Transcript

BHP Billiton
Investor briefing – Onshore US assets

14 November 2011

1. Part 1 - Mr J Michael Yeager

MR M. YEAGER: Good evening, ladies and gentlemen, or late afternoon. We appreciate the opportunity to update you on our business and look forward to being with you here for about the next two hours. Obviously, what we've got to say today is trying to be informative and trying to make sure that we are covering the waterfront, so I know we've got people both here in town, or here in Melbourne, we've got a number on the line from Sydney, we should have a number back in the UK and elsewhere, so we will try to make sure that we conduct ourselves in a manner where we keep everybody informed, not only if you're live here or what chart we're looking at, but also those that are on the phone as we go through things. We trust that everybody has had a chance to have the packet now, and I think it's downloadable and it's been released by the ASX and all out there, so hopefully everybody has this.

Delighted to be here today. We're going to try to go through a couple of things and give you some good insights into the business that we've entered into. As most of you know, we've made these two transactions over the course of this calendar year. In April acquiring the interest of Chesapeake and Chesapeake Energy's business in the Fayetteville Shale in Arkansas, we will just mention these things briefly as we go through, but we're assuming that everybody recalls the transactions, and then also the consummation of our offer for Petrohawk Energy Corporation and their interest in the Permian Basin, in the Eagle Ford and in the Haynesville Shales, and that closed in August.

So here we are, just a couple of months later, trying to make sure that you're up to speed on our business. I would draw your attention first to this picture, and the first portion of what we're going to try to do today is make sure you understand the business and make sure you can see through our eyes how this works and how we go about it. You can see the drilling operations there. You can see its proximity to a farm, you can see the animals, and you will see a number of things that we will talk about how they peacefully coexist, if you will, as this business goes forward. So we're going to have a couple of different segments here, so let's go ahead and get moving.

The first thing, obviously, everything we're going to say today is to the best of our knowledge correct, but obviously there's a little bit of disclaimer there that we always put out, as I'm sure most of you can imagine. We're going to do a couple of things. I'm going to mention three or four charts here opening up to just set this tone about petroleum, about a little bit of a journey that we've been on over the last five years and what we look like today, and then we will immediately go into the two main sections that we wanted to show you. The first one is how the business works. We're going to emphasise the technical overview of the shale industry in general. We will try to draw out for you some very definitive aspects. Some of you, if you're familiar with this, or if you have an oil and gas background, you may find this a bit redundant, but for those of you that really want to understand how the shale business works we're going to go into that in great detail.

We will do about 40 minutes worth of engagement there, and then we will try to take a pause and take any questions you've got around how the shale business operates, and once again this will be generic and it will be industry-wide and it will have to do with how it's progressing in the US, and we will make some comments about it internationally. Then we will go to the second piece – well, pardon me, then we will take some questions on the first piece, and if I

could ask you to make sure that, when we take that first set of questions, try to restrict it to the way the shale business works and anything you need to know about how the business goes forward and how we get our work done, because in the second segment we're going to come back and talk to you at great length about our business model, what we're doing in specific terms and how we can put forward a little bit of guidance on the business as a general update. So those are our plans.

I would say that we're going to spend very little time today on the conventional business. We will have a few wrap-up charts at the end around the Deepwater Gulf of Mexico, Western Australia and other things that are still very, very vital to our business, but predominantly, everything we're going to talk about today has to do with the shale business and how we make it work. Okay. So let's move forward now and look at chart number 4 and just remind you about where we've come, ever so briefly. Back in 2006 we made about 315,000 barrels of oil and gas equivalent today, 315,000. This morning we make 625,000 barrels a day. This is the footprint we have around the world to do that.

Most of you are familiar with the Deepwater Gulf of Mexico, the UK, the assets in Trinidad and Pakistan. We have some interest there in Algeria, and then the big interest here in Australia, both here in the Bass Strait near Melbourne, as we know, down south, it dates back 40 years with ExxonMobil, and then the big operated and non-operated interest off of Western Australia. That's where Pyrenees, Stybarrow and those big oilfields are, as well as our interest in the North West Shelf and our prospective developments in Scarborough and Thebe and Browse and other things. But of course, today you can see the dots there in US onshore where we're going to be featuring the Fayetteville and the Haynesville and the Eagle Ford and the things that I've described, and we will try to go through that.

But suffice to say we've come a long way, and as you can see from the headline there, our total resources, we're now the seventh largest independent oil and gas company in the world, as a result of the actions that we've taken, so quite a journey that our people have been on. A few things about the performance along that way. One of them that we always emphasise is safety, as you know. We have had zero fatalities. We go an entire year sometimes without a lost time incident and this shows the total recordable incident frequency rate trend that we've been on for the last five or six years. If you study this business long enough, you will know that this trend is a direct proxy for many, many things, all having to do with execution capability, so as you can imagine, when you look at going from a total reportable incident frequency rate of around five in about 50 incidents per year down to where we are now, this is the product of a lot of good things coming together.

This is the same performance that we will bring into the shale business and I can look you in the eye and tell you that we have already made adjustments in the Fayetteville business that we have been on top of now for about six months and it tracks on this same logical conclusion, even though it started at something much higher than this. So do know that this safety performance lends itself to project execution, lends itself to drilling execution and lends itself to all the things that we are going to describe today. Our people and our organisation are extremely proud of this and it's something I would draw to your attention with great interest.

Likewise is the volume growth over this period of time. I have already described the book ends of about 315 thousand barrels a day. You can see there at FY11 we finished up at about 460 and now we have closed the Petrohawk transaction and that adds the balance that I just described to you that gives you 625,000 barrels a day that we now produce. I would draw your

attention to a couple of things there. The first one the strong production growth at the top of the chart I think speaks for itself. But secondly is the second statement there about being the first back to work in the deep water Gulf of Mexico, not Shell, not ExxonMobil, not Chevron but BHP Billiton Petroleum being the first company to get back out there. We have talked with you about that before but once again, that shows you the type of execution that we have.

I would also remind you that we were the second company back in the deep water Gulf of Mexico which means we had both of our rigs retrofitted, recertified and back to drilling producing wells before the rest of industry. So overall we have built a strong team. We have built the execution capability that I've described and we have built the performance record that you can see here and as I said, when you bring that into the shale business, we think that brings us in there in pretty good shape.

All right. So let's get on into the meat of what we came to talk with you about. Like I mentioned the first thing we are going to go through is how it works. I know there are many concerns about this and I know there is a lot of notoriety around some of the aspects of how the business works so I am going to be a bit redundant and a bit careful here and try to take you through how it works. So hopefully this will be a primer for most of you, if you haven't seen it, and a good review for those of you that have.

Let's just talk off of what the reservoir looks like when you are talking about shale gas. In a conventional reservoir, guys, I would ask you to picture - and I'm talking on chart 8 now – picture a jar and fill it up with marbles and then pour the liquid in it and watch the liquid flow around the marbles. That's what a conventional oil and gas reservoir looks like. It's just that the marbles are sand grains and the space between the marbles is called porosity and the ability for the fluid to flow through the marbles or the sand grains is called permeability. And a conventional reservoir has porosity and permeability that allows high pressure fluids to flow through it and if the pressure is released, to come to the surface. That's what is shown there in the red on our drawing.

When you get to a shale reservoir, you are talking about a reduction in porosity and permeability down to microanalysis. As a matter of fact, if I had a core of shale to lay here in front of you, it would look like a block of cement. Inside of that cement at the inner granular space is carbon and is high pressure methane gas and other liquids that are bound intergranularly. And what happens is that stuff, if you drill through it vertically and just cut and leave it like it is, it will not flow hardly at all but the inner granular structure releases the hydrocarbons when the pressure is released and the way you release the pressure is to frac it, is to crack it open which is like taking that block of cement and breaking it with a hammer. When those fissures go through, the hydrocarbons are released at the inner granular space. That's what happens in the shale and that's why the fracing part is the revolutionary aspect of it over the last decade or so. It's a bit going on around for a long time in many tight reservoirs but it's now made economic in the shales.

The shales are also unique in that they are the source and the reservoir. If you picture back in historical times or geologic time, you have actually got the mud and the silt stones and the decayable material in the mud and that's what's happening. Normally that generates the hydrocarbons because it's buried deep with pressure and temperature and as those hydrocarbons gradually work their way out of the shale, they get trapped in the conventional reservoirs above them. What we are actually going back in now is producing the shale which is

both the reservoir and the source in the shale and it's all bound together and that's what's shown there in the black line across the bottom.

The shale reservoirs that we are talking about are deep, as shallow as 2,000 feet but as deep as 15,000 feet that we are talking about. Once again I will show you in great detail how that places the work that we do, particularly on the fracing, fall below any groundwater or any surface problems at all. So I'm sure many of you have seen this but clearly this is what makes the shale business different from the conventional business.

Here is what a well looks like, the drawing in the upper right and I'm talking about slide number 9 now. As you can see, the advent of horizontal drilling and fracing is what made this thing possible. I will talk you through each one of the steps in that thing in just a moment but as you can see, the cartoon shows you how a well is drilled down. Through shallow water, the casing is run, cemented. We turn it horizontally and then you can see the small fractures or fissures in the rock there cartoon-wise and that's, like I say to you, break the rock up and the hydrocarbons get released as you release the pressure.

To produce profitably, you've got to have both of these and the advent of these technologies both horizontal drilling and the fracing is what's allowed this to come forward and be profitable. The hydraulic fracturing, as we call it, is what we use to break the rock up as we have mentioned. We have had over 1 million producing wells fraced over the last 50 or 70 years and I will show you a little bit of that, how that goes and now we have as many as 35,000 wells fraced around the world per year.

I would also draw your attention to the graph in the upper left and that is showing you how the reservoirs behave. Look at the little grey line across the bottom. That shows you that if you were to drill through one of these average shale reservoirs, you would get almost no gas out of it over 50 years. Four-year old technology is the blue line where you go in and frac it and now we can recover up to say 7,500 MMcf in the well or about 7.5 Bcf there. And then the red line shows you how the fracing is now improved even further where we can recover up to 10 Bcf in that same well. So I want you to know that the things are changing that rapidly and clearly as we talk about the economics of what we are doing, it's those technology changes that are behind the advent of what we expect to be better and better performance as we go along.

Let's now look on chart number 10 at how fracing and technology has changed over a period of time. As you can see, you can date back to as early as the 1800s when we drilled through the first shale reservoirs and we know that because some of the old records are still around how that was done. Then as you can see, probably 1947 there is the first one I would draw you to and that's where hydraulic fracturing was first commercially used in Kansas to break up that rock. Then you move into the '70s and you can see the advent of the little tool there, that's a downhole motor and we can now steer the drill pipe in the early '70s and start to drill directionally and this is the early advent of how the horizontal drilling is going to work. Then in the 1980s and '90s, as you can see, we have started to have the first commercial horizontal wells. You guys are probably familiar that all the Pyrenees wells that we drilled off of Western Australia are all drilled horizontally just like this. We do this all over the world now.

And then you come into the early 2000s and it shows this is where horizontal drilling and fracing start to take place in the Barnett shale which is in Texas up near Dallas-Fort Worth starts to become economic. It's hard to believe that the shale business is only 10 years old or less in the all the major fields and the Eagle Ford is - which I will show you today – is only about four or five

years old. But as you can see, you move into 2002 to 2008 and you start to have multistage fracing going on where we do it multiple times throughout the reservoir and then now at 2010 as you can see it's really in full bloom and you can see the volume growth is starting to occur in the industry. So, guys, this has been around a long time, the name itself draws a lot of attention but do know there's nothing new here and the technology that's involved here has been proven and successfully executed for a long, long period of time.

Now let's move on to slide number 11 and let me just talk to you about how it works operationally. There are about four major parts to what we do when we get ready to work on shale wells. The first one is that we prepare the site and I will tell you that we are only there for about two to four weeks and the site that we are talking about is about as big as a football pitch, whether that be a couple of hundred metres by a couple of hundred metres is what we are talking about. That's got some basic civil engineering to it and I will describe that a little bit. Then we will come in and drill a well and a well will last from two to four weeks, most of our wells are down around the two week mark. A couple of them get up around 30 days but by and large, about two weeks to two and a half weeks per well. We can drill many wells from the same site as I will describe.

Then we come in after the wells has been drilled and we frac it and that involves setting up the surface equipment and I will show you what that looks like and that process of set up and fracing and getting off would last another two to four weeks and then last but not least the well – only a single well-head sits there after we're done and it might sit there for decades on a very, very small footprint. But that's what is involved with the steps of this business and now let me show you what those look like a little bit.

The preparation of the site on chart number 12 is very basic civil engineering as I'm sure you could imagine. It takes about four weeks but we build a small road into the site, as I've described. We level the site up and make it available for erosion control, that means that any liquids that land on the site stay on the site. Any rainwater – anything – is designed where it all sits there. We will set up some pits on it and line them with an impermeable material where we will actually do our drilling fluids and drilling water off there on the site and then we will place on there racks and other equipment to handle the pipe that we're going to be using. Obviously, the rig moves in and works from the site and, as I mentioned, a number of drilling – we can drill up to 10 or 12 wells from the same site over the course of its term.

So as you could imagine the site and the road are the only footprint and it's very, very small considering the amount of acreage that we're talking about and this is why I would like to point out to you that in the US shale business we've got farms and ranchers and agriculture going on all around us. The site sits there and you've got cornfields or crops or any kind of agriculture that the landowner wants to have right there beside us. You've got cows everywhere like I've described in that open picture. So the ranching and other aspects is very, very common on the land that we occupy. Then of course, last but not least, any other activity that the landowner wants to use – there are leases that we have where we drill only certain times of the year because there is deer and other hunting that goes on and that all works in harmony.

So the aspect of any kind of agricultural conflict is not here. The aspect of any kind of landowner interface that is disrupting their use is not near. We pay the landowner for the right to build a road. We pay the landowner for the right to build the site. These are damages to their property and they're compensated and last but not least, as I'll describe, in most cases the landowners are also royalty owners and share in the profits of the well. So these are very, very

different aspects from coal bed methane and coal seam activities that I know you're all involved with but I would just draw to your attention that this is the real, real aspect to what we're doing and there's an awful lot of harmony with what we have and those that own the surface and on the mineral rights.

So now let's move forward and talk about the routine drilling of a well. I'm sure most of you are familiar with this but basically this is no different than the drilling of any well anywhere in the world. The only thing is we drill a lot of them and that's what matters.

The construction basically involves normally using about a 20 inch diameter pipe. This is a very, very large pipe set to a depth of about 100 feet which we use as a conductor and that's what we will now drill through to guide everything else that we will do. We cement this pipe back to the surface to make sure that any very, very shallow activity is protected and I will use that term "cemented" several times, guys, but what that will mean is that we will run pipe in the hole. The hole is drilled to a certain exact diameter and the pipe is at an exact diameter and then the cement is pumped down through the pipe and circulates back up the outside of the pipe and forms a bond between the pipe and the earth and creates an impermeable pressure-resistant barrier and this is done around the world and it's done in every well that we drill, onshore or offshore. I will use that word "cemented" a couple of times and that's what that means.

