

## Global exploration

The replacement of production ounces through near-mine (brownfields) exploration continued to remain a high priority for AngloGold Ashanti in 2006. During the year, brownfields exploration activities continued around most of the group's current operations.

In 2006, exploration activities in new areas (greenfields exploration) were primarily focused on the Tropicana Joint Venture Project in Western Australia, in Colombia, and in the Democratic Republic of Congo (DRC). Joint ventures and partnerships with other companies facilitated additional greenfields exploration activities in Russia, China, Laos, Colombia and the Philippines, while the company divested its exploration assets in both Alaska and Mongolia during

the year. The discovery of new long-life, low-cost mines remains the principle objective of the greenfields exploration programme, although AngloGold Ashanti is also committed to maximising shareholder value by exiting or selling those exploration assets that do not meet its internal growth criteria and also by opportunistically investing in prospective junior exploration companies.

During 2006, total exploration expenditure amounted to \$103 million, of which \$52 million was spent on brownfields exploration. The remaining \$51 million was primarily invested in three key greenfields areas (the Tropicana joint venture in Western Australia, in Colombia, and in the DRC), with the remainder being spent in Russia, China, the

### Location of AngloGold Ashanti's exploration ventures



Philippines and Laos. Exploration expenditure is expected to increase to \$163 million in 2007, with \$77 million to be spent on brownfields exploration and \$86 million to be spent on greenfields exploration.

### Argentina

At **Cerro Vanguardia**, drilling of over 30 linear kilometres along an extensive array of veins was completed to detect viable ore shoots. Brownfields exploration resulted in the generation of 600,000 ounces of Mineral Resources.

### Australia

**Brownfields:** At **Sunrise Dam**, brownfields exploration continues to focus on increasing the underground Mineral Resource inventory and increasing the confidence category of resources so that Ore Reserve conversion can occur. Underground diamond drilling has been successful in identifying extensions to many of the known zones.

At **Boddington Gold Mine**, six diamond drill rigs were employed by the end of 2006 on drill programmes to convert Inferred Mineral Resource to Indicated Mineral Resource within the planned pit and on near-pit resource extensions. Mineral Resource conversion drilling during 2006 focused primarily on the Central Diorite zone of the Wandoo South pit where, historically, broad zones of mineralisation have been intersected.

**Greenfields:** AngloGold Ashanti holds a 70% interest in the Tropicana Joint Venture Project, a 12,260 square kilometre tenement package located to the east and north-east of Kalgoorlie in Western Australia. Prior to the start of AngloGold Ashanti's exploration programme at Tropicana in 2002, no significant gold exploration had been undertaken in the district. Joint venture partner Independence Group NL holds a free-carried interest in the project until the completion of a pre-feasibility study, at which point Independence Group NL is required to begin to contribute in terms of its 30% interest.

Initial drill target generation at Tropicana has been achieved using primarily soil geochemistry, with wide-spaced soil sampling completed over the majority of the granted tenure. Drilling to date, at both the Tropicana zone and the recently discovered Havana zone, has confirmed the potential for the project to host a multi-million ounce gold resource. Additional early-stage targets requiring closer-spaced follow-up soil sampling and drill testing have also been identified regionally.

Gold mineralisation at the Tropicana prospect (including the Havana zone), which is located 200 kilometres east-south-east of AngloGold Ashanti's Sunrise Dam operation, has been defined by both reverse circulation and diamond drilling to extend over a strike length of approximately four kilometres. The mineralisation is open to both the south and down-dip, and drilling is currently testing a potential block of fault-offset mineralisation to the north. The company is currently undertaking an intensive exploration and resource development drilling programme at Tropicana, and a pre-feasibility study is expected to begin in early 2007. For a complete listing of drill results from the Tropicana prospect, see Independence Group NL's news releases on [www.independencengroup.com.au](http://www.independencengroup.com.au).

First-pass aircore drilling at the Beachcomber 1 prospect, located 220 kilometres south of the Tropicana prospect in the southern portion of the tenement package, has intersected four metres at 43.5g/t from a depth of 24 metres. Additional drilling is currently underway to understand the dimensions and significance of the result.

