

June 21, 2001

ENPE241
Assignment #3 (midterm)

pg. 25-37

30% of final

3.1 Study Chapter 2: Petroleum Exploration in Fundamentals of Petroleum (by Kate Van Dyke, 4th ed., the University of Texas at Austin, Texas, 1997) and answer the following questions:

- 1) What is the general procedure of petroleum exploration used today?
- 2) What is the purpose of surface geographical studies? Describe the techniques used in surface geographical studies.
- 3) What are the principles of the following geographical surveys?
 - i. Magnetic and electromagnetic surveys
 - ii. Gravity surveys
 - iii. Seismic surveys
- 4) The methods of creating vibrations for seismic surveys.



3.2 GIS (Geographic Information System) is used by petroleum companies in making important decisions such as where to drill wells. More than 90% of major oil companies use GIS as an integral part of their decision making process.

resear
paper

- 1) What is GIS? Why can it be a powerful tool for the petroleum industry?
- 2) How can you use GIS technology in petroleum exploration (or production)?

* You can get information about GIS from the following websites:

- www.gis.com
- www.esri.com
- www.esricanada.com

GIS for "use"
 natural resources
 - production
 - exploration