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a- The issue is what property interest does a leaseholder possess.

Breck owns a fee simple determinable in the mineral estate. The fee simple determinable is a present possessory interest that terminates naturally at the happening of an occurrence. Here, the estate will end on the happening of oil and gas no longer being produced in paying quantities. At the termination of the fee simple determinable, the interest automatically reverts back, with no action being required on the part of the reversionary interest. When oil and gas cease to be produced in paying quantities, the interest in the minerals automatically reverts back to Ally.

The mineral estate is the dominant estate and the surface estate is the servient estate. The mineral estate owner has a duty to produce the minerals as a reasonably prudent operator would. He has a duty to explore and produce the minerals, account to the surface owner, and not interfere unreasonably with the surface owners existing use. As the dominant estate, the mineral owner has the right to access the surface for exploration and drilling operations. The surface owner may not deny the mineral owner access to the surface. The mineral owner is obligated to pay the contracted royalties, and bonus and delay rentals. Breck must pay the bonus at time of contract, and pay the delay rentals if he does not have a well that is producing in paying quantities at the end of the 5 years. If the delay rental is paid, that will keep the lease alive. If the delay rental is not paid and there is no well producing in paying quantities, the lease ends and the mineral interest reverts back to Ally.

Breck is obligated to pay Ally 1/8 royalty of production free from any cost of production, along with one-time payment of bonus payments, and delay rentals only if no well producing paying quantities exists at the end of 5 years.

b- Ally owns the surface estate in fee simple absolute, and owns a possibility of reverter in the mineral estate. A possibility of reverter is a future possessor interest that exists at the end of a fee simple determinable. As stated above, at the termination of the fee simple determinable, the mineral interest will automatically revert back to Ally.

Ally is obligated to accommodate Breck in granting him access to explore the land and conduct drilling operations. Ally is obligated to let Breck use the surface, as long as it does not unreasonably interfere with any existing use.

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Under Texas law, there are generally 9 substances that belong to the surface owner-
- Caliche
- Surface lignite
- Water
- Sand
- Building stone
- Sand stone
- Iron ore
- Clay