Best Copy

25

YESTERDAY'S WEATHER

Temperatures recorded at the meteorological station at Nelson
Minimum 35
Maximum 45

The Daily News

THE DAILY NEWS
Is read everywhere in South-eastern British Columbia (Kootenay and Boundary District) on the day of publication.

VOL. 12 | 18 PAGES. 2 SECTIONS | NELSON, B. C. THURSDAY MORNING. JANUARY 8, 1914 | 50c PER MONTH. | NO. 229

REDUCTION IN SIZE OF SHIPS

Scheme Suggested for Lessening Cost of Navies

NEGOTIATIONS STILL CONTINUE

Lord Aberdeen Offers Prize for Housing Accommodation Scheme.

(Western Associated Press Special Cable.)

LONDON, Jan. 7.—Right Hon. C. H. Hobhouse, M.P., whose speech last night on the naval question was looked forward to with considerable interest, said that while he himself was not a naval expert, he had ample opportunity for consultation with those who were. There was no doubt in his mind that much of the increase in our armaments were due to the creation by England of greater ships than she had ever possessed before. If it were possible to reduce the size, power and cost of those ships, he was informed by naval officers, that past history and present experience would lead to other nations reducing proportionately the size of their ships, and if that which was not an Utopian hope came true, we should have at once in our power a way to reduce these costly armaments without affecting our margin of safety. In that way we could make a beginning before a new financial year came into operation.

Bank Failure Small.

Inquiries made by a representative of the Daily Mail here today showed that the reported failure of the Incorporadora company of Sao Paulo, Brazil, will have practically no effect in financial circles. The failure is believed to be for a small amount. The bank is reported to represent a chain of small private banks engaged in financing coffee planters.

First Woman Chloroformed.

Mrs. Agnes Thompson, the first woman in the world to be chloroformed, died yesterday at Streatham, aged 83. She was present at 52 Queen street, Edinburgh, November 4, 1847, when her uncle, Sir James Simpson discovered the uses of chloroform. She proved a happy subject and was often chloroformed in order to demonstrate its pleasing effects.

Negotiations Proceeding.

The Western Associated Press is informed on the highest authority that the negotiations in regard to Ulster have not broken down, notwithstanding the declaration to that effect by the Morning Post yesterday. Instead there is every reason to believe that they are continuing satisfactorily.

Bonar Law, who has been unexpectedly called upon to speak on the 15th instant, will probably then give a definite indication of the position of affairs.

The Daily Chronicle says there has been no failure of the negotiations, but the negotiations have not yet been begun, although Mr. Asquith and Mr. Law met last month and will probably meet again. It suggests, however, that the negotiations will be postponed until the home rule bill is passed for the third time.

The Daily Telegraph announces, on the highest authority that even an attempt to seek a possible solution has failed, and affirms that no meeting has been held or fixed between the premier and opposition leader.

Editorially the same paper says that while it may be too much to say that the negotiations have been broken off it is within the mark to say that they have broken down.

The Morning Post, however, sticks to its guns and views the denial of the Westminster Gazette as a reflection of the anxiety of the Radicals in having to pass the bill at all.

Lord Aberdeen Offers Prize

Lord Aberdeen, viceroy of Ireland, offers a prize of £500 for the best scheme of construction of the city of Dublin in order to provide better housing accommodation for the workmen, whose wretched dwellings are chiefly responsible for the upheaval which has paralyzed Irish trade for many months.

No Effect on Politics.

The announcement that Right Hon Joseph Chamberlain is retiring from politics and will not again contest West Birmingham, has provoked many sympathetic references to the press on both sides of politics, but it will in no way effect politics. The extent of the loss to the Conservative party in consequence of his seizure in 1906 is strikingly indicated by all the commentators.

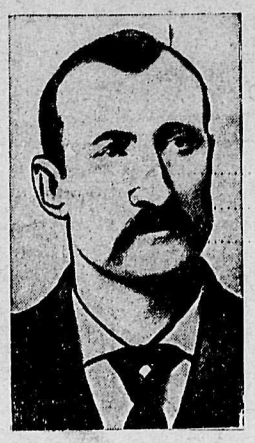
The Westminster Gazette, one of the strongest Liberal papers, says:

"If he had been in the fighting line large tracts of political history would have had to be rewritten."

It is interesting to note as a characteristic of the slow movement of British politics that the controversy in which Mr. Chamberlain spent his active life still is a live issue of the day.

Capt. Thomas Henry Rivers-Bulkeley, C.M.G., M.V.O., comptroller to the Duke of Connaught, has returned to London in anticipation of an interesting domestic event, due at the end of the month. His wife was Miss Eve

(Continued on Page Three.)



CHARLES H. MOYER
President of the Western Federation of Miners, who was "kidnapped" and deported from the copper zone at Calumet, Mich.

WILL MAINTAIN STRENGTH OF NAVY

Chancellor of Exchequer's Utterances Taken Too Seriously, Says London Times.

(Canadian Associated Press Cable.)

LONDON, Jan. 7.—The Times devotes its principal editorial today to the government's shipbuilding program, arguing that Right Hon. Winston Spencer Churchill's speech at Manchester in October was a clear declaration that the government intended to meet its naval commitments to the full, and that the necessity was entirely recognized to filling the gap if the Canadian naval contribution failed.

The Times, however, further argues that Mr. Churchill, in regarding the battleship New Zealand as a part of the North sea strength of the navy, violated the principle applicable to the overseas dominions' ships, and concludes with the opinion that the clear declarations of Mr. Churchill and other ministers on the subject of their duty to the navy, taken in conjunction with certain earlier observations of the chancellor of the exchequer himself, warrant the belief that Lloyd George's recent utterances have, in some quarters, been taken too seriously.

LIBERALS TO TOUR PROVINCE

Meeting in Nelson on January Twenty-fourth—Brewster, McConnell and Macdonald Speakers.

(Special to The Daily News.)

VANCOUVER, B. C., Jan. 7.—A tour of the province is to be made by several of the Liberal party leaders before the convention, which is to be held in Victoria on February 25. This course was decided on at a conference held last night. The meetings will be addressed at Ashcroft, January 19, by M. A. Macdonald, H. C. Brewster and J. P. McConnell. Speakers will arrange their itinerary so as to be in Kamloops on January 20, Vernon, January 21; Revelstoke, January 22; Nelson, January 24, and Cranbrook, January 25.

Mr. Brewster will be accompanied on his tour from Nelson by John Oliver, as Mr. Macdonald has to go east on legal business. Meetings will be held at Fernie on January 27; Creston, January 28; Phoenix and possibly Greenwood, February 2; Grand Forks on February 3; Rossland on February 7, and Merritt on February 9. Points on the northern coast will be visited subsequently and other meetings are to be held on the lower mainland after the convention.

I. H. GRANT OF NELSON PASSES EXAMINATION

(Special to The Daily News.)

VICTORIA, B. C., Jan. 7.—The following results of law examinations for British Columbia are announced:

First Intermediate—H. L. Tupper, G. L. A. Sutherland, H. M. Smith, B. O. Johnston, M. M. Colquhoun, E. Clark, L. H. M. Breadon, H. B. Boggs, D. M. Gordon, F. F. Gallilher, L. Dashwood Jones, J. M. Munro, T. G. McClellan, S. Magill, E. O. C. Martin, J. E. Howes, L. A. Hanna, J. H. Grant, T. S. Wilson, J. H. Wilson and N. W. Whittaker.

Second Intermediate—G. G. McGreer, C. C. McGowan, G. Lindsay, R. W. Lane, A. J. Knowling, H. L. Hunt, H. J. Doeck and C. W. Abercrombie.

The results are announced according to the examination numbers of the candidates and not in the order of the total marks received.

ATTEMPT TO DISQUALIFY LORD MAYOR OF CORK

(By Daily News Leased Wire.)

CORK, Ireland, Jan. 7.—The hearing opened today of a suit by which it is sought to disqualify the lord mayor of Cork, Henry O'Shea, from sitting as a councilman, on the grounds that he is an alien and a naturalized American citizen.

Prosecuting counsel, in addressing the court, announced that he would produce evidence show that Lord Mayor O'Shea had claimed to be an American citizen.

DEPUTY CHIEF IN VANCOUVER PROMOTED

(By Daily News Leased Wire.)

VANCOUVER, B. C., Jan. 7.—M. B. McClennan, deputy chief of police, will be appointed chief to succeed the late Charles Mulhern.

FEAR PARALYSIS OF INDUSTRIES

Great Strike in South Africa Starts Today

VOLUNTEER FORCES BEING ORGANIZED

Special Constables to Be Treated as Scabs--Panic in Johannesburg.

(By Daily News Leased Wire.)

JOHANNESBURG, Jan. 7.—The strike of 35,000 South African state railway employes is fixed for 7 o'clock tomorrow morning and the situation has caused a feeling of panic. The country is faced with the possible suspension of all industries. The only hopeful feature is that the Cape railway men do not seem inclined to join in the strike and are taking time to consider their action. They may possibly call for a ballot of the men. All the men in the Pretoria and Johannesburg districts, however, are going out. After a hurried cabinet meeting at Pretoria today, Gen. Smutz, minister of defence, with the minister of mines and railways, came here to arrange with the authorities for the preservation of order and for railway services.

Citizens' defence committees and volunteer forces are being organized at Cape Town and Pretoria.

For several days the authorities have been removing rifles and ammunition to places of safety. All cadets' rifles have been called in from the government schools to prevent their falling into unauthorized hands. It is reported that unless a settlement is effected by Saturday a general strike will be called.

The council of the trades tonight decided to call out all the workers, both members of the unions and others, to help the railway men in their fight and to treat any men enrolled as special constables as "scabs." A consignment of bullion valued at $80,000, on its way to Cape Town, tonight was stopped and returned to the Standard bank for fear it would not reach its destination. The people in the Rand are laying in supplies of wood and coal. The Amalgamated Society of Engineers has decided to call out its men to support the railway strike.

LESS HOPE FOR ONTARIO PREMIER

Age of Patient Is Adverse Factor—Physician Spends Night in Hotel.

(By Daily News Leased Wire)

NEW YORK, Jan. 7.—While the official bulletins issued from the apartments of Sir James Whitney, the Ontario premier, continue to indicate little change in his condition, there is less of the hopeful feeling among those in attendance about his apartments at the Hotel Manhattan. During the day Dr. R. A. Pyne, minister of education, who is the premier's family physician, said that his patient was resting comfortably. An earlier bulletin, issued during the forenoon at an examination and consultation, in which Dr. Pyne and Dr. Herman Biggs, the neurologist, participated, was issued, indicating that the condition of the patient was still serious. Dr. Pyne issued his latest bulletin tonight about 9 o'clock and more than an hour later stated that conditions were the same. The night bulletin read:

"Practically no change in Sir James' condition in the past 12 hours."

A flood of visitors from Canada continue to inquire about the condition of the distinguished patient. Among today's callers was Hon. Walter Scott, premier of Saskatchewan, who was at one time the victim of an illness that in its course closely resembled that under which the Ontario premier is now suffering. One most important difference exists between the two cases for, while the Saskatchewan leader is well under the half century mark, Sir James has lived out the Biblican span of life. The age of the patient during his illness has been the one stumbling block to the declaration on the part of medical men as to the probable time when he would be able to resume his homeward journey.

While both Horace Wallis, the premier's secretary, and Dr. Pyne went out today, they did not leave the apartments at the same time and tonight Dr. Pyne remained within the hotel instead of taking a stroll outside, as he has usually done even during the trying period following the premier's collapse on Friday last.

Dr. Pyne refused to give up hope, however, and tonight declared that his hope of the past three weeks still lingered and that even if the present illness should prove fatal, it would be possible to bring the patient home before the end.

OLD TIMER OF WEST DEAD

(By Daily News Leased Wire.)

VANCOUVER, B. C., Jan. 7.—J. W. Currell, for 27 years a resident of Vancouver, and for 10 years before that living in Winnipeg, died last night.

MYSTERY OF EDWIN DROOD

Trial for Murder Conducted by Novelists and Other Students of Dickens

(By Daily News Leased Wire.)

LONDON, Jan. 7.—Students of Dickens gathered at King's hall, Covent Garden, last night, and gathered up the threads of Dickens' unfinished tale, "The Mystery of Edwin Drood." The entertainment took the form of a court proceeding, in which John Jasper was placed on trial for the murder of Edwin Drood, J. K. Chesterton, the novelist, acting as judge. About midnight the jury rendered the following verdict:

"In the British spirit of compromise, we adjudge the prisoner guilty of manslaughter."

A rider to the verdict left the prisoner to the judge's mercy and threatened those daring to question the verdict with committal for contempt of court.

The trial was held under the auspices of the Dickens Fellowship, and many of the leading literary men of London took part.

Guineas were vainly offered even for a seat on the stairs. Bernard Shaw, as was expected, was the foreman of the jury, and with Chesterton's pompous dignity as judge gave a most enjoyable turn to affairs. Cheering greeted the jokes, as when, for instance, Foreman Shaw, after listening to the prosecuting counsel's speech, bounded from his seat with the characteristic query to the judge: "Do you imagine, my lord, that the convictions of a British jury are going to be influenced by any amount of evidence?"

J. C. Walters, a well known authority on Dickens, was leading counsel for the prosecution. Cecil Chesterton author of "Charles Dickens As a Social Reformer," acted for the defence. He declared that there was every reason to believe that Drood was still alive and suggested that the key to the story lay in the opium habit of the two men. He urged that in the unexplained disappearance of Edwin Drood there was no evidence upon which to convict Jasper of murder.

The jury was composed of Bernard Shaw, foreman; Sir Edward Russell, W. W. Jacobs, D. E. Morgan, William Partridge, Arthur Morrison, William Archer, Justin H. McCarthy, Francesco Berger, Ridgewell Cullum, Coulson Kernahan and Thomas Seacombe. H. H. Belacombe and Raymond Patton, who had been drawn, were not present.

The wholly spontaneous character of the proceedings—the opposing counsel not having consulted with each other or seen each other's briefs—added greatly to the zest of the affair. The trial had never been rehearsed. The stage in the hall was set as a court scene, and all the witnesses, who included the personators of Dickens' characters, appeared in the costumes of the period.

The judge's summing up was a humorous wavering between the real and make-believe. When the jury was bidden to consider the verdict, the foreman sprang up and announced that the jury had already arranged the verdict in the luncheon interval. When the verdict was given, counsel for both sides protested that the jury ought to be discharged.

The foreman retorted that the jurymen were only too ready to be discharged.

The judge then cited everyone present except himself for contempt of court.

The Drood "trial" is summarized by the morning newspapers as a medley of conscientious stage realism, a genuine desire to, in some quarters, get at a possible solution, and mere brilliant fooling. The general verdict is that the "trial" fell between three purposes. It was realistic enough not to be tedious, but the impossibility of reaching a verdict was vividly enlightened by many flashes of wit. The Daily Telegraph says that the trial went dully, that no opinion of the book was altered and that no one was sorry when the end came with its pleasantly inconsequent verdict.

ESSEX IS COMMISSIONED

(By Daily News Leased Wire.)

PLYMOUTH, Jan. 7.—The British cruiser Essex has been commissioned here for service with the fourth cruiser squadron, under command of Rear Admiral Sir Christopher Craddock She is to sail on January 14 for Jamaica. Her arrival will bring the strength of the British cruiser squadron in the West Indies up to five vessels.

Making the Wheels Go Round

In some parts of the country there has been a feeling of business hesitation. The "timid ones" have been inclined to sit back and see what was going to happen.

And in the meantime—

The live wires have been going ahead and making things happen.

You will notice the directory of "Live Ones" if you glance through the advertising columns of this newspaper and of other good newspapers!

Just run over the names of the "DO IT NOW BRIGADE." These are the chaps who have been too busy making the wheels go around to talk of dull times.

If for no other reason that patriotism they deserve your support.

But there is even a better reason.

The merchants and the manufacturers who have the gumption to keep hustling are certainly the ones who are going to give you the best goods and the most efficient service.

HAWKEY REFUSES APPOINTMENT

Will Not Accept Position of School Health Officer

GIVES REASONS FOR DECISION

Thought Dr. I. Arthur Not Applicant. Unaware Action Not Yet Sanctioned.

Dr. R. J. Hawkey has refused to accept the position of school medical health officer, to which he was appointed at the meeting of the trustees on Tuesday evening.

Three reasons for Dr. Hawkey's refusal to accept the appointment are given. In making the application he understood, he states, that Dr. Isabel Arthur, who has held the position for some four years, would not be an applicant for reappointment; he was under the impression that he was in competition for the position with other doctors of the city and not with Dr. Isabel Arthur, and in the third place, he was unaware that the dismissal of Dr. Arthur had not been made effective by the sanction of the provincial board of health.

Dr. Hawkey made known his refusal of the position yesterday directly that he understood the circumstances he mentions as reasons for the action he has taken.

MILITANT SUFFRAGETTES WANT INTERVIEW WITH KING

(By Daily News Leased Wire.)

LONDON, Jan. 7.—The militant suffragettes decided today to lay their troubles before the King personally, if they could secure an audience. They will send a deputation to his majesty "to protest against the torture of suffragette prisoners and to demand votes for women."

The militant suffragettes argue that the doctrine that the King can be approached only through cabinet ministers applies only to men. They announce that "women refuse to communicate their demands through cabinet ministers whom they hold in contempt, and who have degraded themselves by their cruelty and treachery."

LOAN SCHEME FOR LAND DEVELOPMENT

Farmers to Join Mutual Organization Is Plan Favored by Vancouver Board of Trade

(Special to The Daily News.)

VANCOUVER, B. C., Jan. 7.—The land settlement committee of the board of Trade has submitted an exhaustive report on the proposal to arrange a scheme by which farmers could obtain loans for development of their lands. They would first unite individual farmers into mutual organizations, each farmer allowing the borrowing credit of his land to be placed with the organization for the purpose of securing cheap capital. The organization would then make a debenture issue on the security of the lands of each member and the provincial government would be asked to guarantee the bond issue. The obtainers of loans would be asked to pay 1 per cent more than the interest on the guaranteed bonds. The debenture issue would be in bonds of $100 each. Upon these the farmers would raise temporary loans from the association, which will seek power to accept savings accounts. Action will be taken next week on the committee's report.

ARTISTS ASK RECOGNITION OF FINE ARTS EXHIBITION

(By Daily News Leased Wire.)

LONDON, Jan. 7.—A formal request for official recognition of the fine arts section of the Panama-Pacific exposition at San Francisco was presented to the British government at the express wish of several British art societies, by a committee composed of Sir Edward J. Poynter, president of the Royal academy; Sir Ernest Waterlow, president of the Royal Society of Painters in Water Colors; Sir James Linton, honorary president of the Royal Society of Miniature Painters, and Walter W. Ouless, Francis Dicksee and William Hamo Thorncroft, all members of the Royal academy.

In a letter to Premier Asquith, accompanying the request, Sir Edward Poynter expresses the hope that the position held by the British school of art, and which has been fully recognized at other exhibitions, will be maintained and made known in America.

LEDGER KEEPER ADMITS FRAUD IS SENT TO JAIL

(By Daily News Leased Wire.)

TORONTO, Jan. 7.—Forbes Skene, in the police court today on the charge of fraud, was sent to jail for 30 days. He pleaded guilty of attempting to steal from the Bank of Montreal $150 and defrauding Karl & Wright company of $25. Skene was ledge keeper in the Bank of Montreal's branch at Lindsay.

PRINCESS SOPHIA
wife of Prince Eitel Fritz, the Kaiser's second son, who, it is reported, has left her husband and is now residing in Paris.

AGED STATESMAN RESIGNS SEAT

Father of Tariff Reform Vacates West Birmingham—Protest League Opposes Fiscal Policy.

(Canadian Associated Press Cable.)

LONDON, Jan. 7.—The resignation of Right Hon. Joseph Chamberlain as member for West Birmingham in the house of commons is officially announced. "Joe" has represented this riding since 1885. Neville Chamberlain is mentioned as a possible successor of his father.

It is a remarkable coincidence, though there is no connection between the two circumstances, that the formation of the Unionist protest league should also be announced today, the object being "to oppose the present fiscal policy of the Unionist party."

Irreverent Liberal papers describe his object as beink to kick tariff reform out of the party altogether.

Laudatory references to the long political career of Joseph Chamberlain and expressions of regret at the passing of one of the commanding figures of British public life are made today by newspapers of all political shades of thought in announcing the retirement of the aged statesman.

FLOODS DRENCH PACIFIC COAST

Streets Torn Up, Sewers Blocked and Street Car Service Demoralized By Floods

(By Daily News Leased Wire.)

SEATTLE, Wash., Jan. 7.—The Pacific coast from San Francisco to British Columbia was drenched with a flood today, by storms which have continued for 10 days and which have extended well inland.

Basements are flooded, sewers blocked and the street car service demoralized and streets torn up at Astoria, Ore. Twenty vessels are weatherbound in that harbor, unable to pass the high surf on the bar. This fleet is being augmented by arrivals from up-river points.

The precipitation there since last Saturday has been about nine inches. Many houses on sloping ground are in danger.

Nearly six inches of rain has fallen at Tacoma, causing damage over a wide area. Railroad traffic has been delayed by washouts.

A high wind brought a temporary lull in the storm at Seattle and repair crews immediately began to remove the tangle of broken wires which has delayed transportation. House movers are shifting dwellings threatened by mud slides, to safer ground.

More than nine inches of rain had fallen at Aberdeen, Wash., since Saturday, and lowlands over a wide section of western Washington are under water. Mud slides are holding trains in several isolated places.

UNEMPLOYED FIRES REVOLVER AT CIVIC OFFICIAL

(By Daily News Leased Wire.)

VANCOUVER, B. C., Jan. 7.—Pulling a gun and firing a shot at S. J. Montgomery, clerk of the civic board of works and water company, one of the army of Vancouver unemployed, created a huge sensation at the city hall this morning. It is thought that the cartridge must have been a blank since no mark of a bullet could afterwards be found on the floor of the office, where the affray took place.

The man, whose name is Martin Swit, was one of the scores of men who applied for a job on Tuesday afternoon and had to be reprimanded for not keeping in line with the others. Suddenly he appeared this morning and pulled a gun on Montgomery. The latter grappled with him and handed him over to the police.

FORMER CHIEF JUSTICE OF MANITOBA DEAD

(By Daily News Leased Wire.)

LOS ANGELES, Cal., Jan. 7.—Sir Joseph Dubuc, 73 years old, former chief justice of the province of Manitoba, died here tonight, after a short illness. Sir Joseph was born in Quebec and was admitted to the bar in Montreal. He was speaker of the provincial legislature and for 21 years was vice-chancellor of the University of Manitoba. From 1901 until 1909 he was chief justice of the supreme court King George V knighted him two years ago.

ELECTION DAY IN VANCOUVER TODAY

VANCOUVER, B. C., Jan. 7.—Tomorrow will be election day in Vancouver, where the chief interest centre in the fight between L. D. Taylor, editor of the World, and Mayor Baxter for the mayoralty. There is hardly any betting.

IMPROVEMENT OF CANADA'S OUTPUT

Much Expected from Better Technical Education

ARRANGEMENTS FOR PARCELS POST

Director of Geological Survey Probable Deputy Minister of Mines.

LEGISLATIVE LIBRARY JAN 8 1914

(By Daily News Leased Wire.)

OTTAWA, Jan. 7.—One of the most important questions to which the attention of the government and parliament will be drawn this session will be that of the desirability of embarking upon a policy of technical education with the purpose of placing Canada upon a level educationally with the most progressive of the industrial nations of Europe. The report of the committee on technical education, which is now being finally revised and printed at the government printing bureau, will shortly be ready for distribution. By the time it has become generally circulated the parliamentary session will be well under way and the recommendations made will be urged upon the government and discussed in parliament. In this connection the wish is generally expressed in educational circles that the subject be approached by everybody interested in a nonpartisan spirit.

Should the recommendations be accepted it is believed that in the course of a few years much would be done to improve the quality of Canada's industrial output both from the factory and the farm, while country conditions would be so improved that the problem of depopulation of the rural districts would be, to a considerable degree, solved.

What the commission proposes, briefly stated, is that $3,000,000 of federal money be devoted per annum to the technical education. The idea is to divide $2,500,000 of this between the provinces upon the basis of population and to devote the other $500,000 per annum to the creation of a central technical institute, where experts could be developed who could be loaned to any municipality making a start in the technical training of the young for any period considered necessary. The commission also recommends that a portion of the money be devoted to the establishment of county schools throughout the country where scientific farming and higher ideals shall be imparted to the sons and daughters of the farmers.

The commission believes action should not be delayed longer and it is supported in this view by the Canadian Manufacturers' association, many leading boards of trade, the Dominion trades and labor council and the farmers' organizations throughout the country.

In parliament the proposals are supported by members on both sides. The commission, of which Dr. W. J. Robertson is the head, was appointed by the late government and has traveled throughout Europe, the United States and Canada to secure the information contained in the report. The present government has taken just as sympathetic an interest in the work as did the former administration.

The other day Premier Borden gave the delegates representing the trades and labor council, who waited upon him, the impression that the recommendations would be considered without delay. It would not be surprising therefore, if the coming session should witness an advanced educational movement calculated to ensure a marked improvement in the efficiency of the Canadians' future.

Deputy Minister of Mines.

An appointment is to be made to the position of deputy minister of mines, vacant by the retirement of Dr. A. P. Law. It is understood that Prof. R. W. Brock, director of geological survey, will be promoted to the position. There have been several applicants for the position. Prof. Brock has been eight years in the department and is considered to be eminently qualified.

Safety of Life at Sea.

Greater precautions for safety of life at sea will follow the session of the international congress now holding sessions in London. Mr. Johnson, deputy minister of marine; C. Duguid, naval architect of the department, and C. Macdonald of the inspection branch represented Canada.

It is learned here, on advices from London, that the principal recommendations will be for the construction of ships so as to provide for increased subdivisions, more bulkheads and watertight compartments and sufficient lifeboats and rafts to accommodate all passengers. These boats will be of a better class of construction than have ever before been in use.

Commissioner Appointed.

Dr. Frank Adams, professor at McGill university, has been appointed a member of the Dominion commission on conservation.

Parcels Post.

The postmaster-general, Hon. L. P. Pelletier, returns from Quebec today and the final arrangements for inaugurating the system of parcels post are

(Continued on page four.)

Stock-Taking Sale

All Odds and Ends Must Go

GRAMOPHONES—Machines at absolute cost. Records and attachments 20 per cent. off catalogue prices. We are discontinuing this line.

PICTURES—A large range of subjects. You'll see them in our window. Reduced prices marked in large plain figures. A few only, Oil Colors, good work, at $2.90

LEATHER GOODS—All kinds. We are giving especial value in Ladies' Hand Bags. A genuine French Morocco Leather Lined German Clasp Bag at $2.00

OTHER LINES OF EQUAL VALUE

ODD BOOKS, PIECES OF GLASS AND HOLIDAY GOODS AT PICK-ME-UP PRICES

WATCH OUR WINDOWS .. TERMS NET CASH

NO GOODS EXCHANGED AT THE PRICES

Canada Drug & Book Co. Ltd.

Phone 81 Nelson's Pioneer Drug Store P.O. Box 502

MAIL ORDERS GIVEN SPECIAL ATTENTION.

Kootenay and Boundary

SUCCESSFUL YEAR OF FARMERS' INSTITUTE

Association at Rock Creek Growing in Numbers and Usefulness—Officers Elected.

(Special to The Daily News.)

ROCK CREEK, B. C., Jan. 7.—There was a large gathering at the annual meeting of the Rock Creek Farmers' institute on Saturday, January 3. The president, Major F. E. Glossop, was in the chair. Accounts for the year 1913, duly audited, were passed, showing a balance credit of $257. The president reported that during the year the membership of the institute had increased from 28 to 55 in number, that the government had taken up four acres of land in the district for demonstration work in connection with the growing of fodder crops in rotation, also a plot of land for experimental growing of alfalfa, that the institute had entered the field crop competition in 1913 in the oats and potato competition, with the gratifying result that out of 31 institutes competing in 1913 the Rock Creek Farmers' institute had gained the highest totals of marks awarded in the grain section and the second highest total of marks awarded in the potato competition. The following officers were elected for the year 1914: President, Major F. E. Glossop; vice-president, H. W. Whiting; secretary-treasurer, F. Donald. directors, E. R. Martin, Major Welstead, R. Taylor, A. Johnson, J. S. Shaver, J. R. Jackson, M.P.P., A. Roberts, N. Robinson; auditors, Major Anderson and Commander Glossop.

It was proposed by E. R. Martin and seconded by J. Shaver that a sum of $200 be set aside out of the cash balance for the purpose of starting an annual local fair in Rock Creek, and that committee be appointed to draw up a scheme for the carrying out of the idea, their report to be presented for the consideration of the institute at a special meeting to be called for the latter part of February. The following committee was appointed: Major Glossop, Major Anderson, E. R. Martin, S. Larsen, H. Whiting, R. Taylor, A. Roberts and T. Hanson. A hearty vote of thanks to the retiring secretary, R. D. McLennan, was then moved by H. Whiting and seconded by Major Glossop, for all the hard work he had done during the past, which had contributed so greatly to the prosperity of the institute and the increased interest taken in the district by the agricultural department.

J. R. Jackson, M.P.P., then gave a short address, by request, congratulating the members on the prosperity shown in the district, which compared most favorably with any in the province. He also brought especially to the notice of such members as it concerned the advantages, such as cheap freight rates on registered stock, etc., to be gained by joining the Provincial Stock Breeders' association.

On January 1 a wedding was solemnized at Rock Creek between H. Kayes and Mrs. M. Jupp, Rev. A. M. Lloyd officiating. T. Hanson gave the bride away and A. Snell of Kettle Valley acted as best man. After the ceremony a large gathering of friends spent an enjoyable day at Hanson's hotel, ending in a dance.

There was a minstrel show at Rock Creek hall last Saturday. King Kennedy is expected this week at Larson's hall.

The Rev. A. M. Lloyd moved into his new house on the orchard lands on January 1.

Commander Lewis is leaving Kettle Valley for Victoria next week, as delegate for the Rock Creek branch of the British Columbia Fruit Growers' association.

ROSSLAND NEWS

(Special to The Daily News.)

ROSSLAND, B. C., Jan. 7.—A quiet wedding took place this morning at the Sacred Heart church, when Miss Irene Cotnoir and Leo Therrian were united in marriage, Father Macintyre officiating. The bride and groom were unattended. After the ceremony the young couple returned to the bride's home, where the wedding breakfast was served, after which they left on the Great Northern train for Spokane on a short honeymoon trip. Mr. and Mrs. Therrian will reside in Rossland.

Miss Honey was in town on Monday from Spokane and is the guest of Mrs. L. A. Campbell.

The reading room committee of the Conservative club will give a dance in the Conservative rooms on Wednesday, Jan. 14, in honor of Mr. and Mrs. L. A. Campbell, who are leaving shortly for Victoria.

Mrs. R. J. Clegg was at home yesterday for the first time this season.

The Ladies' Aid of St. Andrew's church will meet on Thursday afternoon at 3:30, when the election of officers will take place.

A delightful tea was given on Tuesday afternoon by Mrs. W. H. Falding at her home in the B. A. C. grounds in compliment to Mrs. Wade of Trail. Notwithstanding the inclemency of the weather a large number of guests were present. Mrs. L. H. Moffat and Mrs. D. J. Brown were in charge of the dining room and were assisted by Misses Elder, Moffat and Martin.

The partnership of J. A. Henderson and T. Connors has been dissolved. From now on Mr. Henderson will conduct the express business and Mr. Conners the wood and heavy teaming.

Mrs. J. White of Trail is spending a few days in town.

The joint installation held last night of officers of the Knights of Pythias of Rossland, Trail and Nelson lodges was a grand success. The lodge was opened at 7:30 and the regular order of business attended to, then the balance of the evening turned into an open session for the purpose of installing the officers. About 8:20 a special train arrived bringing about 50 members of Nelson Lodge No. 25 and an equal number from Trail Lodge No. 23 and the joint installation of the officers of the three lodges was completed. The installing officers were: G. C., Alex Page, Rossland; Vice-C., William Irvine, Nelson; G. Prelate, Noble Binns, Trail; G. M. at Arms, R. J. Steele, Nelson; G. M. of F., R. J. Joy, Nelson; G. I. G., J. R. Randall, Trail; G. O. G. Herbert Howe, Revelstoke. Following were the officers installed:

Nelson—C. C., R. H. Hardman; V. C., J. B. Halliwell; P., E. Marsden; M. W., F. Seaman; M. of E., J. W. Galliber; K. of R. and S., D. Laughton; M. of F., R. J. Steele; M. at A., A. L. Wilson; I. G., H. B. Bellitz; O. G., W. Irvine.

Trail—C. C., W. H. Dawson; V. C., C. S. Shields; P., J. C. Grumette; M. W., J. A. McKinnon; M. of E., J. H. Young; K. of R. and S., S. W. Walmsley; M. of F., B. Downes; M. at A., J. Dwyer; I. G., W. Macintyre; O. G., J. G. Laurie.

Rossland—C. C., J. B. Jarvis; V. C., John Murphy; P., W. Hooper; M. W., N. Michaely; M. of E., R. Gosse; K. of R. and S., W. Turner; M. of F., P. R. McDonald; M. at A., M. Thomas; I. G., R. Hutchens; O. G., W. Jones.

After the installation T. Embleton was made chairman for the evening and after making a few remarks he called on Mr. Irvine and Mr. Michaely to come forward, Mr. Irvine saying he had a very pleasant duty to perform, told about the good work that Mr. Michaely had done for the order and of the high esteem in which he was held by the brethren and presented him with a past chancellor's jewel. Mr. Michaely received the jewel and made a suitable reply, saying he hoped he would always be able to wear it with honor to the order. T. Embleton was also presented with P. C. C. jewel, the presentation being made by Noble Binns of Trail, to which Mr. Embleton replied for himself and also enlarged on the merits of Mr. Michaely. Then E. S. H. Winn, G. C., called on Mr. Mackinnon of Trail to come forward and receive a P. C. C. jewel from the Trail lodge. Mr. Winn, G. C., was called on to receive from Rossland lodge a grand chancellor's jewel, which was presented by Mr. Irvine of Nelson and Mr. Binns of Trail, amid applause. Mr. Winn expressed his appreciation of the gift and the feeling with which it was given. After this all adjourned to the banqueting hall, where turkey supper was served and cigars were passed around. Messrs. Lawson and Edwards gave an instrumental duet on mandolin and guitar, which was well rendered. Then, as those in charge of the dinner were waiting to get the place cleared up before morning, all returned to the lodge room, where the program was proceeded with. A toast to the grand lodge was replied to by Messrs. Irvine, Binns and Winn. A toast to Nelson lodge was replied to by Messrs. Joy, Seaman and Hardman. Messrs. Jones and McQuarrie's names were also coupled with this toast. A letter was read from F. H. Tonkins, G. C. of Washington, sending regrets at not being able to be present. Mr. Wadsworth sang a song to the satisfaction of all. A toast to the Trail lodge was responded to by Messrs. Dawson and McKinnon. J. B. Halliwell then gave a mandolin solo. A toast to the Rossland lodge was replied to by Messrs. J. Jarvis, J. Murphy and Rev. Sarkissian. Mr. Cox rendered a song so well that he was encored, to which he responded by singing "Dixie." After this all joined hands and sang "Auld Lang Syne."

The Order of Knights of Pythias in the short time it has been in existence has far exceeded in growth any of the other fraternal bodies, and today numbers practically 1,000,000 members.

The following officers of Rossland chapter No. 122 Royal Arch Masons were installed last night by R. E. Plewman, superintendent of the district: First P., Lewis Will; Second P., J. W. Junkin; Third P., S. Wilson; S. E., G. H. Kilburn; S. N., Emil Johnson; treasurer, T. S. Gilmour; P. S., Murdoch McKenzie; S. S., C. D. Griffith; J. S. J. J. Thoroughgood; tyler, Richard Baxendale. Alex Cox was presented with a past first principal's jewel on retiring from office.

WANETA NEWS

(Special to The Daily News.)

WANETA, B. C., Jan. 7.—At the annual meeting of the South Kootenay Farmers' institute held at Trail on Dec. 29, Matthew Hill was elected president for the ensuing year.

Several lambs were born last week in Eli Cibout's flock of sheep and also in Slater Bros. flock.

Mrs. Selby, Sr., with Mrs. Harrison, both from Tacoma, have been visiting Mr. Thos. Selby. Yesterday Mrs. M. Selby, with her sister, Mrs. Harrison, left on the morning train for the coast.

Ranchers are busy handling feed from a carload which came in on Friday last. Hauling has to be done in wagons this year, a very unusual thing at this season even for this mild district. The rain of the past week, together with a high temperature, has caused all snow to disappear.

The average maximum temperature for the month of December was 31.8, and the minimum 21.5 on the 28th. The thermometer registered 43 degrees the highest in the month. The coolest day was the 21st with 23.5, the lowest night temperature was on the 22nd, when the thermometer fell to 15 degrees. There were seven clear days while the total snow fall for the month was 4¼ inches, but there was no sleighing.

G. L. Merry and sons went through yesterday to Trail, taking out a big band of cattle.

Special Bargains

For the Last Week Of Our White Sale

In addition to the splendid lines of UNDERWEAR, WAISTS, etc., already advertised, we are offering the following attractive bargains:

Huck Towelling, regular 35c, for 20c

Huck Towelling, regular 25c, for 15c

Fancy Huck, regular 50c, for 40c

Pillow Cotton, 40 in. circular, regular 30c, for 20c

Pillow Cases, hemstitched, 42 in. only 50c per pair

Bleached Table Damask, regular $1.50, for ...90c

Bleached Table Damask, regular $1.75, for ...$1.35

EXTRA SPECIAL

Twill Sheets, regular $2.50, for .....$1.50 per pair

White Cotton, regular 15c, 18c and 20c, for....10c

Bridal Cloth, 36 in., regular 30c, for 20c

Nainsook, regular 18c, for 12½c

Nainsook, regular 25c, for 15c

Nainsook, regular 35c, for 25c

Large Marcel Bedspreads, regular $3.25, for $2.00

We Have Only a Limited Quantity of Each

SMILLIE & WEIR Burns Block SEE OUR WHITE WINDOWS SEND ORDERS BY MAIL

TRAIL EXPERIENCES BANNER YEAR

Building Trade Exceptionally Active—Bridge Across Columbia Has Been Benefit to Trade

(Special to The Daily News.)

TRAIL, B. C., Jan. 7.—The general financial stringency which has been heard so much about during the past year, with its consequent depressing influence on trade, has probably affected Trail less than any town in the country, merchants of the town having all experienced a banner year in their various businesses.

The building trade has been especially active during 1913, a large number of private dwellings having been erected, besides substantial additions to existing stores and warehouses, one of the biggest contracts executed being the extensive alterations to the Arlington hotel.

The hotel accommodation has been severely taxed in handling the transient trade owing to the large number of regular patrons.

A vote of $20,000 was set aside by the Dominion government for the purpose of erecting a new post office. It was expected that building operations would have been under way this year but the difficulties of selecting a suitable site has caused it to be postponed until the coming spring.

The provincial government has spent a large sum of money in improvements to roads in the vicinity of Trail during the past summer, particularly on the main wagon road to Rossland, a much easier grade being now in existence. This work will be continued next year. The road to Castlegar also received much attention.

The third annual fruit fair, which was held in the month of September, was a great success, and has established itself as a permanent institution of the district. A rose show was also held for the first time this summer. A splendid showing was made some perfect blooms being exhibited from the Trail gardens. This show is to be an annual affair.

A surplus of nearly $300 was made by the Trail Fruit Fair association, most of which was voted for the purpose of redeeming the building bonds.

The Trail Poultry association has built an annex to the main fruit fair building, where one of the best poultry shows in the interior was recently held. Trail fanciers carried off a large number of special prizes at the provincial poultry show held in Grand Forks in December.

These results have amply justified the large expenditure for the fine building owned by the association, which is undoubtedly one of the largest and best of its kind, to be erected in a town of this size.

The bridge built by the provincial government over the Columbia river, just below the city, has been a great factor in the success of the fruit fairs and a greater convenience to the ranchers of Columbia Gardens and the Pend d'Oreille valley.

Among the more important projects on hand for the coming year in this district will be the electrification of the Canadian Pacific railway from Castlegar to Rossland. When completed this will greatly facilitate travel between these points.

In the realm of sport Trail last year has shown up to good advantage, the football club winning the championship of the Kootenay league, and a fair share of honors fell to the curling and rifle clubs in their respective tournaments, with exceptional prospects for the hockey team for the coming season.

BAD COLD? YOUR HEAD STUFFED?

One Dose Pape's Cold Compound Gives Relief from Colds and Grippe—No Quinine Used.

You will distinctly feel your cold breaking and all the Grippe symptoms leaving after taking the very first dose.

It is a positive fact that Pape's Cold Compound, taken every two hours until three consecutive doses are taken, will end the Grippe and break up the most severe cold, either in the head, chest, back, stomach or limbs.

It promptly relieves the most miserable headache, dullness, head and nose stuffed up, feverishness, sneezing, sore throat, running of the nose, mucous catarrhal discharges, soreness, stiffness and rheumatic twinges.

Get a 25-cent package of "Pape's Cold Compound from your druggist and take it with the knowledge that it will positively and promptly cure your cold and end all the grippe misery; without any assistance or bad after-effects and that it contains no quinine—don't accept something else said to be just as good. Tastes nice—acts gently.

GREAT NORTHERN TRACK BURIED

Slide Blocks Line West of Morrissey—Debris Thirty-five Feet Deep on Rails.

(Special to The Daily News.)

FERNIE, B. C., Jan. 7.—The first slide of the season occurred on the Great Northern railway a short distance west of Morrissey this morning, when a huge mass of snow, rocks and trees covered the track about 600 feet long and an average depth of 35 feet. A snow plow and a large number of men was sent from Fernie, and a rotary plow from Whitefish. It will likely be some days before the track is cleared and the trains are now running over the Canadian Pacific tracks as far as Waldo.

H. D. Young of Nelson is at the Fernie.

C. H. Hitchcock of Victoria is in the city for a few days.

Charles A. Merrick of Winnipeg and C. P. Genoa of Lethbridge are registered at the Fernie hotel.

Owing to the continued soft weather sleighing is a thing of the past at Fernie.

Thomas Crahan of Michel is spending a few days in Fernie. He has sold his wholesale liquor business in Michel to a syndicate.

ORCHARD AT MIRROR LAKE CHANGES HANDS

(Special to The Daily News.)

MIRROR LAKE, B. C., Jan. 7.—Robb Thompson has bought the orchard property now occupied by W. H. Jeckill who has been obliged to sell by ill health. Mr. Jeckill will still occupy the house with his family until next spring when they will probably move to the coast, and in the meantime Mr. Thompson will continue improving his present preemption at Fletcher creek.

William Wilson of Nelson, was here on Friday making arrangements for the coming ice harvest.

An improvement in th email service has been made on the Kokanee, by having a letter box placed in the forward saloon for the convenience of passengers between Nelson and Kaslo. This service was used for the first time on Monday.

E. Norman made a business trip to Nelson on Monday returning on Wednesday.

Henry Jeckill has returned to his school in Vancouver after spending the Christmas vacation here with his parents, Mr. and Mrs. W. H. Jeckill.

On Friday evening last a very pleasant surprise party composed of most of the residents of Mirror Lake took possession of the house of Mr. and Mrs. A. Link. They brought refreshments with them and made merry until a late hour in the evening.

School opened again on Monday with Miss H. Giegerich and all of her pupils again in their places.

W. J. Britton and Miss Edna Britton, of Harrop, spent part of their Christmas holidays with Mr. and Mrs. A. T. Davis.

CHURCHWARDENS ELECTED FOR ST. PAUL'S CHURCH

(Special to the Daily News.)

SLOCAN CITY, B.C., Jan. 7.—The annual vestry meeting of St. Paul's church was held on Monday evening, the vicar, the Rev. G. H. Snell, presiding. A most satisfactory financial statement was rendered as well as reports from various branches of church work. This was followed by the election of officers for the ensuing year. The churchwardens are: F. C. Callender and H. E. Callender. Sidesmen: Messrs. J. O. Clay, M. Gurney, W. H. Pinchbeck, W. O. Stanger. Martin Gurney was appointed lay delegates, with J. O. Clay as substitute. A hearty vote of thanks was expressed to the retiring wardens, H. D. Curtis and J. O. Clay.

Rev. J. C. Mitton left for New Westminster on Monday morning to resume his college studies after spendig his holidays with friends here.

School reopened here on Monday morning with a good attendance in both the senior and junior classes.

Thomas Macneish went to Nelson on Monday.

WOMAN TEACHER IS INDUSTRIAL WORKER ORATOR

(By Daily News Leased Wire)

CALGARY, Alta., Jan. 7.—Miss Mary Muskitt, a Calgary school teacher, was the principal speaker at today's meeting of the out-of-works, held under the auspices of the local branch of the Industrial Workers of the World. Miss Muskitt made a strong plea for organization, was bitter in her condemnation of the Calgary police, and said that only by concerted effort could the rich men of Calgary be made to furnish employment. The members of the Industrial Workers of the World who were arrested on Saturday for obstructing the streets were dismissed today.

LOCAL DRUGGIST MAKES MANY FRIENDS

The Canada Drug & Book company report they are making many friends through the QUICK benefit which Nelson people receive from the simple mixture of buckthorn bark, glycerine, etc., known as Adler-i-ka. This remedy became famous by curing appendicitis and it is the most thorough bowel cleanser known, acting on BOTH the lower and upper bowel. JUST ONE DOSE of Adler-i-ka relieves constipation and gas on the stomach almost IMMEDIATELY.

POLITICS WARM IN VERNON

Six Incendiary Fires—Death of Constable Injured While Responding to False Alarm

(Special to The Daily News.)

VERNON, B. C., Jan. 7.—Rarely has there been a more contentious public meeting in Vernon than that held on the evening of Jan. 2, when the retiring mayor and aldermen addressed the ratepayers of the city in explanation of last year's work.

The question of the minimum charge for electric light, the chain gang question, and the "open town" agitation were the topics which brought about the lively debate, during which Mayor J. T. Mutrie gave Alderman Rube Swift the lie direct, and charged Aldermen Swift and Simmons with absolute misrepresentation concerning their stand on the minimum charge.

Election day is Jan. 15, and already excitement is at high pitch. Alderman Smith and H. G. Muller are opposing candidates for mayor, and Alderman Swift says he will run again for a place on the council. Seven candidates for council are in the field, with more in prospect, and only five places to be filled.

Vernon's firebug is held directly responsible for the death of John Clarke, the 24-year-old police constable who expired at the Jubilee hospital after lying 15 days in a semi-conscious condition. Clarke, who died Sunday morning, Jan. 4, was injured the morning of Dec. 20, when responding to an alarm rung in when an incendiary set fire to the W. H. Smith plumbing establishment. The heavy six-ton auto fire truck ran over him and he died of blood poisoning resulting from his injuries. The funeral was held Tuesday afternoon at 2 o'clock, after the body had lain in state for two hours at the police station. Mayor Mutrie, the aldermen and the police commissioners attended.

Vernon's fire bug, held accountable for six incendiary fires during 1913 and for six false alarms, has been busy during the new year. Statistics prepared by the fire chief for 1913 show that the loss due to undoubted incendiary fires was $4,382. On the night of Jan. 4 another firebug blaze was started in J. Roberts' vacant house on Trenson street, and was extinguished after a loss of $350 had been sustained. False alarms and incendiary fires added $230 to the upkeep cost of the fire department during 1913.

There is a movement afoot in the Okanagan valley, started by the Kelowna board of trade and endorsed by similar organizations, to petition the provincial government to enact legislation prohibiting the selling of venison in the Okanagan and declaring a closed season for does for the next two years.

MEMBER FOR YMIR LEAVES FOR VICTORIA

(Special to The Daily News.)

TRAIL, B. C., Dec. 7.—A pleasant evening was spent by a number of young people on Monday at the home of Mrs. G. L. Morin, corner of Price avenue and Victoria street. Progressive whist was played until midnight, when the hostess served refreshments. The ladies' prize was won by Miss L. Weir and R. Swartz carried off the gentlemen's honors.

J. H. Schofield, M.P.P., left on Monday evening for Victoria, where he will attend the opening session of the provincial legislature. He was accompanied by J. Schofield jr., who returns to the University college, Mount Tolmie, after spending the Christmas holidays with his parents.

Miss Sylvia Clark, who has been the guest of Miss L. Weir for the past week, returns to her home in Spokane on Wednesday evening.

W. Forrest is a candidate for the mayoralty seat of Trail at the coming election.

The soft weather still continues and the heavy snowfall of last week has almost entirely disappeared and hockey, curling and skating seem to be as far away as ever.

"CASCARETS" BEST FOR THE BOWELS

The Millions of Cascaret Users Never Have Headache, Constipation, Biliousness or Sick Stomach

It is more necessary that you keep your Bowels, Liver and Stomach clean, pure and fresh than it is to keep the sewers and drainage of a large city free from obstruction.

Are you keeping clean inside with Cascarets—or merely forcing a passageway every few days with salts, cathartic pills or castor oil? This is important.

Cascarets immediately cleanse and regulate the stomach, remove the sour, undigested and fermenting food and foul gases; take the excess bile from the liver and carry out of the system the constipated waste matter and poison in the intestines and bowels.

No odds how badly and upset you feel, a Cascaret tonight will straighten you out by morning. They work while you sleep. A 10-cent box from your druggist will keep your head clear, stomach sweet and your liver and bowels regular for months. Don't forget the children—their little insides need a good, gentle cleansing too.

COMMITTEE TO INVESTIGATE WATER SUPPLY BREAKDOWN

(By Daily News Leased Wire)

MONTREAL, Jan. 7.—At a public meeting of the representatives here today the board of trade adopted the following resolution:

Resolved, that the board of control be asked that a committee of inquiry should be appointed, composed of a judge of the superior court and two engineers, who are absolutely independent and have had no connection with the city authorities, the duties of this commission to be the determination of an alternative water supply for the city, to investigate the cause of the breakdown in the conduit and to apportion the blame; to investigate the entire management of the water department and to investigate the whole scheme of water supply whether completed or uncompleted.

The associations represented at the meeting were the board of trade, chambre de commerce, trades and labor council, Canadian Manufacturers' association, builders' exchange and other bodies, by Col. A. E. Labelle, Col. J .H. Burland, S. D. Valliere, Farquhuar Robertson and J. A. Carruthers.

A deputation from these public bodies will wait upon the board of control this week to present the resolution and to state their views in support of it. It is understood also that the chambre de commerce will hold a special meeting on Friday to discuss the situation further in support of the objects agreed upon with the other societies.

TWO DISMISSALS AND ONE APPOINTMENT

(By Daily News Leased Wire)

EDMONTON, Alta., Jan. 7.—Two dismissals and one appointment were made at a secret meeting of the city commissioners, at which Mayor McNamara was chairman. C. L. Richardson, ex-city controller, has been appointed to the position of deputy commissioner of finance, which makes him also inspector of departments, and assistant to the mayor.

G. C. Buck and E. W. Bowness have received notice for the termination of their services. Mr. Buck was inspector of departments and Mr. Bowness was cost engineer and superintendent of the efficiency bureau.

MURDERED AND BURIED FEW HUNDRED YARDS FROM HOME

(By Daily News Leased Wire.)

HALIFAX, N. S., Jan. 7.—Charles Aseff, a Syrian peddler, was murdered and his body buried within a few hundred yards of the house in which he lodged at Sheet Harbor on the night of December 9. The body was found this afternoon. There was an ugly gash in the head and the body was otherwise badly battered. A searching party found the body and an inquest was held before the coroner. The body is being brought to Halifax and an autopsy will be held here.

Edward Cook has been arrested.

AGED COUPLE MARRIED UNDER EUGENIC LAW

JANESVILLE, Wis., Jan. 7.—The first marriage in Wisconsin under the new eugenic law joined together here today an aged couple, who had not seen each other for 40 years. Marcian Hurtibise of Chicago was the bridegroom and his bride was Mrs. Adeline Hurtibise of Winnipeg, his brother's widow. They are each 67 years of age.

Big Bargain Offer By The Daily News

TWENTY PER CENT. DISCOUNT ON SUBSCRIPTIONS, SUBJECT TO TERMS BELOW. NO PREMIUMS OF ANY KIND INCLUDED WITH THIS OFFER. IT'S A STRAIGHT CASH PROPOSITION. PAY NOW AND SAVE.

The Nelson Daily News offers a cash discount of 20 per cent to all old and new subscribers who, between Jan. 5 and 22 inclusive, pay their subscriptions up to or beyond Jan. 1, 1915. After Jan. 22 subscriptions will be payable strictly in advance anyhow.

This will apply on all arrears as well as on subscriptions for the current year. But in order to secure the benefit of the 20 per cent discount on arrears it is necessary sufficient money accompany the amount of these arrears to pay for the paper up to at least Jan. 1, 1915. Otherwise the discount will not be allowed on the arrears. No discount will be allowed anyone on the current year's subscription unless the payment carries the subscription forward to Jan. 1, 1915. In other words, payment in full must be made up to at least Jan. 1, 1915, in order to secure the 20 per cent discount.

This offer positively and absolutely will not hold good after Jan. 22, after which date all subscriptions will be payable strictly in advance, so that by paying during the bargain period you will save yourself money.

All subscribers who receive their copy of The Daily News by mail can tell how their accounts stand by looking at the label which tells the date to which the subscription is paid. Compute your subscription from that date to Jan. 1, 1915, and you have the amount upon which you can secure the 20 per cent discount. City subscribers may find out how their accounts stand by inquiry at The Daily News Office.

Remember this offer will not hold good after midnight of Saturday, Jan. 22, 1914. The date will not be extended a day. After Jan. 22 it will not be possible to secure The Daily News or to pay up arrears except at the regular rate of $5.00 a year. By taking advantage of the 20 per cent discount a saving of $1.00 a year can be effected. Is this not worth taking advantage of? Send or bring your money to The Daily News Office without delay.

Save 20 per Cent On Your Subscriptions

The Nelson Daily News

The News Publishing Co., Ltd. Proprietors, Nelson, B.C.

We Haven't Any Old Stock to Run Off

All New Goods

Prices the Best in Town

5 per Cent Discount for Cash

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The Star Grocery Co.

Store of Quality

GRAND FORKS IS PROGRESSIVE CITY

Substantial Growth in Buildings—Immense Agricultural Resources—Many Carloads Fruit Shipped

(Special to The Daily News.)

GRAND FORKS, B. C., Jan. 7.—The year just ended can truthfully be declared the most progressive year in the history of Grand Forks and the surrounding valley. Grand Forks in common with all interior towns, had its mushroom growth many years ago when money was more free and everybody was carried along with a glorious hope of anticipation. Then came the reaction and for the next three years economy had to be practiced until the natural resources of the district could be developed.

In this Grand Forks has experienced nothing different than any other city of any importance in the Dominion and it can now be stated without fear of contradiction that the city of Grand Forks surrounded as it is, by a wide, prolific and fertile valley has reached its second growth and has come to a stage where it must be reckoned among the most progressive cities of the province. The immense tract of fruit and agricultural lands, the timber and mineral wealth, the enormous smelting industry which lie at its doors combined with railroad divisions and an unsurpassed climate ensure a great future for the city. A good indication of the growth of the city during the year is shown by the increase in building, all of which has been constructed on a substantial basis. In the business section of the city the "Bonthorn" block on First street, the "Manly" block and the "Kerman" block on Bridge street, the Grand Forks Garage company's brick block and the new cannery brick structure on Main street, the hospital building on Winnipeg avenue and the post office and customs block alone represent an investment of over $150,000 and in addition to blocks of which there is still a scarcity, the city has experienced the most progressive year in the history of building of homes. Sixty-five substantial residences have been erected during the past season, the majority of which are of modern type and nearly all of them built for the owners' comfort which goes to show that the increase in building is due to natural growth and not for the purpose of speculation. Besides this railroads have also taken their part in building notable amongst which is the new ten-stall round house built by the Canadian Pacific railway.

The exceptionally dry season, while not producing what might be termed a banner year crop, both fruit and vegetables were of much higher grade and more uniform than ever before and resulted in a record year of crop values. On account of there being so many individual shippers the necessary data of production has been difficult to collect but among the larger shippers, the Grand Forks Fruit Growers' association, of which James Rooke is manager, shipped 17 cars this season. This included two cars of plums, two of prunes, one car of apples and one car of crab apples which realized $12,531.15. About 16 cars of fruit was shipped by Robert Lawson which averaged over $600.00 per car. H. W. Collins who is among the larger shippers, marketed about 6 carloads while the Grand Forks Orchard company also contributed in the neighborhood of 2,000 boxes of apples. In addition to this, plums, prunes and apples were marketed from the original "Covert estate" to the extent of 18 carloads. These are only a few of the larger producers in the valley and when the complete statistics for the year are compiled, it will represent a very creditable showing indeed. The prices realized in all instances are reported as being exceptionally good. Many young orchards will come into bearing next year and more acreage is being put under cultivation while agricultural and mixed farming will insure for this city as great a future as any in the interior of British Columbia.

FIFTY THOUSAND TREES PLANTED

Great Expansion of Fruit Growing Industry at Creston During Past Year—Prospects Bright.

(Special to The Daily News.)

CRESTON, B. C., Jan. 7.—The Creston district, one of the most fertile as well as beautiful valleys in British Columbia, enters the year 1914 with the brightest prospects of its history.

The valley has been open to settlement since Fred Little arrived here over 21 years ago, but it is only within the past decade that the district has become famous as a centre for fruit and vegetable production, and now the Creston apples have an established name and a ready market wherever fruit is bought and apples are tasted.

During 1913 there have been somewhere in the neighborhood of 50,000 trees planted in this district and the most conservative estimate for the crop of the coming year is about double the product of the season just past.

The district had shipped up to the middle of November about $50,000 worth of this year's crop, and since then there have been several carloads, besides numerous express packages, which, with local consumption, go to make a total far in excess of any past year and places the Creston district in a most satisfactory position as a fruit and vegetable centre of the province.

It is estimated that there are now about 202,500 trees planted and that about 80,000 are producing, while this year will see the coming into bearing of a great many thousand more.

There are about 20,000 acres under cultivation and actually producing in this district, and there has been a good deal of clearing done this fall and winter so far, so that one can look for an increase in acreage during 1914.

The small fruits shipped from the district, including Wynndel, amounted to about $16,000; Creston apples, $20,000; vegetables, $4,000, and tomatoes, $10,000.

The fruit growers' union is making great strides in the construction of a large warehouse, which will be used as a central packing place and storage warehouse and will add very greatly to the shipping facilities of the district during 1914.

There have been in the district at all times during the year competent government experts, whose time and attention have been directed to the care of the trees, spraying, pruning and protection from pest or blight of any kind, and the opinion of a nurseryman who passed through the district in the late summer is to the effect that he had never seen in British Columbia a district so free from blight or pest and that the Creston growers should congratulate themselves upon the condition of the trees.

There has been quite a noticeable increase in the stock raising industry in the valley and it bids fair to be quite an extensive business before many years.

During the fall fair a splendid showing of poultry was made. The exhibit was not large, but the birds shown were of the very best breeds and there is no doubt a big future for the industry in this district.

Lumbering operations have necessarily been curtailed owing to the falling market, which has seriously affected the industry all over the province, but the mill will resume operations before long and that will be a great boost to the district.

From every standpoint the prospects for 1914 are most encouraging and the outlook optimistic.

HAIR STOPS FALLING, DANDRUFF DISAPPEARS--25 CENT "DANDERINE

Save Your Hair! Beautify it! Invigorate Your Scalp! Danderine Grows Hair and We Can Prove It.

Try as you will, after an application of Danderine, you cannot find a single trace of dandruff or a loose or falling hair and your scalp will not itch, but what will please you most will be after a few weeks' use, when you will actually see new hair, fine and downy at first—yes—but really new hair—growing all over the scalp. A little Danderine now will immediately double the beauty of your hair. No difference how dull, faded, brittle and scraggy, just moisten a cloth with Danderine and carefully draw it through your hair, taking one small strand at a time. The effect is immediate and amazing—your hair will be light, fluffy and wavy and have an appearance of abundance; an incomparable lustre, softness and luxuriance, the beauty and shimmer of true hair health.

