



**BHP BILLITON**  
**BASE METALS BRIEFING 10TH OCTOBER 2002**

**Mark Lidiard**

Good morning and welcome everyone to today's Base Metals Presentation, good morning here in London, Johannesburg and those of you dialling in. We've got a few more expected to come but I guess we'll get cracking as everyone's here ready to go. Before I hand over to Brad Mills, I would just like to highlight a few upcoming events in the diary. Firstly, that this presentation will be repeated again in Sydney next week on Tuesday and then we have the last of our CSG presentations for this year on Petroleum and that will take place in Sydney on the 8<sup>th</sup> November and again here in London on the 11<sup>th</sup> November. The last point is our Q1 Results Conference Call will be on 31<sup>st</sup> October, given it's the first quarter we will actually be starting in the morning in Australia, so it will actually be on the evening of the 30<sup>th</sup> here in London, although we will repeat it the next morning for those who don't quite want to stay up as late as it's likely to be. So on that note, it's a pleasure today to welcome Brad Mills, President of the Base Metals Division here in London. As always I would like to thank Brad and his team for putting this presentation together, without them we wouldn't be able to do these briefings and I hope you will agree that these are an important part of our Investor Relation's Programme, so on that note, Brad, thanks very much.

## **PRESENTATION ON HSEC MANAGEMENT**

**Brad Mills**

**President**

**Base Metals Division**

### **Brad Mills**

Thank you Mark, good morning ladies and gentlemen, good morning Johannesburg. This is the first time that BHP Billiton Base Metals has presented to the analyst investment community since the merger last year in July and we are very pleased to show you what we think is a very positive story for the long term, despite the current state of the Base Metals markets themselves. I am Brad Mills, the President and with me today is Ken Pickering, who is the President of our Base Metals Development Organisation and he will talk about some of our growth strategies and opportunities. Also, John Crofts who is our Vice President of Marketing and he will go through the Base Metals marketing programme with a little bit of a sense of what's happening with the new marketing model and our approach to the market. And also this morning, with me and hosting the Johannesburg end of this talk, is Philippe Monier our CFO Philippe. Are you there this morning? Thank you Philippe.

The format for today's talk is that we will talk to you for roughly an hour, we do have a couple of videos that we are going to throw in there, so you don't actually have to listen to me for that whole amount of time, I hope to make it a little bit entertaining. At the end of the formal presentation, we will open the floor to questions from both here and in South Africa and then following the questions when we run out of interesting questions, we have a final video that we hope will make your day a little bit more interesting for you when you leave. There will also be, for those of you who can stay, an informal lunch and there will be an opportunity to meet some of the other members of the Base Metals Executive Team who are here as part of the LME proceedings.

The basic topics that we will cover in our presentation are shown on this slide. The presentation is really structured around what differentiates BHP Billiton base metals from other base metals companies or the large base metal divisions of other large diversified mining companies. I will briefly cover at the beginning of the presentation how base metals fits in with the rest of BHP Billiton, most of you probably have a good sense of that already, but I will just touch on it very briefly and then following that we will give you as much as an in-depth look at each one of these key differentiated areas as we can to give you a true

sense of what we are trying to do with this business and where we are likely to take it in the future.

This slide here really shows how we fit into the BHP Billiton world, base metals is one of five major businesses represented on the executive committee of the parent company, the others obviously you are well aware of are petroleum, the carbon steel raw materials group, aluminium and the thermal coal group. The two pie charts show base metals contribution in terms of how much of the asset base it represents and last year it represented roughly 20% of the asset base of the total business and on the right you can see it's EBIT contribution which was about 6%, I think the slide is kind of illustrative of one of the things I know that Chip Goodyear and the rest of the Finance Team has been talking a lot about which is the value of the portfolio diversification and I would draw your attention just briefly to Petroleum which represents 14% of the assets yet contributed almost 30% of the EBIT last year in a better pricing environment than base metals experienced and the Carbon Steel Materials Group which was representing about 14% of the assets but also contributed very substantially to EBIT and we would expect over time as the price cycles of the various businesses rotate that those relationships will flip and that is really one of the core elements of the BHP Billiton Portfolio itself in terms of providing stability of cash flow needed.

At BHP Billiton Base metals health, safety, environment and community in as a core value for us, it's one of our critical management focus areas. We start all of our meetings by talking about health, safety and the environment and today will be no exception. I have a very strong belief that if you can't manage safety, you can't live up to your environmental commitments and you can't manage your community relations, you can't manage a business at all. You can see from this slide that our HSCE management is built around four key foundations. The core values are the BHP Billiton charter, which starts with an over-riding commitment to health and safety, environmental responsibility and sustainable development. We have detailed 21 elements, HSC corporate policy and audit programme. We aspire for all of our assets to be ISO 14,001 certified in terms of environmental performance and today in base metals we are well along the track with Escondida a fully certified ISO 14,001 site and we expect to receive full certification for all of our sites by the end of this year. Zero harm is a core philosophy for base metals and for BHP Billiton. By zero harm what we mean is that every employee goes home every day safely to his or her family, we do no permanent harm to the environment, our communities are better off from our presence and from having been there.

Finally in base metals one of our core strengths is mine reclamation. A single example which really looks at the Stanley mine which is one of a number of assets that have completed their economic life and are now going through the reclamation phase in base metals., This actually happens to be an uranium mine in Canada, but it has undergone a very significant restoration as you can see from the before and after slides and we are very proud of the effort that has been achieved in a result of achieving this area and the communities in which these mines have operated are very happy with the results they are seeing it as well.

We have a world-class safety programme that strives for perfection. If you look at the graph on the right you can see our position benchmarked against a number of industrial companies, they are just listed alphabetically so we are not actually showing you where anybody else fits on that graph other than BHP Base Metals. Today we have a loss time incident frequency rate on a rolling twelve-month average of just over 1, at 1.29 which represents 1 loss time injury per million man hours worked. We also focus a great deal on community relations, we have established a number of foundations at each of our major locations and those have been funded from the cash flows of operations.

The primary purpose of these foundations is to help the communities build long-term sustainable economic activities in those communities that can last well beyond the lives of the mines themselves. We also have in all of our major sites what we call Community Consultative Councils, those are represented by things like the Tintaya Dialogue , which is a open discussion group involving the senior leaders of the local communities and our mine management to talk about what are the core issues that impact them, what are the things that we are doing that they don't like, what are the things that we are doing that they do like, how can we help them, what are their core issues about being neighbours during operations. These have been very successful in dealing with the very large number of subsistence families and communities that exist around some of our mines in the very remote Indian parts of South America, where you can see from the picture that most of the population live at subsistence levels.

I would like to highlight just briefly the La Granja issue. We took over an exploration programme at La Granja that had relocated 250 families away from what was then perceived to be a development project that would proceed. We did an economic evaluation of that asset and came to the determination that it would not turn into a viable mine. As a consequence to that we are restoring all those families to their original land, restoring the environment and ensuring that they have a long-term sustainable community that cannot be in any way impacted by the activities of exploration that was done in that area.

In the following slides, I will now give you an overview of our business itself. The first slide really highlights our locations, we have two headquarters, the first is located, the Base Metals Headquarter is located in Houston. I won't explain that right now but over lunch if any of you are interested I will give the logic which is always fun and then also our Marketing Organisation which is located in The Hague.

