

# Safe and reliable delivery of world class projects

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## Slide 1 - Introduction



Mr Chairman,

Distinguished guests,

Ladies and Gentlemen!

I am pleased to be here today to talk about the successful projects BP operates in the Caspian on behalf of Azerbaijan and our partners.

I would like to begin my presentation with a remarkable history of this successful partnership which has been going on for more than 20 years.

## Slide 2 – History of an extraordinary partnership

### History of an extraordinary partnership



Our partnership started when Azerbaijan had been an independent state for just three years. In just over 20 years, working together, we have built with the government of Azerbaijan and SOCAR and our partners one of the most successful business partnerships in the world.

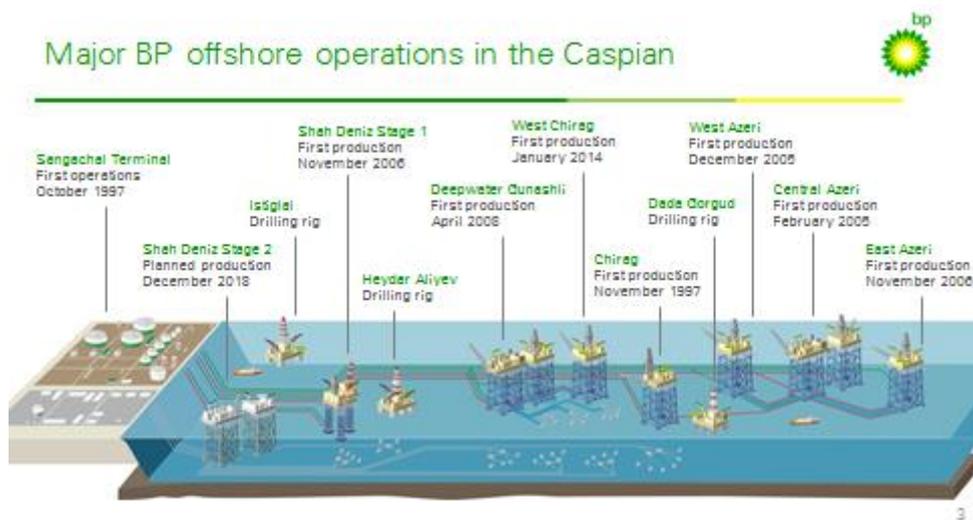
This partnership has witnessed many world-class milestones and achievements including:

- First Oil from AOC in just three years' time after signing the contract in 1994;
- First Gas from Shah Deniz in just seven years after discovery;
- First tanker lifting at Ceyhan launching one of the most amazing pipeline engineering endeavours of the industry – the BTC pipeline.

BTC recently celebrated its 10th anniversary. This was a celebration that we as operator, as well as Azerbaijan and SOCAR and BTC partners should be proud of – 2.2 billion barrels of crude carried via BTC safely and silently and 2900 tankers loaded at Ceyhan and sent safely to the world markets.

A great history that demonstrates what can be achieved through close cooperation of all parties involved, through support by and alignment with host governments, through safe, responsible and efficient operations.

## Slide 3 – Major BP offshore operations in the Caspian



In this slide I will tell you the remarkable story of our huge offshore operations. This story began in 1997 with the opening of one greenfield terminal in Sangachal and the Chirag platform. Since that time, together with our partners, we have established a unique track record of major project delivery in the Caspian. Through the development phases we have, on average, delivered a major project for Azerbaijan every 3<sup>rd</sup> year since First Oil from Chirag. (Central Azeri in 2005, West Azeri also in 2005, East Azeri in 2006, Shah Deniz 1 in 2006, Deepwater Gunashli in 2008 and West Chirag in 2014)

Altogether our giant offshore operations system currently involves nine offshore platforms. And we are also using three drilling rigs which belong to SOCAR - the Dada Gorgud, the Heydar Aliyev and the Istiglal.

Nowhere else in BP's operations are so many platforms and rigs together involved side by side as one team in the same operations – this shows the enormous scale of our offshore operations and we are proud that all this is being done safely and in a manner that takes care of the environment.

## Slide 4 – Major BP onshore operations in the region



Onshore we have a giant export system linking oil and gas fields in the Caspian directly with the markets. Overall onshore we operate three pipeline systems with a total length of 3,300 km and two marine export systems on the Black and Mediterranean Seas.

