

## 1: Mining Safety | Mining Health and Safety Legislation in South Africa

*Mineral and Mining Lawyer in South Dakota and North Dakota Minerals Law & Litigation for Landowners, Exploration, Drilling Companies & More. Ganje Law Offices handles transactional and litigation matters that include.*

Some states have banned drilling, while others permit oil drilling off their coastlines to encourage economic development, and state governments often receive significant tax revenue benefits. A number of coastal states are considering legislation in response to the April explosion of British Petroleum Deepwater Horizon offshore drilling rig. Louisiana, North Carolina, New Jersey and South Carolina have introduced bills relating to oil spill clean up plans, recovery for damages and moratoriums on offshore drilling. Clean Up Plans Louisiana introduced and adopted a bill which requests the state and federal government to encourage all entities involved in the environmental clean up effort to utilize Louisiana citizens during the rehabilitation of the Gulf of Mexico. Recovery for Damages North Carolina has two pending bills that remove the cap on the total recovery by the state for damages to public resources and for the cost of clean up arising from a discharge. The bills also direct the coastal resources commission to conduct a review of the environmental and economic effects of recent spills on the gulf coast region. New Jersey has two pending pieces of legislation. The first bans offshore drilling in state waters and prohibits the Department of Environmental Protection from issuing offshore drilling permits. Prior to the rig explosion, five states had introduced bills that would either permit or prevent drilling on their coastlines. Most states that introduced these bills favored allowing drilling offshore, many in return for revenues. South Carolina also is considering two other bills that would allow oil drilling off its coast. Virginia has considered two pieces of legislation, one of which was enacted. House Bill requires that a percentage of offshore natural gas and oil drilling revenues and royalties go to the Transportation Trust Fund, the state Coastal Energy Research Consortium and localities for improvements to infrastructure and transportation. California is considering legislation that would create a board to approve oil or gas extraction from lands in the State Coastal Sanctuary. Louisiana is reviewing a bill that urges Congress to end the outer continental shelf moratorium on oil and natural gas exploration and production. Conversely, New Jersey introduced legislation opposing offshore oil drilling. The pending legislation prohibits the state Department of Environmental Protection from issuing permits or approving activities associated with offshore drilling for oil or natural gas. Offshore Oil Drilling Laws Some of the most interesting state offshore oil drilling laws focus on liability issues, drilling prohibitions and taxes on offshore drilling. Laws in California, North Carolina and Texas make any responsible party liable for an oil spill. Florida and Virginia prohibit drilling along their coastlines. Florida does not allow permits for or construction of structures intended for oil drilling within one mile of the seaward boundary of any state, local or federal park or aquatic or wildlife preserve. Virginia prohibits drilling for oil in the waters of the Chesapeake Bay or any of its tributaries. Those who want to drill in a prohibited area, however, may apply for a permit by submitting an environmental impact assessment to the Department of Mines, Minerals and Energy. Alabama and Florida tax offshore drilling. Alabama collects tax from any party drilling for oil in the waters of the state. The amount of the tax is measured at 8 percent of the gross value of the oil at the point of production. The tax on offshore production produced from depths greater than 8, feet below sea level is not computed as a percentage of gross value, but as a percentage of gross proceeds. Florida imposes a coastal protection tax on each barrel of pollutants produced in Florida or imported into the state. If a discharge of catastrophic proportions occurs, the secretary of environmental protection may increase the excise tax for a period of time.

### 2: Mineral Rights | Oil & Gas Lease and Royalty Information

*Mining and Oil Drilling Laws Chatten-Brown & Carstens has opposed a number of oil drilling and mining projects over the years, including fighting oil drilling into Santa Monica Bay; gravel mining near the City of Ojai; and mining in the County of Amador.*

