

PART TWO OF A TWO-PART SERIES

A large offshore oil rig is silhouetted against a vibrant orange and yellow sunset sky. The rig's complex lattice structure is reflected in the calm water in the foreground. The overall mood is industrial yet serene.

Building A Productive Career THAT Lasts Decades

By Seabright McCabe, SWE Contributor

During an early interview for this series, Carolyn Emerson, project coordinator for the Canadian Centre for Women in Science, Engineering, Trades, and Technology (WinSETT Centre), remarked, “You know, this [addressing this subject] could be your life’s work!”

Subsequent research confirmed the accuracy of her statement. The forces that drive the petroleum industry reach across continents and geopolitical influences, environmental concerns, and technological issues. Within this expanse, a range of additional factors related to gender come into play, with further variations across cultures and companies.

Delving into this topic yielded a wealth of perspectives, both from women working in the industry and those observing it. Combined with elements of the growing body of research on women in engineering, the result is a broad-brush examination of an intricate, multifaceted subject.

A changing lens

Perceptions of gender bias and related issues may, in part, be nuanced by each generation’s view of the preceding generation’s struggle. For example, as women have gained the right to vote, that right has quickly become embedded in the cultural fabric. Similarly, young Americans today are surprised to learn that, only decades ago, employment ads for men and women were listed separately.

Each advance, large or small, adds to a growing perception of gender equity as social norms, laws, and expectations, plus the daily realities of men’s and women’s lives, move toward greater equality. For instance, many of those

interviewed for this story acknowledge that women at the top of the pyramid are scarce, but don’t necessarily see it as a function of gender. Katy Weidenfeller, a technology program manager in mid-career at ExxonMobil, noted, “The challenge of inclusion is being able to listen to views that are different from yours and learn from them. When it comes to effectively persuading people, *it’s about the individual.*”

Janeen Judah, general manager for Chevron’s Southern Africa Business Unit, offers another perspective. Her career of more than 30 years is unique in that she worked in upstream petroleum engineering positions at two other legacy oil companies before joining Chevron.

“I think women still face many of the same challenges that we were talking about 30 years ago,” Judah said. “Discrimination is not as overt as it was when I started in engineering, but it’s still there. I hear challenges like ‘I don’t know her well enough’ or ‘I haven’t worked with her before,’ that indicate that it is subjective not objective standards like performance that are often in play. Men want to work with those they know, and if they have not reached out to women and minorities, then they won’t know any.”

There’s history behind Judah’s comment. The oil industry, which began in the U.S. in the 1880s, was built on strong male networks. After World War II, companies were seeded with ex-military men and merchant marines who had forged unbreakable bonds during the war. It makes sense that those trusted networks would be difficult for women to penetrate.

It should also be noted that women’s roles in the early days of offshore oil were largely domestic. Initially, women

maintained camp households along the Gulf Coast while husbands were offshore, making their first forays into office work when circumstances required they contribute financial support. Women were eventually brought onto offshore rigs as nurses, housekeepers, or caterers. It was not until the 1970s when employment laws in the U.S. changed that women and minorities achieved a greater presence in the technical fields.

In today’s terms, Judah concludes, “We need more men to champion diversity, not just relying on women to sponsor women or minorities to sponsor their own minority. Diversity should be everyone’s business.”

Focusing on retention

Among multinationals, oil companies stand out as being capital-intensive, investing in training and continuing education in order to reap the benefits of intellectual contributions made over decades.

Alicia Bohnsack, a project development lead for BP, remarked on a key example of the company’s supportive climate. “My focus had been automotive, so I wanted to pursue my master’s in mechanical engineering right after I was hired. It’s unusual to do thesis research while working full time, but my supervisors encouraged me to perform research work on-site. It was a perfect opportunity.”

Indeed, interesting work, opportunity for training and promotion, and recognition for one’s contributions are essential to maintaining a long, productive career in any field. Weidenfeller observed that, “To get maximum production from a tightly managed number of people, a variety of experience is essential. The

Against the backdrop of market demands, the call for new technological solutions, and the oil industry’s labor and skills shortage, part one of this series, “Widening Horizons for Women in Petroleum,” discussed opportunities for women engineers. The conclusion focuses on the keys to retaining them: challenging work, supportive company culture, opportunities for advancement, and policies that respect the boundaries of work and personal life.

expertise developed over years of training and cross-functional experience is highly valued.”

Barbara Burger, vice president of Supply Chain and Base Oil at Chevron, addressed the value of such training, particularly from an international perspective. “As our businesses become global from an operational standpoint, we need universal business standards no matter where in the world we go. That can only come from employees with international experience. Whether it’s from the field, on a rig, or any other area, you need that experience if you want to be a leader in this business.”

