



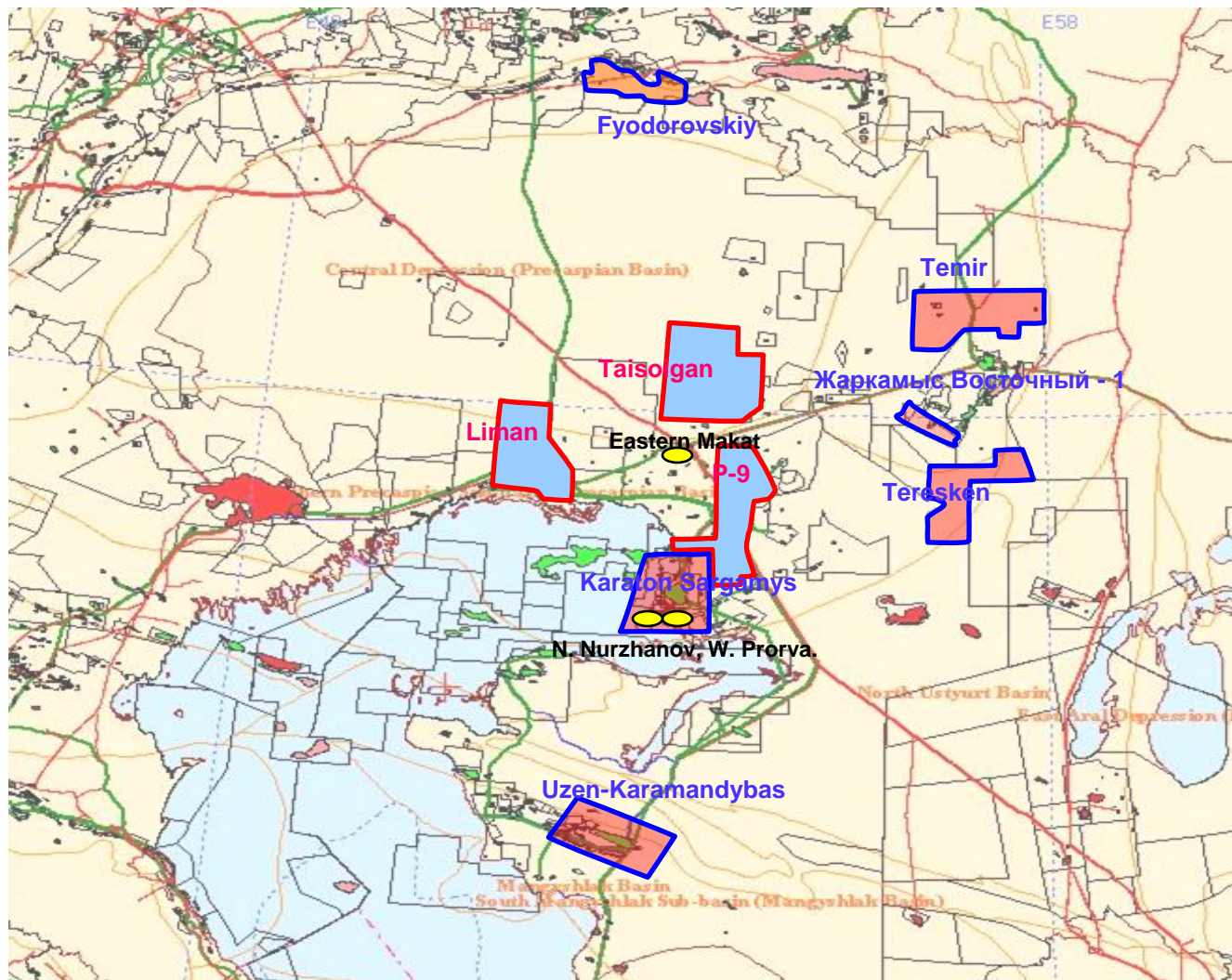
## **KMG E&P Exploration: Program for 2011 and perspectives of development**

**РД OPEN**

Astana, May 2011

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# Location of KMG E&P exploration assets in the west of Kazakhstan in 2011



