

**PNGE 310**

**Project #1**

February 5, 2018

**Spring 2018**

Part (1) Due Thursday, February 15, 2018

Part (2) Due Thursday, February 22, 2018

Part (3) Due Friday, March 2, 2018

Your assignment for this project is to gather data for a site to design a drilling assembly. The information from surrounding wells and fields can be used to design the drill string and selecting the rotary drilling rig. The site selection process should consider the available data from offset wells in terms of formation properties and should have a minimum vertical depth of 8500 ft.

In your report include rotary drilling rig capacity and/or limitations to drill a new well at the selected field. The major part of the report should include the calculations related to the forces on the drill string.

Report should contain the statement of the problem and the limitations and safety factors used for the design. Include all applicable constraints like social and environmental impact of the selected site in the report. Use appendix for detailed calculations and specifications.

Some examples of data you can use in the preparation of your report are site location and surface maps, formation contacts (or thicknesses), completion interval and type, fresh water and coal seam zones to be drilled through, type of fluid produced and their analysis, formation pressure, fracture gradients, well logs, production tests, and other related information on the subsurface. You may not have all the data listed here. Attach copies of all supporting documents used in the preparation of final report in "pdf" format with proper name convention. Keep a copy of your documents and data for new assignments of this class.

Please keep me informed on your progress and see me or class TA if you need additional assistance. This assignment requires four (4) submissions in three (3) parts as: (Part 1) "Spreadsheet One" provided on eCampus with your selected field information, (Part 2a) "Spreadsheet Two" provided on eCampus with your selected values used in the calculations, and (Part 2b) "Calculations Report" with details of calculation and formulas as an appendix and if necessary with additional information and/or file, and (Part 3) "Final Report" with write up of required topics and sections. Part (3) is not acceptable if parts (1)

and (2) are not submitted. And Part (2) is not acceptable if Part (1) is not submitted. For all file submissions use the name convention given in syllabus. All reports and supplements should be submitted on the "Turnitin" and/or related link for this assignment on or before the due date. Other forms of submissions are not acceptable. Additionally, pictures or photos of write ups and equations are unacceptable in the submitted documents.

Use handouts and available catalogs for equipment selection. Each individual is responsible for submitting a final report. More information regarding the report format will be posted.