

# THE RYDER SCOTT QUARTERLY



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### **Welcome Note**

By: Dean Rietz, CEO



We all know, the oil and gas industry is cyclical. In accordance with tradition, company history, and loyalty, Ryder Scott will continue to stand by our employees through the ups and downs we experience in our industry. As CEO, I believe it is important to maintain the reputation we have worked hard to earn over the years, which entails retaining a top quality professional staff consisting of highly experienced, loyal employees. Ryder Scott has over 70 engineers and geoscientists and approximately 20 analysts/technicians. We pride ourselves on the fact that these individuals average 25 years' industry experience, with 15 years at Ryder Scott. I want to take this opportunity to thank the Ryder Scott staff who have stayed with us through the tough times and celebrated with us during the good times. I also want to thank our previous, present, and potential clients for choosing Ryder Scott. You have selected a leader in the industry, a company that remains honest and consistent. We are here to serve you, and I can confidently say, we employ the best in the industry. Contact me directly at [Dean\\_Rietz@RyderScott.com](mailto:Dean_Rietz@RyderScott.com) with any comments. I appreciate your feedback and enjoy conversating with you, our clients and industry friends.

### **Editor's Note**

By: Pamela Sabo



In this newsletter, we close out 2022 and give you, our readers, a glimpse of what 2023 has in store for us. We have moved the release of our newsletter to the end of the quarter instead of the beginning in order to cover events and important information that happened during the particular quarter. I welcome your feedback on this small change. I hope to hear from you and see you all online at our 19<sup>th</sup> Annual Reserves Conference, covered in more detail on Page [7](#) of this newsletter.

"The reality is that the only way change comes is when you lead by example." Anne Wojcicki

# 2022

## AT A GLANCE

With the new year in full swing, we take a brief look back at some of the exciting moments that took place along with a few events we look forward to throughout 2023.

### 2022 Top Workplace – Three Years Running!

For the third year in a row, Ryder Scott has been honored with a spot on the Houston Chronicle's annual list of Top

Workplaces. Winning a 2022 Top Workplace Award from the Houston Chronicle is an outstanding achievement that any company should be proud of. The award recognizes companies that have created exceptional workplaces based on employee feedback, and winning it is a testament to the company's commitment to its employees.

To win this award, a company needs to prioritize its employees' well-being and job satisfaction. The company must create a positive work environment and ensure that employees feel valued, supported, and appreciated. This award is an accomplishment that sets the company apart from its competitors and reinforces its reputation as a top employer in the region.



The Houston Chronicle's Top Workplace Awards recognizes businesses that excel in areas such as company culture, communication, and employee engagement. These are critical components of a successful workplace and serve as indicators of a healthy and productive workforce. To win this award, a company must have a strong company culture that aligns with its values and mission, along with effective communication channels that foster transparency and open dialogue.

In addition, employee engagement is essential to create a positive work environment. Engaged employees are more likely to be motivated and committed to their work, leading to higher levels of productivity and job satisfaction. Companies that prioritize employee engagement by offering training and development opportunities, providing competitive salaries and benefits, and fostering a collaborative work environment are more likely to win this award.

We are proud to be recognized alongside the other 2022 winners and even more proud of every employee that makes Ryder Scott a great place to work. Receiving this award is not the end goal, but rather the beginning of a journey toward continuous improvement and growth.

### A New Year, A New Space!

One of the most exciting events of 2022 was welcoming the Ryder Scott Houston team back to our newly renovated



