Gold Fields Australia Site Visit: St Ives Gold Mine

GRAEME OVENS
General Manager
15th July 2014

Forward looking statements

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In particular, the forward looking statements in this document include among others those relating to the Damang Exploration Target Statement; the Far Southeast Exploration Target Statement; commodity prices; demand for gold and other metals and minerals; interest rate expectations; exploration and production costs; levels of expected production; Gold Fields' growth pipeline; levels and expected benefits of current and planned capital expenditures; future reserve, resource and other mineralisation levels; and the extent of cost efficiencies and savings to be achieved. Such forward looking statements involve known and unknown risks, uncertainties and other important factors that could cause the actual results, performance or achievements of the company to be materially different from the future results, performance or achievements expressed or implied by such forward looking statements. Such risks, uncertainties and other important factors include among others: economic, business and political conditions in South Africa, Ghana, Australia, Peru and elsewhere; the ability to achieve anticipated efficiencies and other cost savings in connection with past and future acquisitions, exploration and development activities; decreases in the market price of gold and/or copper; hazards associated with underground and surface gold mining; labour disruptions; availability terms and deployment of capital or credit; changes in government regulations, particularly taxation and environmental regulations; and new legislation affecting mining and mineral rights; changes in exchange rates; currency devaluations; the availability and cost of raw and finished materials; the cost of energy and water; inflation and other macro-economic factors, industrial action, temporary stoppages of mines for safety and unplanned maintenance reasons; and the impact of the AIDS and other occupational health risks experienced by Gold Fields' employees.

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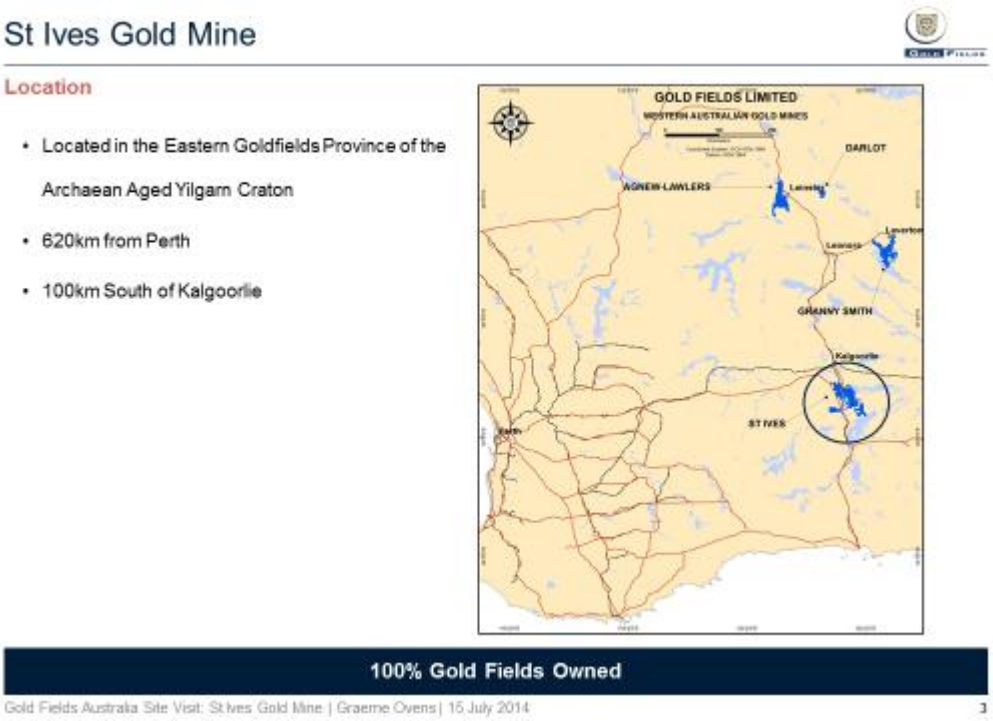
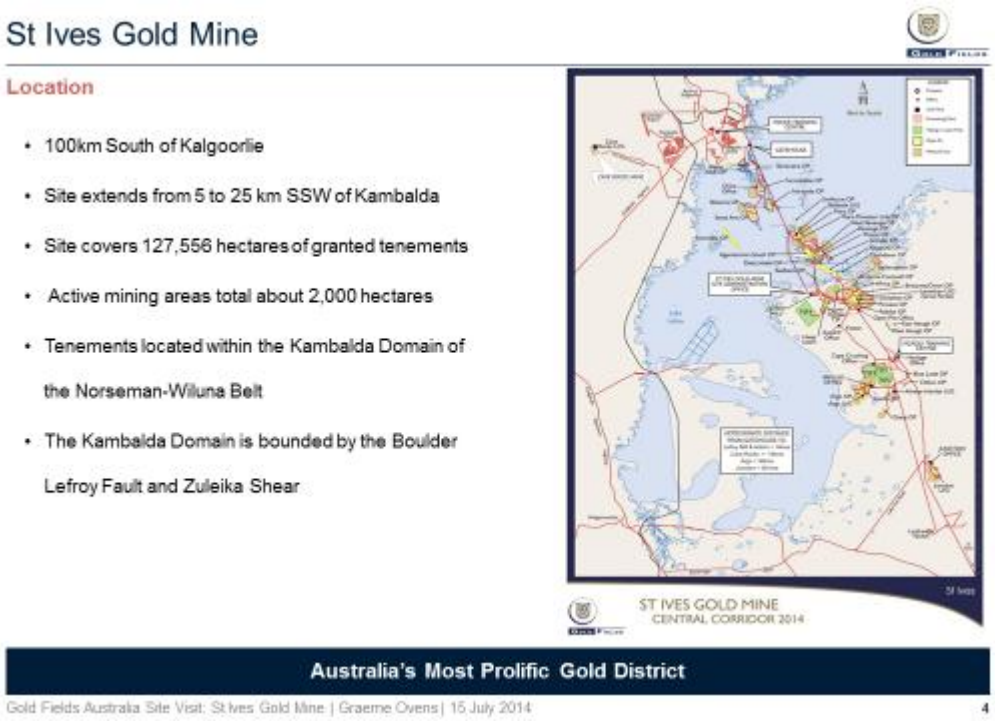
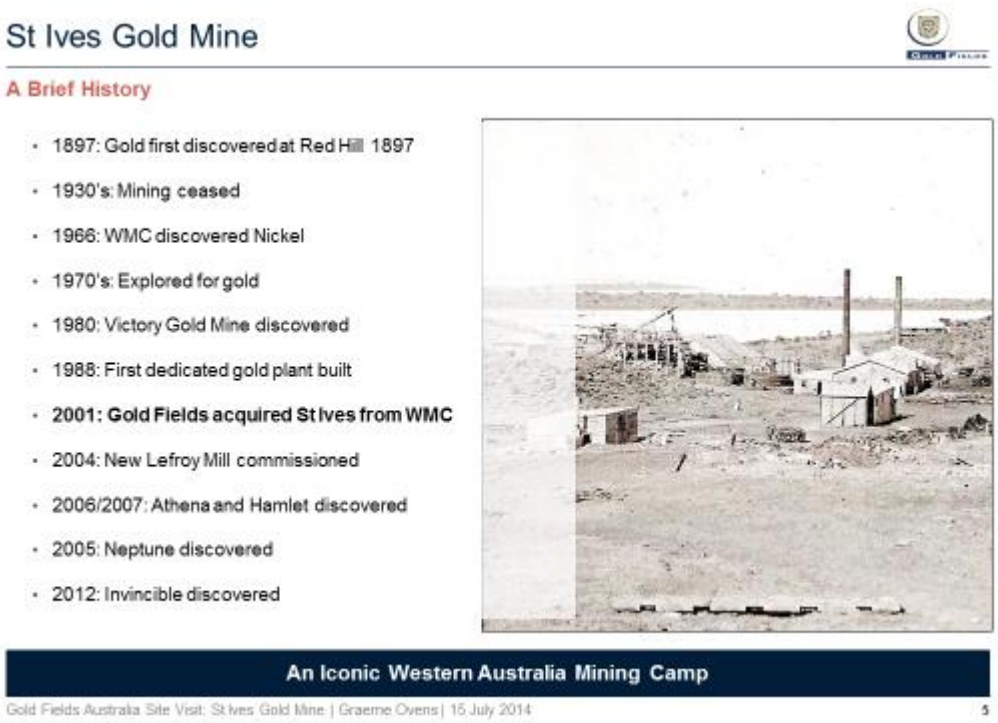


Welcome to St Ives. I'm Graeme Ovens. I'm the General Manager on site. I've been here heading on for about four months. I came from Barrick.

So whereabouts are we? We are located in the eastern goldfields province in the Yilgarn Craton. That's us sitting here about 620km from Perth and about 100km south of Kalgoorlie.



St Ives is 100km south of Kalgoorlie. The site extends from 5km to 25km SSW of Kambalda. So we've got the Kambalda town here and we effectively start about 5km south of the camp. Our area covers 127,000 hectares of granted tenement. Our active mining areas total about 2,000 hectares. The tenements are located in the Kambalda domain of the Norseman-Wiluna Belt. The Kambalda domain is bounded by the Boulder Lefroy Fault and the Zuleika Shear.



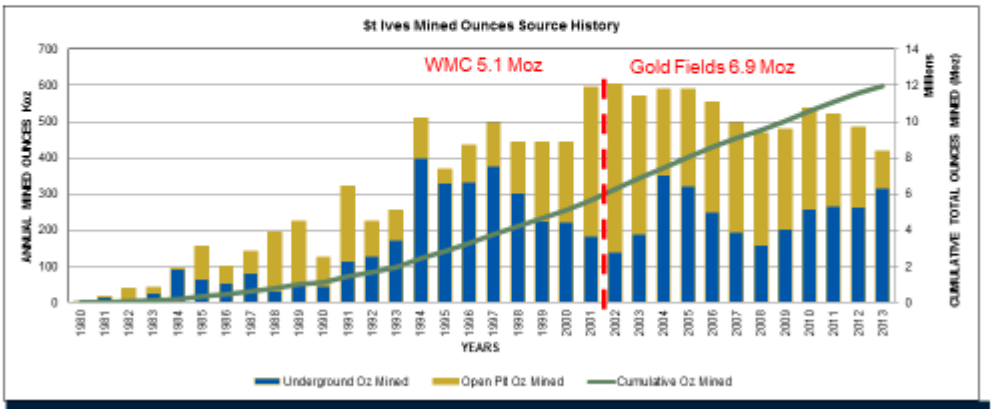
A bit of history on St Ives. Gold was first discovered at Red Hill here in 1897 which is the lookout on the Kambalda town side on the top of the hill there. The mining ceased in the 1930s and in 1966 with the discovery of nickel in Kambalda it really created Kambalda again. They also started exploring for gold in the 1970s, and in 1980 the Victory gold mine was discovered.

In 1988 the first dedicated gold plant was built. That is heading off down towards Athena and Hamlet where the old gold plant was. In 2001, Gold Fields acquired St Ives from Western Mining Corporation and in 2004 the new Lefroy mill was commissioned. That's the mill there. As part of the deal with Gold Fields buying St Ives off WMC, WMC had already bought the mill back in the 1990s, but had not built the mill, so the mill was stored with all its components. Gold Fields decided to build the mill. In 2006/7 the Athena and Hamlet underground operations were discovered. In 2005 Neptune was first discovered. And in 2012 Invincible was discovered. So I will talk a bit more about those ones further on.

St Ives Gold Mine

Historical Production

- 1980: Commercial Gold Production Commenced
- 2010: 10 Moz Milestone Achieved
- 2013: 120 Mt @ 3.0 g/t Au for 11.6 Moz



Outstanding and Reliable Resource To Reserve Conversion History

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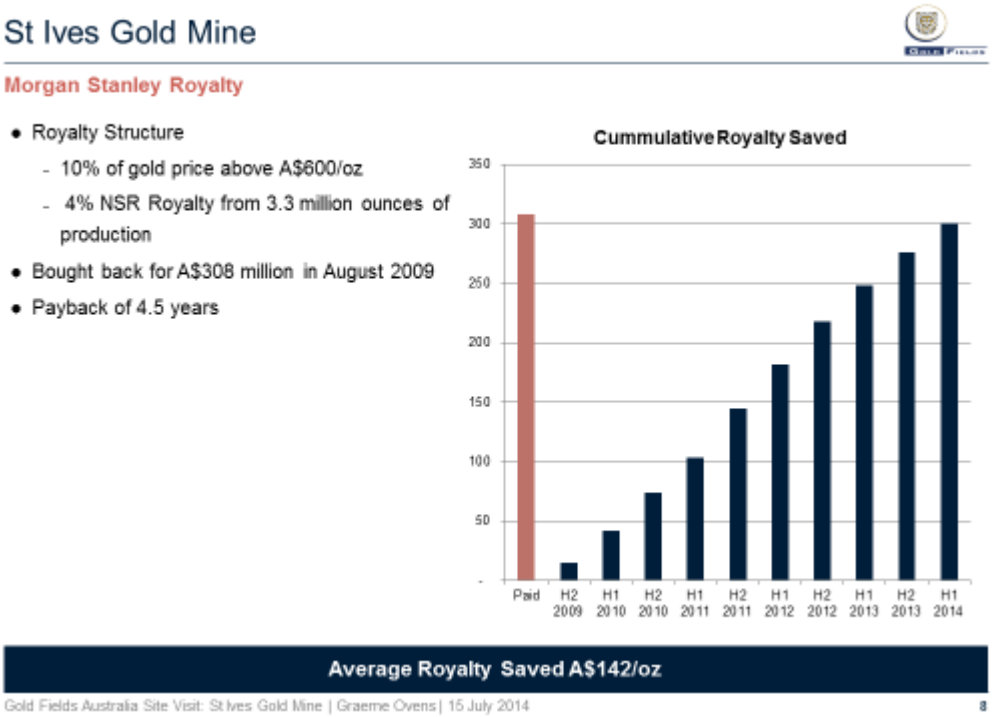
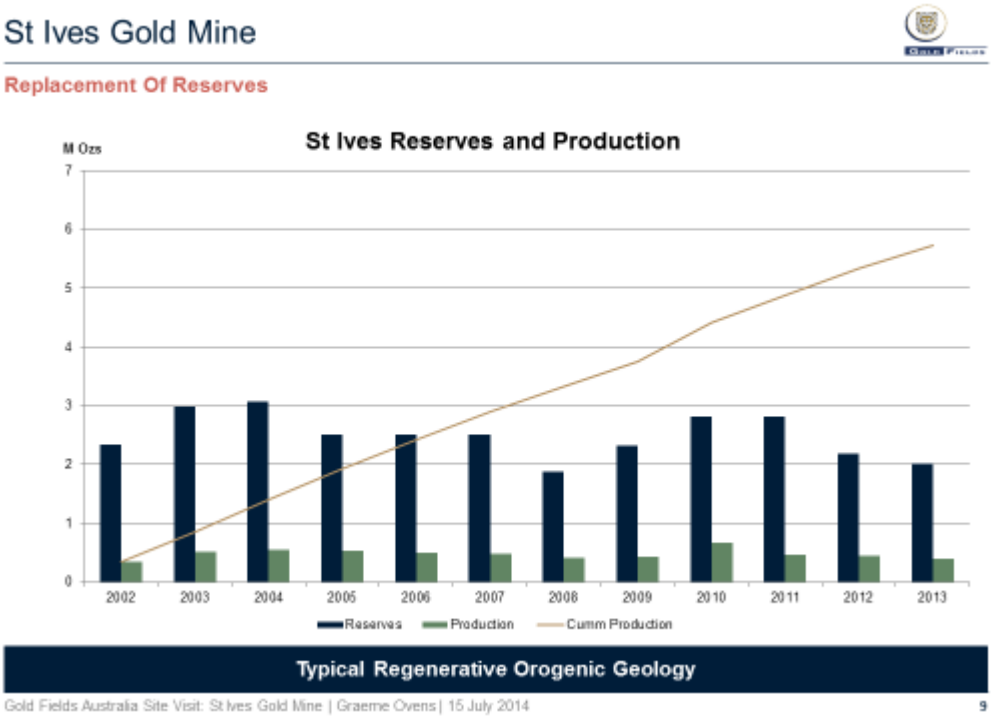
If you look at historical production, in 1980 the first commercial production was achieved. In 2010 the 10 million ounce milestone was achieved. And in 2013, 120 million tonnes at 3g per ton for 11.9 million ounces was achieved. So you see the period through here with Western Mining. It ramped up in 1994 through to 2001 when Gold Fields had taken it over and continued from there.

Since Gold Fields took ownership of this operation, the Lefroy mill was constructed for $125 million. The Morgan Stanley Royalty was paid out. There is a slide after this on the royalty. We purchased an owner mining fleet in late 2012, and we moved away from contractor mining in the open pits to owner mining. We spent $21 million on support infrastructure including workshops, water lines and dams around the site.

In 2014, our spend on exploration is $25 million. We have discovered and developed new mines including the Athena underground, Hamlet underground and Cave Rocks, with a discovery cost of around $65 per ounce. Also, on the open pit side the Leviathan pit, which is one of the major pits we had in operation, as well as the small pits that we continue to mine.



The Morgan Stanley Royalty was a royalty that flowed out backwards in the WMC days of the business. We ended up with a structure with 10% of the gold price above $600 an ounce, a 4% NSR royalty from 3.3 million ounces of production upwards. We bought it back for $308 million in August 2009 and looked at a payback of about four and a half years. Looking at it now we're just on that $300 million mark, so it is effectively going to be paid this year. And then from there on, the liability is cleared.



Looking at the replacement of reserves over the life, since Gold Fields took over in 2002 the darker lines are reserves and our production is in green. When you look at our reserves they have always ranged between 2 million to 3 million ounces in reserves. And we have continued with that right the way through for the last 12 years. We are still maintaining the 2 million ounces of reserves. Our production profile has varied between 400,000 up to 500,000 ounces per annum.

The senior management team on site. Not all of these people are here, but this is the management team that we have. More specifically, I have a strong processing background and experience in open pit and underground mining with a Graduate Diploma in Mining Engineering. I'm a member of the AusIMM. My experience of 35 years is in the eastern goldfields region and have had a long time around Kalgoorlie, in Darlot and I had a stint in New South Wales for five years as well.

Matt O'Hara is our Operations Manager and is currently on leave. Matt has 24 years experience in mining. He has a WA 1st class mine manager's ticket. Malcolm Jolly is the Manager of Mineral Resources. Malcolm has 33 years mining industry experience. He has a broad-based mine geology and exploration background including mine planning, geotechnical, metallurgy, strategy and mine economics.

Daniel Worthy is our Manager: Technical Services. He has a Bachelor of Mining Engineering and experience of 12 years operational mining in Australia, Spain and Bulgaria.

Gary Cormack is our Processing Manager. Again, a broad based metallurgical background, a very strong background of 25 years in various metallurgical positions through South Africa and Australia. So we have a strong management team and with a lot of experience.

St Ives Gold Mine

Senior Management Team

Graeme Ovens – General Manager

- Strong processing background and experience in both open pit and underground mining.
- Grad Dip Mining Engineering – MAusIMM
- Experience - 35 years in the Eastern Goldfields region and NSW.

Matthew O'Hara – Manager: Operations

- Bachelor of Engineering (Mining)
- WA 1st Class Mine Managers Certificate of Competency
- Experience: 24 years in mining industry

Malcolm Jolly – Manager: Mineral Resources

- Broad based mine geology and exploration technical background inclusive of mine planning, geotechnical, metallurgy, strategy and mine economics
- MSc. Geology, Wits EDP, MAusIMM
- Experience : 33 years in mining industry

St Ives Gold Mine

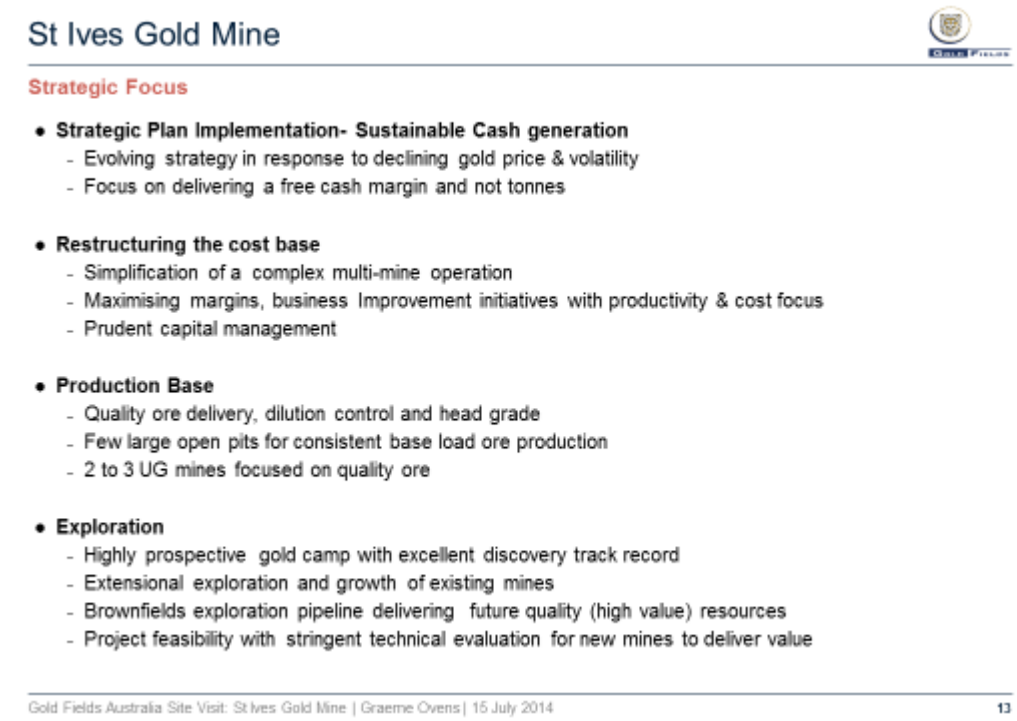
Key Management Team:

Daniel Worthy – Manager: Technical Services

- Bachelor of Engineering (Mining)
- Experience: 12 years of operational mining experience in Australia, Spain & Bulgaria

Gareth Cormack – Manager: Processing

- NHD in Extractive Metallurgy and Diploma in Engineering Management. MMMA
- Broad based metallurgical technical background
- Experience: 25 years in various metallurgical positions ranging from operations to management



St Ives Gold Mine

Strategic Focus

- **Strategic Plan Implementation- Sustainable Cash generation**
  - Evolving strategy in response to declining gold price & volatility
  - Focus on delivering a free cash margin and not tonnes
- **Restructuring the cost base**
  - Simplification of a complex multi-mine operation
  - Maximising margins, business Improvement initiatives with productivity & cost focus
  - Prudent capital management
- **Production Base**
  - Quality ore delivery, dilution control and head grade
  - Few large open pits for consistent base load ore production
  - 2 to 3 UG mines focused on quality ore
- **Exploration**
  - Highly prospective gold camp with excellent discovery track record
  - Extensional exploration and growth of existing mines
  - Brownfields exploration pipeline delivering future quality (high value) resources
  - Project feasibility with stringent technical evaluation for new mines to deliver value

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If we look at our strategic focus for the operations, our strategic planning has really been focussed on sustainable cash generation. It is an evolving strategy in response to the declining gold price and volatility. In the last 24 hours we had a sudden $25 drop in the US gold price. We are still in a very volatile gold market, and we have changed our operating plan to focus on delivering free cash flow margin rather than tonnes. I think that is fairly traditional for most of the gold mining companies in the last few years which have changed their focus away from ounces at any cost to generating profitable ounces. And we have done the same.