## Exploration blocks:

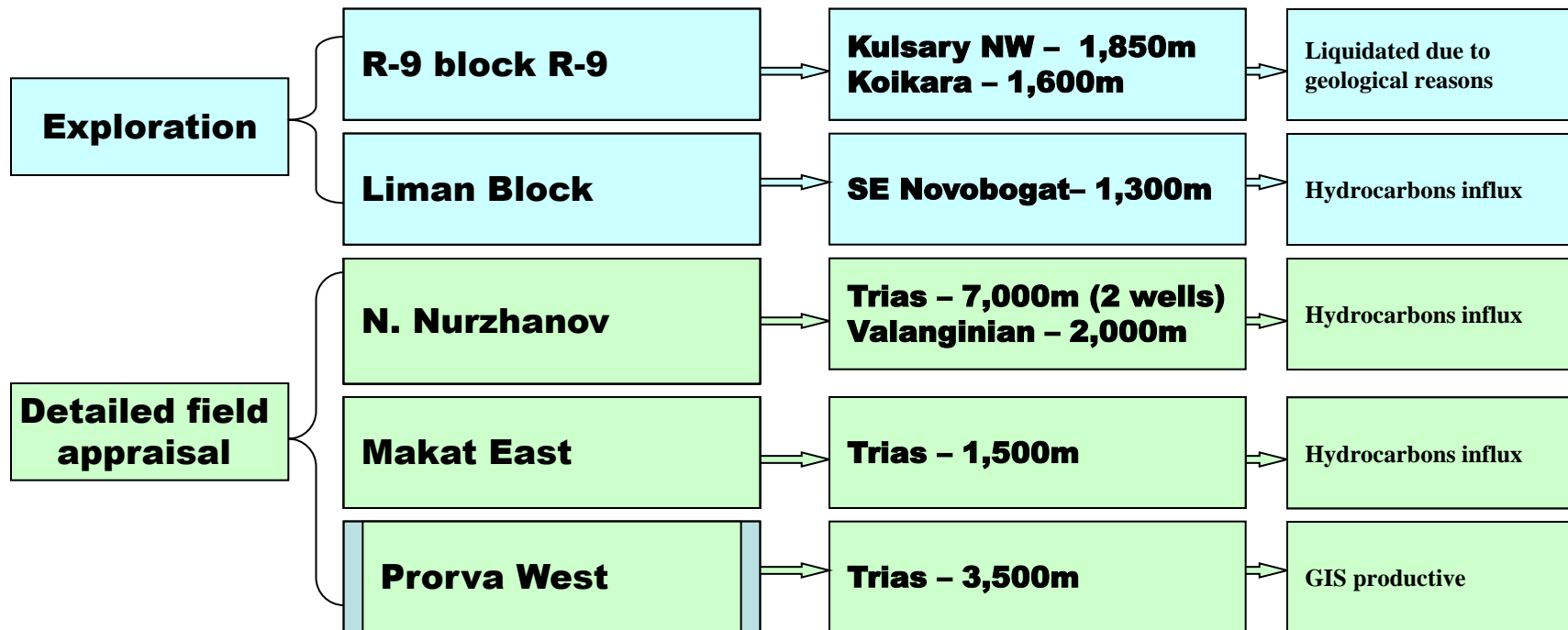
- Liman (SE)
- Taisoigan
- R-9
- Uzen-Karamandybas
- Karaton-Sargamys
- Temir
- Teresken
- East Zharkamys - 1
- Fedorovskiy

## Detailed field appraisal:

- Makat East
- N. Nurzhanov
- Prorva West

## The basic results of KMG E&P exploration works in 2010

### eight exploration wells were drilled



### Seismic survey

**3D**

R-9 Block– 400 sq. km  
 Zhanatalap – 300 sq. km  
 Kenbai – 128 sq. km

total **828 km<sup>2</sup>**

Field works  
 Processing and interpretation

## Major results of KMG E&P exploration works in 2010



### **Hydrocarbons reserves replacement ratio – 0.73**

(oil production – 8,766 mln ton, incremental reserves 6,434 mln ton (2P))



### **Exploration success ratio – 0.75**

(6 productive wells out of 8 wells)



