

the arabian sun

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a weekly Aramco publication for employees



Aramco's advances in nonmetallics work earns recognition

See page 3

Top women golfers go for the green at Aramco International

See page 3



Eighth in a series



The Aramco Hydrocarbon Journey

Gas ...

Decades of greenhouse gas mitigation in our operational DNA

see pages 4 and 5



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Fahad K. Al Dhubaib named executive director of Community Services

Fahad K. Al Dhubaib has been appointed as executive director of Community Services, after serving in an acting capacity.

Prior to his current role, he was the general manager of Public Affairs since November 2018, during which, Al Dhubaib led the transformation of the company's communication, marketing and Citizenship functions and programs.

In addition, he was involved in the company's first global advertisement program and its venture into global sports sponsorships such as Formula 1.

From 2014 to 2017, Al Dhubaib served as a director in Aramco's New Business Development where he led teams in developing and executing commercial strategic multibillion-dollar transactions related to Maritime Development, Energy Industrial City, Third Party Projects, and in Aramco's Planning and Performance Management Department, before joining Investor Relations in January 2018.

Al Dhubaib joined the company in 1994 as a participant in the College Degree Program for Non-Employees (CDPNE). He spent his early career as an engineer in Project Management. In 2005, he moved to strategic and transformational management after joining Corporate Planning with a focus on economic and energy outlook.

In 2009, Al Dhubaib supported the company's senior leadership in the Corporate Strategic Review that led to the energy industry's most ambitious program, the Accelerated Transformation Program (ATP). This enabled him to play a key role in the Strategic Transformation Office, between 2010 and 2013, working with the 15 initiative teams formulating and implementing their respective game changing strategies and plans.

In 2013, Al Dhubaib was seconded to the Supreme Economic Council at Saudi Arabia's Royal Court. As the director of National Strategic Programs, he oversaw a variety of government-led in-



Fahad K. Al Dhubaib

vestment programs; policy analysis and formulation; and an integrated view on socioeconomic issues, including diversification, labor market and subsidy re-

forms, and entrepreneurship.

Al Dhubaib holds a B.S. degree in Electrical Engineering from King Fahd University of Petroleum and Minerals, and an M.A. in Economics from the University of Southern California — both with highest honors. He also completed several executive programs at Stanford University, the Harvard Kennedy School of Government, and Oxford University. Al Dhubaib also completed the General Management Program, and is an alumnus of Harvard Business School.

Al Dhubaib was a member of the World Economic Forum (WEF) Global Future Council on Energy, and selected as a WEF Young Global Leader (YGL) in 2015, and more recently as a member of the YGL Advisory Board.

He was also president and co-founder of the Saudi Association for Energy Economics, and a board member of the International Association for Energy Economics.

Your voice

Call to action: Think before you print



By Faisal S. Al-Suwaimel
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Dhahran

An integral pillar of Saudi Vision 2030 is to sustain and enhance the Kingdom's environmental footprint. HRH Crown Prince Mohammad Bin Salman has emphasized the importance of the environment and the positive correlation it has on many of the Kingdom's goals in terms of health, quality of life, and tourism.

The Kingdom has taken this charge to heart.

At the proposed King Salman Energy Park (SPARK), its green initiative will help improve air quality and reduce temperatures throughout the city. And other entities are working to achieve similar goals, including the Green Riyadh Project Vision, which hopes to help the capital city become one of the top 100 cities of the world through regulating activities such as logging and livestock grazing to enhance agricultural life.

These efforts are key to attracting the rest of the world as an international tourism destination being a

greener Kingdom.

Meanwhile, the Kingdom's green initiative also targets areas such as paper waste. The financial and environmental costs associated with the production, handling, and recycling of paper is too significant to be ignored. In today's digital age, institutes are re-shaping the way they do business by minimizing the use of paper, but industry is still a long way from shaking its dependency on this essential commodity.

Government entities are putting an extraordinary effort to reduce their dependency on paper-based processes and shifting toward digital mediums by providing e-Services to execute day-to-day tasks with a click of a button, bypassing a timely paperwork process. Capitalizing on digital services today enables us to make appointments, renew passports, residents' cards, IDs, driver's licenses, and other tasks from one mobile application, thereby minimizing paper waste.

