ANNEXURE D.

EXAMINATIONS FOR COLLIERY MINE-MANAGERS AND OTHER MINE OFFICIALS.

At the examinations held in December, 1916, twelve candidates sat for first-class coal-mine managers' certificates and six for second-class certificates. The following were successful: First-class—William Crowe (Ngakawau), O. J. Davis (Runanga), and J. T. Mosley (Kaitangata). Second-class—W. C. Davies (Huntly), Frank Duffy (Burnett's Face), and G. F. Whittlestone (Abbotsford). Four candidates for first-class coal-mine managers' certificates and three candidates for second-class coal-mine managers' certificates obtained partial passes.

During the twelve months ended 31st March, 1917, a large number of candidates for certificates as underviewers and as firemen and deputies were examined at the various coal-mining centres. Those successful in obtaining certificates of competency as underviewers were: William Ainscough, John Dymond, John Hadcroft, T. G. Hughes, T. H. King, William Lowden, William Maher, John McKernan, Malcolm McLean, Samuel Pendleton, Isaac Powell, James Rodgers, James Thomson, W. R. Williamson, and Joseph Young.

The successful candidates for firemen and deputies' certificates were: George Dinsdale, R. W. Fairhurst, Thomas Hall, E. E. Hill, T. N. Martin, E. McGuinness, David McIvor, B. E. Miles, J. T. Pearson, Alexander Pratt, Henry Reid (Millerton), Henry Reid (Huntly), W. Richardson, A. G. Rogers, W. R. Rutherford, James Scott, J. R. Sharp, W. M. Shore, C. B. Smith, A. G. Tunstall, F. Turner, James Unwin.

The Board of Examiners under the Coal-mines Act as at the 31st March, 1917, was constituted as follows: Messrs. James Bishop, J. C. Brown, Robert Duncan, H. A. Gordon, P. G. Morgan (Chairman), Frank Reed, and E. H. Wilmot. Since the above date a vacancy has been created by the death of Mr. H. A. Gordon.

QUESTIONS ASKED AT THE EXAMINATIONS HELD DURING DECEMBER, 1916, FOR MANAGERS' FIRST-CLASS CERTIFICATES OF COMPETENCY UNDER THE COAL-MINES ACT.

SUBJECT 1.—*Mining: Opening out a Colliery; Working Coal; Timbering; Boring.*

1. Assume that you are required to undertake the development of a colliery in a new field, the seams being overlaid by several hundred feet of cover: give full particulars of the preliminary work you would consider necessary to—
   (*a.*) Prove depth and character of coal-seams; and
   (*b.*) To ascertain the position at which shafts should be sunk; and
   (*c.*) The general conditions which would influence your judgment in favour of or against the opening of a colliery as assumed.
2. Describe how you would sink a shaft through a depth of 70 ft. of running sand or other loose material; the shaft to be rectangular, and the work to be done without iron casing.
3. Suppose a pair of shafts to be sunk 1,200 ft. deep to a seam of coal 8 ft. thick; angle of inclination 10°, line of cleavage at right angles to line of strike, good roof, soft floor: show by sketches what in your opinion is the proper relative position of the shaft, mode of working you would adopt, and size of pillars you would leave for support of the shafts; position of doors between upcast and downcast; stating fully the reasons guiding you.
4. Assuming coal-seam described in preceding question gives off fire-damp freely, how would you ventilate during the time men are holing round shaft-pillars; and what special precautions would you take to prevent accident?
5. State generally your experience of sinking and opening-out of mines, with conditions under which experience gained; also duties and responsibilities of a chargeman of a shaft during sinking.
6. Describe and give sketches showing plan of longwall workings; also section through working-face showing how timbering is done. Assume seam 4 ft. thick, with strong roof and fireclay floor.
7. In working a pitching seam on bord-and-pillar system, in what relative positions would you keep the pillar and solid-coal workings in order to prevent accumulation of gas in the goaf being forced on to the workmen in the solid coal?
8. In pillar-extraction would you have props drawn as coal removed? If so, state the means you would adopt to prevent roof breaking over the working-places, and precautions to be observed by workmen engaged in drawing timber.
9. The roof of a haulage level putting heavy weight on timber, breaking the bars and reducing the width and height to 8 ft. and 4½ ft. respectively, show in detail (by sketches) how you would enlarge the drive to 12 ft. wide and 7 ft. high, and how you would protect the workmen during the operation; traffic to be worked on the road by single line for eight hours each day.
10. Give particulars describing fully any branch of mining-work, including precautions for safety, to which you have given special study.