LEGISLATIVE COUNCIL.

Tuesday, October 27, 1959.

The PRESIDENT (Hon. Sir Walter Duncan) took the Chair at 2.15 p.m. and read prayers.

CONSTITUTION ACT AMENDMENT BILL (No. 1).

His Excellency the Governor, by message, informed the Legislative Council that he had reserved the Bill for the signification of Her Majesty the Queen's pleasure thereon.

LAND SETTLEMENT ACT AMENDMENT ACT.

His Excellency the Governor, by message, intimated his assent to the Act.

QUESTIONS.

APPOINTMENT OF DEPUTY COMMISSIONER OF POLICE.

The Hon. F. J. CONDON—Since I previously asked questions concerning the appointment of a Deputy Commissioner of Police I note that the Premier, in another place, has stated that such an appointment will be made. As I understand this matter comes under the juristion of the Chief Secretary I ask him whether it is intended to appoint a Deputy Commissioner and, if so, whom?

The Hon. Sir LYELL McEWIN—When the honourable member asked his questions previously I think he stated that the position of a Deputy Commissioner had been created and asked why it had not been filled. I then explained that the matter was not considered to be one of urgency but that an appointment would be made in due course. Since then there has been little alteration in the position excepting that, I understand, the Commissioner has certain ideas for reorganization under consideration, and if that is done it may be the time to make an appointment.

The Hon. F. J. Condon—Why should the Premier make these promises?

The Hon. Sir LYELL McEWIN—I am not aware of any promises other than that the matter is under consideration, and I presume he is giving consideration to the requirements of this very important social service to the community.

EXTENSION OF GOVERNOR'S TERM.

The Hon. F. J. CONDON—Our esteemed Governor and Lady George will be leaving South Australia next February. I ask the Chief Secretary whether it is intended to extend the Governor's term of office and, if not, has the Government considered appointing a successor?

The Hon. Sir LYELL McEWIN—No consideration has been given to the appointment of a successor.

REFLECTORS ON STATIONARY VEHICLES.

The Hon. C. R. STORY—I ask leave to make a statement prior to asking a question.

Leave granted.

The Hon. C. R. STORY—The question I desire to ask the Minister of Roads deals with reflectors on stationary semi-trailers and trucks. Last night when on my way from Renmark, between Blanchetown and Truro I was again almost forcibly reminded that this matter has not been advanced much further in the last 12 months. A semi-trailer was pulled up on the road with at least three feet of the tray on the bitumen. A car was approaching me from the opposite direction with its lights full on, which prevented me from seeing the semi-trailer until the last moment, when I was just able to pull out. There was no-one in attendance on the semi-trailer, and it had no lights switched on. The last I remember of this subject was that the Minister said the matter was in the hands of the State Traffic Committee and that it was thought a regulation would be promulgated in the near future. I ask the Minister whether a regulation has been brought into force making it compulsory for unattended stationary semi-trailers and trucks to have suitable reflectors at the front and rear? If such a regulation has not been promulgated, is it proposed to take some action in the matter?

The Hon. N. L. JUDE—I assure the honourable member that regulations have been promulgated and are in force, and if the facts are as stated by him a breach of the Road Traffic Act has been committed.

CHAIR OF ORIENTAL STUDIES.

The Hon. JESSIE COOPER (on notice)—Is it the intention of the Government to give serious consideration to the establishment of a Chair of Oriental Studies at the University of Adelaide and recommend this to the University authorities?

The Hon. Sir LYELL McEWIN—The Government does not favour making these representations.

MONARTO SOUTH TO SEDAN RAILWAY LINE.

The PRESIDENT laid on the table the final report by the Public Works Standing Committee, together with minutes of evidence, on the Monarto South to Sedan railway line.

SUPPLY BILL (No. 3).

Received from the House of Assembly and read a first time.

Second reading.

The Hon. Sir LYELL McEWIN (Chief Secretary)—I move—

That this Bill be now read a second time.

We are still awaiting an Appropriation Bill from another place, and it is necessary therefore that supply should be provided to carry on the services of the State for a further period. This Bill provides for the issue of a further £4,000,000 to enable public services to be carried on until the middle of November. Clause 2 provides for that issue and clause 3 is the usual provision that no payment shall be made in excess of similar lines that appeared on last year's Estimates, except that the Treasurer may authorize the payment of increases in salaries or wages. This is the usual form of Supply Bill to enable the public services to be carried on until such time as the Appropriation Bill is dealt with.

The Hon. F. J. CONDON secured the adjournment of the debate.

WANDILO AND GLENCOE RAILWAY (DISCONTINUANCE) BILL.

Read a third time and passed.

EXCHANGE OF LAND (HUNDRED OF NOARLUNGA) BILL.

Adjourned debate on second reading.

(Continued from October 14. Page 1050.)

The Hon. K. E. J. BARDOLPH (Central No. 1)—I support this measure. The Minister, when introducing this legislation, explained quite fully the purport of the exchange of land between the Catholic Church Endowment Society and the Housing Trust. I desire to make one observation only. In every new town and in every new subdivision in which the Housing Trust has been interested it has always granted land at very low prices to every denomination requiring it. I wonder, in the establishment of this new township at Christie's Beach, whether the exchange of this 20 acres will impair any future request that may be made by the Catholic Church Endowment Society for further areas of land for religious or school purposes in that particular section. It may be said—and quite rightly so—that this deals with one specific provision; nevertheless, it does deal with an arrangement between the Housing Trust and the Catholic Church Endowment Society. I pay a compliment to the Housing Trust for the manner in which it has always dealt with requests made to it for land by various denominations.