Aramco is working to do its part as well. Its Computer Operations Department introduced "CloudPrint" as a service that not only provides reliable services to the workforce, it has significantly reduced paper waste — over 1,900 trees already this year. That translates into 1,600 gallons of water saved, 800,000 kilowatt hours of energy not spent, and 452,000 pounds of carbon dioxide that did not pollute the environment.

Aramco has always been a role model in its core values such as safety, and preserving the environment and planet, and places this utmost priority as a safety element. This is a call out to every process to revisit their processes, identify the potential, and remodel their services to go paperless.

And while change is challenging and costly, it is also rewarding as a long-term vision. It is our professional and national duty as a corporation and as a country to do what it takes and lead the way toward a healthier greener future.

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

Top golfers come to the fore in Jiddah

By Dalia Darweesh

JIDDAH — The second Aramco Saudi Ladies International (ASLI) golf tournament, presented by the Public Investment Fund (PIF), took place at the Royal Greens Golf and Country Club from Nov. 4-7.

Last year, Aramco joined Golf Saudi as a title partner of the tournament, which was the first ever professional ladies golf tournament in Saudi Arabia.

On Nov. 10-12, the Royal Greens club will host the fourth and final leg of the Aramco Team Series (ATS), which is also an international ladies' golf tournament. The ATS held prior series tournaments in the United Kingdom, Spain, and the United States.

Both tournaments strive to promote equality within sports, empower women athletes, and show Aramco's commitment to diversity and inclusion.

Kiwi wins tournament

New Zealand's Lydia Ko secured her sixth professional victory on the European Tour at the ASLI tournament. Ko won by five shots over Thailand's Atthaya Thitikul, with England's Alice Hewson and Spaniard Carlota Ciganda tied for third.

Ladies First Club Day

On its first day, the ASLI tournament



Aramco president and CEO Amin Nasser applauds New Zealand's Lydia Ko following her first-place finish in the second Aramco Saudi Ladies International golf tournament in Jiddah. Presented by the Public Investment Fund, the tournament strives to promote equality in sports, empower women athletes, and show Aramco's commitment to diversity and inclusion.



Video

Aramco Saudi Ladies International Tournament and Aramco Team Series bring people together.

including:

- Lessons on the golf range
- An introductory seminar from the Ladies European Tour players
- Access to golf activities and giveaways.

To date, approximately 30 women have become active participants in golf through the ASLI, which signifies Saudi women's interest and passion for golf.

welcomed 1,000 women who signed up to participate in a number of unique activities and receive special benefits,

Stadium Concept

Through its relationship with Stadium Concept — a golf educational platform that provides a 360-game experience — Golf Saudi will invite schools from all over the Kingdom to participate in the Ultimate Golf Lesson.

Saudi schools that are currently teaching golf as part of the curriculum will be invited to compete in a real stadium set-up at King Abdullah Sports City, Jiddah. The winning school will be rewarded with a starter set of golf clubs for all students in the class. A VIP visit to the ATS will also take place, where students will meet some of biggest international names in women's golf.

Giving back to the environment

To celebrate the arrival of the ATS in Jiddah, and in alignment with Aramco's existing environmental initiatives, the company will implement a "birdies and eagles" initiative. One thousand mangroves will be planted for each eagle and 100 for each birdie, potentially resulting in 100,000 additional seedlings.



Video

Aramco congratulates Lydia Ko from New Zealand.

Pursuing advantages over metal alternatives while addressing environmental and sustainability

Aramco's advances in nonmetallics work earns recognition

DALLAS — The American Composite Manufacturers Association (ACMA), the world's largest composites industry trade group, has given its Pioneer Award to Ahmad A. Al-Sa'adi, Aramco's senior vice president of Technical Services.

The award, which recognizes Aramco's innovation in nonmetallics, commended Al-Sa'adi for his long-standing leadership in developing and executing the company's nonmetallic strategy of expanding the use of polymer and composite materials in Aramco, Saudi Arabia, and around the world.

"It was our honor to recognize Al-Sa'adi," said ACMA CEO and president Cindy Squires. "The ACMA highly values Aramco's membership as a whole and looks forward to Aramco's continued active involvement in the association's work in relevant global composites initiatives.

The award took note of Aramco's compelling work in nonmetallics space that provides a path forward as the world looks for new ways to develop material solutions that are safer and more resilient.