### **Total exploration costs – USD47 million**



### **Upper-cornice oil field Novobogat SE was discovered at Liman Block**

(New type of deposit coincides with the sand reservoirs of Mid-Trias. Received results demonstrate perceptivity of the selected direction at the current state of exploration of post-salt megalithic complex of the Caspian coastal basin)



### **Oil and gas commercial inflows are first received from the Valanginian sediments at the N. Nurzhanov field**



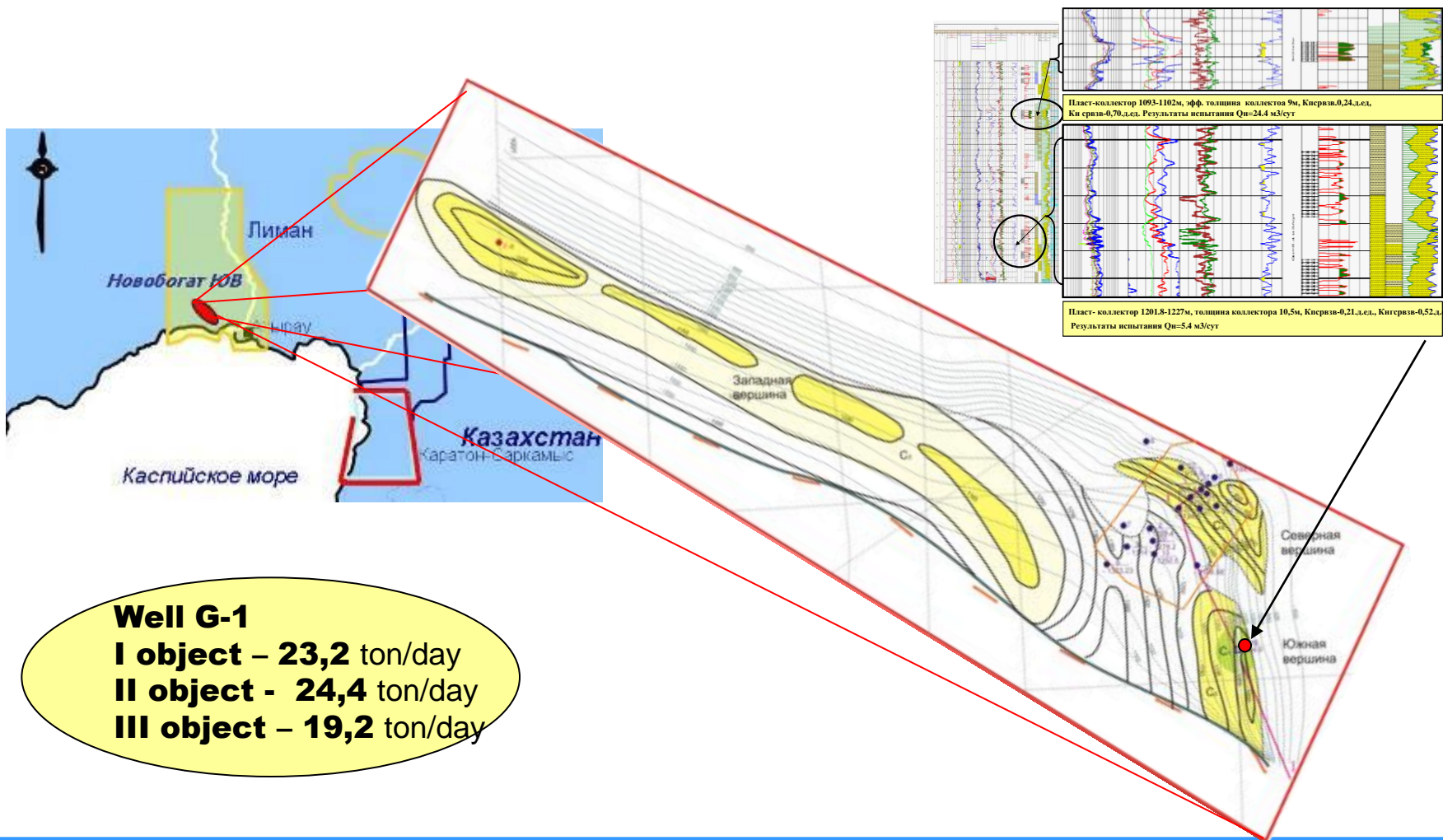
### **Triassic period formations productivity was confirmed at the Western Prorva and Eastern Makat fields**



