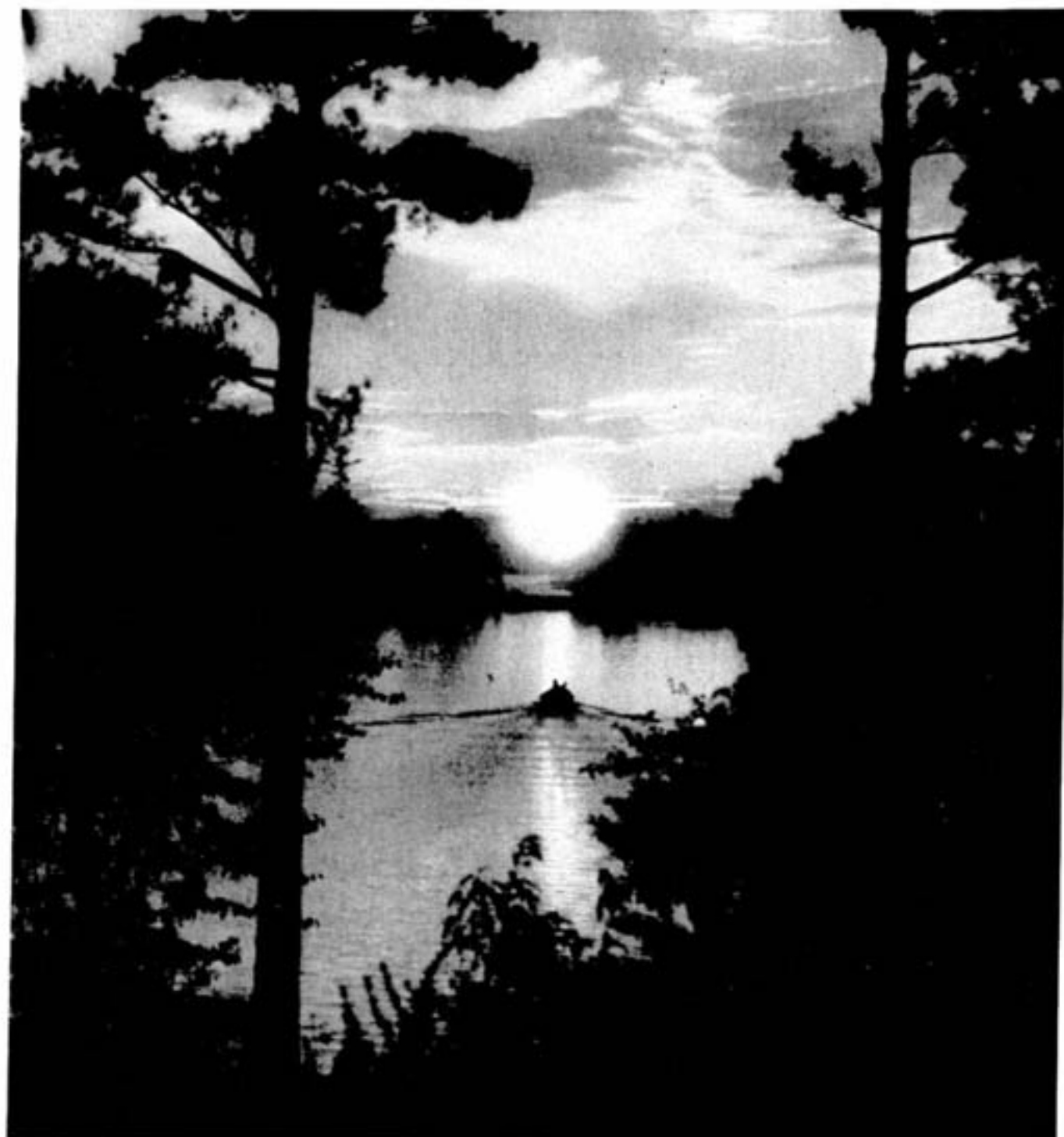




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Hunters Homing at Sunset, McGregor Bay



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Don M. Dunbar, Editor

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Ancient and Modern Metal History

*(Abstracted from an article "Historic Metallurgy" by T. A. Rickard, Canadian Mining and Metallurgical Bulletin, March, 1949).

An interesting mention of iron is made in the Iliad in connection with the games organized to honour the funeral of Patroclus, the bosom friend of Achilles, who gave the prizes to be awarded to the winners. Among other prizes, he brought forth a mass of iron, which, it is said, the mighty Ecthon used to hurl. Achilles had slain him, and thus came into possession of this strange lump of iron. The quantity of iron would suffice, says Homer, to provide tools for the winner's shepherds and ploughmen during a period of five years. This lump of iron was used in a contest resembling "putting the shot", and therefore might have weighed about sixteen pounds. We are told that it was a large and heavy lump of self-used iron. It must have been a meteorite. If so, it was nickel steel. It was the best metal that man had at his service until the nickel alloy steel was manufactured in 1890, in imitation of meteoric iron.

Thereby hangs a tale: In 1887 when copper ore was being shipped from Sudbury, Ontario, by the Canadian Copper Company to the Orford smelter, at Bayonne, New Jersey, it was discovered that the ore contained an unfamiliar metal, which was unwelcome and troublesome. It was recognized as nickel. What was to be done with it?

John Gamjee, an Englishman endowed with inventive genius, accompanied by Samuel Ritchie, the head of the Canadian Copper Company, had visited the Smithsonian Institution, at Washington, for the purpose of examining the meteorites in this museum. They were impressed by the density and hardness of the celestial metal. Was the nickel content the critical factor in contributing to these valuable qualities? Soon afterward Gamjee devised a cure for yellow fever that involved the exposure of the patient to a very low temperature on shipboard. Castings for the ammonia engine of his refrigerator proved too porous, whereupon Gamjee recalled the meteorites in the museum, and made experiments with alloys of steel and nickel.

At length he produced a "perfectly pure mass" of metal that ran into moulds and yielded castings able to resist a very heavy pressure. It is recorded that Ritchie, physi-

THE FRONT COVER

Jack Shea of Sudbury is the accomplished young cameraman responsible for the fine picture on the front cover of this issue of the Triangle. He made the snap at MacGregor Bay, and when he couldn't identify the people in the boat we naturally assumed that they were a certain pair of hunters we know, because we can't see that they have any ducks with them. Can you?

Incidentally, if Jack needs any further introduction, he's a brother-in-law of Dick Wade of Frood-Stobie time office.

The Bowling Club, Port Colborne



ally a powerful man, swung a 70-pound sledge-hammer upon a piece of this ferro-nickel and failed to dent it. Thereupon he negotiated with General Benjamin F. Tracy, the Secretary of the United States Navy, with a view to supplying nickel steel for the armour-plate of battleships. Tracy arranged for the production of such a plate at the Creusot works, in France, and, at the same time, caused a plain steel plate to be made. A similar steel plate was supplied by Cammell & Company, of Sheffield. These three steel plates were then tried at the American navy's plant at Annapolis and subjected to the shock of the severest ballistic tests. The two ordinary steel plates were smashed to bits, whereas the nickel steel plate from Creusot remained intact. At the request of General Tracy, the American Congress voted an appropriation of \$1,000,000 to purchase the Canadian nickel.

