinny" Schinbein, the Great White Father of the Frood timber yard, won three turkeys in the Christmas lottery, and he didn't draw the tickets either.

Just to vary the routine, Jordan's Concentrator lineup, leading team in the Cliff shift league, stepped down to North Bay,

January 10, and handed a 3-2 trimming to an all-star intermediate club in the Gateway City. Smith, Stevens, Armitage, and Goalle Paquette caught the eye of the sports scribe covering the game. Stevens and Armitage combined for the winning tally as the clock hand wavered on the final second of time. The 17-year-old Paquette drew a big hand for his net-minding display.

John Dale has been taking a few weeks off from his weather forecasting, being pretty well occupied with keeping an eye on that steadily-climbing safety thermometer. John's regular thermometer has certainly taken a back seat to the "mercury" in the safe-days indicator since the record was broken.

Employees' kiddies got the supreme thrill at Christmas tree entertainments staged by the Welfare Associations at Levack, Frood, Creighton, and ORCO. Carefully prepared lists were made in advance, and then willing helpers gave good old Saint Nick assistance in handing out his surprise packages. The old boy's INCO plants reindeer certainly deserved a rest when the season was over.

At Port Colborne railroad sidings have been observed leading into the Lambert estate. The curve is very neat, but it is suspected that Earl bought the shovel and the fairies made the curve.

At Creighton, George Reed's Christmas journey to Brockville, via Mattawa, Ottawa, and other points, was a topic of speculation and admiration for several weeks. His friends and backers are now urging him to attempt a non-stop flight to Montreal, via Hudson's Bay Junction and the Rocky Mountains.

Frood Tigers, winners of the Allan Cup last year, were rated third in the annual Canadian Press poll of sport writers for Canada's outstanding team of 1937. By virtue of their triumph over Copper Cliff Redmen, Winnipeg Monarchs were voted the year's most remarkable junior aggregation.

The Algoma championship trophies, won by Cecil Fielding, Mike Miller, "Squint" Felconi and Jackie Harrison at Chapleau's Winter Carnival, are latest additions to C.C.A.A.'s triumph list. Two of the cup winners are two-timers in silverware snatching, for Fielding and Felconi are also Northern Ontario champions. Harrison went them one better by taking two Algoma titles—middle and lightweight—to stack along with his Northern Ontario middleweight honors.

Dan Cupid's invasion of the carpenter shop at Frood has been a disastrous one. One of the most prominent victims was George Grieves, although Frood Tigers hope he isn't totally lost to the cheering section.

Port Colborne INCOites presented the Canadian Legion with a set of billiard balls as a gesture of appreciation for use of the Legion's clubroom for staging INCO's home

games. Many thanks for the hospitality went along with the gift.

C.C.E.B.A.'s chairman of the Membership Committee, Joe Gilpin, reports memberships coming in nicely, and looks for a big increase in 1938.

At Levack the Community Hall has been altered, to the general satisfaction of its patrons. The old stage has been torn out and a smaller platform erected to accommodate the orchestra, providing about 50 per cent. more floor space for the highly popular weekly dances. The improvements were carried out by voluntary labor with the assistance of Frank Leach and other public-spirited hustlers. The men who gave their services were later tendered a dinner at the Crawley & McCracken dining room.

Those who weren't "in the know" extended their heartfelt sympathy to Pete Morgan of Coniston, when he had his right arm dislocated in a hockey game, especially the ones who had heard about his vigorous correspondence Toronto-ward. But they might have saved their condolences. Pete just smiled and carried on with his l.t.e.s. He's left-handed.

Dance and bingo two nights in each two weeks are one activity of Creighton Welfare Association, but with the Community Hall all niftily remodelled the boys are also going in for badminton in a big way and are organizing a gymnasium class, new equipment having been installed for which everybody is deeply appreciative. Boxing ring, gloves, mats, rowing machine, dumbbells, medicine ball, punching bag, etc., are included in the installation. With S.D. Seymour, a former army instructor, in charge, classes are being organized for men and women as well as for the juveniles. This promises to be a very popular feature, according to Secretary V.C. Tremblay.

Speculation is rife at the Frood as to whether or not Gordie Soucie will make the grade in his brave tryouts for the juvenile hockey team. Gord has been turning out religiously to practice, and got a big jump on his competitors when he appeared in a nifty touque, said to have been worn by the Flying Dutchman when he rounded the Cape of Good Hope.

Out in New Westminster, B.C., there's a young lady who has been receiving the Triangle regularly, but doesn't know who has been sending it to her. She writes that she is grateful to her benefactor and would like very much to know who he or she is. So will the Good Samaritan who is performing this kind deed please drop a note of confession to Miss Mona Stokes, 46 Merrivale St., New Westminster? Thanks.

