

NOTE & COMMENT

TEXAS TUG OF WAR: A SURVEY OF URBAN DRILLING AND THE ISSUES AN OPERATOR WILL FACE

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I. INTRODUCTION	338
II. ISSUES AND CONCERNS FOR THE OPERATOR	340
A. The Economics of Drilling	340
1. Technology of Hydraulic Fracturing and Associated Costs.....	340
2. Tax Revenues to City and State.....	342
3. Increased Workforce.....	342
4. Increased Bonus and Royalty Payments.....	343
B. Public Concerns	343
1. Noise from Operations	344
2. Environment	344
3. Safety	345
4. Response from Operators to Public Concerns.....	346
5. Response from Government.....	347
C. Government Concerns.....	347
1. State	347
2. Municipalities.....	348
3. A Case Study of State and Local Regulation of Pipelines.....	350
D. Liability Concerns	355
1. Trespass from Fracing.....	355
2. Nuisance	356
3. Surface Damages	356
E. Leasing Concerns	356
1. Texas Mineral Interest Pooling Act	356

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338	TEXAS JOURNAL OF OIL, GAS, AND ENERGY LAW	[Vol. 4
	2. The Qualified Subdivision Rule.....	357
	3. Neighborhood Coalitions	358
	4. The Accommodation Doctrine	358
	III. FUTURE LEGISLATION AND CITY ORDINANCES	359
	A. Cooperation with Fort Worth to Lay Pipelines Under City Streets	359
	B. Funding for the Railroad Commission.....	360
	C. Limit Eminent Domain for Natural Gas Pipelines.....	361
	D. Odorization of Natural Gas in Pipelines.....	361
	IV. CONCLUSION	362

I. INTRODUCTION

Oil and gas operators¹ are drilling wells in urban areas as never seen before. No longer is the oil and gas operator simply leasing a parcel of rural land outside the city limits. The Barnett Shale has been the impetus for this change by providing for a new type of drilling—urban drilling.² The Barnett Shale is one of the largest natural gas fields in the United States, producing an estimated 3 billion cubic feet of natural gas a day and covering 5,000 square miles in North Texas. This area includes Fort Worth and other populated suburbs.³ Last fall Railroad Commissioner Victor Carrillo projected that the Railroad Commission of Texas (“Railroad Commission” or “Commission”) would issue almost 24,000 drilling permits in 2008—a 20% increase from 2007.⁴ Fort Worth city officials have projected that Fort Worth will have 1,160 wells within the city limits by 2010.⁵

1. Throughout this article, *operator* refers to the entity with the right to drill and produce oil and gas. The term *lessee* also refers to the operator.

2. While urban drilling is not necessarily new, it is new in the sense that the urban setting has never experienced drilling with such magnitude in the sprawl of a metropolitan area. The success of the Barnett Shale has spurred activity in the Marcellus Shale in Pennsylvania and the Haynesville Shale in Louisiana. One study predicts the Marcellus could contain as much as 50 trillion cubic feet of recoverable natural gas. John-Laurent Tronche, *Barnett Shale operators head eastward for Louisiana riches*, ENERGY REP., FORT WORTH BUS. PRESS, Sept. 26, 2008, at 16-17. The Haynesville could have five times more natural gas than the Barnett Shale. Ben Casselman, *Natural Gas Firms Seek Outlet for Growing Supplies*, WALL ST. J., Aug. 11, 2008, at A4.

3. Coastal Oil & Gas Corp. v. Garza Energy Trust, 268 S.W.3d 1, 31-32 (Tex. 2008) (Willett, J., concurring).

4. Victor G. Carrillo, *Texas Energy Sector Update: Red Hot Activity That Just Keeps Going and Going and Going . . .*, 4 TEX. J. OIL GAS & ENERGY L. 118, 119 (2008-2009).

5. THE PERRYMAN GROUP, BOUNTY FROM BELOW: THE IMPACT OF DEVELOPING NATURAL GAS RESOURCES ASSOCIATED WITH THE BARNETT SHALE ON BUSINESS ACTIVITY IN FORT WORTH AND THE SURROUNDING 14-COUNTY AREA 23 (2007), <http://www.bseec.org/images/PerrymanStudy.pdf> [hereinafter BOUNTY FROM BELOW]. (“One unique aspect of the Barnett Shale is that much of it is located in a highly urbanized area. Fort Worth had almost 500 wells within city limits in 2006”)

With this new opportunity created by the Barnett Shale comes a complex tug of war for operators—one that consists of balancing competing interests in an effort to reap the economic rewards of developing natural gas. Such competing interests come from surface owners, royalty owners, city governments, and state government.

These competing interests are the result of the many issues posed by urban drilling such as safety, pollution, and disruption from noise. Severance of the mineral estate and surface estate intensifies these issues. The mineral estate reaps the benefits of royalty payments whereas the surface estate lives with the noise and pollution but receives no benefit.⁶ Understandably, local constituents pressure municipalities and the state to regulate urban drilling as an attempt to mitigate these issues.

This article provides only a survey of the many interests and issues associated with urban drilling accompanied by examples. A thorough discussion of each is beyond the scope of this article. Historically, the dominance of the mineral estate, the rule of capture, and Railroad Commission regulations solved many drilling issues. However, little law, especially municipal regulations, exists to guide operators on how to deal with the complexities of urban drilling.⁷ Although municipal regulations of oil and gas operations date back almost a century, their effect was limited because most production occurred in rural areas—not municipalities.⁸ With the large number of urban wells and production in the Barnett Shale, long-existing and newly-enacted municipal regulations now affect oil and gas operations.

Operators need to be aware of the reasons for state and city regulation of urban drilling and the government's reaction to the public's concerns. Understanding these reasons can provide the operator the opportunity to be proactive in its efforts to alleviate drilling concerns. These efforts may include using technology to minimize noise from drilling operations, molding the public's perception of operators through public relations campaigns, and working with the legislature and city governments to pass balanced regulations that recognize the positive impact of urban drilling.

Ultimately, the economics of drilling are the driving force behind urban drilling because it intertwines government concerns, public concerns, and operator concerns. Thus, the conversation about urban

6. The mineral estate includes four incidents of ownership: (1) the right to use the surface; (2) the right to develop; (3) the right to alienate; and (4) the right to retain lease benefits. JOHN S. LOWE ET AL., *CASES & MATERIALS ON OIL & GAS LAW* 51 (5th ed. 2008).

7. Clarence Wiesepepe, Vice Chairman of the Fort Worth Gas Drilling Task Force, stated, "Fort Worth has discovered existing law is too vague when it comes to dealing with various issues created by urban drilling, including noise limits, safety issues and where natural gas pipelines and compressors can be located." Jack Money, *Urban Drilling Stirs Fort Worth Debate*, THE OKLAHOMAN, Aug. 24, 2008, <http://newsok.com/article/3287702/>.

8. See LOWE ET AL., *supra* note 6, at 128.

drilling—from all sides—begins with money: what is the price of natural gas, what is the going rate for a bonus payment, how much tax revenue will the city or state bring in from urban drilling, and the like.

With all these issues in mind, legislation and regulation are to be expected in the near future to address the complexities of urban drilling. At the local level, many cities have passed or revised municipal regulations of oil and gas operations in recent years. This article will not only explain current statutes and ordinances but also will end with a discussion of future legislation answering the question, from the perspective of the operator, what purposes and policies should guide this future legislation and regulation?

II. ISSUES AND CONCERNS FOR THE OPERATOR

A. *The Economics of Drilling*

Price fluctuations leading to boom and bust cycles have long been the norm in the oil and gas industry. Over the course of conducting research for this article, the tables have turned, and the economics of drilling have dictated different results for urban drilling. Prices plummeted by 50% from July–December 2008, exemplifying the risk and uncertainty involved in the oil and gas industry at its finest. With natural gas price fluctuation comes fluctuations in development and production, tax revenues, and job creation. Yet, as history has demonstrated, just as prices can quickly go down so can they go up.

