

OIL MARKET FORECAST – AUGUST 2020

Summary

This is the sixth oil market forecast I have published this year and since the June edition, while the numbers have moved around a bit, the underlying message has been remarkably consistent. While I wouldn't describe the industry as being in rude health, as prevalent commodity prices are still below sustainable investment levels, demand is recovering and excess inventories are being worked off, due mainly to compliance with OPEC+ production curbs. With a little luck, 2021 may see a return to more “normal” industry challenges.

A few items to note in this forecast:

- Oil inventories will fall to 2019 levels around the end of 2020.
- US Oil production is estimated to have fallen to 14.1 MMbbl/day in June and should start to rise slowly for the rest of the year.
- Oil prices have recovered to a level that may see an uptick in US shale well completion activities but are not yet high enough to support a rebound in drilling activity.
- Under current assumptions, the oil market is broadly in balance in 2021 and 2022 as oil demand recovers.
- A structural supply deficit emerges in 2023 and continues beyond as demand recovers while supply stagnates.

One item that has been consistent in all the forecasts is that demand outstrips supply in the next 2-3 years. In the absence of resurgent US shale production, something that is unlikely on its former scale given poor investor returns, the world faces a structural oil supply shortage in the coming years.

Oil Supply and Demand

The demand estimates from the latest IEA reportⁱ is consistent with July, they estimate demand at 91.9 MMbbl/day and 97.1 MMbbl/day for 2020 and 2021 respectively. The latest EIA reportⁱⁱ is more bullish than the July edition, with demand at 93.1 MMbbl/day for 2020 and 100.2 MMbbl/day for 2021 respectively. The key difference between the two estimates concerns the return of air travel in 2021. The IEA do not see a return to 2019 air travel levels until 2022, whereas the EIA are more optimistic, seeing demand recovering more quickly.

While demand has been stronger than expected, new data for May shows that supply cuts were steeper, particularly in the US. EIA data for May show average US oil production, including Natural Gas Liquids (NGLs), falling to 14.8 MMbbl/day, from 17.2 MMbbl/day in April. Global production was 1.4 MMbbl/day lower for May when compared to previous estimates.

The latest round of revised OPEC+ production data for the first half of the year indicates that compliance with quotas has been good. Global oil production is expected to bottom out at 86.4 MMbbl/day in July, before starting to rise again through the remainder of the year, as OPEC+ relax their restrictions and US production is brought back online. These production levels leave the

market undersupplied through the rest of the year, as the surplus inventories that were accumulated in the first half of the year are worked off.

The last few weeks have also seen WTI above \$40 per barrel for the first time since March this year, but as strengthening prices remain entirely within the gift of OPEC+, this doesn't constitute a basis for renewed investment. Concerns about a second wave of COVID-19 infections leading to another round of global lockdowns appear to be receding. The return of Libyan production remains a wildcard, with ongoing uncertainty as to when it will return to the market and in what volume.

Oil Market Balance and Storage

Oil inventories began to draw down in June by an estimated 174 MMbbl. Draws are forecast to continue at roughly 200 MMbbl per month through the rest of 2020, as the OPEC+ supply curbs restrict supply and demand recovers. The latest forecast shows a market that is essentially balanced through 2021 and 2022, before demand outstrips supply again in 2023 and beyond, as demand continues its recovery, but supply stagnates. A supply and demand and surplus forecast is shown in Figure 1, below.

The key uncertainties in this forecast remain the impact of COVID-19, adherence by OPEC+ members to production cuts, the underlying decline rate of US shale production and the return of Libyan production.

The July oil supply shortfall is estimated at 8.6 MMbbl/day, with an estimated August oil deficit of 6.7 MMbbl/day. The OPEC+ production cuts, together with better than expected demand have reversed the build in crude inventories. The widespread concern in April, that physical storage would be exhausted, no longer appears to be a risk.

