Gold Fields F2010 Reserve & Resource Declaration
05 October 2009

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Slides and Transcripts
June 2009 Resource and Reserve Declaration
with updates on:
South Deep
The Gold Mine Of the Future Taking Shape
St Ives
A Transformation underway.

Gold Fields Limited
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ST IVES
A TRANSFORMATION UNDERWAY

Glenn Baldwin
Head: Australasia Region
Good morning ladies and gentlemen.

Today I’m going to present the changing face of St Ives and in doing so highlight why this will be a great gold mine again very shortly.

St Ives is located about an hour’s drive to the South of Kalgoorlie in Western Australia.

The lease size is in excess of 83,000 hectares and mining started in the early 80s.

So therefore it is about 30 years old.

Cave Rocks in the north is the newest underground mine in the complex, but it has been known about for a number of years. The blue dots in the centre show the position of the 4.8 million tonne per year mill and carbon and pulp plant, plus a heap reach facility.

Production at present comes from 3 underground operations, which are Cave Rock, Belleisle and Argo, as well as the Leviathan and Greater Revenge open pits.

Exploration has recently become more focussed on the mine, and there are three areas worthy of special highlight.

The first is the greater Santa Anna area which continues to give promising results for a large, low grade open pit, and maybe even another underground mine in the future - potentially a mill base load to follow the closure of Leviathan Pit in the future.

The second is the Greater Revenge area, which has already produced more than 2 million ounces - we continue to add resource ounces here as well.

We are confident that in both of these areas the up-side potential seen today will be realised at some stage in the life of St Ives.
The third area is the newly discovered Athena Camp which is located immediately to the east of the existing Argo mine, which has also produced over a million ounces of gold. I will speak about the Athena project at length in this presentation because it is a discovery that will most significantly contribute in the near term to the transformation of St Ives.

It is important that I point out that the Junction Mine, which many of you may remember, produced many profitable ounces during its life in the late 90s and early in the new millennium, and is an important benchmark when we talk about the Athena Camp.

The Athena Camp currently contains 10 projects. Two are at the target definition stage, four of them are resource growth projects, and the remaining four are reserve conversion projects. Typically in a greenfields environment, such as Gold Fields has with Chucapace in Peru, there are potentially several years of drilling required before you see production. The difference at St Ives is that Gold Fields knows this gold yielding district and has been mining in Australia for a number of years, regularly converting supposedly barren earth into resource, reserve and then little gold bars.

So the four later stage projects in the Athena, that were discovered relatively recently, are the Athena, Hamlet, Diana and Apollo projects. The Apollo project has been known about for some time as a mineralised area, but using the information gained from the Athena drilling, is being grown and developed rapidly. Certainly the Apollo open pit will start producing in the second half of this financial year.
Let’s have a look at the Athena project specifically.

The mineralisation is split into three areas: the north, central and southern shoots.

There are in excess of 200 drill holes into Athena, specifically designed to delineate an ore body with a high level of confidence.

The central shoot is around 300 metres long with a 5 to 12 m width. The reserve grades are variable but consistently above 5g/t.

The big difference between Junction and Athena is that Junction was mined at many hundreds of meters below surface, with all the associated geotechnical issues, including seismicity.

Athena starts at 50 to 80 metres below surface, and so faces none of those production restricting challenges associated with greater depth.

It had been hidden from the explorationists just by a sand covering, but not anymore.
Athena Mineralisation

ST IVES GOLD MINE

• Hosted in Paringa Basalt.
• Consistent Structure.
• Mineralised for 500m on strike.
• Drill defined to 600m below surface.
• Average Width 8m.

Cross Section of the Central Shoot

In cross section, the mineralization is consistent and its dip is amenable to standard mechanised long hole stopping techniques, so no new technology is required.

The deepest hole intersecting grade and width is at 700 metres below surface, showing continuity below the reserve declaration depth we just gave you before.

The numbers along the cross section show the width of the central shoot in metres and the diamond drill holes intersection in grams per tonne.

If we pick out the best one there, it is 12.5 metres wide, at 14.9 grams per tonne.
ST IVES GOLD MINE
Recent Intersection

VISIBLE GOLD NUGGETS : STRIKE EXTENSION DRILLING

Here is a photo of a recent core intersection post the reserve declaration.

It has not been sampled and will not be because of the size of the visible gold nugget.

This is the reason for the continued exploration spend at St Ives, finding high grade underground mines to boost the grade into the mill and maximise the margin to shareholders.
The Athena mineralization will be exploited as an underground mine. The Gold Fields Board approved an early and accelerated start program to Athena based on the compelling geology and the conceptual study details.

In fact in one year, that is 2009, we changed Athena from being a newly discovered resource into a reserve with more than 300,000 ounces.

