



 **RANGE RESOURCES®**

## Range Resources – Appalachia, LLC Drilling

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FEBRUARY 10<sup>TH</sup>, 2022

**JOSHUA DOAK**  
DIRECTOR OF DRILLING

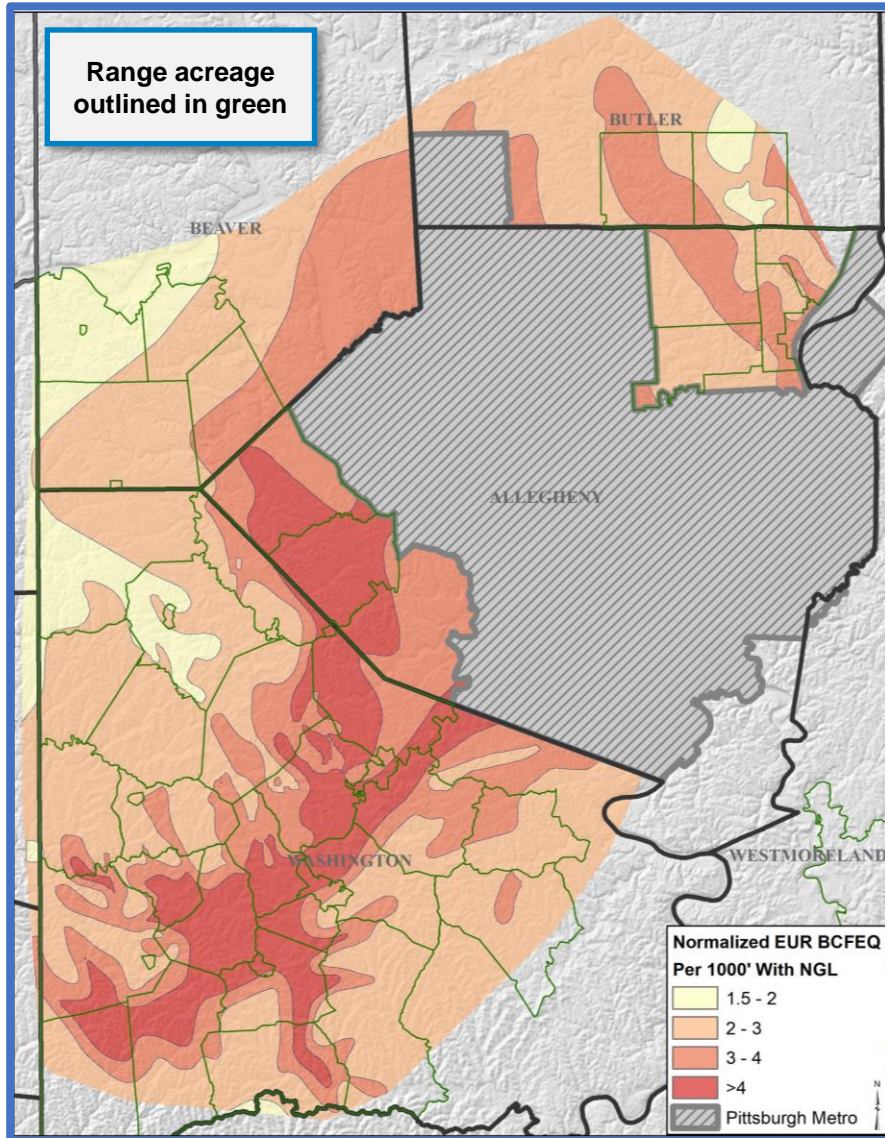
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# Range – Who We Are



- **Top 10 U.S. Producer of Natural Gas & NGLs**
- **Top NGL Exporter Among Independent E&Ps**
- **Pioneered Marcellus Shale in 2004**
- **Longest Core Inventory Life in Appalachia**
- **Upstream Leader in Environmental Practices**

# Range Resources in Southwest Appalachia



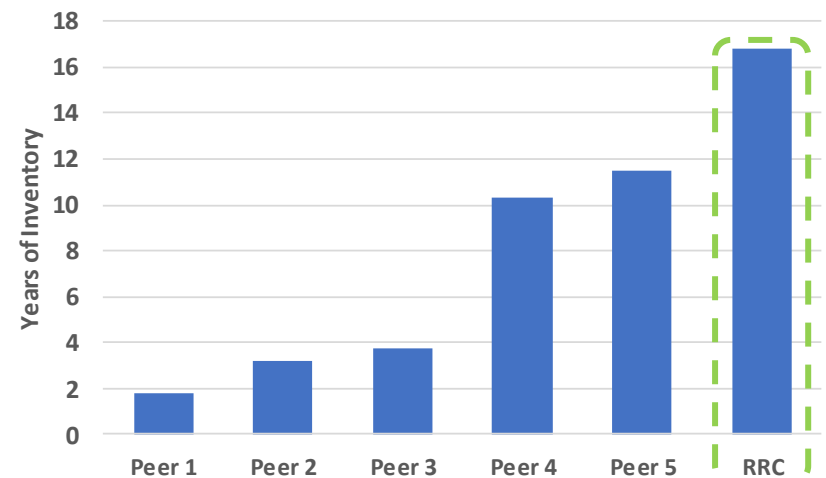
## Significant Marcellus Inventory<sup>(a)</sup>