Get a 25 cent bottle of Knowlton's Danderine from any drug store or toilet counter, and prove to yourself tonight—now—that your hair is as pretty and soft as any—that it has been neglected or injured by careless treatment—that's all.

NAKUSP HAS MADE PROGRESS

Pole Yards Largest In Canada—Shipyard Busy—New Houses and Many New Settlers

(Special to The Daily News.)

NAKUSP, B. C., Jan. 7. — Notwithstanding the stringency of money which has played havoc with and retarded the development of the greater number of towns and cities in Canada during the latter half of 1913, Nakusp has progressed and grown at a rate far in excess of any previous year since its commencement in 1892. In fact, a careful study of the building statistics for the year shows that 25 per cent of the whole town as at present standing has been built in 1913 amounting to $55,000, chief of which are the improvements of Lindsey Bros. yard and buildings. Two stores by J. Sneddon and Thomas Abriel, telephone and assembly rooms by L. J. Edwards and substantial residences by Thomas Abriel, L. J. Edwards, J. Wagstaff, F. Crowell, J. Stone, Mrs. Patterson, W. Riley, L. H. Rawlings, Mr. McKay, Mr. Waterfield, E. Leveque, R. Mills, A. H. Smith, Miss Philpot and others. To cope with the increased business of the town the party system of the local telephone was changed into the individual system with exchange. A rural telephone company constructed another line between the exchange and Box lake, 7 miles in length, and the Dominion government long distance system to Edgewood, Needles, Fauquiers, Burton City, Arrow Park and Rock Island was likewise connected with the exchange, with inter communication facilities and entirely on a modern scale. The water system, though limited in its capacity, has also been extended with the town's growth. There is a bright outlook for 1914 in the building trade, with many residences and business buildings in view of erection.

Industrially, up to the end of October, the district was noted for its activity, the sawmills working to their full capacity and the pole yards, which are the largest in Canada, brought in and shipped out hundreds of thousands of telegraph poles and piling—the shipments being chiefly to the prairie provinces, but large quantities of the most valuable kind were sent to the eastern provinces and various states of the union. To give an idea of the extent of the pole industry it is stated on excellent authority that one-fifth of the whole stock of poles west of Winnipeg and Chicago is found in the Nakusp yards ready for shipment. The lumber shipments show a marked decrease in comparison with 1912, due to the tightness of money on the prairies. The local yards are in consequence heavily stocked, but confidence is felt that the situation will be relieved early in the spring when conditions adjust themselves, when returns from the bountiful wheat crops are available. As a result of the heavy stocks on hand, logging this winter is hardly as active as previously, but statistics show that fully 150 men are in the woods immediately around Nakusp. The local shipyard has been running to its limit until November, the whole fleet of steamers, tugs and barges having been thoroughly overhauled. The Dominion government is active in building new wharves at West Demars, East Arrow Park, Needles and Renata which will greatly aid transportation and will cost $25,000.

Another instance of enterprise and foresight on the part of the government is the placing on the ground of engineers with a view of making the Columbia river navigable from Revelstoke to the international boundary, where similar work is being carried out by the United States government, which if found feasible, will give an outlet for steamers through to the Pacific ocean. Its feasibility is already acknowledged even at this date and it is possible that the level of the Arrow lakes will be lowered some five feet to accomplish the work. No official report, however, is available. The provincial government has been equally as active in the district. The marine drive from Nakusp to a point south of Fauquiers, some 40 miles, has been completed and is open for traffic. The interlake road from Nakusp to New Denver has moved forward and next year should see it passable for vehicles. Improvements to existing roads have been effected and streets opened up and graded within the town. Nearly a mile of sidewalks were built on Broadway and other side streets.

Agriculturally, the development has been unprecedently active and it is safe to say that 125 acres has been transformed from a virgin forest to a highly cultivable state during the year, in close proximity to the town. For this work nearly $4,000.00 worth of stumping powder was bought through the Farmers' institute. In this respect the colonizing scheme of the Canadian Dominion Development company is a great factor. A small army of men having been employed clearing 5 and 10 acre lots for non resident purchasers, who are expected to arrive in 1914. This company has also opened up nearly ten miles of new roads connecting their subdivisions, during the year. Several thousand fruit trees have been planted but there is a feeling in favor of mixed farming, and the future is framing itself on this line.

Co-operation seems to be the slogan of the farmers, and through the Farmers' institute and Poultry association, some $12,000.00 worth of merchandise, feed and flour, and powder has been bought. These dealings however, seem to have not interfered with existing business houses, for they too have expanded their businesse., increased their accommodations and additions have been made to the number of stores, all proving the onward movement in Nakusp in line with the general progress of the country.

An industry of great importance to the district is projected for the coming year—the formation of the Arrow Lakes Produce and Canning association under the new act of 1913 whereby the government loans 80 per cent of the paid up capital. It is proposed to build a warehouse for storing feed, etc., and erect a modern fruit canning factory.

The number of settlers arriving during the year to actually settle on land were fully half a hundred.

ONTARIOS DECISIVELY WALLOPED BY TORONTOS

(By Daily News Leased Wire.)

TORONTO, Jan. 7.—Age fell before youth at the arena tonight when Torontos trebled the score on Ontarios, winning by 9 to 3. Marshall's youngsters played hockey from start to finish, which was the cause of them notching two goals near the finish, after Ontarios had given up hope. As was expected, the game was not a clean one, but there were no serious attacks except when Vair brought his stick down on Walker's head after a check.

WANT POST OFFICE FOR FAIRVIEW

Fairview Conservatives Support Application by Directors of Kootenay Lake General Hospital

Concerning the petitions for a post-office to serve the residents of Fairview and Hume addition to the north of the city a committee composed of D. St. Denis and A. S. Horswill was last evening appointed at a meeting of the Fairview Conservative association to approach R. F. Green, M. P. for Kootenay regarding the matter, during Mr. Green's visit to the city this week.

The association lent its support to the application which will be made to the provincial government at its next session by the directors of the Kootenay Lake General hospital for an appropriation of $50,000 for the construction of a new hospital in Nelson.

For improvements to Fairview and Hume addition, which have been recommended to the member for the district an appropriation will be asked by the association.

A. S. Horswill, president of the association, who was in the city at last evening's meeting was chosen as delegate from the Fairview association to the provincial Conservative convention which will be held in Victoria this month during the session of the provincial legislature which opens on Jan. 15.

NATURAL RESOURCES OF PRAIRIE

Premiers of Manitoba, Alberta and Saskatchewan Make Proposal to Dominion Government

(By Daily News Leased Wire.)

EDMONTON, Alta., Jan. 7.—Premier Sifton today gave out to the Western Associated Press the text of the letter which has been forwarded to Premier Borden by the premiers of the western provinces as setting out their attitude on the question of the transference of the natural resources to these provinces. The letter, which is signed by the three premiers, indicates that they have united on a policy which will remove this much-discussed question from the realm of party politics. The letter follows:

"The Right Hon. R. L. Borden,

"Ottawa.

"Dear Sir,—After having an interview with you in regard to questions with respect to which the prairie provinces have received different treatment from the other provinces of Canada, and at your suggestion, at a meeting of the premiers of Manitoba, Saskatchewan and Alberta, it has been agreed between us to make you, on behalf of the said provinces, the proposal that the financial terms already arranged between the provinces and the Dominion as compensation for lands should stand as compensation for lands already alienated for the general benefit of Canada and if the lands remaining within the boundaries of the respective provinces, with all natural resources included, be transferred to the said provinces, the provinces will accept respectively the responsibility of administering the same.

"Yours very truly,

"WALTER SCOTT.

"R. P. ROBLIN.

"ARTHUR L. SIFTON."

REDUCTION OF SIZE OF SHIPS

(continued from page one.)

lyn Kelly, lady-in-waiting to the Duchess of Connaught, and their wedding was quite an interesting romance of government house life.

R. O. Crosshay, a wealthy amateur airman, today looped the loop eight times in his second attempt in an aerodrome.

Lieut.-Gen. Sir Robert Stephenson Smyth Baden-Powell, K.C.V.O., K.C.B., the chief scout, is suffering from a poisoned arm, but no serious danger is anticipated.

Oscar Wilde's younger son, Vyvian Holland, was married to Violet Craigie, the actress, a daughter of Col. Craigie.

NELSON NEWS OF THE DAY

Miss F. I. G. Bond, of Portland, Ore., is at the Strathcona.

G. Noel Brown, of London, England, a well known mining man, arrived in Nelson last night and is a guest at the Hume.

The annual meeting of the board of trade will be held at 7:30 o'clock this evening for the election of officers and the reading of the annual reports.

F. R. Wolfle, the Spokane mining man, who is interested in the Florence property at Ainsworth, came in last night and registered at the Hume.

Miss Minnie E. Fletcher resumes lessons in music; also kindergarten class Jan. 5. 107 Baker street. *222-6

The Charity Society have a number of ladies who would like to have work by the day. Apply to Mrs. J. Sturgeon or to Mrs. Hugh Ross. tf

E. O. Windsor, piano tuner, has returned to Nelson and district after an unavoidable absence of a trip or two, but will continue his rounds as formerly. Leave orders with Canada Drug & Book Co. 223-tf

When having your piano tuned have it done by a man with practical experience, representing a firm of merit. A. R. Kilby, authorized tuner for Gerhard Heintzman pianos is such a man, patronizing him you keep your business in town. So before you forget phone R516 or leave your orders at Standard Furniture Co. 223-6

The executive of the Nelson and District Veterans' association are specially requested to wear their decorations at this evening's social gathering. 228-1

Members of I. O. F. are requested to meet in lodge room on Friday, 9th at 7:45 p. m. Installation of office bearers and other important business. The newly installed officers will entertain the members and their friends. Music to be supplied by mandolin orchestra. 229-2

Mining News

CONDITIONS GOOD IN SANDON DISTRICT

Ore Cars Leave Every Day During Month—Surprise, Slocan Star and Ruth heaviest shippers

(Special to The Daily News.)

SANDON, Jan. 7.—During the last month ore cars left every other day. The Surprise, Slocan Star and the Ruth were the heaviest shippers. Besides these the Ivanhoe, Noble Five, and the Colonial has closed down for the winter.

Bruce White took up supplies to the Noonday last week. The Wonderful management is contracting to get the raise completed.

The Slocan Star is looking better than ever. Two feet of clean ore was seen last week. Local people have been buying stock lately. The Surprise will also ship a car this week.

Mr. McFadd has left for the coast. He has been superintendent of the Surprise for sometime. Alex. Smith, who has managed the property for the last 15 years, left for the east last week.

PAYS TRIBUTE TO PIONEER PROSPECTORS

What of the pioneer prospector of the early day mining camps of the west, and particularly of our own dear and beloved mining country, those of the Coeur d'Alenes, Republi, Crow's Nest Pass of British Columbia, Phoenix, Colville, Chewelah, Boundary, Slocan and Elk City camps, enshrined and honored with the nomes of Jay P. Graves, Byron N. White, D. C. Corbin, Conrad Wolfle, Clark, Harper, Kearney and others, the sun of whose days is now rapidly setting, but who blazed the trail into the wilderness over which we have travelled to our present greatness and shall continue to travel to greater things? It is for them I speak, lest in our pride and self importance we forget—forget the debt of gratitude we owe."—G. B. Dennis, Spokane, Wash.

GOLD STRIKE REPORTED AT BEAVER LAKE

(By Daily News Leased Wire.)

PRINCE ALBERT, Sask., Jan. 7.—A strike of gold is reported here at Beaver lake, east of Prince Albert. The find came as a result of many months' prospecting by Dan Mosher, who is backed by a local syndicate of prominent men. After Mosher reported his find last June these men went to the location and returned to the city satisfied that the first samples were true indications of the weath of the gold area.

WORLD'S DEMAND FOR COPPER TO INCREASE MUCH

Heath Steele, in an illuminating article in the Engineering and Mining Journal on "Copper Prices, Cosumption and Supply," prognosticates that by 1921 the world will consume 3,500,000,000 pounds of copper annually, as compared with 2,300,000,000 in 1913.

Where will the additional 950,000,000 pounds come from?

That is one of the burning questions of the copper mining and copper metal industries. If Mr. Steele's figures are correct, it means that the world's consumption of copper must increase at the average rate of 120,000,000 pounds per annum during each of the next eight years.

This means a new production each year equal to that of the monster Utah Copper company, the combined production of the Calumet & Hecla and Calumet & Arizona, the combined production of Arizona Copper, Boleo, Braden, British Columbia and Granby, half the production of the titanic Anaconda group, and it means a production almost equal to that of the Phelps-Dodge properties and nearly equal to the combined output of Ray and China.

Needless to add, the copper properties now on the horizon are no of sufficient caliber to yield such stupendous new poundages of copper metal to the markets of the world.

The giants now looming up, namely Inspiration in the United States, Hidden Creek in Canada; Chile Copper in South America, and "Tanks" and other properties in the Belgian Congo, represent practically the sum total of the new properties which in the next eight years will have to add 950,000,000 pounds of copper to the world's production per annum. A few smaller properties, of course, will contribute their iota.

The conclusion is therefore pretty safe that the market for copper will increase faster than the supply of the red metal. This can mean but one thing—that prices for copper metal are bound to hold up under any kind of favorable management of the copper market situation.

MINING A SCIENCE

Today mining is a science. The introduction of electricity above and underground for lighting, power and transportation purposes has involved the employment of a staff of expert electricians. The replacement of the old fashioned steam engine by those of higher grade, with compound cylinders, condensers and economizers, require the services of a very different grade of mechanics to the old-fashioned engine driver.

In addition to other things put forward for the encouragement of mining this firm makes a specialty of trying to regulate prices to suit the investor. We venture to say that most property holders in the interior of British Columbia will, if approached in the proper way make price and arrange terms to suit purchaser.

If the purchasers or their legal representatives will personally consult us we will do what they may consider impossible.

If you have capital, any amount from one hundred dollars up, for legitimate mining investments, it will pay you to consult or write us. We investigate, advise and when necessary act as purchasing agents. Our operations are confined to the interior of British Columbia, where the mining industry is fast coming to the front on a sound business basis.

B. C. Mining Exchange Agencies

P. O. Box 639.

Nelson, B. C., Canada.

WINNIPEGGERS IN AUTO ACCIDENT

Owner of Occidental Hotel and Wife Victims of Chicago Accident—Chauffeur Arrested

(By Daily News Leased Wire.)

CHICAGO, Jan. 7.—Six persons were injured, one seriously, when the auto owned by Dr. Joseph A. Roth, 1054 North Ashland avenue, and driven by Philip Kavanaugh, 2226 West Huron street, struck the curb at West Huron and North Poulina streets this afternoon. The auto was demolished, Dr. Roth was not in the machine. The injured:

David Ribstein, Occidental hotel owner, Winnipeg; deep gash in head and cut and bruised about the body.

Mrs. Mary Ribstein, his wife.

Joseph Greengard, clothing merchant, Williston, N. D.

Mrs. Tilly Greengard, his wife.

Marvin Greengard, their five year old son.

All but David Ribstein received cuts and bruises on the body.

The auto was westbound on West Huron street when at Paulina street, another auto turned suddenly in front of it. Kavanaugh, in order to avoid hitting the other car, drove into the curb. The passengers were thrown violently into the bottom of the car and Ribstein was buried to the sidewalk. The chauffeur was uninjured.

Detective Sergt. Prochowski, of the West Chicago avenue police station, who was standing at the corner, called the police ambulance and placed Kavanaugh under arrest. The injured were attended to by Dr. Edward Niles, of the West Chicago avenue station, and were taken to St. Mary's hospital. Kavanaugh was booked at the station on a charge of assault and was held on $1,000 bonds. Dr. Roth was notified and at once went to the station and signed his bond.

The funeral of the late Mrs. Susan O'Malley took place yesterday morning from the church of Mary Immaculate, Rev. Father Althoff. Many of the friends of the deceased lady attended the funeral and the floral tributes sent were beautiful. The pallbearers were: D. McBurney, William Maher, M. B. Scully, J. O. Patenaude, J. McDonald, and T. J. Scanlan.

Pre-Inventory Clearance Sale

Prices Surprisingly Low

You will only have to call at our warerooms to be convinced. A general mark-down on goods in all departments.

Buffets, Early English Quartered Oak, regular price $65.00,

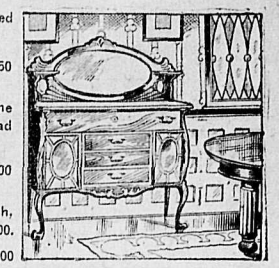
Clearance Sale Only $47.50

Six Dining Chairs, five and one arm, Early English, leather slip pad seat, regular $72.00.

Clearance Sale Only $55.00

Extension Tables, Early English, 8 ft., pedestal, regular price $55.00.

Clearance Sale Only $35.00



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THE OLD RELIABLE CUNARD LINE ESTABLISHED 1840

Is popularly regarded as THE LINE to use when having relatives and friends come out to

CANADA

FROM THE OLD COUNTRY

The service offered is unexcelled in

COMFORT

The new twin screw steamships carrying one class (II) Cabin and third class only,

ANDANIA and ALAUNIA 13,400 Tons Each

Were added to the

CANADIAN SERVICE

in 1913, and are replete with every modern improvement.

MAGNIFICENT APPOINTMENTS

Lounge, Gymnasium, Drawing Room, Smoking Room, Open and Covered Promenades, Orchestra. Other splendid steamships are:

ASCANIA (new), AUSONIA 10,000 tons $,000 tons

Carrying one class (II) Cabin and third class only.

FRANCONIA (new 1911)

LACONIA (new 1912)

18,150 tons each—Twin Screw

CARMANIA (20,000 tons), Triple Screw Turbine

Carrying First, Second and Third Class.

The Cunard Company also maintain services between New York, Queenstown, Fishguard, Liverpool, Boston, Queenstown, Fishguard, Liverpool, New York, Mediterranean, Adriatic. Including the fastest steamers in the world, "Lusitania" and "Mauretania."

Now building for Canadian Service:

S.S. "AURANIA"—14,000 Tons

For descriptive literature, sailings, etc., apply to any Railway or Steamship Agent, or

THE CUNARD STEAMSHIP COMPANY, LTD.

304 Main St., Winnipeg, Man.

Amateur Plumbers

are usually great damage creators. It is not wise for a householder to try to do his own plumbing work—he is almost sure to make a muddle of it. Better send for us, who employ practical, trained help and are experts in the business. Our charges are not at all high, and we are surely cheaper than the damage you might incur doing it yourself.

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Try Us for High-Class Confectionery

Always Fresh.

The best fruits in season always in stock.

We have a very complete stock of tea, coffee and cocoa.

Try us for values.

The Palace Confectionery

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House Heating

Think of it now and you can have it next winter.

See the

B. C. Plumbing & Heating Co.

for prices.

OPERA HOUSE BLOCK

P.O. Box 485 Phone 181

THE NELSON IRON WORKS, LTD.

SECOND-HAND MACHINERY IN STOCK.

HORIZONTAL ENGINES.

1—7 x 8.
1—11 x 18.
2—12 x 16.
1—13 x 18.

MINING HOIST.

1—8¼ x 10 Link motion and several larger ones.

BOILERS.

1—35 H.P. Locomotive Boiler.
1—60 x 12 H.R.T. Boiler.

VERTICAL ENGINES. 1—5 x 6.

PUMPS.

1—4½ x 2¾ x 4 Duplex.
1—16 x 8 x 16 Knowles Sinker.

MISCELLANEOUS.

1—6 x 24 Surfacer and Matcher.
1—Saw Carriage, 3 block.
1—No. 4 Soule Steam Feed.
1 45 KW. Generator.
800 Ft. 5 inch Pipe.
1—5-Ton Triplex Chain Block.

The Daily News

Published at Nelson Every Morning Except Sunday, by The News Publishing Company, Limited

W. G. FOSTER, Editor and Manager.

LEGAL AND OFFICIAL ADVERTISING.

Effective on and after Jan. 1, 1913

Legal Advertising (includes municipal and government notices) — 12c per line for the first insertion and eight cents per line for all subsequent insertions.
In certain cases, however, for the convenience of the public, flat rates have been set, as follows:

Applications for Liquor Licenses:—Once per week for four weeks, $5; daily for month, $30.

Applications for Transfer of Liquor Licenses:—Once per week for four weeks, $7.50; daily for month, $45.

Land Purchase Notices:—Once per week for 60 days, $7.

Land Lease Notices:—Once per week for 60 days, $7.

Certificate of Improvement Notices:—Once per week for 60 days, $12.50.

Delinquent Co-ownership Notices:—Once per week for 90 days, $25.

Duplicate Certificate of Title Notices:—Four insertions, $8; eight insertions, $14.

Water Application Notices:—Four insertions up to 100 words, $6; over 100 words, in proportion.

Where any of the above applications contain more than one application or notice, each application or notice will be charged for as a separate advertisement.

THURSDAY, JANUARY 8

THE DAILY NEWS ANNUAL REVIEW OF MINING.

Today The Daily News presents to its readers its annual review of the mining industry of Kootenay and Boundary. It is a compilation that is not obtained without considerable effort and expense, but it should prove highly interesting and instructive to all who are concerned in the industrial progress and welfare of the interior of British Columbia, and a valuable advertisement of the district, and if this is the case The Daily News will be amply repaid for its effort.

Every care has been taken that the facts presented should be comprehensive and accurate. Mr. L. B. Reynolds, M.E., as in the past two years, has undertaken the preparation of the information. His thorough comprehension of the mining situation of the interior and his well known reliability and technical knowledge are the best possible guarantee of the care and precision with which the facts have been compiled.

In spite of the lower prices which prevailed for copper, silver and zinc, and although gold is estimated at $20 per ounce instead of $20.50, the figure used in computing the values in 1912, an increase of $210,903 in the actual sale value of the metal production is shown by last year's total for Kootenay and Boundary metalliferous mines compared with the total for 1912. If the metal prices which prevailed in 1912 are used in computing the value of last year's ore output the increase is even more noticeable and would amount to $661,768, excluding the lead figures.

In 1912 2,565,404 tons of ore produced 230,168 oz. of gold, 2,522,746 oz. of silver, 35,186,909 lbs. of copper, 35,084,886 lbs. of lead and 7,694,760 lbs. of zinc.

Last year 2,500,100 tons of ore produced 267,075 oz. of gold, 3,193,054 oz. of silver, 32,316,033 lbs. of copper, 35,984,061 lbs. of lead and 7,685,600 lbs. of zinc.

From these figures it will be seen that the metal contents per ton last year increased in an even more marked degree than the actual market value.

Eloquent of the prosperity of the industry are the dividends paid during the year, which amounted to $2,273,952.90, compared with $1,212,251 in 1912, an increase of $1,061,701.90.

Reports indicate that in nearly every camp in Kootenay and Boundary the year just commencing will see a still greater extension of mining activity and an increase in tonnage.

The Changing Age

Girls and boys from 14 to 19 years of age undergo physical changes which tax their strength to the utmost and the strain is always apparent from pale cheeks, colorless lips, and tired bodies—sometimes eruptions of the skin and the utter lack of the ambition and animation with which their younger years were filled.

Budding into womanhood and manhood, with the duties of school or business, demands concentrated nourishment which is readily convertible into red blood corpuscles, energy and strength, and the very best thing for this changing age is the medical nutriment in Scott's Emulsion—it possesses the rare blood-making properties of cod liver oil in a predigested form; hypophosphites for the nervous system, with the healing, soothing qualities of pure glycerine.

Its nourishing force promotes assimilation, yields direct returns in abundant, red blood, fills hollow cheeks, tones the nerves, makes all good food do good, and does it in a natural easy manner.

The sustaining nourishment in Scott's Emulsion is so helpful to this changing age that it should never be neglected—every druggist has it.

43-112 Scott & Bowne, Toronto, Ontario.

ELECTION OF OFFICERS AND BOARD OF TRADE BANQUET.

At the meeting of the board of trade this evening the election of officers for the succeeding twelve months will take place, and it is most desirable that the attendance at the meeting should be large and representative. The board of trade fulfils a service of the highest importance to the community, and the energy with which the work will be prosecuted during the coming twelve months, and the success which will crown the year's efforts, will depend to a large extent upon the officers to whom will be entrusted the direction of the board's activities. All members of the board should show their interest in the work and manifest their intention to support the officers selected by attending tonight's meeting.

The banquet to follow the business meeting will not be less important. It will provide an opportunity for an informal exchange of views, it will offer an excellent chance for fostering friendly relations and a mutually cordial understanding, and it will be in the nature of a demonstration of loyalty and support to the board of trade and to its newly elected officers. All who are interested in the objects of the board of trade, whether members or not, will be welcome, and it is to be hoped that the banquet will by its stimulation of public spirit and general success prove a happy augury for a year's work crowned with usefulness and progress.

WHAT THE PRESS IS SAYING

A Man of Letters.

Fire destroyed the home of a Chicago man named Paliponisoringappacocankuaummonpourglogonlos. We contribute that name to the linotyper and proof readers with the compliments of the season.—Detroit Free Press.

What Next?

Here is a list of the programs of the Liberal party during the past 25 years:

1—Commercial union.
2—Unrestricted reciprocity.
3—Free trade as in England.
4—Tariff for revenue only.
5—Protection.
6—Limited reciprocity.
7—Free food.
What next?—La Patrie.

Toronto's Nerve.

Now that the Mona Lisa has been discovered, it would be just like the nerve of Toronto to try to borrow it for its fall fair.—Montreal Herald.

A License to Drink.

Why not make a man take out a license to drink? Pay $5 for it and have the government take away his license if he indulges not wisely but too well. Make him show his license if he is found buying after hours. This would be limiting the liquor traffic and regulating it right down to the minute. In connection with the treating system, for instance, just imagine a friend calling out to you: "Come on in and have a drink," while you would be forced to reply: "Sorry, old scout, but I haven't a license."—Ottawa Journal.

THIS DAY IN CANADIAN HISTORY

The peace of Ghent, which brought to an end the war of 1812, was signed on Christmas eve, 1814, in the old city of Belgium from which the treaty takes its name. But in those days there was unfortunately no quicker method of sending news across the ocean than by sailing ships, and the last battle in this mainly Canadian war was still to come, though it was fought, not in Canada, but in Louisiana, at the mouth of the great Mississippi, down which the explorer La Salle had made his way 133 years earlier. In 1803 the United States had acquired Louisiana by purchase; and the British commander, Sir Edward Pakenham, after he had been driven by the American general, Andrew Jackson, from Pensacola in Florida, retaliated by an attack upon New Orleans. Here Jackson had fortified himself with hastily constructed barricades and breastworks, and, it is told, had not only armed the free negroes, but had taken the convicts out of prison to aid in the defence. After considerable fighting Pakenham attempted on January 8, 1815, to carry the town by storm, but the British were repulsed with frightful loss of life, more than 2,000 being killed or wounded, and amongst the slain was the commander-in-chief himself.

COLD STORAGE

Enthusiasm makes heavy work light.

A girl isn't necessarily an artist because she paints.

A dark horse may be a nightmare to the other candidates.

Love is never so blind that it can't see a rival around the corner.

It will be a feather in the cap of the plumber who first acquires the art of fixing a pipe dream.

"What makes you so anxious to send Three-Finger Sam to the legislature? He isn't so very popular."

"No. We citizens of Crimson gulch figure that it would be a great savin' to the general community to get a poker player like Sam located somewhere else."—Washington Star.

For years scientists have been telling us there are microbes in kisses, but most girls are willing to do a little investigating.

"What's this?" asked the dictator, nervously, as the courier handed him a document.

"An ultimatum."

"Another ultimatum! Then it's all right. I thought maybe they were trying to start something."—Washington Star.

THE WEATHER

WEATHER FORECAST

Light, local snow falls becoming colder.

Light snow fell locally yesterday in northern Saskatchewan. Elsewhere in the west the weather has been fair, with lower temperatures in Alberta.

	Min.	Max.
Nelson	36	46
Victoria	42	46
Vancouver	42	48
Kamloops	32	40
Edmonton	18	24
Calgary	28	32
Battleford	26	34
Moose Jaw	28	41
Winnipeg	26	40
Prince Arthur	24	26
Parry Sound	24	32
London	28	34
Toronto	30	36
Kingston	30	36
Ottawa	18	32
Montreal	20	30
Quebec	10	26
St. John	10	28
Halifax	16	32

All west easterly and northerly winds; light local snowfalls; becoming colder.

FINE IN LONDON

(Western Associated Press Special Cable.)

LONDON, Jan. 7.—Fine; maximum 39, minimum 31. Paris—Fair; maximum 42, minimum 33.

AT THE THEATRES

The advance sale for "Bunty" will open at the City Drug store this morning.

At the Gem theatre tonight a two-reel melodrama, "The Pendulum of Fate," will be shown. It is a clean, cleverly constructed melodrama with elements of interest and suspense admirably developed and sustained, which give this picture play not only stage values, but vivid realism to make its pathos and power vital and telling.

WANT AD HOROSCOPE

JANUARY 8

Artistic in temperament, fond of the highest and best expression of beauty your nature will demand the best surroundings for development.

If inclined, to writing to oratory or music, cultivate your talents. Success awaits you in a public career.

Saturn, the governing planet, is the ruler of destiny, the pathfinder for men and women, exercising over them the sinister influences of fear. This however, may be conquered and, once conquered, clears your path of all obstacles. This is the birthdate of many of the most famous men and women of the world. Sir Lawrence Alma-Tadema, the artist, was born on this date in 1836. Burton E. Holmes, a popular lecturer, was also born in 1870.

The Want Ads will find successful positions for domestics, for iron workers and mercantile trades.

TO FORBID SALE OF REVOLVERS

Winnipeg Mayor Proposes Confiscation of All Lethal Weapons Owned by Citizens

(By Daily News Leased Wire.)

WINNIPEG, Jan. 7.—A general disarmament order that would mean the confiscation of every revolver or lethal weapon in the possession of citizens of Winnipeg, and which would prohibit the manufacture, importation, sale or ownership of such weapons in the city, will go into effect in the city in the near future if Mayor Deacon can find a legal way. The board of control is with the mayor in his proposal and this morning, after the mayor had explained his views on the subject, unanimously adopted a resolution with this end in view.

Are you one of those to whom every meal is another source of suffering?

Na-Dru-Co Dyspepsia Tablets will help your disordered stomach to digest any reasonable meals, and will soon restore it to such perfect condition that you'll never feel that you have a stomach. Take one after each meal. 50c. a Box at your Druggist's. Made by the National Drug and Chemical Co. of Canada, Limited. 150

BOARD OF TRADE BANQUET TONIGHT

Large Attendance Looked for at Second Annual Event of Organization —Green Among Speakers

The second annual banquet of the Nelson board of trade will be held this evening at the Hume hotel at 8 o'clock and the indications are that it will be largely attended.

An excellent program of toasts has been arranged, R. F. Green, M. P. for Kootenay, will be among the speakers.

At 7:30 o'clock this evening the board will meet to receive the annual reports and to elect officers.

NAME DELEGATES TO CONVENTION

Ten Representatives of Nelson Conservative Association to Attend Provincial Meeting at Victoria

M. R. McQuarrie, William Irvine, Harold Selous, J. E. Annable, R. L. Douglass, W. G. Foster, J. E. Taylor, Ald. Edward Kerr, A. T. Walley and George Ferguson were last night appointed delegates from the Nelson Conservative association to the provincial conservative convention which will be held at Victoria on Jan. 23. C. R. Walker and Fred A. Starkey were Harry Johnston, Donald Guthrie, Ald. and the secretary were given power to appoint other alternates if they should be needed.

C. D. Blackwood and C. W. Appleyard were appointed auditors of the books of the association for the year.

Among those present were: George Ferguson, president; Fred C. Moffatt secretary; Howard Bush, treasurer; Harry Johnston, Donald Guthrie, Ald. Edward Kerr, Charles A. Waterman, A. T. Walley, J. F. Thompson, Arthur Blake, George F. Motion, T. A. Robley, M. R. McQuarrie, J. E. Taylor, William Irvine, George Horstead, P. I. Willson, R. W. Hinton, W. R. Maclean, M. P. P., C. D. Blackwood, J. J. Malone, James Marshall, J. E. Annable and C. R. Walker.

HON. MARTIN BURRELL

The following article on Hon. Martin Burrell, minister of agriculture appears in the Toronto News of Dec. 27.

Hon. Martin Burrell, minister of agriculture, in the Borden cabinet, and member for Yale-Cariboo, is a type of man of which there are too few in this country. They are common enough in Great Britain and that is the reason that the calibre of the members of the British House of Commons is far above that of any similar chamber in the world. He is a man with an English public school education, well read and well informed on many subjects. He has not the fault which marks so many public men both in Canada and the United States, he is not a "one-ideal man." So many people on this continent know just the business they are in and nothing else. They take no interest in anything which is not directly related to their business and are almost ignorant on all political questions excepting those which directly concern themselves. They also have only a small if any acquaintance with literature or art. In a word they are narrow and self-centred and find it hard to see the viewpoint of the other man where it clashes to any extent with their own interests.

To a great extent this cannot be helped in a new country. It is a condition made necessary by the fact that the majority of the people from their early youth have to make their own way in the world. They have little time for anything outside of their own business during their early years and by the time they have got a place where they can take a breathing spell they have become so accustomed to one mode of living that it is hard for them to change. This, however, will be overcome as the country develops and the younger generation has more time to devote to education. Then it is to be hoped they will, like Mr. Burrell, turn their attention to public affairs and enter political life.

Mr. Burrell, who is in his 55th year, came to this country in 1883 and for six years was in the Niagara peninsula fruit farming near St. Catharines. While in Ontario he did not take an active part in politics, but shortly after he removed to British Columbia he began to manifest interest in public questions. He was mayor of his town Grand Forks, in 1903 and member of the British Columbia Board of Horticulture from 1904 to 1908. In 1904 he was defeated when he ran for the House of Commons in Yale-Cariboo. But he was elected in 1908 and was again returned in 1911 and on the accession of the Conservatives to power was made minister of agriculture.

Mr. Burrell has been a horticulturist practically all his life and has been an extensive and successful fruit grower in British Columbia. It was thought in some quarters at the time of his appointment to the office he now holds that perhaps there were other men better fitted for the position. But he has so ably administered his department that everyone is satisfied Mr. Borden made a wise choice.

Mr. Burrell is a good campaign speaker, reasonable and sane and capable with arguing with any one desirous of heckling. He does not attempt to thrust his ideas down your throat but by the use of argument and example he attempts to show where he is right. If you cannot be persuaded he does not think you are insane but is always willing to concede that there can be two points on any question.

One of his greatest assets and perhaps his chief charm is his unfailing courtesy. It does not matter who the person may be or what his station in life, he deals with all alike. He is never abrupt or "short" but always ready to hear one out and his reply, either agreeing or disagreeing is never rude or angry. His manner is delightful and one feels instinctively that no matter under what conditions or what the provocation he will always act the part of a gentleman. A public man, particularly one holding a portfolio, does not live in a bed of roses and they can not be blamed if they are a bit curt sometimes, but Mr. Burrell never is, and this fact undoubtedly accounts for the liking men on both sides of the house and the average person who comes in contact with him have for Martin Burrell.

There may be men of greater eminence in the Conservative party than the member for Yale-Cariboo but it is doubtful if any of them makes a stronger appeal to the public than this quiet, sane, Canadian citizen of English birth, and so long as Mr. Borden has about him men of his stamp he may feel sure that his government will have the respect of the country.

Mr. Burrell has one fault and this we would rather not reveal, but it will probably come out anyway. He is a golf fiend. It is a disease which but lately got its grip on him but even now we fear it is too late to rescue him. However, public men have had worse vices and still have a power in the land. Perhaps he may outgrow it as we imagine he will find it rather hard to discover a golf course in that tract of mountains which he is pleased to call his constituency.

NO ALUM

IMPROVEMENT OF CANADA'S OUTPUT

(Continued from Page One.)

expected to be concluded in short order. The principal obstacle has been an agreement with the railways by way of determining the amount of subsidy they are to be paid. Their demands have trebled. The indications, however, now point to a satisfactory adjustment, and once this is done the schedule of rates will be prepared.

In the west there are plans to use the parcels post to secure books from city libraries to rural parts of the provinces, the limit of weight of a parcel being 12 pounds.

Protection to Trains.

The railway commission today heard the representatives of the various organizations of railway workers of Canada in regard to the complaint that special rule E in the Canadian Pacific railway timetable is not sufficient protection to trains. The rule authorizes trains to occupy a main track without the protection of a main line switch.

James Lawrence, on behalf of the engineers and firemen, contended that the rule was the most unfair ever put into force by the railway. James Harris, on behalf of the conductors, and J. Maloney for the trainmen supported this statement. It was decided to postpone the hearing in order to allow the representatives of the unions to confer and agree upon a rule to be submitted to the railway officials.

Intercolonial Improvement.

It is understood that at the approaching session of parliament there will be a considerable appropriation for improving the intercolonial railway. An effort will be made in the course of the next few years to cut down the grades and reduce the curves, more particularly between Moncton and Halifax.

The work is the natural step in the policy of improvement which was begun some years ago, when wooden bridges were replaced by steel structures and 60-pound rails for 80-pound ones. This enables heavy engines and trains to be operated. The reduction of grades and easing of the curves will allow trains of moderate weight to be run and will cheapen the cost of operation.

The next step will be the expansion of the system by development of the branch line feeders.

Cost of Living.

The cost of living committee today had before it Roy Hammer, chief of the livestock branch, who submitted figures relating to the livestock industry. John McDougall, chairman of the board, stated today that it would take two or three weeks to complete the examination of officers of the departments. The commissioners have not yet decided what witnesses will be brought to the capital from outside points or whether they will meet in Toronto, Montreal and other points to secure evidence.

NURSE DROPS DEAD

TORONTO, Jan. 7.—While attending in the emergency ward of the Victoria hospital tonight, Miss Myrtle J. Jones, a nurse, dropped dead from heart failure.

She was a graduate of Victoria hospital and 25 years old.

Household Economy

How to Have the Best Cough Syrup and Save $2, by Making It at Home.

Cough medicines, as a rule, contain a large quantity of plain syrup. If you take two cups of granulated sugar, add one cup of warm water and stir about 2 minutes, you have as good syrup as money could buy.

If you will then put 2½ ounces of Pinex (50 cents' worth) in a 16-ounce bottle, and fill it up with the Sugar Syrup, you will have as much cough syrup as you could buy ready made for $2.50. It keeps perfectly. Any housewife can easily prepare it in five minutes.

And you will find it the best cough syrup you ever used—even in whooping cough. You can feel it take hold—usually stops the most severe cough in 24 hours. It is just laxative enough, has a good tonic effect, and taste is pleasant. Take a teaspoonful every one, two or three hours.

It is a splendid remedy, too, for whooping cough, croup, hoarseness, asthma, chest pains, etc.

Pinex is the most valuable concentrated compound of Norway white pine extract, rich in guaiacol and all the healing pine elements. No other preparation will work in this formula.

This recipe for making cough remedy with Pinex and Sugar Syrup is now used and prized in thousands of homes in the United States and Canada. The plan has often been imitated, but never successfully.

A guaranty of absolute satisfaction or money promptly refunded goes with this recipe, if the genuine Pinex is used. Your druggist has Pinex, or will get it for you, if you ask him. If not, send to The Pinex Co., Toronto, Ont.

Business Investment Wanted

We have a client with Six to Seven Hundred Dollars wishing for Active Position in local concern.

McQuarrie & Robertson

20 Per Cent Discount Sale

This Discount Applies to

Men's, Women's and Children's Felt Shoes and Slippers

Women's and Children's Felt Overgaiters and Leggings

Men's, Women's and Children's Overshoes

Men's Fancy Leather Slippers

Sale Goods Strictly for Cash

The ROYAL Shoe Store

Leaders in Foot Fashions

R. ANDREW & CO. Props.

The Canadian Bank of Commerce

SIR EDMUND WALKER, C. V. O. LL.D., D.C.L., President.

ALEXANDER LAIRD, Gen. Mgr.

Capital $15,000,000
Rest $12,500,000

Place your Securities, Titles, Deeds, Mortgages, Insurance Policies, Wills and other values in one of our Safety Deposit Boxes, where they will be secure from loss by fire or otherwise. Rentals according to size of box.

Nelson Branch, J. S. Munro, Mgr.

Bank of Montreal

ESTABLISHED 1817

Capital authorized $25,000,000
Capital all paid up.....$16,000,000
Rest $16,000,000

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Rt. Hon. Lord Strathcona and Mount Royal, G.C.M.G., G.C.V.O., Honorary President.

H. V. Meredith, Esq.....President
Sir Frederick Williams-Taylor, General Manager.

Branches in British Columbia: Armstrong, Athalmer, Chilliwack, Cloverdale, Enderby, Greenwood, Hosmer, Kamloops, Kelowna, Merritt, Nelson, New Denver, New Westminster, Nicola, Penticton, Port Alberni, Port Haney, Prince Rupert, Princeton, Rossland, Summerland, Vancouver, Vancouver (Main street), Vernon, Victoria, West Summerland, Alberni.

Nelson Branch, L. B. DeVeber, Mgr.

John Burns & Sons General Contractors and Builders

SASH AND DOOR FACTORY. NELSON PLANING MILLS, VERNON STREET, NELSON, B. C.

Every Description of Building Material Kept in Stock. Estimates Given on Stone, Brick, Concrete and Frame Buildings.

MAIL ORDERS PROMPTLY ATTENDED TO.

BOX 134. PHONE 178

SKIS SKIS

WE HAVE A LARGE ASSORTMENT OF THE FAMOUS

Northland Ski

Manufactured by Experts
Including
PINE, HICKORY, ASH AND MAGNOLIA
All Lengths
PRICES RIGHT
Wholesale Orders Receive Prompt Attention

The Nelson Hardware Co.

27

We Should Worry

But our stock is fresh. We keep it fresh by insisting that every department must turn over its goods quickly.

Every article on sale guaranteed.

The trip promises to succeed. All records and new lines will be picked up every day.

Pickles

STEPHENS ENGLISH, SWEET OR SOUR
Regular 15c. Now..... 10c

SOUR GHERKINS (Quarts)
Regular 50c. Now..... 35c

CHOW CHOW (Quarts)
Regular 40c. Now..... 25c

SWEET MIX AND SWEET GHERKINS
No. 1 quality, vacuum top.
Regular 40c. Now..... 30c

D. & W. SWEET MIXED
Regular 25c. Now 2 for..... 35c

WHITE ONIONS (Lever top)
Regular 35c. Now..... 25c

PICKLED WALNUTS
Worth 40c. Labels slightly discolored. Now 20c

Olives

PIMENTO
Regular $1.25. Now..... 90c
Regular $1.00. Now..... 75c

QUEEN
Regular $1.00. Now..... 75c
Regular $1.25. Now..... 90c

MANZANILLA
Regular 25c. Now..... 15c

Sauces

CATSUP
2 bottles 25c

MENAGHER'S SAUCE
Regular 50c. Now..... 25c

HOLBROOK'S SAUCE
Regular 30c. Now..... 15c
Regular 50c. Now..... 25c

SHARWOOD'S CHUTNEY
Regular 25c. Now..... 15c

HEINZ CELERY SAUCE
Regular 35c. Now..... 20c

MANDALAY SAUCE
Regular 50c. Now..... 50c

More specials tomorrow.

85 BOXES FANCY APPLES
From Fauquier's Ranch, Needles. Spys, Baldwins, Russsets, Wageners and Ontarios.

THE BELL TRADING CO.
The Up-to-Date Grocers
Baker Street.

Nelson House
European Plan
W. A. WARD, Proprietor
CAFE—Open day and night—BAR
Merchants' Lunch 12 to 2
Phone 97 P. O. Box 597

NELSON — Thomas Moore, L. E Henry, C. McSperrin, F. Clarkson, Marcus; W. A. Stock, Midway.

Tremont House
Baker Street, Nelson
RANSOME & CAMPBELL
Proprietors
European plan, 50c up
American plan, $1.25 and $1.50
Meals, 35c
Special Rates per Month

TREMONT—T. Oliver, Burt Logan, Slocan; W. F. Burgess, Wardner; W. N. Brown, F. E. Read.

Grand Central Hotel
OPPOSITE POSTOFFICE
American and European Plans.
H. H. PITTS, Proprietor.

GRAND CENTRAL—John W. Gray, Fernie; Milton McLeod, Oscar Nyman, Erie; S. Bridcott, Colville; J. Thomson, Springdale, Wash.; A. Harkonson, Proctor; N. A. McFadyen, Balfour; Mrs. Binkman, Trail; J. McLeod, Sandon; H. Erickson.

SHERBROOKE — J. Mathews, H Beck, J. W. McDonald, Slocan; R. Harthing, R. McDonald, Erie; George Turner, Midway; F. Bigney, Rossland; Gust Berg, William's Siding; F. Miller, Arrowhead.

When Taking a Vacation

go to the Great Halcyon Hot Springs, where you can secure not only rest, but at the same time have the benefit of the best medicinal waters on the continent, unequaled for rheumatism and kindred ailments. The springs are easy of access to travellers and the hotel has been fitted up and is conducted with a view to the maximum of comfort and convenience for guests.

Rates: $12 and $15 per week, or $2 per day and upwards.

Halcyon Hot Springs Sanitarium
WM. BOYD, Proprietor.
Halcyon Arrow Lakes

HOTEL ARRIVALS OF A DAY

The Hume
Table d'Hote and a la Carte

HUME—W. E. Robinson, Castlegar; George Hamilton, Brantford; Alex. Stewart, Rossland; F. R. Wolfe, F. H. Gaskill, Spokane; S. G. Wilsheimer, Colville; Stanley Pratt, Vancouver; T. C. Peck, Midway; W. J. Gamble, B. I. McCall, Montreal; Mrs. J. McMahon, Creston; T. A. Rodley, Fred Irvine, R. L. McBride, City; B. J. McKenzie, Vancouver; J. W. Ford, Edgewood; Edwin Gissing, Toronto; V. D. Doty, Vancouver; B. S. Chipp, Montreal; G. Noel Brown, London; H. M. Budd, Calgary.

JAMES MARSHALL, Proprietor.

STRATHCONA—Miss F. I. G. Bond, George E. Doherty, Miss Doherty, Portland; L. H. Moshier, Calgary; J. A. Tauns, Vancouver; D. Cummins B. Hartman, Salmo; Carl Larson, City; Miss J. Earle, B. Heitz, Chicago; R. H. Cross, J. Herkless, E. V. Blunt, R. R. Reiser, J. Reader, Edmonton; C. E. Fraser, Vancouver.

Queen's Hotel
Steam Heat in Every Room.
Business Lunch 35c.
Rates: $1.50 and $2.00 Day.

QUEENS—P. O. Meacham, Marcus; J. O'Keefe, Northport; Rev. H. A. Bain, New Denver; A. Sutherland, City, P. Wood, J. Wood, Spokane.

Madden House
E. C. CLARKE
Cor. Baker and Ward Sts., Nelson.

MADDEN—Hugh McVicar, Ainsworth; R. Chadwick, Mr. and Mrs. W. E. Fowler, E. Hacking, Stettler; J. Dunn, Greenwood.

Klondyke Hotel
Vernon Street
Headquarters for miners, Smeltermen, loggers, railroad men.
Rates, $1.00 per day up.
NELSON & JOHNSON, Props.

KLONDYKE—Dolph Anderson, C. Paulson, Lardo; P. Isaacson, Tony Tepic, Peter Anderson.

Kootenay Hotel
Two Doors from Postoffice
Vernon Street
Rates $1.00 and $1.25 per day. Every convenience given to the traveling public. Electric piano and union bar in connection, where the best of wines and liquors are kept.
MRS. MALLETT, Proprietress.

KOOTENAY—V. Bettist, Miss Smith Fernie; W. A. Thornton, Moose Jaw; Theodore Lens, Joseph Lundee, City.

Silver King Hotel
Baker Street
Under new management. Well furnished rooms, $1.00 a day and up. Best 25c meal in Nelson. Best brands of liquors and cigars, served by union men.
N. McLEOD, Proprietor.

SILVER KING—Ernst Hansen, John Andrews, Slocan; Ed Fraser, M. Edwards, Rossland.

A bridegroom is a person who spends a lot of money buying himself a wedding suit that nobody notices.—Dallas News.

Sport

ANOTHER HOCKEY TEAM ORGANIZED

Government Offices Team Will Enter City Amateur League—Well Attended Meeting

The members of the office staffs of the various government offices of the city last evening decided to organize a hockey team and elected officers and decided to make application to join the amateur city hockey league. There were about 20 present at the meeting last night and the following officers were elected:

President—J. Cartmel.
Vice-president, M. B. Wescott.
Secretary treasurer, R. V. Venables.
Manager, C. E. Richardson.
Committee, R. Morrow, G. Beeston and C. E. Richardson.

A meeting will be called of the committee shortly to decide upon club colors and other matters concerning the organization.

NEW SHELL FOR LOCAL OARSMEN

Committee Appointed to Arrange for Purchase—Big Season Expected in Rowing Club Circles.

A committee composed of T. D. Desbrisay, E. E. Robinson, James H. Grant and W. R. Allen was at last evening's meeting of the Nelson Rowing club appointed to arrange on the most suitable terms for the purchase of a four-oared shell for the club, which it has been found necessary to purchase in view of the unusual activities that are expected during the coming summer in rowing club circles through the holding here of the week of festival known as the Chalko Mika week.

At the meeting last night considerable pleasure was expressed among the members present that the club would this coming summer be given the opportunity of entertaining visiting clubs at a big regatta, and there promises to be a record membership for the club during the coming season, it is said.

A committee composed of T. Phillips and Mr. de Veber was appointed last night to audit the books of the club before the date of the annual meeting.

LOCAL ATHLETES IN HEXATHLON

Competition Will Be Held for Members of Local Y. M. C. A. in Competition with Other Associations

The physical director of the local Y. M. C. A. has arranged to have the athletes of the local institution entered in the annual hexathlon conducted each year by the athletic league of the Y. M. C. A. of Canada. The association will be included in class B of the competition which includes all associations except the Montreal central, Ottawa, Toronto west end, Hamilton and Winnipeg, which associations are included in class A of the event.

The athletes are divided into senior and junior divisions, the dividing age being 18 years. There are 12 events in which the athletes compete and a system of points is worked on the competitors who make the three highest total number of points in each class qualifying to have their names sent into the headquarters of the officials in charge of the event as representing the institution, and the institution whose representatives have the highest aggregate number of points carries off the prize. All competitions are held on the floor of the competitors' own gymnasium and competent judges and stop watches for timing will be provided.

The athletes of the local Y. M. C. A. are already practising for the event which, it is expected, will be held here some time in March and it is expected by the officials of the local association that a good showing will be made by the local entries.

Last year in class B division the senior events were won by the Vancouver association and the junior events by the Edmonton Y. M. C. A.

The events in which competitions are held are: 60 yard potato race, 220 yard potato race, running high jump, standing broad jump, 12 lb. shot put, fence vault, for the senior competitors and for the junior competitors the following events: 60 yard potato race, 150 yard potato race, running high jump, standing broad jump, 8 lb. shot put and the fence vault.

CALGARY CHINOOKS MEET DEFEAT AT EDMONTON

(By Daily News Leased Wire.)

EDMONTON, Alta., Jan. 7.—Edmonton Eskimos defeated Calgary Chinooks tonight in a provincial league game by a score of 8 to 4 before 3,000 spectators at the Arena rink. The local team got away to a good start and ran up four goals in the first few minutes of play.

At half time the score stood 5 to 3 in favor of Eskimos. For Edmonton Dea shone, while Laws was the pick of the visitors.

CANADIENS WHITEWASHED BY OTTAWA SEPTET

(By Daily News Leased Wire.)

OTTAWA, Jan. 7.—The Ottawas played again tonight in the form that made the "old silver seven" famous, and applied the whitewash brush to Kennedy's Canadiens. The score at the end of play was 6 to 0.

In the first stage of the game the Canadiens offered a strong defence and held the Ottawas to two goals in the opening period. They did not seem to be exerting themselves and many took it for granted that they would come through with a burst of speed toward the end.

Ottawa—Leseur, goal; Morell, point; Shore, cover; Ronan, centre; Broadbent, right, Darragh, left.

Canadiens—Vezina, goal; Depau, point; Laviolette, cover; Laloude, centre; Berlinquette, right; Smith, left.

Referee—Dave Power. Judge of play—Harvey Pulford.

Lakeview Hotel
Cor. Hall and Vernon.
J. G. SCHULTZ, Prop.
German Home Cooking
Renovated and Refurnished Throughout
The Best of Wines, Liquors, and Cigars Always on Hand

LAKEVIEW—R. Jenkins, Spokane; A. V. Johnstone, City.

JANUARY CLEARANCE SALE JANUARY CLEARANCE SALE

Today Is a Day of Supreme Value-Giving In This Sweeping Clearance Movement

Record-breaking buying is fast lowering our stocks of Winter Goods. That is the purpose back of this tremendous merchandising event. But there is still a vast amount remaining. A let-up in our activities at this moment would be fatal. Hence, we are rounding up groups of merchandise and cutting prices with renewed energy and redoubled vigor in order to make absolutely certain of a COMPLETE clearance. Still greater and more phenomenal saving opportunities are planned for tomorrow, so make every effort to be here.

It's for you to come and save. Economy and opportunity go side by side. Dependable merchandise only coupled to the lowest prices ever recorded in retail history.

Ladies' Suits

$20 Suits for $10.95

Twelve only, Women's Suits in Serges and Tweeds, some lined with silk others mercerized lined. All this season's styles and regular $20.00 values.

January Sale Price $10.95

$25 and $27.50 Suits for $12.95

Twenty only, Suits in Fine and Heavy Serge and Tweeds. Coats in cutaway style and lined with satin. The skirts show the new draped effect. A full range of sizes in the lot. Regular values up to $27.50.

ALL HIGH PRICE SUITS REDUCED TO ONE-HALF OR LESS

January Sale Price $12.95

Ladies' Coats

$25 Coats for $12.50

Eighteen only, Women's and Misses' Coats in new cutaway effects as well as the popular short coats. They are made of all wool tweeds or fancy coatings. A full range of colors in the lot. Regularly sold up to $25.00.

January Sale Price $12.50

$40 Coats for $19.95

Ten only, Women's High Class Coats, absolutely new in style and material. Mostly silk lined. Some are plain or fancy draped. Regular values up to $40.00.

January Sale Price $19.95

Odd Sizes in Wool Hose at 20c Pair

Heavy Rib Wool Stockings, only a few sizes left in the lot. Regular 35c values.

Sale Price 20c

Women's and Children's Underwear at Clearance Prices

Odd lines of Women's Fleeced Underwear, regularly sold at 35c.

Sale Price 20c

Women's 75c Vests and Drawers for 50c

Made of mixed cotton and wool in nice soft quality, full cut and open front vest. Regular 75c values.

Sale Price 50c

Children's Underwear Reduced 25 Per Cent

Children's Vests and Drawers, in mixed cotton and wool. Nice soft, fleecy lined. Sizes 2 to 14 years. Regular 45c to 75c.

Sale Price 35c to 55c

Reductions in Boys Underwear

Boys' Pen Angle Shirts and Drawers. Sizes up to 14 years. Regular 90c to $1.25.

Sale Price 70c to 95c

MEAGHER & CO.
The Store for Style and Value
Eagle Block, Baker Street

GANG READY TO DEVASTATE REGINA

Whole Police Force Will Be on Duty on Night Set for Beginning Outrages.

(By Daily News Leased Wire.)

REGINA, Sask., Jan. 7.—The "chief of the unemployed gang" who the other day sent a letter threatening to demolish Regina with fire and dynamite if the "white unemployed" were not found work immediately, has been identified as Jerry Miner. He revealed his identity in a rooming house frequented by unemployed, but left before the police were able to get there. The city is being searched for him. He comes from North Dakota.

Another letter has been received, setting Friday night as the time for opening operations against the city. This states that there are 83 in the gang, all well armed. This letter is also treated as a joke, except by the police, who have made arrangements to have the entire force on duty and ready for action on that night.

QUEBEC BEATS WANDERERS

(By Daily News Leased Wire.)

MONTREAL, Jan. 7.—Overcoming what at one time looked to be a commanding lead, Quebec earned the decision over the Wanderers tonight at the arena, 4 to 3, in a match requiring 18 minutes' overtime play to determine the winner. The match was one of the most gruelling witnessed in Montreal in years, and the soft condition of the ice toward the end of the game told against the Quebec players and they showed marked signs of fatigue.

GUNBOAT SMITH CHALLENGES CHAMPION

(By Daily News Leased Wire.)

SAN FRANCISCO, Cal., Jan. 7.—A cablegram has been sent to Jack Johnson by local promoters offering him a fight with Gunboat Smith for the heavyweight championship of the world, the bout to be held across the Mexican border at Tia Juana, Lower California, July 4, next, just four years from the day Johnson defeated Jim Jeffries. Smith, it is said, is willing to bind the match.

MEETING OF WESTERN CANADA LEAGUE CALLED

(By Daily News Leased Wire)

MEDICINE HAT, Alta., Jan. 7.—President James Fleming, of the Western Canada league, has called a meeting of the club owners for Jan. 26, to be held in this city. At the meeting the schedule will be considered.

MOOSE JAW DEFEATED BY WEYBURN IN OVERTIME

(By Daily News Leased Wire.)

WEYBURN, Sask., Jan. 7.—The Thistles of Weyburn tonight defeated the Moose Jaw team at Weyburn in a very hotly contested game. The score at the end of the first half was 2 to 2. Five minutes play for each goal was then allowed to decide the game. Weyburn scored in the first five minutes and the game ended.

INFANTILE MORTALITY IS DECREASING IN WINNIPEG

(By Daily News Leased Wire)

WINNIPEG, Jan. 17.—A decrease in infantile mortality in Winnipeg from 195.5 deaths per 1,000 births in 1912 to 162.2 deaths per 1,000 births in 1913 is the outstanding and much the most satisfactory feature of the annual report of vital statistics issued at the city hall today.

In spite of the fact that the record for 1913 in infant deaths is far from satisfactory as compared with many other cities in other parts of the country, the improvement will be hailed with great satisfaction, as it is believed to show that the special work done by the health department in recent years, and especially in 1912, is bringing tangible results. The total number of births registered in 1913 was 5,785, and the total number of the deaths of the infants under one year of age was 953.

COOPERATION IS ENDORSED

Slocan Valley Farmers' Institute Elects Officers—Cheap Money for Farmers Advocated.

(Special to The Daily News.)

APPLEDALE, B. C., Jan. 7.—The annual meeting of the Slocan Valley Farmers' institute was held in Appledale hall on January 3, when the officers for 1914 were elected. The directors are: Winlaw, C. Carter; Appledale, W. Marshall and D. F. Peters; Perrys, G. Stevens; Slocan City, T. Semolina. The secretary in his report showed that the institute in the past year had done over $7,000 in trade, cars of feed, etc. The institute passed a resolution endorsing cheap money for farmers, to be loaned by the government; also a resolution endorsing the co-operative buying and selling by a central agency, branches to be placed in all shipping centres. J. Dawney was elected delegate to the convention at Victoria.

The new directors held a meeting afterwards, when D. F. Peters was elected president, C. Carter vice-president and G. S. Godfrey was appointed secretary-treasurer.

WARDER GOT RAKEOFF FOR CASHING ORDER

(By Daily News Leased Wire.)

KINGSTON, Ont., Jan. 7.—The penitentiary probe took a lively turn this morning when a guard, Frank Randall, formerly of Peterboro, confessed to securing money for a convict in the penitentiary through a postoffice money order which the chairman produced, and securing a "rakeoff" for his efforts. He admitted having received a money order for $20 and stated that he gave the convict $15 and kept $5 for himself. This was the last of July. There were other similar transactions. Randall was the only guard called at this session, but others will follow.

FORT WILLIAM, Ont., Jan. 7.—The mild weather which has been so remarkable this winter at the head of the lakes is still continuing, and today rain was falling in the cities of Fort William and Port Arthur. There has not yet been enough snow to make sleighing and the harbor is so free of ice that tugs have no difficulty in towing the vessels to and from the elevators to take on cargoes for winter storage.

Father, teaching his six-year-old son arithmetic by giving a problem to his wife, begs his son to listen.—Father: Mother, if you had a dollar and I gave you five more what would you have?—Mother (replying absently): Hysterics.—Brooklyn Life.

AN ARROW Notch COLLAR
2 for 25 cents
Cluett, Peabody & Co., Inc. Makers, Sales Dept. Montreal

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Ruling
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The Daily News Job Department does work of the highest order.

