Oil and Gas News Briefs Compiled by Larry Persily May 18, 2023

Sanctioned crude helping to hold down world oil prices

(Bloomberg columnist; May 16) - Purveyors of conventional wisdom would have you believe that the 25% drop in oil prices since late last year was due to softening demand in slowing economies. They would be wrong. The real problem is too much supply. Paradoxically, almost all the unanticipated production is coming from OPEC+ countries that are under Western sanctions: Russia, Iran and, to a lesser extent, Venezuela. Put simply, the black market for oil is booming. If one has the appetite — and the stomach — to buy crude from Moscow, Caracas or Tehran, the barrels are there, at a discount.

For instance, Iranian production hit a four-year high last month, up nearly 50% from mid-2020, just as Tehran accelerates its nuclear program and intensifies a crackdown on domestic opposition. Much of that oil is ending up in China under different guises, often rebranded as originating in Malaysia. Over the past six months, the International Energy Agency has lifted its 2023 forecast for Russian, Iranian and Venezuelan output by a combined 1.3 million barrels a day, to an average of 14.3 million barrels a day.

Meanwhile, compared to six months ago, the IEA has lifted its forecast for 2023 global oil demand by nearly 400,000 barrels a day, reaching a record annual daily average of 102 million barrels, helping to provide a market for sanctioned crude. Is the extra supply from Russia, Venezuela and Iran a sign that the Western sanctions intended to reduce revenues to the targeted nations aren't working? No. It's a sign that the sanctions also prioritize keeping the oil market well supplied, even if that means that Moscow, Tehran and Caracas can sell oil.

Ukraine counter-offensive could be critical to oil and gas markets

(S&P Global; May 15) - Ukraine has made no secret of its plans to launch a massive counter-offensive against Russia this summer. The expected battle looks like a critical moment for the direction of the war. Its outcome is likely also to be pivotal for the direction of oil and gas markets in 2023. Prices have normalized since the shock of Russian troops marching on Kyiv last year lit up global crude and natural gas markets.

Dated Brent was assessed by Platts, part of S&P Global Commodity Insights, at \$129.51 a barrel on March 9, 2022, a day after President Joe Biden signed an executive order banning imports of Russian oil, gas and coal. The benchmark was last assessed at \$75.31 on May 12. Despite the imposition of sanctions on Russian commodities and

price caps designed to restrain the Kremlin's capacity to wage war but keep its oil and gas flowing, markets have returned to something resembling normality.

But everything could change on the outcome of the battle ahead. "The outcome of this summer's battles in the Donbas will bring the international order of politics and energy to an inflection point," wrote Carlos Pascual, senior vice president, head of Geopolitics and International Affairs at S&P Global Commodity Insights and a former U.S. ambassador to Ukraine, in a recent analysis published May 5. A Ukrainian counter-offensive could coincide with OPEC's next production-setting meeting, set for the weekend of June 4.

Russia's seaborne oil exports continue to rise

(Bloomberg; May 15) - Russian oil flows to international markets continue to rise, even as the country insists it is slashing production. Four-week average seaborne shipments, which smooth out some of the volatility in weekly numbers, rose again in the period to May 12, as they have in four of the past five weeks. Flows are now up by 10% since the first week of April and hit a new high for the period since Bloomberg began tracking in detail at the start of 2022. Almost all Russia's crude is going to China and India.

Russian cargoes continue to be transferred from smaller ships used at its ports onto the largest crude carriers in the Atlantic for onward journeys to Asia. During the winter months, these cargo switches were carried out in the relatively sheltered waters of the Mediterranean, off the coast of Morocco close to the Spanish exclave of Ceuta. More recently, the transfers have moved to waters between the Canary Islands and Azores.

The combined volume of crude on vessels heading to China and India plus smaller flows to Turkey and quantities on ships that haven't yet shown a final destination edged higher to reach a record 3.61 million barrels a day in the latest four-week period, the highest since Bloomberg began tracking the flows in detail at the start of 2022.

