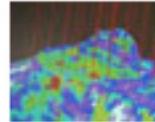




Line Rider

Global Employee eMagazine

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April 2009



Realizing Possibilities



Courses for Causes



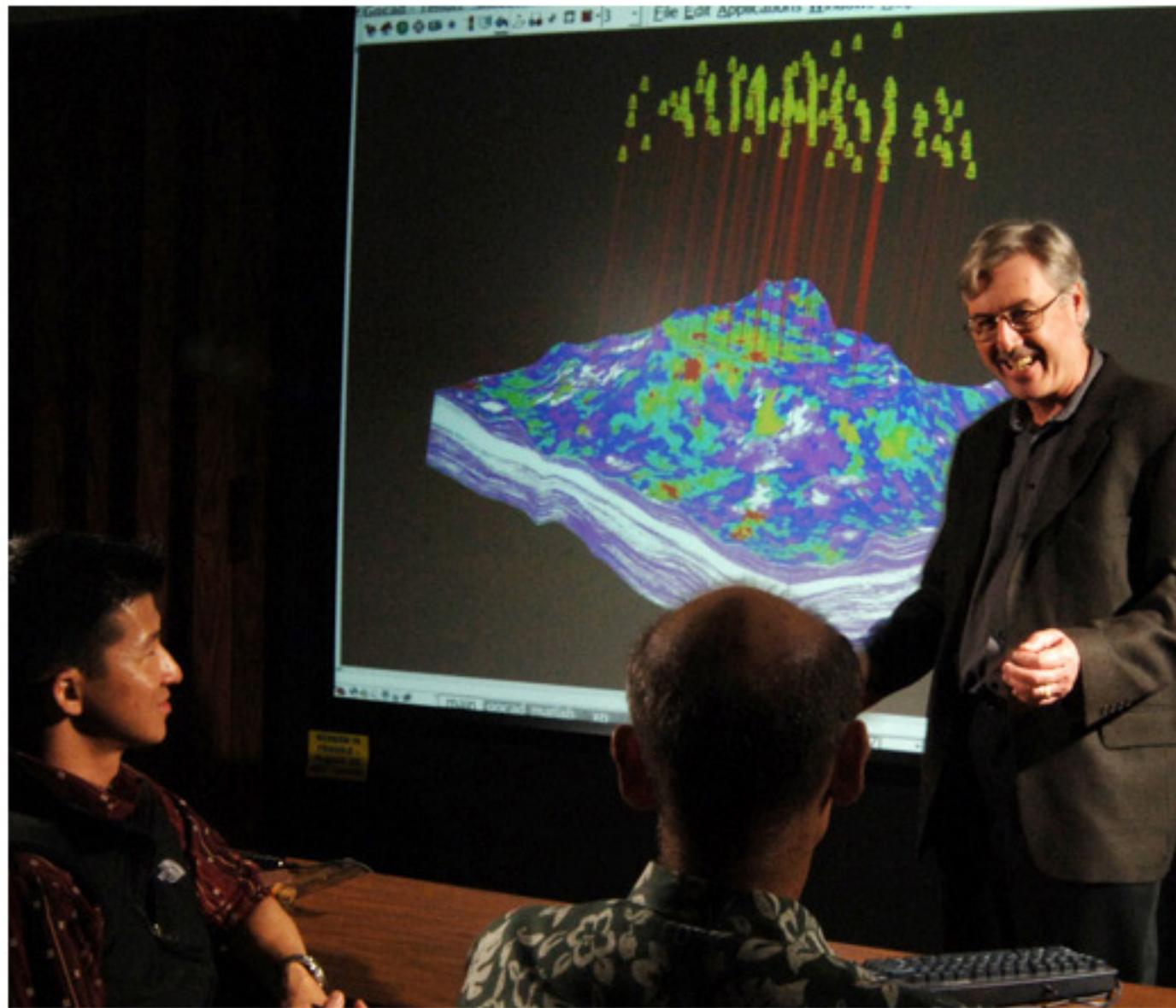
A Cleaner Tomorrow



Test Your Knowledge Quiz



Voices: Your Community



Realizing the Earth's Possibilities

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Realizing the Earth's Possibilities

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It was 15 years ago, but Mike Koch still vividly recalls when he and his colleagues miscalculated the effects of a new water-injection project designed to boost production in a big Nigeria oil reservoir.

