Oil and Gas News Briefs Compiled by Larry Persily July 30, 2018

No decision yet on Shell-led LNG Canada project

(CBC News; Canada; July 26) - Global energy giant Shell is still examining plans for a massive liquefied natural gas terminal on the northern coast of British Columbia, though company officials said July 26 the C\$40 billion project looks "very promising." Despite speculation Shell would announce a decision on the LNG Canada project during its second-quarter conference call, chief financial officer Jessica Uhl told analysts the venture's future is still under study. Its initial capacity is planned at 13 million tonnes.

"Together with our partners we need to finalize consideration of a few key items before we can take a positive final investment decision," Uhl said. "We see great opportunities, but we also have clear expectations when it comes to competitiveness, affordability and returns." Shell leads a consortium behind the project in Kitimat, B.C. — partners from China, Japan, South Korea, and Malaysia. LNG Canada has been building momentum in recent months, leading some analysts to suggest a positive decision is imminent.

This month, Houston-based Civeo Corp. was awarded a contract to supply temporary work camps at four locations along the gas pipeline route from Dawson Creek, B.C., to the West Coast, on the condition that the LNG export terminal is built. Uhl said the company is still doing its homework. Shell needs to know if the project will be resilient, generating positive free cash across a "range of commercial and energy transition scenarios." Uhl said the company expects to make a final investment decision this year.

Gas production starts at Ichthys LNG project offshore Australia

(Reuters; July 30) – Japan's Inpex Corp. said July 30 it has started producing gas at its giant Ichthys field off northern Australia, putting it a big step closer toward shipping its first liquefied natural gas cargo from the long-delayed US\$40 billion project. Start-up of gas production is a major milestone for the project, Japan's biggest overseas investment and first major energy development to be operated by the country's top oil and gas producer.

Inpex said it now expects to start exporting products by the end of September, with condensate to be shipped first, then LNG and liquefied petroleum gas, nearly two years later than its initial target. The project is expected to take two or three years to reach full capacity of 8.9 million tonnes of LNG a year, along with about 1.7 million tonnes of LPG a year and about 100,000 barrels per day of condensate, an ultra-light form of

crude oil. The gas will be piped 550 miles to an onshore liquefaction plant and export terminal.

Inpex owns 62.45 percent of Ichthys LNG with France's Total holding 30 percent. The remainder is owned by Taiwan's CPC Corp. and Japanese utilities. The project, which was sanctioned for development in 2012, was originally expected to start production at the end of 2016.

Economics contradicts Trump's claim of more U.S. LNG to Europe

(Bloomberg; July 26) - President Donald Trump's vision of Europe becoming a "massive buyer" of U.S. liquefied natural gas is likely to crash into the reality that Russia is a cheaper supplier for now. Europe is consuming record volumes of gas delivered by pipelines from its traditional and geographically closer suppliers, Russia and Norway. Production has been increasing in both countries, and the Russian government has been promoting vast fields in Siberia that can ship to Europe at lower cost than the U.S.

On top of that, Asia, which buys almost three-quarters of the world's LNG, lures most of the fuel from global suppliers, including the United States. And Europe may see slowing gas consumption in its power sector. Those factors will make it difficult for U.S. LNG to get a major foothold in Europe, regardless of what Trump said after his meeting with European Commission President Jean-Claude Juncker in Washington on July 25.

"Ultimately, it is dictated by global prices," said Nick Campbell, a director at Inspired Energy Solutions. Trump and State Department officials have spent months promoting U.S. LNG exports in Europe, raising concerns that the continent faces security risks from buying more Russian gas. The full-cost break-even price of U.S. LNG supplies to Europe stands now at \$6 to \$7.50 per million Btu. That compares with \$3.50 to \$4 for Russia's pipeline gas based on Gazprom's current taxation, according to estimates of Alexander Kornilov, an analyst at Aton LLC in Moscow.

U.S. LNG to Europe has to pass the economic reality test

(Reuters; July 26) - President Donald Trump's plan for "vast amounts" of U.S. liquefied natural gas to be sold to the European Union after trade talks with its top representative faces a reality test. After a meeting at the White House with European Commission President Jean-Claude Juncker on July 25, Trump said the EU also would buy more U.S. soybeans and work with Washington to cut other trade barriers to zero. Juncker said the EU would build more terminals to handle America's LNG.

It appeared a major LNG deal had been struck. In reality, three-quarters of Europe's existing import facilities lie empty while demand for U.S. LNG on the continent is limited.

