

Supplementary Appendix 1. Assessment input data for the Eureka Structures Assessment Unit.

[MMBO, million barrels of oil; BCFG, billion cubic feet of gas; MMBNGL, million barrels of natural-gas liquids; MMBOE, million barrels of oil equivalent; NGL, natural gas liquids; CFG/BO, cubic feet of gas per barrel of oil; BNGL/MMCFG, barrels of natural gas liquids per million cubic feet of gas; BLIQ/MMCFG, barrels of liquids per million cubic feet of gas; AU, assessment unit; TPS, total petroleum system. F75 denotes a 75-percent chance; F25 denotes a 25-percent chance.]

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

**IDENTIFICATION INFORMATION**

Assessment Geologist:	C.J. Schenk	Date:	13-Dec-07
Region:	North America	Number:	5
Province:	West Greenland-East Canada	Number:	5208
Total Petroleum System:	Mesozoic-Cenozoic Composite	Number:	520801
Assessment Unit:	Eureka Structures	Number:	52080101
Scenario:		Number:	
Based on Data as of:			
Notes from Assessor:			

**CHARACTERISTICS OF ASSESSMENT UNIT**

Area of assessment unit: 146,000 square kilometers

Minimum assessed accumulation size: 50 MMBOE (grown)

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

<b>Uncertainty Class:</b>	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>
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Median size (grown) of discovered gas accumulations (BCFG):

1st 3rd	<u>          </u>	2nd 3rd	<u>          </u>	3rd 3rd	<u>          </u>
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## ANALOGS USED IN ESTIMATING INPUT

<u>Purpose</u>	<u>Analog or Analog Set</u>
1 <u>Numbers of Accumulations</u>	Compressional structural setting _____ _____
2 <u>Sizes of Accumulations</u>	Compressional structural setting _____ _____
3 <u>Composition</u>	World averages _____ _____
4 _____	_____ _____ _____
Assessment Unit (name, no.) Scenario (name, no.)	Eurekan Structures, 52080101 _____

**Scenario Probability:**

Probability of occurrence (0-1.0)

\_\_\_\_\_

### 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. <b>CHARGE:</b> Adequate petroleum charge:	0.5
2. <b>ROCKS:</b> Adequate reservoirs, traps, and seals:	1.0
3. <b>TIMING OF GEOLOGIC EVENTS:</b> Favorable timing:	0.5
<b>Assessment-Unit GEOLOGIC Probability</b> (Product of 1, 2, and 3):	0.25

## 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>35</u>	maximum	<u>150</u>
Oil/Gas Mix:	minimum (>0)	<u>10</u>	mode	<u>50</u>	maximum	<u>90</u>
	X	no. of oil accumulations / no. of total accumulations				
		no. of oil accumulations / no. of gas accumulations				
		no. of gas accumulations / no. of oil accumulations				
Oil Accumulations:	minimum (>0)	<u>1</u>	median	<u>16</u>	maximum	<u>135</u>
Gas Accumulations:	minimum (>0)	<u>1</u>	median	<u>16</u>	maximum	<u>135</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>50</u>	median	<u>120</u>	maximum	<u>5000</u>
Gas in Gas Accumulations (BCFG):	minimum	<u>300</u>	median	<u>720</u>	maximum	<u>30000</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>1000</u>	<u>20000</u>
NGL/gas ratio (bnl/mmcf):	<u>5</u>	<u>25</u>	<u>80</u>
<u>Gas Accumulations:</u>	minimum	median	maximum
NGL/gas ratio (BNGL/MMCFG):	<u>4</u>	<u>25</u>	<u>75</u>

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## SELECTED ANCILLARY DATA FOR UNDISCOVERED ACCUMULATIONS

(variations in the properties of undiscovered accumulations)

