

ExxonMobil Canada Properties

Sable Offshore Energy Project

2014 Canada-Nova Scotia Benefits Report



Thebaud Central Processing Facility – Offshore Nova Scotia

Submitted to the

Canada-Nova Scotia Offshore Petroleum Board

March 31, 2015

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Executive Summary

The 2014 Canada - Nova Scotia Benefits Report has been prepared by ExxonMobil Canada Properties (EMCP) as operator of the Sable Offshore Energy Project (SOEP). The 2014 report is submitted to the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB) by as required by the CNSOPB Benefits Plan Decision Report for SOEP (Section 2.6 (Page 56)). The 2014 report includes SOEP offshore and onshore activities for the period January 1, 2014 to December 31, 2014.

The total SOEP related expenditures in Nova Scotia during the report period were \$111.1 million. This represents 51.2% of the overall SOEP expenditures for the year. EMCP and the Sable Project owners continued to support initiatives aimed at developing and sustaining the natural gas industry in Nova Scotia.

The cumulative SOEP expenditures in Nova Scotia since project sanction in 1998 total \$2,696.3 million or 39.5% of the overall project expenditures.

The 2014 expenditures supported on-going operations and maintenance activities as well as initiatives in areas of community support, education and training, research and development, technology transfer and support of diversity and inclusion programs.

1.0 Introduction

The 2014 SOEP Canada-Nova Scotia Benefits Report is submitted to the CNSOPB as required by Section 2.6 of the SOEP Benefits Plan Decision Report issued in 1997. The report includes economic impact data arising from producing operations conducted in 2014 as well as cumulative data compiled since project sanction in 1998. The following SOEP facilities were operated by EMCP in 2014 and are included in the scope of this report:

Offshore Facilities

- Thebaud Central Processing Platform
- Venture Platform
- North Triumph Platform
- Alma Platform
- South Venture Platform
- Export and Inter-field Pipelines

Onshore Facilities

- Goldboro Gas Plant
- Point Tupper Fractionation Plant
- Interconnecting NGL Pipeline



Goldboro Gas Plant

2.0 Project Update

Continued Safe Operations

The focus on continued safe operations at the offshore and onshore SOEP facilities remained during 2014. No lost time injuries (LTI) for employees or contractors occurred during the year marking more than 13 years for the offshore workforce and more than 11 years for the onshore workforce since the last LTI.

A schedule maintenance and inspection shutdown was completed in the August / September timeframe. During this period the offshore and onshore production facilities were taken offline and several inspections were completed.

An offshore diving program was completed at the Thebaud and Venture during April 2014. The work was completed accident free and with no spills to the environment.

EMCP has implemented the Operations Integrity Management System at all Sable Project facilities. This system sets expectations and processes aimed at effectively managing safety, environment and overall facility integrity. This system has the active support and participation of the EMCP employees and contractors here in Nova Scotia. It has been instrumental in building and sustaining a safety culture.

Initiatives such as safety-focused training; workshops to share lessons learned; hazard recognition programs; looking out for others and recognizing results have set a foundation for safety performance. These initiatives continued throughout 2014.

EMCP continues early planning work and studies that will support eventual decommissioning of the Sable Project. The information being gathered will enable EMCP to bring forward a decommissioning plan and timetable.

To date the study work has focused on the project logistics and the market for services that will be involved. Building on this study work, EMCP expects to issue Expressions of Interest in 2015 for certain long lead items such as heavy lift vessels to get a better understanding of future availability.

EMCP is committed to timely communications with all stakeholders who have an interest in Sable's end of field life and decommissioning. EMCP is also committed to providing full and fair opportunity for the local supply community to participate in the project as the scope is developed and implemented.

As we continue our study work EMCP will engage the supply community and share information that will allow companies to bid and participate in the work that is eventually undertaken.

As with all aspects of the Sable Project, EMCP is committed to operating in a safe and environmentally responsible manner, and will adhere to those same values during the planning and execution of activities that are part of end of field life.

Emergency Response and Coordinating with Community Based Responders

On June 28, 2014 EMCP conducted an emergency response exercise in conjunction with Goldboro and local area responders at the Goldboro Gas Plant. The local area RCMP, fire departments, Emergency Health Services and Emergency Measures Organizations all participated in the exercise. The exercise objectives included testing of the SOEP emergency response plans including the structure and processes contained in these plans. The various internal and external communication links were tested as well as the interfaces with the local area responders.



