

12 December 2019

## CEO PRESENTATION, ANNUAL MEETING 2019

Te Wharewaka Function Centre,  
Odlins Square, 109 Jervois Quay, Wellington  
2pm Thursday, 12 December 2019

Thank you Mr Kellner

Tena koutou

Tena koutou

Tena koutou katoa

G'day and welcome.

I would like to take you through some of our most important activity from the past year.

The financial statements for the year were consistent with our expectations.

Revenue for the year was \$43.3 million, up from \$35.8 million the year prior.

This was made up of \$15.9 million from our 4 per cent interest in Kupe, up from \$9.2 million the previous year.

And Cue Energy's revenue, which was also up - from NZ\$26.6 million to NZ\$27.4 million.

However, we took a \$7 million impairment on Kisaran in Indonesia.

I said at our annual meeting last year that I was unenthusiastic about our remaining Indonesia interests after working there for the past decade with not a lot to show for it. We have exited our positions there retaining a residual royalty right.

The other major write down was \$4.6 million from the unsuccessful well at Kohatukai, onshore Taranaki.

At our annual meeting last year the well had just been drilled and we were waiting on results. Unfortunately, we concluded that the gas shows we found could not be economically developed.

These two exploration write downs were the reason that the group recorded a net loss of \$2.9 million, compared to a net profit in the previous year of \$4.8 million.

As you can see from the slide, we have net positive cashflows from our operations, and this is leading to small increases in the group's cash.

Variations in recent years in production costs and revenue reflect our changing share of the Kupe asset.

It has been a busy year for Kupe.

In August the joint venture announced that production from the Kupe gas fields had come off plateau.

This was expected in our reservoir modelling, following record production at Kupe in recent years.

Subsequently the Kupe joint venture approved a final investment decision for a compression installation project.

The inlet compression project will reduce inlet pressure, sucking harder on the field returning us to plateau in mid 2021. This will help fill a gas shortfall in New Zealand, which has led the Huntly power station to consume 19 shiploads of Indonesian coal this year.

We took Kupe offline for most of November for scheduled maintenance. That went well, with all the work being completed, safely and ahead of schedule. So production numbers will be down in this quarter, but overall the asset is performing well.

Our Cue subsidiary has also had a pleasing year.

It recorded revenue for the year of AUD\$25.7 million, and a profit of \$8.5 million, which led to a 54% increase in Cue cash. Overheads remain low, with NZOG continuing to provide technical support under coconsulting agreements.

Oil production from Maari, offshore Taranaki has been steady through 2018 and 2019, and the field produced AUD\$11 million of revenue.

The sale of OMV's 69% interest in Maari, to Jadestone, was an interesting development.

Cue also receives production revenue from Indonesia, where its Sampang gas project earned AUD\$15 million last year.

A compression project in the field is nearing completion, and extending field life.

Meanwhile, there was a gas discovery in the Sampang PSC, at Paus Biru.

Gas flowed at a rate of 13.8 million cubic feet per day, and the net gas pay is estimated at 29 metres.

So this production will help extend the life of the Oyong and Wortel fields, which produce into a dedicated gas fired power station, this power supplanting coal in the Indonesian power grid.

Also in Indonesia the PB-1 well has been drilled in the Mahato PSC with Cue having a 12.5% interest. This PSC is in a good address surrounded by older oil fields. The well has been drilled and cased to total depth and the results are currently being assessed and approved. Though, as we reported on Tuesday, there are some issues within the joint venture which are being worked through.

The other big success for New Zealand Oil & Gas and Cue this year was the completion of the Ironbark transaction, that saw a joint venture formed with New Zealand Oil & Gas farming in along side Beach and BP. I'll come back to Ironbark in a sec.

You'll have noticed me mentioning gas supplanting coal a couple of times.

Let me now talk to you about the excellent work our sustainability and partnership manager, Anna Ririnui, has been overseeing.

This has seen us consider climate change as part of our normal risk management process. More importantly we have looked hard at the business through the lens of the UN sustainability goals. The infographic behind me is in our annual report and it is worth contemplating.

This is an area of growing concern globally. We are front-footing these issues as the Taskforce for Climate-related Financial Disclosure guidelines develop, actively developing our own targets to meet expectations around this.

We are committed to reporting transparently on progress, both throughout website and in our annual report.

Watch this space.

Now I would like to do a bit deeper dive into Ironbark, as there has been a good deal of discussion around this, and we have a resolution related to it later in the meeting.

As you'll probably recall, Ironbark is a prospect offshore Western Australia, which was in the Cue portfolio when we bought our stake. After years of work and farm out activity, Beach and BP had arranged options to farm in, there was a JV in waiting.

