

Charles Bethel



PROFILE

EDUCATION & TRAINING

- Mechanical Engineers Certificate of Competency [GCC].
- Design Draughtsman

PROFESSIONAL MEMBERSHIP / REGISTRATION / AFFILIATIONS

- The Association of Mine Resident Engineers of South Africa

BACKGROUND SUMMARY / PROFESSIONAL EXPERIENCE

As a Project Engineer was responsible for the sinking and commissioning of Harmony No 4 Shaft from “Green fields” to the final commissioning and operation of the shaft complex, initially as the Project Engineer and finally as the Resident Engineer.

On leaving the mines joined Cementation Mining as a Contracts Engineer in charge of all engineering aspects on projects related to sinking of shafts and contract development.

Professional Experience:

- Engineer;
- Project Engineer;
- Resident Engineer
- Contract Engineer;

MAJOR ACHIEVEMENTS / ACCOMPLISHMENTS

- SKD ~ Forsmark ~ Sweden Nuclear waste storage system access shaft
- Chuquicamata Feasibility study for shaft hoisting systems for men, material and rock to produce 47 million tons of ore per annum.
- Ulu Jelai . Hydropower scheme

RELATED EXPERIENCE

- Sinking of Beatrix No 3 Ventilation Shaft with 630 Loaders
- HJ Joel Triple Decline project ~ declines equipped with: -
 - Conveyor for rock handling
 - Chairlift for men handling
 - Tracks and winder for material handling
- Ongopolo Asis Far West Exploration Shaft ~ from Greenfields to commissioning for production, including co-ordinating of design, equipment selection and construction.
- Impala 12 North Shaft ~ Sinking and equipping of a 8.25 metre diameter brattice wall shaft
- Mopani Copper Mines Plc ~ Study to upgrade rock hoisting capacity by 60.7% at the SOB Shaft
- Evander No. 5 Shaft ~ engineering aspects of removing of brattice wall and installing of suspended tower across reef intersection during night shift and weekends so as not to interfere with mining operations on other shifts
- Kico Sa ~ Prefeasibility Study to rehabilitate Kipushi Mine infrastructure to produce 1,2 mtpa
- Ivanplats No 2 Shaft ~ Design of Concrete Headframe for tower mounted Koepe winders to produce 6 million tons per annum utilising 40 ton payload skips and 40 ton payload cage
- Ivanplats No 2 Shaft ~ Feasibility study for sinking 10 meter diameter shaft to depth of 1100 metres and pre-production hoisting of 2500 tons/day from the No 1 Shaft
- Evander No 6 Shaft ~ Initial dewatering with Ritz pumps lowered from surface on pipes with ZSM couplings and then the infrastructure to deepen the shaft and mine shaft at 2400 mBC
- SKD – Forsmark – Sweden ~ Pre=feasibility for a nuclear waste storage system access shaft
- Chuquicamata ~ study for shaft hoisting systems for men, material and rock to produce 47 million tons of ore per annum
- Ingula Pump Storage ~ Study to sink and line 20 metre diameter surge shaft to 40 metre depth and continue with 6 meter surge shaft to intercept with surge tunnel
- Central Rand Gold ~ Initial study on behalf of Water Utilities Corporation for the dewatering of the Acid Mine Drainage of the Central Basin. Investigating numerous

options culminating in the proposal to use Ritz Pumps suspended on pump columns on surface utilising ZSM couplings

INDUSTRY RELATED EXPERIENCE

- Gold and Platinum Mining
- Shaft Sinking and related projects
- Feasibility studies
- Hydro Power
- Engineering design including winders
- Construction including vertical shaft equipping