

16 Future developments

(Discoveries in the planning phase with a development decision expected within four years. This list does not include finds included under new resources in existing fields.)

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2/12-1 Freja

| | | | |
|-------------------------------------|--|--|-----|
| Block and production licence | Block 2/12 - production licence 113. Awarded 1985 | | |
| Operator | Amerada Hess Norge AS | | |
| Licensees | Amerada Hess Norge AS | | 50% |
| | Statoil ASA | | 30% |
| | Dong Norge AS | | 20% |
| Resources | Oil: 2.4 mill scm Gas: 0.4 bn scm NGL: 0.1 mill tonnes | | |

Discovered in 1987, Freja lies east of Valhall in about 70 metres of water close to the boundary with the Danish continental shelf. The development concept under consideration involves a subsea installation tied back to Valhall for processing and transport.

3/7-4 Trym

| | | | |
|-------------------------------------|---|--|-----|
| Block and production licence | Block 3/7 - production licence 147. Awarded 1988. | | |
| Operator | A/S Norsk Shell | | |
| Licensees | A/S Norske Shell | | 50% |
| | Statoil ASA | | 30% |
| | Dong Norge AS | | 20% |
| Resources | Gas: 3.3 bn scm Condensate: 0.8 mill scm | | |

This small gas/condensate find proven in 1990 lies close to the boundary with the Danish continental shelf. Plans call for it to be developed with a subsea installation. Gas production would be piped eight km to Denmark's Harald platform.

15/5-1 Dagny

| | | | |
|---------------------------------------|--|---------------|---------------|
| Blocks and production licences | Block 15/6 - production licence 029. Awarded 1969. Block 15/5 - production licence 048. Awarded 1977. | | |
| Operator | Statoil ASA | | |
| Licensees | | PL 029 | PL 048 |
| | Statoil ASA | | 68.9% |
| | TotalFinaElf Exploration Norge AS | | 21.8% |
| | Norsk Hydro Produksjon a.s | | 9.3% |
| | Esso Expl & Prod Norway AS | 100% | |
| Resources | Gas: 3.6 bn scm NGL: 0.5 mill tonnes Condensate: 1 mill scm | | |

Proven in 1978, Dagny lies north of Sleipner West. A possible development solution involves a subsea production system tied back to the A or T platforms on Sleipner East when capacity becomes available on one or other of these installations.

15/5-2

| | | |
|-------------------------------------|---|-------|
| Block and production licence | Block 15/5 - production licence 048. Awarded 1977. | |
| Operator | Statoil ASA | |
| Licensees | Statoil ASA | 68.9% |
| | TotalFinaElf Exploration Norge AS | 21.8% |
| | Norsk Hydro Produksjon a.s | 9.3% |
| Resources | Gas: 5.5 bn scm NGL: 0.1 mill tonnes Condensate: 0.2 mill scm | |

Proven in 1978, 15/5-2 lies north of 15/5-1 Dagny. It will probably be developed with a subsea system in conjunction with Dagny.

15/9-19 S Volve

| | | |
|-------------------------------------|--|-------|
| Block and production licence | Block 15/9 - production licence 046. Awarded 1976. | |
| Operator | Statoil ASA | |
| Licensees | Statoil ASA | 52.6% |
| | Esso Expl & Prod Norway AS | 28.0% |
| | TotalFinaElf Exploration Norge AS | 10.0% |
| | Norsk Hydro Produksjon a.s | 9.4% |
| Resources | Oil: 7.5 mill scm Gas: 0.8 bn scm NGL: 0.2 mill tonnes | |

Proven in 1993, Volve lies in the Sleipner area. Possible development solutions involve a production ship or jack-up platform.

15/12-12 Rev

| | | |
|-------------------------------------|---|-------|
| Block and production licence | Block 15/12 - production licence 038. Awarded 1975. | |
| Operator | Norsk Hydro Produksjon a.s ² | |
| Licensees | Norsk Hydro Produksjon a.s ² | 42.0% |
| | Petoro AS ¹ | 30.0% |
| | Statoil ASA | 28.0% |
| Resources | Oil: 6.6 mill scm Gas: 2.7 bn scm | |

¹ Petoro AS serves as the licensee for the SDFI.

