

PNGE 441

Project #2

The XYZ operating company in the Northeast of the United States is an independent producer that purchases assets from large major producers and operates them. XYZ can make a profit since their overhead is much lower than the majors. On the other hand they do not have a large engineering staff and must outsource many of their engineering tasks. In this project your small consulting company has been hired to perform a study for XYZ.

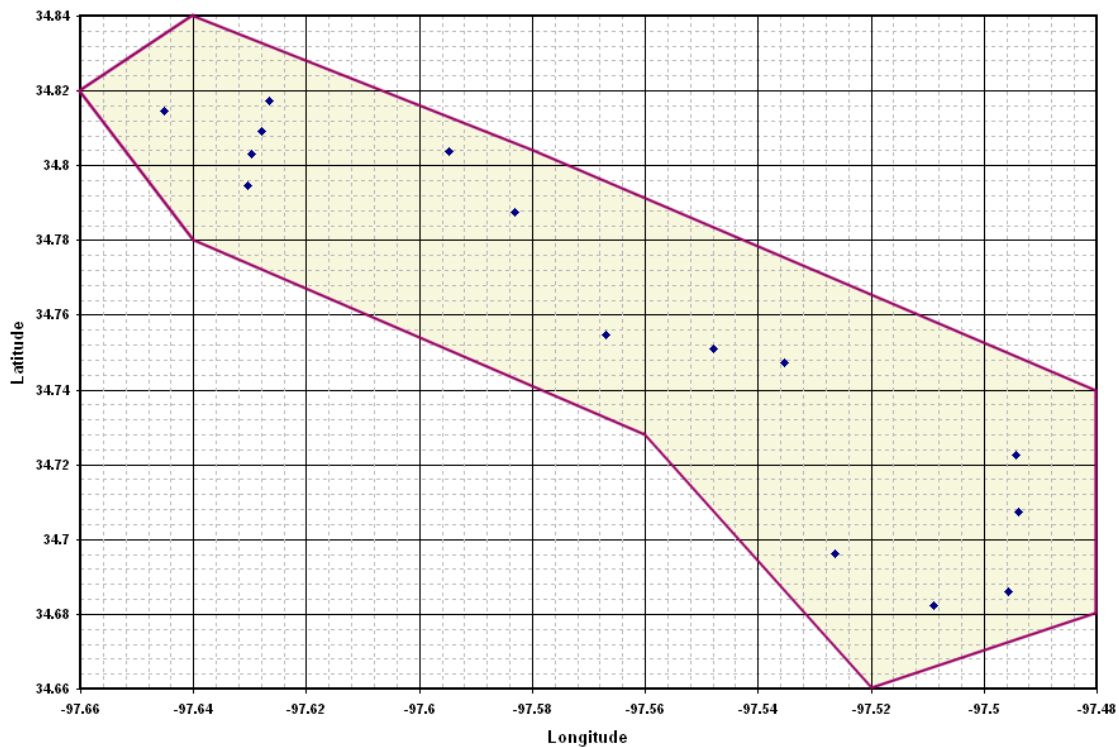


Figure 1. Well Locations for the study area.

Figure 1 shows the location of the wells. The lease imposes a specific set of boundaries on this field as shown in Figure 1. The company would like to perform some kind of analysis on this field in order to identify the value of the property. You are to advise them on this project valuation. As usual the only reliable data that you can get your hands on is the production data. The data available for this field is provided to you in a spreadsheet (download it from the course website).

Recommended approach:

It is recommended that you use the following general steps to complete the task at hand:

- Use the analysis approach covered in the classroom, incorporating modified Voronoi graph theory, and the principal of image wells to estimate the wells drainage area.
- Assume a uniform formation thickness of 50 ft, and an average uniform porosity of 15% and calculate the Estimated Ultimate Recovery. You may assume a 75% recovery factor.
- Use decline curve analysis and production data type curve matching to forecast the remaining gas to be produced and the time it takes to produce it.
- Make all the necessary economic assumptions and perform a detail economic analysis in order to identify a value for this property. Assume that the company is interested in a 10 year economic analysis and that performs its analysis based on 8% discount rate.

Deliverable:

The ultimate deliverable for this project is a complete technical report to the company that has hired you as consultants. Make sure that your conclusions are clearly stated and are backed up with solid analyses that are explained in very detail.