



BP in Azerbaijan

Baku September 2006

#### Cautionary statement



Forward looking statements: This presentation and the associated slides and discussion contain forward-looking statements, particularly those regarding oil and gas prices; expected start-up of Thunderhorse; the timing of other projects and their contribution to expected production, their estimated reserves and production capacity; production; the expected movement of non-proven resources to proved reserves; divestments and their effect; capital expenditure; and cash flow. By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that will or may occur in the future. Actual results may differ from those expressed in such statements, depending on a variety of factors, including the timing of bringing new fields on stream; future levels of industry product supply; demand and pricing; operational problems; general economic conditions; political stability and economic growth in relevant areas of the world; changes in laws and governmental regulations; exchange rate fluctuations; development and use of new technology; changes in public expectations and other changes in business conditions; the actions of competitors; natural disasters and adverse weather conditions; wars and acts of terrorism or sabotage; and other factors discussed elsewhere in this presentation.

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Introduction

Fergus MacLeod Head of Investor Relations

## 1989 Access Agenda



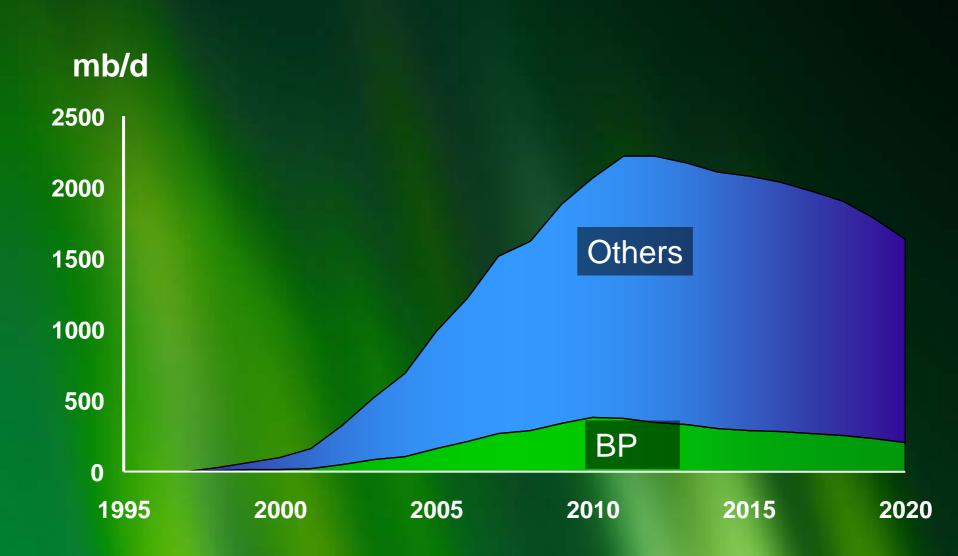
## **Current Environment**

- Competition Increasing
  - Access competition
  - New players
  - Terms erosion



- Challenge to BP
  - Keep ahead of pack
  - Play to strengths
  - Exploration track record
  - Deepwater technology
  - Relationship management
  - Deepen existing positions
  - Broaden into new positions

## **Production Profile**





**E&P Strategy Update** 

Tony Hayward Chief Executive, Exploration & Production

#### BP Azerbaijan organisation



#### **BP Azerbaijan President**

David Woodward / Bill Schrader\*

Chief of Staff
Erich Krumanocker
Executive Assistant
Kamala Husseynli

Commercial Director
Phil Home

Georgia General Manager Hugh McDowell Turkey E&P Director Djan Suphi

Renewal VP
Paul Clyne

**Shah Deniz VP** *Mike Skitmore* 

Major Projects VP Bruce Luberski Offshore
Operations VP
Neil McCleary

Onshore Operations VP Rashid Javanshir

**Technical Director** *Fereidoun Abbassian* 

**HR Director** *Zarina Zeynalova* 

**C&EA Director**Clare Bebbington

HSSE Director
Gunther Newcombe

Business
Transformation
Manager
Judith Luberski

C&FA Dire

\*David Woodward will be retiring from BP on 1 January 2007, Bill Schrader will be effective in this role from 10 November 2006

#### Project start-ups











#### 2005

- Valhall Waterflood
- Mad Dog
- **Central Azeri**
- Clair
- Kizomba B
- Trinidad LNG Train 4
- Rhum
- West Azeri
- Mardi Gras **Pipeline**

#### 2006

- ✓ Cannonball
  - Temsah Redevelopment
- **✓** BTC
- ✓ In Amenas
- Wamsutter
  - Dalia
  - Fast Azeri
  - **Shah Deniz**
  - **Magnus Extension**

#### 2007

- **Atlantis**
- King Sub-sea Pump
- San Juan
- **Coal Bed Methane**
- **Greater Plutonio**
- Kizomba A Ph 2
- Rosa
- **Red Mango**
- **North West Area Development**

#### 2008 - 2009

#### **Thunder Horse Ursa Expansion**

- Kizomba C
- **ACG Phase 3**
- **Angel**
- **Australia LNG T5**
- Tangguh Phase 1
- Saggara
- Dorado
- **Great White**
- **Horn Mountain NW**
- Mad Dog SW Ridge
- **Mars South**
- Cashima
- Chacalaca
- **Egypt LNG T1**
- **Harding Gas**
- Valhall Redevelopment
- **Uvat (Demiansky Phase I)**

#### 2010 and beyond

- **Atlantis North Flank**
- **Puma**
- **Tubular Bells**
- Alaska Gas
- Liberty
- **Point Thomson**
- **Western Regional**
- **Development**
- **Angola LNG**
- **Block 18 West**
- **Block 31 North**
- **Block 31 South**
- **Block 31 Central**

- **Paz Flor**
- **Egypt LNG T2** 
  - **Browse**
  - lo / Janz
  - **Tangguh Phase 2**
  - Vietnam Phase 2
  - Colombia Gas
  - Clair Ridge
  - Skarv
  - **Kovykta Export**
  - Rospan
  - **North Rankin B**
  - Kizomba D
  - Shah Deniz Phase 2