² PGS has acquired Norsk Hydro's interest in production licence 038, and could take over the operatorship (subject to government approval).

This oil and gas discovery south of Varg was proven in 2001. A possible development solution is a subsea installation tied back to the Varg production ship.

24/6-2 Kameleon

| | | | | |
|---------------------------------------|---|---------------|---------------|---------------|
| Blocks and production licences | Block 24/6 - production licences 088 and 203. Awarded 1984 and 1996 respectively. Block 25/4 - production licences 036 (awarded 1971) and 203. | | | |
| Operator | Norsk Hydro Produksjon a.s | | | |
| Licensees | | PL 036 | PL 088 | PL 203 |
| (rounded off to two decimal places) | Norsk Hydro Produksjon a.s | 28.53% | | 35% |
| | Norske Conoco A/S | | | 20% |
| | Det Norske Oljeselskap AS | | | 15% |
| | AS Uglan Rederi | 0.32% | | |
| | TotalFinaElf Exploration Norge AS | 24.24% | 50% | |
| | Marathon Petroleum AS | 46.90% | 50% | 30% |
| Resources | Oil: 7.9 mill scm Gas: 3.9 bn scm | | | |

¹ Petoro AS serves as the licensee for the SDFI.

Proven in 1998, Kameleon lies just to the west of Heimdal. It comprises a thin oil zone with a gas cap. A number of development solutions have been considered by the licensees, including the use of a production ship to recover the oil and inject the gas back into the reservoir.

25/4-3 Gekko

| | | | | |
|-------------------------------------|--|--|--|-------|
| Block and production licence | Block 25/4 - production licence 203. Awarded 1996. | | | |
| Operator | Norsk Hydro Produksjon a.s | | | |
| Licensees | Norsk Hydro Produksjon a.s | | | 35.0% |
| | Marathon Petroleum Norge AS | | | 30.0% |
| | Norske Conoco A/S | | | 20.0% |
| | Det Norske Oljeselskap AS | | | 15.0% |
| Resources | Gas: 7.6 bn scm Condensate: 1.3 mill scm | | | |

This field was discovered as early as 1974 with well 25/4-3, but has only recently been identified as a gas find. Various production solutions are currently under consideration, including a subsea installation tied back to Heimdal.

25/5-3 Skirne

| | | | | |
|-------------------------------------|--|--|--|-----|
| Block and production licence | Block 25/5 - production licence 102. Awarded 1985. | | | |
| Operator | TotalFinaElf Exploration Norge AS | | | |
| Licensees | TotalFinaElf Exploration Norge AS | | | 40% |
| | Petoro AS ¹ | | | 30% |
| | Marathon Petroleum Norge AS | | | 20% |
| | Norsk Hydro Produksjon a.s | | | 10% |
| Resources | Oil: 0.9 mill scm Gas: 4.3 bn scm | | | |

¹ Petoro AS serves as the licensee for the SDFI.

Plans call for Skirne, proven in 1990, to be developed together with Byggve using a subsea installation tied back to Heimdal. The MPE received a plan for development and operation of both fields in March 2002.

25/5-4 Byggve

| | | | |
|-------------------------------------|--|-----|--|
| Block and production licence | Block 25/5 - production licence 102. Awarded 1985. | | |
| Operator | TotalFinaElf Exploration Norge AS | | |
| Licensees | TotalFinaElf Exploration Norge AS | 40% | |
| | Petoro AS ¹ | 30% | |
| | Marathon Petroleum Norge AS | 20% | |
| | Norsk Hydro Produksjon a.s | 10% | |
| Resources | Oil: 0.7 mill scm Gas: 2.4 bn scm | | |

¹ Petoro AS serves as the licensee for the SDFI.