Exercise Safety/Security Kickoff Meeting in Goldboro

Supply Community – Services Supporting Sable Operations

During 2014 the local supply industry provided many critical support services that were used by the offshore and onshore operations. Table 1 below lists examples of these services and the areas of the SOEP operations that have been supported.

Table 1 – Supply Community Services

Support Services Provided by the Supply Community	
<p><u>Operations</u></p> <ul style="list-style-type: none"> - Aviation services - Supply vessels and Marine crews - Catering personnel - Logistics and stevedoring - Staffing services - Laboratory testing and analysis 	<p><u>Business Services</u></p> <ul style="list-style-type: none"> - Customs clearance and brokerage - Courier services - Staffing services - On-land transportation services - Warehousing - Office materials and support - Communications services
<p><u>Maintenance</u></p> <ul style="list-style-type: none"> - Skilled Trades and services such as welding, mechanical fabrication, electrical, instrumentation, insulation and general labour - Painting and Fabric maintenance - Fabrication services - Maintenance materials and consumables - Valve and equipment services - Equipment and tool rentals - Scaffolding services - Diving services and support vessels 	<p><u>Engineering and Technical</u></p> <ul style="list-style-type: none"> - Technical support staff and engineering design services - Equipment inspection services - Data analysis - ROV inspection services and personnel - Survey services - Certification of facility design, maintenance and integrity
<p><u>Safety, Health and Environment</u></p> <ul style="list-style-type: none"> - Safety advisory services - Safety equipment - Safety training services - Environmental monitoring and testing services - Medical personnel and associated services - Weather monitoring and forecasting - Sea state monitoring – waves and currents 	<p><u>Well Services</u></p> <ul style="list-style-type: none"> - Equipment rentals and consumables - Staffing services - Logistics

3.0 Economic Impact

The SOEP economic impact data for 2014 and cumulative data dating to project sanction in 1998 are presented in this section. The project expenditures have been classified in one of three categories listed below based on the *Canadian General Standards Board Method*, which has been adopted by the CNSOPB for local benefits reporting purposes.

- *Nova Scotia,*
- *Other Canadian or*
- *Foreign*

Three other economic impact indicators - person hours of work, headcount and new hires are also included in this section.

In preparing the 2014 Canada Nova Scotia Benefits Report EMCP reviewed information provided by SOEP vendors, the scope of work for the vendor and the guidance available from the Canadian General Standards Board (CGSB) reporting guidelines. Data quality assurance methods used in the preparation of previous Benefits Reports were applied in the preparation of the 2014 report.

The 2014 project expenditures and employment related metrics were higher than the previous year due mainly to the facility milestone inspection and maintenance program conducted during a four week turnaround as well as subsea maintenance programs that were carried out during the year and at year end.

Project Expenditures

The total project expenditures and percentages in each of the categories noted above for 2014 and cumulatively (1998 – 2014) are provided in Tables 2 and 3 below:

Table 2 – 2014 Expenditures (\$ millions)

	Nova Scotia	Other Canadian	Foreign	Total
Total Expenditures	111.1	61.3	44.8	217.2
% of Total	51.2%	28.2%	20.6%	100%

Table 3 – Cumulative Expenditures (\$ millions)

	Nova Scotia	Other Canadian	Foreign	Total
1998 to 2010	2,341.6	1,048.5	2,765.5	6,155.6
% of Total	38.1%	17.0%	44.9%	100.0%
2011	2,416.4	1,081.9	2,800.6	6,298.9
% of Total	38.4%	17.2%	44.4%	100%
2012	2,494.0	1,121.5	2,830.0	6,445.5
% of Total	38.7%	17.4%	43.9%	100%
2013	2,585.2	1,154.7	2,874.5	6,614.4
% of Total	39.1%	17.5%	43.4%	100%
2014	2,696.3	1,216.0	2,919.3	6,831.6
% of Total	39.5%	17.8%	42.7%	100%

Project Employment

Person Hours of Work

The Sable Project person hours of work are categorized as 'Nova Scotia', 'Other Canadian' or 'Foreign' based on the residency of the person performing the work. The total person hours of work conducted for SOEP activities during 2014 was 801,200. Of this total, 694,200 hours or 86.7% of the total was conducted in Nova Scotia. This represents 347 full-time equivalent positions in Nova Scotia during 2014.

