

NORTH CAROLINA OIL AND GAS COMMISSION MEETING MAY 14TH 2019

Follow-up to State Comparison of Oil and Gas Programs February 2019

Which was presented by NC DEQ Staff in February

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STATE COMPARISON OF OIL AND GAS PROGRAMS

FEBRUARY 7 2019

- Pits, Tanks, Set-backs and Pooling
- States Compared
 - Tennessee
 - West Virginia
 - Arkansas
 - Pennsylvania
 - Ohio
 - New York
 - North Carolina

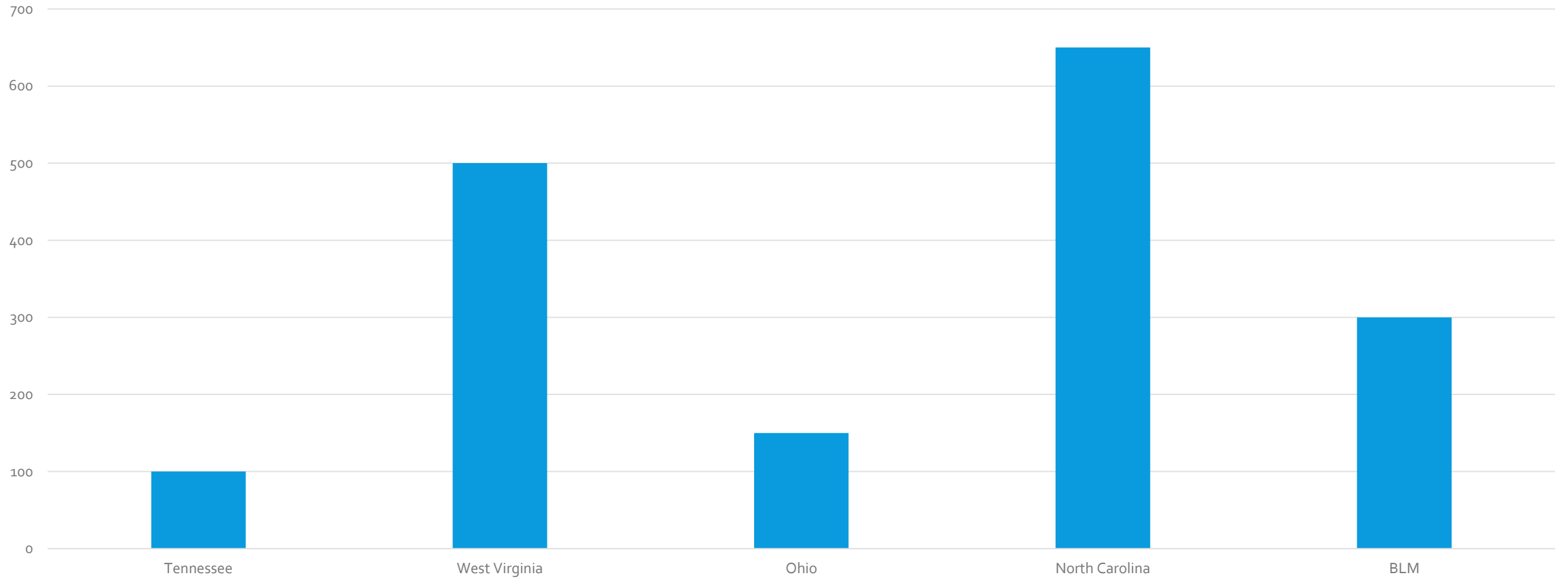
MEASURABLES

- Pits
 - Setbacks
 - Freeboard
 - Berm
 - Horizontal to Vertical Ratio
 - Reclamation Time
- Liners
 - Thickness
- Well Location Setbacks
 - Unit Boundary
 - Dwelling
 - Source of Water
 - Other O&G Wells

ADVANTAGE OF USING MEASURABLES

- Quantify
 - State in numbers
- Precision
 - Clear, indisputable
- Charts and Graphs
 - Allows for quick visual comparisons
 - Meeting, exceeding or lagging behind other state standards
- Ease of comparing more states
 - States and Agencies Added
 - North Dakota
 - Colorado
 - Wyoming
 - New Mexico
 - BLM

