

# NGLS LOG

June 2024  
Volume 64 No. 12





# On the Cover

## *Wieliczka Salt Mine near Krakow, Poland*

In late April, I attended a solution mining conference in Krakow, Poland and had the opportunity to visit the truly breathtaking Wieliczka Salt Mine with a group of former geology classmates! A UNESCO World Heritage site, it is the oldest active salt mine in Europe.

The deposits were formed around 13.6 million years ago when the Carpathian Foredeep was closed off from the sea after a fall in sea level. The weight of the deposits in the basin caused the basin to subside, allowing terrigenous sediments to be deposited with the salt. These clay layers are evident as curved layers in several parts of the mine.

The Wieliczka salt mine was first mined for table salt in the 13th century and continued until 1996. Salt is still mined, but mostly for tourist souvenirs. The tour itself is approximately 2.2 miles (3.5 km) and a total of around 800 stairs to climb and decent (mostly decent). From the surface, the deepest part of the mine is around 440 feet (135 meters). I had doubts about whether I'd physically make it to the end, but it was so worth it!



## On the Cover (continued)

### *Wieliczka Salt Mine near Krakow, Poland*



Everywhere, perhaps unsurprisingly, was salt. Salt “tile” floors, an altar sculpted from salt, a ballroom with religious and folklore carvings, and salt sculptures of Pope John Paul II and Johann Wolfgang von Goethe to name a few. Even the chandeliers’ crystals are salt. Almost everything on the cover of this NOGS Log is made of salt!



Natural salt formations can also be viewed. Wieliczka salt is bedded salt. Groundwater percolates into the mine at several places, forming “popcorn” salt as streaks or large portions of wall. Large, gentle folds cover some of the walls, and there are areas of small, jagged folds. The salt is mostly grey, but there are thin layers of white salt throughout. The salt consists mostly of halite, clay and, if only judging by the bitter taste because I did lick the wall, potassium and/or magnesium salts.



This trip was a treat for me particularly as a salt geologist, but I recommend anyone to see this if they ever get the chance.

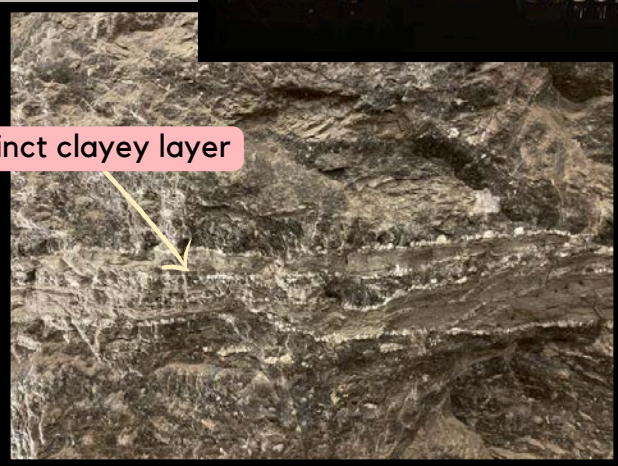


# On the Cover (continued)

## *Wieliczka Salt Mine near Krakow, Poland*



Distinct clayey layer



"Popcorn" salt







## *From the Editor...*

Greetings Everyone,

This will be my last edition as editor of the NOGS Log, and it came with such perfect timing for me to share a few pictures from a trip to a salt mine in Poland called Wieliczka (pronounced *vee-LEECH-ka*) I took while I was there at a salt mining conference. A month prior, a few fellow state regulators and I visited the Morton Salt Mine at Weeks Island, one of the last remaining conventionally mined salt mines in Louisiana. If our incoming editor Brian Bothner will let me, I'd love to write about that experience as well and the awe-inspiring photos from that as well.

I will truly miss this position and am grateful that I was afforded the privilege to participate on the board this past year along with some amazing geologists. We will be welcoming the new board this month, and I look forward to another year with NOGS as secretary this time!

As always, if you have any suggestions about content or would like to contribute to the Log, please reach out to Brian at [editor@nog.org](mailto:editor@nog.org)!

