



# **Oil & Gas Development in Afghanistan**

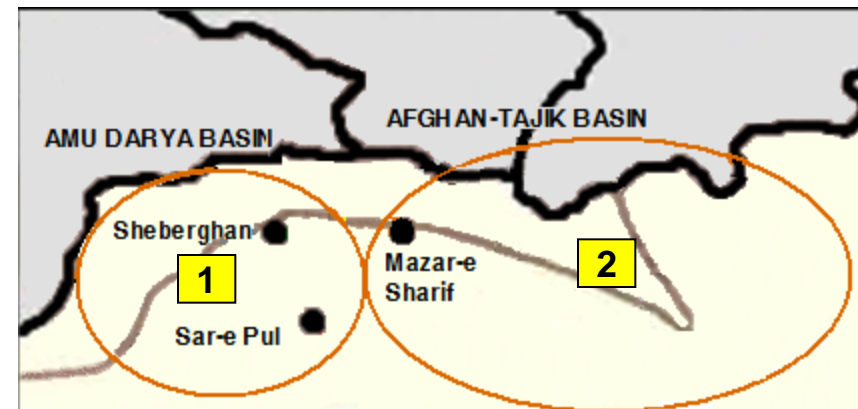
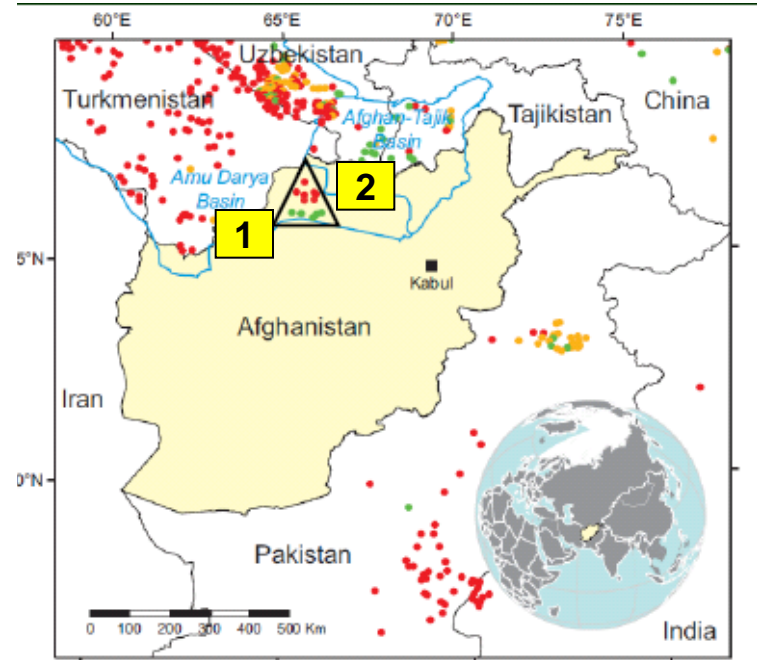
## **Industry Background Presentation**

21 February 2012

# Afghanistan's hydrocarbon resources are significant

According to various estimates, Northern Afghanistan contains reserves and undiscovered technically recoverable resources of between 500 million and 2 billion barrels of oil equivalent.

These hydrocarbons are located in two geologic areas, **1** the **Amu Darya Basin** and **2** the **Afghan-Tajik Basin**. The triangle on the diagram indicates the area where most of the known reserves have been explored to date, but the two basins follow geologic trends that are much better known across the northern border in Turkmenistan, Uzbekistan, and Tajikistan.