Setback from dwelling (ft)



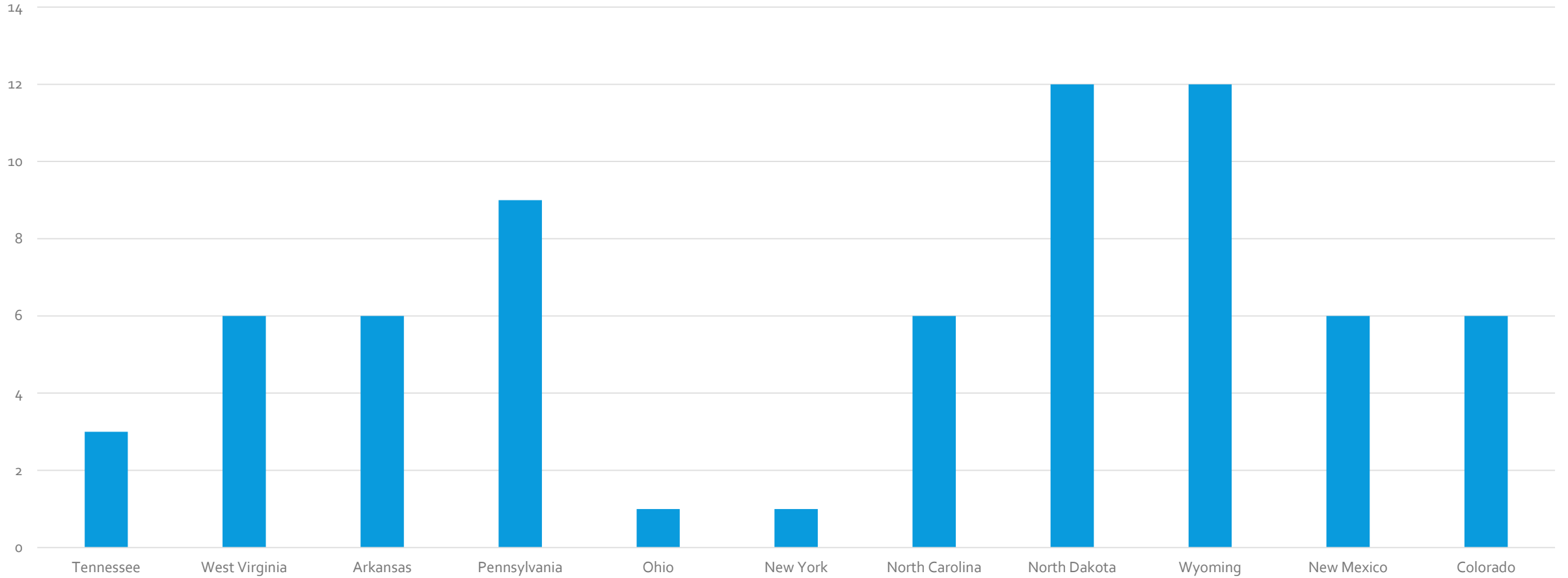
PITS
Setbacks

Setback from Public Water Source (ft)