#### Production to 2010





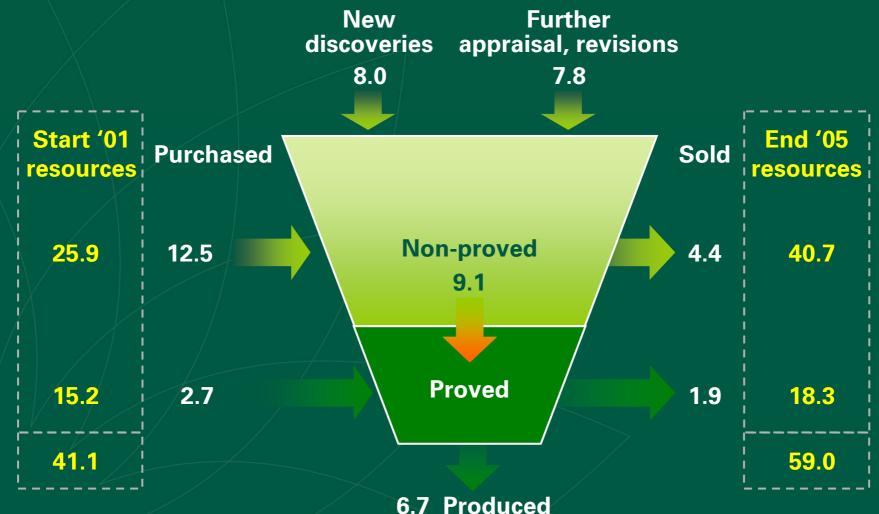
## Strategy – building profit centres





## Resource growth & progression 2001- 2005





Totals in billion boe Proved UK SORP, non-proved BP data

#### End 2005 resource by type



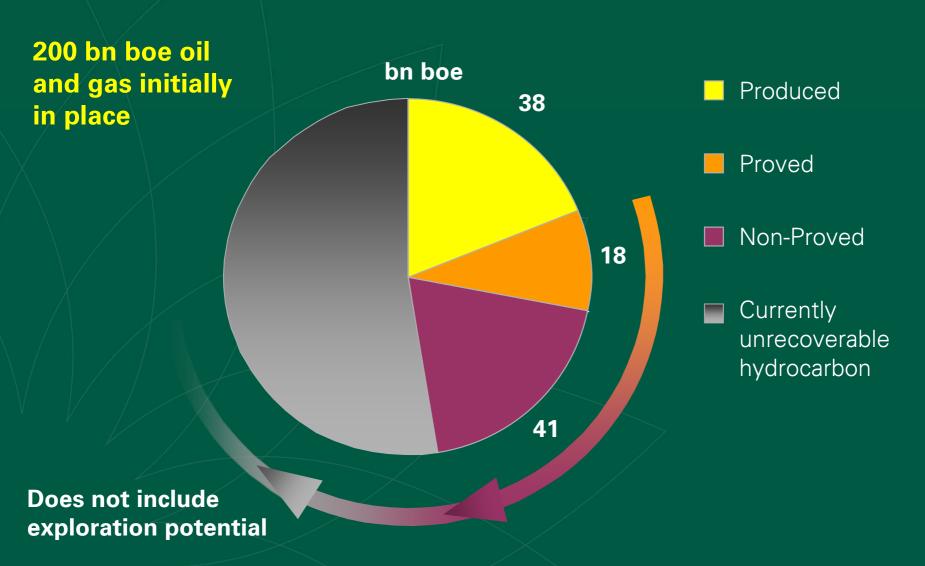


Between 2005 and 2010 11 bn boe of non-proved resources are expected to be moved to proved reserves

Totals in billion boe Proved UK SORP, non-proved BP data

#### The ultimate prize





## Summary



- New Profit Centres have arrived
  - Major Projects underpin production growth through the end of the decade and beyond
- Power of incumbent positions
  - Technology to unlock the resource base



## Building a New Profit Centre: Azerbaijan

Andy Inglis
Deputy Chief Executive, Exploration & Production

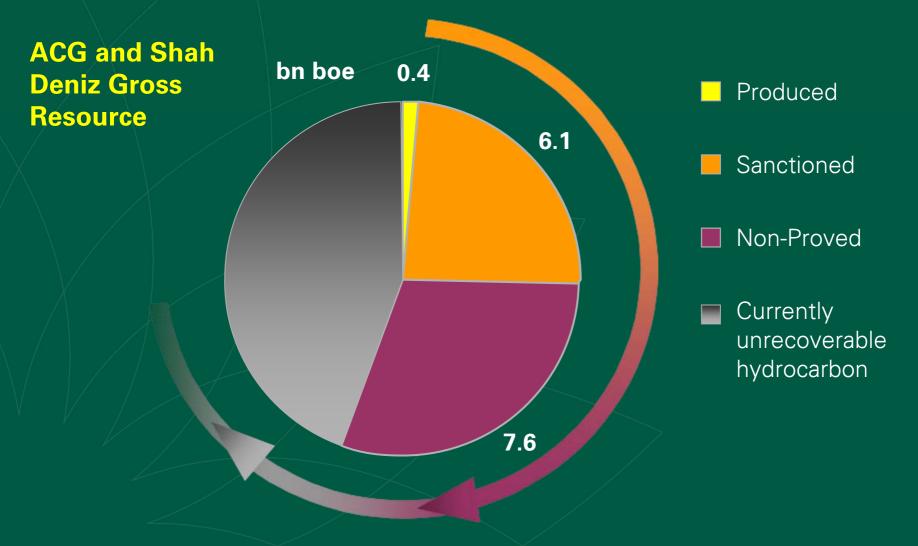
## Building a new profit centre: Azerbaijan



- Resource base
- Technology
- Project delivery
- Statecraft and diplomacy
- Sustainability through mutuality

### Resource base: Azerbaijan



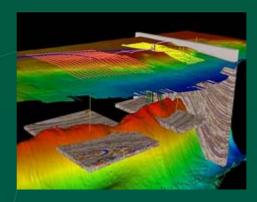


Source: BP data

## Technology



Reserves pull-through



Maximising revenue



**Capital efficiency** 



## Project delivery







Central Azeri - 2004



West Azeri - 2005



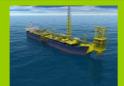
East Azeri - 2006



ACG3 - 2008



G. Plutonio - 2007



Bk31 North - 2010+



Bk31 Central - 2010+



Bk31 South - 2010+



Bk18 West - 2010+



Egypt

Angola



Cannonball - 2006



Red Mango - 2007



Cashima - 2008



Chachalaca -2009





Train 1 Supply 2008 Train 2 Supply - Ph1 2010+









**NW 2008** 





## Statecraft and diplomacy





## Sustainability through mutuality



#### Workforce capability



**Local content** 



**Capacity building** 



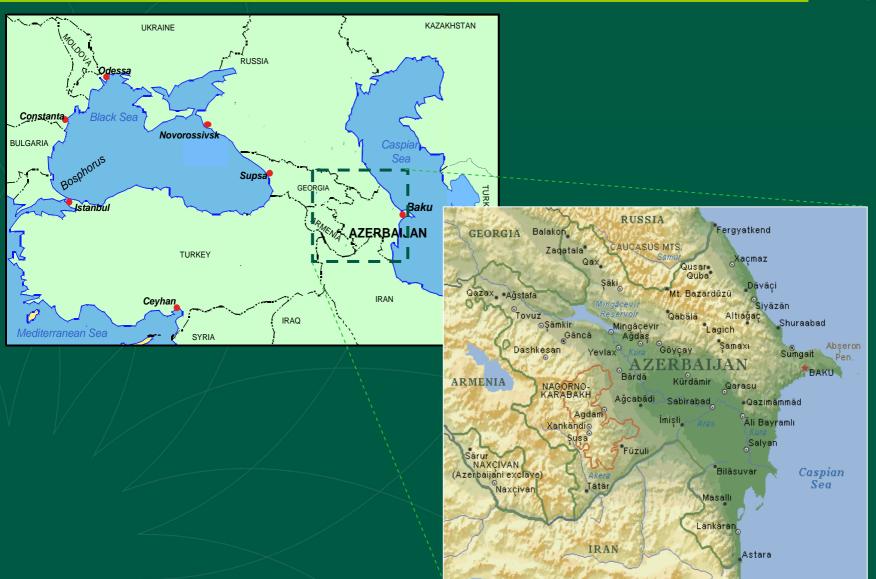


Overview of Azerbaijan and BP's presence

Rashid Javanshir Vice President, Onshore Operations

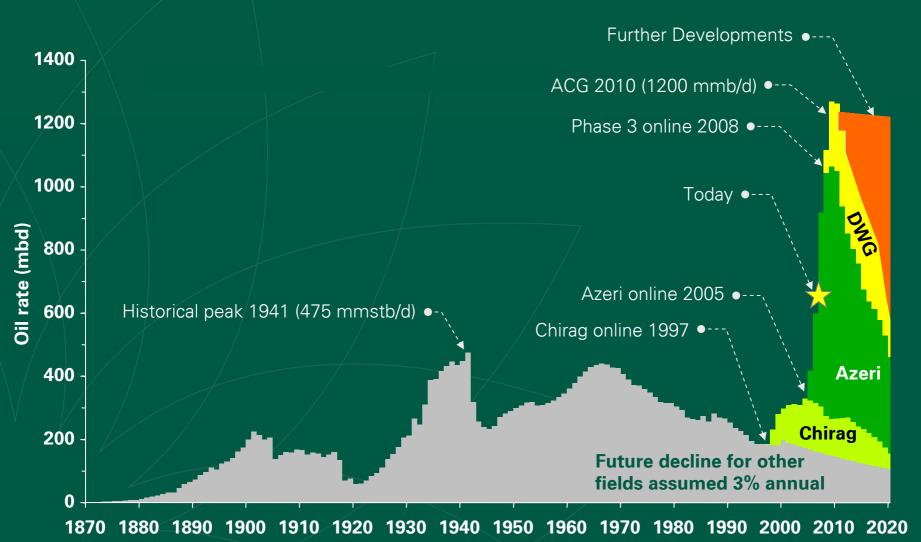
## Geography





### 150 years of oil production





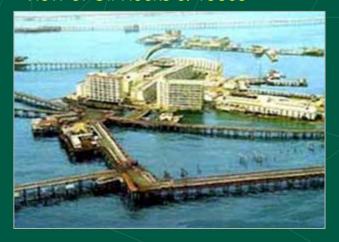
#### Azerbaijan's oil history



Oil wells in the vicinity of Baku pumping oil into reservoir lakes in 1880s. *Photo: Azerbaijan National Archives.* 



View of Oil Rocks c. 1950s



The Nobel Brothers' oil wells in Balakhani, a suburb of Baku.