The Hon. G. O'H. GILES secured the adjournment of the debate.

UNDERGROUND WATERS PRESERVATION BILL.

Adjourned debate on second reading.

(Continued from October 14. Page 1052.)

The Hon. F. J. POTTER (Central No. 2)—I support the second reading of this Bill. I must confess that I approached it with a certain degree of suspicion, because the first thing that occurred to me was that here was something that was probably new and obviously curtailed yet another freedom of the people of this State; and this might be done just because somebody in the Public Service thought it expedient. However, after some research and reading on this subject, I am convinced that this measure is both timely and necessary. As we all know, of course, South Australia has a very low rainfall with only one major river, the Murray, fom which to draw supplies of river water, and with reticulation of surface waters fairly well confined to the Adelaide Plains. So, outside the metropolitan area lies a vast area of land relying mainly on underground water.

The first reason why I feel that this Bill needs support is that I have found it is not quite so rare as I at first thought. Queensland and New South Wales have had similar legislation in force for some years. In both cases the legislation is known as the Water Act. Later I shall have something to say on a few matters arising from those Acts. I also find that Part X of our own Pastoral Act has dealt fairly extensively with the control and management of artesian bores on pastoral leases. Indeed, some provisions of that part of that Act go rather further than the provisions of the present Bill.

The second reason why I feel that this Bill deserves support is that, although as I said earlier it does curtail the existing rights of freeholders in connection with underground water, there can never be such a thing as

freedom without responsibility, and these provisions are concerned with the users' responsibility to the community as a whole. After all, we have the Animals and Birds Protection Act, under which nobody has an unlimited right to trap animals or birds; we have the Fisheries Act, which restricts the right to take fish to those above a minimum size and in certain places only. Also, of course, many Acts on the Statute Book deal with the protection of trees throughout the State. So, in some respects it may be thought that this Bill, designed to protect and conserve our underground waters, is perhaps overdue compared with those matters I have just mentioned. In the present period of great change in South Australia, we need to be awake to the vital necessity of preserving our water supplies, and particularly our underground supplies.

The Hon. F. J. Condon—Does the honourable member believe in the policy of control?

The Hon. F. J. POTTER—I believe that this Bill is designed to ensure that our underground waters are preserved for the benefit of the whole State. Therefore, I think that some degree of control is necessary in that respect. There is a general lack of appreciation of the value of our underground water. Indeed, many people give very little thought to the manner in which it accumulates in the first place. Many think that the supplies are unlimited. One has only to glance at a geological map of Australia to realize at once the importance to this country of the vast artesian basins that cover a large section of Queensland, Northern Territory and South Australia. We should not be able to run cattle and sheep over many thousands of square miles were it not for the existence of the great artesian basins.

Turning for a moment to consider the phenomenon of underground waters, it may be said that the types of underground water can be divided into two main classes, the first of which can broadly be described as non-pressure waters, and the second of which can broadly be called artesian waters. We are all familiar with the non-pressure waters because we see evidence of them in our own metropolitan area, and particularly in the Adelaide Hills. They occur in a free and unconfined state in permeable rocks or sands. A good example of that would be the alluvial sands in a river valley. When those sands are cut by means of either a well or a bore, the waters being, as I said earlier, essentially in an unconfined state, they are readily accessible. We all know that this can occur in what we colloquially called a spring, but there the particular geological structure of the rocks allows the water to escape of its own accord along a fault line.

There are many areas in South Australia where quite good supplies of non-pressure water can be obtained. I mentioned the Adelaide Hills a moment ago, and probably the best example of that would be the Bird-in-Hand mine near Woodside. It is also interesting in passing to note that Nairne Pyrites Ltd. is using water from a bore near Woodside that yields approximately 10,000 gallons an hour, and that is all non-pressure water.

The second broad classification is artesian water. This is confined underground, usually in basins, and in all cases is confined under pressure. Where suitable geological conditions occur, these waters when penetrated by a bore or in some cases by a well will flow freely, sometimes to a great height because they are confined by an overlaying pressure from non-porous rocks and they rise to the natural hydraulic level and run over the surface of the ground. Sometimes they rise along a faulted line in the same way as a spring, and in this form are the well known mound springs, the "mound" being formed through the deposit of salts in solution. There is no doubt that the presence of these mound springs plays a very big part in the pastoral development in the north. Where the water does not rise in that way it is called a sub-artesian bore, and recourse must be had to pumping the water. As the Chief Secretary mentioned in his speech, the Adelaide Plains is one area which it is intended should come within the ambit of this legislation, and the Adelaide Plains is an artesian basin. It contains two distinct areas where appreciable supplies are available. Government bores alone in this area have produced more than 15,000,000 gallons a day from approximately 60 bores; and the State total derived from artesian basins amounts to about 100,600,000 gallons a day, equivalent to about one day's consumption in the metropolitan area during the summer. No statistics are available concerning the activities of private boring contractors, and as a result there are no statistics concerning private bores. There is no reason to suppose other than that there are many of these bores and wells.

I have dealt with the water existing underground and the broad types that exist in permeable rocks and sands. Under proper geological conditions, the whole process can be likened

to a vast area similar to a big sponge absorbing water, most of which has fallen on the earth. In some rare cases it can be formed even from water that comes from the centre of the earth through the slow cooling of the molten rock there existing, although I do not think much of the water found in Australia is formed in this way. It comes mainly from intake areas as a result of rainfall.

