

PULSE



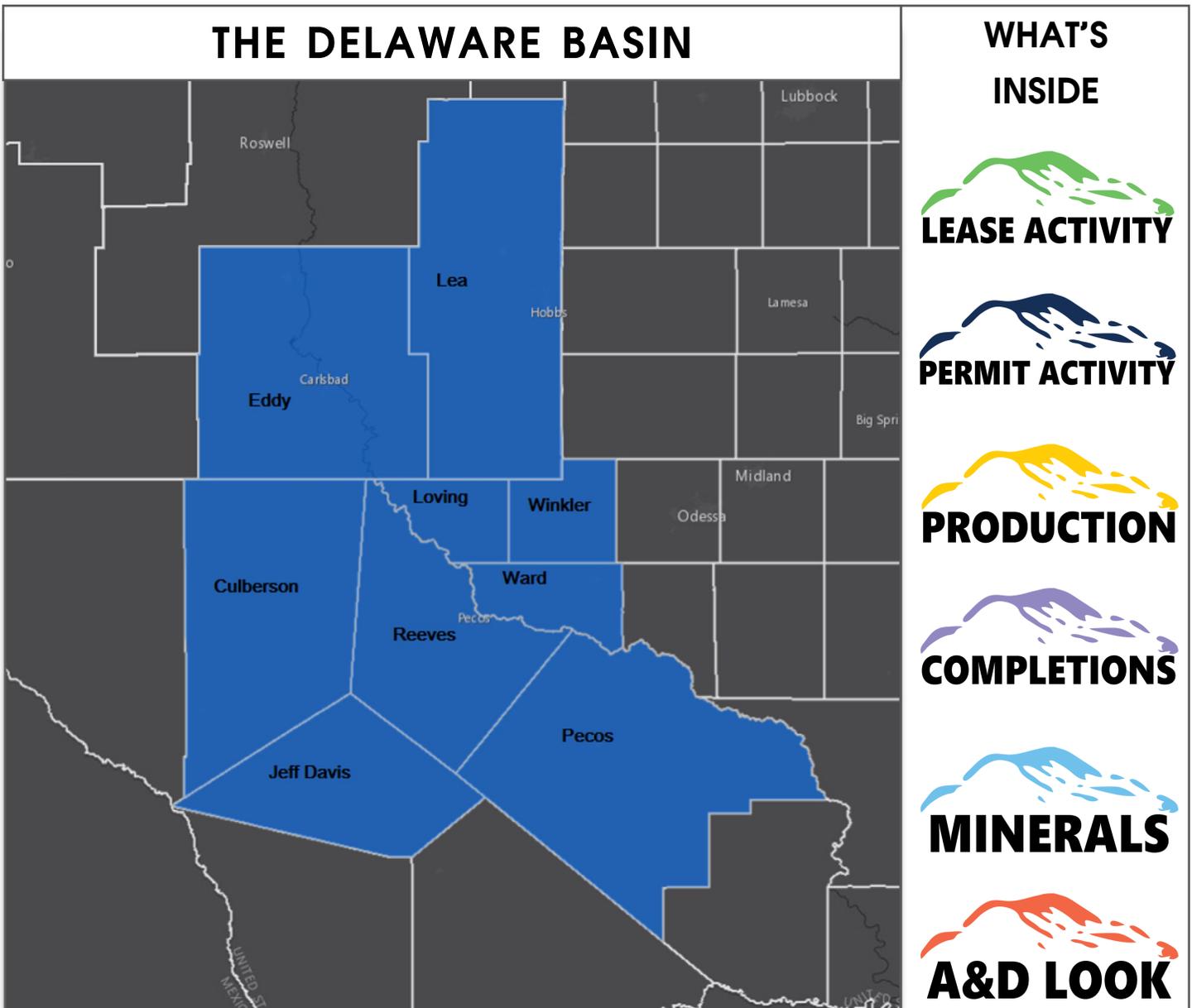
DELAWARE BASIN EDITION

MAY 21, 2019



INTRODUCTION

Welcome to the second edition of the Pulse, where we focus our analysis on the Delaware Basin. In the previous Pulse, we concentrated our efforts on the Midland Basin and comparing these two hotbeds of activity provides an intriguing study. If you missed the Midland Basin Pulse, you can catch up [here](#). As with the Midland Basin, the Delaware saw geographically concentrated operations across the leasing, producing, and mineral buying disciplines, which points to geologic and economically favorable areas. We will unpack these areas methodically, beginning with an analysis of which companies are leasing and permitting in the basin. From there, we will discover which operators drilled the biggest wells and had the highest cumulative production. From operators we move on to mineral buying activity, and we will conclude with a summary of the action on the acquisition and divestiture front.

