MINERAL-RESOURCE POTENTIAL IN NEW MEXICO

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Mineral resources are the naturally occurring concentrations of materials (solids, gas, or liquid) in or on the earth’s crust that can be extracted economically under current or future economic conditions. Most of the state’s mineral production comes from oil, gas, coal, copper, potash, industrial minerals and aggregates. Oil and gas are the most important extractive industries in New Mexico in terms of production value and revenues generated. Other important commodities include a variety of industrial minerals (potash, perlite, cement, zeolites, etc.), sulfuric acid, molybdenum, gold, uranium, and silver. The mineral-resource potential of an area is the probability or likelihood that a mineral will occur in sufficient quantities so that it can be extracted economically under current or future conditions, including the occurrence of undiscovered concentrations of metals, critical minerals, other nonmetals, industrial materials, and energy resources. The mineral-resource potential is not a measure of the quantities of the mineral resources, but is a measure of the potential of occurrence. Factors that could preclude development of the resource, such as the feasibility of extraction, land ownership, accessibility of the minerals, or the cost of exploration, development, production, processing, or marketing, are not considered in assessing the mineral-resource potential. Evaluations of mineral-resource potential are useful for estimating mineral availability, aid government officials in land-use planning (including potential withdrawal of lands from mineral production), and delineate areas requiring more geologic investigation. Government officials are required to make decisions regarding use, acquisition, and restriction of lands (including land exchanges) that could have known or even suspected mineral-resource potential. The mineral-resource potential of an area is the probability or likelihood that a mineral will occur in sufficient quantities so that it can be extracted economically under current or future conditions, including the occurrence of undiscovered concentrations of metals, nonmetals, industrial materials, and energy resources. The mineral-resource potential is not a measure of the quantities of the mineral resources, but is a measure of the potential of occurrence. Mineral-resource potential is a qualitative judgment of the probability of the existence of a commodity and is classified as very high, high, moderate, low, or no potential according to the availability of geologic data and relative probability of occurrence. Factors that could preclude development of the resource, such as the feasibility of extraction, land ownership, accessibility of the minerals, or the cost of exploration, development, production, processing, or marketing, are not considered in assessing the mineral-resource potential. The evaluation process is complex and involves integration of geologic maps with numerous geologic, mineral, and economic databases. The process is based upon geologic analogy of promising or favorable geologic environments with geologic settings of known economic deposits. Current studies at NMBGMR assesses the mineral-resource potential throughout New Mexico, including critical minerals.

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pp. 46
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