# Previous exploration focused on gas and was concentrated in a few specific areas

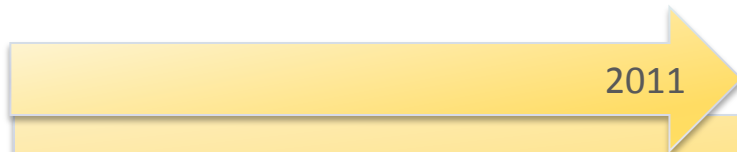
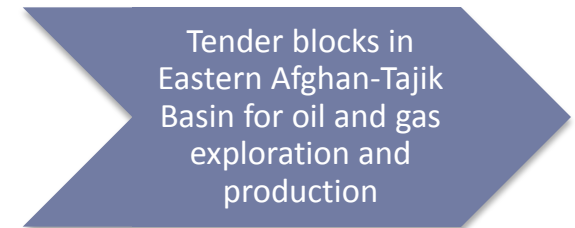
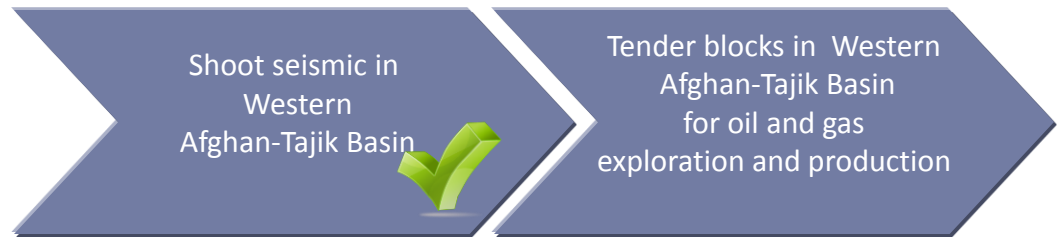
- 15 fields discovered 1957 to 1984 by Soviets (7 oil, 8 gas)
- 4 fields currently producing (1 oil, 3 gas)
- 322 wells drilled in Amu Darya Basin
- 5 Tcf gas reserves, of which approx. 2 Tcf has been produced
- More than 75 MMBbl oil reserves in Amu Darya Basin, of which less than 0.2 MMBbl has been produced
- Extensive well reports (in Russian, some translated into English) and logs, some core samples are available
- Gravity and magnetics were used to locate potential structures
- Afghan-Tajik Basin is much less well explored – fewer than 20 wells

