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WHERE IN THE WORLD ARE CANADIAN OIL AND GAS COMPANIES? 2012

Niloo Hojjati and Braeden Larson

Since the original publication of this briefing paper issued on 2017/07/15, new data have become available which require revisions to the paper. The overall conclusions of the original paper remain the same; however, the magnitude of the increases and/or decreases of activity by Canadian oil and gas companies must be adjusted to correctly project the year-over-year differences. For that reason, version 2 of the "Where in the World Are Canadian Oil and Gas Companies? 2012" briefing paper has been released. In version 1, there were a total of 228 Canadian oil and gas (O&G) companies operating in 85 countries (excluding Canada). However, with the new data that have emerged, this number has been adjusted to 242 O&G companies operating in 99 countries around the world. Below is the revised "Where in the World Are Canadian Oil and Gas Companies? 2012" briefing paper, version 2 issued on 2018/06/12, which reflects the new and updated data collected.

INTRODUCTION

Begun in 2011 as an internal research tool for the development of the Extractive Resource Governance Program, this study seeks to answer the vital question: *Where in the world are Canadian oil and gas companies*? To answer this question, we extract firm-level information from publicly traded Canadian companies in order to establish the location of their activities around the globe.¹ The data collected in the "Where in the World" (hereafter WIW) project are presented through a publicly accessible interactive world map, which allows users to explore a specific country or region over time. This map can be accessed online at <u>http://www.policyschool.ca/research-teaching/teaching-training/extractiveresource-governance/ergp-map</u>. For background information regarding the WIW project, including an extensive overview of the methodology, please refer to <u>http://www.policyschool.ca/wp-content/uploads/2017/06/Where-in-the-World-Hojjati-Horsfield-Jordison-final.pdf</u>. For a summarized overview of the annual data gathered in 2011, please refer to <u>http://www.policyschool.ca/wp-content/</u> uploads/2017/06/2011-Where-in-the-World-Hojjati-Horsfield-Jordison-final.pdf.

The WIW project examines the global activities of Canadian oil and gas companies in 218 countries spanning seven international regions of analysis. They are as follows: Africa; Asia and Oceania; Central and South America; Eurasia; Europe; Middle East and North America. For a complete list of countries examined in the WIW project, refer to Appendix A.

This report, as in the earlier report in this series, presents an extensive account of the global presence of Canadian oil and gas (hereafter O&G) companies in the 2012 year of study.² In total, 242 Canadian O&G companies conducted operations in 99 countries in 2012, extending their presence to every region of the world. With North America continuing to serve as the primary destination for Canadian exploration and production activities, the role of Canadian O&G service companies increased significantly in the Asia and Oceania region's oil and gas industry, particularly in Australia and India.

This report begins with a regional overview of the international activities of Canadian exploration and production (E&P) companies, followed by a summary of the level of activities on a country basis. The report then continues by providing the same analysis for Canadian O&G service companies.

I. WHERE IN THE WORLD ARE CANADIAN E&P COMPANIES OPERATING?

In 2012, 179 Canadian³ E&P companies engaged in international exploration activities in 82 countries worldwide. Among the 179 companies, 65 recorded some level of global production.⁴ Canadian exploration activities accounted for 0.72 per cent of worldwide production of oil, natural gas liquids (NGL) and natural gas, producing a total amount of 965,471 barrels of oil equivalent per day (boe/d) outside of Canada's borders.⁵ This constituted a decline of three per cent in comparison to 2011 levels of production. The following section provides a detailed description of the international presence of Canadian E&P companies in 2012 in terms of scale of activity and total level of production. It begins with a regional overview, followed by a summary of country-specific activities. Finally, notable E&P companies are highlighted.

A. Regional Overview

The regional distribution of Canadian E&P companies in 2012 is similar to the previous year; however, there has been a mix of regional increases and decreases of the number of active Canadian E&P companies in each region. North America continues to serve as the top destination for Canadian exploration activities, while Africa, and Asia and Oceania, now rank one spot higher than in 2011. The number of active Canadian E&P companies in the remaining regions in 2012 along with the numbers in the previous year are presented in Table 1 below.

² The author would like to thank School of Public Policy research assistants Jimmy Solis and Tasha Taylor for their contributions to the WIW project, specifically the collection of 2012 data that are reflected in the content of this paper.

