

NAIT students in Petroleum Engineering Technology and Chemical Engineering Technology gain experience in oil and gas production techniques at Alberta's well-known Enform facility.

# Oilpatch Needs You!

## Post-Secondary Education Ramps Up Training To Fill The Oilpatch Industry's Need For Skilled-Labour

**FROM OIL RIG WORKERS, to skilled tradespeople like welders and heavy equipment operators to technicians, technologists and engineers, Western Canada's oil and gas industry — and particularly its booming oilsands sector — is running out of skilled people.**

"The needs are huge," said Jerry Heck, resources consultant with Careers: The Next Generation, an Alberta-based initiative aimed at educating high school students and others about trades careers and helping youths enter the trades. "For us to meet the needs we'll have to think about convincing people to delay retirements, we'll have to attract immigrants and we'll have to convince young people to enter the trades."

Heck, superintendent of the Fort McMurray Catholic School District from 1974 to 1996, when he was seconded by oilsands pioneer Syncrude Canada Ltd., joined Careers: The Next Generation in 1998, after becoming aware of the organization through his friendship with Eric Newell, one of the founders of the organization when he was the CEO of Syncrude.

The organization, with a budget from industry and the provincial government of \$2.6 million a year and 22 full-time employees, works on increasing the awareness of career opportunities in the trades, in health care and in forestry. It targets high school students and their parents

and offers programs that provide summer internships and pre-apprenticeship training at the high school level. In an average year now it has 1,400 in the internship program and 1,100 in the apprenticeship program, the Registered Apprenticeship Program (RAP), which offers apprenticeship training starting at Grade 10. About 3,000 students have come through the program. It also has several training initiatives aimed at aboriginals, a target because half of the aboriginals in Alberta are aged under 20.

In addition, it recently launched a pilot program aimed at familiarizing youths with technician and technology careers in the energy industry, with a six-week-long exposure to the workplace and academic coaching as well. At this point 28 high school students have taken the program, offered in northern and southern Alberta through Calgary's SAIT (Southern Alberta Institute of Technology). Heck says there are no plans to extend the program beyond the trades or technologist level to engineering, even though there is expected to be a serious shortage of engineers going forward. "Our focus is at the trades level," he said. With about 40,000 high school graduates a year in Alberta, and less than five per cent going into the trades, he says the goal is to raise that percentage by making young people and their parents aware that "these are good jobs."

"We're starting to panic [educators, government and industry] about the shortage," he said. "We need to develop a number of strategies." At the same time, he acknowledges that the shortages are likely to be serious, with an aging population playing a significant role, compounded by the growing demands of the labor-intensive oilsands sector.

"The Alberta Department of Energy has estimated there will be 102,000 new jobs, in construction and operations, created in the oilsands in the next 10 to 15 years," he said. "Each \$1 billion spent in the oilsands creates 2,000 jobs." That estimate comes, for the most part, from work done by the Athabasca Regional Issues Working Group (RIWG), an umbrella organization formed by oilsands producers, local school boards in Fort McMurray, the local college (Keyano), the health region and others.

In its most recent report, "Wood Buffalo Business Case 2005," produced to push for more provincial government investment in local infrastructure, it forecasts that

there will be \$45 billion of investment by oilsands developers in the next five years, with the Fort McMurray area's population growing from 56,000 to 80,000 by 2010. This will also produce a sustained "shadow population" of up to 10,000 living in construction camps in the region, it says.

The report, citing a publication produced by the Alberta Chamber of Resources (ACR) called the "Oil Sands Technology Roadmap" (January, 2004), projects population growth and labour demand based on ramping up from the current one million barrels a day of production to five million by 2030.

Based on the production increase, it says direct employment in the oilsands, now at about 9,000, will grow to over 25,000 by 2030. It's estimated that each of those direct jobs creates three spin-off jobs.