Our onshore system also includes one of the biggest onshore oil and gas terminals in the world – the Sangachal terminal. All our offshore platforms are connected through a complex subsea pipeline infrastructure to this terminal which since the start has undergone one major expansion with a second expansion currently underway.

Two of the world's largest industrial infrastructure projects – the BTC and SCP pipelines, are operating to world standards. BTC's safety and reliability record since the first day has been exceptional – a source of pride for Azerbaijan and for us as the operator.

In addition to other benefits these pipelines have brought, local communities along the route continue to benefit from the hundreds of sustainable development projects we sponsor. And all this has been done with minimal impact on the natural landscape.

## Slide 5 – ACG 20+ years of success



ACG has a fantastic delivery story with its 20+ years-long track record of safe, reliable and efficient operations. Globally, ACG is recognised as one of the best operated giant fields with regard to its safety, reliability and efficiency indicators.

ACG's production and processing facilities are among the largest in BP. These facilities have to date delivered 2.7 billion barrels of oil. These facilities have also achieved extremely high operational availability. Plant performance since 2010 has averaged at more than 97%. This is an industry-leading indicator given the scale and complexity of ACG's operations. And this is exceptional performance by all standards not only in BP but also across the industry.

How has all this been achieved? Well, firstly, we believe as operator we have used the right design, the right equipment, the right technology, the right policies, standards and mechanisms and most importantly the right staff.

For instance, take sand management. The weak sandstone in the ACG reservoirs is prone to produce sand, which can reduce production and damage facilities. BP's effective sand control technology has been critical for protecting the plant while delivering high-rate wells. We are an expert in sand management with 50% of our current production in sand prone reservoirs.

Or just another example is our advanced model-based optimization and condition monitoring systems, which we use to optimize our well performance and monitor equipment integrity, allowing us to detect issues early.

## Slide 6 – Remarkable drilling story of the Caspian

### Remarkable drilling story of the Caspian



#### ACG

- 150 wells and 750km drilled

#### Shah Deniz

- Most productive 5 wells out of 10 in BP's portfolio worldwide

#### Shah Deniz 2

- Deepest exploration well drilled in the Caspian – 7300m



ACG and Shah Deniz drilling performance is one of the most successful stories in the world. I'd like to highlight that the Caspian basin represents some of the toughest challenges in the industry. So, delivery of these world-class projects has required people and technology capable of tackling tough drilling challenges.

In fact many of the world's most difficult wells have been drilled in ACG. To date BP has safely drilled more than 150 wells in this challenging drilling environment. I just want to cite one number to illustrate the huge scale of our drilling experience in the ACG field:

- **we have drilled more than 750 kilometres** – this is equivalent to three times the distance from Baku to Shahdag in Guba – one of Azerbaijan's most beautiful regions!

I would also like to talk about the challenges of drilling in the Shah Deniz field. These are the challenges related to its location in deeper waters than ACG - up to 550 meters and the high pressures encountered in the reservoir - up to 14,000 psi.

Technology available today is limited to 15,000 psi, so you can imagine we have been pushing the limits of technology in our drilling operations on Shah Deniz.

We have safely and efficiently drilled 125 kilometers on Shah Deniz including the deepest exploration well of 7300m depth to-date drilled in the Caspian. I'm pleased to say that these efforts have been rewarded - five out of 10 most productive wells in BP's portfolio worldwide are on Shah Deniz.

## Slide 7 – Field complexity

### Creatively overcoming field complexity – Extended Reach Drilling example



To optimise production and maximise recovery from the ACG field we need to drill as many wells as possible each year. We currently have six production platforms on ACG from which to drill. So it is vital to maximise the performance efficiency of each rig.

Also, ACG is complex. It has multiple reservoir units and dynamic fluid contacts. Placing each well in the right location at the right time is critical. And once a well is drilled it is important that we keep it online for as long as possible.

Learning from almost two decades of drilling experience in this complex geology has been a key factor in delivering one of the most successful resource development stories in the world.

