

PETROLEUM EXPLORATION AND DEVELOPMENT IN IRELAND

**Report Covering Period
1 July 2016– 31 December 2016**

Report by the Minister for Communications, Climate Action and Environment for the six months ended 31 December 2016, 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*.

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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, Climate Action and Environment 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.

Lease	Commencement Date	Block Numbers (p) = part block	Area (km²)	Participants (* = Operator)	% Interest
<u>Offshore Petroleum Lease No. 1: Kinsale/Ballycotton</u>	7 May 1970	48/20, 48/25, 49/16 & 49/21	1003.03	*PSE Kinsale Energy Limited.	100%
<u>Corrib Petroleum Lease</u>	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%
<u>Seven Heads Petroleum Lease</u>	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%

Lease Undertakings

A **Lease Undertaking** gives the Holder the right to a Petroleum Lease over that part of the area covered by the Undertaking.

Undertaking	Commencement Date	Block No. (p) = part block	Area (km ²)	Participants (* = Operator)	% Interest
<u>Dunmore Lease Undertaking</u>	1 March 2016	50/6(p) & 50/7(p)	15.1778	*Providence Resources PLC Atlantic Petroleum (Ireland) Limited Sosina Exploration Limited	72.5% 18.33% 9.17%
<u>Helvick Lease Undertaking</u>	1 March 2016	49/9(p)	4.6317	*Providence Resources PLC Atlantic Petroleum (Ireland) Limited Sosina Exploration Limited	72.5% 18.33% 9.17%

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. **Eight** of these Licences were subject to the 1992 '*Licensing Terms for Offshore Oil and Gas Exploration and Development*'. **Nineteen** Licences 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 km².

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 km². If acreage is surrendered at the end of the fourth year, the annual rental fee rises to **€182** per km².

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 km² and **€60** per km² during the second and subsequent phases.

The 1992 & 2007 Terms also provide for an application fee of **€9,122** in each case.

Licence	Licence Period	Block No. (p) = part block	Area (km ²)	Participants (* = Operator)	% Interest
1/04 Frontier	15 April 2004 - 14 April 2020	26/27 (p), 26/28, 35/2 (p) & 35/3 (p)	622.06	*Island Assets Porcupine Limited Valhalla Oil and Gas (Porcupine) Limited Supernova Ireland Resources B.V.	41.5% 38.5% 20%
2/04 Frontier	15 November 2004 - 14 March 2023	35/8 & 35/9	500.95	*Capricorn Ireland Ltd Chrysaor E&P Ireland Limited Providence Resources Plc Sosina Exploration Limited	38% 26% 32% 4%
3/04 Frontier	15 November 2004- 14 November 2021	44/18, 44/23, 44/24, 44/29, & 44/30	1,295.27	* Eni Ireland BV Providence Resources Plc Sosina Exploration Limited Repsol Exploracion Irlanda SA Atlantic Petroleum (Ireland) Ltd	36.913% 21.477% 2.684% 33.557% 5.369%

Petroleum Exploration Licences (continued)

