

# **PETROLEUM EXPLORATION AND DEVELOPMENT IN IRELAND**

**Report Covering Period  
1 July, 2008 – 31 December, 2008**

Report by the Minister for Communications, Energy and Natural Resources for the six months ended 31 December 2008, in accordance with Section 57 of the *Petroleum and Other Minerals Development Act, 1960*, and the said Section 57 as applied by the *Continental Shelf Act, 1968*.

**PRN A9/0772**

# CONTENTS

	<b>Page(s)</b>
<b>INTRODUCTION</b>	<b>3</b>
<b>PART ONE      PETROLEUM AUTHORISATIONS</b>	
1. Petroleum Leases	<b>4</b>
2. Offshore Petroleum Exploration Licences / Reserved Area Licences	<b>5</b>
3. Onshore Petroleum Exploration Licences	<b>9</b>
4. Licensing Options	<b>10</b>
5. Petroleum Prospecting Licences	<b>11</b>
<b>PART TWO      MONEYS RECEIVED</b>	<b>12</b>
<b>PART THREE    OTHER INFORMATION</b>	<b>13</b>

**Note:** Block numbers refer to blocks in the Williams Grid.

## INTRODUCTION

**This Report sets out:**

- the particulars of all Authorisations granted by the Minister for Communications, Energy and Natural Resources that were current during the reporting period;
- the amount of money relating to petroleum exploration and development collected by the Minister during the reporting period, and
- other information relating to petroleum exploration and development in Ireland.

**PART ONE**  
**PETROLEUM AUTHORISATIONS**

**PETROLEUM LEASES**

A **Petroleum Lease** vests in the Lessee the exclusive right to produce petroleum from the leased areas.

<b>Lease</b>	<b>Commencement Date</b>	<b>Block Nos</b>	<b>Area (km<sup>2</sup>)</b>	<b>Participants (* = Operator)</b>	<b>% Interest</b>
<b><u>Offshore Petroleum Lease No. 1: Kinsale/Ballycotton</u></b>	7 May, 1970	48/20, 48/25, 49/16 & 49/21	1003.03	*Marathon Oil Ireland Limited.	100%
<b><u>Corrib Petroleum Lease</u></b>	15 November, 2001	18/20(p) & 18/25(p)	29.28	*Shell E&P Ireland Limited Statoil Exploration (Ireland) Ltd. Marathon International Petroleum Hibernia Ltd.	45% 36.5% 18.5%
<b><u>Seven Heads Petroleum Lease</u></b>	13 November, 2002	48/23(p), 48/24(p), 48/29(p) & 48/30(p)	168.5	*Marathon Seven Heads Limited Island Oil and Gas Plc. Sunningdale Oils (Ireland) Ltd.	86.5% 12.5% 1%

P – part block

## OFFSHORE PETROLEUM EXPLORATION LICENCES

A **Petroleum Exploration Licence** vests in the Holder the exclusive right of carrying out exploration for petroleum in a specific licensed offshore area.

**Twenty Six** offshore Petroleum Exploration Licences were current during the reporting period. **Sixteen** of these Licences were subject to the 1992 '*Licensing Terms for Offshore Oil and Gas Exploration and Development*'. **Ten** Licences which were awarded in 2007 & 2008 were subject to the 2007 '*Licensing Terms for Offshore Oil and Gas Exploration, Production and Development*'.

A **Standard Exploration Licence** is issued for a period of six years in respect of an area with water depths of up to 200 metres and is subject to an annual rental fee of **€175** per km<sup>2</sup>. If acreage is surrendered at the end of the fourth year, the annual rental fee rises to **€351** per km<sup>2</sup>.

A **Deepwater Exploration Licence** is issued for a period of twelve years in respect of areas in which the water depth exceeds 200 metres and is subject to an annual rental fee of **€87** per km<sup>2</sup>. If acreage is surrendered at the end of the fourth year, the annual rental fee rises to **€175** per km<sup>2</sup>. At the end of the seventh year, this figure rises again to **€351** per km<sup>2</sup>.

