SALIENT FEATURES

Mineral Resources at 5.8 Moz.

Mineral Reserves increase by 23% to 2.8 Moz – post June 2010 depletion.

Highly prospective tenement holdings in the Norseman-Wiluna Archaean Greenstone Belt.

Dynamic mix of open pit and underground mining operations.

Stoping operations commenced at Athena in November 2010 while 104 koz was added to its Mineral Reserves through ongoing mine definition drilling and depth extensions.

At Hamlet, the Mineral Reserves grew to 689 koz, with access development initiated and a full feasibility in progress.

Drilling at the Neptune open pit project defined increased Mineral Reserves and grade.

Mineral Resources decrease due to depletion and a lower gold price assumption.

Life of Mine extension to 2017.

St Ives Gold Mine

Technical Short Form Report

31 December 2010
INTRODUCTION

The St Ives Gold Mine represents a solid base for growth in Australia and is an important contributor to the Gold Fields’ vision, “To be the global leader in sustainable gold mining,” with a target contribution from the Australasia Region of ~1 Moz per annum by 2015.

The St Ives Gold Mining Company (Pty) Limited is wholly owned by Gold Fields Limited and is situated within the highly prospective Norseman-Wiluna Greenstone Belt in Western Australia. The St Ives operations are conducted within mining tenements comprised of 275 mining titles (54,911 hectares), three mineral titles (364 hectares), 12 exploration licences (35,560 hectares), 47 prospecting licences (7,244 hectares) and 19 miscellaneous licences (14,837 hectares) for a total area of approximately 112,917 hectares.

Declared Mineral Resources at the St Ives Gold Mine decreased by 1,134 koz due to depletion and a lower gold price, while the Mineral Reserves, inclusive of a depletion of 269 koz since June 2010, increased by 530 koz, indicating an underlying change of -865 koz and +799 koz respectively. Changes to Mineral Reserves from June 2010 were dominated by discoveries at Hamlet, Athena and Neptune, and the impact of a higher gold price assumption. The St Ives Life of Mine (LoM) has again been extended by a further 12 months, following a year of successful exploration, which delivered and enhanced the future Mineral Resource pipeline.

This technical short form report reflects the latest Life of Mine plan, coupled with an updated Mineral Resource and Mineral Reserve statement as at 31 December 2010. All Mineral Resource and Mineral Reserve figures reported are managed unless otherwise stated and Mineral Resources are inclusive of Mineral Reserves.

The St Ives Gold Mine is located 80 kilometres south of Kalgoorlie, near Lake Lefroy in the Eastern Goldfields Region of Western Australia. Gold was discovered at Kambalda in 1897 at “Red Hill camp”. New discoveries during 1919 led to the construction of many small mines and a town in the St Ives area.

St Ives takes its name from the largest of the many small, historic workings scattered throughout the area, that of Ives Reward, which was discovered by prospector Pat Ives. Mining was discontinued for many years until resumed by Western Mining Company (WMC) Limited in 1981, when gold production from St Ives began. Since then St Ives has produced 102.3 Mt of ore at an average grade of 3.13 g/t yielding 10.6 Moz from 40 open pits and 16 underground mining operations. Gold Fields Limited acquired the St Ives gold mining operations in Western Australia from WMC Limited in December 2001.
Figures reported in this declaration are as reviewed by independent external consultants as at 31 December 2010. Gold Fields has been informed that the audit identified no material shortcomings in any process by which the St Ives Mineral Resources and Mineral Reserves were evaluated.


Effective date: 31 December 2010

Source of information: This technical statement is a summary of the internally sourced document entitled December 2010 St Ives Competent Persons Report

Personal inspection: Personal inspection is conducted by the Competent Persons as listed, who are full-time employees of Gold Fields Limited

General location: The St Ives operations extend from 5 to 25 kilometres south-south-west of the town of Kambalda in Western Australia, approximately 630 kilometres east of Perth at latitude 31° 12’ S and longitude 121° 40’ E. The nearest major settlement is the town of Kalgoorlie situated 80 kilometres to the north. Well-established power, access roads and supporting infrastructure exist in the area.

Climate: St Ives is situated in an area of arid bush lands. While occasional storm events may cause minor delays to open pit mining operations the climatic conditions do not materially impact on the normal operations of the site

Licence status and holdings: St Ives controls exploration and mineral rights over a total area of 112,917 hectares (total of granted tenements) and has security of tenure for all current exploration and mining leases that contribute to future Mineral Reserves. St Ives does not have freehold ownership of its mining areas and all St Ives’ mineral rights in Australia belong to the Australian government and are subject to royalty payments.

Operational infrastructure: St Ives currently operates four underground mines accessed via declines and several open pits, a centralised administrative office, an engineering and mill/CIP processing plant with a supplementary heap leach processing plant.