This contract gave world-wide publicity to the mines at Sudbury and saved the Canadian Copper Company any further trouble in making more tests. Other governments followed the lead of the United States. Nickel had arrived! The alloy thus produced was an imitation of the meteoric iron; and it was the best metal that had yet been available to man.

Fourth Series Bonds Soon to Go on Sale

Andrew Carnegie, of steel and library fame, is credited with saying "Give me the man who saves—and then makes sure that his savings work for him."

Starting without education or money, Carnegie became one of the world's great builders of industry—as well as one of the world's greatest educators and philanthropists.

He himself was the perfect example of his own credo. Through his Scotch ancestry he probably inherited his instinct for thrift, and out of the wise use of his small early savings, he bought his first small share in a small

steel plant, which he steadily expanded to huge proportions.

One of the notable developments of recent years in Canada has been the cultivation of the thrift habit through the purchase of government bonds by the Payroll Savings Plan method now adopted by most leading companies. Hundreds of thousands of Canadians, including many in our own Company, first started a systematic plan of saving in this way, and have kept it up ever since. Everyone has something to save for, even though we can't all be Carnegies.

The new Fourth Series of Canada Savings Bonds will shortly be on sale and Inco is again making the Payroll Savings Plan available to all employees. The plan is designed to make saving easy—and it does. You hardly realize you are saving until one day you get your bond and your savings in a chunk. Andrew Carnegie never had it half so easy!



TRANSIENT AT MURRAY

Unusual visitor in the warm room at Murray Mine one day was this feathered friend, which calmly perched on the back of a chair while its picture was taken. We wondered who was getting the bird.

In the old days, the man who saved money was a miser; nowadays he's a wonder.

—Sunshine Magazine

INCO FAMILY ALBUM

Day by day, in every way, Inco families are looking better and better. For example: (1) Mr. and Mrs. A. Picard (Copper Refinery) with Raymond, 2, Aline, 6, Andre, 18 mos., and Maurice, 3. (2) Mr. and Mr. T. M. Crowther (Copper Cliff Safety) with Sharon, 6, and Tommy, 10. (3) Mr. and Mrs. Gordon Disley (Frood-Stoble Electrical) with Pat, 2, and Barbara, 5. (4) Mr. and Mrs. Joe Ribic (Levack) with Jane, 4, and Joe Jr., 2. (5) Mr. and Mrs. Mike Wakunick (Port Colborne) with Linda, 3, Isabel, 5, David, 1, Michael, 8 and Bobby, 7. (6) Mr. and Mrs. Bill McCormick (Creighton Survey) with Marlene, 6, Emily, 12, and Bill Jr., 4. (7) Mr. and Mrs. J. A. Butler (Copper Cliff Mechanical) with Redvers, 18, Bobbie, 14, Gall, 9, and Ricky, 5.



Frood Tigers Take Thrilling Seven-Game Series



Creighton Made Mighty Effort

In a great seven-game series that had everything from bobbles to brilliancy, and plenty of each, Frood Tigers retained the Nickel Belt baseball championship and the Monell Trophy. Almost 5000 fans saw the final game in which the Tigers, behind the sizzling slants of Glen Seeley, bested Creighton Cubs 8-5.

You had to hand it to that Creighton outfit—they were terrific even in defeat. Frood had them down 3 games to 1 when they really started to fight, and then the series turned into a thriller that crowded Joe Stalin's new atom bomb right out of the conversation wherever you went. Big Earl Brandy, two-year strikeout king of the lea-

gue, was the hero of the piece; he pitched the Cubs to two victories in three nights, and the tally was all tied up at three wins apiece.

THE WINNERS AND STILL CHAMPIONS, FROOD TIGERS: front row, Norm Flowerday, p.; Dick Trainor, utility; Bill Huntley, c.; Gerry Wallace, coach, 2b.; Harry Marchand (he's not really asleep) 3b.; Pete Rigglin, 1b.; Tobin, ss.; back row, Spike Wormington, p.; Johnny Zimany, p.; Billy Brown, cf.; Glen Seeley, p.; Bert Plouffe, rf.; Billy Demkiw, lf.; Jack Duyvestyn, p.

THE FIGHTING RUNNERS-UP, CREIGHTON CUBS: front row, Jimmy Connors and Yawkey Saffie, mascots; Izzy Girard, ss.; Art Carbone, 1b.; Dip DiFillippo, outfield; Earl Brandy, coach and p.; Bobby Rivard, 2b.; Bernie Kallies, c.; Paul Girard, lf.; Cap Cappelletti, 3b.; back row, George Curry, asst. coach; Bill Jewett, utility; Ev Staples, utility; John Mynerich, trainer; Buz Farmer, outfield; Stan Fera, treasurer; Lefty Gutjahr, p.; Snug Mynerich, p.; Hurlie Hreljac, outfield; Frank Truskoski, scorer; Gord Luck, p. and outfield.

lead, but bounced right back with four singles in their half of the stanza and went ahead 3-2. Gordie Luck, who started for Creighton, was shelled off the mound in the second inning after giving up seven hits and a walk while fanning two. For the third time in five nights Brandy went to the hill and allowed only four hits over the rest of the

Luck Runs Into Trouble

That final scramble was a tense bit of business. In the first inning Frood committed four errors to give the Cubs a two-run

route, but Tigers had a fat lead and they were never headed.

It was Frood's third consecutive appearance in the Monell Trophy series. They were beaten by Shamrocks in 1947 and trimmed Coniston in 1948. They're a powerful ball club and never more dangerous than when the heat is on. They're worthy champions.

The last game of the series was a tough climax to the season for Creighton's Gord Luck, who won the Frood Hotel Cup as the league's best pitcher with eight wins against one defeat. A quiet guy who is also a great hitter and outfielder, Gordie is a perennial favorite with players and fans alike. For the third year in a row he finished third in the voting for the most valuable player.

Chunky Bill Huntley, the Frood catcher, won the Wiggy Walmsley Memorial Trophy, emblematic of the league batting championship, with an average of .415. He was in typical form in the last game of the title series when he hit for four out of five. Two of Huntley's team-mates, Bert Plouffe and Bill Demkiw, were in second and third place with .384 and .365. Harry Marchand of Frood batted in the most runs, 35, and Aurele Blake of Coniston was the home-run king with five circuit bingles.

Wallace Most Valuable Player

With 59 points, only one short of a unanimous decision, Frood's Gerry Wallace was picked by his fellow coaches as the most valuable player to his team during the 1949 season, and wins the Roffey award. Tug Parri of Shamrocks was second, Gord Luck of Creighton third, Harry Marchand of Frood fourth, and Art Carbone of Creighton fifth.

Generally acknowledged the best second basemen who ever played in the Nickel Belt, Wallace with his ability and great competitive spirit has done a lot for baseball in his 12 years in these parts. As playing coach of the 1949 Tigers he has proven himself a smart leader as well as a powerful hitter and a deadly infielder. He fully deserves the distinction which his fellow coaches so emphatically accorded him.

