

Sales W. S. : Address by *Hope*. R. Drummond, p. 5.

MARITIME RECORD.

E. R. Faribault,
Geological Survey

MARCH 26, 1919.

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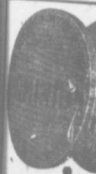
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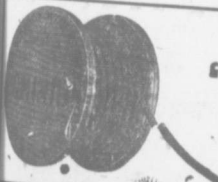
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SOUTHBOUND Superior Dir.		STATIONS	NORTHBOUND Interior Dir.	
486	487			
A M			P M	
10 40		POINT TUPPER	5 48	
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7 59		GLENCOE	5 45	
7 49		MADOU	6 11	
7 25		GLENDYRE	6 22	
7 12		BLACK RIVER	6 32	
6 55		STATHLORN	6 53	
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			P M	

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We manufacture a complete line of Tools for the Coal Mine,
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Wood or Steel let CUMMING'S make it.

OUR PRODUCTS:

Coal Boring Machines.	Steel Pit Hames.	Frogs.
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MARITIME MINING RECORD

Vol. 21

Stellarton, N. S., March 26th., 1919

No. 18

NOVA SCOTIA'S UNDEVELOPED WEALTH.

A COMING BIG INDUSTRY.

In answer to the question "Can a copy of Mr. Drummond's address on Shales, before the Rotary Club, be had?" we give the address in full:

CHAIRMAN AND GENTLEMEN: When asked to give a short address at a regular Rotary luncheon I, in "a moment of weakness" as did a noted Canadian statesman—consented. The suggestion was thrown out that the subject might well be "Nova Scotia", the reason, naively given, being that it was just possible that Nova Scotians did not know as much about themselves as they ought to know. That reason gave me pause, for the idea has long possessed me that Nova Scotians above all else knew themselves. I got this idea, possibly, inferentially. Long, long ago, being in a company of which the late Dr. G. M. Grant was one, he, in the course of conversation, turned to me and said: "My boy, if you wish to get on in Nova Scotia, never be afraid to blow your own trumpet". Possibly I made effort to follow the noted mans advice, but I must have given it up on finding that the trumpet market had been completely cornered. In my reply to Mr. Webster I said that I trembled as I thought of speaking before so critical an assembly, on any subject; and that I was sure I would go altogether to pieces were I to speak on 'Nova Scotians', for, though fifty years in their company, they were still to me, unsolved puzzles.

Do I hear some one ask: "What is your subject, out with it and on with it"? To such I say, do not become impatient, and, yet, truth to tell, I would rather see signs of impatience than see you, one after another, follow your usual habit, of taking forty after lunch winks. Don't dare go to sleep, else something you would not like, might be said of you in your absence.

Have you heard of the member of the British House of Commons, who, while addressing the House, noticed no fewer than a dozen of his political opponents sound asleep. Looking at them, he paused, and then, still addressing the Chair, remarked, 'I have often thought when addressing those—not these—benches—it would be well to change the wording of the old proverb, 'Let sleeping dogs lie' into 'Let lying dogs sleep'—I have no other object in here introducing the incident than to convey an obscure hint to any of you who may be inclined to after heavy meal somnolence.

Possibly you may have read something like this: Mr. S—, on rising, immediately plunged into his subject. 'Conditional Immobility', a fitting theme for Rotarians, if the interpretation—not, however, to be found in Webster—is correct. 'Rotarians—a sect of modern origin opposed to Shakerism.

The speaker is no plunger. He loves the ordinary, and is a great believer in the power of the common place, therefore this introduction, to thaw the ice, and make himself at home with his audience:

The title of my subject is "Nova Scotia's Undeveloped Wealth", the sub-title "A Coming Big Industry". No reference shall be made to farming or fishing, industries capable of much further development. Nor to the forests which some say are within measurable distance of depletion, unless indeed a scientific and heroic system of reforestation is immediately adopted. Even if I would I could not do justice to such themes. The old saying has it 'Let the shoemaker stick to his last', a narrow interpretation of which is 'Let every man stick to his own trade', an interpretation conveying a false philosophy, and which, if followed, would stifle the aspirations of Rotarians.

Many yeers ago through the medium of a mining special published in Halifax, I expressed, without hesitation, the opinion that Coal was Nova Scotia's greatest asset. In the article it was not sought to be conveyed, that coal was her one great mineral asset, for she possesses other rich minerals—some of which to many are no more than a name. Since fifteen years ago there have been marvellous, should I not rather say miraculous happenings. For many years, with flippancy rather than with frankness, have we dubbed Coal as King. When in either mood we dubbed him such we had nothing like a full idea of how towering a King was coal. The five years war has revealed his true greatness. They have demonstrated that while in times of peace he is inconceivably kind, in times of war he can be uncommonly cruel, a King from whose one hand comes untold blessings, in the shape of delicate dyes, bewitching perfumes, tablets the very essence of sweetness, and, also, what some of you may have unconsciously partaken off at your lunches. I refer to artificial butter. Probably not very many are aware that margarine, which, while mayhap

not a fattening food, is an article which makes food slip down more easily, was, during part of the war one of coals' many bye-products—and, from whose other hand, comes explosives and gasses which are deadly. Coal and Iron are the worlds twin giants. There is, however, another giant looming up, which, in many respects, will be a competitor of King Coal, and it is of this competitor I desire to speak shortly.

As with peoples so with provinces; each has its special endowment. The Westerner may say to the Nova Scotian, as he sweeps proudly his hand over the rolling prairies, and points to the weighty sheaves of golden grain: 'What have you to match that?' With that decision characteristic of her countrymen the Nova Scotian's answer is 'Come and see'. He comes and the spokesman for our province says—as he points to the hills and the vales, the fells and the dells—'You have none of these?' 'No' comes the reply, we have no barren hills nor scarcely fertile vales. What of your hills?

Put your ear to the earth. You say you hear nought. But why? Solely because our hearing is not as good as our eyesight. True, we hear nothing, and yet within these hills and vales, and under the very ground we tread mighty forces for ages have been, are now at work. We speak of the silence of the hills, but are the hills really silent, are the vales wholly still, is the earth underneath us really at peace? No, forces, though unseen, unheard by human ears, are producing, distilling, wonderful things for the people of vision to bring forth for the provinces good.