As part of the groundwater information required in the Regulations, determination of the quality of subsurface water includes the analysis of common inorganic groundwater constituents plus certain trace metals. Monitoring plans for pre-mining, mining, and post-mining conditions are required, normally on a three-month basis, in order to track variations in water-quality parameters. Surface mining requires groundwater monitoring at many stages. Groundwater monitoring, both sampling for water-quality analysis and measurement of water level, is required for one year on a quarterly basis for the baseline information that is submitted with the initial permit application. In addition, the mining companies are required to submit plans for quarterly groundwater monitoring during mining and post-mining reclamation activities for RRC review and approval. Monitoring is done by or on behalf of the mining companies, which are required to submit the analytical results to the RRC on a quarterly basis. Various commercial laboratories perform chemical analyses for the mining companies and some have in-house laboratories. Therefore, the RRC has no direct control over the quality of the chemical analyses reported by the companies. Methods for evaluating the results of chemical analyses ionic balance are being exercised by the mining companies and the RRC. Monitoring by the RRC is generally conducted only during investigations for some specific reason, such as water-quality complaints. The RRC no longer maintains a laboratory, and chemical and physical analysis of samples collected by enforcement personnel are sent to a commercial laboratory under contract with the Division. Typically about contamination complaints are investigated annually by RRC field personnel. To date, investigations have not borne out any confirmed contamination cases. There have been no confirmed contamination cases in the Surface Mining and Reclamation Program. Groundwater impacts related to the initial and current mining activities are almost totally associated with aquifer-head drawdowns and declines. It may take years to decades for the spoils areas to become re-saturated and the groundwater contributions from the spoils areas to start affecting adjacent aquifers and stream baseflow. At that time, the preventive nature of the RRC permitting and enforcement activities should minimize the type of groundwater contamination expected from the spoils areas. Sand and gravel pits are regulated from a safety aspect by the RRC if the pit is located within feet of a public roadway. Mining and reclamation of these pits are not regulated under State law. If the sand or gravel operations will affect groundwater quality, have a surface-water discharge or create a point-source air discharge, the operation may be regulated by the Texas Commission on Environmental Quality TCEQ.

### 3: A modern land run? Trump move opens Utah to mining claims under law | Reuters

*The Mining Law requires the performance of annual assessment work for each claim, and subsequent to enactment of the Federal Land Policy and Management Act of 1872, 43 U.S.C. §§ 201 et seq., mining claims are invalidated if evidence of assessment work is not timely filed with BLM.*

Miners and prospectors in the California Gold Rush of 1849 found themselves in a legal vacuum. Although the US federal government had laws governing the leasing of mineral land, the United States had only recently acquired California by the Treaty of Guadalupe Hidalgo in 1848, and had little presence in the newly acquired territories. California miners spread the concept all over the west with each new mining rush, and the practices spread to all the states and territories west of the Great Plains. At the end of the American Civil War in 1865, some eastern congressmen regarded western miners as squatters who were robbing the public patrimony, and proposed seizure of the western mines to pay the huge war debt. In June 1872, Representative George Washington Julian of Indiana introduced a bill for the government to take the western mines from their discoverers, and sell them at public auction. Representative Fernando Wood proposed that the government send an army to California, Colorado, and Arizona to expel the miners "by armed force if necessary to protect the rights of the Government in the mineral lands. In 1872, Congress passed a law that instructed courts deciding questions of contested mining rights to ignore federal ownership, and defer to the miners in actual possession of the ground. Chaffee Act, passed and was signed on July 26, 1872. The mining law of 1872 had given discoverers rights to stake mining claims to extract gold, silver, cinnabar the principal ore of mercury and copper. When Congress passed the General Mining Act of 1872, the wording was changed to "or other valuable deposits," giving greater scope to the law. The law was codified as 30 U.S.C. The remainder of the placer-claim, or any placer-claim not embracing any vein or lode claim, shall be paid for at the rate of two dollars and fifty cents per acre, together with all costs of proceedings;. This price set by law has remained the same since 1872. Investors in an alleged diamond deposit in the western United States that became known as the Diamond Hoax of 1872 paid Benjamin F. Butler for amending the General Mining Act of 1872 to include the terms "valuable mineral deposits" in order to allow legal mining claims in the diamond fields. NO Prospecting, Panning, Sluicing South Yuba River, California photo. A mining claim is the right to explore for and extract minerals from a tract of land. Once the claim is staked, the prospector documents the claim by filing required forms. Originally the forms were filed with the mining district recorder; today they are filed with the Clerk of the County in which the claim is located, and with the US Bureau of Land Management. Papers are likewise filed to document annual assessment work. Land dedicated for specific uses such as the White House lawn, national parks, or wilderness areas, is not subject to mineral entry. Land west of the Great Plains managed by the US Forest Service or the Bureau of Land Management, unless designated as wilderness area, is generally open to mining claims. Federal land on or east of the Great Plains was generally acquired by the federal government through purchase, and so is not considered public domain, and is not subject to mining claims. Since 1872, the list of locatable minerals does not include petroleum, coal, phosphate, sodium, and potassium. Rights to explore for and extract these are leased through competitive bidding. Common construction material such as sand and gravel are obtained by purchase. For instance, the failure to prosecute the work on the tunnel for six months is considered the abandonment of rights to all the undiscovered veins on the line of the tunnels. If this does not occur, the claim or mine upon which such failure occurred shall be made to relocation in the same manner as if no location of the same had ever been made. The original mining law gave miners the opportunity to obtain patents deeds from the government, much as farmers could obtain title under the Homestead Act. The owner of a patented claim can put it to any legal use. The process of patenting claims has been perhaps the most controversial part of the mining law. Because of a Congress-imposed moratorium, the federal government has not accepted any new applications for mining claim patents since October 1, 1993. This gave the owners of the surface outcrop of a vein the right to follow and mine the vein wherever it led, even if its subsurface extension continued beneath other mining claims. This provision, also known as the law of the apex led to lengthy litigation and even underground battles, especially in Butte, Montana and the Comstock Lode. Subsequent