"We have developed and deployed nonmetallic solutions within our own operations for more than two decades as they offer superior life cycle, cost,

efficiency, and environmental advantages," said Al-Sa'adi. "Nonmetallics offer advantages over metal alternatives, while addressing environmental and sustainability challenges. The potential goes way beyond the oil and gas sector, and this trend is opening new markets for Aramco's hydrocarbon resources."

Delivering on a comprehensive strategy

Aramco has been implementing a comprehensive nonmetallic strategy, striving to promote the use of nonmetallic materials globally in the oil and gas sector and beyond, including building and construction, packaging, automotive, and renewables sectors.

The company has also supported the establishment of more than 20 manufacturing plants in the Kingdom to make nonmetallic products, and dedicated significant resources to conduct research projects for the advancement of nonmetallic solutions in various industrial sectors.

Aramco is delivering on its strategy to play a leading role in accelerating the deployment of nonmetallic materials globally, working to maximize the value of its resources and assets, drive sustainability, localize industry, and reduce its carbon footprint.



While at CAMX, ACMA's annual conference and trade show, the Aramco team also delivered a presentation about business opportunities in the Kingdom, conducted meetings with major composite manufacturers, and explored the latest technologies showcased by presenters and exhibitors.

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The team highlighted the Kingdom's enormous investment opportunities in nonmetallic, noting Aramco has helped forge partnerships that have led to more than \$500 million in

investments in nonmetallic projects across Saudi Arabia.

As part of its innovation initiatives and in collaboration with The Welding Institute and the Abu Dhabi National Oil Company, in 2019 Aramco opened the Nonmetallic Innovation Center based in Cambridge, U.K., to focus on technologies for nonmetallic pipeline solutions. Aramco also recently established the Center of Excellence for Nonmetallic Building Materials with the American Concrete Institute.

The Aramco Hydrocarbon Journey (8)

Gas | Decades of greenhouse gas mitigation in our operational DNA

by Janet Pinheiro

Natural gas, the free-spirited member of the hydrocarbon family, can be hard to pin down.

Of minimal weight, without expert capture inside a pipe, gas will float into the air.

It is also transparent, making it difficult to see.

Associated and nonassociated

When Aramco crude oil journeys from the field, its associated gas — which was separated from the oil in the gas-oil separation plants and at stabilization facilities — is sent to gas plants.

Willful gas is also found independent of oil.

This nonassociated gas, with its own dedicated gas wells and gathering manifold, is also sent to gas plants for sweetening and fractionation.

Plus, gas likes to play, hiding in tight corners, requiring unconventional methods to entice it to the surface.

Energy transition piece

At its heart, gas is methane — a simple hydrocarbon of one carbon and four hydrogen molecules — and considered an increasingly important piece in the energy mix for the world's energy transition.

Gas is able to quickly kick-in when intermittent energy sources, like wind and solar, are unable to cover demand.

Aramco's gas gathering network is strategically located near its fields, reducing transportation, pipeline compression costs, and time to deliver gas products to the market.

Super chilled gas

When sour gas arrives at one of the company's nine processing plants — Berri, Shedgum, 'Uthmaniyah, Hawiyah, Haradh, Khursaniyah, Wasit, Midyan,



Working with technology makes for a lower carbon, more efficient, and safer operation, and in real-time, process engineer Turkey S. Alshuhail and operations shift superintendent Bdah F. Hajri examine thermal images monitoring the 1,200 degree Celsius metal skin temperature of Shedgum's sulfur recovery plant's refractory-lined reaction furnace to proactively identify any defects or hot spots requiring immediate isolation and repair.

Ice builds up on pipelines where natural gas liquids are separated from light methane gas. To separate the two, gas is chilled to a frosty -71 degrees Celsius.



and Fadhili — the collective goal is to condition, sweeten, and then chill the gas to remove its acidic gases (hydrogen sulfide and carbon dioxide), water, and hydrocarbon condensate.

Sweetened gas is ready for direct dispatch to the energy market, while its separated natural gas liquids (NGL) — as

one fluid stream — is sent for onward processing at an NGL plant for fractionation into ethane, propane, butane, isobutane, and pentane.

Gas train station

When the Master Gas System was initiated in 1975, Aramco constructed its Berri, Shedgum, and 'Uthmaniyah gas plants.

Like a central station of an underground train network, Shedgum is a busy, yet mostly quiet, place.

Gas, through a web of underground pipelines, silently snakes its way from southern fields into Shedgum, where it is made ready for its direct onward connection to the domestic energy market, or for the Ju'aymah and Yanbu' NGL plants.