Old Dan Cupid reports progress as follows: At Coniston, Lionel Martin and Marina Squires, on December 9; David Moran and Aurore Larocque, on January 1 (the champion New Year's resolution of 1938); at Copper Cliff, December 22, Fraser Ross of Levack, and Ruby Gribble; Dalton Ovens and Teresa Speedie of Muskoka Falls, at Copper Cliff, January 22.

Oscar the Optic writes from Frood: Foster Todd has gone Monie Carlo; Stuart McKenzie takes in all Friday games with his son, who is certainly a Tiger booster; Looks like Harry Towns can put away the old silver polish until next year; Lots of hockey activity with the inter-level league under way and a Tiger to coach each club; "Conny" Soucie is a busy boy with these junior clubs to handle—and a nice piece of work this league is on the part of the



Snowfall was so heavy at Port Colborne, December 9 and 10, that milk was delivered only to homes where there were babies and youngsters. Many an INCOite engaged in grim struggle with the drifts, and here are Bill Irvine and Ward Davis of the Engineering Dept., digging out their transportation.

Welfare Association, too; Penman, McAndrew, Barlow and Walde talk a mean game of bridge during the lunch hour; The Great West should elect Cam Burke as Special Ambassador; Red Stuart is beginning to think the hockey league standing is upside down this year; McNaughton and Moretti seem to have the shift league won right now; Jim Miles is certainly a dead game sport when it comes to hockey.

★ ★ ★
 ¶ Note to Mrs. Karl Lindell and family: With this issue of Triangle safely put to bed, we return to you herewith one husband and father, considerably used but still good as new. You will recognize him as that gaunt-eyed person who has been slipping in for the odd snack and wink of sleep between sketches for that snifty illustration on Pages 8 and 9, in the tracing of which he got some real assistance from "Duke" Jarrett. Thank you very much, and maybe you will loan him to us again sometime.

★ ★ ★
 ¶ Additions to the INCO family, and heartily welcome they are, too: At Creighton, December 11, to Mr. and Mrs. Leo McLaughlin, a son; December 17, to Mr. and Mrs. Roy Leck, a son; on December 22, to Mr. and Mrs. G. Bordas, a daughter; on January 1 (Happy New Year, old fellow) to Mr. and Mrs. Edward Lalonde, a son; on January 8, to Mr. and Mrs. Chas. Seguin, a son; on January 17, to Mr. and Mrs. D. Moszolar, a son; on January 15, to Mr. and Mrs. Kenneth Blackwell, a son; at Frood, on January 13, to Mr. and Mrs. A. P. Olive, a son; at ORCO, to Mr. and Mrs. A. Crossgrove, on December 18, a daughter; on December 26, to Mr. and Mrs. S. Smyth, a daughter; on January 5, to Mr. and Mrs. "Flash" Mathews, a son; at Coniston, on December 2, to Mr. and Mrs. Jas. Todostachuk, a son; on December 3, to Mr. and Mrs. O. Cloutier, a daughter; on December 5, to Mr. and Mrs. X. Lalonde, a son; on December 9, to Mr. and Mrs. L. Tessier, a son; on December 16, to Mr. and Mrs. Peter Hasen, a daughter; on January 9, to Mr. and Mrs. F. Spence, a son; on January 10, to Mr. and Mrs. R. Muirhead, a son; at Copper Cliff, December 5, to Mr. and Mrs. George Gribble, a daughter.

★ ★ ★
 ¶ More on the subject of pro hockey, which Jim Cowan ably covers re Messrs. Chamberlain and Kampman in other columns of this issue: Jack Shewchuk, ex-Redman, writes from Providence, R.I., that the hockey with the Boston Bruins' farm team is much faster and rougher than in the Nickel Belt, and that his most interesting experience to date was a bumping duel with Eddie Shore. (Most readers will prefer to read about that, and let Jack take part in it.) Another big moment was when he scored his first goal in pro hockey—the tying counter in a game against Springfield, which his club went on to win 4-3. The crowds are good, he says, and Providence packs 'em in all around the circuit. He sends best regards to all his friends in these parts, particularly a certain young lady.

