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## Possible Solutions to the Problem Presented by Missing Owners of Fee Simple Title or Non-Consenting Owners with Coal or Lignite Prospect

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"POSSIBLE SOLUTIONS TO THE PROBLEM PRESENTED BY  
MISSING OWNERS OF FEE SIMPLE TITLE OR NON-CON-  
SENTING OWNERS WITH A COAL OR LIGNITE PROSPECT"

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FEDERAL TRADE COMMISSION, 1973-75.  
SPEAKER AT 17TH ANNUAL ARKANSAS  
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J.D., OKLAHOMA, 1973. MEMBER,  
ORDER OF THE COIF AND OKLAHOMA BAR  
ASSOCIATION.

"A Possible Solution to the Problem Presented  
by Missing Owners of Fee Simple Title or Non-Consenting  
Owners with a Coal or Lignite Prospect"

The size of our estimated recoverable reserves<sup>1</sup> and the present potential for development portend that the oft predicted accelerated expansion of coal production,<sup>2</sup> compelled by the gravity of the energy crisis, is now inevitable. Coal conversion, i.e., the switch by electric utilities or other major fuel burning installations from oil or natural gas to coal as a primary fuel source, as mandated by the Powerplant and Industrial Fuel Use Act of 1978,<sup>3</sup> will provide the primary impetus that will make the opening of new mines a likely prospect.<sup>4</sup> The prospective development of coal reserves entails the problems inherent in acquiring the rights necessary to conduct mining operations. Difficulties in determining the mineral ownership, locating the mineral owner and procuring the mining lease have long plagued mineral development, particularly for oil and gas.<sup>5</sup> However, the magnitude of the coal reserves that may be required to be aggregated to establish a feasible mining unit, and more importantly, the nature of the mining process likely to be contemplated exacerbates the problems inherent in acquiring such rights and may constitute barriers to the opening of new mines<sup>6</sup> and, additionally, preclude the efficient and optimum development of a vitally needed energy source.<sup>7</sup>

The large scale aggregation of reserves is required for the opening of new mines by the dictates of coal conversion,<sup>8</sup>

the predominant market for expanded production. A utility is naturally reluctant to risk the capital required to erect a new coal fired plant or to convert existing plants to coal without a firm supply of reserves dedicated to the life of the plant. To successfully market coal to such a project, the mining operator must have sufficient committed reserves or at least demonstrate the ability to acquire such reserves, to fuel the plant for approximately 30 years.<sup>9</sup> Projections as to the amount of coal required to fuel a moderate size coal fired plant for that period of time range from 790 million tons for bituminuous, a high BTU coal, to 1.5 billion tons for low BTU lignite.<sup>10</sup>

Surface mining, where technologically feasible, will in all probability be the mining process utilized in any coal development project. In the coal mining industry, surface mined coal production currently exceeds the output of deep mined coal,<sup>11</sup> despite the fact that total strippable coal reserves comprise only twelve percent of total recoverable coal reserves.<sup>12</sup> The predominance of surface mining in the development of coal reserves is attributed to its being more economical than deep mining,<sup>13</sup> as it is less labor intensive,<sup>14</sup> inherently safer<sup>15</sup> and yields a greater ultimate recovery of coal reserves.<sup>16</sup> Surface mine projects may also be more quickly developed than deep mines.<sup>17</sup> Furthermore, coal deposits located in close proximity to the surface may only be developed by surface mining.

Surface mining involves the tearing away of the earth's surface and the horizontal extraction of the minerals. Contour mining, utilized in mountainous areas, involves the excavation of a portion of the hill side to expose the seam and permit the

removal of the coal. A "highwall", a vertical bank which marks the limit of the excavation, and a "bench", which is the relatively flat area remaining after the coal is removed, results.<sup>18</sup> "Area" strip mining,<sup>19</sup> applied to relatively flat topography characteristic of the coal fields located west of the Mississippi, entails the following sequence of events: stripping of the top soil by scrapers; removing the remaining overburden by a drag line; and, extracting the coal from the seam by drilling or blasting. Reclamation, the rehabilitation of the surface mined land in accordance with the environmental performance standards mandated by the applicable state reclamation act or, in absence thereof, by the Surface Mining Control and Reclamation Act of 1977<sup>20</sup> (SMCRA), is integrated into and occurs simultaneously with the mining process employed. The equipment, depending upon the size of the mining unit, typically involves high power shovels and drag lines that frequently are the largest land moving machines in the world.<sup>21</sup>

After processing, the coal has to be transported from the mine to the coal fired plant which may be located vast distances away. To eliminate the high costs and other problems inherent in the long distance transportation of coal, on-site utilization has occurred or is planned, particularly with respect to low BTU coal situated in the Southwest, in which a "mine mouth" coal fired plant is erected near the mine site, with the generating facilities clustered nearby to transmit the electricity by power lines to the distant market.

Obviously, during the mining and reclaiming process the surface of the land is radically disturbed and its beneficial use is thereby foreclosed for an extended period of time. The

mine operator may also deem it practical to occupy all of the land within the confines of the mining unit for plant and equipment storage and utilization throughout the life of the project.<sup>22</sup> Additionally, although exceptions to the contrary have been observed, the expectation is that the market and utility value of the land will be lower after reclamation.<sup>23</sup>

The amount of land necessary for inclusion in the mining unit to accumulate a sufficient amount of committed reserves and the complications inherent in surface mining increase the likelihood that some landowners will "hold out", i.e., refuse to grant the necessary rights to the mine operator. The purpose of this article is to examine the problem of "hold out"<sup>24</sup> acreage and to speculate on how its obvious solution, legislation requiring the forced sale of the non-committed interest, should be structured in order to be equitable and, as well, to encourage the most efficient and optimum development of coal reserves.<sup>25</sup>

An examination of the "hold out" acreage phenomena and its potential legislative solution necessitates an analysis of the following relevant subjects: the Surface Mining Control and Reclamation Act of 1977; the mining rights incident to the surface mining of coal; the current practices in the industry of acquiring such rights; and, finally, the structure and function of the proposed statutory scheme, including compensatory measures.

#### The Surface Mining Control and Reclamation Act of 1977

The Surface Mining Control and Reclamation Act of 1977<sup>26</sup>  
(hereinafter referred to as SMCRA), a product of a long and tur-

bulent congressional effort,<sup>27</sup> is central to any compulsory mining right acquisition scheme which contemplates surface mining as the process for coal extraction. The applicable reclamation requirements, particularly the environmental performance standards which largely determines the consequence of surface mining to the physical condition of the land, are relevant to the nature of the property interest that the mining operator will have to acquire as well as to the compensation to be paid. Additionally, when the "hold out" acreage is surrounded by or adjacent to reserves included within the mining unit, the ability to satisfy the "offsite" environmental performance standards required to surface mine the committed acreage will bear on the necessity of the proposed statute.

Historically, surface mining has been distinguished by severe environmental disturbances occasioned by inadequate or non-existent reclamation attempts stemming from an absence of effective regulatory legislation.<sup>28</sup> Strip mining without adequate reclamation disrupted vast areas of surface land, wildlife habitat and hydrological systems,<sup>29</sup> The landscape was scarred by deep depressions and ugly spoil banks of overburden incapable of supporting animal or plant life. The instability of the soil after stripping resulted in erosion and landslides. Phosphates, pyrites or other highly mineralized or toxic materials drained from the mine site and polluted streams and lakes. Blasting disrupted underground water formations and toxic or acid water from the affected mine site leached into the underground water table and contaminated ground water supplies. The displacement of water in streams and lakes by silt and the ac-

celerated rate of drainage from the bared stripped site resulted in widespread flooding. The damage resulting from erosion, landslides, flooding and water pollution as an incident of insufficient regulation of surface mining was not restricted to the mine site but effected off-site areas, frequently encompassing broad geographic zones, and yielded property damage, and occasionally, personal injury,<sup>30</sup> to private individuals, as well as severe disturbances of the environment.

Besides the grotesque disfiguration of the landscape, the cumulative harm to the environment, and the visitation of the evils of spoiled wells, polluted water and flooding of adjacent property owners; inadequately restored lands frequently were totally unproductive and failed thereafter to make any beneficial contribution to the local economy.<sup>31</sup> The owners, generally the mine operator, abandoned the property. The assessed valuation for ad valorem tax purposes was at most, de minimis, and the tax base of the local community declined.<sup>32</sup> Strip mining without adequate reclamation over a broad geographic area seriously impacted on local economies and created pockets of poverty.<sup>33</sup>

Congress, in passing the SMCRA, recognizing that increased surfaced mined coal production is inevitable if coal production expands to meet the nations energy needs, intended to minimize the attendant adverse environmental effects by making reclamation a prerequisite to the surface mining of coal.<sup>34</sup> In effect, surface mining was only to be a temporary and not a terminal land use.<sup>35</sup> Basically, this goal was to be achieved by establishing a regulatory process in which antecedent to the actual surface mining, the mine operator's reclamation plan, conform-

ing to the basic environmental performance standards promulgated in the Act, is determined by the regulatory agency to be adequate, feasible and capable of implementation to ensure the prospective use and productivity of the effected land.<sup>36</sup> Thereafter, rigorous application of effective enforcement provisions was to ensure that the reclamation scheme is effectuated as approved.<sup>37</sup>

The fundamental theory of the Act is that surface mining is to be prohibited unless, with the burden of proof being placed on the mine operator, the attendant detrimental environmental effects, both on-site and off-site, can be avoided. Also, by merging the process of reclamation into the formative stage of the mining project, the Act further enhanced the opportunity to achieve effective reclamation. Surface mining and reclamation are integrated: no longer is stripping the paramount concern of the mining operator with reclamation merely being an "after thought" that is hastily conceived and poorly executed.<sup>38</sup> The increased emphasis on land restoration should result in greater success in reclamation projects. Additionally, as adequate reclamation is expensive in that it requires methodical and definitive planning and detailed construction efforts, the Act externalizes that cost into the price of coal.

