

# **SPECIAL RULES**

Established Under Section 92,  
"Coal Mines Regulation Act,  
1911"




Applicable to the Mines of  
**The Canadian Collieries**  
(Dunsmuir) Limited  
(Wellington Division)

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# *Special Rules*

*of the*

*Canadian Collieries (Dunsmuir) Limited*

*Wellington Division*

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For the conduct and guidance of the persons acting in the management of these mines or employed in or about the same, to prevent dangerous accidents, and to provide for the safety and proper discipline of the persons employed in or about the mine, in terms of Section 92, of Chapter 160 of the Revised Statutes of British Columbia (1911) and amending Acts.

Any person, who is bound to observe these Special Rules, who acts in contravention of, or fails to comply with any of such Special Rules, shall be guilty of an offence against the Act (Section 93, C. M. R. A. 1911).

## MANAGER

1. Generally, the mine (or division of the same when divided in terms of the Statute) to which the manager has been appointed, shall be under the control and daily supervision of the manager, whose duty it shall be to carry out, and see carried out, the various provisions of the Act, so far as is incumbent on him, or on those acting under his control and directions, and to see that sufficient materials and appliances are always



provided for the proper carrying out of all necessary operations.

2. He shall cause notice boards to be posted at the pithead and also at the shaft bottom stating the number of persons permitted to enter the cage at any one time for the purpose of descending or ascending the shaft, as allowed by the Inspector of Mines, under General Rule 24.

3. He shall appoint all stations in compliance with General Rule 7, and shall cause the word "Station" to be legibly put up and maintained at each station.

4. He shall see that all report books required by the C.M.R.A. 1911, are kept at the mine, and shall daily examine the same, and see that the reports are recorded therein. In cases of accident, he shall see that the proper notices are sent to the District Inspector of Mines.

5. He shall provide from time to time, a proper number of printed copies of the Abstract and Special Rules for use at the mine.

#### OVERMAN

6. Subject to the control and supervision of the manager the whole operative detail shall be under the care and charge of the overman. The overman shall see that the workmen of every class, in their several departments discharge their duties; and shall receive and attend to all reports made to him as to the state of repair of the air-courses, machinery, trap doors, roads, and working places. He shall cause remedies to be provided where needed; and shall see the General and Spe-

cial Rules faithfully and vigorously enforced.

7. He shall have under his immediate and special charge all haulage ways, slopes, traveling ways and air-courses, all of which he shall keep safe and efficient.

8. He shall attend to the ventilation, in terms of General Rules 1 and 2 so far as these Rules, from their nature, can be observed by himself, or fail to be observed by others under his charge.

9. He shall perform the special duties, as to examination of machinery, with special regard to all the machinery and appliances used in connection with the winding apparatus, and once at least every week make an inspection of the shaft and all workings and return air-ways, measure the air passing in each district of the mine, and register all of the above in a book to be kept for the purpose.

10. He shall see that a plentiful supply of timber, for props and other purposes required by the workmen to carry on their operations with safety to themselves, is always ready at some convenient place near the mine mouth, and deliver the same to a convenient place near the working faces.

11. He shall immediately suspend operations and withdraw all persons from the mine or any part thereof, that is at any time dangerous or unsafe by reason of noxious gas prevailing therein, or from any other cause whatever, and shall prevent any person again entering therein, except for the purpose of removing the danger, until its safety has been restored, and comply fully with the requirements of General Rule 8.

12. He shall see that all doors along the airways are hung in such a manner that they will fall closed of their own accord. He shall cause all doors not in actual use to be taken off their hinges and shall not allow any door to be propped or fastened back, and opened, except at the time of passage of persons, animals or cars.

13. He shall not allow trappers, while on duty, to leave their doors under any pretext whatever.

14. He shall see that the drivers and all others are instructed to close all doors not attended by a trapper, after passing through such.

15. He shall cause all places to be driven the proper height and width, and see that all roads are kept properly cleaned, as well drained as possible, and in safe condition for animals and of such height and width that no animal will rub against the roof, sides or timber.

16. He shall see that all horses and mules under his charge are not overworked or unnecessarily whipped or abused by drivers or other work people.

17. He shall give directions to the persons employed in approaching old workings and other reservoirs, which may contain water or gas, and see that the drift is driven in accordance with General Rule 14, and that the utmost caution is observed in tapping the water or gas, and he shall see that those directions are obeyed; but if practicable neither water nor gas shall be tapped during working hours. Proper plugs shall be provided to

stop the bore holes if necessary.

18. He shall take care that all man holes and places of refuge are constantly kept clear.

19. He shall, without delay, report to the manager or owner any matter or thing coming under his notice, necessary to be observed or carried out, with a view to compliance with the General or Special Rules, which he cannot himself perform.

### FIREMEN

20. The fireman shall be subject to the overman, whose instructions shall not conflict with the C.M.R.A. 1911, or the Special Rules, and shall carry out all duties required of him by the C.M.R.A. 1911 and these Special Rules.

21. He shall be at the station before commencing his shift, to read the report of the fireman on the preceding shift and initial same.

22. He shall have general charge of the mine or portion of the mine appointed to him during the afternoon and night shifts.

23. If inflammable gas has been found in the mine within the preceding twelve months—which it shall be the duty of the manager to ascertain and intimate to the fireman—then it shall be the duty of such fireman or firemen if more than one, in their respective divisions, or shifts, to perform the duties of examining and inspecting, with a safety lamp, the mine and roadways, and making the report thereon according to the requirements of General Rule 4. It shall also be his duty to see that a lighted safety lamp is maintained in ac-

cordance with Special Rule 3.

24. If inflammable gas has not been found in the mine within the preceding twelve months—which it shall be the duty of the manager to ascertain and intimate to the fireman—then it shall be the duty of the fireman or firemen, if more than one, in their respective departments, to inspect the mine and roadways, and make a report according to the requirements of General Rule 5.

25. In making the examinations provided for by the foregoing rules, the fireman shall mark with chalk, the day of the month upon the face of each working place, as 1, 5, 10, 25, or other numbers, as the case may be. He shall be careful to ascertain that every part of the mine and roadways, so to be examined, are free from fire damp, choke damp and other impurities, and are safe for the workmen to enter and to work therein, and in case fire damp, or other impure air shall be discovered in any working place, road or level, the firemen shall, in the first instance, thoroughly clear the same of such impurity, if that can be done easily, and shall thereupon report to the miners, and other workmen, that the same are safe; but if the impurity cannot be readily or at once cleared out, he shall fence the place off and put up danger signals, and not allow any workmen to enter therein until the fire damp or other impure air has been removed.

26. If the fireman shall encounter falls from the roof in any of the roads which he requires to traverse, or in working places under the care of the miners, he shall not proceed further in the

direction of such falls, so as to pass under the broken roof, but shall endeavor, cautiously, to ascertain if there be any accumulation of fire-damp, or other impurity, in, about, or beyond the falls, so that the safest way of clearing the same may be learned, and shall proceed elsewhere through the mine to examine the unobstructed parts thereof, and to complete his inspection; whereupon the fireman shall report to the manager or overman the state of the falls, and whether free from impurity, to the end that the necessary directions may be given for having the same cleared away, and the roof secured; and until this shall be done, no miner or other workman shall be at liberty to proceed near or be under the broken roof, unless employed in remedying the same.

