

New South Wales

**Board of Surveying and Spatial Information**

# **MINING LAW ASSESSMENT**

## **MINING SURVEYING**

### **Surveying and Spatial Information Act 2002**

(Mining Legislation)

Wednesday 23<sup>rd</sup> September 2015

**All questions to be answered**

Duration 2 Hours

Pass Mark of 60% Required

1. As stated in AS4368 Mine Plans – Preparation and Symbols what label is usually shown on electrical power lines?
2. Sketch the symbol for each of the features described below, as defined in AS4368 Mine Plans – Preparation and Symbols.
  - a. Fire Depot
  - b. Gas sampling location
  - c. Permanent Mark
  - d. Fresh air base
3. As stated in the Coal Mine Health and Safety Act 2002 who must have access to the health and safety management system?
4. As stated in the Coal Mine Health and Safety Act 2002 who must immediately be supplied with an up to date copy of the health and safety management system on request?
5. What 4 areas make up a hazardous zone as described in the Coal Mine Health and Safety Regulation 2006?
6. What are the 3 duties of a mining surveyor, as described in the Coal Mine Health and Safety Regulation 2006?
7. What are the 2 contents required in an Emergency plan as described in Mines Health and Safety Act 2004?
8. Describe 2 duties of a mine holder as described in the Mines Health and Safety Act 2004?
9. What is the definition of a registered mining surveyor, as described in the Mines Health and Safety Regulations 2007?
10. When must an operator review and update the Escape and Rescue plan as described in the Mines Health and Safety Regulations 2007?
11. What does section 98 of the Mines Health and Safety Regulations 2007 state in regards to the preparation of mine plans by registered mining surveyor?
12. What does section 99 of the Mines Health and Safety Regulations 2007 state in regards to the certification of mine plans?
13. List 4 Core attribute themes required for either a coal or metalliferous mine spatial submission?
14. What is the maximum number of characters allowed to be used in attribute names for Mine Workings Digital theme submissions?

15. What are the 3 attribute categories and name at least 1 attribute required for each in a digital theme submission?
16. What is the definition of a borehole, as described in Survey and Drafting Directions for Mine Surveyors 2013, Amendments 2014?
17. What does the Survey and Drafting Directions for Mine Surveyors 2013, Amendments 2014 state regarding correlation of Surface and Underground surveys?
18. Name 4 themes required for an underground mine Seam Workings Plans as described in the Survey and Drafting Directions for Mine Surveyors 2013, Amendments 2014?
19. What is the definition of Endorsement, as stated in Survey and Drafting Directions for Mining Surveyors 2008, Amendments 2014?
20. Apart from the Mine Workings Plans name 4 other plans that are required by the Survey and Drafting Directions for Mining Surveyors 2008, Amendments 2014?
21. What information is to be recorded on the label of the CD-R as described in the Survey and Drafting Directions for Mining Surveyors 2013, Amendments 2014?
22. Who can prepare a MOP and under what Act as described in ESG3 guidelines?
23. What is the maximum term of a MOP, as described in ESG3 guidelines?
24. What are 2 reasons the Department may refuse to approve a MOP amendment as described in ESG3 guidelines?
25. For Level 1 Mines (State Significant Development) name and briefly describe what plan 2 covers as described in ESG3 guidelines?
26. With reference to the Surveying & Spatial Information Act 2002, what is a **formal mining survey plan** defined as?
27. With reference to the Surveying & Spatial Information Act 2002, what is a **mining survey** defined as?
28. With reference to Surveyor General's Direction No.8, Mining Tenure Surveys, who can carry out a survey of a proposed mining portion involving the surface and which documents are these surveys to be carried out in accordance with?

29. With reference to Surveyor General's Direction No.8, Mining Tenure Surveys, the level of detail and presentation of information on plans of Mining Portion Surveys are to be adopted from which standard?
30. With reference to ESG3: Mining Operation Plan (MOP) Guidelines, when is a MOP required?
31. With reference to ESG3: Mining Operation Plan (MOP) Guidelines, what is the term of a MOP?
32. With reference to ESG3: Mining Operation Plan (MOP) Guidelines, name two Primary Domains of a MOP?
33. With reference to ESG3: Mining Operation Plan (MOP) Guidelines, name two Secondary Domains of a MOP?
34. With reference to ESG3: Mining Operation Plan (MOP) Guidelines, plans for a Level 1 Mine should be based on what?

Question 2 (10 Marks)

You are the nominated mine surveyor for an open cut gold mine. You have been instructed to investigate the option of bringing a contracting company to site to trial the use of an Unmanned Aerial Vehicle for surveying parts of the mine.

Detail your considerations in complying with current Work Health and Safety legislation for this trial.

### Question 3 (10 Marks)

You are a contract registered mine surveyor engaged to oversee a high volume underground coal mine whilst a permanent registered mine surveyor can be employed.

The mine is transitioning from highwall gateroad development to traditional mains and gateroad development and the main ventilation shaft is to be drilled by a raise bore methodology.

The 4 heading mains have been developed to the proposed shaft intersection although no permanent ventilation structures have been installed yet. The proposed surface fan location is close to the mine's infrastructure facilities. (E.g. Bathhouse, Workshop, etc.).

With reference to ICSM publication, *Standards and Practices for Control Surveys (SP1 v1.7)*, outline the minimally accepted equipment, practices, networks and reduction methods that should be used for all the Control Surveys required.

Question 4 (10 Marks)

You have been requested to establish a base line for an underground metalliferous mine.

As a part of the process you will be required to access some existing permanent marks located on private property.

What are the provisions in which powers of entry could be used for these surveys?

Who and under what conditions can a person other than a Registered Mining Surveyor carry out a control survey from the new base line to position the mine workings?

With reference to the Surveyor General's Direction No.5 – Verification of Distance Measuring Equipment, what is required for the instrument to be used for the surveys and when must it be done?

Question 5 (10 Marks)

You are employed as the nominated mine surveyor for a small open cut coal mine that operates in an area with numerous abandoned underground mines.

You have been requested to conduct an archival research project for an extension of the mine by the operator.

The information is to be included in a Mining Operations Plan (MOP) for the operation.

Detail the steps to be undertaken for the archival research, how this would be included in the MOP and describe any other approvals required.



Question 6 (10 Marks)

Detail the access rights granted to the holder of a remote surface mining lease granted under the Mining Act 1992.

List the obligations placed on the holder to establish these rights.