The second point here is that we will then start to drill through the conductor pipe and we will drill vertically to a depth well down below the ground water, sometimes several thousand feet deep, and then another casing string is installed and another string – another set of cementing takes place where that intermediate string is then isolated from the surface and this is our primary barrier. This prevents anything from flowing down through the earth up the back side and getting to the surface. It's blocked with the cement barrier, if you will, and that's pressure-tested and the cement is tall enough to prevent any kind of permeable activity through it.

Then the third step is now we start to drill directionally and we will come down through that and start to steer the well - as I mentioned, the steering tools on the motors – and then we will start to turn the well until we're in the target zone and simultaneously building this inclination until the well moves from vertical to horizontal. Then that horizontal drilling will take place for quite some length. It might be up to 5,000 or 6,000 feet of actual horizontal penetration that goes to the reservoir. Now, it doesn't take a lot to picture that geoscience. Picture a reservoir as thick as this room height. If I drill through it vertically, I can only have that much flow, 10 or 12 feet into the well. If I drill it horizontally, I can now have flow into the well for that entire 5,000 or 6,000 feet and that is how we get the high rates in the shale wells that allow them to be economic.

So that pipe is run and cemented once again, so as you can see you have got a conductor pipe cemented, you have got an intermediate string that's run and cemented and you have got the long string that runs all the way through the horizontal element and it is all cemented and that is done on every well and that is pressure tested and verified that we have those impermeable barriers in place.

Now let us move on to chart number 14 and look at the fracturing. The first thing that we do is run a tool down into that horizontal section, the picture here is the horizontal pipe that is now running through the reservoir horizontally. We can now come down through there and put what is called a perforating gun in there, which is nothing more than a shape charge, and we fire the guns and it penetrates a hole through the pipe and into the formation. These penetrations are only 12 to 18 inches deep and about a half to three quarters of an inch in diameter, and we will

do it many, many times, so the pipe is now perforated and you have got the ability to connect into the reservoir, if you follow me. Your perforation goes through the pipe and through the cement on the outside into the reservoir. It makes a hole, as I have described it, we call that a perforation tunnel. The perforation tunnel provides access to the reservoir. Now I have got the ability to pump something down from the surface and pump it into the reservoir and that is what I was trying to do, but the cement and all that I put in place allows me to only – into the reservoir at that exact precise spot. I can't do it anywhere else because it is all bound and locked up with impermeable physical activity.

Then of course the third step is now I'm going to pump fluid and proppant, which is really sand, and I'm going to pump that down in the reservoir at such a rate and such a pressure that I crack the rock in half. It's called the frac pressure. Every well that we drill anywhere in the world, we know the frac pressure and are able to calculate that and we can now crack the rock open if we want to, like we do here. Other places we don't want that to happen and we keep our fluids lighter than the frac pressure and that is how we don't have well-control problems. But here we're going to pump the fluid down there and crack the reservoir open. So you can see the drawing there of the perforation tunnels and you can see now how we're about to frac the well.

Now, let's go to chart number 15. This is the hydraulic fracturing process. Now I'm ready to – I have got my perforations made and I'm going to pump my high pressure fluid down in sand and I will go through it a little later of the contents of what that looks like, but as I do that at high enough pressures, as you can see, what I'm actually doing is creating these fissures in the rock and the rock once again is like cement. So each and every one of these is like cracking open its own little mini-reservoir and that is one big aspect of what you need to know about the shale business, because once again, I have told you, fluid will not flow through this. If you don't release the pressure through those fractures, the hydrocarbons just sit there and that is the aspect of what we're trying to do.

So we will pump the fluid down, crack the rock open and the fluid carries sand, which is called proppant. Now, why do we do that? Once we crack that rock open, we want it to stay open. So we fill it up with sand now and that proppant allows the fracture to stay open and that is vital, because now if my fracture stays open, I have opened up all that crack along that fracture length and the hydrocarbons can flow in there and flow through the sand now and then come to the surface.

Once again, remember this is very high pressure gas and liquids, trapped – but it is trapped inside of that intergranular structure, but the minute I crack it open, it gets released. So that is what is going on and you can see that cartoon there at the top is what that might look like at a blown-up scale.

Point number 5 there has to do with repeating this a number of times across the horizontal interval. I'm going to frac a number of these perforation intervals, break it open, it's called a "stage." And then afterwards, I'm going to set a plug that's impermeable and I'm going to do it again and I'm going to set another plug and I'm going to do it again. So I end up fracturing a number of intervals along this 5,000 or 6,000 feet of horizontal section and, as you can see, that's what that middle cartoon is trying to show you. And then the bottom cartoon is now how we reverse the process. The red image there at the bottom shows now I'm going to remove all of the plugs out of the wellbore and I'm going to open it up to the surface to where now the pressure in the reservoir is greater than the pressure at the surface and my hydrocarbons are going to flow back into the wellbore and come to the surface and that's how that works.

The reservoir engineering involved here, the drilling engineering, the geo-science, all those aspects, I've glossed over those, those are difficult. They're hard to do and clearly, they must be done on the hour and on the minute and that's how we keep the cost down. But basically, this is how the horizontal drilling and the fracturing process occurs.

Now, let's briefly look at some of those steps and show you what it looks like. Here the hydraulic fracturing process involves a lot of equipment at the surface. Once again, all this equipment fits on the site that I told you that we established on the surface which is about as large as a football pitch but we're going to have numerous vehicles up there that have special purposes.

They're going to consist of high pressure pumps, they're going to consist of blending units where the sand and the fluid are mixed together, they're going to consist of control units to make sure all the valving and hydraulics are controlled and we know exactly what rates and pressures we're pumping, and they're also going to state adequate supplies because, as you can imagine, there's a lot here that goes on for many hours in order for these frac jobs to get done. The supplies are transported to the location, they're stored in bulk bins, and it takes several days or even a week or so to get everything set up and that's why we're here for a little bit. The fracing itself is going to take place over a number of hours but to get it all set up does take a while.

The third bullet point there is important and it just describes what on average is used. A typical well uses about 100,000 barrels of water and in excess of five million pounds of sand. There's a small amount of chemicals that are used here that enable the fracture pressures to be reduced or enables the sand to stay in suspension in the fluids and a number of things but overall, this is how it works. You can see the drawing there, the yellows are – the yellow things are bulk containers. The white elements there are the cabs of the trucks. The trucks themselves on their trailers have the pumping units, have the blending units, have all the different aspects there. And as you can see the setup and to do one of these things is quite an operation and you're pumping into about 10,000 pounds of pressure down the wellbore to get these things done. But that's what the equipment looks like and that's how it works.

Now, let's go to the next stage and talk a little bit about the environmental impact here. As I've described to you, hopefully you can see the footprint is very, very small. A very, very small site and then we're going to drill multiple wells and do all of our drilling and all of our fracing and leave all the well heads on that single site. When we have a number of these going on we call it a "pad" and pad drilling is where I'm no longer drilling one well, I'm now drilling sequential wells on the same site and, as you can imagine, that's lower cost drilling when I get into that kind of sequence. When the drilling is completed, all the land is restored to its original condition and except for the small footprint that we will use to capture the well heads.

This production phase, as I've described, is going to last up to 50 years. The well sites might include a small amount of production equipment in addition to the well heads that you can see there in that drawing but that's all there is. And then the wells are monitored remotely, we can monitor all the wells in the Fayetteville shale from our Houston office and and all this is done where there's a minimal amount of ingress and egress to the landowners' operations once it's set up. As I've described to you, the landowners are normally the royalty owners. They share in the revenue of the well because they own a percentage of the hydrocarbons that are being sold. As I've also described, they're paid per square yard or per square metre or something for

our ability to build the road and to build the site. So the landowners, in essence, are our partners and this is one of the things that makes it work and makes it work well in the US.

What are some of the aspects for the long term here? Sustainability issues, the development of the shale. There are a number of positive aspects as to why this business is going forward in a big way. The first one is, of course, is the large amount of hydrocarbons that the United States now has that it did not have 10 years ago. This has actually be a rejuvenation of the entire oil and gas industry in the US as a result of this and it's displacing foreign hydrocarbons and high-cost foreign hydrocarbons from entering the US.

The employment opportunities here are tremendous. Hundreds of thousands of jobs have been created, ladies and gentlemen, and you're talking about in states that here before had no oil and gas industry. Where we work in Arkansas, Louisiana and Texas, the business has been around for a long time. But in Ohio and Pennsylvania and New York, it's relatively new and the jobs are growing in the tens of thousands annually in those places.

Obviously, lower carbon emissions are possible with the use of gas rather than the use of coal and in the US large amounts of gas substitution for coal are taking place. As a matter of fact, it's very difficult if not impossible to get a coal-fired electric generation plant to even be permitted today and I've already just talked to you about the very attractive landowner mineral rights and all.

Tens of billions of dollars of state and federal taxes are being created with this so overall you've got a number of very, very positive benefits. The areas that we're still working on that receive an awful lot of concern in the press and more public education goes on every day and that is the quantity of water that we use, we want to make sure that we're recycling as much as we can. There are some chemicals that are used in the fracturing process and although this happens most of the time, miles below the surface we want to make sure the public knows that they're, for the most part, fairly benign. There's aquifer and groundwater protection that receives a lot of attention but I've already described to you how we know that can be done safely.

There is some aspect of seismic activity. There have been some earthquakes reported especially in saltwater disposal along the fault line. We've been involved in that a little bit and I will describe that a little later and not the least of which is there is some noise and air pollution that occurs in these sites but as you can see it's only for a very brief period of time. So we never want to take these things for granted but because we're working with landowners that are our partners, for the most part, these things are very, very manageable and end up being something that we can work with the landowner to get it done.

I will make a few comments about the water here on chart number 19 now. Water is critical to this operation as you can imagine. We must have the fluid in order to create the fracture fluid and pump down the well in order to get this work done. Obviously, this is confined only to the drilling phase and there's not any water that's used post the drilling and fracing operations. So it does not represent a very long term commitment. Any water that we would draw from aquifers or lakes or streams or anything is subject to regulatory review and approval and all this is managed and worked with the authorities in a very transparent way.

Overall, although there's a lot of water used here, on an energy basis the amount of water used is fairly small. It's certainly smaller than is used for extracting coal or producing corn ethanol or other things that would be a competitor for this type of activity and then last but not least - I will

say this many times but hopefully I don't have to – as BHP Billiton Corporation, you know, we continue to evaluate all the technologies that are involved here to minimise the use of any water we can and also to make sure that other forms of fluids, like saltier waters that could be used in this operation, are technically being challenged and looked at. If you could ever move away from fresh water to briny or saltier water then the whole equation changes a lot and we're working with others around how that could be done.

Obviously, the water being re-used and cleaned up and a number of different things are very much in our sight so do know the water situation is something we don't take for granted. It is something that the citizens need to know about but it's handled in a legal and regulatory way and fairly small compared to other forms of energy development.

The fracturing fluids that I've described: now, let's look at slide number 20. The pie graph at the top shows you the real breakdown. When we fracture a well 90 per cent of what goes in the wellbore is just nothing but water. Nine and a half per cent of it is sand. So we're down to one-half of one per cent is the chemical constituents that go in there to make sure that things can work effectively and efficiently.

What happens – the chemicals are listed over there on the right. You've got various forms of mild acids that are the same as what we would have in our swimming pool cleanser, sodium chloride - table salt. I won't read those down there through there but as you can see these are, for the most part, a very small amount. They are pumped miles below the ground. We can measure the amount of fractured distance from the wellbore that we cracked and it is measured in hundreds of feet, not in anything that is extremely distant from the wellbore and then as you can see, a very very small amount of chemicals are used.

Each and every week, if not month, the chemicals used in fracturing is becoming more and more benign. Companies like Haliburton and Schlumberger are doing a magnificent job of replacing these chemicals with more and more things that are household detergent-like aspects, and I'm confident that over time we will get rid of even more of this, but as you can see, it is a very very small amount of what goes on and it is miles below the ground and it is very near the wellbore. A lot of this is flowed back, when we open the wellbore and we capture it at the surface, but nonetheless, some of it does stay in the reservoir.

BHP Billiton is one of a number of companies that voluntarily discloses every bit of this to the public and we put it out there so you can see and so the landowner and the public can follow it, and that is as transparent as we can be. That is where the industry is going with this and we're very proud of what is happening there.

Groundwater of course is something that cannot be stated enough and hopefully the way I have described the integrity of a wellbore has given you great confidence that the industry can do this correctly. I'm now looking at chart number 21. We have already discussed how a well is drilled and developed. You can see the cartoon there but I just want to reiterate that the horizontal section is miles below any groundwater, that the wellbore is completely isolated with a number of strings of pipe and the cementation that I have described, that makes it have impermeable flow paths to the surface. The fracture height, when we do crack the rock, as I have said, we can calculate that. 300 to 350 feet is about normal distance to displace from the horizontal section, so you're looking at a couple of hundred feet as opposed to miles below the ground, and then I have already described how the fluids in here are a very, very small amount of what goes on.

So all in all, the industry has done this for a long time. We don't have any record of groundwater that can be directly traced back to any kind of fracturing or anything that is going on. Movies like Gasland and other things highlight what we think are naturally occurring hydrocarbons that are occurring in those waters, and it is not happening from the fracturing that is going on. The EPA and many other forms of US regulation have investigated this and the industry is quite confident that nothing here has ever contaminated any landowner's property or other fresh water. So it is a very, very safe operation.

I didn't come to talk about coal bed methane at all or coal seam gas that many of you know a lot about, but I hope I have drawn out some of the characteristics of this and let you make the comparison, but as you know, coal bed methane is oftentimes, well, it is much shallower. We're working miles below the ground here. Significant amounts of water are used in the coal seam gas, as you know, when it is depressured, and the only water that we use here is for the fracturing guns I have described.

Our landowners are partners, as I have said. If the landowner wants to farm, or any type of agriculture, we have no problem with that. He wants to be in the ranching business, which a lot of them are, then the cattle are all around us all the time. If he wants to be in the hunting or other things, we can work with that. So our conflict with landowner operations is very, very manageable. Then on top of that, BHP Billiton Petroleum, as I will get into when I go through the individual fields, we have chosen to work in some of the most remote parts and sparsely populated regions of the United States, where the people that live there are, there's not many of them and the ones that are there, we hire and they're our employees. Not only that, but we normally hire their children and the landowners themselves are our royalty owners, as you can imagine. So I just would let you draw out those comparisons, but clearly on slide number 22, hopefully by now I have drawn for you the distinctions of how that works.

A couple of other things to wrap-up here very, very quickly. Safe operations can ensure the protection of everything. I won't repeat everything that is on here, but the industry has without question proven itself to be reliable. With the millions of wells that have been managed here, clearly the shale gas production has been shown to be very, very sound and safe and I think most of the things that are on this chart I have already described. You can see the well and how it is cleaned up and you can see what goes on around it. I mean, we do have wells that are in the industry, we don't have any of them, but there are wells near the Dallas Fort Worth Airport runway, and that's what can be done because of the proximity, as to how this works. Other companies have them.

