

NOMOS

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Центр содействия изучению геополитических проблем и евроатлантического сотрудничества Черноморского региона

UKRAINE AND SECURITY OF EU GAS SUPPLIES



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MEMORANDUM OF UNDERSTANDING
on co-operation in the field of energy between
the EU and Ukraine, 01.12.2005

- Ukraine is a key transit country for hydrocarbon's supplies to the EU with 40% of the EU's imports of natural gas transiting through the Ukraine network <...>
- The parties will devote their best endeavours to enable the integration of the Ukrainian electricity and gas markets into the European Union's internal energy market.
- *Both sides* <...> resolve to co-operate in roadmaps covering the following four specific areas:

III. Enhancing the security of energy supplies and the transit of hydrocarbons.

European Gas Networks



PROJECTS OF PAN-EUROPEAN INTEREST

PROPOSED PRIORITY AXES FOR NATURAL GAS PIPELINES

 December 2003



Gas Transmission System (GTS) and Underground Gas Storages (UGS) of Ukraine



Irreplaceability of Ukrainian GTS and UGS

- Key factors of gas supplies safety to EU:
 1. Interconnected GTS;
 2. UGS located near Ukraine–EU border

Combination of these two factors is unique case which keeps role of Ukrainian GTS and UGS in the future.

*(For example: possible loss in the case of potential emergency on the Yamal – Europe or “North Stream” or “South Stream” can be compensate via Ukrainian GTS (direct delivering or gas from UGS) **only***

To construct GTS as an alternate of Ukrainian GTS including UGS network Gazprom needs ~\$130-150 bln and 15-25 years (estimation in prices of 2006).


Volume of Gas Transit via Ukraine, *bcma*

Year	Total transit	Transit to EU+ *	Transit to CIS
2001	124,4	105,3	19,1
2002	121,4	106,1	15,3
2003	129,2	112,4	16,8
2004	137,1	120,4	16,7
2005	136,4	121,5	14,9
2006	128,5	113,8	14,7
2007	115,2	112,1	3,7**
2008	124,2	120,8	3,5

* EU countries area + Turkey

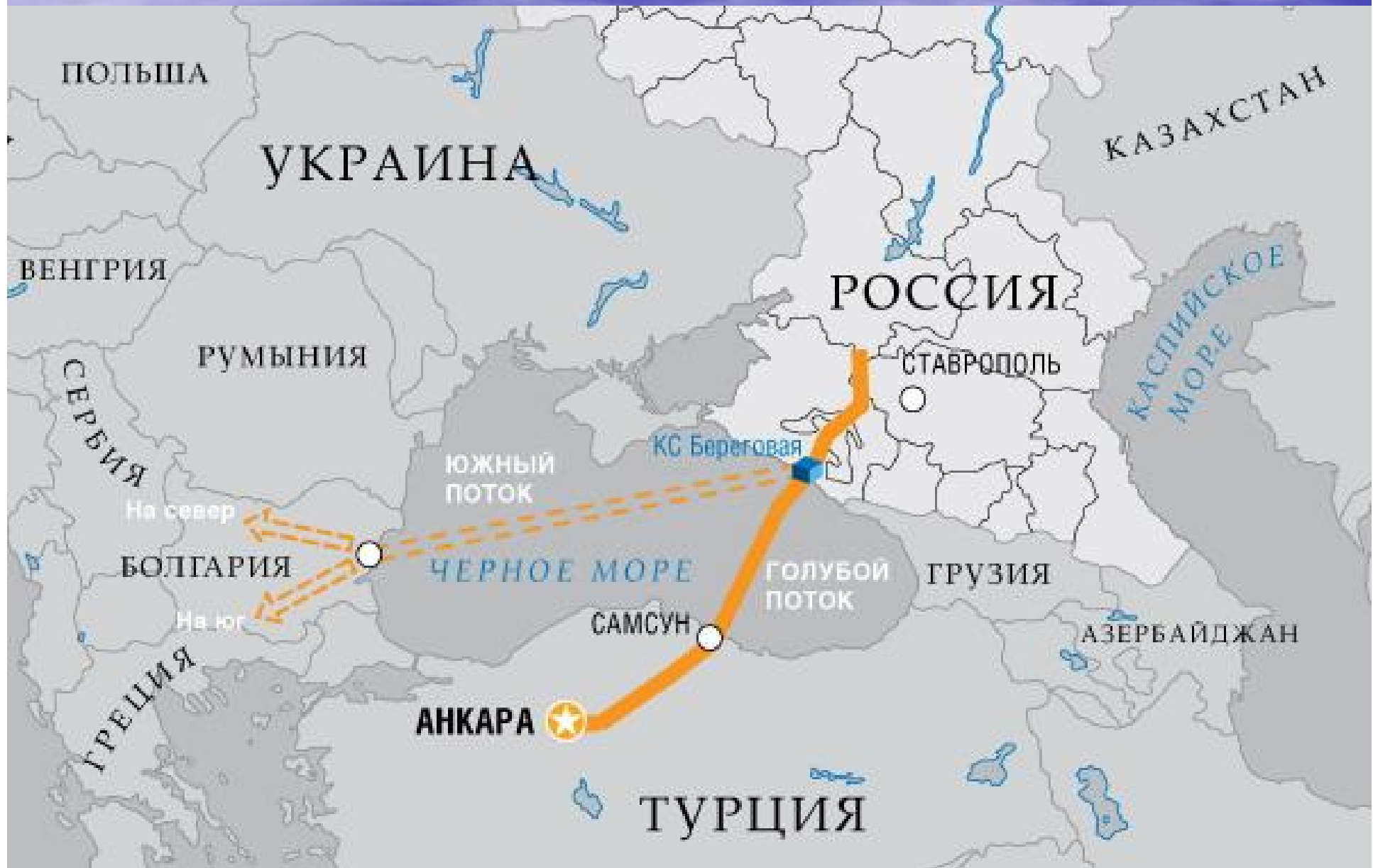
** For Moldova only after construction bypass Sokhranovka – Ochyabrskaya by Gazprom

