any 'A' west dipping seams (Scott's) near Westville p. 11.
as prior to 1858 conveyed minerals to grantee p. 12.

MARITIME MINING RECORD.

E. R. Faribault,
Geological Survey

April 14. 1920

INVERNESS RY. & COAL CO'Y.

Time Table No. 36, Taking effect 12.01 June 1st, 1919.

SOUTHBOUND Superior Dir.	STATIONS	NORTHBOUN Inferior Dir.
436		437
A M		P M
10 40	POINT TUPPER	3 40
10 30	INVERNESS JCT.	3 45
10 14	PORT HAWKESBURY	3 50
9 57		
9 52	PORT HASTINGS	4 03
9 42		4 08
9 29	TROY	4 20
9 12	ORESGNISH	4 33
8 58	GRAIGMORE	4 45
8 40	JUDIQUE	00
	MARYVILLE	18
8 35		28
	PORT HOOD	5 35
8 05	GLENCOE	6 45
7 59	MABOU	6 11
7 49	GLENDYRE	6 35
7 15	BLACK RIVER	
7 03	STRATHLORN	6 55
6 45	INVERNESS	7 05
A M		P M

MARITIME MINING RECORD

Vol. 22 Stellarton, N. S., April 14th., 1920 No. 19

MODES OF WORKING COAL

Q. 1. Describe fully how you would sink a shaft for the first 50 feet through sandy soil, with reference to timbering, pumps, and surface arrangements?

A. In sinking a shaft in this case, the shaft would need to be started at a much larger size than the size required when finished. Piles are driven down in the earth in a circular form, if the shaft is to be a circular shaft, the piles being first bevelled so as to admit of their coming close together. The sinking is then done inside the piles, and continued towards their bottom, with cribs put in to hold the piles in their place. At or near the bottom of the first set of piles another set are driven downward through the soil, as in the first case, and the sinking is done inside the second set of piles, as in the first set. Cribbing is again put in and another set of piles driven downward again. This plan is followed until the fifty feet (or as the case may be) are passed. Afterwards a starting place is fixed at the rock, and the permanent walling of the shaft is commenced and built upwards to the top. Due allowance must be made in size at the surface for the narrowing which takes place as set after set of piles is used. The walling or lining of the shaft for the finish is well packed behind with clay as the work proceeds upward. The permanent walling of the shaft may be done with stone, or with brick, or with wooden cribs and backing deals.

With regard to the pumps in this case, if pumps are required and not a very unusual quantity of water to contend with, which might naturally be expected to be the case for a depth of fifty feet, a small pump worked by a horse may suit the purpose, or in some cases the pumping would have to be done by steam power. For this depth and under these circumstances, the pumping would have to be supported chiefly from the surface. The surface arrangements in this case need be only of an ordinary nature, not calling for any extraordinary work.

2. Q. What size of pillars would you have at depths of 200, 500, and 1000 feet, and what width would you make your boards? Give your reasons.

A. The size of pillars is a matter depending on a number of circumstances, the nature of the roof and floor having to be very much taken into consideration, as well as the nature of the whole overlying strata. At a depth of 200 feet=33 fathoms, I would consider pillars from 5 yds. to 6 yds. about sufficient with boards 6 yds. wide. At 500 feet=83 fathoms, I would have pillars about one fourth wider, and at 1000 ft. depth=166 fathoms, I would have pillars at least ten or twelve yards wide. In considering the size of pillars there is the consideration to be looked into of the drawing of these pillars afterwards; and by leaving the pillars large we are by no means liable to lose any considerable quantity of coal, as in drawing the pillars, we are in a position with good large pillars to draw them successfully.

The size of shaft pillars is a matter deserving much consideration, because if shaft pillars are not of sufficient size there is considerable danger of losing the shaft, and it would seem very poor economy to limit the size of shaft pillars and then endanger the safety of the whole shaft. In the case of one shaft I would have the total space occupied by shaft pillars in a square form and measuring on its side at least as much as the shaft is in depth. If the other shaft was close at hand a proper allowance for the two should be made.

3. Q. What do you know about underground haulage, especially along levels?

A. Underground haulage is perhaps best done with horses, except in cases where the workings are at a very long distance from the shaft. In that case it pays to have the hauling done by an engine, even on a level. The roadway should dip towards the shaft, say about 1 in 80 or 100. The hauling is best done on metal roads with the most suitable size tub for the size of the travelling road and output of the mine.

4. Q. Under what circumstances would you be prepared to advise robbing the pillars in flat and pitching seams?

A. I would advise that robbing pillars should not be commenced until the mining area has been pretty well worked out by boards and pillars. When this is done the pillars may be drawn to as full extent as circumstances will permit, and the work can be proceeded with from the outer limits of the mine back towards the shaft. This method admits of a convenient way of managing the ventilation. But the mine may not be considered as a whole, but as sections, and the pillar drawing may be resorted to with that consideration in view. In pitching seams this method would suit, also, only with the limitation that in two directions chiefly could the work mainly proceed.

5. Q. In driving levels in a flat seam you meet with a down throw fault of 18 feet, how would you proceed to regain the coal?