★ ★ ★
 ¶ Mel Hill, another Providence recruit, goes on record in a letter to Triangle with "If you don't sign a National League contract, boys, don't sign at all, because the American League pay would be pretty hard to live on all summer." Mel calls Nickel Belt hockey the world's fastest in the amateur end of the game. He misses Nickel Belt fans because "they know their hockey." Although he got a good contract, and is satisfied, his closing words are a sigh for the old days: "Sometimes I feel the Nickel Belt players are the wise guys after all. I would like to have Jim Dewey down here. He can play centre for me any time, and is not a bad guy to step out and spend



Dr. R. M. Mitchell demonstrates some of the fine points of bandaging for a Frood First Aid class. Foster Todd, Frood Safety Engineer, and Bert Dehney, First Aid Man, are second and third from the left, respectively, while Joe Ebey proved an excellent "patient." There are approximately 275 men taking the St. John Ambulance course in First Aid at the various INCO plants this year, and interest is keen in the approaching contests for the various team championships. The Inter-Department tests will probably be held about the middle of March, and the Inter-Plant Competition for the R. D. Parker Shield is slated for the last week in March. Seven teams will seek the coveted Parker Shield this year, as compared with four in 1937, when Copper Cliff won it.

the night with."

★ ★ ★
 ¶ Jim, we'll give you two minutes for rebuttal.

★ ★ ★
 ¶ Still another coming Bruin is Red Hamill, whose letter to this column says, "Sometimes I sure wish I were back in good old Copper Cliff, playing Nickel Belt. All I can say is, you sure find a difference from the blue line in, when comparing Nickel Belt with pro hockey. When you get two out of ten in this loop you're cutting the mustard. As far as crowds go, the fans down here are all for you, but they are not the educated hockey fans of Sudbury." Red has been called up from Providence to play with Bruins against Maroons, Americans, and Leafs, but didn't get anything like the thrill that Memorial Cup series in Toronto gave him. In fact, he admits, it was a letdown. He puts in a strong plug for his former team-mates on their European tour, and says three of Maxie's former kids are certainly pulling for that world championship. "Best of luck for a banner year in the Nickel Belt," is his closing message, except for a little P.S.: "Say, that Triangle would be a very interesting piece of reading matter for long evenings and to keep us up with the doings and diggings around the good old I.N.C.O."

★ ★ ★
 ¶ Now, Red, you wouldn't be getting a little homesick?

★ ★ ★
 ¶ Anyhow, these three ex-Redmen would have been thrilled to hear Bruin Boss Art Ross talk about them over the radio Saturday night, January 22 from Toronto. "They're all real comers, and I'm certainly glad I got them," said the sagacious Arthur.

★ ★ ★
 The Coniston safety thermometer, as we go to press, stands at 225 days worked without a lost-time accident. Keep 'er going, boys!

Inter-Level Play Organized at Frood

Frood:—Commencing January 19, an inter-level hockey league got under way with a bang, and promises some hectic competition before the winter is over. Each level has a good entry and a powerful intermediate club for the N.O.H.A. playdowns should emerge.

George Moretti, fiery little shift boss from Frood's lower regions, is the brain-trust behind the 2950-3100 entry. George Dottery is managing the entry from 2800, and the 2600-2400 club is being coached by Ray VanHamme, who distinguished himself in a similar assignment with their softball team.

Reports say 2000 have an excellent lineup also, and Le Brick's squad from graveyard is being highly touted by its mentor too. The surface entry is another club not likely to suffer from lack of advertising.

The Welfare Association, league sponsors, have purchased two dozen pairs of pants, gloves, shin and elbow pads, indicating an interest in inter-level hockey that is highly appreciated.

Juveniles Get Break in Hockey

Creighton:—More than 50 boys between the ages of 12 and 16 are getting the benefit of organized hockey in a league sponsored and managed by the Welfare Association.

The five teams taking part are: Uptown, Newtown, Dardanelles, Spanish Town, and Lake St. The boys have been provided with sweaters and other equipment, and each team has a member of the Creighton Eagles as coach.

Ski Artists Show Up Well at the "Bay"

North Bay:—Lauri Tulku of Levack, and Kel Sproule of Copper Cliff, were standout competitors in the annual ski championships here.

Tulku duplicated his Ontario championship march of last year, completing the cross-country course in a little better than an hour-and-three-quarters. Sproule turned in a nice card in the slalom event to finish fourth. He had the worst bit of luck of any competitor on the first run. He was all but through on a stylish run when he clipped a flag on the last sharp break to the finish line.

MINING Past and Present

(Continued from Page 11)

the first stage of the stoping cycle, while the other is on the timbering shift, or the second stage of the stoping cycle. This procedure divides the responsibility of the bosses evenly, keeps the number of drills running divided, etc., so a balanced operation is obtained.

HANDLING SUPPLIES

On the third shift the supplies are taken into the stopes. There is thus no interference with the regular operations carried on during the other two shifts. Supplies, except in all stopes, are all lowered into the stopes through the fill raises from the level above. (31) An air hoist, commonly called a tugger hoist, is used to lower the supplies in a small metal bucket. The stope fill raises are timbered with a cribbed manway as they are driven, and have a 20-inch by 20-inch enclosed box slide for passing supplies into the stope, as well as the ladderway for men. Air and water lines to the stope are usually brought up in the stope manways (35) from the level below.