Deposit type: Archaean orogenic greenstone gold hosted in a number of different styles of mineralisation.

Life of Mine (LoM): It is estimated that the current Mineral Reserve will be depleted in 2017


Gold Fields has stated: “If we cannot mine safely, we will not mine.” This principle is embedded at St Ives.
### OPERATING STATISTICS

<table>
<thead>
<tr>
<th>Units</th>
<th>Dec 2011a</th>
<th>June 2010</th>
<th>June 2009</th>
<th>June 2008</th>
<th>June 2007</th>
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<td><strong>Open pit mining</strong></td>
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<td>Waste mined '000 BCM</td>
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<td>10,850</td>
<td>9,921</td>
<td>11,807</td>
<td>9,892</td>
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<tr>
<td>Ore mined '000 tonnes</td>
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<td>6,660</td>
<td>5,799</td>
<td>5,143</td>
<td>3,928</td>
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<td>Head grade g/t</td>
<td>1.94</td>
<td>1.35</td>
<td>1.5</td>
<td>1.7</td>
<td>2.2</td>
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<tr>
<td>Strip ratio waste:ore</td>
<td>3.3</td>
<td>4.2</td>
<td>4.3</td>
<td>5.8</td>
<td>6.8</td>
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<td><strong>Underground mining</strong></td>
<td></td>
<td></td>
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<td>– Ore mined '000 tonnes</td>
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<td>1,444</td>
<td>1,222</td>
<td>901</td>
<td>1,336</td>
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<td>– Head grade g/t</td>
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<td>4.7</td>
<td>5.1</td>
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<tr>
<td><strong>Source of ore</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>– Milled '000 tonnes</td>
<td>2,419</td>
<td>4,766</td>
<td>4,821</td>
<td>4,647</td>
<td>4,669</td>
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<td>– Heap leach '000 tonnes</td>
<td>866</td>
<td>2,052</td>
<td>2,441</td>
<td>2,586</td>
<td>2,090</td>
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<td>Total '000 tonnes</td>
<td>3,284</td>
<td>6,818</td>
<td>7,262</td>
<td>7,233</td>
<td>6,759</td>
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<tr>
<td>– Milled g/t</td>
<td>3.2</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
<td>3.3</td>
</tr>
<tr>
<td>– Heap leach g/t</td>
<td>0.8</td>
<td>0.5</td>
<td>0.5</td>
<td>0.6</td>
<td>0.9</td>
</tr>
<tr>
<td>Combined g/t</td>
<td>2.3</td>
<td>1.9</td>
<td>1.8</td>
<td>1.8</td>
<td>2.2</td>
</tr>
<tr>
<td>– Milled kg</td>
<td>7,147</td>
<td>12,096</td>
<td>12,187</td>
<td>11,552</td>
<td>14,177</td>
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<tr>
<td>– Heap leach kg</td>
<td>410</td>
<td>999</td>
<td>1,135</td>
<td>1,440</td>
<td>969</td>
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<tr>
<td>Gold produced kg</td>
<td>7,557</td>
<td>13,096</td>
<td>13,322</td>
<td>12,992</td>
<td>15,146</td>
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<tr>
<td>Gold produced koz</td>
<td>243</td>
<td>421</td>
<td>428</td>
<td>418</td>
<td>487</td>
</tr>
<tr>
<td><strong>Operating costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total cash costs A$/oz</td>
<td>757</td>
<td>806</td>
<td>805</td>
<td>649</td>
<td>540</td>
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<td>Capital expenditure A$ million</td>
<td>59.2</td>
<td>116.8</td>
<td>92.9</td>
<td>120.3</td>
<td>96.6</td>
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<td>National cash expenditures (NCE) A$/oz</td>
<td>1,025</td>
<td>1,842</td>
<td>1,023</td>
<td>932</td>
<td>738</td>
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<tr>
<td>General</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of employees (TEC) No</td>
<td>774</td>
<td>828</td>
<td>699</td>
<td>661</td>
<td>865</td>
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<tr>
<td>Life of Mine years</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Mineral Reserves Mt</td>
<td>32.7</td>
<td>30.6</td>
<td>30.1</td>
<td>25.9</td>
<td>33.0</td>
</tr>
<tr>
<td>Mineral Reserves head grade g/t</td>
<td>2.7</td>
<td>2.3</td>
<td>2.4</td>
<td>2.3</td>
<td>2.4</td>
</tr>
</tbody>
</table>

1Figures shown above represent the six months ended 31 December 2010.
Rounding off of figures presented in this report may result in minor computational discrepancies. Where this occurs it is not deemed significant.
GEOLOGICAL SETTING AND MINERALISATION

St Ives is situated in the Norseman-Wiluna Greenstone Belt, which is part of the Yilgarn Craton, a 2.6 Ga granite-greenstone terrain in Western Australia. In comparison to other greenstone belts in the Yilgarn craton, the Norseman-Wiluna Belt is highly mineralised, particularly in gold and nickel. The rock types in the belt comprise abundant tholeiitic and komatiitic volcanic rocks, chert, sulphidic and albitic sedimentary rocks, and a chain of discrete felsic volcanic centres.