*** Predicted transit volume after 9 months of 2008



**SOUTH STREAM AS ELEMENT OF
STRATEGIC GAME TO BYPASS OF
TRANSIT COUNTRIES AND TO
RECEIVE ADDITIONAL GAS
RESOURCES FROM C.ASIA AND
CASPIAN REGIONS FOR GAZPROM**

GAZPROM VISION OF SOUTH STREAM



COMPARISON OF BALTIC AND BLACK SEA DEPTH



BALTIC SEA

Average depth - ~ 52 m

Maximal depth - ~459 m

Depth > 200m ~0,3% area

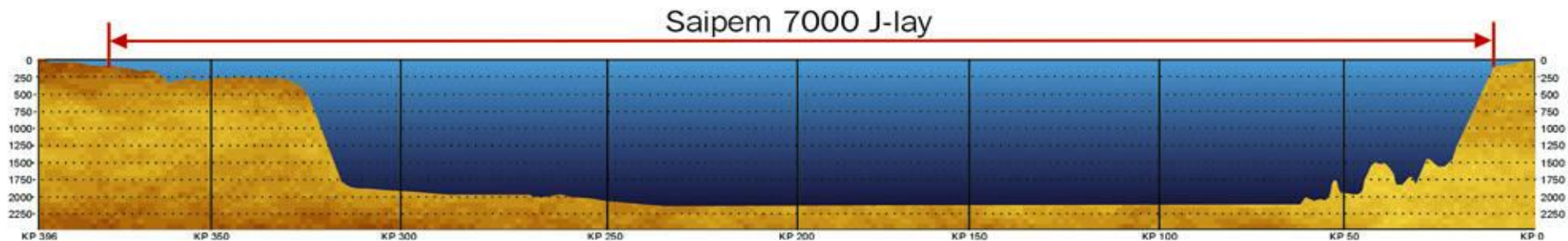
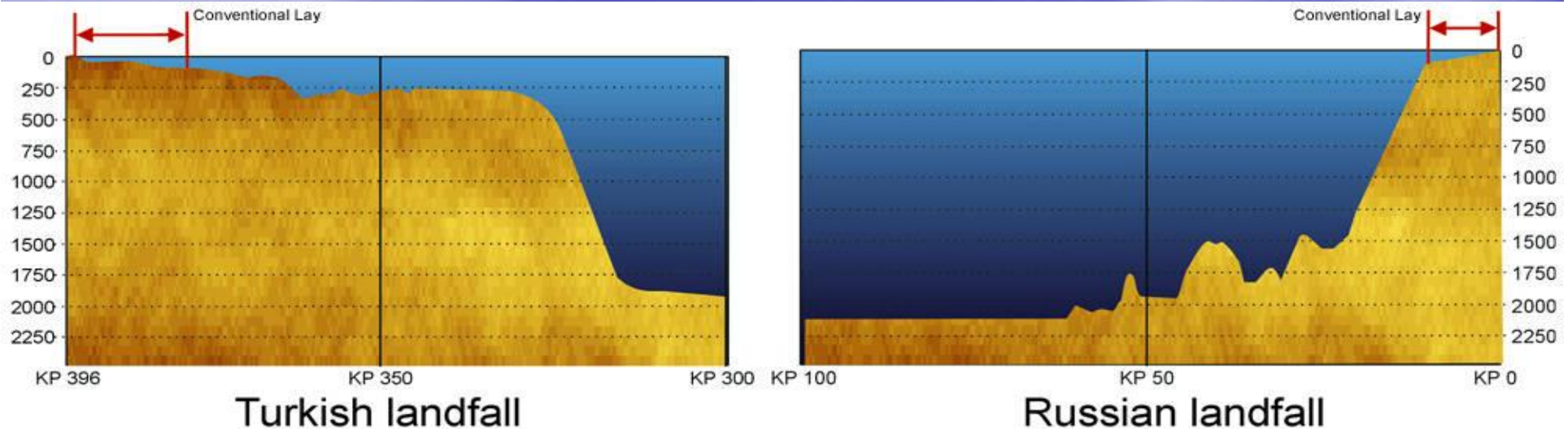
BLACK SEA

