



Turkmenistan Oil and Gas Conference

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Sustainable Growth Using New Technologies

Dr. Abdul Jaleel Al Khalifa
CEO, Dragon Oil

- ❖ Dragon Oil is a leading independent international oil and gas exploration, development and production company
- ❖ Headquartered in Dubai, UAE, with offices in Turkmenistan
- ❖ Owned 54% by the government of Dubai through the Emirates National Oil Company (ENOC)
- ❖ Our principal producing asset, the Cheleken Contract Area, is in the Caspian Sea, offshore Turkmenistan
- ❖ The asset is being developed under the Production Sharing Agreement since 2000
- ❖ Exploration assets in Tunisia, Iraq and Afghanistan



The Cheleken Contract Area



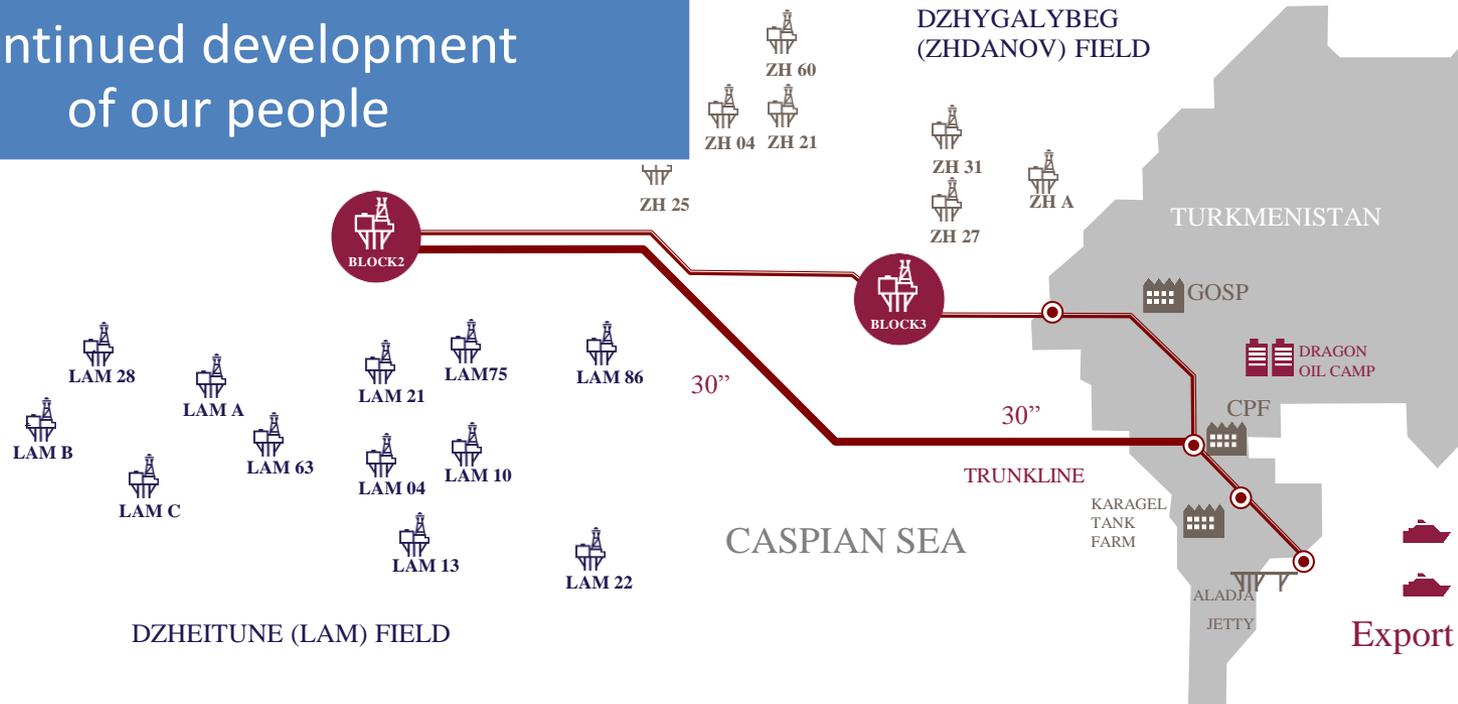
Excellent management of reserves



13 years of production growth and infrastructure development



Continued development of our people



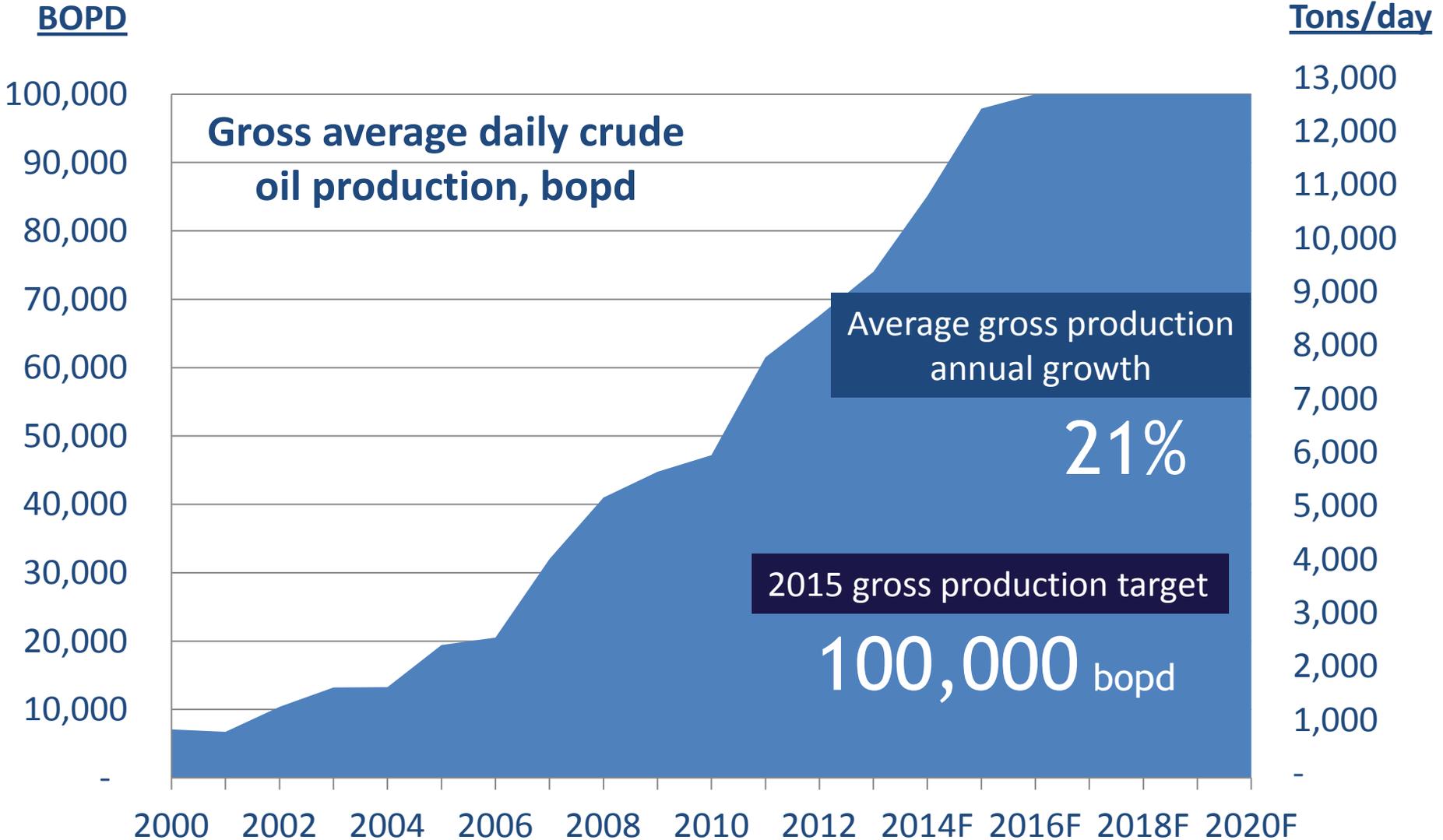
- ❖ Impressive gross production growth since the commencement of the Production Sharing Agreement in 2000
- ❖ Organic 2P oil and condensate reserves replacement of 190% against cumulative gross production
- ❖ Capital investment of over US\$2.8bn