A **Frontier Exploration Licence** may be issued in respect of an area with special difficulties related to physical environment, geology or technology – where such an area is specified and announced by the Minister for Communications, Energy and Natural Resources as a 'Frontier Area'. This Licence type is valid for a period of not less than fifteen years and is comprised of a maximum of four phases. Annual rental during the first phase is **€28** per km<sup>2</sup> and **€58** per km<sup>2</sup> during the second and subsequent phases. If acreage is surrendered at the end of the second or third phase, the annual rental fee rises to **€116** per km<sup>2</sup>.

The 1992 & 2007 Terms also provide for an application fee of **€8,763** in each case.

Licence	Licence Period	Block Nos.	Area (km <sup>2</sup> )	Participants (* = Operator)	% Interest
<b>2/94</b> Frontier	15 March, 1994 – 14 March, 2012	12/2(p), 12/3(p), 12/7(p), & 12/8(p)	465.6	*Shell E&P Ireland Ltd. Eni Ireland BV STX Ireland Ltd OMV (Ireland) Exploration GMBH	50% 40% 25% 10%
<b>3/94</b> Frontier	15 March, 1994 – 14 March, 2012	18/14(p), 18/15(p), 18/19(p) & 18/20(p)	467.2	*Shell E&P Ireland Ltd. Statoil Exploration (Ireland) Ltd. Marathon International Petroleum Hibernia Ltd.	45% 36.5% 18.5%
<b>5/94</b> Frontier	15 March, 1994 – 14 March, 2012	19/2(p), 19/3(p), 19/4(p), 19/7(p), 19/8, 19/11(p), 19/12(p), 19/16(p), 19/17(p) & 19/21(p)	657.22	*Statoil Exploration (Ireland) Limited Shell E&P Ireland Limited Shell E&P Ireland Offshore Inc. Hess Exploration Ireland Limited	39.348% 42.065% 13.587% 5%

P – part block

Approx 50% of acreage under Frontier Exploration Licence 5/94 was relinquished with effect from 15 December 2008

## OFFSHORE PETROLEUM EXPLORATION LICENCES (cont'd)

Licence	Licence Period	Block Nos.	Area (km <sup>2</sup> )	Participants (* = Operator)	% Interest
<b>7/97</b> Frontier	4 June, 1997 – 3 June, 2013	11/20, 11/23(p), 11/24, 11/25, 11/28(p), 12/11(p), 12/12(p) & 12/16(p)	1327.66	* Eni Ireland BV	100%
<b>1/99</b> Frontier	15 March, 1999 – 14 March, 2014	43/19, 43/20, 43/24, 43/25, 43/28 & 43/29	1553.62	* Eni Ireland BV	100%
<b>1/04</b> Frontier	15 April, 2004 – 14 April, 2019	26/27(p), 26/28, 35/2(p) & 35/3(p)	622.06	*Island Assets Porcupine Limited Valhalla Oil and Gas Limited Supernova Ireland Resources B.V.	51.5% 38.5% 10%
<b>2/04</b> Frontier	15 November, 2004 – 14 June, 2022	35/8 & 35/9	500.95	*Providence Resources Plc Sosina Exploration Limited	80% 20%
<b>3/04</b> Frontier	15 November, 2004 – 14 November, 2021	44/18, 44/23, 44/24, 44/29, & 44/30	1295.27	*ExxonMobil Exploration and Production Ireland (Offshore) Limited. Providence Resources Plc Sosina Exploration Limited	80% 16% 4%
<b>2/05</b> Frontier	1 July, 2005 – 30 June, 2021	11/10, 11/15 & 12/1, 12/6	932.18	* Shell E&P Ireland Limited Eni Ireland BV. STX Ireland Ltd OMV (IRELAND) Exploration GmbH	25% 40% 25% 10%
<b>3/05</b> Frontier	1 July, 2005 – 30 June, 2021	18/10, 19/1 & 19/6	715.58	*Island Rockall JV Limited OMV (Ireland) Killala Exploration GmbH	50% 50%
<b>4/05</b> Standard	1 November, 2005 – 31 October, 2011	49/17(p), 49/22(p) & 49/23(p).	258.49	*Island Expro Limited Valhalla Oil and Gas Limited Encore Exploration Limited	65% 20% 15%
<b>5/05</b> Standard	1 November, 2005 – 31 October, 2011	48/26(p), 48/27(p), 57/1(p), 57/2	664.2	*Island Expro Limited Valhalla Oil and Gas Limited Encore Exploration Limited	62.5% 25% 12.5%
<b>1/06</b> Frontier	1 December, 2006 to 30 November, 2021	27/4, 27/5(p)& 27/9	610.55	* Serica Energy (UK) Limited RWE DEA AG	50% 50%