Cheryl Knight, executive director and CEO of the Calgary based Petroleum Human Resources Council (PHRC), a federally-funded body that works on energy industry human resources issues, says it won't be just a question of finding new skilled workers but of replacing the retiring ones. "The ageing of the workforce is a big problem," she said. "I know in the operations and maintenance jobs in the oilsands, for instance, 39% of the workforce is 45 or older and I'd guess the profile for the construction trades is similar." A study produced by PHRC in 2003, (updated in 2004) called "The Decade Ahead", projects



a need for at least 3,600 skilled oilsands workers to replace those who retire — and that was before a wave of new projects was announced.

In November 2004, the Construction Owners Association of Alberta (COAA) produced a study called "Needs Assessment of Essential Skills", which paints a bleak picture of future shortages for skilled tradespeople.

Brad Anderson, a former senior provincial civil servant who also is executive director of the COAA and executive director of the

ACR, said the study — which included all major construction projects costing \$100 million and up — projected "a frightening forecast" of the need for skilled trades through to 2012.

That forecast, which included oilsands projects that had been announced before 2004 (more have since been announced), the proposed Mackenzie gas pipeline, upgraders, expansion of refineries and more, saw skilled labour demand in Alberta growing from about 13,000 overall now to above 30,000 by 2009. That was bad news for those needing to fill those skilled trades openings. But the news won't get any better. "We're about to release an updated study, with a graph of expected demand," said Anderson. "It gets worse, way worse." The new number is beyond 30,000 "but that's only the tip of the iceberg. This is for projects worth over \$100 million."

"What about all the infrastructure projects (for new roads and schools), not to mention the demand for skilled workers in the residential construction sector?" In his positions with COAA (and to some extent ACR) Anderson is tracking the supply and demand statistics for the tradespeople who work on heavy industrial projects, which involves about 12 trades areas, including pipefitters, welders, boilermakers, electricians and others.

But the problem is, Alberta isn't the only place in Canada where those skilled workers will be needed (although some

projections have it that 60% of Canada's skilled trades demand will be in Alberta). For instance, there will be huge demands for skilled trades workers in Vancouver-Whistler, required to prepare the area for the 2010 Winter Olympics, he says.

But the demand will be most acute in Alberta, he says, citing a recent Alberta Human Resources and Employment study that projects there will 400,000 new jobs created in the next decade in the province, with only 300,000 new Albertans taking those jobs — a shortfall of at least



NAIT President Dr. Sam Shaw with welding students.

Photo courtesy The Northern Alberta Institute of Technology

***“Industry is facing a skills shortage crisis and NAIT has solutions to that problem ... We will train 160,000 skilled workers in the apprenticeship and business fields from 2010 to 2020.”***

100,000. And, of course, not all people moving to the province will have the skill sets required.

Nevertheless, Anderson says a variety of initiatives, from Careers: The Next Generation to ones launched by community colleges and the province, will help fill the gap. Anderson points out that there are 43,000 people now involved in the province’s apprenticeship system (from fully trained to beginning their training), which he calls “the best in the world.”

It will need to be, if Beverlie Cook, project manager of the Skilled Trades Promotion Program, is right. The \$12 million, four-year program, established in 2003 by Human Resources and Skills Development Canada (HRSDC) to make Canadians aware of a serious shortage of skilled workers going forward — and to attempt to lure more people to train for those jobs — has led to the production of numerous studies that confirm the shortage and strategies to deal with it. The program tracks over 200 trades, 45 of those being the so called “Red Seal” trades involving long apprenticeships

(many require four years of training). But it also looks at — literally — the butchers, the bakers and the candlestick makers.

Working with the Canadian Apprenticeship Forum and other organizations involved in skilled trades development (they also help fund her program), it projects there will be 913,000 skilled trade job openings from now through 2015, half due to the retirement of today’s skilled workers.

Its studies show that in the next 20 years 40% of new jobs will be in the skilled trades and technologies (in 1998 it was less than 20%). They also show there is a shortage now of at least 20,000 skilled workers a year and that will grow to 50,000 by 2010. Finally, projections are that Canada will be short one million workers by 2020, due to the ageing of the population (according to the Conference Board of Canada).