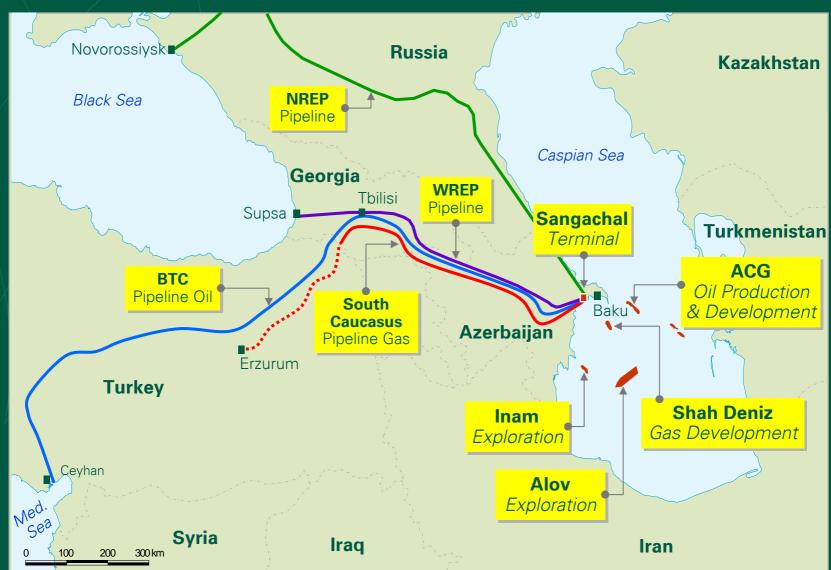


2006 Central Azeri platforms



#### BP Azerbaijan assets





#### BP Azerbaijan assets



- Total gross investment of \$25bn, with over \$21bn spend to date
- Peak production of over 1 million barrels per day and 840 mmcfd (8.7 bcma) gas from existing projects
- Sangachal the largest terminal outside of the Middle East (3 million barrels of storage)
- BTC One of the world's longest pipelines at 1768km
- Combined design capacity of Central, West and East Azeri platforms:
  - 1.1 million barrels / day oil
  - 1.2 billion cubic feet / day gas



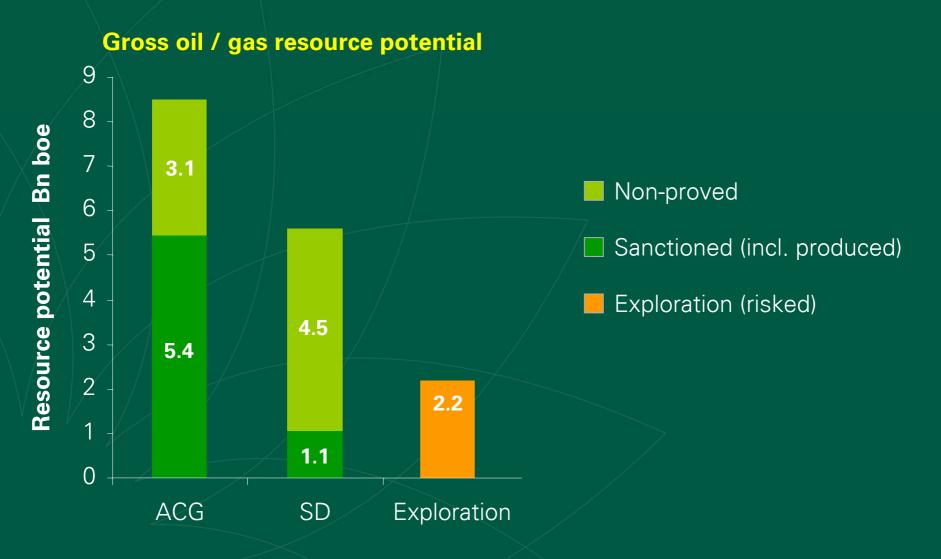


Resources and Renewal

Paul Clyne Vice President, Renewal

#### Resource base: Azerbaijan

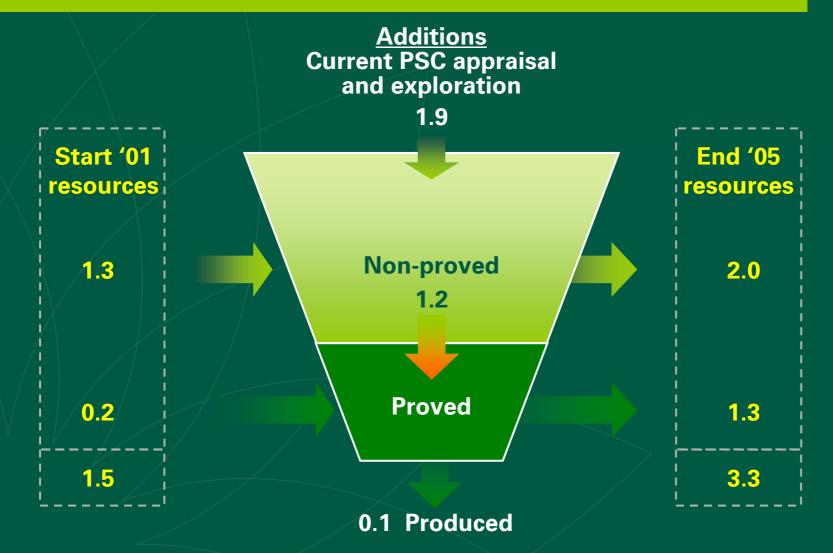




Source: BP data (based on existing PSCs only)

# BP Azerbaijan net resource progression 2001 - 2005

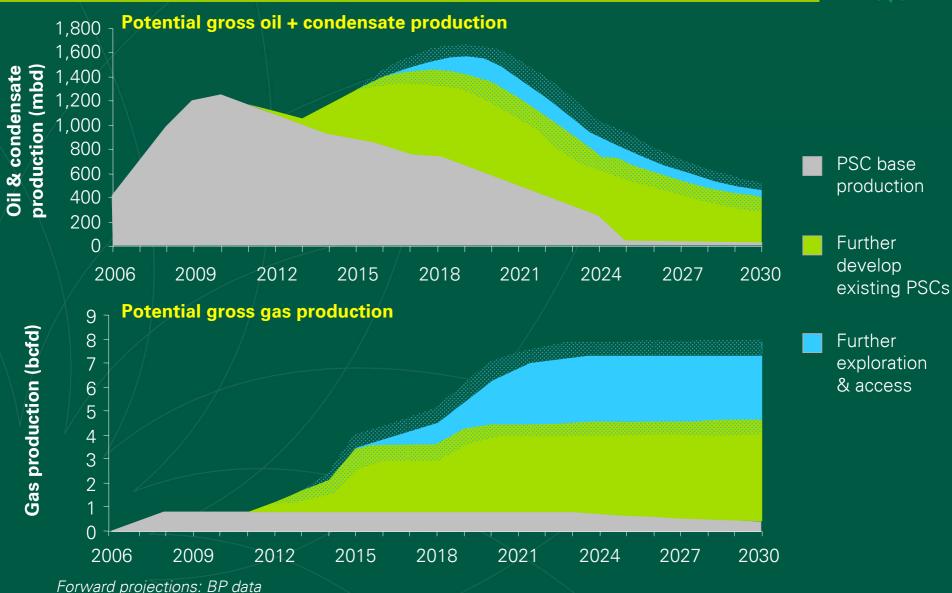




<sup>\*</sup>Totals in bn boe <u>End '05 position based on UK SORP, non-proved BP data</u>