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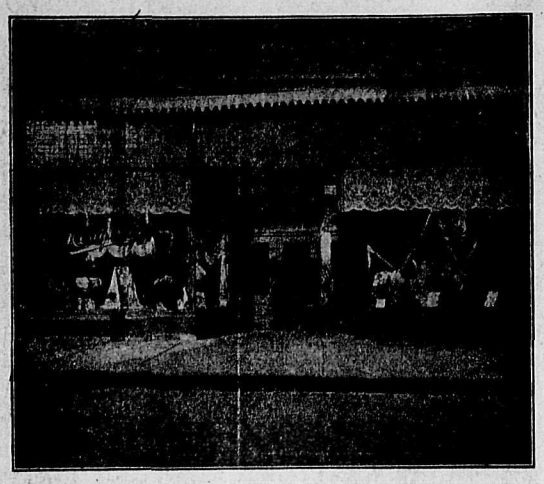
THE DAILY NEWS JOB DEPARTMENT
Nelson, B. C.

NELSON'S PROGRESSIVE BUSINESS MEN



MEAGHER AND COMPANY

The Home of Fashion in Nelson

Meagher & Co.'s store is in the Eagle block, one of the finest buildings in the city. The store is one of the largest in the interior of British Columbia, extending the whole length of the building. Well lighted, beautifully fitted up and furnished, the store always presents a most attractive appearance. This is the case particularly on account of the attention which is paid by Mr. Meagher and his staff to displaying the heavy and up-to-the-minute stock which this company always carries.

Meagher & Co. are known throughout Kootenay and Boundary for the fact that their stock is purchased with advance knowledge of fashions that it cannot be excelled by the stocks carried by the immense stores of the metropolitan cities.

Under the supervision of capable people, the various departments that are maintained here number dry goods, fancy goods, ready-to-wear, neckwear, knit goods, children's wear, house furnishings, boys' clothing, furs and millinery. All goods stocked by this large concern are from the leading manufacturing houses of Canada, who set a pace in all the latest styles and fashions. Considering the fact that Meagher & Co. only do a retail business in this city, a very large and complete stock is carried by this firm, averaging for the year $65,000 at wholesale price.

Efficient service and courteousness that is given by the staff of this firm, whose employes number twelve, aids in keeping up the reputation of the firm of Meagher & Co., which is known not only in Nelson, but all through the Kootenays and Boundary towns.

The results of the experience of Mr. Meagher, who has had 23 years' experience in the dry goods business are *illustrated by his ability as a sales*man and manager.

On entering the store the shopper is at once attracted by the prompt attention and courtesy displayed by the sales force, which delights in showing the splendid stock which is carried. There is no compulsion to purchase; Meagher & Co. rely on the quality and design of their goods to make sales, and leave it entirely to the customer to make a selection from the bargains which are offered.

BRITISH COLUMBIA MINING EXCHANGE AGENCIES

NELSON, B.C. CANADA

The B. C. Mining Exchange Agencies, a licensed registered firm of this city, carrying on a general mining and brokerage business, has connected with it as manager and mine examiner Mr. Edward Peters. Mr. Peters has given the most of his attention to the mining industry in the Kootenays for the last 18 years. With his practical knowledge and system of making investigations, the firm is kept in constant touch with the various properties throughout the district and more especially those available by purchase.

This firm makes a specialty of dealing in mineral properties, such as gold, silver, copper, molybdenite, lead, zinc and iron mines, prospects and stocks; and with their manager's years of practical experience, prospecting and underground mining in the interior of British Columbia, they are placed in a position to make selections, protect and satisfy the investor. It will be to the interests of non-residents wishing representation here, and intending investors, to get in touch with this firm, advising them of their requirements.

Not a single complaint, nor failure, has been reported to the firm for the year just closed; quite to the contrary, excellent results have been met with in nearly every instance where developments have been carried on to any extent, and more excellent results may be looked for during the present year.

It is the intention of this firm to promote a purely development and exploration company, so as to take over and put in better shape for the market, certain properties known to be worthy of attention, but as yet too much in the prospective stage for the larger companies to take hold of. Under the firm's plan greater encouragement will be given to outside capital and investors in general. Any wishing to take advantage of the first issue of treasury stock in this Development Company should at once communicate with this firm for further particulars.

The excellent display of ores in the offices of the firm is a credit not only to the firm but to the city of Nelson, the interior and British Columbia as a whole. It of itself speaks volumes for the mining possibilities of the interior. Many authorities on mineral's from nearly every part of the globe, in addition to members, ministers and others in authority in the Dominion, visited the Exchange during the past year and expressed themselves as being highly pleased with what they had seen.

BELL TRADING CO.

The establishment of the Bell Trading company, notably attractive from without, conveniently and efficiently arranged within in its new quarters on Baker street, in the McCulloch block, is one in which every citizen in Nelson should take pride. Prompt service in transaction of business, quantities of goods shown, all are features which not only bring trade to this large organization but give the public generally the knowledge that in Nelson the most modern methods of merchandising are practised.

There is little to demand in goods or service that cannot be supplied by the Bell Trading company, the leading grocery house in this city. The extension in space was made by this company because the Bell Trading company being the leader in the field was desirous of making all possible advancements.

The variety of delicacies and unusual foodstuffs that may be obtained here, as well as fancy groceries of all kinds of staple goods, have aided in making the reputation of this firm. Nothing but the best of fish, meats, sauces in tins, fruits, cheese and confectionery are stocked by this reliable firm and all goods bear the trade marks of the best known packers in the world. The two large display windows, attractively dressed, and the white painted shelves, can give the observing purchaser no other idea than that cleanliness is a leading motto of the Bell Trading company.

With Mr. Harry Amas as president and J. Teague as secretary and treasurer, both experienced and practical men in the grocery business, makes this well known firm not only a credit to its principals, but an advantage and asset to the entire community.

THE TREMONT HOTEL

A Popular Hostelry

Any business which has been established a long time may make it well known, but unless that business is properly conducted it may be well known without being well patronized. Thus, when a business has been established for years and has been managed efficiently then it gains double benefit. As the Tremont hotel, on Baker street, is one of the oldest hotels in Nelson, this fact makes it well known and now, as in other years, the Tremont hotel has been so conducted as to make friends and patrons that are lasting and appreciative.

The Tremont caters principally to miners, ranchmen and other industrial people and has done so during the past 24 years, this giving the Tremont hotel a reputation that has been published in all parts of the country. Cleanliness in beds and wholesome food is catered to a guest at the Tremont.

For the past three years, under the proprietorship of F. E. Ransome and A. Campbell, the business has been conducted with thoroughness and enterprise.

CANADIAN GENERAL ELECTRIC COMPANY

Wholesale Electric Supplies

The Canadian General Electric company, with a local branch in this city, known as as Canadian General Electric company and Canadian Allis-Chalmers, Limited, is situated on Baker street and under the able management of Mr. H. A. Parker. It is the largest wholesale house for electrical supplies in this district, and with the large stock of supplies it carries on hand is able to furnish Nelson patrons with what they desire. They are also well known in the Kootenay and Boundary district for the satisfactory contracts they have finished.

CORNWELL & CO.

Commencing in business over six years ago, Cornwell & Co., bakers confectioners and caterers, have grown from a small bakery to one of the most up-to-date bake shops in the city of Nelson.

In catering to the public, Cornwell & Co. aim at conducting a first class business. Cleanliness ranks first with this well known bakery in the manufacture of their goods. Nothing but the choicest of material is used in all goods manufactured. One of the finest displays of cakes and pastry can be seen at this reliable company. The distribution of their goods to such towns in the district as Portland, Greenwood and Trail has been by far the largest of any previous years.

The success in business during the past year is due to the fact that not only is *Mr. Cornwell a practical* baker, his years of experience numbering nearly 30, but also because of his efficiency in directing the merchandising end of the business. Residing for 13 years in the city of Nelson accounts for Mr. Cornwell being a so well known citizen and business man here.

J. H. RINGROSE

One of the oldest pioneers and residents in Nelson, Mr. J. Ringrose, was born in England, coming to Canada in the year 1881. Since the year 1886 Mr. Ringrose has resided in the province of British Columbia. During his many years as a resident in this province, this well known pioneer has worked at telephone and electrical labor, and from the latter especially he has gained a wide knowledge and experience in electrical installation work, which business Mr. Ringrose is now conducting.

Before opening up a business for himself in Nelson in the year 1901, Mr. Ringrose was employed with various telephone and electrical companies. In the year 1888 Mr. Ringrose was employed by the old electric light company of Vancouver. Coming to Rossland and Trail in the year 1895 this old time resident was instrumental in installing the telephone equipment in both of these towns. From the year 1898 to 1901 Mr. Ringrose was employed by W. P. Dickson, now consulting electrical engineer of Victoria, installing independent lighting and power plants. While in this employ, he aided in completing the installation of the first electric light plant in Kaslo.

Since his start in business in this city. He has handled all the large contracts in the district, such as the public schools, court house, Kaslo court house, Methodist and Presbyterian churches, Canadian Bank of Commerce, hotels and many others. At the present time Mr. Ringrose is wiring Vernon court house, a $6,000 contract.

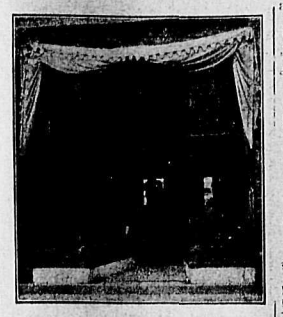
Having been a resident of Nelson for over 13 years, Mr. Ringrose has not only made himself well known by his satisfactory catering to the people in Nelson in installation work, but has made the surrounding districts look to the prosperous city of Nelson, especially for electrical installation work.

THE ATHABASCA HOTEL

John Philbert, Prop.

The subject of this sketch, Mr. John Philbert, was born in Gaspe county, Quebec, forty-six years ago. He left home when he was fourteen years of age and has since made his own way in the world. He was first employed in the lumber camps of the Ottawa valley, after which he went to Michigan, where he also engaged in lumbering for some years. Following this he went into the bridge work and building, which he followed for ten years. He came to British Columbia twenty years ago, being attracted by news of the opening of this country as a mining district. He spent some years prospecting, being one of the locators of the famous Ymir mine, at Ymir, B.C. Later on he went into the hotel business in Ymir, after which he entered the butcher business in Nelson. After being engaged in that line of trade for three years he went to Cobalt, at the outbreak of the excitement there, and returning to Nelson a year or so later purchased the Athabasca saloon.

Mr. Philbert is just completing the erection of a fine thirty-room brick hotel on Baker street, which will be known as the Athabasca hotel, and to which the licence of his present *saloon will be transferred.* In the erection of this hotel, Mr. Philbert's ten years in bridge work and building have stood him in good stead. In less than two months he has erected a solid brick building, 50 ft. by 120 ft. in size, two stories high, and hopes to open up for business in it on Jan. 15, certainly a record in building operations in this country.



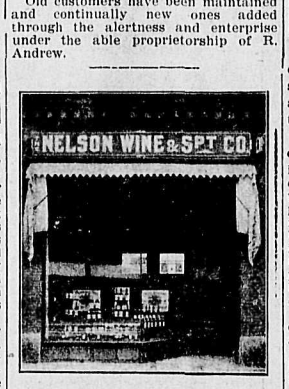
ROYAL SHOE STORE

R. Andrew & Co., Props.

Over ten years ago R. Andrew, proprietor of the Royal Shoe Store, came to Nelson, and since that time he has here conducted a successful business. As a result he has made the Royal Shoe Store the leading and most well equipped business house in this city. Having an experience of 23 years as a shoeman, Mr. Andrew is in a position to stock nothing but high grade footwear for both men and women.

One of the best exhibits in any part of the province in leading makes of shoes is shown in the display windows and show cases at the Royal Shoe Store, these attractive lines displayed are but specimens of what are carried in stock. The exhibits displayed both in men and women's footwear are in stylish lasts and manufactured by such well known concerns as the Nettleton, Invictus, Hager and Utz and Dunn's companies.

Old customers have been maintained and continually new ones added through the alertness and enterprise under the able proprietorship of R. Andrew.



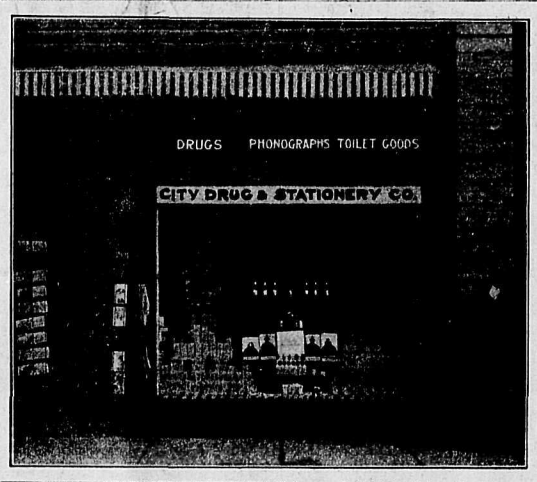
NELSON WINE & SPIRIT CO.

The Nelson Wine and Spirit company, under the able proprietorship of *Mr. Thomson, has now been one year* in its new location, on Baker street, and the increase of business has fully justified the change. The new premises are in a large new brick building and have all modern conveniences including a wine cellar, shipping room and also a spacious office.

Mr. Thomson gained his many years of experience when for 11 years he had the lease of the bar on the Canadian Pacific railroad lake and river boats and already he has established good connection in Nelson and the Kootenay district. Since taking over he proved by his first three years here it has shown a steady increase in both the wholesale and family trade.

The wines and liquors sold by this firm are nothing but the choicest, being imported from the United Kingdom, various European countries. The stock carried by this wholesale firm is complete. They are agents for Bell's Perth whiskey and Pabst Blue Ribbon beer, for which they have a large turnover in these special lines.

Notwithstanding the tightness in the money market during the past year their business has in every way been satisfactory and the prospects for the coming year are very bright.



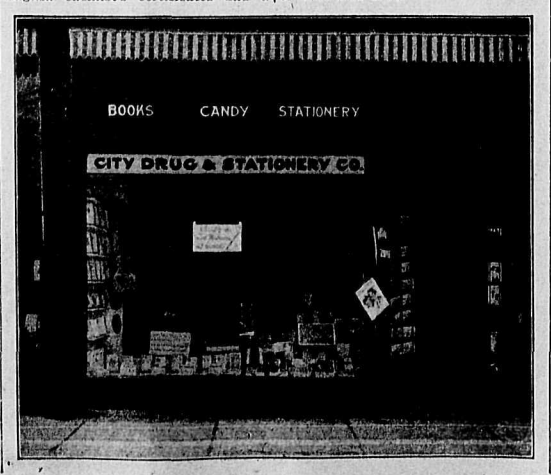
THE CITY DRUG AND STATIONERY COMPANY

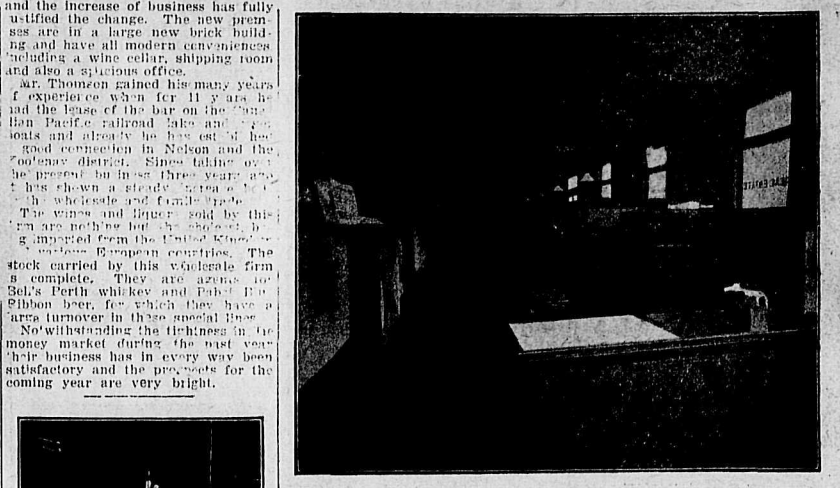
The City Drug & Stationery company of this city is Nelson's most progressive and substantial business house of its kind. This company is composed of men who are graduate druggists of Ontario and British Columbia, men who are all personally connected with and interested in the welfare of the business. This, together with a wide experience, is accountable for the phenomenal success of the business.

This large drug and stationery business is situated on Baker street, making that point Nelson's busiest section. Every department has reliable men at its head. Mr. A. Higginbotham as general manager, holds two diplomas as a druggist and has had a long and thorough experience in drugs and stationery. Mr. J. H. Argyle, who holds English chemist's certificates and a diploma of British Columbia Pharmaceutical association, has charge of the dispensing department and Mr. T. E. Higginbotham, a graduate of the Ontario College of Pharmacy, has charge of the drug department. As assistants to the general manager in the stationery and phonograph departments are Ross Higginbotham and Louis Kerr, whose duty it is to see that all customers are promptly and courteously waited on.

The store is a large one and arranged so as to display goods to the best advantage. This company carries a full line of drugs, toilet articles, fancy goods, men's shaving supplies, Kodaks, books, stationery, toys, Victor and Edison machines, and candy; sole agents for Neilson's and Willard's chocolates. A wholesale business is also done which means big purchases and consequently lower prices, enabling this well known firm to supply their many customers at prices below the *ordinary.*

A feature of the business is the mail department, where every effort is made to send out all orders the same day as received. Address all orders to P.O. Box 1083.





THORPE & CO., LTD.

Thorpe & Co., Limited, is a branch of the well known manufacturers of soft drinks who have their head office and a factory at Victoria and factories at Vancouver and Nelson.

This is the largest British Columbia concern manufacturing non-intoxicating beverages exclusively. The growth of their business may be divined from the fact that they started with a comparatively small factory in Vancouver in 1889, and in the following year built another in Victoria. When the importance of the Kootenay district became generally noticed in 1896, this progressive firm secured interests and built the Nelson factory in the spring of 1897.

W. R. Maclean, the present member of the provincial parliament for Nelson, who has been with the firm since 1892, came up and opened the Nelson branch and has continued to manage it ever since.

The influence of this firm has been felt in Nelson not only on account of their business success, but also because of the generous support which they have given to the general welfare of Nelson and the Kootenay district. Thorpe & Co., Limited, are *particularly noted for their ginger ale* and soda water.

CITY AND FARM LANDS LIMITED

Financial and Insurance Agents

The City & Farm Lands, Limited, successors to the Western Canada Investment company, with head office at Nelson, B.C., and branch offices at Vancouver and Moose Jaw, Sask. This company for seven years has done a general real estate and insurance business in Nelson, handling large tracts of Kootenay fruit lands and timber, and has located a large number of settlers on the Kootenay, Slocan and Arrow Lakes, along the west arm of the Kootenay river and the Slocan and Lardo valleys, who are now prosperous and satisfied ranchers.

The City & Farm Lands, Limited, of which Mr. John E. Taylor of Nelson is president and general manager, has been instrumental in securing a large amount of capital for loaning purposes on ranch property, the majority of which has been secured from the old country through the efforts of Mr. Taylor, who made a trip to England and Scotland two years ago for this purpose and since that date the amounts for loaning purposes have been steadily increasing.

Their insurance business is one of the best in the city of Nelson, representing the German Alliance Insurance Association of New York, National Fire Insurance Company of Hartford, British Canadian Underwriters, Norwich, England, Rochester German Underwriters Agency, Rochester, N.Y., Agricultural Insurance Company, Watertown, N.Y., Michigan Fire and Marine Insurance Company, Detroit. These are all board fire insurance companies and among the best in America. Agents for the British Columbia Life Assurance Company, Vancouver, also Norwich Union, and Law, Union and Rock, Accident Employers' Liability and Plate Glass Insurance.

The company has branches at both Vancouver and Moose Jaw, Sask. At the latter place they are joint owners and exclusive agents of Hillhurst subdivision, a high class residential property one and a half miles north of the post office. Street railway construction is under way at the present time, and will run a half mile beyond the property. Recent and proposed construction of Grand Trunk Pacific and Canadian Northern railway lines and terminals make it a very valuable property indeed.

Close attention is given to the handling of city property in Nelson and the building of the bungalow style of house has been tested by them and found to be satisfactory. Large listings of city properties are maintained.

It is a rule of this company to carefully inspect any and all propositions offered, and the result has been that their clients are satisfied at all times. They have unbounded faith in the success of the district and are doing their best to bring in the best class of settlers from the prairies.

CITY & FARM LANDS, LIMITED

John E. Taylor, General Manager

Real Estate and Financial Agents

Successors to Western Canada Investment Co.

Corner Baker and Josephine Streets
Phone 254 Nelson, B.C.

Code, Western Union Safety Deposit
Cable Address, Taylor Boxes to Rent

Insurance—Fruit Lands—City Real Estate
CHARLES F. McHARDY
Notary Public
Box 1230 Nelson, B.C.

Mr. McHardy, who occupies the office shown above and which is one of the finest in the province, has been a resident of Nelson for nearly 18 years, so is in a position to give good sound advice on any investment in Nelson or surrounding district. He also is operating a fruit farm, so is capable of advising persons contemplating purchasing fruit lands in the district.

In addition to his business duties, Mr. McHardy takes a keen interest in public affairs, and at all times is ready to render any assistance he can to bodies such as the Y. M. C. A., board of trade, farmers' institute and similar institutions that go toward building up a good clean progressive city.

THE WEST TRANSFER CO.

Teaming and Storage

The sign of many transactions of the West Transfer company is shown in the many strong and well conditioned teams that may be seen on the streets, busily employed at all times. Many times are transient guests or the citizens of Nelson impressed with the frequency with which the name of this well known company appears.

What was a solid investment in the year 1910 has become a still better one in the past year. They have erected a large and substantial structure on Baker street. This building, with its numerous compartments for storage is one of the best of the many accommodations of this city. Any persons who have household furniture and wish to store it when going away for the winter, may do so in the storage rooms of the West Transfer company. More than household furniture is stored here, the merchant finding he has no need of so much stock as he anticipated, can obtain space in the store rooms of this large concern.

The West Transfer company uses its own teams to bring these goods there for storage, but this is only a small portion of the operations the large number of horses are called on to do. In fact, all the heavy teaming in this city is done by the West Transfer company and in such a systematic and effective way is this work done that few concerns find it profitable to have transportation outfits of their own. Many large concerns in this city look to this firm for the transfer conveniences and the service that it provides, which gives satisfaction to the patrons and public.

Mr. George F. Motion, proprietor of *the West Transfer company, has been* in Nelson and in business for the past 16 years, and is today numbered among the leading business men in Nelson and is regarded as a representative and influential citizen.

Agents for Acme Coal, Bankhead Coal, Crows Nest Pass Coal company, Lethbridge Collieries, Princeton Coal company.

FOR THE NEW YEAR OF 1914

NELSON IRON WORKS, LTD.

A Flourishing Industry

One of the best known industries in Nelson is the Nelson Iron Works, Limited, which conducts a large business in the surrounding mining district on account of the first class work which it carries out. This large concern is well known throughout the province were mining supplies and machinery are required. *In addition to manufacturing machinery* the company is agent for several important standard lines.

The Nelson Ironworks, Limited, manufactures a drill sharpener which is shipped from Nelson to many parts of the continent. This machine is a splendid product of the ironworks which also makes tools and other equipment required in the mining industry.

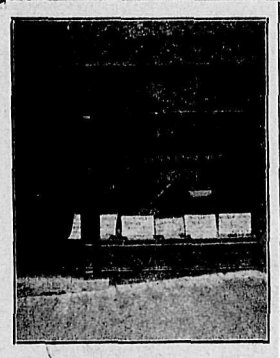
The company's shops occupy five or six city lots and more than 20,000 square feet of ground is needed for the stock carried and the manufacturing and repair operations.

Such notable manufacturing concerns, in steel and other products, as the Cammel Laird company's and Jenckes Machine of Sherbrooke, Ont., are represented by the Nelson Iron Works.

Upon very short notice the Nelson Iron Works can meet almost any demand that is made by mining or mill men. This widely known manufacturing company as well as catering to the mining industry has also the lumber industry to consider. For this industry it supplies machines that are used insaw mills, all of which are manufactured at the factory on Front street in this city.

The present company was formed in March, 1910, although part of the business taken over had been in existence since 1898. An amalgamation of the Rossland Engineering Works and the Nelson company took place when the present organization was formed. The following are the officers of the company: B. A. Isaac, president; Leslie Craufurd, vice-president; W. M. Cunliffe, manager and secretary, R. W. Hinton, who is works manager, and S. S. Fowler, director.

The long years of experience of these officers and directors in industrial life in this city have made this company one of the sound enterprises here.



ST. DENIS & LAWRENCE

Insurance.—We are local agents for the Imperial Life Insurance company, and represent strong and reliable companies handling fire, sickness and accident, employers' liability and plate glass insurance.

Fruit and Farm Lands.—We handle small and large tracts of fruit and mixed farming lands in the Slocan Valley and on the Kootenay and Arrow Lakes, and have listings of several choice properties, both improved and unimproved.

City Property.—We have on our lists a number of good residences, building lots and business properties.

Bonds.—Contractors, administrators and fidelity bonds handled with a minimum of red tape and delay.

Stocks.—We handle on commission mining, industrial and investment securities of all kinds.

Investments. — We have frequent opportunities of placing funds in first mortgages and other gilt-edged investments returning good interest and with ample security.

Prompt attention given to inquiries by mail.

ST. DENIS & LAWRENCE
509 Ward Street Nelson, B.C.

NEW NELSON FIRE HALL

Built by John Burns & Son

The property occupied by the well-known firm of John Burns & Son, *contractors' and builders' supplies dealers*, is situated in the heart of the business section, on Vernon street, covering almost an entire city block. Since August, 1910, when this firm located on Vernon street, their business has steadily increased.

As both Mr. Burns and his son have had numerous years of experience in this line of work, they are able to supply all the materials that are needed in the construction of a home. The senior Mr. Burns has been a contractor in Nelson for the past 15 years. As well as being a progressive business man, he is a practical man and all the modern improvements in the building trade have been incorporated by him and put into practice.

The firm of John Burns & Son stands foremost in the building field in this part of the province, Mr. Burns, Sr., being one of the best industrial men and well known citizens in Nelson.

CHOQUETTES' BAKERY

The above two well known figures, A. Choquette and L. H. Choquette, came to Nelson from near Montreal nearly 12 years ago. Starting on a very low scale, they have today the largest bakery business of the interior of British Columbia. Their bake shop is well equipped with modern machinery such as a dough mixer and ice cream freezer, run by electricity. Eight men and two ladies compose *the staff employed by the Choquette* Bros. Three wagons, used for the delivery of bread, are daily in operation on the streets of Nelson.

They have one of the neatest ice cream parlors in British Columbia, where ice cream is served made from pure local cream.

The Choquette boys have made a name for themselves by using only high grade materials in the manufacture of their goods. That this is surely very much appreciated is certain, the proof being the immense increase in their business.

KOOTENAY LAKE SASH AND DOOR FACTORY

Waters & Pascoe, Props.

The fact that the contracting firm of Waters & Pascoe is also proprietors of the Kootenay Lake Sash and Door Factory is not only a credit to this well known firm of contractors, but is advantageous to the city of Nelson. *Although their mill has only* been in operation for the past three years, there has been a continual expansion that calls attention to the facilities of the organization and the resources that are afforded in the city of Nelson.

The reputation of this firm is not only known in Nelson, but all over this district, where its substantial structures have pleased the owners as well as the public.

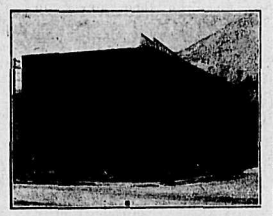
At their splendidly equipped factory on Front street, such other work as he carving of wood to any design and the manufacturing of sashes, doors and hardwood fixtures is carried on and their excellent products are shipped to all parts of the Kootenay and Boundary district, and to other parts of British Columbia where their *excellent workmanship has earned* an enviable reputation.

During the past year the services of this well known firm as well as being required in so many operations outside of this municipality have also been many in this city. Several notable structures completed during the past year have been the Dominion hatchery at Gerrard and the Provincial Land Registry building in this city, *just recently completed. Other* work completed during the past year by this reputable firm was the erecting of two summer residences at Willow Point and Grey's Creek and a modern barn at Harrop. Also there has been during the past year abundance of construction material shipped to Rossland.

Both Messrs. Waters and Pascoe are well known citizens of Nelson. Mr. *Waters having been in business here* for over seven years, being in business for two years before engaging in his present partnership. Mr. Pascoe has been in Nelson about the same length of time and is a fully experienced builder. The progress and development of this reliable firm is due to the fact that features of this firm have been efficiency and ability.

R. J. CAMPBELL

Although only a resident of Nelson three years, Mr. Robert J. Campbell, now conducting a gents' furnishing and tailoring business at 518 Ward street, came here with a vast experience in this line of business. He makes a specialty in cleaning, pressing and tailoring. The swell dressed young man who wears Classic clothing is up to date in every respect. Mr. *Campbell*, who is the representative in Nelson for Classic clothing places a guarantee with every suit ordered through him.



A. MACDONALD & CO.

For the past 18 years, which time the A. Macdonald & company, wholesale merchants, whose local establishment gives Nelson and adjoining country a good service, has had a branch office in this city, now situated on Front street. As well as having a office in this city for the past 15 years. This large concern has branch offices in Vancouver, Fernie, in the province of British Columbia, and various ones in other provinces, the head office being located at Winnipeg. They have occupied their new premises, a fine large brick building of three storeys and with a frontage of 50 ft., situated on Front street, for the past four years.

Not only has the A. Macdonald company built up its own trade, but also calls attention to Nelson as a wholesaling and distributing centre. Their trade in this city has steadily increased and also their supplies to the surrounding district. As for a successful financial year, the past year shows results having surpassed all *previous years.*

The experience of T. D. Stark, who has been with the company as manager nearly seven years, has been applied effectively to the administration of the business in the Nelson branch office.

FRED A. STARKEY

Mining Broker
NELSON, B.C.

As is generally known, the mining interests in the interior country in British Columbia are steadily forging ahead. Had it not been for the money stringency that gripped the country generally this past 18 months, we would have witnessed wonderful *achievements in the development of* our unquestionable mineral bodies. This financial tightness is gradually but surely passing away. No part of the Dominion has stood the strain better than the interior of British Columbia. We can safely predict that the year 1914 will eclipse any prevous record in the mining industries.

Now is the time for the investor to get in on the ground floor. There are splendid opportunities for the man wishing to invest in mining properties. My long residence in this country—some 16 years—makes me thoroughly acquainted with all phases of this in*dustry and places me in a position to* judge with great accuracy a l mining investments.

I have properties in all stages of development—from a prospect to a mine—that are well worth inquiring into. Your inquiries are respectfully solicited and will receive my careful and prompt attention.

Those having good properties that will stand investigation cannot do better than list with me at once as I am in the channel whereby I can satisfactorily place them.

SPECIALTY
Examination and Reporting on Properties
FRED A. STARKEY

NELSON HARDWARE CO.

Hardware, Sporting Goods and Sheet Metal Work

In a district like that in which Nelson is situated, the Kootenay and Boundary district, the centre of one of the richest mining, lumbering and fruit growing districts in the province of British Columbia, there is one line *of commercial activity which of neces*sity must be looked after with no little effort and that is the hardware business.

Nelson is the home of the Nelson *Hardware company*, which has its headquarters at 412 Baker street a handsome three-storey brick and stone block, under the roof of which can be found by the mine owner, prospector, builder or fruit rancher any article of hardware that is to be found even in the stocks of the largest dealers in hardware in the larger cities of the Dominion.

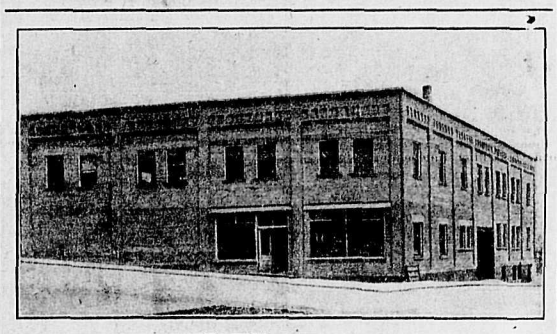
Nor does the company confine its activities to the hardware line alone for within its spacious store is to be found one of the most complete lines of sporting goods that is to be found anywhere in the Kootenay and Boundary. Lacrosse, baseball, tennis, cricket, football and all manner of equipment for the gymnasium are kept in stock and throughout the entire district the company is noted for the complete line of fishermen's supplies which it keeps in stock. In this line the firm has taken particular care to cater to the exclusive needs of the fishermen of the Kootenay and Boundary districts, which have become far-famed as the home of the rainbow trout.

During its 16 years of business in the city of Nelson, the firm has built up a reputation for square dealing and satisfaction to customers that has won for it the confidence of the people and a wide reputation as the people's store. With the vast growth of Nelson and district during these 16 years, the Nelson Hardware company has kept pace and proportionately growing with the growth of the city they have ever been ready to meet the demands placed upon them by their steadily growing number of customers.

One floor of the company's three-storey building is devoted to the tinsmithing department, where the needs of the city and district in this line are well looked after and some of the largest contracts that have been let in the city stand as excellent testimony to the class of work that is carried on by this branch of the firm's business.

Among the exclusive agencies which this firm is favored with carrying are the agency for the famous Round Oak ranges and heaters, Linkenheimer valves and fittings, Yale and Towne locks and builders' hardware, and Maple Leaf paints.

Throughout the year, from 13 to 16 men are constantly employed by the Nelson Hardware company in its spacious store and an obliging staff is ever at hand to offer the best of service to the customer at any time of the day.



BRACKMAN-KER MILLING CO.

The Home of "Purity" Flour

It was 'way back in 1896 that The Brackman & Ker Milling company opened their Nelson branch to distribute *"B. & K."* rolled oats and other breakfast cereals. A general "feed" business was immediately added, which has developed with the district.

Later, the business was incorporated under the name of The Brackman-Ker Milling Company, Limited.

A little over a year ago, this company acquired the flour mill of the Western Milling company, at Calgary, thus adding flour to their other lines, the principal brands being "B. & K. *Bread Flour," "Gold Seal"* and "Empire."

Later, again, "B. & K." decided to amalgamate with the Western Canada Flour Mills Company, Limited, makers of the celebrated "Purity" flour, thus giving the "Purity" people the benefit of the popularity and strong establishment of "B. & K." breakfast cereals in Alberta and British Columbia and gaining the prestige of "Purity" products and the eastern connections.

The Nelson branch carries full lines of "B. & K." goods and "Purity" flour, besides all varieties of hay, grain and feed, *and makes a specialty of poultry* supplies, Cyphers incubators and brooders, chemical fertilizers, sprays, grass and clover seeds and seed grain.

Both of these firms have an enviable reputation for straight dealing and prompt and courteous attention to business.

COLONIAL INSTITUTE AND VICTORIA LEAGUE COMBINE

Practical steps have recently been taken to effect co-operation between *two of the non-political associations* which aim at promoting the unity of the empire, namely, the Royal Colonial institute and the Victoria league. The two bodies have, in large measure, common aims, and while the work of the one is for the most part supplementary to that of the other, it was felt that without some machinery for co-operation there might be a possibility of overlapping. A joint standing committee, composed of an equal number of representatives of each association, has accordingly been set up and meets periodically to exchange information and confer with regard to the work of the institute and of the league, respectively.

Notices of lectures given by each society are circulated to members of the other and the corresponding secretaries of the Royal Colonial institute and the secretaries of Victoria leagues in all parts of the empire have been invited to co-operate in this and in any other way that may seem desirable. The Victoria league has circulated amongst its members at home *and overseas particulars of the gold* medal competition of the Royal Colonial institute. The corresponding secretary of the institute in Auckland has arranged to co-operate whenever possible with the Victoria league of that city.

The secretary of the Victoria league of Tasmania has reported that most of the fellows of the Royal Colonial institute in that state belong also to the league and attend its meetings.

During the recent visit to South Africa of J. R. Boose, the secretary of the Royal Colonial institute, the Victoria league of the Orange Free States gave him reception, at which Lord de Villiers spoke of the work of the two associations and expressed his approval of the co-operation between them.

WISH TO SELL TRY A WANT AD IF YOU HAVE AN ARTICLE YOU

Nelson Leads Way In Civic Utilities

ACQUIRES GAS PLANT AND STREET RAILWAY DURING YEAR JUST CLOSED—POWER PLANT AND WATERWORKS REVENUE PRODUCERS—PROGRESS IS MADE IN DEVELOPMENT OF CITY DURING PAST YEAR—STREETS MACADAMIZED

Acquiring during the year 1913 the plant of the Nelson Coke & Gas company and the system of the Nelson Street Railway Company, Limited, Nelson became the first city of its size on the North American continent to own its own gas plant, street railway system, hydro-electric power plant and water works.

For some years the waterworks and power plant have been profit producers under civic management and both the gas plant and the street railway are regarded as future profit makers.

In the power plant and other electrical equipment the city has invested $350,000, it has $50,000 in the gas plant and about $80,000 in the street railway *system which will be taken over and* operated by the municipality on Feb. 1. The gas plant was taken over on Jan. 1.

From the power plant the annual revenue is in the neighborhood of $62,000. The revenue from water works last year was about $24,500. The maximum rate charged power users is 4 cents net per kilowatt down to 2 cents with a discount in accordance with the amount of power consumed. For light the consumer pays from 10 cents to 4 cents per kilowatt according to the amount used.

During the past year a number of improvements were made at the power plant at Bonnington Falls, the most important being the construction of a new cement wall. One hundred and twenty-five new consumers were se*cured during the year and 224 services* were changed. This brings the total number of consumers to about 1,540.

The power plant consists of two units, with a development of about 2,300 horse power and during the past two years the plant has been running almost perfectly, power having been cut off only 20 minutes during that period.

The city has approximately 17 miles of water mains and during 1913 50 new connections were made. In the city 1,500 ft. of new mains were laid and 2,000 ft. were put down in Rosemont without any expense to the municipality.

In Nelson there are nearly 10 miles of sewers, 500 ft. having been laid during the past year and 17 new connections having been made.

Forty-five *hundred feet of new* wooden sidewalks were laid and 6,400 ft. rebuilt. Concrete walks put down totaled 1,095 ft. There are over 3½ miles of concrete walks and 16 miles of wooden sidewalks in the city.

Five blocks of street were graded during the year and three blocks were macadamized.

Building permits reached a total of $131,100. Sixty-five permits were issued.

Many Other Improvements.

Customs collections at the port of Nelson during 1913 totaled $151,355.65 and inland revenue collections amounted to $39,360.10, an increase of $267.29 over 1912.

During the year the system of tungsten standard lights on the main streets was *extended and illumination* of Nelson's business streets is now modern.

Two new hotels were constructed during the year and a $20,000 extension was made to a third hotel.

For the fire department an automobile truck has been ordered by the city council for delivery during the coming spring.

Nelson is the centre of a network of railways and steamboat lines and for that reason the amount of travel is very large. During the past year the Canadian Pacific railway has augmented its line of lake steamers by the addition of the splendid passenger boat, the Nasookin, the queen vessel of British Columbia inland waters. *During the coming spring* a new gasoline passenger boat will be placed in commission by the company for local service.

Nelson is a divisional point on the Canadian Pacific railway, a number of mines are being operated in the district immediately surrounding the city, in addition to the scores of other properties in the Kootenay-Boundary district, there are a number of industries in the city which in the aggregate employ a large number of men, and the city is the wholesale centre *for a large section of the province.* For that reason the payroll is a large one and the population of the city and suburbs, now between 7,000 and 8,000, is making a steady increase.

Next July Chah ko Mika week will *be held. This event will be the first* annual Nelson carnival and will be attended, it is expected, by thousands of persons from this province, the United States, the prairies and other parts of Canada.

WILLIAM JOHNSTON BUYS PICTURE SHOW

Former Nelson School Trustee Decides to Locate in Fernie—Has Resigned From Board.

William Johnston, who has resigned his seat on the Nelson school board, has purchased the Orpheum theatre at Fernie and states that he will run it as a first-class moving picture show.

Mr. Johnston has been a resident of Nelson for many years and was well known in labor circles, having been a member of the machinists' union and president of the trades and *labor council for several terms.*

NELSON VETERANS HOLD ENJOYABLE CONCERT

Many Contribute to Interesting Program—Both Branches of Imperial Service Represented.

An enjoyable evening was spent last night in the Veterans' hall by the Nelson and District Veterans' association and their friends under the chairmanship of Lieut. Thomas Brown. *An excellent program was rendered* by the following contributors: A. Blake, W. Cutler, G. Roach, J. Kelly, E. Lupton, G. Horstead, T. Neelands, C. Swannell, J. Floydd, T. Broughton, and H. W. Braddell. P. G. Morey acted as accompanist for the various numbers of the evening. Military songs with swinging choruses were the feature of the evening. Members present represented all branches of the service, both army and navy. All ex-military and naval men not already enrolled are invited to send in appli*cations for membership.*

GRADE WILL BE FINISHED BY NEXT JULY

(Special to The Daily News.)

VANCOUVER, B. C., Jan. 7.—Sir Donald Mann left tonight for Victoria to confer with the premier. It is announced that an extension of time beyond the stipulated period for completing the main line in British Columbia will be asked from the provincial government. The four years specified will be up next July, but on account of difficulty experienced in obtaining steel for bridges, and engineering handicaps which have had to be surmounted, Sir Donald did not *think the line would be linked up be*fore next September for through freight and local passenger service from coast to coast before the end of 1914. Sir Donald remarked: "We believe that the line will be in good shape for operating the transcontinental passenger service a few months later. We will have our line graded right through British Columbia by next July. There is now only a gap of 60 miles to be graded in the province on the section of the route from Albreda summit to Kamloops."

Sir *Donald said he had no new* railway schemes to lay before the provincial authorities and stated that work would be commenced on a large scale on the Vancouver terminals at an early date. He favored a joint depot here with the Great Northern. This is likely.

ANGELO GUILTY

(Special to The Daily News.)

NEW WESTMINSTER, B. C., Jan. 7.—Angelo was found guilty by jury tonight on all six counts of rioting at Extension last August. Sentence was reserved.

McQuarrie & Robertson

Branch Office: TRAIL, B. C.

Real Estate and Investment Brokers
Insurance and Financial Agents

Nelson

Insurance Companies Represented

ROYAL EXCHANGE ASSURANCE—FIRE AND AUTOMOBILE
YORKSHIRE INSURANCE COMPANY—FIRE AND LIVESTOCK
EQUITABLE-ALLIANCE INSURANCE COMPANY—FIRE
COLONIAL FIRE INSURANCE COMPANY—FIRE
BRITISH CROWN FIRE INSURANCE COMPANY—FIRE
NEW ZEALAND FIRE INSURANCE COMPANY—FIRE
ALLIANCE ASSURANCE COMPANY—FIRE
STATE OF PENNSYLVANIA FIRE INSURANCE CO.—FIRE
B. C. PLATE GLASS INSURANCE COMPANY—PLATE GLASS
CANADIAN RAILWAY ACCIDENT INSURANCE COMPANY—ACCIDENT AND SICKNESS AND EMPLOYERS' LIABILITY
MONARCH LIFE ASSURANCE COMPANY—LIFE

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for the Nelson Investment Company, Limited, of Moose Jaw, Sask., and own or control a large amount of Nelson Business and Residential Property.

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THE UP-TO-DATE SUBDIVISION OF NELSON

Lots for Sale in Columbia Heights, Trail

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Dealers for the White Company Motor Cars and Trucks. Automobiles for hire any hour day or night—passengers, baggage and light freight.

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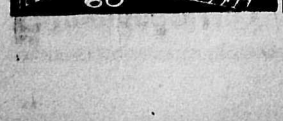

TELEPHONE 60

NEWS OF THE MARKETS

RECORD YEAR FOR BRITISH TRADE

End of Trade Boom Not Yet in Sight —Canadian Pacifics Flat

(By Daily News Leased Wire.)

LONDON, Jan. 7.—The stock markets were irregular, closing weak. Consols advanced on sinking fund purchases but reacted on the uncertainty as to the bank rate to be announced tomorrow, despite a further decline in bill and loan rates.

Americans were confused. The news of the distribution of B. & O. by the U. P. is taken as a policy to centralize railroad organization in the United States, and obscures the outlook. It may check interest in American railways.

Brazilian bonds were flurried by the failure of a group of rural banks in the state of Sao Paulo. It is a disagreeable reminder of the strain on Brazilian credit but is not viewed seriously here. Sao Paulo bonds were unchanged but the stock of the London and Brazilian bank fell 1½ to 30. C. P. R's. were irregular and flat, closing at 214¼. A report of a new international bull pool is not believed. G. T. R's. reacted ½ on profit taking. Land shares were steady. Dominion Steels were up 1. Mexican trams again advanced on an official denial of the report that the government intended to confiscate the franchise and property.

The trade returns for December are most satisfactory. Imports were $355,559,285, a decrease of $14,753,255, but exports showed an increase of $9,339,410, the total for the month being $216,634,600. The imports of the Canadian wheat were 2,333,300 cwt., valued at $4,457,345, as against 1,833,700 cwt. valued at $3,803,630 last year. The imports of the Canadian flour were 367,310 cwt., valued at $980,855, against 356,204 cwt. valued at $980,610 last December.

The total trade of the year thus compares:

Imports, 1913, $3,845,169,745; 1912, $3,723,203,155.

Exports, 1913, $2,127,307,080; 1912, $2,486,117,195, thus showing an increase of imports of $121,966,590, and a decrease in exports of $358,810,115.

Thus 1913 proves Britain's record trade and the feature is that the trade with Canada was no good there is a general belief that the end of the trade boom is not yet in sight.

STOCKS

PRICES ON NEW YORK MARKET UNSTEADY

(By Daily News Leased Wire.)

NEW YORK, Jan. 7. — Variable changes and moderate dealings constituted the chief characteristics of today's stock market.

U. P. moved irregularly with some slight gain in the preferred and a little weaker in the convertible bonds. B. & O. common sold off in the early dealings, but more than recovered later, with a gain in the preferred. Weakness of the New York Central and a few other items suggested apprehensions of dividend stability.

Best prices of the day were scored in the final hour. Interantional Harvester made a sudden advance of five points.

The following New York stock market quotations are supplied by Osler, Hammond and Nanton:

	Open	Close
Amalgamated Copper	72⅝	72½
American Car Foundry	44⅝	44¼
American Locomotive	33	32¾
American Smelting	64¼	63½
American Sugar	..	107
American Tobacco	..	244
Anaconda	34¼	34⅛
Atchison	94¼	94⅜
Baltimore & Ohio	88½	89⅜
Brooklyn Rapid T.	88	88½
Canadian Pacific	208½	208¾
Chesapeake & Ohio	60¼	60½
Chicago & Alton	..	107⅝
Chicago M. & St. Paul	99½	100¾
Chicago & Northwestern	128	128½
Consolidated Gas	130¼	130¼
Delaware & Hudson	..	151
Erie	28⅛	28⅜
Erie 1st pfd.	43⅞	44
Erie 2nd pfd.	..	35½
General Electric	..	140
Great Northern pfd.	127⅞	127⅞
Great Northern Ore	..	33¼
Illinois Central	..	108
Interboro	15	15
Kansas City Southern	24¾	25
Lehigh Valley	150	149½
Louisville & Nash	135	134¼
M. St. P. & S.S.M. (Soo)	..	126
Missouri, Kansas & T.	19	19
Missouri Pacific	24½	24⅝
New York Central	90¾	90⅞
Northern Pacific	111	111⅜
Pennsylvania	109⅞	109¾
Reading	169¼	169⅜
Southern Pacific	90⅝	91⅝
Southern Ry.	23⅝	23¼
Tenn. Copper	33¾	33½
Texas Pacific	..	13¼
Twin City	105¼	105½
Union Pacific	158½	158⅞
U. S. Rubber	58⅝	58⅝
U. S. Steel	59	58¾
U. S. Steel pfd.	107	107
Utah Copper	50½	49⅞
Wabash	..	2¾
Western Union	60¼	60
Wisconsin Central	..	42⅞

Total sales 351,600.

WINNIPEG STOCK QUOTATIONS

(By Daily News Leased Wire)

WINNIPEG, Jan. 7.—

	Bid	Asked
Can. Fire Ins.	150	...
Com. Loan	...	110
Empire Loan	109½	116
G. W. Life	242	265
G. W. Perm.	127	127½
Home Investment	135	138
Man. & Sask. Coal	...	90
Nor. Can. Mort.	120	...
Nor. Crown	86	88¼
Nor. Mort.	102¾	104
Nor. Trust	125	...
Occidental Fire	...	105
Standard Trust	...	175
Union Bank	138	138½
Winnipeg L. & M.	105	...
Winnipeg P. & G.	...	110

Sales—10 Union Bank 138; Nor. Mort., 30 p. c. 102½; 20 Nor. Trust 130.

ADVANCE IS CHECKED

(By Daily News Leased Wire.)

MONTREAL, Jan. 7.—The advancing tendency of the local market today was checked by lower prices for C. P. R. and Brazilian from London and a confused estimate with reactionary action in New York.

C. P. R. opened ⅝ lower at 208¾, advanced ¼ and then fell ½. The tone was slightly firmer in the afternoon and the last sale was at 208¾.

Brazilian followed much the same course as C. P. R., opening nearly 1 lower at 81¼ offering at 81⅞ at the close.

Power improved ¼ to 214½ on light buying and Toronto similarly rose ¾ o na few transactions to 135¼ and closed 135.

TORONTO STOCK SALES

(By Daily News Leased Wire.)

TORONTO, Jan. 7.—Brazilian 1,684 shares 81¾ to 81½; Hollinger 205 at 17.10 to 17.00; Can. Perm. 153 at 184; Commerce 73 at 200; Reserve 540 at 168; Coniagas 250 at 7.50 to 7.60; Steel of Canada 60 at 17¼ to 17½; C. P. R. rights 86 at 4 3-16; Nipissing 400 at 7.87.

Unlisted—Cobalt Lake 560 at .53; Nor. Ontario Exploration 300 at 2.75 to 2.90; Vipond 1600 at .10; Nor. Crown 500 at 212; St. Lawrence & Chicago listed $140,000 additional stock.

SPOKANE MARKETS

(Reported by St. Denis & Lawrence)

SPOKANE, Jan. 7.—

	Bid	Asked
B. C. Copper	$ 2.00	$ 2.50
Caledonia	.54	.57
Canadian	82.00	85.00
Granby	74.00	75.00
International	.33	...
Lucky Jim	.02½	.05
McGillivray	.14½	.17
Rambler	.18½	.23½
Snowstorm	.19	.25
Standard	1.53	1.50
Stewart	1.35	1.45

Sales—25 Granby $74.25.

VANCOUVER STOCKS

(Special to The Daily News.)

VANCOUVER, B. C., Jan. 7.—

	Bid	Asked
Nugget	$ ...	.25
Kootenay Gold	...	.09
Dom. Trust	...	1.06

GRAIN

WHEAT PRICES FIRM

(By Daily News Leased Wire)

WINNIPEG, Jan. 7.—A good demand for wheat and very light local receipts caused prices to hold firm, despite weaker Liverpool cables.

Winnipeg opened ⅛c higher for May ⅜c higher for July and closed ⅜c to ½c higher. Minneapolis opened ⅛ to ¼c lower and closed ⅜c higher for both months. Chicago opened ¼ to ⅜c lower and closed ¼ to ½c higher. Cash wheat closed ½ to ¾c higher for contract grades. Cash oats closed unchanged to ¼c lower. Cash flax closed 1¾ to 2c higher. Cash barley closed unchanged.

Winnipeg wheat close—Jan. 84⅝; May 90¼; July 91¾.

Oats—May 35⅝; July 37.

Flax—Jan. 1.27¼; May 134⅜; July 1.36.

Minneapolis wheat close—May 87⅞; July 89½.

Chicago—May 91½; July 87¾.

METALS

NEW YORK METAL MARKET

(By Daily News Leased Wire.)

NEW YORK, Jan. 7.—Copper unsettled; standard spot not quoted; Jan. offered at 14.37; Feb., March, April offered at 14.30; Electrolytic 14.62 to 14.75; Lake 15.00 to 15.50, nominal; Casting 14.37.

Tin easy, spot and Jan. 36.50 to 36.70; Feb. 36.55 to 36.75; March 36.65 to 36.85; April 36.75 to 37.00.

Spelter quiet, 5.25 to 5.40.

Iron quiet and unchanged.

London markets: Copper steady; spot £64; futures £64, 10s; tin steady, spot £167, 10s; futures £169, 5s; spelter £21, 11s, 3d; iron, Cleveland warrants 56s, 3d.

PRODUCE

MONTREAL PROVISION MARKET

(By Daily News Leased Wire.)

MONTREAL, Jan. 7.—Butter and cheese quiet. Demand for eggs good.

Cheese—Finest westerns 13⅞ to 14; easterns 13¼ to 13¾.

Butter—Choicest creamery 28½ to 29; seconds 26½ to 27.

Eggs—Fresh 48 to 50; selected 38; No. 1 stock 34; No. 2 stock 26.

Pork—Heavy Canada short mess barrels, 35 to 45 pieces, 30; short cut back barrels, 45 to 55 pieces, 29.

NOT MUCH IMPRESSED BY BANKERS' ARGUMENTS

(By Daily News Leased Wire.)

NEW YORK, Jan. 7—The federal reserve organization committee today concluded its hearing here, having devoted three days to ascertaling the views of New York bankers concerning the task with which the committee is charged of setting up the regional reserve districts provided in the new law, and selecting the cities in which the banks are to be placed. The committee, consisting of Secretary McAdoo, of the treasury department, and Secretary Houston, of the department of agriculture, will proceed tomorrow to Boston, the next point in its journey to the financial centres of the country. Hearings there will be held on Friday and Saturday.

After the hearings here had been concluded, Secretary McAdoo was asked whether he had been impressed by the arguments advanced almost unanimously by the New York bankers, who have appeared in favor of the establishment of a regional bank of such size that it would overshadow all the others.

"I hope," said the secretary smilingly, "that I am not as green as I look."

Mr. McAdoo allowed his questioners to draw their own conclusions as to what he meant.

SASKATOON DEFEATED

(By Daily News Leased Wire.)

REGINA, Sask., Jan. 7.—Back in good form again and playing a game that won for them premier honors of the northern division of the provincial league last year, and the runners-up for the provincial title, the Prince Albert Mintos tonight doubled the score on the Rajas of Saskatoon, taking the big end of a 6 to 3 score.

MEADOWS RANCH MODERN PROPERTY

Samuel Barkley Has One of Best Mixed Farming Propositions in District.

One of the largest and best developed mixed farming properties in this district is the ranch of Samuel Barkley at Meadows, near Salmo, according to S. P. Pond, manager of the Taylor Milling & Elevator company's Nelson branch, who recently visited the place.

Mr. Barkley has 70 head of cattle and his meadow land last year produced sufficient hay for his stock and a surplus of about 50 tons for the market.

His dairy is one of the most modern in the province, the separators, churns and other equipment being operated by electricity from a private plant, which also supplies light for Mr. Barkley's residence and farm buildings.

ALASKA MINERAL OUTPUT DECREASED DURING YEAR

(By Daily News Leased Wire.)

WASHINGTON, Jan. 7.—Alaska's mineral output decreased $3,500,000 during 1913, as compared with the 1912 figures. The territory's total production was valued at $19,900,000, as against $22,253,831 in 1912.

Accounting for the decrease, the geological survey report says that since more than $15,000,000 of the total mineral output is in gold and that two-thirds of what was produced by placer mines, the working out of old bonanzas, the exceptionally dry summer of 1913, and other local causes fully explain the figures. The survey found no shortage of auriferous gravels, although it noted that many deposits cannot be worked profitably under the present high cost of operation.

While the coastal region is developing at a rate which bids fair to overshadow all mining operations in the interior, the report says of lode mining operations, "no marked progress can be expected in the inland region until a transportation system is provided."

REALTY CHANCES OF ALL KINDS
for buying, selling, renting and exchanging in town, country, or at the seashore or mountains
ARE DAILY OFFERED IN THE WANT ADS.

NOTICE

In the matter of an application for the issue of a duplicate Certificate of Title to Lot 9 of Lot 4311 Group 1, Kootenay District, Map 742 and part (14.10 acres) of Block "C" of said Lot 4311.

Notice is hereby given that it is my intention to issue at the expiration of one month after the first publication hereof a duplicate of the Certificate of Title to the above mentioned lots in the names of Frances P. M. Townshend, Archibald O. Jenny and Henry J. A. Eyre, which Certificate is dated the 20th day of May 1909 and numbered 10719A.

Nelson, B. C., 12th December, 1913.
"S. R. ROE."
District Registrar

NOTICE

In the matter of an application for the issue of a duplicate certificate of Title to the West ½ of Lot 9, Block 1, Town of Nelson.

Notice is hereby given that it is my intention to issue at the expiration of one month after the first publication hereof a duplicate of the Certificate of Title to the above mentioned lot in the names of Bruce White and William P. Tierney, which Certificate is dated the 20th day of April, 1905, and numbered 4415A.

Nelson, B. C., 12th December, 1913.
"S. R. ROE"
District Registrar

WEST KOOTENAY LAND DISTRICT

Take notice that I, A. Larsen Kieraas, laborer, of Nelson, B. C., within 60 days after first publication of this notice intend to apply to the Commissioner of Lands and Works at Victoria for permission to purchase the following described lands.

Commencing at a post marked "A. L. K.'s" south-west corner and planted at the north-west corner of lot 397, thence east 100 chains more or less, thence north 10 chains more or less to south-east corner of lot 863 thence west 100 chains more or less to the south-west corner of the said lot 863, thence south along shore of upper Arrow lake 10 chains more or less to point of commencement, containing 100 acres more or less.

Dated this 25th day of November 1913.

A. LARSEN KIERAAS.

Tenders, addressed to the undersigned, at Ottawa, and endorsed on the envelope "Tender for Gasoline Launch" will be received up to noon of the twenty-sixth day of January, 1914, for the construction of a gasoline launch for the Fishery Patrol Service in the Province of British Columbia, of the following dimensions, namely:

Length over all ..... 55 ft.
Beam ..... 12 ft.
Draft ..... 5 ft.

Boat to be equipped with a three-cylinder, four-cycle, 8x10 in. Samson Engine or any other engine satisfactory to the department.

Plans and specifications can be procured upon application from the Chief Inspector of Fisheries at New Westminster, Inspector of Fisheries at Nanaimo, E. B. Schock, Vancouver, and from the Agent of this Department at Victoria, B. C.

Each tender must be accompanied by an accepted cheque on a chartered Canadian bank equal to ten per cent (10 p. c.) of the whole amount of the tender, which cheque will be forfeited if the successful tenderer declines to enter into a contract or fails to complete the boat in accordance with the tender.

Cheques accompanying unsuccessful tenders will be returned.

The Department does not bind itself to accept the lowest or any tender.

Newspapers copying this advertisement without authority from the Department will not be paid for same.

ALEX JOHNSTON
Deputy Minister of Marine & Fisheries
Department of Marine & Fisheries,
Ottawa, Ont., December 31, 1913. 225-6

ANNOUNCEMENT

Having been selected as candidates by the Trades and Labor council for the forthcoming civic election, we the undersigned solicit the suffrage of property owners and house-holders as aldermen who are in favor of clean administration for the residents of the city as a whole.

ALDERMAN AUSTIN
For West Ward
JOHN NOTMAN,
For East Ward
229-6

CORPORATION OF THE CITY OF NELSON

NOTICE

Public notice is hereby given to the electors of the Municipality of the City of Nelson, that I require the presence of the said electors at the City Hall on Monday, the 12th day of January, 1914, at 12 o'clock noon, for the purpose of electing persons to represent them in the Municipal Council as Mayor and Aldermen and on the Public School Board as Trustees.

The candidates shall be nominated in writing; the writing shall be subscribed by two voters of the Municipality as proposer and seconder, and shall be delivered to the Returning Officer any time between the date of this notice and 2 p. m. of the day of nomination and in the event of a poll being necessary, such poll will be opened on Thursday, the fifteenth day of January, 1914, between the hour of 9 o'clock a. m. and 7 o'clock p. m. at the City Hall for the East Ward, at 509 Kootenay street (the City Band Room) for the West Ward, and in the City Hall for that portion of the school district included in subdivisions No 98, 182, 304, 619, 5180, 5250, 5291, 5549, 3349, 9013, 683, 393, 6585, 370, 372, 7672, 3212, 909, 908, 3690, 7873, 7705, of which every person is hereby required to take notice and govern themselves accordingly.