changes to the law include: Timber and Stone Act , an law that allowed private purchase of minable government land was codified as 43 U. Since 1 October Congress has imposed budget restrictions which have prevented the Bureau of Land Management from accepting new applications for patents on mining claims. Many of the provisions of FLPMA revised the surface uses allowed on mining claims under the mining law by halting or restricting unnecessary or undue degradation of the public lands. These regulations were updated and the final rules published in December These rules effectively replace many of the Mining Law provisions and require mining reclamation, financial guarantees for reclamation to the Federal government, mining claim occupation permits and detailed Mining Plans of Operations to be submitted to the governing agencies before disturbing the surface. Richard Pombo R, California lost the election and was replaced by Nick Rahall from West Virginia , who has been a strong critic of the mining industry. Don Young R- Alaska believe that the Surface Management regulations [35] address modern day concerns and that implementing further restrictions on the industry or imposing royalties would force even more of the domestic mining industry out of the country. As stated by Congressman Pearce, "Why would we as a nation want to send our metals and uranium mining off shore, then wind up reliant on foreign countries for the raw materials we need for our industries and new power plants. We need to learn from past mistakes such as our reliance on the middle east for our petroleum products. Mining of private mineral rights including patented mining claims would not have been affected. In addition, a reclamation tax of from 0. The royalties and reclamation taxes would be used to reclaim abandoned hardrock mines. Interior Secretary Ken Salazar stated "There is a new administration in town, and we want to see the mining law reformed.

## 4: DMME - Laws and Regulations

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Back to top 3. There are no restrictions on the types of entity that can hold reconnaissance, exploration and mining rights. An application for reconnaissance, exploration or mining rights can be made by an individual or a company incorporated under the Corporations Act Cth. It is most common for a company to hold reconnaissance, exploration and mining rights. Such rights may be held under an incorporated joint venture structure i. The entity holding the rights can be a foreign entity or owned directly or indirectly by a foreign entity. The regime applies to: Applications are assessed against the national interest, which is generally determined by reference to factors including national security, competition, federal government policies including tax, the impact on the economy and the community and the character of the investor. Foreign government investors are subject to more rigorous screening than other investors. There are two mechanisms by which the FATA governs transactions: For significant actions, the Treasurer has broad powers to make orders if satisfied that the transaction would be contrary to the national interest. The transaction may be prohibited, or, if it has already occurred, an order may require disposal. The Treasurer can also impose binding conditions whether or not the foreign investor asks for FIRB approval if necessary, to ensure the transaction is not contrary to the national interest. The risk of adverse orders is removed if FIRB approval for the transaction is obtained. For notifiable actions, there are criminal penalties if FIRB approval is not obtained before proceeding. There is an exemption for tenements granted directly by the Australian government however, this does not apply to foreign government investors. Acquisitions of interests in exploration and prospecting tenements may be notifiable in certain circumstances. The relevant question is whether the exploration or prospecting tenement gives a right to occupy Australian land for a term including extensions and renewals that is reasonably likely at the time of grant to exceed five years. This will depend on the nature of the rights conferred by the relevant State, Territory or Commonwealth legislative regime. Entering into, or terminating, an agreement with the holder of a mining or production tenement, where the total value of the business exceeds the monetary thresholds outlined above and the action results in a change in control of the business, is also a significant action. Agreements include those relating to leasing assets, the right to use assets, participating in profits or management and control of the business. Agricultural land register Foreign persons are also required to register certain interests in Australian agricultural land, as well as any new acquisitions or divestments of such interests. Agricultural land includes land in Australia that is used, or that could reasonably be used, for a primary production business. There are, however, some limited exemptions in the definition for certain types of land associated with mining and oil and gas projects. Ownership by indigenous persons or entities is not a standard condition or requirement. There are no free carry rights or options to acquire shareholdings in favour of States, Territories or the Commonwealth.