"Nothing happened," says Koch, a veteran earth scientist now heading the Strategy unit of Chevron's Business Development group. "Then the water showed up about a mile away. Instead of sweeping oil to the planned wells, it had followed a prehistoric river channel that we had never noticed before."

Such humbling lessons of trial and error are not uncommon in Chevron's diverse reservoir management (RM) community. Numbering about 3,000 engineers, geologists, geophysicists, info-tech wizards and others, they shepherd the company's 150 major reservoirs and hundreds of smaller ones through their productive lives.

Consider the challenges. Every reservoir is an enormous, unique, totally hidden rock puzzle requiring different types of strategies and wells. Some must be cracked open. Others roar like jet engines.

Strip away the surrounding earth and you'd see a mind-boggling range of gargantuan geologic structures. Kazakhstan's Tengiz reservoir resembles a limestone mountain. Greater Gorgon, a series of stacked gas reservoirs that Chevron plans to develop offshore Western Australia, is four times the

length of Manhattan. The Rangely oil field in Colorado, U.S., is a 50 square-mile (129 sq-km) stack of sandstone pancakes. And the company's Thailand natural gas production doesn't come from a single reservoir but from thousands of isolated pockets.

Four years ago, Chairman Dave O'Reilly issued a challenge: Become the best in RM. Back then, Mike Allison, the company's newly established general manager of RM, saw a universe of world-class talent and "pockets of excellence" in need of a global framework, new standards, less paperwork, improved workforce management, faster forecasting and a better technology focus. Today, he oversees and monitors a broad slate of RM initiatives and teams addressing that full range of opportunities and more.

Among the latest: Technology Planning Workshops to look 10 to 20 years ahead and help guide research dollars to what Allison calls "game changing" tools and opportunities. Early results: stronger emphasis on unlocking "unconventional" reservoirs, more focus on waterflooding and reservoir "surveillance," and greater attention to reservoirs feeding our liquefied natural gas business.

"The participants think as business strategists first and technologists second," says workshop creator and facilitator Mike Chuchmuch, a change management specialist with Chevron's Project Resources Co. "Teams work to determine not just the transformational goals but how to leverage current strengths to achieve them."

One big reason to seek top RM performance is to define Chevron's reservoirs clearly enough to officially log future oil and gas output as "proved," says Tim Magner, general manager of Reservoir and Production Engineering at Chevron Energy Technology Co. (ETC). "In this sense, RM literally creates our

assets.”

Most reservoirs are produced for decades, so their management “life cycle” starts with appraisal, then development, then production in “primary,” “secondary” and “tertiary”

phases (see life cycle photo gallery). But plans change with reservoir behavior, experience and new information or tools – and even today, RM remains far from an exact science, says ETC Vice President Ganesh Thakur, chair of the company’s RM Forum. “We know much more about a reservoir qualitatively than we do quantitatively. And we constantly strive to better understand connectivity – how and why fluids move from one point to the next.”

The struggles are well worth the effort. Get it wrong, and billions of barrels stay stuck in the earth. Get it right, and a lot of those barrels go straight to the bottom line. Historically, most oil fields have only given up 30 percent of their reserves. Long-term RM efforts like Rangely, where Chevron injects carbon dioxide to enhance recovery, can exceed 50 percent. Extraordinary situations like Chevron’s 100-year-old Kern River Field project in California can get 70 percent or more, thanks to our industry-leading, steam-injection capability. Just getting another 1 percent from a multibillion-barrel portfolio of resources like Chevron’s could mean billions of dollars in new revenue, says Thakur.