Data on person hours of work in the three categories for 2014 and the cumulative total for the period 1998 – 2014 is provided in Tables 4 and 5 below. Data on person hours by major vendor for 2014 is included in Appendix 1.

**Table 4 – 2014 Person Hours
(Thousands of Person Hours)**

	Nova Scotia	Other Canadian	Foreign	Total
Person Hours of Employment	694.2	61.6	45.4	801.2
Percent of Total	86.6%	7.7%	5.7%	100.0%

Table 5 – Person Hours - Cumulative
(Millions of Person Hours)

Cumulative as of December 31	Nova Scotia	Other Canadian	Foreign	Totals
1998 - 2010	20.69	3.37	9.29	33.35
% of Total	62.0	10.1	27.9	100
2011	21.23	3.40	9.29	33.92
% of Total	62.6	10.0	27.4	100
2012	21.84	3.44	9.30	34.58
% of Total	63.2	9.9	26.9	100
2013	22.43	3.50	9.31	35.24
% of Total	63.7	9.9	26.4	100
2014	23.13	3.55	9.35	36.04
% of Total	64.2	9.8	26.0	100

Year End Headcount

The year-end head count is a measure the number of people on shift and scheduled to work on the Sable project at a fixed point each year (December 31). It differs from the full-time equivalent data reported under the person hours measure because it represents a point in time as opposed to all employment activity over the full year. The data is sourced from the EMCP work sites and reports provided by the project's major contractors. The Project year end headcount was 432 on December 31, 2014. Data on this metric for 2014 and the seven previous years is provided in Table 6 below.

Table 6 – Year End Headcount

Year End	Activity in Nova Scotia	Activity in the Rest of Canada	Total Project Activity
2007	411	27	438
2008	336	22	363
2009	320	11	342
2010	218	0	225
2011	212	1	218
2012	251	9	260
2013	265	13	287
2014	406	25	432

Residency of New Hires

The total number of new hires reported for the Sable Project and its major contractors during 2014 was 62. Table 7 below provides the historic distribution of the Residency of New Hires for the Sable Project for 2014 and the seven previous years.

Table 7 – Residency of New Hires

Year	Nova Scotia	Other Canadian	Foreign	Total
2007	99	17	54	170
2008	89	8	0	97
2009	392	30	4	426
2010	29	3	0	32
2011	39	0	0	39
2012	47	11	4	62
2013	74	16	5	95
2014	46	14	2	62

Co-op Student Employment and Cadet Program

EMCP and the major Sable contractors have supported co-op education and work placement programs since 1998. In addition, Secunda Canada, the SOEP supply and standby vessel contractor has implemented a cooperative cadet training program for individuals interested in pursuing a marine-related career.

During 2014 a total of 8 engineering co-op students were placed at the EMCP Halifax office or contractor's offices in Nova Scotia for either four or eight month assignments. A further six cadets were placed on Secunda vessels during the year. A total of \$152,400 was expended on these placements in 2014. The total excludes costs associated with mentoring of the students and cadets or any specialized training courses that were provided.

The 2014 co-op program provided work opportunities for students of varied engineering disciplines. Students pursuing engineering degrees worked with mentors and gained hands on experience with day-to-day operational and business challenges. The students learned about EMCP's and our contractors' safety, business and engineering practices, as well as computer applications. The students focused on supporting on-going operations, projects and reporting and analysis activities.

Information on the co-op program expenditures for 2014 and the seven previous years is provided in Table 8 below.

Table 8 – Co-Op Work Placements

Year	Number of Placements	Cumulative Placements	Investment	Cumulative Investment
2007	20	531	\$286,387	\$4,767,097
2008	18	549	\$310,240	\$5,077,337
2009	21	570	\$252,400	\$5,329,737
2010	7	577	\$100,360	\$5,430,097
2011	7	584	\$93,694	\$5,523,791
2012	8	592	\$165,400	\$5,689,191
2013	4	596	\$61,900	\$5,751,091
2014	14	610	\$152,400	\$5,903,491

4.0 Diversity and Inclusion

EMCP, the Sable Project owners and the project’s major contractors support the development of a diverse and inclusive workplace. Table 9 below includes data from 2014 and the previous seven years on the four designated groups identified in employment equity legislation. These groups are:

- Aboriginal Peoples
- Visible minorities
- Women
- Persons with disabilities

The table provides data collected from EMCP and the SOEP contractors for individuals who identified themselves as members of one or more designated groups since 2001. Information regarding gender representation is gathered from existing Human Resources records. Representation of other designated groups is based on voluntary self-identification data gathered through a confidential survey employee. The information is collected and recorded on employee files in the company's human resources database, accessible only by select designated HR staff.

