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Kentucky Law Survey: Mineral Law

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Mineral Law

BY ELIZABETH K. ROUSE

INTRODUCTION

During the Survey period there have been two significant events related to subsidence, a problem long associated with underground mining. First, portions of the Surface Mining Control and Reclamation Act of 1977¹ (SMCRA or Act) which relate to mineowner liability for subsidence became effective in Kentucky on January 18, 1983.² Also, in 1982, the Kentucky Court of Appeals decided *Island Creek Coal Co. v. Rodgers*.³ Both SMCRA and *Island Creek* impose a high degree of liability for subsidence, yet examination of the two reveals a significant gap in the protection afforded Kentucky homeowners threatened by subsidence. This Article will examine the subsidence problem, identify the statutory and common law remedies for those affected, and examine a possible solution to the inadequacies of these remedies.

I. SUBSIDENCE

Surface subsidence occurs when the existence of voids created by removal of coal and other solid material causes the weight of the overlying rock to be redistributed.⁴ If the supports or pillars of material left to support the overburden do not have sufficient strength, the overlying rock breaks and falls into the voids, often crushing any pillars left as support.⁵ In addition, the natural and inevitable deterioration of old pillars will result in overburden collapse.⁶ The results of the breaking and collapse of the overlying rocks often extend upward to the surface, causing potholes, cracks and general settling of the surface.⁷ These vertical and horizontal

¹ 30 U.S.C. §§ 1201-1328 (Supp. 1981).

² See text accompanying note 64 *infra*.

³ 644 S.W.2d 339 (Ky. Ct. App. 1982).

⁴ Colaizzi, Whaite & Donner, *Pumped-Slurry Backfilling of Abandoned Coal Mine Workings for Subsidence Control at Rock Springs, Wyo.*, U.S. BUREAU OF MINES INFORMATION CIRCULAR 8846 at 1 (1981).

⁵ *Id.* at 1-2.

⁶ R. Gray & R. Bruhn, *Subsidence Above Abandoned Coal Mines* 8 (Sept. 1982) (unpublished manuscript).

⁷ Colaizzi, Whaite & Donner, *supra* note 4, at 2.

displacements of the surface may occur in a matter of days or extend over a period of many years depending upon the nature of the overlying rock, the depth of the mining and the method of mining employed.⁸ "Partial events of subsidence," or multiple episodes of subsidence, occur until the point of complete collapse or until the mines are stabilized by backfilling or some other means.⁹ A suit may be brought for *each* "partial event of subsidence," even though the same mine working caused each episode.¹⁰

Two types of subsidence features found above abandoned mines have been identified: sinkholes, which are generally fifteen feet or less in diameter and twenty feet or less in depth;¹¹ and troughs, which average about thirty or more feet in diameter and three feet or less in depth at the center.¹² Subsidence sinkholes are caused by the collapse of a thin mine cover, while troughs develop where "pillars fail by crushing or punching into the mine roof or floor."¹³ The occurrence of sinkholes outnumbers troughs thirty to one.¹⁴

In the United States, early coal mining practices were irregular, with the coal pillars left for support of the overburden varying widely in size and spacing.¹⁵ These irregularities, plus the age of the abandoned mines, present significant potential subsidence problems in a large area of the United States. Approximately eight million acres are already undermined, and it is estimated that 1.9 million acres have suffered subsidence due to bituminous coal mining.¹⁶ With approximately 70,000 abandoned or inactive underground coal mines across the country there is a high probability that a large surface area in the United States will suffer subsidence in the future, regardless of prior partial events of subsidence.¹⁷

⁸ *Id.*

⁹ R. Gray & R. Bruhn, *supra* note 6, at 8.

¹⁰ 3 LINDLEY ON MINES § 823 (3d ed. 1914) ("Each event of subsidence is a new cause of action, although the *causa causans* of each subsidence may be the same").

¹¹ R. Gray & R. Bruhn, *supra* note 6, at 5.

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.* at 1.

¹⁶ *Id.*

¹⁷ *Id.* at 1-3, 8.

Kentucky faces the danger of considerable subsidence because of the very substantial amount of underground mining carried on in the first four decades of this century. Efforts to pinpoint the areas with greatest vulnerability to subsidence have been hindered because a fire in 1948 destroyed the Kentucky Department of Mines and Minerals building and the state's collection of mine maps, without which many of the state's older mine workings cannot be located.¹⁸

II. DEVELOPMENT OF THE COMMON LAW RIGHT OF SUBJACENT SUPPORT

The problem of subsidence arose in England in the wake of the rapid expansion of coal production in the 18th and 19th centuries. In dealing with the question, English courts formulated a policy of protection for the surface owner which made mine operators strictly liable for subsidence.¹⁹ American courts have followed this approach, holding that the surface owner has an unqualified right of subjacent support.²⁰

In the 1839 case of *Harris v. Ryding*,²¹ a landowner had granted the right to take all the subsurface minerals in an agreement which provided that the grantee would make compensation for any damage done to the surface.²² The court held that the grantee could take "only so much coal as he could get leaving a reasonable support to the surface."²³ The court in *Harris* put considerable stress on the intent of the parties and concluded that the surface owner never intended to grant away the coal needed for surface supports.²⁴ Because negligence had been admitted in a demurrer, the court in *Harris* did not establish whether the liability for subsidence was absolute or dependent on negligence.²⁵ In *Humphries v. Brogden*,²⁶

¹⁸ Interview with Dr. Donald Haney, Director of the Kentucky Geological Survey, 311 Breckinridge Hall, University of Kentucky, Lexington, Kentucky (August 28, 1983).