### 5: Mining | Texas Groundwater Protection Committee

*At the Lewisville, Texas, law firm of Neal Ashmore, we have handled dozens of divorce cases involving mineral and drilling rights in Denton County, Dallas County, Collin County, Wise County, Tarrant County and other counties across Texas.*

About Us Federal Laws The Bureau of Land Management BLM leases minerals and manages oil and gas development activities on over million acres of BLM and other federal lands, as well as private lands where mineral rights have been retained by the federal government. The Forest Service identifies areas on national forest system lands where leases can be sold and will determine the appropriate lease stipulations necessary to protect surface resources. The BLM issues the lease and manages the sub-surface operations, but the Forest Service and other land management agencies manage the surface operations throughout the drilling process on their lands. Under these laws, the BLM has the authority to approve or deny oil and gas leases or to impose environmental restrictions on leases when appropriate. Federal Oil and Gas Statutes The federal government owns, and the BLM and other federal agencies manage, most of the land suitable for oil and gas development in the United States. An additional 56 million acres of split estates also exist, in which private individuals own surface rights and the federal government owns subsurface mineral right. The BLM leases federal minerals and manages these oil and gas leases, in cooperation with other federal agencies or private surface owners where appropriate. The General Mining Act of was the seminal law regarding mineral management on federal lands in the United States. However, this act was implemented primarily to deal with hard-rock mining, and it was not until the enactment of the Mineral Leasing Act of that a comprehensive system was developed for managing oil and gas development on federal lands. Since , the Mineral Leasing Act has been modified by several amendments and elaborated upon by the implementation of new statutes. These are discussed below. Mineral Leasing Act of 30 U. The Act articulates a national interest to foster and encourage private enterprise while mitigating adverse environmental impacts. FLPMA provides an express congressional policy aimed at retaining federal control and possession over valuable lands and mineral resources. As a result, the FLMPA established additional land and resource management authorities; it also amended, or repealed provisions on federal land withdrawals, land acquisitions and exchanges, right-of-way, and the general organization and administration of BLM and the public lands. FLPMA established multiple use, sustained yield, and environmental protection as the guiding principles for public land management. Specifically, BLM must take any action necessary to prevent unnecessary or undue degradation of the lands. Typically, oil and gas lessees pay the federal government royalties of The Act changed the analysis process from responsive to proactive. The BLM administers the lease but the Forest Service has more direct involvement in the leasing process for lands it administers. The Act also established a requirement that all public lands that are available for oil and gas leasing be offered first by competitive leasing. Federal Environmental Statutes The following are very brief summaries and links to some of the major environmental statutes applicable to oil and gas development. At the heart of NEPA is the requirement that environmental impact statements EISs be prepared for all major federal agency actions significantly affecting the human environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste as these sites, and established a trust, funded by a tax on the chemical and petroleum industries, to provide cleanup when no responsible party could be identified. The CWA aims to protect water quality through development of water quality standards, anti-degradation policies, water quality permitting procedures, water body monitoring and assessment programs, and elimination or point and nonpoint pollution sources. The CWA regulates the National Pollutant Discharge Elimination System NPDES permitting process, which establishes, through a permit, pollutant limits on the discharge of produced water that generally include a volume quantity and concentration quality. There are two types of permits under the NPDES program that allow for the discharge of pollutants from point sources. These are individual permits, which are specific to an individual facility, and general permits, which cover multiple facilities within a specific permit category. The act prescribes the measures that federal agencies, state and

local governments, and polluters in business and industry must take in order to decrease air pollution in the country. This act was last amended in Federal Oil and Gas Regulations The Bureau of Land Management promulgates regulations, which are enforceable as law, upon oil and gas developers. The BLM also issues administrative orders and notices to carry out its authority, which are published in the Federal Register. Additionally, other agencies such as the EPA and Forest Service, promulgate rules and regulations that impact oil and gas development. Rules of particular interest include: Stipulations shall become part of the lease and shall supersede inconsistent provisions of the standard lease form. If the authorized officer has determined, prior to lease issuance, that a stipulation involves an issue of major concern to the public, modification or waiver of the stipulation shall be subject to public review for at least a day period. Provides a detailed analysis of the steps operators must perform in order to gain approval through the BLM. Defines Best Management Practices as practices that provide for state-of-the-art mitigation of specific impacts that result from surface operations and that BMPs are voluntary unless they have been analyzed as a mitigation measure in the environmental review for a Master Development Plan, APD, Right of Way, or other related facility and included as a condition of approval Forest Service Regulations affecting Oil and Gas lease management are found in Title 36 of the Code of Federal Regulation in Part , and can also be found in the Forest Service Manual. Federal Oil and Gas Policy and Guidance The following are various guidelines and policy statements issued by the BLM aimed at guiding oil and gas development throughout the United States in an environmentally conscious manner and at increasing understanding of and compliance with current oil and gas laws and regulations. Bureau of Land Management. The Gold Book, prepared and issued by the BLM now in its Fourth Edition , is the foremost federal resource for oil and gas developers operating on federal leases. The Gold Book provides guidance regarding how to comply with BLM regulations, policies, and guidelines across the entire range of development from planning to production. The Gold Book also instructs field offices to incorporate appropriate BMPs into Applications for Permit to Drill and associated on- and off- lease rights-of-way approvals. Consolidates and further refines sometimes conflicting exception, waiver, and modification guidance contained in law, regulations, handbooks, and other guidance documents. The Purpose of the Awards Program is to promote and showcase the finest examples of responsible fluid minerals resource development on Federal, Indian Trust, and Federal split estate lands, and to recognize oil, gas, and geothermal operators and their partners who demonstrate leadership and creativity in reducing the impacts of energy development. The Split Estate Report to Congress may be found at [http:](http://) The IM mainly deals with off-site mitigation. BLM - Manual Series: Visual Resource Management VRM - Provisions of the VRM manual require operators to comply with visual resource management objectives for all activities that alter landforms, disturb vegetation, or require structures. A primary consideration is the selection of a paint color that allows long-term facilities to blend in with the natural landscape background. BLM - Roads Manual - The Roads manual provides detailed guidance specific to constructing and maintaining roads for oil and gas lessees on federal land and provides BMPs to minimize environmental and riparian impact and mitigate interference with wildlife habitats. The handbook also recommends common methods to mitigate environmental harm caused by building roads on Forest Service land. The guidance includes a description of the oil and gas development process and briefly summarizes laws applicable to development.