Table 9 – Traditionally Under-represented Groups

Year	Aboriginal Peoples	Visible Minorities	Women	Persons with Disabilities
2007	*	13	83	*
2008	*	9	61	*
2009	6	11	60	*
2010	7	7	55	*
2011	*	8	45	*
2012	6	7	56	*
2013	5	5	40	*
2014	17	6	46	*

Note: Those categories in which the representation is five individuals or less are marked by an asterisk (*) to protect the privacy of individual respondents.

One initiative that continued to be supported by two of the Sable Project owners (ExxonMobil Canada and Imperial Oil) in 2014 was the Indigenous Women in Community Leadership offered by Coady Institute’s International Centre for Women’s Leadership. This national program supports First Nations, Métis and Inuit women in

building their capacities to be strong leaders and agents of change capable of strengthening and contributing to the development of their communities.

In operation since 2011, the Indigenous Women in Community Leadership program provides successful candidates with a full scholarship that includes tuition, travel, accommodations, meals, and a three-month community placement stipend. Program participants also benefit from the guidance and mentorship from accomplished Indigenous women leaders throughout their learning journey.

The program has three components over the course of four months:

- A three-week course at the Coady International Institute, which includes training in Project Management, Aboriginal History, Leadership, Asset-Based Community Development, Positive Interpersonal Engagement Strategies and Proposal Writing.
- A three-month work placement which is identified and negotiated by the participant with the approval of the IWCL program manager.
- One week and a half at the Coady International Institute, which includes a two day course in Public Speaking and an opportunity for participants to reflect on their placement and the overall program; to present their community project placement results, and to graduate.

5.0 Capacity Development

Information on capacity development, which includes focused oil and gas related training and education activities, supplier development and technology transfer, is provided below.

Training and Education

Expenditures for training and education initiatives for 2014 are included in Table 10 below. These expenditures were aimed at developing or maintaining oil and gas industry relevant skills and include expenditures by EMCP and major contractors.

Table 10 – Training and Education Expenditures

(Including Co-op/Work Placement Programs, Community Training and Education Investments)	
Description of Training	2014 Total
Internal Training	\$328,335
Major Contractor Training	\$456,984
Co-op Programs	\$152,400
2014 Total	\$937,719

The cumulative expenditure for Training and Education since project sanction is almost \$50 million. The cumulative data, including 2014 and the previous seven years is included in Table 11 below.

Table 11 – Training and Education Expenditures - Cumulative

(Including Co-op/Work Placement Programs, Training and Education)		
Year	Investment	Cumulative
2007	\$1,405,177	\$40,901,911
2008	\$1,515,871	\$42,417,782
2009	\$3,393,881	\$45,811,663
2010	\$1,234,541	\$47,046,204
2011	\$687,403	\$47,733,607
2012	\$680,987	\$48,414,594
2013	\$583,710	\$48,998,304
2014	\$937,719	\$49,936,023

In addition to direct training and education activities undertaken by EMCP and our major contractors, EMCP and the Sable owners supported a number of other initiatives that assist and/or recognize the existing education and training infrastructure in Nova Scotia.

Techsploration

Two of the Sable Project owners (ExxonMobil Canada and Imperial Oil) are sponsors of Techsploration which is a joint initiative of the NS Community College, Women in Trades and Technologies (WITT) National Network, and the Nova Scotia Department of Education - Apprenticeship Division. Some local supply community contractors that have provided services to SOEP are also sponsors of Techsploration including Black and MacDonald and Stantec.

Techsploration provides young women from grades nine through twelve with opportunities to explore science, trades, and technology occupations, while creating awareness about the critical role of work in their lives. It also helps them understand the significance of high school math and science for their future career. The goal is to increase the number of women working in science, trades, technical and technology related occupations by assisting young women from diverse backgrounds to explore a wide range of career options in these fields.

Techsploration reaches across Nova Scotia and uses a combination of career research, role models and workshops to expose young women to a variety of career options in trades and technologies. The program is delivered through the schools with the full involvement of the participants' teachers. A team of ninth grade women is chosen from each participating school. Each team is assigned a high-demand trade or technology career to research with the assistance of a role model who is employed in that career. The teams then create interactive presentations that are shared with the other participants, allowing them to learn about a number of career options.