P – part block

## OFFSHORE PETROLEUM EXPLORATION LICENCES (cont'd)

Licence	Licence Period	Block Nos.	Area (km <sup>2</sup> )	Participants (* = Operator)	% Interest
<b>2/06</b> Frontier	1 December, 2006 to 30 November, 2021	19/9, 19/13 & 19/17(p)	653.53	*Statoil Exploration (Ireland) Limited Hess Exploration Ireland Limited Shell E&P Ireland Limited	39.348% 42.065% 18.587%
<b>3/06</b> Frontier	1 December, 2006 to 30 November, 2021	13/4(p), 13/5(p), 13/9(p), 13/13(p), 13/14(p) & 14/1(p),	699.29	* Island Oil and Gas plc Lundin Exploration BV Endeavour Energy UK Limited	40% 40% 20%
<b>4/06</b> Frontier	1 December, 2006 to 30 November, 2021	27/17(p), 27/18, 27/22(p) & 27/23	741.48	* Island Oil and Gas plc Lundin Exploration BV	50% 50%
<b>1/07</b> Standard	1 February, 2007 to 31 January, 2013	41/25(p), 42/21(p), 41/30(p), 42/26(p) & 51/1(p)	622.87	*Providence Resources Plc	100%
<b>2/07</b> Standard	1 February, 2007 to 31 January, 2013	49/8(p), 49/9(p), 49/13(p), 49/14(p), 49/18(p), 49/19(p), 50/6(p), 50/11(p) & 50/12(p)	368.65	*Providence Resources P.l.c Challenger Minerals (Celtic Sea) Limited Dyas BV Atlantic Petroleum (Ireland) Limited Forest Gate Resources Inc Sosina Exploration Limited	43.5294% 16.325% 16.325% 10.8824% 7.5% 5.4412%
<b>3/07</b> Standard	1 April, 2007 to 31 March, 2013	48/29(p), 48/30(p) & 49/26(p)	298.86	*Providence Resources P.l.c Challenger Minerals (Celtic Sea) Limited Dyas BV Atlantic Petroleum (Ireland) Limited Forest Gate Resources Inc Sosina Exploration Limited	43.5294% 16.325% 16.325% 10.8824% 7.5% 5.4412%
<b>4/07</b> Standard	1 August, 2007 – 31 July, 2013	49/11(p), 49/12(p), 49/13(p), 49/17(p) & 49/18(p)	542.37	*Lansdowne Celtic Sea Limited	100%
<b>5/07</b> Standard	1 August, 2007 – 31 July, 2013	48/17(p), 48/18(p), 48/19(p), 48/22(p) & 48/24(p)	365.81	*Lansdowne Celtic Sea Limited Island Expro Limited Sunningdale Oils (Ireland) Limited	77% 22% 1%

P – part block

Area held under Standard Exploration Licence 1/07 was extended from 558.75 km<sup>2</sup> to of 622.87 km<sup>2</sup> with effect from 19 November 2008

