TRANSCRIPT OF EVIDENCE

given before

THE ROYAL COMMISSION APPOINTED TO INQUIRE
INTO THE CAUSES AND ORIGINS AND OTHER MATTERS
ARISING OUT OF BUSH FIRES IN VICTORIA DURING
THE MONTH OF
JANUARY, 1939,
held at

MELBOURNE

on

MONDAY, 27TH MARCH, 1939:

PRESENT:

HIS HONOUR JUDGE STRETTON, Royal Commissioner.

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MR. GREGORY GOWANS, appeared to assist the Commission.

MR. R. R. F. HARDY, appeared on behalf of the Forests
Commission.

MR. A. R. KIRSO, appeared on behalf of the Melbourne and
Metropolitan Board of Works.

MR. W. BLAITH, appeared on behalf of the Forest Officers
Association.

MR. A. D. HARDY, appeared on behalf of the Victorian Branch
of the Australian Forests League.

MR. W. SHIRKON, appeared on behalf of the Bush Fire Brigades
Association.

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MR. KIRSO: If Your Honour pleases, reading over the transcript of
the evidence I gave, I might say the performance of the
shorthand writers was very good; but there are some places
where, possibly my fault as much as theirs, there are
odd sentences that should be remodelled. I feel that
there will be no objection to those alterations, on the
part of any person, when they are made clear. If you would
agree and everyone else agrees, the easiest way to save the
time of the Commission would be for certain pages to be
altered by me, put in and retyped, and issued in substitution
of the others.

THE COMMISSIONER: I believe the best thing would be for you to confer
with the other Counsel concerned. If they agree you can have
the pages retyped or altered in any way you like.

MR. KELSO: Very well, Your Honour.

MR. BARBER: Are they large alterations?

MR. KELSO: No, not generally; just odd paragraphs, but it is so hard to
alter them on the spot. I feel quite sure Mr. Barber will
make no objection to the alterations when he sees them. If
there are odd ones they can come before the Commission.

ROGER F. STEVENS CODE, Sworn and Examined:

MR. BARBER: Your name is Robert Stevens Code, and you are Senior
Inspector in the service of the Forests Commission?—Yes.

You are in charge of the Western Division?—Yes.

I believe you joined the Forest service in 1900 and have been District
Forest Officer at Macedon, You Yang, Rushworth, Shepparton,
Bendigo, Beaufort, Central Gippsland, Castlemaine, Daylesford,
and Stawell?—Yes.

You were appointed Inspector of Forests for the Western Division in
1925?—Yes.

Perhaps you would just tell us first of all roughly what are the bound-
aries of your division?—Starting from the You Yangs near
Geelong, across to Macedon Marsh, on to Macedon, from Macedon to
Trentham, across to Daylesford, then across to Mt. Cole on to
Stawell embracing the Cresplains, then to St. Arapiles, on to
the South Australian border embracing all the districts on
the south of that line.

There seems to have been an alteration of division boundaries a couple
of years ago. Mr. Hayden's division has had the western portion
excised from it. Has your division also been altered?—Yes.

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In what way?—Previously, I used to do Maryborough, Tarnagulla,
Bunyoli, Bealiba, St. Arnaud, Cuyan, and Hildura.

I believe a new division— the North-Western Division— was created
and consisted of portion of your Western Division and Mr.
Hayden’s Northern Division?—Yes.

Perhaps you would start off by telling us the extent of the 1939 fire
season in your division, the number of outbreaks and so on?—
83 fires occurred in reserved forests and protected forests.
The total area burnt over was 130,630 acres.

What is the total area of forest and crown lands in your inspectorate?—
2,000,790 acres.

What was the percentage burnt?—Nine per cent.

THE COMMISSIONER: Would that be the biggest Inspectorate in the State,
or how does it rank?

MR. BARBER: Is yours the biggest inspectorate?—As far as I know it is.

What was the forest conditions to the fire hazard in your division
prior to the fires?—There was practically every type of
forest represented in my division, except those peculiar to
East Gippsland. The forests may be classified in four main types:

Firstly, Box iron bark and redgum forests. This is really an
extension of the northern district type of dry forests. Under-
growth is light and fire hazard very low. Redgum occurs on
swamps and flats, usually in park-like stands with grass.
Unlike the Murray redgum forests these areas are not subject
to flooding.

Your second type is messmate and stringybark foothills?—Yes.

With gum and peppermint, these forests constitute a consider-
able part of the division, particularly in the vicinity of
Ballarat, Tombat, Heywood, Casterton, Cobden, and Wansley-
dale. Generally speaking, these forests, being usually
accessible have been exploited over a long period and are now
heavily stocked with pole and re-growth timber. Undergrowth
consists of bracken, wattle, grass-tree and other scrub, and
varies from dense to light. These forests occupy country within
the 25 inch/35 inch rainfall belt, with long dry summers. There, as
often happens, the cover on exposed, northern and western slopes,
leading to higher country is of this type, these forests with
their highly inflammable scrub and fire-carrying bark constitute
the main fire hazard in the division. Grazing interests in
forests and adjoining unoccupied crown lands, together with
settlement holding unimproved lands of similar type, set fires in
dry windy weather to clear up undergrowth and to secure fresh
herbage. For settlers fire is the cheapest agent for clearing
up unimproved areas. The laws against fire lighting are little
understood by the average settler, who takes no steps to find out
the conditions under which he may be allowed to burn, therefore
these fires are set secretly and no measures are adopted for
their control. For these reasons fire protection operations
of a systematic character have been developed extensively in
recent years in forests of this type.

What is your third type?---Messmate and stringy-bark mountain forests.

Forests of this type comprise the Grampians, Mt. Cole,
Tretham, (in the Wombat Forest) and northern slopes of the
Optays. Species include blue gum, grey gum, manna gum,
messmate, brown stringy bark and inferior species. Under-
growth is generally heavy with bracken, wattle, etc... Rain-
fall in these localities varies from 35 to 45 inches.
Generally speaking these forests at higher elevations and
enjoying heavier rainfall are highly productive of valuable
milling and pile timbers. While their liability to fire
is undeniable, it is recognised the threat to their security
is almost entirely marginal, that is the danger of fire
coming in from outside. In this connection settlements
within and adjoining forests of this type constitute a
constant menace.

What fire protection measures have you designed in that type of forest?—
—We have provided ready access to all parts of the forest, to isolate the forests from the marginal hazard, and to break up any fire which may occur in the forest.

Your fourth type is the mountain ash forest which, I presume, is confined to the Otways?—Yes.

What have you to say about those?—These forests are closely comparable in topography and constitution to those of central Gippsland. The threat to these areas lies in the semiarid country to the north and west, a great portion of which is privately held either by occupiers or absentee, and is generally in a dirty and unimproved condition. The protection of such areas therefore revolves itself into the isolation of the ash belt from the stringy bark country which menaces it. Except in the most abnormal seasons it is barely possible to start a fire in ash country, and such a fire, if started, does not gather headway with sufficient rapidity to make suppression difficult.

What is your general policy with regard to fire protection?—Firstly, adequate reading of reserves to give speedy and ready access to all outbreaks of fire. Secondly, water storage adjacent to roads and fire trails, preferably on high levels. Thirdly, quick detection of fires by means of mounted fire patrols and lookouts which must be linked up by telephone connected to district headquarters, forest huts and camps. Fourthly, adequate experienced forest labour in the summer to fight fires. Fifthly, strip burning along roads and fire trails. Patch burning of inferior timber and scrub land to the north and north-west of its valuable timber belts. Sixthly, construction of fire trails and footpaths to serve as connecting tracks between roads, particularly in mountain country, and lastly, the
provision and proper distribution of adequate equipment with special provisions for the use of mobile power pumps wherever possible.

(Continued on page 197E).
With regard to your red gum forests, what types of protection work do you carry out?—There is a succession of thinning of young trees, which is governed by progress of growth. This work may be extended over a period of from ten to twenty-five years. All debris caused by thinning operations is stacked and burned. In open red gum areas, matured trees are felled for milling. All trees unsuitable for milling are subsequently utilized for railway sleepers, fence posts, etc. When all marketable timber is exploited, the areas are closed against grazing for a period to assure good seedling regeneration. I may say that through all these operations, the stacking and burning of tops is insisted upon and is done by the licensees.

Under supervision?—Under the control of the Forestry Officer and his staff. That is, in most cases, a foreman supervises the work, and the District Officer visits the area periodically, say, once a fortnight or once a week, and he insists on that work being carried out.

You have told us, in describing the types of forests, that your box ironbark forest and your red gum forest are not very dangerous from a fire hazard point of view, so that I presume that extensive and expensive fire protection work would not be justified in these forests?—No.

And the matters you have told us about are sufficiently to ensure safety in these areas?—Yes.

Were these methods effective in the red gum forests this year?—Yes; we had no fires in these red gum forests this year.

What about your box ironbark forests, the fire hazard in this type of forest would not be high there, I presume?—No, it is similar to the Northern District. The area is patrolled by fire guards and forest officers, and then there is the employment of nucleus gangs during the fire season—small gangs which can be called upon when required to take charge of larger gangs—and all these men are picked and

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experienced men. Then there is the construction of dams to provide water storage during the long, dry season.

Were these methods effective?---Yes.

To come now to the stringy bark peppermint forests, known as the Creswick type and the Haywood type. What about the Creswick type, in the first place?---In the case of the Creswick type forests, thinning out of the young trees is carried out under licence. All tops, etc., are burnt by the licensee. There is a complete road and water supply system. Forty-gallon drums are provided where the dams are some distance apart, and patch burning is carried out in the inferior timber belts. Strip burning is carried out along all roads and fire lines. Lookout towers, connected by telephone to the district headquarters and local quarters, are provided where necessary. Water pumps and water drums, mounted on utility trucks, are standing by on fire danger days.

Have you more than one lookout tower in that area?---We have something like fifteen lookout towers or lookout points. They are not all towers.

Are they continuously manned during the danger period?---Yes, during all danger days there is a man on duty.

And he is connected by telephone line to the appropriate headquarters?---To the nearest headquarters and to other quarters.

In the stringy bark peppermint forest, you do a certain amount of thinning out of the young trees there?---Yes.

You burn the debris?---Always.

You regard the thinning out, provided the debris is burnt, as a fire protection measure?---It is of great assistance.

I understand, that, in this area, you employ men experienced in fire fighting to form the nucleus of the gangs?---We have gangs working during the danger period during the summer months in the most accessible portions of the forest, so that men

can be picked up readily and taken to bush fires.

In regard to your second sub-division, in connection with the Haywood type of stringy bark forest, what about that?---The work is carried out there on the same lines, except that the thinning operations there are performed by forest employees, principally by relief labor. Saw milling is extensively carried out. The tops are burnt by the miller. Salvage cutting in partly cut out areas is performed by the forest gangs, and all tops are burnt by such employees.

Salvage cutting is carried on in areas that have been milled out, with the exception of poor trees that have been left?---Exactly.

In these cases, you employ gangs to clean up the areas?---It is done in conjunction with thinning operations. Milling forests and leaving isolated trees is not a good practice. They have to long butt them --- that is to get the marketable timber out of them --- so that the areas can be closed for a period.

You have something to say about the top disposal in the Wombat milling areas?---For a long while I have found that millers in that district were inclined to do all the burning with one match; in other words, they set fire to the heads and let them go without limit. We arranged to do the burning by men experienced in that work, and we charged one penny per one hundred feet of super timber to cover the cost.

THE COMMISSIONER: Was there any objection by the millers to that charge?---Not that I know of.

Would there be any objection to the general application of that principle?---I understand there was a little objection in the Kyawill district.

There will not be objection here, at any rate.

MR. BARBER: You started that system in the Wombat area and found it successful?---Yes.

And you extended it gradually?---Yes.

You went to tell us something about your views on the development of
fire prevention methods?---Yes. For some time I was rather dissatisfied with the slow progress achieved in the development of fire prevention methods, and the entire lack of standardization. I felt that there was urgent need to overhaul and modernize the existing fire policy. With that end in view, I made certain suggestions to the Commission in 1936 regarding water storage and fire fighting, and also reading. I followed that up with another report in March, 1936, asking that the Commission should allow me to experiment in a district where the fire hazard was high, namely, Scaradale. That proposal was proceeded with almost immediately after receiving approval.

Can you produce copies of these reports?---No, I cannot. I can produce copies of plans and estimates.

Well, the plans and estimates will probably be all that is required.

MR. GOWANS: I should like to see the reports. Are they not available?---The plans are here.

MR. BARBER: All you want to do is to submit the Mt. Cole plan and the Otway East plan?---This system was started in the Scaradale district.

You started the scheme in the Scaradale district, and when it proved satisfactory, you extended it to the Mt. Cole and the Otway East districts?---Yes, then to the Bellarat-Greswick area.

I have a plan here showing the strip burnings and the general reading. The scheme was then extended to the Otway East district, on to Heywood, and then to Mt. Cole.

The Otway East district is difficult mountain country, is it not?---Yes, it is.

Would need to be a modification of the plan to suit that district?---Yes.

Now, what about the Proclamation. What are your views about that?---I consider the Proclamation has been rather a nuisance.

THE COMMISSIONER: To whom?---To the forest people. My reason for
saying that is - well, take the Otway area, for instance, when you can do a certain amount of strip or patch burning, you are debarred because of the Proclamation.

MR. BARBER: You can always give yourselves a permit?—-No, I do not think so. If you break the law of the land, you cannot expect others to keep it.

I agree, as a matter of policy that would not be right. In fact, you obey the Proclamation?—-Yes.

THE COMMISSIONER: You are allowed to issue permits for burning; you can give permits to settlers, or anybody else?—-I do not think that that is a practice that should be carried out by the Commission. If you question a man lighting a fire, and he says that the Forests Commission is carrying out burning, you have very little to stand on.

MR. BARBER: You have power to burn under the same policy, but you do not do so to any extent?—-That is so.

