

MIDCONTINENT

'Terrible Tragedy' in Oklahoma As Five Workers Believed Dead After Rig Explosion

Five workers who went missing on Monday after a Patterson-UTI Energy Inc. drilling rig in eastern Oklahoma exploded and collapsed are presumed dead, local emergency management officials said on Tuesday.

"At this time, we have moved from a rescue mission to a recovery mission," said Pittsburg County Sheriff Chris Morris. "Fire rescue personnel have performed primary and secondary searches of the area for those missing without any success."

Seventeen other workers were safely evacuated. One was airlifted to St. John Medical Center in Tulsa to treat burns. Morris said those presumed dead include Josh Ray, 35, of Fort Worth, TX; Matt Smith, 29, of McAlester, OK; Cody Risk, 26, of Wellington, CO; Parker Waldridge of Crescent, OK, and Roger Cunningham of Seminole, OK.

Ray, Smith and Risk were all employees of Patterson. It's unclear what company the other two men worked for. Their ages were also not released. Morris said it is most likely that the missing men were

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CANADA

NEB Rejects 'Premature' Discounted Toll For U.S. Shale Gas to New Brunswick

A halt has been called to an attempt by Canada's biggest oil refinery to avoid looming pipeline cost increases for switching Canadian East Coast natural gas markets over to imports from the United States.

The National Energy Board (NEB) rejected, as "premature," a discounted toll "load retention service" that Maritimes & Northeast Pipeline (M&NP) proposed for delivering U.S. shale gas to Irving Oil's 313,000 b/d Saint John plant in New Brunswick.

The ruling observed that during a lengthy review of the plan, "significant broad concerns and uncertainties were raised about the future of the natural gas market in the Maritimes and the impact on shippers, in particular those captive to M&NP."

Devising solutions was postponed for a later, larger case. The NEB said "an examination of possible alternative toll and tariff

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REGULATORY

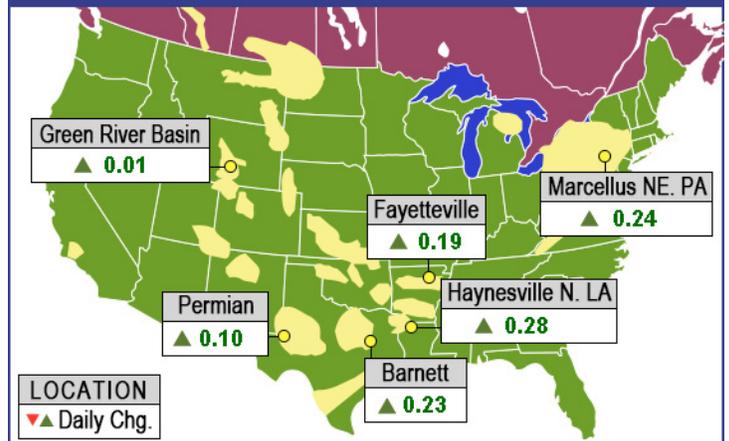
U.S. Supreme Court Rules WOTUS Fight Belongs in District Court

SCOTUS doesn't want to discuss WOTUS.

In a setback for the Trump administration, the U.S. Supreme Court ruled unanimously on Monday that the nation's district courts, not the appellate court system, should decide a legal challenge over which waterbodies deserve protection under the federal Clean Water Act.

At issue is the definition of what constitutes Waters of the United States (WOTUS). Last July, the Environmental Protection Agency (EPA) said it was [moving forward](#) with a two-step process to rescind

NGI's Shale Price Indices (SPI)