The SMCRA entails a complex statutory scheme which establishes a federal administrative agency, the Office of Surface Mining and Reclamation Enforcement (OSMRE)<sup>39</sup> to administer statutorily delineated environmental performance criteria and stringent enforcement procedures to attain the legislatively mandated standard of reclamation. A federalist approach is also incorporated in that a state may adopt its own statutory scheme,

with appropriate enforcement procedures, so long as the environmental performance standards and enforcement provisions, as determined by the OSMRE, either equal to or exceed in their rigorousness the "minimum" standards contained in the Act.<sup>40</sup> Absent such state action, the SMCRA is applicable. During the period in which the states are promulgating their statutory scheme or awaiting federal approval, interim regulations have been promulgated and enforced by the OSMRE.<sup>41</sup> Due to the prolixity of the federal regulations and the fact that most state programs have not been approved by the OSMRE, merely the federal act will be analyzed.<sup>42</sup>

The statutory framework simply requires the mining operator to obtain a permit from the appropriate agency,<sup>43</sup> either the federal OSMRE or the state agency administering the approved state program, in order to undertake a strip mining project. As a prerequisite to being granted, the application for the permit must describe the proposed mining and reclamation plan in sufficient detail to affirmatively demonstrate that the reclamation plan can be accomplished.<sup>44</sup> The plan must also demonstrate, and the agency must find in writing, that certain statutory prescribed minimum environmental performance standards will be satisfied before the permit may be granted.<sup>45</sup> Additionally, the application permit must describe in detail: the hydrology of the area;<sup>46</sup> the probable consequences of the mining and reclamation on both the on-site and off-site hydrological balance<sup>49</sup> and the agency must find, in writing, that the scheme has been designed to prevent material hydrological damage to the off-site area.<sup>48</sup>

The permit, if issued, operates as follows: initially has a duration of five years;<sup>49</sup> will terminate for failure of the operator to timely commence surface mining operations;<sup>50</sup> may be renewed beyond the five year period with respect to areas within the boundaries of the plan;<sup>51</sup> and, will terminate if the terms and conditions of the approved plan are not being satisfied.<sup>52</sup>

Reclamation, as contemplated by the approved plan, is ensured by the requirement that a performance bond be submitted, prior to issuance of the permit, sufficient to pay a third party to perform all of the reclamation work in the event of forfeiture.<sup>53</sup> Additionally, continuous supervision of the implemented reclamation project to ensure compliance with the permit conditions is provided by on-site mine inspections,<sup>54</sup> along with the submission of monthly reports containing<sup>55</sup> in depth data on the progress of the project by the mining operator.

Civil penalties of \$5,000 fines per day may be assessed for violations of any permit conditions.<sup>56</sup> Criminal penalties, \$10,000 per day fine or imprisonment of not more than one year or both,<sup>57</sup> is provided for willful and knowing violation of a permit condition or the making of a known false representation in a permit application.<sup>58</sup>

The environmental performance standards establish the minimum criteria for reclamation. The central requirement is that the land must be restored to its capability of supporting its pre-mining use or environmentally acceptable higher or better uses that are not impractical, unlawful or inconsistent with applicable land use policies or involve unreasonable delay in implementation.<sup>59</sup> As to prime agricultural lands, those

designated by the Department of Agriculture as high yield crop producers, the operator must demonstrate that the post mining productivity of the restored farm lands will sustain the pre-mining high yields.<sup>60</sup> The "pre-mining or higher or better use" requirement ensures that the mined land will be returned to at least its pre-mining form of productivity and obviates the opportunity for convenience or economic attractiveness of a potential restoration scheme, such as the creation of a series of artificial lakes, to dictate the reclamation effort and the subsequent post mining land use.

The affected area, with some exceptions,<sup>61</sup> must be restored to its "approximate original contour"<sup>62</sup> which requires the elimination of highwalls, spoil piles and depressions by backfilling, grading and, if necessary, compacting so that the land after restoration will resemble its pre-mining general surface configuration and will blend into and complement the drainage pattern of the surrounding terrain.<sup>63</sup> The approximate original contour requirement, although it clearly does not impose the impossible task of achieving full restoration of the original topography, has been criticized as precluding surface mining or steep slopes in mountainous terrain characteristic of Appalachia.<sup>64</sup>

A permanent vegetative cover consisting of diverse native species, introduced species may be used under some circumstances, capable of self-generation must also be established co-extensive with the natural vegetative cover of the mined area.<sup>65</sup> The re-established vegetation must support the utility of the post mining land use plan as well as stabilize the surface soil in

order to prevent erosion and siltation.<sup>66</sup> To assist the revegetation effort, the top soil, which must be restored, has to be removed in a separate layer, segregated from the toxic material to avoid contamination during the stripping process.<sup>67</sup> The mine operator is responsible for the survival of the re-established vegetation for a period of five years, or ten years in arid or semi-arid conditions, after the last augmented vegetative effort, such as re-seeding or fertilizing occurs.<sup>68</sup>

Additionally, the mine operator must also minimize the consequences of surface mining to the hydrological balance<sup>69</sup> and the quality of surface and ground water systems by using the best technology available to avoid acid or other toxic mine drainage or pollution;<sup>70</sup> prevent sedimentation and siltation or surface waters;<sup>71</sup> and, restore the recharge capacity of the aquifer.<sup>72</sup>

The anticipated post mining condition of the land depends to a large extent on the post mining land use plan which is determined by the topography, dimensions of the coal seam and overburden, soil type, precipitation, and other physical or environmental land characteristics which effect the mining and reclamation plan. However, at least prior to the implementation of the SMCRA, examples of a higher or better land use resulting from surface mined reclamation typically involved mountainous terrain with a casual agricultural or grazing pre-mining land use, which could only feasibly and economically be restored by leveling the mined area, and, the market value increased due to the lack of level land in the area.<sup>73</sup> However, economic efficiency, consistent with engineering feasibility, will probably dictate that reclamation is unlikely to result in restoration

to an enhanced land use that improves the utility or value of the land.

The evidence is conflicting as to whether reclamation of surface mined land, in accordance with the minimum environmental performance standards, to a condition supporting its pre-mining use, typically agricultural or grazing activities, inevitably results in land which is physically inferior, due either to diminution in utility or market value, to its pre-mining condition. Evidence that reclaimed lands equal, or even exceed, their pre-mining utility or productivity has been presented.<sup>74</sup> Critics of the industry and some landowners provide evidence of diminished crop yields, ad valorem assessments and market values.<sup>75</sup> Some fear exists that the detrimental effects of removing and replacing the overburden will not be known for years after the conclusion of the reclamation process.<sup>76</sup>

### The Right to Surface Mine

Although less exacting state reclamation statutes, representing varying degrees of stringency as to land rehabilitation requirements and enforcement efforts, have been in existence long before the SMCRA,<sup>77</sup> the legal struggle between the mine operator and the landowner, in particular the severed surface estate owner, has not focused on the performance of reclamation or the functioning of such acts. The primary conflict has traditionally centered on whether the rights expressed or implied in the mining grant were sufficient to allow the mine operator to extract the mineral by methods, usually necessary to either fully exhaust

or economically mine the property, which substantially interfered with or adversely effected the surface estate. Initially, when deep mining was the primary method of mining coal, the issue was whether the mine operator was compelled to provide subjacent<sup>78</sup> support by leaving adequate pillars of coal which may have represented up to forty percent of the deposit<sup>79</sup> to avoid subsidence and its attendant damage to the surface estate.

The development of surface mining as the predominant and most attractive method of producing coal injected a new dimension to the conflict existing between the surface estate, and the severed mineral estate as to the extent of the burden imposed upon the former by the latter's right to exploit the mineral.<sup>80</sup> The paramount issue is whether the owner of the mineral estate has by implication, either implied in the instrument of severance or at law, the right to extract the mineral by surface mining with its attendant disruption and consequent harm to the surface estate. Case law resolving the issue has yielded the two distinct positions.

The majority view, which is followed by most of the traditional coal producing states, holds that the surface estate is entitled to be preserved in its natural condition undisturbed by surface mining,<sup>81</sup> even if the mineral owner is thereby precluded from extracting the mineral.<sup>82</sup> The implied development easement, i.e., the right of reasonable and necessary use of the surface to explore for and extract the mineral implied in the grant to secure to the mineral owner the ability to mine the substance and, thus, to beneficially enjoy the acquired interest does not include a right to surface mine.<sup>83</sup>

The traditionally accepted basis for this right, inherent in the surface estate, of surface preservation as originating in Harris v. Ryding<sup>84</sup> and Humphries v. Brogden,<sup>85</sup> is the mineral owner's duty to provide subjacent support to the surface estate.<sup>86</sup> The right to subjacent support as a basis for denying an implied right to strip mine has been explained as follows: "... if.... the owner has a right to subjacent support . . . , (then) . . . he has at least an equal right to hold intact the thing to be supported, i.e., the surface . . ."<sup>87</sup> However, the failure to imply such a right is based on reasoning identical to that underlying the common law imposition of the obligation to the mineral estate to provide subjacent support: the creation of the surface estate, by the instrument of severance, with its consequent right of beneficial use and enjoyment evidences an intention, in absence of express language to the contrary, that it is not to be destroyed in the process of the legitimate use of the mineral estate.<sup>88</sup>

Therefore, in states adhering to the majority view, the right to surface mine must have been expressly included within the grant if such right is imparted to the mineral owner by the instrument of severance. Almost, universally, the inquiry is whether, according to the construction of the conveyance, the parties contemplated surface mining - the removal of the overburden to extract the coal.<sup>89</sup> Kentucky alone resolves the issue by determining whether the parties contemplated, as opposed to a particular method of mining, that the mineral owners rights to surface usage in extracting the mineral would be superior to any competing rights of the surface owner.<sup>90</sup>

Thus, the right to surface mine as an incident of the ownership of the mineral estate is governed by the intent of the parties to the instrument of severance. The intent is ascertained by construing the instrument as of the date of its execution and considering the attendant surrounding circumstances.<sup>91</sup> A waiver of subjacent support is a prerequisite to the existence of such a right, but is not conclusive of the issue.<sup>92</sup> The party asserting the right to surface mine has the burden of proof.<sup>93</sup>

Some differences in the methods utilized to ascertain the existence of the requisite intent exists. If the instrument does not expressly prohibit or permit surface mining,<sup>94</sup> some courts construe the written language, with emphasis on the express development easement, and, in addition, as part of the surrounding circumstances, look to the "common mining" practices, i.e., the methods of mining then practiced in the geographic area.<sup>95</sup> Some courts further require that the language evidencing the right to surface mine be clear and convincing; especially if the common mining practices did not then include surface mining.<sup>96</sup> Other jurisdictions have expanded the evidence of contemporaneous circumstances to encompass not only the common mining practices, but to include the "totality of circumstances" bearing upon the probable intent of the parties.<sup>97</sup> Under this freewheeling inquiry, evidence as to the amount of consideration paid for the mineral rights acquired, including the express development easement, in relation to the actual value of the land;<sup>98</sup> and, the physical character of the land, i.e., whether the property was then improved agriculturally or unimproved mountainous land.<sup>99</sup>

As to the minority view, a California intermediate appellate court decision rendered over thirty years ago, Trklja v. Keys,<sup>100</sup> is the only case found unequivocally holding that a mineral grant or reservation, by necessary implication, includes the right to destroy the surface in extracting the mineral.<sup>101</sup> The court specifically limited that right to instances in which the substance cannot be mined by other less destructive methods. However, the argument that the mining process contemplated by the mining operator, a dredge or dragline method, could only be utilized if it was "not inconsistent" with the use of the property being made by the surface owner was rejected.<sup>102</sup> The court's reasoning, obviously rejected by the adherents to the majority view, is that if the only method available to remove the mineral is prohibited due to the surface disturbance involved, then the mineral owners' grant has been rendered "void" as the enjoyment of the acquired interest has been denied.<sup>103</sup> Although the court's opinion did not so indicate, implicit in its reasoning is an assumption that under such circumstances, the parties to the conveyance, more probable than not, contemplated that the mineral could be extracted despite the radical consequences resulting to the surface estate.

However, existing case law, even though there is no case in point, in an influential natural resources producing state, Texas, portends that a strong minority may exist. Decisions in that state intimate that the severed mineral owner, by virtue of the breadth of the implied easement of reasonable necessary surface usage, may be entitled under some circumstances to extract the mineral by surface mining.

