

Women in Canada's Oil and Gas Sector

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INTRODUCTION

This presentation summarizes information gathered for the Oil and Gas Sector Programme Pakistan (OGSP), a seven-year project (1996-2003) funded by the Canadian International Development Agency (CIDA). The text is a summary of the report: Women in Canada's Oil and Gas Sector, by Susan Dowse, Kimberly Horton, Dorothy Lele, and Susan Sherk. The overall goal of the OGSP is to strengthen Pakistan's capacity to manage its oil and gas resources more sustainably through policy advice, privatization assistance, appropriate regulatory mechanisms, technology transfer and specialized petroleum training.

In accordance with CIDA's Gender Equality Policy, the OGSP promotes gender equity and women's participation in its project activities and within the petroleum industry in Pakistan and Canada. This report emerged in response both to questions about the availability of professional Canadian women to work as consultants in the Programme, and to requests from the Pakistani industry and government on international models for policies and programs promoting gender equity within the petroleum sector.

An investigation was therefore conducted which aimed at identifying current levels of female labour force participation in the Canadian petroleum sector, barriers to women's entry and promotion, and strategies used by oil and gas companies to encourage the full contributions of their female employees.

Statistics Canada data show that women make up 24.2% of employees in the petroleum sector, compared to approximately 45% of Canada's total labour force across all industries. Of women employed in the petroleum sector, a majority are clustered in support, sales and service jobs (60%). 25% of all professional positions are occupied by women, but most professional women currently occupy junior and intermediate positions, with a serious shortage of women occupying executive and senior management positions. Overall, women have not yet achieved a critical mass in this industry, which is defined at 30%.

Positive trends were identified. A major positive trend is the significant growth in the last ten years in female enrollment in petroleum-related university programs (i.e. petroleum and chemical engineering, geology, and geophysics). This trend indicates that female participation in the petroleum industry in Alberta is likely to grow as these women graduate and enter the workforce.

Another positive trend is growth in the numbers of oil and gas companies that are developing policies and organizational initiatives to address inequities in the workplace. There is a trend away from employment equity strategies that focus on quotas to ensure the participation of designated groups (including women), towards practices that support diversity management in its broadest sense. The reality of the diversification of Canada's labour force and the globalization of the market place is requiring companies to secure the productivity and commitment of a diverse group of employees in order to maintain a competitive edge. The end goal is to ensure a corporate culture that values and capitalizes on its total human resources. This has become an economic necessity.

Many oil and gas companies have now established diversity management initiatives that deal with gender-related issues and address barriers to women's participation. Examples of initiatives that have been implemented include: childcare and summer-care facilities within company offices subsidized by the company; bridging programs to introduce training opportunities for non-traditional occupations; introduction of harassment prevention policies and training that require managerial accountability and support; gender awareness training, as well as diversity-sensitive hiring and selection processes.

Significant barriers were identified that obstruct women's equal participation in the oil and gas industry. Sources indicated that organizational cultures are dominated by values, beliefs, and styles of behaviour that discourage alternative perspectives and modes of expression. Women working at senior professional levels often find they have a very small female peer group, if they have one at all, and often experience isolation and lack of support from a peer network. Women's small numbers prevent them from initiating significant organizational change at the senior executive level. Women who do succeed and advance in the industry have generally learned to play by established rules and behaviour patterns and become reluctant to propose innovations that would be seen as too different, but that could benefit the organization.

Industry sources reported that recruitment and selection processes often present major institutional barriers for women. The lack of alternative work schedules (e.g., job-sharing and part-time positions) and child-care arrangements impede women's equitable participation and advancement.

An important issue for professional women working in the industry is that high mobility and field experience are critical requirements for career advancement in the petroleum industry. To gain respect and promotions, oil and gas professionals must have adequate experience in the field, and have a full understanding of the technical components of up and downstream oil and gas processes. The mobility requirements in gaining such field experience present another barrier for women, due to their major responsibilities for child and domestic care.

Although women are not yet equally represented in Canada's oil and gas sector, there are positive signs: more women in petroleum-related university programs, more associations dedicated to promoting women in science and engineering, organizational change within companies in support of the principles of diversity. These positive steps should be supported, at the same time as monitoring and overcoming barriers to women's participation, in order to ensure that Canada's oil and gas sector benefits fully from the new approaches, ideas and alternative working styles that women bring to their work.

The report recommends some measures that companies, educational institutions and government departments and agencies can apply to ensure that the petroleum sector gains full access to the talents and skills of well-qualified women. Ultimately, there are many critical issues regarding women's participation in Canada's oil and gas sector that should be further investigated.

