

Commission Hearing January 30, 2017

Competing spacing applications arising under Rule 318A & traditional spacing and drilling units



COLORADO

**Oil & Gas Conservation
Commission**

Department of Natural Resources

**Matthew J. Lepore
Director**

Rule 318A: GWA Special Well Location, Spacing and Unit Designation Rule

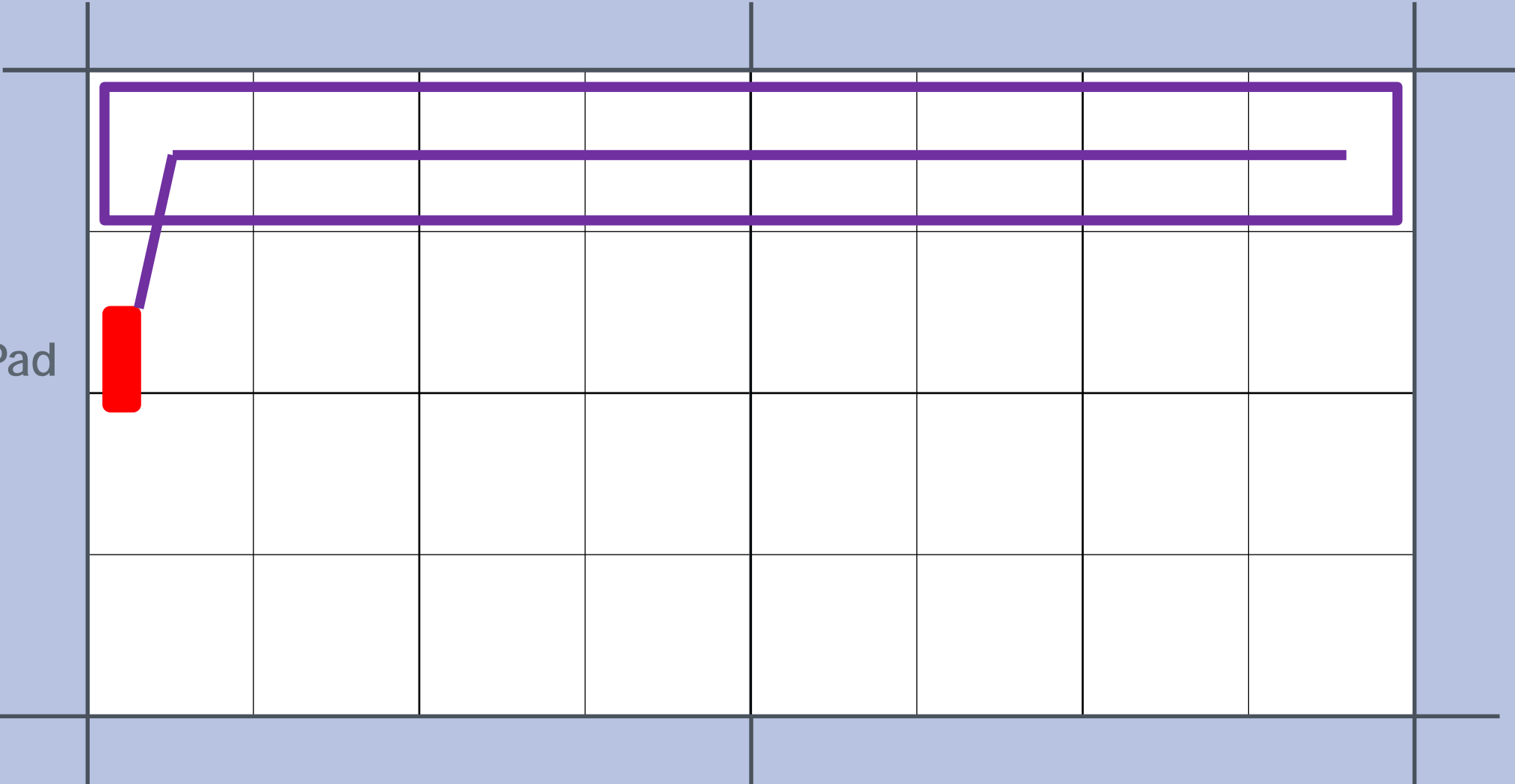
- ✧ 318A.a.(4): Unit designations.
 - D: Horizontal GWA Well.
 - ⊕ Wellbore spacing unit is comprised of all quarter-quarter sections through which the lateral portion of the wellbore passes AND all adjoining quarter-quarter sections less than 460' from the completed intervals of the wellbore.
 - ⊕ Wellbore spacing units may overlap one another.

Rule 318A: GWA Special Well Location, Spacing and Unit Designation Rule

- ✧ 318A.e.(5): Notice and hearing procedures.
- ✧ Streamlined notice & /approval
 - Operator provides notice to all Owners in proposed wellbore spacing unit.
 - Owners have 30 days to object on limited grounds: **Waste; correlative rights; applicant does not own all mineral rights.**
 - Absent objection, Director may approve wellbore spacing unit.
 - Objection may lead to Comm'n hearing.

WBSU Illustrations

HZ Wellbore Spacing Units

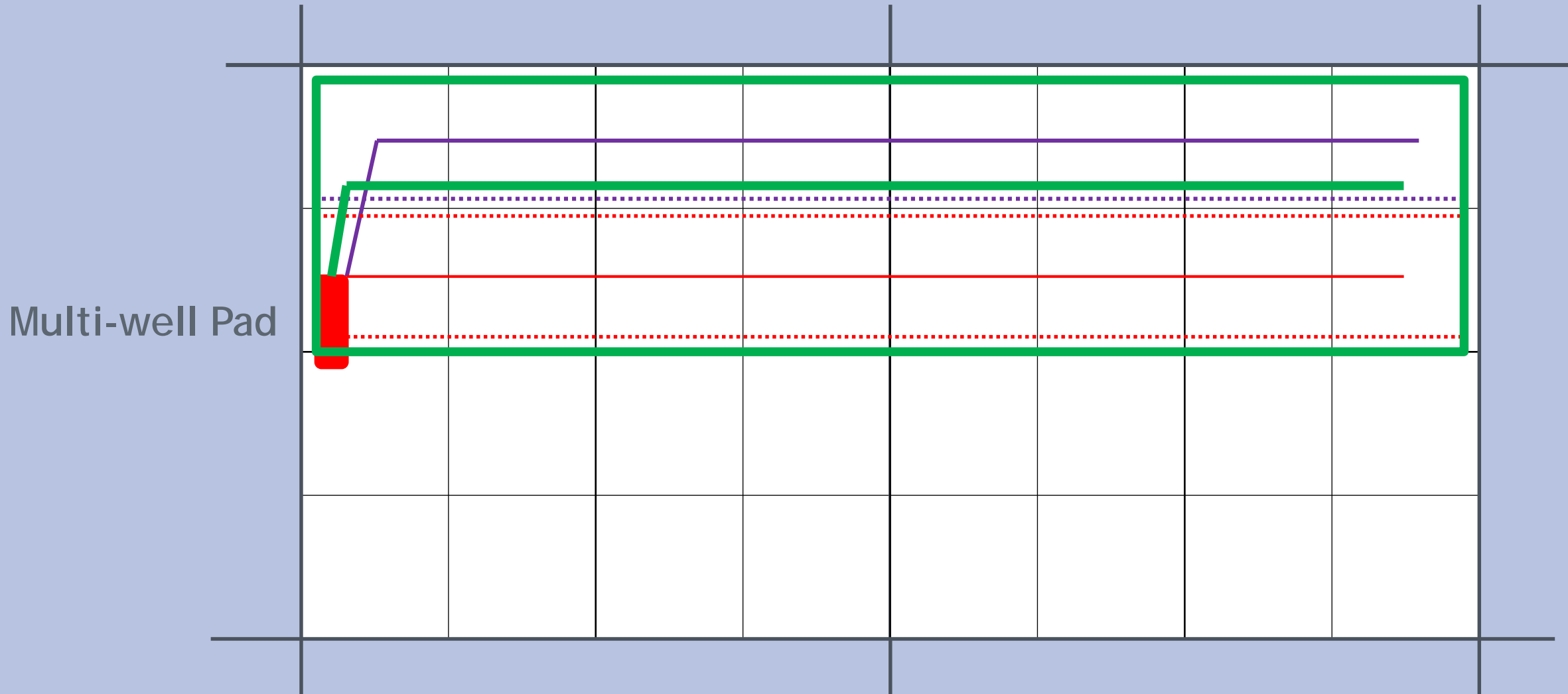


Multi-well Pad



HZ Wellbore in 320 - acre Wellbore Spacing Unit

HZ Wellbore Spacing Units



Multi-well Pad



HZ Wellbore in 320 - acre Wellbore Spacing Unit



HZ Wellbore in 320 - acre Wellbore Spacing Unit



HZ Wellbore in 640 - acre HZ Wellbore Spacing Unit

Section 34-60-116, C.R.S. Drilling units - pooling interests.

