

# **PETROLEUM EXPLORATION AND DEVELOPMENT IN IRELAND**

**Report Covering Period  
1 July, 2009 – 31 December, 2009**

Report by the Minister for Communications, Energy and Natural Resources for the six months ended 31 December 2009, 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 A10/0094**

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**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	*PSE Kinsale Energy 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. Vermilion Energy Ireland Limited	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	*PSE 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 Seven** 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*'. **Eleven** Licences which were awarded in 2007, 2008 & 2009 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 **€182** per km<sup>2</sup>. If acreage is surrendered at the end of the fourth year, the annual rental fee rises to **€365** per km<sup>2</sup>.

A **Deepwater Exploration Licence** is issued for a period of nine years in respect of areas in which the water depth exceeds 200 metres and is subject to an annual rental fee of **€91** per km<sup>2</sup>. If acreage is surrendered at the end of the fourth year, the annual rental fee rises to **€182** per km<sup>2</sup>. At the end of the seventh year, this figure rises again to **€365** 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 twelve years and is comprised of a maximum of four phases. Annual rental during the first phase is **€29** per km<sup>2</sup> and **€60** 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 **€121** per km<sup>2</sup>.

The 1992 & 2007 Terms also provide for an application fee of **€9,122** 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) & 12/7(p)	231.83	*Shell E&P Ireland Ltd. Eni Ireland BV STX Ireland Ltd OMV (Ireland) Exploration GMBH	25% 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. Vermilion Energy Ireland Limited	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)	657.22	*Statoil Exploration (Ireland) Limited Hess Exploration Ireland Limited Shell E&P Ireland Limited Shell E&P Ireland Offshore Inc.	39.348% 42.065% 13.587% 5%

P – part block

## OFFSHORE PETROLEUM EXPLORATION LICENCES (cont'd)

Licence	Licence Period	Block Nos.	Area (km <sup>2</sup> )	Participants (* = Operator)	% Interest
<b><u>7/97</u></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><u>1/99</u></b> Frontier	15 March, 1999 – 14 March, 2020	43/19, 43/20, 43/24, 43/25, 43/28 & 43/29	1553.62	*Eni Ireland BV ExxonMobil Exploration and Production Ireland (Offshore) Limited Providence Resources Plc Sosina Exploration Limited	60% 36% 3.2% 0.8%
<b><u>1/04</u></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><u>2/04</u></b> Frontier	15 November, 2004 – 14 June, 2022	35/8 & 35/9	500.95	*Providence Resources Plc Sosina Exploration Limited Chrysaor E & P Ireland Limited	56% 14% 30%
<b><u>3/04</u></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 Eni Ireland BV Providence Resources Plc Sosina Exploration Limited	40% 40% 16% 4%
<b><u>2/05</u></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><u>3/05</u></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><u>4/05</u></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><u>5/05</u></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%

P – part block

## OFFSHORE PETROLEUM EXPLORATION LICENCES (cont'd)

Licence	Licence Period	Block Nos.	Area (km <sup>2</sup> )	Participants (* = Operator)	% Interest
<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%
<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	49/9(p), 49/13(p), 49/14(p), 49/18(p), 49/19(p), 50/6(p), 50/7(p), 50/11(p)	107.23	* 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%

P – part block

Frontier Exploration Licence 3/06 (Island Oil and Gas plc, Lundin Exploration BV and Endeavour Energy UK Limited) relinquished with effect from 30 November 2009

## OFFSHORE PETROLEUM EXPLORATION LICENCES (cont'd)

Licence	Licence Period	Block Nos.	Area (km <sup>2</sup> )	Participants (* = Operator)	% Interest
<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%
<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 Plc Chrysaor E&P Ireland Limited Sosina Exploration Limited	56% 30% 14%
<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%
<b>1/09</b> Frontier	21 July 2009 - 20 July 2025	5/17, 5/18, 5/22, 5/23, 5/27 & 5/28	993.5	*Serica Energy (UK) Limited	100%

P – part block

## 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 October 2006 - 30 September 2009	61/14, 61/15, 61/17, 61/18, 61/19, 61/20, 62/11, 62/16, & 62/17	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%
<b><u>09/1</u></b>	2 March 2009 - 1 March 2012	48/14 (p), 48/15 (p), 49/11 (p) & 49/12 (p)	314.77	*Lansdowne Celtic Sea Limited	100%

P – part block

**Licensing Option 07/1 expired 31 August 2009**

**Licensing Option 06/1 (Providence Resources Plc, ExxonMobil Exploration and Production Ireland (Offshore) Limited and Sosina Exploration Limited) expired on 30 September 2009**

**Licensing Option 07/2 (Valhalla Oil & Gas Limited) expired on 4 November 2009**

## 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>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
<u>1/09</u>	3	25 May 2009	Lansdowne Celtic Sea Limited
<u>2/09</u>	3	26 July 2009	TGS-Nopec Geophysical Company ASA

Petroleum Prospecting Licence 3/07 (Valhalla Oil & Gas Limited) expired on 4 November 2009

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

During the six months ended 31 December, 2009, 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, gas storage and application fees was **€925,679.00**. Details are as follows:

Rentals	Application fees	Assignments of interest	Sale of Data	Gas storage	Total
€910,419.00	€15,260.00	€0.00	€0.00	€0.00	€925,679.00

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

**EXPLORATION/APPRAISAL WELLS drilled during the 6 months ended 31 December, 2009**

**NO EXPLORATION OR APPRAISAL WELLS WERE DRILLED DURING THE SIX MONTH PERIOD 1 JULY TO 31 DECEMBER 2009**

Well No. (Block)	Well Class	Area	Operator	Rig Name	TD (MD)	Water Depth	Spud Date	Rig Release Date	Well Status

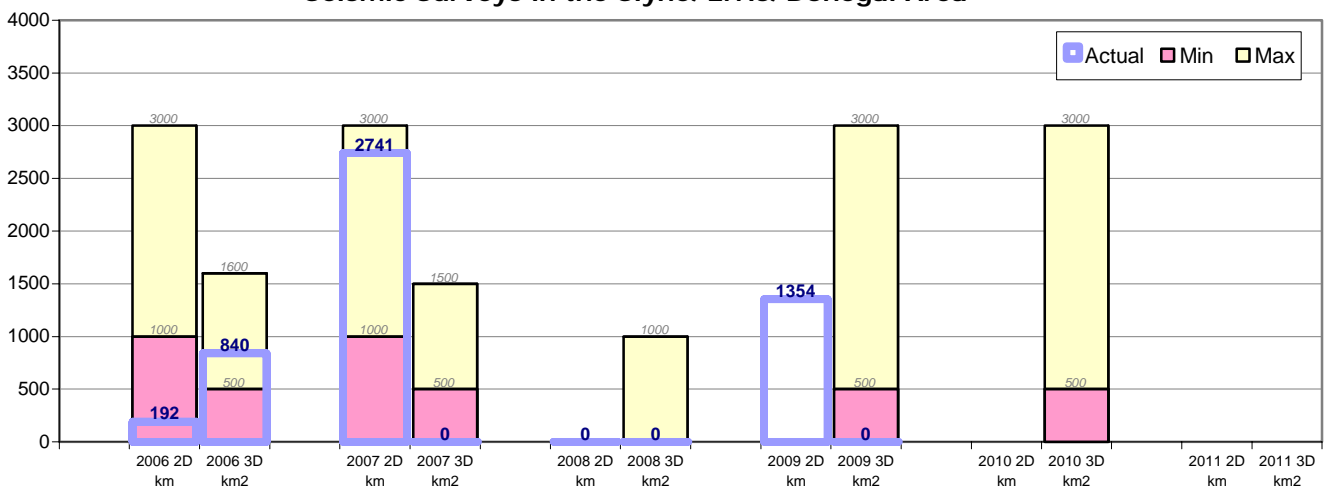
**SEISMIC SURVEYS carried out or commenced in the 6 months ended 31 December, 2009**

Operator	Authorisation	Contractor	Vessel	2D Line Km	3D Km <sup>2</sup>	Survey Area
Providence	FEL 2/04,4/08	Bergen Oilfield Services	BOS Angler	0	327	Porcupine
PSE Kinsale Energy	PL1	Bergen Oilfield Services	BOS Angler	0	52	Celtic Sea
TGS-NOPEC	PP2/09	Seabird Exploration	M/V Munin Explorer	1354	0	East Rockall Margin

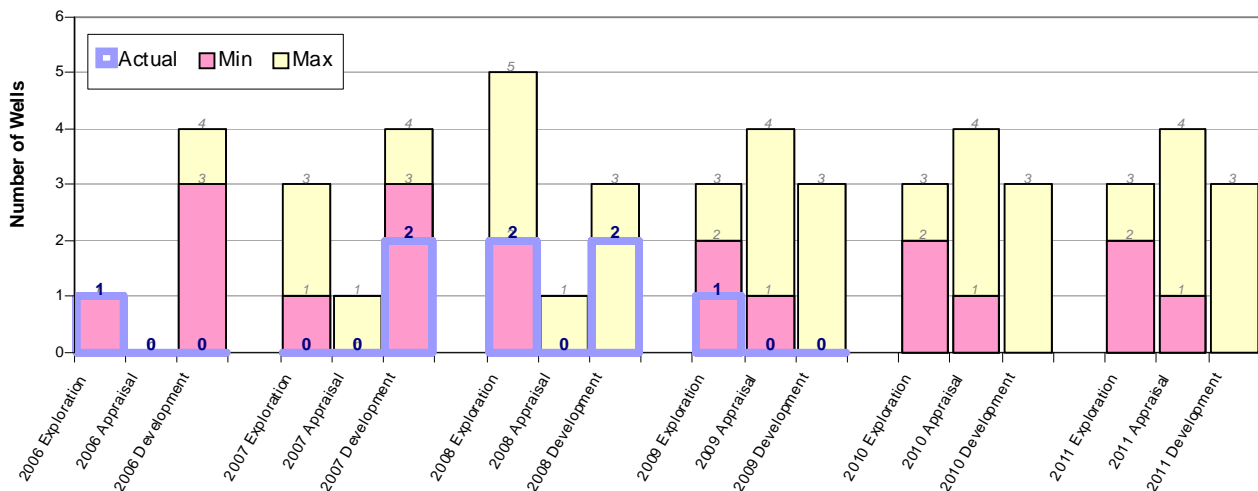
**Exploration activities forecast for the Slyne/Erris/Donegal area from new 2006 licences and pre-existing licences - 2006 to 2011 (from combined tables 4.1 and 4.2 of IOSEA1 Environmental Report)**