One such case is Sun Oil Co. v. Whittaker.<sup>104</sup> There, the defendant, by conveyance in which the grantor retained the mineral interest, acquired the surface estate "subject to" the plaintiff's outstanding oil and gas lease. The lease contained a "free water" clause which provided: "Lessee shall have free use of oil, gas, coal, wood and water from said land except from lessor's wells for all operations hereunder..."<sup>105</sup> The Ogallala aquifer, a closed and isolated underground fresh water reservoir, underlay the tract and was its only source of water for domestic or irrigation purposes. Such underground water, not having been severed from the fee estate by a previous reservation or conveyance, is a part of the surface estate<sup>106</sup> and was therefore owned by the surface owner. The defendant, a farmer, drilled wells and produced water from the Ogallala Reservoir for domestic use and agricultural irrigation.

The plaintiff secured oil production, from the San Andres formation, on the tract. Thereafter, within the secondary term of the lease, production declined due to diminution of the underground pressure in the reservoir. Five years after the defendant had commenced using the underground water, plaintiff initiated a secondary recovery "waterflooding" project to stimulate oil production. The project, a reservoir repressuring operation, involved the injection of an enormous amount of water into the San Andres formation. After a futile attempt to use salt water, the plaintiff drilled a water well on the tract and began taking 100,000 gallons of water per day from the Ogallala Reservoir. At that rate of consumption for the dura-

tion of the project would diminish the life of the defendant's dwindling water supply by eight years, the value of the surface estate would be substantially decreased. The waterflood operation, however, would result in additional oil production valued at over \$3.2 million dollars.<sup>107</sup> Sufficient water for the project was available and could have been purchased from the owners of the other tracts in the area for \$42,000.

The plaintiff brought suit to enjoin the defendant from interfering with its production of water for use in the secondary recovery project. The defendant crossclaimed to enjoin the plaintiff from producing and using such water, and, additionally, sought actual and exemplary damages for the water so appropriated. In the trial court, the defendant prevailed and was awarded actual and exemplary damages and the plaintiff was enjoined from producing and using the water in its waterflood program.

On appeal, the Circuit Court of Appeals<sup>108</sup> perceived that the plaintiff's right to free use of the defendant's water in a secondary recovery project was solely governed by the applicability of the free water clause. Finding that clause ambiguous as to whether the parties thereby intended to permit the lessee to make such extensive use of the water, it affirmed the trial court's judgment on the basis that extrinsic evidence, admitted below, was sufficient to support the lower court's determination that such extensive use was not contemplated by the parties.

In an opinion stressing the dominance of the mineral estate, the Supreme Court, with four judges dissenting,<sup>109</sup> re-

versed the judgments of the lower courts and held that as the waterflood operation was reasonably necessary to the production of oil, the plaintiff, as the owner of the dominant mineral estate, was entitled to the free use of the water as an incident of the implied development easement, i.e., "the free use of such part and so much of the premises as is reasonably necessary to effectuate the purposes of the lease, having due regards to the rights of the surface owner."<sup>110</sup>

The concept of accomodation between the mineral estate and the surface estate inherent in the "reasonable necessity" and "due regards" standard of the implied development easement had previously been delineated in Getty Oil Co. v. Jones<sup>111</sup> which held that the lessee must utilize a reasonable alternative method, if available, when its contemplated use substantially interfered with or precluded an existing use made by the surface owner. As water was available for purchase from other tracts in the area, it would seem that the "reasonable alternatives" test of Getty would preclude the lessee's free use of the water. However, the court limited Getty by holding that test only applicable when the reasonable alternative is located on the premises. According to the court, to force the plaintiff to purchase the necessary water from other sources would be in "derogation" of its dominant mineral estate.<sup>112</sup>

Also, the lower court's determination that the free water clause did not sanction such use of the water, based on the ascertained intent of the parties to the instrument of severance derived from the extrinsic evidence, was rendered irrelevant by

court held, affirming the judgment of the trial court, which denied recovery to the plaintiff, that as the mining operator, owner of the dominant estate, could only mine the sulphur by a process which caused subsidence, the "reasonably necessary" requirement of the implied development easement was satisfied and the servient surface estate's right to subjacent support was precluded by the applicability of the mining grant.<sup>117</sup>

As the mining practices in Whittaker resulted in the diminution of the surface owner's water supply and, consequently, the market value of the surface estate, it essentially holds that the dominant mineral estate, in the proper exercise of the implied development easement, is entitled by law, without liability for damages, to destroy the surface estate.<sup>118</sup> The same observation can be made of Texas Gulf Sulphur. The inferences to be derived from both cases is that the severed surface estate may be surfaced mined by the mining operator to recover a coal deposit that can only be physically extracted, or perhaps, commercially mined by surface mining.<sup>119</sup> As subsidence can result in the complete destruction, eliminating any beneficial use of the surface, and is the recognized theoretical foundation for the holding that the surface estate is entitled to surface preservation, free from the interference and harm of surface mining, Texas Gulf Sulphur, indoubtably supports that inference.

However, the implication of the right to surface mine in a deed of severance, as well as any such previously imparted express rights, may be rendered insignificant by a legislative act which insulates the surface owner from uninvited surface

mining,<sup>120</sup> "surface owner consent" statutes require the mine operator to obtain the acquiescence of the surface owner to the surface mining of the tract independent of any such previously acquired right.<sup>121</sup> In effect, the surface owner is vested with a statutory right to "veto" the mining of the tract and preclude its inclusion within the mining unit.<sup>122</sup> Obviously, if such consent is granted by the surface owner, it won't be gratuitous. Of dubious constitutional validity,<sup>123</sup> such acts are indicative that state legislation may be invoked to protect landowners<sup>124</sup> from the burdens of surface mining and that such attempts may not necessarily be structured to encourage the orderly development of coal reserves.

#### Acquiring Surface Mineable Coal Reserves

The nature of the property interests that the mining operator will have to acquire as a prerequisite to the surface mining of a tract is determined by the particular jurisdiction's treatment of the implied right to surface mine. In a state in which such a right is not recognized, the severance of the coal interest from the surface interest necessitates that the mining operator obtain a mining lease from the mineral owner, granting the right to mine for coal, and, in addition, the consent of the surface owner to the surface mining of the tract.<sup>125</sup> If there has been no severance of the coal from the surface estate, a coal lease, containing an express right to surface mine, from the landowner, will suffice.<sup>126</sup> However, in a jurisdiction

which recognizes the implied right to surface mine as an incident to the implied development easement, a mining lease from the owner of the coal interest will suffice even if that interest has previously been severed from the surface estate. The consent to surface mine need only be acquired from the owner of the severed surface estate in the event that the instrument of severance specifically precluded such surface destruction or reasonable alternatives to the extraction of the minerals by surface mining exist.

The actual practices of acquiring coal reserves reflect the complications implicit in obtaining mining rights that substantially impact on the land and in which, depending upon the jurisdiction, the respective rights of the severed mineral and surface estates as to the coal or the right to surface mine may not yet have been delineated. In some jurisdictions, the title to the coal is clouded<sup>127</sup> due to the existence of a grant or reservation in which the coal is not specifically identified but the expansive term "mineral" is utilized.<sup>128</sup> In such a grant or reservation, the coal may or may not have been severed from or retained by the surface estate. Endemic to oil and gas conveyances, such language is characteristic of mineral transactions occurring in areas experiencing oil and gas exploration activities. The applicability of the implied right to surface mine, as a matter of law, also may not have been judicially ascertained. Furthermore, the possibility exists that the surface owner, bearing the burden of surface mining, may have an interest that amounts to a "veto" over the surface mining of the

tract, and does have some ill-defined right to participate in the formulation of the reclamation<sup>129</sup> plan, and yet, is not entitled to the economic benefits, the royalties and advance royalties, traditionally associated with mineral development.

As a result, it is not uncommon for the mining operator contemplating surface mining to purchase the land outright,<sup>130</sup> i.e., to obtain both the surface and mineral fee estates, even though acquiring the mining rights by leasing requires "less up front" money.<sup>131</sup> Acquiring a mining lease from both the mineral and surface estate owners and, in effect, paying double royalties and advance royalties is also a prevalent practice.<sup>132</sup> Leasing the surface owner, as well as the mineral owner, procures the prerequisite consent when the holder of the coal title lacks an express or implied right to surface mine, and, additionally, also secures the necessary mining rights by binding all possible claimants, i.e., the surface and mineral owners, to the disputed coal title created by an instrument of severance which contains the inclusive but undefined term "minerals," or other kindred language within the grant. Additionally, in the western states where the doctrine of prior appropriation may result in an adjacent tract owner having title to appurtenant surface waters, it is not uncommon for a mining operator to acquire the water rights by a mining lease which grants that party the right to receive royalties and advance royalties in order to lessen the potential impact of third party water rights on the surface mining project.<sup>133</sup>

Acquisition of the fee ownership of the land outright, in

particular as to the surface estate, is advantageous to the mining operator in that it eliminates the potential disputes that may arise over the landowner's status during the mining process or the formulation, implementation or eventual outcome of reclamation.<sup>134</sup> Leasing the surface owner not only obtains the requisite express right to surface mine or ensures title to coal that ultimately may be determined not to have been severed from the surface estate by the term "minerals", or other similar equivocal language in the grant; but, additionally, the obligation to pay "surface royalties" vests an economic interest in the surface mining of the tract in the likely principal antagonist to the mining venture, the surface owner, and thereby lessens the opportunity for differences to arise between the mining operator and the landowner over the mining and reclamation process.

Despite the possibility that the mining operator may offer to purchase the land outright or to pay surface royalties, the acquisition of the surface mineable coal reserves, even at a high price, will be difficult. For a multiplicity of reasons, not the least of which is that it may require foregoing a present livelihood such as farming, or ranching, selling the land or surface estate outright, either as an incident of or independent of the sale of the coal, may not be acceptable to the respective landowner regardless of the financial inducement. Furthermore, the potential for fragmented ownership of the necessary mining rights in some jurisdictions, i.e., requiring successful negotiations with both surface and mineral owners; and, the

attendant disruption to the surface state, including the possible dislocation of the surface owner, along with the justifiable apprehension as to the utility and value of the land after reclamation, forewarns that attempts to acquire the necessary mining rights by mining lease, even if munificent surface and mineral royalties and bonuses are paid, will often fail.

### The Problem of Hold Out Acreage

Not only does the hold out acreage phenomena have the potential to preclude the aggregation of sufficient coal reserves necessary to establish a mining unit that conforms to the market for coal conversion or that renders the project economically feasible, but, the impact to the hold out acreage from surface mining in the unit may preclude compliance with the reclamation act as to the committed acreage and, thus, also condemn the mining project. In effect, the environmental characteristics of the specific mine site such as the topography, dimension and chemical composition of the coal seam and overburden, and the nature of the hydrological system may inherently portend that the unavoidable impact of surface mining to the hold out acreage is so adverse as to preclude compliance with the requisite minimum environmental performance standards that accord protection to off-site areas.

