



Community & Economic Development Department

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MEMORANDUM

To: Noel Bernal, County Manager
From: Greg Dean, Oil & Gas Administrator
Thru: Alisha Reis, Deputy County Manager
Jenni Hall, Director, Community & Economic Development
Chase Evans, Deputy Director, Community & Economic Development
Katie Keefe, Environmental Program Manager
Date: September 23, 2022
Subject: Adams County Production and Drilling Update

Executive Summary:

As requested during the August 23, 2022, Study Session, Staff has prepared the following memo providing a drilling activity and production update for Adams County (“County”). Oil and gas activity in the County, state, and nationally has been increasing significantly since the pandemic-driven global commodity price crash in 2020. As crude oil and natural gas prices continue to increase to near-record levels, so do drilling rig counts associated with exploration and production operations. Drilling rig activity within the County has recovered to at or above pre-pandemic levels with nearly 90% recovery statewide. Practically all oil production in the County and the entire Denver Front Range occurs on non-federal land (99.3% in 2021), largely isolating this region from recent modifications in federal leasing and drilling policy. The County has approved 20 oil and gas well locations containing almost 500 horizontal wellbores since 2016, of which more than 300 are either producing or spud (a well that has commenced drilling but is not yet producing) and require no additional County or state approvals. As such, oil production in the County has continued to rise as demonstrated by a 7.2% increase in 2021, even as drilling rig counts and production levels statewide decreased by 10.6%. Further, through May 2022, production in the County has increased 47% year-over-year compared to a statewide growth of only 10%. This indicates oil and gas activity in the County is recovering from the commodity price crash faster than the state and other jurisdictions in the Denver Front Range. This also demonstrates many oil and gas companies can operate responsibly in a manner that is protective of public health, safety, welfare, and the environment, and that SB19-181-related regulatory changes appear to be having minimal impact on those activity

levels. It seems that much of the restrained growth in crude oil production, despite increased demand and prices, is related to shifting company priorities towards private investor demands surrounding capital expenditures and equipment and personnel shortages.

Drilling Rig Activity:

Across the United States, oil and gas drilling activity is controlled by many different factors perhaps largest being commodity prices (i.e., oil and gas). Fluctuations in the price of crude oil and natural gas are generally based on supply, demand, and global geopolitics and can vary wildly at times with drilling rig counts increasing and decreasing accordingly. The price of oil had been relatively steady at around \$60 per barrel for much of 2019 and early 2020. The global pandemic and associated decline for demand caused the price of oil to crash to an average price of \$25 per barrel (and momentarily going negative) by mid-2020, the lowest crude oil price in nearly 25 years. This caused oil and gas operators across the Country to remove drilling rigs from service as prospects became less profitable to produce. Active drilling rig numbers in the U.S. declined 120% in 2020 from a high of 840 to 260 by the end of that year. This decrease in rig count was also seen in Colorado with the state counts declining from 24 in January 2020 to 4 by the end of that year, a decrease of 142% (with one rig running only intermittently in Adams County for much of 2020). Figure 1 illustrates this decrease in rig counts nationally and in Colorado during the pandemic. Some industry proponents may argue that the decrease in drilling activity, specifically in Colorado, was tied to the more stringent state and local regulatory environments following the passage of SB19-181. As Figure 1 demonstrates, this reduction in oil and gas activity was not isolated to Colorado and reductions in drilling rigs were also seen in other states with less-robust regulations such as Wyoming (170% decrease), Oklahoma (140% decrease), and Texas (130% decrease). The reduction in drilling activity in Colorado was in line with the national trend, further illustrating the stronger correlation of commodity prices to oil and gas activity.

Pandemic Drilling Activity Recovery:

Global commodity prices rebounded throughout much of 2021 and the first half of 2022 with crude oil prices increasing from \$25 per barrel to \$70 per barrel by the end of 2021 and averaging around \$90 per barrel in the beginning of 2022 (currently ~\$88 per barrel). Drilling rig counts in Colorado increased accordingly from 4 rigs at the lowest point in 2020, to 11 by mid-2021, and 21 as of September 2022. Currently, rig counts in Colorado are around 87% of pre-pandemic levels, with drilling activity in Adams County having fully recovered, averaging 2-3 active drilling rigs running at any one time. This pattern is in line with national

trends where rig counts are approximately 10% below pre-pandemic levels, with some states exceeding those amounts (see Figure 1).