The project metrics are compelling.

For an initial capital investment of some A$95 million, we will produce first ore in less than one year from now and look to a life of mine in excess of 10 years.

The real value potential, however, is in the creation of cash flow to St Ives.
But Athena is not the only Athena camp project that will see production.

You will recall in the Athena cross section, I read out the highest grade I could find.

That is not as good as the latest drill hole results for the Hamlet project shown here.

These were two results, 14 metres at 13 g/t and 10 metres at 21 g/t, which came through only a couple of weeks ago and are not included in the resource statement.

We are redoing the models for Hamlet before the end of the year and expect significant improvements in this project’s reserves.
Our focussed exploration programme has led to the successful discovery of the Athena camp. At times we have had four diamond drill rigs lined up side by side to bring the discovery to production as quickly as possible. It's been a long time since I've seen four diamond drill rigs that close together. We will be spending a further A$25 million on exploration at St Ives in F2010.
Athena and Hamlet are only 1km apart and this provides optionality.

We know that Athena cannot support an open pit mine, but looks like it will be a wonderful underground mine.

We are still assessing options for Hamlet and we may have an open pit mine through which to...
create an independent access portal for Hamlet. Alternatively we may access Hamlet from the Athena portal as shown in the picture here, and save on an open pit excavation.

Either way, the metrics for Athena are compelling, and do not yet include the potential of Hamlet. The options for Hamlet will be determined by the end of this financial year.

As you can see in the picture, we have started the excavations for the Athena Portal.

The insert photo shows Nick giving a thumbs up for this transformational project at St Ives, standing in the actual Athena pit.

That picture was taken about eight weeks ago. So we are moving along very quickly here.
What the Athena camp means to St Ives is shown in this production graph. On the vertical axis is hundreds of thousands of ounces per year and on the horizontal axis is the financial year.

I remember when I joined Gold Fields a couple of years ago, thinking what can we do to get ourselves out of this low production position.

The answer was twofold.

First, obviously, was to drill. But more important was to challenge the status quo thinking regarding drilling, and the team has done that successfully in the discovery of the Athena Camp.

The second was to structure the mine for bigger things, which is what we have done quietly in the background. Although our most recent production results are below par, the goal remains to quickly move St Ives back to being a 500,000 ounce per annum producer, and to give it longevity.

When last did you see a six year plus commitment for St Ives at these levels of production?

That’s at around 110,000 ounces per quarter, but obviously a much stronger position once the annual production goal of 500,000 ounces is reached.
And using published results, you can see that the Gold Fields board supports the short and long term plans of St Ives through its support to terminate the royalty that was part of the St Ives purchase consideration in December 2001.

This moves the mine from a third tier producer to a second tier cash cost producer in the Australian gold industry.
Conclusions

THE TRANSFORMATION OF ST IVES

Athena camp 4 Moz potential
Target to at least double the St Ives LoM
Five underground mines by F2011
Targeting 500koz p.a. steady state production by F2012

The goal for the Athena Camp is to double the resource in size as quickly as possible and then to ensure that St Ives has a life beyond 2020.

We currently produce from 3 underground mines. We only produce from one 24 months ago. And in Athena and Hamlet you get a fourth and a fifth producing in F2011.

Then of course, there are the other 8 projects within the Athena camp, I have glossed over, as well as the up-side potential of the Greater Santa Anna and Greater Revenge areas.

All in all, the transformation of St Ives has started with the excavation of waste rock overlying the Athena project. Also, we will see improved production in the back half of this year and certainly into F2011 and beyond.

Thank you very much.
CONCLUSION

Nick Holland
Chief Executive Officer

Gold Fields has robust Reserves.

Long-term optionality for shareholders without hedge liabilities.

South Deep starting to realise its potential.

International portfolio growing.

Uranium Mineral Resource proven up – feasibility underway

TO BE THE GLOBAL LEADER IN SUSTAINABLE GOLD MINING

Thank you Glen. It’s been a long presentation, so let me wrap up as briefly as I can, and then we will take some questions.

I think the conclusion you should get from this presentation today is that Gold Fields has robust reserves determined at robust gold prices, that have been externally reviewed, and this provides the foundation for the company going forward.
It is also the foundation for our vision to be the leader in sustainable gold mining.

But in order for us to exploit those reserves optimally, to bring them to account, we need to develop them. We need to develop them safely and we need to make sure that our short term planning enables us to deliver the value in those reserves for the benefit of shareholders.

That is going to be our key focus, in 2010, second only to safety.

What we provide with these reserves is long term optionality for our shareholders without any hedge liabilities, and therefore we offer you something that very few other gold counters in the sector can give shareholders.