Licence	Licence Period	Block No. (p) = part block	Area (km ²)	Participants (* = Operator)	% Interest
3/05 Frontier	1 July 2005 - 30 June 2022	18/10, 19/1 & 19/6	715.58	*Island Rockall JV Limited Island Oil & Gas Plc	50% 50%
4/05 Standard	1 November 2005 – 31 October 2011 (Lease undertaking application being considered)	49/17(p), 49/22(p) & 49/23(p).	258.49	*Island Expro Limited Valhalla Oil and Gas Limited St Stephen's Energy Limited	65% 20% 15%
5/05 Standard	1 November 2005 - 31 October 2011 (Lease undertaking application being considered)	48/26 (p), 48/27 (p), 57/1 (p), 57/2	664.2	*Island Expro Limited Valhalla Oil and Gas Limited St Stephen's Energy Limited	62.5% 25% 12.5%
1/06 Frontier	1 December 2006 - 30 November 2021	27/4(p), 27/5 (p) & 27/9 (p).	305.25	*Serica Energy Slyne BV RWE DEA AG	50% 50%
4/06 Frontier	1 December 2006 - 30 November 2022	27/17 (p), 27/18, 27/22 (p) & 27/23	741.48	*Island Oil and Gas plc Lundin Exploration BV	50% 50%
1/07 Standard	1 February 2007 - 30 June 2014 (Follow-on application being considered)	41/25 (p), 42/21 (p), 41/30 (p), 42/26 (p), 50/5 (p) & 51/1 (p)	302.22	Providence Resources Plc	100%
2/07 Standard	1 February 2007- 31 January 2013 (Lease undertaking application being considered)	49/9 (p), 50/6 (p), 50/7 (p) & 50/11 (p)	107.23	*Providence Resources Plc Atlantic Petroleum (Ireland) Limited Sosina Exploration Limited	72.500% 18.333% 9.1667%
4/07 Standard	1 August 2007 - 31 July 2017	49/11 (p), 49/12 (p), 49/13 (p), 49/17 (p) & 49/18 (p)	542.37	*PSE Seven Heads Limited Lansdowne Celtic Sea Limited	80% 20%
3/08 Frontier	12 March 2008 - 11 March 2021	61/9, 61/10 & 62/6	801.59	*Island Oil and Gas Plc Supernova Ireland Resources BV	50% 50%
4/08 Frontier	12 March 2008 - 30 June 2021	35/2(p), 35/3(p) & 35/4 (p)	370.42	*Capricorn Ireland Ltd Chrysaor E&P Ireland Limited Providence Resources Plc Sosina Exploration Limited	38% 26% 32% 4%

Petroleum Exploration Licences (continued)

Licence	Licence Period	Block No. (p) = part block	Area (km ²)	Participants (* = Operator)	% Interest
1/09 Frontier	21 July 2009 – 20 July 2027	5/17, 5/18, 5/22, 5/23, 5/27 & 5/28	390.0463	Serica Energy Rockall BV	100%
1/11 Standard	14 July 2011- 13 July 2019	48/22(p), 48/23(p),48/24(p), 48/27(p), 48/28(p), 48/29(p) & 48/30(p)	613.9969	*Exola Ltd. Lansdowne Celtic sea Ltd	80% 20%
2/11 Standard	18 August 2011 – 17 August 2019	32/25(p), 33/21(p) & 33/26(p)	384.13	Providence Resources Plc	100%
1/13 Frontier	5 July 2013 – 4 July 2028	44/4(p), 44/5(p), 44/9(p), 44/10, 44/14(p) , 44/15(p)	1051.75	Antrim Exploration (Ireland) Ltd	100%
2/13 Frontier	5 July 2013 – 4 July 2028	43/9, 43/10(p), 43/14 & 43/15(p).	768.02	Europa Oil and Gas (Ireland West) Ltd	100%
3/13 Frontier	5 July 2013 – 4 July 2028	54/1(p), 54/2, 54/6(p) & 54/7.	781.97	Europa Oil and Gas (Ireland East) Ltd	100%
4/13 Frontier	1 December 2013- 30 November 2028	11/10, 11/15, 12/1(p), 12/6 & 12/11(p)	925.05	Serica Energy Rockall BV	100%
5/13 Frontier	13 December 2013- 12 December 2028	35/25(p), 35/30, 36/21(p), 36/26(p), 44/5(p) & 45/1(p)	712.3241	*Woodside Energy (Ireland) Pty Ltd Bluestack Energy Ltd	90% 10%
1/14 Frontier	1 January 2014 – 31 December 2028	35/13, 35/14, 35/15(p), 35/18 and 35/19	1133.70	*Capricorn Ireland Limited Providence Resources Plc Chrysaor E&P Ireland Limited Sosina Exploration Limited	38% 32% 26% 4%
2/14 Frontier	1 January 2014 – 31 December 2028	52/5(p), 52/10(p), 52/15(p), 53/1(p), 53/6(p) and 53/11(p)	1166.41	*Providence Resources Plc Sosina Exploration Limited	80% 20%
3/14 Frontier	1 March 2014 – 28 February 2030	35/23(p), 35/24(p) and 35/25(p)	474.86	*Woodside Energy (Ireland) Pty Ltd Petrel Resources Plc	85% 15%
4/14 Frontier	1 March 2014 - 28 February 2029	45/6(p), 45/11(p) and 45/16(p)	576.44	*Woodside Energy (Ireland) Pty Ltd Petrel Resources Plc	85% 15%
5/14 Frontier	1 March 2014 to 28 February 2030	34/19(p), 34/20(p), 34/24(p), 34/25(p), 35/16(p) and 35/21(p)	1,135.9	*Woodside Energy (Ireland) Pty Ltd AzEire Ltd	60% 40%