A couple of brief comments now on chart number 24 about the seismic activity that has been reported in certain areas of the world. Although it's certainly not yet absolutely proven, it's not something that we take for granted. Water disposal is normally what's going on here where we're disposing water into the underground, and if we get it along a fault plane, it does look like there has been a couple of places in the world where there has been some seismic activity that has been exacerbated.

Scientists are still looking at this, and although it's inconclusive, clearly there have been a few earthquake swarms in a couple of different areas. Once again, these are small minor quakes and they're taking place very, very deep down in the earth, but, nonetheless, we did have this happen near two of the wells that we acquired from Chesapeake in Arkansas, so we've voluntarily closed those wells in and plugged them out and got out of there. So that's the type

of company we are. If we have something like this that is thought to be a problem, we're going to take care of it and move on, and that's what we've done. Then now, of course, we continue to look at the disposal of water into approved wells and facilities, and we're constantly looking for how water can be reused, so do know that, consistent with the rest of our corporation, we're going to take these things very, very seriously.

Then to kind of move toward our final couple of charts on this topic, in comments about the local population, I've already described how the land impacts really only last a couple of weeks, but obviously we want to make sure that any wildlife issues, noise, dust, or anything, are managed, and as I've described, our landowners work with us on that. Obviously, we comply with all regulations and we maintain our very rigid internal processes and don't have any compromises as it relates to these activities and the local communities. It has been found that the trade-off between economic benefit and some small inconveniences to landowners, particularly where they are our partners, has been manageable and the industry has been able to make that work, and then, as I mentioned to you, we're operating in some of the lowest density areas in the United States and have found that to be very advantaged. Arkansas, Texas and Louisiana, the places we are are not only sparsely populated but the oil and gas industry has been there 50 or 75 years and clearly it's supported and understood, and that's why we're able to work unimpeded.

A couple of comments about the natural gas itself in closing. Obviously, if you're going to make a greenhouse gas movement, and I will comment on that a little bit later in regards to supply and demand, natural gas is going to be a big part of this. It is far cleaner burning than any other fuel in the US – pardon me, in the industry today, and clearly the US is no exception to that. If the US is going to make a very large move on its greenhouse gas reductions, natural gas will be a big part of that, there is no doubt.

As a corporation our goal is to be cleaner every day. We look for various ways to reduce our greenhouse gas footprint and be as efficient as we can on our energy use around the world. Then, of course, as you know, we set corporate emission standards and we publicly report against those. So the US right now has kind of deferred the greenhouse gas topic. We've got an election coming up and that's not going to be brought forward, it doesn't look like, by this presidential administration before next November's election, but after that's done we fully expect this to be back on the table, and we fully expect greenhouse gases to be addressed through the use of natural gas as a big part of that.

So let me wrap this up very quickly. Hydraulic fracturing, I hope I've described that in great detail for you. It's been around for about 60 years. We're going to develop the shale assets totally in line with our current values. We're going to protect the people, the environment and the communities in which we operate. We will engage regularly, and openly, and honestly, and we're going to disclose everything that we have. We will make rigorous assessments of all of our operations as a matter of routine review, and we're not going to undertake anything that's not in line with how we manage things around the world which are outlined in our charter that all of you know.

We do not expect any material change in our investment plans from any sensible regulatory changes that are coming forward, and everything, I can tell you, ladies and gentlemen, is showing that the number of wells that are drilled, and the success of this industry in its documented performance is gaining more and more acceptance across the entire United States, even in places where the industry is new. So if you don't mind, I would like to now open the

floor up to a question. If you don't mind, I would just ask you to restrict your questions right now to those that have to do with this topic, and as I've said, we will move forward on to the business component of this in just a few minutes.

2. Part 1 - Questions

MR YEAGER: So can we start here in Melbourne with a question. Yes, sir.

MR CAPPARELLI: Thank you. Can I refer you to slide 9. Which has got that chart on impact of hydraulic fracturing. Can you explain, in simple terms like you've been doing, what the advances are that have seen that increased recovery rate from the four year old technology to now?

MR YEAGER: Of course. That's a great question, and it really starts to get to the business story a little later on. But what has happened here - hopefully we're trying to draw out from you how the fracturing has evolved. Hopefully, as I've described, if you were to drill through one of these shale reservoirs vertically and not fracture it, you would have a very, very small amount of hydrocarbons that would flow through. Then the fracturing technology in the blue line that's depicted would be how the fracturing hydraulics are working along the horizontal path. What we're finding out in more recent times is the number of stages can be increased, and the number of rock broken up can be increased, and we can do so by fracturing more intervals along the horizontal path.

So as we're doing that, it allows the wells to flow more gas and ultimately be more economic, and I have looked at wells that are right side-by-side six months apart. You can see that phenomenon changing right before your eyes where a well today is 10 or 15 per cent better than a well six months ago because of the fluids, the proppants, the design of the horizontal section and the way it was pumped and fractured, and that's what we're trying to demonstrate here. That's moving forward – I will describe a little later in the business side - the amount of hydrocarbons we get out of the rock, but this allows you to get more and more of the hydrocarbons out of the rock over time.

MR P. YOUNG: Yes, it's Paul Young from Deutsche Bank. Mike, could you talk about this – on the same track of drilling technology. So I know lateral lengths are increasing, your drill times are reducing and the fracing technology is improving but, I mean, if every company is using this new technology that effectively, will lower the cost curve, push more gas into the market. So the question I have is that how does BHP – or what advantage do you have over other companies at the moment? Is it purely your balance sheet and, you know, working with the Haliburtons, etcetera, I mean, can you just talk us through that?

MR YEAGER: Well, I think, Paul, when it comes to this section here I'm going to better be able to explain the answer to your questions in the next one, that not all geology is the same and not all of it works the same. But, you know, when it comes to the way that technology is evolving the technology is becoming more and more sound, irrefutably – to protect the environment, to irrefutably allow this to be done with regulatory support, to irrefutably be able to say that the industry will go forward. After that, you're going to be back to who owns the best rocks, how it works, and clearly, some of the aspects of what your commercial terms and how big you are

with those vendors will start to matter. So if you will let me get to some of that in the next section, I would appreciate it. What else?

MR A. HINES: Yes, thanks, Mike, Andrew Hines from CBA. The same sort of topic, so how far down the evolutionary path of this are we? So if you look at those two curves there and see the advances you've made in the last four years, I mean, if you cast your mind forward four years from now, are we going to make the same sort of leaps or have we reached sort of the end of the advances?

MR YEAGER: No, I think, Andrew, the – I mean, the technology is changing all the time. So whether or not we will continue to make the quantum leaps that we've described, I think, you know, obviously, we will come along to a certain point and then we will have another breakthrough and it's happening, everything that this industry has done. But what's really happening right now would be in some of the more liquid rich areas of the shales your recoveries are very, very small, maybe not even double digit. So that's the real opportunity for the technologies, to increase the recovery of the hydrocarbons that are in place. An awful lot of the very, very best fields on the gas side are still in the low 30s of what you will get.

So once again, we're kind of getting into the business side of this but clearly, the technology that's going to happen here to deplete these reservoirs is going to get better and it's going to allow us to be more efficient. But the technology to be environmentally safe and have the local and the worldwide citizens support is clearly – and I hope I've demonstrated it – is sound and that's what we want to make sure that we get across here. Can we take to the telephone now and have a question, operator?

THE OPERATOR: Thank you. The first question is from Clarke Wilkins from Citigroup. Go ahead, thank you.

MR C. WILKINS: Hi. My question is sort of put in two parts and the first part is probably along the similar lines. When you look back at that slide 9 and you say that, you know, you're getting 10,000 from the current technology, what sort of – percentage extraction are you actually achieving there and, you know, what could be the improvement if you do increase it? I think you – what you say, the best wells are now 30 per cent. And the second one was just in regards to how many wells are now being drilled from each pad, where are we at and, you know, what is the potential there for how many wells could be drilled from one pad to increase the efficiencies?

MR YEAGER: Okay, Clarke. Once again, on the technology improvement, you know, you are finding that it's different in different parts of the world and certainly, in different parts of North America. You know, right now in the Eagle Ford we're finding that the frac density allows us to have more recoverability because it breaks up more rock and it's not necessarily about chasing the horizontal length quite so much anymore. In other areas like the Haynesville, the horizontal length becomes very, very important because the well – just the way the rock works and all. But I think the technology improvements there are no doubt, you know, moving forward and they will continue to move forward.

When it comes to wells per pad, we're going to be able to drill whatever wells it takes to deplete, say, a section which is a square mile and you will hear me talk about, you know, wells per section. The industry right now is very comfortable at around 100 acres – pardon me, 100 acres per section and if you divide that, a section is 640 acres. So you're talking about, you

know – that would be six to seven wells per section. So the industry can do that. There are some operators that are already going down below that to something below 100 acres per well and you can do that from a single pad also. So I don't think the pad is a big limiter. Clearly, the physics and the diameters and the geometries that we're looking at work up to 10 or 12 wells per pad, if we would ever get to that to get to that area. Okay, operator, can I take another question?

OPERATOR: Certainly, the next question is from Richard Hatch from RBC. Go ahead, thank you.

MR HATCH: Thanks very much. Good morning, Mike. Just a quick question on the production profile. Can you kind of give us an example as to how that goes, is it kind of like a champagne cork where it kind of pops out and then trickles off or is it different to that?

MR YEAGER: Yes. These are – Richard, these wells decline rapidly and they level off. I will show you a couple of graphs later on in the second section where there are some things that we are doing to try to enhance that and hold the well on plateau a little longer but by and large, these things come in at fairly high rates initially and then dissipate pretty rapidly over time and a lot of that is in the industry and we are no different there. So I will leave that with you but yes, these things do decline. Once again, picture like you are breaking the windshield of a car, that's the reservoir and the cracks in that windshield, the effectiveness of those cracks across that windshield is what we are actually draining. That does allow for high initial rates and then they do decline fairly rapidly but we are obviously doing a number of them and that allows us to keep the rates and the field rates high and I will show you that here in just a moment. Okay. Operator, another one over the telephone.

OPERATOR: Thank you. The next question is from Caroline Learmonth, from Barclays Capital. Go ahead, thank you.

MS LEARMONTH: Thank you. You have talked quite a bit in your presentation about potential issues of using this technology and how you manage that and mitigate those issues and risks. But given this is a relatively new industry, if you look back at data and what's happening on some of the older wells that are using this technology, are there any issues arising there that you need to have a look at? Are you comfortable that there aren't new issues that could come out of the woodwork as this technology becomes more established?

MR YEAGER: Caroline, I think if we've got older wells, as we have described, they are either now at such low pressure or they are so far into their historical lives that they do not present normally new problems for us. The thing that you do have to be aware of is that when we come into fracture a well, oftentimes if we are fracing the well near other wells, we will shut the nearby surrounding wells and as a preventative measure to make sure that we don't fracture from one well into another. So if we do have older wellbores near where we are fracturing a new well, that can obviously be a problem. We do make sure that, you know, all the wells are regulated, they are all spotted so in the case of drilling new wells around an old well, that would probably be something that we would be careful about. Normally if we've got an older well, it means it did not penetrate the reservoir that we are trying to do and it is not in communication but I think that's the biggest thing that I would tell you, would be an older wellbore near where we are pumping a high pressure fracture is something that we would want to be very careful about. Okay. But nothing else because of a very low pressure nature of an older well would present a

real problem. Can we come back here, guys. Anything here in the room to follow up on? Okay. Operator, we are complete here in Melbourne. Anything else over the telephone?

OPERATOR: Thank you. We have a question from Robert Clifford from Deutsche Bank. Go ahead, thank you.

MR CLIFFORD: Yes, good afternoon. A quick question on cost development. You talked about where rates have gone. What is happening with development costs? And can you talk about your strategy of how you manage that? Is it better to do that internally or to use third parties over time?

MR YEAGER: Yes, Robert. You know, the cost piece of this equation is no different than any other supply-demand. There are parts of the United States that are, like there are in Western Australia, where the industry is red hot, the services are all being fought over by the same operators and the prices are being bid up a little bit and that's particularly true in the liquids-oriented shales of the US. So costs have been growing and as the service industry provides more frac units, more drilling rigs and more service units of every kind, we are hopeful that cost will moderate itself as supply-demand is equilibrated. The way we manage that is we are now going to be one of the largest operators of shale operations in the US, we will be the number one or number two customer of most all of the largest vendors and our ability to extract commercial terms that are as much as 25 to 40 per cent less than those that don't have our size and scale, it's the kind of thing that will be going after. So I am answering it in two parts, we are hoping that the industry itself will have better service support and demand will be ameliorated a little bit but BHP Billiton's size and scale will allow it to have a commanding position as to whatever is done there. Okay. We will describe that a little bit more in the second part. Operator, is there anything else in regards to this first section over the phone?

OPERATOR: Thank you. We do have a further question from Glynn Lawcock from UBS. Go ahead, thank you.

MR LAWCOCK: Good evening, Mike. I was just wondering if you could talk a little bit about the safety but more in terms of how the authorities are going to monitor the industry because if we look at the Gulf 18 months ago and the Macondo incident. I'm not so much worried about yourself, but there are juniors in the industry, you know. If we get an aquifer issue, you know, then it could destroy it for everybody and I think this would be far worse than, say, what happened with the Macondo well. So I'm just wondering, how do I get comfort that, not yourself, but some of your peers and maybe the juniors, don't cut corners on the industry to keep this safe.

MR YEAGER: Yes. Well, Glynn, I think that is a very good point. Once again, I would say that every single day, we're finding a firmer and more robust regulatory environment that involves both the safety aspects that we all have to meet, as well as the other regulatory aspects. We're subject to inspection at any time. Everything that I have described today is permitted and is attested in a number of different ways. How the pipe is set, how the cementing is done, all that is subject to, you know, both inspection and attestation, so I think the opportunities for the industry to cut corners here at any level is small and is being managed down all the time.

But the other thing I would tell you would be once again, because of the nature of what you describe, what we have chosen to do is operate in places where there is very little or no dependency on groundwater. The groundwater is not used for potable drinking. The population

is small and further abilities to say that that sort of thing, were it to happen, would have less impact on us or a real extra step that we're taking. So I do know that that is a very real situation. You don't find us in Pennsylvania, you don't find us in New York, because the industry is not yet grounded there and understood well enough. But I would tell you on behalf of the industry, I think the regulatory environment, the transparency, the way things are done, the service company industry and the overall skill and replication of this is getting stronger every day and it should give you and others confidence that the business plans that we have described are going to be executable. The industry has been here 75 years, Glynn, and what we're doing here is no different than what has been going on that entire time. Great question. Operator, anything else?

OPERATOR: Thank you. We have a final question from Tim Gerard from Investec Securities. Go ahead, thank you.

MR GERARD: Hi, Mike. Just a quick question with respect to – given that the shale can be very uniform and very thick, can you discuss a little bit what – how you would stack the horizontal wells one on top of each other? What would sort of be the minimum amount of shale that you would target in a vertical sense?

