



## **23<sup>RD</sup> LICENSING ROUND**

# **GUIDELINE FOR PRODUCTION LICENCE APPLICATION**

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## GENERAL INFORMATION ABOUT APPLICATION

### Submitting application

One (1) electronic version of the application is delivered to the Ministry of Petroleum and Energy (MPE) and two (2) identical printed copies of the application are delivered to the Norwegian Petroleum Directorate (NPD) by **2 December 2015 at 1200 hours.**

### Application format

Application(s) to the MPE must be delivered on an electronic memory stick.

The application to the NPD must be delivered in both electronic format on a memory stick and as a paper version in a binder. The paper copy must be identical with the electronic application.

The tables requested for the applications are gathered in the following excel sheets:

1. ApplicationData
  - a. Table 1: Application Summary
  - b. Table 2: Resource Potential
  - c. Table 3: Work program and duration
  - d. Table 4: Coordinates
2. ProspectData
  - a. Table 5: Prospect Data
3. CompanyInformation
  - a. Table 6: Application list from company
  - b. Table 7: Size and experience
  - c. Table 8: Financial status

The forms must be delivered together in the above-mentioned excel sheets. Formatting of the excel sheets beyond adding new rows at the bottom is not accepted. Files delivered in the incorrect format will be returned to the applicant. Shape files requested in the application are delivered in ED50, decimal degrees with a minimum of nine decimals.

Shape files for the applied for area must be named AppliedArea\_”block number\_company” and contain a polygon showing the applied for area. The shape must otherwise contain information on the block number, company name, information regarding whether or not the application is stratigraphically split, and whether this is potentially an application for additional acreage. The format which we want this information delivered in is described in example file [AppliedArea](#).

Shape files for prospects/prospect leads must be named Prospect\_Lead\_”block number\_company” and must contain at least one polygon (Psans/Mean) for each reported prospect, i.e. “Table 5: Prospect Data”.

The names of these prospects/prospect leads must all be spelled the same.

Note: All prospects/prospect leads discussed in an application must be delivered in the same shape file. The format which we want this information delivered in is described in example file [ProspectLead](#).

### The following must be delivered for each application:

- Two identical binders with a printed paper copy of the application (only one application per binder)
- memory stick is enclosed with each binder and contains an electronic copy and appendices:
  - Application
  - Pdf version of Ch. 6 “Other factors”

- ApplicationData
- ProspectData
- CompanyInformation
- Map of applied for area
- Shape file with applied for area
- Shape file with prospects

The files on the memory stick must be structured and named as shown below:

	<b>Name of file</b>	<b>Format</b>	<b>Description</b>
<b>1</b>	Application_"block number"	PDF	Electronic copy of application
<b>2</b>	Other factors_"company name"_"block number "	PDF	Electronic copy of Ch. 6.
<b>3</b>	"block number"_"ApplicationData"	XLS	Filled out excel sheet "ApplicationData" One excel sheet per application
<b>4</b>	"block number"_"prospect name"_"ProspectData	XLS	Filled out excel sheet «ProspectData» One excel sheet per prospect
<b>5</b>	"block number"_"company name"	JPG	Map of applied for area with prospects and prospect leads, max. 200 kb
<b>6</b>	AppliedArea_"block number_company"	shp	Shape file with applied for area outline
<b>7</b>	Prospect_Lead_"block number_company"	shp	Shape file with prospect outline and prospect lead, attribute in the shape file must describe resource class

Upper limits have been indicated for the number of pages in the various parts of the application, these should be followed. Use a font size corresponding to Times New Roman 12 and single/standard spacing. It is assumed that all information in figures and maps is legible, also in the paper version, and all maps must include coordinates and a scale.

The forms that **must** be used are in three excel sheets on the NPD's website:

[ApplicationData](#)

[CompanyInformation](#)

[ProspectData](#)

All sizes (depth, area, volume, etc.) must be listed in metric units.

### **Application for additional acreage**

You can apply for additional acreage when discoveries or mapped prospects extend into area announced in the 23<sup>rd</sup> licensing round from an existing production licence. The following criteria must normally be fulfilled in order to be awarded additional acreage:

1. All licensees in the existing production licence are applicants.
2. Distribution of ownership interests must be identical to the existing production licence.
3. Discoveries or mapped prospects extend into relevant additional acreage.

