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NOTE

SELECTED ISSUES IN FEDERAL CONDEMNATIONS FOR UNDER- GROUND NATURAL GAS STORAGE RIGHTS: VALUATION METHODS, INVERSE CONDEMNATION, AND TRESPASS[†]

INTRODUCTION

In December 1989, an arctic cold front lingered over the United States, setting record low temperatures in 125 cities from the Midwest to the Eastern United States and as far south as the Gulf Coast.¹ The temperature in Houston, Texas fell to a record low of 7°F.² At the same time, an explosion and fire stopped production at a large Exxon refinery in Baton Rouge, Louisiana, and frozen equipment shut down additional production and transportation facilities.³ Just as demand for natural gas skyrocketed due to the cold, 17% of the country's production capability was lost.⁴ There simply was not enough gas moving through the pipelines to meet demand. According to one industry executive, "[d]uring the freeze, the market fell apart."⁵ Fortunately, gas distribution companies were able to withdraw enough gas from

[†] Awarded the fifth annual *Case Western Reserve Law Review* Outstanding Student Note Award, as selected by the Volume 50 Editorial Board.

¹ See K. Michael Fraser, *Delivering Natural Gas*, PETROLEUM ECONOMIST, Jan. 1991, at 8 (detailing events during winter gas shortage and reaction of markets); Rick Hagar, *Winter Hits U.S. Industry, Strains Gas Supply*, OIL & GAS J., Jan. 1, 1990, at 28 (explaining events leading up to industry-wide gas shortage in middle of winter cold snap).

² See Fraser, *supra* note 1, at 8.

³ See Hagar, *supra* note 1, at 28.

⁴ See Fraser, *supra* note 1, at 8.

⁵ *Id.* (quoting Edward Sondey, a Brooklyn Union Gas Company vice president who is responsible for gas supply for the utility that serves one million residences in New York City).

underground storage fields to mitigate the shortages.⁶ Consequently most customers experienced no interruption in gas service.⁷

Again in 1991, a pipeline problem occurred in the Southwest during a cold snap, resulting in the curtailment of deliveries of gas to Columbia Gas Transmission Corporation ("Columbia").⁸ During the interruption, 85% of the deliveries that Columbia made to its customers consisted of gas withdrawn from underground storage.⁹ Underground reserves of gas were called upon to meet demand once again during the unusually cold winter of 1993-94.¹⁰

These events illustrate the importance of underground natural gas storage to the consumer. Yet many, if not most, people seem to be unaware of its existence and the important role that it plays in the nation's natural gas delivery infrastructure.¹¹

Natural gas is distributed throughout the country, from the wells that produce the gas to the eventual consumer, via a system made up in part of over 1.3 million miles of pipeline.¹² In some areas even the normal flow of gas through transmission pipelines is not sufficient to meet demand during peak demand times in the winter.¹³ As illustrated above, an interruption of the normal flow of gas through interstate pipelines can create a crisis.

To solve this problem, transmission companies and local distribution companies store vast quantities of gas in large underground storage fields during the spring and summer, when supply exceeds demand.¹⁴ In the winter or during a crisis, this gas is pumped back out of storage to supplement the gas coming into the area via pipeline.¹⁵ In fact, in the winter up to 30% of the daily need for gas can

⁶ See *id.*; Hagar, *supra* note 1, at 28.

⁷ See Fraser, *supra* note 1, at 8; Hagar, *supra* note 1, at 28.

⁸ See David D. Noble, *Ten Years of Federal Underground Gas Storage Condemnations*, E. MIN. L. FOUND.: PROC. FOURTEENTH ANN. INST. § 26.05 n.3 (1993). Noble is the attorney who represented Columbia in many of the cases discussed in this note. Although it is admittedly slanted toward the storage operators' perspective, Noble's article provides useful insights into the condemnation process as well as otherwise unavailable background information.

⁹ See *id.*

¹⁰ See Warren R. True, *Gas Storage Plays Critical Role in Deregulated U.S. Marketplace*, OIL & GAS J., Sept. 12, 1994, at 45 (underscoring "the importance underground natural-gas storage has come to play in ensuring gas-supply availability").

¹¹ See U.S. Dep't of Energy, *Natural Gas Storage Program* (visited Nov. 4, 1999) <http://www.fe.doe.gov/oil_gas/gasstorage/gas_storage.html> ("Natural gas storage is a vital link between production and end-use.").

¹² See *id.*

¹³ See Alan Stamm, *Legal Problems in the Underground Storage of Natural Gas*, 36 TEX. L. REV. 161, 162 (1957) (explaining that pipelines large enough to handle peak demand in the winter would be economically inefficient due to great excess capacity during off-peak times).

¹⁴ See U.S. Dep't of Energy, *supra* note 11.

¹⁵ See *id.*

be supplied by withdrawals from storage.¹⁶ This arrangement solves the winter shortage problem and provides backup in case of an emergency.¹⁷ These facilities exist all over the country, indeed, all over the world,¹⁸ and it was recently estimated that there were hundreds of underground natural gas storage facilities in the United States alone.¹⁹

To facilitate the construction of such projects, gas companies are permitted to use the federal power of eminent domain to secure the necessary property rights for approved underground storage areas and related facilities.²⁰ In brief, under the Natural Gas Act the gas company must first try to contract with the property owner for the necessary rights, and if unsuccessful may then acquire the rights by filing a condemnation proceeding in federal or state court.²¹ This Note will address some common issues that arise in actions under the Natural Gas Act to condemn property rights for underground natural gas storage. The issues to be addressed fall into three categories.

One category of issues involves the method of valuation for the property rights in question. Since the property right being taken for public use is merely one strand in the bundle of rights making up an owner's property rights, difficulties in valuation methodology arise. How exactly does one determine the value of the right to store natural gas in a geological formation 3,000 feet beneath the surface of one's property?²²

¹⁶ See *id.*

¹⁷ See *id.*

¹⁸ See, e.g., *Southern Uruguay to be Site of Gas Storage Project*, OIL & GAS J., July 24, 1995, at 18 (reporting that Michigan company is part of an international group awarded the contract to develop an underground gas storage facility in southern Uruguay); *Australian Underground Storage Facility Open for Business*, PLATT'S OILGRAM NEWS, Aug. 11, 1999, at 6, available in LEXIS, News Group File (reporting that Western Underground Gas Storage opened Australia's first underground gas storage facility on Aug. 9, 1999); *Western Europe's Largest Underground Gas Store-Wingas*, CHEMICAL BUS. NEWSBASE: PETROLEUM REV., Oct. 20, 1999, available in 1999 WL 28473163 (reporting that Wingas of Germany expanded its Rehden facility to create the largest underground natural gas storage facility in western Europe); Xu Yihe, *China to Build Underground Gas Storage Facility - Xinhua*, DOW JONES ENERGY SERVICE, Oct. 29, 1999, available in WESTLAW, DJES (reporting that China will build its first underground natural gas storage field approximately 150 kilometers southwest of Beijing).

¹⁹ See *Storage/Hubs Seen 'Efficient'*, INT'L GAS REP., July 21, 1995, § 280, at 25, available in LEXIS, RDS Business & Industry Database (examining the role of underground natural gas storage and market hubs in the natural gas market).

²⁰ See 15 U.S.C. § 717f(h) (1994).

²¹ See *id.* The Constitution, of course, requires that the property owner be justly compensated for any governmental taking of property. See U.S. CONST. amend. V ("[N]or shall private property be taken for public use, without just compensation").

²² See *Columbia Gas Transmission Corp. v. An Exclusive Natural Gas Storage Easement*, 962 F.2d 1192, 1194 (6th Cir. 1992) [hereinafter McCullough] (explaining that the underground natural gas storage field at issue in the case was located "approximately 2800 to 3000 feet beneath the earth's surface"). Under FED. R. CIV. P. 71A(c)(1), which deals with federal proceedings for the condemnation of property, the first defendant listed in the case caption must be the property itself. As a result, the various condemnation proceedings filed by the same gas

Another category of issues concerns the extent of the property owner's rights to the subsurface geological formations beneath his or her property. It has been argued that a property owner's subsurface rights are not absolute but are instead limited in much the same way as an owner's rights to the airspace above his or her property.²³ A property owner cannot successfully sue an airline for trespass because one of its airliners flew over the owner's property at great height.²⁴ Does this also mean that a property owner cannot sue a gas company such as Columbia for trespass for storing natural gas 3,000 feet beneath the owner's property without permission?²⁵

The third category of issues concerns whether an owner should be permitted to sue or counter-sue for trespass when the storage company has stored gas beneath the property without first obtaining the necessary property rights either by contract or condemnation. Although procedures for condemning property for use in the interstate transportation of natural gas are prescribed in the Natural Gas Act,²⁶ they have not always been scrupulously followed.²⁷ As a result, the rights to many properties overlying storage fields have not been secured.²⁸ This is true even though the gas storage fields have been in operation for decades in some cases.²⁹ The situation is common enough that the industry even has a name for these properties. They

company have nearly identical and generally indistinguishable names. Courts and commentators have often adopted the convention of referring to the cases by the last name of the landowner involved in the case as a way of distinguishing the cases. See Noble, *supra* note 8, § 26.01 n.3. This convention is followed throughout this Note.

²³ See, e.g., *Chance v. BP Chem., Inc.*, 670 N.E.2d 985, 992 (Ohio 1996) (holding that property owners have subsurface property rights, but that such rights are limited, without specifically defining the full extent or nature of those limitations).

²⁴ See, e.g., *United States v. Causby*, 328 U.S. 256, 266 (1946) (holding that the "airspace, apart from the immediate reaches above the land, is part of the public domain"); *Argent v. United States*, 124 F.3d 1277, 1279 n.2 (Fed. Cir. 1997) (explaining that since *Causby*, courts have generally held that "flights above 500 feet in non-congested areas," and flights above 1,000 feet in "congested areas" are in the public domain and not actionable).

²⁵ Compare *Columbia Gas Transmission Corp. v. An Exclusive Natural Gas Storage Easement*, 747 F. Supp. 401, 402-03 (N.D. Ohio 1990) [hereinafter *Arnholt*] (holding that a trespass action will not be allowed in an underground natural gas storage condemnation action), with *Bowman v. Columbia Gas Transmission Corp.*, 1988 WL 68890 (6th Cir. July 6, 1988) (affirming punitive damages awarded in action for trespass in underground gas storage case with similar facts).

²⁶ See 15 U.S.C. § 717f(h) (1994).

²⁷ In affirming the award of punitive damages for trespass in the court below, the Sixth Circuit stated that "it is difficult to imagine a case in which an award of punitive damages would be more appropriate," and went on to characterize Columbia's use of the property without first obtaining the right to do so as a "willful unauthorized expropriation." *Bowman*, 1988 WL 68890, at *3.

²⁸ See Noble, *supra* note 8, § 26.04.

²⁹ The storage field at issue in the *Bowman* case had been in operation for twenty years prior to commencement of the condemnation action by Columbia, and the company had been storing gas under the *Bowman* property without permission or compensation during that time. See *Bowman*, 1988 WL 68890, at *3.

are called "windows" in the gas storage business.³⁰

When events of some kind precipitate a condemnation action in these cases,³¹ property owners may wish to counterclaim for trespass.³² Are the property owner's subsurface rights sufficient to support a trespass claim? Does the Natural Gas Act under which the gas company is entitled to condemn property rights preempt the state law trespass claim, leaving the owner with only a federal inverse condemnation claim for the unauthorized taking? The law of trespass permits presumed³³ as well as punitive³⁴ damages, whereas inverse condemnation permits neither.³⁵ Considering the immense public importance of underground natural gas storage facilities, should punitive damages be allowed? There is a lot at stake for both sides in the resolution of these issues.

I. BACKGROUND

As America's dependence on natural gas as a fuel source has grown over the last century,³⁶ so, too, has the dependence of America's natural gas suppliers on underground storage technology.³⁷ The first underground natural gas storage field began operation in 1915 in Ontario, Canada.³⁸ The first underground storage field in the United States was the Zoar field near Buffalo, New York, which commenced operations in 1916.³⁹ Growth in the number of storage fields progressed slowly at first, but eventually the number of storage fields

³⁰ See Noble, *supra* note 8, § 26.04.

³¹ A common event triggering a condemnation action is a plan by the owner to drill an oil or gas well on his property, threatening the integrity of the underground gas storage field. The storage company then files a condemnation action to stop the owner from drilling. See, e.g., *Bowman*, 1988 WL 68890, at *1 (beginning with Columbia filing suit to prevent Bowman from drilling into the storage field); *Columbia Gas Transmission Corp. v. An Exclusive Gas Storage Easement* 776 F.2d 125, 128 (6th Cir. 1985) [hereinafter *Parrott*] (beginning with Columbia filing suit to prevent the owner from drilling into the protective zone around the storage field).

³² See, e.g., *Arnholt*, 747 F. Supp. 401, 402 (N.D. Ohio 1990) (filing of counterclaim by owners for trespass in condemnation action); *Bowman*, 1988 WL 68890, at *1 (same).

³³ See RESTATEMENT (SECOND) OF TORTS § 158 (1965) ("One is subject to liability to another for trespass, irrespective of whether he thereby causes harm to any legally protected interest of the other.").

³⁴ See *Bowman*, 1988 WL 68890, at *3 (Ryan, J., concurring) (explaining that punitive damages are "permissible in a trespass claim under Ohio law").

³⁵ See *id.* (explaining that punitive damages "are not available in an inverse condemnation action under federal law").

³⁶ See Stamm, *supra* note 13, at 161 (explaining that in 1922, natural gas "supplied only 4.2 per cent [sic] of the country's total energy needs" but that by 1957 gas accounted for more than 25 percent of those requirements and provided "heat for more residences than . . . any other fuel").

³⁷ See *id.* (detailing the growth of underground natural gas storage).

³⁸ See *id.* (citing INTERSTATE OIL COMPACT COMMISSION, A SURVEY OF UNDERGROUND NATURAL GAS STORAGE PROJECTS IN THE UNITED STATES 2-3 (1943)).

³⁹ See *id.*

blossomed. By 1930 there were still only four U.S. underground storage fields in operation,⁴⁰ increasing to fifty in 1944,⁴¹ 214 in 1956,⁴² and to 400 fields in operation by 1995.⁴³

Underground storage fields have now become a crucial link in the chain that comprises our nation's natural gas delivery infrastructure,⁴⁴ and emergency reserves are by no means the only important function that the storage facilities provide. The Texas legislature neatly summarized some of the benefits of underground natural gas storage in the following manner:

The underground storage of natural gas promotes the conservation of natural gas, permits the building of reserves for orderly withdrawal in periods of peak demand, makes more readily available natural gas resources to residential, commercial, and industrial customers . . . , provides a better year-round market to the various gas fields, and promotes the public interest and welfare⁴⁵

The efficiencies that storage fields bring to the pipelines themselves are another important benefit.⁴⁶ The immense cost of the interstate pipelines that are the major means of transporting gas from the primary gas producing regions in the Southwest to the main gas consuming regions in the Northeast dictate that this resource be used in the most efficient manner possible. In 1949, the total cost of a 1,500 mile natural-gas pipeline twenty-four inches in diameter was more than ninety-two million dollars.⁴⁷ If pipelines adequate to meet peak demand in the winter heating season were constructed, those pipelines would cost much more to build and would operate at much less than full capacity in the summer, resulting in dramatic inefficiency.⁴⁸

Underground storage resolves this dilemma by permitting the use

⁴⁰ *See id.*

⁴¹ *See id.*

⁴² *See id.* at 161-62.

⁴³ *See Storage/Hubs Seen 'Efficient,' supra* note 19. For a state-by-state, county-by-county table showing details of all U.S. underground natural gas storage fields in operation in 1994, see True, *supra* note 10, at 47.

⁴⁴ In a recent petition filed with the Federal Energy Regulatory Commission ("FERC"), Columbia claimed that its "ability to render adequate and reliable service to a large portion of the Eastern United States depends in large part on the operation of its underground storage system." *Columbia to Affirm Eminent Domain Rights*, GAS STORAGE REP., Aug. 1998, *available in* LEXIS.

⁴⁵ TEX. NAT. RES. CODE ANN. § 91.172 (1993).

⁴⁶ *See* U.S. Dep't of Energy, *supra* note 11 ("Storage enables greater system efficiency by allowing more level production and transmission flows throughout the year.").

⁴⁷ *See* Stamm, *supra* note 13, at 162 (citing JOSEPH A. KORNFELD, NATURAL GAS ECONOMICS 231 (1949)).