A. In driving in a flat seam, if a down throw fault of 18 feet is met, I would start a drift back on the level and at a suitable point so that by a convenient grade of dip I would reach the coal at its new level.

(Continued on page 14.)

MARITIME MINING RECORD.

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STELLARTON, N. S. April 14, 1920

SALT, SHALE AND SODIUM.

Within the past few weeks there has appeared in a Halifax daily, much interesting correspondence over the Cameron Act of 1919—"Cameron" so called. The two chief disputants are Jennison of Truro, for the defendant—in this case the Department of Mines—and Milner of Amherst, for the prosecutors, in this instance certain landowners in and around Malagash, Cumberland County. In the Record's opinion the layman- Jennison—has the better of the argument over the lawyer Milner. The writer is willing to admit that—he himself being a layman—his judgment may be swayed by the subconscious bias, but the admission is a mere possibility. The lawyer, in one of his letter, declares that the Act is confiscatory and was passed in the interests of the few, as against the many. To this allegation we take emphatic objection. The Act favors the many as against the few—the few farmers who hold the land overlying the salt and allied minerals, notably potash. If the Act be confiscatory and we are content meantime to admit it may be, then the confiscation being in the public interest can well be justified. The present landowners have been in possession for scores of years. The salt was there as was the potash when they received their land grants. Why then did not one of them in all these years seek to develop this and other minerals. Several reasons may be given. They valued their lands not for any mineral they might contain, but for agricultural purposes solely. And this was the case in regard to land grants all over the province. We challenge Lawyer Milner, or any other person, to name a half dozen farmers out of the possible fifty thousand who actively entered into the exploitation of minerals contained in their lands, beyond those visible to the eye. As a rule the farmers acted on the axiom:—"Let the shoemaker stick to his last." Mining in Nova Scotia has made farming and well the tillers of the soil know, they were not among the chief makers.

The public are indebted to Mr. Jennison for having called attention to the wording of the grants made prior to 1858. Readers will find the "reservations" in the portion of his letter on another column. The writer has known for long that there were grants of various kinds, and wondered how there should be reservation in some cases and not in others. It is now plain why these exist. The old governments from 1826 to 1886 were as ignorant, as to the worth of minerals, as were those receiving grants. Only three or four minerals were known to our forbears, as being worth bothering with. The old governments placed no value on potash, or tungsten or magnesite, et cetera, et cetera and therefore in comitting the reservations concluded they were doing no injury to the province.

In calling attention to the blundering Act of 1858, Mr. Jennison is accused of an attempt to tarnish the reputation of Tupper, Howe, Archibald and others. Were we to say that neither Howe nor Archibald nor many others knew of aeroplanes or wireless telegraphy or telephony, would it be casting a slur on their memories? Not at all. And if they in 1858 knew nothing as to the value of certain minerals, beyond those they reserved, is it contemptious to say so? They can be forgiven for the Act of 1858, for if they sinned in passing it they did so ignorantly and in unbelief as to the diversified minerals with which nature had endowned the province. The Cameron Act is merely an attempt to restore to the people of Nova Scotia—as a whole—what formerly was theirs, and ignorantly thrown away.

AN APPEAL TO LABOR

APPLICABLE TO NOVA SCOTIA.

The following is from an article in the Glasgow Herald contributed by G. N. Barnes, laborite leader and Member of Parliament. Mr. Barnes is no extremist; he has too much sense for that; he is not a red as are some leaders nearer hand, that could be named. It is a pity that articles, such as this, have little place in Nova Scotia newspapers. Nothing but what is flambuoyant, seemingly, is deemed worthy of a prominent place in not a few of our provincial press, more's the pity, aye and the shame:—

. . . . . Here in Great Britain we suffer in minor degree. Four years of war dislocated productive activities and we have not as yet been able to reconstruct industrial life on a Peace footing. Prices, although lower than in any of the belligerent countries, are still more than 100 per cent. above pre-war level. And perhaps the worst of all results of the war is the mental unbalance which has followed and which is so prevalent among us. Some people seem to see red. Instead of helping they hinder. They create distrust and excite envy. They cause stoppage of work when there should be wholehearted co-operation in the fullest possible production.

I am no defender of, or apologist for, the existing industrial system in our country. I believe that the position of Labour in industry must in future

be one of partnership, instead of servitude, and that capital must function in the main in such a way as to subserve the interests of the community, and not primarily in such a way as to gether to itself surplus value.

But this is no time for demonstration of fundamental shortcomings; it is a time for making the best use of what we have got. And, after all, our industrial system is not a machine to be tampered with and experimented upon with impunity. It is a growth of ages, with roots deep down in history, and it is inter-dependent and interlaced with world conditions. It can be altered and transformed only by a co-operative spirit and a social sense on the part of those who operate it.

In the light of these considerations what should be the attitude of Labour leaders in industrial reconstruction? Clearly that of patient and suggestive helpfulness. Workers may, of course, point to profiteering and plead that a bad example has been set them by those who ought to have known and done better. But two blacks don't make a white, and, besides, if all profiteers were locked up, it would not make much difference to anybody else.