#### Future potential







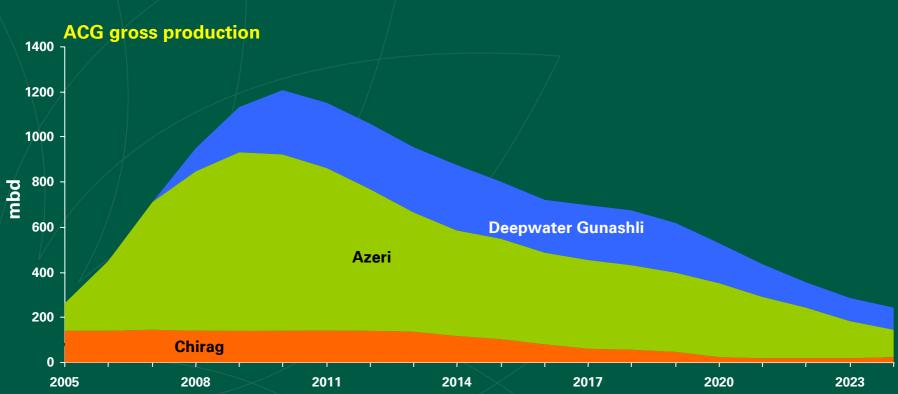
## Major Projects Delivery (Offshore)

Bruce Luberski, Vice President, Major Projects Mike Skitmore, Vice President, Shah Deniz

#### ACG field



ACG sanctioned resource5.4 bn bblPeak production gross1.2 mmbdCapital cost gross\$17 bnBP working interest34.1%



Forward projections: BP data

#### BP Azerbaijan vision



#### **End 2004**

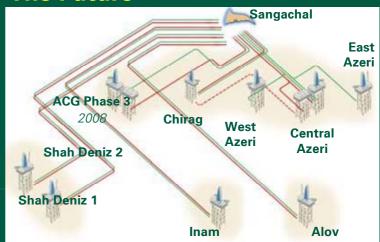


#### **End 2006**



GROWTH Capital Spend 2004: \$12m/ day GROWTH Capital Spend 2006: \$13m/day

#### The Future



Offshore: Chirag

People:

3000 BP staff + agency

#### Infrastructure:

- 2 export pipelines
- Sangachal EOP Terminal

#### **Production:**

130 mbd

Chirag, CA/CWP, WA, SD, EA

4000 BP staff + agency

- 4 export pipelines
- Expanded Sangachal Terminal
- 500 mbd
- Shah Deniz ramping up

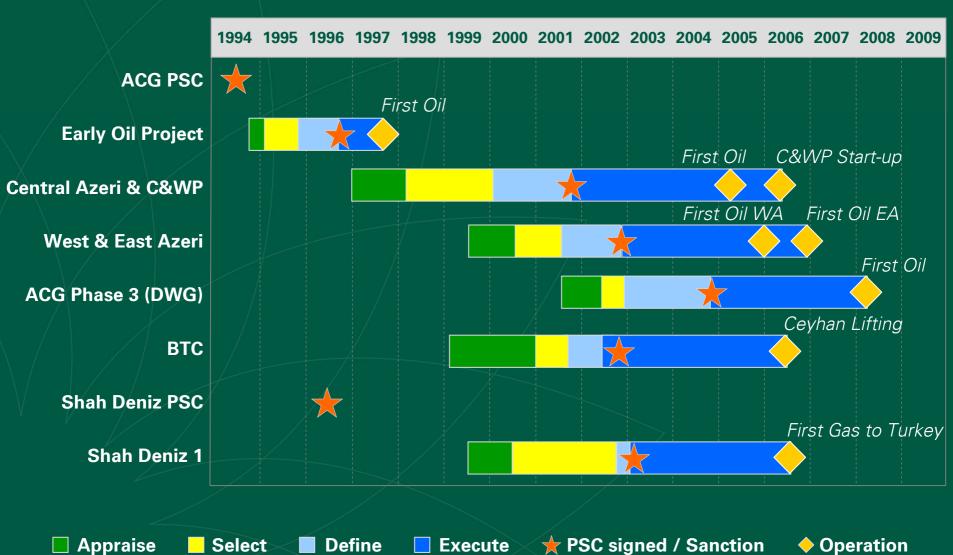
8+ operating platforms + Projects

>2000 BP staff

- 4 export pipelines
- One of the biggest terminals in the world
- 1 mmbd in 2009
- 840 mmcfd in 2009

#### Project schedule





### ACG early oil project (Chirag)



Sanctioned 1994

First oil Nov 1997





2005 production – exported 140 mbd gross

2005 Lifting and transportation cost ~\$1.60/bbl

**Total investment** 

~\$2.2bn

#### ACG full field development





- 90,000 te topsides
- 90,000 te jackets
- 1000 km offshore pipelines
- One of world's largest terminals
- 7 years of execute
- 100 million man-hours to date
- Over 3 million man-hours/month
- 80% of man-hours in Azerbaijan
- 20% across another 10 countries
- New Workforce 8000 Azerbaijani