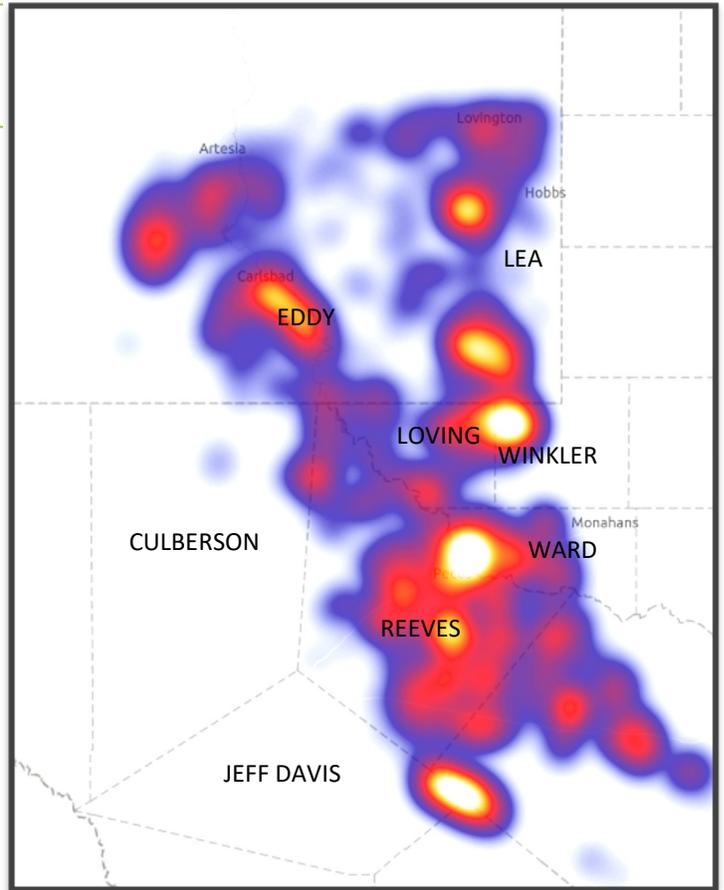




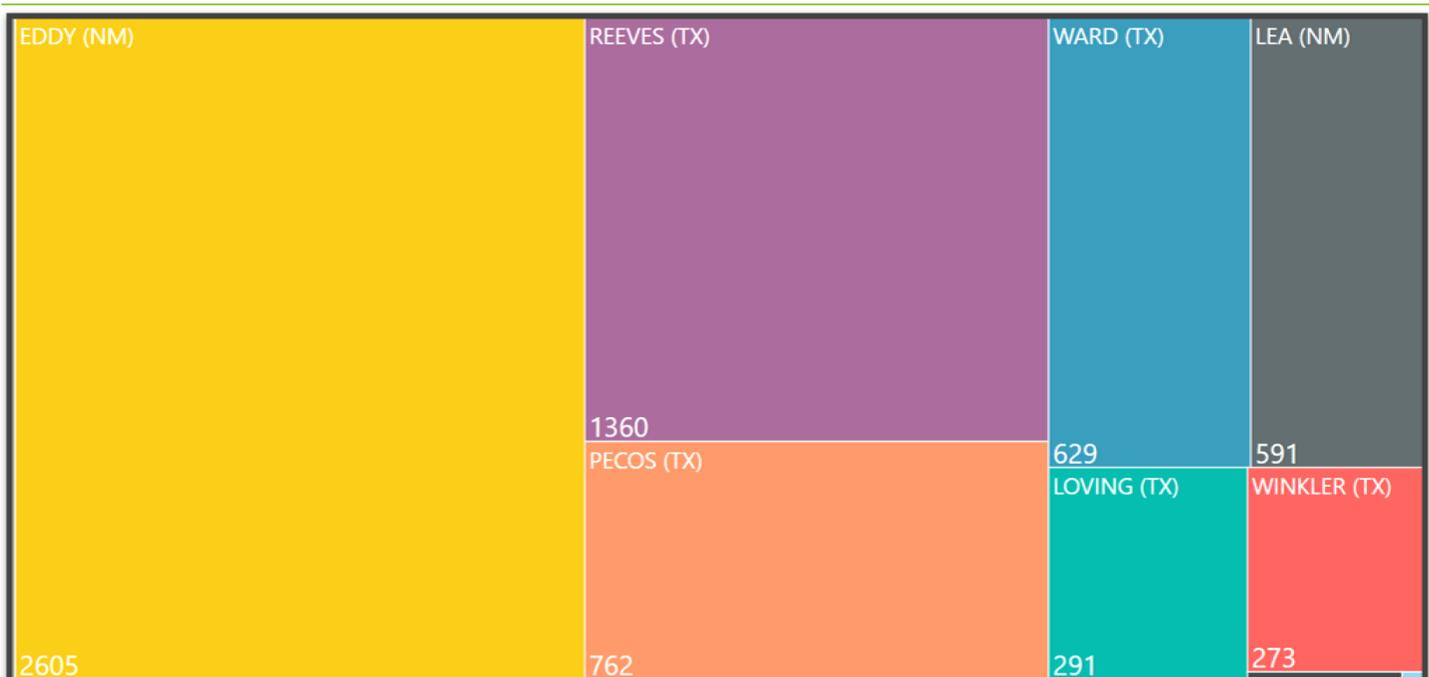
LEASE ACTIVITY

WHERE IS THE LEASING?

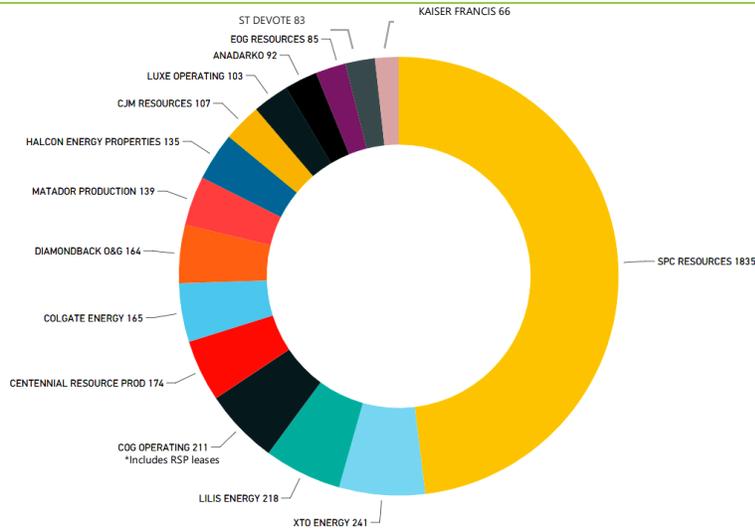
From April 2018 through April 2019 there were 6,513 leases taken in the Delaware Basin. The hottest activity according to the map follows a north-south trend from Lea County to the southern tip of Reeves County. Over the past 12 months, Eddy County showed the most activity with 2,605 new leases (Eddy County is covered in more detail on the next page). Reeves County followed Eddy with 1,360 leases. Following the two leaders, the activity dropped significantly with Pecos (762), Ward (629) and Lea (591) Counties rounding out the top five.



COUNTY LEASE TOTALS



WHO LEASED THE MOST



We identified the most active lessees (calculated by number of leases, not total acreage), in the past 12 months, SPC Resources overshadows all the other lessees by sheer number of leases, 1,835 (see our note below on why). XTO Energy comes in second with 241 leases, followed by Lillis Energy with 218. Concho’s acquisition of RSP lands them in the fourth spot with 211 and Centennial Resources rounds out the top five with 174 leases.

Next, we outlined the counties where these top companies leased. Once again we see focused leasing demonstrated by these companies. Not only did they take the most leases, they concentrated their efforts geographically to generate a successful prospect. Over a third the Top 15 companies had at least 98% of their leasing activity in one county. Much like the Midland Basin, the evidence points to geologically (and therefore geographically) constrained leasing efforts that support the time-tested military adage of concentrating your forces at the most decisive point. Only a handful of companies including; Concho, Anadarko and Matador maintain a distinct leasing effort spread across multiple counties.

