

# Longreach Energy Investments LLC November 2018 Report

Market and Portfolio Commentary 1.1 Macro Industry Commentary

### **General Industry**

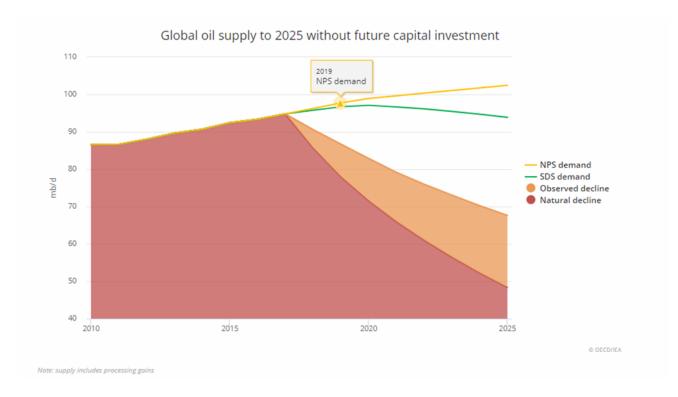
The **Fraser Institute**, a Canadian public policy think tank, has published the results of its Global Petroleum Survey, 2018. The survey provides a global ranking of oil and gas jurisdictions according to the likelihood that each will, intentionally or unintentionally, deter investment in the upstream sector. Fraser received responses from 256 oil industry professionals, including CEOs, other officers and various specialists knowledgeable of the industry's investment behaviour. Responses allowed 80 global jurisdictions to be ranked, these contain 53% of global oil and gas reserves and provide 68% of global oil and gas production.

The top ten jurisdictions are eight US states and a body of water – Texas, Oklahoma, Kansas, Wyoming. North Dakota, Alabama, Montana, Gulf of Mexico and Louisiana – and the UK North Sea. Texas scored 100 points, the highest available score in the survey, and Oklahoma was a close second.

The **International Energy Agency** (IEA) has published an update to its 2018 World Energy Outlook (WEO) with new supply and demand scenarios.

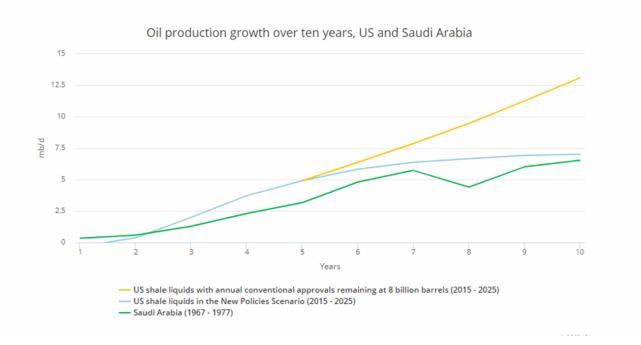
The WEO outlines two core scenarios, a New Policies Scenario (NPS) with moderate implementation of policies around the world to reduce climate change consistent with recent experience and a Sustainable Development Scenario (SDS) with more significant energy demand constraint.

In the NPS there is a 7.5mb/d increase in oil demand between 2017 and 2025. To put in context current total worldwide supply and demand are approximately 100mb/d. With no further investment in existing fields, the natural decline in current sources of supply would drop 45 mb/d over this period. With continued investment into existing fields but with no new fields being brought online the loss of supply would be closer to 27.5mb/d. A 35mb/d supply-demand gap in the NPS will need to be filled by investment in new fields by 2025. Even in the SDS there is a 26mb/d gap.



Part of the 35mb/d gap is expected to be filled by conventional projects already under development, conventional NGLs, extra-heavy oil, bitumen and other smaller increases elsewhere. In total these sources add about 11mb/d new production. New conventional crude oil projects not yet approved are assumed to provide around 13mb/d of additional production by 2025.

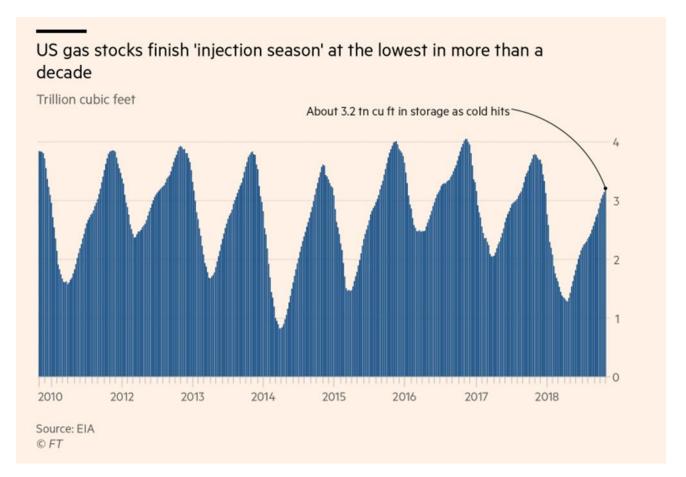
This leaves around 11mb/d in the NPS to be filled by US shale liquids. Delivering this increased production would surpass the fastest rate of growth ever seen previously over a 10-year period (Saudi Arabia between 1967 and 1977).



## Private and Confidential

#### Gas Market

The FT published a good chart of US Energy Information Agency (EIA) gas storage data. Gas fundamentals remain strong.