For the purposes of the WIW project, an O&G company is defined to be "Canadian" according to two selection criteria: (i) the company must have its headquarters (or head office) in Canada; and (ii) the company must be publicly traded on a Canadian exchange.

⁴ Information about international operations is not uniformly represented across regulatory filings for similar firms in the O&G industry. For instance, an E&P company might indicate it is active in a particular region or country, but might not specify more detailed information about its activities, such as production levels.

⁵ The aim of the WIW project is to examine the international presence of Canadian companies in foreign countries. As such, this project does not provide information related to the activities of Canadian companies within Canada's borders, such as the annual levels of production within Canada of oil, NGL and natural gas.

		2011		2012		
Region	Ranking	Number of Active E&P Companies	Number of Countries Activity is Spread Across	Ranking	Number of Active E&P Companies	Number of Countries Activity is Spread Across
Africa	3	44	32	2	53	31
Asia & Oceania	5	30	18	4	33	14
Central & South America	2	50	19	3	43	9
Eurasia	7	6	4	7	7	4
Europe	4	31	17	5	32	17
Middle East	6	21	4	6	14	4
North America (Excluding Canada)	1	92	3	1	82	3
Total Worldwide (Excluding Canada)	N/A	191	96	N/A	179	82

TABLE 1 NUMBER OF CANADIAN E&P COMPANIES BY REGION, 2011 AND 2012

Source: "Where in the World Are Canadian Oil and Gas Companies?" (2012).⁶

To illustrate the regional significance of Canadian E&P companies in 2012, the following table (Table 2) provides the share of production for oil, NGL and natural gas by Canadian companies relative to the total production levels in each region in this year of study, as well as in 2011.

TABLE 2OIL, NGL AND NATURAL GAS PRODUCTION LEVELS OF CANADIAN E&P COMPANIES BY REGION,
2011 AND 2012

		2011			2012			
Region	Ranking	Total Production (boe/d)	Total Production by Canadian Companies (boe/d)	Ranking	Total Production (boe/d)	Total Production by Canadian Companies (boe/d)	Share of Total Production which is Canadian (%)	
Africa	4	12,603,685	69,842	4	12,835,582	86,272	0.67%	
Asia & Oceania	5	16,154,291	59,144	5	16,115,035	45,071	0.28%	
Central & South America	3	10,318,349	145,247	2	10,063,062	197,716	1.96%	
Eurasia	7	26,305,227	193	7	25,947,930	281	0.0011%	
Europe	1	8,410,634	209,221	1	8,080,656	198,516	2.46%	
Middle East	6	35,066,266	54,042	6	37,117,517	3,231	0.0087%	
North America (Excluding Canada)	2	23,255,293	458,115	3	23,673,201	434,382	1.83%	
Total Worldwide (Excluding Canada)	N/A	132,113,746	995,814	N/A	133,832,983	965,471	0.72%	

Source: "Where in the World Are Canadian Oil and Gas Companies?" (2012).⁶

As observed in Table 2, the share of Canadian production levels has increased most substantially in Central and South America but Europe still accounts for the highest share of Canadian production in this year of study. The Middle East experienced a significant decrease in the level of production by Canadian E&P companies, a decline of approximately 50,811 boe/d in comparison to the previous year. Meanwhile, while the

 [&]quot;Where in the World Are Canadian Oil and Gas Companies?" University of Calgary School of Public Policy, <u>http://www.policyschool.ca/research-teaching/teaching-training/extractive-resource-governance/ergp-map/</u>.
 For further background information regarding the WIW project, including the methodology and sources of data extraction, see Niloo Hojjati, Kai Horsfield, and Shantel Jordison, "Where in the World Are Canadian Oil and Gas Companies? An Introduction to the Project," University of Calgary School of Public Policy Research Paper (volume 13) (2017).

contribution of Canadian exploration activities has increased by some 24 per cent in Africa, the region maintains the same fourth-place ranking as in 2011.