## OFFSHORE PETROLEUM EXPLORATION LICENCES (cont'd)

Licence	Licence Period	Block Nos.	Area (km <sup>2</sup> )	Participants (* = Operator)	% Interest
<b>1/08</b> Frontier	12 March, 2008 - 11 March, 2021	52/5, 52/10, 52/15, 53/1, 53/6 & 53/11	1570.3	*ExxonMobil Exploration and Production Ireland (Offshore) Limited Providence Resources Plc Sosina Exploration Limited	80% 16% 4%
<b>2/08</b> Frontier	12 March, 2008 - 11 March, 2021	52/13(p), 52/14, 52/18, 52/19, 52/20, 52/23 & 52/24(p)	1581.3	*ExxonMobil Exploration and Production Ireland (Offshore) Limited Providence Resources Plc Sosina Exploration Limited	80% 16% 4%
<b>3/08</b> Frontier	12 March, 2008 - 11 March, 2021	61/9, 61/10 & 62/6	801.62	*Island Oil and Gas Plc Supernova Ireland Resources BV	50% 50%
<b>4/08</b> Frontier	12 March, 2008 - 11 March, 2020	35/2(p), 35/3(p), 35/4, & 35/7(p)	741.06	*Providence Resources P.l.c. Sosina Exploration Limited Challenger Minerals Inc	72% 18% 10%
<b>5/08</b> Standard	1 April, 2008 - 31 March, 2014	47/25(p), 48/21(p), & 48/22(p)	448.68	* Milesian Oil & Gas Limited	100%

P – part block

## RESERVED AREA LICENCES

A lessee may at any time apply for a **Reserved Area Licence** in respect of a specified area adjacent to or surrounding the leased area and which is not the subject of an authorisation other than a Petroleum Prospecting Licence granted to a person other than the lessee.

Licence	Licence Period	Block Nos.	Area (km <sup>2</sup> )	Participants (* = Operator)	% Interest
<b>1/05</b> Deepwater	1 January, 2005 – 31 December, 2008	18/25(p) & 18/30(p)	130.21	* Shell E&P Ireland Ltd. Statoil Exploration (Ireland) Ltd. Marathon International Petroleum Hibernia Ltd.	45% 36.5% 18.5%

P – part block

Reserved Area Licence 1/05 (Shell E&P Ireland Limited, Statoil Exploration (Ireland) Limited and Marathon International Petroleum Hibernia Limited) expired on 31 December 2008

## ONSHORE PETROLEUM EXPLORATION LICENCES

Licence	Licence Period	Location	Area (km <sup>2</sup> )	Participants (* = Operator)	% Interest
<u>ON1/05</u>	1 November, 2005 – 31 October, 2011	Northwest Carboniferous Basin, over parts of Counties Cavan and Leitrim	209.51	*Finavera Ltd.	100%
<u>ON2/05</u>	1 November, 2005 – 31 October, 2011	Northwest Carboniferous Basin, over parts of Counties Sligo, Leitrim, Cavan, Roscommon and Mayo	1069.47	*Finavera Ltd.	100%

Onshore Petroleum Exploration Licences ON1/05 and ON2/05 were relinquished with effect from 1 November 2008

## LICENSING OPTIONS

A **Licensing Option** gives the Holder the first right to an Exploration Licence over all or part of the area covered by the Option.

