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PART V. —*cont.*

computing the amount of the expenses of the Department of Mines for the purposes of the limit imposed by subsection (2) of section five of the Mining Industry Act, 1920, upon the expenses of that department.

Interpretation.

18.—(1) In this Act the following expressions have the meanings hereby respectively assigned to them :—

"Class," in relation to coal, means a class determined according to the nature of the coal or of the trade, industry or other category of consumer supplied, or according to whether it be supplied for use in Great Britain or for export to any other country:

"Coal" includes bituminous coal, cannel coal, and anthracite:

"Coal mine" means any mine or open working where the getting of coal (including for the purposes of Part IV of this Act, lignite or brown coal), is the principal object of the mining or quarrying operations:

"Disposal" in relation to a coal mine means the tonnage in saleable coal raised and weighed at the pit head at that coal mine, after deducting all coal to be used for the purpose of working the mine and all coal to be supplied free or at reduced rates for the use of persons who are or have been employed in or about the mine and the dependants of persons who have been so employed, and in relation to a district means the aggregate tonnage in saleable coal raised and so weighed at all the coal mines in the district after making the deductions aforesaid:

"District" means for the purposes of Part I of this Act a district mentioned in Part I of the Schedule to this Act, subject to any amalgamation or adjustment of districts under Part II of that Schedule; and for the purposes of Parts III and IV of this Act has the same meaning as it has for the purpose of the arrangements for the time being in force for the regulation of wages in the coal mining industry:

"Functions" includes powers and duties:

"Output" in relation to a coal mine means the tonnage in coal raised and weighed at the pit head at that coal mine, and in relation to Great Britain or a district means the aggregate tonnage in coal raised and so weighed at all the coal mines in Great Britain or the district, as the case may be:

"Owner" has the same meaning as in the Coal Mines Act, 1911. 1 & 2 Geo. 5. c. 50.

(2) The references in this Act to the London Gazette shall, in so far as any scheme or order relates to Scotland, be construed as references to the Edinburgh Gazette.

19.—(1) This Act may be cited as the Coal Mines Act, 1930, and the Coal Mines Acts, 1887 to 1926, and this Act may be cited together as the Coal Mines Acts, 1887 to 1930. Short title, citation and extent.

(2) This Act shall not extend to Northern Ireland.

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Section 18.

SCHEDULE.

PART I.

DISTRICTS FOR PURPOSES OF PART I OF ACT.

Northumberland.
Durham.
Cumberland.
Lancashire and Cheshire.
Yorkshire.
Derbyshire (exclusive of South Derbyshire).
South Derbyshire.
Nottinghamshire.
Leicestershire.
Shropshire.
North Staffordshire.
South Staffordshire (exclusive of Cannock Chase) and Worcestershire.
Cannock Chase.
Warwickshire.
Forest of Dean.
Bristol.
Somerset.
Kent.
North Wales.
South Wales (including Monmouthshire).
Scotland.

PART II.

PROVISIONS AS TO AMALGAMATION AND ADJUSTMENT OF DISTRICTS.

1. If an application is made to the Board of Trade for the amalgamation of two or more districts, and the Board are satisfied that the application has been duly approved in accordance with paragraph 3 of this Part of this Schedule, the Board may by order direct that those districts be treated as one district.

2. If an application is made to the Board of Trade by the owner of a mine situate in any district that the mine should be treated as if it were situate in any other adjoining district, and the Board are satisfied that the application has been duly approved in accordance with the next following

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paragraph and that the mine has, for the purpose of the arrangements in force for the regulation of wages in the coal mining industry, been customarily treated as a mine situate in that other district, the Board may by order direct that that mine shall be treated as situate in that other district.

3. An application shall not be deemed to have been duly approved for the purposes of this Part of this Schedule unless it has been approved as respects every district to which the application relates by the owners of coal mines which produced more than half the output of those districts respectively, during the period of six months ending on the thirtieth day of June or the thirty-first day of December last preceding the date of the application, whichever day is the later:

Provided that if in the case of an application made before the first day of January, nineteen hundred and thirty-one, it appears to the Board of Trade that during such period of six months as aforesaid the output of a substantial number of coal mines in any district was subject to regulation under any arrangements made by a voluntary association or otherwise, the Board may treat any application submitted to them which relates to that district as if the latest period of six months during which the output of those coal mines was not so regulated had been the period mentioned in the foregoing provisions of this paragraph.

4. If for the purpose of the arrangements for the time being in force for the regulation of wages in the coal mining industry any adjustments are made in the districts specified in Part I of this Schedule, the Board of Trade may, if they think fit, by order direct that corresponding adjustments shall be made for the purposes of Part I of this Act, and upon the making of any such order, Part I of this Schedule shall have effect subject to any modification specified in the order.

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[fol. 1133] DEFENDANTS' EXHIBIT 43

3. Special Recommendations of the Board.

Reviewing the committee's report, the Board calls particular attention to the following points:

The immediate outlook, as far as the national resources in minerals are concerned, is for abundant supplies available at low prices, lower, in many cases, than those prevailing in the twenties. There is no sign that any serious limiting factor will emerge among the minerals to prevent the Nation from attaining a production of goods and services far above the levels of even 1929, say, for the next 10 years. The minerals for which we lack domestic deposits can be imported from abroad in any volume needed. The immediate problem of our major domestic industries is not a shortage but an unmanageable surplus, much like the surplus in agriculture. As in agriculture also, the surplus is resulting in heavy capital loss and depression of living standards. Few groups in our population have suffered greater hardships than the coal miners. Relief of these conditions is an immediate and pressing social problem.

The long-time outlook in the field of mining, on the other hand, is for increasing costs through exhaustion of the rich and more accessible deposits. The situation varies greatly in different minerals, but, in general, depletion is much further advanced than is generally realized. Known supplies of oil, natural gas, and certain of the metals (ores of present commercial grade) are sufficient for, at most, a few decades. Even in coal mining, the life of certain districts producing our finest coals is limited to about 85 years at normal rates of production. In both metals and fuels the reserves are sufficiently limited so that waste can no longer be tolerated. The long-time problem of the minerals is conservation.

At first thought the immediate problem of the surplus and the long-time problem of conservation seem to be in conflict. Actually they are due to the same fundamental cause—the destructive competition characteristic of scattered ownership and overdevelopment of productive capacity. Resource waste is most serious in those very industries with an unmanageable surplus. In oil and gas, the wastes are proverbial. At the present time in one field,

enough gas is being blown into the air to supply all domestic consumers in the United States. In bituminous coal mining the avoidable loss is placed at 20 percent. Such wastes are seldom the fault of the individual operator who has small choice under existing competitive conditions. As described in the report of the technical committee, the wastes of fuel present a grave national problem. Avoidance of waste is partly a matter of technology. But very largely the prevention of waste is a legal and economic problem. As long as bituminous coal mining functions in surroundings of poverty, the operator has neither the incentive nor the means to prevent waste. The first and indispensible step to the solution of either the short-time problem of too many mines and miners or the long-time problem of preventing waste, is to place these industries on a basis of economic stability.

The States can do much in the prevention of waste. Through exercise of the police power, the States have the [fol. 1134] constitutional authority to prohibit wasteful methods of mining, just as they have the authority to prescribe safety regulations. In the last 10 years, several of the States have made attempts to control waste in the production of oil and natural gas, which have in general been sustained by the courts. So far only a beginning has been made, but enough has been accomplished to show the possibility of replacing the wasteful rule of capture with a requirement of unitary development of the individual pool. In time, similar prohibitions of waste may be extended to coal mining. Progress in this direction can go no faster than the development of public opinion within the great mineral States. In the past, local opinion supporting such regulation has been held back by the depressed and profitless condition of many enterprises and by the competition between producers in different States. The slightest increase in production cost, caused by a local conservation law, might handicap the local industry. Similarly, the control of production by one State has been virtually impossible for lack of similar action in competing States, regardless of whether the purpose of control was to prevent waste of resources or to protect capital and living standards. The necessary prerequisite to encouraging action by the States is economic stability and some limitation on destructive competition between the States. Interstate

compacts for this purpose should be encouraged, but are likely to call for complementary action by the Federal Government. In the mineral field, the problem of balancing supply and demand is essentially national and requires assistance of the National Government.

The chief service which the Federal Government can render in either the long- or the short-time problem is to assist the mineral industries to attain economic stability. Stabilization is necessary to preserve capital, to maintain reasonable wage standards and steadier employment, and to minimize resource waste. Stabilization requires a central organization and collective action. It may also require permitting control, under public supervision, of production, capacity stocks, and sometimes of price, in ways which have traditionally been thought forbidden by the antitrust laws. Such control of competitive practices seems clearly necessary in the bituminous coal, oil, and natural gas industries. Some measure of control may also be found advisable in certain of the metals such as copper, lead, and zinc. In the case of oil, special legislation authorizing the fixing of State production quotas appears to be necessary.

Experience under the N. R. A. codes has shown the beneficial results of control and also the lines along which future action might be guided. Control of sales or of production is authorized by some of the metal codes; control of production and price is authorized by the oil code though up to the present production only has been dealt with. In the bituminous coal code the instrument of control selected is the minimum district price. Despite numerous shortcomings, which are summarized in the committee's report, the codes have yielded impressive benefits. In coal mining, especially the control has kept prices above production costs, wages have been greatly increased, and employers, now able to pay the wage, have taken a different view of labor relations. In most of these industries, majority opinion appears to favor a continuation of some form of control.

The limited occurrence of many minerals is known to invite concentrated ownership, in some cases creating natural monopoly. In other cases, concentrated control is effected by control of patents, reduction plants, fabricating capacity, marketing facilities, or exceptional technical and managerial ability. Despite certain economies of centralized ownership, the consumer is right in feeling that unless an

industry is operating under public regulation, competition is necessary to assure a fair price. While control of production and price presents grave difficulties in manufacturing and the service industries, the Board feels that it should be permitted, under appropriate public supervision, in natural resource industries where competition is known to be forcing serious waste, and where control can be shown to offer some improvement.

We therefore recommend that permanent provision be made to authorize control of competition after the expiration of the present National Recovery Act. We shall not attempt to outline the specific steps applicable in each industry, but, in general, the authorization should cover the control of production, of capacity, of surplus stocks, and where necessary, of price. The choice of specific methods of control is a technical matter, which should be left as far as possible to the supervising authority, acting in council with the industry concerned. From the point of view of the consumer the choice of methods makes little difference, since any minimum price, if observed, necessarily affects production, and any control of production necessarily affects price. The authorization of control should be made contingent on acceptance of whatever safeguards are thought necessary by Congress to protect the interests of the mine workers and the consumer, and upon assurance by the industry concerned that action will be taken to minimize resource waste.

It should not be the intent of such limitation to create monopoly profits nor to subsidize inefficiency, the consumer interest must be protected through effective representation. Equally labor must be protected in its right of organization, and advanced in its standards of living and of working conditions. Among the pressing needs of the workers is greater continuity of employment. The labor interest also [fol. 1135] requires and the Committee recommends that the National Planning Board shall concern itself with the rehabilitation of stranded mining populations, presumably in connection with other programs for land utilization, construction or industrial development.

Supervision of such plans for production control could be lodged either under a separate mineral code division of a permanent N. R. A. or under a separate mineral industry division of the Interior Department. In the case of oil and

coal, separate acts may be necessary to provide for special problems, such as crude oil quotas or purchase of marginal mines, but supervision should be placed under the same general auspices as other mineral codes. The important point, in the Board's view, is to recognize that the special problems raised by the waste of irreplaceable resources necessitate separate consideration.

To facilitate the adjustment of production to requirements, periodic forecasts of consumption should be made by a Government agency in collaboration with representatives of producers and consumers.

The Board further recommends that in any legislation for the stabilization of the mineral industries, consideration should be given to the possibility of retiring marginal mines now in operation.

To supplement the economic attack on waste, the Government should promote scientific research and foster mineral technology. The day of easy discovery of surface outcrops by the old-time prospector is past and the burden of overcoming the growing difficulties of mining falls more and more upon science and engineering. The great advances made during the last 20 years suggest the future savings which may be hoped for in this quarter. The invention of flotation has recovered great amounts of metal, formerly wasted because it could not be separated. Progress in oil technology has trebled the maximum depth of drilling. In power generation the fuel engineers have cut the consumption of coal per kilowatt-hour from 5.3 pounds to 1.5 pounds. The major contributions will doubtless continue to come from private sources, but the Government, through the Geological Survey and Bureau of Mines, should carry on fundamental research, testing and standardization; should aid in developing new methods of exploration such as use of geophysical instruments, and in improving methods of mining and metallurgy. Better maps and more thorough inventories of the national resources are needed. All these services should be maintained and strengthened.

Hazards to life and limb are still excessive, despite progress in the prevention of mine accidents. Since the welfare of the worker is the concern of all agencies of government, the health and safety of miners must be considered as part of any general plan. The task of those leading the safety movement is made easier because of the economic losses

incident to hazard. Federal work in this field should be maintained and strengthened. The United States now has the highest mine accident rate of any country except Chile.

In addition to these immediate steps, there is need of continuous study and review of national policy in relation to the minerals, and of the results obtained. This might well be carried on by a permanent mineral policy committee working in cooperation with the National Resources Board. The present committee is already studying a number of special problems centering around mine taxation, tariffs, foreign trade, capacity, and reserves concerning which recommendations will be made later.

[fol. 1136] 43-A

Section I

The Need of a National Policy

The United States leads the world in variety and abundance of its mineral deposits. No similar area contains as great a number of mineral deposits of such large size, high grade, and easy accessibility. It produces about 40 percent of the value of the world mineral production from within its own borders, and its commercial control of mineral resources in foreign countries brings its proportion of the world total up to 50 percent. It has shared with the British Empire in the exploitation of over three-quarters of the world's minerals. Through its use of mineral fuels and water powers, it produces nearly half of the mechanical energy of the world. Minerals account for about 40 percent of the value of the annual product of natural resources in the United States, which include its agriculture, forests, and water powers. In 1929 the mineral industries employed more than a million men and reported products to the value of nearly 6 billion dollars.

Mining is the stepchild of our economy. Rightfully it is coordinate with agriculture and manufacture; actually, it receives insufficient attention. Ours is the age of the power machine and the minerals furnish both the power and the machine. Not only is the United States the largest producer of minerals; it is also the largest consumer. Our per capita requirements of metal and fuel far exceed

those of any other nation. Until recently consumption has increased like a sum at compound interest, so that in the last 30 years we have used more oil and coal, iron, and copper than in our entire previous history. While the rate of increase slowed down after the war and while consumption is now reduced by the depression, the future of our industries depends on an abundance of cheap metal and cheap fuel.

In the happy stage of skimming the cream of the resources, the Nation has taken its abundance of mineral supplies as a matter of course. But as we pass into the stage of maturity it is evident that the spend-thrift habits and impetuous expansion of the pioneer days must give way to a more orderly and less wasteful development. The great mineral industries of the United States have been built up through individual initiative, with little social direction or control. Until recently it has been assumed that private enterprise required no guidance in developing the national resources and needed no help from Government. The World War, however, made people acutely conscious of their dependence on the minerals, and in the case of the fuels led to an elaborate machinery of wartime control. Following the war expansion came a difficult readjustment. Abroad, our trade in minerals was disturbed by the tide of economic nationalism, expressed in the spread of public controls of one kind or another. At home, coal, oil, and certain of the metals struggled with an unmanageable surplus of plant capacity. The difficulties of the mineral industries were brought to a crisis by the great depression.

The situation calls for review, to see whether it warrants better coordination of national policy in the public interest. The following report considers this question.

We shall make no attempt to discuss the many economic and social conditions that affect mining in common with other industries. The Nation's interest centers very largely around the 1,000,000 men and their families who are dependent on the mines for a living. The public is rightly concerned with the arduous life of the mine workers, their isolation, and their long struggle for the right of collective bargaining; with the immense fluctuations in employment; with living conditions that are sometimes healthful and comfortable, yet sometimes miserably poor.

The committee is informed that the questions of employer-employee relations and of economic security for the unemployed and the aged are being considered by other agencies and are outside its terms of reference. We cannot, however, forbear a consideration of the stranded populations in some mining districts or of the special problem of health and safety. In general, the task assigned to this committee deals with mineral technology and markets. Yet the economic stability which we find the most urgent first step in preventing resource waste is also a prerequisite to ameliorating the lot of the mine workers.

Our discussion is concerned primarily with questions of policy arising from the inherent characteristics of mineral resources. Among these characteristics are: (1) That minerals are exhaustible and nonreproducible; (2) that some minerals do not exist in the United States in quantities adequate for national welfare; (3) that others exist in present surplus; (4) that geographic distribution is fixed by nature and cannot be changed by enactment, thereby determining trade routes and trade areas, both domestic and foreign; (5) that there are special hazards, both physical and economic, in mining; (6) that closing down a mine may result in losses far more serious than closing down a factory. The outstanding public problem arising out of these conditions is that of conservation. By conservation of minerals, we mean not hoarding, but orderly and efficient use in the interest of national welfare, both in war and peace, without unnecessary waste either of the physical resources themselves or of the human elements involved in their extraction.

The task in mineral conservation now before the Nation is to take up and carry forward the work begun under the leadership of President Theodore Roosevelt 30 years ago. The original conservation movement had two major objectives: (1) Protection of the public domain against despoiling by private interests, and (2) prevention of physical waste. Indignant at the frauds and evasions practiced under the old land laws, the friends of conservation attacked the first objective with zeal and vigor. Unappropriated mineral-bearing lands (except for the metals which were open to location as before) were withdrawn from settlement pending their classification and the enactment of new legislation. After prolonged debate, Congress passed a group of leasing acts, including the Alaskan coal

land act of 1914 and the mineral leasing act of 1920, opening deposits of coal, oil, gas, phosphate, and salines on the public domain to prospecting and leasing with payment of royalty to the United States. With the passage of these laws, the first objective of the conservation movement was largely attained, so far as minerals were concerned, though there will always remain the task of vigilant and courageous administration.

But with respect to the second objective—the prevention of physical waste—much remains to be done. Great and encouraging savings have indeed been made by engineers and scientists. Thus, the invention of the process of flotation has recovered large quantities of metal formerly wasted. In the production of oil, the technical men have learned how to cement wells against infiltration of salt water, how to utilize the lifting power of the imprisoned gas to increase the yield of oil, and have carried the maximum depth of drilling from 3,000 to 10,000 feet. The cracking process has doubled and trebled the percentage of gasoline obtainable from the crude. In the field of power generation, the fuel engineers have reduced the average consumption of coal from 5.3 pounds per kilowatt-hour in 1908 to 1.5 in 1933. These and other brilliant technical achievements have made available deposits formerly considered unminable and have greatly prolonged the life of our limited reserves. Among other things, they have shown the wisdom of conservation, for a barrel of oil saved for use today will generate four times as many horsepower-hours of work as it could have done 30 years ago.

But, as regards the waste of resources associated with the economic organization of mining, inadequate progress has been made. The waste of gas, oil, and coal now going on which is directly ascribable to the destructive competition characteristic of these industries, deserves the measured use of the word "intolerable." These wastes are not due to lack of engineering knowledge—our mining engineers and oil technologists are the best in the world. They are due rather to continuance of the literal application of the rule of competition to the development of these resources, and also, the special case of oil and gas, to the conflict between in the legal facts of surface ownership and the natural facts of geology. The present-day problem of conservation is to encourage an organization of industry that will control competitive waste. It involves, in

the case of oil and gas, using the States' police powers to prohibit preventable waste and substituting the principle of the equitable share in the common reservoir for the judicial "law of capture." It involves permitting the control of production, stocks, capacity, and perhaps of price, under public supervision, by methods hitherto thought to be forbidden under the antitrust laws. The Nation must learn that the rule of uncontrolled competition applied to certain resources leads to excessive waste. The greatest single task of conservation is to insure economic stability in the mineral industries.

There is a wide-spread impression that waste is a thing of the past. Every school boy is taught how our pioneering fathers burned natural gas in great open torches 50 years ago. In point of fact, the wastes of that time were probably small compared with what is going on in the month of October 1934. As this report is written, in one field of the United States, a billion cubic feet of natural gas is being blown into the air daily. That is gas enough to supply the United Kingdom twice over. It is forty times as much gas as all the Scandinavian countries use together. It is almost enough to supply every householder in the United States now consuming either natural or manufactured gas. The only use made of this particular gas is to strip it for the tiny fraction of gasoline which it contains, and this at a time when the supply of gasoline from other sources is already so great that measures to limit production are thought to be necessary. Similar wastes, though fortunately on a smaller scale, are going on in other gas fields and in other industries, to which we shall later refer. It is probable that during the time it would take the ordinary person to read over this report, enough fuel will have been wasted in our gas and oil fields and coal mines to keep at least 10,000 relief families warm during the coming winter.

Were our resources unlimited, such losses might seem excusable. The facts are otherwise. Despite the difficul- [fol. 1137] ties of estimating reserves and the shortcomings of some past efforts, it is the consensus of geologists that the principal mineral regions have now been found; their general extent is known; in many cases their size has been measured. The geologic and geographic limitations upon further large developments are becoming fairly defi-

nitely understood. The rapid increase in the scale of production in the last few decades brings a new perspective into our judgment as to what constitutes adequate reserves. It is now established beyond reasonable doubt that the United States is deficient in many minerals necessary for industry, both in respect to present and to future requirements; that for others the supply is limited to a decade or a few decades; that, aside from the building materials, only a few of the minerals, such as coal and iron, exist in quantities sufficient to supply the Nation for long periods of 100 years or more, and even these are more limited in regard to the higher grade reserves. Present overdevelopment of some minerals has tended to obscure the central and dominant fact that, in relation to what we hope will be the life of the Nation, our mineral supplies are too limited to excuse the wasteful exploitation that now often prevails.

In approaching the problem of a national mineral policy, the committee starts with recognition of the fact that private industry has successfully developed the minerals of the United States to an extent never before approximated in the world; that the job on the whole has been done efficiently and without greater wastes or mistakes than were more or less inevitable under existing conditions of enforced competition and widely scattered ownership of the resources; that the desire for efficiency and profit has been mainly responsible for the great gains in conservational practice already made; that the nature and immense diversity of the problems—scientific, technical, economic, and social—have required a variety, elasticity, and boldness of attack scarcely possible under bureaucratic control, even if it be assumed that such control were competent, honest, and not hampered by shifting political currents. American consumers have been furnished the cheapest fuel and some of the cheapest metal in the world. The output per worker in the mines of the United States is generally far higher than in foreign countries. We believe that the record of the mineral industry in the United States warrants the presumption that it should continue to develop under private initiative. However, we also believe that mineral reserves are vested with a public interest which justifies extension of public supervision to those specific conditions affecting our mineral industries, which are dis-

tinctly detrimental both to the public and to the industries themselves, and which seem beyond the power of the industries themselves to remedy.