B. Country Overview

Similar to the previous year of study, the vast majority of Canadian exploration activities are concentrated in the United States and Colombia, with a combined presence of 55 per cent of Canadian E&P companies in both countries (99 out of a total of 179 E&P companies). Several countries experienced a slight increase in the number of companies, including Tunisia and Brazil, which are both ranked fourth, and Australia which ranks third. The most significant reduction in the international presence of companies occurred in Trinidad and Tobago, which experienced a 67 per cent decrease and is no longer considered a top-five country for Canadian E&P companies in 2012, including their level of activity in the previous year, are outlined in Table 3 below.

	20	011	2012		
Country	Ranking	Number of Active E&P Companies	Ranking	Number of Active E&P Companies	
Argentina	4	10	5	8	
Australia	6	8	3	11	
Brazil	7	6	4	9	
Colombia	2	26	2	23	
Peru	3	12	5	8	
Tunisia	6	8	4	9	
U.S.	1	90	1	80	
Total Worldwide (Excluding Canada)	N/A	191	N/A	179	

TABLE 3 TOP FIVE COUNTRIES BY NUMBER OF CANADIAN E&P COMPANIES, 2011 AND 2012

Source: "Where in the World Are Canadian Oil and Gas Companies?" (2012).6

An additional measure of demonstrating the impact of Canadian E&P companies in the international arena is an examination of the contribution of Canadian exploration activities in terms of total production of oil, NGL and natural gas. Table 4 presents the top five countries with the highest levels of production of Canadian-produced oil, NGL and natural gas, as a share of total countrywide levels of production in 2012, while also outlining the production levels in the previous year by way of comparison. As seen in Table 4, the international exploration activities of Canadian companies continue to play a pivotal role in Colombia. The second country of significance is the United Kingdom, where Canadian E&P companies are responsible for nearly nine per cent of total oil, NGL and natural gas production levels. This ratio has decreased by less than one per cent in comparison to the previous year and Canadian E&P companies continue to have the highest level of production in the United Kingdom among all other European countries. Meanwhile, the role of Canadian exploration companies has expanded within the local oil and gas industry on the African continent, specifically in Tunisia and Libya, which have seen a combined increase of 50 per cent in the Canadian share of total production of oil, NGL and natural gas in 2012.

2011			2012				
Country	Ranking	Total Production (boe/d)	Total Production by Canadian Companies (boe/d)	Ranking	Total Production (boe/d)	Total Production by Canadian Companies (boe/d)	Share of Total Production which is Canadian (%)
Bangladesh	6	329,485	9,900	4	343,269	9,330	2.72%
Colombia	1	1,108,636	139,247	1	1,136,700	186,658	16.42%
Libya	8	629,023	12,100	5	1,705,436	41,500	2.43%
Tunisia	6	101,605	3,093	3	97,193	4,169	4.29%
United Kingdom	3	1,813,561	168,107	2	1,908,669	167,566	8.78%
Total Worldwide (Excluding Canada)	N/A	132,113,746	995,814	N/A	133,832,983	965,471	0.72%

TABLE 4TOP FIVE COUNTRIES BY PERCENTAGE OF CANADIAN OIL, NGL AND NATURAL GAS PRODUCTION
AS A SHARE OF TOTAL COUNTRY PRODUCTION, 2011 AND 2012

Source: "Where in the World Are Canadian Oil and Gas Companies?" (2012).6

C. Company Highlights

Canadian E&P companies serve as principal players in the international oil and gas industry, producing a significant proportion of oil, NGL and natural gas within local jurisdictions. To establish the extent of the international presence of Canadian E&P companies around the globe, Table 5 records the number of active country operations for the top three ranking companies in 2012, as well as their level of operations in 2011.

	2	011	2012		
Company	Ranking	Number of Countries with Recorded E&P Activity	Ranking	Number of Countries with Recorded E&P Activity	
Heritage Oil Corp.	3	9	2	8	
Niko Resources Ltd.	4	7	3	7	
Pacific Rubiales Energy Corp.	8	3	3	7	
Simba Energy Inc.	2	10	3	7	
Suncor Energy Inc.	5	6	3	7	
Talisman Energy Inc.	1	21	1	13	
Total Worldwide (Excluding Canada)	N/A	96	N/A	82	