You have read the words 'The whole creation groaneth and travaileth in pain together . . . until now' A theologian might here interrupt and say: 'These words apply to creatures on the earth and not to things under. Well, no quarrel. To the theologian I would reply, even so, what is to hinder their application to things under the earth. Have not mighty forces, down through the ages, been contending and wrestling in these hills. Aye, heaving, groaning, pressing, crushing, and at the same time producing wonderful things which have been calling, are now loudly calling to us and saying, drag us, dig us, delve us, yes, tear and blast us out, so that we may serve the purposes of our creation—the production of gifts for the children of men. You hear no sound, you feel no earth throbs. Ah, what matter? Where there is motion and commotion there must be sound; and, looking up unto the hills, the Easterner says to the Westerner: 'Your prairies may be grand; our hills, with the vales between, are glorious.'

How bountiful, how wonderful is nature.

Geikie, the geologist tells of two Scottish workmen who made summer holiday by climbing Goat Fell, one of the most romantic and inspiring mountains in Scotland. On reaching the top the two stood, awe struck, gazing around. They were amazed and enrapt at the glorious prospect. There was silence between them for a time. At last one, finding his voice, exclaimed, 'Man, Tam, the works of God are devilish,' the one word that came handy, to express his profound admiration. And no one who has travelled the hills and the valleys of the mineral producing counties of Nova Scotia, having a little knowledge of what these contain, can do other than give vent to his astonishment, though, possibly, in somewhat different, but no more arresting language.

The late geologist, H. S. Pools, expressed the opinion that the site of the present Town of Stellarton, was at one time the bottom of a great bay, and I can well believe that, for at a high point in the Town of Westville, at a higher altitude than Stellarton, I have picked up a petrified oyster and fossils of the mouths of large fish.

Geologists tell us that Springhill, alleged to be one of the highest points in Nova Scotia, was in the far bye gone past a great peat bog. Believing these things who can say other than that the works of God are wondrous.

* * * *

Shale, oil shale, is coals new competitor—and as the years roll on to become more and more so. An enthusiast, not long ago, declared that the shale industry is bound to become the worlds greatest industry. The speaker would hesitate to endorse that opinion, while constrained to say it is bound to become one of the greatest. Certain it is that the industry must play a foremost part in the worlds progress, a larger part possibly, than most of us dream. In any case the subject of, oil from shale, is worthy of the most serious consideration of every well wisher of this, the province of his birth, or, as in the case of the speaker, of his adoption.

I now purpose to ask and, make bold attempt to answer, a few questions.

Has Nova Scotia Oil Shales?

Yes; Oil Shales, and, besides, Oil Coal,

Has she shales of good quality, and of commercial value?

Assuredly.

Has the shales in abundance?

Yes, in quantity that cannot well be estimated.

One Scottish oil shale expert, failing figures, had to fall back on the statement that the ENORMITY of the

(Continued on page 13.)

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MARITIME MINING RECORD.

THE MARITIME MINING RECORD is published the second and fourth Wednesday in each month.

THE RECORD is devoted to the Mining—particularly Coal Mining—Industries of the Maritime Provinces.

Advertising Rates, which are moderate, may be had on application.

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R. DRUMMOND, PUBLISHER.

STELLARTON, N. S.

March 26, 1919

Mr. R. D. ANDERSON ON OIL SHALES.

Commenting on the address of Mr. Drummond on 'Oil from Shales', before the Rotary club, Mr. Anderson of the Mines office, Halifax, who has long taken an interest in Oil Shales, says, in the Morning Chronicle:

Sir:—The Hon. R. Drummond's address on "Nova Scotia's Undeveloped Wealth," in which much was said about oil shales, was very illuminating. Seldom does one hear so much good humor with so much common sense.

The report of the address in your issue of yesterday makes Mr. Drummond say, that the delicate dyes, bewitching perfumes and other sweet things come from iron. Mr. Drummond said that they come from coal. This is a correction that need not be made save for those who might be inclined to say Mr. Drummond should know better.

The address teaches us to bear in mind that there are inexhaustible quantities of oil shale in our Province, that it is of the best quality, and that it will pay to extract the oil from it. Now what are we going to do about it?

From the other sources we get the information that the supply from the oil wells of the world is not meeting the demand now, and will be less able to meet the demand in future. It is now estimated that the horsepower produced by gasoline is double that developed from coal; think then of the menace to the industrial world by a shortage in the production of oil. Canada's production of oil has gone down to almost a negligible quantity, notwithstanding that the Canadian Government offers a bonus of 40 cents a barrel to encourage the search for petroleum.

We will soon be, or are we not now, dependent on foreign countries for our oil supply and half of our source of power? This is a serious question, but what will happen to us when foreign countries can not produce enough oil for export?

Get ready, the lines of decreasing production and increasing demand will soon cross; then the only source from which we can get our supply of oil is from the shales of our own Province.

The price will never go down; the market is assured, it is up to capital to produce the goods."

- Rubs by Rambler. -

Mr. J. H. Thomas, the sane and highly spoken of leader of the British railway men, is one of the few

leaders not afraid to tell his followers wholesome, if not wholly welcome, truths. He lately delivered a notable speech, of which the following is a short extract:

"The war has proved that the conditions under which the men and women of this country work and live are unworthy of the heroism which has been displayed. It is our duty to bring about a change, but there is a right and a wrong way to do it. . . . The only wealth is that which we all produce. . . . If we do not keep that in mind we are going headlong to disaster." While agreeing that the powerful trade union of railwaymen can paralyse the community, Mr. Thomas said that the State is more powerful and more important. "Citizenship has a stronger claim than any sectional interest. We as trade unionists have to keep clearly in mind that we have to make our sectional claims consistent with a part of our duty as citizens to the State."