What do you think should be the policy adopted regarding the Proclamation period?—-I think that, instead of embracing the whole of the state, it should be applied to only certain areas where the fire hazard is high at a particular time. With modification, I think it could be worked to apply south of the Dividing Range and north of the Dividing Range.

That is, different periods for the Proclamation for the different areas?—-Exactly. You can burn in the north early in the season, whereas you cannot burn early in the season south of the Dividing Range. In the Otway area it is difficult to get a burn, in a normal year, until January, February, and sometimes March.

What about the actually acute danger periods during the month of January?—-In my opinion, it would be a great benefit if we could create a black-out for January and February for the whole of the state.

How do you find the co-operation with the local people; how do they
co-operate with you; how do they react to your co-operation?---In some districts, very good; in other districts, they will not turn out right. Where we have volunteers, in many cases they work well; and in other cases, they just come out for what they can get.

Do you encourage bush fire brigades?---Yes.

How do you do that?---The Commission supplies them with equipment when they are near a forest. The forest officers attend meetings of bush fire brigades and assist in forming and organizing these brigades wherever possible. They co-operate with them at fires. Whenever possible, we help them and they help us.

How about forest boundaries, when they abut on private property?---That is as regards fire hazard?

As part of the co-operation?---Well, we have found co-operation very good in some districts. The farmers have turned out and assisted our men to burn strips along the forest, to protect their own properties, of course, to keep fires from going from their properties into the forest. We have found that quite a good policy in many places. In other places we have given permission to clear fire breaks along the fences, and, when new fences are erected, we give permission to clear fence lines. That is, they clear a line along the fence?---Yes, about six feet along the fence.

And they fell any leaning trees?---Exactly.

Have you carried out protective strip burning at the request of individual landowners and communities?---We have.

Have you done much of that?---It has been more pronounced within the three last years.

THE COMMISSIONER: What do you mean by protective strip burning; where is the strip burnt?---Inside the forest.

How far inside the forest?---It varies from one chain to three chains. What is the length and width of the strip?---The length of the strip...
is usually a mile to two miles — it varies according to the class of country, and the width is from two to three chains.

Do you think that is a sufficient protection?—In my part of the country, I think it is, Your Honour. It is done adjoining grass lands.

I suppose there is a difference where you adjoin grass lands?—Yes, there is a difference.

If a forest continued some distance within the boundary of your neighbour, that might constitute a greater danger than with mere grass lands?—Yes.

I suppose there are still some belts of forests within your area that present more danger through fire escaping, than would be the case if grass lands continued up to the fence?—Generally speaking, in that class of country, if there is timber on private property, it is usually fairly clean on account of grazing or through being cleaned by settlers.

MR. BARKER: In regard to volunteer fire fighters, do you consider volunteers should be called upon to assist in fighting forest fires?—I have no hesitation in recommending payment for the services of such men.

Does that system work well so far as your area is concerned?—I have found it works excellently.

You have not found any difficulty such as is experienced in other districts, in that payment is rather a temptation to some people to see that there are fires to be paid for?—Generally I have not.

It is not a general payment; it is only in certain cases where men have given long and useful assistance?—In many cases.

That does not apply to members of the volunteer brigades?—So, it does not apply to them.

THE COMMISSIONER: On the question of payment, there is some new award, is there not, under the Federal Arbitration Court, which covers fire fighting activities.

MR. BARKER: That is the A.W.U. award, silvicultural section. The
Forests Commission has responded to that award. Perhaps it it would be a good thing if I were to obtain a copy for Your Honour's information.

MR. KELSO: The Board of Works is exempt. We entered into an agreement which virtually covers the same terms in relation to forestry work. We carry workers' compensation ourselves. The reason why we are exempt is that our terms and conditions have been better than those of the award in the past, and the Unions have never pressed for a change in that connection.

THE COMMISSIONER: I am told the rates are thought to be rather liberal.

MR. BARBER: The Tasmanian representative at a hearing in regard to which I have some knowledge, pressed very hard for the elimination of this from the award, but the late Judge Borthridge nevertheless included it. I shall obtain a copy for Your Honour's information.

(No witness): Referring now to your own employees, and not volunteers, have you had any very large amount paid for overtime for fire fighting?--I cannot exactly say. I know a lot of money was paid for overtime in respect of the Oway fires.

THE COMMISSIONER: Does it run into hundreds or thousands of pounds?--I do not think it runs into thousands of pounds.

MR. BARBER: Do you remember one man in a district being paid £22 for a fortnight's work?--No.

Very well. Turning to another matter, grazing, what have you to say. Deal first of all with the red gum and other open areas?--Grazing red gum areas is of an advantage generally.

Why is that?--It keeps down the grass and prevents fire from starting.
THE COMMISSIONER: Do they not burn for feed in these areas?—No, it is a different type of country. In red gum areas, the forest floor is usually clean except for grass.

That is not so in the hill country?—I cannot say.

Can you name an area for example?—The Wochlpoor area, commonly called the Blueblock.

That does not convey anything to me. Where is that?—That is eighteen miles from Cavendish, and then you go to the Brimpaen Post Office.

(Continued on page 1382)
MR. BARNES: Would the conditions be similar in a clean ash forest?---

I have always been under the impression that if the Department were allowed to purchase stock and graze them on these areas, it would be of advantage in keeping down the scrub and rough grass.

For the Department to do it itself?---Yes, after clearing.

Has it ever been tried?---Not that I know of.

There would be objections to private graziers being allowed to do it?---Yes.

What about areas where the grazing value is fairly low and the fire hazard is fairly high? What about grazing there?---I should say that, from a forest point of view, it should be totally eliminated.

For instance, in dry mountain forests and water catchments?---Yes, particularly in water catchments.

Is that for any particular reason other than the reasons we have heard before?---Giving a man a licence to graze sheep on that particular country is equivalent to giving him a licence to burn it. He must have green feed for his sheep and the only way to obtain it is to burn the rough scrub.

Have you any preference between leasing and grazing on agistment?---I think that is a matter of indifference.

There is no advantage?---Not in that rough country.

What about top disposal?---We have assisted in most cases - there are one or two cases where we have not - on the lopping of the tops, and the burning of them in safe weather, except in ash country in the Otways, where the damage from running fires in burning operations would more than offset the minor risk in allowing the tops to remain until the winter rain had rendered them no longer inflammable.

I suppose that in the Otways one winter is enough to place the tops beyond the fire hazard?---In two or three months after a tree has been felled, you cannot find the top. You can find the log but not the top.

What has happened to it?---It rots away and is covered up with bracken or scrub.
THE COMMISSIONER: Why do you think that if cattle were run in some of
the hill country by the Department, it would not be necessary
to burn for feed? Would they be better educated cattle?—
We would grass them for two or three months and then take them out.
Cattle in the Osage Forest would trample down the rough scrub
and eat off the wire grass. They keep the tracks open and tread
the scrub down to a certain extent.

Do you think that would have any real effect in cleaning up a forest?—
I would not say cleaning up. My contention is that grazing
would keep the scrub down.

How would you clean up the forest in the first place?—A light thinning
can often be carried out. I had 400 acres of mountain ash
treated experimentally. The wire grass was pulled down from the
trees and the treetop that had come up with the mountain ash was
felled. That area was set light to on a damp misty day and the
fire went through it. Wire grass is very inflammable, so much
so that the fire travelled so rapidly that it did not damage the
ash trees. The result of that experiment was a dense growth
of wire grass and of coarse scrub with it. After two years,
you could hardly walk through it. I contend that if cattle
had been grazed there, they would have prevented the wire grass
from climbing the trees and would have kept the tracks open.

How high does wire grass grow?—Up to 10, 12 and 14 feet up a tree.

How high will it grow from the ground?—When it comes up fresh, it grows
to about 1 foot high and then leaves off until it gets something
to climb up. As soon as it starts to climb, the cattle take
no further interest in it.

What happens to it then?—Every year there is an additional accumulation
of dry litter under the wire grass. The grass dies back and
accumulates in the form of dead wire grass underneath the
green top. As soon as it is lit it goes up like powder.

How would you keep a forest clean, or perhaps you would not keep it clean
for your purpose—that is to say “clean” in the sense in
which the word is used here, free of scrub and undergrowth? —
In my opinion the best forest is the one which never has a
fire in it — what may be called a "dirty" forest.
If you wanted to keep it clean, how would you do it, assuming you wanted
to keep a good part of the timber uninjured? — I assume you
are referring to mountain ash.
Yes, start with mountain ash? — The only way I can see to keep it
reasonably clean is to graze cattle.  I maintain that the
thinning of mountain ash is not necessary from a forest point of
view because it is the only eucalypt we have that thins
itself naturally.  Therefore the less cutting and chopping
in such a forest the better.
What do you do in a messmate forest? — The only way to keep that clean
is by thinning and what I would call light or controlled burning.
It is necessary to keep the canopy almost perfect in order to
lessen the growth of the natural scrub. In fact, a messmate
forest with a good canopy grows very little scrub.
You would combine perfecting the canopy with light burning? — Yes.
Say you go into one of the forests as they are today with some places
very dirty and not a very good canopy and a sparse sort of
growth.  How long do you think that by leaving it to itself
it would take to form a canopy and stifle the undergrowth by
natural means? — In a messmate forest, it would take from
15 to 25 years to form a canopy.
Having formed a canopy, how long would it take to get the floor clean
by that natural process? — In 35 years it would be almost perfect-
tly
clean in a messmate and stringy bark forest.
And that means that in the meantime there would be two major
disastrous fires? — Yes.
Where do we go then? — If you have your forest floor clean by controlled
burning, you will not get a disastrous fire.  We have proved
this year that we can hold the messmate, string bark forest
in the worst of years.
You would not eliminate all burning from the forest? — No.
But you would like to do as little as possible in the interests of safety?—I realise, and I think all foresters do, that constant burning in a forest will eventually denude the forest of marketable timber. I have in mind that the burning of a forest cannot go on forever. A forest policy has to be a long-sighted policy, and if you are going to burn, burn, burn, you exhaust the humus from the soil and the seed supply, until eventually the forest floor becomes barren. After rain, the humus is washed down to the gullies and the result is about barren ranges covered with bracken which is the only thing that survives continual fires.

Although you want to do everything possible to preserve the forests, you would not adopt the policy of closing them up and letting nature take its course?—That cannot be done.

You would lose them in the meantime?—Undoubtedly. If you do not take the precautions, you cannot hold your forests. We have some very large forest areas in Victoria, and they include both valuable and poor belts. Nature seems to provide means of protecting the good timber by providing poor timber for patch burning and resting in a proper way to keep out fires. I would confine burning wherever possible to the inferior timber belts and try and keep the valuable timber free from fire.

MR. BARBER: Even in the inferior belts, you do not advocate the complete burning of them?—Not the whole of them.

THE COMMISSIONER: We have been told that we should let nature take its course, but one of the courses of nature seems to be to have raging fires. That width of burn do you have?—It would vary from 3 to 5 chains. In some places there may be 10 chains.

On the plan of Glen Park block, Cabbage Tree block, in the Parishes of Bellarat and Creswick, the areas in red represent burning in what is thought to be the inferior timber country, and those burnings are from 3 to 5 chains in width?—Yes.

You have a forest more or less in compartments with your burning?—
The working plan is drawn out according to those compartments.

Is that the practice now?—It is. It is not complete but the red sash represents areas actually burned.

Does the map show areas yet to be burned?—We take the two sides of a road alternatively. We burn one side and two years later the other side, and we keep shifting backwards and forwards.

We had a gentleman here the other day who said he would not allow a fire to be lit in a forest but would grow a lovely canopy and then all would be well. What do you think of that suggestion?—It would have been all right one hundred years ago, but now unfortunately we cannot do it. We have inherited a point of view from our ancestors. They had to clear the land and they regarded every tree as an enemy. Unfortunately we still have many people who think that way.

Mr. Barnes: I think you have already said that burning had always been done by millers until 1907, but you then insisted on a system of burning of tops by Departmental employees the cost being met by a surcharge. What about other operations in milling?—All other operations are carried out under licence and all tops are stacked and burnt by the licensee. That is insisted on.

With regard to firewood cutters, we have quite a lot of licensed men working in the stringy bark and eucalyptus forests during the winter, and those men cut and stack their tops throughout that period. Very often they burn the tops green off the axe. That, of course, is the perfect system. They have a small fire, they put a bough on it and the heat goes up gradually.

What about the disposal of mill waste?—Edgings, bark, off-cuts, and general waste, not used in the fire box, are burned in a fire pit which should be at least one chain distant from the mill shed. Generally there is a tramline from the saw bench to the pit.

Have you insisted on that provision in the mills in your area?—In almost all cases.

1936.
The Commissioner: Do you feel that you have the right to insist on certain
measures being taken by the miller, or do you think there
is a legal doubt about your power to do so?---Where in the
past a miller would not carry out the instructions of a
forest officer, he has been warned that his operations would
be stopped, and his license recommended for cancellation.
You have never heard any question raised as to whether you have the right
to enforce conditions?---Only in the forest regulations.
Have you heard it referred to as a legal problem?---I have not.
Do dugouts arise in your country?---Not to a great extent.
If you thought that a certain mill ought to have a dugout and there was
a condition to that effect in the lease or licence, would you
insist on it being done?---At what I considered a dangerous
place, I would.
You would think you had the right to do it?---If we had the goodwill of
the miller, there would be no difficulty.
Suppose you had not that goodwill?---I do not think we could insist.
Why?---Because I do not think we have the power.
Who told you that?---I do not know who told me, but I am under that
impression.
In practice you would make him do it, and you would not care much that
the law was?---I would take that attitude.
When did you hear the theory put forward that you have not the power to
insist on dugouts?---From memory, I cannot think of anything
that specifies dugouts in sawmills' licences and conditions.
Do you think you have heard it for the first time since this Commission
started?---It has certainly been more spoken of since the fires.
Do you think you heard of it before the fires of Friday, the 13th?---
After the 1926 fires, I think the Commission took steps
to try and insist on millers providing dugouts in the
Gippsland district. It has never been done in my district.
Was it said then that there was legal doubt about the Commission's right to insist? Have you heard about that? I cannot say I have.