Licence	Licence Period	Block No. (p) = part block	Area (km ²)	Participants (* = Operator)	% Interest
6/14 Frontier	1 April 2014 to 31 March 2029	61/13(p) , 61/14, 61/15, 61/18(p), 61/19(p), 61/20(p), 62/11(p) and 62/16(p)	1,203.94 41	* Providence Resources Plc Sosina Exploration Limited	80% 20%

(p) – part block

SEL 4/07 surrendered 31 December 2016

FEL 1/14 surrendered 31 December 2016

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. (p) = part block	Area (km ²)	Participants (* = Operator)	% Interest
11/1 Onshore	1 March 2011 – 28 February 2013 (Follow-on application under consideration)	Clare Basin	495	Enegi Oil Plc	100%
11/3 Onshore	1 March 2011 – 28 February 2013 (Follow-on application under consideration)	Northwest Carboniferous Basin	986	Tamboran Resources PTY Ltd	100%
13/4 Offshore	1 December 2013 - 30 November 2016	57/13(p), 57/14(p), 57/15(p), 57/17(p), 57/18, 57/19(p), 57/21(p), 57/22 and 57/23(p)	1530.14	Providence Resources Plc	100%
13/5 Offshore	1 December 2013 - 30 November 2016	50/12, 50/6(p), 50/7(p), 50/8(p), 50/9(p), 50/11(p) and 50/13(p)	765.02	*Excalibur Exploration Ltd Theseus Ltd	90% 10%
14/1 Offshore	1 October 2014 - 30 September 2016	48/28(p), 48/29(p), 48/30(p), 49/26(p), 57/3(p), 57/4(p) and 57/5(p)	1035.739	Faroe Petroleum (U.K.) Limited	100%
14/2 Offshore	1 October 2014 - 30 September 2016	57/7, 57/11, 57/6(p), 57/8(p), 57/9(p) and 57/12(p)	1086.232	Faroe Petroleum (U.K.) Limited	100%
14/3 Offshore	1 October 2014 - 30 September 2016	50/10, 50/14, 50/16, 50/17, 50/9(p), 50/11(p), 50/13(p), and 50/18(p)	1336.045	Faroe Petroleum (U.K.) Limited	100%
14/4 Offshore	15 October 2014 – 14 October 2017	57/3(p), 57/4(p), 57/5(p), 57/8(p) & 57/9(p)	416.273	*Trans International Oil Exploration Limited Theseus Limited	90% 10%
15/1 Offshore	1 March 2015 – 31 August 2016	55/13, 55/7(p), 55/8(p), 55/12(p), 55/17(p), 55/18(p) & 55/19(p)	996.407	Fastnet Oil & Gas (Ireland) Ltd.	100%