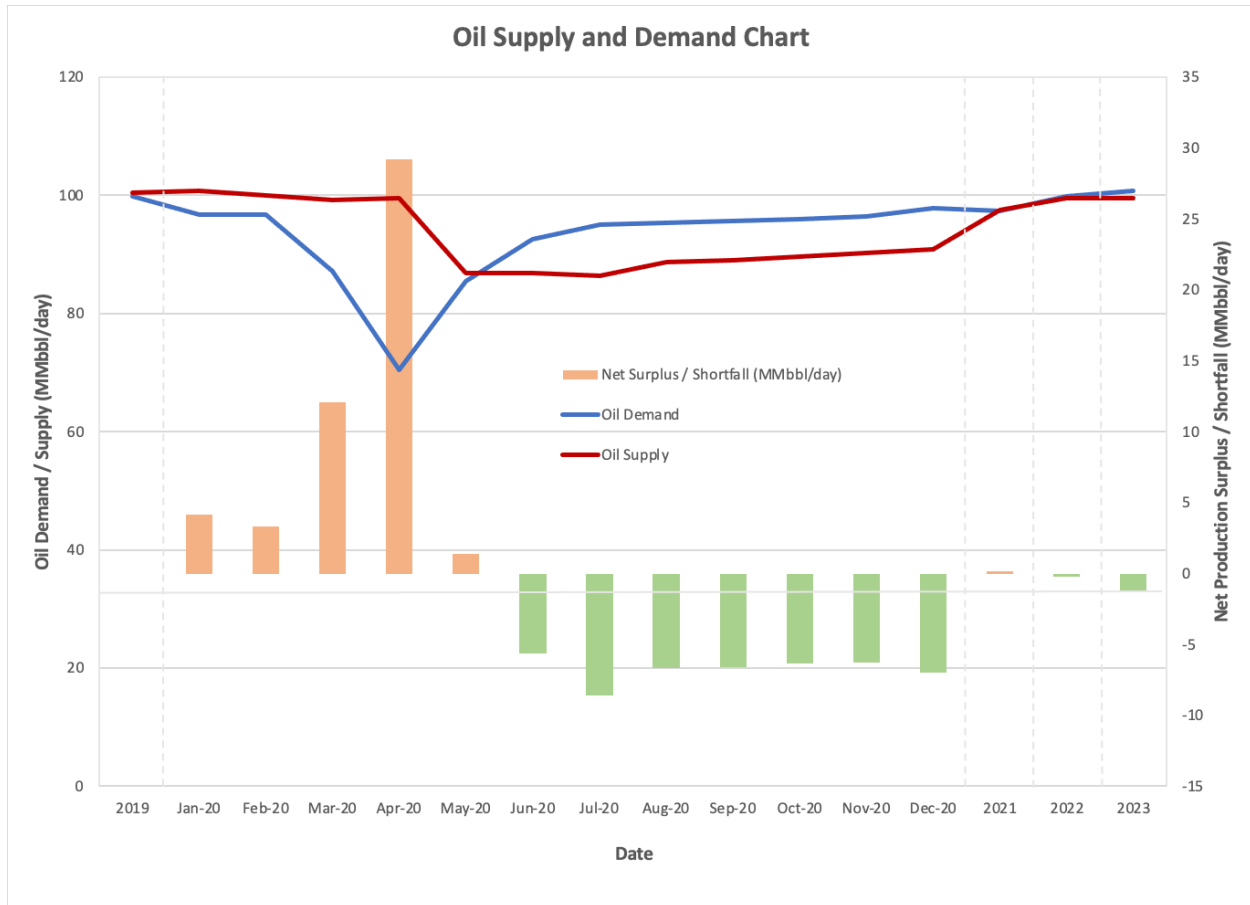


Figure 1 - Supply and Demand and Surplus Forecast

This edition of the oil market forecast has switched from OECD storage to global oil storage as a measure of capacity. While this is a more meaningful, in terms of supply and demand balance, there is less available data. There are a couple of assumptions that should be pointed out. The first is that real storage capacity is lower than actual nameplate storage capacity, because production and storage must balance regionally in the short term first. Operational capacity is assumed to be 75% of actual nameplate storage capacity, based on the anecdotal reports of storage capacity facing exhaustion when inventories approached this level. The second assumption is that the 5-year average ratio of crude stocks to storage capacity is the same for global storage as it is for OECD storage, at around 55%.

The picture when considering oil inventories as a proportion of global storage or OECD storage is similar. OECD Crude storage capacity is about 4.4 billion barrels, whereas global crude oil storage is estimated at 6.7 billion barrels. As figure 2 shows, the global inventories peaked in May at 4.63 billion barrels, some way short of even the operational limit on global storage. The threat of overwhelming storage was valid however, as if inventories had continued to build at the April rate, storage would have exceeded its operational limit in May. It was only the dramatic OPEC+ and US supply curbs that were enacted in May that prevented this from happening.