Had you heard of it before the recent fires? I had not.

It came up after the fires As far as I know.

MR. BARRER: You have not been much concerned with dug-outs? I have not.

Do you think the Otway sawmills should have dug-outs? Prior to this fire I did not think it was necessary. I only know of two places where I should think it necessary - Haydon Bros.' mill on the Barwon, and Anderson & Sivak's mill on the West Barwon.

After these fires, you have changed your view as to the desirability of dug-outs That is so. We did not lose any lives in the Otway fires. The conditions there hardly justify insisting on millers providing dugouts.

Apart from mountain country, you do not think they are necessary? I do not.

Do you suggest that sawdust should be burnt in a firebox or effective retort, and is there some difficulty in securing suitable designs? Very great difficulty.

Do you disallow burning of sawdust in the open? We do not allow it at all in the open. A man must have an adequate supply of water handy to put out any fire that should occur on the sawdust dump.

An adequate supply of water is important? Most important, in my opinion.

Have you insisted on that in the mills in your area? I do not know of a mill in the danger zone that has not a fair water supply.

You have something you wish to say about access to sawmills? Yes.

I think every sawmill should have a good road leading to it, and along such roads all dangerous trees should be felled.

That should be insisted on.

As a safety-of-life measure? Yes.

THE COMMISSIONER: What do you think of the suggestion that the mills
should be taken out of the forest; is that practicable or desirable?——Circumstances change cases. In most cases, from the forest point of view, it makes very little difference where the mill is located, provided the millers are prepared to utilize all available timber. I do not think you will lessen the fire hazard very much by removing the mills while still having the fallers and other mill employees working in the forest.

There would be fewer women and children and other people there?——Yes, from that aspect it may be desirable.

And very valuable property is comprised in the mill itself — machinery, buildings, and settlement. That would not be in the danger zone if it were not in the forest?——It would not.

It would make life and property safer, but what would be the cost?——

I think the cost would be prohibitive.

(CONTINUED ON PAGE 1990)
WITNESS (Continued): I know that in the Heywood district where there are mills on private property the exploitation of the marked stands has been so poor that we have had to follow up iron to exploit the timber left behind before we could close the forest. There is an old adage: it pays to cart sawn timber but it does not pay to cart logs. That means actually that they do not like carting the sawdust, waste, and that sort of thing.

MR. BARBER: You were to tell the Commission something about thinning and cleaning up in the forests as of fire protection benefit. I think you put it that it is a fire protection measure, inasmuch as it provides for all tops and debris to be disposed of. Have you anything further to say on that aspect?—Yes, I am in agreement with thinning of stands of young forest where it is messmate or other eucalypt, with the exception of an ash forest. Thinning and cleaning is absolutely essential, but to my way of thinking such silvicultural operations should not be undertaken until a thorough system of fire protection is established.

Why is that?—Because if you thin out a young forest at great expense but do not take precautions against the forest being destroyed, when a fire comes along it burns up the whole of your assets. Is there anything further you desire to add before you are cross-examined?—I do not think so.

THE COMMISSIONER: How long is it since you instituted the policy of road the forest for motor traffic around the Mount Cole forest?—We started road at the end of 1936, but at Mount Cole we started the work eighteen months ago.

Did instructions for that work come from the Commission, or was it a suggestion made by somebody else and approved by the Commission?—That originated from my suggestion which was made in 1936 and was carried out under the approval of the Forests
Commission. In other words as soon as I got the approval of the Commission I carried on in every district as the money was made available.

That is the roadburning plan?—Yes, and each road in each area acts as a strip burning area. We follow along the road and burn.

Was the roadburning policy being carried out in other forest areas?—I can only speak for my own inspectorate.

You only want to speak for your own inspectorate, but will you tell me what you know about the others?—I know about the forests in my own inspectorate.

Have you not discussed it with other Forest Inspectors?—I understand the roadburning system has been carried out quite extensively.

Since when?—That I cannot say with any degree of accuracy.

Do you think that idea originated at Mount Cole?—I think it actually originated from the suggestion I made in 1936.

Do you think that if it is being done elsewhere that you set the example?—Yes, there is no question that prior to 1936 the forests were not roaded.

I suppose the inspectors hold conferences and collaborate with the Commission?—Yes, we are summoned to conferences, very often in Melbourne.

Who indicates that you are going to talk about—-the inspectors or the Forests Commission?—The Commission draws up a syllabus and we discuss it at our conference.

Are you encouraged to study the methods of fire fighting, or lessons that may be learnt from other countries where there are similar forests and similar problems?—Yes.

How have you studied them? Are you given any assistance in your studies?—We gather information from Western Australia, N.S.W., and South Australia.

Western Australia is entirely different from Victoria, is it not, and the same would apply to South Australia?—Exactly.

In N. S. W. conditions are somewhat similar?—Yes, but you gather some
notable facts from all these places, and they are readily applied.

Are any officers ever sent abroad to gain experience or to pursue studies, or anything of that sort — either the younger men or the older men? — I understand the Chairman went to South Africa and Mr. Gay went to the United States of America on forestry matters. Some other staff men have gone to N.S.W. and Queensland on various conferences.

The lesser officers have not travelled as far as the United States of America or South Africa? — No.

They have only made local tours? — That is so, but it is quite unusual for an inspector to get an opportunity to tour Victoria, let alone any other State.

According to that you would think that the Forests Commission would frame the policy all the time and would instruct the inspectors, rather than to listen to what you have to say because, having travelled and imbibed all this knowledge, they would be in a position to inform you rather than for you to inform them about things? — It should be so.

MR. SLATER: Arising out of what Your Honour has asked I desire to ask some questions. Having made no examination of forestry conditions in other States or New Zealand, are you in a position to say what areas are under the control of inspectors in other parts? Are there analogous positions to yours in other States? For instance, in N.S.W. do you know if the state is divided into areas which are under the control or supervision of inspectors? Are you familiar with conditions there? — I cannot say that I am.

I am trying to ascertain whether you can give the Commission any idea of the areas under the control of inspectors in other States? —

If they are controlled by inspectors?

Q: . . . THE COMMISSIONER: Let us take that for a start. Take, for instance, a man in your position under any other State Government.
would he have 2,000,000 acres to look after?—I have no
idea on that.

You have enough local troubles without looking for the troubles of
officers in A. S. W., is that it?—Yes.

MR. SLATER: Arising from Your Honour's question I asked that question
in order that you may become familiar with the information
they get in relation to the practices in other States.

THE COMMISSIONER: I should like to know how they are named and other
matters in connection with their work.

MR. SLATER: We have information on that aspect that will be submitted
later. In Victoria the areas under the new control of
inspectors are greater than in other places. (To witness):
You cannot help us on that aspect?—I am sorry I cannot.

Do you feel that you have ample permanent staff for the area under your
control and supervision?—Under present conditions we have
sufficient permanent staff.

MR. SWINDON: You are a member of the Bush Fire Brigades Committee and
you were the first Chairman of that body?—Yes.

On one occasion I think you spoke very strongly at that Committee on the
need for steps to be taken to give the Brigades the opportuni-
ity of undertaking presuppression works. Can you give us
any method you suggest whereby the brigades should have
powers to carry out those presuppression methods?—Yes. I
think the volunteer brigades could be authorised to take
precautionary measures at the beginning of each season, such
as strip burning, the burning of some of the shire roads,
thus disposing of grass and stuff there, and also preparing a
general plan to meet emergencies during the advancing summer.

You have always found the brigades willing to co-operate with you in your
area?—Quite.

You said that you were in favour of the Proclamation being divided
whereby the north could be separated from the south. Was

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not that done about 1935 at the request of the Bush Fire
Brigades Association?—I think it was.

The proclamation came into operation in northern districts about one
month earlier than southern districts?—Yes.

Do you think that practice could be broken down into districts, whereas
instead of only being applicable to two districts it would
be made applicable to a number. You could take the streams as
possibly being at a later date, or do you think two divisions
would be sufficient?—In my opinion two divisions would be
sufficient and would cover all that was necessary.

MR. KELSO: Certain questions arise about taking mills out of the forests.
Is it a fact that Sanderson's mill at Bell's Gap has been
burnt out three times?—_No._

How many times has it been burnt out?—Once, to my knowledge.

I was informed that it has been burnt out three times.

MR. GOBANS: I have the file here if you want it, Mr. Kelso.

MR. KELSO: I shall take it as an assumption. If that is a fact, and if
Simnett's mill at Erice has been burnt out three times in a
short number of years, would that not be a justifiable reason
for placing those mills in a place where they would be free
of that danger? I suppose that in your experience you have seen
mills that have been burnt out. Do not you think there is
justification for their being brought out of the forests?—
In the two cases you mentioned it may be so, but generally
I do not think so.

You think in spite of that that you would prefer the advantages, if any,
of keeping them in the forests?—Yes.

I am a little puzzled about some of the matters you put before the
Commission. There is, firstly, the question of getting rid
of the heads. You say that in your area that if the heads are not burnt by the millers the Forests Commission
does the work and charges royalty. Is that done at Mount
Coles?—No, it is not.
Does the miller clean up his own heads there?—Yes, in conjunction with our foreman. The miller does the burning and the foreman does the supervision.

That means that the miller does the work?—Not always, because the foreman often assists him to do the work.

If that a one man or a two man job?—A miller might have four or five men there and the foreman will instruct them on how to do it, when to stop and when to continue burning.

How much of that work is done by the Forests Commission at 100 a hundred?—Thousands of acres.

Where?—At Trentham and Tawell.

Is any such work done at the Otway Forest, which is one of your biggest forests?—Yes.

Is the work done there?—It is not done under the surcharge.

Listening to your evidence I appreciated that what should be done is in accordance with what you have said. We have had evidence before the Commission about what is in fact done in the Otways. You have two men under your supervision in the Otway Forest, Keaoro, Oldham and Irvine?—Yes.

Do you know personally that the areas under those men are both operated in the way you have said in relation to heads burning?—I have inspected those areas, and inspected them previous to the fire. I can definitely say that in most of the areas the tops had been burnt.

Does that apply in the mountain ash areas?—Not always in the mountain ash areas, but in most cases. At Henry's mill the tops were burnt in the mountain ash country.

Is that mill in Irvine's area?—Yes.

What Mr. Irvine said was that he would not burn the mountain ash heads if he could; is that wrong?—I am not responsible for what he said. In my opinion mountain ash heads are very hard to burn.

I appreciate that, but I am asking you about what Mr. Irvine said in his
practice, not what he ought to do. He said that he would
not burn them if he could because he wanted to save the timber.
Does that agree with what you think should be done?---Yes,
partly it does.

That Mr. Oldham said was that he could not burn the heads at all but
that he would if he could. Does that agree with what you
think should be done?---He could not burn the heads because
the Proclamation prevented him from doing so.

As far as the mountain ash in those two places is concerned it is fairly
similar in both cases. I refer to the mountain ash areas in
the Oways district under the control of Messrs. Irvine and
Oldham?---The areas at Oways East are drier than the areas
at Oways West.

That runs into the other area and the conditions merge?---There is a
difference in the rainfall.

The district around Mt. St. Isla is a fairly wet place?---Yes.

That is where Mr. Henry's mill is situated. Mr. Henry said he not only
burnt his heads but he could also get rid of them quite
easily at little cost - is that wrong?---No, as far as I know,

Then why do not the Forestry officers see that it is quite easy, if
Mr. Henry can see that it is done at one of the wettest parts
of the Oways?---Henry's mill is operated in a large way,
whereas the other millers whom we allege do not burn their
tops are operating smaller mills and have very difficult
country to work. I have walked down some of the gorges and
it has taken me 1½ hours to get back. The burning is not
insisted on where it is not necessary.

That is what you really say, that in some places it is not necessary?

MR. BARBER: I do not want to interrupt anybody during cross-examination,
and I cannot for one moment suggest that the questions are
not relevant, but they seem to be irrelevant to Mr. Kelso's
case and interests.

THE COMMISSIONER: I do not know yet but it would appear to me that
Mr. Kelsco is cross-examining on matters which cannot concern his case, although they are generally relevant to this enquiry.

MR. BARNER: I do not suggest that are not relevant.

MR. KELSO: I have two answers to that suggestion: my case is not solely connected with watersheds and I have already shown that I am interested in forest practice. I have stressed that aspect in the case I placed before Your Honour, that any condition that applies to the afforested areas of the State, if it is adopted as a matter of policy and a general condition that may apply anywhere near the areas with which the Melbourne and Metropolitan Board of Works is connected, may set up a condition such as occurred in January last. In that way the matter is definitely of interest to my Board. I have also shown that my Board suggests that it should be made compulsory to burn stubble.

THE COMMISSIONER: Where are they in your areas?

MR. BARNER: Mr. Kelsco is referring to specific areas in the Otway Forest which are about as far removed from the areas in which he is interested as one could get.

MR. KELSO: I refer to that merely for the purpose of ascertaining whether or not that is a policy of the Forests Commission. If Your Honour thinks it is a matter for further cross-examination but not for me, then I do not mind.

THE COMMISSIONER: I will not stop you if you think you have an interest, but I cannot see how a great deal of your cross-examination can be pertinent to your case. I have been wondering about it, but I have decided not to stop you.

MR. KELSO: When you heard my case involved the suggestion that in the interests of the forests the heads should be completely cleaned up I thought that would be clear.

THE COMMISSIONER: Would you say that the rest of the litter in other forests should be cleared up?

MR. KELSO: Certain types of litter which are natural to the forest
cannot be and it is not necessary to clear them up; but the litter that results from industry and which is far in excess of what nature can do, should be cleared up.