School locations in Nova Scotia that have participated in Techsploration.

Technology Transfer and Local Supplier Capacity

Many local engineering, consulting, construction and service related firms have benefited from the transfer of technology from the Sable Project owners and the international expertise that supported construction, start-up and operation. This transfer has enhanced local supply community in-house expertise and knowledge and in turn enhanced business opportunities.

Local firms continue to benefit from the knowledge collected and are actively seeking opportunities to apply these skills at the local, regional and national level. The estimated cumulative value of the technology transfer exceeds \$31 million.

Over the past few years the Sable Project inspection contractor, EM&I Stantec, has assessed the applicability of a number technologies aimed at increasing the efficiency and cost effectiveness of facility inspections. Digital Radiography (Digi-Rad), Backscatter Computed Tomography (BCT) and most recently Real-Time Radiography have been applied to varying degrees at the Sable Project onshore and offshore facilities. These technologies offer the potential to provide necessary information with less up-front and post inspection preparatory work. This work is also discussed below as a Research and Development initiative.

Technology and knowledge transfer have helped with the establishment of safety cultures that extend beyond the Sable project work to other aspects of the vendors work. Sable project vendors have applied the "nobody gets hurt" philosophy to their work throughout the region. The Sable safety culture and lessons learned from contractor safety workshops has helped the vendors reduce accident rates, improve their overall business performance and improve their competitiveness as they seek to obtain work in the oil and gas sector and other business sectors.

International Oil and Gas Training from Cape Breton University

Previous SOEP Canada Nova Scotia Benefits Report provided information on training programs offered at Cape Breton University (CBU) and the Advanced Skills Training Program led by LearnCorp International (LCI).

LCI is a private sector company wholly owned by the Cape Breton University Foundation. It works with international clients to identify their training needs and then engages the appropriate mix of partners to provide training solutions.

LCI has on-going multi-year contracts with ExxonMobil Global Services to train African, Russian, and Italian nationals in select disciplines associated with the petroleum industry. The contracting opportunity evolved from the introduction to ExxonMobil's global operations that was initiated by the Sable Project. LearnCorp has partnered with

Cape Breton University and the Nova Scotia Community College to address ExxonMobil's training needs.

The LCI training initiatives were recognized in 2014 along with the Nova Scotia Community College. The two organizations that joined forces to provide specialty training services to the international energy sector received a partnership award, Emerging Markets Exporter of the Year, sponsored by Export Development Canada.

The two organizations are becoming leaders in curriculum development and delivery, consulting services, gap assessments and training solutions that combine the principles of safety, technical accuracy and a team based approach to operations.

6.0 Research and Development Initiatives

Condition 4 of the SOEP Benefits Plan Decision Report requires a research and development (R&D) plan be approved by the CNSOPB. Under the current approved R&D plan, EMCP and the Sable owners have committed to expenditures in Nova Scotia of at least \$375,000 per year and an aggregate of \$3,000,000 over the five-year period of 2013 – 2017.

In addition to the initiatives considered to be R&D under the terms of the five-year plan, the Sable owners and the contracting community supported broader R&D activities in Nova Scotia during 2014.

The 2014 R&D activities amounted to \$568,800 and the cumulative R&D expenditures by the owners and contractors since project sanction in 1998 exceeds \$29.8 million.

Table 12 below provides data on R&D expenditures in 2014 and the previous seven years along with a cumulative total.

Table 12 – Research and Development Initiatives Historical

Year	Investment	Cumulative (since Project sanction)
2007	\$782,333	\$24,862,560
2008	\$925,881	\$25,788,441
2009	\$931,600	\$26,720,041
2010	\$627,600	\$27,347,641
2011	\$613,600	\$27,961,241
2012	\$766,466	\$28,727,707
2013	\$506,000	\$29,233,707
2014	\$568,800	\$29,802,507

Examples of Supported R&D Initiatives

Supporting Geoscience Research at Nova Scotia Universities

During 2014 EMCP and the Sable owners continued to support an R&D initiative started in 2012 which provides support for geological and geoscience research at Dalhousie University. The Sable owners provided researchers with access to a comprehensive set of seismic data that was collected in the offshore Nova Scotia Sable sub-basin. The combination of a financial commitment and access to the seismic data provides practical tools and research opportunities for local student researchers.

