

# Husky Energy

# Canada-Newfoundland and Labrador Benefits Annual Report 2014





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# 1.0 Introduction – 2014 Highlights

Husky continues to be active on Canada's East Coast, utilizing its in-depth knowledge of the area and extensive offshore drilling experience to evaluate prospects. Offshore exploration and development programs are focused in the Jeanne d'Arc Basin, offshore Newfoundland and Labrador, which contains the Hibernia, Terra Nova and White Rose fields. The company also has interests offshore Labrador and in Greenland and the Flemish Pass.

Husky has ownership interests in the Terra Nova and White Rose fields, as well as in a number of smaller fields centrally located in the Jeanne d'Arc Basin. Working interests range from 5.8 to 73.125 percent in 23 significant discovery areas in the Jeanne d'Arc Basin, Flemish Pass, Labrador and Baffin Island. Husky also holds a working interest in 11 exploration licences (ELs) offshore Newfoundland and Greenland. Husky is the operator of 8 of these ELs and has working interests ranging from 35 percent to 100 percent.

In 2014, the North Amethyst field completed its fifth year of production, producing approximately 8.1 million barrels of oil and the West White Rose Pilot Scheme completed its third full year of production, producing approximately 2.9 million barrels of oil. Also in 2014, Husky completed its ninth full year of operations on the White Rose field, safely producing approximately 8.9 million barrels of oil. To the end of 2014, the White Rose field and satellites have produced over 238 million barrels of oil. Husky recognizes the impact of the White Rose and satellite projects on the provincial economy and on local communities, and works proactively to ensure that Newfoundland and Labrador residents and members of the local supply community are full participants in the projects.

In 2014 Husky completed installation of oil production equipment in the SWRX glory hole. First oil is planned for 2015.

Construction of the graving dock at Argentia continued in 2014 and is expected to be complete in Q1 2015.

Fabrication of the new drilling rig *West Mira* continued in 2014. The rig will be used to support a range of exploration and development drilling activities for Husky in the Atlantic region.

In 2014, Husky had 107 co-op student placements in various disciplines throughout the company. In 2014, Husky had eight engineers in training as part of Husky's New Grad Program. Through the program, new graduates are able to gain hands-on exposure to different disciplines by completing six-month work assignments in the first two years.

Quarterly updates, procurement and business opportunities are posted on the Husky website. Husky continues to interact with local stakeholders in the White Rose and satellite projects, including maintenance of a close working relationship with the Newfoundland Ocean Industries Association (Noia). Husky regularly posts procurement opportunities with Noia through the Noia/OTANS Daily Bulletin. Again this year, Husky participated in the annual Noia conference providing a project update to the supplier community. Husky also sponsored "The Pitch" at Newfoundland and Labrador Organization of Women Entrepreneurs (NLOWE) Annual Conference in 2014.

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# 2.0 Summary of 2014 Activities

2014 marked the ninth full year of production from the White Rose field. A total of 8.9 million barrels of oil was produced. 2014 also marked the fifth year of production from the North Amethyst field. A total of 8.1 million barrels of oil was produced. 2014 was also the third full year of production from the West White Rose Pilot Scheme and 2.9 million barrels of oil were produced.

In 2014, the *Heather Knutsen, Jasmine Knutsen and Mattea* transported Husky's White Rose and Terra Nova crude. A total of 27 White Rose cargoes were completed in 2014 of which the vast majority (93% or 18.4 million bbls) was delivered to points within Canada. Of the total Canadian deliveries, 88% (16.1 million bbls) was delivered to the NTL terminal at Whiffen Head.

In 2014 the *GSF Grand Banks* drilled the SWRX gas injection well J-05 2 as well as the North Amethyst Hibernia well E-18 12z. The *Henry Goodrich* completed drilling on the North Amethyst Hibernia well E-18 12a which began in late 2013. The *Henry Goodrich* also began drilling the Aster C-93A exploration well in late 2014. Figure 5.1 identifies the wells drilled and/or completed in 2014. Fabrication also continued on the new build drilling rig *West Mira*, due to arrive in late 2015.

In 2014, Husky conducted a well site survey at A-78 (covering portions of SDLs 1025, 1023, 1020 and 1019).

In 2014, Husky invested over \$15 million in Research and Development and Education and Training on a number of initiatives, including a donation of \$750,000 to Stella's Circle to support an Employment Training Centre for adults who face barriers to employment. In December, Husky contributed \$200,000 to the Newfoundland and Labrador Chapter of the Heart and Stroke Foundation to support the installation of Automated External Defibrillators (AEDs) in rural schools.

As of December 31, 2014, a total of 1,602 people were reported employed on Husky's White Rose Operations of which 665 were located offshore. This includes people employed with Husky and its contractors and includes North Amethyst, West White Rose Pilot Scheme and South White Rose Extension (SWRX). Of this total, 1446 or 90% were residents of Newfoundland and Labrador when hired, while another 113 or 7% were residents of other regions of Canada at the time of hire. The number of females employed on White Rose operations was 299 or approximately 19% of the total workforce.

As of December 31, 2014, 769 people were reported employed on Husky's White Rose Extension Project, representing over 290,000 person hours. The number of females employed on the project was 138 or approximately 18 percent of the total workforce.