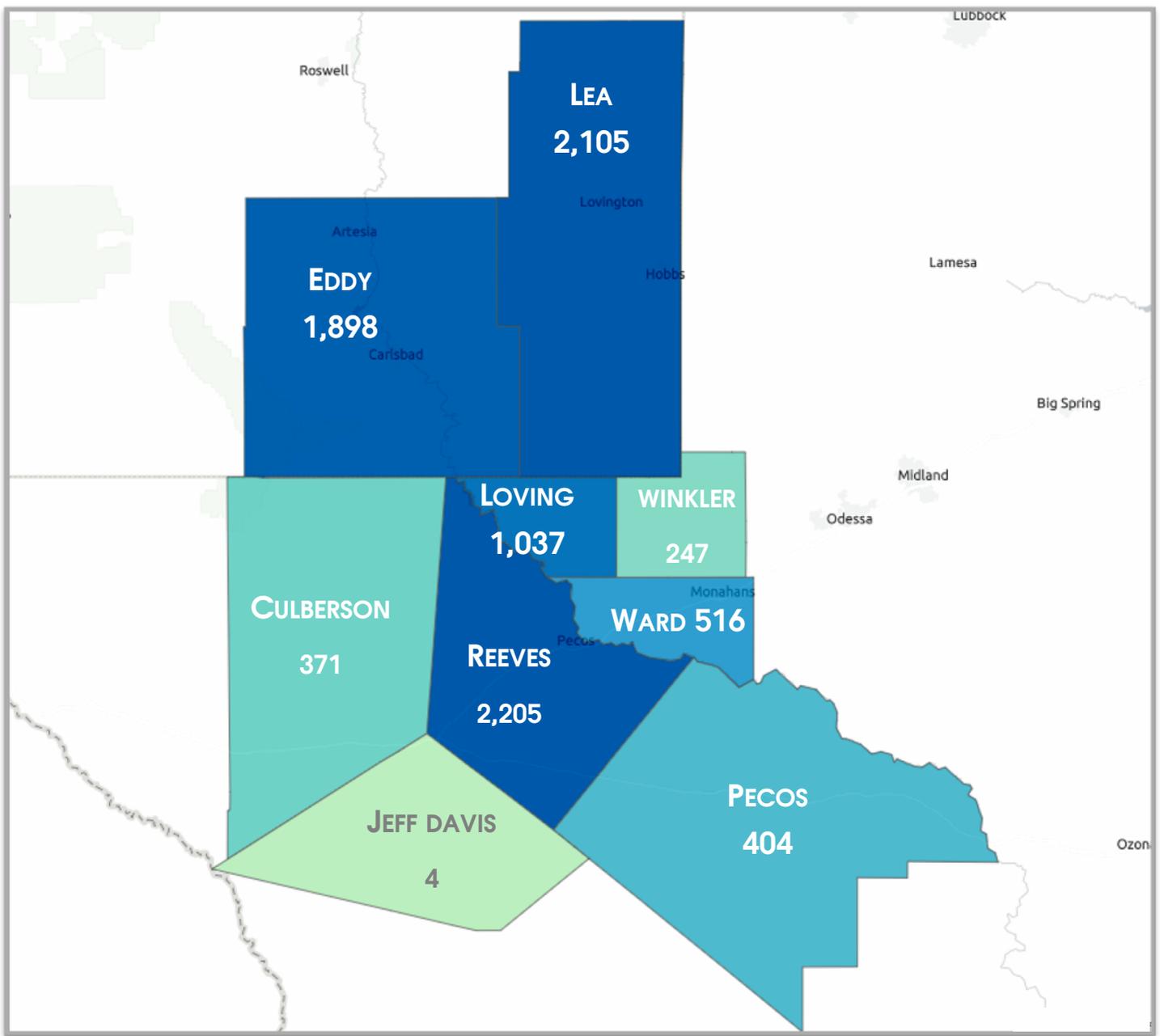
WHERE THEY LEASED

That’s a lot of leases! All of the 1,835 leases taken by SPC Resources (Santo Petroleum) were in Eddy County. Why so many? Most of the leases were in and around Carlsbad, and included residential areas. Here’s a map of the lease locations:



PERMIT ACTIVITY

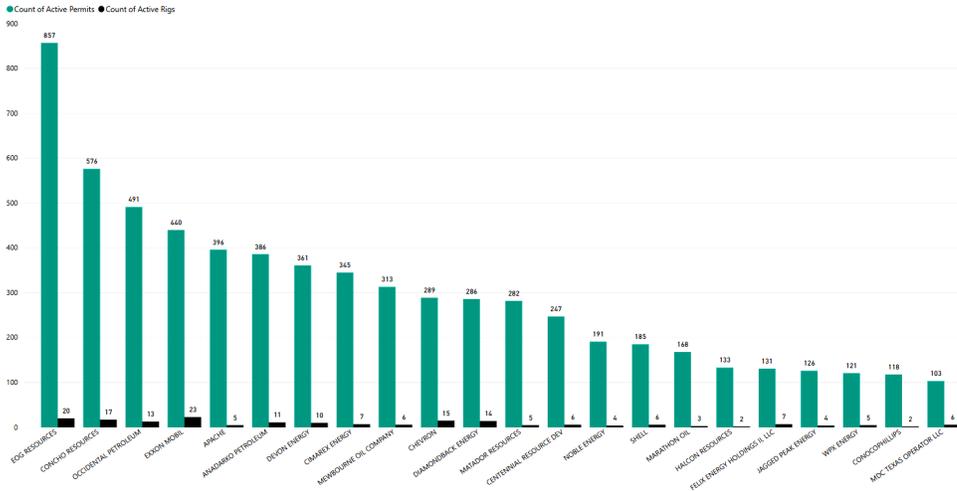
WHERE ARE THE PERMITS?



WHERE ARE THE PERMITS?

Reeves County is still dominating the Delaware Basin with 2,205 permits. New Mexico counties Lea and Eddy are close behind with 2,105 and 1,898 permits, respectively. New Mexico overall is having a moment, with 4,184 permits. Don't worry, Texas, you're still the biggest, with 5,328 Delaware permits.

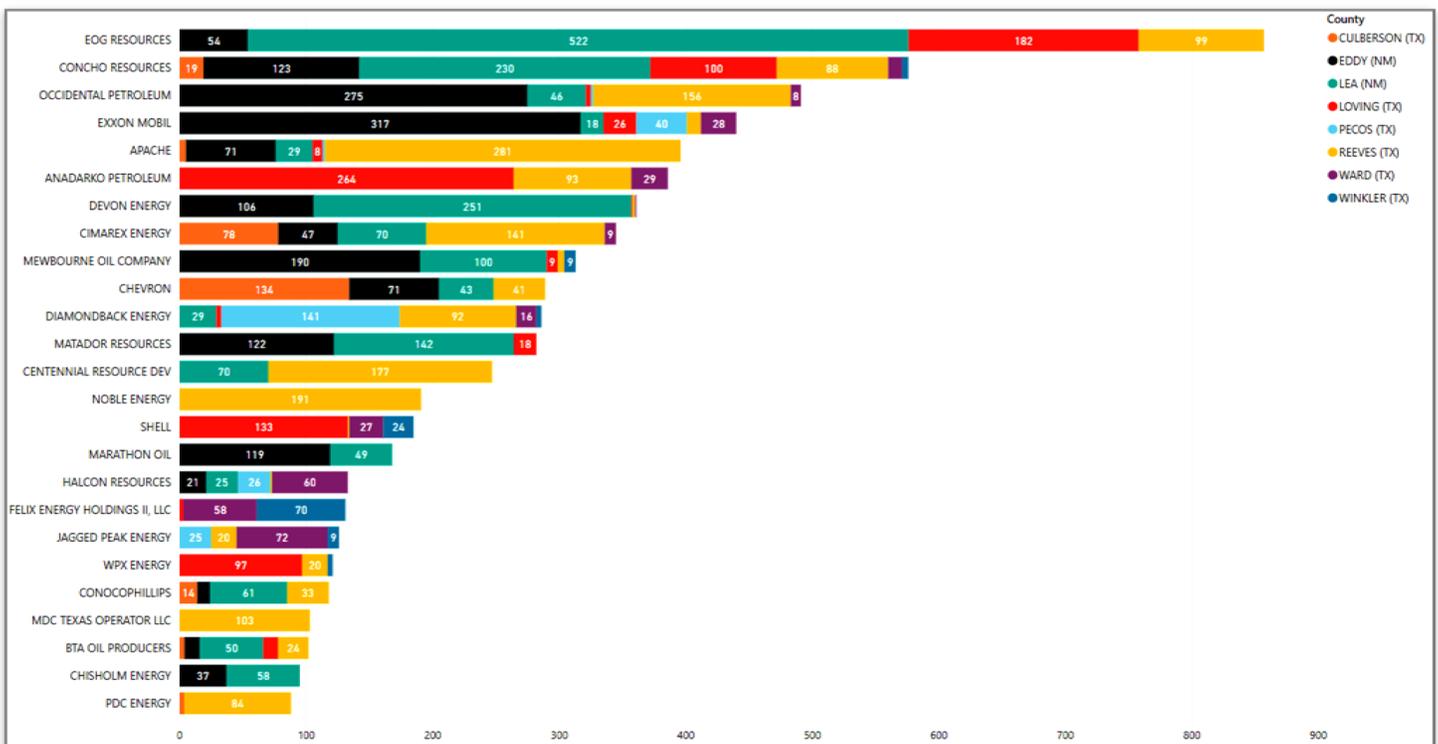
WHO HAS THE MOST PERMITS



The adjacent chart displays the top 25 operators with the most permits and the rigs they currently have in the basin. The operator with the most Delaware Basin permits is EOG Resources with 857 permits, running 20 rigs. Next in line is Concho (576 permits), followed by Oxy (491), ExxonMobil (440) and Apache (396). Once the acquisition of Anadarko by Oxy is complete, Oxy will move to the