⁴⁸ *See id.*

of smaller pipelines than would be necessary to handle peak demand.⁴⁹ These pipelines operate at maximum capacity year-round, with excess stored underground during off-peak times and reserves withdrawn from storage to satisfy peak demand.⁵⁰ One industry report stated that the “[s]torage of natural gas, . . . both at the producing and at the consuming ends of the transmission system, has emerged as shippers’ primary means of maintaining flexibility to meet fluctuations in supply and demand.”⁵¹

A. *Technical Basics—How Underground Gas Storage Fields Work*

There are several different types of underground natural gas storage fields, but by far the most common variety is the “depleted reservoir” type.⁵² These storage fields are located in subsurface geological formations that have been emptied of the native natural gas that they contained at one time. The formation consists not of a cavern, but rather of rock that is sufficiently porous and permeable to allow natural gas under pressure to fill in the spaces in the rock in much the same way that water soaks into a sponge.⁵³ Porosity refers to the pores or small spaces in the rock that can store the gas, and permeability is a measure of the degree to which the pores are interconnected by cracks that allow the movement of the gas from pore to pore throughout the rock.⁵⁴

Because the porosity and permeability of the rock allows the gas to migrate freely, the formation would be useless as a storage area (and would not have held native gas initially), without being surrounded by a barrier of impermeable rock that holds the gas in the storage field.⁵⁵ Without this impermeable barrier, injected storage gas would be lost forever as it migrated throughout the sub-strata of the earth. If the integrity of the barrier of an existing storage field is breached, for example, by drilling, “it could cause the storage field to

⁴⁹ See U.S. Dep’t of Energy, *supra* note 11 (“[S]torage decreases the amount of new transmission pipeline needed to connect the producing regions to the marketplace by 50 percent.”).

⁵⁰ See *id.*

⁵¹ True, *supra* note 10, at 45. See U.S. Dep’t of Energy, *supra* note 11 (“Natural gas storage is a vital link between production and end-use.”).

⁵² See True, *supra* note 10, at 46. Storage fields can also be created in salt caverns, underground aquifers, mines, and hard-rock caverns. See U.S. Dep’t of Energy, *supra* note 11 (providing general information on underground natural gas storage, including an illustration). Because most of the storage fields in the United States are of the depleted reservoir type, however, most of the cases that have arisen in this area have involved depleted reservoir storage fields (the focus of this Note).

⁵³ See Noble, *supra* note 8, § 26.03.

⁵⁴ See *id.*

⁵⁵ See *id.*

leak,"⁵⁶ and render it useless.

A successful underground storage field then, consists of a geological formation, depleted of its reservoir of native natural gas, made up of porous and permeable rock, and surrounded by a barrier of impermeable rock. These formations can be quite large. In fact, "[a]n underground gas storage field is often the size of several townships."⁵⁷ Although some above-ground facilities are necessary for the operation of a storage field, these facilities usually require a very small percentage of the surface area above a depleted reservoir storage field.

The storage company injects natural gas under pressure into this geological container. The gas then migrates throughout the formation, remaining in the underground storage field until withdrawn by the storage company. The gas that is initially pumped into the storage field is called "base gas," or "cushion gas,"⁵⁸ and serves merely to raise the pressure in the storage field to the level necessary to conduct storage operations.⁵⁹ The base gas remains in the formation until it is abandoned for storage purposes,⁶⁰ and therefore constitutes part of the investment necessary to construct a storage field.⁶¹ The working gas is the gas that, when added to the storage reservoir, may be withdrawn at a later date.⁶² Working gas is added during the summer months of low demand and removed to meet higher demand in the winter.⁶³

B. *The Natural Gas Act of 1938*

The federal Natural Gas Act grants private companies engaged in the interstate transportation of natural gas the right to use the federal power of eminent domain to obtain property for the construction of transportation facilities.⁶⁴ The statute requires that before availing

⁵⁶ *Id.* § 26.04.

⁵⁷ *Id.* § 26.03.

⁵⁸ See ORIN FLANIGAN, UNDERGROUND GAS STORAGE FACILITIES: DESIGN AND IMPLEMENTATION 57 (1995).

⁵⁹ See *id.* at 44; Noble, *supra* note 8, § 26.03.

⁶⁰ See FLANIGAN, *supra* note 58, at 44; Noble, *supra* note 8, § 26.03.

⁶¹ See FLANIGAN, *supra* note 58, at 84 (listing "cushion gas" as one of the necessary investments in setting up a storage facility, along with factors such as compressors, wells, transmission lines, and dehydrators).

⁶² See *id.*

⁶³ See *id.*

⁶⁴ The statute provides:

When any holder of a certificate of public convenience and necessity cannot acquire by contract, or is unable to agree with the owner of property to the compensation to be paid for, the necessary right-of-way . . . it may acquire the same by the exercise of the right of eminent domain in the district court of the United States for the district in which such property may be located, or in the State courts.

itself of the powers of eminent domain granted in the Act, the interstate pipeline company must show that it is a holder of a "certificate of public convenience and necessity."⁶⁵ This certificate is granted by the Federal Energy Regulatory Commission ("FERC") after public hearings.⁶⁶ As part of the certification process, a map is issued delineating the geographic boundaries of the project.⁶⁷ The first line of defense for a property owner seeking to attack the validity of a holder's certificate begins and perhaps ends with the hearing process, because the statute specifies that a district court does not have jurisdiction to review the decision of FERC to grant the certificate.⁶⁸ A person wishing to have the FERC decision reviewed must first petition FERC for rehearing within 30 days of the granting of the certificate and must specify the issues to be raised upon rehearing.⁶⁹ If rehearing is denied, the aggrieved person may, within sixty days after denial of rehearing, petition the court of appeals for review of the FERC decision.⁷⁰ The court of appeals, however, generally may not consider any issues not raised in the petition for rehearing.⁷¹ The decision of the court of appeals is "subject to review by the Supreme Court of the United States."⁷²

The Natural Gas Act does not specifically state that property may be condemned for underground natural gas storage facilities. In

15 U.S.C. § 717f(h) (1994).

⁶⁵ *Id.* See also 15 U.S.C. § 717f(c)(1)(A) (1994) ("No natural-gas company . . . shall . . . undertake the construction or extension of any facilities . . . unless there is in force with respect to such natural-gas company a certificate of public convenience and necessity issued by the Commission authorizing such acts or operations . . .").

⁶⁶ See 15 U.S.C. § 717f(c)(1)(B) (1994) (requiring that, after application is made for the certificate, "the Commission shall set the matter for hearing and shall give such reasonable notice of the hearing thereon to all interested persons as in its judgment may be necessary under rules and regulations to be prescribed by the Commission").

⁶⁷ See generally Noble, *supra* note 8, § 26.05[1] (discussing the maps that accompany the certificates of public convenience and necessity and the genesis of the "map rule").

⁶⁸ See 15 U.S.C. § 717r(b) (1994) ("Any party . . . may obtain a review of such order in the court of appeals . . . by filing in such court, within sixty days after the order of the Commission upon the application for rehearing, a written petition praying that the order of the Commission be modified or set aside in whole or in part."); *Williams Natural Gas Co. v. City of Oklahoma City*, 890 F.2d 255, 262-64 (10th Cir. 1989) (holding that "[j]udicial review under § 19(b) is exclusive in the courts of appeals once the FERC certificate issues," and that therefore "the eminent domain authority granted the district courts under § 7(h) of the NGA, 15 U.S.C. § 717f(h), does not provide challengers with an additional forum to attack the substance and validity of a FERC order").

⁶⁹ See 15 U.S.C. § 717r(a) (1994) ("[A] party may apply for a rehearing within thirty days after the issuance of such order. The application for rehearing shall set forth specifically the ground or grounds upon which such application is based.").

⁷⁰ See 15 U.S.C. § 717r(b).

⁷¹ See *id.* ("No objection to the order of the Commission shall be considered by the court unless such objection shall have been urged before the Commission in the application for rehearing unless there is reasonable ground for failure so to do.").

⁷² *Id.*

a 1947 amendment to the Natural Gas Act, the power of eminent domain was granted to interstate pipeline companies, but its application to condemnation proceedings for underground natural gas storage rights remained untested for years.⁷³ It was not until the *Parrott* condemnation case that those rights were firmly established.⁷⁴ In that case the Sixth Circuit held that the language of §717f(h) of the Natural Gas Act allows legitimate holders of certificates to condemn property for underground natural gas storage fields.⁷⁵

The *Parrott* court carefully applied the Natural Gas Act's grant of federal eminent domain power to private corporations. Although the court held that the language of the statute was in fact broad enough to include the power to condemn property for the underground storage of natural gas, it found that the *Parrott* property itself was outside the map area of the project as delineated by FERC. The *Parrott* court held that Columbia therefore could not use its condemnation power unless FERC agreed to modify the map boundaries to include the property.⁷⁶

The court's reasoning was simple. The Natural Gas Act requires that, to take advantage of the grant of federal eminent domain powers, a company must first show that it is a holder of a certificate of public convenience and necessity.⁷⁷ The court held that if the property to be condemned is outside the map area as delineated by FERC, the company's certificate of public convenience and necessity is not valid with respect to that property. The company, therefore, does not have the power to condemn that property unless and until the map is modified by FERC.⁷⁸ This has since become known as the "map rule."⁷⁹ Columbia lost that particular battle but won the war, for the establishment of the right to condemn was its primary goal.⁸⁰

In 1988, the Supreme Court, in dicta, cited with approval the Sixth Circuit's holding in *Parrott* that the Natural Gas Act language included the power to condemn property for underground natural gas storage.⁸¹ The map rule was further refined in the *Hostettler* and *Johnson* cases, in which it was established that the power to condemn extended to the "protective area" defined on the map filed with the

⁷³ See Noble, *supra* note 8, § 26.05.

⁷⁴ See *Parrott*, 776 F.2d 125 (6th Cir. 1985). See also Noble, *supra* note 8, § 26.05 (explaining the significance of *Parrott*).

⁷⁵ See *Parrott*, 776 F.2d at 128.

⁷⁶ See *id.*

⁷⁷ See *supra* notes 65-72 and accompanying text.

⁷⁸ See *Parrott*, 776 F.2d at 128.

⁷⁹ See Noble, *supra* note 8, § 26.05.

⁸⁰ See *id.*

⁸¹ See *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 295 n.1 (1988).

FERC.⁸² The protective area refers to the barrier rock that surrounds the storage field and keeps the gas in place, and without which the storage field would be useless.⁸³

In summary, in order to use the power of eminent domain granted in the Natural Gas Act, the company seeking to condemn property must show:

1. It is a natural gas company regulated by FERC pursuant to the Natural Gas Act;
2. It holds a valid certificate of public convenience and necessity from FERC for the storage field where condemnation is sought;
3. The easement sought is in the certificated geologic formation; and
4. The affected real property is within the "map area" of the storage field defined by the certificate of public convenience and necessity.⁸⁴

Once these elements have been demonstrated, the ability of the company to condemn the property rights sought is established and the issue becomes one of putting the proper valuation on those rights. Valuation methodology will be discussed at length, but first an explanation of the origin of the cases that present these issues is in order.

C. How the Condemnation Issue Arises

There are several ways in which a case involving one or more of the issues addressed in this note may arise. The textbook application of the Natural Gas Act would begin with the company obtaining a certificate of public convenience and necessity from FERC.⁸⁵ After obtaining the certificate, the company would then approach every property owner and attempt to privately contract for the right to store

⁸² See *Columbia Gas Transmission Corp. v. An Exclusive Natural Gas Storage Easement*, 688 F. Supp. 1245 (N.D. Ohio 1988) [hereinafter *Hostettler*]; *Columbia Gas Transmission Corp. v. An Exclusive Gas Storage Easement*, 705 F. Supp. 1242 (N.D. Ohio 1988) [hereinafter *Johnson*].

⁸³ See *Noble*, *supra* note 8, § 26.05.

⁸⁴ *Id.* § 26.06.

⁸⁵ See 15 U.S.C. § 717f(c)(1)(A) (1994). See also *supra* notes 65-72 and accompanying text.

gas beneath the property, as well as any surface rights needed.⁸⁶ Historically, most property owners voluntarily agree to relinquish the needed rights.⁸⁷ If the company is unable to contract with some of the owners, then it files a condemnation action in state or federal court.⁸⁸

After demonstrating the elements required as a prerequisite to exercising the power of eminent domain under the Natural Gas Act, the issue is then one of valuation.⁸⁹ In this hypothetical example, trespass would not be an issue because the company is securing the necessary property rights prior to using them. Of course, there are several potential fact patterns in which trespass is an issue, and these cases arise when a company has an ongoing underground gas storage operation but has failed for one reason or another to obtain all of the necessary property rights. A property overlying an underground gas storage field for which the property rights have not been obtained is called a "window" in the storage field.⁹⁰ When the owner of a window property threatens to drill into the storage field or surrounding barrier rock, the company may file a condemnation action to prevent that owner from either producing the company's storage gas or damaging the integrity of the entire storage field.⁹¹ In response, the owner may counterclaim for trespass.⁹² In some cases the property owner initiates the lawsuit rather than the storage operator, by suing the operator for trespass. The operator then files a condemnation action in response and claims that the federal condemnation action preempts the state trespass claim.⁹³

In addition to potential claims for trespass, these cases involve questions about valuation methodology just as in the "textbook" hypothetical example above. In fact, although it did not involve a claim for trespass, the *McCullough* case, the case that has so far yielded the most detailed analysis of valuation methodology, arose when the

⁸⁶ See Noble, *supra* note 8, § 26.04 (discussing methods of acquiring the property rights necessary to operate a storage field, and the fact that "[s]torage operators always try to obtain storage rights to all the properties in a storage field").

⁸⁷ See *id.* (explaining that "[m]ost landowners voluntarily lease necessary underground storage rights to the storage operator").

⁸⁸ See 15 U.S.C. § 717f(h) (1994).

⁸⁹ See Noble, *supra* note 8, § 26.06[1].

⁹⁰ See *id.* § 26.04.

⁹¹ See *id.* § 26.05. The *Parrott* case arose when the property owner began implementing a plan to drill into the storage reservoir. See *Parrott*, 776 F.2d 125, 128 (6th Cir. 1985). See also *Bowman v. Columbia Gas Transmission Corp.*, 1988 WL 68890, at *1 (6th Cir. July 6, 1988) (arising when window property owner applied for permit to drill well).

⁹² See, e.g., *Arnholt*, 747 F. Supp. 401, 402 (N.D. Ohio 1990) (discussing property owner filing counterclaim for trespass).

⁹³ See, e.g., *Bowman*, 1988 WL 68890, at *1 (affirming the district court's decision allowing a property owner to sue a storage operator for trespass).

owners planned to drill into the storage field.⁹⁴

Some type of accident or malfunction in the storage field that involves a window property may also give rise to a condemnation action.⁹⁵ It is also possible for inaccuracies in the estimation of the size of the storage field to be the genesis of these issues. For example, the reason that the *Parrott* property was not within the map area originally submitted to FERC was that the storage field turned out to be larger than Columbia's engineers had estimated.⁹⁶ This was a result of one of the difficult aspects of developing and managing an underground natural gas storage field—namely that it is impossible to directly observe the geological formation thousands of feet below the earth.⁹⁷ The maps initially submitted to FERC are based on estimates of the dimensions of the storage field, but gas is sometimes very slow to migrate throughout the extent of the field,⁹⁸ and companies sometimes discover that the boundaries of a storage field are not where they first expected.⁹⁹ In this way, a property that the company originally expected to be outside the storage field, and therefore one for which the company did not acquire the property rights, can become a window in the storage field, with all the attendant problems that accompany such parcels.

Thus, there are numerous ways for an action for condemnation of underground natural gas storage rights to arise. The issue common to all such cases, however, is valuation.

D. Valuation Methodology

The problem is easy to frame and difficult to answer: how exactly does one determine the value of the right to store natural gas thousands of feet beneath the surface of one's property? The Fifth Amendment of the U.S. Constitution provides scant guidance. It simply states that private property shall not be taken "without just com-

⁹⁴ See *McCullough*, 962 F.2d 1192, 1194 (6th Cir. 1992).

⁹⁵ A recent case in the Northern District of Ohio came about when gas from an underground storage field leaked through an abandoned well into a fresh water aquifer and came out a neighbor's faucet. The leaking well turned out to be on a window property, and to obtain access to repair the well, Columbia filed a condemnation action. The property owners filed a counterclaim for trespass because Columbia's underground gas storage field beneath their property had been in operation since the early 1950s without Columbia having secured the necessary property rights. See *Columbia Gas Transmission Corp. v. An Exclusive Gas Storage Easement*, Case No. 1:98CV 590 (N.D. Ohio Aug. 10, 1999) [hereinafter *Amend*]. This case was settled prior to trial or other disposition.

