

Sponsorship via the Interview Method

This note is intended to provide additional guidance for a Sponsor using the Interview Method. The Sponsorship Form section details the requirements for using the Interview Method. Following this, in separate sections, guidance is provided for the Interview Meeting(s) and completion of the sponsorship form. Examples are included for best practice in terms of sponsor forms.

Sponsorship Form

The following section is taken from the SPEE sponsorship form and explains when the Interview Method can be used and the requirements of this method.

[Extract from Page 1]

If you have not known the Applicant in a professional capacity for at least a year or if you are not directly familiar with the Applicant's training and technical experience in the evaluation of oil and gas properties, then you may provide sponsorship to the Applicant only after you have spent sufficient time interfacing with the applicant and discussing the applicant's work history such that you

- (1) understand the applicant's record of relevant experience,
- (2) have been shown evidence of the applicant's historical technical evaluation work, and
- (3) are able to judge and attest to the applicant's qualifications for SPEE membership.

If you plan to act as an SPEE Sponsor for an Applicant using this Interview Method, then it is imperative that you completely read and understand the Notes for SPEE Sponsors on Page 4 of this Sponsor Form package.

[Extract from Page 4]

In some cases, however, an otherwise very eligible Applicant for SPEE membership might not be sufficiently acquainted with three SPEE Members for the members to provide sponsorship based on prior direct knowledge of their technical work. In these cases, the Executive Committee encourages the applicant to seek out SPEE members who are willing to invest the time and effort into becoming familiar with the applicant and his/her technical work.

Under this alternate method of SPEE Sponsorship, members would meet with the applicant to:

- (1) discuss in detail the applicant's prior record of experience,
- (2) examine evidence of the applicant's prior technical evaluation work, and
- (3) be able to judge and attest to the applicant's qualifications for SPEE membership.

Each SPEE Sponsor has latitude in how they conduct these meetings, discussions, and evaluations; however, please be aware that all applications for SPEE membership are subject to screening of the Qualifications Committee and approval of the Executive Committee. If Sponsor forms are deemed insufficient to provide attestation of the applicant's training and experience, then additional information from you as an SPEE Sponsor may be requested before a final decision regarding membership approval is rendered. Because of the unique situation involved in such sponsorship, it is recommended that the Chairman of the Qualifications Committee be notified in advance if an applicant intends to apply for membership using an SPEE Sponsor who will provide sponsor

attestation by this interview process, rather than based on direct apriori knowledge of the applicant and his/her history of experience.

As you are aware, applicants for SPEE membership typically prepare a series of written project summaries, which illustrate and describe their specific oil and gas evaluation experience and expertise using examples of projects that they have performed over time. While these written project descriptions are intended to be primarily for Qualifications Committee and Executive Committee use in evaluating the applicant's eligibility under Article III of the SPEE By-Laws, the Executive Committee recognizes that they may also be used by SPEE Sponsors who have known the applicant for at least one year and intend for the descriptions to serve as a refresher of applicant's experience. However, these project descriptions are not intended to be the sole basis upon which SPEE Sponsors assess qualifications for SPEE membership using the Interview Method. In this case substantially more review by the Sponsor is expected.

Finding Interview Method Sponsors

The Interview Method is intended to make it easier for an Applicant to find a Sponsor in a case where they do not have three Sponsors who have known them in a professional capacity for at least a year. In some cases, the Applicant will themselves be able to find SPEE Members who are willing to act as their Sponsor using the Interview Method. Sometimes though the SPEE Local Chapter facilitates the process and can put the Applicant into contact with potential Sponsors who are familiar with the Interview Method. If the Local Chapter does not have the resources to be able to help with this, it is recommended that the Applicant contacts the Society through <https://secure.spee.org/contact-us> and the main Membership Committee could then provide assistance.

Interview Method Procedure

The objective of the interview is to be able to satisfy the Sponsor that the Applicant meets the requirements for membership of the SPEE.

One or more interview style meetings can be held with the Applicant to discuss in detail various projects the Applicant has been involved with. If the Applicant requires more than one Sponsor using the Interview Method, the interview can be held jointly with all the Sponsors in attendance, or separate interviews can be held with each Sponsor. There is nothing to preclude the Applicant having three Sponsors all using the Interview Method.

