

Proposed BOP and Well Control Rule

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Key Messages

ExxonMobil supports the goal of strengthening safety and operations integrity

Regulations should focus on prevention via a risk based approach

If Proposed Well Control Rule concerns are not addressed:

- **Unintended consequences (higher risk)**
- **Compromised ability for Operators to effectively manage risk**
- **Significant impact to future OCS activity**

Key Concern	Proposal
Prescriptive Drilling Margin Requirements	Encode current practice; Preserves ability to manage risk
Prescriptive Cementing & Completion Requirements	Refocus wording on well integrity; Enables risk management
Requirements beyond API Standard 53 (BOP equip)	Adopt API Standard 53; Enhance future versions with Industry
Prescriptive Real Time Monitoring Requirements	Performance based “Real Time Monitoring Plan”; Preserve wellsite personnel authority to make real-time decisions

Prescriptive Drilling Margin Requirements

BSEE proposal creates prescriptive drilling margin requirements

- Mud weight must be at least 0.5ppg below integrity of the weakest formation (typically casing shoe)
- Equivalent Circulating Density must be below integrity of the weakest formation (no losses allowed)

Review of 175 wells drilled since 2010: 63% could not be drilled as designed

- All were drilled safely without a well control incident

Reserves would be stranded, OCS competitiveness would be reduced

- Some fields have insufficient margins to meet proposal; Deepwater and depleted fields most at risk
- Additional casing would increase execution cost and complexity, and often reduce completion sizes

Removes ability to manage risk; Incentivizes drilling practices that may increase risk

- Incentivizes drilling with mud weights closer to pore pressure; Increased risk of well control incidents
- Reduces wellbore stability and increased safety risk to personnel

Recommend drilling margin requirements be risk based and enable Operators to apply Industry best practices and technologies to manage narrow margins / lost returns

- Consistent with current process; BSEE District staff and Operators collaborate to manage risks

Prescriptive Cement & Completion Requirements

BSEE proposal creates prescriptive cementing & completion requirements

- Use of weighted drilling fluids to maintain overbalance during cement setting
- Use of weighted packer fluids to maintain overbalance against reservoir loads
- Restrictions on packer placement (proximity to perforations, within cemented casing)

Removes ability to manage risk; Prioritizes some exposures above others

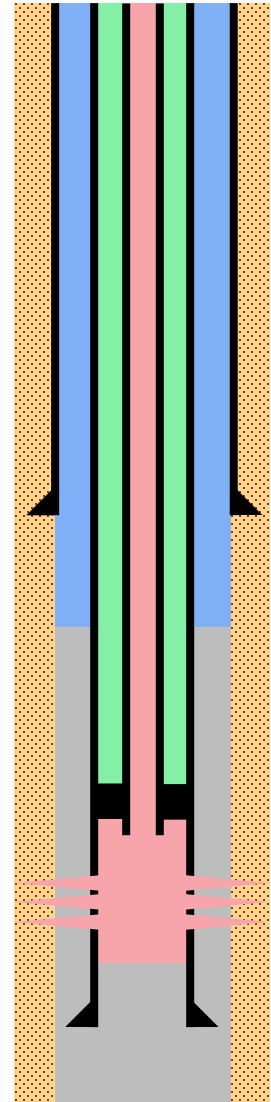
- Increases likelihood of a poor primary cement job; Challenges long term integrity
- Prioritizes packer fluids that carry higher SH&E risks; Fails to improve integrity
- Raises overall design loads; Failure risks associated with non-standard equipment

Economic feasibility of wells would be tested

- Many fields could not handle the higher hydrostatic loads
- Completion designs may result in reduced production and costly future workovers

Recommend cementing and completion requirements be risk based and enable Operators to continue to apply Industry best practices

- Leverage API Standard 65-2 for cementing potential flow zones
- Adjust completion design requirements to focus on ensuring well integrity



Requirements Beyond API Standard 53

BSEE proposal conflicts with API Standard 53; Creates unintended consequences

- API Standard 53 is the product of two years of work by Industry experts including input from BSEE
- Proposed requirements exceed redundancy set in API Standard 53; Introduces additional failure points
- BSEE focus is on worst case events rather than early detection; Increases system complexity