# Resource development is being managed in multiple phases

Amu Darya



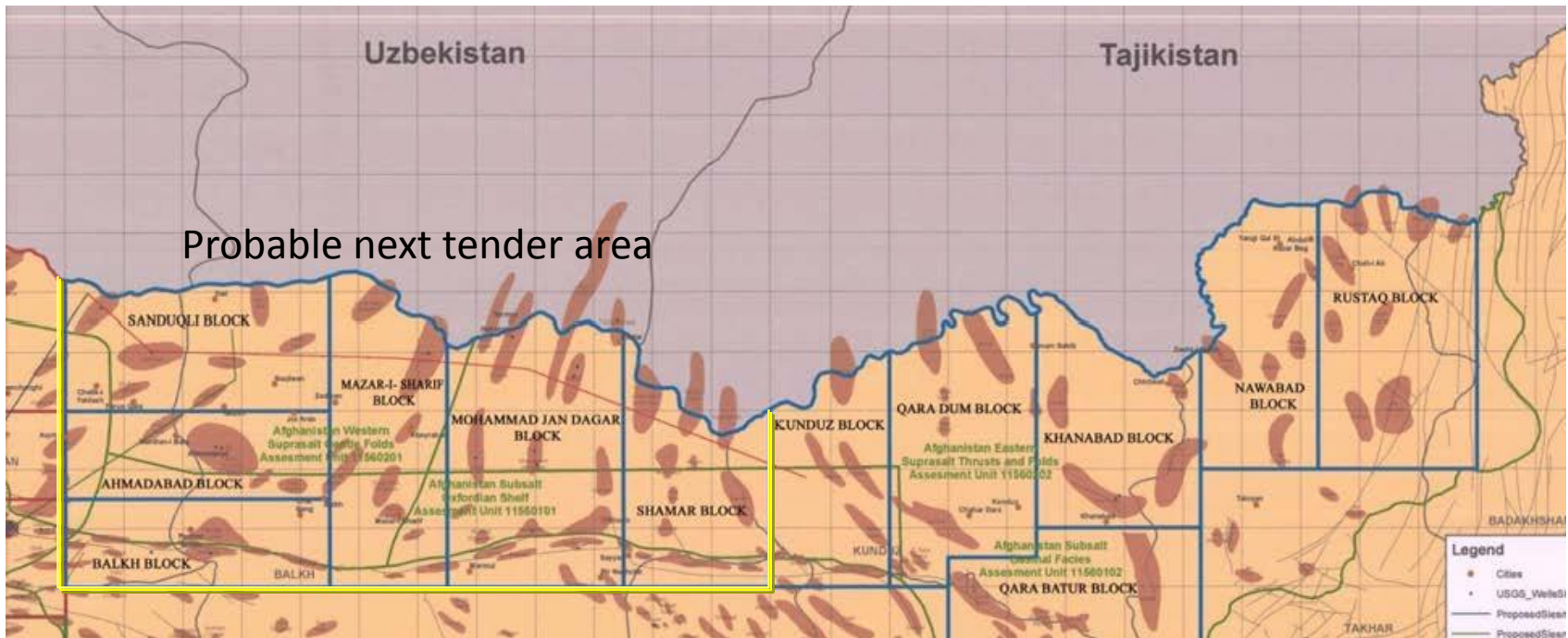
Afghan-Tajik



# The Amu Darya Basin tender of 2011 was a significant milestone

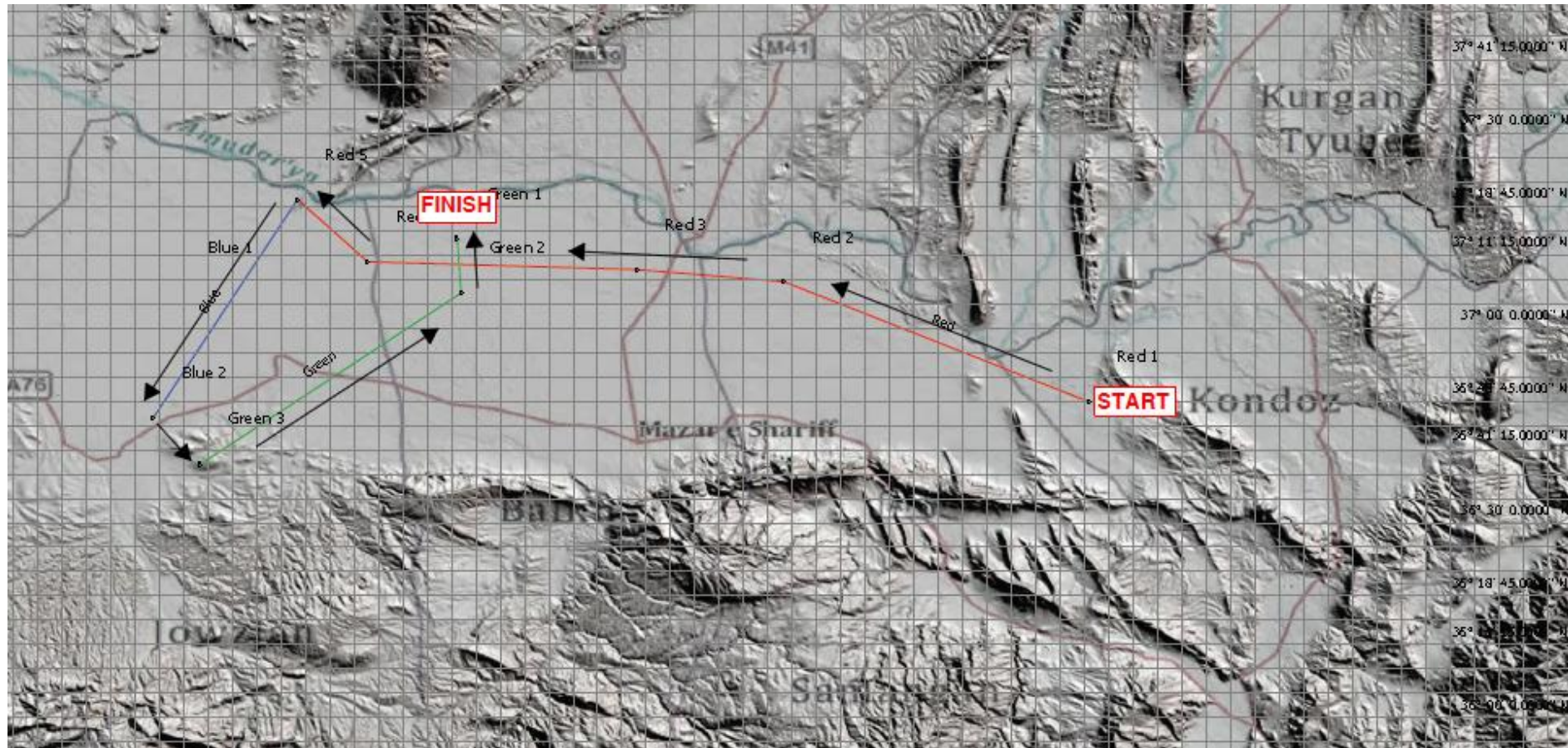
- Tender announced in March 2011
- 13 companies expressed interest, 5 were prequalified, 4 companies bid
  - CNPC International-Watan (Chinese/Afghan partnership) was winning bidder, at 15% royalty
- Contract concluded with CNPCI Watan Afghanistan Oil & Gas Ltd., approved by Council of Ministers on 26 December 2011, and signed 28 December 2011
- CNPCIW is now mobilizing, performing field assessments and assessments of existing wells, and tendering for services
- CNPCIW has a commitment to produce at least 150,000 barrels in 2012