What is the legal position concerning underground waters, because after all we are dealing with something in this legislation that undoubtedly will affect the legal position? I had a look at what Lord Halsbury had to say about underground waters in his great work on the *Laws of England*. He says that at common law there are no specific rights to underground water itself, but where the water flows in a defined but unknown channel, or where it merely percolates through the soil, the law as to riparian owners does not apply. Honourable members may not be aware of the common law concerning the taking of waters from defined channels such as rivers and streams, and also from subterranean waters which are flowing or existing in a defined channel. I think that the practical effect of Lord Halsbury's statement is that an owner may, by digging a well, or sinking a bore, divert or appropriate underground water as he pleases; and this would be so even though, as a result, a neighbour's supply was diminished or extinguished. I have been unable to find any law cases on this matter and I think that such situations may present ticklish legal problems.

We can start by accepting what Lord Halsbury says is the law as being broadly correct and sound. There is no doubt that a man has a perfect legal right to put down a well on his own land. Therefore, this Bill will in some way affect these legal rights. As I said earlier, a man undoubtedly has a right to sink a well. Much thought must have been given to this matter by the draftsman of the Queensland Act of 1910. That was the first State to pass an Act dealing with underground water rights, and it was called the Rights in Water and Water Conservation and Utilization Act, in which it was declared that all artesian water was the property of the Crown. That provision has been continued into the present law in Queensland. It is the only State that goes as far as to declare that all underground water is the Crown's property. It can well be realized that there was a great outcry and strong objections from pastoralists when this Act was passed, but largely as a result of a special educative campaign by the Government the pastoralists were mollified. Their attitude became such that they were ultimately reconciled to the provisions because no attempt has been made to alter them in the present Act. I am pleased that the South Australian Bill has not gone so far as to declare that all underground water is the property of the Crown.

The Hon. S. C. Bevan—It could ultimately come to that.

The Hon. F. J. POTTER—I should think that it would need a very specific alteration to the legislation for that to occur, and of course it would have to come before Parliament.

The Hon. S. C. Bevan—Could it not be done by proclamation?

The Hon. F. J. POTTER—Nothing could be done in that direction by proclamation. Following upon the passing of the Queensland Act, the whole subject of artesian water and its ownership and control seems to have become a fairly live issue throughout Australia, and from 1912 to 1939 six conferences were held in the various capitals between representatives of the States. It is interesting to note some of the recommendations and results of these conferences. These are some of the recommendations:—

(*a*) That there should be a uniform system of measuring and recording all bore flows;

(*b*) That there should be a uniform recording of chemical analyses;

(*c*) That there should be legislative provisions introduced by States to secure effective conservation of supplies and to prevent multiplication of bores;

(*d*) That there should be effective control of all existing bores and the controlling of new ones; and

(*e*) That artesian supplies should be regarded as a natural asset to be preserved for future landowners as well as present ones and that every member of the community had an interest in their conservation.

The Hon. Sir Frank Perry—Are they State-wide suggestions?

The Hon. F. J. POTTER—That was part of the final report of the conference.

The Hon. Sir Frank Perry—To be of State-wide application?

The Hon. F. J. POTTER—They were principles that State Governments should bear in mind when dealing with any legislative action on water. The final recommendation was—

(*f*) That everybody putting down a bore should preserve elementary precautions.

It will be seen that these recommendations formed broad terms of reference for the Government when drawing up the provisions of this Bill. Incidentally, it is of interest to compare some of the recommendations in another very extensive report by the Artesian Water Irrigation Committee set up in Queensland. As can be realized, Queensland has taken a very keen interest in the subject of artesian water. This report is dated as late as 1954. The recommendations were rather brief, having regard to the voluminous nature of the report. I shall not read all of them, but some were:—

With a view to ensuring that flowing supplies shall be utilized the following recommendations are submitted—

(1) That the policy hereunder, which is in accord with present practice, be followed by the Irrigation and Water Supply Commission in regard to applications under the Act for licences to sink bores—

(*a*) That applications for licences to sink artesian bores be investigated to determine in what manner the land may be most effectively and economically watered, with due regard to the conservation of diminishing artesian supplies.

In passing, I draw attention to the fact that in Queensland it is necessary also to obtain a licence to be a qualified driller. It has always been the subject of great concern to Queensland people that the supplies available from the Great Artesian Basin were rapidly diminishing. In fact, that was one of the reasons why this committee was set up by Parliament to investigate whether or not this alleged diminution was a fact. A further recommendation was—

(*b*) Licences issued for new artesian bores, firstly, should give preference to the use of supplies for domestic purposes, stock water and irrigation in that order. Secondly, that they should be provided with the necessary casing, cementing and headworks so that supplies can be effectively controlled to actual requirements. Thirdly, the licence to stipulate the volume of water that can be tapped, and also the volume to be used. Preference to be given to distribution by pipelines and short drain systems.

Each application is to be treated on its merits and the use of water for irrigation should be strictly limited and controlled. Other recommendations were that a strict programme of conservation be not undertaken; that all cases of surplus flows be examined in relation to the conclusions reached by the committee; where found to be desirable in the public interest, that bore owners should be called upon, in the case of artesian flows, to regulate the flow to actual requirements; that the Artesian Water Investigation Committee should be retained to keep under regular review—it was suggested annually—the artesian diminution problem and the predictions which have been made regarding the future performance of the artesian system and to advise on any other problems associated with artesian development which should arise from time to time. This Bill before us also makes provision for the setting up of an advisory board.

