SPEE Virtual Annual Meeting

Reserves Definitions Committee Report

June 14, 2021

Topics

- Committee objectives
- Membership
- Activities during the year
  - PRMS FAQs
  - Application guidelines
  - UNFC petroleum specifications

Committee Objectives

By-Laws Article XVIII, Section 1:

The Executive Committee shall appoint a Reserves Definitions Committee, the purpose of which shall be to advise the Board of Directors, and to liaise with Society committees, other professional societies, governmental entities, and intergovernmental entities, on issues relating to petroleum reserves and resources definitions

Membership

- Current members:
  - Rawdon Seager (chair)
  - Rod Sidle (past chair)
  - Jorge Faz
  - Shane Hattingh
  - John Lee
  - Tim Smith
- Board Liaison
  - Doug Wright

- Membership changes
  - No members are retiring this year and no new members have been appointed
  - It is expected that there will be membership changes next year in line with the three-year term policy

PRMS FAQs

- Since the publication of the updated PRMS in June 2018, SPE OGRC received questions regarding the proper interpretation of the principles and guidelines
- The FAQ document presents several questions received with answers prepared by the OGRC and reviewed by the other Sponsors offering guidance on the interpretation and usage of PRMS
- This FAQ document will be updated by the OGRC from time to time to include both other pertinent questions and clarifications to responses to previously existing questions
  - The latest document version will always be referenced in the title and each question will also contain the “date of latest update”

PRMS FAQs—Topics

- Communications with the SPE OGRC
- Production
- Reserves
- Contingent Resources
- Prospective Resources
- Miscellaneous
  - Fuel, vent and CiO
  - Recoverable hydrocarbons
  - Technology
  - Economics
  - In Place
  - Aggregation
  - PSCs

PRMS FAQs—RDC Responses

- The FAQs were originally intended to be a rapid response to questions raised by the professional community regarding PRMS 2018 ahead of the release of the Examples and, later, the Application Guidelines
- RDC submitted initial comments on the first draft in July 2020 and responses to revisions in October
- However, recent discussions with members of the Application Guidelines and Examples committees raised concerns about inconsistencies among the three sets of documents
- FAQs are currently being re-reviewed

PRMS FAQs—Examples

- How or where do you capture the low-case recoverable quantity (NPV negative) if it is not captured in 1P or 1C?
- How should the tail (extension) of an existing project that is fully developed and producing be classified when it has been “enabled” by an incremental undeveloped project that achieves reserves status and pushes the economic limit date further out?
- Should Contingent Resources (or Prospective Resources) be subjected to an economic limit test?
- Is there a limit to the time Contingent Resources remain in Development Not Viable? Can they remain for decades?
- Do Prospective Resources refer to unrisked (without considering the Pg, chance of geological success) quantities in PRMS, or are risked figures also allowed?
- What is “currently available technology” (as in the TRR definition)? Is this “established technology” only or can it also include “Technology Under Development” (TUD)?
- Can resources be added up, provided they are in the same category, as long as a proper breakdown is also presented reflecting the different risk profiles (e.g., 2PD + 2PUD + 2C + 2U = RR Best Estimate)?

Application Guidelines

- The original AG document was published in November 2011, four and a half years after publication of PRMS 2007
  - 221 pages
  - Unlike the PRMS, each chapter has a named author or authors
- “The original [2001] guidelines document was the starting point for this [2011] work, and that was updated with addition of the following new chapters:
  - Estimation of Petroleum Resources Using Deterministic Procedures (Chap. 4)
  - Unconventional Resources (Chap. 8)”
- The AG is now being brought up to date for PRMS 2018

Application Guidelines Update Chapters

1. Introduction
2. Petroleum Resources Definitions, Classification, and Categorization Guidelines
3. Seismic Applications
4. Assessment of Petroleum Resources using Deterministic Procedures
5. Petrophysics
6. Reservoir Simulation
7. Probabilistic Reserves Estimation
8. Aggregation of Reserves and Resources
9. Evaluation of Petroleum Reserves and Resources
10. Unconventional Resources Estimation
11. Production Measurement and Operational Issues
12. Resources Entitlement and Recognition

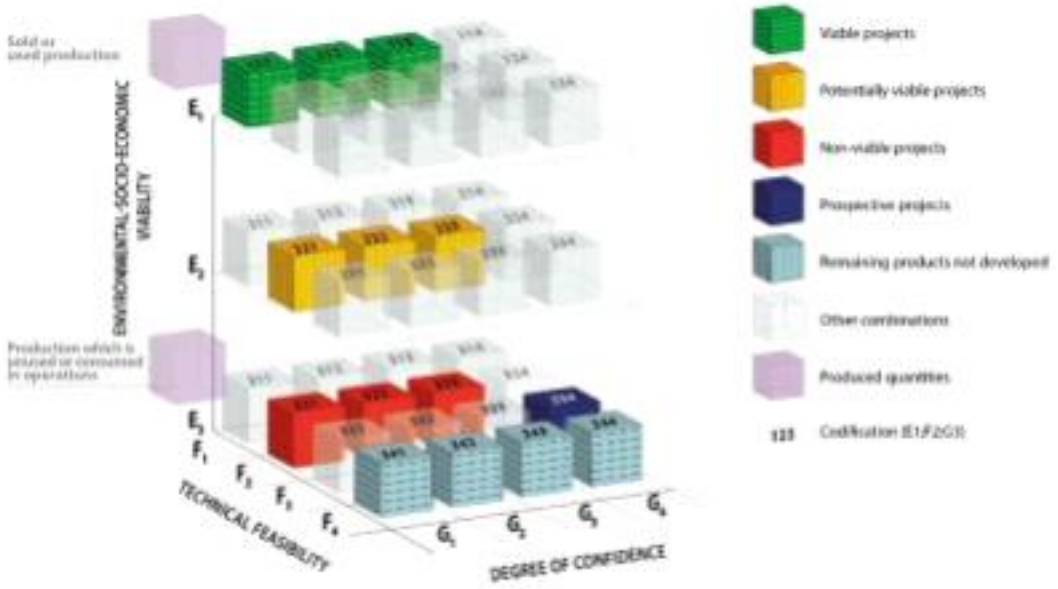
New

Application Guidelines Update Status

- Six out of an eventual total of 12 chapters are available for review by the PRMS co-sponsoring societies
- Responses have been requested by June 30, 2021
- This will be a very substantial document (the six chapters are 157 pages)
- RDC members are reviewing

UNFC Petroleum Specifications

- UNFC uses a numerical and language independent coding scheme
- Three-dimensional system with the axes representing E, F and G
- The [specifications] document is to be used in conjunction with UNFC and to enable its … application for petroleum projects
  - It should not be used as a stand-alone document.



UNFC Petroleum Specifications

- The PRSG* will replace the PRMS as the underlying specifications for petroleum within UNFC-2019
- The RDC reviewed the updated petroleum specifications prepared by the PWG**
- The SPEE board decided that no formal SPEE response was appropriate
  - An individual response was provided by Rawdon Seager, Rod Sidle and Jorge Faz
- The AAPG provided a formal response; the SPE did not
- An initial review of the UN document suggests that it largely mirrors (often plagiarizes) the PRMS although there are also some differences
- All responses are listed on the UNECE website: https://unece.org/draft-unfc-petroleum-resource-specifications-and-guidelines-comments

* Petroleum Resource Specifications and Guidelines
** Petroleum Working Group

Questions?