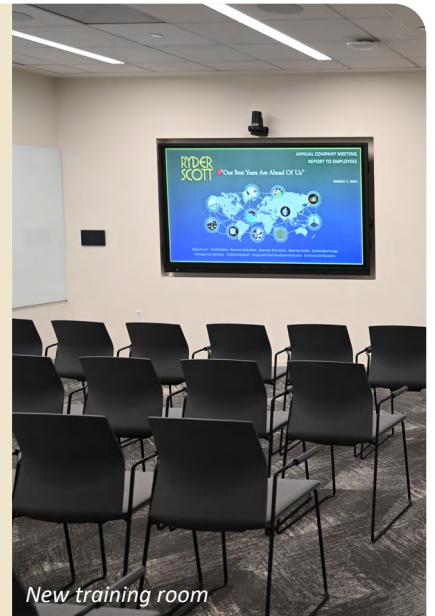
*Ryder Scott's Newly Renovated Lobby*



New elevator lobby



New collaboration room



New training room

office space. While our Houston staff carried out business as usual from their home offices, an internal team was assembled to create a workspace that was not only aesthetically pleasing but, more importantly, was designed and arranged to improve staff interaction and safety. Together with Hines building management, our team successfully accomplished both.

Ryder Scott selected [selected Ziegler Cooper Architects](#), and [O'Donnell/Snider Construction](#) to create functional workspaces for individual and team collaborations. Both floors include spacious break and wellness rooms designed to accommodate the needs of all employees with small perks that enhance the workday experience. All meeting rooms were updated with the latest technology and “Zoom” rooms were added to facilitate our new flexible work environment.

Upon the completion of construction, the team at [Agile Interiors](#) brought the space to life with touches of modernity and functionality while incorporating Ryder Scott’s 85 years of history. While in-person client meetings are in full swing, we look forward to hosting an open house in late Spring 2023. Stay tuned for more details.

### **2023 Upcoming Events**

As in-person conferences resumed, Ryder Scott staff attended many industry events throughout the year.

Throughout 2022, our experts were asked to present and participate in many of the highly-attended industry conferences while our marketing team interacted with attendees at the Ryder Scott exhibit booth. Our representatives spoke on several relevant topics which are currently shaping the oil and gas industry.

We look forward to attending upcoming 2023 industry events. Our employees are valuable contributors to the constantly evolving industry, and their abilities, knowledge, involvement, and experience are a major part of why our company continues to be an industry leader.

## **See You There!**

### **March 29-30**

Carbon Tracking Conference  
Houston, Texas

### **April 25-27**

AAPG - CCUS  
University of Houston Campus

### **June 13-15**

UrTEC  
Denver, Colorado

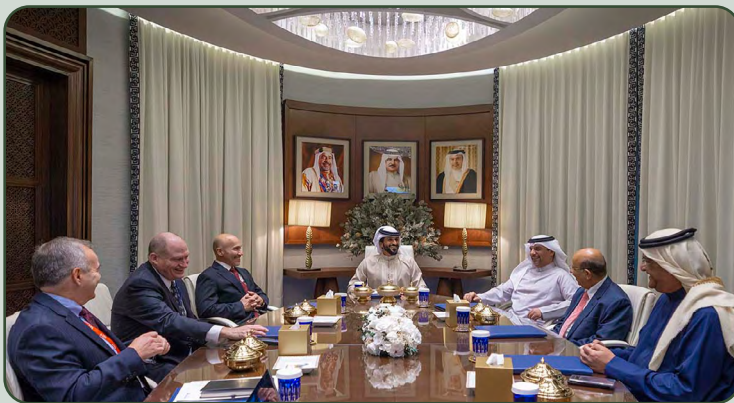
### **October 16-18**

SPE-ATCE  
San Antonio, Texas

## Ryder Scott & Tatweer Representatives Present Preliminary Results to the Kingdom of Bahrain

On January 10, 2023, Ryder Scott experts presented the preliminary results of a study certifying the volumes and production quantities of natural gas in two newly discovered reservoirs located under the Khuff and Unayzah natural gas-producing reservoirs in Bahrain. The evaluation began shortly after the official announcement by the Oil and Gas Holding Company (nogaholding).

**Herman Acuña**, Ryder Scott's Executive Vice President, and **Miles Palke**, Managing Senior Vice President and head of Ryder Scott's Simulation Group, along with representatives for Tatweer Petroleum, presented the results to His Highness **Shaikh Nasser bin Hamad Al Khalifa**, His Majesty the King's representative for Humanitarian Work and Youth Affairs and Chairman of the Board of Directors of nogaholding.