### Brazil

At **Córrego do Sítio**, prospecting for both open pit and underground ore continued. Conversion of open-pittable Mineral Resources to reserves by in-fill drilling added 540,000 ounces to Ore Reserves. Some 7,000 metres were drilled during 2006 to

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delineate ore shoots amenable to underground mining, although the orebodies are geometrically complex and will require detailed geological control during the exploitation phase. Drilling planned for 2007 will continue to concentrate on the Laranjeiras orebody. Drilling has indicated an additional, probable economic orebody located south of Cachorro Bravo. Also at Córrego do Sitio, a new deposit (Paio) is being delineated after three initial intersections returned encouraging results in the third quarter of 2006.

In March of 2006, **Serra Grande** acquired the mining rights to property adjacent to its current operations, permitting full access to the Palmeiras orebody, as well as to the potential upside in surrounding mineralised structures. Growth in Mineral Resources and Ore Reserves in 2006 amounted to net gains of 400,000 and 300,000 ounces respectively. This was mainly due to successful drilling and model interpretation of the open-pit table portions of the main orebodies and drilling in the vicinity of Corpo IV. Drilling in 2007 will focus on structurally controlled targets in a zone below Palmeiras and above Corpo IV.

### China

In February 2006, AngloGold Ashanti announced the acquisition of an effective 8.7% stake in Dynasty Gold Corporation through a \$2 million private placement. Dynasty Gold is a Vancouver-based explorer with a 70% interest in the Red Valley project in Qinghai, the Wild Horse project in Gansu, and the Hatu project in Xinjiang. The proceeds of the AngloGold Ashanti placement are currently being used to fund further exploration at the Red Valley and Wild Horse projects, both of which are located in the prospective Qilian metallogenic belt. In addition to this equity investment, AngloGold Ashanti retains the right to enter into joint ventures at either or both of the Red Valley and Wild Horse projects, and may earn-in to a total 55% interest by investing \$5 million in exploration over three years. Results from a recently completed 5,397-metre diamond drill programme at Red Valley are currently being evaluated.

Complementing the company's equity investment in Dynasty Gold Corporation, AngloGold Ashanti also signed two separate cooperative joint ventures (CJV) in 2006 with local partners at Yili-Yunlong (in Xinjiang province) and Jinchannong (in Gansu province). These prospects possess the potential for epithermal gold and porphyry copper-gold deposits, and orogenic gold deposits, respectively. Assuming final business registration approval is received from the Chinese regulatory authorities by early 2007, these projects are expected to form part of AngloGold Ashanti's 2007 greenfields exploration drilling programme.

### Colombia

AngloGold Ashanti made significant progress in 2006 in the exploration of its extensive tenement position in Colombia, both through its own exploration activities and through its preferred joint venture partner strategy. AngloGold Ashanti has been active in Colombia since 1999.

In terms of its own projects in 2006, AngloGold Ashanti completed first-pass drilling on the bulk-tonnage targets at Quinchia and Gramalote in central Colombia. Initial results included 255 metres at 1.16g/t and 275 metres at 1.2g/t at Gramalote, and 265 metres at 0.8g/t and 242 metres at 0.85g/t at Quinchia. Follow-up diamond drilling is underway at both Gramalote and Quinchia.

In order to capitalise on its first-mover advantage in Colombia and to optimise its resources in the process of exploring the country, AngloGold Ashanti also announced two exploration partnerships in the country during 2006. On 1 June, AngloGold Ashanti announced the signing of a Heads of Agreement with Bema Gold Corporation in order to form a new company to explore eight of AngloGold Ashanti's mineral opportunities located in northern Colombia. In terms of this agreement, the new company will have the right to earn-in to a 51% interest on any property that AngloGold Ashanti elects to farm-out

within the area of interest by carrying out a minimum of 3,000 metres of exploration drilling and by matching AngloGold Ashanti's prior exploration expenditure. Bema Gold Corporation will provide a minimum of \$5 million in exploration funding.