I should like to think that Labour was doing its share in the re-building of the world, but it is a melancholy reflection that in the year 1919 there were in this country more working days lost by industrial disputes than in any previous year of our history. In the year before the war five million working days were so lost, and before the end of last year there was a loss of nearly five times that number for 1919. These stoppages are bad enough as affecting the areas and the activities of the trades immediately concerned, but the effect does not stope there. Stoppage of one trade means stoppage of other trades.

I visited a Labour Exchange last week on the pay day. Some 4500 men were being paid the unemployment donation. Most of them were strong, healthy-looking men in the prime of life, and most of them had, of course, served in the war. Yet there they were, willing to work and unable to get it. I was told by the manager that many of them were workless because of the moulders' strike, which had held up engineering and other trades and caused widespread unemployment.. Many of them might have gone into the engineering workshops but for the fact that the A.S.E. members had refused to ratify a plan for their training. I was told further, what one might expect, that the men were getting demoralised by the lack of work.

There has been, and there is still much outcry about unemployment. Protest meetings are frequently held and the Government is denounced in unmeasured terms for the lack of provision of work. But the Government is powerless while it is thwarted by those immediately concerned. As a matter of fact, the Government have done more for unemployment and for the help of the unemployed than any Government ever did before, by creating the necessary conditions for absorption of Labour, and also by payment of donation to those still unprovided for by work. I wish Labour men and women could realise how much they could help—how much the matter is really in their own hands.

PAISLEY AND THE LABOR PARTY

The following is an extract frim a speech delivered lately by Bonar Law, at a Unionist function held in Glasgow:—

Then Mr. Asquith was returned by Conservative votes which were given for a reason not to be regretted—that the electors are beginning to realise that the programme of the Labour party is a serious danger to this country. ((Hear, hear.) I am inclined to think that the success of the Labour party at the by-elections has reached its zenith. (Cheers.) The war has left economic conditions which no Government—if it were a Government of archangels or archfiends—could prevent, and people naturally blame the Government of the time for everything they do not like. Therefore, at the by-elections Labour candidates got an immense amount of support which would not have been given them had it been believed for a moment that the vote meant putting in power the Labor party. (Hear, hear.) The last three by-elections show a complete change in the outlook, and what happened at Paisley, at the Wrekin, and Ashton, I think, is going to be the position in the future.

Mr. Winston Churchill got some pretty severe criticisms from some quarters because he said the Labour party was not fit to govern. I am not in the least afraid that Labour will not be fit to govern by the time they have got the majority to enable them to govern. (Laughter and cheers.) If any of you are sorry for us and think the members of the Government are worrying about the by-elections, I assure you that your sympathy is misplaced. (Laughter.)

I have not talked about this with Mr. Lloyd George, but I say for him quite as strongly as for myself that we have a big and very difficult task before us. The King's Government must be carried on. We will do our best as long as we believe that we have the support of the majority of the people of this country. (Cheers.) I believe we have that support today, that we shall continue to have it, and that if to-morrow we appealed to the people of this country the answer would be—not by the same majority; it is too big—"We wish the present Government to continue its task." (Cheers.) When the history of the final phase of the war and the years since the war is told this Government will be considered as not undeserving of the good opinion of their countrymen. (Loud cheers.)

A BIG HOLD-UP

A least 12,000 people desirous of going to Australia and New Zealand are held up in Britain at present owing to the scarcity of shipping. The vessels on which they proposed to sail are either being held up through congestion at the docks, or used as larders!

Rubs by Rambler.

The Trades Union Congress which met in London two or three weeks ago, is declared to have set an example to the world by its firm refusal of direct action as a means of forcing the British government to nationalize the coal mines. The Congress voted down the general strike by a majority of 2,820,000 in card votes. The miners who had 650,000 votes in the Congress formed the chief part of the minority in each division. With them went the engineers, who have 280,000 votes, and a few smaller unions. One of the ablest speeches was made by Mr. J. H. Thomas, who warned the Congress against a policy of defying the Constitution. Political action, he said, has not failed; it has never yet been fully tried. The one sane course is to use intelligently the power afforded by the Constitution—the most democratic in the world. Mr. Tom Shaw, M.P., pointed out that even in the miners' ranks there is a huge majority against direct action. Opposing Mr. Frank Hodges, who had spoken passionate words in denunciation of Parliamentary methods, Mr. Shaw said: "The tide is not flowing towards Mr. Hodges' policy. The people themselves are against it. The only way to success is by good, hard, strenuous work, patient and insistent."

Mr. Clynes and Mr. J. H. Thomas made notable speeches. The former reminded the Congress that the Prime Minister would welcome "direct action." You give him a general strike, and he will give you a general election, in which the country would turn against you." Recent by-elections have proved that while a large number of people are ready to accept the nationalisation of mines, they resent the method which has been threatened to secure it. Mr. Clynes dwelt on the difficulties that would confront a Labour Government if a dissatisfied minority were to take the law into their own hands. If the principle of direct action were accepted, each section would feel itself at liberty to revolt in turn as each section thought itself wronged by the Government of the day. "That is not a state of things which a Labour Government could contemplate. A Labour Government, in its first few years at least, will find itself beset with all manner of demands, which perhaps it will be impossible to meet. Will any section of the working class then be entitled to assail the Labour Government by the means which it is suggested should be used against the present Government?"

