

Supplementary Appendix 2. Assessment input data for the Northwest Greenland Rifted Margin 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:	Northwest Greenland Rifted Margin	Number:	52080102
Scenario:		Number:	
Based on Data as of:			
Notes from Assessor:			

**CHARACTERISTICS OF ASSESSMENT UNIT**

Area of assessment unit: 286,000 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>    X    </u>	<u>    4    </u>
Seismic	<u>          </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>	Rift-Sag
2 <u>Sizes of Accumulations</u>	Rift-Sag
3 <u>Ancillary Data</u>	World averages
4 _____	
Assessment Unit (name, no.)	Northwest Greenland Rifted Margin, 52080102
Scenario (name, no.)	

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. <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:	1.0
<b>Assessment-Unit GEOLOGIC Probability</b> (Product of 1, 2, and 3):	0.50

## 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>60</u>	maximum	<u>250</u>
Oil/Gas Mix:	minimum (>0)	<u>10</u>	mode	<u>60</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>30</u>	maximum	<u>225</u>
Gas Accumulations:	minimum (>0)	<u>1</u>	median	<u>27</u>	maximum	<u>225</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>110</u>	maximum	<u>10000</u>
Gas in Gas Accumulations (BCFG):	minimum	<u>300</u>	median	<u>660</u>	maximum	<u>60000</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>200</u>	<u>650</u>	<u>10000</u>
NGL/gas ratio (bngl/mmcf):	<u>4</u>	<u>20</u>	<u>90</u>
<u>Gas Accumulations:</u>	minimum	median	maximum
Liquids/gas ratio (bliq/mmcf):	<u>2</u>	<u>20</u>	<u>85</u>

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Scenario (name, no.)

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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>400</u>		<u>800</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>400</u>		<u>800</u>
	minimum	F75	median	F25	maximum
Drilling Depth (m):	<u>500</u>		<u>2500</u>		<u>9000</u>

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## ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO ARCTIC AREA

### 1 North of Arctic Circle

56.01 area % of the AU

Oil in Oil Accumulations: 56.01 volume % of the AU

Gas in Gas Accumulations: 56.01 volume % of the AU

### 2 South of Arctic Circle

43.93 area % of the AU

Oil in Oil Accumulations: 43.93 volume % of the AU

Gas in Gas Accumulations: 43.93 volume % of the AU

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Scenario (name, no.)

## ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO COUNTRIES

## 1 Offshore

94.99 area % of the AU

Oil in Oil Accumulations: 94.99 volume % of the AU

Gas in Gas Accumulations: 94.99 volume % of the AU

2 Onshore portion of:

## Greenland

5.01 area % of the AU

Oil in Oil Accumulations: 5.01 volume % of the AU

Gas in Gas Accumulations: 5.01 volume % of the AU

3 Onshore portion of:

Canada

0 area % of the AU

Oil in Oil Accumulations: 0 volume % of the AU

Gas in Gas Accumulations: 0 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

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Scenario (name, no.)

## ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO PROVINCES

1 ONSHORE portion of: West Greenland-East Canada

5.01 area % of the AU

Oil in Oil Accumulations: 5.01 volume % of the AU

Gas in Gas Accumulations: 5.01 volume % of the AU

OFFSHORE portion of: West Greenland-East Canada

94.99 area % of the AU

Oil in Oil Accumulations: 94.99 volume % of the AU

Gas in Gas Accumulations: 94.99 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

Assessment Unit (name, no.)

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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

Assessment Unit (name, no.)

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Scenario (name, no.)

\_\_\_\_\_

## ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO ICE CONDITIONS

1 Province: West Greenland-East Canada

Permanent sea ice	area % of the AU
1979-1999	10.1
2000-2019	10.1
2020-2039	10.1
2040-2059	10.1
2060-2079	10.1
2080-2099	10.1
2100	10.1

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
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Oil in Oil Accumulations: 100 volume % 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
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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
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Oil in Oil Accumulations: volume % of the AU

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

Semi-permanent sea ice	area % of the AU
1979-1983	1.0
1984-1988	1.0
1989-1993	1.0
1994-1998	1.0
1999-2003	1.0
2004-2008	1.0
2009-2013	1.0
2014-2018	1.0
2019-2023	1.0
2024-2028	1.0
2029-2033	1.0
2034-2038	1.0
2039-2043	1.0
2044-2048	1.0
2049-2053	1.0
2054-2058	1.0
2059-2063	1.0
2064-2068	1.0
2069-2073	1.0
2074-2078	1.0
2079-2083	1.0
2084-2088	1.0
2089-2093	1.0
2094-2098	1.0
2099-2103	1.0
2104-2108	1.0
2109-2113	1.0
2114-2118	1.0
2119-2123	1.0
2124-2128	1.0
2129-2133	1.0
2134-2138	1.0
2139-2143	1.0
2144-2148	1.0
2149-2153	1.0
2154-2158	1.0
2159-2163	1.0
2164-2168	1.0
2169-2173	1.0
2174-2178	1.0
2179-2183	1.0
2184-2188	1.0
2189-2193	1.0
2194-2198	1.0
2199-2203	1.0
2204-2208	1.0
2209-2213	1.0
2214-2218	1.0
2219-2223	1.0
2224-2228	1.0
2229-2233	1.0
2234-2238	1.0
2239-2243	1.0
2244-2248	1.0
2249-2253	1.0
2254-2258	1.0
2259-2263	1.0
2264-2268	1.0
2269-2273	1.0
2274-2278	1.0
2279-2283	1.0
2284-2288	1.0
2289-2293	1.0
2294-2298	1.0
2299-2303	1.0
2304-2308	1.0
2309-2313	1.0
2314-2318	1.0
2319-2323	1.0
2324-2328	1.0
2329-2333	1.0
2334-2338	1.0
2339-2343	1.0
2344-2348	1.0
2349-2353	1.0
2354-2358	1.0
2359-2363	1.0
2364-2368	1.0
2369-2373	1.0
2374-2378	1.0
2379-2383	1.0
2384-2388	1.0
2389-2393	1.0
2394-2398	1.0
2399-2403	1.0
2404-2408	1.0
2409-2413	1.0
2414-2418	1.0
2419-2423	1.0
2424-2428	1.0
2429-2433	1.0
2434-2438	1.0
2439-2443	1.0
2444-2448	1.0
2449-2453	1.0
2454-2458	1.0
2459-2463	1.0
2464-2468	1.0
2469-2473	1.0
2474-2478	1.0
2479-2483	1.0
2484-2488	1.0
2489-2493	1.0
2494-2498	1.0
2499-2503	1.0
2504-2508	1.0
2509-2513	1.0
2514-2518	1.0
2519-2523	1.0
2524-2528	1.0
2529-2533	1.0
2534-2538	1.0
2539-2543	1.0
2544-2548	1.0
2549-2553	1.0
2554-2558	1.0
2559-2563	1.0
2564-2568	1.0
2569-2573	1.0
2574-2578	1.0
2579-2583	1.0
2584-2588	1.0
2589-2593	1.0
2594-2598	1.0
2599-2603	1.0
2604-2608	1.0
2609-2613	1.0
2614-2618	1.0
2619-2623	1.0
2624-2628	1.0
2629-2633	1

Oil in Oil Accumulations: volume % of the AU

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