INFORMATION SOURCES AND GAPS

The assessment of women's participation in the Canadian oil and gas sector is not a simple exercise. Statistics Canada combines oil and gas figures with mining and quarrying in all published data. No other sources of industry-specific data were found that could offer a comprehensive overview of the number and situation of women currently employed across the industry.

The OGSP, therefore, made a special request to Statistics Canada for customized data on the oil and gas industry. The Canadian OGSP Gender Equity Consultants have also collected additional information from various sources which describes the current situation of women in the industry, relevant gender-related issues, as well as corporate approaches to promoting gender equity used in oil and gas companies. A sample of the data collected is included here.

Table 1: Employment by industry and sex, Canada, 1997

	Number employed (thousands)		
	Both sexes	Men	Women
All industries	13941	7649	6292
Goods-producing industries	3769	2863	906
Agriculture	423	285	138
Other primary industries	292	251	41
Fishing and trapping	36	32	4
Logging and forestry	79	69	10
Mining, quarrying and oil wells	177	151	26
Utilities	140	106	34
Manufacturing	2167	1556	611
Construction	747	665	82
Service-producing industries	10172	4786	5386
Transportation, storage and communications	897	662	235
Trade	2386	1339	1047
Finance, insurance and real estate	795	311	484
Services	5303	2027	3275
Business services	1005	569	435
Educational services	962	362	600
Health and social services	1425	306	1120
Accommodation, food and beverage industries	898	368	530
Other service industries	1013	423	591
Public administration	791	446	345

Source: Labour Force Survey, Statistics Canada, Catalogue no. 71F0004XCB
<http://www.StatCan.CA/english/Pgdb/People/Labour/labor10a.htm>

Table 2a. Women as a Percentage of Total Employment in Canada's Petroleum and Natural Gas Industry 1997

	Canada			Alberta		
	Total employees	# of women	Women as %	Total employees	# of women	Women as %
Managerial, administrative	39.6	14.1	35.6	19.7	7.4	37.6
Professionals	20.2	5.3	26.2	12.5	3.2	25.6
Clerical & related	30.2	23.2	76.8	9.5	8.2	86.3
Sales	45.5	8.3	18.2	6.3	1.1	17.5
Service	3.7	1.7	45.9*	*	*	*
Primary occupations	34.3	1.7	5.0	25.1	1	4.0
Processing/machining/fabricating	22.7	0.6	2.6	10.6	0.1	0.9
Construction trades	10.9	0.2	1.8	5.1	0	0.0
Transport equipment operating	10.7	0.1	0.9	3.3	0.1	3.0
Material handling and other crafts	11.6	0.4	3.4	6.9	0.3	4.3
Total	229.5	55.5	24.2	100.1	21.6	21.6

* Too few to be reported from survey data

Table 2b. Women in each occupational group, as a percentage of all women in the petroleum and natural gas industry, 1997

	Canada				Alberta	
	# of men	% of total men	# of women	% of total women	# of women	% of total women
Managerial, administrative	25.6	14.7	14.1	25.4	7.4	34.3
Professionals	14.9	8.6	5.3	9.5	3.2	14.8
Clerical	7	4.0	23.2	41.8	8.2	38.0
Sales	37.2	21.4	8.3	15.0	1.1	5.1
Service	2	1.2	1.7	3.1	*	*
Primary occupations	32.6	18.7	1.6	2.9	1	4.6
Processing/machining/fabricating	22.1	12.7	0.6	1.1	0.1	0.5
Construction trades	10.7	6.2	0.2	0.4	0	0.0
Transport equipment operating	10.6	6.1	0.1	0.2	0.1	0.5
Material handling and other crafts	11.2	6.4	0.4	0.7	0.3	1.4
Total	173.9	100.0	55.5	100.0	21.6	100.0

* Too few to be reported from survey data

Table 3: Gender-Disaggregated Enrollment in Petroleum-related Programs

University of Calgary

Program	1987 Enrollment ¹	1997 Enrollment
Chemical Engineering ²	Total: 123 Female: 20 (16.3%) Male: 103 (83.7%)	Total: 211 Female: 76 (36.0%) Male: 135 (64.0%)
Geology/Geophysics ³	Total: 183 Female: 40 (21.9%) Male: 143 (78.1%)	Total: 192 Female: 79 (41.1%) Male: 113 (58.9%)

Source: NSERC/Petro-Canada Chair for Women in Science and Engineering, Department of Geomatics Engineering, University of Calgary

University of Alberta

Program	1987 Enrollment	1997 Enrollment
Petroleum Engineering	Total: 92 Female: 8 (8.7%) Male: 84 (91.3%)	Total: 108 Female: 21 (19.4%) Male: 87 (80.6%)
Chemical Engineering	Total: 194 Female: 37 (19.1%) Male: 157 (80.9%)	Total: 270 Female: 95 (35.2%) Male: 175 (64.8%)

¹ Enrollment figures include all students registered in each program, including regular, co-op, honours, and specialization streams.

