



Department of Minerals and Energy
Mine Health and Safety
The Mine Surveyor's Certificate of Competency examinations

SYLLABUS – MINING ECONOMICS I

Framed in accordance with Regulation 28.6 in force in terms of
Schedule 4 of the Mine Health and Safety Act (Act 29 of 1996) as amended

29 March 2006

DEFINITIONS AND VALUATION TERMINOLOGY:

(As published by the Institute of Mine Surveyors of South Africa for all types of minerals)
Development, primary development, secondary development, stope development, ore, pay limit, payable ore, payable development, total ore, ore reserve, block, block width, block value, block factor, mine call factor, ore reserve mining factor, high value shoot, cutting, discounting, regression, dilution tonnage, tonnage discrepancy, reef width, internal waste width, external waste width, channel width, stope width, tramming width, milling width, milling grade, residue value, grams per ton, centimetre kilograms per ton, forcing, picking, reclamation ore, sweeping, vamping, volatile matter, ash content, fixed carbon, calorific value, inherent moisture, swelling index, roga, density.

DESCRIPTIONS OF:

- Purpose and importance of sampling records.
- Procedures followed in the Assay Office/Laboratory from delivery of samples to the dispatch of results.
- Sampling of stope or working faces, development ends, shaft reef intersections, pulp, slimes dams, dumps, broken ore, outcrops, trenches and pits, alluvial, deposits
- Safety factors.
- A flowchart of rock/mineral from the working face to the final product.

CALCULATIONS ON:

- Sampling data including the averaging and weighting of widths and values in stopes, development ends, massive ore bodies and open cast workings.
- True widths and values from boreholes results.
- Areas, volumes, tonnages, contents, tramming and treatment widths and values, mine call factor, block factor, ore reserve mining factor, dilution, recovery, tonnage discrepancy and other relevant factors, quality and grade control, pay limit, payability

(marginal stoping, development, multiple products, massive ore bodies), ore reserves, value and width contours, value trends.

Plot and interpolate coal washability curves.