Shipping companies cash in on demand and sell their old oil tankers

(Wall Street Journal; May 15) - "Gone With the Wind" Rhett Butler's brutal take on war still resonates almost a century later. "There were two times for making big money, one in the upbuilding of a country and the other in its destruction," he said. "Slow money on the upbuilding, fast money in the crackup." Publicly listed oil tanker companies are benefiting from the latter. Despite their best efforts not to have their old ships end up with Russia's so-called shadow fleet assembled for the sole purpose of transporting its oil around the world, they are reaping a bonanza anyway.

Shipping companies have been able to sell their old and soon-to-be-scrapped vessels at lofty prices as demand remains high from those who are eager to participate in the

Russian oil trade. Buyers are often unlisted Greek and Chinese shipping companies. Due to sanctions, trading patterns have become highly inefficient, requiring more tankers to make longer journeys to customers who will accept Russian oil. Vessels earn a certain rate per day irrespective of their age, so a cheap tanker spending more time reaching its destination generates a handsome return.

Growing global oil demand and a dearth of new vessel orders since 2015, according to analyst Benjamin Nolan at Stifel Investment Services, are helping to prop up the value of ancient ships. But owners of new ones are doing well, too. According to Peter Michael E. Christensen, an analyst at Cleaves Securities, tanker companies' earnings have increased sharply on the back of historically high tanker rates, and to a lesser extent from selling older vessels at high prices.

U.S. starts long process to refill Strategic Petroleum Reserve

(CNN; May 15) - The Biden administration announced plans on May 15 to buy 3 million barrels of crude oil, marking the start of a years-long process aimed at replenishing America's depleted emergency oil stockpile. The Energy Department is soliciting offers of crude oil to refill Big Hill, one of the four major oil storage facilities along the Gulf Coast that make up the Strategic Petroleum Reserve. However, the 3 million barrels will make up just a sliver of the vast amounts of oil released from the SPR in recent years.

Faced with spiking gasoline prices, President Joe Biden has aggressively drained the SPR, the world's largest supply of emergency crude oil. The SPR held about 638 million barrels of oil when Biden took office in January 2021, according to the U.S. Energy Information Administration. Today, it is down to 362 million barrels — the lowest level since October 1983. A year ago, the Biden administration announced it would seek bids to buy tens of millions of barrels of crude oil, marking the first time since the early 2000s that the federal government is moving to buy large quantities of oil for the SPR.

The unprecedented amounts of oil released helped lower gasoline prices, but they also shrunk the government's reserves for future potential emergencies, including hurricanes, wars and other disasters. The Energy Department said the purchase of 3 million barrels of oil is part of an effort to replenish reserves at a "good deal" for taxpayers, noting that today's prices are well below the average of about \$95 from 2022.

Faulty design, welds and inspection all contributed to pipeline spill

(The Associated Press; May 16) - Pipeline design issues, lapses by its operators and problems caused during its construction led to an oil spill on the Keystone pipeline system in northeastern Kansas, according to a report for U.S. government regulators. An engineering consulting firm said in the report that the bend in the Keystone system

where the December 2022 spill occurred had been "overstressed" since its installation in 2010 — likely because construction activity itself altered the land around the pipe.

The U.S. Department of Transportation's Pipelines and Hazardous Materials Safety Administration posted a redacted copy of the report online May 15, about three weeks after it was completed by a contractor. The report raised questions about TC Energy's oversight of manufacturing of its pipe, finding no record of a pre-installation inspection of the welds on the bend. The report concluded that TC Energy underestimated the risks associated with the bend going from its round shape when installed to a more-restricted oval shape within two years — and didn't replace the bend after excavating it in 2013.

The company said in February that a faulty weld in the bend caused a crack that grew over time under stress. The spill dumped 13,000 barrels of oil into a creek running through a rural pasture in Washington County, Kansas. The U.S. Department of Transportation has documented 22 leaks along the Keystone line since it was built in 2010. The one in Washington County was by far the largest. The 2,700-mile Keystone system carries heavy crude from western Canada to central Illinois and the Gulf Coast.