16/1 Offshore	1 March 2016 – 28 February 2018	53/29(p), 53/30(p), 54/21, 54/22, 54/26, 54/27 & 61/5(p)	1405.276	*Eni Ireland B.V. BP Exploration Operating Company Ltd.	50% 50%
16/2 Offshore	1 March 2016 – 28 February 2018	54/3 & 54/8	522.5155	Europa Oil & Gas (Holdings) Plc	100%
16/3 Offshore	1 March 2016 – 28 February 2018	52/7, 52/8, 52/9(p), 52/12, 52/13, 52/14(p), 52/17(p) & 52/18 (p)	1557.3513	*ExxonMobil Exploration and Production Ireland (Offshore South) Limited Statoil Exploration (Ireland) Limited	50% 50%
16/4 Offshore	1 March 2016 – 28 February 2018	61/17, 61/18(p), 61/19(p), 61/22(p) & 61/23(p)	881.2274	*ExxonMobil Exploration and Production Ireland (Offshore South) Limited Statoil Exploration (Ireland) Limited	50% 50%
16/5 Offshore	1 March 2016 – 28 February 2018	61/7(p), 61/8(p), 61/11, 61/12 & 61/13(p)	731.0954	Nexen Petroleum UK Limited	100%
16/6 Offshore	1 March 2016 – 28 February 2018	61/20(p), 61/22(p), 61/23(p), 61/24(p) & 61/25	874.3265	Nexen Petroleum UK Limited	100%
16/7 Offshore	1 March 2016 – 28 February 2018	43/27, 52/2, 52/3, 52/4, 52/9(p) & 52/10(p)	1300.6126	Nexen Petroleum UK Limited	100%
16/8 Offshore	1 March 2016 – 28 February 2018	60/13, 60/14, 60/15, 60/18(p), 60/19, 60/20 & 61/16(p)	1611.7667	Nexen Petroleum UK Limited	100%
16/9 Offshore	1 March 2016 – 28 February 2018	54/23 & 54/28	529.8617	Scotia Oil & Gas Exploration Ltd	100%
16/10 Offshore	1 March 2016 – 28 February 2018	53/27(p), 53/28(p), 53/29(p), 53/30(p), 61/2(p), 61/3, 61/4, 61/5(p), 61/7(p) & 61/8(p)	1597.2843	*Statoil Exploration (Ireland) Limited ExxonMobil Exploration and Production Ireland (Offshore South) Limited	50% 50%
16/11 Offshore	1 March 2016 – 28 February 2018	53/26(p), 53/27(p), 60/4(p), 60/5, 60/8(p), 60/9(p), 60/10(p), 61/1, 61/2(p), 61/6(p) & 61/7(p)	1598.7622	*Statoil Exploration (Ireland) Limited ExxonMobil Exploration and Production Ireland (Offshore South) Limited	50% 50%
16/12 Offshore	1 March 2016 – 28 February 2018	60/10(p), 61/6(p), 61/7(p) & 61/8(p)	473.1863	*Statoil Exploration (Ireland) Limited ExxonMobil Exploration and Production Ireland (Offshore South) Limited	50% 50%

Option No	Option Period	Block Nos. (p) = part block)	Area (km ²)	Participants (* = Operator)	% Interest
16/13 Offshore	March 2016 – 28 February 2018	52/27(p), 52/28(p), 52/29(p), 60/2, 60/3, 60/4(p), 60/7(p) & 60/8(p)	1597.722	*Statoil Exploration (Ireland) Limited ExxonMobil Exploration and Production Ireland (Offshore South) Limited	50% 50%
16/14 Offshore	1 March 2016 – 28 February 2018	54/11, 54/12, 54/13, 54/16, 54/17 & 54/18	1578.584	Woodside Energy (Ireland) Pty Limited	100%
16/15 Offshore	1 May 2016 – 30 April 2018	55/9, 55/10, 55/14 and 55/15	1048.72	Theseus Limited	100%
16/16 Offshore	1 July 2016 – 30 June 2018	35/6, 35/7, 35/11 and 35/12	1003.8733	AzEire Ltd	100%
16/17 Offshore	1 July 2016 – 30 June 2018	44/14(p), 44/15(p), 44/19, 44/20, 44/25, 45/21 and 45/26	1498.4821	AzEire Ltd	100%
16/18 Offshore	1 July 2016 – 30 June 2018	34/29, 34/30, 35/26, 43/4, 43/5 and 44/1	1528.441	Capricorn Ireland Limited	100%
16/19 Offshore	1 July 2016 – 30 June 2018	35/27(p), 43/10(p), 43/15(p), 44/2(p), 44/6, 44/7(p) and 44/11(p)	975.5783	Europa Oil and Gas (Holdings) PLC	100%
16/20 Offshore	1 July 2016 – 30 June 2019	18/14, 18/15, 18/19 and 18/20(p)	945.0947	Europa Oil and Gas (Holdings) PLC	100%
16/21 Offshore	1 July 2016 – 30 June 2019	11/27(p), 11/28(p), 19/2, 19/3 and 19/4(p)	831.8929	Europa Oil and Gas (Holdings) PLC	100%
16/22 Offshore	1 July 2016 – 30 June 2019	75/21, 75/26, 82/25 and 82/30	992.4618	Europa Oil and Gas (Holdings) PLC	100%
16/23 Offshore	1 July 2016 – 30 June 2019	19/7, 19/8(p), 19/11(p), 19/12(p), 19/16(p) and 19/17	959.7287	Faroe Petroleum (U.K.) Limited	100%
16/24 Offshore	1 July 2016 – 30 June 2018	26/26, 26/27(p), 35/1 and 35/2(p)	663.988	Petrel Resources Plc	100%
16/25 Offshore	1 July 2016 – 30 June 2018	45/27	259.8712	Petrel Resources Plc	100%
16/26 Offshore	1 July 2016 – 30 June 2018	18/24(p), 18/25(p), 18/29(p) and 18/30(p)	302.4861	*Predator Oil and Gas Ventures Limited Theseus Limited	50% 50%

