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Oil and Gas

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I. Introduction

A. Oil and Gas in Michigan §20.1

The Michigan geological basin contains significant amounts of naturally occurring or native oil and gas. These resources have been the source of produced hydrocarbons since the late 1800s. The state is also the home to numerous natural gas storage fields into which natural gas is injected during periods of low demand and then is withdrawn when demand for natural gas rises during the heating season.

1. Native Oil and Gas §20.2

The Michigan geological basin contains the same subsurface formation that lies under Ohio Springs, Ontario, where in 1858 a hand-dug hole filled with free flowing oil. Colonel Drake drilled his famous well at Titusville, Pennsylvania in 1859. Explorers discovered the first recorded Michigan oil field in 1886. The discovery of the Saginaw field in 1925 is viewed as the birth date of Michigan as a commercially producing oil state. Michigan's recorded natural gas production history began in the 1930s when the Michigan Public Service Commission issued its first standard well connection permit for a well in Mecosta County.

Oil and gas exploration efforts have drilled over 50,000 holes in Michigan. These explorations have produced more than 15,000 oil wells, 14,000 gas wells and 21,000 dry holes. Cumulative production in Michigan exceeds 1.2 billion barrels of crude oil and 7 trillion cubic feet of natural gas. Oil or gas has been produced in 64 of the 68 Lower Peninsula counties.

See *Michigan Oil and Gas Story: County by County*, Michigan Oil and Gas News, Incorporated (1991); Michigan Oil and Gas Association, [Michigan's Oil & Gas Exploration – Production Inventory At A Glance](#); Michigan Public Service Commission, [About Michigan's Natural Gas Industry: Exploration and Production](#).

2. Stored Natural Gas §20.3

Demand for natural gas in Michigan is seasonal with higher demand during extreme cold periods and lower demand during warmer months. Natural gas supply, whether from gas wells located in Michigan or pipelines transporting natural gas into the state, is available on a more uniform basis than the seasonal demand. Suppliers and producers utilize Michigan's underground geological features for the storage of natural gas during periods of lower demand. Michigan has approximately 623 billion cubic feet of working gas storage capacity. This storage capacity exceeds that of any other state. Michigan has approximately 55 natural gas storage fields. All but two were once producing fields. Two of the storage fields are salt caverns, while the rest are located in various geologic formations where the production of oil or natural gas has taken place. See Michigan Public Service Commission, [About Michigan's Natural Gas Industry: Storage](#).

B. History of Regulation §20.4

In 1927, Michigan's legislature enacted 1927 PA 65, which designated the Director of the Department of Conservation as the Supervisor of Wells. The statute imposed on the Supervisor of Wells the duty to prevent waste in the sinking, drilling, and abandoning of oil, gas, or test wells. This act required operators to secure drilling permits and to secure approval for plugging and abandoning wells. In 1929, the legislature enacted 1929 PA 15, which continued the regulation of oil and gas operations by the Supervisor of Wells and provided for more comprehensive and effective regulation of oil and gas operations. In 1937, the legislature enacted 1937 PA 326 to regulate dry natural gas wells. Act 326 continued the authority of the Supervisor of Wells over natural gas wells and provided for either permissive or compulsory pooling of properties.

In 1939, the Legislature enacted 1939 PA 61, a more comprehensive regulatory program, which repealed 1929 PA 15. In 1994, the Legislature recodified Act 61 into Part 615 of NREPA, [MCL 324.61501 et seq.](#)

1959 PA 197, codified at [MCL 324.61701 et seq.](#), authorized the Supervisor of Wells to unitize oil and gas interests. Unitization is the joint operation of a reservoir or reservoirs to enhance the ultimate recovery of hydrocarbons.

1994 PA 308 granted the Supervisor of Wells authority to address so-called orphan wells and established the Orphan Well Fund. [MCL 324.61601 et seq.](#) The act authorizes the Supervisor of Wells to expend money from the Orphan Well Fund to plug abandoned or improperly closed oil, gas, or brine disposal wells, to conduct remedial response activities, and to perform site restoration.

The Michigan Public Service Commission (MPSC) has regulatory authority over certain aspects of the oil and gas industry. 1929 PA 9, [MCL 483.101 et seq.](#), governs the buying, selling, and transportation of natural gas. 1923 PA 238, [MCL 486.251 et seq.](#), authorizes the regulation of natural gas storage. 1929 PA 16, [MCL 483.1 et seq.](#), governs the transportation of liquid hydrocarbons by pipeline within the state of Michigan.

C. Michigan Natural Resources Trust Fund §20.5

[Const 1963, art 9, §35](#) establishes a trust fund to purchase public land and finance recreational projects throughout the state. Revenues for the fund are generated by royalties from oil and gas wells and production facilities on state-owned land. See [MCL 324.1901 et seq.](#)