Total Newfoundland and Canadian content for expenditures on the White Rose project for the period January 1 to December 31, 2014 stands at 92.69 percent (53.4 percent NL; 39.29 percent Other Canadian).



# 3.0 Employment Summary

#### 3.1 WHITE ROSE PROJECT

As of December 31, 2014, a total of 1602 people were reported employed on Husky's White Rose Operations of which 665 were located offshore. This includes people employed with Husky and its contractors and includes North Amethyst and the West White Rose Pilot Scheme which were previously reported separately, as well as South White Rose Extension.

Of this total, 1446 or 90% were residents of Newfoundland and Labrador when hired, while another 113 or 7% were residents of other regions of Canada at the time of hire. The number of females employed on White Rose operations was 299 or approximately 19% of the total workforce (Table 3.1). Table 3.2 provides a summary of employment by Husky and its major contractors and Table 3.3 provides a summary of employment by discipline and gender.

Table 3.1 – White Rose Employment Summary by Location, as of December 31, 2014



Location	Newfoundland Male	Newfoundland Female	Newfoundland Subtotal	Other Canadian Male	Other Canadian Female	Other Canadian Subtotal	Foreign Male	Foreign Female	Foreign Subtotal	Male Subtotal	Female Subtotal	Total
Alberta	0	0	0	1	0	1	0	0	0	1	0	1
Newfoundland - Offshore	569	27	597	61	0	61	8	0	8	638	27	665
Newfoundland - Onshore	587	262	849	43	6	49	21	2	23	651	270	921
Nova Scotia	0	0	0	1	1	2	2	0	2	3	1	4
UK	0	0	0	0	0	0	2	0	2	2	0	2
USA	0	0	0	0	0	0	9	0	9	9	0	9
Total	1,156	290	1,446	106	7	113	42	2	43	1,304	299	1,602

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# Table 3.2 Employment Summary - Husky & Major Contractors as of Dec 31, 2014



# Atlantic Region Contractor Stats Head Count By Contractor

White Rose - Q4 2014

Contractor	Newfoundland Male	Newfoundland Female	Newfoundland Subtotal	Other Canadian Male	Other Canadian Female	Other Canadian Subtotal	Foreign Male	Foreign Female	Foreign Subtotal	Male Subtotal	Female Subtotal	Total
A Harvey	17	4	21	0	0	0	0	0	0	17	4	21
Aker Solutions	59	37	96	0	0	0	2	0	2	61	37	98
ASCO Canada Limited	7	1	7	0	0	0	0	0	0	7	1	7
Atlantic Offshore Medical Services	3	2	5	0	0	0	0	0	0	3	2	5
Atlantic Towing	83	3	86	8	0	8	0	0	0	91	3	94
Atlantic XL	6	2	8	0	0	0	0	0	0	6	2	8
Baker Petrolite	1	1	2	1	0	1	0	0	0	2	1	3
Canship Ugland Ltd.	80	6	86	13	0	13	0	0	0	93	6	99
Cormorant Ltd.	4	1	5	1	0	1	0	0	0	5	1	6
Cougar	33	9	42	8	0	8	1	0	1	42	9	51
_	32	5	37	2	0	2	0	0	0	34	5	39
Crosbie Salamis		7										
East Coast Catering	14		21	0	0	0	0	0	0	14	7	21
East Coast Tubulars	21	2	23	1	0	1	4	0	4	26	2	28
Enhanced Drilling	7	1	8	0	0	0	1	1	2	8	2	10
Expro Group Canada	5	1	6	1	0	1	0	0	0	6	1	7
FI Oilfield Services Canada ULC	8	0	8	1	0	1	0	0	0	9	0	9
Fugro Jacques GeoSurveys Inc	6	0	6	0	0	0	0	0	0	6	0	6
Halliburton	11	1	12	3	0	3	0	0	0	14	1	15
Hansen Protection Canada Limited	3	0	3	0	0	0	0	0	0	3	0	3
Husky	238	96	334	27	3	30	13	0	13	278	99	377
Import Tool	6	0	6	4	0	4	0	0	0	10	0	10
Maersk Seabase	56	4	60	1	0	1	0	0	0	57	4	61
MI Swaco	25	10	35	0	2	2	0	0	0	25	12	37
Newalta	6	1	7	0	0	0	0	0	0	6	1	7
Oceaneering Canada Ltd.	127	43	170	16	0	16	0	0	0	143	43	186
Oceaneering International Ltd.	0	0	0	0	0	0	8	0	8	8	0	8
Oceans Ltd	7	1	8	0	0	0	0	0	0	7	1	8
OneSubsea	30	3	33	0	0	0	0	0	0	30	3	33
Provincial Airlines	4	1	5	0	0	0	0	0	0	4	1	5
Schlumberger Services	35	8	43	1	0	2	3	1	4	39	9	48
Score	5	2	7	0	0	0	1	0	1	6	2	8
SGS Canada Inc.	2	0	2	0	1	1	0	0	0	2	1	3
Siemens	6	1	7	0	0	0	0	0	0	6	1	7
SNC Lavalin	1	0	1	0	0	0	0	0	0	1	0	1
Stantec	3	3	6	1	1	2	0	0	0	4	4	8
Technip	56	16	72	0	0	0	0	0	0	56	16	72
Trans Ocean	104	11	115	13	0	13	8	0	8	125	11	13
Weatherford	27	2	29	3	0	3	1	0	1	31	2	33
Workstrings Canada	20	4	24	0	0	0	0	0	0	20	4	24
Total	1.156	290	1,446	106	7	113	42	2	43	1,304	299	1,60