The most lucrative markets for U.S. LNG are in South and Central America, India, and the Far East with Europe near the bottom of the pile given its relatively low prices and ample supplies of pipeline gas from Russia and Norway. Price determines LNG trade flows, Shell CEO Ben van Beurden said July 26. "Will U.S. LNG reach Europe? Yes, but only if there is an arbitrage opportunity that makes sense," van Beurden said.

Politicians have little sway over this. The EU applies zero tariffs on U.S. LNG imports, so cutting them is not an option to boost trade in any future U.S.-EU talks. A number of European companies have already announced plans to buy U.S. LNG from a new wave of projects. Portugal's Galp, Italy's Edison, Britain's BP, and Shell are all lining up to take LNG from Venture Global's planned Calcasieu Pass project in Louisiana. But supply from these and other projects will not be ready for years, and there's no guarantee it will come to Europe in substantial volume if more lucrative markets, such as China, emerge.

BP pays \$10 billion for U.S. oil and gas assets; biggest buy since 1999

(Bloomberg; July 27) - BP agreed to pay \$10.5 billion, its biggest acquisition in almost two decades, for most of BHP Billiton's onshore U.S. oil and gas assets, including in the prized Permian Basin. The deal gives the energy giant a position in the Permian, a swath of west Texas and New Mexico that's the world's fastest-growing major oil region. It's another sign that BP has mostly rebounded from crude's price crash and the fatal 2010 accident in the Gulf of Mexico that left it with bills totaling more than \$60 billion.

"We've just got access to some of the best acreage in some of the best basins in the onshore U.S.," BP's Upstream CEO Bernard Looney said in a statement. The Permian produces about 3.4 million barrels a day, which would make it the fourth-largest member of OPEC, behind Saudi Arabia, Iraq, and Iran. BHP, however, appears to have got the better side of the deal, selling the entire package of assets for a higher price than expected, RBC analyst Biraj Borkhataria said in a note.

"The Permian is the largest U.S. shale play with the most inventory so it's not hard to see the long-term attraction," said Leo Mariani, an Austin-based analyst at NatAlliance Securities. BP's deal will also give it positions in the Eagle Ford and Haynesville basins in Texas and Louisiana. The deal will add production of about 190,000 barrels of oil equivalent a day and resources of 4.6 billion barrels of oil equivalent to BP's books.

The deal gives BP access to wells that pay back in months rather than in years common in bigger offshore projects. It is BP's biggest deal since it bought ARCO in 1999. "The Permian acreage offers the biggest long-term upside with some of the best break-evens in the play, well below \$50 a barrel," said Wood Mackenzie analyst Maxim Petrov.

Shell says it is on schedule to start Prelude LNG production this year

(Australian Financial Review; July 27) - Shell's groundbreaking Prelude floating LNG plant far off Australia's northwest coast has gone "live" ahead of production start-up later this year, CEO Ben van Beurden declared, even as industry talk swirls that several technical issues still need resolution. LNG and liquefied petroleum gas have both been introduced into the plant in preparation for commissioning, and system testing is under way before the wells are opened for production, van Beurden told investors in London.

"The offshore team is preparing for that moment, getting the seven wells tied to the facility and ready to flow," he said. "Based on our current commissioning schedule, we are on track to start production this year." Prelude, 295 miles northeast of Broome, is the world's largest floating gas processing, liquefaction and storage structure at 1,600 feet long, anchored at the site. LNG and condensates produced at the field will never come to Australian shores but will be directly exported from Prelude by visiting tankers.

Some industry sources point to "complications" in the complex process of preparing the plant for start-up, which could delay the official start of deliveries from Prelude and further add to its costs. "Overall, it's been a massive technological and project execution achievement for Shell, but it is placed to become the highest unit-cost LNG project on record globally," said independent analyst Saul Kavonic. Prelude is designed to produce 3.6 million tonnes of LNG per year and 32,000 barrels of condensate per day.

Darwin, Australia, wants to establish itself as LNG export hub

(Reuters; July 27) - Australia's tropical city of Darwin wants to establish itself as a world-scale energy export hub, building on its closeness to demand centers in Asia and abundant nearby natural gas resources. With the imminent start-up of Inpex's US\$40 billion Ichthys liquefied natural gas project, the capital of the Northern Territory will be home to two LNG exporting facilities, with a total capacity of 12.6 million tonnes a year, including ConocoPhillips' Darwin LNG plant that opened in 2006.

Darwin is poised to become the nucleus of the Northern Territory's push to expand LNG exports by tapping 30 trillion cubic feet of offshore gas. Perched at the top of Australia, Darwin is closer to Jakarta than Sydney. The city will vie with multiple projects looking to meet growing demand in Asia, the world's top consuming region. "We have the gas, location and proximity to markets — whether it's China, India, Japan, or Indonesia," said Paul Tyrrell, chair of the Northern Territory Gas Taskforce, created to lead the push.