. . . . . The London Times labor correspondent referring to the British miners demand for increased wages says that if the government concedes to it that it would mean a total addition to the wages bill of the mines of about £40,000,000 a year. The miners, he says, propose to raise the wages bill to within £10,000,000 of the entire proceeds of the sale of coal. "Even if the mines were nationalised without compensation it would be necessary to add at least 2s. 9d. a ton to the price of coal, for the amount of coal on which any increase could be applied is only 152,000,000 tons. If royalties and profits continue to be paid on the present limited scale the £40,000,000 now demanded by the men would entail an addition of something like 4s. a ton to the price of coal."

The present demand, adds this expert writer, is clearly intended to be part of a policy of "indirect action" to bring about nationalisation by making the continuance of the industry under the present ownership unprofitable.

• • • •

Mr. J. H. Thomas, M.P., who expresses sane views, when speaking on topics not expressly confined to railway men, stated at a meeting he addressed lately in England, "that the system of obtaining more wages for one section, and artificially raising the cost of living for all, would prove in the end disastrous to the working classes, and the country as a whole." This is a reasonable statement which should be taken to heart by labor leaders in Nova Scotia, especially the miners' leaders, whose only duty, as they make it appear, is to be continually urging a demand for increased wages. Can anybody point out what else they have put forward on behalf of the rank and file than the matter of wages? Can any one point to a public utterance, of any one of the leaders, urging upon their followers the supreme necessity of increased production or of lessened absenteeism? And why have not any of the conciliation Boards given official recognition to this important point by giving figures that may be looked upon as authoritative.

• • • •

There was, for a time, much controversy, by correspondents of the Evening News, on the merits or demerits of prohibition. Of course the disputants were bound to buttress their arguments by quotations from the Bible. It is said that the devil can quote scripture and make the wrong appear the better reason, and one of the correspondents who, if he did not say, in so many words,, that he was a saint, left folk to infer that he thought he was, acted not a saintly but a devil's part. This controversialist was not in touch with the times, and though he claimed to be a saint he could not, or cannot be a Russelite, for did not the Great Teacher send forth his disciples ordering them to take with them neither staff nor scrip or wallet. Whereas Pastor Russell thought money an essential to successful propaganda. However that only by the way. I am not going into the controversy. I merely wish to point out that the inuendo in the signature of one of the disputants "Timothy," leads to the assumption that the non de plume was selected to convey a hint to any prohibitionist that would quote scripture. Another correspondent is less adroit and bluntly quotes what Paul is alleged to have written to Timothy regarding what would be beneficial to a particular part of his anatomy. "Bible student," is not, I fear, much of a Bible student otherwise he would not have quoted the passage

Continued on page 11.

AROUND THE COLLIERIES.

From No. 9 to No. 10 landing of Dom. 14 the track has been relaid with 60 lb. rails, also the roof along this distance with eighty pound rails, instead of booms.

All the horses have been taken out of No. 9, west level Dom. No. 14, the work being now done by a main and tail rope engine, 6 x 8 installed for the purpose.

The No. 10 east landing of Dom. No. 14 is at present being laid and made ready for hauling coal, but with the heavy rock roof, requiring much brushing and timbering, it will take some time yet to complete the work.

The new wash house at Dom. No. 14, New Waterford, is giving much satisfaction and is greatly appreciated by the men using it. If it be true that "cleanliness is next to godliness" then the Dom. No. 14 workmen are now next to that condition.

The recent changes at the Dominion collieries, whereby blasting of coal has to be all done by night, is one of the necessities of deep mining, but must be done in the interests of all mine workers. The change has had its effect on the output, but the mine superintendent who puts safety first, in first place, is wise and has the support of all workingmen.

A large main and tail engine, size 10 x 12, is being placed in east landing to haul the coal from the boundary, or the inside end of level, of Dom. No. 14. The present engine is capable of hauling a distance of only 2800 feet, so that over the distance of 4,000 feet two systems of haulage, horses and tail ropes, are used. Excepting one horse hauling from the face, the system will be wholly rope haulage.

Several years ago—in the late Hugh Fletcher's time—a group of enthusiasts came to the conclusion that coal was to be found at a point in Cumberland County where it had not previously been sought for. This group of explorers were not easily daunted, and one failure did not discourage them, and they persisted. When one bore hole failed they tried another, and another, until their courage or their cash failed. It is now said that some of the old group have had a revival of courage and additions to their revenues, and will try again. One bore hole, if we remember rightly, attained a depth of two thousand feet. It is said they will either sink the old hole a thousand feet deeper, or bore deep in another direction. The Record is bound to pray for success, to every similar heroic effort, for we believe there is much yet to learn of the geology of Nova Scotia.

Some scribbler from Dom. No. 6 colliery seems to take delight in keeping the local newspapers posted on the many runaway trips which occur in the slopes of that mine.

From the No. 6 landing of Dom. No. 6 colliery to the surface, the main track of the deep is being relaid with heavy rails and a permanent road bed laid down.