*Brittany*



**Brittany George**  
**2023/2024 NOGS Log Editor**





**MARK WOJNA**

# **A MESSAGE FROM THE 2023/2024 NOGS PRESIDENT**

It's hard to believe that an entire year has passed. My term as 2023-2024 New Orleans Geological Society President has come to an end. It has been an honor and privilege to serve as NOGS President. I have enjoyed working with the current NOGS Board serving NOGS. NOGS is celebrating its 83rd anniversary this year. The successful longevity of the New Orleans Geological Society is due to past, present and future members participating in NOGS by volunteering their time to leadership roles within the Society, volunteering their time in educational programs throughout our community and taking part in professional development opportunities provided by NOGS. This position gave me the opportunity to meet other geologists in our region and become aware of other geologically related opportunities in South Louisiana outside of my oil and gas world.

NOGS once again co-hosted the annual Deepwater Technical Symposium last summer along with the American Association of Drilling Engineers (AADE) New Orleans Chapter and the Society of Petroleum Engineers (SPE) Delta Section. The symposium was a successful event due to the hard work of many dedicated NOGS/AADE/SPE volunteers. The New Orleans geological and engineering communities played a leading role in the development of the deepwater Gulf of Mexico as a world class oil and gas exploration and development trend. Lessons learned here are now being applied all over the world in other deepwater basins. The symposium also provides continuing education opportunities for geologists. Last year featured a course on salt tectonics. This coming summer, the deepwater technical symposium will offer several courses. You can visit [www.deepwaternola.org](http://www.deepwaternola.org) for more information. The Symposium will be held August 15-16, 2024 at the Hilton Riverside. NOGS members receive a discount to the symposium. Please visit the NOGS website for more information.

We began a new tradition this past year by holding Northshore and Southshore Fall Kick-off Socials in order to bring our members together and recruit new members. Hopefully this new tradition continues on into the future. Speaking of new members, two of our new incoming board members have recently joined NOGS. Lee Hyson, Gaia Earth Group will be the new Vice-President. Chase Cromwell, Leaaf Environmental will be the new Director C. The Spring NOGS Golf Tournament was a big success despite the early bad weather. NOGS also participated in a fall Charity Golf Tournament co-sponsored by PLANO/SPWLA/NOGS.

Please renew your NOGS annual membership. During the renewal process we are asking members to list universities attended and also list other professional society memberships. This information will only be available to paid members in the membership directory section. This information will help NOGS with planning purposes to target our membership with appropriate programs.

Please welcome and support our new President Jared Bullock and the new incoming board. Our organization is in good hands. It's encouraging to see younger members stepping forward in leadership roles for NOGS. I would also encourage any senior members of our society to consider volunteering to NOGS and sharing your knowledge and insight to help continue the growth of NOGS. I would also like to acknowledge Christy Himel, NOGS Administrator. Christy's energy and organization skills have helped NOGS run smoothly. Christy provided assistance with organizing our board meetings, planning the monthly meeting venues along with helping organize and attending the various NOGS events. Thank you Christy for all you do for NOGS. You made my job as President much easier. Finally, thank you for giving me the opportunity to share some of my thoughts with you each month. Hopefully you've enjoyed my monthly musings as much as I did sharing them with you. Wishing everyone a fun and enjoyable summer ahead.

Mark J Wojna



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# 2024/2025 NOGS BOARD OF DIRECTORS SLATE



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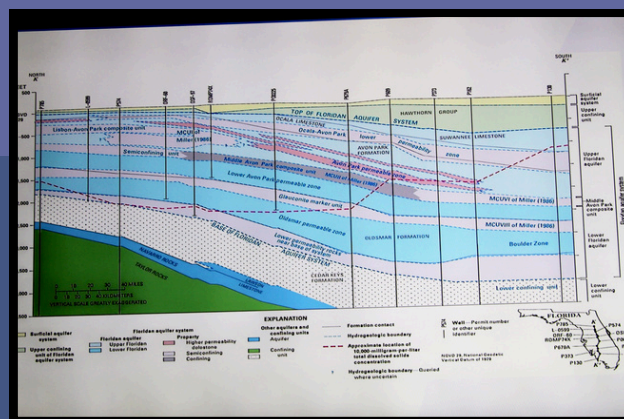
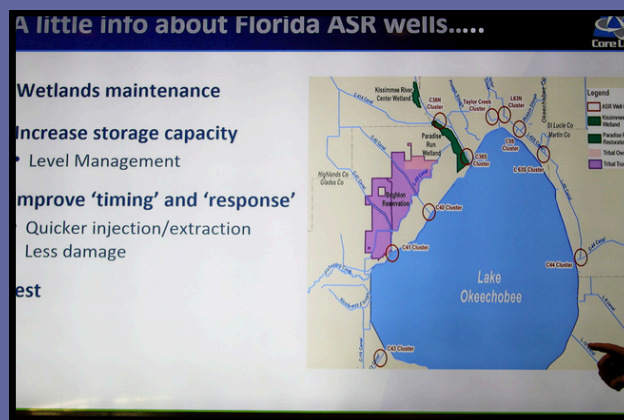


