

COALBED METHANE

Go to <http://formontana.net> and then click on picture # 46.

1. Coalbed methane is a big issue in southeastern Montana. The Blue line represents the water table. Find out what the term “water table” means, and then write a definition below in your own words.
2. What does the black layer on the diagram represent?
3. What gas is dissolved in pop, and what keeps it dissolved?
4. When you open a bottle of pop you can see bubbles of this gas. Why do they come out of solution? (Why don't they stay in a dissolved state?)
5. The groundwater can be found in the coal. What gas is dissolved in the groundwater?
6. What causes the pressure that keeps the gas dissolved in the groundwater?
7. Why does the gas bubble out when the groundwater is pumped to the surface?
8. What are the vertical white bars on the diagram at the top of the web page?
9. Why shouldn't the water that is brought to the surface be used for irrigation or be put (discharged) into streams?

10. What is the formula for methane, and what percent of U.S production of natural gas comes from coalbeds?
11. According to the map shown on the web page, near what town (include state) are most of the coalbed methane wells located?
12. Which two rivers in Montana could be harmed by discharge of coalbed methane water?
13. Look at the photo near the bottom of the screen. In what two ways has the natural landscape been altered here?

SALINE SEEP

Go to <http://formontana.net> and then click on picture # 84.

14. Throughout much of central and eastern Montana you can see white deposits on farmland. What is the name for this problem?
15. What are the two “salts” that form in areas like this?
16. Explain what the “recharge area” is (shown on diagram on web page).
17. What does the term “percolates” mean as it is used in the explanation on the web page?
18. What does the term “leaches” mean as it is used in the explanation on the web page?
19. How do the salts get to the discharge area?

20. Where did the salts come from?

21. Would the white areas shown on the photo be considered part of the recharge area, or part of the discharge area?

22. Explain what the “crop-fallow” system of farming is.

23. Explain how strips of summer fallow contribute to saline seep?

24. Why won't crops grow where there is saline seep?

25. **Click on the Hot Link titled “Click here to see a happy ending”.** This photo shows the same area 12 years later. How did they fix the saline seep?

26. Find out what “perennial” means and then write the definition here in your own words.