The most ominous example of holdout acreage frustrating the acquisition of the surface mining permit for committed acreage is the "toadstool" phenomena.<sup>135</sup> When coal deposits

that are characterized by either a massive coal seam or an overburden that is slight in relation to the thickness of the coal seam are surfaced mined from tracts that are adjacent to or surround non-committed acreage, the non-mined lands, reposing at their original elevation, will protrude above the recessed mined and reclaimed lands, creating a terrain that resembles a field of "toadstools."<sup>136</sup>

The extended elevation in relationship to the adjacent area will likely affect the utility of the non-mined lands in that, for example, irrigation by surface or ground waters will be precluded.<sup>137</sup> The prospect of such a distorted terrain and the consequent detriment to the off-site tracts will likely result in a denial of the surface mining permit for the committed acreage due to: the impact to the hydrological system of the non-mined lands violating the SMCRA's minimum off-site water protection standards, i.e., by inevitably causing "material damage to the hydrological balance outside the permit area"<sup>138</sup> inherently disrupting the local physical environment;<sup>139</sup> or, the failure to formulate a satisfactory post mining land use plan for such an area.<sup>140</sup>

Even if the consequences of surface mining to off-site areas will not be as pronounced as the anticipated detrimental effect of the toad stool phenomena, the specific characteristics of the mine site can preindicate that compliance with the off-site environmental performance standards, in particular of the surface and ground water protection requirements, will be difficult, if not impossible, to satisfy when hold out acreage, in

particular of tracts located wholly within the unit, is encountered. Thus, the protection accorded to off-site areas by the applicable reclamation act may prevent the mining operator from merely ignoring the existence of the non-committed tracts and proceeding with the mining of the committed acreage.

However, should the reclamation act be satisfied as to offsite area protection, surface mining would still impact adversely on the hold out acreage. The noise and dust associated with the blasting and removing of the overburden by the huge earth moving equipment, along with the clogging of the access roads by trucks and other vehicles, may render occupation or utilization of tracts immediately adjacent to or surrounded by the mine site extremely impractical.<sup>141</sup> In effect, withholding land from the contemplated mining unit to avoid the interference with the surface usage occasioned by surface mining may to a large extent be an illusory act of self preservation.

Isolating the mine site from adjacent landowners to facilitate compliance with the applicable offsite reclamation protection standards and to mitigate the impact of surface mining to such tracts can, however, be accomplished by acquiring tracts adjacent to and surrounding the mining unit, not for mining purposes, but to act solely as a protective "barrier" to such off-site areas.<sup>142</sup> Limiting the exposure for liability to adjacent landowners for nuisance, failure to provide lateral support, or for damages resulting from a failure to comply with the reclamation act is a further inducement for the mining operator to establish such a barrier.<sup>143</sup>

Nevertheless, interspersing tracts between the minesite and privately owned lands to prevent the non-committed acreage from frustrating compliance with the requisite off-site performance standards of the reclamation act may not be a feasible or optimum solution for the mine operator. The inability to acquire such strategically located lands or the incidence of the occurrence of the holdout acreage may render the utilization of such a plan impractical or impossible. More importantly, if commercially mineable coal underlies the tracts adjacent to such holdout acreage, utilizing such tracts to barricade the minesite may only further exclude reserves that are necessary or convenient to the establishment and operation of the mining unit.

Timely development of a much demanded energy resource is not the only loss occasioned by permitting holdout acreage to block the opening of a logical mining unit: the owners of the mining rights to the reserves underlying the other tracts in the unit, including prospective mine operators who have acquired coal leases or other mining rights, will be deprived of the benefits, such as the royalties, surface royalties, or other profits or advantages to be deprived from the mining of the coal. Since the deposit underlying the various tracts can only be developed as a unit, the holder of any of the necessary mining rights can veto the surface mining of its particular tract and, thus, deny to the remaining owners of the mining rights in the deposit the beneficial enjoyment of their property interest, i.e., the right to exploit their mineral interest.

Furthermore, even if the holdout acreage does not effec-

tively foreclose the opening of the mine, its omission from the mining project may forever doom the mining and utilization of the underlying coal reserves in that economies of scale may render the remaining scattered non-mined tracts uneconomical to surface mine.<sup>144</sup> Assuming that a market, conceivably a spot market, will exist for that amount of coal excluded from the original mining unit; it may not be economically feasible to acquire a surface mining permit, move on a dragline or other equipment necessary to surface mine and reclaim, to recover the amount of reserves underlying such isolated tracts. The failure to achieve the "maximum optimum recovery" of the coal reserves may result. In effect, physical waste of a valuable and needed non-renewable natural resource, which is inimical to the theory and practice of sound natural resources development and conservation,<sup>145</sup> is apt to be the distinguishing trait of the large scale development of coal reserves under circumstances in which the landowner may withhold his acreage from the mining project.

### The Legislative Solution

The solution to the problem is state legislation which empowers the mine operator with the right to acquire, for a fair compensation, the necessary mining rights to the hold out acreage. Based on the need to facilitate development, prevent waste and protect the correlative rights of the owners of a valuable and demanded natural resource, such a statute would be a valid

exercise of the state police power.<sup>146</sup> Similar reasons justified and sustained the validity of state compulsory pooling<sup>147</sup> and unitization statutes,<sup>148</sup> which, in effect, mandated compulsory integration of oil and gas interests and as to the former statute, may require a forced sale of the mineral interest.<sup>149</sup>

Even though such a statute could simply bestow upon the mine operator a broad and unqualified private right of condemnation, along with a formula of fair compensation for the condemned interests; the structure of the typical oil and gas compulsory unitization statute is easily adaptable to the hold out acreage phenomena and can be modified to insure that property interests will only be condemned pursuant to the objectives of accelerated and prudent natural resources development.<sup>150</sup>

Thus, the statute would vest the appropriate state conservation agency with jurisdiction to delineate and establish a surface coal mine unit<sup>151</sup> when necessary "to promote optimum development of coal reserves, prevent waste, and protect correlative rights." The mine operator would have to demonstrate, and the agency so find, that is it "uneconomic or impractical" to mine the hold out acreage as individual tracts, or in the alternative, to mine the committed acreage without the hold out acreage. The agency would further have to determine that, pursuant to the proposed mine plan, the coal reserves in the unit can be developed in an "efficient, economic and orderly method."<sup>152</sup> Should the jurisdictional requirements be satisfied after proper notice and hearing on the merits, the statute would require the agency to order the consolidation of the tracts within the unit

area into an integrated mining unit and effectuate a transfer of the mining rights to the non-committed acreage to the mine operator.<sup>153</sup>

To permit a proposed determination of unit boundaries, the statute should provide the mine operator with the right to acquire, for a fair compensation, access to conduct coal exploratory activities, such as core drilling, on lands that may be included within the mine unit. Such exploratory activities should be limited to ascertaining the extent and characteristics of the underlying coal deposit. The information acquired would be transmitted to the affected property owners. Adequate safeguards would be delineated to ensure that the interference with the surface estate activities would be limited.

Also, as opposed to merely being applicable to coal mineral and surface owner interests, the act should operate to mandate compulsory inclusion of coal leasehold interests into the unit. Hold out acreage can result from an intractable coal lessee's refusal to pool or otherwise commit it's acreage to the unit. If accelerated and enlightened development of coal reserves demand forced acquisition of mineral and surface owner interests, a similarly situated coal lessee should be subject to the same hazards.

Furthermore, the agency, upon a petition of the owner of the coal interest to a tract situated adjacent to the proposed or established unit area, should also be empowered to compell the inclusion of the tract into the unit, despite the mine operator's objection. Thus, coal less economically attractive to the mine

operator may be developed to the benefit of the mineral owner and the public. The impossibility of the mine operator's marketing such coal would preclude such agency action.

Of obvious importance and inherently susceptible to controversy, is the compensation to be paid to the owners of the effected property interest. As to the surface owner, some guidance exists in that the Opencast Coal Act of 1958,<sup>154</sup> a statutory scheme regulating surface mining of coal in Great Britain, specified the compensation to be paid to owners of the surface estate subjected to surface mining. Also, throughout the period in which Congress was attempting to enact surface mining legislation, culminating in the SMCRA of 1977, various proposals to regulate surface mining on western coal lands in which the coal is federally owned and the surface estate is privately owned were advanced.<sup>155</sup> Some of these proposals attempted to establish a system of compensation for the surface owner consenting to surface mining.

These statutes are typically characterized by the failure to provide for the condemnation of the full fee interest and the extent of the compensation to be accorded to the surface owner.<sup>156</sup> Loss of the beneficial enjoyment of the surface estate was only to occur during the period in which the surface estate was actually disturbed and the surface owner was to be recompensed for damaged proximately caused by the surface mining and the consequent interruption to the surface estate. Such compensation encompassed damages for the annual rental value of the land, loss of income, cost of relocating, loss incurred

from the forced sale of machinery and livestock, and any diminution of value to the land.<sup>157</sup> Additionally, even though not incorporated into any of the above statutory schemes, surface owner royalties, especially if widely utilized in the field, can also be included within the compensation formula.

Compensation for the acquired coal interest can take the form of a royalty interest, likely to be based on the prevailing royalty paid in the field, along with a bonus, the fair market value of the development right; or, its proportionate share of the production, minus its proportionate share of the costs of development.<sup>158</sup> The latter is identical to the common law treatment of a non-consenting cotenant<sup>159</sup> when a concurrent owner develops the mining property which, with some deviation, is the treatment typically accorded the non-assenting oil and gas mineral owner under forced pooling statutes.<sup>160</sup> However, the problems that may be encountered in allocating the costs incurred in the formation and operation of a long lived large scale surface mine project to specific tracts, which will be mined at different times, may render the application of a net production formula impractical. Furthermore, a proportionate net production formula of compensation may not provide a sufficient economic attractive inducement to the mine operator to develop holdout acreage.<sup>161</sup>

## CONCLUSION

Although condemnation of property interests, in particular of the surface estate, is not a remedy to be unreluctantly adopted, the public interest requires that holdout acreage not impede the expeditious and enlightened development of surface mineable coal reserves.

Legislation can remedy the problem. The proposed statutory framework and potential compensation formulas are not offered as the definitive solution but merely to serve as the departure point for the diligent and meticulous consideration required to perfect a fair and feasible legislative solution. Any such legislative solution to the problem must balance the public's demand for energy resources with the fair treatment due the property owner by establishing that a degree of necessity must exist before the mine operator may compulsorily acquire the holdout interests, providing for payment of fair and just compensation to the property owners, and, ensuring that the economic and efficient development of coal reserves results. Obtaining such legislation, due to the competing interests involved, will not be an easy task and the attention and expertise of the mineral practitioner and the land person is required to ensure that the definitive statutory solution is achieved so that when enacted, it will be as successful as the legislation that pioneered state regulation of mineral resources, compulsory oil and gas pooling and unitization statutes.

