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About Geophysical Prospecting Work

Hans Lundberg Has Interesting and Informative Article in Mining Bulletin

A timely discussion of recent advances in geophysical prospecting appears in the December issue of the Bulletin, Canadian Institute of Mining and Metallurgy, in a paper presented by Hans Lundberg, president, Hans Lundberg, Limited, Montreal.

The author traces the early history of the development of geophysical methods and then pictures what he terms the sad conditions under which the geophysicists have had to work during the past few years. An almost hostile feeling had developed against geophysical prospecting following the experience of the boom years 1928 and 1929, and it became so bad that a few years ago the mine owners did not employ a geophysicist until all other means had failed. If it then so happened, he states, that no indications of ore were found which could be recommended for further exploration, the old hostility was revived.

A campaign of research was organized during the depression years and methods have since been developed which make it possible not only to discover sulphides, but also to distinguish, to a certain degree, between the sulphides, and the other conductors that are of no commercial importance.

New fields have been found, and the applicability of the methods has been widened to an extent which could scarcely be envisioned a few years ago. It is now possible to trace out geological formations, determine geological contacts, trace intrusions of acid and basic rocks, locate and trace quartz veins, and trace out fault lines and zones of shearing and brecciation. As a result, the work on sulphides has become rather limited in comparison to work on structural problems, prospecting for gold, tracing geological contacts, and determining depth of overburden.

Besides the success achieved by other geophysical methods in the oil fields, in outlining favourable structure, and in the location of important details, there are now over fifty mines in production, none of which could have been found by ordinary prospecting methods.

The paper then deals in turn with the terrestrial conditions governing geophysical surveys; the problems that may be solved by geophysical methods; preliminary work, organization and routine where surveys have been made; ore-bodies, and zones of mineralization; and depth determination. The author's discussion of recent applications of the methods, in which he gives a number of examples of the tangible success of these methods to Canadian deposits is a particularly interesting feature of the paper.

Discussion of Radium and Its Rays in Bulletin

"Radium and Its Rays" is the interesting topic of a paper appearing in the December issue of the Bulletin, Canadian Institute of Mining and Metallurgy. The paper is one of a few on the subject that have been sufficiently free from technical discussion to appeal to the layman.

Its author, G. C. Laurence, National Research Council Laboratories, Ottawa, presents an engaging account of the early work of Hittorf, Perrin, Sir William Crookes, Bquerel, and other noted physicists that led to the discovery of radium by the Curies. This is followed by a discussion of the properties of radium, and the work done in determining them, more especially by Ernest Rutherford and Frederick Soddy. In the story of radium, the author states, the contributions to our knowledge by the Curies and by Rutherford stand out prominently. Canada has played an important part in the history of radium from the time when Rutherford and Soddy gave the first satisfactory explanation of its properties while working at McGill University, to the present, when the Dominion has become an important source of world supply.

Attention is directed in the paper to experiments on the artificial disintegration of atoms that have led to the discovery of "neutrons," a kind of ray that may possibly be useful in the

treatment of cancer. Some enthusiasts have claimed that these rays are more effective than radium rays. It will require at least five years, however, to learn whether or not the new method is satisfactory and should it prove to be, a few more years would elapse before it could be adopted generally. Besides, radium treatment is much more convenient and adaptable for many growths than methods that require, or would require, massive equipment, as in the case of x-rays and neutrons. Radium, it will be noted, is used also in engineering for the radiographic examination of castings and welds to detect flaws and holes.

Waited Thirty Years for Gold Brick at Larder Lake

Larder Lake, Dec. 30.—The first brick was poured at the Raven River Gold Mine at Larder Lake recently before officials of the mining concern.

"And we waited for you 30 years," was Charles D. McGregor's salutation to Raven River's first gold brick. The Raven River Mine, formerly the Harris-Maxwell, was staked nearly thirty years ago. Mr. Fisher, the president of the Proprietary Mine, and his father before him have had money in the company. "It took two generations to bring results from the Raven River, but at last it is in production, thanks to the efforts of Col. E. M. Thompson and his associates on the Proprietary board," explained Mr. Fisher at the ceremony of the pouring.