II. Property Rights in Oil and Gas

A. Title to Oil and Gas Rights

1. In General §20.6

Under Michigan common law, the surface owner of the land owns oil, gas, and minerals in place beneath his or her land, and the minerals are part of the realty until they are severed. *Jaenicke v Davidson*, [290 Mich 298](#); [287 NW 472](#) (1939); *Manufacturers Nat'l Bank v Director of Dep't of Natural Resources*, [420 Mich 128](#); 362 NW2d 572 (1984); *Mark v Bradford*, [315 Mich 50](#); 23 NW2d 201 (1946). The subsurface minerals, which include oil and gas, are a real property interest that can be owned, severed, and transferred separate from the ownership of the surface estate. *Van Slooten v Larsen*, [410 Mich 21](#); 299 NW2d 704 (1980); *Southwestern Oil Co v Wolverine Gas and Oil Co, Inc*, [181 Mich App 589](#); 450 NW2d 1 (1989); *Eadus v Hunter*, [268 Mich 233](#); 256 NW 323 (1934). A conveyance of the surface with a reservation or an exception in the deed may sever a landowner's mineral rights from the remainder of the land, or a conveyance may transfer just the mineral rights. *Mable Cleary Trust v Edward-Marlah Muzyl Trust*, [262 Mich App 485](#); 686 NW2d 770 (2004); *Rathburn v State*, [284 Mich 521](#); 280 NW 35 (1938).

Upon the severance of title to the mineral interests from the remaining land, the mineral estate and the surface estate each become freehold estates in fee simple. Both estates are subject to laws of descent, devise, and conveyance. *Rathburn; Stevens Mineral Co v State*, [164 Mich App 692](#); 418 NW2d 130 (1987). Multiple owners of the same mineral rights hold the interests as tenants in common. *Mable Cleary Trust*, [262 Mich App at 493](#).

A subsequent purchaser of a portion of a surface estate that is subject to a prior oil and gas lease takes such land knowing that his surface ownership may be burdened by the exercise of rights of the owners or lessee of the mineral estate. *Rorke v Savoy Energy LP*, [260 Mich App 251](#), 256; 677 NW2d 45 (2003). “[E]ach subsequent purchaser of a subdivision thereof, taking with notice of the prior sale and reservation of rights, takes knowing that his surface ownership may be burdened in part, and, in very rare cases perhaps, in its totality, by the reasonable exercise of the rights of the owner of the oil and mineral estate; and this without regard to whether or not the oil or mineral underlies the particular subdivision, or whether the facilities located thereon serve facilities located without the subdivision, so long as they do not lie beyond the original tract.” *Id.*, quoting *Schlueter v Shawnee Operating Co*, [141 Misc 2d 1000](#); 535 NYS2d 867 (1988).

Michigan oil and gas law distinguishes between the mineral owner and the surface owner in the rights to use subsurface caverns for gas storage. The surface owner has the right to use a subsurface cavern for storage of foreign minerals or gas only after all the minerals have been extracted by the mineral owner. *Dep't of Transportation v Goike*, [220 Mich App 614](#); 560 NW2d 365 (1996). The general rule is that a mineral lessee who holds the rights to use a subsurface formation that contains no producible mineral deposits must still consent to the use of the formation for gas storage. Williams & Meyers, *Oil & Gas Law*, § 222 (2002).

2. Riverbeds and Streams §20.7

Riparian owners own the submerged land to the middle of the stream or inland lake whether it is navigable or not, including the underlying minerals. *Aalsburg v Cashion*, [384 Mich 236](#); 180 NW2d 792 (1970). Michigan statutes, however, prohibit drilling for oil or gas under the Great Lakes, their connected bays or harbors, or their connecting waterways except under leases existing prior to April 5, 2002. [MCL 324.502\(4\)](#). MCL 324.502(4) prohibits the DNRE from entering into a contract on or after April 5, 2002 allowing drilling operations beneath these waters.

3. Streets and Roadways §20.8

Several Michigan statutes govern the ownership of oil and gas under streets and roadways. See generally [MCL 213.51 et seq.](#); [MCL 213.171](#); [MCL 213.172](#); [MCL 213.361 et seq.](#); [MCL 252.51 et seq.](#) It is necessary to review the conveyance by the original owner to the governmental unit for the road or street to determine the scope of the government's interest. *Village of Kalkaska v Shell Oil Co*, [433 Mich 348](#); 446 NW2d 91 (1989). The recording of plats designating streets and roadways for public use does not transfer a proprietary interest in the subsurface oil and gas to a municipality without express language transferring those interests. *Id.*

B. Rule of Capture and Fair-Share Principle §20.9

Oil and gas, unlike solid or hard rock minerals, do not remain stationary. The movement of oil and gas underground across property lines is a lawful dynamic of the fugitive nature of native gas. "Oil and gas, unlike other minerals, do not remain constantly in place in the ground, but may migrate across property lines." *Wronski v Sun Oil Co*, [89 Mich App 11](#), 21; 279 NW2d 564 (1979).

Michigan adheres to the ownership-in-place theory with regard to oil and gas. Under this theory, "The nature of the interest of the landowner in oil and gas contained in his land is the same as his interest in solid minerals' . . . and as a consequence the owner of land is also the owner of the oil and gas in or beneath it." *Id.* (citation omitted).

The "rule of capture" allows a mineral owner or its lessee to produce oil and gas under lease even if some of the produced oil or gas migrates from under adjoining lands. A mineral lessee produces the fluid minerals that he "captures" under his own land. If strictly applied, the rule of capture could be inequitable when one landowner drains the oil and gas out from under adjoining lands. To prevent this inequity, Michigan recognizes the "fair-share principle," which modifies the "rule of capture" to provide each owner with the reasonable opportunity to recover oil and gas in the common pool. The fair-share principle modifies the rule of capture to exclude operations that are in violation of valid conservation orders issued by the Supervisor of Wells. *Id.* at 22-23. The Supervisor of Wells regulates the location and spacing of wells, allowable production rates, and pooling of large resource fields to implement the fair-share principles. See [§20.18](#) and following.

