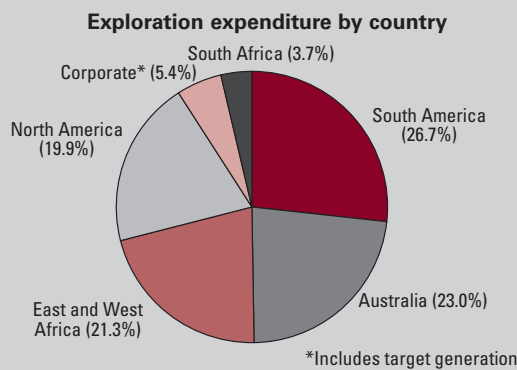


# Exploration



**“Exploration activity continued to support AngloGold’s growth strategy by sustaining or growing existing operations and to discover new gold deposits.”**

AngloGold’s exploration activities in 2003 continued to support the group’s growth strategy, by seeking to extend and replace existing production ounces by sustaining or growing existing operations (through brownfields exploration) and to discover gold deposits in new areas (through greenfields exploration). Activities are focused on finding long-life, economic orebodies by utilising multi-disciplinary teams and appropriate state-of-the-art technology.

Brownfields exploration continued with variable success at all the existing operations. Greenfields exploration activities continued in the traditional areas such as Australia, Mali, Canada, Alaska, Peru and Brazil, and exploration commenced within the “frontier” area of Mongolia. In line with AngloGold’s strategy to commit itself to definitive “walk-away criteria”, greenfields exploration was terminated in Nevada and Tanzania and curtailed in Australia, where further exploration

# Exploration (continued)

expenditure is considered to have reached the point of diminishing returns.

Exploration expenditure amounted to \$63.4 million for the year, some 60% of which was spent on increasing and converting near and in-mine resources. Of the brownfields expenditure incurred in 2003, \$25 million has been capitalised. Exploration expenditure for 2004 is expected to be in the region of \$62 million.

## Exploration expenditure by region (\$ million)

Region	Brownfields	Greenfields	Total
South Africa	2	–	2
East and West Africa	9	4	13
South America	8	9	17
Australia	9	6	15
North America	8	5	13
Corporate (includes target generation)	2	1	3
<b>Total</b>	<b>38</b>	<b>25</b>	<b>63</b>

## Review of exploration activities by country

### Mali

Phases V & VI of the deep sulphide drilling programme at Sadiola were completed during 2003 and orebody modelling and further metallurgical testwork have commenced. The final feasibility study is planned to be completed by 2005. Satellite oxide exploration continued to produce positive results from extension drilling between the FE3 and FE4 pits.

Satellite oxide mining at Yatela commenced at the Alamoutala project, located some 13km south-east of the main pit. Extension and in-fill drilling at Alamoutala has indicated further contiguous resources to the north-east and south of the current pit shell.

At Morila, exploration drilling was focused on the areas to the west and east of the pit with drilled intersections being narrow and deep.

In southern Mali at Sinsin, the JV with Fokolore Mining will be terminated early in 2004 due to negative drilling results. At Kola, Reverse Circulation (RC) follow-up drilling returned mixed results and further drilling is planned in 2004. At Garalo, located about 100km south-west of Morila, encouraging results were obtained from RC follow-up drilling on Rotary Airblast (RAB) delineated gold anomalies. Further drilling will be required in 2004. Soil sampling is in progress at the Banzana permit, 140km

south-west of Morila on the Côte d'Ivoire border, with RAB drilling scheduled for 2004.

### Tanzania

At Geita Mine, additional drilling information from Nyankanga and Geita Hill has added 1.2Moz to the Mineral Resource. In 2003, drilling of the "Gap" area between Geita Main and North-East Extension has indicated that this area could be continuously mineralised. Results from RC drilling at Chipaka indicate a possible westerly extension to the currently defined deposit.

### Namibia

At Navachab, expansion drilling was completed and a feasibility study on the footwall expansion is in progress.

### Canada

AngloGold has restructured its landholding in the Red Lake area with the dissolution of the Rubicon Joint Venture in exchange for a royalty and 100% interest in certain properties at the west end of the Red Lake Belt. Further work is planned for these tenements in 2004 pending a review.

### United States

Exploration in Alaska focused on the Tintina Gold Belt, a region of intrusion-related gold deposits that extends from central Alaska to the Yukon Territory of Canada through Alaska. Drilling in the West Pogo area, adjacent to the Teck/Sumitomo's Pogo property, where AngloGold has a joint venture with Rimfire Minerals, intersected mineralisation warranting further work in 2004. After encouraging first-phase exploration results at Livengood, 100km north of Fairbanks, further work is planned for 2004. Exploration in Nevada was terminated due to poor results.