Before I turn to discussion of the Bill in detail it may be of interest to consider our present uses of artesian or underground water and the problems associated with the diminution or contamination of these supplies, and what the future may hold. Dealing first with present uses, the obvious one is to augment water supplies for domestic purposes. A second great use for underground water is in agricultural and horticultural pursuits, particularly in the metropolitan area. The Chief Secretary, in his second reading speech, referred to the fact that in addition to the metropolitan area, it had been decided that this measure should apply to certain of the plains north of the city and to certain areas in the South-East.

The Hon. E. H. Edmonds—It could apply anywhere in the State.

The Hon. F. J. POTTER—That is so, and I will deal with that aspect a little later. It must be obvious to anybody that the future development of food supplies for what will be a greatly enlarged local population is inevitably bound up with the availability of good underground water supplies which may be used safely, without fear of injury to plants and for watering of stock and, if possible, for human drinking purposes. However, the greatest use of underground water is the demand that industry makes upon it. Many industries in the metropolitan area are drawing upon our underground supplies to augment other supplies; indeed it would be impossible to supply all industrial requirements merely from the reticulated supply. Another use which is being made, not so much of underground water, but of wells and bores, is the disposal of waste and surplus material from industry, and I

understand that this use is increasing. It is, of course, pretty obvious that any waste put down through a hole in the earth that can make contact with the underground water could do great damage to it. Then we have the other problem that arises from the greatly increased housing in the metropolitan area and country towns. In many cases these homes are equipped with septic tanks and the effluent from those tanks is being discharged underground. How many homes are there in the metropolitan area where the surplus water from the roofs is not being discharged into a tank, but is being put down holes in the ground dug by the house owner in order to get rid of the surplus? It is a very effective and easy way to dispose of surplus water, but it is questionable whether it is a very good way from the point of view of possible damage to our underground supplies. I am fortunate to live in an area where underground water may be obtained by going down a mere 4ft. or 5ft., and where water is so close to the surface it is obvious that it can be very easily contaminated. It may be of interest to note the sources of contamination. I use the word in a very broad sense to include depletion; and depletion of supplies is one of the things that have always given the Queensland Government at least considerable concern.

The Hon. Sir Frank Perry—Do you say that contamination includes depletion?

The Hon. F. J. POTTER—I am using the word to include depletion and I think, if I read the Bill correctly, or understand what the Chief Secretary said, that that is one purpose of the Bill. Heavy demands are being made on underground water, particularly in the new market garden areas that are being established north of the city in the vicinity of Virginia and Two Wells. I think also there has been a very big increase in the number of major industrial water consumers. I believe it is considered in official sources that a considerable danger exists in South Australia that there may be an overuse of underground water. In fact, in the mid-north districts I understand that the use of bore water is considered by the Mines Department geologists to have already reached the stage of maximum development. A second source of contamination can arise from the indiscriminate drilling of bores, and this includes faulty construction in the first place and sometimes the abandonment of unsuccessful bores. The other source of depletion, and one which occurs to everybody, is the unnecessary wastage of water which can arise from bores being left unattended or from the flow not being sufficiently controlled. I have already mentioned the pollution that may occur from factory waste and to the possible pollution that can occur from the use of septic tank systems. A good deal of division of opinion exists on whether the effluent of a properly constructed septic tank is necessarily in such a condition that it would pollute underground water. Some scientists feel that the effluent is sufficiently pure not to present any great difficulty in that direction.

To show what future development we may expect in South Australia in the use of underground water, three interesting matters are mentioned in chapter 13 of a book entitled *Groundwater Handbook* that has been issued by the Department of Mines and which has been circulated to honourable members. This book contains very interesting matter. Chapter 13 outlines broadly three big developments that we may expect. Firstly, it is considered by the authors of the book that there will be a greatly increased use of underground water for irrigation of crops and the only danger that exists is the one I have already referred to, that there may be too great a demand on the supplies of water available in certain areas. I shall not speak on that in great detail, because honourable members can read that section of the chapter for themselves, but I desire to refer to two other interesting scientific possibilities of the future. Firstly, there is a possibility of treating saline water. The Chief Secretary, in his second reading speech, said that one of the sources of contamination and one of the difficulties encountered by boring contractors was that often a considerable body of pure underground water is available in an area but it is either overlain by a saline bed or in some cases the saline bed is underneath the fresh water and that inaccurate, careless or unskilled drilling may result in a certain quantity of this saline water getting into the good supply and, of course, contaminating it. That is not the only problem we have because in certain areas a good deal of our water has a high salt content and it is fit only for stock, while some is not useful at all because of the high degree of salinity.

This book states that this problem of saline waters has received very close attention, particularly in Holland and in the United States of America since the war, and that various corrective processes seem economically possible in the future. We may be able to extract a good deal of the salt from the

underground waters and, of course, all honourable members have heard or read in the newspapers about schemes for extracting fresh water from the sea. One method referred to in that chapter is the method known as the electro-dialysis or permo-selection membrane method. An interesting paragraph reads as follows:—

> From such estimates, the cost of treating water of 200-1,000 grains per gallon—commonly found in the more arid regions of South Australia—could be brought within economic limits on farming and pastoral properties. Culmination of such an achievement is most likely within the fairly immediate future. The development of an economic method of removing saline matter from water would greatly assist both the water finder and consumer and would certainly raise the stock-carrying potential of the north-eastern and north-western areas of the State.