We have ten major operations worldwide From the small Selbaie mine that is near completion in Northern Canada to our very large operations in Latin America There is Pering, again a very small mine that is near completion in South Africa and Cannington, a very significant silver lead zinc operation in Australia. And beyond the operated assets we also have a number of important joint ventures, and these are Antamina in Peru, Alumbrera in Argentina and Highland Valley in Canada.

In addition to the operating assets, we have a number of work out assets. These are assets that have been accumulated by the various companies, these are Billiton or BHP or MagmaCopper or Utah International, that actually comprise where this company came from and we are in the process of working those out of the portfolio., They include things like the Smith Ranch which you will have seen the announcement on the sale of the uranium part of the business earlier this year, it also includes things like the Lanping project in China which we worked on last year and a few others that we are working out of the portfolio.

And then finally in blue, we have a very substantial suite of growth options that have very high quality that we will highlight in today's presentation for you. The next thing that has just come up on the slide, you will see the yellow areas which really represent the concentrate and metal flows out of South American operation which primarily go to Northern Europe and to Northern Asia and similarly from Cannington similar kind of trade flows, this is not 100% of our trade flows, but probably represents 90% of the trade flows from our businesses today.

Very briefly let me touch on our Management Team, its majority Houston based with Bruce Turner being our Senior Representative in Chile and as I earlier mentioned John Crofts who is located in The Hague. This is a very experienced management team, it has more than 150 years of combined experience in base metals and copper mining. In addition, this team has been directly involved with or responsible for all phases of the Escondida development, the Antamina development, the development of Cerro Colorado and the Tintaya privatisation and redevelopment project.

Base metals is a large business in all of our four primary metals, in addition to the ones that you would be familiar with in terms of copper, lead, silver and zinc. We also derive by-

product revenue from the production of gold and molybdenum from our various base metals mines.

I will now turn to last year's financial performance and just wish to highlight a few things. The first thing to notice is that all of our operations were EBIT positive last year at 69 cents copper with the exception of Tintaya which has some unusual circumstances really related to the shutdown that we took in that operation. I will give you more details on Tintaya and what is happening there in a few minutes. So total profits from operations were \$299million at a copper price of 69 cents.

We also had on the next piece above the line, reporting one significant non-occurring breakdown that was not taken below the line and this was the write-down of the La Granja exploration programme which had been capitalised to \$41million and that was taken as a before profits, above the line write-off. So if you look at that our real true EBIT earning power after total overheads was about \$250 million EBIT at 69cent copper which gives you a sense of power of earnings that we operate the business. And we also had some below the line write-offs last year that represented the cleaning up of the portfolio. These primarily related to the final write-down of assets in South West Copper as we reached final views on how we were going to use those assets in the future and they unbundled the very large reserves that had been originally assigned to those assets. There was also some additional provisions made for the entire closure for the twelve months of this year and a few other minor elements as well.

Let me next take you through our business strategy. On the left you can see the major elements of BHP Billiton's business strategy as outlined by Brian Gilbertson and his strategy piece earlier this year, Mark I think, April thanks. And then on the right elements of the base metal strategy and that large collection of arrows really reflects an attempt to really line up where we are going with base metals with the strategy and we have aligned ourselves with every single one of the elements except for the petroleum element which we find a little bit difficult to at least justify in significant efforts in that direction. But again, I think it's important for us to have what we call strategic coherence, an alignment with the overall BHP Billiton approach and portfolio. We will highlight a number of these in the following slides and in the rest of the presentation.

The first thing I want to talk about is our role in industry leadership and I know that this is probably on all your minds, this is LME week and everybody is trying to understand the future of the base metals market in some detail, but I want to start by taking you back to the very dark days in November last year when the copper price was 58 cents per pound. The

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chart on the upper right shows the basic relationship between copper stocks and prices as existed at that time. We could clearly see the possibility of creating a mountain of copper similar to the period of 1982 – 1984, the chart on the lower right shows what's actually happened post November and post our decision to reduce production from even our low cost operations. You can see the divergence that occurs in copper which is the orange line from the rest of the base metals in terms of inventory. Inventory has continued to build through May of last year despite the cuts that occurred in January and the fundamental reason for this was the flow-out of the concentrate pipeline which points to the economic extent as smelters produce regardless of what the copper price is.

By May the pipeline inventory was dried up and you can see the stabilisation of copper stocks and their slow decline that has occurred since then. Today we think the market is in balance. We see very slowly declining stocks but there is no build-up, which is fortunate. I think John will certainly touch on a number of marketing issues, but we see very robust growth in Asia and very weak markets in Europe and the US with a net kind of flat balance, flat market in general today. Having said that we certainly think that the market is well positioned if there is a return to growth anywhere in the Western world over the next year or so. The chart on the lower right shows what's actually happened post November in terms of price. You can see that copper has outperformed all of the other base metals with the exception of nickel during that time period and we think this really reflects the market's view of a more disciplined and demand focused industry than existed maybe prior to November of last year.

Let me take you through some of the details of the actual production costs, this has been the subject of some confusion and I thought I would try and lay it all out once and for all so that there is no mistaking on what we actually did and what has actually happened. What the slide shows is that starting in January 1 last year we shut down the Tintaya sulphide operations. That's 90,000 tonnes of metal that were taken off the market effectively as of January 1<sup>st</sup>. Also from the period of November through December last year, that's going to be a reduced total Escondida by 16,000 tonnes of metal. We took another 140,000 tonnes of metal out of Escondida primary production during calendar year 2002 which is partly offset by the planned ramp-up during the last two months of this year of Escondida Phase IV which is about 98,000 tonnes during the last two months of this year. And so the net effect is that Escondida will produce slightly less copper in total in calendar year 2002 than it did in calendar year 2001.

Going forward we have made no commitments about what we will do with production cuts beyond December 2002. But this slide makes the obvious point, our strategy is to only produce metal for which there is true market demand. This philosophy will guide our approach as we look forward to what we think the first half of next year looks like in December of this year and we will make a decision at that time about what is an appropriate production rate to operate our major operations. We have had a lot of questions about well, you'll surely run Phase IV at full production and add 40,000 or 400,000 tonnes additional metal market that is not the case. We will simply look at what is the true demand picture and we will try to match our productions to what we think that demand is.

Turning to the major assets – this is just a reminder of where Escondida is located, Escondida is our flagship asset and we will obviously highlight it and the other major assets in the next few slides. A couple of quick pictures just to give you a reminder that it's in the Atacama Desert in Northern Chile. This is the world's largest copper mine, it is a very phenomenal asset and moves more than a million tonnes of rock every day, when Phase IV is fully commissioned and if we have a copper market that will support it, we can produce up to 1.4 million tonnes of copper per annum out of this one asset. Ken will show you some interesting issues around the flexibility that this asset has in terms of its production profile, so it's a really important asset in terms of our overall demand management strategy.

The other thing to note is that if you look at the chart on your left it gives a little bit of EBIT history of Escondida and also highlights the power this asset has to earn when we have a little bit better copper prices than we are seeing today. Keeping in mind that those EBITs were derived from production that's probably less than the half of the peak that we will be able to achieve.

Some other things I would like to highlight on this slide is the reserve, the actual mining reserves today are over 2 billion tonnes of ore in the ground and then the resource table which is shown on the right, shows that there are resources that extend to more than 4 billion tonnes, some of these are subject to some of our growth options such as the Escondida sulphide leaching project and again Ken will highlight more on what we can do with some of these resources going forward.