Looking at restructuring the cost base on site, we are trying to simplify a complex multi-mine operation. We are looking at moving into the Invincible pit next year. That will be the predominant pit that we mine next year as opposed to four pits that we mine this year. So one larger pit and three underground mines as a focus.

We make sure that we maximise the margins. There are business improvement initiatives with a productivity and cost focus. And we're prudent with our capital management.

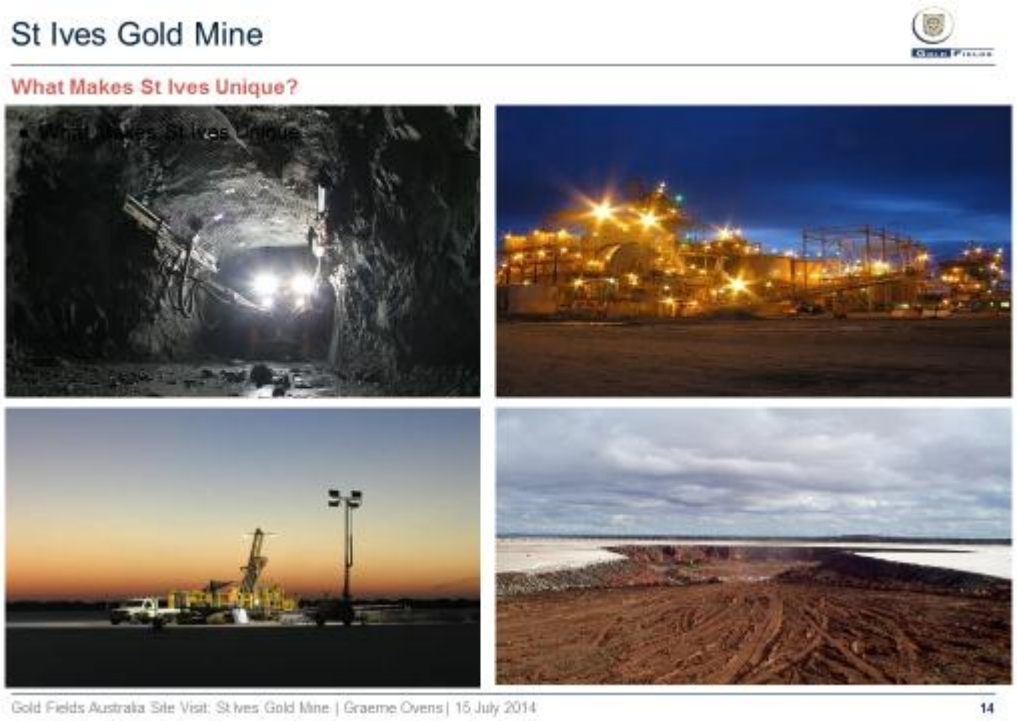
We will continue to push that. We've actually reduced numbers on site in late 2012 and 2013; about 100 positions were removed out of site. Earlier this month we have taken another 100 positions out of site. So we have come down to quite a lean organisational structure on site.

We had about 1,000 people on site including contractors and we are now down to 900 including contractors. Productivity work that we're doing, quality ore delivery, dilution control and head grade, focussing on ensuring that we get the right head grade at the mines. There have been a few issues with dilution and we have had a group focussing on that.

I've talked about a few large open pits with a consistent base load of ore production. Two to three underground mines focussed on higher-grade, quality ounces.

We are still focussing on our costs. We have actually shut down several underground trucks and one loader, making sure that we only operate what we need to deliver the tonnes and ounces.

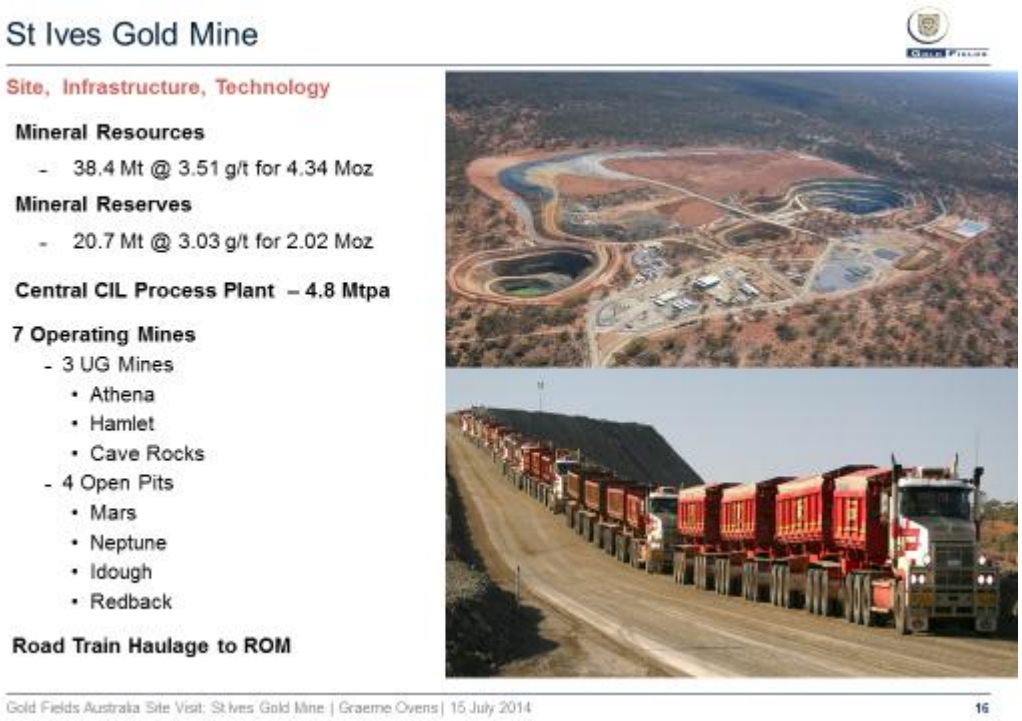
On the exploration side, a highly prospective gold camp with its own discovery record, as you've seen before. We're consistently replacing our reserves year on year and have done so for the last 12 to 13 years through extensional exploration and growth of existing mines. The brownfields exploration pipeline is delivering quality, high-value resources and the project feasibility is with stringent technical evaluation for the new mines that we deliver.



What makes St Ives unique? We are an underground operation. We are also an underground operation that is under a salt lake. We've got an open pit as well, and you can see this is the commencement of an open pit operation in the middle of the salt lake. I'm not sure if you noticed on the bus on the way in, but the drill rigs are set up and drilling on the salt lake without us having to create massive causeways out there to drive on.

We have a very large mill, 4.8 million tonnes per annum capacity which is variable down to 3 million tonnes. It is an extremely well maintained operation.

This area up here is the Kambalda town site. Cave Rocks mine, some of you came via this morning. We have Cave Rocks out to the west, a causeway down to the Lefroy mill here, right down to the Athena Hamlet complex. Invincible open pit that we will talk about later is situated here on the lake. The Greater Revenge area here is Neptune open pit that we are currently mining as well as the large open pit.



The resource is 38.4 million tonnes at 3.51 g/t for 4.34 million ounces. The reserves are 20.7 million at 3.3 g/t for 2.02 million ounces. That's as at the end of 2013.

We have a central CIP processing plant at 4.8 million tonnes per annum. We currently have seven operating mines, three underground – which is Athena, Hamlet and Cave Rocks – and four open pits – Mars, Neptune, Idough and Redback. You will see a couple of those this afternoon.

We have road train haulage to the ROM. So this is an old photo of a previous contractor, but these road trains run four trailers each and all of the ore from all the mines is trucked to the ROM at the mill.

St Ives Gold Mine

Key Metrics

KPI's US$	Unit	Q4 2013	Q1 2014
Safety	LTI's	1	1
Ore mined - UG	kt	712	625
Mined grade - UG	g/t	3.44	3.97
Ore mined - OP	kt	924	214
Mined grade - OP	g/t	1.38	1.37
Ore processed	kt	1,207	1,282
Head grade	g/t	2.55	2.35
Recovery	%	93.3	94.0
Gold sold	Koz	99.1	96.6
Operating cost	US$m	87.7	76.8
Capital expenditure	US$m	26.5	33.3
AISC	US$/oz.	1,091	1,291
Revenue	US$m	125.1	122.9
Operating Profit	US$m	48.3	36.4

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This slide is looking at Q4 2013 and Q1 this year. On the safety side we've had one lost-time injury in Q4. We had one in Q1 this year. Underground ore mined is 712,000 tonnes in 2013 and 625,000 in Q1 this year. Our mine grade was 3.44g last year. In the first part of this year we had 3.97g. Our open pit, 924,000 tonnes back in Q4, and 214,000 in Q1 this year.

Q1 has been down because we did a major pre-strip this year with both the Neptune open pit, which has produced its first 7,000 tonnes of ore in the last week of June. We have also been pre-stripping West Idough and Redback. So we had a fairly high pre-strip in the first half of the year with the majority of the ore tonnes coming in the second half from the open pits.

Question: What is the level of your stockpiling?

We only have some low-grade stockpiles left at the moment that we're treating just to keep the mill topped up.

Question: Is that what you treated in Q1 as well?

Q1 was low-grade stockpiles to bring the mill capacity up to the 1.28Mt

We actually see the 924,000 tonnes produced in Q4, so we actually did a lot of mining in the open pits in Q4, and some of that was processed in Q1. So there were some better grade stockpiles present in Q1.

So we only had some remnant stockpiles. The rest we are mining out of the Mars pit. We are treating that ore until Neptune and Redback, Neptune is about to start producing and Redback is about six weeks out from producing tonnes, and then that stockpile treatment will reduce significantly

What is your current life of mine for Cave Rocks, Athena and Hamlet?

Cave Rocks is currently the end of 2015, thereabouts. Athena is 2016. Hamlet I think is 2019 or 2020

for Hamlet.

We are still drilling underground on those deposits to see if we can extend them out any further, particularly a couple of shorter life ones. Recovery-wise we're seeing 93% or 94% recovery. Ounces sold, 99,100 in Q4 and 96,600 in Q1 2014. We were impacted substantially in Q1 this year by some major rainfall events in January and another one in early March where we had 150 or 160 mm of rain in a 24 hour period, which impacted some of the open pit works. The operating costs totalled $87.7 million last quarter of last year, $76.8 million this year. Capex, $26.5 million last year, $33.3 million this year. Again a lot of pre-strip this year in the first quarter.

Question: What is the budget for the year?

Total budget? With capex we have $500 million.

$350 million is operating and $150 million is capital.

Thereabouts. Part of the capital is in development work and pre-strip.

Question: Can you just clarify that? $350 million was...

$350 million was Opex and capex is $136 million.

Capex is considered sustaining capex, underground development. Included in the capex is some exploration drilling as well. So your all-in sustaining cost is $1,091 last quarter, up to $1,291 in Q1. But again driven by the ounces sold being down a bit. So revenue has been similar. Operating profit $48.3 million to $36.4 million for the quarter.

Question: What is your exploration spend?

This year it is $25 million.

Question: When you're measuring per ounce are you using resource or reserve as your denominator?

Reserve We're measuring our spend per ounce, dollar per reserve ounce.

Question: Graeme, sorry, could you go back to slide 16? Could you give us an idea because this is a very complex slide? What is the current mining mix in terms of tonnes and grade more or less coming from each of the underground mines and each of the open pit mines as well, just so we can get an idea of what your mix is now?

The ounces out of the underground would be about 250,000 ounces from the three underground mines. They are all similar around the 70,000 to 80,000 ounces each. Tonnage-wise it has been around 600,000 to 700,000 tonnes. Caves is up at 800,000 tonnes.

So two million tonnes for these and the remainder from the open pits.

Question: So worst case scenario you don't expand the life of mine at Cave Rocks and Athena, so mid-2016 you will only be drawing ore from Hamlet underground?

Potentially we will have Invincible underground on line.

Okay.

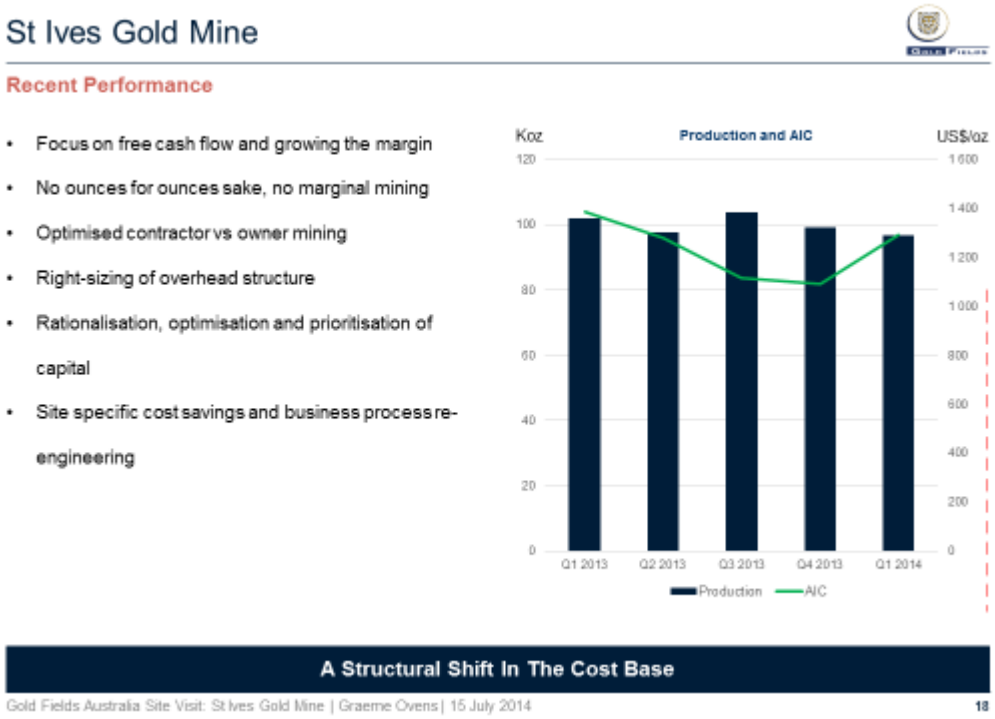
Invincible has a potential underground as well.

Question: And you could turn that around quickly?

We believe so. The current plan is to start Invincible underground in the second half of 2016.

This would be a reasonable size then, plus the tonnes you would be getting to maintain the same tonnage ratio.

That's a significant increase from what we have currently. We will see a higher grade open pit coming in. You will see a shift in the ounce distribution from the underground.



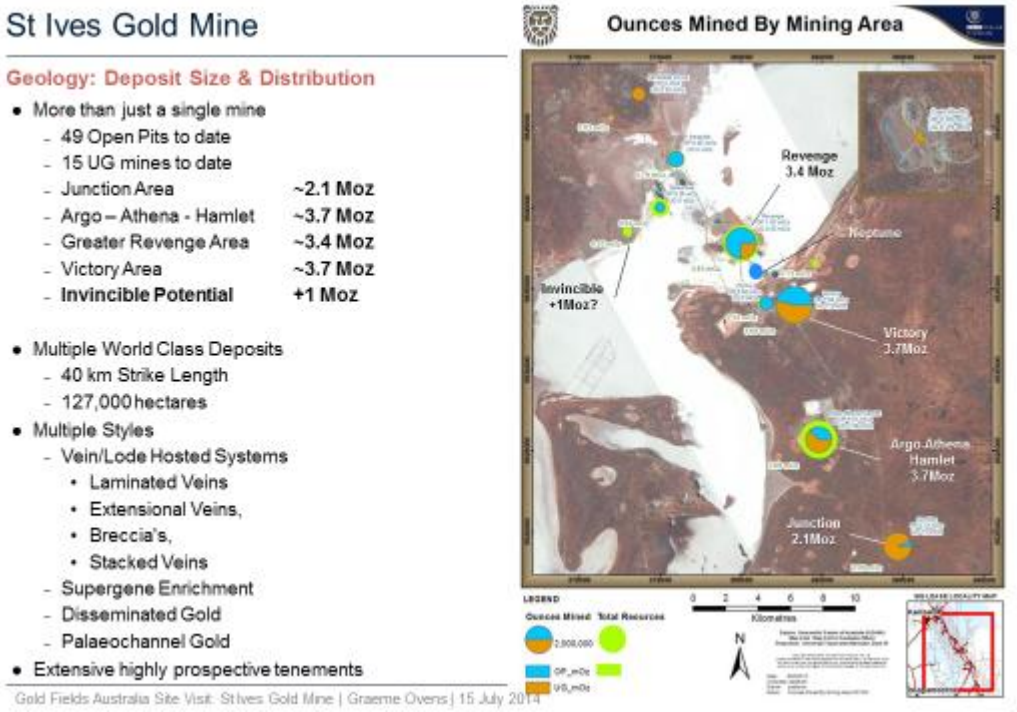
What we're focussing on is ounce production and cost profile. Our new strategic plan has our throughput dropping to 4 million tonnes per annum rather than 4.8 million, rather maintaining a good head grade and a good margin on what we produce.

Providing that ratio of underground ore is maintained

We will vary depending on ore supply anywhere between 3.8 million and 4.5 million tonnes over the next few years. So looking at recent performance over the last five quarters on ounce production, we are sitting at around the 100,000 ounce mark pretty much all the way through, and the all-in sustaining costs driven down through 2013. A slight pick-up in 2014, but pretty much driven by the lower ounces. So no ounces for ounces' sake. No marginal mining. We have reinforced that earlier. Again we have optimised the contractor versus owner mining, and we are now fully owner mining in open pits rather than contractor.

Question: Does your sustaining capital go down next year given you had a big pre-strip coming into this year?

The capital will likely be less next year because there is less development at Athena and at Caves. There will be some pre-strip involved in Invincible. We are right in the middle of our budget process at the moment. We are right-sizing our overheads structure. We reduced the number of people and rationalised our organisational structure. We prioritised expenditure of capital. Site-specific cost savings and business process re-engineering is on-going to ensure that we keep the all-in sustaining cost down.

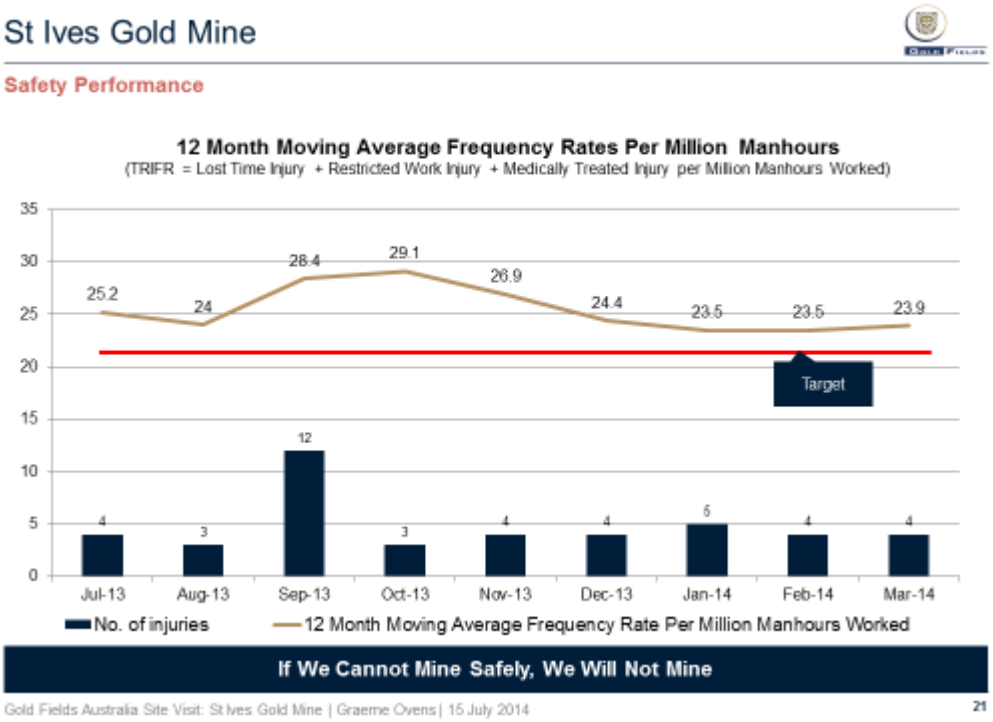


The next one is the geology, deposit size and distribution. I will get Malcolm to go through these ones there. He is our mineral resource manager.

Just to put it into a bit of context, I think someone alluded to earlier that St Ives is quite a complex site. It is more than a single mine and we need to unpack the history of this mine. We've had something like 50 odd open pits and various cutbacks and variations as gold price changes. We have had 15 underground mines to today. Probably what is the exciting part of it is that as a camp we've had a number of fairly large deposits, the Victory area where Leviathan was, the Athena/Hamlet complex and the Junction complex. All of these have been 2 to 4 million ounce deposits, which for a greenstone environment are pretty sizeable deposits.

You will see Neptune is here between the two of them. It's a matter of joining the dots. Julian will talk about this deposit a little bit more. It is a million ounce potential. These are areas and recent discoveries at a fairly mature camp. So we are seeing world-class deposits in a pretty mature camp, a very prospective area. There are a number of styles of mineralisation. You can pick a lot of the details up in the mineral resource supplement. Julian will talk a little bit later about the paleochannels. These are old historical rivers that flowed through the area, picked up old deposits in their history and they have old deposits on the bottom. So that's pretty good. We are pretty impressed. The camp has some of the highest concentration of deposits in the vicinity, and I think there is more to come.

OHS & Sustainable Development



Health, safety and sustainable development. We have a 12 month moving average frequency rate per million man-hours. You see our target is here. We saw a bit of a spike through last year. We were moving up to around 23. And we are bringing some new initiatives on board to deliver some improvement in our safety performance. The first key value is that if we cannot mine safely we will not mine. That is reinforced right from the CEO down.

St Ives Gold Mine

Health And Safety Strategy

Initiative	Goal
Behavioral Based Safety: Vital Behaviours	Engage 95% of St Ives workforce and embed the Vital Behaviours concepts into the St Ives safety culture
Field Level Risk Assessments	Rollout new GFA Field Level Risk Assessment tool and associated Hazard ID training
Visible Felt Leadership	Incorporate GFA Visible Felt Leadership process into current Management Time In Field activities
Improved Critical Risk Management	Review site critical risk register and periodically verify controls
Safety System Compliance and Auditing	Periodically audit all SIGM Departments and Contractor Partners against the Site Safety Standard

If We Cannot Mine Safely, We Will Not Mine

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So our strategy there. We are looking at a behavioural-based safety system called Vital Behaviours. It will engage 95% of the St Ives workforce including contractors and embed the Vital Behaviours concept into our safety culture. This programme has previously been rolled out in Australia at Newmont, and they have seen some very good success with it. We just happened to grab hold of the guy from Newmont to roll the programme out for us.