The new haulage in No. 6 west of Dom. No. 15, shows originality in its installation. To save time and money in removing the centre props of the level, the rope has been made to run on the side of a pit box fitted for the purpose. It is giving good results and working freely without more than ordinary friction.

The air courses of Dom. No. 14 colliery are being brushed, widened, retimbered and repaired from the fan shaft down; permanent stoppings of stone and cement are being built. Where good mine stone can be procured stoppings of this material, faced with mortar, are being put in. This work begun about three months ago is about completed to No. 6 landing. Over casts will be built over Nos. 7, 8 and 9 levels on both sides of the slope. When completed the air current instead of travelling downwards along the working faces, will travel upwards. This will make a great improvement in the ventilation, giving the maximum of fresh air, where most needed by the workmen, and at the same time carrying all noxious gases over the shortest possible distance.

Did not a miners' leader, some time ago, insult mayhap inadvertently, the miners as a class when he depicted them coming from work with tottering step and abject look, etc. The Record has always maintained that the miners of Nova Scotia are as healthy, as well "set up" as any class of workers in the land. The miners in Nova Scotia are comparable with the miners of any other land, and the British miner is no slouch. The Medical Board who examined men of military age from Nov., 1917 to Dec., 1918, have issued a comprehensive report. An analysis of the particulars relating to men of different occupations in Yorkshire revealed that the best physical specimens were agriculturists and miners. Curiously, tailors who people think have the easiest kind of work, are at the bottom of the list. Barbers are very unhealthy, and the report calls for immediate enquiry into the extent to which infection may be conveyed in barber shops. These days of Gillette safety—and others equally good—razors there is not the same necessity to go to a barber shop as formerly. A home shave need not cost more than two cents, soap included, and then, best of all, there is no fear of infection.

AROUND THE COLLIERIES

The small engine 6 x 8, now on No. 8 east of No. 14 colliery, will be placed on No. 8 west, thereby releasing six horses for other places, thus entirely eliminating horses. In this section pillars are being successfully drawn, the first work of the kind in this colliery.

In last issue of the Mining Record reference was made to the alleged remarkable find of new coal seams near the Westville station. It seems that in the correspondence column of the Evening News there was a paragraph—which the writer of this overlooked—hinting, presumably, that the Record representative had been "guyed." At least that is inferred from a letter in the News of the 30th ult., in which Mr. Cameron—the applicant for the right of search—says the Record man was mistaken as to the language Mr. Cameron used in speaking of the dip of the new seams being westerly. If there was any mistake it certainly was not on the Record's part, as may be gleaned from the following:— Happening into the Mines Office, when Mr. Cameron was there, a member of the Mines Office staff beckoned to the writer to come over, and said, on his doing so, "Listen to this." The information was so astounding that the writer gently questioned its veracity; said a seam there could not be dipping westerly, as in Tommy Lowther's time a pit had been sunk on the other side of what, in these days, was boggy land, and coal encountered which was pronounced the Scott seam turned soft. The three were joined by another member of the staff who, looking at the writer, asked, "Another coal basin?" To which the writer replied, "or a 'fold' "—not field as erroneously printed in the Record. Mr. Cameron was positive as to the value of his finds. The whole thing was so astounding that the writer called the attention of the Deputy Commissioner to it. This he did by writing to the Deputy Inspector for the district, who replied saying that no pit 118 feet deep had been sunk, that the dip was easterly and that it might be one of the known seams, possibly the "Scott," thus corroborating the writer's opinion. When the pit was sunk, say fifty years ago, and the "Scott" pit seam struck, another trial pit was sunk some distance northerly from the Black Diamond slope, and again what Lowther termed soft coal was struck, though there was a difference of opinion as to its softness. Lowther's opinion carried and boring and sinking operations stopped. This pit also was thought to be a continuation of the Scott seam. No one, the writer assumes, would be other than joyous could it be demonstrated that seams could be found near Westville dipping westerly and we sincerely wish Mr. Cameron success in discovering seams in the vicinity that have hitherto lain dormant.

One thing the "wage agreement" in Cape Breton has succeeded in doing, and that is the causing of many strikes of one or two days duration chiefly of the boys. Those strikes could very well be done without.

A large pump has been installed at No. 9 landing of Dom. No. 14 colliery which throws the water to No. 6 landing, a distance of 2,000 feet. A six inch wrought iron pipe line is used. This pump was put in to handle water that might be met with in the drawing of pillars on the west side of the mine, a wise and necessary precaution.

It has often been asserted by miners' leaders that an eight hour day would not result in a decreased output of coal and that a miner would do as much work in eight hours as in ten. Experience, however, in the Cape Breton and, indeed in all other collieries, has exploded this idea. Whatever other reasons existed—and there are some good ones—for an eight hour day in a coal mine, the short day argument is unbared, and cannot be used for a six hour day. All daily outputs of Cape Breton collieries decreased from the time the eight hour day began, and the six hour day would certainly show a further decrease. There are so many things—natural causes—to lower the output of a coal mine, after it has reached a certain stage of development, that unnatural ones look like an outrage on the coal industry. Every day adds to the length of haulage, necessitating larger engines; motor power lines grow longer and friction greater until these have to be enlarged; large pumps and pipe lines have to be installed; and long air courses kept open and in good repair. The whole mine grows wider and deeper until the pressure upon the largest timber reduces these almost to pulp, in one night. But before this stage is reached the safety of the mine becomes a serious factor; changes in the methods of mining take place, wide places give way to narrow ones and these have to be continually brushed and kept open.