Average depth - ~1315 m

Maximal depth - ~2210 m

Depth > 200m ~85% area

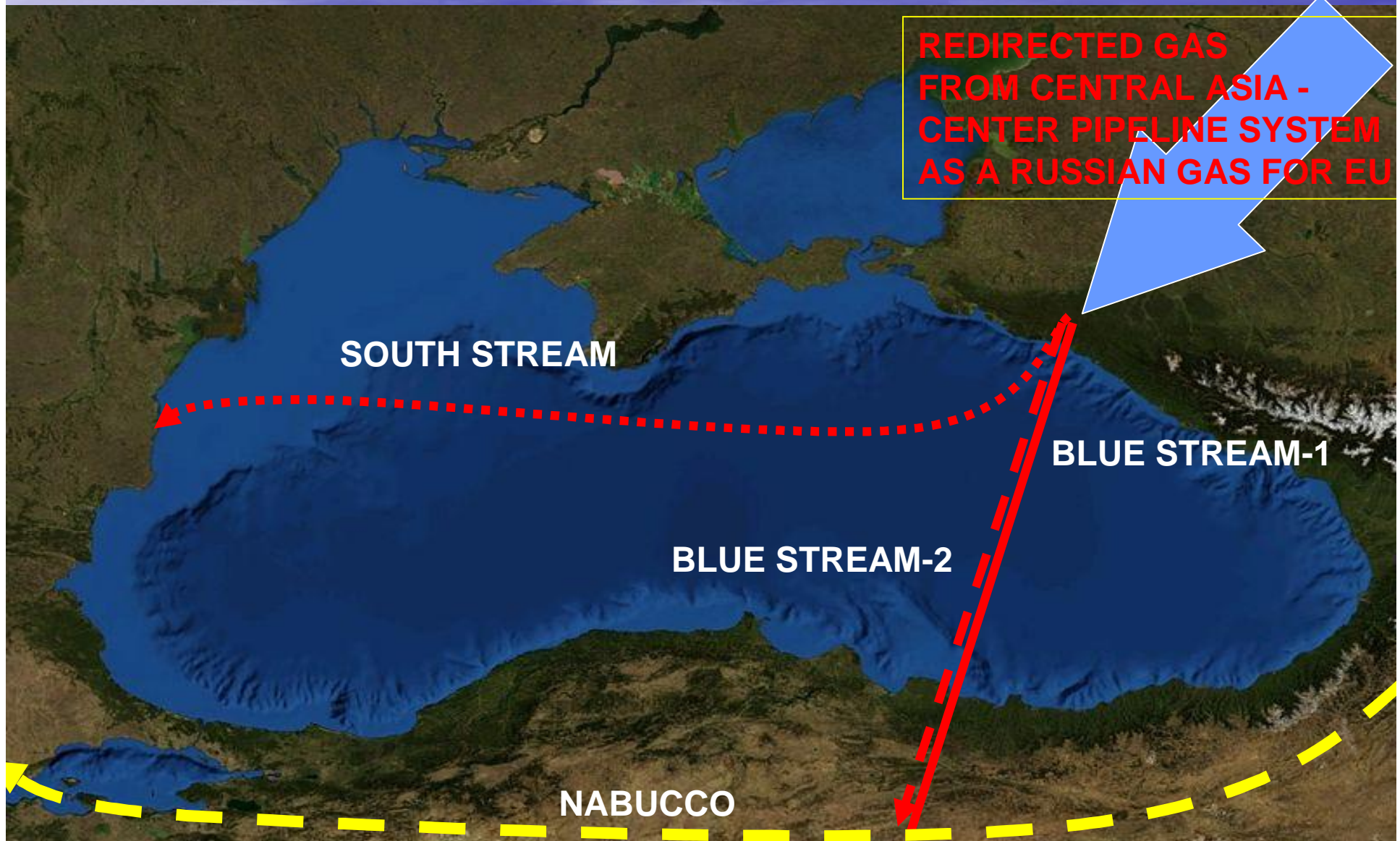
"BLUE STREAM" ROUTE PROFILE



"SOUTH STREAM" ROUTE PROFILE RATHER LIKES ON "BLUE STREAM".
Length of underwater pipeline – 444 km for "Blue Stream", more 900 km for "South Stream". Depth of "South Stream" laying – ~1800-2100 m (for example laying of "Nord Stream" – from ~20 m to 210 m).

CONVERGENCE SCENARIO FROM RUSSIA:
SOUTH STREAM **VS** NABUCCO =
BLUE STREAM-2 + NABUCCO

REDIRECTED GAS
FROM CENTRAL ASIA -
CENTER PIPELINE SYSTEM
AS A RUSSIAN GAS FOR EU



Complementarity of Nabucco and White Stream with usage of Ukrainian and Slovak GTS





