## FIELDING IS **VINDICATED**

## Queen's - Shelbonrne Re-Elects Him by Splendid Majority

North Bruce Turns Former Tory Majority of 107 Into Liber I Majority of 246 by Electing John Tolmie

Halifax, N.S., Oct. 31.-The election in the constituency of Queen's-Shelbourne fill the vacancy for the house of commons caused by the unseating of Hon W. S. Fielding for corruption by agents, held today, resulted in the reelection of Fielding by a majority of 865, with two polls to hear from, ove Dr. Weldon, conservative. The vote polled was larger than at

the general election.

Port Elgin, Ont., Oct. 31.—Today's election for the house of commons for the constituency of North Bruce, to fill the vacancy caused by the death of L. Polmie, ex-M. P. liberal, by a majority of 246 over McLellan, conservative.

(Special to The Daily News) Ottawa, Oct. 31.-Parliament will phably be called for November 22nd. The announcement has been held back until after the Fielding election. Writs for St. Marys and St. Annes, Quebec constituencies, were issued to-

day, nominations November 7th, elections November 21st. The marine department says that captain Gaudin is making a special inquiry into the Kestrel matter and until that is completed captain Newcombe is suspended. Inspector Roy's report was re eived some time ago.

Hon. H. R. Emmerson will address the Canadian club on Saturday on the aims and objects of the Intercolonial railway.

Something is wrong with the mechan ism of the Ross rifles supplied to the mounted police. They are being sent pack to be fixed, but it is not intended o re-arm the force.

The Grand Trunk Pacific, Canadian Northern and the C. P. R. were represented before Hon. Mr. Emmerson on Monday regarding the route between Winnipeg and Portage la Prairie. The minister approved of lines east of Portge and said he would leave the balance intil the terminals at Winnipeg wer approved. He told the rival railway interests they must get together and arrange for a central station in Ed-He also informed the Grand Trunk Pacific and Canadian Northern epresentatives that they must do some

hing at Winnipeg.

The customs receipts of the domnion ow another large increase this month. revenue from this source was \$4,656,531, as compared with \$3,986,158. i increase of \$670,373 over the same ime last year. Receipts for four months of the fiscal year show an increase of

FATALITY AT PHOENIX.

Miner Run Over by a Loaded Ore Car and Crushed to Death.

Phoenix, Oct. 29.—An unfortunate ac dent occurred last night at the Granby nines, which resulted in the death of a John Holmes, at the hospital hortly after he was removed there. Beween 9 and 10 o'clock Holmes was working in the No. 3 tunnel level, and was letting a heavily loaded mine ore o a point where the train is made up r hauling by the electric locomotive. Infortunately he placed himself in front if the car, and it is thought stumbled fell, the car passing over and crushng him so badly that he expired a ninutes after being hurried to the hos-

Holmes was a native of Finland, where ne is said to leave a widow and several children. He was a member of Phoenix Miners' Union No. 8, having joined but couple of weeks since. tood that no inquest will be held, it not being deemed necessary under the

FIRE TEAM RUNS AWAY

(Special to The Daily News) Phoenix, Oct. 31-The extensive trestles the V., V. and E. railway, within the stern limits of the city were endangerabout midnight last night, by a fire nich broke out in a log cabin, occupied section men and located in the guich se to the trestle. Long blasts from a ailway locomotive whistle brought out e brigade in short time and with a ne of hose from the nearest hydrant the plaze was soon extinguished. When it tarted two Italians were sleeping in the

In hitching up the city fire team, the es started before they had the bits in eir mouths, and ran away, going over mile with the wagon and pa ore a wheel was broken and the horses

WOOLEN MILL BUILDINGS. Lethbridge, Oct. 31.-A contract for the erection of new woolen mill buildings was awarded to Rex Virtue this It will cost in the neighborood of twenty or twenty-five thousand ollars and will be entirely of brick. The main building is to have ories and basement and contain 27,000 eet of floor space. It will be fireproof hroughout. It is also reported that a intract for the steel works on the great C. P. R. bridge here has awarded to the Dominion Bridge Co. or \$780,000. This will not cover cost LAND NOTICES

NOTICE is hereby given that 60 days after date I intend to apply to the Hon. after date I intend to apply the Chief Commissioner of Lands and Works for permission to purchase the following cribed lands in the Lower Arrow lake crict, about three miles above the les postoffice on the west side of the ke: Commencing at the southwest cor-r of F. B. Lucas' pre-emption, post No. 40 chains west to Post No. 2; thence chains north to post No. 3; thence 40 chains east to post No. 4; thence 20 chains th to place of commencement. Dated this 23rd day of October, 1906

NOTICE is hereby given that sixty days or date I intend to apply to the Hon Chief Commissioner of Lands and Works or permission to purchase the following hed lands, situate in West Kootenay district, starting from a post marked "Robert McLeod's S.W. corner," thence chains east: thence 80 chains north; hence 40 chains west; thence 80 chains south to point of commencement, covering Chas. E. Ehl's abandoned pre-emption on the Arrow lake, about eight miles south f Nakusp.