¹⁹ See, e.g., *Humphries v. Brogden*, 116 Eng. Rep. 1048 (Q.B. 1850).

²⁰ See, e.g., *West Ky. Coal Co. v. Dilback*, 294 S.W. 478 (Ky. 1925).

²¹ 151 Eng. Rep. 27 (Ex. 1839).

²² *Id.*

²³ *Id.*

²⁴ *Id.* at 29.

²⁵ *Id.* at 30. See also Comment, *The Common Law Rights to Subjacent Support and Surface Preservation*, 38 Mo. L. Rev. 234, 237 (1973).

²⁶ 116 Eng. Rep. at 1048.

however, another English court, held that the duty of support was absolute, regardless of how carefully or skillfully the mine had been worked.²⁷

As later English cases accepted the subjacent support doctrine, "the general English rule became that where the surface and mining rights were severed, the surface owner had a right to the subjacent support of his land, unless the deed effecting the severance contained an express provision to the contrary."²⁸ In *Humphries v. Brogden* this right was said to be a "natural easement of support" of the surface estate.²⁹

The court in *Humphries* noted that it could find nothing in American commentaries concerning a right of subjacent support.³⁰ But, as mining activity increased in the United States, the concomitant problem of subsidence apparently also increased, as evidenced by a number of cases dealing with the problem after 1870.³¹ In most of these cases the courts followed the English rule of subjacent support, finding a duty of support unless there was agreement to the contrary.³²

As case law in this area developed in the United States, the right of support became absolute.³³ The care of the operator, or the fact that industry custom was followed, is no defense in the event of a subsidence.³⁴ The consequences of this absolute obligation were clearly described in *Noonan v. Pardee*:³⁵

Where there has been a horizontal division of the land, the owner of the subjacent estate, coal or other mineral, owes to the superincumbent owner a right of support. This is an absolute right arising out of the ownership of the surface. Good or bad mining in no way affects the responsibility. What the surface owner has a right to demand is sufficient support, even, if to that

²⁷ *Id.* at 1048, 1053 (citing *Harris v. Ryding*, 151 Eng. Rep. at 27).

²⁸ *See* Comment, *supra* note 25, at 237.

²⁹ *See* 116 Eng. Rep. at 1053.

³⁰ *Id.* at 1054. The court also mentioned it could find nothing on the right of subjacent support in the Code Napoleon, either. *Id.*

³¹ *See* Comment, *supra* note 25, at 238-39.

³² *See id.* at 238.

³³ Comment, *Mine Subsidence Legislation in Pennsylvania and the Developing Concept of the Police Power*, 27 U. PITT. L. REV. 835 (1966).

³⁴ Comment, *supra* note 25, at 238-39; Comment, *supra* note 33, at 835.

³⁵ 50 A. 255 (Pa. 1901).

end, it be necessary to leave every pound of coal untouched under his land.³⁶

Furthermore, a mine operator will be held liable for subsidence which might have occurred because of prior mining if his mining contributed in weakening the surface strata and hastened the subsidence.³⁷

The American rule provides that the surface owner has a right to the support of his land in its *natural state* unless the contract conveying the mineral estate provides otherwise.³⁸ It is less clear what protection is afforded to the structures on the surface. In *Marvin v. Brewster Iron Mining Co.*,³⁹ the court held that the duty to support the surface in its natural state did not include the duty to support buildings or other structures on the surface which were neither existing nor contemplated at the time of the severance of the mineral and surface estates.⁴⁰ This rule was rejected by the Kentucky Court of Appeals in *Island Creek Coal Co. v. Rodgers*.⁴¹

On the other hand, structures existing or contemplated at the time of the severance of the estates were entitled to support.⁴² One case decided at common law did not allow the surface owner to recover for damage to his buildings caused by subsidence because the surface owner knew, or had reason to know, that subsidence had occurred, or would occur in the future, *before* he erected the building on the land.⁴³

The Kentucky courts have followed the rule articulated in *Hum-*

³⁶ *Id.* at 256.

³⁷ Comment, *supra* note 33, at 835-36.

³⁸ Comment, *supra* note 25, at 238 & n.37.

³⁹ 55 N.Y. 538 (1874), *discussed in* Annot., 32 A.L.R.2d 1309, 1317 (1953); Annot., 35 A.L.R. 2237, 2238 (1925).

⁴⁰ *Id.* at 556-57.

⁴¹ See 644 S.W.2d 339 (Ky. Ct. App. 1982) ("Island Creek should be held liable for the natural state of the surface, as we have defined it, as of the time it last took coal from the earth in 1963.").

⁴² See *Collins v. Gleason Coal Co.*, 115 N.W. 497, 498-99 (Iowa 1908); *Marvin v. Brewster Iron Mining Co.*, 55 N.Y. at 556-57.