TABLE 5 TOP THREE CANADIAN E&P COMPANIES BY NUMBER OF COUNTRY OPERATIONS, 2011 AND 2012

Source: "Where in the World Are Canadian Oil and Gas Companies?" (2012).⁶

The table demonstrates that, for the second consecutive year, Talisman Energy Inc. is the most expansive Canadian E&P company in its spread of international activities, even though there was a 38 per cent reduction in its international operations since 2011. Heritage Oil Corp. is now the second most expansive exploration company, operating in eight countries. Niko Resources Ltd., Pacific Rubiales Energy Corp. and Suncor Energy Inc. have the third highest spread of international activities, now tied with Simba Energy Inc. in the 2012 study after not being the top three companies in the 2011 study. Simba Energy experienced a decrease in its international activities and is tied for third with the companies listed above. The top five Canadian E&P companies according to total in-country oil, NGL and natural gas levels of company production in 2012, including their production levels in the previous year, are highlighted in Table 6. Interestingly, the companies presented below are identical to the top five companies from the 2011 year of study. However, there are a number of variations that must be addressed. Foremost, although Encana Corp. is responsible for the highest level of in-country production of oil, NGL and natural gas yet again, company production has fallen by nearly 13 per cent in comparison to production levels in 2011. Second, Nexen Inc. also experienced a decline in production and has moved from the second rank in 2011 to the third rank in 2012. Talisman Energy Inc., Pacific Rubiales Energy Corp. and Suncor Energy Inc. all experienced more boe/d of oil, NGL and natural gas production year-over-year. While Pacific Rubiales Energy Corp. produced in one more country than in 2011, Suncor Energy Inc. produced in one less country than in 2011. Talisman Energy Inc. now ranks second, having increased the level of its total oil, NGL and natural gas production by nearly 12 per cent.

		2011			2012			
Company	Ranking	Total Company Production (boe/d)	Number of Countries with Recorded Production⁴	Ranking	Total Company Production (boe/d)	Number of Countries with Recorded Production⁴		
Encana Corporation	1	322,667	1	1	281,933	1		
Nexen Inc.	2	145,433	3	3	99,000	1		
Pacific Rubiales Energy Corp.	4	86,497	1	4	97,657	2		
Suncor Energy Inc.	5	76,400	3	5	89,500	2		
Talisman Energy Inc.	3	141,611	4	2	158,043	4		
Total Worldwide (Excluding Canada)	N/A	995,814	24	N/A	965,471	24		

TABLE 6TOP FIVE CANADIAN E&P COMPANIES LEVEL BY OIL, NGL AND NATURAL GAS PRODUCTION,
2011 AND 2012

Source: "Where in the World Are Canadian Oil and Gas Companies?" (2012).⁶

II. WHERE IN THE WORLD ARE CANADIAN O&G SERVICE COMPANIES OPERATING?

The international presence of Canadian O&G service companies extended to 56 countries in 2012. In total, 63 service companies delivered technical, production and drilling expertise throughout every region of the world. This section presents a description of the level of international activities of Canadian O&G service companies in 2012. It begins with a regional overview, followed by a summary of Canadian operations on a country basis. Last, a brief highlight of notable service companies is presented.

A. Regional Overview

The primary region of significance for the international operations of Canadian O&G service companies in 2012 is North America once again. The second highest concentration is in Asia and Oceania, with the presence of 19 active service companies. Central and South America serves as the third highest destination even though there was a decrease of Canadian service company activity in the region by nearly 11 per cent from 2011. Meanwhile, Africa,

Europe and the Middle East all experienced a surge in service activity year-over-year, while Canadian service activity in Eurasia remained idle. Table 7 indicates the number of active Canadian O&G service companies in each region for the year 2012, while presenting the level of activity in each region for the previous year of study by way of comparison.