South Deep is starting to realise its potential. I believe that Vishnu’s presentation has demonstrated the confidence that we have that this asset will truly be one of the premier gold assets, if not the premier gold asset, in the world.

Our international portfolio is also growing. At Damang, we have tremendous opportunities to make this a 15 year mine or even longer, and based on Glenn’s presentation, you can see why the board authorised me to spend AUD$308 million in terminating the royalty. With all of the upside that we see ahead of us at St Ives, it was not a difficult decision.

Our uranium feasibility study continues, and we hope to give you some new information on where we stand on that in the early part of F2010.

With that I’m going to ask Nicky to coordinate questions for us.

QUESTIONS & ANSWERS

Question 1
Steve Shepherd: JP Morgan

Thank you. Good morning, ladies and gentlemen. Steve Shepherd JP Morgan. I would like to start with a technical question too if I may. You know I think we’ve seen quite a lot of Mine call factor volatility on some of the South African mines, I suppose particularly at Beatrix perhaps. Could you just maybe talk to us about what work you guys have done on this and how you see that going forward. It’s obviously a bit of a problem for us to model.

That would be the first question, and the second question Vish. On South Deep, could you please explain carefully to those of us that are somewhat confused what the reef hoisting capacity is all together, including the deepened twin shafts plus the south shaft. Because my arithmetic – I’m having a bit of trouble here, because it doesn’t look like you’ve got milling capacity to match your hoisting capacity. Maybe you could just explain that a bit more to me and I will leave it there.

Answer 1
Tim Rowland

If I can just take your first question Steve, about the mine call factor.

You mentioned Beatrix and that’s such a good example of where we were off the pace of where we wanted to be some months ago. But the mine call factor, if you break it down, it’s a very simple thing to manage if you pull the right four levers.

Those four levers are:
1) Making sure that your mining fragmentation is optimal, especially were you’ve got high levels of free gold, which we do have at Beatrix and many of the other shafts. So it’s optimising the blast fragmentation.
2) You need your current sweepings to be fully up to standard across all faces and you need all the standards in place, like blasting barricades and water control of course.
3) Old gold reclamation is a huge area that impacts mine call factor. In Gold Fields terms old gold is older than 12 months since it was blasted. This includes vamping areas to reclaim old gold. That isn’t built into our planning, so good old gold recoveries go straight to the bottom line.
4) The other one is ensuring you’ve got a good survey shortfall or positive survey discrepancy in your tonnage which will reflect that you’re preventing any significant underground lockup in tonnes, either in the stopes or in the box holes or cross cuts.

So, if you’ve got your fragmentation, your sweepings, your old gold reclamation, and your survey shortfall, you’re basically going to deliver on the planned mine call factor.

These are the levers we pulled at Beatrix to get back on track, and where we have got some challenges on certain other shafts, it’s exactly the same approach we are taking there.

SS: You don’t have a problem with fine gold then?

TR: Yes, we have fine gold which is linked to the fact that we’ve got a high free gold factor, and where we’ve got concentrates such as Beatrix, you actually see significantly higher gold recoveries from the Nelsons, which means you’ve got a lot of free gold. So that’s why your fragmentation has to be optimal. You don’t want to blast it as beach sand, because you’re going to lose a lot of that fine free gold. You want to blast it ideally in tennis ball size pieces.

SS: So these are all discipline and control factors I think that you’re pointing to.

TR: This is drill and blast quality at the face on a daily basis.
SS: Have you made any technological innovations using vacuum cleaners or not using water for cleaning?

TR: Steve, one of the things we do in the technical department is to make sure we’re right at the head of the learning curve when it comes to vacuum machines. We’ve got a huge vacuum fleet at Driefontein. We’re currently building that vacuum fleet up at Kloof where we’re looking at re-engineering certain vacuum machines to work in hydropower environments such as at Kloof four shaft. So yes, we’re building up the vacuum machine fleets to leverage that position on old gold and we’re always trialling new technologies such as new blasting barricades. If there’s a leading technology available to help gold recovery, Gold Fields is either using it or looking at using it.

Vishnu Pillay:
Thanks Tim.

Steve, there’s a slide in the pack that shows shaft infrastructure for South Deep. The twin shafts, let me read it out for you, Steve. I’m a few years younger than you.

Steve, the name plate capacity for the twin shaft complex is 175,000 tons per month. (That is for the one shaft that is currently in operation).

The vent shaft, when completed, will give you an additional 195,000 tons per month. This is name plate capacity.

And then South Shaft, it will give you an additional 150,000 tons per month when fully operational. It is now at 60,000 tons per month.

SS: Is that reef tonnage or total tonnage?

VP: Total tonnage. Reef plus waste.