Relocation to foreign countries raises a whole host of issues related to work life, dual career families that require work visas for spouses, child rearing, and even elder care. Judy Moses, general manager, Asset Development of Chevron’s MidContinent Business Unit and an active mentor, said, “The most common question I get from women is ‘how do I make this work with my family?’”

While availability of work visas is particular to international assignments, the challenge of work/life balance seems universal regardless of whether one relocates for an assignment or remains at the same facility. Concerns over work/life balance are frequently viewed as the major reason women leave the engineering profession.

Yet it’s far from the only or primary reason. A recent study funded by the National Science Foundation sheds light on retention issues for women engineers. Conducted by Romila Singh, Ph.D., and Nadya Fouad, Ph.D., of the University of Wisconsin-Milwaukee, the study indicates that women who remain in engineering and enjoy their careers feel they are valued, are offered training and advancement, and believe that their work/home boundaries are respected and supported by colleagues and superiors. (See sidebar.)

Networks promote professional development

As early as 1949, the value of connections among a growing number of women professionals was recognized

with the formation of the Desk and Derrick Clubs. Founded by a group of 12 petroleum industry secretaries in New Orleans, the clubs provided seminars, speakers, and newsletters, and even published a magazine, *The Oil and Gal Journal* (now called *The Desk and Derrick Journal*). The relationships established through these activities were a precursor to what we now call networking, and Desk and Derrick chapters quickly spread across the south, and northward into Canada.

As the intervening years have shown, networking has proved vital to women’s growth, success, and retention; essential both within one’s company and discipline, as well as in the broader community. Frequently, as networks develop, so do careers. When the Society of Women Engineers was formed in 1950, one of its aims was to bring together women engineers and engineering students for mutual support at a time when there were no formal avenues within the traditional discipline-based societies.

Within companies, horizontal and vertical networks are indispensable for women. Bohnsack, a project development lead at BP, said, “Networking plays a big part in problem-solving. It’s pretty easy to create that network with peers, but creating it upward is amazing. You need people at different levels.”

At Shell, one of the networks available to women is Women Adding Value Everywhere (WAVE). “It’s predominantly women but men can join,” Ana Kopf, recruitment manager for the Americas, said. “It started out as a way to build relationships and has grown to conferences with speakers who talk about Shell businesses and teach ‘soft skills’ for professional and personal growth. WAVE is one of the stronger networks in the industry, with mixing of various levels, functions, culture, and gender.”

Emerson points to Schlumberger, known for having strong diversity initiatives. “They work with community groups to identify where women are, learn the issues and work with second-

Recent Study Sheds Light on Retention Issues

Romila Singh, Ph.D., and Nadya Fouad, Ph.D., of the University of Wisconsin-Milwaukee reported on the first phase of an important study that delves deeply into the reasons women leave engineering. More than 3,700 women with undergraduate degrees in engineering completed the survey. Participants included women who never entered the field after graduation, had left it more than five years ago, less than five years ago or were currently working as engineers. Drs. Singh and Fouad released their initial report, “Stemming the Tide: Why Women Leave Engineering,” in 2011.

Chief among the reasons for women’s loss of interest in the profession was an inhospitable work environment, with workplace incivility being a significant factor that drew extensive comments from respondents in each category, including those who left the field during the process of interviewing for a first job.

Mary Fitzpatrick, Ph.D., who helped author the study and who followed a 20-year career in engineering with a doctorate in educational psychology, noted that technical fields tend to reward personalities that are “competitive, territorial, extremely confident and willing to work almost around the clock.” While these traits are certainly not exclusive to men, some of them limit the flexibility that many women value.

Interestingly, only 25 percent of the respondents who had left engineering left the workplace altogether to raise families, offering further evidence that work/life and child-rearing issues may not be as primary a factor as conventional wisdom would have it. The vast majority of women who left the profession found satisfying work in other industries.

The study concludes that women are more likely to remain in engineering when companies:

- Create an organizational culture that values employees’ contributions
- Assert zero-tolerance for uncivil and undermining behaviors; promote a culture of respect
- Create a supportive network at work through colleagues, supervisors, and mentors
- Offer work/life initiatives that are imbedded in family supportive cultures

The study further showed that while a company’s broad commitment to these goals mattered a great deal, the microclimates generated at work among colleagues and supervisors had a profound effect on women’s commitment and desire to remain in the organization and the profession.

Link to the full report here: http://energy.gov/sites/prod/files/NSF_Stemming%20the%20Tide%20Why%20Women%20Leave%20Engineering.pdf

ary institutions to encourage women into engineering schools.”