The increase in crude oil prices is largely considered to be tied to a rapid increase in post-pandemic demand and a lower supply of crude oil primarily due to numerous global and domestic geopolitical and economic factors. However, some industry representatives suggest regulatory and policy changes are principally driving the sustained increase in oil prices (and associated impact on gasoline prices), particularly federal policy changes and the implementation of regulations in both Colorado and Adams County after the passage of Senate Bill 19-181. According to congressional reports, onshore oil production on federal lands represents only 9% of total U.S. production and 7% of production in Colorado. In 2021, oil production on federal leases in Adams County and the entire Denver Front Range region represented approximately 0.7% of annual volumes from those jurisdictions. This suggests that any change in federal leasing policies would likely have minimal impact on oil and gas activity in Adams County or the surrounding jurisdictions. Further, a recent survey of 132 U.S. oil and gas companies conducted by the Federal Reserve Bank of Dallas found that nearly 60% of companies responded that the primary reason for not increasing drilling activity/oil production volumes significantly, despite the increased demand and elevated commodity prices, was pressure from private investors to maintain capital discipline, reduce company debt, and return money to shareholders rather than drill more wells. Additionally, of those surveyed, 15% cited limited equipment and supply chain issues or personnel availability and only 11% cited government regulations or governance issues as primary reasons for the intentionally restrained growth and recovery in exploration and production activity levels. This indicates that, contrary to industry proponent arguments, recent changes in policy regarding federal leasing activity and post-SB19-181 changes to local regulations are most likely not the driving factors impeding companies from increasing the oil production necessary to help drive down gasoline prices for consumers, especially in Colorado.

Adams County Oil Production Trends:

Adams County has approved 20 oil and gas facility permits with up to 480 horizontal wells since it began permitting these facilities in 2016. Approximately 200 of those wells have been drilled at the time of this report. There are an estimated 270+ additional lateral wellbores that could be drilled in the near-term from these existing facilities without requiring further County approvals. Of these, 120 have been spud such that, no other approvals from the Colorado Oil and Gas Conservation Commission (COGCC) are necessary. As Figure 2 shows, oil production here has increased dramatically since 2017 and Adams County has been the

second largest oil producer in Colorado since 2019. Oil production in the County increased in 2021 by 7.2% to 8.1 million barrels (representing 5.25% of all oil production statewide) while state production declined by nearly 11% during that same time. Additionally, December 2021 and January 2022 were the highest oil producing months in County history with 950,000 barrels of oil extracted each month. Further, through May 2022 oil production in the County has increased 47% year-over-year, compared to a more modest overall state increase of 10%. These trends are outliers relative to other jurisdictions and suggest Adams County oil and gas activity has recovered significantly faster than the state, even under a more protective regulatory regime (see Figure 2).

The County has approved 10 minor amendments to existing oil and gas permits since March 2021 that have allowed operators to complete modifications necessary to connect facilities to product pipelines, install lower emissions equipment, and otherwise come into compliance with revised state regulations while reducing off-site impacts. The continued growth in oil production within the County demonstrates how oil and gas companies can better utilize existing permitted and built facilities, rather than disturbing additional land for new sites. By implementing modifications that reduce environmental, public health and safety, and other impacts, operators can still produce natural resources responsibly, in compliance with state and county regulations, while avoiding, minimizing, and mitigating impacts to the residents and resources of Adams County.

References:

Congressional Report on Oil and Natural Gas Production on Federal Lands:

<https://crsreports.congress.gov/product/pdf/R/R46537>

Federal Natural Resources Revenue Data for Oil and Gas Production:

<https://revenue.data.doi.gov/downloads/production-by-month/>

Federal Reserve Bank of Dallas, Survey of Oil and Gas Companies:

<https://www.dallasfed.org/research/surveys/des/2022/2201.aspx#tab-questions>

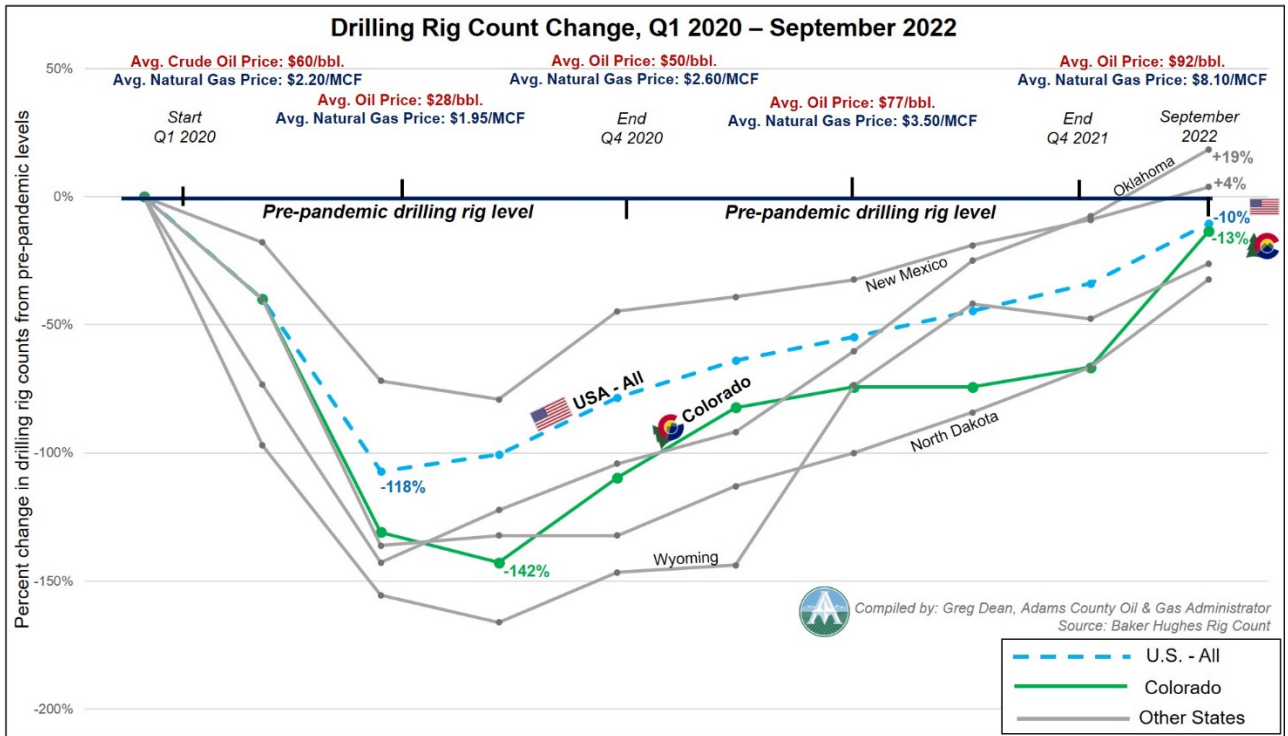


Figure 1: Drilling rig count changes from the beginning of 2020 through September 2022 nationally and in Colorado that demonstrates the recovery of oil and gas activity after the pandemic-driven global commodity price decline.

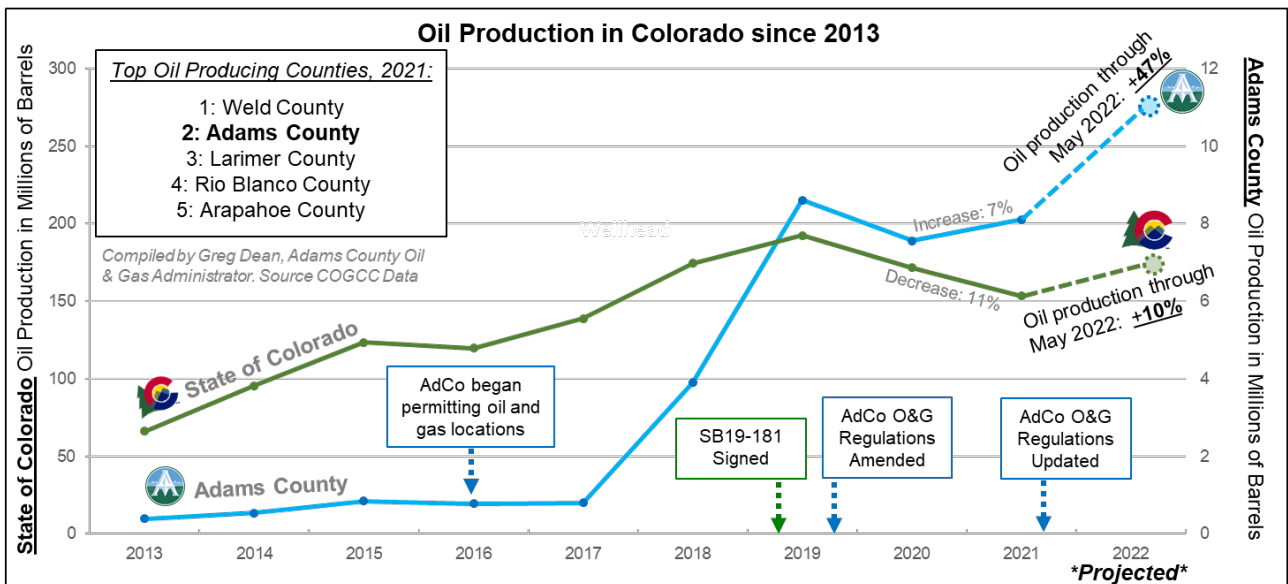


Figure 2: Oil production in Adams County and Colorado since 2013. Production in the County has increased 47.4% year-over-year compared to a state increase of 10.3%. Adams County has been the second largest producer of oil in Colorado since 2019, representing 5% of oil statewide.