- ~460,000 Net Acres in Southwest Pennsylvania
- ~3,100 Undrilled Marcellus Wells
  - 2,600 liquids rich well inventory
  - 500 dry gas well inventory

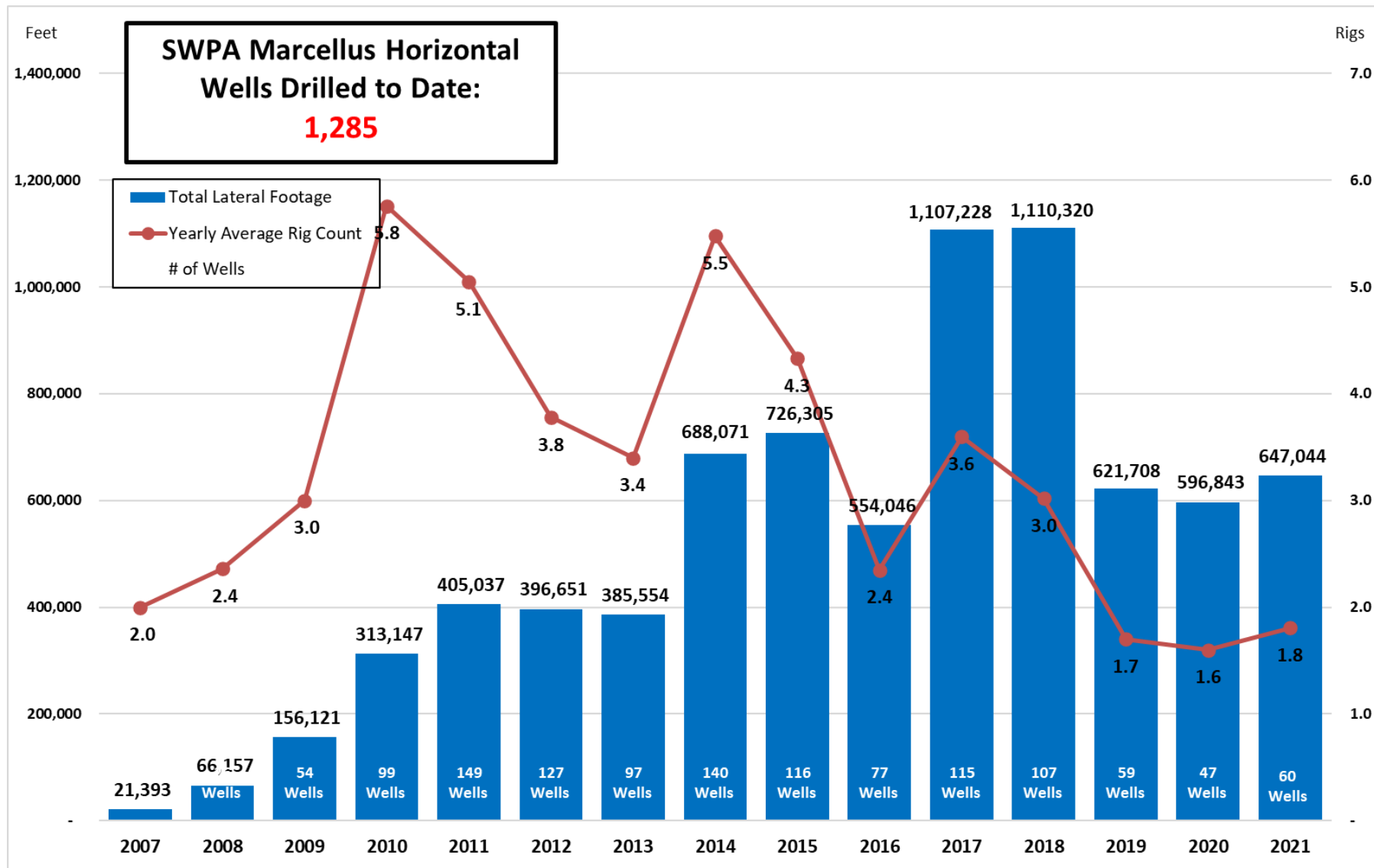
## Repeatable Capital Efficiency

- Range estimates ~2,000 undrilled Marcellus locations remain with EURs greater than 2.0 Bcfe per 1,000 foot of lateral
- In addition, over 1,000 down-spaced Marcellus locations
- Additional potential from Utica & Upper Devonian