C. Use of the Surface to Explore For and Produce Oil and Gas

1. In General §20.10

The owner of the mineral interest may lease the interest for exploration and development. Under an oil and gas lease, the lessee acquires the right to use and occupy that portion of the surface of the land that is needed for the exploration of oil and gas. *VanAlstine v Swanson*, [164 Mich App 396](#); 417 NW2d 516 (1987). If the mineral interest has been severed from the surface estate, the mineral estate is dominant to the servient surface estate. *Miller Brothers v Dep't of Natural Resources*, [203 Mich App 674](#); 513 NW2d 217 (1994). The owner of the surface estate has an implied duty to allow the owners of the mineral estate to exercise their rights to extract oil and gas. *Id.*

2. “Reasonable Use” §20.11

Even though dominant, the severed mineral owner’s or lessee’s use of the surface must be “reasonable”. The amount of damages that a mineral owner must pay to the surface owner for use of the surface land has been vigorously debated. Unless there are specific provisions in the documents of conveyance or severance of the mineral rights, the surface owner is usually compensated only for damage to growing crops or trees that results from the drilling process. The exception to this rule is when the lessee negligently overburdens the servient estate. See Topp, *Severed Minerals: Are Surface Owners Entitled to Damages for Diminution of Their Property Value?* [78 Mich BJ 148](#) (Feb. 1999); Topp, *Severed Minerals: Restrictive Covenants as Restrictions on Surface Use by the Mineral Owner*, [32 Michigan Real Property Review No. 4](#) (Winter 2004).

Even though an oil and gas lessee is entitled to enjoy “reasonable surface use” necessary or convenient for the exploration and development operations, this right does not entitle the lessee to have unfettered use of the surface. Although there are no published Michigan appellate decisions on point, cases from other states hold that the relative rights of the surface owner and the oil and gas lessee or mineral owner are balanced. *Gerrity Oil & Gas Corp v Magness*, [946 P2d 913](#) (Colo 1997) (dominant mineral owner or lessee must enjoy his implied easements with due regard to the interest of the owner of the servient surface estate); *Grynberg v City of Northglenn*, [739 P2d 230](#) (Colo. 1987) (each owner must have due regard for the rights of the other in making use of the estate in question); *Gulf Production Co v Continental Oil Co*, [139 Tex 183](#), 132 SW2d 553 (1939), superseded without change to cited material by *Gulf Production Co v Continental Oil Co*, [139 Tex 183](#), 164 SW2d 488 (1942) (surface estate servient to mineral estate but requiring that mineral owners right be exercised with due regard to rights of surface owner); *Columbia Gas Transmission Corp v Limited Corp*, [759 F Supp 343](#) (ED Ky 1990)(dominant estate owner liable in damages for conducting mining operations causing physical damage to the servient estate when damage could have been avoided with the use of reasonable care by the dominant estate owner), aff’d [951 F2d 110](#) (6th Cir 1991).

Unpublished decision: *Rorke v Savoy Energy LP*, unpublished opinion per curiam of the Court of Appeals, issued May 18, 2004 ([Docket No. 245317](#)) (right to engage in a specified activity that

was expressly authorized in oil and gas lease resulted in the mineral rights owner having no obligation to accommodate the surface owner's use of the property).

3. Exceeding “Reasonable and Necessary” Use of Surface §20.12

If the mineral owners or mineral lessee's use of the surface is not “reasonable and necessary,” the use is considered excessive and the surface owner may protect himself through an action in trespass or an appeal to equity for an injunction. Williams & Meyers, *Oil & Gas Law*, § 218.8. Excessive use resulting in violation of conservation agency rules or regulations governing development and exploration of oil and gas may provide the basis for a “negligence *per se*” claim by the surface owner. *Id.*

Courts in other states have found incidents of surface use exceeding the scope of “reasonable and necessary” to include the following: *Oryx Energy Company v Shelton*, [942 SW2d 637](#) (Tex App 1996) (finding sufficient evidence relating to oil spills and leaks and abandoned pipes and other equipment to show that even though the lessee was found not to have acted negligently, the lessee still made an excessive use of the surface so as to justify an award of compensatory damages); *Magnolia Petroleum Co v Norvell*, [205 Okla 645](#); 240 P2d 80 (1952) (finding that the lessee failed to take reasonable precautions against erosion while constructing its roads causing unnecessary permanent injury to the surface injury entitling the lessor to damages); *Speedman Oil Co v Duval Coty Ranch Co*, [504 SW2d 923](#) (Tex Civ App 1973) (sustained a temporary injunction restraining the pumping, flowing, or producing of oil and gas due to history of spills of oil and salt water); *Winslow v Duval Coty Ranch Co*, [519 SW2d 217](#) (Tex Civ App 1975 ref'd n.r.e.) (finding that the plaintiff may be entitled to an injunction against pollution of the surface estate). An oil and gas lessee was found liable for surface damage when it constructed a road to a well site from the east rather than from the north, which would have minimized surface damage and not interfered with the irrigation of the land. *Flying Diamond Corp v Rust*, [551 P2d 509](#) (Utah 1976).