MR YEAGER: Yes, Tim. Well, when it comes to the geology that we're looking at there, a number of components are in play. You have got, you know, the shale itself is made up of – they're not all the same. Some are thicker than others, as you have described. Some have more carbon content in them than others. Some have more contaminants like sand or silica in them. Some are very ductile and others are very brittle. So what we're after is something that is full of carbon, I mean, the carbon content is high, that the brittleness allows it to fracture and break up easily, but also down with – at the micro level, we're looking at a certain amount of porosity or a certain amount of intergranular space that will allow the gas to flow. And it is all those things that we look at. The better they are, then the thinner it can be in a vertical sense.

The thicker they are, then the more those things need to be good and quite honestly, most of the things that we're drilling, if we're in them and they're good, then they're good for hundreds of miles. So that is, has a lot of homogeneity and clearly things like the Eagle Ford, the Fayetteville and the Haynesville extend for a large aerial extent with good quality reservoir across that, and we happen to sit on the lion's share of the very best part of that, as I will describe in just a few minutes. But the thickness varies with the quality of the shale is what I would tell you.

3. Part 2 - Mr J Michael Yeager

Okay, ladies and gentlemen, can you guys cue me up now for the second portion of that or do I need to advance it myself? There you go. All right. Well, that was right on time at one hour and I appreciate that discipline and now, let's move on and get into the business update portion, if I could, and supply you with what we're going to try to do. Once again, the same basic format, I'm on slide 29 now. I'm going to give you a little bit of an overview of the US and the shale world and why we think it works. Then I'm going to go into our assets which we think are amongst the very best if not the best set that any individual operator has and then, last but not least, give you a little bit of our business outlook as best we know it today. And believe me, that is still evolving and still coming to fruition but I'm going to tell you everything that we can tell you.

On chart number – I'm on number 30 now. Let's talk a little bit about why does shale work and believe me, as it says at the bottom, not all shales do work and they're not all the same and this is going to be a dilemma that we're going to find around the world as this gets sorted. But let me start at 12 o'clock on the little bit of the United States map there with number 1 and that is, attractive geology. The question that was just asked by Tim is the question. If the rock is not good, it's not good. You can't overcome bad rock. So what we're looking for there is total organic carbon, TOC, as well call it, and how it works, the amount of porosity in the rock at the intergranular level, the brittleness of the work, in other words, how does it break up, how does the wind shield crack, if you will. The depth of the rock and how deep it is, which is going to be a matter of cost. And then last but not least, because of low gas prices in the US right now a premium is being placed on the liquids content, and I will show you how we have some of the very best of that in our portfolio.

Moving clockwise now, the next biggest thing that you must have is you must have the ability to sell that gas into the market. The US gas market, as you know, is the largest gas market in the world and grows daily and I will show you what that's looking like. The third thing that will allow shale to work in the US now is at 3 o'clock there and that is the extensive pipeline network where we can get this gas anywhere we want to in the US, into the major markets and get it there for just the cost of the transportation, whatever you can pay.

The fourth thing that makes the US work as opposed to, say, things in Europe right now and that is the landowner situation. I went to great lengths to describe what that looks like, that our landowners are our partners and our royalty owners and if you do that right, then it allows the whole world of how that relationship works to be positive, and we're very confident that that's a good place in the United States. Number five, down at 6 o'clock and that is the supportive regulations. What's happening in the US is hopefully you will see as I walk through this, is the gradual positive movement and it's driven economically and it's driven socially and it's driven environmentally.

I've gone through the economics – or, pardon me, the social part of it a little bit and I've gone through the environmental part and I will try to describe to you the economic part as we move forward here. But clearly, the regulators, the more they can find that this gas is dependable then the more they're going to support it over the long term and those that buy it are going to be willing to buy it on long term relationship as they see the dependency of the supply go forward, and that's happening.

Number 6, which is over near 7 or 8 o'clock on the dial here and that is attractive fiscal terms. The US, as you know, has some of the best fiscal terms in the world where you keep all the price up-side that is involved here and that's very, very important. And also, don't forget, just basic rule of law, as we look around the international side of this, being in places where you can export your cash and be able to control your own destiny cannot be taken for granted and that's another thing that makes this work, you know, in stable countries like the US and Australia and others.

At 9 o'clock there on the dial, the low population density is critical. There's a very, very direct correlation between the amount of people on the land that you're using and how successful you're going to be at being able to carry out your business and clearly, being in a low population area is important.

And then last but not least of what makes it work is you've got to have the services. I think it was someone that asked the question earlier and I probably did not answer that completely but clearly, most all of us choosing to have the services rented. To get in the drilling rig business, to get in the fracing business, to get in those things full-time means training, equipment, maintenance and other things that we would rather leave to people that do that full-time. But nonetheless, if you're going to go internationally or if you're going to work in the remote parts of even the United States you've got to have those services available and they're not available everywhere. In order for that to be profitable for a service company, they've got to have a lot of work and they've got to almost be able to come in and set up a business there and support it regionally.

So these are the things that it takes in order for the shale gas to work and clearly, as you will see over time, as we look internationally – which we will – there are going to be international places where you're going to have some of that but not all of it and it won't go forward. And there are going to be places where you're going to have, you know, most of those things but it only takes one or two of them in order for it not to work. But do know that gives the US a little bit of what it has right now.

Now, let's move forward under chart 31 and talk one more time and try to wrap this up around how it's working. The transparency and the knowledge is leading to much greater acceptance. I can't say that enough. This US administration which is taking a measured view of this is certainly, onboard with what's happening here. So this administration shows more and more support literally daily. It is helping that through its support for a firm regulatory environment, but clearly a supportive regulatory environment, to make that happen. The states are supportive. Pennsylvania, Ohio: these places have tens of billions of dollars of tax money now that's flowing in, sometimes 5 or 6 billion a year, that they did not have just a couple of years ago, and every and every state that's involved with this, as I've described, has hundreds of thousands of jobs that have been created, and it's being done successfully. So on the jobs, taxes and a carbon reduction nature of the states which will bear the brunt of those regulations when they come, this is being supported.

I've already talked about supply dependability, but that's important to long term demand. I have sat with some of the larger utilities in the United States that have been using coal for 40 or 50 years and are now saying that, "As I gain more and more confidence that the gas supply will be there for the long term, I have less and less problems with making that switch and moving forward," so that's an economic proposition as well as a regulatory thing, but supply dependability is moving forward and becoming much more a stable nature of the way the business is working. Increases in US energy of being more self-sufficient over the long term, I cannot tell you how much this can change. The amount of liquids displacing imported crude, the amount of gas that's now being used in place of other fuels, clearly, this allows the United States to have a much needed shot in the arm here.

The industry's transparency I think I've described to you. Everything that I showed in the first section is all disclosed to the public in a number of different ways and the technology improvements, both on the environmental side and on the safety side, are making this all very much positive in the public image. We can't take this for granted, but we see further and further evidence of support every day. Then last but not least, you've got testimony going on right now in the United States from people that have no skin in this game. Maybe they're tied to the nuclear industry, maybe they're tied to other industries, but it's irrefutable that the shale business is a game-changer for energy supply across the United States for the next 50 years,

and clearly, not being part of that is something that – as I talk more and more about why we're doing what we're doing – we think it's irresponsible for this corporation to not be a part of that game-changing aspect that's going to be, not only here in the US, but worldwide, as it moves forward.

So once again, there are challenges. I don't want to underplay those. There will be bumps in the road. But overall this transparency and confidence is gaining much needed support as we move forward. So what is really happening on the ground? Well, what's happening on the ground, ladies and gentlemen, is an enormous amount of hydrocarbons that are now being developed and flowed into the market. These are just a few of the largest fields. Obviously, as I've described this industry as only eight to ten years old, with some fields like the Eagle Ford only about four years old, it's in its infancy as far as how it's going to shake out and how it's going to develop, and how it's going to work worldwide. There is no doubt that this will blend across into the international markets. There's a gas conference going on right now, internationally, that is talking about how this phenomenon and other gas exporting mechanisms around the world are going to work together. So there is no doubt that this is going to work, and we can't look at today's world and see how it's going to be economically. Then, of course, as I've described, the three fields in orange on the right are the three big ones that we own a piece in and I now want to go through those with you a little bit.

If I could now go on to slide number 33 and just briefly remind you of the markets on this. Obviously, shale gas has fundamentally altered that mix. That's depicted at the graph in the lower right. You can see how the shale gas is now dominating the forward picture of low cost and competitive gas in the United States. The conventional gas is falling off rapidly. The net imports that just a few years ago were thought to be very, very prominent in the US's future are no longer being viewed as a major component. It's really the tight gas that has now got some stableness to it going forward, but as you can see, the top of that graph is clearly showing that shale gas will be as much as 50 per cent of all gas produced over the next 20 years.

Where will that increase come from? Well, and then, of course, at the top you can see the market, from a 60 Bcf market moving up above 80. That's what we can clearly see today, and as you can see, most of that growth is in the orange on the power sector, and that's where the natural gas is either absorbing new electric demand or replacing coal as it goes forward. The comments are on the left. Obviously, the shale gas has fundamentally altered the supply mix. Its increased dependability attracts customers, as I've described. It's obviously the preferred fuel in a low carbon environment and will be a major point of contention after this presidential election when the greenhouse gas component gets back on the table. As I mentioned, forecast to be almost 50 per cent by 2020 and moving forward. As long as the shale gas supply is substantiated, this oversupply will be absorbed. We've very confident of that.

Then last but not least, LNG export potential has been announced. There are four permitted export terminals right now and that's growing rapidly, and there's one new export contract that has been let for actual purchases of gas, should it be developed, and liquefied and sent into Europe, and all that's happening at light speed. So as you can see, clearly, shale gas is changing the landscape and becoming a major source of hydrocarbons around the world for the future.

Now let's look a little bit about what we bring to the table. I've been asked a couple of times off the line, you know, "Are you sure you know this business and how does it work?" and I would like to take that head-on. The first thing in regards to how this is done, and it goes back to the

question that maybe - was asked earlier about confidence - I think Glynn asked it – around confidence here. You know, that is a big part of it. What we bring is BHP Billiton Petroleum, and the reason I went through those introductory charts is we bring a very, very solid approach to anything in the oil and gas business now with our current capability. We're going to bring a functional excellence approach here that is going to allow us to systematically break down the drilling and fracturing components and improve it step by step going forward, and I'm talking about improving it as compared to even those companies that have been doing it for quite some time. We've already moved into the Fayetteville. We have improved the safety of the entire operations up there. We've improved the project management. We've improved everything that's being done relative to what was being done before. It's basic oil and gas. You either do it well or you don't, and we do this stuff really, really well. So we're not going to have any problem with that.

The long term technology gains that we're going to be able to do because of our strength financially to invest for the long term and to seek long term relationships here – we're in conversations with all the major service providers to do things that will allow us to be a technological innovator and a technological mover, if you will, for the long term, and we're very excited about that. Then obviously the scale and leverage that we have, as I mentioned to you, when you think about those big service providers out there, and overnight we're going to be their number 1 or number 2 customer. It allows us to extract gains that we think will be substantial, and we will be competitively advantaged as we move forward.

So I don't want anybody to say, "You've entered the shale business, do you know anything about it?" Absolutely we do, absolutely we do, and we're going to know more about it each and every day and our view is to move forward into an industry leading position here. Our Petrohawk colleagues that are coming in as partners are outstanding at this. As I'm going to show you in a minute and remind you, they've discovered some of the biggest fields, they're very experienced. But when you look at what we bring around the systematic managerial approach to this, we will improve it and we will improve it significantly going forward.

The second comment, of course, is our financial ability. I know the word "balance sheet" is kind of thrown out there but let me make sure you know what that means. What that really means is that we have the financial ability to do more now and that's why we're able to make these acquisitions. We can do more than those companies that were restricted to living within their means and had already borrowed to the maximum and had already sold everything that was discretionary. We have capability to move beyond that. And then last but not least, we have ability to take a long term view and, as you know, I'm going to remind you a little bit later around some of the things in our portfolio today, of what they looked like on day 1 and what they look like today, and there's no comparison to that. This will look different moving forward also and we have the ability to stay the long term on this.

The managerial approach, I can't understate this. Visit with any Petrohawk employee and they would say, "We do not know how to run these businesses for the long term." We bring the skill to run four major shale businesses, the Fayetteville, the Permian, the Haynesville and the Eagle Ford simultaneously and to run them at a very high level of sophistication and that clearly, is something that we will do. And all of this will lead to shareholder value that would not have been created otherwise and we're very, very confident of that. So we bring a lot to the table here and we worked hard to develop the skills that we have in order for that to happen.

So now let's move on to the second piece of this and let me make sure you can see the unique parts of the assets that we have. This is really, really important that you bear with me here because clearly, what I'm going to show you is different enough that I want you to really, really give me a chance to explain it. First of all, let me just start off by saying we've captured a very, very significant resource position and we've done so at a low point in the market and we've done so at a price that is competitive to even other transactions, and I will get into that later. But nonetheless, I want you to know, no company ever got great by having nothing in their portfolio. We have a lot in our portfolio now. We've now captured four extremely large and very concentrated acreage positions in four of the best shale plays in the United States.

Secondly, as I'm going to show you, not only do we have a large position, we have the core of those fields, the very, very best. And not all shales are the same and not all positions within those shales on the cost curve and other things are the same, and I'm going to show you what we look like. Obviously, this is very long lived. Less than 10 per cent of it is produced and at 100 acres spacing we're going to be drilling the stuff for the next 20 or 30 years. If you take that spacing down even lower then the drilling even multiplies beyond that and that's clearly, what we have in mind.

Because of the unique position that I'm going to describe to you, you're going to see that regardless of whatever the price is out there, we're competitive, if not advantaged in regards to costs, our returns, our other economic vehicles, regardless of how this thing shakes out. Our proximity to the Gulf of Mexico of all of our fields gives us a chance to play in the long term arbitrage as to whether these molecules are going to go forward, stay in the US or be exported. We will be part of that as it moves forward. And what I want to show you, that each and every field that we have, there's no duds, there's no average, each and every one of them has a significant advantage economically.

Last but not least, I would remind you that we never sat back, we're not sitting here talking to you about large acquisitions or we're in a non-operated passive mode. We're the operator of every bit of this. All those JVs that you guys have read about, we passed on every one of them and everything I'm going to show you today – our BHP Billiton team, in combination with our Petrohawk colleagues, is being formed up and we run and drive and control everything I'm going to show you. It allows us to have the scale I've talked about, it allows us to drive the technology and consequently, it allows us to be in a position to repeat this and do it again in what is a game changing world over the next 30 years. That's why we've done it.

Chart number 37, the Fayetteville. I will just remind you, a field that's about 40 miles north and south and 80 or 90 miles east and west, a big, massive field. At the time we purchased it, it was the 29th largest gas field in the entire world. The yellow squares are where we have ownership. As you can see, we have ownership across almost the entire thing. Some – almost every one of those, there's multiple owners and we earn an average of 58 per cent of the 487,000 acres that we have that we operate. There are some blocks that we don't operate and I think our average ownership on those blocks is around 10 or 11 per cent. The big players here are the three big guys: ourselves, Southwestern Energy who has had a phenomenal run in this field for about eight years and XTO which is the acquisition that ExxonMobil made. We are the three large and big players here.