Dated this 9th day of October. ROBERT McLEOD.
J. E. TAYLOR, Agent.

NOTICE is hereby given that 60 days after date I intend to apply to the Hon. the Chief Commissioner of Lands and Works for permission to purchase the following described lands in West Kootmarked "M.E.T.'s northwest post" and planted on the east line of Lot No. 3872, about one mile from Kootenay river on the south side, thence 80 chains south; thence 20 chains east; thence 80 chain north: thence 20 chains west, to point of

Dated this 22nd day of Avenut. 1906.

NOTICE is hereby given that sixty days from date I intend to apply to the Hon. the Chief Commissioner of Lands and Works for permission to purchase the cribed lands, situate on the lower Arrow lake: Commencing at a post planted about 10 chains east of Sand creek, marked "W.R.H.'s N.E. corner," 20 chains south; thence 20 chains west thence 20 chains north; thence 20 east to point of commencement, conta n
40 acres, more or less; said land adjoint
Paul Auder's pre-emption on the norside.

W. R. HOBBS. side. Located Oct. 5, 1906.

NOTICE is hereby given that 60 days aite date I intend to apply to the Hoa. the Chief Commissioner of Lands and Works for permission to purchase the following described lands in the West Kootenay district: Commencing at a post marked "C. s. Walmsley's N.E. corner post," situated at the S.E. corner of Lot No. 3333, thence outh 40 chains; thence west 6 chains; thence north 40 chains; thence east 6 chains

to point of commencement.

Dated this 15th day of October, 1906. 10-20 C. F. WALMSLEY. JOS. BLACKBURN, Agent.

NOTICE is hereby given that 60 days after date I intend to apply to the Hon Chief Commissioner of Lands and Works for permission to purchase the following described lands in West Kootenay district Commencing at a post marked "B. Bis-seil's N.E. corner," planted about 3 1-2 miles on the west shore of Upper Arrow ake half a mile south of Fosthall creek hence 80 chains west; thence 40 chains south; thence 80 chains east; thence 4 chains north to point of commencement Containing 320 acres, more or less. Dated this 18th day of Oct., 1906.

BELLE BISSELL J. E. TAYLOR, Agent 10-27

NOTICE is hereby given that sixty days after date I, J. H. Taylor, intend to apply to the Chief Commissioner of Lands and Works, Victoria, B.C., for permission to purchase the following described lands, situate in the West Kootenay district and more particularly described as follows: On the west side of the Columbia river. on the west sale of the Continual article opposite Makinson's pre-emption, starting at a post planted near the northwest corner of Gus. Adolph's pre-emption and on Gerhard Ludwig's south boundary, and marked "J. H. Taylor's N.E. corner," running thence west 20 chains; thence running thence west 20 chains; thence south 40 chains; thence east 20 chains to Gus Adolph's west boundary; thence north Chains to point of commencement.

Located this 30th day of August, 1906.

J. H. TAYLOR.

NOTICE is hereby given that 60 day: after date I intend to apply to the Hou the Chief Commissioner of Lands and Works for permission to purchase the following described lands in West Koot district: Commencing at a chains east of the southwe orner of Lot 6890, Group 1, thence south orners; thence west 80 chains; thence orth 20 chains; thence east 80 chains, to

Dated this 17th day of August, 1906.

OTICE is hereby given that 60 days after date I intend to apply to the Chief Com-missioner of Lands and Works for permispurchase the following describ tract of land: Commencing at a post marked "C. Padley's Southwest corner placed at the southeast corner land, thence 20 chair rth; thence 40 chains east; thence 22 ains south; thence 40 chains west along north bank of the Lardo river, to the

C. PADLEY, Locator. M MORGAN, Agent. Poplar Creek, B.C., Sept. 20, 1906.

OTICE is hereby given that 60 days after ate I intend to apply to the Hon, the missioner of Lands and Works permission to purchase the following Commencing at a post marke Logan's N.E. corner," and situated of the Upper Arrow lake, near Fostek, thence running west 80 chains south 40 chains; thence east 80 thence north 40 chains, and cor ing 320 acres, more or less.

JOHN LOGAN. J. E. TAYLOR, Agent. 10-26

OTICE is hereby given that 60 days aflef Commissioner of Lands and Works permission to purchase the following

M. Gaylord's N.E. corner," at the north-east corner of Frank Corte's old pre-emption claim, near Brooklyn creek, and about two miles back from the southwest shore of Lower Arrow lake, thence west 80 chains, more or less, to the boundary line between said pre-emption and lot 1847; thence south 80 chains, more or less, to th tion; thence east 80 chains, more of to the boundary line of said lot and ol pre-emption; thence north 80 chains, more or less to point of commencer taining 640 acres, more or less.

