



Peer Review Plan

Date: October 31, 2023

BSEE Funding Source or Author's Division: Office of Offshore Regulatory Programs
Emerging Technologies Branch 45600
Woodland Road
Sterling, VA 20166

**Title: Evaluation of Technology Assessment Program (TAP) Project 761 –
RECOMMENDATIONS FOR IMPROVEMENTS TO WELLBORE SURVEYING AND
RANGING REGULATIONS**

Subject and Purpose: The subject of this study is PEER REVIEW OF REPORT "RECOMMENDATIONS FOR IMPROVEMENTS TO WELLBORE SURVEYING AND RANGING REGULATIONS." In 2015, BSEE conducted a project with ICF international to perform a Wellbore Surveying Technology study to both evaluate and catalog various operational performance capabilities as well as determine the limitations of the survey technology tools with a focus greater than 350°F. This study also set out to identify the current and best practices and technologies, evaluate them, and finally propose improvements to the BSEE regulations. This research was conducted in seven Tasks ranging from Task 1: Initial kickoff meeting to task 7: Identify future Technologies in wellbore surveying, and survey management, and relief well/ well intersection operations.

The purpose of this Peer Review is to evaluate the merits of and determine if the report provided by the original contractor adequately answer the questions posed in Tasks 2 through Task 7. The tasks are as follows:

- **Task 2:** Evaluate and catalogue down hole surveying tools with a focus on 350 degrees F and greater, survey accuracy, and survey management.
- **Task 3:** Identify the current best practices, standards, and regulations at the state and national levels, and make recommendations for improving BSEE's regulations.
- **Task 4:** Provide recommendations for the best methods, processes, procedures, and tools for performing relief well and well intersection operations at 350 degrees F and greater, and to improve survey accuracy and survey management.
- **Task 5:** Identify current ranging technologies, tools, techniques, and applications.
- **Task 6:** Prepare a report of the analysis, research, observations, methods, results, and conclusions and recommendations on improving BSEE's regulatory program.
- **Task 7:** Identify future technologies in wellbore surveying, and survey management, and relief well/well intersection operations.

This Wellbore Surveying and Regulations study report reviewed Measurement-while-drilling (MWD) systems. This study was conducted to study and discuss Directional Survey and Ranging Technologies, The Survey Lifecycle, Best practices, and Regulations effecting the Wellbore Surveying.

Disclaimer: The content of this peer review plan has been verified in compliance with the peer review handbook. For peer review contracts executed prior to peer review plan release, there may be differences in language used between the peer review plan and the executed contract.



This peer review will evaluate and assess the testing methods, assumptions, data quality, the strengths of any inferences made, and the overall strengths and limitations of the report. Therefore, this peer review will evaluate and assess the TAP 761 project report.

Impact of Dissemination: BSEE considers this study is influential scientific information, which requires a robust evaluation that the scientific community and stakeholders will accept. This study's findings may directly impact the production methods, industry specifications, best practices, and selection for equipment utilized for high-pressure and high-temperature offshore oil and gas operations. The results from this study are essential for reviewing new projects in deeper waters for offshore operations.

Upon conclusion of the peer review, BSEE will post all possible contracted deliverables, tasks, data, analyses, and information, including the peer-review reporting, reports, and comments on BSEE's research records website: <https://www.bsee.gov/research-record>.

Timing of Review: September 04, 2023 – September 03, 2023 (Total peer review process of not more than 12 months is desired for this project.)

Manner of Review, Selection of Reviewers, and Nomination Process:

This peer review shall be conducted through the contract BSEE BPA Process. This process will provide for a panel of qualified subject matter experts (SMEs) selected by the agency in order to achieve an optimum level of expertise across the spectrum of issues. The SMEs will be required to maintain both balance and independence while minimizing any potential conflicts of interest. The public will not be consulted in the nomination of potential peer reviewers.

Primary criteria for peer reviewers include the following:

- Mechanical Engineering, Petroleum Engineering, Civil Engineering, etc.
- Practical experience and knowledge specific to Wellbore Surveying and Drilling Engineering.
- Practical experience and knowledge specific to Wellbore Surveying with experience in tools used, understanding of the current best practices, understanding of current ranging technologies, and an understanding of well/well intersection technologies.

The secondary tier of criteria should include the following:

- No more than two persons from the oil and gas industry and shall not include multiple reviewers from the same affiliation.
- At least one person from outside of the oil and gas industry

Reviewers may be selected from academia, industry, and federal government. The group of reviewers shall not include multiple reviewers from the same affiliation and shall strive to include various perspectives on the issue considered.

Expected Number of Reviewers:

Three reviewers, plus contractor oversight, and writing personnel.

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Requisite Expertise:

- Subject Matter Experts with five years of experience in a relevant field and should also have some other strong credentials, e.g., a Ph.D. with a substantial publication or patent record specific to the evaluated technology, a young investigator award, or a strong pedigree (e.g., a Ph.D. from a high caliber institution or under a recognized leader in the field).
- Publications and Patents. Qualified experts often have many peer-reviewed journals and/or patents on the evaluated technology.
- Other evidence is that the person is a recognized expert in the field. Qualified experts have often managed a public policy program that has had a national impact, has a record of bringing innovations to the market or holds vital patents.
- In a relevant field, an advanced degree - Ph.D., Sc.D., D.Eng., MS, or MBA. Experts with only a bachelor's degree should have other experience and or a record of significant accomplishments indicating their expertise.
- Relevant awards. Qualified experts may have received a prestigious award such as the National Medal of Science, American Chemical Society National Award, Young Investigator Award, R&D 100 Award, or other awards specific to technology (e.g., Fuel Cell Seminar Award).
- Key Society Membership. Qualified experts may be members of a society like the National Academy of Sciences (NAS), the National Academy of Engineering (NAE), the American Physics Society, a National Laboratory Fellow, etc.

Opportunity for Public Comment:

At the time of this peer review plan's posting, the research report will be available on BSEE's Peer Review Public Posting website located here: <https://www.bsee.gov/what-we-do/research/peer-review>. BSEE welcomes public comment, especially from those with experience with tension leg platforms. BSEE invites the public to comment within the 30-day window indicated on the website through the process described below, which is consistent with the guidance on the website:

- For comments pertaining to this peer review plan, send emails to:
bsee_peerreviewplancomments@bsee.gov
- For comments pertaining to the research, send emails to:
bsee_researchpubliccomment@bsee.gov

In the subject line list of a public comment email, please state: "TAP 761 – RECOMMENDATIONS FOR IMPROVEMENTS TO WELLBORE SURVEYING AND RANGING REGULATIONS" + the words "peer review plan" or "research" + the words "public comment."

- List out any comments, questions, feedback by number (ex. 1, 2, 3, etc.)
- If referencing any sources of published information, please list the complete source information in a recognized reference format (such as APA)
- Please include your name, contact information, and affiliation

The agency will provide public comments deemed significant and relevant to the peer reviewers to address during their review.

Agency Contact: Joshua Toepfer

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