² Petroleum fields are included in University of Calgary's chemical engineering program. Petroleum engineering will start as a separate program in 1998.

³ Statistics for geology and geophysics programs were not separated by the University of Calgary

Geology	Total: 120 Female: 24 (20.0%) Male: 96 (80.0%)	Total: 117 Female: 41 (35.0%) Male: 76 (65.0%)
Geophysics	Total: 29 Female: 4 (13.8%) Male: 25 (86.2%)	Total: 20 Female: 9 (45.0%) Male: 11 (55.0%)

*Sources: Office of the Registrar, Institutional Analysis, University of Alberta.
Faculty of Science, University of Alberta*

CONCLUSIONS

Limited comprehensive research has been undertaken to date on women's participation in the Canadian oil and gas sector. While a growing amount of literature has emerged on women's experiences and barriers in corporate organizations generally, very little has been directed towards gender issues in the oil and gas sector in particular.

Statistics Canada data point to an important potential for women's increased involvement in the oil and gas sector. While women make up approximately 45% of Canada's total labour force across all industries, they constitute 24.2% of employees in the petroleum sector. Of these women, a majority are clustered in support, sales and service jobs (60%). 25% of all professional positions in the sector are occupied by women. Most professional women currently occupy junior and intermediate positions, with a serious shortage of women occupying executive and senior management positions. Overall, women have not yet achieved a critical mass in this industry, which is defined at 30%.

Significant barriers have been identified that obstruct women's full and equal participation in the oil and gas industry. Sources indicated that organizational cultures are dominated by values, beliefs, and styles of behaviour that discourage alternative perspectives and modes of expression. Women working at senior professional levels often find they have a very small female peer group, if they have one at all, and often experience isolation and lack of support from a peer network. Women's small numbers prevent them from initiating significant organizational change at the senior executive level. Women who do succeed and advance in the industry have generally learned to play by established rules and behaviour patterns and become reluctant to propose innovations that would be seen as too different, but that could benefit the organization.

Industry sources also noted that recruitment and selection processes often present major institutional barriers for women. The lack of alternative work schedules (e.g., job-sharing and part-time positions) and child-care arrangements impede women's equitable participation and advancement, once they are hired.

An important issue for professional women working in the industry is that high mobility and field experience are critical requirements for career advancement in the petroleum industry. To gain respect and promotions, oil and gas professionals must have adequate experience in the field, and have a full understanding of the technical components of up and downstream oil and gas processes. The mobility requirements in gaining such field experience present another barrier for women, due to their major responsibilities for child and domestic care.

One of the most positive trends, however, is the significant growth in the last ten years in female enrollment in petroleum-related university programs. Both the University of Calgary and the University of Alberta have experienced considerable growth in female participation in petroleum and chemical engineering disciplines, as well as geology and geophysics. This trend indicates that female participation in the petroleum industry in Alberta is likely to continue to grow as these women graduate and enter the workforce. Without significant organizational efforts to ensure women's contributions are welcomed and respected, however, female professionals will likely continue to face barriers preventing them from reaching senior or executive levels.

Many oil and gas companies are developing policies and organizational initiatives to address inequities in the workplace. There is a trend away from employment equity strategies that focus on quotas and programs to ensure the participation of designated groups (including women), towards practices that support diversity management in its broadest sense. The reality of the diversification of Canada's labour force and the globalization of the market place is requiring companies to secure the productivity and commitment of a diverse group of employees in order to maintain a competitive edge. The end goal is to ensure a corporate culture that values and capitalizes on its total human resources. This has become an economic necessity.

Oil and gas companies now provide many examples of diversity management initiatives that deal with gender-related issues and address identified barriers. Examples of initiatives that have been successfully implemented include: childcare and summer-care facilities within company offices subsidized by the company; bridging programs to introduce training opportunities for non-traditional occupations; introduction of harassment prevention policies and training that require managerial accountability and support; gender awareness training, as well as diversity-sensitive hiring and selection processes.

Although women are not yet equally represented in Canada's oil and gas sector, there are positive signs: more women in petroleum-related university programs, more associations dedicated to promoting women in science and engineering, organizational change within companies in support of the principles of diversity. These positive steps should be supported, at the same time as monitoring and overcoming barriers to women's participation, in order to ensure that Canada's oil and gas sector benefits fully from the new approaches, ideas and alternative working styles that women bring to their work.