- ✧ 116(1): To prevent or to assist in preventing waste, to avoid the drilling of unnecessary wells, or to protect correlative rights, the commission . . . has the power to establish drilling units of specified and approximately uniform size and shape covering any pool.

Issue Statement:

- ✧ Recent increase in percent of contested spacing applications, whether WBSUs under Rule 318A or traditional DSUs.
- ✧ Most protests /objections eventually resolved between operators;
 - Significant staff time invested in pre-hearing procedures as soon as protests / objections are filed.
- ✧ Increasing % of protests / objections are not being resolved by operators, leading to contested Commission hearing.
 - Significantly more staff time expended as these matters linger.

Issue Statement:

- ✧ Typically, each of the competing applications meet applicable statutory and regulatory requirements:
 - Correlative rights protected by applicable setback & pooling requirements
 - Unless substantial mineral acreage will be stranded, substantial waste is unlikely
 - “Unnecessary wells” typically precluded by market forces
 - Drilling unit sizes vary within a rational range.

Issue Statement:

- ✧ Faced with competing spacing applications that satisfy existing, statutory and regulatory requirements, Staff:
 - Historically has used “first-in-time” as the tie-breaker.
 - Although a long-standing practice, first-in-time is not a statutory or regulatory requirement, nor is there a written policy supporting the practice.

Issue Statement:

- ✧ Objectors / protestants assert various grounds to support their later-filed applications:
 - Wellbore orientation
 - ⊕ Incrementally higher estimated EUR “prevents waste”
 - ⊕ Precluding preferred orientation interferes with correlative rights
 - Wellbore length
 - ⊕ Longer laterals reduce total number of wells, which reduces capital expenditures, improves ROI
 - ⊕ Fewer total wells reduces total surface disturbance
 - Planned use of pipelines to reduce truck traffic

Issue Statement:

- ✧ Objectors / protestants assert various grounds their later-filed application is superior:
 - Planned “master development:”
 - ⊕ integrated infrastructure network to reduce various impacts
 - Timing of development
 - ⊕ Ready to drill now or waiting until later?
 - Dilution of mineral interest within proposed unit
 - ⊕ Preference to develop one’s own leasehold

Issue Statement:

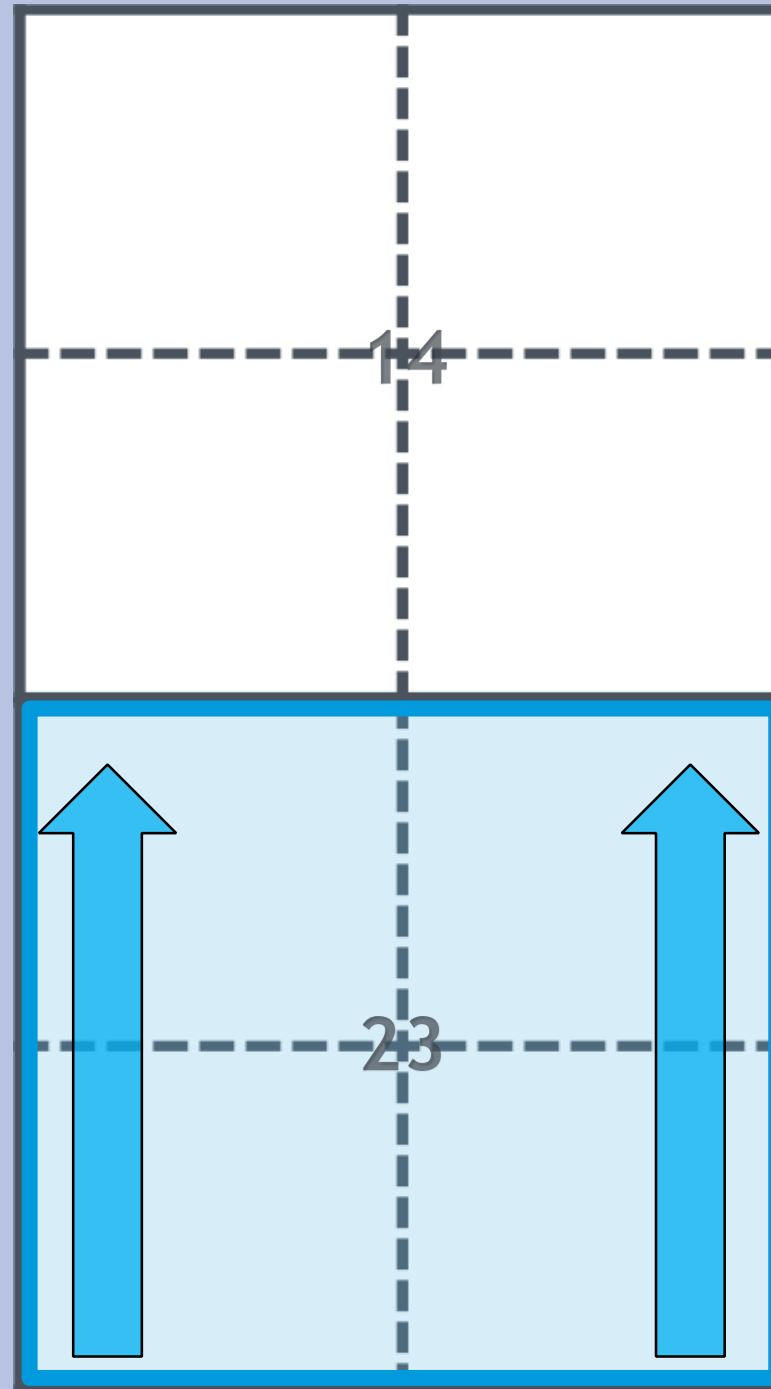
- ✧ Staff seeks direction from the Commission regarding factors other than first-in-time, if any, the Commission would consider relevant when evaluating competing spacing applications.
- ✧ Staff would elicit additional relevant information if necessary from applicants in protested spacing matters.
- ✧ Staff does not believe rulemaking is necessary at this time; if operators are unwilling to provide relevant information, may need to revisit.

Recent examples of competing
spacing applications.

