Exploration Assurance Team

BG GROUP

Assurance Process

Industry Assurance

November 2008

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Assurance

- Commenting on BP's "dreadful" Q3 performance, Tony Hayward said "bp needs to shift its culture and take well-judged risks. Assurance is killing us"

Uncertainty

- There are known knowns…There are known unknowns… There are also unknowns unknowns" (D. Rumsfeld)

Best Practice

Roles and Responsibilities of EAT

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Exploration **A**ssurance **T**eam (**EAT**)

- Manage overall subsurface assurance process
- Provide independent assessment, assurance, support and guidance for stakeholders
- Provide standardised, balanced and consistent reviews with effective support & challenge
- Ensure technical standards and guidelines are followed
- Provide consistency of subsurface model
  - Volumetric range (uncertainty)
  - Chance of Success estimations (risk)
- Ensure that all recommendations fully reflect the opportunities, risks and uncertainties
- Facilitate knowledge transfer

Primary Areas for Improvement

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- Planning and scheduling of assurance process
- Move away from reactive, “just-in-time” Functional Reviews
- More technical focus
- Emphasis on “Front-End Loading” (Peer Reviews/Assists)
- Consistent functional reviewers
- Emphasis on multi-functional integration and participation

EAT Perspective

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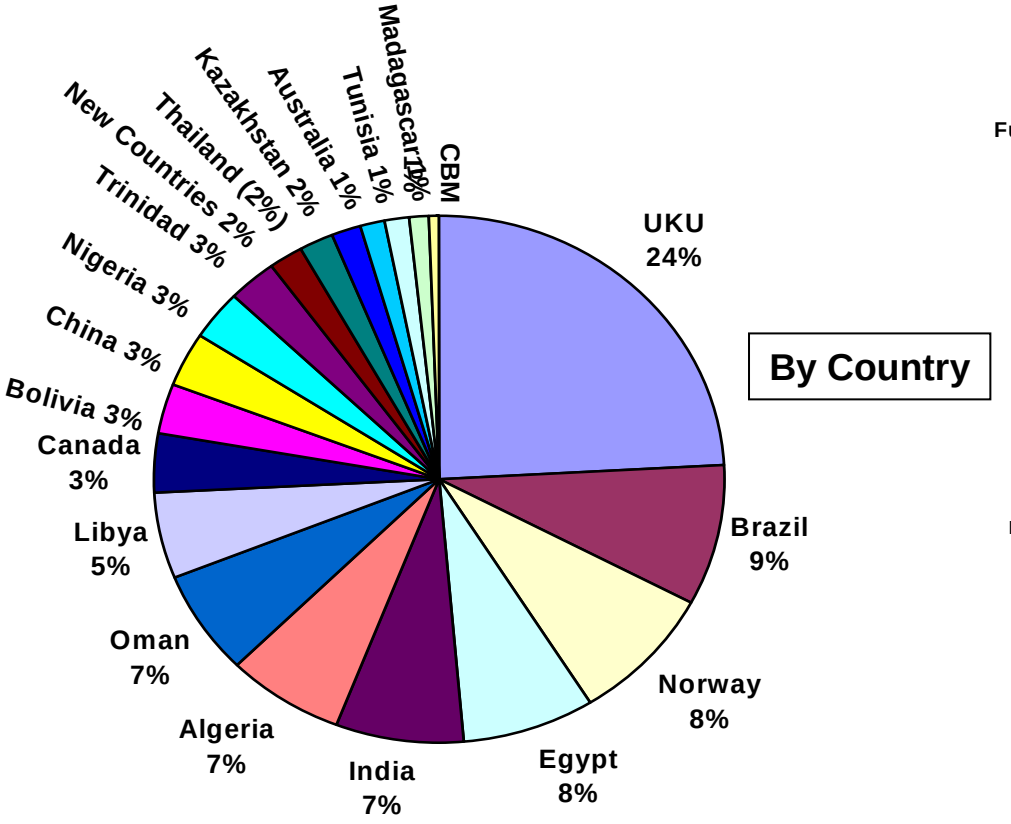
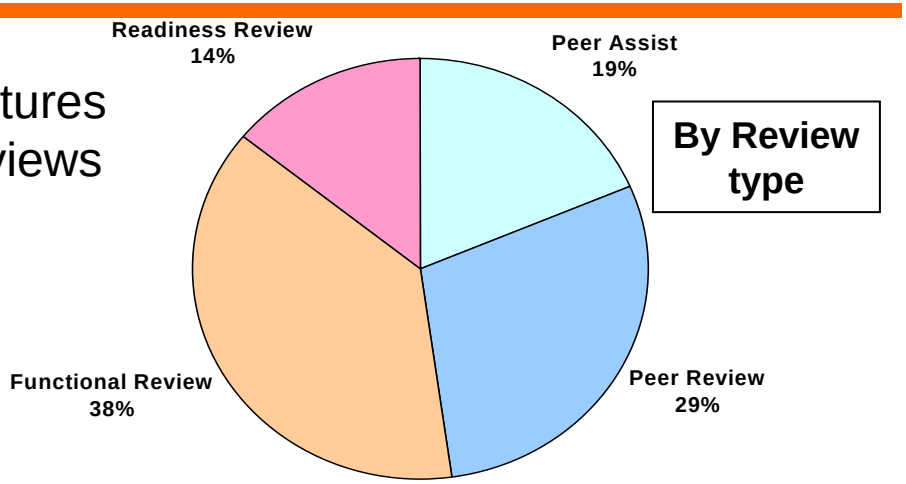
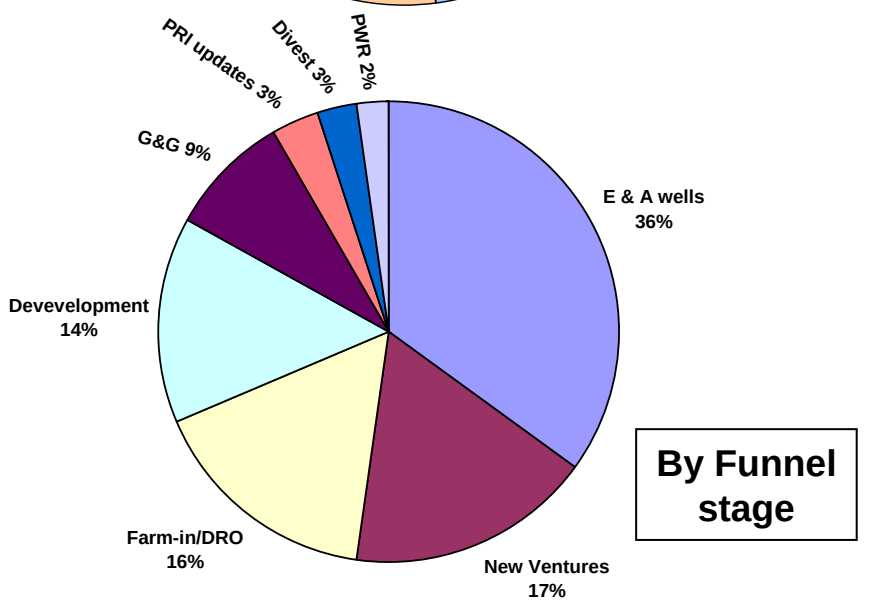
Summary observations