27. In case from any cause, the operation of the mine shall have been discontinued for any unusual length of time, and thereafter resumed, no workman shall be allowed to enter the mine until the manager, overman or fireman shall have first entered, and reported on the state of the workings, and in discharging this duty, the manager, overman or fireman must proceed with great caution, and shall not go further into the workings than he, from his own experience, shall deem safe; and in case there are reasonable grounds for apprehending the presence of impure air, he shall return to the mine mouth and remain there, until precautionary measures shall have been applied to restore the proper ventilation of the mine.

28. Without prejudice to the foregoing rules,

it shall also be the duty of the fireman to fence, or cause to be fenced, all entrances, according to the requirements of General Rule 6; as well as in going his rounds, to observe and report to the manager or overman upon the following matters, embraced in General Rules:

- (1) Any deficiency in the amount of ventilation, as provided for in terms of General Rule 2.
- (2) Any attempt on the part of workmen to violate General Rule 7, as to going beyond the appointed station.
- (3) Any violation of the terms of General Rules 11 and 12 as to the use of explosives.
- (4) Any failure to keep clear man-holes, in terms of General Rule 16.
- (5) Any failure to make secure the roof and sides of traveling roads and working places, under General Rule 22.
- (6) Any violation of General Rule 34, as to damaging of fences, signals, etc., and the fireman shall thereupon without delay, enter such report in a book kept for the purpose.

29. It shall be the duty of the fireman, where he discovers that any part of the mine is dangerous from the presence of noxious gases, to cause the workmen to withdraw from the mine, or the part thereof so found dangerous, according to the requirements of General Rule 8, and all workmen shall be subject to his orders, in respect to this



matter; and he shall thereupon, as the "competent person" appointed for the purpose within the meaning of General Rule 8, inspect the mine, or such parts thereof as are dangerous, in the manner and in effect provided for in said General Rule, and make a report as therein provided for. He shall also fit up bratticing where required, of suitable height and length, so that air may be at all times conveyed from the principal air courses for the use of the workmen, and see that all entrances are properly fenced according to the requirements of General Rule 6.

30. It shall be the duty of the fireman to see that the miners are attending to the security of the roofs and sides of the working places, and for that purpose to visit each working place at least once a day; and in case of finding that any miner is failing so to secure his working place, by propping the same, or otherwise, to point out to such a miner any such failure; and should such miner refuse or fail to perform such repairs as may be necessary to render the place secure, to require him and his assistants to withdraw from such working place.

31. It shall be the duty of the fireman, who may be appointed shot-lighter (unless some other person shall be specially appointed) where explosives are being used to act as the "competent person" in the terms of General Rules 11 and 12, and to ascertain the state of "inflammable gas" in terms of the said General Rules, and to prevent explosives being used, otherwise than as in the General Rules provided for.

32. It shall be the duty of the fireman to stop



the passage of men and materials through or under defective roads, roofs or places, until the necessary repairs shall have been executed. He shall take note of any information imparted to him concerning any interruption in the ventilation, or of any other cause of danger, and communicate with the manager or overman immediately, and shall aid and assist in the rectification and remedy of the same.

33. The fireman shall report to the manager or overman any instances of neglect on the part of the miners, in not carrying forward their faces or walls in accordance with the plan pursued in working the mine. He shall also examine and report to the manager or overman instances of neglect and acts of carelessness on the part of the miners.

34. Each fireman shall take and have charge of the particular district of the mine assigned to him, and shall cause sufficient timber to be distributed therein for the safe and proper working thereof.

35. A fireman becoming aware of anything requiring special attention shall, before leaving the mine see the overman, or the fireman coming on the next following shift, and report the same.

36. He shall not allow any workmen to enter the mine until he has made a thorough examination within three hours of the oncoming shift entering the mine, and report the same in the book kept for the purpose, and also post a copy up on the blackboard at the station.

## SHOT-LIGHTERS

37. It shall be the duty of a shot-lighter, where one is appointed, to see that the provisions of General Rules 11 and 12 are strictly carried out and to prevent explosives being used otherwise than as there provided for.

38. It shall be the duty of a shot-lighter to see that all roads leading to the place where the shot is to be fired are properly guarded before firing the shot.

### Amendment to Special Rule 38:

He shall see that when firing a shot or shots in a place that is approaching any other working place or roadway, the men in the place being approached shall be withdrawn to safety during the firing of the shots.

39. He shall not fire any shot in rock or coal charged with powder, dynamite or other explosive, until he has seen and examined the explosive used, before the hole is charged, and in case of a miss shot, the charge shall not be withdrawn under any circumstances, and no hole shall be drilled within two feet of the miss shot, which must be done under the supervision of the overman, or fireman. He shall not fire any shot which in his judgment is not properly placed.

40. Every case of a shot missing fire shall be reported to the overman or fireman, by the shot-lighter in charge of the shot at the time of misfire, and the shot-lighter shall pay particular attention to the fencing, etc., enjoined in General Rule 12.

41. He shall after firing a shot, return as

soon as practicable and examine the place where the shot has been fired and see that it is in a safe condition, before the workmen return, and in no case shall a shot be fired just before the workmen leave the working places.

42. Where detonators are used they must always be obtained by the shot-lighters from some person regularly appointed by the manager in writing from time to time.

43. In the use of electric igniters the shot-lighter shall proceed as follows:

After making an examination of the place the shot-lighter must first couple the cable at the charge and after seeing that every person in the vicinity has taken shelter, then couple the cable to the firing apparatus.

If there is a detachable handle to the apparatus the shot-lighter must always keep it in his possession when on duty, and under no condition allow it to pass to another. The handle must always be detached from the apparatus except when the shot is being fired.

44. The cable attached to the firing battery must be at least 25 yards in length.

#### STABLEMAN

45. The stableman shall have charge of all livestock connected with the mine, and shall see that it is properly cleaned, watered and fed. He shall also see that all harness is kept clean. He shall make a daily inspection of the fire system and see that it is kept in proper working order.

46. Every stableman shall see that no animal under his care is allowed to go to work while in an unfit state, and shall report to the manager, overman or fireman any injury to any animal under his charge.

47. He shall note the condition of all animals and harness upon their return from work, and see that they are properly fastened in the stalls provided for their use. In case of any injury to either animals or harness he shall make a record of the same in his daily report.

#### DRIVERS

48. Every person in charge of any animal shall take proper care of it. He shall not abuse it or allow any other person to abuse it. He shall not leave it at any time without first securing its safety from any probable dangers, unless by so doing he endangers his own or other human life. He is not to let any other person take out or return his horse or mule to the barn for him.

49. Every person in charge of any animal shall report immediately to the stableman or to a fireman any injury received by such animal while in his charge.

50. Every person in charge of any animal shall immediately report to the manager, overman or fireman in case he finds such animal cannot pass along any road without rubbing against the roof, timbering or electric wires.

51. Every person in charge of any animal shall personally take his own animal from the stable at the beginning of his shift and return it

again to the stable at the end of the shift, and fasten it in the proper stall provided for its use.

52. Every driver shall see that an adequate supply of sprags is kept in readiness, and wherever their use is necessary for safety, he shall see that the cars are properly spragged before starting on his trip; and during any stage in the trip where their use is not necessary he shall see that they are removed.

53. He shall report to the overman or fireman any defect of the ventilation, any ventilating door open or injured, any brattice displaced or injured; any fall or danger in any roadway, or in the roof or sides, and any injury or defect which he may observe in any machinery or structure.