Virtually all industries will be short of skilled workers. For instance, in the manufacturing sector an estimated 400,000 skilled workers will be required in the next 15 years due to retirements.

Cook says her program, which includes a national TV and print advertising campaign, working with provincial governments and post-secondary institutions throughout Canada, and other initiatives, targets youths aged 13 to 17. “We’re trying to get them before they’ve made up their minds about a career,” she said. “The trades provide good job opportunities, with good earnings potential.”

As a former teacher, she says too many of her colleagues, all university educated, with no understanding of the trades, fail to make young people aware of the opportunities in the trades. “When I tell teachers what people in the trades can earn it opens their eyes,” adding that most skilled tradespeople earn more than teachers.

Aside from Careers: The Next Generation and other initiatives in Alberta, she says Ontario is the only other province where major initiatives have been launched to target young people and get them interested in trades. The Ontario program includes tax credits for businesses offering apprenticeship training and scholarships for

# Skills In Progress

students going into trades training. The government is also looking at the current high school curriculum and may reintroduce — 20 years after abandoning its streaming program that offered technical and trades training in high schools — new trades training programs. “Alberta and Ontario are leading the way, although every province is doing something to promote skilled trades,” she said.

While shortages of skilled workers is an issue, that’s only part of the problem faced by Alberta’s — and Western Canada’s — booming energy industry. There aren’t enough engineers, technologists, technicians and Master of Business Administration graduates with knowledge of the energy industry, says Professor Laurie Milton of the Haskayne School of Business at the University of Calgary. “It’s a massive issue,” she said. “About 29% of oil and gas industry workers and 39% of electricity industry workers are eligible for retirement within 10 years. Every energy company is concerned about succession in the next five to 10 years.”

Milton says there aren’t enough business graduates trained in energy industry management and there is such a shortage of trained geoscientists, from geophysicists to petroleum and mining geologists “companies are looking at sharing them”.

She says talk of importing immigrants from elsewhere in the world misses the point that there’s a worldwide shortage.

She places the blame for this shortage on demographics — the natural ageing of the population in the Western world (the Organization for Economic Cooperation and Development) estimates that by 2030 there will be only 2.5 people working for every dependent elderly person in the Western world, down from seven to one in 1960) — but on energy companies that didn’t groom new executives and geologists.

Haskayne has submitted a proposal to the Alberta government for funding for a new MBA program in energy. It would represent a major expansion beyond its existing Global Energy Management MBA program. The University of Alberta also offers an MBA in the field of energy industry management, as does the University of Montreal (with more of a focus on hydro and other sectors). The new energy management program would be fully integrated, with students at the undergraduate, master’s degree and PhD levels.

In addition to this move, the U of C has



Photo courtesy The Northern Alberta Institute of Technology

profiler

SAIT’s 2006 graduating class in petroleum technology will have some students in their 40s, who went back to school to train for a career that promises to pay them above-average wages and provide ample job opportunities in the coming years.

But it will only have one graduate who is a single mother, with three children, who has juggled the responsibilities that come with raising a family on her own, working part-time and taking one of the most difficult courses the school has to offer.

“By the end of last year I was like a zombie,” says Rachele Reid, a 30-year-old single mother, who got by on about three hours of sleep a night last year, while earning an above-average 3 grade point average.

“I’d be studying until 1 a.m. or 2 a.m. and getting up at 5 a.m. to make lunches for the kids (aged six, nine and 10).”

**Now well into her second — and last year — of the program, which many students take three years to complete, she says it has all been worth it. “It’s very rewarding,”** said Reid, who was married at 21 and divorced two years ago. “I took a leap of faith [when she enrolled in the program]. It’s very challenging, taking the course and raising three children. But they’re my motivation.” She also worked part-time as a waitress for much of the year.

This year she says things have gotten a lot easier for her because her mother, who had been living in Ontario, offered to move in with her and help to care for the children. “It’s helped a lot with my own sanity,” she jokes.