Option No	Option Period	Block Nos.	Area (km <sup>2</sup> )	Participants (* = Operator)	% Interest
<b><u>06/1</u></b>	1 September 2006 – 31 August 2009	61/14, 61/15, 61/17, 61/18, 61/19, 61/20, 61/22, 61/23, 61/24, 61/25, 62/11, 62/16, 62/17, 62/21 & 62/22	2410.05	*Providence Resources Plc ExxonMobil Exploration and Production Ireland (Offshore) Limited. Sosina Exploration Limited	16% 80% 4%
<b><u>07/1</u></b>	1 September 2007 – 31 August 2009	49/15(p), 50/7(p), 50/8(p), 50/11(p), 50/12(p) & 50/13(p)	374.51	*Providence Resources Plc Challenger Minerals (Celtic Sea) Limited, DYAS B.V., Forest Gate Resources Inc Atlantic Petroleum (Ireland) Limited	45% 15% 15% 10%
<b><u>07/2</u></b>	5 November 2007 – 4 November 2009	56/10, 57/1(p), 57/3, 57/6, 57/7, 57/8 & 57/9(p)	1565.09	*Valhalla Oil & Gas Limited	100%
<b><u>08/1</u></b>	14 July 2008 - 13 July 2010	48/22 (p), 48/23 (p), 48/24 (p), 48/27 (p), 48/28 (p), 48/29 (p) & 48/30 (p)	291.69	*Lansdowne Celtic Sea Limited Providence Resources Plc Island Expro Limited	40% 30% 30%
<b><u>08/2</u></b>	18 August 2008 - 17 August 2011	32/25 (p), 33/16 (p), 33/17 (p), 33/18 (p), 33/21, 33/22 (p), 33/23 (p), & 33/26 (p).	958.47	*Providence Resources plc Star Energy Oil and Gas Ltd	50% 50%

Approx 40% of acreage under Licensing Option 06/1 was relinquished with effect from 1 September 2008

P – part block

## PETROLEUM PROSPECTING LICENCES

A Petroleum Prospecting Licence is non-exclusive and confers on the Licensee the right to search for petroleum in any area where an Exploration Licence, Reserved Area Licence or Petroleum Lease is not in force.

Licence No.	No. of Years	Licence from	Licensee
<u>3/05</u>	3	1 October, 2005	TGS- NOPEC Geophysical Company (UK)
<u>1/06</u>	3	8 March, 2006	Lansdowne Celtic Sea Limited
<u>2/06</u>	3	22 May, 2006	Shell E&P Ireland Limited
<u>3/06</u>	3	12 June, 2006	Fugro Data Services AG
<u>1/07</u>	3	23 April, 2007	Providence Resources Plc
<u>2/07</u>	3	17 May, 2007	GX Technology Corporation
<u>3/07</u>	2	5 November, 2007	Valhalla Oil & Gas Limited
<u>2/08</u>	3	1 July, 2008	ExxonMobil Exploration and Production Ireland (Offshore) Limited
<u>3/08</u>	3	10 July, 2008	Wavefield Inseis ASA

Petroleum Prospecting Licence 3/05 TGS- NOPEC Geophysical Company (UK)  
expired on 30 September 2008

**PART TWO**  
**MONEYS RECEIVED**

During the six months ended 31 December, 2008, the total amount of all moneys collected by the Minister either by way of rentals under or by virtue of any lease, licence or permit, sale of data and application fees was **€1,931,952.78** Details are as follows:

Rentals	Application fees	Assignments of interest	Sale of data	Total
€1,305,024.00	€4,382.00	€8,760.00	€613,786.78	€1,931,952.78

**PART THREE**  
**OTHER INFORMATION**

**EXPLORATION/APPRAISAL WELLS drilled during the 6 months ended 31 December, 2008**

Well No. (Block)	Well Class	Area	Operator	Rig Name	TD (MD)	Water Depth	Spud Date	Rig Release Date	Well Status
12/2-2	Exploration	Rockall Basin	Shell E&P Ireland Ltd	Leiv Eiriksson	4466m	1720m	15/05/2008	28/07/2008	P & A with/without shows or untested pay
19/8-1	Exploration	Erris Basin	Statoil Exploration Ireland Ltd.	Ocean Vanguard	2755m	176m	19/05/2008	08/07/2008	P & A with/without shows or untested pay
50/11-4	Appraisal	North Celtic sea Basin	Providence Resources Plc.	Arctic II	4951ft	244ft	05/08/2008	01/09/2008	P & A with/without shows or untested pay
50/6-4	Appraisal	North Celtic sea Basin	Providence Resources Plc.	Arctic II	5214ft	243ft	05/09/2008	28/09/2008	Suspended with/without shows or untested pay