RUBS.—Continued from page 9.

from Timothy, which anti-teetotallers, anti-prohibitionists, have for long rolled as a sweet morsel under their tongue. Dr. John Moffatt is considered one of the foremost exponents of the Greek of the New Testament, indeed he has, in Britain at least, won for himself the name of "Grecian." In his translation of the New Testament into every day English, referring to the advice given Timothy to drink a little wine for his stomach's sake says, "this is evidently a gloss," that is, words inserted by the amanuensis, (as is the case in the closing words of the Lord's prayer, "for Thine is the Kingdom, etc.") Or if ever uttered or written by St. Paul they were uttered at some other time, or in

some other place. In short Dr. Moffatt's doctrine is that the words should have no place in 5th Chapter or 2nd Timothy. If some faddist, or fresh air or salt water fiend, promulgated the idea that it would be healthier for fishermen, while at work at sea, to go naked, would he have the support of a Bible student on the ground that the fisherme of the sea of Gallilee were very primitive as to dress? See 21st verse of St. John (for he was naked.) Well he wasn't naked, in spite of this apparently positive statement.

* * * *

A Manchester Guardian correspondent who was for a time in Russia gives an outline of the scheme which has for preamble that "the Russian Socialist Federate Soviet Republic recognizes that work is an obligation on every citizen of the Republic, and proclaims "He who does not work shall not eat." I am wondering how this platform will be received by the C. B. Soviets and their leaders who have expressed sympathy with the Winnipeg reds. As soon as they can be brought to believe that Bolshevism means no work, no pay and no food, then, like the prodigal, they may want to hold on to the old order of things. Trotsky, who is backed by the government proposes the division of the country into territorial productive districts, with registration of labour, military and industrial registration being co-ordinated. Labour, skilled and unskilled, is to be registered in the army, and laborers will be freed from the army on condition that they employ themselves on productive work. A manifesto has been issued insisting upon the necessity for initiating general compulsory labour. The corvee is to be introduced and all citizens capable of workin gwill be registered and tabulated according to their professions. "In every factory, in every workshop, in all works, in every dwelling house, the factory, works, or house committee must take upon itself the duties of a committee for compulsory labour." I have half a notion to become a Bolshevist and strive to have this part of its platform apply to N.

* * * *

Keep your ear to the ground and you may hear whisperings of a possible provincial election this year. Some may ask why there should be an election this year? No necessity in the world, but may not a thing be expedient although unnecessary. From the standpoint not of a pure hearted statesman, but a motived politician, this year is the time to strike. You see, there are big road grants and the appointment of, no doubt, a small army of roadmasters and road makers. If the elections are deferred until after the appointments are made, then just fancy how many disappointed and disgruntled grits there will be. Spring the elections before General Wickwire has chosen his staff and everybody of that persuasion is on the qui vive, and will endeavor to demonstrate by his devotedness, in securing votes, that he has merited a—well, say, reward. The grit who works has that object in view, at least the nasty conservatives say so. There is more graft in Nova Scotia today than ever there was, and—and—there are more grits. I wonder, I have heard the question asked, "Who is to run as leader, Murray or some one else?" Can it be that Murray will find an easier seat elsewhere?

In Great Britain the trades Unionists have made a terrible mistake in refusing to help towards the employment of demobilised men. The engineers and others would not assist the government by a relaxation of any of their rules or prerogatives, the consequence being that the general public is annoyed and surprised if not disgusted at their selfishness. The press is almost a unit in condemnation. It is even hinted that the action of the unionists is the way to ruin of trades unionism.

* * * *

Verses from the National Anthem, and from the hymn "All things bright and beautiful" were objected to by Labour members in a discussion on a school hymnal of the Notts education committee. "I have no objection to 'the rich man in his castle,'" said one of them, "but I have a decided objection to 'the poor man at his gate.'" It was also objected that the verse implied Divine approval of social differences. It was decided not to eliminate the verses objected to, but to print a footnote stating that teachers could use their discretion about the hymns they taught.

* * * *

It looks as if there were to be many parties in Canada when elections come off. Are many parties a good thing or bad?

THE CAMERON—SO CALLED—ACT.

(W. F. Jennison in Chronicle.)

There are a few important facts that Mr. Miller, either from design or otherwise, has neglected to present t othe public. The first of these is this. None of the old grants conveyed any of the minerals to the grantee. Do I make that clear? The grantee never had any claim to any of the minerals until 1858, when by legislation they were taken from the public Treasury and given to the favored few. To substantiate this fact, let me quote the reservation clause in Grant No. 2905, dated December, 1854. It reads:

> "Reserved to us gold, silver, coal, iron, stone, lime stone, slate rocks, tin, clay, copper, lead and ores of every kind and description and precious metals, in and under the said land with full liberty at all times, to search and dig for and carry away same and for the purpose to enter on said land or any part thereof," etc.