### PUSHERS

54. Every pusher shall provide himself with an adequate number of suitable sprags and shall use them whenever necessary, so as to prevent any injury or accident happening to any person or animal.

55. He shall report to the overman or fireman any defect of the ventilation, and ventilating door open or injured, any brattice displaced or injured; any fall or danger in any roadway, or in the roof or sides, and any injury or defect which he may observe in any machinery or structure.

### CONDUCTORS AND MOTORMEN

56. Wherever traction motor haulage is in use the trip shall be in charge of a conductor, whose duty it shall be to see that before starting

the cars are all coupled up and the trip otherwise properly assembled and in readiness for running.

57. The conductor shall give all signals to the motorman for starting, stopping, switching, shunting, etc.

58. It shall be the duty of the conductor to see that no other person or persons than those permitted to do so shall ride on the cars.

(1) Workmen shall only ride on empty cars in going to and from their work, between the pit-head and regularly appointed stations for stopping nearest to the point where their working place is located.

(2) No driver in charge of a mule shall be allowed to ride on any empty cars or have his mule attached to any such car while it is in motion, unless it is for purposes of his work.

59. Motormen shall at all times run their motors with care, seeing that the proper lights are on the motor, and keep a good lookout ahead. They will not exceed the speed prescribed for them, and make all switchings and couplings with care. FLYING SWITCHES BEING EXPRESSLY FORBIDDEN. They will be held responsible for the care and cleanliness of their machines, and report any defects at once to the overman or electrician.

They shall place all oily waste in a receptacle which shall be furnished for the purpose.

60. Every motorman shall provide himself with a certificate from a medical practitioner, stating that he is mentally and physically fitted to perform his duty, and he shall obtain a renewal of

such certificate once in every six months, as provided in the C.M.R.A., 1911, Ch. 160, Sec. 5-(2).

### ELECTRICIAN AND LINEMAN

61 The electrician will be responsible for the erection and care of all cables, trolley wires, electric motors, hoists and pumps driven by electric power. He shall see that these are all kept in proper working condition, and all cables, trolley wires, etc., are hung according to the best practice, and in such a manner as to prevent accident to life and property.

### HOISTMEN AND DRUM RUNNERS

62. Any person in charge of any haulage engine, drum, motor, or wheel, must pay strict attention to the signals, and to any deviation from the regular course of the trip, or any defect of the machinery. When observing anything wrong, he must immediately, if possible, stop the trip and the machinery until the defect is put right, and he shall report to the manager or overman, as soon as possible, any danger, defect or weakness he may observe.

63. Any person whose duty it is to couple any cars to any rope or chain, or to any other car, shall see that such couplings are in good order and not twisted, and shall not make such coupling while the cars are in motion.

### ROPE RIDERS

64. Any person whose duty it is to ride a rope will see that the rope is properly attached to the trip, and that the proper signals are given; he shall also see that there is a drag attached to each

trip. He will not permit any person to ride on the cars without the permission of the manager.

65. Any defects in the track or timbering of the slope shall be reported by him immediately to the overman, fireman, or other person whose duty it is to see that the necessary repairs are made.

### SLOPEMEN AND ROPEMEN

66. The slopeman and ropeman shall be responsible for the care of the ropes, chains, balance cars, rollers, etc. He shall inspect them daily and make a report of the condition of same in a book kept for that purpose. He shall immediately inform the manager or overman of any defect in the ropes, chains, etc.

### BOTTOMERS

67. The bottomer shall have control of the pit bottom and shall constantly during his turn observe the condition of the signal apparatus, cages, ropes and chains for lifting persons and things in the shaft, and if he observes any defect or disorder therein, he shall instantly signal the same to the banksman, and immediately report to the overman.

68. He shall, when persons ascend or descend the shaft, give the proper signal to the engineman or banksman, to ensure the safety of those operations; and shall not leave his station during ordinary working hours while persons are being lowered into or lifted out of the shaft.

69. He shall not permit more than the proper number of persons mentioned on the notice board



to ascend the shaft, and if a greater number get into a cage, he shall not signal for it to be lifted until the excess in number leave it; and if the excess in number do not immediately leave the cage, he shall report the names of all the persons in it to the overman for investigation.

70. He shall see that the trams are secured in the cage, and that no coal or other material is sent up the shaft projecting over the cage.

71. He shall attend during the whole shift, and until the whole of the persons have ascended the shaft, or until relieved by another person. In the unavoidable absence of the bottomer, some other qualified person appointed by the overman shall take the place of the bottomer and perform his duties.

72. He shall prevent persons crossing the shaft bottom, unless the cage is there and signalled to stop, and shall on the first opportunity report to the overman any attempt on the part of any person to do so.

73. He, or the person acting in his absence, shall make the following signals, being those appointed for guiding the ascent of the cage:—

- (a) One Bell—Hoist, or stop when in motion.
- (b) Two Bells—Lower cage.
- (c) Three Bells—(Caution) Men. Engineer must answer with same signal before men enter cage, when one bell must be given to start.
- (d) Four Bells—Lower landing or hoist slowly.

No deviation from these signals shall be permitted on any account. The ascending signals shall not be made until the cage with its load, whether of men or material, are securely placed and everything ready for ascent.

74. He shall not allow any person to take his tools or gear with him in the cage, when ascending a shaft, but shall see that all tools and gear are lifted in a cage while persons are not ascending or descending a shaft, and that they are safely laid at the bottom of the cage or car used for raising or lowering them; nor permit any timber, materials, rock, coal or other thing under any circumstances to be raised in a shaft while men are being lifted or lowered in it, except such as may be necessary in repairing a shaft, while the repairs are going on.

#### PUMPMEN

75. The pumpman shall see that all pumps are kept properly packed and in shape to handle the water. He shall report to the overman any defect which he cannot repair himself and also report in a book kept for the purpose the condition of the pumps and pipes under his care at the end of the shift, and the position of the water in the lodgements.

#### PIPEMEN

76. It shall be the duty of the pipeman to keep the supply pipe, of whatever size directed, within reasonable reach of the face. He shall lay all pipes clear of the tracks, so that they do not interfere

with passage of cars, animals or men. He shall remove all pipes from abandoned roadways and keep them free from leaks.

### BRATTICEMEN

77. The bratticemen shall see that the brattice is properly erected and kept up to the working face in terms of General Rule 2. They shall see that stoppings are made air tight and kept in repair.

### DOORKEEPERS

78. Every person employed keeping a trap-door for the production or promotion of ventilation in the mine shall during his shift remain continually at the post assigned to him, and carefully observe the directions he receives from the manager, overman or fireman as to the opening and shutting of such doors, either on the occasion of other workmen passing through same or at the beginning or end of the shift.

79. He shall, on the first opportunity, immediately report to the fireman or other superior officer, if he observes any defect or derangement in the door, or in any frame or appliance connected with it, or in any ventilating brattice, or in the roadway in which it is placed.

### TIMBERMEN

80. It shall be the duty of every timberman to remove falls from the roofs or roads and air courses, and repair defects therein: and they are charged with the maintenance of all roads and passages in the mine, and are enjoined to proceed

with the greatest caution, both for their own safety and the successful performance of their duties. In these they must, therefore, be careful, and are required to prevent all other workmen coming near any defective places, or interfering with them when at work. They are required to undertake no repairs of unusual magnitude or danger without sufficient assistance, and until provided with every necessary material, which will be supplied on application to the manager or overman.