⁴³ See *Kangas-Jacobsen Dairy, Inc. v. Lloyd-Smith*, 62 N.W.2d 915, 919 (Minn. 1954) ("If . . . plaintiff had knowledge or had such information as to cause it to believe that subsidence had occurred or would occur in the future and still erected its building on such land, it would hardly seem that it could be permitted to recover for damages to such building . . ."). See text accompanying note 83 *infra* for a discussion of this question in the context of the *Island Creek* case.

phries v. Brogden and have held that the mineral owner has an absolute duty to leave sufficient support for the surface to remain in its natural state.⁴⁴ In *Nisbet v. Lofton*,⁴⁵ coal support pillars were removed with the knowledge of the mineral estate owner who received royalties from the removal.⁴⁶ In a suit seeking subsidence damages, the Court held that the mineral owner was liable as if he had committed the wrongful acts himself because he had accepted royalties from the parties causing the damage: "[S]ince these parties had no lease, he could have stopped them at any time, and, after the plaintiff told him that they were removing the pillars, it was his duty to stop them."⁴⁷ *Nisbet* represents an exception to the general rule that lessors of the mineral estate are not liable to the surface owner.⁴⁸

In *West Kentucky Coal Co. v. Dilback*,⁴⁹ the former Kentucky Court of Appeals made clear its acceptance of strict liability for subjacent support, stating:

We find no proof in the record that the taking of the coal from adjacent property was negligently done. If the coal had been taken from under the property of appellees and a subsidence had been caused thereby, appellant would be responsible for the resulting damage, regardless of whether the mining operation had been conducted negligently or otherwise.

. . . .

As we have said, the right to mine is subservient to the right of the surface owners to have the surface maintained in its natural state free from subsidence or partings of the soil, and this right of support is absolute and not dependent upon any question of negligence.⁵⁰

As a general rule, damages for permanent injury are measured by the difference in the value of the premises before and after the

⁴⁴ See, e.g., *West Ky. Coal Co. v. Dilback*, 294 S.W. at 478.

⁴⁵ 277 S.W. 828 (Ky. 1925).

⁴⁶ *Id.* at 829-30.

⁴⁷ *Id.* at 831.

⁴⁸ *Id.* For an example of the more restricted view on lessor liability see *Butte Copper & Zinc Co. v. Poague*, 164 F.2d 201, 203-04 (9th Cir. 1947), *cert. denied*, 333 U.S. 843 (1948).

⁴⁹ 294 S.W. at 478.

⁵⁰ *Id.* at 479.

injury.⁵¹ In Kentucky, "the measure of permanent damage to real estate . . . is the difference in the fair market value of the real estate just before and after the injury."⁵²

The Kentucky law of subjacent support as it has developed in the cases is generally in accord with the rules developed in other coal mining jurisdictions.⁵³ For example, Kentucky follows the majority rule on the statute of limitations⁵⁴ which provides that a cause of action does not accrue and the statute of limitations does not begin to run⁵⁵ until the surface has actually been damaged.⁵⁶

III. THE SURFACE MINING CONTROL AND RECLAMATION ACT

In 1977 Congress codified the absolute liability doctrine of the common law subsidence cases in the provisions of SMCRA.⁵⁷ The Act, and the regulations promulgated under the Act,⁵⁸ require coal mine operators subject to SMCRA to plan and conduct their underground mining operations:

to prevent subsidence [from] causing material damage [to the surface] to the extent technologically and economically foreseeable,

⁵¹ See *Collins v. Gleason Coal Co.*, 115 N.W. at 499-500; Annot., 56 A.L.R. 310, 312 (1928).

⁵² *Island Creek Coal Co. v. Rodgers*, 644 S.W.2d at 345.

⁵³ The only state not adopting similar rules is Pennsylvania, which has developed unusual and arguably erroneous rules. For example, Pennsylvania follows the minority rule in determining the statute of limitations of an action for damages caused by mine subsidence. See *Noonan v. Pardee*, 50 A. at 244. Thus, the surface owner's cause of action accrues and the statute of limitations begins to run when the underlying support is removed. Consequently, in Pennsylvania, "if insufficient support causes the surface to subside six years after the mining occurred, the six year statute of limitations will bar the surface owner from suing." *Id.* at 257. For a discussion of *Noonan* see Comment, *supra* note 33, at 836; Comment, *Limitations of Actions for Failure of Subjacent Support*, 20 WASH. & LEE L. REV. 117, 118-19 (1963).

⁵⁴ See *Big Sandy & C. Ry. v. Thacker*, 109 S.W.2d 820, 821 (Ky. 1937); *North Jellico Coal Co. v. Trosper*, 177 S.W. 241, 244 (Ky. 1915) (not a subsidence case, but instead a situation wherein plaintiff alleged defendant had negligently deposited coal mining waste on a river bank causing channel fill and substantial flooding of plaintiff's land. "As to the statute of limitations, we may say that the time did not begin to run until the actual happening of the injury.").

⁵⁵ In Kentucky, a five year statute of limitations would apply. KY. REV. STAT. ANN. § 413.120(7) (Baldwin 1983) [hereinafter cited as KRS].

⁵⁶ See Comment, *supra* note 25, at 240.

⁵⁷ See 30 U.S.C. § 1266 (Supp. 1981).

⁵⁸ See 30 C.F.R. § 817.121-.126 (Supp. 1983).