Receiving equal parts of associated and nonassociated gas, Shedgum is 41 years old, and combines wisdom with innovation to create fresh thinking about gas processing.

Energy efficiency Shedgum priority

Greenhouse gas (GHG) impacts are mitigated when industrial plants become more efficient with their energy use.

To separate the NGL from the light methane gas, its temperature is chilled to a frosty -71 degrees Celsius.

Leaving moisture in gas risks crystallization — known as hydrate formation — which brings an unwanted hazard of pipe blockage.

Removing moisture is the job of the dehydrator system, and to save energy, Shedgum decided to do this differently.

Using a closed loop regeneration cycle, a molecular sieve desiccant is used

Gas terms

Raw	Gas prior to processing
Wet	Contains moisture/water
Dry	Contains no moisture/water
Sweet	Minimal treatment as no hydrogen sulfide present
Sour	Hydrogen sulfide is present
Lean	No liquid hydrocarbons require removal
Rich	Contains liquids such as ethane, propane, or butane
Sales	Gas after processing
Natural Gas Liquids (NGL)	Heavier hydrocarbons extracted from gas for use as a feedstock in chemical plants
Liquefied Petroleum Gas (LPG)	A mix of propane and butane gases with a variety of uses



Solar panels power North Arabia unconventional

Releasing tight gas



Gas, at its heart, is a simple hydrocarbon comprising one carbon and four hydrogen molecules, and is found both associated with crude oil, or on its own.

Gas processing plants prepare gas for direct dispatch to the energy market, and separate natural gas liquids for onward processing at an NGL plant.



This flare gas recovery system in Shedgum helps prevent gas from being flared on a regular basis.

compression systems that recover and repurpose gas that would have previously been flared.

Hajri says Shedgum's flare recovery infrastructure is one of the company's larger systems, "Instead of flaring gas, it is sent back into the production facility for production."

Gas from Shedgum's flare networks is taken to one of three liquid seal drums, where a water sealing concept recovers gas, and two compression trains then redirect the gas back into the main processing plant.

Hajri has worked at Shedgum for 12 years, and says recovering waste gas is better for the environment.

"People are concerned about climate change, and a closed gas processing system is better for the environment and safety," said Hajri.

Aramco is a signatory to the World Bank's "Zero Routine Flaring by 2030" initiative to eliminate routine flaring by 2030, and seeks, over time, to develop an integrated global gas portfolio, and plans to expand its gas business to meet the large and growing domestic demand for low-cost cleaner energy by increasing production, and investing in additional infrastructure.

to capture the moisture, which is dehydrated once it becomes saturated.

Rather than the usual compression of the regeneration gas from 350 psi to 450 psi, the compressors are bypassed, and instead, the desiccant is dehydrated at 350 psi through automated pressurizing and depressurizing of the dehydration columns.