Plans call for Byggve, proven in 1991, to be developed together with Skirne using a subsea installation tied back to Heimdal. The MPE received a plan for development and operation of both fields in March 2002.

25/5-5

| | | | |
|---------------------------------------|--|--------------|--------------|
| Blocks and production licences | Block 25/5 - production licence 102. Awarded 1985. Block 25/4 - production licence 203. Awarded 1996. | | |
| Operator | TotalFinaElf Exploration Norge AS | | |
| Licensees | | PL102 | PL203 |
| | TotalFinaElf Exploration Norge AS | 40% | |
| | Petoro AS ¹ | 30% | |
| | Marathon Petroleum Norge AS | 20% | 30% |
| | Norsk Hydro Produksjon a.s | 10% | 35% |
| | Norske Conoco A/S | | 20% |
| | Det Norske Oljeselskap AS | | 15% |
| Resources | Oil: 4.3 mill scm | | |

¹ Petoro AS serves as the licensee for the SDFI.

This 1995 discovery lies about six km east of Heimdal. It extends marginally into block 25/4. A development based on a subsea installation tied back to other infrastructure is under consideration.

25/11-16

| | | |
|-------------------------------------|---|-----|
| Block and production licence | Block 25/11 - production licence 169. Awarded 1991. | |
| Operator | Norsk Hydro Produksjon a.s | |
| Licensees | Norsk Hydro Produksjon a.s | 45% |
| | Petoro AS ¹ | 30% |
| | Statoil ASA | 15% |
| | Esso Expl & Prod Norway AS | 10% |
| Resources | Oil: 3.6 mill scm | |

¹ Petoro AS serves as the licensee for the SDFI.

Proven in 1992, this oil discovery lies south-west of Grane. Development is planned with a subsea installation tied back to Grane after production from the latter field goes off plateau.

30/6-17 Alpha Cook

| | | |
|-------------------------------------|--|-----|
| Block and production licence | Block 30/6 - production licence 053. Awarded 1979. | |
| Operator | Norsk Hydro Produksjon a.s | |
| Licensees | Petoro AS ¹ | 35% |
| | Norsk Hydro Produksjon a.s | 34% |
| | Statoil ASA | 14% |
| | TotalFinaElf Exploration Norge AS | 10% |
| | Mobil Development Norway A/S | 7% |
| Resources | Oil: 0.3 mill scm Gas: 1.7 bn scm | |

¹ Petoro AS serves as the licensee for the SDFI.

Proven in 1986, Alpha Cook is a small oil and gas find in the Cook formation beneath the main reservoir in Oseberg. It could be produced with a long well drilled from Oseberg B.

30/6-18 Kappa

| | | |
|---------------------------------------|--|--------|
| Blocks and production licences | Block 30/6 - production licence 053. Awarded 1979. Block 30/9 - production licence 079. Awarded 1982. | |
| Operator | Norsk Hydro Produksjon a.s | |
| Licensees | Petoro AS ¹ | 37.67% |
| (rounded off to two decimal places) | Norsk Hydro Produksjon a.s | 34.00% |
| | Statoil ASA | 14.00% |
| | TotalFinaElf Exploration Norge AS | 10.00% |
| | Mobil Development Norway A/S | 4.33% |
| Resources | Oil: 0.8 mill scm Gas: 2.7 bn scm Condensate: 0.2 mill scm | |

¹ Petoro AS serves as the licensee for the SDFI.

Proven in 1986, Kappa is an oil and gas discovery in a Statfjord formation structure west of Oseberg. Two new oil and gas discoveries were made nearby in 2001 - 30/6-26 (Gamma West) and 30/6-27, which is a northern extension of Kappa. A joint development of Kappa and the new discoveries is being considered on the basis of a subsea installation and wellstream transfer to Oseberg for processing.