Field level risk assessment is one that certainly needed updating on site, and there is a new rollout for Gold Fields Australia of a field level risk assessment tool associated with hazard ID training. That is also coming up.

The visible felt leadership. Again it is getting the management team and everybody out in the field so that we're out there interacting with the workforce and ensuring that everybody is following the systems and procedures that we have in place.

Improved critical risk management. Review the site critical risk register and periodically verify the controls. So we're doing quite a bit of work on updating our risk register going to more or less a team-based risk assessment across the whole site and all operating areas.

And safety systems compliance and auditing. Periodically we are auditing our contract partners against the Site Safety Standard. Recently we had an OHSAS 18001 and ISO 14001 audit and we will maintain those certifications going forward.

On the environmental side, environmentally responsible operations through ISO 14001 certified management system. We have effective local indigenous group engagement through our heritage programme and active engagement in the local Kambalda community through a community programme.

St Ives Gold Mine

Human Resources

- Primarily a Residential Site with 85% of employees living in Kambalda or Kalgoorlie
- Remaining employees and contractors on FIFO
- Contract camps are utilized in Kambalda

Description	2013
Employees in service	713
Contractors	236
TE+C	949
Tonnes mined/ TE+C	5,058
Oz Sold / TE+C	432.2

On the HR side primarily we are a residential site. We have 85% of our employees living in either Kambalda or Kalgoorlie. The remaining employees and contractors are on a fly in/fly out basis. And we have a couple of contractor camps in Kambalda that are utilised. There is an ESS camp and the MAC camp, which we use. In 2013 the total tonnes mined per employee was 5,058. Ounces sold per employee contractor were 432.

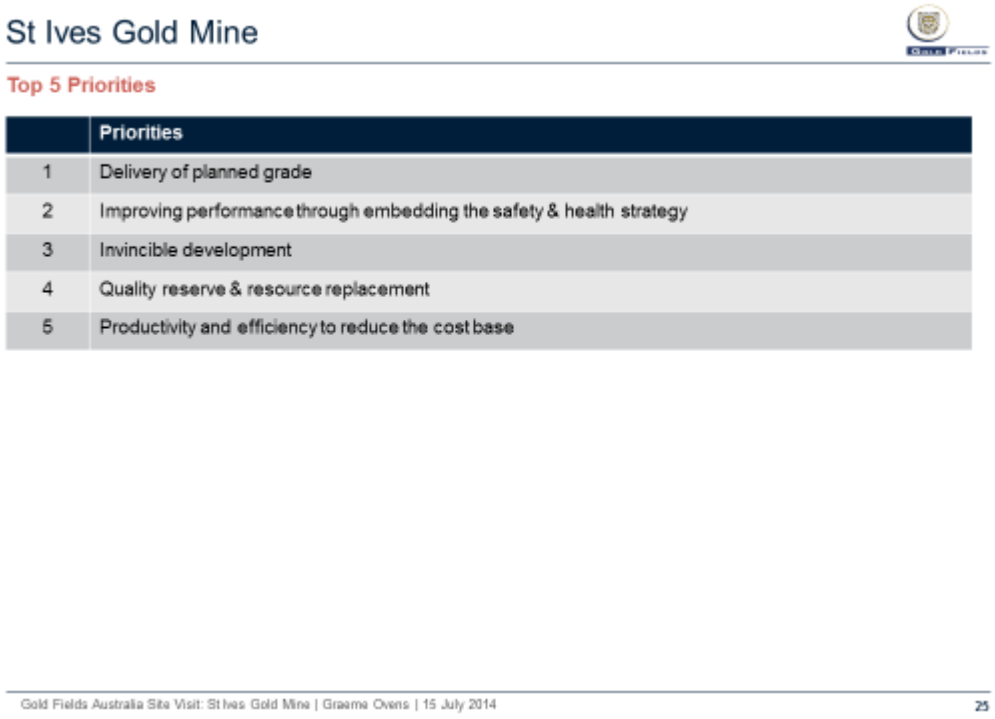
The reduction, that's quite a lot of people, 200 people. Is that because you are moving to less material? Where do those people come from in terms of positions in the organisation?

A lot of the people come from middle management within the organisation. We try to replace them in our management structure in some way. Some people were gone early this year with the closure of the Argo mine. Argo underground closed down. I think we retrenched about 15 out of that. Because we knew the Argo closure was coming this year we substituted contractors in whenever someone left over the previous 12 months. So we ended up predominantly contract by the time we closed it.
We are 400,000 ounces. So it is significant.
Some of the other mines were citing their numbers in monthlies.
Oh, it was in monthly.
That's an annualised figure.
That's high.
You're looking at about 35 to 45 on a monthly basis.

There were some numbers here. Just after the most recent ones we are up about 43 per employee per month. So that pretty much lines up.

Question: Just give us an idea, what's your payroll cost?

I don't know off the top of my head, sorry. The average cost per employee. Not a number we normally look at. Average cost per employee. We will get that number for you.



St Ives Gold Mine

Top 5 Priorities

	Priorities
1	Delivery of planned grade
2	Improving performance through embedding the safety & health strategy
3	Invincible development
4	Quality reserve & resource replacement
5	Productivity and efficiency to reduce the cost base

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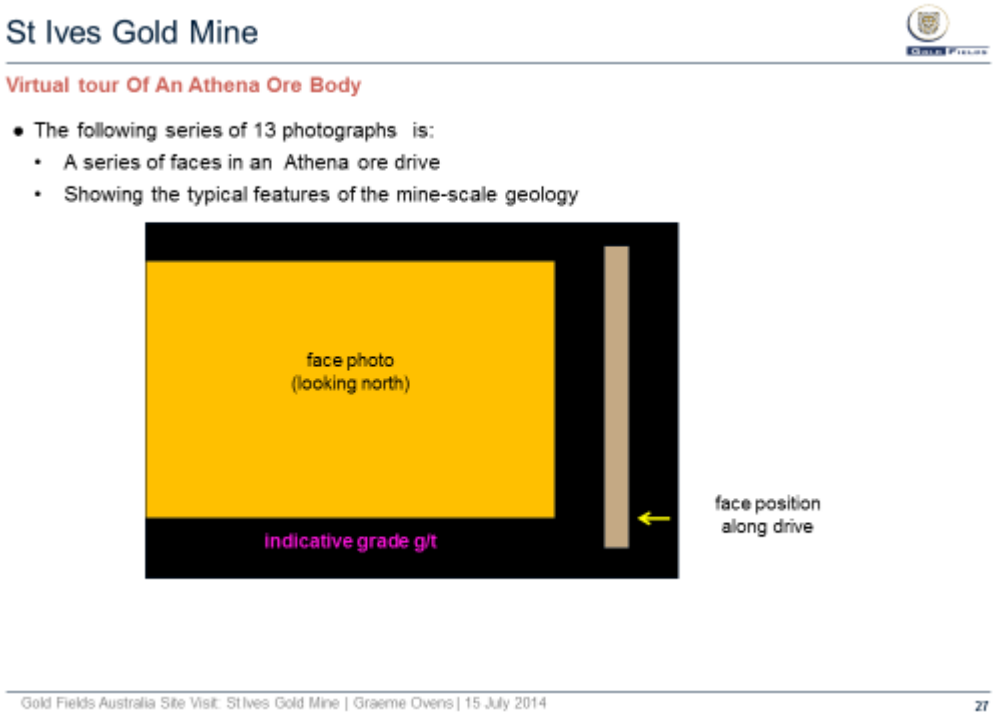
So looking at the priorities there, the top five are really delivering to plan and grade. I mentioned earlier when I was talking about improving on our dilution we had a few dilution issues at Hamlet. Trevor and his team have got on top of those and we have seen an improvement in the last three months. Improving our performance through embedding the safety and health strategy. We have spoken a bit about that. Invincible development we're pretty excited about. There is a huge opportunity with Invincible. Quality reserve and resource replacement. Julian and the team have been working hard with that. And productivity and efficiency improvements to reduce the cost base. We need to continue to drive that cost down.

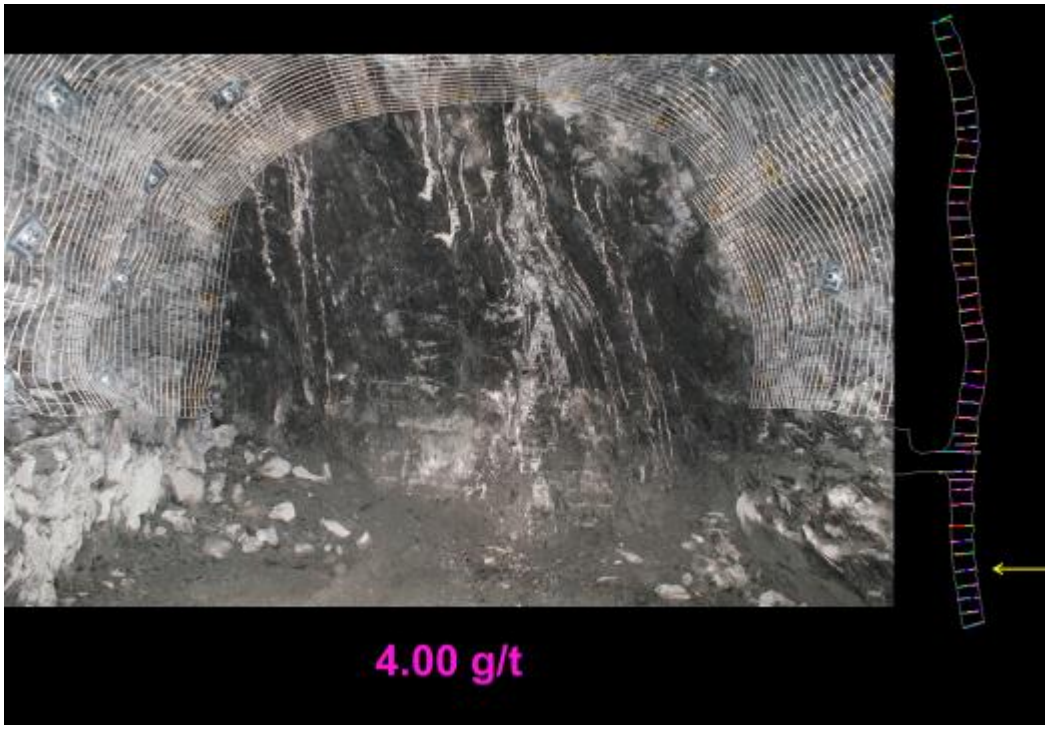
Underground Mining



So underground mining is next. This one starts with a bit of a walk-through of a virtual tour of the Athena ore body. I will let Malcolm walk you through this one.

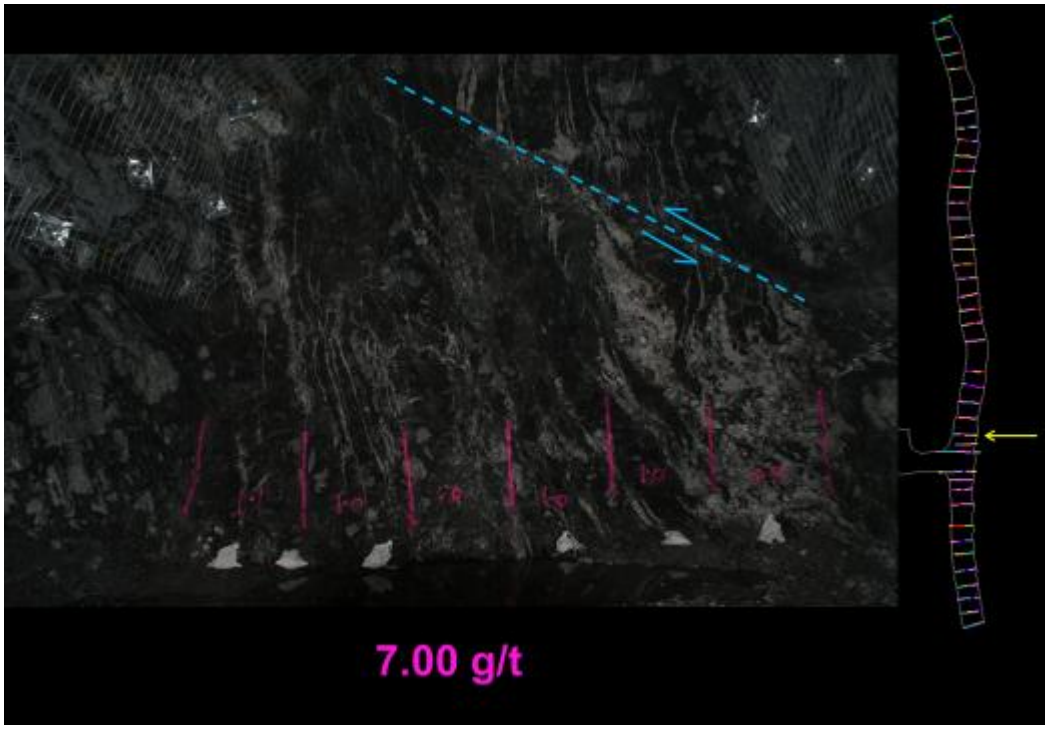
This is some of our development faces. When we were starting to put this together, this takes a virtual tour of an ore drive just to give you an indication of the sort of deposits we have. What you will see in the six slides, we will be going along an ore drive which is about 250 metres long. I will show you a photograph of the face, and at the bottom you will get an indicative grade. So you will see the good ore of 12g per ton and you will see the rubbish that looks pretty awful.

This is the start of the ore drive. That is the base of the shear. This is the ore and this is the waste. If you go down to the next area you're starting to see a lot more quartz vein as it starts to improve.



This one here was a lot of the shearing in the middle. And this one is all about the plunging system.

We've got 10g per ton out of that one. This was also very well mineralised and we were lucky there was another shear that went down the middle that duplicated the ore body, so we got duplication of ore.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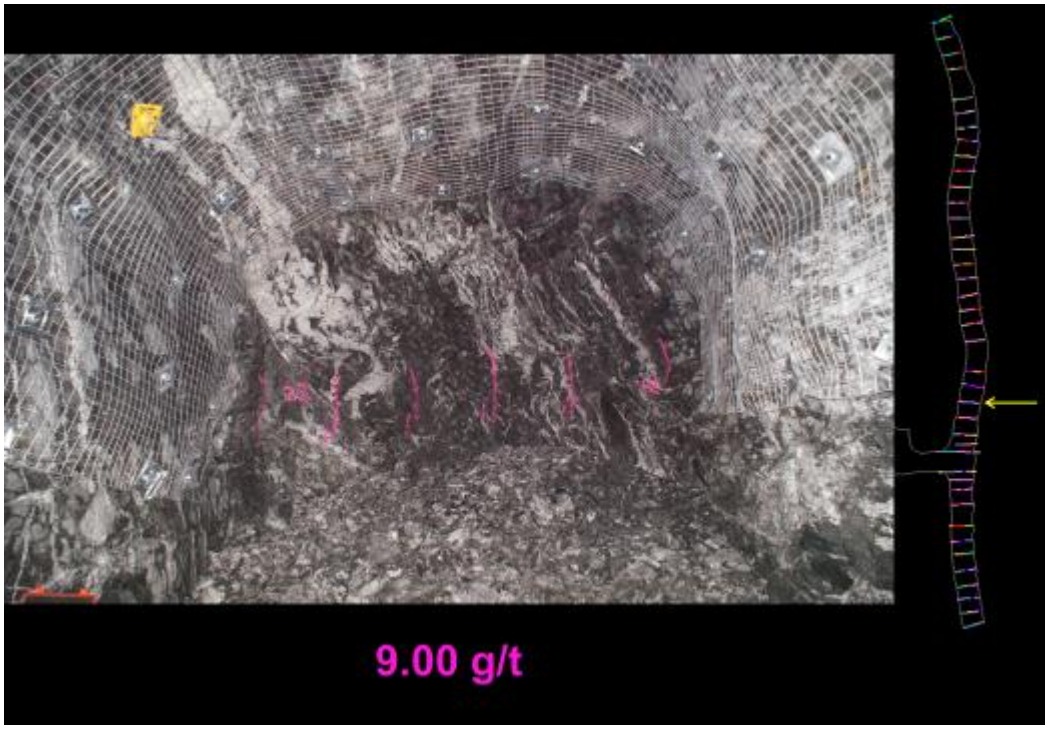
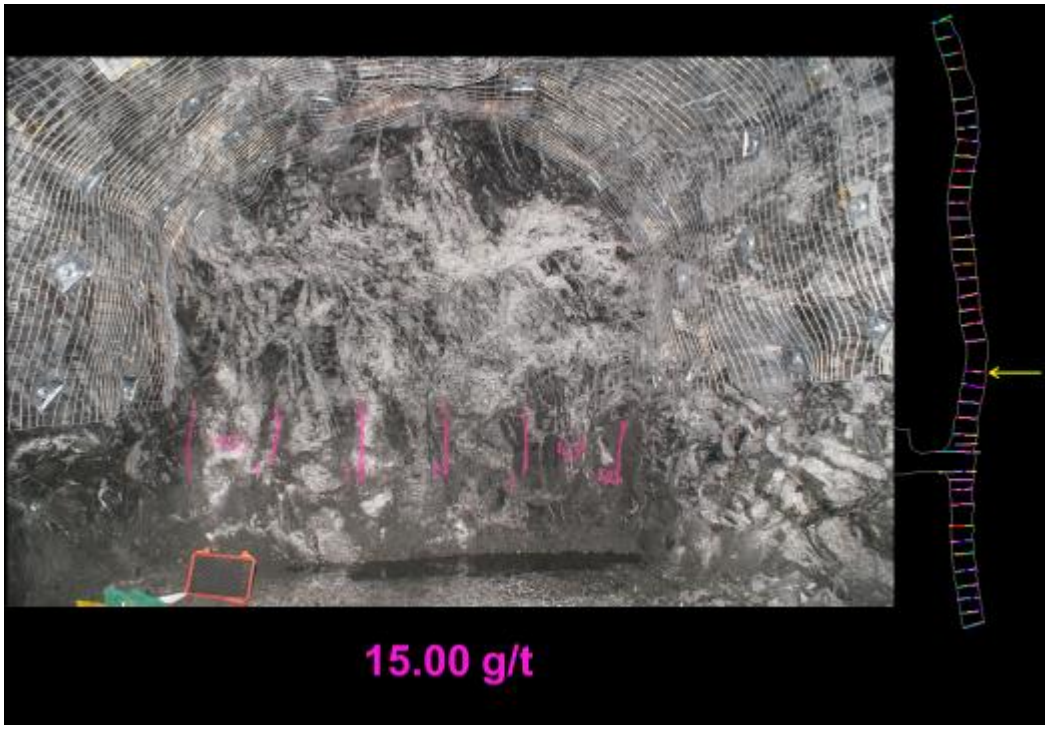
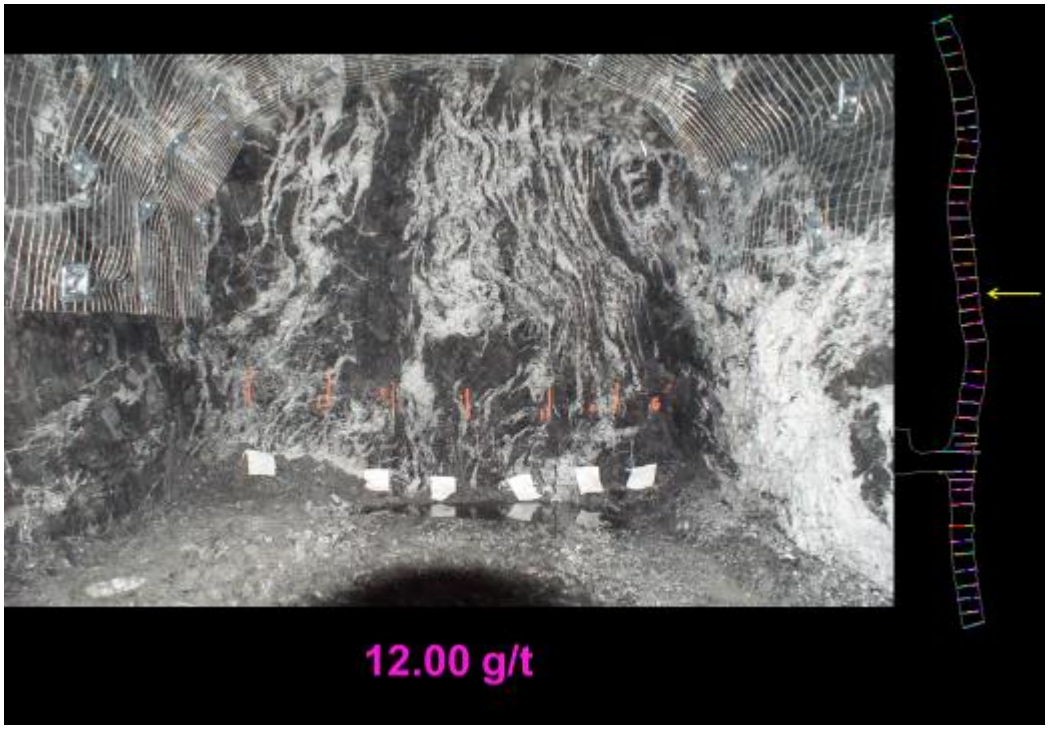


This was really 9g per ton, the whole face and even the hanging wall. The whole face was full of ore, lots of high grade in it. Trevor and everybody loves that.