<u>Oil Accumulations:</u>	minimum		median		maximum
API gravity (degrees):	<u>23</u>		<u>40</u>		<u>55</u>
Viscosity (centipoise)	<u>120</u>		<u>280</u>		<u>8200</u>
Sulfur content of oil (%):	<u>0.24</u>		<u>0.7</u>		<u>5</u>
Depth (m) of water (if applicable):	<u>0</u>		<u>600</u>		<u>1000</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>1.5</u>		<u>3.8</u>		<u>17</u>
Carbon dioxide content (%):	<u>1.4</u>		<u>5</u>		<u>28</u>
Hydrogen sulfide content (%):	<u>0.7</u>		<u>1.5</u>		<u>6</u>
Depth (m) of water (if applicable):	<u>0</u>		<u>600</u>		<u>1000</u>
	minimum	F75	median	F25	maximum
Drilling Depth (m):	<u>500</u>		<u>2500</u>		<u>7000</u>

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## ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO ARCTIC AREA

### 1 North of Arctic Circle

100 area % of the AU

Oil in Oil Accumulations:	<u>100</u>	volume % of the AU
Gas in Gas Accumulations:	<u>100</u>	volume % of the AU

### 2 South of Arctic Circle

           area % of the AU

Oil in Oil Accumulations:	<u>          </u>	volume % of the AU
Gas in Gas Accumulations:	<u>          </u>	volume % of the AU

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## ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO COUNTRIES

1 Offshore

37.44 area % of the AU

Oil in Oil Accumulations:	<u>37</u>	volume % of the AU
Gas in Gas Accumulations:	<u>37</u>	volume % of the AU

2 Onshore portion of:

Greenland

0.26 area % of the AU

Oil in Oil Accumulations:	<u>0</u>	volume % of the AU
Gas in Gas Accumulations:	<u>0</u>	volume % of the AU

3 Onshore portion of:

Canada

62.3 area % of the AU

Oil in Oil Accumulations:	<u>63</u>	volume % of the AU
Gas in Gas Accumulations:	<u>63</u>	volume % of the AU

4 Onshore portion of:

                     area % of the AU

Oil in Oil Accumulations:	<u>                    </u>	volume % of the AU
Gas in Gas Accumulations:	<u>                    </u>	volume % of the AU

5 Onshore portion of:

                     area % of the AU

Oil in Oil Accumulations:	<u>                    </u>	volume % of the AU
Gas in Gas Accumulations:	<u>                    </u>	volume % of the AU

6 Onshore portion of:

                     area % of the AU

Oil in Oil Accumulations:	<u>                    </u>	volume % of the AU
Gas in Gas Accumulations:	<u>                    </u>	volume % of the AU

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## ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO PROVINCES

1 ONSHORE portion of: West Greenland-East Canada

0.26 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: West Greenland-East Canada

99.74 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: \_\_\_\_\_

\_\_\_\_\_ 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

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## 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

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## ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO ICE CONDITIONS

1 Province: West Greenland-East Canada

Permanent sea ice	_____	area % of the AU
Oil in Oil Accumulations:	_____	volume % of the AU
Gas in Gas Accumulations:	_____	volume % of the AU

Semi-permanent sea ice	100	area % of the AU
Oil in Oil Accumulations:	100	volume % of the AU
Gas in Gas Accumulations:	100	volume % of the AU

2 Province: \_\_\_\_\_

Permanent sea ice	_____	area % of the AU
Oil in Oil Accumulations:	_____	volume % of the AU
Gas in Gas Accumulations:	_____	volume % of the AU

Semi-permanent sea ice	_____	area % of the AU
Oil in Oil Accumulations:	_____	volume % of the AU
Gas in Gas Accumulations:	_____	volume % of the AU

3 Province: \_\_\_\_\_

Permanent sea ice	_____	area % of the AU
Oil in Oil Accumulations:	_____	volume % of the AU
Gas in Gas Accumulations:	_____	volume % of the AU

Semi-permanent sea ice	_____	area % of the AU
Oil in Oil Accumulations:	_____	volume % of the AU
Gas in Gas Accumulations:	_____	volume % of the AU