**Capstone Project Proposal Sripriya Prabhala**

**Assessing Production And Performance Metrics Of Oil Fields From a Given Asset.**

**Purpose of the project:**

My client, a reservoir engineer, needs an in depth analysis of the production and performance metrics of the oil wells from the production data that has been collected and formatted for further analysis. Based on the analysis of the production and performance variables, I intend to assist my client in understanding which field activities and development activities have been useful in order to plan future developments.

**Scope of work:**

A variety of data analysis tools/methods would be applied to the dataset for detailed analysis (explained in the next section). Some of the questions I hope to answer that will help my client decide his further steps include:

1. What is the average production per field/well groups?
2. Which types of wells are best suited for water injection, and which are not?
3. What is the operating efficiency of the wells?
4. Which well architecture would be most optimal for production?
5. How has the field development changed over time?
6. How has the water-cut performance changed over time?
7. How has the eater-cut performance changed with respect to water injection?
8. What types of wells would you recommend for highest oil production?

**Methods for data analysis:**

Following are some methods that would be applied to fulfill the goals of this project:

* Perform Exploratory Data Analysis to understand the characteristics of the dataset;
* Perform Exploratory Data Analysis to summarize and visualize the statistical properties of the dataset;
* Regression and Correlation to understand the relationships between the different variables;
* Other machine learning tools to identify patterns; extract useful insights and draw predictions from the data.

**Deliverables:**

The deliverables for this project include:

1. Codes for various analysis methods; and
2. A report of data analysis and recommendations.