- Opportunity type: mainly Wells & New Ventures
- Review type: ~50% collaborative Peer Reviews
- ~25% reviews workstation based

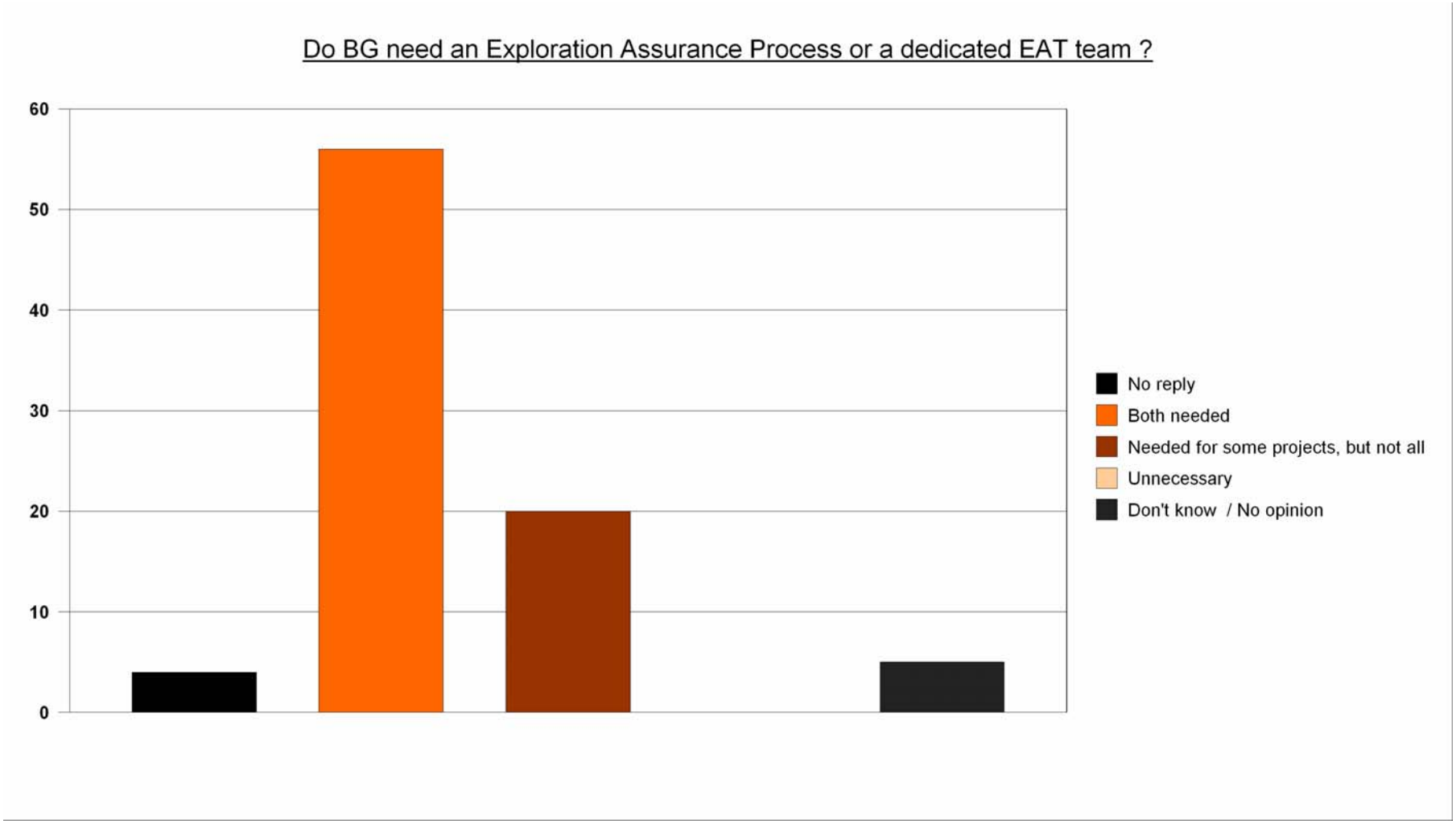






553 Reviews over 16 months

What are we doing right / wrong?



EAT Questionnaire, 11/07

100% Believe EAT is Needed

What are we doing right / wrong?