*Miles Palke and Herman Acuna (second and third, left) meet with HH Shaikh Nasser bin Hamad (center) and Tatweer leadership to discuss the preliminary natural gas results of the recently conducted reserves certification.*

The newest natural gas resources located in each of the Al-Juba and Al-Jouf layers were a welcome discovery for the Kingdom of Bahrain in the face of depleting gas resources over recent years. With an economy built around reasonably priced natural gas, the results of Ryder Scott's report also bode well for the Kingdom's 2030 Economic Vision. The vision, launched in 2008 by His Majesty King **Hamad bin Isa Al Khalifa**, is centered around three guiding principles – sustainability, fairness, and competitiveness – aims to transform Bahrain's once oil-driven economy into one driven by a revitalized private sector that benefits all Bahrainis.

His Highness Shaikh Nasser bin Hamad Al Khalifa expressed his excitement at the preliminary results, reiterating the importance of new discoveries to the Kingdom's success. He commended both Ryder Scott and Tatweer Petroleum for the efforts put forth in this important project and announced his approval for further evaluations and studies. After presenting the results, Miles Palke echoed His Highness's sentiment by saying "It is Ryder Scott's honor and pleasure to help Bahrain secure the inexpensive and clean energy resources necessary to fuel the Kingdom for decades to come."

Since partnering with Tatweer in 2004, Ryder Scott has provided technical, commercial, and management consulting services to Bahrain. In 2008, our experts assisted in establishing the Bahrain Oil Concession through the creation of a robust bidding process and the evaluation of IOC proposals. The following year, Ryder Scott assisted with a similar project for a deep gas exploration for the establishment of an Exploration, Production and Sharing Agreement (EPSA). Our team is currently focused on assessing the Kingdom's additional unconventional resources potential.

Along with His Highness Shaikh Nasser bin Hamad Al Khalifa, the meeting was also attended by the Minister of Oil and Environment and Special Envoy for Climate Affairs, His Excellency **Dr. Mohamed bin Mubarak Bin Daina**, Tatweer Petroleum Chairman **Faisal Al Mahroos**, Group Chief Operating Officer **Mark Thomas** of nogaholding, Tatweer Petroleum's Acting Managing Director **Ghassan Almuhanha**, and other representatives of the company.

## Ryder Scott's Upstream and Midstream Integrated Services Team to Present at 2023 OTC in May on GHG Emissions

Ryder Scott staff members have been selected to present on a trending topic in the industry – greenhouse gas (GHG) emissions – at the upcoming 2023 Offshore Technology Conference (OTC) set to take place at the beginning of May in Houston, Texas. Ryder Scott's Head Advisor of Upstream and Midstream Integrated Services and Vice President, **Sandeep Khurana** along with his team members **William Turner**, Senior Project Engineer, and



*Sandeep Khurana, Alex MacKay, and William Turner of Ryder Scott's Upstream and Midstream Integrated Services Team*

**Alexander MacKay**, Project Engineer have written a paper that provides insights and guidance in estimating GHG emissions at the offshore facility level and subsequent reporting at the company corporate level with the following:

- Review the regulatory framework, estimating methods, and reporting for offshore facility-level emissions.
- Organize emission sources into defined categories in order to comprehend major emission sources for an offshore facility.
- Analyze inherent uncertainty in emissions estimation.
- Discuss ways to reduce emissions at the facility level and its limitations.
- Analyze select energy companies' corporate sustainability reports and cover ways to standardize emissions reporting so it is easier to evaluate and compare a company's performance with its peers.
- Identify energy company strategies and associated risks to achieve net zero emissions.

