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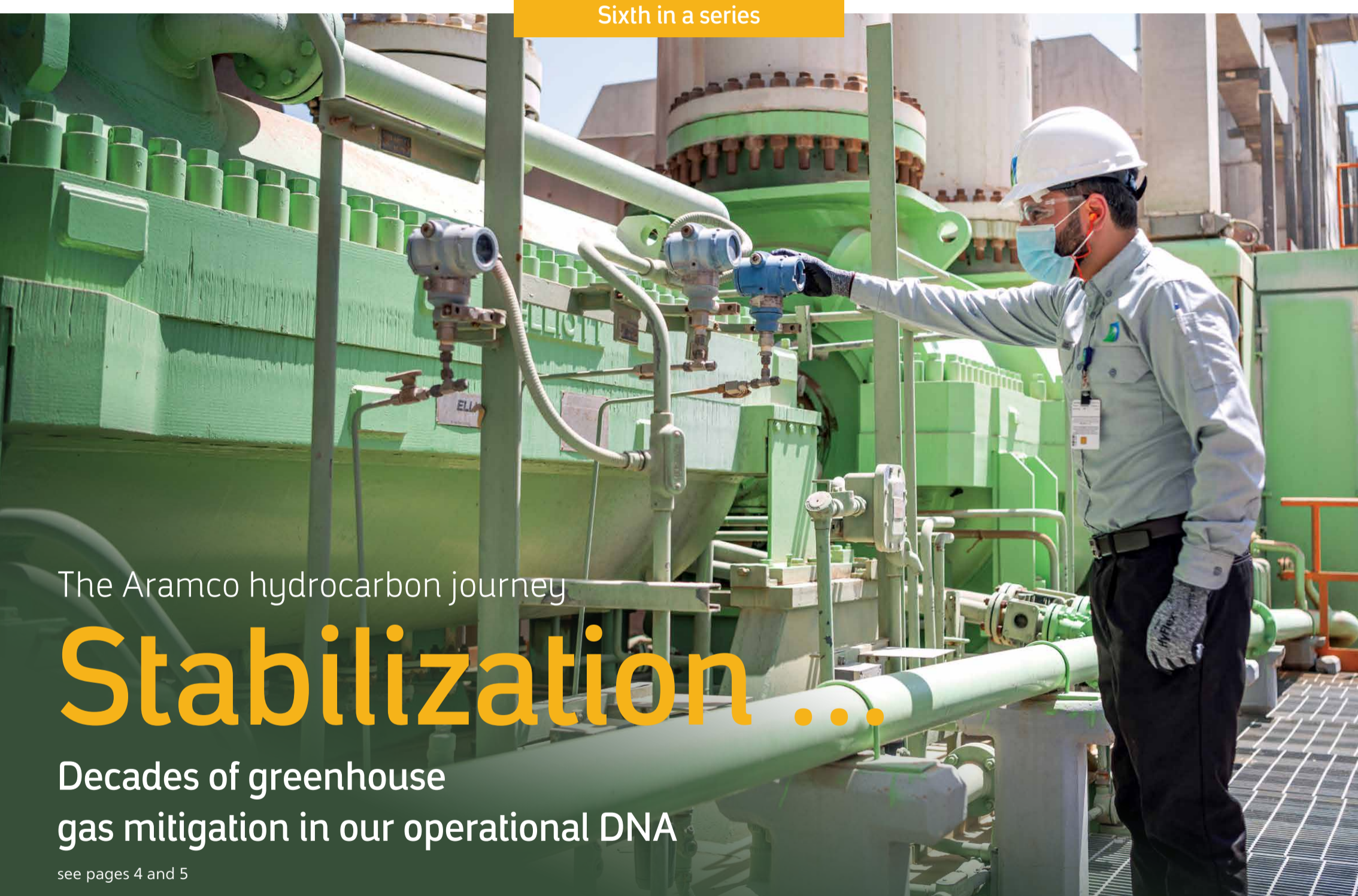


Haradh Gas Plant wins the GPA Environmental Excellence Award

See page 3

Aramco Team Series moves to New York

See page 6



Sixth in a series

The Aramco hydrocarbon journey

Stabilization ...

Decades of greenhouse gas mitigation in our operational DNA

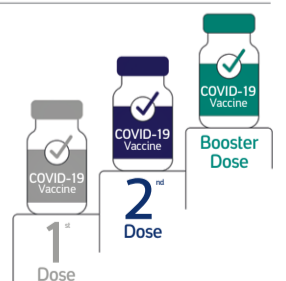
see pages 4 and 5

Scan the QR code to see the JHAH FAQs webpage.



Together we can end the pandemic: Important COVID-19 vaccination update

JHAH is pleased to offer **COVID-19 booster vaccinations** in line with Ministry of Health (MOH) directives. Currently, the booster dose is available to Aramco employees and their eligible dependents **aged 60 years or older**, who received their second dose at least eight months ago.



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Enhancing decision making in operations

Power Systems Technical Forum shares digital solutions

Digital technologies are transforming the safety, reliability, and efficiency of the energy industry, and the Power Systems Engineering Department (PSED) recently hosted a virtual Technical Forum titled "IR 4.0 Solutions toward Excellence in Electrical System Reliability and Maintenance," to highlight digital solutions that are having a significant impact in operations.

Power Systems executive director Hasan J. Al Zahrani inaugurated the forum, telling attendees, "To drive business growth, we need to stay vigilant toward the age of digitalization and automation, as those two are the key concepts of reaping productivity and profit gains."