Tribal band seeks emergency order to shut down U.S.-Canada oil line

(The Canadian Press; May 14) - The controversial Canada-to-U.S. oil and gas conduit known as Line 5 could be facing its toughest challenger yet — the very watershed the pipeline's opponents are trying to protect. Spring flooding has washed away significant portions of the riverbank where Line 5 intersects Wisconsin's Bad River, a meandering, 75-mile course through Indigenous territory that feeds Lake Superior and a complex network of ecologically delicate wetlands.

The Bad River Band of the Lake Superior Chippewa has been in court with Alberta energy giant Enbridge since 2019 in an effort to compel the pipeline's owner and operator to reroute Line 5 around its traditional territory. Mother Nature raised the stakes last month. "There can be little doubt now that the small amount of remaining bank could be eroded and the pipeline undermined and breached in short order," the band's lawyers argued in an emergency motion last week to shut down and drain the pipeline.

Line 5 meets the river on Indigenous territory just past a location the court has come to know as the "meander," where the riverbed snakes back and forth multiple times, separated from itself by only several yards of forest. At four locations, the river is less than five feet from the buried pipeline — and the erosion has continued in recent days at an "alarming" rate, the motion said. Enbridge has offered numerous plans to reinforce the riverbank and install an additional emergency valve on the pipeline to further mitigate the risk — work that requires the band's approval.

Oil and gas pipeline owners merge into one of the largest in U.S.

(Bloomberg; May 14) - Oneok has agreed to buy Magellan Midstream Partners in a \$18.8 billion cash-and-stock transaction that would create one of the largest U.S. oil and gas pipeline operators. Pipeline operators are increasingly turning to acquisitions for growth as the transition to renewable energy pares the need for new links and threatens to make some existing assets redundant.

The acquisition will give Oneok, which currently transports only natural gas and its byproducts, access to a network of crude oil and refined-products lines and terminals sprawling from Texas to Minnesota. The combined company will have a total enterprise value of \$60 billion, according to the statement. That would put it among the five largest U.S. pipeline operators by that criteria, according to data compiled by Bloomberg.

While the "surprising deal" comes at a high price for Oneok, it could still make sense, Raymond James Financial analysts J.R. Weston and Justin Jenkins wrote in a note to clients. "We are fans of consolidation in midstream."

Court rejects environmental challenge to Alaska LNG project

(Reuters; May 16) - A federal appeals court on May 16 rejected a lawsuit filed by environmental groups challenging federal approval of a \$40-plus-billion project that would export Alaska North Slope natural gas. A three-judge panel of the U.S. Circuit Court of Appeals for the District of Columbia said the Federal Energy Regulatory Commission review of the state-run project satisfied the National Environmental Policy Act requirements to take a hard look at environmental impacts of major proposals, and that the approval complied with the Natural Gas Act and other laws.

The Alaska LNG project would transport natural gas along an 800-mile pipeline that would bisect the state north to south, ending at a liquefaction plant. The project was first proposed years ago, and is currently looking for financial backers and investors. Supporters say it could help the U.S. compete with Russia for selling gas to Asia. But, environmental groups, including the Center for Biological Diversity and the Sierra Club, which sued in 2020, claim it would "wreak havoc" on Alaska's wildlife and the climate.

Kristen Monsell, an attorney for the Center for Biological Diversity, said on May 16 they are disappointed with the ruling but that "the fight isn't over." FERC declined to comment. The judges said that FERC adequately considered how noises and ship traffic might harm endangered beluga whales and how construction could impact wetlands, despite concerns raised by the environmental groups. The court also backed FERC's method for analyzing the significance of the project's expected greenhouse gas emissions by comparing those to existing state and nationwide emissions.

Chevron's carbon capture project needs more work and money

(Bloomberg; May 17) - Chevron's flagship carbon capture and storage project in Australia faces years of work to hit full capacity, underscoring the challenge of a technology seen as necessary to help the world hit climate goals. The Gorgon CCS project, one of the largest of its kind in the world, needs more investment to boost its performance and will be stuck at around one-third of its capacity until that's completed, according to David Fallon, Chevron Australia's general manager energy transition.