A starting point for any interview is the Applicant's draft application form which provides details of the four projects they intend to form the basis of their application. The Sponsor should read the application carefully and prepare questions in advance of the interview.

- develop questions that require additional, and more detailed, explanation beyond what is written in the application for at least two of the projects
- develop questions that will specifically address their experience in the responsible determination of petroleum reserve/resources estimates
- develop questions that will specifically address their experience in and the responsible determination of production forecasts
- develop questions that will specifically address their experience in and the responsible inclusion of the economic impacts of reserves/resources and production estimates

The interview would typically be expected to last between 45 and 75 minutes, however this could be split over several meetings if that is preferred. Please remember this is not a job interview and the aim is to satisfy yourself that they meet the minimum requirements for membership.

Prior to the interview the Sponsor should contact the Applicant to set up the interview and to inform them of what is expected. The Sponsor could ask if they know of anyone that might be a mutual acquaintance and if so, consider contacting that person. The Applicant should be prepared to present and discuss projects they have worked on that demonstrate they meet the minimum requirements for membership. Use of handouts and/or power-point slides could be used but are not essential. The Applicant should be encouraged to provide any additional material that they feel would be helpful prior to the interview. As detailed in the Sponsor guidance on the Interview Method, the projects should not be limited to the four projects listed on the Applicant's application.

The projects should span the full period of required experience for the appropriate membership grade. For example, an Applicant applying for the grade of Member should provide examples of their involvement with oil and gas projects over a ten year period and projects involving the evaluation of oil and gas properties over at least a five year period. It is not adequate to provide projects which were all completed over a much more limited time-frame.

Questions should generally be of an "open" rather than "closed" nature allowing the Applicant to provide longer answers and do most of the talking. As an interviewer the Sponsor needs to establish whether the Applicant's depth of knowledge and understanding of oil and gas evaluation meets the requirements for SPEE Membership. As part of this process the Sponsor might consider questioning whether the Applicant has an appreciation of the following:

- the different methods used to estimate recoverable resources (e.g. volumetrics, material balance, reservoir simulation, performance analysis);
- how to handle uncertainty (deterministic and probabilistic methods);
- generation of production and cost forecasts and application of an economic limit;
- methods to value the resources;
- application of different resource standards and the classification of resources.

This list is not intended to be exhaustive and should be adapted as appropriate. In addition, the Applicant's knowledge of the SPEE Code of Ethics and the SPEE rules regarding licensure should be ascertained.

It is important that the Applicant has the capacity to think critically and really understands the work they are doing and is not just going through the motions. One experienced interviewer gives the following advice:

I start by asking the Applicant, "from the work you have done, pick a project that had a positive recommendation (i.e. do it, or buy) and where you gave a negative recommendation (i.e. don't do it, or sell). Explain each of these up in as much technical detail as you can release, explaining the data used, the assumptions made, the analysis performed, conclusions drawn, the tests applied, and how uncertainties were characterized."

This gives me some insight into the Applicants thinking process. Often projects have mixed financial metrics (some positive, some negative) e.g. Payout, cashflow, NPV, Cost Variance, ROI, etc, and discussing them will allow the Sponsor to determine whether the Applicant knows how they relate in the context of the project, and the goals of who they are doing the

evaluation for and the sensitivities they run. Projects are rarely “go” or “no go”, and this brings in judgment.

This also helps me get insight into how critically an Applicant is looking at the project and is not just “running the numbers” and passing the project on. I want to see thinking geologists and engineers putting together a case for why a project is considered “good” or “bad”, and providing support on their reasoning. It also helps tell me that they’re not just being a “yes person” to management or whoever hired them.

Make sure you give time to allow the Applicant to ask questions especially before ending the meeting. If you feel there should be a follow up meeting or there are areas within their draft application form that need more detail this could be suggested either at the Interview Meeting or in a follow up phone call or email. Where there is more than one Sponsor at the interview it may be best to wait until after the Applicant has left to compare notes and provide consolidated feedback.

