



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

SYLLABUS FOR THE FOR MINE SURVEYOR'S CERTIFICATE OF COMPETENCY

Framed in accordance with regulation 28.6, in force in terms of Schedule 4 of the Mine Health and Safety Act, 1996 (Act No 29 of 1996)

MINING ECONOMICS 1

DEFINITIONS AND VALUATION TERMINOLOGY: ALL TYPES OF MINERALS (Definitions as published in "South African Mine Valuation" – Edited by ED Storrar and available from the Institute of Mine Surveyors of South Africa) 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/grams per ton, forcing, picking, reclamation ore, sweeping, vamping, volatile matter, ash content, fixed carbon, calorific value, inherent moisture, swelling index, roga, density.

DESCRIPTION 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 factor (coal)
- (With the aid of diagrams) the flow of rock/ material from the working face to the final product, (coal)

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.