I will turn now to Escondida Phase IV, the first half of this slide shows what we committed to when we originally started this project more than two years ago and we were looking for world-class safety performance during the building of this asset and I will touch on the results in a minute. There was \$1.045billion CAPEX in a 22 month construction period, the facility designed is 110,000 tonnes per day capacity. Other facilities, very substantial

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changes to our crushing and conveying system to feed both of the two concentrators, an expanded mine fleet and a slurry pipe line that was doubled to allow us to take the extra production to our port.

The bottom half of the slide shows what has been accomplished to date, we have achieved mechanical completion on the facility, we have taken all of the mills through their 48 hour running test and we shut them down for the normal 2 week shut down after that running test to re-torque all of the bolts and to check all of the punch lists in terms of final construction. We expect to be producing first concentrate really from today onwards, I think. I am really waiting for a phone call, it could be this afternoon maybe, it could be tomorrow morning but we are very, very close. We worked 32 million man-hours on this project and every single one of our contractors and employees went home safely to their families.

We have very strong expectations about the performance of this facility once it starts running, the gear is the most modern that we have ever installed in any one of our plants. It's a beautifully laid out facility in terms of its maintainability and its operability and we hopefully have put every single lesson that we have learned about how not to do it in the last 20 years into this facility. So we would expect hopefully a very smooth ramp-up in the ability to achieve full production quite rapidly. We will talk about it a bit more but in the world of Escondida this will become the lowest cost source of copper concentrate for us and when we make decisions about production this will probably be the anchor facility for Escondida and we would probably take shut-downs out of the Phase 3.5 or earlier Phases which were less efficient and small in gear.

What I would like to do at this point in time is show you a video that gives you a real sense of the size and scale of this project.

*[Presentation Video – Escondida]*

That gives you hopefully a little idea of the size and scale of the Phase IV project. For those of you that have never been to Escondida, the inauguration will occur just prior to the CESCO meetings in Chile in April of next year and I am sure if you contact Mark you can probably arrange a visit up to the site at that time.

Turning to some of our other great assets, I will highlight them quickly. Cerro Colorado, north of Escondida in the first region has been a tremendous success story. This is one of the first mines to attempt stand alone commercial leaching of sulphide copper ores and has a great record of production growth and cost reduction. Today this operation is at its peak,

producing about 150,000 tonnes of metal per annum at less than 40 cents a pound with reserves that should allow it to continue for the next 15 years. And also there is some potential for additional exploration in the immediate vicinity.

Turning to Tintaya in Peru, moving further north along the Andes, this is also an interesting story for us. This was originally a state-owned operation that was privatised in the early 90s, I haven't shown its growth profile but it's gone through very substantial growth since that time.

One of the issues has been a very old mining fleet at this operation most of the equipment there pushing 100,000 hours of operations use and quite costly, so we elected to shut it down as one of our curtailments of production last year. At the same we had already committed to building the oxide project and we continued and completed and commissioned that plant. The oxide project, just to give it a little bit of scale, 34,000 tonnes of nominal capacity per annum and again at a very low cost, its less than 40 cents, it was about 35 cents a pound.

That facility has ramped-up essentially within one month the full capacity and we think we will be able to de-bottleneck that fairly quickly to about 40,000 tonnes per annum capacity. At the same time that we shut down the sulphide operation, we also continued our drilling capacity at Tintaya. Tintaya has very significant prospective resources in the immediate vicinity and we have had very effective success in proving our additional reserves and we will make an announcement about this when we complete all of the requirements [ ] probably early next year.

What we see is that those resources will allow us to restart sulphide operations with more than 12 years of life which match those of our oxide operations, we have also found a sufficient additional oxide ore to allow us to look at expanding the oxide operations to around 60,000 tonnes per annum in production and it would bring the total capacity of Tintaya of up to about 150,000 tonnes of metal.

We are also re-capitalising the mining equipment and have taken all of the low hour gear from our Nevada operations and relocated them to Tintaya as part of what will be a much lower cost new operation which we call Nuevo Tintaya, which we will start at the point in time that we will feel that the market can accept that copper without creating any excess inventories.

I would also highlight Cannington., Again Cannington is located in Queensland in Northern Australia, it's an underground mine, roughly 6,000 tonnes per day, very high grade silver lead zinc ore being processed and shipped from Townsville. Again there's a very significant success story. You can see the ramp-up in silver production, matched by the EBIT. Today this operation earns around US\$100,000 million EBIT per year. Again on a 6,000 tonnes per day mine that's a very significant achievement. We would expect production will continue to grow somewhat from here. We are looking at an expansion into what we call the North Block which would allow us to increase the mining rate and potentially achieve another small increment of growth and it has reserves again today for about 20 years of production going forward.

Finally just touch on one of our newest major joint ventures, which is the Antamina project. Antamina in my view is what I call a diamond in the rough, it needs a bit of polishing, it's a brand new operation, it's located in high Andes of Northern Peru and very difficult technical challenge in terms of where it was built and where the mines are, at more than 4,500 metres and it's got a number of significant technical issues that are being overcome by the operating groups and we are nearing financial completion on this in terms of going non-recourse with our financing facilities which we will expect to happen either by the end of this year or very early next year. We have essentially completed all of the completion tests on the operation, and so we look forward to this operation really starting to contribute significantly in the future as we iron out some of the teething pains that major new operations go through in their initial start-up phases.

Now let me turn over to Ken Pickering who will take you through some of our growth options and I would draw your attention to the disclaimer on the front of this which I am required to make which is – none of these projects have been approved by the Board and their timing is completely uncertain.

**Ken Pickering**  
**President of Base Metals Development Organisation**  
**BHP Billiton**

**Ken Pickering**

Thank you Brad. Well perhaps the suite of growth projects might best be called the armoury because they are very substantial and very robust. I would draw your attention to the map, that is an aerial view of the Escondida infrastructure and perhaps, just to explain briefly in the centre there of the diagram and I am speaking here for the benefit of the South African audience, is the main Escondida pit which is currently moving between 230,000 and 240,000 tonnes a day of ore and as Brad mentioned earlier about 1 million tonnes per day of total movement.

So if you can just imagine that you've got a dozen big 50 plus to 70 yard mining shovels and a fleet of 100 trucks working 365 days a year, 24 hours a day, this place never closes except for elections. We have the Escondida in the red is the upper part of the diagram, 5km north of the main Escondida pit today. What we are envisaging here, this is a world class deposit., It's about some 580 million tonnes as indicated there, about 1.3% copper, what isn't indicated is that there is a high grade cap of about 200million tonnes of just slightly less than 2%. The advantage of this really is when this mine comes on, it will not have a new concentrator, it will feed either or both of the two existing concentrators So it will add something like about 80,000 – 90,000 tonnes a day of higher grade ore that would come from the main original pit.

So it's really a no brainer as far as the development goes., It's a stripping operation and mining, crushing, conveying and in addition to the ore, the sulphide ore, it has oxide and sulphide, low grade sulphide material. The situation there also indicates with the green arrows that in the future the oxide ore and the sulphide low-grade ore could be delivered to large pads, which is the light blue area to the right of the screen. I also want to talk about the sulphide leach project. This is really what best to do with 2.3 to 2.5billion tonnes of low grade sulphide material that grades about 0.55% copper and that sulphide copper is a mix of various types of sulphides., The process is really very simple taking from the mine after blasting from the mine, but no crushing. Leach pads, sulphuric acid , copper sulphide recovery, solvent extraction and electro winning to produce copper cathode. Our initial

capital investment here is estimated at some \$500million with the cash cost of around 35 cents a pound, this is a long life operation.