PSED manager Jobran A. Refai told participants that PSED's objective is to create value for its customers and to improve asset reliability and maintenance.

The forum included 10 technical topics associated with implementing IR 4.0 technologies on generation, transmission, and distribution assets across the PS's value chain.

Digital Twin

Like a virtual mirror, a digital twin re-



Attendees at the event got the chance to ask questions to SMEs on IR 4.0 technologies.

“The forum highlighted digital solutions that are having a significant impact in our operations.”

flects the state of a physical asset and helps to optimize the design and operation of a device, predicting future faults with the goal of reducing or eliminating unplanned outages.

"The goal of a Digital Twin is to automate complex engineering tasks so that the results are always at your fingertips to improve decision making," said Bobby Noble, a digital twin expert from EPRI.

Optimized General Dispatch

This innovation provides optimized generation dispatch for the Shaybah power grid, and has been fully completed in-house.

In their presentation, Michael Burke, a PSED engineer, and Muhannad A. Al-Mulla, a power dispatch coordinator at Shaybah Power Dispatch, said the optimized tool helps Shaybah decision makers to dispatch sufficient generation to meet user-specified power demands.

Robotic Process Automation

Ahmed Alssaggaf, Jawahir Al-Shalfan, and Hani Alhashimi, experts from SEC shared how their company had implemented robotic process automation (RPA) to automate enterprise processes in financial transactions. RPA handles the repetitive, routine, and structured processes and other important and sensitive work. By employing RPA

solutions, companies can save time and money while allowing the employee to handle meaningful tasks that require human experience and problem solving capabilities.

Intelligent Maintenance Recommender System

Developed by Yokogawa, the Intelligent Maintenance Recommender System recommends actions for new defects, said Abdullatif Alnajim and Abrar Alamoudi, Yokogawa representatives.

Your voice

The business problem that is Big Data



By Ashish J. Abraham
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Big Data is a very catchy term that sounds straight forward but is tricky in reality. We all know what the word "big" means and we know what the word "data" means; put them together, and boom, both words instantly became more interesting and makes one an instant geek.

A traditional method of handling the data is to store it and process it in a single computer and every time the computer capability is not enough, we upgrade it with a better one — as a vertical upgrade. However, in some cases, these traditional methods are no longer feasible for the business needs and that's where big data comes in.

The value of data

Generally, big data is classified using the concept of the five Vs: volume, velocity, variety, veracity, and value. Let's consider the data in the health industry as an example. Hospitals across the world collect 2,314 exabyte (1 exabyte equals 1 billion gigabytes) annually in the form of patients' records, test results, etc. All of this data is generated at a very high-speed rate, which attri-

butes to the velocity of big data. The collected data is of different variety: patient visits, log files, blood test results, X-ray images, and CT scans. We need to keep the veracity of data in mind, knowing that some data may have come from faulty or non-calibrated sensors. But last, all of this data, when analyzed properly, can have value: it can enable faster disease detection, better and faster treatment with a lower cost, for instance.

Opportunities

The business applicability of big data is significant. Some of the broad applicable areas are cybersecurity, health care, tax compliance, business forecasting, blockchain in the oil and gas industry, and the list goes on. The opportunities are plentiful, all we need is a strong link between a well-defined business objective and the use of big data technology.

There are many proven frameworks in the market that handle big data, i.e., Casandra, Hadoop, and Spark, etc., all of which use nontraditional methods of dealing with data. For example, Ha-

doop stores big data using a technique called distributed file system, where a big file will be broken into smaller chunks and stored in different computers. Similarly, processing the data will also be distributed among multiple computers, known as parallel processing. Once the data is stored and processed it can be analyzed to extract knowledge and insights from it with all the Vs applied giving the advantages back to business. Choosing the right technology to implement and to reap its success can be summed up by, "To implement Big Data, take small steps."

One of the biggest misconceptions of starting with big data is to think of it as a solution to an IT problem. A better way of looking at it is as a tool to solve a business problem. There is no point in collecting and storing all this data and then doing nothing with it. Instead, as now you know what big data is and how it can be used, look around you to determine and define a business problem that you would like to solve. Then, start with a small set of data and try to solve the problem. Once you are successful in solving it, scale up gradually, and that's how big data will find you.

Your Voice reflects the thoughts and opinions of the writer, and not necessarily those of the publication.

Downstream shares safety and manufacturing excellence with visiting Motiva team

Driven by the Downstream Global Manufacturing Admin Area's records in health, safety, security and environment (HSSE) and manufacturing excellence, the Affiliates Manufacturing Excellence (AME) hosted a team from Motiva's executive management, to learn from Aramco's safety and manufacturing excellence, as part of promoting and disseminating the downstream excellence culture. Motiva is the largest refinery in North America and a wholly owned subsidiary of Aramco.

The program strives to establish a long-lasting partnership between Aramco's Downstream affiliates and its operating facilities, leveraging the newly launched downstream model to create new knowledge and best practices exchange channels in the HSSE and manufacturing management fronts. The program was based on direct dialogue as well as field performance review and engagement at a number of best performing Downstream facilities.

Deep dive into safety

The program began in east Ras Tanura, where Motiva's management attended the safety Boot Camp course. Throughout the course, Motiva's team went for a deep dive into Aramco's Safety Management System. Following the Boot Camp program, the visiting team went to the Ras Tanura Refinery (RTR), where they observed the engagement of RTR management in field safety.