Dated Oct. 10, 1906. C. M. GAYLORD. RALPH SLYE, Agent

NOTICE is hereby given that 60 days after date I intend to apply to the Hon the Chief Commissioner of Lands and Works for permission to purchase the following described lands in West Koot enay district: Commencing at a post planted at the southwest corner of Loi 5079, Group 1, thence west 40 chains; thence north 80 chains to the Kootenay river thence east 40 chains; thence south chains, to place of beginning.
Dated this 17th day of August, 1906.
M. C. MONAGHAN.

NOTICE is hereby given that 60 days after date I intend to apply to the Hon, the Chief Commissioner of Lands and Works for permission to purchase the following escribed lands in West Kootenay district Commencing at a post marked "T.B.'s N.E. corner," said post being south of Cedar creek. Kootenay lake, thence west; thence 40 chains south; thence 4 chains east to lake shore; thence 40 chains north to place of commencement.

Dated this 17th day of October, 1906.

NOTICE is hereby given that 60 days af-ter date I intend to apply to the Hon. Chief Commissioner of Lands and Works for permission to purchase the following de-scribed land, situated in the West Kootenay district: Commencing at a post plant-ed at the S.E. corner of Lot 222, thence west 80 chains; thence south 20 chains; thence east 80 chains; thence north 20 chains to point of commencement. Dated Oct. 22, 1906.

M. McLeod. Locator. NOTICE is hereby given that 80 days after date I intend to apply to the Hon the Chief Commissioner of Lands and Works for permission to purchase the following described lands, situate in West Kootenay District: Commencing at a post marked "Peter McPherson's southeast corner."

Lake, near Fosthall creek, thence 80 chain

north; thence 80 chains west; thence 80 chains south; thence 80 chains east to

point of commencement, containing 640 acres, more or less.

PETER MCPHERSON. J. E. TAYLOR, Agent, 10-2

Dated this 8th day of October, 1906. NOTICE is hereby given that 60 days after date I intend to apply to the Hon-Chief Commissioner of Lands and Works for permission to purchase the following described lands, situated in West Koote-nay district: Starting at N. D. Stuart's east; thence 30 chains south; thence chains west to point of commencement. 10-13 FRANK PENNOCK.
Located this 8th day of October, 1906

NOTICE is hereby given that 60 days after date I intend to apply to the Hon. the Chief Commissioner of Lands and Works for permission to purchase the following described lands, situate in West Kootenay District: Commencing at a post market "Florence Richardson's N.E. corner," and situated about four miles west of the Upper Arrow lake, near Fosthall creek, thence running west 40 chains; thence south 80 chains; thence east 40 chains; thence north 80 chains to point of commencement, and

ontaining 320 acres, more or less. Dated Oct. 9, 1906. FLORENCE RICHARDSON. J. E. TAYLOR, Agent. 10-20 NOTICE is hereby given that sixty days

after date I intend to apply to the Hon. Chief Commissioner of Lands and Works or permission to purchase the following described lands, situate in West Kootenay district: Starting 400 feet west of post narked "R. Corlett's southeast corner post," about ten chains from Kootenay river, 15 chains west to lot 5082, more or ess; thence 15 chains north; thence 1 chains east, more or less; thence 15 chains to place of comm Dated this 13th day of Oct., 1906. R. CORLEYPT.

Sixty days after date I intend to apply to the Hon. the Chief Commissioner of Lands and Works, for permission to pur-chase the following described lands in West Kootenay District: Commencing at West Kootenay District: Commencing at a post marked "A. M. Pingle's S.E. post," thence 40 chains north to S.E. corner of lot 2512, near south shore of West Arm of Konteny level thanks. Kootenay lake; thence 40 chains west thence 40 chains south; thence 40 east to point of commencement, the whole

A. M. PINGLE, Locator. S. E. OLIVER, Agent. Sept. 12, 1906.

NOTICE is hereby given that 60 days after date I intend to apply to the Hon he Chief Commissioner of Lands and Works for permission to purchase the following described lands in West Koot enay district: Commencing at a post planted at the southwest corner of Lot 5283, Group I thence south 20 chains; thence east 40 chains; thence north 20 chains; thence west 40 chains to place of beginning. Dated this 17th day of August, 1906. W. J. MURPHY.

NOTICE is hereby given that two months after date I intend to apply to the Chief Commissioner of Lands and Works for per mission to purchase the following described lands, situate in West Kootenay district Commencing at the southwest corner Lot 4682, thence south 60 chains; then west 40 chains, more or less, to the Kootenay river; thence following the shore of same river northeasterly to point of commencement, comprising 160 acres, more of

A. FYFE. Dated Sept 25, 1906.

NOTICE is hereby given that sixty days after date I intend to apply to the Hon. Chief Commissioner of Lands and Works for permission to purchase the following described lands, situate in West Kootenay Tibed lands in the West Kotenay dis-t: Commencing at a post marked "C. district, starting from a post market

Margaret McLeod's southwest corner, adjoining application to purchase of W. J. Toye on the Arrow lake, about eight miles outh from Nakusp, thence 80 chains east; hence 40 chains north; thence 80 chains hence 40 chains north, fouth to point of

ommencement.