4. Statutory Prohibition of “Waste” §20.13

The Supervisor of Wells Act, [MCL 324.61501 et seq.](#), Michigan's oil and gas regulatory statute, may limit a lessee's right to use the surface. The Act, codified as Part 615 of NREPA, specifically prohibits waste in the exploration and development of minerals. Part 615 defines “waste” as follows:

(q) “Waste” in addition to its ordinary meaning includes all of the following:

(i) “Underground waste”, as those words are generally understood in the oil business, and including all of the following: . . .

(B) Unreasonable damage to underground fresh or mineral waters, natural brines or other mineral deposits from operations for the discovery, development, and production and handling of oil or gas.

(ii) “Surface waste”, as those words are generally understood in the oil business, and including all the following:

(A) The unnecessary or excessive or surface loss or destruction without beneficial use, however caused, of gas, oil or other product, but including the loss or destruction, without beneficial use, resulting from evaporation, seepage, leakage, or fire, especially a loss or destruction incident to or resulting from the manner of spacing, equipping, operating, or producing a well or wells, or incident to or resulting from inefficient storage or handling of oil.

(B) *The unnecessary damage to or destruction of the surface; soils; animal, fish, or aquatic life; property or other environmental values from or by oil and gas operations.*

(C) *The unnecessary endangerment of public health, safety, or welfare from or by oil and gas operations. . . .*

[MCL 324.61501\(q\)](#) (emphasis added).

The Michigan Supreme Court has held that a lessee may be denied a permit for the development of minerals that would result in serious or unnecessary damage to or destruction of natural resources (flora and fauna) of the state. *Michigan Oil Co v Natural Resources Comm’n*, [406 Mich 1](#); 276 NW2d 141 (1979). The Court interpreted the statutory definition of the term “waste” to refer not only to waste of oil and gas, but also to any unnecessary spoliation or destruction of the land, including flora and fauna, by one lawfully in possession to the prejudice of the estate or interest of another. *Id.* at 26, citing MCL 319.2, the predecessor of [MCL 324.61501\(q\)](#). The Court also rejected a construction of the statute that would permit oil and gas drilling unnecessarily detrimental to the other natural resources of the state. *Id.* at 23.

D. Loss of Title

1. Dormant Minerals Act §20.14

The Michigan Dormant Minerals Act allows severed minerals to be reunited with the surface estate under certain circumstances. [MCL 554.291 et seq.](#) The Dormant Mineral Act provides that any interest in oil or gas in any land owned by any person other than the surface owner that has not been sold, leased, mortgaged, or transferred by an instrument recorded in the office of the register of deeds for 20 years is deemed abandoned if (1) a drilling permit is not obtained, (2) actual production is not obtained from the property or pooled unit, or (3) the interest not used for underground gas storage. [MCL 554.291](#). Under the Dormant Mineral Act, the severed mineral owner may record a claim of interest or “Notice of Intent” to retain mineral rights every 20 years if one of the events set forth in [MCL 554.291](#) does not occur during the 20 year period. The occurrence of one of the specified events or filing of a claim of interest will also protect the severed interest from foreclosure due to nonpayment of property taxes by the surface owner.

[MCL 554.291\(3\)](#). Storage field operators may file an affidavit defining the boundaries of the underground storage field so as to establish a prima facie case of the use of such interests in underground gas storage operations. MCL 554.293.

2. Adverse Possession §20.15

The success of a claim for possession of property through adverse possession depends generally on whether or not the minerals are severed from the surface. If the minerals are not severed from the surface, the mineral rights are part of the realty (see [§20.6](#)). A person proving non-severance under adverse possession is entitled to both the surface and mineral estate. *Deer Lake Co v Michigan Land & Iron Co*, [83 Mich 11](#); 46 NW 1024 (1890).

If the mineral estate is severed from the surface estate, adverse possession of the surface estate will not by itself result in possession of the mineral estate. *Van Slooten v Larsen*, [86 Mich App 437](#), 272 NW2d 675 (1978). To claim the underground mineral rights, a potential adverse possessor must demonstrate acts of dominion over the mineral rights for the prescriptive 15 year period, such as by developing the minerals or other mineral exploration activities on the surface estate. *Id.*

3. Title to Migrating Injected Natural Gas §20.16

Under the law of “capture”, courts have found that the title to native oil and gas that moves across property lines to neighboring property is lost. *ANR Pipeline Co v 60 Acres of Land*, [418 F Supp 2d 933](#) (WD Mich 2006). “Oil and gas, unlike other minerals, do not remain constantly in place in the ground, but may migrate across property lines.” *Wronski v Sun Oil Co*, [89 Mich App 11](#), 21; 279 NW2d 564 (1979). See [§20.9](#). Title to foreign, extraneous or injected gas, however, remains with the injector even if it migrates under adjoining property:

Injected gas which has previously been produced, reduced to possession, and then re-injected into the ground is not subject to the rule of capture. Once severed from the realty, gas becomes personal property, and title to that property is *not* lost when it is injected into underground storage reservoirs. *See, e.g., Ellis v Arkansas Louisiana Gas Co*, [450 F Supp 412](#), 419 (ED Okla 1978); *White v New York State Natural Gas Corp*, [190 F Supp 342](#), 349 (WD Pa 1960). Accordingly, if injected gas moves across boundaries there may be a trespass.

ANR Pipeline at 940 (emphasis added). An action for subsurface trespass is recognized at common law. 1 Restatement Torts 2d, §159, p 281.

