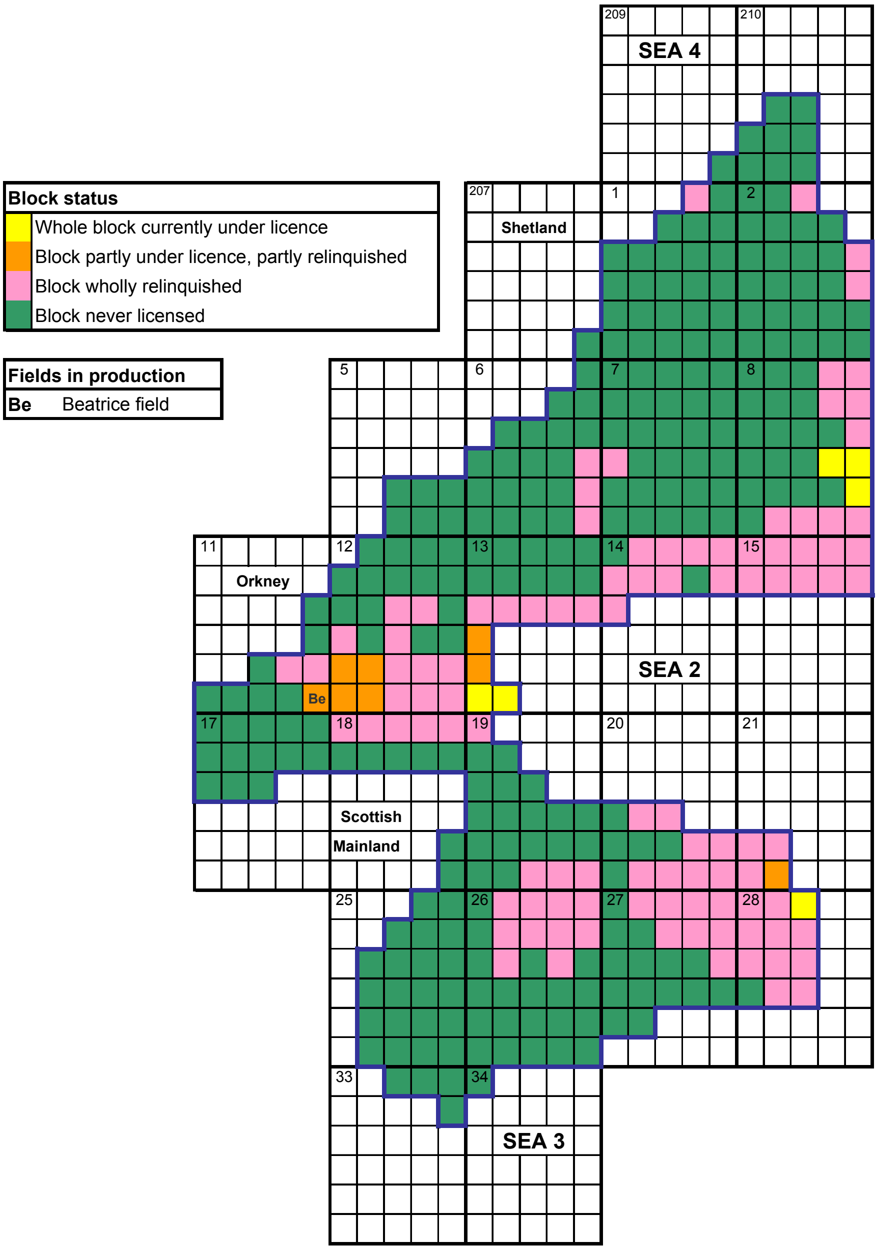
4 THE DRAFT PLAN AND ALTERNATIVES

4.1 Background

Blocks within the SEA 5 area were first offered for licensing in 1964. The area comprises some 382 blocks of which 6 are currently wholly under licence, 8 are partly licensed and partly relinquished, 101 have been licensed but are now wholly relinquished, and 267 which have not previously been licensed. Figure 4.1 provides a schematic representation of block licensing status.

Figure 4.1 – Schematic of blocks in the quadrants within the SEA 5 area, either currently licensed or potentially available for licensing



(Source: DTI website)

Overview of prospectivity in the SEA 5 area

The SEA 5 area includes components of 25 separate basinal, intrabasinal and platform structural elements, each with its own geological succession, which directly determines the hydrocarbon prospectivity of the area. These features are grouped into broad areas of prospectivity and summarised in Figure 4.2 overleaf and the text below:

- The Unst Basin in the north of the SEA 5 area, covers parts of Quadrants 209, 210, 1 and 2, and contains some minor potential for hydrocarbons. Where it lies close to the Shetland Islands, the potential reservoirs are probably too shallow to be prospective.