The estimated cost of that method would be somewhere between 10s. and £1 per thousand gallons. The whole secret of success in that process is the availability of cheap power, and we are looking forward to developments in that respect in South Australia. There is no doubt it would mean a great deal to the more arid regions of this State. Another interesting possibility for the future is that we may be able to artificially recharge our underground waters from the surface. This system has been fairly extensively investigated in America and we can see an excellent example of recharging the source of supply when water is discharged from household roofs into the ground. A paragraph in the chapter on this matter says:—

> There appears scope for further investigational work both on the drainage of swamp areas where hydraulic conditions are favourable, and the recharging of basins, or even individual bores, when surplus waters are available.

Therefore we have some interesting possibilities for the future. I turn now to the Bill and shall briefly deal with one or two sections. Firstly, clause 5 states that the Governor may, by proclamation, declare that any part of the State defined or indicated in the proclamation shall be a proclaimed area for the purposes of this legislation; alter any such proclaimed area; or abolish any such proclaimed area. There appears to be no reason why, under this section, the whole State cannot be legally brought under the provisions of this legislation. I question whether this is a good thing and I doubt whether this power should be reserved to the Governor by proclamation. Surely this is a most important matter and Parliament deserves some consultation on it. It would be much better if this power could be exercised by means of regulation so that Parliament would always have some say and some knowledge of what areas were being proclaimed. The Minister referred to three areas which it is intended to proclaim—the metropolitan area, the plains north of the metropolitan area, and some areas in the South-East, and no doubt honourable members representing that part of the State will be most anxious to know what areas are contemplated to be brought under this Act.

That is one query I have on the Bill as it stands at the moment, whether it would not be better to provide that the control be achieved by means of regulation rather than proclamation. Clause 6 requires the notification of wells. I refer honourable members to clause 4 again, where a well is defined to mean a well, bore, hole, excavation or other opening made for the purpose of procuring a supply of underground water or for drainage. It appears from that clause that the hole we sink in our back garden to dispose of our surplus water is a well within the meaning of this measure. Clause 6, of course, refers to the notification of existing wells. Honourable members will agree that this is very necessary. As I said earlier, there are no statistics in South Australia about the location of bores or the kind of bores or wells in existence. If this Bill is to be put effectively into operation one thing is necessary, that we start with properly compiled hydrological data of bores already in existence. Much valuable information can be obtained if the proper questions are asked of the owners of land where wells exist at the moment.

Clause 7 requires that after the passing of this Bill it will be necessary to obtain a permit for the sinking of a well. It is interesting to note, on this question, that in the Queensland Act there is a section which specifically states that any sub-artesian well, which is one from which the water has to be obtained by some mechanical means, is completely exempt from the provisions of the Act if it is used to supply water solely for use in connection with a dwellinghouse. That may have to be borne in mind in this matter and consideration may have to be given to including a provision in this legislation to exempt water to be used solely for domestic purposes. Applications for permits are dealt with in clause 8. They have to be made to the Minister in the prescribed form and contain all the information required.

Clause 9 entitles the Minister to refuse such an application for a permit or for the renewal of a permit. This clause seems to be designed particularly to cover the investigation of applications. Again, I should like to draw honourable members' attention to the departmental practice in Queensland in relation to applications for permits. A little paragraph can be found tucked away in one of the schedules to the Queensland report. The departmental practice there is that applications are investigated in relation to the following factors:—

(*a*) Average rate of diminution of flow in the district.
(*b*) Existing water supplies on the applicant's land.
(*c*) Area not adequately watered by existing supplies.
(*d*) Whether the area not adequately watered may be most effectively and economically watered by—
  (i) Surplus water from adjacent existing artesian bores.
  (ii) A new artesian bore and drain system.
  (iii) A new artesian bore with pipelines, tanks, and troughing.
  (iv) New sub-artesian bores or excavated tanks.

Licences issued for new artesian bores stipulate:—

(*a*) An outer string of casing, pressure cemented outside from shoe to surface.
(*b*) An inner string of casing from surface to bottom, slotted opposite the water beds and with headworks attached to control the flow.
(*c*) Drilling to cease when a prescribed free flow has been obtained.
(*d*) Free flow to be fully controlled for use by piping, tanks, and troughing only, or controlled to a prescribed working flow for distribution by drains.

More favourable consideration is given to an application for a licence when the flow obtained is to be controlled for use by piping, etc., or for distribution by a limited length of drain. Then also consideration is given to the question of extra piping, length of drains, etc., to be used. That is the departmental practice in Queensland regarding new applications for licences to drill.

The Hon. E. H. Edmonds—Has their Act a State-wide reference?

The Hon. F. J. POTTER—Yes. In clause 11, the Minister is given power to include terms and conditions in the permit, and that is the really effective control clause in the Bill. Clause 16 requires an occupier of land in a proclaimed area upon which a well exists to maintain the well in good repair and condition; and clause 18 empowers the Minister to give directions to owners or occupiers. Much of the Queensland practice deals, of course, with the control of the waste of water. There is no doubt that under the provisions of this Bill the Minister will have power to give directions to control the waste of water. Clause 17 provides:—

Every person doing any work for which a permit has been issued—

I emphasize the words "every person" because that includes the actual driller himself, in addition to the owner of the land:—

shall execute such work in a proper and workmanlike manner in accordance with sound water well drilling practices.

