

**CIRCUM-ARCTIC RESOURCE ASSESSMENT
GEOLOGIC DATA FORM FOR CONVENTIONAL ASSESSMENT UNITS (Version 5.1, June 4, 2007)**

IDENTIFICATION INFORMATION

Assessment Geologist:	<u>K.J. Bird</u>	Date:	<u>13-Mar-08</u>
Region:	<u>Former Soviet Union</u>	Number:	<u>1</u>
Province:	<u>North Chukchi-Wrangel Foreland Basin</u>	Number:	<u>1258</u>
Total Petroleum System:	<u>Mesozoic-Cenozoic Composite</u>	Number:	<u>125801</u>
Assessment Unit:	<u>North Chukchi-Wrangel Foreland Basin</u>	Number:	<u>12580101</u>
Scenario:	<u></u>	Number:	<u></u>
Based on Data as of:	<u></u>		
Notes from Assessor:	<u></u>		

CHARACTERISTICS OF ASSESSMENT UNIT

Area of assessment unit: 196,052 square kilometers

Minimum assessed accumulation size: 50 mmboe (grown)

No. of discovered accumulations exceeding minimum size: Oil: 0 Gas: 0

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

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

1st 3rd	<u></u>	2nd 3rd	<u></u>	3rd 3rd	<u></u>
---------	---------	---------	---------	---------	---------

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

1st 3rd	<u></u>	2nd 3rd	<u></u>	3rd 3rd	<u></u>
---------	---------	---------	---------	---------	---------

ANALOGS USED IN ESTIMATING INPUT

<u>Purpose</u>	<u>Analog or Analog Set</u>
1 <u>Number & Sizes</u>	<u>Used edited analog set from the Arctic Platform AU consisting of:</u> <u>Extensional structural setting, continental crustal system,</u> <u>rifted passive margin and rift sag architecture, and</u> <u>basement-involved block structures or extensional grabens</u> <u>trap type (salt-induced structures not included).</u>
2 <u></u>	<u></u>
3 <u></u>	<u></u>
4 <u></u>	<u></u>

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

North Chukchi-Wrangel Foreland Basin, 12580101

Probability of occurrence (0-1.0)

Scenario Probability:

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

<u>Attribute</u>	<u>Probability of occurrence (0-1.0)</u>
1. CHARGE: Adequate petroleum charge:	<u>0.5</u>
2. ROCKS: Adequate reservoirs, traps, and seals:	<u>0.8</u>
3. TIMING OF GEOLOGIC EVENTS: Favorable timing:	<u>0.6</u>
Assessment-Unit GEOLOGIC Probability (Product of 1, 2, and 3):	<u>0.240</u>

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) <u>1</u>	median <u>20</u>	maximum <u>80</u>
Oil/Gas Mix:	minimum (>0) <u>0</u>	mode <u>0.1</u>	maximum <u>0.3</u>
	<u>X</u> # of oil accumulations / # of total accumulations		
	# of oil accumulations / # of gas accumulations		
	# of gas accumulations / # of oil accumulations		
Oil Accumulations:	minimum (>0) <u>0</u>	median <u>2</u>	maximum <u>24</u>
Gas Accumulations:	minimum (>0) <u>1</u>	median <u>17</u>	maximum <u>80</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 (mmbb):	minimum <u>50</u>	median <u>70</u>	maximum <u>4000</u>
Gas in Gas Accumulations (bcfg):	minimum <u>300</u>	median <u>600</u>	maximum <u>40000</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>50</u>	<u>1400</u>	<u>20000</u>
NGL/gas ratio (bnlq/mmcf):	<u>2</u>	<u>16</u>	<u>90</u>
<u>Gas Accumulations:</u>	minimum	median	maximum
Liquids/gas ratio (bliq/mmcf):	<u>1</u>	<u>13</u>	<u>150</u>

SELECTED ANCILLARY DATA FOR UNDISCOVERED ACCUMULATIONS

(variations in the properties of undiscovered accumulations)

<u>Oil Accumulations:</u>	minimum	median	maximum
API gravity (degrees):	<u>1</u>	<u>38</u>	<u>55</u>
Viscosity (centipoise)	<u>0.01</u>	<u>2.9</u>	<u>30</u>
Sulfur content of oil (%):	<u>0</u>	<u>0.3</u>	<u>2</u>
Depth (m) of water (if applicable):	<u>20</u>	<u>200</u>	<u>2500</u>

	minimum	F75	median	F25	maximum
Drilling Depth (m):	<u>500</u>		<u>2000</u>		<u>5000</u>

<u>Gas Accumulations:</u>	minimum	median	maximum
Inert gas content (%):	<u>0</u>	<u>2</u>	<u>10</u>
Carbon dioxide content (%):	<u>0</u>	<u>1.4</u>	<u>10</u>
Hydrogen sulfide content (%):	<u>0</u>	<u>0.4</u>	<u>2</u>
Depth (m) of water (if applicable):	<u>20</u>	<u>200</u>	<u>2500</u>

	minimum	F75	median	F25	maximum
Drilling Depth (m):	<u>500</u>		<u>2000</u>		<u>6000</u>

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

North Chukchi-Wrangel Foreland Basin, 12580101

ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO ARCTIC AREA

1 North of Arctic Circle

100 area % of the AU

Oil in Oil Accumulations: 100 volume % of the AU

Gas in Gas Accumulations: 100 volume % of the AU

2 South of Arctic Circle

 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 COUNTRIES

1 Offshore

100 area % of the AU

Oil in Oil Accumulations: 100 volume % of the AU

Gas in Gas Accumulations: 100 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

3 Onshore portion of:

_____ area % of the AU

Oil in Oil Accumulations: _____ volume % of the AU

Gas in Gas Accumulations: _____ 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