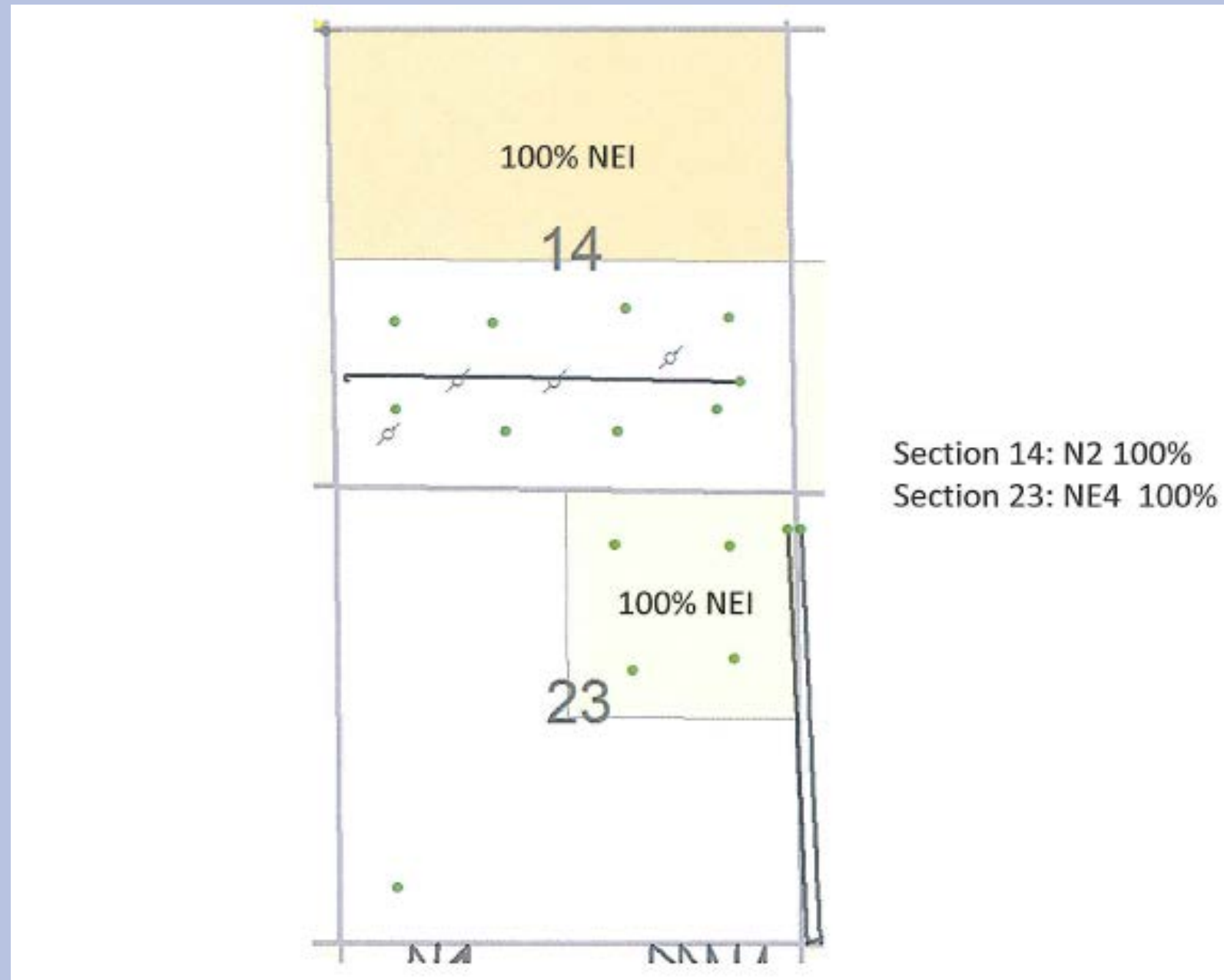
Spacing Unit Size / Lateral Length



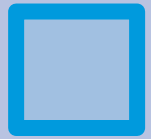
Applicant's
Application



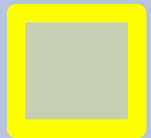
Spacing Unit Size / Lateral Length



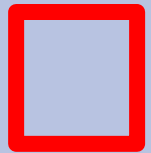
Spacing Unit Size / Lateral Length



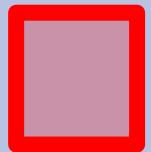
Applicant's Application



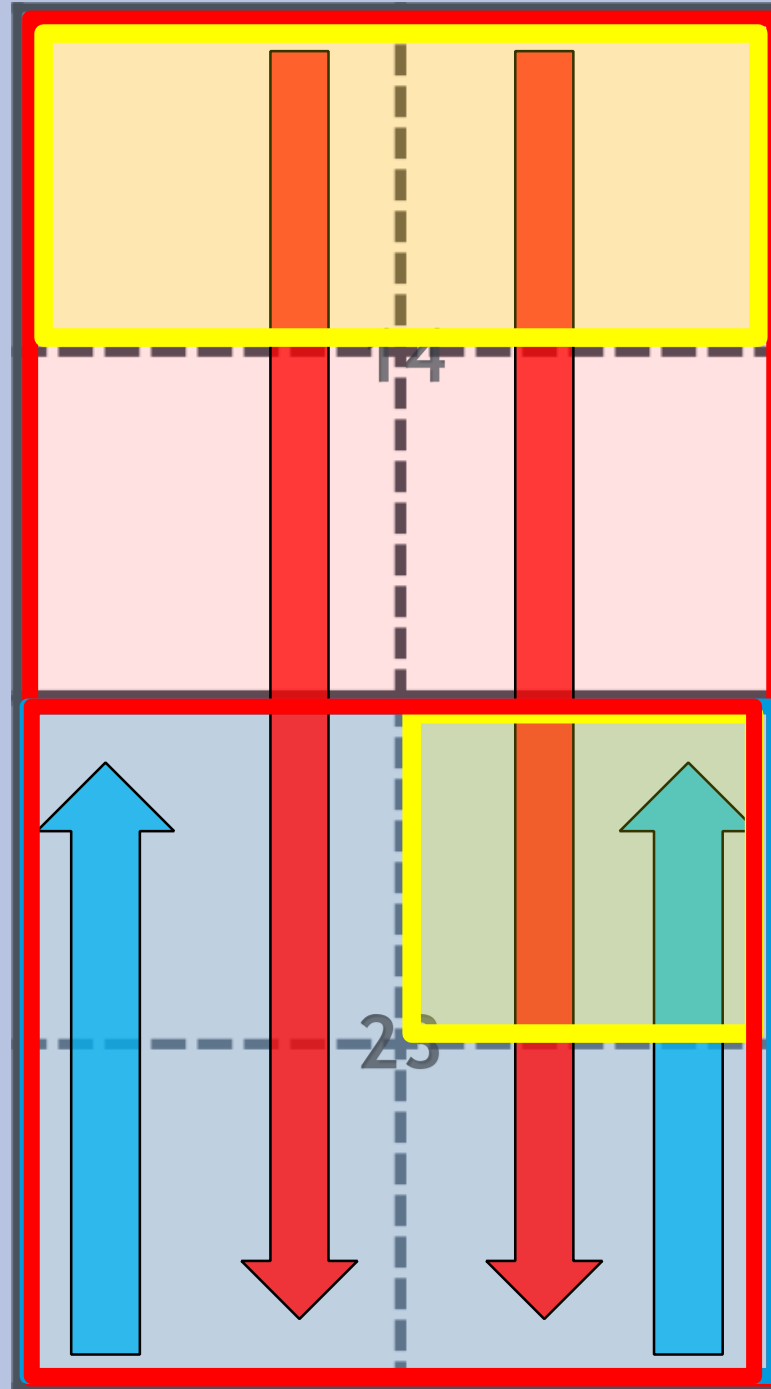
Protestant's Leasehold



Protestant's Initial Protest

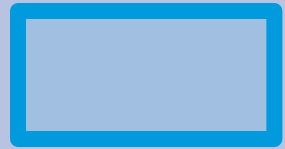


Protestant's Application



Diluted Working Interests / Master Plans

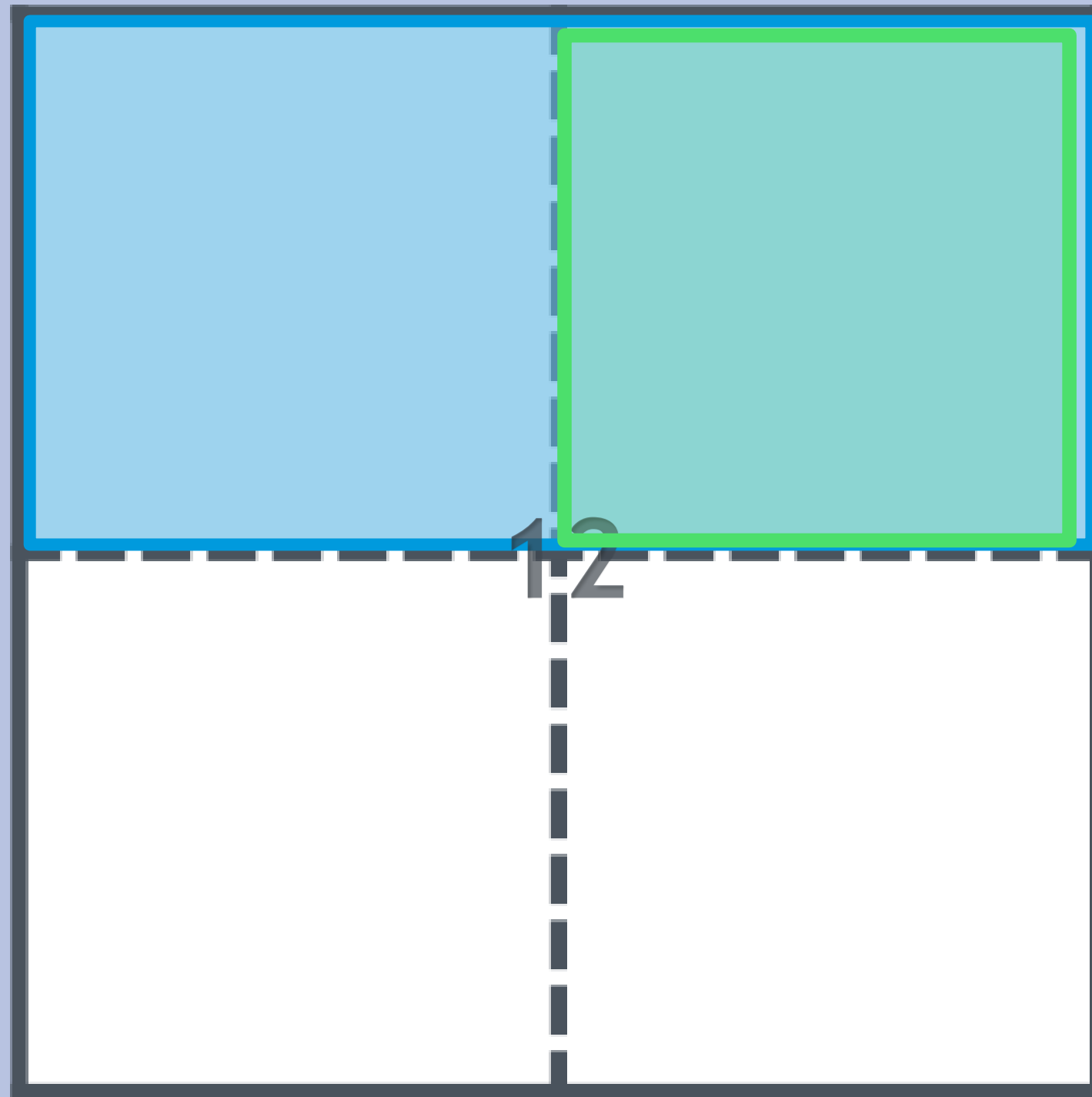
Diluted Working Interests / Master Plans