This field is unique. By shale standards, it's shallow. From 2,000 to 8,500 feet with low average drilling cost. I will talk to you about that in a minute. The geology here is excellent. The field is very – the shale is very brittle. It cracks easily, it breaks up and it gives you largely

de-risk amounts of gas that we can count on and are dependable but at low cost. Today we produce already 435 million a day and we've got the full pipeline infrastructure to handle our current and forward program. Our total resource here risk is 10 trillion and that's based on 70 acre spacing and Southwestern right next door to us is already drilling below 70 acres in some of their core holdings. We are not even counting on that yet. If you will be mindful, when we bought this from Chesapeake it had six rigs running. Right now our plans are to gradually ramp this up to 20 drilling rigs and these 20 drilling rigs are brand new, they are being built right now. We have got some loader rigs that we are using right now where we've got around 10 or 11 rigs in the field but gradually these new builds will start arriving in January and we will take a few every other month or so until we are ramped up to about 20 over the next two years. All of them are new and all of them are on hire and on order.

Our initial service contracts here are already yielding gains of between 25 and 40 per cent from what the previous operator was paying and that is because the people that we are going to be working with know that they are also going to be in line for the Haynesville and the Permian and the Eagle Ford and they are anxious for that business. We will be the number one or number two service customer from all these things before it's all over.

We have our team in place, if you will remember this was just an asset purchase from Chesapeake so we had to go out and form our team. Chesapeake is providing some essential services for a while but clearly that is moving forward and our team will take over everything, lock, stock and barrel by April. I can say we are gradually taking over each and every piece of it as we described and I already described this is operated and it gives us – it will now set us up where we can go work with Petrohawk in a more advanced and a more skilful way.

I would draw your attention to the little chart in the upper right, ladies and gentlemen, and this gets to where we are today. The initial production on these wells is a little over 3 million a piece. The EUR that we average from the portfolio that we have is around 3.2 Bcf per well. These are some of the cheapest wells in the United States at only three and a half million to drill and frac. And right now, at today's forward strip at the prices that were out there we make a 16 per cent rate of return on the investments on these wells at today's very, very depressed circumstances. Why? Shallow brittle and lower cost and clearly an advantage situation. So if you are going to be in the gas business in the US, even during these times, being in the good part of the Fayetteville is a really, really good place to be and I hope you can see that. This clearly meets our criteria they were after when we made the acquisition and I am going to describe to you a number of different ways that we think this will improve over the next 30 years going forward. But nonetheless we are making this work and we are very, very pleased with the progress here. So the Fayetteville, in our position, the Fayetteville has good advantages to it and good profitability going forward.

Now let's go to the Eagle Ford. This is where it gets to be really, really interesting. The Eagle Ford shale has the best economics for a single well drilled in any shale in the United States. This was, as you guys know, was discovered by Petrohawk and because of that, we have the premier land position in the Eagle Ford shale. Look at that little box there. First of all, remember this is in south-central Texas, this is down where the oil and gas business has been around for 75 years, we are working with landowners, it's very, very sparsely populated and clearly all the things that I have described of agriculture and cattle ranching and other things are going on all around us. So a very friendly environment to be in.

The Eagle Ford shale is unique because it's liquids rich. It gets deeper as you go south and as you get deeper, the temperature gets higher and it turns to gas. And it gets shallower as it goes north and as it gets shallower, it gets too shallow, it has no pressure and if you drill into it and even frac it, it won't flow. The sweet spot is right here in the middle and that's what Petrohawk figured out before anybody. They drilled the first commercial well there in 2008 and captured the key acreage across this entire area. The contiguous nature of this acreage will allow our development to go unimpeded for many, many years to come. This is rated as the lowest cost shale of any of the liquids rich shales in North America. It has attractive economics because it has natural gas, condensate and NGLs that flow from the fields. Right now this shale has the highest rig count of any shale in the United States, reflecting the attractive economics and what happens and I will show you why that works even further as we go forward.

The reservoir depths are much deeper than the Fayetteville. Here you are at 10,500 to 14,000 feet and the average costs of every well is 9 to 10 million. We have the 332,000 net acres, the best position in the thing. Today we produce 310 million cubic feet and 53 per cent of this is liquids, not gas. The total risked resource that we think we have purchased of about 13 and a half trillion is 42 per cent liquids and that's on 90 to 100 acre spacing. Offset operators are already now drilling at 50 acre spacing in this, and if we do, that potentially has a multiplier effect to the resources that I've just described there, and that is our ambition, to go forward and get that done.

Our plans are to take the 14 drilling rigs that Petrohawk has in play now, and gradually ramp that up to about 26 through 2013, and then as I've described, that is based on 100 acre spacing and the potential for down-spacing and higher recovery factors is very, very prevalent. We think that right now the industry is capturing about 15 per cent of the hydrocarbons in place in this rock. That gives you some aspect of what the target is going forward over the next 30 to 40 to 50 years for companies like ourselves to get after.

Okay. Now let's break the Eagle Ford down a little bit further, because as you saw on there, there's really two different clusters. The first one here is this most southern cluster called Hawkville, and I will draw your attention to that little bar graph inside the map where the colours get redder and hotter as the recovery per well gets higher. As you can see, the reddest orange is up there in the 10 and 11, or eight to 10 Bcf per well, and I will describe to you the liquids content of that as we go forward, but as you can see, Hawkville is the heart of the 10 - of the bright red. We now have 224,000 acres, with an average working interest in every well of 85 per cent in this trend. It contributes 50 per cent of the current Eagle Ford production, or about 180 million a day or 30,000 barrels a day, of which 36 per cent of that, is liquids.

It has – we think that the total risk potential that we bought is 10.7 Bcf and 34 per cent liquids, and once again, that's at 100-acre spacing. The liquids pipelines are being laid to us right now and we expect them to be in place by the middle of next year, around June or July 2012, and our plans are to ramp up from the current five rigs to 13 rigs during 2013.

Now, this, as I mentioned to you, the Eagle Ford gets shallower to the north and turns into oil that won't move and it gets deeper to the south and turns into gas, so it has two different phases here. The economics, or the characteristics, that I've described on the right-hand side are there for you to peruse. If we're drilling in the northern part of this, we're in the rich gas portion of it. Initial production is normally around 5 million per well and about 600 barrels of liquids. The estimated ultimate recovery is around 2 and a half billion cubic feet and around 450,000 barrels of liquids. The drilling and completion costs here are about 8.8 million,

and at the November forward strip for both liquids and gas we make a 43 per cent rate of return on every well that's drilled here.

If we're in the southern part of this, where it gets a little leaner, then the characteristics do change, and as you can see, we're looking at where the gas content increases to about eight and a half million cubic feet a day, and the liquids content decreases to around 200 barrels a day. These wells are a little deeper because they're southerly and they're more expensive at about 9.6 million, but at today's forward strip we're looking at 15 per cent rate of return on each and every well that's drilled there. Once again, guys, 224,000 acres, 85 per cent ownership, drilled at this kind of spacing for a long, long time. That's what we will be doing, with economics that you can see that we will be realising today.

Now let's go to the other portion which is called Black Hawk. This is even better because it's even stronger liquids here. Once again, I would draw your attention to the little bar graph there from green to red in the map and the bright colours there get up to 10 Bcf, and as you can see, we have the lion's share of that acreage throughout that trend. The little squares represent the Petrohawk acreage that we've acquired, so the Black Hawk is in the economic sweet spot of this entire play. It's the best economics in the United States because it produces the highest value product mix that you could have. The high liquids content substantially improves every well that's drilled. Once again, the liquids pipelines will be in place in FY12.

We have 58,300 net acres with a 48 per cent average operated ownership. Our current net production is about 22,000 barrels a day, of which 77 per cent is liquids. The total risk net resource of about 2.8 trillion is 72 per cent liquids, and we expect to ramp up the drilling rigs from nine to 13 by 2013. You can see the economics in the bottom in the little graph there. Initial production of about 3.8 million cubic feet, and 1.6 thousand barrels a day, or 1,600 barrels a day. Estimated ultimate recoveries of about 1.8 billion cubic feet, 220,000 barrels of NGLs, 550,000 barrels of condensate. The drilling and completion costs just shy of $10 million per well and rates of return on these wells of over 100 per cent on each and every well that's drilled.

So the Eagle Ford is the most active shale in the United States and we have the sweetest spots within it as a result of our acquisition. Okay. So hopefully you can see the advantage that we feel like we have in the Fayetteville and the advantage that we have in the Eagle Ford moving forward. Now let's go forward and look at the others. If you're going to be drilling dry gas, and with prices being where they are, then let me talk to you about why the Haynesville is one of the places that you want to be. Look at what the Haynesville has done. The Haynesville has now grown to where it's the largest producing gas field of all the fields in the United States today, and there's a reason for that, and then I'm going to show you what that means to us as we move forward.

The little map on the right-hand side is something that you've seen a couple of times, and I'm now on slide number 42. The map shows the perlimited areas where if you drill a well inside of that area, and it goes back to what the gentleman asked me on the question. The Haynesville field is marked there in the dotted line and it shows how large it is, but look how the acreage changes and the quality of the shale changes within the field boundaries. The very, very most black lines that are in there are perlimited where every well drilled in there averages about 8 Bcf per well, and some are as high as 15 Bcf. The Haynesville is unique. It's deeper. It's very, very high pressure. It's even over-pressured, and it has natural fractures already in it, so that if I go in and I fracture it and I connect to the best of that, I get more hydrocarbons for every dollar spent than anywhere that I could be. That's why, if I'm inside those black lines inside of

the field boundaries, I'm going to get the most monster boomer wells that you can drill in the shale in the United States.

The next area out is a little lighter line, and that is 4 Bcf a well, and if you're anywhere between the dark black line and that line, you're going to average about 4 Bcf, and then you come on out to the field boundary, and anywhere between where it says zero and four, you're going to average about two. Well, today in the Haynesville, ladies and gentlemen, if you're inside of that 8 Bcf line, you're drilling good monster wells even at today's prices, and look who has the lion's share of that. We do. So we sit on the crest of the Haynesville. We have the largest position inside the most prolific area of the biggest gas field in the United States, and that's what allows these wells to be economic at today's prices.

So let me just go down through some of those characteristics with you. As you can see, I've already made the headline statement, the large amount of the best acreage in the biggest gas field, 345,000 net acres in the Haynesville and the Bossier. The core that I'm describing in the 8 Bcf average is well above the field average. Natural fractures, high total organic carbon, or total organic content, and it being over-pressured, is what makes this happen. Our average working interest in every well we drill is around 75 per cent.

Petrohawk has been the industry leader in the way the technological achievements of this have occurred. Once again, like the Eagle Ford, Petrohawk discovered this. They were the owners of it and that's why they were able to capture the very best parts of it. It has a direct access to an extensive pipeline that supplies the evacuation to date of the major markets. All of these fields are near the major markets, and that gives us advantage. The average reservoir depth here is deeper at almost 12,000 feet. It costs a full 10 million to drill and complete and fracture one of these wells, and Petrohawk has been able to improve that from 15 million a well to 10 million a well over the last several years. Right now our gas that we produce today this morning was over 780 million out of this field, very, very large and we think our total risk resources that we've purchased here are around 22 TCF at 90-acre spacing. Once again, you take the 90 acres down and that 22 trillion should grow and that's what we're counting on.

Now let me draw you to the individual well economics in the little graph below the map. I've already described a bit of the characteristics but the initial production that we expect from our wells because of our advantaged position is about eight and a half million. I've just described the EUR at around eight billion cubic feet; the very best of any player in this field. Our drilling completions cost of around 10 million and at the November right now forward strip we make 17 per cent ratio return on these wells drilled in the upper part of the crest here.

So when you go out and look at Fayetteville and you look at Haynesville, things like Wood Mac and all, you can't just look at the one component there. There are many parts of these fields and look at where we sit and the advantaged nature of this. So we stick a dollar in here, we get more gas out in a preferential position going forward. So if you're going to be in the gas business, once again this is a great place to be.

Now, several of you asked questions about technological improvement and this is just an example of it and I'm looking at slide 43. This is something that Petrohawk pioneered here in the field and it's now been adopted by several of the other operators. But it's indicative of the kind of things that we are acquiring with the technical team that are going to be joining us.

The graph in the upper right in grey, and this answers a little bit of the questions that was asked earlier, shows a well being placed on line and the decline in it over about a year and a half and how it declines. That was producing the well in absolutely open flow and letting it flow as hard as it will early on. Petrohawk has examined this rock and been able to show that the very nature of the way the geology works, it's better to not produce it as hard and hold some back pressure on it. When you hold some back pressure on the well and keep the rate restricted, what that does is translate a higher pressure down through the reservoir and what that does, it keeps the fractures open longer and it creates a higher flow rate. As you can see, the orange line there depicts the new rate where the actual flow rate, although restricted early on, is much more advantaged over the life of the field. What that's led to is of course higher EURs on an average well.

So a few of the comments there, they pioneered this, choking back these initial wells has allowed the ultimate recovery to be stronger and as you can see, an average non-restricted well of four to six billion cubic feet ultimate recovery is now seven to nine with the kind of improvements that are depicted in the chart in the lower right. So once again, let me just make sure I'm clear with you here because I know the dry gas and the price is on people's mind. But we're in an advantaged position in this field. We have operators that have called my phone at my desk that operate in this field and say, "Will you partner with me and help me because I'm on the fringes," and I won't go into what they've said but clearly not everybody here can do what I'm describing.

Over time you're going to see the rig count decline and you're going to see some things happen if prices stay less. The other thing that people asked about early on is about service cost. If prices stay down, you're going to see the service cost come down also. So I do want you to know if you're going to be in the dry gas, the 17 per cent rates of return at today's prices in this kind of advantaged position, it's not what everybody can do, and we can, and clearly that's something we want to take advantage of.

Now let me go to the last piece, and I want to make sure that I don't confuse you here because this is very, very important. The Permian Basin, as most of you know, is one of the oldest oil provinces in the United States. It was in its hay day back in the 50s when it was one of the largest producers in the world. It's produced billions and billions and billions of barrels. It is undergoing right now a rejuvenation like no other part of the US. That little nook right there between Texas and New Mexico, as you can see, where it turns a little square, I used to live there back in 1985 and that's where my son was born.

At that time we were drilling oil at about $40 and this was one of the hottest places in the world and then it went dormant for a number of years and now the advent of horizontal drilling and fracing has rejuvenated this. Look at that rig count now; 480 rigs are working in the Permian Basin today and the reason is this is nothing but oil and it's stacked reservoirs one on top of the other, some of which are 500 feet thick, and it's going through a rejuvenation, like I mentioned, as to redevelopment and the recapture of new resources, particularly at $110.