Messrs. Synder, McGregor, Fisher, Weller and Pharr of the Proprietary Mine were present at the pouring of the brick. John M. Colville, father of the Kerr-Addison and now vice-president of the mine and consulting engineer for the Proprietary Mine, was also present.

A small celebration was held in the Raven River mill at which the managers from the other mines in the locality were present and expressed their congratulations.

The mine is a credit to "Ruddy" C. Rutherford, manager. John Colville sitting quietly in the background, must have had great satisfaction in seeing the plans, formerly some two years ago, bear fruit.

Former Porcupine Engineer Now B.C. Minister of Mines

(From Globe and Mail)

The new Minister of Mines of British Columbia, Hon. W. J. Asseltine, the only occupant to that office with practical mining experience, excepting the late Hon. William Sloan, is an Ontario man, having been born at Renfrew in 1891 and graduated from Sydney, and is well known to many of the leading mining operators of this province.

His first job after leaving school was with Cobalt Townsite Mine, operated by Mining Corporation of Canada under Charles Watson, who went down on the Princess Sophia in October, 1918, with 397 others, off the coast of British Columbia after making an examination of the Engineer Mine. From there he went to Dome Mines, South Porcupine, as a member of the mill construction crew, remaining two years, when he went to the McIntyre Mine, then under Andre Dorfman and R. J. Ennis. Later he was at Porcupine Crown, managed by Maurice Summerhayes, now General Manager of Wright-Hargreaves, and secured his first mill foreman job at Dome Mine, managed by C. D. Kaeding.

After service during the World War, he was made mill superintendent of Trethewey Silver Cobalt Mine, a subsidiary of McIntyre, and following two years in that capacity accepted a similar position with Premier Gold Mining Co., Portland Canal district, B.C., which was then constructing a new concentrator and commencing its sensational dividend career. He held that position with credit for between twelve and thirteen years and then resigned to enter private practice as a mill and metallurgical consultant at Vancouver. He was elected Liberal member for the Atlin district in 1933 while mill superintendent for Premier and returned by a large majority from the same district this year.

He is the patron of several improvements in milling practice, a fluent speaker and extremely popular with all classes connected with the mining industry in the province.

Increased Output of All Canada's Metals

Increase in Gold Production of Special Interest

(From Globe and Mail)

Figures recently released by the Mining Branch of the Dominion Bureau of Statistics, covering production for the first ten months of this year, indicate that, in spite of the recession of recent months, new records will be hung up in 1937 for gold, silver, copper, lead, zinc and nickel, further emphasizing the importance of the mining industry upon the prosperity of the Dominion.

Production of silver up till the end of October was 19,781,075 ounces, and if the same average rate is maintained during the last two months of the year, total will be in the neighbourhood of 23,737,284 ounces, compared with 18,334,487 ounces in 1936, a gain of 5,402,797 ounces, the largest output since 1930, when 26,443,823 ounces was recorded.

Copper production for the period was 214,899 tons, an average of 21,489 per month, indicating total for the year of 257,868 tons, compared with 210,513 tons in 1936, an increase of 47,355 tons and almost double the output of 1929, when 121,151 tons was mined and nearly 50,000 tons more than was produced in the previous record year, 1935.

Lead production for ten months was 17,998 tons, indicating total of 212,833 tons for the full year, compared with 191,590 tons in 1936, an increase of 20,798 tons. This represents the highest production on record. There has been an unbroken yearly increase during the past seven years, production in 1931 having been but 129,371 tons.

Zinc production has been 158,488 tons, indicating total of 190,176 tons for the full year, an increase of 23,595 tons from 166,581 tons produced in 1936. This will be an all-time record. There has been an unbroken increase each year since 1933. Ten years ago total production was 66,704 tons. The history of production of electrolytic zinc in Canada only goes back to 1916, when a satisfactory process was worked out at Trail smelter of Consolidated Mining and Smelting Co.

Nickel production of the period was 92,677 tons, indicating total of 111,264 tons for the full year, compared with 84,869 tons in 1936, an increase of 26,395 tons. This is a new all-time high and double the production of 1929. There has been an unbroken increase in output each year for the past five years.

Lower prices will prevail during the last two months of the year for base metals, compared with averages for the first ten months, but nevertheless, it is expected that valuation records will also be established. The price of silver has remained around 45 cents during 1936 and 1937, and production for current year will therefore show an increased value of approximately \$2,400,000 according to these estimates.