In the paper, the authors offer a systematic approach to verify and validate GHG emissions for a typical Gulf of Mexico (GoM) offshore oil and gas production facility. They discuss different ways to reduce GHG emissions at the facility level and examine an approach to assess an energy company's emission reporting methods and, where applicable, its target to achieve net zero emissions.

The authors' analysis includes the construction of a simplified model to estimate total emissions for a typical offshore facility. Their process is described in detail throughout the paper. The model results are used to evaluate inherent uncertainty in emissions estimation techniques and provide a basis to reduce emissions. The authors also evaluate sustainability reports of select energy companies and analyze these companies' reporting methods, targets, and strategies to reduce emissions at the corporate level.

The 2023 Offshore Technology Conference (OTC) will take place at NRG Park in Houston May 1-4, 2023. Ryder Scott's team is scheduled to present on Monday, May 1 at 9:30 am in Room 604. Visit <https://2023.otcnet.org/> for more event information.

## Ryder Scott's 19<sup>th</sup> Annual Reserves Conference – Broadcast Worldwide in May

The 19<sup>th</sup> Annual Ryder Scott Reserves Conference will be held virtually via the Zoom platform on the mornings of May 10<sup>th</sup> and May 11<sup>th</sup> (CDT). This is the fourth year that the conference will be held virtually.

Last year's conference was viewed by more than 750 attendees from 40 countries throughout the world. A second broadcast of the conference was offered for the first-time last year to accommodate industry professionals in different time zones across the globe. Due to the positive feedback following the second airing, we will be offering a second broadcast of the conference this year as well.

**"The conference will be broadcast at 8:00 AM CDT on May 10<sup>th</sup> and May 11<sup>th</sup>. The second showing will be aired at 7:00 AM GST on May 11<sup>th</sup> and May 12<sup>th</sup>."**

The conference will be broadcast at 8:00 AM CDT on May 10<sup>th</sup> and May 11<sup>th</sup>. The second showing will be aired at 7:00 AM GST on May 11<sup>th</sup> and May 12<sup>th</sup>. We anticipate increased participation in the second airing this year and hope the scheduled time is amenable to our international clients and friends.

Licensed petroleum engineers in attendance will receive a certificate of attendance to document earned CEUs (Continuing Education Units), which are required to maintain certain annual P.E. licensing requirements. The conference ends with an "Ethics Hour" that qualifies as a one-hour credit necessary to fulfill most states' annual ethics requirement for licensed engineers.

The conference lineup includes well-known industry professionals. Speakers and agenda may change closer to the event. Updates will be posted at <https://ryderscott.com/ryderscott-reserves-conference/>.

At this time, the speakers will include:

- **Dr. John Lee**, Professor at Texas A&M
- **Deji Adeyeye**, Vice President at Ryder Scott
- **Andy Thompson**, Senior Vice President – Manager of Ryder Scott Canada Office
- **Samantha Holroyd**, CCO at ZeroSix
- **Gillian Rosen**, Carbon Transport and Storage at The U.S. Department of Energy (DOE)
- **Marylina Garcia**, Senior Vice President at Ryder Scott
- Panel Discussion  
The next article covers some of the dialog from last year's panel discussion.
- **John Wallenstein**, Managing Member of The Wallenstein Law Group (Ethics Hour)

If you are interested in attending the conference, please send an email to [RSCConfHouston@ryderscott.com](mailto:RSCConfHouston@ryderscott.com). Only registered attendees will be able to attend. Invites will be sent out soon.



## 2022 Panel Discussion – The Energy Transition

Over the last few years, the oil and gas industry has implemented regulations and adopted new policies to reduce environmental impact and actively participate in the energy transition.

The following discussion is an excerpt of just a few of the Questions and Answers from the 2022 Ryder Scott Reserves Conference Panel Discussion, moderated by Ryder Scott's Chairman Emeritus **Ron Harrell**.



**Ron Harrell, P.E.**  
Panel Moderator  
Chairman Emeritus  
Ryder Scott Co.

## **Q & A** Question & Answers

### Group

**Q:** Carbon capture and sequestration seems to be a logical solution to bridge existing energy resources to a lower emissions future. What's needed to unlock it's potential?

