



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Rick Scott  
Governor

Carlos Lopez-Cantera  
Lt. Governor

Jonathan P. Steverson  
Secretary

June 22, 2016

[choward@thecarolgroupinc.com](mailto:choward@thecarolgroupinc.com)

Ms. Carol Howard  
The Carol Group, Inc.  
208 Dal Hall Boulevard  
Lake Placid, Florida 33852

RE: Third Request for Additional Information  
Drilling Permit Application 1366  
Kanter Real Estate LLC, Kanter Well 23-2  
Broward County, Florida

Dear Ms. Howard:

You are receiving this correspondence as the agent for Kanter Real Estate, LLC, in connection with the Application for Permit to Drill received by the Florida Department of Environmental Protection's Oil and Gas Program in July 2015. The Department is also in receipt of the May 23, 2016 response to the second Request for Additional Information (RAI) and the application update dated June 15, 2016.

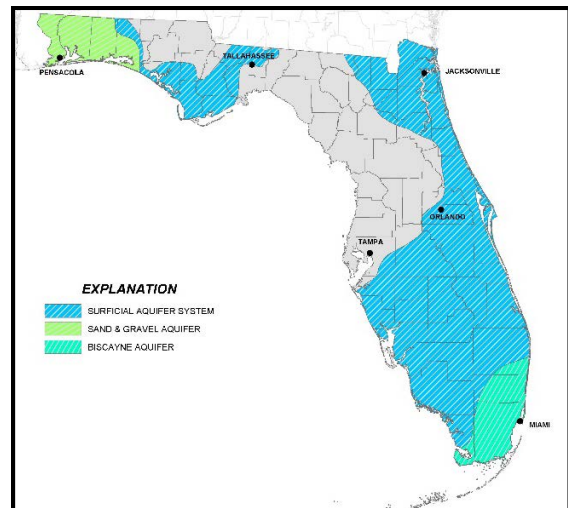
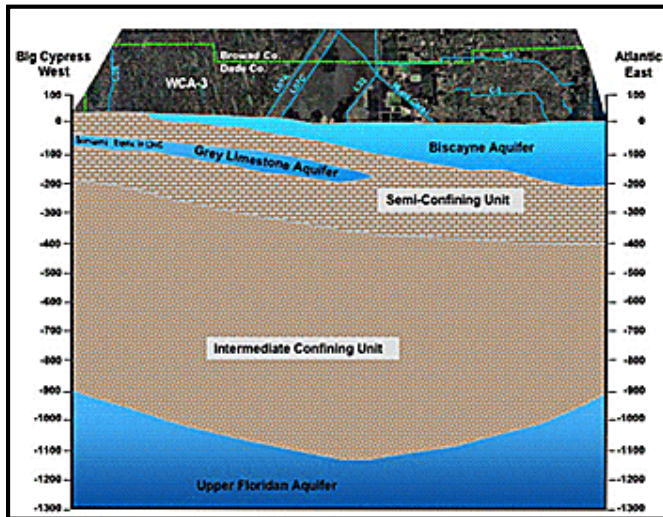
The Oil and Gas Program's review of the RAI response indicates that additional information is required for the Department to fully consider whether the applicant's proposal conforms to the requirements of Florida law. The Department's specific requests for information are enumerated below. Please be aware that the applicant may elect to not respond to any or all of the Department's requests, if the applicant believes the request or requests are not authorized by law or rule. [120.60(1), F.S.] In such case, the applicant may specifically direct the department to determine its action on the basis of information already provided, and failure to provide requested information will not automatically result in denial of the application for permit. Under Florida law, the department may only deny an application for an oil and gas permit for lawful cause, such as an inconsistency between the proposal and a specific applicable requirement in Department rule. [377.24(4), F.S.]

In addition to the Department's specific requests for additional information, the Department has enclosed comments from other agencies, including, the South Florida Water Management District, and Broward County. The Department provided these agencies with a copy of the application and the RAI Responses, and sought comments within these agencies' areas of expertise on matters that may pertain to the Department's regulatory criteria. These comments may also assist the applicant in identifying potentially-applicable legal requirements within these agencies' jurisdiction. The Department encourages the applicant to consider and respond to these comments, particularly where doing so may improve overall stakeholder understanding of the applicant's proposal.