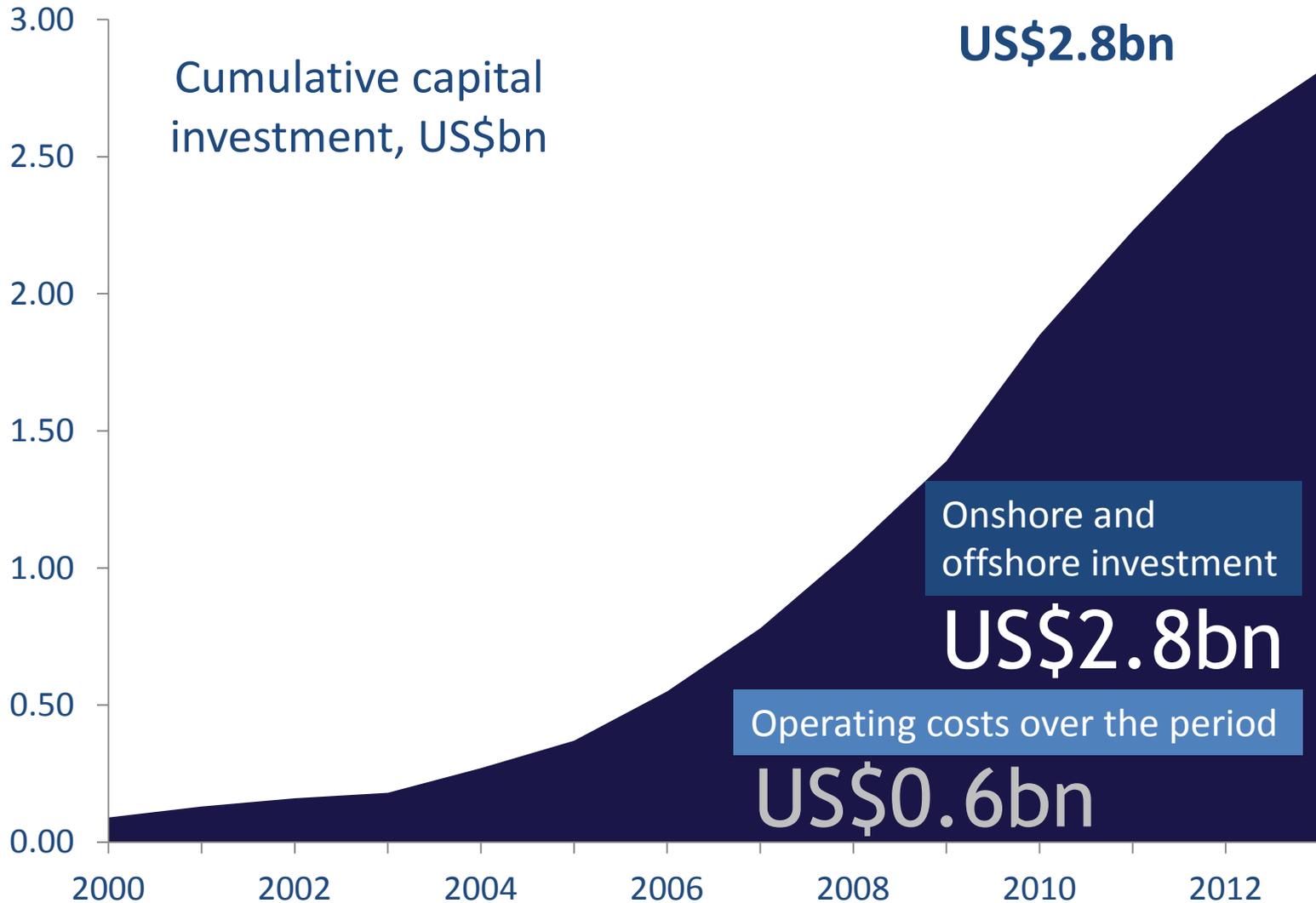
Building well-head platform at Hazar



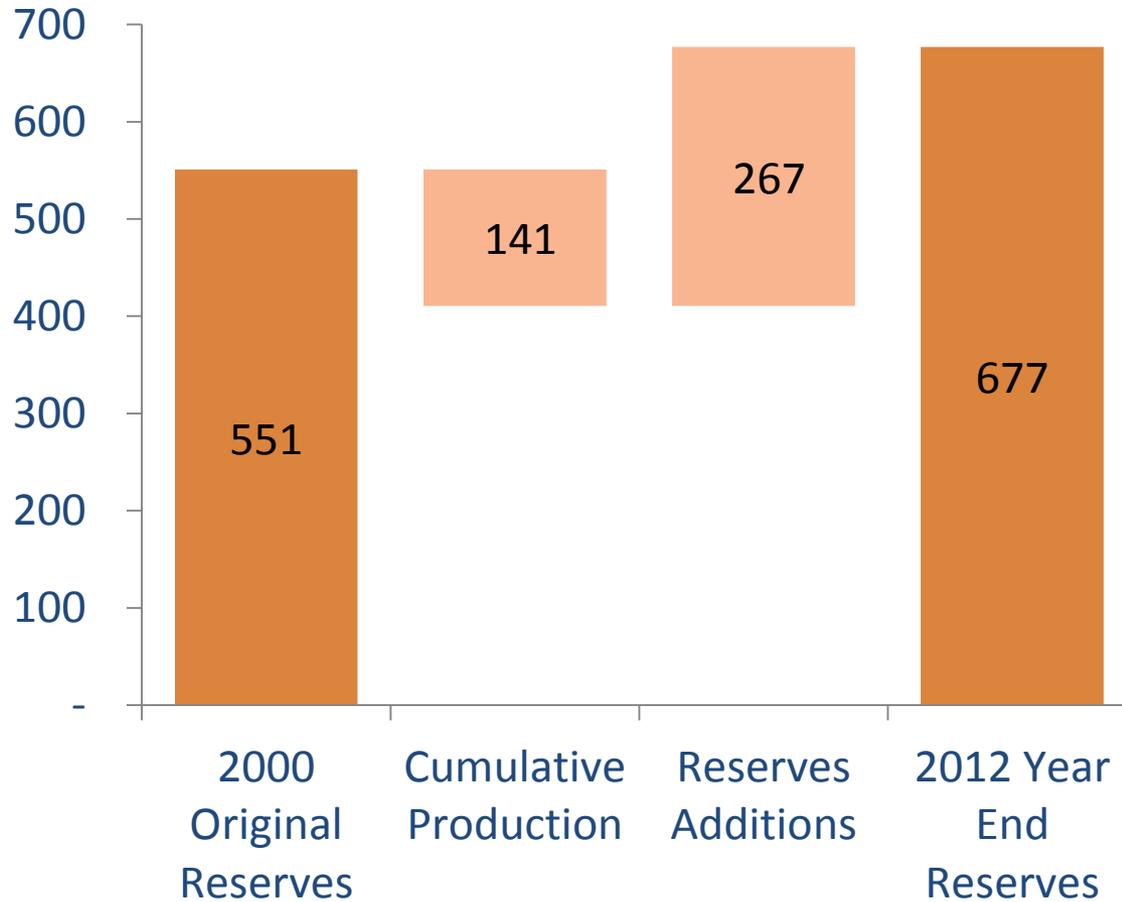
Gross Production Growth



Capital Investment



Reserves Replacement



Reserves replacement over 12 years

190%

Reserves replacement in 2012

180%



Platform-based drilling rig.