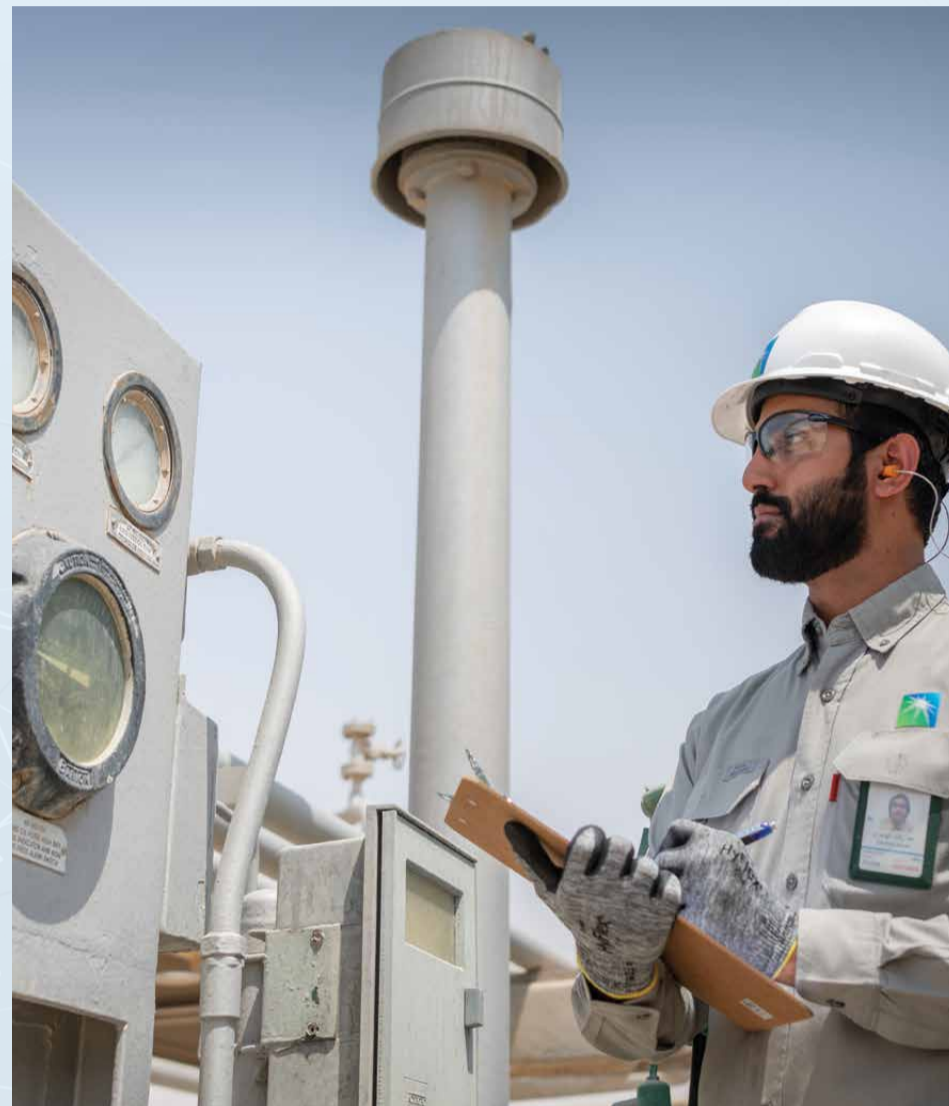
It is achieving the same outcome, without the need for compression.

Supervising operator Eid R. Hajri says stopping the compressors meant reducing power consumption, "Reducing power load also means reducing greenhouse gas emissions."

Combatting flaring

One of the infrastructure heroes for reducing GHG emissions are flare gas recovery systems, which are specialized

Master Gas System



Supervising operator Eid R. Hajri checks the pressure, flow, and temperature of the Shedgum sales gas compressor, which takes the sales gas from 350 psi to 800 psi for its onward journey through the Master Gas System.

Catch and utilize

The Shedgum sales gas compressor pushes sales gas on its onward underground journey beneath desert sands to the Master Gas System, an extensive network of pipelines collecting natural gas produced in the Kingdom, for distribution to domestic power generation, and other end users.

Capturing and utilizing gas as a source of energy significantly lightened both the Kingdom's and Aramco's footprint.



The circular economy makes big turns in the Kingdom's northern horizon.

North Arabia's unconventional gas, proudly stubborn, will not come to

you. Instead, this tight gas demands you go to it.

Rather than one centralized processing facility, five small dispersed satellite processing facilities (SPF)

covering more than 10,000 km² of the North Arabia field extract the gas, and the facilities' modular design means they can be moved for continual reuse.

Eleven out of SPF's 50 wells are

powered by solar panels, and from the wells, the gas journeys through nonmetallic piping to the SPF where it is dehydrated to deliver cleaner fuel to power the whole Wa'ad Al Shamal Industrial City.

Bringing broadband to Drilling and Workover's remote areas

Project to bring hundreds of sites online by 2024

High speed connectivity to the internet and to general corporate network resources are of paramount importance for any of Aramco's business operations. And while connectivity to the internet is something that most employees take for granted, it is often a challenge to get a good signal in remote areas, especially those that are nonstationary, such as drilling rigs, seismic crews, and construction sites.

Challenges faced by remote sites include speed limitations of satellite communications and the technical limitations of legacy terrestrial communications networks. This has led the company's Information Technology (IT) teams to scout for new technologies and deploy cutting-edge solutions to improve data flow from and to all company operating areas.

"We are leveraging multiple technologies such as data analytics, robotics, Internet of Things (IoT), 5G and broadband networks, blockchain, and other technologies to take corporate operations and business processes to the desired highest levels of automation and efficiency," said Yousef Al-Ulayan, IT vice president.