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There are very many different kinds of remedies suggested for the present unrest among the workers, such as profit sharing, co-operation, semi proprietorship, and so on. So far none of these have met success. The Furness Withy scheme was a pretentious affair, and looked fine on paper, but the employees, after a year or two trial, seemed so apathetic, that the firm was forced to abandon it. The workmen generally are not inclined to take any risks; wages are a sure thing, whereas big profits are uncertain, and dividends in small sums don't appear to them to amount to much. Rather than become 'capitalists' they prefer to remain simply wage earners. They have concluded there is more in it. A United States paper, *Sawards*, has this to say on the lack of response of workers to take shares in a business:

"Quite a commentary upon efforts to interest employes in a company by the offering of stock is afforded by a recent official statement by the U. S. Steel Corporation. Although stock in that company is offered to employes on most favorable terms, which greatly reduce the net cost, after 15 years there are now only 125,000 shares of the stock held by employes, these being distributed among 43,000 men, so that the average holding is less than 3 shares. Furthermore, it is indicated that, as about 50,000 shares are bought by the company annually for sale for employes, the stock is held only about two and one-half years despite the inducements offered for its retention for a period of five years."

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Dr. Jewett, the famous American-Anglo divine, is more than a little disappointed at the outlook for a higher life as the result of the war. He says that Piety and Fraternity are the rock foundation, alike for individuals, and for nations. He goes on to say—and at the same time show his disappointment:

"In these times of strikes and disputes, love is not going about caressing its own hands. It goes among masters and workmen like salt and like light.

"If you look around to-day—and ever since the armistice—would you be persuaded to believe that we are going to reconstruct our life on the double basis of piety and fraternity? Are the British people eagerly and reverently exploring the mind and heart of God, so that they may obtain sufficient vision and light to reconstruct their common life? I, for one, am profoundly disappointed. I did believe that after these

(Continued on page 10.)

NOW READY

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NOVA SCOTIA.

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 CHAPTER IV. Nova Scotia Coal Fields.
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 CHAPTER VI. Coal Trade Expansion.
 CHAPTER VII. Iron Ore. CHAPT. VIII. Gypsum.
 CHAP. IX. Diatom Earth. CHAP. X. Molybdenum.
 CHAPTER XI. Barite. CHAP. XII. Manganese.
 CHAPTER XIII. Tungsten. CHAP. XIV. Silver.
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 CHAP. XVI. Asbestos. CHAP. XVII. Antimony.
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 CHAPTER XXIV. The Four Great Epochs in the Industrial Expansion of the Province.
 CHAPTER XXV. The Coming of Dominion Coal.
 CHAPTER XXVI. The Part Wabana Plays.
 CHAPTER XXVII. The Advent of Dominion Steel.
 CHAP. XXVIII. The Province's Fortunate Escape
 CHAP. XXIX. An Offer Fortunately Unaccepted.
 CHAPTER XXX. Iron Ore Mining
 CHAPTER XXXI. The First Mine Inspector.
 CHAPTER XXXII. The Wonderful Island.
 CHAPTER XXXIII. In the Early Days.
 CHAPTER XXXIV. Early Coal Mining in N. S.
 CHAP. XXXV. Romance in Prospecting and Findings
 CHAPTER XXXVI. Submarine Mining.
 CHAPTERS XXXVII to XLVII, Pages 313 to 368 treat respectively on: By Products of Coal—Vast increase in Mineral Wealth—Quality of N. Scotia Coal—Mine Explosions and Fires—Government Assistance to Mining—Technical College, Mining Schools—Coal Companies of Nova Scotia—New Seams, Stellarton—Nova Scotia Coal Sales, 1811-1917—Staff of Mines Department and Some Production Comparisons.

STILL MORE NOTICES OF THE BOOK.

Favorable, indeed flattering notices are being received of the book issued by the editor of the Mining Record. That youthful modesty which is, as many know, a characteristic of the author, forbids a rehearsal of many of the nice things said. At the same time, that arrogance, also characteristic of youth, impels him not to hide them all in a napkin. Here is a little coincidence. With the same mail came two notices and both from McInnes's, one a former District Superintendent of the Dominion Coal Coy., and now a wholesale coal merchant in Montreal, the other from a highly respected citizen of Port Morien:

"While in Cape Breton two weeks ago I got a copy of your new book. It is very interesting—brings back the old days. The coming generations will find it an accurate story of the periods just passed, when Nova Scotia came into her own as a coal producer and as a pillar in our industrial development."—Mr. A. McInnes.

And this from Daniel McInnes: "I congratulate you on your authorship—the right man in the right place. No other man could write such a history without the knowledge you possess.

And these:

R. McDougald, Westville: . . . All that comes from your pen is always to the point, and within the limits of human knowledge, accurate. I am very glad that you undertook to conserve the acquisitions of a life time of special study and observation in a book. It will no doubt prove helpful to many a Canadian mining student.

John Moffatt, Dominion, C. B.: I have read your book and am convinced that to the great work accomplished by you in the sphere of labor, in the past, you have added another service which will endure for many years, and be often quoted from. The Province of Nova Scotia is indebted to you in many ways, and this well written book adds to that obligation.

This from another C. B. correspondent: "The book made a hit. It has proved itself a success. I have heard not a few complimentary remarks, both regarding the book and the author. I hope the 2nd and the 3rd editions will be called before long.

Thomas Cantley, Chairman of the "Sectia" Board, writes: "I wish to congratulate you on your book. It is certainly creditable, well printed, good clear type, in short, the binding, the size of the volume, and general make-up leave nothing to be desired. Altogether it is a most creditable production, and I have no hesitation in saying that it will be looked on as an authoritative history of the Iron and Coal industry in this Province, the value of which as the years go by will be continually enhanced, and in it you are leaving that which will keep your name alive so long as Nova Scotia is interested in civilization's great basic industry."

Mark Workman, President of the Dominion Steel Corporation writes: "I have not had an opportunity of carefully perusing the book but I feel constrained to say after a preliminary examination that the work appears to be comprehensive in its scope and excellently arranged and the subject, ordinarily technical, is treated in an interesting and readable manner."

R. P. Fraser, Pictou.—"Please send me two more of your books "Minerals and Mining, Nova Scotia", which I want for sending to some mining friends. I think your book a very interesting history of the mines and minerals of Nova Scotia. Your account of the development and expansion of our basic minerals of "Coal and Iron" since the Foord Pit disaster is good and very correct. The farmer may claim he feeds us but where would agriculture be were it not for the implements supplied from the basic minerals."

