### **Kovykta Project Development**

Presentation to James A. Baker III Institute & the Carnegie Endowment

for International Peace

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Moscow, Russia September 30, 2005





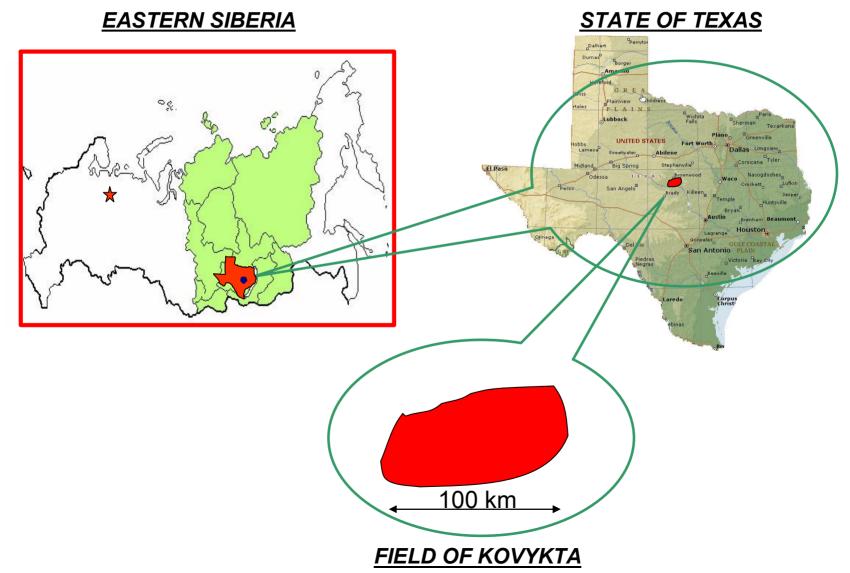
### Agenda



- Field Project
- Transportation
- Markets
- Conclusions

### The Relative Size of the Project





### The Kovykta Field



#### **History**

- **1987** Discovery by the state enterprise «VostSibneftegas»;
- 1991 First reserves approval by the State Reserves Committee of the USSR;
- **1992 –** «RUSIA Petroleum» formed to carry out exploration and development;
- 1999 Start of the International Feasibility Study (IFS);
- 2001 Inclusion of the Kovykta into the List of Subsoil blocks for PSA terms;
- **2003 –** IFS completion with report submitted to the government
- 2004 Announcement of Irkutsk Regional Gasification Project

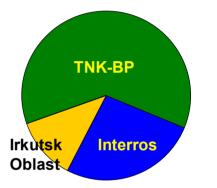
#### **Field**

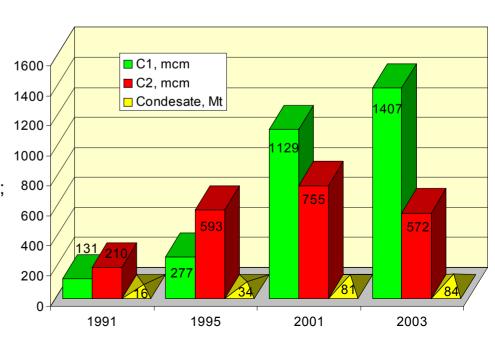
- Extremely continental climate, average annual temperature below zero, sporadic permafrost;
- Elevation: Ranging from 380 m to 1503 m above mean sea level.
- 80 km to the nearest settlement, 350 km to Irkutsk city, 180 km to the station at Baikal-Amur Railroad;
- License area: 10.3 thousand km<sup>2</sup>;

#### Reserves

- Reserves associated with Precambrian Parfenovsky;
- Average effective thickness: 14-15 m.
- Occurrence at 2650 3300 subsurface
- Gas reserves:
  - 1.9 tcm gas
  - 84 mmt condensate
- Average flow-rate per well: 350 to 500 10<sup>3</sup>m<sup>3</sup>/day;