Brownfields exploration was primarily concentrated on Cripple Creek & Victor, where extensive drilling was conducted to expand and define new, potentially surface mineable resources at the Upper Cresson project and to test targets in close proximity to the current reserve areas. 1.0Moz was added to the Mineral Resource in 2003.

### Brazil

Diamond drilling of the Carruagem (PA zone) shoot at the Lamego project, near Morro Velho's Cuabá mine, has confirmed the mineralisation of both limbs of the fold structure at depth, and metallurgical test work has indicated that the ore is free-milling. Further drilling is planned for 2004.

Drilling of the Cachorro Bravo orebody at Córrego do Sítio has tested the down-dip limit of the principal mineralised

horizons in the area currently being investigated by the exploration ramp. The mineralisation has been traced for a down-plunge length of 900m and is still open-ended. Some 75m of underground exploration access strike development was completed on the principal 200 ore horizon, with 26 face samples assaying at an average grade of 14.32g/t over an average sampled true width of 3.31m. Test mining and further exploration from the exploration ramp will be conducted in 2004 with a possible view to fast tracking the project.

At Crixas mine, ongoing drill testing of the Forquilha Sul ore zone extended the mineralisation along strike and down-plunge to the north-west. Drill testing of a number of geophysical anomalies in the vicinity of the mine has proved negative to date.

At the Toncantins project, a joint venture with IAMGOLD, RC drilling was completed on two targets and negotiations are in progress for further tenement acquisitions. Three drillholes are currently in progress at the Gandarela project in the Iron Quadrangle, a joint venture with IAMGOLD, to test the Witwatersrand-type mineralisation.

## Argentina

At Cerro Vanguardia, exploration continued to focus on the definition of depth and strike extensions of the Osvado Diez, Lomas Sur, Loma del Muerto and Mangas Sur veins, for possible future open-pit and underground resources. An additional Mineral Resource of 0.3Moz at a grade of 9.60g/t was added in 2003 from brownfields exploration.

## Peru

Greenfields exploration in Peru brought three prospects to drill-ready stage in 2004. Exploration concentrated on multi-disciplinary target generation, ground truthing and third-party property-scale investigations in several parts of the country.

At the La Rescatada project, the diamond-drilling programme was completed in the third quarter and metallurgical studies on the refractory sulphide ore are in progress. Once the metallurgical work has been completed, a scoping study based on a conceptual resource will be completed to assess the project's potential.

## Australia

At Sunrise Dam the Mineral Resource, before depletion, increased by 1.5Moz, whilst the Ore Reserves increased by 1.0Moz. The majority of this growth was in underground resources, particularly in the GQ, Sunrise Shear and Hammerhead structures. The growth in high-

grade underground resources initiated the Sunrise Dam expansion project, which is discussed under Review of Operations. The expansion project will focus on the development of reserves within the Western Shear and Sunrise Shear and the expansion of the GQ, Cosmo, Dolly, Astro and Northern Deeps areas. Underground development will also provide the platform for ongoing exploration of other underground targets. During 2003, deep drilling confirmed the existence of the Carey Shear and intersected high-grade mineralisation below the shear, at a depth of about 1,100m below surface. Further drilling will be undertaken to test new targets associated with and below this structure.

Greenfields exploration activities focused on the Yamarna Greenstone belt, about 150km east of Sunrise Dam (AngloGold earning 70%) in a joint venture with Aurex Consolidated Ltd. and at the Tropicana East project located about 350km north-east of Kalgoorlie (AngloGold earning 70%) in a joint venture with Independence Group NL. AngloGold holds substantial acreage in these under-explored belts and has achieved encouraging results from initial exploration programmes.

In May, an exploration office was opened in Mongolia. A large number of exploration properties were reviewed, with four properties acquired to date. Field activities in Mongolia will commence in 2004.

AngloGold is actively seeking new exploration opportunities in the Asian region.

A review of the Western Tanami project, which includes the Coyote Resource, concluded that development of a project that would fit with a portfolio of long-life, high-margin operations was unlikely. The company divested the project to Tanami Gold NL for A\$9 million cash, 25 million A\$0.20 Tanami Gold shares and a phased production royalty.

## South Africa

Three drillholes targeting high-grade Ventersdorp Contact Channel Reef (VCR) to the west of Tau Lekoa mine at Goedgenoeg all intersected negligible values. A 22-hole drilling programme at Weltevreden, to the east of the mine, for an open pit VCR Mineral Resource encountered uneconomic mining grades.

A drillhole at Moab, targeting the Vaal Reef in the Lower Mine Block, intersected reef as anticipated and confirmed the predicted structure and grade. A second hole is in progress to confirm the facies model over the Lower Mine Area.