[to] maximize mine stability and [to] maintain the value and reasonably foreseeable use of surface lands, except in those instances where the mining technology used requires planned subsidence in a predictable and controlled manner.⁵⁹

The regulations provide:

This may be accomplished by leaving adequate coal in place, backfilling, or other measures to support the surface, or by conducting underground mining in a manner that provides for planned and controlled subsidence. Nothing in this Chapter shall be construed to prohibit the standard method of room and pillar mining.⁶⁰

According to SMCRA, all underground mining operations must comply with the Act no later than eight months after the state's permanent program is approved.⁶¹ Kentucky's proposed permanent program was conditionally approved by the Secretary of the Interior on May 18, 1982.⁶² During the eight month interval after the permanent program was approved, the underground mining operators were only required to comply with the relevant provisions of Section 516 of the Act.⁶³ Since January 18, 1983, Kentucky underground mine operators have been obligated to comply with the provisions of SMCRA specifically addressing subsidence prevention and control.⁶⁴

SMCRA's Section 516 and the regulations promulgated thereunder differ from the common law in several important respects. First, under SMCRA, the underground coal mine operator is absolutely liable for subsidence-caused material damage to the subjacent *and* adjacent or lateral estates. Thus, SMCRA imposes absolute liability for lateral support, in addition to the common law rule of absolute liability for subjacent support.⁶⁵ Second, under

⁵⁹ 30 U.S.C. § 1266(b)(1) (Supp. 1981). The Act provides *prospective* protection from subsidence, applying to the effects of mining conducted *after* the effective date of the Act.

⁶⁰ 30 C.F.R. § 817.121(a) (Supp. 1983).

⁶¹ 30 U.S.C. § 1256(a) (Supp. 1981).

⁶² McGraw, *Surface Mining Primacy for Kentucky: The Legal Considerations*, 71 Ky. L.J. 37, 40 (1982-83).

⁶³ Blazey & Strain, *Deep Mine Subsidence--The State Law and the Federal Response*, 1 E. MIN. L. INST. 1-1, 1-25 (1980).

⁶⁴ See *id.* at 1-25 to 1-26.

⁶⁵ See 30 U.S.C. § 1266; 30 C.F.R. § 817.126 (Supp. 1983); 44 Fed. Reg. 15,276 (1979).

SMCRA, the surface owner's express waiver of the right of subjacent support does not absolve the coal operator of liability. "The Act does not contemplate that private parties can, by contract or purchase of resources, void the Congressional mandate for environmental and other property protection."⁶⁶ Thus, under the Act, the right is not waivable as at common law. Third, under SMCRA, the operator must provide a remedy for the surface owner who suffers subsidence-caused material damage by returning the surface to its presubsidence position or status,⁶⁷ a dramatic expansion of the common law principles of damages and remedies for subsidence claims.⁶⁸

Unlike the remedial objectives of the Abandoned Mine Reclamation Fund,⁶⁹ Section 516 imposes upon the underground coal operator the responsibility to adopt means to reduce the *likelihood* of subsidence.⁷⁰ If subsidence occurs, the operator is responsible for preventing change, mitigating the effects of any damage, and repairing *any* material damages to the land, water *and* structures on the surface.⁷¹

Underground coal mine operators must select one of three alternatives to remedy any material damage caused by the coal mining operations:⁷²

[The regulations] provide protection for the rights of owners of surface lands or structures by stipulating that underground operators shall use all measures approved by the regulatory authority to reduce, control, or prevent subsidence and subsidence-caused damage. Operators of mines that cause subsidence-related damage are required to mitigate the damage by restoration, rehabilitation or removal and replacement of structures; purchase of the damaged structure or feature and

⁶⁶ 44 Fed. Reg. 15,274 (1979).

⁶⁷ 44 Fed. Reg. 15,275 (1979).

⁶⁸ Compare 44 Fed. Reg. 15,275 with 4 AMERICAN LAW OF MINING §§ 21.18-.19 (The Rocky Mountain Mineral Law Foundation ed. 1982). At common law, for example, the damages for the destruction of wells and springs is measured by the diminution in the value of the tract; the cost of providing water from another source is a proper, but not necessary, factor to consider in that determination.

⁶⁹ See 30 U.S.C. § 1231 (1983).

⁷⁰ 30 C.F.R. § 817.124(a)-(c) (Supp. 1983).

⁷¹ *Id.*

⁷² 30 C.F.R. § 817.122 (Supp. 1983).

restoration of surface to pre-mining capability; or by providing surface owners with pre-paid insurance to cover the amount of diminution in value caused by subsidence or other similar protection. In the case of land-use degradation caused by subsidence, operators are required to return the surface to a condition capable of supporting uses reasonably foreseeable before subsidence.⁷³

SMCRA attempts to balance the energy needs of the United States with the policy of protecting the environment from the adverse consequences of mining.⁷⁴ The Act also recognizes that subsidence cannot always be prevented, but attempts to lessen the effect of subsidence through planning.⁷⁵ However, in certain areas, called "buffer zones," environmental protection is paramount, and underground mining activities may not be conducted beneath or adjacent to these areas. "Buffer zones" include perennial streams, private water supply wells, public buildings and urban communities.⁷⁶

SMCRA statutorily reverses the historically preferred rights of the mineral estate owner over the surface estate owner. It also manifests a superior federal interest in protecting the water and land from the adverse effects of coal mining,⁷⁷ at least for the mining operations which are within its scope.

IV. *ISLAND CREEK COAL CO. v. RODGERS*

While SMCRA provides for relief for subsidence from future mining, relief for damage caused by past mining must come from the common law. In 1982 the Kentucky Court of Appeals restated the strict liability doctrine applied in earlier common law cases and, arguably, expanded the extent of that liability.⁷⁸

The Rodgers family lived east of Madisonville, Kentucky, in Sharp subdivision, which is located above Island Creek's East Diamond Mine. This mine covered 5,000 acres and had seams of coal

⁷³ 44 Fed. Reg. 15,275.