“RM is the premier capability in the industry,” says Magner. “I view it as the core of our upstream business.” Chevron’s efforts to date have earned it a solid reputation, he notes. “In every partnership around the world, when we go into a room with competitors and RM professionals, we get respect.”

Not surprising, RM is fundamental to Upstream’s growth strategy – particularly in seeking new partnerships and keeping existing ones strong. Last year, notes Koch, Chevron’s RM talents in heavy-oil development helped win a 30-year partnership extension with the Kingdom of Saudi Arabia to continue oil development in the Partitioned Neutral Zone between Saudi Arabia and Kuwait. And our “sour gas” RM expertise won Chevron a new venture managing a difficult gas field in China. “If these were simple reservoirs, these countries wouldn’t need our expertise,” Koch says.

Ultimately, RM is about building a competitive advantage on knowledge gained across decades. ETC’s Jerry Hale describes the 1970s as RM’s “Age of Discovery.” The 80s were RM’s “Age of Certainty.” As the community matured to appreciate what it truly didn’t know, the ‘90s became the “Age of Uncertainty,” says Hale, head of the company’s Reservoir Simulation consulting team and leader of the Next Generation Reservoir Characterization and Modeling Workflow Project.

And the present decade? Hale says we’ve entered a new chapter with extraordinary potential if we rise to it. Welcome to RM’s “Age of Possibilities.”

– End –



Good Causes Need Great Leaders

The Chevron Management Institute is making nonprofits and their top executives more effective.

Thriving communities are vital to Chevron's business. For decades, we've funded hundreds of good causes around the globe. These days, to ensure that communities can sustain their own improvements to education, health and their economy, we do more than write checks. Chevron Management Institute (CMI) is a good example.

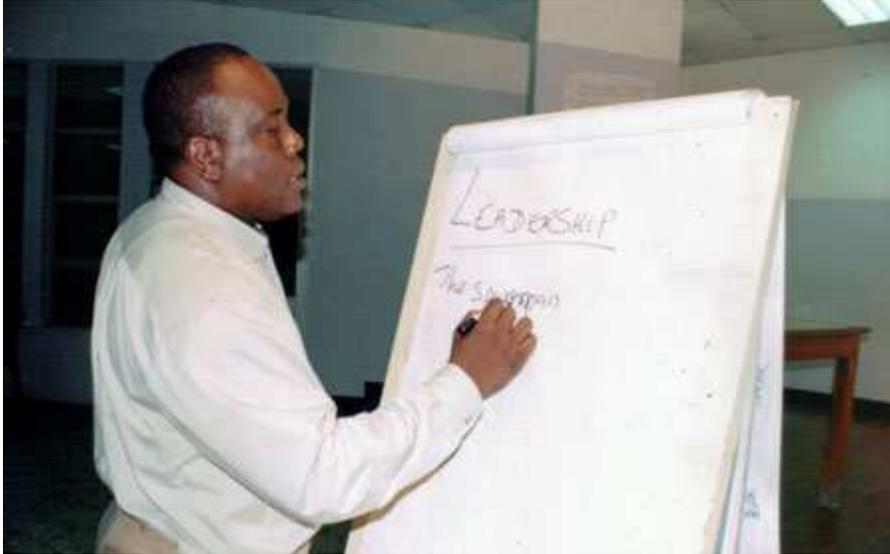


New Skills for Leaders

Since 1995, the CMI has reached out to nongovernmental organizations (NGOs) and invited their leaders to participate in a unique, interactive learning experience designed to develop leadership skills. This week-long, expenses-paid training program, conducted by Chevron, draws participants from around the world and helps them develop additional expertise to build and sustain high-performance organizations that can better serve their communities.