Follow up after the Interview

Having completed the interview(s) each Sponsor needs to decide whether they are able to Sponsor the Applicant. There are a number of possible outcomes:

1. On the basis of the interview you are willing to attest to the fact that the Applicant meets the requirements of the membership grade applied for and that their draft application form does not need revision. You can complete the Sponsor form without further information. The Applicant should be informed that you will forward the Sponsor form to them in due course.
2. As per item 1) you are again of the opinion that you are able to Sponsor the Applicant but that they need to make specific improvements to their application form before you are able to fill out the Sponsor form.
3. You feel the Applicant does not meet the requirements for membership. In this situation is recommended you contact the Membership Chair of the Local Chapter to discuss the situation and decide on the course of action. This is one of the advantages of having more than one Sponsor present at the Interview Meeting to be able to compare notes and reach a mutual decision. One option could be to arrange for a further Interview Meeting if this might be beneficial. Alternatively, a different grade of membership could be appropriate (Associate rather than Full Member). Ultimately though you may decide you cannot act as a Sponsor and this will then need to be conveyed back to the Applicant in a professional manner. The decision of sponsorship must rest solely with the Sponsor and whilst the Applicant may not agree with your decision their only possible action would be to find an alternative Sponsor willing to consider providing sponsorship.

Completing the Sponsorship Form

The idea of the Interview Method is that following the interview the Sponsor should be able to complete the SPEE Sponsor form if required. The following should be covered:

- State that your sponsorship is based on the Interview Method;
- the Qualifications Committee would like the responses to include specific examples of specific situations where the Applicant has performed functions satisfying the requirements of reserves/resource estimates, production forecasts and economic impact;

- state the nature and type any additional documents that were provided to you as support;
- include that date and place of the interview and the names of other attendees if present.

Best Practice

As with any Sponsor form the Qualifications Committee needs to be provided with sufficient detail to make sure the Applicant meets the specific membership requirements.

The following two examples show suitably redacted forms that could be considered best practice. The second example corresponds to a case where all three Sponsors used the Interview Method; whilst there is nothing to preclude this happening, it is likely to be unusual and more applicable to remote Chapters and/or Chapters in Formation.

Example 1 – A Very Detailed Sponsor Form

Question 2

What specific relationship have you had with the applicant that would enable you to judge his/her qualifications to be a Member or Associate Member of SPEE? If you are a subordinate to the applicant in his/her current position or a provider of service to the applicant, please detail this relationship. If you have known the applicant less than 1 year and your sponsorship is the result of an interview process, please describe in detail the process and what information you were able to review in order to assess technical capability and qualifications.

I interviewed the Applicant on February 1, 2019 and February 8, 2019, with each meeting lasting approximately one hour. We met prior to the Local Chapter meeting. For the first interview, I asked the Applicant to review projects that they had completed which demonstrated the capability for engineering analysis, project assessment, and economic evaluation. Specifically, I asked the Applicant to guide me through what data was used, which assumptions were made, how the analysis and economic modeling were done, which conclusions were developed, how uncertainties were assessed and what recommendations were made. The Applicant was free to choose the demonstration method - notes, Powerpoint presentations, or workstation to explain the projects. During these interviews, I questioned the Applicant to gain an insight into how each project was analyzed, which key metrics were measured, and how they arrived at the conclusions.

At the first meeting the following projects were presented: 1) Investigating the Value of Micro-seismic, 2) Pitfalls in Performing RTA for Unconventional Wells, 3) Probabilistic Production Forecasting Workflow, 4) Property A Well Performance Evaluation, 5) Tank/Cube development strategy and 6) Sand Production Analysis and 7) Property B Type Curve and Development Program.

These projects demonstrated the Applicant's ability to analyze a variety of different reservoir engineering problems, many dealing with industry-wide challenges of determining the economic feasibility of unconventional resources (spacing determination - wells per section and per bench), data integration (micro-seismic, production, RTA, PTA and DCA, GOR and WOR) with both positive (pursue opportunity) and negative (sell) recommendations. The Applicant is an insightful engineer with the ability to integrate and analyze apparently unrelated data sets and seek connections. The Applicant can clearly explain their analysis fairly, highlighting both the strengths and weaknesses of each project.

QUESTION 3

Please provide a specific statement, in as much detail as possible, on the evaluation experience which you believe qualifies the applicant to become a Member or Associate Member of SPEE.

In follow up, I asked the Applicant to meet with me again on February 8, 2019 and show a project where they had completed an oil and gas property economic evaluation. This was demonstrated using a third party economic software package; a competitor's performance data (rate and value) from public-available sources, and back-estimated a rate-of-return and cost of acreage were compiled and compared to the Applicant's company ("Company A") in order to assess whether offset acreage was of potential value, and if it was, how the team would optimize the development (cost/well and wells/section).