The forecast shows inventories returning to 2019 levels by year end and stabilizing at that level for 2021 and 2022. Beyond that, the same structural supply deficit, driven by the decline in US shale production, that had been a feature of previous forecasts remains. As US shale has been the major source of production growth over recent years, lack of investment in the coming years, coupled with natural declines, creates a structural supply deficit.

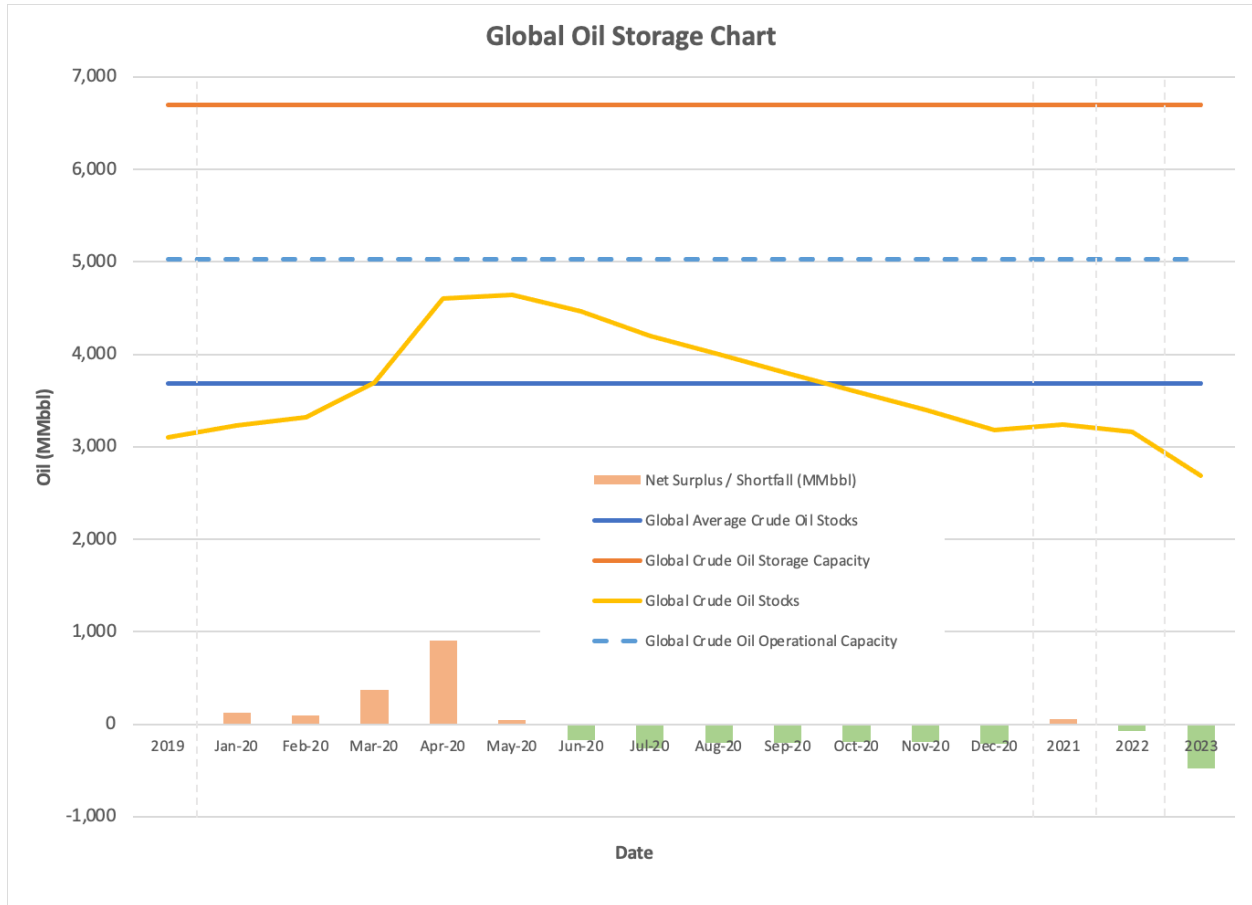


Figure 2 - Global Oil Storage Chart

Impact on US Investment and Oil Production

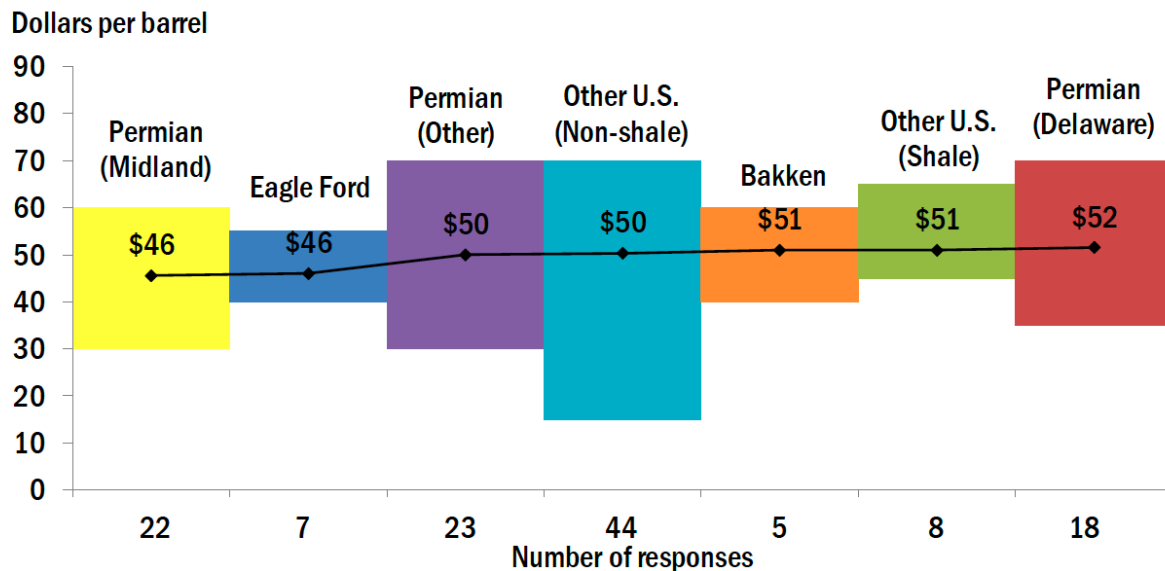
As noted earlier, the recovery in prices has resulted in several US operators choosing to bring shut in production back online. This forecast sees US oil production, including NGLs, bottoming out at 14.1 MMbbl/day in June, before rising to 16.1 MMbbl/day at year end as shut in production is brought back online and the backlog of drilled uncompleted wells (DUCs) is worked through. This is about 2 MMbbl/day below January 2020 production levels, due mainly to underlying well declines.

One outstanding question is whether recovering prices will trigger renewed investment in the form of an increase in drilling activity onshore US. The last six months has seen a decline in oilfield services costs as demand collapsed. The latest survey from the Dallas Federal Reserveⁱⁱⁱ shows that the best operators with the best acreage could see breakeven prices as low as \$30 per barrel. I am