		2011		2012			
Region	Ranking	Number of Active Service Companies	Number of Countries Activity is Spread Across	Ranking	Number of Active Service Companies	Number of Countries Activity is Spread Across	
Africa	5	8	11	5	10	15	
Asia & Oceania	3	14	9	2	19	12	
Central & South America	2	19	9	3	17	10	
Eurasia	5	8	3	7	8	2	
Europe	4	9	7	5	10	8	
Middle East	7	7	5	4	11	7	
North America (Excluding Canada)	1	46	2	1	51	2	
Total Worldwide (Excluding Canada)	N/A	64	46	N/A	63	56	

TABLE 7 NUMBER OF CANADIAN O&G SERVICE COMPANIES BY REGION, 2011 AND 2012

Source: "Where in the World Are Canadian Oil and Gas Companies?" (2012).6

B. Country Overview

The United States is host to the highest proportion of Canadian O&G service companies engaged in international operations again in 2012. Meanwhile, Mexico and Australia have experienced a spike in the number of active companies in comparison to the previous year, with those countries ranking second and third respectively. There has also been a major increase of activity in the Middle East, with the addition of five Canadian O&G service companies now operating in the United Arab Emirates. The following table (Table 8) outlines the top five ranking countries with the largest presence of Canadian O&G service companies in 2012, while also indicating their level of activity in 2011.

TABLE 8	TOP FIVE COUNTRIES BY NUMBER OF CANADIAN O&G SERVICE COMPANIES 2011 AND 2012
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	20	011	2012		
Country	Ranking	Number of Active Service Companies	Ranking	Number of Active Service Companies	
Argentina	3	7	4	8	
Australia	4	6	3	12	
Colombia	2	10	3	12	
Mexico	2	10	2	16	
United Arab Emirates	8	2	5	7	
U.S.	1	46	1	50	
Total Worldwide (Excluding Canada)	N/A	64	N/A	63	

Source: "Where in the World Are Canadian Oil and Gas Companies?" (2012).⁶

C. Company Highlights

Major Drilling Group International Inc. is the most active Canadian O&G service company in 2012, with operations extending to six of the seven regions worldwide. Enerflex Ltd. expanded its operations to four additional countries from the year 2011 – New Zealand, Nigeria, Russia and Singapore – while it ceased operations in Pakistan. Shawcor Ltd. nearly doubled its international operations, with 56 per cent of its new activities located in countries that make up the Pacific Rim, now encapsulating almost half of its total international operations. The top three ranking service companies with the highest number of country operations for the year 2012, including their level of operations in the previous year of study, are summarized in Table 9 below.

		2011	2012		
Company	Ranking	Number of Countries with Recorded Service Activity	Ranking	Number of Countries with Recorded Service Activity	
Enerflex Ltd.	1	12	3	15	
Major Drilling Group International Inc.	-	-	1	20	
Shawcor Ltd.	3	7	2	16	
Total Worldwide (Excluding Canada)	N/A	46	N/A	56	

TABLE 9 TOP THREE CANADIAN SERVICE COMPANIES BY NUMBER OF COUNTRY OPERATIONS, 2011 AND 2012

Source: "Where in the World Are Canadian Oil and Gas Companies?" (2012).6

CONCLUSION

In 2012, 242 Canadian O&G companies conducted exploration and service operations in 99 countries around the globe. North America continues to serve as the most significant region for Canadian E&P and service companies, with the vast majority of activities concentrated in the United States. The contribution of Canadian exploration activities to total production levels of oil, NGL and natural gas has increased on the African continent, an indication of the growing importance of Canadian companies in the region. Meanwhile, the role of Canadian O&G service companies has expanded within the Middle Eastern oil and gas industry, specifically in the United Arab Emirates, Saudi Arabia, Kuwait and Oman. For further information and country profiles, please visit the accompanying website at http://www.policyschool.ca/research-teaching/teaching-training/extractive-resource-governance/ergp-map/.

APPENDIX A: COUNTRIES OF ANALYSIS

This section outlines the list of countries examined in the WIW project. The countries of analysis are organized according to the designation system employed by the U.S. Energy Information Administration (EIA).