Ron Silver, Bill Lake Inco Golf Champs

In the eight-man playoff to decide the 1949 Inco golf champion of Sudbury District, the result of the final match was a foregone conclusion: the surname of the winner would be Silver.

For the second time this season it was Art against Ron with a golf title at stake. The mining and mashie-wielding Silver brothers duelled for the Idylwyde championship, which Ron won. In the showdown for the Inco laurels he turned the trick again, although Art forced him to the 21st hole before bowing out.

Another close match featured the final of the Inco handicap championship, which saw Bill Lake of Garson edge out Joe Bell of Open P.t. on the 18th green.

The eight players competing in each draw were the top handicap and non-handicap scorers in the Inco tournament on August 13. Prizes for the finalists were fabricated of Inco copper and Monel.

WHAT'S IN A NAME?

"What's your name?" the store manager asked the young applicant for a job recently.

"Ford," replied the lad.

"And your first name?"

"Henry."

"Henry Ford, eh?" remarked the manager with a smile. "That's a pretty well-known name."

The boy looked pleased. "Yes sir, it ought to be," he replied proudly. "I've been delivering groceries around here for two years now."

Parks Learns the Bear Facts Of Wrestling — the Hard Way



At the Inco Club on the evening of Sept. 19, in the presence of some 1500 blood-thirsty customers, Herb Parks of North Bay learned the bear facts of wrestling.

Herb had been on the mat many times before, but he never really knew what fur. Now he knows. It's one thing to "cut a rug" and quite another to roll around a ring with the "rug" cutting you.

Three hundred and fifty pounds (at sea level) of fighting bear steak, Gorgeous Gus of Alaska wowed the crowd out of their seats in the final match of one of Vern Tupling's best grunt-and-groan fiestas to date. Gus supplied the grunts and Herb put in the groans.

Captured as a cub by Billy Fox and coached for a year and a half in the gentle pastime of wrestling, Gus really knows his stuff. The crowd loved the way he gave the business to his opponent, matching hold for hold and finally pinning his man after 12 minutes of highly scientific endeavor.

Hardly Sporting, Old Chap

They had a leather muzzle on his snout, and leather mitts over his claws, and there was some murmuring among the customers at this cruel handicapping of a poor dumb animal fighting for his vittles, but Citizen Parks was not one of the murmurers. He staggered out of the fray with a dazed look on his face, bear hair between his fingers, and some quite bloody scratches on his heaving bosom.

True to the traditions of the bad men of wrestling, Gus gave Referee Larry Kasaboski a going-over after the battle with Herb was done, ripping the official's nice white shirt to shreds and driving him fear-crazed from the ring. Only then did he consent to recline on the mat and guzzle the bottle of orange pop thrust into his paws by his trainer's proud and happy wife.

"It's one way of making a living," Gus told us in his den later. But could you bear it?



Creighton Men Set New Inco Drift Record

Three crews of Creighton miners, working smoothly to a well-organized schedule, established an outstanding Inco record in driving a 1921-ft. conveyor drift on 30 level between No. 3 Shaft and the location of the new No. 7 Shaft.

Really giving their special assignment "the works", the Creighton crews advanced the drift an average of 515 feet per month plus cutting safety stations at 100-ft. intervals, and reached their peak during August when they pushed the 9x10-ft. opening a total of 524 ft. Previous Inco record of 417 ft. was hung up in September of 1942 in driving the 10x11-ft. drift connecting the Frood and Stobie Mines on 2400 level of the Frood.

On June 20 the crews and equipment were organized and sent into action in the new Creighton drift, which had already been driven 349 ft. They commenced advancing on a round-per-shift basis, working three shifts. They drilled off, blasted, and mucked a 7-ft. round per shift, and also, as they progressed, installed air and water lines for the drills and two 12-in. ventilation pipes, hung on pins in the centre of the arched roof, to pull out the smoke from blasting. They completed the drift on September 21 after removing a total of 13,230 tons of rock. The men of all Inco mines will take off their hats to the Creighton boys on this note-



Another Big Development at Creighton Mine



There's been quite a change in the scenery since that rainy day last November 3rd when the first round was drilled for the collar of Creighton Mine's new No. 7 Shaft. On the left is the crew which launched surface activities in Creighton's big development program, with No. 3 Shaft in the background, and on the right is a picture of the same spot today. A handsome concrete headframe has been erected, and concrete footings for a 6,000-ton concentrator are being poured. The new plant is scheduled for production in the summer of 1951.

worthy achievement.

In No. 1 Picture on the opposite page, part of a 7-man crew is seen in action in the drift. Their jumbo drilling rig, for which the truck was designed and made in the Creighton shops, carries three machines mounted on hydraulic booms which are raised and lowered by the operator at the controls. The miner at the left is changing bits on drill steel.

An unusual feature of the operation was a double-track installation for tramming the muck, with a portable switch near the face on which the cars were switched as the mechanical loader filled them. Average tramming distance was 3,700 ft.

In the pictures of the three record-breaking crews are:

2. (front) Ernie Levesque, Eddie Moffatt (captain), Tauno Maki; Sam Slobodian, Dolph Charbonneau, Pat Stephens, Hewson Lehman, Jack Labine, Germain Besner, Emil Pera (shift boss).

3. (front) Ted Unruh, Gerry Gauthier, Armand Charron; Erin Holmes (shift boss), Alf Hearn, Joe Krol, John Mihalic, Ken Adams, Dave Peterkin.

4. (front) Pete Kubisewsky, Gordon Clarke, Eldon Robinson; Alf Emblin (shift boss), Mike Mascoritto, Fred Osmachenko, Henry Vilseche, Albert Dupuis, Les Armstrong.

A complete departure from Inco's regular underground tramming system of mine cars and locomotives, the 3-ft. conveyor to be installed in the drift will be 1,842 ft. long and will have a capacity of 700 tons per hour. Longest Inco conveyor at present is 891 ft., above the receiving bins in Copper Cliff Concentrator.

Part of Big Development

The conveyor installation is part of an extensive development program at Creighton for the recovery of a large body of lower grade ore, mining and processing of which has been made economically possible by Inco's improvements on mining and metallurgical practices. The program includes the sinking of No. 7 Shaft and construction of a 6,000-ton concentrator. The new operation is scheduled for production in the summer of 1951.

Mined by the caving method, in which large sections are undercut and allowed to

break of their own weight, the lower grade ore will be crushed at 28 level of No. 3 Shaft and dropped down through a concrete-lined bin to the conveyor belt on 30 level, which will carry it to an ore bin and loading station at No. 7 Shaft. From there it will be hoisted directly into the concentrator for secondary crushing and separation by flotation.

No. 7 Shaft, 8 x 24 ft., will be sunk 2,000 ft. and will have three compartments, two for skips and one for pipes and manway. Sinking of the shaft will be speeded up by a raise driven from 30 level. The shaft has been collared and the concrete headframe erected.

Concrete footings for the concentrator are now being poured.