MOVEMENT OF ORE

Getting back to the ore again: We left it at the point where the mucker was busy shovelling it into a stope chute (23). The ore drops down the chute, which is lined throughout its lower section with timber blocks 8 inches by 10 inches by 13 inches long to take the wear, and is pulled at the level below into the ore cars as shown in 43. The ore train crew consists of a chute puller who operates the chute gate to fill the car; a chute blaster who assists the chute puller as well as attending to the blasting of any large chunks that cannot be passed through the chute opening; a switchman who by whistle controls the movement of the train; and a motorman who operates the battery locomotive used to draw the ore cars in the longitudinal drifts.

The battery locomotive draws the train into the main footwall haulage drift (44) where a trolley locomotive picks up the train (18) and pulls it to the main ore pass tippie. On the 2800 level large cars are used, necessitating a rotary tippie (13) for dumping, and this feeds directly into a bin above the crusher. On all other levels side-dump cars are used, and are run over a ramp which tilts the car and spills the ore down the ore pass (14) leading to the crusher station (11). The crushed ore passes down to the loading station (9, 10) and thence up the shaft in large nickel-alloy skips, as we have previously described in an earlier issue.

Now under consideration are plans for supplementing operations at Frood with open-pit mining by electric shovel and truck, as we have sketched in 51.

"From Peon to Purchasing Agent" — or — "Pancho Waterbury's Last Ride"



"From Peon to Purchasing Agent," is the probable success-story behind W. T. Waterbury, widely-known Copper Cliff INCOite. This exclusive Triangle shot, relayed via secret channels by our Mexico operative, shows Pancho Waterbury (better known as "Bill" north of the Rio Grande) at the height of his career as a Mexican generalissimo. Shortly afterward he came north and settled down serenely to a life of buying, bridge, and black-fly baiting at the Cliff and Birch Island.

GUARDIAN ANGEL

Once the terror of Mexican bandits was this proud scion of an old Spanish family. Ruthlessly he fought them, pillaged them, plundered them, standing always for Law and Order, the safety of women and children, the sanctity of the two-demand, and Sir Wilfred Laurier.

His jaunty sombrero and the flowing scarf which drapes his shoulder were worn by his great-uncle, the Vicomte D'Finessio, at his bloody battle of Culbertson's Corners. His fiery steed Rancho, a rare cross between an African panther and a gilligallu bird, was capable of making tremendous speed on the ground or, if the need arose, could take off with his master and fly through the air with the greatest of ease. This was of infinite value in reconnoitering enemy positions, and oftentimes the terrified natives of some cruel bandit village would fearfully watch the sky at night when Pancho and Rancho loomed in threatening silence overhead like a great avenging black bat, spying out strategies for an attack on the morrow.

RIGHT TRIUMPHS

The photograph, our operative tells us, was snapped just after Pancho had led his Army of Virtue in a triumphant attack on the brigands entrenched at Agua Caliente. General Roulette was the bandit chief in command of the place, and his army had recruited a large contingent of visiting travelling salesmen. It was the signal success with which Pancho put these travelling

salesmen into hopeless confusion and finally into ignominious rout that decided his future career as a purchasing agent.

The original of this fine old print, we are told, has been placed in the Mexican Museum of Natural History.

Basketball at Port Colborne

Port Colborne:—The "Incos" have entered a basketball team in the Niagara district O.A.B.A. The record of the team to date has not been very impressive, showing one victory and four defeats. Their lone victory was at the expense of Thorold in Port Colborne, 23-11. They were defeated 32-26 by St. Catharines Aces in St. Catharines; by 21-20 by St. Thomas Church, St. Catharines in Port Colborne; 30-18 by Niagara Falls "Y" in Port Colborne and 34-25 by St. Catharines "Athletics" in St. Catharines.

MOSTLY OLD GRADS

The team, composed largely of members of the Port Colborne High School "Grads" of former years, includes: Roy Walters, Douglas Hebert, Leslie Heard, Earl Stock, Stanley Munroe, Edward Winn, Dominic M'aselt, Philip Beawick, Ernest Clark, Alex Winn, Frank Hammond, Donald Winn, Robert Baker, and Elery Neff. "Bill" Henson is the coach.

The "Incos" are staging a keen scoring race, with the lead changing after every game. At the conclusion of the game on January 11th in St. Catharines, against St. Catharines "Athletics," Roy Walters was leading the team with 24 points, or a points-per-game average of 4.8. Douglas Hebert with 38 and Leslie Heard with 3.0 are in second and third places respectively. These three have been sharing the lead since the start of the league.