J. Macgillivray, Receiver and Manager, Inverness Railway & Coal Co.: "I have been reading your book "Minerals and Mining, Nova Scotia", and find it highly interesting and instructive, containing, as it does, much useful information in very readable form."

Henry McArel, Glace Bay.—"Minerals and Mining" duly received. I am much pleased with this interesting book."

A. S. McNeil, District Superintendent, Glace Bay: "I have received a copy of your book. It is very interesting, instructive, and to the point. I congratulate you on the completion of this valuable work and trust it will meet with the appreciation which it deserves."

The Inimitable O'Dell, Glace Bay.—"I have waited until I had quite finished reading your book before seeking a niche in your gallery of immortals."

I can only say that on closing the volume last night I could almost imagine I had written it myself. Higher praise than this I cannot offer. Hoping that this may be your last word on Nova Scotia's chief industries.

Hon. E. H. Armstrong, Commissioner of Mines: "I have no hesitancy in saying that so far as I was able to glance over your book, it was very readable and I enjoyed it very much. Whilst I appreciate it would have entailed a very great deal of extra labor, I regret that an index does not accompany the book. I always miss an index. I think it would have added a great deal to the value of your very interesting book. The pains and care

which you have taken to gather so much reading matter, particularly of local interest, is most praiseworthy. My wonder is that you have had the time to have collected it as well as you have done. However, I have no doubt it will supply a place in our mining literature that will redound to the credit of its author.

Chief Justice, Robt. E. Harris.—"I have been perusing your recent publication, "Minerals and Mining, Nova Scotia," which I have enjoyed very much. I consider it a valuable addition to the literature on that subject."

W. A. Winfield, Supt. Mar. T. & T. Co.—"The reading of "Minerals and Mining" afforded me much pleasure, and a great deal of information, in many cases respecting properties that I was already acquainted with. I shall keep my copy on my shelves for reference purposes, for a knowledge of districts liable to development from mining, as from other industries, is of great use to us in our business, as an aid to forecasting our probable future requirements and development. I trust, as I am sure will be the case, that your volume will have a large circulation, and be the means of directing more capital to the possibilities of the minerals in the province."

A. McDonald, District Supt., Dom. Coal Co'y.—"I am fortunate in having so valuable a book, and wish to say that the province is much richer by having such a work, the production of one who has made mining a life study. In your "comparisons of outputs", it might, possibly, have been well had you stated that so far as the Dominion Coal Company is concerned, 1917 was a one shift year, as against double shift in previous years."

A. A. McKinnon, Ry. Dept., Springhill—"Have read "Minerals and Mining" with much interest and profit. Am greatly impressed with the author's splendid optimism regarding the future development of the mineral resources of Nova Scotia. The book contains a wonderful fund of useful information hitherto hidden from the writer, who will treasure the book on account of its own worth, as well as for former friendly association with its author."

'ONE' FOR "MINERALS AND MINING."

The following has been received from one who was instrumental in the expenditure of a large amount of American capital in the Province some years ago, and shows the necessity of acquainting "outsiders" with the mineral resources of our Province:

BROADWAY, NEW YORK, Jan. 22, 1919.

A day or two since I had the pleasure of receiving from Mr. Robert Fraser a copy of your book, "Minerals and Mining, Nova Scotia". I wish to thank you for having written the book and extend to you my most hearty congratulations upon it. It has already brought about an inquiry among some associates of mine who are interested in the oil business.

For a number of years I have been waiting until the time was opportune to take up the question of the establishment of the oil shale industry of Nova Scotia and I am now going to ask you for such assistance as

you may be able to give me in this direction.

The information that we primarily would like to have is data relating to the Scotch plants that have established the best records in distillation and recovery of by products through shales. We very much desire to get into communication with the engineers who have built these plants with the idea that if we can obtain their services based on the result of plants already designed and erected by them that would give us actual figures of costs and operation, we would feel justified in erecting such a plant in the Provinces.

My personal impression has been that these plants in Scotland have proved not only successful in operation but very remunerative to the capital invested and if we can obtain the actual assurance of the successful operation of such plants the capital is available here for the undertaking.

Trusting that you will be able to assist me in this direction,

Continued from page 7.

terrible and desolating years there would be a more urgent and hungry inclination towards God. I don't see it. I thought we should be dead weary of the old cisterns—broken cisterns which can hold no water—and that we should be turning to the well of salvation. I expected that we should be terribly tired of things, and that we should want more of the Spirit. I expected that God would be greatly worshipped, and that piety would be coming back to her sacred nest. Do you think we are seeking God, and that there is more piety than there was four years ago? I don't find it. I was expecting a more eager and a more passionate fraternity. . . . We see around us grievous wrongs, irritating and humiliating wrongs, which compel men to strike in order to get their wrongs righted. We see also men who have no wrongs at all, who cannot even state their grievances, and who are ready to inflict wrong on others. Because of misunderstandings which ought to have been settled in a day, and would have been so settled under the rule of true fraternity, the life of an entire community has been dislocated.

"My own serious and sober judgment is that the absence of a finer fraternity is due to the absence of a profounder piety. We shall not find one another till we have found God."

The Halifax Herald is, it must be confessed, a many sided paper. For instance, it is agonizing in soul over the churches, and offering prizes for articles giving opinions as to what our churches and ministers of religions should do to bring about a millennium; and at the same time it is showing the utmost interest in bringing about a 'Dempsey or other bout' in Halifax. Just how these brutalizing bouts are going to help uplift humanity, and do what it insinuates, the churches have not done, is not quite clear. I'm 'awfully' afraid that the Herald is more materialistic than religious. I hope not, but if I err the Herald is to blame. It is possible the churches need a poking up, and people might believe that the Herald was anxious to help in the work of renovation, but the people cannot understand how the Herald can forward a reformation by calling in the aid of a boxing evangelist like Jack Dempsey. Of course there will require to be some sort of reform if those, who say they know, speak truly. For instance a Y. M. C. A. worker with the soldiers said lately:

"As it seems about certain that within the next few months the churches of our land will be awakened to the tragic fact that the demobilised men will not for the very most part come to them—unless something of an almost revolutionary character takes place within those churches—it may interest ministers and Church folk generally, who do not yet know, to learn what the men are thinking and discussing. I have to deal with one camp where we have a lively weekly debate, and I have known as many as 400 attend—in fact, the hut has been practically full each night. Here are the subjects:

Has the war proved that Christianity has failed?
 Can democracy achieve its aims without religion?
 Ought there to be an economic boycott of Germany after the war?