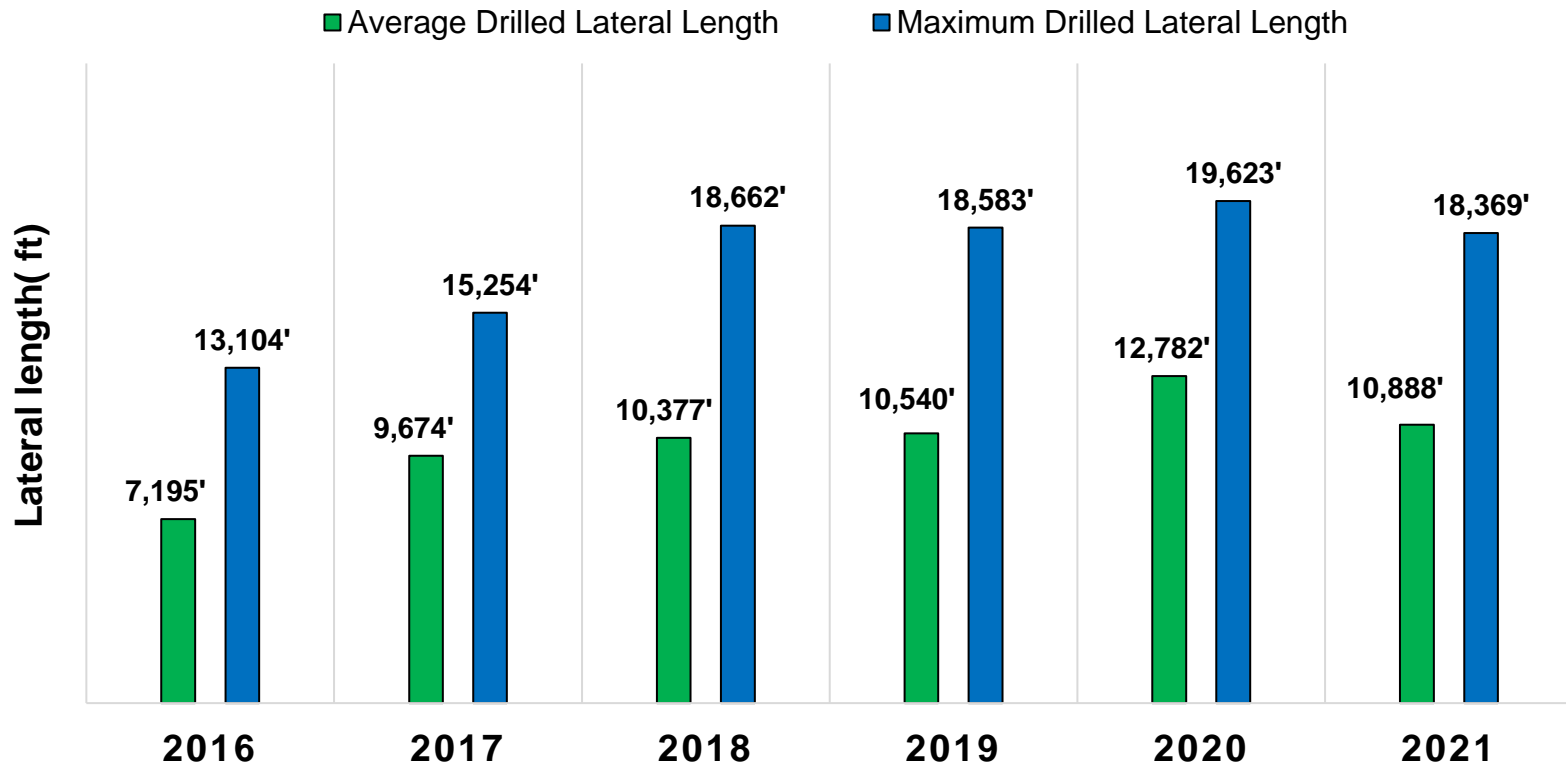
## Longest Core Inventory Life in Appalachia<sup>(b)</sup>



# 2007 – 2021 Lateral Footage & Rig/Well Count (SWPA)



# Range's Long Lateral Drilling Success Continuing Year Over Year



- Consistent and repeatable performance on long laterals
- Q4 daily lateral footage 14% faster than Q3
- 9 laterals drilled over 17,000' in 2021
- Fleet performance numbers to date
  - 51 laterals drilled over 15,000'

# Drilling Sustainability Efforts

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## Patterson Drilling Rig Fleet Improving Drilling Sustainability

- 92% of horizontals powered by dual fuel in 2021
- Total of 596,000 gallons of diesel substituted in 2021

## Continuous Improvement

- Optimizing diesel/natural gas blending kits with Patterson and Caterpillar
- Drilling team investigating additional power generation options
  - Natural gas turbine electric power generation for horizontal drilling
  - Natural gas auxiliary power generation for top hole operation
  - Dual fuel and turbine power for top hole air drilling operations
  - Existing AC power tie in for auxiliary equipment

# Range Resources 2022 Drilling Plans

## 2022 Drilling Plans

- Top hole & horizontal rigs
- Varying lateral lengths throughout the field
- Emphasis on efficiency improvements
- Monitoring of KPI's and constant communication with rigs on performance

	2021	2022
<b>Top Hole Rigs</b>	<b>1</b>	<b>1.5</b>
<b>Horizontal Rigs</b>	<b>2</b>	<b>2.5</b>
<b>Average Lateral Length</b>	<b>10,900'</b>	<b>~10,500'</b>

**Thank you**