The next one was also just a spectacular face. The whole ore body was sheared, the next one was very similar, very visual.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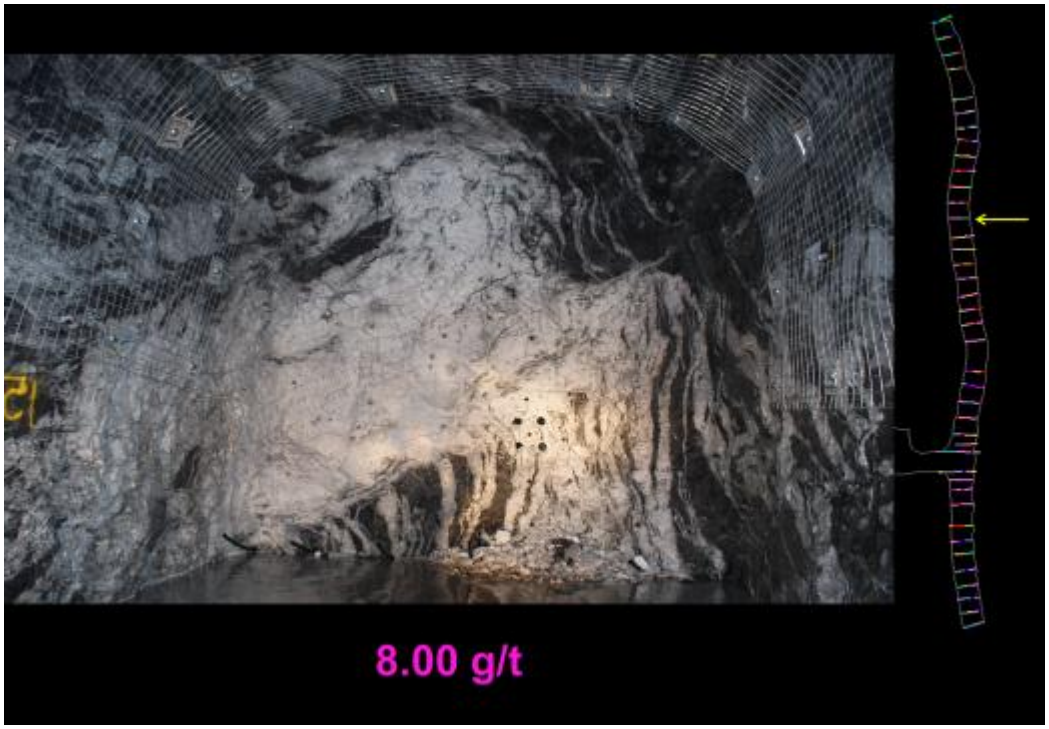
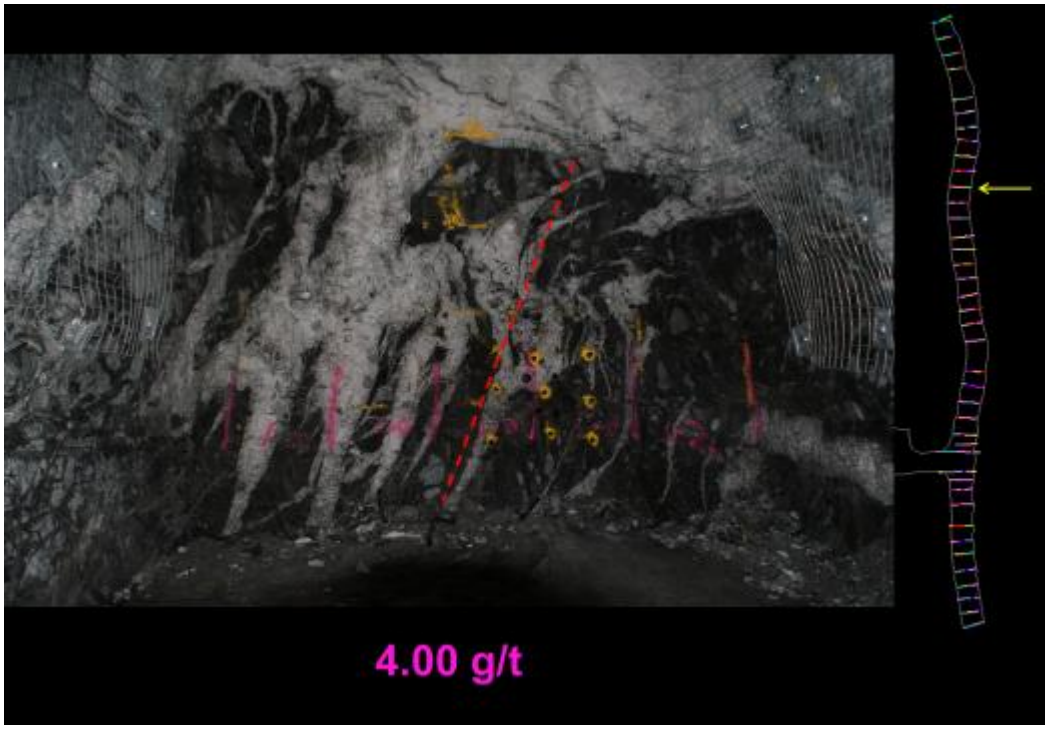


Then it started to get a bit lower, a bit of faulting, and you can see we're going into the hanging wall on the right.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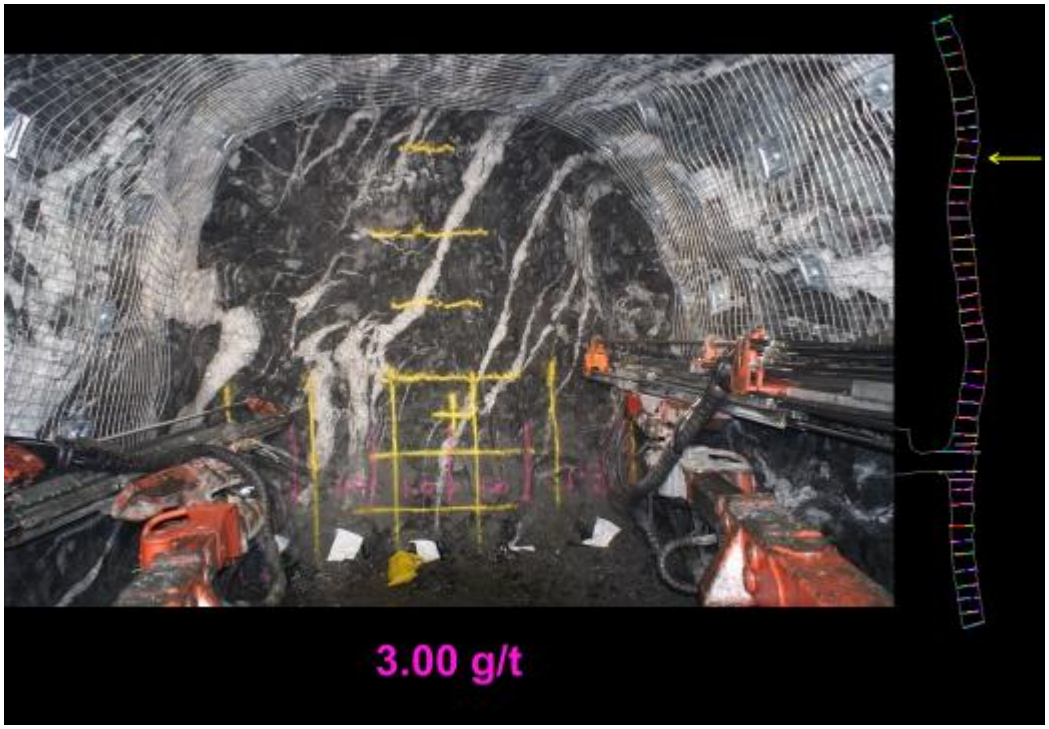
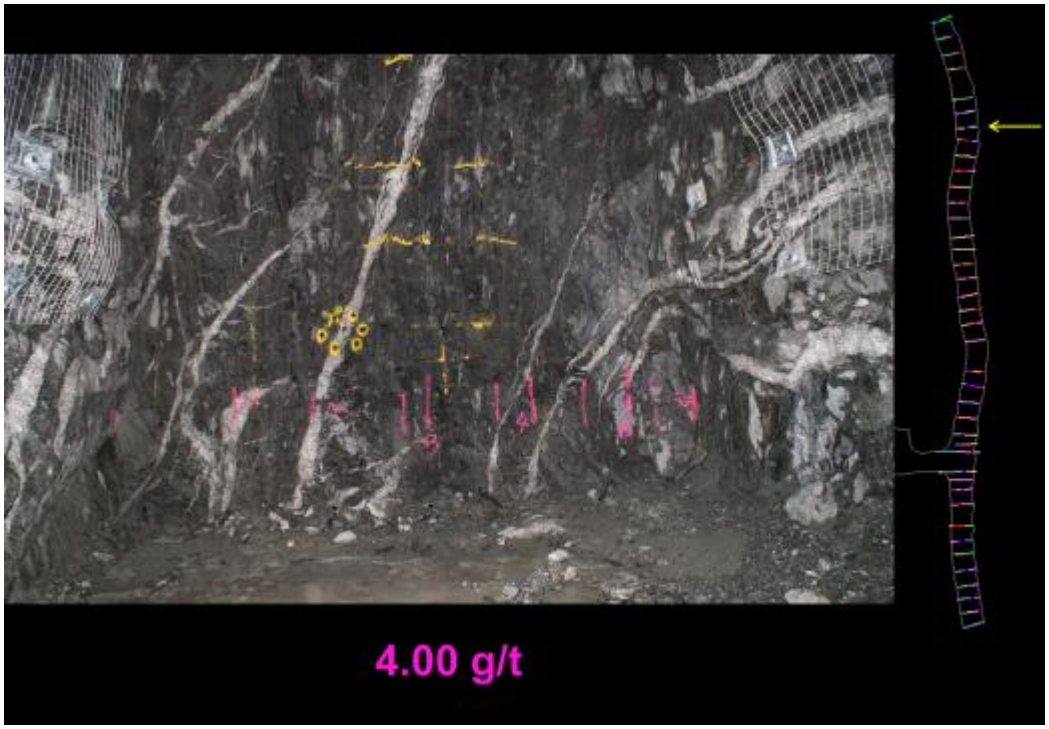
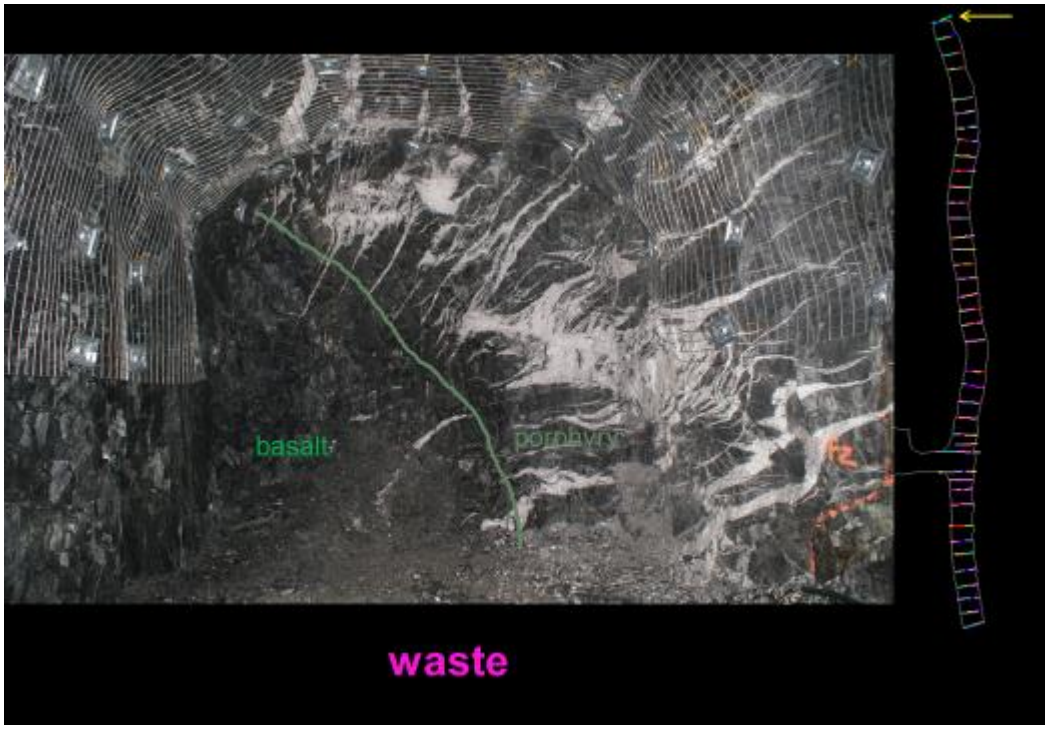


And then you see it again down at 3g per ton.



And then again not particularly good. Then you start to get into waste. It is pretty obvious when you're out of that.

waste



This one is we have some late stage porphyries that intrude, so that was the original genesis. That area there is not ore. That gives you a bit of a visual for the variations that we have through this ore body. And most of the ore bodies have similar type backgrounds to this.

This was Athena?

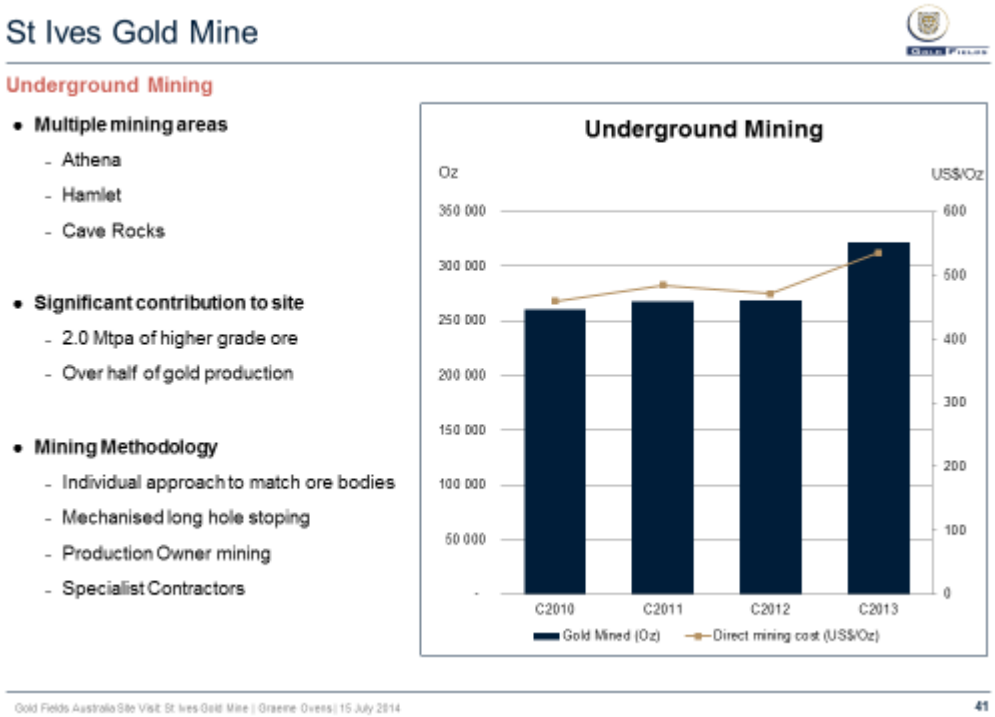
This was Athena.

Is that what you get in most parts of Athena? What about Hamlet?

Hamlet is very similar. It tends to be a little bit thicker and probably not as well developed. Athena is a very visual ore body and very well developed. The Hamlet ore body you will see it is a little bit more diffused to what you're seeing here.

And what about Cave Rocks?

Cave Rocks is very narrow ore bodies. When Julian talks a little bit later about Cave Rocks you will see it is very different. Cave Rocks is probably very similar to what you saw at Lawlers yesterday. That is probably the closest analogy. I think, Trevor, that's the geology. That's the good stuff.



I'm Trevor McIlwaine, Manager Underground Mining. I've been here at St Ives for coming on six months. I have been in Australia now for seven years through the Newmont organisation. I spent a most of my underground time with Teck Cominco in Canada and Echo Bay in the early days of my career.

One of the areas we have already touched on, and we've done a few slides for an open cut as well. Athena and Hamlet, half the group went out there and saw some of the production areas. The other half of the group went over to Caves this morning and saw some development, some raise bore I believe and some production drilling. We have half the production at 2 million tonnes per year, half the production at St Ives. Each of the ore bodies is a little bit different. Cave Rocks is much more of a vertical ore body. Athena and Hamlet are about 60 to 80 degrees dipping to the east. Athena has got a paste fill mining strategy and we will extend that strategy towards Hamlet at the end of this year, early next year. All of the mining is done by Gold Fields employees, the vertical and the horizontal development is done through Byrnecut and Redpath. When we were at Hamlet this morning Stephan said that we could get 1.3 million tonnes from Hamlet. Steph was saying Hamlet will be able to do 1.3 million tonnes a year.

We are going through the planning process. You can see the extent of the Hamlet ore body. We are looking to optimise that. There might be a few ideas on schedules we can look at, bringing some ounces ahead. This is Hamlet. It is 550 metres from Athena. You see the strike length is 550 metres for Hamlet and 350 metres for Athena. Then you look at the strike length of Cave Rocks. It is a kilometre. So you have to picture your access to the ore bodies carefully because you are essentially constraining your production and your development along the strike. The other complexity is the open stopes. You can't work underneath open stopes, so you have to do mining in sequence. So the scheduling is very important.

Is that 51,000 tonnes per month, that's the current rate at Hamlet?

These are snapshots. The cost profile and production profile is here for the total underground mining.

St Ives Gold Mine

Underground Mining: Equipment

Mine Production (Gold Fields Australia Pty Ltd)

- 7 x Atlas Copco MT6020 Mine Trucks (50t nominal capacity)
- 6 x Caterpillar R2900G Loaders
- 1 x Atlas Copco MC7 and 4 x Sandvik Production Drills (89 mm diameter blast holes)
- 1 x Sandvik Cable Bolter

Mine Development (Byrnecut Australia Pty Ltd)

- 3 x Caterpillar AD55 Mine Trucks (55t nominal capacity)
- 3 x 621 Sandvik and 2 x Caterpillar R2900G Loaders
- 3 x Sandvik Axera 07 Jumbo Drills

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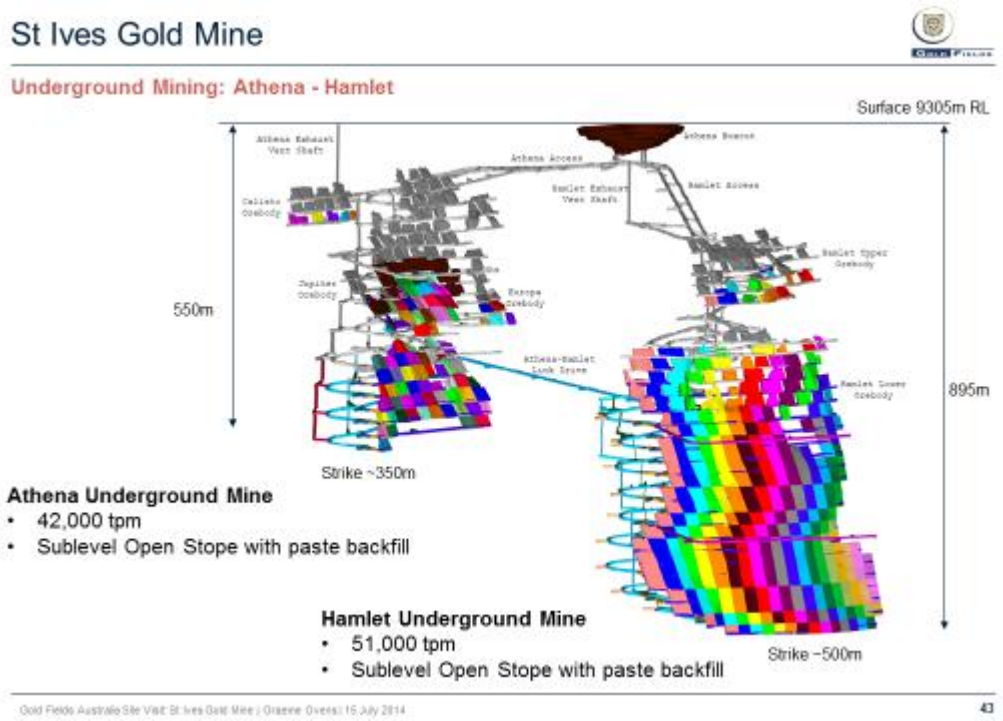
The contractors run three AD55 mine trucks with 55 ton nominal capacity, three Sandvik and two Caterpillar loaders, and also three jumbos, for Cave Rocks and the other two mines Athena/Hamlet.



Somebody had some questions about the vertical depth of the mine. 550 metres at Athena and 900 metres at Hamlet. 51,000 tonnes per month at Hamlet and 42,000 tonnes per month currently at Athena

Question: So what is it going to get to? Athena is shutting down next year. What can you push Hamlet to? You think it has got more strike.

You've got a strike and you've got a depth, so there are a couple of different parameters. And I guess it is getting back to the optimal blend to the mill. You get the best margin and the best possible quality.

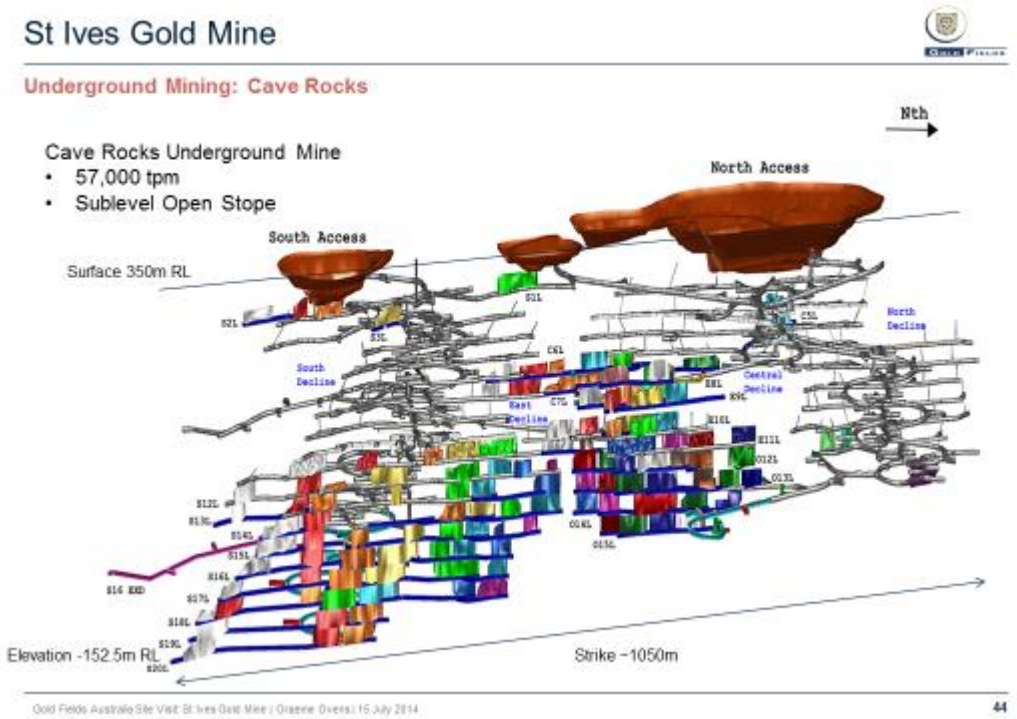
We are looking at the assessed options at Hamlet at how it could optimise the number of working areas. And the difference between these two mines and Cave Rocks is the mineralised planes essentially. The whole strike length is mineralised, whereas at Cave Rocks you have a kilometre of strike length but it is all of these different ore pods. It is not like continuous mining. You don't have the interaction of the stope filling and curing. So we are looking at how we can optimise Hamlet and increasing the number of working areas.

You have the direct costs, how does that vary between the three operations? Is there much variability?

Yes. Cave Rocks does not have backfill but has scheduling bottlenecks. On a per ton basis Cave Rocks is the cheapest mine. I don't have the number but it is around 15% cheaper. 15% cheaper. Because of the face it is a lot more stable ore body. The ground support obviously has a big impact at Cave Rocks. They don't have nearly the dilution we have or the oversize issues that Athena and Hamlet have.