1. Technology of Hydraulic Fracturing and Associated Costs

Development of natural gas in the Barnett Shale requires horizontal drilling and a technique called hydraulic fracturing (“fracing”).⁹ The price of natural gas needs to be high enough to afford this technology. Fracing includes the process of:

[P]umping fluid down a well at high pressure so that it is forced out into the formation. The pressure creates cracks in the rock that propagate along the azimuth of natural fault lines in an elongated elliptical pattern in opposite directions from the well. Behind the fluid comes a slurry containing small granules called proppants—sand, ceramic beads, or bauxite are used—that lodge themselves in the cracks, propping them open against the enormous subsurface

9. Coastal Oil & Gas Corp. v. Garza Energy Trust, 268 S.W.3d 1, 6 (Tex. 2008). “The development of the Barnett Shale can truly be considered a function of technology, as modern, much larger fracture stimulation methods have led to greater investments . . .” Patrick C. Forbis, *Barnett Shale Development Encroaches on DFW Metroplex as Play Grows by Leaps and Bounds; Spreads South*, TEX. DRILLING OBSERVER, <http://www.drillingobserver.com/Editorial.htm>.

pressure that would force them shut as soon as the fluid was gone. The fluid is then drained, leaving the cracks open for gas or oil to flow to the wellbore.¹⁰

The cost of drilling a horizontal well using fracking can depend on several factors, such as long-term rig contracts, late-generation or new-generation drilling rigs, and the price of natural gas; however, the cost is typically \$2–3 million per well.¹¹

In consideration of this cost to drill, the price of natural gas needs to maintain a certain level. There are differing views on what the magic price is for a well to be profitable. Some analysts say production will be cut if the price falls below \$8 per one million Btu (“MMBtu”)¹² for less productive wells, while others say that a highly-productive well can be profitable at \$5 per MMBtu.¹³

The Henry Hub spot price peaked in July 2008 above \$13 but had fallen to a \$6.50 average the week of December 4, 2008 according to the Energy Information Administration.¹⁴ Companies take a huge risk when drilling at prices of \$6.50.¹⁵ Basic economics of supply and demand led to the price drop. Between July 2007 and July 2008 natural gas production increased about 8% while natural gas consumption only increased by 3%.¹⁶ Thus, Chesapeake, Devon, and XTO all cut back or halted production.¹⁷ Vantage Energy agreed to one of the largest single leasing deals with bonuses of \$27,000 per acre but said it will not sign new leases with the Southwest Fort Worth Alliance group due to the drop in natural gas prices and turmoil in the financial markets.¹⁸

An operator’s debt-equity ratio may relate to the sustainability of the company in the falling market. For instance, John Olson, co-manager of Houston Energy Partners, saw the amount of Chesapeake’s debt as a

10. *Coastal*, 268 S.W.3d at 6–7.

11. Based on discussions with knowledgeable industry experts.

12. MMBtu stands for one million British thermal units, the unit for measuring the energy content of fuels.

13. Casselman, *supra* note 2, at A4; Dan McGraw, *Putting on the Green Suit*, FORT WORTH WKLY., Oct. 21, 2008, http://www.fweekly.com/index.php?option=com_content&view=article&id=396%3Aputting-on-the-green-suit-&Itemid=477.

14. Energy Info. Admin., Natural Gas Weekly Update, Overview (For the Week Ending Wed., Dec. 3, 2008), <http://tonto.eia.doe.gov/oog/info/ngw/ngudpdate.asp>.

15. McGraw, *supra* note 13.

16. John-Laurent Tronche, *Don't bite off more gas than the U.S. can chew*, FORT WORTH BUS. PRESS, Oct. 27, 2008, at 21.

17. Christopher Barker, *Detecting Tremors in Natural Gas*, MOTLEY FOOL, Feb. 9, 2009, <http://www.fool.com/investing/small-cap-2009/02/09/detecting-tremors-in-natural-gas.aspx>; Jim Fuquay, *Chesapeake Energy is Scaling Back*, FORT WORTH STAR-TELEGRAM, Sept. 23, 2008, at C1. Chesapeake announced it would cut its drilling budget by \$3.2 billion (17%) over the next two years. Tronche, *supra* note 16.

18. John-Laurent Tronche, *Southwest Fort Worth Neighborhood Gas Agreement Falls Apart Due to Market Turmoil*, FORT WORTH BUS. PRESS, Oct. 15, 2008, <http://www.fwbusinesspress.com/display.php?id=8653>.

problem.¹⁹ Olson reported that Chesapeake's debt-equity ratio was 60%, whereas XTO Energy's ratio was 47% and Devon's was 14%.²⁰

2. Tax Revenues to City and State

The economics of drilling affects municipalities and states in the form of tax revenues from property taxes on oil and gas properties and sales taxes on increased retail sales. Fort Worth city officials estimate that, "over 20 years, lease bonuses will provide \$742 million for municipal coffers and property tax revenues from the wells could bring that total to more than \$1 billion."²¹ In 2006 seven operators paid \$87.17 million in direct taxes to local governmental entities—a \$30 million increase from 2005.²²

The Texas Supreme Court recently highlighted the positive tax impact from oil and gas production in the Barnett Shale in its *Coastal v. Garza* decision.²³ Tax receipts from oil and gas operations rose 58%, and the four public funds that receive oil and gas revenues (the general state revenue fund, the Rainy Day Fund, the Permanent School Fund, and the Permanent University Fund) posted an 84% rise over the last year.²⁴ Operators paid approximately \$165.4 million in severance taxes to the State of Texas in 2006.²⁵ The Perryman Group updated its study and found that total state and local tax revenues resulting from activity in the Barnett Shale exceed \$1 billion per year.²⁶ These numbers will fall considering the drop in natural gas prices and reduction in exploration and production; thus, the level of financial impact will be determined by future prices fluctuations.

3. Increased Workforce

Studies by the Perryman Group found that the Barnett Shale contributed 83,823 permanent jobs in North Texas and projected that it will create an average of 108,000 jobs through 2015.²⁷ These jobs not only include those related to exploration and production in general but also

19. McGraw, *supra* note 13.

20. *Id.*

21. Barnett Shale Energy Education Council, Barnett Shale Facts, http://www.bseec.org/index.php/content/facts/about_barnett_shale (last visited Apr. 22, 2009) [hereinafter Barnett Shale Facts].

22. BOUNTY FROM BELOW, *supra* note 5, at 32.

23. *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 31-32 (Tex. 2008) (Willett, J., concurring).

24. *Id.* at 27.

25. BOUNTY FROM BELOW, *supra* note 5, at 54.

26. THE PERRYMAN GROUP, DRILLING FOR DOLLARS: AN ASSESSMENT OF THE ONGOING AND EXPANDING ECONOMIC IMPACT OF ACTIVITY IN THE BARNETT SHALE ON FORT WORTH AND THE SURROUNDING AREA 9 (2008), <http://www.bseec.org/images/report.pdf>.

27. *Id.* at 29; BOUNTY FROM BELOW, *supra* note 5, at 8.

the jobs created through the injected stimulus as a trickle-down effect in the economy.

4. Increased Bonus and Royalty Payments

Not only has the North Texas area seen increases in tax revenue and job creation, but it has also experienced increased “[r]oyalty and lease payments generat[ing] additional gains in regional business activity of more than \$1 billion in output per year over the next 10 years.”²⁸ The typical lease form used in the past included a 1/8th royalty, but now a 1/4th or 1/5th royalty is common.²⁹ Offers of bonus payments reached as high as \$27,500 per acre in October 2008 in the Barnett Shale compared to normal bonus payments of \$200 per acre across Texas;³⁰ however, these high bonuses may be a thing of the past. According to Julie Wilson, spokesperson for Chesapeake, the drop in natural gas prices means that bonus figures will be in the \$5,000 range to continue drilling in the Barnett Shale.³¹

Money in the form of profits, tax revenues, and royalty payments drives all the players—operators, the public, and state and local governments—to be conscientious of the other parties’ concerns. Money, however, may be the only commonality between the three. Beyond money, interests diverge and complicate the operational aspects of urban drilling.