It will be noted, from the foregoing quotation, that the Government, in issuing these grants, not only retained all the minerals of "Every kind and description," but they also retained the right to enter upon the lands and search, dig and carry away all minerals, without paying compensation to any grantee. This is the primary starting point; the grantee had no claim to any of the minerals. These were the property of the public, held in trust by our representatives in Halifax, for the benefit of Mr. Milner, myself and all other citizens of our Province.

Unfortunately our representatives, in 1858, betrayed that trust and legislated away, not the birthright "of the men of Malagash" or any farmer or grantee who obtained grants at that date, but the birthright of every citizen of the land, and not even the proverbial mess of pottage was given in return. Mr. Milner, by his letter, leaves the impression that this Act of 1858, continued in force, without change, until the Cameron Act was passed in 1919.

Will he please inform the public why he neglected to mention the Act of 1892? Was it by design or otherwise? Surely he is not ignorant of the fact, that in 1892 an Act was passed, giving back to the public a certain portion of the rights confiscated in 1858. I would dislike to think that he had intentionally tried to deceive the public in this manner, for the benefit of his Malagash clients. In case however, he, possibly, is not so learned in the law as we suppose, let me quote for his edification and the public good, from Chapter 16, Acts 1892. Act to amend Chapter 2 of the Acts of 1858. Section 1 reads: "Section 3 of Chapter 2 of Acts 1858, is hereby amended by striking out all words after stones in the 7th line and adding the following, and all other minerals, excepting limestone, plaster and building materials." This means, that together with the reservations of gold, silver, tin, copper, coal, iron and previous stones, in No. 1858 Act, all other minerals, were also reserved in 1892, which gave back to the Crown the original reservations, less the few exceptions mentioned. About that time the first protection was given the landowner against surface damages.

This Act of 1892 was carried down to 1910, when the Act of 1858 was re-enacted, and again the people's rights were confiscated for the benefit of the favored few.

I hope I have made these points clear, if not in the legal phraseology of my learned friend, in the humble words of an ordinary layman. In reference to the old grants, a summary would show as follows: The landowner had no claim from the 25th day of August, 1826 until the 24th day of March, 1858. From 1858 to 1892, they held everything except gold, silver, tin, lead, copper, coal, iron and precious stones. From 1892 until 1910, they only had claims to limestone, plaster, and building materials. In 1910 the old Act of 1858 was re-enacted and remained in force until 1919 when really the old Act of 1892 was re-enacted by the Cameron Bill.

It may be due, as discerned by Mr. Milner, to my "incapacity to cope with trivial difficulties," but in spite of his presentation, in favor of his clients from Malagash, I still claim that the Cameron Act is the best piece of legislation passed for years.

I claim this, first, because it is an incentive to the development of our minerals, and will furnish the Government a revenue, that will assist in the reduction of our present burden of taxation. The salt and potash of Malagash is not the only development of our minerals that is going on today, or will be developed within the next few years, due to the passage of the Cameron Act.

Mr. Milner infers that the "bargain with Messrs. Chambers and McKay was of slight advantage to the Malagash farmer." The development of these deposits and others, is of the greatest advantage to the Government of Nova Scotia. Does Mr. Milner know, or realize that for each $1,000,000, worth of these minerals, extracted, the Government receives under the Cameron Act, a revenue of $50,000? The municipality receives increased population, and all the benefits that accrue from the same, in the way of taxes, and the farmers increased valuation in their lands, which, probably, in a few years will be know, or realize that for each $1,000,000, worth of cut up into Town Lots.

To make this clear, let me ask Mr. Milner one question. It will be assumed, that I have discovered a vein of ore, in the Lake Ainslie district, Cape Breton. The ore is a complex one, containing gold, copper, lead and zinc. The starting point for a description to cover this deposit will be, due east, two miles from the east abutment of the Outlet Bridge. I have been on the property and find the vein crosses the properties claimed by Rory McPherson, Roderick McDonald and the heirs of Donald McKenzie, who died some years ago intestate. The estate of the latter has never been settled because the sons went away from home some years before the death of their father and have never returned. It is understood that they now live in the Western States. The present occupants of this land have no copy of the original Crown Grant, and I do not know if they are the real owners or not.

You, Mr. Milner, having already discerned my "incapacity to cope with trivial difficulties," and being a most learned man in the practical working of our mining laws and the Crown land Acts, I want to ask you if you will secure for me the title of this mineral deposit and tell me, approximately, what your fees will be for such work?

It is not an exaggerated case. I Ihave met several in my experience of 25 or more years with the minerals of the Province, very similar, if not more difficult.