Director C  
Chase Cromwell



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emailed to NOGS  
Members**





# NOGS May 2024 Monthly Meeting: "Planning the Analytics for CCUS, Waste Injection and Water" by Toddy Guidry (Core Laboratories)



# MEMBER RENEWAL

## ITS TIME TO RENEW YOUR NOGS MEMBERSHIP



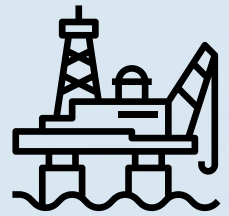
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PAYING MEMBERS WILL BE  
SENT A BALLOT FOR THE  
2024/2025 BOARD OF  
DIRECTORS ELECTION



# DRILL BITS

## OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES BY AL BAKER



During April 2024, the **Bureau of Safety and Environmental Enforcement (BSEE)** approved 73 Gulf of Mexico (GoM) drilling permits. Twenty-one of the permits were for shelf wells, and the remaining 52 permits were for deepwater wells. There were 7 new well permits issued in deepwater.

The 7 deepwater new well permits were for 4 exploration wells and 3 development wells. **Anadarko Petroleum** was given 2 new exploration well permits for their Mississippi Canyon 40 #1 and Mississippi Canyon 216 #1 wells. **LLOG Exploration Offshore** was granted 2 new exploration well permits for their Mississippi Canyon 509 #1 and Keathley Canyon 828 #1 wells. A new development well permit was awarded to **BOE Exploration & Production** for their Green Canyon 944 #WA-4 well in Winterfell Field. **BP Exploration & Production** received a new development well permit for their Mississippi Canyon 775 #4 well in Thunderhorse North Field. **Shell Offshore** obtained a new development well permit for their Mississippi Canyon 509 #1 well (Who Dat East appraisal well).