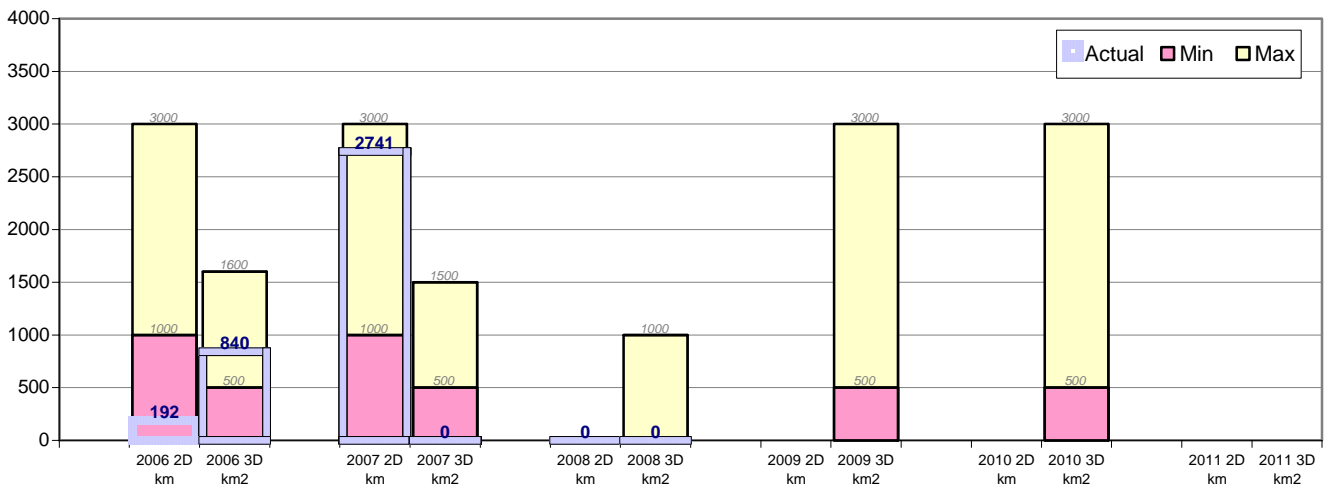
**SEISMIC SURVEYS carried out or commenced in the 6 months ended 31 December, 2008**

<b>Operator</b>	<b>Authorisation</b>	<b>Contractor</b>	<b>Vessel</b>	<b>2D Line Km</b>	<b>3D Km<sup>2</sup></b>	<b>Survey Area</b>
ExxonMobil	FEL1/08,2/08	CGG Veritas	M/V CGG Princess	947	0	Porcupine