On 14 July, AngloGold Ashanti announced the signing of a second Heads of Agreement with Antofagasta plc to jointly explore for new copper and gold deposits in the La Vega-Mocoa belt in southern Colombia. All of AngloGold Ashanti's mineral applications and contracts in the area of interest were included in the agreement and Antofagasta has committed to funding a minimum of \$1.3 million of exploration within 12 months of signing the agreement.

#### Democratic Republic of Congo (DRC)

Greenfields exploration activities in the DRC continued to focus on a 10 km x 15 km block surrounding the town of Mongbwalu in the north-eastern part of the country. Diamond drilling in 2006 remained concentrated on defining the resource potential of the mineralised mylonite zones at Adidi-Kanga at Nzebi-Senzere, together with following up on the significant new gold intercepts returned from the adjacent Pluto area. The mineralised mylonite zones in all three areas are shallow-dipping and occur at the contact between a granodiorite intrusive and volcano-sedimentary rocks of the Kilo greenstone belt. Two reverse circulation drill rigs and one diamond drill rig will be used in 2007 to accelerate the exploration programme in the area. The company is initially targeting a 3 million-ounce gold inferred resource in the combined Adidi-Kanga and Nzebi-Senzere areas.

Regional drill target generation and evaluation programmes in the Kilo greenstone belt will also be accelerated in 2007. An airborne geophysical survey, centred on Mongbwalu and extended to cover the highest priority targets in the region, is scheduled to be flown in early 2007. First-pass drill testing of targets will then be undertaken on a priority basis.

#### Ghana

Surface drilling continued throughout the year at **Obuasi** with the deep surface borehole UDSDD 3 intersecting the main reef fissure at 1697.38 metres to 1766.20 metres. Both the UDSDD 2 and UDSDD 3 holes are currently experiencing technical problems that have severely curtailed progress. As a result, one of the holes has been stopped and replaced by a hole drilled from underground.

#### Guinea

Drilling at **Signiri** in 2006 focused on identifying and then following up known mineralisation at Kintinian, Eureka North, Kosan North and Sintroko West prospects. Reconnaissance drilling was also undertaken at the the Foulata and Saraya anomalies. Reverse circulation drilling of selected portions of the spent heap leach in order to define a Mineral Resource began.

#### Laos

Regional reconnaissance exploration activities continued in Laos during 2006 as part of AngloGold Ashanti's exploration alliance with Oxiana Limited. A number of new target areas were defined and a follow-up field review is underway. AngloGold Ashanti also extended its Laos exploration alliance agreement with Oxiana for another year and amended the alliance to include the Sanakham Project area, which is still under application.

#### Mali

At **Morila**, regional drilling was undertaken on the grant defined sub-economic mineralisation in the vicinity of the open-pit. The additional knowledge generated by drilling this campaign will be used to update the regional geological model and to further define drill targets in 2007. Infill drilling campaigns around the pit margin continued to upgrade the confidence of the Mineral Resource, while a drilling programme targeting underground potential was initiated at the near-pit Samacline anomaly.

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At **Sadiola**, exploration in 2006 focused primarily on further defining the hard sulphide orebody that lies below the main pit. This orebody is currently the focus of an economic study and is expected to extend the mine's life. Infill drilling also occurred at the Tambali South and FE4 prospects, while reconnaissance drilling was undertaken at the smaller anomalies of Lakanfla East and Sekokoto South East.

### Mongolia

Exploration activities in Mongolia were terminated in early 2006 and the tenements and related data packages were subsequently sold to a third party.

### Namibia

At **Navachab**, infill drilling was undertaken north of the main pit, with the intention of converting Inferred Mineral Resources to Indicated Mineral Resources. A high-resolution magnetic survey over the mining licence was completed during the year and used to define further targets. Drilling focused on the Gecko central and north prospects with 1,000 metres of reverse circulation drilling returning positive results. Infill drilling was also undertaken at Anomaly 16, located about five kilometres west of the main pit.