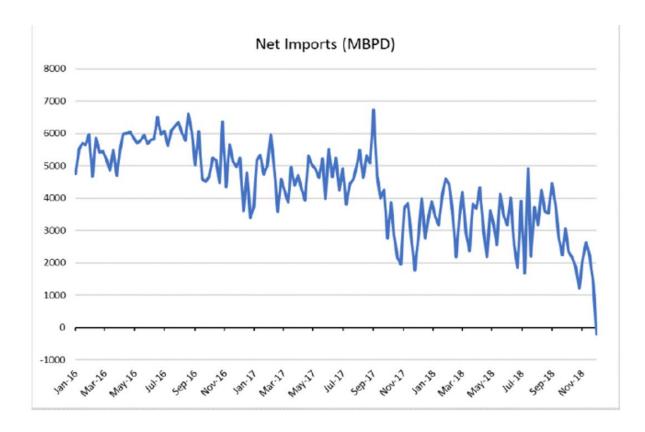


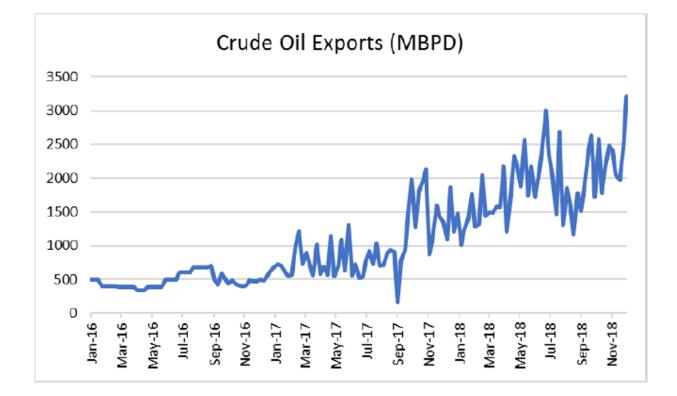
Also from the FT is S&P Global Platts data on LNG prices. These have been strong reflecting demand, particularly from China.



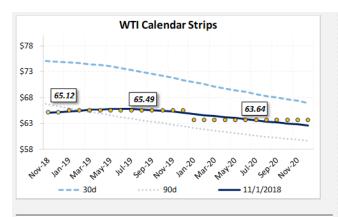
#### **Oil Market**

During November the US became a net exporter of crude oil and refined products, the last time this occurred was in 1944. Based on preliminary EIA data the US exported a net 211kb/d in the second week of November. In total, the country imported 8.8mb/d of crude and products and exported 9.0mb/d. 3.2mb/d of this total export volume was of crude oil. Current crude exports are nearly six times larger than the volumes the US exported at this point in 2016.





#### Gas and Oil Prices 1 November 2018

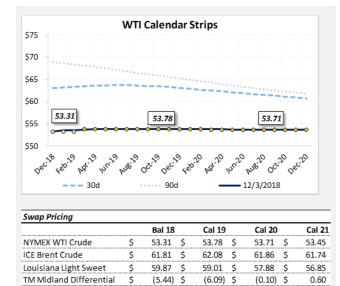


#### Swap Pricing Bal 18 Cal 19 Cal 20 Cal 21 NYMEX WTI Crude 65.18 \$ 65.56 61.13 Ś Ś 63.68 Ś ICE Brent Crude \$ 74.68 \$ 74.19 71.66 68.86 \$ Ś Louisiana Light Sweet 64.29 72.72 70.93 67.40 \$ Ś Ś Ś TM Midland Differential \$ (5.92) \$ (5.93) \$ NYMEX Natural Gas \$ 3.30 \$ 2.86 \$ 2.68 \$

Source: Bloomberg LP

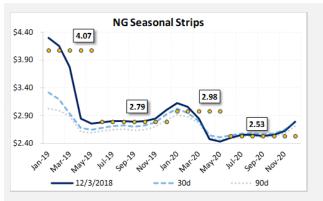
Note: Midland diff changed to TM computation Oct 1. All prices indicative only.

#### Gas and Oil Prices 3 December 2018



**NG Seasonal Strips** \$3.40 3.21 \$3.20 2.91 \$3.00 \$2.80 2.71 \$2.60 2.57 \$2.40 111-29 Jan.19 Mar.19 May 19 Sep. 19 1317-20 111-20 404.19 Mar.20 NOV-18 May 20 5ep.20 H04.20 11/1/2018 \_ \_ - 30d ····· 90d

Natural Gas Basis				
Location	Today	W	/inter '18/'19	Summer '19
MichCon	\$ (0.18)	\$	(0.02)	\$ (0.23)
CIG	\$ (0.42)	\$	(0.60)	\$ (0.82)
TETĆO M3	\$ (0.60)	\$	1.74	\$ (0.44)
Dominion S	\$ (0.66)	\$	(0.42)	\$ (0.57)
Waha	\$ (1.68)	\$	(1.44)	\$ (1.38)



Natural Gas Basis				
Location	Today	Winter	'18/'19	Summer '19
MichCon	\$ (0.13)	\$	0.07	\$ (0.15)
TETCO M3	\$ (0.32)	\$	2.37	\$ (0.42)
CIG	\$ (0.37)	\$	(0.44)	\$ (0.80)
Dominion S	\$ (0.42)	\$	(0.41)	\$ (0.56)
Waha	\$ (3.61)	\$	(2.79)	\$ (1.72)

NYMEX Natural Gas Source: Bloomberg LP

Note: Midland diff changed to TM computation Oct 1. All prices indicative only.

\$

3.13 Ś 2.68 Ś 2.65

0.53

2.60

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