## FOOTNOTES

1. Domestic coal reserves encompass an estimated four trillion reserves. Averitt, Coal Resources of the United States, U.S. Geological Survey Bull. 412 (1975). Estimates of recoverable reserves range considerably, from 150 billion to 483 billion tons. R. Stobaugh and D. Yergin, ENERGY FUTURE: MANAGING AND MISMANAGING THE TRANSITION (Random, 1979) (hereinafter referred to as Stobaugh), 80 and 290 N.3. citing various estimates of recoverable coal reserves.
2. Despite the realization of the need to impel greater development of coal reserves, expansion of coal production has not proceeded a pace of the earlier projected targets. In President Carter's Energy Plan of 1974, coal was to play a key role in alleviating the energy crisis by being widely substituted for foreign oil and scarce natural gas. Coal production was to be increased by over 80% by 1985 - from 680 million tons to over 1.2 billion tons. Stobaugh, supra note 1 at 80. Recent projections for coal production for 1985 have been as low as 800 million tons. Id.

Since the opening of new mines is inextricably tied to "coal conversion", the occurrence of only a moderate increase in coal production during a period of bullish expectations has been attributed to problems encountered by utilities in expanding existing or erecting new coal fired power plants. Such problems have included difficulties encountered in power plant siting occasioned by air pollution or licensing requirements; the inability to finance utility expansion during an economic downturn; decreased demand by consumers for electricity due to higher prices and, perhaps, successful consumer conservation attempts. Id. at 90.

Additionally, problems inherent in coal transportation and the coal operator's inability or, at least, difficulty in complying with the Surface Mining Reclamation Act of 1977 have also been mentioned. See, Brownell, Energy Independence The Return to Coal, Constraints on Production and Utilization of our Most Abundant National Energy Resource, 11 St. Mary's L. J. 674, 682-688 (1980).

3. "The Power Plant and Industrial Fuel Use Act of 1978", 42 U.S.C.A. § § 8301-8348 which replaced the coal conversion program established by the Energy Supply and Environmental Coordination Act of 1974 (ESECA), 15 U.S.C.A. § § 8791-98, required existing power plants and major fuel burning installations to convert from natural gas or petroleum to coal or other alternative fuels by 1990. 42 U.S.C.A. § 8341. If it

is financially feasible and the technical capability exists, the facility must now make the conversion. 42 U.S.C.A. §8341. Exemptions from such forced conversion exist in the event that coal conforming to the required design and operational requirements may not be available; or, if available may cost more than imported foreign oil; and, additionally, if environmental protection statutes may not be satisfied. 42 U.S.C.A. §§8351-52. Similar constraints are applied, along with identical exemptions, to newly constructed power plants or other major fuel burning installations. 42 U.S.C.A. §834, 1811-21-22. See, Cockrell, Coal Conversion by Electric Utilities: Reconciling Energy Independence and Environmental Protection, 28 Hastings L.J. 1245 (1977); and, Toll and Cottingham, Powerplant and Industrial Fuel Use Act of 1978 and Possible Amendments Thereto, 11 St. Mary's L.J. 653 (1980).

4. Stobaugh, *supra* note 1 at 91.
5. See, e.g., Clegg, "The Severed Mineral Estate Problem: Are There Legislative Solutions", 13th Ann. Arkansas Oil & Gas Inst. 1 (1974); Kuntz, "Old and New Solutions to the Problem of the Outstanding Undeveloped Mineral Interest", 22nd Ann. Inst. on Oil & Gas L. & Tax 81 (1971); Outerbridge, "Missing and Unknown Mineral Owners", 25 Rocky Mtn. Min. L. Inst. 20-1 (1979); Polston, "Legislation, Existing and Proposed, Concerning Marketability of Mineral Titles:", 7 Land & Water L. Rev. 73 (1972); Smith, "Methods for Facilitating the Development of Oil and Gas Lands Burdened with Outstanding Mineral Interests", 43 Tex. L. Rev. 129 (1964); Street, "Need for Legislation to Eliminate Dormant Royalty Interests," 42 Mich. St. B. J. 49 (Mar. 1963); Note, Severed Mineral Interests, A Problem Without a Solution," 46 N.D. L. Rev. 451 (1970).
6. See generally, Office of Coal Research, Economic System Analysis of Coal Preconversion Technology, §§9.4.4; 9-8-1 (1974); Beck, Surface Owner Consent Laws: The Agricultural Enterprise versus Surface Mining for Coal, 2 So. Ill. U.L.J. 303, 317 (1979); Leistritz and Voelker, Coal Resource Ownership: Patterns, Problems, and Suggested Solutions, 15 Nat. Res. J. 643, 653 (1975).
7. See generally, Office of Coal Research, *supra* note 1 at §§ 9.4.4, 9.8.1; Leistritz and Voelker, *supra* note 1 at 653.
8. See generally, Stobaugh, *supra* note 1 at 86, 91.
9. See generally, Hearings on Leasing and Western Development of Coal Before Subcomm. on Energy Production and Supply of Comm. on Energy and Natural Resources, 95th Cong., 1st. Sess., ser. no. 95-93, at 451, in which the witness, Director, Federal Coal Leasing for Peabody Coal Co., made the following observation in reference to impediments to federal coal coal leasing requirements:

"You see, we must market the coal - we must put the coal together before we can market it. It must be put together in a mincable block. You cannot - if I may draw an analogy, and I think it is a pretty good analogy - let's suppose that I'm in the quilting business and you lease me enough quilt pieces to put together parts of the quilt, but it's full of holes. Then I go to a utility and try to sell them that quilt full of holes and they say, wait a minute, you know, I want a whole blanket. I'm not going to commit millions of dollars to a utility plant based on a blanket full of holes when you don't know whether you can pick up the additional pieces. That's the situation we're faced with."

10. Id.
11. Surface coal mining accounted for approximately 60% of total coal production in 1977. Energy Information Administration, Statistics and Trends of Energy Supply, Demand and Price, Vol. 3, p. 76 (1977).
12. See, Hearings on H.R. 3. Before the Subcomm. on Environment and subcomm. on Mines and Mining of Comm. on Interior and Insular Affairs, 93rd. Cong., 1st Sess., ser. 93-11, at 915 (1973).
13. Congressional Research Service, The Coal Industry: Problems and Prospects, 16 (1978).
14. Id.
15. Id.
16. Id.
17. Id.
18. H.R. Rep. No. 950218, 95th Cong., 1st Sess., 77 (1977).
19. Id.
20. 30 U.S.C.A. § § 1201-1328. (West. Supp. 1978).
21. K. Lindbergh & B. Provorse, COAL, A CONTEMPORARY ENERGY STORY, 11, 119 (1979 Mining Information Sources).
22. See generally, Stround, Acquisition of Coal Rights - It's Different, 21 Rock Mt. Min. L. Inst. 587, 591 (1975).
23. Comment, Between a Rock and a Hard Place: Surface Mining on the Severed Estate - A Legislative Proposal, 17 Wm. and Mary L. Rev. 140, 142 (1975). See also, Hearings on S. 425 Before the Comm. on Interior and Insular Affairs, 93rd Cong., 1st sers., pt. 2 at 997-1006 (1973).

24. In attempting to acquire the coal mineral interest, the problem of the "lost or unknown mineral owner" may be encountered. The problem has long plagued the oil and gas industry. Kuntz, *supra* note 5 at 95. Though various attempts have been made to solve the problem, a universally acceptable solution has not evolved. The Louisiana Civil Code, 31, La. Stat. Ann. § § 153-156, from which many of the statutes have been patterned, follows the liberative perscription doctrine in which the mineral estate, being an incorporeal hereditament, has to be used within a 10 year period or it will prescribe in favor of the surface owner. While it sounds quite simple, it is exceedingly complex, has spawned a large body of frequently confusing, inconsistent and much criticized case law. See, 1 E. Kuntz, *Law of Oil and Gas*, § 10.7 (1962).

Some other states, Illinois, Michigan, Nebraska, Tennessee, Wisconsin and Florida, have adopted statutes utilizing the theory of abandonment. See, for example, 30 Ill. Rev. Stat. 147-198; or 57 Neb. Rev. Stat. 228-231. If the severed mineral interest has not been developed, or if the instruments have not been filed of record relating to the interest, for a defined period, it will be deemed to have been abandoned unless preserved by use or the recording of a claim within an additional period of time after the limitation period. Constitutional objections as to the validity of the statutes, such as deprivation of property without due process; denial of equal protection; and the impairment of the obligation to contract, have been made. Some of the statutes have survived the attack; others have not. See, Chicago and N.W. Trans. Co. v. Pederson, 80 Wis. 2d 566, 259 N.W. 2d 316 (1977), declaring that act as it attempted to operate retroactively unconstitutional, and, Love v. Lynchburg National Bank, 205 Va. 860, 140 S.E. 2d 650 (1965), which held the Virginia statute to be constitutional. For a recent discussion of the statutes and case law, see Outerbridge, *supra* note 5 at 20-27-20-45.

As the "lost mineral owner" will only arise episodically, while the traditional hold out acreage phenomena, i.e., refusing to grant the mining rights, promises to be a common and recurrent problem, primarily the latter will be considered although the proposed statutory remedy will also solve the former problem.

25. Additionally, despite the importance of western coal to enhanced coal development, federally owned lands or coal deposits will not be encompassed within the analysis or the operation of the proposed statutory remedy. The Surface Coal Mining Reclamation Act of 1977 pre-empts such state action by vesting in the private surface owner of tracts underlying federally owned coal a right to veto such surface mining. 42 U.S.C.A. 1304 (1977). See also, Alfors, *Accommodation or Preemption: State and Federal Control of Private Coal Lands in Wyoming*, 12 Land & Water L. Rev. 73

(1977). Due to the "checkerboard" pattern of land ownership, alternating tracts of private, federal and state lands, a state statutory scheme requiring forced unitization that did not encompass federal coal interests would be largely unworkable. A federal statute, founded on the commerce clause, that operates in conjunction with the federal coal leasing program would appear to be the optimum solution to facilitate the aggregation of reserves to establish a feasible mining unit in the western states. R. Kalter & W. Tyner, WESTERN COAL: PROMISE OR PROBLEM, 95 (1978) (Lexington Books).

26. The constitutionality of the essential provisions of the SMCRA of 1977 is currently being challenged. In Va. Surface Min. & Reclamation Ass'n v. Andrus, 483 F. Supp. 425 (W.D. Va. 1980) it was held, inter alia, that the environmental performance standards that required restoration of mined lands to the "approximate original contour", as applied to mountainous terrain, was unconstitutional in that it constituted a taking of private property without just compensation in violation of the 5th Amendment and, further, that the imposition of such a scheme impinged on state sovereignty and contravened the 10th Amendment. See also, Andrus v. Indiana, no. 80-231 (S.D. Ind., filed June 10, 1980), which also held, inter alia, that the scheme requiring restoration of mined "prime farm lands" to the "approximate original contour" and to agricultural productivity equivalent to surrounding non-mined prime farm lands violated the 5th Amendment and the 10th Amendment. An appeal to the Supreme Court has been perfected and probable jurisdiction has been noted by the Court. 49 L.W. 3245.
27. Beginning with the first session of the 92nd Congress, in 1972, Congress attempted to enact legislation regulating surface mining of coal. One such bill that was reported out of Congress, "The Surface Mining Control and Reclamation Act of 1974" was pocket vetoed by President Ford. A similar bill, "The Surface Mining Control and Reclamation Act of 1975" was vetoed by President Ford the following session of Congress. For an account of the legislative history of the bill through 1975, see Dunlap, An Analysis of the Legislative History of the Surface Mining Control and Reclamation Act of 1975, 21 Rocky Mt. L. Rev. 11 (1975).