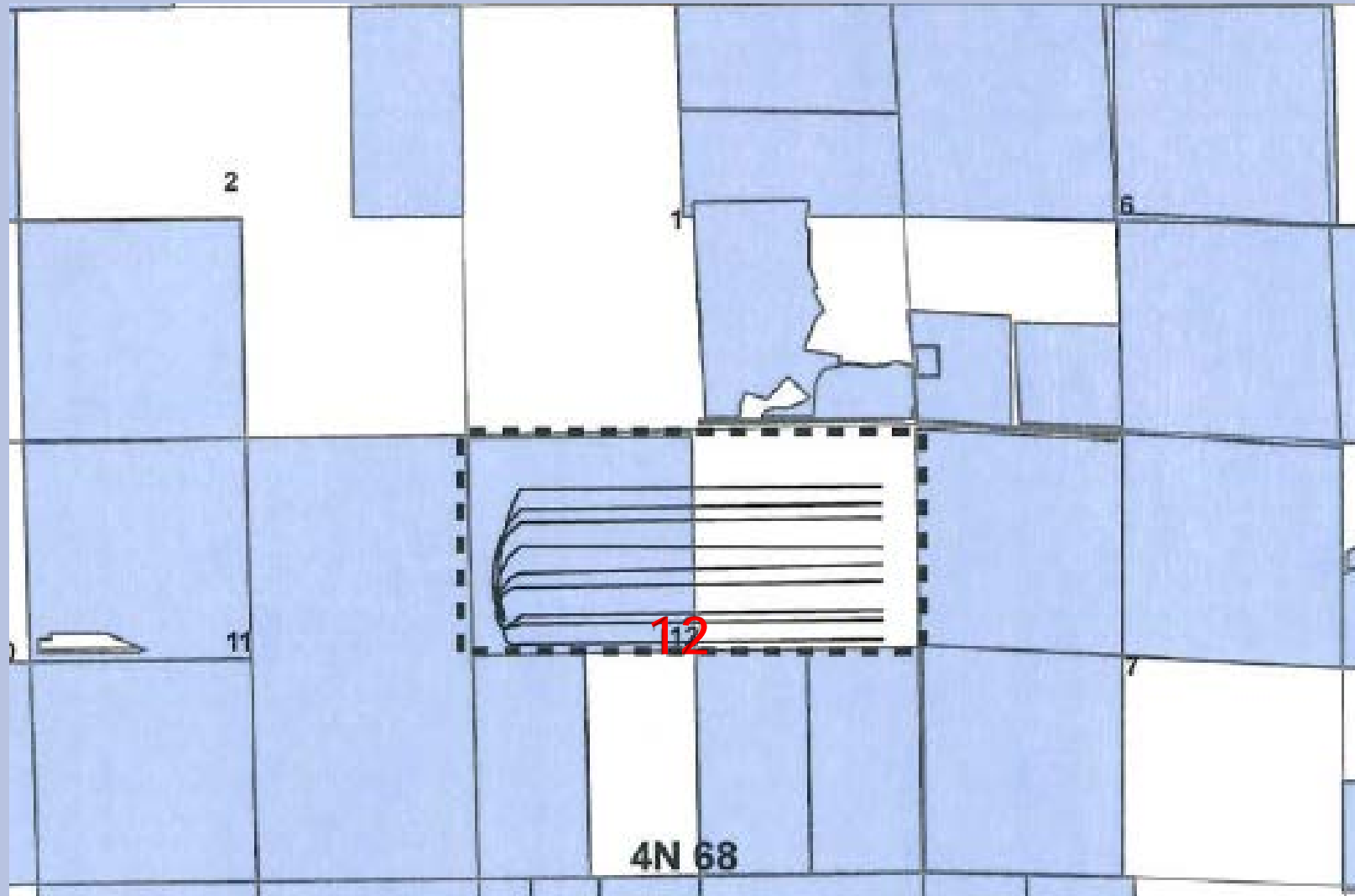
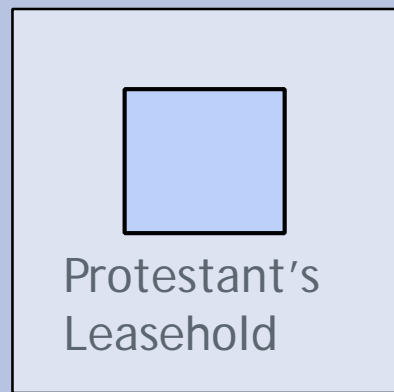
Applicant's
Application



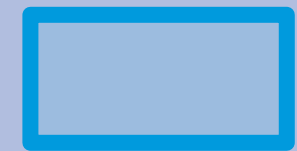
Applicant's
Leasehold



Diluted Working Interests / Master Plans



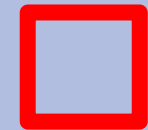
Diluted Working Interests / Master Plans