"We will not hide from the fact that it's not perfect," Fallon said May 17 in an interview on the sidelines of an Adelaide conference. Gorgon is designed to capture 4 million tons of CO² a year from a Chevron-led liquefied natural gas plant on Barrow Island and store it in a subsea reservoir. Since its commissioning in 2019, the project has been plagued with difficulties and is operating at a storage rate of about 1.6 million tons of CO² a year.

Oil and gas producers, along with other industries, are stepping up plans to use carbon capture projects, both to curb their own climate impact and develop businesses that will handle emissions generated by third-parties. Critics of carbon capture cite Gorgon as evidence that the technology is too expensive and technically challenging to be relied on as a climate change mitigation tool. Unlike many carbon capture projects which use depleted oil or gas wells to store CO², Gorgon utilizes a saline aquifer that never contained fossil fuels and has encountered problems with water pressure.

Iran, Africa and India lead the world in oil lines under construction

(Tehran Times; May 14) - The 2023 annual survey of data in the Global Oil Infrastructure Tracker shows that Iran, Iraq and Africa together are building 2,700 miles of crude oil transmission pipelines at an estimated capital expenditure of \$14.4 billion. Globally, there are 5,600 miles of oil transmission pipelines under construction and an additional 13,500 miles of proposed pipelines. These pipelines in development are estimated to cost \$131.9 billion, if all are built. The total of oil pipelines in development globally represents an increase of nearly 30% from this time last year.

The leading five countries in terms of pipelines under development (proposed and under construction) are Iran, the United States, India, Iraq and Tanzania. The top five parent companies developing oil pipelines are state-owned enterprises and private companies, including Iran's Oil Ministry, China National Petroleum Corp., Iraq's Ministry of Oil, India's Numaligarh Refinery and France's TotalEnergies. The longest pipeline projects under construction are the 1,200-mile Niger—Benin Oil Pipeline in Africa and Paradip Numaligarh Crude Pipeline in India, both slated to start operating in 2024.

South Korean company invests in Canadian green hydrogen project

(The Korea Herald; May 17) - SK Ecoplant, a construction and energy arm of South Korea's SK Group, on May 17 signed an agreement to participate in a proposed \$4.5 billion green hydrogen commercialization project in Newfoundland, in eastern Canada. SK Ecoplant struck up a partnership with Canadian renewable energy company World Energy GH2 to participate in the first phase of the project that would generate electricity through wind power, using the electricity to produce green hydrogen.

The project use electrolysis, a zero-emissions process in which electricity is used to split water into hydrogen and oxygen. The produced green hydrogen will then be processed to produce green ammonia, the final product which will be exported to other continents, including Europe. The project will include construction of green ammonia plants, which are expected to be able to process produce 360,000 tons of green ammonia each year.

Under the agreement, SK Ecoplant will make an investment worth \$50 million in World Energy GH2 and take a 20% stake in the project. SK Ecoplant said the company is expecting to produce green hydrogen by March 2025, and green ammonia by 2026.

Vietnam wants to greatly increase its use of natural gas

(Reuters; May 17) - Vietnam's plan to quadruple by 2030 its gas capacity, turning it into its first source of energy, marks a big bet on imported liquefied natural gas and domestic reserves in the South China Sea, despite supply and geopolitical risks. The plan, which was approved by the government May 15, would turn the Southeast Asian nation from a very small player in the gas market into one of the larger users in the region.

LNG imports are projected to jump from zero now to volumes that would cover nearly 15% of the country's booming energy needs by the end of the decade, according to the government's adopted targets published on May 16. Locally produced gas would be given priority over LNG, the government said. Both face major hurdles, however, as LNG imports may be expensive amid high global demand, while Vietnam's gas production is often exposed to pressure from China which opposes work by other nations in large parts of the South China Sea, which it claims.

To process the additional energy input, Vietnam would build 15 LNG power plants by 2035, at least two LNG import terminals and nearly a dozen new plants fired with domestic gas, which would switch to green hydrogen over the next decades.