B. Public Concerns

The *public*, which includes severed surface owners, royalty owners, citizens, and coalition groups, is a diverse group making a range of demands to state and local governments and operators.³²

A Google search of “Barnett Shale” and “neighborhood group” results in numerous coalition groups with various interests. For example, the Fort Worth Coalition for a Reformed Drilling Ordinance (“CREDO”) wants a moratorium on urban drilling until the city revises the pipeline ordinance and limits drilling to industrial zones.³³ One neighborhood coalition, the Arlington Heights Neighborhood Association, posts its own gas lease blog.³⁴ Royalty owners appear at city council meetings asking

28. *Id.* at 48.

29. As the price of natural gas falls, a 1/5th royalty payment may become more common than the typical 1/4th royalty seen throughout the Barnett Shale in past years.

30. Tronche, *supra* note 18.

31. See McGraw, *supra* note 13.

32. This list of what constitutes the *public* is nonexhaustive.

33. Money, *supra* note 7.

34. Arlington Heights Neighborhood Association, Urban Gas Drilling, <http://arlingtonheightsna.com/Blog/> (last visited Apr. 22, 2009).

cities to refrain from implementing unnecessary regulations that limit production and accompanying royalty payments.

Considering the groups described above and the enormous amount of money and jobs involved in the Barnett Shale, what are the public's concerns about urban drilling?

1. Noise from Operations

Drilling, pump stations, compressor stations, and other activities associated with developing and producing natural gas result in noise. The degree of noise and citizen response is a function of several factors such as proximity to the noise and mitigation efforts with sound blankets, sound walls, and sound reduction enclosures. Also, levels of noise fluctuate as wells are drilled and completed.

2. Environment

a. Water Supply

The process of fracing uses 1 to 4 million gallons of water, which ultimately results in contaminated water.³⁵ Many worry about the amount of contaminated water produced and whether it will affect the general water supply.³⁶ The Tarrant Regional Water District, a major provider in the area, sold 131 billion gallons of water in 2006—natural gas drilling accounted for 0.19% of those sales.³⁷

Residents call for recycling the water, which could result in 10% of reusable water,³⁸ but some operators say it is too expensive.³⁹ Instead, operators inject the water into deep formations using injection disposal wells.⁴⁰

b. Gas Emissions

Another environmental concern is the increase in air pollution caused by the vapors that come off natural gas storage tanks.⁴¹ A 2006 study by the Texas Commission on Environmental Quality (“TCEQ”) found that storage tanks account for around 8% of volatile organic compounds in North Texas.⁴² The oil and gas industry, however, questioned these

35. Barnett Shale Facts, *supra* note 21.

36. Mike Lee, *Well Plan Injects Pressure into Wastewater Dispute*, FORT WORTH STAR-TELEGRAM, Nov. 18, 2007, at B1.

37. Barnett Shale Facts, *supra* note 21.

38. *Id.*

39. Lee, *supra* note 36, at B1.

40. Barnett Shale Facts, *supra* note 21.

41. Mike Lee, *Drilling's Role in Pollution Examined*, FORT WORTH STAR-TELEGRAM, Oct. 12, 2008, at B1.

42. *Id.*

numbers and called for using 12-month samples in a larger geographic area because some storage tanks produce no vapors.⁴³

Compressor stations also account for an increase in emissions.⁴⁴ The compressors move natural gas through pipelines and operate continuously. The TCEQ is phasing in pollution controls for the compressor stations.⁴⁵

Many operators release methane—the major ingredient of natural gas—into the atmosphere during completion of wells, but some capture the methane during completion and resell it for a profit.⁴⁶ Currently, operators such as Devon share information about emissions with the TCEQ in an attempt to discover new emission-reducing options.⁴⁷

3. Safety

a. Gas Well or Pipeline Incidents

Gas well incidents can happen. A gas well incident, the apparent result of contractors not following safety practices, killed a well service contractor in 2006 and caused the evacuation of 500 people in Forest Hill.⁴⁸ The public, however, seems more concerned with possible pipeline incidents due to the surge of pipeline plans in front yards.⁴⁹ One landowner expressed his concern with pipelines in neighborhoods: “A wellhead is a whole lot safer than a pipeline, and you won’t allow that within [600] feet of a house.”⁵⁰

Gas industry officials respond, “The new gathering lines are no more dangerous than the lines that supply homes and businesses with natural gas.”⁵¹ But this may not be such a close analogy because service lines carry odorized dry gas and gathering lines carry unodorized wet gas.⁵² Ultimately, the industry claims the pipelines are a necessary component

43. *Id.*

44. *Id.*

45. *Id.*

46. *Id.*

47. *Id.*

48. John Burnett, *Urban Gas Drilling Causes Backlash In Boomtown*, NAT’L PUBLIC RADIO, Aug. 5, 2008, <http://www.npr.org/templates/story/story.php?storyId=93300400> (explaining that OSHA made the determination that XTO Energy contractors did not follow standard safety practices). Forest Hill is located in Tarrant County between Fort Worth and Arlington.

49. Mike Lee, *Homeowners Edgy Over Pipeline Plans*, FORT WORTH STAR-TELEGRAM, Mar. 31, 2008, at B1.

50. *Id.*

51. *Id.*

52. Wet gas includes a mixture of hydrocarbons that are liquid and gaseous such as butane and propane. See [offshore-technology.com](http://www.offshore-technology.com), Glossary Definition of Wet Gas, <http://www.offshore-technology.com/glossary/wet-gas.html> (last visited Apr. 22, 2009). For a more detailed explanation of odorizing gas lines, see *infra* note 169 and accompanying text.

“to move gas out of the field and fulfill the leases that thousands of Tarrant County residents have signed.”⁵³

b. Traffic

Development of natural gas requires numerous trucks to haul the water. Texas Citizens for a Safe Future and Clean Water expressed concern with the traffic associated with a disposal well when it protested the application for an injection well permit issued by the Commission.⁵⁴ They claimed that the trucks hauling water travel with blind spots on dirt roads that are frequented by children and pedestrians.⁵⁵

The Commission granted the permit for the well as in the public interest due to the importance of proper salt water disposal to produce oil and gas in Texas.⁵⁶ Texas Water Code § 27.051(b) provides that “the [R]ailroad [C]ommission may grant an application in whole or part and may issue the permit [for the injection well] if it finds: that the use or installation of the injection well is in the *public interest*,” as well as several other factors.⁵⁷ The Court of Appeals reversed and remanded, however, holding that the Commission abused its discretion by failing to consider other factors to determine if the well would be in the public interest, such as traffic concerns.⁵⁸ A petition for review by the Supreme Court of Texas has been filed by the Railroad Commission.⁵⁹ If the decision is affirmed, this case can be expected to affect the Commission and what it considers when granting permits—effectively affording more weight to public concerns.

4. Response from Operators to Public Concerns

a. Information

With noise, safety, and environmental concerns in mind, eight operators formed the Barnett Shale Energy Education Council—“a community resource that provides information to the public about gas drilling and production in the Barnett Shale region” with the goal to be a source of fact-based information “from sources such as industry, government, organizations and institutions of higher education.”⁶⁰

53. Lee, *supra* note 49, at B1.

54. *Tex. Citizens for a Safe Future and Clean Water v. R.R. Comm’n of Tex.*, 254 S.W.3d 492, 498 (Tex. App.—Austin 2007, pet filed).

55. *Id.*

56. *Id.* at 499.

57. TEX. WATER CODE ANN. § 27.051(b) (Vernon 2007) (emphasis added).

58. *Tex. Citizens*, 254 S.W.3d at 502.

59. Petition for Review, *Tex. Citizens*, 254 S.W.3d 492 (No. 08-0497).

60. Current members include Axia, Chesapeake, Dale Resources, Devon Energy, EnCana, EOG Resources, Forest Oil, XTO Energy, Quicksilver Resources, and Waste Facilities, Inc.,

b. Innovation

As a proactive measure, operators can take steps to reduce noise such as using sound blankets and perimeter sound walls.⁶¹ A new type of drilling rig used by EnCana reduces the noise associated with a rig's braking system and allows a shorter drilling schedule, which lessens the duration of the noise.⁶²

c. Public Relations

Many operators contribute to the North Texas area by supporting local charities.⁶³ Also, Chesapeake launched a media campaign in print and on television, emphasizing the importance of drilling for natural gas in North Texas and its positive impact.⁶⁴

5. Response from Government

State and local governments respond to public concerns by holding hearings and passing legislation and ordinances. In response to concerned surface owners, the Texas legislature passed TEXAS NATURAL RESOURCES CODE § 91.703 in 2007 to provide notice to the surface owners after an operator obtains a drilling permit.⁶⁵ In response to noise concerns, municipalities have passed city ordinances to measure noise levels and install controls to prevent noise from reaching certain levels.⁶⁶

C. Government Concerns

Both the state and municipalities regulate oil and gas exploration and production. The State has exclusive jurisdiction within certain areas such as regulating spacing and density of wells; however, the State and municipalities concurrently grant drilling permits.