Members of the Motiva team met with Mohammed Y. Al-Qahtani during their recent visit to Aramco facilities.

Motiva's team then went to visit Aramco facilities at Yanbu' where they experienced Yanbu' Refinery's 3-D Hub and the breakthroughs in 3-D printing. Following the Yanbu' Refinery visit, the team participated in the Yanbu' Natural Gas Liquids Fractionation (YNGLF) Quarterly Safety Inspection along with area management and observed YNGLF Innovation Center 4IR implementation.

Motiva's team then went south to the Jazan Refinery Complex (JZRC), where they experienced the JZRC safety management journey during construction and commissioning. During the visit, the senior vice president of Downstream,

Mohammed Y. Al-Qahtani, met with the team and encouraged such collaboration across the Downstream portfolio, embarking on the newly launched operating model.

Operational and safety excellence

The team then returned to the east, visiting SATORP in Jubail, OSPAS, the Loss Prevention Department (LPD), Operational Excellence (OE), and Environmental Protection (EP). At SATORP, the team observed the operational and safety excellence and discussed future collaborations. At OSPAS, the team

were briefed about Aramco business continuity while LPD held a workshop that explored areas for collaborations with Aramco affiliates. At OE, the team had an overview of Aramco's OE system while EP presented the leading environmental excellence program in Aramco.

While the program was business focused, culture was imbedded as part of the program in which AME facilitated visits to cultural sites such as Ithra, the Yanbu' Heritage Park, the Faifa Mountains, and al-Hasa. The visit by Motiva's team is only the beginning for the AME programs to leverage Downstream portfolio excellence.

Haradh Gas Plant wins the GPA Environmental Excellence Award

The Haradh Gas Plant (HdGP) is an embodiment of the company's commitment to environmental excellence and sustainability. On its 100th anniversary, the U.S.-based Gas Processing Association (GPA) Midstream recognized HdGP with the prestigious environmental excellence award during its annual convention held on Sept. 26, 2021, in San Antonio, Texas.

Fahad S. Al-Dossary, HdGPD manager, hosted Wail A. Al-Jaafari, the Southern Area Gas Operations (SAGO) executive director and other SAGO management in celebration of this prestigious award. "We are proud of being selected for this prestigious environmental excellence award from such a reputable organization that has been serving the energy industry since 1921. This award reinforces Aramco's commitment to manage its environmental footprint associated with its operations," said Al-Jaafari.

Innovative solutions in action

The GPA selected HdGP for its 2021 Environmental Excellence Award because of "several complementing environmental sustainability initiatives and innovative solutions used by its department that resulted in greenhouse gas emission reductions and air quality management for the plant." In a press statement, GPA noted, "The project yielded significant operational efficiency enhancements



Wail A. Al-Jaafari, executive director of Southern Area Gas Operations, Fahad S. Al-Dossary, manager, HdGPD, and other SAGO management celebrating the GPA Environmental Excellence Award at the Haradh Gas Plant Department.

while improving environmental emission rates for the facility by reducing flaring and sulfur dioxide emissions."

The HdGP came on-stream in 2003 and is one of the major gas plants in Aramco, located 300 km southwest of Dhahran. The HdGPD is a center for talent growth and creativity. "We will continue to develop and deploy innovation, optimize plant operations, and invest in high-impact environmental projects to sustain HdGP's environmental excellence for a greener envi-

ronment," said Al-Dossary.

Sharing technical knowledge

Aramco is an active member of the GPA Midstream, supporting midstream industry standards and sharing technical knowledge and developments. These awards recognize the company's increased footprint in the midstream sector and ongoing commitment to operational excellence, recognizing our role as an integrated energy company in all three stages of

industry operations.

Members of GPA are involved in the midstream sector of energy, including the processing, storing, transporting, and marketing of oil, natural gas, and natural gas liquids. Aramco has diversified its portfolio to be globally leveraged further down the value chain, placing emphasis on developing its midstream and downstream business by building and integrating a network of refineries and petrochemical facilities across suitable geographies.

The Aramco hydrocarbon journey 6

Stabilization | Decades of greenhouse gas mitigation in our operational DNA

by Janet Pinheiro

Abqaiq Plants — Glinting quietly on the skyline of Saudi Arabia's eastern ad-Dahna desert is a metallic silhouette of assembled pipes, spheroids, columns, vessels, and tanks.