The persons qualified to be nominated for and elected as mayor of such city shall be such persons as are male British subjects and the full age of twenty-one years, and are not disqualified under any law and have been for the six months next preceding day of nomination, the registered owner in the land registry office of land or real property in the city of the assessed value on the last municipal assessment roll of one thousand dollars or more, over and above any registered judgment or charge, and who are otherwise duly qualified as municipal voters.

The persons qualified to be nominated for and elected as aldermen for such city shall be such persons as are male British subjects of the full age of twenty-one years, and are not disqualified under any law and have been for the six months next preceding the day of nomination the registered owner in the land registry office of land or real property in the city of the assessed value on the last municipal assessment roll of five hundred dollars or more, over and above any registered judgment or charge and who are otherwise qualified as municipal voters.

The persons eligible to be nominated for and elected as school trustees of the Nelson School District shall be any person being a British subject of the full age of twenty-one years and having been for the six months next preceding the date of nomination the registered owner in the land registry office, of land or real property in the City School District of the assessed value, on the last Municipal Assessment roll, of five hundred dollars or more over and above any registered judgment or charge, and being otherwise qualified to vote at an election of school trustees in the said school district.

Given under my hand at the City of Nelson aforesaid, the fifth day of January, 1914.

W. E. WASSON
Returning Officer

SYNOPSIS OF COAL MINING REGULATIONS

Coal mining rights of the Dominion in Manitoba, Saskatchewan and Alberta, the Yukon Territory, the Northwest Territories, and in a portion of the Province of British Columbia, may be leased for a term of twenty-one years at an annual rental of $1 per acre. Not more than 2,560 acres will be leased to one applicant.

Application for a lease must be made by the applicant in person to the Agent or Sub-Agent of the district in which the rights applied for are situated.

In surveyed territory the land must be described by sections or legal subdivisions of sections, and in unsurveyed territory the tract applied for shall be staked out by the applicant himself.

Each application must be accompanied by a fee of $5, which will be refunded if the rights applied for are not available, but not otherwise. A royalty shall be paid on the merchantable output of the mine at the rate of five cents per ton.

The person operating the mine shall furnish the Agent with sworn returns accounting for the full quantity of merchantable coal mined and pay the royalty thereon. If the coal mining rights are not being operated, such returns should be furnished at least once a year.

The lease will include the coal mining rights only, but the lessee may be permitted to purchase whatever available surface rights may be considered necessary for the working of the mine at the rate of $10.00 an acre.

For full information application should be made to the Secretary of the Department of the Interior, Ottawa or to any Agent or Sub-Agent of Dominion Lands.

W. W. CORY,
Deputy Minister of the Interior

N.B.—Unauthorized publication of this advertisement will not be paid for.

ELECTION CARD

I hereby offer myself as a candidate for alderman in the East Ward, at the forthcoming election.

G. HORSTEAD.

NELSON CONSERVATIVE ASSOCIATION
Nelson, B. C.

A special meeting of the Nelson Conservative association will be held in the Board of Trade rooms on Wednesday, Jan. 7th, at 8 p. m. to elect delegates to the provincial convention at Victoria, and for other business.

Dated January 1st, 1914.

FRED C. MOFFATT
Secretary
223-6

DAILY NEWS CLASSIFIED AD. RATES

One cent a word per insertion, four cents a word per week, fifteen cents a word per month when cash accompanies the order. Otherwise one cent per word per insertion straight. No accounts opened for want ads. Minimum charge 25 cents.

HELP WANTED

NELSON EMPLOYMENT AGENCY
F. A. Newell, Manager
HELP PROMPTLY FURNISHED
PHONE 278 BOX 485

THE WORKINGMAN'S EMPLOYMENT AGENCY

WANTED — For logging camp; tiemakers; also 500 men to buy out my little stock of gloves, mutts, socks, cooks' aprons, and caps, razors, razor strops, cutlery, mirrors, mouth organs, blankets, rugs, shoes, slippers and much else. Everything must be closed out not later than Jan. 20. A very liberal discount. W. Parker, 312 Baker street. Phone 283.

FOR SALE

FOR SALE—Furniture and lease of 16 rooms over Starland theatre. Apply room 1. 223-tf

PIANO FOR SALE—Cheap, Gerard Heintzman, practically new. P. O. box 958. 228-tf

FOR SALE—Standard bred S. C. White leghorn cockerels, Tancreds trap nested strain from prolific winter layers. One pair Indian Runner ducks. Old Trusty incubator practically new. R. W. Chalmers, Thrums, B. C. *228-6

FOR SALE—A team of heavy horses; new harness; price $550. Large white Yorkshire boar, two years old, price $40. Plymouth rock cockerels $2 each. Marsden, Taghum, B. C. 227-6

FOR SALE—Good driving and saddle mare. Also harness and covered top buggy. W. Holmes, Cemetery Road, Nelson. *226-6

$300.00 buys gasoline wood sawing outfit. Fairbank's Morse engine. Steel saw frame, 20 and 36 in. circular saws with belts, batteries, etc. The whole mounted on low wagon truck and in perfect running order. Capacity 2½ cords per day. R. H. Baird, Nakusp. *226-

FOR SALE—Motor launch "Scarle Runner," length 23 ft., speed 16 miles per hour, seating capacity 6 persons. Also boat house and site. Am leaving town and will sacrifice for quick sale. Apply W. S. Longhurst, Canadian Bank of Commerce, Nelson, B. C. 225-6

AT LAST!—You could reduce the high cost of living by having your meals 25c at New Peoples' Lunch Room, Svoboda block. Best coffee and cake 10c; sandwiches 5c; white cook; reserved table for ladies. Peoples' Restaurant, Svoboda block, corner Baker street and Hall street, Nelson. *225-7

FOR SALE—Small millinery and dry-goods business. Good paying business for smart person, cheap. H. G. Cuddie, New Denver. 223-10

FOR SALE—Improved or unimproved fruit lands, from 5 acres up, 2,000 acres to select from. Situation, Kootenay Lake District. Easy terms. H. L. Lindsay, owner and locator, Nelson, B. C. 210-tf

THOROUGHBRED registered Berkshire pigs. Harry Anderson, Birchbank. 202-tf

CITY & FARM LANDS, LTD.
Successors to
Western Canada Investment Co.
REAL ESTATE AND INSURANCE.
John E. Taylor, Manager.

$1000 to loan on City Property. Interest 10 per cent.

Money to loan on improved fruit lands.

Have reliable client wanting to rent improved fruit ranch with option to purchase.

Have clients for 5- and 6-roomed houses close in to rent or buy.

CITY & FARM LANDS, LTD.
Corner of Baker and Josephine streets

FOR SALE—In Pend d'Oreille valley, excellent fruit land. Clearing light. Cheap. Terms. P. O. Box 965, Nelson. 147-tf

WANTED—MISCELLANEOUS

WANTED—Position as chef, good cook. Box 515 Daily News. *229-6

WANTED—Plain sewing of any description. Terms reasonable. Apply Mrs. G. A. Hardy, 506 Gore street or Gendel. *229-6

MONEY TO LOAN on approved security. Hamilton & Wragge. *229-3

MRS. LAYSON begs to announce that she will keep her studio open for three months before she takes a vacation. Pupils, advanced or beginners taken if application is made soon. Studio over Mason & Risch piano store. *229-6

WANTED—To buy six or seven roomed house close in, on two or three lots. State price and terms to Box 728 Daily News. 228-tf

WANTED—Three Pekin drakes. H. G. Slater, East Robson. *228-3

WANTED — Horse; thoroughbred heifer; leghorn pullets; one horse sleigh and Alredale bitch. Box 723, Daily News. *228-3

WAITRESS wants position in boarding house, out of town. Box 709 Daily News. *226-6

WANTED—Riveters and helpers. Apply Taghum Bridge. 224-6

LADY BARBER SHOP — 500 men wanted to have their hair cut. Children's hair cutting a specialty. First class work, 508 Stanley St., near Baker. *215-26

GOOD STEADY CAMP COOK wants position with wife as helper if desired. Box A X, Daily News. *201-26

FOR RENT

FOR RENT—Furnished housekeeping rooms. 515 Hall street. *227-6

FOR RENT—Furnished room. Apply 203 Silica street. *221-26

FOR RENT—Furnished housekeeping rooms; also bedrooms. Apply Mrs. Riley, McDonald block. *227-6

FOR RENT—Bed room and sitting room combined, 404 Silica St. 229-6

FOR RENT—Nicely furnished five-room house, modern, toilet and bath. On Mill street close to car line. Reasonable terms. Enquire 714 Baker St. *225-6

FOR RENT—Small house. Apply Office of the Nelson Brewery.

FOUND

FOUND—Postoffice key. Apply Daily News. 227-tf

FOUND—A muff which was left in P. O. a few days after Christmas. Apply to postmaster. 227-1

HOTEL DIRECTORY

SHERBROOKE HOTEL
Nelson, B. C.
One minute's walk from C. P. R. station. Cuisine unexcelled; well heated and ventilated.
LAVIGNE & DUNK

Business Directory

ASSAYERS

E. W. WIDDOWSON, ASSAYER AND Chemist, Box A1108, Nelson, B. C. Charges: Gold, silver, copper or lead, $1 each; gold-silver, $1.50; silver-lead, $1.50. Other metals on application.

AUCTIONEERS

C. A. WATERMAN & CO.—Opera Blk.

NELSON AUCTION MART — W. CUTLER, licensed auctioneer. Auction and sales room, 609 Ward St. Phone 18.

GROCERIES

A. MACDONALD & CO., Wholesale Grocers and Provision Merchants. Importers of Teas, Coffees, Spices, Dried Fruits, Staple and Fancy Groceries, Tobaccos, Cigars, Butter, Eggs, Cheese and Packing House Produce. Office and warehouse corner of Front and Hall streets. P. O. Box 1095. Telephones 28 and 29.

WHOLESALE PRODUCE

A. S. HORSWILL & CO., Wholesale Importers and Manufacturers' Agents. Produce, Fruits, Flour and Feed. P. O. Box 54, Nelson, B. C. Phone 121.

ELECTRICAL SUPPLIES

I. H. RINGROSE, 304 BAKER ST., Reid Block. Installation of electrical manchinery, telephone plants, house wiring. Repair work. Supplies carried. Phone A227. P. O. Box 155. 22-tf

HOUSE CLEANING

WINDOWS, CARPET AND CHIMNEY cleaning. House cleaning our specialty. Awnings, new and repairs. Vacuum Cleaning Company, Phone 428. Box 165. 277-tf

PROFESSIONAL CARDS

GREEN BROS., BURDEN & CO.
Civil Engineers. Dominion and B. C. Land Surveyors
Surveys of Lands, Mines, Townsites, Timber Limits, Etc.
Nelson, 516 Ward Street; A.H. Green, Mgr. Victoria 114 Pemberton Bldg.; F. C. Green, Fort George, Hammond Street, F. P. Burden.

GEORGE H. PLAYLE, Chartered Accountant, Auditor, Assignee, etc. Annable block, 513 Ward St., Nelson, B. C.

WILL HALDANE, ARCHITECT, 513 Ward street. Plans, specifications and estimates.

A. L. McCULLOCH
Hydraulic Engineer
Provincial Land Surveyor
P. O. Box 41
Office phone 1.86; residence phone R72
Office, Suite 6, McCulloch Bldg.
Baker Street, Nelson, B. C.

T. M. RIXEN, AUDITOR AND ACCOUNTANT. Room 15, K. W. C. Blk. 122-tf

H. PERRY LEAKE, CONSULTING Engineer, Nelson, B. C. 300-tf

LODGE NOTICES

KOOTENAY LODGE No. 16, I.O.O.F. —Meets every Monday night in Oddfellow's hall at 8 o'clock.

QUEEN CITY REBEKAH LODGE No. 16, I.O.O.F., meets first and third Tuesdays, Oddfellows' hall, 7:30 o'clock.

NELSON ENCAMPMENT No. 7 I. O. O. F., meets second and fourth Thursdays in Oddfellows' hall at 8 o'clock.

CANTON CORONA No. 7 meets every second Tuesday in Oddfellows' hall at 8 o'clock.

KNIGHTS OF PYTHIAS MEETS Tuesday nights in K. of P. hall, Eagle Bldg.

L.O.O.M. NELSON lodge No. 817 meets 2nd and 4th Thursday at 8 p. m. in Eagle hall.

F.O.E. Nelson Aerie No. 22 meets 2nd and 4th Wednesdays in Eagle hall.

A.O.F. Court Royal, Nelson No. 9204 meets on 2nd and 4th Mondays each month in K. P. hall at 8 p. m. Ladies' Court meets first and third Wednesdays.

C.O.F. Court Kootenay Belle meets 2nd and 4th Fridays in K. P. hall, Eagle Blk.

CLAN JOHNSTONE 212 MEETS IN I. O. O. F. hall first and third Fridays, 8 p. m.

NELSON LODGE, NO. 5, B. P. O. E., meets first and third Thursdays at 8 p. m. in the Eagle hall. All sojourning members invited. 130-tf

NELSON ASSESSMENT DISTRICT

Notice is hereby given that all taxes for the year 1914 for properties situate in the Nelson Assessment District, are now due and payable at my office in the Court House, City of Nelson.

And, moreover, take notice the publication of this notice is deemed to be equivalent to a personal demand by the Collector of all taxes due and payable by persons liable to pay the same.

Dated at Nelson, B. C., this 2nd day of January, 1914.

"S. S. JARVIS."
Collector Nelson Assessment District

LOST.

LOST—Lady's gold watch and fob; Elgin make; initials "E. C. L." on watch and fob. Return to Strathcona.

NOTICE

The Annual General Meeting of the Nelson Brewing Co., Limited, will be held in the office of the company, 517 Latimer street, Nelson, B. C., on January 22nd, 1914 at 3:30 p. m.

GEORGE S. HAWTHORNE
Secretary

WANT ADS BRING GOOD RESULTS

Our Great January Clearance Sale

Commences Today at 8.30 a.m.

There are few women in Nelson who do not look forward with lively interest to this event. It is a feast of bargains in which all may join, and is featured with saving opportunities in merchandise of every kind, every day requirement. We intend that this sale shall be a memorable one, and have accordingly arranged such a program of bargains that no one can afford to escape them.

Great Money-Saving Opportunities All Over the Store. Come and Take Advantage. See Our Window Display

Women's Cashmerette Gloves
WITH SUEDE LINING
Colors—Grey, Brown and Black
SALE PRICE
30c pair

Women's Cashmere Hose
SALE PRICE
FIVE PAIRS FOR
$1.00

Boots and Shoes

A SPECIAL SNAP ..... AT, PER PAIR **$3.95**

Fifty Pairs Men's Tan Calf Boots, in button and laced styles. Included in the lot are our special "Prince Rupert" and Geo. A. Slater makes. *Regular $5.00, $5.50* and $6.00 values.
Clearance Sale Price $3.95

MEN'S JERSEY TOP FIRST QUALITY STORM RUBBERS. Sizes 5½ to 11.
Special Clearance Price .. **$1.35**

ANOTHER SPECIAL—Of odd lines and sizes in Men's Patent, Tan and Black Calfskin Boots, in Hartt, McPherson and J. & T. Bell makes. Regular values $5.50 and $6.00.
Clearance Sale Price ... **$3.50**

MEN'S STORM RUBBERS—All sizes from 6 to 11. Our regular $1.25 line.
Special Sale Price ..... **.95**

BOYS' BOOTS—In several different styles and leathers.
At..... $1.95, $2.45 and $2.65 Pair

LADIES' TAN CALF BOOTS—Buttoned and laced styles, medium short vamps and new receding toes. "Empress" make, some with cloth tops, Goodyear welt soles. Regular $5.00 shoes.
Clearance Sale Price ... **$3.50**

ODD LOT OF LADIES' BLACK AND TAN BOOTS—Some button, but mostly laced styles, not all sizes, but a good variety. Regular $3.50 and $4.50 values
Special Sale Price **$2.95**

LIGHTNING HITCH HOCKEY BOOTS for Ladies and Boys. At
Special Sale Price **$2.85**

FELT SLIPPERS—In Men's Women's and Children's sizes, also Overgaiters and Leggings, all styles

AT A DISCOUNT OF
25 PER CENT
DURING THIS SALE

MISSES', CHILDREN'S AND INFANTS' FOOTWEAR—ALL AT EQUALLY LOW PRICES.

TRUNKS, SUIT CASES AND VALISES
AT A DISCOUNT OF
12 PER CENT
DURING THIS SALE

Extraordinary Values in the Men's Section

Talk about bargains! We have just put prices on reliable clothing and furnishings that should crowd these sections from morning till night.

Eight Only Men's Suits

TO BE CLEARED .... AT **$9.50**

These are not old stock, but odd sizes of this season's best sellers and being such they must move out. The materials are Imported Tweeds in shades of drab and brown, cut in the season's latest styles and finished with good quality linings. Only eight in the lot, in sizes 35, 36, 37, 39, and 42, so be on hand early. All one price.
To Clear at $9.50

Men's Suits

REGULAR VALUES TO $17.50 FOR **$11.95**

This season's latest styles, with three-button sacque coat and finished with best quality linings. The materials are Imported Tweeds, Worsteds, and Navy Serges in every desirable pattern and weave that a man would want. Our actual values to $17.50.
Clearance Sale Price $11.95

Men's Tweed Overcoats

A GREAT SNAP AT **$12.95**

Men's Winter Overcoats in brown and grey Diagonals and Fancy Mixture Tweeds. Full length models, with or without belt back, convertible collars and strap cuffs. Only twelve coats in this lot in sizes 36 to 42. Choose as early as possible when the assortment is at its best.
Special Clearance Sale Price $12.95

Men's Raincoats

REGULAR $14.50 TO $17.50 VALUES. TO CLEAR AT **$9.95**

A chance to get a first class up-to-date Raincoat at less than cost price. There are only eighteen in the lot, but all sizes are represented, from 34 to 44. Made of splendid quality Cravenette in Chesterfield or with convertible collar. Colors are dark grey and green mixtures and stripe effects. The cheapest coat in the lot sells regularly at $14.50 and there are others at $16.50 and $17.50.
January Clearance Sale Price $9.95

A Phenomenal Clearance---25 Dozen Men's Shirts

TO MARCH OUT AT ..... **.95**

Shirts that sell in the regular way at $1.25, $1.50 and $1.75. The assortment includes Negligee Shirts with soft bosom and stiff cuffs. Outing Shirts with soft turn down collar and cuffs. Come in fancy stripes and plain colors. Also a number of Working Shirts in sateens, drills, Ceylons, etc. Actual values to $1.75.
Clearance Sale Price 95c

Great Bargain in Boys' Suits

At..... **$3.25**

Every Suit is this season's style, made of strong Imported English and Scotch Tweeds. Coats are double breasted and the pants bloomer style, well lined and tailor finished. Come in medium and dark shades of brown and grey, also mixed effects. Sizes 24 to 30.
January Clearance Sale Price $3.25

Big Reductions on House Furnishings

Wilton Carpet Squares

Size 9ft.x10ft. 6in. Regular $36.00. January Sale Price $28.75

Size 9ft.x12ft. Regular $50.00. January Sale Price $36.50

Brussels Carpets

Size 9ft.x9ft. Regular $19.50. For $15.95

Size 9ft.x10ft. 6in. Regular $22.50. For $18.50

Size 9t. x12ft. Regular $26.00. For $21.50

Union Wool Squares

The best wearing Carpet Squares ever sold at this low price. Come in nice floral and conventional designs in colors of blue, green, crimson, brown and tan. In these sizes and prices:

FIRST QUALITY—
Size 9ft.x9ft. Sale Price $7.95
Size 9ft.x10ft. 6in. Sale Price $9.25

SECOND QUALITY—
Size 9ft.x7ft. 6in. Sale Price $4.95
Size 9ft.x9ft. Sale Price $5.95

Misses' Cloth Dresses

REGULAR $6.50 ..... VALUES FOR **$3.75**

Misses' Tweed and Serge Dresses, nicely made in one-piece styles and trimmed with pipings and fancy buttons. Suit ages 12 to 14 years. Regular $6.50 values.
To Clear at $3.75

Women's Vests and Drawers

REGULAR 65c and 75c .... VALUES FOR ..... **.50**

Odds and ends in Women's Wool Vests and Drawers, white and natural.
Reg. 65c and 75c values .....
Clearance Sale Price 50c

Women's Nightgowns

REGULAR $1.25 ..... VALUES FOR ..... **.95**

Made from splendid quality English Flannelette in button front styles. Choice of white or stripes. Silk embroidered or finished with trimming. Our actual $1.25 values.
Clearance Sale Price 95c

Women's Combinations

REGULAR $1.25 PAIR .. TO SELL FOR **$1.00**

Women's Wool Combinations, "Health" Brand, with high neck and long sleeves. All sizes. Regular $1.25 values.
Clearance Sale Price....$1.00 Pair

Men's Underwear

REG. VALUES TO $1.50 .... TO CLEAR AT ..... **.95**

Odd sizes and broken lines in Men's Heavy Ribbed Underwear in natural and cream color. Stanfield's and Penman's make and unshrinkable. Regular values to $1.50.
Clearance Sale Price 95c

Men's Heavy Working Socks

SPLENDID WEARING QUALITY
SALE PRICE ..... FIVE PAIRS FOR **$1.00**

Pre-Inventory Clearance of Women's Ready-to-Wear

Our policy of clearing out all Women's Suits and Coats in July and January is well known. This year the clearance will be equally emphatic and those who have been waiting for this opportunity to purchase will realize most extraordinary bargains.

Every Woman's Suit Must Go

Women's Suits, made of fine quality Serges, Whipcords, Fancy Tweeds, etc., in every wanted color, beautifully tailored and lined Skinner satins or silk serges.
Regular Values to $21.00. Sale Price $10.00
Regular Values to $24.50. Sale Price $11.95
Regular Values to $27.50. Sale Price $14.95

Women's Winter Coats

REGULAR VALUES TO $20.00 ..... CLEARANCE SALE PRICE **$9.95**

They are made of Scotch Mixture Tweeds, Blanket Cloths, etc., in color effects of grey, green, brown, etc. Full length styles, with cut-away or square fronts. Set-in sleeves and collars that can be worn open or fastened close up to the neck. Our actual values to $20.00.
Clearance Sale Price $9.95

Great Clearance of Women's Dresses

REGULAR VALUES TO $25.00 ..... CLEARANCE SALE PRICE **$12.50**

Included in this lot are Silk, Poplins, Messalines, Shot Silks, Corduroy Velvets, etc., with high or low neck and long sleeves. Some finished with self buttons and pipings, others with lace colors and cuffs or vests of fine Bretonne net. Colors are tan, grey, navy, saxe, wine, brown and black. Regular values to $25.00.
Clearance Sale Price $12.50

Sweeping Millinery Clearance

Trimmed Hats, in Velvets, Plush, Velour, Satin, etc. Distinctively trimmed with fancy ostrich mounts, wings, etc. All this season's popular styles.

Reg. Values to $10.00 CLEARANCE PRICE **$2.75**

Reg. Values to $15.00 CLEARANCE PRICE **$4.50**

Great Bargain in Lingerie Waists

WORTH TO $2.25 EACH ..... CLEARANCE SALE PRICE **$1.25**

Fourteen Dozen White Lingerie Waists, bought from an Eastern manufacturer at a big discount for cash and offered to you now at this bargain price. There are ten different styles to choose from and all have the new drop sleeves. Worth to $2.25 each.
Special Sale Price $1.25

All Wool Delaine Waists

REGULAR $3.50 VALUES. TO CLEAR AT **$2.50**

All-Wool French Delaine Waists, latest styles, showing fancy Paisley border on sleeves, collar and down front, finished with tiny velvet bow and fancy glass buttons. Come in grounds of cream, blue, green and grey, with neat spot effects. Sizes 34 to 42. Regular $3.50.
Clearance Sale Price $2.50

Budget of Bargains from the Dry Goods Section

Sheetings

72-INCH ENGLISH SHEETING
Clearance Sale Price
Per Yard 32½c

PILLOW CASES—Made from good quality English cotton. Size 42 and 44 inch.
Clearance Sale Price
Two Pairs for 75c

50c Huck Towels for 40c

Twenty-Five Dozen Pure Linen Huckaback Towels, fine quality, with fancy borders, hemmed ends. Size 19x38. A towel that will give good service. Regular 50c values.
Clearance Sale Price, Pair 40c

Grecian Bedspreads

REGULAR $1.50 ..... VALUES FOR **$1.25**

Three Dozen Only, Beautiful Grecian Bedspreads, size 72x90, in lovely designs. Regular $1.50 values
Sale Price $1.25

English Witney Blankets for $3.95

About 25 Pairs English Witney Blankets, 7 lbs. weight, size 64x84, with blue borders.
Special Clearance Price, Pair, $3.95

Down Comforters

REGULAR $4.75 ..... VALUES FOR **$3.95**

Real Elderdown Comforters, covered with downproof art sateen and well ventilated. Reg. $4.75 values.
Sale Price $3.95

Big Snap in Turkish Towels

AT ..... EACH ..... **.20**

Ten Dozen Turkish Towels, in white and colored stripes. Liberal sizes and splendid dryers.
Very Special at, Each 20c

Crockery Prices Will Entice Fast Selling

Table Tumblers, light and heavy. Reg. $1.25 dozen. Sale Price ...90c

Table Tumblers (Cut Flute). Reg. $2.00 dozen. Sale Price $1.50

Glass Water Jugs (3 pint size). Reg. 75c. Sale Price, each ...50c

Glass Cream Jugs. Regular 25c. Sale Price 10c

Glass Oil and Vinegar Bottles. Reg. 90c. Sale Price 45c

Glass Butter Dishes. Sale Price 25c

Glass Salt and Pepper (nickel tops). Regular 20c each. Sale Price .....2 for 25c

Brown and Decorated Tea Pots. Sale Price from.....25c to 85c

Ten Pieces Toilet Sets (splendid assortment). Sale Prices from, per Set .....$3.45 to $6.95

Plain White Cups and Saucers. Sale Price .....6 for 50c

China Cups and Saucers. Sale Price ...10c, 15c, 20c and 25c each

SEE OUR SPECIAL BARGAIN TABLE

Men's Heather Mixture Socks
Regular Values to 50c Pair
Sale Price ..... Three Pairs for **$1.00**

The Hudson's Bay Company

Incorporated 1670 Incorporated 1670

Women's Aviation Caps
IN WHITE AND ALL COLORS
REG. $1.50 VALUES .. SALE PRICE ..... **.95**

PICKLES

HEINZ DILL PICKLES
Per doz. 30c
HEINZ SWEET MIX PICKLES
Per quart 50c
HEINZ INDIA RELISH
Per bottle 25c

C. A. Benedict
Josephine St.

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and we must close on Sunday. Be sure and get what you want today.

Choquette Bros.
The Bakers and Confectioners,
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Fire Insurance

This is the time of year when fires are likely to occur.

If you are not fully protected, let us quote you rates.

We represent:

Phoenix Assurance Co. of London, England.

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H. & M. Bird
Nelson, B. C.

Ranchers Enjoyed Prosperous Year

GOOD PRICES WERE REALIZED FOR FRUIT CROP—OUTPUT GROWS RAPIDLY—MIXED FARMING INDUSTRY IN COURSE OF DEVELOPMENT — GOVERNMENT GIVES VALUABLE AID TO AGRICULTURE—GREAT MARKET AVAILABLE FOR PRODUCE OF KOOTENAY AND BOUNDARY

Good prices for fruit and other farm produce and a total output which exceeds that of any past year combined in 1913 to make the year the most successful in the history of Kootenay and Boundary agriculture.

It was a year of good rather than bumper fruit crops, but the large acreage which came into bearing for the first time resulted in the greatest total production the district has yet been credited with, and so rapidly are the orchards coming into bearing that the present year's output, it is estimated, will be double or three times as great as in 1913.

The Kootenay Fruit Growers' union, whose territory is chiefly the Kootenay lake and Kootenay river district, last year shipped out 13 straight carloads of apples to the prairie markets and a carload of apples was shipped privately to England from the same district, making a total of 14 carload shipments, compared with about five in 1912. Apples shipped through the union in 1912 in less than carload lots amounted to two carloads, and a large amount of fruit was sold individually, bringing the total output of apples of the district mentioned to probably 20 carloads.

For first grade apples an average price of about $1.50 per box was received by the grower at the point of shipment for apples sold in the prairie provinces of Alberta, Saskatchewan and Manitoba. Fruit shipped to England realized in London up to $5 per box.

Other fruit handled by the Kootenay Fruit Growers' union was approximately: Peaches, 1,500 20-lb. cases; pears 500 boxes; apricots, 500 cases; cherries, 15 tons. Fifteen tons of potatoes were sold through the union. In the neighborhood of eight cars of local grown potatoes were sold in other ways.

Production Grows Rapidly.

The union expects to handle 35 carloads of apples this year, the estimate being based on the new orchards which will come into bearing.

Small fruits were sold chiefly to the two jam factories in Nelson and a very large increase in the amount handled is shown. The Nelson Jam factory, of which J. A. McDonald is proprietor, in 1913 produced 12 carloads of jam and other products, which is over four times the output of this factory in 1912.

The Kootenay-Columbia Jam company in 1913 manufactured 177 tons compared with 92 tons in 1912 and 70 tons in 1911. This company purchased 199,817 lbs. of strawberries, 12,579 lbs of raspberries, 8,200 lbs. of gooseberries, 2,458 lbs. of red currants, 2,974 lbs. of black currants, 1,275 lbs. of blackberries, 1,762 lbs. of cherries 34,008 lbs. of plums, 3,755 lbs. of tomatoes, 64,820 lbs. of apples, 11,565 lbs of peaches, 2,323 lbs. of pears and 9,159 lbs. of apricots.

Poultry Industry Extends.

Great strides were made by the poultry industry in Kootenay and Boundary during the year and good prices were paid for eggs and table birds. In Nelson the price of eggs during the year ranged from 35 cents per dozen for a short period, to 80 cents. The price at the present time is 5 cents, which is probably very near the average for the year. Chickens retail at from 22 to 28 cents per lb.

In the fruit ranching sections mixed farming has been neglected, but with the increase in the poultry industry and the encouragement which is being given by the provincial government and the Canadian Pacific Railway company to the introduction of live stock this branch of agriculture is expected to take great strides during the next few years.

More attention is also being paid to raising hay and during the year several carloads of local grown hay were brought into Nelson.

Grand Forks Has Good Year.

In the Grand Forks district the ranchers also had a very successful year. The Grand Forks Fruit Growers' union shipped 17 cars of apples two of plums, two of prunes, one of pears and one of crab apples. The total price realized for these shipments was $12,531.15. Robert Lawson of that place shipped out 16 carloads of apples, which averaged $600 per car, and H. W. Collins shipped six carloads. Two thousand boxes were shipped by the Grand Forks Orchards company and 18 carloads of plums, prunes and apples were shipped from the Cover estate. This makes a total of large shipments from the Grand Forks district of about 66 carloads. Many smaller shipments were made, bringing the total output of the district to a large figure.

Output Heavy at Creston.

During the year small fruits, which realized $16,000, were shipped from the Creston district. Apples totaled in value $20,000; vegetables amounte to about $4,000, and tomatoes to $10,000, making a total of $50,000 up to the middle of November. Several carloads have been shipped since that time, making an output for the district which is considerably in excess of that of any previous year.

That the output next year will be even greater is the case in the Creston district as at Grand Forks, Nelson Kaslo, the Arrow lakes and the Slocan valley, and other agricultural section of Kootenay and Boundary, as many new orchards will come into bearing. The rate at which trees are being planted in Kootenay and Boundary fruit growing sections is shown by the fact that in 1913 50,000 trees were set out in the vicinity of Creston.

Other Districts Do Well.

Another district which had a heavy production of fruit and vegetables in 1913 was the Arrow lakes, where one of the shippers as responsible for 2,200 cases of small fruits, in addition to carloads of apples. A large quantity of produce was handled during the year by a new canning factory at Burton City, on the Arrow lakes.

The Slocan valley also produces a large tonnage of vegetables and a considerable quantity of fruit. This district in the near future will be a heavy producer of apples, as many thousand of trees have been planted out during the past four or five years and are now approaching the bearing stage.

In the Trail and Columbia river district the production of agriculture produce last year was large, and a *similar condition applied to Fruitvale* Waneta and Pend d'Oreille valley sections.

Kaslo, on the main Kootenay lake is the centre of a great fruit growing district and the number of cases of cherries and other small fruits, and the output of apples was large. The Kaslo district is famed for its splendid cherries and for the Kaslo Gravenstein apple, which has a flavor all its own, and which, although a fall apple, is noted for its long-keeping qualities.

Such places as Crawford Bay, Queens Bay, Boswell and other points on Kootenay lake are also producing fruit and vegetables and have a large acreage of land which will shortly be responsible for a heavy output.

In the East Kootenay district the agricultural resources of the Windermere valley and the Cranbrook district are being rapidly developed.

Province Imports Heavily.

Rapidly as the output of agricultural products in British Columbia is increasing, official reports show that there is no danger of any overproduction, provided that proper marketing facilities are secured. British Columbia imports many millions of dollars worth of fruit, poultry and other agricultural products annually, and there is in addition the great market offered by the three prairie provinces of Alberta, Saskatchewan and Manitoba. At present much of the Kootenay and Boundary fruit is being sold in the prairies and this market will be extended in future years as selling facilities are developed.

In Kootenay and Boundary much of the agricultural produce is consumed by the mines and lumber camps which offer a ready market to the rancher.

Much attention is being paid throughout the province to the question of co-operative marketing, and during the past year a scheme was worked out in the Okanagan district under the auspices of the provincial government, which loans up to 80 per cent of the subscribed capital of organizations for building packing sheds and carrying out similar work, and it is said to have proved a success.

Unions in various parts of the Kootenay and Boundary district have existed for some years and it is believed that a greater success will be achieved in co-operative marketing now that the orchards are coming into the bearing stage and the output has reached substantial proportions. In 1915 it is proposed to form a Kootenay-Boundary organization on the lines of the government scheme in the Okanagan district.

Government Gives Aid.

Valuable aid to agriculture is given by the government. In each district an assistant provincial horticulturalist is stationed and these officials are prepared at any time to give advice to ranchers. Lectures on subjects of importance are given at intervals and pruning, spraying and top-working demonstrations and apple packing schools are also held. Through the farmers' institutes the government supplies publications concerning agriculture and gives advice and assistance to ranchers in numerous other ways.

Kootenay and Boundary districts contain numerous fertile valleys available for fruit ranching and other agricultural pursuits and settlement is taking place steadily. The climate, soil and other conditions are recognized to be ideal for farming and fruit growing. Timber and water are plentiful and the rain and snowfall is annually sufficient to obviate the need for any irrigation except in rare instances.

Special

L. V. Floor Polisher, with $1.00 Bottle Liquid Veneer, Introductory Price $1.50
Try our Special Blend Tea, 35c per lb., 3 lbs. for $1.00
ASK FOR IRVING'S SPECIAL
Good Hope Blend Orange Pekoe, per lb. 50c
ALL KINDS OF FRESH VEGETABLES IN STOCK

J. A. IRVING & Co. THE GREAT SUPPLY HOUSE
Baker St. Phone 161

Special

FOR ONE WEEK

We will offer our large line of

Beautiful Clocks

at a discount of

20 Per Cent

These are all new clocks—newest designs, finely finished, pretty styles.

Travelling clocks, mantle clocks, hall clocks, dining room clocks, etc.

Prices range from $3.50 to $60.00.

Each and every clock absolutely guaranteed.

J. O. Patenaude
Importer of Fine Wares. Manufacturing Jeweler, Watchmaker and Optician.

These Cold Mornings

there's nothing better to start the day with than a good hot dish of

"B. & K." Rolled Oats

The Standard Breakfast Cereal of the West.

The Brackman-Ker Milling Co., Limited

Manufacturers' Samples
Dry Goods, Sweaters, Hose
AT WHOLESALE PRICES

The Ark
New and second-hand furniture.
Cheapest in the city.
Phone L395. 606 Vernon St.
Nelson, B. C.

Daily News "Want" Ads. Get Results.

"Kryptok" Bifocal Lenses
Two Pairs of Glasses in One.

The absence of the customary lines and seams which mar the vision are truly a revelation to wearers of Bifocals

R. L. DOUGLASS
THE GRADUATE OPTICIAN AND OPTOMETRIST
Certified by a Provincial Board of Examiners in Optometry.
Room 17, K. W. C. Block.

HAVE NOT OFFERED BONDS FOR SALE

Vendors of Gas Plant Have No Intention at Present of Selling Debenture Issue.

"We have not nor do we intend for some time to offer for sale Nelson debentures received for gas plant. Please have this statement published. Impression may have resulted from offer of local bond house to sell Nelson debentures upon 6 per cent basis. These are other issues at lower interest rate sold less than par."

Above was the night lettergram received yesterday by Mayor Keefe from the Economical Gas Apparatus Company, Limited, of Toronto. It refers to a statement that Nelson 6 per cent debentures were being hawked about in the east. The 6 per cent debentures for the gas plant have not yet been received by the vendors of the plant.

MISS MARY DARROUGH WEDS MALCOLM McKAY

Miss Mary Darrough was married last night to Malcolm McKay by Rev E. S. Logie. The ceremony took place at the residence of the mother of the bride, Mrs. Duncan Darrough corner of Hoover and Cedar streets and was attended by a large number of friends of the two families. Miss Marion Darrough was bridesmaid and Malcolm Darrough acted as best man. Both bride and the bridesmaid were attractively attired and carried pretty bouquets. Heather was much in evidence as a decoration. A delightful wedding breakfast was served after the ceremony.

J. W. Ford of Edgewood, who has just returned from a visit to Vancouver, registered at the Hume last night.

Unequalled for General Use.

GALT COAL — BURNS ALL NIGHT

W. P. TIERNEY, General Sales Agent
Nelson, B. C.
Cars shipped to all railway points

D. C. McMorris C. A. Drake

Your Liabilities

It is necessary that everyone should fully recognize their liabilities.

One of your liabilities comes to you at the end of each month's trading with us. It is your monthly *account. The basis of trade is exchange.* If it is all give and no take it is not fair trade.

Therefore, let there be free flowing trade by meeting your present liability right now with

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911 Stanley Street
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We have
5 Child's Coats
to clear at
Half Regular Price
J. W. GALLAGHER
102-4 Baker St.

Nelson Opera House
Monday, January 12
The Highland Comedy Success
Bunty Pulls the Strings
The Favorite of Two Continents.
Mail orders filled in order of precedence.
Prices: $1.50, $1.00, 75c and 50c.
Sale opens at City Drug Store on Thursday.

Nicer Now Than They Used To Be

The different varieties of canned goods have only reached their present degree of excellence within the last few years.

If you'd sample some of these you'll find on our shelves you might be surprised to find such choice selected fruits and vegetables were put up in cans.

At prices like the following they are certainly worth trying:
Tartan Brand Tomatoes, 3 for..50c
Tartan Brand Corn, 2 for.....25c
Pineapple, 2 large cans for....35c
Pineapple, 2 small cans for....25c
Heinz Dill Pickles, in tins.....25c
4 lbs. C. & B. Marmalade.....65c
7 lbs. C. & B. Marmalade.....$1.00
Raspberries and Strawberries, 2 tins 35c

JOY BROS.
Grocers and Tea Merchants
P. O. Box 637 Tel. 19
City.

THE GEM
The Quality Photoplay House.
TONIGHT! TONIGHT!
Selig's Big Two-Reel Feature
The Pendulum of Fate
An o'er true story of perils of the peerage.
Two Snappy Comedies
"BURGLAR AND THE BABY"
and
"ONE BEST BET"
Western Play
"PED AND PETE, PARTNERS"

Every Householder, Merchant Manufacturer and Contractor

ought to carry a POLICY protecting his interests against LOSS BY FIRE

As also a POLICY covering legal liability for Accident to Employees or to the Public.

PROMPT ADJUSTMENTS YOU GET THE BEST

We Have for Sale

500 SHARES, NELSON STREET RAILWAY
Price for Quick Purchase $210.00

CITY PROPERTY. FRUIT LANDS. INVESTMENTS.
FIRE. LIFE. ACCIDENT AND EMPLOYERS LIABILITY INSURANCES.
BONDS. STOCKS. SHARES.

Chas. F. McHardy
THE GREEN BLOCK, NELSON, B.C.

Mining Rails

8 lb. -- 12 lb. -- 16 lb.

ALSO SPLICES AND TRACK SPIKES

PROMPT SHIPMENT FROM STOCK

Wood-Vallance Hardware Co. Ltd.
Wholesale and Retail. Nelson B. C.

BUILDS CEMENT PLANT AT BLAIRMORE

Works Will Have Capacity of Over Twelve Barrels per Day, States Director

Construction of a new cement plant at Blairmore in the Crows Nest district has been commenced, according to H. M. Budd, of Calgary, a director of the Keystone Portland Cement company, Limited, which is responsible for the undertaking, who was at the Hume last night.

The plant will have a daily capacity of about 1,250 barrels of cement and will also produce bricks and lime, stated Mr. Budd, who is interested in the cement plant at Princeton, which commenced to ship last year.

AUTHORITIES DEFIED BY BRIGAND

Missionaries Forbidden to Return to Missions—Landing of Marines Is Required.

(By Daily News Leased Wire.)

PEKING, Jan. 7.—The brigand, Hwang Liang, who during the anti-Manchu revolt proclaimed himself Ming emperor, still defies the authorities and refuses to permit the American missionaries who have been for months at Foo Chow, to return to their missions in the interior, although he has allowed all other foreigners to do so.

The American legation has made repeated representations to the Chinese foreign office on the subject, but Edward T. Williams, former American charge d'affaires, and Paul Reinsch, the present American minister, have been equally unsuccessful in their efforts to persuade the Chinese government to take any action.

In American circles here it is thought that only the landing of a force of marines will accomplish the fulfilment of the Chinese treaty obligations, and it is pointed out that the Japanese and other nations obtain quick satisfaction for their grievances by making naval displays. It is remarked that neither foreign residents nor the Chinese contemplate the possibility of the United States taking any such action and that consequently there will be a continuance of defiance by Hwang Liang.

HOSPITAL RECEIVES GIFTS

The Kootenay Lake General hospital wishes to acknowledge with thanks the following donations for the month of December: P. Burns & Co., two turkeys; Mrs. G. H. Scott, one dozen jars preserved fruits and pickles; J. A. Irving & Co., fruit and olives; R. A. Howe (P. Burns & Co.), venison; Standard Furniture company, handkerchiefs; J. T. Greenwood, Willow Point, fresh eggs; Ladies' Hospital Aid society, gift for each patient in public and semi-private wards; also cut flowers; George H. Motion, one case of oranges; Harry Bird, two cases ginger ale; Hudson's Bay company, fruit and candies; Bell Trading company, fruit and holly; Mrs. George A. Hunter, home-made candies, pickles and preserved fruit; D. J. Robertson & Co., two rattan chairs; Poole Drug company, candies; Choquette Bros., candies.

REBEKAHS INSTALL OFFICERS

At the regular meeting of Queen City Rebekah lodge No. 16, I.O.O.F., on Tuesday evening, D.D.G.P., Mrs. M. Traves, assisted by Past Grands Mrs. S. Smith, W. Swannell, Mrs. Marshall, Miss B. Barker, Mrs. C. Longhurst, Mrs. J. Bulger, Mrs. Balding and Mrs. Eddy, installed the following officers for the current term: Miss Grace Lucia, N.G.; Mrs. George Miller, V.G.; Mrs. S. Smith, treasurer; Mrs. S. Brown, recording secretary; Miss Bertha Bulger, financial secretary; Mrs. B. Stevens, warden; Mrs. Frost, conductor; Miss B. Barker, inside guardian. C. Watts, outside guardian; Mr. Jackson, R.S.N.G.; Mrs. J. Bulger, L.S.N.G.; Mrs. Barker, R.S.V.G.; Miss Plum, L.S.V.G.; Miss Wilson, L.S.S.; Mrs. Brosseau, R.S.S.; Mrs. D. C. Fraser, chaplain; Mrs. C. Dunn, organist; Mrs. J. P. Wilson, past grand. After the closing of the lodge refreshments were served and the remainder of the evening was spent socially.

NELSON NEWS OF THE DAY

Judge Forin returned from Rossland yesterday.

The I. O. O. F. past grands will confer the initiatory degree on Jan. 12.

Mrs. F. W. Bissett has returned from a four weeks' visit to her daughter, Mrs. M. H. Roberts, at Pincher Creek.

The board of trade banquet at the Hume hotel this evening will commence at 8 o'clock. Tickets may be secured at the hotel.

During the past few days the water in the West Arm of Kootenay lake has risen four inches, which is extraordinary for the waters of the lake at this season of the year.

Classes today at the Y. M. C. A. are: Junior school 3:15 to 4:15 o'clock; senior school 4:15 to 5:15 o'clock; senior leader's corps 6 to 7 o'clock; business men 8:30 to 9:30 o'clock.

R. W. Chalmers, of Thrums, has received work from J. R. Terry, in charge of the international egg-laying competition at the coast, stating that his pen took ninth place in November and tied for third place in December.

E. B. Skeels, division engineer at Nelson, who has been promoted to the office of the chief engineer for western lines at Winnipeg, will leave for the prairies about Jan. 25. He will be succeeded here by H. B. Walkem, of Vancouver.

The Nelson District Women's institute will hold its regular monthly meeting in Knights of Pythias hall on Saturday afternoon next commencing at 3:30 o'clock. A large attendance of the members of the institute is expected at this meeting as the election of officers for the ensuing term will take place.

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by reading and using the Daily News Want Columns.

FIND WORK AT ALL SEASONS

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HOUSE OF FEATURES
DYER'S STARLAND ORCHESTRA

Imp. Two-Part Feature
The Stolen Love
A typical sea story, with many powerful situations, beautiful backgrounds and splendid acting.

"THE UNIVERSAL WEEKLY"
Most important news events in pictures.

Majestic Comedy
"A MIX-UP IN PEDIGREES"
Excellent comedy situations.

Coming Friday—
"FANTOMAS, THE MAN IN BLACK"
European sensation in four parts.

Saturday—
"IN THE COILS OF THE PYTHON"
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Annual Mining Review

The Daily News

Annual Mining Review

NELSON, B. C., THURSDAY MORNING, JANUARY 8, 1914.

Year Promises Well for Nelson District

SEVERAL OLD PROPERTIES HAVE BEEN REOPENED AND ARE NOW ON REGULAR SHIPPING LIST AND OTHER DEVELOPMENT IS UNDER WAY WHICH WILL MATERIALLY INCREASE THE TONNAGE

In the Nelson district there has been a marked increase in the tonnage figures of the district. The ore shipped is 36,125 tons, against 7,242 for 1912, principally due to the heavy shipments from the Queen Victoria mine to the Greenwood smelter.

The Silver King shipped about 3,000 tons and will ship much more the coming year, as the shipments have been held back this year owing to heavy development and surface work being necessary. The shipments from these two copper mines will bring up the copper production of the district this year.

Of the gold mines the Motherlode stamp mill production is greatly increased, while the shipments from the Yankee Girl have been heavy to former years. The increase in production of these two properties will be enough to more than offset the decreased production of the Queen on account of labor troubles early in the years and the closing down of the Granite Poorman owing to financial difficulty. The Second Relief mill operated for nine montrs against five months last year.

The outlook for a large incredse next year is very bright. The Eureka, which has been steadily developed by the British Columbia Copper company, may be added to the shipping list. The Silver King will ship heavier. The production of the Queen will no doubt be increased and a heavier tonnage of silver-lead ore may be expected. The ore milled is estimated at 48,103 tons. The ore shipped was 1,832 tons, taking away the concentrates from ore milled makes a total production of 86,396 tons, against 72,586 tons for 1911, and 44,003 tons for 1910. In 1901 the high water mark was reached of 109,000 tons. It will be seen that with the steady increase of the last two years that this figure will soon be passed if the present rate of production is maintained. As every indication points in this direction, unless something unforeseen happens, the production figures will soon have a ne wrecord.

The Nelson division produces copper, silver, gold ores, copper-silver ores, lead-silver ores and free milling gold ores, or more variety than any other mining division in British Columbia. It is during the coming year to add molybdenum ore to the list. The first shipment from Lost Creek will be made as soon as there is sufficient snow to commence hauling to Salmo.

In the Sheep Creek district this year the production has been increased by the steady operation of the Mother Lode mill but has been decreased in other properties by labor trouble. The Queen Mill has lost fully 3 months of operations and the Emerald has not shipped as heavily. In both of these properties and the H. B. as well, the margins of profit is small and to keep up development and mine ore under an increased wage scale would be difficult, if not impossible.

A controlling interest in the stock of the Nugget mine was sold but it is stated that nothing will be done with the property under the existing labor conditions. It seems too bad that this section of the country should be tied up by demands for higher wages than the rest of the country are paying. Certainly with properties like the Nugget, Kootenay Belle, Golden Belle Golden Fawn and numerous others the districts should go ahead but it is impossible to expect it under present conditions.

The one new feature of the district is the development of the Molybdenum property on Lost Creek and although it is only in a small way at present, may lead to the establishmen of an important industry.

In conversation with Henry E. Woods of Denver, at whose works the ore is to be treated he assured the writer that the ore from this property is the freest from impurities he has received in samples sent from all over this continent, Peru, Australia and Africa. By impurities, he meant not tht ordinary gangue but other metallic minerals. Even a trace of copper is enough to spoil the ore and on its purity depends its value.

The taxes collected in the Nelson mining division on the 2 per cent on out put tax and the 25 cents per acre tax are over $15,000 a year. If agricultural land were taxed 25 cents an acre it would bring an enormous revenue if paid, but would not be paid. The mining community do not object to this tax and it might be better if it were bigger. The 2 per cent tax works out as a hardship in some cases but need not be discussed here. The main fact is that $15,000 a year by these taxes and a large revenue from mines licenses is brought into the government by the district. If this revenue is to grow some of it must be spent where it came from. How long would a business man run his business if he drew out money every year and put none back in?

These taxes were for the province for 1912, free miners' licenses $68,101.-21; mining receipts general $93,467.-70; mineral tax $100,659.29, tax on mineral claims $43,436.00 or a total of $305,657.00 not including revenue from coal and coal lands. Let some of this be spent in the mining districts. Help to get more mines and more revenue and not hold back the district by a shortsighted policy. Even if the mines produce no revenue do not let the fact be overlooked that they are an absolute necessity to the Kootenay country, the very backbone of it and the more there are the greater the prosperity.

On the Bayonne district the inaccessibility of the district still prevents much work being done. Assessment work and a small amount of development on prospects is all that has been done or probably will be done till a road is built into this promising district. The Bayonne mine, with its developed ore reserves, is still waiting for the road between Kootenay lake and the Bayonne trails to be constructed on wagon road grades up all the creeks. This country contains many promising prospects and has not begun to be prospected yet.

There is no denying that mining is the main backbone of this whole interior country. It provides the tonnage for the railroads to operate and makes possible the other industries. If private capital is willing to go into a new country, surely the government should look at matters in a broad light and encourage it. At one time mining was the main source of revenue of the government of the province. At that time roads and trails could be obtained. Many were built, it is true, that did not bring results and this argument is used today against the building of roads and trails to mines and mining districts. The general public must not forget that mining men engaged in the business as a business do not expect to make a mine out of every prospect. On the other hand, if one mine is obtained out of several they are repaid for their trouble. So it is with the benefit to the general public. British Columbia has produced over $430,000,000.00 since 1852 in mineral wealth, yet not one cent would have been possible without transportation was possible. To develop a mine to the producing stage is a costly business where supplies have to be packed in on horses' and men's backs. Before it can be operated as a producing mine, machinery is necessary and that means roads are necessary. Can you expect people to go into a country and develop properties when after they get them developed they cannot operate them?

The Bayonne and the adjoining country is not a one-property proposition, but is a whole distict, containing one developed property and a lot of prospects. Till the people engaged in other industries support the people trying to develop and open up this district, and help them get roads and trails, nothing will be done with it. Trails, if they are built to waggon road grades at first, instead of trying to make them as short as possible, can be widened out and are not a dead loss afterwards when a road has to be built.

Let the community at large be honest with themselves and they must admit that although the other resources of the country are great and diversified, yet the mining is essential. Even the Canadian Pacific Railroad company realise this and do all they can to help the mines and the district. Witness the completion of the Three Forks to Kaslo branch this year, which is not expected to pay for some time, except to keep the mines going and to help develope the country and thus pays them in a broad way, as it eventually will in a specific way. So must the country through the government help the mining by roads and trails surely more than a private corporation. The government cannot be expected to do these things unless they are brought to its attention and that strongly, with the support of the general public.

Silver King Mine

This famous old property produced between $5,000,000 and $6,000,000 when owned and operated by the Hall Mines Limited. The property after the Hall Mines company stopped operating was leased for a time, and then purchased by a syndicate of which A. E. Rand and R. S. Lennie were the moving spirits. They also purchased the Dandy and Ollie groups adjoining the Silver King group, and sold a 75 per cent interest to the Consolidated Mining & Smelting Co., who are now developing and operating the property.

The mine was developed for 5 main levels by drifts run in on the vein, and by a wenze 500 ft. deep sunk about 1,200 ft. from the portal of No. 5. From the winze five levels were opened up, of which No. 10 was the lowest.

The line between the Silver King and the Dandy is a few feet below No. 5 tunnel. A crosscut tunnel was run in on the Dandy some little distance down the hill, and the lead has been drifted on and some ore stoped out. This drift has been driven through to the shaft a distance of 2,000 ft. this year. It broke into the shaft about 40 ft. above No. 8, and a station is being cut there now. This has been the principal development during the year, being started in March and completed in December.

The ore opened up by this drift will for the present be run to the shaft, hoisted to No. 5, and taken out that level to the ore house at the tram terminal.

Ore is being stoped from 3 small stopes at No. 5 at or near the intersection of the south and main veins. In No. 1 a crosscut 25 ft. in length opened up a small shoot of high grade copper and silver about 18 in. in width which has been drifted on for about 45 ft. and still shows strong on the face. This ore is dumped down the raises to the No. 5 level.

In the summer time ore is mined from the glory holes above No. 3. A considerable part of the output of the mine came from here this summer. It all goes through raises to No. 5 tunnel.

Near the portal of No. 5 is situated the upper terminal of the 4½ mile two stage single rope aerial tramway to the railway at Nelson. All the ore is taken to the upper bins from which it is sorted on dumping sorting tables. It then passes to the tramway bins from which it is drawn into a loader, which just holds one full bucket of ore. The buckets are loaded from the loader.

A 1,500 ft. single bucket aerial tramway from No. 5 to No. 1 tunnel was installed to hoist timbers, tools, supplies, etc., to the upper workings.

Mine Equipment

The mine is connected with the West Kootenay Power & Light company's plant at Bonnington Falls by a 4½ mile line from the main Nelson lines. Power is supplied at 20,000 volts and stepped down to 2,200 volts at the substation.

Two Ingersoll Sargent 18x24 in. straight line air compressors are driven by two 100 h. p. 2,200 volt motors, one induction and the other syncronous. The air is conveyed to the Dandy tunnel by a temporary pipe line, and a 6 in. pipe line is being laid to No. 5 in addition to the 4 in. one.

The hoist at the winze is the old steam hoist gear connected to a 220 volt 150 h. p. motor of the induction reversible type. The hoist is at present at the Nelson Iron Works to be trued up and repaired. Formerly the water was hoisted out but as soon and No. 10 was pumped dry an electrically driven pump was installed. It is operated by a 550 volt 50 h. p. induction motor. A newly installed transformer plant at No. 5 steps down the current from 2200 volt circuit to 220 volts and 550 volts for the motors.

The powder thawing house is heated by electricity and the crushers in the assay office are operated by motors, and also the ventilating fan in the Dandy Tunnel.

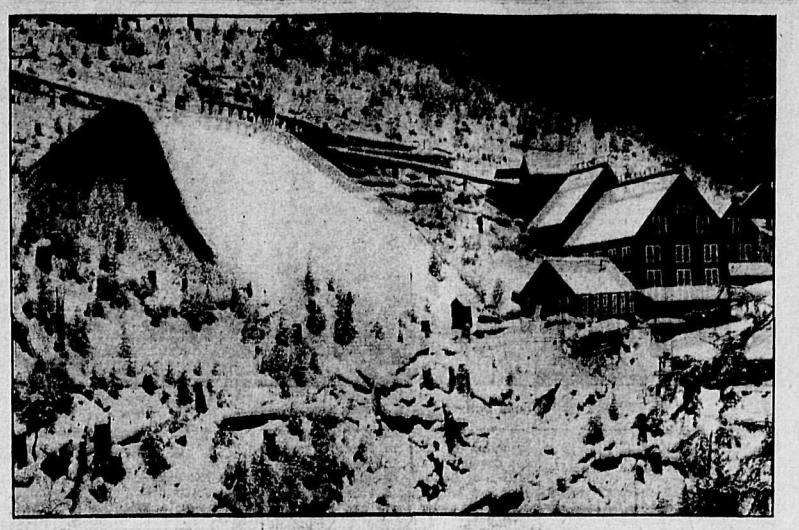
An assay office, blacksmith shop, carpenter and machine shops have been built this year at No. 5.

The compressor house is a new two story building, the top story being used as a store room. New bunk houses and snowsheds have been built. A 12 h. p. boiler for a hot water heating plant for all the buildings is being installed in addition to the compressor house.

Seventy-five men are employed at the mine. Daniel Mathewson is in charge of the work. The output will no doubt will be greatly increased next year as there has been so much construction work and development to be done before mining operations can be carried on a large scale. The output has been limited this year.

Molly Gibson

The Molly Gibson mine, 13 miles up Kokanee creek, is owned and operated by the Consolidated Mining and Smelting company. Kenneth B. Carruthers has charge of the property.



Portal of Tunnel at Slocan Star, through which ore bodies were tapped at depth during the past year, marking another step in the deep development of the Slocan

The mine has five principal evels, the lowest of these is an 800 ft. crosscut through granite to the lead, which stands nearly vertical. This level is called the 6,900 and is 240 ft. below the level above. Development in this level was highly satisfactory; the ore has been shown to be as good a grade and as persistent as on the level above. The uppermost tunnel of the mine is called the 8200 and they are named by their respective heights above the sea level.

A new crosscut tunnel to tap the vein about 4,000 ft. to the south at the same level as the 6,900 was started this year. Last year the surface was prospected and a continuity of the ore shoots in this direction shown.

The ore is galena with some zinc blende pyroiusite with a gangue of quartz and spathic iron. The vein is very persistent and can be traced for thousands of feet on the surface. The hillside is very steep and snow slides are numerous. The mine buildings are all built in excavations and the whole covered by a heavy roof supported by heavy timbers anchored by cables to the solid rock. The roof is on about the slope of the hill. Last year a snow slide passed right over the buildings and did no more damage than to carry away the smoke stacks.

Last year the operations were stopped owing to the snow slides carrying out the towers, etc., on the big tramway for a distance of two and a half miles. New towers sufficiently high to cross the dangerous places without putting towers on the slides were put in this year. Some of these towers are 85 ft. high.

As it is impossible to operate a mine without travelling on the surface, the company has decided to close down the mine in the winter months henceforth, and only operate in the summer months.

The terminal for the tramway to the mine is built in an underground excavation below the 6900 tunnel mouth. The excavation is 25 ft. wide, 45 ft. long and 12 ft. high. Two ore pockets excavated out of the solid rock, one for crude ore and one for mill ore serves as ore bins. A raise to the tunnel level is equipped with a hoist for hoisting the timber and supplies brought up on the tramway.

The tramway from the mill to the mine is 1½ miles in length; detachable buckets are used. Three classes of ore are turned out. The crude ore, averaging about 18 per cent lead and 40 oz. in silver is shipped in bulk. Anything averaging over that is sacked, and under that goes to the mill. The crude ore goes to the bins over the big lower tramway, the sacked ore goes to the upper floor of the double terminal station. The mill ore goes to the bins over the crusher.

Mill Operation

At the mill, power is supplied by a flume line from the little lake above the mill, giving a head of 180 ft. From the crusher, the ore which has been sorted roughly in the stopes passes over a 60 ft. 20-inch picking belt, which was installed to replace the narrower one formerly used.

