

the arabian sun

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a weekly Aramco publication for employees

in this issue

Our engineers believe the impossible is possible

At the Onshore Maintain Potential Projects Department young engineers are leading the way in a fleet of crucial projects.

see page 3

Minimize waste, maximize reuse

Importance of environmental preservation takes center stage at "Reverse Logistics and Circular Economy" virtual conference.

see page 9

Bittersweet encounters with one of the world's rarest birds

On a personal trek, an Aramcon visited the Asir region on a quest to spot and photograph the rare Asir magpie.

see pages 6 and 7



OIL AND GAS CLIMATE INITIATIVE

Report keys in on carbon capture potential and company success

see page 2

Aramco recognizes 2020 Safety Innovations



see page 5



It's good to talk

Emotional Well-Being Roadshow offers employees space to discuss mental health.

see page 4



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New OGCI report keys in on carbon capture potential

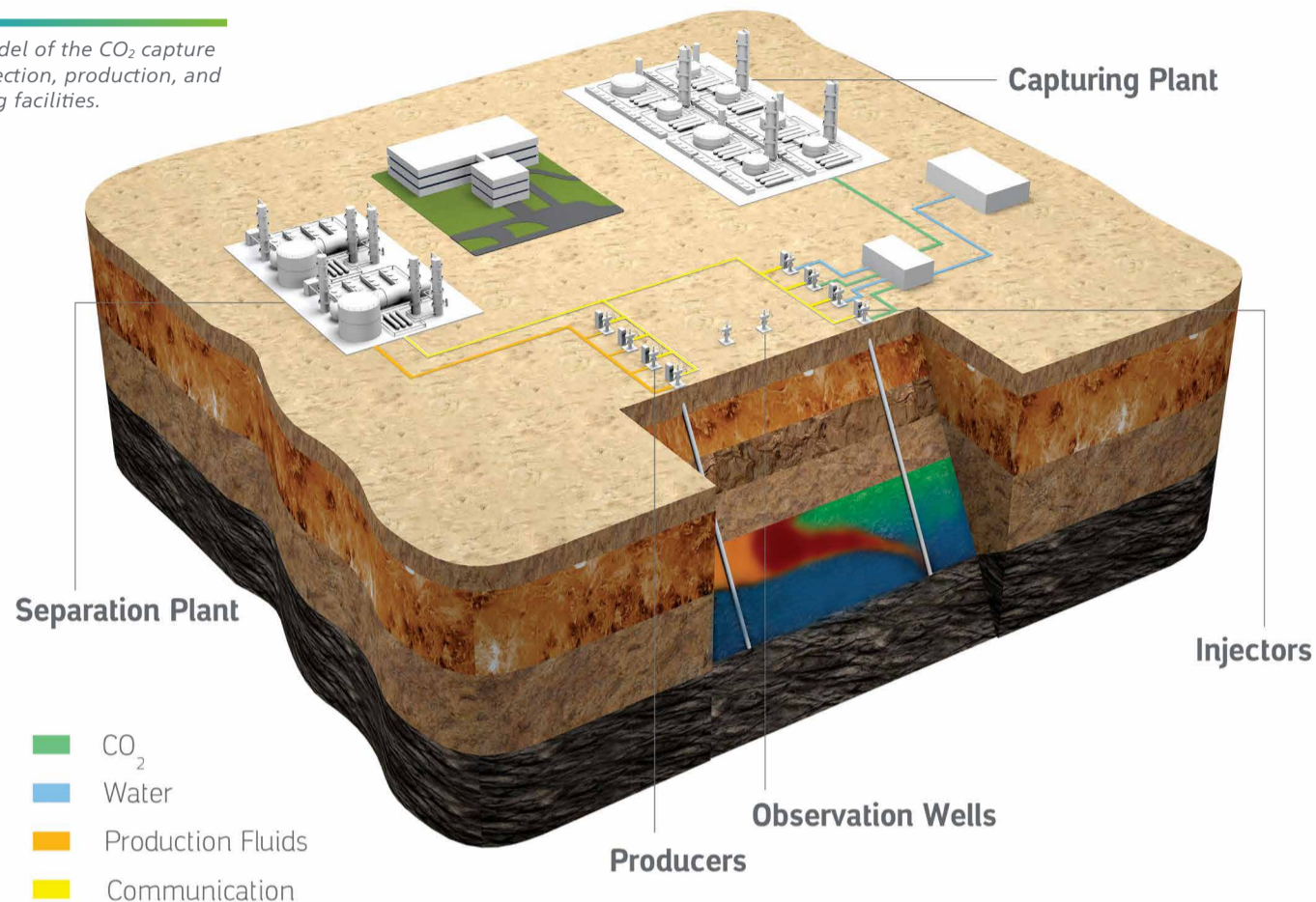
The Oil and Gas Climate Initiative (OGCI), a CEO-led initiative to deliver tangible, credible, transparent, and integrated contributions to climate change solutions, of which Aramco is a founding member, released a report that looks at the value and opportunities for deployment of carbon capture, utilization and storage (CCUS) in Saudi Arabia.

In 2020, the inaugural CCUS conference was held in Saudi Arabia, and this report builds on that engagement. The report outlines the Kingdom's experience to date with CCUS and its potential as a decarbonization tool for domestic power, desalination, and heavy industry, which account for two-thirds of Saudi Arabia's carbon dioxide (CO₂) emissions. In addition, the report explores the value for Saudi Arabia of leveraging CCUS to accelerate diversification, creating jobs and shifting exports away from reliance on oil and gas and toward low carbon products and services.

In the short and medium term, these include exports of low carbon hydrogen, as well as low carbon petrochemicals, steel and aluminum, enabled by CCUS. Long-term opportunities include using CO₂ as a feedstock for synthetic fuels and using negative emissions technologies to remove CO₂ from the atmosphere.

The report outlines business models that could be relevant for scaling up CCUS deployment, highlights potential hub locations in the country, and raises the opportunity for collaboration across the Gulf States to link hubs into a larger CCUS network — a topic OGCI is exploring further this year.

A 3-D model of the CO₂ capture plant, injection, production, and processing facilities.



The potential of CCUS in Saudi Arabia

The report highlights the fact that Saudi Arabia already has extensive expertise across the CCUS value chain, with two CCUS projects in operation and a high-level of international collaboration on CCUS:

- **Aramco's 'Uthmaniyah demonstration project** uses CO₂ for enhanced oil recovery injection.
- **SABIC has a carbon utilization project** aimed at enhanced chemicals pro-

duction.