⁹⁶ See *Noble*, *supra* note 8, § 26.05[1].

⁹⁷ See *id.* § 26.03.

⁹⁸ See *id.*

⁹⁹ See *id.* § 26.05[1].

pensation."¹⁰⁰

Two factors make solving this problem particularly difficult. First, the right at issue is not a commonly bargained-for right. This means that the average person (average juror, average lawyer, or average judge) lacks any idea of what the right might realistically be worth. It also means that there is a notable lack (and perhaps a complete absence) of comparable arm's length sales that one might look to for an idea of value.

Second, the right at issue is not a particularly valuable right. In these cases subsurface rights are typically the only rights being condemned. The surface use of the property is normally unaffected. In 1993 it was reported that Columbia routinely paid four dollars per acre per year for the right to store gas beneath a property, while East Ohio Gas was paying the sum of five dollars per acre per year.¹⁰¹ The small amount of value or minimal amount of intrusion on the property owner's rights at issue is not determinative of the matter, however. To the contrary, the Supreme Court has held that "constitutional protection for the rights of private property cannot be made to depend on the size of the area permanently occupied."¹⁰²

The most detailed analysis of the problem so far has come in an Ohio case involving Columbia and a property owner named McCullough.¹⁰³ This case seems to have settled the law with regard to this issue in Ohio, and, to a lesser degree, in the Sixth Circuit. It is not yet apparent what effect these decisions will have for condemnations in other states. Nevertheless, the *McCullough* case provides a good illustration of a judicial system working through this problem. The courts involved used a carefully reasoned, thoughtful approach to the problem, resulting in some rules and analysis that can provide illumination and direction on this issue to courts in other jurisdictions.

In the *McCullough* case, Columbia filed suit in district court to condemn an easement for the underground storage of natural gas in its Wayne Storage Field, approximately 2,800 to 3,000 feet beneath the surface of the McCullough property.¹⁰⁴ Rather than try the case to a jury, the judge, complying with the wishes of both parties,¹⁰⁵ appointed a commission to determine the appropriate compensation to

¹⁰⁰ U.S. CONST. amend. V.

¹⁰¹ See Noble, *supra* note 8, § 26.04 n.1.

¹⁰² Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 436-37 (1982).

¹⁰³ See McCullough, 962 F.2d 1192 (6th Cir. 1992). For further background information, provided by the attorney who represented Columbia in this case, see Noble, *supra* note 8, § 26.11[6].

¹⁰⁴ See *McCullough*, 962 F.2d at 1194.

¹⁰⁵ See Noble, *supra* note 8, § 26.11[6].

be paid to the landowners.¹⁰⁶ The court provided the commissioners with detailed instructions as to the methodology for determining value and awarded the landowners \$213,798 in compensation.¹⁰⁷

On appeal, the Sixth Circuit held that the judge's instructions to the commissioners were improper because they failed to follow Ohio state law in determining just compensation and remanded the case for further proceedings.¹⁰⁸ In its decision, the court of appeals provided a detailed analysis of whether state or federal law should govern the determination of value in such condemnation cases and ultimately offered a number of factors supporting its decision that state law should control, including the fact that property rights are traditionally an area largely defined by state rather than federal law.¹⁰⁹ The *McCullough* court also cited the lack of a compelling reason to fashion "a nationally uniform rule of compensation for private parties exercising their power of eminent domain under the Natural Gas Act," and its confidence that "incorporating state law as the federal standard [would] not frustrate the specific objectives of the Natural Gas Act."¹¹⁰ The court concluded that, "although condemnation under the Natural Gas Act is a matter of federal law, § 717f(h) incorporates the law of the state in which the condemned property is located in determining the amount of compensation due."¹¹¹

Upon remand, the district court certified the following question to the Ohio Supreme Court: "According to the law of the state of Ohio, what is the measure of just compensation for the appropriation of an underground gas storage easement?"¹¹² In response, the Ohio Supreme Court adopted the federal judge's instructions to the commission.¹¹³ In fact, all but three paragraphs of the Ohio opinion simply reprinted the instructions originally provided by the district court to the commission, which delineated the various factors to be used in

¹⁰⁶ FED. R. CIV. P. 71A(h) governs federal condemnation proceedings under the power of eminent domain. This rule provides that, unless specifically provided for otherwise in the authorizing statute, any party may have a jury trial on the issue of just compensation by so requesting, "unless the court in its discretion orders that, because of the character, location, or quantity of the property to be condemned, or for other reasons in the interest of justice, the issue of compensation shall be determined by a commission of three persons appointed by it." *Id.* The judge used his discretion to appoint a commission in the *McCullough* case, but clearly this rule would support a decision to allow a jury to decide the issue of compensation. In fact, the comments to Rule 71A make clear that the preferred method of determining value in such a case is trial by jury. See FED. R. CIV. P. 71A advisory committee's notes.

¹⁰⁷ See *McCullough*, 962 F.2d at 1194-95.

¹⁰⁸ See *id.* at 1200.

¹⁰⁹ See *id.* at 1198.

¹¹⁰ *Id.* at 1198-99.

¹¹¹ *Id.* at 1199.

¹¹² *Columbia Gas Transmission Corp. v. An Exclusive Natural Gas Storage Easement*, 67 Ohio St. 3d 463, 463 (1993) [hereinafter *McCullough II*].

¹¹³ See *id.*

determining value.¹¹⁴

After the Ohio Supreme Court held that the original instructions to the commission were to be adopted as Ohio law, the district court reinstated the commission's award of \$213,798 as just compensation without further proceedings, and the Sixth Circuit affirmed.¹¹⁵

In sum, the Sixth Circuit held that in condemning an easement for underground natural gas storage, state law shall be applied in determining just compensation for the taking of the easement. The Ohio Supreme Court, following the district court's lead, carefully prescribed the precise methodology to be used in making that determination in Ohio. A jury or commission following these instructions could use one or more of the factors adopted by the Ohio Supreme Court to determine value, even though some of these factors may not be applicable in every case.

In the *McCullough* case, for instance, the award was based on apparently credible testimony that significant economically recoverable reserves of native oil and natural gas existed beneath the property, from which the Columbia easement would prevent the McCulloughs from profiting.¹¹⁶ The existence of such reserves was enumerated by the Ohio Supreme Court as one of the factors that may be used in determining value.¹¹⁷ In some cases, however, it may be apparent that all reserves of oil and natural gas beneath the property have been exhausted, so it would be inappropriate for a jury to consider this factor in determining value. The existence of current mineral leases is another factor to be considered that will likely not be applicable in all cases.

The end result is that in Ohio, both federal and state law are clear with regard to the valuation methodology for underground natural gas storage condemnation cases. In Michigan, Kentucky, and Tennessee, it remains clear that the law in the Sixth Circuit is that state law is followed in establishing valuation methodology, but it is perhaps less clear what the state law is on this point. Outside the Sixth Circuit the issue is much more open, and a major question that will be examined further in this Note is whether the thoughtful reasoning of the Sixth Circuit and the Ohio Supreme Court should be followed by other circuits and other states.

¹¹⁴ See *id.* at 463-65.

¹¹⁵ See *Columbia Gas Transmission Corp. v. An Exclusive Natural Gas Storage Easement*, 1995 WL 216915, at *1 (6th Cir. Apr. 11, 1995).

¹¹⁶ See *McCullough*, 962 F.2d 1192, 1194-95 (6th Cir. 1992).

¹¹⁷ See *McCullough II*, 67 Ohio St. 3d at 464.

E. Inverse Condemnation and Trespass

Another important question that has arisen in some condemnation actions is whether the property owner may sue or counter-sue for trespass.¹¹⁸ This is an issue in cases where the underground gas storage field has been in operation for some period of time and the storage field operator has never obtained the necessary property rights, either by contract or condemnation.¹¹⁹ It has been argued in such cases that state law trespass claims by the property owner are preempted by the federal law that authorizes the use of eminent domain power by holders of certificates of public convenience and necessity.¹²⁰ This argument concludes with the assertion that the property owner's sole remedy is a federal inverse condemnation claim.¹²¹ The law on this point is not settled,¹²² so the argument has been made in the alternative that, even if the trespass claim is not held to be preempted, the conduct of the storage operator does not constitute trespass.¹²³

To understand the analysis of these issues, it is helpful to have a basic grasp of the fundamentals of both trespass and inverse condemnation as applied to this type of situation. The law on the issue of underground trespass is fairly straightforward—an actor may be liable for trespass due to an intrusion beneath the surface of another's land.¹²⁴ Of course, in underground natural gas storage cases, the tres-

¹¹⁸ See, e.g., *Arnholt*, 747 F. Supp. 401, 402-03 (N.D. Ohio 1990) (discussing a counter-claim for trespass by the property owner after Columbia filed suit for condemnation under the Natural Gas Act).

¹¹⁹ See *id.* at 402.

¹²⁰ See *id.* at 403.

¹²¹ See *id.*

¹²² Compare *Bowman v. Columbia Gas Transmission Corp.*, 1998 WL 68890, at *1 (6th Cir. July 6, 1988) (explaining that the district court judge below permitted property owner's action for trespass rather than inverse condemnation in underground gas storage condemnation case), with *Arnholt*, 747 F. Supp. at 403 (holding that inverse condemnation rather than trespass applies in an underground natural gas storage condemnation action virtually identical to *Bowman*).

¹²³ See *Bowman*, 1998 WL 68890, at *2 ("Columbia argues that (1) *Bowman* is limited to a cause of action for inverse condemnation under the fifth amendment, and may not assert a claim for trespass under Ohio law; and (2) the act alleged did not constitute a trespass under Ohio law.").

¹²⁴ See RESTATEMENT (SECOND) OF TORTS § 159 (1965) ("[A] trespass may be committed on, beneath, or above the surface of the earth."). See also *Marengo Cave Co. v. Ross*, 10 N.E.2d 917, 923 (Ind. 1937) (holding that "appellant pretended to use the 'Marengo Cave' as his property and all the time he was committing a trespass upon appellee's land"); *Edwards v. Sims*, 24 S.W.2d 619, 621 (Ky. 1930) (deciding whether to require a survey to establish extent of cave's boundaries, the court reasoned that "[i]f the survey shows the Great Onyx Cave extends under the lands of plaintiffs, defendants should be glad to know this fact and should be just as glad to cease trespassing upon plaintiff's lands"); *Hartman v. Texaco Inc.*, 937 P.2d 979, 983 (N.M. Ct. App. 1997) ("[I]n New Mexico an action for trespass does provide relief for trespass beneath the surface of the land.").

pass is committed not by a person, but by an instrumentality controlled by a person. The law of trespass, however, is again clear—an actor may be held liable for trespassing on the land of another because of the continued presence of “a structure, chattel, or other thing the actor has tortiously placed there.”¹²⁵ It is established, then, that an action may lie for underground trespass caused by an instrumentality under the control of another.¹²⁶

The law of inverse condemnation is also relatively straightforward. The United States government has four basic methods by which it may take a piece of private property for public use.¹²⁷ The most commonly used method is a straight condemnation proceeding in which the government takes the property by power of eminent domain.¹²⁸ As a part of the proceeding, the compensation to be paid to the landowner is determined, the owner is paid, and the title then transfers to the United States.¹²⁹ In this scenario the United States does not take possession of the property prior to taking title.¹³⁰

A more expeditious method for taking property is provided by the Declaration of Takings Act.¹³¹ The Act provides a procedure whereby the government may, any time prior to the judgment in a condemnation action, file a declaration of taking with the court and then take immediate title and possession of the property.¹³² Before taking title and possession, the Act also requires that the government deposit with the court “an amount of money equal to the estimated value of the land,” which is to be promptly distributed to the owner.¹³³ The court proceedings continue with the goal of establishing value, and if the value eventually established is higher than the estimate paid previously, the owner receives the difference plus interest.¹³⁴

A third available method is for Congress to directly exercise the power of eminent domain in what is termed a legislative taking.¹³⁵ Under this method, Congress simply passes a statute that vests title of a property in the United States immediately upon enactment and pro-

¹²⁵ RESTATEMENT (SECOND) OF TORTS § 161 (1965).

¹²⁶ See, e.g., *Chance v. BP Chem., Inc.*, 670 N.E.2d 985, 992 (Ohio 1996) (holding that a property owner could prevail on a trespass claim involving deepwell injection under his property).

¹²⁷ See *Kirby Forest Indus., Inc. v. United States*, 467 U.S. 1, 3-6 (1984) (reviewing the various methods by which the United States government may exercise the power of eminent domain).

¹²⁸ See *id.* at 3.

¹²⁹ See *id.* at 4.

¹³⁰ See *id.*

¹³¹ 40 U.S.C. §258a (1994).

¹³² See *id.*

¹³³ *Kirby Forest Indus.*, 467 U.S. at 4-5.

¹³⁴ See 40 U.S.C. §258a.

¹³⁵ See *Kirby Forest Indus.*, 467 U.S. at 5.

vides for the subsequent determination of just compensation to be paid to the land owner.¹³⁶

Finally, the government may simply take physical possession of a property, ousting the owner, without any formal condemnation proceedings.¹³⁷ The owner then has the right to sue the government for “inverse condemnation” to obtain compensation as of the date of the taking.¹³⁸ A condemnation proceeding normally involves a condemnor filing suit against an owner to take property for public use.¹³⁹ Occasionally, however, the government takes property without any formal proceedings and without paying the owner.¹⁴⁰ In those cases, the owner may sue the government, claiming that there has in fact been a taking of his property without compensation and seeking damages for that taking,¹⁴¹ hence the term “inverse” condemnation.¹⁴² Just compensation is then paid to the property owner as a result of that proceeding.¹⁴³ Actions for inverse condemnation have been allowed in cases of regulatory¹⁴⁴ as well as physical¹⁴⁵ takings, and for both direct¹⁴⁶ and indirect¹⁴⁷ takings.

Taking land by physical appropriation is an officially disfavored method.¹⁴⁸ The Uniform Relocation Assistance and Real Property

¹³⁶ See *id.* For example, the land for Redwood National Park was taken in this manner. See *id.* at 5 n.5.

¹³⁷ See *id.* at 5.

¹³⁸ See *id.* See also *United States v. Clarke*, 445 U.S. 253, 257 (1980) (explaining the difference between “inverse condemnation” and “condemnation” actions).

¹³⁹ See *Clarke*, 445 U.S. at 257.

¹⁴⁰ See, e.g., *Hendler v. United States*, 952 F.2d 1364, 1367 (Fed. Cir. 1991) (discussing a plaintiff who sued for inverse condemnation because the EPA placed ground water wells and equipment on plaintiff’s property without permission or compensation).

¹⁴¹ See *id.*

¹⁴² See *Clarke*, 445 U.S. at 257 (defining inverse condemnation).

¹⁴³ See *id.* (explaining that inverse condemnation is “a shorthand description of the manner in which a landowner recovers just compensation for a taking of his property when condemnation proceedings have not been instituted”).

¹⁴⁴ See, e.g., *First Evangelical Lutheran Church v. Los Angeles*, 482 U.S. 304, 318 (1987) (holding that a county land-use regulation that denied plaintiff all use of his property constituted a compensable taking).

¹⁴⁵ See, e.g., *Kirby Forest Indus., Inc. v. United States*, 467 U.S. 1, 5 (explaining that when a government, without formal condemnation proceedings, physically takes property, “the owner has a right to bring an ‘inverse condemnation’ suit to recover the value of the land on the date of the intrusion by the Government”).

¹⁴⁶ See, e.g., *Hendler v. United States*, 952 F.2d 1364, 1367 (Fed. Cir. 1991) (drilling of groundwater wells on property without permission).

¹⁴⁷ See, e.g., *United States v. Causby*, 328 U.S. 256, 262 (1946) (holding that the government partially “took” property as a result of regular flights by airplanes as low as 83 feet over the surface of the property, even though the planes never physically touched the surface of the property); *Argent v. United States*, 124 F.3d 1277, 1284 (Fed. Cir. 1997) (holding that owner’s inverse condemnation claim is not precluded because noisy aircraft operated by Navy flew over adjacent parcels and not over owner’s parcel).

¹⁴⁸ See *Kirby Forest Indus.*, 467 U.S. at 5-6.

Acquisition Policies Act of 1970¹⁴⁹ dictates that federal agencies try to acquire land through negotiations instead of condemnation proceedings, and “whenever possible not to take land by physical appropriation.”¹⁵⁰

In an inverse condemnation action the plaintiff is permitted to recover damages for an uncompensated taking of his property, but the doctrine does not provide for punitive damages.¹⁵¹ This distinction between inverse condemnation and trespass has public policy ramifications and provides the storage operator with strong motivation to argue in favor of federal preemption of the state law trespass claim.¹⁵² For the same reason, the property owner will prefer an action for trespass over an inverse condemnation claim. Without this distinction regarding punitive damages it appears that the debate as to whether the property owner’s remedy is to be found in a trespass or an inverse condemnation action would be largely one of academic rather than practical effect.