Activities supported by the geological and geoscience research grant included a petroleum systems overview and field trips to Joggins, Point Pleasant Park, Rainy Cove, Cheverie and Cambridge Cove, NS. The field trips were sponsored by Shell, one of the Sable Project owners and included second, third and fourth year students. They were focused on the theme of Wilson cycles and petroleum systems. Students also presented research papers at a conference in Antigonish.

A number of research projects and themes were advanced during the year as well, including:

- Carbonate margin to delta transitions: Stratigraphy of the Jurassic carbonate platform and Sable delta
- Reservoir Quality and Architectural Elements of Mesozoic Rift Basin Sediments, Scotian Margin
- Reservoir Connectivity and Overpressure in the Sable Sub-basin
- Development of an Integrated GIS Database
- Reservoir Characterization
- Characterization of source rock geochemistry and potential
- Hydraulic Fracturing, Unconventional Hydrocarbon Systems and Carbon Capture & Storage
- Sequence Stratigraphy of the Banquereau Formation
- Multi-Scale Permeability Modeling of the Cretaceous Mississauga Formation
- Overpressure Conditions in the Scotian Basin
- Hydrocarbon Potential of the Sable Delta Producing Reservoirs
- Production of a Source Rock Atlas and Geochemistry of the Scotian Margin
- Reservoir Architecture of Meanderbelt Systems and Vegetation Density in the Carboniferous using Lidar Imagery and Ground Penetrating Radar
- Penobscot Seismic Attribute Study

Pengrowth Nova Scotia Energy Scholarship Programs

The Pengrowth Nova Scotia Energy Scholarship Programs provides financial support through the Energy Scholarships and the Innovation Grants. These two programs provide resources to ensure the success of future oil and gas industry leaders.

Established in March 2005, the \$3 million program is a partnership between Pengrowth Corporation, one of the Sable Project owners and the Province of Nova Scotia, through contributions of \$2 million and \$1 million respectively. The 2014 awards mark the 10th anniversary of this successful initiative. Over this ten-year period, the scholarship component has provided more than 180 Nova Scotia students with assistance in the form of university and trade scholarships and innovation grants at the Masters level of university studies. The program consists of the following components:

– **Pengrowth - Nova Scotia Petroleum Innovation Grant Program**

Up to four Pengrowth-Nova Scotia Petroleum Innovation Grants can be awarded each year. The research grants, valued at \$15,000 over two years, are awarded to Nova Scotia students pursuing energy-related studies at the master's degree level.

The 2014 recipient of the Innovation Grant is Natasha Morrison. She is a master's student in earth science at Dalhousie University. Ms. Morrison will begin her master's program by specializing in petroleum geoscience. Her research will focus on the geochemistry and source rock potential of the Scotian Basin.

For 2013 the Innovation Grant recipient was Andrea Christians. Andrea is pursuing a Master of Science degree in Earth Science at Dalhousie University. She graduated with a Bachelor of Science (Honours) majoring in Geology from Saint Mary's University in 2012. The focus of her Master's thesis is to study the impact of salt tectonics on the surrounding sediments in the Scotian slope.

– **Pengrowth - Nova Scotia Energy Scholarship Program**

Up to 12 renewable scholarships, valued at \$10,000 each (\$2,500 per year over four years), are awarded annually to students pursuing energy related studies at a university. The program also offers up to ten non-renewable \$2,500 scholarships for first-year students pursuing energy related trades and technology programs at the Nova Scotia Community College.

In 2014 sixteen Nova Scotia students were chosen to receive the Pengrowth-Nova Scotia Energy Scholarship. Eight received university scholarships worth as much as \$10,000 each, \$2,500 renewable over four years, based on a combination of extracurricular activities and academic performance. Eight others received \$2,500 non-renewable scholarships at the Nova Scotia Community College.

Continued Application of New Technologies in Offshore Oil and Gas

Beginning in 2012 EMCP and the Sable owners funded studies aimed at applying new inspection technologies to offshore oil and gas assets. The work initially focused on an evaluation of Backscatter Computed Tomography (BCT) and Digital Radiography (Digi-Rad) as tools to inspect equipment while in operation. BCT brings the diagnostic capability of medical Computed Tomography (CT or CAT scan) to the management of offshore oil and gas assets and can provide information not available with current inspection techniques. BCT enables the inspection of multi-layered assets without disassembly. Similar to BCT, Digi-Rad can also be used to provide inspection data. These technologies decrease shut-down scope, increases up-time, and reduces the need for confined space entry.