### TRACKLAYERS

81. Tracklayers shall keep the track laid up to within a reasonable distance of all faces, and shall be responsible for the repair and upkeep of all tracks. They shall remove all rails, ties and track spikes from all abandoned roads.

82. On all important roads which shall be used for permanent haulage tracklayers shall exercise special care in maintaining a uniform grade, so as to make haulage as easy as possible. In the case of levels, it shall be their duty to report to the overman when any miner at the face drives his place in such a way that it is impossible to maintain a uniform grade.

### MINERS AND OTHER WORKMEN

83. Miners and other workmen are, and shall be, generally subject to the control and orders of the manager and overman; but they shall also be subject to any directions which the fireman may give in his department for the purpose of preventing them from infringing or of causing them to comply with any of the provisions of the Act, or

of the General or these Special Rules.

84. Miners and other workmen shall not proceed into travelling roads or working places until it shall have been reported to them by the fireman, or other person appointed for the purpose, that the travelling roads and working places are safe to be entered.

85. Until such report or intimation of safety is so made, no such miner or other workmen shall pass beyond the station appointed; and if no other place or station has been appointed, they shall always understand that the mine mouth is the station at which they are required to wait the necessary examinations and report.

86. Every miner or other workmen in charge of any working place, before commencing work, and at intervals during his shift, shall examine his working place, and in case any danger is observed shall at once report to the manager or overman or fireman.

87. He shall, on first entering his working place, satisfy himself that it has been examined and found safe by observing whether the fireman's mark has been made on the face of his working place; and if it has not, he shall not commence to work therein, but shall return immediately to the nearest station and report the fact to the fireman, or other superior officer, and wait directions from one of them before returning to such working place.

88. If while at work, or any other time, any miner or workman shall discover or be informed

of the existence of any obstruction in the ventilation or stagnation or impurity in the air of the mine, or of the existence of any defect in the walls, roofs or in any other parts thereof, he shall be bound to give instant information of the circumstances to the manager, overman or fireman, so that these defects may be remedied and danger therefrom averted.

89. Miners are expressly forbidden to go into, or improperly near, any place throughout the whole mine where danger is known or suspected to exist.

They are forbidden to continue at any part of a face where a sudden outburst of fire-damp shall happen, or where danger from any cause whatever shall apparently threaten, until the same shall have been examined and reported safe, or the impurity or other cause of danger removed.

90. Whether the operations are conducted under the "long wall" or "room and stall" system (there being sufficient timber of proper lengths, either in the working places or at the place where the miner deliver his cars) the miner shall set the timbers in the working places in such a way as to insure complete safety. He shall cease to work and withdraw in the event of the working place becoming insecure, and must set and maintain a short prop or sprag at least every six feet to prevent the undermined coal from falling unexpectedly. The overman or fireman may require sprags to be set as much less than six feet apart as he deems necessary for safety.

91. Besides exercising their own skill and experience in all matters, the miners of each mine shall be under the general supervision of the fireman, and it shall be his duty on finding them careless or incapable of doing their work to cause them to be removed from their working face.

92. All renewal or replacing of props or other necessary repairs in the waste and road heads shall be done by the timbermen or firemen.

93. If, from accident, or any other cause, miners are at any time unable to find a sufficient supply of mine props at the place appointed, when it is unsafe to continue their work without them, they are expressly forbidden to remain at their working places.

94. All workmen are expressly forbidden to throw into, deposit or leave coal or other materials, wood, stones, or rubbish, or materials of any kind, in any air courses or roads, so as to interfere with, or hinder, the air passing into and through the mine.

95. Every miner shall be possessed of a certificate of competency as such, or shall procure one at the first examination after he starts work.

96. Every person while at work must pay frequent attention to his safety lamp, and if a lamp becomes unsafe from fire-damp or any other cause, he shall at once extinguish it and report to the manager, overman or fireman, and take the lamp to the proper official.

97. No person shall set a safety lamp on its bottom, unless it is necessary to do so for the safe



performance of his duty, or unless authorized by the overman, and in all cases it shall be placed at least two feet from the swing of the pick, hammer or other tool, and shall be hung up.

98. Where safety lamps are in use they shall be used with the greatest care. Every person on receiving his lamp must examine it carefully and see that it is securely locked.

99. Miners must build good pack walls, and set a sufficient quantity of props and bars for safely securing the roof and sides of their own working places, and add to them or renew them when necessary, or when told by the manager, overman or fireman; and the miners when leaving off work must see that the pack walls, props and bars are left in safe order. In mines where the building of pack walls is separately contracted for, the miners shall not be required to build pack walls, except in their own working places to prevent imminent danger in the absence of the persons appointed to build them.

100. Every miner who has a helper working with him who does not possess a miner's certificate shall be responsible for the inspection and care of the working place of his helper, and also for the conduct of said helper while he is working at the face.

101. He shall, as far as practicable, leave his working place in good order at the close of his shift, and on no account leave in it any rubbish, coal or slack which shall prevent access to the face of the coal or interfere with free ventilation



to the working face; and he shall maintain across the face of his working place an air way of such size as may be directed by the fireman or other superior officer for the purpose of the free and proper ventilation thereof.

### MACHINE MEN

102. It shall be the duty of the machine man to undercut the coal as directed by the foreman. They shall be held responsible for the proper care of their machines, hose, picks, etc., and to exercise such care as will render himself, his helper and his machine safe.

### DRILLERS

103. It shall be the duty of the driller to drill the holes at the distances and angles required by the foreman. They shall be held responsible for the care of their machines, drills, hose, etc., and each driller shall exercise such care as will render himself and his machine safe. He shall not drill any holes into the roof or floor, nor beyond the depth of the undercut coal.

### BRUSHERS

104. The duties of the brushers shall be to brush the roadways, build the pack walls along the roadway in a careful and efficient way. He shall carefully pack any material thrown in the gob tight to the roof, and shall exercise such care in setting his breaking props that the pack walls shall not be undershot or the roof disturbed, and shall not pack the refuse so as to impede the air current.

## MASTER MECHANIC

105. The master mechanic shall see that all engines, compressors, pumps, fans, boilers, and all of the machinery and gearing, together with all ropes, steam and water gauges, valves, appliances, and everything connected therewith, are in a safe and effective state, and that any fly-wheel, or any other exposed or dangerous part of any of the machinery, is securely fenced. If he becomes aware of any weakness, defects or injury, or apprehends any danger, he must immediately report the same to the manager and take the necessary steps to have the same remedied.

106. The master mechanic shall cause each boiler to be well cleaned as often as necessary, and after a boiler is cleaned or repaired he shall thoroughly examine it internally and be satisfied that it is in a fit state to work before the steam is again raised.

107. The master mechanic shall examine from time to time the fittings of the boilers, safety valves and steam and water gauges, so as to ascertain the level of the water and the pressure of the steam, and shall see that the stokers attend to their duties in a proper manner, and shall report any defects at once to the manager.

108. The master mechanic or other competent person appointed for the purpose, must have a written order from the manager or overman in charge of the shift, stating that all workmen are out of the mine, before stopping any ventilating fan.

109. The master mechanic shall not permit

any person without authority to interfere with any engine, pump, fan, boiler or machinery of any description in connection with the mine.