After being sorted on this belt, it passes through an automatic sampler to 125-ton mill bins. From the bins it passes through rolls and the coarser sizes, after screening, are jigged, while the fines go to a hydraulic classifier. From the hydraulic classifier, the overflow goes to a "V" settling tank and the hutch products to the fines jiggs. The settling tank feeds three Overstrom tables and three Frue vanners. All the middling products from the tables and jiggs are crushed to 20 mesh in a Huntingdon mill and returned to the classifiers. Three additional Frue vanners are used for the dirty water from the tables when there is sufficient water to do so. The water then passes through the settling tanks. The general mill practice is to save as large a percentage of the values

(Continued on page two.)

KOOTENAY-BOUNDARY DIVIDENDS HAVE INCREASED ONE MILLION DOLLARS

The following table shows the production of metals, coal and coke in the Kootenay-Boundary districts of British Columbia for the year 1913:

	Tons.	Gold, ozs.	Silver, ozs.	Copper, lbs.	Lead, lbs.	Zinc, lbs.	Value, $
Consolidated M. & S. Co.	335,323	14,5471	2,785,599	3,155,278	36,270,593	.....	6,846,309
Granby M., S. & P. Co.	1,242,053	44,023	348,538	21,958,092	.....	.....	4,486,830
B. C. Copper Co.	622,442	25,286	125,856	8,365,672	.....	.....	1,887,394
Hedley Gold Mines	70,727	39,612	.....	.....	.....	.....	792,330
Other Stamp Mills	53,488	27,118	9,732	.....	.....	.....	548,199
Zinc Shipments	9,017	.....	209,589	.....	.....	7,685,600	494,452
Tonnage other ores milled, not included in above	240,300	.....	.....	.....	.....	.....	.....
Total metalliferous	2,573,350	290,510	3,479,314	33,479,042	36,270,593	7,685,600	15,055,514
Less United States ores	73,250	23,435	286,260	1,163,009	286,532	.....	829,938
Total B. C. Metalliferous	2,500,100	267,075	3,193,054	32,316,033	35,984,061	7,685,600	14,125,576
Less miscellaneous B. C. ores	835	77	43,944	13,303	373,067	.....	41,367
Kootenay & Bound'y Metalliferous	2,499,265	966,998	3,149,010	32,302,730	35,510,994	7,685,600	14,074,209
Total Coal sold	1,581,449	.....	.....	.....	.....	.....	4,849,028
Total Coal used for Coke	492,902	Coke produced, 319,325 short tons at $5.36½ per ton					1,713,178
Total value metalliferous, coal and coke	5,073,616	.....	.....	.....	.....	.....	$20,629,415

In the above figures December is estimated in all cases. In figuring the values of metals $20 per ounce for gold, 60.04c per ounce for silver, 15.234 cents per pound for copper, 85 per cent of 5.503 cents per pound for zinc were the figures used. The estimate of the Trail smelter values was furnished by the company, the balance of the output was figured on the above basis. The prices used last year were Gold, $20.50 per ounce; silver, 60.88 cents per ounce; copper, 16.335 cents per pound, and zinc, 6.995 cents per pound. The tons milled are furnished by the mine managers. Coal was figured at $3.12½ per short ton, and the coke at $5.36½ per ton, which correspond to the British Columbia government figures used last year of $3.50 and $6, respectively, per long ton. Last year the figures used were $2.78 per short ton for coal and $4.85 for coke. The coal used in making coke is not included in the figures for coal this year as it was last. The tonnage of coal mined was greater this year, and with the increased figures of valuation practically makes up the whole increase.

The average price of metals for 1910, 1911, 1912 and 1913 are given in the following table:

	1910	1911	1912	1913
Silver	53.486	53.304	60.88	60.04
Copper, Electrolytic—New York	12.738	12.376	16.335	15.234
Lead—£ Sterling, London	12.920	13.970	17.94	*18.829
Zinc—St. Louis	5.370	5.758	6.995	5.503

*—For 11 months.

Dividends for the Year.

The dividends paid by the Kootenay and Boundary mines were:

Granby Consolidated Mining, Smelting & Power company	$ 899,901.90
Standard Mine, Silverton	650,000.00
Hedley Gold Mine	360,000.00
Consolidated Mining & Smelting Company	232,176.00
British Columbia Copper Company	88,675.00
Le Roi No. 2, Rossland	43,200.00
	$2,273,952.90

The dividends paid are over $1,000,000 greater last year than in 1912. Besides the dividend payers in the list, the Mother Lode, on Sheep Creek, has made a steady, substantial profit, which has not been disbursed as yet. The Rambler-Cariboo has made a profit of about $10,000 per month, which has been applied on the debt. The Yankee Girl at Ymir has paid nearly $95,000 on the purchase price of the property, most of which has come out of the ore shipped. Several others have not attempted to make a profit, but have been developing and taking out enough ore to pay for the work done.

The dividends of the Consolidated Mining & Smelting company will be twice as large next year as this, as the company has been put on an 8 per cent basis. The Mother Lode may pay out their large reserve fund and a profit should be made by the Silverton mines, though dividends may not be paid this year. The Standard should continue its present rate, and the usual dividends may be expected from the Hedley Gold and the Le Roi No. 2. The Granby dividends should be large, with the operation of their additional smelter on the coast.

Kootenay-Boundary Has Large Tonnage

OVER TWO AND A HALF MILLION TONS OF ORE PRODUCED DURING PAST YEAR—VALUE INCREASES ONE HUNDRED AND SIXTY THOUSAND DOLLARS—COAL OUTPUT SHOWS MARKED GROWTH—PROSPECTS ARE FOR FURTHER GAINS THIS YEAR

With a total ore production of 2,500,100 tons the Kootenay and Boundary district in the year just closed practically equalled the record output of 2,565,400 tons in 1912. The total value of this ore was $14,074,209. The value in 1912 was $13,914.67.

The total coal output was 1,474,816 tons in 1912; last year it increased to 2,074,351 tons.

The gain in the coal output has increased the total value of the mineral production of the district from about $17,000,000 in 1912 to $20,629,415 for the year just closed.

The Boundary district, as predicted last year, did not quite come to the 1912 figures. The tonnage figure is about 100,000 tons less and the copper and gold recovered about 2,500,000 lbs. and 9,000 ozs., respectively. These are more than offset by the increase of silver and gold of the Trail smelter and the gold of stamp mill recovery. The values of the total metalliferous production work out to slightly more than the 1912 figures. Had the prices of 1912 been obtained for the metals, which are all lower in prices except lead, the increase could be carried to the dollar column with a substantial figure. The higher price for the lead helped out considerably.

The coal shows a marked increase in value and quantity. The best feature of this increase is that it is likely to show just as marked a growth in the future.

The silver production shows an increase of 626,000 ozs. and the gold of 36,700 ozs., both substantial gains. The production of gold and silver will be maintained the coming year without doubt. The lead will undoubtedly show an increase this year. Copper will at least hold its own.

It will be noted that a steadily increasing tonnage is being shipped from the United States to the three smelters for treatment. The value of these ores has increased by about $175,000. The tonnage figure has gone up 31,000 tons, principally due to the low grade ore from the Napoleon mine of the British Columbia Copper company, which has been shipping heavily this year.

In the Nelson district the tonnage figures have increased and will be greater next year. In the Slocan the shipments and ore milled will be increased next year by the addition of the Hewitt mill's output. A steadily increasing tonnage from smaller properties is anticipated and probably towards the end of the year the Slocan Star mill will be in operation.

In Ainsworth the growth is remarkable in the last two years and still the prospects are for an increase this year again. In East Kootenay an increase in the output of the Sullivan this year and a larger tonnage from the Windermere and Moyie districts is probable.

The ore production of the Kootenay and Boundary for the past few years is as follows 1908, 2,106,892 tons; 1909, 2,188,509 tons; 1910, 2,230,000 tons; 1911, 1,651,483 tons; 1912, 2,565,409; and 2,500,100 tons for 1913.

In regard to figures it might be said that those of The Daily News in regard to tonnage are the nearest to being correct published. The published official figures in this point are often incorrect. For instance, the tonnage of Ainsworth division was given in 1912 as 32,741 tons, which was the output of the Bluebell mine from July to the end of November, and takes no account of other mines in the district. Nelson district was given as 52,323 tons, against 72,584, The Daily News figures. It is very hard for the government to collect these figures correctly, as often mill outputs are missed and only the concentrates are taken into account.

In the valuation figures the provincial government figures are nearer correct. The Daily News estimate last year totals up about $1,000,000 less than the government's, but it is on a different basis. The provincial government figures represent the content of the ore with specific allowances on price and losses, while The Daily News' figures are based on the recovery made, which is the basis of the Dominion government figures. The figures on coal have been made to conform with the provincial government calculations.

LEGISLATIVE LIBRARY JAN 12 1914 VICTORIA B.C.

Boundary District	
Bounty Fraction Carmi	46
Belle Fraction Carmi	10
Rob Roy, Fraction Carmi	5
Sally	40
Sunnyside, Franklin	33
Union, Gloucester	2
Jewel, Eholt	78
No. 7, Boundary Falls	4,594
Total	4,808
Miscellaneous	
Henderson & Ovington, Merritt	26
Iron Mark, Kamloops	540
American Boy, New Hazelton	23
Omineca, New Hazelton	22
Silver Standard, New Hazelton	282
White Heather, New Hazelton	2
Neilson, New Hazelton	1
Livingstone	1
Acorn	1
Total	904
Rossland	
Centre Star, Rossland	156,441
Le Roi, Rossland	63,039
Le Roi No. 2	20,515
Le Roi No. 2 Concentrate, Rossland	1,985
Le Roi, Josie	297
Giant, California, Rossland	103
Inland Empire, Paulson	93
Nickle Plate, Rossland	97
Richmond, Rossland	22
Le Roi, Concentrates, Rossland	76
I X L, Rossland	2
Phoenix, Rossland	24
Total	242,694
East Kootenay	
Sullivan, Kimberley	35,925
St. Eugene, Moyie	1,542
Monarch, Field	196
Society Girl, Moyie	20
Total	37,683
Kootenay Belle, Ymir	2,034
Queen, Salmo	2,128
Emerald, Salmo	1,118
Queen, Salmo	609
Vancouver, Salmo	23
Molly Gibson, Kokanee	959
Silver King, Nelson	3,881
Granite-Poorman, Nelson	90
Calumet, Nelson	28
Black Prince, Erie	6
Big Ledge, Erie	25
Second Relief, Erie	219
German Mountain, Sanca	5
Total	11,125
Trout Lake	
Ajax, Ferguson	465
Silver Cup, Ferguson	96
Fidelity, Trout Lake	10
Total	571
Ainsworth	
Bluebell, Riondel	7,208
Silver Head, Ainsworth	1,286
No. 1, Ainsworth	3,929
Highland, Ainsworth	1,129
Maestro, Ainsworth	157
Gallagher, Ainsworth	10
Florence, Princess Creek	16
Utica, Twelve-Mile	628
Whitewater, Whitewater	517
J. W. Power, Kaslo	1
Cork, South Fork	5
Revenue, South Fork	16
Total	14,902
Slocan District	
Standard, Silverton	14,967
Van-Roi, Silverton	627
Hewitt, Silverton	231
Rambler-Cariboo, Three Forks	3,159
Idaho-Alamo, Three Forks	276
Eastmount, Ten-Mile	360
Kilo, Slocan City	6
Black Prince, Slocan	26
Neepawa, Slocan	25
Ottawa, Slocan	64
Hamilton, Slocan	16
Lily B., Slocan	15
Meteor, Slocan	24
Panama, Bear Lake	69
Lucky Jim, Bear Lake	61
Apex, New Denver	20
Beth, Sandon	471
Slocan Star, Sandon	562
Surprise, Sandon	251
Reco, Sandon	79
Cinderella, Sandon	8
Mountain Con, Sandon	1
Noble Five, Sandon	53
Colonial, Sandon	21
Jennie, Sandon	6
Margaret, Sandon	4
Richmond-Eureka, Sandon	912
Wonderful, Sandon	50
Ivanhoe, Sandon	37
Mascot, Sandon	1
Hartney, Sandon	4
Total	23,379
Washington and Idaho	
Ben Hur, Republic, Wash.	16,828
Knob Hill, Republic, Wash.	1,442
Lone Pine, Republic, Wash.	924
Surprise, Republic, Wash.	485
Imperator Quilp, Republic, Wash.	395
Republic Slag, Republic, Wash.	8
Hope, Republic, Wash.	911
Golden Zone, Chepaka, Wash.	22
United Copper, Chewelah, Wash.	2,076
Bonanza, Evans, Wash.	412
Paragon, Northport, Wash.	7
Galena Hill, Rock Cut, Wash.	7
Snowstorm, Larson, Idaho	340
Pittsburg, Lakeview, Idaho	14
Total	23,871
B. C. Copper Company	
Mother Lode	303,996
Napoleon	70,301
Queen Victoria	27,795
Rawhide	238,455
Other mines	9,664
Total	610,231
Granby Company	
Granby	1,242,053

LUMBER BRINGS MUCH REVENUE

Eight Million Dollars Worth Sold During Past Year—Large Sums for Labor and Supplies

Among the great industries of Kootenay and Boundary is the lumber manufacturing business, the timber being logged from the great tracts of timber which cover the mountains of the district. Many millions of dollars are invested in the timber limits and mills of the district and the amount of money expended annually in labor and supplies reaches a huge figure. In the mountain district of British Columbia there are in the neighborhood of 100 mills of various sizes, and the majority of these are in the Kootenay and Boundary section of southeastern British Columbia.

During 1913 market conditions in the prairies, where the British Columbia mills find much of their market, were not particularly good, yet in spite of that fact it is estimated on the official figures of the amount shipped out that the value of the lumber exceeded $8,000,000.

The sale of lumber in the mountain district of British Columbia has been largely dependent upon the demand from the prairies, but it is claimed that this year some of the mills of the interior of the province will find a market in the United States, on account of the reduction in the duty which became effective with the passage of the new tariff bill. Low stocks in prairie yards at the present time and the good crops last fall are also pointed to as indicating an improved market during the coming year.

Hedley, Province's Banner Gold Mine

FREE MILLING PROPERTY HAS PRODUCED FIVE AND A HALF MILLIONS IN GOLD AND IN 1912 PAID THREE HUNDRED AND SIXTY THOUSAND IN DIVIDENDS AND ONE MILLION ONE HUNDRED AND FIFTY THOUSAND, OR NINETY-SIX PER CENT., ON ITS CAPITAL STOCK IN FOUR YEARS

The Hedley Gold Mining company paid dividends for the year 1913 of 30 per cent., for 1912 30 per cent., 1911 25 per cent. and of 11 per cent. in 1910, the year in which the present company took over the mine, a total of 96 per cent. in four years and have a handsome surplus in the treasury besides which the company's original properties have been greatly added to by purchase of other claims out of the profits.

The Hedley Gazette gives the output of the mine since 1908 to the end of 1912 as $4,605,415 which must be added the figures for 1913, which were $582,260, giving a total of almost five and a half millions up to December 31.

For the year 1913 the ore milled was 70,727 tons of an assay value of $12.05 per ton, which, with gold at $20 per ounce, gives a total assay value of $852,260.35. From this $792,330 was recovered, out of which dividends of $360,000 were paid, $5,469.96 spent in new construction and an addition made to the already handsome surplus of the company.

The principal development work for the year was the sinking of a new 8x16 incline shaft at the Nickle Plate mine to a depth of 700 ft.

The present power plant is operated by water power and steam as a reserve. The flume line on 20-Mile is 4 ft. by 4ft. and 13,600 ft. long. The flume line is a constant source of trouble from rock falls and from slides of all kinds. The steam plant can be connected up in a few minutes, but is costly to operate. This year the company have made an appropriation of $200,000 from the reserve fund for the building of a new power plant on the Similkameen river. One of the main features will be a reinforced concrete dam with piers at 25 ft. intervals. The dam will be 220 ft. from end of abutment to end of abutment and 34 ft. wide at the base and 22 ft. at the top. It will be 16 ft. high. Aprons 25 ft. up stream and 60 ft. down stream will be built. Submerged piles will be driven in the river bottom and the foundation built on these 10 ft. below the bottom of the river. A bridge will be built on the top of the dam and a motor driven crane running on a track installed to handle logs, etc.

From the dam a flume line 7ft. by 8 ft. in the clear will carry the water to the power house, where a 60 ft. head will be obtained to develop 1,800 h.p.

The Nickle Plate ore bodies are in an altered lime. Tongues of andesite penetrated the bedding planes of the lime and brought in the ore carrying solutions. The values of the ore is some free gold and arsenical iron carrying gold. The lime is altered to a lime silicate with horn blende epidote and calcite the preponderant minerals.

At the main shaft the ore bodies are very large and there are three of them superimposed with tongues of andesite between. The main body was 175 ft. wide and from 25 ft. to 45 ft. thick.

The ore is conveyed 7,000 feet by electric locomotive drawn trains to the head of the main three-rail surface tram and down it 9,320 ft. in 5½ ton skips, which dump into a bin. A 500 ft. similar gravity tram conveys it to the mill. The short tram is set at an angle to the other tram and is a safety device against the breaking loose of one of the skips which by this means would not crash into the mill.

No changes have been made in the mill during the year.

The ore is drawn from the lower tramway bin direct to a 20x10 Farrel crusher, from which it passes by gravity over a grizzly, the coarse going through a 6x20 Farrel crusher. The throughs from the grizzly and the smaller crusher feed on a belt conveyor, running at right angles to it and which is carried on a carriage running on a track over the main storage bins. Over this belt is suspended a powerful electric magnet, which picks up any bits of steel or iron in the ore. By moving this carriage the ore can be fed into any of the bins desired. From the bins it is fed by Challenge feeders to the 40 stamps. The stamps drop 101 times a minute, a distance of seven and one-half inchts and weigh 1,650 pounds. No amalgamation has been attempted either in the battery or on the plates for the last year and a half, as the saving effected by the amalgamation was found to be so small, and the gold could be collected in the cyanide plant anyway. This was one of the many changes made in the mill since Mr. Jones became manager, although he has been with the property as mine superintendent for over 12 years.

The stamps crush to 12 mesh and have a duty of five tons per stamp. The screens used are of the slot type.

Concentrating Plant

The pulp passes to four duplicated Spitzkasten. The coarse is fed to vanners and the fines to 16 smooth belt vanners and 12 Deister tables. The tailings from the corrugated belt vanners are re-elevated by a sand pump to a tube mill and reground. The finely ground product then joins the feed to the 16 smooth belt vanners and 12 Deister tables. Churtz pebbles are used altogether in the tube mill. At first coarse ore and pebbles were used, but by using the Churtz pebbles, obtained from Denmark, it was found that the output of the mill was increased and the life of the lining was much longer. Two-fifths of a pound of pebbles are used to one ton of tailings. The tailings from the Deister tables and smooth belt vanners go to a set of cone classifiers. The slimes from the classifiers go to the slime plant and the sands to the sand plant.

About 240 tons of concentrates, containing silica 14 to 16 per cent and iron 28 to 30 per cent, the ire being arsenical iron, are produced per month and shipped to the Tacoma smelter for treatment. These concentrates contain from 70 to 80 per cent. of the values saved.

Cyanide Plant

The sand plant treats 120 tons per day, while the slime plant treats 80 tons, that being about the proportion of slimes to sands produced. The sand plant has 12 tanks, six on each floor. The tanks are six feet deep by 32 feet in diameter. The sands are treated twice with cyanide solution, first in one of the upper tanks and then in one of the lower, the whole treatment occupying 20 days.

The slime plant tanks are all on one floor and the slimes are agitated for 12 hours in one tank and allowed to settle once and then are thrown over into the No. 2 tanks, where they remain for about 30 hours. From the No. 2 tanks they are taken to two Oliver filter presses, where they are washed with a barren cyanide solution, which is sucked through them to wash out any gold carrying cyanide they may contain. After being pressed dry by the suction provided by the vacuum pumps they pass to the tailing launder.

The cyanide solution from the sand plant and the slimes plant is fed into a solution tank with zinc dust, with which it becomes thoroughly mixed in the tank. It is then pumped with the zinc dust and precipitated gold through two Merril presses, one 20-frame and the other 10-frame. They are kept locked and the gold precipitate is all collected in them, from which it is taken, washed first with sulphuric acid solution and then with water, dried and melted into bullion. The barren solution from the presses passes to the sump tanks and from there it is pumped to the mixing tanks, where it is brought up to standard strength and used again. The consumption of cyanide is three-fifths of a pound, of zinc one-quarter of a pound and 4½ pounds of lime per ton of ore treated, while the extraction of gold is averaging 95 per cent., although last month it was nearer 97 per cent. of the total gold content of the ore.

The important changes that have been made in the mill and which have brought about the increased saving were completed about 18 months ago. They consisted of abolishing amalgamation altogether, the installation of the tube mill for the fine grinding of of the sand tables tailings, the addition of the 12 Deister tables for the concentration of the fine slimes in the concentrating plant, the addition of the Oliver filter presses for the slimes treatment, and the abolishing of the use of the zinc boxes and the installation of the Merril filter presses and tank treatment of the solution with zinc dust instead of zinc shavings for the collection of the gold precipitate. The changes have brought the values in the sand tailings down to about 25 cents and in the slime tailings to about 60 cents per ton.

The capacity of the mill has been increased from 4,000 tons per month to over 6,000 tons, while the additional cost of treatment is nominal.

Princeton District

Besides the work of the British Columbia Copper company at Voight's camp, the following notes were obtained:

In Leadville camp in the Princeton district on Treasure mountain a 1,200 foot crosscut to tap a silver-lead vein at 600 feet depth is being run. A new vein was cut in the crosscut recently about 2 ft. wide with 5 in. of high grade ore.

Charles Lambert, of Vancouver, let a contract for 200 ft. of rock tunnel to drain his placer ground on Granite creek immediately above the North Fork.

A fine seam of good coal was exposed in the cut for the wagon road about 150 yards from the hotel in Princeton.

Quite a bit of prospecting, sinking test pits, etc., is being carried on in the neighboring coal lands.

HEDLEY PROSPECTS BRIGHT

HEDLEY, B.C., Jan. 7.—Mining progress in and around Hedley for the year just closed has been steadily advancing and has now reached the stage where the future prosperity of the camp is permanently assured.

The greatest amount of work has been done at the Nickel Plate, where they are running the Dickson incline shaft at present down 700 feet and through continuous ore.

During the past summer the Exploration Syndicate No. 2, headed by W. T. Beam, has prospected with diamond drills on the Bradshaw claims, just below the Nickel Plate, and has done in the neighborhood of 5,500 ft. of drilling. This certainly promises well, as a few days ago the company made a payment on the property and will continue to prospect next spring.

The Tregor company has lately struck 75 feet of very rich gold ore and the owners are now negotiating for very extensive operations. It is generally conceded that this is the richest ground in the camp and it is confidently expected that before long the Oregon will become a very heavy producer.

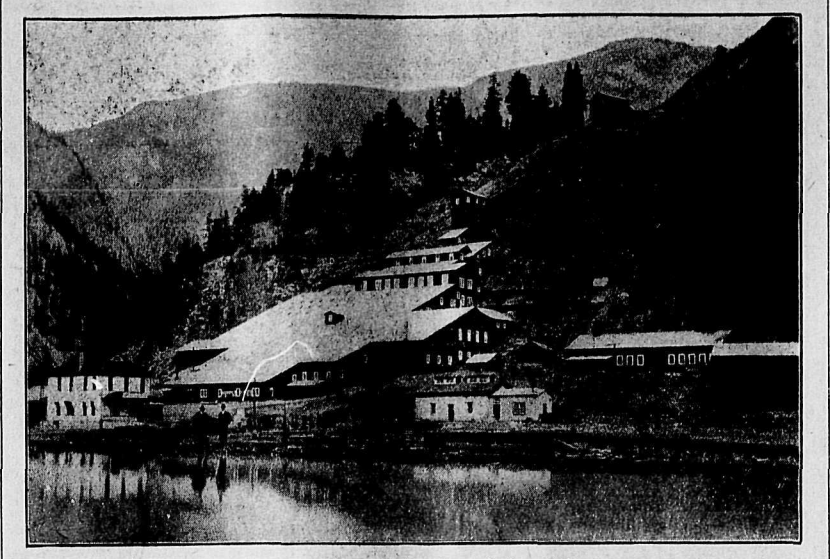
The Daly Reduction company is now working a large force of men day and night on the new dam at the mouth of Twenty-Mile creek, adjoining Hedley. This dam will be about 350 ft. long and will require about 3,000 barrels of cement. A cement headgate will carry the water to a flume 7 ft. by 8 ft., to be built of lumber, and will be nearly four miles in length. The power plant will be built near the mouth of Sixteen-Mile creek and power generated at about 6,000 volts, supplying about 1,500-horsepower.

The company also intends doubling the capacity of its stamp mill to 80 stamps next summer, which means a continuous era of prosperity for Hedley.

Prospects in general are exceedingly bright for Hedley and the activity of the past few months indicates the substantial foundation of a great and wealthy mining camp.

FORMER ST. EUGENE OWNERS NOW RECEIVE DIVIDENDS

The Canadian Goldfields Syndicate, Limited, had 640,000 shares in the St. Eugene mine when that property was taken over by the Consolidated Mining & Smelting Company of Canada, Limited, and this way the syndicate became a stockholder in the Trail company and is now participating in the dividends of that corporation. The St. Eugene company was originally organized, according to the Mining, Engineering and Electrical Record, with a capital of $1,000,000 in 10-cent shares, of which 600,000 shares were issued.



Stamp Mill of Hedley Mines, Hedley, B.C.

YEAR PROMISES WELL FOR NELSON DISTRICT

(Continued from page one.)

present as possible, rather than to make too clean a product. At the mill a compressor is driven by a Pelton wheel, which supplies air for the 40 h.p. compressed air engine which drives the big tramway; the excess air is used at the mine.

The water from the wheels at the mill passes into a flume line 2,900 ft. long. It is then carried by a pipe line, giving 150 ft. head to a lower compressor house, where two 36 in. Pelton wheels are belt connected to a Rand compressor. The air is conveyed to the mill by a 4 in. pipe line, and from the mill, together with the air generated by the compressor at the mill, to the mine by a 6 in. pipe line. The mine works only one shift except at development work. The mill works night shifts, thus making the best use of the power and insuring a good supply of air for the mine. At the mill a pipe threading machine, lathe and drill press have been installed.

Long Tramway

The lower tramway is 4½ miles in length and has one of the longest spans of any aerial tramway in the world, being 4,800 ft. long. The crude ore, sacked ore and concentrates are carried by it to No. 1 camp, five miles from Molly Gibson landing, on the west arm of Kootenay lake. The profile of the tram is such that it will hardly run itself, but as all the supplies for the mine are hauled up over this, a 40 h.p. engine, using compressed air, was installed. The lower tunnel of the mine is 7,100 ft. above sea level, while the highest tunnel is 8,200 ft., and the mill is 5,150 ft. and 11 miles by wagon road from the lake. As the mine is above timber line, all the timber and wood has to be cut at the mill and taken up on the tramway. As little timber as possible is used in the mine, the stopes being filled with waste. At the mill there is a complete sawmill outfit for cutting timber. The mine and mill employ from 50 men in winter to 70 men in the summer.

Eureka

The Eureka mine is situated at the head of Eagle creek, nine miles from Nelson. It is developed by a crosscut tunnel, 700 ft. in length, and by drifts on the vein. The property is under lease and bond to the British Columbia Copper company, who have about 25 men working at development work this year.

On the main level drifting to the extent of over 1,100 ft. was done, several raises were put up totalling some 520 ft. A winze was sunk 110 ft. and 200 ft. of drifting done from the bottom of this winze. Another winze was sunk about 30 ft. The level from the winze had to be abandoned on account of water coming in faster than it could be hoisted by the gasoline hoist.

An air compressor and boiler were installed and a power house built at the head of the raise. Pumps were ordered and drifting will be continued in the spring. Considerable ore was opened up. The winze shows bornite and native silver in quartz and the ore in the main drift opened up this year is mostly chalcopyrite. The ore opened up before was mostly copper carbonate ore. This property is unique in British Columbia copper mines for the depth at which carbonate ores are found.

Harry Johns is superintendent. About 25 men have been employed on the average during the year.

Queen Victoria

The Queen Victoria mine at Beasley is owned and operated by the British Columbia Copper company. A steady tonnage of about 10 tons a day is mined from this property and shipped to the company's smelter at Greenwood. The limit of the ore shipments is what can be put down over the two-bucket tramway in two shifts. The ore runs about 1½ per cent copper and 75 cents in silver and gold and carries an excess of lime and iron over silica, giving it a slight additional value as a flux.

The ore is broken down in open stopes and shoveled into cars. It occurs in bodies in an altered lime rock, which varies in thickness from 4 ft. to 30 ft. A year ago there was estimated to be 40,000 tons of ore altogether, as the ore body appeared to be bottomed. There will probably be considerably more than this, however, as the ore bodies have extended back a little further than they appeared to and also ore has been found in raises from a lower tunnel. It has flattened off considerably and this tunnel is being driven to catch it at the level, if it extends down that far. The mine is equipped with an air compressor, driven by electric power obtained from the Bonnington Falls Power company, machine drills, two-bucket aerial tramway to the railroad and all the necessary mine buildings.

Granite Poorman

At the Granite Poorman the mill was closed down and the company went into liquidation this year. The company suffered at the time of its formation by lack of funds to properly develop it and to pay off the liabilities of Messrs. Gough, Guille and Swedberg who operated it. They had worked it under lease and bond and partially paid for it out of the profits but still owed a balance on the purchase price. If the company had raised sufficient money to provide for the liabilities and a suitable fund for development, it should have been on its feet by this time.

The ore in the Hardscrabble tunnel shows for a distance of 650 ft. in the bottom and is practically continuous pay ore of a width on the average of 18 inches. Above the tunnel it was badly faulted and cut up by dykes and did not pay to work it. The company ran into debt, could not develop their pay ore below the tunnel and finally closed down. Below the tunnel level the ore is overlaid in part by the Poorman workings and should not be badly faulted.

Efforts are being made by the liquidators to dispose of the property to meet the company's liabilities as the property is equipped with a 20-stamp mill, air compressor, aerial tramway, all the necessary buildings and accessories and a good showing of ore to develop, it should not lie idle for any length of time.

Perrier

At the Perrier, the shaft was sunk about 20 ft. and the ore taken out in sinking put through the Huntingdon mill and a small shipment of concentrates made. There is stated to be 37 in. of ore running $28 in gold at the bottom of the shaft. The property is owned by a local syndicate, who have not funds enough to work it except in a very small way.

It is a promising little property, has more than on one fairly persistent lead with good surface showings.

Venus

The Venus is being worked under a lease and bond by a syndicate headed by A. H. Gracey. A drift 100 ft. below the lowest tunnel has been driven in on the lead to a point under the old tunnel. A raise is being put up for ventilation. The ore mined from the upper levels milled from $7 to $9 a ton and is cheaply mined. It is shown to be very persistent for a distance of 1,500 ft. by the upper tunnels. Some ore will probably be shipped this winter of a grade of about $25 and the Athabasca mill put in commission in the spring and milling operations started. The tunnel is on a level with the top of the ore bins at the head of the Athabasca-Venus aerial tramway.

Pingree

Some development work is being done at the Pingree on the divide between Eagle and Forty-Nine creeks.

California

A new discovery was reported on the California this year and some prospecting done on it. A car of ore was shipped from the mine this year by leasees and 4 men are working at present.

SHEEP CREEK DISTRICT RICH

Mother Lode Mine

The Mother Lode mine on Sheep Creek has been operated continuously this year. The mine has two principal ore shoots in two separate belts of quartzite with a belt of schist separating the two. It was developed on the Independence ore shoot by 5 levels driven from crosscut tunnels. This ore shoot has been the principal ore supply and is mostly mined out above No. 4 level and is now being stoped between 4 and 5. A winze was sunk 100 feet from No. 5 level and 169 feet of drifting done this year. It will probably be sunk farther next year to prove up the ore body at greater depth. No. 3 level was run over to the Mother Lode ore shoot, a raise put up and ore is now being stoped from between No. 3 and the surface. This ore shoot was partially developed by crosscuts for two levels above No. 3. The drift on No. 5 is now started to catch it at that level, it has to be driven 500 further at the present time of writing.

The mine was formerly quite wet and cold owing to the stopes being carried through to the surface but these have been covered over and doors put on the tunnels so that it is now quite warm and dry. There are comfortable bunk houses with bath rooms and other necessary and usual mine buildings at the mine. In the past six months 1140 feet of development has been done or at the rate of about 200 feet per month.

The mine is connected with the mill by a Leschen & Sons' aerial tramway 3600 feet long with a drop of 1900 feet.

The Most Complete Stamp Mill and Cyanide Plant in British Columbia

The mill is one of the best ever constructed in British Columbia and for a 10-stamp mill has a tonnage record hard to beat. One hundred tons of ore a day were treated for the month of November and an average recovery for the year 96.6 per cent of the gross value was effected. 24,728 tons were treated during the year. For the fore part of the year the tonnage treated was only 70 tons per day but it is expected that the present tonnage will be maintained. Fifty-three men are employed at the mine and 20 men at the mill at present on the 100 ton output and 200 feet per month of development basis. For the fore part of the year about 90 men were employed.

The tramway delivers the ore into a 75-ton receiving bin. It is then passed over a grizly, the coarse going through a 12x10 in. Blake crusher to the 350-ton mill bin. From there it is fed to 10 1,250 lb. stamps.

Formerly the stamps crushed to 14 mesh but this was changed to 4 mesh and afterwards to 2 mesh, with a consequent increase in output. The tube mill works at its greatest efficiency when under full load and this threw more load on it. It was able to take care of the increased load and actually cut the cost of the tube-milling down as it effected a saving in pebbles which previously had ground on themselves.

The pulp then passes to a hydraulic cone classifier, from which the coarse goes to a duplex Dorr classifier. The coarse product from the thickener goes to the tube mill, the fine product joins the overflow from the first classifier, and both then join the reground product from the tube mill and pass over the amalgamation plates. The tube mill is a 5x20 ft. mill which crushes to 200 mesh.

This classifier will return any free gold with the coarse product and it will pass over and over the plates till the majority of it is caught by the amalgam. In other words it makes a closed circuit for the free gold and in this manner a saving of over twice that which would be made by a single plate amalgamation is effected. The plates are in duplicate sets and one set only is used, the other being dressed ready. As soon as the other set needs dressing the feed flow is changed over.

From the Classifier the fine pulp is pumped by Frenier lifts to a second hydraulic cone classifier and the coarse product is returned to the first Dorr classifier. The overflow from the second cone classifier goes to a 30x10 ft. Dorr thickener. The overflow from the thickener is pumped back to battery water tanks. The underflow is pumped with cyanide solution to four Pachuca tanks 8 ft. in diameter and 25 ft. high where it is agitated by means of compressed air. From the Pachuca tank it goes to a 25 ft. x 10 ft. Dorr thickener. The overflow from the thickener goes to a clarifying press and the underflow to the mechanical agitator, which feeds the 35 frame Merril automatic sluicing slime presses. The effluent from the presses goes to the sump tank, from whence it is pumped with zinc dust to a Merril precipitation press, from which the precipitated gold is obtained. The precipitate is taken to the refinery and refined.

Power is supplied by a pipe line having two branches, one 4,000 and one 2,000 ft. of wooden stave pipe, giving a 700 ft. head. The steel pipe at the mill is 14 in. in diameter. There are seven Pelton wheels. One of 125 h. p. drives the tube mill, one of 40 h. p. drives the stamp batteries, one of 20 h. p. drives the crusher, while one 1-wheel is used to drive the dynamo; two are for the pumps and a 260 h. p. wheel is used to drive the 1450 cu. ft. Sullivan high speed air compressor.

W. D. Alderson is the manager in charge. A steady profit has been made this year but no particulars can be obtained.

Queen Mine

The Queen mine is situated at the junction of Sheep and Wolfe creeks. It is operated by the Queen Mine Incorporated, of Merrillan, Wis. E. V. Buckley is the local manager of the company. The present groups consist of 15 claims and fractions, comprising some 400 acres.

The output of the mine has been seriously affected by the strike declared against the mine by the Ymir Miners' union. The mine was closed down for two months and the output curtailed on starting up for some little time. However, the mine has 40 men now working which is a full crew, and no difficulties are expected on that score by the manager.

Work is confined at present to the Queen vein. This vein was developed by three tunnels, No. 3 of which is the main working tunnel. From No. 3 level a winze was sunk to No. 7 level the levels having 125 ft. between them. Practically all the ore that has been developed above No. 5 level has been mined.

The main ore supply for the year has been obtained from the big ore shoot on the other side of Wolf Creek opened up last year and which produced such a heavy tonnage on No. 3 level. It is over 200 ft. long and has an average width of from 12 to 14 ft.

The ore is mined on the shrinkage system. Stulls are put in from wall to wall at the roof of the level.

These are given extra support by rows of posts. Floors are then laid of pole lagging. The ore is broken down to allow head room till the stope is carried up 125 ft. to the next level. The broken ore is then used as a reserve supply, while another ore shoot or level is being opened up. When working up from the level below the posts supporting the crosstulls can be removed. The main timbers required by thus using the shrinkage system is for the mainway stulls and pole logging of the floor.

Only two big machine drills are required to break enough ore to keep the mill running at its full capacity of from 55 to 60 tons per day. The ore is hoisted to No. 3 level by a Jenckes direct motion hoist operated by compressed air. It is taken to the mill in cars hauled by a horse a distance of 1,600 feet from the portal of the tunnel. The track is covered by a snow shed roof for the entire length.

The mill has four 5-stamp batteries fed by the Challenge feeders. The ore is crushed to 55 mesh. After amalgamation the crushed product is sized and fed to three Overstrom and one Wilfley table. The concentrates are hauled to Salmo and shipped to Trail smelter.

One unusual feature is stated to be that a higher percentage of the gold values are free on the sixth level than they were in the upper levels, and that more of the gold is obtained by amalgamation. This is contrary to what would naturally be expected.

Compressed air is supplied by one 10-drill Rand duplex compressor and one nine-drill Ingersoll-Sargeant compressor. Electric light is furnished by a small dynamo for the well-built bunk houses and mine buildings and mill. Power is furnished by two 224 h. p., two 75 h. p., one 48 h. p., and one 36 h. p. Pelton wheel.

Besides the veins worked there are several others on the property. On the Alexander is an excellent showing of ore on which a little prospect work has been done. A shaft was sunk by hand work 50 ft.

Vancouver

Messrs. Humphrey & Fisher shipped 23 tons of high grade ore from this property adjoining the Queen during the year. The lead is small but high grade and the ore is shipped to the Trail smelter.

Spokane Group

At the Spokane group on Cultus Creek just over the divide the Laibe Bros. have drifted 105 ft on the lead They came down the hill and drove a crosscut 25 ft. to get 150 ft. more depth on the lead. They have drifted 130 ft. from this crosscut and have 40 ft. to go before raising to the level above. The drifts are said to be all in ore and the vein to be uncovered for 1000 ft. The ore is said to run about $40 in silver, lead and gold. The gold is the principal value. This is the property for which $150,000 on a development basis was refused a year ago last fall.

Messrs. McLeod & Revelle are developing a silver lead property in Fawn Creek.

H. B.

The H. B. is on Deen creek 2¾ miles from Sheep creek and at present is under lease to S. Salisbury. He has eight men working but has been held up on shipping through the snowfall not being sufficient for sleighing. He is raising from the lower level to the north shaft, which is only down 75 ft. The ore mined surface and this raise will be used to handle the ore from below that. There is from 6 to 16 ft. of ore.

1829 tons of ore were shipped before the roads broke up and shipments will be resumed as soon as there is sufficient snowfall.

Zincton

The Zincton is an old claim adjoining the H. B. and prospecting on it this year a lead was found carrying galena. A 140 ft. crosscut was run but did not reach the ore. H. M. Billings, the owner, decided to get out some ore this wonter and to sink on it where it showed 2 ft. of galena and 2 ft. of carbonates. The clean galena is said to run 50 per cent lead and about 20 ounces in silver. Shipments will be made this winter.

Aspen

At the Aspen group owned by Billings & Horton, the crosscut was driven 100 ft. this year and the vein encountered at 151 ft. from the portal. Work was abandoned for the winter as the property is reached by a poor trail but will be started in the spring again.

Emerald

The Emerald mine is owned and operated by The Iron Mountain, Ltd. It is silver lead property 7 miles from Salmo and south of Sheep creek. It is developed by 2 crosscuts. The vein pitches about 20 degrees and the main ore shoot is mined out from the upper levels.

From the lower crosscut which is in 600 ft. a raise was run 130 ft. at a point 400 ft. from the portal to the ore, and 100 ft. in the ore to the level above. A drift 200 ft. long was carried on the ore from the raise with an average of 3 ft. solid ore running 38 per cent lead, 2 ounces of silver and 7 per cent zinc. Another raise is being run at 600 ft. in to catch the ore and will give about 250 ft. on the lead. Nine men are working and 922 tons were shipped before the roads broke up. Shipments will be resumed as soon as there is sufficient snow. The development work is done with machine drills. A 3 drill compressor run by steam supplies the air. The ore is mined by hand.

Arlington Erie

The Arlington was worked under lease by W. J. Barker. This mine is a peculiar proposition, the lead is a blanket one with frequent rolls and is practically worked out except the ore in the bottom roll to get which more development is necessary. It has paid several dividends, of which the total amount is not available. The ore is from 2 to 18 in. of gold quartz carrying about $50 in the shipments. A movement is under foot for the development of the ore left.

Second Relief

The Second Relief is on the North Fork of the Salmon river 17 miles from Salmo. The mine is developed by two crosscuts, No. 1, 150 ft., and No. 2, 250 ft. long. On No. 1 and No. 2 in the south end a small block of ground is left that is being developed and the ore mined from between 2 and 1. The mill was operated for 2 months and about 18 tons per day put through. Seventeen men are employed at present.

Mill

The ore is a free milling ore carrying considerable sulphides, which vary considerably in their values. The pay streak averages from $25 to $50, the mill feed is stated to run from $9 to $11.

The mill, with an output of 20 tons per day, is kept going with two hammer drills working two shifts. It takes four timbermen to keep up the timbering behind these two machines. Plenty of mine timber is obtainable on the property. Development work is carried ahead with a 3¼ Rand machine working one shift.

The mine is equipped with bunk houses and buildings for 30 men The camp is supplied with water by a flume line 1¼ miles long from a small creek. The bunk houses have bath tubs with hot and cold water installed.

The mill is operated by water power under a 260 ft. head, brought in a 2x2½ ft. flume 2¼ miles from the North Fork of the Salmon river. Power is supplied by three Pelton wheels A four ft. Pelton drives the air compressor which is a 14-drill Fraser & Chalmers of which only one side is used at present. A three-drill steam compressor is kept in reserve, in case there being insufficient water to run both the mill and compressor in the winter. A three-foot Pelton drives the stamps and the crusher and a two foot Pelton the concentrating tables and the 200-light dynamo which supplies electric light for the mill and the mine buildings.

The ore is brought from the ore bin at No. 2 to the mill on a three-rail surface tramway, with a by-pass in the centre having a fall of 325 ft. and a length of 600 ft. One ton skips are lowered by a drum with a friction break, the loaded skip hauling the empty up.

The ore from the tramway is dumped over a 1¼ in. grizzly, the fines going to the mill ore bins and the over size through a 9x15 in. Blake crusher. There are 10 1,000 lb. stamps fed by Challenge feeders. The ore is crushed to 60-mesh, rolled slot screens being used. Most of the gold being free, it is recovered by the inside amalgamation. The pulp is fed to Wilfley tables, making concentrates and middlings. The tails pass directly out the tail race, while the middlings are passed over a Frue vanner. The mill is provided with a sample crusher, assay office and a 40 h. p. boiler used for heating purposes, and to drive the 3 drill compressor when necessary.

There is an old cyanide plant below the mill, but it did not give satisfaction service and has not been used for 10 years. There are also buildings for the mill employes.

The mine and mill employ 27 men, two of whom are kept at development work. During the year the mill produced gold bricks to the value of $21,870 besides the concentrates shipped to the smelter. The mill was operated for nine months in the year.

Big Bump

A car of ore was shipped from the old dump this year.

INSERT

Molybdenum

The first shipment of Molybdenum ore will be made from Salmo this winter. Sid Ross and his associates have a car ready to come down. It has to be rawhided 2½ miles to the Salmon river and hauled 12 miles to Salmo. The property is on Lost creek and the ore is stated to run 10 per cent molydinum. It will be shipped to the concentrating plant of Henry E. Woods & So. at Denver, Col.

Dundee Mine

The Dundee Mine on Bear creek 1½ miles from Ymir is at present shut down but will be started up shortly. This property was formerly worked by a 260 ft. shaft.

Three years ago A. E. Rand formed the Dundee Mines Limited of New Westminster. This company has been developing the property by a tunnel to catch the lead end on. The hillside was heavily covered with debris and the lead could not be found on the surface. When the tunnel was in hard rock a series of shear zones were encountered and it was difficult to to distinguish the proper one. A diamond drill was used last year and the ore cut in the hole. The tunnel was then driven to pick up the ore and the work closed down to make more extensive financial arrangements after the ore was found.

The present fact is over 900 ft. vertically below the collar of the shaft and this lead has a dip of about 67 degrees. This gives a great depth on the veins. Before any ore can be mined a raise will have to run to the bottom of the old workings and a lot of drifting done to open up levels.

It will probably be some time before the mine is in a producing condition but when it is if the ore opens up as expected should be a steady producer for some time.

H. B. Washburn has been in charge of the property and has about 10 men at work.

A power plant for development was installed. A flume half a mile long gives a 300 ft. head. A 3 ft. Pelton drives an Ingersol Sargent air compressor and a fan for ventilation.

Yankee Girl

The Yankee Girl mine adjoins the Dundee and the workings are about 600 ft. from the Dundee shaft. It is operated by the Hobson Silver Lead Mining company of Spokane.

The vein contains large ore bodies of a low grade of silver-gold ore with high grade shoots in them. No attempt to do anything with the low grade ore has been made yet. The ore is a mixture of iron sulphides, galena and zinc-blende in aquartz gangue and nearly all the values are in silver.

It is developed by adits. No. 1 is about 1,500 feet and No. 2 about 1,700 ft., 135 ft. on the vein below No. 1. All the ore shipped this year came from the high grade shoot between 2 and 1 and the main shoot is now mined out from 2 to the surface. The ore shoot was about 180 feet long on No. 2 and 100 ft. at No. 1.

2,967 tons were shipped this year and net smelter returns of $100,000.00 were obtained for the ore. Some small shoots of high grade ore are available for working at present but a new adit 400 ft. below No. 2 will be started in the spring to open up the ore at greater depth.

This mine also shipped 450 tons to the British Columbia Copper company, making 3,484 tons.

The property is equipped with a two bucket aerial tramway from the mine to the wagon road at the foot of the hill, from whence the ore is hauled 1¼ miles to Ymir. A power plant consisting of a 1,000 ft. flume line, a 600 ft. pipe line from Bear creek giving 280 ft. head, a 30 in. Pelton and a 3 drill air compressor connected to the mine by a 4,000 ft. 4 in. pipe line supplies air for the machine drills at the mine.

To Build Mill and Power Plant

The company intends in the spring to build a concentrator to concentrate the low grade ores. Experiments will be carried on to find the most suitable process and if satisfactory results are obtained a power plant will be put in on Wild Horse creek where a suitable supply of water can be obtained.

Ymir-Wilcox

The Ymir-Wilcox mine is situated on Wild Horse creek 7 miles from Ymir. It is being developed by the Ymir-Wilcox Development company of Denver, Col., under the management of Arthur Lakes, Jr., who supplied the following data. If more mines in this country were developed in the manner this one is before attempting to produce there would be far more mines producing steadily in the Kootenay country.

There are two veins about 40 ft. apart called the Fourth of July and the Wilcox. They are two distinct shear zones in granite cut by dykes of mica lamprophyre.

The Fourth of July vein is developed by 5 tunnels. No. 1 adit is in 540 ft. with 180 ft. depth below the surface at the face. No. 2 adit is 159 ft. below No. 1 and is in 704 ft. No. 3 is a crosscut 400 ft. to the vein with a 650 ft. drift and is 312 below No. 2. From 2 to 1 there is a raise to connect the two levels. From 2 to 3 a shaft was sunk from No. 2, 242 ft. and a raise of 80 ft. put up to meet it. Between 3 and 2 are two intermediates with 350 ft. of drifting and one intermediate between 2 and 1 with 60 ft. of drifting.

The Wilcox is developed by two tunnels called the Wilcox and the Bywater tunnels. The Wilcox tunnel is in about 340 ft. and has 130 ft. depth at the face. The Bywater tunnel is in about 220 ft. and is 130 ft. below the Wilcox tunnel.

The development done by the pre-

(Continued on Page Six.)

Increased Output Million and a Half

REMARKABLE SHOWING OF THE CONSOLIDATED MINING AND SMELTING COMPANY'S SMELTER AT TRAIL—GOLD, SILVER, LEAD AND COPPER PRODUCTION ALL SHOW SUBSTANTIAL ADVANCES IN VALUE

The Consolidated Mining and Smelting company was put on an 8 per cent dividend basis during this year. The old mines of the company are now well equipped and have large ore reserves of all classes of ore. The company should now be able to maintain a dividend rate of 8 per cent or even better.

The annual report shows the assets of the company to be mines, mineral claims and shares in other companies $5,006,974.60 mining, smelting, concentrating and refining plants $1,516,047.69 after depreciation has been written off, ore smelting products, stores and other assets bringing the total to $8,248,133.33. The profit and loss account shows a balance of $1,717,650.40 after the dividends for the year are taken out. The other liabilities total $725,282.84. The stock issued total 58,052 shares of a par value of $100.00 each. The fiscal year of the company has been changed from June 30 to Sept. 30 so the report is for 15 months and the profit carried to the profit and loss account in the time was $998,367,14. The report of June 30th, 1912 shows assets of $7,685,073.63 which is $563,060 lower than this year's report.

During the calendar year December estimated the company shippped from its different mines ores of which the content is given in the following table. The metallic contents given are the paid values after smelter deductions are made, not the assay values.

Company Ore Received 1913

District	Tons	Gold	Silver	Copper	Lead
Rossland	227,476	119,773	77,791	1,287,923	
Ainsworth	5,296		161,215		1,271,709
Boundary	4,526	763	25,491		
Slocan	1,046		47,745		247,709
Nelson	6232	23	120,119	168,341	348,038
East Kootenay	37,799		405,694		1,938,320
Totals	282,375	120,559	838,055	1,456,264	21,245,776

The total content of all ores received at the smelter on the same basis would be: Gold 153,622 ounces; silver 3,017,563 ounces; lead 51,881,847 lbs.; copper, 2,553,558 lbs. of a total value of $6,840,064.78.

At the Trail smelter the production for the year 1913 showed a marked increase over 1912. The increase is general, the gold, silver, copper and lead all being greater by the total value of over $1,400,000.

The gold is 36,540 ounces higher, silver 759,543 ounces, lead 1,185,706 lbs., and copper 1,018,598 lbs. The tonnage treated was 358,937 tons, against 305,240 tons last year.

The ores received at the smelter comprised 272,246 tons from the company's own mines, and 86,691 tons from customs ores. About one-fourth of the customs ores come from Washington and Idaho and a small tonnage of ore comes from New Hazelton, on the Grand Trunk Pacific, the balance coming from the Kootenay and Boundary. The Ainsworth, Slocan and East Kootenay district lead ore shipments all show a marked increase.

The figures show a marked increase in all varieties of ore and are indicative of increased activity in mining. Values obtained were: Gold, $3,172,189; silver, $1,719,670; copper, $486,344; and lead, $1,486,106—a total of $6,846,309, against $5,400,753 last year.

Coke to the extent of about 200 tons daily is obtained from Hosmer, in the Crows Nest pass, 249 miles distant. Limestone for flux is quarried at the company's quarry at Fife, on the Boundary line of the Canadian Pacific railway, 68 miles from Trail by rail. Electric power is obtained from Bonnington falls, where it is produced by the West Kootenay Power & Light company and brought to the smelter by a 33-mile pole line at 20,000 volts and stepped down to 550 volts. About 3,250 horsepower are used at the smelter.

R. H. Stewart is managing director of the Company; S. G. Blaylock, assistant general manager; T. W. Bingay, comptroller; James Buchanan, superintendent of the smelter; M. H. Sullivan, assistant superintendent; J. M. Turnbull and A. W. Davis, mining engineers; W. M. Archibald, in charge of properties under bond to the company.

Copper-Gold Smelting Department.

The copper-gold ores are received by the smelter on a track on a trestle over a string of ore bins of 5,000 tons capacity. From the ore bins the ore is drawn into a traveling feeder hopper, which feeds a conveyer belt running the entire length of the bins. The conveyer belt feeds direct into the crusher of the sample mill.

A new 36-inch Pan conveyor 106 feet long was installed this year to the top of a new ore bin, the ore, after sampling, going to the stock yard bins. Two new tunnels were run under the stock yards and sloping walls built up on the ground to form bins so that the stock piled-ore dumped from a trestle above can be drawn from chutes into cars in the tunnel below. the lime rock for stock is dumped off the end of the belt and can similarly be obtained when needed.

The lime rock bins are at the crusher and the lime rock is drawn directly from these to the crusher.

After crushing and sampling the ore and lime rock are taken from the sample mill bin by electric trains to the feed floor bins. From the feed floor bins it is drawn into charge cars with suitable mixtures of coke and lime rock. The cars are hauled by electric locomotives to the furnaces. Formerly the furnaces were all fed on the sides, but Nos. 5 and 1 are now fed from a track running through the centre. The rails are made from pipes flattened on one side and held together by cross pipes. They are supported on heavy pipe. The pipes are kept full of running water to prevent bending and warping with the heat.

Copper Blast Furnaces

There are five furnaces, four of which are in operation. Nos. 2, 3 and 5 on ore charges and No. 1 on a matte charge. The average capacity of the ore furnaces is about 300 tons each per day. Two of the furnaces are 42x300 inches at the tuyeres, two 42x240 inches and one 42x363 inches. The height of the furnace above the tuyeres is 9 ft.

No. 4 furnace is being rebuilt and will be six inches wider, 35 ft. long, and be fed in the centre, otherwise the same as before.

Two forehearths are used with each furnace, but only from 0.25 to 0.50 per cent of the matte is caught in the second settler. Most copper ores are smelted raw to a low grade first matte. The slag from the first furnace runs silicia, 43 to 46 per cent; iron (Fe O), 14 to 17 per cent; lime, 20 to 22 per cent; copper, 0.1 per cent, and very little gold and silver.

Pyritic Smelting Adopted.

Formerly the low grade matte from the ore furnaces was granulated, roasted and re-treated. This process has been abandoned. No. 1 furnace was cut down to 10 ft. in length and the low grade matte, after cooling and crushing, is charged into it with silicious ore and from 2½ to 3 per cent. of coke. The sulphur in the matte supplies the most of the heat. The iron unites with the silicia, forming a high iron slag which is used as a flux for the lead furnace. This raises the copper content of the resultant matte. After two treatments a matte of from 40 to 50 per cent copper is obtained. The gold content of this matte is too high to be converted alone without heavy gold losses and it is shipped to Tacoma for Bessemerizing.

The length of No. 1 furnace has now been increased to 17 ft. The matte and ore is fed into the furnace from cars running through the centre of the furnace. The coke is fed at the sides; this keeps the coke on the sides of the furnace where it is needed.

Formerly the matte was tapped into pots and broken up with hammers, after cooling, to a suitable size for furnace feed. This has been replaced by using five revolving cars with 16 moulds each. The matte is tapped into a mould and as soon as that mould is full the car revolves till the next one comes under the stream from the tap hole. The tap hole is not stopped till the 16 are filled. The car is then pulled by an electric motor on a 36 in. gauge track out in the yard till the matte cools. It is then run alongside of a concrete embankment retaining wall 8 ft. high, with a concrete floor at the bottom. The moulds are tipped up and the matte falling to the floor is broken. It is then loaded into a bucket and taken by a traveling crane and dumped directly into a 10x20 in. Farrel crusher. After passing through the crusher it falls into a steel pan belt conveyor, which conveys it to three matte bins. These matte bins are made of two upright steel Bruckner cylinders and one one-half cylinder. One cylinder is kept for low grade matte. The low grade matte from the ore furnaces is tapped into pots and after cooling is broken up and fed to the crusher. The other bins are kept for second and high grade matte as the case may be. The elevator discharge can be switched from one bin to the other by means of a lever at the crusher, which operates gates at the top. From the bins the matte is drawn into cars and hauled to the feed floor bins by an electric locomotive.

The slag from No. 1 furnace is run out in bg pots hauled by the electric locomotive. They are dumped hot over the side of a specially built-up dump about 25 ft. high. At the bottom is a floor space, level with the top of the cars running on the track to the matte bins. A concrete retaining wall has been put in on the upper side of the track. In the top of the wall ring bolts are cemented; chainrs are fastened to these. The chains are laid to the top of the dump before the hot slag is poured. A cable through a snatch block is fastened to the chain at one end and the other end to an electric crane. The crane when started rips the chain up through the slag after it is cooled, breaking it up. I is then rolled down the dump and taken to the feed floor bins. This saves much labor over the old method of running it out in small pots which, after cooling, were dumped in the yard wherever convenient and broken up with hammers.

Lead Smelter Department.

In the lead sample mill installed last year some new machinery was added and a conveyor belt was put in to convey the ore from the ore bin to the crusher. Trestles were erected and more are in the course of erection to distribute the ore to the beds in cars hauled by electric locomotives.

The lead ores received at the smelter carry for the most part from 20 to 75 per cent lead, which necessitates the making up of charges carrying from 35 to 40 per cent lead instead of the usual 10 to 15 per cent charges used in most districts. The remainder of the charge consists of dry silver and gold ores, stamp mill concentrates and oxidized lead ore. The beds contain about 600 tons each and are made up of the heavy lead ores, lime rock and lead matte.

The Consolidated Mining & Smelting Company's Smelter at Trail, B. C., which made a record last year.

Tunnels have been run under the beds and conveyor belt systems are being installed to convey the ore to the roaster bins. The belts will be made up of short units installed in crosscuts and fed by automatic mixing feeders, so that the ore from different beds can be mixed into suitable charges automatically as fed to the belt. These belts feed a long main belt, which empties into the Huntingdon Heberlein roaster bins. This belt system will cut out one shovelling of all the lead ore handled as well as the hand tramming of it from the beds to the bins.

Dwight & Lloyd Process.

The Dwight & Lloyd roasting and sintering process installed in 1911 was found to give the best results on a high lead charge low in zinc. When it contains over 7 per cent zinc it does not give a satisfactory elimination of the sulphur. As most of the ores contain over 7 per cent zinc its use will be limited.

The plant consists of two of the largest size Dwight & Lloyd machines with the necessary bins, travelling belts, etc. There is a conveyor belt under the hopper of each machine, which feeds onto a long conveying belt. This belt feeds into an elevator from which the ore mixture is taken to the large feed hoppers of each of the machines. The small hopper conveying belts travel at the same speed and the opening of each hopper is controlled by a sliding door. By this means any desired mixtures of ore and fluxes can be obtained and does away with the necessity of charge wheeling and weighing of each ore separately. The machine consists of a number of pallets which travel as an endless chain over two windboxes. The air is exhausted by a large fan from each machine. This is one principle of the Dwight & Lloyd system that is different to the other systems in use on lead ores, that is, the air is drawn from the top downward through the ore beds instead of being drawn from the bottom upward. This principle also keeps the building free from sulphur smoke.

The ore is ignited by producer gas. Air is supplied by the fan and mixing with the gas a mass of flame plays on top of the ore bed under a hood. This burner is placed on the top of and over the front edge of the first windbox. The producer gas is obtained by a newly installed plant adjoining the building. Formerly gasoline was used, but enough heat was not obtained and that too local, and also was too expensive. A marked improvement in the roasting efficiency has been obtained by this change.

One pallet is left out of the machine and this leaves a space on the curve at the end of each machine so that on dumping the top of each pallet falls on the lower pallet and throws the sinter into a large hopper, the jar also breaking the cake up into a suitable size for smelting. The product is taken to the furnace bins.

Huntingdon Heberlein Roasters.