II. ANALYSIS

The development of the law to date regarding condemnations for underground natural gas storage rights has left several legal issues unresolved. Depending on the state in which the action arises, there may be a significant question as to the method of valuing the property rights to be taken. There is also some question as to whether a state law action for trespass may be allowed, or if such an action is preempted by federal law, leaving the plaintiff with an inverse condemnation remedy. Further, should a trespass claim be permitted, there may be some question as to whether the unauthorized storage of natural gas thousands of feet beneath a property constitutes trespass.

Even with the sometimes conflicting authorities that exist on these questions, it is possible to choose a clear path through the maze. Each of these unresolved issues will be examined in this section.

A. Valuation Methodology

The first major piece of the puzzle to be examined is valuation methodology. In essence, the questions to be answered are whether

¹⁴⁹ 42 U.S.C. §§ 4601-4655 (1994).

¹⁵⁰ *Kirby Forest Indus.*, 467 U.S. at 6. See 42 U.S.C. § 4651(8) (1994) (“No Federal agency concerned shall intentionally make it necessary for an owner to institute legal proceedings to prove the fact of the taking of his real property.”).

¹⁵¹ See *Bowman v. Columbia Gas Transmission Corp.*, 1988 WL 68890, at *3 (6th Cir. July 6, 1988) (Ryan, J., concurring) (“[P]unitive damages, permissible in a trespass claim under Ohio law, are not available in an inverse condemnation action under federal law.”).

¹⁵² See *id.*

the State of Ohio and the Sixth Circuit “got it right” in the *McCullough* case,¹⁵³ and whether their example should be followed in other states and circuits around the country.

Initially, the focus here will be on whether the valuation methodology arrived at in *McCullough*¹⁵⁴ is worthy of emulation elsewhere, but another important question to be addressed is whether the valuation methodology to be used should be a matter of state or federal common law. Because a resolution of this question necessarily involves some issues that overlap with the consideration of whether a state law trespass claim should be allowed when the facts warrant it, these issues will be discussed together below.

The overall problem to be resolved in this section can be very succinctly summarized. The U.S. Constitution makes clear that property is not to be taken for public use without the payment of “just compensation” to the owner.¹⁵⁵ Both sides in a condemnation action will likely agree on this point. If the action involved the taking of an entire piece of property—including all surface, mineral, and air rights—valuation of the property would be more easily accomplished. There is an established market for entire properties, in which buyers and sellers routinely engage in arm’s length transactions. These transactions can be analyzed to arrive at the market value for the subject property. When one is dealing with a taking of underground natural gas storage rights, however, the commodity is one for which there is no established market in which similar property is routinely traded at arm’s length.¹⁵⁶ This makes valuation problematic, and the question is just what standard should be used to value such an infrequently valued right? It has been argued that the standard is supplied by the U.S. Constitution itself, which requires the payment of just compensation.¹⁵⁷ But to offer “just” compensation as the standard is

¹⁵³ See *McCullough*, 962 F.2d 1192, 1199 (6th Cir. 1992) (holding that the federal Natural Gas Act “incorporates the law of the state in which the condemned property is located in determining the amount of compensation due”); *McCullough II*, 67 Ohio St. 3d 463, 464-65 (1993) (promulgating the factors to be considered in Ohio when establishing a value for the right to store natural gas in the geological sub-stratum beneath a property).

¹⁵⁴ See *supra* notes 103-07 and accompanying text.

¹⁵⁵ U.S. CONST. amend. V.

¹⁵⁶ It is true that there is a market to look to for *some* indication of value. Many property owners voluntarily grant underground storage rights to storage operators in exchange for the “going rate” routinely paid to landowners by that particular storage operator. However, it is also clear that in most cases, this is not an arm’s length transaction. The offer is generally accompanied by the explicit or implicit threat that if the owner does not agree the company will simply take the rights by eminent domain, and there are no other buyers willing or able to purchase the same rights from the landowner. Essentially, there is no market in the usual sense.

¹⁵⁷ See *Noble*, *supra* note 8, § 26.11[6] (“[T]he Fifth Amendment to the United States Constitution specifies the measure of compensation for all federal appropriations—it must be ‘just.’”).

simply to beg the question of exactly how one determines "just" compensation in such a case.

This is precisely the issue that the courts wrestled with in the *McCullough* case.¹⁵⁸ The solution to the valuation problem that the courts involved in that case eventually produced was a list of factors and some general principles to be considered by a commission or jury when establishing value in an underground natural gas storage condemnation case. These factors will be considered as a possible model for actions in other jurisdictions.

The instructions adopted by the Ohio Supreme Court¹⁵⁹ begin with a brief introductory paragraph that sets a general framework for the process of establishing value:

In determining just compensation for the easement, you shall consider fair market value. The fair market value is the fair and reasonable amount which could be attained in the open market at a voluntary sale. In this case, there are alternative methods of determining fair market value based upon your preliminary determinations, including whether there exists native natural gas in the Clinton formation under the condemned tract to the extent that its recovery would be economically justified.¹⁶⁰

There is nothing remarkable in the direction to consider fair market value, or the definition of fair market value as "the fair and reasonable amount which could be attained in the open market at a voluntary sale."¹⁶¹ Fair market value is the traditional standard for determining just compensation,¹⁶² and the definition of the term given is traditional, as well.¹⁶³ The remainder of the paragraph simply states that

¹⁵⁸ See *supra* notes 103-17 and accompanying text.

¹⁵⁹ See *McCullough II*, 67 Ohio St. 3d 463, 463 (1993). These instructions were originally developed by the federal district court and provided to the commissioners when the case was at the trial level. On appeal, the Sixth Circuit struck down the award and remanded for further proceedings because the instructions failed to take into consideration relevant state law. On remand, the district court certified the following question to the Ohio Supreme Court: "According to the law of the state of Ohio, what is the measure of just compensation for the appropriation of an underground gas storage easement?" *Id.* In response, the Ohio Supreme Court adopted the instructions originally provided to the commissioners. See *id.* The balance of the opinion simply quotes the trial court's instructions.

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² See *United States v. Causby*, 328 U.S. 256, 261 (1946) ("Market value fairly determined is the normal measure of the recovery."); *United States v. Miller*, 317 U.S. 369, 374 (1943) (explaining the adoption of "market value" as a standard for determining just compensation).

¹⁶³ Although the impact is the same, the Court put a slightly different spin on the definition in *Miller*, in stating that the owner is entitled to "what it fairly may be believed that a purchaser in fair market conditions would have given." *Miller*, 317 U.S. at 374.

alternative methods of valuation will be provided to the factfinder, and then offers as an example one of the more controversial of those factors, discussed in detail shortly. These concepts are well supported by authority, including the concept of alternative methods for establishing value.¹⁶⁴

The first alternative method enumerated by the court was:

1. *Comparable Sales*. One method in determining fair market value would be to consider comparable sales of easements for the purpose of allowing the storage of natural gas in the Clinton formation. If no evidence is offered of such comparable sales, this method is not available to assist you in determining just compensation.¹⁶⁵

Again, this is a traditional approach to the problem.¹⁶⁶ Generally speaking, analyzing recent comparable sales is one of the best ways to establish the fair market value of a property.¹⁶⁷ It seems that many, if not most, property owners voluntarily agree to surrender the necessary property rights in exchange for payment of a standard fee set by the storage operator.¹⁶⁸ As mentioned previously, in 1993 it was reported that Columbia routinely paid four dollars per acre per year for the right to store gas beneath a property, with East Ohio Gas paying five dollars per acre per year.¹⁶⁹ These transactions should be considered as some evidence of value. There are, however, some difficulties with using these sales as a benchmark.

First, and most obvious, these transactions are not actually sales at all, but rentals. If the factfinder is attempting to arrive at a fair market rental price, then these transactions might be comparable. If, however, the factfinder is trying to arrive at a fair market value for a lump sum payment in return for the transfer of a permanent easement, then the rental transaction must be converted into a present value for purposes of comparison. This was anticipated by the court and is ad-

¹⁶⁴ See *Miller*, 317 U.S. at 373-74 (explaining that it "is conceivable that an owner's [compensation] should be measured in various ways depending upon the circumstances of each case").

¹⁶⁵ *McCullough II*, 67 Ohio St. 3d 463, 464 (1993).

¹⁶⁶ See EDWIN M. RAMS, *VALUATION FOR EMINENT DOMAIN* 153 (1973) ("The second step of valuation then involves a search and examination of the market for similar market sales, with similar physical attributes and rights, to obtain an insight as to the probable value of a subject property.").

¹⁶⁷ See *id.*

¹⁶⁸ See *Noble*, *supra* note 8, § 26.04 ("Most landowners voluntarily lease necessary underground storage rights to the storage operator. It is not often that landowners are offered money for rights that they do not use, to authorize an operation that causes them no inconvenience whatsoever.").

¹⁶⁹ See *id.* § 26.04 n.1.

dressed in the third alternative method for establishing value, which will be discussed below. Of course, if the company has made lump sum payments in exchange for permanent easements, no conversion is necessary if those figures are available. Columbia, for example, has recently paid lump sum payments of fifty dollars per acre for permanent easements.¹⁷⁰

A much more troubling question with regard to the use of either rental or lump sum payments paid by the storage operator is whether the payments in fact represent fair market value. A very strong argument can be made that, at least in the traditional sense, they do not. It is undisputed that in this situation, there is essentially no market, and therefore these sales fail to indicate "the fair and reasonable amount which could be attained in the open market at a voluntary sale."¹⁷¹ In a brief filed in a recent condemnation case in the Northern District of Ohio, attorneys for Columbia argued that:

Columbia is the only market for these rights. Defendants cannot establish that their rights are worth more than Columbia pays because no one else would buy them. Therefore, the total just compensation to which the Defendants are entitled is \$50.00 per acre.¹⁷²

Although this case settled prior to trial,¹⁷³ Columbia appears to be making a self-defeating argument. To the extent that they succeed in establishing that there are no other buyers for the subject property rights, and hence no other comparable sales to look to for guidance, they would seem also to succeed in establishing that such payments do not represent "the fair and reasonable amount which could be attained in the open market at a voluntary sale."¹⁷⁴ To the contrary, when the supply of a good remains constant, price will increase as demand increases. Applying that rule to this case, if the same property right were to be sold in an open market with multiple competing buyers, instead of with Columbia as the sole buyer, one could reasonably expect that the price would be higher than what Columbia has traditionally paid. Since a competitive market is the standard for establishing value, rather than a monopolistic market, the fees historically paid by Columbia in this case only establish that fair market value must be something greater.

¹⁷⁰ See Plaintiff's Memorandum in Support of its Motion for Partial Summary Judgment at 10, Amend, No. 1:98CV590 (N.D. Ohio 1999) (settled before disposition).

¹⁷¹ *McCullough II*, 67 Ohio St. 3d 463, 463 (1993).

¹⁷² Plaintiff's Memorandum in Support of its Motion for Partial Summary Judgment at 10, Amend, No. 1:98CV590 (N.D. Ohio 1999) (settled before disposition).

¹⁷³ See Stipulated Dismissal Entry, Amend, No. 1:98CV590 (N.D. Ohio 1999) (setting forth the terms of the settlement).

¹⁷⁴ *McCullough II*, 67 Ohio St. 3d at 463.

Moreover, lurking in the background of this “voluntary” sale is the seller’s knowledge that the buyer, if unhappy with the seller’s demanded price, has the authority to use the government’s power of eminent domain to simply take the property. The seller will be aware, in most cases, that the storage operator must pay compensation. If the storage operator argues, however, that the property owner will be unable to prove a market value higher than the going rate, the owner might believe that she really has no option and decide to accept the offer regardless of her opinion of the price. This further undermines the reliability of other sales of similar rights as a measure of fair market value.

It would seem that no matter how the argument is cast, when the market has only one buyer, when that buyer possesses the power of eminent domain, and when no one really knows what the right to be sold would be worth in an open market, there is no way that even a “voluntary” sale can be characterized as an arm’s length transaction, or as a truly voluntary sale between a willing seller and a willing buyer.¹⁷⁵ Therefore, this information, even if available, should be used by the factfinder with the utmost caution. Otherwise, the storage operator would possess both the government’s power of eminent domain and the power to determine the amount of just compensation to be paid for the taking—a particularly troubling prospect where such important rights are concerned.

In searching for a proper method of valuing underground gas storage rights, the goal should be to find a method that arrives at a value fair to both sides. An error either way has negative consequences. If the property owner does not receive enough compensation for the taking, we as a society are asking them to shoulder more of the public burden than is fair. If, on the other hand, the storage operator is asked to pay more than a fair price, ultimately it is the public that loses because the price is passed on to the consumer.¹⁷⁶ In

¹⁷⁵ This point is conceded by the attorney who represented Columbia in many of the condemnation actions discussed in this Note. According to Noble, *supra* note 8, § 26.11[4] n.19, the problem with valuation methods that rely on historical payments by the storage operators “is that the only entity purchasing these rights is the storage operator and it has condemnation rights. As a result there are no arms length sales of underground gas storage easements or leases because these sales are coercive by definition.”

¹⁷⁶ See *id.* § 26.11[1]. Noble states:

Although the payment of the award in these cases does not come from the government, its amount is nonetheless of concern to the public. The capital expenditures of interstate pipelines are included in their rate base, and FERC allows recovery of these expenditures from ratepayers. The ultimate victims of any excessive “compensation” are residential consumers and other end-users of gas that has been transported through or sold at wholesale from the interstate pipeline system that owns the particular storage field.

Id.

a situation such as this, it seems that it should be incumbent upon both sides to strive for a fair resolution of this issue, and to ardently reject that which is not fair. In the real world, it is perhaps too idealistic to hope that parties to a condemnation action would behave in this manner. This makes it even more important for those called upon to assist in finding a solution to these issues to keep in mind the overarching goal of balancing these equities.

The second method of determining value is both speculative and controversial, although it rests on firm theoretical ground. The Ohio Supreme Court phrased this second method of valuation in the following way:

2. The Existence of Sufficient Natural Gas Allowing for the Commercial Recovery in Sale of the Natural Gas. A second method of determining fair market value, and in turn just compensation, rests upon evidence offered by landowner that sufficient natural gas remains under the landowner tract so as to allow the commercial recovery and sale of that natural gas. If the landowner so proves, then in determining just compensation, you may assess the foreseeable net income flow from the property for its productive life reduced to a present value figure.

In other words, in fixing just compensation, you would determine the probable revenues and costs for the production and sale of native natural gas from the condemned tract and reduce the net sales value by the interest the landowners will enjoy for an early, one time payment.¹⁷⁷

This method of establishing value appears to be reasonable, except perhaps for the problem of proving the existence of the natural gas reserves. The general justification for the constitutional edict that property not be taken for public use without the payment of just compensation is that one citizen alone should not be forced to shoulder the public burden.¹⁷⁸ Assuming the existence of recoverable reserves of oil or gas beneath a property, if the condemnation of an easement will prevent the owner from reaping the benefit of those reserves, an enormous burden is shifted to the owner, and it would seem funda-

¹⁷⁷ *McCullough II*, 67 Ohio St. 3d at 464.

¹⁷⁸ See *Armstrong v. United States*, 364 U.S. 40, 49 (1960) ("The Fifth Amendment's guarantee that private property shall not be taken for a public use without just compensation was designed to bar Government from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole.").

mental that the owner should be compensated for that loss.¹⁷⁹

The problem here would appear to be one of proof. One commentator has dismissed the efforts of landowners to prove the existence of gas reserves on their properties through the use of expert witnesses: "A more speculative enterprise is hard to imagine."¹⁸⁰ The difficulty seems to center around proving the production characteristics and productive life of hypothetical wells, in addition to the price of oil and gas over the length of that productive life. These factors are notoriously difficult to predict accurately,¹⁸¹ and it therefore seems only fair to require rigorous proof of such a claim. On the other hand, if such proof exists, denying the right to recover on a valid claim could cause an enormous burden to shift to the landowner.

The award of \$213,798 to the landowners in the *McCullough* case, for instance, was based on this method of valuation¹⁸² and was awarded even though Columbia produced evidence that the fair market value of the entire piece of property was only \$154,200.¹⁸³ The commissioners, however, "found that [i]t is more likely than not that commercially recoverable oil and gas reserves exist within the property sought to be appropriated."¹⁸⁴ If the commissioners were right about the evidence, it would have been an enormous blow to the landowners, and constitutionally unjust, to take their property for public use and deny them compensation for the loss of that income. If, on the other hand, the commissioners were mistaken and made the award erroneously, Columbia, and ultimately the public, were done a serious disservice.