# Table 3.3 Employment Summary of Husky and Major Contractors – By Discipline and Gender as of December 31, 2014



# Atlantic Region Contractor Stats Head Count By Location and Occupation

White Rose - Q4 2014

All Locations

Occupation	Newfoundland Male	Newfoundland Female	Newfoundland Subtotal	Other Canadian Male	Other Canadian Female	Other Canadian Subtotal	Foreign Male	Foreign Female	Foreign Subtotal	Male Subtotal	Female Subtotal	Total
Administration & Clerical	15	69	84	0	5	5	0	0	0	15	74	89
Engineers	177	34	212	19	2	21	12	0	12	208	36	244
Management	111	68	178	7	0	7	8	1	8	126	68	194
Marine Crew	289	9	298	23	0	23	1	0	1	313	9	322
Other Field Services	123	8	131	8	0	8	0	0	0	131	8	139
Professionals	91	72	162	12	0	12	2	0	2	104	72	177
Skilled Trades	144	7	150	19	0	19	11	1	12	174	8	182
Technicians & Technologists	207	23	230	18	0	18	8	0	8	233	23	256
Total	1,156	290	1,446	106	7	113	42	2	43	1,304	299	1,602

**Note:** In Q4 2014, Husky employed 27 co-op students (9 female) on the White Rose project. The students are not included in the head count above because they finish the term prior to the December 31 close period for Q4 in the reporting system.

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#### 3.2 EMPLOYMENT SUMMARY - WHITE ROSE EXTENSION PROJECT

As of December 31, 2014, 769 people were reported employed on Husky's White Rose Extension Project, representing over 290,000 person hours (Table 3.5). The number of females employed on the White Rose Extension Project was 138 or approximately 18 percent of the total workforce (Table 3.5).

Table 3.4 Person Hours by Contractor – White Rose Extension Project Employment



Contractor	Onshore	Offshore	Subtotal	Other Canadian	Foreign	Total
Arup Canada Inc.	32,025	0	32,025	828	8,212	41,064
Dexter Construction	95,778	0	95,778	517	360	96,655
Husky	31,316	0	31,316	755	2,545	34,616
Wood Group Mustang	15,775	0	15,775	0	105,818	121,593
Total	174,893	0	174,893	2,100	116,935	293,928

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# Table 3.5 Head Count by Contractor – White Rose Extension Project



Contractor	Newfoundland Male	Newfoundland Female	Newfoundland Subtotal	Other Canadian Male	Other Canadian Female	Other Canadian Subtotal	Foreign Male	Foreign Female	Foreign Subtotal	Male Subtotal	Female Subtotal	Total
Arup Canada Inc.	19	16	35	14	4	18	131	21	152	164	41	205
Dexter Construction	108	19	127	21	6	27	3	1	4	132	26	158
Husky	62	20	82	16	1	17	13	0	13	91	21	112
Wood Group Mustang	31	9	40	0	0	0	213	41	254	244	50	294
Total	220	64	284	51	11	62	360	63	423	631	138	769

Ongoing construction of the graving dock at Argentia is reflected in the number of skilled trades, other field services and technicians/technologist reported in Table 3.6. The remaining positions are associated with engineering supported by administration, management, other professionals and technicians/technologists (Table 3.6).

Table 3.6 Summary by Occupation – White Rose Extension Project



# Atlantic Region Contractor Stats

Head Count By Location and Occupation Wellhead - Q4 2014

#### All Locations

Occupation	Newfoundland Male	Newfoundland Female	Newfoundland Subtotal	Other Canadian Male	Other Canadian Female	Other Canadian Subtotal	Foreign Male	Foreign Female	Foreign Subtotal	Male Subtotal	Female Subtotal	Total
Administration & Clerical	1	14	15	1	3	4	0	6	6	2	23	25
Engineers	68	15	83	21	6	27	210	33	243	299	54	353
Management	14	4	18	9	1	10	50	8	58	73	13	86
Other Field Services	19	12	31	0	0	0	0	0	0	19	12	31
Professionals	20	4	24	9	0	9	4	0	4	33	4	37
Skilled Trades	75	3	78	5	0	5	0	0	0	80	3	83
Technicians & Technologists	23	12	35	6	1	7	96	16	112	125	29	154
Total	220	64	284	51	11	62	360	63	423	631	138	769

Note: In Q4 2014, Husky employed 7 co-op students on the WREP.



# 4.0 Development and Delineation Drilling Program

In 2014 the *GSF Grand Banks* drilled the SWRX gas injection well J-05 2 as well as the North Amethyst Hibernia well E-18 12z. The *Henry Goodrich* completed drilling on the North Amethyst Hibernia well E-18 12a which began in late 2013. The *Henry Goodrich* also began drilling the Aster C-93A exploration well in late 2014. Figure 4.1 identifies the wells drilled and/or completed in 2014. Fabrication also continued on the new build drilling rig *West Mira*, due to arrive in late 2015.