You can see from the lower left the run of mine test work we have done, that's some 300,000 tonnes of two types of material that we have been testing for some period of time. We have exceeded our targets on the leaching recoveries over some 250 days and so we have had a good test year. If you look at the diagram in the lower left there now, you can see the production coming from the current oxide plant, some 150,000 tonnes a year, the oxide reserves start to fade away, you can see the indication of adding at some point in time the Norte oxide, but again as the grade falls in the oxide reserves, so does the ability to fill the plant which is why the sulphide leach fills the oxide tank up, plus there is a plan and a concept to move the facilities from Colloso and that 80,000 tonnes capacity electro-winning facility. So if you just take a look at the diagram again, then everything up to the top and to the the right hand side , is the increased production from sulphide leach for some 20 some plus years.

If I could just take a bit of a vision that you put a scenario out some years perhaps 4 – 5 years, you would see the ultimate situation with two large open pits, two large sulphide concentrators, two leaching operations and a huge solvent extraction and electro winning facility, which gives you outstanding production flexibility. You can move your material to various dumps, you can vary your cut-off grades, you can vary your mix of mineralogy, depending on what you had for hardness or for various types or ores. In this scenario here it would kind of the most rapid development that the team could do to develop Norte and the sulphide leach and would give you a peak of a little bit north of 1.5million tonnes of total copper both in concentrate and in cathode in 2005.

If you also can extend that and modify your production timing or your cut-off grades and do 1.4million tonnes a year for say a 5 year period and again you have got yourself flexing to what the market can take. Also 1.2million tonnes in a lower scenario, the lower right, for some 15 year. For the capacity in the lower left, one million tons of capacity for say some 30 years. And you can certainly switch from one million tons to 1.2 or 1.21 at any point in time depending on what the markets are and this gives you the flexibility to react to real demand. I think this is just a tremendously powerful scenario having the facilities I mentioned, the flexibility of two mines and being able to dial up or dial down, depending on what the market conditions are.

It is quite interesting to see at Escondida] that the day after one year's production cuts and you can see the high-grade stacks just on one side of the mine you know, running some

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fifteen benches down and it is just there waiting for when the demand is there to justify mining it.

Ok. We can move along then to talk about Spence. Spence is an outstanding deposit, It was discovered in the mid-90s, some 250 plus million tons of 1.2 to 1.3% copper. It is envisaged that there would be a leaching facility of both copper oxides and copper sulphides. Production is predicted at about 190,000 tons over the first ten years.

It has excellent infrastructure. For those of you that know the country, it looks a bit like moonscape on the lower right. That is an aerial view of the Spence entry tunnel, for bulk sampling. It is very dry with 5 millimeters of rain a year. But there is a highway that goes right there, a little bit to the left of where the entry is. There is a railroad system, there is a power line system and there is actually a water pipeline that takes water from the high Andes to the coast

We have the advantage here for Spence of having three operations in the area, Escondida, Cerro Colorado and Tintaya with results that people are going to build the technology. It really isn't going to be stepping up in technology with a skilled workforce. We can bring all the best elements to start this project, when the timing is right.

We estimate a CAPEX of something nearing \$50 million dollars and operating cost of 235 cents a pound.

Ok, with that, I would like to turn over to John Crofts on the marketing side.

## **John Crofts**

### **BHP Billiton**

**John Crofts:** Thanks, Ken and good morning ladies and gentlemen. It is my pleasure this morning to talk to you about the new marketing structure in base metals. I will talk a little about our sources of revenue, our major products and markets and how we are looking to align our marketing strategy with the business strategy that Brad has outlined.

Turning firstly to our sources of revenue in the business, there are six in total – gold and molybdenum are not depicted, but the four major revenue sources in the business are copper and silver and lead and also zinc. One of the features of the business of course is that copper is our principal source of revenue and one of the strengths I think, of the business, is the diverse applications of copper, in terms of its end uses and one of those strengths in fact relates to low price elasticity of demand for copper's principle applications. And this is a strength of the business. Silver has a competitive threat in the form of digital technology. Notwithstanding that, we have seen the silver fundamentals, in terms of supply and demand balance has improved over recent years, and that is a trend that we expect to see continued.

Lead is a bit of a one-product show, of course that is car batteries. There is an interesting development there on the technology side associated with 42 volt batteries, that a number of the world's major car manufacturers are looking at introducing. That would be a very positive outcome for lead demand if it were to be adopted.

Moving on to what has happened in the copper business, over the last 20 years. The clear story here is the emergence of Asia as the key source of refined demand growth. You can do the maths I am sure, but in 1980 Asia represented 16% of the total pie, it is now up to 42% and we are even seeing a new phenomenon now of course with a further movement of fabricating capacity within Asia, namely out of Japan and into China and to some extent India. This has come at the expense of Europe, particularly the CIS and former eastern bloc but also to some extent Western Europe, and of course North America. I should point out that this doesn't depict end of product use consumption and actually depicts fabricator demand and of course, there is trade in products containing copper all over the world.

So having said that it is our principle product and its migrated, fabricator demand has migrated to Asia, you can see in this slide the sort of growth rates that we have seen in the industry over the last 20 or 30 years. It is a busy slide, I appreciate, but if you focus on the

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bold black line that is the world growth rate for refined demand for copper – I think it is well known in the industry that industrial production tends to be the closest proxy for the refined demand growth rate. But you can see very clearly what has also happened in terms of the emergence of China over the past ten years and that is a trend that we see continuing with the enormous market potential and of course also very low labour costs in China, it is a very attractive place for fabricators to set up their businesses.

Turning now more specifically to our business and the products in BHP Billiton's base metals business, our largest product base is in fact copper concentrate. This is a distinguishing feature of the BHP Billiton in terms of comparison with our peers. You can see on the chart on the slide there now, the equity ownership percentage of BHP when compared with its peers in terms of our position in the copper concentrate production. Perhaps more telling and more marked is the bottom graph which depicts it on a marketing rights basis and the takeaway from all of this is that we are somewhere around 35% and in fact with Escondida phase 4 it will be a little bit more than that of the traded custom concentrate market, that is obviously a very substantial position for us. The sources of that concentrate from the marketing rights basis are Escondida, Tintaya and the owners at Highland Valley took a decision to move to a joint marketing arrangement and close down the previous project based marketing team. Antamina is a potential source of product for our group as well.

Elsewhere (and less well-known) we are also a big player in lead concentrates and in fact we are by virtue of Cannington's ton's position, we are the largest player in the lead concentrate market. We have been taking recently a conscious decision to try and decouple or delink the lead concentrate negotiations from the zinc concentrate negotiations – historically they have played out in conjunction with one another. But we strategically are now moving to delink that.

Copper cathodes is something we have a small position in, but we are strategically looking to grow that position. At the moment it consists of the Escondida oxide output, also the Cerro Colorado output and more recently, as Brad has outlined, the start-up of the Tintaya oxide project. In terms of the traded market we are a relatively small player. Zinc concentrates are not so important to us. Cannington has some position there and Antamina will become a larger player there, but we are not currently involved in the marketing of that although we do have the equity interest of course. But silver is a large position, Cannington produces in the order of 30 million ounces of silver. It is the largest single source of silver mining in the world. It actually reports of course as a bi-product in the concentrate



principally the lead concentrates, and we are not actually marketing the silver but we do have it as an important revenue source.