- ❖ Eight new platforms constructed and installed in the Dzheitune (Lam) and Dhzygalybeg (Zhdanov) fields
 - ❖ Four wellhead and production platforms: Lam A, B and C and Zhdanov A
 - ❖ Three gathering blocks: Block-1, 2 and 4
 - ❖ One accommodation platform to complement the Dzheitune (Lam) 22 production platform
- ❖ Zhdanov B Platform is being constructed and modified

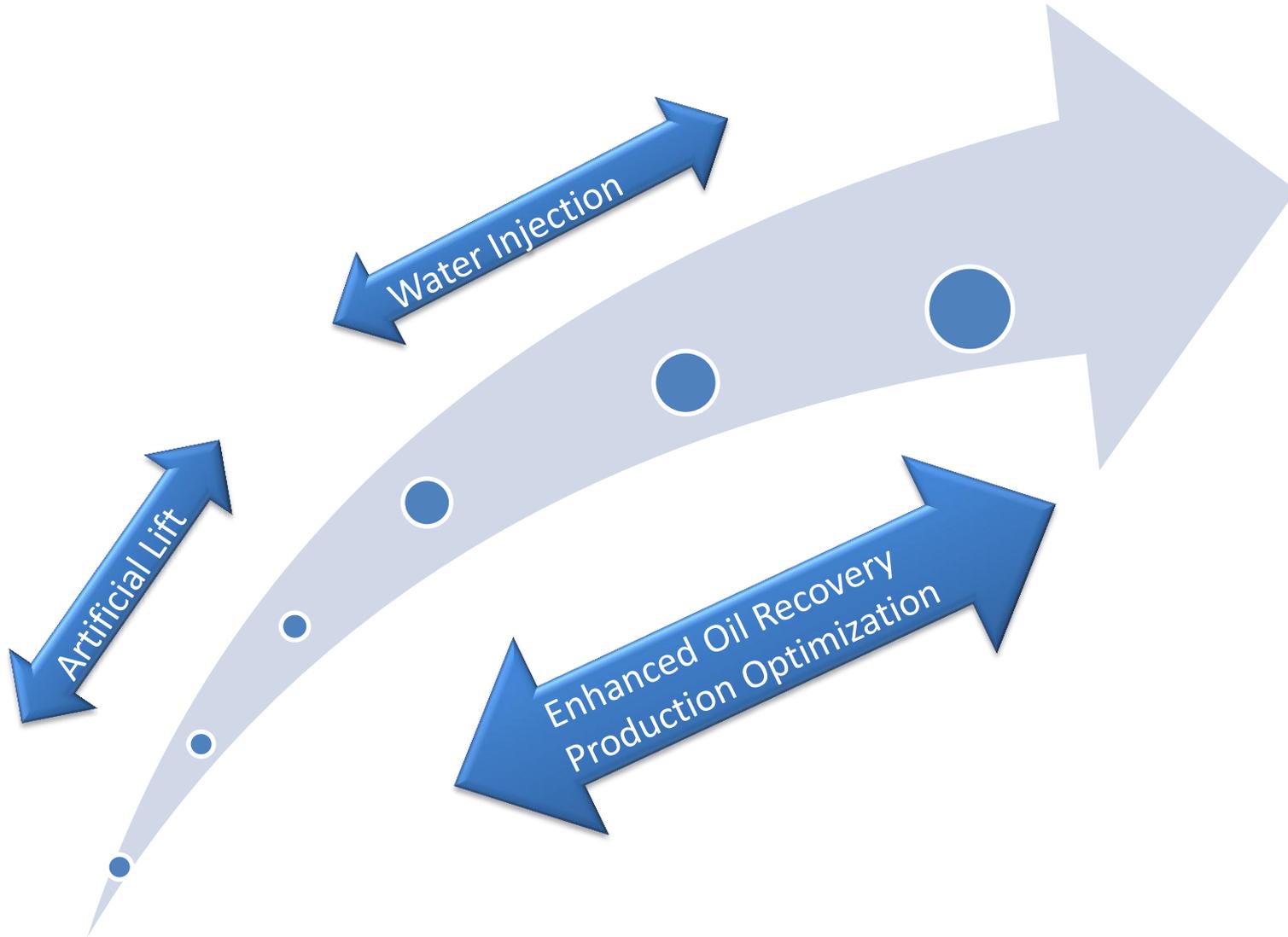


Oil Storage

- ❖ Total oil storage capacity of 300,000 barrels
- ❖ The new tank farm



Dragon Oil Tank Farm.