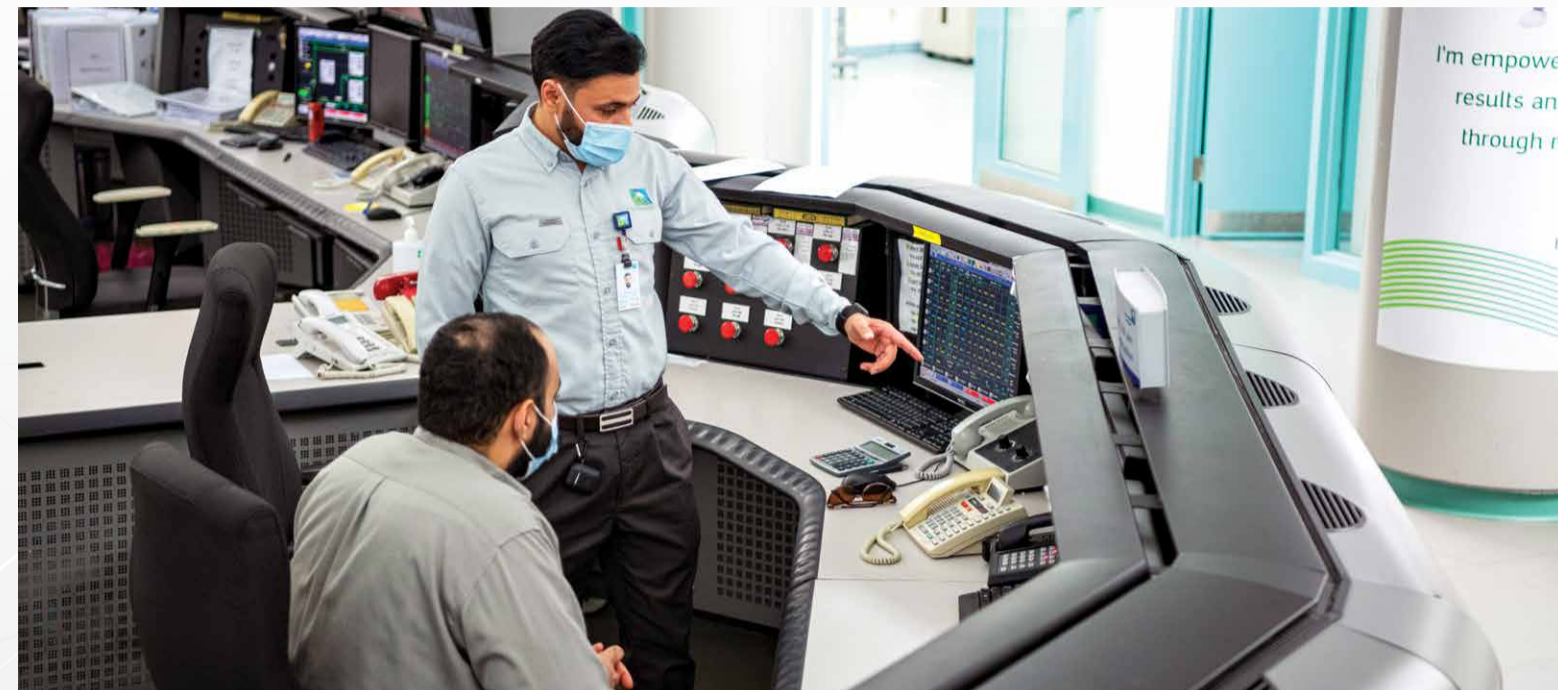
The industrial spot has risen on the desert's horizon for more than seven decades, and within it, stands the world's largest crude oil stabilization facility, Abqaiq Plants.

From far-off distances, treated crude propelled by emissions-free gravitational pressure, and some pumping assistance, flows through an extensive network of pipelines into the plant's massive engineering marvels.

At Abqaiq, people, technology, and a history going back to 1947, fuse together to shape a thoroughly modern stabilization heartland. Deep industrial roots have seeded a thinking operational culture, and high on the precinct's thoughtful list are actions toward an even lighter environmental footprint.

Keeping customers happy

When treated crude — oil from a



Last month, Abqaiq Plants became the third Aramco facility added to the World Economic Forum's prestigious Global Lighthouse Network, and Distributed Control System operator Ahmad M. Suwayyid and supervising operator Mohammad A. Zahrani monitor a screen showing the advanced process controls for the oil processing plant's south stabilizers.

gas-oil separation plant — flows into Abqaiq, it is still mixed with various kinds of light and sour gases.

Stabilization not only separates these gases from the oil for safe piping, but also prepares the oil to meet Aramco's customers' specified requirements.

Three giant facilities at Abqaiq — oil processing, natural gas liquids (NGL), and utilities — work together to stabilize oil, and capture its valuable associated gases for useful products.

Stabilized oil is piped on to Ras Tanura and Jubail on the East Coast, and Yanbu' in the west, while the light gases go for further processing at other Aramco plants, and the NGL is sent to Ras Tanura.

Human and machine team up

Humming silently around Abqaiq's towering steel forest is smart collabora-

tion thinking by both people and technology.

It takes exceptional teamwork to operate an oil and gas facility, and technology is welcomed as a member on the team.

Alongside Abqaiq's workforce, data provides a helping hand to enhance safety, efficiency, and importantly, mitigate greenhouse gas (GHG) emissions.

At the "Ghawar Intelligence Center" inside Abqaiq's main administration building, artificial intelligence sensors, advanced analytics, and machine learning click together to present a digital summary across all Aramco's Southern Area Oil Operations (SAOO).

Gathering all SAOO data together means figuring out strategic actions for

expertise as its global warming potential is significantly higher than that of carbon dioxide.

At Abqaiq, a drone, methane analyzer, MX4 gas detector, and low emission level sensors are being used to detect and quantify methane emissions.

With a 2020 upstream methane intensity of 0.06%, Aramco's upstream methane emissions intensity is among the lowest in the industry.

Aramco methane among lowest



Operators provide a front-line check on fugitive leaks, and supervising operator Mohammad A. Zahrani checks valves at Abqaiq Plants cogeneration system.

In the Abqaiq Plants cogeneration plant, supervising operator Mohammad A. Zahrani uses a handheld methane analyzer to check for possible leaks of methane and volatile gases.

Natural gas, a lower carbon energy source, consists primarily of methane, which is just one carbon molecule surrounded by four hydrogen molecules (CH₄).

Control of fugitive methane emissions requires thoughtful



One of Abqaiq's two elevated flares.