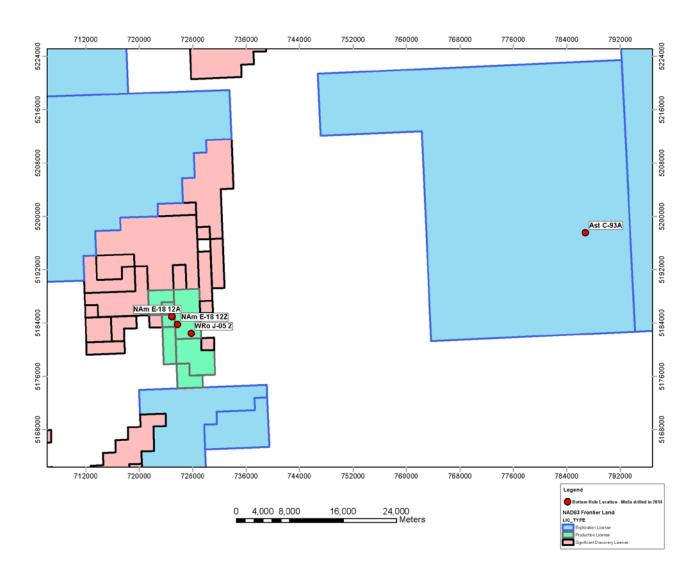


Figure 4.1 Map of Husky Wells Drilled in 2014

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# 5.0 Procurement

During 2014 a total of seven new contracts and 18 contract extensions valued at over \$250,000 were awarded. Table 5.1 provides a summary of these contracts.

**Table 5.1 Procurement Summary for 2014** 

<b>Husky East Coast Operatio</b>	ns	2014	Нис	sky	Energy		σv
Procurement Summary		•	IIU.	SNY		C	<b>5</b> y
Description	Vendor Name	Vendor Location	Range	NF	CDN	FOR	Total
New Contracts							
HPT Suits	DBC Marine Safety Systems Ltd.	Vancouver	Е	35%	22%	44%	100%
Supply Vessel Services	Secunda Canada LP.	St. John's	С	67%	30%	3%	100%
Vessel Hire (Trinity Sea & Ryan Leet)	Secunda Canada LP	St. John's, NL	Е	25%	50%	25%	100%
West Mira Rig Intake Software Control Systems Acceptance Testing	Kingston Systems LLC	Houston, TX	В			100%	100%
Directional Drilliing, MWD, LWD Services	Schlumberger Canada Limited	St. John's, NL	0	21%	31%	48%	100%
Weather Forecasting and Observations	Oceans Limited	St. John's	С	100%			100%
Medical Services	Atlantic Offshore Medical Services	St. John's	F	95%	4%	1%	100%
Contract Extensions							
Provision of Communications	Bell Aliant Regional Communications	NFLD	С	100%			100%
Provision of HVAC System Maintenance Services	Dawe Enterprises Ltd.	NFLD	В	100%			100%
Lab Analysis Services	Petroforma inc.	NL	Α	100%			100%
Drilling Tools & Accessories	SES Canada ULC (Workstrings)	NL	- 1	69%		31%	100%
ROV Services	Oceaneering Canada	NL	Н	82%		19%	100%
Inflow Control Devices/Stand Alone Screens	Schlumberger Canada Ltd.	NL	С	11%	39%	50%	100%
Oil and Water Tracer Systems	Resman AS	Norway	С			100%	100%
Provision of Hydraulic System Maintenance Servi	Hyflodraulic Ltd.	NFLD	D	100%			100%
Provision of PLS Application Service Provider Agreement	Bell Canada	St. John's	Α	100%			100%
Provision of Technical Engineering Services	Maderra Engineering Inc.	St. John's	С	100%			100%
Provision of Accommodation Services	East Coast Catering Limited	St. John's	Н	100%			100%
Ad-Hoc Marine Crew Support Services	Canship Ugland	St. John's	Α	100%			100%
Vessel Services - Dispatcher	Maersk Supply Service Canada Limited	St. John's	J	70%	3%	27%	100%
Subsea / Interventtion Support Services	Technip Canada Ltd.	St. John's	- 1	100%			100%
Provision of Turbine Maintenance	Rolls-Royce Canada Ltd.	St. John's	L	100%			100%
Technical Support and Maintenance for FPSO	Wartsila Canada Inc.	St. John's	D	100%			100%
Main and Auxiliary Engines	Wartsila Canada Inc.	St. John's	l 0	100%			100%
Freight Forwarding, Customs Clearance and	PF Collins	St. John's, NL	Е	100%			100%
Immigration	TT Comits	Ot. Odili 3, NE	_	10070			10070
Cost Range Code Legend							
A = 250,001 - 500,000 \$	E = 2,000,001 - 3,000,000 \$	I = 10,000,001 - 15,000,000 \$		M = 50	-	-	
B = 500,001 - 1,000,000 \$	F = 3,000,001 - 5,000,000 \$	J = 15,000,001 - 20,000,000 \$		N = 75,	000,001	- 100,00	0,000 \$
C = 1,000,001 - 1,500,000 \$	G = 5,000,001 - 7,500,000 \$	K = 20,000,001 - 30,000,000 \$		0 = 0v	er 100,0	00,001 \$	i
D = 1,500,001 - 2,000,000 \$	H = 7,500,001 - 10,000,000 \$	L = 30,000,001 - 50,000,000 \$					

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# 6.0 Research and Development

Husky Energy's investments in Newfoundland and Labrador executed R&D and E&T grew by more than 34% from 2013 to 2014, with new R&D and E&T expenditures of approximately \$15 million during the year versus \$11 million in 2013. Expenditures include engagement with a wide spectrum of local companies and academic institutions.