⁷⁴ See 44 Fed. Reg. 14,927, 15,274 (1979).

⁷⁵ See 30 C.F.R. § 817.124(a).

⁷⁶ 30 C.F.R. § 817.126. See also Blazey & Strain, *supra* note 63, at 1-28 to 1-29; 2 COAL LAW & REGULATION § 44.36[4], at 44-126 to 44-127 (Matthew Bender 1982).

⁷⁷ 44 Fed. Reg. 14,927.

⁷⁸ See *Island Creek Coal Co. v. Rodgers*, 644 S.W.2d 339, 342 (Ky. Ct. App. 1982).

ninety to 250 feet below the surface.⁷⁹ These abandoned mine works under the subdivision were begun in 1905 by the West Kentucky Coal Company, Island Creek's predecessor in title. Island Creek began underground mining in the area in 1948 and ended the mining operations in 1963.⁸⁰ In 1966, the Rodgers built their home in Sharp subdivision, "knowing that the house was situated over underground mines and that other subdivisions in the area built over mines had trouble with subsidence."⁸¹ In 1967, Cimarron Coal Corporation acquired property east of Sharp subdivision from Island Creek Coal Company and used strip mining methods with explosives to fragmentize the rock and soil and expose the coal in this property. On April 29, 1977, the Rodgers experienced an earthquake-like blast which they alleged caused the damage to their home.⁸²

The Rodgers brought suit for damages to their home against Cimarron Coal Corporation, which had been actively strip mining in the area, and Island Creek Coal Company, past operators of the mine under the house. The coal companies contended that the Kentucky courts should not expand the well developed common law rule of subjacent support (to leave the surface in its "natural state") to include liability for damage to structures erected after coal rights were severed.⁸³

The trial court did not deal directly with this question, and the instructions did not define "natural state." On appeal, the court

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Id.* The judge did give a contributory negligence instruction, but the jury answered "no" to the interrogatory number 1: "[State whether from the evidence you are satisfied as follows:] that the Plaintiffs prior to the construction of their home knew or should have known that subsidence had occurred or was likely to occur in the Sharp Addition as a result of underground mining?" W. Logan, Subsidence—Current State of the Law (outline), in Eighth Annual Seminar on Mineral Law (Oct. 21-22, 1983) (available from Continuing Legal Education, University of Kentucky College of Law). Since the jury found no contributory negligence, the court of appeals did not address the question. This instruction seems inconsistent with the Kentucky position of an absolute duty of subjacent support which is "not dependent upon any questions of negligence." See *West Ky. Coal Co. v. Dilback*, 294 S.W.2d 278, 279 (Ky. 1927) quoted in *Island Creek Coal Co. v. Rodgers*, 644 S.W.2d at 343-44. The question of whether contributory negligence should be considered has been raised by at least one court. See *Kangas-Jacobsen Dairy, Inc. v. Lloyd-Smith*, 62 N.W.2d 915, 919 (Minn. 1954).

⁸² 644 S.W.2d at 342.

⁸³ *Id.* at 344.

of appeals rejected the arguments of Island Creek. In language resembling the subsidence provisions of SMCRA,⁸⁴ the court defined "natural state" as "the condition of the surface, including *reasonable and foreseeable* improvements thereon, at the time the coal is severed, not from the fee, but from the earth."⁸⁵

In so defining "natural state" to include foreseeable improvements on the surface, the court of appeals upheld the trial jury's finding of liability for ordinary and punitive damages as to Island Creek and Cimarron (fifty percent each), but reversed as to the amount of damages and remanded the case to the trial court for a redetermination of the amount.⁸⁶ By holding that "strict liability is applicable" under Kentucky law,⁸⁷ the court of appeals' decision means that the protections available to the surface owner are basically the same under the common law as under SMCRA. In holding mine operators to a strict liability standard, *Island Creek* really does little more than reaffirm the earlier holdings in *Dilback* and *Nesbitt*. *Island Creek's* real significance is in establishing that this strict liability extends to foreseeable uses, especially to later buildings erected on the surface, whenever they may be built.⁸⁸

V. OTHER POSSIBILITIES FOR SUBSIDENCE PROTECTION

The meaning of SMCRA and *Island Creek* is that Kentucky mine owners face strict liability for subsidence from past and future mining operations. But does it follow that the Kentucky homeowner is now fully protected against damage caused by mine subsidence? The answer clearly is no. SMCRA may protect the homeowner in regard to future mining, but the common law, as set forth in *Island Creek*, only provides a protection where the companies conducting past mining operations can be identified and are financially responsible. Because of the high number of abandoned mines with unknown owners, a substantial gap in the protection of surface owners remains.

Three avenues of relief are available to the surface owner faced

⁸⁴ See 30 U.S.C. § 1266(b)(1).

⁸⁵ 644 S.W.2d at 344.

⁸⁶ *Id.* at 347-48.

⁸⁷ *Id.* at 343-44.

⁸⁸ *Id.* at 344-45.

with this situation. These are: (1) the prevention of subsidence by remedial means; (2) federal aid directed at alleviating losses from abandoned or "orphan" mines; and (3) insurance protection against subsidence damage.