The whole Huntingdon Heberlein plant was rebult and remodelled as fast as could be done and still supply sinter enough to keep the furnaces running. A new building is finished. It is supported by heavy timbers, which carry the track for a 20-ton Niles crane having a 58 ft. span. The crane runs the entire length of the building. The seven circular Huntingdon Heberlein roasting furnaces, 26 ft. in diameter, with hearths revolving once in every three minutes, pre-roast the ore for the converters. The heat is supplied by the use of coal, but a battery of gas producers are being installed and producer gas will be used as soon as they are completed. A boiler plant will be installed to supply steam for the producers and hot water for the new wash house and change room, which is also fitted with shower baths. This occupies the top floor of the new blower house for the H. & H. plant and is for the use of the employes of that department. In the lower floor are one Root blower and one 30,000 ft. Sirocco fan to supply the air for the converters and an exhaust fan to suck off the fumes and provide good ventilation. A system of conveyors is being installed to take the hot partly roasted product from the furnace to the concrete ore bin. A small conveyor will feed the main belt with the roasted fine product from the fines bin. Two seven-deck Wedge roasters to supplement these rotaries are being constructed.

These furnaces are fed from the Huntingdon Heberlein ore bins with a charge mixed on the conveyor belt to contain 40 to 44 per cent lead, 10 to 13 per cent iron, 7 to 8 per cent silicia, 7 to 10 per cent lime and zinc under 10 per cent if possible.

The converters number 36 and are arranged and operated differently than heretofore, The pots sit on castings bolted to the frame and resting free on concrete foundations. Air connection with the blower pipe is made by the weight of the converter resting sufficiently hard on a large rubber gasket to make the connection tight. The crane picks up the converters and takes them to the hot ore bins, where a small charge of hot partially roasted ore from the circular roasters is run in. The converter rests on a foundation similar to that of its stand. The hot partially roasted ore is then blown to a red heat and the full charge of moist, partially roasted ore is added and the converter taken by the crane back to its own blowing stand.

The time of converting varies widely with the charge, but averages three 10-ton charges per 24 hours. The blast is used at 12 oz. pressure, reduced to 10 oz. at the close of the operation. The charge has to be watched closely while being blown to see that no blow holes get in it and that the top is kept cool. The converter charge is fairly hard, yellowish & greyish yellow, showing some fines and containing some hard lumps, which are quite large in some cases.

These solid chunks were formerly broken by dumping the pot and letting the contents drop a few feet onto the floor and then attacking it with hammers. After breaking the product it was shovelled into cars, which involved no small amount of labor. This is now accomplished by picking up the converter with the crane and carrying it to a cooling floor 104 ft. long by 60 ft. wide. The converter is hoisted as high as permissible, turned up and the charge dumped out. The charge falls about 40 ft. on to the hard floor. If this does not entirely crush it the next one is dumped on top of any large pieces remaining.

The sinter is taken to a 36 in. by 24 in. Blake crusher set in a pit at the end of the floor by a Hayward clamshell operated by the crane. From the crusher the crushed sinter drops into a 36-inch pan conveyor, which takes it to the sizing plant at the top of the sinter bins. The coarse product goes to the fines bins. From the fines bin the fine is drawn into a large U car fitted with lugs and taken to the main floor. The car is picked up by the crane, taken to the ore bin at the roasters for that product and dumped.

The main building is 240 ft. by 60 ft. and a 40 ft. addition for the Wedge roasters was built this year.

Lead Furnace Practice.

From the sinter bins and other charge bins the furnace charges are drawn into cars hauled by electric locomotives to the furnace floor. This supplants the old method of hand tramming.

The two lead blast furnaces are respectively No. 7, 45 by 160 in., and No. 6, 45 by 140 in. at the tuyeres. The average daily capacity is about 150 tons of ore, besides by-products, matte, slag, etc., these constituting 20 to 30 per cent of the charge. The heights of the charge is 17 ft. 6 in. above the tupyers and the blast pressure used is 32 to 34 ozs. The charge has about 85 per cent of the Huntingdon-Heberlein roast, varying considerably with the ores and some oxidized and silicious dry ores and lime rock. The cake is about 12½ per cent of the charge, not taking into account slag and easily melted by-products. An addition of 100 to 300 lbs. of slag from the matte copper furnace is made to each charge to keep it open, make the furnace action uniform and reduce the percentage of zinc. The lead in the charge averages about 40 per cent, but it has been successfully run as high as 55 per cent. Sulphur is kept below 4 per cent, the lower the better, as the matte falls with less. The speed of running decreases markedly with a small increase of sulphur. From 30 to 40 per cent of the sulphur is eliminated in the blast furnace.

The slag is kept at about 31 to 33 per cent silicia, 18 to 20 per cent lime, 24 to 30 per cent iron (FeO) and manganese, 7 to 12 per cent zinc oxide, and 8 to 16 per cent alumina. I contains about 0.4 ounce of silver and a little more than 1 per cent lead. With high zinc the lime is reduced to keep the slag fluid. It is not profitable to use siliceous ores to bring the slag much above 33 per cent silica, as the furnace runs too slowly. Alumina gives no serious trouble. Iron and manganese may vary between the percentages above given without making much difference in the furnace running. Scrap iron is added occasionally, although unnecessary when the charge is good.

The lead bullion flows from the well at the side of No. 7 furnace into a kettle of 50 tons capacity, from which it is pumped into vertical anode moulds. The bullion made by No. 6 furnace is drawn from the lead well into an ordinary slag pot and run around to the 50-ton kettle. The pot is picked up by the crane and the contents dumped into the crucible. The matte and slag are tapped into a large receiver at the end of the furnace; the slag overflows into a granulating launder, while the matte is tapped from the receiver into pots. A single day's production of bullion has been as much as 130 tons with one furnace, but about 75 tons is the present rate of production per furnace running. An average analysis of the bullion is: Copper, 0.22; manganese, nil; zinc, 0.098; antimony, 0.32; arsenic, 0.28; nickel, cobalt and cadmium, nil; bismuth, 0.0138, and lead, 98.5 per cent; silver, 100 ozs., and gold, 0.5 ounces per ton.

The annodes when cool are removed from the moulds and loaded into rack cars and taken to the refinery by an eight-ton electric locomotive.

The matte is crushed and elevated to the top of the crusher building by a bucket elevator. It is then taken to the beds to be retreated.

Both lead furnaces are kept in full operation except when they become choked up by the zinc fumes, when they have to be shut down and cleaned out.

A 12 ft. Sturtevant fan run by an electric motor has been installed on the lead furnace feed floor. It sucks up all the fumes from the feed and furnace floors and discharges them out a separate stack through the roof. new stacks being erected.

These two furnaces are on the main furnace floor. On account of having a greater height than the copper furnaces it makes it necessary to have the feed floors at different levels. At the far end of the furnace building the earth has been excavated to a depth equal to this difference in height. The main building has been extended by a steel addition and a wing put on at right angles. The lead furnaces will be removed to this part of the building and this will give room for expansion when necessary.

A 20-ton crane at right angles to the main floor will handle the receivers, etc., for these furnaces. A 40-ton crane will run the full length of the main building.

In the blower room a 400 cubic ft. Root blower, run by two 300 horsepower motors connected to a jack shaft by a flexible rope coupling is being installe. The jack shift is connected by a herringbone gear to the blower. The motors are 550-volt, 60 cycle, polyphase, 299 amp. per terminal, 495 R.P.M., No. 17 H. type H. F. Westinghouse of 300 h. p. each. A Sullivan W. J. 16x10x14 compressor motor driven, has been installed to supply compressed air for the pneumatic tools in the machine shop, boiler shop, on construction work and similar purposes. A concrete retaining wall to support the brick wall at the end of the blower house was built The machines already installed had to be moved and the belt shortened to make room for the extra installation.

The plant contains, besides these new ones, one 300 cubic ft. No. 11 Root blower driven by two 200 horsepower induction motors, one No. 9 Root blower driven by one 200 horsepower motor, one 9½ Root blower driven by one 300 horsepower motor, and one No. 8 Connersville blower driven by two 150 horsepower motors. The motors are all 550 volt induction motors. These blowers supply air for the copper and lead blast furnaces.

Silver and Gold Department.

The lead refinery is now enlarged by a full 30-ton unit, comprising the electrical equipment, tanks and everything necessary for the Betts process. At present there are 240 tanks, each 3x3x3½ ft., arranged in cascades, and pumps keep the electrolyte circulating in these. Each tank has a capacity for 20 anodes, which are spaced 4½ in. apart in the tanks. Cathodes, consisting of sheets of pure lead about one-sixteenth of an inch in thickness, are placed between and outside the anodes, 21 in each tank. The electrolyte used is lead fluosilicate with free fluosilicic acid, averaging 12 per cent acid and 5 to 6 per cent lead. The tanks are operated with a current density of 16 amp. per square foot of cathode area. The voltage averages 0.32 volt per tank, the contacts causing a loss of not more than 0.2 per tank. A tank is worked out in about eight days and 15 per cent of the anodes goes back as scrap to the melting pot, after having been washed. The cathodes are removed from the tanks, washed, melted and cast into pigs of lead—of 190 lbs. each—for the Chinese trade, and half that weight for other markets. An average analysis of 2,000 tons of lead ready for shipment was: Arsenic and bismuth, nil; zinc, 0.0005; silver,

(Continued on page four.)

Rossland's Mines Better Than Ever

NEW ORE FINDS BEAR FRESH TRIBUTE TO PERMANENCY OF CAMP—ALL CONSOLIDATED'S PROPERTIES AND LE ROI NO. 2 ARE SHOWING UP EXCEEDINGLY WELL—SOUTH BELT ALSO GIVES EVIDENCE OF BECOMING AN IMPORTANT FACTOR

The mines at Rossland during the year have continued to bear out the prophecy that the camp will produce a steady tonnage for many years to come. The ore shoots in the bottom level of the War Eagle, worked from the Centre Star, have been opened up another 60 feet lower down and proven to be as large as on the level above. The ore continues to hold its values at a depth of about 2,100 feet below the collar of the War Eagle shaft. A new ore shoot on what is probably the continuation of the War Eagle vein containing valuable ore has been opened up at depth, and this is practically like adding a new mine to the camp.

In the Le Roi new ore bodies have been opened up and a good tonnage of ore is in sight, while the results of diamond drilling have been highly satisfactory.

In the Le Roi No. 2 much new ore has been found, and exploration is being carried into new territory to the north with very satisfactory results. Ore has been mined from the 1,650-foot level during the year. This ore comes out of the Le Roi shaft, as it is at a greater depth than the Josie shaft has been sunk to. It has proven to be of a very good pay grade and gives indication that the values will be continued at depth in this property as well as in the others.

The block of ground between the Le Roi and the Josie, which was partly opened up years ago, but never worked owing to disputes over extra lateral rights, which were not carried into court, has, since the settlement by definite boundary lines made last year, been worked steadily, and some very rich ore is being mined there now.

During the year a very careful and exhaustive study of the geology of the camp has been made by Dr. Drysdale of the geological survey, and his report will be awaited with interest by the whole camp. Mining in the camp, and especially all the exploration work by diamond drilling at depth, is carried on with the greatest care and study of the different formations. It has been found in mining at depth that the ore deposits follow contacts of intrusions of a diorite porphyrite which does not outcrop at the surface. In the upper levels the ore bodies are in augite porphyrite or at or near the contact of it ,and the monzonite. These rocks are so similar when fine grained it is very difficult for the layman to distinguish between them. Accurate maps and descriptions of their occurrences found in the mines and drill holes will be a tremendous aid to the carrying on of mining operations. To the diamond drill is the condition of the Rossland mines due today. Without its invaluable aid in exploration it is very doubtful if the ore bodies at depth would have ever been found, as prospecting for them would have otherwise been too costly.

Some idea of this may be obtained from the fact that even with its aid the development work in the Centre Star mine and War Eagle mines alone totals, drifting and crosscutting, 24 miles; raising, two and two-fifths miles; sinking, one and one-half miles. Figuring this out in feet, as is ordinarily done, and comparing it with some of the ordinary mines of the country, the vast size of the mine can realy be realized.

In the south belt the Richmond group is being steadily developed, and during the coming year this promising territory will be proven up, and from the surface indications looks very promising for a new era for Rossland. If this property poves satisfactory without doubt a new lease of life will be given to this part of the camp, and many of the old properties worked in the early days will be reworked in earnest.

As an indication of the increased activity of the camp, the number of men working is a good criterion. Last year there were 661 men, and this year the number is 789, or 138 more than the year previous, and without doubt next year there will be still more.

The ore bins are being rebuilt at the Centre Star. A new bin was built at the end of the row with a concrete foundation to the solid rock. They will be torn down one at a time and replaced with bins of this type. The use of concrete instead of timber is an indication of the idea the company has of the permanency of the mines.

The output for the camp was 267,819 tons last year, against 244,155 tons in 1912 and 254,997 tons in 1911. There is just as much, if not more, ore actually blocked out in the mines today as there was a year ago.

Below is a table giving the production of the Rossland camp and brought up to date. The gold in 1907 appears to be a little too low, and the silver in 1909 was corrected, otherwise it appears to be correct.

Yr.	Tone Ore	Gold oz.	Silver oz.	Copper lb.	Value
1893	...	...	...	...	...
1894	1,856	3,723	5,357	...	75,521
1895	19,693	31,487	46,702	106,229	702,457
1903	30,076	55,225	89,285	1,580,635	1,243 360
1897	68,804	97,024	110,068	1,819,586	2,097,250
1898	111,282	87,343	170,804	5,232,011	2,476,811
1899	172,605	102,976	1[illegible]818	5,693,889	3,289,086
1900	217,636	111,625	[illegible]378	2,071,865	2,739,300
1901	283,360	123,333	970,460	8,333,446	4,621,299
1902	329,524	162,146	373,101	11,667,807	4,893,395
1903	360,786	145,353	209,537	8,652,127	4,255,958
1904	312,991	133,695	181,830	7,119,867	3,730,866
1905	330,618	129,842	147,753	5,800,244	3,672,825
1906	297,527	105,356	126,174	4,750,110	3,173,387
1907	285,923	94,573	126,661	5,080,275	3,049 702
1908	302.419	142,314	129,588	5,042,244	3,673,392
1909	257,656	115,153	80,026	3 509,909	2,875,084
1910	253,471	119,277	80,026	3,577,745	2,966,696
1911	254,062	116,388	88,076	3,429,702	2,881,366
1912	243,870	132,073	87,530	2,539,900	3 196 037
Total	3,924,228	2,017,362	383,951	86,848,070	55,577,425

Centre Star Group.

The Centre Star group consists of the Centre Star, War Eagle, Iron Mask and Idaho mines, besides many other claims. The property is owned and operated by the Consolidated Mining & Smelting Company of Canada, Limited. M. E. Purcell is the superintendent. In 1912 some 160,256 tons of ore was shipped, and this year's production is about 5,000 tons less, due to the company taking more of their tonnage from the Le Roi. The ore shipped has been about of the same grade as that of 1912.

The development work from the 1st of January to the end of October, 10 months, consisted of drifting 7,030½ feet; crosscutting, 3,475 feet; raising, 843 feet; sinking, 1,825 feet, a total of 11,531 feet for the 10 months, against 10,282 feet for the whole year of 1912. The diamond drilling for the year will be about two miles of holes. The production from the different mines of the group for 15 months was: War Eagle, 135,748 tons; Centre Star, 60,723 tons; Idaho, 11,400 tons; and the Iron Mask, 5,137 tons.

Deep Mining.

The ore opened up last year from the winze 200 feet below the lowest main level of the War Eagle was developed 160 feet below that again by a crosscut from the Centre Star No. 12 level. This level is said to be 2,100 feet below the collar of the War Eagle shaft. One ore shoot here is about 200 feet long and seven sets wide in places, showing ore in the stopes of a good grade for its entire length. The ore is hauled to the Centre Star shaft by electric locomotives hauling 12 cars to a train load, each car holding 1½ tons. On the level above there are three main ore shoots, and the drift showed ore for about 60 per cent of its length of 1,200 feet. On the lowest level the drift is still being carried ahead and the ore bodies are opening up in a similar manner to those on the level above. A raise has been run between the two levels, and the ore from the two other levels will later be brought down the raise instead of hoisted from the winze as at present.

New ore bodies were also found in Nos. 8, 10 and 12 of the War Eagle, and in No. 5 a downward continuation of an ore body from No. 4 was opened up. On No. 4, 10 and 11 of the Centre Star ore opened up in other levels was developed on these levels.

From Nos. 5, 7 and 8 of the Centre Star an ore shoot was opened up by crosscuts to a vein, probably the continuation of the War Eagle vein. As No. 8 level would be about 1,200 feet below the surface of the new vein, the importance of this can well be realized. The size and extent of the ore shoot has not been determined as yet. It has been drifted on for 150 feet on one level and shows ore of a little better grade than the average. If after development this shoot proves as productive as the others have, it means the addition of another big ore shoot to the camp.

There are already so many veins, being three main veins, cross veins, the Iron Mask vein, the Josie vein and others already opened up and producing, that there is still left large blocks of ground to be developed even as high up as No. 4 level as not surprising. There are numerous ore shoots mined at some levels to be developed yet at other levels, some above and some below. The development work is so planned that the ore reserves are kept at a minimum tonnage of ore in sight of two years' supply at the regular output of the mine.

The mine office is a commodious building, with offices for the engineering staff. All the maps and records are kept in fire-proof vaults. A map painted on glass sheets, each sheet representing a level, and superimposed in their correct position, is kept in a cabinet lighted by electric lights. All of the mine workings can be seen at a glance by means of these maps, and a comprehensive idea of the mine obtained by a study of it.

A large assay office building houses that department, and a staff of men is constantly employed sampling the drifts, stopes and different faces in the mine. Accurate record of all these assays are kept on file and placed on the mine assay plans, so that the value of the metallic content of the rock at any particular part of the mine or a diamond drill hole, new or old, can be found in a few moments. Similar records are also kept for the Le Roi.

About 500 men are employed at the mine this year. Heretofore most of the men, tools, timbers and supplies were lowered at the War Eagle shaft, while all the ore was hoisted at the Centre Star. In June last the War Eagle shaft house was burned and the hoisting plant destroyed. Since that time the Centre Star shaft has been used for all the hoisting and lowering men, supplies, etc.

All the ore from the Le Roi mine, except that mined from above the 300, is also hoisted from the Centre

(Continued on page four.)

Develop Large Ore Bodies at Sullivan

OUTPUT OF EAST KOOTENAY PROPERTY WILL BE INCREASED DURING COMING TWELVE MONTHS—EXPLORE MINE WITH DIAMOND DRILLS—STEAM PLANT CONSTRUCTED AS AUXILIARY TO WATER POWER—ST. EUGENE AND SOCIETY GIRL ARE OPERATED

The Sullivan mine at Kimberley is owned and operated by the Consolidated Mining & Smelting company. C. H. Macdougall is in charge of the property. Besides the claims that belonged to the Fort Steel Mining & Smelting company 14 others have been purchased.

The vein is nearly flat and was worked by a shaft, the tenth level was only 100 ft. below the collar of the shaft. A tunnel was run to connect with this level and this is now the main working tunnel of the mine. Below this level the vein has considerably more pitch and a winze was sunk 100 ft. Last year the main tunnel was in 2,300 ft., and has been driven steadily ahead this year into new ground, which has been thoroughly diamond drilled. The drift from the winze has also been pushed ahead very steadily.

The principal vein filling is pyrrhotite with bodies of lead and zinc sulphides contained in it. These ore bodies are developed by raises, drifts and the use of diamond drills till their nature and extent has been fairly well outlined, a crosscut is then run underneath from the main drift, raises run up to the ore bodies, and the ore taken out through the raises.

Development work this year has opened up a good tonnage of ore of a good grade and the output of the mine will be increased this coming year. The remainder of the surface plant was moved down to the tunnel mouth and the construction of the shops, etc., completed this year. A new dining room and cook house have also been built this year. A steam heating plant for all the mine bunk houses and buildings has been installed. The shops are housed in a building built last year. This building is 112 ft. by 35 ft., and situated near the tunnel mouth. Power is supplied by a 30 horsepower motor. The equipment consists of a forge, a Ward drill sharpening machine, an air hammer for the blacksmith shop, two lathes, shears, drill press, metal saw, planer and pipe threader. The carpenter shop is equipped with timber framing saws and such necessary equipment. A Sullivan diamond drilling machine is also at the property. One hundred men are employed at the property, 60 of whom are underground. The output is about 100 tons of crude ore per day.

Seven big machines are at present in use breaking about 225 tons of crude ore, second class ore and waste per day. On account of the flatness of the ore bodies a vertical set-up is about the only one possible in the stopes. No more second class ore is mined in the stopes than can be sorted, but considerable is taken out from the drifts. Very little timber is required in the mine. When a stope gets too big pillars left, or a stone cribbing erected to take up any weight from the roof.

Between the old shaft and the rock house several old prospect shafts had been sunk, showing the existence of a body of ore very near the surface. This ore was stripped by a scraper operated by a compressed air hoist. The ore was then mined by the glory hole method. This work is only carried on in the summer time.

The ore is hauled to the rock house and the waste to the waste dumps by a four-ton Jaffrey electric locomotive, running on 30-pound rails and pulling a train of eight 2½-ton cars. The rock house is 800 ft. from the tunnel mouth, the track is covered by a roof to keep it free from snow in the winter.

Method of Handling Ore

At the rock house the crude ore is dumped over a three-inch grizzly, the fines going to a storage bin, whence they are passed through a six-foot 25 mm. trommel. The fines from the trommel may be directed to the aerial tramway bin, the waste bin or second class ore bin. The same also applies to the oversize. The overs from the grizzly go to a bin from whence they are drawn into a 15x24 in. Farrel jaw crusher, from which they pass to the picking belt. The oversize from the trommel and the feed from the crusher are not usually put on the picking belt at the same time.

The picking belt is a 50 ft. link conveyor steel belt 36 in. wide, giving a 30 ft. sorting table length.

Three classes of ore are sorted. First class ore is anything over 14½ per cent. lead, if not too high in zinc. This is thrown down chutes to the tramway terminal bins beneath. Second class ore is anything containing below 14½ lead or over 14½ lead, if too high in zinc. This goes to the second class ore bins, from which it is drawn and run out to the second class ore dump. The third product is waste and clean pyrrohitite, which is run out to the waste dumps.

The second class ore from the mine is dumped down into a separate bin. If it contains any clean ore of shipping grade, it is put through the rock house; if not, it is drawn directly from the bin and taken to the second class ore dump.

The aerial tramway to the Canadian Pacific railway track is loaded by a self-loader. The chute gates are operated by compressed air.

Power Plant

The hydraulic power plant consists of two six-foot Pelton wheels driving a 30-drill compressor and one six-foot Pelton driving a 150 k.w. 2,080-volt Royal electric generator.

The wheels are controlled by Lombard governors. The water is brought to the power house from Mark creek in a 30-inch wood stave pipe 4,385 ft. long, with a 200-ft. fall. The compressed air is conveyed by 6,000 ft. of pipe line 8 in. at the lower end and 6in. at the upper end. At the rock house there is a transformer station, where the current is transformed down to 550 volts. A 75-horsepower 550-vout motor is belt connected to a line shaft which drives the crusher, belt conveyor and a 20 K. W. D. C. generator, which supplies the power for the haulage locomotive and electric light for the tunnel.

The power house is situated on Mark creek at the terminus of the Kimberly branch of the Canadian Pacific railway. The hydraulic plant has been found insufficient at low water. A boiler plant was installed and steam cylinders put on the 3,000 ft. air compressor. When water is low in the winter time the steam can be turned on to help out the water power. By this arrangement only sufficient steam is used to supplement the water power and keep the compressor running at full speed.

St. Eugene

At the St. Eugene at Moyie a crew of from 20 to 35 men have been at work steadily. A small amount of development has been done. The ore stoped was shipped crude, any mixed ore encountered is piled in the dump waiting a final clean up.

Society Girl

The Society Girl mine lies back of the St. Eugene, 3½ miles from Moyie. It is developed by two crosscuts with drifts. The upper crosscut is 200 ft. long, the lower is 4,200 ft. long and 260 ft. on the dip of the lead below No. 1. The two levels are connected by a raise. A shoot of ore was developed this year on the lower level but no ore was shipped.

In the Windemere country the company of the Kootenay Central railroad will undoubtedly see renewed activity in the mines of the district. The Black Diamond on Toby creek has been doing development work this year and some work on other properties will be pushed this year.

The Sullivan mine at Kimberley is opening up big ore reserves and steady increasing tonnage is to be expected from this property. The developments in the new ground adjoining the old property are giving highly satisfactory results. The old St. Eugene at Moyie, still continues to produce small tonnage. There is ore developed on the Society Girl and the Aurora, near Moyie, and a small tonnage may be shipped from these properties soon.

ROSSLAND MINES BETTER THAN EVER

(Continued from page three.)

Star shaft. The ore is hauled to the shaft by eight electric locomotives. The corresponding levels of the different mines on which they run are No. 6 level of the War Eagle, No. 6 of the Le Roi, corresponding to No. 4 of the Centre Star; No. 8 of the War Eagle with No. 5 of the Centre Star; No. 9 of the War Eagle and No. 9 of the Le Roi, with No. 6 of the Centre Star; No. 11 of the War Eagle with No. 8 of the Centre Star, and on Nos. 11 and 12 of the Centre Star.

Pockets have been installed at the shaft on these levels and ore is drawn from them into 4½-ton skips and hoisted to the top of the shaft house. The skips dump over a four-inch grizzly, the oversize from which is passed to a 24x36-inch Farrel crusher. The undersize drop in a two-inch grizzly, the overs going into a set of bins with the ore from the crusher. The undersize goes to another set of bins and is elevated to the sample bins by a 24 inch conveyor belt 300 feet long. The coarser sizes are fed on a picking belt of equal length, 40 feet of which, at the upper end, is used to pick off the waste, which amounts to about 10 per cent of the whole. The belts feed directly into the sample bins from which the ore is drawn and passed through the sample mill into the storage bins. From the storage bins it is drawn direct into the cars.

None of the mines make much water below the sixth level. The pumping system consists of a Knowles sinker 10x7x5, on the second level; a Macdougall electric centrifugal turbine, capacity 200 gallons per minute, on the fourth; one Aldrich quintuplex electric capacity of 100 gallons per minute on the sixth; one No. 5 Cameron sinker on the eighth, one No. 7 Cameron sinker on the twelfth, and a 10x7x5 Knowles sinker on both the fourteenth and sixteenth. Compressed air is supplied by two 10-drill Rand compressors, rope driven, and one 600 horsepower synchronous motor. These two compressors supply the air for all the drills, the hoists at the War Eagle and Le Roi shafts, the 200-horsepower hoist at the winze on the eleventh level of the War Eagle and all the pumps except the electric ones.

The Centre Star hoist is driven by a 1,100-horsepower Hordberg engine with Corliss valve gear using steam. The two drums are 10 feet in diameter. The boiler plant consists of three 80-horsepower and one 150-horsepower boilers for power purposes and one 75-horsepower low pressure boiler for heating. The machine and blacksmith shops are equipped with two machine drill sharpeners, steam hammer, lathes, drill presses and all the necessary tools for making the skips, cars, machine parts and such equipment for all the company's mines. The carpenter shop is equipped with a set of saws for framing timber, machine for cutting wedges and a complete framing outfit.

The Le Roi.

The Le Roi mine produced 63,366 tons of ore (December estimated) for the year 1913, an increase of about 13,000 tons over the 1912 production and will probably show as large an increase the coming year. This ore is of about the same grade that the old company lost money on during the last year of the operation of the smelter at Northport, where the ore was formerly treated. The Consolidated Mining & Smelting company purchased the property in 1911 for $250,000 after it had been closed down for some time. As it is connected with their Centre Star mine, which it adjoins, the different levels were connected up and all the ore below the third level is taken out through the Centre Star shaft, to which it is hauled in trains drawn by electric locomotives.

The ore mined from No. 3 all goes into the Black Bear tunnel. This does away with the upkeep of the big steam hoisting plant, a former great source of expense. The ores treated at Trail, along with the other ores and handled on a much larger scale, can be economically smelted. No extra expensive overhead charges for large mine and smelter office staffs is now necessary, as it was formerly. Neither is there an expensive office in London to be kept up, nor is a large force of surface men necessary. Also it is not necessary to keep a smelter going on the output of the mine, resulting in the crowding of development work, and at times the mining of a lower grade ore than is profitable. Ores heavy in iron, but of low value, do not have to be mined to provide enough per cent of matte for the smelter charge and for flux, when the pay ore becomes too silicious. In all these and numerous small ways the Consolidated can mine and treat this ore at a great advantage over the former company, and make a handsome profit out of ore that proved unprofitable by the former method.

One hundred and ten men are employed at the mine, of which F. S. Peters is superintendent. He has been at the mine practically since it started. During the first 10 months of the year 2,322 feet of drifting, 711 feet of crosscutting and 178 feet of raising, making 3,211 feet of development work, was done, and much new ore was opened up.

Find New Ore Body

Some new ore was found in the Peyton vein on the 200-foot level. On No. 5 level a raise as put up from a drift on the footwall side of the main vein in a block of ground between the two old stopes. Pay ore was encountered and a crosscut to the hanging wall opened up a large body of ore about 2 5feet wide in places. This was opened up on the level and found on the 350 above. As the two other stopes went through to the surface, it is quite possible this ore will do so as well and will yield a large tonnage.

On No. 6 on the north vein an ore shoo twas opened up about 100 ft. long with ore on both walls. On the foot wall side the ore is 20 feet thick. Also found some ore shoots on No. 7. On a vein between the north and main veins a new ore shoot was opened up on No. 8 and 9. On No. 9 it shows three feet of ore of a better grade than the average. On No. 5 an ore shoot 55 ft. wide on the sill floor. Development work in ground that has been diamond drilled. Also work will be started on the lower levels shortly. A diamond drill has been at work steadily and about 10,000 feet was drilled during the year.

Where the Le Roi claims adjoine those of the Le Roi No. 2 there was a large block of ground which has been developed in places, but from which neither company ever mined any ore to speak of, although it was known to contain some good ore shoots. The reason for this was that the claims were staked under the old extra lateral rights law, and rather than have a beautiful crop of law suits this ground was left unworked. When the Consolidated purchased the Le Roi an amiable agreement was made with the Let Roi No. 2 by which definite boundaries were established on a give and take basis, with the result that this part of both mines is now available, and it is certainly a rich piece of ground.

In No. 7 level of the Josie is a stope six feet in width, with two feet of the richest ore being mined in the camp. It runs high in copper and unusually high in gold. In the northwest corner of the mine, which was similarly situated as to extra lateral rights, development work is being pushed and some ore opened up. The Le Roi No. 2 are also working in both these blocks of ground. It speaks well for the management of these two companies that an agreement of this kind has been made, rather than keep the ground tied up so neither could work it without expensive lawsuits.

Mine Equipment.

On the ninth level a triple electric 7½x15 Stillwell - Bierce - Smith - Vail pump pumps 250 gallons per minute to the Black Bear tunnel. Two smaller pumps on the thirteenth and one on the 1,650 pump to No. 9.

The Le Roi shaft has five compartments. One compartment is used for pipes, manway, etc., and two are used for hoisting men and supplies. The other two are not in use. The hoisting engine used is a Fraser & Chambers 20x30 in. direct hoisting engine, with "D" slide valves. The reversing gear clutches and brakes are all operated by auxiliary engines fitted with oil checking devices for locking their motion. The two 6 ft. drums have 3 ft. faces. They are loose on the shaft and each is fitted with band brakes and friction clutches. There is a Welch automatic safety stop to prevent the overwinding of the 1 in. Lang lay cables. The engine for the other two compartments is much larger, being a 24x60 in. The hoist is driven by compressed air from the Centre Star.

At the portal of the Black Bear tunnel is a fine large timber shed equipped with framing saws and all the necessary machinery for framing mine timbers. The remaining surface plant consists of a blacksmith shop, large store houses, ore bins an da concentrating plant. The whole surface plant is fitted with a complete fire equipment. The concentrating plant has been remodeled. An Elmore oil unit has been installed and is being tried out in combination with water concentraton on some of the lower grades of ore.

The Le Roi No. 2, Limited.

At the Josie mine, operated by the Le Roi No. 2, of which Ernest Levy is the local manager, during the fiscal year 1913 the shipments were 20,724 tons of ore and 1,595 tons of concentrates, obtained from 16,530 tons of ore crushed, as compared with 17,583 tons of ore and 1,658 tons of concentrates from 17,116 tons of milling ore for 1912. The ore is of a similar grade to that of 1912, when the shipping ore ran to $31 per ton and the concentrates $32.

Dividends of $43,200 were declared for the year, bringing the total paid to $1,471,580 to date.

The development work consisted of drifting 3,503 feet, crosscutting 628 feet, raising 482 feet, sinking 20 feet, making a total of 4,633 feet for the workings from the Josie shaft. From the lower workings of the Le Roi 317 feet drifting and 60 feet crosscutting were done, making a total of 5,010 feet of narrow work in all. Fifteen thousand and seventy-five feet of diamond drilling was done, nearly three miles, for one year. Ten stopes were started up on ore shoots that had been found on other levels. Seven stopes were started on entirely new ore shoots. In the northern part of the company's property diamond drilling has been extensively done, and development work is being pushed ahead vigorously into the new territory to open up the ore discovered in the drill holes. Important developments are to be looked for here in the near future. The ore shoots are similar in occurrence, etc., to those in the Le Roi and Centre Star, so no description of these is necessary.

The method of handling them is slightly different, in that three classes of material are sorted, namely, shipping ore, which is sorted to a much higher grade than in other mines, milling ore, and waste. The milling ore is ore carrying on the average for the year 0.12 oz. gold and 11.05 lbs. of copper to the ton.

The mine is opened up on the 1,650-foot level from the Le Roi, as their own shaft is down only 1,300 feet, and a good shoot of ore was opened up at this depth on what is thought to be the south vein. It was found in a crosscut from the main vein and drifted back onto the Le Roi ground. A stope was started here and ore shipped from it this year. A winze is being sunk on it at present. This is very promising, as it gives promise of pay ore at depth on both properties, and that the values continue to hold with depth in this part of the district.

One hundred and twelve men are employed at the mine and mill. The ore is dumped from the skips over a grizzly of 4 in. and 1 in. spaces. The fines go to the mill and the coarse ore is sorted into shipping ore, milling ore and waste. The milling ore is trammed to the concentrator, where it is crushed by two Blake crushers, one 8x16 inches and the other 8-12 inches, was opened up, and carries its width for nearly 100 feet, when it narrows in. This ore shoot may go through to the surface, and will provide a big tonnage.

The old drifts on the Black Bear are being cleared out and repaired preparatory to the carrying on of development work in ground that has been diamond drilled. Also work will be started on the lower levels shortly. A diamond drill has been at work steadily and about 10,000 feet was drilled during the year.

Nickel Plate Mine

Puffner & Rice, who were leasing at the Nickel Plate last winter, shipped the ore mined, and did not go on with the lease, as mine development will have to be done first.

Giant California Mine

A shipment of ore from the Giant California dump was made by leasors this year.

I. X. L. Mine

Leasors were working at the I. X. L. and made a small shipment this year.

SOUTH BELT SHOWING UP

Phoenix Mine

At the Phoenix, where leasors were working last year, the surface ore was taken out and it was found impossible to get more without sinking and doing development work. They threw up their lease.

Bluebird Mine

Some ore mined near the surface was shipped this year. On account of insufficient funds, the shaft workings have not been worked this year.

Richmond

The Richmond group comprises the Lily May, Black Horse, Richmond, Rattle, Sunbeam, Dewdrop and Alice D. claims, comprising a large territory in the centre of the South Belt.

On these properties are numerous veins striking east and west, or roughly parallel to the veins of the North Belt. Across the property a large dyke striking north and south cuts the leads and has what are apparently contact veins running with it. The ore here is similar to that of the North Belt, namely, gold copper ore. The east and west veins, however, are different in character, the ore showing galena and being similar to that of the Bluebird. Five of these have been stripped on the surface in different places and uncovered by open cuts and are certainly a fine lot of surface showings. Some very good assays have been obtained and some good ore found in the prospect holes.

To develop these the old Lily May shaft was utilized and a comprehensive scheme of development started under the direction of J. L. Warner, who is the manager of the company. S. Coulter is the superintendent in charge. Two crosscuts were started from the drift in the 200 ft. level of the Lily May. One to cut the five east and west veins and is now in 222 ft. and has 100 ft. to go to get to the first vein. The others are all about 50 ft. apart and dip 60 degrees. When this cross cut reaches the veins they will be drifted on and thoroughly prospected.

The other crosscut was in 200 ft. and had just crossed the dyke. It was coming into ore. The face showed considerable iron in the characteristic gangue of the north belt and a little copper was seen in it. It carried some gold, and looked promising. After the vein is crosscut, drifting will be pushed ahead. Later the vein was reported to be 35 ft. wide with 13 ft. of fair grade ore on the hanging wall.

Equipment

The mine is operated, as are all the mines in Rossland, by electric power from the Bonnington Falls. A power line 1½ miles long was built from the substation to the mine and a 48 amp. 3,200 volt 200 h.p. induction motor drives the Sullivan class W.J. 22x11x18 inch air compressor to which it is belt connected. A Washington Iron Works 8x10 hoisting engine with friction brake driven by compressed air is used for the hoisting. A Northey 4½x2¼x4 pump supplies the water for the water jackets of the compressor, pumping the water to a tank on the hill, whence it feeds the jackets by gravity and is pumped back again. The machinery is housed in a wooden building sheeted with corrugated iron as in the blacksmith shop.

A new head frame, made from solid timber cut on the ground, was built. A No. 6 Cameron pump handles the water at the bottom of the shaft and a small Northey the same size as the one in the power house, pumps the water from a sump in the drift.

A small shoot of ore in the drift of the 200 level shows some galena and shipment was made giving net returns of $25.00 per ton.

Inland Empire

The Inland Empire is 7 miles from Paulson's and 10 miles from Rossland. It is operated by the Inland Empire Mining company of Walla Walla, Wash. The company own fourteen claims, or about 500 acres. There are two veins on the property, the Inland Empire and the Berlin.

The Inland Empire vein is developed by a 300 ft. shaft on a 70 degree incline. There are 3 levels, No. 3 with about 250 ft. of drifting, No. 2 with about 300 ft. and No. 1 with 1,300 ft.

The ore is mostly a refractory gold ore carrying some free gold. The value runs from $5.00 to $7.75 on the average and they are principally contained in the sulphides. It varies in width from 12 ft. down, but is stated to be at least the whole width of the drift (7 feet) wherever drifted on.

A 250 h. p. boiler, a hoist and air compressor are installed at the mine. Also a 10- stamp mill with rock crushers, 1,050 lbs. stamps, automatic feeders, hydraulic cone classifier, two Wilfley tables and two Rieden Johnston vanners. The ore taken out in development is put through the mill. The company expects during the coming year to build a mill to treat the ore opened up by the last two years' development. The present mill is situated too high up the creek and water power is intermittent. The new mill will be built further down the creek. Just what kind of a mill is to be built has not been decided on as yet.

T. H. Paulson is drifting on a vein about ½ mile from Paulson. The ore shows some copper and carries gold and silver. Three men have been at work all summer.

INCREASED OUTPUT MILLION AND HALF

(Continued from Page Three.)

0.0013; copper, 0.00075; lead, 99.9938; iron, 0.00075; tin, 0.0001; antimony, 0.0028.

The slime from the anodes is agitated in tanks with hot water, filtered and dried, and next melted in a water jacketed reverboratory furnace lined with magnesite brick. The impurities are oxidized off and dore metal running 960 to 975 parts gold and silver is obtained. The dore metal is parted with sulphuric acid. The silver sulphate is run into steam heated tanks, where the silver is precipitated as a slime by bars of metallic copper. The silver and gold are collected, melted and cast into bars. The fine gold is 995 fine and the silver 999, the latter in bars of about 80 lbs. each. Fine gold and some silver are sold to the branch of the Royal mint, Ottawa, Ont., and the United States assay office at Seattle, Wash. Silver finds its chief market in the Orient; refined lead is sold in eastern Canada, the Orient and other places.

The copper sulphate solution obtained in the course of treating the slimes is crystallized into commercial copper sulphate.

Mechanical Department.

The mechanical department is housed in a fine brick building, well lighted. It is provided with all sorts of machine tools necessary to a complete machine, boiler and blacksmith shops. The electrical department is very large. Mr. Cocroft, the head of the department, having some 30 men employed running motors, repairing and replacing old machinery, building new lines and installing the new motors.

The assay department is also staff of assayers is kept constantly housed in a brick building and a large staff of assayers is kept constantly busy. Six hundred and eighty men in all are employed at present at the big plant.

PROSPERITY REIGNS OVER PHOENIX

PHOENIX, B. C., Jan. 7.—Phoenix, the highest incorporated city in Canada, is perhaps at the present time the most prosperous city for its size in Canada. The city lies at an elevation of 4,800 feet above sea level, and its population is estimated at about 2,000. Mining, the chief industry, is handled on a most extensive scale by what is known as the glory hole system. The Granby Consolidated company mines and ships to the smelter each day an average of 5,000 tons of ore. The company operates three properties here, the Granby, the Snowshoe and the Gold Drop. The British Columbia Copper company operates the Rawhide property near here, which has a daily output of 600 tons. The former company ships to its smelter at Grand Forks, and the latter to its smelter at Greenwood. Both companies have had a most prosperous year. Copper has been in great demand and the price has been firm. This has enabled these two big companies to work without interruption, employ large numbers of men, pay good wages and pay the shareholders handsome dividends besides.

The payroll of the camp runs considerably over $100,000 each month, and the greater portion of this amount is spent at home. Thus in the past 12 months the enormous sum of over $1,200,000 has been distributed among the working men of Phoenix. No wonder the city is enjoying unprecedented prosperity. The financial stringency, so prevalent in other places, is unheard of here.

Even though the altitude is high, Phoenix is a healthy and most delightful place in which to live. There are good schools and teachers, a good hospital with competent physicians and nurses; four churches to look after the spiritual needs of the people, an opera house that cost $25,000, built and run by the Miners' union, and a skating rink that cost $10,000. There are numerous hotels, stores, restaurants, a weekly newspaper, a brewery and other business firms incidental to a first-class city.

Phoenix looks ahead to the year 1914 with the full anticipation of a continuation of the abundant evidences of prosperity noted in the foregoing paragraphs.

NEW ERA FOR MAIN LAKE TOWN

Transportation Gives Impetus to Mining—Bonds Sold at Thousand Dollars a Minute.

(Special to The Daily News.)

KASLO, B. C., Jan. 7.—Kaslo is situated 18 miles from the north end of Kootenay lake, in the centre of a rich mining district. Development here has been somewhat retarded owing to lack of adequate transportation from the town to the mining camps, but the year just closed marks a new era, as the last link is now complete and trains are running from Kaslo, on Kootenay lake, to Nakusp, on the Arrow lakes. All the mines are thus served with a means of hauling out their ore, the towns benefiting by the new route being Sandon, Three Forks, McGuigan, Bear Lake and many smaller places along the railway. The service is the Canadian Pacific railway standard service, and it is believed by the mining men of the place that the assurance thus inspired by the operation of the railroad will result in more actual development in one year than has hitherto been seen in five.

A wharf costing upwards of $60,000 is to be built in the spring, having facilities for the transshipment of ore in ordinary cars by barges to the lines connected with the smelter towns.

The increase of children of school age has of late been such as to make the erection of a large brick school building necessary. This building will cost $35,000, and will be ready for occupation in February. Schools is a subject in which Kaslo has always kept well to the front, and the following incident will show ho the maintenance incident will show how the maintenance citizens to be of first class import. When $17,500 was needed to build the present building the debentures on which it was to be raised were ready for the market at a time when the whole country was in the grip of a financial stringency. All over the world people were offering gilt edge securities to a market that was glutted. Inducements were increased and sound issues failed. The Kaslo school bonds were 95s at 6 per cent, and every dollar was taken up by local people. Nothing could show more plainly that the people had confidence in their town and in the administration of its affairs. No one was surprised when Kaslo bought her bonds as on one occasion when the old railway charter of the Kaslo & Slocan was offering for sale the citizens met in the city hall, talked it over and subscribed $50,000 to hold the charter, the meeting just lasting 50 minutes. Kaslo is the only town in the interior which subscribes money at the rate of $1,000 a minute, either for education or transportation.

The report of the health office shows that infant mortality is almost unknown here and the climate and other vital conditions combine to keep the health record above the average of less favored spots.

At the present time the town boasts of four churches—Roman Catholic Anglican, Methodist and Presbyterian; a modern school system, a drill hall, government office. The town has rail and boat connection with the Canadian Pacific railway. Hundreds of young orchards are in the near vicinity and apples, pears and plums reach their highest perfection in the adjoining valley. A sawmill in the bay has changed ownership and early next year great activity in lumbering and sawmilling is scheduled to be manifested.

PROSPECTS OF GREENWOOD BRIGHT

City on Solid Basis—Money More Plentiful than for Many Years Past

(Special to The Daily News.)

GREENWOOD, B. C., Jan. 7.—Business was good in Greenwood during 1913. The smelter ran every day and the employment of a large number of men upon the wagon roads and Canadian Pacific railway made extra business for everyone in the city. It is several years since money was so plentiful in Greenwood.

The long and successful steady operation of the Jewel mine and mill has been of great benefit to the district. The Jewel mine is the only gold mine in this district and employs 5 men.

During the year the Granby began diamond drilling upon the Big Copper group of 13 claims. The successful working of the Big Copper would have a tendency to make Greenwood a second Butte.

The diamond drill has also proved that the Mother Lode mine, the oldest in camby, has also a large supply of ore that will take many years to dig out.

The resumption of work upon the Sun Top and other claims near the city, and the re-opening of several mines up the West Fork of the Kettle river, point to a great mining revival in and around Greenwood.

All the local carpenters have been busy for months, although not many new buildings were erected during the year. The building of the $50,000 office edifice was begun in September.

The prospects for the future of Greenwood were never better. The city is now on a solid basis and built is not necessary to push it into the front rank of Canada's mining and smelting towns. It has the goods, progressive citizens, and one of the best climates in the world.

WILL ELECTRIFY LINE WHICH CARRIES MUCH ORE

The electrification of the Rossland-Castlegar line of the Canadian Pacific railway, for which arrangements are being made, will follow the plan which has been adopted for the electrification of the Butte, Anaconda and Pacific railway, according to a mining journal.

D. C. Jackling, managing director of the Butte-Superior company, declares the electrification of that line "is the greatest step taken in transportation methods in my lifetime."

A large tonnage of ore and coke for the Trail smelter will be carried over the electrified line between Rossland and Castlegar.

ROSSLAND SEES SOLID PROGRESS

Mining in Substantial Condition—Agricultural Resources Being Proved Many Signs of Prosperity

(Special to The Daily News.)

ROSSLAND, B.C., Jan. 7.—Rossland has shown a much greater improvement in 1913 than has been the case for a long time past. The streets have been well laid with crushed rock which puts them in fine condition and an air of prosperity is shown in the very considerable improvement in and through renovation of the principal stores and buildings of the town. A renewed feeling of confidence is noticeable on all sides, and this is largely accounted for by the very satisfactory condition ruling in the principal mines of the camp as well as in the fact that with the renewed interest being taken at present in mining enterprises, there is good prospect of again attracting capital to this city, and it is felt that where this is invested in a competent way and on an economical mining basis, excellent results may be obtained for investors, with the much lower rates for freight and treatment prevailing than was the case in earlier days.

Climatic conditions for mining are excellent and operations are carried on without any difficulty the year around. Rossland is equipped with good light, water services and school accommodation and living conditions generally are the best that can be desired. During the year of 1913 operation have been carried on by Vancouver and eastern capitalists in developing what is known as the south belt, lying to the south of the town, in which area many good showings are apparent. A most complete plant on a smal scale has been installed in this section by the Richmond Consolidated mines and their development has been carried on with satisfactory results so far as they have gone and an outcome of this venture which should give good returns to the shareholders would mean regeneration of many properties.

The large pay rolls of the local mines tend to give the merchants a substantial basis for trade and each year the amount of acreage under cultivation about Rossland is increasing considerably, so adding another asset to the town.

The board of trade during 1913 received numerous inquiries in regard to opportunities in and around Rossland and in conjunction with the Trail board of trade have placed a permanent exhibit of Rossland ores and the manufactured products of the Trail smelter in the Progress Club building, Vancouver, to which will be added from time to time products of the soil to show the agricultural resources of this district.

One of the features demonstrating the development in Rossland and the district surrounding was the exhibition held in August by the Rossland Flower show, under the auspices of the local farmers' institute, and managed by a committee of citizens. Although the name of the show gave the impression that the scope of the undertaking was limited to floral exhibits, prizes were also offered for very many varieties of vegetables, fruits and agricultural products of all kinds, as well as for needlework, painting and other handiwork. The entries in all these classes far exceeded the expectations of the most sanguine of those in charge and the variety and excellence of the cut flowers and potted plants was much commented upon. The most striking display was that of vegetables and small fruits, which were most favorably spoken of and the judges were enthusiastic as to exceedingly fine exhibits in the competitions, even in the early season at which the show was held.

Such encouragement has been given to this enterprise and so much interest was taken that it has been arranged to incorporate an association under the style of the Rossland Agricultural association, which will carry on the work started by the Farmers' institute. The new association will enlarge considerably the scope of the original institution and more particulary so in the different lines of agriculture.

Another association which was formed was the Rossland Athletic association, combining the football, lacrosse and baseball clubs, for the advancement of clean sports. The executive of this association was composed of three members of each club and their first duty was to collect money by subscription for the purpose of clearing and draining the large park, which had previously been started under different management. They met with a hearty response from those whom they approached and soon had enough promised to warrant them proceeding with the work. They also put up a high wire fence all around and when the grand stand is put up next year Rossianders will have a recreation park where mothers can take their children on a hot day and enjoy watching a good game in a nice shady spot and when the grounds are fully completed there will be none better in the province.

Building operations during the past year have been considerable, which shows the renewed confidence in Rossland and this has had a marked influence in the advancement of real estate, prices having an upward tendency and more property has changed hands in the past 12 months than ever before since the early days of the camp.

Besides the new buildings which have gone up there have been many additions and repairs to houses and stores and tons of paint have been used in the refinishing and beautifying of homes and stores, hardly a home but what has had some improvements made during this year and old timers who have come back to have a look at their old stamping grounds are surprised to see how everything is looking up. The building of good roads was one of the best things received by Rossland during the past year. A fine even graded road between here and Trail has been made, which makes it a pleasure for people to go up and down between the two towns. The road leading out of Rossland towards Northport having also been graded and put in first class shape, automobiles can run up and down without any trouble and it is not uncommon to see strange cars come touring through the city.

The merchants have also had a splendid year and Rossland's fame has spread so well that three new business places have opened up, comprising a dry goods store, a watchmaker's shap and a real estate office. Besides these one more hotel has opened and a new theatre started.

At the present time it appears that there is a very bright future before Rossland for a good many years, as lots of good ore is in sight, the mines are all working full time and prospects are good for much new work being done during 1914.

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Big Profit Is Made By Granby Company

BIG BOUNDARY CONCERN EARNS MILLION AND QUARTER DOLLARS ON YEAR'S OPERATIONS—NEW SMELTER AT GRANBY BAY ALMOST READY TO HANDLE ORE FROM HIDDEN CREEK PROPERTIES RECENTLY DEVELOPED AT HEAVY COST

ranby Consolidated Mining, Smelting & Power Company, Limited.

The net profit of the big smelting id mining company for the year end- g June 30 was given in their an- ual statement as $1,214,599. For the alendar year $899,901 was paid in ividends; 1,242,053 tons of ore were melted at the big smelter at Grand orks, against 1,263,331 tons in 1912, 21,278 tons less. The copper ob- ined was 21,958,092 lbs., containing 8,538 ozs. of silver and 44,023 ozs. gold, all of which show a slight de- rease due to the slightly less ton- age treated.

The company gives as the cost of opper per pound for the past year 0.64 cents, cost of mining and smelt- ng $2.64 per ton. The cost of copper er pound is figured by deducting the ilver and gold recovery from the ore. he ore reserves in the Phoenix mines re given as 5,613,402 tons, a decrease 820,016 tons during the fiscal year. he large tonnage of the fiscal year akes a big improvement in the com- any's report and the profits for the alendar year will closely approximate hose of the fiscal year.

The ore of the Granby is lower in netallic content and consequently the ecovery less than formerly, being bout 17.7 lbs. of copper per ton re- overed and 73 cents in silver and old. This is due to three causes: First, when copper was low in price only the best grade of ore was mined to make a profit and the plant was not run to full capacity. Now the plant running at full capacity and copper from 14½ to 16 cents a pound a lower grade of ore can be profitably mined. The second cause is due to robbing pillars and working on the edge of the ore bodies, more waste getting into the ore as a result. The third reason is similar to the first—that as the ore in the reserves be- comes depleted every bit of ore that will pay to mine is broken down and ore that was left before is mined.

The part of the statement showing a decrease of 820,016 tons in the ore reserves will also show, if subtracted from the ore mined, that 441,000 tons of new ore must have been opened up. A new ore body is being diamond drilled on an extension of the Iron- sides ore body, where it was thought to have pinched down. Ore to the width of 150 ft. was found under the boarding house and this ore body is now nearly proven up and makes a respectable addition to the ore re- serves. Extensions and isolated bodies will no doubt be found in other parts of the camp, so it is safe to say that the life of the company's mine cannot be figured out by taking the yearly tonnage and dividing it into the ore reserve, but will undoubtedly be much larger than that, and pro- vided that copper keeps up to present average yearly price a handsome profit can be made by the company for some time to come. The produc- tion of the company to date is given in the following table:

Granby Production.

Ores smelted and values recover ed at the Granby smelter since 1901 are:

Taken from the Mineral Product ion of Canada, published by the Do- minion government mines branch, and brought up to date.

Years to June 30.	Total tons.	Gold, ozs.	Silver, ozs.	Copper lbs.
1901	176,919	8,871	34,990	5,435,955
1902	301,100	30,786	274,511	10,836,851
1903	303,407	35,121	277,574	12,551,758
1904	556,531	54,493	275,935	16,020,986
1905	590,120	42,980	215,449	14,224,692
1906	832,346	50,020	316,947	19,939,004
1907	665,915	32,738	201,337	16,410,576
1908	882,611	40,068	300,204	21,092,228
1909	984,733	45,760	335,520	21,901,528
1910	1,197,337	48,752	356,746	22,754,899
1911	984,346	41,707	343,178	17,858,860
1912	739,519	33,932	225,305	12,231,121
1913	1,279,869	47,266	324,336	22,686,614
Total	9,494,883	512,494	3,482,032	215,045,132
⅛ 1913 production.	621,026	22,013	174,269	10,979,046
Total	10,115,909	534,507	3,656,301	226,024,178

The dividends paid by the company o date are, as near as they can be btained:

903	$ 133,630.30
905	339,991.00
906	1,620,000.00
907	1,315,000.00
908	540,000.00
909	270,000.00
910	248,481.00
913	899,901.90
	$5,367,004.20

Besides this profit of over $5,300,000 surplus of $700,332 is shown by the st annual statement. The profits ade for some time, all of 1912 in fact, ave been put into a new mine and melter at Hidden creek.

Hidden Creek Smelter and Mine.

A 2,000-ton smelter at tidewater at ranby bay, with wharves, railroad to e mine, mine equipment and devel- pment on this property are all near- g completion. This has been par- ally done by profits from the Boun- ary plant and from a bond issue. he property was purchased and de- loped and is now stated to have 759,550 tons of 2.2 per cent copper e opened up. The smelter is of a ca- acity of 2,000 tons per day, or at full pacity 730,000 tons per year, so er 10 years' ore supply is opened up, cording to the company's figures. he first furnace can be blown in January, but it is doubtful if active roduction will be started till the hole plant can be put in commission The company is also purchasing ther copper properties on the coast r fluxing purposes with the Hidden reek ores. The Midas mine at Val- ez, Alaska, was purchased in Octo- er for $123,000. The Copper Queen ine of the Van Anda Mining com- any, on Texada island, has also been ken under lease and bond. The idas ore is a heavy sulphide useful for a flux, and a lime property tribu- tary to the smelter has been pur- chased for a supply of lime. Several other properties in the immediate neighborhood of Hidden creek have been bonded and some of them pur- chased.

Buying Other Properties

At Phoenix the Snowshoe mine was purchased for $20,000. This property was a heavy producer under a lease by the Consolidated Mining & Smelt- ing company, who shipped 427,000 tons of ore to the Trail smelter, and over 180,000 tons had been shipped to the Boundary smelters previously. It ad- joins the Gold Drop property of the Granby, and considerable ore can be obtained from pillars and in the bot- tom level of the mine. The Granby can mine and handle this ore through the Curlew tunnel, from which a tun- nel is now being run into the Snow- shoe for this purpose. The ore mined will probably be of little lower grade than formerly, but still good enough to make a profit under present condi- tions.

Near Curlew in the Belcher district in Washington the Lamefoot and Oversight properties were prospected this year and some development done. These ores are oxides, carbonates and sulphides of iron, carryin some gold. The ore bodies are fairly large, but their value has not been determined as yet. The ore will make a valuable flux.

The Big Copper, back of Deadwood camp, was diamond drilled and some test pits sunk. There is some splen- did ore on this property and the sur- face showing is deceivingly large, as the ore body is known to have a lim- ited depth. The drilling was stopped on account of shortage of water, but will be continued in the spring. If sufficient ore to warrant the purchase price and the expensive equipment necessary to provide transportation can be opened up the property will be purchased.

Work in Phoenix

At the mines in Phoenix 6,200 ft. of drifting and 6,637 ft. of raising, and 14,236 ft. of diamond drilling were done this year; 1,040,169 tons of ore were shipped from the Victoria shaft and tunnels and 190,497 tons from the Gold Drop.

As no changes of importance have been made at the mines during the year the description given last year is reproduced below:

The company operates what appears to be two distinct sets of ore bodies. The oldest and largest of these are on the Knob Hill and Old Ironsides claims, while the latter is half a mile to the east of the Gold Drop and ad- joining claims.

The ground above the No. 1 tunnel was worked by open cuts, steam shovels being employed. After nearly 1,000,000 tons had been taken out a fire destroyed the crusher. It was rebuilt at No. 2, 100 ft. lower, in such a way that the ore drops from it di- rectly into the railroad cars or, if none are available, through to No. 3 tunnel. All ore below No. 3 tunnel is hoisted from the Victoria shaft. The levels below being the 200, 300 and 400. No. 2 tunnel and the Vic- toria shaft are served by the Cana- dian Pacific railway, while No. 3 tun- nel and the Victoria shaft are served by the Great Northern railway.

Four Thousand Tons Daily

There are really four distinct mines with separate crews, rolling stock, bins, crushers, etc., the Gold Drop making the fourth. The idea of this is that in case of any accident to any part of the mine or to either of the railroads the output from three of the outlets can be kept up and the smelter assured of a steady supply. The aver- age output is a trifle over 4,000 tons per day.

System of Mining.

In the upper levels the ore bodies had a pitch of 60 degrees, but in the lower workings seems to flatten out. They are in places so wide that the crosscuts crossing them are 600 ft. long. In opening up a level parallel drifts about 75 ft. apart are run on the strike. At about 45 ft. intervals raises are carried up vertically for three rounds, when they are continued at 45 degrees. The first of these is carried through to the level above for ventilation. When No. 2 is up about 30 ft. stoping is started until the two are connected and the same process continued. In this way the stopes are left with a network of pillars. These pillars are then mined by starting above and putting in long holes, using a tripod and blasting out a funnel- shaped hole called a glory hole. This is widened out until the sides get too flat for the ore to run. Other raises then can be brought up from a paral- lel drift underneath and the process repeated. Sufficient pillars are al- ways left to support the roof till as the ore is mined out. While mining the ore these pillars are drilled full of holes. When all the other ore is mined out but them these holes are all shot together and the pillars brought down in this way.

The ore is never touched with a shovel and the only shovelling done is that required in running the drift and starting the raises.

The rock is hard and practically the only timbering done is for the chutes. The ore is hauled in 10-ton steel cars by electric locomotives of 75-horse- power on a three-foot gauge track with 30 lb. rails, capable of hauling 150 tons per hour at each of the outlets.

All of the later cars used in the shaft workings are wooden ones of five tons capacity, with a specially constructed side dump that permits of their being dumped at the pocket while the train is going at full speed and causing no delay.