Recovery of lower grade ore at Creighton will not disturb the mine's regular production, which at present is at the rate of about 5,000 tons per day. Preliminary exploration by diamond drilling, to determine the grade and quantity of the lower grade reserves was carried out in 1943; by 1947 the mining and metallurgical techniques for handling that type of ore had been worked out, and by November of 1948 the program had been planned in sufficient detail that drilling could commence for the collar of the new shaft.



Six-Mile Watermain

A six-mile pipeline from the Vermilion River will bring 3500 gallons of water per minute to Creighton's new concentrator. A Fraser-Brace crew is seen laying the 20-in. watermain from the mine to the river. It will contain about half a million feet of Douglas fir, banded by 61,000 hoops.



Air Cadets Get Classy Course Of Training in Local Squadron

With an enrolment at time of writing of 155 cadets, 70 of them recruited this fall, 200 Sudbury Squadron of the Royal Canadian Air Cadets is pressing steadily toward its goal of 200 boys in uniform.

And it's not hard to understand why so many young fellows between 14 and 18 years of age head for the St. Clair St. Armouries every Tuesday and Friday evening. The broad and well-organized program of instruction and training, the smart uniforms, and the air force atmosphere combine to form a highly magnetic attraction.

In the accompanying picture layout are shots of some of the activities during a typical Air Cadet evening:

1. With an AR2 receiver and an AT1 transmitter, regulation equipment in bombers such as Halifax and Lancaster, Sgt. Allen Taylor and Lac Paul Martin demonstrate for a class in radio theory, conducted by PO Jim Theriault, who is seen in the centre

background. In the circle of observers are WO2 Barney Cook, Cpl. Andy Fournier, Lac Jerry Hutchison, Sgt. Tom Graham, Lac John DeLongchamp, Lac Doug Clair.

Recruits Get First Eyeful

2. PO Ken Connelly, who served in North Africa as an air gunner, gives a lecture on the .303 Browning machine gun to a group of recruits. Navigation is taught by PO Walter Johnson.

3. An ignition harness for a Harvard trainer is studied by the elementary flight in aero-engines and airframe. On the left is the instructor, PO Hugh Mulligan, and the boys in the flight, from left to right, are Lac's Eric Lefebvre, Ron Vance, Bruce Hutchison, Regis Spencer, Tom Schumacker, Terry Howard, Ken Parker, Tom Trainor, Vic Crawford, and Ray Gatien.

4. A smart-looking squad takes rifle drill from PO Don Ross. Note the buckets of

(Continued on Page 10)



44 Reasons Why Life Can Be Beautiful



HOLLYWOOD PAPERS PLEASE COPY! Here's a picture of most of the girls in Inco's general offices at Copper Cliff, obvious explanation of why the men find it such a pleasant place to work. Left to right:

Front row, Doris Wilkie, Eileen Davidson, Dina Biondi, Jo Travaglini, Maureen Branigan, Edna Johnston, Naomi Perras, Eileen Van Allen;

Second row, Nora Bargnesi, Thelma Blaney, Joyce James, Elsa MacDonald, Joyce McClellan, Dina Minardi, Connie Rogers, Mary Whalen, Janet Prieur, Mildred Fram, Louise Schofield;

Third row, Mary Owens, Mary Coleman, Catherine McKenzie, Miriam Hervey, Phyllis Winters, Shirley Leclair, Shirley Kampi, Marjorie Pawson, Bette Maddock, Veronica Sauriol, Maureen Lowney, Therese Trainor, Wilma Tiplady;

Fourth row, Hilda Leigh, Lenore Beaver, Dorothy Hawke, Cleda Mei, Audrey Lyman, Lily Kauppi, Kay Ferguson, Molly Weir, Joyce Green, Betty Pilon, Kay Thomas, Irene Lindberg.

Air Cadets Get Classy Course

(Continued from Page 9)

water on the right, probably kept handy in case the guns get too hot.

5. First Aid is an important part of Air Cadet training. Here PO Gordon Hubbard shows how to apply splint and bandage to a fractured forearm. In the class are, left to right, Sgt. Terry Maloney, Plt. Sgt. Roy Edey, AC2 Bill Crawford, Cpl. Andy Fournier, Lac Doug Clare, AC2 Bob Shoveller, Lac John Delongchamp, Lac Paul Martin, and Sgt. Tom Graham.

6. While the Supply Officer, PO Harry Forster, stands by to make sure the new man gets a good fit, Sgt. Allen Taylor issues a uniform to AC2 Alf Simmons, a recruit. In the right background Sgt. Phil Simard, orderly room sergeant, is busy with his notes while Plt. Lieut. Eric Mulligan (right) confers with PO Gordon Hubbard.

7. With WO1 Len Bolger (centre) doing the instructing, a class in model airplane building holds the close attention of AC2 Bill Rannelli, Sgt. Tom Graham, Lac Regis Spencer, AC2 Art Desabrais, and Lac Tom Schumacker.

8. One of the special advantages available to members of 200 Squadron is the opportunity to study photography. In this picture Karl Niemi, well-known Sudbury photographer who served with the R.C.A.F., explains some dark-room mysteries to Lac Claude Legace, Sgt. Tom Graham, Lac Ron Vance, Lac Tom Schumacker, and Lac Regis Spencer.

Plt. Lieut. Eric Mulligan, D.F.C., is commanding officer of 200 Sudbury Squadron. A stickler for discipline but also a man who knows how to keep things interesting for young fellows, he appears to be an ideal

choice to head this important branch of Canadian youth training in Sudbury District. Working closely with his very capable staff of officers and instructors, he has the project well in hand.

Parents' nights, motion pictures, theatre parties, and sports are among the special items on the Air Cadet program. A monthly squadron newspaper has been started with PO Hubbard as editor.

Scholarship Inducements

Outstanding feature of the Air Cadets for boys who aim to make the R.C.A.F. their career are the scholarships offered as follows:

(1) Cadets who attend squadron meetings for three or four years, and whose academic standings are exceptionally good, are awarded \$600 scholarships which entitles them to four years of Royal Military College training at either Royal Roads or Kingston.

(2) A scholarship which entitles the cadet to first year aeronautical training at Toronto.

(3) A flying scholarship which provides for one month's training at an R.C.A.F. sponsored air school. During the course the cadet takes about 40 hours dual flying and about four hours solo.

Three cadets who have already left for college training are Len Bolger, Robert Fraser and Bill Hough, all of Sudbury. Hough is at present in his second term at R.M.C. Kingston.

Sponsoring committee of the squadron from its inception in 1942 until this year was Sudbury Rotary Club. This responsibility has now been taken over by Wing 402 of the R.C.A.F. Association, of which Al Sangster is president. When the Triangle visited the St. Clair St. Armouries he was right on the job, keenly interested in every phase of the activities.

Cliff Men Winners In Fishing Contest

Two Copper Cliff fishermen figured in the prize list of Cochrane-Dunlop Hardware's 1949 fishing contest.

