STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

KANTER REAL ESTATE, LLC,

Petitioner,

vs. Case Nos. 17-0666 17-0667

DEPARTMENT OF ENVIRONMENTAL PROTECTION,

Respondent,

and

CITY OF MIRAMAR AND BROWARD COUNTY, FLORIDA,

Intervenors.

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RECOMMENDED ORDER

Pursuant to notice, a final hearing was held in this case on May 22 through 26, 2017, in Tallahassee, Florida, before E. Gary Early, a designated administrative law judge of the Division of Administrative Hearings.

APPEARANCES

For Petitioner: Douglas P. Manson, Esquire
Brian Bolves, Esquire
Christine Senne, Esquire
Chris R. Tanner, Esquire
Paria Shirzadi, Esquire
Manson Bolves Donaldson Varn, P.A.
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The issue to be determined is whether the applicant, Kanter Real Estate, LLC (Kanter), is entitled to issuance of an Oil and Gas Drilling Permit, No. OG 1366 (the Permit).

PRELIMINARY STATEMENT

On November 16, 2016, the Department of Environmental Protection (Department or DEP) issued a Notice of Denial - Oil & Gas Drilling Application (the Denial). The basis for the Denial was that Kanter:

failed to provide information showing a balance of considerations in favor of issuance given the particular criteria specified in Section 377.241, Florida
Statutes, “Criteria for Issuance of Permits.” Specifically, [Kanter]’s information did not show a balance in favor of issuance when considering the nature, character and location of the lands involved; the nature, type and extent of ownership of [Kanter]; and the proven or indicated likelihood of the presence of oil in such quantities as to warrant the exploration and extraction of such products on a commercially profitable basis.

On November 16, 2017, the Department also issued a notice of denial of an Environmental Resource Permit (the ERP Denial). The basis for the ERP Denial was that Kanter had not provided reasonable assurance that the proposed activity would comply with various provisions of the statutes, rules, and Applicant’s Handbook applicable to the activity.

Kanter timely filed separate petitions challenging the Denial and the ERP Denial, both of which were dismissed by the Department with leave to amend. Kanter filed a separate Amended Petition for Formal Administrative Hearing for each of the denied permit applications on January 13, 2017. Those Amended Petitions were referred to the Division of Administrative Hearings on January 31, 2017, and were thereafter consolidated. The hearing was scheduled to be held on May 22 through 26, 2017.

On March 14, 2017, Intervenor City of Miramar (Miramar) filed its Petition to Intervene into Formal Administrative Hearing, which was granted, over objection, on March 24, 2017.
On April 14, 2017, Intervenor Broward County, Florida (Broward County), filed its Verified Motion for Intervention, which was granted, over objection, on April 24, 2017.

On May 19, 2017, the parties filed a well-crafted and comprehensive Joint Pre-hearing Stipulation for Oil and Gas Permit Proceeding (JPS/OG), which contained, among other things, 52 stipulations of fact, each of which are adopted and incorporated herein. The JPS/OG identified the issues of fact remaining for disposition to be:

1. Whether the nature, character, and location of the lands involved weighs toward the approval of exploratory drilling.

2. Whether the nature, type, and extent of ownership of the applicant, “including such matters as the length of time the applicant has owned the rights claimed without having performed any of the exploratory operations so granted or authorized,” weighs toward the approval of exploratory drilling.

3. Whether, and the degree to which, Kanter can demonstrate “the indicated likelihood of the presence of oil, gas or related minerals in such quantities as to warrant the exploration and extraction of such products on a commercially profitable basis.”

On May 19, 2017, the parties filed an equally well-crafted and comprehensive Joint Pre-hearing Stipulation for Environmental Resource Permit Proceeding (JPS/ERP), which limited the issue for disposition as “[w]hether the cumulative impacts analysis demonstrates that the proposed project and
mitigation proposed to offset the adverse impacts will not result in unacceptable cumulative impacts to the Everglades Basin.”

On May 22, 2017, Kanter filed a Motion in Limine on Historic Ownership and Use of Mineral Rights, which was denied by separate order, with the issues raised therein being subject to further analysis in the parties’ post-hearing submittals.

The final hearing was commenced as scheduled on May 22, 2017. During the proceedings, the parties announced a stipulation on the record that all issues related to the Environmental Resource Permit (ERP) had been resolved, and that the parties were in agreement that Kanter had met its burden of demonstrating entitlement to issuance of the ERP. Thus, the parties agreed that they would not submit detailed proposed findings of fact on that issue and would submit proposed recommended orders reflecting the agreement. The parties have done so, and this Recommended Order will include, without further elaboration, a recommendation that ERP No. 06-0336409-001 be issued.

Joint Exhibits 1(A) through 1(Y), consisting of the complete Oil and Gas Permit Composite Application, were received in evidence by stipulation of the parties.

Kanter called as witnesses: Carol Howard, who was tendered and accepted as an expert in environmental and resource
management; Edward Pollister, who was tendered and accepted as an expert in oil well design, drilling, and operation; Bob Howard, P.E., who was tendered and accepted as an expert in hydrology and hydraulics, water resource engineering, Everglades operation, and water management systems; Peter Gottfried, who was tendered and accepted as an expert in wetland ecology and aerial imagery interpretation; Phil Lakin, who was tendered and accepted as an expert in geophysics as related to oil exploration; and Jeffrey Aldridge, C.P.G., who was tendered and accepted as an expert in petroleum geology and risk assessment for petroleum exploration. Kanter Exhibits 1 through 116 and 126 through 132 were received in evidence without objection. Kanter Exhibits 122 and 123 were received in evidence over objection. Kanter Exhibit 123 consists of designated excerpts of the deposition of Daniel Reeves, to which the Department filed Objections and Cross-Designations. Those matters were addressed by separate Order.

The Department called as witnesses: Alvaro Linero, P.E., who was tendered and accepted as an expert in environmental engineering; Tracy Woods, P.G., who was tendered and accepted as an expert in geology, hydrogeology, and hydrology; and Charles Preston, who was tendered and accepted as an expert in geophysical exploration and risk evaluation. DEP Exhibits 16-25, 29, 31, 33, 35, 40(A) through 40(DD), 41 through 45,
48 through 56, 58 through 63, 70, 71 (pg. 24), 74, 75, 77, 79, and 80 were received in evidence.

Neither Miramar nor Broward County called independent witnesses. Miramar’s Exhibit 1 was received in evidence.

The nine-volume Transcript was filed on July 10, 2017. By agreement of the parties, 30 days from the date of the filing of the Transcript was established as the time for filing post-hearing submittals. On August 7, 2017, Kanter filed an unopposed Motion for Extension of Time to Submit Proposed Recommended Orders, which was granted, and extended the date for filing to August 17, 2017. The parties timely filed Proposed Recommended Orders on that date, which have been considered in the preparation of this Recommended Order.

The law in effect at the time the Department takes final agency action on the application being operative, references to statutes are to Florida Statutes (2017), unless otherwise noted. Lavernia v. Dep’t of Prof’l Reg., 616 So. 2d 53 (Fla. 1st DCA 1993).

FINDINGS OF FACT

The Parties

1. Kanter is a foreign limited liability company registered to do business in the State of Florida. Kanter owns 20,000 acres of property in western Broward County, on which it seeks authorization for the drilling of a vertical exploratory
well. The exploratory well is to be located on a five-acre site that is subject to an ERP (the Well Site).

2. The Department is the state agency with the power and duty to regulate activities related to the management and storage of surface waters pursuant to chapter 373, Florida Statutes, and to regulate oil and gas resources, including the permitting of activities related to the exploration for and extraction of such resources, pursuant to chapter 377, Florida Statutes.

3. Miramar is a Florida municipal corporation located in Broward County, Florida.

4. Broward County is a political subdivision of the State of Florida with jurisdiction extending to the Kanter property and the Well Site.

