# SACAC

**The South African Council for Automation and Computation**

# Visit to Projek Katleho

## *Kopanang Mine Overview:*

**Ownership:** AngloGold Ltd100%
**Milling Capacity:** 5 M ton pa
**Former Name:** Vaal Reefs No.9 shaft

Kopanang was part of the old Vaal Reefs Exploration & Mining Company Ltd (Southvaal) and was formerly known as Vaal Reefs No.9 Shaft. Shaft sinking began in 1978 and ended at a depth of 2,240m. First gold was produced in 1984. The shaft hoists approximately 245,000 tons per month, including waste, at optimum underground production levels and in 1999 Kopanang produced an average of 175,200 reef tons per month.

**Shaft Capacity:** 350,000wet tones per month

**Gold Production:** 1984 to end 1999: 6.488 M oz

## *Projek Katleho – Overview*:

*Projek Katleho*[1] is a nominal 3-year 'Research and Development' (R&D) type project, which will be implemented at Kopanang mine. It will be 'ring-fenced', thus making it to be an independent entity from the rest of Kopanang mine. The section in which it will be implemented is outside the current life of mine plan and is therefore sub-economic because of low grades.

The following are four main objectives of the project that must be achieved through the implementation of the '21st Century mine' project. These objectives are aligned with the AngloGold (SA) Region Strategic Objectives. The general objectives are as follows:

- Quantum improvement in health and safety
- Modernise the AngloGold (SA) production machine
- Improve stakeholder value for AngloGold (SA)
- *Roll out proven 21st Century Mine operational model(s) to organisation: 2001-2003*

## *Underground Visit*

- **High bandwidth Underground IP Radio LAN:** PDA (Personal Data assistant) Applications: Incident Reporting Management system (IRMS), Mining Standards. Voice-over-IP: IP Phones.
- **Underground Offices.**
- **Man-Machine-Interface (MMI)**: SCADA – All important production measurements available on surface or anywhere on network where required. Measurements: Air-, water- and power is measured down to consumption per mining panel.

## *Presentations*

- AngloGold's Underground Communication backbone strategies – Rian van Schalkwyk Pr Eng, CIC Engineer, AngloGold.
- Projek Katleho – CIC Overview – Ludwich Pretorius, Chief Technician, Projek Katleho.

## *Other Technologies being implemented at Projek Katleho*

- **Tramming Management System**: Modular Mine System. Leaky Feeder Voice Communication; Tracking; Dispatching System
- **New era Loco / Remote control**.
- **High Speed, high capacity train for transporting ore**: Ore movement over this 300-ton train running on an overhead trolley line. Autonomous train planned for future (No drivers).

[1] ***Katleho*** is a Sotho word which means "being successful"

## *Other Information*

- Date: 13 December 2002
- Venue: Kopanang Mine Near Klerksdorp in the North West Province, South Africa (See attached map)
- No of Visitors: A Max No of visitors than can at this stage be accommodated for an underground visit is: **15**

## *Agenda:*

07:30 Welcoming with Coffee and snacks

08:00 Prepare for U/G Visit – Safety Induction

09:00 U/G Visit to Offices, IP LAN systems.