Soon after the passage of the National Industrial Recovery Act, several of the mineral industries embraced the opportunity to undertake collective action, under the public guidance and supervision afforded by the new law. Problems were taken up, in cooperation with the Government, which either because of the prohibitions of the anti-trust laws or because of economic conditions associated with the depression had proved beyond their own capacity to master. It is mainly the conservational aspects of these questions that the committee has in mind in its discussion of possible extension of public regulation or control, Federal or State. By public control we mean not so much the forcible public interference with private business, as the addition of safeguards and powers to enable industry itself to act collectively, where necessary, in order to avoid the wastes, physical and social, of destructive competition.

Many agencies of Government, Federal, and State, permanent and emergency, touch the problem of conservation in one way or another, and progress has been made in the solution of the problems of individual industries. The various agencies now attempting to formulate a national program for land use are necessarily giving some thought to the minerals. The National Industrial Recovery Act is designed, among other things, to conserve natural resources, as well as human resources, and notable progress has been made in conserving oil. However, only a start has been made. Neither the N. R. A. nor any other agency has worked out the guiding principles, and naturally there is no consistent plan common to all of the agencies. The complex inter-relationships of minerals have scarcely been considered. No individual policy for coal, oil, or gas, for instance, can be worked out or administered without consideration of their inter-relations in a highly competitive fuel market. The same is true of the shifts in demand and the substitutions which are taking place among the major metals. A similar lack of a unified approach characterizes our activities touching minerals in the foreign field. All agencies of the Government dealing with foreign trade, or with national defense, are concerned with the minerals, yet policies hitherto have all too often been haphazard and

even contradictory. Tariffs and reciprocal trade agreements, commercial treaties, foreign concessions and investments, the American attitude toward the "open door", all need review in the light of our present supplies and future reserves of the minerals.

Long-range considerations will dominate the discussion, though the special conditions of the depression cannot be overlooked. We shall consider first the problems raised in the domestic field, and then take up those in the foreign field.

[fol. 1138] 43B

Section II

III. Conservational Problems Arising From Surplus of Production or Plant Capacity

1. Conservation and Production Control

Foremost among the problems of conservation is the prevention of resource waste and associated social and economic disorder caused by the destructive competition characteristic of those minerals with a surplus of plant capacity or production. It may seem a paradox but it is a fact that resource loss is most serious in the same industries, such as coal and oil, where attention at the moment is centered on the disposal of an embarrassing surplus. In this group the problem of conservation is less one of technology than of economics. The task before the Nation is to help these industries to prevent competitive waste, bring supply in balance with requirements, stabilize employment, limit cut-throat competition, and by achieving some measure of stability, permit the savings in the underlying resource which technology has already shown to be possible. It involves considering the control of production, of capacity, of stocks, and often of price by methods which traditionally have been thought forbidden by the anti-trust laws. It involves recognition of the competition between mineral industries, as in the fuel and power group, as well as within them.

While it is clearly inadvisable to authorize price-fixing and limitation of output in the great majority of our indus-

tries, such as general manufacturing and trade, it may prove to be wise, under the necessary public supervision, in those industries involving natural resource waste. Even during the present emergency, the N. R. A. has recognized a distinction between business in general and industries involving a problem in conservation. The Nation must learn that in some circumstances competition leads to waste that we can ill afford.

A review of the mineral industries shows that troubles of surplus are widespread, but most acute in coal and oil. They are present, though less acute, in iron, copper, lead, and zinc.

While there has been large overdevelopment of iron ore capacity, there has been no difficulty in holding production reasonably in line with consumption or in stabilizing prices, because of the fact that nearly all of the mines are captive and also because of the concentration of ownership in a few companies. These companies will take a large loss, because their overestimates of future demand have led to a great excess of mine capacity. However, it is not apparent that Government cooperation is needed to effect conservation of the resources, though it may be needed for rehabilitation of unemployed workers and safeguarding the welfare of labor. Problems of the type involved in the concentrated ownership of the mines are discussed in section II, V.

For the other five—coal, oil, copper, lead, and zinc—experience has thus far shown that the industries acting alone have been unable to prevent dissipation of resources or economic and social distress. Already, under the National Industrial Recovery Act, several of these industries are asking Government approval of various measures designed to stabilize supply and price, to control excessive stocks, or otherwise to set bounds to competition. Their leaders desire to continue the effort at stabilization in some form, and it is in the public interest to encourage them to do so. Each of the five listed has its own distinctive problems, sharply differing from those of the others, but all present in some degree the common problem of control of destructive competition.

2. Bituminous Coal [1]

Need for Stabilization: The mineral fuels are subject to a high degree of substitution and inter-industry competition. The bituminous-coal industry, as the oldest and most important source of energy, has suffered loss of markets to oil, natural gas, and water power. Competition within the industry has always been intense because of the widely scattered reserves and the thousands of producing units. Rivalries between districts and the legal obstacles of the antitrust laws have hitherto prevented any form of centralized organization.

Lack of adequate profits has meant inadequate wages and excessive waste of coal resources. For years the industry has worked in surroundings of poverty. Coal was therefore one of the industries which could gain the most from the facilities for collective action offered by the National Industrial Recovery Act. Its experience under the Bituminous Coal Code indicates that continuation of some form of price or production control is necessary to effect the stabilization of this industry.

Stabilization of the coal industry is needed to protect capital. In 1929, according to the Treasury Statistics of Income, there were 1,437 bituminous-coal companies, pro- [fol. 1139] ducing approximately 46 percent of the total output, that operated at a loss, and their deficits exceeded the income of the companies making a profit, so that the industry as a whole reported a net loss even during that year of boom. Virtually no other business covered by the Treasury's record showed such widespread money losses as the mining of bituminous coal.

Stabilization of the industry is needed to protect wage standards. The pressure of low prices upon wages in coal mining is direct and cruel. Whereas in manufacturing wages constitute 23 percent of the cost of the product, in coal mining they make up 65 percent. Any savings the operator can make in supplies, in power, in overhead, look small in comparison with the wage cost, and the pressure

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[1] The statements in this section refer only to the mining of bituminous coal. The mining of Pennsylvania anthracite is a separate industry, not here considered. The retail coal business is outside the terms of reference of this committee.

to reduce wages in periods of low prices is almost irresistible. Hence arises on the part of the mine workers the insistent demand for collective bargaining. Fifty years of bitter experience has proved beyond question that underlying the turbulent history of labor relations in this industry is the competitive pressure which often made it difficult or impossible for the employer to pay a decent wage or earn a profit. The record of the years from the end of the Jacksonville wage agreement to the signing of the N. R. A. code (from 1927 to 1933) is proof of the depths to which wage cutting can go, and unless some means is found by which a reasonable margin of profit can be assured in the future, resistance to trade unionism can be expected to return as before, and maintenance of any such wage structure as is developed by the code will become impossible.

Stabilization of the coal industry is needed to minimize waste of the resource.

In western Europe the average loss of coal in the mining of the beds now worked is from 5 to 10 per cent. In the United States, according to careful field studies in 1923 by engineers of the Bureau of Mines and the United States Coal Commission, the average loss is 35 percent. Of this loss, 15 percent was considered unavoidable and 20 percent as avoidable, using the standards of engineering already shown to be feasible by the practice of the better companies. This meant that the avoidable loss amounted to 150 million tons a year, left behind under conditions that virtually prevent its being recovered.[2] That is coal enough to supply the entire requirements of the German Reich. In terms of energy it is equivalent to twice the production of natural gas in the United States. Conditions have since grown worse. Howard N. Eavenson, now president of the American Institute of Mining and Metallurgical Engineers, testifying in the Appalachian Coals case (August 1932) stated:

The depressed condition in the coal business has had a great deal of effect on the waste in the mining of coal. Since the depressed condition of the last 7 or 8 years, a good many mines [that is, in Appalachian territory—a re-

[2] George S. Rice and J. W. Paul. Amount and Nature of Losses in Mining of Bituminous Coal. Report of the United States Coal Commission, pp. 1855-1858.

gion where normally the recovery is relatively high] have found that it is very much cheaper for them to lose a very considerable proportion of the coal in the ground than it is to try to mine it. In other words, instead of recovering 85 percent or more, a number of them have gone to a practice where they will not get ultimately more than from 60 to 65 percent, because the ultimate result is cheaper than if they tried to mine the greater amount of coal. I think I could make the broad assertion that there is not a single bituminous mine in the country today that is not mining the very best coal that it has, and the cheapest, and is allowing portions of the mine to get into shape where a lot of the coal will never be recovered, because they cannot afford, at present prices, to mine it.

According to Newell G. Alford, from 1923 to 1932 a total of 4,802 bituminous mines were shut down or abandoned.[3] Some of these were worked out, but unfortunately, exhaustion accounted for but a small percentage of the mortality. The great majority of these old pits are not likely to be reopened. The quantity of coal lost in these old workings through collapse of roof, crushing of pillars and stumps, or through permanent isolation of odd acreages of unmined coal is unknown but must certainly run into some hundreds of millions of tons. Were these mines located in Belgium the loss would be regarded as a national calamity.

In the United States we are prone to ignore the loss in mining because coal seems so abundant, but the facts are that while our reserves of lignite and low-grade bituminous are indeed enormous we are exhausting our best bituminous coals at a rate that makes their conservation a serious national problem. For example, with production at the 1929 rate, the life of the magnificent Pittsburgh bed in Pennsylvania is limited to a hundred years, and the high-

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[3] Alford's study included some wagon mines, but on the other hand, it did not cover Ohio or the trans-Mississippi fields. The total shut-down was therefore even greater than the figure quoted. Transactions of the American Institute of Mining and Metallurgical Engineers, vol. 108, pp. 476-488.

grade portions of the seam in the gas and coking coal districts will be gone long before that.

In the famous smokeless fields of southern West Virginia, the reserves in beds of commercial thickness are placed by Eavenson at 4.8 billion tons, which, at the 1929 rate of production, would last but 85 years. The same authority states that the highest grade gas and metallurgical coals are 11 percent exhausted in Kentucky and 22 percent exhausted in southern West Virginia and Virginia. Yet these coals, the Pittsburgh bed in Pennsylvania and the southern low- and high-volatile metallurgical coals, are the foundation of the American steel industry and their depletion will handicap not only steel itself but all industries depending on steel.

The causes of the excessive waste attending the mining of our coals are complex, but the great underlying cause is destructive competition. The losses are nobody's fault in particular, for the individual operator is driven by economic pressure. In many cases the prevention of loss, while entirely possible from the point of view of engineering, involves a substantial increase in cost. Thus, in portions of the Middle West the removal of pillars would result in damage to the surface. In such cases it may be many years before a change in present practice is possible. But there remain many other losses which can be avoided with slight additional expense as the practice of the better companies in normal times has already shown. Prevention of such losses depends on relieving the conditions of poverty which have surrounded the industry. The members of this committee who have given most thought to the question are convinced that the necessary first step in reducing the waste of coal in mining is to aid the industry in establishing itself on a stable and profitable basis.

Experience has shown that a reasonable margin of profit stimulates conservation. The more valuable coal becomes, the more men tend to save it. (It is true that if wage rates advance more than prices, reducing the operator's margin, the effect may be anticonservational.) A financially stable company can afford competent engineers and adequate supervision: that is an important factor, since large tonnages are lost in squeezes due simply to lack of engineering control. It is known, for example, that the captive mines, freed from the extreme pressure of competition, generally

secure higher extraction than the average commercial mine in the same district.

Reduction in waste may also be expected from other results of a program of production control. A check upon new development will prevent the premature abandonment of mines before they are worked out, thereby eliminating in the future losses such as those resulting from the closing of the 4,802 mines above referred to. With some check on the expansion of capacity, steadier operation of the mines remaining will ensue, thereby increasing the percentage of extraction. It is well known that recovery of pillars depends on maintenance of a regular breakline and a systematic schedule of operations, and some part of the present waste is due to the simple fact of irregular and intermittent operation.

Moreover, if reasonable prices are made possible, the coal industry may be asked to give assurance of reducing the waste. It would, for example, be possible for an N. R. A. code authority to study the problem and set up a local technical committee on conservation in each of the mining districts, charged with the duty of formulating reasonable standards of extraction as indicated by the better practice attained in that district. Such standards could then be recommended to landowners for incorporation in coal leases, to the mine inspection and conservation departments of the States, and to individual operators for adoption by their engineering staffs.

In time, if the industry can be placed on a stable basis and competition between districts held within reasonable bounds, the legislatures of the coal-mining States may be expected to enact conservation laws to lessen waste of their coal resources analogous to those already adopted in some jurisdictions for oil and gas. Hitherto, State action has been impossible, because of cut-throat competition. Progress in this direction can go no faster than development of a strong opinion within the principal coal States. Meantime, the first and indispensable step is so to organize the economic forces of the industry as to relieve the extreme pressure of competition.

These considerations, the exceptional money losses of operators, the protection of wage standards of a depressed group of workers, and the prevention of resource waste justify governmental aid in the effort toward stability which the industry alone is unable to accomplish.

Stabilizing Effect of Price Control Under the N. R. A. Code: In the case of bituminous coal, the N. R. A. code authorizes the direct control of prices. The choice of the minimum price as the instrument of control in the code was dictated by market mechanics and industry psychology. Had the framers of the code attempted to set up a system of rigid production quotas, they would have become involved in a welter of conflicting interests and local controversies. Centering attention on the direct control of price, they were able to formulate a code which won acceptance by all important districts and which could be put in operation at once. Aside from the labor clauses, price control is the central idea of the code. The code authority in each district sets the minimum price for every grade of coal mined in the district, and except as modified by the Administrator the price is binding on all shippers in the district. Under present conditions the minimum price also becomes the maximum price, in nearly all cases, since competition prevents the shipper from obtaining more than the minimum.

Despite numerous criticisms, the code has achieved a great measure of success. Criticisms of delay on the one hand and of over-hasty action on the other are natural in so new and so large an undertaking. Complaints of discrimination are heard from individual producers. Correlating price differentials between competing districts has proved difficult. Evasions threaten to reach grave proportions unless the power to force compliance is upheld by [fol. 1140] the courts. Yet in comparison with the competitive chaos which preceded it, the code is a great achievement. For the first time in years prices have generally been held above production costs. Employers, now able to pay the agreed-on wage, have taken a different view of labor relations. Wage standards and working conditions in the East and South are better than for years past. This has been accomplished without unreasonable burdening of the consumer or serious curtailment of demand. Opinion in so large an industry is always divided, yet it is generally agreed that many features of the code should be continued. It is clear, therefore, that nothing should be done to handicap administration of the present code and that the experience gained under the code should guide any future attempt to adjust supply and demand in this industry.

The Case for Continuing Control: In the bituminous coal industry the outlook is not for a temporary emergency but rather for a long period of destructive competition and natural resource waste unless some continuing adjustment of supply and demand can be effected. In this industry the disadvantages of price and production control are less weighty, and they are offset by the public interest in conservation and in protecting the wage standards of the miners.

The problem of protecting the consumer against unreasonable advance in price is simplified in coal mining by the pressure of competitive sources of energy—oil, gas, and water power—and by the alternative offered to the larger consumers of opening mines for their own use. Industrial consumers already supply a fourth of their own requirements from mines which they control.

The objection that stabilization protects the inefficient producer loses some of its force in this industry where several thousand marginal producers (commercial mines, not wagon mines) had already been forced out of business before the great depression began. Any mine able to survive the years 1930 to 1932 has demonstrated a considerable efficiency. With deflation of the less efficient mines so far accomplished, the present time offers a unique opportunity to inaugurate production control.

The most serious objection to continued price control is the tendency under it to create more capacity, through development of new mines or reopening of old ones. There seems no answer to this objection short of providing some method of controlling the expansion of capacity, if permanent stability is to be attained.

Opinion in the coal industry is definitely in favor of continuing some form of price or output control after the expiration of the present code.[4]

Possible Forms of Price and Output Control: The minimum price concept of the present N. R. A. code and the tonnage quota concept developed first in Germany, tried later in England, and now proposed in many quarters for the United States, both have their strong points and their weaknesses, and both deserve consideration in any per-

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[4] See Report of Special Legislative Committee of the National Coal Association, Oct. 27, 1934.

manent scheme of control. Thus, foreign experience makes use of both price and tonnage control, and while the American code began with the simpler idea of minimum prices, it shows some signs of moving in the direction of quotas. There are, however, grave difficulties on the American scene which would make the quota plan much harder to operate here than abroad. One of the most serious is the difficulty of applying a national system of quotas to the intrastate shipments which in some fields make up a large part of the business. The choice of method is a highly technical problem to be worked out step by step on the basis of experience by the code administration in counsel with the industry. From the consumers' viewpoint, the choice makes little difference, for any minimum price that is observed necessarily affects the tonnage and, conversely, any tonnage limitation necessarily affects the price.

Even should it be found impractical to set up a uniform national system of prices or quotas, it would be possible to authorize price or production control schemes in the several districts, to be operated through district sales agencies or other local associations, subject to coordination by a central public authority. In any case, a large measure of district flexibility is necessary to meet the great diversity of local problems characteristic of this industry.

Necessary Safeguards: Any plan for stabilization of production and price must provide ample safeguards for the welfare of labor and the consumer. The question of safeguards necessary to protect the rights and liberties of the mine workers is a special subject of great importance, which will no doubt be considered by other agencies of the Government and is outside the particular province of this committee. The issue of consumer safeguards requires, in our view, (1) complete and uniform records of costs, prices, profits, and margins, and (2) review of any scheme of price or production control by a public authority clothed with ample powers. If the producer is to be protected by minimum prices, the consumer may reasonably ask to be protected by maximum prices. No such interference with free competition as is proposed by the coal industry is conceivable without such safeguards, both because the public would rightly withhold its consent and because the powers of Government are necessary to prevent a small minority of firms from paralyzing the action of the majority, as the experience of the present code so clearly shows.

Possible Forms of Capacity Control: Already the industry is awaking to the fact that control of price or output is not enough and that it must also grapple with the control of capacity.[5] Coal mining was over-developed 20, 40, or even 50 years ago. In 1929 the bituminous coal industry was burdened with a huge surplus of plant capacity due to many causes and not simply to the World War. The excess capacity has been a prime factor in the cut-throat competition, the resource waste, the financial losses, the low wages, and the turbulent labor relations. The problem of capacity before the industry is two-fold—first, to reduce the present surplus and, second, to control unwise expansion in the future so as to prevent a repetition of past overdevelopment. The necessity of some check upon future expansion is suggested by the increase in small truck mines which has already taken place under the code.

The Committee has considered some of the chief suggestions that have been offered for control of capacity.

It has been proposed at times that a sliding wage scale or a guaranty of minimum employment be included in wage agreements between operators and the miners' union, in a way to encourage a shift of business from high-cost mines to those able to operate more steadily.

It has been proposed that promoters of additional mines —as distinct from replacement of worked-out mines—be required by the Federal Securities Commission to include a full statement showing that existing capacity in the industry is already more than sufficient in all proffers of securities addressed to the investing public. Such a plan should discourage some unwise promotions. A similar provision is already in effect as to public lands through an order of the Secretary of the Interior that the offering of coal lands for lease or granting of prospecting permits be recommended only on reliable information that there is an actual need for coal which cannot otherwise be reasonably met.

It has been suggested that extensions of common carrier railroads serving the coal fields should be controlled in the

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[5] Report of Special Legislative Committee, National Coal Association, Oct. 27, 1934. "As a permanent basis for a sound recovery in this industry some control of overexpansion of productive facilities should be established."

light of their effects on mine capacity. Under the Transportation Act a railroad desiring to construct a branch line must obtain a certificate of public convenience and necessity, and if the central coal authority found that existing capacity was sufficient and recommended against the extension, the Interstate Commerce Commission might withhold its approval. This would not prevent promoters of a new venture from building their own branch line down to the railroad and demanding a connection, but it should serve to discourage unwise development. It would obviously have no effect on the increasing number of mines served by motor trucks. It has been suggested that marginal mines be purchased by a governmental agency and shut down, a small tonnage tax being levied to pay the cost of the acquisition and to pay for rehabilitating displaced miners. Such a plan should do much to relieve the condition of the mine workers. It would afford steadier employment in the other mines remaining and would tend to center production in the lower-cost mines whose savings in overhead through steadier running time would go far to absorb the tax. This plan deserves most careful consideration, though its execution would have to be timed with reference to general relief and unemployment policies, so as to give reasonable assurance that workers discharged by shutting down the mines in question could actually be placed in other occupations. In further support of this plan, it is argued that where employment of coal miners is reduced by public hydroelectric projects, an obligation rests upon the public to rehabilitate the workers displaced.

It has further been suggested that such a tax be used to purchase reserve coal lands accessible to existing railroads and available for immediate development, these lands to be held as a national coal reserve and later leased as needed for payment of royalty to the United States. This plan accords with the Mineral Leasing Act of 1920, by which coal deposits on the western public domain no longer pass with the surface title but are leased under royalty. The plan provides a market for coal lands, thereby relieving the pressure on land owners to open more mines in order to meet taxes and interest, which, it is well known, has always been one of the most powerful causes forcing overdevelopment. To make the plan workable it would also be necessary for operating companies remaining in business to agree not to expand their own capacity beyond limits

approved by the central authority. Possibly this could be done by contract or by code agreement. If such agreement to control the expansion of capacity of operating companies is provided, the plan for a national coal reserve deserves most careful consideration. In this form it resembles the national forest reserves.

From this sketch of some of the proposals to deal with surplus mine capacity, it will be obvious that the problem is not simple and that any plan to be tried would require most careful study of its economic, technical, and legal features. Nevertheless, it may well be that the adoption of some of the steps here outlined or of other measures could prevent serious future inflation of capacity and its train of evils.

The committee, therefore, would commend the importance of capacity control alike to the industry, the mine workers, and the Government. We would urge the industry to remember that some limitations on the individual are necessary in any form of joint action. We would urge upon the public the great importance of the ends in view and feel that a friendly hearing should be accorded to any serious [fol. 1141] attempt by this industry to stabilize production and capacity on a national scale. Above all, we would counsel against a defeatist attitude. We cannot believe but that if the bituminous coal industry really desires to achieve economic stability there will be found both economic devices and constitutional powers sufficient for the purpose.

[fol. 1142] 43-C

Section II

XIII. Health and Safety

Mining has long been known as an occuption more hazardous to life and limb than almost any other major industrial pursuit and in many of its phases harmful health conditions are also encountered.

The miner carries on his occupation underground in confined places where it is difficult to maintain adequate lighting. Frequently the rock stratum overhead requires much care to prevent its crashing down on the worker who must be on the alert also to avoid relatively small rock falls that

often occur without warning. Powerful explosives—with all the risks that accompany their use—and machinery, operated under conditions usually much more hazardous than on the surface, have a regular place in the daily tasks; in addition, some mines give off explosive or irrespirable gases or may be subject to intrusion of dangerously large volumes of water. Rock falls, fires, explosions, asphyxiation, and machines take a large yearly toll in human lives and crippled bodies. Recent statistics compiled by the National Safety Council indicate that mining has much the highest accident rate, both in frequency and in severity, of all major industrial occupations. Moreover, we are the most backward major industrial nation in the matter of mine accident prevention, for the accident rate of the United States is exceeded only by that of Chile.