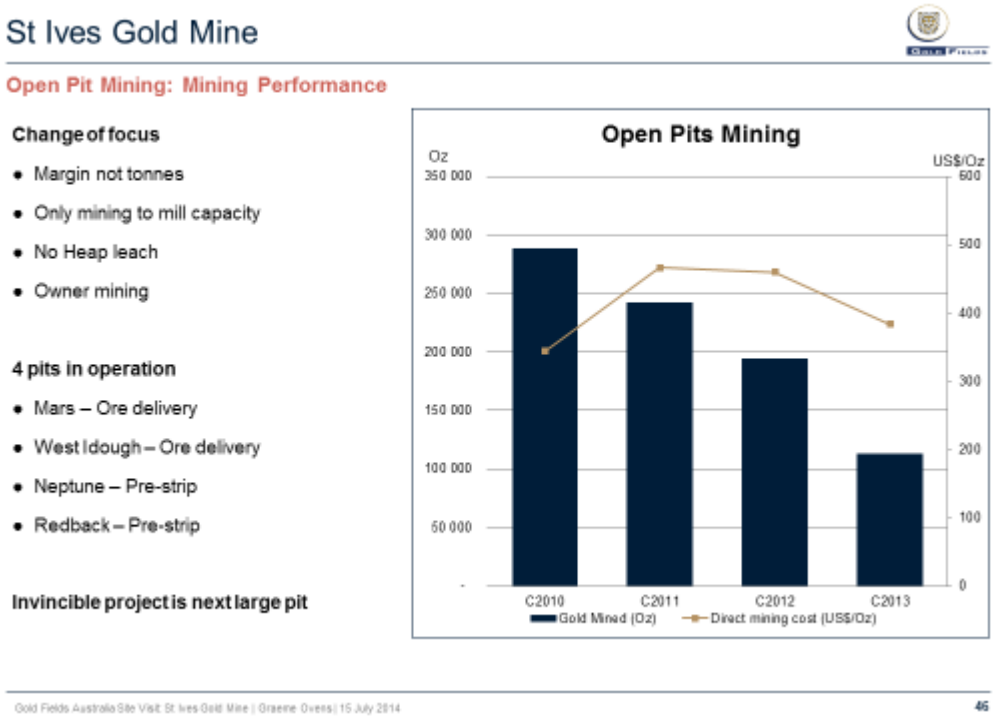
If Cave Rocks ceases at the end of 2015 your costs are going to go up.

On an ounce basis they are a lot closer to each other. They generally have the same productivity. Cave Rocks is a vertical ore body and the other two are about 65 degrees which is more challenging.



Again you've seen these photos a couple of times now of Cave Rocks. Down on the lower levels there are a few pillars next year so we're looking at the end of 2015 end of mine life here. It is pretty much the same monthly production.

Open Pit Mining



The graph on the ounces mined and cost per ounce the last four years.

If I jump into the open cuts, the focus is on margin. Only mining to the mill capacity. There is no heap leach. I think I pointed out this morning where the heap leach was located. And we have gone to an owner mining fleet, owner mining and maintenance fleet.

Question: What sort of benefit is that cost-wise?

I don't know what it is specifically for here. You can see between 10% and 15% premium on a contractor. But I haven't done the sums yet.

The four pits are Mars, Idough, Neptune and Redback. I don't know which ones they are going to be looking at this afternoon.

We will potentially cover Neptune and Redback, maybe Mars on the way back.

Which one is Leviathan?

Leviathan is closed. That was run between 2005 and 2011.

And the current life of mine for the four pits?

2019.

Mars will be finished in about a month. West Idough will be finished by the end of the year. Redback will be finished in December, and the current stage of Neptune will be finished in December. As Graeme said before our focus is moving to Invincible and throwing our open pit focus at Invincible. We might close Neptune and come back to it again in a couple of years' time.

Question: Are you pre-stripping Invincible at the moment?

No.

Question: When does that start?

We will commence with the infrastructure and project approvals before the end of this year.

We will see ore very quickly at Invincible. The initial area will deliver ore almost immediately.

About six weeks before we get into initial ore.

There are a significant amount of other pits that are in the reserves; lots of smaller deposits. So they are in the mine plan.

Question: So the life cycle of these pits is pretty short?

They vary. Some of them are months. Some of them are years. Invincible, Neptune, Leviathan are multi-year pits. Some of these pits are less than a year. So Neptune is potentially two to three years. Invincible is three years in a series of stages. So they are the two big pits of the big pit potentials that we have for the next five to six years. And then whatever else can turn up in exploration. That is really our focus. 2015, 2016 and into 2017 of the Invincible pit, and then we will come back to stages two to six on the Neptune pit after Invincible.

If we look at the all-in sustaining cost in quarter one, a large pre-strip, very little ore. You can see there are four pits that are going to be mined, in the second half of the year. It is kind of a lumpy profile because of the nature of those open pits and the fact that there are periods when we are doing mostly pre-stripping and then there are other periods where we are bringing in a lot of ore

Question: The logic between leaving Neptune, is that basically grade?

Maximise NPV. Invincible is such a higher return pit that it makes sense to do it next year.

The other one is the productivity. If you can have all your assets and run efficiently in a larger pit relative to a lot of smaller pits, it is economies of scale and efficiencies.

Question: So the discovery has just brought it forward.

The discovery has brought it forward based on a ranking process. The primary driver is value.

There is no underground opportunity at Neptune because it is a paleochannel type deposit, but there is at Invincible. The sooner we get into Invincible and open that pit up we can put an access in for underground from that pit, which is why we want to get into Invincible early.

Some of the detail. 16 million BCM capacity. Five digging units both in the excavator and the shovel configurations. 12 trucks with 90 to 150 tonne capacity, Komatsu and Caterpillar. Drills, dozers and auxiliary fleets. And there are a few hired dozers as well. Multiple pits. It's de-risking the plan so they have one in grade control and another one in drilling blasting and mining, so you've got that cycle. Centralised workshop. I think we pointed that out to a few people when we drove by. Pit haul to the local ore pads and then road train haulers to the ROM Pad.

Question: What's a road train?

Remember we showed you earlier all those trucks on the ramp there in the earlier part of the presentation? So it is a truck that pulls four trailers.

It's just a big truck.

A really long truck. They are hauling a 150 ton pay load across the four trailers.

Question: That's the contractor. And the cost of that, is that included in the direct mining cost or is that included in the Processing costs? Where does that cost report to?

That cost is captured separately and included in the overall costs per ounce The milling cost is $16 per ton.

Question: So how much is it?

It's a haulage cost. Somewhere between $3 and $5 per ton.

Depending on where you haul it from. $3 to $8 per ton is a reasonable range. The dearer one is Caves because we have to drop our pay loads hauling from Caves because we have to haul that on a public road.
Question: Have you thought about a conveyor system to move the ore?

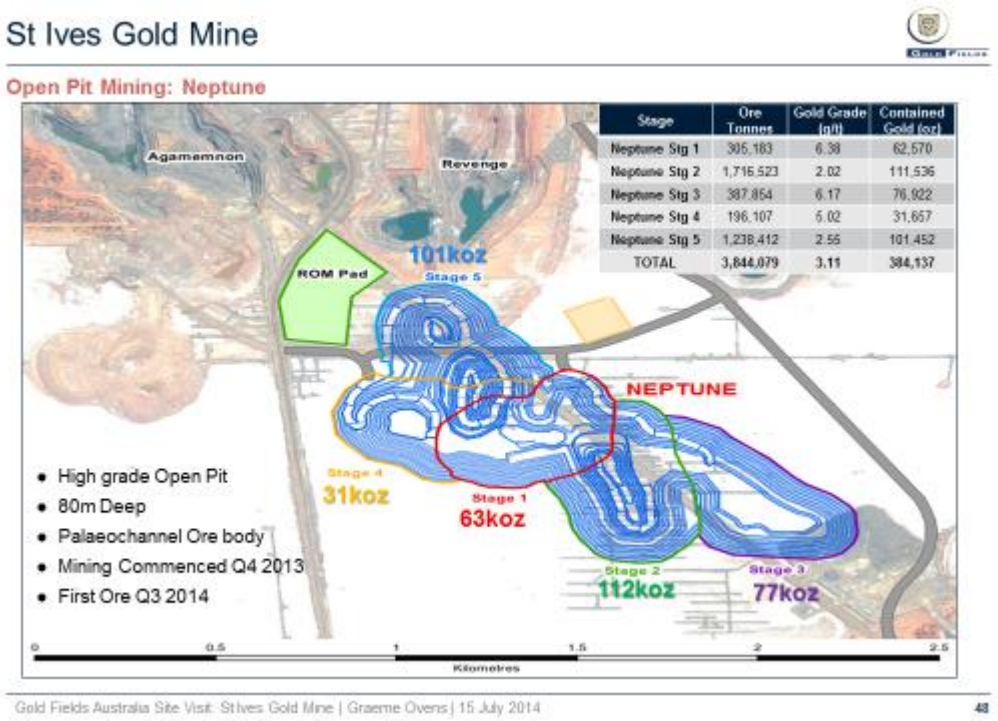
One of the problems that we have again is the number of pits that we operate as well as the underground. Cave Rocks finishes in the next year. So to put a conveyer belt in is a fairly expensive exercise. Some of the other undergrounds, like some of the bigger South African mines where you drill it out and you know you've got to mine there for the next 40 years. Some of these things are only built on a three year mine life, so it is hard to justify putting a conveyer system in. You need a big, long-life project to do it.

Particularly the pits, some of those pits are a six month project. We do three months of that and then we move to a different geographical location.

Question: Is there an opportunity for a long life underground and maybe a sizeable project in the future.

I think you've got to read the Invincible slide pack.

Julian will talk about Invincible in the later part.



Stage	Ore Tonnes	Gold Grade (g/t)	Contained Gold (oz)
Neptune Stg 1	305,183	6.38	62,570
Neptune Stg 2	1,716,523	2.02	111,536
Neptune Stg 3	387,854	6.17	76,922
Neptune Stg 4	196,107	5.02	31,657
Neptune Stg 5	1,238,412	2.55	101,452
TOTAL	3,844,079	3.11	384,137

This is a close-up on Neptune and the different stages, the grades and ounces. We are 80 metres deep. A paleochannel is an ancient river bed with very coarse gold. We started mining in Q4 2013 and the first ore was just last week.

Question: Are you in stage five now?

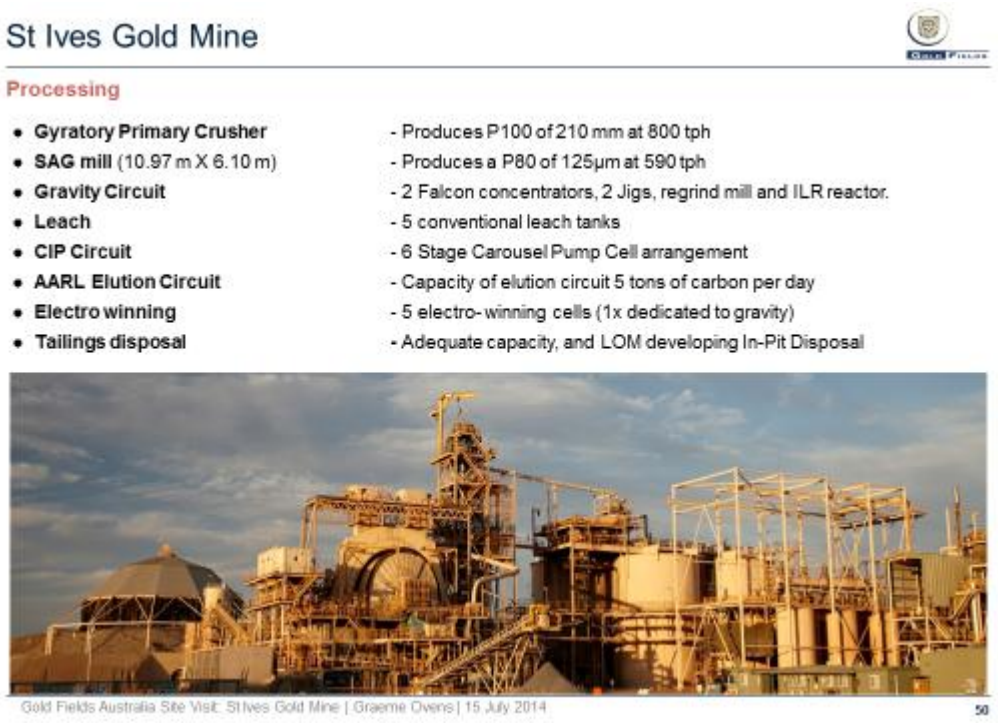
We're still in stage one. There are five stages in the current design now. So we are after 4 million tonnes for 384,000 ounces.

Question: You said you're going to stop mining there.

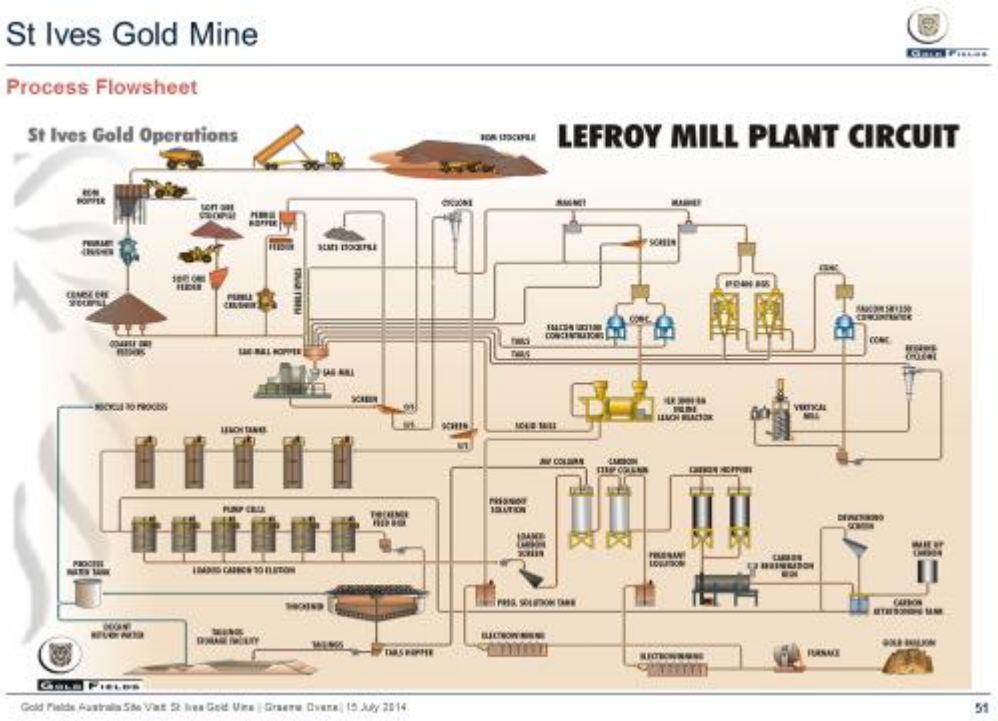
We are going to stop after stage one, and then there is a break after a number of years. We will go to Invincible and then we will come back. There is a better return for us to do Invincible first and then return to Neptune in a couple of years.

I'll hand over to Graeme.

Processing

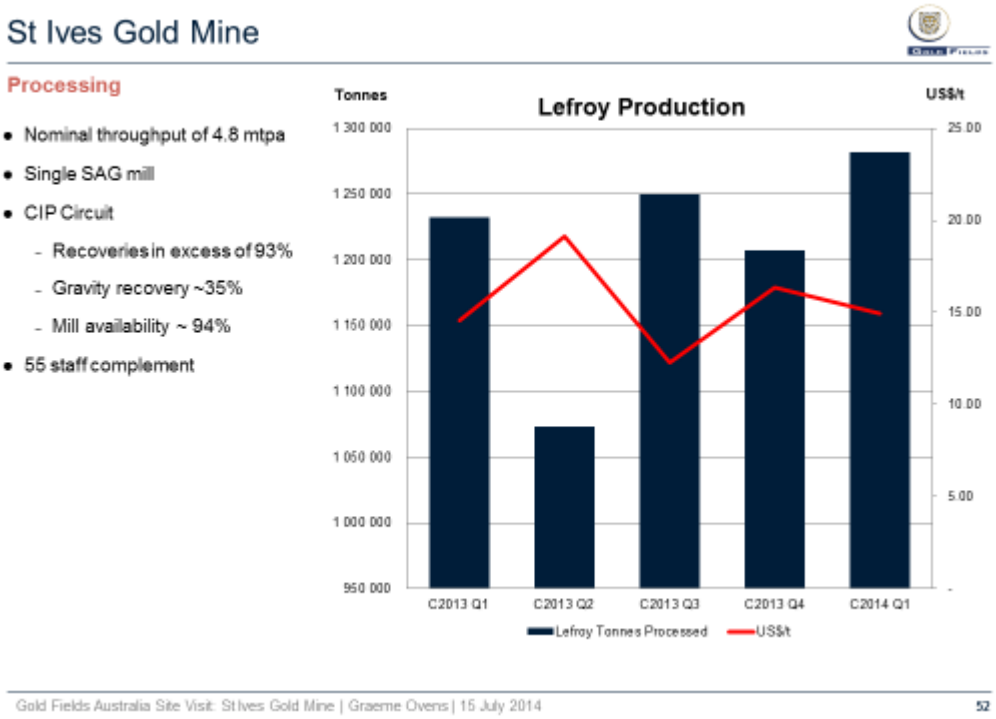


As you can see this is the processing site. If you have a look at the set-up today we have a gyratory crusher which crushes down to 210mm size. A SAG mill which brings it down to 80% passing 125 micron at around the 600 ton per hour. A gravity circuit, two Falcon concentrators, two jigs, a regrind mill and a leach reactor. Five leach tanks, six pump cells for carbon contactors. A five ton elution circuit, five electro-winning cells and plenty of tailings capacity.

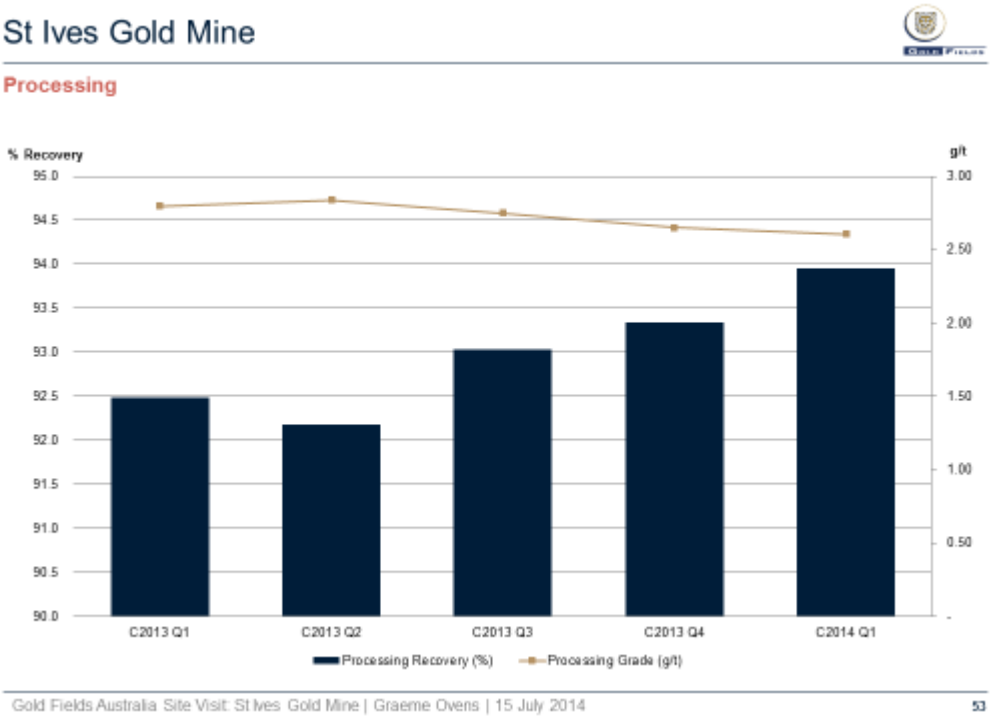


This is a flow chart of the whole process starting from ROM stockpiles tipped into the crusher with our trucks or with the loader. We use the combination of both. Through the primary crusher onto the coarse ore stockpile, getting to the sag mill, which is the only mill which is in closed circuit. It is not all that common to see a sag mill in closed circuit these days. Over a discharge screen to a recycle crusher and back into the mill. The screen undersize runs a backup to a cyclone cluster for classification. Then the material from that across some trash screens, through our leach tanks, back to our pump cells, and then away from there out to a thickener for water recovery. We recover a fair amount of our water back into the process and pump from there to tailings.

If we look at our gravity side we've got a couple of magnets ahead of the concentrators. Product comes down through a screen into a Falcon concentrator or two jigs down into the leach reactor. From there we take the tails back into the circuit. The product from there then goes across to the electro-winning and the gold won. Carbon out of the leach contactors is sent to a carbon screen into an acid wash column, into a carbon strip column, it runs through here and the solution is electro-won. The carbon is out back into the regeneration kiln, we regenerate the carbon and then back into the circuit.



It is all pretty standard, a pretty basic flow chart for a circuit like this. It runs very reliably. So it is a nominal throughput of 4.8 million ton per annum. It is a single SAG Mill in closed circuit. CIP Circuit is in excess of 93% recoveries. Gravity recovery around 35% on average. And a mill availability of about 94%. And the whole mill is run with a staff complement of about 55 people, which is low for a mill with 4.8 million tonne per annum. throughput



So here is our profile on tonnes.

Question: What happened in the second quarter of last year?

Second quarter of last year, Garry?

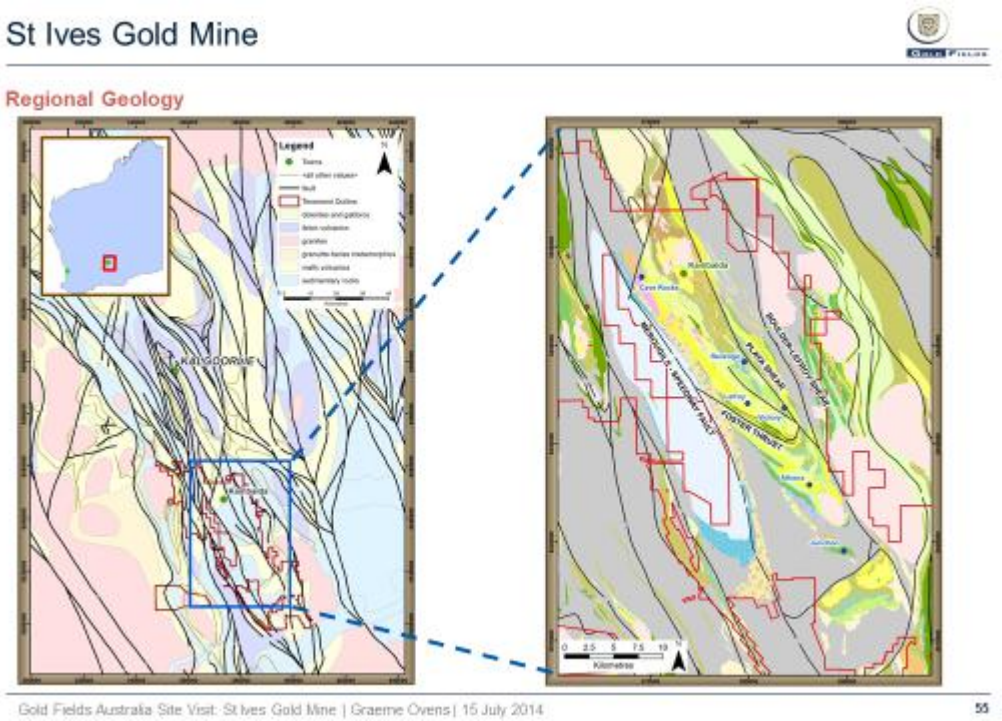
We had the mill motor inspection for ten days.