#### 6.1 Ongoing R&D Projects

A number of Husky directed or sponsored R&D initiatives noted in the 2013 Annual Report continued into 2014, including:

## **Memorial University**

Seaformatics Subsea Self-Powered Sensor Pod Technology Trial

## Petroleum Research (PRNL)

- Ice Loads on Floating Offshore Structures
- Effects of Seismic Activity on Shrimp Behavior
- Improving Helicopter (Floating) Stability in Waves
- Subgouge Displacements for the Design of Buried Submarine Pipelines in Cold Regions
- Next Generation Emergency Escape, Evacuation and Rescue (EER) System in Ice Covered Waters
- Marine Dredge Disposal Measuring Recovery to Natural Conditions
- Enhanced Oil Recovery from Complex Reservoirs Using CO2 (MUN)
- Development of Diagnostic Bioindicators for Marine Life Environmental Effects Assessment

#### C-CORE

- Evaluation of CGS Foundation Current Scour Mechanisms and Protection Alternatives
- Derivation and Evaluation of Iceberg Impact Loads on Fixed Concrete Structure

#### **PanGeo**

 Offshore Technology Trial – Acoustic Corer and Sub Bottom Imager Sub-Seabed Characterization Technologies

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#### Virtual Marine Technology (VMT)

 Safety and Survival Simulation Training – Development of training simulators for emergency egress, lifeboat davit maintenance and operation and evacuation in ice

# Oceanic Consulting, NRC-IOT and Memorial University

Development of Hydrodynamic Loads and Motions Simulator for SeaRose FPSO

#### Radient360

 Development of Mobile Computing Technology to Improve Process Safety through Enhanced Lifecycle Management of Safety Critical Elements (Project won Husky's CEO Award of Excellence for Technology to Improve Management of Operational Integrity)

#### Oceans Ltd.

- Development of Sidescan Sonar Iceberg Profiling Technology
- Development of Ocean Current Prediction Model

#### 6.2 New R&D Projects

Husky's R&D program continued to grow via initiation of a number of new R&D projects during 2014. Notable new projects include:

#### Petroleum Research (PRNL)

- Alternative Subsea Systems Protection Structures
- Effectiveness of Virtual Environments to Improve Onboard Drills & Exercises
- Towing of Large Icebergs
- Towing, Sheltering and Recovery of TEMPSC Lifeboats and Life Rafts
- Large Scale Iceberg Impact Experiment Concepts Development and Feasibility

# NRC - OCRE

 Wave Tank Scaled Model Tests to Determine Concrete Gravity Base Hydro Dynamic Performance during Tow-out and in Installed Condition

## **Memorial University**

• Corrosion Under Insulation – Dr. Faisal Khan with NL R&D Corporation

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#### C-CORE

Ice Impact on Wellhead: Re-Analysis of SIRAM Results

#### **Oceanic Consulting**

 Investigation of Optimal OSV hull and propulsion arrangements for Grand Banks service

#### Husky Led R&D

- Advancement of Fueltrax fuel efficiency management technology to Reduce OSV Fleet Fuel Consumption and Emissions
- Collaborative Research with National Research Council to advance development of a Pressured Ice Predictive Model for the Grand Banks
- Ice Island Fragment Profiling and Towing Experiment

#### 6.3 Future Initiatives in R&D

Husky's investment in collaborative R&D in Newfoundland and Labrador community continues to contribute to growing local R&D capacity and capability.

Initiatives supported by Husky continue to stimulate innovation to improve safety, efficiency and reliability of offshore exploration and production operations, while advancing the technologic feasibility of future offshore developments. Husky maintains a diverse R&D portfolio, with a mixture of direct investments in R&D to address strategic challenges unique to Husky's business needs and opportunities, and participation in industry collaborative R&D that targets more generic industry and regional operating challenges.

Husky will continue to act as a strategic industry partner to enable Newfoundland and Labrador innovators to successfully leverage additional funding from agencies such as the NL R&D Corporation and ACOA Atlantic Innovation Fund, toward advanced technology demonstration and commercialization of projects. Husky's participation includes a combination of direct financial investment and in-kind contribution through mentoring and access to subject matter experts and operational resources.

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# 7.0 Education and Training

Education and training remains a key area for Husky Energy, and continues to provide an opportunity to contribute to the development of the local offshore industry. Through the period of January 1st to December 31st, 2014, direct training expenditure by Husky and its contractors related to the White Rose and North Amethyst projects totaled over \$4 million.

Husky will continue to invest in education and training to assist our personnel in developing key skills and knowledge for professional and personal development. Husky's regard for the health, safety and wellbeing of the the people who support Husky's operations remains paramount, and will be reflected in training associated with implementation of elements of Husky's Operational Integrity Management System, including a behavioral based safety management system.