Unpublished decision: *Hope Land Mineral Corp v Panhandle Eastern Pipe Line Co*, unpublished opinion per curiam of the Court of Appeals, issued May 9, 2001 ([Docket No. 234202](#)) (claim of trespass recognized where natural gas has been stored in, or migrated to, subsurface areas of another’s land).

E. Regulatory Takings §20.17

The Michigan Court of Appeals held that the denial of a permit to drill an oil and gas well was a regulatory taking. *Miller Bros v Dep't of Natural Resources*, [203 Mich App 674](#); 513 NW2d 217 (1994). In *Miller Bros*, the DNR denied the mineral lessee a permit to conduct any gas and oil development activities in the Nordhouse Dunes area. The lessee brought suit stating that the denial of the drilling permit was a taking of its mineral rights. In defense of the drilling permit denial, the state argued that even if a taking occurred, the lessee was not entitled to compensation since mineral development within the Nordhouse Dunes area could have been enjoined under nuisance law. *Id.* at 62. The court rejected the nuisance defense and found a regulatory taking had occurred, holding that the limited detrimental effect on the surface property was not sufficient damage to deny the permit.

III. Regulation

A. Regulation by the Supervisor of Wells under Part 615 §20.18

With the enactment of 1939 PA 61, the Michigan Legislature created the office of Supervisor of Wells and specified the powers and duties of this office. The Director of DNRE is currently designated as the Supervisor of Wells. Generally, the Supervisor of Wells has appointed an Assistant Supervisor of Wells to carry out the functions of the office.

Part 615 of NREPA, [MCL 324.61501 et seq.](#), contains the primary statutory provisions regulating oil and gas exploration and production. Administrative regulations implementing these provisions are found at 1996 AACS, [R 324.101 et seq.](#) The Supervisor of Wells also issues orders and instructions governing oil and gas operations. Through these orders and instructions, the Supervisor of Wells has set general spacing and maximum production rates for wells drilled into various geologic formations, pooled unleased interests within drilling units, authorized variances and exceptions, and specified required operational practices. DNRE's website lists [instructions](#), [special orders](#), and [general spacing orders](#). The primary regulatory provisions contained in Part 615 and its administrative rules are discussed in [§20.19](#) and following.

1. Permitting §20.19

Part 615 requires a person to obtain a permit to drill any well for oil or gas, to conduct secondary recovery operations, and to dispose of salt water, brine, or other oilfield waste produced in association with oil and gas operations. Part 615 requires a permit for wells drilled for the development of reservoirs for the storage of liquid or gaseous hydrocarbons. A potential permittee must file and maintain an adequate surety or cash bond as a condition of the permit. The statute prohibits DNRE from issuing a permit to a person who has not complied with or is in violation of Part 615 or any of the rules, requirements or orders issued or promulgated by the Supervisor of Wells or DNRE. [MCL 324.61525\(1\)](#).

Part 615 prohibits the Supervisor of Wells from issuing a permit to authorize the drilling of a well beneath the bottomlands of the Great Lakes, the connected bays or harbors of the Great Lakes, or connecting waterways. This prohibition does not apply to leases in effect before April

5, 2002. [MCL 324.61505a](#). The DNRE may not enter into contracts on or after April 5, 2002 allowing drilling operations beneath these waters.

Administrative rules provisions pertaining to the application for and issuance of permits, as well as to performance bonds, are found in 1996 AACCS, [R 324.201](#)-.216.

2. Drilling Units and Spacing of Wells §20.20

[MCL 324.61506\(j\)](#) authorizes the Supervisor of Wells to fix the spacing or location of wells to prevent the drilling of unnecessary wells. [MCL 324.61513\(2\)](#) authorizes the Supervisor to establish a drilling unit for each pool. A drilling unit is the maximum area that may be efficiently and economically drained by one well.

Administrative rule 301, 1996 AACCS, [R 324.301](#), specifies the generally applicable requirements for the location and spacing of wells to be drilled for oil or gas. Rule 301 requires the standard drilling unit for wells to be drilled for oil or gas to be a legal subdivision of 40 acres, more or less, defined as a quarter-quarter section of land that conforms to one of the quarter-quarters of the governmental-surveyed section of land. This rule specifies the distance the bottom hole location of a well must be set back from a drilling unit boundary. Rule 301 also provides for setbacks of well surface locations and associated surface facilities from fresh water wells, existing structures and public water supply wells.

The Supervisor of Wells may grant exceptions to the location and spacing requirements for a particular well or drilling unit. 1996 AACCS, [R 324.301\(2\)](#).

The Supervisor of Wells may adopt special spacing orders, rules or determinations that set drilling unit and spacing requirements differing from those specified in Rule 301. These orders include certain geologic formations, such as the Antrim formation, Niagaran formation, Trenton-Black River formation, and the Glenwood and deeper formations. See [general spacing orders](#) on the DNRE's website. Numerous exceptions have been granted for individual drilling units or wells. See [special orders](#) on the DNRE's website.

3. Pooling §20.21

[MCL 324.61513\(4\)](#) permits pooling, which is the combining of oil and gas interests in a drilling unit or larger area. As there may be numerous separate owners of oil and gas within the boundaries of a proposed drilling unit, it may be necessary to have the owners of those interests pool their interests to allow an operator to form a complete drilling unit that conforms to the applicable drilling unit requirement.