The Application

5. On July 2, 2015, Kanter submitted its Application for Permit to Drill (Application) to the Department. The proposed Well Site is on land to which Kanter owns the surface rights and subsurface mineral rights.

6. The Application contemplates the drilling of an exploratory well to a depth of approximately 11,800 feet. The Application is not for a production well. The well is to be drilled, and ancillary activities are to be performed on a fill pad of approximately five acres, surrounded by a three-foot high
perimeter berm on three sides and the L67-A levee on the fourth. The pad is the subject of an ERP which, as set forth in the Preliminary Statement, is not being challenged.

7. The pad is designed to contain the 100-year, three-day storm. The engineering design incorporates a graded area, berm, and containment with a water control structure and a gated culvert to manipulate the water if necessary. The entire pad is to be covered by a 20 mil PVC liner, is sloped to the center, and includes a steel and concrete sump for the collection of any incidental spills. The pad was designed to contain the full volume of all liquids, including drilling fluid, fuel, and lubricating oil, that are in tanks and containers on the facility.

8. The Application includes technical reports, seismic data, and information regarding the geology and existing producing oil wells of the Upper Sunniland Formation, which Kanter filed for the purpose of demonstrating an indicated likelihood of the presence of oil at the proposed site.

9. The third Request for Additional Information (RAI) did not request additional information regarding the indicated likelihood of the presence of oil at the proposed site. After it submitted its response to the third RAI, Kanter notified the Department of its belief that additional requests were not
authorized by law. As a result, the Department completed the processing of the Application without additional RAI’s.

10. On November 16, 2016, the Department entered its Notice of Denial of the Oil and Gas Drilling Permit. The sole basis for denial was that Kanter failed to provide information showing a balance of considerations in favor of issuance pursuant to section 377.241.1/

11. There was no assertion that the Application failed to meet any standard established by applicable Department rules, Florida Administrative Code Chapters 62C-25 through 62C-30. In particular, the parties included the following stipulations of fact in the Joint Prehearing Stipulation which are, for purposes of this proceeding, deemed as established:

8. The structure intended for the drilling or production of Kanter’s exploratory oil well is not located in any of the following: a municipality; in tidal waters within 3 miles of a municipality; on an improved beach; on any submerged land within a bay, estuary, or offshore waters; within one mile seaward of the coastline of the state; within one mile seaward of the boundary of a local, state or federal park or an aquatic or wildlife preserve; on the surface of a freshwater lake, river or stream; within one mile inland from the shoreline of the Gulf of Mexico, the Atlantic Ocean or any bay or estuary; or within one mile of any freshwater lake, river or stream.

9. The location of Kanter’s proposed oil well is not: within the corporate limits of any municipality; in the tidal waters of the state, abutting or immediately adjacent to
the corporate limits of a municipality or within 3 miles of such corporate limits extending from the line of mean high tide into such waters; on any improved beach, located outside of an incorporated town or municipality, or at a location in the tidal waters of the state abutting or immediately adjacent to an improved beach, or within 3 miles of an improved beach extending from the line of mean high tide into such tidal waters; south of 26°00'00" north latitude off Florida’s west coast and south of 27°00'00" north latitude off Florida’s east coast, within the boundaries of Florida’s territorial seas as defined in 43 U.S.C. 1301; north of 26°00'00" north latitude off Florida’s west coast to the western boundary of the state bordering Alabama as set forth in s. 1, Art. II of the State Constitution; or north of 27°00'00" north latitude off Florida’s east coast to the northern boundary of the state bordering Georgia as set forth in s. 1, Art. II of the State Constitution, within the boundaries of Florida’s territorial seas as defined in 43 U.S.C. 1301.

19. The proposed oil well site does not contain Florida panther habitat and is located outside of the primary and secondary habitat zones for the Florida panther.

21. There are no recorded archaeological sites or other historic resources recorded within the area of the proposed oil well site.

29. Kanter submitted a payment of $8,972.00 for its oil and gas permit application on June 30, 2016 pursuant to Rule 62C-26.002(5)(c), F.A.C.

30. Kanter’s application includes sufficient information and commitments for performance bonds and securities. DEP and Intervenors do not claim that the
application lacks the information required in rule 62C-26.002, F.A.C.

31. Kanter’s application includes an organization report that satisfies the requirements of rule 62C-26.003(3), F.A.C.

32. Kanter’s engineering aspects of the site plan for the proposed project site, are appropriate.

33. Kanter’s survey submitted to DEP in support of its application includes a suitable location plat which meets the minimum technical standards for land surveys.

34. Kanter’s application includes an appropriate description of the planned well completion.

35. DEP and Intervenors do not claim that the drilling application lacks the information required by rule 62C-26.003, F.A.C. Kanter’s Application proposes using existing levees to provide access to the proposed Kanter well site. Kanter did not propose to construct additional roads for access.

36. Kanter’s proposed well site is located 332 feet from the L67-A levee, which serves as a roadway for trucks used to perform operations and maintenance on the levees and canals in the area.

37. Kanter’s application does not lack any information required by DEP with respect to the location of roads, pads, or other facilities; nor does it lack any information regarding the minimization of impacts with respect to the location of roads.

38. DEP and Intervenors do not contend that the permit should be denied based upon the proposed “spacing” of the well, or drilling
unit, as that term is used in rule 62C-26.004, F.A.C.

39. Kanter’s application includes appropriate plans for the construction of mud tanks, reserve pits, and dikes. Kanter agrees to a reasonable permit condition requiring that if water is to be transported on-site, that it will add additional tanks for the purpose of meeting water needs that would arise during the drilling process.

40. Kanter’s design of the integrated casing, cementing, drilling mud, and blowout prevention programs is based upon sound engineering principles, and takes into account all relevant geologic and engineering data and information. Kanter’s proposed casing plan includes an additional casing string proposed in its response to DEP’s Third Request for Additional Information. This casing plan meets or exceeds the requirements of 62C-27.005, F.A.C.

41. Kanter’s proposed casing and cementing program, as modified, meets or exceeds all applicable statutory and rule criteria. [2/]

42. Kanter’s response and documents provided in response to DEP’s 3rd RAI satisfactorily resolved DEP’s concern regarding the risk of passage of water between different confining layers and aquifers resulting from the physical act of drilling through the layers of water and the intervening soil or earth.

43. Kanter’s application includes a sufficient lost circulation plan.

44. Kanter’s application is not deficient with respect to specific construction requirements which are intended to prevent subsurface discharges.
45. Kanter’s drilling fluids plan is appropriate and is not deficient.

46. Kanter’s blowout prevention equipment and procedures are appropriate and are not deficient.

47. Kanter’s plans for blowout prevention are not insufficient.

48. Kanter’s proposed oil pad is above the 100 year flood elevation and under normally expected circumstances would not be inundated by water if constructed as proposed in Kanter’s application.

49. Kanter’s application includes a Hydrogen Sulfide Safety Plan that includes standards which are consistent with the onshore oil and gas industry standards set forth in the American Petroleum Institutes’ Recommended Practice.

50. DEP and Intervenors do not claim any insufficiencies with respect to Kanter’s Hydrogen Sulfide Gas Contingency Plan, the sufficiency of secondary containment, its construction plans for a protective berm around the drilling site and storage tank areas of sufficient height and impermeability to prevent the escape of pad fluid, its pollution prevention plan, its safety manual, or its spill prevention and cleanup plan.

51. DEP and Intervenors do not contend that the permitting of the well would violate section 377.242(1), F.S., regarding permits for the drilling for, exploring for, or production of oil, gas, or other petroleum products which are to be extracted from below the surface of the land only through the well hole(s).

52. DEP and Intervenors do not contend that Kanter’s application violates the applicable rule criteria for oil and gas permitting set
forth in Chapters 62C-25 through 62C-30, Florida Administrative Code.

12. In addition to the foregoing, Kanter is not seeking or requesting authorization to perform “fracking,” and has agreed to a permit condition that would prohibit fracking.