• **Saudi Arabia is a member of a wide range of international CCUS collaborations** such as the Clean Energy Ministerial CCUS initiative, the Carbon Sequestration Leadership Forum, and the Mission Innovation Carbon Capture Challenge, driving research, technology, and policy development for CCUS scale up.

Alongside climate benefits, CCUS has the potential to support several key goals in Saudi Arabia's Vision 2030, such as economic diversification, job creation,

and sustainable development.

The report highlights that CCUS can help protect existing high value jobs and unlock significant future opportunities, including the export of clean hydrogen and additional low carbon products such as petrochemicals and steel. It goes on to note that Saudi Arabia could also opt to develop CO₂ storage resources to provide storage as a service to other countries that want to decarbonize their industrial sectors, but do not have suitable storage capacity.

Your voice

Charm your way through life with effective communication skills



By Husin Sitepu
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You will be one of the most charming people in the world when you develop effective interpersonal communication skills and make other people feel like the most important person in the world.

Here are a few learnable techniques on how to become better at creating a good impression.

Listen with genuine interest to what other people say and ask them good questions

One of the secrets of making people feel important and comfortable enough to collaborate with you is to focus and fully engage in listening to them when you have a conversation. You indicate clearly to others that you are actually fully investing your time in listening to them carefully and with great interest by making eye contact with them, switching off your mobile phone, taking a note from the conver-

sation, and asking good questions. You will always make others feel important by going into a discussion with the clear mindset of, "My main tasks in every conversation at work and at home is to fully focus my listening skills, fully hold my attention to the speaker, and ask them good, relevant questions." One question to a colleague, for example, could be, "How would you predict the future development of research related to your topic?"

Make people feel good by making them feel like an expert

One of the most powerful personal communication skills to deepen your connections with your colleagues at work and family at home is to directly acknowledge their expertise in the topic under discussion. Additionally, if you are interested in the topic, that makes them feel privileged. You will, therefore, learn much from them. This skill works well because everyone you

meet knows a lot more about something than you. So, the key point here is to connect with people and make them feel like a subject matter expert and let them talk until they finish.

Respect and admire other people

You increase dramatically other people's self-esteem when you admire their accomplishments and their positive thoughts. People will respect and value you more if you effectively charm them with kindness, politeness, and respect. Also, always keep disciplined in saying the right things about people in their absence; clearly indicating to others present that those people not there are also important to you.

If you effectively act upon these suggestions on how to make other people feel important, you will achieve your goals of being a successfully charming person at work and at home.

Young Aramco engineers believing the impossible is possible

By Eamonn Houston

Young engineers in the Onshore Maintain Potential Projects Department (OMPPD) are playing a critical role in ensuring the success of major company projects.

The 650 professional project management employees operate under the Upstream Project Management (UPM) area, and executed more than 500 projects in 2020.

Mohammed A. Al Qahtani, general manager of UPM, praised the capabilities and talent of the young employees in his area.

“The young talent that we are able to attract and retain in this organization has proved time and again that they are more than capable of handling any challenge that comes their way,” Al Qahtani said.

OMPPD’s success depends on the development and promotion of young talents using new technologies, he added.

Youthful voices

Nawaf K. Alrasheed, a project engineer in the Khurais and Central Arabia Upstream Projects Division, said OMPPD’s people have driven the department to success and energized the world by extracting potential.



“I am confident that the hardworking, enthusiastic, and ambitious people I have seen are the norm in the department. It has made me more determined to develop my skills to reach the high standards that OMPPD sets for its community,” Alrasheed said.

Abdulrahman M. Alghunaim, a project engineer in the Ghawar Gas Upstream Projects Division, said that working with OMPPD has been a highly stimulating experience on both the personal and professional front.



“The diverse nature of OMPPD operations has helped to cultivate in me a rich multicultural work ethos, and has provided me with an enriching and productive platform at the very start of my professional journey,” Alghunaim said.

Abdullah M. Gahtani, a project engineer with Khurais & Central Arabia Upstream Projects, said he was proud to be a member of OMPPD family.

“I started working for this organization in early 2014. It was a quantum leap for new experiences and challenges through which success can be achieved. I have moved over the past



In addition to playing a major role in company projects, young engineers from OMPPD have also played an active role in planting thousands of native trees at Aramco construction sites, camps, and communities.

six years to several stations. Many achievements have been accomplished and there are still ambitions that we strive to achieve. Working with amazing and highly qualified people is one of the most important factors that help you succeed and progress,” Gahtani said.



Supportive environment

Adel A. Alghamdi, a project engineer in the Project Control Division, described joining OMPPD as “a blessing.”

“It has a very nurturing and supportive environment. The team provides the highest level of support and knowledge sharing as well as empowerment. In the last three months, since my assignment with OMPPD started, I have seen nothing but support and encouragement from everyone in the department. I hope that I can add value to the department to match what I gained,” Alghamdi said.



Asim M. Dayel, a project engineer with Ras Tanura and Shaybah Oil and

Gas Upstream Projects, said OMPPD brought the best out of him as a project engineer during the past five years.

“I do feel more confident of my technical and leadership skills, starting from my first assignment back in 2015 as part of the Haradh Satellite Fields Development project. One of the main special traits of OMPPD is that an assigned division executes projects continuously within the same geographic location, and that creates a real feeling of ‘familyhood’ within the project team,” Dayel said.



Fadhel A. Zayer, a project engineer with the Khurais and Central Arabia Upstream Projects Division, said he learned a lot during his days in Maintain Potential Projects.

“I learned to engage with colleagues, to be open and respect others’ opinions, and more importantly, to enjoy every moment of work, especially while working in a remote area as we spend a large amount of our time together in the work place,” Zayer said.

“I enjoyed the most working in the



... Maintain Potential Gardens initiative under the leadership of Buniyan Mustenair. I started appreciating water and environment preservation, and learned a lot about the types of native trees suitable for a desert environment like Saudi Arabia.

“We have so far planted 6,000 native trees across company facilities, and plan to plant 60,000 by the end of the initiative.”

Sustain and increase

OMPPD is one of the largest project management organizations in the company and knits together tie-ins between wells and processing facilities Kingdomwide while executing a diverse array of other projects, at an average of 550 each year. It has a simple adage: believing that the impossible is possible.

Amin F. Ghazzawi, the manager of Mega-Projects, said that the chief role of OMPPD is to sustain and increase the production capabilities of Aramco.