Is cursing a necessary part of a soldier's life.
 Are the war aims of Labor satisfactory?
 Will a League of Nations be strong enough to prevent war?

Is democracy more alive to its rights than its responsibilities?

Will the defeat of Germany end militarism?
 Has the war changed our idea of God?

Would a Labour Government be able to deal successfully with the problems of social reconstruction after the war?

Does prayer protect the soldier on the battlefield.
 Would re-union enable the churches to fight evil more effectively?

The voting on the first question was almost unanimous that the churches had failed, but certainly not Christianity.

The voting on the last question was a decided 'yes'.

• • • • •

I have long been of opinion, though I may not have expressed it loudly, that it would be good policy for our provincial coal operators to take the community a little more into their confidence, and try to show the people that their chief objects are not, first to grind down wages, and boost coal prices. Very many people, I believe mistakenly, are of the opinion that the companies are waxing fat over profits. So long as the workers and the public believe that, there will be dispute. The late conference between operators and workmen did good. How would it do to have a conference between the operators and representatives of the general community, where prices could be calmly talked over. There might not then be the readiness to conclude that the operators in every dispute were mostly in the wrong. The public now cannot well advise, in case, say, of a strike, because it does not know which side has more of the right on its side. The following, from the Coal Trade Journal, has a bearing on this point:

"For the past month, the rate of production has been steadily declining. . . . Cullm bank coal, which figured so largely in the investigations, is a drug upon the market. Anthracite and bituminous collieries are closing because nobody wants coal. As might be expected, editorial damnation is visited upon the operators because of this. The anthracite differential upon independent coal has disappeared; in some places, reductions have been made in retail prices; but the increased demand, which, if certain critics were correct, should have followed the lowering of prices and the augmentation of supply, has failed to arrive. Therefore, if we are to believe certain of our public tribunes,

there is a deep laid plot to hold up prices—and this despite the fact that, in the bituminous field, demurrage coal is more difficult to sell than mine shipments. Apparently whatever the coal man does, he should have done just the opposite.

"In the face of this popular belief that the basic industry of the country is endowed with a genius for doing the wrong thing, the failure of the coal man to take the public into his confidence is understandable. Nevertheless it is regrettable. The attempt to present the story of coal fully and frankly should be made with more frequency, even when it is known in advance that the attempt is foredoomed to failure. The trouble is not wholly upon the side of the public. The public, it is true, is wrong in its judgment, biased in its interpretation of the facts, but the facts themselves are not offered freely enough and often enough. The recent advertising announcement quoting the statement of Dr. Garfield with respect to anthracite costs is a case in point. Presumably this advertising copy was financed by the anthracite interests. There was nothing of which to be ashamed in the copy or the facts upon which it was based, but it went before the public cursed with anonymity. It excited suspicion where it should have opened the mind of the reader. It raised questions that it did not answer."



I clip the following from an old country paper. There is food for thought in it. Some, in Canada, are of opinion that the government, during the war, have been a little too lavish of money, have been, for instance, stampeded by the McAdoo action in regard to railway employees, and are, in a measure, responsible for the extravagant wages in some branches of industry. It may be that the government could not help it, and yet, when the time comes, when wages must be lower if the country is to meet competition, the government will have to bear the censure that may fall upon it for prodigality in war times. Here is an opinion from a railway magnate regarding the part played by the British government. I am not going to give any opinion on the point:

"Lord Claud Hamilton, chairman, speaking at the Great Eastern Railway meeting, said the condition of affairs at home, especially as regarded labour, afforded ground for grave concern. "The plain fact is that for the last three years the country has been debauched by Government money, lavishly bestowed, without the least regard to supervision or control. (Hear, hear.) It has had the effect of temporarily perverting the moral sense of those who have been exposed to its influence."

"What has happened during the last nine months? One concession following upon another on the part of the Government—concessions not to reasoned argument, not in the interests of justice and fair play, but to brute force. (Hear, hear.) Brute force in any shape was contrary to the instincts of the British nation. (Applause.) We have disposed of it on the Continent. We are surely not going to allow it, fostered by those who have not risked their lives or suffered the unspeakable miseries of trench life, to raise its noxious head at home. (Hear, hear.) The time is arriving when the Government must take off the velvet gloves which they have worn too long. (Hear, hear.) Adequate wages and shorter hours of labor were all very well in themselves. All must rejoice that they had become possible under the sweeping reform in our fiscal system which must shortly be announced. But un-

Continued on page 13.

Coal Shipments, February, 1919
—DOMINION COAL CO., LTD.
Output and Shipments for February, 1919

	Output	Shipments
Dominion No. 1	30 429	
Dominion No. 2	56 151	
Dominion No. 4	29 070	
Dominion No. 5	7 467	
Dominion No. 6	19 518	
Dominion No. 7	nil	
Dominion No. 9	21 481	
Dominion No. 10	7 748	192 990.
Dominion No. 11	12 106	
Dominion No. 12	14 361	
Dominion No. 14	16 712	
Dominion No. 15	11 843	
Dominion No. 16	13 262	
Dominion No. 21	12 247	
Dominion No. 22	10 481	
	262 876	

Shipments	Feb. 1919	192 990
Shipments	" 1918	203 200
Decrease	" 1919	10 210
Shipments	2 mos. 1919	420 660
"	2 " 1918	436 317
Decrease	2 " 1919	15 657

SPRINGHILL.

Shipments	Feb. 1919	21 274
"	" 1918	25 107
Decrease	" 1919	3 833
Shipments	2 mos. 1919	46 542
"	2 " 1918	51 882
Decrease	2 " 1919	5 340

—NOVA SCOTIA STEEL & COAL CO.—

Shipments	Feb. 1919	22 947
"	" 1918	42 318
Decrease	" 1919	19 371
Shipments	2 mos. 1919	62 043
"	2 " 1918	89 315
Decrease	2 " 1919	27 272

ACADIA COAL CO.