## Sangachal history



2000

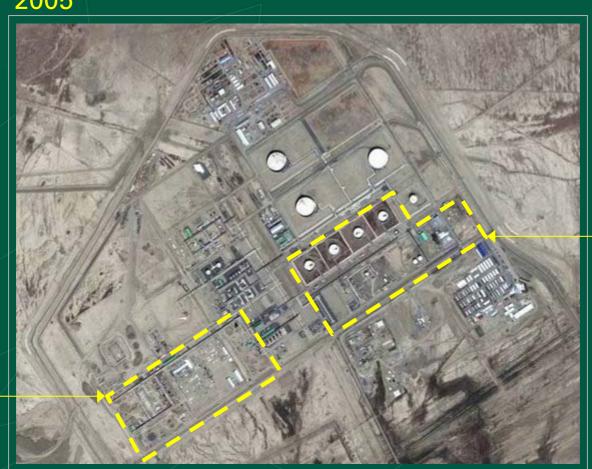


Early Oil Project

## Sangachal history



2005



Early Oil Project

Shah Deniz

## Projects production line

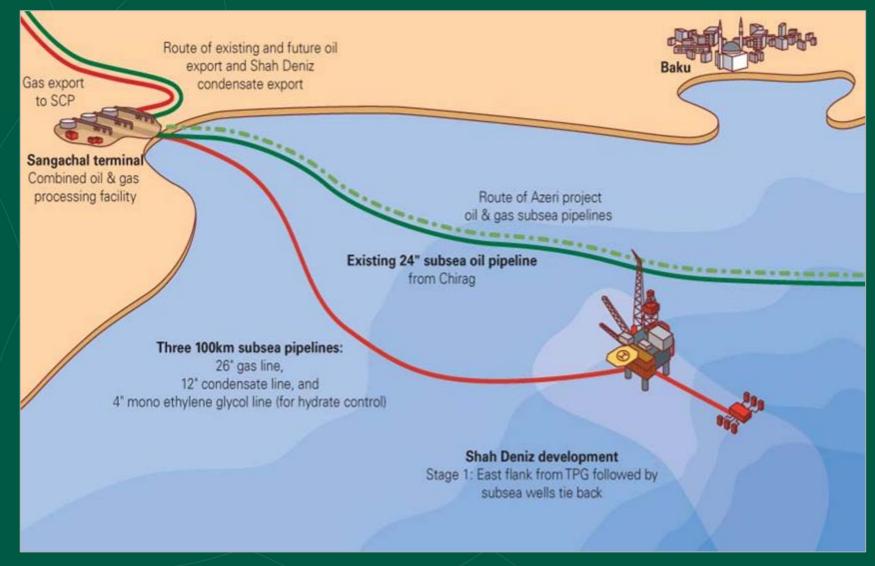






### Shah Deniz Stage 1 development





#### Shah Deniz Stage 1 development



**Sanctioned resource (Stage 1)** 

Stage 1 peak production
Capex (upstream & midstream)
Working interest

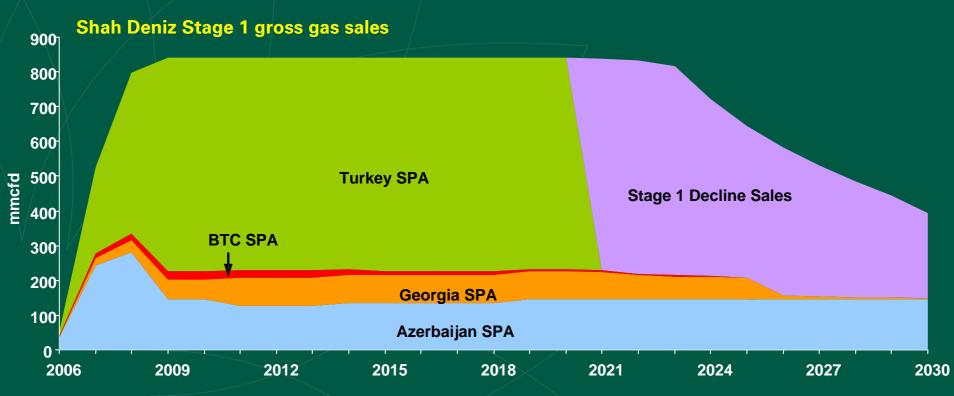
6.5 tcf (185 bcm) of gas

300 mmbbl of condensate

840 mmcfd (8.7 bcma)

\$4bn

25.5%



Forward projections: BP data

#### Shah Deniz













Statecraft and Diplomacy: The Story of BTC

Michael Townshend
Former Vice President, Onshore Operations & Projects

### Regional context





## The politics of welding



Golden Weld Azerbaijan /Georgia - Oct 04



1<sup>st</sup> Oil Azerbaijan – May 05



1<sup>st</sup> Oil Georgia – Oct 05



Golden Weld Azerbaijan /Georgia - Oct 04



## Social





## Environmental











## Project financing and NGO scrutiny



#### Why external financing:

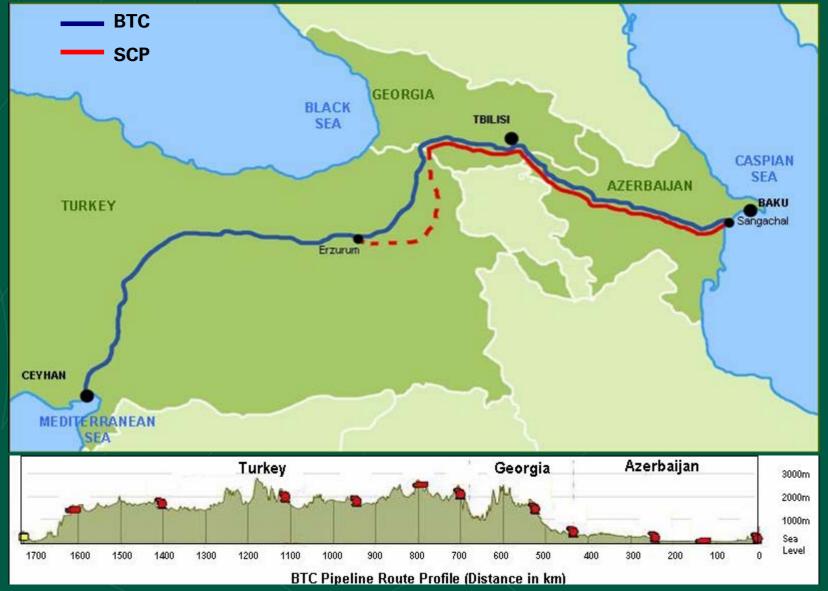
- Ensured pipeline built to international standards
- Provided political risk cover

#### Impacts of external financing:

- Higher levels of NGO scrutiny
- Significant media coverage
- High standards set and audited by lenders