Prevention of accidents in the mining industry is a far more complicated problem than in surface industrial work, even of the more hazardous types, because the different elements which enter into possible accident hazards are much more readily ascertained above ground and action can be taken against them; also, errors in judgment causing accidents in surface industrial work usually affect but one or possibly a few persons, while in mines a human error may readily cause an explosion or other occurrence that may result in death for scores or even hundreds of persons.

In addition to the accident risk, various conditions in and around mines, usually in connection with the air which the worker breathes, have an adverse effect on health. Many deep mines have high temperatures, others have both high temperatures and high humidities, and some shallow mines are affected by outside climatic conditions. Some mines have harmful waters or gases while others are afflicted with dusts. Dust disease is the greatest health menace to the miner, whether in coal or in metal mines, and it is probable that more underground workers are incapacitated or die from breathing excessive amounts of dust than are killed by mine explosions and fires. While health is the greatest asset of any human being, it is of greater relative value to the miner because his occupation demands the possession of far more than ordinary endurance and command of faculties.

The sheer human tragedy of mine disasters with their heavy loss of life is the overwhelming case for an effective

mine safety program. Those who have seen the anguish in the faces of relatives stolidly waiting at the tipple for news of husbands and brothers entombed below know the urgency of adequate Federal efforts to reduce the human toll of the mines.

The immediate effect of accident and ill health is cessation or curtailment of income with consequent economic distress in the worker's family and additional strain on relief agencies. The average age of the coal-mine worker who is killed is 35 years, and his active life expectancy and potential income would be relatively good in most other industries. Miners and their families lose between $50,000,000 and $100,000,000 in income annually due to preventable accidents and ill health. While compensation payments may be received by the victims or their dependents as a temporary aid, in general the families of the sickly, crippled, or killed miners usually become largely dependent upon the public for support for several years after an accident, sometimes indefinitely.

Aside from the question of conserving human life and preventing suffering, mine accidents and unhealthful conditions increase the cost of producing mineral raw materials. Recent data indicate that 10 or more percent of the mine cost of producing coal or ore is due to various factors entering into accident occurrence; in the bituminous coal industry alone this amounts to between $30,000,000 and $50,000,000 per year. If already known and available improved safety methods and measures could be put into general use, the burden of accident expense could probably be reduced to as low as 1 or 2 percent of mineral production costs. The investment of a small fraction of the annual losses in workers' income and the increased mine costs in a larger program to curtail preventable accidents and ill health holds possibilities of at least a hundredfold return.

The difficulty in preventing accidents in and around the mines is well known and most countries have rather rigid regulations protecting the safety, and to a much less extent the health, of the workers in mining and allied industries. In the United States the Federal Government, through the Bureau of Mines, has led the mine safety campaign through extensive educative and cooperative safety programs, by training hundreds of thousands of miners in safety and first-aid practices, by the indirect improvement of mine machin-

ery to exclude unsafe features, and by constant investigations and research to point the way to improve safety practices. Under the Constitution, however, the authority for enforcement of specific safety measures at individual properties resides with the States, and most mining States have laws and agencies intended for safety promotion and enforcement. The State laws and regulations are usually a skeletonized outline of some of the fundamental minimum safety requirements and are often too general in nature to give adequate protection to the mine worker or even to the mine in terms of modern standards.

For many years progressive mining companies have not been satisfied to operate only within the meager safety requirements of the State codes and have adopted additional and more effective safety procedure of their own, although complying also with the State rules. As a result of this forward-looking policy, many of these companies have made great progress in the reduction of accidents. Many examples could be given of such laudable special safety efforts by companies in all branches of the mineral industry, including bituminous and anthracite coal mines, metal mines, nonmetallic mineral mines, coking plants, milling, smelting, and metallurgical establishments, and the various activities in connection with the production and processing of petroleum.

Over a period of 23 years the threefold cooperative efforts of mining companies, the States, and the Federal Government have saved the lives of 24,300 coal miners and eliminated 50,000 annual nonfatal accidents. Organized safety work received its impetus following the 5-year period 1906-10 when there were 84 major coal mine disasters and when coal mine fatalities reached the shocking total of 13,288, or a fatality of 5.89 persons killed per million tons of coal produced. Congress reacted to this situation by establishing the Bureau of Mines in 1910 which has constantly led the pioneer work on behalf of greater mine safety. The success of this movement can be measured by the decline of the coal mine fatality rate from the high levels of 1906-10 to 3.31 accidental deaths per million tons of coal produced in 1931, 3.36 in 1932 and to 2.69 deaths (preliminary figure) in 1933. If the 5.89 fatality rate for the early period had continued to the first of January 1934, the lives lost would have been 24,300 more than the number recorded. Similar

figures as to prevention of nonfatal accidents are not available, but it is estimated that there are about 50 nonfatal accidents to 1 fatality and that about 50,000 nonfatal accidents a year have been avoided.

While much progress has been made in the operation of mines with lessened loss of life or limb, especially in the last decade, consistently exceptional safety performance at many operations indicates that there is still much to be done toward raising the general standard. Some mines, for example, have worked 25 or more years without a fatal accident while others have worked large numbers of men a year or more without the occurrence of a lost-time accident; one surface mining operation produced upwards of 75,000,000 tons of rock without a fatality and another underground mine produced over 15,000,000 tons of ore without a fatality; in numerous instances individuals have worked 50 or more years in mines without having sustained any accident which would prevent their working at their jobs on the next regular shift. Recent statistics show that approximately 70 percent of the mines of the United States operate without fatalities, and it is probable that at least 75 percent of the nonfatal accidents occur in 25 to 30 percent of our mines. Unquestionably, some managers now know how to hold accident occurrence to a minimum, and in so doing reap a financial reward as well as performing a humanitarian service of the highest order. Observers who have given the closest study to the subject of accident prevention in mining are thoroughly convinced that accident occurrence can be reduced at least 50 percent (possibly as much as 75 percent) from present rates if the necessary effort is made.

Research in health and safety in mining is needed now more urgently than in any other period of our mining history, as mine technology is subject to rapid changes that invariably introduce new elements (often unfavorable) affecting the health and safety of the workers. Unless study and research on these problems are continuous, little understood conditions are likely to endanger further the life of the miner. Dust diseases, particularly, are increasing and require study of causes and development of methods that will eradicate, or at least materially lessen, their effects. Air conditioning, now beginning to be utilized in other [fol. 1143] industries, calls for research in its application to the comfort, health, and safety of the mine worker; very

probably its application will be found to be connected with the ventilation problem which in some form or other confronts every mine.

Knowledge of how to avoid the special hazards of the mine is not in itself enough; special efforts must be taken to make this information effective by constant education and reeducation of the operator and mine laborer. The ordinary mine worker reads but little and remains in ignorance of surrounding risks unless some central educational agency, capable of successfully reaching into hundrers of widely scattered mining camps throughout the country, is kept functioning. Education is also needed to promote closer correlation of State laws and regulations on mine safety, as well as to point out any inadequacies in present codes.

The need for accident and health work in mines is urgent and ever pressing. The responsibility for leadership in the effort to reduce unnecessary deaths and suffering rests on the Federal Government. Neither depression nor prosperity can change the need or the responsibility; and an aggressive, effective long-time mine safety program must function continuously, especially in maintaining frequent contacts with the mine worker. It is the judgment of the committee that reduction of field safety and health work in mining by the Federal Government is false economy threatening the entire mine safety program which must not be allowed to fail.

[fol. 1144] D. No. 44

United States Department of Interior

National Bituminous Coal Commission, Washington, D. C.

General Order No. 6

An Order Deferring the Filing of Reports by Producers

Pursuant to authority contained in an Act of Congress entitled "Bituminous Coal Conservation Act of 1935", it is hereby ordered by the Commission in regular meeting assembled, as follows:

1. That the reporting of spot orders to District Boards and other agencies and the filing with them of copies of

contracts for the sale of coal, invoices, credit memoranda and other information as provided by the Bituminous Coal Conservation Act of 1935 shall be deferred until this Commission shall have prescribed and promulgated rules and regulations to effectuate the requirements that such records shall be held as the confidential records of the producer filing such information.

Dated this 7th day of November, 1935.

National Bituminous Coal Commission, by C. F. Hosford, Jr., Chairman; George E. Acret, Walter H. Maloney, C. E. Smith, Percy Tetlow, Commissioners. (Seal.)

[fol. 1145] DEFT. EX. 45

(Copy)

Extract from Minutes of Meeting, District Board of District 7, Bituminous Coal Conservation Act of 1935. Held at Washington Hotel, Washington, D. C., at 4 P. M., November 5th, 1935

On motion by Mr. Tams, seconded by Mr. Caperton, it was unanimously

Resolved—That in the By-Laws of this District Board, which will shortly be submitted to the Bituminous Coal Commission for its approval, there be incorporated a provision for the establishment, at the earliest date practicable, and for the maintenance of a statistical bureau, as authorized in subsection (a) of Section 4, "Part II—Marketing" —of the Bituminous Coal Conservation Act of 1935;

Further Resolved—That said statistical bureau shall be under the management of a Director, who shall have no financial interest in the industry and shall not be in the employ of any coal producer;

Further Resolved—That the reports of spot orders, copies of contracts for the sale of coal, copies of invoices, copies of credit memoranda, and such other information, as provided in said subsection (a) shall be filed by Code Members of District 7 with said statistical bureau in lieu of the filing thereof with this District Board; the said records

shall not be available for inspection by the District Board nor any member thereof.

Further Resolved—That the headquarters of the District Board and of the aforesaid statistical bureau be located in the State of West Virginia, the location to be selected at an early date.

Certified to be a true and correct copy of an extract from the minutes of a meeting of the Bituminous Coal Producers Board for District No. 7, held Nov. 5, 1935.

Wm. G. Caperton, Secretary.

At a meeting held in Washington this date, the National Bituminous Coal Commission duly considered the foregoing and does hereby approve the same with the exception of the last paragraph referring to the location of the headquarters of the aforesaid District Board and of the aforesaid Statistical Bureau, regarding which action is held in abeyance.

National Bituminous Coal Commission, by C. F. Hosford, Jr., Chairman.

November 14, 1935.

Defendant's Exhibit No. 46

No. W.C.B. 871

PRODUCTION OF BITUMINOUS COAL, 1920 TO 1933, IN THOUSANDS OF NET TONS
(Prepared from operators' reports to the United States Bureau of Mines - Exclusive of wagon mines producing less than 1,000 tons annually)

Code Authority Districts	1920		1921		1922		1923		1924		1925		1926	
	Thousands of net tons	Percentage of total	Thousands of net tons	Percentage of total	Thousands of net tons	Percentage of total	Thousands of net tons	Percentage of total	Thousands of net tons	Percentage of total	Thousands of net tons	Percentage of total	Thousands of net tons	Percentage of total
DIVISION NO. I														
Eastern Sub-Division:														
Central Pennsylvania 1/	60,584	10.74	42,073	10.12	38,479	9.19	56,349	10.00	43,244	8.94	45,376	8.72	49,871	8.70
Somerset 2/	7,433	1.32	5,840	1.40	6,117	1.46	5,712	1.01	5,647	1.17	6,753	1.30	7,142	1.25
Maryland-Upper Potomac 3/	6,243	1.11	2,993	.72	2,315	.55	1,775	.67	1,139	.65	4,155	.80	4,622	.80
Total, Eastern Sub-Division	74,260	13.17	50,906	12.24	46,911	11.20	63,836	11.68	50,030	10.76	56,284	10.82	61,635	10.75
Western Pennsylvania Sub-Division 4/	100,041	17.74	68,142	16.38	67,106	16.02	109,580	19.45	81,743	16.90	84,799	16.31	96,028	16.75
Ohio Sub-Division:														
Ohio - all	45,276	8.03	31,943	7.68	26,645	6.36	40,454	7.18	30,473	6.30	28,034	5.39	27,872	4.86
Panhandle of West Virginia 5/	4,341	.77	4,078	.98	4,464	1.07	6,202	1.10	5,406	1.12	5,892	1.13	6,305	1.10
Michigan - all	1,489	.26	1,142	.27	989	.23	1,178	.21	831	.17	808	.16	687	.12
Total, Ohio Sub-Division	51,106	9.06	37,157	8.93	32,038	7.65	47,834	8.49	36,710	7.59	34,734	6.68	34,864	6.08
Northern West Virginia 6/	21,815	4.06	16,223	3.90	16,594	3.96	31,028	5.51	22,823	4.59	26,668	5.13	34,582	6.02
Southern Low Volatile 7/	33,778	5.99	29,134	7.00	35,098	8.38	37,380	6.64	39,622	8.19	46,884	9.08	53,579	9.34
Southern High Volatile 8/	66,625	11.82	55,997	13.46	64,939	15.50	81,588	14.48	83,905	17.35	101,470	19.51	113,710	19.83
Western Kentucky 9/	11,037	1.96	8,618	2.07	13,734	3.28	10,890	1.93	9,080	1.88	12,187	2.34	15,464	2.70
GRAND TOTAL - DIVISION NO. I	359,862	63.82	266,177	63.98	276,480	65.99	381,184	66.18	325,253	67.24	363,026	69.81	409,802	71.47
DIVISION NO. II														
Illinois Sub-Division	88,631	15.72	69,603	16.74	58,378	13.94	79,252	14.07	68,323	14.13	66,909	12.86	69,367	12.10
Indiana Sub-Division	29,091	5.16	20,319	4.88	18,950	4.52	26,138	4.64	21,480	4.44	21,225	4.08	23,186	4.04
Iowa Sub-Division:														
Wayne and Appanoose Counties	1,539	.27	631	.15	895	.21	952	.17	841	.17	574	.11	499	.09
Rest of State	6,236	1.11	3,900	.94	3,401	.82	4,750	.84	4,628	.96	4,141	.80	4,126	.72
Total, Iowa Sub-Division	7,775	1.38	4,531	1.09	4,296	1.03	5,702	1.01	5,469	1.13	4,715	.91	4,625	.81
GRAND TOTAL - DIVISION NO. II	125,497	22.26	94,453	22.71	81,624	19.49	111,092	19.72	95,272	19.70	92,849	17.85	97,178	16.95
DIVISION NO. III														
Alabama - all	16,140	2.86	12,569	3.00	18,229	4.35	20,420	3.62	19,130	3.95	20,005	3.85	21,001	3.66
Georgia - all	50	.01	34	.01	61	.01	76	.01	75	.02	66	.01	60	.01
Southern Tennessee 10/	1,788	.32	1,076	.26	1,331	.32	1,726	.31	936	.19	1,207	.23	1,291	.23
GRAND TOTAL - DIVISION NO. III	17,978	3.19	13,679	3.29	19,621	4.68	22,222	3.94	20,141	4.16	21,278	4.09	22,352	3.90
DIVISION NO. IV														
Southwestern Coals Sub-Division:														
Kansas - all	5,838	1.04	3,466	.83	2,776	.66	4,328	.77	4,248	.88	4,524	.87	4,416	.77
Missouri - all	5,267	.93	3,551	.86	2,849	.68	3,314	.59	2,481	.51	2,694	.52	3,009	.52
Oklahoma - High Volatile 11/	4,359	.77	3,006	.72	2,431	.58	2,495	.44	2,093	.43	1,946	.37	2,329	.41
Total, Southwestern Coals Sub-Div.	15,464	2.74	10,023	2.41	8,056	1.92	10,137	1.80	8,822	1.82	9,164	1.76	9,754	1.70
Ark.-Okla. Smokeless Sub-Division:														
Arkansas - all	2,051	.36	1,227	.29	1,086	.26	1,233	.22	1,452	.30	1,220	.24	1,459	.25
Oklahoma - Low Volatile 12/	471	.08	356	.09	352	.08	346	.06	236	.05	280	.07	514	.09
Total, Ark.-Okla. Smokeless Sub-Div.	2,522	.44	1,583	.38	1,438	.34	1,579	.28	1,688	.35	1,500	.31	1,973	.34
Texas - all	1,615	.29	972	.23	1,106	.27	1,187	.21	1,147	.24	1,009	.19	1,091	.19
GRAND TOTAL - DIVISION NO. IV	19,601	3.48	12,578	3.02	10,600	2.53	12,903	2.29	11,657	2.41	11,773	2.26	12,818	2.23
DIVISION NO. V														
Southern Col. and Northern N. Mex. 13/	12,080	2.14	8,496	2.05	9,341	2.23	9,348	1.66	9,199	1.90	9,111	1.75	9,437	1.65
Central and Southern New Mexico 14/	1,127	.20	739	.18	933	.22	1,103	.20	1,141	.24	1,049	.20	1,069	.19
Northern Colorado 15/	2,753	.49	2,349	.56	2,836	.68	2,775	.49	2,890	.60	2,707	.52	2,940	.51
Utah - all	6,003	1.06	4,079	.98	4,991	1.19	4,720	.84	4,488	.93	4,690	.90	4,374	.76
Wyoming:														
Southern 16/	5,861	1.04	4,879	1.17	4,040	.96	5,235	.93	4,640	.96	4,573	.88	4,438	.78
Northern 17/	3,762	.67	2,322	.56	1,918	.46	2,324	.41	2,117	.44	1,980	.38	2,074	.36
Total, Wyoming	9,623	1.71	7,201	1.73	5,958	1.42	7,559	1.34	6,757	1.40	6,553	1.26	6,512	1.14
Montana - all	4,404	.78	2,734	.66	2,557	.61	3,144	.56	2,905	.60	3,044	.59	2,798	.49
Washington - all	3,753	.67	2,429	.58	2,577	.62	2,926	.52	2,654	.55	2,538	.49	2,587	.45
North Dakota and South Dakota:														
North Dakota - all	908	.16	865	.21	1,268	.30	1,357	.24	1,201	.25	1,325	.26	1,370	.24
South Dakota - all	13	.00	8	.00	8	.00	10	.00	12	.00	16	.00	15	.00
Total, No. Dakota and So. Dakota	921	.16	873	.21	1,276	.30	1,367	.24	1,213	.25	1,332	.26	1,385	.24
All Other Western States 18/	154	.03	136	.03	75	.02	20	.00	17	.00	13	.00	19	.00
GRAND TOTAL - DIVISION NO. V	40,818	7.24	29,036	6.98	30,544	7.29	32,962	5.85	31,264	6.47	31,044	5.97	31,130	5.43
Alaska - all	61	.01	77	.02	79	.02	120	.02	100	.02	83	.02	87	.02
UNITED STATES	563,517	100.00	416,000	100.00	418,888	100.00	563,423	100.00	483,687	100.00	520,053	100.00	573,367	100.00

1/Includes U. S. Coal Commission Fields No. 6 Blossburg; 7 Broad Top; 9 abc Central Pennsylvania.
2/Includes U. S. Coal Commission Field No. 8 Somerset.
3/Includes U. S. Coal Commission Field No. 10 Maryland-Potomac (or Maryland plus Grant, Mineral, and Tucker counties, West Virginia).
4/Includes U. S. Coal Commission Fields No. 1 Pittsburgh; 2 Connellsville; 3 Westmoreland-Ligonier; 4 ab Freeport; 5 Butler-Mercer.
5/Includes Brooke, Hancock, Marshall and Ohio counties in West Virginia.
6/Includes Monongalia, Preston, Marion, Harrison, Taylor, Lewis, Barbour, Gilmer, Upshur, Randolph, Braxton, and Webster counties, and Nicholas County on Baltimore and Ohio Railroad (or U. S. Coal Commission Fields No. 11 Fairmont and No. 24 abc, except Clay and Kanawha counties).
7/Includes U. S. Coal Commission Fields No. 17 Tug River; 18 Pocahontas; 19 Winding Gulf; 20 New River; 27 Virginia Anthracite; 28 Richmond Basin; 92 North Carolina.
8/Includes mines in Clay and Kanawha counties in U. S. Coal Commission Field No. 24 abc; 13 Mason County; 14 Putnam County; 15 Kenova; 16 Thacker; 21 Kanawha; 22 Coal River; 23 Logan; 25 Southwestern Virginia; 26 Clinch Valley; 36 Northeastern Kentucky; 37 Hazard; 38 Harlan; 39 Southern Appalachian; 40 Jellico; 43 Pentress; and northern part of No. 42, namely, mines in Anderson, Morgan, and Roane counties and Cumberland County except on the Nashville, Chattanooga and St. Louis Railroad. (This includes all high volatile districts of Southern West Virginia, Eastern Kentucky, Virginia, and Northern Tennessee).
9/Includes U. S. Coal Commission Field No. 41 Western Kentucky. R.R.
10/Includes Bledsoe, Grundy, Hamilton, Marion, Rhea, Sequatchie, Van Buren, Warren, White counties, and mines in Cumberland County on the Nashville, Chattanooga, and St. Louis
11/Includes all counties in Oklahoma except Leflore, Haskell, and Sequoyah.
12/Includes Leflore, Haskell, and Sequoyah counties.
13/Includes all counties in Colorado except those included in Northern Colorado. Also, Colfax County, New Mexico.
14/Includes all counties in New Mexico except Colfax.
15/Includes Adams, Arapahoe, Boulder, Douglas, Elbert, El Paso, Jackson, Jefferson, Larimer, and Weld counties.
16/Includes Lincoln, Sweetwater, and Uinta counties.
17/Includes all counties in Wyoming except those in Southern Wyoming.
18/Includes Arizona, California, Idaho, Nebraska, Nevada, and Oregon.

(Continued on next page)

Clipped from U. S. Bureau of Mines' Weekly Coal Report No. 871, March 24, 1934. Tables prepared by W. H. Young, L. Mann, H. O. Rogers, R. McKinney, March 24, 1934.