## Request for Additional Information

### Background

Please refer to the discussion and figures in this background section in order to respond to the questions that follow. The extent of the shallow Biscayne Aquifer is virtually exclusive to Southeast Florida, including Broward County and the proposed site. It is the key source of drinking water in Broward and Dade Counties and is generally absent in Southwest Florida.



**Representative Diagram of Strata near Site**

**Key Surficial Aquifer Systems in Florida**

The diagram on the left suggests that the base of the Biscayne Aquifer is on the order of 50 feet below sea level (BSL) near the proposed site. The diagram also suggests the presence of another aquifer called the Grey Limestone Aquifer (GLA) within the Semi-Confining Unit (SCU) that underlies the Biscayne Aquifer.

The Upper Floridan Aquifer (UFA) is located below the Intermediate Confining Unit (ICU). The UFA exhibits artesian characteristics. Refer to the attached potentiometric surface diagram. At the proposed site, the potentiometric surface of the UFA is on the order of 50 feet. Basically, this means that water would rise to 50 feet above ground level in a casing directly connecting the UFA with the surface.

According to the attached wellbore that was provided by the applicant, the 24-inch conductor casing will be driven to a depth 200 feet below ground level (BGL).

1. Will the main drilling contractor/consultant responsible for the surface, intermediate and production casing/cementing programs also be responsible for setting the conductor casing? [377.22(2)(a), F.S. and 62C-27.005, F.A.C.]
2. Please explain, based on soils and prevailing shallow subsurface how the conductor can actually be driven 200 feet into the limestone without encountering refusal at a shallower depth. [377.22(2)(a), F.S. and 62C-27.005, F.A.C.]
3. Describe the measures that will be taken to prevent hydraulic connection between the Biscayne Aquifer and the possible GLA during setting of the conductor. [377.22(2)(a), F.S. and 62C-27.005, F.A.C.]

Ms. Carol Howard

Page 3

June 22, 2016

According to the wellbore diagram, the 13-3/8-inch surface casing will traverse the Biscayne Aquifer, the GLA, the SCU, the ICU and the UFA prior to landing in a competent confining unit below the deepest Underground Source of Drinking Water (USDW) and above the Boulder Zone.

4. Explain the measures that will ensure that water from the UFA will not enter the Biscayne Aquifer by direct connection or surface spillage. [377.22(2)(a), F.S. and 62C-27.005, F.A.C.]
5. How will the surface casing plan and mud/drilling fluids plan be modified if lost circulation zones are encountered when drilling the surface casing borehole through the limestone of the UFA? [377.22(2)(a), F.S. and 62C-27.005(1)(a), F.A.C.]

Refer to the attached Equipment Layout Sheet C-2.03 provided in the Application Update submitted June 15, 2016.

6. Please reconcile the dimension given on the left side of 100 feet and the dimension of 223.3 feet given on the right side (for a clearly smaller distance). Resubmit this sheet after clearing up this discrepancy.

Thank you and the applicant for your cooperation in this matter. If you have questions, please contact me at 850-245-8406 or [alvaro.linero@dep.state.fl.us](mailto:alvaro.linero@dep.state.fl.us) .