Ichthys and Darwin together have space to add five more LNG production units, with a feasibility study at Darwin LNG advising another unit at 4 million tonnes per year would be optimal. Darwin's expansion would build off existing facilities, an advantage over the \$200 billion of LNG projects built from scratch in Australia the past decade, said

Graeme Bethune, CEO of advisers EnergyQuest. A second train at Darwin would raise the territory's output to nearly equivalent to Indonesia, the world's fifth-biggest exporter.

Deal close to process third-party gas at Australia's oldest LNG plant

(Interfax Global Energy; July 27) - Gas from the Browse Basin offshore Western Australia looks likely to hit the international LNG market early next decade following news of an impending deal on third-party tolling through the 29-year-old North West Shelf liquefaction plant. "Alignment has been reached between the NWS participants on non-binding key commercial terms and pricing for processing third-party gas," said Peter Coleman, CEO of Woodside Petroleum, which operates the five-train plant.

"A preliminary tolling agreement is expected between the NWS project participants and Browse joint venture in the third-quarter," Coleman said July 19. The deal is a major step forward for Woodside and its North West Shelf partners: BHP, BP, Chevron, Shell, and Japan's Mitsui & Mitsubishi. The LNG facility is Australia's oldest and one of its most cost-competitive. Woodside has long pushed for a solution that would enable the facility to keep working beyond 2020, when output from existing fields tails off.

But finding a solution that works for all partners has taken time, largely because of the commercial complexity of getting six international companies with their own agendas to reach agreement. Woodside had looked at building a new onshore LNG terminal, and then a floating production unit at sea, but neither was viable for Browse gas. By building subsea pipelines linking the fields to the NWS plant, Woodside believes it can export gas at competitive rates. In an interview this week, Coleman said gas from the Browse fields could be processed at the NWS plant at "comfortably below" US\$2 per million Btu.

Australia's Northern Territory lifts ban on fracking for shale gas

(Interfax Global Energy; July 23) - Shale explorers in Australia's Northern Territory are pushing the local government to fast-track a host of new fracking regulations to enable exploration and production to resume in 2019's dry season. Not doing so, the industry said, would risk another year of missing the opportunity to increase natural gas supplies to LNG export plants and eastern Australia's domestic market.

The Labor Party imposed a ban on onshore fracking in September 2016, after it won power. The government said it would lift the ban only if an independent inquiry found it was safe. The review concluded fracking could be done safely if 135 recommendations were implemented. This week the government published its implementation plan for the first chunk of these measures, including new codes of practice for industry and shifting environmental decision-making from the resources ministry to the environment ministry.

Baseline mapping and monitoring for methane emissions, water quality and weed growth also will be put in place, while a new system will be sketched out to monitor social, health and cultural impacts of fracking. Although most of the recommendations will take years to complete, the government expects to complete the initial package by the end of 2018 and said it will not issue any exploration permits until then. Geoscience Australia estimates the territory holds more than 200 trillion cubic feet of shale gas.

Proposed Nova Scotia LNG project signs labor agreement

(Cape Breton Post; Nova Scotia; July 25) - A deal has been struck that will ensure labor stability between the proponents of a liquefied natural gas project in Richmond County, Nova Scotia, and the Cape Breton Building and Construction Trades Council. The developer of the proposed \$5 billion Bear Head LNG facility, outside Point Tupper, signed a memorandum of agreement with the council and the Nova Scotia Construction Labour Relations Association on July 17.

The labor unions and company agreed to abide by negotiated wages, without strikes or lockouts during construction, said Jack Wall, president of the Cape Breton Building and Construction Trades Council. Though it lacks a final investment decision to proceed, the project has its construction and environmental permits as well as federal approvals to import gas from the U.S. and then export LNG. Bear Head LNG Corp., a subsidiary of Australia-based Liquefied Natural Gas Ltd., hopes to start production by 2023.

Bear Head LNG in 2014 announced it would purchase the partially constructed Anadarko Bear Head liquefied natural gas import terminal for US\$11 million and develop it as an export facility. Anadarko had announced in 2006 that it would not proceed with its plans for the site. The project's initial export capacity would be 8 million to 10 million tonnes per year.

FERC gives go-ahead to \$6.5 billion Atlantic Coast gas line

(S&P Global Platts; July 25) - Dominion Energy said a late 2019 start-up for its Atlantic Coast Pipeline remains on track after the Appalachian Basin gas project received the go-ahead from federal regulators July 24 to begin full construction in North Carolina. The news comes as the market has been eager for Dominion to complete the line to help meet demand for Northeast shale gas — it would move 1.5 billion cubic feet a day.

