The Inauguration of
The Ahmad Al-Jaber
Oil & Gas Exhibition
The Kuwaiti Digest is a quarterly magazine published by the Kuwait Oil Company (K.S.C.) since 1973.

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The Inauguration of The Ahmad Al-Jaber Oil & Gas Exhibition

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Letter from the Editor

By the time this issue of *The Kuwaiti Digest* reaches readers, we will have all settled comfortably into the crisp and refreshing cold of another Kuwaiti winter. And while we look ahead and plan to make 2017 one of the Company’s most productive years on record, we should also look back on 2016 and be proud of our many accomplishments. Over the past year, KOC has made enormous strides in terms of working toward the successful achievement of our 2030 Strategy. From exciting new developments at our heavy oil fields in North Kuwait to the implementation of groundbreaking solar projects that will assist our sustainability objectives, KOC is on track to meeting all our future goals and targets.

I encourage all employees to spend some time reading about the Company’s recent achievements in the pages that follow. Our lead story provides an exposé on the recently constructed Ahmad Al-Jaber Oil & Gas Exhibition. This new facility was very carefully constructed to publically showcase the Company to the world, and it is sure to leave a lasting impression on all who walk through its doors. Our other main stories include coverage of KOC’s participation at the World Heavy Oil Congress in Canada and the SPE International Heavy Oil Conference & Exhibition, which was held here in Kuwait.

When examining the pages that follow, readers will notice that a significant portion of the magazine has been dedicated to some of the recent accomplishments registered by the Company’s female employees. In this regard, the Professional Women Network Summit was held recently, which has done much in the way of promoting diversity in the workplace while encouraging young female professionals to network and grow their careers. In addition, one of our Company’s senior leaders and role model to all, DCEO (NK) Badria Abdul Raheem, was recently honored at ADIPEC as Woman of the Year. Her story, in addition to two other articles that highlight female professionals at KOC, are featured prominently in this issue.

In addition to the aforementioned articles, this issue of *The Kuwaiti Digest* highlights a number of important Company projects, such as the Sidrah 500 Project, which aims to introduce solar energy into the Company’s operations. This very important initiative will allow KOC to create greater sustainability measures that will help protect our environment and free up oil stocks for export, which helps our nation’s economy.

As we bring in the new year, I would like to encourage all KOC employees to renew their commitment to our Company’s strategies and objectives. In this regard, I would like to implore employees throughout every Directorate to find new ways to improve their workflows and create efficiency while steadfastly adhering to KOC’s high standards of quality. From engineers in the field to analysts in the office, it is up to each and every one of us to carry our Company proudly into the future. In every sense, the successful realization of KOC’s 2030 Strategy depends on every employee fulfilling his or her duties for the betterment of our Company and the State of Kuwait. May Allah Almighty assist us in our efforts.
Kuwait’s Deputy Prime Minister, Minister of Finance and former Acting Minister of Oil Anas Al-Saleh, as well KPC CEO Nizar Al-Adsani, KOC CEO Jamal Jaafar, and a high level delegation of senior officials from Kuwait’s oil industry were on hand recently to celebrate the inauguration of KOC’s Ahmad Al-Jaber Oil & Gas Exhibition.

The new exhibition will replace the KOC Display Center, which has served the Company for more than 50 years. Established in 1956, the KOC Display Center was built in order to share the story of the discovery and production of oil in Kuwait with the public. Heads of state and international diplomats, businessmen, students and the public have been guests to the Display Center over the years.

The new Ahmad Al-Jaber Oil & Gas Exhibition, named after Kuwait’s 10th ruler, H.H. the late Sheikh Ahmad Al-Jaber Al-Sabah, will proudly continue the legacy of KOC’s Display Center. Under Sheikh Ahmad Al-Jaber’s rule, many notable achievements in Kuwait’s history occurred, particularly the most important of all: The discovery and export of Kuwaiti crude oil.

During the event, Kuwait’s Deputy Prime Minister Anas Al-Saleh expressed his honor in being able to take part in such a monumental occasion for KOC and the State of Kuwait. In a statement he made to the press, Al-Saleh said that the new exhibition, in addition to being a center of education and
inspiration for Kuwait’s next generation of leaders, will serve as a historic landmark for the country.

Before the official inauguration and ceremonial ribbon cutting of the exhibition, KOC CEO Jamal Jaafar delivered the event’s official opening remarks to the group of senior officials from Kuwait’s oil industry. In his address, the CEO said that the construction of the Ahmad Al-Jaber Oil & Gas Exhibition was the result of integrated cooperation and dedication by KOC employees and its partners.

“The Ahmad Al-Jaber Oil & Gas Exhibition will serve as an important platform for Kuwait to share knowledge related to our national industry,” the CEO said. He added that the exhibition also served the purpose of enhancing KOC’s role in contributing to the society it operates in. In this regard, he said, the exhibition will help inspire young Kuwaiti students to become the country’s next generation of qualified engineers, geologists, and industry specialists.

Following the KOC CEO’s speech, the Ahmad Al-Jaber Oil & Gas Exhibition was officially inaugurated and a private tour of the new facility was provided to the guests, where KOC employees were on hand to describe each section of the new exhibition.

A Journey

The idea behind the building is to enable visitors to go on a journey through the world of oil and gas, starting with the main building and through the different halls until they reach the external garden. This will familiarize visitors with the world of oil and gas in an hour or two, according to the tour program they choose.

The journey will cover important information related to the oil industry, the geophysical theories regarding oil and gas, and the date of the discovery of oil and gas in the State of Kuwait. In the basement, visitors can take the lift, which can accommodate 26 people, to the 16-meter watch tower. On the way up, visitors can view a panorama of oil installations throughout Ahmadi and the export ports and refineries. On their way down, visitors can learn about the refining and export centers and gain useful information about oil products, where they go and what they are used for.

Deputy Prime Minister and Minister of Finance Anas Al-Saleh inaugurated the exhibition alongside KPC CEO Nizar Al-Adsani and KOC CEO Jamal Jaafar.
in order to get a comprehensive idea about this vital industry.

A key aim of the exhibition is to encourage young people to explore careers in the oil industry. *Meet the Experts*, an interactive spine of multimedia exhibits threaded throughout the exhibition, enables visitors to personalize their access to detailed and industry-relevant content. The experts include a Geoscientist, Health and Safety Manager, Control Center Supervisor, Tanker Pilot and Firefighter, each of whom explains the nature of their job and provides young visitors with a series of challenges that test whether they have what it takes to work in the oil industry. *The Meet the Experts* trail culminates in the *Your Oil - Your Future* gallery, where young visitors identify their potential future role in the industry.

**Project Description**

The design of the building is based on the shell of the ammonite, an extinct marine animal that lived some 120 million years ago. The ammonite and other marine animals from its era are thought by scientists to have contributed to the formation of today’s oil reserves. The ammonite serves as both the symbolic and aesthetic inspiration of the building, with rooms distributed on the periphery of the building and surrounding central interior spaces, where the crust of ammonite forms a horizontal cap.

The project consists of a basement, a ground floor and first floor. The ground floor, with a projected space of 5,126 meters, will be comprised of the following:

- Main entrance, security and ticketing,
- Management offices.
• A display area of 420 square meters which will be used for exhibitions.
• Multi-purpose conference room.
• A conference hall that can accommodate up to 200 people, equipped with the latest audio-visual media, and a room for holding meetings and seminars for up to 30 people.
• A 200-seat theater equipped with a display screen.
• A library designated for oil research to serve oil sector employees and university students.
• Prayer rooms for males and females.
• A media center that can be used to hold press conferences and media activities.
• A special hall for VIP meetings and banquets with a private entrance.
• A café and gift shop.

In addition to the ground floor, the first floor and basement will be comprised of various offices, meeting rooms, exhibition halls, archives, and displays that provide visitors with information regarding the history of oil.

A Vision Realized
On the sidelines of the event, The Kuwaiti Digest spoke to former PR&I Group Manager Abdul Khaliq Al-Ali, who was instrumental in the early stages of transforming the idea of the
new exhibition from concept to reality.

“When we sat down to identify the objectives of the Ahmad Al-Jaber Oil & Gas Exhibition, we considered who would be visiting the new facility in the future. Guests to Kuwait, researchers and students figured high on that list, which gave us the idea to build a national facility that was informative, educational and entertaining through the utilization of the latest technologies,” Al-Ali said.

“The Ahmad Al-Jaber Oil & Gas Exhibition will be one which can accommodate a broad spectrum of visitors, ranging from heads of state and VIPs to students and visitors from around the world, with the common denominator being that everyone, regardless of age or status, can learn about Kuwait’s story of oil. Finally, the long-awaited dream of a new KOC oil and gas exhibition that is open to the public has come true.”

The journey through the Ahmad Al-Jaber Oil & Gas Exhibition will cover important information related to the oil industry, the geophysical theories regarding oil and gas, and the date of the discovery of oil and gas in the State of Kuwait.
The SPE International Heavy Oil Conference & Exhibition took place recently at the Al-Dorra Ballroom of the Mangaf Hilton. The event, which featured the participation of hundreds of attendees from regional and international companies related to the oil and gas industry, was organized by the Society of Petroleum Engineers and held under the patronage of His Excellency Anas Al-Saleh, Deputy Prime Minister, Minister of Finance, and former Acting Minister of Oil.

Badria Abdul Raheem, Conference Chairperson and KOC DCEO (NK), delivered the conference’s opening remarks. In her address to the audience, Abdul Raheem maintained that the focus of the SPE International Heavy Oil Conference and Exhibition would touch on the conference’s theme: “Future of Heavy Oil: Challenges and Opportunities.” This topic, she said, represented a very important issue for not only Kuwait, but many other International Oil Companies (IOCs) that included heavy oil in their long-term goals as well.

“The conference is aimed at bringing together top industry specialists to exchange experiences and
ideas on significant challenges, opportunities and innovation in heavy oil exploration, development, production, processing, and marketing,” she said. The KOC North Kuwait DCEO went on to say that the conference would do much in the way of helping attendees understand the key drivers and risks involved in developing heavy oil fields.

Badria Abdul Raheem then concluded her opening statement by thanking everyone in the audience for attending, adding that it was her hope that everyone present would benefit greatly from the contributions and exchange of expertise that was set to take place. She then welcomed KOC CEO Jamal Jaafar to the stage to deliver his opening remarks.

“Heavy oil offers a large potential resource base for meeting the world’s long-term energy needs,” the KOC CEO said. “It is very clear that the long-term energy demand will continue to surge in the years ahead. Based on the latest energy outlooks, energy demand is anticipated to grow by more than 40% between now and 2035. While there is still plenty of oil left in the ground, easy oil supplies are declining rapidly, forcing the global petroleum industry to turn to unconventional oil deposits that are costlier to recover.”

He went on to say that despite being more expensive to recover, especially when considering the current low price environment for oil, heavy oil would increasingly play an instrumental role in supplying the needs of the global oil market.