“Young Saudi employees are exposed to a once-in-a-lifetime learning experience here,” Ghazzawi said.





800-305-4444 | www.jhah.com

JHAH COVID-19 Vaccination Program

The COVID-19 vaccine is available to all Saudi Aramco employees, retirees, and their eligible dependents aged 18 years and over.

English



العربية



Scan the QR code to visit our COVID-19 Vaccination page. You can register online, or use the quick link to access and register on your MyChart account.

Please continue to follow infection prevention measures to keep everyone safe and well.



مركز جونز هوبكنز
أرامكو الطبي
Johns Hopkins
Aramco Healthcare

It's good to talk

Emotional Well-Being Roadshow offers employees space to discuss mental health

By Eamonn Houston

The global COVID-19 pandemic has placed untold pressures on workforces across the world, but Aramco's Human Resources (HR) and joint venture Johns Hopkins Aramco Healthcare (JHAH) is going the extra mile to promote well-being and emotional health among its employees as part of their Well-Being Strategy.

HR's Management & Professional Development Department has partnered with JHAH to deliver informative sessions on emotional well-being during challenging times — especially for workers in the field located in remote areas.

The three-hour sessions — with up to three medical experts on hand — encourage an open discussion about emotional well-being and offer proven techniques to empower employees to maintain their mental health balance and build resilience.

How can you Challenge your negative thoughts?

- Recognize**
Recognize that your negative thoughts are causing you anxiety.
- Challenge and reframe**
Write your thoughts and emotions.
- Write**
Write down your positive self-statements; this will reinforce the ideas.
- Relax**
Practice relaxation techniques.

Resilience

President and CEO, Amin Nasser, has taken a personal interest in the well-being of employees and recorded a special message to be shown at each session.

"Over the past several months, I have been deeply grateful for the sacrifices you have made and the resilience you have demonstrated as we deal with the COVID-19 pandemic," Nasser said.

"These have been stressful and uncertain times. Together we have faced numerous challenges regarding safety, separation from our families, travel restrictions, and a struggling global economy.

"And, through every test we have faced, I am so proud of what we have accomplished as a team. But, I also understand how stress can affect our well-be-

ing — that is why we must ensure that our people remain our priority and we must give our well-being the attention it deserves."

The president and CEO said that employees would be empowered with the tools offered by the health experts.

"You will know that help is available and how to access it, and the importance of looking out for one another," Nasser said.

Well-being

Lamah F. Khayyal, administrator of Management Development Services, has played a pivotal role in the initiative.

"This initiative arose from our senior management's concern about our employees' well-being in the company, and specifically during the pandemic," she explained.

"The big focus is on the field workers.

"The fieldworkers are often located in remote areas and have faced a very challenging situation. Our focus was to provide some support for those employees," Khayyal said.

"It provides support to employees to talk about things usually shied away from. When we talk about emotional well-being, this is something that hasn't been addressed before so openly."

Khayyal noted that Aramco's diverse workforce have different ways of dealing with the unprecedented challenges of the COVID-19 pandemic.

"We have a huge population of employees who are not with their families, expatriate employees who have been unable to travel," she said.

"The goal is how we, as Aramco, can provide an environment for our employees with their various backgrounds and situations with some solutions and aids, which can help them deal with the challenges during difficult times."

Providing the tools

Dr. Abdul Sammad A. Jishi has been one of the medical experts in the sessions. He said that it is vital to provide people — especially in remote areas — with the tools to deal with anxiety and worries.

"Not only do these workshops help participants understand the basics of

emotional stressors, but they also provide them with hands-on tools, which teach them how to deal with these stressors, with anxiety, and with depression.

"In these workshops, we discuss depression; its causes, signs, and symptoms, and how it is treated. We also discuss anxiety and its causes, and the methods that are used to deal with it, particularly the non-pharmacological interventions.

"These interventions include how to challenge negative thoughts, breathing exercises, and muscle relaxation techniques. We also discuss the ways in which we can build psychological resilience. We suggest self-help and the way to get help in JHAH," Jishi said.

You can download our "Mental Health Tool Kit," or for more information about our mental health resources, visit: JHAH.com>Care Services>Specialty Care>Mental Health.

If you are suffering from feelings of depression, stress, or isolation, call the JHAH Emotional Help Line, available Sunday to Thursday from 8 a.m. to 3 p.m. This confidential service is available to all Aramco and JHAH employees, and their family members.



JHAH
Mental
Health Tool
Kit

Company recognizes 2020 Safety Innovations

Safety recognition has always been an essential part of how safety is managed at Aramco, of which the Exceptional Safety Achievement Recognition Program (ESARP) is a core element.

The program is administered by the Loss Prevention Department (LPD), and strives to stimulate the innovation, creativity, and talent of employees and working teams, as well as bring forth proactive and sustainable safety initiatives that will promote a safer workplace.

Celebrating 20 Years of Progress

ESARP is now celebrating its 20th anniversary, and gains in popularity year after year. A record 175 initiatives were received for evaluation, nine of which were shortlisted and three declared the top winners from the group. The remaining six received recognition from LPD for the high value they add to safety.

175 innovations evaluated

9 winners recognized

3 top winners

And the winners are ...



Southern Area Production Engineering Department

IR 4.0 Well Tubular Safety Program

Applies predictive solutions to prevent tubular failures and hydrocarbon emissions to the surface, including well casing leaks, and provides safe well lifespan forecasts.

Abdulrahman T. Mishkhes
Syedkhalid M. Gliani
Sanjiv Kumar
Yousef A. Mubarak



Northern Area Production Engineering Department

Multiphase Flow Meter (MPFM) Liquid Referencing

Portable MPFMs that minimize personnel interaction with sweet and sour crude production, while reducing exposure to potentially toxic material.

Samih M. Alsyed
Karam S. Yateem
Mohammed E. Gomaa
Mohammad S. Dabbous



EXPEC Advanced Research Center

Auto Well Space Out

An IR 4.0 smart well solution that safely shuts down a well in the event of an uncontrolled flow to the surface, providing additional protection to rig employees.

Michael A. Affleck
Chinthaka P. Gooneratne

And the winners recognized are ...



Safaniyah Offshore Producing Department

Critical Data Remote Monitoring

Strengthens safety barriers through remote monitoring and transmission of critical safety data related to H₂S/Lower Explosive Limit (LEL) gas detection and shutdown.