Significant opposition from environmental groups had threatened the timeline as Dominion has only been able to do certain work at certain times in certain areas. Spokesman Aaron Ruby said Dominion will get underway with work in Virginia once it receives state approval of erosion and sediment control plans. West Virginia construction has been underway for several months. The line will provide additional

capacity out of West Virginia for delivery to Virginia and North Carolina. Its cost is pegged at \$6.5 billion, about 30 percent over original estimates.

The 600-mile pipeline — a joint venture of Dominion, Duke Energy, Southern Co., and Piedmont Natural Gas, which Dominion will operate — is part of a wave of new infrastructure to boost access for constrained gas from the prolific Northeast producing region. The Federal Energy Regulatory Commission said the project has met all environmental conditions and "received all federal authorizations applicable for the work activities requested." Work in North Carolina should begin within days.

Russia will change oil taxes to earn more on export sales

(Bloomberg; July 25) - Russia, one of the world's top three crude producers, is preparing the most radical shake-up of its oil-tax system since 1999. The changes, which will allow the nation's producers to export crude and oil products duty-free while raising the tax at the wellhead, is set to get the go-ahead from President Vladimir Putin by year-end, bringing in much-needed funds for a multibillion-dollar plan to revitalize the country's faltering economy.

Starting in 2019, Russia will gradually lower export duties on crude and oil products until they're fully abolished in 2024. At the same time, it will raise oil-extraction taxes by the same amount, keeping the fiscal load steady for producer-exporters but collecting more tax revenue from sales that did not pay the export duty. For refineries, the shift may be more painful as it will raise the cost of every barrel processed. To avoid domestic fuel-price hikes, the government will offer tax breaks to several types of refineries.

The government will also offer relief to refineries where at least 10 percent of the output is high-octane gasoline, and to the refining subsidiaries of oil producers subject to international sanctions. That means basically all major Russian oil companies will receive tax breaks for their refineries. The tax overhaul is Russia's second attempt to remove export duties on crude and oil products, after an earlier effort in 1996 failed. In the past decade, Russia has sold roughly half its oil output abroad. Under this latest proposal, some of the export duty could be re-imposed in months of higher oil prices.

Princess Cruises orders its first LNG-powered ships

(UPI; July 23) - Princess Cruises announced plans July 23 for construction of two new cruise ships — larger than ever and powered by liquefied natural gas. The cruise line will add the as-yet unnamed ships in 2023 and 2025 to its current fleet of 17 ships, along with three more currently under construction. The company selected Italy's Fincantieri as the builder of the new newest ships, which will be capable of carrying about 4,300 passengers — roughly 700 more than Princess Cruise's largest ships.

As of July 23, the ships would be the fifth- and sixth-largest cruise vessels in the world. Other cruise lines, including Royal Caribbean and MSC Cruises, have larger ships under construction for delivery by 2022. Princess Cruises' new vessels will be powered by LNG, a first for the company. Natural gas is much cleaner than bunker fuel or other heavy petroleum products traditionally burned by cruise ships. The international maritime industry is moving to cleaner fuels to meet new air-emissions standards.

New technologies allow companies to use unmanned platforms

(Wall Street Journal; July 26) - Eighty miles off the Norwegian coast, one of the country's smallest oil platforms is gearing up to start production. On board there's no helipad and no toilet — not even lifeboats. The slimmed-down oil platform, operated by Equinor, is expected to run without anyone on board. While workers can be ferried in for repairs or other matters, the nine oil and gas wells will be controlled from 5 miles away.

For years Big Oil's strategy was rooted in tapping bigger, deeper, more complex wells. But, driven by a deep slump in oil prices four years ago, an increasingly cost-conscious industry has been experimenting with digital technologies to open up fields long thought too small or too remote. "It was a confluence of the lower oil price ... and more powerful computers," said Christyan Malek, a JPMorgan Chase analyst. "Companies are riding a technological wave," said Martin Kelly, of U.K.-based consultancy Wood Mackenzie.

Typically, the complex engineering required to pump oil from Norway's deep and rough waters has made it necessary to have people onboard watching everything. Where unmanned platforms have been used, they have targeted simpler reservoirs, smaller fields and controlled fewer wells. Equinor's unmanned North Sea platform marks a new generation of technology with a much wider scale of monitoring abilities and sensors.

Separate of at-sea platforms, BP has said it expects to cut costs by 20 percent in the coming years through technological improvements. It is running fiber-optic cables to all its oil wells, allowing the company to gather data and monitor projects in real time.