One of the biggest problems with subsidence prevention in Kentucky springs from the loss of maps indicating abandoned mines.⁸⁹ The Kentucky Geological Survey is currently engaged in a mine map inventory and is trying to collect as many of the old underground mine maps as possible.⁹⁰ Unfortunately, coal mining companies are reluctant to release their old maps because of the fear of lawsuits, particularly after decisions like *Island Creek*. In effect, this decision holds coal companies liable indefinitely for past mining practices, a prospect not relished by coal companies and one which might be avoided simply by retaining their old mine maps. Without the mine maps, the state and federal agencies cannot conduct investigations to determine which abandoned mines require stabilization, the appropriate method of stabilization, and the extent of the area susceptible to subsidence.⁹¹ Even where maps or other information permit the identification of a potential subsidence hazard, the cost of preventative measures represents a substantial barrier to remedial action. The Bureau of Mines has had considerable success with hydraulic backfilling, but the expense of this and other methods of filling or grouting is very high.⁹²

Since the cost of preventing the subsidence itself is prohibitive, two other possible avenues of prevention could be followed. Both are aimed at minimizing the problem caused by development over mined out areas by taking into account the possibility of future subsidence.

One measure is the use of subsidence-resistant designs in buildings.⁹³ Surface structures reinforced or designed to resist the stress imposed upon them by subsidence-caused ground movements may minimize damage.⁹⁴ In contrast to the expensive methods of

⁸⁹ See note 18 and accompanying text *supra*.

⁹⁰ Interview, *supra* note 18.

⁹¹ *Id.*

⁹² For example, an estimate of the cost of a coal mine flushing project in Wilkes-Barre, Pennsylvania, was over six times the value of the potential damage prevention or abatement. R. Gray & R. Bruhn, *supra* note 6, at 12.

⁹³ *Id.*

⁹⁴ *Id.*

subsidence prevention such as backfilling, incorporating subsidence-resistant designs into the building plans has proven effective in preventing structural damages and rarely adds more than five percent to the cost of a building.⁹⁵ Use of such designs would provide protection against subsidence from "orphan" mines, but would also shift costs from the mine operator, who is held to the duty of preventing subsidence, to the homeowner.

Another approach is to avoid development in the threatened area so as to limit future subsidence costs to damage to the land itself. Zoning laws could limit development over known mine areas, or permits could be issued only to developers and builders incorporating subsidence-resistant designs.⁹⁶ The effectiveness of such zoning restrictions would be limited by the lack of adequate mapping. Without a clear idea of the location of abandoned workings, it would be difficult to use this highly restrictive and probably unpopular weapon.

Preventive measures thus promise to be frustrated by a lack of adequate information, private or public resistance, and prohibitive cost. In an effort to help with the problems associated with subsidence prevention, especially cost, Congress has included remedial measures in SMCRA, with Title IV of the Act establishing the Abandoned Mine Reclamation Fund⁹⁷ (the Fund). The Fund consists partially of the reclamation fees imposed upon all coal operators subject to SMCRA.⁹⁸ Each year the state receives fifty percent of the money which is collected for the Fund in the state. This money is allocated to the state for use within three years but if not used by the state within the allotted period, the Secretary of the Interior may use it elsewhere.⁹⁹

In general, the Fund is available to reclaim land and water which were mined or affected by the coal mining process prior to August 2, 1977, and left unreclaimed or inadequately reclaimed

⁹⁵ Brauner, *Subsidence Due to Underground Mining* (pt. 2). *Ground Movements and Mining Damage*, U.S. BUREAU OF MINES INFORMATION CIRCULAR 8572, at 15 (1973). But see R. Gray & R. Bruhn, *supra* note 6, at 13.

⁹⁶ R. Gray & R. Bruhn, *supra* note 6, at 12.

⁹⁷ See 30 U.S.C. § 1231 [hereinafter cited as the Fund].

⁹⁸ 30 U.S.C. § 1231(b). Other sources of money for the Fund include charges for the use of land acquired or reclaimed with money from the Fund and liens created upon the private lands reclaimed with money from the Fund. *Id.*; 30 C.F.R. § 872.12 (Supp. 1983).

⁹⁹ 30 C.F.R. § 872.11(b)(5) (Supp. 1983).

with *no continuing responsibility* for reclamation imposed on an owner or operator.¹⁰⁰ This provision would prevent using money from the Fund to reclaim the land subsiding under a situation similar to that in *Island Creek*, where the owner or operator is readily identifiable and has a continuing responsibility.

However, the provisions of SMCRA section 409 would permit the use of money from the Fund in such situations:

The Congress declares that voids, and open and abandoned tunnels, shafts and entryways resulting from any previous mining operations, constitute a hazard to the public health or safety and that surface impacts of any underground or surface mining operations may degrade the environment. [Thus,] [t]he Secretary [of the Interior] at the request of the Governor of any state . . . is authorized to fill such voids, seal such abandoned tunnels, shafts and entryways and reclaim surface impacts of underground or surface mines which the Secretary determines could endanger life and property, constitute a hazard to the public health and safety, or degrade the environment. State regulatory authorities are authorized to carry out such work pursuant to an approved abandoned mine reclamation program.¹⁰¹

The Fund may be used in these situations regardless of when the mining took place or of the continuing responsibility of an owner or operator. Thus, Kentucky's Governor could request the Secretary to spend money from the Fund which was collected from Kentucky to fill the voids and to prevent subsidence.¹⁰² If the Secretary determines that subsidence endangers life and property or constitutes a hazard to the surface residents, he is authorized to use the Fund to fill the voids and reclaim the land or he may authorize the Kentucky regulatory authorities to do so. This portion of the Fund is available for use without regard to the priorities limiting the Fund's use to the reclamation of land and water affected by coal mining practices prior to August 2, 1977.¹⁰³ The money from the Fund is available to reclaim the land and water only. It is not available to repair and reclaim structures upon the land.¹⁰⁴

¹⁰⁰ 30 C.F.R. § 874.12 [or 30 U.S.C. § 1234 (Supp. 1983)].