This clause takes the place of a whole part of the previous Bill which was introduced in another place two years ago and which was allowed, for some reason or other, to lapse. That Bill provided that all drillers were to be licensed. Apparently, the Government has seen fit not to go on with that system of licensing drillers. I do not express an opinion on whether or not that is a good thing, but probably this clause imposing a duty upon owners and people who drill is a more effective method than the licensing method contemplated two years ago.

But, as against that, just about every writer on this subject has made it more or less a cornerstone of his thesis that drillers should be licensed, because one of the big problems that occur in the contamination of underground waters is that many bores are drilled by people who are wholly unskilled and care little whether they complete a bore properly or put down the proper casing. As against that, the Government has seen fit to include this duty clause. It is probably a good thing because, after all, it is not the licensing of a man that counts: it is the effectiveness and the workmanlike character of the work that he does that is important. It is interesting to note that the sanction applied is contained in the general provisions in clause 47 of this Bill, which states:—

A person who fails to comply with a duty imposed on him by or under this Act shall be guilty of an offence.

That is not limited.

The Hon. E. H. Edmonds—Does clause 17 absolve the owner from responsibility?

The Hon. F. J. POTTER—The person who actually does the work is the person responsible, under clause 17.

The Hon. E. H. Edmonds—But that would not let out the owner?

The Hon. F. J. POTTER—He has some degree of control, but I question whether the wording of clause 17 would apply to anybody unless he was in actual control and direction of the work. The situation arises that the owner of the land, although he is particularly interested in the work and how it is being done, is never in a position to exercise any real control over a driller. Indeed, he is probably very much in the hands of the driller from the word "go."

It is interesting to note what a drilling operator should be required to record. First, these suggestions are made on the very last page of that ground water hand-book to which I referred earlier. They are almost identical with the requirements of the Queensland regulations. They do not come into our Bill specifically but undoubtedly will be borne in mind by the Minister. Statistics are required by holders of permits. These details, which are broadly the basis of the statistics, are as follows:—

(*a*) The types of strata that are passed through and their depths;
(*b*) The depth, supply and salinity of all waters cut;
(*c*) The method of developing the supply, whether by baling, blowing or compressed air, etc., and how much sand is removed;
(*d*) How the final supply is decided, whether by baling or pumping and how long continuously;
(*e*) The standing of the water level and the depth to which the water is drawn down in a bore near the completion of testing;
(*f*) The final depth of the bore or length, diameter and position of the casing string.

In other words, it is suggested that all those details are necessary for developing proper information to conduct and keep statistics, and conduct a hydrological survey in South Australia. All those requirements are, broadly speaking, the statistics that have to be forwarded in Queensland by the licensed drillers. There is no doubt that, if those details are required, they can be required by the Minister as a condition under clause 11, under which he issues the permit. In other words, he issues the permit on condition that those details are supplied when the work is completed or as it progresses.

Next I come to Part III, which sets up an advisory committee on underground water contamination. The Government must have had in mind one of those recommendations of the Queensland committee's report, because that recommendation was that the Artesian Water Investigation Committee be retained and keep under regular annual review all problems in connection with underground water supply. The Government has seen fit to follow that idea in Part III. It will obviously assist the Government, and particularly the Public Service, which will be charged with certain responsibilities under this legislation. The committee, of course, as is logical, comprises an officer of the Department of Health, an officer of the Engineering and Water Supply Department, an officer of the Department of Mines, and such other persons as the Minister considers necessary. I think it would be advisable to have some representative of the agricultural users of underground water on the board.

Part IV deals with the members of an appeal board to be set up under the provisions of this Bill, to deal with any question arising on appeals by owners against the refusal of the Minister to grant a permit or any other matters arising out of the general licensing of bores and wells. I commend the Government for including as chairman of the appeal board a person with legal qualifications. That is desirable, particularly as this board will be able to hear evidence and will be the final appeal; there will be no appeal from this board to any other authority, except possibly by a long process involving an application to the Supreme Court for a writ of *certiorari*. Honourable members will be familiar with a previous case in that Court involving the Town Planning Committee.

Clause 47 provides that it will be an offence if a person fails to comply with a duty imposed upon him under the legislation and, as is usual in this type of legislation, for a continuing fine, because it is obvious that this type of offence could continue from day to day; so it provides for an additional daily fine of £5 for every day the failure continues. That is similar to the provision under other Acts, such as the Companies Act. Subclause (3) provides that if a person against whom an order is made fails to comply with it the Minister may do the work and recover the cost from the defendant as a debt by action in court. This gives the Minister the right to undertake work which he considers vitally necessary and the execution of which has been delayed or ignored by a landowner. In conclusion I sound a warning regarding the curtailment of the unlimited freedom we have had in

being able to put down a well or sink a bore without having to ask anyone's permission. I also sound a note of warning on the possibility of the whole State coming under the jurisdiction of the Minister in this regard. Although difficulties and hardships may be imposed on individuals, we must look at this legislation broadly in the interests of the community as a whole, having in mind the future development of the State and the increasing need we shall have for the industrial, agricultural and horticultural use of water. We must make sure that this natural asset is preserved as far as possible, and that the Appeal Board and the Advisory Committee do what they can to alleviate any injustice that may occur.

The Hon. Sir Frank Perry—Did you find any reference to depth of wells in your researches?