Option No	Option Period	Block Nos. (p) = part block	Area (km ²)	Participants (* = Operator)	% Interest
16/27 Offshore	1 July 2016 – 30 June 2018	44/2(p), 44/3(p), 44/7(p), 44/8(p), 44/11(p), 44/12, 44/13(p), 44/16(p) and 44/17	1323.5121	*Providence Resources Plc Sosina Exploration Limited	80% 20%
16/28 Offshore	1 July 2016 – 30 June 2018	44/22, 44/27, 44/28, 53/2, 53/3 and 53/8	1561.9983	Ratio Petroleum Limited	100%
16/29 Offshore	1 July 2016 – 30 June 2018	35/16(p), 35/17 and 35/22(p)	355.6429	Scotia Oil and Gas Exploration Limited	100%
16/30 Offshore	1 December 2016 - 30 November 2018	49/13(p), 49/14(p), 49/15(p), 49/18(p), 49/19, 49/20 and 49/23(p)	799.4	*Predator Oil and Gas Ventures Limited Theseus Limited	50% 50%
16/31 Offshore	1 December 2016 - 30 November 2019	56/26(p), 56/27(p), 63/5 (p), 63/8(p), 63/9(p), 63/10(p), 63/13(p), 63/14 63/15(p), 63/14, 64/1 , 64/2(p) and 64/6(p)	1654.2923	AzEire Limited	100%
16/32 Offshore	1 December 2016 - 30 November 2019	56/5(p), 56/10, 56/14, 56/15, 56/19, 56/20(p), 57/1(p) and 57/6(p)	1508.9519	AzEire Limited	100%

(p) – part block * operator

LO 13/5 expired 30 November 2016
LO 14/1 expired 30 September 2016
LO 14/2 expired 30 September 2016
LO 14/3 expired 30 September 2016
LO 15/1 expired 31 August 2016

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
3/14	3	1 July 2014	Capricorn Ireland Ltd
4/14	3	1 July 2014	Seabird Exploration Multi-Client Limited
1/15	2	1 October 2014	Faroe Petroleum (U.K.) Limited
2/15	3	15 October 2014	Trans International Oil Exploration Limited
2/16	3	1 May 2016	Woodside Energy (Ireland) Pty Limited
3/16	3	23 April 2016	Providence Resources Plc
4/16	3	1 May 2016	Polarcus MC Ltd
5/16	3	1 May 2016	CGG Services SA
6/16	3	1 July 2016	ExxonMobil Exploration and Production Ireland (Offshore South) Limited
7/16	2	1 July 2016	Nexen Petroleum U.K. Limited
8/16	3	1 July 2016	TGS-NOPEC Geophysical Company ASA
9/16	3	1 July 2016	Statoil Exploration (Ireland) Limited
10/16	3	1 July 2016	PGS Exploration (UK) Limited
11/16	3	1 November 2016	Europa Oil and Gas (Holdings) PLC
12/16	2	1 November 2016	Eni Ireland B.V.
13/16	2	1 November 2016	Predator Oil and Gas Ventures Limited
15/16	2	1 November 2016	AzEire Limited