1. State

The Railroad Commission acts as the regulatory arm of the State of Texas for oil and gas operations. The Commission regulates the

Barnett Shale Energy Education Council, About Member Companies, http://www.bseec.org/index.php/content/about/about_member_companies/ (last visited Apr. 22, 2009); Barnett Shale Energy Education Counsel, About BSEEC, <http://www.bseec.org/index.php/content/about/bseec/> (last visited Apr. 22, 2009).

61. BOUNTY FROM BELOW, *supra* note 5, at 71.

62. *Id.*

63. *Id.* at 62-64.

64. Burnett, *supra* note 48.

65. TEX. NAT. RES. CODE ANN. § 91.703(a) (Vernon Supp. 2008) ("Not later than the 15th business day after the date the commission issues an oil or gas well operator a permit to drill a new oil or gas well or to reenter a plugged and abandoned oil or gas well, the operator shall give written notice of the issuance of the permit to the surface owner of the tract of land on which the well is located or is proposed to be located.")

66. BOUNTY FROM BELOW, *supra* note 5, at 71.

exploration and production of oil and natural gas in Texas with the primary responsibilities of preventing waste of oil and gas resources, protecting surface and subsurface water, and ensuring “all mineral interest owners have an opportunity to develop their fair share of the minerals underlying their property.”⁶⁷ Areas outside the authority of the Commission include roads and traffic, noise, odors, oil and gas exploration and surface ownership, and royalty payments.⁶⁸

2. Municipalities

Municipalities take two forms: general law or home rule. General law cities “have only the authority expressly granted to them by the legislature and those necessarily implied.”⁶⁹ A home rule city possesses the full authority of local self-government, limited only by its charter, state law, and the Texas Constitution.⁷⁰ Thus, Texas confers broader authority to home rule cities than general law cities to regulate oil and gas activities within its jurisdiction.⁷¹ Examples of home rule cities include Fort Worth and Flower Mound while Paradise and Cool are general law cities in Texas.

When Texas vested authority over the oil and gas industry with the Commission, it did not repeal the fundamental authority of municipalities to regulate oil and gas drilling through their police power “for the protection of their citizens and the property within their limits, looking to the preservation of good government, peace, and order therein.”⁷²

67. Railroad Commission of Texas, Barnett Shale Information, <http://www.rrc.state.tx.us/barnettshale/index.php> (last visited Apr. 22, 2009).

68. “The Railroad Commission does not have jurisdiction over, and exercises no regulatory authority with respect to, private or public roads or road use. Permits issued by the Commission for oil and gas exploration, production, and waste disposal do not limit any independent authority of a municipality, county or other state agencies with respect to road use The Texas Department of Transportation oversees the construction and maintenance of state highways within their jurisdiction.” *Id.* Local ordinances govern noise and nuisance related issues. *Id.*

69. Martin E. Garza, Gas Well Development in the Urban Environment, Presentation at the American Association of Petroleum Landmen Annual Meeting 4 (Jun. 14, 2008), <http://www.landman.org/content/File/Garza%20-%20Gas%20Well%20Development%20in%20the%20UrbanEnvironment.pdf> (explaining that general law cities consist of 200 or more citizens to incorporate and “[c]annot adopt a charter, nor create a distinct body of law, but may pass ordinances”). See also Bruce Kramer, *Drilling in Cities and Towns: Rights and Obligations of Lessees, Royalty Owners, and Surface Owners in an Urban Environment*, 23 PETROL. ACCT. & FIN. MGMT. J. 39 (2004).

70. Kramer, *supra* note 69. Home rule cities need 5,000 or more citizens as well as a city charter that has been approved by voters. Garza, *supra* note 69, at 5.

71. See Kramer, *supra* note 69.

72. *Klepak v. Humble Oil & Ref. Co.*, 177 S.W.2d 215, 218 (Tex. Civ. App.—Galveston 1944, writ ref’d w.o.m.).

a. Regulation through Zoning and Subdivision Ordinances

Cities use zoning and subdivision ordinances to regulate oil and gas operations. Subdivision ordinances govern platting regulations with the purpose of creating a legal building site, which can include gas well plats.⁷³ Zoning ordinances govern the development and use of land “for the purpose of promoting the public health, safety, morals, or general welfare and protecting and preserving places and areas of historical, cultural, or architectural importance and significance.”⁷⁴ Zoning ordinances may regulate the height of structures and “the location and use of buildings, other structures, and land for business, industrial, residential, or other purposes.”⁷⁵ The distinction between subdivision and zoning ordinances is important because subdivision regulations apply to the city’s extra-territorial jurisdiction while zoning ordinances do not.⁷⁶

b. Development Moratoriums

A city can apply development moratoriums to zoning and subdivision issues. Moratoriums are advocated by those who think more time is needed to consider regulations. Many residents called for a moratorium on drilling permits in Fort Worth when an operator proposed a gas well in close proximity to a city park.⁷⁷

c. Examples of City Ordinances

Generally, cities require a permit for drilling within the city limits with additional stipulations. Examples include the following: limitations on access (no access through floodplain or residential areas), prohibited uses related to mineral development (no compressors), setback requirements, noise limitations, limitation on hours of operation and illumination, insurance requirements, and operational constraints (24-hour security, leasehold fencing, etc.).⁷⁸

Specifically regarding setbacks, Fort Worth and Arlington require a minimum of 600 feet from the wellbore to an inhabitable dwelling, while

73. Garza, *supra* note 69, at 17. “After a public hearing on the matter, the governing body of a municipality may adopt rules governing plats and subdivisions of land within the municipality’s jurisdiction to promote the health, safety, morals, or general welfare of the municipality and the safe, orderly, and healthful development of the municipality.” TEX. LOC. GOV’T CODE ANN. § 212.002 (Vernon 2007).

74. *Id.* § 211.001 (Vernon 2007). The issuance of local permits is governed by TEX. LOC. GOV’T CODE §§ 245.001–.007.

75. *Id.* at § 211.003(a)(5).

76. *Id.* at § 212.003. “[T]he mere label given to oil and gas regulations by a city can define the area in which the city will enforce such regulations.” Garza, *supra* note 69, at 20.

77. Mike Lee, *Council Delays Vote on Issuing Permit for Well near Cemetery*, FORT WORTH STAR-TELEGRAM, Sept. 9, 2008, at B1.

78. Garza, *supra* note 69, at 33.

Colleyville and Weatherford require 1,000 feet.⁷⁹ Interestingly, Flower Mound requires a 1,000-foot setback for any residence with no mineral interests and a 500-foot setback for a resident with mineral interests.⁸⁰ As for noise, Fort Worth allows no more than five decibels during the day and three decibels at night, and Flower Mound allows no more than 70 decibels at 300 feet.⁸¹ Many cities also require road maintenance agreements to take care of damage to the roads from trucks. Southlake requires both a road maintenance agreement and a security bond of \$100,000.⁸² Such city ordinances vary from city to city in the North Texas area.⁸³

3. A Case Study of State and Local Regulation of Pipelines

Pipelines serve as an informative example of the production process regulated at the federal, state, and local levels. The production of natural gas in the Barnett Shale depends on pipelines to transport the produced natural gas from a well site to the market through gathering lines.⁸⁴ Operators set up subsidiaries, such as Chesapeake and its subsidiary Texas Midstream Gas Services, to build the pipelines and negotiate easement agreements for the land.⁸⁵ Currently, the hot dispute in the Barnett Shale revolves around building pipelines in populated areas.

a. Texas versus Federal

Federal law preempts state law regarding the transportation and sale of natural gas in interstate commerce under the encompassing Natural Gas Act of 1938 (“NGA”).⁸⁶ The Federal Energy Regulatory Commission regulates and enforces the interstate transmission of natural gas, oil, and electricity in accordance with the NGA.⁸⁷ This leaves the State of Texas, through its designated agency—the Railroad Commission, to control intrastate pipelines, gathering lines, production of natural gas, and distribution facilities.⁸⁸

79. Barnett Shale Energy Education Council, City Ordinances, http://www.bseec.org/index.php/content/facts/city_ordinances/ (last visited Apr. 22, 2009).