THE COMMISSIONER: Of course you are in a difficult position, or I should imagine you think yourself to be in a difficult position because you are very much opposed to burning. From what I gather you are even more opposed to burning than the Forests Commission, yet you find it necessary, in the conduct of your case, to lecture the Forests Commission for not burning. It is true that you excuse yourself by saying "We have an entirely different trust. Behave to maintain a pure water supply." And that is the difficulty of your position.

MR. KELSO: I do not feel that there is a difficulty. We who are interested in the forests endeavour to have certain things that are dangerous to them brought to light with a view to having them put right. I have felt all along that it is definitely relevant to the Board's case in that way, and I am quite prepared to be guided by Your Honour. I can leave that aspect of the matter.

THE COMMISSIONER: I will not guide anybody in this enquiry unless he is obviously wrong. I do not want anybody to be talking about the breeding of tadpoles, or anything like that. I do not want anybody to say they were not permitted to put the fullest possible imaginable case and I would not stop anybody as long as he was talking about bush fires and bush fire prevention. You are quite free and I will not interfere, but I wanted to know where you stood.

MR. KELSO: I can appreciate Mr. Barber's point.

THE COMMISSIONER: I can see your position and I do not think it is necessary to discuss it further.

MR. KELSO: I think I shall discontinue that line of cross-examination at this stage. The point is sufficiently appreciated and if there is a desire to bring out anything more along
those lines I am quite sure Mr. Cowans would do it. I do not feel in my leaving it it is entirely hostile to the Commission’s case.

MR. HARDY: One witness mentioned a particular matter in connection with sawmills in the forest and referred to the necessity for better protection from sparks from locomotives and sawmills. Can you advise the Commission on that point? The witness said that he had seen sparks from sawmills floating over the forest. He said that it was not very dangerous at that time, but at a dangerous period it would be a definite danger to the forest. The matter of spark arresters was mentioned.

THE COMMISSIONER (to witness): Do you think mill engines should be fitted with spark arresters so that sparks cannot escape into the forest? In the first instance do you know whether or not they do escape?---I do not understand what Mr. Hardy refers to.

He refers to a witness who said that in some cases sparks from sawmill engines escape from the mills or engines, but what I wanted to know is, do they escape?---Is he alluding to tractor engines or locomotives?

I think he means railway trains?---Provided they have spark arresters on the engines they are fairly safe.

MR. HARDY: What do you say about the mills?---I have never known of a difficulty to arise from sparks from the mills.

You do not know of any such trouble?---I have never heard of any.

Evidence was given by a witness who was rather emphatic about it?---I am only speaking from my own experience. I have never known a fire to start from sparks from an engine.

MR. COWANS: Would you tell the Commission the functions and duties of a District Inspector?---It covers rather a long list.

THE COMMISSIONER: Would you like to think it out, compile a list and hand it in after the adjournment, or do you think you could give it straight out?---I think I can give you a good idea.
of it at present.

MR. GOWERS: We want a general idea?—He is responsible for the Commission for all his actions; he is in charge of the staff of officers in his district and is responsible for the work carried out by that staff.

THE COMMISSIONER: Has he to decide what work is to be carried out, or when it is carried has he the responsibility for what is done?—Yes, he is responsible in respect of the duties—

I have asked two questions in one and you answer "yes"?—I mean he is responsible to the Commission for whatever work is carried out in the inspectorate.

That seems a strange sort of statement to me. Does that mean he is responsible for making some plan of work and seeing that it is carried out, or does he get his instructions from higher up and then have the responsibility of seeing that the instructions or directions are carried out—do you appreciate the difference?—Yes, I appreciate the difference.

An inspector is instructed from Head Office as to what is expected from him with regard to the control of the staff in his inspectorate and the work carried out by that staff.

(continued on page 2001.)
MR. GOWANS: Was there something that you wished to add about those

duties?—He has also to make special reports to the Forests
Commission on special questions. He would make a report
on all the timber on Crown lands that might be made available.
He has also to attend the hearing of cases at the Police
Court, when his officer prosecutes. There are, I think,
a hundred and two duties that have to be performed.

Can you tell me this: does the officer get instruction in the matter of
safety precautions around the mills and in the burning off
of heads? Does he get instruction from the General Office
of the Commission, or does the District Officer give them?—
My practice when visiting my districts is to visit a great
number of the mills personally. Then, if I see anything that
is out of order, I instruct the officer to have it rectified.

According to a file produced and put in evidence concerning the safety
precautions in mills, there have been plenty of letters
written to the District Officers, but with the exception of
one Divisional Inspector, there seem to have been no letters
written to Divisional Inspectors. Is there any reason for
that?—Not so far as I know.

In the file there are practically no letters written to you in regard to
any of these questions—the burning off of heads, or other
safety precautions. What is your recollection of the practice
of the Commission?—You mean the omission to send instructions
to me?

Do you get instructions from the Central Office about these things direct?—
—I am sure I cannot say.

But you must know whether you get instructions in writing about them—
about the burning off of heads, the clearing around mills,
dug-outs, and the disposal of waste and sawdust. Do you
get any instructions about those matters?—I have had
circulars drawing attention to the necessity of burning the
heads.

That is a general instruction?—Yes.

But when the Commission wants to know what has happened in your area, do not they apply to you, or do they go direct to the District Officer?—I get a copy of everything sent out from the Head Office.

Of every letter?—So far as I know of everything of importance, I am supposed to get a copy.

I suppose when the copies are endorsed to District Officers that is not a full statement of whom they are sent to?—I cannot say.

In connection with the matter of the disposal of heads, I see that a letter was sent on the 12th of December 1936, and attention to it was directed to Mr. Irvine. Did he report direct to the Commission on the 12th of December, 1936? You do not seem to have come into the picture. You have no consent to make, but what I wish to get from you is how far you have control over your District Officers, and how far do you intervene in those matters with which they get instruction from the Head Office?—I have had full control.

Has there been any communication between your District Officers and the Head Office of which you knew nothing?

THE COMMISSIONER: The Witness would not know that.

MR. GOWARDS: The Witness might have found out subsequently?—I do not know whether I can state a case of that description.

Has the matter agitated your mind or the minds of the other Divisional Inspectors, — that is, the question of the responsibility of District Officers to you or to the Commission? Have you been concerned about that?—No, I simply carry on. I see that the officers do right according to the regulations made under the Forest Act.

That is, so far as you know of directions from the Central Office?—As far as I know.

Can we take it that every action taken by the District Officer, or the
failure of the District officer to take action is known to
you and you accept responsibility for it?—Undoubtedly I do.
So far as you know, that is the position throughout the whole of Victoria?
—So far as I know.

If the District Officer fails to carry out the policy of the Commission,
the Divisional Inspector should be aware of that and should
be prepared to take responsibility?—That is the attitude
I have adopted.

From the point of view of timber, your area is a representative one?—Yes.
What has happened is this — Mount Cole was practically free of fire this
season?—Free from destructive fires. We had four or
five fires, but we put them out.

In the Wombat forest you had fairly extensive fires?—We had a number
of fires there.

Were you able to put those fires out as you put the fires out at Mount
Cole?—The majority of the fires came in from Macedon along
the highway and went along some distance before they struck
our reading system.

Have you developed the fire protection measures in the Wombat Forest as
fully as you have done at Mount Cole?—More so.

Have you been able to deal successfully in the Wombat Forest?—Until
this year, yes.

Was there any circumstance this year that made you less able to deal with
the Wombat Forest?—Yes, the lack of experienced men was one.

I think you told Mr. Slater that you felt you had sufficient staff?—I am
not speaking of the permanent staff.

Did you feel that you would like to have additions to the permanent staff
to meet the outbreaks?—No, I have already found that if I
have sufficient experienced fire fighters employed during
dangerous season, it is all right. The officer is able to
control the actions of those men. The staff is competent
to do all the organizing necessary to combat any fire or any
big fire that occurs there.
Does that mean your difficulty has been in getting volunteers?—No.

My difficulty has been in not having sufficient forest employees during the fire season.

That is temporary employees?—Up to the present they have been temporary employees.

At the beginning of each fire season, what steps are taken to get sufficient temporary employees to deal with the menace during the season?—The forest officer is asked to prepare a list of the number of men he is likely to require during the emergency fire season. This list is revised by me, and then submitted to the Head Office.

These requests were sent at the beginning of last season?—Yes.

And sent to the Head office?—Yes.

Were the requests acceded to?—No, they were cut down.

Did you raise any question about it?—Yes.

With what result?—The result was that, in one case, where I wanted thirty men I was allotted twelve. Subsequently I protested, and I got six extra, making eighteen when I wanted thirty.

Did you go into the question with the Commission as to the reasons for being unable to get the men you wanted?—I could go no further.

Why?—Because I had put in a strong protest previously and was told that I would be allotted six additional men, and that was the end of it.

Was that for the whole of your district?—No.

Which district?—The Bombala.

Did the same thing happen in regard to the other districts?—Practically all the other districts were cut down.

What about the Grampians District?—Yes, it was cut down.

And the Otway districts?—Yes, they were reduced.

That means that during the last fire season you were fighting fires with fewer men than you really needed, or rather, fewer than you knew at the beginning of the season that you would need?—With experienced men, yes.
You think that most other officers of experience contend that it is
experienced men they want to fight fires?—Exactly.
You were going to add something to your answer?—With experienced men, a gang of five is worth about thirty casualties.
You want leaders when you are fighting fires?—Yes, that is the secret.
Why could you not have these men?—The usual thing—funds were not available.
Apparently that is a very usual thing with you?—Yes, quite usual.
In order to review the fire fighting duties and to review the position,
may we take it that you had severe fires in the Gwamians
and in the Gways this season?—Yes.
Do you feel that in either of those areas you could have done more to meet
the position if you had had more tracks?—Yes, if we had
more roads and more men, we would have stopped the fires.
We have been speaking of the lack of men from the point of view of
suppressing the fires. How from the point of view of pre-suppression, could you have done with more men to put in
roads, dams and so on?—Of course, the road, track and the
making of dams are gradual processes. I never hope for the
expenditure to carry out that work in one, two, or three years.
I realise that funds are not available, and, therefore, the
longer the system is in existence, the more effective it
becomes.
Do you think that, if the system had been in existence longer, you would
have had a better chance of fighting the fires?—Yes,
certainly I do.
You told us that about 1936 you became dissatisfied with the fire protc-
tection policy and practice. Is that so?—Yes.
With what parts of the policy and practice were you dissatisfied before
1936?—The general practice did not go far enough in the
protection of the forests.
THE COMMISSIONER: What was the policy at that time?—I am afraid I
cannot tell.
Was there any policy?—The only policy of which I was aware
included petrols, the burning of fire breaks, and the provision of equipment, such as slashers, axes, etcetera, and I think, in more recent years, the introduction of the spray pump.

Of what year were you talking?

MR. GOWANS: In 1936.

THE COMMISSIONER: That was the state of affairs up to 1936?—Yes. What was wrong with the policy?

MR. GOWANS: Before the witness answers that question, I should like to ask him whether there was not plenty of publicity?—Any amount.

Even before 1936?—Yes.

Did you think much of it?—No.

I suppose you thought there was far too much propaganda and not enough fire prevention?—I wanted to get down to tin tasks, and do something.

Did you feel any dissatisfaction with the amount of money, time and energy expended on the preservation of forests as distinct from the propagation of forests; I mean the relative position of fire protection and the propagation of silviculture?—Yes. I felt that there was not sufficient money being expended on the protection of the silviculture works that had been carried out;

That was what I gathered from your evidence. You consider that it would have been better to preserve what you had rather than to build up new forests that might be burnt out: Apart from that generalization, can you tell us in what particulars was wrong with the policy in your view before 1936?—I felt that method of trying to combat forest fires was altogether out of date. I felt that we were using the same equipment as we used thirty-five years ago, without keeping in view the advancement of science to combat forest fires. That is where I suggested we should try to fight fires with water. To that end we should establish catchment dams, tanks and equip motor vehicles.
or other means of transport so that the fires may be beaten instead of raging away from the man. The fires should be quelled with water, the same as is done in the Metropolitan area of Melbourne.

Your view seems to be the same as Mr. Hayden expressed yesterday on the policy of the conservation of roads?—Yes.

How many dams have you in your district?—We have been getting dams and waterholes somewhere in the vicinity of one hundred. Many more are to be put in.

Very many more should be put in, in your view, to fight the fire menace?—With the funds available, we intend to put in more dams and re-enforce concrete tanks.

I think you have already told His Honour that you are in favour of more protective burn in strategic areas?—Yes.

And apparently you have endeavoured to carry out that policy so far as possible, but do you agree with your District Officer, Mr. Irvine, that you feel more could have been done?—I do. Our scheme was nothing like complete.

Does that apply to all your points equally?—Practically.

According to page 655 of the transcript, Mr. Irvine was asked "Have you been able to carry out patch burning fairly extensively?" He answered "Yes, but not as extensively as I would like". Then he was asked "What has been your difficulty?" and he replied "The difficulty has been money". Is that your opinion?—It would not be applicable to burning in certain areas country in the season on account of the fires breaking away.

Mr. Irvine also expressed the opinion that the plan that had been carried out to some extent in the Staves would need to be revised in the light of experience this year, because of the fact that more fires arose inside the forest areas than you had anticipated. What is your view about it?—The fires that burnt most valuable areas originated outside the blocks.
I understand that Mr. Irvine told us that, in spite of the fact that certain parts of the fire protection scheme had been put into operation in the East Gippsland district, none the less the fires which started outside leapt into your areas. Is that your view?—Yes.

Have you any ideas as to how the scheme will be extended to meet the state of affairs that existed in January?—We will have to extend the reading and put in cross-sections connecting the tracks, and also have re-inforced cement or concrete tanks on the ridges so that water will be available on the ridges, instead of having to go to creeks to get it.