For the 1977 Act, see, Broyles, A synopsis of the Federal and Arkansas Surface Mining Acts. 1977, 17th Annual Arkansas Nat. Resources Inst. (1978); Kite, The Surface Mining Control and Reclamation Act of 1977: An Overview of Reclamation Requirements and Implementation, 13 Land and Water L. Rev. 703 (1977); Swift, Implementation of the Surface Mining Control and Reclamation Act of 1977 from the Coal Operator's Perspective, 25 Rocky Mt. Min. L. Inst. 4-1 (1979).

28. H.R. Rep., supra note 18 at 58.

29. Id. See also, 42 U.S.C.A. 1201(c).
30. H.R. Rep., supra note 18 at 60. See also, 42 U.S.C.A. §1201(c).
31. See generally, Hearings on H.R. 60 Before the Subcomm. on Mines and Mining of the House Comm. on Interior and Insular Affairs, 92nd Cong., 1st sess., ser. no. 92-26, at 76, 117, 547 (1972).
32. Id. at 117, 547.
33. Id.
34. 30 U.S.C.A. §1201(c) and (d) and §1202(c).
35. Id. at §1201(d) and §1202(e). See also, House report, supra note 18 at 93.
36. H.R. Rep., supra note 18 at 91.
37. Id. at 128.
38. Id. at 96.
39. 30 U.S.C.A. §1211.
40. Id. at §1253.
41. Id. at §1252(b).
42. 30 C.F.R. §§700-837 (1978).
43. 30 U.S.C.A. §1256.
44. Id. at §1258.
45. Id. at §1260(b).
46. Id. at §1254(b)(11).
47. Id.
48. Id. at §1260(b)(11).
49. Id. at §1256(b).
50. Id. at 1256(b), which provides that the permit shall terminate if operations under the permit are not initiated within three years from the date of its issue. However, "reasonable extensions" may be granted, if necessary, due to "litigation", "threatening economic loss", or reasons beyond the control, without contributing fault or negligence, of the permittee.

51. Id. at §1256(d)(1).
52. Id.
53. Id. at §1259.
54. Id. at §1267(a).
55. Id. at §1267(b).
56. Id. at §1268(a).
57. Id. at §1268(e).
58. Id. at §1268(d).
59. Id. at §1265(b)(2).
60. Id. at §1260(d).
61. Id. at §1265(c).
62. Id. at §1265(b)(3).
63. H.R. Rep., supra note 18 at 97.
64. Id.
65. 30 U.S.C.A. §1265(5).
66. Id.
67. Id.
68. Id at §1265(b)(20).
69. The Act also requires the surface mining operator to replace the water supply of a property owner that has been adversely affected by the surface coal mining operations. 30 U.S.C.A. 1307.
70. Id. at §1265(b)(10)(a).
71. Id. at §1265(b)(10)(b).
72. Id. at 1265(b)(10)(d).
73. See, Hearings on H.R. 2 Before the Subcomm. on Energy and the Environment of the House Comm. on Interior and Insular Affairs, 95th Cong., 1st. Sess., ser 95-1, pt. 2, at 10-13, 79-80, 328, 381 (1977); Hearings on S. 425, supra note 23, pt. 2, at 1372-73, 1393.
74. See, Hearings on H.R. 2, ser. 95-1, supra note 73, pt. 2, 916.

75. See, Hearings on H.R. 2, ser. 95-1, supra note 73, pt. 4, 16-21, 25, 30, 47, 55-63, 79-80, 90; Hearings on H.R. 3, ser. 93-11, supra note 12, pt. 2, 1227, 1306-7, 1566-67; and, Hearings on H.R. 60, ser. no. 92-26, supra note 30, 796, 799-800. The testimony of the witnesses cited herein reflects particular skepticism of the industry's claims of successful restoration to pre-mining productivity levels.
76. See, Hearings on H.R. 2, ser. 95-1, supra note 73, pt. 4, 56, 80; and, Hearings on S. 425, supra note 23, pt. 2, at 1001.
77. For a complete description and analysis of the state reclamation acts in existence prior to the enactment of the SMCRA of 1977, see, Hearings on H.R. 2, ser. 95-1, pt. 4, 261-418.
78. See, Casper, the Police Power and the Third Estate, 53 Dick. L. Rev. 277 (1949); Donley, Coal Mining Rights and Privileges, 52 W. Va. L. Rev. 32 (1950); Montgomery, "The Development of the Right of Subjacent Support and the Third Estate in Pennsylvania, 25 Temp. L. Q. 1 (1951); Williams, Coal and the Third Estate, 58 Dick. L. Rev. 146 (1954); Note, Extinguishment of the Right to Subjacent Support, 3 Ala. L. Rev. 241 (1951); Note, the Right to Subjacent Support, 19 Tenn. L. Rev. 982 (1947).
79. Donley, supra note 79 at 32.
80. Donley, Some Observations on the Law of Strip Mining, 11 Rocky Mt. Min. L. Inst. 123 (1963); Ferguson, Severed Surface and Mineral Estates - Right to Use, Damage or Destroy the Surface to Recover Minerals, 19 Rocky Mt. Min. L. Inst. 411 (1974); Patton, Recent Changes in Correlative Rights of Surface and Mineral Owners, 18 Rocky Mt. Min. L. Inst. 19 (1973); Sargeant, Mineral Lessee's Right to Strip Mine, 19 Wash & Lee L. Rev. 276 (1962); Schneider, Strip Mining in Kentucky, 59 Ky. L. J. 652 (1971); Twitty, Law of Subjacent Support and the Right to Totally Destroy the Surface in Mining Operations, 6 Rocky Mt. Min. L. Inst. 497 (1961); Comment, The Common Law Right to Subjacent Support and Surface Preservation, 35 Mo. L. Rev. 234 (1973); Comment, the Implied Right to Strip Mine Coal, 58 W. Va. L. Rev. 174 (1956); Note, Duty of Uranium Miner to Support Surface Estate, 10 Wyo. L. J. 239 (1956).
81. Benton v. U.S. Manganese Corp., 229 Ark. 181, 313 S.W.2d 839 (1958); Smith v. Moore, 172 Colo 440, 474 P.2d 794 (1970); Barker v. Mintz, 73 Colo 411, 262 P. 534 (1923); Dept. of Forests & Parks v. George's Creek Coal and Land Co., 250 Md. 125, 242 A.2d 165 (1968); Skivolocki v. East Ohio Gas Co., 38 Ohio St. 2nd 244, 313 NE2d 374 (1974); Franklin v. Calliccoat, 53 Ohio Ap. 240, 119 N.E.2d 688 (1954); Stewart v. Chernicky, 439 Pa. 43, 226 A.2d 259 (1970); New

Charter Coal Co. v. McKee, 411 Pa. 307, 191 A.2d 830 (1963); Wilkes-Barre Township School Dist. V. Corgan, 403 Pa. 383, 170 A.2d 97 (1961); Commonwealth v. Fitz Martin, 376 Pa. 390, 102 A.2d 893 (1954); Roches v. Duricka 374 Pa. 262, 97 A.2d 825 (1953); Commonwealth v. Fisher, 364 Pa. 422, 72 A.2d 568 (1950); Brown v. Crozier Coal & Land Co., 144 W. Va. 296, 107 S.E.2d 777 (1959); Oresta v. Romano Bros., 137 W. Va. 633, 73 S.E.2d 622 (1952); West Virginia Pittsburg Coal Co. v. Strong, 129 W. Va. 832, 42 S.E. 2d 46 (1947); Phipps v. Leftwich, 216 Va. 706, 222 S.E.2d 536 (1976).

82. Moss v. Jourdan, 92 S. 689 (1922). This anomolous situation is not unique to surface mining: the mineral owner may be required "to leave every point of coal untouched under the land," if necessary to support the surface. Noonan v. Pardee, 200 Pa. 474, 50 A.2d 255. (1901).
83. Skivolocki v. East Ohio Gas Co., 38 Ohio St. 2nd 244, 313 Ne. 2d 374, 377 N. 1 (1974). See also, Barker v. Mintz, 73 Colo 411, 262 P. 534, 535 (1922); and, Ferguson, Severed Surface and Mineral Estates - Right to Use, Damage or Destroy the Surface to Recover the Mineral, 19 Rocky Mt. Min. L. Inst. 411, 418 (1974).
84. 151 Eng. Rep. 27 (Ex. 1839).
85. 116 Eng. Rep 1048 (Q.B. 1850).
86. Benton v. U.S. Manganese Corp., 229 Ark. 181, 313 S.W.2d 839 (1958); Barker v. Mintz, 73 Colo 411, 262 P. 534 (1923); Skivolocki v. East Ohio Gas Co., 38 Ohio St. 2d 244, 313 N.E.2d 374 (1974); Franklin v. Calliccoat, 53 Ohio Ap. 240, 110 N.E.688 (1954); Commonwealth v. Fitzmartin, 376 Pa. 390, 102 A.2d 893 (1954); Brown v. Crozier Coal & Land Co. 144 W. Va. 296, 107 S.E.2d 777 (1959); Oresta v. Romano Bros., 137 W. Va. 633, 73 S.E.2d 622 (1952); W. Va. Pittsburgh Coal v. Strong, 129 W. Va. 832, 42 S.E.2d 46 (1949).
87. West Virginia-Pittsburgh Coal Co. v. Strong, 129 W. Va. 832, 42 S.E.2d 46, 51 (1947).
88. In Harris v. Ryding, supra note, at 31, Baron Parke in his concurring opinion observed:

"This is the true construction of the deed, in order to make it operate according to the intention of the parties. It never could have been in their contemplation that, by virtue of the reservation of the mines, the grantor should be entitled to take the whole of the coal and let down the surface, or injure the enjoyment of it; it is very like the case of the grant of an upper room in the house, with the reservation by

the grantor of a lower room, he undertaking not to do anything which will derogate from the right to occupy the upper room; and if he were to remove the supports of the upper room, he would be liable in an action of covenant; for the grantor is not entitled to defeat his own act by taking away the underpinnings from the upper room. So in this case, he would be acting in derogation of his grant, if he were to take away from the whole of the coal below, he having granted the use of the surface to the grantee."

89. See, *Skivolocki v. East Ohio Gas Co.*, 38 Ohio St.2d 244, 247, 313 N.E.2d 374, 376 (1974) and, the numerous cases cited in Annot: 70 A.L.R.3d 383, (1976).

90. See, *Martin v. Kentucky Oak Mining Co.*, 429 S.W.2d 395 at 397 (1968) in which the court stated:

"Whether or not the parties actually contemplated or envisioned strip or auger mining is not important - question is whether they intended that the mineral owner's rights to use the surface in removal of minerals would be superior to any competing right of the surface owner."

See also, *Peabody Coal Co. v. Pasco*, 452 F.2d 1126 (CA 6, 1971).

Kentucky has been liberal in construing coal conveyances to encompass the right to surface mine. See, *Schneider*, supra note 81, and, note: *Kentucky: Experience with the Broad Form Deed*, 67 Ky. L.J. 107 (1963) for an analysis of the relevant cases.