Shipments	Feb. 1919	27 344
"	" 1918	8 815
Increase	" 1919	18 529
Shipments	2 mos. 1919	69 862
"	2 " 1918	33 116
Increase	2 " 1919	36 746

INTERCOLONIAL COAL CO.

Shipments	Feb. 1919	11 287
"	" 1918	13 442
Decrease	" 1919	2 155
Shipments	2 mos. 1919	23 617
"	2 " 1918	28 106
Decrease	2 " 1919	4 489

AROUND THE COLLIERIES.

Mr. Robt. Baxter, Vice-President of the A. M. W., is allowed on all sides to be a reasonable and prudent labor leader. The Record has always been of opinion that if Mr. Baxter would only assent himself there would be a great deal more good result to the society. Bob works and gets there, without guffaw.

The five most hazardous occupations for the three months ending January, are as follows. The figures are for all of Canada: Lumbering 25; Steel plants 27; Building 28; Mining 33, and Railways 69. Before, however, a proper estimate can be made one would require to know the numbers employed in these several trades.

The papers must have been in error when they announced some time ago that the A. M., U. M. W. would ask for legislation creating a new sick benefit society for mine workers, to which the operators would be compelled to pay 60 per cent., and the workers and the government 20 per cent. each. The workers, under a proposed new arrangement, will contribute the largest proportion.

A delegation from Cape Breton lately waited upon the government and placed before it a request, not embodied among those of the A. M. W., though it vitally concerns the interests of the workmen. At the request of the latter, or rather a minority of the Dominion Coal Co.'s employees, and some of the officials of the A. M. W., the Compensation Board refused to give a permit to the Dominion Employers' Relief Fund to carry on business, and so the workers came under the operation of the Compensation Board. The Record, at that time, hinted that the benefits accruing from the Compensation Act might not measure up to the workers' expectations, and it seems as if that has actually occurred. The lack of sick benefits and compensation for accidents, or death from accidents, occurring when the workmen were not engaged in the employes work, has turned out to be weak points in the Compensation Act as compared with the old benefit society, and therefore a new relief society, for payment of indemnities in case of sickness, and non-vocational accidents, is being attempted to be set in operation, the society to be supported primarily by the employees, and in a lesser degree by the employers and the government in something like the following proportion: Workmen a dollar a month; employers twenty-five cents a month, and the government at, say, a half cent per ton on the yearly shipments. Contributions at this rate should build up a society of sufficient financial strength to pay liberal weekly benefits, and indemnities in fatality cases. It is to be hoped the government will give the financial support requested.

An enterprising New Brunswicker, or one^o with a speculative turn, or needing some cash, sent to Halifax, some time ago, a car load of shale from Albert County. Possibly he had read that any old thing the color of coal would sell readily in N. S. Nova Scotians may have, under constraint, burned black rock, but there they evidently drew the line, for there were no purchasers for the N. B. shale, and the railway authorities, for some time, in vain, have been trying to secure a customer, to help cover railway charges; but there are no buyers. The shale burns freely but does not look pretty in a grate, and the super abundance of ash is against it as a domestic fuel.

There have, on several occasions in the past, been slack times in the industry, but the present slackness has features that have no parallel in past times. The slump in trade came, it might almost be said, with lightning rapidity. Less than six months ago coal scarcely could be had for love or money, while to-day it is declared that no coal can be sold. The demand for coal for the C. N. Ry. has ceased, and the steel works at Sydney Mines and Trenton are using, comparatively, very little coal, while industrial concerns are content to order supplies to meet no more than immediate requirements, and yet we hear talk in the press of the government, being asked to adopt measures for increased production. Production will be forthcoming as soon as the demand arises. Some may ask: "Would not there be more demand if prices were reduced?" Possibly, but the operators cannot sell at a less than present price, unless—well we must out with it—cost of production, that is, wages and material, are less than at present. The operators, and can they be blamed, say: "What benefit is there to us in selling at a price that yields no return, if it does not involve loss."

After explosions in the United States, involving much loss of life, it has been suggested, among other things, as a preventive, that firing or shooting, or blasting of the coal, should be done at night, when very few men would be in the pit. The suggestion, where practical, is an excellent one. The Record is pleased to learn that at some of the pits in Cape Breton the system of night blowing of the coal has been adopted. At Dem. No. 4 we learn not a shot is being fired in day shift, and this change has been effected without any loss of output. The men at this colliery went hand in hand with the officials in the inauguration of this system, and it has proven to be a great benefit to both men and management, in removing a great deal of anxiety. This change is a case of men and management working in harmony, in the right direction. Gen'l. Supt. Tonge is much pleased with the re-

sults, as he has carried the change in his mind over for a year. It is said the system will be carried out in other pits, until every mine operated by the Dominion Coal Company will have the coal shot down at night. Men who do the firing at night are paid higher wages than they were paid on day shift. By this night blasting the mine (Dom. No. 4) is in better condition than ever, and the men are not slow in saying so.

been upset. There might be a possibility of increasing their suburban service, but this was the only bright spot that he could see in connection with increased passenger facilities."

SAINT LOUIS FUR EXCHANGE BUYS DIRECT FROM TRAPPER.

Due to certain complaints being brought to the notice of the St. Louis Fur Exchange 7th and Chestnut Streets, St. Louis, Missouri, U. S. A. of unsatisfactory grading of furs as made by some of the advertising fur houses of that market, where in January over ten million dollars worth of furs were sold, they are now also receiving shipments of furs from the trapper direct, and are recognized and registered under license P. B. F. 30 with the U. S. War Trade Board and all the Collectors of Customs, thus insuring free passage of furs when addressed to them with the words, "Raw furs of Canadian Origin" on the package or shipping tag. This advertisement appears on Page 15.