Stabilization separates more gases from treated crude, allowing for safe handling and shipping, as well as preparing oil to meet specified customer requirements.

energy efficiency, and flaring mitigation.

Analysis, like safely running one pump instead of two, collectively add up to big reductions in GHG emissions, and financial costs.

Clicking on mitigation

Abqaiq's oil processing facility's spheroids and stabilizer columns use gravity, heat, and compression to complete final gas separation, while the NGL facility compresses gas in compression trains, and passes it

through stripper and deethanizer columns.

It is an intricate process, closely watched 24/7 by both digital and human eyes. Outside operators work one of three shifts, and every shift, take content samples from each oil and NGL process.

A predictive Aramco algorithm uses data from on-site lab analysis samples to automatically adjust multiple process parameters to maximize energy efficiency. In real-time, the advanced process controls also detect any energy abnormality, pinpoint root causes, and advise corrective action.

Within the site's Distributed Control System building, operators monitor 24/7 how well technology is implementing the algorithm's techniques.

"The algorithm may decide less steam is required to stabilize a particular oil," says supervising operator Mohammad A. Zahrani.

"Using less steam means less energy, and less energy means a lower environmental footprint," adds Zahrani, who has worked at Abqaiq Plants for 23 years.

More with less

It takes energy to make energy, and Abqaiq's power comes mainly from the utility facility's three generators. The facility also supplies steam, treated water from 16 reverse osmosis units, and instrument air — used to control valves — from two steam-driven and three motor-driven compressors.

Lowering energy intensity — a measure of how much energy a facility consumes to meet its production requirements — at industrial facilities like Abqaiq has a big energy conservation impact, and since 2015, the site has improved its energy intensity by 20%.

Upgrading older equipment can enhance their efficiency. One of the

Using wasted heat



Abqaiq Plants cogeneration system.

Unused energy is a waste of precious resources, and Abqaiq's cogeneration system captures the most out of every consumed cubic foot of gas.

Gaining the best thermal efficiency from cogeneration requires monitoring of the fuel supply, and ambient temperature.

"We achieve optimum efficiency with Abqaiq's cogeneration system," says supervising operator Mohammad A. Zahrani. "All the manufacturer's upgrades are put into our cogeneration systems, and we particularly watch its operation during late summer when our foggy weather can make them sensitive."

Flaring minimization

Flaring is a safety mitigation activity, burning off gases to maintain proper pressure.

As far back as the 1970s, Aramco introduced a program to significantly reduce the amount of gas the company flares.

Abqaiq Plants has two elevated flares, and like all Aramco facilities, its flare system is connected to the company's corporate flaring monitoring system at the Dhahran headquarters, where all flaring events are measured and monitored.

Abqaiq flares are equipped with assisted smokeless flare tip technology, which helps mitigate emissions even further.

The current replacement of this Abqaiq Plants' NGL combustion gas turbine driver with a new steam compression train will bring substantive reductions in energy consumption and greenhouse gas emissions.

"Abqaiq Plants has operated for many years next to the Abqaiq community, where our families and friends live," Zahrani noted.

"It is our responsibility to take care of the plant to always make sure we operate safely, and this is best for people and the environment."



Aramco Team Series moves to New York

Old Westbury, New York — Women's golf took center stage last week as the newest tournament format kicked off in the U.S. with the Aramco Team Series (ATS)-NY, Oct. 14-16, on Long Island.

The event, which included games in London and Spain earlier this year, concludes next month in Jiddah. Associated sideline activities will be hosted to highlight Saudi Arabia's diversity, culture, and heritage.

Jessica Korda's team, with Ladies European Tour (LET) players Karolin Lampert and Lina Boqvist and amateur player Alexandra O'Laughlin, won the team event, while British golfer Charley Hull won the individual prize.

During ATS-NY, ATS ambassador Anna Nordqvist, winner of the 2021 Women's British Open, played on a four-person team that included Ahmed A. Al Subaey, vice president for Marketing, Sales, and Supply Planning. Other teams were composed similarly, with three pros and one amateur — an innovative take on golf that brings a different kind of energy to the course.

HE Yasir O. Al Rumayyan, chairman of Aramco's Board of Directors and governor of the Public Investment Fund, also attended the tournament.

The new series adds four new tournaments to the LET, giving women golfers additional venues to compete and ad-



Left: Winners of the Team event, Jessica Korda, Alexandra O'Laughlin, Karolin Lampert, and Lina Boqvist hold their trophy. Top: Charley Hull, winner of the individual event, kisses her trophy.

vance in their profession.

"We hope the Aramco Team Series inspires generations of women and girls to follow their dreams and achieve their full potential — whether in golf or any other discipline," said Al Subaey. "The series is designed to elevate the standing and the profile of women's golf in Saudi Arabia and around the world, and to encourage more women of all ages and abilities to take up the sport."

During the series in New York, the series launched the Driving Force initia-

tive and teamed up with nonprofit Girls on the Green Tee to empower girls and women through golf. Driving Force ambassador Rania Biltagi, Aramco Americas Public Affairs director, said, "Thanks to the Aramco Team Series, we have been given the opportunity to support organizations like this that are having such an impact on the lives of girls and women."

The golf tournament was especially meaningful as it drew together customers and close Aramco partners, some of whom played in the event as amateurs and others who joined the company at

hosted events.

"We have business relationships in the United States that go back decades, back to the founding of our company even, and this event — with its unique approach — showed them a new side of Aramco," said Rakkan M. Trabulsi, president of Saudi Petroleum Inc.