91. See, Annot; supra note 89 at §2(a).

92. *Benton v. U.S. Manganese Corp.* 229 Ark. 181, 313 S.W.2d 839 (1958); *Smith v. Moore*, 172 Colo. 440, 474 P.2d 794. (1970); *Skivolocki v. East Ohio Gas Co.*, 38 Ohio St.2d 244, 313 N.E.2d 374 (1974); *Franklin v. Calliccoat*, 53 Ohio Ap. 240, 119 N.E.2d 688 (1954); *Stewart v. Chernicky*, 439 Pa. 43, 226 A.2d 259 (1970); *Brown v. Crozier Creek Coal & Land Co.*, 144 W. Va. 296, 107 S.E.2d 777 (1959); *Phipps v. Leftwich*, 216 Va. 706, 222 S.E.2d 536 (1976).

93. *Skivolocki v. East Ohio Gas Co.*, 38 Ohio St. 244, 313 N.E. 2d 374 (1974); *Stewart v. Chernicky*, 439 Pa. 43, 266 A.2d 259 (1970); *Phipps v. Leftwich*, 216 Va. 706, 222 S.E.2d 536 (1976).

94. A deed granting the "right to strip mine the surface" for "fire clay" was construed as granting the mineral owner the privilege of surface mining even though modern stripping methods were unknown at the date of the execution of

the grant. *Heidt v. Aughenbaugh Coal Co.*, 406 Pa. 188, 176 A.2d 400 (1962). See also, *Tokas V.J.J. Arnold Co.*, 122 W. Va. 613, 11 S.E.2d 759 (1940) for language in a deed specifically granting the right to surface mine.

95. *Smith v. Moore*, 172 Colo. 440, 494 P.2d 794 (1970); *Dept. of Forests & Parks v. George's Creek Coal & Land Co.*, 250 Md. 125, 242 A.2d 165 (1965); *Skivolocki v. East Ohio Gas Co.*, 38 Ohio St.2d 244, 313 N.E.2d 394 (1974); *Franklin v. Callicoat*, 53 Ohio Ap. 240, 119 N.E.2d 688 (1954); *Wilkes-Barre Township School Dist. v. Corgan*, 403 Pa. 383, 170 A.2d 97 (1961); *Phipps v. Leftwich*, 216 Va. 706, 222 S.E.2d 536 (1976); *Oresta v. Romano Bros.*, 137 W. Va. 633, 73 S.E.2d 622 (1952); *West-Virginia Pittsburgh Coal Co. v. Strong*, 129 W. Va. 832, 42 S.E.2d 46 (1947).
96. *Stewart v. Chernicky*, 439 Pa. 43, 226 A.2d 259 (1970); *Commonwealth v. Fitzmartin*, 376 Pa. 390, 102 A.2d 893 (1954); *Phipps v. Leftwich*, 216 Va. 706, 222 S.E.2d 536 (1976).
97. *Martin v. Kentucky Oak Mining Co.*, 429 S.W.2d 395 (Ky. 1968); *Dept. of Forests & Parks v. George's Creek Coal & Land Co.*, 250 Md. 125, 242 A.2d 165 (1968); *Commonwealth v. Fitzmartin*, 376 Pa. 390, 102 A.2d 893 (1954); *Rochez v. Duricka*, 374 Pa. 422, 72 A.2d 568 (1950); *Phipps v. Leftwich*, 216 Va. 706, 222 S.E.2d 536 (1976).
98. *Martin v. Kentucky Oak Mining Co.*, 429 S.W.2d 395 (Ky. 1968); *Dept. of Forests & Parks v. George's Creek Coal & Land Co.*, 250 Md. 125, 242 A.2d 165 (1968).
99. *Id.*
100. 49 Cal. App. 2d 211, 121 P.2d 54 (1942).
101. *In Banks v. Tennessee Mineral Products Corp.*, 202 N.C. 408, 163 S.E. 108 (1932); the grantor reserved in the conveyance of the property to the plaintiff's predecessor-in-title ".... the mineral interest on and in .... together with the right to ingress, regress and egress .... with the necessary mining privileges for the operation of said mineral rights ...." Thereafter, the grantor executed a mining lease to the defendant mining operator who subsequently mined a shallow feldspar deposit by open pit mining. The plaintiff, basing his action on the failure of the defendant to provide subjacent support, sued to recover the damages resulting to the surface estate.

The court, construing the severance deed to determine the intent of the parties, held that it was not contemplated that the surface estate would be entitled to subjacent support. In so holding, the court emphasized the seemingly broad language, i.e., "necessary mining privileges for the operation of said mineral rights; and, more importantly,

the close proximity of the mineral deposit to the surface which precluded the possibility of mining the substance and providing subjacent support. Further, that open pit mining constituted the accepted and prevailing method of mining feldspar in the locality.

Subsequently, in English v. Harris Clay Co., 225 N.C. 467, 33 S.E.2d 329 (1945), the court was again faced with the identical issue in a case involving similar facts except that the severance deed merely reserved "...all the minerals and mining rights ...." The court noted that cases which hold that the mineral owner owes a duty of subjacent support primarily involve coal or other minerals traditionally extracted by subterranean mining in which subjacent support may be readily provided consistent with the mining of the deposit. Therefore, the implication of such an obligation to the mineral estate is consistent with the probable expectations of the parties. However, as to minerals such as feldspar, which are located near or on the surface and are commonly surface mined, the doctrine of subjacent support, based on the presumed expectations of the parties, is of "doubtful application." The court then held, noting that it was reaffirming Banks, that under such circumstances the doctrine of subjacent support is either inapplicable or is waived by implication.

102. Trklja v. Keys, 49 Col. App.2d 211, 212; 121 P.2d 54, 55 (1942).
103. Id.
104. 483 S.W.2d 808 (1972). The present opinion was substituted for a previous opinion in favor of the surface owner which was withdrawn by the Supreme Court. Also, prior to that, the case had already been before the Supreme Court. For a history of the case, see Gray, A New Appraisal of the Rights of Lessees under Oil and Gas Leases to Use and Occupy the Surface, 20 Rocky Mt. Min. L. Inst. 227, 245 (1975).
105. 483 S.W.2d at 810.
106. Fleming Foundation v. Texaco, Inc., 337 S.W.2d 846 (Tex. Civ. App. 1960; writ ref'd, N.R.c.), cited at 483 S.W.2d at 811.
107. At the trial, the parties also stipulated as to the following facts: the waterflood process for the production of oil is a reasonable and proper operation; and, the use of the Ogallala water in conducting secondary recovery of oil by water flooding and the location of the injection wells and the rates of water injection so conducted by the lessee also constituted reasonable and proper operations. Id.

108. 457 S.W.2d 96 (1969).
109. The dissenting opinion, by Mr. Justice Daniel, opined that the judgment of the lower courts' should have been affirmed on the following ground: the free water clause, as applied to secondary recovery operations, was ambiguous and the extrinsic evidence indicated that the parties to the instrument of severance did not thereby contemplate the use of the water of the magnitude required by such operation; and, additionally, as opposed to the "unfettered" implied easement theory of the majority opinion, the dissent would have simply applied the Getty test and have held such use unreasonable as it interfered with the surface owner's pre-existing use when reasonable alternatives, i.e., purchasing water from sources other than the tract, was available. See, 483 S.W.2d 813-823.
110. 483 S.W.2d at 810.
111. 470 S.W.2d 618 (Tex. 1971), cited at 483 S.W.2d at 812.
112. 483 S.W.2d at 811.
113. Id.
114. Id.
115. 351 S.W.2d 612 (Tex. Civ. App. 1961, error ref'd).
116. Id.
117. See, Note, Right to Use Surface by Mineral Owner, 14 Baylor L. Rev. 240 (1962).
118. See, Ferguson, supra note 83 at 415.
119. The theoretical basis for such an extensive implied dominant easement is not definitively revealed in either Whittaker or Texas Gulf Sulphur. One conceivable theory is that such "dominance" of the mineral estate in Texas originates from the lingering civil law heritage of the sovereign ownership of all mines and minerals. See, 483 S.W.2d at 816 and Ferguson, supra note 83 at 414. Texas, as a republic and later, briefly, as a state retained the sovereign ownership of minerals derived from its Spanish colonial background. Laws, Republic of Texas, 7th Congress, 3-4 (1840). The mineral rights, however, were fully relinquished to the owners of the soil in 1866. Tex. Const. Art. VII, § 20; Art. XIII, § 2 (1845). Moreover, it seems hardly appropriate to determine the mineral owner's right to burden the surface estate by a law intended to govern the extent of the sovereign's right to extract state owned minerals from private owned lands.

The dominance of the mineral estate may also be explained

as a manifestation of the policy of encouraging the development and utilization of mineral resources. That necessarily assumes that such far greater benefits to society are obtained from the extraction of minerals than from other surface uses, such as agriculture, that the mineral owner is entitled, without payment of compensation, to destroy the surface estate. Not only is such an assumption of dubious validity, it contravenes the traditional method of determining the extent of the burden of mineral development to the surface estate on the basis of ascertaining the existence of previously imparted consent, i.e., determining the intent, or, due to the impracticality, the probability of the intent of the parties to the instrument of severance.

Conceivably, however, the absolute dominance of the mineral estate in Whittaker and Texas Gulf Sulphur, may be based on the logic implicit in Trklja v. Keys: the parties to the instrument of severance, more probable than not, contemplated that, if absolutely necessary to the beneficial enjoyment of the mineral interest, the mineral owner would be entitled to mine the minerals regardless of the adverse affect on the surface estate. Although contrary to the common law perspective, as evidenced by the recognized obligation of the mineral owner to provide subjacent support to the surface estate, and the majority view; it may not be an unfounded assumption in areas characterized by mineral production in which the economic incidents of mining typically exceed the value of the contemporaneous surface usage.

120. See, Ky. Rev. Stat. Ann. §350.060(8)(1976); 50 Mont. Rev. Codes Ann. §§1039.1, 1301, 1306 (Supp. 1975); 38 N.D. Cent. Code 18 (Supp. 1975); 35 Wyo. Stat. 502-24(b)(x)-(xii) (Supp. 1975).
121. For an analysis of the Acts, see Beck, *supra* note 6 ; and Karell, *Montana's Statutory Protection of Surface Owners from Strip Mining and Resultant Problems of Mineral Deed Construction*, 37 Mont. L. Rev. 347 (1976).
122. Such acts differ from provisions common to surface mining reclamation acts which merely require the mine operator to demonstrate its right to surface mine, i.e., to reveal its title to show, depending on the jurisdiction, an express or implied right to surface mine. See, 30 U.S.C.A §1257(b)(9).
123. In *Dept. for Natural Resources & Environmental Protection V. no. 8 Ltd.*, 528 S.W.2d 684 (Ky. Ap. 1975) the Kentucky Act was held to be unconstitutional on the basis that it changed the relative legal rights of such private parties under their contracts without achieving any public purpose. For an analysis of that case and the constitutionality of such

statutes, see Beck, supra note 6.