Dated this 10th day of October, 1906.

MARGARET MCLEOD. J. E. TAYLOR, Agent.

NOTICE is hereby given that 60 days after date I intend to apply to the 'Con the Chief Commissioner of Lands and 'Criss for permission to purchase the follows. escribed lands, situate in West Kootenay nd situated three miles west of the Up per Arrow lake, near Fosthall creek, thence running 80 chains south; thence 80 chains vest: thence 80 chains north; thence hains east to point of commencement, and ontaining 640 acres, more or less.

MINNIE McPHERSON.

J. E. TAYLOR, Agent. 10-20 Dated this 8th day of October, 1906.

NOTICE is hereby given that 60 day after date I intend to apply to the Che Commissioner of Lands and Works for permission to purchase the following de-scribed land in West Kootenay district. cing at a post marked "G. A thence 20 chains south; thence 40 chain west; thence 20 chains north; thence 4 chains east, to place of beginning, con taining 80 acres.

G. A. BROWN. K. K. BJERKNESS, Agent

Located this 15th day of August, 1906. Sixty days after date I intend to ap-Sixty days after date I intend to apply to the Hon. Chief Commissioner of Lands and Works for permission to purchase the following described lands situate in West Kootenay district, and adjoining N. D. Stewart's pre-emption, starting 11 chains west from N. D. Stewart's northeast corner post, thence west 40 chains; thence north 40 chains; thence east 40 chains; thence south 40 chains to point of Dated Sept. 22nd, 1906. N. D. STEWART.

Sixty days after date I intend to apply to the Hon. the Chief Commissioner of Lands and Works, for permission to pur-chase the following described lands in West Kootenay District: Commencing as a post marked "E.T.'s S.E. corner," or

est shore of Kootenay lake, about fou miles south of Wilson creek, thence 20 chains west; thence 60 chains north; thence 20 chains east, more or less to lake; then o chains south along shore line, to poin

ERROL TRELEAVEN, Locator. S. E. OLIVER, Agent.

NOTICE is hereby given that 60 days after date I intend to apply to the Hon. Chief commissioner of Lands and Works at Victoria, for permission to purchase the following described lands situate in Valley, West Kootenay district, join ost marked "L. C. Morrison's N.W. cor her post," running 40 chains east; thence 0 chains south; thence 20 chains west; hence 40 chains north; thence 20 cha est; tence 40 chains north, to place of

r less.
Dated Sept. 24, 1906.
L. C. MORRISON. NOTICE is hereby given that sixty days from date I intend to apply to the Honthe Chief Commissioner of Lands and Works for permission to purchase the following described lands situate on the west side of lower Arrow lake: Commen ing at a post planted about 30 chains north of Paul Auder's pre-emption on Sand creek, marked "P.A.'s S.E. corner," thence 40 chains north; thence 30 chains west thence 40 chains south; thence 30 chains east to point of commencement. PAUL AUDERS.

Located Oct. 5th, 1906.

APPLICATION FOR TRANSFER OF

I, J. H. Smith, of Slocan Junction, B.C. intend to apply at the expiration of 30 days from the first publication of this notice to the Board of License Con ers for the Ymir License District, for a transfer of my hotel license to sell intoxicating liquors under the provisions of the statute in that behalf, in the premise nown and described as the "Kootenay said, to Napoleon Mallette and Peter John

Dated the 5th day of October, 1906.

NOTICE is hereby given that a meeting of the Board of License Commissioners of the Ymir License Ditrict will be held at the Provincial Constable's Office at Nel on, B.C., on Wednesday, the 7th Novem er, 1906, at 11 o'clock in the forenoon to consider the application of J. H. Smith or the transfer of the license of the Kootenay Falls Hotel at Slocan Junction afore-said, to Napaleon Mallette and Peter

W. H. BULLOCK-WEBSTER, Chief License Commissioner, Ymir Licens District. Chief Constable's Office, Nelson, B.C., 5th October, 1906.

FOR SALE

Hotel Hume, 2 lots, 50x120, furniture, Block V at Balfour, 12 lots ....... . 8,000 Lots 7 and 8, W. half 9, block 14, with 8-room new dwelling ..... 3,500 8 lots town of Silverton .... 1,000 Half interest 200 acres Slocan lake, 500 Half interest 200 acres Siocan lake. 500
Quarter interest Trout Lake City... 2,500
Lot Atlin City... 250
Half interest in 180 acres near Kasio 160 acres Pass Valley ... 1,600
Half interest 70 acres, 3 miles up Cottonwood creek, Nelson ... 200
All interests in mineral claims, stocks, etc. ... 5,800

J. FRED HUME

ZINC RESOURCES OF B.C.