Because there is so much at stake if these issues are applicable to a particular piece of property, it seems important both that the owner should have the opportunity to present evidence regarding commercially recoverable reserves of oil and gas, and that such evidence should have to be very reliable to support a large judgment such as the one in the *McCullough* case. This is a situation in which the only fair solution seems to be that judges should screen experts carefully, making strict use of the *Daubert* factors to determine reliability.¹⁸⁵

¹⁷⁹ See *United States v. Miller*, 317 U.S. 369, 373 (1943) ("The owner is to be put in as good position pecuniarily as he would have occupied if his property had not been taken.").

¹⁸⁰ Noble, *supra* note 8, § 26.11[4].

¹⁸¹ See *id.* ("Courts ought to take judicial notice that oil and gas prices and interest rates cannot be predicted for one year with any degree of accuracy, let alone for a 20 year period.").

¹⁸² See *McCullough*, 962 F.2d 1192, 1194-95 (6th Cir. 1992). See also Noble, *supra* note 8, § 26.11[6] (discussing the *McCullough* case).

¹⁸³ See *McCullough*, 962 F.2d at 1195.

¹⁸⁴ *Id.* (internal quotation marks omitted).

¹⁸⁵ See *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 593-594 (1993) (explaining factors to be considered by judges in determining the reliability of scientific evidence). See also

The third alternative method that the *McCullough* opinion provides for determining value involves the more or less straightforward consideration of rental incomes for gas storage:

3. *The Fair Market Value of the Storage Easement Based upon a Capitalization of Retail Income for the Right to Store the Gas.* If you do not find that there exists commercially recoverable reserves of oil and gas, a third alternative method of finding fair market value, and in turn just compensation, involves determining the fair market value of the storage easement based upon a capitalization of the rental income for the right to store the gas. In so determining, you shall use the date of the filing of the condemnation as the starting point and the termination of the storage field as the ending date.

Fair market value by a capitalization of the rental income is determined by multiplying the acreage rental by the comparable storage rights to arrive at the present worth of the future income stream. In applying this method, the fair market value of the storage easement is equated to a capital sum which, when invested as of the date of filing, would earn income equal to the comparable storage rentals for the future.¹⁸⁶

Although the heading of this section is confusing,¹⁸⁷ the court's underlying meaning is evident. This factor simply provides the jury or commission with a method for converting yearly per acre rentals into a lump sum payment by calculating the present value of the future income stream. This factor seems unremarkable and worth keeping in the analysis with only one caveat: the yearly per acre rentals customarily paid by the storage operator in "voluntary" transactions may not reflect market value. The same caution should be applied in this context as in the context of the "voluntary" sales. But again, if used correctly, this method of valuation could be potentially helpful to the factfinder in certain cases.

The next alternative method for determining value promulgated by the *McCullough* court is actually the traditional method for deter-

Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137 (1999) (extending *Daubert's* gatekeeping obligation to all experts, not just "scientific" experts).

¹⁸⁶ *McCullough II*, 67 Ohio St. 3d 463, 464 (1993).

¹⁸⁷ In fact, there appears to be a typographical error in the title sentence of this section, which refers to "a Capitalization of *Retail* Income." *Id.* (emphasis added). The word "retail" does not make much sense in this context, and the rest of the phrase is repeated later in the same paragraph with the word "rental" substituted for the word "retail." It would seem that "rental" rather than "retail" should have been used in the first sentence, as well.

mining value in a "partial taking" case.¹⁸⁸ Applied in an underground natural gas storage case, this factor may or may not be dispositive, but should be a part of any deliberations in such a case. The Ohio Supreme Court stated this factor in the following way:

4. *Depreciation in the Fair Market Value of the Condemned Tract as a Whole by Reason of the Taking of the Storage Easement.* This alternative method of determining fair market value, and, in turn, just compensation, involves determining the difference in the fair market value of the entire condemned tract before and after the taking. This determination is accomplished by establishing the fair market value of the entire condemned tract before the taking and deduct[ing] the fair market value of the entire tract immediately after the taking. If this method is chosen to determine just compensation, the fair market value of the storage easement is equated to the difference, if any, between these before-and-after values of the entire condemned tract.¹⁸⁹

It has been argued that the underground storage of natural gas beneath a property has no effect whatsoever on the surface use of the property, and that an owner cannot therefore show any diminution in value due to the taking. In many cases this will be true. A series of events that took place in the early 1990s, however, provide a graphic illustration of the way in which this factor could easily come to the forefront.

In 1992 an underground gas storage operation in Brenham, Texas, experienced a catastrophic equipment failure resulting in a massive explosion that caused three fatalities and several other injuries.¹⁹⁰ The explosion also destroyed dozens of homes and structures in the area, causing millions of dollars in property damage in the surrounding community.¹⁹¹ One media account stated that "the bucolic area . . . looked as if it had been hit by a tornado carrying a torch. Grass, shrubbery and other vegetation were charred. Trees were broken like matchsticks or reduced to stumps. Cars were blown off the

¹⁸⁸ See *Dugan v. Rank*, 372 U.S. 609, 624-25 (1963) (explaining that in the partial taking case before the Court, damages were "to be measured by the difference in market value of the [owner's] land before and after the interference or partial taking.").

¹⁸⁹ *McCullough II*, 67 Ohio St. 3d at 464-65.

¹⁹⁰ See Terry Kliever, *Brenham Gas Leak Sends 350 From Homes*, HOUSTON CHRON., June 5, 1997, at A29. See also *The Big Numbers of 1996; Environmental*, NAT'L LAW J., Feb. 10, 1997, at C2 (stating that the explosion caused three deaths).

¹⁹¹ See Carlos Byars et al., *Hot Blast "was Chaos," Brenham's Gas Blowout Felt for Miles*, HOUSTON CHRON., Apr. 8, 1992 at A1 ("Judge Dorothy Morgan said it was apparent that at least 50 structures were destroyed or heavily damaged."); Kliever, *supra* note 190, at A29 ("A passing car touched off a massive explosion that wrecked a number of homes, killed three people and injured at least 20 others. Property damage was estimated at \$9 million.").

road. Dead livestock were sprawled on the ground."¹⁹² At Rice University in Houston, sixty-five miles away, a seismograph registered the blast as a four on the Richter Scale.¹⁹³ A lawsuit brought by victims of the blast eventually resulted in a jury award of \$5.4 million in compensatory damages and \$138 million in punitive damages.¹⁹⁴

In response to the Brenham explosion, the Texas legislature passed bills requiring that the Texas Railroad Commission set strict safety standards regulating the underground storage of petrochemical products, including propane and natural gas.¹⁹⁵ The bills gave the Commission the authority to levy fines of up to \$25,000 per violation.¹⁹⁶ The Texas Railroad Commission subsequently promulgated new rules that covered not only the storage of liquefied petroleum gas ("LP gas") in underground salt domes (the type of facility that exploded in Brenham), but also the underground storage of natural gas in depleted geological formations like those at issue in this Note.¹⁹⁷ The response of the Texas legislature in regulating both LP gas and natural gas facilities because of an explosion at an LP gas facility illustrates that the different types of storage facilities are thought of as at least similar, if not identical, in risk, by politicians as well as by members of the general public.¹⁹⁸

This explosion is relevant because such dramatic events make news headlines all over the country. These news headlines affect potential buyers' perceptions of value, and buyers' perceptions of value, accurate or not, have a significant impact on actual property values. And this story clearly reverberated from coast to coast.¹⁹⁹

¹⁹² Byars et al., *supra* note 191, at A1.

¹⁹³ *See id.*

¹⁹⁴ The punitive damage award was subsequently reduced by the trial judge to \$70.2 million pursuant to Texas law capping punitives. *See The Big Numbers of 1996, supra* note 190, at C2.

¹⁹⁵ *See Senate Passes Bill Regulating Underground Gas Storage Facilities*, UPI, May 26, 1993, available in LEXIS, News Group File.

¹⁹⁶ *See id.*

¹⁹⁷ *See TRC Tightens Underground Storage Regulations*, PLATT'S OILGRAM NEWS, Oct. 6, 1993, at 2 (setting forth three proposed rules for underground storage of all hydrocarbons).

¹⁹⁸ It also illustrates the seeming futility of such legislative endeavors. Brenham recently experienced another massive gas leak, this time from a leaking well that once again enveloped part of the town in a huge cloud of explosive vapor. On this occasion the vapor did not explode, but hundreds of people had to be evacuated from their homes until authorities could get the situation under control. *See Kliever, supra* note 190, at A29.

¹⁹⁹ *See Catherine Chriss & Patti Muck, Gas Explosion Flattens Rural Area*, HOUSTON CHRON., Apr. 7, 1992, at A1; *Gas Blast Rocks Big Texas Area; Boy Killed and 18 Injured in a Zone of Devastation*, SEATTLE POST-INTELLIGENCER, Apr. 8 1992, at A3; J. Michael Kennedy, *One Killed, 18 Injured in Texas Gas Explosion*, L.A. TIMES, Apr. 8, 1992, at A3; J. Michael Kennedy, *Texas Gas Explosion Kills Boy, 6; Pipeline Blast Hits 4.0 on Richter Scale*, WASH. POST, Apr. 8, 1992, at A3; Roberto Suro, *Gas Explosion Tears Through Texas Pastures*, N.Y. TIMES, Apr. 8, 1992, at A17; *CBS Evening News: Gas Pipeline Explodes in Texas, Causes One*

Although the type of facility in Brenham was very different from the natural gas storage fields in use in much of the country, involving the storage of LP gas rather than natural gas in a different type of geological formation, it seems unlikely that the average member of the public distinguishes between types of underground gas storage fields, much less understands those distinctions. In fact, some reports in the media traced the explosion to "natural gas" or simply "gas," failing to distinguish between heavier than air LP gas, and lighter than air natural gas.²⁰⁰ Further, the Texas legislature responded to this crisis by regulating safety at natural gas facilities as well as LP gas facilities, indicating that they, too, took the events at Brenham as cause to worry about natural gas as well as LP gas facilities.²⁰¹

The significance of all of this is the potential negative impact on fair market value of a property subject to an underground natural gas storage easement. In very simple terms, when given the choice of a property not above an underground natural gas storage facility, or an identical property above such a facility, most buyers would choose to buy the property that is not above the storage field.²⁰²

When demand for a good falls and supply remains constant, price will fall as well. Thus, the Ohio Supreme Court properly adopted this factor for use in determining the value of underground natural gas storage rights. Values arrived at using this method might, in some cases, significantly exceed the four or five dollars per acre per year customarily paid by some gas companies.²⁰³ It also seems

Death; Destruction (CBS television broadcast, Apr. 7, 1992); *CNN News: Gas Explosion Injures 16 in Texas* (CNN television broadcast, Apr. 7, 1992).

²⁰⁰ See Kennedy, *One Killed*, *supra* note 199, at A3 (identifying the source of the explosion simply as "gas"); Kliewer, *supra* note 190, at A29 (misidentifying the source of the explosion as natural gas); *CNN News*, *supra* note 199 (misidentifying the source of the explosion as natural gas).

²⁰¹ See *Senate Passes Bill*, *supra* note 195.

²⁰² The fact that buyers will make the leap from negative publicity about LP gas storage to worrying about living over a natural gas storage field is illustrated by a story from Katy, Texas. Prior to the Brenham explosion, a Denver company called Western Gas Resources Storage was moving ahead with plans to convert a local depleted geological formation 7,000 feet underground into a natural gas storage facility. They had already encountered opposition from the Katy community, and the Brenham accident struck fear into the hearts of local residents. When officials from Western Gas Resources Storage tried to assuage the community's fears by explaining that the natural gas to be stored beneath Katy was unlikely to cause a Brenham-type disaster because it had entirely different properties from the liquefied natural gas that caused the explosion in Brenham, residents were not impressed. "Our point is, gas will explode, whether it be liquid propane or natural gas," said [one property owner]. "And when it's in that concentrated, condensed volume, we could have a worse scenario than what is in Brenham." Patti Muck, *The Blast Near Brenham; Blast Hits Close to Home for Those Over Reservoir*, HOUSTON CHRON., Apr. 9, 1992, at A26. Whether or not this property owner was correct in her assessment of the relative risks of propane and natural gas storage, her perception, and the similar perceptions of others, are certain to impact property values.

²⁰³ In the Katy, Texas situation described above, for example, it seems reasonable to assume that the values of local properties above the gas storage field were significantly impacted.

likely that in many cases there may be no reduction in fair market value.²⁰⁴ Used appropriately, this factor is a vital element to be considered when determining the value of an underground natural gas storage easement, and is worth including as an element of any statutory solution, or any jurisdiction's formula for determining value.

The fifth factor enumerated in the *McCullough* opinion is relatively minor, but deserves some consideration. The Ohio Supreme Court formulated this factor in the following way:

5. *Mineral leases.* The existence of a lease for the production of native oil and gas from the property is not evidence of the existence of such oil and gas. However, you must award nominal damages to the holder of such a lease even if the presence of native oil and gas in paying quantities is not proven to a reasonable probability.²⁰⁵

Given the Constitution's mandate that private property not be taken for public use without the payment of just compensation, the justification for this factor seems self-evident. At the same time, the factfinder is cautioned against using the mere existence of a lease as proof of the existence of economically significant oil and gas reserves. This appears to be a prudent and justified element of value in cases where it is applicable.

The last factor promulgated by the *McCullough* court is not actually an element of value, but rather an instruction that provides guidance to the factfinder and specifically identifies an element that is not to be considered:

6. *Viewpoint of value.* Just compensation is measured from the point of view of the landowner. The yardstick is what the landowner has lost, not what Columbia has gained. Therefore, you are not to consider the value of the storage easement to Columbia, nor may you consider any increase or increment in value by virtue of the activities of Columbia in reference to the gas storage field for which the easement is acquired. For example, if there is, within the storage ease-

Furthermore, it does not seem like much of a stretch to take it one step further and conclude that in most parts of the country, properties located over underground natural gas storage fields were worth something less in April of 1992 than they had been in March of that year.

²⁰⁴ If, for example, an owner purchased property that is a "window" in an existing storage field, and if the existence of the field and the property's position over it was well known at the time of the purchase, an argument can be made that any reduction in the market value of the property by virtue of the storage field's existence was already taken into account in the price that the owner paid for the property. If so, the property's fair market value would not be further reduced by condemnation of the storage easement.

²⁰⁵ *McCullough II*, 67 Ohio St. 3d 463, 465 (1993).

ment, some amount of native oil and gas, but not in paying quantities, so that they had no effect on the market value of the subject tract on the date of taking, you would not take native oil and gas into account.²⁰⁶

This admonishment is firmly grounded in eminent domain jurisprudence and should be part of the factfinder's analysis whether or not it was specifically set forth in these instructions.²⁰⁷ So, rather than providing a method of determining value, this part of the valuation methodology merely serves as a reminder that this area of the law is firmly established.

The factors for determining the value of an underground natural gas storage easement promulgated in *McCullough* are flexible enough to accommodate the varying requirements of individual cases and yet tailored to the specific needs of the underground natural gas storage context. They comport with the constitutional requirement that just compensation be paid to the land owner, and yet, if used properly, will also protect the interests of the public that ultimately will pay for the rights being purchased. In short, the *McCullough* approach to determining value is worthy of emulation by other state or federal courts and should therefore be considered when they are called upon to determine value in an underground gas storage case.

B. State Trespass Claims Should Not Be Preempted By Federal Law

The next issue to be addressed is the question of whether an action for trespass should be permitted in cases where a storage field was in operation for some period of time prior to the institution of condemnation or trespass proceedings. The property owner in such a case may sue or counter-claim for trespass, and the storage operator may claim that the owner's state law trespass claim is preempted by federal law, leaving them with only a federal inverse condemnation remedy.²⁰⁸ The stakes are large in this dispute because punitive dam-

²⁰⁶ *Id.*

²⁰⁷ *See, e.g.,* *City of Monterey v. Del Monte Dunes at Monterey, Ltd.*, 526 U.S. 687, 710 (1999) ("[I]n determining just compensation, 'the question is what has the owner lost, not what has the taker gained.'") (quoting *Boston Chamber of Commerce v. Boston*, 217 U.S. 189, 195 (1910)); *United States v. Miller*, 317 U.S. 369, 375 (1943) (explaining that the property's "special value to the condemnor as distinguished from others who may or may not possess the power to condemn, must be excluded as an element of market value."); *Bauman v. Ross*, 167 U.S. 548, 574 (1897) ("The just compensation required by the Constitution to be made to the owner is to be measured by the loss caused to him by the appropriation.").

