

## DRY WELLS THAT ARE NOT SO DRY

### Performance Standard 15C.I

Write a letter using economic reasoning to convince a state legislator to take a particular action accordingly:

- *Knowledge*: Identify and describe the economic issues inherent in situations where scarcity necessitates choices and producers respond to incentives.
- *Reasoning*: Analyze the describe the relationship between public investment in private interests and between public investments and social benefits.
- *Communication*: Write a letter that is well-focused, well-organized and well-detailed; express all ideas in a way that provides evidence of knowledge and reasoning processes.

### Procedures

1. *In order to understand that scarcity necessitates choices by producers (15C)*, students should experience sufficient learning opportunities to develop the following skills:
  - Analyze how producers respond to incentives and allocate their scarce resources to maximize profits.
  - Write persuasive letters to government officials and others.
2. Have students review and discuss the assessment task and how the rubric will be used to evaluate their work.
3. Have students read “Dry Wells That Are Not So Dry.” Students should take notes on information they can use in writing a letter to a state legislator from an owner of a dry oil well who would like financial help for oil well owners to reopen the dry wells during a time of rising oil prices.
4. Ask each student to assume the role of the oil well owner and write a letter to the state legislator including the following information:
  - Request a grant of \$3 million from the state that, combined with the oil well owners’ money, would give sufficient funds to reopen your well and others nearby. State that the grant will **not** be repaid and the state will have **no** ownership rights nor receive any of the profits if the plan is successful.
  - You do not have to justify the amount of money, but state that the oil well owners’ money is limited and that they need the state’s help. You and the other owners are asking for only matching funds (that is, for every dollar the state invests in this, the owners will put up the same amount).
  - Show recognition that the state’s resources are limited. Acknowledge that the state might have to reallocate resources or increase taxes to meet the well owner’s request.
  - Explain your incentives and the public good that can result. Stress that oil is also a scarce resource and that funding this grant will eventually bring benefits to the state. It is very important to convince the legislator of any benefits you can think of to the community and state, and particularly to his/her voters.
  - Include other any information about the legislator or his/her district that might make him/her take action.
5. Evaluate each student’s work using the Social Science Rubric as follows and add the scores to determine the performance level:
  - *Knowledge*: The descriptions of the economic issues inherent in re-opening the dry oil wells were complete and objective.
  - *Reasoning*: The analysis of the relationships between public investment (state funds) in private interests (oil wells) and between public investments and social benefits was thorough and compelling.
  - *Communication*: The letter was well-focused, well-organized, and well-detailed; the knowledge and reasoning were completely and effectively communicated.

### Examples of Student Work follow

### Resources

- Copies of “Dry Wells That Are Not So Dry”
- Social Science Rubric

### Time Requirements

- One class period

## DRY WELLS THAT ARE NOT SO DRY

There are many oil wells in the United States that are no longer producing oil. They are said to be dry. Oil production began in the United States well over a century ago and long before most other parts of the world. Eventually the flow of oil in even the best oil fields slowed or stopped forcing the closing of the wells. Over the years more and more low priced oil was imported from around the world to the United States. This kept the price of oil down even as the cost of pumping oil in the United States was rising in part due to the aging wells.

Owners of oil wells often stop pumping oil long before the oil underground is gone. They pump oil when the price of oil is high enough to provide them a profit after paying the cost of pumping the oil. When underground oil levels fall as oil is removed, the remaining oil becomes more difficult to pump. Eventually pumping stops when the wells become unprofitable even though all the oil has not been extracted. The oil companies will find and open new oil fields where the oil is cheaper to pump rather than lose money on older fields. If oil prices are low, the process moves quickly because only the most cost efficient wells will be profitable. When the price of oil rises, "dry" wells sometimes come to life when the owner can once again pump oil for a profit.

Another factor that comes into play is technology. As the technology for getting oil out of the ground improves and/or gets cheaper, closed wells have new potential. Even though the wells may have no more oil than they did when closed, newer technology will allow the oil that is there to be extracted at a lower cost than before. New technology may provide much greater knowledge about how much oil is there and the best way to get to it. When oil prices rise, the process speeds up. Technology is expensive, and it does not pay to spend large amounts of money on new technology unless oil prices are high enough to cover the cost and leave a profit. It becomes less of a gamble to reopen an old field that still has some oil that may be more expensive to get out than it is to open a new field with unknown potential that may deliver oil at less expense.

Dear Mr. Regulator,

I'm an oil well owner of this state. I want financial help from my state government to reopen a closed oil well during this time of rising oil prices. The money given to me to open the well will not be repaid to you directly from me. It will come to you in many different ways. First of all, by opening the oil well we will gain scarce resources and the supply will increase which in turn would make prices drop. The tourism would increase because lower prices would make travel increase. Then because of tourism, the government will get money in sales tax from bowwiners, toll ways, car repairs, amusement parks, trucking and many other things.

There would be benefits for the community also. For example by opening the oil well, the

price of oil will decrease and therefore the people in the community will have more money in their pockets. The more money they have, the more stuff they buy and the more money the states get from taxes.

The oil well should be opened because all the oil is not pumped out because ~~it~~ wouldn't be making a profit but by obtaining \$3 million from the generous state government will be enough to open mine and others around it so consider your choic wisely. and I appreciate your thought and time. Thank you.

Sincerely,

Dear Mr. Legislator:

"Exceeds" (page 1)

I'm writing in request of your financial aid in order to reopen a closed oil well. In the past, most oil wells have been closed long before the oil is completely gone. This is done when oil prices are low because pumping the oil ~~fee~~ becomes more expensive as the level decreases, and therefore doesn't turn out a profit. However, when oil prices are high, as they are now, it becomes ~~not~~ worth it to reopen these wells. There are several advantages to reopening a closed well as opposed to drilling a new. One is the rapid advancement of technology that may make getting oil from a certain well easier now than it was five years ago. Also, in a closed well, there is a greater chance of finding oil.

In order to accomplish this, I'm requesting a grant from the state for three million dollars. With this money, along with my own, I shall have enough to reopen the closed well and several others nearby. This money will not directly be repaid, nor will the state own any part of well, so I am asking the state to risk a large sum of money. However, I think you will see that the benefits of this operation far ~~outweigh~~ outweigh the risks.

More than anything, opening the oil provides several benefits for the state. While I do ~~not~~ not plan to pay back the government, indirectly, the state will have its money returned in full if my plan is successful. ~~First~~ First, opening the oil well will create many new jobs. We will need to hire new employees to do the different tasks associated with drilling oil. Once the oil is found, it will allow more gasoline to be produced, lowering the

price of gas. This will make more people willing to drive more, increasing the number of gallons of gas purchased. In turn, the state will receive more money due to the sales tax on gasoline. More oil will stimulate the economy in other ways as well. The lower prices will encourage travel which will affect many industries. Tourism will increase, making hotels and amusement parks more profitable. More people will be on the roads so the state will gain more money through the tollways. And while the results would be the same if the oil came from any source, reopening a supposedly dry well is the best because it minimizes the chances of not finding any oil at all.

As oil prices continue to rise, a solution becomes more imperative. Reopening a <sup>closed</sup> ~~dry~~ well is clearly the best solution because it benefits both the people and the state. The money given to me to finance the job will not be ~~paid back~~ <sup>repaid</sup> directly, but the state will more than get its ~~money~~ <sup>money</sup> back through the increases in other parts of the economy. I hope you consider all these factors and realize the benefits of supporting my operation.

Sincerely,