Recommend final rule adopts API Standard 53 for BOP requirements

- BSEE should collaborate with Industry to appropriately address remaining concerns via future editions

Prescriptive Real Time Monitoring Requirements

BSEE proposal creates new requirements; May decrease wellsite personnel authority

- Requires real time data feeds and onshore data monitoring centers
- Risks shifting focus of decision making; Compromises long term effectiveness of wellsite supervision
- Remote monitoring stations lack the situational awareness of wellsite personnel

Recommend adoption of performance-based Real Time Monitoring Plans

- Drives Operators to demonstrate how well integrity is monitored and data is stored
- Enables fit-for-purpose approach and effective management of risk in daily operations

Regulatory Impact Assessment (RIA)

RIA estimates the direct cost at ~\$1B vs ExxonMobil's estimate of ~\$25B+

Time and complexity associated with compliance is significantly underestimated

- Critical path impact for rig modifications beyond API 53 underestimated by an order of magnitude
- Duration of operational interruptions and incremental equipment testing not fully evaluated

Loss of reserves and reduced production rates not addressed

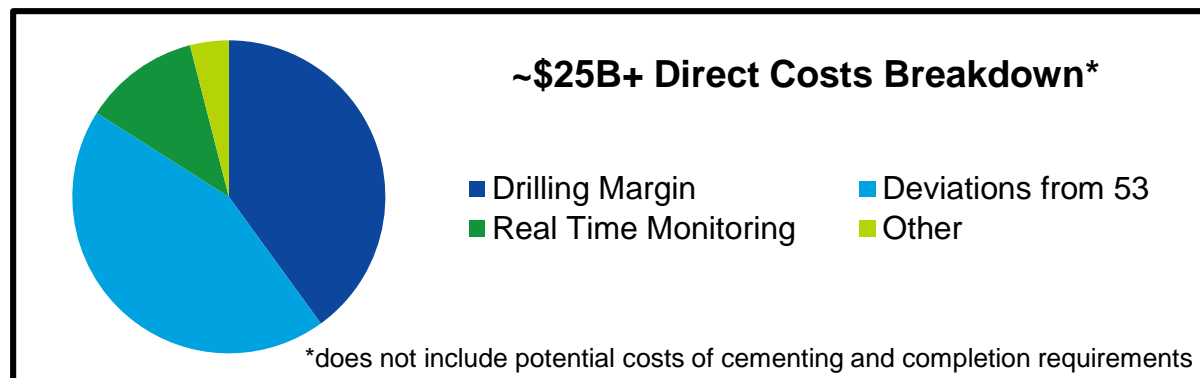
- Many fields require management of narrow margins; Prescriptive regulations would deter investment
- Completion requirements could drive reduction in completion size and production rates

Anticipated benefits are not identified and many proposals would increase overall risk

- Failure points would be added in routine operations for functionality that would rarely be needed
- 'One size fits all' approach to well design and monitoring could erode risk management capability

OCS competitiveness will be challenged unless unintended consequences are addressed

- Requires use of Industry standards and performance based alternatives to prescriptive language



Specific Recommendations

Formal comments submitted July 2015; Proposed alternatives to draft language

- Support BSEE in improving safety
- Avoid unintended consequences

Most critical areas listed below; Comments include specific recommendations for each

Topic Area	Draft Regulation Reference	ExxonMobil Attachment B Page #
Drilling Margin	§250.414(c)	5-7
Cementing & Completions	§250.420(c)(2)	8
	§250.428(c)	10
	§250.518(e) / §250.619(e)	14-15
Deviations from API Standard 53 (BOP Equipment)	§250.732(b)(1)i	33
	§250.734(a)(1)	39
	§250.734(a)(3)	40
	§250.734(a)(4)	41
	§250.734(a)(16)	45
	§250.735(a)	47
	§250.739(b)	58
Real Time Monitoring	§250.724	22-23