The documentation requirement for applying for additional acreage is smaller. It is important to provide a reason for why the area should be awarded as additional acreage, based on the above criteria, and to describe the work program and plans in the existing production licence, as well as the potential further work program for the additional acreage.

## CONTENT OF THE APPLICATION

### 1. APPLICATION SUMMARY

The application summary must be at the top of the application. The application summary should be no more than three pages and must contain:

- a) Overview of applicants and applied for area, listing the block in completed form "Table 1: Application Summary" (Table 1 must also be in the **excel** sheet "ApplicationData" in electronic format)
- b) Area description with completed form "Table 2: Resource potential" (Table 2 must also be in the excel sheet "ApplicationData" in electronic format)
- c) Map with geographical coordinates, block numbers and scale which shows the applied for area with an outline of the prospects and prospect leads listed in the form "Table 2: Resource potential" and presented in the application (must also be enclosed as separate .jpg or .tif file in electronic format)
- d) Form with corner point coordinates for applied for area in the form "Table 4: Coordinates" (must also be in **excel** sheet "ApplicationData" in electronic format)
- e) Completed form "Table 3: Work program and duration" (must also be in the **excel** sheet "ApplicationData" in electronic format)

#### Application summary:

A brief presentation of applicants and the applied for area should be provided. For **additional acreage** applications, a brief background for why the production licence is applying for additional acreage must be provided. "Table 1: Application summary" is completed with the necessary data. If it is probable that the area has high pressure/high temperature (HPHT) issues in the area, it is important that this is clear in the application summary (def: >690 bar/ >150° C)

**Table 1: Application Summary**

Application for Production License in blocks:	Region	If application for additional acreage <sup>1</sup> , PL no.:	Participants (Correct name of company from list)	O P O/P <sup>2</sup>	Participation share [%] <sup>3</sup> (0.00001 - 100)			Application delivered by: <sup>4</sup>	Fee paid by: <sup>4</sup>
					Preferred	Lower	Upper		
7324/9	Barents Sea		Company A	O	60	50	70	x	x
			Our Company AS	P	40	30	40		

<sup>1</sup> Additional acreage: where discoveries or prospects extend into announced area from an existing production licence with the same licensee(s) and ownership interests, list licence number.

<sup>2</sup> O= operator, P= licensee (partner).

<sup>3</sup> Size of the participating interests primarily preferred, as well as an upper and lower limit for what the applicant can accept. The interests must comply with the interests listed in the application letter from each company.

<sup>4</sup> Put an x next to the company actually delivering the application, individually or on the behalf of a group. Put an x by the company that paid the application fee, individually or on the behalf of a group.



## Resource potential:

Briefly summarise the prospectivity in the applied for area and show in map with outline of the prospects and prospect leads discussed in the application and listed in "Table 2: Resource Potential". Key data for the prospects and prospect possibilities discussed in the application are entered in "Table 2: Resource Potential".

**Table 2: Resource Potential**

Discovery/ Prospect/ Lead name <sup>1</sup>	D/ P/ L <sup>2</sup>	Case (Oil/ Gas/ Oil&Gas) <sup>3</sup>	Unrisked recoverable resources <sup>4</sup>						Probability of discovery <sup>5</sup> (0.00 - 1.00)	Resources in acreage applied for [%] <sup>6</sup> (0.0 - 100.0)	Reservoir		Nearest relevant infrastructure <sup>8</sup>	
			Oil [10 <sup>6</sup> Sm <sup>3</sup> ] (>0.00)			Gas [10 <sup>6</sup> Sm <sup>3</sup> ] (>0.00)					Litho-/ Chrono- stratigraphic level <sup>7</sup>	Reservoir depth [m MSL] (>0)	Name	Km (>0)
			Low (P90)	Base (Mean)	High (P10)	Low (P90)	Base (Mean)	High (P10)						
6706/5 Karlsvogna	P	Oil	6,80	11,70	15,90	0,80	1,80	2,20	0,22	100	Nise Fm/ Upper Creteaceous	3640	Aasta Hansteen	30
		Gas	0,10	0,70	1,80	4,00	13,40	24,20	0,13	100				
6706/5 Storebjørn	L	Oil	1,71	2,78	6,98	0,94	2,61	4,56	0,17	100	Nise Fm/ Upper Creteaceous	3500	A. Hansteen	30
6706/5 Lillevogna	L									85	Nise Fm/ Upper Creteaceous	3400	A. Hansteen	30

<sup>1</sup> Name of prospect or prospect lead is informal and can be chosen freely. Ensure the name is used consistently throughout the application documentation.