Trade Date: Jan 23; Flow Date(s): Jan 24

| Basin/Region | Range | Avg | Chg | Vol | Deals |
|---------------------------------------|-----------|------|------|-------|-------|
| Gulf Coast | | | | | |
| Barnett | 3.06-3.38 | 3.19 | 0.23 | 257 | 29 |
| Eagle Ford | 3.25-3.41 | 3.32 | 0.26 | 464 | 91 |
| Haynesville - E. TX | 3.04-3.35 | 3.16 | 0.26 | 688 | 103 |
| Haynesville - N. LA | 3.22-3.35 | 3.26 | 0.28 | 96 | 15 |
| Permian ¹ | 2.65-2.91 | 2.77 | 0.10 | 1,497 | 182 |
| Tuscaloosa Marine Shale | 3.34-3.43 | 3.39 | 0.33 | 1,265 | 146 |
| Midcontinent | | | | | |
| Arkoma - Woodford | 3.22-3.27 | 3.26 | 0.30 | 109 | 8 |
| Cana - Woodford | 2.41-2.45 | 2.43 | 0.01 | 138 | 14 |
| Fayetteville | 3.03-3.35 | 3.15 | 0.19 | 269 | 55 |
| Granite Wash* | 2.71-2.88 | 2.80 | 0.20 | 404 | 67 |
| Northeast | | | | | |
| Marcellus - NE PA ² | 2.50-2.87 | 2.62 | 0.24 | 403 | 100 |
| Marcellus - NE PA: Other ³ | 2.61-2.87 | 2.65 | 0.21 | 303 | 68 |
| Marcellus - NE PA: Tenn ⁴ | 2.50-2.58 | 2.54 | 0.23 | 101 | 32 |
| Marcellus - SW PA/WV | 2.64-3.20 | 2.93 | 0.26 | 2,496 | 460 |
| Utica ⁵ | 2.59-3.20 | 2.82 | 0.12 | 536 | 124 |
| Rocky Mountains / West | | | | | |
| Bakken | 2.00-2.30 | 2.09 | 0.07 | 50 | 5 |
| Green River Basin* | 2.70-2.85 | 2.78 | 0.01 | 1,322 | 206 |
| Niobrara-DJ ⁶ | 2.75-2.81 | 2.79 | 0.07 | 407 | 79 |
| Piceance Basin* | 2.73-2.78 | 2.75 | 0.02 | 233 | 36 |
| Uinta Basin* | 2.67-2.75 | 2.72 | 0.02 | 209 | 34 |
| San Juan Basin* | 2.74-2.81 | 2.79 | 0.04 | 678 | 102 |

*Notes: Table represents fixed-price delivered-to-pipeline transactions in USD/MMBtu. These data are comprised of deals that NGI believe represent trading activity in the respective resource plays and may contain gas that was produced from conventional formations. * Denotes a tight sands formation. Details on additional footnotes are available [here](#). Volumes may not total due to rounding. For more information, please see [NGI's Shale Price Methodology](#).*

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the controversial Clean Water Rule (CWR), which it helped promulgate during the Obama years with the Army Corps of Engineers. The Trump administration had appealed to the Supreme Court in hopes of accelerating the rescission process.

But on Monday, Justice Sonia Sotomayor [opined](#) that "even if the court might draft the statute differently, Congress made clear that rules like the WOTUS rule must be reviewed first in federal district courts..."

PIPELINES**Permian Delaware Gaining More Oil Transport Options in Matador, Plains Agreement**

Matador Resources Co.'s majority-owned San Mateo Midstream LLC and Plains All American Pipeline LP are teaming up to transport crude oil from the Permian Basin in the Rustler Breaks area of Eddy County, NM.

San Mateo, 51% owned by Matador, and Plains plan to offer services to third-party producers across a joint development area (JDA) of the Delaware sub-basin that covers about 400,000 acres.

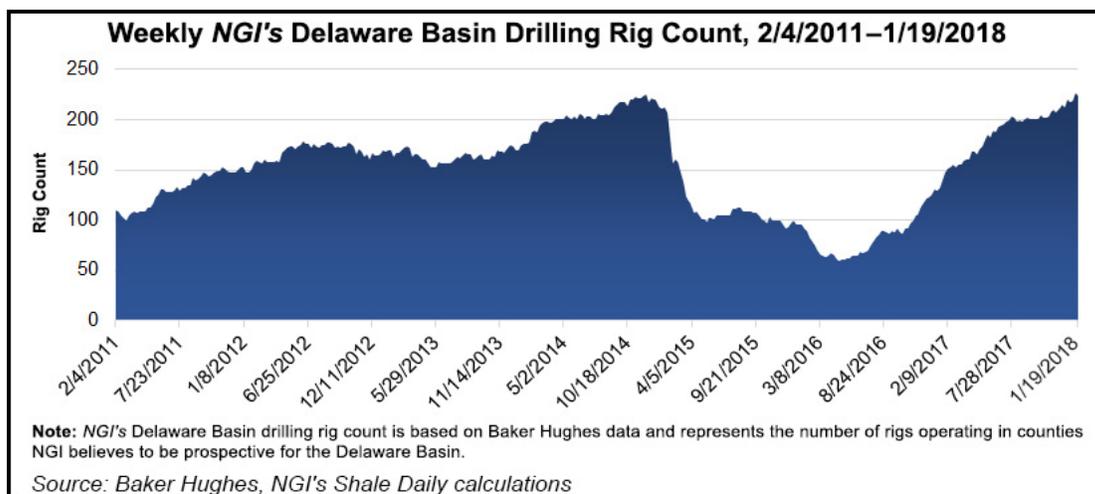
Oil would be gathered and transported from the wellhead to Midland, TX, with access to other end markets including the Cushing, OK, oil hub and the Gulf Coast. A Plains unit also agreed to purchase Matador's oil production from Rustler Breaks and from its West Texas assets in the Wolf play in Loving County.