“Several GCC countries such as Kuwait, Oman and Bahrain are exploring how to assess and unlock the huge and largely unexploited reservoirs of heavy crude. Despite a significant drop in oil prices since mid-2014, and the huge uncertainty faced by the global oil and gas industry in this extended low oil price environment, Kuwait Petroleum Corporation has pressed ahead with its energy-related developmental spending, thus emerging as the region’s biggest market for oil and gas projects, with a total capital expenditure budget of more than KD 34 billion over the next five years.

An important portion of these investments is related to heavy oil development,” the KOC CEO said.

Some of the aforementioned investments include the following:

- The Al-Zour Refinery. The newly constructed refinery has a capacity of 615,000 barrels per day, and is considered to be the largest in the region. The refinery will process Kuwait’s heavy crude oil output.

- In January of 2015, the first commercial heavy oil project was awarded with a value of KD 1.3 billion. The project aims to expedite plans to develop Kuwait’s heavy oil reserves.

KOC CEO Jamal Jaafar then told the audience that KPC’s 2030 Upstream Strategy encompasses the development of heavy oil resources in two phases. The first, known as the “Building Capability Phase” aims to build strategic capability to produce 60,000 barrels per day of heavy oil starting from 2018/19 and growing that figure in the years to come. This will contribute to Kuwait’s target capacity of 4 million barrels per day by 2020. After this, development of heavy oil production is planned to reach a capacity of 280,000 barrels per day by 2030.

Jaafar also maintained that KPC has identified the optimum development strategy by adopting an integrated approach and obtaining technological solutions from world leaders on heavy oil recovery by applying the best industry practices at every stage of development. To that effect, he added that KOC was
executing rigorous piloting programs to test different technologies to evaluate reservoir responses, which represents a significant learning curve. He maintained that it was important to highlight that developing and building such mega projects requires a highly experienced workforce, which is why KOC has explored partnership options with international oil companies and service providers, resulting in signing an Enhanced Technical Services Agreement with Shell to work hand in hand with KOC to achieve Kuwait’s heavy oil strategic production targets.

The KOC CEO concluded his address by saying the collaboration the Company was fostering among companies and heavy oil experts from around the world will be instrumental in carrying Kuwait’s heavy oil development into the future. “As innovations and technologies are improving, costs will come down. And with incremental investment and lower production costs, our heavy oil business will continue to thrive, sustaining the production of heavy oil in Kuwait and the region for many more years to come,” he said.

The Executive Plenary Session

KOC DCEO Emad Sultan served as moderator for the event’s Executive Plenary Session. Panelists included John Gallagher, Executive Vice President of Shell, Hussain Shehab, Country Chairman of Glasspoint Solar, and Krishna Shivram, CEO of Weatherford. Key topics were discussed during the executive plenary session where speakers uncovered different aspects of the conference theme. The conference also included two panel sessions titled Heavy Oil Economics: Challenges and Opportunities and Heavy Oil: Projects in the Region plus 14 technical sessions covering a variety of technical papers pertaining to the exploration, maintenance and retention of heavy oil.

The SPE Regional Awards for the Middle East was also held on the same day, which recognizes significant technical and professional contributions to the oil and gas industry, the petroleum engineering profession, exceptional service to the society, and to the greater community.

An exhibition featuring 20 regional and international companies was also held that showcased advanced products and solutions on developing heavy oil assets, production optimization and enhancing the value and return on investment.

About the Society of Petroleum Engineers

The Society of Petroleum Engineers (SPE) is a not-for-profit professional association whose members are engaged in energy resources development and production. SPE serves more than 168,000 members in 144 countries worldwide. SPE is a key resource for technical knowledge related to the oil and gas exploration and production industry and provides services through its publications, events, training courses, and online resources.
KOC INAUGURATES SIDRAH 500 PROJECT

KPC CEO Nizar Al-Adsani and KOC CEO Jamal Jaafar recently inaugurated the Sidrah 500 project that utilizes photovoltaic solar energy in Um Gudair, West Kuwait. Carlos Tejada, Ambassador of Spain to Kuwait, KEPA General Director Sheikh Abdullah Ahmed Al-Hamoud Al-Sabah, and a number of DCEOs attended the inauguration ceremony.

Sidrah 500 is the first large-scale photovoltaic solar energy project implemented by the Company, and the plant has a capacity to generate 10 MW of electrical power solely from solar energy. This project will help KOC save approximately 500,000 barrels of oil over the course of 20 years.

In a statement he made to the press on the sidelines of the inauguration ceremony, KOC CEO Jamal Jaafar maintained that Sidrah 500 is the first photovoltaic solar energy project to be utilized in the oil fields at KOC. He also said that the project’s value rests in its ability to generate alternative energy as opposed to relying on electricity supplied by the Ministry of Electricity and Water, which is derived by conventional means.
On the sidelines of the event, KOC CEO Jamal Jaafar said Sidrah 500 represented the country’s first step toward significant alternative energy production. “We hope that by 2020 we can produce 20% of the electricity which will be needed to run KOC from alternative sources,” he said.

During the ceremony, KOC DCEO Drilling and Technology Ahmad Al-Eidan delivered a speech in which he said that the project is regarded as a practical interpretation of KPC’s vision to obtain value from technology while contributing to KOC and the State of Kuwait.

“It gives me great pleasure to be with you here today on this historic occasion, when we are celebrating the opening of Kuwait’s first large-scale solar project. This 10-megawatt project represents the first step taken to bring the vision of His Highness the Amir Sheikh Sabah Al-Ahmad Al-Sabah of meeting 15% of Kuwait’s energy demand, through renewable and sustainable technologies, such as solar and wind. It is a practical translation of KPC’s vision of “Realizing Value from Technology” and “Contributing to Enterprise and State,” he said.

DCEO D&T Ahmad Al-Eidan went on to say that since its establishment, KOC has dedicated itself to ensuring the prosperity of Kuwait. However, he also added that as an oil company, KOC’s responsibilities do not stop at simply growing the economy, as the Company realizes it has a major role to play in society, which is why it strives to live up to its commitments by doing everything in its control to protect our environment.

“By deploying this pioneering project, KOC is signaling to the world that Kuwait is strongly committed to protecting the environment and reducing its carbon footprint for the good of humanity. This is the first KOC project registered with the “Clean Development Mechanism” under the United Nations Framework Convention for Climate Change,” he said.

“The project, which is named Sidrah 500, will significantly cut down on CO2 emissions that will be the equivalent of planting 500,000 trees. In addition, the project will save the Company 500,000 barrels of oil over the course of the next 20 years. Aside from the environmental benefits, there is also the element of technology transfer, through an extensive training program by our project partner. KOC employees will have the opportunity to learn more about solar technology and utilize this clean form of energy for the benefit of KOC and the State of Kuwait,” he added.

About the Sidrah 500 Project

Kuwait announced plans last year to generate 15% of its energy needs via renewable sources by 2030. Consumption of electricity is rising rapidly in Kuwait, as it is throughout the rest of the Gulf region. Last year, official figures indicated that Kuwait’s electricity demand would reach 30,000 MW per day by 2030.
The opening of the plant follows increased interest in renewables in Kuwait and across the Gulf region in recent years, as the scale of the consumption challenge has become clear. The Kuwait Institute for Scientific Research signed a contract last year with Spain’s TSK to establish the country’s first solar thermal energy plant, with a planned production capacity of 50 MW. The institute’s Shigaya initiative is also planning solar and wind projects in the northwest of the country.

Facts about the Sidrah 500 project:

- 10 MW peak, 5 MW minimum during summer months from 10AM – 2PM.
- Location: Um Gudair, West Kuwait.
- 5 km away from F-193 substation, which is connected to MEW Minagish-B substation.
- Feeds 29 Electric Submersible Pumps (ESP).
- Located on a 600m x 600m plot of land (360,000 square meters = 36 hectares).
- The plant uses crystalline silicon panels at a 16.2% rate of efficiency.
- Panels are mounted on single-axis trackers to maximize output of the solar plant.
- First utility-scale solar plant in Kuwait.
- First solar plant in the world to power ESPs.
- First KOC project to register with the United Nations.

Benefits:

- Environmental: Reduction of CO₂ emissions.
- Economical: Less oil is required for fuel, which translates to an economic benefit.
- Skills Development: Training on solar plants from development to operation for KOC staff and others through Kuwaitization.
KOC recently hosted Ahmadi Governor Sheikh Fawaz Al-Khaled Al-Sabah at an event that took place at the Ahmad Al-Jaber Oil & Gas Exhibition, where the Governor and his accompanying delegation were provided with a tour of the exhibition that takes visitors on a journey into the world of oil and gas.

KOC CEO Jamal Abdul Aziz Jaafar, Acting DCEO (Administration & Finance) Menahi Al-Anzi and Manager (Public Relations & Information) Mohammad Al-Basry received the visiting delegation.

Sheikh Fawaz and the accompanying delegation were then provided with a tour of the various sections of the exhibition, where they listened to thorough explanations of the most important information and events related to the history of KOC and the oil sector in Kuwait. They also observed the exhibition’s various installations, such as the educational and interactive installations that aim provide information to both adult and school-aged visitors.

At the conclusion of the tour, Sheikh Fawaz and his delegation commended the modern equipment and advanced technologies utilized by the exhibition, which is the first of its kind in Kuwait. He also upheld and commended KOC’s efforts in the field of education and community service.

OPEC Secretary General Visits KOC

OPEC Secretary General Mohammad Barkindo and his accompanying delegation recently visited the Ahmad Al-Jaber Exhibition, where they were received by KOC CEO Jamal Jaafar and a number of Company officials.
During the visit, exhibition staff provided a thorough explanation of the facility’s various displays, which use the latest visual presentation technologies to provide a historically comprehensive image of Kuwait’s oil industry, in addition to many details related to the different phases of oil production such as drilling and transportation.

The high-level delegation expressed their interest in the information that was presented during their tour, which they said played an important role by contributing to the enrichment of knowledge related to oil production in Kuwait. The accompanying delegation included the State of Kuwait’s Governor at OPEC, Nawal Al-Fuzai.

Ministry of Oil Visit

Meanwhile, the Ahmad Al-Jaber Oil & Gas Exhibition also recently hosted the Undersecretary from Kuwait’s Ministry of Oil, Sheikh Talal Al-Sabah, and Head of the Petroleum Cultural Committee and PR Observer from the Ministry, Sheikha Tamadhur Al-Sabah. A delegation from the ministry also accompanied the two guests. The visit is part of a succession of visits that have taken place since the exhibition’s opening.

The delegation was received by Acting DCEO (Administration & Finance) Menahi Al-Enezi, Manager (PR & Information) Mohammad Al-Basry and Manager (T&CD) Qusai Al-Amer. Sheikh Talal commended the standard of the exhibition and the Company’s efforts in the field of community and cultural services.