The gross structure is markedly linear with north-north-west trending strike-slip faults and other tectonic lineaments traceable for hundreds of kilometres, which disrupt the greenstone into fault-bounded domains. The generalised stratigraphic sequence comprises three mafic-ultramafic units, two felsic volcanic units and an uppermost epilastic sequence.

There has been a complex and long-lasting history of structural deformation incorporating up to seven significant stages (D0-D7) during and after regional metamorphism. The gold mineralising episodes are interpreted to have occurred during thrusting and faulting associated with the D2-D3 structural events.

Metamorphism has affected all rock types and ranges from low temperature prehnite-pumpellyte facies to high temperature-pressure amphibolite and granulite facies. Flexures and irregularities in many local and regional shear zones are interpreted to be the major control on location of the majority of economic gold deposits in the belt.

Much of the Yilgarn Craton is deeply weathered and partially covered by Tertiary and Quaternary regolith. Pre-Tertiary lateritic horizons are variably exposed, eroded or buried by later deposits that have in turn been lateritised.

Local geology

St Ives lies within the Kambalda domain, a subset of the Norseman-Wiluna Belt. The Kambalda domain is bound by the north-north-west trending Boulder-Lefroy fault (BLF) and Zuleika shear. The region has undergone four compressional events predated by early extension and has been metamorphosed to upper greenschist or lower amphibolite facies.

The main structural feature of the St Ives area is the gently south-plunging Kambalda anticline, which extends 35 kilometres from the south end of the Kambalda dome to the Junction Mine. The majority of known gold deposits are proximal to the trace of the anticlinal axis. A major second order structure known as the Playa shear splays off the BLF shear zone and can be traced through the St Ives field for a distance in excess of 10 kilometres.

Most of the St Ives ore bodies mined to date are associated with third order splays off the Playa shear – notable exceptions being Argo and Santa Ana which are situated on the western limb of the anticline. Mineralisation typically occurs where these structures intersect favourable rock units, with chemical or rheological contrasts combining with structural flexures to form the most important local controls to mineralisation. The interaction between structures and rock types has produced a large number of individual deposits with at least 80 having been mined in the St Ives area.

The stratigraphic succession in the Kambalda domain comprises Kalgoorlie group volcanic rocks and the Black Flag group felsic volcanic and sedimentary rocks overlain by the post-tectonic Merougil beds unit.
The most common host rocks of gold mineralisation are dolerites such as the Defiance, Condenser and Junction dolerites. Granophyric dolerite and Kapai slate tend to host the highest grade mineralisation. The Paringa basalt and Kambalda komatiite host deposits in discrete shear structures that are moderate in both tonnage and grade. Low to moderate-grade, high-tonnage mineralisation is commonly developed in porphyries, which are found in almost all deposits.

The Kambalda domain to the north is structurally complex. Multiple phases of deformation occurred during and after regional metamorphism. The domain is crossed by a network of variably striking and dipping first, second, third and fourth-order shears, faults and thrusts that control the location of the gold mineralisation.

Hydrothermal alteration and associated gold mineralisation was synchronous with deformation on a network of shear zones. Alteration is concentrated in 10 centimetres to 300 metres wide halos around shear zones. Gold is commonly associated with pyrite or granular pyrrhotite.

There are several styles of gold mineralisation at St Ives. The individual deposits may contain more than one of these styles:
- Lode mineralisation: Archaean lode mineralisation typically consisting of 0.5 to 20 metres wide mesothermal vein complexes ± hydraulic breccias, ± mylonites;
- Supergene mineralisation: Broad zones of flat-lying gold mineralisation in weathered Archaean and overlying Tertiary sediments; and
- Palaeoplacer mineralisation: Placer deposits hosted by palaeochannels in the unconsolidated Tertiary sediments which overly the Archaean basement.