In the Gold Drop all the ore is dropped through a 300 ft. raise to the Curlew tunnel, where it is hauled to the crusher bins, 800 ft. distant, in the three-ton capacity side-dump wooden cars by an electric locomotive.

At the Victoria shaft the hoisting is done by a 250-horsepower electric hoist from three pockets, one for ore and one for waste on the 400, and one for ore in the 200. These are con- nected by raises with the upper level, which greatly increase their capacity.

The shaft is of three compartments, having a 4x6 ft. manway and two skipways each 5x6 ft. in the clear. The skips are balanced and hold al- most five tons, and 2,000 tons can be hoisted in eight hours.

The skips dump 60 ft. above the col- lar of the shaft into two bins of 500 tons capacity each. From these it passes through a 42 by 36 in. Blake crusher, driven by a 150-horsepower induction motor. From the crusher the ore is fed on a 250 ft. conveyor belt 42 in. wide, traveling 250 ft. per minute, with a capacity of 200 tons per hour. This delivers the ore to four bins of 700 tons capacity. Two of these are served by the Canadian Pacific railway and two by the Great Northern railway. Nine hundred tons can be loaded into the cars per hour.

Compressed air is supplied by two 60-drill Rand compressors, run by a 700-horsepower motor.

A comparison of the methods of 1902 and those of today show that at the Ironsides then 280 men mined 1,000 tons per day, while at present 387 men turn out over 4,000 tons per day. The costs are stated ot be $4.77 in 1901 and $2.50 in 1910 per ton of ore mined and smelted.

The slag is allowed to run from the settlers, which are located at the out- let of the furnace, into flues where a steady stream of cold water granulates it and carries it down a main flume or laundry to a series of bins, where it is dewatered. These bins are lo- cated several feet below the level of the present dump. After a bin has been filled, a stream of water carrying the slag is turned into another bin by means of gates in the main flume. A chute at the bottom of the bin already filled with slag is then opened and it is allowed to run on to an endless belt. The belt, which is 24 in. wide and half an inch in thick- ness, is carried on an incline trestle 500 ft. long, to an elevation of 120 ft. above the present dump or level of the furna- ce outlet. At the higher level of this incline trestle is located a cross-angle trestle 400 ft. in length and similarly equipped at the main trestle. The main belt is driven by a 75 h. p. motor, as is also the cross angle belt.

Upon the upper side of the trestle on which the belt runs when carrying its load are located steel rollers 6 ft. apart. These rollers are cone shaped, making the upper side of the belt concave, thus enabling it to carry a full load of slag without spilling. The slag can be dumped at any point along the trestle by means of a traveling hop- per, through which the belt passes. This hopper cleans the belt of all slag by means of brushes and allows it to settle to the present dump.

The installation of one unit of the new system cost the Granby in the neighborhood of $50,000, but it will mean a large saving to the company in the cost of treating their low grade ores, doing away with, as it will, a miniature railway system and a large army of employes previously necessary to carry on the work.

The equipment for the new system was built by the Stephens-Adamson company, and the success with which it meets with the requirements of the Granby is being watched with consid- erable interest by a number of smelt- ing concerns, as the idea in connection with smelting operations is something entirely new.

Largest in British Empire

The new slag disposal system put in by the Granby company at the smelter is building two miniature cone mountains on the old dumps. A good idea of the amount of material handled can visibly be obtained by the growth of these mountains of granulated slag. The big plant has been running at full capacity for two years steady now and no changes have been made except in the way of re- placement and repairs where neces- sary.

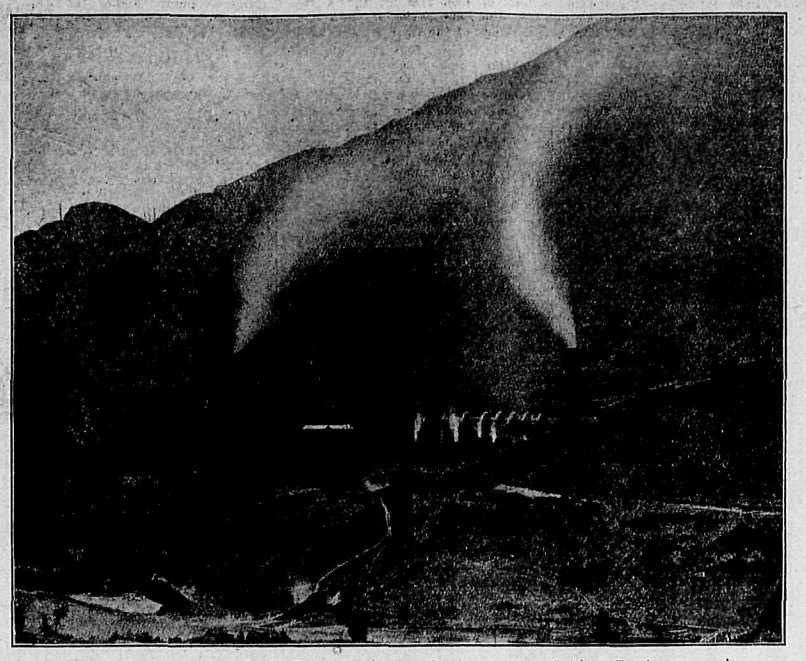
The smelter is the largest in the British empire and the second largest in the world.

The ore is hauled by the railroad to the smelter, 24 miles distant, in 53- ton steel cars.

These cars discharge into three sets of parallel ore bins, 760 ft. long of 5,000 tons capacity each. One in 10 cars is put through a sample mill and the ore is found to run so steadi- in value that 20 cents is the greates variation in 30,000-ton lots noted.

From these bins the ore is draw

(Continued on Page Six.)



Granby Smelter, Grand Forks, the Largest Smelter in the British Empire

Boundary Has Produced Total of Sixteen Million Tons of Ore

The ores of the Boundary district are for the most part low grade cop- per ores, carrying from 15 to 24 lbs. of copper and from 75c to $1.50 per ton in gold and silver. The mining and smelting of these ores can only be successfully carried on on a large scale. If the gangue of the ores was not of such a character as to make them self-fluxing they could not be mined and treated with a profit by this method.

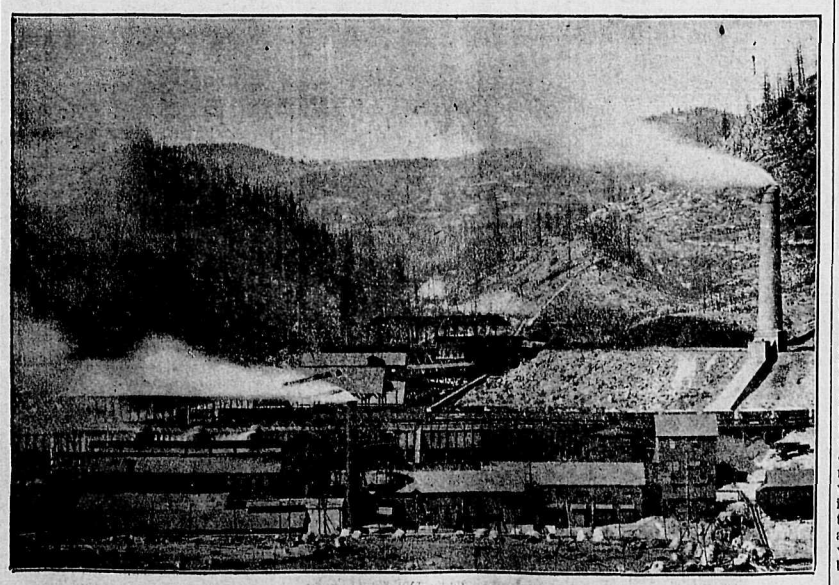
The Granby company, after years of hard struggle in its earlier days, is now producing 1,250,000 tons of ore per year, which immense tonnage is handled at a good profit. Its earnings last year are quite sufficient to pay back the money spent on the invest- ment and interest charges if kept up as expected. The compani, no mat- ter how big, that mines cannot go on forever at that rate, and they have therefore wisely purchased new prop- erties and built a new smelter at Granby bay on the coast.

The British Columbia Copper com- pany has pursued the same course by buying new property at Voights camp and has been fortunate enough to find workable ore bodies that can be treated at their own smelter. Brit- ish Columbia can point with pride to these two companies, that in spite of higher labor cost than ordinary can show sheets for mining and treat- ment charges comparable with any companies in existence. They have devised methods of mining, the glory hole system and the Mother Lode system, to meet their difficulties and cut down their mining costs and have studied the smelting end till their costs on that are down to a minimum. Only by such methods could a company make nearly a million dollars a year out of ore of the grade of Phoenix camp with copper at an average price of a little over 15 cents. The im- mense production of the district may be realized by totalling up roughly the ore produced since 1901.

The Granby company has mined and smelted 10,515,109 tons of ore during that period and the British Columbia Copper company about 4,350,000 tons. These two companies alone produced over 310,000,000 lbs. of copper, besides 821,529 ozs. of gold and 4,841,191 ozs. of silver.

Besides these the Trail smelter has handled about 450,000 tons of ore from the district, and the old Montreal & Boston, later the Dominion Copper company, now controlled by the Brit- ish Columbia Copper company, pro- duced over 642,145 tons, making a total roughly approximating 16,000,000 tons for the district since 1901.

The value of the output varies from year to year with the price of copper and silver. This year copper was low- er than 1912, therefore the figures show a decrease on this account. Oth- er conditions also change the output, but it should be, on the whole, fairly steady.



B. C. Copper Company's Smelter, Green wood, B. C.

B. C. Copper Company Does Much Development

AT VOIGHT'S CAMP, NEAR PRINCETON, FOUR MILLION TONS OF ORE HAVE BEEN OPENED UP—MUCH WORK ALSO DONE, OPENING UP ORE IN COMPANY'S BOUNDARY PROPERTIES AND IN EUREKA, NEAR NELSON

The British Columbia Copper com- pany treated during the year 622,442 tons of ore at its smelter at Green- wood. This is a decrease of about 79,- 000 tons from the figures for 1912. The cause of the falling off is due to the closing down of one of the com- pany's furnaces, due to lack of suit- able fluxing properties in the ores treated and the desire of conserving the reserves of ore of the Mother Lode mine for the excess flux they contain.

The tonnage from the Mother Lode was reduced 80,000 tons and from the Rawhide 30,000 tons. That of the Na- poleon, in Washington, and of cus- toms ore was increased and the ship- ments of the Queen Victoria mine, near Nelson, were increased 26,000 tons.

From the ore treated 8,365,672 lbs. of copper, 25,286 ozs. gold and 125,856 ozs. silver were recovered. These figures show a corresponding decrease to the tonnage figures. The company is undergoing a very expensive period of enlargement and the development outlay for the year has been very large, as has the outlay for purchase of properties. The payments on the numerous properties in Voights camp, near Princeton, have been met as they came due, as have the payments on the Eureka, near Nelson, and the pur- chase of the Queen Victoria was com- pleted.

These properties, with the exception of the Queen Victoria, have all been undergoing a vigorous development campaign, which has taken a respect- able sum.

In Voights camp some 4,000,000 tons of ore having been proven up, a scheme of development to mine this ore is now being undertaken and all the development henceforth will be of a permanent nature. Concentrators will be built here and at the Lone Star and it is hoped to have these completed by the end of the year.

After the company gets all the de- velopment and equipping of its new properties done a heavy increase in production and profits may be looked for.

The following table gives the out- put of the company since 1901. The years 1901 to 1904 are estimated from the tons of matte produce; from 1904 to 1910 they are compiled from Steven- en's Copper Handbook, and represent the fiscal year of the company. From 1910 to 1913 the figures are from those supplied by the company to The Daily News:

Year.	Tons treated.	Oz. gold	Oz. silver	Lbs. copper
1901	117,077	15,810	69,014	3,701,400
1902	148,600	13,647	64,324	3,567,431
1903	163,454	12,359	56,720	3,421,725
1904	210,484	36,404	118,419	5,081,743
1905	194,056	26,266	95,410	5,601,300
1906	121,031	20,238	82,193	5,820,651
1907	341,952	24,967	101,114	8,643,133
1908	348,610	13,597	58,204	5,567,355
1909	359,000	18,244	64,234	6,325,000
1910	440,173	24,962	84,180	7,143,456
1911	580,000	29,600	127,000	9,650,000
1912	701,341	25,642	141,222	11,267,681
1913	622,442	25,286	125,856	8,365,672
Total	4,348,220	287,022	1,184,890	84,136,556

Mother Lode.

The Mother Lode mine at Deadwood is unique in its system of mining. The ore body is about 150 ft. wide, of low grade copper-silver-gold ore. It was mined on the spiral raise system and later by glory holes. Now the ore is blasted down by enormous blasts, bringing down thousands of tons at a blast. At first about 75,000 tons were brought down in one blast, but the last one brought down the enormous quantity of 425,000 tons, which, by the way, would be a very re- spectable ore reserve for a higher grade mine. The value of the ore brought down in this one blast would be well over $1,000,000.

The ore is drilled with holes for the whole width of the ore body by machines working in the spiral raises from the 200 ft. level to the surface, some 400 ft. in height. These holes are loaded and all fired simultaneous- ly, bringing down a whole cross sec- tion of the ore body into the glory hole. Twenty-five tons of 40 per cent Giant dynamite was used in the last blast.

The ore is then drawn out through the spiral raises running to the bot- tom of the glory hole and taken out of the 200, 300 and 400 ft. levels to the shaft. Any big boulders are drilled with Murphy hammer drills and blasted. The trains on the 300 and 400 ft. levels are hauled by 3½- ton Jaffray electric motors.

From the 200 ft. level down the ore has been mined by the spiral raise system, which only allows of about one-third of the ore body being taken out. A very convenient porphyry dyke cuts almost horizontally across the ore body at this level. It is very hard and almost unsmeltable and will be left in as a roof for protection from rock falls from the sides of the glory hole when mining is car- ried on beneath it.

This system of mining has the dis- tinct advantage that, when a machine is once set up holes can be drilled from 18 to 20 ft. in depth in every necessary available place without tearing down the machine to blast. Also simultaneous firing of hundreds of holes gives a greater efficiency in the use of the powder. Thus, a great saving is effected in labor and pow- der. Also much ore can be kept broken ahead, some 500,000 tons be- ing broken in the glory hole at pres- ent. The ore can be drilled for sev- eral years' supply ahead of require- ments if desired. It has the disad- vantage of waste wall rock falling into the glory hole and mixing with the ore. This is sorted out, however, and is a minor factor; 150 tons of waste a day are being picked off the belts at present.

The ore body is an altered lime im- pregnated with iron and copper sul- phides, resting on the volcanic for- mation at the 500 ft. level. It con- tinues from the present end of the glory hole for some distance down the hill past the shaft. Diamond drill- ing was carried on there recently to determine its limits in that direction.

On account of its containing more than enough lime and iron over silicia necessary to be self-fluxing, it is a valuable ore for fluxing. The output of the mine will be curtailed to use in fluxing the concentrates from the Princeton district and the Lone Star as soon as those mines are produc- ing.

W. Norcross is superintendent of the mines of the company in the Boundary district.

Mine Equipment.

No changes have been made in the plant or equipment during the year.

The main shaft is a three-compart- ment shaft, situated about half way between the railroad track and the top of the hill. The 200-foot level tun- nel enters at the railroad track level and is 400 ft. below the outcrop of the ore body. The hoisting engine is a 20x42 first motion Corliss valve gear engine with 6-foot 6-inch drums, made by the Jencks Machine company. A 14x16 second motion hoist with a 5- foot drum, made by James Cooper & Co., is used for hoisting men, steel, lumber, etc. The hoisting engines are driven by compressed air, with steam injected into the exhaust. The skips dump into a bin, from which the ore is drawn direct to a 30x42 in. Farrel crusher, driven by a 200-horsepower motor. The coarsely crushed ore falls on a 36-inch 6-ply rubber belt, with one-eighth inch facing, 327 feet long, which conveys it to the top of the sampler. In the sampler one-fifteenth of the ore is cut out, the rest passing to the track bins of about 600 tons capacity. The one-fifteenth part cut out is drawn into a separate bin, from which it is taken to the sampler at the smelter as a special sample car and cut down to an assay sample.

The ore is conveyed to the smelter in 40-ton steel cars in trains of 18 cars, drawn by Shay engines, the rail- road being operated by the Canadian Pacific railway.

Compressor Plant.

The compressor plant consists of one Rand duplex 16-horsepower, 25 L. P. 36 in. stroke Corliss valve gear compressor, supplying 3,740 cubic feet of air at 125 pounds pressure. This is driven by a rope drive on an 18 ft. fly wheel by a 600-horsepower, 2,080- volt General Electric induction mo- tor. A converted steam cross-com- pound H. P. 19¼, L. P. 31¼, stroke 48 inches Ingersoll-Sargent compressor, driven by a rope drive on a 26-foot fly wheel by a 500-horsepower, 2,080- volt Westinghouse induction motor, is held in reserve. The compressor fur- nishes air for the hoists, mine pumps and Sullivan drills. The compressor house is built at the creek below the mine and an electric pump forces water to two tanks at the top of the hill above the shaft to supply drinking water for the cottages, boarding houses and the boiler plant, which supplies steam for the hoist exhausts and heat for the buildings in the win- ter, as well as fire protection for the plant.

There is also a complete machine shop, blacksmith shop with machine drill sharpeners.

About 100 men are at present em- ployed at the mine, which is produc- ing from 1,000 to 1,100 tons of ore per day, against about 200 men with a slightly greater output under the old system of mining. The company has provided cottages for the married miners and boarding houses for the single men, and operates a store. There is a stage service twice daily between Greenwood and the mine. The ore shipped from the Mother Lode during the year amounted to 303,996 tons.

Rawhide.

The Rawhide mine at Phoenix ad- joins the Snowshoe. The ore body extends through the old Snowshoe mine, purchased by the Granby Con- solidated Mining, Smelting & Power company this year, into the Curlew and Gold Drop claims of that com- pany. It is one of the two greatest ore bodies of the camp and the ore is the characteristic chalcopyrite in a gangue of garnet and epidote.

On the Rawhide claim the area of the ore-bearing zone is about 14 acres and the main ore body is from 35 ft. to 75 ft. in thickness. The most of the ore lies near the end of the claims of the Granby company. The mine is developed by six tunnels and a shaft, and all the ore is brought out the main tunnel. A large Hadfifeld crush- er set under ground is used to crush the ore.

The 1913 output of the mine was 238,455 tons, against 267,347 tons in 1912 and 50,450 tons in 1911. It is mined by the glory hole and stop- ing system similar to that of the Granby.

Lone Star in Washington

The Lone Star mine is situated on the Boundary line of the United States and Canada. Some of the claims when staked were recorded on the wrong side of the line. The shaft

(Continued on Page Six.)

Ainsworth Shipments Double Previous Year

DEVELOPMENT IS BRINGING OLD CAMP AGAIN TO FRONT AS PROFITABLE PRODUCING DISTRICT—DESPITE INCREASE IN SHIPMENTS ORE RESERVES ARE ADDED TO—CONSOLIDATED COMPANY IS LARGELY INTERESTED

That the period of development which the old camp of Ainsworth has been going through is resulting in its rejuvenation is evidenced by the fact that for 11 months to December 1 this year the shipments of ore and concentrates were double those of the year previous.

The Highland property, the purchase of which was completed this year by the Consolidated Mining & Smelting company, after an active period of development, is once more on the shipping list. The mill has been repaired and over 5,000 tons put through it already. The No. 1, also owned by the same company, produced 3,300 tons of dry ore. From the other properties the company holds under lease and bond a small tonnage was mined.

The Silver Hoard, from the workings from the wonderfully convenient cave, shipped nearly 1,000 tons this year, against 200 tons last year.

The Bluebell at Riondel, by the steady operation of the mill, shipped over double the tonnage of concentrates of 1912. The shipments from the Utica were about the same as last year, while the Whitewater's tonnage fell off about 500 tons.

The development work in the mines of the district is being kept up, and although the amount of ore milled and shipped has been great, still there have been large additions made to the ore reserves of the different mines. The Bluebell is opening up a new level from their shaft, which has been sunk 100 feet further, and at the No. 1 exactly the same development scheme is being carried out. The Highland, Maestro and Banker are being developed as rapidly as conditions warrant. The Silver Hoard is drifting from the 175 ft. level of the shaft in the cave to the ore. Crosscuts are being run on the Florence and the Gallagher, and prospecting development is being done on some claims above the Gallagher. The Eureka and the Whitewater are both pushing development. The Utica is also keeping up development work. From this it will be seen that the conditions of the camp are healthy.

The price of lead has helped the mines in the lower grade silver belt this year. The mines at Ainsworth are of two classes: The No. 1, Silver Hoard, Gallagher and all the properties at the top of the mountain beng dry ores, carrying a small percentage of galena, zincblende and iron pyrite, the values all being in the silver content. Lower down the mountain the ores are lead-silver ores, carrying about one ounce of silver to one per cent of lead, while across the lake the silver value drops to about one-quarter to one-sixth of an ounce of silver to the per cent. of lead.

Bluebell.

The Bluebell mine, situated on the shore across the lake from Ainsworth, produced ore containing 7,790,000 lbs. of lead and 96,400 ounces of silver this year. This famous old mine is the oldest in this part of the country. Trappers and Indians are said to have melted down lead here for their bullets before mining was thought of and when the country was a wilderness. It was one of the first lead mines to be opened up in British Columbia and has been worked intermittently ever since in a more or less indefinite manner.

The mine, under the managership of S. S. Fowler, is now being systematically developed and worked. The shaft was sunk 75 ft. vertically o. 115 ft. on the dip this year and a new level opened up. The ore bodies as far as developed are proving fully as large as on the level above. Stoping was started on the second level about the first of July.

Two main ore bodies are worked. On account of their great width and thickness pillars are left on a definite system as supports for the roofs. The ore is drawn out of the chutes and taken to the ore pockets at the main shaft and hoisted in 2½-ton skips running on three rails to the ore bins at the top of the crusher house. It then passes through two Blake crushers into bins, from which it is drawn into cars and hauled by horses to the mill bins, 600 ft. distance.

The ore hoisting is done by a second motion host with 4 ft. drums using compressed air. The timber, tools, supplies, etc., are lowered into the mine by a smaller hoist at the old shaft.

Compressed air is supplied by a 1,400 cubic ft. Sullivan two-stage compressor driven by a Pelton wheel working under the pressure of a 700 ft. head. The old compressor is kept in reserve and only run when needed.

At the mill little changes are constantly being made. Two new three-compartment jigs were added this year; also two more Deister tables for the slimes and to handle the middlings from the other four Deisters. The new tables have the new Deister movement and are very fascinating things to watch, as they run so smoothly. The mill practice is to save as much of the galena as possible, fine grinding of the middlings by a Huntingdon mill being resorted to Seventy-eight thousand tons of ore was treated at the mill and 8,000 tons of concentrates shipped this year (December estimated). Charles Sherwin is mine superintendent and about 100 men are employed at the mine and mill. The concentrates are loaded on barges at the mill and shipped to Trail.

Highland.

The purchase of the Highland mine and adjoining property was completed this year by the Consolidated Mining & Smelting company. Stoping was started and about 5,000 tons of ore stoped. The mill, which is connected with the mine by a 4,300 ft. single rope aerial tramway, was repaired and put in commission. Power for the mill and compressor is supplied by a flume and pipe line from Cedar creek, giving about 400 ft. head

New Power Plant.

A new power plant is being installed, taking the water from Cedar creek higher up. A 9,000 ft. pipe line, 18 in. at the upper and stepped down to 12 in. at the lower end, will deliver the water at the mill under a 1,000 ft. head. The upper part of the pipe line is a wooden stave pipe, while the lower is spiral riveted steel pipe.

The waterwheel for the plant, on account of the high head, has to be especially strong and built of extra good material. It is being built at the Nelson Iron works. It will drive electric generators as well as the mill and the power will be used for the different mines owned and operated by the company in Ainsworth. When finished the other plant will be left in commission and can utilize the excess water if needed.

The mill contains a Comet crusher, screens, rolls, two four-compartment jigs, three three-compartment jigs, two two-compartment jigs, six Wilfley tables and three Frue vanners.

About 75 men are employed at the mine and mill.

Maestro and Banker.

The old Taylor hydraulic air compressor on Coffee creek was repaired and the air mains connected by pipe lines with these properties, which are operated under lease and bond by the Consolidated Mining & Smelting company. Development is being carried ahead and a little ore shipped. About 20 men are employed. Roy Wethered, who is in charge of the Highland, also looks after the work on these properties.

No. 1.

At the No. 1 mine the winze started at the end of the crosscut has been sunk an additional 100 ft. and another level opened up. The old winze is connected with the new one and the drift carried into new ground. On the main level considerable drifting has been done and raises started. The ore, occurring in bunches and shoots, is a dry silver ore in the bedding planes of limestone. As the ore-producing lime belt is fairly wide much prospecting has to be done to open up the ore, but the bodies are fairly large in most cases when obtained.

The ore is taken from the tunnel to the ore bins at the upper tramway terminal. The bins are provided with a 1½-inch grizzly. The coarse ore is drawn out onto dumping sorting tables. After picking out the waste the tables are tilted by a lever and the ore dumped into the main bin. The main bins are of 500 tons capacity. The ore is drawn from three chutes into an automatic loaded on a movable platform, which can be moved from one chute to the other as required. The loader loads the 8 cu. ft. capacity buckets of the 9,000 ft. aerial tramway.

The lower tramway terminal is built on piles driven in the bottom of the lake close to the Highland mill. A slip has been built and car barges are run into the slip. The ore is drawn directly from the bins through a chute into the cars. A floating storehouse is used for supplies for both the Highland and the No. 1. A trestle from the Highland mill, provided with a chute and swinging pipe, runs out to the side of the slip and the concentrates are dumped through this directly into the car. Extra piling is being put in to protect the structures from pounding by the barges in rough weather. A dredge was employed this summer in deepening the channel into the slip.

The mine will be supplied with power from the power plant being installed at the Highland mill. A compressor house has been built and an 18x11x16-inch compound Jenckes compressor installed on a concrete foundation. This will be belt driven by a 60 cycle, 200 horsepower, 50 amp., 2,200 volt induction General Electric motor. At present compressed air is supplied for the drills and hoist at the winze by a steam driven 16x18-inch straight line Ingersol compressor. About 60 men are employed at the mine under John Cannon.

Silver Hoard.

The Silver Hoard mine adjoins the No. 1 and s a similar ore deposit. The property is under the management of W. S. Hawley, who operates it for the Silver Hoard Mines of Spokane.

The present workings are at the end of the property, adjoining a claim of the No. 1 group. A cave was discovered in December of 1911 while prospecting a new surface showing, and this cave runs down the footwall side of the ore body for 50 ft., where it takes a turn towards the ore body and recrosses the shaft below the 100 ft. level. The shaft was made by simply straightening out the cave for 50 ft., then going down the cave 50 ft. and raising up to the bottom of the shaft to make a straight incline. The shaft has been sunk to the 175 ft. level and crosscuts are being run to the ore and to the cave. The one to the cave will be for drawing off the seepage water.

On the 100 ft. level 800 ft. of drifting and crosscutting and 400 ft. of raising have been done this year; 50 ft. of drifting was done on the 50 ft. level. As the ore follows the bends and dips of the formation, which is disturbed near the surface, a lot of extra development has been necessary due to these dips and folds. The drifts on the 100 ft. level are being carried in both directions, as are the crosscuts on the 175.

The ore bodies are quite wide and the roof is supported by stulls and pillars. The ore is hoisted from the shaft by a horse whim and taken to the ore sorting house and sorted. After sorting it is hauled to the No. 1 tramway terminal and taken on the aerial tramway to the lake. Electric power machinery has been ordered and an electrically driven hoist will be installed next spring.

About 1,000 tons have been mined this year, shipments running about 60 oz. silver. This ore contains a negligible amount of galena and not enough zincblende to be penalized at the smelter for the zinc content. Native silver abounds on the fracture planes, mostly in the form of wire silver. The gangue materials are a blue-grey limestone, quartz and pyrite. Thirty-three men are employed at present.

Gallagher.

The Gallagher is being developed by a crosscut tunnel which will be about 400 ft. to the Gallagher vein. It is now in 85 ft. and should cut the Ashya vein in a short distance. A. D. Wheeler is developing the property. Some claims above the Gallagher are being opened by the Beckett's of Spokane.

Florence.

The Florence silver-lead property on Princess creek is being developed by the Florence Silver Mining company of Spokane, under the managership pof A. D. Wolfle. Suitable mine buildings were built last year and a prospect shaft sunk about 100 ft. A steam boiler plant and a hoist were installed. Some ore was encountered in the drift. A crosscut was started this year to intercept the vein at a depth of 300 ft. A three-drill compressor, water driven, was installed on Princess creek and a five-drill steam-driven compressor at the shaft, to be utilized when the water was too low to operate the other one.

Utica

The Utica is situated at the base of the cliff on Paddy's Peak. It is 6½ miles from the siding at Twelve-Mile on the old K. S. to the mine by the wagon road, which has a steady upgrade with numerous switchbacks, climbing nearly 5,000 ft. in that distance.

The property originally belonged to Paddy McQue. It was developed by the late George Hughes ,who, after spending $25,000 on it was unable to complete his payments and it reverted to the original owner. After his death it was bonded by Charles F. Caldwell and his associates, who have worked it steadily ever since. On the property are three leads, one of these has not been developed to any extent. It appears to be rather flat. The other two stand nearly vertical and are about 150 ft. apart. A crosscut tunnel cuts the both leads and drifts have been carried from it a distance of 1,200 ft., on each lead, bringing the face well under the cliff and giving a depth of somewhere close around 900 ft. From the first lead has come most of the ore that has been mined. The ore occurs in lenses which pinch down in every direction to about an inch or two and widen out to about 18 in. of clean ore at their thickest point. As the shipments this year have been running from 170 to 217 oz. of silver, 20 per cent. lead and 20 per cent, zinc, it only requires about two inches or ore to pay to mine.

One feature of this ore deposit is that it appears to lie in a bedding plane in a narrow band of slate which is not more than 20 ft. wide in the main cross cut with line on both sides of it. The ore lies in about the centre of the slate and not on the contact.

The ore does not come down into the drift in the first 300 ft. but was opened up there by raises. From where first encountered to the face there is 900 ft. of practically continuous ore. Worked carefully on a small scale this yields a very fine profit to the owners. A crosscut is being run about 1100 ft. in from the main crosscut to the drift in the second lead which is also in about 1200 ft. This will provide ventilation.

The second lead is larger. The ore shoots widen out to 4 and 5 ft. in the centre of the lenses but the ore is not so clean and more zinck. Fairly clean zinc ore is also encountered. One car shipped to Pueblo ran 122 ozs. silver and 38 per cent zinc, realizing $2,360.50. Two miners only are working on this lead and have 3½ ft. of ore at its widest place in the stope at present.

Up on the cliff is a showing of ore supposed to be the small lead on which some leasors were working this summer. They have put in a wire cable and let their ore down this in a bucket as well as get up their supplies.

As there is no place to build a cabin they live in their tunnel which is of course, too cold to work there in the winter. Twenty-seven men are employed altogether.

Mine Equipment

At the lower end of the basin in which the mine is situated is a small lake. A dam has been built at the end of it providing a small reserve of water, and a pipe line with 600 ft. of 14 in., 400 ft. of 12 in. and 200 ft. of 8 in. of wooden stove pipe conveys the water to a 5 ft. Pelton wheel giving a 270 ft. head. The Pelton is a belt connected to a 4 drill Holman straight line compressor equipped with Mathews Son patent valves. The air is conveyed to the mine by 3800 ft. 5 in pipe line with two expansion joints after passing through a 36 in. by 10 ft. receiver 1½ in. branch lines are used There are 4 3¾ Holman Preston drills, 1 Shaw stoper and 1 Shaw plugger drill. The big machines will be used for drifting and cross cutting.

The Pelton wheel can be used to drive the same mill by changing the belt. There is a 4 ft. saw and an edger to cut the timber for the mine which is plentiful in the vicinity.

Three cabins, 4 bunkhouses, cookhouse, compressor house, blacksmith shop, stables and ore sorting house comprise the mine buildings. The 4-horse teams and two other horses are used for hauling ore, supplies the timber. An ore house, freight shed, stables and cabin have been built at the railroad.

All these improvements as well as the development work done since the present owners took over the property, part of the cost of the road to the mine and most of the purchase of the property has been paid for out of the profit fade from the ore shipped.

U. S.

At the U. S. in Jackson's basin Mr. Smith, of Kaslo, encountered a body of zinc ore from which he shipped about 4 cars. As he did not have much depth more development will have to be done before more shipments can be expected. This he is doing now.

Whitewater

At the Whitewater about 22 men have been employed steadily this year getting out small bodies of ore left around the old workings and discovered since and at development work. The principal development has been a 900 ft. raise from number 9 level from the drift in the new ground. As the ore shoots rake to the east this will prospect a lot of ground.

No important discoveries have been made and the description of the property as given last year is repeated for the benefit of those who are interested.

The Eureka

The Eureka is situated on the peak between Bear and Lyall creeks. A new trail from the Whitewater Deep wagon road was built to the property last summer by the government. The property is being worked under a lease and bond by E. R. Davidson of Spokane.

A crosscut was run 340 ft., which 300 ft. from the portal cut the vein. The vein has been drifted on 110 ft. to the north. The drift if driven under the old workings would be 3,000 ft. long and give a depth of about 1600 ft. The first surface showing is about 200 ft. from the present face of the drift.

The old workings are away up on the peak above timber line. Several cars o high grade silver lead ore were shipped from them in the early days.

Development work is being carried ahead here this winter, six men being employed.

J. L. Retallack & Company

J. L. Retallack & company, a company consisting of J. L. Retallack of Kaslo, Clive Pringle of Ottawa, J. W. Stewart of Foley, Welsh & Stewart, and others own the Whitewater, the Whitewater-deep and the Washington.

Washington

The Washington is situated across from the Rambler-Cariboo in McGuigan Basin, in the Slocan mining division. Over 3000 ft. of development work has been done on this property which has been closed down for over a year. There is stated to be blocked out in the mine 40,000 tons of milling ore running from o to 6 per cent lead, 20 to 25 per cent zinc and 2 oz. in silver, to 1 per cent of lead with 0.25 oz. of silver to 1 per cent of zinc. The property will be worked in conjunction with the company's mines at Whitewater. A mill to treat the ores of all three properties will then be built at Whitewater.

This famous old property since the English company stopped operations, was under lease till the fire of 1910 to Messrs. Retallack, Fowler & Koch. Under the lease $230,000 was distributed in dividends and $98,000 was paid to the company in royalties. The property was developed by eight tunnels, Nos. 9 and 10 being on the Whitewater Deep.

A small shoot of ore was encountered on the sixth level in 1911. Ore has been stoped from here during the summer. At present operations are confined to getting under this ore shoot on the next level below. Some ore was also mined from a shoot of zincy ore that has been opened up for some time. About 12 men have been employed at the mine during the year under the charge of James Street; 930 tons were shipped to the smelter by December 1, and about 3000 sacks were at the railroad awaiting shipment.

The Deep is developed by a crosscut 800 ft. to the vein from the portal which is about 100 ft. above the bottom of the valley. This crosscut the vein at a vertical depth of 1500 ft. or 2000 ft. on the dip of the vein, the deepest workings in the Slocan. A raise 850 ft. long connects the tunnel level with No. 10 level of the upper workings. Stations were cut at Nos. 1, 12 and 13, the tunnel level being No. 14. Drifting was carried on at all the levels. It will be necessary to drive over 1000 ft. on the lower levels to get under the old ore shoot which has a decided pitch to the east.

The only equipment at the mine is an 18x24 in. air compressor driven by a 26 in. Pelton and a small electric light unit. A camp with suitable buildings is situated at Whitewater for the Deep and at the old mill site for the Whitewater.

The two properties have produced to the end of 1911 as nearly as Mr. Retallack can estimate 89,552 tons of ore, which contained 1,699,860 oz. of silver and 13,539,174 lbs. of lead, and 10,179,000 tons of zinc concentrates, averaging 43.3 per cent of zinc. Besides this there was considerable ore from which the zinc was not saved. Some of the ore also contains a little gold.

TROUT LAKE

Gold Hill Placer

The dredge built by C. R. Bushner, of Philadelphia, Pa., to operate at Gold Hill on the Lardeau river has been closed down for the winter. It has been working steadily at removing the overburden and the layer of boulders that cover the pay dirt. The overburden is from 8 to 9 ft. in thickness and carries a little flour gold of which as much as possible was saved. The boulders were cemented together with dirt running about 75 cents per yard but would hardly pay to work as the boulders comprise almost 75 per cent of the material. A trench 150 ft. long and 80 ft. wide has now been cut through these two layers and the pay gravel and sand reached. Numerous efforts to reach bed rock have failed at this point which is above the second crossing of the railway on the line from Gerrard to Trout Lake, about 20 miles above Lardeau.

The gold in the pay dirt of the boulder layer is coarser than that of the overburden but not as coarse as that of the dirt beneath it.

The dredge is 1 1-3 yard dragline bucket type and can handle a bucket every two and a half minutes. The buckets dump over a grizzly and the big shoulders go out a chute at the side. The sand and the gravel go to a 12 mesh shaking screen and the overs go through the riffle boxes to catch the coarse gold. The sand that goes through the screen goes to Pierce amalgamator of 400 cubic yards capacity.

About 20 per cent of the sands are magnetic iron and a magnetic concentrator will be installed next year to take these out as they carry off some gold that could be caught in this manner. A belt elevator sticks the tailings. A Morris 4 inch sand pump pumps sand up and an eight inch Morris pump will be installed when working on the sands to pump up the necessary water, and the sands stirred up by the dredge.

The work done this year was all on a preliminary type but nearly paid for itself and next year dredging will be begun in earnest. As the layer of boulders can low be undermined the difficulty of handling them from now on will be greatly lessened.

Spokane people are the exploring the adjoining ground and state that they intend to instal a bucket elevator dredge next year.

At the Ajax a 150 ft. crosscut to tap the ore body found at the surface is being run. If it opens up as it appears to it will be then opened up by a still lower crosscut. The ore is rather zincy. The clean ore runs about 60 per cent lead and 40 ounces silver The ore body is said to be about 150 ft. long with a width of 8 to 10 ft. of milling ore. It adjoins the Nettie L and belongs to the Ferguson Mines Ltd. Twelve men are employed at the property.

At the Ethel 3 men are employed developing.

At the Silver Cup leasors are working.

BIG PROFIT MADE BY GRANBY COMPANY

(Continued from Page Five)

with coke into charge ovens run by electric motors of 30 h p., each train carrying four tons per load and handling 750 tons to 900 tons per 24 hours. There are four of these trains feeding the eight furnaces, which have a total capacity of from 3,000 to 3,400 tons per day when all are in operation. The cars run right into the furnace from the end and dump on both sides at once. The slag heretofore was hauled away in cars.

During the first three years' operation at the plant the system of granulating was adopted, but owing to the loose slag taking up so much room and running into the Kettle river, was abandoned and the slag taken from the settlers at the furnace in a molten condition. Since that time it has been allowed to run into huge pots, containing six tons each, which were hauled by dinky engines to the dump and while still in a molten condition was dumped.

By dumping the slag hot the Granby has secured a yard over a mile in length and varying in width from 100 to 500 ft., and as the haul from the works to the dump has become so long and making this method so expensive the company last year decided to again adopt the granulation system, only using a much more improved method of handling the slag.

OTHER PROPERTIES IN THE BOUNDARY

Jewel Mine

The Jewel mine is about 8 miles from Greenwood and 4½ miles from Eholt. It is connected with the British Columbia Telephone system. Charles Arthur Banks, late of the Wahi Parloa Mining company of New Zealand, where he has installed a tube mill and cyanide plant for tailings treatment, was engaged to put the mill in operation by the English company owning and operating the Jewel mine.

The ore is a partially refractory and partially free milling gold ore containing some tellurides. A 15-stamp mill and cyanide plant was erected some few years ago and numerous changes made during the last year has brought the mill to a successful stage. The mill treats about 30 tons a day and has been in fairly steady operation this year. Unfortunately Mr. Banks left for England in December and no particulars could be obtained.

Union

The Union mine at Gloucester, about 3 miles past Franklin camp on the north fork of the Kettle river has been shipping ore to the Granby smelter this year. The ore is a dry silver gold ore, the principal values being in silver. The bodies are said to be quite large and easily mined.

The ore is hauled about 25 miles to the railway at Lynch Creek and shipped to the smelter. The cost of hauling is $9 per ton and freight $2.

West Fork of Kettle River

On Wallace mountain on the west fork of the Kettle river the Sally mine is being operated by a syndicate of which Alex. Robinson is the head. This property produced ore when it had to be packed 50 miles to Midway and the freight and treatment charges were $47.00 per ton. Of course it had to be closely sorted and lots of ore was put on the dump that can now be shipped as the new Kettle Valley line of the Canadian Pacific railway passes within 2 miles of the property. Some of this ore running $80 per ton was shipped this year.

There are four leads from 300 to 500 feet apart on the Sally and Rob Roy claims of the property. No. 1 lead is the one from which most of the ore shipped came. Mr. Robinson states that the ore in the bottom of the tunnel for 300 ft. averages 244 ounces in silver, 2 to 9 per cent lead and 4 to 18 per cent zinc with a width of about 10 inches on the average being very uniform in size and value.

On No. 2 lead the adit tunnel shows from 4 to 9 feet of milling ore carrying from 2 to 5 per cent lead and good silver values for mill feed. The ore here is very irregular pinching in and widening out very rapidly.

On No. 4 lead stoping is being carried on in a small way, the ore is high grade but very irregular, being from 10 inches to 5 feet wide. When widening out it is mostly milling ore.

A crosscut is being run to tap the whole four leads and is in 400 ft. having about 35 ft. to be driven to reach the first lead at 135 feet vertical depth on a 60 degree dip. The intention is to mine enough high grade ore to pay the development and building a mill for the milling ores. Twelve men are employed at present.

Other Properties

The Bounty and Bounty Fraction adjoining the Sally are expected to be developed this winter. A syndicate of London, Ont., and Phoenix, B. C. is to start work in January.

The Rambler, next to the Bounty Fraction, is also said to be under lease and bond and work has to be started soon.

The old Carmi mine, on the other side of the Kettle river, is said to be under option to a syndicate of Vancouver people.

The Butcher Boy, adjoining the Carmi, is also said to be included in the same deal.

With the coming of the railroad an increased activity is to be expected in this district and it is a splendid field for prospectors for, with shipping facilities and such ore as is found in the Sally, if new properties were found a sale for them should be effected without much trouble.

B. C. COPPER COMPANY DOES MUCH DEVELOPMENT

(Continued from Page Five)

is on the Washington side. The ore bodies are well developed and quite large. The ore is of a different character, being of a higher copper content and more silicious than the most of the other ores of the district. On account of the silicious gangue the ore will be concentrated and the mine was closed down last year awaiting the completion of the concentrator.

An experimental plant was built at the aerial tramway terminal at Boundary Falls to experiment with the ores from this mine as well as the ores from Copper mountain, with a view to finding the most efficient method of concentration. As soon as definite results are obtained a mill will be built.

Wellington.

At the Wellington mine the ore reserves were depleted in 1912 and last year numerous test pits and other development of a prospecting nature have been carried on. The ore bodies are nearly flat and near the surface, so work of this character is very easily done.

Copper Mountain.

At Copper Mountain, near Princeton, the company has a large number of claims under lease and bond. The work done so far has all been of an exploratory nature to determine the size and character of the ore bodies Shafts, test pits, tunnels and extensive diamond drillings in different parts of the property comprise the nature of the work done. Evidently this work has proved the ore bodies to be satisfactory, as the company has met all its payments due up to date. Some 4,000,000 tons of ore have been proven up and development work for the purpose of mining this ore will now be pushed ahead.

The character of the ore has been found to be slightly different from what it was first thought to be. Instead of being self-fluxing the ore is slightly silicious—a little too much so to make it a profitable straight smelting proposition. On this account the ore will be concentrated. After a suitably efficient method has been decided upon a large concentrator will be built and the concentrate shipped to the smelter at Greenwood.

The ore is in fracture planes along quartz porphory dykes, cutting the granodiorite and monzonite. It is mostly found in the monzonite. It is chalcorpyrite containing a little silver and gold. Some hematite accompanies the ore in the workings near the surface.

Greenwood Smelter.

No charges were made at the smelter last year. It is built on a side hill and gravity is used for handling the ore throughout. The railroad enters the works by nine spurs on three different levels. The upper ore bins have a capacity of 2,000 tons. The customs ore and ore to be sampled is dumped in these, from which it passes through a 36-inch by 42-inch Farrel-Bacon crusher driven by a 100-horsepower motor.

From the crusher the ore passes on to a conveyor belt, which delivers it through two steel boxes from which, by an especially designed device, one-fifth of the total is taken at regular intervals and the balance passes on to the storage bins. The sample finally taken by the mill represents 1-6250th part of the whole. The mill is driven by a 100-horsepower motor and has a capacity of 2,000 tons in 16 hours with 11 men.

The storage bins consist of 18 bins in two lines with a capacity of 600 tons per bin, with two coke bins at each end, and 12 bins in two lines, with one large coke bin, giving a total capacity of 12,100 tons of ore and 3,000 tons of coke. The whole is served by five railroad spurs.

From the bins the ore is taken by 26 charging cars with four 7½-ton electric locomotives running on 3 ft. gauge tracks to the furnace.

Smelting Operation.

There are two furnaces with 26 Tuyres 48 in. by 300 in. and one 18 in. by 240 in. with 24 tuyres. Two forehearths are used to the furnace. The matte is tapped into 5-ton ladles and carried by a 40-ton crane to the converter plant. The slag is run into pots of 250 cu. ft. capacity, which are hauled to the dump. They are dumped by a 15-horsepower tilt motor and are so designed that all the shell will dump out. The cars were designed here and have since been adopted by several of the big American smelters.

The converter plant consists of two stands of converters 84x126 in., with seven bodies, and is equipped with a 6 ft. mixing mill for working up the linings, which are made from silicious gold ores. The plant has a capacity of from 40 to 50 tons of 45 per cent matte per 24 hours.

Collieries Are Heavy Producers for Year

TOTAL OUTPUT FOR DISTRICT'S COAL MINES EXCEED MILLION AND HALF TONS COAL AND THREE HUNDRED THOUSAND TONS OF COKE—PRODUCTION APPROXIMATES FIVE MILLION DOLLARS IN VALUE

	Coal	Coal for Coking	Coke
Crow's Nest Pass Coal Co.	1,165,219	372,902	252,525
Hosmer Mines	266,000	120,000	66,800
Corbin Coal	81,000		
Princeton	3,230		
United Empire, Midway and others	37,000		
Total	1,581,449	492,902	319,325

The output for the collieries for the year shows an all around increase. The Crow's Nest Pass Coal Company produced 1,165,219 tons of coal and 372,902 tons of slack which was used to make 252,525 tons of coke, a general increase. From their property at Hosmer The Canadian Pacific Railway Department of Natural Resources mined 266,000 tons of clean coal and 120,000 used for coke and produced 66,800 tons of coke. Both companies increased their equipment during the year and the Crow's Nest company is opening up new seams.

The Corbin Coal & Coke company completed the railway to No. 3 mine where coal will be mined with a steam shovel next year. The output for tht year was 81,000 tons.

In the Princeton district the Princeton Coal & Land company and the United Empire worked steadily while the mines at Coalmont have been undergoing development as well as turning out a small tonnage. The tonnage from this district will be greatly increased when the V., V. & E. and the K. V. railroads are completed through to the coast and the market for their product enlarged.

Crow's Nest Pass Coal Company

The Coal Creek mines of the company have produced 927,410 net tons this year which figures are 230,139 tons greater than the figures of 1910 and 133,000 tons greater than 1912.

During the past 11 months a new seam of coal at Coal Creek named "B" seam has been opened up. It is expected that 500 tons per day will be taken from this new mine when in operation. It is expected that the mine will start producing about the beginning of next month and this will increase the Coal Creek tonnage figures of 1914.

At Michel the operations during the year have been confined to No. 3 seam from which 237,809 net tons were taken which exceeds all past records for No. 3 seam, prior to 1911 by 349 per cent.

A new seam of coal has been discovered on the south side of the valley at Michel above No. 3 mine. It is about 9 feet thick and development work will be started on it early in the spring.

On the north side of the valley a new automatic incline plant has been installed to develop and bring down the coal from the seams opened up on the mountain side.

This plant is already in operation and some coal being produced from these hitherto unworked seams. A satisfactory tonnage is being produced and a large output from these mines is to be expected the coming year. It will thus be seen that besides the older mines the company will have these new mines working next year and expect to greatly increase their tonnage.

W. R. Wilson is the general manager of the company and by his courtesy we are given the above data.

Hosmer Mine

The mines at Hosmer owned and operated by the Department of Natural Resources of the Canadian Pacific railway, of which Lewis Stockett, Calgary, is the superintendent, have furnished us with the following data:

The "B" incline has been double tracked and an additional drum for the engine operating the same has been installed. An 8 foot diameter Sheldon Sirroco fan for ventilating No. 2 "B" south mine have been installed during the year.

A steam locomotive for Rock Bank and boiler coal has been produced and 120,000 tons used for making coke, 66,800 tons of coke were made during the year.

Corbin Coal & Coke Company

The Corbin Coal & Coke company did not get their upper mines producing this year, but expect to next year. The mine at Corbin produced 81,000 short tons of coal. The big seam at the upper or No. 3 mine will be worked with a steam shovel. The British Columbia Eastern railway was completed to this mine this year. It is 7 miles of mostly switch backs from the town of Corbin which is 14 miles from the main line of the Canadian Pacific railway.

A new Marcus screening plant of a capacity of 1,000 tons is on the ground and will be erected in the spring.

When the immense coal deposits described last year in the Annual Review of the Nelson Daily News are worked by the steam shovel method, the output of this property will only be limited by the number of cars obtainable. 120 men have been employed during the year.

Princeton Coal & Land Company

The Princeton Coal & Land company operated a coal seam at Princeton. The output for the mine this year was 32,230 tons and 50 men were employed on the average.

Several new markets have been opened up and the screening plant installed in 1910-1911 has been giving satisfactory results. An electric plant for the town is being installed at the mine.

United Empire

The United Empire mine at the Cement Works near Princeton, besides turning out enough coal for the cement plant has been selling coal locally for fuel purposes.

Coalmont

The workings at Coalmont encountered a faulted area with swelling ground. It was found impracticable to keep the workings open. A new seam of coal 40 feet thick four miles up Granite creek was prospected during the year. A narrow gauge railway and an aerial tramway are to be installed in the spring. Two cars of coal were brought down and shipped to Fernie for a coke test.

The property changed hands during the year and is assured of sufficient capital to push the development of the mine and the production of coal on a large scale.

YEAR PROMISES WELL FOR NELSON DISTRICT

(Continued from Page Two.)

ent company totals over 2,000 ft. in the two leads. The work has been principally done on the Fourth of July lead and the Wilcox lead can easily be developed by short crosscuts from these workings.

The vein has been sampled every two feet during development and Mr. Lakes states that the Fourth of July vein for an average sampled width of 42 inches averages $18.00 in gold and the vein is opened up for a depth of 800 ft. below the surface. The Wilcox for an average sampled width of 40 in. carries $13.00 in gold. The ore is free milling gold quartz with iron oxides pyrite and galena.

It will be seen from this that the mine is a very valuable property. As soon as the development is completed the property will be turned over to an operating company and the mill put into commission. All of the ore taken out in development is stored in the mine.

Equipment

Power is supplied by a 4 ft. Pelton belt connected to a 50 k. w. 404 volt 3 phase alternating Westinghouse generator. A 30 h. p. motor is belt connected to a 10x10 in. compressor set underground.

A 10 stamp mill with crusher amalgamation plates, vanners, etc. is connected to the mines by two aerial tramways.

Jennie Belle

Some development was done on the Jennie Belle this summer but work was discontinued for the winter.

The construction of the Kootenay Central railway is stated to be the cause of the renewal of mining activity in the Windermere district. It is reported that the Black Diamond on Toby Creek has been bonded and that the Paradise, in the same locality, will be worked this year after nine years of inactivity. Up to that time about 20,000 tons of ore had been taken from the property. The values are in silver and lead and smelter returns gave about 50 oz. silver and 60 per cent. lead.

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Slocan District Sees Great Development

IMPORTANT ORE DISCOVERIES AT DEPTH IN SLOCAN STAR AND RAMBLER-CARIBOO AND SURPRISE MINES—CONSOLIDATED COMPANY IS ACTIVE IN DISTRICT — STANDARD PAYS SIX HUNDRED AND FIFTY THOUSAND IN DIVIDENDS

The most important development in the Slocan this year have been the finding of good ore on the eighth level of the Slocan Star, the opening up of a new ore shoot in the Rambler-Cariboo and the Surprise. The purchase of the Ottawa by the Consolidated Mining & Smelting company and the taking of a lease and bond by the same company on the Lucky Thought group are signs of renewed activity in the old camps of the Slocan.

The policy of deeper development inaugurated by W. E. Zwicky in the Rambler-Cariboo and Alex Smith in the Surprise has been followed by the Slocan Star with excellent results in all three cases. The Payne, through the efforts of Mr. Zwicky, also are pursuing the same policy, but have not got in far enough yet. Now, these are to be followed by still another at the Noble Five. The 2,000 ft. crosscut started this fall at this property differs from the other in that it will develop five veins, which have all been producing veins in the past, instead of one, and the results obtained will undoubtedly be of prime importance to the whole Slocan country. The Idaho-Almo has been steadily developed during the summer and although closed down for the winter will be started again in the spring.

The Surprise mine has opened up enough ore to pay for the deep development of the property, which is working at the greatest depth of any mine in Slocan. Work is necessarily slow and arduous in this mine and for the amount of work done since the raise was put through, the quantity of ore opened up is to say the least highly satisfactory. The ore runs about 130 ozs. in silver and 60 per cent. lead at a depth of 1,300 ft. below the surface, showing there has been no decrease in values in depth.

The fortunate owners of the Mountain Con have developed a fine showing of the richest ore ever opened up in Slocan, averaging over 800 ozs. per ton in silver and high in lead, assays of over $2,300 per ton have been obtained.

The heavy dividends paid by the Standard mine and the good steady profit of the Rambler-Cariboo, which has been applied on the debt have tended to increase activity in the district. Shipments from the Slocan were 1,000 tons heavier at the end of October than they were for the whole previous year, not taking into account the zinc ore.

The manner in which new ore has opened up in the Standard, with its heavy production, enabled that great property to keep up its ore reserves. The mine has proved a veritable surprise to the mining public and to its owners. The results obtained during the next six months by the deeper development, which should reach the ore body by that time are of the greatest importance to the whole district.

Slocan Star.

The Slocan Star mine is situated in the valley of Sandon creek, about 10 minutes walk from Sandon. In the early days of the Slocan it was one of the famous producers of the district. Ore and concentrates of the gross value of $2,675,430.04 were shipped, giving net smelter returns of $2,875,371.56. From this, the original money put in was returned, $540,000 in dividends was paid the mine equipped with a steam compressor plant, a concentrator driven by water power, a gravity tramway from the then lowest tunnel to the mill, and all the necessary buildings were constructed.

In 1905 the mine was closed down until 1911 pending the settlement of a lawsuit with J. M. Harris over that mining bugbear, extra lateral rights. In 1911 a company was formed to take over the claims of the Byron N. White company, which operated the Slocan Star, and those of J. M. Harris and a scheme of extensive development planned. Only the claims on the east side of Sandon creek were included in the company. The company was capitalized for $2,500,000 stock issued for the two properties and 100,000 shares sold to raise the necessary fund for development purposes. A crosscut tunnel of 2,300 ft. in length was driven and the vein drifted on for a considerable distance past where the ore ought to be without encountering it, so a raise was run to tap the bottom of the winze in the old workings on No. 6 level. At that point there was known to be ore. Very curiously, on tapping the ore shoot it was found that a few feet below this point it changed its pitch. From No. 5 level to the surface the ore above pitches 47 degrees to the west in the lead, while from there down to the new level, No. 8, it pitches 40 degrees to the east. This proves the wisdom of raising for the ore and following it down, rather than trying to find it on the lower level and raising up on it, when it was not where it ought to be. It would probably not have been found yet had that been done.

On No. 5 level is a slip coming into the vein with a clear-cut wall. Against this lay the bulge in the large ore shoot from which most of the ore of the mine came. On the level the old stope is about 40 ft. wide at this point.

On No. 6, which was the bottom level of the winze, they are crosscutting for this slip at present. Eighty-five feet below No. 6, No. 7 level was driven and the ore was encountered about 60 feet from the raise and the drift was run in the footwall for about 200 ft. the ore where crosscut showed from 2 ft. to 9 ft. width of milling ore carrying a lot of zinc and very little clean ore.

Justifies Deep Development.

On No. 8, which is 110 ft. on the lead below No. 7, the ore shoot is 200 ft. to the east of the raise (instead of about the same distance to the west), the drift was only extended about 60 ft. on the ore shoot and showed lots of clean ore. Four cars running about 58 per cent lead and 90 to 113 oz. silver had been taken out from running this 60 ft. of a drift. This ore is now being crosscut for on No. 10, which is 260 ft. below No. 8, and is the main tunnel level. When it is encountered there a raise will be run to No. 8, and No. 9 will be driven from this raise so as to not stop operations in the main raise. The main raise is equipped with a hoist running to No. 6 and all the timber, supplies, etc. are hoisted while the muck comes down the chute. The chute gate is operated by a lever and is made of sheet iron. The principal feature of this gate is that it works in a grove and is lowered to open it instead of being raised, as is usual.

When sufficient ore is opened up the mill will be started and the mine put on the producing list on a large scale once more.

Although the ore bodies opened up so far are not as large as in the old workings the ore is proven to extend in depth and with more development may widen out considerably, and it may safely be said that one more Slocan mine has justified the deeper development. Oscar White is in charge of the property and Andrew G. Larsen of Vancouver is the consulting engineer.

Hope Under Development

The Hope mine adjoins the Slocan Star on the east and lies above the old Ruth mine, which belonged to the same company, being a parallel lead distant about 700 ft. Development work has been steadily carried on for the last 10 years. The ground is very soft and easy driving and several thousand feet of work has been done and enough ore encountered to pay for it. So far the ore encountered is mostly bunchy and small, no large ore shoots, such as that found in the Ruth have been met with as yet. From 18 to 25 men are constantly employed. under the charge of Daniel Mackenzie. Most of the ore is mined and shipped in the winter, as it is easier to take down the hill to Sandon than it is in the summer, when the development work is pushed.

Richmond-Eureka.

The Richmond-Eureka, under the charge of Wilfred Cameron for the Consolidated Mining & Smelting company, adjoins the Slocan Star on the west and is probably on the same lead The mine has been a good producer of straight shipping ore. The main ore shoots in the upper levels have been worked for some years and a small force of about 16 men is employed.

The ore is taken to the ore bins at Sandon by a 4,000 ft. aerial tramway from the main tunnel, and power from this tram is used to hoist the ore by a short aerial tramway from the lower levels.

Wonderful.

At the Wonderful, so called from the wonderful surface showing, from which 575 tons of ore running 70 per cent lead and 113 oz. silver were shipped in the early days, Clarence Cunningham of Seattle is developing the property, the work being in charge of J. Keane. A little ore has been encountered in the Blacksmith tunnel, but seems to be broken up badly as yet. No ore has been encountered before in place on this property and most of the ore shipped was taken from the surface, some of it being obtained by ground sulcing. A car will be shipped as soon as there is enough snow for rawhiding it to Sandon.

Ivanhoe.

At the Ivanhoe Al. Holmquist and three partners are leasing. They have a car of ore ready for shipment as soon as rawhiding starts.

Evening

At the Evening George Gormley is leasing. He drove 150 feet of tunnel and has from 1 to 4 inches of high grade ore which is expected to run at least 200 ounces of silver.

Cinderella

At the Cinderella George Dean has one man and himself working.

Lone Bachelor

Cameron and Mac Curvie are leasing and expect to ship a car of ore soon.

Payne New Crosscut

At the Payne mine the company formed by W. E. Zwicky of Kaslo is driving an angling crosscut to a point projected down on the average dip from No. 8 level to the surface. From these old workings high grade silver lead and milling ore was taken in sufficient quantities to pay $1,438,000 in dividends. The length of this crosscut will be 3400 feet. It is now in 2500 feet and is being driven at the rate of 200 feet per month.