During the visit, the delegation toured the various sections of the exhibition and listened to a detailed explanation of its most prominent characteristics and the unique educational and cultural experience it offers to its visitors. The visit aimed to display sophisticated equipment in the new exhibition that seeks to introduce the history of Kuwait’s oil sector and highlight its successful path in the oil industry to its visitors.

Dutch Ambassador Visits KOC

A high level delegation headed by H.E. the Dutch Ambassador to Kuwait Frans Potuyt recently visited KOC. The delegation, which was comprised of 17 oil and gas companies, aimed
to explore new business opportunities, enhance relations and increase cooperation in Kuwait’s energy sector.

DCEO (Planning & Commercial) Emad Sultan, in addition to other KOC officials, received the delegation, which introduced their unique products and innovative technologies during the visit through a presentation that outlines each company, its activities and areas of operation.

Meanwhile, KOC officials delivered two presentations related to KOC’s 2030 Strategy. The presentations also touched on aspects related to planning and matters that deal with prequalification of contractors and manufacturers, in addition to conditions they must fulfill to participate in KOC tenders and business deals. The visit aimed to increase cooperation between the two countries in the energy sector and gain knowledge of projects that the companies can support.

**Canadian Delegation Visits KOC**

In a related event, a delegation comprised of a number of senior officials from various Canadian corporations and institutions that are active in areas related to the oil industry also recently visited KOC, where they were met at the Main Office in Ahmadi by Acting CEO at the time Abdullah Al-Sumaiti and a number of Managers, Team Leaders and other concerned officials.

Al-Sumaiti welcomed the delegation, which was headed by Tammy Ames, Commercial Counsellor at the Canadian Embassy in Kuwait. He then provided them with a brief explanation of KOC targets, current plans and future projects as they relate to the Company’s 2030 Strategy. He also upheld and commended the strong ties and continued cooperation that exists between Kuwait and Canada.

Members of the delegation were then provided with an explanation regarding the planning aspects behind KOC’s exploration and production processes. This was conducted through a presentation delivered by Petroleum Engineer Shahad Al-Mutawa from the Strategic Planning Team.

The visiting delegation was also briefed about the procedures for pre-qualifications of contractors and manufacturers. This information was delivered by Senior Engineer Yousef Al-Dewaila from the Supplier Relationship Management Team.

After a Q&A session, Team Leader Public Relations Hassan Al-Shammari accompanied the delegation on a tour of the Ahmed Al-Jaber Oil & Gas Exhibition, where the visitors were briefed on the various sections. The delegation then expressed their admiration of the unique and innovative experience which tells the story of Kuwait’s relationship with oil.
KOC recently hosted a ceremony to honor former DCEO (Administration & Finance) Saad Al-Azmi and former DCEO (West Kuwait) Hasan Bunain. The event was held in recognition of their efforts and dedication to KOC throughout their long and productive careers with the Company.

During the event, KOC CEO Jamal Abdul Aziz Jaafar delivered a speech in which he expressed his appreciation and gratitude to the former DCEOs. He praised their efforts, hard work and the achievements they accomplished for the Company during their years of long service. He then wished them every success before encouraging all employees in attendance to follow in their footsteps by modeling their personal work ethic after the example set by the two departing DCEOs.

In a speech he delivered on the occasion, Bunain encouraged the current generation of employees to work hard in their service to KOC and Kuwait, as their efforts are indispensable in the goal of meeting the needs of all of Kuwait’s citizens.

Meanwhile, Al-Azmi expressed his gratitude for the kind gesture before thanking everyone in attendance. He also expressed thanks to KOC for all the Company has given to its employees, and he asked that they continue to abide by the values of respect and loyalty that are inherent in the Company’s workforce.

At the conclusion of the event, the KOC CEO presented the former DCEOs with honorary plaques to recognize their service while Ahmadi Hospital Manager Emad Al-Awadh presented a plaque to Al-Azmi in recognition of his efforts and dedication to the Company.
WOMAN OF THE YEAR:
DCEO (NK) BADRIA ABDUL RAHEEM

A delegation from KOC recently took part in the Abu Dhabi International Petroleum Exhibition & Conference (ADIPEC), where DCEO North Kuwait Badria Abdul Raheem won the prestigious Woman of the Year award. From a list of 43 female candidates from around the world, the North Kuwait DCEO was selected as the most deserving of the recognition. A brief retrospective of her life and career uncovers a long list of achievements that have been registered in her 33 years with KOC, which we will uncover in the pages that follow.

In an interview conducted shortly after ADIPEC, Badria Abdul Raheem answered questions related to her career, the secrets of her success, and how – in her opinion – she has successfully managed to preside over the North Kuwait Directorate, one of the Company’s most important assets that is home to a major push for heavy oil production which accounts for more than 50% of KOC’s current major projects.

When asked to provide an overview of her career, the North Kuwait DCEO said she divides the areas of her life into various categories that we will highlight below.

KOC & Core Work

In regard to the technical aspects regarding her position at KOC, Badria Abdul Raheem is responsible for leading the production of North
Kuwait assets, particularly heavy oil. Heavy oil production at KOC is one of the most important undertakings at the Company when viewed in the framework of current activities and future investments and expansion.

In addition to being in charge of strategic development for conventional oil reserves and heavy oil in North Kuwait, Abdul Raheem also presides over operations in the field that currently produce more than 700,000 barrels per day. Six Managers, 21 Team Leaders and more than 1,500 employees and 10,000 contractors work under her close supervision. The responsibilities associated with this undertaking are enormous by any measure. Abdul Raheem’s ability to oversee the very important work that is being conducted in North Kuwait represents her ability to engage different teams professionally and skillfully so that employees under her administration can be encouraged to work harder to complete projects before or ahead of schedule.

The North Kuwait DCEO has accomplished a great deal in her 33 years with KOC. Since graduating from Kuwait University in 1982 with a degree in Chemical Engineering, Abdul Raheem made her way up the KOC ladder, first as a Petroleum Engineer working in Burgan Field, to Superintendent of the Reservoir Management Division, then as Team Leader of the Greater Burgan Studies Team, then as Manager of Fields Development for three separate Groups, before finally becoming DCEO of North Kuwait.

Today, Abdul Raheem is in charge of overseeing the development of Kuwait’s heavy oil resources in North Kuwait, where billions of dollars’ worth of investments are in play to produce 60,000 BOPD by 2018/19, with plans to steadily increase that production figure into the hundreds of thousands as time goes on.

Contributions & Female Empowerment

In addition to her core work at KOC, Badria Abdul Raheem is no stranger to participating in regional and international organizations where she is seen as a competent, influential leader. For example, the North Kuwait DCEO is a distinguished member of the GCC National Oil Companies Steering Committee, which aims to facilitate knowledge transfer between the GCC companies in areas of Research and Development, Technical Development, Production Enhancement, Cost Reduction, Emergency Assistance, and a general enrichment of careers for employees in the region’s oil and gas industry. In addition to her participation with the Steering Committee, Abdul Raheem was also a distinguished member of the GCC National Oil Companies Exploration
Development Committee for seven years, where she participated in facilitating knowledge transfer among specialists and technical personnel.

When asked about her contributions in the field of oil and gas, both locally and internationally, Abdul Raheem expresses her pride with a humility that can only be found in a true, natural-born leader – after all, according to her, she is only delivering on the responsibilities and expectations of her job. However, there is one volunteer-based organization that the North Kuwait DCEO should be exceptionally proud of, and that is the Professional Women Network (PWN).

The Professional Women Network was co-founded by Badria Abdul Raheem, current Vice President of the organization, and Hosnia Hashem, former DCEO at KOC. Founded in 2009, the network aims to provide a number of services and opportunities for female professionals throughout the K-Companies. For one, PWN aims to create opportunities for enhancing female professional growth at KOC and its sister companies. It also aims to enhance the work environment in terms of gender diversity by opening doors for women where they otherwise may have been closed in the past.

Abdul Raheem said that PWN has already achieved many of its goals, one of which was the Women’s Summit that was held recently for all K-Companies and IOCs. During the summit, more than 200 diplomats, employees, and delegation members attended. So far, PWN has held 18 workshops and three conferences for female employees.

**An Inspirational Leader**

Badria Abdul Raheem is more than just a capable leader. She is a caring mother of three and a tireless supporter of volunteer work. In her free time, aside from learning how to cook cuisines from around the world, she oversees a summer program that focuses on Quran memorization for children with special needs. According to Abdul Raheem, the work/life balance is absolutely vital, and she frequently encourages colleagues and all working women to ensure they have a healthy balance in their lives between work and family.

In terms of inspiration, Badria Abdul Raheem credits her strong faith as being the cornerstone of her energy and strength. She also maintains that remaining optimistic and having a positive outlook is imperative for a successful career. To her, disappointments in the professional arena are viewed as challenges, and they force her to work harder, stronger, and more persistently in her quest for excellence. One of the secrets of her success, she says, is surrounding herself with positive individuals that embody strong work ethics. Giving up, of course, is not an option that even comes close to registering on her radar.

Over the course of our interview, Badria Abdul Raheem said that one of her ambitions and goals was to create a team of distinguished, experienced Kuwaiti employees who are capable of leading the next generation of oil workers into the future. She believes that this generation deserves a chance from their superiors; therefore, she consistently encourages young employees to approach their jobs with a hands-on attitude. Part of this involves entrusting them with great responsibilities so that they may learn through experience at an early stage. For example, she does not believe new employees should wait years before they are entrusted with the responsibility of presenting lectures or presentations at conferences and seminars. In a similar vein, she believes all employees should be encouraged to venture out of their comfort zones so that they may learn all there is to know about their jobs. In this regard, Abdul Raheem often delegates roles to young employees in managing projects because she believes in empowerment of the abilities and skills to build and qualify the next generation of KOC employees.

In her closing statement, Badria Abdul Raheem said that it was her hope to succeed in her effort to help KOC achieve the goals of its 2030 Strategy, and by doing so, she hopes she is serving her country to the best of her ability. Her final wish is to leave a legacy of competent employees that can accomplish the vision and mission of KOC – today and in the future.

**About ADIPEC**

Held under the patronage of the President of the United Arab Emirates, His Highness Sheikh Khalifa Bin Zayed Al-Nahyan, ADIPEC is the global meeting point for oil and gas professionals. Standing as one of the world’s top three energy events, and the largest in the Middle East and North Africa, ADIPEC is a knowledge-sharing platform that enables industry experts to exchange ideas and information that shape the future of the energy sector.
KOC PARTICIPATES IN WORLD HEAVY OIL CONGRESS

KOC recently participated at the World Heavy Oil Congress event that was organized in Calgary, Canada, where more than 2,200 individuals from 36 countries presented 196 work papers.