The acreage that we have in the Permian Basin – I'm going to show you some far projections in a minute on barrels. There's not one barrel in there from the Permian Basin right now. This acreage of 325,000 net acres with an 86 per cent working interest was acquired by Petrohawk within six months of us closing the transaction. There's only been seven wells drilled by Petrohawk so far. There's only four rigs working. So we don't even know enough right now to tell you but what I can tell you is it's the hottest place in the United States, it's all oil and we own

a lot of the acreage going forward and we're going to add that to our story here in due course but right now I don't even know enough to tell you.

Our early results are positive. We've drilled through these shales. As you can imagine, we're now drilling the shales that provided all those hydrocarbons that were produced back in the 50s and 60s. Very confident, great, big, fat shale packages that are continuous for many, many miles and we own a bunch of it and the gas content here is low. This is primarily liquids, as I've described, and no volumes that are in here. So as you look at our forward projections in a minute, I'm going to show you what we think we can do but we've still got the Permian in our pocket here and if we need to substitute some of the dry gas plans we've got for this, this is clearly within our repertoire. So do know that that's what we've got; oil and multiple pays and a lot of it.

So what I would like to do is summarise for you very quickly. What we've entered into is not only the shale business but we've entered into the shale of the shale businesses. These four big fields all have significant advantages. I've described the Fayetteville and how it's shallower and very brittle and it means it's low cost. That's its advantage and going forward we're going to be able to ramp this thing up and have scale and leverage that the previous players don't have. And if you want credibility about our story, look, at the story of Southwestern Energy. We occupy the same acreage and they've had a track record now for five years for ramping this stuff up in a big way. We'll be just like them. They've already been over to our place to talk about swapping acreage. We are right on top of each other and there's no reason our story should not be just like theirs. They're profitable and they have a wonderfully powerful and very valuable corporation in the United States and we're going to emulate that.

The Eagle Ford: liquid rich, as I've described. Petrohawk discovered it. It has the very best components out there. Wells between 40 and 100 per cent rates of return in each and every one of them. And we have the industry best acreage. We're going to ramp those rigs up and then we're going to drill this stuff at 100 acres and we're going to be looking at that down spacing and many of the companies around us are already at 50 and if we do, the story that I've described to you is going to change and it's change for the positive because there'll be more of it going forward.

The Haynesville: dry gas but if you're going to be somewhere, be where you get a lot of it. We're at the crest of the structure. We can drill for five years and never get out of that top area that I've described to you. At today's prices still making 15 to 17 per cent rates of return because we get the highest rates and the highest EURs of any of the gas wells in the United States. We're going to have a – you notice the word "controlled" here. We're going to have a controlled rig ramp up meaning we're going to be smart about this, make sure if the market moves, that we're able to move with it but clearly a very, very advantaged position and we've still got the shallower Bossier Shale above us for the long term.

Once again, if you're looking for a story there on the Eagle Ford, look at EOG and what they're able to do and if you're looking for a story on the Haynesville, look at Encana and what they do. And look at these giant growth positions and we're advantaged to all those companies acreage-wise going forward. Then last but not least, the Permian, predominantly liquids, multiple pays. We may end up drilling two horizontal wells from the same pad at the same vertical orientation, one of them is at 8,000 feet and one of them is at 10,000 feet because these big shale packages are stacked on top of each other. That's how prolific the Permian Basis is.

The opportunity is here. It's completely unappraised. There's activity going all around us. We don't have one barrel in the forward projections that I've described and there's still additional land capture. We are beating and coring up new acreage in the Permian Basin every day. The rest of these fields that I described are locked up. All the acreage is gone. Anything that happens after that in the Fayetteville or the Haynesville or the Eagle Ford is probably going to be swapping around but in the Permian Basin, there's still acres to be had and we are very active. So once again, guys, overall it's not that we are just average in the shale, we are in the shale of the shales as I've described it. Four world class fields, each with very distinct advantage and our unique position within there. Immediate volume gains, multiple 30 year opportunities for improvement as we go forward. So I wanted to make sure you had a few minutes on this because it's very, very critical that this be understood.

Now let me walk you through into our business outlook very quickly. I would just like to spend a minute on the business model here because it's important here. Some of you see this as low – the lower margins but there's clearly some advantages here. When you compare the shale business to the conventional businesses, there's a number of things that you need to understand. We have no geologic risk here. We have tremendous geologic risk in the conventional business. Our first production in the shale is in months. In the conventional business, it's in years, sometimes five years. The payback here is in months. It's in years, sometimes five, seven, 10 year paybacks in the conventional business.

Flexibility, if we are going to drill Shenzi which is the picture on the left, we've got to commit to everything up front and there's no turning back once you have done it. In the shale business, we've got tremendous flexibility where we can modulate our spend depending on the market circumstances and that means our capex can have a general plan but we can adjust that if we move forward. But the biggest thing I want you to know is the expandability. When we drill Shenzi, if it's going to be 120,000 barrels a day, it's never going to be above that and it's going to decline from there and whatever we start at, it's going to get worse as we go along. On the shale business, whatever we start at, we can improve it in orders of magnitude as we move along. So the margins may be not as large as that big oil at Shenzi but there's more, much more of them and the earnings can be just as strong and just as powerful over time. It's really important that you know that.

I think I have described some of those things at the bottom. I would just like to say that the shale is also ripe for the long term technology which few companies can do. There's not four or five companies that can take the long term technological view that we can and improve costs per well and EUR and frac designs and all that over 30 years.

Now let's get into a couple of definitions, if you will. Sorry, I didn't advance that chart but I hope you were able to follow that. I would like to now go on to chart number 48, the value chain. I think I have described this in general terms but it is important because if you are going to follow this and understand the story, there's got to be some definitions. I think I have described a well and how that flows but as a well flows, it must flow into separation. The oil comes off the bottom of that separator and it goes to stock tanks and it's sold and that's a very simple process across the bottom. But across the top comes the gas and the gas is always going to be wet and it's going to have additional liquid hydrocarbons in it. That's normally what's called the midstream, you will hear that business. The midstream is where we take that gas and we process it and sell it as both dry gas and sell the natural gas liquids as liquids at a premium price. That's important that you get that because I am going to show you the many things that

involve how you calculate revenue and how you look at expenses and you must understand this entire chain in order to be able to get what we are doing.

So the production is gathered in flow lines and the owners take their portion. The crude and condensate is separated from the wet gas. The gas price, NYMEX benchmarks are translated into regional sales by basis of market differentials and transportation and the reporting of upstream and midstream is not uniform across this industry.

What we found when we purchased the Fayetteville stuff - and I want to show you a little bit about how we need to adjust some numbers with you – is how Fayetteville and Chesapeake racked these numbers up, Petrohawk does it differently. Every other company does it differently and we have taken a common approach and we are going to be consistent with that and I want to show you that in a just a moment.

What are some of the components of the profitability? As I've said, revenues is not just revenue. You need to understand gas revenue. I've tried to emphasise the liquids revenue today. And then there's also third party revenue on the processing. If we have laid these pipelines, other people are going to want to join us, we are going to make a small amount of money when we carry their product and make a little money. So there will be all three of those revenues you will need to understand.

Costs. They are broken down between transportation and in the field gathering and processing and then the midstream operating organisation, the people who are out there running the compression in the pipelines, the upstream operating costs which are the traditional costs of caring for the wells and their workovers and their upkeep and measurement and the people, and then last but not least, there are secondary taxes across each and every state in the US that are slightly different state to state, where there are doing a small amount of tax on the wellhead product as it changes and it's different in Texas and Arkansas and Louisiana. So once again, you will need to understand those a little bit.

When it comes to non-cash, because of these acquisitions you are going to have our acquisition price and its amortisation as well as just our normal capital depreciation which is our capex divided by our proved reserves. So those are important that you get across and we are going to do our very best to guide you through that.

So guys, here's the best guidance that we are going to be able to give you right now and I apologise for this still being, you know, maybe not as complete as you would like but hopefully this combined with the well economics that I have described to you give you some view as to how we view the business. Our very best guidance for FY12, the year that we are in right now is that we will average about 90 million barrels produced from the shale business. This includes the partial year of Petrohawk that closed back in August and the full year of the Fayetteville which we closed back prior to this fiscal year but wet think we are going to average about 545 billion cubic - we are going to produce about 545 billion cubic feet or about 90 million barrels of oil and gas equivalent this year.

I've tried to talk with you about the liquids component. You can't just look at the gas price. But of that volume, there's going to be about 10 per cent of that volume that is going to be in liquids and it's going to involve the ramp up of the Eagle Ford and certainly right now the liquids in the Permian are not in here as I've described but we will be emphasising more of that going forward but the liquids component is important.

Now when you get to the third comment that liquids in midstream uplift, we think is going to average about $1.20 this year and $1.70 next year. So over the next two years, you are going to have that additional revenue for every Mcf we produce. So that's not just in Eagle Ford, that's on everything that we produce, all of it will have that kind of uplift to the gas price. We are going to report that as revenue to you in both cases.

Let me pause here and make sure that you know we need to make a little correction. When we talked to you about it at the end of the year, the midstream revenue, the way Chesapeake handled that was to deduct it from their operating expenses and use it as a net lower expenses. That's not the way Petrohawk does it and that's not the way most of the larger companies do it. So we want to clear that up with you. We are going to report revenue as revenue and we are going to report operating expense as operating expense and not net one against the other going forward. Doesn't change the EBIT, doesn't change the EBITDA, doesn't change anything. It just has those components be a little different going forward.

Our cash costs for everything that I am showing you we expect to average about $1.90 per Mcf over the next two years. You know, that will move around a little bit but that's our very best circumstances. That's fully burdened with everything including the non-recurring charges. Right now as you know we have got a very elaborate and we think very appropriate retention program for all the Petrohawk employees that lasts until about 2013. We are having to build the accounting system. We are having to build the land system. Anything that's in there that's non-recurring we have it in those costs.

Then on the non-cash, you are going to see us charge every Mcf about $2.60, that is the depreciation of the purchase price as well as the capex depreciation going forward. When it comes to modelling some of this, the purchase price, the way the US oil and gas accounting must work is we must apportion the purchase price to the value of the acquisition. So think about the 780 million that were flowing in the Haynesville today. Whatever percentage of the total value of the acquisition is, we've got to depreciate it at that rateable amount. So do know that over time that charge will change but we are going to average about $2.60 over the next two years.

When you look below this, guys, the cash generation here is enormous. You are looking at gas prices plus liquid prices minus that cash cost and everything else is EBITDA. So this is very, very strong on cash generation going forward. So I want to make sure that over time you get – these last three charts, the definitions and we're showing this, this is the way we will be consistently showing it to you from now on.

Now, there are a few things that will allow for significant improvements going forward. In FY12, we're impacted by a few things. Obviously, our liquids are around about 10 per cent, and we expect that to grow year on year for the next few years, and it does not include any of the Permian yet, so that will allow even more liquids to flow in.

I've already talked to you about the retention program for the Petrohawk staff, the major systems that we're building for land and revenue accounting, and there is some excess transportation today that Petrohawk had secured that's not being used, but that will be rapidly absorbed as we ramp the volumes up. Other forms of improvement are the liquids are set to double by 2015, and once again that's without Permian. The scale of the service contracts that we're in the process of doing are going to capture significant operating expenses. We will be

the number 1 or number 2 customer, and the optimisation of well spacing, as I have described, where we're only talking about 90 to 100 acre spacing now, we will clearly change this as we move forward.

I've already shown you the frac technology and how some of those decline curves are changing, and overall we're expecting lower and lower cost over time as well as higher EURs. So that's the story as we see it, but I would ask you to know that the story for a number of reasons is going to improve going forward, and the first one is not just us, but this is what the market is saying. This is the forward curve of the NYMEX today. It is telling us that the market expects that prices will rise over time, and the reason is for all the features that I've just described to you going forward, that gas demand is becoming more dependable, that some of the shales are higher cost, even in the same field, that the lower gas drilling activity to secure the acreage is decreasing and therefore the rig count is declining. There is a shift from liquids to shale, particularly amongst the smaller companies where their financial circumstances only allow them to live within their cash flow.

Then last but not least, you've got the LNG export capability where the $4 US gas and the $10 European gas, and the $15 Asian gas, we expect to equilibrate over time and we expect to be part of that. Now, when you go back and look at that forward curve, I want you to know that that curve, we could go lock in our sales today at that curve, as you guys know. That's how liquid that market is. As BHP Billiton, we do not do that. We will take the price on the day, but clearly that is there to be had. If we were to get that forward curve, we would meet every one of our board's expectations for these acquisitions, so everything that we've put in place here would allow that to go forward, if we could get that price and the current liquids prices, and obviously there's strong expectations that we do.

As I've described to you, the liquids component is on top of that at $110 oil and the Permian is not even in there yet, so when you start looking at the overall story, I hope you can see that we fully expect that to improve. So now what could that mean to us, and this is kind of headed to where it will wrap up, guys. If the value is there going forward, and once again, we're not going to be foolish, but if the value is there to be created, here is what we could do. On the right-hand side is the capex. I've already shown you the rig ramp, and this we expect to have phased over the next several years. If that rig ramp occurs, then this is the capital spend that will go with that, and as you can see, consistent with what we said last time, we have an enormous number of opportunities, all of which are 15 per cent to 100 per cent rate of return at each and every well going forward, and that's at today's depressed circumstances and we fully expect that to get better, but that's what it looks like on the capex with the rig ramp that we've described.

Now, if you come back on the right, if we run the rigs as are depicted here and if we spend the money, here is the growth rate from the shale business that we expect, to average about 250,000 barrels a day this year, or about 1.6 Bcf, and I have already shown you how that's about 90 million barrels, by 2015 to have increased that to about 600,000 barrels equivalent, or just shy of 4 Bcf a day, and by 2020 to about a million barrels a day, or just under 7 Bcf, and once again, the liquids part of that, that's all in Mcf and all in gas terms, but the liquids part of that will grow from 10 to 20 per cent and beyond as we move forward. Now, what makes this credible? I can say go look at Southwestern in the Fayetteville. Go look at EOG in the Eagle Ford, and go look at Encana in the Haynesville, and we have preferential acreage position to each one of those going forward. Highly, highly credible story.

We still have the Permian Basin in our pocket. If you were to ask me, "Mike, what about if gas prices stay depressed?" The chances are we're going to true up the liquids part and substitute some of that gas for liquids component if we were to not like the world that we see, but as I've described, we can modulate this and go forward. Having said that, my job is to go execute the plan as I'm describing it to you and to provide these sort of returns to our corporation, and that's what we're geared up to do. Let me move toward closing here as I described. This is an excellent fit. I've already shown you. This is going to be a game-changer around the world, and for BHP Billiton to not be part of this we think is irresponsible.