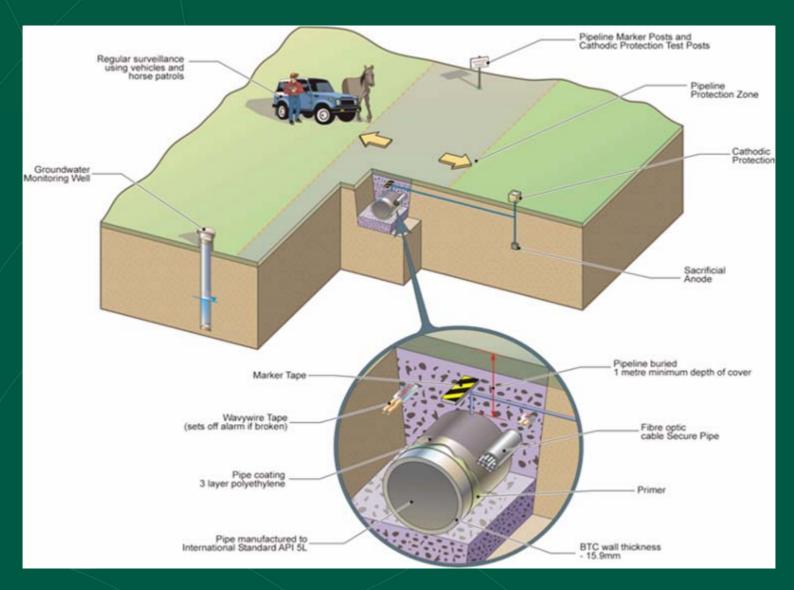
### Scope and scale of BTC and SCP





## Security and Integrity





## Unexploded ordinance on right of way





## Mud volcano ridge





## Digging for the pipe & block valve station





## Going down deep





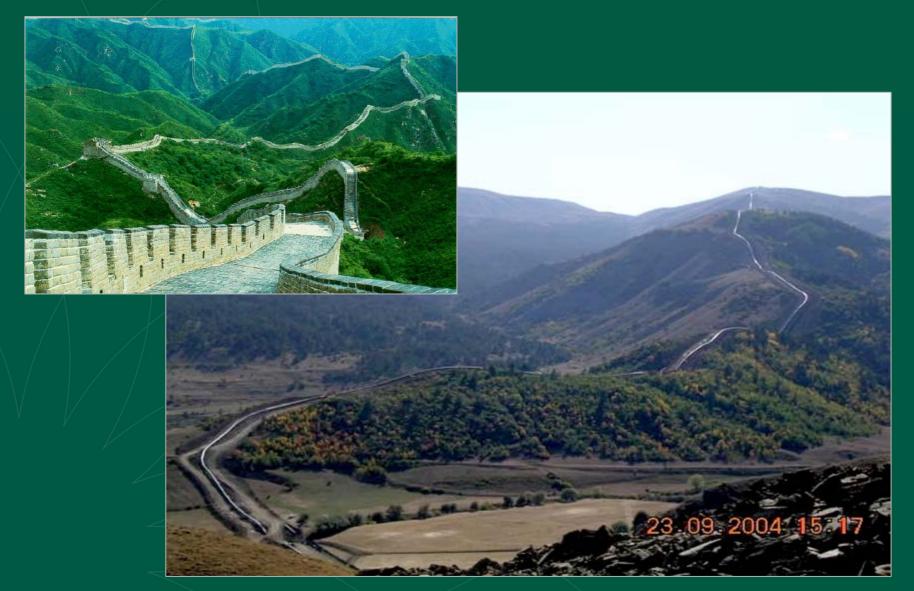
## River crossing





## Ridgeline construction – Turkey (and China)





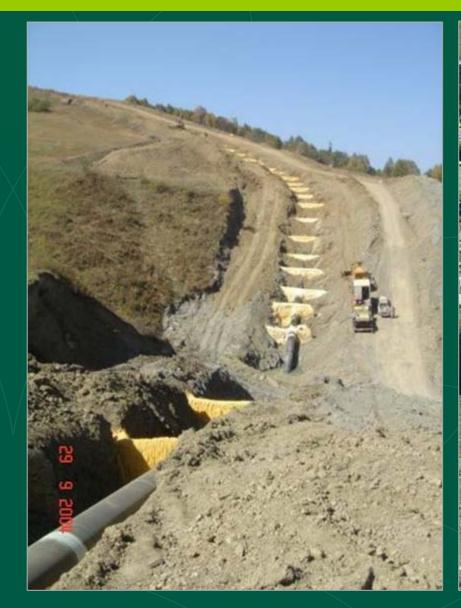
## Rock removal





## Trench breakers and broken bones







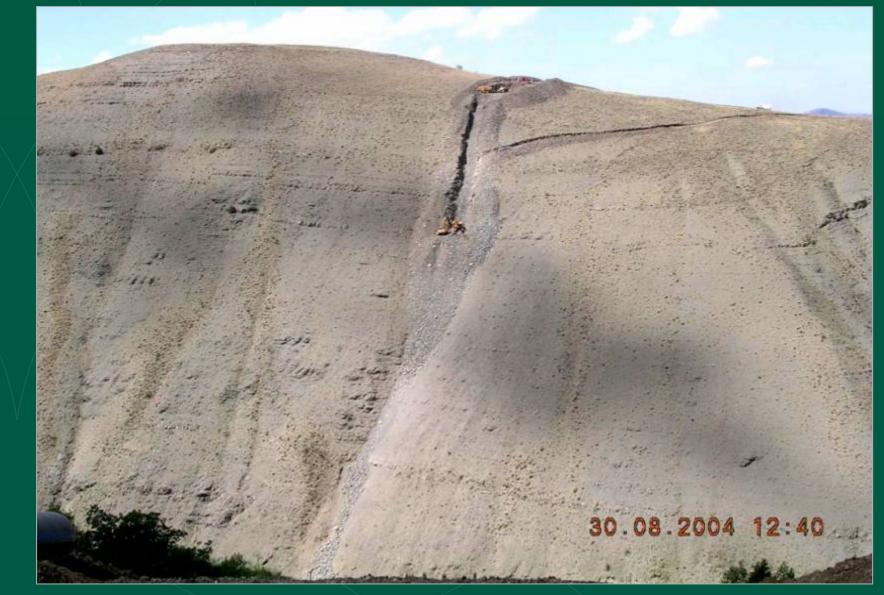
## Steep slope





## Moving down





## Nearly there...





## The end in sight











## The end in sight







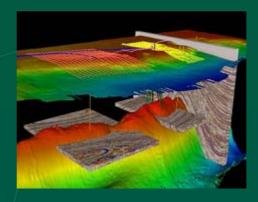
Value through Technology

Fereidoun Abbassian Technical Director

## Technology in support of business delivery



Reserves pull-through



Maximising revenue

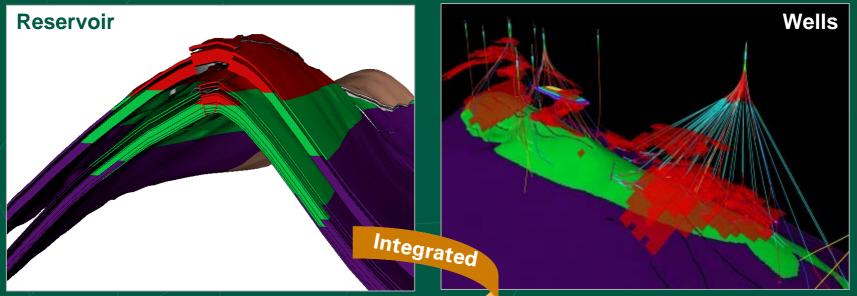


**Capital efficiency** 



## Technology in support of business delivery



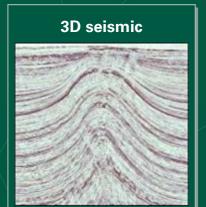


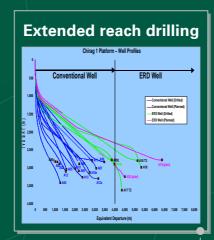


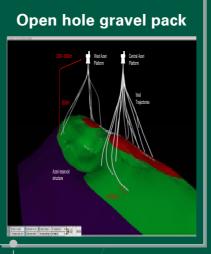


## Technology delivery track record

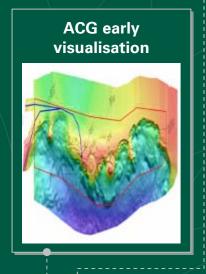


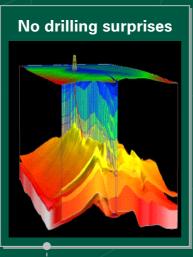


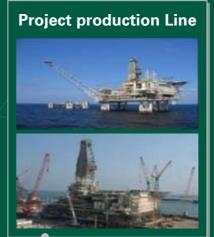














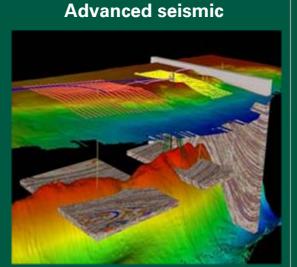
995 1998 2000 2002 2004 2006

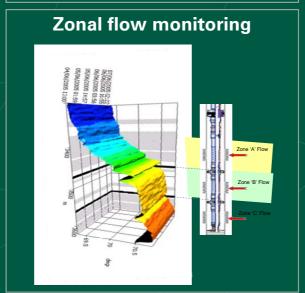
#### Strategic technologies

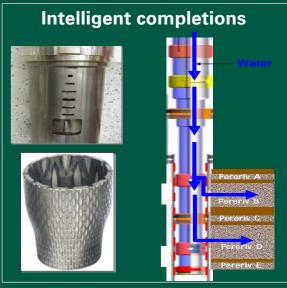


#### **Technology drivers**

- Reservoir management
- New well delivery
- D&C performance
- Operating efficiency