124. Such legislation is analogous to state legislation in Pennsylvania which required the coal lessee to leave sufficient coal in the underground mine to support the surface estate despite the fact that the lessee had acquired a waiver of subjacent support from the surface owner. See, The Kohler Act, 52 Pa. Stat. Ann. 666(13)(Purdons 1921), which held to be an unconstitutional deprivation of property, without compensation; in violation of the 5th Amendment of the U.S. Constitution the landmark case of Pennsylvania Coal Co. V. Mahon, 260 U.S. 393.
125. Chernicky v. Stewart, 439 Pa. 43, 46; 266 A.2d 259, 262 (1970).
126. Id.
127. Adkins, Legal Problems in Development and Utilization of Southern Coal, 15 Annual Arkansas Nat. Resources Inst. 1 2 (1976); Broyles, Right to Mine Texas Uranium and Coal by Surface Methods: Acker v. Guinn Revisited, 13 Houston L. Rev. 451, 459 (1976).
128. Broyles, supra note 121; DeLung, The Strohacker Doctrine An Arkansas Rule of Property, 14th Annual Arkansas Nat. Resources Inst. 1 (1975); Emery, What Surface is Mineral and What Mineral is Surface? 12 Okl. L. Rev. 499 (1959); Horner, Lignite - Surface or Mineral, 31 Ark. L. Rev. 75 (1971); Hortenstein, Is Coal Included in a Grant or Reservation of "Oil, Gas, or Other Minerals", 30 S.W.L.J. 481 (1976); Kuntz, Law Relating to Oil and Gas in Wyoming, 3 Wyo. L.J. 197 (1949); Maxwell, Meaning of "Minerals" - The Relationship of Interpretation and Surface Burden, 8 Tex. Tech. L. Rev. 255 (1974); Patterson, Survey of Problems Associated with Ascertaining the Ownership of "Other Minerals", 25 Rocky Mt. Min. L. Rev. 21-1 (1979).
129. 30 U.S.C.A. §1258(a)(8) provides that "each reclamation plan submitted as part of a permit application ... shall include ... a statement of: "the consideration which has been given to making the surface mining and reclamation operations consistent with surface owner plans ..."
130. Adkins, supra note 121 at 2; Stroud, supra note 22 at 591-2. Also, the mine operator may exchange land of comparable value and utility for the landowner's tract. See, Stroud, infra, 598.
131. Stroud, Id. at 592.
132. Id. See, also, Burgess, Representing the Landowner in a Mineral or Surface Lease or Sales Transaction, 22 Rocky Mt. Min. L. Rev. 451, 459, 60, 64, (1976).

133. See, 120 Cong. Rec. 25250 (1974) (Remarks of Rep. Ruppe).
134. See generally, Adkins, supra note 121 at 2; Stroud, supra note at 591-2.
135. 121 Cong. Rec. 6113 (1975) (remarks of Sen. Hansen).
136. Id.
137. Id.
138. 30 U.S.C.A. §1260 (b)(3).
139. Id. at §1258 (a)(10).
140. Id. at §1258 (a)(2).
141. Stroud, supra note 22 at 591.
142. See, generally, Id. at 591; Burgess, Effects on the Private Landowner of Reclamation and Land Use Regulations Governing Mineral Development of the Severed Mineral Estate, paper presented before the Rocky Mtn. Min. L. Inst., Denver, Colo. (1979) at 15-21-24.
143. Id.
144. For a discussion of economies of scale in surface mining, see, Kalter and Tyner, supra note 25 at 86, et seq.
145. Prevention of physical waste of a valuable natural resource and the protection of correlative rights is the basis of typical state regulation of oil and gas. See, 5 Kuntz, Law of Oil and Gas, §70.1 (1978).
146. Eminent domain, traditionally, may only be exercised by the sovereign for the "public use." However, statutory condemnation schemes which require the acquired interest to be utilized by private parties have been constitutionally sustained. See, for example, a Mill Act case, Head v. Amoskeag Mfg. Co., 113 U.S. 9, 5 S. Ct. 441, 28 L. Ed. 441 (1885), discussed in Williams, supra note at . Also, see, Berman v. Parker, 348 U.S. 26, 79 S. Ct. 98, 99 L. Ed. 2d 27 (1954) in which the Court sustained the constitutional validity of the taking of the plaintiff's property, which was not in a dilapidated condition, to be subsequently redeveloped, by private parties, on the basis of the sovereign's interest in eliminating slums and creating aesthetically desirable neighborhoods. See generally Stoebuck, A General Theory of Eminent Domain, 47 Wash. L. Rev. 553, 588-597 (1972); Comment, The Public Use Limitation on Eminent Domain: An advance Requiem 58 Yale L. J. 599 (1949).

Some state constitutions specifically define the public use to include mining purposes. See, Art. I, §14 Idaho Const., Art III, §15 Mont. Const. Conceivably, the restrictive interpretation of the public use requirement contained in a state constitution or enabling statute could render a state statute providing for condemnation for mining purposes unconstitutional. See, generally, Campbell, Condemnation of Mining Properties, 14 Rocky Mt. Min. L. Inst. 231 (1968).

147. Hunter v. McHugh, 202 La. 97, 11 So.2d 495 (1942), appeal dis'm'd 320 U.S. 222, 64 S. Ct. 19, 88 L. Ed. 5 (1943); Patterson v. Standolind Oil & Gas Co., 182 Okla. 155, 77 P.2d 83 (1938) appeal dis'm'd 305 U.S. 376, 59 S. Ct. 259, 85 L.E. 231 (1939).
148. Armstrong v. High Crest Oils, Inc., 164 Mont. 187, 520 P.2d 1081 (1974); Palmer Oil Corp. v. Amerada Pet. Corp., 204 Okl. 543, 231 P.2d 997 (1951), appeal dis'm'd 343, U.S. 390, 72 S. Ct. 842, 96 L.Ed. 1022 (1952).
149. 6 Williams & Meyers, Oil and Gas Law, §§906.2-3 (1977).
150. See, generally, Williams, Unitization of Mining Properties, 17 Rocky Mt. Min. L. Inst. 245 (1972) which discusses, inter alia, the only found compulsory unitization statute applicable to hard mineral, "Consolidation of Small Tracts for Mineral Development", 69 N.M. Stat. Ann. §9-1 et seq. (1967), which is applicable only to small tracts of uranium.
151. Basically, the mine unit contemplated by the statute is analogous to the logical mining unit, which may be established, as provided by the Mineral Leasing Act Amendment of 1975, 30 U.S.C.A. 202(A), upon approval by the Secretary of the Interior, by consolidation of federal coal leases, in excess of the statutory maximum of the size of an area that may be leased, to achieve economic and efficient recovery of coal reserves. The amendment provides as follows:

The Secretary, upon determining the maximum economic recovery of the coal deposit or deposits is served thereby, may approve the consolidation of coal leases into a logical mining unit. Such consolidation may only take place after a public hearing, if requested by an person whose interest is or may be adversely affected. A logical mining unit is an area of land in which the coal resources can be developed in an efficient, economical, and orderly manner as a unit with due regard to conservation of coal reserves and other resources. A logical mining unit may consist of one or more Federal leaseholds, and may include intervening or adjacent lands in which the

United States does not own the coal resources, but all the lands in a logical mining unit must be under the effective control of a single operator, be able to be developed and operated as a single operation and be contiguous.

For a discussion of the logical mining unit and economies of scale in coal surface minings, see, Kalter & Tyner, *supra* note 25 at 86.

152. Additionally, the statute could also require the mine operator to hold the respective necessary mining rights equal in the aggregate to a stated percentage, computed on an acreage basis, to the total interests contained in the unit. The New Mexico Compulsory Unitization statute *infra*, note 150 at §9 contained such a requirement. However, due to the inevitable resistance to surface mining, such a statutory requirement, especially if it equaled the percentage of the consenting owners commonly required in compulsory unitization schemes, ranging from 62.5% in Alaska to 85% in Mississippi, Williams & Meyers, *supra* note 149 at §913.5, could render the statute inoperable.
153. To initiate the regulatory process, the petition of the applicant would have to include, inter alia, a detailed description of the following: the boundaries of the proposed unit; the unit mining and reclamation plans; the projected mining and reclamation schedule for each respective tract; the extent and characteristics of the coal deposit underlying the proposed unit and each respective tract; and, the relevant ownership information as to the committed and non-committed acreage. Also, the facts necessary to determine the amount of compensation due to each affected property owner under the requisite formula would have to be specified.
154. Law of Aug. 1, 1958, The Opencast Coal Act, 22 Halsbury's Laws of England, §1, et seq., at 4720, (3d Ed. 1970).
155. For a legislative history discussing the primary legislative amendments offered as a solution to the regulation of surface mining of federal coal on privately owned surface estates, see, Dunlap, *supra* note 27 at 28 to 31; Gallinger & Haughey, Legislation Protection of the Surface Owner in the Surface Mining of Coal Reserved by the United States, 22 Rocky Mt. Min. L. Inst. 145, 154-164 (1976); Comment, Surface Mining of the Severed Estate, *supra* note 23 at 146-153.
156. Even if the instrument of severance grants the express right to surface mine, Arkansas has held that the surface owner is still entitled to be compensated for the destruction of the surface estate. *Benton v. U.S. Manganese Corp.*, 229 Ark. 181, 313 S.W.2d 839 (1958). Kentucky

courts have held to the contrary. Martin v. Kentucky Oak Mining Co., 427 S.W.2d 395 (Ky. 1968); Buchanan v. Watson, 290 S.W.2d 40 (Ky. 1956). See, for a discussion of the cases, Norvell, The Coal and Lignite Lease Compared to the Oil and Gas Lease, 31 Ark. L. Rev. 420, 446 (1977). Therefore, in Arkansas, even if the right to surface mine has been acquired in a prior grant or reservation, the surface owner may still have to be compensated.

As Whittaker and Texas Gulf Sulphur indicate, if the right to surface mine exists as an incident of the ownership of the dominant mineral estate, by virtue of the implied development easement, compensation of the surface owner would not be required.

157. See, 22 Halsbury's Laws, §§17-36, at 494-515; and, also, H.R. 25, quoted at 120 Cong. Rec. 7064.
158. Advance royalties, from the date of the condemnation until the actual mining of the tract, may also be utilized in the compensation formula, especially if such royalties are prevalent in the field.
159. Prarie Oil & Gas Co. v. Allen, 2 F.2d 566 (8th Cir. 1924); Earp v. Mid-Continent Petroleum Corp., 167 Okl. 86, 27 P.2d 855 (1933); Burnham v. Hardy Oil Co., 147 S.W. 330, 108 Tex. 555, 195 S.W. 1139 (1917).
160. Some forced pooling statutes, in fact, treat the affected mineral owner more generously than the common law treatment accorded to the non-consenting cotenant, by providing that the operator can only recoup his expenses out of seven-eighths of the proceeds due such mineral owner which ensures a one-eighth royalty regardless of whether the operator's costs are ever recovered. See, 53 Ark. Stat. §115 (1941); 52 Okla. Stat. Ann. §87-1(d)(1971).
161. New Mexico's hard mineral compulsory statute provides for compensating the mineral owner by a royalty interest, 69 N.M. Stat. Ann. 9-8(1967).