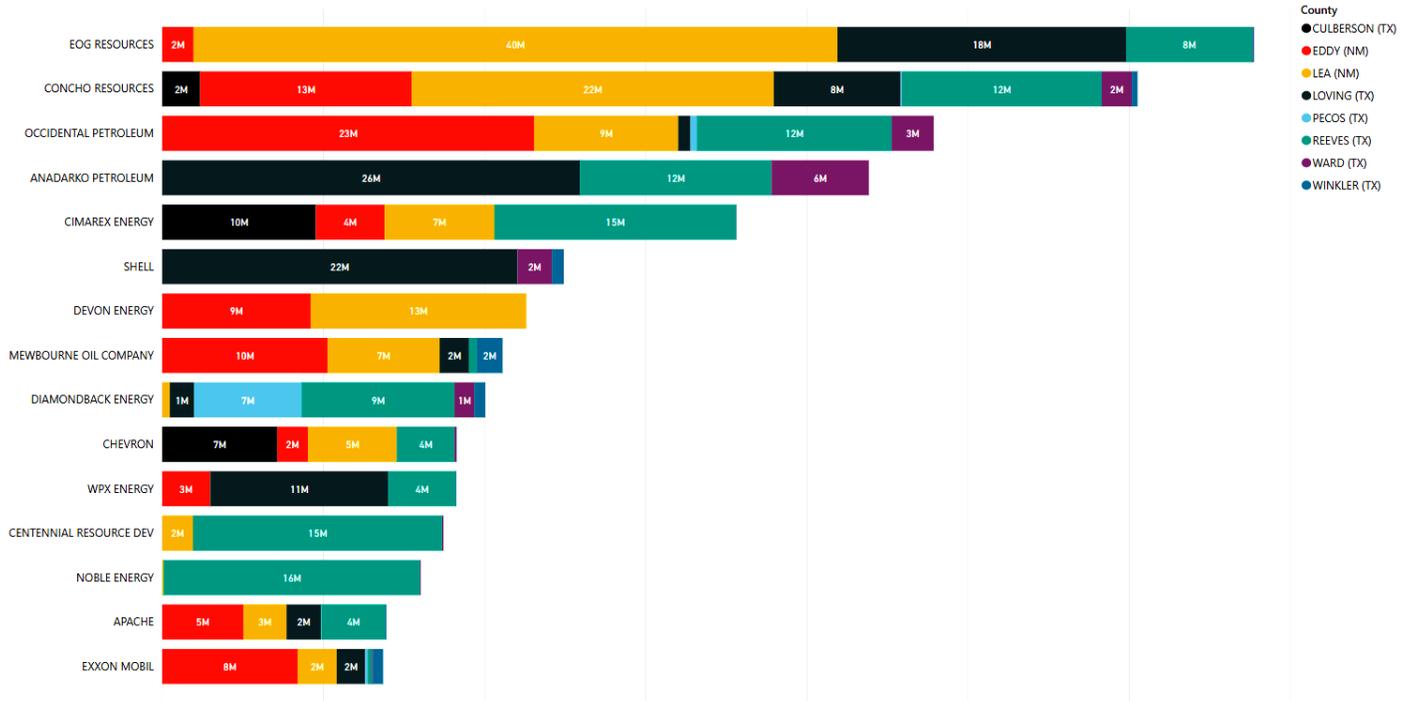
number one permit spot with 877. The graph below shows the counties where the most active operators have permits. An examination of this information can provide insight as to their strategy. Operators that are actively permitting in areas where they have production may demonstrate a desire to infill and further develop an area. Conversely, differences between production and permitting may indicate a shift in focus. An example of this is Devon Energy, who may be expanding their footprint. Devon has production solely in the New Mexico portion of the Delaware, but currently has permits on the Texas side including Reeves, Ward and Loving counties. Halcon Resources does not have any wells in Eddy County, but they have 21 active permits, suggesting a potential expansion into Eddy County. Apache may be eyeing Culberson County, with five permits and no existing production. A company to keep on the radar is MDC Texas Operator, which has an exclusive focus on Reeves County with 23 existing wells and 103 permits. They are currently running 6 rigs, and could significantly increase their position in the near future.