That's right. We had some major repairs on the motor. The mill shut down for reline is normally in the last quarter. It's costs are about $15 per tonne. It varies a little on the way, but generally $15 per tonne. And recovery, the guys have been working hard on improvements in recovery and you can see it is up to 94%. That is with a slightly declining head grade, so a pretty good result there.

Exploration. I will hand over to Julian to talk you through exploration.

On the question asked earlier about the average cost per employee, it is on average about $150,000 including on costs

Exploration



Good afternoon everybody. My name is Julian Woodcock. I'm the exploration manager on site. I'm going to talk you through the exploration. It may be a repetition of some of the stuff you've seen before, but it will help with the context.

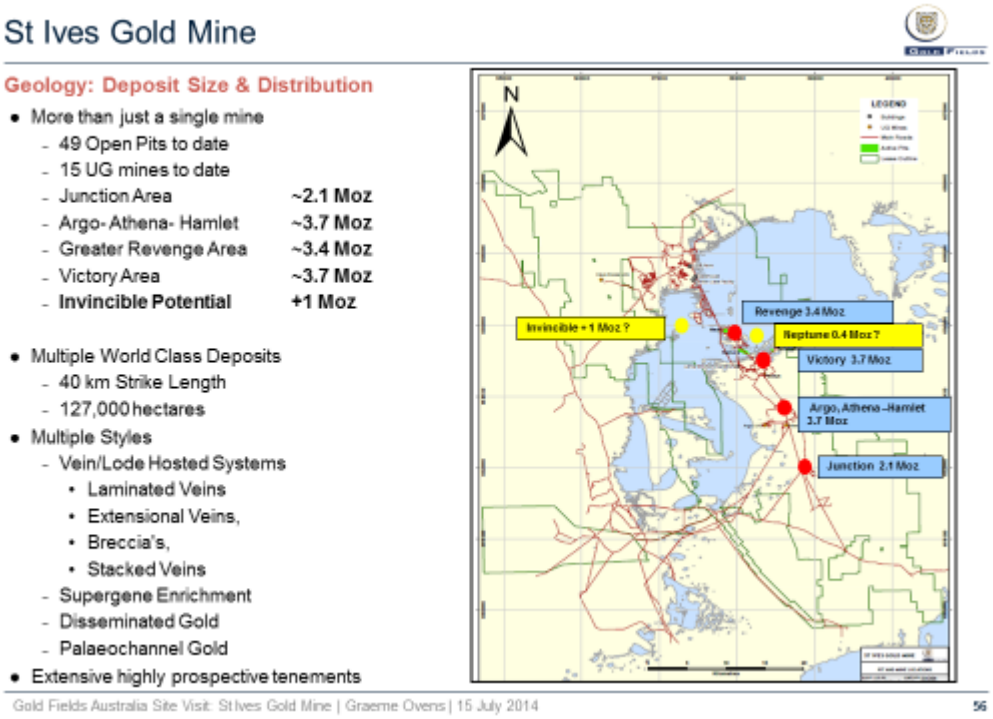
Now, on Sunday Craig talked you through orogenic deposits as a high-level overview. Our regional geology is located in the Norseman-Wiluna greenstone belt in WA. For those that know global geology there is the Abitibi belt in Canada or the Birimian belt in West Africa, It is the same kind of geological setting. So these are volcanic rocks, in our case sandwiched between granite, sediment and a whole lot of regional structures or shears that have allowed the plumbing to take place for the gold deposits to form in this area.

To zoom into our camp scale around our leases, this map on the right. We've got what we called the central corridor, these greens and yellows in here. These are the traditional mafic rocks which host a large component of our gold deposits. And we are bound by the Boulder Lefroy Shear on the east here. That is the same shear that is associated with the Golden Mile that has produced over 50 million ounces of gold at Kalgoorlie, 60km to the north. We have a series of splays off this, one called the Playa Shear, and these are intimately associated with the deposits that form. The slide shows some of the distributions in those deposits.

We are now on the west side of this basin in the Merougils-Speedway Fault. This is what I'm going to talk about shortly because it is in that area that we discovered the Invincible deposit we've talked a lot about already today. Further west there is also another structure called the Zuleika Shear, and that is what Cave Rocks sits on. There is a whole series in the region of these north-west shears that host deposits. And they are not just confined to here. We've got the Golden Mile, Lefroy, Frogs Leg, Pegasus to name other deposits. These are all sitting on the Zuleika shear. That gives a little of the geological context here. The greys in there are sedimentary rocks which aren't traditionally major hosts. Usually we are looking in the dolerites and mafic rocks. However, Invincible is the exception to that rule. We found a significant deposit within the sedimentary.

Question: What made you want to explore there?

There is a slide that gives an analogy as to why we explored for Invincible in that specific area. I've given other talks before. Ten or 15 years ago the thinking was gold deposits here are all found in the dolerites and mafic rocks and it was not worth looking in the other areas. That was the paradigm of the time. Now we are looking further afield and we recognise reasons for why there are gold deposits hosted in a particular area. We use geo-chemistry to try and identify where the gold will be. There wasn't really a geo-chemical signature over there, but we subsequently interpreted that that was because the weathering was different. The weathering of the volcanic rocks gave an oxidised blanket, a supergene blanket which distributed gold and gave a bigger footprint to target an anomaly. There are more slides later on to show the prospectivity.



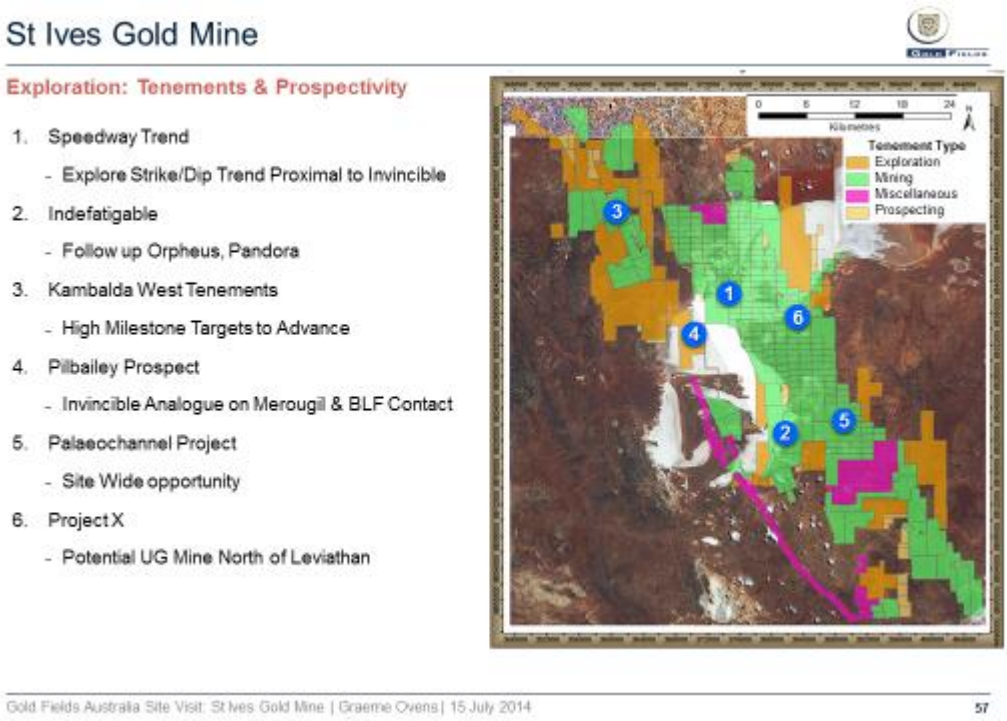
This is a repeat of the slide Malcolm talked to before. Really what we are trying to reinforce with this is the large camp-style deposits. Craig showed you a graph of deposit distribution. I think he said there is 80% of the metal found in 25% of the deposits. As we have talked about there are a lot of these smaller pits that last three or four months. They represent the 20,000 to 50,000 ounce range. The mean deposit size on site is 250,000 ounces, but we've got these multi-million ounces. So Athena and Hamlet which we put in a camp, 4 million ounces ranging between 600,000 to over a million ounces each. That was discovered in 2007 and is now in production.

Invincible is a 1 million ounce deposit – in our resource it is currently 1.4 million ounces – that was discovered two years ago. These deposits have been discovered on a site that has been drilled and explored for over 30 years. As the exploration manager here I would advocate we still actually have a lot of greenfields terrain. So looking in new rock hosts, applying different techniques is allowing us to continue to discover large deposits.

Question: How do you do geo-chem on the lake?
You drill through and you take a bedrock sample. So we are still using a drilling technique to get through to bedrock.

Question: What is the metallurgy like on Invincible?

The metallurgy on Invincible is very favourable. So where we talked about oxide and fresh rock mixed to get the optimum grind for the SAG mill, the hardness of the Invincible ore, because it is more of a sediment-hosted rock, you can actually just feed it on its own and it is very optimal for grinding. In terms of recoveries it is in excess of 90%. About 93% from the 16 samples we did. Just to highlight the varied mineralisation styles, the pictures you saw before, we have laminated veins, extensional veins, fractures. In areas we get supergene enrichment, so we mine the supergene portions out, which is the product of the weathering. But we've also got paleochannel gold. You've heard about Neptune. There is a slide later on paleochannel opportunities across the site.



Just to move into our tenement holding, these are all our leases and they are coloured by different types of leases. Everything in green is granted as a mining lease. So this is a 20 year plus tenement period for your licence and a relatively straightforward process to extend it. But also it means we have collective reporting for our exploration expenditure. So where you hold an individual exploration lease you've got commitments to make certain amounts of exploration on that ground geographically, on a mining lease because we have collective reporting we can explore just a small area of it, but the cost is applied to all the leases and we are allowed to distribute that accordingly. That really highlights the security we've got of our tenure. Even with the multitude of exploration leases we conduct work and manage our tenements to ensure we meet our expenditure, and then if we find a discovery we will convert that to a mining lease.

Question: So it is not clear as to which ones are subject to the Ngadju claim?

I mean you reference to this recent larger claim. I'm not in the position to discuss that because it is not my area of responsibility. I don't know. Richard?

It is not really the leases.

It's not the leases that are in dispute. The question is which leases are in dispute with regards to the Ngadju claim. The Ngadju claim is effectively south of the lake shore.

All of those leases and tenements we have all the mining rights. Any native title claim is not going to impact the grant of the mining tenure for those leases.

Don't confuse it with the South African type of claim. The tenements have been granted by the Western Australian state.

But they were also respondents in the case.

But it is not the mining right that is disputed. It's the native title surface rights to that ground. Don't confuse it with South African land claims. Those are very different type of cases. It's hard. We will go through the appeal process first and then if we're unsuccessful we will have to negotiate with the native title party.

To put it in context, just parking that issue, where the native title aspect sits is that if you have an exploration license, the one in orange, and you find a deposit, before you can get a mining licence you have to go through a negotiation period. So that has impacts on converting whoever the native title claim, if there is one on the ground, on these ones in orange. All these ones in green – and I think this is where the whole thing sits – is that legislation prescribes for a period of consultation and negotiation with regards to compensation. Green licenses are already sitting in mining licence position.

Question: The issue is when you hold those licenses and they are re-granted isn't there an issue that you then enter into consultation?

Again I'm not in a position to be able to answer that. You would have to talk to our legal counsel on that

So basically everything right of Cave Rocks is essentially what we have bought from WMC. In around 2005 we were looking to do some things with the tenements and saw that mineral licences that had been granted had proceeded past their initial 21 year term and had already gone through their automatic right to renew for a further 21. After those periods you have a discretionary number of renewals. The provision in the Native Title Act says you can have the same tenement re-granted to you without going through the right to negotiate process provided no greater rights are granted. We had these tenements re-granted under this provision in consultation with the State and that's what happened. And now the Ngadju are saying there are some inconsistencies between the tenements that were granted under the State Agreement and 1904 Mining Act versus the 1978 Act. So that is the case.

So the tenements are invalid?

No, that's not the case. It is only to the extent that there are inconsistencies between the rights granted and the existing native title rights. Native title rights are usufructuary rights. So it depends upon the actual rights held by native title holders. Native title rights are commonly rights to fish, right to travel local land, conduct ceremonies etc. They are not rights to explore and mine minerals
The minerals are still owned by the state. At the end of the day a compensatory claim would be the worst case scenario.

On this slide there are probably two messages we are trying to say. In terms of exploration we have the existing mines and we try and grow them and maximise the extent of that particular infrastructure. And most of those existing mines fall within our green mining licence. The other part of it is that as a highly prospective area most of our mines and our deposits fall within our current existing tenements, which makes life a lot easier. You probably can highlight five or six within that that are really what we get excited about and what we want to get out of bed every morning for. This gives us the longevity of this mine. If you look at a history of this mine it typically had a four year life for 30 years. Because you continuously discover by applying new techniques. A lot of the 3D dimensional graphics that are coming through allows us to see under previous...it just gives you a whole new approach.

Question: So there are gaps to the south-east. Are they held by someone?

Someone else. So we might have done....This is getting off track, but we have a system which continually monitors what ground is being picked up and what ground is being dropped. We get notifications 30 days in advance of an expiry so we can look at that.

Question: How long can you hold exploration tenements in WA?

Five years, but then you've got options for renewal. You've actually got four years, renewal for one year, then you drop 40% of particular blocks. On a big lease it is almost 40% of your ground, but on smaller leases it is usually less.

What we will show you is we consistently evaluate our opportunities and options. And the whole area around the Kambalda west tenements we purchased last year because it is on a major shear structure. We believe they are highly prospective. So last year we purchased them.

Question: What is the mineral holding cost of an exploration tenement?

This whole tenement package costs $2 million a year. That is our leases and land rates.

Question: What are the miscellaneous tenements?

These fall under miscellaneous. Everything in green we've got all metals rights. We can do minerals, gold, whatever we want. The ones in purple here, these ones are actually owned by other companies and we have an agreement with them which gives us exclusive gold rights. These are owned by Mincor as a mining licence but we have 100% right for all gold. They have the other minerals. I didn't realise tenements were such a hot topic. I should have known I suppose.

Question: So you could potentially have an issue trying to convert an exploration license to a mining licence?

It's just a process you have to go through.

But underneath this claim, that's where you could have a problem?

The conversion of exploration to a mining licence, it is a process of engagement that you have to go through with the native title. The highlight message from this which I was trying to get across is most of the blue dots are the areas we are looking at for focussing on exploration, and the bulk of these are already in existing mining tenements. Invincible, which is by far the most significant thing I've ever talked about, is at number one. It is completely shrouded with mining tenements, as is the whole Invincible trend which runs all the way through these green leases up there through there. So that will not have to go through the process of right to negotiate with respect to converting a lease.

Question: When was the last time you converted an exploration license to a mining license?

Last year.

Question: Last year. And did you have to have a native title negotiation then?

We did.

Everything to the north of this lake shore used to be under a native title claim from a group called the Widji group. They had their claim refused, and so that ground now has no native title claim over it. You still have to engage with the traditional heritage land users and owners, but they don't have a legal right to a native title claim. The Ngadju was one of the first native title grants, if not the first, in the state.

Sorry, this is all a big learning for us, hence the focus on the questions, but if there is a local indigenous group you have the right to communicate but you don't have the obligation to compensate? The native title claim.

Question: It's just a local indigenous group which you have tonegoiate with.

There are multiple indigenous groups which we engage with as part of our exploration. Under the Heritage Act we have obligations not to damage or disturb heritage sites. So as part of that process we speak, discuss and do heritage surveys to try and identify any sites of interest.

You may get a ten year grant or a two year as a native title process. Are there any native title claims in the area that might have an interest? But also underneath that when you want to do a ground survey a lot of these areas have had aboriginal communities on them for thousands of years. So native title is actually a very procedural thing. There are certain boxes you have to tick to actually be recognised as a native title claimant. Heritage in itself is more of a nebulous thing. Are there sacred trees there? Are there sacred sites? And then what you're then dealing with is people who can actually speak for the land and actually identify areas that are special to the communities there. Native title is very rigid, very procedural. Heritage doesn't affect the grant of mining title, it just affects your ability to get on the ground and get drilling.

There are multiple claimants as well. So not just one tribe. You can have five tribes.

Back on Invincible. Here's the Lefroy mill where we're sat at the moment. You drove this morning across the causeway. If you were to look at the right-hand side as you drove in or the left-hand side as you drive out, you will see some drill rigs in the distance. They are situated at Invincible. Invincible is on a parallel trend that runs through here all under the salt lake, crosses through land and heads onto the salt to the south. This is Leviathan that was mined out. There was an underground mine there originally and subsequently an open pit that lasted for five or six years here. Neptune you're going to see this afternoon. It is a paleochannel. I will talk about paleochannels later. Here is the Revenge complex. Mars is the pit that we're currently mining.

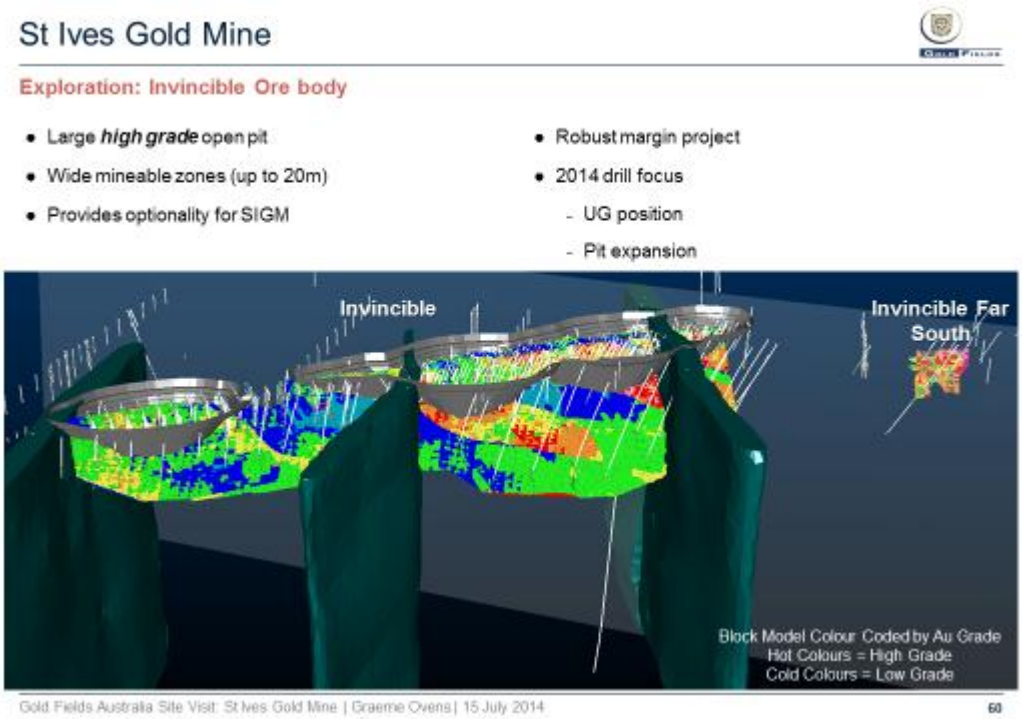
Invincible is within operating radius of the Lefroy mill. It is actually very close. 8km is actually pretty close. Cave Rocks is a 35km distance by road for haulage, so this is a very favourable distance for trucking ore. There is an opportunity to build a conveyer straight across the salt here. It is only limited to lake disturbance which has relevance with regards to our environmental permitting. We have our environmental impact statements and associated approvals. We did an amendment to our existing environmental impact statement. That went through all government channels, no problems, and got approved. Primarily because it is restricted to lake disturbance. Because of the hyper saline nature of the water there is no biodiversity to be concerned about. Effectively we dig a hole on the lake. We are gradually going to use a lot of the waste rock to backfill a series of these pits, which also meets part of our commitment for rehabilitation on the site.

Just to zoom in a bit closer, the deposit is located on a 2km strike length. This is the causeway we built as of the end of 2012. As of now the causeways go up to here. There are 15km of roadways we have built to drill the deposit out. Prior to drilling the deposit out to get the reserve we used lake diamond rigs. We used track-mounted lake diamond rigs which go out, precluding the need to build roads, to do the exploratory drilling. When we've established we've got something that warrants a significant investment decision we will then commit to building the infrastructure to get out there. Obviously this comes at a cost, but by getting cheaper drilling methods such as RC drilling in here we can offset the larger volumes of work. We can apply that as a unit cost per metre for construction of the roadways.

I've mentioned the strike length of 2km is very significant. I will add our drill contractor used to have two lake diamond rigs. These are track-mounted rigs to drive out on the salt. This year they developed an RC drill rig as well with the same capabilities. That is faster and cheaper to allow us to test regional trends. So we are now using that as an extra tool, doing some geo-chemistry before. We also use lake air core rigs that drill through the lake sediments and on land as well to get a better sample for geo-chemistry.

Question: And on average how thick are the sediments?

They vary massively. In this area they are about 6m or 7m. In this area they are about 30m or 40. Then there is a fault that runs from these pits down through here and it drops to 50m. There are areas out on the lake that drop to 120m. So what you've got here is an eroded valley network way back when, and subsequently shallow seas have come in and filled up all these valleys with sediments. So now you've got a nice flat lake on top. So there is a big paleotopography underneath all of these.



Okay. This is Invincible. The causeways would be situated over this pit. So this is looking to the east. We have barren late stage dykes that cross-cut through the ore body here. They are just waste. We've effectively defined as of our 2013 resource statement just short of a 500,000 ounce reserve at a run of mine grade of 4.1g per tonne. Our current run of mine grade that we are putting through the mill is just shy of 3g. So the question was asked with regards to underground winding down and open pits winding up. The tenure of the ore that is going to come out of this deposit is going to significantly tip that balance in terms of ounce production from an underground perspective to an open pit perspective.

Question: What is the strip ratio?

I don't know offhand. I'm not entirely sure. It's about 15:1, but strip ratio is immaterial because it is based on tonnes, it's not based on ounces. You have to move them. It reflects on the cost, but obviously the revenue that is going to come from it is more fundamental to the grade. So this is a higher grade open pit. So it can afford a higher strip. The strip is actually not fundamental to the pit depth. You will see in this model image there are the plunging high-grade zones in hot colours. They effectively govern where the base of the pit goes through this point and this point. But really it is a shallow-dipping zone to the south. It is more a function of the grade. See this lower grade zone here? That's what stops the pit. It's not the actual cost of the strip above it. The margin of this pit exceeds our corporate objective of 15% free cash flow. I'd emphasise significantly exceed. I'm not at liberty to say what the actual margins are. This provides a lot of optionality for us.