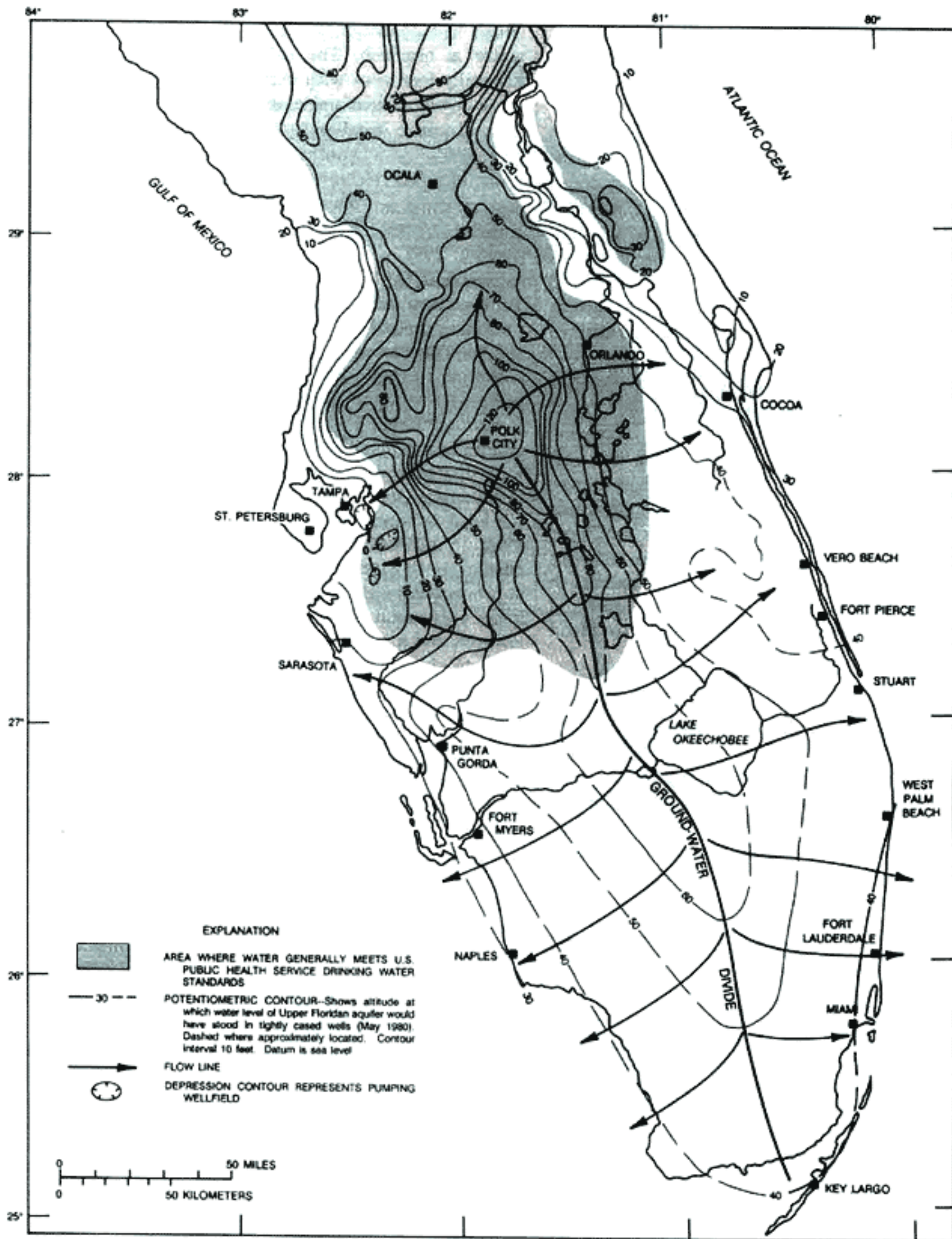
Sincerely,







A.A. Linero, P.E.  
Oil & Gas Program  
Water Resource Division

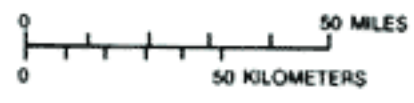
#### Attachments

Potentiometric Surface Diagram  
Wellbore Diagram  
Equipment Layout Sheet C-2.03  
SFWMD Comments  
Broward County Comments



**EXPLANATION**

- 
 AREA WHERE WATER GENERALLY MEETS U.S. PUBLIC HEALTH SERVICE DRINKING WATER STANDARDS
- 
 POTENTIOMETRIC CONTOUR--Shows altitude at which water level of Upper Floridan aquifer would have stood in tightly cased wells (May 1980). Dashed where approximately located. Contour interval 10 feet. Datum is sea level.
- 
 FLOW LINE
- 
 DEPRESSION CONTOUR REPRESENTS PUMPING WELLFIELD