Two years ago Reid attended Mount Royal College, where she was enrolled in an engineering transfer program the Calgary-based college offers. While she did well academically, she said she quickly realized she couldn’t afford to spend four years in university. That’s when someone suggested she take the petroleum technology course, which will allow her to enter a career that doesn’t command quite the same salary as engineering would, but will certainly allow her to earn an above-average salary, while having job security in Alberta’s booming energy industry.

She hopes to land a position with a Calgary-based oil and gas company and work in the city until her children are older, but says she would eventually enjoy the “challenge” of working in the field.

Reid is one of only eight women in the second-year class of almost 103. “I didn’t realize we were such a minority,” she said, adding that the fact she is the only single mother in the class makes her even more of a minority.

She is slated to graduate on April 28 and plans to start working soon afterward. “I have some student loans to pay off,” she says.

committed to becoming a new Centre of Excellence for the Energy Industry, with departments across many disciplines, from the geosciences, to engineering and economics working together to attract students to energy-related programs and to expand those programs.

But Alberta's universities aren't alone in responding to the shortage of skilled tradespeople and professionals.

Edmonton's NAIT (Northern Alberta Institute of Technology) has announced a number of initiatives to deal with the problem. NAIT President Dr. Sam Shaw recently announced its "Building on Demand" program, aimed at raising \$50 million to help pay for the construction of 11 training centres for apprenticeship technologies and business.

"Industry is facing a skills shortage crisis and NAIT has solutions to that problem," he said, when announcing the fundraising campaign. "We will train 160,000 skilled workers in the



NAIT continues to develop solutions for skills training, whether in technologically-advanced facilities on campus like the NAIT HP Centre for Information and Communications Technology, or on the road with the innovative NAIT In Motion mobile education units.

apprenticeship and business fields from 2010 to 2020."

NAIT has already raised \$13.5 million towards its goal of \$50 million and has been assured of future funding under the provincial government's Access to the Future Fund, which will provide seed money for innovations in post-secondary education.

NAIT is one of North America's largest institutes of technology and trains 65,000 students annually at its nine Alberta campuses. It trains 57% of Alberta's tradespeople and 19% of the national total. Shaw said post-secondary institutions have to be innovative to reach out to students, citing NAIT's mobile education units, two portable training facilities, which cost \$750,000 each, and which have been sent to the Fort McMurray area and to aboriginal communities to provide training.

NAIT also offers distance education, combining on-line instruction with practical on-site work. Its "Roaming Instructor" program is another initiative, which sees

## Skills In Progress cont'd

One of her classmates, 31-year-old Joel Appleton, is also not a typical student — most are in their early 20s and recently graduated from high school.

"I worked in the hospitality industry in Australia for 7 ½ years, before coming back to Canada," he says. "I had a good time but I wanted something with more job security."

Appleton came back to Calgary a little over two years ago, moving in with his parents and planning to study towards a bachelor of commerce degree. "A couple of friends suggested I look at petroleum engineering and then I discovered the petroleum technology course." Both SAIT and NAIT offer the program, with SAIT's course having more of an emphasis on reservoir engineering, he says. "I haven't regretted my choice," says Appleton.

**"Obviously, I'm coming into the career at a good time. It's an employees' market." So good, in fact, there are more students enrolling than spaces available, even after SAIT expanded the program to accept 132 first year students.**

Demand is so good for graduates, Appleton was able to get a summer job with oilfield services giant Halliburton Company, which has a well developed student training program. He worked in the Grande Prairie area and was able to try his hand at several jobs in the field. "You can read about it, but there's nothing like being out in the field," he said.

Appleton has excelled in his course work, maintaining a 3.7 grade point average, making him eligible for the Dean's list.

He will graduate this spring, but can understand why many students

take three years to complete the program. "They [teachers] pile it on," he says of the course load. Most days he's at school at 7 a.m. and attends classes until 6 p.m., followed by a good deal of homework.

The course isn't cheap. He estimates it costs about \$8,000 a year, including books and tuition. His parents have helped out financially and don't charge him room and board.

