

EVALUATION AND DESIGN OF AN APPROPRIATE SURFACE MINE FOR MUI BASIN BLOCK C

1. JAMES MWANGI WAITHERAEN293-0658/2013
2. JEFF MUCHIRI NDUNG’U.....EN293-0647/2013

ABSTRACT.

Kenya is in need of low cost and competitive energy as it gears up to actualization of its vision 2030 and in addition there is need to meet the ever-increasing demand for coal by both the cement and steel industries. Mui basin has been identified as a potential source of meeting this demand due to the immense amounts of coal that have been discovered in it. Currently, there is no mine to extract this ore and thus there is an urgency to come up with a workable design. Thus, there is great need to design a suitable mine that may be used as a basis for similar future ventures. This project therefore comes in handy by designing and optimizing a suitable mine for the extraction of coal in Block C of Mui Basin. The basin is divided into four blocks namely; A (121.5 sq.km), B (117.5 sq.km), C (131.5 sq.km) and D (120 sq.km). Block C has an estimated coal reserve of 400 million tonnes of mineable coal and occurs in different seams i.e. C1-C6. The project mainly focuses on the relatively near surface coal before other underground techniques are applied at a later stage.