This is the same chart I showed you last time. I don't think I have to go through this about a large long life gas market and all those things, but let me just make a couple of comments about strategy here, guys, in closing. Let me remind you that between 1995 and 2003, all of that stuff in the deepwater that we have today was discovered. All of it was discovered back then. Do you know what liquids prices were back at that time? They fluctuated between 20 and 35 dollars a barrel. So if you're talking about these massive margins today that we enjoy, we did not have those going back. In 2004 in the North West Shelf we sold LNG for less than $4 an Mcf. In both cases, those things have doubled. I don't know how this will be going forward, but we like the fact that over the next 30 years with these massive resources and this huge price disparity around the world, and the thirst for hydrocarbons, the opportunity for these margins to grow and increase I think we've shown you a number of reasons as to why we think that will happen.

What I can tell you today the rates of return on the wells as you can see them today. That's healthy. They're strong. There's not anything we're going to do over the next five years that's not within that, and that gives us five years for things to move as they go forward, and over the next five years, the capital spend and the rates of return that I've described to you, we should average a full 25 per cent rate of return on our program because we're going to be drilling in the heart of these fields going forward. We're in the best fields, we're in the best location, and the liquids component will give those gas prices a big boost. Also, guys, we've made good deals. You can't look inside of these deals that we've made, but in each and every case you've got these premium fields that I've described, but there is also net operating losses and undepreciated assets that we're going to be able to bring to bear here that will protect cash flow as we go forward.

As a matter of fact, over the next five years for the Eagle Ford and the Haynesville and the Fayetteville, we're going to be net cash generating by the natural cash flow that we generate from the fields and the net operating losses and the additional depreciation we're going to bring to bear. So we've made transactions that will not draw on the corporation's cash flow at all, and as a matter of fact, still return large amounts of cash, even with the ramp up that we're doing that is three and four times what Petrohawk and Chesapeake did. Then on top of that, we think we've done good transactions on a per-unit basis. If you look at the top 10 transactions that have been done over the last few years, they've been purchased at an average of 66 cents per Mcf. We average 44 cents, so we've bought all this stuff at 44 cents and we will have it for the next 30 to 50 years, and our competitors are above that. So by any measurable way, the fit is good.

On chart number 55 – I showed you this last time – but look at the enormous position we have now. I've already said we're about the seventh largest independent oil and gas company in the world. We have 11 billion barrels of resources. It's all operated. These four advantaged fields. We have scale for cost and technology, and now we have the operational capability to go and

do it again. You can see where this places us, but clearly no one ever got great sitting on the sidelines, and as you can see, we've got a chance of this being really, really good.

This is the only chart I've got where we add back in Western Australia and the deepwater Gulf of Mexico, but as you can see our target that we're disclosing to you with all of this in now for the full year is 225 million barrels.

That's the shale plus our other business. I would remind you that we're still a little bit handicapped on the BP side of the Gulf of Mexico, and we're still working through that. BP is still not drilling a producer, even though we're drilling nothing but producers now, so that tells you a little bit about our capability, but also a little bit of the drag that's still on our business there. I've already mentioned Western Australia and the Gulf of Mexico. None of this displaces that. That will be just as vital going forward, and as a matter of fact, we're about to do more exploration in WA than we've ever done before in the next year or so.

We have the potential to be a one million barrel a day business in less than five years and unlike only a handful of companies in the entire world, we can tell you that we can have 10 per cent compound annual growth rate for the entire decade. Something that others can't do. So in closing, guys, we know this is a big move. I apologise for this taking a little bit longer but I know most of you wanted to hear this story. Clearly we've tried to do this right, this big move. It's 45 trillion and we've got 35 years to work it. It's got 20 per cent liquids and that will grow because the Permian is not even in here. We've got multiple ways to be right on cost and technology and timing and spacing. Although we cannot predict what prices will do, the market says they're going to increase and they're going to increase because greenhouse gases are going to be more important. This fuel is going to be more important and the lower cost shale producers that are not in the premium positions are not going to be able to stay in there and that's evidenced by the rig count declining.

So when you look at what we've got, we've got four of the best positions, premium geology and liquids. The Permian is yet to come but we're clearly anticipating that to be a big player. We can ramp these programs up in a big way. We do it in the most industry friendly locations in the world and that gives up confidence in the execution and then last but not least the way this corporation attacks the long term, we're going to do this just like we've done the Gulf of Mexico or anything else. And confident that we can do it right. So once again, I apologise for that being a little bit longer than we had planned, but clearly a lot to be said there and I wanted to make sure that you have that.

We're very, very proud of this, guys, and I would ask you not to look at today's Henry Hub forward curve and see the picture. The liquids are there and we've got liquids not even in the equation yet. You got substitution that occur. If prices stay low, the costs are going to go down and our long term view of being right on this over 30 years we think just gives us an enormous opportunity going forward that our shareholders are going to be proud of.

4. Part 2 - Questions

So, guys, I'd be glad to answer a question now about the business side. If we could get the microphones in a position. Why don't you say your name, once you get where everybody can hear it.

MR L. CAPARELLI: Lou Caparelli from Black Rock.

MR YEAGER: Hey Lou.

MR CAPARELLI: You've made reference, although I'd say it's mainly in passing, to export LNG potential and, you know, even just a moment ago you referred to Henry Hub pricing. It seems to me that your marketing strategy seems to be centred around a domestic US gas play. Is that deliberate on your part or are you concerned about, the US sort of general paranoia about security of supply and, you know – because there has been some developments in US export.

MR YEAGER: No doubt. Lou, thanks. Lou, I will just tell you that, you know, the only thing that we know right now is that this disparity that's out there won't remain. What will happen there, we want to be on both sides of that. Clearly the higher cost gas is going to halt and that's going to do things. I was with Chesapeake this week where they were talking about Chesapeake has produced a large amount of all the gas produced in the US and they've grown their production year on year and this year they're saying for the first time, and their projection for five years forward was that their growth was going to slow to almost nothing. So if you're not in these premium spots exclusively, you're going to have to back off. Right now, as you can see, we're in such good geology. 10 years from now if prices stay low we would have to adjust but for the next five years we can drill in the US at today's prices and make the kind of rates of return. But having said that, we have our LNG capability, we understand the global markets, we have – Lou, we have purchased all four of these fields where they're in close proximity to each other. They can all be amalgamated. So our ability to core this gas up and do something with it around export is advantage to others. We're right there where that could be occurring while if this was scattered up into Canada and other places, it would be harder.

So we're nearer than the nesting markets and pay less of a differential and we're nearer the gulf coast which is where this stuff would exit. All I can tell you is we're going to study both sides of that and we know that that $4 to $10 to $15 will change and we want to be part of it. And we've got 30 years for that to happen.

MR G. RAMSEY: Gordon Ramsey, UBS. When you're talking about the Fayetteville earlier on you mentioned potential savings of 20 to 40 per cent on service cost. I'm just wondering if you could just provide us with a bit of insight to where that might come from.

MR YEAGER: Sure, Gordon. Well, Gordon, when we took this thing over because we had no capability at all, we negotiated, if you'll recall, where Chesapeake would supply these services for us. So we know what Chesapeake and others are paying in the region. When we sat down with certain suppliers and now start talking about the ability to give them a contractor cost all four of these fields, we're able to capture the kind of preferential pricing that I've just described and that's where that comes from. If you don't have scale and staying power and long term

potential, then you can't do that and that's the advantage that we'll have here and that's where that comes from.

MR P. YOUNG: Paul Young from Deutsche once again. Mike, you haven't given a capex split by field. Just want to get a sense of how you view capital allocation by field because it seems like you 're referring to the forward curve, on natural gas and at spot gas, you know, Haynesville is making very little money, if anything. I mean, how do we view that going forward? Obviously you're running at full capacity, want to get the drill rigs in there as fast as possible. I mean, how do you rank these fields because they're so different obviously on capex per well and operating costs.

MR YEAGER: Yes.

MR YOUNG: And then the second question I have is actually you mentioned these three companies we need to compare you against, and South Western is of course one of them and Southwestern has 12 rigs in the Fayetteville and they're going 1.9 Bcf a day, roughly. You're doing a quarter of that and you're aiming to build your rigs up to 20 from six. So, you know, of course they've been operating for many years and they've got, you know, lot of wells on production already but should we be inferring you're going to go beyond that?

MR YEAGER: Well, I think, Paul, what you want us to know is – let's take the capex per field first of all. We have these general plans and we're going to be smart about it and the fact that we've got the liquids preferential and the very lost cost Fayetteville and then the Permian, you know, gives us an enormous amount of flexibility around how you handle the Haynesville. So do know that on the dry gas side we're going to be watching that, we're going to ease into it, we're going to control that ramp up and although our general direction, as I have described, if things don't plan out, you'll see us move more to the Eagle Ford and more to the Permian sooner. So that rebalance there is what we have here and that's why the Permian is not even in here yet but will be a big large part. And, Paul, because of that it's hard for us to give you a field by field split right now. We can give you this general indication and it's more than that. It's a specific indication as to what we're going to be doing, but the liquids to gas rebalancing is the part that we will be flexible about and move forward.

Obviously when it comes to the Fayetteville, you know, that being much lower cost and everything, even today that's different than the Haynesville and will be positive for us but, you know, we're fully expecting, Paul, that things will be rebound in some sense and if they don't, you'll see us move closer to those liquids as a larger and larger part of this. As far as trying to match up to South Western, I wouldn't imply anything right now. What we are telling you is we've got that much opportunity and we clearly have that many premium ways and the link that is here will still take us 20 years to drill it. So getting after it – as you know, they've been at it for about six or eight years so there's a little bit of catch-up there to it also. Great question. Operator, can we go to the phone now?

OPERATOR: Thank you. The first question is from Heath Jansen from Citigroup. Go ahead, thank you.

MR H. JANSEN: Yeah, good evening, Mike. Just a question if you could just talk about the infrastructure that's currently available in the US for you to tap in given the gas industry has got these big increases in production expected over the next, you know, 20 years, is that going to create infrastructure issues and then also if you could talk about that costs of infrastructure to

you; how do you negotiate that as a cost of production and obviously if LNG does become viable, would you be looking to build facilities or would you just have to pay for that facility? And then just a second question on ramp up around rigs, obviously quite an aggressive increase in the number of rigs. Have you secured those rigs under long term agreements? Thanks.

MR YEAGER: Sure, Heath. In regards to infrastructure, you know, there is clearly an advantage that both Chesapeake and Petrohawk perform by being early movers here. Chesapeake had secured the lion's share of the transportation we need out of there. They were underpinned most of the big pipelines out of the Fayetteville and we stepped into their shoes. So when it comes to that we're in good shape. Same with the Haynesville. Petrohawk was an early move there, discovered the field and has a preferential pipeline circumstance and although they're different ownerships in those things because Petrohawk had sold their interest to Kinder Morgan, we still have unequivocal rights and no threat to our development.

The Eagle Ford transportation is being built right now. There are gas pipelines there and they're being expanded and the liquids lines are being laid and that's why I went out of my way to make sure that you understand that by the middle of next calendar year we're expecting the Eagle Ford liquids lines to be laid. So our infrastructure is sound. We don't see any big impositions, we will have to build infrastructure in the Permian as we develop it and we have that engineering work being looked at right now.

In regards to LNG, all I can tell you is we know who owns all the sites along the Gulf Coast today. We have our LNG team looking at all that. We are looking at the economics that it would take to make sure that that's successful. All I can do is point to you how much change has occurred, even in the last six months, of four of these sites being brought to permitting and the first export contract already being framed up where British Gas was willing to pay Henry Hub plus a premium in order to take the gas and go into Europe with it. So that's maturing very quickly and we will be across that and we have the capital and the long term ability to stay with that.

The aggressive nature, I think I answered it with Paul, we are able to be aggressive but on this, on the rigs, because we have the Permian backup and we have the Eagle Ford piece and the low cost Fayetteville. Clearly the Haynesville being a little more expensive as is pointed out, we will have to be smart there but the ramp up that I am describing here will take place over the next couple of years. So if it looks like the market moves on us a little bit, we have the ability to back away, that's why I went through that explanation that we don't have to do this and commit today, we can be moving this way and then see where it goes but the liquids to gas rebalancing is what would occur. And Paul also allowed me to mention that the rigs they were ordering right now for the Fayetteville are brand new and we are working with Petrohawk around the rig contracts for the other fields and we will be entering into long term agreements with other contractors to secure the rigs that I have described. We will do that on a staggered basis so that we are not committed to rigs beyond what we need and we will have a rollover or rig contracts on a yearly basis to give us flexibility.

So once again, consistent with this, we are not going to be foolish about it, we are not going to be firing out an not having flexibility, we will maintain that flexibility but clearly these premium fields and the liquids gives us that flexibility and we do want to get going and that's why we are putting it out there that we will, we will get started pretty hard. Great question. Operator, another one on the line?

OPERATOR: Thank you. The next question is from Lyndon Fagan from RBS. Go ahead, thank you.

MR FAGAN: Thanks. The first question is just still back on the oversupply situation. You have laid out a pretty compelling scenario for production growth but I guess it's a pretty similar picture for many of your peer group. I am just wondering how you still get comfort that gas prices will begin to tighten up. I mean if you just look at the chart on slide 33, the growth in natural gas demand is just over one per cent out to 2030. So that's the first question. The second question is just on I guess shale versus offshore. You mentioned that shale investment doesn't displace other petroleum but I imagine funds are limited to some extent. I am just wondering broadly speaking which one is more attractive.

MR YEAGER: Okay, Lyndon. Once again, I think on the oversupply piece, what I would draw your attention to is really, you know, what we feel will happen here over a period of time and, you know, when we are sitting there in some of the best dry gas that there is and the calls are coming into us from those that are not in that best gas, we know they are going to be looking at laying these rigs down. We know they can't compete at today's prices. So we do expect there to be – and the held by production acreage is decreasing and the rig count is declining, so there will be some of that that will occur. But I also tried to go to lengths to talk to about after this election is concerned, then you are looking at the greenhouse gas component and you are looking at additional demand there. You are also talking about the dependability of this supply leading to transportation and other gains. And then of course you've got the world wide equilibration there on prices that we expect to have happen. Will it be overnight? No. But we have 30 years of investment to make this work and we've got the ability to go at a pace that makes it work and obviously the liquids part of this will help it. So do know that we are not trying to hypothesise anything any different other than being in a lowest cost component, highest rate of return component and whatever is going to happen, we should be in as good a position as anybody and then clearly we expect things to happen on a global basis that will help this.

In regards to shale versus offshore, we continue to explore offshore around the world as strongly as we can. I will just say that the offshore economics are not the same everywhere in the world. As you know we have been lucky in that all of our growth has been in the United States and in Western Australia which enjoys these premium economics but clearly when you look at, you know, what's going to happen around the world on the liquids side and offshore, we want to be part of it. I can't tell you that one is any better than the other. The liquids part of the US onshore may end up being just as strong economically as the offshore but our heart and soul and the lion's share of our capability is still offshore and you will see us continue to be aggressive there and we are looking at a number of things that had to do with both exploration as well as other commercial activities. So don't think that the offshore won't be a big piece of ours but if you were to ask me could we go buy big $110 barrels offshore and make any profit on it right now, it would be really, really hard to do that. So just know that that will continue to be an area that we are going to explore but that obviously the shale pit is over the 30 year period is what we are trying to draw your attention to and we do expect – if we could get that forward curve right now to happen and of course we could go make that happen, it would make all of these things that we have done highly, highly economic and we hope that will occur and we are going to do everything we can to make it happen. Okay. Operator, one more on the phone?