Year on year we have learned from our own experiences – the approaches, techniques and procedures required for operating in the Caspian. Of course, this experience is built on that of previous generations of Azerbaijani oil and gas men and women. In particular, I mean the first Azerbaijani explorers and their contemporary successors in SOCAR.

This has resulted in drilling wells here quicker and more effectively. Just one example is that in the last three years, the time we spend drilling 10,000 feet has decreased from 78 to 50 days. During this period our non-productive drilling time has also dropped from 24% to 13%. These are great results and

were achieved not by drilling faster but smarter and based on an intimate knowledge of the geology, the overburden and the stresses in these complicated formations!

In achieving these results we have extensively relied on the use of technology that can help overcome tough challenges. And yet, as I mentioned in the previous slide, many of the world's most difficult and challenging wells have been drilled on ACG.

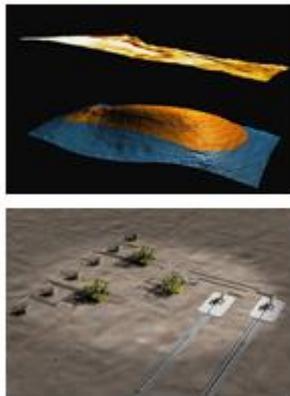
A great example of the technology used to overcome these challenges is Extended Reach Drilling. To date, we have drilled around 60 extended reach wells with a step out of more than 3 km.

The longest of these wells has a step out of 6.4 kilometres from the Chirag platform. As you can see on this slide creatively drawn by a BP employee, it is the distance between the national Flag Square and the Heydar Aliyev Centre of Baku.

We're confident that this technology will allow us to maximise recovery from this super giant field for many decades to come.

## Slide 8 – Shah Deniz 2

### Shah Deniz 2 – a source of new energy supplies



And now I will move on to the next big development in the Caspian – the second stage of the Shah Deniz field development. Having discovered the field in 1999 and produced first gas in 2006, BP is now focused on developing the next tranche of gas with Shah Deniz Stage 2.

Shah Deniz 2 will deploy subsea production technology in the Caspian, and will use advanced drilling solutions to produce wells at some of the world's highest rates.

Specifically, Shah Deniz Stage 2 is set to have 26 production wells at depths of over 6000 meters. Eight of these wells have already been drilled.

These wells will produce 16 bcma of gas, which will be delivered to markets across Azerbaijan, Georgia, Turkey and South Eastern Europe.

Moreover, the Shah Deniz Stage 2 will be the cornerstone of the Southern Gas Corridor linking Caspian resources directly with European gas market for the first time.

## Slide 9 – The Southern Gas Corridor

### The Southern Gas Corridor



The Southern Gas Corridor is a \$45 billion investment comprised of four mega-projects, transiting six countries, with 11 shareholders, and multiple gas buyers. The size, scope and scale of this project makes it one of the world's largest energy projects and currently the largest construction project in the world.

BP, along with SOCAR, is investing in all parts of this large, long-life, scalable gas value chain.

The Southern Gas Corridor is a series of integrated pipelines covering a distance of 3500km in addition to the 500km of subsea pipe being laid in the Caspian. The Sangachal terminal is being expanded with new processing and compression facilities. Six compressor stations will be needed to propel the gas along the route. The pipeline will climb as high as 2,700m above sea level in the mountains of Turkey, and sink over 800m below sea level as it crosses the Adriatic.

The project includes the Shah Deniz Stage 2 development, the SCP Expansion, the (Trans-Anatolian Pipeline (TANAP) and the Trans Adriatic Pipeline (TAP). These projects are set to deliver a new source of Caspian gas to Europe by 2020.

Since the final investment decision was taken in 2013, significant progress has been made— fabrication, construction, and land acquisition are well underway.

The project has wells drilled and steel in the ground and on schedule to deliver its gas commitments.

## Slide 10 – SD2 building the future, offshore

Shah Deniz 2 - building the future  
Offshore progress



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For the Shah Deniz 2 offshore facilities scope we are off to a strong start.

We have completed a safe mobilisation at both of the construction sites, the Amec-Tekfen-Azfen (or ATA) and the Baku Deepwater Jacket Fabrication (BDJF) yards.

So far we have worked 9.5 million man-hours across both of the sites and have a very good safety performance.