- To the south of the Unst Basin lie the:
  - East Shetland platform (covering parts of Quadrants 1, 2, 7 and 8)
  - The basins of the East & West Fair Isle (covering parts of Quadrants 5, 6 and 7)
  - The Dutch Bank Basin (covering parts of Quadrants 7 and 8)
  - The Fladen Ground Spur (covering part of Quadrant 8)

  All these areas (with a few exceptions) are thought to be no more than marginally prospective as only a relatively thin cover of younger rocks lies on an old basement over most of this area. This is also the case very close to Orkney.

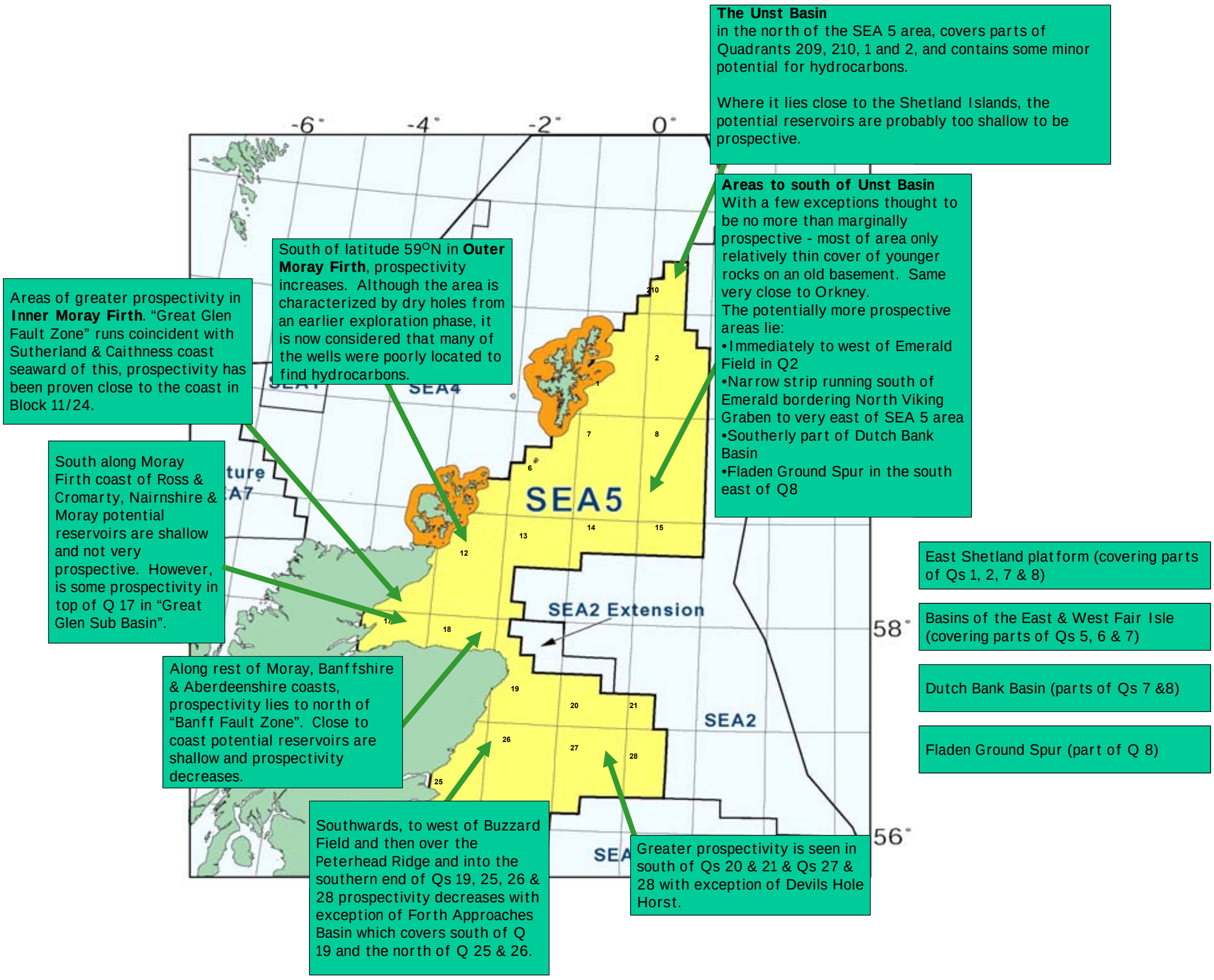
  The potentially more prospective area lies immediately to the west of the Emerald Field in Quadrant 2, and the narrow strip running south of this which borders the North Viking Graben on the very east of the SEA 5 area. The southerly portion of the Dutch Bank Basin shows greater prospectivity, as does the Fladen Ground Spur in the southeast of Quadrant 8. Some of these areas are already licensed.

- South of latitude 59°N in the Outer Moray Firth, the prospectivity increases. Although the area is characterised by dry holes from an earlier exploration phase, it is now considered that many of the wells were poorly located to find hydrocarbons.