²⁰⁸ There are several cases that have presented just these arguments, and more if one looks as well to Natural Gas Act condemnations involving pipeline construction in addition to those relating to the underground storage of natural gas. *See, e.g.,* *Humphries v. Williams Natural Gas Co.*, 48 F. Supp. 2d 1276 (D. Kan. 1999) (involving condemnation action filed in pipeline

ages are permitted in trespass claims, but not in inverse condemnation claims.²⁰⁹

For obvious reasons, this distinction is important not only to the property owner who feels that he has been wronged, but to the storage operator, as well. In the case of a storage operator with large numbers of window properties above its storage fields, a large punitive damages judgment in a single case could provide a very dangerous precedent leading to the eventual multiplication of that judgment many times over. And, of course, a resolution of this issue is not unimportant to the public, either. If the storage operator is permitted to pass the cost of punitive damages through to the public in the cost of gas, then the public, rather than the storage operator, is punished for conduct which it did not authorize and over which it had no control. On the other hand, if punitive damages are not assessed, the storage operator may have no incentive to follow proper procedures, and may in fact have an incentive not to follow them.

The weight of authority on this point holds that a trespass action is not preempted by the federal law of inverse condemnation. Indeed, there are strong public policy arguments in favor of such a conclusion. A good place to start an analysis of this issue is an examination of the existing case law.

1. *The Strange Tale of Bowman*²¹⁰ and *Arnholt*²¹¹

The two leading cases on whether to allow a state law action for trespass against a federally regulated storage operator both pertained to storage fields operated by Columbia in Northeast Ohio. Both involved a claim of trespass by the owner against Columbia and an argument by Columbia that the property owner's trespass claim was preempted by federal law, and both were tried before the same trial judge. Despite these similarities, *Arnholt*, decided only four years after *Bowman*, reaches a much different conclusion.²¹²

In *Bowman*, the court had allowed the property owner's trespass claim to be tried to a jury and had permitted punitive damages to be assessed against Columbia.²¹³ On appeal, the Sixth Circuit affirmed

case); *Arnholt*, 747 F. Supp. 401 (N.D. Ohio 1990) (underground gas storage case); *Bowman v. Columbia Gas Transmission Corp.*, 1988 WL 68890 (6th Cir. July 6, 1988) (same).

²⁰⁹ See *supra* notes 151-52 and accompanying text.

²¹⁰ 1988 WL 68890 (6th Cir. July 6, 1988).

²¹¹ 747 F. Supp. 401 (N.D. Ohio 1990).

²¹² See *Arnholt*, 747 F. Supp. at 402-03 (rejecting *Bowman*'s reasoning and holding for the storage operator).

²¹³ Columbia was ordered to pay a total of \$48,321.75 to the Bowmans, which included \$10,021.75 for condemnation of the property and \$8,300 in compensatory damages, plus \$30,000 in punitive damages in the trespass action. See *Bowman*, 1988 WL 68890, at *1.

the judgment of punitive damages, but held that the issue of preemption of the owner's state law trespass claim had not been properly preserved for appeal and thus addressed only the question of whether the evidence supported the punitive damage award.²¹⁴

Subsequently, in *Arnholt*, the district court held, contrary to *Bowman*, that the trespass claim was preempted by federal law and thus that the property owners were limited to an inverse condemnation claim.²¹⁵ The court reasoned that the operation of underground natural gas storage fields like those at issue in the case come "within the purview of the Natural Gas Act."²¹⁶ The court further found that the "Supreme Court has protected the federal jurisdiction under the Natural Gas Act from direct and indirect state regulation,"²¹⁷ and that therefore

[t]he Court concludes that the State of Ohio has no power to regulate, directly or indirectly, a natural gas storage field certificated by the Federal Energy Regulation [sic] Commission (FERC). The Court finds that such an invocation of preemption applies to the exercise of eminent domain powers whether exercised by the U.S. Government or by a private company granted the power of eminent domain such as has been accorded Columbia in connection with its Weaver Storage Field for the storage of natural gas.²¹⁸

The court provided additional justification for holding that the trespass claim was preempted by federal law by reasoning that the federal law of eminent domain, deriving from the constitutional dictate of just compensation contained in the Fifth Amendment, does not forbid a taking of private property. It simply requires that just compensation be paid for that property, and that a federal inverse condemnation claim is therefore the appropriate remedy.²¹⁹ Significantly, as the above quoted language indicates, the court did not distinguish between a taking accomplished by the United States government and one accomplished by a private corporation to which the power of eminent domain was delegated.²²⁰

²¹⁴ See *id.* at *2 ("[T]he only issue preserved for appeal is whether the evidence supported the award of punitive damages, as this was the only issue raised in Columbia's motion for a judgment notwithstanding the verdict.").

²¹⁵ See *Arnholt*, 747 F. Supp. at 402-03.

²¹⁶ *Id.* at 404.

²¹⁷ *Id.*

²¹⁸ *Id.*

²¹⁹ See *id.* ("Federal eminent domain law, anchored in the Fifth Amendment . . . does not prohibit the taking but rather places a condition of the taking, *i.e.*, just compensation.").

²²⁰ See *id.*

And what about the fact that *Bowman* had been affirmed two years before by the Sixth Circuit? Technically, the Court of Appeals had not reached the issue of preemption, and the court relied on that in *Arnholt*, handling the issue in a footnote to its opinion:

The Sixth Circuit, in affirming the award of damages for trespass in *Bowman*, held that Columbia had failed to preserve for appellate purposes its claim that the property owner was limited to a cause of action for inverse condemnation and could not pursue the trespass action. Thus, the only precedent on the inverse condemnation [issue] . . . is this Court's opinion in *Bowman*.²²¹

It is, of course, true that the Sixth Circuit did not reach the issue of preemption, and that it therefore left the door open for the lower courts to choose not to follow that portion of the *Bowman* decision.²²² There is much more to the *Bowman* opinion, however, than is implied by this simple characterization.

This point is best illustrated by the court's own words. In *Bowman* the Sixth Circuit explained that under Ohio law, both actual damages and actual malice must be proven to support an award of punitive damages.²²³ It also noted that the nominal damages that, at a minimum, are presumed to flow from a proven trespass are sufficient to meet the requirement for actual damages.²²⁴ The court went on:

Similarly, the requirement that actual malice be demonstrated is also easily satisfied. *Indeed, it is difficult to imagine a case in which an award of punitive damages would be more appropriate.* Despite being continually informed that the Bowmans did not wish to lease their tract, and despite having ample notice that the Bowmans intended to use their land in a manner wholly incompatible with the subterranean storage of gas, Columbia intentionally concealed the fact that they were using the property for twenty years without any compensation, just or otherwise. Presumably, this willful unauthorized expropriation would have been continued indefinitely had the Bowmans not signed a lease to retrieve gas from their own property, thereby forcing Columbia's hand. *Columbia's actions went beyond mere negligence; their willful and outra-*

²²¹ *Id.* at 403 n.2.

²²² *See* *Bowman v. Columbia Gas Transmission Corp.*, 1988 WL 68890, at *2 (6th Cir. July 6, 1988).

²²³ *See id.* at *2.

²²⁴ *See id.*

*geous character amply supported an award of punitive damages.*²²⁵

Additionally, in a concurring opinion, Judge Ryan argued that the *Bowman* court should have gone further and reached the merits of the case:

Columbia's motion for partial summary judgment was based on the theory that Maxine Bowman's sole recourse was an action for inverse condemnation, and that she was, therefore, precluded from pursuing her state law trespass claim. The value to Columbia of such limitation is that punitive damages, permissible in a trespass claim under Ohio law, are not available in an inverse condemnation action under federal law. The district court, as a matter of law, correctly rejected this theory.²²⁶

Thus, although the preemption issue was not reached in *Bowman*, the reader is left with the impression that had the court reached the merits, the outcome would not have been favorable to Columbia.²²⁷ Certainly it seems disingenuous to characterize the *Bowman* opinion merely as one that did not reach the issue at hand, implying that it has nothing further to add with regard to the issue. The Sixth Circuit used extraordinarily strong language in condemning the conduct of Columbia.²²⁸

One who looks only to these two opinions for guidance, then, finds that collectively they are something less than dispositive on the issue of federal preemption of trespass claims. The *Bowman* opinion, while strong in its condemnation of Columbia's conduct (and with an even stronger concurring opinion), fails to explicitly resolve the issue. The *Arnholt* opinion takes a clear position on the issue, but is (1) a lower court opinion that has not withstood the test of an appeal; (2) less compelling from the start because the first time the same court

²²⁵ *Id.* (emphases added).

²²⁶ *Id.* (Ryan, J., concurring). Judge Ryan would have further held that Columbia's actions did in fact constitute trespass.

²²⁷ Another possible explanation of the court's opinion is that two of the three panel members felt that, had they reached the inverse condemnation issue, they would have had to hold that the inverse condemnation claim *did* preempt the trespass claim. However, they were so outraged at Columbia's conduct, they felt equity demanded that the result be upheld. The solution: find a way not to reach the issue of preemption, reserving resolution of that issue for another day and reaching the equitable result in the instant case.

²²⁸ See *Bowman*, 1988 WL 68890, at *3 ("Indeed, it is difficult to imagine a case in which an award of punitive damages would be more appropriate . . . Columbia's actions went beyond mere negligence; their willful and outrageous character amply supported an award of punitive damages.").

faced the issue it came out the other way;²²⁹ (3) vulnerable to attack on major points of reasoning upon which the court relied; and (4) a decision that at least one other court that has faced the same issue has refused to follow.²³⁰

While this in no way means that the *Arnholt* opinion is not worthy of consideration, it does motivate one to delve more deeply into the reasoning behind the decision. Upon closer examination one discovers that the decision does not stand up well to scrutiny.

2. *The Trouble with Arnholt*

The *Arnholt* court relied heavily on an argument that because the underground storage of natural gas by firms transporting or selling gas in interstate commerce is regulated by the federal Natural Gas Act, and because the U.S. Supreme Court has protected the jurisdiction of the Natural Gas Act from regulation by the states, that federal law necessarily preempts the state law trespass claim.²³¹ This argument, however, paints preemption doctrine as it has been applied to the Natural Gas Act with far too broad a brush.

While it is true that the courts have struck down various state regulations, holding that they were preempted by provisions of the Natural Gas Act,²³² it is also true that other state regulations have been upheld.²³³ The determination as to whether Congress exercised its power to preempt state law requires an analysis of congressional

²²⁹ One searches the *Arnholt* decision in vain for the source of the epiphany that caused the court to change its mind after the *Bowman* case. Although the opinion elaborates the court's reasoning, the arguments relied upon all existed at the time of *Bowman*. *Arnholt* fails to identify a specific reason why the court chose to reject those arguments in *Bowman*, yet follow them in *Arnholt*, other than "further reflection and reconsideration of the issue." *Arnholt*, 747 F. Supp. 401, 403 (N.D. Ohio 1990).

²³⁰ See *Humphries v. Williams Natural Gas Co.*, 48 F. Supp. 2d 1276, 1281 (D. Kan. 1999) ("This court disagrees with [the *Arnholt* opinion] because it fails to recognize that the gas company bringing the condemnation action is a private corporation, and that unlike the federal government, its only authority to condemn property is grounded in § 717f(h).").

²³¹ See *Arnholt*, 747 F. Supp. at 403-04.

²³² See, e.g., *Williams Natural Gas Co. v. City of Oklahoma City*, 890 F.2d 255 (10th Cir. 1989) (holding that state court order enjoining construction of pipeline for which a FERC certificate had been issued constituted an impermissible collateral attack on the FERC order); *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293 (1988) (holding that Michigan law regulating the issuance of securities by companies engaged in the sale or transportation of natural gas in interstate commerce was preempted by the federal regulatory scheme contained in the Natural Gas Act).

²³³ See, e.g., *Northwest Cent. Pipeline Corp. v. State Corp. Comm'n*, 489 U.S. 493 (1989) (holding that the challenged state regulation governing the production of natural gas was not preempted by the Natural Gas Act); *Federal Power Comm'n v. Panhandle E. Pipeline Co.*, 337 U.S. 498 (1949) (holding that the Natural Gas Act does not grant the Federal Power Commission (which later became the FERC) the authority to regulate the transfer of gas leases, but instead reserved that power for the states).

intent.²³⁴ The circumstances in which a court should find that Congress intended to preempt state law have been enumerated as follows:

In the absence of explicit statutory language signaling an intent to pre-empt, we infer such intent where Congress has legislated comprehensively to occupy an entire field of regulation, leaving no room for the States to supplement federal law, or where the state law at issue conflicts with federal law, either because it is impossible to comply with both, or because the state law stands as an obstacle to the accomplishment and execution of congressional objectives.²³⁵

Another basis for finding preemption was described by the Court in the *Northwest Central Pipeline* opinion: "Where state law impacts on matters within FERC's control, the State's purpose must be to regulate production or other subjects of state jurisdiction, and the means chosen must at least plausibly be related to matters of legitimate state concern."²³⁶

In the case of the Natural Gas Act, not only is there no explicit language signaling Congress's intent to legislate comprehensively in the natural gas field, there is explicit language to the contrary. In enacting the Natural Gas Act, Congress put in place a system of regulation that the Supreme Court has described as a "dual regulatory scheme,"²³⁷ carefully dividing between the states and the federal government the power to regulate in the natural gas field.²³⁸ Congress "did not envisage federal regulation of the entire natural-gas field to the limit of constitutional power. Rather it contemplated the exercise of federal power as specified in the Act."²³⁹ Further, "[t]he Natural Gas Act was designed to supplement state power and to produce a harmonious and comprehensive regulation of the industry. Neither state nor federal regulatory body was to encroach upon the jurisdiction of the other."²⁴⁰ Several areas of regulation were expressly re-

²³⁴ See *Schneidewind*, 485 U.S. at 299 (holding that "[a] pre-emption question requires an examination of congressional intent").

²³⁵ *Northwest Cent. Pipeline*, 489 U.S. at 509 (internal citations omitted). See also *Schneidewind*, 485 U.S. at 299-300 (holding that "[i]n the absence of explicit statutory language . . . Congress implicitly may indicate an intent to occupy a given field to the exclusion of state law").

²³⁶ *Northwest Cent. Pipeline*, 489 U.S. at 518.

²³⁷ *Id.* at 514.

²³⁸ See *id.* at 510.

²³⁹ *Federal Power Comm'n v. Panhandle E. Pipeline Corp.*, 337 U.S. 498, 502-03 (1949).

²⁴⁰ *Id.* at 513 (citations omitted). *Panhandle* includes analysis of the legislative history of the Natural Gas Act that makes clear Congress's intent to limit federal powers and to reserve to the states those areas which they had traditionally regulated. The Court included in its opinion this explanatory statement made by the sponsor of the bill during debate in the House:

served to the states, including natural gas production or gathering.²⁴¹

Based on the foregoing considerations, it is abundantly clear that state regulation in the natural gas field is not, per se, repugnant to the provisions of the Natural Gas Act. The statute does not explicitly preempt state law in the area in question, and one may not infer an intent to preempt on the part of Congress because the language of the statute and its legislative history explicitly repudiate that idea, instead pointing to a system of regulation divided between the state and federal governments. Even a state regulation that has some effect on matters under federal control is not automatically considered preempted.²⁴² Therefore, a state law trespass claim against a storage operator survives this portion of the preemption analysis.

State trespass law also meets the requirement that the state regulation have a proper purpose. The state's purpose is to regulate property rights, a matter clearly within the state's traditional jurisdiction, and the means chosen, trespass law, is plausibly related to matters of state concern.

The only other valid ground for finding that a state law trespass action is preempted by federal law would be that the state law conflicts with the federal law. The Court has enumerated two tests for finding such a conflict, the first being whether it is impossible to comply with both the state and the federal law.²⁴³ Clearly that is not

The primary purpose of the pending bill is to provide Federal regulation, in those cases where the State commissions lack authority, under the interstate-commerce law. This bill takes nothing from the State commissions; they retain all the State power they have at the present time. This bill would apply to the transportation of natural gas in interstate commerce and to the sale of natural gas in interstate commerce for resale or public consumption.

Id. (quoting 81 CONG. REC. 6721). During the Senate debate, Sen. Wheeler put it even more succinctly: "There is no attempt and can be no attempt under the provisions of the bill to regulate anything in the field except where it is not regulated at the present time. It applies only as to interstate commerce and only to the wholesale price of gas." *Id.* (quoting 81 CONG. REC. 9313).

²⁴¹ See *Northwest Cent. Pipeline*, 489 U.S. at 510.