80. *Id.*

81. *Id.*

82. *Id.*

83. The Barnett Shale Energy Education Council’s website provides organized charts that compare varying city ordinances in the North Texas area. Also, there are links to the specific city ordinances. *Id.*

84. John-Laurent Tronche, *Pipelines Latest Dispute Between Residents, Industry*, FORT WORTH BUS. PRESS, Aug. 18, 2008, at 16. Gathering lines transport natural gas from the field to the main pipeline.

85. Reference to *operators* also refers to the pipeline subsidiaries of the operators.

86. See 15 U.S.C. § 717(b) (2008).

87. 42 U.S.C. § 7171 (2008).

88. See City of Fort Worth, *Gas Drilling Taskforce, Pipelines and the City*, Aug. 7, 2008, <http://www.fortworthgov.org/gaswells/default.aspx?id=52558> (demonstrating that the city website directs pipeline questions to the Railroad Commission).

Both federal and state laws regulate pipeline safety. The state serves as the enforcement agency for the federal regulations. In Texas the Railroad Commission usually adopts federal pipeline safety standards as a minimum for the state, or the state can adopt more stringent standards. For example, the federal government (specifically the Department of Transportation) redefined *gathering lines* for pipeline safety standards in 2006 based on the pipeline's location and its associated risk in a populated area but included an exception for production lines. The Commission initiated a rulemaking in October 2008 to adopt these federal guidelines but did not provide for any exception for so-called production lines.⁸⁹

Many comments from the industry to the proposed rules expressed that they had worked with the federal government to redefine gathering lines and were concerned about the Commission adopting standards that will apply to production-type pipelines not previously regulated before. Some smaller operators may not be aware of these new rules or be able to pay compliance costs. The Commission, however, maintains that it fully intends to regulate all of these pipelines if they pose a risk in a populated area, irrespective of whether the federal guidelines would apply.⁹⁰

b. State versus City

City ordinances that regulate pipelines serve as one of the most contentious regulations for operators because each city may impose different standards or even impose more stringent standards than state and federal regulation. Some operators believe certain municipalities have overstepped their authority to regulate pipelines.

Several provisions in the Texas Utilities Code address authority to regulate pipelines. Pipelines in Texas fall under the jurisdiction and control of the Railroad Commission.⁹¹ TEXAS UTILITIES CODE § 121.202(a) expressly limits the authority of a municipality to pass ordinances affecting pipeline safety. Specifically, a city may not “establish[] a safety standard or practice . . . that is regulated under . . . state law or a federal law.”⁹²

89. In industry terms, production lines are pipelines on the lease premises (otherwise known as flowlines), whereas gathering lines are pipelines off the lease premises that transport gas to transmission lines.

90. Telephone Interview with Mary McDaniel, Dir., Safety Div., R.R. Comm'n of Tex. (Dec. 1, 2008). A proper discussion of the proposed rules implementing federal guidelines is beyond this article. The proposed rules and comments received can be viewed on the Railroad Commission's website at <http://www.rrc.state.tx.us/rules/proposed.php> (last visited Apr. 22, 2009).

91. See TEX. UTIL. CODE ANN. § 121.051 (Vernon 2007).

92. *Id.* § 121.202(a).

Operators and city officials commonly interpret § 121.202(a) to mean that state regulation preempts a city's ability to regulate pipeline safety.⁹³ However, under TEXAS UTILITIES CODE § 122.202(b)(2) a city can “establish[] conditions for mapping, inventorying, locating, or relocating pipelines over, under, along, or across a public street” and “establish conditions for mapping or taking inventory in . . . a municipality's extraterritorial jurisdiction.”⁹⁴ Also, a city can recover the cost for the placement, construction, or use of a gas pipeline in city streets, if the streets incur damage.⁹⁵

c. Pipeline Ordinances in Flower Mound, Texas

Flower Mound, a town in North Texas, adopted extensive ordinances regulating oil and gas operations ranging from required drilling permits to standards for pipelines. For example, the pipeline ordinance entitled “General Requirements and Design Standards” provides that:

Pipeline trenches shall be double ditch backfilled and pipelines shall be constructed so as to maintain a minimum depth of 36 inches below the finished grade except in public rights-of-way, where minimum cover to the top of the pipe shall be at least 48 inches below the bottom of any adjacent roadside ditch.⁹⁶

The Town of Flower Mound also provides that “[w]ithin two years of the effective date of the pipeline permit and every two years thereafter, the pipeline owner or operator shall conduct an on-site, emergency drill that includes, but shall not be limited to, the personnel operating the pipeline, local law enforcement personnel, and officials of the town.”⁹⁷

d. Preemption

Does Flower Mound have the authority to pass such pipeline ordinances when the state already regulates intrastate pipelines? As previously discussed with home rule cities, a city may pass ordinances within its police power unless a statute or the Constitution limits the city's authority expressly or impliedly.⁹⁸ Thus, the “local regulation [may not] impermissibly conflict with state law.”⁹⁹ No statutory or constitutional limit means no preemption issue exists to invalidate the ordinance. Timothy Riley confirmed in his article that urban drilling “breeds the

93. See City of Fort Worth, *supra* note 88.

94. TEX. UTIL. CODE ANN. § 121.202(b)(2)(b).

95. *Id.* § 121.2025(b)(2).

96. FLOWER MOUND, TEX., CODE OF ORDINANCES, ch. 34, art. VIII, § 34-454(d) (2007), available at <http://www.municode.com/resources/gateway.asp?pid=13329&sid=43>.

97. *Id.* § 34-462(g).

98. See Kramer, *supra* note 69; see also Garza, *supra* note 69, at 5.

99. LOWE ET AL., *supra* note 6, at 129.

potential for conflicting regulatory schemes” but that concurrent oil and gas regulations by municipalities and the Commission are “widespread and judicially accepted.”¹⁰⁰

The pipeline ordinances in Flower Mound may be subject to preemption by state law. The first provision prescribing the minimum depth for pipelines may fit in the authority to establish conditions for locating pipelines under TEXAS UTILITIES CODE § 121.202 but does not limit it to pipelines “over, under, along, or across a public street.”¹⁰¹ However, the definition of *locating* is unclear. It could be argued that *locating* is a variation of *mapping* and *inventorying* such that the operator needs to inform the city of the location of the pipeline according to the city’s regulations, but the city cannot tell the operator where to locate the pipeline. Also, requiring that pipelines file certain information with Flower Mound to maintain a permit seems ministerial and informative in nature, but conducting an on-site emergency drill affects pipeline safety—expressly preempted by § 121.202(a).

Texas Midstream Gas Services filed suit in September 2008 against the City of Grand Prairie claiming preemption of a city ordinance based on TEXAS UTILITIES CODE § 121.202(a).¹⁰² Grand Prairie had amended its Unified Development Code to mandate certain requirements for compressor stations, which compress natural gas and then move it through pipelines, including building setbacks and design requirements such as using certain building materials.¹⁰³

Texas Midstream Gas Services sought a preliminary injunction and the district court granted the injunction in part and reversed in part.¹⁰⁴ The court found that federal and state law did not preempt the Grand Prairie zoning ordinances other than one small provision requiring a safety fence around compressor stations.¹⁰⁵ The court held that the security fence implicated pipeline safety; however, other provisions related to materials to be used in building a security fence were not preempted.¹⁰⁶ The decision signals that this court was reluctant to limit cities’ abilities to regulate oil and gas operations.

100. Timothy Riley, Note, *Wrangling with Urban Wildcatters: Defending Texas Municipal Oil and Gas Development Ordinances Against Regulatory Takings Challenges*, 32 VT. L. REV. 349, 361-362 (2007).