"Similar to the [formation of San Mateo](#) in early 2017, this transaction demonstrates the different ways companies in the same industry can work together to create value for their stakeholders," said Matador CEO Joseph Foran.

"Not only does this relationship open up additional market opportunities for San Mateo and Matador through Plains' extensive midstream asset footprint, long-term customer relationships and record of performance, but it also demonstrates San Mateo's ability to generate value for itself and for third-party customers by providing services across all three production streams -- oil, natural gas and water."

For Matador, the transaction "is significant," Foran said. "In addition to Matador's 51% ownership in San Mateo, the joint tariff in Rustler Breaks and the tariff in Wolf provide Matador the ability to lock in attractive and competitive long-term oil transportation rates, obtain additional oil market optionality, reduce shut-in and transportation risk and receive increased takeaway capacity out of the Delaware Basin."

Plains plans to construct a mainline extension to the JDA from its long-haul oil pipeline system in Culberson County, TX. San Mateo's crude oil pipeline system is under construction throughout the Rustler Breaks asset area near Carlsbad, NM. Construction should be completed by early in the third quarter.



In addition, San Mateo would be able to accept oil on its system from trucks near Loving, NM. The crude oil trucking station would provide an outlet for area producers not yet connected to pipe at the wellhead. Oil would be shipped under a joint tariff filed with the Federal Energy Regulatory Commission before the pipeline being placed into service.

With transportation costs rising in the Delaware sub-basin, Matador expects to save substantial expenses by transporting increasing oil volumes by pipeline.

"Matador has simultaneously improved its net pricing realizations for the oil it already has on pipe in the Wolf asset area and expects to have additional options for various end markets as a result of this arrangement with Plains," management said. "These transactions also provide operational advantages as transportation by pipeline rather than by truck reduces operational and shut-in risks; for example, interruptions from ice storms or insufficient trucking capacity around holidays..."

As of Monday (Jan. 22), Matador was operating five oil and gas rigs in the Delaware. It also was temporarily operating a sixth rig to drill a well in the Antelope Ridge area in southern Lea County, NM.

Matador plans to drill two additional saltwater disposal wells in Rustler Breaks for San Mateo, giving it five by mid-2018. San Mateo now disposes of around 100,000 barrels of wastewater per day for Matador and third-party operators in the Rustler Breaks and Wolf asset areas. ■

OCC records show rig was still in the process of drilling well's vertical leg when accident occurred

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working in the doghouse or on the rig floor at the time the accident occurred. It remains unclear what exactly happened or what caused the explosion.

"We can't speculate and we won't speculate on the investigation at this point, but we will work with the Occupational Safety and Health Administration (OSHA); we have management working with OSHA today to begin the investigation because we want to learn from this," said Patterson CEO Andy Hendricks, who joined emergency management officials on Tuesday for a press conference at Quinton

High School near the scene. "We don't want this to happen again for anybody in our industry."

Authorities received a call at 8:45 a.m. CST on Monday and were dispatched to a site west of Quinton, which is about 100 miles southeast of Tulsa. Footage of the aftermath of the explosion showed flames spewing into the air and eventually a collapsed and charred derrick. By Monday night, the fire had been extinguished. Halliburton Co. subsidiary Boots & Coots Services was called to assist in bringing the wellhead fire under control.

Ten fire departments, law enforcement agencies, three medical helicopters, crisis management teams and even the Red Cross, among others, responded to the scene, according to Pittsburg County Emergency Management (PEM).

"We're waiting on the scene to be declared safe," PEM Director Kevin Enloe said Tuesday. "We're relying on the resident experts to tell us that they feel comfortable and that we're not going to have anymore issues with the medical examiner and their team to conduct their follow-up."