The regulatory clock was ticking down and Cue had not managed to attract a necessary further partner.

If we had not farmed in, then the JV would not have formed, and in April this year Cue would most likely have lost its chance at the well.

By farming in, Cue preserved its value and the opportunity to drill the well.

A couple of factors delivered the opportunity, as Beach and BP could have elected not to exercise their options:

Firstly: OGOG has many deep connections in our industry, they stood firmly behind NZOG and our farm in.

Secondly: because of the time pressures, this had become a highly complicated and innovative farm in, which was the work that led to our General Counsel, Paris Bree, winning the award mentioned by the Chairman.

A complex deal landed by group teamwork.

New Zealand Oil & Gas is paying for 17.85% of the Ironbark-1 well in exchange for a 15% equity interest.

Those are the same terms, pro rata, as Beach is paying for its 21%

Cue has a 21.5% equity interest, with a part-carry from us, Beach, and from BP.

So, with our ~50% interest in Cue, we effectively have 25.75% of the Ironbark well.

On top of the sums we have already paid, we have a further NZD\$23.5 million to pay towards the well.

Cue has contributed US\$8.08 million from its existing cash into an escrow account to secure the proportion of its costs that are not carried by other parties - about NZ\$12 million.

These recent transactions were the main evidence that Northington partners used to value Ironbark - the amount that three separate companies were prepared to pay to enter the joint venture.

Let me talk you through why this makes sense to drill.

While New Zealand Oil & Gas does not have a geological model of Ironbark of our own, we peer-reviewed Cue's work to satisfy ourselves that the farm in would be prudent. We didn't need to repeat Cue's geological assessment.

Ironbark is potentially very large - as much as 15TCF of gas [Cue's best estimate of prospective resources]. To put that in perspective, it would about five times the size of Maui - which changed New Zealand's economy in the 70s and 80s.

If it comes in, it will be world scale. But the size of the target doesn't affect the chance of success - just as when the Lotto jackpot goes up, your ticket doesn't have a better chance of winning.

It does affect the economics of the permit.

The way I prefer to look at these things is pretty simple: take the potential size of the prospect, and then multiply that by the likely present value of the resource in the block and probability weight that against the cost of the drill.

This means we need to make a judgement about standard industry uncertainties and variables, including the estimated size of the resource, the expected recovery rates, the price it will net, the costs and timeline of production and adjustments for the decades of production that would be expected.

From this information we can calculate the chance of success we would need to make the well worthwhile to drill. It is the drilling limbo test: "how low can you go"

The answer that came out was 3%. That is, given a chance of geological success, and in a frontier well, about one in four or five, then the chance of commercial success only has to be high enough that the product of the two gets to 3%. Everyone is free to take their own view, but the neighborhood is good, so the 3% economic hurdle is an easy one to reach.

It made economic sense, we already had in in our portfolio, with a potential JV in waiting.

The good news is, the same Mungaroo sands are produced at Gorgon, Wheatstone and the Northwest Shelf.

These are excellent reservoir sands and they produce world class volumes of gas.

But the key risks need to be understood as well. Here they are reservoir, seal, and source.

This is a picture of the other wells that have been drilled in the region.

The first thing to notice about it is the depth of the Ironbark reservoir.

This will be the deepest target of any well in the area. Indeed, it will be the deepest target drilled to date offshore Australia.

The depth creates uncertainty because of the weight of rock above the reservoir, crushing the pore spaces in the rock, and because the heat at those depths can deposit material into those already-restricted pore spaces - like limescale in your kettle.

The reduction in pore space means less room for gas to be present and makes it much harder for the gas to flow. It is not unknown for porosity to be preserved at these depths, but it is unproven in this area and in these sands. Ironbark will be the proof or otherwise.

The next feature of the graph to pay attention to is the Brigadier 1 well, which has been drilled more or less above the Ironbark prospect.

It didn't come all the way down into the Mungaroo sands - but it was a dry hole. One explanation is that the seal is very, very good — and it needs to be as there are some faults that have to seal; Either that, or the reservoir doesn't hold hydrocarbons.

The third key risk at Ironbark is source.

We can see on this slide the way the Barrow sub-basin fills.

For Ironbark to be successful, then, the resource has to have gone past the Rankin Platform, which is a high, or come out of the Victoria syncline which is possible but not proven. Lack of source could also be a reason for the Brigadier-1 duster.

As has been pointed out elsewhere - the result at Ironbark is likely to be binary. Either it will be full of hydrocarbons and very valuable, or it will be dry and the cost of drilling it will be lost.

There is only one way to tell - the rotary lie detector, and we are going to find out.

Or in Haiku form...

The Ironbark lurks patiently,  
it's beauty buried deep,  
come next summer we shall know.