Connecting remote sites

To help improve the efficiency of complex drilling operations and digitize associated business processes, IT engineering teams have recently equipped 55 onshore and offshore remote drilling rigs at the Marjan, Hawiyah, and Haradh areas with a "broadband" wireless connectivity solution that provides 20 times the speed of current communications methods.

This solution is also planned to be ex-



To help improve the efficiency of complex drilling operations and digitize associated business processes, IT engineering teams have recently equipped 55 onshore and offshore remote drilling rigs with a wireless connectivity solution, with more than 300 Aramco sites to be improved by 2024.

panded to cover more than 300 remote Aramco sites by 2024.

"The broadband solution will enhance the efficiency of relevant company operations, improve customer experience, and elevate quality of life at the remote sites," said Omar Al-Thukair, IT Engineering Department manager. "[We] will continue to provide cutting-edge solutions as the company continues its pursuit to digital transformation."

The broadband solution will enable drilling geosteering experts at Dhahran to manage remote rig operations with more confidence and efficiency. It will also allow the company to monitor video feeds from cameras at the drilling rig sites to maintain their security from any location in the Kingdom.

Development opportunities

High speed connectivity will also contribute to the well-being and development of the field staff at the rig sites, providing them with video communications capabilities with their peers and families as well as online access to e-Learning resources, e-banking, e-government services, and other corporate network resources.

"This broadband solution will enable rigs in remote locations to receive virtual reality and augmented reality training sessions and experience the Internet of Things," said Nayef K. Ghafel, Drilling & Workover Operations manager. "This enhancement will work in conjunction with exceptional existing IT services at our drilling sites such as IP phones, video conferencing, and the corporate Shahed platform.

“

These instantaneous communication technologies will allow for more agile business process decisions to be made in real-time with significantly more relevant data at our disposal.

— Omar S. Al-Husaini

More to come

As the fifth generation mobile networks "WiFi 6" and "Low Earth Orbit" satellite services become more mature and gain more global coverage in upcoming years; IT, in partnership with Drilling and Workover and other benefiting proponents, is also expecting to adopt some of these new technologies to implement more digital transformation use cases at remote sites.

"These instantaneous communication technologies will allow for more agile business process decisions to be made in real-time with significantly more relevant data at our disposal," said Omar S. Al-Husaini, Drilling and Workover executive director.

Aramco, Chevron team up to tackle technology, add value, and increase efficiency

By Rima Ruhman

With their eyes on the future, Aramco, through its wholly owned subsidiary Saudi Aramco Technologies Company (SATC), recently signed a Joint Collaboration and Licensing Agreement (JCLA) with Chevron Lummus Global (CLG), a culmination of years of collaboration between CLG, one of the main licensors of the Ebullated Bed Hydrocracking technology worldwide, and Aramco.

The JCLA will allow CLG to license the Heavy Oil Processing Initiatives (HOPI+), an Aramco patented process technology that features an innovative configuration concept that aggregates crude oil processing with a solvent to remove asphalt. The technology's value proposition is to improve hydrocarbon residue refining margins by yielding higher crude conversion rates, more stable operations, improved reliability, and increased energy efficiency.

Aramco can also maximize its crude revenues with the option to place its crude with licensors of the technology

— potentially monetizing an additional 10% to 25% of additional crude. In addition, when the technology is licensed to a third party, Aramco will receive licensing fees.

Motaz A. Al Mashouk, Aramco's Engineering Services executive director said, "This joint collaboration with CLG reflects the focus of Aramco on breakthrough technologies that generate added value across the hydrocarbon chain."

"CLG and Aramco's technology partnership will provide a strong foundation for better efficiencies in heavy crude oil processing," said Abbas Al Ghamdi, CEO of SATC.

Many potentials

As the technology configuration lowers CAPEX, it has the potential to provide an opportunity to acquire economies of scale in upgrading heavy crude residue. It also has the potential to be used in other bottom-of-the-barrel projects.



Aramco's Motaz A. Mashouk, executive director of Engineering Services; Ahmad O. Al-Khowaiter, chief technology officer; and Abbas Al Ghamdi, CEO of Saudi Aramco Technologies Company ink a deal with Ujjal Mukherjee, managing director of CLG, that will help Aramco maximize crude revenues.

It is estimated that globally, of the approximately 80 million barrels per day of crude oil produced, 11 million barrels, or about 13%, are classified as heavy crude oils.