not an advocate of using individual well breakeven prices for investment decisions as they exclude SG&A, infrastructure, land acquisition and financing costs, but they may provide an indicator of when activity will begin to recover. If we assume that those costs impose a premium of \$15 – \$20 per well, then we could start to see some limited new investment in the US onshore when WTI passes the \$50 per barrel mark. There are no mainstream forecasts that see prices above \$50 per barrel this year, but those forecasts are being constantly revised, at the moment mainly upwards, so we could find ourselves there by year end.

Breakeven Prices for New Wells

Dallas Fed Energy Survey—In the top two areas in which your firm is active: What WTI oil price does your firm need to profitably drill a new well?



Federal Reserve Bank of Dallas

NOTES: Line shows the mean, and bars show the range of responses.
92 E&P firms answered this question from March 11-19, 2020.
SOURCE: Federal Reserve Bank of Dallas.

Figure 3 - Breakeven Prices for New Wells

The US land oil rig count appeared to stabilize in July, but then continued to decline in the first half of August. Statements from large US onshore operators such as Occidental and Exxon indicate they will continue to reduce active rig counts through the rest of the year. This decline is set to continue with 57 land oil rigs estimated to be in operation by year end, as shown in Figure 4. If gas rig counts remain flat for the remainder of the year, the total land rig count at year end would be about 132. A moderate rebound in rig activity is forecast for 2021, with an average US land oil rig count of 200 for the year, which implies 330 US land oil rigs active at the end of 2021.