What this next slide shows is the structure of the industry, or market structure for our two major product groups, concentrates is up there now. Brad made some references to our efforts for initiatives in the industry leadership sphere and this is an important area of interface because one of the aspects of the current market structure is that we do not deal with the end users – fabricators – perhaps I could even term them real customers, in the way the industry structure is set up. We are in effect selling our material, our concentrates, lead, zinc and copper, to the custom smelters, who perform a processing function and the price, the LME price, is as pass-through with the deduction for their processing services. That screens us, or shields us from interacting directly with the fabricators, the real customers and this is a facet of the industry structures that we are focussing on quite closely because we don't believe it is optimum in terms of producers understanding the dynamics of the actual supply and demand fundamentals for the metals.

On the metal side of the business, and where we want to take the overall business to ultimately, looks like this:

Copper cathodes are sold directly into fabricating mills, the fabricators who turn them into useful things – copper tube and copper rod, which is further extruded into wire etc.

In order to pursue our objectives in the marketing arena, a lot of effort has been put into over the last twelve months, reorganising the marketing structure in BHP Billiton. This is not unique to base metals, it is across the whole company and I will just pause a little bit to talk about the objectives of that new marketing model.

Previously, in Base Metals we had our marketing teams embedded in the assets, so embedded in Escondida , embedded in Tintaya , embedded in Ok Tedi . On the Billiton side of the equation, the principal base metals interests were in fact the assets arising from the Rio Algom purchase and consisted of a joint venture, minority joint venture positions, which didn't include any marketing rights. So a substantial task over the past twelve months has been to address that issue to pursue the marketing rights for those joint venture interests and then to centralise and co-ordinate the properties for which we already held the marketing rights into one centralised book. And the centralised structure that goes with that of course is located in the Hague, and that is a structure I will talk a little bit more about a little later in the presentation. The other facilitating aspect of this model, is what we call BMAG, which is BHP Billiton Marketing AG. This is our Swiss based vehicle through which

the controlled product flows. So in effect the assets are selling their output to that vehicle and then that vehicle sell themselves to end customers. The beauty of that vehicle in a base metals context is that it can in effect act as a merchant and can take in third party material in a competitive manner by using the LME hedging opportunity in terms of forward curve capture of contango. So that is a new facet of the business that we are putting in place.

What does this new organisation look like in the Hague? It consists of a team of about 42 people worldwide. About half of those are located in the Hague. You can see from the structure of my direct reports that the new marketing model in BHP actually has marketing as a business, in its own right. The price risk management and the finance positions reflect the changes that have occurred. This organisation has been built from scratch in the last twelve months, because Billiton did not have a lot of access to marketing rights for – it didn't have any access to marketing rights for their portfolio. There was no Base Metals presence in the Hague. The Hague office was an aspect of the former Billiton organisation. So we have put a new team together there. It is complemented by a very strong regional presence which was a feature of the old BHP marketing approach and it also still has very strong linkage back to our major producing assets with the Santiago presence.

The other aspect of the new organisation is a new working environment. You perhaps may have heard from our other CSGs about the paperless office and if you look closely at the photo on the slide there, you will see it. 'A challenge that Mr Kloppers has set for us all'. We have deliberately organised that way to facilitate knowledge-sharing among, across the marketers, but it is a key facet of the new organisation.

Just going back to the regional presence, particularly in Asia, I think you can appreciate that that is the largest and has facilitated the strong Asian franchise being built and I think, going back to my earlier comments about the demand shift for copper that has occurred over the past twenty years, that is a very important facet of our structure. Houston is also shown up there, as Brad mentioned, myself and Bruce Turner are the only two members that sit outside Houston, but there is very close and constant communication between the Hague and Houston.

This last slide really tries to encapsulate what the fuss is all about in terms of the new marketing model and the team that has been put together and the strategies we are pursuing. It is a key cornerstone of the CSG structure that the increased profile of marketing is deliberate. And it is deliberate, because what we are trying to do is align our business strategy and our marketing strategy with a focus on the market. This is not about dig and

deliver, it is not about produce at maximum capacity, and dump the stock on to terminal markets or into warehouses – it is about a focus on what Brad has termed, real demand.

The principle strategy initiatives that we are pursuing in the marketing group flow directly, or cascade from the strategy tree that Brad outlined, earlier in his presentation and I have already talked to some of them. But a focus early on, getting control of our product – we call that liquidity – and particularly with our joint venture structures that I mentioned. That has really been a key focus and continues to be a key focus. As I mentioned, we also have the BMAG vehicle, which facilitates the aggregation of third party material both concentrates and metal and we won't be active in that area until we have put in place our execution back office systems and risk management systems and that is the work that is occurring at the moment in the Hague and across the other CSGs of BHP Billiton. The other aspect that I mentioned earlier in the presentation is this focus on ultimately getting a greater proportion of our production units in the form of metal, that doesn't need to be in a physical sense necessarily. It can occur in a virtual sense by for example, tolling concentrate into metal and getting those units or getting marketing control of the resulting units. So we are pursuing, or plan to pursue some strategies aimed at achieving that objective and that is a big driver of the new marketing model.

We have also continued to focus on the industry promotion aspect. The International Copper Association is something that we are a major member of – I think our total spend in that arena is in the vicinity of \$6million dollars a year post Escondida phase 4. That is substantial investment in the future of the metal and therefore it is important that we spend time on making sure that investment is well made. So that is another focus.

So that covers the marketing area, so I think now Ken I hand back to you to talk about technology.

## **Ken Pickering**

### **BHP Billiton**

**Ken Pickering:** Thank you and then to pick up this next piece. With a real trend, the message here is that it is a commitment of the plan and the driving sense of development for BHP Billiton to produce an increasing amount of our production for levels of copper through leaching of primary and secondary sulphides. Currently the BHP Billiton areas we control are about 300,000 tons of copper as cathode in our operations in Escondida and Tintaya. With the addition of the sulphide leach at Escondida and the expansion of Tintaya, that would put us over the 600,000 ton capacity and we could be there in that five-year time frame if things were justified.

In that context then, research and development is really focussed in generating breakthroughs on leaching of the primary secondary sulphide ores. We have a strong staff in two laboratories in Johannesburg and also in Newcastle in Australia. We are really on the breakthrough there on the bio-leaching processes. We grow bugs, it is like a laboratory there. I mean there is all manner and shape of various bacteria that have been worked in certain conditions of high temperatures, low temperatures. We are in a relationship with the world-class universities both in Australia and in Canada. With the CSIRO and AMIRA in Australia.

We really have a full scale lab with the old mining operations of Magma in the United States where we actually are clearing out, bleaching on the dumps that have been partially oxidised and we are doing a lot of things to measure various control aspect of those things. The holy grail here is of course is chalcopyrite leaching,

We have Alliance Copper, which is really a joint venture between BHP Billiton and Codelco. We have committed to a \$60 million pilot plant to be built on the Chuquicamata site. It is a plant that is under construction now, 30% complete. It is really the idea to treat dirty concentrates and in the case of Chuquicamata they have sectors of their mine that have high arsenic. The Mansa Mina deposit is very high arsenic and it is a niche market. This pilot plant is capable of producing some 20,000 tons of cathodes per year. We should have it inoculating some time around May or June of next year and with the idea of about October to start the actual process.