According to Hon. T. A. Cresser, Minister of Mines, total mineral production for 1937 will reach an all-time high of \$425,000,000, or in excess of \$1,180,000 for each day of the year. This will be a gain over 1936, when production was \$361,900,000, of between 16 and 2 per cent. Dividends for the year also reached a new high of \$105,000,000; salaries and wages will total around \$135,000,000, and expenditures for supplies and equipment \$127,000,000.

Add to all that the fourteenth consecutive yearly increase in the production of gold, estimated for this year at \$105,000,000, and we submit that the mining industry of Canada presents as attractive a picture as can be found anywhere in the world.

Golden Gate Mine Rushing Work on New 250-Ton Mill

Excavations for mill foundations at property of Golden Gate Mining Co., Swastika, Kirkland Lake area, have been completed and the 250-ton mill unit purchased from Teck-Hughes Gold Mines is being dismantled for shipment to the Golden Gate property, officials advise.

HORSE AND BUGGY WIRED FOR SOUND AND LIGHT



If C. I. bee farmers and buggy drivers would take a leaf out of Frank Dyer's book there would be far fewer accidents. Just because Frank, of White Water, Wis., prefers his horse and buggy to an auto, you needn't think he's old-fashioned. His rig uses more electricity than an auto does. Reading from left to right, he has two barnish lights in place of bells on the horse, four spoke lights on each wheel, a spotlight and horn on the dashboard, a radio, a light on the whip-socket, port and starboard lights b-side the seat, a light on each side (one can be seen between the spokes of the rear wheel, and a big tail-light with "Howdy" painted on it. Five batteries at the rear furnish current. He says that sometimes when autoists meet him on the road at night they pull up at the side because they don't know what's coming.

High-grade 303, orebody, which was intersected on the 475-foot level about two weeks ago, is opening up well and the fact that the vein was cut about 40 feet further east of where it was first intersected on the upper level indicates greater length on the 475-foot level.

Values are also higher and width greater than in the corresponding area on the 350-foot level, where the shoot averaged \$60 per ton for its full length of 130 feet across 6-foot drift width.

Lower-grade 304 vein has also been intersected on the 475-foot level and values here are also proving better than on the upper level.

McManus Red Lake Mines Drilling in the Porcupine

(From Northern Miner)

McManus Red Lake Gold Mines Ltd. has completed a total of 2,650 ft. of drilling in four holes on its newly acquired property located in the north-west corner of Deloro township, Porcupine area. Late last week stand-piping through overburden for hole No. 5 was under way.

The property comprises a group of eight claims adjoining south of Kay-crum Gold Mines on which considerable diamond drilling was completed by Hollinger this summer. It is located one claim west of Delrite Mines, surface exploration was started on July 6th. A total of 15 test pits to depths of five and 10 ft., as well as considerable stripping and trenching was completed under the capable direction of Donald McCrea.

Numerous showings of quartz were located at various points. The main break, striking in an east-west direction across the property, is described as a mineralized zone occurring along the contact of the spherulitic and the coarser lavas. The zone was exposed in three test pits put down along a length of 2,800 ft. Close to the eastern boundary, No. 3 hole went down to a depth of 1,077 ft., cutting the vein zone at a vertical depth of 900 ft. No. 1 hole was drilled 800 ft. west of No. 3, and No. 4 is located 1,800 ft. west of No. 1. No. 5 hole has been spotted 1,600 ft. west of No. 4. Hole No. 2 was an exploratory hole drilled in the same plane as No. 1 and 500 ft. to the north. It went down to explore surface outcroppings in the section immediately north of No. 1 hole.

The three holes drilled along the main break to date cover a distance of 2,600 ft. The vein zone is stated to have been intersected in all the holes with vein material showing across widths of 15 to 20 ft. Details of assay values have not yet been released.

A considerable portion of the property is covered by overburden and some of the future drilling will be of a purely exploratory nature. The surface programme detailed three strong shear zones lying north of the main break but no work has been done on these as yet. Considerable exploration remains to be completed and the management estimates that on the main break alone a minimum of 15,000 ft. of drilling would be required to test thoroughly the possibilities.

The property is advantageously located for economical operation and a transmission line crosses the property. A complete set of camps has been erected near Skinner Lake.