### ENGINEMEN

110. The engineman in charge of engines, boilers and all other machinery under his charge, shall make a daily examination of the same and enter a written report of the condition thereof in a book provided for the purpose.

111. The engineman at the pithead shall, during the hours of his shift, remain continually in charge of and so near his engine as at all times to have it completely and entirely under his control. He shall be careful that the engines and boilers are always in good working condition, and that the pumps and whole machinery and gearing connected with his engine are in a safe and effective state, and any fly-wheel or exposed and dangerous parts of the machinery securely fenced. He shall have charge of the stokers, where these are employed, and be responsible for the regularity with which steam is kept up, and for the proper state of the boilers. He shall have steam raised, and the engine and machinery in working order, in time to allow the fireman, overman or manager to descend the pit to examine the condition of the mine before the miners' or other workmen's shift shall commence.

112. He shall thoroughly acquaint himself with, and shall watch and attend to the various signals made for raising or lowering the cage, whether laden with men or materials, or when

empty; shall carefully and exactly set down the cage at the landing places; shall observe the indicator attached to the machinery showing the position of the load in the shaft, and manage the brake connected with the engine. The engineer shall further attend to and see that any steam and water-gauges and safety valve attached to the steam boilers are kept in good order.

113. Before allowing the descent of workmen into the mine on any morning, the engineman shall be bound to run each cage at least once from the pithead to the pit bottom, to ascertain whether everything is right; and if any defect shall be discovered, he shall stop the engine and shall not, on any pretext, allow the descent of work-

The engineman shall not allow any workman to descend the pit until the fireman shall have remen until the matter has been reported to the manager, overman or person in charge, who shall direct what remedy shall be necessary. ported the safety of so doing.

114. In the absence of the pitheadman or banksman), he shall see that no person descends the pit without permission from the proper authority; that no person goes down the pit in a state of intoxication; that no intoxicating drinks are taken down the pit unless authorized by the manager; and that the safety gates are in proper position.

115. If the winding apparatus is not provided with some automatic contrivance to prevent overwinding, the engineman shall reduce the speed of his winding-engines when men are being

raised so that the cage shall not be wound up at a speed exceeding three miles an hour after the cage has reached within a distance in the shaft of twenty yards from the landing plates at the top, as shown by the mark on the indicator.

116. He shall not, without permission of the manager or overman, allow any person to enter the engine house or work or handle the engine.

117. After making his daily examination of the engine, boilers, signalling apparatus, drum and any other machinery in connection with the winding plant, he shall enter a written report thereof in a book provided for the purpose.

118. All enginemen shall see that all oily waste is stored in a place especially appointed for the purpose.

119. All enginemen shall see that the General and Special Rules applying to their department are strictly observed and shall immediately report any non-observance of the same.

120. Every engineman in charge of an engine or machine used for conveying or hoisting men in the mine shall have in his possession a certificate from a medical practitioner, stating that he is mentally and physically fitted to perform his duty, and he shall obtain a renewal of such certificate once in every six months, as required by the C.M.R.A., Ch. 33, Sec. 4.

#### VENTILATING ENGINEMEN

121. The ventilating engineman shall be responsible for the constant and regular working of the engine, machine and machinery forming

together the mechanical ventilating apparatus, and attend regularly thereto during his appointed turn, and shall several times in the course of each day thoroughly examine and inspect the whole of the said apparatus, so as to maintain a careful supervision over every part thereof. If he observes any defect, want of repair, or disorder therein, he shall instantly report the same to the mechanical engineer, or other superior officer. The result of such examination or inspection shall be regularly entered in a report book to be kept in the engine room for the purpose.

### STOKERS

122. The stoker shall be in constant attendance at his duties during his working hours, and shall obey the direction of the boilerman or engineman.

123. He shall keep every boiler surface properly supplied with fuel, and maintain good fires and an ample production of steam in the boilers, and shall clean out the fires as often as is requisite, and take care to have all ashes and cinders removed at proper times, and see that all flues are in constant good order; and if he observes any disorder or want of repair in the boiler, furnace or flue, or any structure connected therewith, he must immediately report the same to the boilerman, the engineman, or some superior officer at the mine.

### PITHEADMEN

124. Subject to the order and direction of the manager, he shall have responsible control of

the pit banks, screens and sidings, and of all the workmen employed thereon.

125. He shall see that the requirements of Section 4 of the C.M.R.A., 1911, as to the employment of boys above ground are complied with.

126. He shall be in attendance in the morning, or at such other time of the day as the miners' shift commences, and shall see that no person is allowed to go upon the cage until the engineman has ascertained and reported the safety of so doing, in terms of Special Rule 113, and shall regulate the number of men descending at a time, in accordance with the number specified on the notice board at the pithead. If a greater number get into a cage, he shall forbid the engineman to lower the cage until the excess in number leave it; and if the excess in number when ordered by him do not immediately leave the cage, he shall report the names of all the persons in it to the overman for investigation.

127. The pitheadman and engineman respectively shall prevent from going down the shaft or entering the mine any person not employed therein, or not duly authorized, unless by the special order or direction of the owner, agent, manager or overman.

128. He shall not allow any person to descend the shaft before or after the time fixed without permission from the proper authority.

129. When the shaft is used for raising or lowering material, and there are two ropes in the shaft, he shall not allow any person to get on to



the cage except in case of emergency or by special leave, until he shall have been signalled to send down or up the opposite cage empty; but this shall not prevent men ascending and descending at the time in opposite cages.

A 129. Except in cases of emergency or by special leave, he shall not allow any person to take his tools or gear with him in the cage when descending a shaft, but shall see that all tools and gear are lowered in a cage while persons are not descending or ascending a shaft, and that they are safely laid at the bottom of the cage or car used for lowering them; nor permit any timber, materials or other thing, under any circumstances, to be lowered in a shaft while men are being lowered or lifted in it, except such as may be necessary in repairing a shaft while the repairs are going on.

130. He shall not permit any person to enter or leave a cage until it is resting upon the chairs or catches, as directed in General Rule 39.

131. He shall not allow any intoxicating drinks to be taken down the pit, except by permission from the manager; nor any person to descend in a state of intoxication.

132. He shall make himself thoroughly acquainted with the signals.

133. He shall not allow any one to interfere with the signals.

134. He shall, when persons descend or ascend the shaft, or whilst persons are examining or repairing it, or riding in it during working hours,



be, and remain close to the signal wire, to give the signal to the engineman in case of necessity.

135. He shall keep the flat sheets, landing plates, cage bottoms, and all places near the pit's mouth, free from coal, stone and loose material, and shall see that the lights are properly attended to.

136. He shall observe that at all times there is sent in or down the mine a stock of timber for props and other necessary purposes, for the use of the miners and other workmen, and report to the overman if at any time he observes, or has it reported to him, that there is a deficiency of such timber or other articles. He shall superintend and direct the safe removal from the cage of all loaded cars arriving at the pithead, and see to the safe replacing of the return cars on the cage.

137. In compliance with General Rule 36, he shall once at least in every twenty-four hours, carefully inspect the ropes, chains, slides, pithead frame, and other apparatus used for the lowering and raising of the cages, so far as exposed to his observation, and write a report on the same; and if he discovers or is informed of any defect or weakness likely to produce danger, he shall stop the raising or lowering of men or materials until such defect or weakness be remedied. He shall also be careful to prevent the fall of any stone, coal or other substance into the shaft from the surface, and shall communicate to the manager or overman any necessity for a skilled person being employed to rectify any defect in the shaft, ropes, chains, pithead frame and other apparatus.

