

**USGS WORLD PETROLEUM RESOURCES ASSESSMENT  
INPUT FORM FOR CONVENTIONAL ASSESSMENT UNITS (Version 6.0, September 2, 2008)**

**IDENTIFICATION INFORMATION**

Assessment Geologist:	<u>T.R. Klett</u>	Date:	<u>2-Feb-10</u>
Region:	<u>Former Soviet Union</u>	Number:	<u>1</u>
Province:	<u>Volga-Ural Region</u>	Number:	<u>1015</u>
Total Petroleum System:	<u>Proterozoic-Paleozoic Composite</u>	Number:	<u>101501</u>
Assessment Unit:	<u>Volga-Ural Clastic and Carbonate Reservoirs</u>	Number:	<u>10150101</u>
Scenario:	<u></u>	Number:	<u></u>
Based on Data as of:	<u>IHS Energy 2008</u>		
Notes from Assessor:	<u></u>		

**CHARACTERISTICS OF ASSESSMENT UNIT**

Area of assessment unit: 607,359 square kilometers

Minimum assessed accumulation size: 0.5 MMBOE (grown)

No. of discovered accumulations exceeding minimum size: Oil: 1140 Gas: 48

<b>Uncertainty Class:</b>	Check One	Number
Producing fields	<u>X</u>	<u></u>
Discoveries	<u></u>	<u></u>
Wells	<u></u>	<u></u>
Seismic	<u></u>	<u></u>
No seismic	<u></u>	<u></u>

Median size (grown) of discovered oil accumulations (MMBO):

1st 3rd	<u>32.6</u>	2nd 3rd	<u>8.8</u>	3rd 3rd	<u>2.7</u>
---------	-------------	---------	------------	---------	------------

Median size (grown) of discovered gas accumulations (BCFG):

1st 3rd	<u>16.0</u>	2nd 3rd	<u>36.9</u>	3rd 3rd	<u>65.0</u>
---------	-------------	---------	-------------	---------	-------------

**ANALOGS USED IN ESTIMATING INPUT**

<u>Purpose</u>	<u>Analog or Analog Set</u>
1 <u></u>	<u></u> <u></u> <u></u>
2 <u></u>	<u></u> <u></u> <u></u>
3 <u></u>	<u></u> <u></u> <u></u>
4 <u></u>	<u></u> <u></u> <u></u>

Assessment Unit (name, no.)  
Scenario (name, no.)

Volga-Ural Clastic and Carbonate Reservoirs, 10150101

Probability of occurrence (0-1.0)

Scenario Probability:

Assessment-Unit Probabilities: (Adequacy for at least one undiscovered field of minimum size)

Attribute	Probability of occurrence (0-1.0)
1. <b>CHARGE:</b> Adequate petroleum charge:	1.0
2. <b>ROCKS:</b> Adequate reservoirs, traps, and seals:	1.0
3. <b>TIMING OF GEOLOGIC EVENTS:</b> Favorable timing:	1.0
<b>Assessment-Unit GEOLOGIC Probability</b> (Product of 1, 2, and 3):	1.0

### UNDISCOVERED ACCUMULATIONS

**Number of Undiscovered Accumulations:** How many undiscovered accumulations exist that are at least the minimum size?: (uncertainty of fixed but unknown values)

Total Accumulations:	minimum (>0)	_____	median	_____	maximum	_____
Oil/Gas Mix:	minimum	_____	mode	_____	maximum	_____
		_____				_____
		_____				_____
		_____				_____
Oil Accumulations:	minimum	<u>1</u>	median	<u>150</u>	maximum	<u>500</u>
Gas Accumulations:	minimum	<u>1</u>	median	<u>15</u>	maximum	<u>50</u>

**Sizes of Undiscovered Accumulations:** What are the sizes (**grown**) of the above accumulations?: (variations in the sizes of undiscovered accumulations)

Oil in Oil Accumulations (MMBO):	minimum	<u>0.5</u>	median	<u>2</u>	maximum	<u>400</u>
Gas in Gas Accumulations (BCFG):	minimum	<u>3</u>	median	<u>12</u>	maximum	<u>2400</u>

### RATIOS FOR UNDISCOVERED ACCUMULATIONS, TO ASSESS COPRODUCTS

(variations in the properties of undiscovered accumulations)