(Continued from page 11.)
less during the shorter hours more work, and that of the best quality, was put in, we should be unable to hold our own in the new and vast trade competition which would shortly arise. We must produce at a not less rate than our competitors, and the quality of our production must, if possible, be superior to theirs."
"Lord Claud Hamilton added that it had been the company's intention, on the basis existing three months ago, so to expedite the repairs and renewals of their engine stock as to permit them to resume during their Easter holidays their pre-war normal service. Unfortunately, owing to the 47 hour week, which had since been conceded by the Government, all their plans had

(Continued from page 6.)

quantity could not be estimated. Another Scottish expert has expressed the opinion that in only two square miles of territory, in the Pictou County coal field, there is more shale than in the whole of the territory in Scotland, where the oil, from shale, industry is being successfully and extensively carried on. A somewhat cautious man is content to say that there is oil shale in Nova Scotia sufficient to supply the Dominion with oil for hundreds of years.

A Scottish Analyst, accompanied by a Scottish Mining Engineer, both of high repute, visited, prior to the war, portions of the Pictou oil shale field. The Analyst, in a valuable report of his work,—I use the word 'valuable' in a sense additional to that generally used when speaking of an address or a philosophical or technical paper—it was valuable in the sense that his report, in conjunction with that of his associate, cost, so I am assured, in the vicinity of \$5,000, and, note well, you are getting it scot free, or, if you will, free from a Scot, something for nothing, which some of you may declare is a thing unrecorded in the annals of Scotland, and which, from hence, will constitute a needed and meritorious precedent. The Analyst to whom I was referring when the interlarded sentence struck me, in his report, among other things, says: "We resolved on taking advantage of the generous offer of the Canadian government (he meant Provincial government) to aid us in our investigation, who sent us a drill which we employed on a seam on the adjoining river side. The core from the core hole reads as follows:

- (1) Soil and Gravel 5 ft. 6 in
 - (2) Fire Clay 2 ft.
 - (3) Shale 33 ft. 6 in.
 - Cannel 5 ft. 3 in.
 - (5) Shale 15 ft.; a thickness of nearly 60 feet of Shale.
- Laboratory tests of the core give the following results:

No. 3. Oil per ton, 32½ galls.
No. 4. Oil per ton, 30½ galls., and 35½ lbs. of Sulphate of Ammonia. The oil yields are independent of the lighter and more valuable products. . . . which are not recoverable in laboratory tests"
Curly shales appear in the outcrops. One sample of these, I have tested, yielding nearly 64 gallons of oil to the ton.

Laboratory tests of a number of samples give the following results:

Nos.	7	9	10	12	14
Oil in gallons	60 1-2	61 1-2	59	38 1-4	30 1-2
Ammonia in lbs.	30 1-2	30 1-2	30	71 1-2	35 1-2

The numbers intervening omitted as the samples were from another than Pictou County.
You will notice that No. 12, with 38 1-4 gallons of oil, and 71 1-2 lbs. of Ammonia, is of most remarkably high quality and, consequently, very valuable.

A friend of the speaker sent lately a couple of samples of weathered shales to a noted firm of Analysts in the United States. The return from one of the samples was 17 gallons of oil and 35 lbs. of Ammonia. A very fair return, in my opinion, seeing the shale had been weathered long before Pictou was inhabited by a white man.

Our oil shales are richer than those of Scotland, and, so far as yield is concerned, comparable with any of the shale of any industrial country.

A specialist from Colorado, where, at the present time, great efforts are being put forth to establish the oil shale industry, reported, on two samples of stuff that had been sent him, on the mere presumption that

they were oil shales, that they were not as good as Colorado shales, and that nothing less than 40 gallons of oil, and 40 lbs. of Sulphate of Ammonia, to the ton, would induce American capitalists to invest in Nova Scotia shale lands, or oil shale industries. Well, then, Nova Scotia can meet his stated, or any other American, demand, in these two important requirements. Nova Scotia has, in the corner of one county alone, hundreds of millions of tons of shale, giving an average of 45 to over 60 gallons per ton. And she has an oil coal, the Stellarite, which yields, in the middle part of the seam, 126 gallons. and in the bottom part, or bench, 63 gallons to the ton, an average of 94 1-2 gallons. The United States has no known oil coal to match that.

Commerce, the world over, at the present time, demands of oil shale two principal products: first, that it will yield oil, and second, that from it can be produced Sulphate of Ammonia. Nova Scotia shale can not only meet these, but other more or less important requirements.

Is a largely, oil bearing shale required? Then Nova Scotia offers the Stellarite and the Curly shales, and other shales as well, with a minimum of 20 gallons, and a maximum of 126 gallons to the ton.

Is a shale, a large yielder of Sulphate of Ammonia, required? Then we can offer one which, by laboratory test, shows 70 lbs. of Ammonia, and more, to the ton. The expert from across the line asks for a shale yielding 40 gallons oil, and 40 lbs. Ammonia and from the same seam. Nova Scotia can meet his requirements at any turn, or rather can more than meet them—in the main. The oil, from ordinary shale, as yet tested, may fall two gallons short, but then it is no less than 30 pounds better, than the requirement in Ammonia, which makes it a shale, in every way, greatly superior to a forty and forty shale, for at the present time Sulphate of Ammonia, is in greatest demand and sells at, say, six cents a pound.

Further, as to quantity: In order to test the shale, a bore hole, 670 feet deep, was sunk on the East side of the East River, Pictou County. In this comparatively short distance no fewer than 351 feet of shales were bored through. Not all these shales, possibly, are oil bearing. The Analyst or Engineer may have been in doubt, as he did not label all of the divisions of the shales as 'oil bearing', but from 584 to 670 feet, a distance of 92 feet, is described as oil bearing. The boring was stopped after this 92 feet had been gone through, presumably from the belief that sufficient demonstration, as to quantity, had been made.

Now for the main point, which is: Will it pay?