**Exploration and drilling**
The St Ives exploration strategy incorporates the integration of geological information and knowledge of ore-forming systems to identify targets with the greatest potential for conversion from endowment, thus maintaining a high-value project pipeline. This strategy includes:
- Greenfields – enhance the capacity and data consolidation to identify additional targets based on new knowledge and application of current research and development initiatives;
- Continued support, application and integration of company/industry-funded research projects aimed at understanding the structural, geochemical and ore mineralising fluid pathways applicable to the St Ives gold camp;
- Convert and integrate existing knowledge and research into three-dimensional information data sets to identify additional target areas internally and externally to current lease areas;
- Convert existing knowledge and expand the future potential of the Argo-Athena-Hamlet complex environs;
- Increased targeting based on understanding of the structural and macro boundary modelling of ore shoot development at various mine sites;
- Extensional drill-outs and conversion of Inferred Resources to mine defined Indicated Resource levels to enable accurate geology and resource models to be completed to enable optimised mine design, schedules and profitable gold production; and
- St Ives maintains rigorous quality assurance and quality control (QA/QC) protocols on all of its exploration programmes using best industry practice in data acquisition, reputable laboratories and having sign-off by Competent Persons under the 2007 SAMREC and 2004 JORC Codes.
St Ives regional geology plan
MINING

Gold mineralisation at St Ives is mined via both open pit and underground methods to depths generally not exceeding 500 metres below surface. As many of the operations involve mining deposits on or under Lake Lefroy (a shallow salt lake), extraction requires construction of berms and other earthworks to provide access, short-term stockpile areas and to prevent water intrusion.

Mining methods

Open pit mining by conventional drill and blast/truck and shovel is employed at all open pits. Grade control is generally by inclined RC drilling. Open pit projects may include 10 to 40 metres of unconsolidated sedimentary overburden which does not require drill and blast, but requires hard rock to be imported for sheeting to provide equipment access during mining, and/or dewatering of the sedimentary overburden prior to mining.

Load-and-haul is by 140 tonne dump trucks and 150 to 250 tonne excavators in backhoe and/or face shovel configuration. Mining benches vary from 5 to 10 metres, which is excavated in five passes (flitches) of about 2.5 metres per flitch.

Gold mineralisation is mined selectively to cut-offs and segregated into grade ranges as required to balance the ore production and processing capacities on site and maximise cash flow from operations.

Underground at Leviathan

Underground mines at St Ives are commonly extensions of open pit mines. Underground operations are characterised by common features which allow a high level of standardisation in operating strategy, mine design, stoping methods, mining equipment and utilisation. Mines are accessed via declines, with additional development of raises for return airways and ladderways as a second means of egress. Ore drives are developed to access the ore and future stoping production areas.

Underground mining at St Ives is predominantly mechanised and is conducted by long-hole open stoping (LHOS), with subordinate cut-and-fill and room-and-pillar stoping for the shallower dipping ore bodies. The use of paste fill in conjunction with LHOS is applied where mandated by geotechnical factors. Development and stoping utilises electric-hydraulic drilling jumbos and rubber-tyred diesel-powered LHDs and trucks are used for load-and-haul operations.

Ore from both open pit and underground operations is transported with road trains from individual mining operations to the central St Ives processing facilities.

Mine planning and scheduling

Mineral Reserve definition processes for open pit and underground operations are essentially similar. Cut-off grades are applied to define potentially economic mining panels based on direct mining and/or processing costs, commodity prices and other parameters. The economic viability of future mining panels is then tested by determining whether the margin above cut-off is sufficient to cover the required capital development costs and provide a return on investment.

Open pit planning entails the input of economic parameters and physical constraints into optimisation software to generate a series of nested pits, from which an optimal shell is selected. Detailed design is then undertaken to confirm the mineability of the optimised shell. Numerous iterations are conducted until an acceptable level of correlation is achieved between the optimised shell and detailed design.

Underground mining methods are largely determined by the geometry of the mineralised zones and the evaluation may involve review of more than one method. Mine design and scheduling is done utilising sophisticated software.

Mine planning is based on three-dimensional block models of in situ mineralisation, with allowances made for minimum mining widths, dilution and ore loss appropriate to the mining method being considered.
Infrastructure, waste disposal and ore stockpile management requirements are incorporated into the planning process. Ore stockpile management at St Ives strives to optimise the metallurgical blend requirements to the Lefroy mill and the heap leach, with regard to material types and grade management, to maximise cash flow from operations.

**PROJECTS**

The current major mine expansion projects at St Ives are at the new Athena deposit, which is in the production build-up phase and the initiation of underground mining at the Hamlet deposit. Underground development at Athena is now down to the fifth level and the first ore was intersected in May 2010. Stoping commenced at Athena in November 2010. Access towards the new Hamlet deposit commenced in November 2010 and is developed off the main Athena decline. A full feasibility study has commenced for Hamlet, which is scheduled to be completed during the first half of 2011.

**Heap leach expansion**

The capacity of the heap leach pad reached final design capacity based on the current throughput rate. Ongoing production is now managed by the removal of spent (leached) ore from the existing pads and the restacking of new material. Site trials since September 2009 have indicated that removal of the current spent material and reusage of the pads will be environmentally sound and economically viable despite a number of initial transitional issues. A strategy of flushing, removing, restacking and leaching will be employed to treat the remainder of the heap leach ore supply. Notwithstanding the above, consideration for expansion of the heap leach plant and the processing of low-grade material remains an option.