As I mentioned the direct spending in R&D is about \$7.5 million dollars per year with BHP Billiton and our half on the copper Project is about \$30 million per year. That just shows

some of the facilities. Upper left is the Alliance facility under construction. Lower left is the large scale operations we have for leaching cribs and columns in Cerro Colorado. And the right is the Pinto Valley operation that we have closed down in the South-west US but running it here for the full-scale leaching of the chalcopyrite heaps.

**Brad Mills**

**BHP Billiton**

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**Brad Mills:** Ok, we are in the home stretch here. The next piece is really to talk about the way forward as we see it today. The slides that you see here represents a third party view of the copper cost curve and shows where we believe our operations sit along with everybody else's operations. We are not going to opine in terms of the accuracy of the numbers, but we assume the errors are equal across everybody in the system. But they do show a couple of other important things. The first is that the green bar we draw your attention to is where Spence would sit in relationship to the other outsets and also where [Tintyre] will move to when it has reached from its position and somewhat high and in the cost curve, in the middle of the cost curve. And the key important thing that I might note on here is that when you look at the lower cost curve, which is the C3 cost curve, this is the total cost of production, including depreciation, interest etc, and what it demonstrates is that the capital efficiency of our portfolio is extremely good. It is the best of any company in the industry that has more than one mine.

I also would just point out very briefly the yellow bars which may be difficult to see on the slide there. They represent the closed operations, Pinto Valley and, Robinson in Nevada and again represent for us, future swing capacity.

To kind of highlight this point, I am showing you a picture of some of our major mills. And what I would say about this point back to the issue of flexibility is that we have a total of something like 22 SAG and ball mills. Today, eleven of those are operating. So they obviously have different sizes and capacity. But one way to think about the way we will manage our production going forward, as demand becomes apparent in the marketplace, we can dial up or dial down that production very easily across the system.

Today our production is roughly a million tonnes of copper cathode and in concentrates in terms of equity. We have the capacity when we complete the build out of the Escondida Phase 4 to wrap that up and restart Tintaya etc, to ramp up to as much as 1.7 million tonnes of copper per year. So a very significant flexibility in terms of our overall production profile.

Very briefly, this is all you are going to get from me about price in the next slide. We don't intend to project short-term price variations. We do see that demand is still weak. At CESCO in Santiago in February, we indicated we thought that commodity prices had moved so well ahead of fundamental demand in terms of market speculation that IP would increase during the second half of this year and unfortunately we have not really seen that and prices have come back a bit in response to that in our view.

And we did know at that time that recessions had been double dip and we are certainly skating on the edge of that, wobbly at this point in time.

Our view is that the longer the downturn is now, the more competitors are stressed. The continued absence of new projects and discoveries will help the recovery, and when it arrives BHP Billiton people in Base Metals will be well prepared to meet that demand.

Hopefully you have some stance over the last hour of what differentiates BHP Billiton and Base Metals from other producers. We are best in class HSEC management, backed by real programmes and real actions. We have a clear strategy. A flexible production, optimising capital efficiency, maximising the value of our resources and increasing the portion of copper that we produce as metal. A low cost, high quality operations with a bias to open pit mining and leaching operations in the future.

We have an exceptional resource base installed today, that is going to be Cannington-Spence. We have unrivalled growth opportunities Escondida Phase 4 expansion and Tintaya. We have a centralised marketing model which co-ordinates our approach to the market and manages our risk effectively. We have a strong focus on the future in terms of commitment to technology and particularly in terms of leaching technology that will give us, we hope future growth opportunities, further low cost copper in years to come.

Finally, we have a very experienced value focussed management team who focus on operational excellence, continuous improvement to our six Sigma programme and a deep commitment to living the values to the BHP Billiton charter.

And finally we are really focussed on maximum shareholder value in the long run.

**BHP BILLITON**  
**BASE METALS BRIEFING 10TH OCTOBER 2002**

**Question and Answer Session**

**Jack Jones at CIBC World Markets:** Brad, I wonder if you could give us an indication of where your long term forecast for the copper prices are. I know when Billiton bought Rio Algom I think they were talking of 90 cents a pound. Has that now come down? And secondly we have had some comments out of Brian Gilbertson recently that acquisitions are back on the agenda. I wonder if you could comment on whether there is more value in the moment in acquisitions or in projects from the way you see things.

**Brad Mills** Sure. I think that when we look at the long term copper price we obviously have a price protocol that we use to really guide our no regrets capital investment decision approach to projects. I don't really want to share that as it is a bit of a competitive issue for us in terms of what we actually use, but I think the way to understand it is really about no regrets and I would say you could comfortably assume it is between 80 and 90 cents. On the final part of the question, on the issue of acquisitions, I think that is something we certainly think about a fair bit, Ken's guys certainly have screened all of the opportunities in the world and it's a fairly small universe. We do believe that the industry would continue to improve its structure if there was further consolidation. But it is also very difficult because most of the publicly traded companies have issues related to their assets – most of those that have US outlets have potentially significant liabilities related to environmental, long term environmental tales for some of these assets so it is a tricky one to try and create value. I think that the way my Vice-President of Business Development keeps reminding me is that acquisitions are a really good way to destroy value, and most of them do, so we are very cautious in that area, and we will only really act if we felt we could create value.

**Roger Chapman Canaccord Capital:** With such a large proportion of your copper production currently in concentrates and you say do you actually want to get closer to the final market – have you considered moving yourself into the smelting business?

**John Crofts:** Well, of course we do in fact already have a smelter. The San Manuel smelter in US South West in Tucson is an asset that has been shut down since about mid-99, but on a care and maintenance basis. And we continue to actively look for ways of obtaining value from that asset. One of the dynamics of the industry at the moment is that there certainly appears to be an over-supply of smelting capacity, so it is not something that we would see ourselves getting actively involved in, in terms of developing green field projects. However there are some initiatives underway in Chile. There is a very strong



interest in Chile to increase the percentage of units that is smelted in the country and the Chilean government is very keen to support that, so I think we would look perhaps to participate in a project like that in terms of assuring concentrate feed in return for getting hold of the resulting metal units, at least proportionately, and I think it is a further step to think that we would participate in an equity basis and I would doubt that we would, unless it was a compelling case.

**Brad Mills:** I might add to what John has said, is that we tend to see smelters as a bit of our social investing that is done by four large countries. Again John is talking about Chile and their desire to have smelters, we certainly see that in China, they want smelters, and India, they want smelters, and Japan and we try to stay away from businesses where the fundamental dynamics of the economics are driven by social policy as opposed to economic policy.

**Julian Garran from ABN Amro:** Brad, you said that you had the ability to dial up and dial down production depending on how much metal the market could take. If we see a further deterioration in demand over the next few months, would you be prepared to make a further dialling down of your production?

**Brad Mills:** I think that that is a tricky question – there is a lot of industry dynamics associated with that. The basic answer is yes, we would also obviously like to see other players also participate in that, so it is a bit of a tricky one for a whole variety of obvious reasons but we would certainly consider that and would be particularly encouraged if we saw others also participate.

**Craig Sainsbury from Salomon Smith Barney:** Just a question for John. You say you are trying to move closer to your customers to find out about the end demand. Can you describe what your customers are saying at the moment in terms of pick up in the economy and what you are hearing from them.