## WELLBORE SCHEMATIC

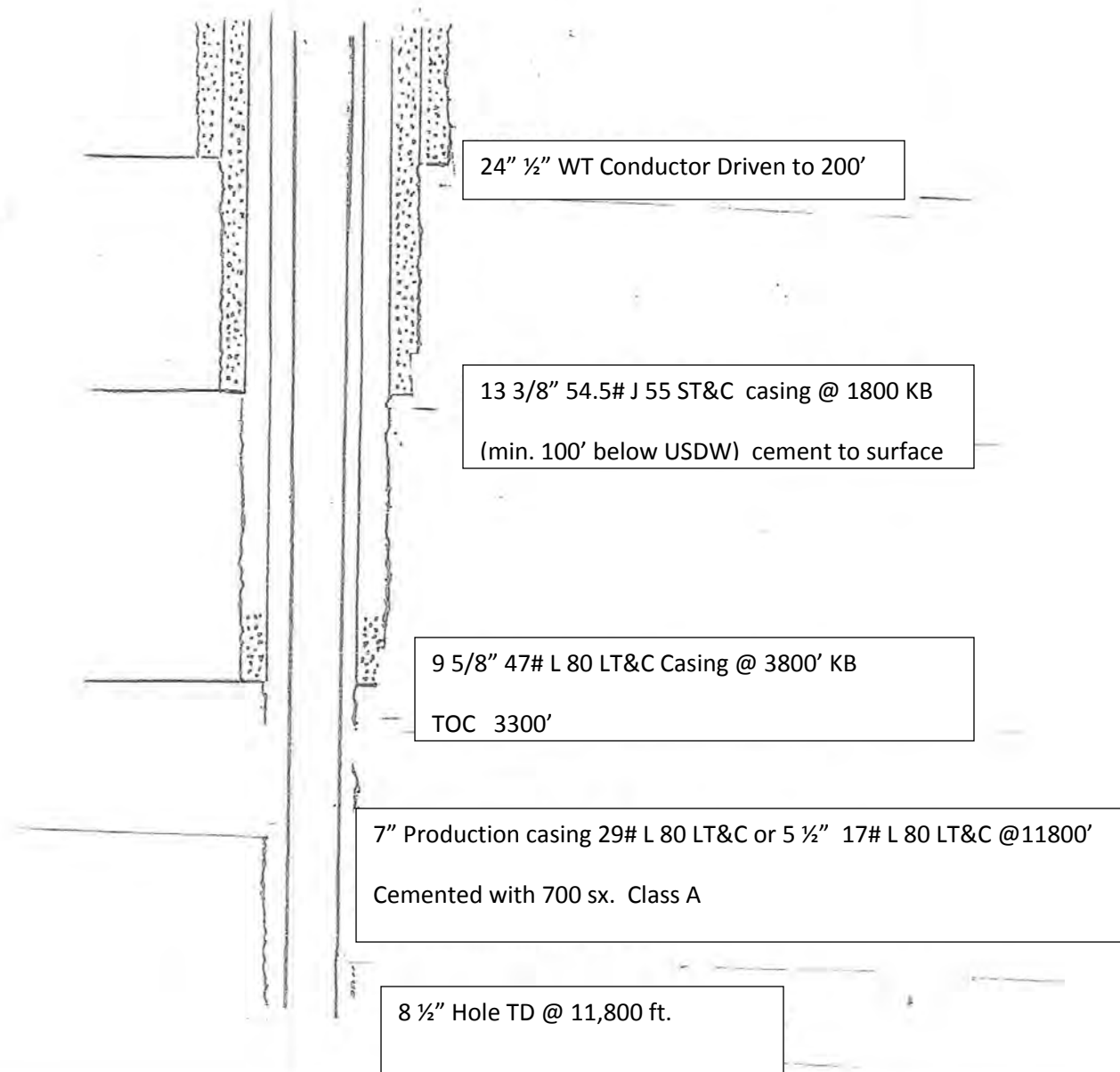
Kanter Real Estate LLC

Permit number 1366

Well Name Kanter 23-2

Location SHL: 920 ft. FNL, 920 ft. FWL of Sec. 23/ T51S R38E

BHL: same as above (straight hole)



24" ½" WT Conductor Driven to 200'