30/9-19 Delta

| | | | |
|---------------------------------------|--|---------------|---------------|
| Blocks and production licences | Block 30/8 - production licence 190. Awarded 1993. Block 30/9 - production licence 079. Awarded 1982. | | |
| Operator | Norsk Hydro Produksjon a.s | | |
| Licensees | | PL 190 | PL 079 |
| | Petoro AS ¹ | 40% | 42% |
| | Norsk Hydro Produksjon a.s | 40% | 34% |
| | Statoil ASA | | 14% |
| | TotalFinaElf Exploration Norge AS | 20% | 10% |
| Resources | Oil 1.6 mill scm Gas: 4.9 bn scm | | |

¹ Petoro AS serves as the licensee for the SDFI.

Delta was proven in 1998 as a gas find with a thin oil zone in the Tarbert formation. This structure could be developed with a long production well from the Oseberg field centre, but a subsea installation tied back to Oseberg is also being considered. The bulk of the resources in this find lie in production licence 079, with a small extension into production licence 190.

35/9-1 Gjøa

| | | | |
|--------------------------------------|--|--|-----|
| Blocks and production licence | Blocks 35/9 and 36/7 - production licence 153. Awarded 1988. | | |
| Operator | Norsk Hydro Produksjon a.s | | |
| Licensees | Petoro AS ¹ | | 30% |
| | Norsk Hydro Produksjon a.s | | 30% |
| | Statoil ASA | | 20% |
| | A/S Norske Shell | | 12% |
| | RWE-DEA Norge AS | | 8% |
| Resources | Oil: 6.5 mill scm Gas: 29.4 bn scm NGL: 1.5 mill tonnes | | |

¹ Petoro AS serves as the licensee for the SDFI.

The Gjøa field was proven in 1989 west of Florø and about 42 km north of Fram. Various development options are currently under consideration, including a possible unitisation with other resources in the Fram/Gjøa area.

6305/5-1 Ormen Lange

| | | | | |
|---------------------------------------|---|---------------|---------------|---------------|
| Blocks and production licences | Block 6305/7 - production licence 208. Awarded 1996. Blocks 6305/4 and 5 - production licence 209. Awarded 1996. Block 6305/8 - production licence 250. Awarded 1999. | | | |
| Operators | Norsk Hydro Produksjon a.s (development phase) A/S Norske Shell (production phase) | | | |
| Licensees | | PL 208 | PL 209 | PL 250 |
| | Petoro AS ¹ | 30% | 35% | 45.00% |
| | Norsk Hydro Produksjon a.s | | 25% | 14.78% |
| | A/S Norske Shell | 25% | 15% | 16.00% |
| | BP Norge A/S | 45% | | 9.44% |
| | Statoil ASA | | 15% | 8.87% |
| | Esso Expl & Prod Norway AS | | 10% | 5.91% |
| Resources | Gas: 400 bn scm Condensate: 23.7 mill scm | | | |

¹ Petoro AS serves as the licensee for the SDFI.

Proven in 1997, the Ormen Lange gas discovery extends across production licences 208, 209 and 250. The find lies about 140 km west of Kristiansund.

Two principal development options are available: construction of a large floating production platform for full processing to sales gas and direct export southwards, or a subsea production facility – possibly with a small platform – tied back to a treatment facility on land with export from there. A plan for development and operation is due to be submitted in the fourth quarter of 2003, with gas production starting in the autumn of 2007.

6406/2-1 Lavrans

| | | | |
|-------------------------------------|--|--|-----|
| Block and production licence | Block 6406/2 - production licence 199. Awarded 1993. | | |
| Operator | Statoil ASA | | |
| Licensees | Statoil ASA | | 46% |
| | Petoro AS ¹ | | 27% |
| | Mobil Development Norway A/S | | 15% |
| | Norsk Hydro Produksjon a.s | | 12% |
| Resources | Gas: 13.4 bn scm NGL: 2.5 mill tonnes Condensate: 4.7 mill scm | | |

¹ Petoro AS serves as the licensee for the SDFI.