No. W.C.P. 871

PRODUCTION OF BITUMINOUS COAL, 1920 TO 1933, IN THOUSANDS OF NET TONS (Continued)

(Prepared from operators' reports to the United States Bureau of Mines - Exclusive of wagon mines producing less than 1,000 tons annually)

Code Authority Districts	1927		1928		1929		1930		1931		1932		1933 (Preliminary)	
	Thousands of net tons	Percentage of total	Thousands of net tons	Percentage of total	Thousands of net tons	Percentage of total	Thousands of net tons	Percentage of total	Thousands of net tons	Percentage of total	Thousands of net tons	Percentage of total	Thousands of net tons	Percentage of total
DIVISION NO. I														
Eastern Sub-Division:														
Central Pennsylvania 1/	43,345	8.37	40,577	8.10	43,886	8.20	39,409	8.43	34,092	8.92	28,051	9.05	28,387	8.66
Somerset 2/	7,157	1.38	6,651	1.33	6,340	1.19	5,950	1.27	5,406	1.42	3,547	1.15	5,738	1.75
Maryland-Upper Potomac 3/	4,326	.84	3,950	.79	4,073	.76	3,507	.75	2,953	.77	2,174	.70		
Total, Eastern Sub-Division	54,828	10.59	51,178	10.22	54,299	10.15	48,866	10.45	42,451	11.11	33,772	10.90	34,125	10.41
Western Pennsylvania Sub-Division 4/	82,462	15.93	83,975	16.77	93,291	17.44	79,104	16.92	58,161	15.22	43,178	13.94	46,981	14.33
Ohio Sub-Division:														
Ohio - all	15,800	3.05	15,641	3.13	23,689	4.43	22,552	4.83	20,411	5.34	13,910	4.49	23,227	7.08
Panhandle of West Virginia 5/	7,137	1.38	7,212	1.44	6,335	1.18	5,114	1.09	4,054	1.06	3,645	1.18		
Michigan - all	757	.15	617	.12	805	.15	661	.14	359	.10	446	.14	340	.11
Total, Ohio Sub-Division	23,694	4.58	23,470	4.69	30,829	5.76	28,327	6.06	24,824	6.50	18,001	5.81	23,567	7.19
Northern West Virginia 6/	35,723	6.90	30,892	6.17	30,210	5.65	25,752	5.51	20,819	5.45	16,772	5.42	18,298	5.58
Southern Low Volatile 7/	51,432	9.93	51,068	10.20	56,695	10.60	50,511	10.80	42,888	11.22	36,229	11.70	41,092	12.53
Southern High Volatile 8/	114,799	22.17	104,454	20.86	106,846	19.97	94,109	20.13	77,594	20.31	64,388	20.79	67,658	20.63
Western Kentucky 9/	21,205	4.10	16,277	3.25	14,437	2.70	10,915	2.34	8,579	2.25	9,540	3.08	7,270	2.21
GRAND TOTAL - DIVISION NO. I	384,143	74.20	361,314	72.16	386,607	72.27	337,584	72.21	275,316	72.06	221,880	71.64	238,091	72.58
DIVISION NO. II														
Illinois Sub-Division	46,848	9.05	55,948	11.17	60,658	11.34	53,731	11.49	44,303	11.59	33,474	10.81	36,110	11.01
Indiana Sub-Division	17,936	3.46	16,378	3.27	18,344	3.43	16,490	3.53	14,295	3.74	13,324	4.30	13,500	4.12
Iowa Sub-Division:														
Wayne and Appanoose Counties	338	.07	486	.10	585	.11	606	.13	564	.15	643	.21	3,230	.98
Rest of State	2,612	.50	3,198	.64	3,656	.68	3,287	.70	2,825	.74	3,219	1.04		
Total, Iowa Sub-Division	2,950	.57	3,684	.74	4,241	.79	3,893	.83	3,389	.89	3,862	1.25	3,230	.98
GRAND TOTAL - DIVISION NO. II	67,734	13.08	76,010	15.18	83,243	15.56	74,114	15.85	61,987	16.22	50,660	16.36	52,840	16.11
DIVISION NO. III														
Alabama - all	19,766	3.82	17,621	3.52	17,944	3.35	15,570	3.33	11,999	3.14	7,857	2.54	8,775	2.68
Georgia - all	77	.01	59	.01	45	.01	7	.00	21	.01	27	.01	869	.26
Southern Tennessee 10/	1,192	.23	1,219	.24	1,240	.23	1,111	.24	978	.25	821	.26		
GRAND TOTAL - DIVISION NO. III	21,035	4.06	18,899	3.77	19,229	3.59	16,688	3.57	12,998	3.40	8,705	2.81	9,644	2.94
DIVISION NO. IV														
Southwestern Coals Sub-Division:														
Kansas - all	3,444	.67	2,810	.56	2,976	.56	2,430	.52	1,987	.52	1,953	.63	5,390	1.64
Missouri - all	3,064	.59	3,732	.74	4,030	.75	3,853	.82	3,620	.95	4,070	1.31		
Oklahoma - High Volatile 11/	3,211	.62	2,784	.56	2,940	.55	2,195	.47	1,389	.36	844	.27		
Total, Southwestern Coals Sub-Div.	9,719	1.88	9,326	1.86	9,946	1.86	8,478	1.81	6,996	1.83	6,867	2.21		
Ark.-Okla. Smokeless Sub-Division:													Not possible to separate Oklahoma high and low volatile.	
Arkansas - all	1,549	.30	1,661	.33	1,695	.31	1,533	.33	1,154	.30	1,034	.34		
Oklahoma - Low Volatile 12/	607	.12	718	.14	834	.16	599	.13	519	.14	411	.13		
Total, Ark.-Okla. Smokeless Sub-Div.	2,156	.42	2,379	.47	2,529	.47	2,132	.46	1,673	.44	1,445	.47		
Texas - all	1,326	.25	1,182	.24	1,101	.21	834	.17	716	.18	636	.21	610	.19
GRAND TOTAL - DIVISION NO. IV	13,201	2.55	12,887	2.57	13,576	2.54	11,444	2.44	9,385	2.45	8,948	2.89	8,170	2.49
DIVISION NO. V														
Southern Col. and Northern N. Mex. 13/	9,133	1.77	8,615	1.72	8,179	1.53	6,350	1.36	4,645	1.22	3,677	1.18	6,371	1.94
Central and Southern New Mexico 14/	1,085	.21	1,049	.21	1,171	.22	977	.21	785	.21	637	.21		
Northern Colorado 15/	2,441	.47	2,896	.58	3,194	.60	2,833	.61	2,727	.71	2,548	.82		
Utah - all	4,782	.93	4,843	.97	5,161	.96	4,257	.91	3,350	.88	2,852	.92	2,610	.80
Wyoming:														
Southern 16/	4,525	.87	4,573	.91	4,717	.88	4,324	.92	3,567	.93	2,915	.94	3,985	1.21
Northern 17/	2,229	.43	1,999	.40	1,988	.37	1,764	.38	1,427	.37	1,256	.41		
Total, Wyoming	6,754	1.30	6,572	1.31	6,705	1.25	6,088	1.30	4,994	1.30	4,171	1.35	3,985	1.21
Montana - all	3,144	.60	3,324	.66	3,407	.64	3,022	.65	2,378	.62	2,125	.69	2,130	.65
Washington - all	2,635	.51	2,519	.50	2,521	.47	2,302	.49	1,846	.48	1,592	.51	1,460	.45
North Dakota and South Dakota:														
North Dakota - all	1,528	.29	1,650	.33	1,862	.35	1,700	.36	1,519	.40	1,740	.56	1,739	.53
South Dakota - all	12	.00	14	.00	13	.00	13	.00	28	.01	49	.02		
Total, No. Dakota and So. Dakota	1,540	.29	1,664	.33	1,875	.35	1,713	.36	1,547	.41	1,789	.58	1,739	.53
All Other Western States 18/	32	.01	27	.01	30	.00	28	.01	25	.01	23	.01	-	-
GRAND TOTAL - DIVISION NO. V	31,646	6.09	31,509	6.29	32,233	6.02	27,576	5.90	22,297	5.84	19,414	6.27	18,295	5.58
Alaska - all	104	.02	126	.03	101	.02	120	.03	106	.03	103	.03	-	-
UNITED STATES	517,763	100.00	500,745	100.00	534,989	100.00	467,526	100.00	382,089	100.00	309,710	100.00	327,940	100.00

1/Includes U. S. Coal Commission Fields No. 6 Blossburg; 7 Broad Top; 9 abc Central Pennsylvania.
2/Includes U. S. Coal Commission Field No. 8 Somerset.
3/Includes U. S. Coal Commission Field No. 10 Maryland-Potomac (or Maryland plus Grant, Mineral, and Tucker counties, West Virginia).
4/Includes U. S. Coal Commission Fields No. 1 Pittsburgh; 2 Connellsville; 3 Westmoreland-Ligonier; 4 ab Freeport; 5 Butler-Mercer.
5/Includes Brooke, Hancock, Marshall and Ohio counties in West Virginia.
6/Includes Monongalia, Preston, Marion, Harrison, Taylor, Lewis, Barbour, Gilmer, Upshur, Randolph, Braxton, and Webster counties, and Nicholas County on Baltimore and Ohio Railroad (or U. S. Coal Commission Fields No. 11 Fairmont and No. 24 abc, except Clay and Kanawha counties).
7/Includes U. S. Coal Commission Fields No. 17 Tug River; 18 Pocahontas; 19 Winding Gulf; 20 New River; 27 Virginia Anthracite; 28 Richmond Basin; 92 North Carolina.
8/Includes mines in Clay and Kanawha counties in U. S. Coal Commission Field No. 24 abc; 13 Mason County; 14 Putnam County; 15 Kenova; 16 Thacker; 21 Kanawha; 22 Coal River; 23 Logan; 25 Southwestern Virginia; 26 Clinch Valley; 36 Northeastern Kentucky; 37 Hazard; 38 Harlan; 39 Southern Appalachian; 40 Jellico; 43 Pentress; and northern part of No. 42, namely, mines in Anderson, Morgan, and Roane counties and Cumberland County except on the Nashville, Chattanooga and St. Louis Railroad. (This includes all high volatile districts of Southern West Virginia, Eastern Kentucky, Virginia, and Northern Tennessee).
9/Includes U. S. Coal Commission Field No. 41 Western Kentucky.
10/Includes Bledsoe, Grundy, Hamilton, Marion, Rhea, Sequatchie, Van Buren, Warren, White counties, and mines in Cumberland County on the Nashville, Chattanooga and St. Louis R.R.
11/Includes all counties in Oklahoma except Leflore, Haskell, and Sequoyah.
12/Includes Leflore, Haskell, and Sequoyah counties.
13/Includes all counties in Colorado except those included in Northern Colorado, Also, Colfax County, New Mexico.
14/Includes all counties in New Mexico except Colfax.
15/Includes Adams, Arapahoe, Boulder, Douglas, Elbert, El Paso, Jackson, Jefferson, Larimer, and Weld counties.
16/Includes Lincoln, Sweetwater, and Uinta counties.
17/Includes all counties in Wyoming except those in Southern Wyoming.
18/Includes Arizona, California, Idaho, Nebraska, Nevada, and Oregon.

No. W.C.B. 671 AVERAGE VALUE PER NET TON F.O.B. MINE OF BITUMINOUS COAL PRODUCED, 1923 to 1932
(Prepared from operators' reports to the United States Bureau of Mines. Exclusive of wagon mines producing less than 1,000 tons annually.)

Code Authority Districts	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
DIVISION NO. I										
Eastern Sub-Division:										
Central Pennsylvania 1/	$ 2.87	$ 2.37	$ 2.14	$ 2.14	$ 2.05	$ 1.95	$ 1.88	$ 1.78	$ 1.66	$ 1.44
Somerset 2/	2.90	1.97	1.84	1.97	1.92	1.72	1.66	1.66	1.55	1.33
Maryland-Upper Potomac 3/	2.99	2.13	1.94	2.17	2.06	1.85	1.75	1.65	1.51	1.31
Total, Eastern Sub-Division	2.88	2.31	2.09	2.13	2.03	1.91	1.84	1.76	1.64	1.42
Western Pennsylvania Sub-Division 4/	2.68	2.22	2.10	2.13	2.06	1.90	1.78	1.69	1.55	1.28
Ohio Sub-Division:										
Ohio - all	2.43	2.03	1.93	1.96	1.98	1.69	1.51	1.40	1.24	1.11
Kanawha of West Virginia 5/	2.53	2.08	1.94	1.93	1.78	1.68	1.54	1.45	1.33	1.10
Michigan - all	4.73	4.33	4.80	4.18	4.31	4.86	3.81	3.81	3.04	2.73
Total, Ohio Sub-Division	2.90	2.08	1.98	2.00	1.98	1.75	1.57	1.46	1.28	1.13
Northern West Virginia 6/	2.24	1.74	1.53	1.63	1.58	1.39	1.38	1.83	1.08	.86
Southern Low Volatile 7/	3.14	1.98	1.94	2.12	1.97	1.79	1.76	1.73	1.47	1.16
Southern High Volatile 8/	2.60	1.82	1.70	1.80	1.71	1.60	1.57	1.50	1.31	1.07
Western Kentucky 9/	2.11	1.78	1.44	1.36	1.54	1.23	1.14	1.13	1.01	.84
GRAND TOTAL - DIVISION NO. I	2.67	2.04	1.89	1.95	1.89	1.72	1.65	1.58	1.43	1.16
DIVISION NO. II										
Illinois Sub-Division	2.50	2.27	2.19	2.14	2.16	2.00	1.87	1.74	1.70	1.53
Indiana Sub-Division	2.48	2.16	2.02	1.98	2.03	1.78	1.63	1.59	1.45	1.30
Iowa Sub-Division:										
Wayne and Appanoose Counties	3.72	3.51	3.37	3.31	3.20	2.83	2.72	2.53	2.30	2.30
Rest of State	3.57	3.27	3.11	3.04	3.15	2.86	2.83	2.69	2.58	2.41
Total, Iowa Sub-Division	3.59	3.31	3.14	3.07	3.15	2.86	2.82	2.67	2.53	2.40
GRAND TOTAL - DIVISION NO. II	2.55	2.31	2.20	2.15	2.17	2.00	1.87	1.75	1.69	1.54
DIVISION NO. III										
Alabama - all	2.52	2.34	2.12	2.29	2.25	2.25	2.08	2.03	1.82	1.54
Georgia - all	4.32	3.62	3.32	2.89	3.04	3.10	3.05	2.54	2.09	1.76
Southern Tennessee 10/	2.86	2.44	2.03	2.02	2.00	1.83	1.83	1.80	1.69	1.54
GRAND TOTAL - DIVISION NO. III	2.56	2.35	2.12	2.07	2.24	2.22	2.07	2.02	1.81	1.55
DIVISION NO. IV										
Southwestern Coals Sub-Division:										
Kansas - all	3.21	3.03	2.88	2.84	2.80	2.44	2.25	2.15	1.90	1.75
Missouri - all	3.41	3.29	3.07	2.98	2.84	2.58	2.43	2.33	2.00	1.64
Oklahoma - High Volatile 11/	3.76	3.62	3.33	3.22	3.04	3.01	3.15	2.81	2.37	1.99
Total, Southwestern Coals Sub-Division	3.41	3.24	3.03	2.97	2.89	2.67	2.59	2.40	2.04	1.71
Arkansas-Oklahoma Smokeless Sub-Division:										
Arkansas - all	4.04	4.06	3.96	3.77	3.48	3.38	3.32	3.36	3.04	2.74
Oklahoma - Low Volatile 12/	3.93	4.31	3.14	3.02	2.98	2.78	2.67	2.65	2.56	2.34
Total, Arkansas-Oklahoma Smokeless Sub-Division	4.02	4.10	3.76	3.57	3.34	3.20	3.11	3.16	2.89	2.63
Texas - all	1.82	1.50	1.55	1.60	1.51	1.34	1.45	1.57	1.49	1.42
GRAND TOTAL - DIVISION NO. IV	3.34	3.19	3.00	2.95	2.83	2.64	2.59	2.48	2.15	1.84
DIVISION NO. V										
Southern Colorado and Northern New Mexico 13/	3.51	3.32	3.19	3.00	2.95	3.02	2.93	2.85	2.58	2.30
Central and Southern New Mexico 14/	3.88	3.76	3.64	3.59	3.47	3.42	3.30	3.18	3.09	2.66
Northern Colorado 15/	2.43	2.34	2.25	2.14	2.25	2.29	2.12	2.22	2.24	2.12
Utah - all	2.89	2.69	2.56	2.37	2.32	2.53	2.47	2.47	2.22	1.99
Wyoming:										
Southern 16/	2.83	2.77	2.80	2.78	2.71	2.68	2.56	2.51	2.47	2.32
Northern 17/	2.69	2.58	2.75	2.65	2.64	2.54	2.53	2.43	2.24	2.01
Total, Wyoming	2.76	2.71	2.79	2.74	2.69	2.64	2.54	2.49	2.40	2.23
Montana - all	3.07	2.96	2.59	2.46	2.35	2.27	2.22	2.00	1.81	1.66
Washington - all	3.72	3.65	3.62	3.61	3.50	3.46	3.43	3.23	3.14	2.99
North Dakota and South Dakota:										
North Dakota - all	2.37	2.05	1.85	1.74	1.70	1.68	1.70	1.63	1.42	1.26
South Dakota - all	2.41	2.99	2.91	2.91	3.04	2.80	2.96	2.42	2.33	1.77
Total, North Dakota and South Dakota	2.37	2.07	1.86	1.75	1.72	1.69	1.70	1.63	1.43	1.28
All Other Western States 18/	3.94	4.19	4.75	3.67	2.81	3.13	3.96	4.47	5.31	4.01
GRAND TOTAL - DIVISION NO. V	3.10	2.97	2.86	2.74	2.69	2.70	2.60	2.52	2.35	2.12
Alaska - all	6.30	5.62	4.89	5.26	5.25	5.25	5.25	5.25	5.25	5.00
UNITED STATES	2.68	2.20	2.04	2.06	1.99	1.86	1.78	1.70	1.54	1.31

1/ Includes U. S. Coal Commission Fields No. 6 Blossburg; 7 Broad Top; 9 abc Central Pennsylvania.
2/ Includes U. S. Coal Commission Field No. 8 Somerset.
3/ Includes U. S. Coal Commission Field No. 10 Maryland-Potomac (or Maryland plus Grant, Mineral and Tucker Counties, West Virginia).
4/ Includes U. S. Coal Commission Fields No. 1 Pittsburgh; 2 Connellsville; 3 Westmoreland-Ligonier; 4 ab Freeport; 5 Butler-Mercer.
5/ Includes Brooke, Hancock, Marshall and Ohio Counties in West Virginia.
6/ Includes Monongalia, Preston, Marion, Harrison, Taylor, Lewis, Barbour, Gilmer, Upshur, Randolph, Braxton, and Webster Counties, and Nicholas County on Baltimore and Ohio Railroad (or U. S. Coal Commission Fields No. 11 Fairmont and No. 24 abc, except Clay and Kanawha Counties).
7/ Includes U. S. Coal Commission Fields No. 17 Tug River; 18 Pocahontas; 19 Winding Gulf; 20 New River; 27 Virginia Anthracite; 28 Richmond Basin; 92 North Carolina.
8/ Includes mines in Clay and Kanawha Counties in U. S. Coal Commission Field No. 24 abc; 13 Mason County; 14 Putnam County; 15 Kenova; 16 Thacker; 21/22 Coal River; 23 Logan; 25 Southwestern Virginia; 26 Clinch Valley; 36 Northeastern Kentucky; 37 Hazard; 38 Harlan; 39 Southern Appalachian; 40 Jellico; 43 Pentress; and northern part of No. 42, namely, mines in Anderson, Morgan, and Roane Counties and Cumberland County except on the Nashville, Chattanooga and St. Louis Railroad. (This includes all high volatile districts of Southern West Virginia, Eastern Kentucky, Virginia, and Northern Tennessee).
9/ Includes U. S. Coal Commission Field No. 41 Western Kentucky.
10/ Includes Bledsoe, Grundy, Hamilton, Marion, Rhea, Sequatchie, Van Buren, Warren, White Counties, and mines in Cumberland County on the Nashville, Chattanooga, and St. Louis Railroad.
11/ Includes all counties in Oklahoma except Leflore, Haskell, and Sequoyah.
12/ Includes Leflore, Haskell, and Sequoyah Counties.
13/ Includes all counties in Colorado except those included in Northern Colorado. Also, Colfax County, New Mexico.
14/ Includes all counties in New Mexico except Colfax.
15/ Includes Adams, Arapahoe, Boulder, Douglas, Elbert, El Paso, Jackson, Jefferson, Larimer, and Weld Counties.
16/ Includes Lincoln, Sweetwater, and Uinta Counties.
17/ Includes all counties in Wyoming except those in Southern Wyoming.
18/ Includes Arizona, California, Idaho, Nebraska, Nevada, and Oregon.

1148

1150

No. ...S. 271

TOTAL NUMBER OF MEN EMPLOYED IN BITUMINOUS COAL MINES 1923 to 1932

(Prepared from operators' reports to the United States Bureau of Mines - exclusive of wagon mines producing less than 1,000 tons annually.)