### **A: Logan Burt**

From an investor standpoint, I would say that there is significant interest, not just from investors, but from emitters, government bodies, and project developers. It's clear that carbon capture and either use or sequestration is a key piece of the puzzle in achieving emission reductions. I believe there are profitable projects that deliver adequate returns today, but it's not everywhere. And what you're looking for is large volume, concentrated emissions, ideally of high purity CO<sup>2</sup>, where there's existing infrastructure. That creates a reasonably high bar today. We need cost to go down, or incentives to go up, to get more traction in CCUS. There's also some really interesting stuff happening on the solvent side to get the technology cheaper and more efficient. There's obviously a will in Washington and other capitals around the world to improve the incentives. But the reality is, sources of emissions are very fragmented. One of the more interesting models that I believe Christine has been involved with along the way is, and probably John as well, is how do you aggregate those sources of emissions to create economies of scale, and get to Hub and Spoke systems? You could say that speaks to the cost element of it, but we need one or two of those to happen, probably both, to get more traction from an investment standpoint in CCUS.

### **A: Christine Ehlig-Economides**

One direction that I've been looking at with some of my colleagues is a higher value, fossil product. Blue hydrogen comes to mind – where we produce methane, but take it straight to steam methane reforming, and then collect the CO<sup>2</sup> from that. And what's interesting is you might put that right back in the same reservoir; so we might see a future where the hydrogen that goes to power plants, and perhaps also to supply transportation, would be decarbonized hydrogen and a takeaway from natural gas fields instead of methane, like today. This is a little bit different, because now it's all about whether markets for the hydrogen emerge to make something like that work. Another direction we've looked at is the carbon-neutral crude oil – instead of flaring associated gas from tight oil, because tight oil is very light, has a lot of gas. If there isn't a market for it, then it can be used for direct air capture CO<sup>2</sup> to offset the emissions from the crude oil. This might be a value product of interest to Europe if they want to move away from importing Russian oil – maybe they could be importing US-generated carbon-neutral crude oil. So, it's a little bit of a different twist – not waiting for a carbon tax or something similar but



coming up with value products from our same fossil reservoirs.

**A: John Hessenbruch**

I believe Christine may have touched on this, but the tax credits, which for CCUS are up to \$50 per metric ton, need to be increased. And when they are increased, I think you'll get more investments into this very important space. There have been movements in Congress, from what I understand, to put incentives out there to increase tax credits up to \$175 per ton but right now, that's still conjecture. I believe we need to enhance those tax credits to encourage more investment into the CCUS field.

The Panel Discussion this year will have a new moderator and panel participants, continuing the discussion on the ever-present energy transition. This year the panel will focus on carbon capture, utilization, and storage/sequestration (CCUS).

# University of Houston Engineers Week 2023

## More than Ten Years of Giving Back

On Tuesday, February 21, Ryder Scott staff members participated in the 2023 Engineers Week (E-Week) Awards hosted by the UH Engineering Alumni Association. Ryder Scott staff had the opportunity to contribute to a scholarship fund named Ryder Scott Company Friends of UHPE for the 11<sup>th</sup> year. Thanks to our generous donors, nine petroleum engineering students were each awarded a \$500 scholarship to recognize their outstanding academic achievements – eight individuals received the Excellence in Petroleum Engineering Award and one student received the Dr. John Lee Engineering Legacy Award.



*Ryder Scott Chairman Emeritus Ron Harrell presents the Dr. John Lee Award and the Dr. Holley Award.*



*Dean Rietz with two recipients of the Friends of Ryder Scott Petroleum Engineering Award*

Ryder Scott Company Friends of UHPE has participated in the UH E-Week program since 2012. Over the last ten years, our donors have raised nearly \$100,000 for UH petroleum engineering students.