Abdulrahman R. Mutair
Abdullah S. Aldawsari
Hussain S. Mohsen



Domestic JV Management Department

Health, Safety & Process Safety Leading KPI Program

ECritical and attainable key performance indicators to measure health, occupational safety and process safety performance, enabling implementation of improvements.

Nasser H. Dahri
Ahmed Alsubahi
Seraj Jan
Mohammed Alrefaei
Dani Bou-Reslan



Shaybah Producing Department and Area IT Department

SOS Button

Additional emergency protection for employees traveling off-road, activating this button sends an immediate alert to rescue teams, and the exact location of the driver.

Omro M. Alawadh
Firas A. Alqaoud
Jaber M. Shehri
Ahmad A. Nader
Ehab M. Moaibed
Fahad S. Khaldi
Hatem K. Khaldi
Bader W. Khaldi
Humoud H. Rashidi
Maher A. Arfaj



Central Community Services Department

Stove Guard

Protecting household residents, this intelligent monitoring system has multiple sensors that automatically switch off stoves when certain heat parameters are reached.

Ameen M. Rashed
Abdullah Y. Bukhamsin



Western Region Distribution Department

Hydrant Pit Pressure Test Mobile Device

Enables mandatory integrity testing of air fueling system valves each month to be conducted safely, efficiently, and spill free.

Thamer M. Hyderabad
Salem S. Rubaah



Traffic Safety Signature Program Division

Eastern Province Statistical Accident System & Dashboard

An accident management tool, recognized by the Ministry of Health and Ministry of Interior, to visually track, analyze, and display road accident data throughout the Kingdom.

Walid K. Alhumaidi
Faris A. Althomairy
Mansoor B. Alzahrani
Ali M. Tuhaishi



A morning with magpies in Billahmer Bittersweet encounters with one of the world's rarest birds

By Gregory Askew

I arrived an hour before sunup on a January morning at a small village northwest of Billahmer, in the highlands of the Asir region.

At about 2,700 meters above sea level, the early hour — coupled with stiff winds up over the edge of the Sarawat escarpment — meant, for the first time, I was properly cold in the Kingdom. I had a few layers on, but unfortunately, forgot my gloves back in Al Ahsa, forcing my hands to retreat into my pullover sleeves for warmth.

Sunlight began to invade from the east. Then, out of the twilight, appeared four magpies winging their way past me toward the village. These were the object of my morning's foray — the Asir magpie (*Pica asirensis*) — one of the rarest birds in the world, numbering perhaps no more than 100 breeding pairs.

Magpies belong to the Corvidae family, famously intelligent birds that include ravens, crows, and jays. The name "magpie" derives from two sources. "Mag" is said to originate from English slang from around the 15th century, a diminutive of the name "Margaret" used proverbially to



denote a "idle chatterer." "Pie" comes from the name for the birds in Old French, which itself derives from *pica*, the Latin name for magpie. The "pie" in the English word "piebald," like a piebald cow, is a reference to magpies and evokes their striking black-and-white plumage. Etymologically,



The remains of an old magpie nest in a dead juniper. Another threat to the magpies is dieback of the mature junipers in which they nest, a loss that has been attributed to climate change.

the name "magpie" captures both the bold beauty and charismatic personality of these charming birds.

Odd sightings

The magpie with which western Europeans have long been familiar is the common and widespread Eurasian magpie (*Pica pica*). However, the Asir magpie, long believed to be an isolated population of the former, is in fact, a distinct species and endemic to the highlands of the Kingdom's southwest, meaning they can be found nowhere else in the world.

The Asir magpie once ranged as far north as Taif, and as far south as Jebel Al-Qahar in Jazan Province. Unfortunately, their range appears

to have shrunk dramatically over the past few decades, due in large part to the fragmentation of their preferred habitat — mature acacia and juniper woods — generally at an altitude of around 2,200 meters and higher.

In recent years, these birds have only been recorded with some regularity in a few pockets of suitable habitat from Al Namas to the north, some 300 kilometers (km) south of Taif, to Billahmer, some 150 km north of Jebel Al Qahar. It is suspected that they have disappeared altogether from former strongholds near Abha, such as Jebel Soudah. However, odd sightings around al Bahah suggest that the magpies may still exist outside their current known range, but



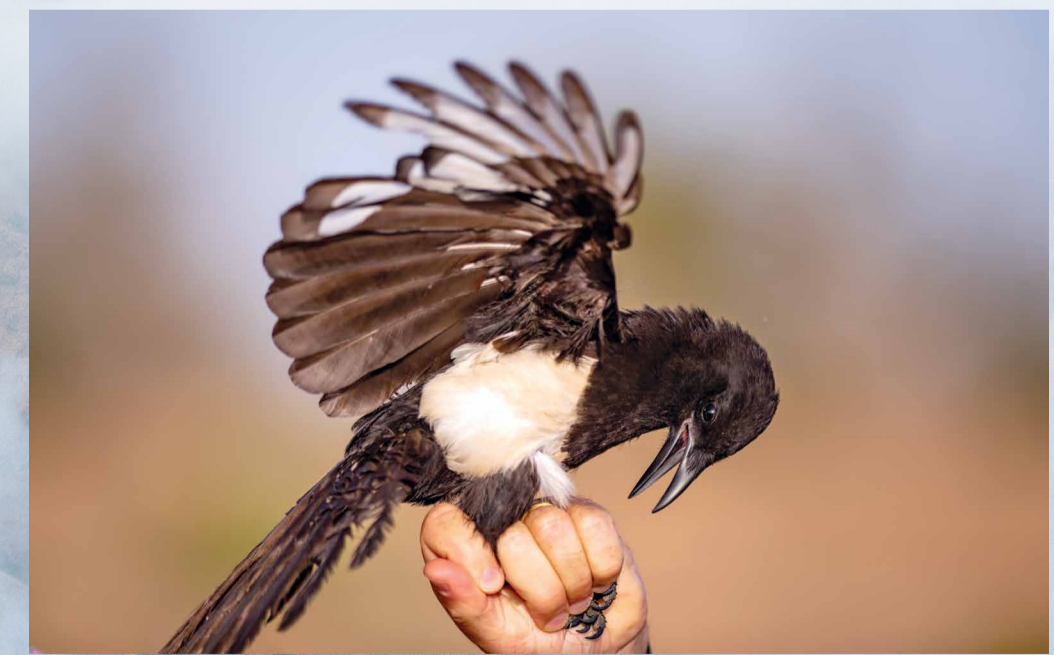
have simply gone undocumented in recent years. For this reason, I decided to explore areas where they had formerly ranged in the hope of casting a clearer light on their actual distribution.