Code Authority Districts	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
DIVISION NO. I										
Eastern Sub-Division:										
Central Pennsylvania 1/	76,735	68,510	61,819	58,891	59,574	51,884	49,561	50,859	48,272	44,934
Somerset 2/	9,184	7,910	7,359	7,787	8,330	7,256	6,199	6,965	6,602	5,194
Maryland-Upper Potomac 3/	5,913	5,366	5,096	5,478	5,271	4,937	4,929	4,863	4,708	4,619
Total, Eastern Sub-Division	91,832	81,786	74,274	72,156	73,175	64,077	60,689	62,687	59,582	54,747
Western Pennsylvania Sub-Division 4/	109,062	92,902	87,620	89,321	85,795	74,274	76,014	72,326	61,852	54,404
Ohio Sub-Division:										
Ohio - all	54,555	44,229	39,658	38,547	35,543	21,371	25,399	25,574	25,085	23,280
Panhandle of West Virginia 5/	5,362	5,612	5,610	5,784	6,256	6,224	5,572	5,243	4,031	3,464
Michigan - all	1,977	1,551	1,579	1,573	1,512	1,239	1,336	1,294	1,372	940
Total, Ohio Sub-Division	61,894	51,392	46,847	45,904	43,311	28,834	32,307	32,111	30,488	27,684
Northern West Virginia 6/	31,301	25,530	26,236	28,816	29,006	25,971	22,616	22,115	19,276	15,232
Southern Low Volatile 7/	40,687	38,821	44,149	46,551	45,667	44,566	44,836	46,550	44,142	40,244
Southern High Volatile 8/	104,456	90,529	94,524	100,318	102,135	96,000	90,806	90,618	82,448	72,875
Western Kentucky 9/	16,226	15,432	15,181	15,945	18,717	17,908	15,966	13,996	11,225	10,804
GRAND TOTAL - DIVISION NO. I	455,458	396,392	388,831	399,011	397,806	351,630	343,234	340,403	309,013	275,990
DIVISION NO. II										
Illinois Sub-Division	99,714	89,363	77,823	75,870	76,970	64,266	56,725	53,603	49,685	47,597
Indiana Sub-Division	35,408	27,558	22,732	23,404	24,352	16,806	15,250	13,881	12,311	10,639
Iowa Sub-Division:										
Wayne and Appanoose Counties	3,192	3,248	2,799	2,140	2,145	1,484	1,598	1,889	1,991	1,927
Rest of State	8,256	8,853	7,368	6,729	6,596	5,481	5,697	6,012	5,906	6,159
Total, Iowa Sub-Division	11,448	12,101	10,167	8,869	8,741	6,965	7,295	7,901	7,897	8,086
GRAND TOTAL - DIVISION NO. II	146,570	129,022	110,722	108,143	110,063	88,037	79,270	75,385	69,893	66,322
DIVISION NO. III										
Alabama - all	30,035	27,956	27,097	27,345	27,615	25,708	25,208	24,393	22,973	20,443
Georgia - all	167	143	137	127	114	124	102	80	62	64
Southern Tennessee 10/	3,405	2,619	2,128	1,960	1,995	2,027	1,987	1,890	1,784	1,826
GRAND TOTAL - DIVISION NO. III	33,607	30,718	29,362	29,432	29,724	27,859	27,297	26,343	24,819	22,333
DIVISION NO. IV										
Southwestern Coals Sub-Division:										
Kansas - all	9,761	8,561	7,800	8,172	7,004	5,991	5,139	4,855	3,813	3,591
Missouri - all	6,952	5,977	5,114	5,270	6,232	5,964	5,618	5,700	5,362	5,677
Oklahoma - High Volatile 11/	6,049	5,403	4,888	4,476	4,741	4,873	4,773	4,063	3,222	1,863
Total, Southwestern Coals Sub-Division	22,762	19,941	17,802	17,918	17,977	16,828	15,530	14,618	12,397	11,131
Arkansas-Oklahoma Smokeless Sub-Division:										
Arkansas - all	3,754	3,350	3,638	3,589	3,706	4,092	4,299	4,626	4,733	4,325
Oklahoma - Low Volatile 12/	1,081	741	743	924	1,055	1,345	1,548	1,361	1,412	1,200
Total, Arkansas-Oklahoma Smokeless Sub-Division	4,835	4,091	4,381	4,513	4,761	5,437	5,847	5,987	6,145	5,525
Texas - all	2,452	2,195	2,108	1,650	1,674	1,462	1,313	1,305	1,148	699
GRAND TOTAL - DIVISION NO. IV	30,049	26,227	24,291	24,081	24,412	23,727	22,690	21,910	19,690	17,355
DIVISION NO. V										
Southern Colorado and Northern New Mexico 13/	12,593	12,354	12,238	11,532	11,241	11,357	10,799	9,612	8,566	7,118
Central and Southern New Mexico 14/	1,783	1,836	1,756	1,632	1,695	1,712	1,805	1,741	1,695	1,534
Northern Colorado 15/	3,059	2,970	2,653	2,818	2,519	2,738	2,686	2,640	2,597	2,699
Utah - all	4,381	4,330	4,441	3,545	3,339	3,352	3,458	3,504	3,268	2,842
Wyoming:										
Southern 16/	5,153	4,827	4,408	4,214	4,183	3,311	3,526	3,766	3,264	2,892
Northern 17/	2,376	2,286	1,830	1,648	1,608	1,532	1,313	1,450	1,495	1,281
Total, Wyoming	7,529	7,113	6,238	5,862	5,791	4,843	4,839	5,216	4,759	4,173
Montana - all	3,511	3,196	2,680	2,419	2,281	2,191	2,283	2,085	1,672	1,525
Washington - all	4,306	3,858	3,726	3,609	3,407	3,099	2,946	2,801	2,662	2,816
North Dakota and South Dakota:										
North Dakota - all	1,621	1,298	1,307	1,288	1,341	1,335	1,421	1,258	1,300	1,311
South Dakota - all	34	40	49	52	49	41	32	43	56	84
Total, North Dakota and South Dakota	1,655	1,338	1,356	1,340	1,390	1,376	1,453	1,301	1,356	1,395
All Other Western States 18/	93	83	42	92	96	96	81	162	143	158
GRAND TOTAL - DIVISION NO. V	38,910	37,078	35,130	32,849	31,759	30,764	30,350	29,062	26,718	24,260
Alaska - all	199	167	157	131	154	133	152	99	80	120
UNITED STATES	704,793	619,604	588,493	593,647	593,918	522,150	502,993	493,202	450,213	406,380

1/ Includes U. S. Coal Commission Fields No. 6 Blossburg; 7 Broad Top; 9 abc Central Pennsylvania.
2/ Includes U. S. Coal Commission Field No. 8 Somerset.
3/ Includes U. S. Coal Commission Field No. 10 Maryland-Potomac (or Maryland plus Grant, Mineral and Tucker Counties, West Virginia).
4/ Includes U. S. Coal Commission Fields No. 1 Pittsburgh; 2 Connellsville; 3 Westmoreland-Ligonier; 4 ab Freeport; 5 Butler-Moraer.
5/ Includes Brooke, Hancock, Marshall and Ohio Counties in West Virginia.
6/ Includes Monongalia, Preston, Marion, Harrison, Taylor, Lewis, Barbour, Gilmer, Upshur, Randolph, Braxton, and Webster Counties, and Nicholas County on Baltimore and Ohio Railroad (or U. S. Coal Commission Fields No. 11 Fairmont and No. 24 abc, except Clay and Kanawha Counties).
7/ Includes U. S. Coal Commission Fields No. 17 Tug River; 18 Pocahontas; 19 Winding Gulf; 20 New River; 27 Virginia Anthracite; 28 Richmond Basin; 92 North Carolina.
8/ Includes mines in Clay and Kanawha Counties in U. S. Coal Commission Field No. 24 abc; 13 Mason County; 14 Putnam County; 15 Kenova; 16 Thacker; 21 Kanawha; 22 Coal River; 23 Logan; 25 Southwestern Virginia; 26 Clinch Valley; 36 Northeastern Kentucky; 37 Hazard; 38 Harlan; 39 Southern Appalachian; 40 Jellico; 43 Pentress; and northern part of No. 42, namely, mines in Anderson, Morgan, and Roane Counties and Cumberland County except on the Nashville, Chattanooga and St. Louis Railroad. (This includes all high volatile districts of Southern West Virginia, Eastern Kentucky, Virginia, and Northern Tennessee).
9/ Includes U. S. Coal Commission Field No. 41 Western Kentucky.
10/ Includes Bledsoe, Grundy, Hamilton, Marion, Rhea, Sequatchie, Van Buren, Warren, White Counties, and mines in Cumberland County on the Nashville, Chattanooga, and St. Louis Railroad.
11/ Includes all counties in Oklahoma except Leflore, Haskell, and Sequoyah.
12/ Includes Leflore, Haskell, and Sequoyah Counties.
13/ Includes all counties in Colorado except those included in Northern Colorado. Also, Colfax County, New Mexico.
14/ Includes all counties in New Mexico except Colfax.
15/ Includes Adams, Arapahoe, Boulder, Douglas, Elbert, El Paso, Jackson, Jefferson, Larimer, and Weld Counties.
16/ Includes Lincoln, Sweetwater, and Uinta Counties.
17/ Includes all counties in Wyoming except those in Southern Wyoming.
18/ Includes Arizona, California, Idaho, Nebraska, Nevada, and Oregon.

1149

1150

No. W.C.B. 571

TOTAL AVERAGE DAYS WORKED IN BITUMINOUS COAL MINES, 1923 to 1932

(Prepared from operators' reports to the United States Bureau of Mines. Exclusive of wagon mines producing less than 1,000 tons annually.)

Code Authority Districts	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
DIVISION NO. I										
Eastern Sub-Division:										
Central Pennsylvania 1/	188	164	190	212	182	187	206	184	159	147
Somerset 2/	162	181	224	236	222	211	243	212	183	145
Maryland-Upper Potomac 3/	175	164	210	232	218	215	243	195	185	145
Total, Eastern Sub-Division	185	165	195	216	189	192	213	188	164	147
Western Pennsylvania Sub-Division 4/	234	193	206	232	215	239	246	208	174	160
Ohio Sub-Division:										
Ohio - all	150	143	151	159	98	171	201	189	174	127
Panhandle of West Virginia 5/	222	192	220	238	251	246	239	202	207	217
Michigan - all	222	178	186	171	188	187	217	187	96	159
Total, Ohio Sub-Division	158	149	161	169	123	188	208	191	175	139
Northern West Virginia 6/	177	150	202	235	226	200	218	190	168	167
Southern Low Volatile 7/	168	198	229	255	232	233	251	212	179	162
Southern High Volatile 8/	168	195	233	247	241	227	244	201	171	160
Western Kentucky 9/	127	115	152	192	235	172	177	148	130	149
GRAND TOTAL - DIVISION NO. I	185	177	205	227	211	216	233	198	170	156
DIVISION NO. II										
Illinois Sub-Division	158	148	161	178	114	156	177	156	136	112
Indiana Sub-Division	136	136	159	173	120	150	172	157	146	145
Iowa Sub-Division:										
Wayne and Appanoose Counties	146	133	97	115	72	159	149	121	120	132
Rest of State	194	172	175	205	128	179	208	166	150	157
Total, Iowa Sub-Division	181	161	153	183	114	175	195	155	142	152
GRAND TOTAL - DIVISION NO. II	154	147	160	173	115	166	177	156	139	122
DIVISION NO. III										
Alabama - all	232	220	246	266	231	222	231	189	136	107
Georgia - all	231	248	220	253	250	220	260	71	180	208
Southern Tennessee 10/	198	190	204	236	220	206	229	146	168	147
GRAND TOTAL - DIVISION NO. III	228	213	243	264	231	221	251	148	138	110
DIVISION NO. IV										
Southwestern Coals Sub-Division:										
Kansas - all	139	151	169	158	138	128	160	126	123	130
Missouri - all	155	135	166	174	151	180	185	166	142	161
Oklahoma - High Volatile 11/	136	127	151	147	201	174	187	153	119	126
Total, Southwestern Coals Sub-Division	143	140	163	170	159	160	177	149	130	145
Arkansas - Oklahoma Smokeless Sub-Division:										
Arkansas - all	97	134	112	135	137	146	146	115	95	92
Oklahoma - Low Volatile 12/	117	105	164	163	175	150	151	131	105	118
Total, Arkansas-Oklahoma Smokeless Sub Division	102	129	121	144	146	147	147	119	97	96
Texas - all	178	166	150	195	202	203	212	181	140	152
GRAND TOTAL - DIVISION NO. IV	139	140	154	166	159	159	172	141	120	130
DIVISION NO. V										
Southern Colorado and Northern New Mexico 13/	177	178	192	211	210	192	180	157	122	117
Central and Southern New Mexico 14/	233	220	217	245	238	212	232	201	168	145
Northern Colorado 15/	184	189	188	198	183	209	219	198	193	191
Utah - all	160	162	179	186	209	191	211	168	140	176
Wyoming:										
Southern 16/	204	186	185	179	184	231	246	200	166	155
Northern 17/	166	153	161	184	200	178	188	157	127	150
Total, Wyoming	192	176	178	183	189	214	230	188	154	150
Montana - all	179	173	171	162	197	191	189	172	153	145
Washington - all	213	202	193	198	210	220	227	205	170	161
North Dakota and South Dakota:										
North Dakota - all	182	165	153	162	168	177	192	180	166	186
South Dakota - all	188	138	143	127	125	128	127	109	127	126
Total, North Dakota and South Dakota	183	164	153	161	167	175	190	178	164	183
All Other Western States 18/	206	156	174	103	204	181	125	98	91	88
GRAND TOTAL - DIVISION NO. V	185	182	186	196	203	200	204	177	149	150
Alaska - all	220	287	243	221	229	224	174	294	277	189
UNITED STATES	179	171	195	215	191	203	219	187	160	146

1/ Includes U. S. Coal Commission Fields No. 6 Blossburg; 7 Broad Top; 9 abc Central Pennsylvania.
2/ Includes U. S. Coal Commission Field No. 8 Somerset.
3/ Includes U. S. Coal Commission Field No. 10 Maryland-Potomac (or Maryland plus Grant, Mineral and Tucker Counties, West Virginia).
4/ Includes U. S. Coal Commission Fields No. 1 Pittsburgh; 2 Connellsville; 3 Westmoreland-Ligonier; 4 ab Freeport; 5 Butler-Mercer.
5/ Includes Brooke, Hancock, Marshall and Ohio Counties in West Virginia.
6/ Includes Monongalia, Preston, Marion, Harrison, Taylor, Lewis, Barbour, Gilmer, Upshur, Randolph, Braxton, and Webster Counties, and Nicholas County on Baltimore and Ohio Railroad (or U. S. Coal Commission Fields No. 11 Fairmont and No. 24 abc, except Clay and Kanawha Counties).
7/ Includes U. S. Coal Commission Fields No. 17 Tug River; 18 Pocahontas; 19 Winding Gulf; 20 New River; 27 Virginia Anthracite; 28 Richmond Basin; 92 North Carolina.
8/ Includes mines in Clay and Kanawha Counties in U. S. Coal Commission Field No. 24 abc; 13 Mason County; 14 Putnam County; 15 Kenova; 16 Thacker; 21 Kanawha; 22 Coal River; 23 Logan; 25 Southwestern Virginia; 26 Clinch Valley; 36 Northeastern Kentucky; 37 Hazard; 38 Harlan; 39 Southern Appalachian; 40 Jellico; 43 Pentress; and northern part of No. 42, namely, mines in Anderson, Morgan, and Roane Counties and Cumberland County except on the Nashville, Chattanooga and St. Louis Railroad. (This includes all high volatile districts of Southern West Virginia, Eastern Kentucky, Virginia, and Northern Tennessee).
9/ Includes U. S. Coal Commission Field No. 41 Western Kentucky.
10/ Includes Bledsoe, Grundy, Hamilton, Marion, Rhea, Sequatchie, Van Buren, Warren, White Counties, and mines in Cumberland County on the Nashville, Chattanooga, and St. Louis Railroad.
11/ Includes all counties in Oklahoma except Leflore, Haskell, and Sequoyah.
12/ Includes Leflore, Haskell, and Sequoyah Counties.
13/ Includes all counties in Colorado except those included in Northern Colorado. Also, Colfax County, New Mexico.
14/ Includes all counties in New Mexico except Colfax.
15/ Includes Adams, Arapahoe, Boulder, Douglas, Elbert, El Paso, Jackson, Jefferson, Larimer, and Weld Counties.
16/ Includes Lincoln, Sweetwater, and Uinta Counties.
17/ Includes all counties in Wyoming except those in Southern Wyoming.
18/ Includes Arizona, California, Idaho, Nebraska, Nevada, and Oregon.

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No. N.C.R. 871 OUTPUT PER MAN PER DAY IN BITUMINOUS COAL MINES, 1923 to 1932, IN NET TONS
(Prepared from operators' reports to the United States Bureau of Mines. Exclusive of wagon mines producing less than 1,000 tons annually.)

Code Authority Districts	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932a/
DIVISION NO. I										
Eastern Sub-Division:										
Central Pennsylvania 1/	3.90	3.86	3.86	4.00	3.99	4.17	4.30	4.22	4.43	4.25
Somerset 2/	3.83	3.95	4.10	3.89	3.87	4.35	4.21	4.03	4.48	4.71
Maryland-Upper Potomac 3/	3.65	3.56	3.89	3.63	3.77	3.72	3.40	3.70	3.40	3.25
Total, Eastern Sub-Division	3.88	3.85	3.89	3.96	3.96	4.16	4.21	4.16	4.34	4.21
Western Pennsylvania Sub-Division 4/	4.29	4.56	4.71	4.64	4.46	4.72	5.00	5.27	5.40	4.96
Ohio Sub-Division:										
Ohio - all	4.96	4.82	4.67	4.56	4.52	4.28	4.64	4.67	4.68	4.71
Panhandle of West Virginia 5/	5.21	5.02	4.76	4.59	4.54	4.70	4.76	4.82	4.85	4.86
Michigan - all	2.67	3.00	2.75	2.55	2.67	2.67	2.77	2.73	2.74	2.98
Total, Ohio Sub-Division	4.89	4.78	4.61	4.49	4.43	4.33	4.58	4.62	4.66	4.67
Northern West Virginia 6/	5.59	5.80	5.04	5.10	5.45	5.96	6.11	6.12	6.42	6.58
Southern Low Volatile 7/	5.46	5.16	4.63	4.51	4.85	4.92	4.84	5.13	5.42	5.54
Southern High Volatile 8/	4.66	4.75	4.60	4.59	4.67	4.80	4.83	5.15	5.50	5.53
Western Kentucky 9/	5.28	5.06	5.27	5.04	4.83	5.28	5.10	5.28	5.58	5.92
GRAND TOTAL - DIVISION NO. I	4.56	4.64	4.55	4.53	4.56	4.76	4.84	5.02	5.24	5.17
DIVISION NO. II										
Illinois Sub-Division	5.02	5.16	5.33	5.31	5.36	5.57	6.06	6.42	6.54	6.30
Indiana Sub-Division	5.43	5.75	5.89	5.72	6.13	6.51	7.00	7.56	7.95	8.65
Iowa Sub-Division:										
Wayne and Appanoose Counties	2.04	1.94	2.11	2.03	2.19	2.06	2.45	2.65	2.36	2.53
Rest of State	2.96	3.05	3.22	2.99	3.10	3.26	3.08	3.30	3.20	3.33
Total, Iowa Sub-Division	2.75	2.80	3.02	2.85	2.96	3.02	2.98	3.16	3.02	3.17
GRAND TOTAL - DIVISION NO. II	4.91	5.03	5.24	5.19	5.35	5.52	5.92	6.29	6.39	6.28
DIVISION NO. III										
Alabama - all	2.93	3.11	3.00	2.89	3.10	3.09	3.08	3.38	3.84	3.60
Georgia - all	1.96	2.11	2.20	1.86	2.69	1.68	1.68	1.66	1.93	2.04
Southern Tennessee 10/	2.64	2.55	2.78	2.79	2.72	2.92	2.73	3.16	3.27	3.06
GRAND TOTAL - DIVISION NO. III	2.90	3.08	2.98	2.88	3.07	3.07	3.05	3.36	3.78	3.54
DIVISION NO. IV										
Southwestern Coals Sub-Division:										
Kansas - all	3.19	3.29	3.44	3.43	3.57	3.68	3.63	3.96	4.24	4.19
Missouri - all	3.07	3.08	3.18	3.27	3.26	3.47	3.87	4.07	4.75	4.45
Oklahoma - High Volatile 11/	3.03	3.05	2.63	2.79	3.37	3.29	3.30	3.53	3.62	3.60
Total, Southwestern Coals Sub-Division	3.11	3.17	3.16	3.21	3.40	3.47	3.61	3.88	4.33	4.25
Arkansas - Oklahoma Smokeless Sub-Division:										
Arkansas - all	3.39	3.24	2.99	3.00	3.05	2.79	2.70	2.87	2.58	2.61
Oklahoma - Low Volatile 12/	2.74	3.03	3.12	3.41	3.28	3.55	3.56	3.35	3.51	3.06
Total, Arkansas-Oklahoma Smokeless Sub-Division	3.21	3.21	3.02	3.10	3.11	2.98	2.93	2.99	2.81	2.72
Texas - all	2.72	3.16	3.19	3.39	3.92	3.99	3.95	3.53	4.46	6.00
GRAND TOTAL - DIVISION NO. IV	3.08	3.17	3.14	3.20	3.39	3.43	3.49	3.65	3.96	3.97
DIVISION NO. V										
Southern Colorado and Northern New Mexico 13/	4.21	4.18	3.88	3.89	3.87	3.95	4.21	4.20	4.43	4.41
Central and Southern New Mexico 14/	2.66	2.81	2.75	2.67	2.69	2.88	2.80	2.79	2.75	2.86
Northern Colorado 15/	4.93	5.16	5.42	5.29	5.31	5.06	5.43	5.42	5.45	4.95
Utah - all	6.75	5.70	5.90	6.65	6.84	7.57	7.09	7.23	7.34	5.69
Wyoming:										
Southern 16/	4.97	5.16	5.60	5.87	5.86	5.99	5.44	5.74	6.57	6.51
Northern 17/	5.91	6.05	6.71	6.83	6.94	7.33	6.06	7.74	7.49	7.00
Total, Wyoming	5.23	5.41	5.90	6.15	6.18	6.34	6.02	6.20	6.81	6.65
Montana - all	5.00	5.26	6.64	7.14	6.99	7.93	7.90	8.45	9.27	9.64
Washington - all	3.18	3.41	3.52	3.62	3.68	3.70	3.77	4.01	4.09	3.51
North Dakota and South Dakota:										
North Dakota - all	4.60	5.62	6.61	6.56	6.78	7.00	6.84	7.50	7.04	7.12
South Dakota - all	2.50	2.18	2.06	2.19	2.04	2.66	3.17	2.73	3.86	4.65
Total, North Dakota and South Dakota	4.57	5.53	6.46	6.43	6.65	6.90	6.78	7.41	6.94	7.02
All Other Western States 18/	1.05	1.31	1.73	2.03	1.66	1.58	2.03	1.85	1.88	1.66
GRAND TOTAL - DIVISION NO. V	4.57	4.62	4.76	4.84	4.90	5.12	5.22	5.37	5.62	5.33
Alaska - all	2.74	2.08	2.17	3.02	2.96	4.23	3.81	4.13	4.78	4.53
UNITED STATES	4.47	4.56	4.52	4.50	4.55	4.73	4.85	5.06	5.30	5.22

a/ Based upon (1) the "reported" number of man-shifts where the operator keeps a record thereof; otherwise upon (2) the "calculated" number of man-shifts obtained by multiplying the average number of men employed underground and on the surface at each mine by the number of days worked by each group, respectively. Using a "calculated" method throughout the average output per man per day for the country as a whole was 5.33, a figure strictly comparable with those published in previous years.

1/ Includes U. S. Coal Commission Fields No. 6 Blossburg; 7 Broad Top; 9 abc Central Pennsylvania.
2/ Includes U. S. Coal Commission Field No. 8 Somerset.
3/ Includes U. S. Coal Commission Field No. 10 Maryland-Potomac (or Maryland plus Grant, Mineral and Tucker Counties, West Virginia).
4/ Includes U. S. Coal Commission Fields No. 1 Pittsburgh; 2 Connellsville; 3 Westmoreland-Ligonier; 4 ab Freeport; 5 Butler-Mercer.
5/ Includes Brooke, Hancock, Marshall and Ohio Counties in West Virginia.
6/ Includes Monongalia, Preston, Marion, Harrison, Taylor, Lewis, Barbour, Gilmer, Upshur, Randolph, Braxton, and Webster Counties, and Nicholas County on Baltimore and Ohio Railroad (or U. S. Coal Commission Fields No. 11 Fairmont and No. 24 abc, except Clay and Kanawha Countiesa).
7/ Includes U.S.Coal Commission Fields No.17 Tug River; 18 Pocahontas; 19 Winding Gulf; 20 New River; 27 Virginia Anthracite; 28 Richmond Basin; 92 North Carolina.
8/ Includes mines in Clay and Kanawha Counties in U.S.Coal Commission Field No. 24 abc; 13 Mason County; 14 Putnam County; 15 Kenova; 16 Thacker; 21 Kanawha; 22 Coal River; 23 Logan; 25 Southwestern Virginia; 26 Clinch Valley; 36 Northeastern Kentucky; 37 Hazard; 38 Harlan; 39 Southern Appalachian; 40 Jellico; 43 Pentress; and northern part of No. 42, namely, mines in Anderson, Morgan, and Roane Counties and Cumberland County except on the Nashville, Chattanooga and St. Louis Railroad. (This includes all high volatile districts of Southern West Virginia, Eastern Kentucky, Virginia, and Northern Tennessee).
9/ Includes U. S. Coal Commission Field No. 41 Western Kentucky.
10/ Includes Bledsoe, Grundy, Hamilton, Marion, Rhea, Sequatchie, Van Buren, Warren, White Counties, and mines in Cumberland County on the Nashville-Chattanooga, and St. Louis Railroad.
11/ Includes all counties in Oklahoma except Leflore, Haskell, and Sequoyah.
12/ Includes Leflore, Haskell, and Sequoyah Counties.
13/ Includes all counties in Colorado except those included in Northern Colorado. Also, Colfax County, New Mexico.
14/ Includes all counties in New Mexico except Colfax.
15/ Includes Adams, Arapahoe, Boulder, Douglas, Elbert, El Paso, Jackson, Jefferson, Larimer, and Weld Counties.
16/ Includes Lincoln, Sweetwater, and Uinta Counties.
17/ Includes all counties in Wyoming except those in Southern Wyoming.
18/ Includes Arizona, California, Idaho, Nebraska, Nevada, and Oregon.