### Philippines

In 2006, AngloGold Ashanti elected to exercise its right to proceed to a second joint venture with Red 5 Limited on the Outer Siana area. This area comprises two tenements which surround, but do not include, Red 5's proposed Siana open pit development. AngloGold Ashanti and Red 5 have also entered into a joint venture to explore the Mapawa area, which is located 20 kilometres north of Siana and has potential to contain both epithermal style gold and porphyry style copper-gold deposits. The start of detailed exploration at Mapawa currently awaits the granting of a mineral production sharing agreement by the Mines and Geosciences Bureau in Manila.

### Russia

On 21 September 2006, AngloGold Ashanti announced its intention to enter into a 50:50 strategic alliance with Russian gold and silver producer, Polymetal, in which the two companies would co-operate in the exploration, acquisition and development of gold mining assets within the Russian Federation. Simultaneously, AngloGold Ashanti agreed to acquire Trans-Siberian Gold's (TSG) interests in the Veduga and Bogunay projects in Krasnoyarsk for a consideration of \$40 million and to contribute these assets to the strategic alliance with Polymetal. In return, Polymetal agreed to contribute two projects – Imitzoloto and Eniseevskaya – located in Krasnoyarsk and Chitay respectively and valued at \$16 million, to the new alliance, as well as to make an initial payment of \$12 million to AngloGold Ashanti.

Having acquired its Veduga and Bogunay projects, AngloGold Ashanti continues to hold a 29.9% stake in TSG.

The strategic alliance is expected to be finalised by the end of the first quarter, 2007.

As a direct result of the new strategic alliance with Polymetal, AngloGold Ashanti also announced the termination of its exploration alliance with Eurasia Mining plc in respect of the Chita and Buryat regions of eastern Russia.

### South Africa

At **Moab Khotsonq**, the drilling of two surface boreholes continued and a third hole was initiated during the year. These boreholes are together intended to further define the geological model of the mine. Borehole MZA9 deflected on reef that averaged 5.13 grams per tonne over 82.2 centimetres (giving 422 cm.g/t) at 3204.29 metres in three acceptable intersections. The Vaal Reef was intersected at 3108.10 metres in the long deflection, and short deflection drilling is

in progress. Borehole MGR 7 successfully intersected the Vaal Reef. A short deflection program on the Vaal Reef gave: 12.73 grams per tonne over 43.9 centimetres (giving 559 cm.g/t) at 3424.11 metres. Long deflection drilling is still in progress. Borehole MMB5 was collared during the year and has advanced to 2733.95 metres in Witwatersrand Quartzites (Elsburg Formation).

#### **Tanzania**

At **Geita**, drilling programmes showed extensions to known orebodies at the Ridge 8 – Star & Comet gap as well as in the Nyankanga South area. Infill drilling programmes aimed at generating open-pit Mineral Resources were undertaken at the Lone Cone and Area 3 West prospects. An airborne electromagnetic geophysical survey was completed over a portion of the grant during the year.

#### **United States**

##### **Brownfields**

At **Cripple Creek & Victor** in Colorado, infill and step-out development drilling focused on the South Cresson Deposit in 2006,

and the final location of the west high wall and step-out drilling between the Main Cresson and the South Cresson pits has now been prioritised. Infill drilling at 60-metre spacings was also carried out within the Life of Mine Extension Project area to determine geological potential for additional ore.

##### **Greenfields**

The divestiture of AngloGold Ashanti's Alaskan exploration assets to TSX-listed International Tower Hill Mines Limited (ITH) was completed in August 2006. The company vended to ITH a 100% interest in six existing exploration properties (Livengood, West Pogo, Coffee Dome, Gilles, Caribou and Blackshell) together with the rights to a newly-staked property, Chisna. In addition, ITH retained an exclusive option to earn-in to 60% in each of the Lost Mine South and Terra properties in return for funding \$3 million in exploration within four years. AngloGold Ashanti received a 19.99% equity stake in ITH in consideration of the divestiture.