COMMISSION NO QUESTION AS TO ABUNDANT SUP-PLY OF ORE

EXTENDED SUMMARY OF REPORT OF

Below is given a more extended summary of the report on British Columbia's sinc resources that the brief telegrapric synop-sis we received from Ottawa the other day; reproduced from the columns of the Toreproduced from the columns of the To on to Globe. The investigation was undertaken in re-

The investigations from the Sliver Lead association and the associated boards of trade of British Coulmbia. Mr. Walter Renton Ingalis, editor of the Engineering and Mining Journal, New York, was ap-pointed chief of staff, with Mr. Philip Argall, M.B. of Denver, Colorado, and Mr. A. C. Garde of Nelson, B.C., as his assistants, the former taking the field work in connection with developed mines, of the province, the fatter acting as Mr. argail's assistant. Dr. A. E. Barlow and Mr. Joseph Keele of the geological survey were detailed to investigate the underground zine ore deposits. The metallurgical investigation of the samples of ore cllected was conducted by Mr. Henry Wood of Denver, under the supervision of Mr. Argall and in consultatio Mr. Ingalls.

The investigation was intended to cover the following points: (1) The examination of the present development of mines to de-termine approximately the tonnage of zinc ore immediately available; it soccurrence and character and the future prospects together with the cost of mining. (2) hx-amination of the present mathod of mill-ing. (3) Invetsigation of the adaptability of the ores to the new methods of concentration (magnetic electrotastic etc.) (4)
The study of the conditions affecting the
marketing of the concentrate, including the question of smelting in the province or elsewhere in Canada. (5) The investiga-tion of the possibility of the special utilizaion of the zine ore if of high silver con-

The first phase of the enquiry was very horoughly investigated and the commis-sion ascertained that zinc in large com-nercial quantities could be produced in British Columbia. The tonnage immediately available in the Ainsworth and Slocan districts was estimated at approximately 30,000 tons of nominal zinc content of 50 per cent, corresponding to a production of upwards of 12,000 tons of speiter, or apconsumption moreover is only about one half in the form of spelter, the remainder consisting of sheet and rolled plate. It is o be expected, therefore, Mr. Ingalls says, that for a long time to come a large por-tion of the ginc ore or spelter produced in British Columbia will be exported. The spekter cannot enter the United States because the American tariff of 1.5 cents er pound is prohibitive, besides America tself is at times a considerable exporter inc smelting in Australia would appear rospects are consequently that the major ortion of any spelter that may be pro-Burope. With respect to the occurrence and character of the zinc ores, these have in every case been carefuly examined and described in detail. The report is accompanied by plates illustrating their geo-ogical features and modes of occurrence. The future prospects are that with the imploymenth of the correct methods of nilling and treatment for the different ses of ore and a careful observance of the suggestions made by the commission, a stable zinc industry, capable for a long ime of meeting the demands of the do-ninion will be established. The cost of mining in every possible case was deter mined by the commission, and amounted to about \$2.50 for every ton of raw material taken out in two of the largest mines. This, sum includes the general and en-gineering expenses. The examination of the methods of milling at present carried on in British Columbia disclosed the fact on in British Columbia disclosed the tact that an imperfect knowledge of the classes of ore dealt with was the cause of some of the mills, which were formerly operated, being closed down. The proper methods of milling for each class of ore is clearly or milling for each class of ore is clearly set forth in the report, and if closely fol-lowed will enable these non-producers to resume operations at a profit. Several schemes for milling with descriptions of the best appliances to be used are enumerated in the report. regard to the investigation of the daptability of the ores to the new methods

of concentration-magnetic, electrostatic and so forth-the exhaustive experiments made with the many classes of ore de-monstrated that the zinc ores of British Columbia can be highly concentrated by magnetic treatment, it being possible in every case to produce zinc concentrate as saying upward of 40 per cent zine, in many centrates assaving 50 per cent saying as high as 57 per cent zinc. As re gards the conditions affecting the market-ing of the concentrates, the report treats he subject in a most comprehens er. Up to 1905 the production of zinc ore in British Columbia was approximately 11,000 tons, which was chiefly exported to the United States, a small quantity being sent to Europe. Since the establishment of the Canadian Smelting works at Frank, Alberta, Canada has entered the market or these ores. There are consequently three markets open to the ores of British Columbia, viz., Europe, the United States nd Canada. The most profitable market for ores is governed by the prevailing price of speiter in London and New York, the former ruling the European market and the latter that of the United States. Acordingly the London and New York prices, together with the freight rates to the destined points must be considered in letermining where the ore shal lbe marke ed to the best advantage. Another fact to be barne in mind is that British Columbla ores going to the United States are subject to a duty of 20 per cent ad valorem, whereas no duty is imposed on

these ores into Europe..