<sup>2</sup> D = **discovery**, P = prospect, L = lead

<sup>3</sup> Calculation method is explained in Ch. 3.2.2. of the application. Low and high values should correspond to P90 and P10. Pot. deviations from this must be clarified.

Complete the form in as much detail as possible for prospect leads.

<sup>4</sup> Calculation of discovery probability is explained in Ch. 3.2.3 of the application.

<sup>5</sup> Percentage of expected resources in the prospect/discovery located in the applied for area. This will normally be less than 100% for **additional acreage**.

<sup>6</sup> Formal nomenclature shall be used when available, see lists in form Stratigraphy & Struct. elements in work book "ProspectData"

<sup>7</sup> Closest relevant facility with a petroleum processing facility.

## Map

Applied for area and outline of the mapped prospects and prospect leads are shown in a map with geographical coordinates, block number, and scale. Indicate the stratigraphic interval for applications for stratigraphic production licences.

## Form with corner point coordinates

Table 4: Coordinates

Stratigraphic? (No/Yes)	Polygon (>0)	Polygon part (>0)	Positive or negative (P/N)	Point (>0)	North degrees (56 - 81)	North minutes (0 - 59)	North seconds (0 - 59.9999)	East degrees (-14 - 36)	East minutes (0 - 59)	East seconds (0 - 59.9999)
No	1	1	P	1	60	2	0,0000	11	0	0,0000
				2	60	2	0,0000	11	4	0,0000
				3	60	0	0,0000	11	4	0,0000
				4	60	0	0,0000	11	12	0,0000
				5	60	8	0,0000	11	12	0,0000
				6	60	8	0,0000	11	0	0,0000
		2	N	1	60	3	0,0000	11	9	0,0000
				2	60	3	0,0000	11	11	0,0000
				3	60	7	0,0000	11	11	0,0000
				4	60	7	0,0000	11	9	0,0000
		3	N	1	60	3	0,0000	11	2	0,0000
				2	60	3	0,0000	11	4	0,0000
				3	60	4	0,0000	11	4	0,0000
				4	60	4	0,0000	11	6	0,0000
				5	60	7	0,0000	11	6	0,0000
				6	60	7	0,0000	11	2	0,0000

## Work program and duration

The applicant's proposed work program and duration for the production licence must be listed in "Table 3: Work program and duration", shown below. Examples of/proposed work programs, and decisions that can be used are shown below the form and are drop-down lists in the excel form.

Other activities can also be added. A more detailed description of the work programme is provided in Chapter 4 of the application.

**Table 3: Work program and duration**

Period	Phase (>0)	Duration [year] (>0.0)	Work program	Decision at milestone
Initial period:	1	1	Reprocess 3D seismic, Acquire EM-data	3D seismic acquisition or Drop
	2	2	Acquire 3D seismic	Drill or Drop
	3	2	Drill exploration well	Enter extension period or Drop
	Sum	5	Extension period [years] (>0.0):	30

Period	Phase (>0)	Duration [year] (>0.0)	Work program	Decision at milestone
Initial period:	1	2.0	G&G studies	Acquire new 3D seismic or Drop
	2	2.0	Acquire 3D seismic	Drill or Drop
	3	2.0	Drill exploration well	Continuation (BoV) or Drop
	Sum	6	Extension period [years] (>0.0):	25.0

G&G studies  
Purchase 2D seismic  
Acquire 2D seismic  
Re-process 3D seismic  
Purchase 3D seismic  
Acquire 3D seismic  
Drill (one) permanent exploration well  
Drill exploration well

Decision on acquisition of 3D seismic  
Decision on drilling a well or relinquishment

For the duration of work program and periods, see Chapter 4 of the guideline.

For applications for additional acreage provide a brief explanation of why the production licence is applying for the area. "Table 1: Application Summary" is completed with available data.

## 2. DATABASE AND REGIONAL GEOLOGY

This part must contain a description of the database which forms the basis for the evaluation of the applied for area. It must also contain a regional approach to the prospectivity in the applied for area. Separate studies and reports can be delivered together with the application, or prior to the application deadline. If separate studies and reports are delivered they must be referenced, and there must also be a summary of the study in the application itself if they are of particular significance for the evaluation of the area. Separate studies and reports will generally be read, but not evaluated as part of the actual application.