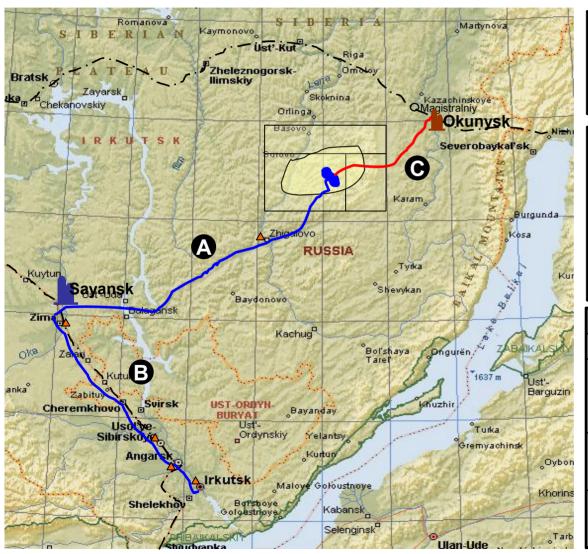






## Kovykta Phase 1 - Regional Project





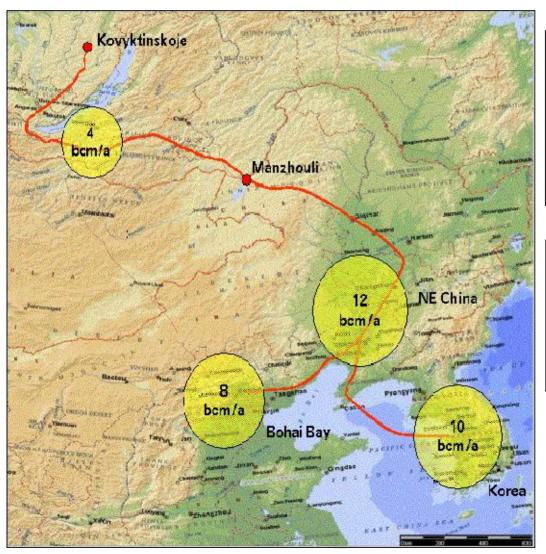
FIELD		
Number of wells	14 new + 4 existing	
Number of well pads	6	
Number of CPF's	1	

Transportation				
Component	Α	В	С	
Length (km)	393	285	160	
Diameter (inches)	24	24	6	
Pressure (bar)	100	63/20	8	

MARKETS			
Component	Phase 1a	Phase 1b	Customer
Methane	0.001 bcma to Zhigalovo	2.5 – 4.0 bcma plateau	Industrial & municipal heat & power
C2+ and helium	NA	280 kt of C2+and 7 mcm of He	Sayansk Chimplast& Geilimash
Condensate	Minimal for remote well sites	163Kta plateau	RFE refineries via BAM

### Kovykta Phase 2 – Export Project





#### **Development Capex**

<u>Component</u>	IFS Estimate
Field & Facilities	\$6,5 bln
Russia Pipeline	\$5,6 bln
China Pipeline	\$5,2 bln
Korea Pipeline	\$0.7 bln
Total	\$18 billion

#### Sales Gas (bcm/a)

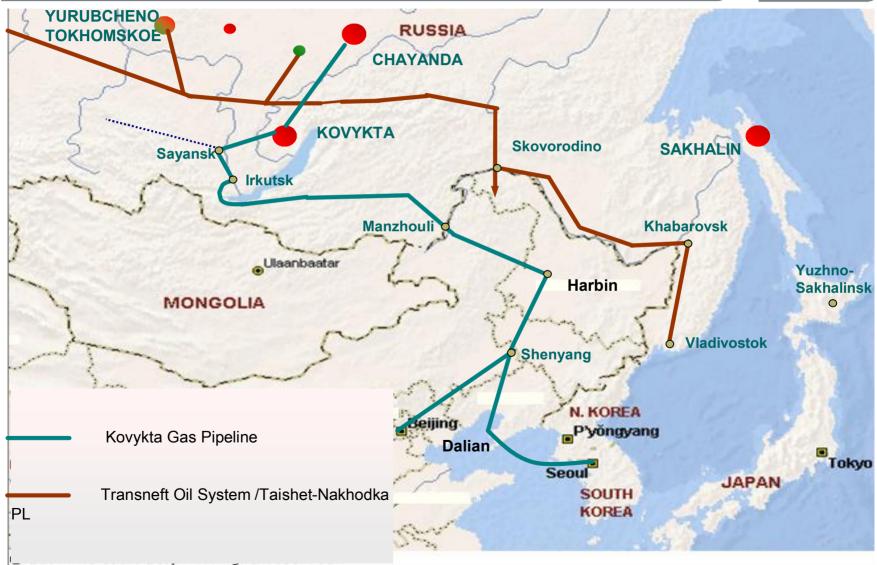
<u>Market</u>	First Gas	Plateau Sales Gas
Irkutsk	2008	4 bcm/a
North East China	2011	12 bcm/a
North China	2014	8 bcm/a
Korea	2011	10 bcm/a