A. Moxam tied for third place in the speckled trout section with his 5 lb.-2 oz. entry and received a fishing barometer. J. E. Sloss won second prize in the rainbow trout event with a 7 1/2-lb. beauty and was awarded a sports jacket.

Biggest speckled trout entered in the contest, 5 lbs. 8 oz., won a sports jacket for Tom Mills of Texhammah, Ont. The best rainbow trout weighed 8 lbs. 6 oz. and earned a wall tent for J. H. Keeso of Lis-towel. As usual there was a heavy entry in this blue-ribbon fishing derby.



Podewarny, Laurie Bazinet, Louie Rossi; front row, Bill James, Lawrence Kavanaugh, Jack Johnson, Louie Rogers, Bill Duncan, Ross Weber, and Don Boyd, mascot. Missing are Don McLennan, Bryden McGhee, Frank Rossi, and Dick Pernu, as well as Coach Wally Flowers.

Flyers also produced two individual champions. Lawrence Kavanaugh again won the W. C. Sinclair Trophy for the most valuable player in the senior loop, and Don McLennan picked off the DeMarco Trophy, awarded to the leading batter, with an average of .457.

Victors in the junior section were Van Exan's lineup, photographed in the first of the pictures at left: back row, Bobby Mikkola, Leo Pevatto, Jack Rogers, Norman Rupch, Andre LeBorgne, John Buck, and George Lamcraft; front row, Ken Harrison, Bobby Kujala, Bobby Phillips, Bobby Deacon, Pat Hickey, David Van Exan. Missing are Peter Crossgrove and Don Finlayson. They finished second in the league standing to Meaden's team but won the playoffs two games to one after eliminating the Signoretti brigade in one semi-final while Meaden was taking care of Sanchioni in the other.

Thirty games were played in the regular junior schedule at the Legion Field, and 40 in the senior.

Young Bob Deacon, whose pitching was a major factor in the Van Exan victory, was named the most valuable player in the junior league.

Led Their Teams in Hitting

Leading hitters on each of the senior teams were: Flyers, D. McLennan, .457; F. Rossi, .370; L. Rossi, .347; Gatchell, Howard, .378; Prescott, .333; Dussiaume, .324; Gunners, Lugli, .327; L. Sleaver, .323; Valentini, .312; Sea Cadets, Sharpe, .363; Galbraith, .333; Bradley, .333; Creighton, Kayshuk, .400; McDonnell, .317; McLaughlin, .290.

ONE UP FOR POP

A son in college was applying pressure for more money from home.

"I cannot understand why you call yourself a kind father," he wrote his dad, "when you haven't sent me a check for three weeks. What kind of kindness do you call that?"

"That's unremitting kindness," came the reply.

Flyers Copped Top Honors in Legion League

The 10-team minor baseball league operated by Copper Cliff Branch of the Canadian Legion has packed up after another season in which the "senior stars of tomorrow" made their light shine in no uncertain manner.

Building a Nickel Belt player pool for the future, and at the same time providing competitive recreation to take up the slack of idle holiday hours which might otherwise produce a whale of a lot of mischief, the Legion's effort was once again an outstanding success.

Orchids are in order for Sports Director Arn Boyd and his assistant, "Specs" Telford, Secretary Bill MacKay, and the following coaches of the Senior Group, Wally Flowers (Copper Cliff Flyers), Richie Dopson (Gatchell), Lloyd Sleaver (Copper Cliff Gunners), Bill Currie (Sea Cadets), Bill Glover (Creighton); also these playing captains in the Junior Group, Buddy Meaden, David Van Exan, Dennis Sanchioni, Ken Signoretti, and Jack O'Connor.

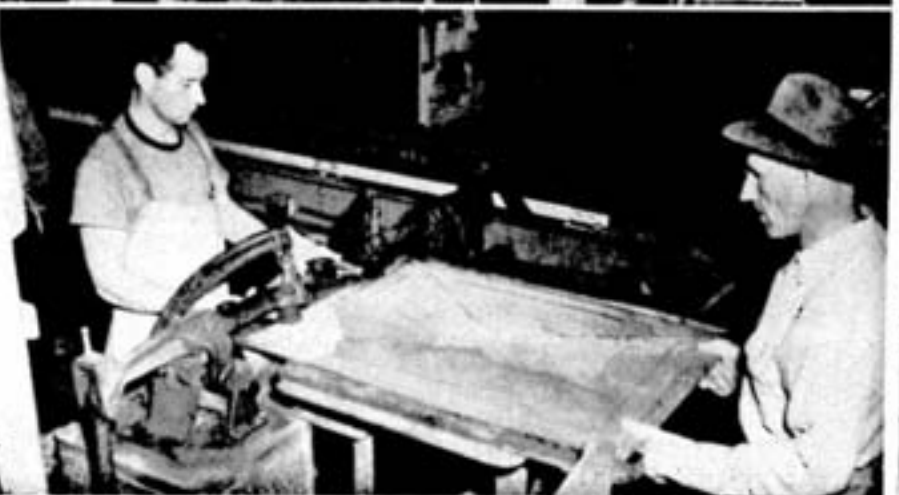
Flyers Defeated Gatchell

Copper Cliff Flyers bagged the bacon in the senior group, defeating Gatchell two games to one in a closely fought final series. They receive the Duncan Finlayson Trophy

and individual medals. Members of the team seen in the second picture are: back row, Ernie Canapini, Raymond Merrifield, Wally



One of the "Comers" A peeperpot on the Gatchell team in the Copper Cliff Canadian Legion's minor baseball loop was Delky Dorzi, 12-year-old left-fielder, seen here squaring away for one of Lawrence Kavanaugh's slants. Seconds after the picture was made he cracked a rousing single over second base. Catcher is Raymond Merrifield of Copper Cliff Flyers and umpire is Joe McDonald, the Old Reliable.



Big Squeeze Is Solution to Old Plating Problem

Installation at the Port Colborne Refinery of a hydraulic press with a capacity of 1200 tons pressure has eliminated a bugbear which had long plagued the nickel refining operations.

Starting sheets, the thin "decoys" of pure nickel on which the cathodes build up in the electrolytic tanks, are curved when they are stripped from the stainless steel blanks in which they are deposited, and the practice was to straighten them manually by a series of reverse bends.

After the starting sheets went into the production tanks, the initial plating current tended to warp the sheet, depending on the condition of the anodes, causing short circuits with a consequent loss of plating efficiency and an increase in box consumption. In order to avoid this all sheets had to be lifted from the tanks within 24 hours and re-straightened, entailing the re-handling of some 3000 sheets every day. In addition to its cost, re-handling resulted in the top of the tanks being sprayed with electrolyte which salted out at the electrical contacts and raised the voltage required for the plating process.

Forms Reinforcing Offsets

The new hydraulic press neatly solves the problem. Operated at a pressure of 300 tons to the square inch, it straightens the curve in the starting sheet and forms reinforcing offsets which keep the sheet straight during the plating cycle.