Reflecting on the success of this year's event, Ryder Scott's Chairman and CEO **Dean Rietz** said, "I'm proud of our donors, many who have no direct connection to the University of Houston, for their continued support of this program and the students."

Rietz also serves on the UH Petroleum Engineering Advisory Board (PEAB) with Ryder Scott's Chairman Emeritus **Ron Harrell** and Senior Petroleum Engineer / Data Science Coordinator at Ryder Scott **Adam Cagle**. The PEAB participates annually in E-Week, raising funds for additional well-deserving petroleum engineering students.

## Ryder Scott New Hire



**Zheng Zhang** joined the Ryder Scott Houston office in December 2022 as a Petroleum Engineer. She has diverse experience in reservoir simulation, history matching, and field development optimization. Her areas of expertise include field performance analysis, well test analysis, decline curve analysis, material balance, production forecasting, and economic evaluation.

Before joining Ryder Scott, Zhang worked as a Senior Advisor for QRI where she evaluated, developed, and proposed new well and workover opportunities to maximize client recoveries. Before that, she was a Senior Reservoir Engineer for ConocoPhillips, where she acted as project lead, evaluated the performance of reservoir management strategies, developed effective workflows, optimized CO<sup>2</sup> WAG scheduling, and identified and solved well-conformance issues.

Zhang received her PhD in Petroleum Engineering from Texas A&M University in 2014. She also holds an MS degree and a BS degree in Petroleum Engineering from China University of Petroleum in Beijing. During her spare time, Zheng enjoys cooking and baking. She also enjoys playing the piano and chess with her son.

## 2023 Ryder Scott Board Members Announced

Newly elected board members are managing senior vice presidents **Stephen Gardner, P.E.** and **Philip Jankowski, P.G.**



**Gardner** is the manager of Ryder Scott's Denver office and has more than 20 years of experience in onshore/offshore oil and gas reservoir and production engineering and operations. He has worked as a petroleum engineer since 2001 and joined Ryder Scott in 2006. Prior to joining Ryder Scott, he worked as a Project Engineer for ExxonMobil where he began his career. He received a BS in Mechanical Engineering from Brigham Young University and is a licensed professional engineer.