The wooded wadi in which I found myself that chilly morning was an ideal nesting habitat for the magpies. Mature African juniper trees populated the bottom of the wadi, growing thick in places. Somewhere in the dense branches, the four birds I disturbed before dawn had been roosting, but now I could hear them in the distance, back toward the village, giving their distinctive contact call — aack aack aack — from which the magpies get their Arabic name, the "Ack-Ack." I headed in their direction.

I looked toward where I was parked only to see them gathered in a tree directly above my car. I quietly stalked off toward them, hoping not to scare them away.

Desperately understudied

Yet, by the time I got there, the magpies had gone. So, I ventured back to the village proper to relocate them. I didn't have far to go, as once I reached the main road and turned to the left, I spied a single bird foraging along the road's edge and heard the others vocalizing not far off. I stopped and began filming the lone bird on the road and switched on my audio recorder to capture the sounds. I realized then that the bird I was filming was vocalizing as well, giving



“What is extinction, after all, but a sudden, unexpected, and irreversible disappearance?”

a soft call as it walked up the road in my direction.

This bird, or perhaps another, was giving the same call as the group foraged in a recently furrowed terrace field a short time later, becoming more insistent as it waited attentively on another individual flipping clods with its sturdy beak and poking at the soft dirt. I suspected then that these might be young birds learning to forage from more experienced adults, perhaps even the parents.

This group did not seem too fazed by my presence and carried on searching for food for nearly the half an hour I spent with them. There is scant literature about this species as it has been desperately understudied. There is still a lot to be learned about the ecology of Asir magpies, and even casual observations by birders, bird photographers, and citizen scientists can help reveal more about the lives of these wonderful, critically endangered birds.



The view from the edge of the Sarawat escarpment near Billahmer.



Two in the group appeared to be observing the others as they foraged, suggesting these may be young birds.

An Asir magpie in a village near Billahmer in the Asir.

On my way out of the village I heard more magpies, very close, and pulled over to record them. They were perhaps a half kilometer from the group I had just left only moments before, so I added them to the day's count. These were making quite a ruckus around one of the houses and the fact that one was relishing a chicken leg on a nearby telephone pole hinted to the reason — the remains of a platter of rice with chicken.

I continued on toward the second spot, which brought me along the very edge of the towering escarpment. I made a brief stop to take in the views, which were stunningly clear. By the time I arrived at the next wadi, I had only an hour before I had to head back to Abha for the flight home. In that time, though, I did locate another four magpies, bringing the day's total to 14, the most I had seen in a single visit to the Asir region.

Extinction is forever

Six months later I took my wife and a friend, Adam, to Billahmer to see the magpies, and while we did find two at the last spot I encountered during the previous visit, the larger group near the village was nowhere to be found. I worried then that something might have happened to them. What is extinction, after all, but a sudden, unexpected, and irreversible disappearance? A sudden silence where the magpies' call once rang out? With researchers worried that their numbers will continue to spiral down, the day that the Asir magpie goes extinct may be much closer than we realize unless we act now.



The distinctive contact call of the Asir magpie.

New COVID-19 challenge a game changer

By Jim Cook

The COVID-19 Gaming Challenge from Training and Development (T&D) was launched to combat a new and growing threat in the battle against the pandemic — a growing sense of complacency among a public weary of complying with guidelines put in place to check the spread of the disease.

Instead of offering the traditional e-Learning format, the T&D COVID-19 Gaming Challenge presents its content in a gamified format. Developers say this format makes the content more engaging to users, increasing their enthusiasm for it and their retention of the material it covers. This is the first gamified e-Learn-

ing course distributed corporately in Aramco.

“COVID cases had been on the rise in the Kingdom and we wanted to reinforce the protective measures urged by the company and government,” Rana Elias, leader of the Technology e-Learning Development & Support Unit, which developed the game, said. “The game format was a way for us to engage users and offer a more entertaining activity.”

The T&D COVID-19 Gaming Challenge gives users several scenarios in which they have to choose the correct actions to protect themselves and others. The game is presented in a drag-and-drop format.

The game has been a success. More than 11,000 completions have been logged since it was launched to employees on Feb. 28, and later offered to dependents. A second phase of the game, which will incorporate new scenarios, is scheduled for launch in April, according to Nitin Puri, a business systems analyst in the Computer Curriculum Devel-

opment Group, who helped develop the game.

Nouf A. Dossary, a business analyst involved in the development of the game, said she’s received positive feedback from users and requests to incorporate the gamification in more e-Learning products.

“When we see something that’s appreciated by the employee and that is beneficial to them, we are very satisfied as developers,” she said. “At the end of the day, the goal is to keep our loved ones safe by increasing the awareness of the COVID-19 safety rules and guidelines, and ensure the employees are engaged and happy with the products we develop.”



Scan the QR code

Sustainability Ambassador Program spreads company message

By Dalia Darweesh

The Corporate Academy has launched its 2021 Aramco Sustainability Ambassador Program (ASAP).

The new program cohort consists of outbound Advanced Degree Program participants and College Degree Program Non-Employees who will learn about Aramco’s sustainability efforts.

Nabil K. Al-Dabal, vice president of Human Resources, said at the virtual launch that the program is directly aligned with the company’s strategy to develop and enable its young professionals to represent Aramco on a global stage.