101. See TEX. UTIL. CODE ANN. § 121.202(b)(2)(a) (Vernon 2007); FLOWER MOUND, TEX., CODE OF ORDINANCES, ch. 34, art. VIII, § 34-462 (2007), available at <http://www.municode.com/resources/gateway.asp?pid=13329&sid=43>.

102. Plaintiff’s Original Complaint at 9, *Tex. Midstream Gas Servs. v. City of Grand Prairie*, No. 3-08CV1724-D (N.D. Tex. Sept. 30, 2008).

103. *Id.* at 7.

104. *Tex. Midstream Gas Services v. City of Grand Prairie*, No. 3:08-CV-1724-D, 2008 WL 5000038, at *21 (N.D. Tex. Nov. 25, 2008) (mem. op.).

105. *Id.*

106. *Id.*

e. Inverse or Reverse Condemnation

Another possible challenge to city ordinances exists if they cause an unconstitutional taking under article I, section 17 of the TEXAS CONSTITUTION, which requires adequate compensation be paid when private property is taken for public use.¹⁰⁷ Inverse condemnation can take the form of a regulatory taking if a “government regulation, whether federal, state, or local, effectively deprives a property interest of all of its economic value or utility.”¹⁰⁸ However, a city is not required to pay compensation for losses occasioned by the proper and reasonable exercise of its police power, particularly restrictions on mineral exploration or the laying of pipelines.¹⁰⁹

Thus, if the operator can prove that a municipal ordinance rendered the operator unable to develop minerals beneath the surface, then he could attack a strict ordinance as an impermissible taking or an inverse condemnation.¹¹⁰ Unfortunately, the operator faces an uphill battle because courts presume city ordinances are reasonable and valid.¹¹¹

The Waco Court of Appeals recently ruled on an inverse condemnation finding regarding an ordinance that banned drilling near Lake Houston.¹¹² The trial court first found an inverse condemnation but then dismissed the case based on ripeness.¹¹³ Not only did the appellate court reverse, but it also rendered judgment with damages of \$16.9 million for the landowner and ordered the transfer of title of the mineral interests to the city.¹¹⁴ On rehearing the court held that the city should not acquire title to the mineral interests.¹¹⁵ The Court distinguished between different types of *takings* under the Constitution:

107. TEX. CONST. art. I, § 17; see Roger E. Beecham, *Collision Course: The accommodation doctrine versus municipalities*, ENERGY REP., FORT WORTH BUS. PRESS, Sept. 26, 2008, at 11.

108. LOWE ET AL., *supra* note 6, at 130. Other factors to look for when determining whether or not a taking occurred include: (1) whether the property was rendered useless; (2) whether the burden created a diminution in value or caused total destruction of the property; or (3) whether the government action against the economic interest of the owner was for its own advantage. Beecham, *supra* note 107, at 11 (citing *Austin v. Teague*, 570 S.W.2d 389, 393 (Tex. 1978)).

109. See Beecham, *supra* note 107, at 11 (citing *College Station v. Turtle Rock Corp.*, 680 S.W.2d 802, 804 (Tex. 1984)). Beecham states:

Municipalities may enact ordinances that can prohibit, limit, or restrict mineral exploration or the laying of pipelines within their limits, so long as the exercise of such power is valid. The power will be deemed valid if there is a legitimate goal that is substantially related to the health, safety or general welfare of the people and the use must be reasonable and not arbitrary.

Id.

110. *Id.*

111. *College Station*, 680 S.W.2d. at 805.

112. *Trail Enters. v. City of Houston*, 255 S.W.3d 105, 112 (Tex. App.—Waco 2007, pet. filed).

113. *Id.* at 108.

114. *Id.* at 110.

115. *Id.* at 113.

(1) taking; (2) damaging; and (3) destroying property.¹¹⁶ The ordinance in question damaged the property interests, so only damages were paid.¹¹⁷

Trail Enterprises v. City of Houston serves as possible precedent and authority for an operator's inverse condemnation claim. However, the ordinance involved in *Trail Enterprises* included a complete ban on drilling in a specific area—making it impossible to recover the minerals. Ordinances affecting standards for pipelines as seen in Flower Mound seem like a more reasonable exercise of police power with little economic taking; thus, the operator's stronger argument remains that state law preempts the ordinance. But, as seen with the recent holding in *Texas Midstream Services v. City of Grand Prairie*, a preemption argument also faces an uphill battle for the operator.

D. Liability Concerns

1. Trespass from Fracing

The development and success of the Barnett Shale is a result of hydraulic fracturing (and of course higher natural gas prices too). Unfortunately, the fracing process creates the potential that the fractures will extend to another's property and constitute a trespass—a claim that could result in substantial punitive damages.¹¹⁸ After hearing oral arguments on September 28, 2006, the Supreme Court of Texas delayed its decision on the issue for almost two years until the issuance of the *Coastal v. Garza* opinion in late 2008.¹¹⁹ Operators sighed relief when the court held that the rule of capture precluded the plaintiff from recovering damages for drainage caused by fractures reaching across lease lines.¹²⁰ The rule of capture allows the owner of the mineral interest absolute ownership of oil lawfully captured by a well, even if the oil flowed to the well from another owner's tract.¹²¹

By using the rule of capture to preclude a claim for trespass, the court avoided directly answering whether hydraulic fracturing resulted in a claim for trespass. The court did recognize, however, that hydraulic fracturing was absolutely necessary to produce natural gas in tight sand formations like the Barnett Shale.¹²²

116. *Id.*

117. *Id.* at 114.

118. The jury awarded \$10 million in punitive damages. See *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 8 (Tex. 2008).

119. *Id.*

120. *Id.* at 17.

121. *Id.*

122. *Id.* at 16.

2. Nuisance

Nuisance resulting from oil and gas operations often takes the form of noise. Usually though, the operator may defend itself against a nuisance (noise) complaint if it can show it took steps to reduce the noise.¹²³ However, in January 2009 a jury awarded over \$1.2 million to property owners based on damages to property caused by noise and odor from a compressor station near Howland, Texas.¹²⁴ In the Barnett Shale area, a resident of Riverbend Estates filed suit against Chesapeake for noise from compressor stations. This suit, filed in Tarrant County, may be the first of its kind in an urban setting.¹²⁵

3. Surface Damages

Drilling for natural gas damages the surface, but landowners often misunderstand that the operator can reasonably damage the surface and yet not pay compensation. Even though the mineral estate does not own the surface, it is the dominant estate. Therefore, it has the right to use so much of the surface as may be reasonably necessary to enforce and enjoy the purposes of the mineral estate.¹²⁶ The operator does not have to pay for reasonable surface damages in Texas unless use of the surface is negligent or in excess of what is reasonably necessary; however, the lessor can contract around this by providing in the lease or a surface use agreement that the lessee must pay for specific surface damages.¹²⁷ The onslaught of urban drilling with high natural gas prices probably has produced more leases with surface use agreements as lessors have become more educated about lease negotiations.

E. Leasing Concerns

1. Texas Mineral Interest Pooling Act

In the urban setting, land may be broken up into several small lots, especially in neighborhoods. This could be a leasing nightmare if one lot refuses to lease. The Texas Mineral Interest Pooling Act (“Act”)

123. See *Humble Pipe Line Co. v. Anderson*, 339 S.W.2d 259, 265 (Tex. Civ. App.—Fort Worth 1960, writ ref’d); *Domengeaux v. Kirkwood & Co.*, 297 S.W.2d 748, 749 (Tex. Civ. App.—San Antonio 1956, no writ).

124. *Justiss v. Natural Gas Pipeline Co. of Am.*, No. 65759 (Dist. Ct., Lamar County, Tex. Jan. 30, 2009); Bill Hankins, *Country residents win 11-year-old lawsuit*, THE PARIS NEWS, Jan. 25, 2009, available at <http://startelegram.typepad.com/files/the-paris-news.htm>.

125. Marice Richter, *Fort Worth Man Sues Chesapeake Energy Over Noise from Barnett Shale*, DALLAS MORNING NEWS, Sept. 11, 2008, available at www.dallasnews.com/sharedcontent/dws/news/city/tarrant/stories/091108dnmetchesapeakesuit.62518b64.html.