Aged Settler Dies While on His Way to Get Mail

Joseph H. Ste Marie, a settler living near Cochrane, was found dead by the roadside one day last week. The late Mr. Joseph H. Ste Marie was 76 years of age at the time of his death. Heart trouble due to his great age is understood to have been responsible for the sudden death. Word from Cochrane suggests that Mr. Ste Marie passed away while on his way to secure his mail at Dunning post office.

and a quarter from his home when he must have dropped dead. The body was brought to Cochrane by provincial police to await an investigation by Chief Coroner E. R. Tucker.

Business Normal in Canada Says General Motors Head

Detroit, Dec. 31.—William S. Knudsen, president of General Motors Corp., announced this week that employment in General Motors plants throughout the United States would be reduced by approximately 30,000 employees, effective Jan. 1.

Knudsen said no reductions had been ordered in Canadian General Motors plants because "business is normal there."

26,000 Off in Michigan

The reduction in Michigan, he said, will approximate 20,000 employees.

Knudsen said "the recession in business working force necessary."

He explained that the General Motors plants would operate on a three-day-a-week basis, each operating a total of 24 hours a week. That will be the working schedule for those employees who are retained.

In an interview Knudsen said "the used car market is stopped, and when that is stopped our employment stops."

Asked if a revision of prices on new motor cars might ease the market problem, he said:

"A cheaper market will do no good if we can't sell used cars. Purchasing power is down—there is no question about it."

Asked for his explanation of the general business recession, he said:

"The price level rose too fast in the spring of 1937 and we just couldn't digest it."

Real Celebration for All Concerned at Rouyn

Rouyn, Dec. 31.—As George Patten says over the radio in his illuminating account of the day when Wellington vanquished Napoleon at Waterloo, "It was a lovely day for a battle."

So thought Louis Brozic and his fellow celebrators of Christmas Eve when at his establishments at 622 Pererault street, greetings developed into arguments, and then to blows with a free for all resulting.

The police learned of the struggle going on among the natives of Poland at Louis' house when John Rixlow appeared in Chief Tissot's office with his clothes, or what was left of them, hanging in ribbons, a closed eye among other injuries and a very good condition generally. Making matters worse he had lost \$16 in the bargain.

Two constables were dispatched to the scene of the engagement only to find they were hopelessly outnumbered, with a tactical retreat necessary. The police returned in two cars and in full force. For a time their entry intensified the fight in which, according to the police account the ladies seemed to be particularly well primed to do their part. Chief Tissot said he had never seen so many men, women and bottles in one apartment. After getting things fairly well straightened out, following a lot of resistance, especially from the fair sex, Louis Brozic, Mike Supar and Elie Bosack were singled out for conspicuous conduct and accompanied the police to the station where they were admitted to bail of \$25 each after a sleep in the cells had sobered them up. In court on Monday morning before J. H. Forget, J.P., the three pleaded guilty to permitting their exuberance of spirits to lead them to violent acts and were given the change out of their \$25 after \$13.30 had been deducted as payment for fine and trimmings.

Brantford Expositor: Mrs. Emma Coate of Somersetshire, England, in celebrating her one hundredth and seventh birthday expressed the opinion that modern girls are too refined. Whether the dear old dame was just sarcastic or trying to convey the impression that she was a convention breaker in her own time is a matter of doubt.