**Tailings storage facility**

A fourth tailings storage facility (TSF 4) will be constructed and commissioned by January 2013 to accept tailings deposition from the Lefroy Mill. TSF 2, which has reached deposition capacity in 2010, will be replaced as an alternate deposition to TSF 3 with North Orchin pit. Construction of TSF 4 will permit the continual implementation of this strategy beyond the current LoM.

<table>
<thead>
<tr>
<th>Mining operation</th>
<th>LoM deposition (Mt)</th>
<th>Available capacity (Mt)</th>
<th>Surplus/(shortfall) (%)</th>
<th>Capital requirement (A$M)</th>
<th>Expenditure period (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>St Ives</td>
<td>30.8</td>
<td>33.6</td>
<td>16</td>
<td>27.7 *</td>
<td>5</td>
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</tbody>
</table>

* Budget estimates including tailings lifts, TSF4 and North Orchin construction.
MINERAL PROCESSING

St Ives employs two separate beneficiation processes, a CIP plant (Lefroy Mill) and a heap leach facility for the treatment of mined ore and stockpiles.

Aerial view of the Lefroy Mill

The Lefroy Mill was commissioned in December 2004 and achieved design capacity within seven months. It treats medium to high-grade ore through a 4.8 Mtpa variable-speed dual-direction 13.5 MW sag mill with wraparound motor. Oversize from the mill (scats) is in closed circuit with a 140-tonne-per-hour pebble crusher. A gravity circuit recovers the gravity-recoverable gold from the milling circuit and the concentrates are treated separately through to bullion form. The mill cyclone overflow product reports to a five-stage leach circuit consisting of mechanical agitators, reagent addition and oxygen sparging. Leached slurry passes through the six-stage carousel pump cell adsorption plant and subsequent 5 tonne capacity acid wash, elution and electrowinning circuits which produce calcine ready for smelting. Bullion is shipped to the refinery. Tailings are alternately deposited on two tailings facilities which are constructed upstream and are of paddock type.

The Heap Leach process was commissioned during 2000 and is used to treat lower grade ore at a rate of 2.5 Mtpa.

From June 2010 heap leach cut-offs are equivalent to those of the Lefroy Mill due to higher rehandling costs. Optimisation and capital is planned in 2011 to reduce cost and improve throughout. A three-stage crushing circuit, of 900 kw installed comminution power, is currently used in a 24 hour operation to prepare -15 millimetre ores for agglomeration, stacking and leaching. A mobile oxide screen was recently introduced to the circuit to screen off oxides at 35 millimetres for direct feed into the agglomeration circuit thereby bypassing the comminution phase. The leach pads have been expanded in three stages of 5.5 Mt each with the third stage nearing full capacity. Rehandling methods are currently used to continue the heap leach as a sustainable operation. Leaching on the heap is performed in two stages with typical solution application of 8-10 litres per square metre per hour. The second-stage pregnant leach solution passes through a six-stage carbon circuit for gold adsorption.

Gold is stripped off the carbon, electrowon and calcined at the heap leach wet plant prior to shipment to the Lefroy gold room for smelting.

SUSTAINABLE DEVELOPMENT

St Ives strives to achieve and maintain outstanding health and safety performance through the participation of all employees and the application of safe, innovative processes and technologies, within a framework of OHSAS 18001, which is an international occupational health and safety management system standard against which our management systems are assessed and certified.

Mine water discharge sampling

At St Ives we strive to create a workplace culture of “zero harm” and to assist us in this pursuit for our people, we’ve embarked on a programme of ZIP (Zero-Incident Process). ZIP is a process that gives the workplace the genuine opportunity to reach the goal of zero incidents. It empowers people to be
able to take control of their personal safety. ZIP does this by giving staff an insight into the way their brain works and how they can use it more effectively to keep themselves safe.

At St Ives the consideration of our activities in a manner which minimises our environmental and stakeholder impact is fundamental to our operations and the way we do business. The operation is committed to responsible stewardship of natural resources, proactive engagement with all stakeholders and behaving in an environmentally responsible manner. This is demonstrated through our commitment to continuous improvement of the site management systems and operational performance. This is evident through our ISO 14001:2004 certification and compliance with our licence to operate.

Safety statistics

<table>
<thead>
<tr>
<th>Class</th>
<th>Units</th>
<th>June 2007</th>
<th>June 2008</th>
<th>June 2009</th>
<th>June 2010</th>
<th>Dec 2010</th>
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<tr>
<td>Fatalities</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Fatality rate</td>
<td>(per mmhrs)</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>LDIFR</td>
<td>(per mmhrs)</td>
<td>2</td>
<td>1.8</td>
<td>0.8</td>
<td>4.1</td>
<td>3.9</td>
</tr>
</tbody>
</table>

1 For six-month period to December 2010.

MINERAL RESOURCES AND MINERAL RESERVES

The geological and evaluation models have been updated to reflect the latest available data sets. These models are coupled to an integrated and holistic mine design and schedule plan that is based on current performance levels and take cognisance of the inherent risks associated with mining operations at St Ives. The impacts of year-on-year changes are covered in the reconciliation section.