Question: Why aren't you at liberty to discuss margins?

It is not published information. We haven't published the full cash flow models for these projects.

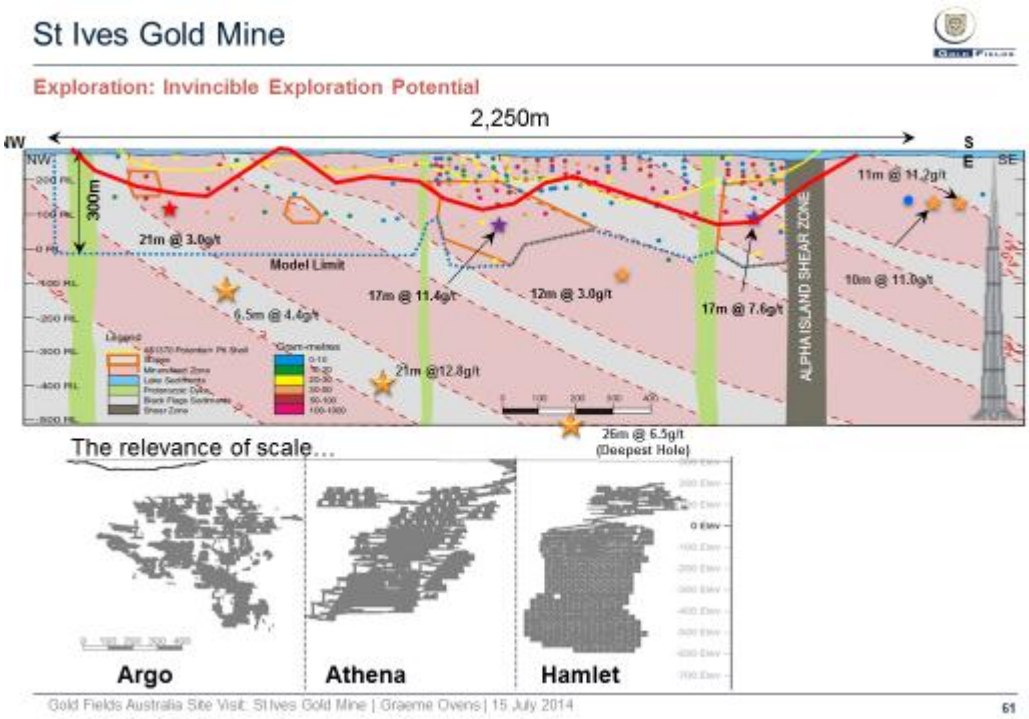
Needless to say it is a 500,000 ounce reserve. A resource evaluation on the same project which includes inferred material at higher gold prices produces just short of a 1 million ounce pit at 4.7g in situ grade. Again all our resource numbers for the open pits and underground by project are listed in our annual summary here, which you should all have access to copies of.

The message I'd like you to take from this slide, you will see one very long hole going off here at the bottom. That is a 1,000 metre drill hole we drilled down the guts of the deposit, really looking at the continuity of the host rock. It wasn't targeted to stay in mineralisation, but the mineralisation was constrained within a narrow sedimentary unit approximately 50m wide. Knowing this was the host and containing mineralisation we decided to drill a steep hole down, recognising where the continuity of the host was, but then added the opportunity to actually snag some mineralisation on the way. I will talk about that a bit further in a minute.

The other thing to note is Invincible South. We have a fault that runs through here. There is offset mineralisation. Late last year we got these first discovery holes into this project. There is no declared resource for this project, but in the first half of this year we have drilled another ten holes into that. They are currently undergoing assessment. The results of that initial assessment have meant we are now out drilling that again at the moment. And at the end of this year if there is a resource to be published on that, we will publish it.

Are these dykes that are intruding

Yes. The dykes inflate the mineralisation. Effectively there is a crack through, and then as they come in they just jack it apart, so there are no offsets with the dykes.



So this is a schematic long section. Here is the resource pit in yellow, 500,000 ounces at a grade of 4,1g. The red outline is the approximate location of the resource pit which is just short of a million ounces at a slightly higher gold price in our resource reporting figures.

What is the resource number?

We evaluate resources at an A$1,570 gold price. We evaluate reserves at a $1,370 gold price.

Aussie?

Australian. Last year was a one to one price. Sorry, last year 0.9 was the exchange rate we used. So what I'm going to show to you here is a series of individual high-grade hits. I've just picked some out, but there are multitudes of other high-grade hits up here. 17m at 11g, 21m at 3g, 17m at 7.6g. That deep hole I talked to you about that drilled down, that encountered a 26m at 6.5g intersection. That was parallel with the dip of the ore body so it is not representative of the width, but it did lead us on to drill another hole this year which I will tell you about on another slide.

And then this is the area to the south. To put that into context, this is 830m vertically and 2km in strike. We have really only drilled in any density in the top 300m. So there is a great system here that we have demonstrated has got continuity on strike. This star has actually shifted. It should have been over here. This is the follow-up hole that we put in place to test this intersection. I have some core here if anyone wants to see it. But a load of visible gold and yielded 21m at 12.8g.

Is that really 21m at 12.8g?

That's the down-hole section. It probably equates to about 17m true thickness.

Is it consistent mineralisation?

Yes. That is altered veining, all the cues for mineralisation.
We've talked about the other mines, Argo, Athena and Hamlet. Argo has just finished this year and

Athena and Hamlet are currently in process. If you plot these on this schematic at the same scale that's the size of these mines that house over 3 million ounces. You can see spatially we've got a huge amount of space to work with. Although we haven't drilled the deeper extents we've got the odd hole that has yielded good results and geographically we've got the space to host a multi-million ounce ore body.

What is the difference in sedimentary packages? What is the different strikes?

About 70 degrees to the west.

And what is it?

It's a mudstone unit. The sediment is the host. In terms of hanging wall stratigraphy, which is waste rock as a conglomerate, then your mudstone host is the [unclear] and the contact and the hanging wall and the footwall unit in the south is a sandstone conglomerate which changes to andesite to the north. The mudstone further north leads to turbidite sequences and as you move south it thickens and deepens and goes to deeper pelagic sediments.

And you only get gold in the mudstone

At Invincible. At Invincible South we've now started encountering gold in the footwall of the main shear packages which is a change, and that is what we are starting to understand. We do get in the footwall rocks a series of flat-lying extensional veins. They represent a different style of mineralisation to what we report in the resource. We haven't drilled them extensively. We don't fully understand them. But they are not in our resource statement.

Is it associated with any alteration?

Yes. Quartz, albite, pyrite. Again I will show you a piece of the core. It doesn't look like mudstone though when you get mineralisation.

I think what is important is you're looking at the scale and you say [inaudible segment] exploration strategy. The scale of that on the right-hand side behind Julian is a schematic of the Burj Dubai. So that is the size of this potential system.

Yes. The Burj Dubai is 830m tall, which represents the same vertical distance this hole has been.

It's a massive system. At the moment we are just nit picking on a peripheral target at the moment.

When did you first discover this?

2012.

First discovery was April 2012. And if we get mining by the end of this year, which the permitting is pending approval by the DMP, but it is our intention to mine by the end of this year, we would have brought a half million ounce reserve pit online within 30 months.

And what target were you testing on when you drilled this discovery hole?

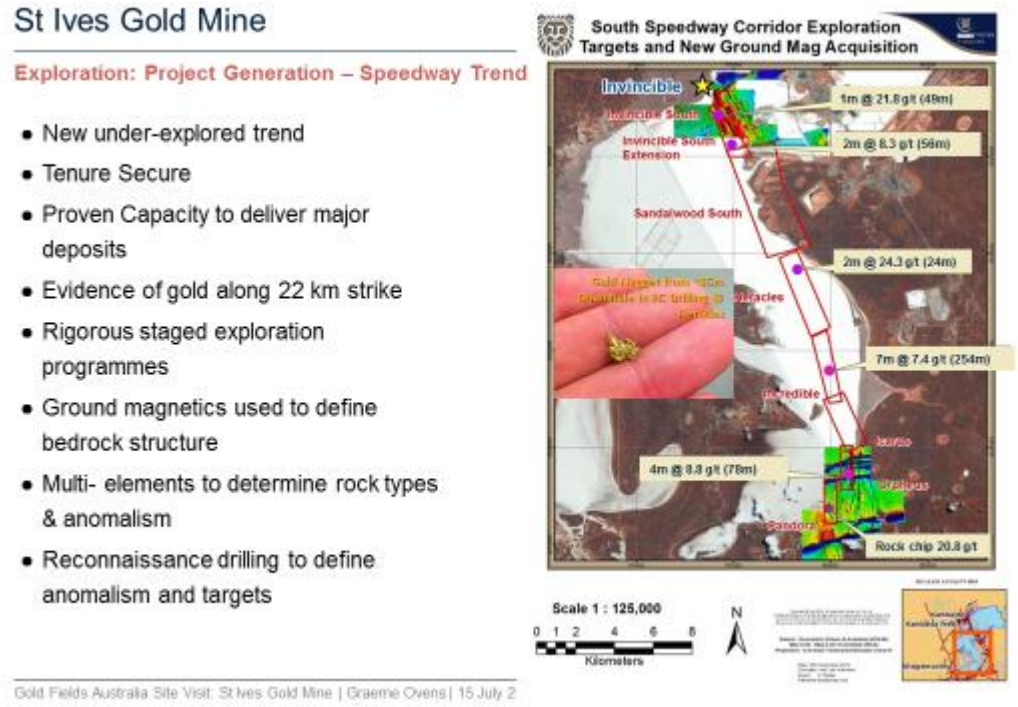
This target. This was the target.

What made you drill where you drilled? There is another slide later on I will show you. Okay.

The deep hole. I have this bit of core here with us. There is some nice veining. This is our deepest hole we just drilled. I was extremely excited a month or so back when we elected to drill this hole. It was very expensive because it was very deep, but out came a vein. We hadn't even seen visible gold like this with all the drilling, thousands of metres we drilled in the upper portion. We drilled this hole and we got probably the best-looking sample that we've got out of all of our drilling to date.

This is just a microscope image of that. These are 4mm size gold grades essentially. That is the exception, not the norm, but it certainly was very encouraging. This is high-grade mineralisation that you see. So it doesn't' look at all like mudstone. You've got quartz, albite, coffee-coloured material and branches forming within it. You go 20 metres outside the ore zone and it just looks like a boring, grey laminated mudstone. A little bit deformed. In the shear zone you get changes in [unclear] and you can see structural indicators, but generally not very exciting to see.

This just emphasises what I said in the previous slide. This deep hole has doubled the known extent of mineralisation. The nearest drill hole to his is 400m up-dip and the nearest hole on strike is about 1,000m away. So that demonstrates the system is still active at depth and it is giving us confidence to pursue testing these deeper components of the system.



In terms of where it sits moving up a step on the scale, this is the geology map of the area. Just to jump back to your question, this is the geophysics map of the area. This is all ground magnetics. What we are seeing here is the magnetic responses of the different stratigraphy. We use the magnetics extensively across the site. We've got our own backpack unit. We have a guy walking out. He walks 20km a day collecting data. We have also developed a mobile based system which we tow a sled which allows us to collect 7.5 metre spaced data over the lake.

What we are looking for is breaks. This break here is called the Alpha Island Fault. That goes up to a pit up here called Santa Ana and Bahama that were mined in 2008. So the analogy here was we've got a structure at Santa Ana and Bahama offset by the Alpha Island Fault. We get mineralisation, the same structural setting here. A big regional structure to the north. There is a project called Lut. It has never quite hung together, but it does yield the high grade. Well, here is a structure coming down to the north. Here's an offset. Let's test this position. We drilled eight holes down to the south here. We drilled four holes to the north. To the north every hole yielded and ore grade interception over a 1km strike length. That was our discovery back in April 2012.

Over the remainder of 2012 we drilled that and yielded a 300,000 ounce resource by the end of the year. In 2013 we continued to drill. All these red dots here are drill holes. We added all that in 2013 and got the 1.4 million ounce open pit and underground resource that we have today, of which 500,000 ounces is reserve.

Looking to the south, we actually missed everything to the south here. We picked the wrong mag unit. We thought that was that, and it wasn't. That is actually that down there. So all the holes that came back dull. This year we have been drilling in here, and we've encountered mineralisation through here. There is mudstone that has faulted out, but then the shear moves into the footwall and obviously the mudstone host is gone. That means there is a change in the tenure of the mineralisation. We are working to understand that at the moment.

Following the structure to the south we have Valkyrie, a project we have just drilled a handful of holes

on. No results through, but again we saw multiple leads into the same alteration of sandwiches. So we have high hopes on some results coming through from that.

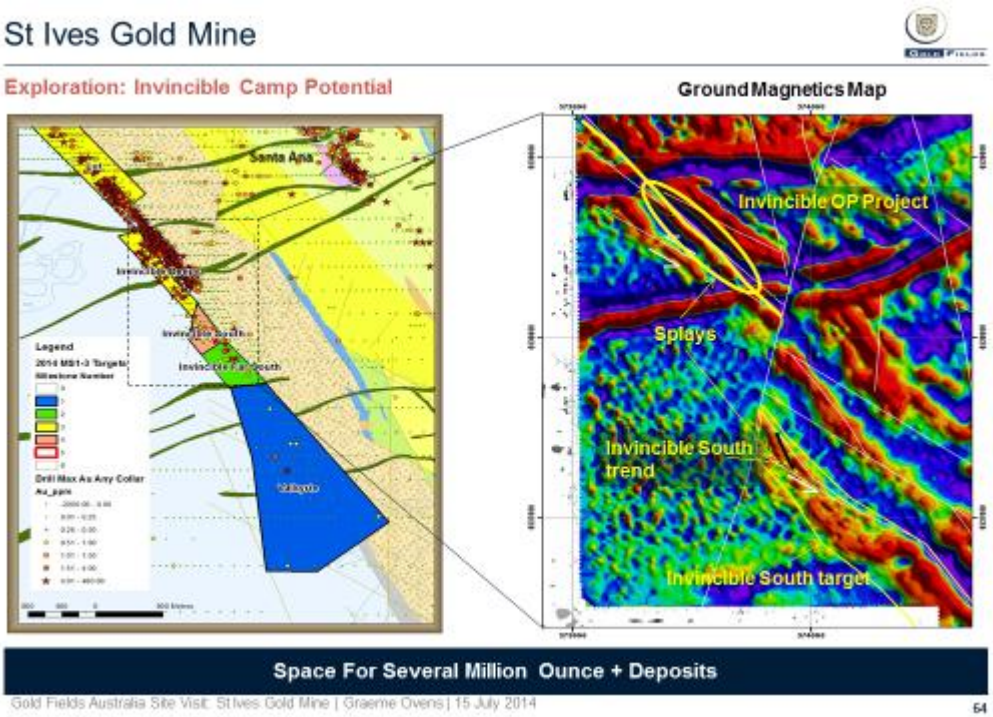
If we step out again another order of magnitude, we go from a 2.2km strike length system which is what we drilled out, and move to a 22km strike length shear zone. So we've gone up an order of magnitude. Between this point here and this point here there are about 15 holes that have been drilled testing the bedrock in that structure. And most of them we started to drill last year in a series of locations.

We have air core drilling over the lot. Someone asked before why did we look there. The air core drilling isn't effective over this strip profile. When the erosions occurred and the oxidation afterwards there is no remnant dispersion of the gold in the bedrock that allows us to hone in on the anomaly. We get that a lot in the mafic rocks on this side, but we don't get them over here. So now we are looking with fresh eyes.

We've completed a series of staged exploration programmes in different areas and these are some of the hits. We've got a rock chip sample of 20g, 4m at 8g, 7m at 7g. And we've got 2m at 24g. We went actually a month or so ago and drilled five RC holes over a 2km strike length over here. One of the RC holes got a 1g nugget. I've never experienced that. The drillers obviously didn't see it.

They got the 2g nugget.

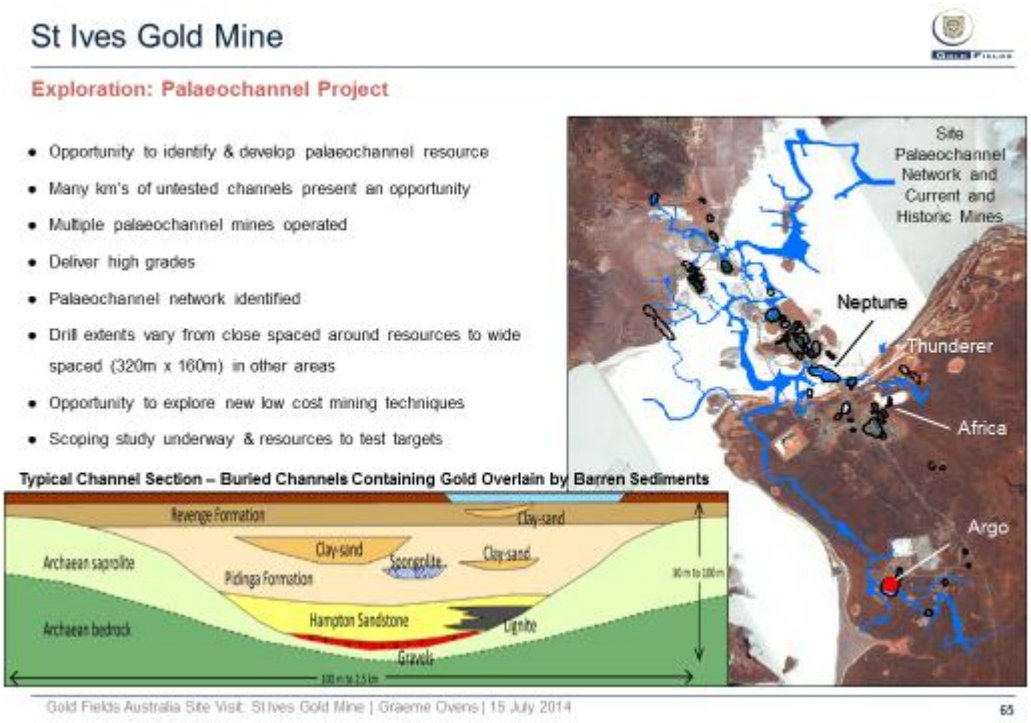
We've got to do some more work. So that was really exciting. And again this is all new information, new ground we are drilling. Again the message I'm trying to pass on to you here, we focussed on 2km, we defined a significant resource. We've got a pretty poorly tested trend that extends for a long strike length that really is what I would say is greenfields terrain. We've got a well drilled area a couple of kilometres to the east through here where we've got existing mining camps, but very poorly drilled through here.



Before someone asks, to the north as I said there is a low-grade prospect that we do keep doing some work on, but it is not looking that exciting at the moment. Further north still at a prospect called Speedway – the reason it is called Speedway is because Kambalda town has a speedway track there. That is where the whole trend gets its name – we drilled that earlier this year and we weren't getting any successes, although there is evidence of historical prospecting mining.

Is it a different mineralising event?

No, it is all part of the same mineralising event and period.

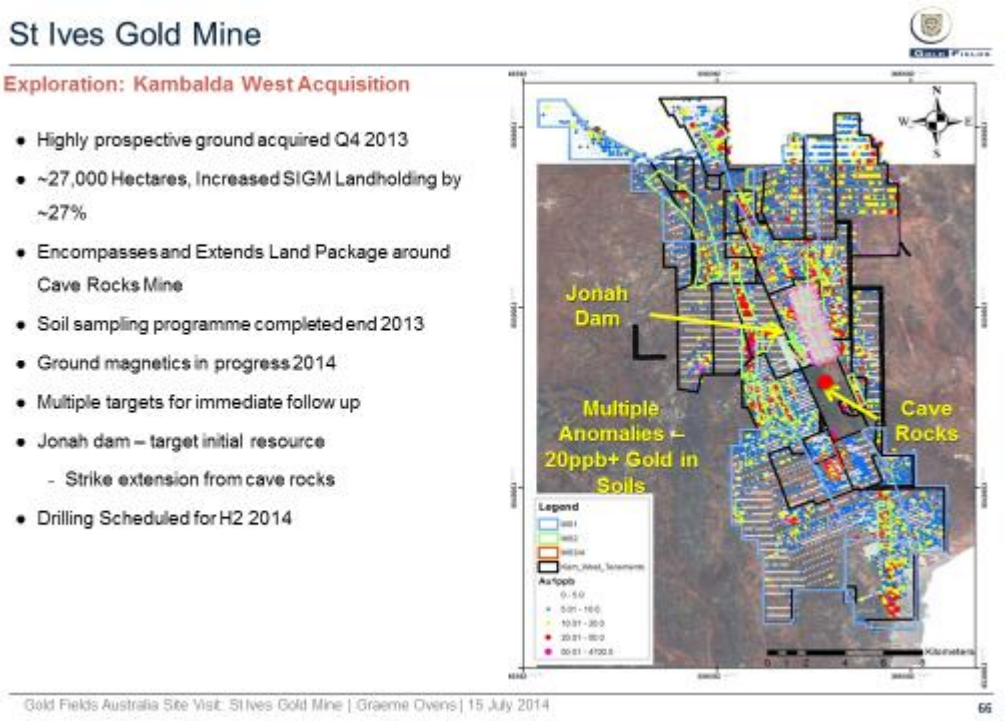


Moving on to paleochannels. We see this as a significant opportunity across the site. When this historic weathering took place of the old original mineralised system it left behind a river network. This is a model of the river network that we put together at the end of last year, a river network or series of channels. That has come from our air core drilling when we hit gravels in the sendiment above. So we have modelled that out. This effectively becomes a target.

Neptune that sits in here is just short of 400,000 ounce reserve. You can see there is still a large expanse of channels to go and test. The philosophy here is that you've got placer deposits weathering from the bedrock with all the gold in it. The big question is we've got Invincible here. Where did all its gold get shed to? We have a channel in the south that was barren, but we have not tested any of these areas to the east. So there could be a significant occurrence to the east over there.