Below is a description of the major initiatives in education and training undertaken in relation to the White Rose project in 2014.

# 7.1 Husky Energy

Husky continued its strong commitment to the Memorial University of Newfoundland and College of the North Atlantic co-operative education programs in 2014. The complement of co-operative education students working in various disciplines on Husky's Atlantic Region increased from 89 placements in 2013 to 107 in 2014. Total expenditure on co-operative education for 2014 by Husky was over \$2.2 million. Husky views this program as an important tool for building strong local capabilities in the offshore oil and gas sector and will continue to support this program in the future.

Husky Energy renewed its commitment to influencing education and career choices of young adults in Newfoundland and Labrador through a \$20,000 contribution to Techsploration in 2014, the 11th year that Husky has provided funding. The Techsploration program is delivered by the Women in Resource Development Corporation (WRDC) in St. John's. The program introduces career opportunities in the trades and technologies to female Grade 9 students in an effort to interest them in the sciences before selecting courses for their secondary program. In addition to funding, Husky supports the efforts of several female employees who volunteer their time to be mentors for this program. Husky also contributed \$12,000 to Esteem Women to support the Building with Becky and GoSett Mentoring programs. Husky also worked closely with Women in Science and Engineering (WISE) in 2014 and provided \$26,000, for summer student positions and provided female mentors.

Husky continued to support, with a contribution of \$2000, the regional MATE ROV competition which identifies teams who will go on to compete at the international MATE competition. This was the eighth year Husky contributed to this event. This is an excellent way to foster interest in ocean technology among the youth of the province and demonstrates that a career in the offshore is a viable option. In 2014, Husky also donated \$750,000 to Stellas Circle to support education and training programs, \$200,000 to the Heart and Stroke Foundation for education and health programing and \$50,000 to the YMCA in support of their Play to Learn childcare curriculum. Husky also

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provided \$10,000 in scholarships to Memorial University, College of the North Atlantic and the Coalition of Persons with Disabilities and \$3,000 to the Associates Program at the Faculty of Business in support of scholarships and fellowships in that faculty. Finally, Husky contributed \$10,000 to the Nature Conservancy in support of their Conservation in Motion Internship program which provides environmental education.

# 7.2 Husky Personnel Training

During 2014, Husky personnel received training from various educational facilities including a rig inspection workshop at a cost of \$20,000, Autronica software training (SeaRose ICSS) at a cost of \$68,000, reliability centred maintenance training at a cost of \$19,000, PHA/HAZOP Leadership at a cost of \$22,000. Husky personnel also received training in diversity and inclusion through several courses sponsored by Husky at a cost of over \$40,000 as well as training in time management, leader as coach and fundamentals of project management at a cost of over \$73,000.

# 7.3 Other Training Initiatives

- Aker Solutions spent over \$14,000 supporting further education of employees including the Masters Certificate in Project Management, Masters of Engineering and PhD graduate studies at Memorial University.
- Canship Ugland spent over \$100,000 on its training program for Marine Institute cadets on board the shuttle tankers servicing the SeaRose FPSO and over \$50,000 on Human Element Leadership and Management Training.
- Technip Canada spent over \$75,000 on work term students from Memorial University.
- A. Harvey and Company spent over \$15,000 on crane operator and forklift operator training.
- Oceans Limited spent over \$38,000 on co-op students from Memorial University and in house meteorologist training.
- Asco Canada spent over \$15,000 on co-op students from College of the North Atlantic.

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# 8.0 Technology Transfer and Supplier Development

Husky considers investments to develop Newfoundland and Labrador's technological, industrial and economic capacity to be strategic to the sustainable growth of Husky's Atlantic Region. Notable recent examples of Husky's support for transfer of technology and knowledge to local the local marketplace include:

## PRNL Joint Industry Ice Management R&D Program

Husky continues to be a key collaborator in PRNL's Ice Management Joint Industry Program. Projects within this program are advancing home-grown technologies and positioning Newfoundland and Labrador companies such as Rutter and C-Core as world leaders in ice intelligence and management technology. These initiatives serve to advance Newfoundland and Labrador's international reputation as a "gateway to the Arctic".

#### SeaRose FPSO Hydrodynamic Loads and Motions Simulator

Building on the success of the Accurate Numeric Simulation of Hydrodynamic Loads for the Safe Production and Transportation of Oil and Gas in Harsh Marine Environments AIF project, Husky and Oceanic initiated a new project to develop a Hydrodynamic Loads and Motions Simulator for the SeaRose FPSO. The simulator will enable Oceanic to showcase newly developed numeric modeling capability, while providing Husky with a platform to develop contingency plans for safe operation during predicted weather events. Future initiatives may include integration of a finite element model with tie-in to a hull stress monitoring system

#### Safety and Survival Training Simulators

Husky has continued to work closely with Virtual Marine Technologies (VMT) and Memorial University in 2014 to ensure that prototype safety training simulators achieve their intended learning goals for emergency egress training, lifeboat davit maintenance and operation, and maneuvering lifeboats in ice. Husky procured a lifeboat training simulator from VMT, which has been installed on board the SeaRose FPSO and has been integrated into offshore training programs. Husky personnel training on the simulator are providing feedback to VMT for future continual improvement of the technology.