The Hon. F. J. POTTER—No. As I said earlier, just to dig a hole in the back garden to get water would be a well within the meaning of this legislation. The Bill will stringently control the physical means of getting water, such as the digging of wells or the sinking of bores. Once water was procured undoubtedly it would become the property of the person using it subject only to any restrictions in the permit. I support the second reading.

The Hon. C. R. STORY (Midland)—I rise with some diffidence after hearing the speech of the honourable member who has just spoken. As one with a lay mind, I am somewhat in trepidation. I have always thought that the practical lay mind played a big part in the Parliaments of the world, and if I can add anything at all in which honourable members will be interested, we can allow our legal friends to get us out of any tangles that may arise later. I believe that the Bill is necessary. I spoke on this subject in the Address in Reply debate and emphasized the need for legislation along these lines. The Bill is most important from the point of view of the use of underground waters, but far more important from the point of view of the misuse of these waters. These natural deposits do not belong to the present generation alone, but are the heritage of our citizens of the future as well. We have done absolutely nothing to create them; nature has done that for us over millions of years. A little selfishness and lack of knowledge on the part of a few individuals could easily rob this country of one of God's greatest gifts, namely, water. I do not intend to give details regarding our underground water supplies, because I did that in my Address in Reply speech. If any honourable member should like to know what I said on that occasion it can be found on page 219 of *Hansard*. The principle contained in the Bill has my unqualified support. The definition of "well" in clause 4 is most important, and is as follows:—

> "Well" means well, bore, hole, excavation or other opening made for the purpose of procuring a supply of underground water or for drainage, together with all work constructed or erected in connection therewith.

This Bill challenges the rights of the individual to a greater extent than any legislation introduced in this Chamber since I have been a member. I call attention to clause 5, which provides:—

> The Governor may, by proclamation—
> (*a*) declare that any part of the State defined or indicated in the proclamation shall be a proclaimed area for the purposes of this Act.

I think that where possible Parliament should keep its hands on the reins of its legislation. I believe that any provision should become operative by regulation so that Parliament would have an opportunity to disallow any provision made under the Bill if it was thought proper to do so. Mr. Redman, a former Clerk of this House, once supplied an explanation regarding the difference between "regulation" and "proclamation" in the following words:—

> A regulation is disallowable by Parliament pursuant to the Act under which such legislation is made, or to the Acts Interpretation Act, but a proclamation made by the Government is not so disallowable unless the Act under which the proclamation is made provides for its disallowance by Parliament, as in the case of the Stock and Poultry Diseases Act.
> It is, however, the inherent right of Parliament to pass any resolution and if in its opinion a proclamation should be annulled it is competent for Parliament to pass a resolution that an address be presented to the Governor praying His Excellency to annul such proclamation, but there is no legal duty on the Governor to revoke it.

Therefore, I am in favour of matters under the Bill being dealt with by regulation. Clause 6 relates to the notification of wells. In his second reading explanation the Minister had this to say:—

> Not only has there been a great increase in the use of underground water for farming, industrial and ordinary purposes, but the introduction and widespread use of septic tanks has added to the demand. Problems of effluent disposal have also grown from this factor as well as the discharge of industrial waste.

It would appear that every septic tank in a proclaimed area would come within the provisions of the Bill, and would therefore be notifiable. I can readily realize the need to control the disposal of harmful effluent and factory waste through deep bores into the natural water-bearing aquifer, but I consider it most unnecessary to include in this category the household septic tank soakage well, which I think this legislation in its present form will cover. The Minister made special reference to the septic tank problem, and he mentioned that the Gawler River area is likely to be proclaimed to come under the legislation early. From the *Groundwater Handbook* I learn that at the Weapons Research Establishment at Salisbury, which is in the Gawler River area, the depth of water in the basin is from 340 feet to 357 feet, and in the metropolitan area the bores range from 200 feet to 500 feet. It would appear to me rather unnecessary to bring in household septic tanks as the danger of pollution to the main aquifer, which is the main source of underground water, is slight, and it would create unnecessary office work to have every septic tank well in a proclaimed area registered under the provisions of this Bill. In the average household of four persons two gallons of water is used for each flushing, and allowing five flushings a day for each the consumption amounts only to 40 gallons; add another 60 gallons for baths and ordinary household sullage and it amounts only to 100 gallons a day that has to be disposed of. I find it difficult to see how this small quantity will unduly affect underground supplies and I ask the Minister to consider exempting household systems, or any others, which comply with the Health Act.

The Hon. F. J. Potter—They do in Queensland.

The Hon. C. R. STORY—And it has a hotter climate, of course. The Health Act lays down clearly what must be done in respect to septic tanks; the size of the system, the length of the outfall and the type of soakage disposal wells, and I ask the Minister to consider exempting these things so that the provisions of the Health Act may be maintained. Clause 10 provides that a permit shall remain in force for two years, but may be renewed by the Minister on application. I think it would be better if it provided that a permit shall remain in force unless lawfully revoked or varied by the Minister. To have to review a permit every two years unless there is some change in conditions will lead to a paper war between the department and the people concerned, who, after all, are the ones that will have to make this thing work. Two years seems to be an unnecessarily short time for a permit to remain in existence. Powers are given elsewhere in the Bill for the Minister, "At any time upon receipt of information that certain conditions are not being carried out" to vary the permit, so I do not see why everybody must renew his permit every two years.