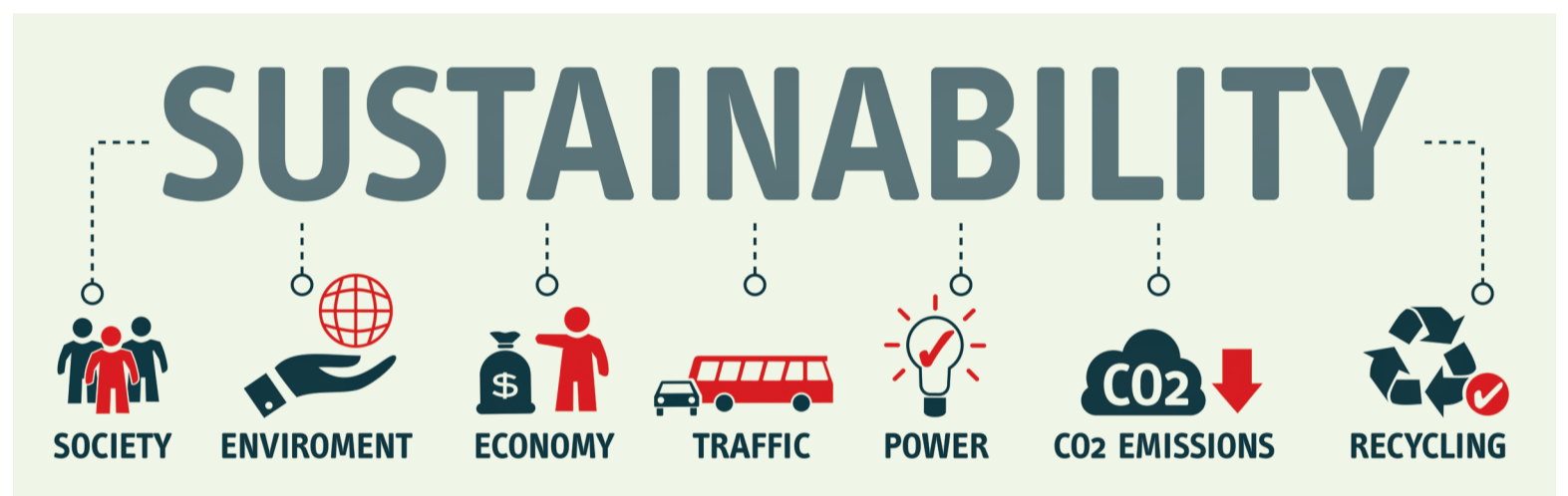
“As we continue to focus on growing our sustainability portfolio, it is crucial to engage our young people,” Al-Dabal said.

“The company has invested in their development, and we are excited to prepare them to show the world how important this issue is for Aramco and for our future,” he said.

ASAP just in time

Abdullah Z. Al Otaibi, acting general manager of Training and Development, at the launch said that climate change was our era’s defining issue, and a critical focus area for Aramco and the Kingdom.

“The ASAP is timely and fully aligned with Aramco’s objectives, showcasing the



organization’s commitment to sustainable development for internal and external stakeholders,” Al Otaibi said.

Matthew G. Bateson, chief climate and sustainability officer from Environmental, Social, and Governance (ESG) Strategy and Reporting, said the company strives to have an influential impact within the energy industry by reducing emissions, helping prevent climate change, and increasing involvement in biodiversity.

“Contrary to popular belief, sustainability is not only associated with the environment; it also combines and balances environmental, economic, and social factors,” Bateson said.

Aramco is actively engaging in the climate discussion as a founding member of the Oil and Gas Climate Initiative, and a member of the International

Petroleum Industry Environmental Conservation Association.

Sustainability shapes strategy

The company has a green energy program for forestation and recycling, a greenhouse gas emissions management program, and a biodiversity program.

Yasser M. Mufti, vice president of Strategy and Market Analysis, pointed out how sustainability shapes and defines the company’s business strategy.

“I believe it is essential that we equip our employees with the right understanding of this topic, and demonstrate how Aramco has and will continue to create long-term ESG value,” said Mufti.

Musaab M. Al Mulla, director of Global Economic and Energy Analysis in the Global Analysis Department, said, “The oil and gas industry will continue to play a key role in meeting economic development, as well as energy access in the future as both are a part of sustainability.

“This is where Aramco’s role comes as a leader in oil and gas,” Al Mulla added.

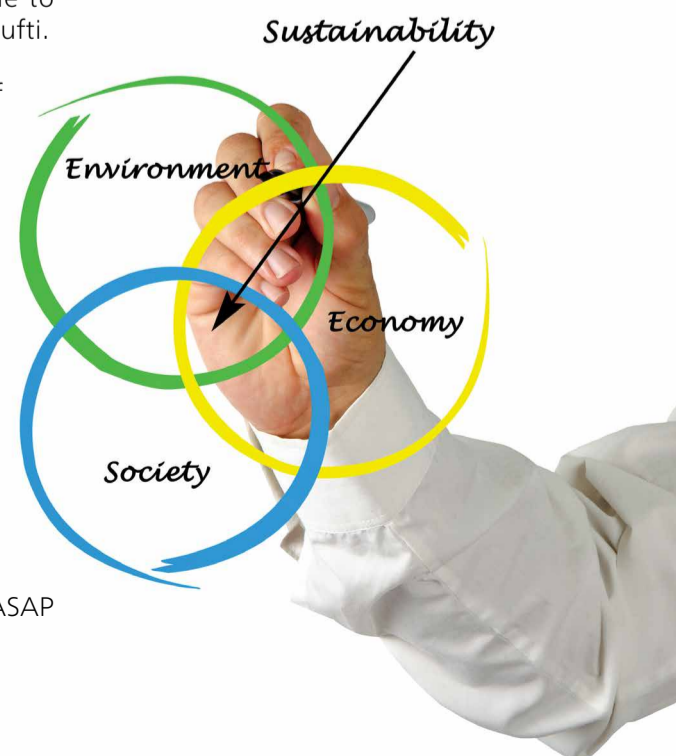
Previous participants

The launch takes place after 20 ASAP

participants completed their program from last year.

A previous participant, Abdulaziz A. Johar, a reliability engineer from the Shaybah Producing Department, said, “I personally enjoyed the program as it was resourceful, and has prepared us to represent Aramco and Saudi Arabia in the right manner.”

Another previous participant, Hala A. Alwagdani, an exploration geoscientist from the Eastern Area Exploration Department, said, “I have learned more about sustainability, and I feel capable to knowledgeably navigate the topic in a way that benefits the company.”



New nonmetallic water pipelines being built in Northern, Southern areas

Two nonmetallic long-distance pipelines are being installed in the desert as part of the company's program of adopting alternative materials to steel.

The Pipelines Department has started the two cross-country water projects in the Northern and Southern areas after successful completion of preliminary engineering.

A 6-inch diameter 16-kilometer (km) long reinforced thermoplastic pipe (RTP) is being run from the Ju'aymah NGL Fractionation Plant to the Ras Tanura Refinery to send sour water to the refinery's steam stripping facility.

The stripping facility will remove impurities and produce acceptable quality effluent for discharge.

A 20-inch diameter 50-km long reinforced thermosetting resin (RTR) pipeline is being run between Shed-gum water wells and Abqaiq Plants to ensure a reliable water supply for the Abqaiq facility and community.