My answer is in the form of a question: 'Why should it not?' In Scotland the industry has been in operation for over fifty years. In its last annual review of Scottish industries, referring to the shale industry, the Glasgow Herald says that, "after a hazardous voyage, the industry is now in tranquil waters." There are a half dozen plants in Scotland, giving employment to 10,000 workmen. The returns from the three chief of these are as follows: PUMPHRESON, lowest dividend in twelve years, seven and one-half per cent., highest fifty per cent.; average for twelve years, twenty-five per cent.; capital \$1,650,000. OAKBANK, lowest seven and one-half, highest fifteen per cent. (five years in succession), average eleven years, twelve per cent., capital \$1,500,000. BROXBURN, lowest seven and one-half, highest twenty per cent., average eleven years, fourteen per cent., capital \$1,675,000. These figures do not include 1917 and 1918. If the industry is in tranquil waters now, it must be assumed that profits are adequate.

The report of the Scottish expert is that, in Nova Scotia, the industry should yield a profit of \$8,000 a ton net, at war prices. He figures on a plant retorting a thousand tons of shale a day, and costing, to erect, \$900,000. At pre war prices he figures the profits at \$4,00 net a ton. I am willing to cut the profit in two and place it at \$2,00 per ton, and begin with a plant to retort 400 tons a day, and the working days in a year at 300. Four hundred multiplied by three hundred, gives a yearly tonnage of 120,000 tons, which, at a profit of \$2,00 a ton, gives \$240,000. Allowing that the plant, of this capacity, costs \$600,000, the profit is forty per cent. We are told that a plant to retort 1,000 tons a day will cost from \$900,000 up, for a full plant. Let us put the cost at \$1,200,000, the yearly tonnage being 300,000. The profit, then, is \$600,000 or 50 per cent. I cannot entertain the belief that these two Scottish experts would risk injuring their reputation by giving other than an honest opinion on profits, yet, once more cutting them in two, we have, in the case of the smaller plant, twenty per cent., and in the case of the larger of twenty-five per cent. net profit, which even a niggardly fellow might be compelled to own was 'not so bad'.

Fifty odd years ago, works for the distillation, of oil from shales, had been planned, and were on the point of being erected at New Glasgow, when announcement of the discovery of oil wells in the U. S. stopped the project. The flow of oil from wells is now rapidly declining, and large expenditures in boring for new wells, of late years, have proved very unsatisfactory, therefore, it would appear, the day of shale has come. The question is, and it is of momentous importance, 'Will Nova Scotia rise to her immeasurable opportunity or will she, leave the exploitation of her oil shales, as she did in the case of her coal industry, in every instance, save one, to British and 'outside' capitalists?

It has been said that the three sources of Britains supremacy are its possession of rich mineral deposits, geographical position, and the genuine untiring energy of her people. Nova Scotia possesses the first two, will she from now make plain demonstration that she can lay just claim to the third?

As a postscript, let me add that while reference has been made to Saccharine and Margarine, and while both were very largely used in Britain and other countries during the war, I do not think that, in normal times, either will be sought after as a bye-product of bituminous coal and shale, for two reasons, chiefly, first the high cost of production, and second, the lack of food value.

The Veteran.

Notice.

As we have had many copies returned, wrongly addressed or for other reasons, we would request subscribers who have not been receiving their copies regularly to notify us immediately so that their names may be relisted.

Business Office
38 St. Antoine Street,
MONTREAL.

The Veteran.

Radium ore has been discovered on a private estate at Buckfastleigh, in Devon. Analysis shows the ore to be thirteen times as productive of radium as that which is now being imported into England from America.

Calvin Austin, president of the Eastern Steamship Lines, is explaining to the Marine Public Utilities

Commission, why service along the Maine coast had been reduced, said that the losses on the Boston and Bangor Division in 1918 amounted to \$198,000. Receipts of the Eastern Lines as a whole were \$1,600,000 less in 1918 than in 1917. In giving causes of the condition described, Mr. Austin said that his company had been paying from \$10 to \$13 a ton for coal, or nearly three times what it paid a few years ago. But coal is only one among the factors in increased costs. Wages have increased 200 per cent. Captains who formerly received \$125 a month now get \$212. Stevedores were formerly paid 30 cents an hour. Now the man who trundles the truck gets 60 cents an hour for an eight hour day, and, if he works ten hours his pay is \$7.20—Sawards.

A. & W MacKINLAY,

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Rule and Print Special Blank Forms for Mining and other Industrial Corporations. BLANK BOOKS ruled to pattern and made in any Style of BINDING.

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135 to 137 GRANVILLE STREET.

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FAIR GRADING

The Rules and ethics of the exchange do not permit of sending out alluring price-lists, yet we give you an exact and expert grading and pay you at a rate of five to twenty-five cents more on the dollar than the average advertising fur company as we cut out all middle-man's profit in dealing direct with you.

ST. LOUIS FUR EXCHANGE, 7th. & Chestnut, St. Louis, Mo., U. S. A.



Synopsis of Coal Mines Regulations.

Coal mining rights of the Dominion, in Manitoba, Saskatchewan and Alberta, the Yukon Territory, the North-West Territories and in a portion of the province of British Columbia, may be leased for a term of twenty-one years, renewable for a further term of 21 years at an annual rental of \$1 an acre. Not more than 2500 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 sub-divisions 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.

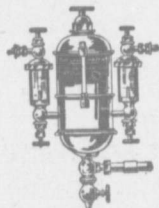
The lease will include the coal mining rights only, rescinded by Chap. 27 of 4-5 George V. assented to 12th June, 1914.

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,
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- 2 The Coal Fields and Coal Industry of Eastern Canada, by Francis W. Gray.
- 3 The Thin Coals of Eastern Canada, by J. F. K. Brown.
- 4 Annual Mineral Production Reports, by J. McLeish, B. A.
- 5 Analyses of Canadian Fuels, Parts I to V, by E. Stansfield, M. Sc., and J. H. H. Nicolls, M. Sc.

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Geological Survey.

Recent Publications:

- Summary Report. The annual Summary Report of the Geological Survey is now published in parts. Applicants should, therefore, state what particular geologist's report is required, or what subjects they are interested in.
- MEMOIR 20. Gold fields of Nova Scotia, by Wyt Malcolm.
- MEMOIR 44. Clay and shale deposits of New Brunswick, by J. Keele.
- MEMOIR 59. Coal fields and coal resources of Canada, by D. B. Dowling.
- MEMOIR 60. Arisaig-Antigonish district of Nova Scotia, by M. Y. Williams.
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