Oil & Gas Exploration:
Phase 3

Simulation & Risk
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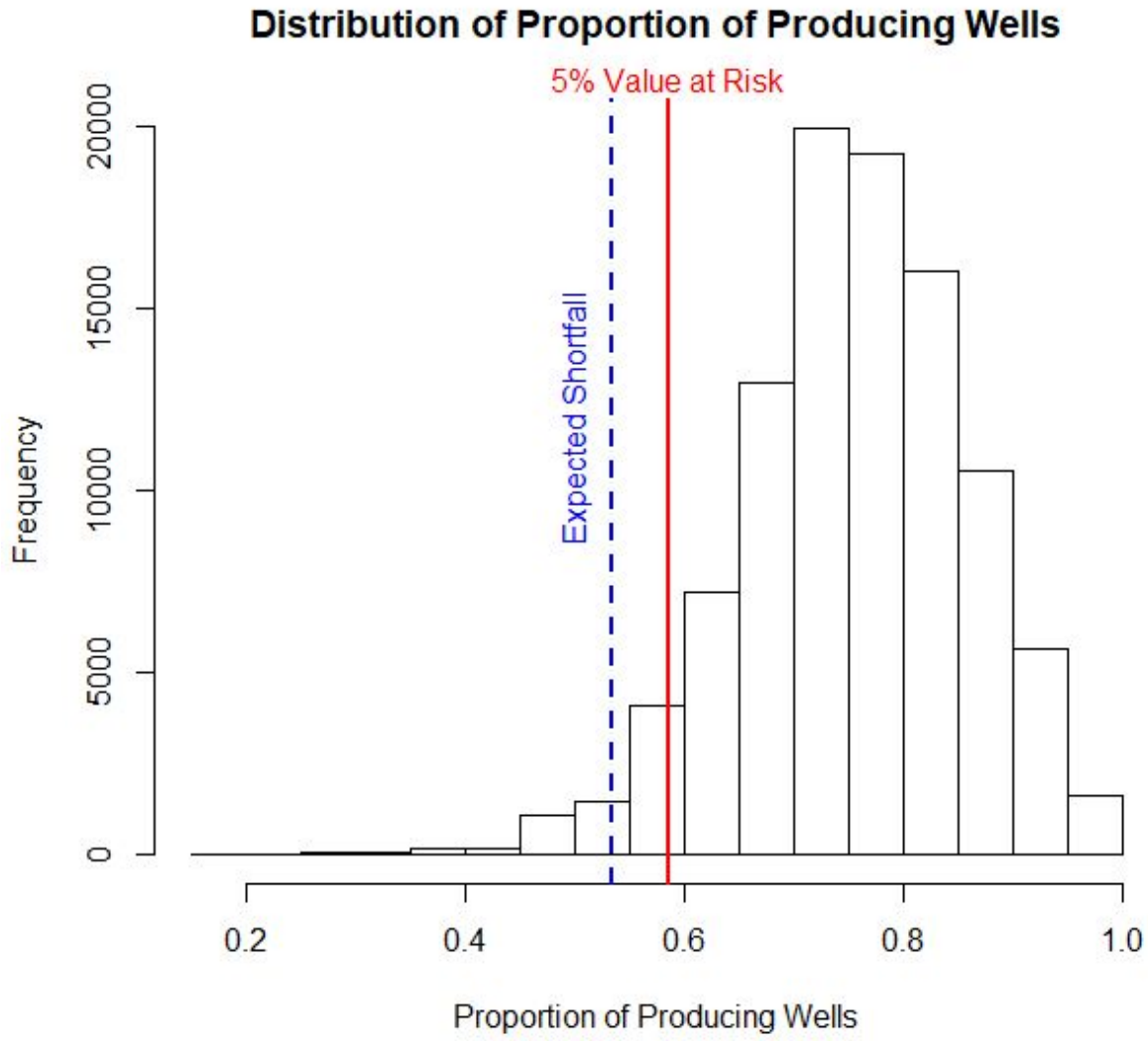
Executive Summary

Per RFP SR-F3.H3 for Compagnie Pétrolière et Gazière, INC (the "Company"), we estimated the distribution of the proportion of drilled wells that would produce oil or gas. The distribution is based on a random number of wells drilled and the probability distributions of two independent risk factors: hydrocarbons being present and reservoirs in the rock formation. The 5% Value at Risk is that no more than 58.6% of the drilled wells are producing and the Expected Shortfall is that 53% of the drilled wells are producing.