Mineral Resources

The Mineral Resource statement for St Ives is summarised in the tables below. The following points apply to the Mineral Resources presented in this report:

- Quoted at an appropriate in situ economic cut-off grade with tonnages and grades based on the inventory block model. The Mineral Resources also include estimates of any material below the cut-off grade required to be mined to extract the economic portion of the Mineral Resource;
- Attributable to St Ives Gold Mine;
- All references to “tonnes” should be taken as being in metric units; and
- Surface sources are comprised of stockpiles. St Ives assumes that stockpiles are managed and monitored when mining occurs and are supported by adequate sampling, and are thus classified as Measured Mineral Resources.

<table>
<thead>
<tr>
<th>Mineral Resources classification</th>
<th>Tonnes (Mt)</th>
<th>Grade (g/t)</th>
<th>Gold ('000 oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dec 10</td>
<td>June 10</td>
<td>June 09</td>
</tr>
<tr>
<td>Open pit and underground</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>4.7</td>
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<td>Indicated</td>
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<td>48.0</td>
<td>41.3</td>
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<td>Inferred</td>
<td>13.7</td>
<td>24.0</td>
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<tr>
<td>Total open pit and underground</td>
<td>59.7</td>
<td>76.1</td>
<td>59.7</td>
</tr>
<tr>
<td>Surface stockpiles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>3.3</td>
<td>5.2</td>
<td>4.1</td>
</tr>
<tr>
<td>Total surface stockpiles</td>
<td>3.3</td>
<td>5.2</td>
<td>4.1</td>
</tr>
<tr>
<td>Grand total</td>
<td>63.0</td>
<td>81.3</td>
<td>63.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mineral Resource by source</th>
<th>Tonnes (Mt)</th>
<th>Grade (g/t)</th>
<th>Gold ('000 oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dec 10</td>
<td>June 10</td>
<td>June 09</td>
</tr>
<tr>
<td>Open pit</td>
<td>39.6</td>
<td>49.2</td>
<td>40.4</td>
</tr>
<tr>
<td>Underground</td>
<td>20.1</td>
<td>27.0</td>
<td>19.4</td>
</tr>
<tr>
<td>Stockpiles</td>
<td>3.3</td>
<td>5.2</td>
<td>4.1</td>
</tr>
<tr>
<td>Total</td>
<td>63.0</td>
<td>81.3</td>
<td>63.8</td>
</tr>
</tbody>
</table>
Modifying factors

- The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce Mineral Reserves;
- All Mineral Reserves are quoted in terms of run of mine (RoM) grades and tonnages as delivered to the metallurgical processing facilities and are therefore fully diluted;
- Mineral Reserve statements include only Measured and Indicated Mineral Resources, modified to produce Mineral Reserves and contained in the LoM plan; and
- Mineral Resources and Mineral Reserves undergo both internal and external audits either during the year, yearly or biannually, and any issues identified are rectified at the earliest opportunity – usually during the current reporting cycle, though it does sometimes occur that more comprehensive work requires more time for adequate completion.

Mineral Resource parameters

<table>
<thead>
<tr>
<th></th>
<th>US$/oz</th>
<th>US$/A$</th>
<th>A$/oz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Resource gold price</td>
<td>1,100</td>
<td>0.82</td>
<td>1,350</td>
</tr>
</tbody>
</table>

Cut-off for heap leach: g/t 0.5 – 0.7
Cut-off for mill feed: g/t 0.7 – 2.6
Cut-off for fresh ore: g/t 0.7 – 2.6
Cut-off for oxide ore: g/t 0.5 – 0.7
Cut-off for open pit: g/t 0.5 – 0.8
Cut-off for underground: g/t 1.6 – 2.6

Mineral Reserve parameters

<table>
<thead>
<tr>
<th></th>
<th>US$/oz</th>
<th>US$/A$</th>
<th>A$/oz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Reserve gold price</td>
<td>1,000</td>
<td>0.82</td>
<td>1,225</td>
</tr>
</tbody>
</table>

Cut-off for heap leach: g/t 0.5 – 0.8
Cut-off for mill feed open pit: g/t 0.7 – 0.8
Cut-off for mill feed underground: g/t 1.6 – 3.5
Cut-off for fresh ore: g/t 0.7 – 3.5
Cut-off for oxide ore: g/t 0.5 – 0.8

Stripping ratio: waste:ore = 6.2
Dilution (open pits): % 13 – 30
Mining recovery (open pits): % 90 – 93
Mine call factor: % 100
Plant recovery factor fresh ore: % 83 – 94
Plant recovery factor oxide ore: % 83 – 94
Heap leach recovery: % 55 – 75
CIP capacity: Mtpa 4.8
Heap leach capacity: Mtpa 2.5
Pit wall angles: degrees 25 – 45

Mineral Reserves

Reported Mineral Reserves at St Ives showed an increase of 530 koz since June 2010, which included the impact of depletion at 269 koz, indicating an underlying increase of 799 koz. The dominant contributors to Mineral Reserves at St Ives are the Athena, Hamlet, and Argo projects.