<u>Oil Accumulations:</u>	minimum		median		maximum	
Gas/oil ratio (CFG/BO):		<u>10</u>		<u>200</u>		<u>20000</u>
NGL/gas ratio (BNGL/MMCFG):		<u>5</u>		<u>40</u>		<u>150</u>
<u>Gas Accumulations:</u>	minimum		median		maximum	
Liquids/gas ratio (BLIQ/MMCFG):		<u>4</u>		<u>40</u>		<u>80</u>

**SELECTED ANCILLARY DATA FOR UNDISCOVERED ACCUMULATIONS**

(variations in the properties of undiscovered accumulations)

Oil Accumulations:

	minimum	median	maximum
API gravity (degrees):	<u>10</u>	<u>28</u>	<u>55</u>
Viscosity (centipoise):	<u></u>	<u></u>	<u></u>
Sulfur content of oil (%):	<u>0</u>	<u>3</u>	<u>18</u>
Depth (m) of water (if applicable):	<u>0</u>	<u>0</u>	<u>0</u>

	minimum	F75	median	F25	maximum
Drilling Depth (m):	<u>100</u>		<u>3000</u>		<u>4000</u>

Gas Accumulations:

	minimum	median	maximum
Inert gas content (%):	<u>0</u>	<u>6</u>	<u>35</u>
Carbon dioxide content (%):	<u>0</u>	<u>2</u>	<u>8</u>
Hydrogen sulfide content (%):	<u>0</u>	<u>2</u>	<u>8</u>
Depth (m) of water (if applicable):	<u>0</u>	<u>0</u>	<u>0</u>

	minimum	F75	median	F25	maximum
Drilling Depth (m):	<u>250</u>		<u>4000</u>		<u>5000</u>

**ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO COUNTRIES**

1 Offshore

0 area % of the AU

Oil in Oil Accumulations: 0 volume % of the AU

Gas in Gas Accumulations: 0 volume % of the AU

2 Onshore portion of:

Kazakhstan

---

0.45 area % of the AU

Oil in Oil Accumulations: 0 volume % of the AU

Gas in Gas Accumulations: 0 volume % of the AU

3 Onshore portion of:

Russia

---

99.55 area % of the AU

Oil in Oil Accumulations: 100 volume % of the AU

Gas in Gas Accumulations: 100 volume % of the AU

4 Onshore portion of:

           area % of the AU

Oil in Oil Accumulations:            volume % of the AU

Gas in Gas Accumulations:            volume % of the AU

5 Onshore portion of:

           area % of the AU

Oil in Oil Accumulations:            volume % of the AU

Gas in Gas Accumulations:            volume % of the AU

6 Onshore portion of:

           area % of the AU

Oil in Oil Accumulations:            volume % of the AU

Gas in Gas Accumulations:            volume % of the AU

**ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO PROVINCES**

1 ONSHORE portion of: Volga-Ural Region, 1015

100 area % of the AU

Oil in Oil Accumulations: 100 volume % of the AU

Gas in Gas Accumulations: 100 volume % of the AU

OFFSHORE portion of: \_\_\_\_\_

\_\_\_\_\_ area % of the AU

Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU

Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

2 ONSHORE portion of: \_\_\_\_\_

\_\_\_\_\_ area % of the AU

Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU

Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

OFFSHORE portion of: \_\_\_\_\_

\_\_\_\_\_ area % of the AU

Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU

Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

3 ONSHORE portion of: \_\_\_\_\_

\_\_\_\_\_ area % of the AU

Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU

Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

OFFSHORE portion of: \_\_\_\_\_

\_\_\_\_\_ area % of the AU

Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU

Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

**ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO PROVINCES**

4 ONSHORE portion of: \_\_\_\_\_  
\_\_\_\_\_ area % of the AU  
Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU  
Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

OFFSHORE portion of: \_\_\_\_\_  
\_\_\_\_\_ area % of the AU  
Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU  
Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

5 ONSHORE portion of: \_\_\_\_\_  
\_\_\_\_\_ area % of the AU  
Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU  
Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

OFFSHORE portion of: \_\_\_\_\_  
\_\_\_\_\_ area % of the AU  
Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU  
Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

6 ONSHORE portion of: \_\_\_\_\_  
\_\_\_\_\_ area % of the AU  
Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU  
Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU

OFFSHORE portion of: \_\_\_\_\_  
\_\_\_\_\_ area % of the AU  
Oil in Oil Accumulations: \_\_\_\_\_ volume % of the AU  
Gas in Gas Accumulations: \_\_\_\_\_ volume % of the AU