OPERATOR: Thank you. The next question is from Jason Fairclough from Bank of America Merrill Lynch. Go ahead, thank you.

MR FAIRCLOUGH: Good morning, Mike, thanks for the opportunity. Two quick questions. You mentioned just in passing there the premium economics that you enjoy in the United States and certainly if we look at the mining space, this idea of royalties not being a fixed goalpost, you know, the changing of the royalties is an ongoing issue. I am just wondering if you had any thoughts on the extent to which that's a risk in these US onshore gas regions.

MR YEAGER: Jason, you know, that is a situation that we are not oblivious to. I will just say this, that the royalties really are at the state level and the tax is at the state level. The royalties are really with the landowner as you know so that is a matter of negotiation and the royalty component has not moved around a lot. The state taxes have moved around a little bit but you are still talking about things between five and seven per cent, down as low as one per cent on a sliding scale. So that's been fairly nominal. As long as prices are low once again we expect that to be under control and we expect that the cost of services to come down.

So do know that that's another part of what Lyndon was talking about that I should have mentioned, if clearly some of this is going to be helped on the costs side but I think we are fairly comfortable there. I will extend that one broader point and that is many of you that study the US know that there are oil and gas accounting that takes place that allows certain aspects of the well to be expensed and increase the economics and, you know, that's been debated by Congress a little bit as to whether or not that would be something that could be taken away. I will just say I think if it were to be taken away, you would put all the little guys out of business so socially that would be something that would be very hard but if it were to occur, as long as the playing field is even, any changes in oil and gas accounting actually favour the companies that are larger with the staying power and clearly that would benefit us. So Jason, I think right now we are fairly comfortable that for the near term, the economics that I presented to you should be fairly stable and we don't see anything on the horizon that would materially change those from a tax or royalty standpoint. Okay. Can we come back here? Yes, Andrew.

MR HINES: Yes, thanks, Mike, Andrew Hines from the CBA again. I've got two questions. One, your costs in the next two years, your $1.90 per thousand cubic feet equivalent, that looks relatively high to some of your competition and you do mention that there is some short term impacts on that. Can you quantify that at all on how much are those short term impacts and, you know, two years from now, will that number come down? The second question is looking at the overall portfolio you had showed on slide 56 and it's great to see you put a forecast up to 2020 and I appreciate in the context its' a very long range forecast but it looks like virtually all the growth is coming from US onshore shale. You know, if you take those two charts, one from the other, then the rest of your portfolio is basically flat. You do note there though that hat includes major growth projects in Western Australia and the Gulf of Mexico. Can you just quickly touch on what those projects are and what rough volumetrics you are talking about there.

MR YEAGER: Sure. Andrew, in regards to the $1.90, right now we are estimating that we will probably spend somewhere between 50 and 70 million dollars this year on one off costs, that primarily is the retention program for the Petrohawk staff, the new systems that we are having to build and the excess pipeline tariffs that are not being used and all and yes, you know, how that gets managed over time, I couldn't promise you but those are one off and they are not repeatable and certainly that kind of cost brought into this basis is a fairly significant delta, and we will work our way out from under that so that is an important component. We have been as

low cost as anybody and we have built a very leveragable and scalable organisation. So whatever the best is out there, that's where our targets will be and that's where we fully expect to be as soon as we possibly can and we will be aggressive on that. So have faith in that, that we're just disclosing to you all the cats and dogs and everything that are in our world right now.

In regards to the shale versus the non-shale, yes, there is a couple of things in there. First of all, there is tremendous growth, as you can see, in this US shale business, and the liquids part of that props this up fairly substantially, so when you look at what we're doing here, and not are we growing that business, but other parts of our conventional business around the world where we've got lower gas prices and possibly no liquids or no boost, you're seeing us adjust our thinking there and sliding a little more preference to these liquid rich areas.

The WA stuff is vital to us, but the truth of the matter is very little of that comes on before the end of the decade, and you're going to see us spend fairly substantial amounts of money in '15, '16 and '17, but the volumes really ramp up, Andrew, at about 2020 forward. So do know that that's there. Then last but not least, I can't help but remind you that – and the same thing for Mad Dog, same thing for the big Gulf of Mexico projects that are being worked on. The biggest bunches of those volumes really stream at the tail end of this decade and then beyond, so you will see that piece of it pick up quite a bit. We're trying to give ourselves a little reminder that if the Permian is as good as we think it is, then that will probably high-grade some of our spending around the world, and that's all 100 per cent all as good we could do and that's we will be trying to do. Okay. What else? Anything else here in the room in Melbourne? Okay. Operator, anything else back on the phone?

OPERATOR: Thank you. The next question is from Paul McTaggart from Credit Suisse. Go ahead, thank you.

MR McTAGGART: Hi Mike. Lucky last maybe. One thing we did pass over quickly through this talk was fiscal regime, and obviously there has been pushes to, you know, get back on the agenda potential of reducing of, you know, the tax deductability of some of these costs around drilling, so that was just a topic I wanted to touch on, particularly as – obviously, it's an important part of getting those high returns, so if you could give us a sense of, you know, where you think those changes might go, whether it will change, how important it is to the returns of the business.

MR YEAGER: Well, yes, Paul, I tried to touch on that, and maybe I wasn't clear enough, but, you know, the big tax deduction that the US oil and gas business has enjoyed for a number of years is the deductability of intangible drilling cost, where you not only deduct, you know, certain normal components, but you're allowed an accelerated deduction on that piece, and that's been part of the US oil and gas business for a long time. If the US Congress were to repeal or adjust that, then it would impact all of the small oil and gas companies across the US in a very, very significant way, and for that reason we are optimistic that that action will not take place, and we hope it doesn't.

But if it does, Paul, then once again I would go back to all that does is favour the larger companies with the staying power, and, you know, we don't seek that. All we seek is a level playing field, and we don't wish bad luck on anybody, but that tax deductability gives us the economics, but all that's going to do is, you know, rework, and if it goes away, then it will just allow us more advantage going forward, you know, relative to our competition. So that's really the best way I could say that, but I think for all the reasons involving jobs and the smaller

companies we think it's unlikely that that tax deductability will be touched by this congress or any others going forward because there's so many jobs tied to it. Okay. Operator, anybody else on the line?

OPERATOR: Thank you. The next question is from Peter Chilton from Constellation Capital Management. Go ahead, thank you.

MR CHILTON: Mike, you mentioned that there are now four permitted export terminals in the US. You've then gone on to say that, you know, you might look to aggregate some of your gas for LNG purposes. Then you also mentioned WA, expansion there being quite late in the piece maybe, volume ramping up in 2024. I just wondered where Scarborough might be figuring in your forward thinking and whether what's happening in the US is actually delaying, or deferring, or in any way influencing your stance towards Scarborough?

MR YEAGER: Well, Peter, first of all, you know, in regard to those exporting options, you know, we do study that hard. We have a global energy model in the corporation that we are fairly good at where we can look at the various variables around the world and see how the lower cost commodities, if placed into the market in certain ways, influence the balancing around the world. So there are scenarios, as I'm sure you can imagine, where US exports do over a longer period of time, have influence on other markets and how that would work. Right now we don't see that as being – having such an immediate impact on anything that would influence our WA investments. We're very active on Scarborough and Thebe right now with ExxonMobil, on the options on that, and we're working those extremely hard, and we have every reason to think that that project will come forward when it's ready and the team is working full-time on it. So I don't see any impact there, and I want to be very, very clear that everything we're doing in the shale business is an "and" and not an "or" and I do not see it impacting our Western Australia LNG whatsoever. The Asian markets are in a prime position for this, and clearly we are going to be, you know, first at the post on this.

But, longer term, you've got the US export possibility; you've got the Panama Canal being adjusted where it can handle the LNG vessels; you've got companies already arbitraging molecules from Europe to the US, and all that's happening in a fairly short period of time. So if you think five years forward, it's not inconceivable to think that there's big changes in this, and it goes back to how gas is priced and where it ends up, and for that reason we want to be across all that, and we're one of the few companies that can play in all those things. I think you could expect us to do that, but no, clearly, there's nothing about our Western Australian investments, and as I mentioned, we're going to do more exploring there over the next two years than we ever have because of our prospectivity there, and how we're going to amass as much gas and take advantage of the investments going forward in as amalgamated way as possible. We would love to add more gas to Scarborough and Thebe and we're trying to do that. So great question, but clearly, not anything that we see right now being a big impact, but longer term there's clearly things that could occur and we want to be part of that. Okay. Operator, anything else on the phone?

OPERATOR: Thank you. We have a question from David George from Bell Potter Securities. Go ahead, thank you.

MR GEORGE: Good evening, Mike. Just in the presentation you mentioned a few times that if these US onshore gas acquisitions would be hugely economic if you locked in that forward gas curve. I understand BHP's sort of general policy about taking prices of the day, but if you were

to see BHP Petroleum as a separate company, would you indeed pursue sort of locking in these much higher forward prices?

MR YEAGER: Well, Dave, you know, that's a little bit of a speculative thing, because as a matter of corporate policy, you know, we want our shareholders to know on any given day that they're exposed to the full market, and I believe in that strongly. I have found that locking this stuff in is for the – you know, we have a number of fixed or locked in contracts that are still in place from kind of our older thinking, and on every single of those we're on the wrong side of that now. So as I mentioned to you, when we made the decisions on Shenzi and Neptune and Mad Dog and Atlantis and all, at 20 and 30 dollar oil, if we had that locked that in, we would be in horrible shape today relative to the opportunities. The gas that was sold out of the North West Shelf back in 2003 and '04 at $4, think about how underwater we are on that now.

So I think we have found that it's just not our corporate makeup, but my personal thinking is consistent with our corporation. We don't need the cash. We don't need to underpin this stuff. And, David, we could have scenarios here where these acquisitions pay out in 18 months around world economics, world events, any of a number of things, and we want full exposure to that. We don't plan on that. We don't expect it to happen. But all the great companies, when they've made huge asset gains like this, when you look back 15 years ago, every one of them were right. Every one of them today are making a tonne of money, and they bought them in depressed prices, and whether that be BP on the North Slope, or ConocoPhillips following BP, or BG, or the Anadarko purchases of Kerr-McGee, all those things are in the money now, every single one of them.

We don't know how this will go. Things look a little tougher right now than we would like for them to, but boy, we sure like this over the next 30 years, and that's where we are. So no, we would not, and we look forward to investing into the cycle and see if we can't, you know, capture some tremendous upside, but that forward curve is a lot of people in the market saying, "We know all the molecules. There's no way it stays here. It doesn't work that way," and that's what we're trying to convey to you. Okay. Operator, anything else on the phone?

OPERATOR: Thank you. The next question is from Clarke Wilkins from Citigroup. Go ahead, thank you.

MR WILKINS: Yeah, just a couple of additional questions. Just to clarify, when you were talking about the rates of returns on the wells, you're using spot prices or are you actually using the forward curve for those IRRs you were mentioning or the rates of returns? The other one, just in regards to the sort of improvements in the drilling, is it that - a lot of the wells that are being drilled now, effectively you sterilise those resources or, you know, with the improvement in the drilling techniques over time, can you actually go back and increase the recoveries from the sort of wells that have been fraced already?

MR YEAGER: Clarke, in regards to those rates of return we were talking about the forward strip but we're using it from the very first of this month and not trying to be perfect - you know, when I prepared this presentation we didn't know exactly what spot prices were but that's the forward strip that we could have securitised, you know, on the first part of this month and I think I've been through that and that gives us these good, healthy rates of returns. As all of us know, that's moved around quite a bit, up and down over the last three or four months and, you know, as we head into the colder weather we'll just have to see how that works out in the northern hemisphere.

On the drilling improvement, you've got a number of different things there. You've got the technology occurring where, you know, we're just getting more efficient in drilling the wells. Every single company – I think South Western is down to averaging about eight days per well in the Fayetteville and that's just been the intense focus on doing that over and over again. You know, we're probably two and a half times that right now. So that's the kind of opportunity we've got on just the bread and butter as we get started. When you look at the cost there, I've already mentioned how we'll be the number 1 or number 2 customer and that gives us an advantage on how some of those services will work.

When you look at the EURs and how the frac design is occurring or you get more gas or more liquids there, then obviously that's where that occurs. So the drilling improvement is a number of different things and obviously drilling is our forte and we fully expect to be as good as anybody here and be there pretty quickly. So do know that that's a number of different factors and you know, we expect to be across all of those including capability and pricing. Operator, anything else?

OPERATOR: Thank you, yes, we have a final question from Glynn Lawcock from UBS. Go ahead, thank you.

MR LAWCOCK: Hi Mike. Mike, at the end of the day I think you're going to be judged on this acquisition in terms of earnings and returns. Now, you've talked a lot about the returns on a well but you've also sunk 20 billion of shareholders' funds into this as well to actually start from where you are now. So if I actually look at this, I think when you bought Fayetteville you talked about a $6 gas price to make the returns. I mean, can we make a return on not just the wells but the full investment? Do we need $6? I wonder if you could just talk a little bit about the full return, not just simply the returns from the future wells and how we should think about that.

MR YEAGER: Well, Glynn, once again I would just say that nothing has fundamentally changed at all about these two acquisitions as we pictured them when we made the decision and the world today. Obviously our near term gas price is a little lower but the forward strip is not much different than where we were. Liquids prices are about the same and have nothing but, you know, possibly stronger aspects going forward. The biggest change that's occurred is you've got, you know, kind of the Global Financial Crisis 2, you know, and some of the things that spin off from that around consumer situations that probably contribute here. So, you know, overall nothing has changed at all. The forward curve as it reflects today is the same thing that we valued all of this stuff at roughly when we did the transaction.

Our year 1 may be a little rougher but overall the liquids are a little better. The down spacing that we didn't even count on the liquids is now clearly in our view. Our ability to do the Permian in a big way and we valued it at almost zero. So like anything, if you do something large enough, Glynn, you've got multiple chances of being right. So our fundamental going in position has not changed and if anything our options for how to deal with the changing circumstances are bigger and stronger. And we'll be able to adjust as we go forward. So I hope that helps. Clearly the - you know, you do something like this, we have a targeted rate of return, we still have strong possibilities of that being there or larger and all the different fundamentals that we were after are still in place.

I just draw you back to Atlantis, Mad Dog, those things; none of that was pictured like we have it today when those decisions were made and having big, very valuable resources over the long

term is what we are and we hopefully will be on the right side of this one and we fully expect to. Okay. Anything else here, guys, in closing? Okay, operator, anything there?

OPERATOR: There are no further questions here.

MR YEAGER: Okay. Well, thank you very much for sharing our story and our update. We'll be back over time as we know more and as you can see, we think we've got some very advantaged circumstances here, possibly a little tougher neighbourhood right now than we had projected but certainly over the longer term we like where we'll sit and we think this will be great for our shareholders. So thanks very much for listening. Appreciate it. Bye bye.