WHERE THEY ARE PERMITTING

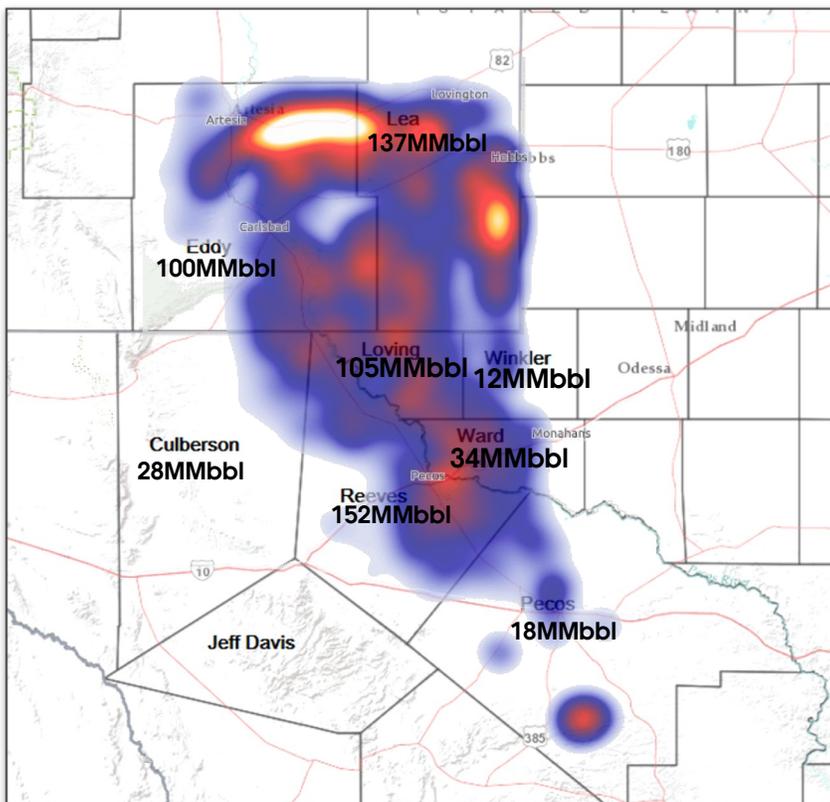


PRODUCTION

TOP 15 OPERATORS: PRODUCTION BY COUNTY BREAKDOWN



PAST 12 MONTHS PRODUCTION HEAT MAP

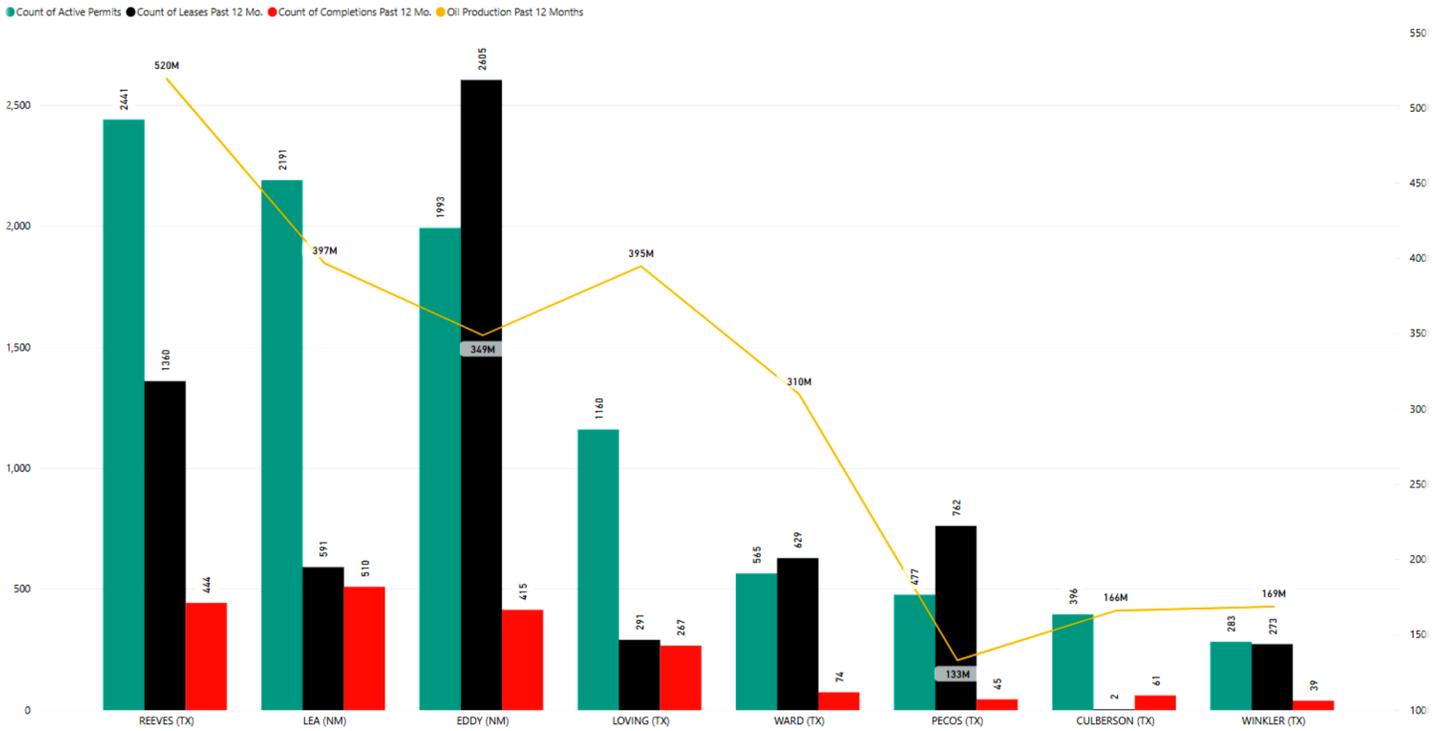


Delaware 12 month total:

587MMbbls produced

Leading the Top 15 Operators in the basin is EOG Resources, who produced from four counties totaling 67.7MMbbls in the past 12 months. The next highest production is close behind, with 56.8MMbbls by Concho, followed by Occidental (47.9MMbbls), Anadarko (43.8MMbbls) and Cimarex (28.6MMbbls). Once Oxy buys Anadarko, that would move them to the number one spot with a combined 90.7MMbbls produced in the past year.

COUNTY COMPARISON: PERMITS, LEASES, COMPLETIONS AND PRODUCTION



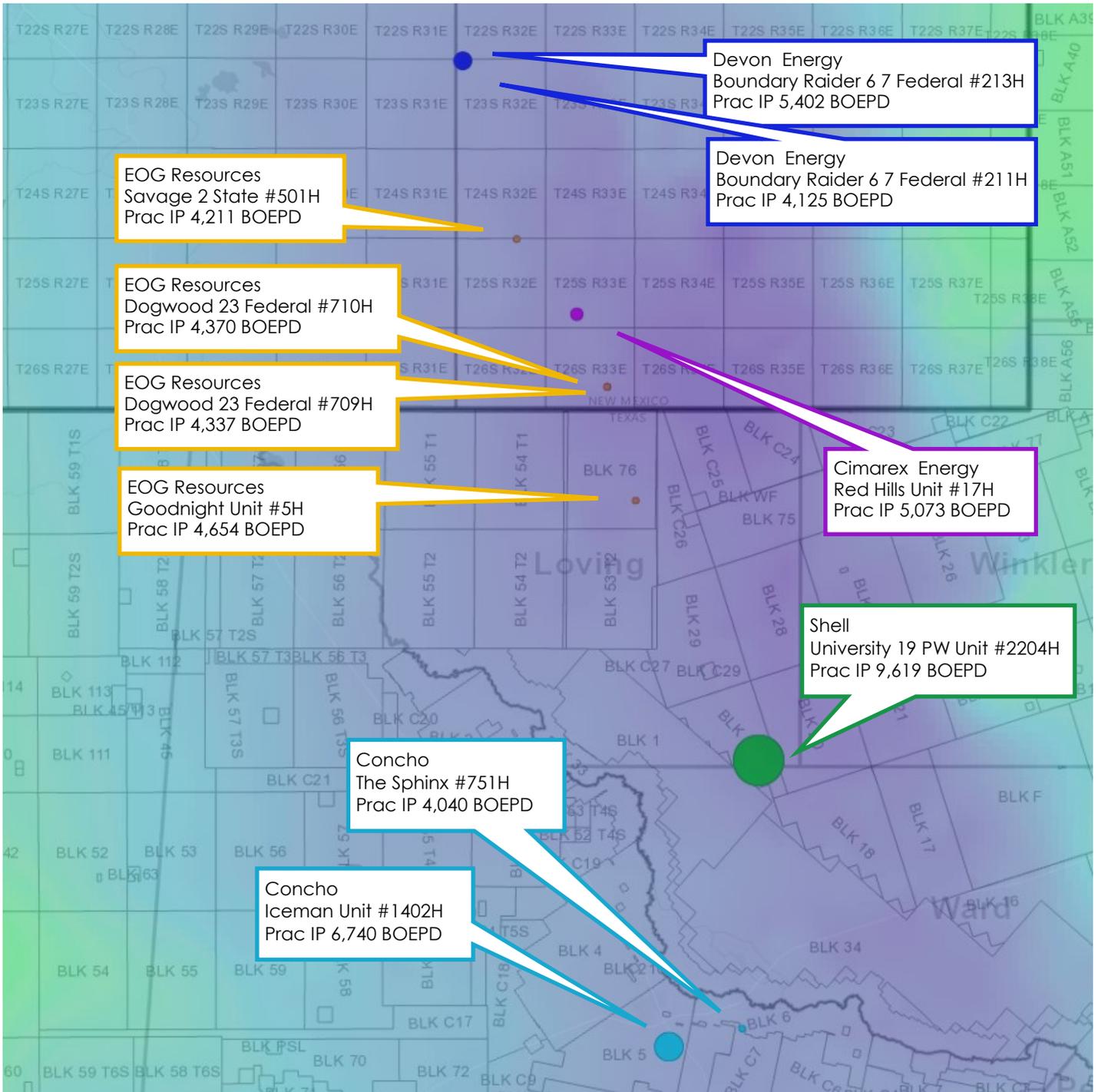
This graph is a culmination of information and compares activity across counties. We think data should be meaningful, so we are going to dive in and explain what all these numbers mean. Looking at activity over the past year, the graph is a comparison of production, leases, completions and permits by county.