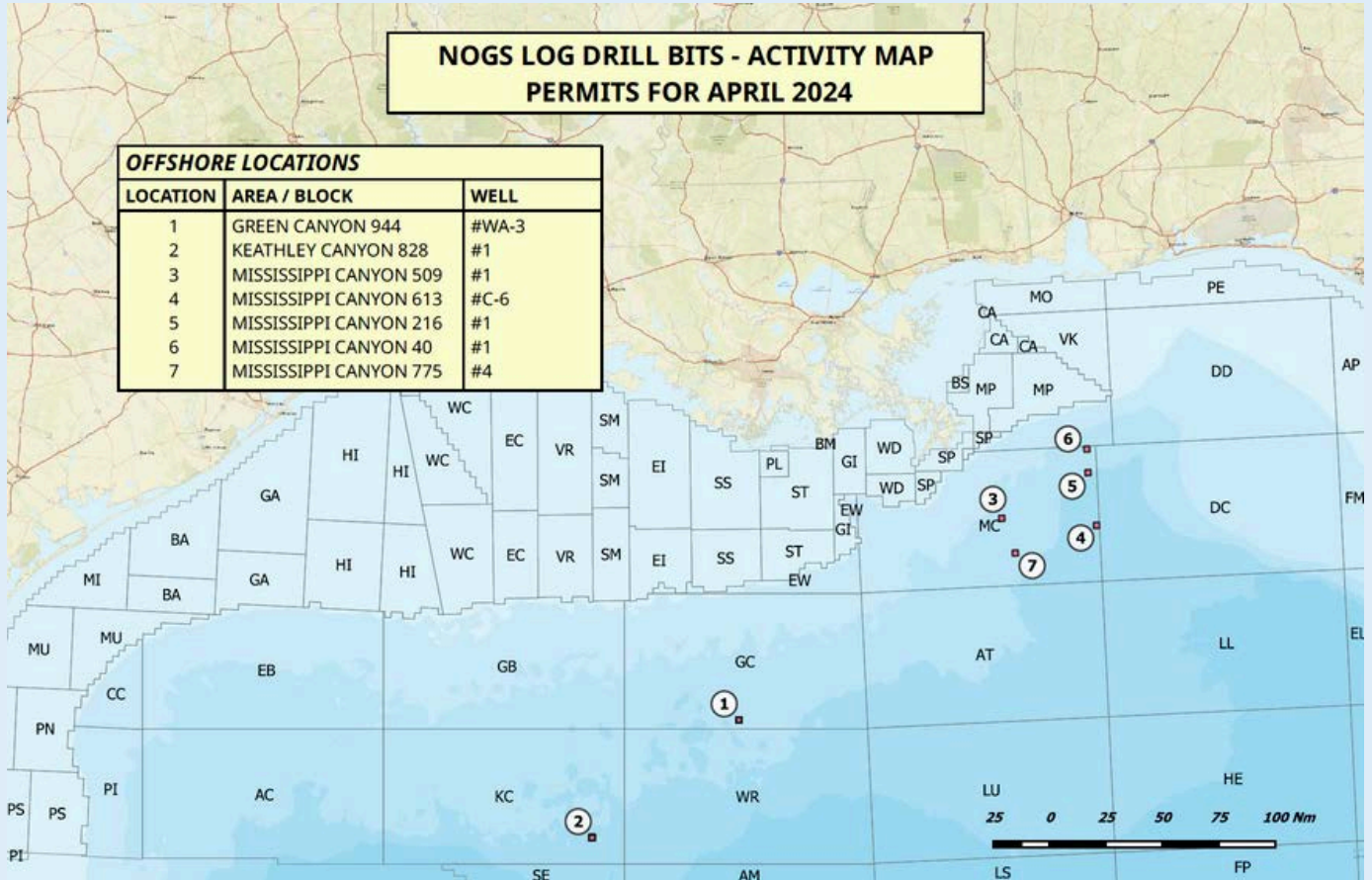
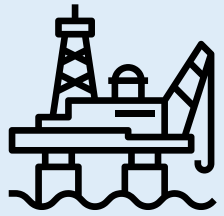
On April 26th, **S&P Global Petrodata** indicated that the GoM mobile offshore rig supply stood at 48, which is the same as last month. The marketed rig supply consisted of 35 rigs, of which 29 were under contract. The marketed rig supply and the contracted rig supply were also the same as last month. The marketed contracted versus total rig supply utilization rate remained at 72.9%, and the marketed contracted versus marketed supply utilization rate remained at 82.9%. By comparison, the April 2023 total fleet utilization rate stood at 83.3% with 30 rigs under contract out of the 45 rigs in the fleet.

On April 26th, **Baker Hughes** reported that there are 15 active mobile offshore rigs in the GoM, which is 3 less than last month and 51.7% of the rigs under contract mentioned above. Currently, 3 rigs are drilling on the shelf, and 12 rigs are drilling in deepwater. The shelf rigs include 2 in the Eugene Island Area and 1 in the South Timbalier Area. The deepwater rigs include 6 rigs in the Mississippi Canyon Area, 2 rigs in the Alaminos Canyon Area, 2 rigs in the Walker Ridge Area, and 1 rig each in the Keathley Canyon and Garden Banks Areas.

On April 26th, the **Baker Hughes** total U.S. rig count stood at 613 rigs, which is 8 less than reported at the end of March 2024. Of the 613 rigs, 506 (82.5%) are oil rigs and 105 (17.1%) are gas rigs. Two rigs are listed as miscellaneous. Of the 613 wells being drilled, 552 (90%) are horizontal and 14 (2.3%) are vertical. A year ago, there were 755 rigs working in the U.S. inferring that the current 142 rig decline corresponds to an 18.8% decrease in rigs year over year. Nationally, Texas has the largest number of rigs with 297, which is 48.5% of the total number of rigs in the U. S. Louisiana currently has a total of 36 rigs, which is the 5 less than last month. Louisiana ranks fourth behind New Mexico, which has 107 rigs, and Oklahoma, which has 45 rigs.