The Mineral Reserve statement for St Ives is summarised in the tables below and these following points apply:

- Estimates for St Ives include allowances for all relevant modifying factors;
- Gold price sensitivities have been derived by assessment of the impact of price changes on individual projects;
- Mineral Reserves are reported in terms of tonnages, grades and contained gold delivered for processing; and
- All references to “tonnes” should be taken as being in metric units.

Surface sources are comprised of stockpiles. St Ives assumes that stockpiles are managed and monitored when mining occurs and are supported by adequate sampling, and are thus classified as Proved Mineral Reserves.
Mineral Resource reconciliation (18-month period)
Factors that affected Mineral Resource reconciliation:
- Economic factors (lower gold price, higher costs); and
- Depletion for the six months to 31 December 2010 (269 koz, measured by processing feed).

Change in Mineral Resource June 2009 to December 2010

Mineral Reserve reconciliation (18-month period)
Factors that affected Mineral Reserve reconciliation:
- Mined depletion for the period was measured by processing feed;
- Discovery was dominated by Hamlet, Athena and Neptune; and
- Higher gold price assumption, partially offset by cost increases.

Change in Mineral Reserve June 2009 to December 2010

Mineral Reserve Sensitivity
Mineral Reserves are presented on an RoM basis delivered to the processing facilities. To illustrate the impact of fluctuations in gold price and exchange rates on the current declaration, St Ives has generated sensitivities with respect to Mineral Reserves. These sensitivities (other than for the base case) are not supported by detailed plans and should only be considered on an indicative basis; specifically as such sensitivities assume 100% selectivity, without any operating cost increases.

Managed Mineral Reserve Sensitivity

Athena borehole core with visible gold
REGULATORY CODES

SAMREC
This technical statement has been prepared in compliance with the South Africa Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (2007 SAMREC Code).

JSE
This technical statement has been prepared in compliance with the Listings Requirements of the JSE Limited, South Africa (JSE), specifically section 12 – issue 11.

Sarbanes-Oxley Act
The Mineral Resources and Mineral Reserves are underpinned by an appropriate Mineral Resource management process and protocol to ensure adequate corporate governance in respect of the intent of the Sarbanes-Oxley Act.

Environmental
St Ives has an environmental management team which is supported by specialist assistance from the regional corporate offices in Johannesburg and Perth. The systems, procedures, training etc. are at international best practice levels. Gold Fields has produced a sustainability report in 2010 and intends reporting annually in accordance with the Global Reporting Initiative.

COMPETENT PERSONS

M Jolly: Manager Mineral Resources
MSc (Geology), EDP Wits Business School, MAusIMM, Pr. Sci. Nat. (Registration number 400006/02). Mr Jolly has 30 years’ experience in the mining industry (two years at St Ives) and is responsible for the overall correctness, standard and compliance of this declaration.

M Briggs: Exploration Manager
BSc (Hons) in Geology, MAusIMM (991545). Mr Briggs has 13 years’ experience in the mining industry (eight years at St Ives) and is responsible for surface exploration and resource development drilling and the oversight of resource development geology models.

J Donaldson: Principal Resource Geologist
BSc (Hons), MAusIMM (209425). Mr Donaldson has 17 years’ mining industry experience (13 years at St Ives), and is responsible for the gold resource estimation processes and models.

C Ferguson: Mine Geology Manager
BSc (Hons) Geology, MAusIMM (113150). Mr Ferguson has 13 years’ experience in the mining industry (six years at St Ives), and is responsible for the mine geology functions at St Ives.

S Ellery: Resource Evaluation Supt
BSc (Hons), MSc Geology, Grad Dip Applied Finance and Investment (SIA), MAusIMM (110420). Mr Ellery has 20 years’ experience in the mining industry (18 years at St Ives) and is responsible for some aspects of economic evaluation at St Ives.