Leading the way is much loved Reeves County, with the most production and permits and second most leases. Next in line is Lea County with the highest number of completions and second most production and permits. Eddy County is close on the heels of Reeves and Lea Counties with the swell of leasing activity in and around Carlsbad. Eddy is third for active permits and completions, and with 2,605 leases, outshined all other counties in the basin. Due to the urban nature of the leases, this may not have a significant impact on future completions and production.

In the past year, Pecos County witnessed the third highest leasing in the basin. With the lowest production in the Delaware and only 45 completions this year, we could likely see a rise in these numbers soon based on the leasing and permitting activity going on.

COMPLETIONS

TOP 10 BIGGEST WELLS LAST 12 MONTHS COMPLETIONS

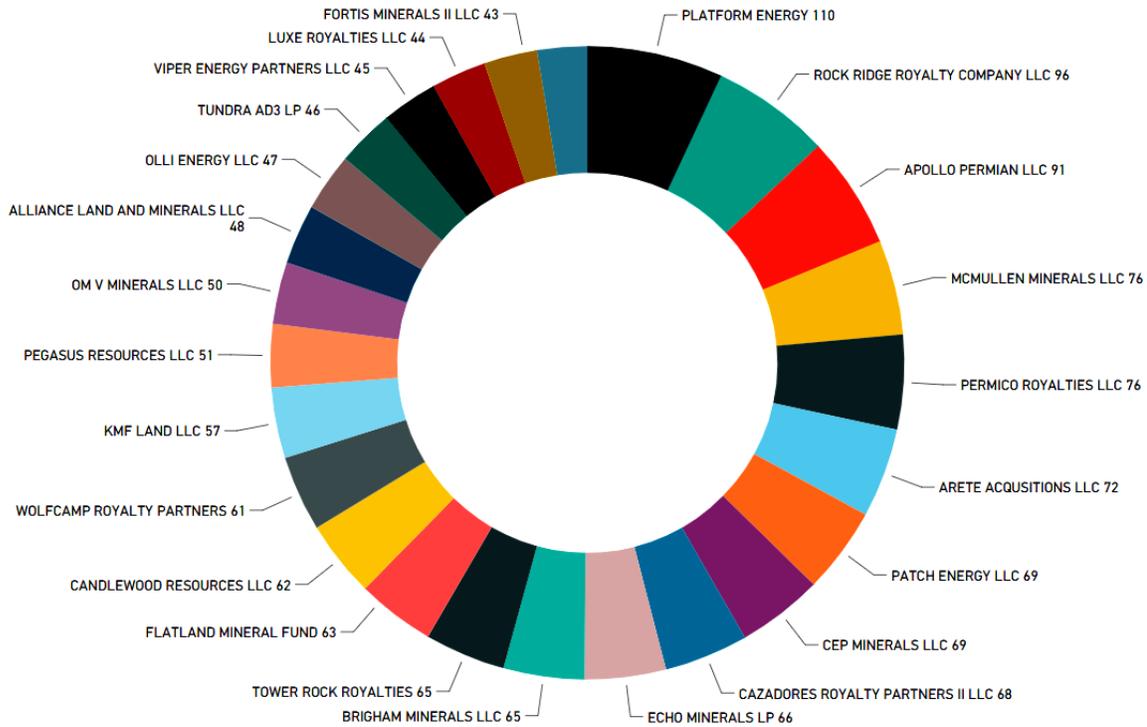


Source: DrillingInfo

Big congratulations to **Shell, Concho, Devon, Cimarex and EOG Resources!** These 5 operators drilled the 10 biggest wells in the Delaware Basin in the past year.

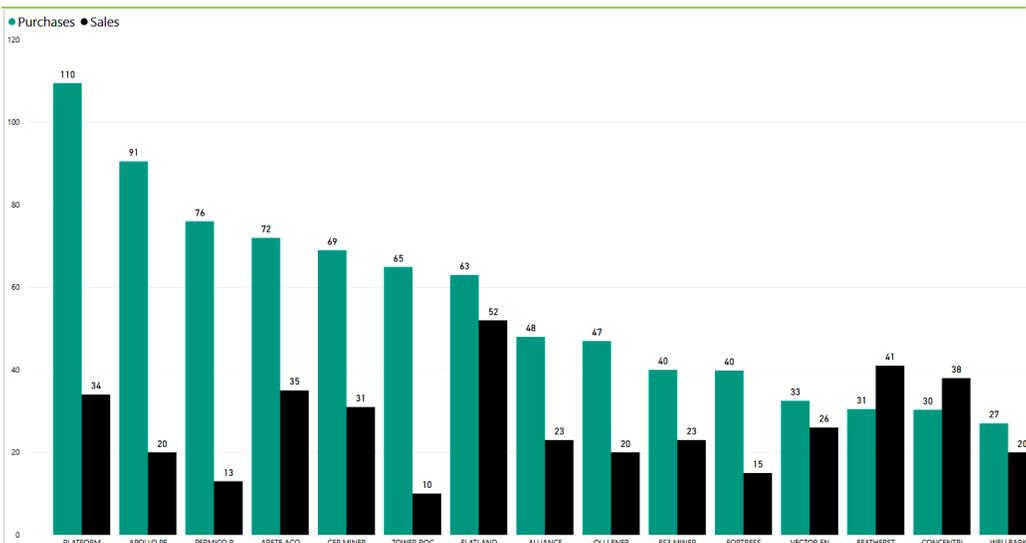


TOP 25 MOST ACTIVE MINERAL BUYERS



The ring shows the biggest buyers, determined by the count of mineral deeds filed in the past year. For comparison, we tracked which mineral buyers also sold minerals. We excluded internal transfers, when possible, to give the most accurate count of mineral sales. This analysis allowed us to narrow down our focus to what we define as mineral brokers; included are both companies that buy minerals with the intent to sell and those that prune their position from time to time. We realize this definition is not all-inclusive and that identified brokers may be end buyers. The top 15 companies that brokered minerals are below, ranked by the number of sales. The first and third biggest mineral buyers in the basin, Platform Energy and Apollo Permian, are also the

