

# 5 Petroleum resources



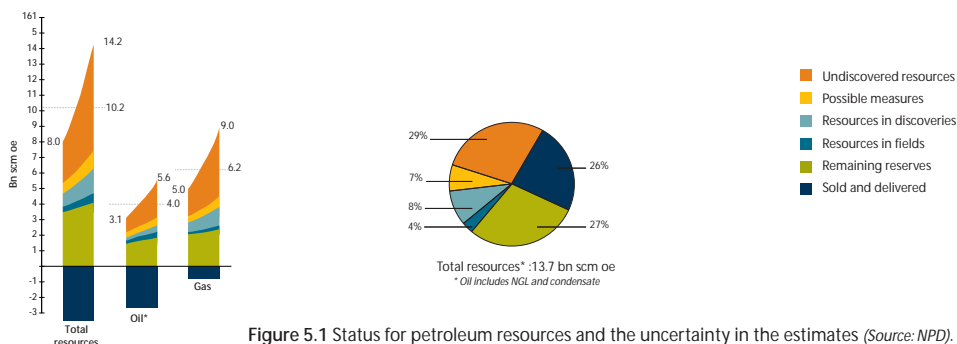


Figure 5.1 Status for petroleum resources and the uncertainty in the estimates (Source: NPD).

Discovered and undiscovered resources on the NCS are expected to total just over 13.7 bn scm oe. Production to date amounts to 3.5 bn scm oe, corresponding to 26 per cent of total resources.

Remaining recoverable resources total 10.2 bn scm oe, of which proven reserves total 5.4 bn scm oe. Undiscovered petroleum resources on the NCS are estimated at 3.9 bn scm oe. In addition, possible future measures for improving resource utilisation from fields are expected to add a total of 900 mill scm oe.

Resources in the order of 10-13 mill scm of recoverable oil and just under 10 mill scm oe of gas were proven in 2002. Overall petroleum production from the NCS in 2002 amounted to 259 mill scm oe. Cumulative output since petroleum production began off Norway in 1971 amounts to 3.5 bn scm oe from 57 fields.

A simple outline, including the uncertainty range in the estimates, is provided in figure 5.1. The following provides a more detailed presentation.

Table 5.1 presents total petroleum resources on the NCS, classified in accordance with the NPD's resource classification system and divided between three geographic regions. The future potential for improved resource utilisation, put at 900 mill scm oe, is included in total resources but not broken down by region.

Undiscovered petroleum resources on the NCS are put at 3.9 bn scm oe, with a large uncertainty range of 1.5 to seven bn scm oe. About 30 per cent of this total is thought to lie in the North Sea, 45 per cent in the Norwegian Sea and 25 per cent in the Barents Sea. Gas accounts for 64 per cent of the total.

Remaining reserves declined by a total of 257 mill scm oe in 2002. Gas reserves fell by 72 bn scm, while the recorded reduction in oil reserves was 195 mill scm. Resources in discoveries sank by 149 mill scm oe, with estimated resources in fields rising by almost 60 mill scm oe.

A total of 6.8 bn scm oe has been found in the North Sea. Of this, 3.2 bn scm oe has been produced and remaining reserves amount to 2.9 bn scm oe. Oil accounts for about 40 per cent of this. Remaining reserves in the North Sea declined by about 210 mill scm oe as a result of production in 2002. Three new fields have been approved for development and classified as reserves. This means that contingent resources in discoveries declined correspondingly. Contingent resources in fields rose because of planned projects to improve recovery.

Discoveries in the Norwegian Sea total 1.8 bn scm oe, of which 287 mill scm oe has so far been produced. Remaining reserves total some 700 mill scm oe, with crude oil accounting for 34 per cent. Remaining reserves declined by 40 mill scm oe, primarily because of production in 2002. Contingent resources in discoveries were reduced by 69 mill scm oe following a downward adjustment of resource estimates for some discoveries.

Discoveries in the Barents Sea total 229 mill scm oe. The PDO for Snøhvit has been approved, with its resources reclassified as reserves. Resources in Barents Sea discoveries have been reduced as a consequence of lower expectations about the resource base.

Table 5.1 Resource accounts at 1 January 2003 (Source: NPD)

Total recoverable potential	Resource accounts at 31.12.02					Changes from 2001				
	Oil	Gas	NGL	Cond	Total	Oil	Gas	NGL	Cond	Total
Project status category	mill scm	bn scm	mill tonnes	mill scm	mill scm oe	mill scm	bn scm	mill tonnes	mill scm	mill scm oe
Produced	2 542	796	63	59	3 517	174	66	6	9	259
Remaining reserves**	1 306	2 117	118	130	3 776	-195	-72	7	-1	-257
Contingent resources in fields	252	198	22	12	504	31	25	2	-4	57
Contingent resources in discoveries	170	852	16	64	1 115	-19	-120	-1	-9	-149
Possible future measures for improved recovery*	400	500			900	-250	0			0
Undiscovered	1 420	2 510			3 930					0
<b>Total NCS</b>	<b>6 090</b>	<b>6 974</b>	<b>219</b>	<b>265</b>	<b>13 743</b>	<b>-10</b>	<b>-100</b>	<b>14</b>	<b>-5</b>	<b>-89</b>
<b>North Sea</b>										
Produced	2 282	778	60	55	3 230	132	57	4	6	202
Remaining reserves**	1 071	1 677	65	29	2 902	-153	-62	3	-3	-214
Contingent resources in fields	227	144	16	5	407	26	29	4	-1	61
Contingent resources in discoveries	102	170	3	23	301	0	-34	0	-1	-36
Undiscovered	630	570			1 200					0
<b>Total</b>	<b>4 313</b>	<b>3 339</b>	<b>145</b>	<b>112</b>	<b>8 039</b>	<b>5</b>	<b>-11</b>	<b>10</b>	<b>1</b>	<b>14</b>
<b>Norwegian Sea</b>										
Produced	259	19	2	4	287	42	9	1	3	56
Remaining reserves**	235	277	48	83	686	-43	-8	5	2	-40
Contingent resources in fields	17	50	6	6	85	-3	-8	-1	-4	-16
Contingent resources in discoveries	56	667	12	40	786	-14	-48	-1	-6	-69
Undiscovered	480	1 270			1 750					0
<b>Total</b>	<b>1 047</b>	<b>2 282</b>	<b>69</b>	<b>134</b>	<b>3 594</b>	<b>-17</b>	<b>-54</b>	<b>4</b>	<b>-5</b>	<b>-69</b>
<b>Barents Sea</b>										
Produced	0	0	0	0	0	0	0	0	0	0
Remaining reserves**	0	161	5	18	189	0	-3	0	0	-3
Contingent resources in fields	8	4	0	1	13	8	4	0	1	13
Contingent resources in discoveries	12	16	0	0	28	-6	-38	0	-1	-45
Undiscovered	310	670			980					0
<b>Total</b>	<b>330</b>	<b>851</b>	<b>5</b>	<b>19</b>	<b>1 209</b>	<b>2</b>	<b>-36</b>	<b>0</b>	<b>-1</b>	<b>-35</b>

\* Resources from future IOR measures are registered at the aggregate level, and no division has been made between the various regions.

\*\* Includes resource categories 1, 2 and 3 (see the explanation on page 69).