#### Advanced seismic



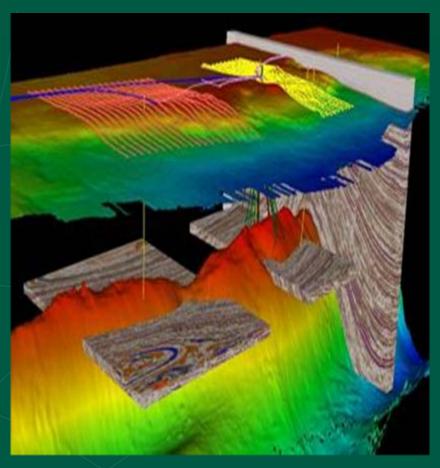
#### Aim

 Monitor fluid movements in the reservoir

#### **BP's position**

- Technology leadership area
- Industry leader in 4-D life-of-field monitoring

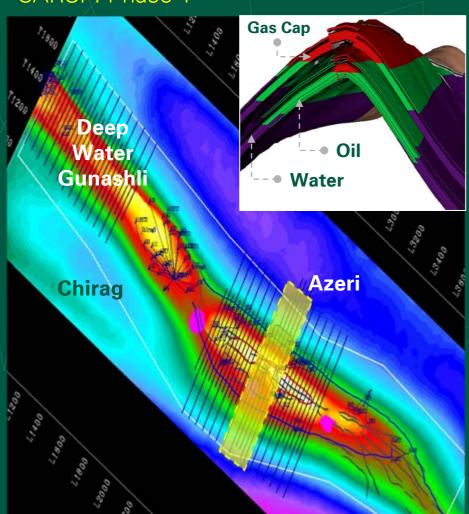
#### Ocean bottom cable 4D seismic



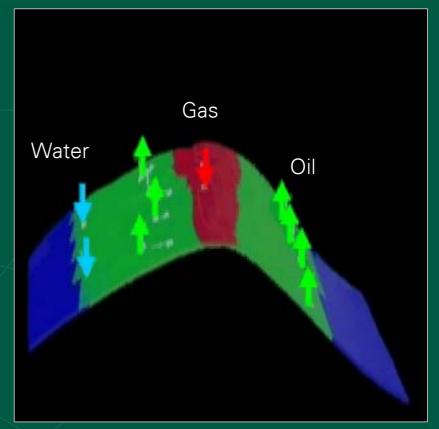
#### Azeri reservoir management



#### CARSP: Phase 1



# Depletion simulation for the Central Azeri



## Intelligent completions

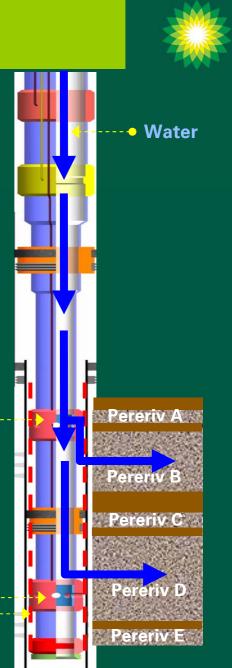
#### Aim

 Increased production with fewer wells

#### **BP's position**

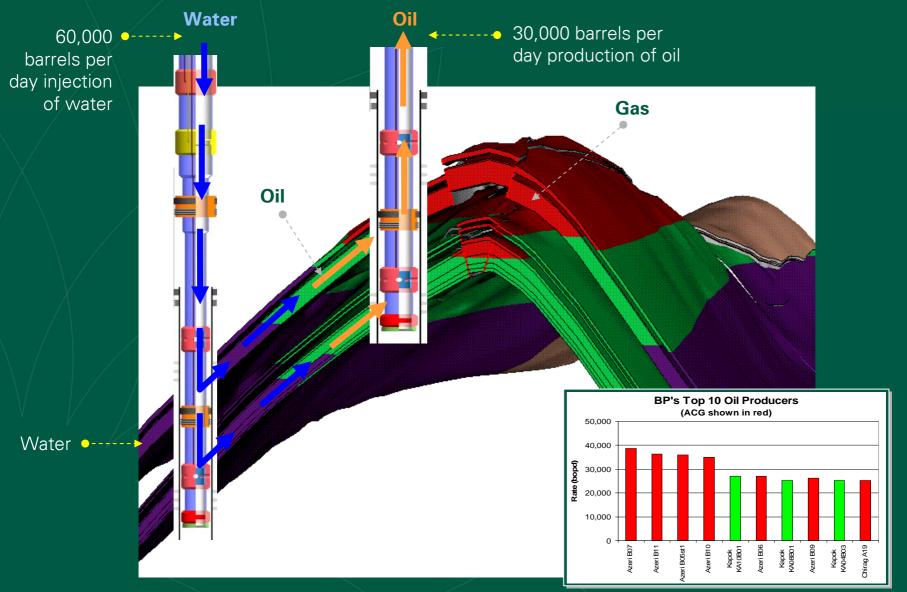
Azerbaijan is leading BP and the Industry





## Increased production on Azeri





## Zonal flow monitoring

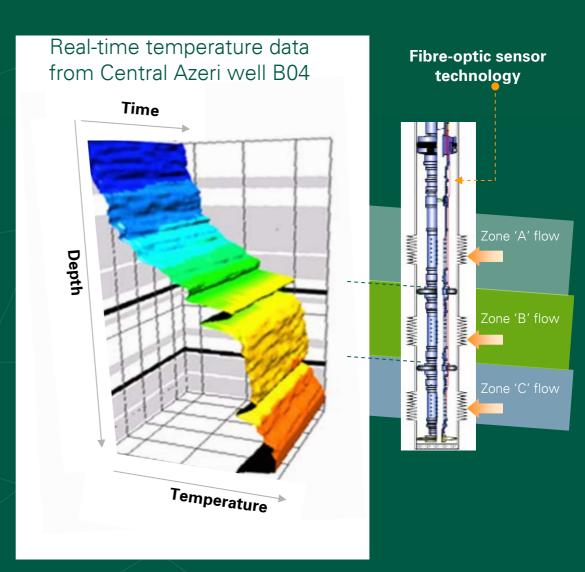


#### Aim

 Real time monitoring of reservoir flow

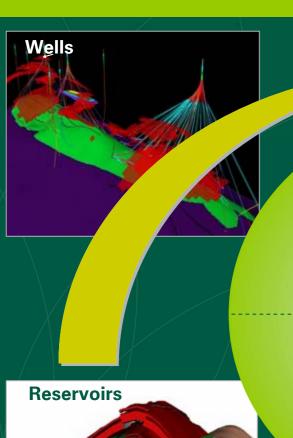
#### **BP's position**

 World leader in development and implementation of technology



#### Field of the Future ™





Cross discipline collaboration

Monitoring real time data

Advanced Collaboration Environment



Decision making/people

Analysis/ modeling





Onshore terminals & exports



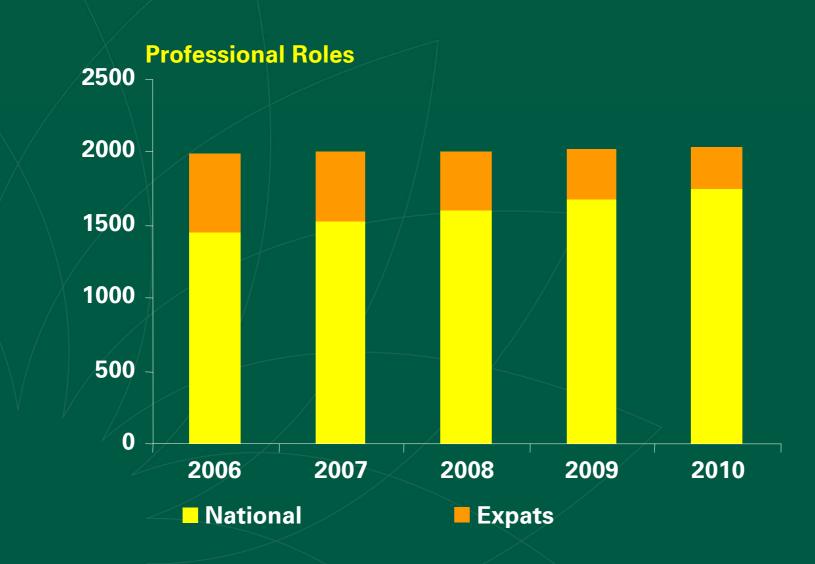


# BP's Distinctive Caspian Presence

Rashid Javanshir Vice President, Onshore Operations

## Workforce capability

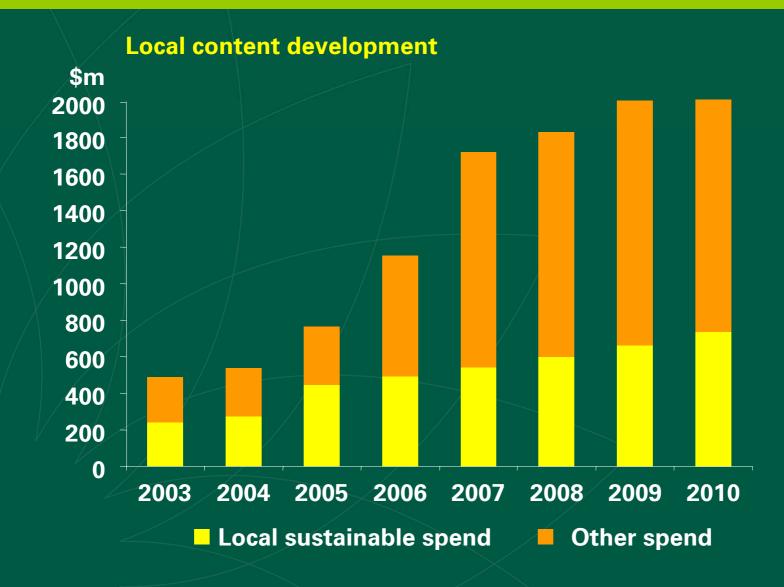




Forward projections: BP data

#### Local content





# Capacity building







# Commercial Structure & Financial Performance

Phil Home Commercial Director

#### PSC terms – General principles



#### **Duration**

- Exploration phase normally three years with 2-3 well commitment
- 25 year development phase with a five year negotiable extension

