ENCO 4312 – Energy Economics

MID TERM REVIEW TOPICS

<u>Discussion topics – TWO REQUIRED</u>

- <u>Crossley, "Current Economic Conditions."</u> Quote: "Modern industry standard practice dictates that in conditions of relatively short-term price fluctuation, a corresponding 'knee-jerk' reaction to reduce or temporarily increase proved reserves is not practical or efficient. This 'one day' analysis attempt at long range reserve recovery under modern price fluctuations is confusing to both the financial community and to those attempting to apply the rules within the industry." What does Crossley mean by "one day analysis" and what is the problem with it? Describe one or more alternatives to a "one day" approach.

- <u>EIA, "Is U.S. natural gas production increasing?"</u> In their analysis, the EIA concludes that domestic natural gas production is increasing, with more than half of the increase from 1Q 2007 to 1Q 2008 coming from Texas. What factors are driving the current increase in domestic gas production? Does the EIA expect production to continue to increase for the next few years? Why or why not?

<u>Discussion topics – ANSWER ONE OF THE FOLLOWING QUESTIONS</u>

- <u>Hamilton, "Understanding Oil Prices."</u> Hamilton's discussion of "Returns to Storage" addresses a common economic argument – sometimes called "storage arbitrage" – linking current and expected prices. Explain why storage arbitrage should tend to keep current prices from being much higher or much lower than prices that are expected to prevail six months from now.

- <u>Hamilton, "Understanding Oil Prices."</u> Quote: "If speculation and short-run price inelasticity are the key driving factors, we would expect shortly to see potentially dramatic moves downward in price. The scarcity rent, by contrast, is expected to increase, not decrease, over time." The date on Hamilton's article is June 4, 2008. Briefly describe world oil price movement since early June. Do prices movements since June allow us to favor the "speculation and short-run price inelasticity" explanations or do they provide support for his "scarcity rent" argument? Why?

- <u>Adelman, "The Real Oil Problem."</u> Adelman says the real oil problem isn't that oil is running out, but that OPEC tries to act as an oil monopolist. Why does Adelman think that OPEC trying to act like a monopolist would increase the volatility of world oil prices? Do you agree or disagree with Adelman on this point? Why?

- <u>Brown, "Natural Gas Pricing-Do Oil Prices Still Matter?"</u> Brown said, "oil prices do still matter for natural gas prices, but the old rules of thumb relating natural gas prices to those for oil are of limited usefulness." Explain why oil prices matter for natural gas prices – why would a change in one price affect the other? What are the "old rules of thumb" relating the prices, and why does Brown think they are now of limited usefulness?

- <u>Bailey et al., "Taking a calculated risk."</u> Bailey and co-authors call discounted cash flow analysis the "the most widely used investment appraisal tool in the oil industry," but they go on to explain that it limited in certain respects. What specifically does Bailey et al. say limits the usefulness of DCF, and what techniques can be used to overcome the limits?

- <u>Smith, "Petroleum project evaluation"</u> Smith describes discounted cash flow analysis as "versatile but not without limitations." What are the limitations that Smith identifies? How does the "options" approach help overcome these limits, according to Smith? What is the "essence of the options approach"?

ALSO ON THE EXAM: Definitions/terminology and DCF problem. Each part of the exam – definitions, problem and discussion section – will count for about 1/3 of the exam grade.