In addition to his course load, Appleton is president of the SAIT Petroleum Society, which has 167 members. The society holds seminars roughly every two weeks, at which people from some of the top companies in the energy business give technical presentations. That responsibility adds to his workload, but he says it has "paid off", both in terms of the information provided and the networking opportunities.

As an example of how "hot" the job market is, he said most of the companies that make presentations bring their recruiting people with them.

Appleton's job prospects are likely better than most, given his academic record, his involvement in the society and his work preference. "I know a lot of the guys (and women) want to work in downtown Calgary, but I want to be in the field," he said. "I want to go up north."

Appleton says he's been told he should expect to earn \$60,000 to \$75,000 a year to start, with that increasing steadily.

There's only one downside to all of his hard work in school and his plans to work in the north. "I don't have a social life," he says. "But I had my fun [in Australia]."

**Those taking apprenticeship training are already employed — and need to be to train as apprentices — but earnings and advancement prospects are steadily improving.** Just ask Allan Johnson.

NAIT teachers travel to distant sites to train apprentices and others.

Shaw says he believes Alberta's skills shortages can be dealt with in a number of ways, including:

- Convincing more high school students to go on to post-secondary education. Only 30% of the Alberta's students go on to post-secondary schooling and of these about 50% go on to university, with fewer going into trades education. The average age of apprentices in the province is 27, which means most have not gone directly into trades training, probably because they're not aware of the opportunities;
- Getting more women into the trades. Only about five percent of tradespeople are women;
- Getting more aboriginals into the trades, not only from Alberta but from all of Canada. In a decade one in five Albertans will be aboriginals and now one-third of aboriginals are aged under 15;
- Getting more immigrants into the

trades in Canada. The NAIT Find program, which sees NAIT (and SAIT and other institutions) working with the Edmonton-based Mennonite Centre for Newcomers, The Association of Science and Engineering Technology Professionals of Alberta (ASET) and others to help foreign-trained workers get accreditation and jobs in Alberta, is one way of doing this. About 500 foreign-trained workers have been helped through that program.

*“There aren’t enough engineers, technologists, technicians and Master of Business Administration graduates with knowledge of the energy industry. It’s a massive issue.”*

Shaw says he believes the skilled workers can be trained and found “but we'll have to work together”, alluding to partnerships with industry (NAIT, SAIT and other institutions have heavy corporate involvement), government, unions and others.

Irene Lewis, Shaw's counterpart at Calgary's SAIT, also believes solutions can be found to what she has called Canada's “human capital crisis” — and she says the solution is more funding for post-secondary institutions like SAIT.

Pointing to shortages in areas where there have traditionally been worker surpluses (for instance, journalism, where SAIT provides training) she says funding shortfalls have meant SAIT and other institutions have had to turn away thousands of student applicants. “We don't have the capacity.”

“The reality is that in the last two years we (at SAIT) have turned away 11,700 qualified applicants ... and by qualified I mean that the total number of overall applications to SAIT was much higher.

Photo courtesy The Northern Alberta Institute of Technology



Johnson, a fourth-year apprentice in the instrumentation technician program at NAIT, has just earned his journeymen's ticket, after being in the trade for five years. He also works for Halliburton.

“I have a certificate in electronics, but I thought it would enhance my skills and my position with the company if I took my apprenticeship,” says Johnston, who is 39, married and has four children.

As part of his training he returned to NAIT every year for two months, where he took training in areas ranging from advanced electronics, to sensors, to chemical processing. “It's a very challenging course, but if you dig in and work hard you'll get through,” he says. There were about 15 students in each of his NAIT courses. Most of the students are in their late 20s and 30s, with families.

Johnston, who has now returned to his job as an electronics instrument supervisor near Grande Prairie, says instrumentation technicians can earn \$60,000 a year and up and work in dozens of different areas, from refineries, to enhanced oil recovery facilities, to natural gas processing plants. “It's one of those jobs where things are always changing,” he says. “But it's not a cash cow. You have to work for your money.” He says it appears the demand for apprentices in the energy industry will remain “very strong” for several years.