Proven in 1994-95, Lavrans lies about five to 10 km south of Kristin in 270-290 metres of water. It is located in production licence 199, part of Halten Bank West. Development could be based on a subsea installation tied back to Kristin, with rich gas being piped through Åsgard Transport to Kårstø for separation of the NGLs while condensate is processed on the Kristin platform. A tie-back of this kind would be accompanied by an adjustment of licence interests in Halten Bank West to reflect it. No development timetable has been clarified.

6407/1-2 +6407/1-3 Tyrihans South and North

| | | | |
|---------------------------------------|--|---------------|---------------|
| Blocks and production licences | Block 6407/1 - production licence 073. Awarded 1982. Block 6406/3 - production licence 091. Awarded 1984. | | |
| Operator | Statoil ASA | | |
| Licensees | | PL 091 | PL 073 |
| (rounded off to two decimal places) | Statoil ASA | 55.00% | 54.67% |
| | TotalFinaElf Exploration Norge AS | | 33.33% |
| | Norsk Hydro Produksjon a.s | 33.00% | 12.00% |
| | Mobil Development Norway A/S | 12.00% | |
| Resources | Oil: 16.6 mill scm Gas: 26.1 bn scm NGL: 3.6 mill tonnes | | |

This discovery comprises two structures – Tyrihans North and Tyrihans South – located about 40 km south of Åsgard in roughly 285 metres of water. The Tyrihans South gas find was proven in 1983. Tyrihans North, which also contains oil, followed in 1984.

A direct subsea tie-back to existing infrastructure on Åsgard is being considered. Plans call for rich gas to be piped through the Åsgard Transport system to a land terminal (Kollsnes/Kårstø) for separation of the NGLs. Development timing will depend on spare capacity in existing infrastructure as well as a sales solution for the gas. A small part of Tyrihans South extends into production licence 091, while Tyrihans North lies entirely within production licence 073.

6507/5-1 Skarv

| | | | | |
|---------------------------------------|---|---------------|---------------|---------------|
| Blocks and production licences | Blocks 6507/5 and 6 - production licence 212. Awarded 1996. Block 6507/3 - production licence 159. Awarded 1989. Block 6507/2 - production licence 262. Awarded 2000. | | | |
| Operator | BP Norge AS | | | |
| Licensees | | PL 159 | PL 212 | PL 262 |
| | BP Norge AS | | 30% | 30% |
| | Statoil ASA | 50% | 30% | 30% |
| | Enterprise Oil Norge AS | 40% | 25% | 25% |
| | Mobil Development Norway A/S | | 15% | 15% |
| | Norsk Hydro Produksjon a.s | 10% | | |
| Resources | Oil: 16.5 mill scm Gas: 33.8 bn scm NGL: 4.3 mill tonnes Condensate: 4.1 mill scm | | | |

Proven in 1998, Skarv lies in roughly 400 metres of water about 200 km off the Norwegian coast. It is primarily located in production licence 212, but also extends into production licence 262 and to a small extent into production licence 159. The earliest date when a plan for development and operation could be submitted to the authorities is the fourth quarter of 2002. Both a stand-alone concept and a long-distance tie-back are under consideration.

6608/10-6 Svale

| | | | |
|--------------------------------------|---|--|--------|
| Block and production licences | Block 6608/10 - production licence 128. Awarded 1986. | | |
| Operator | Statoil ASA | | |
| Licensees | Statoil ASA | | 40.45% |
| (rounded off to two decimal places) | Petoro AS ¹ | | 24.55% |
| | Norsk Hydro Produksjon a.s | | 13.50% |
| | Norsk Agip A/S | | 11.50% |
| | Enterprise Oil Norge AS | | 10.00% |
| Resources | Oil: 7 mill scm | | |

¹ Petoro AS serves as the licensee for the SDFI.

Located about 10 km north-east of Norne, the small Svale oil find was proven in 2000 and could be developed as a satellite of Norne in combination with other possible finds in the area. The probability of making finds in several nearby prospects has increased following the Svale discovery.