First of the accompanying pictures gives a general view of the big press, which straightens and crimps a sheet in 6 or 7 seconds and has handled as high as 3800 in in 8-hour shift. The second picture shows the delivery end of the press, and also one of the spot-welding machines in which straps are welded to the starting sheets to suspend them in the plating tanks. Third picture gives a close-up of the spot-welding operation to show the crimps, or reinforcing offsets, which the press forms in the starting sheet.

Monarchs Seeking All-Ontario Laurels

Monarchs by name and monarchs of all they survey in Nickel Belt Mercantile league softball, the team sponsored by McLeod's Garage will represent Northern Ontario in the playoffs for the Senior B all-Ontario championship.

E. Regimbal is manager of the Monarchs. Bob Grooms is coach, and the club's roster includes: Pope Bray, Leo Houle, Ovie Cyr, Al McEwan, Moon Carroll, Lud Ryski, Jack Newell, Johnny DeMarco, Ted Tyreman, Romeo Houle, George Jenkins, Laurie Boulet, Reg Regimbal, Red Duberry, Red Maltby, and Lou Prete.

ELECTRIC BLANKET

From Vancouver comes proof that the age of electricity is here to stay. It seems that an executive of the B.C. Power Commission sent an electric blanket to his 75-year-old mother; a few weeks later he received a card on which was printed the following:

"Now I lay me down to rest,
Electric blanket 'cross my chest;
I pray my Merciful Creator
Protects the voltage regulator;
So if I die before I wake,
It's not, I pray, because I bake."



Jack Gallagher Had 47 Years At Copper Cliff

Holding the longest service record of any Copper Cliff employee, Jack Gallagher of Stores stepped into retirement last month with the best wishes of the host of friends he has made during better than 47 years with the Company.

A large gathering attended a farewell party at Memorial Community Hall, Copper Cliff, and many were the warm-hearted tributes to him as a staunch friend and a loyal and efficient Incoite. Among the speakers were Vice-President R. L. Beattie, W. T. Waterbury (who was in his usual good form as master of ceremonies), R. C. Crouse, and Inco pensioners E. A. Collins, J. W. Garrow, J. Gribble, and J. Wilson. Presentation of an engraved gold watch and a purse of money was made by C. C. Chapman, general purchasing agent.

In expressing his appreciation Jack passed on a word of advice to the young fellows in the Company. "If you've decided to work with a big organization, you'll never find a better one than this one," he said.

Has Two Birthdays Now

Jack Gallagher was born in Barrie, and for 64 years celebrated his birthday on Sept. 11. But this year when he was getting his retirement papers fixed up he wrote to the department at Toronto for a birth certificate, and back it came showing Sept. 10 as the date on which he entered the world. "Old Doc Ross must have made a mistake," Jack explains. "From now on I'll have to celebrate on both days, just to make sure."

At 17 Jack planned to enter the civil service but instead took the advice of a family friend and came to Copper Cliff. That was on April 1, 1902. He started in as a junior clerk in the first office of the Cana-

Presented with Watch

Jack Gallagher receives an engraved gold watch from his friends at his retirement party after almost half a century with Inco. The presentation is being made by C. C. Chapman, general purchasing agent. Also seen are Johnny Wilson, pensioner; R. L. Beattie, vice-president and general manager; E. A. Collins, pensioner; W. T. Waterbury, assistant to the vice-president; R. C. Crouse, general storekeeper; George Hudson and J. W. Garrow, pensioners. Vocal solos by Tommy Urwin, the boy tenor, were a hit of the gathering.

dian Copper Company at the foot of Serpentine St., and the following July helped move the records over to the new office building which is now the town hall and police station. His duties included making blueprints on the sidewalk in the sun, copying letters in the old letterpress, and polishing up the Company's sign on the front door with banana oil. Jas. McArthur was superintendent, A. P. Turner was chief clerk and office manager, and Fred Bernhard was assistant chief clerk.

When F. L. Shillington came along to take over the new post of purchasing agent, Jack moved to the warehouse to be his secretary. After that he had a turn as weigher at the Cobalt Plant, and then transferred to the smelter as timekeeper. With a chuckle he remembers the morning when he phoned A. P. Turner to tell him that the water tank had burned down during the night. "I've heard of many queer things," exploded "A.P.", "but this is the first time I ever heard of a water tank burning!"

False Reports Were Heard

Investigating the fire, "Cap" Lawson was greatly disturbed when he was told that there had been detonations in the shack beneath the tank when the blaze was at its height. "Cap" was sure somebody had been fooling with dynamite, but Jack thinks maybe the boys on night shift had a few cool ones cached in the shack, and they exploded in the heat. Odd things happened in those days.

Jack did some of his best work as clerk in the Shops office and later in the office of George Craig, master mechanic. They say he was a wizard at looking after detail, but he was never too busy to give a hand to a pal. He even helped Pete Ross with his collection of ore samples, adding a fine

specimen of jet black "licorice" ore which later turned out, to Jack's apparent dismay and Pete's mortification, to be a chunk of converter matte.

For 11 years he was the Company's real estate agent, and in those days the appropriation for house paint and repairs wasn't anything like it is now. It was a good thing for him that he had the Irishman's gift of the soft answer that turneth away wrath, because some of those pioneer Copper Cliff housekeepers used to go after him hammer and tongs.

In April of 1930 Jack transferred to the Stores office, where he remained until his retirement. Of the countless amusing incidents he recalls from that department, one of the best is his story about the hectic time that was had by all, including Purchasing Agent W. T. Waterbury, in getting a shipment of oats away to High Falls one winter day in time to save George Hartman's horse from starvation. His patience under tight rein, "W.T." finally said over the telephone, "Jack, I'm doing all I can. If that won't work they can feed him snowballs."