*Part 2 must be limited to 10 pages of text.*

### 2.1 Database

Seismic, wells and other data types such as EM data, used in the evaluation of the area/prospects must be listed in the table and clearly shown in a database map of the applied for area. Any special studies used must be summarised, and how they will be used in the application design must be explained. Emphasis will be placed on the extent of and how data is used.

### 2.2 Regional geology

There must be a relevant regional geological approach to the issues in the applied for area.

## 3. GEOLOGICAL AND TECHNICAL FINANCIAL EVALUATION OF BLOCKS

This chapter must contain a petroleum geological analysis of the applied for area, as well as an evaluation of the different identified prospects and prospect leads.

### 3.1 Geological petroleum analysis

There must be a brief geological petroleum analysis of the applied for area, with a particular focus on the conditions considered critical for the prospectivity in the area and for evaluating this.

When applying for additional acreage, the geological petroleum overview does not need to be documented, unless the application is based on a completely new understanding of the petroleum geology (e.g. new plays, new source rock understanding, etc.).

*The documentation under Item 3.1 should be limited to 20 pages of text.*

### 3.2 Geological and technical financial prospect evaluation

A geological and technical financial evaluation must be prepared for each prospect, as well as for prospect leads (Item 3.2.4) when these prospect leads are significant as regards the potential in the applied for area.

*Total documentation under Item 3.2 (3.2.1 – 3.2.5) should be limited to 12 pages of text for each prospect (or group of prospects if appropriate).*

For additional acreage applications, prospects/discoveries extending into the applied for additional acreage must be described, and the data/parametres used in the evaluation of the entire prospect/discovery must be listed in the form "Prospect data". Any prospect leads must be described in brief, including the mapping approach and potential resource estimate.

**3.2.1 Prospect description** There must be a brief description of the prospect/prospects with particular focus on critical factors. Key data for each prospect is entered in "Prospect data".

**3.2.2 Resources** This is documentation and explanation of the estimation of resources and selected parametres.

**3.2.3 Discovery probability** Discovery probabilities and associated partial probabilities listed in "Table 5: Prospect data" are explained.

**3.2.4 Prospect leads** In blocks/areas with identified prospect leads, there must be a brief description of these.

*"Table 5: Prospect data" must be used for the available data and parametres.*

**3.2.5 Profitability calculations and technological assumptions** Financial key figures that constitute the basis for the application for award of area, must be calculated for each prospect and/or for the combination of prospects assumed to result in the most profitable development. It must clearly emerge which assumptions form the basis for the financial calculations.

The development and transport solutions used as a basis for the calculations must be described and illustrated. If relevant, there must be a description of the area solution and special technological challenges.

#### **4. EXPLORATION STRATEGY AND WORK PROGRAM**



**4.1 Exploration strategy and work program**

There must be a description of the plan for exploring the applied for area, see “Table 3: Work program and duration” in the form “[ApplicationData](#)”.

If the application relates to additional acreage for a production licence in the initial phase, indicate the remaining work program and duration of this in “Table 3: Work program and duration”.

In those cases where there are no remaining work commitments in the existing production licence that will cover exploration/drilling of the resources in the additional acreage, there must be a proposed work program for the additional acreage with a plan for exploration and/or utilisation of the resources.

*The description should be limited to two pages of text.*

**5. EXPERTISE AND EXPERIENCE WITHIN RESERVOIRS AND TECHNOLOGY**

In the application, the applicant must provide a brief overview of the company’s expertise and experience within use of technology, reservoir management and chosen drainage strategy.

The following must/should be addressed adapted to the applied for area:

- a) Reservoir technology
- b) Exploration technology
- c) Development technology
- d) Environmental technology
- e) Research and development
- f) Project implementation

*The chapter should be limited to five pages of text.*

## 6. OTHER MATTERS

The documented expertise presented must be relevant and adapted to the technical challenges which the applicant will face in Norway.

Emphasis must be placed on the following:

1. Overarching philosophy for safety, working environment and the external environment.
2. System for managing safety, working environment and the external environment in activities the applicant will face in Norway, including what concerns continuous improvement of these conditions.
3. Organisation of the operatorship, including experience, expertise and resources.

Companies applying for operatorship for the first time on the Norwegian shelf must document operational experience that is considered to be particularly relevant for safety and working environment factors for the applied for blocks.

*Must be limited to a maximum of ten pages of text.*

## 7. REFERENCES

References to reports, studies and publications used in the evaluation work.