Scott Jensen is another apprentice taking training at NAIT, although his path to his chosen field was anything but as straight as

the pipes he fits, in his job as a steamfitter-pipefitter.

Jensen, 26, who is in the third year of his apprenticeship, has been more partial to ice than to pipes.

“I was playing junior hockey in B.C. and my former girlfriend suggested I look at the trade, even though I didn't know what a pipefitter was,” he says. His ex-girlfriend is now an apprentice in the trade as well, one of the few women in the trades.

“It's good money,” says Jensen. “If you work 40 hours a week and some overtime you can make \$80,000 and more a year.” He says he knows of some pipefitters with experience who make \$150,000 a year.

Jensen took a twisted path to get into his chosen career. He took liberal arts courses at a private college in New York State, thanks to a hockey scholarship. When that ended, after five semesters, he returned to Alberta.

Originally from Fort McMurray, where his father was a worker at Syncrude Canada Ltd., he says he has no plans to return to the oilsands city, even though there will be lots of work there for pipefitters.

“I'd like to find a small acreage outside of Edmonton and work in the Edmonton area,” he said. “From what I hear there will be lots of work in the immediate area.” He studies at NAIT for seven weeks every fall and will earn his journeymen's ticket next year.

**“I don't appreciate it [the classroom work] until I get back into the field, but it's useful,” he said. “I spend six hours a day in class and you have to work to pass.”**

While he's not certain he'll stay in the trade his entire working life — he'd like to see if he can make a living coaching hockey — Jensen says he plans to work as a pipefitter for at least the next 10 years.

By Jim Bentein

These are staggering numbers, and that's just for SAIT. U of C, Mount Royal [College] Bow Valley [College] and the Alberta College of Art and Design have numbers that are equally staggering."

***SAIT, like NAIT, the U of C and other institutions, is attempting to respond to the demand for trained people, particularly for the energy industry. It recently created the SAIT Energy Training and Technology Institute, pledging to work closely with the industry to meet worker needs.***

Lewis says it appears very few of the qualified applicants reflect multiple applications to other institutions, since most reapplied to SAIT.

"We can build the programs, but we're playing catch-up," she said. "Our infrastructure has been let go. We have many 50-year-old buildings." Lewis cites the new "Campus Calgary" initiative as one program Calgary area institutions have launched, with all of them working together to create 19,000 new spaces for students by the end of the decade. SAIT had almost 12,000 full-time equivalent student spaces in the most recent year.