Spectators at the event crisscrossed the golf course following the game while also spending time at exhibits dedicated to Aramco's sustainability and diversity efforts, e.g., the art and culture of Ithra.

Alfaraj to represent Saudi Arabia in Davis Cup Asia tournament

By Scott Baldauf

Saudi Arabia's top-ranked tennis player, Aramcon Abdullah M. Alfaraj, recently won the Torneo Tennis Planet Vevano tournament in Madrid, Spain, held from Aug. 9-12. The tournament was part of a training camp in preparation for the upcoming Davis Cup Asia team tournament, to be held in Bahrain from Oct. 18-24. The Davis Cup is the premier international team event in men's tennis, it is often described as the "World Cup of Tennis." It is run by the International Tennis Federation and is held annually for teams from competing countries.

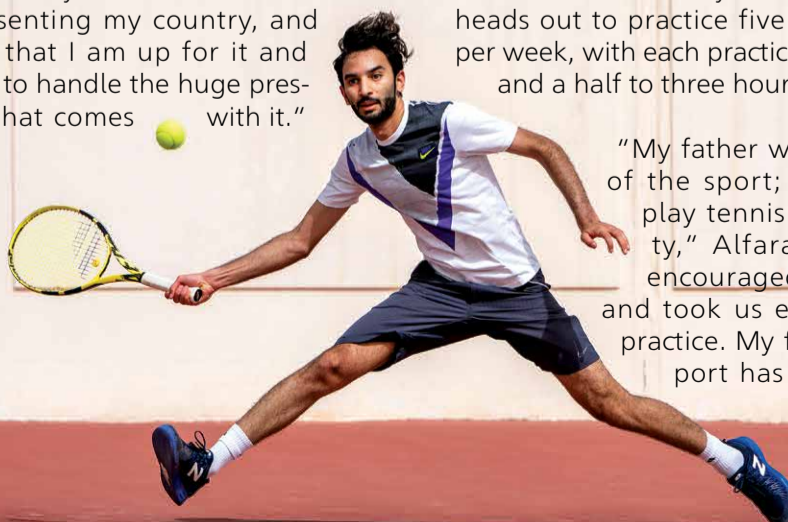
As a member of the Saudi national team at the Davis Cup, Alfaraj and three other top Saudi teammates will be competing against other national teams across Asia. The top three national teams from the tournament will then advance to the next stage, in a Davis Cup tournament to be played next year.

As a member of Al Salam Club in Awamiyah, Alfaraj led the team to win

its second Saudi National Tennis League for the second year in a row. The team event was played throughout the year in Jiddah, Dammam, and Taif. Alfaraj also came out on top in the Saudi Ranking Tennis Tournament held in Taif from July 1-3.

What makes Alfaraj most proud, he said, is the opportunity to represent the Kingdom on the international stage.

"It is a feeling that nothing else can replace," said Alfaraj, a drilling engineer in the Drilling Technical Department. "I feel immense pride and responsibility at the same time in representing my country, and I feel that I am up for it and ready to handle the huge pressure that comes with it."



Alfaraj has a number of key victories under his belt after nearly 25 years of playing tennis. Encouraged by his father, he began tennis lessons at the age of 5, together with his older brother Ali in Al Salam Club. By the age of 10, Alfaraj had won his first tournament, and by 11, he was invited to join the National Junior Tennis Team, with whom he played for another seven years.

While Alfaraj's success has its roots in the support he has received from his family, it has equally depended on the rigorous practice schedule he maintains. After a full day of work, Alfaraj heads out to practice five or six times per week, with each practice lasting one and a half to three hours.

"My father was a big fan of the sport; he used to play tennis in university," Alfaraj said. "He encouraged us to play and took us every day to practice. My family's support has the biggest

effect on my career. I wouldn't have achieved anything without them."

Alfaraj is excited about the Kingdom's new emphasis on healthy lifestyles and sport, through the Saudi Vision 2030 initiative that was initiated by HRH Crown Prince Mohammed bin Salman. "There has been such a big change in society; there has been a significant increase in the amateur-level practice of sports, which is one of the objectives of the vision," Alfaraj said. "There is much more support for sports in the Kingdom, from top to bottom. As top athletes, we have the power to inspire the community to engage in sports, and as a country, we will be able to prepare elite athletes to be among the top in the world."

Sports are important to society, Alfaraj said. "The goal is to promote physical, social well-being and a healthy lifestyle. Another reason is national pride. Winning a gold medal in an international sports competition like the Olympics is a great source for national pride, and raising the Saudi flag in front of the whole world is an amazing feeling."

Well-being

Caring for your health and wellness

Breast Cancer Awareness: early detection saves lives

Breast cancer is the most common cancer for women in the world. In 2012, nearly 1.7 million new cases were diagnosed (second most common cancer overall). Breast cancer is the most common cancer for women in the Kingdom, accounting for 30% of all cancer diagnoses. The incidence of breast cancer increases as a woman ages and is most common in women around menopause and the risk continues to increase as a woman gets older. Breast cancer in women in their teens or 20s is not common; however, there have been recorded breast cancer cases of women in their 20s. Therefore, breast awareness and self-examinations need to start when a woman reaches 20 years of age.

Regularly examine your breasts

It is advisable to start monthly self-exams of your breasts at the age of 20. The best time to do a breast examination is when your breasts are not tender or swollen, which is usually on the 10th day after your period starts. Women who have reached menopause or who have had a hysterectomy can do their breast exam on any day as long as they do it consistently on that day each month. Following are instructions for properly examining your breasts.