At CMI, participants take part in highly focused learning modules and work with coaches to develop a personal action plan. Already leaders in their respective organizations, participants have the opportunity to develop their leadership skills and leave with the confidence necessary to stretch their personal and organizational capabilities.

"Just as organizational capacity is important to Chevron, we believe it is vital to help extend the capacity of our nonprofit partners who make such important contributions to the strength of our communities," says Dave Feldman, senior specialist, Global Partnerships and Programs.



'Building Bridges' in Niger Delta

Joel Bisina, a 2006 CMI graduate, is the founder and regional director of Niger Delta Professionals for Development, which focuses on conflict mediation, youth empowerment, gender-rights issues and good governance in the Niger Delta. Joel's relationship with Chevron began in 2005 when we partnered with his organization to sponsor the first library and public computers in one of the most remote areas of the Niger Delta.

"My work emphasizes building bridges, and in the CMI workshops, I learned very specific process skills to help me do that," says Bisina. "In particular, I learned that I need to be less judgmental and critical of those who work with me and to offer sincere praise for a job well done. When people are appreciated for good work, it inspires them to do more, while criticism demotivates. That's a powerful learning I took home with me."



Revitalizing the U.S. Gulf Coast

Raymond Hebert is executive director of the Community Foundation of Acadiana, which works to improve the quality of life in south central Louisiana. In 2005, after hurricanes Katrina and Rita devastated the region, Chevron began partnering with the Acadiana foundation, helping to revitalize public education in the region through Chevron's Energy for Learning program.

"CMI was arguably one of the best weeks of my life," says Hebert. "It was almost a spiritual

experience, and I don't use that word lightly. For me, the big insight was that leadership isn't just about getting things done. It's how you conduct yourself in your dealing with others and the values you exemplify. My experience at CMI really opened my eyes."



Promoting Education around the World

Naoko Dunnigan, a 2008 CMI graduate, is director of International Scholarship and Training Programs for the Institute of International Education (IIE) West Coast Center. The IIE administers more than 200 international scholarship and training programs, including Chevron's International Scholarship Program for children of company employees (photo shows students in this program).

"The conference was a great gift," says Dunnigan. "For a person in the nonprofit world, it's rare to have such a world-class training opportunity. The exercises and individual coaching helped me focus on what kind of leader I want to be and the values that are important to me. When I got back, I sat with my staff and shared the experience because it's important that they also have the opportunity to develop their leadership potential."



Recovery Across Borders

Daniel J. O'Neil, a 2006 CMI graduate, is the Dominican Republic country director for the Pan American Development Foundation and works to improve economic conditions and mitigate conflict in the Haiti-Dominican Republic border region. A long-time supporter of the Pan American foundation, Chevron sponsors a board member and works closely with the group through the Disaster Emergency

Response Program, which helps communities rebuild after natural disasters.

"CMI made me a better leader," says O'Neil. "I regularly use CMI evaluation and team-building exercises with my staff and volunteers. One thing that really came across for me is how important it is to actually listen.

"As part of our participation in the CMI program, we were each given a globe monument for our desks. I hold it in my hands whenever I have an important decision to make. It helps me reconnect with my CMI experience and draw on what I learned there."

O'Neil is pictured meeting community representatives in the Haitian border town of Belladere.



Empowering the African-American Community

Lynn Law, a 2007 CMI graduate, is the vice president of Corporate Development at the National Urban League, America's largest community-based movement devoted to helping African Americans enter the economic and social mainstream. Chevron supports the League's annual conference and, in 2001, helped to create a customized leadership training institute for Urban League affiliate presidents and senior staff.

"CMI was a real eye-opener for me," says Law, on the left in the picture of her 2007 class. "The individual coaching I received following my 360-degree evaluation is helping me improve my leadership skills. Thanks to CMI, I learned the importance of building trust with my staff and colleagues. I particularly value the opportunity it gave me to network with other NGOs and exchange best practices."