#### Kovykta Reserves

<u>Indicator</u>	<u>Value</u>
Reserves bcm	1472
Build Up Period	9 years
Plateau Period	23 years

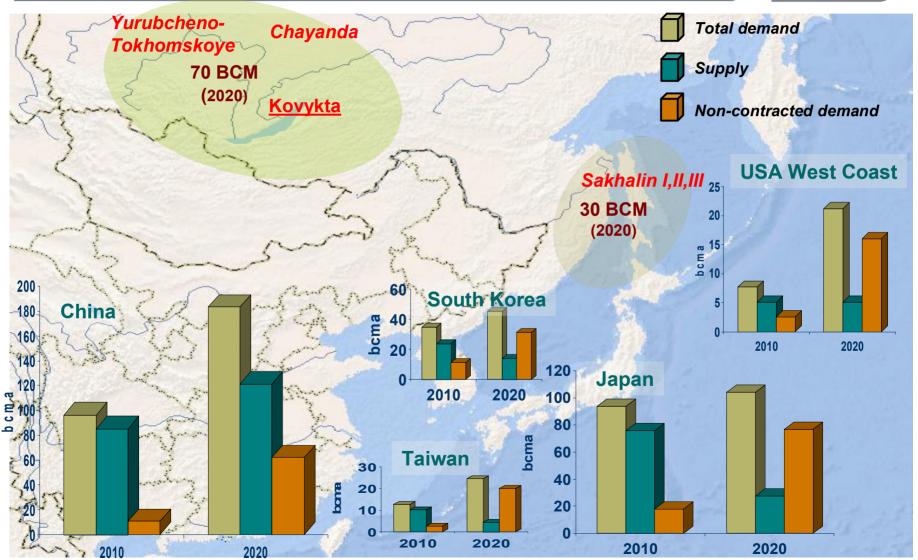
### **Transportation Options**





# Gas Supply & Demand in Asia Pacific Region

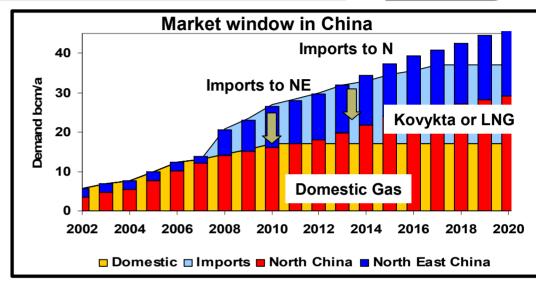


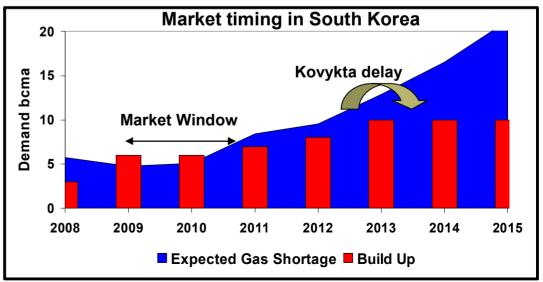


### Securing the Market Window



- North East Asia's fast growing markets are the most logical target for East Siberian pipeline gas. Chinese annual demand growth 12 %, Korean 5,6 %
- Diversity and security of supply for Chinese and South Korean markets
- Market window in 2008 2011 exists in both China and South Korea; competition will be between Russian Pipeline gas and LNG imports in both markets. Next available market window 2015 – 2020
- Pipeline vs. LNG competition: With no deliveries of Russian pipeline gas, new LNG terminals will be built up in the markets of Korea and China. The LNG supplies will be sourced from Indonesia, Australia and Middle East, increasing price competition.





# Conclusion



## Key Issues for Kovykta



### **Pipeline Routing**

- Kovykta gas is exported to China & Korea or west to UGSS
- Southern or Northern route for Export

#### **Market Demand Assurance**

- Volumes & Pricing
- Timing of the Market
   Window
- Deadlines for decisionmaking

#### Stakeholder Alignment

#### **Governments:**

- RF
- China
- Korea

#### **Partner Companies:**

- Gasprom
- TNK-BP
- CNPC
- Kogas

### **Project Development**

- Intergovernmental Agreements
- Signing Long-Term
   Contracts for Gas Supply
- Conducting Technical Assurance
- Establishing Partnership Configuration
- Secure Financing