

Overview of the Petroleum Industry - Test # 4

Please turn test in on Friday, March 24 at the end of class

Name _____

Textbook – The Oil and Gas Industry, A Nontechnical Guide

Please write your answers on this page

Please read Chap 7 (Managing Production)

1. True or False. Once drilling is done, attention focuses on managing oil and gas production from wells safely and economically. Pg. 115
2. Draw a schematic of a Christmas tree. Pg. 115 and done in class

3. True or False. When the reservoir pressure declines, the oil and gas may stop flowing. The well needs artificial lift. Pg. 115, 116
4. True or False. Three types of artificial lift are gas lift, sucker rod pumping and electric submersible pump (ESP). Pg. 116
5. Draw a schematic of gas lift, sucker rod pump and ESP below

6. True or False. Workovers are needed to restore a well to production. Pg. 117, 118
7. List 6 steps that may be involved in a workover. Pg. 118

8. True or False. A recompletion means abandoning an existing completion and moving to a new oil zone. Pg. 118
 9. True or False. Primary production is oil produced by the original pressure in the formation. Normally, it is about 30-35% of the original oil in place. Pg. 119
 10. True or False. Water flood, gas injection and chemical flood are known as “secondary or enhanced or improved oil recovery”. Pg. 119-121
 11. True or False. Associated gas means there is oil with the gas. Pg. 123
 12. True or False. The separator performs initial cleanup, removing water, condensate and sediment. Pg. 124
 13. Draw a gas plant schematic like Fig 7-7, pg. 125
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14. True or False. Acid gas contains hydrogen sulfide and carbon dioxide. Pg. 126
 15. True or False. Flowing acid natural gas and solvents in a tower removes the acid gases from the gas. Pg. 126
 16. True or False. After acid gases are removed, the gas is known as sweet. P 126
 17. True or False. The removal of heavier hydrocarbon gases is known as dehydration. Pg. 126
 18. True or False. Two environmental issues are water quality and air quality. Pg. 127
 19. True or False. NORM is naturally occurring radioactive material. Pg. 128
 20. True or False. Carbon dioxide is a worse greenhouse gas than methane. Pg. 128
 21. True or False. When production ends, wells are filled with cement to “plug and abandon” them. This prevents groundwater contamination and keeps all hydrocarbons downhole. Pg. 128

Maximum test score is 100 points. Each question is 5 points