PITS
Setbacks

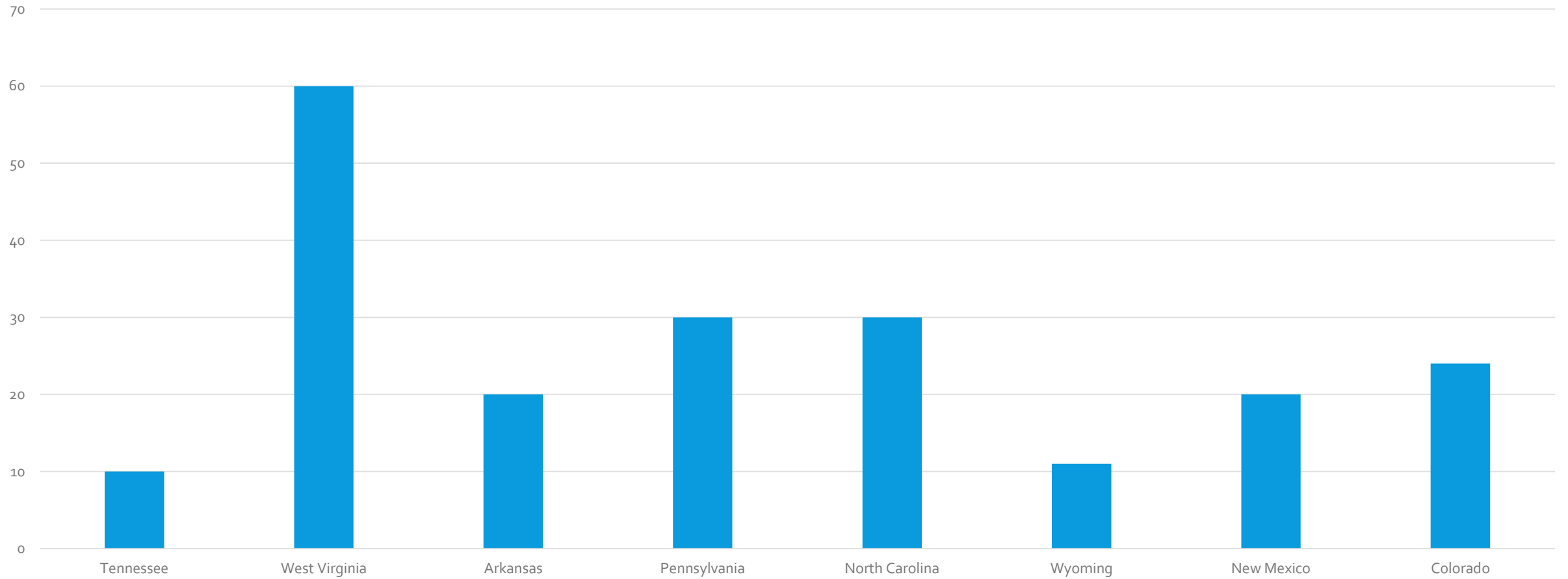
Reclamation (months)



PITS

Reclamation Time

Liner Thickness (mm)