13. As a result of the foregoing, the parties have agreed that the Application meets or exceeds all criteria for an exploratory oil well permit under chapters 62C-25 through 62C-30.

The Property

14. Kanter owns two parcels of land totaling 20,000 acres in the area of the proposed Well Site: a northern parcel consisting of approximately 11,000 acres and a southern parcel consisting of approximately 9,000 acres. Kanter assembled its holdings through a series of acquisitions by deeds from 1975 to 1996. The Well Site is to be located within the southern parcel.

15. On August 7, 1944, Kanter’s predecessor in title, Dallas Investment Co., acquired by tax deed all interests in a parcel within the 9,000-acre southern parcel described as “All Section 23 Township 51 South, Range 38 East, 640 Acres,” including, without reservation, the oil, gas, minerals, and phosphate. The evidence of title submitted as part of the Application indicates that a “Kanter” entity first became
possessed of rights in Section 23 in 1975. By virtue of a series of transactions extending into 1996, Kanter currently holds fee title to all surface rights, and title to all mineral rights, including rights to oil, gas, and other mineral interests, within Section 23 Township 51 South, Range 38 East. The Well Site specified in the Application is within Section 23, Township 51 South, Range 38 East.

16. Kanter’s property is encumbered by a Flowage Easement that was granted to the Central and Southern Flood Control District in 1950, and is presently held by the South Florida Water Management District (SFWMD). The Flowage Easement guarantees Kanter access to the entire easement property “for the exploration or drilling for, or the developing, producing, storing or removing of oil, gas or other . . . in accordance with sound engineering principles.”

17. Kanter has the legal property right to locate and drill the well, and the exploratory well is consistent with Kanter’s ownership interest.

18. The Well Site is located in a 160-acre (quarter section) portion of the 640-acre tract described above, and is within a “routine drilling unit,” which is the block of land surrounding and assigned to a well. Fla. Admin. Code R. 62C-25.002(20) and 62C-25.002(40).
19. The Kanter property, including the Well Site, is in the historic Everglades. Before efforts to drain portions of the Everglades for development and agricultural uses, water flowed naturally in a southerly direction through land dominated by sawgrass and scattered tree islands. The tree islands were generally shaped by the direction of the water flow.

20. Beginning as early as the late 1800s, dramatically increasing after the hurricane of 1947, and extending well into the 1960s, canals, levees, dikes, and channels were constructed to drain, impound, or reroute the historic flows. Those efforts have led to the vast system of water control structures and features that presently exist in south Florida.

21. The Well Site, and the Kanter property as a whole, is located in Water Conservation Area (WCA)-3. WCA-3 is located in western Broward County and northwestern Miami-Dade County. It was constructed as part of the Central and Southern Florida Flood Control project authorized by Congress in 1948, and was created primarily for flood control and water supply.

22. In the early 1960s, two levees, L67-A and L67-C, were constructed on a line running in a northeast to southwest direction. When constructed, the levees separated WCA-3 into WCA-3A to the west and WCA-3B to the southeast. The Well Site is in WCA-3A.3/
23. The area between L67-A and L67-C, along with a levee along the Miami Canal, is known as the “Pocket.” There is no water control in the Pocket. Although there is a structure at the south end of the Pocket, it is in disrepair, is rarely -- if ever -- operated, and may, in fact, be inoperable.

24. The Well Site is located within the Pocket, on the southern side of L67-A.

25. L67-A and L67-C, and their associated internal and external canals, have dramatically disrupted sheet flow, altered hydrology, and degraded the natural habitat in the Pocket. Water inputs and outputs are entirely driven by rainfall into the Pocket, and evaporation and transpiration from the Pocket. From a hydrologic perspective, the Pocket is entirely isolated from WCA-3A and WCA-3B.

26. The Pocket is impacted by invasive species, which have overrun the native species endemic to the area and transformed the area into a monoculture of cattails. Vegetation that grows in the Pocket dies in the Pocket. Therefore, there is a layer of decomposing vegetative muck, ooze, and sediment from knee deep to waist deep in the Pocket, which is atypical of a functioning Everglades system.

27. L67-A and L67-C, and their associated internal and external canals, impede wildlife movement, interfering with or preventing life functions of many native wildlife species.
28. The proposed Well Site, and the surrounding Kanter property, is in a rural area where future residential or business development is highly unlikely. The property is removed from urban and industrial areas and is not known to have been used for agriculture.

29. The Department has previously permitted oil wells within the greater Everglades, in areas of a more pristine environmental nature, character, and location than the Pocket. The Raccoon Point wellfield is located 24 miles west of the Proposed Project Site within the Big Cypress National Preserve. It is within a more natural system and has not undergone significant hydrologic changes such as the construction of canals, levees, ditches, and dikes and, therefore, continues to experience a normal hydrologic flow. Mr. Gottfried testified that at Raccoon Point, “you can see the vegetation is maintaining itself because the fact that we don’t have levees, ditches canals, dikes, impacting the area. So you have a diversity of plant life. You have tree islands still. You have the normal flow going down.” The greater weight of evidence shows that the Kanter Well Site is far less ecologically sensitive than property at Raccoon Point on which the Department has previously permitted both exploration and production wells.
The Biscayne Aquifer

30. The Biscayne Aquifer exists in almost all of Miami-Dade County, most of Broward County and a portion of the southern end of Palm Beach County. It is thickest along the coast, and thinnest and shallowest on the west side of those counties. The western limit of the Biscayne Aquifer lies beneath the Well Site. The Biscayne Aquifer is a sole-source aquifer and primary drinking water source for southeast Florida.

31. A network of drainage canals, including the L-30, L-31, L-33, and Miami Canals, lie to the east of WCA-3B, and east of the Well Site. Those canals penetrate into the substratum and form a hydrologic buffer for wellfields east of the Well Site, including that operated by Miramar, and isolate the portions of the Biscayne Aquifer near public wellfields from potential impacts originating from areas to their west. The canals provide a “much more hydraulically available source” of water for public wellfields than water from western zones of the Biscayne Aquifer, and in that way create a buffer between areas on either side of the canals.

32. The Pocket is not a significant recharge zone for the Biscayne Aquifer. There is a confining unit comprised of organic soils, muck, and Lake Flint Marl separating the Pocket and the Well Site from the Fort Thompson formation of the Biscayne Aquifer. There is a layer of at least five feet of
confining muck under the L67-A levee in the area of the Well Site, a layer that is thicker in the Pocket. The Well Site is not within any 30-day or 120-day protection zones in place for local water supply wells.

33. The fact that the proposed well will penetrate the Biscayne Aquifer does not create a significant risk of contamination of the Biscayne Aquifer. The drilling itself is no different than that done for municipal disposal wells that penetrate through the aquifer much closer to areas of water production than is the Well Site. The extensive casing and cementing program to be undertaken by Kanter provides greater protection for the well, and thus for the aquifer, than is required by the Department’s rules. A question as to the “possibility” that oil could get into the groundwater was answered truthfully in the affirmative “in the definition of possible.” However, given the nature of the aquifer at the Well Site, the hydrological separation of the Well Site and well from the Biscayne Aquifer, both due to the on-site confining layer and to the intervening canals, the degree of casing and cementing, and the full containment provided by the pad, the testimony of Mr. Howard that “it would be very difficult to put even a fairly small amount of risk to the likelihood that oil leaking at that site might possibly actually end up in a well at Miramar” is accepted.
The Sunniland Formation

34. The Sunniland Formation is a geologic formation which exists in a region of South Florida known as the South Florida Basin. It is characterized by alternating series of hydrocarbon-containing source rock, dolomite, and limestone of varying porosity and permeability and evaporite anhydrite or mudstone seal deposits. It has Upper Sunniland and Lower Sunniland strata, and generally exists at a depth of up to 12,000 feet below land surface (bls) in the area of the Well Site.

35. Underlying the Sunniland Formation is a formation generally referred to as the “basement.” The basement exists at a depth of 17,000-18,000 feet bls.