Voluntary pooling can be accomplished either through execution of a pooling agreement or pursuant to the terms of oil and gas leases that are acquired from the several owners of the oil and gas. 1996 AACCS, [R 324.303](#) governs the voluntary pooling of separate tracts or mineral interests to form a full drilling unit or multiples of full drilling units, and to develop the units.

[MCL 324.61513](#)(4) authorizes compulsory pooling of oil and gas interests within a drilling unit. Compulsory pooling must insure that each owner of an interest within a drilling unit can receive the owner's just and equitable share of the production from the unit. 1996 AACCS, [R 324.304](#). The compulsory pooling process prevents a proliferation of wells that could occur if each owner of a separate small tract drilled a well on that tract. The pooling process also protects an owner from having the owner's oil or gas drained without compensation.

Each compulsory pooling plan is implemented after a hearing before the Supervisor of Wells. The compulsory pooling order issued by the Supervisor allows the pooled owner to choose to pay in advance the owner's share of costs of the well or to have those costs deducted from the owner's revenues. The pooled mineral owner will receive 1/8 of the owner's revenue share as a cost-free royalty. The cost of drilling and production of a well will be deducted from the remaining 7/8 interest if the well is successful. 1996 AACCS, [R 324.304](#) and [R 324.1206](#)(4) and (5).

The Supervisor of Wells may not require the pooling of state-owned properties or parts of properties if the state provides for the orderly development of state-owned hydrocarbon resources through an oil and gas leasing program and the Supervisor determines the owner of each tract within the drilling unit is afforded the opportunity to recover and receive the owner's just and equitable share of the hydrocarbon resources in the pool. [MCL 324.61513a](#).

[MCL 319.101](#) *et seq.* provides an alternative way to combine separately owned mineral interests. This statute authorizes the holder of a majority of the title holders to the land or to the oil and gas rights in such lands to file a circuit court action to combine unleased interests in order to explore and develop oil and gas resources.

4. Drilling, Completing and Operating Requirements §20.22

The provisions of Parts 4, 5, 7, 9, 10, and 11 of the Part 615 administrative rules set forth the requirements applicable to the drilling, completion, and operation of oil and gas wells and related facilities. 1996 AACCS, [R 324.401](#) *et seq.* These rules address all aspects of oil and gas operations. The rules regulate the entire life cycle of a well from its initial drilling, through production, to plugging and abandonment. The rules contain requirements for oil and gas flowlines and production facilities, waste disposal and release reporting requirements, and performance standards pertaining to noise and odor.

5. Allowable Production Rates §20.23

Under Part 615, the Supervisor of Wells is authorized to regulate or limit the amount of oil or gas produced from any well, pool, or field of one or more pools. [MCL 324.61513](#)(1). After a hearing, the Supervisor of Wells may set allowable production rates. The production limits may apply to a specific well, field, or pool, or be set as a part of a general spacing order that the Supervisor issues with regard to wells drilled into specific geologic formations. See generally 1996 AACCS, [R 324.601](#)-613.

With regard to wells producing natural gas, the Michigan Public Service Commission (MPSC), under 1929 PA 9, [MCL 483.101](#) *et seq.*, has issued regulations empowering the MPSC to, among other things, determine how much of the open flow of gas from a well may be utilized. While there is some overlap between the jurisdiction of the MPSC under Act 9 and the Supervisor of Wells under Part 615 with regard to these natural gas wells, if the reservoir into which a well is drilled contains primarily dry natural gas, the MPSC rather than the Supervisor of Wells exercises jurisdiction over production rates. The MPSC will set an allowable withdrawal order providing for the maximum rate of gas production as part of issuance of a natural gas well connection permit. [MCL 483.107](#); 1979 AC, [R 460.865](#).

6. Hearings §20.24

Part 615 authorizes the Supervisor of Wells to hold hearings with regard to the regulation of oil and gas exploration, drilling, and production. Part 12 of the administrative rules sets forth the applicable special hearing requirements. 1996 AACRS, [R 324.1201](#).

B. Unitization under Part 617 §20.25

Unitization is a legal process under which separately owned wells, tracts and rights in a producing field are combined for operation as a single unit to increase the ultimate recovery of hydrocarbons. A unitization plan often provides for the use of secondary or tertiary production methods on a field-wide basis. Part 617 of NREPA, [MCL 324.61701](#) *et seq.*, grants the Supervisor of Wells the authority to order unit operations.

A potential unitization plan operator initiates the unitization process by filing a unitization plan along with a petition requesting approval by the Supervisor of Wells. The plan operator must give notice to interested persons. In addition to specifying the nature of field-wide operations, the unitization plan sets forth the allocation of costs among the producers; the allocation of revenues among the interest owners; the taking over of existing wells and facilities from the owners of those wells and facilities and the terms on which they are to be taken over; and the financial and other terms upon which unitized operations are to be conducted. See [MCL 324.31705](#).

To issue an order of unitization, [MCL 324.61704](#)(4) requires that the Supervisor find the following:

- a. that the unitization requested is reasonably necessary to substantially increase the ultimate recovery of oil and gas from the unit area;
- b. that the type of operations contemplated by the plan are feasible, will prevent waste, and will protect correlative rights; and
- c. that the estimated additional cost of conducting the operations would not exceed the value of the additional oil and gas so recovered.