SS: Could you give us an estimate for what you think realistically the reef hoisting tonnage will be? In other words what percentage of your tonnage is going to be waste and which is going to be reef?

VP: Let me just confirm with Stuart. It is about 40,000 tons of waste and the rest is reef. Stuart?

Stuart Allan: Yes Vishnu, at full production South Deep is based on 330,000 reef tonnes hoisted per month and another ten per cent or 40,000 waste tons hoisted per month. So the twin shafts, with the current 175,000 tons per month plus the future 195,000 tons per month, will hoist 370,000 tons per month. Anything else from South Shaft is incremental, is additional.

SS: That leads to the obvious question of why you are designing a 330,000 process facility, bearing in mind that you said on Friday I think that this is a tonnage factory.

VP: Steve I did mention earlier on, we are currently in the process of looking whether we should take it to 430,000 tons, because that would seem to be the obvious decision to make. I think before that decision is taken we just need to holistically look at what are the optimisation protocols that we need to follow with respect to Kloof as well. Having said that, the design was meant for 330,000 tons. In all likelihood we will be revisiting that number going forward.

SS: Just one last question, a quick one. Can you just remind us if you mentioned it and I forgot, when you would make that decision between 330 and 430?
VP: Feasibility with respect to the plant optimisation should be completed by November of this year. This calendar year.

Question 2
Shane Hunter, BJM

Good morning, Shane Hunter from BJM. First of all, just a question for Tarkwa. You mentioned there is going to be some improvement with the rolls crusher coming on stream. Have you got an estimate of what you expect to be extra recovery and also the South Deep again, also to do with the mine call factor. You seem to have gone up from 91 per cent, to 100 per cent. I wonder if you could just explain what’s behind that because it sounds like that could be a little bit optimistic.

Tim Rowland: First of all the additional primary crusher is at Damang. [overtalking] the high pressure grind rolls? And the question was what kind of impact we think it might have on the recoveries?

Nick Holland: Let me help you out. Shane, it’s based on the initial studies we’ve done. It should be between five and 10 per cent. We’re pretty confident on at least five, but we could get as high as 10. We will know once we’ve finished this bulk sample. There’s a bulk sample of 1.5 million tonnes we’re going to run through the HPGR, starting the end of this month, and we will take about 2 to 3 months to process the bulk of it, and then we will have a good idea. But all of the initial studies we’ve done, plus desktops, indicate that five per cent should be at least the recovery upside we get, with potential for 10 per cent. So if this works, what we will do is we will roll it out onto the north heap side of Tarkwa, but we will only make that decision once we’ve finished the pilot. I would think that we would probably make that call before the end of the financial year.

SH: Okay so to confirm that excludes the tons going through the CIL plant then?

NH: Yes absolutely. It’s designed to improve the recoveries through the heap leach, which is run as a discreet circuit separate from the Tarkwa mill. We do about 800,000 to 900,000 tonnes a month through the leach pads and, as you know, we do a million tonnes through the mill. So this would be improving the recoveries of the tonnes going through the pads. Okay. The other question for Tim was?

SH: Okay, that was to do with the mine call factor for South Deep. Your understanding here has gone up to 100 per cent?

TR: I’m actually going to hand you over to the mineral resource manager for South Deep, Michael Cameron. That’s not a hospital pass, so I would just like him to answer that one. Mike, if you like to answer that.

Michael Cameron: Thanks Tim. Yes, 12 months ago at South Deep we introduced a new modelling process and the average MCF since that period is running in the high 110s. The contribution from grade reconciliation appears to be about 10 to 11 per cent, so we have a slight underestimation of our resource, which we are currently looking at rectifying.

Question 3
(Speaker not identified)
I just wanted to find out the impact on the reserve and resource estimates from the dramatic increases in the electricity tariffs in South Africa, how robust are the South African reserve and resource estimates?
**Tim Rowland:** Well of course the Eskom price increases in South Africa have had a big impact on the power tariffs, but I think, what I hoped to show earlier, to a lesser or greater degree, the higher gold prices that we’re declaring at have largely offset the increased power tariffs, the consumable input costs and the additional wage costs. Yet it’s a significant increase in input costs, no doubt about that. But I think the numbers show resilience against that, especially at a higher gold price.

**Speaker:** If the gold price were to disappoint and to range between say 800 and 1,000, rather than above 1,000 what would be the impact of the power tariffs?

**TR:** Bit difficult for me to unpack and quantify that right now, but what we have included in the technical short form report is a sensitivity analysis on the reserves at plus minus five and 10 per cent and plus 25 per cent. So if you just reference that, I think that would be a good indicator of the sensitivity of the reserves to those changes.

**END OF TRANSCRIPT**