36. Oil is produced from organic rich carbonate units within the Lower Cretaceous Sunniland Formation, also known as the Dark Shale Unit of the Sunniland Formation. The oil produced in the Sunniland Formation is generally a product of prehistoric deposits of algae. Over millennia, and under the right conditions of time and pressure, organic material is converted to hydrocarbon oil. The preponderance of the evidence demonstrates that active generating source rock capable of producing hydrocarbons exists in the Sunniland Formation beneath the Kanter property.
37. The preponderance of the evidence also indicates that the oil generated in the Sunniland Formation is at a sufficient depth that it is preserved from microbial degradation, which generally occurs in shallower reservoirs.

38. The Upper Sunniland Formation was formed in the Cretaceous geological period, between 106 and 100 million years ago. Over that period, sea levels rose and fell dramatically, allowing colonies of rudists (a now extinct reef-building clam) and oysters to repeatedly form and die off. Over time, the colonies formed bioherms, which are reef-like buildups of shell elevated off of the base of the sea floor. Over millennia, the bioherms were exposed to conditions, including wave action and exposure to air and rainwater, that enhanced the porosity of the component rudist and oyster shell. Those “patch reefs” were subsequently buried by other materials that formed an impermeable layer over the porous rudist and oyster mounds, and allowed those mounds to become “traps” for oil migrating up from lower layers.

39. A trap is a geological feature that consists of a porous layer overlain by an impervious layer of rock that forms a seal. A trap was described, simplistically, as an upside down bowl. Oil, being lighter than water, floats. As oil is generated in source rock, it migrates up through subterranean water until it encounters a trapping formation with the ability
to create a reservoir, and with an impervious layer above the porous layer to seal the trap and prevent further migration, thus allowing the “bowl” to fill. The reservoir is the layer or structure with sufficient porosity and permeability to allow oil to accumulate with its pores. The thickness of the layer determines the volume of oil that the reservoir is capable of retaining.

40. Although rudist mounds are generally considered to be more favorable as traps due to typically higher porosity, oyster mound traps are correlated to producing wells in the Sunniland Formation and are primary producers in the Felda field and the Seminole field.

41. The Lower Sunniland Formation is a fractured carbonate stratum, described by Mr. Aldrich as a rubble zone. It is not a traditional structural trap. Rather, it consists of fractured and crumbling rock thought to be created by basement shear zones or deep-seated fault zones. It has the same source rock as the Upper Sunniland. There is little information on traps in the Lower Sunniland, though there are two fields that produce from that formation.

42. A “play” is a group of prospects or potential prospects that have the same source rock, the same reservoir rock, the same trap style, and the same seal rock to hold in the hydrocarbons. The producing oil fields in the Sunniland
Formation, including Raccoon Point, Sunniland, Felda, West Felda, and Lake Trafford are part of a common play known as the Sunniland Trend.  

43. The Sunniland Trend is an area of limestone of greater porosity within the Sunniland Formation, and provides a reasonable extrapolation of areas that may be conducive to oil traps. The Sunniland Trend extends generally from Manatee County on the west coast of Florida southeasterly into Broward County and the northwestern portion of Miami-Dade County on the east coast of Florida. The trend corresponds to the ancient Cretaceous shoreline where rudist and oyster bioherms formed as described above.

44. In 2003, the “Mitchell-Tapping” report, named after the husband and wife team, identified two separate trends within the Sunniland Trend, the rudist-dominant West Felda Trend, and the more oyster-based Felda Trend. Both are oil-producing strata. The Felda Trend is more applicable to the Kanter property.

45. Throughout the Sunniland Trend, hydrocarbon reservoirs exist within brown dolomite deposits and rudist and oyster mounds. Dolomite is a porous limestone, and is the reservoir rock found at the productive Raccoon Point oil wellfield. The
evidence indicates that a brown dolomite layer of approximately 20 feet underlies the Well Site, and extends in all directions from the Well Site.

46. A preponderance of the evidence indicates that the Kanter property, including the Well Site, is within the Sunniland Trend and its Felda Trend subset.\(^4\)

47. Oil produced from wells in the Sunniland Trend is typically thick, and is not under pressure. The oil does not rise through a bore hole to the surface, but must be pumped.

48. The Raccoon Point Field, which is the closest productive and producing wellfield to the proposed Well Site, is located approximately 24 miles to the west of the Well Site, within the Sunniland Trend. Raccoon Point contains numerous well sites, of which four or five are currently producing, and has produced in the range of 20 million barrels of oil since it began operation in the late 1970s.

49. Cumulative production of oil from proven fields in the South Florida Basin, including fields in the Sunniland Formation, is estimated to be in excess of 160 million barrels.

50. Estimates from the U.S. Geological Service (USGS) indicate that 25 new fields capable of producing five million barrels of oil each are expected to be found within the Lower Cretaceous Shoal Reef Oil Assessment Unit, which extends into
the Kanter property. Estimates of the potential reserves reach as high as an additional 200 million barrels of oil.

The Dollar Bay Formation

51. Another formation that has potential for oil production is the Lower Cretaceous Dollar Bay Formation, also in the South Florida Basin. The Dollar Bay Formation exists beneath the Kanter property at a shallower depth than the Sunniland Formation, generally at a depth of 10,000 feet in the vicinity of the Well Site. Most of the Dollar Bay prospects are on the east side of the South Florida Basin. Most of the wells in the South Florida Basin are on the west side. Thus, there has not been much in the way of exploration in the Dollar Bay Formation, so there is a lack of data on traps.

52. Dollar Bay has been identified as a known oil-bearing play by the USGS. It is a self-source play, so the source comes from the Dollar Bay Formation itself. Dollar Bay exists both as potential and mature rock. It has known areas of very high total organic content (TOC) source rock; logged reservoir in the formation; and seal rock. There have been three oil finds in the Dollar Bay formation, with at least one commercial production well.

53. Kanter will have to drill through the Dollar Bay Formation to get to the Upper Sunniland formation, thus allowing for the collection of information as to the production potential
of the prospect. Although Dollar Bay is not generally the main “target” of the Permit, its potential is not zero. Thus, consideration of the Dollar Bay Formation as a factor in the calculation of risk/success that goes into the decision to drill an exploratory well is appropriate.

Initial Exploratory Activities

54. In 1989, Shell Western E&P, Inc. (Shell), conducted extensive seismic exploration in south Florida. Among the areas subject to seismic mapping were two lines -- one line of 36,000 feet mapped along the L67-A levee, directly alongside the Well Site, and the other of approximately 10 miles in length along the Miami Canal levee. The lines intersect on the Kanter property just north of the Well Site.

55. The proposed exploration well is proposed to extend less than 12,000 feet deep. The seismic mapping performed by Shell was capable of producing useful data to that depth. The seismic methodology utilized by Shell produced data with a high degree of vertical and spatial resolution. Given its quality, the Shell data is very reliable.

56. Shell did not use the seismic data generated in the 1980s, and ultimately abandoned activity in the area in favor of larger prospects, leaving the smaller fields typical of south Florida for smaller independent oil companies.
57. The Shell seismic data was purchased by Seismic Exchange, a data brokerage company.

58. In 2014, Kanter purchased the seismic data from Seismic Exchange for the lines that ran through its property. With the purchase, Kanter received the original field tapes, the support data, including surveyors’ notes and observer sheets which describe how the data was acquired, and the recorded data.

59. As a result of advances in computer analysis since the data was collected, the seismic data can be more easily and accurately evaluated.

60. It is not unusual for companies to make decisions on whether to proceed with exploration wells with two lines of seismic data.

61. Mr. Lakin reviewed the data, and concluded that it showed a very promising area in the vicinity of the L67-A levee that was, in his opinion, sufficient to continue with permitting an exploratory oil well. Mr. Lakin described the seismic information in support of the Application as “excellent data,” an assessment that is well-supported and accepted.