### **Seismic exploration works revealed new perspective oil and gas structures**

## Major results of KMG E&P exploration works in 2010

### Liman block – upper-cornice oil field Novobogat SE was discovered



## Exploration assets resources audit (as of 01.01.2011г.)

- Preliminary report on the results of the audit by **Gaffney&Cline Associates**
- Prospective resources volume (confirmed by exploration drilling):
  - P50 category – **8.6 mln. tons**, including:
    - W. Nurzhanov, Western Prorva, Eastern Makat, Kondybai, Western Novobogatinskoye, SE Novobogat
- Prospective resources volume (not confirmed by drilling):
  - P50 category – **38.5 mln tons**, including:
    - Liman, R-9, Taisoigan, E. Zharkamys and additional exploration blocks
- Audit results confirmed large potential of KMG E&P exploration taking into account newly acquired geological exploration assets and justification of selected geological exploration direction

## Company's new acquired exploration assets

**In accordance with accepted Program on oil and gas industry development for 2010-2014 Kazakhstan plans to add 300 million tons of hydrocarbon reserves.**

**KMG E&P plays the important role in implementation of such large-scale and strategic project.**

**At the beginning of 2011 company's assets portfolio increased by exploration blocks Karaton-Sargamys (Atyrau oblast), Temir and Teresken (Aqtobe oblast), Fyodorovskiy (Western-Kazakhstan oblast) and the territory adjacent to Uzen and Karamandybas fields in Mangystau oblast.**

**New acquisitions are aimed at development of perspective projects and directions at various sedimentary basins on the territory of Kazakhstan and upgrade of the industry resources base.**

## Exploration Works Program for 2011

### Embamunaigas

Drilling of 15 exploration wells

With total boring of 25,900m

3D seismic exploration CDPM – 539 sq. km

2D seismic exploration CDPM – 900 lineal km

### Ozenmunaigas

Drilling of one exploration well 2,200m deep

### KMG E&P Exploration Assets LLP

Drilling of four exploration with total boring 14,750m

2D seismic exploration – 1,600 lineal km, 3D – 200 sq. km

### NBK LLP

Drilling of one exploration well 3,000 m deep

### Fyodorovskiy Block

Drilling of three exploration wells

### Northern Seaw

Drilling of one exploration well

**Total 25  
exploration  
wells in 2011**

(boring  
65,050 m)

Total  
investments  
amount –  
about USD  
**200 million**

## Exploration goals for 2011

### **Embamunaigas**

Search and exploration of oil and gas deposits in post salt deposits of Southern Caspian coastal basin;

### **Ozenmunaigas**

Clarification of oil bearing capacity perspectives of newly revealed positive structures of Mesozoic period within the limits of Zhetybai-Uzen cascade;

### **KMG E&P Exploration Assets LLP**

Exploration of pre-salt and post salt objects in the western rim of the Caspian Coast basin;

### **NBK LLP**

Detailed field analysis of the deposits in the “upper-cornice” mass of Permo-Triassic;