²⁴² See *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 308 (1988) ("Of course, every state statute that has some indirect effect on rates and facilities of natural gas companies is not pre-empted.").

This topic was also discussed in *Northwest Central Pipeline*, where the Court said: To find field pre-emption of Kansas's regulation merely because purchasers' costs and hence rates might be affected would be largely to nullify that part of NGA § 1(b) that leaves to the States control over production, for there can be little if any regulation of production that might not have at least an incremental effect on the costs of purchasers in some market and contractual situations.

489 U.S. at 514.

²⁴³ See *Northwest Cent. Pipeline*, 489 U.S. at 509. An example of a case in which it was impossible to comply with both the state and federal regulations is *Williams Natural Gas Co. v. City of Oklahoma City*, 890 F.2d 255 (10th Cir. 1989). In that case, Williams Natural Gas was issued a FERC certificate that granted it the right to serve a large industrial customer and to build a pipeline for that purpose. A local, state-regulated distribution company had also com-

the case here. In fact, if a storage operator were in compliance with the Natural Gas Act, trespass would not be an issue. The statute directs that a storage operator first attempt to privately contract for the underground storage rights and, if unsuccessful, then institute condemnation proceedings.²⁴⁴ The statute does not provide that if the storage operator is unsuccessful in contracting for the rights that it may simply use the property without condemnation proceedings and without providing just compensation. A storage operator only runs afoul of the state trespass law when it stops short of complying with the Natural Gas Act and uses property without the right to do so. Conversely, if one is in compliance with the Natural Gas Act, one is also in compliance with the state law of trespass, and therefore it is plainly not impossible to comply with both.

The second test for finding an impermissible conflict between the state and federal law is whether the state law “stands as an obstacle to the accomplishment and execution of congressional objectives.”²⁴⁵ Again, it seems elementary that, unless one includes the taking of property without the payment of compensation on the list of congressional objectives, an action for trespass like those contemplated here would not frustrate the objectives of Congress. To the extent that the prospect of state law trespass actions might encourage storage operators to strictly comply with the provisions of the Natural Gas Act, one can make a strong argument that, rather than being an obstacle to congressional goals, state trespass actions in fact further congressional objectives.

Based on this traditional preemption analysis, using the rules promulgated by the Supreme Court in other cases involving the Natural Gas Act, it seems clear that there is no basis to find that the type of state trespass claim at issue in this Note is preempted by federal law. Also, going back to the valuation methodology issue and applying the same preemption analysis to the concept of using state law to provide the method of valuing property, there would seem to be no conflict and hence no preemption there as well. Using state methods for valuing property would not make it impossible to comply with both state law and the Act—instead, they would be complementary in precisely the way envisioned in Congress. Nor would state valuation

peted for that business. When the certificate was granted to Williams, the local company filed a state court action that resulted in the state court issuing an order permanently enjoining Williams from constructing the pipeline that FERC had authorized. *See id.* This clearly shows that it can be impossible to comply with both state and federal law, and the state court action was held to be an impermissible collateral attack on the FERC order. *See id.* at 257.

²⁴⁴ *See supra* notes 86-88 and accompanying text.

²⁴⁵ *Northwest Cent. Pipeline*, 489 U.S. at 509.

methods in any way frustrate congressional objectives.²⁴⁶

There is another issue that should be discussed here in addition to preemption, however. The reason that the doctrine of inverse condemnation exists is that the federal government has the power to simply take property without formal proceedings and without the payment of compensation at the time of the taking, although this is an officially disfavored method of taking. The government must still provide compensation, but in such cases it is incumbent upon the property owner to petition the government for redress.

The question, then, is whether the power to take property by physical possession was included in the grant of federal eminent domain power to private corporations contained in the Natural Gas Act. Both case law and public policy arguments suggest a negative answer to this question.

It was partly on this basis that the court in *Humphries v. Williams Natural Gas Co.*²⁴⁷ disagreed with *Arnholt*. The *Humphries* court stated “[t]his court disagrees with this portion of the opinion in [*Arnholt*] because it fails to recognize that the gas company bringing the condemnation action is a private corporation, and that unlike the federal government, its only authority to condemn property is grounded in § 717f(h).”²⁴⁸ The court came to the conclusion that nothing in the Natural Gas Act gave the storage operator the power to take immediate possession of property without either an agreement with the owner or the completion of formal condemnation proceedings.²⁴⁹ The *Humphries* court thus stated that “this court does not be-

²⁴⁶ For a thoughtful analysis of the issue of whether state or federal law should provide the basis for determining value in this type of case, see *McCullough*, 962 F.2d 1192, 1198 (6th Cir. 1992).

²⁴⁷ 48 F. Supp. 2d 1276 (D. Kan. 1999). *Humphries* presented a factual situation that was very closely analogous to both *Bowman* and *Arnholt*, although it involved the construction of a pipeline rather than an underground natural gas storage field. Williams Natural Gas was granted a certificate of public convenience and necessity by the FERC, which authorized it to construct a pipeline. In the process of construction, Williams entered Humphries's property with employees and heavy construction equipment, taking the property without any formal condemnation proceedings or payment of compensation for the taking. Humphries filed a trespass action, and in response Williams filed a condemnation action in federal court, claiming that federal law preempted the state court trespass claim. Before reaching the issue of whether the Natural Gas Act authorized Williams to take property without formal proceedings, the court performed a preemption analysis like that engaged in above, finding that:

Had [Williams] followed the letter and intent of § 717f(h), the court would agree that all of Humphries' state law claims for trespass and unlawful taking would be preempted by federal law. In this case, however, [Williams] did not scrupulously abide by the terms of § 717f(h). The court finds that [Williams's] condemnation action does not preempt Humphries' claims that existed prior to the date that [Williams] filed its condemnation action.

Id. at 1279.

²⁴⁸ *Humphries*, 48 F. Supp. 2d at 1281.

²⁴⁹ See *id.* at 1279-83.

lieve that Congress intended the condemnation authority granted by § 717f(h) to cloak holders of certificates of public convenience and necessity with impunity to commit trespasses and other civil wrongs.²⁵⁰

Another district court that reached the same conclusion as *Humphries* explained its reasoning this way:

Although the plaintiff possesses the authority pursuant to Title 15 U.S.C. § 717f(h) [the Natural Gas Act] to exercise the right of eminent domain, this right is not in itself sufficient to authorize the taking of immediate possession prior to the condemnation proceeding itself. The authority to take immediate possession conferred by the Declaration of Taking Act and similar statutes which confer the authority to take immediate possession is reserved to the United States. No statutory authority exists which would authorize a private party, such as the plaintiff, to take immediate possession of the real property prior to the condemnation proceeding. Similarly, the authority to take immediate possession of the property cannot be implied in the mere grant to the plaintiff of the right to eminent domain because the language of Title 15 U.S.C. § 717f(h) is unequivocal. In addition, if an ambiguity were found in the statute the result would not change because statutes conferring the right of eminent domain are strictly construed to exclude those rights not expressly granted.²⁵¹

These are compelling arguments, and they can be bolstered by public policy arguments, as well. Even for the federal government, which has the power to take property without formal proceedings or payment, this method of taking property is officially disfavored.²⁵² It

²⁵⁰ *Id.* at 1282.

²⁵¹ *Northern Border Pipeline Co. v. 127.79 Acres of Land*, 520 F. Supp. 170, 172 (D.N.D. 1981). The court went on to conclude, however, that the plaintiff had legitimate reason to obtain immediate possession of the property for construction of a pipeline and that the court had the authority to grant such equitable relief. The court then issued an order granting plaintiff the right to take immediate possession of the property, but only after plaintiff had deposited an amount of money equal to three times the plaintiff's estimate of the amount of just compensation. *See id.* *See also* *USG Pipeline Co. v. 1.74 Acres in Marion Cty., Tenn.*, 1 F. Supp. 2d 816, 825 (E.D. Tenn. 1998) The *USG Pipeline* court reasoned:

USGP's acquisition of a FERC Certificate cloaks it with the federal power of eminent domain pursuant to 15 U.S.C. § 717f(h). However, nothing in the Natural Gas Act automatically authorizes the possessor of an FERC Certificate to take immediate possession of the property sought to be condemned prior to the condemnation proceeding. Plaintiff has not directed the Court to anything in the Act it contends grants such authority.

Id. The *USG Pipeline* court went on to conclude, as did the court in *Northern Border Pipeline*, that the plaintiff had a legitimate need for immediate possession, and that the court had the authority to grant such equitable relief. The court ordered that possession be granted to the pipeline company, but again after the deposit of funds with the court. *See id.*

²⁵² *See supra* notes 148-50 and accompanying text.

does not make sense to grant this power to a private corporation necessarily driven by the profit motive. From the shareholders' point of view, for example, would it be responsible for a corporation to voluntarily pay for property that it could use for free? In the underground gas storage business, storage operators have discovered that they can use window properties for decades, and perhaps indefinitely, without paying for their use. Because storage is unobservable and, in most cases, does not interfere with the surface use of the property, owners of window properties only infrequently institute action against the storage operator. Most, if not all, of the cases that have arisen in this context so far present themselves when some event precipitates a need for the storage operator to condemn the property in order to protect the storage field, as in the case of an owner about to drill into the field.²⁵³ This means that a storage operator can reap considerable savings by condemning only these window properties and allowing the vast majority of them to go uncondemned and thus uncompensated.

Storage operators have argued that the owners of these window properties have turned down the operator's offer to privately contract for the rights, and thus that the owners have failed to do what is necessary for them to be paid.²⁵⁴ The argument has even been made that the owner is therefore not entitled to any compensation for the taking of their property.²⁵⁵ But this is precisely backwards. The mandate of the Natural Gas Act's grant of eminent domain power is explicit. The storage operator is required to attempt to privately contract for the rights and, if unsuccessful, must then commence a condemnation action in the courts to acquire the rights.²⁵⁶ The burden of moving the process forward should be on the storage operator, not the landowner. A property owner does not need to earn the right to be justly compensated for the taking of his property—that right is guaranteed by the Constitution. A failure to complete the condemnation process must result in a lack of property rights for the storage operator, not the taking of rights from the owner without compensation.

²⁵³ See Noble, *supra* note 8, § 26.06[2] (explaining the use of condemnation procedures to halt drilling operations that might threaten the integrity of the storage field).

²⁵⁴ See Plaintiff's Reply to Defendant's Memorandum in Opposition to Plaintiff's Motion for Partial Summary Judgment at 8, Amend. No. 1:98CV590 (N.D. Ohio 1999) (settled before disposition) ("Defendants claim they should receive, at least, as much as Columbia has paid their neighbors with interest. They now want to be paid the money they previously refused to accept. The time for this has passed. If they had given Columbia a lease or an easement, Columbia would have paid them for it. They did not do what they had to do in order to be paid.").

²⁵⁵ See *id.* ("They want this court to award them the money they could have earned even though they refused to do what they needed to do to earn it. This is like a lazy bum claiming it is only fair that he should receive the same wages as the people who worked all day.").

²⁵⁶ See 15 U.S.C. § 717f(h) (1994). See also *supra* note 64.

Another reason that this power should not be granted to the storage operators is that the district courts have shown a willingness to use their equitable power to provide certificate holders in legitimate need with immediate possession of the property. The courts that have provided this relief have generally required that the company deposit funds with the court prior to possession.²⁵⁷ This process provides what would appear to be a necessary means of oversight over the activities of storage operators.²⁵⁸

It seems logical to conclude that certificate holders should be required to strictly follow the procedure set forth in the Natural Gas Act. The Act does not explicitly grant the power to take immediate possession. Several courts have examined the issue and failed to find such a grant of power. A public policy analysis leads to the conclusion that conferring this power upon private corporations would have the result of encouraging uncompensated takings of private property, with little or no benefit in return. The inevitable conclusion on this point seems to be that the Natural Gas Act does not and should not grant certificate holders the power to take property without payment or formal proceedings.

In conclusion, it would appear that the *Arnholt* decision is fatally flawed and should not be followed in a case presenting the same issues. When one delves more deeply into the court's reasoning, one discovers that the decision lacks true support. There is no real basis for finding that the Natural Gas Act would preempt a state law tres-

²⁵⁷ See, e.g., *USG Pipeline Co. v. 1.74 Acres in Marion County, Tenn.*, 1 F. Supp. 2d 816, 827 (E.D. Tenn. 1998) ("[T]he Court ORDERS the Clerk of Court to deposit all funds received from USGP in these cases in an interest bearing account pending a determination of just compensation."); *Northern Border Pipeline Co. v. 127.79 Acres of Land*, 520 F. Supp. 170, 173 (D.N.D. 1981) ("[T]he plaintiff will deposit with the Clerk monies equal to the plaintiff's estimate of the amount of just compensation and an additional amount of money or a bond equal to at least twice the plaintiff's estimate of just compensation When the Clerk has received the deposits hereby ordered, the plaintiff may take immediate possession of the easements."). But see *Tennessee Gas Pipeline Co. v. New England Power, C.T.L.*, 6 F. Supp. 2d 102, 106 (D. Mass. 1998) (granting pipeline company's request for immediate possession without requiring the payment of funds to the court or the property owner).

²⁵⁸ See *Humphries v. Williams Natural Gas Co.*, 48 F. Supp. 2d 1276, 1280 (D. Kan. 1999). The *Humphries* court stated:

[R]equiring the pipeline builder to first seek the court's approval of the acquisition of the property prior to entering is, on its face, more desirable than the self-help remedy invoked by [Williams] in its taking of Humphries' property. This is particularly true in light of the fact that it is apparently well settled "that the district court does have the equitable power to grant immediate entry and possession where such relief is essential to the pipeline construction schedule." Consequently, there was no reason that [Williams] could not have sought immediate possession of Humphries' property in this court prior to intruding on his land. Requiring the pipeline builder to first seek the landowner's approval, or if that cannot be achieved, to seek the approval of the court, would also obviate the possibility of any physical confrontation with the landowner.

Id. (internal citations omitted).

pass claim against a storage operator, and there is likewise no basis for finding that the Natural Gas Act conferred upon FERC certificate holders the power to take property without formal proceedings or payment. The *Humphries* opinion is a much more thoughtful and in-depth opinion that is well supported by both the authorities and logic.

C. *The Unauthorized Storage of Gas Should Constitute Trespass*

Accepting the proposition that a state law trespass claim is not preempted by the federal Natural Gas Act in this context, the next question is whether the unauthorized storage of natural gas beneath a property constitutes trespass. Although the answer to this question, as a matter of state law, will vary depending on jurisdiction, some useful observations may be made on such trespass claims in general.

First, courts have allowed actions for both underground trespass and trespass committed by an instrumentality under the control of a person.²⁵⁹ Not all of the authorities are unambiguous, however. Columbia, for instance, has argued that according to the Ohio Supreme Court's holding in *Chance v. BP Chemical, Inc.*,²⁶⁰ an action for underground trespass cannot be maintained unless the owner can show some amount of actual interference with the use of the property.²⁶¹ Superficially, this argument would appear to have merit. The facts of *Chance* did involve an alleged underground trespass, and the Ohio Supreme Court did hold that the owners' action could not be maintained because they were unable to show actual interference with the surface use of the property.²⁶² Upon a careful reading of the case, however, one discovers important distinctions indicating that the holding of *Chance* may be a narrow one.

Foremost among these is the explicit distinction that the court itself made between *Chance* and underground natural gas storage cases. Both parties in *Chance* cited oil and gas cases,²⁶³ including underground gas storage cases,²⁶⁴ in support of their arguments. The

²⁵⁹ See *supra* notes 124-26 and accompanying text.

²⁶⁰ 77 Ohio St. 3d 17 (1996).

²⁶¹ See *id.* at 27.

²⁶² Also, the case does appear to hold unequivocally that an owner's right to the subsurface of their property is not absolute, although it does not clearly define the extent of those limitations. See *id.* at 26 ("[W]e do not accept appellants' assertion of absolute ownership of everything below the surface of their properties. Just as a property owner must accept some limitations on the ownership rights extending above the surface of the property, we find that there are also limitations on property owners' subsurface rights.") This is not dispositive of the issue at hand, though, because it does not hold that the property owner has no subsurface rights, only that they are limited, and the limitation is not clearly defined other than with regard to the unusual circumstances of *Chance*. See *id.* at 27-29 (describing the facts of *Chance*).

²⁶³ See *id.* at 24.