- There are areas of greater prospectivity in the Inner Moray Firth. The Sutherland and Caithness coast runs coincident with the “Great Glen Fault Zone” and seaward of this, prospectivity has been proven close to the coast in Block 11/24. South along the Moray Firth coast of Ross and Cromarty, Nairnshire and Moray the potential reservoirs are shallow and not very prospective. However, there is some prospectivity in the top of Quadrant 17 in the “Great Glen Sub Basin”. Along the rest of the Moray, Banffshire and Aberdeenshire coasts, the prospectivity lies to the north of the “Banff Fault Zone”. Close to this coast, the potential reservoirs are shallow and prospectivity decreases.

- Southwards, to the west of Buzzard Field and then over the Peterhead Ridge and into the southern end of Quadrants 19, 25, 26 and 28 prospectivity decreases except in the Forth Approaches Basin which covers south of Quadrant 19 and the north of Quadrants 25 and 26. Greater prospectivity is seen in the south of Quadrants 20 and 21 and Quadrants 27 and 28 with the exception of the Devil’s Hole Horst.

Figure 4.2 – Summary of prospectivity in the SEA 5 area



4.2 Draft plan

The draft plan being proposed by the DTI, and considered in this Environmental Report, is to invite applications for and to offer Production Licences for hydrocarbon exploration and production in the marine areas of SEA 5 in a 23rd round of UKCS licensing. The draft plan includes all the blocks within the SEA 5 area, regardless of their hydrocarbon prospectivity. However, the areas within bay closure lines are excluded since these fall under a separate licensing regime. The possible scale of exploration and development activity which could result from a 23rd round of UKCS licensing covering the SEA 5 area are summarised below.

In addition, the draft plan provides for the re-offer during the same licensing round of unlicensed blocks and part blocks within the areas covered by earlier DTI SEAs for oil and gas licensing. The re-offer of acreage is considered separately in Section 11 of this Environmental Report.

4.3 Plan alternatives

Alternatives to the proposed draft plan to offer for licensing the unlicensed blocks within the SEA 5 area and the areas previously subject to SEA in a 23rd licensing round have been identified as:

1. Not to offer any blocks for Production Licence award
2. To proceed with the licensing programme as proposed
3. To restrict the area licensed temporally or spatially

DTI decisions on whether to proceed with the original draft plan in the 23rd round or one of the alternatives will depend on the outcome of the SEA process and other Government considerations.

4.4 Estimates of potential activity in the SEA 5 area from 23rd round licensing

Both exploration and development activity levels and timing would depend on a range of factors including the number of blocks licensed, work programme commitments made by licensees, exploration success, economic and commercial factors and Government approval of development plans.

The DTI Licensing and Consents Unit have provided projections of the scale of potential exploration and production activity which could follow licensing of the SEA 5 area. The projections are best estimates on the basis of current understanding and thus indicative.

Seismic surveys

In the north of the SEA 5 area, very few seismic surveys are anticipated with the exception of the Unst Basin and a fringe along the margins of the North Viking Graben where some 2D surveys are predicted. The majority of the anticipated 2D and 3D activity is expected in Quadrants 11 to 18, in line with the hydrocarbon prospectivity narrative above. South of this, in Quadrants 19 to 28 little activity is expected except along the fringes of the SEA 2 and SEA 5 areas where there may be some exploration. The following seismic survey effort is envisaged:

- In the year of award – 2 x 2D seismic surveys
- In the year following award – 4 x 2D seismic and 3 x 3D seismic surveys
- In the year 2 years after award – 2 x 2D seismic and 3 x 3D seismic surveys
- In the year 3 years after award – 2 x 3D seismic surveys
- In the year 4 years after award – no seismic surveys envisaged

Exploration and appraisal wells

Expected exploration drilling activity follows the seismic acquisition and it is anticipated to show a similar spatial pattern. The following exploration drilling is envisaged:

- In the year of award - no exploration or appraisal wells
- In the year following award - 3 exploration wells and 1 appraisal well
- In the year 2 years after award - 3 exploration wells and 2 appraisal wells

- In the year 3 years after award – 3 exploration wells and 2 appraisal wells
- In the year 4 years after award - 3 exploration wells and 3 appraisal wells

Developments

Depending on the success of the Exploration and Appraisal drilling, some three new stand-alone developments are anticipated, with potentially one new pipeline to shore and the remaining developments tying into existing export infrastructure.

An overview of the types of oil and gas exploration and production activities which could follow licensing is provided on the SEA website (www.offshore-sea.org.uk/sea/dev/html_file/pdf2.cgi/SD_002_W.pdf).

Expected take up of blocks in the SEA 5 area

As indicated above, much of the SEA 5 area has limited potential for commercial oil and gas reserves and consequently uptake of the 382 blocks offered is expected to be less than 15%, with around 75% of these being Promote Licences and 25% Traditional Licences.

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