# DRILL BITS

NEW WELL PERMITS OFFSHORE GULF OF MEXICO  
SHELF AND DEEPWATER ACTIVITIES MAP BY  
KEVIN TROSCLAIR





# Recent Energy Headlines

## *May 2024 Recap*

**5/14/2024 - New Bloomberg Study Warns of \$150 Oil** - A recent release sent to Rigzone by Bloomberg Intelligence (BI) warned that, according to a new analysis by BI and Bloomberg Economics (BE), “an escalation to a direct war between Israel and Iran could result in oil prices rising to \$150 a barrel and global output cut by \$1 trillion”. Ziad Daoud, Chief Emerging Markets Economist at BE and co-author of the report, said in the release that the organization’s base case is that the war will remain largely confined, with limited impact on the global economy, but pointed out that this could change. [Read Full Article](#)

**5/7/2024 - BP eyes 2025 FID for Tiber oil project in US Gulf of Mexico says Executive** - HOUSTON, May 7 (Reuters) - BP, opens new tab is considering a 2025 financial greenlight decision for its Tiber offshore oil project in the U.S. Gulf of Mexico, an executive said on Tuesday at an offshore energy conference in Houston. The company's U.S. Gulf of Mexico output last year averaged 300,000 barrels of oil and gas per day and it is targeting 400,000 bpd by 2030, Andy Krieger, BP's senior vice president of its Gulf of Mexico and Canada business, said at the Offshore Technology Conference. BP earlier said it was aiming to reach 400,000 bpd net capacity across its assets in the U.S. Gulf of Mexico by mid-decade, according to its website. BP discovered Tiber in 2009 in an area with a resource capacity estimated to be 9 billion barrels of oil and gas across five discoveries, and because all have already been penetrated, they do not need exploration, Krieger said. The Kaskida project, near the Tiber project in the U.S. Gulf of Mexico, also is set for a final investment decision this year, he said. [Read Full Article](#)

**5/6/2024 - Louisiana’s Strategic Shift to Carbon Capture Technology** - Louisiana has long been a leader in the energy sector, pioneering numerous innovations over the past century that have significantly influenced the industry’s evolution. Today, as the world increasingly focuses on environmental sustainability, Louisiana is poised to retake a leading role. The state’s adoption of carbon capture and storage (CCS) technology represents a transformative step towards aligning with global environmental standards and addressing the evolving demands of both the market and regulatory frameworks. This shift is not merely about keeping pace with technological advancements but is a proactive strategy to continue Louisiana’s legacy of energy leadership. By embracing CCS, Louisiana can enhance its industrial base, protect local jobs, and foster economic growth while significantly reducing its environmental footprint. [Read Full Article](#)

**5/3/2024 - Oil Companies Expand Offshore Drilling, Pointing to Energy Needs** - About 80 miles southeast of Louisiana’s coast, 100,000 metric tons of steel floats in the Gulf of Mexico, an emblem of the hopes of oil and gas companies. This hulk of metal, a deepwater platform called Appomattox and owned by Shell, collects the oil and gas that rigs tap from reservoirs thousands of feet below the seafloor. Equipment on the platform pipes that fuel to shore. Political and corporate leaders have pledged to reduce planet-warming emissions to net-zero by 2050. But oil companies like Shell are betting that the world will need oil and gas for decades to come. To serve that demand, they are expanding offshore oil and gas drilling into deeper and deeper waters, especially here in the Gulf of Mexico. [Read Full Article](#)

# NOGS GOLF TOURNAMENT CRAWFISH & SHRIMP BOIL **APRIL 29, 2024**



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# 27th Annual Gulf of Mexico Deepwater Technical Symposium

## GEOLOGY SEMINAR

### Carbon Capture and Storage: An Industry Primer

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August 14, 2024

**Dr Tip Meckel** - Gulf Coast Carbon Center,  
Bureau of Economic Geology (USA)  
**Dr Trey Meckel** - Monteverde Energy (Australia)

**This one-day short course provides technical professionals, managers, and executives at various stages in their career an in-depth overview of Carbon Capture and Storage (CCS), one of the most rapidly emerging sectors in the energy industry and a critically necessary component of all credible low emissions and decarbonization scenarios and plans.**

CCS is a safe, reliable, and proven method to safely and effectively remove carbon dioxide from the atmosphere. Under the right conditions, CO<sub>2</sub> stored in subsurface geologic formations is permanently isolated.