Germany will cut back capacity at Baltic Sea LNG import terminals

(Reuters; May 15) - Germany will almost halve its planned capacity for liquefied natural gas terminals in the Baltic Sea, a government source said, as Berlin revaluates its LNG needs given local resistance and an easing of energy bottlenecks. Two floating LNG

terminals are to be sited at Mukran off the Ruegen coast with annual capacity of around 350 billion cubic feet of gas, down from the 635 bcf previously planned, the source said.

Deutsche Regas will operate the floating stations in Ruegen, a popular tourist attraction, instead of utility RWE, which said last month it did not want to operate any LNG infrastructure long term. Germany last year pushed to accelerate the building of its LNG infrastructure, following Moscow's invasion of Ukraine and a sudden drop in piped Russian gas to Europe's biggest economy that exposed Berlin's dependence on Russia.

In just under a year, three floating terminals were built, granted permission and started operation in the ports of Wilhelmshaven, Brunsbuettel and Lubmin, helping Germany to avert energy shortages last winter. Berlin plans to replace some of its floating terminals with permanent stations by 2026 and has rejected environmental groups' criticism of excess planned capacity, saying the German ports will also supply European neighbors.

<u>India's LNG buyers want long-term deals to protect from spot prices</u>

(Bloomberg; May 16) - India's liquefied natural gas buyers are seeking decades-long supply deals to protect them from price surges, a move that also supports the government's plan to boost the fuel's use. Importers are accelerating efforts to lock in supply, according to traders and executives. Buyers including Petronet LNG, GAIL India and Indian Oil Corp. are in talks with suppliers in the U.S., Qatar and the UAE for deals of up to 20 years. The trend is a reversal for the nation, which hasn't signed a long-term deal since 2021, according to contract data from BloombergNEF.

Taking on more long-term deals should help reduce their exposure to the volatile spot market — where prices surged to a record last year and made the fuel too costly for many buyers. It also increases the prospect of imports rebounding in a boost for Prime Minister Narendra Modi's strategy to more than double the share of gas in the country's energy mix by the end of the decade to help reduce pollution.

"The lesson learned by the consumers is that they can't run the business based on spot," Akshay Kumar Singh, CEO of Petronet LNG, said earlier this month. India's consumers — from power plants to petrochemical facilities — are highly price-sensitive as gas competes with cheaper and dirtier alternatives. GAIL is looking to purchase a stake in a U.S. LNG export terminal, coupled with a contract to take 1 million tonnes per year. About nine suppliers have expressed interest, a senior company official said.

Chinese company may supply turbines for Russian LNG project

(Reuters; May 16) - China's Harbin Guanghan Gas Turbine Co. may provide turbines for the Arctic LNG-2 plant led by Russia's largest liquefied natural gas producer, Novatek,

Kommersant daily reports on May 16, citing market sources. Novatek did not respond to a request for comment. The newspaper said Harbin Guanghan Gas Turbine, part of China Shipbuilding Industry Co., will likely supply equipment for the first two production lines of Arctic LNG-2. The project was left without turbines for gas liquefaction and power supply after Baker Hughes withdrew from the \$20 billion development last year.

Arctic LNG-2 is due to start production by the end of this year. Total capacity of the three planned lines is put at 19.8 million tonnes of liquefied gas per year. Western sanctions have deprived Novatek of engineering and equipment technology for the company's second LNG export terminal in the Arctic. Shareholders of Arctic LNG-2 are Novatek (60%), French major TotalEnergies (10%), China's CNPC (10%) and CNOOC (10% each), as well as Japan Arctic LNG (10%), a consortium of Mitsui and JOGMEC.

Australia considers net-zero zones for industries to work together

(Australian Financial Review; May 14) - Nine net-zero zones could be created across Australia where more than 90% of emissions from heavy industry could be neutralized through shared infrastructure for carbon capture and storage. That is the concept aired in a new report by the oil and gas industry association, which is stepping up advocacy for the controversial technology in the face of mounting pressure to cut emissions in the production of liquefied natural gas and other heavy industrial processes.

The zones could be in areas such as Adelaide-Port Augusta, the Pilbara, Melbourne-Gippsland, Sydney-Newcastle and Queensland's Surat Basin, and could cover almost 80% of the 215 facilities covered by the government's safeguard mechanism and 92% of their emissions, according to the report, which was compiled by the Commonwealth Scientific and Industrial Research Organization, a government agency. The gas industry is relying heavily on carbon capture and storage to help achieve emissions reductions.