12:30 Change

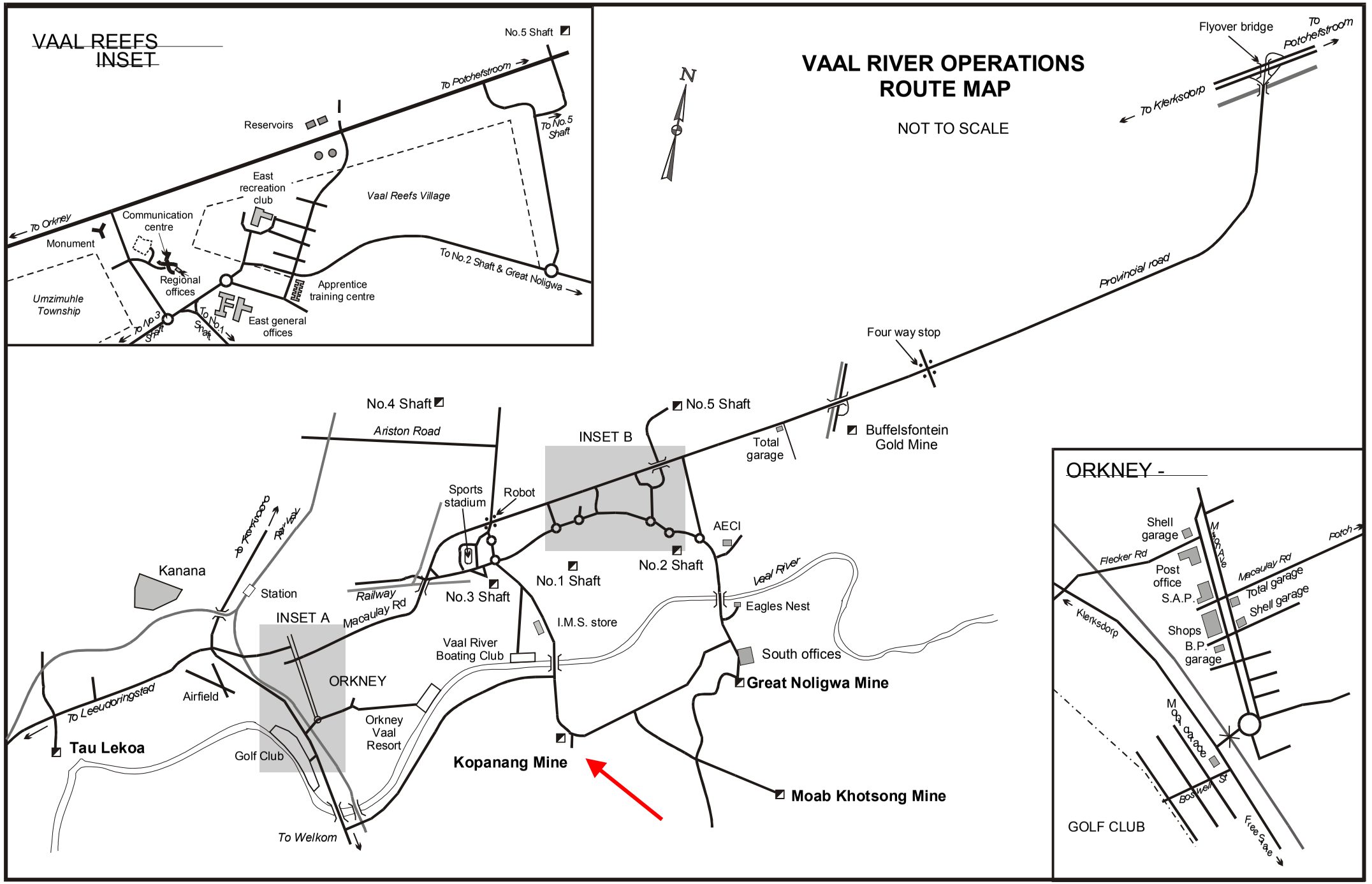
13:00 Coffee & Finger Lunch

13:30 Presentations

15:00 Closure

## *AngloGold Personnel involved with the visit:*

- Ludwich Pretorius – Chief Technician – Projek Katleho (018 478-9348)
- Neil Westgate – Project Manager, Projek Katleho
- Rian van Schalkwyk – CIC Engineer
- Rob Crook – CIC Engineer


VAAL REEFS INSET
No.5 Shaft
To Potchefstroom
Reservoirs
To No.5 Shaft
East recreation club
Vaal Reefs Village
To Orkney
Communication centre
Monument
Regional offices
To No.2 Shaft & Great Noligwa
Umzimuhle Township
To No.3 Shaft
To No.1 Shaft
East general offices
Apprentice training centre
N
VAAL RIVER OPERATIONS ROUTE MAP
NOT TO SCALE
Flyover bridge
To Potchefstroom
To Klerksdorp
Provincial road
Four way stop
Total garage
Buffelsfontein Gold Mine
No.4 Shaft
Ariston Road
No.5 Shaft
INSET B
Sports stadium
Robot
AECI
No.2 Shaft
No.1 Shaft
No.3 Shaft
Railway
Macaulay Rd
Vaal River
Eagles Nest
I.M.S. store
Vaal River Boating Club
South offices
Great Noligwa Mine
Kanana
Station
INSET A
ORKNEY
Airfield
To Leeudoringstad
Tau Lekoa
Golf Club
Orkney Vaal Resort
Kopanang Mine
Moab Khotsong Mine
To Welkom
ORKNEY -
Shell garage
Flecker Rd
Post office
S.A.P.
Shops
B.P. garage
Total garage
Shell garage
Klerksdorp
Potch
GOLF CLUB
Free State