## 6: Federal statutes, regulations, guidelines, and policies related to oil and gas surface operations

*Laws and Regulations. Coal Mining. Coal Mine Reclamation Laws (includes rules specific to drilling in Tidewater Virginia).*

How they arise and how their effects can be mitigated Overview Unregulated mining has the potential to release harmful substances into the soil, air, and water. Mission proposes that governments enforce regulations on companies and use cutting-edge technology to reduce the damage from mining-related sources. As more mines open in countries with varying levels of environmental protection, it is increasingly vital that safeguards established by the Strategic Minerals Association SMA are in place before operations proceed see the international regulation page. Environmental Damages of Mining Open pit mining Open pit mining, where material is excavated from an open pit, is one of the most common forms of mining for strategic minerals. This type of mining is particularly damaging to the environment because strategic minerals are often only available in small concentrations, which increases the amount of ore needed to be mined. Environmental hazards are present during every step of the open-pit mining process. Hardrock mining exposes rock that has lain unexposed for geological eras. When crushed, these rocks expose radioactive elements, asbestos-like minerals, and metallic dust. During separation, residual rock slurries, which are mixtures of pulverized rock and liquid, are produced as tailings, toxic and radioactive elements from these liquids can leak into bedrock if not properly contained. Underground Mining Underground mining has the potential for tunnel collapses and land subsidence Betournay, It involves large-scale movements of waste rock and vegetation, similar to open pit mining. Additionally, like most traditional forms of mining, underground mining can release toxic compounds into the air and water. As water takes on harmful concentrations of minerals and heavy metals, it becomes a contaminant. This contaminated water can pollute the region surrounding the mine and beyond Miranda, Blanco-Uribe Q. Mercury is commonly used in as an amalgamating agent to facilitate the recovery of some precious ores Miranda et al. Mercury tailings then become a major source of concern, and improper disposal can lead to contamination of the atmosphere and neighboring bodies of water. Most underground mining operations increase sedimentation in nearby rivers through their use of hydraulic pumps and suction dredges; blasting with hydraulic pumps removes ecologically valuable topsoil containing seed banks, making it difficult for vegetation to recover Miranda et al. Deforestation due to mining leads to the disintegration of biomes and contributes to the effects of erosion. In situ leach ISL mining ISL mining has environmental and safety advantages over conventional mining in that the ore body is dissolved and then pumped out, leaving minimal surface disturbance and no tailings or waste rock World Nuclear Association, There is no ore dust or direct ore exposure to the environment and a lower consumption of water is needed in the mining process International Atomic Energy Agency [IAEA], However, the strong acids used to dissolve the ore body commonly dissolve metals in the host rock as well. The fluids remaining after the leaching process commonly contain elevated concentrations of metals and radioactive isotopes, posing a significant risk to nearby ground and surface water sources IAEA, Additionally, the low pH of ISL mining wastewater can result in acidification of the surrounding environment. Heap Leaching Environmental issues with heap leaching are centered on the failure to keep process solutions within the heap leaching circuit. Release of toxic heap leaching fluids into the environment can affect the health of both the surrounding ecosystem and human population Reichardt, In some cases cyanide is used to extract metals from oxidized ores and the resulting leach ponds have caused significant wildlife mortality, including the deaths of about 7, animals between and at cyanide-extraction ponds in California, Nevada, and Arizona Eisler, Brine Mining Brine mining involves extracting and evaporating the brine solutions to remove harmful elements and compounds Gruber et al. The drilling and transport of brine solutions can disrupt existing ecosystems and well casings, pipelines, and storage tanks are subject to corrosion due to the high salinity content of the solutions that they are exposed to, which can lead to leaks and contamination of adjacent bodies of water New York State Division of Mineral Resources, Currently, there is no economically plausible plan to clean up contamination of an aquifer by sodium chloride and harmful concentrations of chloride inhibit plant growth and can cause fish kills Division