62. Mr. Pollister reviewed the two lines of seismic data and opined that the information supports a conclusion that the site is a “great prospect” for producing oil in such quantities as to warrant the exploration and extraction of such products on a commercially profitable basis.
Seismic Data Analysis

63. The seismic lines purchased by Kanter consist of line 970, which runs southwest to northeast along the L67-A levee, and a portion of line 998, which runs from northwest to southeast along the Miami Canal levee. The lines intersect at the intersection of the two levees.

64. The data depicts, among others, the seismic reflection from the strata of the Sunniland Trend, and the seismic reflection from the basement.

65. The depiction of the Sunniland Trend shows a discernable rise in the level of the strata, underlain by a corresponding rise in the basement strata. This rise is known as an anticline.

66. An anticline is a location along a geologic strata at which there is an upheaval that tends to form one of the simplest oil traps that one can find using seismic data. In the South Florida Basin, anticlines are typically associated with mounded bioherms.

67. A “closed structure” is an anticline, or structural high, with a syncline, or dip, in every direction. A closed structure, though preferable, is not required in order for there to be an effective trap.

68. Most of the Sunniland oil fields do not have complete closure. They are, instead, stratigraphic traps, in which the
formation continues to dip up and does not “roll over.” Where the rock type changes from nonporous to porous and back to nonporous, oil can become trapped in the porous portion of the interval even without “closure.” Thus, even if the “bowl” is tilted, it can still act as a trap. Complete closure is not necessary in much of the Sunniland Trend given the presence of an effective anhydrite layer to form an effective seal.5/ 

69. The seismic data of the Kanter property depicts an anticline in the Sunniland Formation that is centered beneath the Well Site at a depth in the range of 12,000 feet bls. Coming off of the anticline is a discernable syncline, or dip in the underlying rock. Applying the analogies used by various witnesses, the anticline would represent the top of the inverted bowl, and the syncline would represent the lip of the bowl. The evidence of the syncline appears in both seismic lines. The Shell seismic data also shows an anhydrite layer above the Sunniland Formation anticline.

70. The same anticline exists at the basement level at a depth of 17,000 to 18,000 feet bls. The existence of the Sunniland formation anticline supported by the basement anticline, along with a thinning of the interval between those formations at the center point, provides support for the data reliably depicting the existence of a valid anticline. A basement-supported anticline is a key indicator of an oil trap,
and is a feature commonly relied upon by geophysicists as being indicative of a structure that is favorable for oil production.

71. The seismic data shows approximately 65 feet of total relief from the bottom to the top of the anticline structure, with 50 feet being closed on the back side. The 50 feet of closed anticline appears to extend over approximately 900 acres.

72. There is evidence of other anticlines as one moves northeast along line 970. However, that data is not as strong as that for the structure beneath the Well Site. Though it would constitute a "lead," that more incomplete data would generally not itself support a current recommendation to drill and, in any event, those other areas are not the subject of the permit at issue.

73. The anticline beneath the well site is a "prospect," which is an area with geological characteristics that are reasonably predicted to be commercially profitable. In the opinion of Mr. Lakin, the prospect at the location of the proposed Well Site has "everything that I would want to have to recommend drilling the well," without a need for additional seismic data. His opinion is supported by a preponderance of the evidence, and is credited.

74. Confirmation of the geology and thickness of the reservoir is the purpose of the exploratory well, with the expectation that well logs will provide such confirmation.
Risk Analysis

75. Beginning in the 1970s, the oil and gas industry began to develop a business technique for assessing risk, i.e., the chance of failure, to apply to decisions being made on drilling exploration wells. Since the seminal work by Bob McGill, a systematic science has developed.

76. In 1992, a manual was published with works from several authors.

77. The 1992 manual included a methodology developed by Rose & Associates for assessing risk on prospects. The original author, Pete Rose, is one of the foremost authorities on exploration risk. The Rose assessment method is a very strong mathematical methodology to fairly evaluate a prospect. The Rose method takes aspects that could contribute to finding an oil prospect, evaluates each element, and places it in its perspective. The Rose prospect analysis has been refined over the years, and is generally accepted as an industry standard.

78. The 1992 manual also included a methodology for assessing both plays and prospects developed by David White. The following year, Mr. White published a separate manual on play and prospect analysis. The play and prospect analysis is similar to the Rose method in that both apply mathematical formulas to factors shown to be indicative of the presence of oil. Play and prospect analysis has been applied by much of the
oil and gas industry, is used by the USGS in combining play and prospect analysis, and is being incorporated by Rose & Associates in its classes. The evidence is convincing that the White play and prospect analysis taught by Mr. Aldrich is a reasonable and accepted methodology capable of assessing the risk inherent in exploratory drilling.

79. Risk analysis for plays and prospects consists of four primary factors: the trap; the reservoir; the source; and preservation and recovery. Each of the four factors has three separate characteristics. Numeric scores are assigned to each of the factors based on seismic data; published maps and materials; well data, subsurface data, and evidence from other plays and prospects; and other available information. Chance of success is calculated based on the quantity and quality of the data supporting the various factors to determine the likelihood that the prospect will produce flowable hydrocarbons.

80. The analysis and scoring performed by Mr. Aldrich is found to be a reasonable and factually supported assessment of the risk associated with each of the prospects that exist beneath the proposed Well Site and that are the subject of the Application. However, Mr. Aldrich included in his calculation an assessment of the Lower Sunniland Formation. The proposed well is to terminate at a depth of 11,800 feet bls, which is within the Upper Sunniland, but above the Lower Sunniland.
Thus, although the Lower Sunniland would share the same source rock, the exploration well will not provide confirmation of the presence of oil. Therefore, it is more appropriate to perform the mathematical calculation to determine the likelihood of success without consideration of the Lower Sunniland prospect.

81. To summarize Mr. Aldrich’s calculation, he assigned a four-percent chance of success at the Well Site for the Dollar Bay prospect. The assignment of the numeric scores for the Dollar Bay factors was reasonable and supported by the evidence.

82. Mr. Aldrich assigned a 20-percent chance of success at the Well Site for the Upper Sunniland play. The assignment of the numeric scores for the Upper Sunniland factors was reasonable and supported by the evidence.

83. In order to calculate the overall chance of success for the proposed Kanter exploratory well, the assessment method requires consideration of the “flip side” of the calculated chances of success, i.e., the chance of failure for each of the prospects. A four-percent chance of success for Dollar Bay means there is a 96-percent (0.96) chance of failure, i.e., that a commercial zone will not be discovered; and with a 20-percent chance of success for the Upper Sunniland, there is an 80-percent (0.80) chance of failure. Multiplying those factors, i.e., .96 x .80, results in a product of .77, or 77 percent, which is the chance that the well will be completely dry in all
three zones. Thus, under the industry-accepted means of risk assessment, the 77-percent chance of failure means that there is a 23-percent chance of success, i.e., that at least one zone will be productive.

84. A 23-percent chance that an exploratory well will be productive, though lower than the figure calculated by Mr. Aldrich,\textsuperscript{8/} is, in the field of oil exploration and production, a very high chance of success, well above the seven-percent average for prospecting wells previously permitted by the Department (as testified to by Mr. Linero) and exceeding the 10- to 15-percent chance of success that most large oil companies are looking for in order to proceed with an exploratory well drilling project (as testified to by Mr. Preston). Thus, the data for the Kanter Well Site demonstrates that there is a strong indication of a likelihood of the presence of oil at the Well Site.

**Commercial Profitability**

85. Commercial profitability takes into account all of the costs involved in a project, including transportation and development costs.

86. Mr. Aldrich testified that the Kanter project would be commercially self-supporting if it produced 100,000 barrels at $50.00 per barrel. His testimony was unrebutted, and is accepted.
87. The evidence in this case supports a finding that reserves could range from an optimistic estimate of 3 to 10 million barrels, to a very (perhaps unreasonably) conservative estimate of 200 barrels per acre over 900 acres, or 180,000 barrels. In either event, the preponderance of the evidence adduced at the hearing establishes an indicated likelihood of the presence of oil in such quantities as to warrant its exploration and extraction on a commercially profitable basis. 9/

CONCLUSIONS OF LAW

Jurisdiction

88. The Division of Administrative Hearings has jurisdiction over the parties to and the subject matter of this proceeding. §§ 120.569 and 120.57, Fla. Stat. (2017).