Background

In the previous phases of the Oil and Gas Exploration RFP by the Company, we estimated the distributions of the drilling costs for an average well and the distribution of the costs of a dry well and the possible net present value for a producing well. In this phase, we estimated the distribution of the proportion of drilled wells that produce oil or natural gas. The probability of a well producing oil is determined by four independent factors: the presence of hydrocarbons, a reservoir must be developed in the rock formation, there must be an impermeable seal, and a structure that causes the hydrocarbons to pool must exist. We assumed that the probability of only two of these factors can change: the presence of hydrocarbons and a reservoir. The number of wells was randomly determined from a uniform distribution between 10 and 30 wells.

Analysis & Results

The probability of hydrocarbons and a reservoir were both obtained using the truncated Normal distributions shown below (Figures 1 and 2).

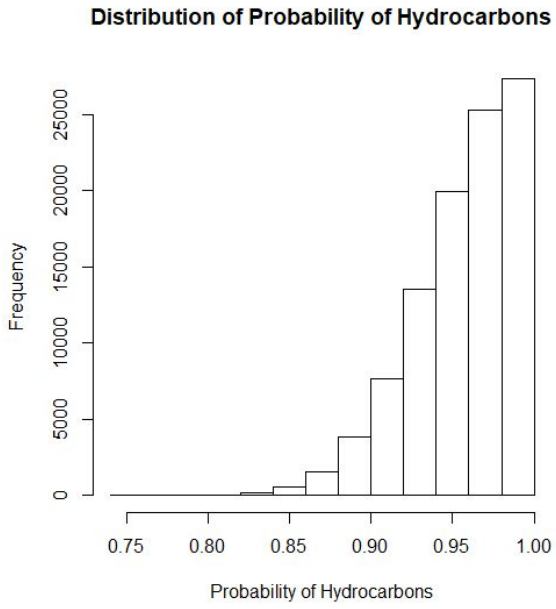


Figure 1

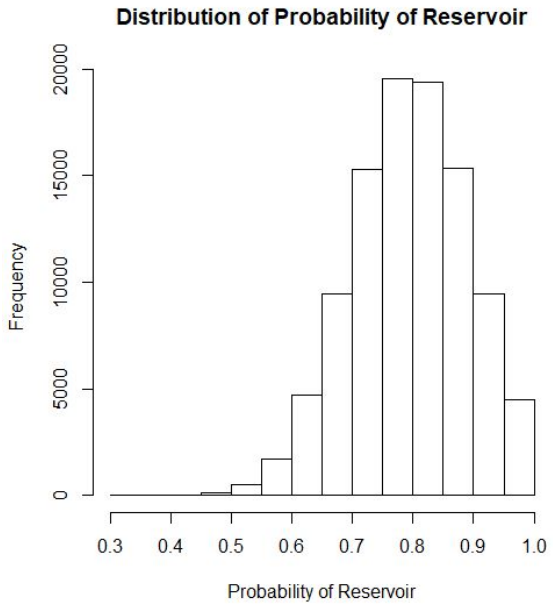


Figure 2

The combined probability from these two distributions was used to determine if each well of a random number of wells (from the uniform distribution) would produce oil. The distribution of the proportion of producing wells to the total number of wells for each iteration is shown in Figure 3. Also shown in Figure 3 is the 5% Value at Risk for the distribution indicating that there

is a five percent chance of less than 58.6% of the drilled wells are producing oil or gas. Lastly, when fewer than 58.6% of wells are dry, the Expected Shortfall is 53% of the wells are dry.