In 2014 Real-Time Radiography (RTR) was trialed at the onshore and offshore facilities as a tool to provide comprehensive inspection data in an efficient and effective manner. The results of the trial are being evaluated and depending on the evaluation this technology could join BCT and Digi-Rad as additional inspection tools.

Sable Island Research – Beached Bird Surveys

In 2014 EMCP and the Sable owners continued to support a long term research project that is part of the Sable Project's on-going program of Sable Island stewardship. The research was carried out on the Island where regular surveys were conducted to gather data on beached birds. The data, which has been collected for a number of years, is an effort to monitor trends in the number and rates of oiling in beached seabirds. Specimens were collected in order to identify possible oil types contributing to any observed oiled birds.

Overall the objectives are:

- To monitor trends in oiling rate in beached seabird corpses over the long term; and
- To generically identify oil types found on seabird feathers and in pelagic tar.

7.0 Community Education and Participation

EMCP, its employees, the other Sable owners and many of the Sable Project major contractors have a history of supporting the communities in which we live and work. Wherever we operate, we try to strengthen local communities by donating time, talent or money to many organizations that provide much-needed services or enhance the culture of the our community.

Some of the highlights from 2014 are noted below.

United Way

The United Way provides support for services in many of the Nova Scotia communities in which we operate or our employees and contractors live. During 2014 EMCP and Imperial Oil employees continued to support the United Way in the communities in which we operate through direct giving, payroll deduction and volunteering their time to the many charitable organizations that function under the United Way umbrella. Participation and overall giving remains at a high level.

Nova Scotia Museum of Natural History – Sable Island

The Sable owners provided financial support to the Nova Scotia Museum of Natural History that assisted with the launch of a new permanent exhibit, Sable Island: Over the Dunes, Beyond Wild Horses. Research and development in science and exhibit technology began more than two years ago. A planning team used the natural history collection to help convey the rich diversity of plants and animals.

The 2,000-square-foot exhibit includes a recreated research station and features selections from the largest Maritimes walrus collection in the world, with skull, jawbone and tusk specimens dating back to the mid-1700s.

Junior Achievement – Nova Scotia

Junior Achievement (JA) first established a presence in Nova Scotia in 1969 with the support of the Halifax Board of Trade. Their mandate is to provide youth across the province with opportunities to learn about business and entrepreneurship. Volunteers from the business community deliver the programs through a variety of classroom activities, discussions, and exercises that simulate real world business practices. In Nova Scotia, JA delivers four programs for students from grades 6 through 12:

- Our Business World,
- Dollars With Sense,
- Economics for Success, and
- Company Program

The programs allow young people to develop creative approaches to new ideas, and new learning experiences. In the 2012-13 school year, 14,300 students participated in JA Programs, an increase of 1000 students from the previous year. There were also 1000 volunteers from the business community that assisted in delivering the programs.

Bursaries

A total of 24 bursaries were awarded in 2014 to qualifying students graduating from seven high schools in Guysborough, Inverness, Antigonish and Richmond counties. The bursaries, which assist with the cost of postsecondary education, are funded by the Sable Project owners.

Nova Scotia Kiwanis Music Festival

The Nova Scotia Kiwanis Music Festival was launched in 1935 by a committee of dedicated music educators and supporters who wished to provide the young artists of our community with the opportunity to pursue their craft at a broader level. For many years, the festival was primarily a project of the Kiwanis Clubs of the Halifax Regional Municipality. In more recent years, however, the event has enjoyed unparalleled success and has grown to involve thousands of participants per year and spreading out to encompass a dozen separate venues.

Through a combination of stage and adjudication opportunities, the Nova Scotia Kiwanis Music Festival gives participants extraordinary possibilities for performing, learning, and sharing this musical experience with an unrivalled group of national artists and educators.

The Discovery Centre

The Discovery Centre is located in downtown Halifax and offers three floors of interactive fun and education through permanent and temporary exhibits, HD movies, live science shows and many special events and outreach activities. The centre is a resource for families looking to spend quality time with their children, or for schools and groups looking to provide a quality educational opportunity for their students or members. EMCP is a supporting partner of the Discovery Centre.