Overall, the technology will have a positive impact on the oil and gas industry, allowing Aramco to showcase its thought leadership in the push to-

ward more efficient uses of energy — for as energy demands grow, the need to be innovative and economical also increases.

The negotiation was led by members of Aramco's Technology Strategy and Planning, Process and Control Systems, and Crude Oil Sales and Marketing departments with support from IP Law and SATC.

Well-being

Caring for your health and wellness

Get your flu vaccine at JHAH



The best way to prevent the flu is by taking the flu vaccine annually. Every fall and winter, hospitals have an increase in patients as a result of the flu. The 2021 flu vaccine is available in all Johns Hopkins Aramco Healthcare (JHAH) health centers, and JHAH registered patients can get the flu vaccine now through December 2021, Sunday to Thursday, between the hours 7 a.m. and 3:20 p.m., and on selected weekends (no appointment is necessary) at the following JHAH locations.

- **Dhahran Vaccination Center**
Al-Munirah Building 133
- **Al-Hasa Health Center**
Immunization Room 7072, Area B
Selected Saturdays:
Nov. 13 and Dec. 4
7 a.m. - 4 p.m.
- **Abqaiq Health Center**
Immunization Room P01-2
- **Ras Tanura Health Center**
Primary Care, Room 1054
- **Udhailiyah Health Center**
Primary Care, Treatment Room 1030

What is Influenza (the flu)?

Influenza is an acute viral infection of the respiratory system. Symptoms include fever, chills, headache, muscle pain, and cough. Malaise can last several days. Severe illness can result in pneumonia, particularly in high-risk individuals. The mode of transmission is mainly airborne, but it may also be spread by direct contact. The flu vaccination can help prevent you from getting the flu. Protecting yourself also

protects the people around you who may be more vulnerable to serious flu illness.

Why get the flu vaccination?

As reported by the Saudi Ministry of Health (MOH), globally seasonal influenza "flu" affects 600 million people and is fatal in around 500,000 cases per year. The MOH and the Centers for Disease Control (CDC) recommend an an-

nual flu vaccine for **everyone 6 months of age and older.**

Why do I need to take the flu vaccination every year?

Because the vaccine is different from one year to the next. Each year the vaccine is developed according to predictions of how existing flu viruses will "genetically drift" or change from the previous year. The flu vaccine protects against the strains expected to circulate during that particular flu season.

Who is at high risk?

People at high risk for developing flu complications include:

- **People aged 65 years and older**
- **Pregnant women**
- **Children between 6 months and 23 months of age.**

People of any age who have chronic medical conditions such as heart, lung, liver, or kidney disease are also at high risk for flu complications. People who have suppressed immune systems from chemotherapy for cancer, immunosuppressive medication such as prednisone, are also at higher risk.

Not registered with JHAH?

Contact your registered health care provider or the MOH to check flu vaccination details.

Nurse Care Line

If you need someone to talk to about COVID-19 vaccination or health-related issues — in English or Arabic — our caring and expert nurses are on hand to talk you through how to manage your condition at home, provide useful information, or direct you to an appropriate clinic.

Call 800-305-4444 and select option 3.

The Nurse Care Line is available Sunday to Thursday, 7 a.m. to 4 p.m. Friday and Saturday, 10 a.m. to 4 p.m.

Becoming a JHAH Patient: Eligible Aramco employees and their dependents are invited to register for health care at JHAH, visit: *MyHome>MyInformation>MyFamily.*

For more information on the flu vaccine, please scan the QR code to our JHAH.com flu vaccine page.



مرکز جونز هوبكنز
أرامكو الطبي
Johns Hopkins
Aramco Healthcare

Together We 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 Saudi Aramco employees and their eligible dependents aged 18 years or older, who received their second dose at least six months ago.

How do I book an appointment for the booster dose of the vaccine?
If you meet the conditions to receive the booster dose of the vaccine, you can book your appointment using MyChart if you are registered for care at JHAH. You can also contact our call center at 800-305-4444 to book an appointment.

Scan this QR code.

the arabian sun

Win free F1 tickets.

Log on to Aramco LIFE to learn more.




Thousands make one 'Big Moment'

More than 4,600 visitors last weekend gathered at the King Abdulaziz Center for World Culture (Ithra) to watch and participate in the "Big Moment," a collective artwork using the latest innovative technology as part of the Tanween Festival 2021, now in its fourth season.