126. *Humble Oil & Refining Co. v. Williams*, 420 S.W.2d 133, 134 (Tex. 1967).

127. *Id.*; David Patton, *The Mineral Estate and Conflicting Interests—The Accommodation Doctrine and Surface Damage Acts*, 34 Ernest E. Smith Oil, Gas, & Mineral Law Inst. 7, at 3 (Univ. of Tex. Sch. of Law Continuing Legal Educ. 2008).

provides help by providing for the Commission to pool two or more separately owned tracts when a mineral interest owner voluntarily offers to pool the land on a fair and reasonable basis and the offeree rejects the offer.¹²⁸

Recently, the Commission used the Act to force pool unleased lots in a Fort Worth subdivision.¹²⁹ Finley Resources had leased 94.1% of the acreage in the proposed unit and filed an application to force pool the remaining lots to protect the correlative rights of the leased mineral interests.¹³⁰ The hearing examiners interpreted the Act to allow unleased parties to participate in a unit but not to “force an unwilling party into a compulsory unit” and rejected the application.¹³¹ The Commissioners, however, approved the application with a 2–1 vote.¹³² The Finley Resources Order shows that the Act can be a remedy for operators to drill wells over the objections of unleased mineral interest owners.¹³³

2. The Qualified Subdivision Rule

Under Rule 76 the Commission may approve a qualified subdivision to establish the limited sites for oil and gas operations on a subdivision plat.¹³⁴ These operation sites are the only surface available for mineral development; the aim is to provide the most efficient development of both the subdivision and mineral estate.¹³⁵ Effectively, the rule “allows development of a residential subdivision . . . without the risk of a mineral interest owner . . . asserting the right to drill in a homeowner’s backyard.”¹³⁶

Developers, though, do not take advantage of Rule 76 often. As of October 2008, only 54 applications have been filed since 1984.¹³⁷ Many

128. TEX. NAT. RES. CODE ANN. § 102.011 (Vernon 2007).

129. Tex. R.R. Comm’n, *Application of Finley Resources, Inc. for the Formation of a Unit Pursuant to the Mineral Interest Pooling Act for the Proposed East Side, Newark, East (Barnett Shale) Field, Tarrant County, Texas*, Docket No. 09-0252373 (Aug. 25, 2008) (final order granting application).

130. H. Philip Whitworth, *State Regulatory Impacts Upon Horizontal Drilling in Urban Areas*, Tex. J. Oil, Gas, & Energy L. Symposium (Jan. 23, 2009) at 12-13, available at http://www.tjogel.org/symposium_2009/symposium_2009_documents.html.

131. *Id.* at 13.

132. *Id.*

133. *Id.* at 14.

134. See TEX. NAT. RES. CODE § 92.001-.007 (authorizing rule 76); 16 TEX. ADMIN. CODE § 3.76 (2008) (Tex. R.R. Comm’n, Commission Approval of Plats for Mineral Development) (implementing Rule 76).

135. Patton, *supra* note 127, at 9.

136. John R. Hays, Jr., *Texas Railroad Commission: Effective Representation of Your Client Before the Commission*, 2008 Advanced Oil and Gas Short Course 59 (Univ. of Houston Law Ctr.).

137. Rule 76 Qualified Subdivision List, R.R. Comm’n of Tex. (Oct. 16, 2008) (on file with author).

developers and their attorneys may not be aware of the statute.¹³⁸ Also, developers may not need to ultimately seek relief from the Commission under Rule 76. Rather, developers use Rule 76 as leverage to reach a contractual agreement outside the confines of the Commission and rule, and mineral interest owners would rather reach a mutual agreement with the developer than depend on the uncertainty of where the Commission will designate operation sites.¹³⁹ Both parties want to avoid the expense and lengthy process associated with Rule 76.¹⁴⁰

3. Neighborhood Coalitions

Along with the advent of the Barnett Shale came the formation of several neighborhood coalitions. These groups were formed to increase negotiating power against lessees. The Fort Worth League of Neighborhoods specially held an event to educate and create sophisticated lessors who demand changes to lease forms such as requiring written consent for surface operations or limiting hours of operations.¹⁴¹ These coalitions also hold out for the highest possible bonus and royalty payments. Currently, however, lessors do not have as much bargaining power as the price of natural gas falls.¹⁴²

At the same time, operators need to be sensitive to residents, who are uneducated about oil and gas operations, and answer questions about the lease and the impact of operations.¹⁴³ Ultimately, the combination of regulations and added special provisions in leases results in a complex web for the operator to navigate when conducting oil and gas operations.¹⁴⁴

4. The Accommodation Doctrine

When leasing, operators should be aware of surface owners' existing uses of the property. *Getty Oil Co. v. Jones* created the accommodation doctrine when it held in favor of Jones, the landowner, who claimed a pumpjack's height interfered with his use of an irrigation system.¹⁴⁵ The court held that if the proposed use of the surface by the lessee will

138. Telephone Interview with Colin Lineberry, Dir. of Hearings, R.R. Comm'n of Tex. (Oct. 27, 2008).

139. *Id.*

140. *Id.*

141. See Gas Drilling 101, Fort Worth League of Neighborhoods Educational Event (Oct. 23, 2007), <http://www.fwlina.org/Gas%20Wells/FWLNA%20Gas%20Well%20Driling101.pdf>.

142. Robin Green, *The Barnett Shale—An Urban Leasing Bonanza*, THE LANDMAN, May-June 2008, available at <http://www.landman.org/landmanarchive/landmanresult.asp?month=&year=&author=233&keyword=&Submit1=Search> (explaining that even with high natural gas prices, operators were able to negotiate for shorter primary terms—two years instead of the typical five-year term).

143. *Id.*

144. See *id.*

145. *Getty Oil Co. v. Jones*, 470 S.W.2d 618, 622 (Tex. 1971).

substantially impair existing surface uses *and* there is a reasonable alternative available to the lessee, the mineral owner must accommodate the surface owner.¹⁴⁶

Building on the accommodation doctrine, *Sun Oil Co. v. Whitaker* established that the reasonable alternatives must be available on the subject land.¹⁴⁷ In a recent decision, the Waco Court of Appeals further bolstered the accommodation doctrine when it held that an area of a landfill not currently in use but planned to be used in the future was an existing use.¹⁴⁸ The accommodation doctrine generally helps operators in the Barnett Shale, yet with oil and gas operations expanding into urban areas, the potential for clashes with the accommodation doctrine increases.¹⁴⁹

III. FUTURE LEGISLATION AND CITY ORDINANCES

As discussed above, the operator must deal with state regulations, federal regulations, municipal regulations, special lease provisions, and multiple leases due to the neighborhood setting—all to drill \$2 million wells in an economic environment where the price of natural gas goes up and down. What else can operators expect to deal with in the future as a product of new regulation?

A. Cooperation with Fort Worth to Lay Pipelines Under City Streets

Fort Worth city officials are considering a possible city ordinance that encourages companies to lay pipelines under city streets. The city would require pipeline companies to consult with the city to identify possible routes under city streets prior to pursuing private easement acquisition or eminent domain proceedings.¹⁵⁰ State law provides that a pipeline company may lay pipeline across, under, or along city streets and alleys with the consent and discretion of the city.¹⁵¹ Municipalities have exclusive control over and under the public highways, streets, and alleys.¹⁵²

From the operator's perspective, there may be more disadvantages than advantages to laying pipelines under city streets. First, other pipelines and fiber optic cables may fill rights-of-way under city streets,

146. *Id.*

147. *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 812 (Tex. 1972).

148. *Tex. Genco, LP v. Valence Operating Co.*, 187 S.W.3d 118, 124 (Tex. App.—Waco 2006, pet. denied, reh'g of pet. denied).

149. Beecham, *supra* note 107, at 10.

150. Mike Lee, *Council may allow gas well pipelines under streets*, FORT WORTH STAR-TELEGRAM, Aug. 8, 2008, at B1.

151. The Texas Utilities Code refers to pipeline companies as gas corporations or gas utilities. See TEX. UTIL. CODE ANN. §§ 181.005-.006, 181.022-.023 (Vernon 2007).