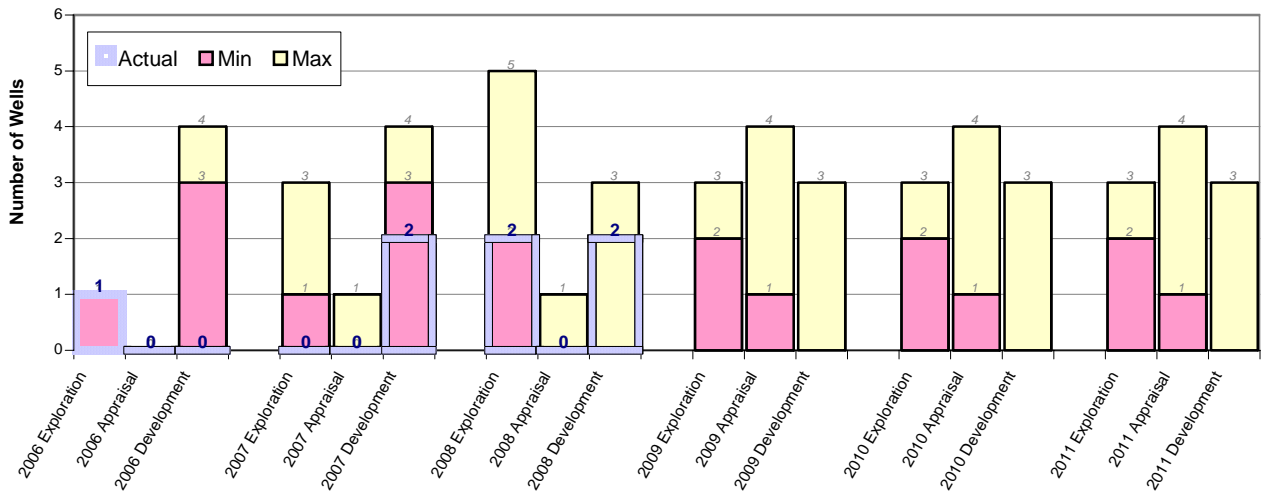
**Exploration activities forecast for the Slyne/Erris/Donegal area from new 2006 licences and pre-existing licences - 2006 to 2011 (from combined tables 4.1 and 4.2 of IOSEA1 Environmental Report)**

Type of activity	2006		2007		2008		2009		2010		2011	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
2D seismic survey (km)	1000	3000	1000	3000	-	-	-	-	-	-	-	-
3D seismic survey (km <sup>2</sup> )	500	1600	500	1500	-	1000	500	3000	500	3000	-	-
Exploration drilling (numbers of wells)	1	1	1	3	2	5	2	3	2	3	2	3
Appraisal drilling (numbers of wells)	-	-	-	1	-	1	1	4	1	4	1	4
Development drilling (numbers of wells)	3	4	3	4	-	3	-	3	-	3	-	3