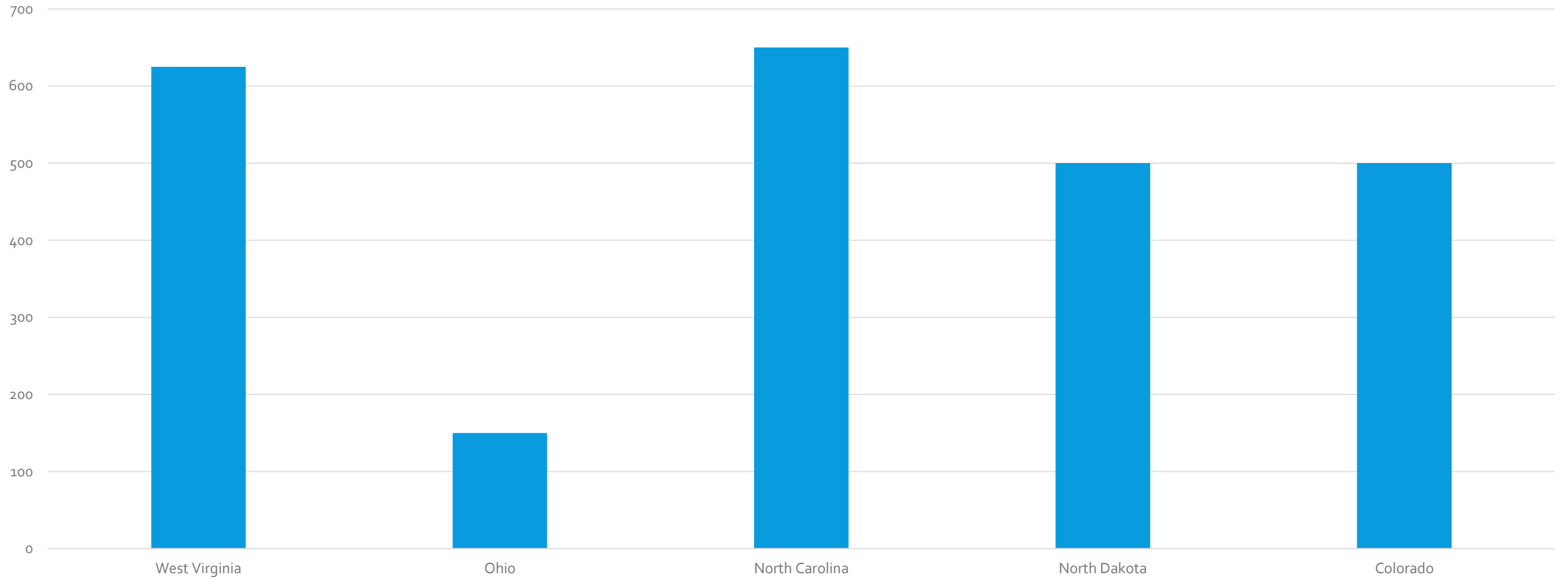
PITS

Liner Thickness

WELL LOCATION SETBACKS

- Property Line
- Unit Boundary
- Dwelling
- School
- Body of Water
- Water Well
- Other Wells
- Roads

Dwelling Unit (ft)