Bringing Science Education to a Wider Public

Darren King, a 2008 CMI graduate, is manager of Fund Development for TELUS World of Science, Calgary, Canada. The TELUS science center works to engage learners of all ages in the arts and sciences, exciting their interest in learning and enabling them to make more informed decisions in their daily lives. For the past 23 years, the organization has been a partner in the Chevron Science Olympics, an annual science competition for junior and senior high school students (pictured here and on the homepage).

"CMI was a tremendous learning experience," says King. "It gave me the space and encouragement to reflect on how I do my job and the tools to take my work to the next level. I found the discussions about shared values and how to enlist support within the organization particularly valuable.

"I especially appreciate the willingness of the Chevron staff members to share insights with us about the work they do. Chevron is to be congratulated for its commitment to improving communities by training nonprofit leaders around the world."



Working for a Cleaner Tomorrow

Because every operation has a finite life, Chevron's environmental remediation team manages yesterday's liabilities while fostering a "new legacy."

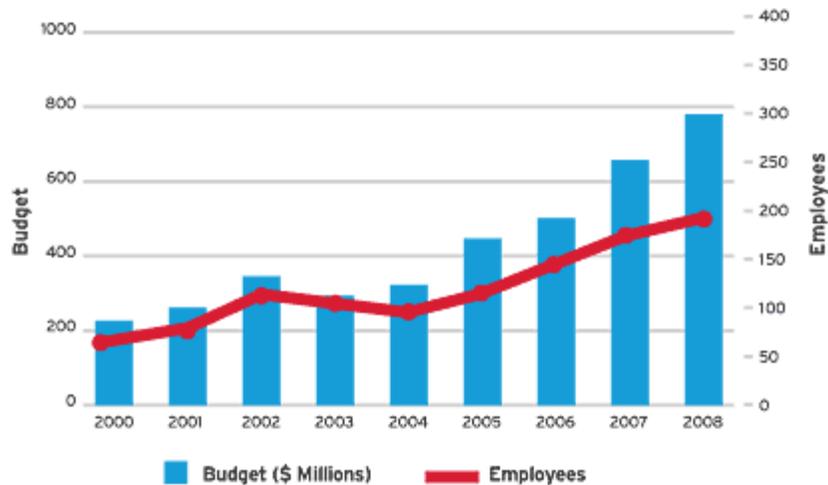
Where past industrial development scarred a Texas estuary, today endangered Mottled Ducks nest in a marsh restored by Chevron at a cost of \$12 million.



Winds of Change

Where tons of tar once contaminated industrial land in Pennsylvania, a wetland built by Chevron now shelters small mammals in "critter condos." At a Wyoming site once occupied by an oil refinery, windmills installed by Chevron will soon be churning out clean electricity.

Meet Chevron Environmental Management Company (CEMC), a unique organization responsible for cleaning up and managing the company's legacy "environmental liabilities" – waste storage sites; depleted, idled or contaminated oil fields; refineries; service stations and other facilities.



Here Until the Work is Done

Founded 10 years ago, CEMC was supposed to work itself out of business in five years, says President Janeen Judah. Instead, demand for CEMC's services grew, and it took on new environmental liabilities from Unocal and Texaco. Staff has nearly doubled in recent years to about 200, and in 2008, CEMC moved to larger headquarters in San Ramon. It handled almost \$800 million in environmental remediation and facility abandonment work last year and currently plans about the same in 2009, much of it in situations potentially risky to Chevron's reputation if things aren't done right.



Every Site Has a Community

"Don't let the small footprint of a service station fool you," says Bob Wilkenfeld, manager of CEMC's Marketing Business Unit (MBU), which oversees 3,000-plus cleanup sites in 53 countries. "A cleanup by itself might not be a big project, but in these urban settings, most every project has issues with governments, neighbors, landowners, businesses and schools."