Water Injection

- ❖ Start date: 28 June 2013
- ❖ Current injection rate: 3,500-4,000 bwpd
- ❖ Average pressure increase in neighbor wells: around 100 psi (to be verified through another survey)
- ❖ Plan to expand water injection operations to 2-3 more platforms during 2014
- ❖ Impact is 5-10% potential additional recovery where applicable
- ❖ **Maintain pressure, sustain production rates and increase reserves recovery**



Water Injection Implementation.

Jet Pumps

- ❖ Start date: 5 June 2013 in two wells: Dzheitune (Lam) 13/118, 13/168
- ❖ Average Production increase: 500-700 bopd/well
- ❖ Plan to expand Jet Pump operations to 14 more wells during 2014
- ❖ **Objective is to increase production and enhance recovery**



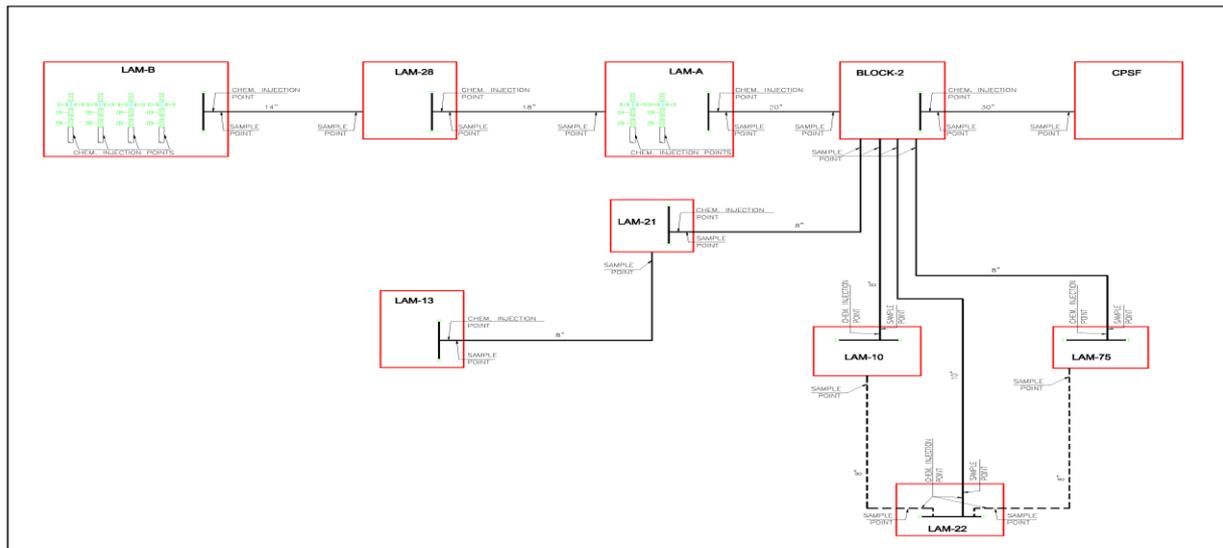
Jet pumps implementation.

Chemical Trials

Application: The effectiveness and cost of current chemical injection systems and chemicals for wax and corrosion reduction.

Trial: Chemical injection trials using four different chemicals were carried out in the year 2012.

Result: Reduction in pour point temperature, viscosity, accumulated wax in the pipelines.



3D Laser Survey

Objective: Plant modifications and changes which are not reflected on the master drawing could be captured.