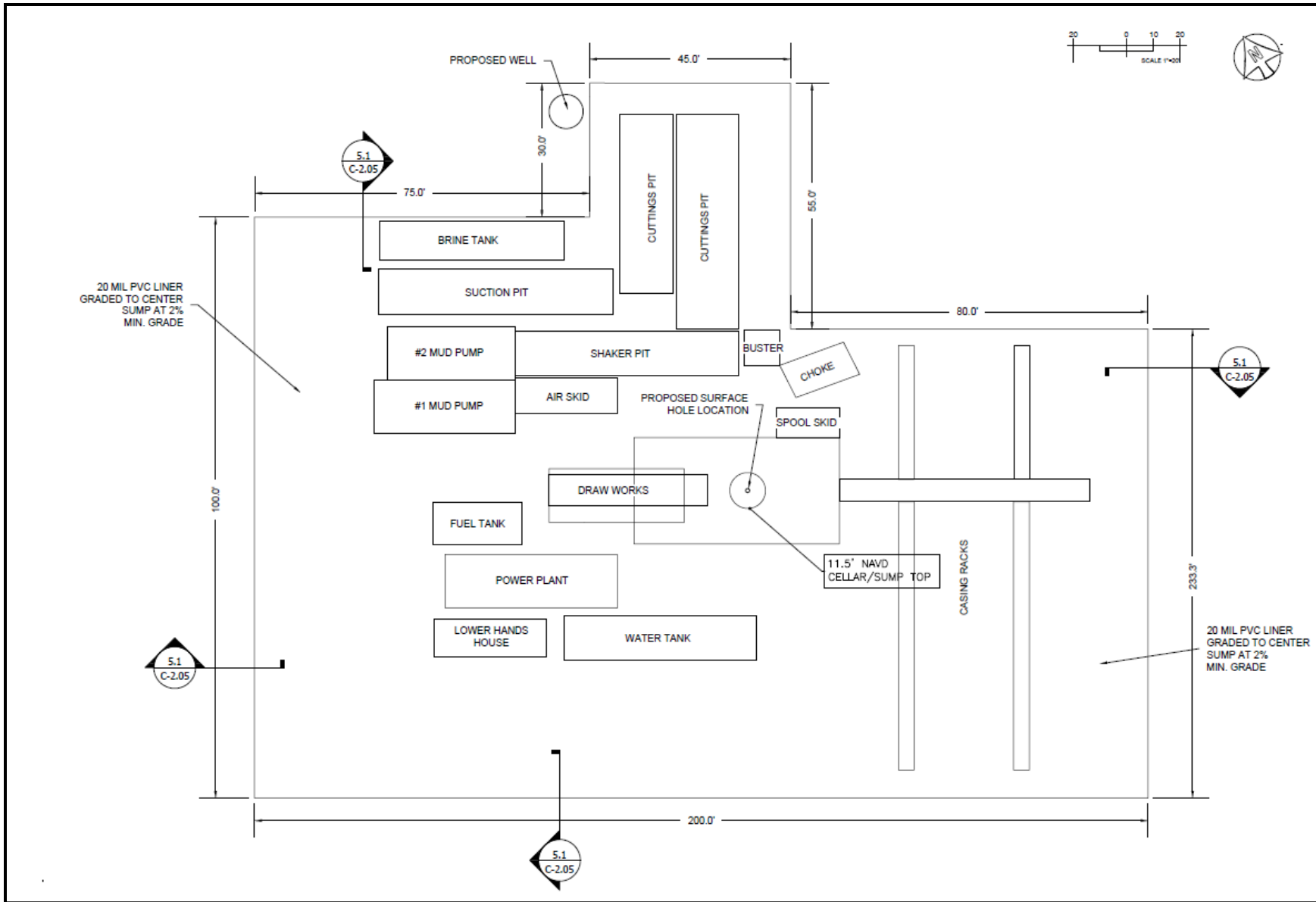
13 3/8" 54.5# J 55 ST&C casing @ 1800 KB  
(min. 100' below USDW) cement to surface

9 5/8" 47# L 80 LT&C Casing @ 3800' KB  
TOC 3300'

7" Production casing 29# L 80 LT&C or 5 ½" 17# L 80 LT&C @11800'  
Cemented with 700 sx. Class A

8 ½" Hole TD @ 11,800 ft.

