

**Petroleum Geology TA/AES3820**  
**Written Examination, April 12, 2012**

**Prof. Dr. Stefan M. Luthi**

The following questions should be answered as concisely as possible (this is part of the rating). Write clearly so that I have a chance of being able to read what you write!

Please mention your name and student number at the top of each sheet.

1. Petroleum geology has developed over many years into a scientifically solid discipline. Name and describe three of the most important findings that led to this.
2. Describe the process of and conditions for the migration of hydrocarbons (oil or gas) out of a source rock.
3. What are the main characteristics of sandstone and carbonate reservoir rocks? Make a list if possible.
4. Describe the different types of sedimentary basins and what is needed for them to contain hydrocarbon accumulations.
5. The figure below shows a structural cross-section across the South Mountain and Timber Canyon oil fields, Ventura County, California. Describe their trapping conditions and the relationship to faulting.