At first glance I thought clause 12, which relates to the transfer and variation of permits, was rather harsh and that it would further complicate and slow down land sales, especially those involving Crown leases, for whereas the Minister of Lands has now to give permission for the transfer, henceforth it will be necessary for the Minister of Mines to give permission for the transfer of the water permit. However, upon reflection I see that it is quite necessary, especially as the trend is towards the subdivision of larger areas. This provision will stop speculators from stating, falsely in many cases, that an assured underground supply of water is available. Instances of this form of salesmanship have come to my notice in recent months, and I think members might reflect on this for a moment. Imagine what could happen if a 640-acre farm on the Adelaide Plains near Gawler were suddenly cut into 10-acre blocks to be used for intensive culture—and this is happening frequently. If every one of the new owners put down a bore and tried to pump water at the rate of 5,000 gallons an hour—which is not a terrifically great volume—it would result in 320,000 gallons an hour being pumped. To supply the equivalent of 2in. of rain it would be necessary to draw nearly 2,000,000 gallons of water from the underground basin every six hours, whereas probably before the subdivision two bores existed on the property to provide stock water and supply a few acres of irrigated pasture. This provision, although at first glance it seems to be unnecessarily restrictive is, in my opinion, most necessary to protect both the buyer and the future supply of ground water.

Clause 14 deals with the restriction on fresh applications after a refusal, and I feel that this is a little harsh. If land is transferred by sale a provision should be made whereby the new owner may apply again for a permit before the expiration of two years. I think the period should be 12 months because the owner or occupier in the first instance may

have refused to do certain things that the Appeals Board had told him to do, whereas the new owner may, in the opinion of the Advisory Committee, have a legitimate reason to sink a bore, not necessarily for the same purpose as the original applicant.

Clause 18 (2) contains the fangs of the Bill, and it is in the provisions of subclauses (*a*) to (*e*) that the real protection under this Bill lies for the preservation of the State's underground water supplies. Clause 21 lays down that the Advisory Committee shall consist of (*a*) an officer of the Department of Health, (*b*) an officer of the Department of Engineering and Water Supply, (*c*) an officer of the Department of Mines, and (*d*) such other persons as the Minister considers necessary. While the Bill is still in this Chamber I would like the Minister to exercise the powers provided under this clause and appoint two other people to the board at once, namely, a practical representative of industry and a practical agriculturist capable of putting the outsiders' point of view to the committee in order to provide a link with the people who have to operate the bores and live with them. Part IV deals with the setting up of an Appeals Board to be known as "The Underground Waters Appeals Board," which is to consist of a person qualified as a barrister and solicitor who shall be chairman; a qualified engineer, not being a person employed in the Mines Department of the Public Service; and a legally qualified medical practitioner experienced in bacteriology. The composition of this committee is probably the most important part of this legislation as its powers are, to say the least, sweeping. It has power to affirm, vary or quash any decision or direction appealed against, or to make any other additional decision or direction as it thinks fit. Clause 33 (3) states:—

> Every notice of appeal shall be served on the Minister not more than 14 days after the appellant is served with notice of the decision or direction appealed against.

It appears to me that 14 days is altogether too short a period for the average person in a proclaimed area, and it should be made one month. A notice served by post—as is provided—may be addressed to the person to whom the notification is desired to be given, and it is deemed to have been effected at the time at which such notice would have been received in the ordinary course of postal delivery to such address. If that person happens to be away from his home or does not collect his mail for a few days he may have only four or five days left in which to lodge an appeal; in all probability a man on the land would need some expert assistance in preparation of the data for an appeal, and therefore I think he should be given a longer time. After all, there is not such a great urgency in this matter.

The Hon. A. J. Melrose—It could be longer than a month.

The Hon. C. R. STORY—If we make it much longer no doubt the department will be accused of delaying certain things at its end; we cannot have it both days. If the time for the lodging of the application is to be extended the department cannot be expected to hurry the decision and I think 30 days would be fair enough. With regard to clause 47, which appears under Part V of the Bill and deals with offences, a person who fails to comply with the duty imposed on him:—

> Shall be guilty of an offence and liable to a fine not exceeding one hundred pounds, and to an additional fine of five pounds for every day on which such failure continues.

Provision is also made that the Minister may himself do the work and recover the cost of so doing from the defendant as a debt by action brought in the name of "the Minister of Mines." It appears to me that £5 a day is an excessive penalty to impose on somebody who may, for financial or some other reason, be unable to comply with the order. As the Minister has the power to do the job and debit it I think this House should at a later stage consider whether that penalty of £5 a day is not excessive.

The Hon. F. J. Potter—Penalties of that type are rarely imposed.

The Hon. C. R. STORY—They are usually imposed in the case of cranks who just will not do things.

The Hon. F. J. Potter—But such penalties are rarely executed by the courts.

The Hon. C. R. STORY—They are probably there as a protection. In this Bill frequent mention is made of the "appropriate form." I do not know how many forms are required, but I imagine there will be a paper war. I can visualize a situation arising where one water operator meeting another will be inclined to say, "How is your form?", because there seems to be a lot of forms to be filled in. This legislation should be administered by regulation so that honourable

members may have a chance to examine the way in which it will operate. I support the second reading of the Bill and will again raise certain points in Committee, when I will take whatever action I consider necessary after having heard the Minister's explanation.

The Hon. Sir ARTHUR RYMILL secured the adjournment of the debate.

ADJOURNMENT.

At 4.15 p.m. the Council adjourned until Wednesday, October 28, at 2.15 p.m.