See Halliburton Cementing proposal for cement calculations, volumes, types, and additives



**From:** Smith, Karin [mailto:karsmith@sfwmd.gov]

**Sent:** Monday, June 20, 2016 5:00 PM

**To:** Linero, Alvaro <Alvaro.Linero@dep.state.fl.us>

**Cc:** Smith, Jennifer K. <Jennifer.K.Smith@dep.state.fl.us>; Krueger, Marissa <Marissa.Krueger@MyFWC.com>; Andreotta, Jason <Jason.Andreotta@dep.state.fl.us>; OGP (Shared Mailbox) <OGP@dep.state.fl.us>; MOWENS@broward.org; Lindahl, Lennart <llindahl@sfwmd.gov>; Wallace, Traci <traci.wallace@MyFWC.com>; Timothy.Parsons@dos.myflorida.com

**Subject:** RE: Application for Permit to Drill #1366 Response to 2nd RAI

Mr. Linero,

Thank you for the opportunity to review and comment on the 2<sup>nd</sup> RAI response for the subject permit. The SFWMD offers the following comments:

- The applicant has acknowledged that application for a Right of Way (ROW) permit will be made and we look forward to reviewing the application, in accordance with the requirements of Chapter 40E-6, F.A.C., when one is received.
- Although the applicant indicates that the spoil pile has been removed from the project plan, references to the spoil pile remain in Section 6.4 of the revised application attached to the response.
- According to Section 6.4 of the application, the fluids (rainwater, oils, grease, drilling additives) collected in the lined containment area on the pad are directed to a sump. The application does not discuss where the sump fluids are discharged but states that 'the bleeder from the discharge culvert will be shut in the event of any spill'. Please clarify where fluids collected on the liner portion are regularly discharged. What is considered a "spill" is not defined in the Spill Prevention Plan.
- The liner area has been expanded but dimensions on drawing C-2.03 appear to be incorrect (sides should be equal but left side=130', right side=288') and the area of 2355 square feet on the table appears incorrect also (2355 SF = approximately 48.5' X 48.5')
- The response to question 12 does not include a discussion of the method to stabilize the berm and prevent erosion directly above the outfall.
- Regarding the oil well casing and cementing programs we repeat our previous concerns:
  - In the submittal the surface casing is shown as being driven to 200 feet of depth, which is approximately 10' below the base of the surficial aquifer system. While drilling from 200 to 1,800 feet, and prior to setting casing, the resulting artesian head will need to be managed. What will prevent the upward migration (in the annular space between the casing and the borehole) of brackish to saline waters under pressure from below into the Surficial Aquifer system?
  - USGS information and SFWMD staff analysis of existing information indicates the base of the brackish water zone (water less than 10,000 mg/L concentration) may be below 2,000 feet, requiring the 13 3/8" casing to extend to at least 2,100 rather than 1,800 feet. The use of resistivity logs as a methodology for confirming the base of the USDW may not provide an accurate estimate in a mudded borehole. How will the USDW be confirmed in the field?
  - There is no specificity provided for managing potential lost circulation in high flow zones and artesian conditions that will be encountered in the upper and middle Floridan Aquifer System. Drilling with mud through the Upper Floridan Aquifer may potentially contaminate the aquifers by loss of circulation through flow zones.

We look forward to continuing coordination on this application. Please contact me if you have any questions.

*Karin A. Smith, P.G.*

*Principal Scientist – Water Supply Bureau  
Water Supply Planning*

**From:** Owens, Michael [mailto:MOWENS@broward.org]  
**Sent:** Monday, June 20, 2016 4:23 PM  
**To:** Linero, Alvaro <Alvaro.Linero@dep.state.fl.us>  
**Subject:** RE: Application for Permit to Drill #1366 Response to 2nd RAI

Mr. Linero,

Thank you for the opportunity to comment on the applicant's response to the Department of Environmental Protection's 2<sup>nd</sup> RAI. Broward County has the following comments on the 2<sup>nd</sup> RAI Response:

- 1) The applicant did not address Broward County comments in RAI Responses, including land use, zoning, and regulatory comments. Those comments are still outstanding and include, but are not limited to:
  - a. An Environmental Resource License application must be submitted regarding proposed wetland impacts. Chapter 27 (Pollution Control), Broward County Code of Ordinances, requires that any person proposing to alter/fill existing regulated aquatic or jurisdictional wetlands must first obtain an Environmental Resource License. Based on the information in the latest submittals associated with the Application, approximately 5.83 acres of wetlands would be impacted; therefore an Environmental Resource License is required. The applicant has submitted a separate Environmental Resource Permit application to FDEP; however this application does not substitute for the requirement to submit an Environmental Resource License application to the County. For additional information, refer to the Environmental Resource License Application located here:  
<http://www.broward.org/EnvironmentAndGrowth/EnvironmentalProgramsResources/Applications/Documents/EnviroResourceLicApp.docx>
  - b. A Surface Water Management License application must be submitted. Chapter 27 (Pollution Control), Broward County Code of Ordinances, requires that any person constructing "water management works" first obtain a surface water management license. Based on the proposed activities shown on the latest design plans and described in the application, the natural flow and level of surface waters would be altered. As such, this activity falls under the definition of "water management works" and a surface water management license is required. For additional information, refer to the Surface Water Management License Application located here:  
<http://www.broward.org/EnvironmentAndGrowth/EnvironmentalProgramsResources/Applications/Documents/SurfWaterMgtLicenseApp.pdf>.
  - c. Unlicensed discharges to ground, groundwater, or surface water. Section 27-197, Broward County Code of Ordinances, states: Except for spills of hazardous materials, which are regulated in Article XII of Chapter 27, if at any time the licensee determines or has evidence to suspect that there is or has been an unlicensed discharge to the ground, ground waters, or surface water, the licensee shall take immediate action to stop the discharge and contain and recover the discharged materials. An oral notification and written report as specified in Section 27-58(b)(3) are required. The Applicant must specify how rainfall runoff to be collected within sump at the center of lined containment area will be disposed of. This center sump would also collect any spill.
  - d. The application indicates that wastewater and sanitary waste will be held in tanks and removed by a waste contractor. A Waste Transporter License may be required for applicable contractor pursuant to Chapter 27, Article XVII, of the Broward County Code of Ordinances. Application located here:



<http://www.broward.org/PermittingAndLicensing/WasteManagement/Documents/AppWasteTransportLic.pdf>

- e. The removal of trees, if necessary for this project, is subject to Broward County's Tree Removal Licensing requirements, including replacement trees. Application located here: <http://www.broward.org/PermittingAndLicensing/Licensing/Engineering/Documents/TreeRemovalLicApp.pdf>
  - f. A Building Permit application may be required. The Florida Building Code exempts from permitting temporary buildings or sheds used for construction and mobile and modular structures used as temporary offices. However, the Application states that some staff will be "housed in temporary quarters"; therefore, a building permit may be required. Application located here: <https://www.broward.org/PermittingAndLicensing/Forms/Documents/BuildingPermitApp.pdf>
  - g. The proposed uses are inconsistent with the Land Use Designation and the Conservation-1 (CON-1) zoning district.
  - h. The well site will likely require a Broward County Hazardous Material Management Facility license for on-site hazardous materials and most probably for onsite storage tank(s).
  - i. Depending on the type of fuel/waste tank(s) used (not clear from the application or RAI), construction of the storage tank(s) may require a storage tank construction permit.
  - j. Broward County's Environmental Hotline Number (954-519-1499) should be included in the emergency response procedures.
- 2) The 2nd RAI Response for Oil Well Permit Application 1366, submitted to the Florida Department of Environmental Protection and dated May 23, 2016, indicates temporary on-site housing will be provided for the drilling supervisor and rig manager. It specifically states the following:
- "6.7 Housing, personnel, and security
- Most of the drilling personnel will be housed off-site. Some of the drilling personnel will be housed in temporary quarters located in the Well pad area. There will be an office trailer with living quarters for the drilling supervisor and rig manager and temporary trailers for other personnel. Electricity will be provided by diesel generator sets. All wastewater will be contained in storage tanks and removed from the site by a waste contractor, and a bottled water contractor will supply drinking water. Portable toilets will be provided, and sanitary waste will be collected in holding tanks and removed by a local contractor. Water for drilling will be supplied by on-site wells. The Well site will be secured by a six-foot chain link fence and a locked gate. Only supervisors of Well drilling activities or construction foremen for each shift will have access to a gate key."
- The Conservation Future Unincorporated Area Land Use designation and the Conservation-1 (CON-1) zoning district do not allow housing.

Best regards,

Michael C. Owens  
Senior Assistant County Attorney  
954-357-7600  
[mowens@broward.org](mailto:mowens@broward.org)