The question of smelting in British Colmbia or elsewhere in Canada is minutely treated in the report. So far as fuel is con-cerned, British Columbia and Alberta are zinc smelters of the United States, for the reason that coal can be procured in either by the Payne and Slocan Star.

be obtained in the adjoining republic. And since one ton of ore required approximately two tons of coal for smelting, it is an item of considerable importance. On the other hand the cost of labor in the United States is somewhat cheaper than in Canada and the former country also enjoys the advantage of already possessing skilled workers, while this country has yet to produce rained men. The investigation phase of the subject by the commission has demonstrated that the smelting of zinc ores is commercially feasible in Canada. The high silver zinc ores, the report desilver lead smelters, to whom they are

disposed of.

The report of the commission, dealing as it does so thoroughly with the metal-turgy of zinc and magnetic separating and concentrating experiments is the only work of its kind in existence and is already recognized by those competent to judge as the greatest authority on these subjects which has yet been published. Already there is an enormous demand for copies of the volume. It consists of 378 pages, beautifully illustrated with photographs, plates and maps. In addition to an exhaustive discussion by Mr. Ingalls, chief of stair, there are valuable reports by Messis. Philip Argall, A. C. Garde, Henry E. Wood and Dr. Barlow.

## ZINC RESOURCES OF B.C.

COMPILED FROM REPORT OF ZINC COMMISSION COST OF PRODUCTION AND PRODUC-TIVE CAPACITY

Whilst a great part of the report of the mmisison that investigated the zinc reurces of British Coumbia is of too technical a nature for reproduction in a daily newspaper, a good deal of it is of general interest and from time to time we purpose publishing in these columns extracts that

The first part of the report is written by Walter Renton Ingalls, the well known editor of the New York Mining and Engineering Journal, and admittedly, the greatest living authority on zinc. In openng he gives an historical sketch of the production of zinc ores in the United States, followed by statistics of production. hen follow general observations on the paracter of ore of the Slocan Star, Ruth, Lucky Jim, American Boy and other mines; the market for ores, valuation of zinc ores, cost of smelting, value of argentiferous blende and wet process of extraction. He then devotes several pages to "The Zinc Mines of British Columbia," and it is from these pages that the extracts hereunder are taken:

There are certain mines Kootenay which are essentially zinc mines The best examples of these are the Lucky Jim and Blue Bell. In each case they were worked originally as silver-lead mines but as such were probably unprofitable— at all events they were allowed to lie idle for many years after the original explaita tion. The proportion of galena to the re-mainder of the ore was small, and the ore was of low grade in silver. The Lucky Jim has recently produced upwards of 5000 tons of zinc blende assaying 50 per cent concentrating grade will afford considererable extent from solid bodies of mineral and shipped in lump form without culling. The Blue Bell also shows rich faces of blende ore, which although mostly of a concentrating grade wil lafford considerwhile that can be selected as comparatively high grade lump ore by hand sorting. The majority of the mines of the West Kootenay are, however, essentially silver-lead mines, in which zinc blende occurs as an accessory ore. In this respect they differ in no wise from many other mines

in the Rocky mountains from British Col-umbia to Mexico, in which zinc blende oc-curs in association with galena, pyrite and other argentiferous and auriferous ores. The widespread and abundant occurrence of zinc in these ores is indicated by the siags made in silver-lead smelting in the United States, which average about 6 per cent zinc oxide, or approximately 5 per ing of 2,500,000 tons of ore per annum, which is considerably under the quantity now actually treated, and the product of nually discarded in this form about 112,500 tons of zinc, which is the result after the zinc ore has been so far as possible culled out by the miner or left behind in his

The increased demand for zinc ore during the last few years, which is by all means likely to continue, has made valuable as a by-product in many cases what was formerly an objectionable impurity, to be culled out as far as possible and thrown over the dump. This represents precisely the situation in connection with the ma-jority of the mines in the Slocan. There are comparatively few which can be worked profitably as zinc mines; there are many which can be worked for silver-lead ore, wherein the zinc ore will be a valuable by-product, as has already been thoroughy well demonstrated in the case of the can Star and certain other mines. The yield or silver-lead ore will always be the cominating factor in the operation of these The silver-lead veins of the Slocan are

extremely irregular. They are generally narrow and the paystreaks are thin. Exceptions to this generalization are to be found in certain wide veins, like one at least on the south fork of the Kaslo, and certain thick stopes of ore in the Slocan Star mine. The general association of siderite with the ore is highly character stic of the entire region; there are few of the silver lead mines which do not show it in some degree. The tendency o the veins towards impoverishment with depth is strongly marked, the proportion of siderite first increasing and then the proportion of quartz. The ore shoots are rather short and the stretches of barren vein between them are rather long; the stoping area of the vein is therefore rather small and the cost of prospecting is cor-respondingly high. The silver lead ore is generally of high grade in silver which cerned, British Columbia and Alberta are better situated for smelting than are the the mines at the excellent percentage of profit that has been shown most brilliantly