Visitors used their phones to create a visual artwork like nothing before. Tethered to 300 drones flying above Ithra.

"They weren't just any artistic scribbles or random drawings," said Abdullah Al Hawwas, creative developer at Ithra who insisted on uniting the efforts of every painting the audience created and coalesce them into a vibrant expression.

Slogans, scenes, and text as art

Al Hawwas also addressed how the light paintings formed images in the sky such as slogans, scenes, and text through the drones.

"It's difficult to imagine having thou-



Lights fill the sky near the King Abdulaziz Center for World Culture (Ithra) in Dhahran as part of the "Big Moment" event.

sands of visitors participate in a single artwork in under 10 seconds and in one place, but it was possible by engaging the audience and uniting their vision and energy to produce this artistic creative outcome," he said, noting that creative and artistic products are one of the objectives of the AlSharqiya Gets Creative Initiative launched by Ithra in conjunction with the Tanween Festival.

More than 200 creative participants sought to promote creativity in an exciting way and in partnership with the

public and private sectors. The "Big Moment" art forms varied between the letters of the visitors' names and unified patterns of hand gestures captured by waving smart devices to draw parallel lines in an organized artistic expression. Drones hovered above them to record the scene and light up the dark sky like twinkling stars embracing digital art.

The audience watched their drawings eagerly, enthusiastically fulfilling the "Big Moment."

The moment that brought them together and united their creative energies was documented on a giant screen. It was notable that the youth segment was larger than any other, as children waved their parents' phones to participate and manifest their artistic gestures.

The event gathered all age groups with their smartphones and the colors chosen from the special "barcode" palette to create with technologically innovative "tools" — the theme of Tanween 2021.

Dr. Jaffar Al-Tawfiq has been named as a top 10 scientist on coronavirus research by Microsoft

JHAH doctor recognized for fight against COVID-19



Dr. Jaffar Al-Tawfiq's career has included numerous national and international recognitions from institutes for his work on COVID-19 and infectious diseases.

He has been named as a Top 10 scientist on coronavirus research by Microsoft, a top influential scientist by Stanford University, a leading expert contributing to COVID-19 by the Infectious Disease Society of America, among others. He is also a member of the Saudi National COVID-19 Scientific and Vaccine committees.

Johns Hopkins Aramco Healthcare (JHAH) has proven its resilience and dedication during the COVID-19 pandemic, with Aramco and JHAH standing out for their recorded high rate of em-

ployee and dependent vaccinations. This rate adds to JHAH's continuous efforts to raise awareness, educate, and enforce COVID-19 guidelines.

But vaccinations are only one part of the fight against COVID-19. Early in the pandemic, JHAH and Aramco worked hard to provide accurate, timely, and scientific-based information on COVID-19 that was available to not only JHAH and Aramco communities, but the entire population.

JHAH's Dr. Jaffar Al-Tawfiq has been a key player in managing the pandemic. An infectious disease and internal medicine consultant who joined the company in 1999, he is the director of accreditation and infection control, department of quality, and patient safety, as well as being the JHAH COVID-19 incident commander and head of the COVID-19 task-force.

"Our understanding of the pandemic has now increased," said Al-Tawfiq, adding that many rules and regulations have become routine to people. He not-

ed that through collaboration with key departments in the company, guidelines and educational campaigns have helped inform patients, health care workers, departments and services, and top management.

"It's like a beehive; we are all working in a collaborative environment," he said.

Preparation and recognition

Al-Tawfiq's contributions during the pandemic has been acknowledged by ExpertScape, which ranks people and institutions by their expertise in more than 29,000 biomedical topics, ranking him the No. 2 scientist worldwide when it comes to the Middle East Respiratory Syndrome Coronavirus (MERS-CoV). He is also ranked in the world's top 0.034% by ExpertScape about infection control.

"I'm honored by all the recognitions that I have received during the past two years and throughout my career — I am humbled. It is a lifetime achievement, and I'm very grateful," Al-Tawfiq said.

“Our understanding of the pandemic has now increased ... It's like a beehive; we are all working in a collaborative environment.”

— Dr. Jaffar Al-Tawfiq

Before the pandemic, JHAH, alongside Al-Tawfiq, held meetings to discuss solutions for future outbreaks and pandemics and how to manage the number of patients. They also conducted a drill to optimize readiness and maximize patients' care.