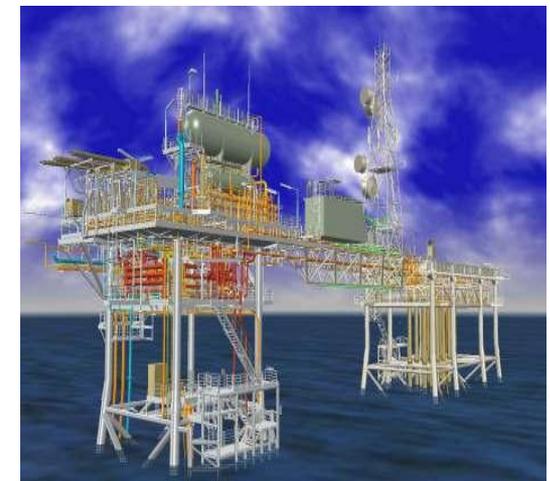
Technology : Survey using Rapid 3D Laser scanning.

Surveyed Platforms: LAM 21, LAM 22, LAM 75, LAM 10 and introduced : 1st Quarter 2013.

Way Forward: Plan to survey 9 Offshore platforms and 3 Onshore facilities in 2014-2015.



Photograph of platform



PDMS model generated from scanning data

Integrity Management System (IM): To ensure safety and reliability of the plant assets.

- ❖ Structures Integrity Management System (SIMS)
- ❖ Pipelines Integrity Management System (PIMS)
- ❖ Corrosion Management System (CMS)

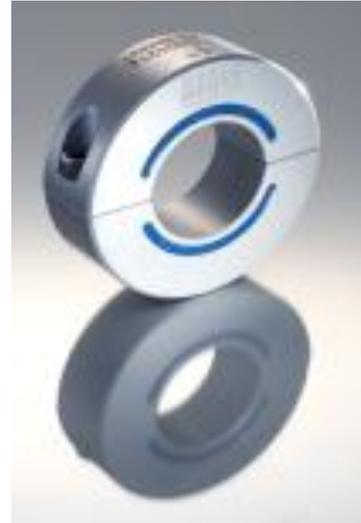
Engineering Management System (EMS): standardized procedures, Forms, Templates, check lists, Technical Specifications & Data sheets and Quality procedures & Specifications

ISO 9001:2008 certified; including OHSAS18001:2007 Organisations and certified / recognised as OHSAS14001:2004 Organisation



Pipelines Integrity Management System (PIMS)

- ❖ Already Installed
 - ❖ Water Injection
 - ❖ Jet Pumps
 - ❖ Expandable screens
 - ❖ Remote Pig Tracking
- ❖ On the way
 - ❖ ESP
 - ❖ Cable Heating
 - ❖ Gravel Packs
 - ❖ Wax Elimination Rings (*Vibration Induced Technology*)
 - ❖ Intelligent Pigging
- ❖ On evaluation
 - ❖ Multilateral Wells
 - ❖ Subsea Pipeline Cleaning using Nitrogen & Heat Generated System (SGN Technology)



Implementation of new technologies.

Our Talent

- ❖ Over 1,550 professional originating from 50 countries
- ❖ 92% of Dragon Oil Turkmenistan workforce are Turkmen nationals
- ❖ Attractive career opportunities



Dragon Oil employee.

Training and Development

- ❖ In-house and external training programs with particular focus on national employees
- ❖ Develop HI potential employees with identified Individual Development Plans linked to Succession Plan Program
- ❖ Assistance with higher education tuition fees



Training and development of Dragon Oil employees.

- ❖ Major c.US\$5mn project completed: polyclinic building and related infrastructure
- ❖ Inauguration took place in March 2013

2011: concept stage.



2012: construction.



2013: completion.



- ❖ Production target of 100,000 bopd in 2015 and plateau at this level for at least five years thereafter
- ❖ Deployment of significant jack-up and platform-based rig capacity
- ❖ Extraction of condensate at a GTP



Loading Crude Oil at Aladja Jetty, Hazar

Conclusion

Continued growth of Dragon Oil and our excellent performance are made possible thanks to our truly successful partnership with the State Agency and all other concerned authorities



Thank you