138. He shall remain in attendance at his post until all the men and boys ordinarily employed are out of the pit.

139. He shall, before leaving the shaft, see that all the rails, gates, chains and other fences at any openings into the pit, and at the landings, are in proper position.

140. He shall see that all unnecessary fires and lights are extinguished when the winding has ceased.

141. He shall see that the Act and the General and Special Rules are observed by all persons in his department, and shall report any non-ob servance to the manager.

#### WEIGHMEN

142. The weighman shall comply with and carry out all the provisions required by the 10th Section of the Act.

143. He shall immediately report to the manager, mechanical engineer, or other superior officer, any disorder or inaccuracy that he may detect or observe in any weighing machine.

#### LAMPMEN

144. No person, except a person authorized by the manager or overman, shall either take himself or give out for use in the mine any safety lamp.

145. The lampman shall see that every safety lamp when given out for use in the mine is thoroughly cleaned and put together in safe working order and safely locked.

146. All persons entrusted with the cleaning of any gauze, or other part of any safety lamp, or with the duty of putting any safety lamp or parts thereof together, shall at once report any defects therein to the lampman, or if there is more than one lampman, then to the head lampman.

147. Whenever a defective or damaged lamp is received from any person by the lampman, he shall report the fact to the manager, and shall keep such lamp in the state in which it was received until seen by the manager.

148. The lampman shall see that all oil, gasoline, or other inflammable articles under his care, are carefully and properly stowed and used, and that no greasy waste or other refuse is allowed to accumulate in or near the lamp house.

149. He shall allow no one in the lamp house except those whose business require them to be there, and shall keep the lamp room neat and clean, and all appliances in working order.

### SAFETY LAMPS

150. The manager, overman, fireman or shot-lighter are authorized to examine safety lamps in terms of General Rule 9, without prejudice to the appointment of any other competent person for that purpose.

151. Where safety lamps are in use they shall be used with the greatest care. Every person on receiving his lamp must examine it to see that it is securely locked; and if it becomes unsafe from fire-damp, oil or gasoline spilled upon the glass or gauze, the gauze punctured, even with a small

pin so as to make a hole larger than that allowed in the ordinary safety gauze, the cracking of the glass, or any other cause whatever, he shall at once extinguish the light, and forthwith take the lamp to the lamp house, or appointed lamp station, and report the same to the overman or fireman at once.

152. No person shall improperly use or damage any safety lamp, or blow out, or attempt to blow out, flame in any lamp; and no person, unless duly authorized, shall unlock or open any safety lamp, or attempt to unlock or open any safety lamp, or have in his possession any key or contrivance for opening the lock of any safety lamp.

### EXPLOSIVES

153. No explosive or detonator of any description is to be used in the mine unless authorized by the manager, and when so authorized, or when used for rock work, it must be in strict compliance with General Rules 11 and 12.

### AMBULANCE

154. In compliance with General Rule 40, "Ambulance boxes" shall be provided at every mine and kept in as dry and convenient part of the mine or district of the mine as possible.

155. A list of the contents of the box shall be pasted on the inside of the cover of the box, and it shall be the duty of the overman to see that the required stock of material is always kept among the contents.

156. Any person is forbidden to damage, de-

face, steal or in any way injure or improperly use this box or its contents.

### RESCUE APPARATUS

157. In compliance with Section 116, a number of sets of rescue apparatus shall be kept in a place especially appointed for the purpose. They shall be under the care of a director or other responsible person appointed by the manager.

158. Every person is forbidden to touch or make use in any way of such apparatus without the consent or authority of said director or other regularly appointed person, and in such a manner as is directed by him.

### RULES FOR ALL PERSONS

159. Every person on entering into employment in or about the mine shall, before commencing work, present himself at the office and be registered, and if a miner, present his certificate as such.

160. Every person at the time of registering shall receive a copy of the Abstract and Special Rules.

161. If in proceeding to their working places, or in travelling along any formed road, or other part of the works the maintenance of which, under the C.M.R.A., 1911, devolves on the owner or manager, miners or other workmen shall meet with or see any fall from the roofs, walls, or elsewhere, in their progress, they shall not pass the same, but shall instantly report the occurrence to the manager, or other person known to have the

maintenance of such places under his charge; and miners and other workmen shall not return or pass the fall or dangerous place until the same shall have been made secure, which it shall be imperative on the manager, overman or other person having the charge forthwith to do.

162. In like manner, every miner and other workman who shall observe or come to know of any defect or flaw in the ropes, chains, or in any part of the engine, machinery and gearing used in or about the mine, whereby the efficiency thereof may be impaired, shall be bound forthwith to communicate the same as above.

163. Any person discovering any stoppage or derangement to ventilation, injury to an air crossing, door, regulator, sheet stopping, brattice, air-pipe, or observing any injury to or obstruction of an air-course, weakness in the roof or deficiency of timber, weight on any working place or roadway, a feeder or accumulation of gas or water, a naked light where a safety lamp should be used, fire, sign of fire, or any other danger shall immediately give notice to the manager, overman or fireman, and to any person or persons whose safety may be endangered thereby.

164. No person shall have in his possession for use in the mine beyond the place at which lamps are examined by an official of the mine, any unlocked safety lamp so defective or insecure that reasonable observation by him could have detected such defect or insecurity.

165. No miner or other workman shall be

permitted to introduce into the mine any stranger or person employed by them, on any pretence, without the consent of the owner or manager.

166. Miners, and all other persons who shall have occasion to pass through any trap door, shall thereupon closely shut the same, and shall on no account leave it open. On discontinuing work at the end of a shift, and especially when no work is to be done in the mine the following day, care must be taken by every workman to closely shut all trap doors, so as to prevent the proper current of air necessary for ventilation from being diverted.

167. All workmen are prohibited from entering or remaining in any place throughout the whole mine where not absolutely required by duty to be at the time.

168. Miners and all other persons, except drivers and rope riders, are expressly forbidden to ride on loaded cars in or about any part of the mine.

169. Miners and all other persons are prohibited from defacing or removing marks which may be made on any part of the workings for the guidance of the workmen in their operations. All workmen are forbidden to displace, injure or damage in any way, the props, cars, rails, or any part of the machinery, gearing and apparatus.

170. Persons employed shall not take or interfere with any lamps, tools, rails, cars, or in any other articles or things belonging to, or in use by, or in charge of, any other person for the purpose of his employment without permission.

171. No person shall without authority remove any caution board, notice or danger signal, or pass any danger signal, caution board or fence.

172. Meetings of miners and other workmen in a body within the workings, or in any of the roads or air courses, or at the mine's mouth, are strictly prohibited.

173. No workman shall be permitted to enter, or to continue in the mine, while in a state of intoxication.

174. No person shall try the workings or the goaves for fire-damp with a naked light; and no person shall smoke tobacco, or take into any district of a mine which is worked with safety lamps tobacco pipes or tobacco for the purpose of smoking, or matches or any apparatus for striking a light other than that approved for lighting shots. All persons may be searched for tobacco, pipes and matches, but the person making such search shall first be examined by two of the workmen in the mine.

175. No person in a place of trust shall depute another person to do his work without the sanction of his superior officer, and no person in a place of trust shall absent himself without having previously obtained the permission of his superior officer for his term of absence.