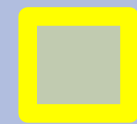
Applicant's Application



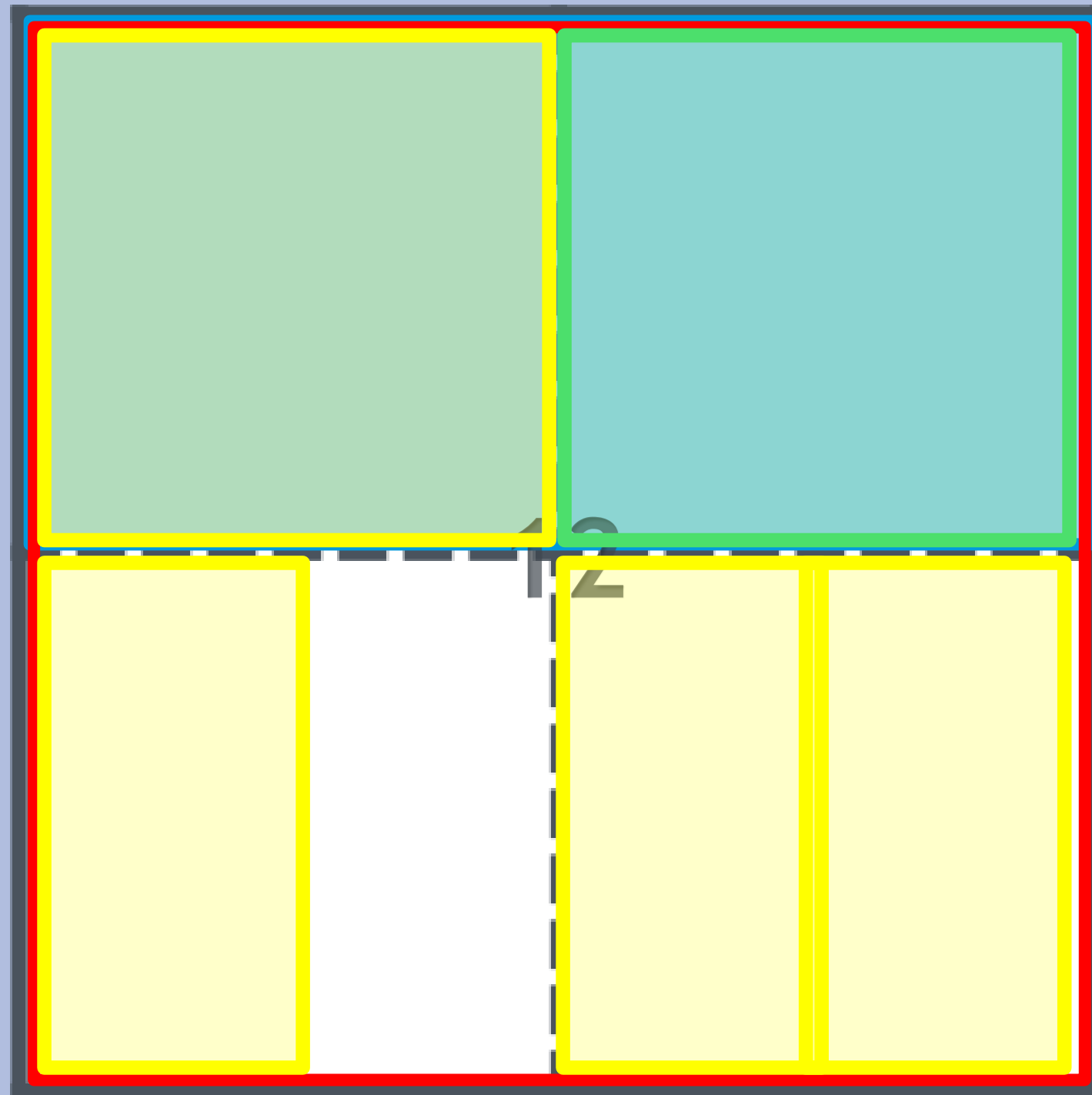
Applicant's "Substantial" Leasehold



Protestant's Protest




Protestant's Leasehold (100% in NW 1/4)

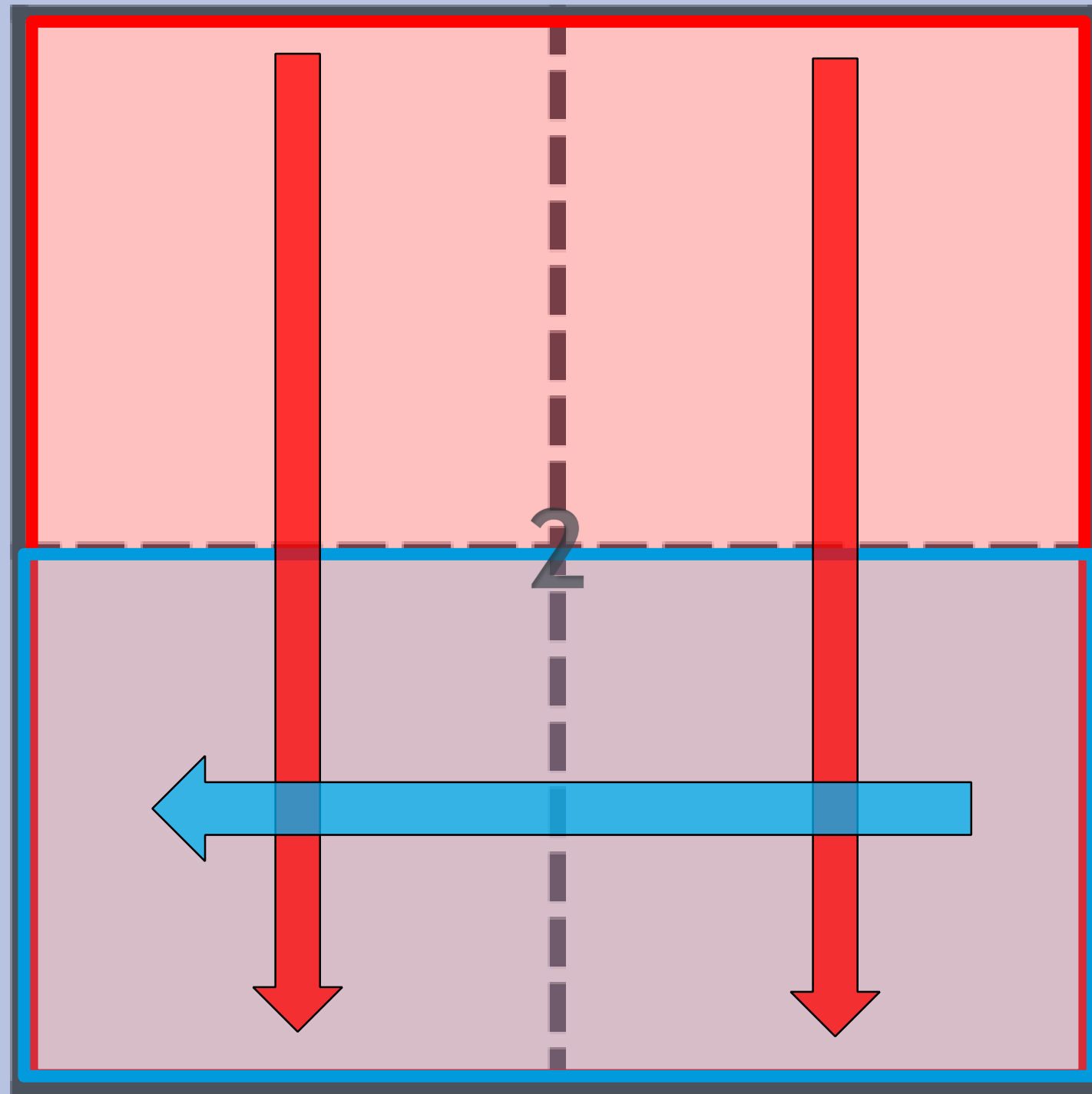


Spacing Unit Size / Wellbore Orientation

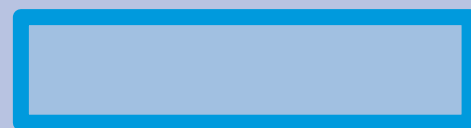
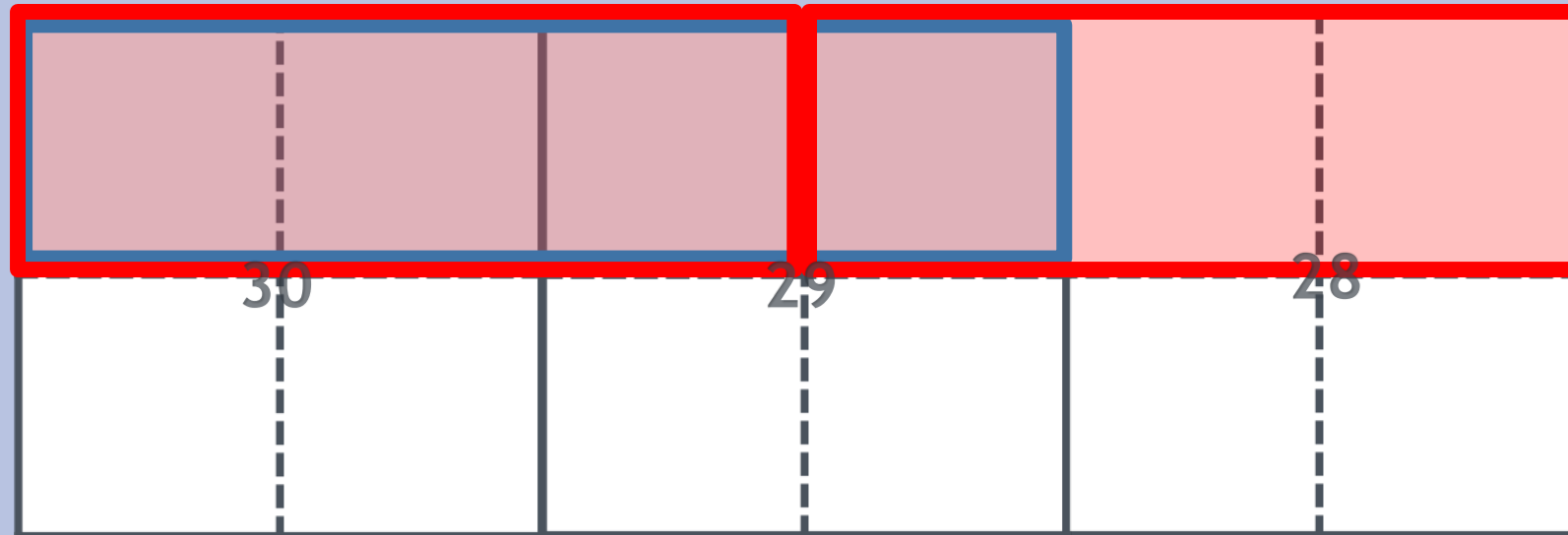
Spacing Unit Size / Wellbore Orientation


Applicant's Application


Protestant's Application



Overlapping Spacing Units



Applicants
Application



Protestant's
Applications

Potential additional factors for evaluating competing spacing applications for HZ development in GWA

- ✧ Preference for spacing unit size or wellbore length?
 - Minimum spacing unit size?
 - Preference for longer wellbore laterals?
- ✧ Parties' respective mineral ownership (leasehold) within each proposed drilling unit?
 - Include consent of other WIOs (JOA)?