A high level delegation represented the Company at the event and was headed by DCEO (Planning & Commercial) Emad Sultan. It included Senior Engineers and Specialists, with Team Leader Reservoir Studies (Heavy Oil) Fatma Ahmad and Team Leader Projects Management (NK) Mohammad Al-Ghariba also in attendance.

Calgary has been a frequent destination for KOC this past year, as the Company participated in two important international conferences held in the city: The Global Petroleum Show, and more recently, the World Heavy Oil Congress. Heavy oil is a field that KOC is particularly interested in as it seeks to develop this type of oil and raise production levels from its oil fields in North Kuwait.

KOC’s participation at the event was conducted through a high-level delegation that included many specialists in the field of heavy oil. This included DCEO (Planning & Commercial) Emad Sultan, who has extensive experience in this field due to the time he spent in North Kuwait as DCEO (NK), where he oversaw the development of many of Kuwait’s northern fields.

During the event, KOC DCEO Emad Sultan participated as a co-moderator during one of the main sessions, where he discussed the future of heavy oil with high-level officials from specialized global companies and government institutions. During the session, Sultan outlined KOC’s main exploration initiatives and
identified development plans to maximize efficiencies, as well as defining different strategies to meet climate goals. KOC’s visiting delegation was well prepared and participated effectively by presenting several working papers that focused on the subject of heavy oil and the Company’s experience in its production. The working papers were comprehensive as they included case studies as well the overall heavy oil experience in the State of Kuwait.

Growth & Challenges

KOC’s most distinguished participation at the event was conducted through DCEO Sultan who oversaw, along with other high-level officials, one of the primary conference sessions that touched on the growth factors and challenges facing the heavy oil market in the world. Along with senior executives from global oil and gas companies and government institutions, as well as high-governing bodies of various sectors, Sultan discussed the global future of heavy oil by presenting the most important exploration initiatives, providing more information about growth plans and defining strategies that aim to help meet the goal of fighting climate change.

Major Points

Within the context of their participation in many technical sessions, KOC employees presented a comprehensive profile that included eight major points:

• KOC’s strategic goals for heavy oil in North Kuwait.
• An overview of the Lower Fars Reservoir of heavy oil in South Ratqa.
• Testing activities in Lower Fars Reservoir of heavy oil in South Ratqa.
• Activities and overview of Lower Fars Reservoir of heavy oil in Um Naqa.
• The first commercial project of heavy oil in NK (First stage of 60k BPD).
• Challenges facing heavy oil reservoirs in South Ratqa and Um Naqa.
• Overview of internal pipe reservoir and development plans.
• Tests related to the utilization of artificial lift for heavy oil within KOC’s scope of operations.

Work Papers

KOC presented a number of work papers that focused on heavy oil at the event through members of the delegation who participated in technical sessions. Work papers were presented by TPL Specialist (Petrophysics) Khalid Ahmad, Senior Petrophysicist Faisal Hassan, Geologist I Saad Al-Rashdan (all from Reservoir Studies Team – Heavy Oil). In addition, Construction Engineer Khaled Al-Shehri (Project Management Team – NK), Process Engineer Sondos Al-Zaide (Production Operations Team – Heavy Oil), Well Surveillance Engineer Abdullah Al-Marta (Artificial Lift Team – S&E/WK), Foreman Artificial Lift Mubarak Al-Metlea (Artificial Lift Team – NK), Senior Petroleum Engineer Mahmoud Hussein and Petroleum Engineer Yousef Al-Mula (Fields Development Team – Heavy Oil) also delivered presentations.

Exhibition

KOC also participated in the exhibition portion of the World Heavy Oil Congress, which KPC supported as a platinum sponsor. The exhibition featured 39 exhibitors from around the world that presented their goods, services, or expertise as it related to heavy oil extraction or oil and gas in general. The KOC pavilion presented various Company studies, data, experience and work as it relates to the goal of extracting heavy oil from Kuwait’s northern fields.
About the Conference

The World Heavy Oil Congress has been organized regularly since 2006 with its 8th cycle this year. Canada has hosted four of the conferences, including the last two.

According to the organizers, this event aims to discuss all matters which contribute to the development of heavy oil. The event also aims to help overcome challenges facing its production. The theme for this year’s Heavy Oil Congress was: “Connecting Professionals for a Leaner, Fitter Future.”

In this year’s cycle, 20% of participating companies were engineering and design specialists, and another 20% hailed from consultation, research and development backgrounds. In addition, 19% of participants came from gas and oil production and operations, 14% for sales and equipment, and 13% of participants from service and technical companies, while 7% came from operations and maintenance, 4% from training and education whereas other sides formed 3%.

Furthermore, 12% of participants were CEOs / DCEOs, 31% were senior managers and 24% were geologists, engineers, etc.

Calgary is considered the energy capital of Canada were 1,746 companies work in the energy industry, which contributes about $35.4 billion to the Canadian gross domestic product.

The Conference was held for the first time in China in 2006. There, 1,126 participants participated and 120 working papers were presented, whereas the second cycle in Canada was held in 2008, where 1,596 participants from 29 countries presented 133 working papers.

The United Kingdom hosted the fifth cycle in 2012, which saw 1,393 participants from 30 countries and the presentation of 135 working papers. After that, the USA opened its doors for the sixth cycle, in which the lowest number of participants was recorded: 1,033 attended from 31 countries presenting 130 papers.

In 2015, the event went back to Canada, which received 1,782 participants from 31 countries delivering 127 working papers.

This year’s cycle was the largest with 2,200 participants from 36 countries with 196 technical and commercial working papers, in addition to five primary sessions for leaders in which KOC DCEO Emad Sultan took part.

KOC employees were instrumental in providing information about the Company at the event.
The Professional Women Network recently held its second summit under the theme of “Gender Balance: Best Practices in the Oil Sector.” The event was attended by KPC CEO Nizar Al-Adsani, PIC DCEO Hosnia Hashem, KOC DCEO (NK) Badria Abdul Raheem, and Her Excellency Martine Moreau, the Canadian Ambassador to Kuwait. In addition, other representatives from International Oil Companies such as Fluor, Shell, Halliburton, Schlumberger and Baker Hughes International were also in attendance.

In his opening speech, Al-Adsani expressed his pride in supporting an initiative that aligns itself with KPC’s strategic directives which seek to empower women by supporting them in their effort to advance their careers.

“This summit is an important platform to promote the advancement of women in the oil industry and endorse the progress of the Kuwaiti oil sector,” he said. “We are very proud to support an initiative that aligns with KPC’s 2030 strategic direction and which aims to facilitate a culture that fosters a productive work environment.”

The KPC CEO also said that initiatives like PWN allow for the creation of a more collaborative atmosphere that helps KPC and its subsidiaries achieve a leading position in the global oil and gas industry. In particular, Al-Adsani singled out field facilities such as gathering centers, drilling rigs and gas booster stations, which have become more accommodating to female employees who are increasingly seeking positions in the field.
“As representatives of the oil industry in Kuwait, we are conscious of the fact that we are a natural role model for the country. Therefore, we strive to provide our employees with opportunities and present them with the right tools and support to enable outstanding performance. This summit is one of the great initiatives dedicated to achieving such a goal, and we hope that such platforms become a rite of passage into creating a more empowered workforce,” the KPC CEO concluded.

The PWN Founder’s Message

Hosnia Hashem, Professional Women Network founder and PIC DCEO, delivered her keynote speech after Nizar Al-Adsani’s opening remarks. In her speech, the PWN founder touched on a number of topics, which included the motivation behind PWN, its goals, and the challenges associated with fully integrating female professionals throughout the K-Companies.

The PWN founder began her speech by reminding the audience that the reason PWN was established was to promote professional growth of the female workforce, empower and integrate female professionals throughout all areas of work, and serve as a forum where female professionals could come together for the purposes of networking and support. In her speech, Hosnia Hashem also provided an overview and analysis of the female workforce in Kuwait’s oil sector.

“I would like to add that we have held more than 12 workshops over the years, six executive panels, two surveys, and one Town Hall session. In combination, these events have enabled PWN to steer efforts to where they were more needed: The enhancement of the work conditions of women in the K-companies and their own self-empowerment at work,” Hashem said.

“The advancement of women in the K-Companies benefits from this awareness raised by PWN, and this year, we gladly welcomed the appointment of four female DMDs,” PIC DCEO Hosnia Hashem said, which was met with great applause. “The appointment of women for top leadership roles enable the availability of role models that inspire and motivate the young women in our workforce to reach to become the best they can be in managerial or technical roles.”

Maximizing Talent & Facing Challenges

Hosnia Hashem maintained that it was critical to dedicate resources to the progression of the female talent that exists throughout the K-Companies. Because about three quarters of women employed are in technical roles, it is imperative, she said, that they be provided with the technical support and training that is required to shape future leaders. On the issue of leadership distribution, Hashem also called for renewed efforts and progress to be made in the effort to appoint more females in leadership positions.

“A characteristic we share with all NOCs, and in particular to those within the GCC, is that we have a young company profile, with the majority of our workforce below 35 years of age. The questions and challenges this brings to the leadership include the following:

• How do we motivate this new generation, the Millennials, to reach their best in the oil sector?
• What workflows, settings, and policies do we implement to ensure fair conditions for men and women in the workplace?
• How do we support women and dual-career couples to balance work/family?
• How do we engage with Kuwait at large to enable the participation of more and more women in activities related to the oil sector, as employees or entrepreneurs, in the public or private sector?

“The future of women in the oil industry is bright, and secured by the need we have of capturing all the talent available,” the PIC DCEO said. She then went on to say that it was pertinent to activate PWN’s actions for the advancement of women. “The natural evolution of PWN will bring more specific projects and activities, and I am very much looking forward to the moment when the actions and initiatives pertinent to diversity
and inclusion have a formal framework in our corporate ecosystem.”

Hosnia Hashem concluded her speech by saying that the success of the summit and PWN would not have been possible without the support of the senior management throughout the K-Companies. In particular, Hashem commended the support displayed by KPC CEO Nizar Al-Adsani, whose backing was crucial to the development and success of PWN.

Message from the Canadian Ambassador

Her Excellency Martine Moreau, Canadian Ambassador to the State of Kuwait, delivered a presentation at the event which focused on best practices in diversity and inclusion in the oil sector. She also provided an overview of her country’s experience and the future goals her government aspires to accomplish by adopting legislation that supports women in the private and public sectors.

The Canadian Ambassador touched on a number of topics over the course of her presentation. She began by providing an overview of major accomplishments for women’s rights in Canada, including the year they were given the right to vote (1913) and the first year a female was elected to parliament (1921).

In terms of diversity and inclusion, H.E. Moreau posited the following question: Why should people care? For one, she said, it is a fundamental human right for women to enjoy the same privileges as men, and secondly, she maintained that women having equal rights simply made better economic sense.

The Canadian Ambassador went on to describe some of the challenges still facing women in Canada, particularly a wage gap that exists between men and women in the workforce and underrepresentation in the country’s parliament by women.