¹⁰¹ 30 U.S.C. § 1239(a).

¹⁰² 30 U.S.C. § 1239(c).

¹⁰³ *Id.*

¹⁰⁴ 30 U.S.C. § 1231(c)(1).

Thus, while the Abandoned Mine Reclamation Fund may provide some aid for subsidence prevention and surface reclamation, it does have two distinct limitations. It *may* not apply to mining conducted after August 2, 1977, and it will not provide relief for damages to surface structures caused by subsidence. The common law also provides little hope of relief for surface structural damage where there are no identifiable defendants. Therefore, the most satisfactory protection for Kentucky homeowners threatened by subsidence may be an extralegal device, such as insurance against the peril.

A. *State Insurance Programs*

Because of the lack of old mine maps,¹⁰⁵ Kentucky has fewer alternatives to prevent mine subsidence than other states. Backfilling methods and local support methods of mine stabilization are unavailable because such methods rely upon mine maps to identify areas in need of support. Furthermore, the lack of maps hinders the legislature, municipalities, land developers, builders and individual home buyers from taking steps to prevent and control subsidence. Thus, without the mine maps, the problems stemming from uncontrolled subsidence eventually may have to be resolved by the Kentucky courts, an unsatisfactory result to all parties involved, especially where an aggrieved homeowner can find no defendant from which to recover.

A possible alternative to dealing with subsidence through prevention or litigation is offered by the bill proposed by State Senator Kenneth Gibson which would establish an insurance program in the state to cover parties affected by subsidence.¹⁰⁶ Currently three states, Illinois, Pennsylvania and West Virginia, have subsidence insurance programs.¹⁰⁷ Senator Gibson reviewed these programs and modeled the proposed act after the Illinois

¹⁰⁵ See text accompanying note 18 *supra*.

¹⁰⁶ See S. 84-BR-264, 1984 Reg. Sess. State Senator Ken Gibson is currently Chairman of the Subcommittee on Natural Resources of the Interim Joint Committee on Agriculture and Natural Resources.

¹⁰⁷ Interview with Dan Risch, Kentucky Legislative Research Commission staff member, Kentucky State Capitol Building, Frankfort, Kentucky (Aug. 12, 1983). See ILL. ANN. STAT. ch. 73, §§ 1065.401-413 (Smith-Heard 1983); PA. STAT. ANN. tit. 52, §§ 3201-3241 (Purdon 1983); W. VA. CODE §§ 33-30-1 to -15 (1983).

program.¹⁰⁸ The proposed act would establish a mine subsidence insurance fund and program. The fund would be established within the Kentucky Department of Insurance and operated by the department to provide insurance coverage of losses due to mine subsidence in Kentucky.¹⁰⁹ The fund will consist of premiums paid for the coverage.¹¹⁰ Only structures damaged by subsidence after July 15, 1984, would be covered.¹¹¹ "The loss coverage shall be the loss in excess of 2% of the policy's total insured value,"¹¹² with a minimum deductible of \$250 and a maximum of \$500.¹¹³ The state, through the Department of Insurance, will reinsure up to a maximum of \$50,000.¹¹⁴

The proposed legislation would require "all companies authorized to write fire insurance"¹¹⁵ to enter into a reinsurance agreement with the Department of Insurance and offer "special coverage on a uniform basis to policyholders in counties deemed eligible."¹¹⁶ The insurance companies participating in the program would not bear any risk from an underwriting perspective.¹¹⁷ The bill proposes that the insurer would assign to the department 100%, up to \$50,000, of any subsidence coverage issued. Insurers would retain the ceding commissions as compensation for expenses incurred in issuing the policies and adjusting losses, while the department's costs of administration would be paid from the fund.¹¹⁸ The Department of Insurance would reimburse the insurer all amounts paid policyholders for subsidence claims from the fund.¹¹⁹ An insurer would only be required to pay claims to the extent that funds are available from the premium income

¹⁰⁸ Interview, *supra* note 107.

¹⁰⁹ See S. 84-BR-264, *supra* note 106, at § 2(1).

¹¹⁰ *Id.* at § 2(3).

¹¹¹ *Id.* at § 3.

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ *Id.* at § 5.

¹¹⁶ Mine Subsidence Insurance Proposal, 1983: Hearings on S. 84-BR-264 before the Subcomm. on Natural Resources, 1983 Reg. Sess. at 2 (Statement of John R. Groves, CPCU, Assistant Counsel, State Farm Insurance Companies) [hereinafter cited as Hearing].

¹¹⁷ *Id.*

¹¹⁸ S. 84-BR-264, *supra* note 106, at § 5.