of Mineral Resources, Specific Contaminant Materials Radionuclides All REE-bearing minerals contain low levels of the radioactive isotopes that can become concentrated in mine tailings. Radionuclides are released as dust during mining or from exposed waste rock stockpiles where they are least containable and mostly airborne. Radiation can also leak into the ground, and nearby water sources after they have been separated into tailings, if the tailings are not stored safely. Another example of harmful dust generated is flue dust, a byproduct of mining fluorine. The following chart details how these contaminants enter the environment during mining and refining. Current mining and refining techniques make contaminant release common. This chart illustrates the many environmental hazards associated with mining. Additional Environmental Problems with Mining: In addition to the issues addressed above, there are many other environmental issues associated with mining: Carbon output Mining, like most heavy industries, is dependent on fossil fuels, which generate the energy needed to operate a mine. To combat these carbon emissions, some countries have enacted regulations requiring emission credits, but many countries do not have codes dealing with carbon output "Molycorp, inc. Some form of environmental standards are needed for larger countries like China and Russia, and other developing countries that mine large volumes of strategic minerals. Erosion and endangered species habitat Mining is an inherently invasive process that can cause damage to a landscape in an area much larger than the mining site itself. The effects of this damage can continue years after a mine has shut down, including the addition to greenhouse gasses, death of flora and fauna, and erosion of land and habitat. An example of the scarred land of a Chinese mine is shown above. Water use and wastewater Most modern mining techniques have high water demands for extraction, processing, and waste disposal. Wastewater from these processes can pollute water sources nearby and deplete freshwater supplies in the region surrounding the mine. Some mines, such as the Mountain Pass mine in southern California, have implemented waste-water recycling technologies, resulting in a huge decrease in water demands and liquid waste Molycorp, Case Studies We have compiled three short case studies of environmentally-harmful mines, to illustrate the results on the environment and surrounding community of poorly regulated or monitored mines. However, the tailings disposal plan involved storing tailings in the Taseq lake, which will cause pollution of not only the lake, but the rivers leading from it and the ocean beyond. Fluorine, heavy metals, and radioactive decay products would all be introduced into the lake by these tailings Schuler et al, Due to the lack of environmental regulations from Denmark, the country overseeing the project, plans for the mine continue to move forward, despite the harmful effects it would have on the environment and the surrounding community. China Current estimates state that around 20, tons of REEs are illegally mined and exported from "off-grid" mines in China every year. It is unlikely that any of these illegal mines have environmental safeguards in place, which means that contamination, dust, and other wastes are not being addressed. This affects the health of the workers as well as destroys the surrounding environment Schuler et al, Molycorp In , Molycorp had a problem with its waste disposal at Mountain Pass, when a pipeline leading out to evaporation ponds in the desert burst, spilling radioactive and toxic waste onto the desert floor Danelski, The resulting uncovering of past spills, coupled with economic factors, caused the shutdown of Mountain Pass and a complete reworking of their environmental practices. However, the damage was done and the area and surrounding water sources are affected, perhaps permanently. Case studies like these illustrate the result of ignoring the environmental damages of mining, and leaving them unaddressed or unregulated. See the green mining page for more information. Already mines in China release 9, to 12, cubic meters of toxic gas containing flue dust concentrate, hydrofluoric acid, sulfur dioxide, and sulfuric acid for each ton of rare earth elements produced. Preemptive actions such as stricter regulations and proper waste disposal strategies can reduce the costs of environmental damage, and in some cases pay for themselves. Underground Mining and Its Surface Effects. Expansion in works for S. County mine with troubled environmental past, The Biz Press. Cyanide hazards to fish, wildlife, and invertebrates--A synoptic review. Fish and Wildlife Service Biological Report 85 1. A constraint for electric vehicles? Journal of Industrial Ecology, 00 Guidebook on environmental impact assessment for in situ leach mining projects. The rare earth saga " more entertaining than a soap opera". The principal rare earth elements deposits of the united states" a summary of domestic deposits and a global perspective. A Report to the Legislature. What is iso Investigating rare earth element mine development in epa region 8 and potential environmental impacts R

Recycling of an electric arc furnace flue dust to obtain high grade zno. J Hazard Mater, 1 , Study on rare earths and their recycling. European parliament Retrieved from <http://>