The RTR material is made of high strength fiberglass (E-glass) and amine cured epoxy resin, and is a corrosion-free material with

low energy loss due to low internal friction. RTR also has a high precision winding technology, which results in better wall thick-



Left and above, installation of the RTR pipes. Below, RTR pipes being transported to the work site.



ness and lower weight.

Both projects are expected to be completed by 2022.

Minimizing waste, maximizing reuse closes loop in a circular economy, event hears

By Saleh H. Bin Yameen

Over 1,000 participants were absorbed by four Aramco organizations and three local recycling companies describing their environmental efforts in a virtual "Reverse Logistics and Circular Economy" event held recently.

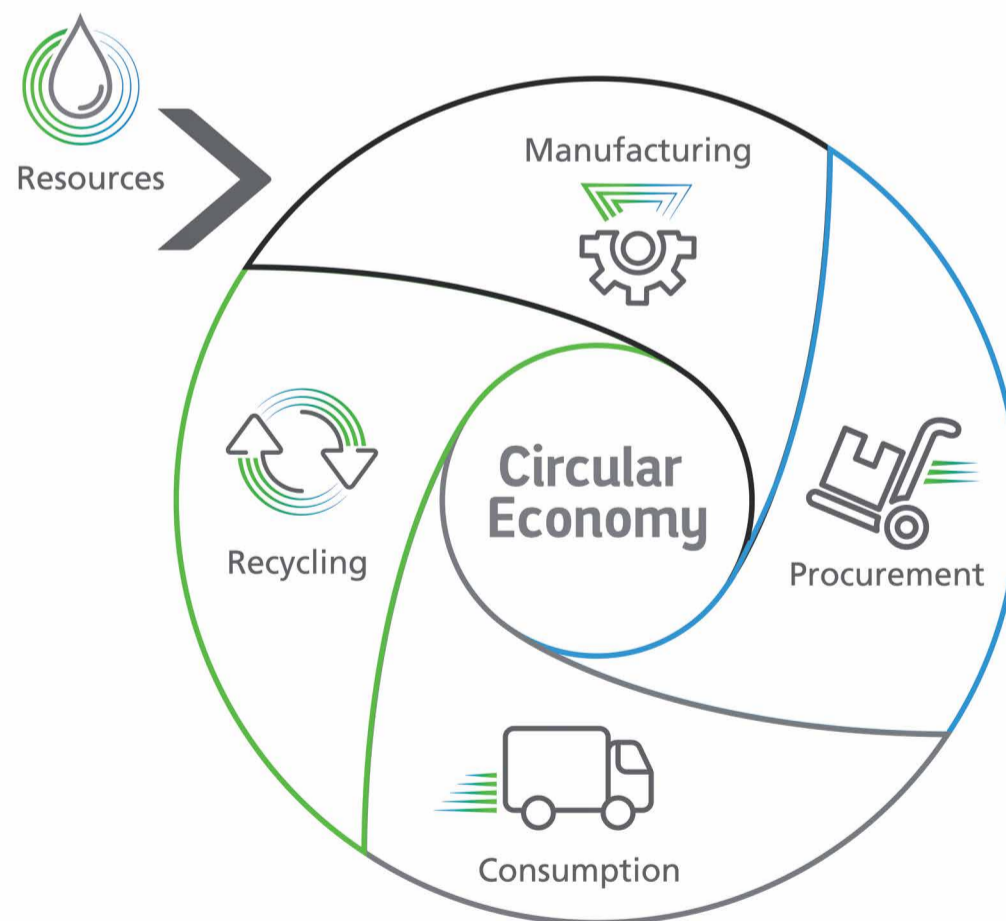
The event highlighted the importance of environmental preservation and how the country, the company, and individuals can contribute to the sustainability of the planet's resources.

The event was aimed at educating the audience about minimizing waste and allowing a continual use of resources, underlining Aramco's materials circularity in a sustainable economy.

In his opening remarks, Mohammad A. Al Shammary, vice president of Procurement and Supply Chain Management, emphasized the alignment of Aramco's initiatives with Saudi Arabia's Vision 2030 and the circular carbon economy as endorsed by G20 energy ministers to secure a sustainable future.

Al Shammary addressed the circular supply chain business model and its application in the company, including the addition of procurement contract terms and conditions and the adoption of sustainable agreements.

He pointed to the company adapt-



ing the reuse, refurbishment, and repair of materials at one end of the supply chain, and the recycling of retired and surplus materials instead of scrapping, to ensure maximum reinjection to the economy at the other end of the supply chain.

Jamil J. Al-Bagawi, the chief engineer and Circular Economy champion, discussed the differences be-

tween the linear economy's profit motive and its depleting of resources, and the circular economy's more rounded solution of unlocking huge economic opportunities while protecting resources.

Al-Bagawi described the beginnings of Aramco's institutionalization of circular economy from providing certification courses to the adapta-

tion of the circular economy concept in engineering standards.

"Aramco will continue working jointly with local industries to accomplish an ideal ecosystem within our operations, achieving the highest sustainable performance possible," he said.

The Circular Economy Task Force introduced its principles and design in the company, then the Materials Logistics Department presented its recycling channels and reverse logistics to minimize waste. Community Services displayed their recycling, decarbonization, and circular carbon economy efforts, while Environmental Protection introduced their materials waste management program.

Local recyclers showcased their processes for different materials and reinjection into the economy.

Holoul E-Waste Recycling discussed the special recycling process for electrical and electronic equipment; the Al Majwal Group explained how it treats and recycles most of Aramco's liquid and solid chemical waste; and the Al-Qaryan Group described its conversion of the company's industrial waste into raw materials.

Ahmed N. Al Zahrani, manager of the Materials Logistics Department, concluded the event by speaking about the importance of materials circularity and the vitality of Aramco's adaptation of the circular economy.

The challenges and charms of traversing the Rub' al-Khali

By Mohammad A. Ghamdi

Being an explorer, the idea of crossing the Rub' al-Khali, also known as the Empty Quarter, was a big challenge.

We spent three months preparing for the trip, meeting frequently to study any potential risks or challenges that we may face.

The team consisted of eight carefully selected individuals and every member had a responsibility — navigation, medical equipment, supplies, logistics, and spare parts.

If you are planning to cross the Rub' al-Khali, let me share some of the challenges.

Vast desert

January is the best time to go because the sand is harder and the weather is more pleasant.

A permit is needed to show your trip route, enough gasoline is essential to cross from the east to the far west, and rescue tools are required, especially for towing vehicles.