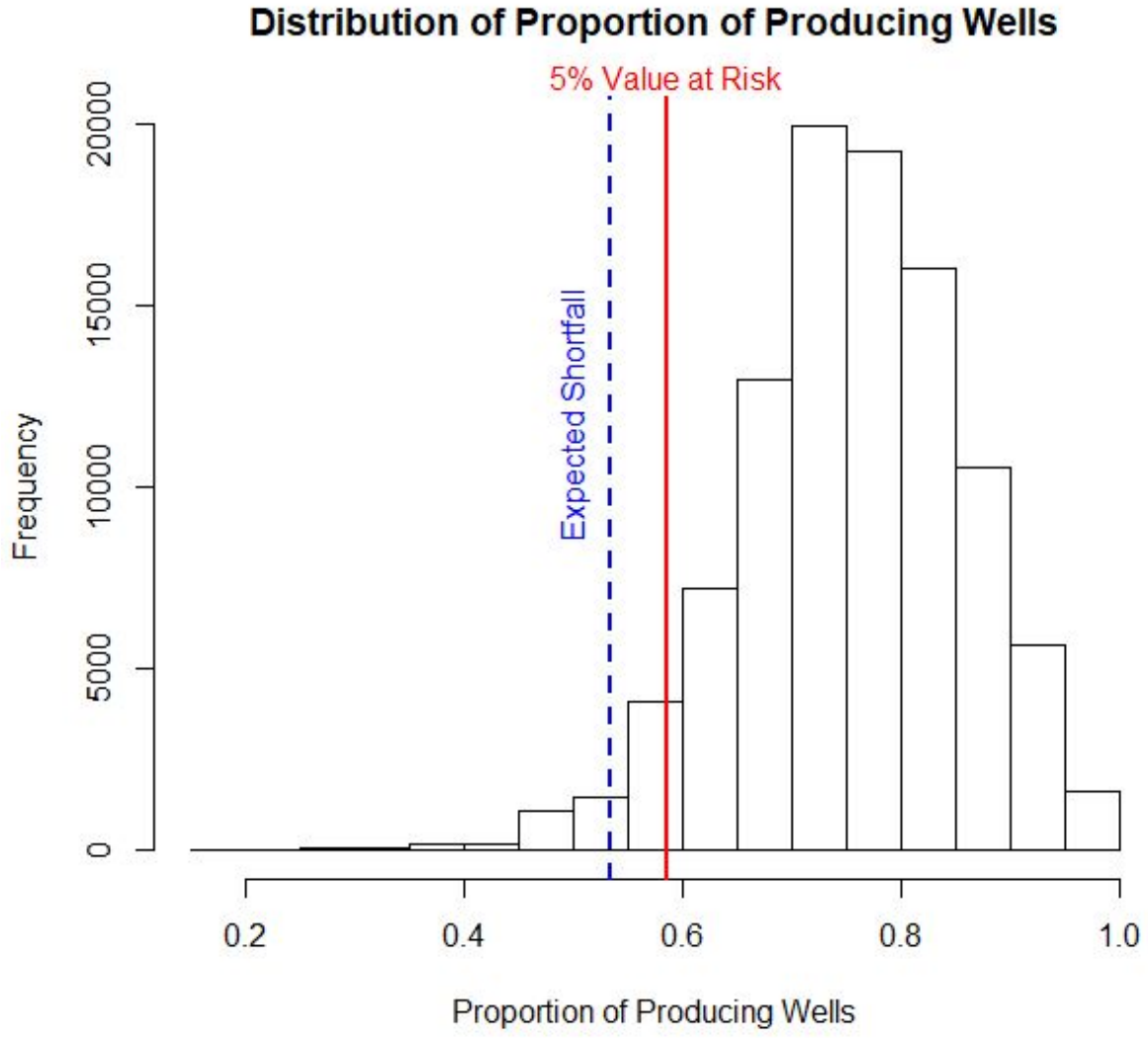


Figure 3

Conclusion

In conclusion, the average of the worst case scenario is that 53% of the drilled wells will be producing oil or gas. Base on our results from Phase 2 of the project, we recommend this investment as the return on a producing well is likely to exceed the cost of a dry well. This will be further explored in Phase 4 of the project.