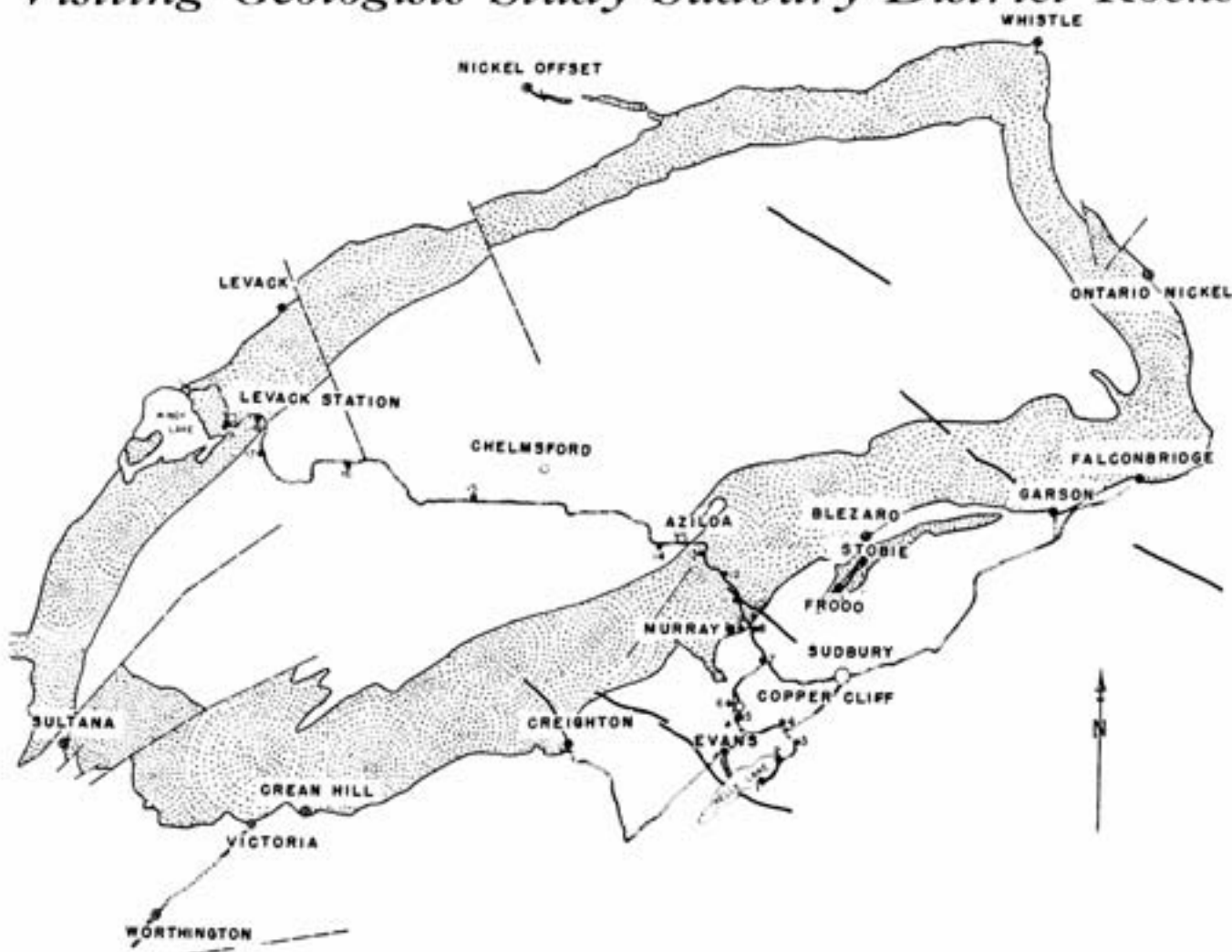
Has 10 Grandchildren

Jack was married at Copper Cliff in 1909 to Mary Buschman, whose father was car shop foreman. They have a family of five: J. T., of the Stores Dept.; Filand, of the Mechanical Dept.; Gerald, a member of the Jesuit Order who is teaching in a college at Kingston; Mary, teaching school at Red Rock. One son died in infancy. They have 10 grandchildren.

OR THEY'LL FIND OUT

A man should be master of his own home or know the reason why. (Most men know the reason why.)

Visiting Geologists Study Sudbury District Rocks



19 Points of Special Interest on Tour

Route taken by a group of Ontario and Quebec geologists in studying a cross-section of principal rocks in the Sudbury District is indicated by 19 numbered dots on the above map of the area. The famous Sudbury Basin is shown in shaded outline. Short broken lines, such as the one near Levack, indicate geological faults, and the short solid lines like the one near Creighton are for dyke rocks—very narrow intrusive formations of great length and depth which in molten form were injected from below along planes of weakness in the earth's crust. Operating mines are marked by large black dots, non-operating mines by cross-circles. In the photograph some of the visiting geologists inspect an outcrop of Onwatin Slate near Chelmsford.

Probe Riddle of Famous "Basin"

One of the world's most intriguing geological riddles—the origin of Sudbury District ores—was high on the discussion list when 50 Ontario and Quebec geologists gathered here for a three-day session in September.

The excursion was arranged by the geological section of the Canadian Institute of Mining and Metallurgy, and was under the direction of the section's local chairman, Frank Zurbrigg, chief mines geologist of Inco.

The party included economic geologists, who are interested chiefly in the location of ore and how you find it, and academic geologists, whose primary interest is how the ore got there in the first place. Both types found plenty to hold their attention in the underground and surface trips arranged for them.

In a field excursion across the famed Sudbury Basin the group saw a cross-section of the principal rock formations in this district. Travelling by bus they started their tour at Kelly Lake, went from there north to the Soo Highway, then to Copper Cliff and via the Clarabelle Road to the Levack Highway, on which they travelled as far as Levack Station; from there they walked in to Windy Lake.

Some Mysterious Names

On this route, which is marked on the accompanying map, the party inspected outcrops where 19 different rock formations could be easily observed. Each point of interest is marked on the map as a numbered black dot, and the following are the features to be seen, couched in the mystical language of the geological fraternity: 1, Mississagi Quartzite; 2, Ramsey Lake Conglomerate; 3, Sudbury Gabbro; 4, McKim Greywacke; 5, Copper Cliff Rhyolite; 6, Copper Cliff Offset (Quartz Diorite) and Creighton Granite; 7, Frood Series; 8, Elsie Mountain Formation; 9, Norite Contact with Elsie Mountain Formation; 10, Norite-Quartz Diorite Contact; 11, Olivine Diabase and Norite; 12, Transition Zone; 13, Micropegmatite; 14, Onaping Tuff; 15, Chelmsford Sandstone; 16, Onwatin Slate; 17, Onaping Tuff; 18, Micropegmatite; 19, Start of Traverse through Micropegmatite, Transition Zone, and Norite.

The average layman's chief reaction to this list will be one of astonishment that the innocent and not too inspiring contours of the district hide so many high-sounding secrets.

The geologists say that these 19 different types of rock formations form the framework in which is set the great riddle of the Sudbury ores.

Three Clues To Riddle

Among the many outstanding features of Sudbury geology there are three of outstanding interest to visitors:

1. The type of the deposit, in which all the ore bodies are located around the rim of a huge oval-shaped basin 35 miles long and 15 miles wide, and are in contact with the outside margin of the solid crystalline rock known as norite.

2. The rock formations which occupy the central portion of the basin beneath the farm lands. These formations are themselves basin-shaped; they are the youngest rocks in the district and, as far as Inco geologists know, there are none like them elsewhere. They are largely of volcanic ash which was deposited in bedded arrangements under water. They range in color from gray to black, and are known as the Whitewater Series.

3. The widespread occurrence of breccias—rock which in a plastic condition was forced into cracks and fractures in the older rock and solidified there, now appearing as irregular bands and patches.

Two Theories of Ore Origin

It is felt that these and other important but less obvious features are inter-related, and if correctly interpreted would indicate the conditions accompanying the deposition of the copper-nickel ore. But the features in question can be explained in more than one way, so after 50 years of study the geologists still can't establish with certainty just what happened during that period, ages ago, when the earth's outer crust in what was



"It's Chelmsford Sandstone"

In this group of geologists taking part in the C.I.M.M. excursion in Sudbury District last month are, left to right, Archie Mathison, Noranda; Jack Satterly, Dept. of Mines, Toronto; Frank Zurbrigg, Inco chief mines geologist; B. K. Prest, Dept. of Mines, Toronto; C. H. Stockwell, Canadian Geological Survey; J. M. Powelson, Consolidated Mining and Smelting Co. Ltd., Haileybury; J. W. Baker, Kerr-Addison, Virginia-town; G. H. Charlewood, Lakeshore, Kirkland Lake.

to be the Sudbury District twisted and buckled under terrific pressure and was shaken by volcanic disturbances. There are two leading theories insofar as the origin of the ore is concerned—one that the ore was introduced from below after the norite was emplaced, and the other that it was separated from the overlying norite, but there's no absolute proof of either.

