

Australian Standard®

**Mine plans—Preparation and
symbols**

This Australian Standard was prepared by Committee MN/1, Coal and Coke. It was approved on behalf of the Council of Standards Australia on 21 December 1995 and published on 5 April 1996.

The following interests are represented on Committee MN/1:

Australasian Institute of Mining and Metallurgy
Australian Chamber of Commerce and Industry
Australian Coal Association
Australian Coal Industry Research Laboratories
Australian Coal Preparation Society
Australian Institute of Energy
Australian Mining Industry Council
Bureau of Steel Manufacturers of Australia
CSIRO, Division of Coal and Energy Technology
Department of Minerals and Energy, Queensland
Electricity Supply Association of Australia
Institution of Engineers, Australia
Queensland Coal Board
Royal Australian Chemical Institute
Standing Committee on Coalfield Geology of New South Wales
University of Newcastle
University of New South Wales
University of Queensland

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

This Standard was issued in draft form for comment as DR 95042 and DR 95043.

Australian Standard[®]

**Mine plans—Preparation and
symbols**

PREFACE

This Standard was prepared by the Standards Australia Subcommittee on Coal Mining and Geology under the direction of the Committee on Coal and Coke.

Input was received from the following organizations:

BHP Collieries Division, N.S.W.
BHP Australia Coal
Department of Minerals and Energy, N.S.W.
Department of Manufacturing and Industry Development, Vic.
Department of Minerals and Energy, W.A.
Department of Mines and Energy, S.A.
FAI Mining, N.S.W.
WMC Olympic Dam Operations
Western Collieries, W.A.
Griffin Coal, W.A.
KCC West Cliff Colliery, N.S.W.
Institution of Engineering and Mining Surveyors, Australia

The objective of this Standard is to provide those responsible for drafting symbols for mine plans with a common set of rules and principles.

The term 'normative' has been used in this Standard to define the application of the Appendices to which it applies. A 'normative' appendix is an integral part of a Standard.

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

CONTENTS

	<i>Page</i>
FOREWORD	4
SECTION 1 SCOPE AND GENERAL	5
1.1 SCOPE	5
1.2 REFERENCED DOCUMENTS	5
1.3 DEFINITIONS	5
1.4 LIMITATIONS	6
SECTION 2 PLAN PRESENTATION	7
2.1 GENERAL	7
2.2 PLAN SCALES	7
2.3 SURVEY GRID	7
2.4 REDUCED LEVELS	8
2.5 USE OF COLOUR	8
2.6 INFORMATION TO BE SHOWN ON MINE PLANS AND PREFERRED SCALES	8
SECTION 3 SYMBOLS FOR MINE PLANS	14
3.1 GENERAL	14
3.2 UNDERGROUND MINES	14
3.3 SURFACE MINES	14
3.4 NUMERICAL CODING	14
APPENDICES	
A MINING SYMBOLS	15
B GEOLOGICAL AND TOPOGRAPHICAL SYMBOLS	30
C GLOSSARY OF ABBREVIATIONS	43

FOREWORD

In modern mining, there is a general interchange of professional staff and workpeople among surface and underground mines extracting coal, industrial minerals and metalliferous deposits. It is therefore important to prepare mine plans with standard symbols and with standard scales, so that plans are easier to read and the chances of reading errors are minimized. This is especially important with plans used in emergencies.

Mine plans have to be updated regularly (usually quarterly). Many plans are already digitized for drafting and printing by computerized methods and it is foreseen that the standard symbols will be introduced as software is improved. Much of the mining software is already common, although not all symbols are in use universally. For part of the process, the Australian Surveying and Land Information Group, and the Australian Geological Survey Organization (formerly the Bureau of Mineral Resources, Geology and Geophysics), already have their symbols available on software.

Legislation in many States prescribes a basic core of symbols, and individual mines have added their own symbols to plans. A general review of existing symbols has been made and those most commonly in use have been chosen. It is recognized that some mines may have a need for extra symbols but those should follow a common pattern and should also be easy to understand. Mine plans are needed for posterity as well as for the current user, and in most cases have to conform to legislation designed to protect the public as well as employees and management in the mining industry.

The symbols shown in this Standard have been chosen for easy drafting by computer. Letter codes are preferred for descriptive symbols for that reason and because they can be readily understood. Colour is avoided where possible so that portions of plans can be easily reproduced in black and white.

STANDARDS AUSTRALIA

Australian Standard

Mine plans—Preparation and symbols

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE Without prejudice to any requirements of statutory regulations, this Standard sets out recommendations for the preparation of mine plans and the symbols to be used on all underground and surface mine plans. It does not deal with drawing practices, for which reference should be made to AS 1100.101 and AS 1100.401.

1.2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

1100 Technical drawing
1100.101 Part 101: General principles
1100.401 Part 401: Engineering survey and engineering survey design drawing

1345c Wallchart—Pipeline identification

2418 Coal and coke—Glossary of terms

2916 Symbols for graphical representation of coal seams and associated strata

Symbols Used on Geological Maps, Australian Geological Survey Organization (AGSO), Canberra.

Specifications for Topographic Maps (NATMAP), Australian Surveying and Land Information Group (AUSLIG), Canberra

1.3 DEFINITIONS Plans are prepared by a mining company for different purposes, and their end use may dictate the choice of symbol to be used. For the purposes of this Standard, the definitions given in AS 2418 and those below will apply, and the word 'plan' should be taken in a generic sense to include cross-sections and isometric drawings where appropriate.

1.3.1 Electrical plans—plans that show the main electrical cables and fixed electrical equipment, and may need to comply with statutory requirements. They are associated with working plans.

1.3.2 Fire fighting and rescue plans—plans that provide the information required to meet emergency situations. Such plans may be statutorily prescribed, and State Acts or Regulations give details of the minimum information to be provided, which usually include firefighting equipment, the principal ventilation devices and the direction of air flow.

1.3.3 Geological plan—a plan that is primarily concerned with the geology of the district in which the mine is situated. The mine workings may be shown only in outline on the plan, along with the location of shafts, adits and boreholes.

1.3.4 Other plans—plans that may include such items as water and drainage plans, progress plans layout plans and accident plans. In general, they are associated with the working plans and follow the same conventions.