

NOTES FOR GUIDANCE FOR REGISTRATION AS A SURVEY TECHNICIAN AND TECHNOLOGIST IN THE MINING CATEGORY

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1.INTRODUCTION

These notes which have been approved by the South African Council for Professional and Technical Surveyors at the 2011 AGM, have been compiled with a view to assisting students at a recognised Provider of Education and Training who intend qualifying for registration in the mining category in terms of the Professional and Technical Surveyor's Act, 40/1984. Adherence to the requirements as set out below, will assist materially in avoiding unnecessary delays. The "Council" means the South African Council for Professional and Technical Surveyors established in terms of Act 40 of 1984, or such agent acting on its behalf.

2.STATUTORY REQUIREMENTS

- 2.1 A candidate who wishes to register as a Mine Survey Technician should normally first register in terms of Section 23 of the Act as a Mine Survey Technician-In-Training, but may, after obtaining the required qualification at a recognised Provider of Education and Training, or its equivalent as certified by the Council, apply for registration as an Mine Survey Technician if he or she has complied with the requirements of Section 22(1)(b)(ii), (iii) and (iv) of the Act.
- 2.2 A candidate who wishes to register as a Mine Surveyor will normally first register in terms of Section 22(1)(b) of the Act as an Mine Survey Technician and after completing the training as prescribed in the Rules may apply for registration as a Mine Surveyor if he or she has complied with the requirements of Section 22(1)(a)(iii) and (iv) of the Act.
- 2.3 A candidate who wishes to qualify for registration as a Mine Survey Technician and who will be entitled to carry on his/her calling under the personal supervision of either a Professional Mine Surveyor or Mine surveyor, shall undergo the practical training as set out in Paragraph 5 and carry out an oral examination, trial survey or such practical tests as determined by Council.

3.MINE SURVEY TECHNICIAN-IN-TRAINING

3.1 *General*

Applicants must have a Senior Certificate. He/she must also be a student at a Higher Learning Institution.

It is normal to register as an Mine Survey Technician-in-Training when commencing studies at a Higher Learning Institution and this form of registration is necessary before a Mine Surveyor or a Professional Surveyor can certify a candidate's practical experience.

3.2 *Requirements*

- 3.2.1 The relevant application form completed before a Commissioner of Oaths.
- 3.2.2 Proof of registration at a Higher Learning Institution

3.3 *Procedure*

- 3.3.1 Submit the application form to the Registrar with the prescribed registration fee.
- 3.3.2 The Registrar will notify the candidate when he or she has been registered.

4.MINE SURVEY TECHNICIAN

4.1 General

- 4.1.1 After obtaining a recognised qualification (Minimum NQF 6 or equivalent) and completing a suitable period of compulsory training, and the passing of a law examination, a candidate may apply to be registered as a Mine Survey Technician.
- 4.1.2 A Mine Survey Technician may describe himself or herself as such, use the appropriate letters MST after his or her name BUT may only work under the personal supervision of . either a Professional Mine Surveyor or Mine Surveyor,

4.2 Requirements

- 4.2.1 A Certified copy of the required qualification recognised by Council
- 4.2.2(a) Candidates from a Higher Learning Institution: A Certificate to the effect that the experiential training by the candidate had been approved
- 2.2.3 If in the opinion of Council the training as required in Section 2.2 or 2.3 is insufficient, a trial survey or equivalent practical test has to be completed.
- 4.2.4 The passing of a law examination as outlined in Section 6.
- 4.2.5 The relevant application form completed before a Commissioner of Oaths.

4.3 Procedure

- 4.3.1 Submit the application form to the Registrar with the prescribed application fee.
- 4.3.2 The Registrar informs the candidate of the date and venue of the law exam.
- 4.3.3 If the application is successful, the Registrar notifies the candidate and sends him or her an Oath/Affirmation form for completion and submission with the relevant registration form noting the fees required.

5. COMPULSORY TRAINING.

The nature and period of training of a Mine Survey Technician are as follows:

- 5.1 The period of practical compulsory training required in terms of the Rules is 240 working days and the nature of such training shall be as set out in Paragraph 5.2 and is controlled by Council. A training certificate issued by the recognised Provider of Education and Training is required.
- 5.2 In the case of "other" qualifications, approved by the Council, it may be expected of the candidate to undertake a trial survey and/or undergo a personal oral examination.
- 5.2.1 Training must be varied and can include cadastral, Mine/construction, topographical, control surveys, hydrographic surveys, and photogrammetric surveys. The work must be undertaken under the personal supervision of either a Professional Mine Surveyor or Mine Surveyor, registered in terms of the Act.

5.2.2 COMPULSORY TRAINING

80 working days in basic survey which comprises:

	TYPE OF SURVEY	WORKING DAYS
1	STOPE SURVEYS: By Total Station/Theodolite: Angular and distance measurements; By other methods e.g. tape or laser, where applicable.	10
2	LEVELLING: Spirit levelling; Precise levelling; Trigonometric levelling; Heighting by GPS where applicable; Adjustment of a levelling network.	10
3	DEVELOPMENT SURVEYS: By Total Station/Theodolite/Laser/Gyro: Angular and distance measurements; Setting out direction and gradients in different excavations in a three-dimensional mining environment	10
4	SURFACE SURVEYS: Different instrumentation and survey methods for mine survey control, correlating surface and underground workings, lease and mineral right surveys and monitoring surveys.	10
5	DATA PROCESSING Computer processing and presentation using computer graphics.	10
6	MINE EVALUATION Sampling and evaluation of reserves, mineral resource management control factors	20
7	MINE PLANNING Mining layouts, scheduling and optimising mine design.	10
TOTAL		80

5.2.3 Additional Training

Not less than 160 working days in the following offices

5.2.3.1 **Surface Mine Surveys, under the supervision of** either a Professional Mine Surveyor or Mine Surveyor.