However, it has been the failure to re- nine years 1895-1903, according to the retoward, it has been the railure to recognize the true conditions, which has been
the cause of many disasters in the district. Many properties have been developed in too ambitious a manner. Long crosscut tunnels have been driven at large outlay of many which he snot hear justlay of money which ha snot been justi-fied by the advantage gained. Mills of too letge capacity have been built and at-tention in their design has been directed towards reduction of operating cost per ton of ore rather than towards securing the maximum percentage of the valuable minerals of the ore, which should have been the chief consideration in the concen-tration of these rich and difficult ores. Thi serror in mill design appears to have been due to a mistaken following of the practice in the Coeur d'Alene district of been due to a mistaken following of the practice in the Coeur d'Alene district of daho, where the conditions as to ore deposits, character and grade of ore are radically different, from those which obtain in the Slocan. The large number of the conditions as the conditions of the conditions are represented by the conditions of the cond tain in the Slocan. The large number of mill sstandin idgle throughout the Slocan in spite of the bounty on lead ore, is the best possible evidence of the mistakes of the past. In future attempts to reopen these mines with a view to augmenting the yield of argentiferous galena by the marketing of the argentiferous blende as a by-product, it is important that profit be taken of previous experience. Operations must be inaugurated tentatively. Large outlays in dead work must be avoided. prospecting in the veins must be pushed boldly and must always be kept well ahead of stoping. Installation of plant, either mining or milling, must be carefully considered with respect to the probability of ursement of the cost of the plant. If there be only 100 tons of ore to be hoisted out of the shaft it is both better en-gineering and better business to raise it by windlass than to buy a steam hoist, and

this same principle obtains throughout Neither the average grade of the ore nor the cost of mining in the Slocan can be satisfactorily generalized. The samples taken by Mr. Argall and Mr. Garde wh are referred to in their reports and are summarized in the report of Mr. Henry Harris, indicate the general character of the ore, but it must not fail to be observed that they were taken from only partially developed showings of pay or in most cases from narrow streaks, an

would depend chiefly on the method of mining and the cleanness with which the ore would be separated underground. The cost of mining per ton of material in the West and East Kootenays does not appear to vary greatly from the cost in the Coeur d'Alene district of Idaho, where the conditions are similar. In each dis-trict timber is abundant and obtainable at nearly equal cost. The mines are workable generally through adit levels, eliminating hoisting and pumping costs. Rates of

wages are practically the same. At Wardner, Idaho, miners are paid \$3.60 per day; shovelers, \$3; foremen, \$6 to \$7; shift bosses, \$4 to \$6; timbermen, \$3.75 to \$4; hoisting engineers, \$4; head blacksmiths, \$4.50; generally eight hour shifts. The rate for board is \$1 per day.

At the Blue Bell mine, opposite Ains worth, miners are paid \$3.25 to \$3.50; show elers, \$3; smiths, \$4; all per shift of eight hours. The rates in the Slocan and East Kootenay are about the same. The cost of mining 50,000 tons of ore

the Slocan Star mine in 1904-05 was abou \$2.50 per ton; the cost of milling the sam ore was about 41 cents per ton.

A mining cost of \$2 @ \$2.50 per ton of material may be assumed as a broad generalization of the conditions which obtain in the Slocan. Such a figure is obtainable in a vein of solid ore of fair stoping width say & feet. The cost of mining ing width, say 6 feet. The cost of min increases inversely as the proportion of pay ore to the total vein area decreases, and diretly as the occurrence of the ore minimum width of efficient stoping, say 3 feet 6 inches, the cost of production per solid blende 12 inches wide and 30 inches of quartz beside it, all of which would have to be removed in stoping, a square foot of vein would yield—assuming clean separation of the minerals to be possible, which, however, would never be entirely ing 20 pounds, and 2. cubic feet of quartz weighing about 412.5 pounds, wherefore, out of every ton of material broke down there would be obtained 6-8 of a ton oblende, and if the cost of mining pe ton of material were \$3, the cost per to ed 60 per cent zinc, the mining of a 12 in streak would be equivalent to the mining of 3.5 foot streak assaying 22.5 per cen zinc, but the solid streak would have the advantage of avoiding the milling ex pense. The ultimate consideration, how ever, would depend greatly upon the clean ness with which the ore could be broke down and handled. In the case of o which must be milled, the cost of produ tion per ton of concentrates i dependent chiefly upon the yield per ton o

The method of development in the min present time there is comparatively little ore that can be estimated as blocked out. There have been several mines, the mos noteworthy being the Payne and Slocan Star, which have made large outputs value and a high percentage of profits in the production. It is probable that new and profitable ore bodies will be found in some of the mines, and it is probable more over that many new veins, not now known, will be discovered within the mineralized area of the district. It is, finally, quite certain that intelligent management materially add to the value of the protion of many mines by careful recovery o zine blende, although the latter may fetch

only a small amount per ton. The present lack of development, together with the irregularity of the ore bodies, make it difficult to formulate any reliable estimate of the zinc producing capacity of the Slocan. That this will bear a definite relation to the production of lead ore may be accepted. The statistics of several nines indicate a probable yield of two tons of blende concentrate containing 50 per cent zinc to one ton of galena blende containing 60 per cent lead. Unfortunately no statistics of the production of galena concentrate are available. The total production of lead ore in the Slocan during the