17/16	2	1 December 2016	Petrel Resources Plc
18/16	3	1 December 2016	Faroe Petroleum (U.K.) Limited

PART TWO
MONEYS RECEIVED

During the six months ended 31 December 2016 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 **€1,093,298**. Details are as follows:

Rentals	Application fees	Assignments of interest	Sale of Data	Gas storage	Total
€1,064,764	€9,120	€9,120	€2,694	€0	€1,085,698

PART THREE
OTHER INFORMATION

EXPLORATION/APPRAISAL WELLS drilled during the 6 months ended 31 December 2016

There were no exploration or appraisal wells drilled during the period 1 July 2016 to 31 December 2016.

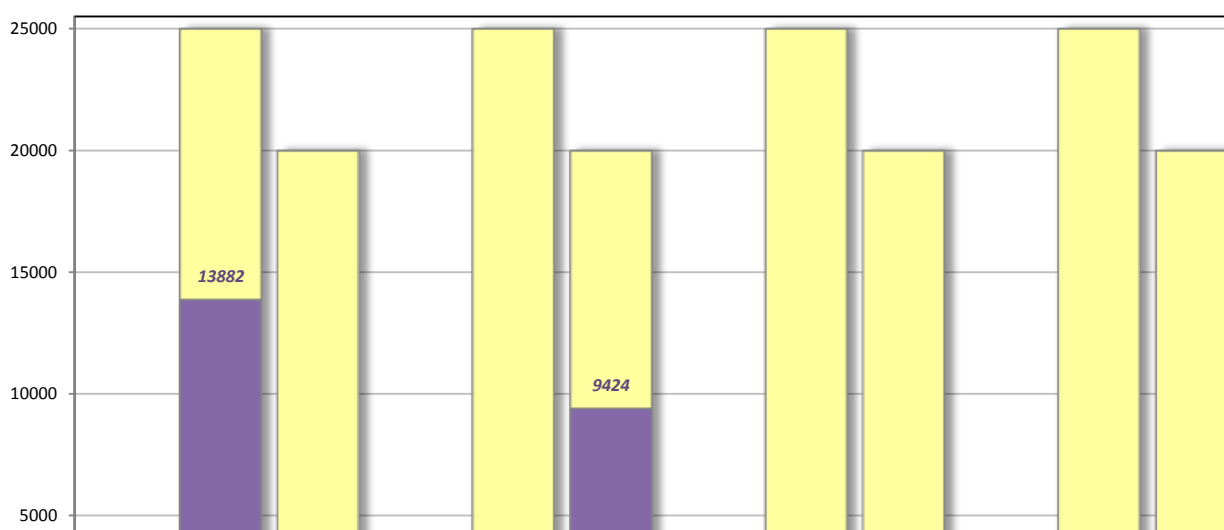
**SEISMIC SURVEYS carried out or commenced in the 6 months to
31 December 2016**

Operator	Authorisation	Contractor	Vessel	2D Line Km	3D Km ²	Survey Area
Woodside Energy	PPL2/16	PGS Exploration	M/V Ramform Vanguard	Nil	2252	Brenann Porcupine Basin
CGG	PPL5/16	CGG	Oceanic Endeavour	Nil	646	Cairenn South Porcupine Basin
CGG	PPL5/16	CGG	Oceanic Endeavour	Nil	4271	Galway South Porcupine Basin

Actual versus forecast levels of exploration activity – IOSEA5 area Exploration and Production activities (i.e. seismic surveying, exploration, appraisal and development / production drilling) forecast in the IOSEA5 area between 2015 and 2020 (from Table 2.1 of IOSEA5 Environmental Report)

Type of activity	2015		2016		2017		2018		2019		2020	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
2D seismic survey (km)	0	25000	0	25000	0	25000	0	25000	0	25000	0	25000
3D seismic survey (km ²)	0	20000	0	20000	0	20000	0	20000	0	20000	0	20000
Numbers of wells	0	10	0	10	0	10	0	10	0	10	0	10

Seismic Surveys in the IOSEA5 Area



Drilling in the IOSEA5 Area