#### Costs

- FOCs (Foreign Oil Companies) pay all costs, recovered as "cost oil"
- Financing cost charged on unrecovered Capex & Opex balances carried forward (e.g. @ LIBOR+4% in ACG PSC)

#### **Production**

- "Profit oil" is shared between FOCs and Azerbaijan State according to profit sharing mechanism [based on either RROR (Real rate of return) or R-factor]
- Unutilised associated gas is delivered at no cost to the State

#### **Accounting & Fiscal**

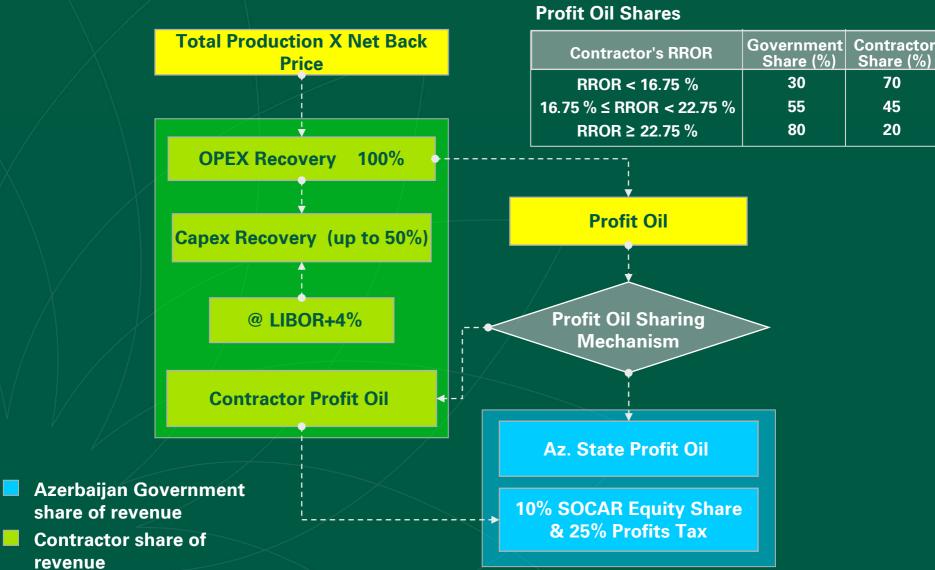
- Accounting is in US Dollars
- Azerbaijan profits tax rate is fixed for duration of PSCs
- No customs duty & VAT paid by FOCs and contractors
- PSCs contain Economic Stability clauses

#### **Standards**

- PSCs apply international standards
- Environmental and Social Impact
   Assessments required for all projects

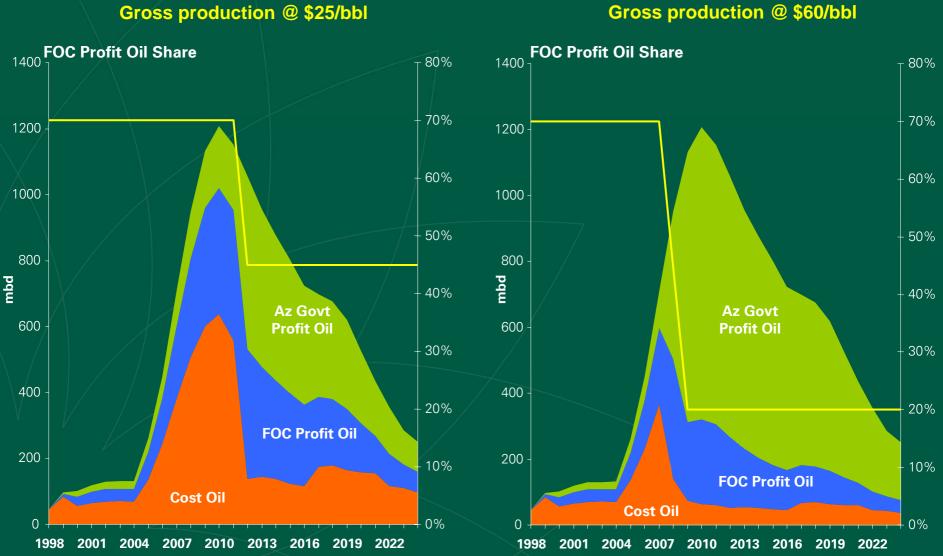
#### Example: ACG PSC mechanism





## Indicative price sensitivity: ACG



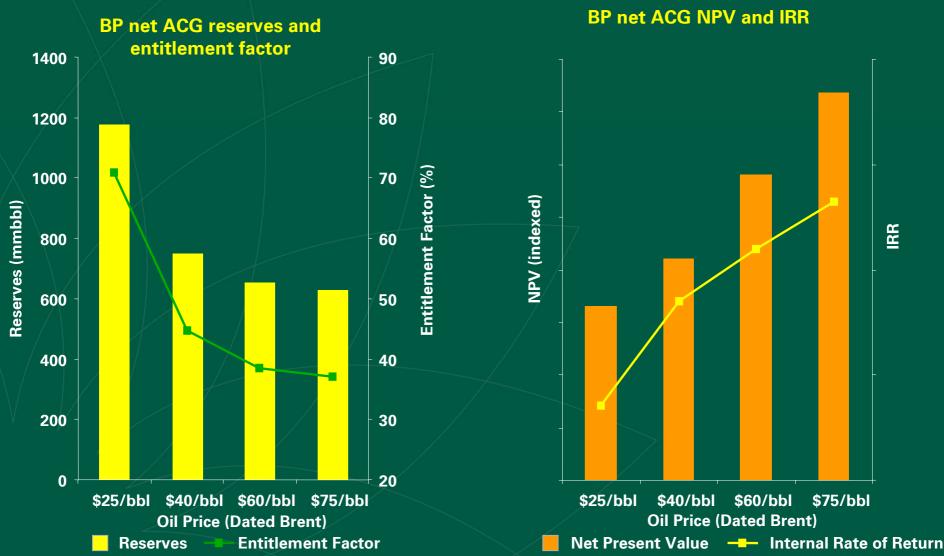


Source: BP data – indicative data based on current assumptions (currently sanctioned projects only)

#### ACG PSC: Impact of higher oil prices

Lower production and reserve entitlement but much higher returns and NPV

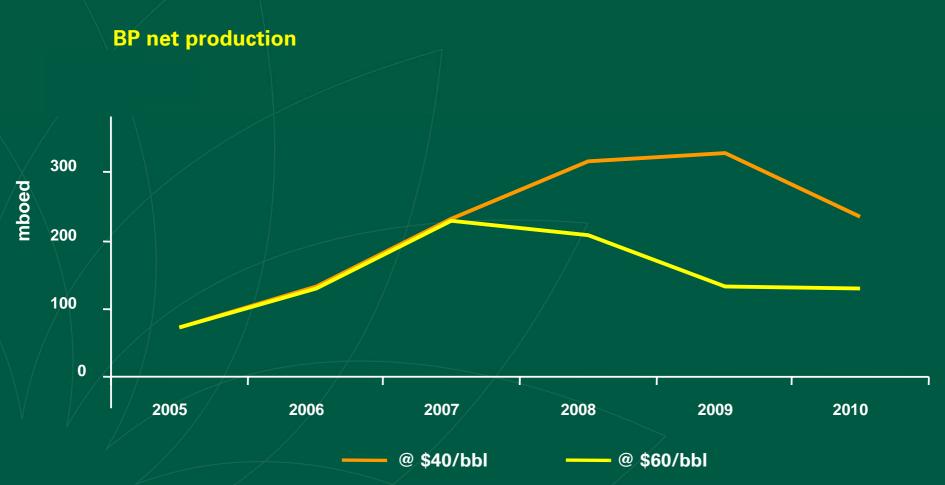




Source: BP data – indicative data based on current assumptions for life of field; currently sanctioned projects only

## BP Azerbaijan net production





Production profiles include sanctioned developments only: Chirag, Central Azeri, West Azeri, East Azeri, Deep-Water Gunashli (DWG) and DWG East manifold in ACG, and Shah Deniz Stage 1

Forward projections: BP data

# BP Azerbaijan high margin barrels





Average Realisation \$65.9/boe