In terms of lessons learned from her time in government, the Canadian Ambassador cited the following:

- Commitment from senior management is critical.
- Diversity and inclusion are objectives in and of themselves.
- Accountability mechanisms are required.
- There is a need to recruit role models and young women with potential.
- The involvement and encouragement of men is also required.

Closing Remarks

Meanwhile, Badria Abdul Raheem thanked the K-Companies and IOCs for their organizational efforts and contributions which played a major role in the success of the summit.

It is worth mentioning that the summit featured an executive panel session where female representatives explained their personal and professional experiences. The executive panel session was accompanied by other sessions that featured the participation of the audience.
The Early Production Facility and Maintenance Team recently commissioned four solar powered chemical injection units to provide corrosion and hydrate inhibition on EPF-50 wells.

In a statement he made about the project, Team Leader EPF Operations & Maintenance Yousef Al-Humoud said that the increasing energy demand in North Kuwait and the present limitations with power infrastructure have led to an increased reliance on the use of temporary power systems. The challenge is therefore to explore alternative renewable energy sources that are environmentally sustainable, cost effective, and which align with KOC’s strategic energy conservation objectives.

In North Kuwait, solar power systems are utilized, but the application of the technology has been generally restricted to systems with relatively low power requirements such as SCADA. A challenge is to provide chemical injection (corrosion and hydrate inhibition) for an increasing number of flowlines on well sites without external power.

The recent initiative with Shell Kuwait was to develop a design package for an integrated solar powered chemical system; this was followed by the manufacture of a number of pilot skids. The units have been installed, commissioned and are now in operation for a number of critical services to enable further evaluation of the technology. The ongoing field evaluation will review lifecycle costing coupled with energy conservation and identify the most appropriate configuration for future applications, providing valuable operations input to further field development.

**Project Overview**

With the continued increase in energy demands in North Kuwait and limitations with present power infrastructure, there is a reliance on the use of temporary power systems, primarily diesel generators. Solar power systems are utilized, but the application of the technology has been generally restricted to systems with relatively low power requirements such as SCADA. A challenge is to provide chemical injection (corrosion and hydrate inhibition) for an increasing number of flowlines on well sites without external power.

A recent initiative was to investigate and study technologies to reduce the reliance on temporary power systems for well site chemical injection and also align with...
the KOC’s strategic objective of energy conservation with the application of renewable energy systems.

Within the North Kuwait Jurassic gas development efforts, there is a critical requirement for reliable chemical injection systems at each of the well sites. Carbon steel is generally selected for flow-lines that require continuous chemical injection for effective corrosion inhibition. Additionally, as the wells mature and begin to produce more water, there is a further requirement for chemical injection to maintain the flow integrity of the systems by mitigating hydrate formation. As external power is not available at the well sites, corrosion and hydrate mitigation by chemical injection is performed using temporary pumps powered by local diesel generators. As the present use of diesel generators does not fulfil the availability requirements or align with the KOC energy conservation strategy, there was a need to identify an environmentally sustainable chemical injection method.
Project
In conjunction with Shell Kuwait, a design package was developed for a solar-powered integrated chemical system followed by the manufacture of a number of pilot skids. The units were installed and are operational, and they enable further evaluation of the technology by using two system configurations. The field evaluation will review lifecycle costing coupled with energy conservation and identify the most appropriate configuration for North Kuwait Jurassic gas applications. This will provide valuable operations input for field development.

The fundamental components of the chemical injection system are as follows:

- Photovoltaic array with integral support structure (conforming to IEC 60904).
- Power system charge controller and battery bank. System autonomy - the battery bank is designed to support the average continuous load for a period of 5 days in the event of little or no charging.
- Modular design that can be expanded.
- Unit split into sub systems for maintainability.
- Local safeguarding and control system.
- Interface with external network to provide remote monitoring and operation, all suitable for installation in hazardous areas.

System benefits include the following:

- Proven reliability of all components.
- Remote monitoring.
- Accurate dose rate measurement enabling optimization.
- Reduced logistic requirement chemical and diesel.
- Reduced contract hire cost for pumps and generators.
- Flexibility, skid mounted transportable units.

### System configurations

<table>
<thead>
<tr>
<th>Single Chemical unit (Corrosion inhibition)</th>
<th>Dual Chemical unit (Corrosion &amp; Hydrate inhibition)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10l/hr injection (turndown ratio 10:1)</td>
<td>2 x 10l/hr injection (turndown ratio 10:1)</td>
</tr>
<tr>
<td>Coriolis flow measurement (+/ - 0.2%)</td>
<td>Coriolis flow measurements (+/ - 0.2%)</td>
</tr>
<tr>
<td>2 cubic meter storage capacity</td>
<td>1 cubic meter storage capacity for each chemical</td>
</tr>
<tr>
<td>5 days autonomous operation</td>
<td>5 days autonomous operation</td>
</tr>
<tr>
<td>7 Solar panels</td>
<td>12 Solar panels</td>
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<tr>
<td>Battery 1689 Ah – spare capacity for other devices</td>
<td>Battery 2808 Ah – spare capacity for other devices</td>
</tr>
<tr>
<td>Ability to interface with current SCADA</td>
<td>Ability to interface with current SCADA</td>
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KOC Holds Safe Driving Campaign

As part of its efforts to help do its part in contributing toward a safer society, KOC recently launched a Safe Driving Campaign to create awareness and help spread a culture of safe driving to KOC employees and Ahmadi residents.

Under the sponsorship and attendance of DCEO (S&EK) Abdullah Al-Sumaiti, and in the presence of DCEO (WK) Ismail Abdulla, the HSE Team (S&EK) recently organized the Safe Driving & Traffic Awareness Campaign for KOC employees and contractors in cooperation with the Kuwait Motoring Company and General Department of Traffic. In addition, Saqir Al-Roshood, PR & Customer Service Manager from Kuwait Motoring Company attended the event, which also featured the participation of various KOC Managers, Team Leaders, and contractors.

In a statement he made on the sidelines of the campaign, Al-Sumaiti affirmed that the aim of the event was to improve driving behaviors among KOC employees and contractors. The DCEO also noted that KOC spares no effort in its quest to improve targets and even surpass them in all fields, whether in operations, projects or HSE.

Al-Sumaiti added that KOC will continue to organize similar campaigns in the future and invite external experts to teach important lessons related to driving behavior. He also indicated that the S&EK Directorate succeeded in achieving 32 million safe working hours, which is a reflection of its compliance to HSE standards.
Safe Driving Tips:
Most people understand that when you drive, it is very important to obey all traffic laws. This includes following the posted maximum and minimum speed limits, not using your phone while driving, and always wearing your seat belt.

Below are some additional traffic safety tips that you can follow in order to help create a safe driving environment for you and those you share the road with.

Avoid being rear-ended by another vehicle:
1. Increase the following distances from vehicles ahead.
2. Signal early for turns, stops, and lane changes.
3. Brake smoothly and gradually.
4. Keep pace with traffic when possible and legal.
5. Check mirrors for following distance of other vehicles.
7. After stopping, keep brake pedal depressed.
8. Keep rear lights clean and functioning.

How to choose an alternate path of travel as an escape route:
1. Importance of maintaining adequate visual lead.
2. Select speeds which position vehicle between clusters of vehicles.
3. Select a safe lane position within traffic clusters.
4. Avoiding multiple hazards:
   - Identify hazards early.
   - Predict potential hazards.
   - Adjust speed and position to avoid potential hazards.
   - Anticipate and plan escape routes.

Avoiding a collision with the car ahead
1. Importance of correct vehicle lane placement.
2. When to increase following distance:
   - When being tailgated.
   - When vision is blocked or visibility is poor.
   - When speed is increased.
   - When adverse roadway, traffic, or weather conditions exist.

3. Momentary distractions
   - Pick a safe time to look away.

4. Look ahead for trouble:
   - Look over and around the car ahead.
   - Check ahead for speed on hilltops and curves.
   - Watch brake lights in adjacent lanes.
   - Start braking early.

5. Locations to watch for trouble
   - Traffic controlled intersections.
   - Approaching crosswalks.
   - Lanes next to parked cars.
   - Parking lot entrances.
   - Interchanges where cars enter and leave.
   - Slippery or ice covered streets.
   - Where children are at play.

Officials from KOC and the General Department of Traffic at the event.
The Ahmadi Bicycle Race took place recently around the park in front of the KOC Main Office in Ahmadi. The event, which was organized by the Public Relations Team of the Public Relations and Information Group, hosted competing cyclists from Kuwait and the GCC.

The successful event witnessed participation from cyclists with a diverse range of backgrounds, and is part of the Company’s efforts to encourage employees and the population at large to engage in more physical activities such as cycling.

The events winners were as follows:

**Professionals:**
1. Sayed Ahmad Khalil (Bahrain)
2. Sayed Jaafar Ali (Kuwait)
3. Talal Al-Saadi (Bahrain)

**Amateurs (Men):**
1. Habib Khader
2. Ahmad Al-Mutairi
3. Jed Francis

**Amateurs (Women):**
1. Najla Al-Juraiwi
2. Noora Al-Umairi
3. Noora Al-Hajri

The event was also part of an effort to transform Ahmadi into a model city and create higher standards of living for all its residents. In this regard, KOC recently completed construction of a new bicycle path that has been designed to connect all of the city’s streets. In addition, the new bicycle track will make it easier for cyclists to access all of Ahmadi’s public service facilities and buildings. This will help encourage residents to use alternative methods of transportation when possible. Alternative methods of transport, such as cycling, play an important role in reducing automobile traffic. It also has the added benefit of contributing to a healthier lifestyle for those who bike instead of drive.
The Health Benefits of Cycling

Some of the health benefits of cycling include muscle toning, improved cardiovascular health, and better blood circulation. These health benefits are the reason behind the consistent popularity of cycling for many years. It is one of the simplest forms of working out as a form of moderate physical activity that is required by the human body. It is not only an exercise; it is also used as a means of transport in many countries. Using cycling helps in incorporating physical activity in your daily life. From children to the elderly, every person can easily choose cycling for a healthier life.

In 1817, the concept of cycling was invented by Baron Karl von Drais. What he invented wasn’t exactly the bicycle which we know and use. He actually invented a walking machine that helped him to walk in the royal gardens faster. This device had wheels, but didn’t have any gears, chains, and peddles. Also, it moved ahead by pushing his feet against the ground. With an improvement in this technology, this crude device was eventually transformed into the modern day bicycle.

The human body requires physical activity for normal functioning. At least thirty minutes of moderate to intense physical activity is very important and is required in order to achieve long-term health. Other than the physical health benefits, there are social and mental health benefits that make cycling an enjoyable activity as well. Some of these health benefits include the following:

Strengthens and Tones Muscles: Cycling is an activity that involves a great deal of pedaling. Usually, it is assumed that this activity helps only in toning the muscles of the calf and thighs, but it is actually an overall physical workout and involves the movement of almost every part of the body. The arm muscles are also strengthened, because they are required to balance the cycle. In children, a strong improvement in bone and muscle health has been noticed after regular cycling sessions. There is even strong evidence showing that the health of muscles is directly related to cycling. Due to the increased flexibility of muscles, aerobic fitness receives a boost.