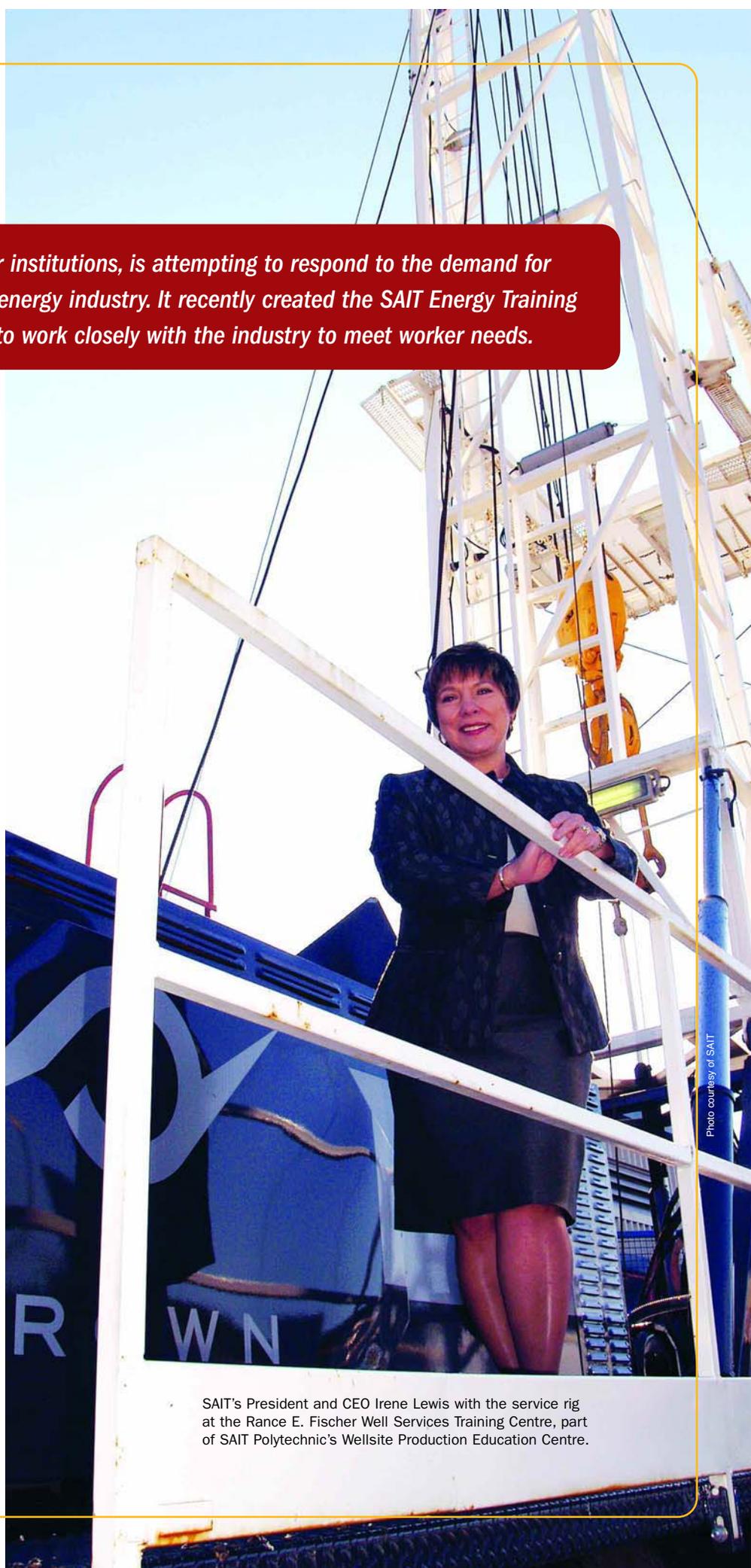
But she says SAIT and the other institutions need "more sustainable" funding, alluding to past funding cutbacks from the provincial government.

SAIT, the second oldest post-secondary institution in Alberta (U of A is the oldest), needs hundreds of millions of dollars for new facilities and programs, she says — and she's optimistic that money will be forthcoming.

Keith Pedersen, SAIT's Chief Financial Officer, says the legacy of past cutbacks will be difficult to overcome, even given Alberta's overflowing treasury.

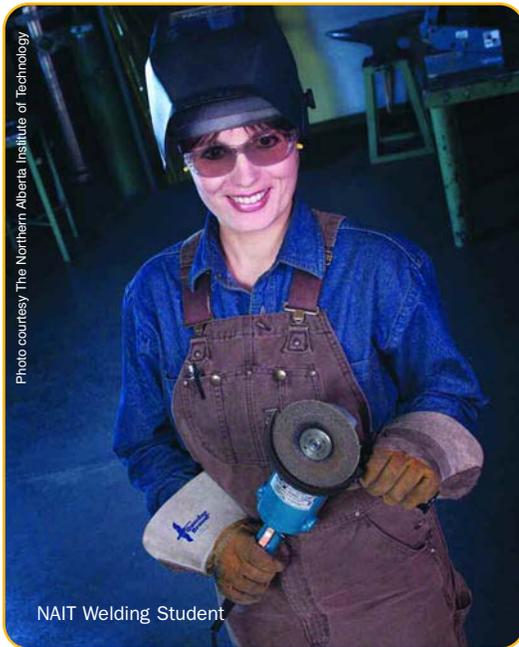
From 1993 to 1997, for instance, annual funding from the province to SAIT was cut from \$68 million a year to \$54 million (21%) and was only increased by less than six percent when finally restored.