However, though they may be up in the air academically the geologists have their feet firmly on the ground economically because, no matter which theory of its origin ultimately wins out, they know for sure where the ore is to be found with respect to the norite, and how to go about finding it. And that's what counts.

Civil Air Regulations, Navigation, Meteorology, Theory of Flight, and Aero Engines, Frames and Instruments. Men who have taken the course, many of them Incoites, say it greatly simplifies learning how to fly a plane.

Lionel Roy, safety engineer at the Copper Refinery who held the rank of flying officer during the war, is thoroughly qualified to conduct the course, having trained as both pilot and navigator after which he served as an instructor.

Special Course For New Pilots

A second Ground Instruction School to qualify budding airmen for their private pilot licenses commenced at the Inco Employees' Club in Sudbury on October 3 with Lionel Roy as instructor. Registration is open until October 10.

For a very moderate fee the private pilot can accomplish in this 15-week course of two evenings per week what it might take him 400 hours to gain by correspondence at four times the expense.

On completion of the course the pilots are examined by the Dept. of Transport; if successful in this exam as well as in their air test, they receive their private licenses, which expire only if the holder fails to pass an annual physical checkup.

The first Ground Instruction School, held early this year at the Inco Club, was a highly successful venture, most of the class passing the Dept. of Transport exam. Some of them intend to be commercial pilots while others have taken up flying just for sport and relaxation.

Subjects covered in the course include



Discussing the relationship between altimeter and barometer, at the first Ground Instruction School at the Inco Club last spring, are Lionel Roy, instructor, Vern Kroetsch of Copper Cliff Metallurgical, Cliff Doman (kneeling) of Frood-Stobie No. 7, Jim Langdon of Copper Cliff Smelter, and Gerry Lamothe of Murray Mine Electrical.

You can preach a better sermon with your life than with your lips.

Make Presentation to Art Hughes on Retirement



Orphan at 8, He Made a Real Mark

Art Hughes has come a long way since that dark day in Glasgow when, a boy of eight years, he faced the world alone. His father had died two years previously. When his mother passed on he was strictly "on his own".

Friends of his family in Canada wrote that they would be glad to have him come and make his home with them, so he sailed away to the New World, not half as calm and confident inside as his good Scottish face may have suggested.

Took Up Railroad

At Aylwin, Quebec, Art took quickly to life on the farm of his foster-parents, and it wasn't until he was 23 that he decided to strike out for himself. His first job was in a dairy in Ottawa, and after a year at that he hooked up with the C.P.R., firing locomotives out of Ottawa and then Smith's Falls. In 1914 he moved to the C.N.R., and it was after they moved him to Capreol that he heard the call of the Nickel Belt. In the spring of 1920 he took the post of night foreman in the locomotive shop of the British America Nickel Co. at Murray Mine, and that fall switched over to Copper Cliff as a locomotive fitter.

The boys in the locomotive shop and other pals made a presentation to Art at the end of his last shift before retirement. Foreman Charlie Cummings read an illuminated address which said a lot of complimentary things Art modestly denied were true, but he was the only man in the crowd who didn't endorse them 100%. He has been a faithful, efficient, and popular workman. He was presented with a purse of money as a token of the high esteem in which he is held.

Some of the locomotive shop gang are seen in the above photograph in which Charlie Cummings is making the presentation to Art. In the front row are Harold Basso, Johnny Hall, Harvey Nadeau, T. Tomassini, Joe Spigelski, Chick McDonald, Richie Howard, Ed. McKerral, Ed. O'Brien; in the back row Joe Martel, Jack Cullen, Fred Lumley, Flash Leishman, Art Lenihan, Marcel Paganucchi,

George Counsell, Alex Salo, Artie Goddard, Luigi Simionati, Bill Leclair, John Martin, Tom Harkins.

Art was married in 1906 at Ottawa to Agnes Badger, who died in 1918. At Capreol in 1919 he was married to Margaret Hawkins of Copper Cliff.

He'll Get His Inco News

Although he is now out of active service, he retains a very close tie with the Company which he served some 29 years because his three sons and two sons-in-law are all Inco men. Sons Bruce and Gordon are employed in the boiler shop at Copper Cliff, and Wilmer is with the Mechanical Engineering Dept.; Ernie Ball, husband of daughter Edith, works in the Copper Cliff Concentrator, and Les Wingrave, married to Evelyn, is a skimmer in the converter building. Now there's an Inco family. If ever you saw one! And there are seven grandchildren coming along to carry the record into the third generation.

Art is fit as a fiddle and firmly convinced that life begins at 65. Between his garden and various odd jobs here and there, he expects to keep busy for another 25 years at least. More power to him!

HOW IS YOUR BRAIN-POWER?

Figuring out how many ways you can get change for a 50-cent piece, the riddle sent in last month by Jack Rogerson of Coniston, was more pencil work than a lot of puzzle fans felt like doing, judging by the number of replies.

First in with the correct answer was Mrs. Elsa MacDonald of the Smelter Efficiency Dept., and John Avery of Copper Cliff Warehouse was next.

Most distant fan to send in the solution of 49 different ways was H. S. Lewis of the New York Office. (And by the way, whatever has happened to Ted Dauchy down

there? This puzzle corner hasn't heard from him for months.)

Sparky said that as far as he is concerned there is just one way to change a 50-cent piece—from his pocket to his wife's purse. Amen!

There has been the odd complaint that our puzzles of late have been too easy. We will be glad to hear from all the brain-trusters who can solve the following little toughie within 10 minutes.

In each of three roads, A, B and C, the houses on one side had consecutive odd numbers (beginning at 1) and on the other side, consecutive even numbers (beginning at 2). In each road the sum of the odd numbers is greater by 43 than the sum of the even numbers; A contains most houses, and there are 6 more even numbered houses in B than there are in C.

How many houses are there in each road?

Another 100,000 For Frood-Stobie

For the sixth time, the men at Frood-Stobie Mine have achieved the distinction of completing 100,000 consecutive shifts without a compensable lost-time accident.

Not so long ago the 100,000-safe-shift goal was regarded as a formidable objective, but by safety co-operation and teamwork Frood-Stobie are making it look comparatively easy. Their sixth 100,000 run was completed in August.

LOST NO TIME

Jim: "When you asked the wallflower to dance, did she accept quickly?"

Jack: "I'll say she did. She was on my feet in an instant."

PUN IN THE NURSERY

"I'm fed up on that," said the baby, pointing to his high chair.

Instead of giving yourself a pat on the back, try giving yourself a good shove.

—The Glickrafter

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