### 7: British Columbia Approves Law Protecting Flathead Drainage From Mining, Drilling

*The General Mining Act of 1872 was the seminal law regarding mineral management on federal lands in the United States. However, this act was implemented primarily to deal with hard-rock mining, and it was not until the enactment of the Mineral Leasing Act of 1920 that a comprehensive system was developed for managing oil and gas development on.*

Three Bottom Lines If we go back in time to the days before drilling and mining, real estate transactions were fee simple transfers. However, once commercial mineral production became possible, the ways in which people own property became much more complex. Today, the leases, sales, gifts and bequests of the past have produced a landscape where multiple people or companies have a partial ownership of or rights to many real estate parcels. Most states have laws that govern the transfer of mineral rights from one owner to another. They also have laws that govern mining and drilling activity. These laws vary from one state to another. If you are considering a mineral rights transaction or have concerns about mineral extraction near your property, it is essential to understand the laws of your state. If you do not understand these laws, you should get advice from an attorney who can explain how they apply to your situation. Large mining trucks are loaded with coal at this surface mine. Here two thick coal seams are being removed. Surface mining involves stripping away all overburden rock and soil above the coal seam, removing the coal, replacing the overburden and revegetating the land. Surface mining completely disturbs the land and produces a new landscape. It can be done when coal seams are close to the surface. Depending upon coal quality and other factors, about ten feet of overburden can be removed for each foot of coal. The fee simple owner may not have the interest or the ability to produce the coal beneath his property but a coal company does. In this type of transaction, the owner wants to sell the coal but retain possession and control of the surface. The coal company wants to produce the coal but does not want to pay an additional price to acquire the buildings and the surface. So, an agreement is made to share the property. The original owner will retain the buildings and rights to the surface, and the coal company will acquire rights to the coal. The transaction can involve all mineral commodities known or unknown that exist beneath the property, or, the transaction can be limited to a specific mineral commodity such as "all coal" or even a specific rock unit such as the "Pittsburgh Coal". When the coal is too deep to surface mine, a mining company will build an underground mine. They can tunnel into the coal seam or drill a large shaft down to the mining level. These shafts are large enough to lower mining equipment and workers into the mine and remove coal. Extra shafts must be built to ventilate the mine. Underground mining can damage the surface because the rooms and passages usually close through collapse or settlement over time. Sometimes the damage occurs after responsible individuals are dead and the mining companies are defunct. Thus, no one to sue. Or, the contract that conveyed the mineral rights gave the mining company immunity. Bureau of Land Management Image. When you buy a car you simply pay for it, file a title transfer with the government and drive the car home. When the car is worn out, it goes to the junk yard and the only thing that remains is a memory. However, when mineral rights are purchased, the buyer and all future mineral rights owners will have a right to exploit the property. And, the seller and all future surface owners must live with the consequences. Usually, mineral extraction will occur at some future time. Mining companies often schedule their equipment and employees years in advance. Or, the mining company might purchase the property as a future "reserve. They are simply buying the property as an investment. Their goal is to sell the mineral rights to a mining company who will assume the duties of production. Speculators who have no intent to mine purchase lots of mineral properties. They are simply attempting to be "middle men" who acquire valuable property from individual owners and broker those properties to mining companies for higher prices. These "speculator" buyers also frequently use options. In an option transaction, they offer the property owner a small amount of money today for the option of buying the property at a specified price on or before a specified date in the future. The speculator then quickly tries to find someone who will pay an even higher price and make a significant profit. If the speculator fails to pay the specified price by the expiration date, the property owner keeps the option payment. When a company buys mineral rights, it also buys the right to enter the property and remove the resource at some future time. In most of these transactions, the surface owner has no say in when the mining

takes place, how it will be done and what will be done to restore the property. Most disagreements between buyers and sellers occur at the time of mining. If the seller wants any control at that time, he must anticipate what might go wrong and write a contract that will preserve his wishes. Keep in mind that your grandson might own the property when extraction occurs. You were paid up front but he will live with the deal. How many tons of coal are down there? This is a fairly easy calculation. An acre-foot of coal is one acre in area and one foot thick. It weighs about tons. Calculating the number of tons of coal beneath a property involves two multiplications. Multiplying the number of acres times the average thickness of the coal would yield the number of acre-feet of coal beneath the property. The number of tons obtained in this calculation is the total tons below. The number of tons that can be recovered will be a much smaller number. A professional geologist or a state geological survey might be able to help you determine if coal seams exist beneath your property. They might also have an estimate of how thick those seams might be. Mineral Leases and Royalties