176. It shall be the duty of any one receiving personal injury in or about the mine to immediately report such injury to the manager, overman or fireman.

177. No person shall be permitted to enter



the lamp house, oil house or powder magazine with matches, an open light, pipe, cigar or cigarettes.

178. Persons employed shall not fight or quarrel, or incite others to fight or quarrel, or create any disturbance in the mine or upon the premises.

179. No person shall wilfully destroy, dump or mess any receptacle provided for sanitary purposes, and where such receptacles are kept it shall be obligatory on employees to use the same.

#### SPECIAL RULES FOR SINKERS

180. The banksman shall in all cases steady the kibble or bucket, or anything about to be sent down, before it leaves the top of the shaft, and shall see that all bricks and other small materials are kept below the level of the top of the kibble or bucket; that no stones or loose materials are sticking to the bottom of the kibble or bucket, and that all tools, gear or timber are properly stowed and secured.

181. The banksman shall see that in every case the kibble or bucket is lifted off the settling board or banking car by engine, and is steadied over and in to the pit.

182. The banksman shall secure the "banking car," where used, by a catch when "off" and "on." He shall not when banking out give the signal to lower the kibble or bucket on to the car until the latter is in position over the shaft and properly secured.

183. The banksman shall immediately before

shots are to be fired ascertain from the engineman that the kibble or bucket is in proper position and that he is ready at once to draw away on receipt of the signals to do so; he shall then signal to the bottom of the shaft to this effect.

184. The charge man in each shaft shall have full charge of the sinking operations, and shall once in every shift, or oftener if necessary, examine the sides of the shaft and pluck any loose stones, and if anything is unsafe, stop sinking until it is made secure, and shall after such examination make a true report of the condition of the pit in a book provided for that purpose, and shall sign the same.

185. The chargeman at the bottom of the pit shall see that the kibbles or buckets are so filled that the filling, when it consists of brick or other small material, shall be below the level of the top of the kibble or bucket, and he shall also see that the stones are properly packed; that no stones or loose materials are sticking to the bottom; that all tools, gear and timber are properly stowed or secured, and that the kibbles or buckets are put in a line with the rope and properly steadied before being sent away.

186. The chargeman shall not allow any shot to be fired except under his supervision, not until the kibble or bucket is conveniently placed and a signal has been received from the surface that the engineman is in perfect readiness to draw away.

187. The chargeman after every cessation of work, whether caused by the withdrawal of the

workmen for shot firing purposes or other causes, shall, accompanied at least by one other person, descend and examine the pit and ascertain it to be safe before allowing the rest of the men to descend; and after the firing of a sumping or breaking down shot, or when inflammable gas is likely to be given off such examination shall be made with a safety lamp.

After an intermission of four hours in working the pit shall not be entered until a light has been lowered, and in case danger from inflammable gas is apprehended, not until a safety lamp has been lowered to ascertain if any gas has accumulated.

188. When directed by the manager locked safety lamps only shall be used in the pit.

189. All persons, when ascending or descending shall keep within the kibble or bucket. No person shall ride on a loaded kibble or bucket.

190. **All persons employed in or around the mine, in whatever capacity, are required to read and make themselves familiar with the whole of these rules, under whatever head, so as to become acquainted with the terms thereof.**

#### SYSTEMATIC TIMBERING

191. (a) The Manager of the mine shall cause to be posted at a conspicuous place near the mouth of the mine, a Notice stating the minimum size of the different types of timber to be used in such mine, and the maximum distance between the timbers and between the timbers and the face and sides of the working place.

(b) In the event of two or more methods of timbering being used in one mine, then in addition to the notice posted at the mouth of the mine, a Notice shall be posted at the entrance to each section or district, stating the method of timbering to be used in such section or district of such mine.

(c) It shall be the duty of the miner in charge of a working place, which shall include such working place and for a distance of fifteen (15) feet back from the face, to keep the props, timber or other roof supports erected as designated in the "Notice of Systematic Timbering" governing the mine, Division or Sub-Division of such mine in which he is employed.

(d) Nothing in this Section shall prevent a miner from setting supports, or an Official from requiring the miner to set supports in his working place at more frequent intervals than those specified in the Notice aforesaid, where necessary for safety.

(e) Every miner in charge of a working place shall set sufficient sprags or other supports for the undermined coal, provided that before commencing to mine he shall set one (1) sprag or other support, and not less than one (1) for every six (6) feet of such undermining.

(f) Temporary props shall only be withdrawn by use of a dog and chain or other type of timber-drawing machine, unless permanent timber has been set before such withdrawal, and no permanent prop, timber or other roof support, shall be finally withdrawn without the use of such timber drawing device.

## SYSTEMATIC TIMBERING—WELLINGTON DIVISION

1. The method of timbering to be adopted in this Mine under Special Rule No. 191, shall be "Sett Timber" and Prop and Cap Piece in Pillar and Stall work, and in Longwall work, Stringer or Crossbar on Roadways, and Prop and Cap Pieces on Faces,—the Stringer in Longwall work applying only to advancing work and not to back brushing.

### LONGWALL

2. The width of road between cogs on main roadways and slants shall not be less than ten (10) feet, and on ordinary gateways not less than nine (9) feet.

3. The roadside packs shall not be less than four (4) feet in thickness, and where no suitable building material is available they shall consist of timber cogs set skin for skin, and must not be less than four by four (4x4) feet at points of rest of the timbers in the cog.

4. Whatever the materials used in the pack-walls, the packs must be continuous, excepting where branch roads leave the roadways.

5. All roads and gateways must be stringered or crossbarred within the area covered by these regulations.

6. The minimum diameter of crossbars shall be six (6) inches.

7. The maximum distance between crossbars shall be four (4) feet centre to centre.

8. The distance between the last crossbar and the working face shall not be more than six (6) feet.

9. The working face shall be timbered with props and cap pieces in rows parallel to the face. The distance between the props in rows parallel to the face shall not exceed four (4) feet, and the distance between the props at right angles to the face shall not exceed four (4) feet.

10. The minimum diameter of props shall be four (4) inches, and the minimum size of cap pieces shall be 1 1-2x6x16 inches.

### NARROW WORK

Not Exceeding 14 Feet, Where Sett Timbers  
Are Used.

11. The sett shall consist of three (3) pieces: a stringer and two (2) legs. The minimum diameter of the timber for stringers shall be seven (7) inches, and for legs five (5) inches.

12. The maximum distance between setts shall be four (4) feet, centre to centre, and the distance between the last sett and the face shall not exceed six (6) feet.