5.2.3.2 **Underground Mine Surveys, under the supervision of** either a Professional Mine Surveyor or Mine Surveyor.

5.2.3.3 **Mineral Resource Management, under the supervision of** a Professional Mine Surveyor , Mine Surveyor or a competent person under the SAMREC Code

5.2.3.4 Combination of 5.2.3.1 to 5.2.3.3.

5.2.4 The following should be noted:

5.2.4.1 The number of working days quoted in Paragraphs 5.2.2 and 5.2.3 includes both office and field work and will be recorded on the official diary form.

5.2.4.2 A detailed day to day diary of all survey work undertaken during the training period shall be kept and must be submitted with each application.

6. LAW EXAMINATION

6.1 A candidate who wishes to register as Mine Survey Technician or Mine Surveyor must apply to the Registrar to write a Law examination as set out in Annexure A (SAGC Law Exams Table).

6.2 The candidate will be expected to have a comprehensive knowledge of the laws relating to registration of surveyors. He or she should also be acquainted with certain aspects of related legislation as set out in Annexure A.

6.3 The law examination consists of one or two written papers as outlined below.
The pass mark is 65%.

The papers will consist of questions on the Acts outlined in Annexure A.

6.4 The Registrar will notify the candidate of a pass or failure.

7.MINE SURVEYOR (TECHNOLOGIST)

7.1 GENERAL

7.1.1 After being registered as an Mine Survey Technician and acquiring a minimum of three (3) years prescribed practical experience, a candidate may apply to be registered as a Mine Surveyor (Technologist).

7.1.2 The scrutinising process that follows will involve a personal oral examination. If in the opinion of Council the practical experience is insufficient, a trial survey or equivalent practical test has to be completed. This will be followed by a Law examination.

7.1.3 A Mine Surveyor may describe himself or herself as such, use the appropriate letters MS after his or her name and perform Mine survey work unsupervised. He or she may also supervise and certify the work of Mine Survey Technicians.

7.2 REQUIREMENTS.

7.2.1 Registration as a Mine Survey Technician

7.2.2 Full details of the prescribed practical experience in the form of two (2) copies of evidence of Work Integrated Learning (Annexure B) certified by a Commissioner of Oaths.

7.2.3 A law examination as outlined in Section 10.

7.2.4 The relevant application form completed before a Commissioner of Oaths.

7.3 PROCEDURE.

- 7.3.1 An application form to register as a Mine Surveyor (Technologist) to be submitted to the Registrar with the prescribed application fee.
- 7.3.2 The Registrar forwards the application to the Convenor of the regional Technical Registration Committee who will evaluate the experience.
- 7.3.3 The candidate will be notified of the date, time and place for an oral examination by the regional Technical Registration Committee.
- 7.3.4 This oral examination will test his or her overall grasp of a broad range of surveying knowledge and practice and assess the candidate's ability to recognise, define and solve practical problems. It will also probe the candidate's powers of effective communication and seek an awareness of the role and responsibilities that surveyors have in society.
- 7.3.5 Once the candidate has passed the oral examination/trial survey, he/she will be advised by the Registrar and he/she may then apply to write the a law examination at the next sitting.

Candidates are advised to bring a portfolio of current work in support of Annexure B which has been submitted to the Registrar to the oral examination with statements or references from persons who have supervised the candidates work.

- 7.3.6 Should there be any doubt with regard to the candidate's ability or level of competence, the Technical Registration Committee will set a **Trial Survey/Project exercise** on any one, or a combination of the following:
 - Any Surface surveying exercise;
 - Any Underground surveying exercise;
 - Any Monitoring surveys exercise;
 - Any Mineral Resource Management project exercise.

The candidate will be notified by the Convenor of Technical Registration Committees of the exact task and requirements for a suitable exercise and will be given supporting data and documentation where relevant.

The exercise must be finalised within three months and all surveying records, calculations and reports returned to the Convenor of the Technical Registration Committee for evaluation.

- 7.3.7 If considered necessary, the candidate will be notified of the date, time and place of a second oral examination for re-evaluation by the Technical Registration Committee.
- 7.3.8 When scrutinising is complete the Convenor notifies the Registrar of the decision and returns all documents. The Convenor also issues a certificate certifying that the candidate has passed, failed or been exempted from the Trial Survey.
- 7.3.9 The Registrar notifies the candidate of the outcome of the application and, if successful, sends the relevant registration form and Oath/Affirmation form for completion and submission for registration together with the required fee.
- 7.3.10 If the application is not successful, the candidate may re-apply for the Mine Surveyor Category, but only after the passage of six months. New application fees are then payable.

8. TRAINING AND/OR EXPERIENCE SCHEDULE FOR CANDIDATES WISHING TO QUALIFY AS MINE SURVEYORS.

- 8.1 The period of training in the form of practical experience as prescribed in the Rules is three (3) years after registration as a Survey Technician

On completion of the three years practical training it will be expected of the candidate to write an examination on the laws that are related to surveying, submit an essay on professionalism and undertake an oral Examination to the satisfaction of the Council.

When applying to the Council for registration, the candidate shall supply a copy of ANNEXURE B as an extract from the diary and prepared in the form of the attached specimen. This schedule must be compiled in chronological order and each page must be signed by the supervisor, with whom the candidate has trained, as well as the candidate.

DECEMBER 2011

ANNEXURE B

WORK INTEGRATED LEARNING FOR MINE SURVEYORS

NAME (Block Letters).....

Page of pages

[illegible]

Each page must be signed by the Supervisor(s) and the candidate

OFF - Office (includes calculations, draughting and admin work)

Employer signature **Date**

Print name:

PLATO registration: **Candidate signature** **Date**