LOOK and FEEL technique

• **In the shower:** Check each breast with the pads of your fingers moving them in a circular motion from the outside to the center of the entire breast, including under your armpit and around your collarbone. Feel for lumps, hard knots, or thickening or swelling. Gently squeeze your nipple and check for discharge and lumps.

• **In front of the mirror:** Stand in front of a mirror and with your arms to the side and visibly check your breasts for any changes such as skin discoloration. Next, lift both arms above your head and check each breast for any changes in shape or size. Check also for skin dimpling and changes in the nipple.

Breast Cancer Awareness

Numbers and Facts

- 1 in 8 women will be diagnosed with breast cancer
- Every 2 minutes a case of breast cancer is diagnosed
- Breast cancer is the most common cancer for women

How to Reduce Risk

- Do regular exercise
- Don't smoke
- Do an annual mammogram

There is Hope

If breast cancer is found early and confined to the breast, the 5-year survival rate is 99%

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• **Lying Down:** With a pillow under you and your arm above your head, check each breast using the pads of your fingers in a circular motion from the outside to the center of the entire breast, including under your armpit and around your collarbone. Feel for lumps, knots, or thickening or swelling. Also gently squeeze your nipple and check for discharge and lumps.

Changes to look for

When checking your breasts look for changes such as the following:

- Breast changes in size or shape, enlargement, or swelling.
- Skin discoloration, redness, or a rash-like skin texture around the breast or around the nipple, e.g., dimpling, puckering or skin feels rough or looks like the skin of an orange.
- Nipple discharge. If you see discharge, note the discharge color.
- Lump(s) such as a hard knot or thickening of the skin. Check to see if the lump is movable or attached in one place and if it is painful.
- Nipple retracted or inverted (pulled in).

- Swelling in the armpit or around the collarbone.
- Constant pain and/or itching on any part of your breast or in your armpit.

What to do if you find breast changes that are not normal for you?

DON'T PANIC! Not all breast changes are caused by cancer. There are many reasons for your breasts to change. Some are harmless. Regardless, you should also have them checked by your physician as soon as possible. You know better than anyone what is not normal for you. So go and see your doctor if something does not seem right.

Know your breast cancer risk factors

Aside from being breast aware, you should also be aware of your risk for developing breast cancer. If you have any of these risks, let your doctor know. Remember, early detection can save your life.

- Gender — Females are at higher risk than males; however, men do get breast cancer.
- Age — 81% of breast cancer cases are found in people over the age of 50.
- Previous history of breast or any cancer, particularly if your received radiation to the chest.
- Family history of breast cancer or any cancer — 5% to 10% of breast cancers are hereditary with a BRCA1 or BRCA2 gene mutation.
- Having been diagnosed with benign breast diseases such as fibroadenoma, breast cysts, or fibrocystic changes.
 - Early puberty or menstruation.

- Late menopause.
- Not currently breastfeeding or have not breastfed for a long time.
- Not having children or had children after the age of 30.
- Currently using hormone replacement therapy.
- Obesity (women who have reached menopause are at higher risk).
- Chronic smoking of any kind, including cigarettes, shisha, or cigars.

Breast screening

A. Mammogram: From the age of 40, women should begin having special X-rays called mammograms. They should be done annually. A mammogram can detect changes inside the breast.

B. Self-breast examination/clinical breast examination: Once a month do a self-breast exam. As part of your annual mammogram, your doctor should examine your breasts as the doctor may notice something you missed.

C. Magnetic Resonance Imaging (MRI): Women who are at high risk (have several risk factors) based on their family, medical or personal history, should have a yearly MRI as well as a mammogram. Your doctor will determine if you are at high risk, and if you are, will advise you about this test.

What you can do

- Self-breast exams starting at age 20.
- Annual screening mammogram starting at age 40.
- Know your risks (family, medical, and personal history).
- Eat a well-balanced diet and avoid unhealthy foods.
- Increase physical activities such as doing regular exercise.
- Maintain a healthy weight.
- Quit smoking.
- Regularly consult with your doctor and have regular clinical breast exams.

JHAH is here for you

The Oncology & Blood Disorders Clinic at JHAH is dedicated to providing the most holistic treatment for your individual needs. Our Oncology team is here to meet your physical, emotional, and mental health needs. Our team consists of experienced oncologists, radiation oncologists, surgeons, oncology psycho-social counselors, social workers, oncology nurses and oncology nutritional support professionals.

For more information, visit: www.JHAH.com> Care Services> Specialty Care> Oncology> Breast Cancer, or scan the QR code.





Breast Cancer Awareness: early detection saves lives

see page 7

Saudi Arabia's first October Big Day of Birding

By Gregory R. Askew

In celebration of Global Bird Weekend and World Migratory Bird Day, on October 9, birdwatchers in Saudi Arabia took part in this year's October Big Day. During the event, the global birding community tried to record the highest number of bird species possible in a single day. By the end of the day, the Saudi Birding Team had recorded a total of 221 species, putting the Kingdom in 44th place out of the 193 countries in which birdwatchers submitted checklists to *eBird*, an online database of global bird observations developed by the Cornell Lab of Ornithology.