I will give you an idea of what I think will be necessary for you to do. You will first have to go to Halifax and search the Crown Land grants situate about 2 miles east of the Outlet Bridge. You will probably find that these grants are affected by the legislation of 1958, when only gold, silver, tin, lead, copper, coal, and precious stones, were reserved to the Crown. But in my case we cannot mine these without mining zinc. What then? I think you will have to take a trip to Port Hood and ascertain from the records there who are the rightful owners of the land, so that it will be possible to get a right from them to mine the zinc. When you have completed this you will have to take a drive of 20 miles or more, to see the owners. I will be frank and say this trip will not be pleasant ,at this time of year, but it is necessary that I secure the title as quickly as possible. When you make the agreements with the landowners it will be very much better if you can make the royalty payable, in each case, the same, so as to avoid complications in bookkeeping. It will also be necessary to have the boundaries well defined but I will attend to that part. A more difficult matter

will be to get a clause in the agreement, so that it will not be necessary to keep the ore, from each lot, separate, before treatment, to determine each owners royalty. But all these are mere 'trivial difficulties'' and you will know just what is required and what to do. By the way I have almost forgotten to mention that the most important outcrop of this ore is on the estate of the late Donald McKenzie, and it being the middle lot, it is most important that you secure an agreement from the heirs. While you are there you might get the address of the heirs and see what can be done with them. I was informed by the neighbors that no one has heard from young Donald, the son, since the war. These however, are "trivial difficulties," and any lawyer can easily get a title. I want the title clear, no litigation, if possible, in the future. Please Mr. Milner don't tell me, that it is practically impossible to get this title but tell me approximately what it will cost to secure it.

To the humble layman of my cloth I see great difficulties in what I have asked you to do, but I rejoice in the fact that the Cameron Act has been passed and removed these difficulties. We can now sit down in our office, if we are fortunate enough to have one, and with the starting point as given above, make a description to secure a title for this or any other mineral, through the mines office, at a cost of $30.00 plus cost of stationery and postage. Is this a sore spot Mr. Lawyer, that you are going to lose a lot of fees?

Yes, I know that some of these men of Malagash were in "France and Flanders fields" but I do not know that their birthright was confiscated. I also know that you Mr. Milner, and some other lawyers, are advocating measures that will rob many hundred miners, who were also "in France and Flanders fields," of their just rights and claims to the mineral resources of the province.

Continued from page 6.

6. Q. On reaching the coal in a shaft 600 feet deep, what size would you make your shaft pillars, width of levels? and state how far you would drive your narrow work before you laid off any rooms.

A. The shaft pillars at a depth of 600 feet should be at least 75 yards square each, and would be much better if they were 100 yards square each. I would certainly have my shaft pillars in this case not less than 100 yards square each. Width of level should be safe at 8 feet or 9 feet wide. The distance I would drive my narrow work (beyond the shaft pillars) before laying off any rooms would be as short as the circumstances of the case would permit. I would certainly not drive them above 75 or 80 yards.

7. Q. If your roof was soft and shelly, give a free hand sketch of how you would timber it.

A. If my roof was soft and shelly, I would put my timber closer together in the rooms than usual, and on my travelling roads, in some cases I would put deals over the cross pieces.

8. Q. If you had a slope 2000 feet long, dipping 8 inches to the yard, and had a gross weight of tubs and coal=10 tons what size and quality of rope would you use?

A. On a slope 2000 feet long, dipping 8 inches to the yard, or 1 in 4.5 the perpendicular height to be overcome is 2000 4.4=444.4 feet. Therefore the strain on the rope of a total weight of 10 tons (no allowance being made for friction or weight of rope) is 2.22 tons; because it depends on the following proportion:

2000 feet, 444.4 feet, 10 tons, 2.22 tons. Then to find size of safe working hemp rope for 2.22 tons the rule is v. (2.22 x 14)=circumference of hemp rope in inches v 22.20=4.7 inches circumference, not taking into consideration friction and weight of rope. But in this case I would prefer an iron or steel wire rope, the size of either of which can be readily obtained in a given case by referring to tables. Not having in memory just now the rules or formula for iron and steel wire rope, I give the calculation for hemp rope. But an iron or wire rope 1¼ or 1½ inches diameter would be sufficient for all purposes including weight of rope and friction.

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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 an 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 for before long.

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 renewal for a further term of 21 years at an annual rental of $1 an acre. Not more than 2560 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,
Deputy Minister of the Interior.

N. B.—Unauthorized publication of this advertisement will not be paid for.—88575.

CANADA.

DEPARTMENT OF MINES.

Hon. Arthur Meighen, Minister.

Mines Branch.

Recent Publications:

1 Summary Report of the Mines Branch for the Calendar Year 1918.

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.

The Mines Branch maintains the following laboratories in which investigations are made with a view to assisting in the developing of the general mining industries of Canada:—Fuel Testing Laboratory, Ore-Dressing Laboratory, Chemical Laboratory, Ceramic Laboratory, Structural Materials Laboratory.

Application for reports and particulars relative to having investigations made in the several laboratories should be addressed to The Director, Mines Branch, Department of Mines, Ottawa.

R. G. McConnell, Deputy Minister.

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 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.

MEMOIR 78. Wabana iron ore of Newfoundland, by A. O. Hayes.

MAP 63A. Moncton Sheet, Westmorland and Albert Counties.

MAP 164A. St. John, New Brunswick, Topography.

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