Sometimes a mining company does not want to purchase a property because they are uncertain of the type, amount or quality of minerals that exist there. In these situations the mining company will lease the mineral rights or a portion of those rights. A lease is an agreement that gives the mining company the right to enter the property, conduct tests and determine if suitable minerals exist there. To acquire this right the mining company will pay the property owner an amount of money when the lease is signed. This payment reserves the property for the mining company for a specific duration of time. If the company finds suitable minerals it may proceed to mine. If the mining company does not commence production before the lease expires, then all rights to the property and the minerals return to the owner. When minerals are produced from a leased property, the owner is usually paid a share of the production income. This money is known as a "royalty payment. It can be a fixed amount per ton of minerals produced or a percentage of the production value. Other terms are also possible. When entering into a lease agreement, the property owner must anticipate any activities that the lessee might do while exploring the property. This exploration might include drilling holes, opening excavations, or bringing machines and instruments onto the property. Defining what is allowed and what restoration is required is part of a good lease agreement. Should you sign a gas lease? A discussion of the factors landowners need to consider before signing a gas lease on their property. Oil and Gas Rights

Mineral rights often include the rights to any oil and natural gas that exist beneath a property. The rights to these commodities can be sold or leased to others. In most cases, oil and gas rights are leased. The lessee is usually uncertain if oil or gas will be found, so they generally prefer to pay a small amount for a lease rather than pay a larger amount to purchase. A lease gives the lessee a right to test the property by drilling and other methods. If drilling discovers oil or gas of marketable quantity and quality, it may be produced directly from the exploratory well. To entice the property owner to commit to a lease, the lessee generally offers a lease payment often called a "signing bonus". This is an up-front payment to the owner for granting the lessee a right to explore the property for a limited period of time usually a few months to a few years. If the lessee does not explore, or explores and does not find marketable oil or gas, then the lease expires and the lessee has no further rights. If the lessee finds oil or gas and begins production, a regular stream of royalty payments usually keeps the terms of the lease in force. One problem that can occur is when the lessee discovers oil or gas but has no way to transport it to market. In addition to a signing bonus, most lease agreements require the lessee to pay the owner a share of the value of produced oil or gas. The customary royalty percentage is Some states have laws that require the owner be paid a minimum royalty often However, owners who have highly desirable properties and highly developed negotiating skills can sometimes get 15 percent, 20 percent, 25 percent or more. When oil or natural gas is produced, the royalty payments can greatly exceed the amounts paid as a signing bonus. Royalty estimation tool for dry natural gas. Stratigraphic Column

Stratigraphic Column: The Marcellus Shale is the target of many gas wells in Pennsylvania. In some parts of the state it is immediately above the Onondaga Limestone. The Utica Shale is located beneath the Onondaga. Here is a quote from the Pennsylvania Department of Environmental Protection website that explains the significance: In fact, your only protection is if your oil or gas property is subject to the Oil and Gas Conservation Law, 58 P.

### 8: Mining and drilling law (edition) | Open Library

*According to me Mining is not only limited to extraction of ores, because coal and diamonds are not ore based still you call it coal mining or diamond mining. Whereas in case of oil and gas, geothermal, water etc it's drilling.*

### 9: Drilling Laws in the United States

*Mining Health and Safety Legislation in South Africa Mining Laws: Skip Navigation Links. marks or indicates shot holes for drilling or sanctions the drilling.*

Heidelberg/Westminster Shorter Catechism The building site English Strictures on American Slavery Misty Memories of Guard Island, Alaska Greshams ghost : challenges to written culture Frederick Macmonnies. 10. Processing Foods without Fish and Crustacean Shellfish (Angelina O. Danquah, Joyce I. Boye and Benjam Six years that shook the world The joy luck club Changing patterns about men, money and romance Building a full wig from scratch BrEr Rabbit in the Briar Patch (Walt Disneys American Classics) Toward a proper understanding of Jesus approach to women. Faithful parents, faithful kids Writing by hand in a digital age Quality relationships in the delivery of care plans Paleo 8 week meal plan Theoretical nursing development and progress New Perspectives on Romance Linguistics: Morphology, Syntax, Semantics, and Pragmatics The machinery of freedom Cities may condemn private homes to make way for commercial development Lapisnica Eduard Limonov Powerpuff Girls Chapter Book #09 Jack and the beanstalk (Gold dust fairy tales) Good health good life joyce meyer Hellenization revisited Bingham of Melcombe Bingham Insight Guides Vietnam Johns Creation; A Model for Understanding the Gospel of John Smith and Wollensky Steak Book Adsorption by Powders and Porous Solids Understanding style Interaction in Cooperative Groups Windows 2000 MCSE Study System Vampire diaries the awakening and the struggle 2007 A History of Science, Technology and Philosophy En hyllning till aporna Twiddledum twaddledum Pragmatic Version Control Using CVS Fundamentals of integrated circuit technology