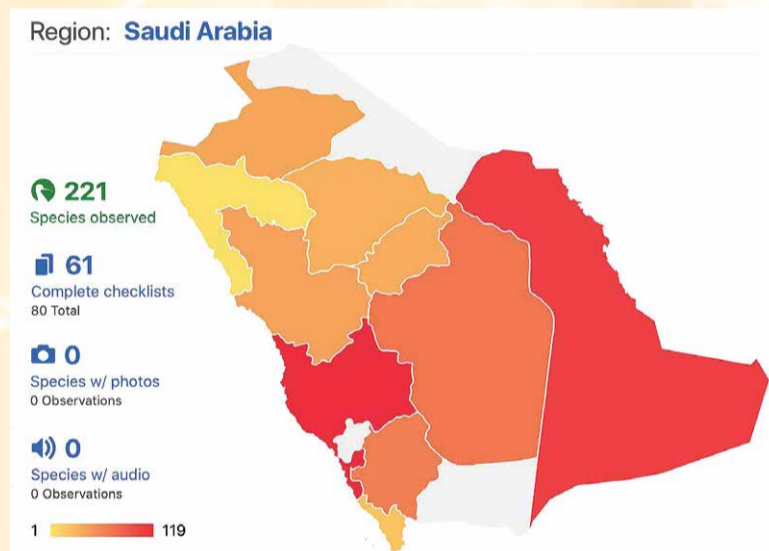
Saudi Arabia outshone nearly all other countries throughout the Middle East and North Africa during the October Big Day, not just in terms of the total number of species recorded but also in terms of the number of participants and the number of *eBird* checklists submitted. From around the Kingdom, 34 birders participated, including members of the Aramco and KAUST communities, and submitted a total of 80 checklists. Only two countries in the region recorded more species — Turkey, with a total of 243 species, and Israel, with a total of 234 species.

Of Saudi Arabia's 13 regions, 10 were represented in the event — Al Sharqiyah, Riyadh, Qassim, Ha'il, Al Jawf, Tabuk, Madinah, Makkah, Asir, and Jazan. Of the 10, the Makkah Region had the greatest number of participants and recorded the highest number of species in the country, with a total of 119 species, 80 of which were recorded by Abdullah Hatim, who, at 16 years old, is the second youngest member of the Saudi Birding Team.

Recording species

Al Sharqiyah had the second highest number of participants and species recorded, with a total of 106 species, 61 of which were recorded by James Conder and myself.

The Asir crew, led by Jacky Judas and Ahmed Neyazi with a total of 54 species, recorded 10 of the 15 Arabian endemics, species not to be seen anywhere else in the world, including the Asir magpie,



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an endangered species that can only be found in the Asir and Jazan regions.

While the Asir crew worked hard to add as many of the endemics as possible, a few other members of the team made it their mission to track down species either unique to their region or particularly challenging to find elsewhere. Nader Al Shammari was a one-man birding crew up in his home region of Al Jawf, where he added several species difficult to impossible to find anywhere else in the Kingdom, such as the see-see partridge, great white pelican, common wood pigeon, and thick-billed lark.

Ibrahim Al Shwamin made sure to hit some desert hotspots north of the capital of Riyadh so that we would not miss the

Arabian lark, a species that occurs almost exclusively in Saudi Arabia, while Saad Ali in Al Qassim refound the black stork that he had discovered near him the day before. Jem Babbington took charge of the borderlands of Al Sharqiyah around Salwa and Batha and helped the team add the gray francolin, which only occurs in a couple of farms a kilometer over the border with Qatar, as well as the sociable lapwing and jack snipe.

Not an all male affair

James Conder and I worked my local patch in al-Hasa — Al Asfar Lake — to add the water rail and mustached warbler to the day's list, and Hussain Al Hrisi from Al Hasher, down in the Jazan Region, did some early evening birding for

the team to contribute the Abyssinian nightjar, a species that's been recorded only a few times in the past 10 years. Finally, Samuel Hodge, the team's youngest member, made the only observation of the black-eared kite during the Big Day from his local patch in Ras Tanura.

The October Big Day, however, was not an all-male affair. Several female birders — Saudis and expats alike — joined in the excitement and made some excellent finds, another important aspect of the diversity reflected in our birding team. At KAUST, Ute Langner, along with her husband Heiko, discovered two black-winged pratincoles, a member of an intriguing family of birds that are classed as shorebirds, but very much recall large swallows in appearance with their agility in hawking insects in flight. Alma Swartz, a member of the Aramco community in Dhahran, added two species unrecorded anywhere else in the Kingdom — the oriental honey buzzard and red-vented bulbul — while Duha Al Hashimi from Jiddah recorded the only Pacific golden plover of the day.

And what of last year's record? As of this writing, on Saturday, Oct. 9, the global birding community recorded 7,269 species to *eBird*, 103 species more than last year, and guess what? Of those, 16 came courtesy of the Saudi Birding Team — 16 species not recorded anywhere else on the planet!

The Saudi Birding Team cannot wait for next year's October Big Day, and we hope you will join us and help our diverse and caring community continue to grow.

Happy birding, everyone!



Samuel Hodge, our youngest team member, at the beach in Ras Tanura.



This juvenile Pacific golden plover, photographed by Duha Al Hashimi, was the only one seen in the Kingdom during the October Big Day.



A beautiful image of the Asir magpie photographed by Jacky Judas during the October Big Day.



Ibrahim Shwamin recorded the only Arabian lark for the world during the October Big Day. Here's his amazing photo of the lark from the end of September.



The red-vented bulbul, photographed by Alma Swartz, is an introduced species that occurs at some of the Aramco camps.