Patterson was working for Oklahoma City-based Red Mountain Energy LLC. The producer had no personnel on site at the time of the incident, said Kevin Say, who co-founded the company in 2013, and joined officials at the press conference on Tuesday.

Oklahoma Corporation Commission (OCC) spokesman Matt Skinner said the company's affiliate, Red Mountain Operating LLC, was authorized to drill a horizontal natural gas well at the location with a permit for the Mississippian Lime and Hunton formations and the Woodford Shale.

Hendricks, who leads a major North American contract driller with more than 7,000 employees, called the incident a "terrible tragedy and a terrible loss." He stressed that safety is always the primary concern for his company and joined Say in expressing condolences for the families of the dead, which had already been notified on Tuesday.

New Brunswick, Nova Scotia have ruled out replacing offshore gas with onshore supplies

Continued from Page 1

approaches would be more fruitful when M&NP's supply, markets and contract billing determinants post-2019 are known."

The main "determinant" is declared intentions to plug and abandon Atlantic Canada's aging, depleted and expensive subsea production networks: the ExxonMobil-operated [Sable Offshore Energy Project](#) (SOEP) and Encana Corp.'s [Deep Panuke](#).

A target date of 2021 has been set for completing the cleanup by removing all traces of the facilities, with well plugging scheduled to start this year. SOEP intends to file a formal work application soon. Encana is recruiting cleanup contractors.

The provincial governments in New Brunswick and Nova Scotia have ruled out replacing offshore gas with supplies from wells on land. Both have enacted popular bans against "fracking" their shale deposits with horizontal drilling and hydraulic fracturing. Neither has responded to an earth sciences reminder, in a new geological atlas, that they have the shale resources to build a multibillion-dollar industry.

The supply loss confronts Canada's Atlantic seaboard market with covering costs of switching to imports from the U.S. by reversing flows on M&NP. Expenses are expected include a high level of excess capacity.

M&NP chiefly delivered Canadian gas exports to New England. The combined gas consumption of New Brunswick and Nova Scotia, currently about 175 MMcf/d, is less than one-third of the M&NP system's capacity.

The NEB rejected claims that M&NP had no choice but to grant the Irving refinery a reprieve from the looming cost increases because a bypass delivery route was available and would not require extensive construction or regulatory approvals.

The foiled deal rested on predictions that gas flows via a parallel

"Like you, the public, the media, we want to know what caused this horrible event, but today is not the time for those questions, at least not for me," Say said. "At this moment, we're focused on the difficult days ahead of us. Our priority, sincerely, is the people who have been affected and the safety of those who will be called upon to work the well site and investigate."

Skinner said OCC records show the rig was still in the process of drilling the well's vertical leg when the accident happened. Patterson's Rig 219 was a large, 1,500 hp APEX model equipped with a hydraulic walking system. Say estimated that the rig was at a depth of about 13,500 feet on the way to a total depth of about 17,000 feet when the incident occurred.

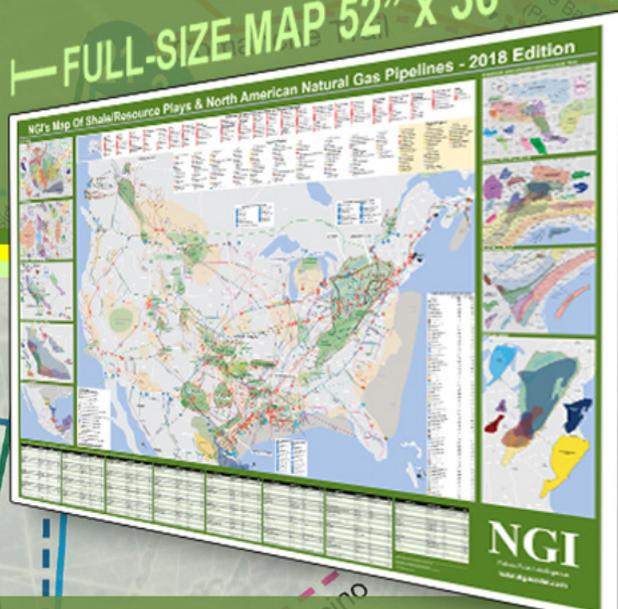
Red Mountain was formed in 2013 and has been led by former Chesapeake Energy Corp. employees, including Say. The company was formed to focus on the Midcontinent and Permian Basin regions. In Oklahoma, its exploration efforts are focused on liquids-rich targets with associated natural gas. Say described Monday's accident as a first for the company and said his staff is "devastated."