#### **Sustainable Technology for Polar Ships and Structures**

The Sustainable Technology for Polar Ships and Structures (STePS2) project at Memorial University, which concluded in 2014, advanced scientific knowledge of ice interaction with structures, while growing local scientific and technological capacity.

A key outcome of the project was the development of new computation methodology using arrays of GPUs (graphics processors) to enable rapid solving of a relatively long and realistic chains of events related to vessels transiting in ice. Memorial subsequently received support from Shell Oil Company to further develop this technology.

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The project produced 50 conference and peer reviewed journal publications and 12 student theses, with an additional 6 theses in preparation or in review. Contribution to development of HQP (highly qualified people) through STePS2 included: 51 Co-op placements (by 40 individual students); 14 Master of Engineering students, of which 7 have graduated to date; 6 Ph.D. students of which 2 have graduated to date; and 2 Postdoctoral Fellows.

Eleven of the STePS2 graduate students or Post Docs have taken jobs in industry/government, and 8 are completing their studies or have gone on to further studies/research. To a significant degree this group represents the next generation of expertise in arctic ship and offshore structures research.

Additionally, the project provided legacy research equipment to the Faculty of Engineering and Applied Science, as well as 2 new faculty members, both hired under the Faculty Growth program out of the STePS2 Project.

# **Engagement with Memorial University**

Husky continued to participate as an advisor on a number of steering committees to provide industry perspective and guidance in a number of areas including:

- Chair of the Advisory Committee for the NSERC Collaborative Research and Training Experience (CREATE) Program for Offshore Technology Research at Memorial University
- Steering committee for Memorial University / Industry Workshop on Safety and Risk Engineering
- Industry Advisory Committee for Scientific Computing Graduate Program
- Industry and Academic Advisory Committee for Computational Applied Geophysics Group
- Research Advisory Committee for Husky Energy Chair in Oil and Gas Research
- Participation in the conference planning committee for Ocean, Offshore, and Arctic Engineering (OMAE2015) – to be hosted by the Ocean Engineering Research Centre (OERC) at the Faculty of Engineering and Applied Science

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# 9.0 Community Investment

Husky's goal is to invest in initiatives that will build safe and sustainable communities. Husky's community investment program includes three giving streams: major gifts, donations committee, and employees in action and our key focus areas are: Education, Health, and Community.

In 2014, Husky invested more than \$1.6 million in organizations that are impacting people and communities across the province. In July, Husky announced a three-year funding commitment to the NL Division of the Canadian Cancer Society valued at \$1,050,000. The money is being used to expand a cancer prevention education program and help staff and volunteers of the Canadian Cancer Society delivering their life saving messages to more communities in our province.

In September, Husky also gave \$750,000 to Stella's Circle to support an Employment Training Centre for adults who face barriers to employment. In December, Husky contributed \$200,000 to the Newfoundland and Labrador Chapter of the Heart and Stroke Foundation to support the installation of Automated External Defibrillators (AEDs) in rural schools. Husky chose to direct its funding to rural schools as these facilities often double as community centres and would have maximum reach.

Some of Husky's other major gifts last year included:

- \$75,000 to the Shorefast Foundation on Fogo Island to establish a Geology Interpretation Centre. The Foundation will refurbish an abandoned church and use it to house geological collections.
- \$75,000 to the CNIB to expand their eye safety education program to schools and colleges across the province
- \$50,000 to the YMCA of Northeast Avalon to support their staff training and development programs. Our support will enable the organization to expand their childcare programs.
- \$20,000 to Earth Rangers to support a school based environmental education program.
- \$10,000 to the Eastern Region Science Fair

Husky also gave \$75,000 to over 40 community organizations through our Atlantic Region donations committee. Table 9.1 provides a list of those organizations Husky supported last year. This program enables Husky to be responsive to local community needs.

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Table 9.1 Organizations Supported by Husky Energy in 2014

Boys and Girls Clubs of St. John's	MUN Sailbot Team
Business and Arts Inc.	Newfoundland and Labrador Occupational Health and Safety Association
Canadian National Institute for the Blind(Vision health month)	Newfoundland Symphony Orchestra Association
Canadian National Institute for the Blind(Eye prevention program)	Opera On the Avalon
Candlelighters Association of Newfoundland and Labrador	Parkinson Society Newfoundland & Labrador
City of St. John's	Placentia Area Theatre D'heritage Committee
Dr. H. Bliss Murphy Cancer Care Foundation Newfoundland and Labrador Inc	Seniors Resource Centre Associaiton of Newfoundland and Labrador
East Coast Trail Association Inc	Shorefast Foundation
Eastern Newfoundland Science Fairs Council	Stella Burry Foundation
Eating Disorder Foundation of Newfoundland & Labrador	St. John's Downtown Development Commission
Esteem: Educational Science, Trades, Engineering, Exploration and Mentoring Program	St. John's Pride Inc.
GoodLife Kid's Foundation	The Community Food Sharing Association Inc
Heart and Stroke Foundation of Newfoundland & Labrador	The Pottle Centre Inc
Independent Living Resource Centre	The Salvation Army Newfoundland & Labrador East
Jimmy Pratt Memorial Outreach Centre (Soup Kitchen and Breakfast Program)	The Workplace Health Safety & Compensation Commission
Learning Disabilities Association of Newfoundland & Labrador	Thrive Community Youth Network, St John's
MacMorran Community Centre	Ymca of Northeast Avalon Inc.
Memorial University of Newfoundland Through Its Fisheries and Marine Institute	
Ms Society of Canada Atlantic Division	
Mummers Festival	

The third stream of Husky's giving program is employee-led. Husky encourages employees to volunteer and support organizations that are meaningful to them including the Community Food Sharing Association, Daffodil Place, Junior Achievement, the VOCM Happy Tree, the Salvation Army Red Kettle Campaign and more.

