

Name: Key
Pd: _____ Date: _____

Chemistry 12
EQUILIBRIUM Lesson #5
Industrial Applications of Equilibrium PLO: E5

Read page 56 before answering the following.

1. Why was there a push to find a way to synthesize nitrates in the early 1900's?

Blockades prevented nitrates from Chile needed for explosives during WWI.

2. What is the name of the scientist who figured out an alternative source for nitrates?

Fritz Haber

∴ known as the Haber Process

3. Write down the equation that this scientist used to synthesis nitrates:



4. What problems did he have to overcome in regards to heat and pressure with this equilibrium? Rxn is exothermic therefore increased heat favours the reactants, low temps favor products but at low rate.
5. How did he overcome the above problems?

High pressure, moderate temperature
and in the presence of a catalyst

6. What is the equation used to make "quicklime" CaO from Limestone CaCO₃?



7. Under what conditions can you make the greatest yield of CaO? (in regards to heat and pressure)

High temperatures and low pressure