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You will be shocked by the sand dunes, which can reach up to 300 meters high.

which was an amazing place to visit and see the different types of animals.

For those who have never visited the Rub' al-Khali, you will be shocked by the sand dunes, which can reach up to 300 meters high.

It's always a majestic view with a clear sky at night, and sleeping under the stars will take your breath away.

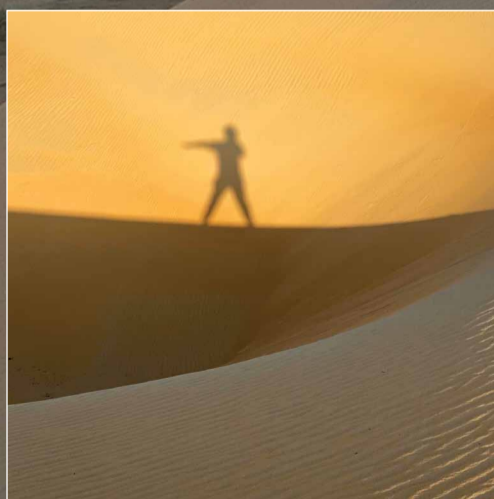
Special thanks to all the trip members, the Ju'aymah NGL Fractionation Department, the Corporate Affairs Department, Johns Hopkins Aramco Healthcare, and the Shaybah Wildlife Sanctuary team for the great support and motivation.

We started the trip on Dec. 31, 2020, to celebrate the New Year in the vast desert, which was amazing. There is sand as far as you can see during the day, and at night you can almost touch the stars.

Our trip had many planned stops for food, rest, sleep, and refueling.

Majestic view

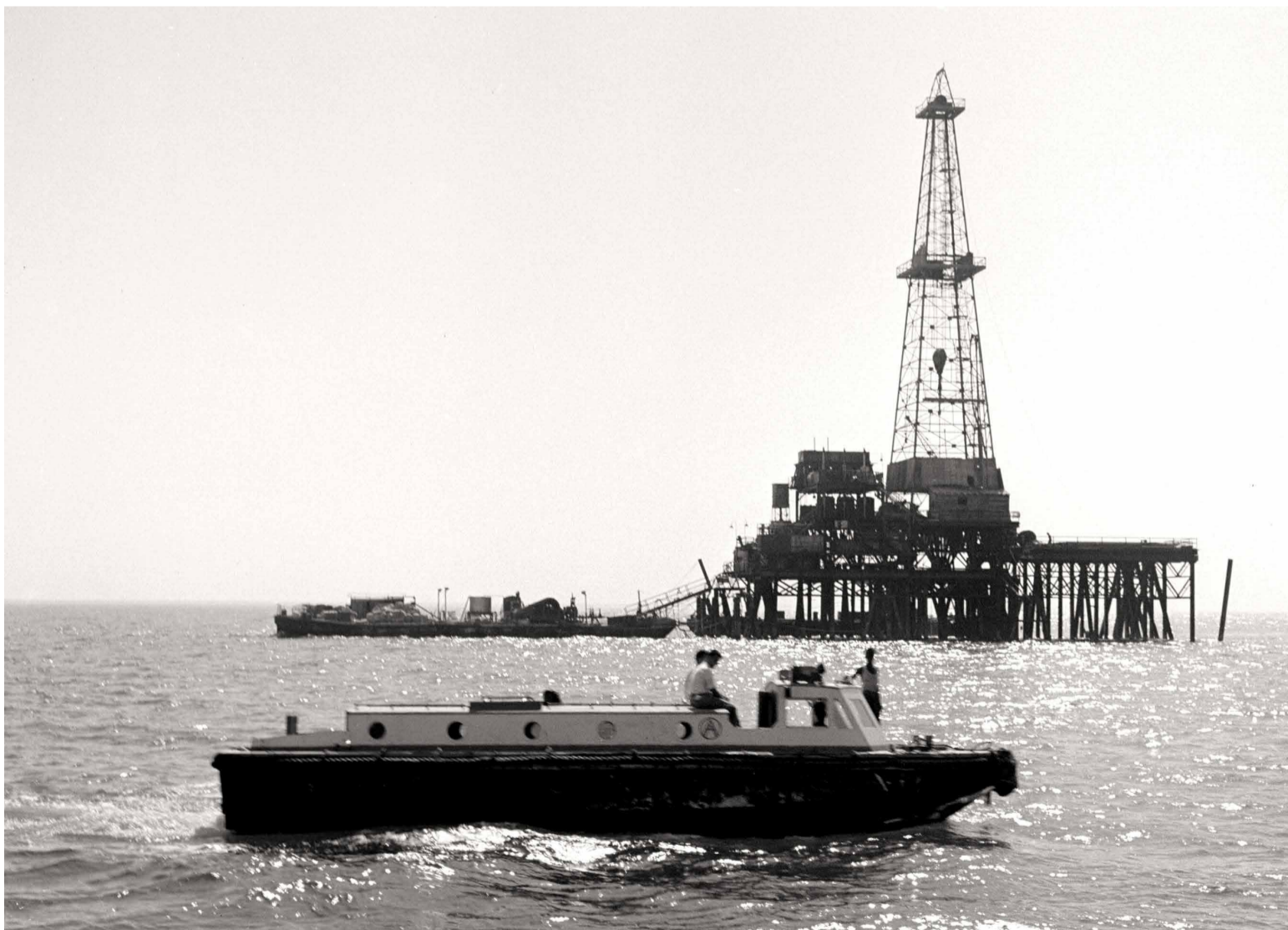
Some of the most charming sites we visited during our journey included Al Shalfa sweet water well, the Wabar meteorite site, the Jalab hot sulfur water well (where the team had the best shower ever), and the Oryx sanctuary,





Sunset in al-Khobar

In December of last year, Abdullah M. Battah, a process control system technician, captured this image of the setting sun in al-Khobar using his Nikon D5600 camera. While he lives in al-Khobar, Battah works in the Maintenance Engineering & Support Unit of the Northern Area Gas Producing Department in Tanajib. He has been with the company for seven years.



Photographic memory

Drilling on the first offshore well
 Drilling was completed on Aramco's first offshore well at Safaniyah on Aug. 15, 1951. The crude oil from Safaniyah No. 1 flows into a barge several hundred yards away. The drilling operation ended more than 200 days after it began. The well was brought in some weeks earlier, but the Producing Department decided to drill deeper for exploratory purposes.



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