It has been suggested that the necessity to carry out patch burning arises to prevent erosion and to provide some sort of covering for the floor of the forest?—I have considered that from a practical point of view where water is available.

But not from the point of view of patch burning?—I have not considered that.

We were told that in the Grampians district, which is part of your area, that no steps had been taken there from the point of view of fire protection, and that the floor were very dirty. Do you know them?—Yes.

What is your attitude towards carrying out fire protection measures in Crown land areas?—Where Crown lands adjoin valuable forests we have patch burning. Where Crown lands are worthless from a forest point of view, we look on them as a menace, and guard the entrance to the forest wherever it is possible.

Have you considered whether you had any right or duty to carry out fire protection measures away from the valuable timber areas?—Yes.

What has been your attitude?—The officers have always visited any outbreak of fire on Crown lands.

I am dealing with pre-suppression measures?—No, I have taken no steps in that area.

What has been your attitude; have you considered that you had a right
to do it?—I considered that we did not have a right to do it.

Where did you get that view?—The Forests Act gives the Forests Commission power over timber growing on proclaimed Crown lands. If we destroy the grass, we are liable to get into trouble.

Suppose you had no right in that area, would that interfere with anything except the interests of the Forests Commission?—Generally speaking, we are very sceptical about putting in roads on Crown lands. Most of the local land officers agree that whatever Crown lands can be utilized to protect the forests may be used, and they are willing to overlook anything that might be done.

Who is willing to overlook anything that might be done?—The local land officers. I am aware of the fact that the Forests Commission is sometimes required to put a road through Crown lands, and no objection is raised. They do not raise objection if we want to burn unlicensed Crown land.

You say that you have no right because of interference with grass. Did you peruse the Forest Act to arrive at that conclusion, or have you had instructions from headquarters?—I have had no instructions from headquarters about it.

Apart from what you have read of the Forest Act, has there been any kind of discussion between the responsible forest officers as to the right to carry out fire protection measures on Crown lands?—I do not remember any discussion from a legal point of view. The general forest practice in silviculture work is that when it comes to a Crown land belt it is a dead stop.

Then was it you first came to the conclusion by reading the Forest Act that you had no power to carry out that work?—I think somewhere about fourteen or fifteen years ago.

In 1905?—Probably.

Before the 1925 Forest Act came into operation?—It may be. I think the same clauses are applicable in the Act now.
Have you read the 1926 Act?—Yes.
And you are still of the same opinion?—Yes.

Are you quite clear in your mind that the Commission has no power to carry out these measures, or was it your view that it would not pay the Commission to carry out that work, or that the Commission did not have the money to carry it out?—Simply because I would myself not recommend improvements to be carried out on Crown lands that are liable to be selected at any moment, therefore the expenditure is thrown away.

Do you remember whether you recommended that to the Commission and found that it was refused?—I do not think I ever made such a recommendation.

You said you would not recommend it?—I would not recommend it.

You would not recommend it because of the possibility of land being alienated. Suppose the Lands Department undertook not to alienate any land for twenty or thirty years, would that affect your mind?—You mean that if a promise not to sell the land was made?

Yes?—I would like to see it in black and white.

That seems to be the thing operating in your mind - the fact that you would be throwing away these measures?—Exactly.

You do not remember the matter coming up for discussion at a conference?—No, I do not remember its coming up at any particular discussion that I can remember.

(LUNCHEON ADJOURNMENT).
MR. GOWANS: Prior to the adjournment, Mr. Code, I asked you several questions in regard to fire protection in your own district, and in that connection a report of yours, dated the 18th of February, 1936, on water storage in forest areas, has been supplied to me. Do you remember submitting that report?—

Yes.

If Your Honour pleases, I shall read this report in order that it might be incorporated in evidence. The report submitted by Mr. Code, and dated the 18th of February, 1936, is as follows:

"A great deal has been said and written regarding the prevention and erosion and storage of water by natural forest cover. I wish to stress the point that much of the alleged storage of water, as applied to the central and northern forest reserves, is incorrect and mythical.

In going over such reserves, it is the exception to find any visible water storage apart from occasional old mining dams, which are mostly out of repair and quite useless for that purpose.

The point I wish to make is the advantage of a plentiful water supply in the forest,

1. to assist in the prevention and suppression of fires;

2. to encourage evaporation, thereby increasing humidity, which means,

   (a) reduction in the rate of spread of fire;

   (b) better atmospheric conditions for plant and tree growth;

3. to increase the amount of available soil moisture;

4. to facilitate forest improvement operations by providing camps in suitable and accessible sites with a plentiful supply of pure water;

5. to provide water for cattle grazing in the forest;"
vi. to encourage bird life, thereby restricting the activity and spread of forest insect pests.

In order to bring this scheme into operation, I suggest that a survey be made in suitable districts, say Scarsdale (which is a notorious fire district), so that desirable dam and weir sites may be located and an estimate of costs be prepared. Data should also be given as to the cost of connecting these dams, wherever possible, with a gravitation system of service mains or pipes, with turncocks at intervals of 5 to 10 chains. A portable hose would have to be stored at suitable depots.

There is no room for doubt that water is the most successful element for the suppression of fire; therefore it is only reasonable to suggest that, when the organization of fire protection in valuable forest assets is in review, the storage of water should be made a primary consideration.

Should my suggestions meet with the Commission's approval, I will undertake to have the necessary surveys and estimates prepared.

N.B. During the recent relief activities, it was a most difficult matter to locate relief camps within reasonable distance of drinkable water*

(Continued on next page.)
On the same file there is a note, apparently made on behalf of the Chairman, as follows:

1. Thank Mr. Code for his valuable suggestion, which will be taken up at once.

2. Mr. Bone will bring before district officers for inclusion in plans of operations and working plan.

There is also a communication dated the 10th of March, to Mr. Code, Inspector of Forests, Ballarat: "In furtherance of an earlier communication having regard to the provision of water storage and reticulation facilities in forest areas for fire control and other purposes, kindly note that the Commission has approved the preparation of such a plan of works, with estimates, for the Seesdale Forest District. Will you kindly put this in hand and arrange to submit the programme in detail.

Mr. Bone: If I might interrupt, I should like to make brief reference to a circular contained in a bundle of circulars and instructions put in bearing on this matter. I am not sure whether I have not already read it, but in view of the fact that it relates to the subject under discussion, I should like permission to quote portion of a circular dated the 2nd. of December, 1936, as follows:

"Circular 692: To officers in charge of districts:

Please note that the Commission desires action to be taken by officers in charge of districts to provide a more adequate supply of water to be used for fire fighting purposes. It is considered that dams could be constructed at strategic parts of the forests at locations remote from the existing water supplies, which are readily accessible to fire fighters, and you are requested to investigate the possibilities of this scheme in so far as your district is concerned."

I am sorry to interrupt you, Mr. Gowans, but I thought it necessary to refer to this matter.

Mr. Gowans: That is all right.
MR. GOVANS: According to the statement of your evidence, furnished to me, Mr. Code, that report which I have just read was followed by a further report in March, 1936, which stressed the necessity for a more intensive policy of fire prevention and suppression, and which asked that certain areas be set aside for experimental purposes, notably the Searsdale area. Do you remember sending in any such further report?—Yes.

That report does not appear on this file, and I will ask Mr. Barber to have instructions made that a search be made for it. The report seems relevant, since it stresses the necessity for more intensive methods of fire prevention.

MR. BARBER: I will have that done.

MR. GOVANS (To witness): Arising out of that, one thing that strikes me is, that it was your view that no adequate scheme of fire protection had been evolved and put into practice. That was your opinion, was it not?—It was my contention.

Even before this time, have you, as divisional inspector, taken any steps yourself to see that a more adequate scheme of fire protection should be put into force?—Yes; I voiced my opinion at various bush fire conferences, and also I insisted on the necessity for carrying out protective duties prior to that report, such as adequate fire guard patrols, fire towers, and lookouts, connected by telephone to headquarters, fire breaks or what are now called fire lines, burning back from fixed lines where possible.

As far as you know, was that done only in your own areas, or was it part of the general policy of the Commission?—So far as I know and knew at the time, it was a sort of universal method adopted throughout the State.

Then what was the difference between that universal method as you put it and the new fire policy which you were asking should be put into operation?—I think the essential difference would be that I was asking for a complete reading system, and a water supply system whereby we would be enabled to fight
fires with up-to-date methods, such as pumps and water.

Were you insisting, as far as it was possible, that the matter of fire protection should be put more in the forefront of the Commission's policy?—Undoubtedly.

Coming on to the operations of mill owners in your district, you told Mr. Kelso that you were of the opinion that it was not desirable to burn off heads in the mountain ash forests in the Otway district?—Not as a general practice. My reason is that when a mountain ash reaches 150 feet long and it is felled, it knocks down a lot of scrub and fern-trees, and the head itself is a mere infinitesimal part of the scrub and debris which is knocked down.

You take the view that the lesser of the two evils is to leave the heads there?—Exactly.

Although you will agree that they cause some kind of fire menace?—The heads of the trees will not, because it is only a few months before the heads turn into wood particularly with the mountain ash which is a notoriously small-headed tree.

At all events, we may take it that practice as followed in the Otway district was followed with your full approval and you take the full responsibility for it?—I do.

We have also been told in the course of the enquiry that in general the conditions in regard to dug-outs were not in force in the Otway district. Was that done with your approval, and do you accept the responsibility for that?—With regard to what? Dug-outs?—Yes, well, I do not think I can be saddled with the responsibility for that. My contention is that within the Otway area there is not such danger to life and property as exists in the central Gippsland districts, because millers there have generally got a good outlet from fire, and another thing is that in times of bush fires — I do not care what
day it is, the men are warned. The men working in the
forests must know there is a fire raging in the forest before
it actually comes close to their mills.

Then what follows from that?—They get out.

If they have a good road to get out?—All the mills in the Otway area
have good roads or tramways leading out to the main highways.
Otway is interlaced with tourist tracks and bitumen roads,
and the sawmill roads are leading to these roads.

In the light of experience within recent times, and particularly during
the recent fires, will not the experience at Kerslake require
a revision of our views, particularly in regard to getting
away from these mills?—I think not, in that particular case;
I think sawmillers are quite well aware of the dangers arising
from bush fires, and they call their men out where necessary.
That is proved by the total absence of loss of life at the
mills there.

Would that not in many cases be a matter of good luck rather than good
judgment?—I do not think so.

You mentioned two mills earlier in the day, Hayden Bros.' mill, and
what was the other?—Anderson Mackie & Co.

What about the Armistead mill?—That is only about a quarter of a mile
from the main Lorne road.

This is a passage from page 928 of the transcript of evidence given by
Mr. Armistead: (Passage read from Mr. Armistead's evidence,
from "Have my steps been taken? down to "I should say so,
yes"). Do you think you would be in a better position to
judge than Mr. Armistead?—Judging by the result, I think
my opinion is quite all right.

It is only fair to say that in Mr. Armistead's case that the mill was
half on private land and half on Crown land. Would that
make any difference?—Not at all. Fires are no respecters
of boundaries.

And the Forests Commission would be no respecter of boundary lines if
it wanted dug-outs to be constructed?—I think it would.

It would have some regard to that.
If you had a mill half on private property and half on Crown property, you would still be able to enforce conditions?

Yes.

Have you ever heard of mill owner’s licences being cancelled for breaches of conditions regarding safety precautions?

No.

Not in the whole of your experience?

Not in the whole of my experience.

Have you ever heard of grazing licences granted by the Forests Commission being cancelled?

Yes.

For lighting fires?

Yes.

Where was that?

In the Lamangurah district.

Coming back to dug-outs, was it your view that it was the policy of the Commission to insist on dug-outs being put in at all mills?

Not so far as I am aware.

Do you remember the resolution passed by the Hardwood Millers’ Association in 1932?

Yes.

Do you know that they were of opinion that dug-outs should be installed at all mills?

I do not know of that resolution.

I think, if Your Honour pleases, at this stage I might put in these notes of a deputation which waited on the Minister of Forests on the 12th of February, 1932, to place before the Government certain proposals for bush fire prevention and control.

Mr. Galbreith, M.L.A., Chairman of the Forests Commission, and Mr. Gay, Commissioner, as well as Mr. Yelland, President of the Hardwood Millers’ Association, were present. These notes were taken and I shall quote them so far as they are relevant.

"Mr. Yelland read resolutions carried at a meeting held on 8/2/32 of district delegates representing Eriab, Wombat, and Soojes, Powelltown and Glidacroy, Terra Junction, Barburton, Bealesville, Alexandra and Hubboon, Forrest and Beach Forest, which are as follows:

1. That the sympathy of this Association be extended to all those persons who have suffered bereavement and loss of property in the recent disastrous bush fires."
2. That the President and Manager interview the Lord Mayor with a view to arranging representation of this Association on the Lord Mayor's Bush Fire Relief Committee.

3. That the Committee be formed consisting of the Hardwood Miller's Association, the Timber Workers' Union and the Forests Commission to meet the Minister for Sustenance, and request that unemployed mill workers only be given work on reconstructing forest tramlines, the cost to be paid from the Unemployment Relief Fund.

4. We recommend the erection of safety dug-outs on all sawmills and Forest Depots and suggest cooperation between employers and employees in order to bring about the immediate establishment of same."

..............EXHIBIT............EXHIBIT Mr. Notes of Deputation to Minister of Forests on 12.3.32. - File.

(CONTINUED ON PAGE GPS.)
MR. BANER: I should have thought hardwood millers would have been the best people to bring that about if they wanted to. It is a strange situation to have them asking for dug-outs.

THE COMMISSIONER: That raises something I wanted to refer to. I cannot understand why the timber workers have not been represented here. I should think their interests are most vitally affected. They have not been represented and almost to a man they have shown an extreme unwillingness to enter the witness-box. Some hardy spirits did so, but mostly one could not prevail on them to do so. They are the people most vitally interested and one would have thought, if one values life more than property, that they would have been represented. Have you any information on the subject, Mr. Gowan?