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# 10.0 Diversity

Husky continued to work closely with its sub-contractors to advance the various initiatives identified within the Diversity Plan. More than 70 people (employees and representatives from community partners) attended Husky's Diversity Forum in November. The program included an introduction and update on Husky Energy's Atlantic Region activities followed by presentations on the status of the White Rose Extension Project. The status of suggestions made from the 2013 diversity forum roundtable discussions was also outlined. A guest speaker from Schlumberger gave a presentation that company's diversity and inclusion initiatives. Roundtable discussions on what potential research could be undertaken to assist in building the pool of available qualified workers for the industry took place during the second half of the forum. A report on diversity-related activities in 2014 will be submitted under separate cover.

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# 11.0 Photographs





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# Junior Achievement - January 2014



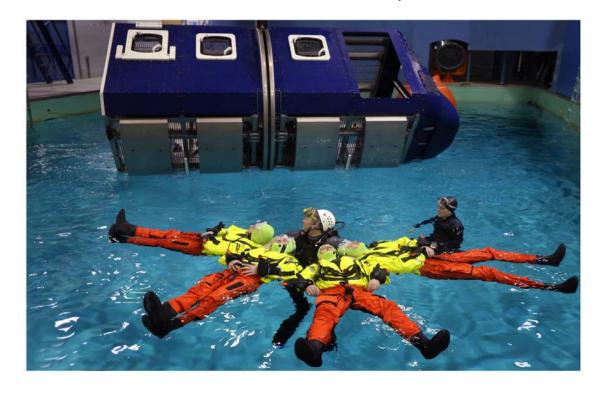


Energy Day - February 2014

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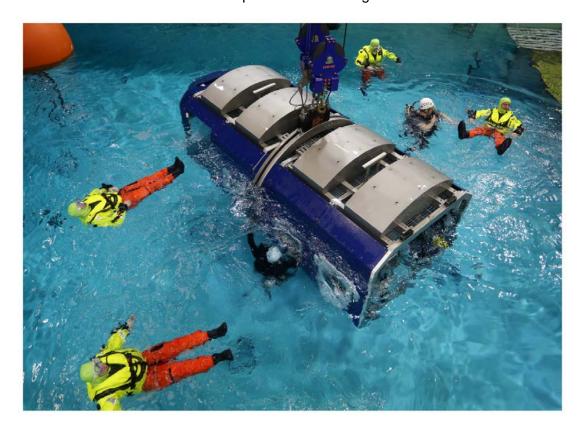


West Mira Launch - February 2014





# New Helicopter Suit Fit Testing - March 2014



New Helicopter Suit Fit Testing - March 2014



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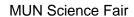
# Techsploration 2014



Husky staff participate in Tely Hike June 2014



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Husky Personnel Participate in "The Pitch" Panel at NLOWE's 2014 Conference





# White Rose Extension Project Public Information Session in St. John's



White Rose Extension Project Public Information Session in Placentia



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Preparation for Fit Testing of Wellservicer Lifeboat to SeaForce HRF



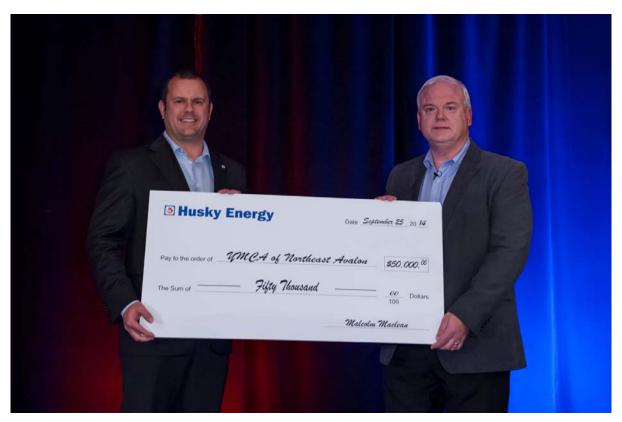
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## **Deck of the Wellservicer**



**Husky Donation to Canadian Cancer Society – July 2014** 



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# Husky Donation to YMCA - September 2014



Husky Donation to Stella's Circle - September 2014



**Husky Donation to CNIB - October 2014** 

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Husky Donation to Heart and Stroke Foundation – December 2014



**Donations to Daffodil Place - December 2014** 

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**Donations to Daffodil Place - December 2014** 



Take your Kids to Work Day - November 2014



Husky Donates Computers to Eastern School District, Easter Seals, Daffodil Place

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