The Supervisor may issue an order of unitization without holding a hearing if no protests are filed. If the Supervisor receives written protests, the Supervisor may issue an order only after a Supervisor's hearing. [MCL 324.61704](#). The unitization order will not become effective until the

unit plan is approved by a specified percentage of those who have interests that would be the subject of the unit operations. [MCL 324.31706](#).

C. Natural Gas Well Production and Pipeline Regulation

1. Regulation of Wells and Pipelines under 1929 PA 9 §20.26

As noted in [§20.18](#) and following, the Supervisor of Wells has jurisdiction over the spacing, drilling, deepening, plugging, reworking and abandonment of oil and gas wells. After a well is drilled, and before production begins, the well is classified as either a natural gas or an oil well. Natural gas well regulation is split between the Supervisor of Wells and the Michigan Public Service Commission (MPSC). The MPSC authority is found in 1929 PA 9, [MCL 483.101](#) *et seq.*

Under the regulatory program in 1929 PA 9, before a natural gas well begins production, the producer or operator must apply to the MPSC for a wellhead connection permit. An allowable withdrawal order is issued with the permit which, for most wells, sets the production limits for specified timeframes. 1979 AC, [R 460.864](#). Natural gas wells are subject to proration by the MPSC. Proration is intended to keep each gas well in a field from producing more than its fair share of the total field production.

1929 PA 9 regulates certain natural gas pipelines and the purchase and transportation of natural gas. The authority to permit the construction of such pipelines rests with the MPSC. [MCL 483.101](#). Act 9 grants operators of regulated natural gas pipelines the right to use state highway right-of-ways and easements, and grants operators the power of eminent domain to acquire the necessary property interests for the construction of a pipeline. [MCL 483.102](#).

2. Safety Regulations under 1969 PA 165 §20.27

As required by the Natural Gas Pipeline Safety Act of 1968, [49 USC 60101](#) *et seq.*, and pursuant to the authority granted in 1969 PA 165, [MCL 483.151](#) *et seq.*, the MPSC has promulgated gas safety standards pertaining to certain pipelines transporting natural gas. Rules implementing these standards are at 2000 AACs, [R 460.20101](#) *et seq.*

D. Oil and Hydrocarbon Liquids Pipeline Regulation

1. Regulation of Pipelines under 1929 PA 16 §20.28

The MPSC approves the construction of new petroleum or liquid hydrocarbon pipelines under the provisions of 1929 PA 16, [MCL 483.1](#) *et seq.* An entity receiving approval under Act 16 is entitled to use the state highway right-of-ways and easements and is granted the power of eminent domain to acquire the necessary property rights for the pipeline. [MCL 483.2](#).

2. Federal Safety Regulations §20.29

Liquid hydrocarbon pipelines must be built and maintained in accordance with federal standards established by the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration. See generally [49 CFR Parts 190-199](#). The Hazardous Liquid Pipeline Safety Act

of 1979, [49 USC 60101](#) *et seq.*, authorizes federal regulation of interstate pipeline transportation of hazardous liquids including crude oil and petroleum products.

E. Municipal Zoning of Oil and Gas Operations

1. Townships and Counties §20.30

The Michigan Zoning Enabling Act prohibits township and county regulation or control of the drilling, completion, or operation of oil or gas wells, or other wells drilled for oil and gas exploration purposes. [MCL 125.3205](#). Townships and counties do not have jurisdiction over issuance of permits for the location, drilling, completion, operation, or abandonment of those wells. See, e.g., *Dart Energy Corp v Iosco Twp*, [206 Mich App 311](#); 520 NW2d 652 (1994) (oil and gas well converted to brine well). Certain oil and gas facilities that do not include oil and gas wells may be subject to township or county zoning approval. See, e.g., *Addison Twp v Gout*, [435 Mich 809](#); 460 NW2d 215 (1990). See [§20.31](#) regarding city and village regulation of oil and gas wells or operations.

2. Cities and Villages §20.31

Unlike townships and counties (see [§20.30](#)), the Michigan Zoning Enabling Act does not expressly preclude regulation by cities and villages of oil and gas wells or operations. [MCL 125.3205](#).

3. “Valuable Resources” and the “No Very Serious Consequences” Test §20.32

Where a zoning ordinance attempts to prohibit or limit the extraction of valuable mineral resources, such an ordinance is presumed to be reasonable and the burden is on the party challenging the ordinance to overcome this presumption by demonstrating that there is no reasonable governmental interest being advanced. *Kyser v Kasson Twp*, 486 Mich 514; ___ NW2d ___ (2010) ([No. 136680](#), issued July 15, 2010). *Kyser* overturned the court of appeals decision that held that the ordinance is invalid if the party challenging the prohibition can show that “no very serious consequences” would result from extraction of those resources. *Kyser v Kasson Twp*, [278 Mich App 743](#); 755 NW2d 190 (2008). “Valuable natural resources” are those resources of a certain high-quality or rarity that when extracted are expected to raise revenues and produce a profit for the producer, such as high quality gravel necessary for certain construction projects. *Id.* This more permissive regulation of valuable natural resource removal operations occurred because such resources are located only in discrete areas in a given community. Application of the “no very serious consequences” test required inquiry into three criteria: (1) whether the mineral proposed to be extracted is “valuable,” (2) the degree of public interest in the minerals to be extracted; and (3) the nature and severity of the consequences that are likely to result from the removal operations. *Id.*