TOP 15 COMPANIES THAT BROKERED MINERALS

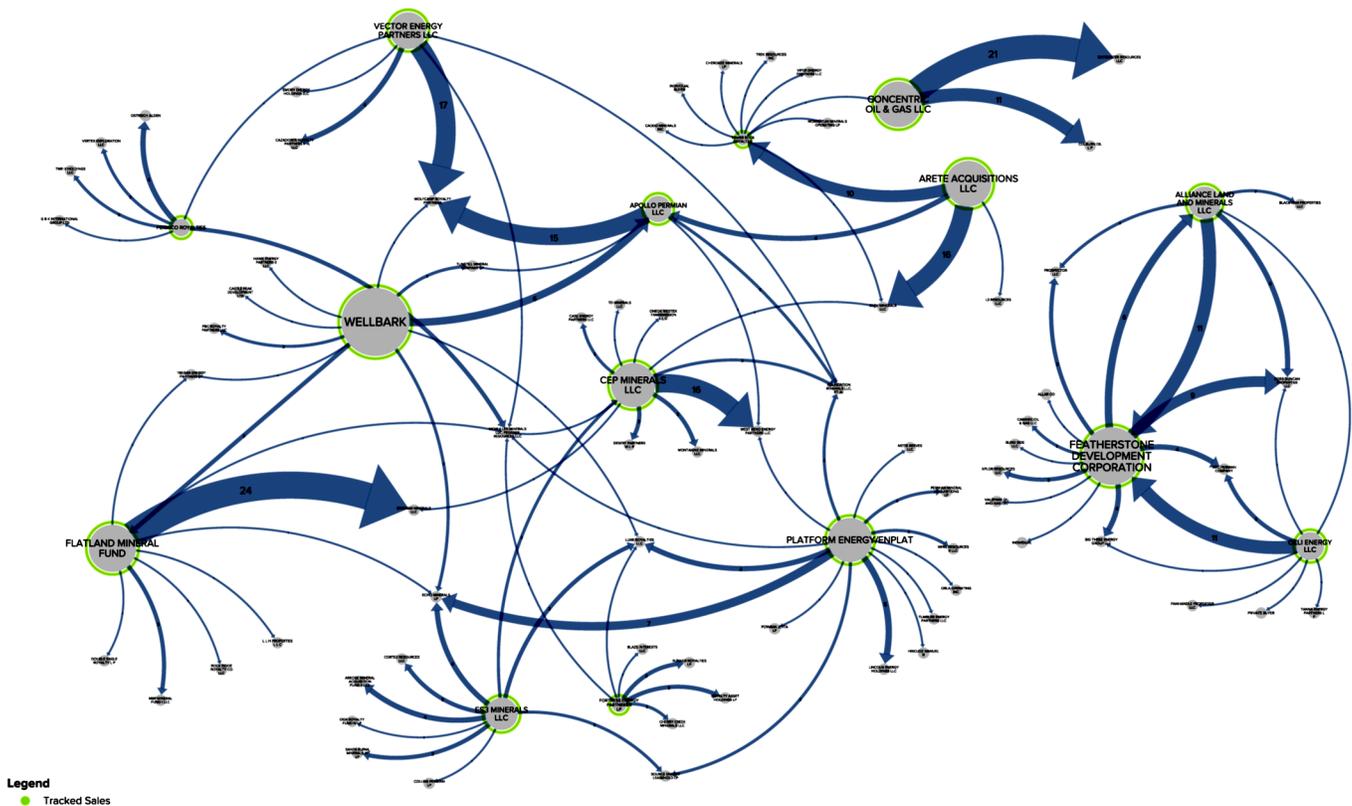


first and second ranked brokers. Platform had 110 mineral purchases and 34 sales and Apollo had 91 purchases and 20 sales. Of course, this data can be examined in much more detail using acreage amounts, property descriptions and the ratio of purchases to sales. [Contact us](#) if you are interested in digging deeper.

TOP 15 COMPANIES THAT BROKERED MINERALS:

It's hard to keep track of who is buying and selling minerals so we created this visual map of the transactions. The network shows the transaction flow from the top 15 companies that brokered minerals as a way to track the frequency of mineral sales and identify relationships. The network shows mineral sales for the top brokers in the basin during the past 12 months. The companies within a green circle are the top 15 brokers and the size of the green circle is representative of the number of times a company sold mineral interests. The thickness of the arrow as well as the number on the arrow is the number of times one company sold to another, indicating a strong relationship between the two entities. If you would like to see this network in more detail [Click Here](#).

Mineral Transaction Flow



When you appraise the mineral transaction flow, interesting relationships and conclusions emerge. The largest broker and also largest mineral buyer overall, Platform Energy, purchased 110 mineral interests and sold 31 in the past year. They sold interests to 14 different companies, evidence of a large network of mineral buyers. The second largest broker, Apollo Permian, had 91 purchases, 10 of which sourced from other brokers. Apollo sold interests a total of 19 times, to 4 companies. Interestingly, some of the biggest mineral buyers purchased a significant portion of their minerals from brokers. Wolfcamp Royalty Partners, ranked 15th, purchased mineral interests 61 times and over half of those interests (33) from brokers. Other mineral buyers, like number two Rock Ridge Royalty, only purchased one time from a top broker. This mineral flow diagram also shows a relationship between Featherstone Development Corporation, Olli Energy, Alliance Land & Minerals and other entities. The transaction flow between these companies, isolated from other buyers, indicate a partnership or collaboration as opposed to brokering of mineral interests. This is backed up by the mineral deeds themselves, repeatedly showing a portion of mineral interests conveyed between these entities.

