

## GoM NOJV Production: 2017 Changes



The following changes have been made to the **GoM NOJV Production & MWCC Risk Assessment** for 2017:

- **Changed risk assessment & endorsement as required by updated Upstream Risk Procedure:**
  - Worst Case (WC) Likelihood added to NOJV risk assessment.
  - Review all Purple and C+ Blue NOJV Exposure risks assessed on WC basis and other NOJV Exposure risks beneath this threshold where the associated Inherent risk is A – C.
  - Endorser sees flow through from Inherent to NOJV Exposure risk.
  - NOJV E&A and NOJV GPO risk endorsement through Exploration and GPO Functions.
- **Aligned descriptions to comparable GoM BP-operated risks and descriptions to new NOJV database:**
  - Aligned Inherent, WC and Net incidents to Operated and re-assessed under NOJV Exposure criteria.
  - Combined “Terrorism - Waterborne Attack” & “Terrorism – Insider Threat” into “Major Security Event”.
- **Added new risks:**
  - Great White Fault Reactivation – Loss of Seal Containment – 2 additional shallow Frio wells in 2018.
  - Gas Export Pipeline Pigging in 2018 – Deferral of production due to stuck pig.
  - Europa Flowline 136 Decommissioning in 2017 – Line parts during lift resulting in loss of containment.\*
- **Upgraded/Downgraded risks:**
  - Multiple Failures of SCSSVs net impact/likelihood changed to match WC following assessment at Thunder Horse field where it was concluded that all Baker Neptune SCSSVs will eventually fail and need to be replaced. The Great White field has 18 wells with similar SCSSVs.
  - Water Injection impact/likelihood lowered due to much improved Mars/Ursa injection performance; water injection risk removed at Great White with current injection rates at 120mbwipd and no issues.

\* Below threshold for RP endorsement

Target one slide (two max)

Highlights, some of which may be represented in more detail in subsequent slides

Opportunity to note significant risks that have been closed (eg discussed today, MD bolting, NK flare tower)

**Redacted - Privilege**

GOM NOJV:  
Actions 2017

BP Confidential

# of Actions in 2016 RAPs	7
Actions closed in 2016	7
Cancelled 2016 Actions	0
Deferred 2016 Actions	0
Remaining Open 2016 Actions	0
New Actions in 2017	6
# of Actions in 2017 RAPs	6

**2017 ACTIONS**

1. Update incident notification with latest BP/Shell contact information.
2. Share BP's deployment learnings on Immobile Proppant with Ursa.
3. Review Operator's analysis of loss of seal containment risk associated with further Frio development/production by BP Geomechanics SMEs and inform BP's participation GD002 and GD003 wells in 2018.
4. Participate in BP/Shell joint technical review of Operator's abandonment plans (lift and mill) for plugged Europa 136 Flowline.
5. Participate in BP/Shell joint technical review of Operator's plans for Mars Gas Export Pipeline pigging.
6. Establish E&C discussion as standing agenda topic for Shell / BP executive meeting, in lieu of written compliance certifications.

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## Decision Rights for Risk Notification & Endorsement

NOJV Classification	Decide ("D")				Agree ("A")
	Operational NOJV	Exploration NOJV	Non-Production NOJV Managed by GOO	Greenfield NOJV Managed by GPO <sup>1</sup>	All NOJVs
<b>Purple</b>	COO Strategy & Regions	COO Developments & Technology	COO Production	COO Developments & Technology	Head of S&OR Upstream (only applies to Purple / Blue C+ WC NOJV Exposure risks relating to an S&O Inherent risk)
<b>Blue C+</b>					
<b>Blue D&amp;E</b>	RP	VP Exploration	TBC (only applies in Alaska at present)	VP GPO-OBO / VP GPO	
<b>Turquoise</b>	OBO Manager (VP NOJV/OBO)	Exploration Manager	TBC (only applies in Alaska at present)	Project General Manager (PGM)	

1) Typically through GPO-OBO, though TAP and TANAP are notified and endorsed via GPO (not GPO-OBO)