Potential additional factors for evaluating competing spacing applications for HZ development in GWA

- ✧ Preference for larger, comprehensive development plans?
 - Rule 216 Comprehensive Dev. Plans
 - Geographic area plans
 - Coordination with / approval of local government
- ✧ Preference for approving spacing units when applicant has definitive plans to commence development soon?
 - How to ascertain development plans?

Potential additional factors for evaluating competing spacing applications for HZ development in GWA

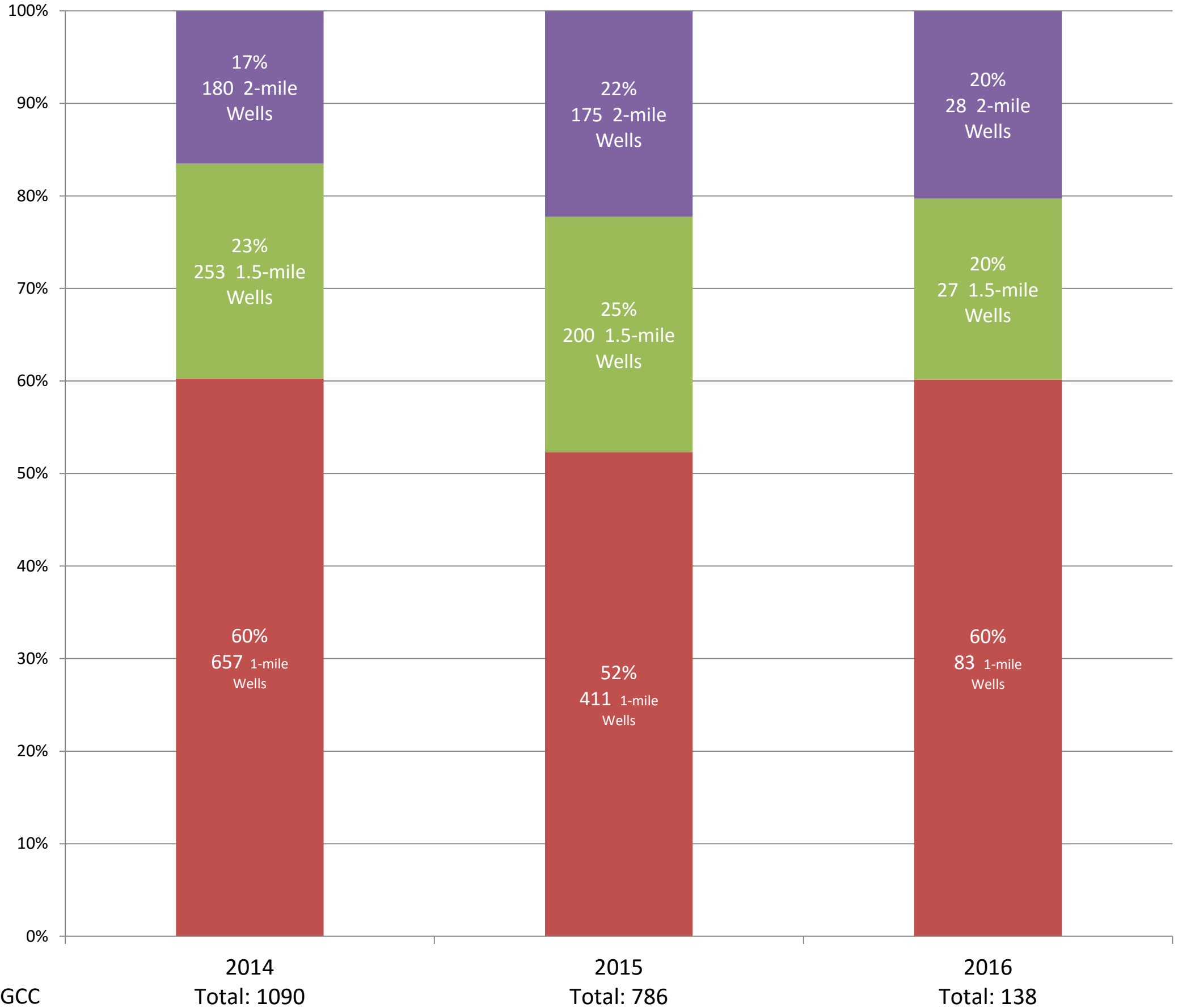
- ✧ Preference for oil pipelines vs. storage tanks?
 - How to ascertain likelihood and timing of pipeline development?
- ✧ Other factors?

GWA Wellbore Spacing Unit & Drilling Unit Sizes and Trends

GWA Well Lengths 2014-16

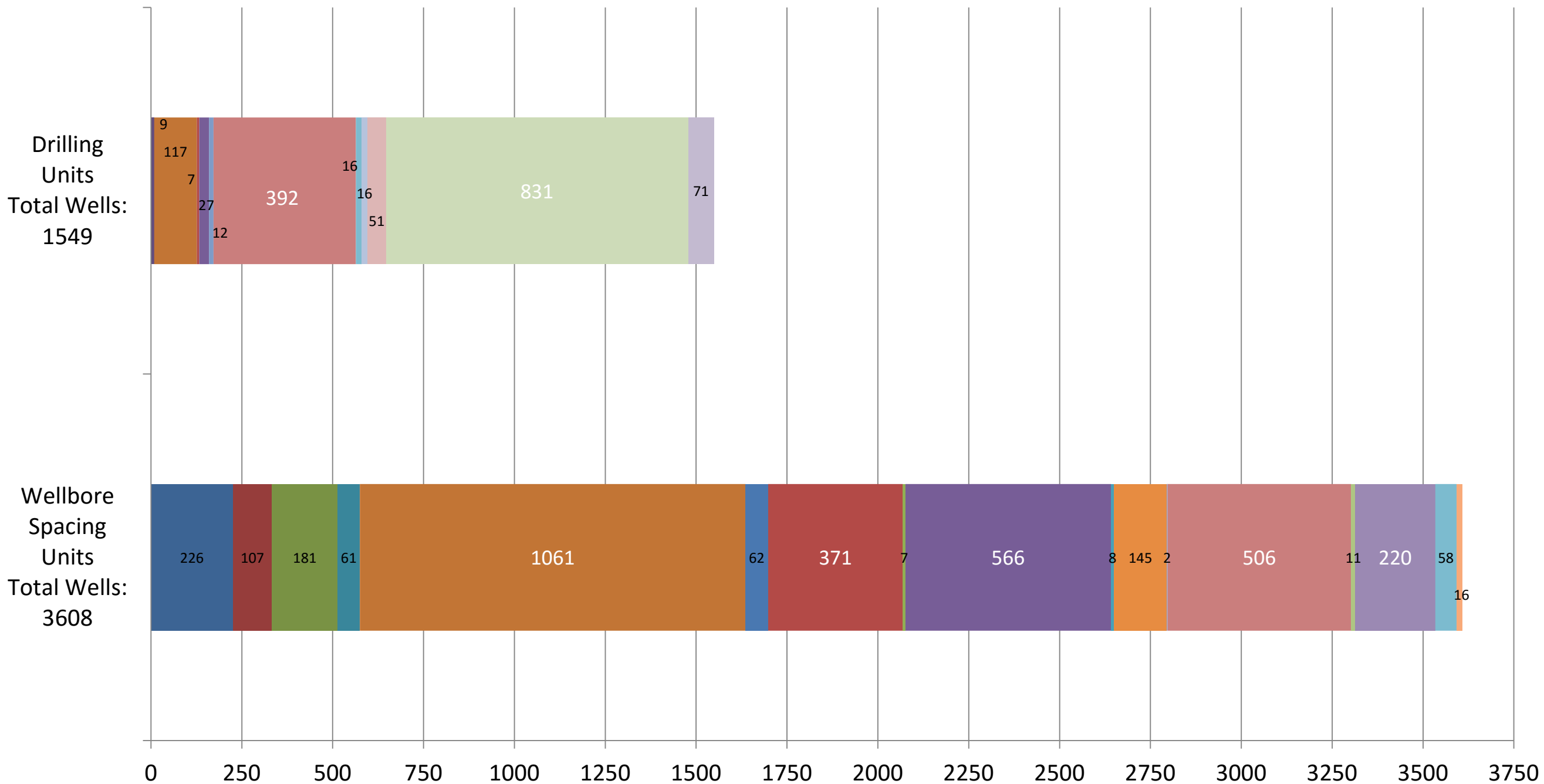
Percentage of Wells Completed by Length (feet)