Emerson organized a recent workshop — another venue for building connections and networks — where a group of women based in Newfoundland analyzed and practiced the process of negotiation. “Women look at the issues under discussion from a collaborative standpoint,” said Emerson. “Relating to supervisors and co-workers is critical to solving issues, and women draw on long-term relationships for those solutions. Research shows that men often see negotiation as a contest. Women tend to have the long-term top-of-mind and seek to preserve the goodwill of relationships.”

Events such as SWE’s annual conference, local meetings, and professional development activities contribute to women’s career growth and continue to stand the test of time. SWE’s more recent promotion of webinars and expanded lifelong learning opportunities heighten the advantages of belonging to a formal network of women engineers.

Additional examples of networking efforts include the Houston-based Society of Professional Women in Petroleum, founded in 1981 to provide industry-specific opportunities. With more of a local focus, group activities include monthly breakfast meetings and seminars. The Women in Oil and Gas Conference, an international event held in 2011 in Canada, followed up on an initial conference in Newfoundland in 1985 to address global concerns and has spun off legacy initiatives, while the discipline-based Society of Petroleum Engineers established its women’s network in 2004. The WinSETT Centre is now delivering leadership workshop modules across Canada with a continuing focus on women in the petroleum sector.

Governments also support professional development efforts that benefit women and their employers. In Norway, OLF’s “Female Future” (FF) is a career development program for women focusing on management, board work, image-building, and cultivating networks. Companies are asked to nominate female participants and commit themselves to work to promote

these women into management positions in the company and/or on corporate boards. Twenty women participate each year, setting personal goals adapted to individual companies. The companies receive publicity as well as access to the FF database of female board candidates. Participation in the project qualifies as equality reporting under Norway’s Gender Equality Act, which requires companies to provide an account of activities that promote gender equality.

Mentors and role models matter

An effective role model can offer an unforgettable glimpse of possibilities. Weidenfeller, whose mechanical engineer father was her first role model, recalled a key inspiration. “There was a pivotal moment in ninth grade geometry when a woman came in and played a video about engineers and how they solved problems. She talked about herself as an engineer, and something clicked. That was the moment I decided to be an engineer. It was something I could see and touch and feel.”

Such a moment can become a guiding light through mentorship, a relationship that is formal or informal, centering on subject expertise or career planning.

Burger, whose 25-year career spans the management chain at Chevron, said, “In the second half of your career you give more thought to who’s coming up behind you. We all learn the rules and how to approach situations and if you can get information and strategies to people earlier in their careers, they will advance faster and become better leaders.” Burger is an active mentor who goes beyond a supervisory role to a broader context, working with mentees on their specific objectives.

Judah also believes mentorship and sponsorship are key for individual career advancement. “I am very aware of being a role model for many women engineers both inside Chevron and outside, through my leadership role in the Society of Petroleum Engineers. I have mentored both formally and informally, and rarely turn down an opportunity to speak to young employees about career development and lessons learned.”

Moses recalled the value of mentors in her career. “I had one who spent a tremendous amount of time explaining how the company works,” she said. “Later, when I was in project management and becoming visible, I had a boss who spent a lot of time with me on presenting and conveying ideas clearly. If it weren’t for him, I probably wouldn’t have had as much success.”

Moses also gives back. “I’ve done informal mentoring on a regular basis with high-potential people and direct reports,” she continued. “Our executive women’s network at Chevron is working to find ways to be visible role models in the company, and making ourselves available. At the moment we’re looking at our local women’s network, sharing diversity studies, sharing with the larger group.”

Mentoring is a two-way street, with benefits for both individuals, in any stage of career. At BP, Bohnsack gains as much from mentoring as she gives. “Now that I am a mentor too, it helps me sharpen my team leadership skills. I try to do that whenever I can, and part of it is selfish because I get a lot out of it.”

On the horizon

Today’s vast oil reserves pose unique technological and environmental challenges just as the industry confronts a growing skill and labor shortage. To support the drive toward new technology for safer, more efficient ways to extract, refine, and transport this oil, the industry actively seeks talent that will grow and contribute over decades.

Networking, role models, and mentors provide the supportive scaffold needed for the climb of a productive, satisfying career. However, as Drs. Fouad and Singh’s study has revealed, substantial investment in recruiting, training, and advancing women can be undermined if equal investment is not made in building a supportive culture.

Research has clearly shown that women are attracted to careers that have a positive impact on society in general and families in particular. Women engineers may find themselves uniquely positioned to contribute their knowledge, skill and collaborative mindset not only to the oil industry’s present, but its future. ■