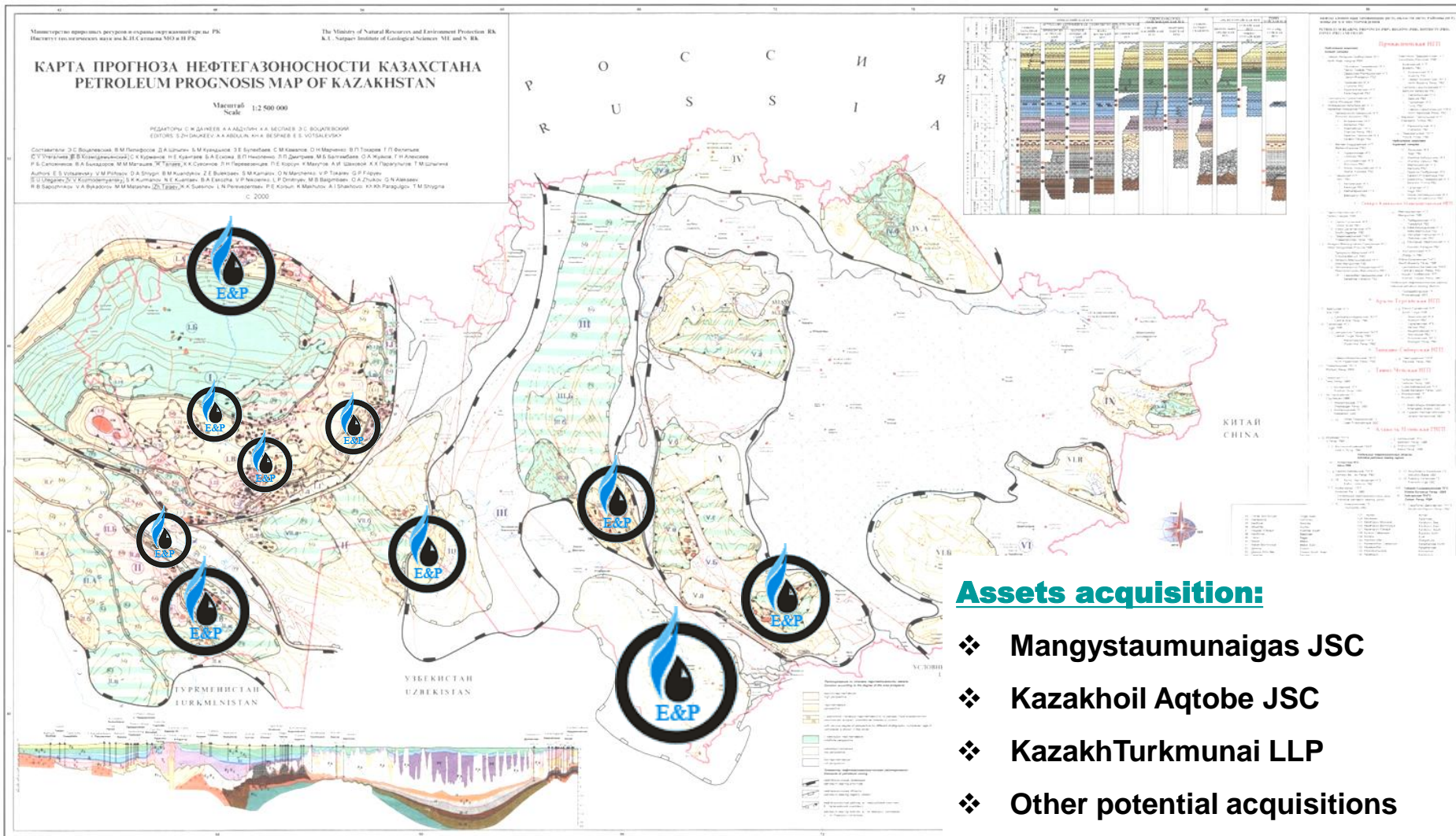
### **Block Fedorovskiy**

Appraisal of discovered deposits in post salt Paleozoic of the northern basin rim;

### **Northern Sea**

Clarification of perspectives of “fulmar” package on the Lower Cretaceous of Belyi Medved structure.

# Program of expansion of exploration blocks portfolio in 2011



## Perspective goals

### **New stage in exploration strategy:**

- geological-exploration works to enter post-salt sediment complex of Caspian coastal basin
- search for new and non-typical oil and gas traps
- involvement of dome peripheral areas into exploration
- detailed elaboration of inter-dome mini-pools
- exploratory prospects development at the depth of 7-8 km
- development of new sedimentary basins (Southern Torgai, Aral and Sub-Aral Area, Shu-Sarysuskaya basin, Syrdarya area)

### **Guidance by scientifically proved concepts**

**Increase of amount of 3D seismic exploration, sequence-stratigraphy and AVO-analysis**

**Maximum usage of the western modern technology in the first wells that are being currently drilled**

**Enhanced training of the local skilled personnel**