

HELIS OIL & GAS COMPANY, L.L.C.

228 ST. CHARLES AVENUE, SUITE 912
NEW ORLEANS, LA 70130

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(504) 523-1831

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(504) 522-6486

October 3, 2014

Mr. Michael Farabee
Chief Eastern Evaluation Section, Regulatory Branch
U.S. Army Corps of Engineers
New Orleans District
P. O. Box 60267
New Orleans, LA 70160-0267

OCT 03 2014

RE: PERMIT APPLICATION NO. MVN-2013-02952-ETT CLARIFICATION/AMENDMENT
HELIS OIL & GAS COMPANY, L.L.C.
PROPOSED DRILL SITE & STRUCTURES
EADS POITEVENT NO. 1 WELL SECTION 34, T7S-R12E
ST. TAMMANY PARISH, LOUISIANA

Dear Mr. Farabee:

On behalf of Helis Oil & Gas Company, L.L.C. (Helis), please accept this clarification and amendment to Helis' pending Permit Application No. MVN-2013-02952-ETT with corresponding attachments (Exhibits A and B), regarding the proposed installation of a drill site well pad with associated access improvements to be located in St. Tammany Parish. Helis is submitting the attached clarification and amendment to: (1) provide additional detail regarding the proposed activity described in the original submittal; and (2) reduce the scope and footprint of the originally-proposed initial phase of the project based in part upon the recommendations emanating from the Geological Review meeting conducted on July 29, 2014.

In its initial 404 permit application submittal, Helis sought a permit that would cover both phases of its proposed project:

- (1) a first phase that would entail the development of a drill site for the drilling of a vertical well from which geologic information would be obtained to confirm the production potential of an over two-mile deep subsurface geologic zone from which Helis seeks to extract oil and/or gas; the vertical well would be designed and constructed to accommodate production should the potential be confirmed; and
- (2) should the geologic data collected from the vertical well confirm the potential for economically viable mineral production from the target zone, a second phase that would include the development of the drill site for the drilling, development and production from a horizontal well advanced from the vertical well into that deep subsurface geologic zone.

The recommendations issued by the State Geologist administering the Geological Review concluded that there existed no less damaging feasible alternative to the project location selected

by Helis. The review recommended that the initial 404 permit application be limited to the first phase of the project only, i.e., the drilling of the vertical well and further recommended that the proposed drill site pad to support this first phase be limited to a surface area equal to 400' by 350' or 3.21 acres as opposed to the 10.35 acres originally proposed for the entire project.

In response to the consulting geologist's recommendations, Helis has amended its initial application to encompass the surface development required for the first phase of the project only – the drilling of the vertical well; and has reduced the well pad size to the absolute minimum required for this first phase drilling of the vertical well and for implementation of additional environmentally protective features Helis intends to employ voluntarily in connection with the proposed activity to be permitted.

In addition to the clarified and amended 404 permit application, Helis provides herewith responses to the U.S. Army Corps of Engineers (USACE) request for information dated June 20, 2014. (Attached hereto as Ex. C) This clarified and amended application is limited to the first phase of the Helis project (i.e., the drilling of the vertical well). Helis has likewise limited its responses to the USACE June 20, 2014 requests to address only those issues relating to the first phase of the project. Helis will respond to comments regarding the second phase including those relating to hydraulic fracturing, in any subsequent application required to proceed with the second phase of the project. The USACE also issued a request for information dated July 2, 2014 pertaining to the avoidance, minimization and mitigation of wetland impacts. Helis has addressed these issues in the clarified and amended 404 application and therefore does not intend to submit a separate response to the USACE's July 2, 2014 request.

Please feel free to contact me at 504/681-3316 or by email at mbarham@helisoil.com if you have any questions.

Sincerely,

HELIS OIL & GAS COMPANY, L.L.C.