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[fol. 1152]

D. No. 47

Carter Coal Company

Condensed Statement of Income Account by Years

1923 to 1934, Inclusive

Particulars	Operations Under the Consolidation Coal Company Management										Operations under Carter Management			Operations under Carter Management
	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	2½ Months ended March 15 1933	9½ Months ended December 31, 1933	1933 combined	1934
Production in Net Tons	685,904	812,780	1,255,899	1,596,314	1,773,223	1,872,492	1,963,771	1,921,215	1,668,744	807,625	174,008	1,344,917	1,518,925	2,126,046
Average Mine Realization* Per Ton Produced	$2,261,538 ($3.297)	$1,623,624 ($1.998)	$2,432,951 ($1.937)	$3,299,135 ($2.067)	$3,646,842 ($2.057)	$3,450,901 ($1.843)	$3,545,890 ($1.806)	$3,393,577 ($1.766)	$2,362,534 ($1.416)	$942,629 ($1.167)	$185,647 ($1.067)	$1,564,833 ($1.164)	$1,750,480 ($1.152)	$3,918,266 ($1.843)
Cost of Production, Administrative and Selling Expenses (Exclusive of Interest Charges) Less Other Income	1,848,266	1,782,391	2,316,128	2,952,196	3,201,254	3,094,274	3,410,329	3,275,966	2,780,207	1,538,116	260,373	1,744,559	2,004,932	3,516,317
Per Ton Produced	($2.695)	($2.193)	($1.844)	($1.850)	($1.805)	($1.653)	($1.737)	($1.704)	($1.667)	($1.905)	($1.496)	($1.298)	($1.320)	($1.654)
Net profit before interest charges, provisions for Federal income taxes and direct charges to profit and loss account	$413,272	$158,767†	$116,823	$346,939	$445,588	$356,627	$135,561	$117,611	$417,673†	$595,487†	$74,726†	$179,726†	$254,452†	$401,949
Per Ton Produced	($ .602)	($ .195)†	($ .093)	($ .217)	($ .252)	($ .190)	($ .069)	($ .062)	($ .251)†	($ .738)†	($ .429)†	($ .134)†	($ .168)†	($ .189)
Deduct—Interest Charges	327,078	443,991	537,141	601,036	655,148	674,653	704,184	766,269	811,043	851,980	179,125	8,596	187,721	24,961
Per Ton Produced	($ .477)	($ .546)	($ .428)	($ .376)	($ .369)	($ .360)	($ .358)	($ .399)	($ .486)	($1.054)	($1.029)	($ .006)	($ .123)	($ .012)
Net profit before provision for Federal income taxes and direct charges to profit and loss account	$86,194	$602,758†	$420,318†	$254,097†	$209,560†	$318,026†	$568,623†	$648,658†	$1,228,716†	$1,447,467†	$253,851†	$188,322†	$442,173†	$376,988
Per Ton Produced	($ .125)	($ .741)†	($ .335)†	($ .159)†	($ .117)†	($ .170)†	($ .289)†	($ .337)†	($ .737)†	($1.792)†	($1.458)†	($ .140)†	($ .291)†	($ .177)
Deduct:														
Provision for Federal income tax	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	$53,000
Direct charges to Profit and Loss Account	.....	.....	.....	.....	$359,934	$135,096	.....	.....	.....	.....	.....	.....	.....	.....
Total	.....	.....	.....	.....	$359,934	$135,096	.....	.....	.....	.....	.....	.....	.....	$53,000
Net Profit or Loss per Books, before Provision for Dividends	$86,194	$602,758†	$420,318†	$254,097†	$569.494†	$453,122†	$568,623†	$648,658†	$1,228,716†	$1,447,467†	$253,851†	$188,322†	$442,173†	$323,988
Per Ton Produced	($ .125)	($ .741)†	($ .335)†	($ .159)†	($ .321)†	($ .242)†	($ .289)†	($ .337)†	($ .737)†	($1.792)†	($1.458)†	($ .140†)	($ .291)†	($ .152)

Includes Inventory Variation.
Red in copy.

[fol. 1153] D. 48

Statement as to Carter Coal Company Contracts Made Since May 27, 1935

Since May 27, 1935, Carter Coal Company has entered into contracts for terms of one year or longer covering an aggregate of 850,750 net tone (of 2,000 lbs.), at an aggregate price F. O. B. mines of $1,004,765. The average price per ton F. O. B. mines is $1.18.

Of the aforesaid tonnages, approximately 230,000 net tons have been contracted for since August 30, 1935 (the date of enactment of the Bituminous Coal Conservation Act of 1935). These contracts all provide for delivery for a period longer than 30 days from the date of the contract, each being for a period of more than 1 year.

(Here follows Deft. Ex. 49, folio 1154.)

Defendant's Ex. 49

NET INCOME OR DEFICIT OF SPECIFIED INDUSTRIAL GROUPS, 1926-1932
(These are the same industrial groups specified in plaintiff's exhibit No. 72A.)

NOTE: 1928-1932, inclusive, are the only years for which separate figures on bituminous coal mining corporations are given in "Statistics of Income", compiled from income tax returns by Income Tax Unit of Treasury Department

In thousands of dollars
D indicates deficit

	1926	1927	1928	1929	1930	1931	1932	Net Result 1926 through 1929	Net Result 1930 through 1932
Mining and Quarrying									
Coal: Anthracite	37,714	20,303 D	5,251	2,422	8,109	1,614 D	16,697 D	10,728 D	10,202 D
Coal: Bituminous, lignite and peat			24,508 D	11,304 D	42,071 D	47,745 D	51,167 D		140,983 D
Oil and Gas	121,379	31,504 D	3,481	29,602	9,462 D	120,883 D	46,760 D	122,958	177,105 D
Manufacturing									
Woolens and worsted goods	1,233	8,730	1,080 D	10,294 D	35,327 D	31,243 D	37,191 D	1,411 D	103,761 D
Finishing and tanning leather and manufacturing leather products other than boots, shoes, etc.	12,466	24,454	10,660	3,693 D	35,525 D	36,802 D	31,364 D	43,887	103,691 D
Tires and tubes	839	36,123	16,851 D	3,170	52,241 D	16,835 D	28,180 D	23,281	97,256 D
Radios, complete or parts	no data	2,445	16,060	2,964 D	12,610 D	28,270 D	13,312 D	1/ 15,541	54,192 D
Forest products (lumber and wood products)	103,776	31,114	70,704	67,113	116,636 D	184,172 D	207,118 D	272,707	507,926 D
Construction									
Shipbuilding and repairing	no data	3,860 D	1,210 D	819 D	1,280	3,223 D	1,565 D	1/ 5,889 D	3,508 D
Transportation									
Aerial transportation	no data	179 D	724	6,489 D	19,152 D	14,610 D	6,029 D	1/ 5,944 D	39,791 D
Service									
Theaters, legitimate, vaudeville, etc.	no data	11,828	1,848 D	499 D	4,557 D	6,134 D	20,702 D	1/ 9,481	31,393 D

1/ Since data for 1926 are not available the net result here shown is for 1927 through 1929.

By W. H. Young,
Coal Economics Division,
United States Bureau of Mines,
November 15, 1935.

[fol. 1155]

D. 50

Index Numbers of Wholesale Prices of Specified Commodities or Commodity Group
1923 = 100

	Bituminous coal average realization f.o.b. mine	Nonferrous metals	Petroleum Products	Lumber	Cotton Goods	Hides and skins	Raw materials	All commodities
1923	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1924	82.1	97.6	101.1	95.8	98.1	93.7	99.1	97.4
1925	76.1	106.4	115.0	97.1	94.1	100.9	108.3	102.9
1926	76.9	104.9	121.1	96.5	85.5	85.0	101.5	99.4
1927	74.3	97.3	88.0	89.8	83.0	102.3	97.9	94.8
1928	69.4	98.6	87.2	87.3	85.8	126.3	100.6	96.1
1929	66.4	111.3	86.3	90.5	84.5	95.8	99.0	94.7
1930	63.4	86.4	74.5	82.8	72.4	77.4	85.6	85.9
1931	57.5	64.9	47.8	67.1	56.5	51.2	66.6	72.6
1932	48.9	52.2	55.0	56.5	46.2	35.8	55.9	64.4
1933	50.0	62.5	49.7	68.2	60.9	57.0	57.3	65.5
1934	67.9	71.0	61.2	81.5	74.0	58.3	69.6	74.5

Source: Bituminous coal average sales realization f.o.b. mines, U. S. Bureau of Mines. Other series, Bureau of Labor Statistics, U. S. Department of Labor.

Prepared by: Bituminous Coal Unit, Division of Review, N.R.A., Under the direction of F. E. Berquist.

(Here follows tables, side folios 1156 and 1157)

[fol. 1156] D. 51

Production, value, Men Employed, Days Operated, and Output Per Man Per Day at Coal Mines in West Virginia in 1934[a]

(Exclusive of product of wagon mines producing less than 1,000 tons)

County	Net tons						Value		Number of employees				Average number of days mines operated	Average tons per man per day[b]
	Loaded at mines for shipment	Commercial sales by truck or wagon	Other sales to local trade, or used by employees, or taken by locomotives at tipple	Used at mines for power and heat	Made into coke at mines	Total quantity	Total (thousand dollars)	Average per ton	Underground	Surface: In strip pits	Surface: All others	Total		
Barbour	922,771	7,376	11,217	16		941,380	$1,331	$1.41	1,221	..	147	1,368	123	5.62
Boone	2,697,587	357	12,216	7,982		2,718,142	4,528	1.67	2,326	..	535	2,861	193	4.92
Brooke	488,813	43,104	599,990	155		1,132,062	1,990	1.76	1,031	..	224	1,255	186	4.84
Clay	706,712	1,488	14,012	17,092		739,304	1,209	1.64	617	..	148	765	228	4.25
Fayette	10,576,164	8,847	192,370	64,692	230,337	11,072,410	20,773	1.88	10,701	..	1,649	12,350	221	4.06
Gilmer	23,560	2,970	104			26,634	47	1.76	72	..	14	86	98	3.15
Grant	7,365	2,840	85	715		11,005	22	2.00	54	..	14	68	61	2.66
Greenbrier	1,684,053	21,900	18,822	14,764		1,739,539	3,008	1.73	1,583	..	221	1,804	198	4.87
Hancock		17,195	3,467	1,245		21,907	42	1.92	49	..	12	61	178	2.01
Harrison	3,009,037	114,540	18,849	859	190	3,143,475	4,627	1.47	3,059	..	434	3,493	138	6.51
Kanawha	5,709,498	33,244	73,682	15,743		5,832,167	9,386	1.61	5,261	..	928	6,189	204	4.63
Lewis		7,700	6,941			14,641	34	2.32	22	..	5	27	192	2.83
Logan	13,253,434	4,088	87,478	10,114		13,355,114	20,996	1.57	9,771	..	1,780	11,551	196	5.91
McDowell[c]	16,851,041	20,824	183,265	115,820		[c]17,170,950	31,360	1.83	15,163	34	3,651	18,848	199	4.57
Marion	6,881,995	19,228	52,055	37,281		6,990,559	10,924	1.56	5,904	2	807	6,713	180	5.78
Marshall	546,272	88,556	149,386	9,487		793,701	1,324	1.67	989	..	157	1,146	155	4.47
Mason	23,992	41,737		3,600		69,329	95	1.37	143	..	22	165	145	2.90
Mercer	3,257,215	6,463	25,455	6,003		3,295,136	5,905	1.79	2,989	..	858	3,847	210	4.07
Mineral	275,973	26,403	5,425	945		308,746	549	1.78	471	..	92	563	214	2.56
Mingo	3,199,967	1,878	27,251			3,229,096	5,101	1.58	3,153	..	621	3,774	176	4.87
Monongalia	4,850,643	81,589	23,679	790		4,956,701	6,753	1.36	4,341	..	703	5,044	179	5.49
Nicholas	60,038	10,049	554	6,799		77,440	167	2.16	146	..	42	188	134	3.06
Ohio	1,880,548	164,910	43,830	4,303		2,093,591	3,203	1.53	2,266	..	160	2,426	230	3.76
Preston	684,023	9,846	2,298	10,191	50,664	757,022	1,167	1.54	1,320	..	184	1,504	153	3.30
Putnam	352,737	5,491				358,228	533	1.49	512	..	111	623	163	3.53
[fol. 1157]														
Raleigh	12,496,955	24,635	109,535	104,239		12,735,364	24,030	1.89	11,198	..	2,038	13,236	214	4.49
Randolph	349,526	29,847	22,396	9,623		411,392	710	1.73	725	..	129	854	154	3.12
Taylor	849,385	18,578	3,797	1		871,761	1,141	1.31	882	..	100	982	166	5.35
Tucker	492,927	104	10,088	22,756		525,875	1,045	1.99	640	..	69	709	169	4.40
Upshur	169,601	7,782	126	3,785		181,294	253	1.40	206	..	46	252	128	5.61
Webster	837,638	6,152	7,650	3,884		855,324	1,536	1.80	898	..	140	1,038	216	3.81
Wyoming	1,623,007	10,043	10,375	28,001		1,671,426	3,256	1.95	1,665	..	356	2,021	198	4.17
Other counties (Braxton, Summers, and Wayne)	13,081	20,580	17			33,678	59	1.75	79	..	16	95	69	5.11
Total 1934[c]	94,775,558	860,344	1,716,415	500,885	281,191	[c]98,134,393	167,104	1.70	89,457	36	16,413	105,906	196	4.73
Total 1933	91,328,937	817,841	1,648,139	361,347	187,271	94,343,535	107,124	1.14	77,722	20	14,730	92,472	196	5.20

[a] The figures relate only to active mines of commercial size that produced coal in 1934. The number of such mines in West Virgnia was 764 in 1934; 733 in 1933; 726 in 1932.

Size classes of commercial mines in 1934: There were 32 mines in Class 1A (500,000 tons and over) producing 23.7 percent of the tonnage; 142 mines in Class 1B (200,000 to 500,000 tons) with 44 percent; 137 mines in Class 2 (100,000 to 200,000 tons) with 20.6 percent; 101 mines in Class 3 (50,000 to 100,000 tons) with 7.4 percent; 129 mines in Class 4 (10,000 to 50,000 tons) with 3.6 percent; 223 mines in Class 5 (less than 10,000 tons) producing 0.7 percent.

Methods of mining in 1934: The tonnage by hand was 7,725,090; shot off the solid, 1,434,586 (including 316,177 tons reported by the companies as "pillar coal," the method of mining of which differs materially from solid shooting in rooms or entries); cut by machines, 88,929,965; mined by stripping, 29,533; not specified, 15,219.

[b] Based upon (1) the "reported" number of man-shifts where the operator keeps a record thereof; otherwise upon (2) the "calculated" number of man-shifts obtained by multiplying the average number of men employed underground and on the surface at each mine by the number of days worked by the mine and tipple, respectively. Using throughout the "calculated" man-shifts as developed before the year 1932, namely the product of the total number of men employed at each mine times the tipple days, the average output per man per day was 4.68 tons in 1934, a figure which is strictly comparable with 5.61 in 1930, previously published.

[c] Includes only the McDowell County operation for one mine producing in both Tazewell County, Virginia, and McDowell County, West Virginia. All tonnage for this mine in earlier years was tabulated in McDowell County, West Virginia.

By W. H. Young and L. Mann,
Statistics Section, Coal Economics Division.

Department of the Interior,
Bureau of Mines, October 19, 1935.

[fol. 1158] D. 52
2371

Relative Rate of Growth of Coal, Oil, and Water Power

According to a special study by F. G. Tyron of the Bureau of Mines, the total supply of available energy in the form of coal, oil and natural gas, and water power in 1933 was 19,317 trillion British thermal units.

The figures are expressed in B. t. u. because some common denominator is necessary for such unlike quantities as tons of coal, barrels of oil, and cubic feet of gas. Table I summarizes the B. t. u. equivalent of each of the fuels. Water power is represented by the equivalent of the fuel necessary to perform the same work, assuming a low thermal efficiency.

It is very important to note that the figures for "domestic oil," as in earlier issues of these tables, represent the entire production of crude petroleum. They include, therefore, not only energy used in the form of fuel oil under boilers, and consequently competing more or less directly with coal, but also the energy used in the form of gasoline, kerosene, and other refined products. Even these refined products involve a measure of indirect competition with coal, for the energy market of the country is becoming more and more fluid and competitive, and a demand which cannot be met by one source of supply tends to fall back on the others. The purpose of these tables is to measure the total demand for energy.

[fol. 1158]

Table I. Annual Supply of Energy from Mineral Fuels and Water Power in the United States

(Figures represent trillions of B.t.u. Water power is represented by B.t.u. of coal necessary to produce the same amount of power.)

Year	Anthracite	Bituminous coal	Total coal	Domestic oil (total crude including that refined)	Natural gas (total production)	Imported Oil (total crude)	Total oil and gas	Total mineral fuels	Water power *a*	Grand total, including water power
1899.....	1,643	5,065	6,708	342	*b*240	...	582	7,291	135	7,426
1909.....	2,205	9,949	12,155	1,099	517	...	1,616	13,771	411	14,182
1913.....	2,490	12,535	15,025	1,491	626	102	2,219	17,243	588	17,831
1918.....	2,688	15,180	17,868	2,136	775	226	3,137	21,005	837	21,842
1920.....	2,437	14,899	17,336	2,658	858	637	4,153	21,489	971	22,460
1921.....	2,461	10,897	13,358	2,833	712	752	4,297	17,655	908	18,563
1922.....	1,487	11,063	12,551	3,345	820	764	4,929	17,480	1,024	18,504
1923.....	2,539	14,791	17,330	4,394	1,082	492	5,968	23,298	1,136	24,434
1924.....	2,392	12,672	15,064	4,284	1,227	467	5,978	21,042	1,167	22,209
1925.....	1,681	13,625	15,306	4,582	1,278	371	6,231	21,537	1,290	22,827
1926.....	2,297	15,022	17,319	4,625	1,411	362	6,398	23,717	1,492	25,209
1927.....	2,179	13,565	15,744	5,407	1,553	350	7,310	23,054	1,687	24,741
1928.....	2,049	13,120	15,169	5,409	1,686	479	7,574	22,743	1,942	24,685
1929.....	2,008	14,017	16,025	6,044	2,062	474	8,580	24,605	1,929	26,534
1930.....	1,887	12,249	14,136	5,388	2,089	373	7,850	21,986	1,856	23,842
1931.....	1,622	10,011	11,633	5,106	1,813	284	7,203	18,836	1,721	20,557
1932.....	1,356	8,114	9,470	4,711	1,673	268	6,652	16,122	1,900	18,022
1933.....	1,348	8,741	10,089	5,434	1,672	191	7,297	17,386	1,931	19,317

(*a*) The fuel equivalent for water power is calculated from the reported horse power of installed water wheels assuming a capacity factor of 20 percent for manufacturers and mines, and of 40 percent for public utilities, and assuming that the theoretical thermal equivalent of 1 H.P. hour (2,547 B.t.u.) is 7 percent of the B.t.u.'s that would have been consumed in generating 1 H.P. hour from fuels in practice. For 1920 to 1933, however, actual reports of the H.P. hours produced by water in electric utility plants have been used as published by the U. S. Geological Survey.

(*b*) Based on the amount of coal displaced by gas as estimated by the gas companies at the time.

To make comparisons easier the figures of heat units are reduced to index numbers in Table II, taking the year 1918 as 100.

[fol. 1159]

Table II. Relative Rate of Growth of Coal, Oil and Water Power in the United States

(The figures for the year 1918 are represented by the number 100, and the figures for all other years are expressed as a percentage of the 1918 rate.)

Year	Anthracite	Bituminous coal	Total coal	Domestic oil (total crude including that refined)	Natural gas (total production)	Imported Oil (total crude) including that refined)	Total oil and gas	Total mineral fuels	Water power	Grand total including water power
1899.....	61	33	37	16	31	..	19	35	16	34
1909.....	82	66	68	51	67	(a)	52	66	49	65
1913.....	93	83	84	70	81	45	71	82	70	82
1918.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920.....	91	98	97	124	111	282	132	102	116	103
1921.....	92	72	74	132	92	333	137	84	109	85
1922.....	55	73	70	156	106	338	157	83	122	85
1923.....	94	97	97	206	140	218	191	111	136	112
1924.....	89	83	84	201	158	207	191	100	139	102
1925.....	63	90	86	215	165	164	199	103	154	105
1926.....	85	99	97	217	182	160	204	113	178	115
1927.....	81	89	88	253	201	155	233	110	202	113
1928.....	76	86	85	253	218	212	241	108	232	113
1929.....	75	92	90	283	266	210	274	117	230	121
1930.....	70	81	79	252	270	165	250	105	222	109
1931.....	60	66	65	239	234	126	230	90	206	94
1932.....	50	53	53	221	216	119	212	77	227	83
1933.....	50	57	56	252	205	90	229	82	231	87

(a) Imports negligible before 1913.

Coal remained by far the largest source of energy in 1933, contributing 52.2 percent of the total supply. The water power developed furnished only 10.0 percent of the total (though, of course, a much larger percentage of the electric power produced by central stations). Details are given in Table III.