To-day's Stocks

Stock	Price
Afton	2 1/2
Ashley	5 1/2
Brett	7
Base Metals	20
Big Missouri	36
Beattie	1.25
Bidgood	3 1/2
Bobjo	1
Braicorne	8.60
Buffalo Ankerite	13.50
Canadian Maritime	1.0
Castle Trethewey	5
Central Porcupine	8 1/2
Central Patricia	2.3
Coniagas	1.1
Cocniarum	1.4
Con. Chibougamau	1
Darkwater	1
Dome	54.1
Eldorado	2.2
Falconbridge	5.1
Glenora	4 1/2
Goldale	1
Granada	5 1/2
Gunnar	7
Hardrock	1.0
Hollinger	12.7
Howey	2
Hudson Bay	21.4
International Nickel	43.7
Jackson Manion	1
Kerr Addison	1.80
Kirkland Lake	1.2
Label Oro	1 1/2
Leitch	96
Lake Shore	52.2
Lee Gold	5
Little Long Lac	5.1
Macassa	4.95
McLeod Cockshutt	1.36
Manitoba and East	7
McIntyre	40
McKenzie Red Lake	1.0
McWittie Graham	14 1/2
McWatters	32
Mining Corporation	1.73
Moneta	2.24
Naybub	23
Nipissing	1.75
Noranda	52.00
O'Brien	5.15
Omega	37
Pamour	3.65
Paymaster	5.05
Pickle Crow	5.0
Pioneer	2.95
Preston East Dome	1.05
Premier	1.90
Read Authier	4.30
Reno	60
San Antonio	1.35
Red Lake Goldshore	1.27
Sherritt Gordon	20
St. Anthony	13
Sullivan Con.	98
Sudbury Basin	2.50
Stadacona	41
Sylvairite	3.10
Siscoe	3.30
Teck Hughes	5.50
Toburn	2.20
Ventures	5.75
Wright Hargreaves	7.45

SEE AND HEAR THE Westinghouse

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Common Ground Against the Intoxicated Drivers

(By Thomas Richard Henry in The Toronto Telegram)

One Christmas message we received as from a friend at the coast. It seems that he was out driving with his wife last September when his car was hit by a drunken driver. He and his wife are still in the hospital but he is very happy because they are both alive.

We suggest one argument on which sets and dries should be able to agree and probably it is the only argument in which they ever will be able to agree. For the safety of children, pedestrians and sane motorists, drunken driving must be stopped.

We think that the Fanatical Drips, the Almost Drips, the Slightly Damps, the Moderationists, the Wets, and even the Soaks, could all unite under that name.

Just to help matters along we suggest that the government borrow an idea from the cad up in Hamilton.

Put in the statutes that any conviction for drunken driving will automatically suspend both the driver's license and the car license for one year, and hand the car license numbers to the cops with orders to pick up the car at any time within the year if it shows its radiator outside the garage.

This fact might be printed in red on both the driving license and the motor vehicle permit.

How about it, Mr. McQuesten? You need to sponsor a bright idea sometime to make the public forget your 1938 license plates.

We are not even asking for a Government job in return for the suggestion.

We saw a store yesterday with a sign in the window reading: "Do your Christmas shopping early and avoid the rush."

That should give everybody plenty of time, there being roughly about 300 shopping days until Christmas.

There is something in a name after all.

Robert Gamble, the Bay street broker, won a turkey in a raffle.

It still does not pay to gamble even if that happens to be your name.

Lucky Robert had bought so many tickets for the raffle that his prize cost him about sixty cents a pound.

When he was collecting his turkey he got a ticket for double parking.

It was a very expensive turkey.

A mining man about town has been buying second-hand mining equipment for some heavy project up in the mining country.

The other day he asked his stenographer to phone around town to see if anybody had a "good second shaft for sale."

The stenographer obediently phoned several places and asked if they had a mining shaft for sale.

It reminds us of the old days when they used to send the new kids to the Bell Telephone office to get a bottle full of electricity.

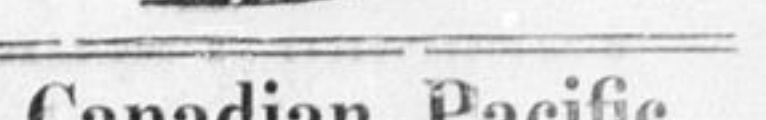
We wish that sport broadcasters would refrain from calling a "goal" a "ghoul."

Appeal Against Conviction at Cochrane Successful

At Toronto last week the Ontario Court of Appeal quashed the magistrate's conviction at Cochrane of Elvi Sorvari, who was sentenced to two months in jail and a fine of \$100 or a three months' term of imprisonment, on a charge of keeping a disorderly house.

In quashing the conviction the Court of Appeal held that the premises did not constitute a disorderly house in the meaning of the Criminal Code, it being necessary for there to be more than one inmate to make a place a disorderly house and the evidence before the magistrate's court suggested Elvi Sorvari as the only inmate.

Waterloo Chronicle: A report that a Montreal man, hit in the mouth by a puck at a hockey game is suing for \$10,000. Quite a bit for a puck in the mouth.



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