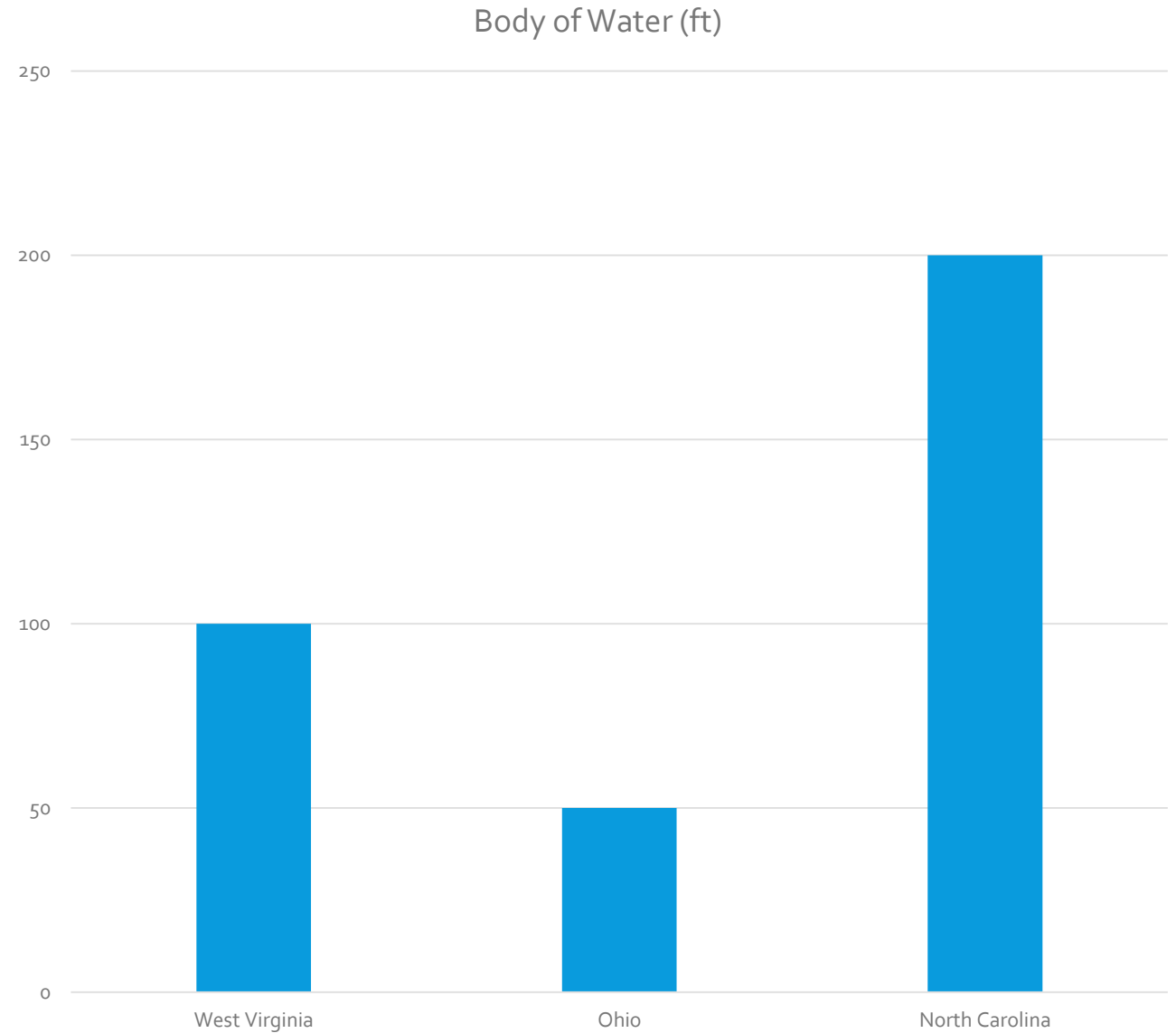


WELL LOCATION SETBACKS

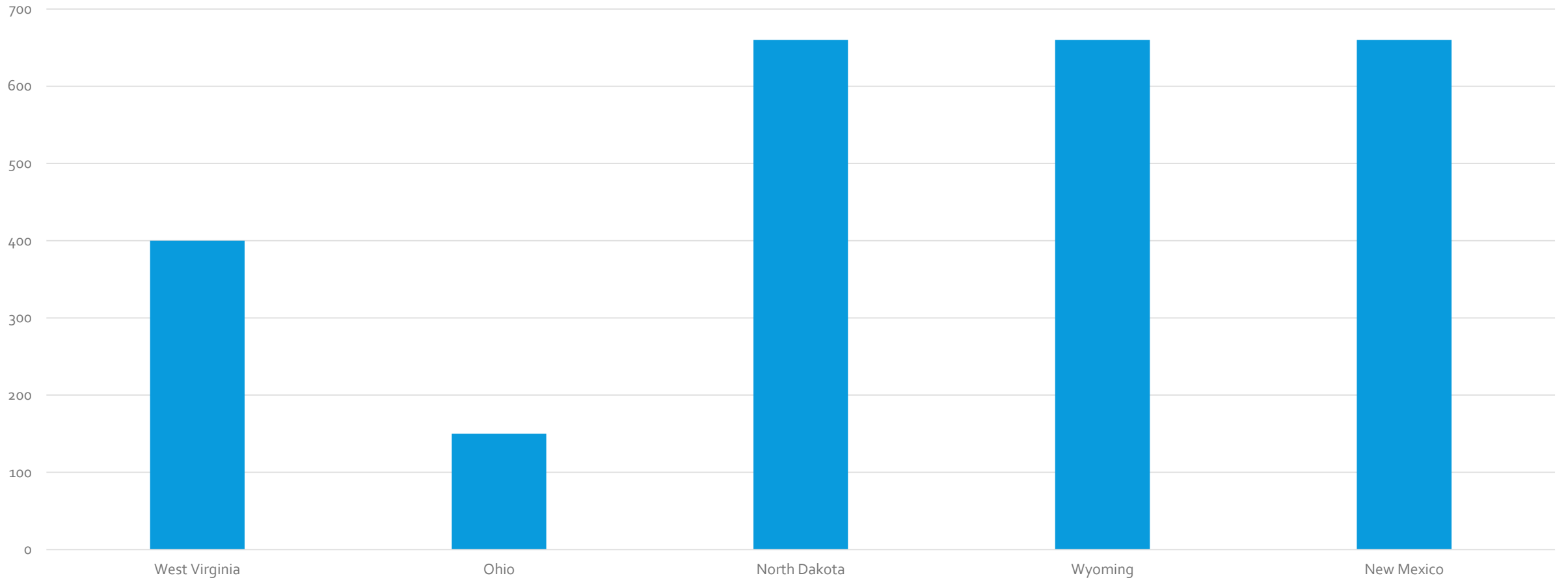
Dwelling Unit

WELL LOCATION SETBACKS

- **Body of Water**
Includes perennial stream, river, watercourse, pond, lake, wetlands, and artificial body of water.



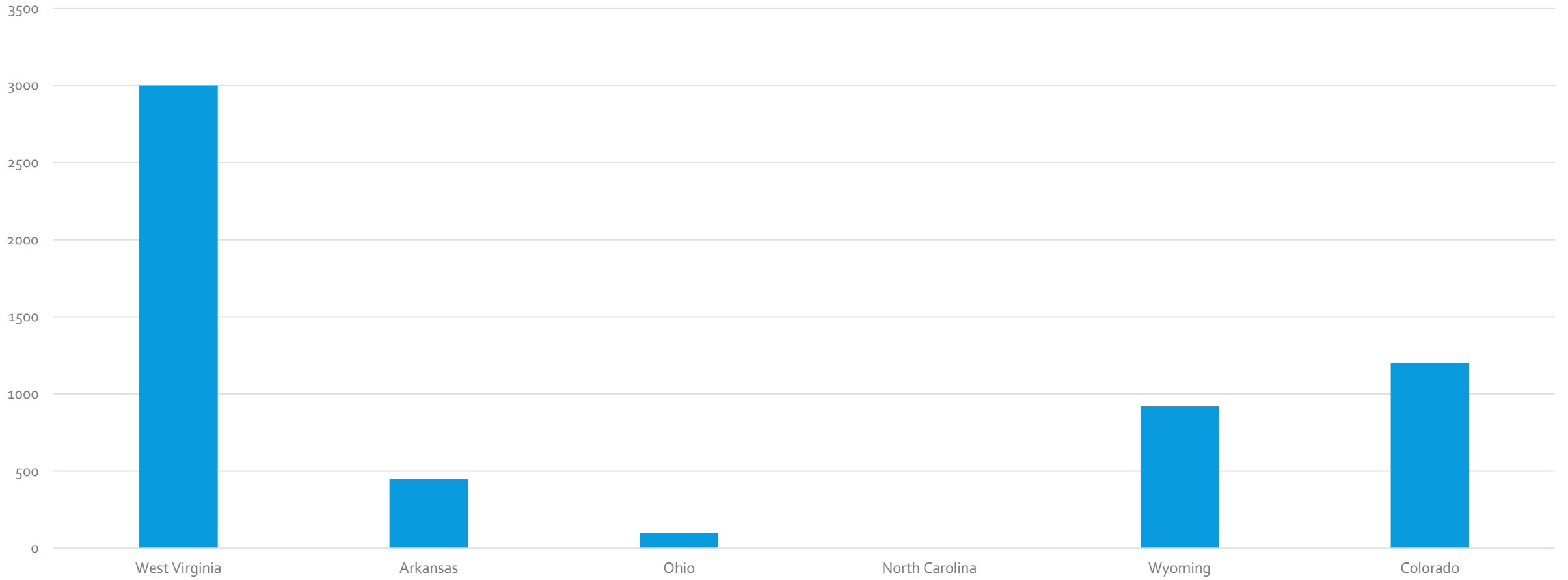
Property Line (ft)



WELL LOCATION SETBACKS

Property Line

Other wells (ft)



WELL LOCATION SETBACKS

Other Wells

SUMMARY

- Regulations defined by numerical values lend themselves to chart comparisons
- Based on this limited, first pass study, NC meets or exceeds requirements
- A complete data set is the goal
- More States will be added for a more complete comparison
- Uniformity in the definitions of the categories is needed