Cardiovascular Health: During cycling, the heart beats faster than usual. This exercises the heart and promotes good health. Studies on middle-aged men showed positive results in terms of cardiovascular function. Compared to sedentary people, those who participated in activities such as cycling, walking, and running displayed improved cardiovascular function.

Diabetes Control: Diabetes increases the risk of various diseases such as heart disease, stroke, skin diseases, ocular diseases, kidney disease, and a wide variety of others. Diabetes can be controlled by physical activity, which includes cycling. It can be very beneficial in controlling diabetes as the glucose present in the cells is exhausted and the glucose from the blood is drawn in by the cells and converted into useful energy.
A cough is a reflex action to clear your airways of mucus and irritants such as dust or smoke. It’s rarely a sign of anything serious. A “dry cough” means it’s tickly and doesn’t produce any phlegm (thick mucus). A “chesty cough” means phlegm is produced to help clear your airways.

Most coughs clear up within three weeks and don’t require any treatment. For more persistent coughs, it’s a good idea to see your general practitioner so they can investigate the cause. Find out when to see your GP.

What causes coughs?

Some of the main causes of short-term (acute) and persistent (chronic) coughs are outlined below.

Common causes of a short-term cough include:

- An upper respiratory tract infection (URTI) that affects the throat, windpipe or sinuses – examples are a cold, flu, laryngitis, sinusitis or whooping cough.
- A lower respiratory tract infection (LRTI) that affects your lungs or lower airways – examples are acute bronchitis or pneumonia.
- An allergy, such as allergic rhinitis or hay fever.
- A flare-up of a long-term condition such as asthma, chronic obstructive pulmonary disease (COPD) or chronic bronchitis.
- Inhaled dust or smoke.

In rare cases, a short-term cough may be the first sign of a health condition that causes a persistent cough.

Persistent coughs

A persistent cough may be caused by:

- A long-term respiratory tract infection, such as chronic bronchitis.
- Asthma – this also usually causes other symptoms, such as wheezing, chest tightness and shortness of breath.
- An allergy.
- Smoking – a smoker’s cough can also be a symptom of COPD.
- Bronchiectasis – where the airways of the lungs become abnormally widened.
- Postnasal drip – mucus dripping down the throat from the back of the nose, caused by a condition such as rhinitis or sinusitis.
- Gastro-esophageal reflux disease (GORD) – where the throat becomes irritated by leaking stomach acid.
- A prescribed medicine, such as an angiotensin-converting enzyme inhibitor (ACE inhibitor),
which is used to treat high blood pressure and cardiovascular disease.

Rarely, a persistent cough can be a symptom of a more serious condition, such as lung cancer, heart failure, a pulmonary embolism (blood clot on the lung) or tuberculosis.

Coughs in children
Coughs in children often have similar causes to those mentioned above. For example, respiratory tract infections, asthma and GORD can all affect children.

Causes of coughs that are more common in children than adults include:

- Bronchiolitis – a mild respiratory tract infection that usually causes cold-like symptoms.
- Croup – this causes a distinctive barking cough and a harsh sound known as stridor when the child breathes in.
- Whooping cough – look out for symptoms such as intense, hacking bouts of coughing, vomiting, and a "whoop" sound with each sharp intake of breath after coughing.

Occasionally, a persistent cough in a child can be a sign of a serious long-term condition, such as cystic fibrosis.

When to see your doctor
There’s usually no need to see your doctor if you or your child have a mild cough for a week or two. However, you should seek medical advice if:

- You’ve had a cough for more than three weeks.
- Your cough is particularly severe or is getting worse.
- You cough up blood or experience shortness of breath, breathing difficulties or chest pain.
- You have any other worrying symptoms, such as unexplained weight loss, a persistent change in your voice, or lumps or swellings in your neck.

If your doctor is unsure what’s causing your cough, they may refer you to a hospital specialist for an assessment. They may also request some tests, such as a chest X-ray, allergy tests, breathing tests, and an analysis of a sample of your phlegm to check for infection.

What treatments are available?
Treatment isn’t always necessary for mild, short-term coughs because it’s likely to be a viral infection that will get better on its own within a few weeks. You can look after yourself at home by resting, drinking plenty of fluids, and taking painkillers such as paracetamol or ibuprofen.

Cough medicines and remedies
Although some people find them helpful, medicines that claim to suppress your cough or stop you bringing up phlegm are not usually recommended. This is because there’s little evidence to suggest they’re any more effective than simple home remedies, and they’re not suitable for everyone.

The Medicines and Healthcare products Regulatory Agency (MHRA) recommends that over-the-counter cough and cold medicines shouldn’t be given to children under the age of six. Children aged 6 to 12 should only use them on the advice of a doctor or pharmacist. A homemade remedy containing honey and lemon is likely to be just as useful and safer to take. Honey shouldn’t be given to babies under the age of one because of the risk of infant botulism.

Treating the underlying cause
If your cough has a specific cause, treating this may help. For example:

- Asthma can be treated with inhaled steroids to reduce inflammation in your airways.
- Allergies can be treated by avoiding things you’re allergic to and taking antihistamines to dampen down your allergic reactions.
- Bacterial infections can be treated with antibiotics.
- GORD can be treated with antacids to neutralize your stomach acid and medication to reduce the amount of acid your stomach produces.
- COPD can be treated with bronchodilators to widen your airways.

If you smoke, quitting is also likely to help improve your cough.

*Parts of this article were sourced from information printed by the UK’s National Health Service.*
Energy conservation generally refers to methods used to reduce energy usage. This is like switching off some of the lights or using stairs instead of lifts, etc. This activity is associated with some level of inconvenience to the user. But when we adopt certain measures to increase the efficiency of the equipment or design a system to curtail the unnecessary usage, we achieve conservation through energy efficiency. Here are some simple methodologies developed and successfully tried by the Export Maintenance Team to achieve this target in indoor and outdoor electrical loads. The same can be adopted at any offices, homes and other buildings with minimal effort.

The Indoor Electrical Load Control

The indoor electrical loads in offices consist of lights, air conditioning, computers, heaters, kitchen equipment, fire alarm systems, etc. It can be noted that some of them need to be continuously on and some could be switched off after office hours.

Therefore, the first step in achieving conservation is to identify and segregate these loads into “Office Time Loads” and the “Full Time Loads”. We target only in the Office Time loads as they can be controlled with least disturbance to consumers after the office hours.

The power sockets for computers, finger printing system, exit lamps, surveillance cameras, air conditioning for sensitive electronic equipment, fire alarm systems, etc. are considered to be critical and shall be redistributed from a “Critical Load DB” at the local DB Room. General area lighting and air conditioning systems are considered to be Office Time Loads and will be redirected to a separate DB. The air conditioning system in offices consumes more than 60% of total loads in any office and thus optimizing its usage makes huge saving compared to all other loads.

The System Description

The occupancy sensors in the individual rooms are wired to switch the lights during non-occupancy for a predetermined period. In the open cubicle office, the area is divided into zones and the occupancy sensors in these zones are connected in parallel. This will switch off lights in the zone, if unoccupied by everyone.

The AC in the office is also controlled zone wise. Here, the combined output of the sensors are connected to a contactor which controls the power supply of the ACs. In the event of non-occupancy, the supply will be switched off automatically. ACs in occupied zones shall continue to work as normal till everyone leaves.

The Schematic

A major part of the general lighting system is connected through the sensors as shown in Figure 1. The ACs also shall be switched off in case the zone is unoccupied. But during summer, it is advisable to limit the temperature to a safe level for the furniture and other items in the office. This is achieved by a high set thermostat installed at a representative location inside the office to switch ON all AC’s together for half an hour if the temperature reaches the limit. In other words, the said system works as an automatic set point adjusting gadget.

The system was installed at the Export Maintenance Team office two years ago and is functioning very well. The installation requires only a small modification in the DB room with a negligible cost. Comparing with the Building Management System (BMS), it does not require any separate room or software for functioning. Any regular electrical personnel can install and operate it.
and is suitable for both new and old buildings. The cost of installation is negligible compared to the saving it offers.

The system ensures that the temperature in the office never exceeds 38 degrees during OFF hours. As soon as the first person enters the office in the morning, the AC system starts functioning and attains the set point within 3 to 4 mins. It has also been noted that the ACs were switched ON only 1-2 times in the off duty hours through the high set thermostat during the summer seasons. As the ACs constitute the largest portion of loads in the office, the system has recorded a total saving more than 50% from its original figures.

**Outdoor Light Control**

Outdoor lights are a major consumer of electrical energy for both industrial and domestic locations. Street lights and area lighting are generally kept ON for the entire night irrespective of the requirement. Conventional methods of controlling the same includes timers and photocells, etc.

Photocells sense the amount of light falling on its sensors and switches the lights accordingly. It can be seen that the sensor cover gets deposited with dust and other items which make the same opaque. This makes the system less sensitive and results in switching ON the lights much earlier in the evenings and switch OFF late in the mornings. Lights also switches ON during daytime due to rain or sand storm.

An astronomical timer is a special time switch which can be programmed to switch ON & OFF the lights based on the actual “Sunset” and “Sunrise” time corresponding to any specific location on earth by feeding the GPS coordinates of the same. Provision is also available to make an offset to the set time to accommodate a special requirement of any site.

In the export area, astro-timers have been installed on an experimental basis for more than a year and successfully tested its effectiveness during all seasons. It has been calculated that the energy saving is almost 40% from its earlier figures.

**Conclusion**

Energy conservation has gained a lot of importance in the present world as the major part of the energy is still deriving from the non-renewable resources itself. The estimate on the extent of availability of such sources are published regularly in the media and is alarming. In order to sustain the world for a few more generations, it is a must to reduce its consumption rate. This is really a tough task as the energy requirement keeps on increasing due to the increasing population as well as due to the rapid urbanization.

Energy conservation through energy efficiency has a better edge due to the less impact on the comfort level of the user. Utilizing energy efficient equipment and adopt measures to avoid wasting of energy has a great potential in conserving the same. The automatic control system such as mentioned above can offer real returns as they are simple and easy to implement. Energy conservation shall be effective only if it is practiced by everyone who uses it.
Here at The Kuwaiti Digest, we have a special word for Kuwaiti winters: Paradise. After the brutal months of summer, what could be better than the cooler weather, clear skies, and crisp air that we are currently experiencing? In our opinion, this type of weather is hard to beat, and there is plenty to do in Kuwait over the next few months: Desert excursions, beach trips, picnics at the park, lunch outside by the seaside – your options are practically endless.