Table III. Percent of Total B.t.u. Equivalent Contributed by the Several Mineral Fuels and Water Power in the United States

Year	Anthracite	Bituminous coal	Total coal	Domestic oil (total crude) including that refined	Natural gas (total production)	Imported oil (total crude) including that refined	Total oil and gas	Water power	Grand total
1899	22.1	68.2	90.3	4.6	3.3	...	7.9	1.8	100.0
1909	15.5	70.2	85.7	7.7	3.7	(a)	11.4	2.9	100.0
1913	14.0	70.3	84.3	8.3	3.5	0.6	12.4	3.3	100.0
1918	12.3	69.5	81.8	9.8	3.6	1.0	14.4	3.8	100.0
1920	10.9	66.3	77.2	11.8	3.8	2.9	18.5	4.3	100.0
1921	13.3	58.7	72.0	15.2	3.8	4.1	23.1	4.9	100.0
1922	8.0	59.8	67.8	18.1	4.4	4.1	26.6	5.6	100.0
1923	10.4	60.5	70.9	18.0	4.5	2.0	24.5	4.6	100.0
1924	10.8	57.0	67.8	19.3	5.5	2.1	26.9	5.3	100.0
1925	7.4	59.6	67.0	20.1	5.6	1.6	27.3	5.7	100.0
1926	9.1	59.6	68.7	18.4	5.6	1.4	25.4	5.9	100.0
1927	8.8	54.8	63.6	21.9	6.3	1.4	29.6	6.8	100.0
1928	8.3	53.2	61.5	21.9	6.8	2.0	30.7	7.8	100.0
1929	7.6	52.8	60.4	22.8	7.7	1.8	32.3	7.3	100.0
1930	7.9	51.4	59.3	22.5	8.8	1.6	32.9	7.8	100.0
1931	7.9	48.7	56.6	24.8	8.8	1.4	35.0	8.4	100.0
1932	7.5	45.0	52.5	26.1	9.3	1.5	36.9	10.6	100.0
1933	7.0	45.2	52.2	28.1	8.7	1.0	37.8	10.0	100.0
1934	7.7	46.3	54.0	26.9	8.7	1.1	36.7	9.3	100.0

(a) Less than 0.1 percent.

By F. G. Tryon, Statistics Section, Coal Division. Department of the Interior, Bureau of Mines, October 31, 1934.

[fol. 1160] D. Ex. 53

Table 1

Comparison of Average Hourly Earnings of "Outside Laborers" at Bituminous Coal Mines with Average Hourly Entrance Rates Paid Common Labor in Other Industries

Prepared in the U. S. Bureau of Labor Statistics

(The figures for the two groups are not entirely comparable. Those for bituminous coal mines represent the average earnings of all men on the rolls in the occupation of "outside laborer" including both experienced men and beginners. The figures for "other industries' represent the entrance rates for men newly hired only, and it is to be noted that "the rates of pay are increased by some employers after a stated length of service or after a certain degree of fitness for the job has been developed." See "Monthly Labor Review," 1934, p. 1452.

These figures alone are not to be regarded as indicative of weekly earnings. In any comparison of hourly rates such as those shown here, the intermittent employment characteristic of bituminous coal mining should also be kept in mind. In February, 1933, employees at bituminous coal mines reporting to the Bureau of Labor Statistics received 30.4 hours of work per week; employees in manufacturing received an average of 38.2 hours; and employees of power and light utilities, 46.5 hours. In June 1933, bituminous coal employees received 28.5 hours of work per week; manufacturing employees 42.6 hours, and power and light employees, 46.0 hours. Thus bituminous coal employees received 20 percent less work than manufacturing employees in February and 33 percent less in June. See Bureau of Labor Statistics, "Trend of Employment," March 1933, p. 15, and June 1933, p. 18).

State	Bituminous coal mines Average hourly earnings of "outside Laborers" February 1933 a	Other industries Average hourly entrance rates of common labor b July 1, 1932	July 1, 1933
Pennsylvania	33.0¢	34.6¢	33.1¢
Ohio	34.6¢	39.1¢	34.4¢
Indiana	c 54.5¢	32.9¢	36.0¢
Illinois	c 49.1¢	43.0¢	40.9¢
West Virginia	30.7¢	31.9¢	35.1¢
Kentucky	29.1¢	30.9 d	27.5¢ d
Virginia	25.1¢	24.4¢	26.6¢
Tennessee	26.1¢	20.4¢	19.6¢
Alabama	20.2¢	16.5¢	14.8¢

a Bureau of Labor Statistics, Bulletin 601, Wages and Hours of Labor in Bituminous Coal Mining, 1933.

b These figures are based upon the same data as the tables showing Average Hourly Entrance Wage Rates for Adult Male Common Labor. See Monthly Labor Review, October, 1932, pp. 916–919, October 1933, pp. 932–936. For 1934 regional figures see Monthly Labor Review, December 1934, p. 1455. Regional averages are reproduced in the Statistical Abstract, 1934, p. 303. The regional averages previously published are here broken down by individual states as far as possible.

c The coal mines in these States were mostly operating under collective wage agreements setting minimum rates for all occupations.

d Excluding returns for automobiles that distort the average.

A. F. Hinrichs, Bureau of Labor Statistics.

[fol. 1161] D. Ex. 54

Computed Total Annual Wage Payments Made by the Bituminous Coal Industry in 1923, 1929, and 1933

(A complete statistical canvass of the total wages paid in the bituminous coal-mining industry is available only for the years 1919 and 1929, when the decennial Census of Mines and Quarries was taken. It is, however, possible to compute the total wage payments of the industry with a reasonable degree of accuracy from the known (1) number of men employed, (2) average days operated by the mines, and (3) average daily earnings, as shown by the periodic sample surveys of the Bureau of Labor Statistics. Such a computation should be entirely comparable from year to year.

A check on the computation is obtained by comparing the result for 1929 with the Census for that year. The computed wage payments for 1929 amount to $588,000,000 and the actual, as reported by the Census, amounted to $574,-800,072. Fifteenth Census, Mines and Quarries, 1929, p. 254.)

Year	(1) Number of men employed a	(2) Average days operated a	(3) Average daily earnings b	(4) Computed total wage payments (1) x (2) x (3)
1923	705,000	179	c $6.74	$851,000,000
1929	503,000	219	d $5.34	$588,000,000
1933	419,000	167	e $3.36	$235,000,000

(a) From annual coal reports of U. S. Bureau of Mines, quoted in Defendant's Exhibit 4A. (b) Computed from the periodic wage surveys of the Bureau of Labor Statistics. Figures are average daily earnings of all bituminous mine workers covered in the States of Illinois, Indiana, Ohio, Pennsylvania, West Virginia, Kentucky, Alabama, and (except in 1921–1922) Virginia and Tennessee. These 9 States in 1929 produced 89.9 percent of the national output of bituminous coal. In computing the grand average, the sample returns for each State have been weighted by the tonnage produced in that State during the year in question. (c) Represents wage survey of October 1921—February 1922, the nearest one to the year 1923. Were actual earnings for 1923 available, they would be somewhat higher. (d) Survey of January–March, 1929. (e) Survey of February, 1933. Wage rates were increased by the NRA code later in the year. The computed earnings are therefore less than the actual for 1933 but probably above the actual for 1932, in which year the mines worked 146 days.

By F. G. Tryon, Coal Economics Division, U. S. Bureau of Mines.
November 23, 1935.

[fol. 1162]

D. Ex. 55

Number of men employed in bituminous coal mines in 1931, in specified counties, listed by the Department of Justice

(Compiled from annual coal reports of the U. S. Bureau of Mines)

State and county	Men employed in 1931	Rank of county in number employed	Rank of state in number employed	Year of first substantial production in county
Illinois:	(49,685)	..	..	....
Franklin	9,933	1		1906
Saline	3,918	4	3	1903
Williamson	4,627	3		1893
Kentucky:	(47,766)	..	..	....
Bell	2,399	8		1901
Harlan	9,932	1		1912
Hopkins	3,636	6		Before 1890
Knox	483	14		1902
Letcher	5,188	3	4	1913
Perry	4,774	4		1914
Pike	5,327	2		1906
Union	870	11		1902
Maryland:	(3,224)	..	..	....
All counties	3,224	..	18	Before 1890
Pennsylvania:	(116,726)	..	..	....
Allegheny	13,072	4		Before 1890
Cambria	18,005	1		Before 1890
Clearfield	5,758	8		Before 1890
Fayette	15,749	2	1	Before 1890
Washington	14,096	3		Before 1890
Westmoreland	13,053	5		Before 1890
Tennessee:	(7,448)	..	..	....
Campbell	1,875	1	11	1895
Cumberland	77	12		1902

DEFENDANTS' EXHIBIT—Continued

State and county	Men employed in 1931	Rank of county in number employed	Rank of state in number employed	Year of first substantial production in county
West Virginia:	(97,787)	..	..	....
Kanawha	5,799	5)		Before 1890
Logan	10,832	4)		1906
McDowell	17,719	1)		Before 1890
Marion	4,797	7)	2	Before 1890
Mingo	3,372	8)		1897
Monongalia	4,820	6)		1909
Randolph	613	23)		1902
Alabama:				
All counties	22,973	..	6	Before 1890
Arkansas:				
All counties	4,733	..	14	Before 1890
[fol. 1163]				
California:				
All counties	86	..	24	Before 1890
Colorado:				
All counties	10,028	..	9	Before 1890
Georgia:				
All counties	62	..	27	Before 1890
Idaho:				
All counties	17	..	31	Before 1890
Indiana:				
All counties	12,311	..	7	Before 1890
Kansas:				
All counties	3,813	..	16	Before 1890
Oklahoma:				
All counties	4,634	..	15	Before 1890

November 19, 1935

[fol. 1164] RECITAL AS TO ORIGINAL EXHIBITS

There were further offered and received in evidence as plaintiff's Exhibits 35-A-43 physical exhibits of various kinds, sizes, and qualities of coal, which were ordered transmitted to the appellate court as original exhibits.

[fol. 1165] The following exhibits were offered in evidence, but refused, the Paintiff's counsel noting an exception:

(Here follows 2 photos, folios 1166 and 1166a)

Official Circular

Washington, D. C., October 21, 1935.

To the Officers and Members of all
Local Unions, United Mine Workers of America:

Greeting:

During the past two and one-half years, the United Mine Workers of America has made wonderful progress, in not only protecting but advancing the best interests of the mine workers of this country. In the bituminous coal fields we have secured wage increases of a substantial nature and there have been established minimum wages which are a substantial approach to the highest minimum established in the industry. This progress augurs well for the future welfare of these standards.

In addition to the wage increases we have secured the adoption of the 7-hour work day, the increases being applied on that basis. We have established the right to checkweighmen and grievance committees for the adjustment of disputes arising under the contract. Security has likewise been provided for on the generally accepted standard basis of agreements. In our anthracite jurisdiction during this period we successfully resisted efforts of the operators to lower the wage standards of the workers in the great anthracite field.

Your organization has, in addition to these economic and industrial achievements, secured the passage of the Guffey-Snyder Coal Stabilization law. We have aided materially in the enactment of the Social Security measures, the Wagner-Connery Labor Relations law and we believe that the foundation has been established to bring about stability not only in the coal industry in particular, but in industry in general.

During this period, notwithstanding the extraordinary cost and expense of the organization, we have been able to build up substantial reserves so as to protect the accomplishments referred to herein. However, we have situations existing now in some of the bituminous sections of the country that will require the outlaying of considerable funds. These situations exist in Western Kentucky, Southern Appalachian field, and in Harlan county, Kentucky, where even the Constitution of the United States is not functioning. The mines are idle in most of these sections through failure on the part of the operators to apply the terms of the Appalachian Agreement signed September 26, 1935.

In addition to these factors we expect that we will be compelled to carry an appeal to the Supreme Court of the United States on the Guffey-Snyder law which is now being contested in the courts and which will result in considerable expenditure of funds to protect this all-important legislation. We also face the need of extraordinary funds in the organization of boards under the Guffey law and in seeing to it that they are properly functioning.

Our contract in the anthracite region expires March 31, 1936. Negotiations for a new contract will start following the adjournment of the international convention. Our financial reserves should be in such condition next spring so we may be in a position to protect and advance the best interests of the anthracite mine workers. We believe in the policy that the best time to prepare for trouble is in time of peace. We believe that the best and surest way to make progress is to be in a position to fight for progress and to have the necessary money to carry that fight to a successful conclusion.

Taking all these facts and factors into consideration, the International Executive Board of the United Mine Workers of America believes that our financial position should be strengthened by the building up of our reserves to a point as high as possible, consistent with the ability and means of our membership, and that the best interests of our membership and its continuing progress and security should be provided for.

Therefore the International Executive Board, to accomplish this laudable, necessary and vital purpose, officially decided at a meeting held October 20, 1935, to levy an assessment of one dollar per month per member to be collected for the months of November and December, 1935.

In accordance with this action, all local unions, and the officers thereof, are hereby instructed to collect an assessment from our membership of one dollar per month per member for November and December, 1935, on all those members who are required to pay dues during those months under the provisions of the international constitution. The assessment shall be collected and transmitted in the manner and way in which dues are collected and tax transmitted. In Districts where the check-off is transmitted through the District office, the same procedure shall be followed as in the payment of dues and tax. In any check-off District where difficulty may be occasioned in the collection of this assessment, the local union officers should get in touch with the District officers immediately so that the matter may be adjusted on the basis of the contract and in keeping with the provisions of this action of the International Executive Board.

District officers, under the terms of the Appalachian contract, can arrange to officially notify the operators signatory to the agreement with respect to this official action of the International Executive Board concerning the collection and payment of this assessment.

Taking into consideration the benefits received by our membership through increased wages, shorter hours and better protection and the fact that our reserves to be built up through the collection of this assessment will be insurance against endangering those benefits and will make provision for any emergency that might arise in our anthracite jurisdiction, we believe the assessment is not only justified but essential and reasonable in every degree. We believe our great membership, which is imbued with the principles of real Unionism, solidarity and cooperation, will respond to this action of the International Executive Board in a manner that will prove to the world that the Mine Workers are determined not only to protect but to advance their interests in every section of our jurisdiction.

We have laid the foundation and we propose to leave nothing undone that will hinder in any way the building of a superstructure on that foundation which will reflect greater and greater accomplishments for the mine workers of this country and those dependent upon them. The power, prestige and influence of the United Mine Workers of America, great as it is, will become greater and greater as our plans and policies develop. The payment of this assessment is an investment in your future welfare. With enthusiastic fervor and a determination to go forward, let us highly resolve to see to it that there is universal compliance with this decision of your organization.

The international officers and the International Executive Board pledge that we shall continue to do everything in our power to carry out the great principles of the United Mine Workers of America to the end that greater prosperity, greater security, justice and stability may obtain in every mining section under our jurisdiction. In this way we will contribute to the welfare, happiness and security of our own people, of the communities in which they live and will make more effective and increase the power, prestige and influence of the United Mine Workers of America.

By Direction of the International Executive Board,
JOHN L. LEWIS, President,
PHILIP MURRAY, Vice President,
THOMAS KENNEDY, Secretary-Treasurer.

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33 **NOVEMBER 1, 1935**

Good Bye, Dual Unions

NO dual union in the coal mining industry ever accomplished any good for the men who work in the mines. In fact, dual unions are not organized for any good purpose. Instead, they always have but one object in view, and that is to create as much turmoil, and trouble as possible. No one can point to a single constructive accomplishment of any dual union. That is why dual unions die off so quickly. They are unable to show any good excuse for living. There is no excuse for the Progressive outfit in Illinois, and that is why that organization is gradually dying of dry rot. If it were not for a few officers and sore-heads who keep the organization alive for their own purposes the Progressive union would wither overnight and disappear with the coming of the morning sunlight. Its membership is constantly dwindling.

There also was a dual union in the Anthracite region in Pennsylvania. It ran its course, just as the Progressives are running their course in Illinois. It hadn't a Chinaman's chance to get anywhere. Neither does the Progressive outfit have a Chinaman's chance. All that either of them could hope to do was to create turmoil and trouble in the industry. And now the Anthracite dual union is dead—dead as a mackerel. It held its own funeral on October 25, when its chief leader issued a statement pronouncing the dual union dead, dead, dead. He spoke the truth when he said in his statement that there is room for but one union among the miners. He spoke from experience. It will be recalled that the Illinois Progressive leaders boasted loudly of their close affiliation with the anthracite dual union and together they would sweep the coal industry like wildfire. But the fire is now out in Pennsylvania, and all they have left in Illinois are a few coals and no more fuel. If the present rate of disintegration in Illinois continues a little longer, the Progressives will not have enough members left to supply scabs to the Harlan county non-union mines. The Progressives made an agreement with the chief pistol-toting mine guard of Harlan county, Kentucky, to send members of their organization to work in the Harlan county mines as scabs so as to prevent the United Mine Workers of America from organizing the Harlan county miners. In view of this and other disreputable things done by the Progressive dual union, it is not strange that its members are quitting the organization every day.

There is an article in this issue of the Journal telling about hundreds of members who have quit the Progressive union in Illinois, all of which is further evidence of the disintegration of that organization. It is going the way of the Anthracite dual union.

Any organization that furnishes scabs to work in non-union mines cannot hope to last long, and that is what the Progressive miners did in Harlan county.

Good bye, dual unions.

Amend the Constitution

ORGANIZED labor took a long step forward when the American Federation of Labor convention at Atlantic City adopted a resolution declaring in favor of an amendment to the Constitution of the United States that would bring that great document up to date. Under the leadership of the United Mine Workers of America and its delegates to the convention, the American labor movement placed itself on record in favor of amendment. The fight is on. Powerful forces in the country, including the so-called Liberty League, the United States Chamber of Commerce, the National Association of Manufacturers, the big banks and other great financial interests are lined up in a group in opposition to any amendment that would be in the interest of the common people. These powerful interests form a bloc that will fight hard to retain their strangle hold upon business and industry. But arrayed against them from now on will be the full strength of labor and the common people of America who are deeply dissatisfied with present conditions.

What labor wants is an amendment that will make it possible for Congress to enact laws on such subjects as minimum wages, maximum hours of labor, the right to organize, collective bargaining, old age pensions, unemployment insurance and other social security measures without the danger of such laws being declared unconstitutional by the courts. In other words, it is proposed that there shall be a new deal in this country that cannot be upset by judicial whims or bourbonism. The people want a new deal, and they propose to get it with assurance of permanency by an amendment to the Constitution.

We believe the present Constitution confers upon Congress such powers, but this position is disputed by the powerful interests, which fact leaves the question open to determination by the courts. The people should be permitted to have the kind of Constitution and government they most desire. If a majority of the people want protection for minimum wages and maximum hours of labor, social insurance and other reforms of that character they should have it. Such an amendment as is proposed by the labor movement would give them that protection.

Not long ago fifty-eight big corporation lawyers employed by the big interests solemnly declared the Wagner labor relations law unconstitutional. Of course, these lawyers possess no power or authority beyond the expression of their collective opinion, but they assume to speak with an air of finality that is amazing, to say the least. Only the United States Supreme Court has the power finally to decide upon the constitutionality of any law. President John L. Lewis says the fifty-eight corporation lawyers of the Liberty League are scabbing on the Supreme Court.

The Liberty League, the Chamber of Commerce, the Manufacturers Association and all the rest of the hard-shell crowd are crying out in holy horror that the Constitution must not be changed. They say it is such a sacred document that the foul hand of man must not touch it. They say the Constitution is the bulwark of American liberty, and that any change in it would be disastrous. It is true that the Constitution is and should continue to be the bulwark of American liberty. It is true that the Constitution is the fundamental law of the land. It is true, also, that the Constitution was adopted a hundred and fifty years ago for an entirely different country than the one we have today. Times have changed. People have changed. Industry has changed. The national viewpoint has changed. Everything has changed since a hundred and fifty years ago. The original Constitution does not conform to present day ideas, ideals or needs. It must be made to govern modern conditions, not the conditions of a century and a half ago. Liberty Leaguers and their followers say the Constitution should never be changed.

Why, bless their souls, the Constitution of the United States has already been changed and amended twenty-one times since it was first adopted, because the American people decided that it did not meet new developments and modern trends and ideas. That fact destroys their argument that the Constitution should never be changed.

The time is coming, and it is not far off, when the Constitution will be made more flexible and liberal, because this is an age of liberalism and flexibility in all things.

CIRCULATION THIS ISSUE OF THE JOURNAL 347,996

[fol. 1166b] I, Henry W. Hodges, Clerk of the United States Court of Appeals for the District of Columbia, hereby certify that the foregoing page is a true copy of Exhibit 85, Volume II, Statement of Evidence, in the case of James Walter Carter, Appellant, vs. Carter Coal Company et al., No. 6611, and Guy T. Helvering et al., Appellants, vs. James Walter Carter et al., No. 6612.

Witness my hand and the seal of said Court this 17th day of December, A. D. 1935.

Henry W. Hodges, Clerk. (Seal United States Court of Appeals for the District of Columbia.)

[fol. 1167] STIPULATION AS TO CERTAIN TESTIMONY

The following stipulation was entered into between counsel on December 10, 1935:

Counsel for plaintiff admit that witnesses for the Government officer defendants, if called, would testify that the practices described in paragraphs 2 to 10, inclusive, of subsection (i) of Part II of Section 4 of the Bituminous Coal Conservation Act of 1935 existed throughout the bituminous coal industry prior to 1933 and now exist, but are not and have not been the general practice in that industry; that the practices described in paragraphs 11 and 12 of said subsection also existed throughout the bituminous coal industry prior to 1933 and now exist (although not the general practice in that industry) except that such practices had no relation to prices determined under the Bituminous Coal Conservation Act of 1935; that they were in part caused by the competitive pressure in the bituminous coal industry, and that they have been a factor in the downward trend of prices. Counsel for the Government officer defendants admit that such witnesses would testify that similar practices existed in other industries. The witnesses for the plaintiff would testify that instances of the said practices occurred prior to 1933 but that they were not engaged in by the reputable firms in the industry and the said practices were not general. It is stipulated between counsel that it is considered as though such evidence had been given over the objection of the plaintiff (and exception duly noted) on the ground that such evidence is immaterial and irrelevant to the issue raised in this proceeding.

[fol. 1168] At the conclusion of the trial of the cause the Court delivered orally the following opinion and decision:

IN THE

Supreme Court of the District of Columbia

HOLDING AN EQUITY COURT

JAMES WALTER CARTER

v.

CARTER COAL COMPANY, *et al.*

IN EQUITY
No. 59374

OPINION OF COURT

(November 27, 1935.)

The Court (Mr. Justice Adkins): Gentlemen, permit me to express my appreciation of the very able and thorough way in which this case has been tried, and the very powerful and persuasive arguments which I have listened to for the last two days. It has been borne in on me throughout the trial that this proceeding is a very important one, and counsel on both sides have given me briefs from time to time, and I have been trying to read the briefs, and think I have read every one of them more than once, and most of the cases cited. The arguments yesterday and today I think have served to crystallize my judgment, and it would be fairer perhaps for me to give it to you orally than to take the time to write it.

I do not think the declaratory judgment act is applicable. Another statute approved on August 30, 1935, excepted from the operation of the declaratory judgment act suits "with respect to Federal taxes." I think the Congress used the word "taxes" in that act and the word "tax" in the present statute, with the same meaning.

I think the statute is severable. Section 15 certainly undertook to make it so as to the different provisions of the statute itself; and Section 3 provides that the fact that a person accepts the Code shall not prevent him from questioning the validity of any portion of the Code.

I am inclined to think after hearing all the argument that the plaintiff does raise the question as to the validity of both the price-fixing provisions and the provisions with respect to wages and hours.

Now, so far as paragraph (g) of Part III of Section 4, is concerned, that is the section which provides that when a certain percentage, two-thirds of the employers and more than a majority of the men, have agreed upon hours of labor and wages, such agreements would be binding, it seems to me that section is invalid under the case of *Schechter Corporation* v. *U. S.*, 295 U. S. 495.