nine years 1836-1803, according to the re-ports of the minister of mines for British Columbia, was 198,207 tons, averaging 40.74 per cent lead. This is an average of about 22,000 tons per annum. This would corre-spond to about 15,000 tons of 60 per cent grade, and assuming the blende: galena ratio of 21 would indicate the possible production of 30,000 tons of blende per annum if all the zinkiferous ore were concentrat

ed. The latter is obviously an improbable result. Many of the zinc-lead mines are small affairs, for which it would never pay to provide mills, and are so situated that their care. producers, moreover, have too little zinc it is possible that further chimneys of sinc ore may be found in that property, or similar chimneys in other properties. All things considered, it is probable that 15,001 tons of zinc ore of 50 per cent grade would be a liberal estimate for the productive capacity of the Slocan.

Mr. Argall considers that the mines of Ainsworth camp can produce from present

Ainsworth camp can produce from present developments about 54 tons daily of sinc ore of 50 per cent grade, and may be able or so if the extensive ore deposits be mined and milled on a scale commensurate with their magnitude. These estimates would correspond to 16,000 to 30,000 tons per an-

enay, which were examined by Mr. Argail and me, are not properly to be considered as zinc mines at all, although the Sullivan in the Kootenays, except possibly the Big Ledge. Its ore, however, is of such a char-acter that sinc extraction is almost hope-less. The St. Eugene mine is essentially a lead mine. Zinc ore occurs only at the edges of the ore lenses. On the opposite side of Moyle lake from the St. Eugene property there is a prospect known as the Aurora, which has shown some zinc ore, but according to the account of the owner

## TO WORK ON SILVER KEY

TRIAL SHIPMENTS TO BE MADE AT ONCE.

LARGE FORCE EMPLOYED TAKING OUT ORE AT THE ARLIGTON

(Special to The Daily News)
Slocan, Oct. 31.—Messrs. Teeter, Benedum and Skiller began work on the
Silver Key, situated on Dayton creek.

Under former workings, considerable ore had been left on the dump, also hanging along the wall of the tunnel for 3d feet. This will no at once knocked down, sacked and shipped. If the shipment proves satisfactory, development work will proceed. The Silver Key is a continuation of the ledge of the well known Dayton claim, and is only three nites from Slocia City.

A good force is taking out ore at the Arlington. This will be increased as soon as the smelter notifies them that through the settling of the Fernia strike,

scon as the smeltar notines them that through the settling of the Fernia strike, the ore can be hardled.

Messrs, Tattersall and Waring have a fine showing at the Myrtle, and are rapidly blocking out ore. They have four feet of fine ore

W. J. Kyte, who has been down in the Yaking country. What ingran has re-

W. J. Kyte, who has been down in the Yakima country, Wa'd agton, has returned to Slocan. Mr. Kyte had intended taking up government irrigated land, but found conditions most discouraging. Only alkali water to drink and high winds carrying clouds of stiffing sand into throat and nostrils. Mr. Kyte says he is glad to get back and asserts that there's no place like the Slocan.

D. St. Denis paid a business, visit to Nakusp this week.

John Wafer has returned to Slocan, after spending two months at the Canadian group.

J. H. Howarth, who has for years, conducted a jewelry and watch mak business in Slocan, has removed stock to Nelson.

Mrs. McAllister, returning to her ho

Mrs. McAllister, returning to her home in Cody, after a trip east, recently visited Mrs. Joseph Law, here. Engineer Colbeck, of the S. S. Slocan, arrived in Slocan, this week.

The annual shoot of the Slocan Rifle association began yesterday, and will continue today. All are invited to compete, and substantial prizes are offered.

EASTERN CANADIAN NEWS NOTES. Halifax, Oct. 31.—Edward Way, a young man employed as a section man on the Halifax & Southeastern railway, was brutally murdered on Monday. Clairlance L. Spears, of Sable River, clairance L. spears, of Same River, a laborer in the Brownell lumber mill at Granite willage, is held in connection with the murder. Robbery is said to have been the motive.

Hamilton Oct. 21.-Andrew Murdock 51 Oxford street, is dead from injuries received by being run down by a deliv-ery wagon on Saturday.

Plum Coulee, Man., Oct. 31.—Ros & Brownstone's stable here was burned this morning together with the contents, which included nine horses and two cows. The loss is heavy.

Montreal, Oct. 31.—The collection of customs at this port for the month of October were the greatest in the history of Montreal, being \$1,326,511, or \$219,929 greater than in October of last year. The collections for the cal-endar year will exceed \$15,000,000.

SMALL-POX OUTBREAK. Moneton, N. B., Oct. 31.-A rather alarming situation has been created by the small-pox outbreak in certain sec-tions of Kent county, near the border of Westmoreland. There are probably one hundred cases in two or three par-