***PREDICTIVE SCENARIOS
FOR GAS FLOWS***

**(CASPIAN-BLACK-BALTIC SPACE,
2-nd DECADE)**

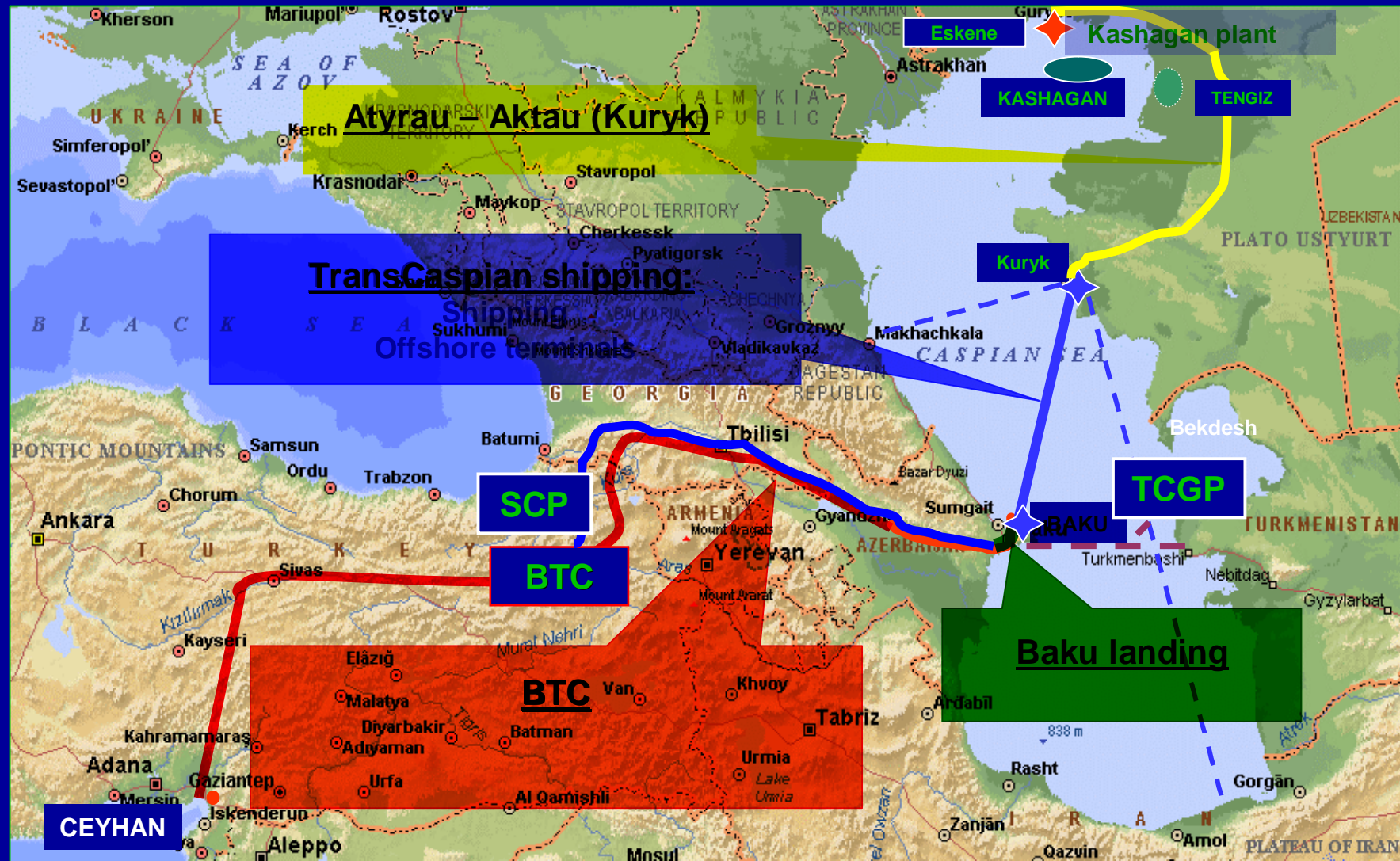
Caspian & Central Asian Gas Supply to Europe, Russian Scenario



One from important goals of Russian ingression into Georgia – reorientation of Caspian and Central Asian gas streams from Transcaspien and S. Caucasus directions in the Northern direction (via Russia) as more secure way

Energy Security: View from Azerbaijan

Trans Caspian Transportation Options



Ø Delivery of the gas originated in Azerbaijan and in the Caspian to Europe – important factor contributing to the stability of the European gas market



Ø The South Caucasus Pipeline (SCP), running from the Sangachal terminal near Baku to the Georgian-Turkish border, is a key element in the gas exports system from the Caspian, which should be accompanied by the development of transportation systems through neighboring countries to the EU markets.

Ø ITGI Project (2012, 210 km Poseidon subsea section, 8-11 bcma)

Ø **Nabucco** Natural Gas Pipeline Project (2012-13, 3400 km, 25-31 bcma)

Ø Transadriatic Pipeline – TAP (2012, 520 km, 10-20 bcma)

Ø Gas Pipeline Project **White Stream** (1150 km, 850 subsea, 8-32 bcm)

Ø The opening of a new gas supply corridor to Europe will contribute to enhanced competition in the EU internal gas market and promote the EU Commissions energy policies and objectives.