- > 7,500
- > 5,000 and < 7,500
- < 5,000*



Source: Form 5As filed with COGCC

Comparing Cumulative Wells Approved by Wellbore Spacing Units and Drilling Units 2014-16



Number of Wells

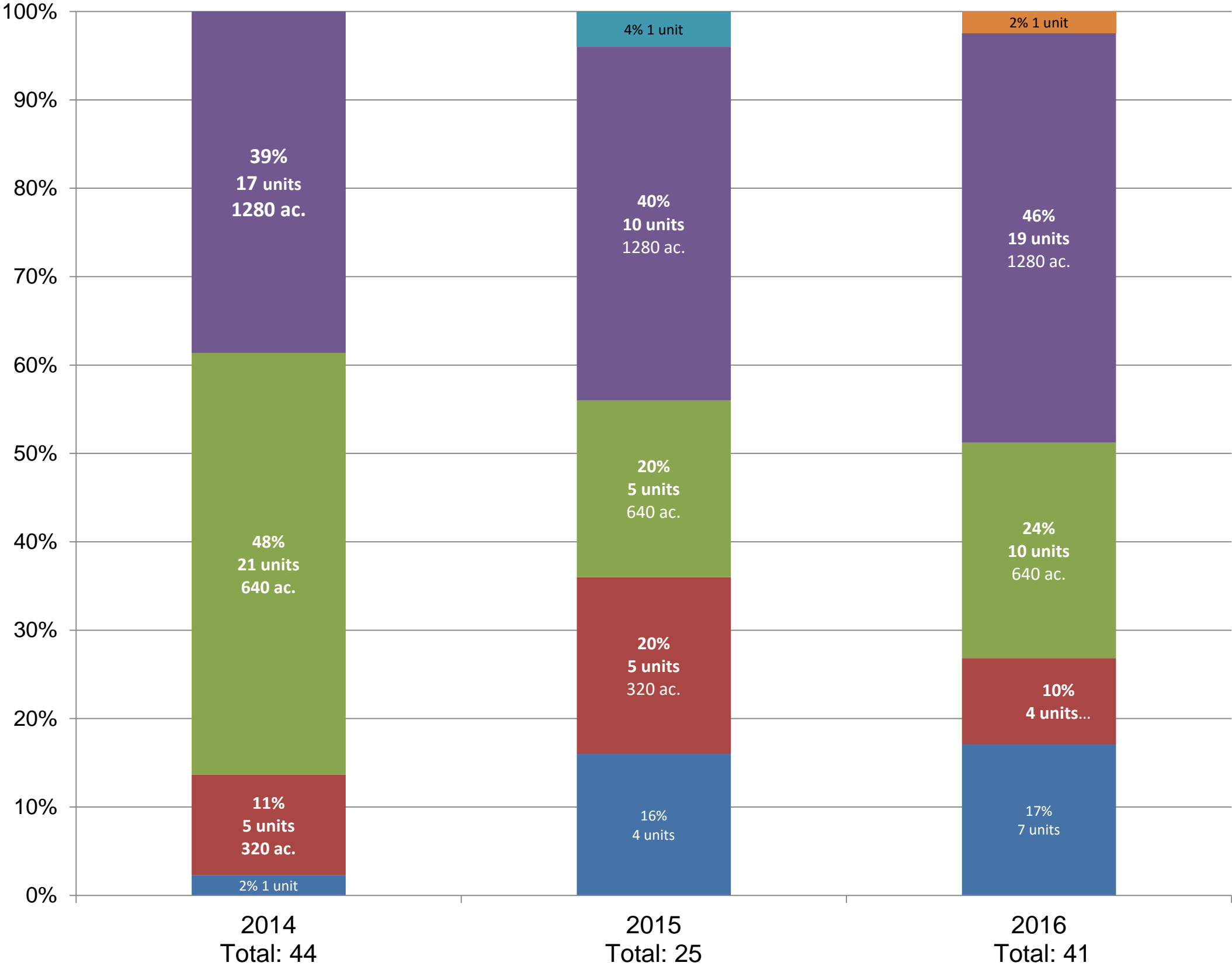
- ≤160
- 200
- 240
- 263
- 280
- 320
- 360
- 400
- 440
- 480
- 520
- 560
- 600
- 640
- 680
- 720
- 800
- ≥960, <1078
- 1078
- 1120
- 1280
- >1280

Drilling Units Established in GWA Year-by-Year 2014-16

110 Total Units

Percent of Drilling Units Established by Size

- 2560
- 1920
- 1280
- 640
- 320
- Misc.