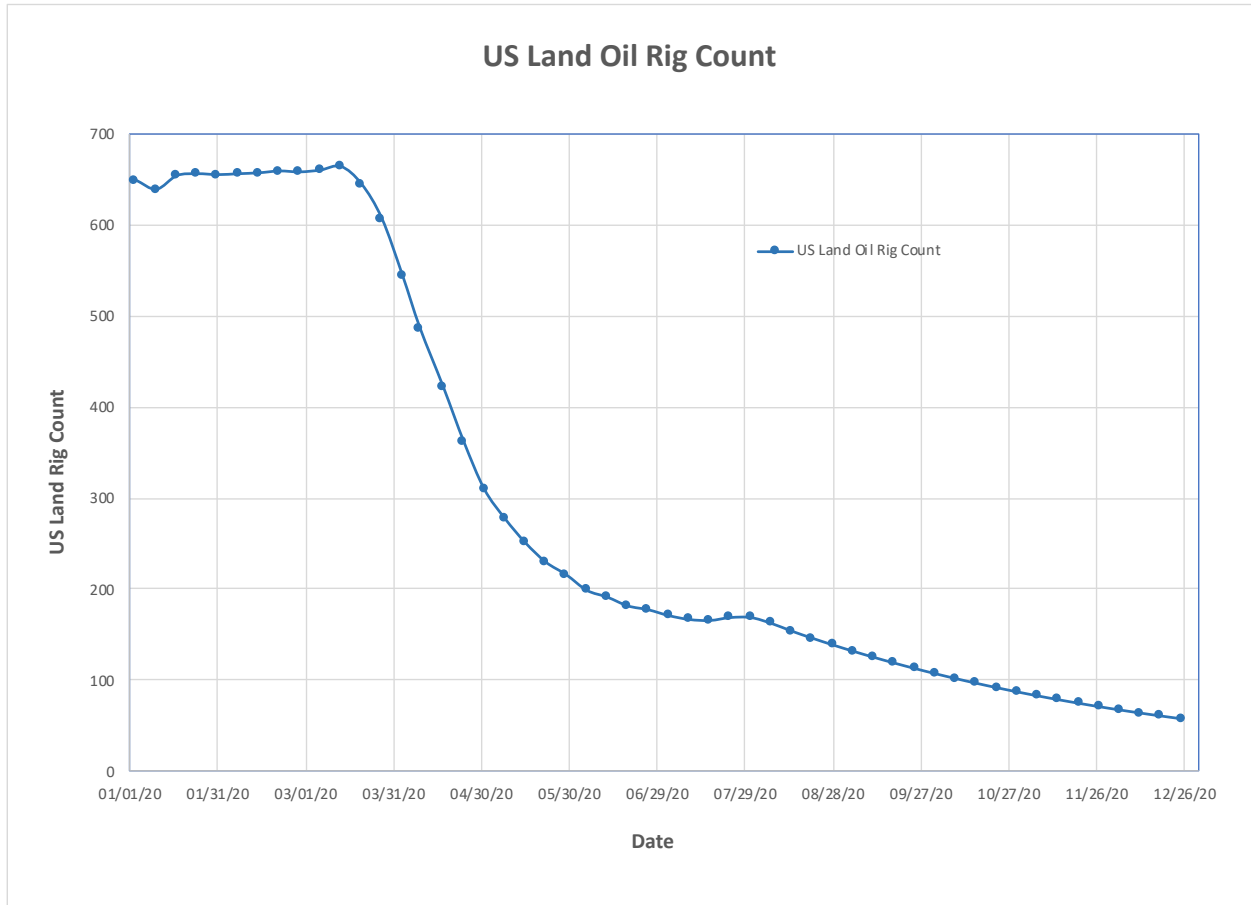


Figure 4 - US Land Oil Rig Count

ⁱ IEA (2020), Oil Market Report - August 2020, IEA, Paris

ⁱⁱ Short Term Energy Outlook (STEO), August 2020, U.S. Energy Information Administration.

ⁱⁱⁱ Energy Slideshow, Federal Reserve Bank of Dallas, August 3rd, 2020