Skinner said because the explosion was a "workplace accident," OSHA and the Oklahoma Department of Labor would handle the investigation to determine what happened and assess any necessary fines. The OCC is primarily concerned with remediating any environmental damage to land or water. ■

JUST RELEASED

NGI's 2018 Map of Shale/Resource Plays & North American Natural Gas Pipelines

FULL-SIZE MAP 52" x 36"



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conduit -- Emera Brunswick Pipeline, built for exports from Repsol's Canaport LNG terminal next door to the Saint John refinery -- could be easily reversed for low-cost imports from the United States.

The NEB observed that evidence in the contested case showed

that the rejected bargain would have given the refinery 13 years of delivery service for 65 MMcf/d for C\$79 million (US\$63 million) -- which would have been a C\$176-million (US\$140 million) discount off current M&NP tolls. ■

Opponents of WOTUS rule, including oil and gas industry, worry it is too broad

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"The government argues that immediate court-of-appeals review facilitates quick and orderly resolution of disputes about the WOTUS rule. We acknowledge that routing WOTUS rule challenges directly to the courts of appeals may improve judicial efficiency...But efficiency was not Congress' only consideration. Had Congress wanted to prioritize efficiency, it could have authorized direct circuit-court review of all nationally applicable regulations, as it did under the Clean Air Act."

The case is *National Association of Manufacturers (NAM) v. Department of Defense et al.*

Linda Kelly, NAM's senior vice president and general counsel, called the ruling "a win for manufacturers" on Monday.

"We are pleased that the Supreme Court decided to help clarify what the law requires by taking action on this case," Kelly said. "As manufacturers, we understand the importance of responsibly managing water resources and have been working to protect clean water for decades. That's why we have been asking for a clear rule from the EPA and the Army Corps that empowers everyone to join in protecting our waters."

EPA's two-step plan involved initiating a public rulemaking to rescind the CWR and revert to laws governing water protection that were first enacted in 1986. The agency would then promulgate a

revised definition of WOTUS. The Sixth District Court in Cincinnati issued a stay and **blocked** it from being implemented in October 2015.

Last February, President Trump signed an **executive order** instructing EPA and the Army Corps to review the CWR. Although the order **did not repeal** the CWR outright, it kicked off a review and rulemaking process that was expected to extend into 2018.

According to EPA, the proposed WOTUS definition would include all territorial seas, interstate waters and wetlands and all waters that are currently being used -- or which were used in the past or which may be susceptible for use in interstate or foreign commerce -- including all waters subject to the ebb and flow of the tide. It also includes certain impoundments, tributaries and adjacent waters, including wetlands.

Opponents of the rule, including the oil and gas industry, worry that it is so broad that it could be used to include ditches and ruts in dirt roads that capture rainwater.

Republicans in Congress have been working on a second track to abolish the CWR. Earlier this month, the House Appropriations Committee **included a policy rider** in the energy and water spending bill for fiscal year 2018 that authorizes the EPA and the Army Corps to withdraw the rule. House Democrats then attempted to add an amendment to **remove the policy rider**, but it failed along party lines. ■

NEWS

Industry Briefs

Three former employees of **Montreal, Maine & Atlantic Railway Ltd.** were acquitted on charges related to a **July 2013 derailment** of a 73-car train carrying crude oil that resulted in the deaths of 47 people in Lac-Megantic in eastern Quebec. Following more than a week of deliberations, a jury found the train's conductor and two other men not guilty of criminal negligence, according to reports. The train had been carrying oil from the western U.S. to a refinery in New Brunswick. In the aftermath of the disaster, both the **United States** and **Canada** moved to end crude oil deliveries using legacy DOT-111 railway tank cars.

The **U.S. Bureau of Land Management (BLM)** plans to auction 484 acres in Arkansas and Ohio's **Wayne National Forest (WNF)** on March 22. The BLM Eastern States Office is to offer 345 WNF acres in the Utica Shale hotbeds of Monroe and Noble counties, OH, along with 139 acres in Van Buren and White counties, AR. BLM **began auctioning parcels** in the WNF in 2016 and has since generated more than \$7 million in proceeds. The bureau **auctioned 350 acres** in the forest last month during its 4Q2017 lease sale. More information on the March auction is available on the **BLM's website**. ■

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