DISCLAIMER

Forward-looking statement

Such forward-looking statements involve known and unknown risks, uncertainties and other important factors that could cause the actual results, performance or achievements of the company to be materially different from the future results, performance or achievements expressed or implied by such forward-looking statements. Such risks, uncertainties and other important factors include among others: economic, business and political conditions in South Africa, Ghana, Australia, Peru and elsewhere; the ability to achieve anticipated efficiencies and other cost savings in connection with past and future acquisitions, exploration and development activities; decreases in the market price of gold or copper; hazards associated with underground and surface gold mining; labour disruptions; availability terms and deployment of capital or credit; changes in government regulations, particularly environmental regulations; new legislation affecting mining and mineral rights; changes in exchange rates; currency devaluations; inflation and other macro-economic factors, industrial action, temporary stoppages of mines for safety reasons; and the impact of the Aids crisis in South Africa. These forward-looking statements speak only as of the date of this document. The company undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after the date of this document or to reflect the occurrence of unanticipated events.

Note: For abbreviations refer to page 24 and for glossary of terms refer to IBC – “Mineral Resource and Mineral Reserve Overview 2010”.

Sonic drilling at Neptune
Athena and Hamlet portal from air
# KEY TECHNICAL STAFF

<table>
<thead>
<tr>
<th>Post</th>
<th>Incumbent</th>
<th>Qualifications</th>
<th>Years</th>
<th>Key responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Manager</td>
<td>Ted Lambourne</td>
<td>Associate Diploma Engineering Diploma Business Management</td>
<td>24</td>
<td>Responsible for overall strategic direction, leadership and management</td>
</tr>
<tr>
<td>Operations Manager</td>
<td>Craig Bradshaw</td>
<td>B.Eng (Hons) Mining Engineering</td>
<td>18</td>
<td>Full operational management</td>
</tr>
<tr>
<td>Manager: Mineral Resources</td>
<td>Malcolm Jolly</td>
<td>MSc (Geology), EDP (Wits) COM Cert. Rock Engineering</td>
<td>30</td>
<td>Exploration and mine geology plus compilation of CPR</td>
</tr>
<tr>
<td>Commercial Manager</td>
<td>Charl van Rensburg</td>
<td>B.Com</td>
<td>17</td>
<td>Financial management, reporting and compliance</td>
</tr>
<tr>
<td>Human Resources Manager</td>
<td>Petro Bekker</td>
<td>B.Tech HR</td>
<td>28</td>
<td>Human resources</td>
</tr>
<tr>
<td>Processing Manager</td>
<td>Scott Davies</td>
<td>BSc (Hons) (Mineral Science) MAusIMM</td>
<td>11</td>
<td>Mineral processing, metallurgy and tailings management Lefroy plant</td>
</tr>
<tr>
<td>Manager Metallurgy Lefroy Mill</td>
<td>Warwick McKenzie</td>
<td>MSc Extractive Metallurgy MAusIMM</td>
<td>10</td>
<td>Mineral processing, metallurgy Heap Leach plant</td>
</tr>
<tr>
<td>Engineering Manager</td>
<td>Brian Cameron</td>
<td>Mechanical Engineer Cert Nov 1991 No 5025 Diploma in Business Nov 2009 Cert 00766</td>
<td>29</td>
<td>Engineering, logistics and infrastructure management</td>
</tr>
<tr>
<td>Strategic Mine Planning Engineer</td>
<td>Max Sheppard</td>
<td>B.Eng (Mining)</td>
<td>21</td>
<td>Mineral Reserves, planning open pits and underground LoM</td>
</tr>
<tr>
<td>Mine Planning Superintendent</td>
<td>Robert Urie</td>
<td>B.Eng (Honours) Mining Engineering, Dipl Applied Finance</td>
<td>17</td>
<td>Responsible for the mine planning and scheduling of underground mining operations</td>
</tr>
<tr>
<td>Environmental Manager</td>
<td>Peter Bayliss</td>
<td>BSc (Hons) (Applied Biology) MPhil (Environmental Sciences)</td>
<td>22</td>
<td>Environmental management</td>
</tr>
<tr>
<td>Safety Manager</td>
<td>Ben Harrington</td>
<td>Graduate Certificate in Extractive Metallurgy</td>
<td>16</td>
<td>Safety and Health Emergency Services</td>
</tr>
</tbody>
</table>

## NOTES
Increasing level of geoscientific knowledge and confidence

Consideration of mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors (the ‘modifying factors’)

**Exploration Results**

- **Mineral Resources**
  - Reported as in situ mineralisation estimates
  - 63.0 Mt @ 2.8 g/t, 5.8 Moz
  - 13.7 Mt @ 2.9 g/t, 1.3 Moz
  - 41.4 Mt @ 2.9 g/t, 3.9 Moz
  - 8.0 Mt @ 2.3 g/t, 0.6 Moz

- **Mineral Reserves**
  - Reported as mineable production estimates
  - 32.7 Mt @ 2.7 g/t, 2.8 Moz
  - 26.3 Mt @ 2.8 g/t, 2.4 Moz
  - 6.5 Mt @ 2.1 g/t, 0.4 Moz

**St Ives Mineral Resource and Mineral Reserve Classification**