152. TEX. TRANS. CODE ANN. § 311.001(a) (Vernon 2007).

requiring pipeline companies to use expensive digging techniques.¹⁵³ Second, private citizens may be quicker to respond to easement agreements than the potentially lengthy city staff approval that would be required to build under streets.¹⁵⁴ In addition, under certain market conditions, easement agreements could be less expensive than fees imposed by cities.¹⁵⁵ Nonetheless, city officials and neighborhood residents see the possible ordinance as a means of lessening the impact of laying pipelines in neighborhoods.¹⁵⁶

Ultimately, the Fort Worth Gas Drilling Task Force made no recommendations for ordinances to regulate laying pipelines under or along city streets.¹⁵⁷ However, city staff recommended the following:

The Pipeline Operator shall be required to submit an application for a Pipeline Permit to the City prior to making any offer or initiating any negotiation or action to acquire any easement or other property right to construct, install, maintain, repair, replace, modify, remove or operate a pipeline in Private Residential Areas.¹⁵⁸

Thus far, the Fort Worth City Council has made no decision regarding the recommendations made by city staff.

B. Funding for the Railroad Commission

Currently the Commission does not have the manpower or money to adequately regulate the increased production activity in the Barnett Shale.¹⁵⁹ Not only are there backlogs for drilling permits, but the Commission is also losing employees offered higher salaries for their expertise.¹⁶⁰ Commissioner Carrillo confirmed, “From January 1, 2007 through May 31, 2008, the Commission lost over 40 employees to the private sector” and “an additional 43% of [Commission] leadership will be eligible for retirement within the next five years.”¹⁶¹

Both the Commission and cities across North Texas will be pushing for increased Commission funding for additional technical staff positions at

153. Telephone Interview with Martin Garza, Partner, K&L Gates LLP (Oct. 21, 2008) [hereinafter Garza Interview]. A Chesapeake spokesperson verified that boring twenty feet under pavement “requires a large staging area that could encompass nearly an acre.” Lee, *supra* note 49, at B1.

154. Garza Interview, *supra* note 153.

155. *Id.*

156. Lee, *supra* note 49, at B1.

157. FORT WORTH 2008 GAS DRILLING TASK FORCE, TASK FORCE RECOMMENDATIONS TO THE FORT WORTH CITY COUNCIL 20 (Nov. 4, 2008), available at <http://www.fortworthgov.org/gaswells/default.aspx?id=52558>.

158. *Id.*

159. Carrillo, *supra* note 4, at 123.

160. *See id.*

161. *Id.*

the 81st Legislative Session.¹⁶² This funding serves the interest of the operator, who desires an efficient and timely regulatory process, while cities and residents want more safety inspectors.¹⁶³ However, a budget deficit will likely preclude additional funding to the Commission.

C. *Limit Eminent Domain for Natural Gas Pipelines*

Pipeline companies possess broad eminent domain powers. A pipeline company has the ability to use eminent domain in front of people's homes to lay pipelines because under Texas statutes, pipeline companies constitute common carriers, gas utilities, or gas corporations.¹⁶⁴ Thus, pipeline companies use this authority as leverage to negotiate easement agreements with landowners. If the landowner does not agree to the easement agreement, the company can merely initiate eminent domain proceedings.¹⁶⁵

This broad power angers many landowners, especially those with no benefit from urban drilling such as severed surface estate owners. Landowners will demand the Texas legislature restrict this eminent domain power through more oversight because, from their perspective, current eminent domain statutes favor the pipeline companies.¹⁶⁶

D. *Odorization of Natural Gas in Pipelines*

Currently, the natural gas in gathering lines and production lines does not contain odorant, known as mercaptan. After the New London School explosion in 1937, the State of Texas, followed by Congress, passed legislation requiring natural gas distribution lines to contain odorant so that leaks would be detectable by smell.¹⁶⁷ Many neighborhood residents, leery of pipeline explosions, call for pipeline companies to odorize natural gas in gathering lines and production lines.¹⁶⁸

162. *See id.* at 124.

163. Editorial, *Urban Drilling*, FORT WORTH STAR-TELEGRAM, Nov. 30, 2008, available at <http://www.compressorstation.info/news/081130.asp>.

164. *See* TEX. NAT. RES. CODE ANN. § 111.019 (Vernon 2007) (authorizing common carriers to transport gas for hire and eminent domain powers); TEX. UTIL. CODE ANN. § 181.004 (Vernon 2007) (authorizing eminent domain powers for gas corporations and gas utilities). A gas corporation includes partnerships, limited partnerships, corporations, and limited liability corporations that operate gas pipelines. *See* TEX. UTIL. CODE ANN. § 181.001. A gas utility is an entity engaged in the business of transporting or distributing gas for public consumption. *Id.* § 181.021.

165. *See* R. Scott Moran, *Effectively resolving difficult eminent domain cases*, ENERGY REP., FORT WORTH BUS. PRESS, Sept. 26, 2008, at 29.

166. *See* *supra* note 49, at B1.

167. TEX. UTIL. CODE ANN. § 121.252 (Vernon 2007) (originally enacted in 1939); Odorization of Gas, 49 C.F.R. § 192.625 (2005); Posting of Bill Fisher to Arlington Heights Neighborhood Association blog, <http://arlingtonheightsna.com/Blog/archives/27> (Aug. 3, 2008).

168. *See* Peter Gorman, *Peeling the Barnett Shale Onion*, FORT WORTH WKLY., Sept. 10, 2008, available at <http://www.fweekly.com/content.asp?article=7161>.

Adding an odorant to high pressure systems such as gathering lines may not be necessary from a safety standpoint though. Odorant in low pressure systems such as distribution lines is used to alert people of leaks, whereas high pressure systems are monitored differently based on measuring pressure changes to detect leaks.¹⁶⁹

IV. CONCLUSION

The urban setting creates many complexities for the operator that do not exist when drilling in rural areas, but the economics of drilling—the potential prosperity for operators, landowners, royalty owners, and units of government—make it worthwhile for all parties to encourage exploration and production rather than limit it.

From the operator's perspective, goals for legislation in Texas should be to streamline the urban drilling process by way of limiting inconsistent local control in the form of city ordinances, especially for pipelines, to avoid patchwork regulation. However, state representatives—due to pressure from local constituents—may act to block any passage of this type of legislation.¹⁷⁰ Rather, legislation may well bolster local regulation and further complicate the urban drilling process for operators.

More than likely, Texas courts will uphold a city's ability to exercise its police power to regulate oil and gas operations as seen in *Texas Midstream Gas Services v. City of Grand Prairie*.¹⁷¹ The State of Texas may even see a trend toward favoring considerations of the public (surface use) over the mineral estate, depending on the outcome of *Texas Citizens for a Safe Future and Clean Water v. Railroad Commission* before the Texas Supreme Court.¹⁷² Ultimately, other states and operators will likely look to Texas for guidance on these issues, as Texas has always been at the forefront of oil and gas law.

169. See Barnett Shale Energy Education Council, Pipeline Facts, <http://www.bseec.org/index.php/content/facts/pipelines/> (last visited Apr. 22, 2009). According to Chesapeake's website on why gathering lines are not odorized, the company states:

Gathering lines are a closed system with control measures. The lines are monitored closely for any drop in pressure and are inspected regularly. At compressor stations there will be controlled venting of the gas. The release of natural gas that is odorized would create concern for people in the area and would eventually compromise the sensitivity for the smell with natural gas customers. Also, adding an odorant to natural gas too early in the production process can cause equipment problems for industrial users of the natural gas down the line and can make natural gas unsuitable for some market uses.

AskChesapeake.com, Natural Gas Pipelines, <http://askchesapeake.com/EN-US/Pipelines/Pages/default.aspx> (last visited Apr. 22, 2009).

170. Fort Worth city officials plan to ask for more city control of natural gas pipelines in the upcoming session. See *Urban Drilling*, *supra* note 163.

171. No. 3:08-CV-1724-D, 2008 WL 5000038 (N.D. Tex. Nov. 25, 2008) (mem. op.).

172. 254 S.W.3d 492 (Tex. App.—Austin 2007, pet filed).