²⁶⁴ See *id.*

court responded in this manner:

We find that the situation before us is not analogous to those present in the oil and gas cases, around which a special body of law has arisen based on special circumstances not present here. . . . For the same reason, we also reject appellants' argument that this court's opinion in [*McCullough*], which involved the determination of compensation due for the appropriation of an underground gas storage easement, is relevant to the resolution of this case.²⁶⁵

The property owners had argued that they should not be required to show actual damages because the law of trespass allows for presumed damages.²⁶⁶ In rejecting this argument, the court once again seemed to limit the holding of the case: "We do not accept appellants' argument in this regard *in the specific circumstances of this case*, but find that some type of physical damages or interference with use must be shown in an indirect invasion situation *such as this*."²⁶⁷ Although one could interpret this language to mean that the rule should apply in all cases of indirect underground trespass, it seems much more likely that the holding is more limited than that. This is especially true given the peculiar facts of the case, which involved the deepwell injection of hazardous liquid waste,²⁶⁸ and the distinguishing language throughout the opinion, epitomized by the language holding specifically that the situation "is not analogous to those present in the oil and

²⁶⁵ *Id.*

²⁶⁶ *See id.* at 27.

²⁶⁷ *Id.* (emphases added).

²⁶⁸ This "deepwell injection" waste disposal process involves injecting liquid waste, called injectate, through a well and into the native brine that is found several thousand feet beneath the earth's surface. A layer of non-porous rock creates a barrier between the injected waste and the surface.

The lawsuit in *Chance* was a class action suit on behalf of local property owners who claimed to be damaged by the operation of a deepwell injection process of BP Chemical, Inc. By the time the case reached the Ohio Supreme Court, the primary issue to be resolved was the property owners' trespass claim, which was based on the contention that the injectate had migrated laterally from the injection site to the geological substratum beneath their properties. Despite expert testimony, the plaintiffs had trouble in even establishing that the injectate had in fact migrated to the area beneath their properties. The court found that "there were great difficulties in appellants establishing, as a factual matter, that a property invasion had occurred," and that "when all of the circumstances of this case are considered, appellants' evidence of trespass was simply too speculative." *Id.* at 27-28.

Given the unusual fact pattern and the speculative nature of the claims, the court seemed to go out of its way to distinguish this case from others. In addition to the distinguishing remarks quoted in the text above, the court used similar distinguishing language in other places throughout the opinion, including one of the final paragraphs of the opinion. There, the court stated, "[w]hen the nature of the alleged property invasion is considered in light of appellants' apparent lack of specific and readily demonstrable concrete damage, *this was a highly unusual case*." *Id.* at 29 (emphasis added).

gas cases."²⁶⁹ In sum, courts should not apply *Chance* to underground gas storage cases.

There is, on the other hand, a powerful policy argument for allowing a trespass action on the facts typically presented in unauthorized underground gas storage cases. Simply put, subsurface rights should be treated differently than air rights because the historical use of subsurface property has been much more extensive and profitable for property owners than the historical use of air rights. Traditionally, property owners have had the right to profit from the potentially valuable resources beneath their properties, including caves, valuable minerals such as gold or silver, and reserves of coal, oil, and gas. The geological formation that is typically used for an underground natural gas storage field is one that originally contained natural gas. There is no question that the owner of a property situated over such reserves has the right to profit from them. In fact, the right is alienable and is frequently transferred by sale or lease.

Storage operators cannot plausibly argue that property owners have no protectable property interest in the same geological formation in which they did have a protectable and alienable interest when the formation contained native natural gas.²⁷⁰ Such a reversal should require strong justification. While it is true that underground natural gas storage serves an important public interest, that alone would not provide sufficient justification, for the Constitution forbids the taking of property for the public interest without the payment of just compensation.²⁷¹ It would likewise not be sufficient to argue that the owner's property interest was in the gas itself, rather than the rock, and that, since the gas is gone, the owner's interest is extinguished. Even in *Chance*, which limited Ohio property owners' subsurface rights to at least some degree, the court only held that such rights were limited, not that they were non-existent.²⁷²

There is reason, then, to treat subsurface rights differently from air rights because of the traditional ability of owners to profit from valuable resources beneath their land. It is arguable that the facts of *Chance* are more analogous to an air rights case than an underground gas storage case. The plume of injectate from the deepwell injection

²⁶⁹ *Id.* at 24.

²⁷⁰ *But see* Defendant's Memorandum in Support of its Motion for Partial Summary Judgment at 11, Amend. No. 1:98CV590 (N.D. Ohio 1999) (settled before disposition) ("Columbia seeks dismissal of the trespass counterclaim because the [Amends] have no protectable property interest in the depleted Clinton Formation 3,000 feet beneath the 'subject tract' where Columbia stores its gas.").

²⁷¹ *See* U.S. CONST. amend. V.

²⁷² *See Chance*, 77 Ohio St. 3d at 25 ("Appellants have a property interest in the rock into which the injectate is placed, albeit a potentially limited one . . .").

process dispersing through the geological substratum in *Chance* seems analogous to a plume of smoke dispersing in the air from a smokestack. This is fundamentally different from a storage operator knowingly profiting from the use of an underground gas storage facility beneath an owner's property without first acquiring the right to do so. Given these considerations, it is not difficult to come to the conclusion that a storage operator that knowingly uses property—even subsurface property—without paying for the right to do so should be liable for trespass.

CONCLUSIONS

This Note has examined the issues of valuation methodology, preemption of state law trespass claims, and whether or not the unauthorized storage of natural gas constitutes trespass. It is time now to summarize the results of that examination and come to some conclusions. First, to some preliminary sub-issues: the problem of punitive damages and the question of who should pay any increased costs.

A. *Punitive Damages*

One of the problems to be resolved when dealing with these issues is the question of whether punitive damages should be allowed. On the one hand, underground natural gas storage serves an enormously important public interest. Out-of-control punitive damage awards could harm that interest if the awards are large enough to seriously weaken the companies that provide the service and to render them less able to perform their role in the national natural gas delivery infrastructure. Also, as noted before, the rights at issue here have a relatively low value on an individual basis, so large punitive damage awards would seem unjustified.

On the other hand, a decision not to allow punitive damages in the type of case at issue here would have the effect of encouraging storage operators to continue taking property without the payment of just compensation. The fact that the property subject to the "willful unauthorized expropriation"²⁷³ is low in value is not dispositive of the issue.²⁷⁴ The situation seems to cry out for an undesirable economic consequence accompanying non-compliance with the condemnation

²⁷³ *Bowman v. Columbia Gas Transmission Corp.*, 1988 WL 68890, at *3 (6th Cir. July 6, 1988).

²⁷⁴ See *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 434-35 (1982) (explaining that when the nature of the action by the government "is a permanent physical occupation of property, our cases uniformly have found a taking to the extent of the occupation, without regard to whether the action achieves an important public benefit or has only minimal economic impact on the owner").

procedures set forth in the Natural Gas Act. Such a result would change the decision-making calculus of storage operators and make compliance with the Act's provisions the rule rather than the exception.

Hence, the arguments for punitive damages weigh more heavily in favor of allowing punitive damages than against. Some potential solutions, moreover, could keep these punitive damage awards within reason at the same time as providing a greater incentive for compliance. Condemnations do not have to be performed one at a time, for instance. A storage operator could file an action to condemn all the remaining window properties over a given storage field and request the appointment of a commission to determine the appropriate compensation for all those properties at the same time. With a single determination of punitive damages by an appointed commission, rather than a piecemeal determination by multiple juries, it is more likely that the total punitive damage award would reasonably reflect the degree of corporate wrongdoing. The best solution to this issue, however, may be statutory, as will be discussed shortly.

B. Who Should Pay?

The question of how any increased costs should be distributed must be considered in any resolution of these problems. Any solution that results in greater numbers of condemnations of window properties will result in higher costs to consumers, because the costs of these properties are capital costs that the storage operator is permitted to pass through to the consumer.

The actual cost of compensating owners of condemned property rights is a legitimate cost of doing business that storage companies should be permitted to pass on to consumers. Although the condemnation of window properties would therefore result in somewhat higher costs to the consumer, the difference should be negligible on an individual basis and is easily justified. First, costs will only go up because the property that is being condemned should have been condemned a long time ago. The problem is not that the new costs will be too high, but rather that old costs were artificially low because the storage operators (and ultimately consumers) were essentially receiving a "free ride" at the expense of some individual property owners. Second, the purpose of the Takings Clause of the Fifth Amendment is to protect private property owners from having to bear a disproportionate share of the burden of providing for the public good.²⁷⁵

²⁷⁵ See *Armstrong v. United States*, 364 U.S. 40, 49 (1960) ("The Fifth Amendment's guarantee that private property shall not be taken for a public use without just compensation was

Thus, these increased costs should be spread among consumers.

Punitive damages, however, are a different story. They arise from the misconduct of companies that were entrusted with an enormous public power—the power to take property for public use against the wishes of the property owner. It would seem that there are two strong arguments for not allowing the gas companies to pass along the costs of punitive damages to the consumers. First, it seems unjust to the consumer. The arguments enumerated above for sharing the costs of condemning private property for public use do not apply here. The public gets nothing in return for the payment of punitive damages as they do from the condemnation of property for public facilities, and they played no role in the conduct that gave rise to the punitive damages. Second, permitting the gas companies to pass along the costs of punitive damages to the consumers eviscerates the primary justification for awarding the punitive damages in the first place, deterrence. What deterrent value will there be in punitive damages that are simply passed along to the consumer? The only result would be a windfall to the property owner and increased costs to consumers. The gas companies would have no motivation to change their behavior in the future. Care should be taken to see that punitive damages are borne by the company and its shareholders, rather than the public. As wholesale interstate gas prices are federally regulated, responsibility for this would fall to FERC, as well as to the legislators crafting a statute to address these issues.

C. A Statutory Solution?

Perhaps the best resolution to all of the issues addressed in this note would be an amendment to the Natural Gas Act authoritatively resolving these questions and setting forth uniform rules to be applied. There would be several possible approaches to such an amendment.

First, with regard to the preemption issue, the statute could take one of two approaches. One would be to simply make explicit that if the certificate holders fail to follow the procedures mandated by the statute, the statute does not preempt state trespass laws. The certain knowledge that the storage operator would be left to the vagaries of individual juries with the authority to award punitive damages should be enough to encourage future compliance.

One thing this approach would not do, however, is provide the storage operator with protection from devastating punitive damage

designed to bar Government from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole.”).

awards for past conduct. Although one can make the case that the conduct involved is reprehensible, there is a danger that punitive damage awards could be excessive relative to the degree of wrongdoing involved. One of the opportunities that a statutory solution would provide would be the ability to balance these equities and arrive at a fair solution to the problem that would be henceforth uniformly applied.

An appropriate solution might be a provision that specifically does preempt state law. The provision should require that when condemnation procedures are not followed, the owners must be compensated with interest from the time that the property was first used by the certificate holder, and must be reimbursed for any attorney's fees and court costs incurred, along with a further provision that provides for a fine to be paid to the government by the certificate holder. This solution would provide for deterrent measures while allowing the legislators to set the fine at a level commensurate with the severity of the violation.

Detailed economic analysis would most likely be necessary to arrive at the proper fine structure, but certainly it could be accomplished in a number of ways. A fine based on a percentage of value of the property taken improperly would be one example, as would a simple flat amount per violation. The goal would be to set the amount at such a level as to have deterrent value without being excessive relative to the seriousness of the violation. If it is significantly cheaper to comply with the Natural Gas Act than not to comply, it seems reasonable to predict that compliance will be the rule.

A statutory solution could also tackle the valuation methodology problem, but in this case less might be more. There might be value in making explicit that the substantive law of the state should be followed in determining value. The Sixth Circuit makes a convincing argument in the *McCullough* case that this is an area best left to the states for a variety of reasons.²⁷⁶ Property rights are such a traditional area of state control that there is little reason to replace state law with federal law at this point. The statute could enumerate the *McCullough* factors and dictate that they be followed in federal condemnations for underground storage rights. But this seems unnecessary. The history of the Natural Gas Act has been to leave intact as much as possible the states' jurisdiction over matters within their traditional regulatory sphere, and clearly that would include the valuation of property. The progress of the *McCullough* case, culminating in a very workable formula for determining the value of an underground gas

²⁷⁶ See *McCullough*, 962 F.2d 1192, 1195-99 (6th Cir. 1992).

storage easement, suggests that this can be successfully worked out on a state-by-state basis.

A properly constructed statutory solution, then, would provide several benefits. It would insure that property owners are made whole when violations occur, provide a deterrent to prevent future violations, cap punitive measures at a reasonable level, and provide a nationally uniform solution. At the same time, the states' interests would be addressed by permitting each state to establish their own valuation methodology, and by providing the statutory incentives that would improve compliance with proper condemnation procedures, thus making it less likely that storage operators would run afoul of state trespass laws. Provisions that require reparations to the landowner in the event of a violation would likewise insure that the federally regulated storage operator would not be able to use the federal statute to ride rough-shod over the landowner's state property rights.

Relying on the courts for a solution to these problems seems less likely to produce correct and uniform results. As the foregoing analysis section demonstrates, it is possible to resolve these issues in the courts without resorting to the crafting of new legislation. It does not seem realistic, though, to believe that each state and circuit will resolve the issues either properly or uniformly. This is shown by the *Arnholt* decision,²⁷⁷ which is arguably an incorrect, unsupported decision in which that court failed even to follow its own precedent, and the *Humphries* opinion,²⁷⁸ which is arguably correct and well supported, but reaches a different result than *Arnholt* on similar facts.²⁷⁹ Also, although the argument for punitive damages is strong, the problem of capping punitive damages at a reasonable level seems particularly intractable when relying on individual juries to establish amounts. Statutory punitive damages would solve this problem.

Based on the foregoing considerations, it seems that an amendment to the Natural Gas Act would provide the best overall solution to the problems addressed in this Note. The most desirable approach is one that would explicitly preempt state trespass law in the case of violations and provide for reparations to be made to the owner, as well as fines to be paid to the government. The amendment should also provide specifically that state substantive law should be followed in determining value in condemnation actions.

²⁷⁷ See *Arnholt*, 747 F. Supp. 401 (N.D. Ohio 1990).

²⁷⁸ 48 F. Supp. 2d 1276 (D. Kan. 1999).

²⁷⁹ See *supra* note 250 and accompanying text.

D. *The Current State of the Law*

For now there is no statutory solution available to the punitive damage problems or to any of the other issues discussed in this Note. What then, is the current state of the law?

As far as valuation methodology is concerned, the answer varies depending on jurisdiction. In Ohio, for instance, the law is fairly clear. The Sixth Circuit has ruled that state law must be looked to in establishing value, and the Ohio Supreme Court has clearly promulgated the method for doing so. Elsewhere in the Sixth Circuit, in Michigan, Kentucky, and Tennessee, it is clear that state law must be looked to, but perhaps less clear what that law actually is. And in the rest of the country, the question is unresolved at both the state and federal level. The Sixth Circuit and Ohio Supreme Court opinions in *McCullough*, however, provide useful precedents that are worthy of consideration by other courts.

As to the issue of whether state law trespass claims should be allowed when storage operators do not follow the procedure for acquiring property rights provided for in the Natural Gas Act, the arguments and the weight of the authorities all point in the direction of allowing the trespass claims. Although this determination exposes the storage operators to liability for punitive damages, the arguments for permitting punitive damages in such cases are stronger than those against. Storage operators are free to pursue damages-limiting strategies, such as lobbying for a statutory solution or mass condemnations with the appointment of a commission. The bottom line is that storage operators have been entrusted with an enormous public responsibility, and if they refuse to follow the procedures for acquiring property as laid out in the Natural Gas Act, they should expect negative economic consequences to flow from that conduct.

On the issue of preemption, there is no basis for finding that a state trespass claim is preempted by the Natural Gas Act, because it does not conflict with the federal law, does not frustrate congressional objectives, and the state does not have an improper purpose in promulgating trespass law. Nor is there a solid foundation upon which to determine that the Natural Gas Act vests in the storage operators the power to take property without payment or formal proceedings, leaving the owner with only an inverse condemnation claim. And while there may be some question as to the extent of property owners' subsurface rights, it would appear that those rights are at least extensive enough to permit a trespass claim when a storage operator is profiting from the geological formations beneath an owner's property without first having obtained the right to do so. It is clear, then, that trespass

claims should be allowed.

A statutory solution would provide two important features not provided by the current state of the law—a nationally uniform solution, and a reasonable cap on punitive damages. Even without a statutory solution, however, following the recommendations in this Note would provide many benefits. States would be able to determine their own methods of property valuation, with the guidance of the already formulated *McCullough* factors to assist in their deliberations. Storage operators would be motivated to comply with the requirements of the Natural Gas Act. Property owners victimized by past violations of the Act would be made whole, and perhaps most importantly, property owners from this point forward would be compensated in a timely manner for the taking of their property, in accord with constitutional dictates.

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