MR. GOWAN: I have no information except to speculate that these men are not at this stage in a position to offer any criticism. (To witness): You were apparently not aware of that resolution of the hardwood millers, but you were aware, were you not, that after the passing of the resolution the Forests Commission did become active in the matter of sending out instructions to forest officers regarding safety precautions, including dug-outs around mills?—Yes.

Do you remember whether you received a copy of a letter sent on the 1st October, 1936, to Mr. Irvine, who was a District Officer in the Gtway area. The letter stated, "Please note that adequate precautions are to be taken by all sawmillers to protect their mills from destruction by fire and to safeguard the lives of the mill communities, and you are requested to see that suitable breaks are prepared around each sawmill and that the regulation so far as the permanent water supply is concerned is carried out. Where considered necessary dug-outs are to be constructed to provide retreats in case of danger. Information is to be submitted in due course concerning arrangements made by each miller in your district in this..."
matter". You would receive a copy of that letter?—Yes.

Would you get a copy of the reply that was sent by Mr. Irvine?—I would not.

Is not that rather a defect in the system — you get a copy of the letter sent to him, but no copy of what is said in reply?—I think it is.

I suppose you would get a copy of another letter sent on the 12th December, 1936, to Mr. Irvine among others — "Please report as early as possible on the precautions taken by sawmillers operating on forest reserves in your district in connection with the preservation of the mill plant from destruction by fire and also the safety-guards adopted on behalf of the mill community. Your report should indicate the name of the saw-miller, the break prepared around the mill, the water supply and safety retreats, etc."?—I do not know whether I have received a copy.

I suppose you would not have had a copy of the letter written by Mr. Irvine on the 19th of December in reply to that letter?—No.

MR. GOWANS: This may be a convenient stage for me to put in the file from which I am reading.

............EXHIBIT ............EXHIBIT "J.J.")......File No.36/288, "Safety precautions at sawmills."

MR. BARR: Your Honour would direct perhaps that we should have access to the file. It is a current file?

THE COMMISSIONER: Yes.

MR. GOWANS: (To witness): I think we have been told that it is has been part of the policy of the Commission to make it a condition of mill licences issued since 1930 that dug-outs should be constructed. Is that your recollection?—Yes.

Sanderson's mill at Hell's Gap has been mentioned. Was there a dug-out there?—No.

And a considerable number of people, were, in fact, trapped there and had to take refuge in a barrel drain. Did you know of that?—I did.
Did you know that although the mill site licence there was issued in 1935 there is no condition with regard to a dug-out?—No, I cannot say that I did.

Would you be surprised to know it?—I think it was the usual condition that was inserted.

The Commissioner: Who draws up that document?—It is drawn up at Head Office.

Are you advised of the conditions attached to it?—I generally receive a copy of the statement sent to the sawmiller.

What is that?—A copy of the conditions governing the issue xxxxx of the licence—so and so has been issued with a licence provided he complies with such and such conditions.

Do you think you always received copies of the conditions?—Yes.

Annually?—Not necessarily annually, but when a licence is renewed or a new one issued.

Have you ever been told that it is your duty to enforce the conditions in the licences or leases?—I take it it is part of my duty to do so.

Would it be part of your duty in regard to dug-outs?—Only where it is necessary.

Where the licence is issued subject to a condition that a dug-out must be provided do you consider it your duty to see the licensee provides the dug-out? Is it followed up from Head Office to see that the conditions are complied with?—Not that I know of.

It is left entirely to the inspector?—Yes.

Have you to make a report annually or periodically regarding each lessee who is milling?—I make a report on every new applicant before he gets a licence, I recommend it or otherwise.

When he gets his licence and starts in the forest have you to report at any later date as to how he is getting on?—Not unless something goes wrong. I mean, if he is not complying with the regulations I generally first tell the miller personally.
If he does not then comply I report to Head Office.

Is he matter then out of your hands?—Not exactly. I wait for a reply
from Head Office before taking any action.

Suppose you hear no more about the report would you then think it was out
of your hands?—I would.

That would be a reasonable view to take. Have you ever had instructions
by circular to the effect that millers must burn their tops?—I think I have had such circulars.

Is that condition ever put in their leases or licences?—Yes.

If they are not doing it would they be reported to Head Office?—Not
necessarily.

It does not apply to your territory now, but it did?—If I found a miller
was not burning his tops when instructed by a district officer
to do so, I would visit him and warn him that if such and
such was not done by a certain date I would have to recommend
the suspension of his licence until such a time as it was done.
I have never had a great deal of trouble in getting them to
abide by the conditions.

Leaving yourself out of it altogether, what do you think of a district
officer who knows that tops are not being burnt and does not
insist on it, and does nothing about it. Would he be doing
his duty?—I should say he would be neglecting his duty.

Would the local inspector know that or would he have to rely on a report
from the officer?—Generally he should know it.

Is he supposed to go to these places personally?—Yes.

Mr. Gordon: Advertising to Sanderson’s mill site, when I saw the licence
it had no condition in it regarding a dug-out. Will you
accept my assurance that the letter of allotment did not have
anything in it about the construction of a dug-out?—Yes.

I see that in the statement of the Commissioner’s policy it is set out
“Letters of allotment subsequent to 1930 require millers
operating in dangerous country to construct dug-outs for
the protection of their employees and dependents.” Who
will decide whether the mill is operating in dangerous
country?—I think it is a question for the local forest officer and his inspector.

Do you remember whether you ever advertised to this in connection with Sanderson’s mill site?—No.

Did you ever get a report from the district officer about it?—No.

We have heard it said rather categorically that in fact all letters of allotment subsequent to 1930 have required millers to construct dug-outs. It would make a big difference if in fact that is subject to the condition that the district officer has to decide whether the area is dangerous?—It would.

And the whole strength of that statement depends entirely on whether district officers and their inspectors have in fact thought that areas in which mills were operating were dangerous?—Yes.

And in your district the majority of mill sites have been held by district officers and yourself not to be dangerous?—That is so.

So that in spite of the fact that the hardwood millers passed a resolution in 1930 advocating that dug-outs should be installed, and in spite of the fact that the Commission has made general statements that sawmill owners had to install dug-outs after 1930, the whole thing has been left to district officers to enforce?—Yes, after consulting with the sawmiller.

MR. BARBER: After all there is nothing to stop sawmillers putting dug-outs in if they want them.

THE COMMISSIONER: I see your point of view and it has occurred to me too. It might be said that when you allow them to go on to your property you are introducing a source of danger and therefore you should do something about it. I am not making a finding on the point, but am hastening to tell you one point of view. In every other form of business men are asked to take precautions that they do not take. There are all
sorts of elaborate regulations for erecting guards round machinery and in many places they are not observed.

MR. GOWANS: I am putting it from another point of view. No matter whose responsibility it was in the first instance, the Forests Commission has in fact adopted and assumed the responsibility.

THE COMMISSION: They have assumed it and then not enforced it in some instances.

MR. GOWANS (to witness): Have you seen it stated in the press since 1930, apparently on the authority of the Forests Commission officials, to the effect that mill owners are in fact required to provide dug-outs?—I have never seen it.

You have in fact advocated and used controlled burning in your area.

Do you consider that it is an effective way of preventing fire to slow burn in certain selected areas?—Yes, within forest margins.

Do you consider that it is feasible to get a light fire?—I not only consider it feasible, but I say it is possible and I have done it for thirty years.

Do you think that in those cases where you have done it it has led to any permanent damage to the timber?—You mean have I done it without permanent damage? Yes, undoubtedly.

In reserve forests?—In reserve and permanent forests.

MR. BARBER: Do you think that if there had been more burning of heads it would have had any effect on the intensity of the fires of January of this year?—No.

You do not think it would have helped?—Not a scrap.

I take it that the general rule is that copies of all letters sent by Head Office to district officers are sent to you?—Yes.

And I suppose that if you were interested in the reply you could ascertain what the reply was either from the district officer or from Head Office?—Yes, provided I knew it was in existence.

You get a copy of the original letter and if you are anxious to see
what the reply is you can readily find out, although the reply is not sent to you as a matter of course?---Yes, I think I could.

You were talking, again I think in the Otway, about a fire that had got behind your defences and burnt down to the sea?---Yes.

Is it not a fact that the fires that started outside your defences were got under control, but that fires were lit by individuals behind your defensive system? Do you agree with that?---I do.

You have no doubt about it?---No doubt at all.

During lunch time I understand you gave some more thought to the duties of an inspector. Would you like to amplify the list you gave before lunch?---A copy of the duties was drawn up by me and handed to you.

You wrote out a list of the duties?---Yes.

Do you agree that Henry's mill is in clear cutting?---Yes, practically clear.

Have they been burning tops?---Yes.

Other mills in the ash belt in that district are in bush that has been burnt over by relatively light fires?---Yes.

So there is now a fairly dense under-storey of young trees through those areas?---Yes.

THE COMMISSIONER: I have heard the expression "clear cutting". What does it mean?---It means that the miller takes 100, 200 or 300 acres and proceeds on a face to clear-fell everything.

There is no selection?---Yes.

Is that a forest where there are no seedlings?---Generally the seedlings in that kind of forest do not come through until after the milling operations.

MR. BARBER: In areas where there is young growth the burning of tops would result in heavy mortality of the young growth?---It would destroy large patches.

Assuming that Mr. Irvine refused to permit the burning of tops in the
latter places would you regard him as being justified or not?—
I would regard him as being justified.

THE WITNESS WITHDREW.

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HOBERT DUNCAN GALBRAITH/ Sworn and Examined:

MR. BARRS: You are an inspector of forests in charge of Gippsland District?—Yes.

You are not related to Mr. Galbraith, Chairman of the Forests Commission?—No.

How long have you been in the service of the Commission?—I entered the forest service through the New School of Forestry, Creswick, at the beginning of 1917.

You have been in Dunolly, Maryborough, Ballarat, Delatite, Orbost, Upper Yarra, and Niagara?—Yes.

That gave you an extensive experience in many types of country?—Most forest types.

When were you appointed to your present position?—I was appointed Inspector of Forests for the North-Eastern Division at the beginning of January, 1936, and was transferred in the same capacity to Gippsland Division in May, 1938.

What are your forest areas?—Reserved forest 1,111,093 acres; protected forest 3,926,600 acres, making a total of 5,037,693 acres, which represents approximately 32 per cent. of the State total.

How much of your division was burnt?—Of the reserved forest about 19 per cent., or 216,513 acres; of the protected forest 10 per cent., or 389,340 acres, making a total of 604,753 acres, or an average of 12 per cent.

How many out-breaks of fire were there in your division?—219 affecting both reserved and protected forest.

THE COMMISSIONER: In what period?—In the whole of the summer period from October, 1938, to February, 1939.

A good many would be burning simultaneously?—Yes.

What hope had you of attending to all of them?—It depends on the man supply.

What was it in fact?—In fact it was hopeless.
Could you not get sufficient men?—Not under those circumstances. It is no use getting a number of men to help you if you have not a number of trained men to lead them?—The man power was available, but it was not forthcoming. There was practically no volunteer assistance.

Cannot you pay fire fighters?—Yes.

Why did not you do that?—We had quite a large number of men on in the division attending to these fires, but you must have a certain number of trained officers with those men. We did not have the trained staff available.

That is what I suggested, that you must have men to lead them?—Yes.

Your complaint is that you could not get fire fighters?—I could not say we would get them because men are chary about going into that country.

Even if you paid them?—Even if we paid them.

Assuming you could get them, could you have received the money to pay all the men you wanted?—I am not in a position to say that, on the financial side of it.

Even if you applied for it?—Not altogether in connection with fire fighting.

If fifty fires break out within a couple of days in your area in weather which helps fires, are you at liberty to engage the number of men you think necessary to fight them?—Yes, I engage all I think necessary.

Apparently in a case of emergency, you could engage as many as you liked?—I have had no restrictions placed on me.

They would be paid?—They would be paid if I recommended payment.

Your trouble is you would not have men to lead them?—I have not the staff available to take charge of those men.

They may send many inexperienced men to their death if trained men were not sent with them?—I doubt if they would go. They would probably go in if they received payment, but probably they would stop in a safe place and possibly nothing would be done on the fire.

MR. BARBER: Perhaps it may be significant that on that point you have
figures which amount to an analysis of the fire situation and
showing the occurrence of out-breaks each month?---Yes, I
have those figures available.

They show how many fires were burning at the same time?---Actually fire
period started in September last year, because it was a par-
cularly dry year. There were five out-breaks that month.

THE COMMISSIONER: What were the causes?---I have an analysis of causes
later. In October there were fifty-one out-breaks; in
November, twenty-eight; in December, forty-four; in January,
the maximum of sixty-nine; and in February, twenty-two.

MR. BARBER: Of the sixty-nine fires in January, obviously you would have
more than one fire burning on the same day. Did they overlap
very badly in the week-end?---They did.

THE COMMISSIONER: What was the distance between the two fires furthest
apart?---It is hard to say, as they were scattered throughout
different districts in the divisions.

Would you say roughly ten miles or fifty miles?---Probably it would be
up to fifty miles, but I should not like to express an opinion
on that, as it would be a wild guess.

I understand that, but that distance is not beyond possibility?---No, it
is not beyond possibility to have these fifty miles apart.

MR. BARBER: Take the fire nearest to your western boundary and the fire
nearest to your eastern boundary, which is probably the coast?---
Yes, at Cape Howe.

THE COMMISSIONER: Fires may be burning on the same day on these bound-
aries, while at the same time other fires may be scattered
all over the place?---That is what actually did happen.