# The Afghan-Tajik Basin in Afghanistan, generally across the border from Uzbekistan and Tajikistan, is the location of the next tender

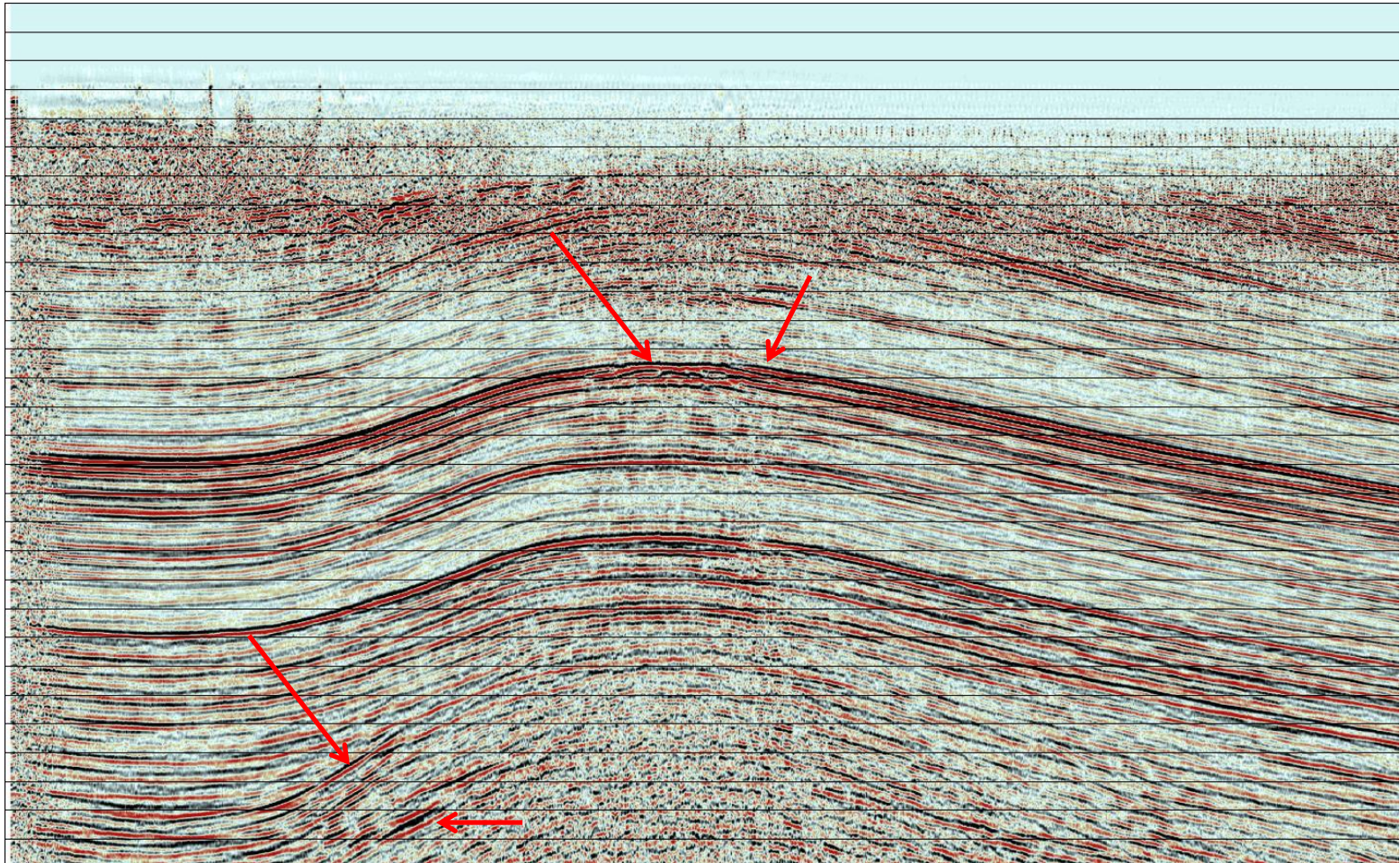


Probable next tender area

# 2D Seismic is being shot over the western portion of the Afghan-Tajik Basin

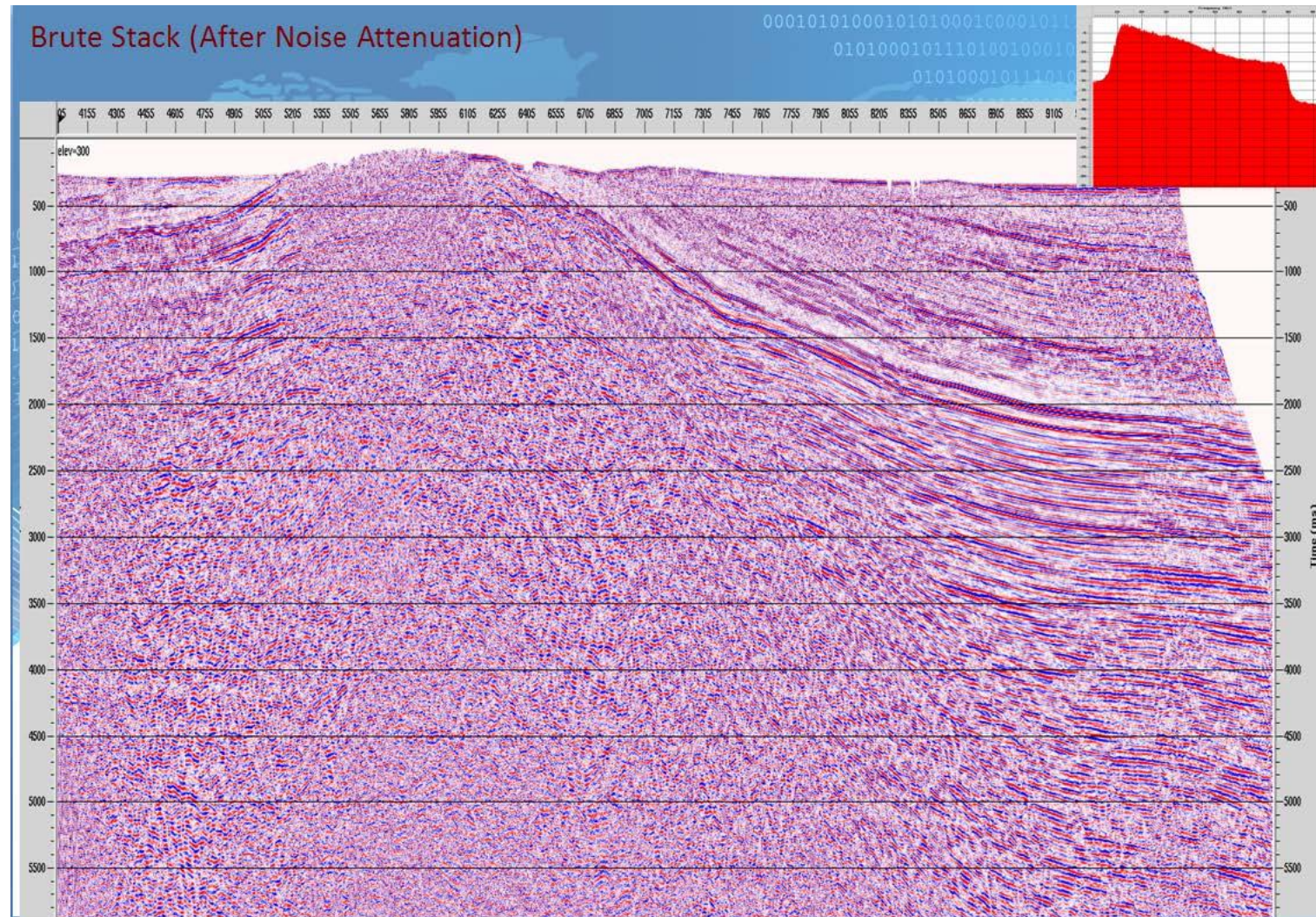


# Possible Zones of Interest – 1<sup>st</sup> Structure BLUE Line





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01/30/12

# The current security situation surrounding the western Afghan-Tajik blocks is relatively stable

- **Balkh Province**, which includes Mazar-e-Sharif, the largest city in the region, and Hairitan, the border crossing, is stable and peaceful. Only exceptions are small rural Pashto villages. All 4 Afghan-Tajik Phase I blocks are partially in Balkh Province.
- **Jowzjan Province**, which includes the city of Sheberghan and most of the known gas fields, is also stable, except for small pockets on the road to Mazar-e-Sharif. The Sanduqli, Ahmadabad, and Balkh blocks also lie partially in Jowzjan Province.
- **Sar-E Pol Province**, which includes the oilfields of Angot, Kashkari and Aqdarya, has experienced some hostile activity over the past year, but mostly in isolated rural areas. Limited security is sufficient to offset the threat level. Frequent trips to Angot oilfield have been incident free.