F. Injection Wells

1. Regulation by the Supervisor of Wells §20.33

Injection wells drilled for the purpose of disposal of waste fluids produced incidental to oil and gas operations, or wells used to inject water, gas, air, brine, or other fluids for the purpose of increasing the ultimate recovery of hydrocarbons from a reservoir or for the storage of hydrocarbons, must be permitted under Part 615. [MCL 324.61525](#)(1); 1996 AACS, [R 324.201](#)(1). Part 8 of the administrative rules set forth requirements regarding the use and operation of injection wells. 1996 AACS, [R 324.801](#) *et seq.*

2. Regulation by the Environmental Protection Agency §20.34

In addition to obtaining a permit and being subject to regulation under Part 615 (see [§20.18](#) and following), injection wells may require permits from EPA pursuant to the Underground Injection Control Program. This program was created pursuant to the federal Safe Drinking Water Act, [42 USC 300f](#) *et seq.* and is regulated under [40 CFR Parts 124](#), 144 and 146-148.

G. Orphan Well Fund §20.35

1994 PA 308 creates the Orphan Well Fund within the Michigan Department of Treasury. [MCL 324.61601](#) *et seq.* Revenues for the Orphan Well Fund come from a severance tax on the oil and gas industry. The act authorizes the Supervisor of Wells to expend money from the fund to plug abandoned or improperly closed oil, gas or brine disposal wells, to conduct remedial response activities, and to perform site restoration. Before initiating these actions, the Supervisor of Wells must determine that the owner of the well is unknown or insolvent or that there exists an imminent threat to public health and safety.

H. Special Provisions under Non-Oil and Gas Regulatory Statutes

1. Inland Lakes and Streams §20.36

Watercourse crossings by pipelines not exceeding 20 inches in diameter are identified as a minor project category under the administrative rules issued pursuant to Part 301 of NREPA, [MCL 324.30101](#) *et seq.* See 1985 AACS, [R 281.816](#)(1)(g). Administrative rules [R 281.832](#) to [R 281.838](#) set forth requirements pertaining to pipeline and other utility water crossings.

2. Wetlands §20.37

Part 303 of NREPA, [MCL 324.30301](#) *et seq.*, which regulates wetlands, specifically exempts the maintenance, repair, or operation of gas or oil pipelines, and the construction of gas or oil pipelines having a diameter of six inches or less, from the permit requirements if the pipelines are constructed, maintained, or repaired in a manner to assure that any adverse effect on the wetland will otherwise be minimized. [MCL 324.30305](#)(2)(1). Wetlands are discussed generally in Chapter 10.

3. Soil Erosion and Sedimentation Control §20.38

County enforcement agencies are generally responsible for issuing permits under Part 91 of NREPA, Soil Erosion and Sedimentation Control, [MCL 324.9101](#) *et seq.* Most oil and gas related operations, however, can comply with Part 91 by submitting an application for a permit to drill and operate under Part 615, discussed in [§20.19](#) and following. [MCL 324.9115\(3\)](#).

4. Liability for Environmental Contamination

a. Michigan §20.39

Part 201 of NREPA, Environmental Remediation, [MCL 324.20101](#) *et seq.*, addresses the potential liability of owners or operators of facilities where hazardous substances may exist in the soil or groundwater. Part 201 is discussed in Chapter 5. The definition of “hazardous substance” under Part 201, [MCL 324.20101\(1\)\(t\)\(iv\)](#), includes “petroleum as defined in Part 213.” This definition is important, because CERCLA excludes petroleum products from the definition of a hazardous substance (see [§20.40](#)). Under Michigan law, therefore, an oil or gas operator or lessee that causes a release of petroleum products from the drilling or operating of the well is liable. A person who owns severed subsurface mineral rights or severed subsurface formations, or who leases subsurface mineral rights or formations, however, is not liable under Part 201 unless the person is responsible for an activity causing a release of hazardous substances at the facility. [MCL 324.20126\(3\)\(d\)](#).

b. CERCLA Petroleum Exclusion §20.40

CERCLA, [42 USC 9601](#) *et seq.*, is the federal counterpart to Michigan’s liability scheme in Part 201. CERCLA is discussed in Chapter 5. The definition of “hazardous substance” under CERCLA, [42 USC 9601\(14\)](#), excludes petroleum, including crude oil or any fraction thereof, and natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel. In contrast, Michigan’s definition of “hazardous substance” under Part 201, [MCL 324.20101\(1\)\(t\)\(iv\)](#), includes “petroleum as defined in Part 213”, as described in [§20.39](#).

c. Baseline Environmental Assessments §20.41

Under Part 201 of NREPA, [MCL 324.20126\(1\)\(c\)](#), a person about to become an owner or operator of contaminated property may conduct a baseline environmental assessment to obtain protection from liability for existing contamination. A Part 615 permittee may prepare a baseline environmental assessment to establish this liability exemption under Part 201. 2002 AACS, [R 299.5903\(8\)](#) specifies the time period in which the Part 615 permittee may conduct the BEA. Generally, the period to conduct a BEA ends 45 days after the date the Part 615 permit is issued unless notice is provided to DNRE not less than five days in advance of any site preparation work. If the notice is provided, the period to conduct a BEA ends 45 days after the date DNRE receives the notice. 2002 AACS, [R 299.51017\(2\)](#) specifies how a Part 615 permittee is to provide notice to DNRE of contamination migrating beyond property boundaries. Baseline environmental assessments are discussed in Chapter 7.

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