How is the district roaded; could you get to the fires?---Most of them,
but to some you could not. Some were in inaccessible
country, and the only way to get to them was on foot; Prob-
ably it would take several days to get through.
MR. BARBER: Have you figures available as to locality and origin of the fires, whether on reserved forest, Crown lands or private property?---Yes. On Crown lands there were ninety-seven outbreaks, which occurred on protected forest; thirty-six spread from private property, and three came from burning-off on railway land.

THE COMMISSIONER: How many fires got out to other properties?---On reserved forest, I do not know.

Once they go, they cease to be a worry, is that it?---No, they are followed right through to completion, irrespective of whether they are on reserved forest, protected forest, or private property.

Did a number get out on to private property?---Yes, there were some.

MR. BARBER: His Honour asked for causes of the outbreaks, can you give us the figures first of all for last season?---In 1938-39, an analysis of the two hundred and nineteen outbreaks from known or strongly suspected causes: grazing interests, including bona fide graziers in mountain country and what has been referred to as the back yard grazier, who is seeking a little grass for winter feed, eighty-six; spread from private property, thirty-one; deliberate lighting, twenty-four.

THE COMMISSIONER: What do you mean by that; graziers probably light deliberately?---Those directly responsible for the outbreak may be because of malice against a neighbour, which is one of the primary causes, or deliberate lighting of the forest so that the fire will get sufficient pace to sweep through adjoining property and make a good clean burn over private property adjoining.

MR. BARBER: Have you similar totals for the past seven years?---Perhaps it would be better if I gave the percentages, because the outbreaks over the previous seven years are in the percentages. In 1938-39, grazing interests or strongly suspected or known, 51.5 per cent.; spread from private property, 18.6 per
cent; deliberate lighting, 14.3 per cent; and there are a number of minor causes with small percentages. The figures for the previous seven years are: grazing interests, 19.5 per cent; spread from private property, 18.3 per cent; deliberate lighting, 18.2 per cent; tourists, sportsmen, etcetera, 16 per cent; miners and prospectors, 8 per cent; road and rail gangs, 4.3 per cent; forest licences, 5.3 per cent; railway locomotives, 1 per cent.

You had a bad fire year in your division last year; what was the condition of the forest immediately prior to last season?—The Gippsland division contains four principal topographical regions. These are, (1) the coastal plains and low regions in that belt, which comprise the major part of the division; (2) the foothills leading to the Great Dividing Range; (3) the mountainous country along and adjacent to the Great Dividing Range, and the more mountainous country in the northern portion of Eastern Gippsland; (4) a smaller belt known as the South Gippsland Highlands, rising to approximately 2,000 feet elevation.

The mountainous country in (3) rises from 3,000 feet to 6,000 feet elevation?—Yes.

There are different types of forest in those areas, are there not?—Yes. The major type is stringy bark, silvertop, which is the most expensive and covers the coastal plains, extending into part of the foothill country. The undergrowth in the particular forest type consists principally of bracken fern, dogwood scrub, and various species of acacias. One of the principal species of acacias, *Acacia melanoxylon* is the black wattle, which is scattered extensively throughout practically the whole of that series. The second is the messmate-gum type in the upper foothill ridge, and also extending into some of the mountain top areas. The undergrowth in that type is very

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similar to the undergrowth in the stringy bark-silvertop coastal plains region. The third is the mountain type, which contains both the white and red mountain ash, with a proportion of the messmate-gum type, extending into the mountainous country. Finally, at the higher elevations, we have the poor snow gum belt and grass lands. The undergrowth through the mountain type varies considerably. In the white mountain ash country, it approximates very closely to the typical which ash country of the Central Division. In the messmate-gum type, it varies from almost typical low country undergrowth of broken and dogwood, running into more or less clear forest floor at some of the higher elevations.

In the red ash country, it is fairly clear country, with grass between the trees, until finally it runs into the top country, where you get the pure grass lands. The fourth type is the Gippsland box, which is limited to the limey soils of Gippsland. There are other small areas of which the undergrowth is very low. It is principally good grass, with some sedges.

Is there any variation in the fire hazards in these forests?---Yes, the stringy bark-silvertop, the messmate-gum, and the Gippsland box types are all dry forest types, whereas the mountain forest is a moist forest type. Naturally, the fire hazard is greatest in the stringy bark-silvertop type, and that is due to a variety of causes. The principal causes are:

(i) the forest type is of a highly inflammable nature;
(ii) it is within the comparatively low rainfall area;
(iii) the natural undergrowth responds very quickly to the influences of hot periods of weather or dessicating winds;
(iv) the utilization of the forest is very incomplete in these areas, in that only the prime portions of the trees are utilized, the prime portion of the bole of the tree.

That is for economic reasons, and is distinct from what Mr. Hayden told us about in his area where practically the whole of the tree
is used?—Mr. Hayden has a market fort hat, but we have not. A fifth cause is that land settlement is incomplete. One of the principal reasons for the great fire hazard is the incomplete nature of the land settlement in those areas. The forests are surrounded and penetrated by uncleared or semi-cleared private holdings. Many of them are timbered, and many are very scrubby in nature. Again, for economic reasons, the land-holder resorts to the means that will give him the most rapid and extensive return at least cost, that is, by firing on the day when it will do the quickest job.

What do you say about the messmate-gum type?—In the messmate-gum type, we have practically the same type of fire hazard as exists in the stringy bark-silver-top type. There is very little difference between the two.

What about the mountain regions and the Gippsland box areas?—The mountain regions normally constitute a very low fire hazard, either due to the more moist conditions and higher elevations, or the more open nature of the forest. In regard to the box forest, the comparatively low fire hazard is due to the lack of undergrowth.

That did not stop those areas from being burnt this year?—In the box forests, it did, together with the precautionary measures we had to take.

What fire protection works have been carried out in your division?—The fire protection works have actually been laid down from three principal aspects, namely, (1) the early detection of outbreaks; (2) rapidity of ingress and egress to and from all parts of a forest area; and (3) confinement of an outbreak to the smallest possible area.

THE COMMISSIONER: How long have those principals been in vogue in the Forests Commission?—As far as I know, it is a policy of development, and it has been developed for as far back as I can remember in the Department. The works fall under two headings, firstly, those of a permanent nature, and secondly, those which are more or less of an annual.
MR. BARBER: Will you give a summary of the works of a permanent nature? They include the following works:— the construction of tracks, which, during the summer months at least, are negotiable by motor utility track, 635 miles; fire lines and trails, 174 miles; thinning of young tree growth and cleaning of the forest floor by burning debris, 76,000 acres; water conservation—construction of dams, 6 dams. That is a matter so far as Gippsland is concerned, on which, as a result of last season's experiences, we have gained knowledge, and that work will be followed up very much more than it has been previously. Gippsland is normally well watered and it has not been considered necessary to carry out water conservation very extensively. Up to date only 6 dams have been constructed. Two lookout stations are in operation, and they are manned throughout the summer months. Both lookout stations are connected by telephone line with District Headquarters, there being four and a half miles of telephone lines.

THE COMMISSIONER: What range of vision is there from the lookout stations?—

Up to twenty-five or thirty miles.

What is the area of that district?—One station is in the Bowa Nawa district, which overlooks the Bruthen district. The officer stationed there can see over portion of the Bruthen district, portion of the Orbost area, and portion of the Bowa Nawa district. The other lookout is in the Bruthen district, from which the operator can see the other portion of the Bruthen district, as well as portion of the Bowa Nawa district. There is an interlocking effect.

They do not provide complete supervision of the whole of your forestry area?—No, not at present, but we hope to increase the number of towers.

MR. BARBER: How long has this district been a forest district; does it go back to before the establishment of the Forests Commission?—I do not know when it was established, but
as far as I know it would go back to before the establishment of the Commission. It is one of the primary divisions in the State.

You mentioned the reversion that had been thinned of young trees growth. These works have been located principally in the stringy bark-silvertop type, as being the major type, both in extent and in economic importance in the division, although it has been extended to a lesser extent to the mountain forest type. The development of the work is still proceeding, and is being co-ordinated between divisions in the inspectorate. In addition, wherever practicable, that has been done with adjoining divisions. The works of an annual preventive character laid down prior to the last summer season were: firstly, controlled strip burning along tracks and fire lines, 106 miles. That fire spreading varied in width from two chains to fifteen chains.

Patch burning by the Commission's employees covered 7,645 acres. Patch burning by forest licensees of debris resulting from felling operations constitutes a further several thousands of acres, for which definite figures are not available. It is difficult to get anything approaching an accurate estimate of that work. The provision of special mounted patrols during the periods of fire danger amounted to twenty patrols throughout the division. They were mounted either on motor cycles or horses. Tracks maintained and improved amounted to 38,021 chains, while fire lines and trails improved and maintained amounted to 5,490 chains. Two lookout stations were named during the summer, and telephone lines mm between the lookout stations were maintained prior to the summer months.

How did those measures stand up to the crisis? They proved to be a decided advantage, particularly in the stringy bark-silvertop type, and undoubtedly, without those measures, many of the outbreaks that occurred would have become major conflagrations. We could not have handled them without the works.
Many of the outbreaks you have mentioned were caught early and put out?—

Yes, very many of them. I should say rather more than one half of the outbreaks occurred within or adjacent to those forest areas wherein protection works had been carried out; but only 8 per cent. approximately of the protected area was burnt over.

Can you give us some idea of the extent of the different outbreaks?

THE COMMISSIONER: I suppose other areas were practically 100 per cent. burnt?—Yes, but in those particular areas where fire protection works were carried out, thirty of the outbreaks did not exceed five acres in extent. Many of them were only a quarter of an acre, and they were caught before they had hardly moved.

At what time of the year were they?—Throughout the summer months; they varied considerably, but I have no figures to show when they occurred. They were at different periods throughout the summer months.

Did the whole lot go in January?—No.

A good deal of it is still left?—Yes; in fact most of the Gippsland country is left, and it is only the mountainous country that has been burnt in Gippsland. Practically all of the low country has been saved.

Is that so? I must have been in the wrong part of Gippsland for your purpose?—The Commission went through the Bruthen to Omeo area, and it missed most of the East Gippsland country. Around the Bruthen district, probably Your Honour noticed that there was no burnt country along the Bruthen-Omeo road until you got well up towards Omeo. The same thing applies to other areas throughout Gippsland.

MR. BARBER: According to the fire map, which probably is an exhibit, the main area burnt in your district was to the north and west of Omeo?—That is correct. There was also some of the protected forest in the extreme east of Gippsland towards the New South Wales border, that was burnt. The fires came in over the New South Wales border.
That is included in the area on this map of where the fires occurred.

In your area east of Ensay seems to have been not completely burnt, although there were small fires—only patches were burnt.

How did you succeed in localising those fires to such small areas?—Firstly, by the adoption of means of patrols by District Officers and the lookouts, and secondly, because of the fact that those forest areas are now becoming well subdivided by tracks which can be rapidly traversed in utility trucks conveying gangs of men. Thirdly, the patch and strip burning carried out along those tracks was effective.

This seems a convenient time to tell us your own policy of fire prevention in your area?—My policy has been in accordance with the general policy of the Commission with regard to this matter. It has been directed, in the first instance, towards a complete and full reading of the areas of forest to be given protection. Secondly, there has been the reduction of the fire hazard by means of controlled burning along the forest margins and within the forests themselves on selected areas. Thirdly, there has been the construction of water storages at frequent intervals within the forests, these to be on or in close contact with the roads and tracks. This work in particular is now in course of more extensive development, because, in previous years, there had been few areas which we regarded as being particularly dangerous from that point of view.

You always had plenty of water?—Yes, but this year has taught us a lesson. Fourthly, the construction of fire lines and trails has been undertaken to further subdivide the area. Fifthly, the provision of a series of lookouts with telephonic communication to ensure rapid detection and notification of outbreaks of fire has been undertaken. Sixthly, there has been a continuance of forest clearing operations, which tend to reduce the fire hazard.
Seventhly, there has been a co-ordination of these works between forest districts. The maintenance of an adequate trained staff for fire fighting during the summer months has been undertaken, while there has been the use of special forest patrols during dangerous weather. The development of these measures and works has necessarily been limited, and has a direct relation to the amount of money available to carry them out, thus a definite scheme of work is being evolved as funds permit.

Have you received full co-operation from adjoining landowners or communities in connection with marginal protection works or fire breaks?—No, in general we have not. There has been no co-operation between landowners and the Commission, except in a few isolated cases.

Is there any reason for that?—Yes. There is a general apathy until such time as an outbreak is directly threatening some private assets, and then co-operation is forthcoming until the danger is past. The co-operation is then withdrawn, when the fire is headed into the wooded hills, or something of that sort.

Has the Commission given any assistance to private landowners?—Yes, we have co-operated with them in not only marginal areas but in areas remote from forests.

Do you think that the co-operation, or lack of it, could be improved?—Yes, I think the lack of co-operation is due primarily to a misunderstanding. If there could be some means of combination of efforts, it would be better. That combination could be secured by more or less personal contact between the forest officer and the landowners concerned, with the mutual discussion of problems. If that were done, we would get a long way towards solving many of the difficulties that exist at present.

Do you think it would be of any use having the forest labour drawn from the local populace only?—Yes, I think that would have

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a great bearing on the subject. A man would have much more interest in his forest, if he knew he was going to have employment in it.

Do you think it would help if there was a more liberal application of the owner's right to fire for clearing purposes during a non-dangerous period?—Yes, I do.

(Continued on page 2059).
MR. BARBER: That brings us to the grazing. What have you to say about the relation of grazing contracts and the protection of the forests? In regard to grazing, my opinion is that all state lands should be used to their fullest capacity, whether for grazing or otherwise. In my division, I consider that controlled grazing could be carried on on the mountain grass land plateaux and the coastal plains. I maintain, however, that grazing on the steep escarpments of the foothill country is not generally desirable.

For what reason? Would burning by graziers cause erosion?---Yes.