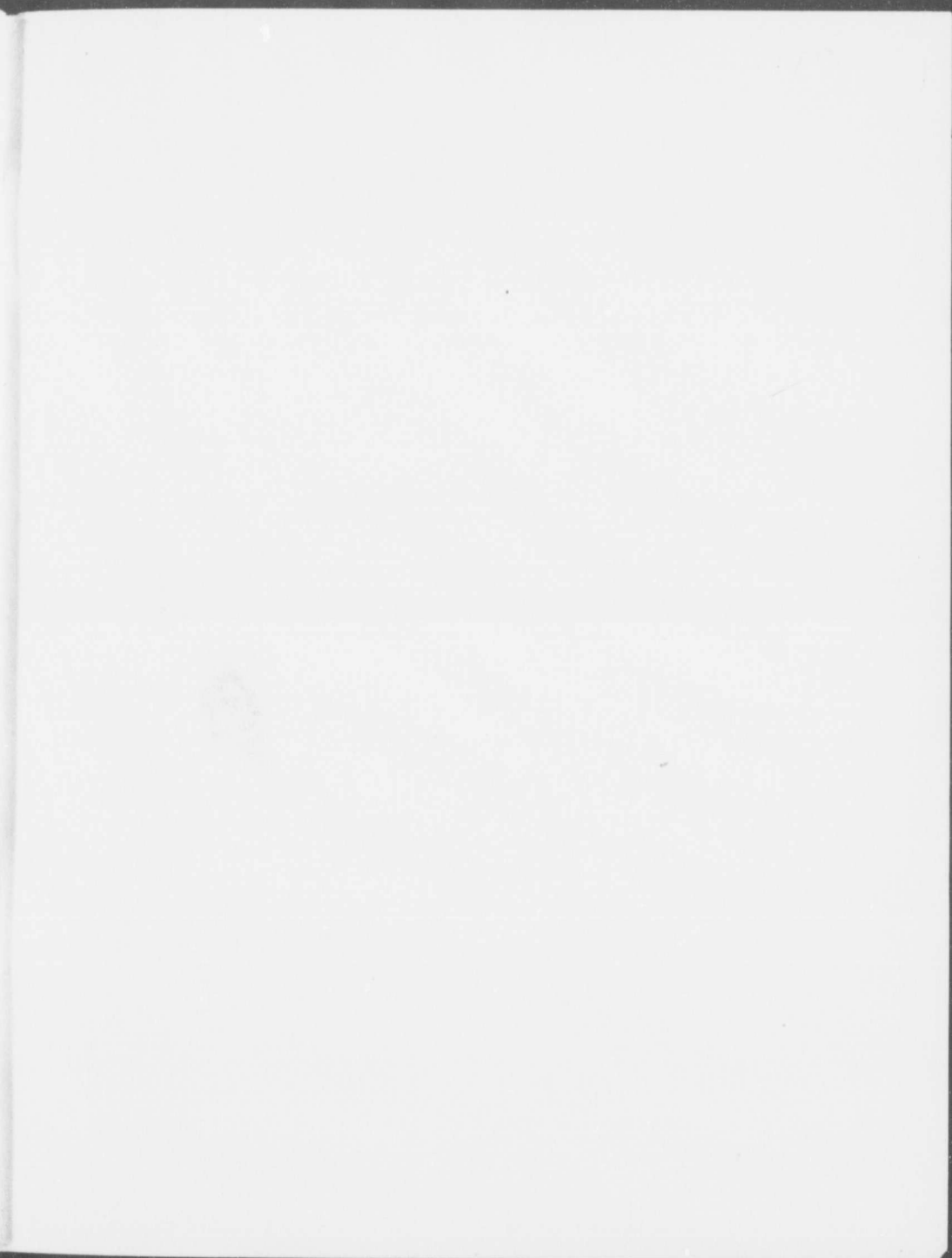
13. Where prop and cap pieces are used, the maximum distance between props at right angles to the face shall not exceed four (4) feet.

14. The minimum diameter of prop timber shall be five (5) inches, and the minimum size of cap pieces shall be 1 1-2x6x16 inches.

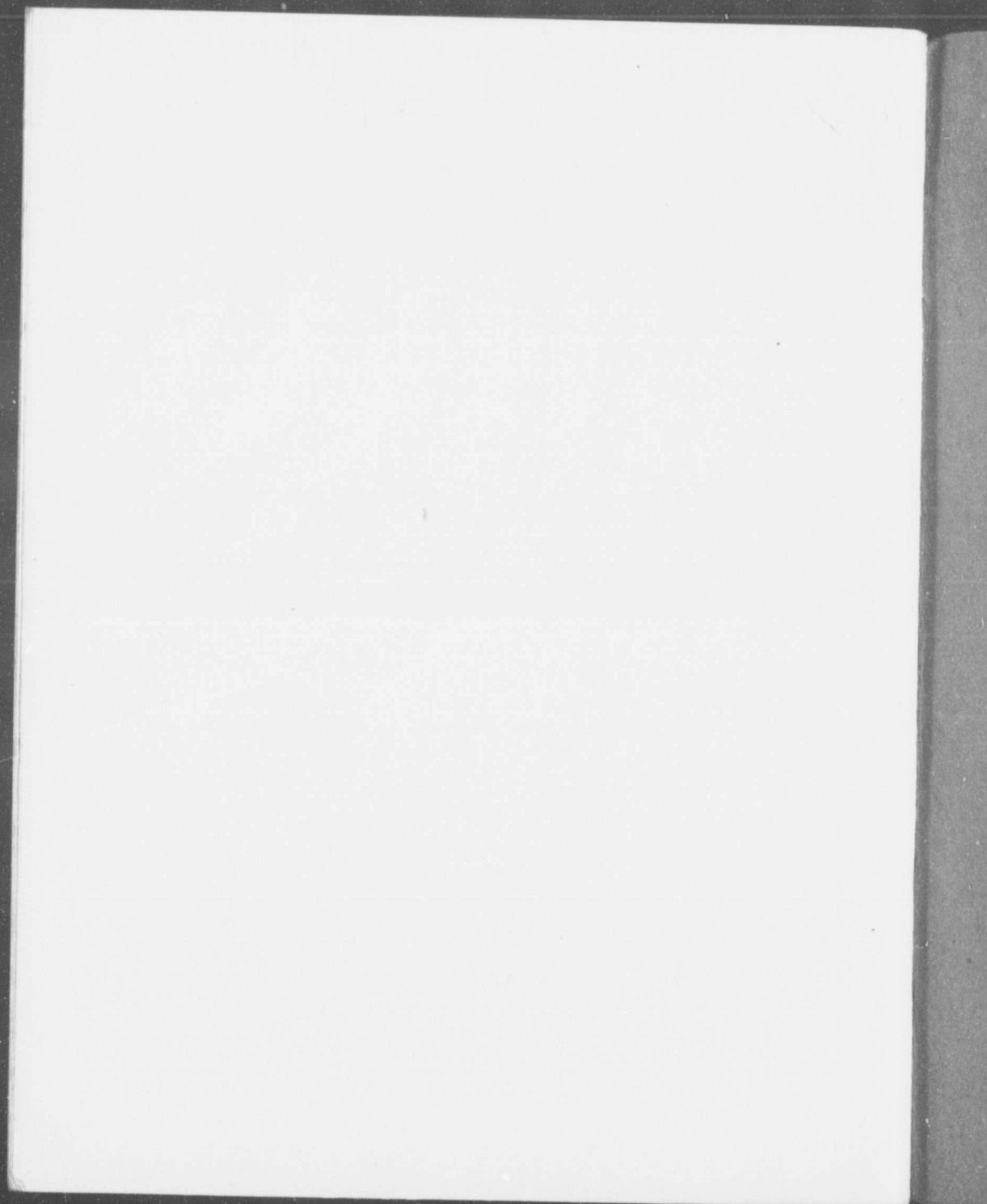
15. In all places where stringers or setts are

erected, the distance between the last sett and the working face must be supported by at least three (3) temporary supports of lagging or props.

16. Where the diameter of round timber is given, sawn timber of equal area may be substituted, or split timber of equal area in the case of prop timber only. In longwall districts either half-round or square-split stringers of equivalent area to a six (6) inch diameter round may be substituted where the latter are not available.









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