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**



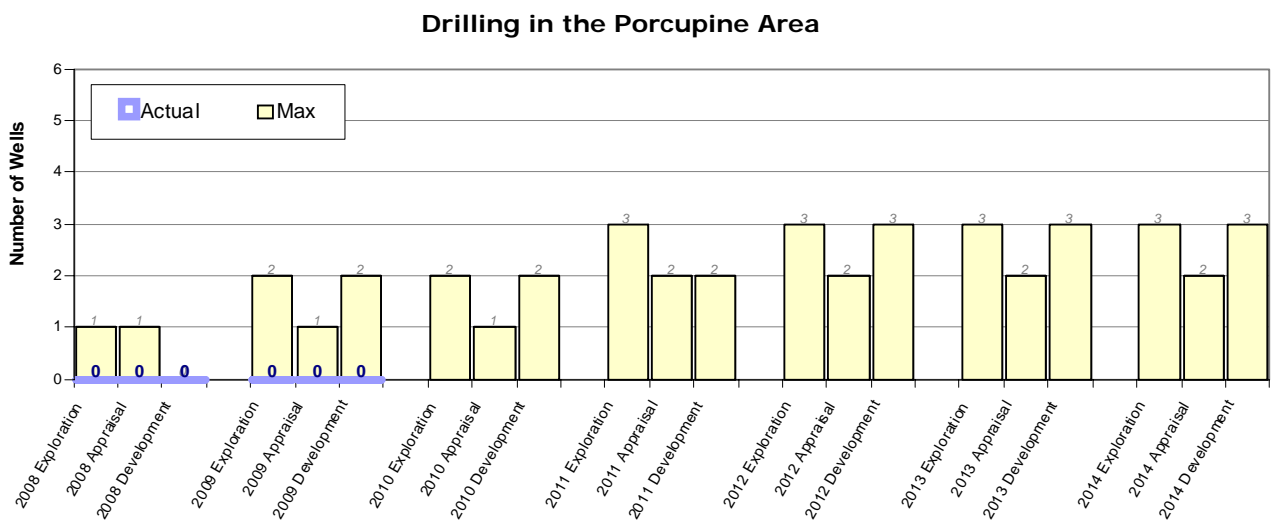
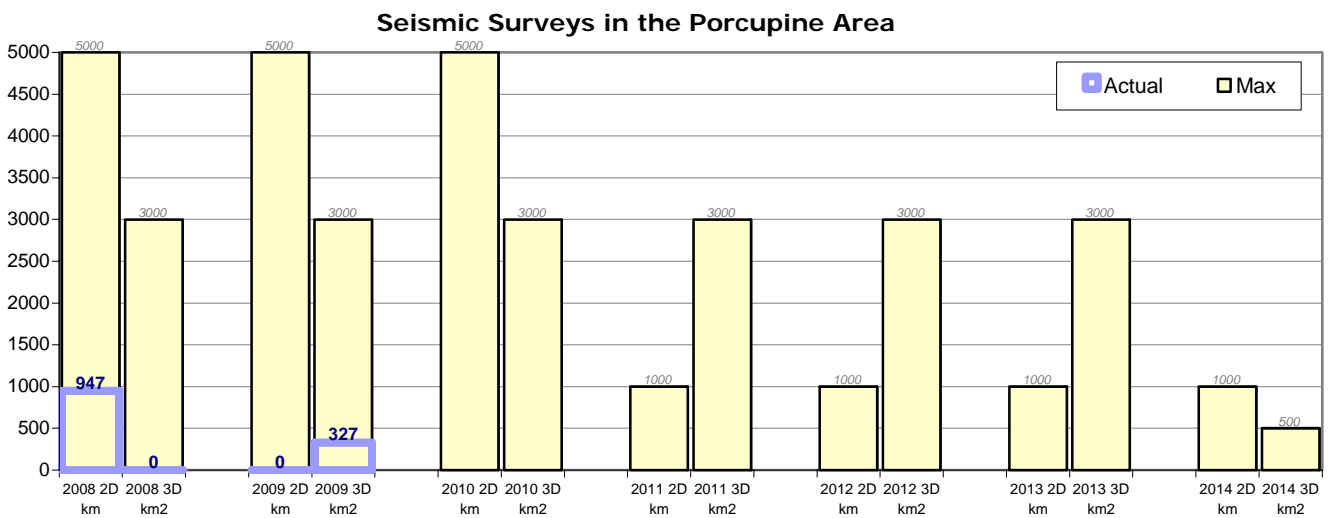
**Drilling in the Slyne/Erris/Donegal Area**



**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



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