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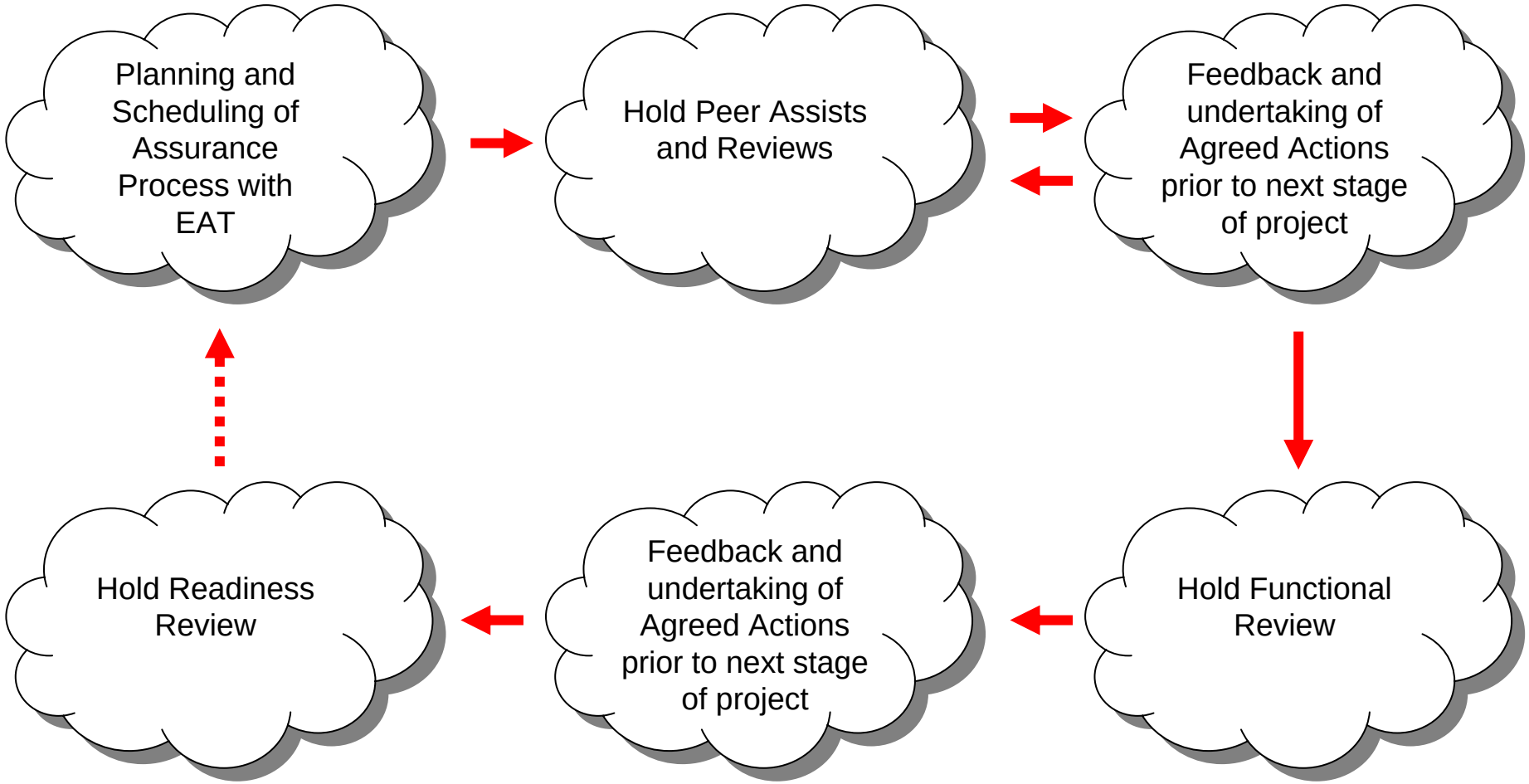
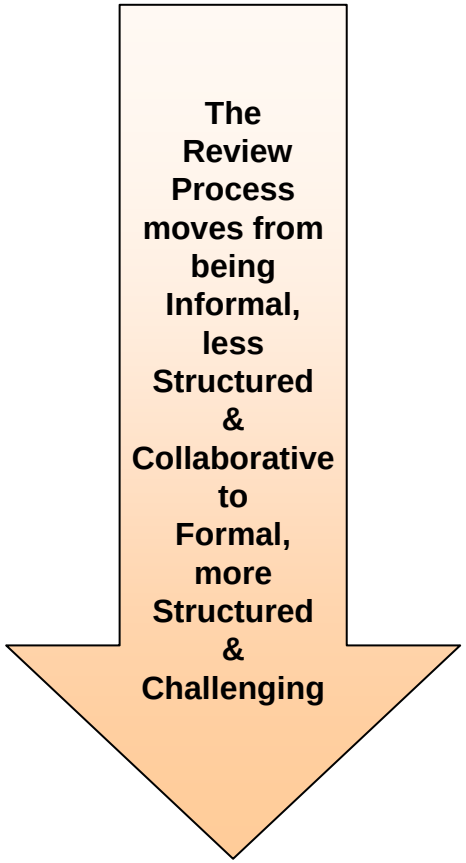
- 75% believe Exploration Assurance Process is Better
- 78% believe Assurance Adds Value to Project
- 79% believe FEL Adds Significant Value
- 88% believe Peer Reviews/Assists are Effective
- 94% believe Functional Reviews are Effective
- 98% believe Key Risks & Uncertainties were Identified
- 89% believe there is Right Balance Between Support & Challenge
- 73% believe Combination of PowerPoint & Workstation as Best Medium
- 67% believe Feedback is Fair & Consistent
- 98% believe Written Feedback is Essential & Useful
- 88% believe Asset Visits are Helpful
- 36% have Presented an Opportunity They Did Not Believe had Technical Merit

50 Questions, 92 Respondents

EAT Assurance Process



Assurance Process



- Peer Assists
  - generates ideas, gives guidance, and shares knowledge
- Peer Reviews
  - confirms work is robust
  - identifies gaps prior to subsequent reviews
- Functional Reviews
  - provides independent assurance
  - summarise recommendations and outlines critical issues
- Readiness Reviews
  - verifies that assurance activities and deliverables are completed
  - considers whether project is ready to proceed to decision point
  - provides project recommendation