A rate-time series (DCA and RTA) were built in a third party production analysis package. Initial Productivities were derived from multi-well statistics and analogs. The validity of analog well set used was defended. GOR's were assumed flat, as it was not desired to have later gas production carry the well economics. Operating costs were taken from Company A's internal OpCost model for total fluid, fixed, gas and water. Scenarios were run for both 5,000 and 10,000 ft wells.

This exemplified a single-project-type evaluation. The Applicant was able to demonstrate how they had assembled a reasonable, analogy based production profile; scale the profile into a project using well scheduling, convert the production profile into cash flow; analyze metrics that incorporate the time-value of money; build a cost model; incorporate taxes and royalties and run scenarios with corresponding metrics (Payout, ROCE and NPV).

QUESTION 4

Please provide a statement regarding the personal character and professional conduct of the Applicant. The SPEE organization places significant value on the ethical and professional conduct of the applicant.

The Applicant is a systematic, well organized, and enthusiastic professional capable of evaluating a variety of projects with a spectrum of technical challenges. The Applicant conducts themselves professionally and ethically at all times, and can fairly represent an unbiased analysis of their work, detailing any modeling within data limitations and supporting assumptions. The Applicant is able to provide both positive and negative evaluations based on financial metrics, and effectively defend their conclusions when questioned.

Example 2 – A Less Detailed Sponsor Form (but still providing sufficient information)

Question 2

What specific relationship have you had with the applicant that would enable you to judge his/her qualifications to be a Member or Associate Member of SPEE? If you are a subordinate to the applicant in his/her current position or a provider of service to the applicant, please detail this relationship. If you have known the applicant less than 1 year and your sponsorship is the result of an interview process, please describe in detail the process and what information you were able to review in order to assess technical capability and qualifications.

On July 1, 2018 myself, Sponsor_B and Sponsor_C met with the Applicant for an hour to discuss their evaluation experience with the intention of providing sponsorship through the Interview Method. The Applicant works for an oil and gas consultancy. The meeting was held in the Applicant's office. During this interview I was able to review in some detail the Applicant's personal contribution to a number of projects which I feel demonstrated their technical capabilities with respect to evaluation work and satisfy myself as to their suitability for SPEE membership. Following the meeting the Sponsors recommended the Applicant's application be updated to cover projects covering the duration of their evaluation experience and as a result there was a slight delay in finally completing this sponsorship form.

QUESTION 3

Please provide a specific statement, in as much detail as possible, on the evaluation experience which you believe qualifies the applicant to become a Member or Associate Member of SPEE.

The Applicant has been involved with reserves evaluations since 2008 when previously working for an oil and gas company. First example discussed was from 2008 when given reservoir engineering responsibility for one part of the North West Shelf Project offshore Australia. Responsible for determining technical recoverable volumes and production forecasts and providing these to the planner for economic evaluation. Proved reserves were based on SEC rules taking account of GDT.

During 2010 - 2012 worked on a small gas field offshore Australia with responsibility for determining the technical recoverable volumes and production forecasts. The field was challenging as there was aquifer support and as such P/Z material balance methods were not reliable.

Discussed ethical conflicts and withstanding the pressure placed on the consultant by the client.

Discussed different fiscal regimes. Worked in Indonesia with PSCs and in Malaysia with risked service agreements. Has taken generic economic models and modified them to take account of specific terms.

Discussed how costs are handled as part of an evaluation. Experienced in taking historical costs and splitting into fixed and variable elements.

Discussed use of probabilistic and deterministic methods.

Discussed what is the trickiest aspect of evaluation work. The Applicant felt that in most cases this comes down to correct handling of uncertainty.

QUESTION 4

Please provide a statement regarding the personal character and professional conduct of the Applicant. The SPEE organization places significant value on the ethical and professional conduct of the applicant.

We discussed the importance of ethical and professional conduct. The Applicant highlighted the tension between consultant and client that sometimes occurs during reserves/resources evaluations. The Applicant stressed that they are prepared to stand up for what they believe to be the correct approach even if this means coming into conflict with the client. The Applicant believes communication skills are very important and are sometimes not given enough attention. The discussion satisfied me that Applicant will uphold the SPEE Code of Ethics.