**John Crofts:** Certainly in terms of the fabricators, we do participate in that market, selling copper cathodes. It is coming up to negotiating, or mating season, right now of course, it is that time of year. So we have our marketers going on the road over the next four to six weeks, so to some extent the jury is partially out. But certainly just looking back earlier this year, around the end of the first quarter there was excitement generated in terms of lead indicators on IP trending upwards. That never actually resulted from our perspective in an improvement in offtake fundamentals and we then moved into the Northern hemisphere summer period where you expect the seasonal downturn in demand in any case, so that

provided another excuse of not seeing anything. We have come out of that in September, and I have to say at the moment, it is still rather depressing. The one exception to that of course, remains China where the growth continues at very solid levels, probably north of a 15% year on year increase for 2002 is how we would see it. Partially that may be driven by the tightness in the concentrate market and the inability of the Chinese smelters to source metal units in concentrate form. But here in Europe and in North America, I have to say at the moment, it is a very patchy outlook at best.

**Brad Mills:** I think we should probably turn maybe to South Africa at this point in time and take some questions from Johannesburg.

**Des Kilalea from HSBC:** Could you tell us what copper price you would require to meet your cost of capital in your various operations please?

**Brad Mills:** Philippe that sounds like a question for you, I leave it in your hands.

**Philippe Dumortier:** Thanks a lot Brad. I am not sure I can give you from the top of my head asset by asset. What I can say though is we would need a substantial shift in expectations towards the bottom of the price curve to actually think about this sort of things, but perhaps you have a more precise question on one particular asset

**Des Kilalea:** Escondida particularly.

**Philippe Dumortier:** Well Escondida is actually the easy answer. It is one of the most robust assets we have, lowest cost in the world. I think we feel extremely comfortable with what we have on our balance sheet in terms of return on capital. The way we measure return on capital in BHP Billiton now since we organised in CSGs is actually EBIT return on capital. Currently, I think we are as a CSG charge across the capital of around 13.5% and as I said, it would take for Escondida in particular much lower prices than we have, to actually not make the cost of capital.

**David Fleming from BOE Securities:** I wonder if you could give some insight in terms of where your costs are going into the future, assuming exchange rates remain as they are, given that you have some declining grades in some of your pits and a second question is can you give some insights into whether Spence or Escondida, which of those projects would go first and why.

**Brad Mills:** Let me address those questions if I can. I think on costs, what we see really from the portfolio effect is really stable costs going forward. The new projects that Ken

talked about are all sub 40 cents per pound type C1 costs. Typically less than 50 cents a pound C3 type costs so very robust projects. In our portfolio mix we do have at least one reasonably high cost operation which is our joint venture interest in Highland Valley and I think that what we will see is some re-balancing of the portfolio over time, either through sale or closure and in shifting to lower cost operations. So we will constantly try and drive that cost curve down, either through internal efficiencies, or the repositioning the portfolio. And when we look out over the next five seven years, we see a cost structure that is very stable at more or less around 40 cents a pound, or just underneath that and going forward. The second part of the question?

**Dave Fleming:** Spence or Escondida

**Brad Mills:** That is a little trickier question. I think it is really tied up into our view of the markets. Spence is quite a long lead time project. It takes about four to five years to achieve design capacity so it is a long shot out into the future in terms of trying to guess what the market will look like, and by the time that one comes on stream and as with any green field project it is more intensive because of infrastructure for our requirements. We will complete all the feasibility study work on Spence by the end of this year and go through all of our internal corporate approvals, which could lead to Board approval for that project middle of next year and our intent is to really think about then is what's the timing on Spence. It is a little bit more advanced in terms of actual study work than the Escondida sulphide leach or the Escondida Norte project, but it is a little more complicated and more costly. What plays out in this is of course, how we really feel about the market at the time we would make that decision. But when you pull the trigger on Spence, you are really trying to guess what the market looks like four or five years later. So it is a bit of a tricky question and one that we are wrestling with internally ourselves.

**Michael Campbell:** Brad, that looks about all we have from Jo'burg, back to you. Thank you.

**Brad Mills:** Thanks for that. More questions from here?

**Paul Millbank from Metal Bulletin:** Coming back to this question of getting close to the customer, which you touched on in the marketing presentation, by retaining ownership of the metal up to the point of sale, do you have any target proportions or percentages of ownership you want to retain in the different metals, which would take you up against a customer? So do you have a feel for how much copper you want to retain ownership of, how of the lead and so on? Are you shooting a particular target here?

**John Crofts:** No there are no specific targets. One aspect of this is we want to increase our participation in the metal markets in Asia. Traditional economics of selling, or economics of selling cathode out of Chile in recent years have pretty much dictated that the metal goes to Europe, the majority of it. So we want to focus on understanding those markets, particularly where there is strong growth rates. There is no set percentage that we are targeting. It is more having a global presence and understanding of metal markets.

**David Bird from ABN Amro:** Can you explain your rational bid behind becoming a swing producer with an asset that is essentially reasonably low cost and not taking the stretch you are trying to squeeze out the higher cost players in the market?

**Brad Mills:** I think that one of the things we have looked at in terms of that question is really the inability of the industry to squeeze out the high cost producers. I think we have seen that with Pasma. You can shoot them and it is like the day of the living dead, they just get back up and keep on going and the banks just keep on putting more money into them and so they go bankrupt and they still keep on going, and the banks put more money into them. So I guess the real question is 'what does it take for the banks not to finance dead mines?' And I guess I don't know the answer on that one. I'll kick that one almost back to you guys. And as a consequence of that we really looked at it and said, "this industry has consolidated perhaps to the degree where we can introduce the concept of much more disciplined production philosophy across a broader portion of the industry, and not simply leave the burden to the high cost producer to deal with it". And that really triggered our decision. We are feeling our way into this in terms of the global scene and we are feeling our way into this in terms of what's, what can we do on our own? What can we do as an industry and it is all new territory I think for a lot of us in the base metals industry and there are lots of concerns about legal issues and so on and we get lots of dialogues with our lawyers and you can well imagine those kinds of issues. But we really do feel that strongly in BHP Billiton we will attempt – we are part of a very large portfolio that can afford to play these kind of games, perhaps quite differently from some of the sole commodity producers in the industry. And that is a really big strength of BHP Billiton that it can actually take on some of the roles and perhaps affect fundamental structure change in an industry like this. Which may ultimately result in significantly better long-term returns for ourselves and for our shareholders.

**Michael Wang from Dow Jones:** You stated from the outset that you didn't want to be drawn in on when the next decision would be on production coming from Escondida. You also indicated that you thought the market was broadly flat at this stage in terms of supply and demand. Can we then assume that given that, there is no pressure on you guys to

change your output from Escondida, and if there is a change in the market, at what point does that then trigger a decision on Escondida production.

**Brad Mills:** I think that for a variety of reasons, we need to be very opaque in terms of what we are actually doing to commit to it at any particular point in time. We look at the market issues very carefully as we get towards the end of the year and make a commitment for the next six months, at that point in time, which is what we think the market can handle in terms of production. There is no pressure on us internally to do anything. There is no pressure on us externally to do anything. There are a lot of what I would say almost old expectations about taking the dig and deliver kind of approach. We have built Phase IV, ramped it up to full production, run everything flat out and make tons and tons of copper. But I really want to stress the strategy is a demand based strategy. It is really quite different than we have operated in the past and I know it will take a while for people to believe us, and that is really what we intend to do.

Six months ago we were more optimistic about these six months than we obviously are right now. The market is not giving us strong signals that it's going to shift quickly. But having said that it is also completely destocked. There are no stocks in the chain and if you do see an increase in IP anywhere in the system it will cause a very significant reduction of stocks very quickly. I think you only have to go back and look at 1989 to see when the market flips, it really flips fast. That's about the best that I can really offer at this point in time.