Many of the aspects of CCS that we will cover as topics and themes on the course will be familiar to participants with experience in oil and gas, but we will focus on how to leverage skills and experience to maximum benefit.

- CCS in the context of Net Zero and the Energy Transition
- Existing and emerging technologies to capture, transport, store, and monitor injected CO<sub>2</sub>
- Sources of CO<sub>2</sub> emissions
- Distribution networks: Pipelines and flow assurance

- Characterizing and selecting potential storage sites
  - Onshore vs offshore
  - Depleted fields and saline aquifers
  - A forensic look at seal integrity
- Risk and uncertainty
- Reservoir surveillance
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  - Measuring, monitoring, and verifying
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- Establishing and building successful partnerships
- Project management
- Financing, incentives and cost considerations
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**Course cost: \$200**

*The course will draw on the instructors' decades of first-hand experience on successful (and not so successful) USA and International commercial and technology research projects, including their learnings from applied case studies, a review of the status of current and planned global projects, projections for future growth, and thoughts on how to build a sustainable and rewarding career in the 21st century energy industry.*



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# Energy Fundamentals



July 8-12 & 15-19

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These two one-week short courses on **energy and energy markets** are designed for

- early career professionals,
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**Energy Fundamentals** will provide an overview and introduction to the energy sector, with a focus on Louisiana and the Gulf Coast region. Participants will be exposed to the history, science, and economics of producing and consuming energy.

**Week 1, “Molecules,”** will cover energy derived from coal, oil and gas, biomass, uranium, and hydrogen, as well as critical materials relevant to the energy transition.

**Week 2, “Electrons,”** will cover the electric utility industry and the electricity supply chain, including generation, transmission, and distribution. Emerging technologies, electricity market regulation, wholesale markets, cost-of-service-based regulation, and industry growth opportunities and challenges will also be presented.

[CLICK FOR REGISTRATION INFO](#)

**Subject-matter experts**, including LSU faculty and staff and representatives from the energy industry and government agencies, will provide instruction.

**CPD** and **MCLE** hours will be available. Each day will include **six** hours of possible continuing education/professional development credit.

Lectures will take place in the **Energy Information Center located in the Energy, Coast & Environment Building on LSU’s campus**. Short field trips to energy-related sites on campus and at the LSU Center for River Studies facility are in the works.



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The New Orleans Geological Society was organized on October 3, 1941, as a non-profit organization for the purpose of facilitating the development of the profession and science of Geology, with specific emphasis to exploration and production of petroleum and natural gas. Secondary related objectives include the dissemination of pertinent geological and environmental technological data, and the maintenance of a high standard of professional conduct of its members. The full history of the Society can be found at [nogs.org](http://nogs.org).

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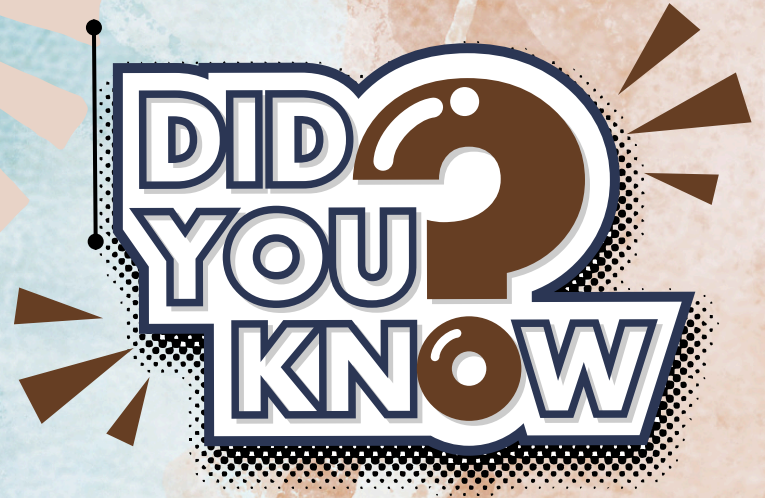


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