At BDJF construction of the first of two large jackets is on schedule and we have commenced the construction of the subsea facilities ahead of schedule.

At ATA both decks are under construction and we are ahead of our plan. The fabrication engineering for these decks has been completed in country by ATA for the first time and was very successful.

## Slide 11 – SD2 building the future, onshore

Shah Deniz 2 - building the future  
Onshore progress



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Significant progress continues on onshore facilities.

The construction of onshore facilities has commenced well and the initial accomplishments are impressive.

In the initial construction phase we have built new fabrication facilities on the construction site. This enables us to fabricate about 15,000 tons of steelwork and 16,000 tons of piping over the next eighteen months. Also we have completed the erection of office facilities, canteens, changing facilities and a 600-man camp to support the work and allow over 5000 people to work at the site. Installation of underground pipework and concrete foundations are ongoing and the first steelwork racks and storage tanks are being erected above the ground.

This has been an impressive start with the added accomplishment of nearing 7 million man-hours worked without a recordable incident.

The South Caucasus Pipeline Expansion (SCPX) Project will expand the existing SCP system to accommodate a further 16bcm/a with a new 48-inch 489km pipeline loop, to be constructed parallel to the existing SCP. The SCPX project also includes construction of a number of facilities. These comprise two new compressor stations in Georgia of 120MW installed capacity each, two intermediate pigging stations (one in Azerbaijan and one in Georgia), six 48-inch block valve stations (one in Georgia and five in

Azerbaijan), pressure reduction and metering stations at the international borders, and the interconnection with TANAP at the Georgia-Turkey border. The execution of the SCPX project is based on an overall philosophy of safe design and quality build.

As of May 2015, project progress on the BP-operated projects for first gas (Shah Deniz 2 and SCPX) is approximately 40%, with more than 12500 people working across all main contracts; over 85% of them are Azerbaijani nationals.

## Slide 12 – Legacy of the national oil industry



The work we do for this project will leave a lasting legacy for the energy industry of Azerbaijan.

We have invested more than \$180 million in infrastructure upgrades at the ATA and BDJF construction yards, which improve the productivity of the yards.

We are also investing heavily in training and competency of the workforce, building new training facilities and investing in state-of-the-art technologies for welding, inspection and coating systems that enable the construction of the subsea structures to be completed wholly inside Azerbaijan for the first time.

Local content has also benefited immensely from the projects - more than \$5.5 billion in new contract awards involve Azerbaijani companies.

## Slide 13 – Proud to be a good corporate citizen



Throughout our 20 year-presence in Azerbaijan, in addition to our primary responsibility, we have been involved in numerous activities to support capacity-building efforts of the country. Our activities in this area have covered communities, enterprises, public institutions, universities, schools, cultural and sport organisations.

We take great pride in our presence in the country and our role in supporting a wide range of development areas in Azerbaijan. So far together with our partners we have invested about \$70 million in Azerbaijan alone to support capability and capacity development.

Our development programmes mainly focus on support for education and training, culture and sport, environmental protection, the creation of economic opportunities for local communities and enterprises, and the improvement of local infrastructure in our neighbourhoods.

In addition, we've worked hard to maximise the local content of our investments. And about 3,000 local professionals have found employment inside BP and tens of thousands have been indirectly employed by our projects.

We have not done this alone. Throughout, we have had crucial support from the government of Azerbaijan, SOCAR, our partners, contractors, suppliers, and local communities.

In less than 10 days, we will get together to share Azerbaijan's excitement as the host of the inaugural European Games. We are the Official Oil and Gas Partner of the Baku Games. This builds on our experience of partnering with the London 2012 Olympic and Paralympic Games. In addition, we are sponsoring top Azerbaijani Olympians and Paralympians, providing them and their coaches with elite training. And we're supporting the Games Academy to enhance the nation's capability to deliver world-class events. We are proud to be involved in the Games and look forward to cheering Azerbaijan's athletes on home ground together.

At the conclusion, I would like to highlight that in our industry there is never any standing still. We believe we will continue to succeed, and we will succeed together, in a spirit of co-operation and partnership.

And now I'd like to invite you to watch a short video which will allow you to see visually the progress made by one of the biggest projects in the world - SD2/SCPX, which will deliver gas from the Caspian to Europe.