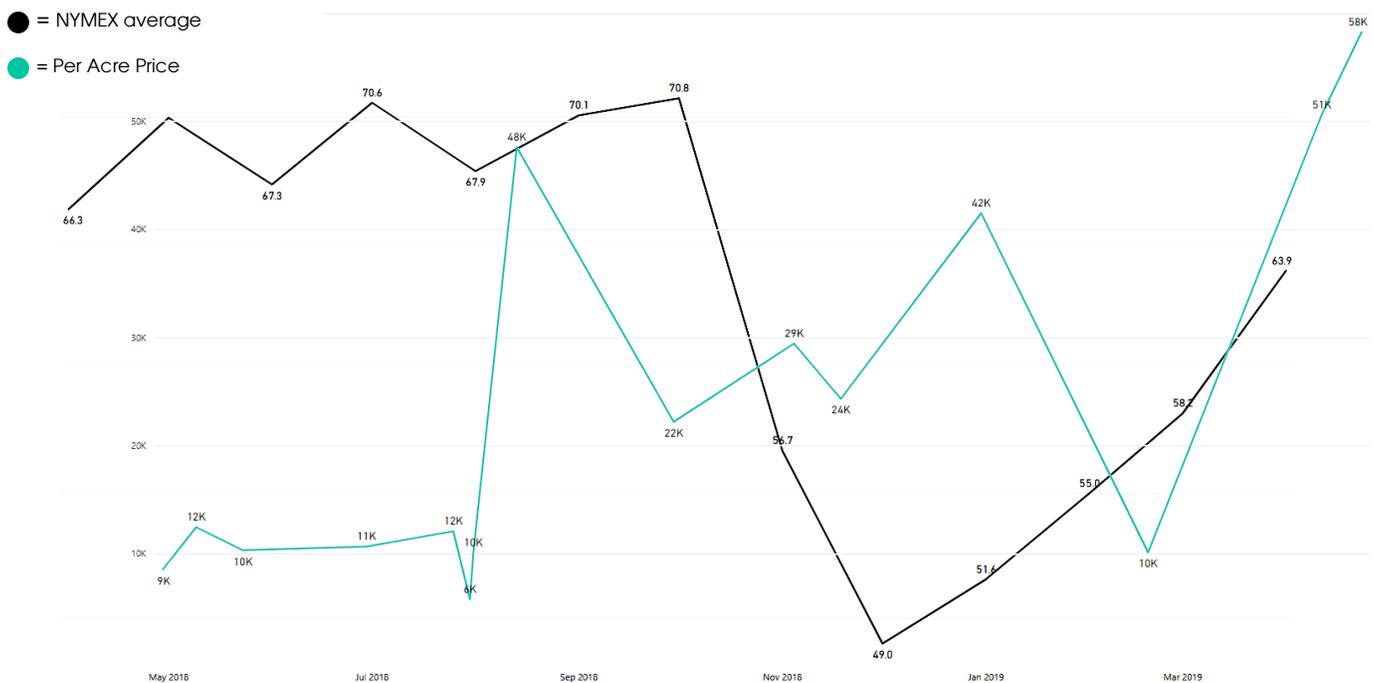
A&D LOOK

TOP 10 BIGGEST E&P TRANSACTIONS



The timeline above shows the Top 10 Biggest Transactions in the past year that included Delaware Basin assets. Half of these transactions included only Delaware Basin assets and the other half were multi-basin packages. The biggest, of course, is the transaction everyone is talking about, Oxy's purchase of Anadarko for an astounding \$57B. Oxy was able to wrest Anadarko from the clutches of Chevron. As far as breakups go, walking away with \$1B seems like a win for Chevron in our book. Callon made multiple acquisitions this year, with the purchase of assets from Cimarex in May 2018 and another acquisition at the end of the year. This catapulted them into the Top 10 with \$658M spent. Resolute sold to Cimarex in November after pressure from activist investor Lion Point Management. Keep reading for more on activists on the next page.

TRANSACTION PRICES

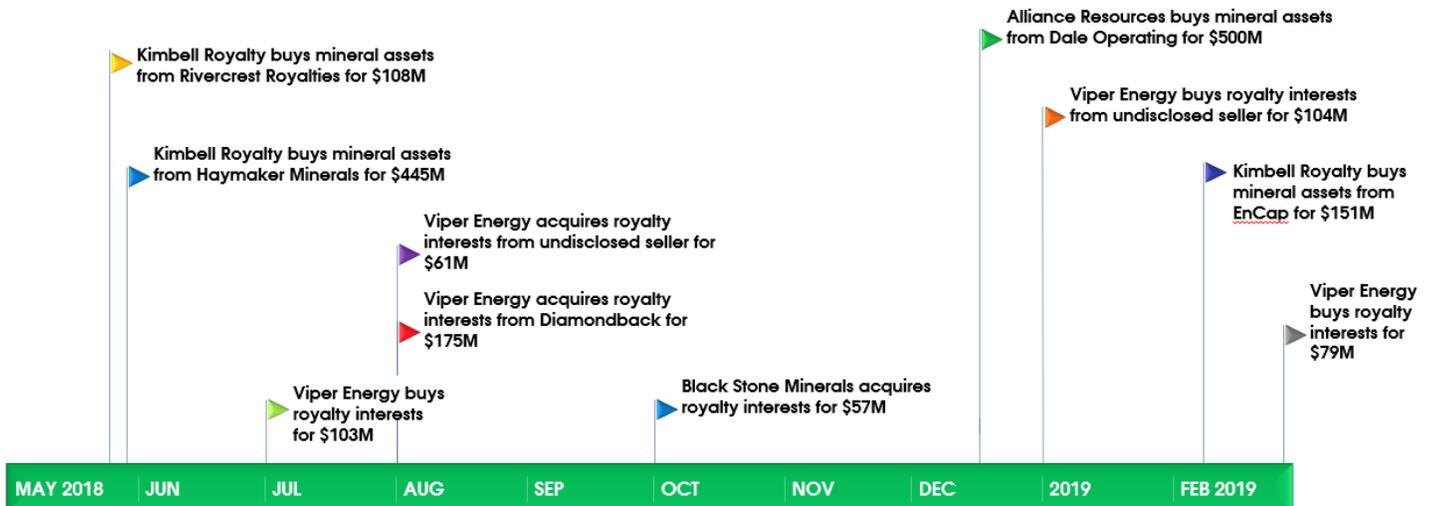


The trend of transaction prices on a per acre scale generally reacted to commodity prices. It is an understatement to say there was a significant range of prices, from \$5,800/acre for non-operated acreage to the record-breaking \$58,000/acre mega deal for Anadarko's multi-basin asset portfolio. Factors in valuations have a large effect, the bottom line is that every acre is not created equal. However, no matter where you're starting from, the good news is that both acreage and oil prices are on the rise.



A&D LOOK

TOP 10 BIGGEST MINERAL TRANSACTIONS



There were several large scale mineral transactions in the Delaware Basin. The green timeline above shows the Top 10 Biggest Mineral Transactions in the past year for mineral or royalty assets. The biggest buyers emerge as Kimbell Royalty Partners and Viper Energy Partners who account for 69% of the total value of the Top 10. Kimbell had three mineral acquisitions in the Top 10 which totaled \$704.5M. Viper also had a big year with five mineral asset purchases in the Top 10, totaling \$552M. The success of the Brigham Minerals IPO last month is raising questions about which other mineral companies have plans for public offerings.

FUTURE FORECAST

What's next? The start of 2019 was relatively flat in the A&D sector, but with commodity prices on the rise, we expect things to get moving. Here are some other possible sales to keep on your radar:

- EnCore Permian Holdings is working with TenOaks Energy Advisors on the potential sale of their Permian Basin assets. [Read more](#)
- Black Mountain Oil and Gas II is purportedly exploring a potential sale of their southern Delaware assets covering approximately 16,000 net acres.

2019 is being called the "Year of the Activist Investor" by some. This antagonistic trend of activist shareholders pushing management to sell underperforming assets and cut costs to increase profitability is in line with Wall Street's call for shale companies to be cash flow positive. Here are a few stories that we will be keeping our eye on:

- Activist investor Fir Tree is pushing for a sale of Halcon's assets and rumored to be the reason for Floyd Wilson's sudden departure from the company. Halcon said this month they are currently evaluating strategic alternatives, including a possible sale or merger. [Read more](#)
- Activist investor Lion Point Master LP (you may recall them from the Resolute sale on previous page), is calling for the sale or merger of Carrizo Oil & Gas. [Read more](#)
- PDC Energy is dealing with investor activism from Kimmeridge Energy Management who is demanding lower executive compensation, new board members and overall cost cutting. [Read more](#)



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We created the Pulse to be the perfect union and natural product of our love for data and staying informed about what's happening in the major oil and gas basins in the United States. The Pulse is a monthly report, focused on a different basin in each edition. If there is somewhere you want to know more about, just let us know.

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