Configuring the Assurance Process

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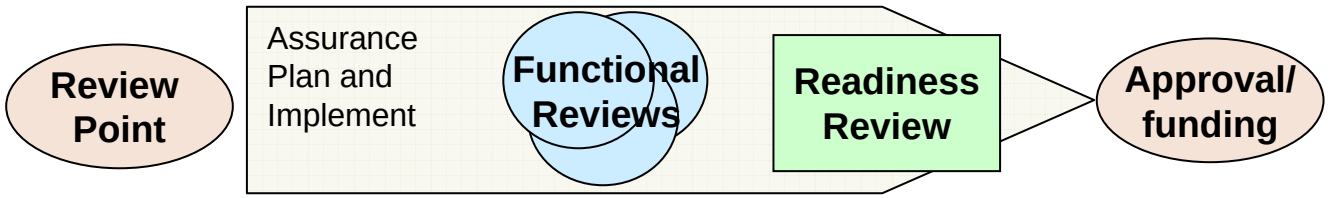
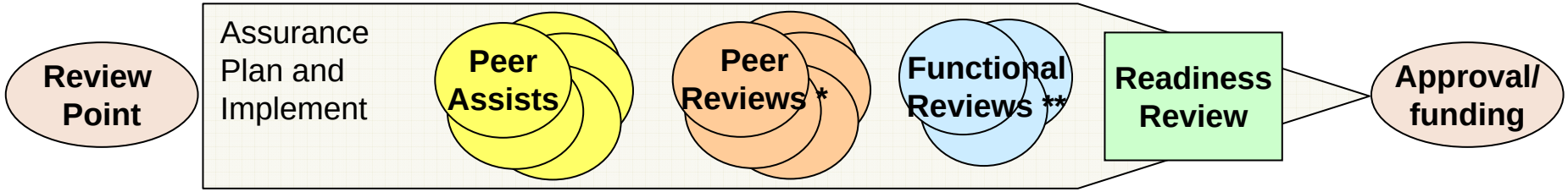
Low focus



Each opportunity to be scaled within this range as appropriate

High focus



* Or Single Discipline Functional Reviews

** Recommended to be multi-disciplinary i.e. surface disciplines, subsurface, commercial / legal / tax …)

Exploration Assurance Team

Some Key Measurable Wins

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- Consistent volumetrics estimation
- Consistent Chance of Success / Risking estimation
- Clearly capture the critical risks and uncertainties of project
- Challenge technical team's assumptions
- Emphasis on "Front-End Loading"
- Promote open, honest and quality-driven technical evaluations
- Facilitating Knowledge and Lessons-Learned Transfer
- Providing advice and recommendations to decision-makers

Post-Well Reviews

Best Practice Standard	A formal Post-Well Analysis review shall be held for all BG E&A wells
Objective	• To capture all well results and subsurface Lessons-Learned for BG wells • Compile metrics and themes to improve forecasting and portfolio management
Value	• Formalises a process for technical feedback with BG • Captures and disseminate lessons-learned • Facilitates knowledge sharing • Collates data for Portfolio Analysis and assesses prediction accuracy • Contributes to improved prospect evaluation, volumetrics, and CoS estimations
Deliverables	• Completed Post-Well audit data sheet • Documented PowerPoint presentation • Summary write-up • Collation of Lessons Learned • Action tracking of pre- vs. post-well results

Improving the Process - Prospect Evaluation

- Incorporation of regional work into evaluations
- Remove confusion between confidence (data quality / quantity), risk, and uncertainty
- Capture full range in volumetric estimations - *uncertainty*
- Employ PERA guidelines for CoS estimation – *risk*
- Closer integration between key disciplines and subsurface specialists

Exploration Assurance Team

EAT Key Messages to Assets

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- Be exploration driven and technically focused – *do not compromise technical standards*
- Challenge assumptions, be they technical or commercial
- (To managers) listen to your technical staff first
- Ensure adequate resources – people and TIME - are employed in evaluation – *appropriate balance*
- Filter opportunities, and do not look to EAT to “kill” projects
- Focus efforts on key uncertainties and critical risks, and challenge project proposals accordingly
- QC work within your team prior to reviews with EAT
- Share best practices and Lessons Learned with EAT and wider G&G community