**Seismic Surveys in the Slyne/Erris/Donegal Area**



**Drilling in the Slyne/Erris/Donegal Area**

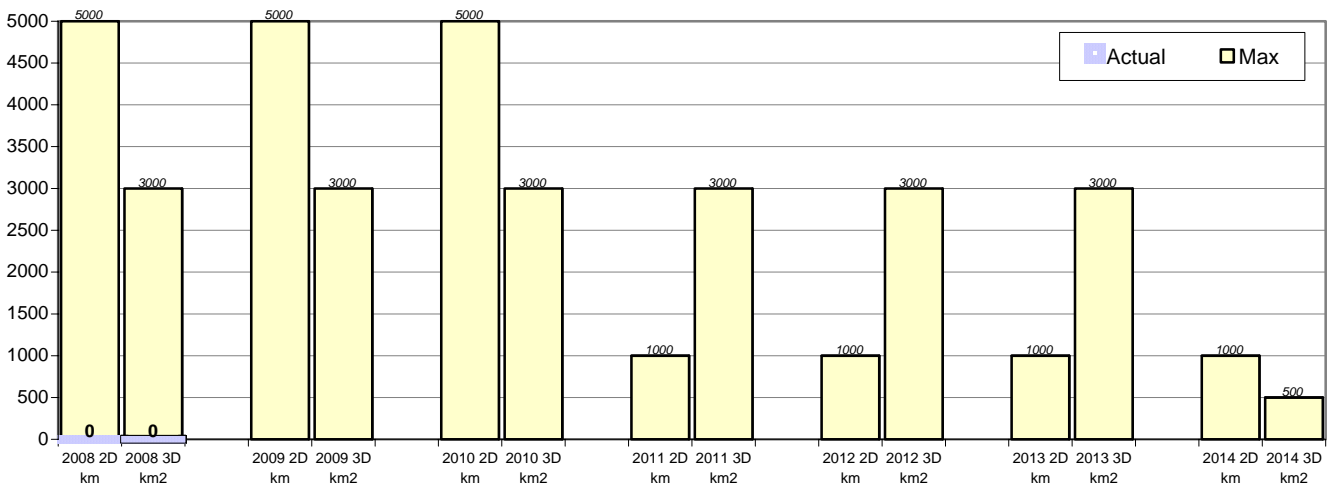


**Actual versus forecast levels of exploration activity – IOSEA1 area**

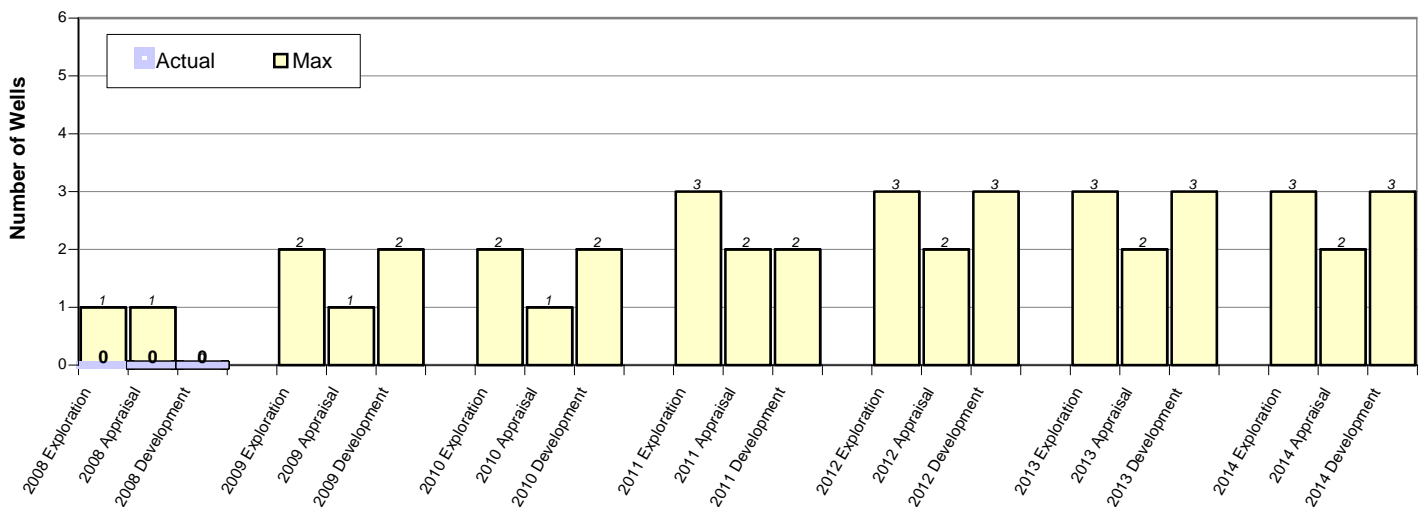
**Exploration activities forecast for the Porcupine area from new 2008 licences and pre-existing licences - 2008 to 2014 (from combined tables 4.1 and 4.2 of IOSEA2 Environmental Report)**

Type of activity	2008		2009		2010		2011		2012		2013		2014	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
2D seismic survey (km)	0	5000	0	5000	0	5000	0	1000	0	1000	0	1000	0	1000
3D seismic survey (km <sup>2</sup> )	0	3000	0	3000	0	3000	0	3000	0	3000	0	3000	0	500
Exploration drilling (numbers of wells)	0	1	0	2	0	2	0	3	0	3	0	3	0	3
Appraisal drilling (numbers of wells)	0	1	0	1	0	1	0	2	0	2	0	2	0	2
Development drilling (numbers of wells)	0	0	0	2	0	2	0	2	0	3	0	3	0	3

**Seismic Surveys in the Porcupine Area**



**Drilling in the Porcupine Area**



**Actual versus forecast levels of exploration activity – IOSEA2 area**