Region: Africa	Region: Asia & Oceania	Region: Central & South America
Algeria	Afghanistan	Antarctica
Angola	American Samoa	Antigua and Barbuda
Benin	Australia	Argentina
Botswana	Bangladesh	Aruba
Burkina Faso	Bhutan	Bahamas, The
Burundi	Brunei	Barbados
Cameroon	Burma (Myanmar)	Belize
Cape Verde	Cambodia	Bolizia
Central African Republic	China	Brazil
Chad	Cook Islands	
		Cayman Islands
Comoros	Fiji	Chile
Congo (Brazzaville)	French Polynesia	Colombia
Congo (Kinshasa)	Guam	Costa Rica
Côte d'Ivoire (Ivory Coast)	Hong Kong	Cuba
Djibouti	India	Dominica
Egypt	Indonesia	Dominican Republic
Equatorial Guinea	Japan	Ecuador
Eritrea	Kiribati	El Salvador
Ethiopia	Korea, North	Falkland Islands (Islas Malvinas)
Gabon	Korea, South	French Guiana
Gambia, The	Laos	Grenada
Ghana	Macau	Guadeloupe
Guinea	Malaysia	Guatemala
Guinea-Bissau	Maldives	
		Guyana
Kenya	Micronesia	Haiti
Lesotho	Mongolia	Honduras
Liberia	Nauru	Jamaica
Libya	Nepal	Martinique
Madagascar	New Caledonia	Montserrat
Malawi	New Zealand	Netherlands Antilles
Mali	Niue	Nicaragua
Mauritania	Pakistan	Panama
Mauritius	Papua New Guinea	Paraguay
Morocco	Philippines	Peru
Mozambique	Samoa	Puerto Rico
Namibia	Singapore	Saint Kitts and Nevis
Niger	Solomon Islands	Saint Lucia
Nigeria	Sri Lanka	Saint Vincent/Grenadines
Réunion	Taiwan	Suriname
Rwanda	Thailand	Trinidad and Tobago
Saint Helena	Timor-Leste (East Timor)	Turks and Caicos Islands
São Tomé and Principe	Tonga	Uruguay
Senegal	Tuvalu	Venezuela
Seychelles	U.S. Pacific Islands	Virgin Islands, British
Sierra Leone	Vanuatu	Virgin Islands, U.S.
Somalia	Vietnam	
South Africa	Wake Island	
Sudan and South Sudan		
Swaziland		
Tanzania		
Тодо		
Tunisia		
Uganda		
Western Sahara		
Zambia		
Zampia		

TABLE A1 COUNTRIES OF ANALYSIS BY U.S. EIA DESIGNATION SYSTEM

Source: U.S. Energy Information Administration website, "Countries," http://www.eia.gov/countries/#allcountries

Zimbabwe

Region: Eurasia	Region: Europe	Region: Middle East	Region: North America
Armenia	Albania	Bahrain	Bermuda
Azerbaijan	Austria	Iran	Greenland
Belarus	Belgium	Iraq	Mexico
Estonia	Bosnia and Herzegovina	Israel	Saint Pierre and Miquelon
Georgia	Bulgaria	Jordan	United States
Kazakhstan	Croatia	Kuwait	
Kyrgyzstan	Cyprus	Lebanon	
Latvia	Czech Republic	Oman	
Lithuania	Denmark	Palestinian Territories	
Moldova	Faroe Islands	Qatar	
Russia	Finland	Saudi Arabia	
Tajikistan	France	Syria	
Turkmenistan	Germany	United Arab Emirates	
Ukraine	Gibraltar	Yemen	
Uzbekistan	Greece		
	Hungary		
	Iceland		
	Ireland		
	Italy		
	Luxembourg		
	Macedonia		
	Malta		
	Montenegro		
	Netherlands		
	Norway		
	Poland		
	Portugal		
	Romania		
	Serbia		
	Slovakia		
	Slovenia		
	Spain		
	Sweden		
	Switzerland		
	Turkey		
	United Kingdom		

TABLE A2 COUNTRIES OF ANALYSIS BY U.S. EIA DESIGNATION SYSTEM (CONTINUED)

Source: U.S. Energy Information Administration website, "Countries," <u>http://www.eia.gov/countries/#allcountries</u>

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Niloo Hojjati is a Research Associate in the Extractive Resource Governance Program and Tax and Economic Growth Program at The School of Public Policy at the University of Calgary. As part of the Extractive Resource Governance Team, she has worked with governments of numerous resource-rich jurisdictions around the world to assist them in developing sustainable extractive policies through executive training and applied research initiates. Niloo holds a Master's degree in Public Policy from the University of Calgary, with her capstone focusing on the potential application of Small Modular Reactors (SMRs) for electricity generation in the Northwest Territories. She also holds a Bachelor's degree in Economics from the University of Calgary. Her current areas of research include natural resource governance and economic development, with a focus on the role of sovereign wealth funds in resource-rich jurisdictions.

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