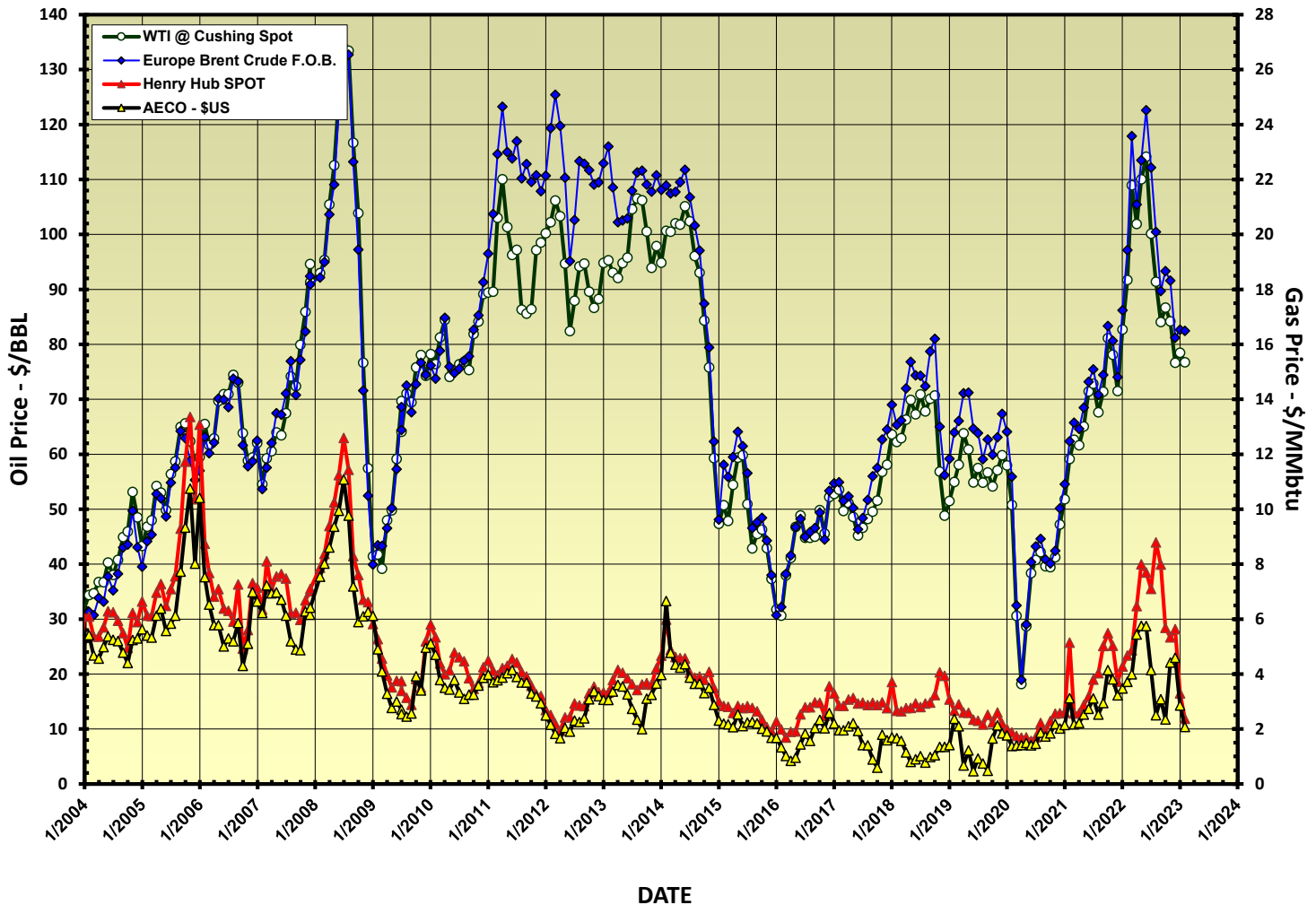
**Jankowski** joined the Ryder Scott team as a Geologist in 2007. He manages the Ryder Scott Geology team conducting various multidisciplinary global projects. Philip has over 14 years of experience with Ryder Scott performing volumetric evaluation of reserves through geological, geophysical, and petrophysical methods. He has been involved in integrated studies with multidisciplinary team approaches to analyze seismic, geological, engineering and economics data. He has a BA degree in Geology from Texas A&M University.

## Ryder Scott Promotions

The Board of Directors promoted the following personnel:

- **Ali Porbandarwala** to Managing Senior Vice President
- **Dan Olds** (Managing Senior Vice President) has moved laterally to manage a new team of Ryder Scott staff members.

# Price History of Benchmark Oil and Gas in U.S. Dollars



Published, monthly-average, cash market prices for WTI crude at Cushing (NYMEX), Brent crude and Henry Hub and AECO gas.

## Board of Directors

Dean Rietz  
Chairman & CEO

Guale Ramirez  
President

Herman Acuña  
Executive VP

Dan Olds  
Managing Senior VP

Eric Nelson  
Managing Senior VP

Miles Palke  
Managing Senior VP

Tosin Famurewa  
Managing Senior VP

Stephen Gardener  
Managing Senior VP

Philip Jankowski  
Managing Senior VP

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## The Ryder Scott Quarterly

is published quarterly by Ryder Scott Co., LP. Established in 1937, the consulting firm performs hundreds of independent studies a year and offers a wide range of services – including reserves evaluations, geological studies, reservoir simulation modeling, integrated studies, facility evaluations, data analytics, economic analyses, expert witness testimony, and sustainable energy consultancy to name a few. With 113 employees, including 77 engineers and geoscientists, Ryder Scott has the expertise and capability to complete the largest, most complex reservoir evaluation projects in a timely manner.

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