The old flume and pipe line were repaired and an air compression fan driven by Pelton which were in stalled. I. Kecken is in charge of the work and 12 men are employed on an average.

Unusual difficulties have hindered the work or the progress made would have been greater. An enormous flow of water was encountered last year while later seams carrying gas which caused bad air were cut.

Ya Ya

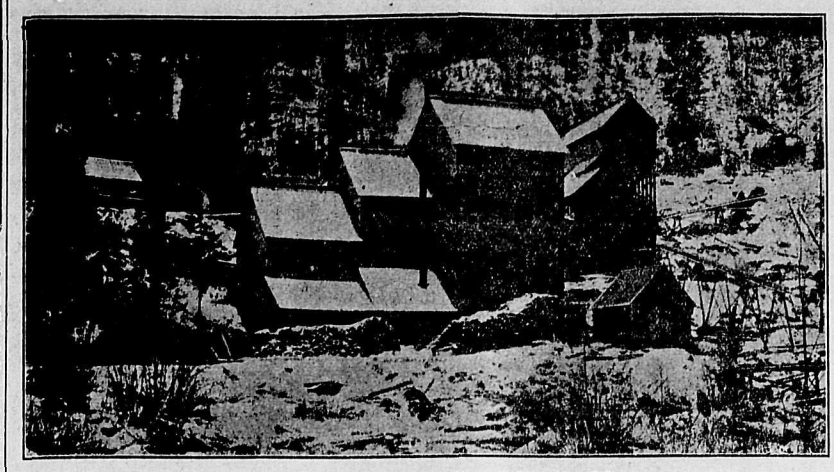
At the Ya Ya Dr. Gomm this year struck some slabs of badly mixed ore carrying some zinc.

Surprice

The Surprise mine, owned by Mr. Kean, of California and Alex Smith of New Denver, was added to the shipping list in a small way this year after a period of development of 10 years.

The property adjoins the Maud S. claim of the Noble Five group which adjoins the Last Chance. The mine has been developed by driving in from the No. 4 tunnel of the Last Chance through the Maud S to the Surprise and putting up a 900 foot raise to the shaft sunk 100 feet below the 300 foot level. As this work was all done by hand it proved a costly and laborious proposition. As only one shift could be worked in the raise it was also a very slow one.

The lead has a pitch of 70 degrees and is a series of shear zones. Two of these have been proven to carry ore. On No. 2 level and 1200 ft. below the apex of the lead there is about 100 feet of clean lead ore from 2 to 3



New Mill for Hewitt Mines, Limited, Silverton, B.C.

inches wide and and 1 to 2½ feet of clean zinc ore with some lead ore along side of it.

High Values at Depth

The galena runs high in lead and carries 135 ounces of silver. The zinc ore of which there is about 125 tons which was taken from this drift piled up in a crosscut runs around 50 per cent zinc and carries about 35 ounces of silver.

On the other side of the raise the drift has been extended 120 feet and shows a little mixed up ore.

The No. 3 level is 100 feet higher. An intermediate level 35 feet above No. 2 and about 70 feet long shows a splendid shoot of lead ore of the same grade. There is 6 feet of mostly clean ore at the widest place and it would average 2 feet. In the bottom of the third level this ore shoot shows a width of from 2 feet to 18 inches. A crosscut of 10 feet following a stringer behind the raise opened up a nice body of ore on another wall 1 foot to 3 feet thick for 60 feet long and the drift still shows ore on the face.

On the next level above 3, this same ore shows about 18 inches wide for 60 feet, and is still strong in the face while in a raise it is widening out about 20 feet above the level.

Showing Very Promising

The quickness with which the ore came in and the quantity of it for ore of this grade, especially at this depth, and the large amount of ground to be explored from these levels as well as the amount of stoping ground above the ore already opened up makes the property look very promising. Mr. Smith estimates that they have nearly enough ore to pay for all their years of development work opened up already. It is seldom that one sees as much high grade ore opened up with so little development work as has been done since the raise was finished.

The ore is taken out to the raise near the mouth of the Last Chance tunnel below from whence it is conveyed to the tramway bins. The Last Chance tramway has been repaired, new towers built and the cable spliced. A new running cable will be put on in the spring.

From the tramway bins the ore is taken in the buckets to the ore sorting house at the foot of the hill. After sorting closely the fines are hand jigged making a lead and zinc product, it is then hauled to the tramway at Sandon about one mile.

All the mine timber and supplies are hauled up with the aerial tramway.

New rails will be laid in the main tunnel as the old ones are well worn eight pound rails and far too light. The timber and steel are all hoisted by hand windlasses and all the mining is hand work.

Dunedin

The Dunedin adjoins the Reco and is worked through one of its tunnels on the Reco Goodenough lead. The ore was picked up last year and after following for 40 feet ran into a fault. No work is being done at present. This ore is in virgin ground 700 feet below the surface.

Noble Five

The Noble Five group is owned by the Dunsmuir interests at Victoria and is in charge of J. MacAllister. The property has two main workings on it, namely the Dead Man and Noble Five.

The Dead Man is developed by three tunnels and the ore is principally zinc ore. The clean ore runs about 55 per cent. zinc and 16 ozs. in silver.

The Noble Five workings are adjoining and down the hill from the Surprise and Last Chance and both of these veins are worked on the property. Development has been continued this year in these workings and in the Dead Man about 20 men being employed.

Important Development.—The Dead Man lead pitches toward the Noble Five lead and a crosscut tunnel to be about 2,000 ft. in length has been started on the Omega claim of J. M. Harris to tap these leads at 600 ft. depth, which is below where they will intersect each other on their present dips. This tunnel will cross the Texas lead on J. M. Harris' ground at about 400 ft. in from the portal. After the success of deep development on the Surprise adjoining, on the Slocan Star and the Rambler-Cariboo, this policy was decided on and is far reaching in its possibilities as beside the veins mentioned, there are also the Surprise and Last Chance veins to be opened up by this crosscut.

New buildings comprising a complete camp were built this year at the portal of the crosscut on the Omega.

The property was formally equipped with a compressor at the mill, but this was removed some years ago. A new 12 drill compressor has been ordered and will be installed so that machine drills can be used to drive the crosscut, which is being driven by hand at present, 12 men being employed.

The portal of the crosscut is in a safe place from snow slides and work can be carried on all winter. The upper workings are closed down for the winter on account of their dangerous situation. The aerial tramway to the mill passes close to the new workings and can be used, without being moved, for hauling up supplies and later, to take down any ore opened up.

Reco.

At the Reco mine, which has paid $20,000 dividends, leasers are working. Of late years this mine has been worked entirely on the leasing system. There is ore in the bottom of No. 3 tunnel which was not found in No. 5, although it was driven in 1,100 feet. Erickson & Johnson, the famous drilling team, and McGinniss & Isnor have taken a leave to raise up to find this ore if possible.

Rails have been laid and air pipe put in to the raise and the leasers are attempting to establish a record for raising 250 feet by hand work.

Colonial

The Colonial group is situated on the mountain opposite Reco mountain it is just beneath the old Freddie Lee and is owned and operated by J. E. Coplen of Spokane.

In the early days 60 tons of high grade ore was taken from the surface but the ore pinched down and the property has stood idle till last year except for leasees working.

The lessees' drift was carried ahead to a point 550 ft. from the portal and opened up a small shoot of carbonate and galena ore mixed, but only a small tonnage was obtained, as on raising up a few feet an old stope from a winze on the Freddie Lee was broken into. Lessees working on the Freddie Lee had stolen most of the ore.

A tunnel 100 ft. below vertically, or 250 ft. on the dip was in 150 ft. last year. This tunnel is into within 250 ft. of the Freddie Lee ore shoot and for 100 ft. has been in carbonates and galena mostly of too low a grade to ship. A shipment from the ore shoot in the upper tunnel will be made as soon as rawhiding commences.

Richest Ore in Slocan

The Mountain Con is in the Granite belt, seven miles up the creek from Sandon and just over the summit. It is in an almost inaccessible place and work can only be carried on in the summer. It is owned by Messrs. Bennet & Clergue of Sandon and Yakke of New York, who formed a small company to operate the property. Only 40,000 shares of the stock have been issued.

This summer, 60 ft. from the surface, a drift from a raise was run and 6 in of ore struck and drifted on for 60 ft., the ore still showing strong in the face.

The drift has to be carried 25 ft. to break out at the side of the cliff and provide ventilation. Mr. Bennet took careful cuts every six feet over a width of six inches, and got an assay of $815 per ton. He then took cuts every other 6 ft., starting 3 ft. from his original cut and got $840. The ore shipped from the drift runs just between the two. An individual specimen ran $2,327.40 a ton in lead, silver and gold. The ore is mostly large crystalline galena, with some red and black oxides and carbonates on each side. A handsome profit for a small property should be realized this coming summer.

RAMBLER-CARIBOO PROFITABLE

The Rambler Cariboo has made a handsome profit since starting its mill last December. This property was developed under the management of W. E. Zwicky of Kaslo who retired from the management of the mine this summer. John Kinto, who has been superintendent of the mine for years, was promoted to the vacancy.

The company went into debt heavily to drive the long crosscut tunnel 4500 ft in length and to open up the ore after it was found, to put in a 7000 ft. Crawford aerial tramway and to build a mill driven by its own water power plant.

By the end of the year sufficient profit from the ore mined will be realised to pay off the debt entirely according to the expectations of the management.

The main tunnel level is the 1400 ft level of the mine and the bottom level of the old winze from No. 3 tunnel is No. 8.

Ore Shoots Described

The ore shoot mined in the level above to the north of the winze did not yield much on No. 9 being of a low grade of milling ore. To the south of the raise a new ore shoot which did not go up to No. 8 was encountered. This has been mined out above No. 9. On No. 8 a new ore shoot is being worked above 8 and shows for about 30 ft. 6 in to 18 in. of ore.

On No. 10 were two ore shoots. The small one is stoped to within 30 feet of No. 9 for a length of 50 feet. The second ore shoot is between 90 and 100 ft. long with an average width of 1 ft. or ore and the stope is up about 50 ft. from the level. The third ore shoot is only stoped about 20 ft. up from the level and for a length of 20 ft. shows about 1 ft. of ore.

On the twelfth level the first ore of No. 10 while the second one is shoot is stoped out to within 50 ft. nearly all stoped out. The third ore shoot has lengthened to about 60 ft. with from 1 ft. to 2 ft. of ore and a stope is just being started on it. The first ore shoot did not come down below 12. On the thirteenth level a stope is up about 20 ft. and there is stated to be about 6 in. of ore for a length of 90 ft. on what is the second ore shoot on No. 10. On the new ore shoot a raise is started on about 1 ft. to 3 ft. o flow grade milling ore with a length of 60 ft.

It will be seen from this short description that there is considerable ore left yet after all heavy development and plant installation charges have been wiped out from the profits of ore mined. The finding of the third ore shoot within 150 ft. of the second one gives great promise for future development. Of special importance is the ore found above the third level going up strong in what is said to be virgin ground.

On account of the heavy debt in development has been carried on on the third ore shoot but it is very promising ground to prospect in the future. Development on 14 will be pushed in the near future.

Mill Feed in Reserve

While doing development and starting stopes before the building of the mill only clean ore was shipped and the excess mill feed placed on the dumps. Some of this has been run through this summer but on account of the frost none will be handled in the winter. This is kept as a reserve supply for the mill.

The mill ore from the upper levels is all dumped down the chutes to 14. The clean ore is roughly sorted out in the stopes and is lowered down the main raise to 14 in a bucket operated by a hoist on 14. This hoist and another one at another raise further in are also used for hoisting the timber drills, etc., to the different levels.

The ore is handled in trains of five cars of 1½ tons capacity each hauled by mules to the ore sorting house. Two trains make five trips a day each. Thirty-five men are employed inside and seventeen outside.

A 14 x 22½ Rand compressor belt connected to Pelton wheel operated under a 750 ft. head, supplies compressed air to the mine. There is also a 44 amp. 125 volt dynamo for lighting purposes. The power house is a half mile from the crosscut. The mine buildings consist of dryhouse, cook house, numerous cabins, a bunk house, office, blacksmith shop, ore sorting house, tramway terminal buildings. The buildings are all neatly painted red trimmed with white. In the dryhouse are bath rooms and wash rooms.

The ore is conveyed to the mill in a Crawford aerial tramway having 2 buckets of 8 cu ft capacity and also hooks for hauling lumber. The standing cables are ⅞ in and 1⅛ in Langlay plough steel cables. The running cable was a ⅝ in. cable of the same lay but a new one of a firmer and softer rope was put in in October.

Rambler-Cariboo Mill

The new mill is built on the mountain side just at the creek, 2½ miles from Three Forks. It is just below the old McGuigan station on the Kaslo and Slocan trail. The main building is 56x60 and it is 83 ft. from the lower floor to the tramway terminal floor.

Power is furnished by a flume 1,600 ft. long and a 14 in. reduced to 8 in. pipe line 1400 ft. long from McGuigan creek giving a 500 ft. head. A 24 in. Pelton wheel on the crusher floor drives a line shaft from which all the machinery is driven except the crusher.

The ore is delivered from the tramway to two 75 ton capacity bins. One is used for shipping ore and the other for the milling ore. The shipping ore bin is connected by a chute to a 100 ton bin on the power floor of the mill. The milling ore is drawn through a chute over a one and a quarter inch grizzly, the oversize going to a 7x9 Blake crusher belt connected to a 12 in. Tuttle wheel. The troughs from the grizzly and the crushed ore go to the coarse elevator and are elevated to two trommels. The trommels have three sections each. The first two sections of No. 1 tunnel are 10 mm. and feed a two compartment Hartz jig. The oversize went to a picking belt on the jig floor, but this has been cut out and closer sorting done at the mine instead and the oversize now go direct to the main rolls and back to the main elevator. The belt is 22 ft. by 30 in. of heavy rubber and four chutes leading to the crude ore bin are provided. The ore as it just comes from the tunnel is washed clean and can be easily sorted.

The first and second sections of the second trommel are 3 mm. The undersize goes to classifiers feeding two five compartment Hartz jigs. The third section is 7 mm. and the undersize feeds a one five-compartment Hartz jig and the oversize feeds two more jigs. The Hartz jigs makes lead concentrates, zinc concentrates, middlings and tails. The middlings from the two compartment jigs go through the intermediate rolls and back to the main elevator. The middlings from the third five-compartment jig are passed through the fine middling rolls and are elevated by a second bucket elevator to a classifier for the fine jig and the oversize back to the fine roll. The first compartment of the classifier feeds a five compartment Hartz jig and the second section feeds another one while the overflow goes to the "V" tank for the tables.

There are four James' No. 3 improved oblique sand tables making zinc and lead concentrates.

A Harding's pebble mill is being installed to crush the middlings from the tables to 140 mesh when they will be re-treated on two La Franz slime tables to make a cleaner zinc concentrate and also to save more of it.

All the concentrates from the jigs and tables go direct to bins on lower floor. There are five of these bins of 100 tons capacity each. Two are for lead concentrates, two for zinc concentrates and one for crude ore. They have hopper bottoms and provided with a chute and gate so that the ore and concentrates can be drawn into a car: It is then weighed and run on a 300 ft. trestle built across the valley to the 1600 ft. railroad spur. The cars are run right into the railroad cars and dumped. The spur is provided with two tracks at the end so cars can be switched without trouble. A roa has been built from the mine to the mill.

Mill Feed and Output.

The mill feed runs about 7 per cent lead at present. It was run lower during the summer, when 100 tons were put through in three shofts. Now 75 tons in two shifts make about the same amount of concentrates. This is accomplished by soring out more waste at the mine.

One peculiar feature of the milling process is that the iron sulphide in quartz in some places in the mine carries high silver values, while from other places it does not. This necessitates constant changing of the mill practice and care at the mine in sending down the class of ore carrying silver in the iron sulphine to the mill. When the iron is saved the lead concentrates are only run up to about 30 per cent lead.

A hoist and skidway have been put in to hoist supplies to the tram house on their way to the mine. An assay office and office building have been built at the mill. A saw run by water power is used to cut wood for the mill and buildings, as well as for the mine, as there is plenty of dry standing timber around the mill.

Up to 1910 the mine had shipped 23,384 tons of ore and concentrates, containing 2,216,800 oz. of silver and 13,676,885 lbs. of lead. This was from the old workings, and profit to the extent of $225,000 in dividends were paid out of this. No figures of production are available from that time.

Idaho-Almo

The Idaho-Almo was bonded last year to a syndicate composed of A. Finch, W. E. Finch, George H. Alyward and others. The property consists of 26 claims, on which are three leads, called the Idaho, the Almo and the Cumberland. When operated by the English company this mine produced $1,500,000 and paid over $400,000 in dividends, but development work was not kept up and the property was closed down for a number of years.

The Idaho was developed by Nos. 1, 2 and 3 Idaho tunnels, and Nos. 1, 2 and 3 Cumberland. This year 400 ft. of drifting, 100 ft. of raising and 30 ft. of crosscutting was done on this property.

The Almo vein is 800 ft. from the Idaho and is developed by six tunnels. Nine hundred feet of drifting, 240 ft. of raising, 230 ft. of crosscutting and 60 ft. of sinking was done on this vein this year. Some ore has been opened up and 170 tons were shipped this year.

The silver values in the Almo and Idaho veins are in the relation of 1.5 oz. of silver to 1 per cent of lead, while in the Cumberland they are about 1 to 1. This is a very promising old property, containing some good blocks of undeveloped ground and the development work, which has been stopped for the winter will be continued in the spring.

W. E. Finch is manager of the company and C. B. White is superintendent at this mine. Twenty-five men were employed this summer. A new building, 20 ft x 100 ft., was erected at the junction of the trails to the two mines for a safety camp and stables.

Lucky Jim

The Lucky Jim zinc mine at Bear lake shipped zinc ore heavily this spring, but about exhausted the best of the shipping ore and was forced to close down. There is a large tonnage of zinc concentrating ore in the Lucky Jim mine and a movement is on foot to raise funds to build a concentrator and handle this ore.

The property has been badly handled. * * *

* * * The company was greatly over-capitalized in the first place and now the property is heavily mortgaged so it is rather difficult to see where the stockholders are going to get off at unless a reorganization is effected.

Mr. Norry, who has been in charge of the mine for the last six months estimates that if the funds are raised to put in the necessary equipment that the profit that would be realized out of the ore in sight would be $225,000.

The Lucky Jim is a good mine and if the management is kept out of the hands of stock promoters and the mining competently carried on, no doubt more than this would be realised after more development. The ore bodies are large and the zinchlende could be easily separated as there is no spathic iron to complicate matters. The whole situation is well summed up by the editor of the Slocan Record in an editorial as follows:

By request, in another column, we publish an interview, or, perhaps, more properly speaking, an open letter to the shareholders of the Lucky Jim, by G. Weaver Loper of Winnipeg, with also request for editorial comment. Were it not for the latter request we would not have touched the Lucky Jim and its promotion with a pair of tongs. The methods of the Lucky Jim company are not those by which dividend payers have been developed into paying concerns. Disaster was expected by those who know that careful management and economy are as necessary in a mining venture as in any other line of business. The money of the company should be put into the ground, not spent on wine suppers and special trains. In developing a property the manager should be the superintendent as well, and sufficient funds should be placed at his disposal to pay indebtedness promptly. It is well known that when wages are in arrears men do not take as great an interest in their work as they do when they are paid promptly and that merchants must either charge a higher price or furnish inferior goods to the "slow" pay. In this respect the Lucky Jim company have been unfair to the men in charge of development and to the property itself. Until the last six months officials of the company were "carrying too much sail for their ballast; too much newspaper publicity, not altogether correct; too many interviews for the development, ore and ore values. The paying mines of British Columbia are managed from the bottom of the shaft and face of the tunnel. Every foot of development and its cost are carefully estimated, every piece of steel, hammer, pick, shovel, ets., is on record and can be located at any time by the office staff, and all supplies examined and checked. It is a business proposition. In reference to the large shareholders of the Lucky Jim, if they went into the company blindly, they are not deserving of sympathy. For a few dollars they could have had the property examined by a reputable mining engineer. Buying mining shares is a business proposition, and the same care should be exercised that is usual in purchasing other merchandise. Newspaper publicity in mining is also a business proposition. The shrewd business man will not advertise a quality of goods he cannot produce in his store; neither should the mine manager make statements in regard to his property that are not borne out by facts. The paying mines of the Slocan have been made so by careful management and intelligent development. Shares or interests in many of them cannot be purchased at any price. The managers do not want publicity. It is known the Standard has between two and three years of ore blocked out at the present rate of shipment, although the manager didn't make it public. The Surprise has clean ore veins of 10 in., 3 ft. and 6 ft. in width below the 800 level—some stoping ground—but the manager couldn't be induced to part with the information. The Noble Five has four strong veins. The Ruth has ore and is developing, but the Ruth-Hope doesn't chase after reporters. These are all close corporations, with the exception of the Standard. The Slocan Star, the Reco and a number of other properties do not give out news until after the reporter has secured it from other sources. If business methods are introduced into the Lucky Jim the shareholders have a chance of at least breaking even. The mine itself is all right. It will do its share with a superintendent who can live in a bunkhouse and work. The superintendent has been there for the past six months.

Panama

The Panama mine, above Bear lake, is developed in the winter time, working from three to four men. Sixty-nine tons of dry silver ore were shipped to the smelter this fall. The development work is being carried on again this winter, and the usual shipments will be made next summer.

Jo Jo.

Lessees are working at the Jo Jo, on the north fork of Carpenter creek.

Apex.

From a short crosscut tunnel and a drift about 120 ft. long, with about 40 ft. of stoping ground, six cars of $100 dry ore, carrying silver and gold, were shipped since A. J. Becker started work at the property.

A crosscut tunnel 415 ft. long is being driven to catch this ore at greater depth.

Hartney

The Hartney group is operated by J. J. McMasters of Rochester, N.Y. The mine is developed by four tunnels. No. 2, the lowest, is a crosscut and is not yet into the lead and is not being worked. No. 3, the next, is a 105 ft. crosscut. The drift is about 600 ft long. The ore from this tunnel is a rather intimate mixture of galena, zinc blende and iron sulphide making it very difficult to sort. The coarsest is sorted as clean as possible and the rest piled up. The ore from No. 4 is much cleaner, still badly mixed, but not so intimately and can be more easily sorted.

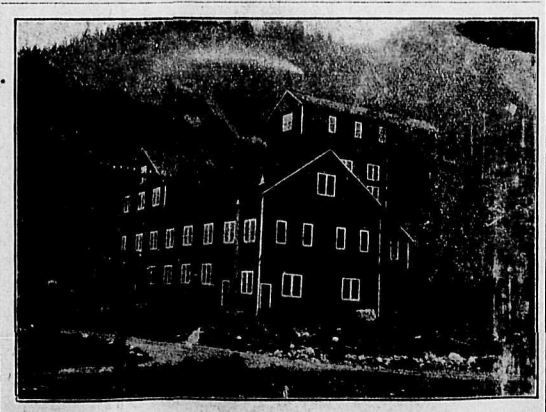
A primitive mill, with which to tackle so difficult a proposition has been built at the mine. The idea is to enlarge it as funds are available. A 1,500 ft. wooden pipe line, 8 in. reduced to 4 in., gives a 200 ft. head. Water is very slack at this time of the year and a tank 12 ft. by 40 ft. by 10 in. will be installed at the intake to collect more of it.

An 8 h.p. gasoline engine is used to drive a 2 in. by 4 in. Sturtevant roll jam crushed to crush the fine ore remaining after sorting. Two water wheels, a 12 in. and 18 in., drive two single compartment jigs and a Wilfley table. The ore is sized by one Sturtevant Newago separator, which has to be worked dry, necessitating drying the ore if it is wet. A. H. Blumenauer is in charge and has 19 men working. The clean ore and concentrates are said to run 2 oz. silver to 1 per cent. of lead and the clean zinc 38 per cent. and 40 oz. silver. No zinc concentrates have been made as yet. In December it was found necessary to suspend operations on account of shortage of water.

STANDARD BANNER DIVIDEND PAYER

The production of the Standard mine at Silverton was milling ore 51,789 tons and shipping ore 4,117 tons. The shipping ore contained 309,671 ozs. of silver and 4,944,414 lbs. of lead. The

(Continued on Page Eight.)



Standard Mill, Silverton, from which $650,000 in dividends was paid in 1912

SLOCAN SEES GREAT DEVELOPMENT

(Continued From Page Seven.)

concentrates from the milling ore gave returns of 771,333 ozs. of lead and 11,689,507 lbs. of lead in 9,860 tons and 4,680,000 lbs. of zinc in the zinc concentrates. This makes a total of 19,420 tons of shipping ore and concentrates containing 1,206,193 ozs. of silver, 16,333,921 lbs. of lead and 4,680,000 lbs. of zinc.

The Standard mine started operating its mill a year ago last spring it paid $25,000 the first month and $50,000 a month steadily ever since. At the end of the year the dividends had amounted to over $1,000,000. When the question of the duty on zinc ore being changed came up the zinc concentrates were piled. These were shipped in November and an extra dividend of $50,000 was declared on this account, making the dividend for December $100,000. The reserve fund has also been added to till it now amounts to the substantial sum of over $265,000. In spite of all the ore that has been taken out to yield these handsome dividends there are still very large ore reserves opened up in the mine. Ore has been encountered in the most unexpectd places and in extraordinarily large bodies for ore of this grade. Also the main ore body has lengthened out in the most extraordinary manner instead of shortening up, as it was thought it did as it approached No. 4 level. Certainly it is one of the biggest bonanzas ever struck in the northern part of the continent in a silver-lead mine with ore of this grade.

Number Five Bonanza.

In the upper levels of the mine the ore shoot did not give any great promise and no body of pay ore was encountered till No. 3 level was reached. In the widest place on this level there was 3 ft. of clean ore. In No. 4 there was 3 and 4 ft. of clean ore for a short distance, with milling ore alongside of it and the rest was very small, with a total length of 300 ft.

On No. 5 it was a veritable bonanza. The first 100 ft. opened up to a width of from 4 to 6 ft. of clean ore, suddenly widened to 8 ft., then to 20 ft., and *in the centre of the big ore shoot* it is 12 sets of timbers wide. Of course, this was not all clean ore by any means, but yilded over 10 per cent clean shipping ore and the rest mill feed averaging about 20 per cent lead, with silver values of about 1 oz. of silver, 1 per cent of lead and zinc about 10 per cent.

The ore shoot in No. 5 showed a total length of a little over 300 ft. On going up on it, it got longer till at the top of the stope from 30 to 40 ft. below No. 4 it is over 350 ft. long. The stope is timbered with square sets, which have to be filled with waste, as the ground is very heavy. The ore is not so wide at the top of the stope and the dip is flattening off so much that towards the west end of the stope the ore will pass under the No. 4 level altogether, if it does not straighten up. No. 4 level has not been driven in near the length of the ore shoot in the stope 40 ft. below and it may be found to yield a valuable tonnage above No. 4.

New Ore Body

On the tenth floor up from No. 5 a drift was run to the west on what appears to be the footwall. It might be mentioned here that there are what appears to be walls everywhere in the ore bodies and it is not safe to call any slip a wall. In numerous instances a round or two has opened up ore behind what was thought to be the wall and cross cutting of this nature has to be carried on constantly. From this drift a crosscut was run toward the hanging wall and ore was encountered there, which has been followed back of the big main stope for a distance of over 60 ft. A sill floor is being put in 20 ft. wide. Strangely enough this ore shoot carries higher silver values than the main ore shoot. The zinc carries high silver, which may account for the higher average values. The extent of this ore body has not been determined as yet as the main stope will have to be closely filled before it can be worked, as the ore shoot overlaps the old stope. *No. 4 level is being driven to* catch this ore shoot, while a raise is being run from a crosscut in No. 5 to tap it below. From the end of the stope a drift has been run on it towards the west, where *it narrows in* considerably, but has not been thoroughly prospected as yet. With the prospect of getting this ore on No. 4 and the way the main ore shoot appears to dip under No. 4 at the west end, it would not be at all surprising if some valuable ore bodies extending above No. 4 are found in this new ground.

No. 6 Level

On account of the rake of the ore body and the slope of the surface of the mountain, each succeeding lower crosscut has to be driven considerably *further than the one above* to catch the ore shoot. No. 6 was driven over 1,800 ft. before the ore was encountered and no ore was open up on the way in. Near the portal a body of quartz and zincblende was encountered similar to that in No. 1 tunnel above the big ore shoot.

On No. 6, which is 190 ft. below No. 5 are three stopes. No. 6 was connected to No. 5 by a raise, which left the ore about 60 ft., where it flattened off and caught the ore again just below No. 5. The main stope from No. 6 to No. 5 is not on this ore. However surprising it may seem it is undoubtedly another ore body, unless it flatens off tremendously in the next 40 ft. The top of the stope is within 40 ft. of No. 5 level and the dip of the wall at the end of the stope if projected up would come outside of the footwall about 40 ft. from the centre of the big ore shoot on No. 5 On Dec. 3 a cross cut from this point on No. 5 level was in 38 ft., and some of the machine holes were drilled in zincy ore for there entire length, thus bearing out the conclusion that the stope was on another ore shoot in the footwall side of the big main ore shoot. A crosscut from the main raise to the top of the stope cuts another ore body about 6 ft. in width. Whether this is the downward continuation of the main ore body or whether it is still further towards the hanging wall remains to be proven. The stope is from 200 to 280 ft. long and averages from 10 to 15 ft. in width and is called B stope.

In C stope not much has been done, it may be the ore encountered in the main raise.

D stope is a U-shaped stope on a turn in the vein. It is very much flatter, *being about a 40 degree stope* instead of 60 degrees as are most of the others. It apparently has no connection with the others and is up about 140 ft. It was the first ore *found on No. 6 level and is about 100* ft. long with from 6 to 10 ft. of ore in places.

A stope is another apparently separate ore shoot, about 60 ft. long and *dips in a different direction to the* other ore bodies. If its present dip continues it would come up away outside the other found on No. 5.

About 700 ft. per month of development work is done every month and so far about as much ore has been opened up as has been taken out, so that the ore bodies opened up show about as much ore as they did a year ago, which considering the tonnage mined is remarkable.

No. 7 Level

No. 7 is being driven by continuing No. 2 tunnel on the Emily Edith, which is owned by the Standard. It is now in 2,300 ft. About 800 ft. from the portal an ore shoot was encountered and drifted on for 60 ft., showing from 18 inches to 3 ft. of clean ore. As it took a sharp turn it was left at this point and was picked up again and continued for 70 ft. further. If this is the same ore shoot it is about 210 ft. long. The face of the drift is now about under the body of quartz and zincblende near the portal of No. 6. Just how far it is to the main ore bodies is not known, but thought to be about 1,600 or 1,800 ft. *yet. It will give a vertical depth of* between 200 and 400 ft. below No. 6.

No. 8 Level

No. 8 level is being driven in on No. 5 of the Emily Edith. It was first planned to drive this level before No. 7, but it was abandoned on account of the steep grade in the old tunnel. It is being driven on top of the old tunnel starting at the portal and gradually coming down into it and is an interesting and unusual piece of work. A box flume was laid in the tunnel to carry the water. The rock is shot down into the tunnel below and any excess trammed out. As the upper tunnel comes into the lower one the timbers are sawed off and a sill put on them to support the timbers or the lower tunnel. The smoke from the blasting travels ahead in the lower tunnel and is sucked out through the box flume, providing splendid ventilation. The smoke clears away almost instantly. The face is now in 650 ft.

The mine is under the charge of Ivan de Lashmutt and W. McPhie is the foreman. One hundred and twenty men are employed at the mine, 20 at No. 7 and at No. 8 about 150 in all.

An addition was made to the bunk and cook houses this year. Shower baths were installed. A concrete building, with a central steam heating plant was *built in front of the offices* by which all the buildings will be heated. A store room was built off this office. The Hunter timber limits were acquired and roads constructed *from them to the different tunnels.*

The power plant on Four-Mile creek, where half a mile of flume line gives 100 ft. head, was enlarged by the addition of an 800 cubic foot Rand *compressor belt connected to a Pelton* wheel, making two identical units. The compressor plant is connected to No. 6 by a 5-in. pipe line to Nos. 7 and 8 by a 3-in. branch line.

A 50 k.w. *dynamo supplies power* for the lights at the mine and mill and for the motor at the mill.

The Mill

From the terminal station at No. 6 the ore is conveyed to the mill at the lake by an 8,000 ft. Leschen & Sons aerial tramway with lock coil standing cables. The buckets are loaded by an automatic loader. The mill is situated just out of Silverton, near the shore of Slocan lake.

The coarse fines go to six Wilfley tables and the fine slimes to six Franz tables. The middlings to the *Wilfleys as well as some from the* fine jigs go to a 5 ft. Huntingdon mill, which crushes to 40 mesh. From the Huntingdon they join the feed to the Franz slime tables after classification.

The dirty water from the Wilfley and Franz tables is fed over nine Fruevanners to extract any fine slimes carried off in the rush of the feed across the tables. The tailings from the fine tables all go to a dump where they are saved for future further concentration at some later dates.

The tables are driven by a 62.5 amp. 220 volt induction motor. The rest of the power for the mill is supplied by two 24-inch Peltons and one 4 ft. Pelton working under a 240 ft. head, supplied by a 2-mile flume line from the power house on Four-Mile creek.

The Huntingdon mill, the six Franz tables and four additional Wilfleys were added to the mill this summer. A 24 ft. addition was built os the end of the main building to provide the necessary floor space. Store houses, an office building and residences have been built at the mill, which is in charge of John Gordon.

The mill feed runs from 16 to 20 pe rcent. lead, from 16 to 22 ozs. of silver and 8 to 14 per cent. zinc.

The crude ore, which is mostly sorted out at the mine and kept in a separate bin at the tram terminal, averages about 60 per cent. lead and about 77 ozs. of silver. The lead concentrates average about 64 per cent. lead and 80 ozs. in silver and the zinc concentrates 40 to 45 per cent. zinc and 16 to 30 ozs of silver.

HEWITT HAS BIG TONNAGE OPENED UP

Tre Hewitt mine is operated by the Silverton Mines Limited, of which M. S. Davys is manager and George Stillwell is superintendent.

The mine is splendidly developed and has ore reserves opened up that are larger than those of any other mine with this class of ore in the Slocan. The ore is, in the upper levels, a typical Slocan dry ore, carrying above No. 4 from 120 to 320 ozs. in silver, 3 to 8 per cent. lead and 9 to 15 per cent, zinc in the clean shipping ore. Below No. 4 the silver values are slightly lower and in the lower levels the clean ore runs as high in lead as 25 per cent. The most of the ore, however, is milling ore. When mined, the clean ore can be sorted out and shipped and the balance sent to the mill. The gangue materials are quartz and siderite. The siderite makes the concentration of the zincblende a difficult problem. The zincblende carries silver as well as the galena and the ratio of silver to the zincblende and galena is much higher *than in the average ores* of the district. Ruby silver is very common, especially in No. 7. Beautiful crystals from here have been obtained by the British museum in London and the *museum at Ottawa.*

There are two main veins on the property which are joined in the upper workings by cross veins, in one place forming an M and all the veins carry ore. *The veins lie on or near a con*tact of a granite intrusion in the slates and ore is found in both the granite and the slates. In this they differ from the other veins of the *Slocan that are being worked.*

The mine is developed by seven tunnels, five of which are driven in on the vein. Three of these, No. 2, 1,250 ft. in length, No. 3, 1,750 ft. in *length, and No. 6,* 3,150 ft. in length, are driven clear through the top of the mountain. Nearly all the ore mined has come from above No. 4 and from development work. On No. 4 a *cross cut,* 85 ft. long, was run to the south vein, and 300 ft. of drifting was done on it.

On No. 6 levels, large reserves have been opened up and stopes started *ready to commence running.* On No. 7 are three developed ore shoots, two of which are 100 ft. long and the other 140 ft. Besides these, new ore was opened up this year. In one place *it shows 68 ft. across with ore scat*tered all through it, so that the largest portion of it will go as mill feed. In one place there is 16 ft. of nearly clean ore. The levels are all *connected by raises and* well timbered.

No. 8 is a crosscut and was driven about 345 ft. this year, and is now crossing a very big vein, thought to be the Van Roi lead, showing quartz *with some zincblende through it, and* this vein will be prospected later. It is 450 ft. from the present face of the crosscut to the first known ore shoot on the Hewitt vein. No. 8 is 400 ft. *below No. 7 and will give over 500 ft.* of backs in the dip of the vein.

No. 9 is 400 ft. below No. 8 and will be a 1,500 ft. crosscut to the lead. The portal has been faced off, but the crosscut will not be driven till after the air compressor has been installed. All the work done this year has been done by hand.

No. 6 tunnel is connected to the mill *by a 6,000 ft. Crawford aerial tram*way. A two-bucket tram connects No. 6 with the upper levels.

Power Plant

Power is obtained by a flume line 3,000 ft. line and 2,800 ft. of pipe line, 32 in. reduced to 14 in., taking water from Four-Mile creek and delivering it at the mill under an actual head of 350 ft.

An 800 cu. ft. per minute Rand compressor will supply air for the machine drill. A 6,000 ft. 4-in. pipe line to No. 6, with branch lines to Nos. 7, 8 and 9, has been installed. The dynamo for electric lights and the mill machinery is all driven by Pelton wheels.

The Mill

The ore was first treated in the old Wakefield by water concentration, but on account of sliming and the near approach of the specific gravity of the silerite and the zinc blende, satisfactory results were not obtained by the ordinary methods. An Elmore oil unit was then installed and after a good deal of experimenting far better results were obtained. Unfortunately just as the mill was to be put in steady operation it burned down. A new mill was then built and the mineral separation process was decided upon for the treatment of the ore. This process is somewhat similar to the Elmore oil process and is only installed by the company owning the patents on a royalty basis and a guarantee that it will give operation results equal to those of their test runs. The mine was thoroughly examined by its experts, who reported satisfactorily on the tonnage of ore in sight and the plant was installed. The company has opened a branch in San Francisco and is installing a number of these plans in different parts of the continent and after the plant was installed found that it was faulty in design and the crusher machinery inadequate, so the whole plant had to practicaly be rebuilt and changed to meet the conditons required. This work is now nearing completion and as soon as the Hardinge mills arrive for the fine grinding and some of the other machinery necessary the mill will be put in operation and turned over to the operators after a trial run. The mill was expected to be in operation by February *last and* probably will be by January or February next. The operation of this mill, if it meets with the success shown by the test runs, will mark a new era in lead-*zinc concentration for Kootenay, and* other units will probably be installed.

The capitalization of the company is only $250,000, only about three-fifths of which is issued. Too much *credit cannot be given the manage*ment for the way it has attempted to solve the difficulties and for keeping the capitalization of the company down to reasonable limits.

Van Roi

The Van Roi mine is operated by a subsidiary company of the Le Roi No. 2 at Rossland. Ernest Levy is manager and Douglas Lay superintendent of the property. The mine adjoins the Hewitt and is developed by tunnels, Nos. 1, 2, 3, 4, 5, and 6 comprising the upper tunnels, from which the ore of the past few years has come. The ore differs from that of the Hewitt in that there is very little siderite, the iron being in the sulphide form, which greatly simplifies the concentration. There is very little clean ore and it practically all goes to the mill. It contains 3 to 4 per cent. galena, 9 to 11 per cent. zinc blende, some grey copper, and 9 to 15 oz. of silver and the gangue is quartz with iron sulphide.

Last year the property was worked very heavily, 57,489 tons of ore being taken out. This heavy tonnage, which has been kept up for some time, from a property requiring much development work, necessitated the curtailment of operations and an extensive scheme of development carried out. This is now being done. The ore produced for the 12 months ending Sept. 30 was 27,382. The mill is only run one shift per day instead of two as formerly. The ore shoots are irregular, lenses lying in the veins sometimes quite large and persistent and again rather bunchy.

Nos. 7, 9 and 10 tunnels were started and new ore shoots opened up in them further down the side of the mountain. Stoping is being caried on in these at present and development is being pushed ahead. New ore has been encountered. The development of the fiscal year consists of drifting 1,641½ ft., corss cutting 287 ft., raising 953 ft., making 2,809½ ft. of narrow orkw. Diamond drilling to the extent of 998¼ ft. was also done.

The mine is connected to the mill by two aerial tramways, one to No. 5 and the other to No. 9, the latter being a two tram. Thirty-seven men are employed at the mine and 17 at the mill.

The Mill

At the mil no changes of importance have been made during the year. The mill is built on Four Mile creek and has three main floors, 66x38 ft. 78x66 ft. and 46x40 ft. respectively.

The ore passes from the 75-ton tramway bins over a 1½ in. grizzly. The undersize goes to the 75-ton mill bins, where it is joined by the oversize after passing through a 9x15 in. Blake crusher. From the mill bins an automatic feeder feeds the coarse rolls, after passing through which it is elevated to the 18 mm. trommel. The oversize goes direct to two-compartment jigs, the undersize goes to *the 7 mm. and mm. trommel.* The ovens from the 4 mm. trommel go to a classifier which feeds two 2,- two 3,- and four 5-compartment Hartz jigs. The overthrow of the classifier goes to the "V" tanks which feed seven Wilfley tables. The middlings from the Jgs and tables got to the finer rolls and thence to the classifier. The overflow from the "V" tanks goes to waste.

The average content of the milling ore is 3 to 4 per cent lead, 9 to 11 per cent zinc and from 9 to 15 ounces in silver. The lead concentrates are the richest produced in the Slocan country.

For the fiscal year ending September 30, 57,849 tons net dry weight was produced, six tons of clean ore and 3,753 tons of waste were sorted out; 54,900 tons were put through the mill, *yielding 2,392.5 tons of lead concen*trates averaging 179.5 ounces silver and 60.2 per cent lead and 11.1 per cent zinc; 2,570.5 tons of zinc concentrates, averaging 45 per cent zinc, 60.8 ozs. in silver and 3.7 per cent lead. As the tonnage treated is fairly even in quantity and contents this may be taken to represent the output for the fiscal year 1912 without much error.

Lucky Thought

The Lucky Thought group, lying between the Van Roi, Hewitt, and Standard mines, was bonded by the Consolidated Mining & Smelting company this year. The property was developed by two tunnels and a winze from the upper tunnel by the owners. The lower tunnel was driven into a point under the winze and a raise put up to the bottom of the winze this year. Another tunnel has also been started lower down the hill.

L. H.

The L. H. group is under lease and bonded to the British Columbia Copper company. The ore is principally quartz and arsenopyrite, the arsenopyrite carrying gold, and the country rock is impregnated with arsenopyrite and quartz seams. The values are spotty and the worth of the mine depends on the general average value of the ore. The ore bodies are large, crosscuts showing them to be over 40 ft. wide in places. The rock is very hard and development by hand work is slow, especially in such large bodies. The mine is 5½ miles from Silverton and is situated on a steep cliff. At these features make slow work and it will probably be a year yet before the value of the deposit can be sufficiently well determined to warrant its final acceptance or rejection by the company. Harry Johns is superintendent of the property.

Buck Fraction

Lessees are working on the Buck fraction adjoining the Emily Edith. A drift will be driven on a vein discovered on the property.

SLOCAN CITY MINING DIVISION

Ottawa

The Ottawa mine is on Springer creek and was purchased by the Consolidated Mining & Smelting company this year. Twenty-five men are employed at the property under the charge of Wilfred Cameron.

The compressor plant, air lines, water lines and the ore bins at the railroad have all been repaired. Machine drills are now being used. A small amount of development was done in the upper levels and a winze is being sunk from the lower level. The ore is a dry silver ore and a small tonnage was shipped.

Black Prince

At the Black Prince J. C. Moen is leasing. The drift was driven ahead and another ore shoot opened up after the one found last year was stoped out to the level above.

The ore is a very zincy dry ore and has to be closely sorted. The shipments ran a little over 100 oz. Ore is being sacked ready for shipment at present.

Meteor

At the Meteor the lessees took out all of the ore opened up they could before their lease expired and shipped it to the smelter.

Lily B.

Some ore taken out in development work was shipped to the smelter and the property closed down this summer owing to financial difficulties.

Neepawa

At the Neepawa, on Ten-Mile, G. B. Webster developed some dry ore under a lease, *from which he has shipped* three cars.

Eastmount

At the Eastmount, on Ten-Mile, the ore shoot was encounted in a raise *from the lower tunnel and an inter*mediate level driven from the raise. Twelve to fifteen men were employed during the summer and the force has now been cut down for the winter. *Shipments have been continued steadi*ly since the ore was opened up and two cars are sacked at the mines ready to be brought down as soon as the sleighing is good enough. The *property is expected to be worked all* winter.

Hamilton

Ralph Gillet and M. Donuinsey made a small shipment from the Hamilton, on Twelve-Mile.

Kilo

The Kilo on Lemon creek, which is worked under a lease and bond by Andrew Sostad, ran some ore through *the old Chapleaw mill. It was hauled* from the Kilo to the mill in wagons or sleighs and did not prove profitable. A shipment of concentrates from the run was shipped to the Trail smelter.

Zinc Ore Problem Is Subject of Research

EXPERIMENTS IN ELECTRIC METHODS ARE BEING CARRIED ON AT NELSON SMELTER BY FEDERAL GOVERNMENT—REDUCTION OF UNITED STATES DUTY AIDS BRITISH COLUMBIA *PRODUCERS—HEAVIER TONNAGE IS LOOKED FOR THIS YEAR*

The production of zinc ore is practically the same as last year. The Lucky Jim mine did not ship as much crude ore, but the shipments from the Standard are heavier. There is considerable difference in the gross value of the product figured on 85 per cent of the market price due to the difference in the average price for tre two years. There has been an average decline of 1.3 cents per lb.

The difference in the duty on this ore, which is all shipped to the United States, however, has helped out the mine owners. Last year the duty was 1 cent per lb. and also duty on any lead contained in the ore. The duty now paid is $1 for the first 25 per cent. of zinc and $1 per unit afterwards and 1½ per cent. of value. *Lead in the ore is not dutiable un*less it exceeds 3 per cent, and then the rate is ¾ of a cent. This makes a big difference in the duty on a carload of ore.

Improved methods of saving more of the zinc contents of the ores in the district is attracting the attention of mine owners. At a later date more zinc will be produced by better methods.

For the coming year a much heavier tonnage may be expected, as the Hewitt will probably be shipping heavily and the Standard will maintain its present rate of shipments.

The report to Dr. Hanel, of the Dominion government department of mines, in regard to electric smelting of zinc ores is of interest to the community. The work covered in the report has been supplemented by the repairing of the plant at Nelson and *the carrying on of further experiments* there on a larger scale than heretofore. The results obtained at Nelson, of course are not published as yet, but that the balance of the grant to carry them on was not adequate to carry them to completion is known. A movement is on foot to have this grant enlarged and it is to be hoped it receives the full support of the community at large as the success of this work would be of great benefit to the whole mining district of Kootenay. It would mean the opening up of some mines now closed down, the opening up of new mines and the working of now unworkable ore bodies already opened up in mines, but that have to be left at present.

Herewith is given the report:

New York, Jan. 15, 1913.

Dr. Eugene Haanel,
Director of Mines,
Ottawa, Can.

Dear Sir,—Experimental work upon the treatment of zinkiferous ores has been conducted during 1912 in the metallurgical laboratory at McGill university. Mr. Edward Dedolph has been in direct charge of this work and Dr. Alfred Stansfield has advised and occasionally assisted, the work being conducted under my general direction. Operations have been prosecuted steadily, save upon certain occasions when Mr. Dedolph was given leave of absence in order to attend to urgent personal affairs.

During the progress of these experiments I have made a careful exam*ination of the literature respecting* similar work elsewhere, have carried on an extensive correspondence with persons proposing new methods for trial, studying their data, etc., and have rendered opinions to you upon proposals that *have been brought to* your own attention and referred by you to me. Among these I have found nothing of promise in connection with the zinkiferous ores of Canada; nothing in fact that I have deemed worthy of experimental trial.

At McGill university the experimental work of 1912 was confined to electrothermic smelting. In this Messrs. Dedolph and Stansfield made 122 separate experiments during 1912, using 32 different forms of furnace, some of these, howeverr, embodying but slight modifications.

At the request of the secretary of the Canadian Mining Institute, I pre*pared, with your permission,* and read at the meeting of the institute in Toronto, in March, 1912, a paper reviewing the then existing status of electrothermic zinc smelting. In the following paragraphs I shall necessarily be obliged to *repeat some of the* ideas and opinions expressed in that paper.

A commonly experienced difficulty in the electric smelting of zinc ore is the condensation of the zinc as powder, ordinarily called "blue powder," rather than as molten metal that may be tapped off and cast into molds. A certain proportion of blue powder is made in ordinary smelting, but in electric smelting this proportion has been far exceeded. In fact *in many of our* experiments at McGill university the condensation of zinc has been almost entirely in pulverulent form. Upon resmelting this powder spelter may be *obtained,* and in Sweden electric smelting is actually practiced in that way. During 1912 you requested my opinion respecting the advisability of inaugurating at Nelson, B.C., experiments upon the line of the Scandinavian method. I reported to you under date of February 6, 1912, that a translation of the Trollhattan results into Nelson terms showed a probable cost of smelting that would be pro*hibitive. Such work as is done* at Trollhattan may in fact be done only under exceptionally favorable conditions. The conditions existing in British Columbia may not be thus characterized.

For successful electric smelting under ordinary conditions I am firm in the conviction that the avoidance of blue powder condensation, thereby escaping the necessity for extensive re*smelting, must first be mastered.* Until that be done I see no use in undertaking any work upon a scale approaching the commercial. Holding this opinion the main thread of our experimental work at McGill university during 1912 has been that leading to the condensation problem.

Along with this, however, we have tried various systems of smelting, which may be broadly classified as (1) the smelting of high grade product, obtained by the pyrometallurgical concentration of low grade ores; and (2) the direct treatment of low grade ores. By the first method the zinc is burn*ed from the ore in an ordinary* air furnace and the residuum discarded therefrom, the zinc-oxide fume being passed on to the electric furnace. By the second method no preliminary treatment is given to the ore and the worthless constituents thereof are drawn off from the electric furnace as slag. We have experimented also with such ore as is ordinarily treated by the zinc smelter in conventional prac*tice, with the redistillation of blue* powder, and with the smelting of raw sulphide ore. In all of this work, however, we have had a good deal of trouble in condensation and I do not regard that problem as being satisfactorily settled yet, but we have gradually obtained improved results and in some recent experiments have obtained rather high proportions of spelter in the form that we want, and I am consequently hopeful that this particular problem will be mastered ere long.

The formation of blue powder in the *zinc condenser appears* to be due to both physical and chemical causes. Under certain conditions of temperature, vapor pressure, etc., zinc may condense as powder and pellets, just as aqueous vapor may condense as snow and hail. This kind of powder may be melted, as we have sometimes done in the laboratory at McGill. If, however, the powder be superficially oxidized or otherwise affected chemic*ally it may not be possible to fuse it* at all. Such chemical action must therefore be avoided.

The studies at McGill have led me to believe that an essential condition *to the condensation of zinc from the* electric furnaces is purity of the gas and vapor, including freedom from all but a small medicum of carbon dioxide and freedom from vaporized impurities. The gas coming directly from the electric furnace is righer in carbon dioxide, as we have found by repeated determinations, than is permissible. This has been corrected by passing the gas and vapor through a column of *incandescent carbon, called a "second*ary reducer." The action of this is ameliorative, I think. We have generally obtained a better condensation with the use of this adjunct; but even when the gas is thus cleaned of carbon dioxide we still experience a certain collection of blue powder, that we suppose to be due to vaporized impurities, which we are now endeavoring to control or avoid.

In early experiments we had much difficulty in managing the secondary reducer, but gradually it was learned how to do that. Similarly, experience has been gained in the matters of *feeding and management generally,* and in details of construction. The main types of furnace tried during 1912 were of the resistance and arc-resistance principles, both of these being modified in many different ways; such as vertical electrodes and horizontal; passage of current through charge as resistor, passage through carbon, and passage through slag; secondary producer arranged internally and externally; different arrangement of condensers, etc.; change after change being made with the hope that some particular difficulty would be circumvented. This, of course, is the *natural course of experimental work.* The furnaces used in the recent experiments have smelted about 200 lb. of charge in 24 hours.

We have in the main used roasted *ore purchased from zinc smelters in* the United States, this serving as well as any other ore for the determination of what we have been aiming at and saving as the trouble and expense of ourselves roasting ore. Besides, we have been able to obtain a product commercially roasted and better done than we could accomplish in a small furnace. In conducting our electric smelting experimentation at McGill *university we have had the advantage* of a laboratory well provided with electrical equipment, besides the use of necessary scientific instruments, and the services of analytical chemists and draftsmen. Although we sometimes are cramped for room and are delayed by collegiate necessities, we probably could not on the whole find elsewhere such conveniences as we have enjoyed there.

Besides our own work in electric smelting a large amount of experimental work during the last ten years has been done by others. A good deal of such work was done during 1912, *among others by Specketer, Thierry,* Cote and Pierron, Johnson and Petersen; and by the Vieille Montague company. At Trollhattan, Sweden, electrothermic spelter was produced commercially. The results in the smelting of 537 metric tons of ore in 1911 were ported by F. W. Harbord. According to him the average power consumption per ton of ore was 2,078 kw., this relatively high figure being explained to a large extent by the necessity for resmelting two tons of blue powder for each ton of new ore. So far as I can learn, however, not very much further progress was accomplished during 1912; *certainly Trollhattan is not tak*ing ore for which it has contracted.

I have been informed that Specketer, Thierry and Johnson have succeeded in avoiding an excessive condensation as blue powder, finding purity of the gas and vapor to be an essential condition, and although I am unable to verify these statements and this conclusion from personal observation and experimentation, both of the latter at *McGill university have prepared me to* accept their probable truth. I am informed also of some well progressed experimental work wherein the smelting of ore containing 40 to 42 per cent. zinc has been done with a power consumption of only 1,175 to 1,200 kw., which in my paper read at Toronto last March I indicated as being a result possible of attainment.

In the United States, W. McA. Johnson, who has been engaged on this problem for seven years, has informed me of the production at Hartford, Conn., of several hundred pounds of spelter per day in campaigns lasting several days, and during 1912 he made perhaps a dozen tons of spelter in the aggregate. The Butte & Superior Copper company did some experimentation with the Petersen furnace, with more or less promising results in its own estimation, and toward the end of the year was contemplating a 10-day run at the rate of 2,000 lb. of ore per day. The New Jersey Zinc company inaugurated some experimental work in its *laboratory at Palmerton, Penn.*

In Europe, electrothermic spelter was produced at Trollhattan, to which place I have previously referred. Some tonnage was also produced at Hohenlohehutte, Silesia, by the Imbert Process company, but reports of what has actually been accomplished there are still conflicting. The Imbert Process company has never given out anything about its operations. My private ad*vices from Kattowitz* are to the effect that after a great deal of costly experimentation, the process has been practically dropped at Hohenlohehutte. It has also been dropped by the Amalgamated Zinc company of Australia, which was looking into it. The Vieille Montague company did experimental work with an electric furnace at one of its smelteries. Cote & Pierron also resumed experimental work. This is only a partial list of what has lately been going on.

The history of electric zinc smelting development is thus partaking of the features of the development of *other metallurgical process,* i.e., the engagement of the interest of many investigators; the conduction of experiment after experiment, many contributing no additional knowledge, some aiding a little; and in general the gradual acquisition of knowledge of principles and the art of manipulation, in other words the "learning how." This is inevitably costly and to a large extent is a waste of money, considered narrowly, but regarded broadly the negative results are important along with the others. The outlay in electric zinc smelting investigations has already run into the hundreds of thousands of dollars in several instances whereof I have been informed.

In our own work in Montreal we have heretofore confined ourselves purposely to experimentation upon a small scale in order to determine what might advisably be undertaken on a larger scale, this being considered to be the most economical procedure; and consequently expenditures up to date *have been relatively small. I am* hopeful that it will prove that we have at last developed a type of furnace upon which we may safely concentrate attention and inaugurate experiments upon a larger scale early in 1913. Our recent work has been pointing that way.

It may be asked, what is in sight as the possible benefit of electric smelting that leads to so much experimentation and so much expenditure of *money on it?* A *broad* answer to this question is that investigation of this subject is directed into one of the great unexplored fields of metallurgy. The rewards, if any, are likey to be of a nature at present unforeseen by anybody. A good deal of the common forecasting of the benefits to be expected from electric zinc smelting may be dismissed as thoughtless and idle, based upon premises at present unestablished. We cannot at present predict with any certainty that labor and other costs will be materially reduced; they may, or may not. With respect to fuel or power consumption, the two phrases being equivalent, we can see a little more clearly. We can reasonably expect an ability to smelt a ton of zinc ore containing 40 to 42 per cent. zinc, with a power consumption of about 1,200 kilowatt-hours. With power costing $10 per horsepower per year 1,200 kilowatt-hours would cost $1.84; with power at $20 per horse-power per year 1,200 kilowatt-hours would be $3.68. The latter *figure does not show any material* advantage over the direct combustion of coal. Nor do I see necessarily, or certainly, any higher yield of zinc by the electric furnace than by the ordinary furnace.

On the other hand, there are certain important possibilities of benefit. For example, in the ordinary practice of zinc smelting, the smelters are able to effect an extraction of only about *55 to 60 per cent. of the* lead content of the ore treated, and about 60 per cent. of the precious metals, and such extractions are made only under favorably adjusted conditions and at considerable increase in expense over the cost of smelting for zinc extraction alone. Moreover, there are certain kinds of ore which may not advantageously be treated at all by the present method, such as certain ores that are not amenable to mechanical separation and ores that are high in fluorspar content. In the treatment of such ores, we may find certain distinct advantages in electric smelting, and also, as I have remarked above, we may find advantages in electric smelting that at present we do not suspect at all. Such ideas are, in the main, the justification of the great expenditure in electric zinc smelting investigation that is now being made, both in Europe and America.

W. R. INGALLS,

MONARCH AT FIELD

Concerning the Monarch mine at Field, the Mining, Engineering and Electrical Record says:

"The Mt. Stephen Mining syndicate, which for two years previously had been developing the Minarch mine at Field, was recently incorporated as the Monarch Mines, Limited, with a nominal capital of $1,000,000, of which $500,000 was distributed among the members of the original syndicate and $500,000 held as a reserve in the treasury. No stock has been offered to the *public,* and the company is composed of the following fifteen shareholders: Alvo von Alvensleben, W. H. Bentley, Jas. Caldwell, John B. Eager, S. J. Emanuels, J. Sanderson, E. Sheppard, *A. S. Stewart, J. A. Thomson, W. J.* Van Houten, H. Wilkinson, A. H. Wallbridge and Mesdames J. B. Eager, Maggie Street, and Jessie Young, all of Vancouver.

The Monarch mine is the second oldest location on lead ores in British Columbia, and many have tried their fortunes at it under lease and bond but without success, until J. A. *Thomson, of Vancouver, took hold of* it, organized the original syndicate of those comprising the present company, prosecuted development with such success that considerable bodies of *ore were proved up, installed a mill,* brought the property to a steady producing stage and in the face of many difficulties achieved economic success. The directors of the new company *are: President, J. A. Van Houten;* vice-president, A. H. Wallbridge; secretary-treasurer, A. S. Stewart; managing director, J. A. Thomson.

The plant has recently been increased by the addition of new tables manufactured by the Trayler Engineering & Manufacturing company, of Allentown, Pa., and a Huntingdon mill, the new installation working well. The company was shipping its lead concentrates for a time to the North American Smelting company's plant at Kingston, and has been holding its zinc concentrates for the readjustment of the United States tariff, which has been expected to bring about a reduction on the duty levied on such ores.

Silver values in the ore now mined run from three ounces to five ounces to the ton. The lead concentrates are worth $40 per ton, and up to the end of May 80 cars of concentrates had been shipped. The mill has been lately making a larger zinc concentrate than hitherto and Mr. Thomson claims the zinc going into the lead concentrate has been reduced to 4.8 per cent., while of the total concentration lead amounts to 69.5 per cent. During last winter a great deal of development work was done. The mill has been running through an average of 50 tons a day, making a concentrate of 12 to 1. The zinc separation amounts to 70 per cent. and the tailings are being reserved for re-treatment. The lead concentrates are again being shipped to the Consolidated Mining & Smelting company's smelter at Trail.