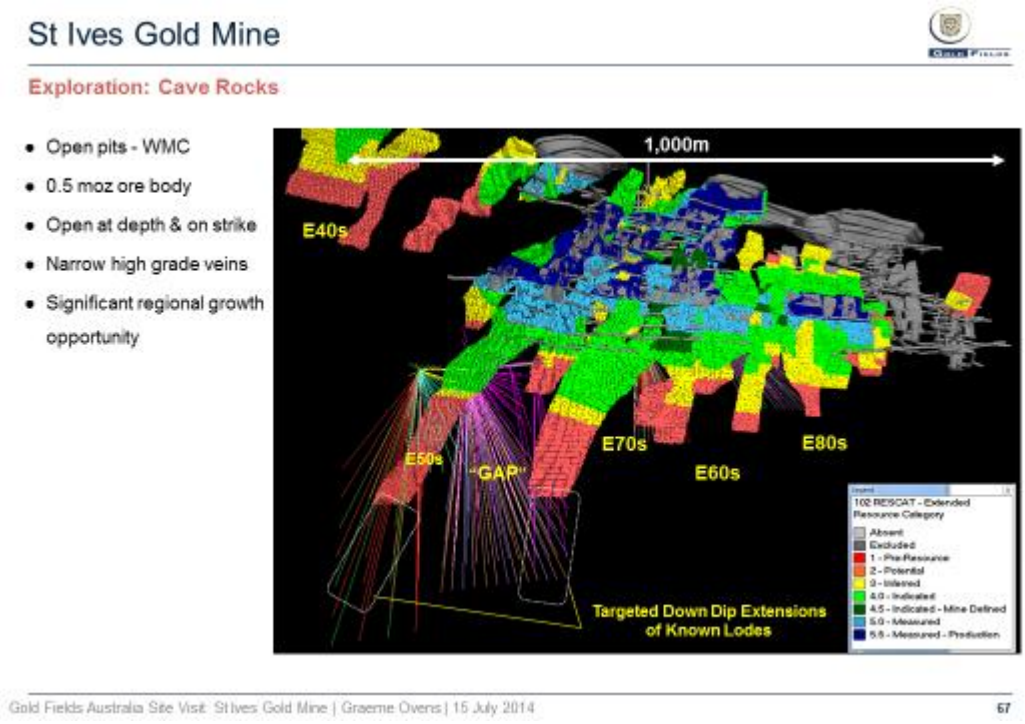
Just a schematic. I should have said upfront. This demonstrates what we are talking about. When you get the weathering you get the channels and the gravels forming in the base of the topography through here. And then that fills up with a series of sediments behind. In terms of our costs the reason we have this upfront loading on our AIC this year is because we are stripping all these sediments out of Neptune. At the end of this year we will get paid back for it. We've actually got first ore already.

So we see this as a significant opportunity. We've got drill rigs turning on this at the moment. This is what we call early stage exploration. It is really defining targets. We've put rigs out, wide drill spaces, we're testing the channel in specific places and looking at building that up. There are tens of kilometres of channels to test through here. We also use them as a pathfinder. Even if they don't become economic in their own right, the same principles of stream sediment sampling. You get a hit in this ancient river bed. You can then look for a bedrock source.



Kambalda West Malcolm talked about briefly before. This is a series of tenements we acquired last year. This is located around Cave Rocks. This tenement in the centre was already ours. It was our own tenement that we had with Cave Rocks mine established on it. This is the Zuleika shear running through here. We saw significant opportunity to look at expanding and growing the Cave Rocks site. We've got infrastructure in there. We've got natural growth from the existing mine, but then also regional growth using the production centre that we have.

This effectively grew our land holding package by about 25% when we acquired the ground. We did some infill soil sampling in some areas up here, but a lot of this is existing soil data that was already there. We are now going up and prioritising these targets and looking at following up on them. We have also started doing extensive round magnetics programmes through here to get detail on specific targets and then plan the initial drilling. Again we have a rig out there drilling at the moment at a site called St Barbara. We are seeing sulphides in the hole which is usually an indication that there could be some mineralisation.

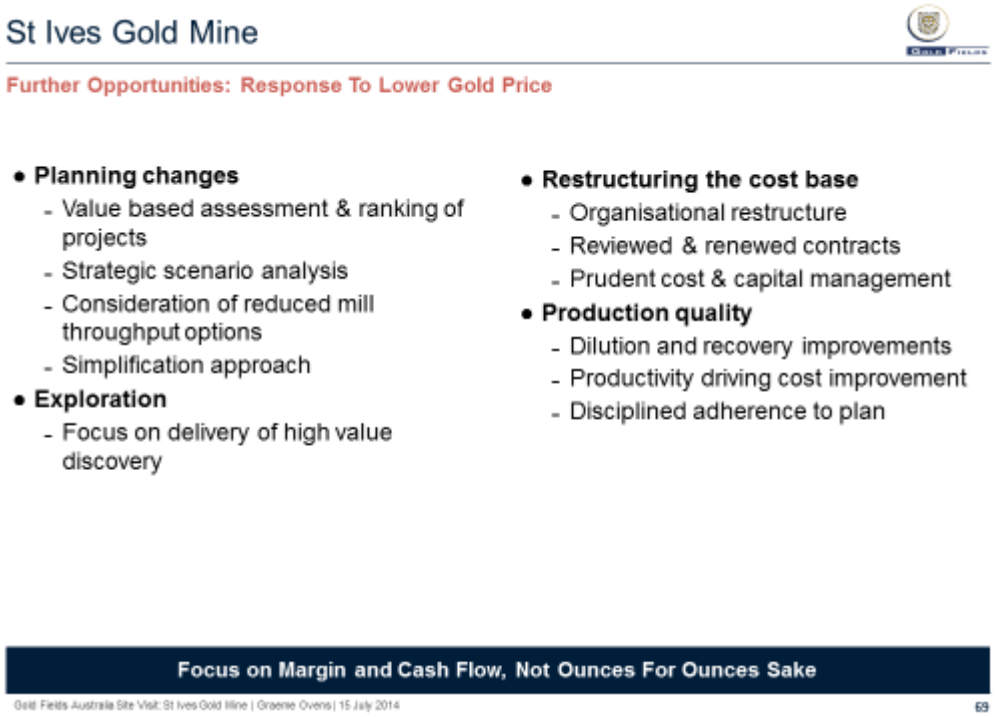


Talking about Cave Rocks, this is an image of Cave Rocks that we put in here. Malcolm mentioned it before. We can talk about the specifics of Cave Rocks, but really just talking about the ethos that we have for extending off our known existing mines. So a significant portion of our exploration is about expanding. What you see here is some lodes coming off at depth. And then this is underground drill platforms. You will have seen the same happening at Granny Smith and at Agnew as well. Our philosophy is just natural mine extension. We very rarely manage to get to grips with the full extent of the ore body before we start mining. They show they've got their own capacity to deliver and make a margin, and then we will continue to push out from them with mine extensional exploration teams. My team is responsible for more looking at distal continuities that are outside the existing mine infrastructure.

I think just for Cave Rocks at the moment we've been talking about potential extensions If you look on the right-hand side you will see there that there is a spot there where we think we've got a potential area. We have mined [inaudible segment] exploration space there on the mine. As you go to the left-hand side there are a number of areas there that again because of historical drill access there are a number of areas there. So while we talk at the moment of unknown deposit sizes within the next year or year and a half we've been able to take the lodes down E50s and E60s and E70s down. This year we're potentially filling the gap of what is called the E60s. The short one in the middle above the gap there, the orange one there, we have been able to take that further down. Now, what happens on the E70s and the E80s is ongoing work. You get depressed for a day thinking you've got a year left, then you have a couple of discovery holes and...

Basically Cave Rocks replaced its depletion last year with the work that was carried on there. There is a budget on this project this year to allow for sufficient drilling for the same objective, to replace its depletion. Although the mine life is 18 months or so from now or 20 months from now, this deposit has been closing for about five years in a year. Every year it is supposed to close the following year, but every year we push out and extend. It is open with depth at this stage and it is open along strike. That was one of the main drivers for that acquisition.

Further Opportunities

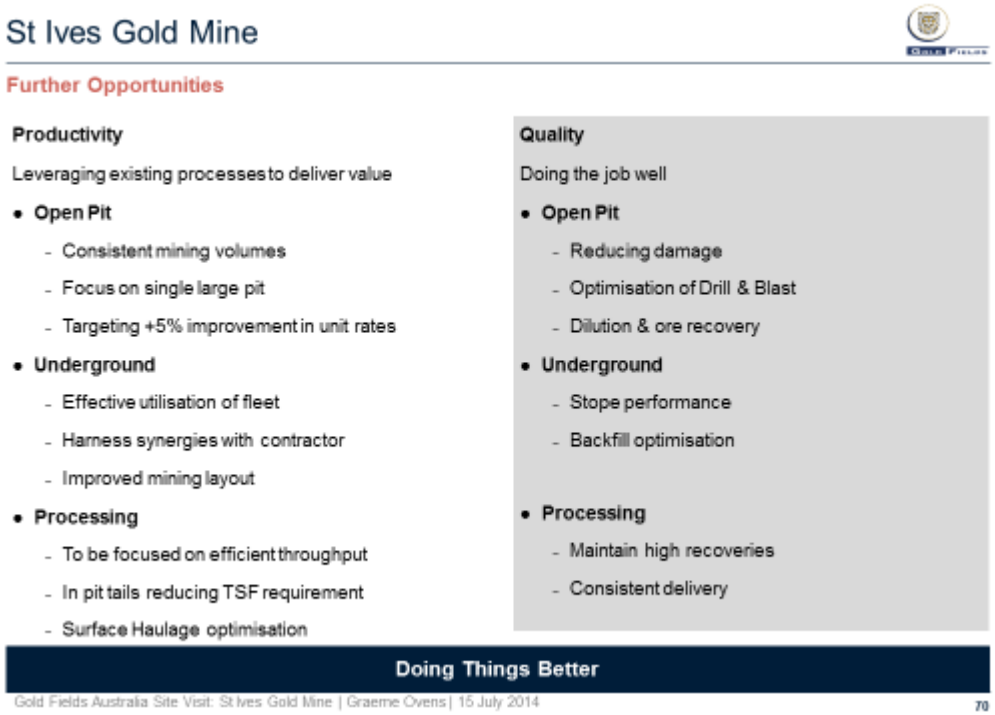


Further opportunities. We're working in response to the lower gold price. The value-based assessment of ranking of our projects and ensuring that we get into some projects that will give us a reasonable return. Strategic scenario analysis. Dan and his team have been working quite a lot on different scenarios going forward, hence the change for next year to Invincible. It gives better returns. Under consideration are reduced mill throughput options which we are looking at as a part of that strategic planning from between 3.8 million to 4.5 million tonnes.

Simplification of approach, particularly in open pits. Efficiencies in open pits when you try to operate four pits, having to move equipment from one to the other, particularly when you've got to move excavators, shovels and dozers around potentially 10km of area where we have our pits. So getting back to the one pit should make us far more productive.

Exploration focus. As Julian has just said, focus on higher value discoveries. Certainly Invincible is looking like that and its potential extensions. Restructuring of our cost base. Again we have spoken about the organisational restructuring. We have tightened that up. We have a fairly lean organisational structure. We have reviewed and renewed a lot of our contracts that have been in place, and we are finding that we get better pricing on contracts these days with the market being fairly tight. And plenty of people out there are looking for work. We can actually get some reduced rates on a lot of our contracts, particularly drilling.

Prudent cost and capital management. Again making sure we only spend capital on what we need to do. We've got our productivity and production drive. Dilution and recovery improvements, ensuring that we get every bit of ore out of the stopes and that we don't do that with excess dilution. Productivity driving cost improvements. Trevor and his team underground have already found two trucks that they can take out of the system and one loader. That is $2 million saving just by parking those. And we are looking at further opportunities of what else we can do to streamline the operation. And a disciplined adherence to plan and ensuring we follow our plans rigourously in what we do.



Productivity, again leveraging existing processes to deliver value. Consistent mining volumes. We have seen some fairly consistent volumes coming out of our pits more recently. We're going to focus on a single large pit in the next couple of years with Invincible. We are targeting at least 5% improvement in our unit rates by doing that.

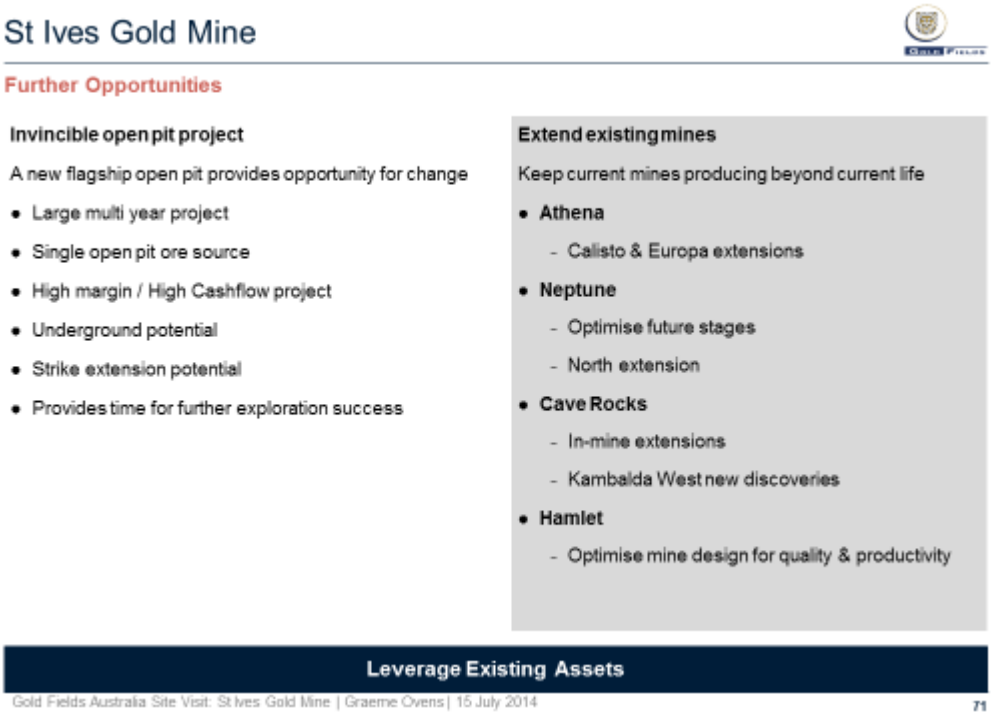
Underground, the effective utilisation of the fleet which we've spoken about. There are synergies with the contractor. We have a contractor doing the development of our underground operations. We are looking at getting some synergies of using some of their supervision and our supervision together to reduce our costs. And improved mining layouts.

So processing, to be focused on efficient throughput and in pit tailings to reduce our TSF requirements in the longer term. And we are looking at in pit tailings. That has the potential to save around $40 million of life of mine costs by going to in pit tailings disposal instead of creating extra tailings dams And surface hauling optimisation. Can we use bigger, more efficient haulage units to reduce that cost?

On the quality side, Doing the job well.

Open pits. Reducing damage. We've made some significant progress there more recently and we've seen a few weeks without any significant damage occurring. Optimisation of our drill and blast processes in the open pit and the optimum ore recovery in open pits as well.

Underground, stope performance. We have already mentioned that ensuring that we get effective recovery out of the stopes as well as dilution. And backfill optimisation. We have put backfill into Hamlet. It currently doesn't run any paste fill. But we want to make sure we're only backfilling what we have to do and not doing it just for the sake of doing it.
Processing guys, they've maintained their high recoveries sand their consistent deliveries. Garry and his team have done very well over the years. Excellent recoveries through the circuit, and we are continuing to improve those all the time and delivering very consistently.



The Invincible open pit project. It is a new flagship open pit that provides a lot of opportunities for us, as Julian has already mentioned. This is a significant project. It is a large multi-year project with open pit and significant underground potential. We will have a single open pit ore source. It is a high grade pit, as Julian mentioned it is a 4g pit, so it is a higher grade, higher margin, and higher cash flow project.

Significant underground potential to go with it. And significant potential for strike extension particularly to the south when we look at some of the stuff we have drilled in this area. And it gives us a bit of time for further exploration success. We expect that to run for two to three years. It gives us opportunity for Julian and his team to find the next Invincible pit so that we can move into that in 2020 and beyond.

We are also looking at extending existing mines beyond their current life. Athena we're looking at the Calisto and Europa extensions. So looking along strike on those to see whether we can push them out further. At Neptune we are looking at further stages there. Julian showed you the paleochannel. There is a lot of potential within that whole paleochannel area. Those paleochannels are showing fairly high grades. They are anywhere between 4g and 6g per tonne. So if we can really prove up that then Neptune could turn into a fairly significant open pit for us, particularly looking out to the north.

Julian mentioned the in-mine extensions at Cave Rocks as well as the Kambalda West area, so a lot of potential there. And Hamlet, looking at our mine design to improve our productivity. Someone mentioned that Stefan was talking about potentially 1.3 million tonnes over there. We may be able to do that, but it is also making sure we get good grade from there as well.

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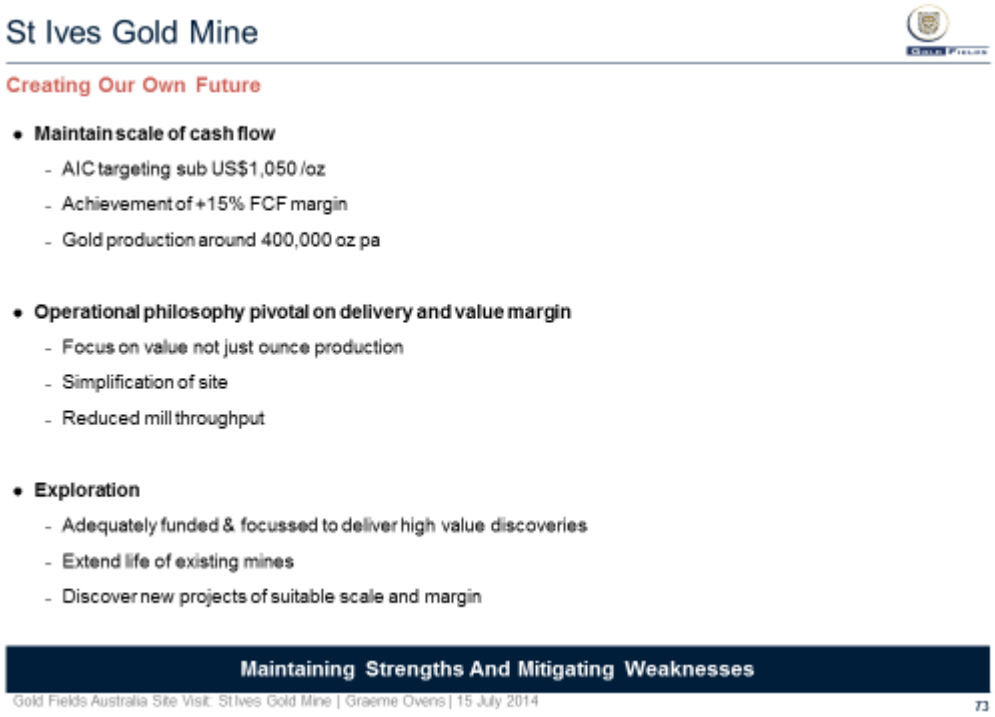

Creating our own future. We are looking at an all-in cost and targeting sub $1,050 per ounce, achievement of plus 15% free cash flow margin on all of our production and gold production around 400,000 ounces per annum ongoing for the next five years. The operational philosophy is pivotal to the delivery and value margin. So we're focussed on value, not just ounce production. Simplification of the site. Fairly streamlined, lean organisation structure. A single or two large pits with three underground operations adding the high grade ounces into the mix. And a reduced mill throughput and focus on quality and margin, not just tonnes.

Exploration adequately funded and focussed to deliver high-value discoveries. I think Julian and his team and Malcolm have proved that they can deliver those, and they have delivered those over the last few years particularly with Invincible. But looking at since Gold Fields have had St Ives we're consistently replacing our reserves year on year. So the guys are doing really well there. And extend the life of our existing mines. Discover new projects of suitable style and margin. I'm pretty confident that we are going to be able to do that.

So in conclusion, the relentless focus on margin and cash flow is the focus for us here. We have certainly been driving that very hard in the last few years. No ounces for ounces' sake. We are situated in a highly prospective region with ample opportunity for a lot further discoveries going forward. We're about to develop a new major ore body which will improve our margins. A 4g open pit is a great project. And towards sub $1,050 cost profile, producing 400,000 ounces per annum. So it is a great quality asset.

Questions

Just a question on costs. At the moment the labour and generally the cost of maintenance increased a lot to where we were. So in the next two years and maybe contrast that to the last few years what will be the likely inflation rate? Is profile on costs year on year flat, ui there going to be a great deal of inflation in the next couple of years?
The reserve bank doesn't seem to think so at the moment. They are not talking about any rate rises until next year at the earliest. But the market is still fairly quiet. Labour-wise we've got a very good pool of labour out there. We are starting to see a downturn in labour costs. Jobs being advertised are now being pitched with much lower salaries than what they were two years ago. We don't have BHP and Rio out there offering ridiculous salaries anymore just to get people. We believe it is going to be relatively stable for the next couple of years anyway.

What do you guys model for the next year for Invincible etc? Do you basically have an underlying cost that is flat so actually what drives your unit costs is effectively grade?

Ounces of production. We are still working. We are still focussed on driving our costs down lower. We are still working on what else we can do to try and make our cost base lower than where it currently is. But the ounces will drive the unit cost per ounce. And we are still consistently targeting around 400,000 ounces.

The other side is labour In South Africa labour has gone up 10%. Electricity has gone up 10%.

So you're having a natural margin squeeze. So you're saying actually you're in a zero inflation environment for the next two years.

Hopefully we will see a reduction in power costs with this carbon tax coming off. It will drop 6% from our power costs if they drop that in parliament today hopefully.

You get your full diesel rebate back if they drop that.

Diesel rebate will drop 6 cents a litre carbon tax on fuel.

What percentage of your costs is that?

It is probably worth $20 to $25 an ounce reduction in our costs overall.

I haven't worked out for St Ives, but for GFA around $15 an ounce.

St Ives cost is about $6.5 million so it probably is in that range of $20 an ounce.

So some savings there. And we are seeing savings as I mentioned before with contractors. Some of those contracts were put out and we achieved better prices. Some companies tried to supply into the market at almost break-even cost or marginal profit given they have got so much fleet that is parked up and is costing them a lot of money. So we are seeing a lot of savings through there, quite surprising savings. And there is a trend of pitching salaries lower than where they have been. The most recent survey has salaries coming down by about 5%. So we believe we can hold that down for the next few years anyway.

What do you think the driver of the reduction in contractor rates is? Is it drive by more in-sourcing of these activities by the producers? Is there too much capacity?

There is too much capacity in the market. Have a look at the number of drill rigs parked up. Exploration has really backed right off in Australia. So there is a whole lot of drilling companies out there who are not drilling anywhere. So they would much rather have them out working and risk paying for them, even though they might not be making a great deal of profit, hopefully to keep them in business for when things pick up again in a few years' time. Some have already gone out of business, but others are trying to hang in there and offering cheaper prices.

Is that true on the development side as well?

Generally around about the same. The underground development contractors are also fairly cutthroat. They are struggling to keep their business. I think Barminco have lost about three major contracts in the last 12 months. So they are keen to continue working somewhere to keep their employees employed. So they are prepared to cut rates to do it. Grinding medium steel is coming down in cost from what it previously was, so there are a lot of those things easing back that gives us extra opportunity. And the contracts group in Perth are looking at all of those. Okay, if there are no more questions thanks for your attention. We've got Mark at the back. Markk is the current open pit mining manager. And Mark is going to take us through for a run though a couple of the pits just to finish off.

To be the global leader in sustainable gold mining
Gold Fields Australia Site Visit: St Ives Gold Mine
GRAEME OVENS
General Manager
15th July 2014