The Stan Rogers Folk Festival

EMCP and the Sable owners have provided sponsorship support to the Canso, Stan Rogers Folk Festival (or Stanfest) for a number of years. Although the 2014 festival was cancelled due to unfavourable weather, the sponsorship support remained in place. Stanfest was established to honour the legacy of Stan Rogers – an artist that managed to influence a whole generation of performers, while contributing to the emerging popularity of East Coast Music.

Phoenix Youth Programs

EMCP continues to support the programs carried out by Phoenix House and Phoenix Youth. This is a non-profit, community based organization located in Halifax that offers at-risk and homeless youth ages 12 to 24 the opportunity to break the cycle of homelessness and find a better path. The services are free of charge to any youth who reaches out. Phoenix House offers a wide range of programs and services including: prevention, crisis assistance, emergency and long-term shelter, employment and learning assistance, counseling, parent support, food, laundry, medical support and more.

Neptune Theatre

EMCP and the Imperial Oil Foundation continued to support Neptune Theatre in 2014. Neptune Theatre is Atlantic Canada's largest professional regional theatre. The theatre is also home to a year-round Theatre School which runs classes, camps and workshops for theatre enthusiasts of all ages. Neptune Theatre School also coordinates elite training programs, such as the Youth Performance Company, the Pre-Professional Training program, the Musical Theatre Foundation Program and the Young Actors Company, which give aspiring local actors an opportunity to work with and learn from this region's top artistic talent.

Granville Green Outdoor Concert

EMCP and the Sable owners continued to support a series of free Sunday concerts held throughout the summer in Port Hawkesbury. Each summer regional and national artists visit Port Hawkesbury to share in this unique musical opportunity. The outdoor concerts provide a stage for local musicians and continue to attract both tourists and local fans.

Festival Antigonish

The Sable Project has been a supporter of Festival Antigonish since the late 1990's. The Festival has become a place where Nova Scotia artists can create dynamic new works and gain valuable experience performing in works produced to the highest artistic and technical standards. Some of Nova Scotia's finest playwrights, directors and performers have originated new works and honed their performance and directing skills at Festival Antigonish.

Mulgrave Road Theatre

The Sable Project continued to support the Mulgrave Road theatre in 2014. As a professional touring theatre, Mulgrave Road has enabled a wide audience to experience acclaimed works by some of Atlantic Canada's most respected playwrights. Over 10

productions have toured outside of the Maritimes to destinations such as Ottawa, Toronto, Vancouver, Winnipeg, Edmonton, Ireland, Australia and New Zealand. Local performances are held at the Guysborough Masonic Hall, at the Mulgrave Road Theatre Centre, and at Guysborough's 300-seat performance space, Chedabucto Place Performance Centre. Mulgrave Road Theatre has also made a commitment to reaching out to young performers.

APPENDICES

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Appendix 2 - 2014 Research and Development Initiatives 30

Appendix 1

Sable Project Person Hours 2014 EMCP and Major Contractors

	Nova Scotia	Other Canadian	Foreign	TOTAL
ABB	2,131	59	0	2,190
AMEC	197,092	0	0	197,092
Aker Solutions Canada Inc.	0	2,572	18,178	20,750
AOMS	4,380	0	0	4,380
Cougar Helicopters	43,604	25,998	0	69,602
East Coast Catering	17,520	0	0	17,520
EM&I	51,172	224	12,280	63,676
ExxonMobil Canada (Sable Project)	238,000	12,000	0	250,000
Helly Hansen	2,660	0	0	2,660
Lloyd's Register	2,212	578	412	3,201
Newalta	1,588	0	0	1,588
Secunda	128,544	16,077	13,416	158,037
SGS	3,453	0	0	3,453
Stantec	1,700	2,196	0	3,896
WorleyParsons Canada Services Ltd.	187	1,911	1,076	3,174
TOTAL	694,242	61,614	45,362	801,218

Appendix 2

2014 Research and Development Initiatives

Recipient	Program Description	Investor
Dalhousie University	Geoscience Research	Sable Owners
EM&I Stantec	Application of Real-time Radiography	Sable Owners
Nova Scotia Students	The Pengrowth - Nova Scotia Scholarships	Pengrowth
Nova Scotia University Students	The Pengrowth-Nova Scotia Innovation Grant	Pengrowth
Zoe Lucas	Beached Bird Survey	Sable Owners