Standing

89. As the applicant for the permit at issue, Kanter has standing to challenge the denial of its Application, and is a “party” by operation of law because it is the specifically named person whose substantial interests are being determined by the Department's denial of the permit. § 120.52(13)(a), Fla. Stat.; Ft. Myers Real Estate Holdings, LLC v. Dep’t of Bus. & Prof’l Reg., 53 So. 3d 1158, 1162 (Fla. 1st DCA 2011); W. Frank Wells Nursing Home v. Ag. for Health Care Admin., 27 So. 3d 73, 74 (Fla. 1st DCA 2009); Maverick Media Grp., Inc. v. Dep't of Transp., 791 So. 2d 491, 492 (Fla. 1st DCA 2001).
As to the Intervenors, both Miramar and Broward County were granted Intervenor status by separate Orders, each of which addressed the standing of the Intervenors. The Joint Pre-hearing Stipulation does not identify the standing of Intervenors as an issue of fact or law remaining for disposition. Paragraph 5.(d) of the Order of Pre-hearing Instructions provides that “[t]he failure to identify [in the Joint Pre-hearing Stipulation] issues of fact or law remaining to be litigated may constitute a waiver and elimination of those issues. See Palm Beach Polo Holdings, Inc. v. Broward Marine, Inc., 174 So. 3d 1037 (Fla. 4th DCA 2015).” As set forth in Palm Beach Polo Holdings:

any previous skirmishes or dust-ups or contentious pretrial issues become mostly irrelevant once the parties prepare and stipulate as to the final agreed-upon “executive summary” as to what the impending trial is about and the specific issues that remain on the table. The Pretrial Stipulation is surely one of the most coveted and effective pretrial devices enjoyed by the trial court and all involved parties. Cf. Broche v. Cohn, 987 So. 2d 124, 127 (Fla. 4th DCA 2008) (“A stipulation that limits the issues to be tried ‘amounts to a binding waiver and elimination of all issues not included.’” (quoting Esch v. Forster, 123 Fla. 905, 168 So. 229, 231 (Fla. 1936))).

Everyone connected with the trial - from witnesses unsure if they will ultimately be called to trial, to well-prepared and
efficient lawyers - benefits from a mandated and thereafter duly enforced Pretrial Stipulation.

The Pretrial Stipulation is a powerful blueprint that fully enables a well-run and fair trial. "'[I]t is the policy of the law to encourage and uphold stipulations in order to minimize litigation and expedite the resolution of disputes.'" Id. (quoting Spitzer v. Bartlett Bros. Roofing, 437 So. 2d 758, 760 (Fla. 1st DCA 1983)). "'Pretrial stipulations prescribing the issues on which a case is to be tried are binding upon the parties and the court, and should be strictly enforced.'" Id. (quoting Lotspeich Co. v. Neogard Corp., 416 So. 2d 1163, 1165 (Fla. 3d DCA 1982)).

Id. at 1038-1039.

91. As a result of the failure to raise Intervenors’ standing in the Joint Pre-hearing Stipulation, despite the issue having been disputed earlier in the proceeding, and since the issue was not raised during the evidentiary portion of the hearing until literally at the final on-the-record minute (see Transcript, Vol IX, 890:25 through 891:6), the issue is deemed to have been waived, and Intervenors are determined to have standing to proceed.

Burden of Proof

92. As the party seeking to demonstrate entitlement to the permit, Petitioner bears the burden of proving, by a preponderance of the evidence, that it satisfied all of the requirements for issuance of the Oil and Gas Permit, and was
entitled to receive the permit. § 120.57(1)(j), Fla. Stat.; Dep't of Banking & Fin., Div. of Sec. & Investor Prot. v. Osborne Stern & Co., 670 So. 2d 932, 934 (Fla. 1996); Fla. Dep't of Transp. v. J.W.C. Co., 396 So. 2d 778, 788 (Fla. 1st DCA 1981).

**Nature of the Proceeding**

93. This is a de novo proceeding, intended to formulate final agency action and not to review action taken earlier and preliminarily. Young v. Dep’t of Cmty. Aff., 625 So. 2d 831, 833 (Fla. 1993); Hamilton Cnty. Bd. of Cnty. Comm’rs v. Dep’t of Envtl. Reg., 587 So. 2d 1378, 1387 (Fla. 1st DCA 1991); McDonald v. Dep’t of Banking & Fin., 346 So. 2d 569, 584 (Fla. 1st DCA 1977).

94. There is no contention that the Application should be denied based on any failure to comply with the Department’s rules for oil and gas permitting set forth in chapters 62C-25 through 62C-30.

95. The only issue in dispute is whether the Application should be approved or denied based on the factors in section 377.241.

**Permitting Standards**

96. Section 377.241, entitled “Criteria for issuance of permits,” provides, in pertinent part, that:
The [DEP], in the exercise of its authority to issue permits as hereinafter provided, shall give consideration to and be guided by the following criteria:

(1) The nature, character and location of the lands involved; whether rural, such as farms, groves, or ranches, or urban property vacant or presently developed for residential or business purposes or are in such a location or of such a nature as to make such improvements and developments a probability in the near future.

(2) The nature, type and extent of ownership of the applicant, including such matters as the length of time the applicant has owned the rights claimed without having performed any of the exploratory operations so granted or authorized.

(3) The proven or indicated likelihood of the presence of oil, gas or related minerals in such quantities as to warrant the exploration and extraction of such products on a commercially profitable basis.

Section 377.241 has not changed in any material way since its enactment in 1961.

97. Upon the enactment of section 377.241 in 1961 (ch. 61-299, Laws of Fla.), the Legislature expressed its intent regarding the new law through a series of “whereas” clauses as follows:

WHEREAS, it is the intention of the owners of the fee simple title of lands at the time of granting undivided fractional oil, gas and mineral rights that their grantees should extract the oil, gas and minerals only through a well hole drilled in exploring for such products, and
WHEREAS, the owners of fee simple titles of lands in granting undivided fractional oil, gas and mineral rights did not intend that the exploration by grantee should be made by surface operations such as sifting of the sands, open pit mining by dragline or any type of operation which requires the movement of surface sands, dirt, rock, or minerals, except as such surface operations might be required in the actual drilling of oil wells to explore for such oil, gas and minerals, and

WHEREAS, the owners of fee simple titles to the surface rights in granting undivided fractional oil, gas and mineral rights had no intention that such grants should give their grantees the rights to unduly interfere with the potential surface development and use of such lands for farms, groves and ranches, or the building of homes, commercial buildings or other proper and appropriate use as might be indicated by the character or location of the land, and

WHEREAS, many thousands of oil, gas and mineral leases, deeds and reservations cloud the titles of surface landowners, having the effect of depressing the value of these lands to the owners of the fee and restricting and limiting the use and development of these lands, and there does not exist any system for the orderly determination as to whether drilling or surface exploration should be permitted, which condition is a serious handicap to surface ownership and development of these lands, and the legislature deems it to be in the public interest that these conditions should be remedied under the state’s power of regulation and conservation as hereinafter provided, and

WHEREAS, in addition to the recitations in the paragraphs of the preamble above it in the public interest, particularly in respect to general community, agricultural,
industrial and residential development, that
the surface of lands should not be subjected
to unrestricted and unregulated mining
operations under the circumstances
recited[.]