The steep nature of the country and the fact that the stringy bark-silvertop type and some messmate-gum type carry a fairly large undergrowth. If a fire started there, it would sweep into the top country, and, vice versa, it would sweep into the lower country. There is also the erosion aspect which is a very strong consideration.

Have you any views on the King Charles's head subject - the Proclamation?---I consider that the Proclamation is far too inelastic. It should be made to operate on the basis of climatic and topographic zones, rather than a State-wide basis, and for the minimum period requisite in each zone. As the Proclamation stands now, it places hardship on many landowners. I know areas where, in the proclaimed period, it would be safe to burn, but the Proclamation prohibits that. We have to recognize the right of the landowner to burn when the conditions are safe. I think that during the proclaimed period when it is considered to be in the interests of the community, there should be a total black-out of all fires.

You seem to agree with other witnesses - the less rigid the Proclamation the better, but when there is a Proclamation it should be enforced?---It should be severe when it is proclaimed.

Have you anything to say about spring burning?---In my opinion spring burning can be a very dangerous practice. As an example, take this last summer. Many of the fires which occurred in
the hot months actually resulted from the earlier spring burns which the normal rains did not put out. We had not have the rain. Personally, I would like to see spring burning discouraged and be replaced by autumn burning.

I want you to deal with one specific matter. We had evidence from, I think, Mr. Roberts who, in cross-examination, gave instances of mills around which there had been no burning of the tops. The only one that concerns you is Collins' mill?—In the Mullendung Forest.

Mr. Roberts said the tops had not been burnt there. Are you familiar with the mill?—Yes.

You will tell us the conditions?—The tops were burnt.

When?—Prior to the summer. I was not there when they were burnt, but I know that the Commission's foreman in that district burnt approximately half the heads in the area. I have been through the area.

You would see that the heads had been destroyed?—Yes.

THE COMMISSIONER: Do you favour the forestry officer burning or the mill owner?—Given an adequate staff, I am in favour of the forest officer.

Who is Mr. Roberts?—A timber inspector from the State Electricity Commission.

Mr. Barbe: In the last part of his evidence, he named certain mills. This is the only one with which Mr. Delbraith is concerned.

THE COMMISSIONER: In these any sort of feeling between the Electricity Commission and the Forests Commission?

Mr. Barber: There is no suggestion of bad feeling between the two Government Departments.

Mr. Slater: Is yours a big area?—Yes.

How many forest officers have you under your control?—Eleven permanent staff officers.

Into what category do they fall?—There is a chief forester among them. How many foresters are there?—There are two foresters, a chief forester, four assistants, foresters and four forest overseers.
Are there any cadets?—No.

THE COMMISSIONER: Those are what you might call the officer class?—The permanent field staff.

What men have you on that staff?—In addition there are 11 foremen who are not permanent staff officers, and the daily paid men.

What do you mean by foremen not being permanent officers? Are they casuals?—They are not in receipt of superannuation benefits.

Are they employed whole time?—Practically whole time.

What do you mean by that?—Some years ago there was rationing. They were three weeks on and then off, otherwise they are permanent.

Have you any other permanent staff?—No.

How many million acres are there in your district?—Roughly, five million acres.

I should think you feel lonely.

MR. SLATER: I was coming to that.

THE COMMISSIONER: They would be lonely if each one took his section of the forest.

MR. SLATER: I am speaking of the field men, the officers. Can you tell us the areas each of those men control?—I have the areas here.

THE COMMISSIONER: You start with the lot?—Yes.

That is the five million acres?—Yes. In the Wollacoota there are 291,000 acres.

Is there a district officer in charge?—That is combined with the Cann Valley district which has 641,000 acres, making a total of 930,000 acres.

Who is in charge?—One staff officer in the Cann Valley district and one foreman.

MR. SLATER: Two men are in charge of that area?—Close on 900,000 acres.

What other districts are there?—In the Orbost district there are 885,000 acres, and there are two permanent officers, two foremen and the constable.
THE COMMISSIONER: What are they foremen of?—Certain of the forest areas are sub-divided and are designated "foremen's charges". A foreman is in direct charge of the operations in that area, and they come under his immediate supervision.

Do you employ any casual labour?—Yes.

That is, relief workers?—The number varies from year to year, and throughout the year.

MR. SLATER: What about the next group?—The Ross River district has 550,000 acres.

How many men are there?—Two permanent staff officers, and three foremen. The Bruthen district has 744,000 acres. The officer in charge supervises the Omeo district which has 397,000 acres, or a total of 1,000,000 acres, and in the district there are two first constables, one being at Omeo and the other at Benambra, respectively. The Yanjil district has 821,000 acres. There are one permanent officer and one foreman there. The Yarrin district has 189,000 acres, and there are two staff officers and two foremen. There is also a first constable who is stationed at Foster.

In your conferences, have you had an opportunity of comparing those areas with the areas controlled by field officers in the other States or outside Australia?—I don't know particularly in regard to the other States in Australia, but I have heard that in New Zealand there is about one officer to 19,000 acres.

Under 20,000 acres?—Yes.

Would you be surprised to know that the unit area is about 1300 acres?—I would not be surprised.

Do you agree with the opinion put by the last witness that you have an adequate staff?—No, I think there is an inadequate staff to control the vast areas of country.

That is based on your knowledge?—Yes, on the experience in that Division.

THE COMMISSIONER: What do you do if you want to see one of the men?—All the district staff are connected by telephone.
Unless they are out on duty?—I am continuously through the district, travelling all the time.

MR. SWINDON: You stated that there was a lack of co-operation between the landholders at time of fire. Do you think that if the bush fire brigades could arrange to have a meeting and call a conference of the landholders and the agricultural societies, those misunderstandings might be relieved?—I think they would.

It would be beneficial if we could have a meeting?—Yes.

We have been trying to get a sitting there?—I don't know what move has been made in that direction.

You think it would be a good move to have a meeting there?—Personally, I think so.

There are not many bush fire brigades in the district?—So far as I am aware, there is one and it is at Swift Creek.

THE COMMISSIONER: We had a gentleman from that Brigade, Mr. O'Brien.

MR. SWINDON: We have had meetings in the provincial centres, and have been able to wipe out those misunderstandings?—Personally, I think most of the apathy is due to misconception to a big extent.

THE COMMISSIONER: Mr. O'Brien will not have that there is any apathy.

MR. SWINDON: There is an enthusiastic brigade there.

THE COMMISSIONER: I remember he was very enthusiastic.

MR. GONALE: The Tanjill district comes within your area?—The Tanjill Forest district does.

In the map put in as evidence, the western boundary of your district is shown as running through Keerim and including Walhalla and Erica?—That is not correct.

What is the western boundary of your district?—The western boundary commences, I think, at Anderson's Inlet and runs generally east and north to the main Gippsland line somewhere about Morwell.

It is east of Mirboo?—Yes: It does not come into the Gippsland division. It runs a short distance along the Latrobe river to the Mount Useful spur to the main Divide, then it
follows the Divide about 20 miles to the west of Omeo and then travels generally north-west to a point where it hits the Murray. The Omeo district is definitely outside it.

And Mt. Useful is in your district?—The district passes over Mt. Useful.

You have told us of a number of fire protection measures carried out in your area. Can you tell us where they were carried out?—They have been carried out in all districts in the division.

To an equal extent?—More or less, according to the value of the timber.

That is one of the primary considerations.

We were told by a previous district officer that nearly all the fire protective measures were carried out at Bruthen and not at Omeo?—There has been very little carried out in the Omeo district.

There is a considerable State Forest area around Omeo?—Yes.

Were any fire protection measures carried out there?—No permanent measures.

Why?—Because the forests there have been inaccessible up to date, so far as utilising the timber is concerned. Secondly, the timber except for a few patches, is not of commercial value. Thirdly, being in a moist mountain forest type of country, the fire danger has not been regarded as great there.

Do you still think in those terms?—No.

In view of the experience we have had, I would not think so.

The position is that there are about 100,000 acres in the Omeo district where nothing has been done from the point of view of fire protection?—No.

Was that been due to the policy of the Commission in not carrying out fire protection measures unless there is valuable timber in the area?—The operations of the Commission have been more or less progressive in dealing with the more valuable areas and in protecting them. I would not say that the Omeo areas would not have works laid down, but so far our works
have not extended that far.

On what date did the fire protection measures start?—I could not say.
I have been in Gippsland 10 months.

Who was the divisional officer before you?—Mr. Birt. He is now
chief inspector.

Are you in a position to assist the Commissioner by telling us whether
fire protection measures could have been carried out in the
Omeo forest area?—With the amount of money available it
would be problematical whether they could be put into operation.

I want to get whether the difficulty has been one of time or of money?
—Primarily one of money.

The Commissioner: Have you any idea of the proportion spent on protective
measures as compared with the general expenditure of the
Forests Commission?—Not over all the Commission’s activities,
but so far as Gippsland is concerned, 50 per cent., if not
more, has gone in protective measures.

What else do you do in the forests?—There are 76,000 acres that have had
received silviculture treatment in the form of thinning.
A large proportion of the money has gone in cleaning up the
forest floors.

How do you clean the floor when you have been thinning?—We do that in
conjunction with the thinning. They are burnt out as the
work progresses.

Mr. Gowans: Can you tell us the annual acreage of patch burning?—
only that of last year?

Does the figure of 7,000 refer to that?—I think that was the figure.

There were 7,645 acres and that was prior to last summer.

That area was actually burnt over through the forest
districts in the division.

Through the area or was it the whole time prior to the summer?—During,

say, prior to the summer. I am speaking of the time I have
been there.

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Have any parts of the measures been carried on in the Ben Cruachan forest?—In the south western portion of that reserve, in the Parish of Ba-de-loch.

What about the other parts?—They are in very rugged country and are practically inaccessible. There is very little timber of economic value there.

Have any of these measures been carried out on Crown lands which are not reserve forests?—Yes, in the Orbest district and in the Bruthen district.

For what purpose?—Primarily to protect the reserve forest areas and areas of better class timber.

Of the 3,783,000 acres of protected forests, on what part do you think fire protection measures have been carried out?—Roughly, I think about 304,000 acres.

That is centred around Bruthen and Orbest?—No, scattered, throughout all the districts of the division.

Easily?—More or less equally, according to the forest track into the district.

Have you put any roads through Crown lands?—We have put tracks through Crown lands. Those tracks are negotiable by motor vehicles.

Of what length are the tracks?—I think I can give the total length in the division — no, I cannot, but I can say what has been done recently. There have been 2287 chains constructed on Crown lands.

600 miles in the division?—28½ miles have been constructed within the last 12 months, but protective work has been done at Melmore, the Camp Valley and Rose Roads.

For fire protection purposes?—For protection purposes and the extraction of produce.

You appreciate the difficulties voiced by other witnesses that you have had no power to carry out these measures on Crown lands?—The insecurity of tenure was a restriction of great importance.

COMMISSIONER: That is the same answer that we have got from other witnesses?—That is the one and only answer.
MR. GOWANS: Have you ever considered that you have no power?—-I have been doubtful about the power.

In what circumstances did that doubt arise in your mind? What led to it?

---Principally the Commission is charged with the management and development of timber on State forests which includes protective forests, but the Lands Department have a measure of control over protective forests. They lease areas and charge a rental for them for the purpose of grazing. I think the question of the liability for destroying a man's asset comes into consideration strongly.

Have you discussed that matter at conferences?—-So, it is only a recent thing.

Since this Commission started?---Yes, it was brought up then. It did not occur before. My primary objection is to the dual control.

THE COMMISSIONER: How was it brought to your notice since the Commission started?---I cannot say definitely, but it came up in a general discussion.

What was the general discussion?---I cannot recall it to my mind.

On what occasion did it come up? Was it in a conference with the Commission?---More or less private discussions among ourselves.

Then did you see each other?---After the sittings of the Court.

MR. GOWANS: The witness means since the Commission has been sitting in Melbourne?---Yes.

I do not want to trouble you to argue the legal position, but I want to find out whether that was a factor affecting you in carrying out these fire protection measures?---Not from that aspect.

THE COMMISSIONER: It could not have been. We had not heard of it before.

MR. GOWANS: I think you said you have six dams throughout your area. Although you regard 3½ hat number as adequate before the fires you don't now?---That is so.

Am I right in saying there are two lookouts over all your 8,000,000
scare?—Yes.

Is that number adequate?—No.

What has been the difficulty about getting these things in?—I don't know anything in regard to past difficulties. I have not pressed for it.

When you first went there, what scheme did you find being put into operation?—Primarily accessible tracks.

Were they traversable by motor vehicle?—Yes.

Has that been mainly in the State forest areas?—Primarily in the reserve forests.

That means that there must be a tremendous area of land covered with timber outside the reserve forests which is not traversable by any tracks at all?—Very few tracks.

(Continued on page 2049.)
You have a tremendous job in trying to bring about fire protection measures on your own?—An enormous job is ahead of us.

With regard to safety devices at mills, have you in your experience ever known millers' licences to be cancelled for not carrying out conditions of licences with regard to safety precautions?—No.

THE COMMISSIONER: Have you ever known conditions to be broken by such men in your territory?—Yes, I suspended a miller once.

What do you mean by "suspended"?—I suspended his milling operations until he carried out the requirements of the licence.

MR. GOWANS: What was the reason for suspending his operations?—The non-installation of sawdust retorts.

Where?—Powelltown.

When were you stationed at Powelltown?—From 1925 to 1932.

Were you there during the 1926 fires?—Yes.

MR. BARBER: With regard to the protective works in the Omeo district, is it fair to summarise your evidence in that connection by stating that you consider that the Commission, with its limited resources, first of all applied itself to the protection of the more valuable timber areas and gradually extended that protection to the next valuable areas?—That is the point I made a while ago.

Thank you, that is all.

THE WITNESS WITHDREW.

THE COMMISSION ADJOURNED UNTIL 10:30 A.M.

ON TUESDAY, 26TH MARCH, 1938.