However, for the more adventurous and restless among us, the winter months open up doors for other possibilities, namely, travel. If you are one of those individuals that happen to fall into that category, why not consider the fast-paced metropolis of Tokyo, Japan, where modernity and tradition collide?

Tokyo is Japan’s capital and the world’s most populous metropolis. It is also one of Japan’s 47 prefectures, consisting of 23 central city wards and multiple cities, towns and villages west of the city center. The Izu and Ogasawara Islands are also part of Tokyo.

Before 1868, Tokyo was known as Edo, which was a small castle town in the 16th century. Edo then became Japan’s political center in 1603 when Tokugawa Ieyasu established his feudal government there. A few decades later, Edo had grown into one of the world’s most populous cities. With the Meiji Restoration of 1868, the emperor and capital moved from Kyoto to Edo, which was renamed Tokyo (“Eastern Capital”). Large parts of Tokyo were destroyed in the Great Kanto Earthquake of 1923 and in the air raids of 1945.
Today, Tokyo offers a seemingly unlimited choice of shopping, entertainment, culture and dining to its visitors. The city’s history can be appreciated in districts such as Asakusa, and in many excellent museums, historic temples and gardens. Contrary to common perception, Tokyo also offers a number of attractive green spaces in the city center and within relatively short train rides at its outskirts.

The sheer size of Tokyo means you’ll never run out of things to see and do. Start by scaling the 634 meter high Sky Tree, the world’s second tallest structure after Dubai’s Burj Khalifa. On a clear day, you can see the whole Tokyo metropolitan area and as far as Mount Fuji.

Anime lovers should take the train to the suburb of Mitaka to visit the stunning Studio Ghibli museum, which is full of classic characters from the films of Hayao Miyazaki. It offers an amazing insight into modern Japanese culture. Afterwards, head back to Shinjuku Station and lose yourself in the maze of shops and restaurants underneath the vast, ultra-modern terminal.

Set your alarm to see Tsukiji Market come to life in the pre-dawn hours. The world’s largest fish market is the place to eat the best sushi of your life at knockdown prices, but if the lines outside the restaurants are too long for your liking, check out the tempura stands instead. If shopping factors high on your list of things to do, go shopping in high-end Ginza or try and fit in with the fashionistas in ultra-hip Harajuku. The latter is the best place to see Tokyo’s most cutting edge fashions.

Tokyo stuns with its contrasts. One minute you’re lost in Shiodome’s skyscraper jungle, the next in quiet contemplation beside a carp pond in the Zen-like Hamarikyu Gardens. Too vast to grasp, this city is all about delighting in the details, whether you’re watching locals retrieve their fortunes from wooden drawers at the Buddhist Senso-ji Temple or enjoying springtime cherry trees in bloom in Ueno Park, home to the treasure-trove Tokyo National Museum. Across the color-changing Rainbow Bridge lies artificial island Odaiba’s futuristic cityscape and Edo-style hot springs.

As the 2020 Olympics loom, Tokyo’s popularity is certain to boom further. Get there now to see why it remains one the world’s most captivating cities.
No Barriers
An Interview with Maria Capello

As part of a series of articles that highlight the work and achievements of female professionals throughout the Company, The Kuwaiti Digest recently sat down with Maria Capello, who currently assumes the very demanding role of Executive Advisor at KOC. In her capacity as Executive Advisor, Maria Capello is responsible for a broad range of consultancy services for the Company’s senior leadership; however, as readers will learn in the interview that follows, her work does not simply stop there. Currently, the primary focus of her work concerns itself with the coordination and standardization of reservoir management best practices across KOC. In addition, Capello serves as Advisor to the Professional Women Network, which she helped found. She is also a Distinguished Member and Lecturer at the Society of Petroleum Engineers (SPE), and she has served as Vice President of the Society for Exploration Geophysicists (SGE), where she is currently a Council Member.

Maria Capello is a trained physicist who has worked on three continents throughout her career. Her Italian-Venezuelan background brings a unique advantage to international workplaces where the ability to navigate through a multicultural workforce is held in high regard. With a degree in Physics from Venezuela’s Simon Bolivar University and an MS in Geophysics from the Colorado School of Mines, Capello is more than qualified to help carry companies like KOC into the future as they seek to create greater efficiency while adhering to a broad set of best practices. In the following interview, we ask Maria Capello about her life, career, and how best to address some of the challenges facing women in the oil and gas industry.
TKD: You prepared for your career by studying physics and geophysics. When did you know you wanted to work in the oil and gas industry?

Maria Capello: As part of my career in physics there were three options when I was a student at Simon Bolivar University in Venezuela: Plasma, Theoretical and Geophysics. Starting in my fourth year, we began to study Petroleum Geology and Methods of Geophysics. At the time, I was lucky to have a very good professor who engaged all the students. He imparted firsthand knowledge to us about geology, and we visited a great number of museums and sites in the field where we could directly witness and understand the material we were studying. We were very lucky, actually, because in Venezuela we have fantastic mountains and we can view the natural elements and geological structures and strata, and after learning and truly understanding all this material, it was absolutely impossible for me to drive around and not see the geology of the topography. I remember telling myself, “Now I see!” because when you learn about the geological structure of the world around, you truly do see things anew. It was around that time that I discovered I had a passion for geology and geophysics.

In my fifth year of study we were required to seek out internships related to our field of study, and while my peers looked for placements in scientific companies and organizations, I looked to the oil industry. However, nobody from the physics department had done that before, so I had to apply myself in order to submit all the necessary paperwork and be approved. In the end, I was the first person from Simon Bolivar University to conduct an internship in the oil industry, and I was very proud of that. The internship allowed me to conduct seismic surveys and see the relevant department, all while learning as much as I could. It was a fantastic experience, and I was hooked forever.

TKD: You have been with the Company for eight years. How did you find yourself working for KOC?

Maria Capello: In Venezuela there was a difficult time in 2003. By 2005, I remained active in the oil industry and I was Practice Manager for Halliburton for all of Latin America. In 2005, I was also Vice President of SEG, and it was that year that I went to Houston with my husband, who also works in the oil industry. While there he was offered a job at Kuwait Oil Company, so after a very detailed analysis of the pros and cons he decided, and I agreed, that he would go to Kuwait for a couple years and then when the situation in Venezuela improved, we’d go back.

As soon as he went to Kuwait I went to visit my mother with my two daughters. The situation there was dramatic in terms of security, and as fate would have it, my daughters and I were kidnapped and were taken around in what is known in Venezuela as an “express kidnapping.” After eight hours, we were left stranded outside the city. It was a horrible experience. We had to walk for hours before we could make it to safety. After the event, I took some days to recover and realize what happened. When I went back to work, I asked for a transfer to the Middle East so that my family could be together. After a week, a position for an Operations Manager based in Kuwait opened up. I couldn’t believe it, and I applied immediately. After some back and forth, I received the job, but I was in the unique position of being the first female manager for Halliburton in the Middle East. This was about 2006, and in 2008, as we all know, the recession hit, affecting oil prices. I have been in the industry long enough to know what happens to service companies in situations like this, so I began knocking on KOC’s door.

I was interviewed by Badria Abdul Raheem, who was a Manager at the time. I then went through a second round of interviews with a number of Team Leaders before finally receiving the approval of Hashem Hashem, who was then a DCEO. I was then hired and placed in a high position where Badria Abdul Raheem asked me to report directly to her. Shortly after, I began supporting Hosnia Hashem, DCEO at the time, with KOC’s regional role in SPE. I also worked very closely with a number of Managers and DCEOs at KOC where I helped advance a variety of initiatives for the Company, in addition to offering directional and motivational support to a variety of individuals and projects. This, I believe, is why I’m here today. Throughout the years, my work has been interesting and motivating, and through the journey I have developed many different initiatives. Sometimes I wonder how it is that I could have
stayed on for so long, but I have changed roles many times in my time here, so there are always new challenges for me to tackle, and I think in that sense I have been very blessed.

**TKD:** Can you speak a bit about your work as it relates to the Steering Committee for Reservoir Management Best Practices?

**Maria Capello:** This is a committee that is aiming to standardize best practices that the Company looks to implement for reservoir management. It was an initiative from former CEO Hashem Hashem that aims to identify the main gaps we need to fill in order to advance KOC as an international oil company that utilizes the best standards in the world for reservoir management. Trying to do this from a team-level point of view was difficult, so it was decided that all Managers from Field Development, Planning, Well Surveillance, and all stakeholders would shape a team – the Steering Committee for Reservoir Management Best Practices – to implement and envision the best practices needed. Strong coordination was needed for this undertaking, in addition to envisioning a way to implement it, and I effectively filled that role and worked closely with the secretary of the steering committee. Part of our work concerns the implementation of the PEEPS project, which aims to underscore the need for field development best practices while also considering feedback from users, because we realized early on that there is a need to understand their views as well.

**TKD:** You were recently the author of a webinar entitled: “Embracing Multiculturalism.” Can you tell us more about that?

**Maria Capello:** I was selected as a Distinguished Lecturer by SPE to host a webinar that touched on my own vision of embracing multiculturalism. I am the embodiment of multiculturalism - I’ve always been part of the minority, and the minority has to adapt. My family is Italian, and they immigrated to Venezuela in the 1950s when the country was accepting immigrants to help develop the country and its infrastructure. My father was a civil engineer and my mother’s family owned an Italian restaurant – the only one in town. Naturally, it catered to the many Italians working on various projects around the area, and eventually my parents met and fell in love before moving to Caracas, where I grew up.

It was in Caracas, when I was in elementary school, that I discovered that I was different. I must have been five or six years old at the time, and I was playing jacks with some of the other girls on the floor. One of them said to me, “You have green eyes!” I said, “Really?” I then went running to the bathroom and noticed, for the first time, that I did in fact have green eyes. I still remember that to this day, and I also remember feeling embarrassed if my mother spoke Italian to me when she picked me up from school. Everyone would say, “Look at the Italian girl!” During university, the competition that existed there and the commonly held belief that women shouldn’t study math or physics built a strength in me. I knew I had to work harder and stronger, and this paid off because my determination led to me being first in my class.

Later, over the course of my internship and at the beginning of my career, I was also a minority. As an Italian-Venezuelan, as a woman, as a foreigner in Colorado when studying for my MS, and even today in Kuwait, I am a minority. It is my belief, however, that multiculturalism comes from always being the minority. But the minority, by working together and supporting each other, can in fact achieve much more. Through my webinar, I wanted to show that multiculturalism has to be embraced from within, and I wanted to demonstrate...
that by understanding what drives peoples’ behavior, you can then be flexible and adapt accordingly. I think that understanding is key, and it is up to each of us to better understand our colleagues from different backgrounds so that we can understand where they are coming from, their points of view and their mentality so that we can then expand our flexibility, which was the focus of the presentation.