98. The “whereas clauses” are a valid and reliable
expression of the intent of the Legislature in passing the act.
See S. Fla. Racing Ass'n v. State, Dep't of Bus. & Prof'l Reg.,
Div. of Pari-Mutuel Wagering, 201 So. 3d 57, 65 (Fla. 3d DCA
2015) (“Lastly, the whereas clauses in the 1980 enactment evince
a legislative intent to allow a struggling entity to remain in
business during the summer, thereby increasing tax revenues and
tourism.”); Vetter v. Dep't of Bus. & Prof'l Reg., Elec.
Contractors' Licensing Bd., 920 So. 2d 44, 47 (Fla. 2d DCA
2005) (“The preamble to the law, ch. 71-115, at 304, Laws of
Fla., explained the legislature's intent: WHEREAS, it is the
policy of the State of Florida to encourage and contribute
. . . .”)

99. The whereas clauses demonstrate an overriding
legislative concern with the effect of divided mineral interests
on rights of surface ownership, and the desire that extraction
of oil would not “unduly interfere with the potential surface
development and use of such lands for farms, groves and ranches,
or the building of homes, commercial buildings or other proper
and appropriate use as might be indicated by the character or
location of the land.”
100. As established by Judge D. R. Alexander, “[t]he Department issues permits under chapter 377 to persons with a lawful right to drill. When enacted in 1961, the overall purpose of the statute was to institute a permit process in order to protect landowners from undue burdens from mineral leases.” (citation omitted). Thomas G. Mosher and Matthew Schwartz v. Dan A. Hughes Co. and Dep't of Envtl. Prot., Case Nos. 13-4254 and 13-4920 (DOAH June 3, 2014; Application withdrawn by Stipulation July 17, 2014; DEP July 17, 2017).

101. The law, as construed, requires the Department to “balance” the interests set forth in section 377.241, including environmental interests. Coastal Petroleum Co. v. Fla. Wildlife Fed'n, Inc., 766 So. 2d 226, 228 (Fla 1st DCA 1999).

102. The most comprehensive analysis of section 377.241 criteria is set forth by the Department in its Final Order in Florida Wildlife Federation, Inc. v. Department of Environmental Protection and Coastal Petroleum Co., Case Nos. 96-4222 and 96-5038, ¶ 35 (DOAH Apr. 8, 1998; DEP May 22, 1998)(Florida Wildlife). As established by the Department:

   By its own terms as well as in the context of other sections of chapter 377, section 377.241 charges the Department with balancing the interests of the fee simple owner against the interests of the mineral rights lessee. The title of the enacting legislation describes the statute as “relating to,” among other matters, “the protection of surface rights of landowners"
and "providing criteria . . . to issue permits for drilling or exploring and extracting through well holes." Ch. 61-299, at 591. The preamble also refers to concerns of "the owners of the fee simple title" that mineral rights grantees not "unduly interfere with" the fee simple owners' use of their lands and "deems it to be in the public interest" to provide a remedy for the absence of "any system for the orderly determination" as to whether drilling or other operations should be permitted. Ch. 61-299, at 592, Laws of Fla.

Florida Wildlife at 5.

Section 377.241(1)

103. As to the purpose of section 377.241(1), "[t]he first criterion to be considered by the Department is the 'nature, character, and location of the lands involved.' This criterion focuses on the interests of the fee simple owner." (citation omitted). Id. at 6. "Moreover, as noted above, the overall purpose of the statute was to institute a permit process in order to protect landowners from undue burdens from mineral leases." Id. at 7.

104. This case does not concern a dispute between the legal interests of a fee simple owner of the property and an owner of severed mineral rights.

105. The Well Site is owned in fee simple by Kanter, with no severance or alienation of mineral rights. The Well Site is subject only to a Flowage Easement that itself contains a reservation to the property owner of all oil, gas, or other
mineral rights on or beneath the property. The Flowage Easement also guarantees the owners of the property access to the easement property “for the exploration or drilling for, or the developing, producing, storing or removing of oil, gas, or other minerals . . . in accordance with sound engineering principles,” and provides that the Flowage Easement holder shall permit the reserved rights to be exercised so that oil, gas, and minerals may be developed, extracted, and removed from the property.

106. Given the unified title to the Well Site in Kanter, balancing of the interests of the fee simple owner against the interests of the mineral rights lessee is neither necessary nor appropriate.

107. The Department’s Florida Wildlife Final Order further provided that:

The “evil identified” by the legislature [in section 377.241] was the lack of a permitting process, leaving landowners under a threat that mineral rights lessees might “unduly interfere with” the “proper and appropriate use as might be indicated by the character or location of the land.” Ch. 61-299, at 592. The policies enunciated in Chapter 403 of the Florida Statutes and in Article II, Section 7(a) of the Florida Constitution, as discussed above, also suggest that the Department should consider lands and waters potentially impacted by pollution. Unruh, 669 So. 2d at 245 (construing related statutory provisions harmoniously).

Id. at 7.
108. Even if this case involved separate surface fee and mineral rights owners, the location and nature of the property, along with the Flowage Easement, virtually eliminates the probability that it could ever be improved or developed for farms, groves, or ranches, or for residential or business purposes.

109. The property upon which the Well Site is to be located has no special characteristics that would make it susceptible to pollution. Although the Well Site is in WCA-3, it is located in the Pocket, an area with existing road access that is hydrologically isolated from both surface and groundwater and is environmentally degraded and overrun with cattails. The area is far less likely to impact natural resources than other Department-permitted wells, notably those at Raccoon Point which exist in the Big Cypress National Preserve, in a far more ecologically intact area than here.

110. The greater weight of the evidence establishes that the potential for harmful discharges and the potential for harm to groundwater and public water supply are insignificant. In that regard, the Department admitted, in its Proposed Recommended Order, that “[t]he weight of evidence did not demonstrate that a spill is likely to occur or that if it occurred, it would pass through or migrate beyond the proposed liner.” However, the Department speculated that several events,
including some that could occur off-site, were not “impossible.” In no way can impossibility be the permitting standard, nor was there any suggestion that such a standard has ever been applied.

111. Furthermore, the project meets all regulatory criteria established in the Department’s rules, chapters 62C-25 through 62C-30. In that regard, Kanter has proposed measures that exceed the Department’s permitting criteria, notably its well casing and cementing program.

Sections 377.241(2)

112. The Department’s Final Order in Florida Wildlife establishes that:

the second and third criteria to be considered by the Department both address the interest of the owner of the mineral rights. The second criterion directs the Department to consider “the nature, type and extent of ownership of the applicant, including such matters as the length of time the applicant has owned the rights claimed without having performed any of the exploratory operations so granted or authorized.” § 377.241(2).

Id. at 8.

113. The primary consideration of section 377.241(2) is the balance between the legal interests of the fee simple owner versus the interests of the mineral rights owner. That balance is not necessary in this case since Kanter holds a unified interest in the property and its mineral rights.
114. The Department suggests that since Kanter held the Well Site property since 1975, the fact that the property was not made subject to exploration earlier than 2014 should weigh against issuance of the permit. In the Florida Wildlife Final Order, the applicant held a mineral rights lease to sovereign submerged lands owned by the State of Florida. The Final Order held that “the fact that for many years the applicant held its lease without exercising its exploration rights is expressly made relevant to the second criterion. This criterion weighs somewhat against issuance of the permit.” (citations omitted). Id. at 8-9. The Final Order also provides that “the applicant's mineral rights were unexercised over a long period, and are speculative.” Id. at 12.

115. The facts of this case lean against consideration of the length of time that Kanter owned the property as a basis for denial of the application. First, and most important, is the unified title to the surface fee and the mineral rights. Concerns that present themselves by the passage of time when there is a fee owner and a separate mineral rights lessee with rights to enter and potentially disrupt and interfere with surficial property rights and otherwise cloud title are not present here. In addition, Kanter’s ownership extends to 1975. The seismic data that confirmed the existence of subsurface features conducive to the presence of oil was not conducted
until 1989, and was not available outside of Shell until its later sale to Seismic Exchange. Once that data was purchased and reviewed by Mr. Lakin in 2014, the Application development proceeded quickly. Furthermore, Kanter’s mineral rights are not “speculative.” Rather, the likelihood of oil beneath the Well Site is substantial and supported by data.