¹¹⁹ *Id.*

generated.¹²⁰ In addition, the proposed act provides that each participating insurer will have a right of subrogation.¹²¹

Insurance companies in Kentucky who would participate in the program, if the act is established, have already expressed objections and reservations to the proposed program.¹²² A representative of one insurer which has been a participant in the Illinois program and would be a participant in the proposed Kentucky program, objects to the proposed program because of the problems the insurer has experienced in Illinois.¹²³ The stated problems are as follows: (1) the majority of the policyholders in Illinois rejected the coverage; (2) adjusting the reported losses is very expensive to the insurer due to the engineering surveys required to confirm or deny that the cause of the subsidence damage is mine related and not a natural subsidence incident; and (3) due to the characteristic of subsidence occurring in a sequence of events over an extended period of time, the resolution of claims is delayed unless the initial loss is \$50,000 or greater.¹²⁴

In addition, the short term profitability experienced in Illinois may be offset by the feared results of "adverse selection."¹²⁵ To the insurer, "adverse selection" means that only those policyholders who are aware that their properties are located over undermined areas will purchase the coverage, while those who do not feel threatened will not purchase the subsidence coverage. This results in a "lack of risk spread."¹²⁶ The insurer also expressed fears of uncontrolled real estate development, insurer mismanagement, lack of prevention and control alternatives, supplanting of the federal Abandoned Mine Lands Fund, and the reduction of the effectiveness of private remedies.¹²⁷

These fears are largely unfounded for the following reasons. First, the state reinsurance program is basically risk-free for the participating insurance companies. Second, the current mine map

¹²⁰ *Id.*

¹²¹ *Id.* at § 11.

¹²² See Hearing, *supra* note 116.

¹²³ *Id.* at 3.

¹²⁴ *Id.* at 3-4.

¹²⁵ *Id.* at 5.

¹²⁶ *Id.*

¹²⁷ *Id.* at 5-7.

inventory by the Kentucky Geological Survey represents the beginning of efforts to prevent and control mine subsidence within the state. Third, the subsidence insurance program will not supplant the federal Abandoned Mine Lands Fund program simply because SMCRA's Title IV is limited to reclaiming land, not the structures upon the land.¹²⁸ Finally, the availability of private remedies will remain unchanged because other state and federal programs are not exclusive and thus do not prevent the possibility of a private suit to address the same problems covered by the programs.

Kentucky's need for the proposed insurance program appears to be as great as the need in Illinois, Pennsylvania and West Virginia. Kentucky, like West Virginia, faces an unknown risk due to the lack of mine maps.¹²⁹ Moreover, an estimated 37,200 acres in Kentucky are threatened by subsidence as compared to 89,000 acres in West Virginia, 151,400 acres in Pennsylvania, and 41,800 acres in Illinois.¹³⁰ In many instances of subsidence within this large, four state area, insurance coverage would be the only protection for a resident's home and other structures. Subsidence insurance complements other state and federal programs in preventing and controlling mine subsidence.

CONCLUSION

SMCRA has abrogated the common law rules of subjacent support and significantly expanded the liability of an underground coal mine operator for any subsidence above and adjacent to mine openings which materially damages the surface land, water and structures on the land or other features of value.¹³¹ The Abandoned Mine Land Reclamation Program embodied in Title IV of SMCRA provides funds for the reclamation of land and water adversely affected by past coal mining practices prior to August 2, 1977, and,

¹²⁸ See 30 U.S.C. § 1231(c)(1).

¹²⁹ Of an estimated 100,000 mines in West Virginia, only 30,000 have been located. STAFF OF KENTUCKY LEGISLATIVE RESEARCH COMM., 1983 REG. SESS., REPORT ON WEST VIRGINIA SUBSIDENCE INSURANCE PROGRAM 1 (presented to the Interim Joint Committee on Agriculture and Natural Resources, Subcommittee on Natural Resources, June 1, 1983) (prepared by Don Risch and Brooks Talley).

¹³⁰ R. Gray & R. Bruhn, *supra* note 6, at 1.

¹³¹ See 30 U.S.C. § 1266.

by request of the governor of any state to the Secretary of the Interior, this coverage may be extended to later mining.¹³² Regardless of the time period covered, when the money from the Fund is used to reclaim land and water adversely affected by past mining practices, the repair and reclamation of any structures on the surface are never included.¹³³ On the other hand, the performance standards of SMCRA do require the mine operator to completely provide a remedy for the surface owner and return the owner and the surface to the condition presubsidence.¹³⁴ The penalty and enforcement provisions of SMCRA ensure compliance with the congressional mandate.¹³⁵

For subsidence damage resulting from pre-1983 mining the surface owner will need to find relief under the common law. The expansive ruling in *Island Creek* provides for strict liability for subsidence damage resulting from any pre-SMCRA mining,¹³⁶ but this protection is only effective where a financially responsible mine operator can be identified.

Where the subsidence danger arises from abandoned, "orphan" mines, the surface owner must look beyond SMCRA and the common law for protection. Prevention of such subsidence by engineering activities or by zoning restrictions offers little promise in Kentucky because of the cost and the difficulty in identifying endangered areas. It is recommended that the proposed mine subsidence insurance fund program be enacted as the best means of protecting against this danger.

¹³² 30 U.S.C. § § 1231, 1239(c).

¹³³ See 30 C.F.R. § 874.12.

¹³⁴ See 44 Fed. Reg. 15,275.

¹³⁵ See 30 U.S.C. § 1268.

¹³⁶ See *Island Creek Coal Co. v. Rodgers*, 644 S.W.2d 339 (Ky. Ct. App. 1982).