**TKD:** You played a very active role in the establishment of the Professional Women Network. Can you speak about the organization and how it got started?

**Maria Capello:** The establishment of PWN is an interesting story. When Badria Abdul Raheem introduced me to Hosnia Hashem, one of the things I took away from our first meeting was the fact that many senior officials from around the world, when visiting KOC, were surprised that the Company had a woman in such a senior role. Hosnia Hashem asked me what we could do to make known to Kuwait and the rest of the world that there were many female professionals in senior positions throughout the K-Companies. After her request was made to me, I developed a proposal for a professional women’s network that not only promoted this type of awareness, but which was also focused on helping women network and advance their careers in the oil and gas industry. Part of this proposal was to instill a “no barriers” attitude among female employees, and this idea was very much welcomed.

Our first event took place in 2009 after much planning and consideration. As we were organizing the event, we discussed who could fill the role as keynote speaker. I remembered that the US Ambassador to Kuwait was a woman – Deborah Jones. I brought up the idea, which was well-received, and began making the preparations to meet with the Ambassador. The planning and coordination resulted in a morning I will never forget as a breakfast was arranged for me, Hosnia Hashem and Badria Abdul Raheem to meet with Deborah Jones at the US Embassy. It was truly an unforgettable experience at the home of the US Ambassador, where we were provided with a tour of the private residence and grounds by the Ambassador herself, who also agreed to be the keynote speaker at our first PWN event.

**TKD:** What are some of the challenges facing females in the oil and gas industry?

**Maria Capello:** There is an often repeated saying that women have to work twice as hard as their male counterparts, which I believe is true. If you calculate the ratio or percentage of women in circular appointed roles compared to men, you will find that men have three more chances to become a circular appointed employee than if they were women. The facts show the gaps, and while in the last two years the raising of awareness has been amazing, what is required now is some structural intervention. We are in the process of suggesting that the time has come to establish guidelines and quotas for female employees, and we are also working on obtaining exceptions for females so that they can begin working in operational roles. We need to be able to recruit more women for these roles, and after recruitment we must establish guidelines for promotion. If there are no women in the pipeline, we have to ask ourselves: Why?

I believe that we are now mature enough to understand that change will not come from the women alone. Our actions should be addressed to the men, for it is necessary for us to have them on our side. As part of this, one of the things we want to do is change the name of the Professional Women Network to the Professional Growth Network, because we have to be inclusive of men. If we don’t change the mentality of men, how will we change the processes?

**TKD:** What is your advice to young women seeking to break into the oil and gas industry? What is your advice to young women in general as they begin their careers, in any field?

**Maria Capello:** In brief, I would say that participation and volunteering has given me a global network to tap into. In terms of experiences, I have learned from the many colleagues along the way that have helped me grow professionally. In terms of advice, I would say having a “no barriers” attitude is essential, as is participating from day one. Never say no to opportunities. It all starts with action – participate, ask questions, and be active. You are never ready for your next role – if you assume a position fully equipped with all the knowledge to conduct every task, it is a demotion. There has to be space for you to grow. Take the challenge before you and empower yourself.
Under the auspices of His Highness the Amir Sheikh Sabah Al-Ahmad Al-Jaber Al-Sabah and with His Highness the Amir in attendance, the inauguration ceremony for the Sheikh Jaber Al-Ahmad Cultural Center was held recently in Kuwait City.

Upon arrival, His Highness the Amir was received by Deputy Minister of Amiri Diwan Affairs Sheikh Ali Jarrah Al-Sabah, Minister of Information and Minister of State for Youth Affairs Sheikh Salman Sabah Salem Al-Humoud Al-Sabah, Minister of Education and Minister of Higher Education Dr. Bader Al-Essa and Head of the Amiri Diwan’s Financial and Administrative Affairs Abdulaziz Ishaq.

The ceremony was attended by His Highness the Crown Prince Sheikh Nawaf Al-Ahmad Al-Jaber Al-Sabah, Sheikha Moza bint Nasser, former National Assembly Speaker Marzouq Al-Ghanim, senior members of Kuwait’s ruling family, Deputy Chief of the National Guard Sheikh Mishaal Al-Ahmad Al-Jaber Al-Sabah, His Highness Sheikh Nasser Al-Mohammad Al-Ahmad Al-Sabah, His Highness the Prime Minister Sheikh Jaber Al-Mubarak Al-Hamad Al-Sabah, First Deputy Prime Minister and Foreign Minister Sheikh Sabah Al-Khaled Al-Hamad Al-Sabah, Deputy Prime Minister and Minister of Defense Sheikh Khaled Al-Jarrah Al-Sabah, Deputy Prime Minister, Minister of Finance and Acting Oil Minister Anas Al-Saleh and other senior state officials.

The ceremony began with the playing of Kuwait’s national anthem followed by a speech given by the Deputy Minister of Amiri Diwan Affairs. In his speech, Sheikh Ali Al-Jarrah said that the inauguration was a momentous day for the country, and that as a cultural landmark, the Jaber Al-Ahmad Cultural Center has been officially opened. He added that His Highness the Amir’s attendance augmented the joy of the occasion, noting that the center will be instrumental to the development of the cultural sector in the country.
Sheikh Ali Al-Jarrah also said that the nation now has the opportunity to enjoy the cultural center and that he was confident that similar major achievements will follow. He then thanked the country’s leadership, wishing Kuwait continued prosperity.

His Highness the Amir’s patronage of the opening of the Sheikh Jaber Al-Ahmad Cultural Center is a testament to his unbridled support of national culture and arts, Minister of Information and Minister of State for Youth Affairs Sheikh Salman Sabah Salem Al-Humoud Al-Sabah said at the event. Sheikh Salman, who is also President of the National Council for Culture, Arts and Letters (NCCAL), said that the center is a milestone in the nation’s history and is part of efforts to introduce a new cultural renaissance in the country.

In regard to the opening of the new cultural center, Sheikh Salman said that it was a watershed moment that will induce a cultural boom, thanks to the efforts of His Highness the Amir. He also described the center as a catalyst that will help catapult Kuwait into cultural prominence.

The Minister of Information also noted that the center is a landmark befitting lofty contributions made by the people of the nation, while it serves as further affirmation of the country’s leadership’s belief in culture as a pillar of society. Regarding the structure itself, the minister said that it covers an area of 214,000 square meters with three elements comprising the complex, in addition to musical and exhibition centers.

Sheikh Salman then thanked His Highness the Amir for inaugurating the center, which he described as a bastion of culture and arts that will go a long way to enhance Kuwait’s cultural ties with other Gulf and Arab nations.

After a short documentary and a musical performance, His Highnesses the Amir and His Highness the Crown Prince were presented with commemorative gifts.
During the 1990/91 invasion, heavy and devastating damages were inflicted throughout the Kuwait’s various economic, industrial, and infrastructure sectors. Kuwait’s oil industry was the most devastated sector of all, and the extent of the destruction caused at oil installations and facilities was unprecedented in the history of the modern oil industry.

The destruction unleashed on the oil installations and facilities was devastating and widespread. The first step taken by Kuwait Oil Company’s management was to conduct an exhaustive survey of the damage sustained in the production areas. After determining the extent of damage, remedial measures began. An estimated 80% of oil wells were ignited by retreating forces, and ten gathering centers were totally destroyed. The amount of destruction in other areas varied. Gas booster stations and oil tank farms underwent varying degrees of damage while 13 tanks in the South Tank Farm and eight in the North Tank Farm were destroyed. The Sea Island facilities were also totally destroyed, and the North and South Piers required extensive repair and restoration work.

Al Awda (The Return) Project

KOC employees who remained in Kuwait during the occupation could only watch in horror at the scale of the destruction. No one thought that it was possible for the damage to be controlled, let alone repaired. But elsewhere in the world, other members from KOC were planning a contingency plan. Their
efforts were named “The Al Awda Project,” or in other words, “The Return.” KOC teams in the United States of America, Europe and the Gulf Cooperation Council countries worked on the Al Awda project. They secured the contracts, equipment and personnel necessary to combat the environmental disaster and to assist in the restoration of production facilities to enable the production of oil and refined products for local consumption.

Al Ta’meer (The Reconstruction) Project

After the successful completion of the Al Awda phase, the Project was renamed “Al Ta’meer” - The Reconstruction. The focus of Kuwait Oil Company’s efforts moved towards the rehabilitation of 18 damaged Gathering Centers and the restoration of oil production to pre-war levels. Additional efforts were concentrated on the recovery and treatment of an estimated 20 million barrels of weathered crude oil from approximately 240 surface oil lakes, the rebuilding of over 40 storage and process tanks, and the refurbishment of the oil export facilities.

Kuwait Wild Well Killers Team

The Kuwait Wild Well Killers team was formed on September 9, 1991 to fight the oil well fires of Kuwait. The team was comprised of individuals with various specializations which included fire fighters, drilling operators, petroleum engineers, support servicemen and safety engineers. The team from Kuwait astonished foreign firefighting teams and observers when they extinguished the first burning well in a record of 12 minutes. The team then went on to extinguish wells east of Um-Ghudair before joining other teams to extinguish the largest oil well fire at Burgan 160.

The team worked 14-hour days, and thanks to the zeal and enthusiasm of its members, the team was able to reduce the time needed to extinguish an oil well to one day and two hours compared to other teams from around the world that took three days and eight hours for each well. To fully extinguish a single oil well required a process that involved many phases.
First, the site was prepared and combed, mines and barb wires were removed from the areas surrounding the well, and its nearby oil lakes were emptied. This first process was conducted in order to allow the land to more quickly recover to its natural state.

The second phase consisted of extinguishing the well, cleaning its head after a very close and thorough inspection, and an examination and preparation of all necessary equipment and measurements. The extinguishing process was carried out either through oil pumping or by installing a piece inside the wellhead that already existed during the oil flow. After the second phase, the well was sprayed with cool water. The third phase dealt mainly with repairing the wellhead and preparing it for operations. Three wells on average were extinguished daily, and the maximum number of wells controlled in one day was thirteen.

Capping the Last Burning Well

Of the 700 oil wells that were torched by the former Iraqi regime before its defeat in 1991, the Kuwait Wild Well Killers were able to extinguish 41 wells. This was achieved as a result of the members’ experiences gained from practical and theoretical training courses in and outside the State of Kuwait that came in addition to their weekly training that dealt with extinguishing simulated burning wells.

The capping of the last burning oil well was conducted during a ceremony that was held under the auspices of the late Amir, His Highness Sheikh Jaber Al-Ahmad Al-Jaber Al-Sabah, on November 6, 1991. This day is internationally recognized by the United Nations as the International Day for Preventing the Exploitation of the Environment in War and Armed Conflict.

Approximately one million gallons of seawater were used by the Kuwaiti Fire Team per day in the operation to bring burning oil wells under control.

KOC's export facilities were also damaged during the invasion.
1991
A Kuwaiti employee attempts to control a wellhead.