116. As a result of the foregoing, there is neither a factual nor a legal basis for giving any weight to the fact that Kanter owns and has owned its property, including the Well Site, for any period of time.

117. Finally, the Department suggests that consideration of the Broward County comprehensive plan, which was not allowed for reasons set forth in separate orders, “would show that [Kanter] had unreasonably delayed its exploration of oil during a time that Broward County was planning for future development that may be adversely affected by the location of an oil well.” However, as set forth in the Florida Wildlife Final Order:

nothing in the language or history of the statute suggests that the Department should consider the applicant's motive. Instead, as discussed above, the statute charges the Department with balancing the interest of the landowner against the interest of the owner of mineral rights, looking to specific, relatively objective factors.
Section 377.241(3)

118. With regard to the third criterion for evaluation under section 377.241, the Final Order in Florida Wildlife establishes that:

Like the second criterion, the third criterion also evaluates the applicant's interest in oil and gas rights: “The proven or indicated likelihood of the presence of oil, gas or related minerals in such quantities as to warrant the exploration and extraction of such products on a commercially profitable basis.”

Id. at 9.

119. Section 377.241(3) requires consideration of whether there is an “indicated likelihood” of the presence of oil in commercially-profitable quantities. Subsection (3) does not require a guarantee. The preponderance of the evidence in this case establishes a strong indication of the presence of oil in quantities as to warrant the exploration for and extraction of oil on a commercially profitable basis. The risk assessment method used by Mr. Aldrich and Mr. Lakin is a reasonable and industry-accepted method of calculating the risk inherent in any exploration well. Based on reasonable mathematical assumptions, known geologic features, published materials from well-regarded public and private entities, and high-quality seismic data, the likelihood of the presence of oil at the Kanter Well Site
exceeds that generally considered for commercial exploration by industry standard, and far exceeds that established by past Department agency permitting action.

Conclusion

120. It is undisputed that Kanter satisfied all applicable rule criteria for oil and gas permitting set forth in chapters 62C-25 through 62C-30. The only disputed issue is whether a balancing of the three factors in section 377.241 weighs in favor of approval of the Application. Although “balancing policy interests is the province of the [Department]” [Id. at 12], the Department is nonetheless constrained by the evidence in this case, which establishes no reasonable basis in fact or law to deny the Application.

RECOMMENDATION

Based on the foregoing Findings of Fact and Conclusions of Law, it is RECOMMENDED that the Department of Environmental Protection enter a final order:

1. Approving the Application for Oil and Gas Drilling Permit No. OG 1366 with the conditions agreed upon and stipulated to by Petitioner, including a condition requiring that if water is to be transported on-site, it will add additional tanks for the purpose of meeting water needs that would arise during the drilling process, and a condition prohibiting fracking; and
2. Approving the application for Environmental Resource Permit No. 06-0336409-001.

DONE AND ENTERED this 10th day of October, 2017, in Tallahassee, Leon County, Florida.

E. GARY EARLY
Administrative Law Judge
Division of Administrative Hearings
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Filed with the Clerk of the Division of Administrative Hearings this 10th day of October, 2017.

ENDNOTES

1/ There was evidence that Mr. Linero prepared a notice of intent to issue the proposed permit several days before the Denial was issued. The undersigned agrees with the Department that such evidence is not indicative of the position of the agency, particularly in the context of a de novo proceeding, and also agrees that the unissued draft should be given no weight.

2/ Kanter proposes to cement the well bore and casing from the surface to approximately 100 feet below the underground source of drinking water, i.e., the Biscayne Aquifer. Additional cementing of the surface casing string and a packer on the casing string that runs through the boulder zone, a primary discharge zone for municipal disposal wells, is proposed. Mr. Howard was not aware of any comparable casing and cementing plan having been performed at any other well location. The proposal maximizes protection of the aquifers and exceeds regulatory requirements.
Some literature places the Pocket and Well Site in WCA-3B. The Pocket, and its levees, separate WCA-3A from WCA-3B. Regardless of the WCA designation, the Pocket is hydrologically disconnected from both.

The undersigned recognizes the contrary conclusions drawn by Mr. Preston, who is recognized as experienced and capable in the fields of oil exploration and risk assessment. Nonetheless, the testimony offered by Mr. Lakin, Mr. Aldrich, and Mr. Pollister, who are far more familiar with the South Florida Basin, and the supporting documentation relied upon by them, is found to be more persuasive and convincing that the Well Site lies atop the Sunniland Trend.

Mr. Preston identified Raccoon Point as having a stratigraphic component without proof, to his satisfaction, of structural closure. Despite his lack of knowledge of a trapping mechanism, Raccoon Point is a relatively large and amply producing field. Likewise, he agreed that with regard to a number of productive fields in the South Florida Basin and Sunniland Trend, “the literature recognizes [that] they don't have mappable closure in the reservoir section.”

No, not THAT Pete Rose.

The undersigned recognizes that the numeric criteria regarding features differed between Mr. Aldrich and Mr. Preston, sometimes significantly. However, given Mr. Aldrich’s familiarity and experience in the South Florida Basin, and his experience in risk assessment -- currently teaching the most recently updated iterations -- compared to Mr. Preston’s lack of any experience in the South Florida Basin (or in the United States), and the fact that his last course in prospecting risk analysis was taken in 2009, the undersigned concludes that Mr. Aldich’s assessment is more accurate and reliable.

Mr. Preston calculated a chance of success of 6.48 percent. Aside from the fact that 6.48 percent is very close to the seven percent chance that has warranted issuance of permits by the Department in the past, the calculations were based on application of numeric factors that were, in light of the evidence, unreasonably low. For example, Mr. Preston discounted the seismic evidence of a trapping formation and applied a value of .3 to that factor, less than the .5 to be applied to “unknown.” The evidence was persuasive that the seismic data depicted a formation strongly suggestive of the existence of an anticline, and in any event, the existence of seal rock created
a strong indication of stratigraphic closure. Thus, Mr. Aldrich’s testimony that the assignment of a .8 to the trap/closure component is more persuasive. With that single change alone, the chance of success as calculated by Mr. Preston, would increase to 17 percent, above the 10- to 15-percent threshold used by most companies to warrant drilling an exploratory well.

8/ Mr. Aldrich assigned a 16-percent chance of success at the Well Site for the Lower Sunniland play. The numeric scores for the Lower Sunniland factors were reasonable and supported by the evidence. If that figure were to be added into the calculation, and with a 16-percent chance of success for the Lower Sunniland equating to an 84-percent (0.84) chance of failure, then multiplying the factors for the three zones, i.e., .96 x .80 x .84, would result in a product of .65, or 65 percent, which is the chance that the well will be completely dry in all three zones, including the Lower Sunniland. Thus, under the industry-accepted means of risk assessment, if the Lower Sunniland were be included in the risk calculation, the chance of at least one of the three prospects being productive is 35 percent.

9/ There was a fair bit of discussion regarding the lack of an “economic analysis.” Aside from the issue of the ability to perform a meaningful economic analysis prior to receiving the results of the exploration well, and the evidence suggesting the Department had not previously required applicants to submit economic analyses with exploratory well permit applications, the evidence demonstrates that for Kanter to have submitted an “economic analysis” would have violated industry practice and standards. The Petroleum Reserve Management System consists of auditing standards which govern the methods for petroleum exploration companies to measure and report their petroleum reserves. Under those guidelines, oil companies are not allowed to develop any economic models with respect to prospective petroleum reserves that have not been proven. Although it is appropriate to estimate the size of a reserve, which Mr. Aldrich did, it is not appropriate to prepare an economic model demonstrating profitability or cost-effectiveness of the prospect until the results of the exploratory well are known.
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NOTICE OF RIGHT TO SUBMIT EXCEPTIONS

All parties have the right to submit written exceptions within 15 days from the date of this Recommended Order. Any exceptions to this Recommended Order should be filed with the agency that will issue the Final Order in this case.