In the first place, there is no standard fixed. It is merely a matter of what those gentlemen may do. I can quite agree with the Attorney General that that might be the wiser way to fix the wages and the hours of labor, but the *Schechter* case and the *Panama Refining Company,* 293 U. S. 388 case expressly held that a standard must be set up.

The *Schechter* case also held, as I understand it, that a power of this kind cannot be delegated to private individuals but may be delegated only to Government officers. At page 537 of that opinion the Court discusses the contention at some length with respect to codes of fair competition and expresses the view that Congress cannot delegate its legislative authority to a trade or an industry.

Now, it seems to me also that the Schechter case decides as a matter of law that the influence of wages paid in local commerce is indirect, that the influence of those wages upon interstate commerce is not direct, and therefore not a matter which can be controlled by the Congress although in the present case the effect of wages is very substantial upon interstate commerce.

And the Court also says, at page 550, "The authority of the federal government may not be pushed to such an extreme as to destroy the distinction which the commerce clause itself establishes between commerce among the several States, and the internal concerns of a State."

Now, the Government relies most strongly upon the price-fixing feature, and counsel upon the other side concedes that that is the strongest part of the law.

Upon consideration of all the facts, it seems to me —while the question is not free from doubt—that the power to fix prices is within the power conferred upon Congress by the commerce clause, and it is my duty to sustain that part of the statute in this particular case.

There are findings of fact which counsel have submitted which do state in some detail—the particular

facts and description of the bituminous coal industry and of the interstate commerce, in such coal. Here it is enough for me to point out a few of the facts showing the extent of the industry, the importance of it to interstate commerce, its peculiarities as distinguished from other industries or kinds of commerce, and some of the evils which have existed and which Congress is attempting to correct by providing for the fixing of the price at which bituminous coal may be sold in interstate commerce.

Bituminous coal is the source of nearly one-half of the energy used in the country. It supplies about 75 per cent of the energy used by the public utilities and in manufacturing. It is essential to the industrial life of the Nation and furnishes a great part of the fuel used for household heating.

It is of great importance to transportation itself. It furnishes about 83 per cent of the fuel used by locomotives operating on the railways. Over a period of years the amount of coal transported by the railroads has ranged from 26 per cent to 33 per cent of their total freight and has furnished from 16 per cent to 19 per cent of the total revenues of the carriers.

Bituminous coal is found in 26 states of the Union, although the great part of it today is produced in four states: Pennsylvania, Illinois, Kentucky, and West Virginia. It is transported to practically every state in the country, and the coal produced in the different states competes in market with coal produced in other states.

The production has ranged, I believe,—or the sales—from nearly 600,000,000 tons—I think about 579,000,000 tons is the highest figure—down to, apparently, at the present time, nearly 350,000,000

tons. There has apparently been some difference among counsel about the figures, but, as I understand, it is now agreed that about 25 per cent of the total production is sold in local commerce, about 50 per cent in interstate commerce, and, the remainder going to the interstate commerce carriers.

The facts with respect to the sales apparently are agreed upon. It is the practice to sell coal before it is mined. These sales of coal which go into interstate commerce are interstate commerce themselves. In many mines the coal is graded, because the different sizes are more valuable in the market than the run-of-mine coal, and the practice is before operating the mine to obtain contracts for the different kinds of coal. Sometimes it is impossible to get the contracts in advance for all of the sizes, and the mine is compelled to operate.

The unsold coal accumulates until it so clogs the mine that operations are suspended, or that coal is shipped out, consigned to the owner or his agent, in the hope that it will be sold before it reaches its destination. If not, there are heavy demurrage charges, and there are also charges due to a change in consignment. So, there is a very decided pressure to sell that coal as quickly as possible, and it is referred to as "distress coal." Sometimes it is offered for sale to a number of brokers at the same time, and so far as the purchasers know, each broker is selling different coal. The result is that that distress coal has a very great effect upon the market price and depresses it.

About three-fourths of the coal is sold upon contracts and upon contracts made in advance, while the remaining coal is sold "spot," which, I suppose,

would include the kind of sales I have just mentioned.

There are other differences which distinguish coal to some extent from other commodities. The cost of the labor is the greatest item in producing coal. It is about 60 per cent.

The closing down of a mine is a difficult and very expensive thing. The pumps must be kept going, and there are various items of supervision such as to see that the walls and ceilings do not collapse, and the result is that the expense of running the mine while it is not operating is so heavy that it is usually considered cheaper to keep the mine going, even though the price received for the coal is less than the actual cost if all items of overhead are taken into consideration.

Then, there is a very great over-capacity in the mines of the country. The mines are capable of producing a much greater amount of coal than is consumed.

During the War the demand for coal grew enormously, with the result that prices soared. Finally Congress passed legislation for the purpose of regulating the price of coal. As I recall the testimony, it was some months after the Fuel Administration began to operate before the difficulties were corrected.

After the War there were a number of strikes of some importance. I believe the evidence shows that the wage agreements had usually been made for a period of two years, and there was always likely to be some suspension at about the time of the termination of the wage agreement. Frequently it was not renewed before the expiration.

In 1919 there did occur a very serious strike. That was a general strike of the union miners. It began about November 1, 1919, and lasted for about six weeks. Some 400,000 men altogether were on strike in about 22 different states. Before that strike was over, the testimony indicates, manufacturers in some places had to close down because of the shortage of coal.

In 1920, before the effects of that strike were over, as I recall it, the Government undertook to fix the prices of coal again.

In 1920 there was legislation in the State of Indiana because of the effects of that strike. The State created a special Food and Fuel Commission. The validity of the creation of that commission was sustained in the case of *American Coal Mines* v. *Food and Fuel Commission,* 268 Fed. 563. In that decision Circuit Judge Baker said that the State had the right to regulate the prices.

Before I leave that subject, I think in 1920 or 1921 the President appointed a Coal Commission which undertook to study the difficulties between the operators and the miners.

In 1922 another suspension occurred at the expiration of the wage agreement on March 31, 1922. About 460,000 miners were out, and at one time about 73 per cent of the productive capacity of the mines was closed down.

I think that in that year legislation was passed in Ohio for the purpose of remedying the difficulty, and on September 22, 1922, Congress itself passed an act which created the office of Federal Fuel Distributor, and also appointed the United States Coal

Commission, which made an investigation, the report of which has been referred to here.

I think the evidence shows that during that suspension the price of coal increased, and there was some evidence that some buyers were unable to get the grades of coal to which they were accustomed. Some of the coal sold was, of course, impure, and there were some breakdowns on some of the locomotives on the railroads. I think that at both of those times there was a real threat of a suspension, not only of the commerce of coal itself but of the commerce which depended on the use of coal in order to move; and that that threat was overcome by the action of the President in one case and of Congress in the other.

Between 1924 and 1927 there were a number of local strikes or suspensions, and after the expiration of the Jacksonville agreement in 1927 there were still other suspensions.

Prior to 1917 the industry had grown a great deal. Even before that time, and from that time on, there had been a very great growth in Kentucky, West Virginia, and other southern states, some due to natural causes—the building of the railroads to the mines and the building up of the mines—and some due to the competitive conditions.

Between 1924 and 1927 a great many of the union mines abrogated their contracts or suspended operations and later reopened on a non-union basis. As a result, a great deal of the sales of the mines that had been union before that time went to the mines in the other states that had been non-union.

By 1927, after the expiration of the Jacksonville agreement, the testimony showed, practically all of

the territory, or the very great part of the territory, that had theretofore been union, became non-union, and thereafter some of this commerce which had gone to Kentucky and West Virginia then went back in the normal course to Pennsylvania, Illinois, and the other states.

Between 1924 and 1929 there was no decrease in the sales of coal. As I recall the sales were over 500,000,000 tons in each one of those years.

From 1917 up to about 1923, the figures showed, the business as a whole had been very profitable. There were some years when the net profits of the entire industry were in the neighborhood of $250,000,000. I do not know just what the total sales were, but perhaps in that year the wages were about $851,000,000, so the sales might have been nearly double that, or around $1,500,000,000. During this period from 1924 to 1929, when the production continued at about the same amount there were heavy losses. There were several of the years when the figures, I believe, were not obtainable, but I think that between 1924 and 1929 there was a loss in every year to the industry as a whole.

During that same period the average price at the mine decreased from $2.68 to $1.78, a decrease of 90 cents, or about 31 per cent. During the same period the total wages decreased from about $851,000,000 to $588,000,000, a decrease of about the same percentage. The number of miners decreased about 200,000. So, with the same production, this meant that the miners were working more days per year.

Also during that same period, the approximate period between 1923 and 1929, the number of mines decreased about 3,300, about 30 per cent.

The losses after 1929, of course, became heavier, and they continued to be very heavy, I think, until the year 1934, when the N. R. A. became effective.

Throughout this same period Congress made a large number of investigations—either Congress itself, through a committee, or through some body appointed by Congress, or a commission appointed by the President. I think there must have been 12 or 14 of those during the period from 1918 down to 1935, and various suggestions as to various remedies were made.

I think it is a fact that during this period from 1919 down to the adoption of N. R. A., at any rate, there were a number of things which were injurious to the commerce in coal, and to the entire commerce of the nation. Whenever a wage agreement expired there was a threat, or at least a fear, that a very substantial part, if not all, commerce might be suspended until the wage agreement should be renewed. In 1920 and 1922 these threats grew to very serious proportions. The Presidents exercised their good offices, and Congress passed a statute as a result of which investigations were made, and the suspensions ceased and commerce in coal was renewed, and the threat of interference with that commerce, and with the bulk of the commerce of the railroads, ceased, but there was that threat on each occasion. As it was, there were many interruptions to the commerce, and real obstructions to the commerce. Consumers were compelled to lay in stocks of coal. Of course, the commerce of the carriers themselves fell off. Prices increased. I think the evidence shows that certain of the carriers in 1920 paid about 25 per cent more for their contract coal and about 50 per cent more for

their spot coal than they paid during the preceding year, and it was admitted that they probably suffered less because of their great buying ability, than other consumers.

That is your situation. The question is, Has Congress the right to regulate interstate commerce in that coal because of these conditions?

It seems to me that there is a real analogy between the right of the State to regulate local commerce and the right of Congress to regulate the national commerce. Historically, we know that the States exercised that right first, and their right was sustained beforce Congress attempted to exert a similar right. That was true of the elevator rates, decided in *Munn* v. *Illinois,* 94 U. S., and of railroad rates, decided in *Chicago, Burlington & Quincy* v. *Iowa,* in the same volume.

It seems to me that in *Nebbia* v. *New York,* 291 U. S., 502, in this quotation which we have heard so many times, the Supreme Court was expressing that view. In the *Nebbia* case, at page 524, the Court said:

> "Thus has this Court from the early days affirmed that the power to promote the general welfare is inherent in government. Touching the matters committed to it by the Constitution, the United States possesses the power, as do the States in their sovereign capacity touching all subjects the jurisdiction of which is not surrendered to the Federal Government, as shown by the quotations above given."

In *Brooks* v. *United States,* 267 United States at 436, which counsel have discussed at great length, the Court made a similar observation, to the effect that

in that particular statute it was merely exercising police power for the benefit of the public within the fields of interstate commerce.

It seems to me the same thing was said in the Lottery case, *Champion* v. *Ames,* 188 U. S., at 321, and in *Gibbons* v. *Ogden* 9 Wheat. 197, it was discussed. Chief Justice Marshall said that when a portion of the power of the State, that is, the power to deal with some of its commerce, was surrendered to Congress, Congress had the same power with respect to that commerce that the State had, subject to the restrictions contained in the Constitution.

In the *Nebbia* case the Supreme Court was dealing with milk. Coming down to coal, there are a number of State decisions holding that coal is affected with a public interest. The earlier decisions used that expression, that the State had power to regulate an industry which was clothed with a public interest. In the later cases the Supreme Court has somewhat changed the language, and said that the question is whether the activities to be regulated so nearly touch the vital economic interests of society that the police power may be invoked to regulate those activities. *Nebbia* v. *New York,* p. 534.

I was impressed today by the fact that Judge Kenyon, while chairman of the committee of the Senate, had made a recommendation that certain legislation be passed, and that he had used the expression that coal is a public utility, and that Congress should so declare.

Counsel have referred to the case of *Jones* v. *Portland,* 245 U. S., at 224, where the Supreme Court sustained the right of the city of Portland to conduct a municipal fuel yard. The importance of that case

is that the city had no right to spend money except for a public use. The supreme court of Maine could see no difference between selling coal and hauling it over the streets to its citizens and burning the coal at a central station and sending the heat under the streets, and the Supreme Court adopted that view and used some language which points in the direction that the coal industry is one which the States have the right to regulate.

Now, coming directly to the power to regulate interstate commerce, we have had several definitions. One was read this morning, I think, from the first *Employers Liability* case, and I think it is the same definition as is given in the Recapture case, *Dayton-Goose Creek Railway* v. *United States,* 263 U. S., 478. There the Court said:

> "It was insisted in the two cases referred to and is insisted here, that the power to regulate commerce is limited to the fixing of reasonable rates and the prevention of those which are discriminatory, and that when these objects are attained, the power of regulation is exhausted. This is too narrow a view of the commerce clause. To regulate, in the sense intended, is to foster, protect, and control the commerce, with appropriate regard to the welfare of those who are immediately concerned, as well as the public at large, and to promote its growth and insure its safety."

Congress has passed legislation undertaking to deal with matters of competition, and to forbid unfair methods of competition.

Of course, the purpose of the Sherman act is to prevent the monopolization of interstate commerce.

There are various provisions in the Clayton act which prevent price discriminations. It has been held, in numerous decisions, even before the Clayton act, that the sale of goods by one competitor at less than cost in a certain place, in order to injure the business of his competitor and put the competitor out of business, is unfair competition. That was a favorite method, I think, in the days of the cut-throat competition between the large corporations which were undertaking to obtain a monopoly.

In *Board of Trade* v. *Olsen,* 262 U. S. 1, 40 it is said that the question of price dominates the trade between the States.

While, as I said at the beginning, this question is not free from doubt, nevertheless it seems to me that Congress does have the right, under all the facts that are shown with respect to the bituminous coal trade, to do what is reasonably necessary to remove obstructions to and prevent injuries to that commerce; and Congress having determined that this may be done by the fixing of the price, it seems to me that it is not for the Courts to say that that is not a reasonable way of attacking and correcting the difficulty.

The evidence shows that much of the coal is sold in interstate commerce at less than cost. There are different prices to different consumers, depending, to some extent, upon the buying power of the different consumers. Of course, the wholesale principle is always proper, I suppose, but some of those prices are secret, and the condition is one that may properly be called cut-throat competition.

There is a threat of interference with commerce in coal itself, a threat of interference with all the commerce, or that part of the commerce of the rail-

roads which depends upon coal. That threat is more or less periodical, and it seems to me that the evidence shows that it is just as real as the threat to the milk business in New York. That is, the threat that that milk business in New York might entirely cease is no more likely than that the commerce in coal might cease for a substantial period, and that the entire industry might be destroyed if some remedy were not evolved.

I must confess that I was very much impressed by the list of the different things that were said in the *Nebbia* decision, compared with the facts in this case. The opinion in the *Nebbia* case is almost an encyclopedia of the law up to that date, and there the Court concludes that the legislature need not stop at acts which will indirectly affect the price, but that if, in the opinion of the legislature, the particular industry so affects the vital economic life of the State as to make price fixing necessary, then the legislature has the right to do it.

In what I have said in sustaining the right to fix the price, I have limited it, or tried to limit it, to those things which really have to do with interstate commerce as distinguished from local commerce.

In this comparison between the *Nebbia* case and the present case these are some of the things which were relied on there:

First, the prices to the producers had fallen below the cost of production. That is true in a great many instances here.

Second, the price of milk had declined more than prices generally. I am not so sure about the decline of prices, but the evidence shows that during this period between 1925 and 1929, when the consump-

tion of coal did not decrease, but the price fell off 90 cents a ton and the industry as a whole lost money every year, most of the other industries of the country were making money during those years. Those were the profitable years before the depression. It is true that there were four or five, or perhaps as many as seven, industries that lost money during this period, or a portion of it.

Third, the situation of dairy farmers was desperate. I think that is true of the situation of many of the operators of the mines.

Fourth, milk is an essential article of diet. Coal is certainly essential for the carrying-on of our commerce and the industrial activities of the country, as well as for domestic heating.

Fifth, milk cannot be stored, and this leads to the constant accumulation of surpluses, which tends to force down prices. I might amplify a little what I have said about the storage facilities. While the Carter Company and some others have some storage facilities, I think as a whole the industry avoids storage as much as possible, for two reasons: The lump coal tends to disintegrate when it is stored, and, of course, it is a costly thing to do. The evidence indicates that sales may go from one field to another, from one mine to another, and from one State to another, on a very few cents differential in the price.

Sixth, overproduction and overcapacity. Of course, that exists in this particular industry, and is perhaps just as difficult to cope with as in the milk industry. There it depended somewhat on the life of the cows, but, as counsel has said here, the life of a coal mine is usually longer.

Seventh, the prevalence of unfair trade practices,

which lead to demoralization of prices—attempts to sell the product to large buyers at discriminatory prices, and matters of that kind. I think I have discussed that.

Eighth, the rigidity of transportation charges. Of course, that exists here.

Ninth, the failure of producers of milk to receive a reasonable return threatens sanitary regulations. I do not think that comparison is to be made here.

Tenth, the milk industry is paramount to the State, and the destruction or decline of the industry would cause serious economic loss to the people of the State. I think the destruction of this industry, of course, would cause serious economic loss to the entire country, and the destruction of it would cause a very serious interference with all commerce.

Now I come to the effect upon local commerce. I think the effect of the stipulation which has been made is to make it unnecessary for me to say anything about that. 98 per cent of the commerce of the Carter Coal Company is interstate.

There is a question in the case as to the delegation of the right to fix the prices. There was also a question raised as to the standard. The steps provided by the law are complicated. The matter is complicated, so that the steps necessarily are complicated. Without going into the details, I think there is a sufficient standard set up, and I think that the statute requires that there be action by the Bituminous Coal Commission before any price becomes effective.

It is also contended that under section (a) of Part II, "Marketing," stabilization of wages and working conditions and maximum hours of labor is inextricably tied in to the fixing of prices. I am unable

to agree with that. It is true that at the top of page 6 the sentence begins: "In order to sustain the stabilization of wages, working conditions, and maximum hours or labor, said prices shall be established so as to yield a return per net ton," and so forth; and then the statute enumerates the things which shall be taken into consideration in fixing the price. They are all items of cost, which would have to be taken into consideration in fixing the price. It does not seem to me that language does anything more than to indicate a desire on the part of Congress that wages, working conditions, and maximum hours of labor be stabilized, but that it is not an essential part of that portion of the statute, and the statute would be precisely the same if that language had been omitted.

Now, as to the due process clause, I think what is said in the *Nebbia* case answers that, at page 525:

> "The Fifth Amendment, in the field of Federal activity, and the Fourteenth, as respects state action, do not prohibit governmental regulation for the public welfare. They merely condition the exertion of the admitted power, by securing that the end shall be accomplished by methods consistent with due process. And the guaranty of due process, as has often been held, demands only that the law shall not be unreasonable, arbitrary or capricious, and that the means selected shall have a real and substantial relation to the object sought to be attained."

It seems to me that the statute complies with those requirements.

It is also contended that the purpose of the act is really not to regulate interstate commerce, but to stabilize the industry. I think it must be admitted,

from a reading of the statute itself, that Congress had in mind both purposes. If one of them is within the power of Congress—and I have already held that the regulation of interstate commerce is within its power—I understand the law to be that the expression of the other purpose, no matter how plain it is, does not invalidate the statute. That is held in *Stephenson* v. *Binford,* 287 U. S. 276. *Stephenson* v. *Binford* deals with a state statute, but it cites the case of *Ellis* v. *U. S.,* 206 U. S. 256.

Having held that that portion of the statute which undertakes to fix prices is valid, I think it follows that the tax is valid.

I think, Gentlemen, I have covered all of the questions that were raised.

Mr. Dickinson. If your Honor please, there is one question that I do not think I have heard your Honor express an opinion on, and that is sections (a) and (b) of the labor relations provisions, the ones relating to collective bargaining and those provisions.

The Court. I am unable to distinguish them from (g).

I think, in view of the doubt that I have expressed, that it would be appropriate to grant a stay similar to that which was granted by Judge Hamilton.

Mr. Robertson. The stay is to be against the company joining the code, and against the collection of any tax in excess of one and one-half per cent, which is to be paid into the registry of the Court, as Judge Hamilton ordered?

The Court. I think that would be reasonable.

Mr. Dickinson. Yes.

Mr. Whitney. Your Honor, I am not absolutely clear whether there is to be an injunction against the company's joining this code that has been promulgated by the Bituminous Coal Commission, and a copy of which is in evidence in this record. May I ask your Honor whether you enjoin the company from joining the Code, or whether you do not do so?

The Court. I do not enjoin them from accepting that Code, but I grant a stay pending appeal.

Mr. Robertson. Would it be your Honor's pleasure to have us take an exception and ask an appeal now, so as to get it in the record?

The Court. Is it necessary to make a formal notation of exception to the opinion? You have the findings of fact and conclusions which I will sign.

Mr. Robertson. Then I will content myself with just noting an appeal in open court now, for the purpose of the record, and also ask that you grant it. We are not clear whether we are under the Federal or the District practice.

[fols. 1187 & 1188] ORDER APPROVING STATEMENT OF EVIDENCE

Be it further remembered that the foregoing contains the substance of all of the evidence given on the hearing of this cause, and the opinion and decision of the Court; and each of the exceptions stated to have been taken by the attorneys for the plaintiff and the defendants were so taken and were duly allowed and noted by the Court; and in order that each and every thereof may be preserved and made of record this Statement of Evidence is duly stated, approved and signed and ordered to be made of record in the above-entitled cause this 10th day of December, 1935.

By the Court:

Jesse C. Adkins, Justice.

[fol. 1189] Clerk's certificate to foregoing transcript omitted in printing.

Endorsed on cover: File No. 40,190. District of Columbia, U. S. Court of Appeals. Term No. 636. James Walter Carter, Petitioner, vs. Carter Coal Company, George L. Carter, as Vice-President and a Director of Said Company, et al. Petition for a writ of certiorari and exhibit thereto. Filed December 16, 1935. Term No. 636, O. T., 1935.

(7240-C)

[fol. 1190] SUPREME COURT OF THE UNITED STATES, OCTOBER TERM, 1935

No. 636

ORDER ALLOWING CERTIORARI—Filed December 23, 1935

The petition herein for a writ of certiorari to the United States Court of Appeals for the District of Columbia is granted. And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though filed in response to such writ.

[fol. 1191] SUPREME COURT OF THE UNITED STATES, OCTOBER TERM, 1935

No. 651

ORDER ALLOWING CERTIORARI—Filed December 23, 1935

The petition herein for a writ of certiorari to the United States Court of Appeals for the District of Columbia is granted. And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though filed in response to such writ.