We should perhaps check in with Johannesburg and see if there are more questions in Johannesburg at this time.

**Des Kilalea from HSBC:** You mentioned in answer to a question just now that you were talking to your lawyers. Are you then anticipating something like an MOU as the aluminium industry went through and what are the legalities of it anyway?

**Brad Mills:** I think that would be pretty much hard to assume that we've gotten anywhere that far along as an industry. But that is one of the things that we have been talking about internally not externally at this point in time. In terms of what would be within the bounds of the industry in terms of trying to deal with this and so I can't really predict where it might go, but it would certainly give us more confidence in taking the lead role in swing production if we had more than just a voluntary relationship between the producer that exists today.

**Ross Gardiner, S&B Securities:** I'd just like to ask, one thing you've not touched on is exploration. Now obviously you talked about the development of projects. But is the

pipeline dry on that end of the equation? Is there money being pumped into it? Is it new areas that you're moving into? Obviously China didn't happen. Is it happening in the rest of the world?

**Brad Mills:** Let me ask Ken to give some thoughts on that.

**Ken Pickering:** Exploration is essential to maintaining this pipeline. We have projects now on the portfolio that would take us off to 2006, 2007, 2008. But obviously to discover a new mine and develop it, it is something like an eight minimum, maybe a 10 or 12 year lead time. So we're quite aggressive in our exploration. We have some unique advantages there I feel, particularly with the airborne gravimetric technique we have with Falcon. It has been very successful in finding diamond pipes that were not detectable before. Typically they were found by magnetics, ground mag or air mag. So we found magnetic kimber-like pipes for example in North West Territories that were non-magnetic through this airborne gravimetric survey.

We have also run this through parts of the world. We have three planes now that are equipped with this equipment. We're running a number of the joint ventures. We've been running it in Australia. We have one plane in South America and we have one plane in South Africa. So we've leveraged that with a number of traditional mining companies on their ground and other partners that join at looking at ground together and we feel quite optimistic of what some of the applications of that on this new edge.

We've got some interesting anomalies that we've picked up in parts of the world where we have known deposits and running it in other ground that we have clean blocks to or with partners and we're in the process of drilling those anomalies now. So yes, exploration is our future. You've got to be looking at all facets of it.

On the technology side on development are getting more out of what you have. The low grade sulphide, low grade oxide assets. On the other side you find something new with new techniques. So I would say we're being aggressive on that, yes.

**Brad Mills:** Other questions in Johannesburg?

**Brendan Ryan, Financial Mail:** Why did you back off from the Lan Ping zinc project in China and are you looking at any other exploration effort or possible projects in China at this point?

**Brad Mills:** Sure. I think that we hopefully tried to stress right up front that we have a very serious and real commitment to managing environment, community, safety issues. And one of the issues in Lan Ping is it's being mined today by artisanal miners and there's a community that's effectively built on top of it. More than 10,000 people and it would require a substantial relocation effort to move those people. Also all the tailings and effluent from the current mining are going into a local river. We saw that as a bit problematical. When we discussed with our Chinese partners the issue of relocation, the answer was "not your problem, the army will take care of it". That was really an unsatisfactory answer and we felt that we would not really be able to effectively manage to our commitment around our HSEC standards in developing that operation.

As far as other opportunities in China are concerned, we really are not looking seriously at anything at this point in time on the base metals side. I'm not quite sure. I think that some of the other CFC's do have some serious interests in operations in China. We do feel that we could successfully operate there on a good green fields project in the right circumstances and that are our basic principals can work well there as they have in other parts of the world. Right now we see better opportunities in other parts of the world for the base metals group.

**Michael Campbell:** Brad that's all from us in Johannesburg. Back to you.

**Brad Mills:** Okay. Thanks for that. Other questions here in London.

**Paul Millbank, Metal Bulletin:** Just three quick nuts and bolts questions on the Escondida Phase IV. Could you indicate, or if I missed it first time round, remind me what the planned production of contained metal will be out of that Phase? How much of it will arrive this year in calendar 2002? And whether it's all coming out as concentrates or whether any will come out as cathode from the project?

**Brad Mills:** The design capability of Phase IV is about 400,000 tons of metal in concentrate. It's all concentrate production from Phase IV. Again it will be the lowest sourced copper at Escondida, so we will ramp up the Phase IV to full production, but at the same time we'll balance that against our market demand strategy. So if we don't have sufficient demands for new metal, we'll simply dial down the Phase III.5 concentrator to balance the production that comes out of Escondida in total. So you may not see any of that change potentially out of Escondida until the market improves somewhat.

Right now in the slide that I showed earlier that we expect to produce about 98,000 tons of metal out of Phase IV in the last two months of the year.

**Adam Rowley, Macquarie Bank:** Just on your desire to move closer to the customers. Presumably keeping control of the cathode that is produced at smelters essentially means reducing the role of the custom smelters to really toll smelters with you deciding where the product goes, essentially how much product they produce. Do you think that is something that is going to be easy to force through on the smelters?

**Brad Mills:** John, do you want to take that one?

**John Crofts:** Thanks Adam. The toll strategy is one of a number. I think Ken outlined leaching technology initiatives that we're working pretty hard on as well. So that would perhaps be an area that we would see moving us closer to this objective over time. On the specific issue of the custom smelter reaction to the tolling possibility, some have already indicated positively that they would look at that. We have to think carefully about where we want to take metal units back. You know metal units 1,500kms inland China may not be something that we would want to do. Potential additional source of metal of course is to aggregate it into our existing cathode book and I think I outlined the BMAG vehicle that facilitates us doing that.

So we can operate on a number of fronts here to pursue this objective of more metal units proportionally.

**Peter Blight, UBS Warburg:** Brad, it's a commendable strategy relating production to the market. However you've got I guess two significant minority positions in copper in Antamina and Alumbra where you have no control. Does the strategy you're now pushing forward with change your attitude to those investments, to that ownership level?

**Brad Mills:** Sure. I think that the situation is a little different in each one of those cases. I would agree with the no control comment around Alumbra. We are 25% minority partner with no voting rights and we really don't have the ability to affect it very much.

A very different situation in Antamina. It's a strong owner's council. The owners take a very strong interest in what it does and what its production rates are and I'm very happy to sit down with Noranda and Teck Cominco and talk about those issues and really come to an agreement about what is the right production rate for that asset. It's a little bit hamstrung less from the issue of what we could do with it than it is around its need to meet its financial commitments and its non-recourse financing. So until those are really satisfactorily handled, I think that that asset's a little bit hamstrung more because of its need to manage its financial commitments than really what the partners want. It does highlight an area that we are going



to look at in terms of future projects. Which was not a feature perhaps in the past, the project financing, but we've looked at for instance Spence and we've said if we decide to project finance Spence, it will be established with a swing capacity for that asset. And the banks will have to come to some agreement if they want to participate on project financing, allowing us to flex production on an asset like Spence in the future. So that is a feature that we would look to develop in our new assets going forward.

Just a quick note. My team over here is telling me that the production at Escondida Phase IV for the last two months is 40,000 tons, not 98. So if you correct that note. Sorry about that.

Other questions from here in London. If not, just quickly are there any other questions in Johannesburg? Okay. I think we've kind of reached the saturation point on questions. We do have a video and the video is designed to have a little fun and give you an idea of how base metals people think about and the people in BHP Billiton think about base metals itself.

VIDEO

END