The provincial government has committed to add a total of 30,000 post-secondary "seats" by 2020, up from 140,000 now province-wide. There would be funding for another 15,000 between 2009 and 2012, which Pedersen says will only allow SAIT to "scratch the surface." But he said the special 'Access Fund', which provides more flexible funding, could also be tapped. SAIT gets \$100 million a year in operating grants from the province now, while NAIT gets \$120 million, a sore point at SAIT (and at other Calgary-based



SAIT's President and CEO Irene Lewis with the service rig at the Rance E. Fischer Well Services Training Centre, part of SAIT Polytechnic's Wellsite Production Education Centre.

Photo courtesy of SAIT



NAIT Welding Student



NAIT Petroleum Engineering Technology Student

institutions, which have lagged behind Edmonton institutions in funding). “With \$20 million more in funding we could have 2,000 more students here,” he says.

Lewis says SAIT, like NAIT, the U of C and other institutions, is attempting to respond to the demand for trained people, particularly for the energy industry. It recently created the SAIT Energy Training and Technology Institute, pledging to work closely with the industry to meet worker needs. As an outgrowth of this effort, it recently signed a deal with Grande Prairie Regional College, located in the booming northwestern part of Alberta, to collaborate on training. It has also pledged a campus-wide effort to ramp up training for other skilled workers.

Professional organizations are doing what they can to attract young people to their fields as well.

For instance, ASET is involved with NAIT and other post-secondary institutions in helping to get foreign-trained professionals get certified by ASET.

“The problem with bringing in foreign trained workers is they have to meet the same standards (as Canadian-trained technologists and technicians) and we can help determine if they do,” says Jay Fisher, communications director for ASET.

Many of the hundreds it has helped certify over the last decade have engineering degrees from elsewhere and have been unable to obtain certification from the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA), which he called “very restrictive” in granting engineering certification.

Technicians and technologists need to have at least two to three years of training and in Alberta are required to work under the supervision of an engineer, although ASET is lobbying to have that changed.

ASET has 16,500 members in Alberta, with an estimated 20,000 additional potential members, many of whom have not joined because job prospects are so good they don’t need the job-finding and networking and skills upgrading help of ASET. There are 46,000 members of similar organizations Canada-wide, with Ontario having 20,000 and Alberta the second most. He estimates 3,000 technicians

It also works with Edmonton’s Grant MacEwan College, which offers a course in technical English for immigrant professionals who haven’t mastered the language.

It gets about 4,000 applications for accreditation each year, about one third from outside Alberta or from outside Canada.

Although he says there are some engineers who are unemployed or semi-employed (particularly those with information technology training) energy-related trained engineers have their pick of jobs. “It’s very tight.”

Nima Dorjee, director of the Engineering Internship Program at the U of C (the pro-

***“Campus Calgary” initiative is one program Calgary area institutions have launched, with all of them working together to create 19,000 new spaces for students by the end of the decade.***

and technologists graduate each year in Alberta, which has the highest percentage of both in the country.

Len Shrimpton, Internal Affairs Director at APEGGA, says his organization, which has 43,000 members (engineers must be members), is ramping up its efforts to give accreditation to engineers from offshore.

He said APEGGA and other provincial engineering bodies (there are 160,000 licensed engineers in Canada) are working with the federal government to speed up the accreditation process.

“Typically, 60% of the foreign graduates are licensed without having to take any examinations in Alberta,” he said.

gram gives engineering students an opportunity to work in the field for one year before graduating), said the engineering faculty has a plan to increase the number of students in its undergraduate programs — now at 2,400 overall — by up to 1,000 a year for the next few years.

The University of Alberta, which has 3,200 undergraduate engineering students, is looking at a similar expansion.

Yes, Canada’s energy industry is facing a huge labour shortage — but with the combined efforts of post-secondary institutions, industry associations, governments and the industry at-large, work is underway to find solutions. **By Jim Bentein**