Indeed, the MBU recently scrambled to provide drinking water for a neighborhood affected by a Caltex station fuel leak in Malaysia, winning public trust for the cleanup period ahead. It was one of many situations where CEMC must model Chevron Way values each day.



Each a Unique Challenge

Set up to focus on U.S. work, CEMC today is managing more international cleanups and advising on others. This trend will continue, and the MBU is already internationalized. But regardless of location, much of the work will be entangled with competitors and partners, legal affiliates or subsidiaries, some long gone and dating back 100 years.

CEMC's Superfund and Specialty Portfolios (SFSP) unit manages about 300 U.S. cleanups of all sizes under often contentious, multi-party agreements. Example: a former landfill in the Los Angeles area (pictured), where a cleanup shared by hundreds of companies and some cities could take until 2064 and cost \$1.5 billion. Adds SFSP General Manager Bob John: "It's challenging because each situation – mines, pipelines, or an old tank farm site covered with houses – is so different from the others."



The Way Nature Intended

CEMC's workload involves significant excavations of contaminated soil; earthen pits created in the past under then-accepted work practices (and in compliance with the law at that time); leaks from underground tanks; hundreds of idled onshore and offshore oil facilities; and more. And after a decade of growth and skill building, the organization is taking pride in its critical role.

Speaking at the 2008 Operational Excellence Forum, Judah announced a new strategic plan to help Chevron create a "new environmental legacy."



'We Own Up, We Don't Run'

"Our industry's past operations leave behind a footprint that isn't always pretty," says Judah (pictured), who shared photos of CEMC sites during her talk. "But we're dealing with these things in a Chevron Way manner, using sound science and working with government to protect people and the environment, and finding the best solutions. We own up, we don't run, and we try to do the right thing. We don't shy away from our responsibilities."

CEMC has years and tons of cleanup work ahead, but Judah has high confidence in her team: "You can talk about being 'green' and taking responsibility, but we're out there doing it every day," she says. "We're going to have a lot more good stories to tell."

CEMC's strategic plan also calls for proactively seeking a full range of "end-of-asset-life" solutions matched to the needs of communities. This includes traditional site redevelopment plus innovative, beneficial re-uses like wildlife habitat or renewable energy that "give back to society in an environmentally responsible way," says Katie Hower, who heads CEMC's Refining Business Unit (RBU).



New Energy from Old Sites

It also means exploring safe re-uses of certain kinds of sites where past contamination can be reduced and contained, but not completely eliminated. CEMC projects at Richmond, Calif., for

example, will provide land for new uses – including proposed solar power or other renewables – while also creating a safe, confined storage area for wastes that can't be removed. Pictured: EMC workers deploy a rolled-out mat to sample dredged soil at the refinery.

In recent years, Chevron businesses have shifted more of their remediation work to CEMC, which has evolved into a unique organization of professional project managers and seasoned support staff.

“In the past, Upstream organizations did most of their own remediation and decommissioning, but this is not their core business, which is producing oil and gas,” says John Ladd, general manager of CEMC's Upstream Business Unit (UBU), which has seen its workload grow dramatically from the early days.



Know Our Footprint at the Front End

In 2008, the UBU plugged 800 old wells and removed 55 offshore structures for Upstream. “We’re set up to steadily get better at what we do, so partnering with us is a great opportunity for Chevron’s various businesses.”

CEMC's new strategic plan focuses first on “World Class Execution.” This means superior Operational Excellence, particularly safety. Also it means excelling in project and cost management using proven Chevron and CEMC processes. With billions of dollars in forecasted cleanup and facility dismantling in the years ahead, cost reduction can protect hundreds of millions in Chevron profits. But the plan aims higher still.

“We want to be a life-cycle advisor to Chevron’s businesses,” says RBU’s Hower, whose group oversees some of the more complex U.S. cleanup efforts, particularly former refineries. “We don’t want to wait until the end of an operation to look at environmental liabilities. We say, let’s understand our footprint on the front end and try to prevent future liabilities.”