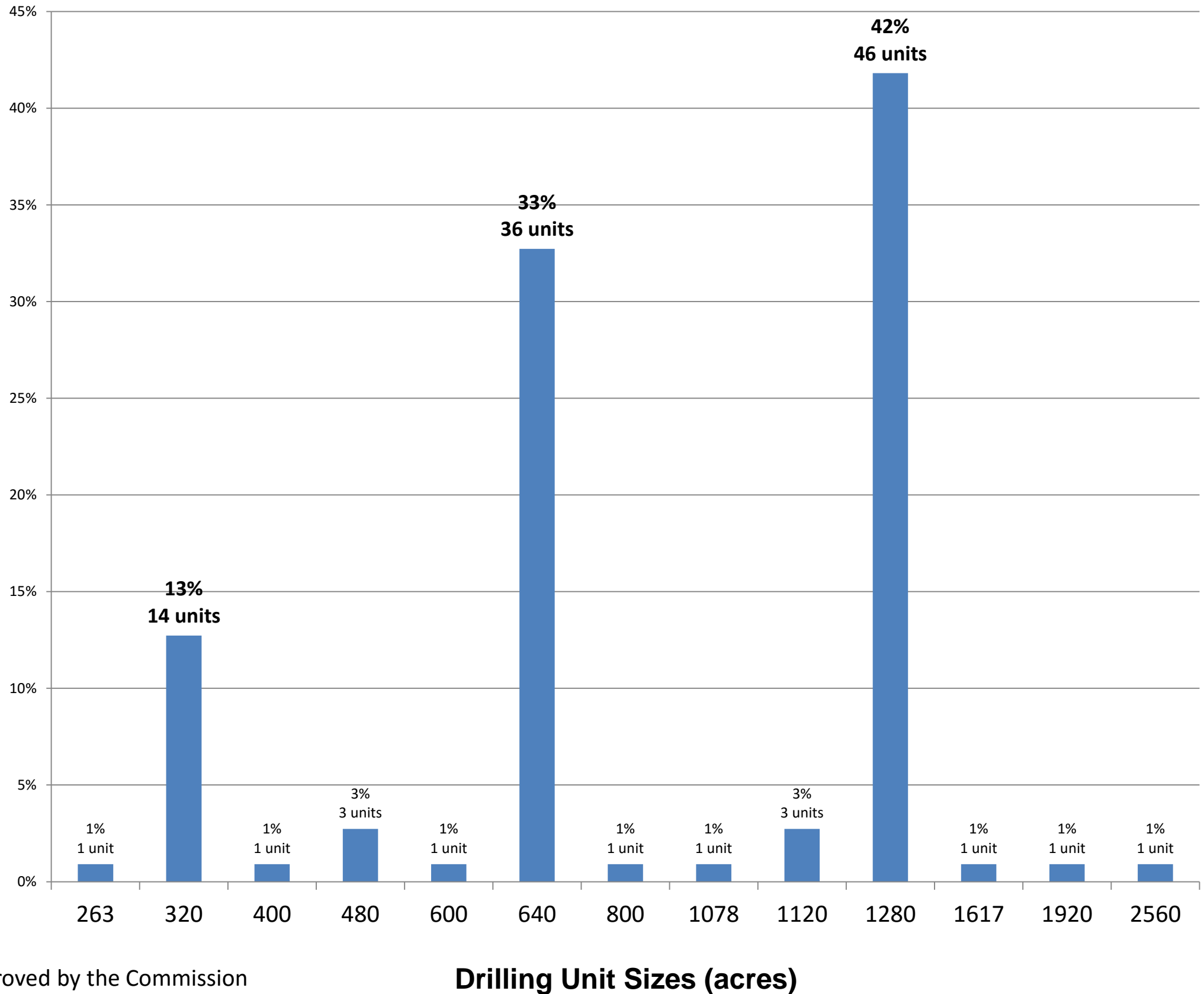


Source: Spacing Orders Approved by the Commission

Cumulative Drilling Units Established in GWA 2014-16

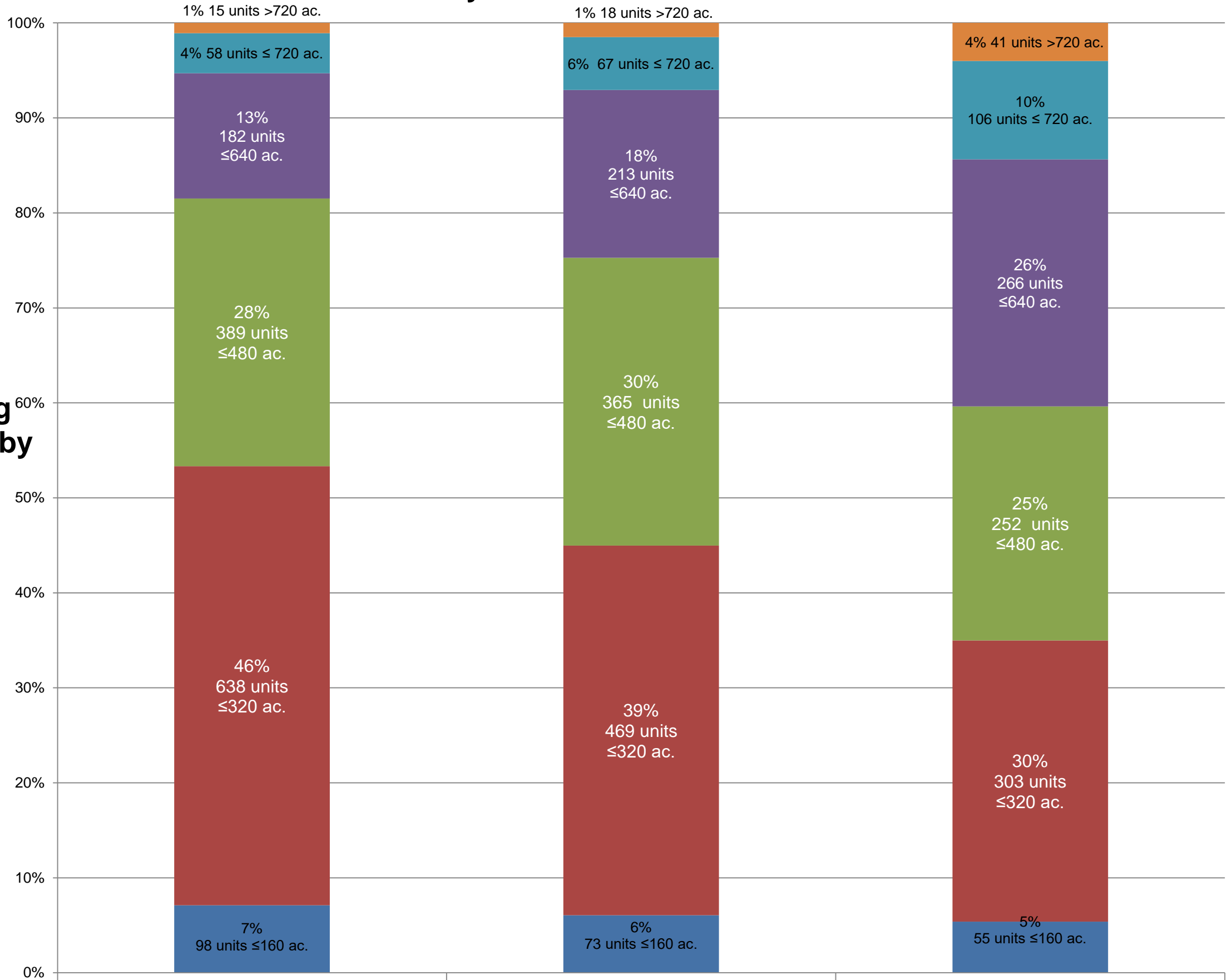
110 Total Units

**Percentage of
Approved
Drilling Units**



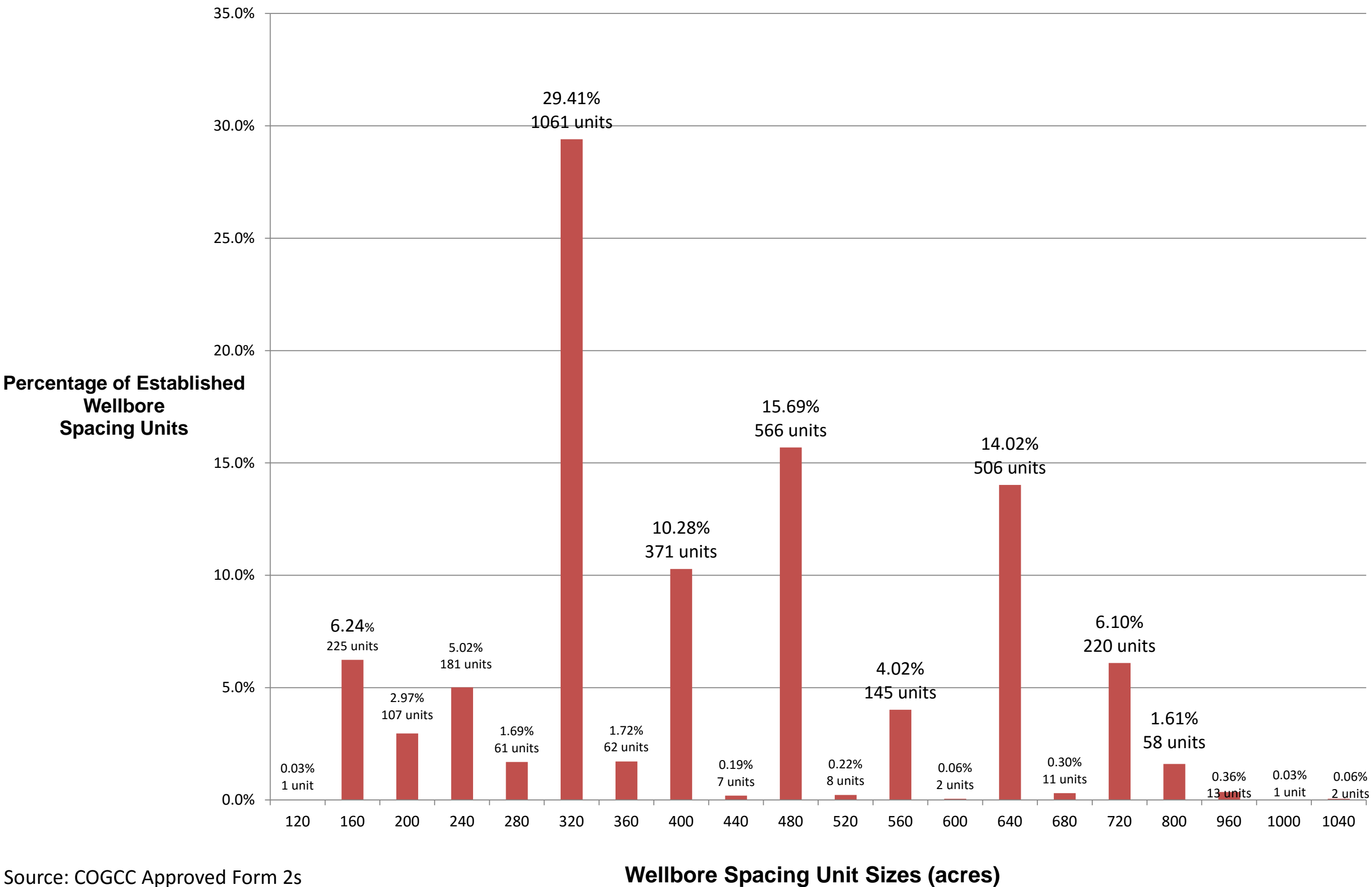
Source: Spacing Orders Approved by the Commission

Horizontal Wellbore Spacing Units Established in GWA Year-by-Year 2014-16 – 3608 Total Units



Source: COGCC Approved Form 2s

Horizontal Wellbore Spacing Units Established in GWA Cumulative 2014-2016 – 3608 Total Units



Source: COGCC Approved Form 2s