Samantha McCulloch, CEO of the Australian Petroleum Production and Exploration Association, said the zones could become "magnets" for regional investment, providing a framework for different industries to work together to accelerate the path to net-zero emissions. "In a way, it's like carpooling carbon emissions by working together to help achieve net-zero in the fastest and most cost-efficient way for the economy," she said.

Santos sees potential in storing CO2 emissions for customers

(Bloomberg; May 16) - Santos, Australia's second-biggest natural gas producer, wants to use carbon capture projects to store emissions for some of Asia's top industrial polluters. The Moomba facility, in the gas-rich Cooper Basin north of Adelaide, in South Australia, is intended to store 1.7 million tons of the producer's own carbon dioxide

releases annually from 2024, and the firm sees potential to handle tens of millions of tons of emissions from third-parties, including customers in Japan and South Korea.

It's a move that highlights how Australia's liquefied natural gas export industry sees a potential future role in using its expertise and technology aimed at reducing its own climate impact to handle pollution generated by some of the region's most difficult to decarbonize sectors. BP, Chevron and Woodside are also among energy companies examining large-scale carbon capture and storage projects intended to offer climate solutions to industrial customers.

Australia is seen as a potential key location for the sequestration of emissions because of its geology. Santos has the ability to import carbon dioxide and permanently store the material in South Australia, Brett Woods, president of the company's energy solutions business, said May 15. "Hard-to-abate sectors such as fertilizer and cement, such as steel manufacturing, all require solutions beyond what's being currently offered."

Australia LNG industry wants to revive its growth

(Bloomberg; May 16) - Liquefied natural gas exporters aim to add new multibillion-dollar projects and revive the sector's growth in Australia, arguing additional fossil fuel supplies are needed to support Asia's energy transition. BP and Woodside Energy are among companies studying major developments that would add to the industry's investments of about A\$300 billion (\$200 billion) over the past 15 years, a program that transformed the nation into one of the world's top LNG shippers.

Deliberations on new projects come as Australia's annual export earnings from LNG are forecast to slide after hitting a A\$91 billion peak on last year's energy crisis and with volumes plateauing. The country has already been usurped as the industry's No. 1 exporter by the U.S. and is expected to also fall behind Qatar. "The oil and gas industry is not a passenger on the road to net-zero," Woodside CEO Meg O'Neill told a conference on May 16. "When used to generate electricity, gas emits around half the life cycle emissions of coal. That's a pretty strong argument for using more gas in my book."

Woodside is considering plans to develop Browse, one of the country's largest untapped gas fields, with partners including PetroChina Co. However, projects in Australia face challenges. Shipping distance and cost means the nation's cargoes are rarely sent outside Asia, while action by Australia's government to hike taxes on projects and tighten powers to restrict LNG exports has spooked some overseas buyers. In addition, demand in Japan and South Korea, two of Australia's top customers, is expected to decline over the next decade as the nations add more renewables and nuclear power.

Government intervention could weaken investment in Australian gas

(Reuters; May 16) - The Australian government's repeated intervention in domestic gas prices could have long-term repercussions on investments in its wider energy sector, industry executives warned this week. Australia, which accounts for 21% of global liquefied natural gas exports, has successfully attracted billions of dollars in investments over decades because of its abundant resources and stable investment environment.

However, domestic gas supply shortages in the East Coast and record gas prices last year prompted government measures including caps on local natural gas and coal prices. Early this year, it proposed expanding its powers to curb LNG exports from Australia's three East Coast projects to meet shortfalls for the region which is home to most of its population and gas-dependent manufacturers.

"Every single policy change they've made has hurt the sector, has hindered its ability to invest," Saul Kavonic, head of energy and resources at Credit Suisse, told the Australian Petroleum Production and Exploration Association conference. "Large investors are now seeing investment in gas as unwelcome in Australia and it's going to have repercussions well beyond just around energy security here," Kavonic said.