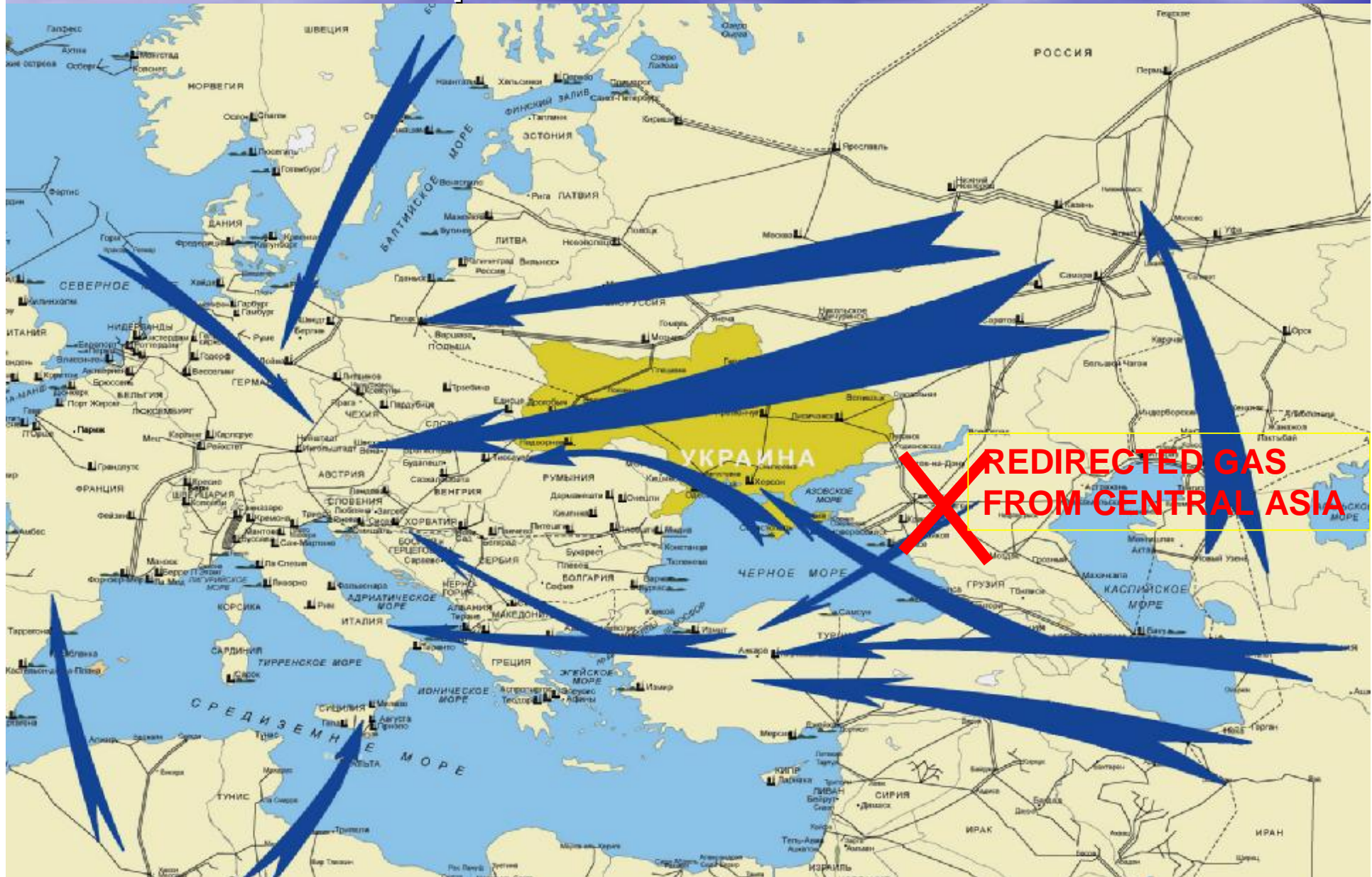
Ø Azerbaijan and its partners are prepared to commence commercial talks with potential buyers, transportation systems operators and transit countries on prices, terms and tariffs for the gas export to Europe

(From SOCAR presentation in Kyiv, 12-th May)

Caspian & Central Asian Gas Supply to Europe, Turkish Scenario



Caspian & Central Asian Gas Supply to Europe, Black Sea Scenario



GUIDELINES

- Modernization of Ukrainian GTS with participation of EU, equipment of Eastern borders of Ukraine by Gas Metering Stations, access to UGS for EU companies
- Integration of V4+Ukraine gas infrastructure facilities
- Initiation by EC of creation of Integrated Program for Black Sea Shelf Development in the context of “Black Sea Synergy”
- Freezing of North Stream Project with revision of existing route until gas-field development of Shtokman and Yamal





- Proactive policy of EC in Central Asia and Azerbaijan to involve new gas resources for EU market via new infrastructure (Trancaspian Pipeline, Nabucco, White Stream)
- Integration of Nabucco and White Stream in a single project
- Coordination Energy Policy between EU's institutions and NATO in the context of Bucharest Declaration (§48) of Alliance Summit

Thank you for your attention

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