- **Faryab Province**, which includes most of the Zamurdsay oil block, is currently undergoing clearing operations. Almost all security incidents reported in north-west Afghanistan over last six months have occurred in Faryab.
- **Bottom Line:** Facilities security is required, but the threat level is notably lower than in Iraq.



# **Afghanistan and neighboring countries can accommodate all near-term crude and gas production, but over the long term export markets will increase in importance**

## **Primary Markets for Oil Products**

Afghanistan currently imports 47,000 BPD of diesel fuel and other distillates. Heavy fuel oil from distillation is the prime component of asphalt, which is currently in high demand and also being imported. Fuel oil is also burned for heat. As the mining sector grows, diesel and fuel oil demand is expected to increase.

## **Transportation of Oil Products**

There are rail terminals at Mazar-e-Sharif and Hairatan, the border crossing to Uzbekistan. The means of transportation from that point is largely by truck. Truck imports of fuels also come into the country from Iran, Pakistan, and Tajikistan.

## **Primary Markets for Natural Gas**

There is presently local distribution and limited sale to industrial users in Mazar-e-Sharif, which has significant room to grow due to currently unmet demand. There is presently export demand in Tajikistan, and the pipeline systems to the north could accommodate additional volumes.

# Next Steps

- **Come visit our booth in the International Pavilion**
- **Come visit us in Afghanistan**