Michael Barham
Inland Drilling and Completion Manager

17. DIRECTIONS TO THE SITE

The proposed project includes:(1) a well pad to be located west of Log Cabin Road, between Interstate 12 and Louisiana Highway 1088; (2) three bypasses and a guard shack to be located adjacent to Log Cabin Road between the proposed drill pad and Louisiana Highway 1088; and (3) a turning apron to be located at the intersection of Log Cabin Road and Louisiana Highway 1088; as more specifically delineated in Sheets 1-8 of 8.

18. Nature of Activity (Description of project, include all features)

Please see Addendum A.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The purpose of Phase I of the Helis Project is to install an environmentally secure drill site with associated access road improvements to support the drilling and installation of a vertical well; the proposed installation of up gradient and down gradient monitor wells to assess and monitor the quality of groundwater in the Southern Hills Aquifer in the vicinity of that vertical well; and provide storm water drainage, collection and management features necessary for the management, and controlled discharge of uncontaminated storm water generated within the drill site during active drilling operations. Helis anticipates construction of the drill site and access road improvements will commence within approximately 30 days of USACE permit approval and be completed within approximately 30 days of construction commencement subject to potential delays caused by inclement weather.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Helis is drilling the vertical well to obtain geologic data to confirm the production potential of a very specific subsurface geologic zone which Helis has identified as a potentially significant source of previously undeveloped mineral resources. The construction of the 3.21 acre drill site is required for the drilling and installation of the vertical well; the proposed installation of up gradient and down gradient monitor wells ("sentinel wells") to assess and monitor the quality of groundwater in the Southern Hills Aquifer in the vicinity of the vertical well; and to provide storm water drainage and collection features required for the management and controlled discharge of uncontaminated storm water generated within the drill site during active drilling operations. The improvements to the access road are required to allow use of this existing road for the drilling operations thereby eliminating the need for construction of a new access road and all of the increased wetland impacts that might be associated with a new access road.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
Non-Native-1,731 yd ³ access improvements	Non-Native - 10,766 yds ³ - drill pad	Native - 492 yds ³ - ring levee

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 0.32 acres for access improvements, 2.81 acres for drill site. Total impact=3.13 acres

or

Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Please see Addendum A.

24. Is Any Portion of the Work Already Complete? Yes No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list)

a. Address- P&F Lumber Company (2000), L.L.C., c/o Edward B. Poitevent II, One Lakeway, 3900 North Causeway Blvd., Suite 1200

City - Metairie State - Louisiana Zip - 70002

b. Address- St. Tammany Land Co. L.L.C., Mr. William Rudolf, One Galleria Boulevard, Suite 902

City - Metairie State - Louisiana Zip - 70001

c. Address- PF Monroe Properties, L.L.C., c/o J. Edgar Monroe Foundation, 3939 N. Causeway Boulevard, Suite 200

City - Metairie State - Louisiana Zip - 70002

d. Address- Markle Interests, L.L.C., 701 South Olive Avenue, #2101

City - West Palm Beach State - Florida Zip - 33401

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

 10/3/14
SIGNATURE OF APPLICANT DATE

SIGNATURE OF AGENT DATE

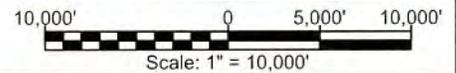
The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.



NOTE:
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EXCLUSIVELY FOR THE PURPOSE OF OBTAINING
ENVIRONMENTAL COMPLIANCE PERMITS

VICINITY MAP



HELIS OIL & GAS COMPANY, L.L.C.

PROPOSED DRILLSITE & STRUCTURES

Eads Poitevent No. 1 Well

Section 34, T7S-R12E

St. Tammany Parish, Louisiana



Lafayette New Orleans Houston
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

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REVISED: 3/14/2014

DATE: 1/15/2014

PROJ. MGR.: RLL

08/28/2014

SHEET 1 OF 8 SHEETS

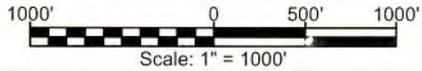
09/05/2014

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PROJECT PLAN VIEW



HELIS OIL & GAS COMPANY, L.L.C.

PROPOSED DRILLSITE & STRUCTURES

Eads Poitevent No. 1 Well

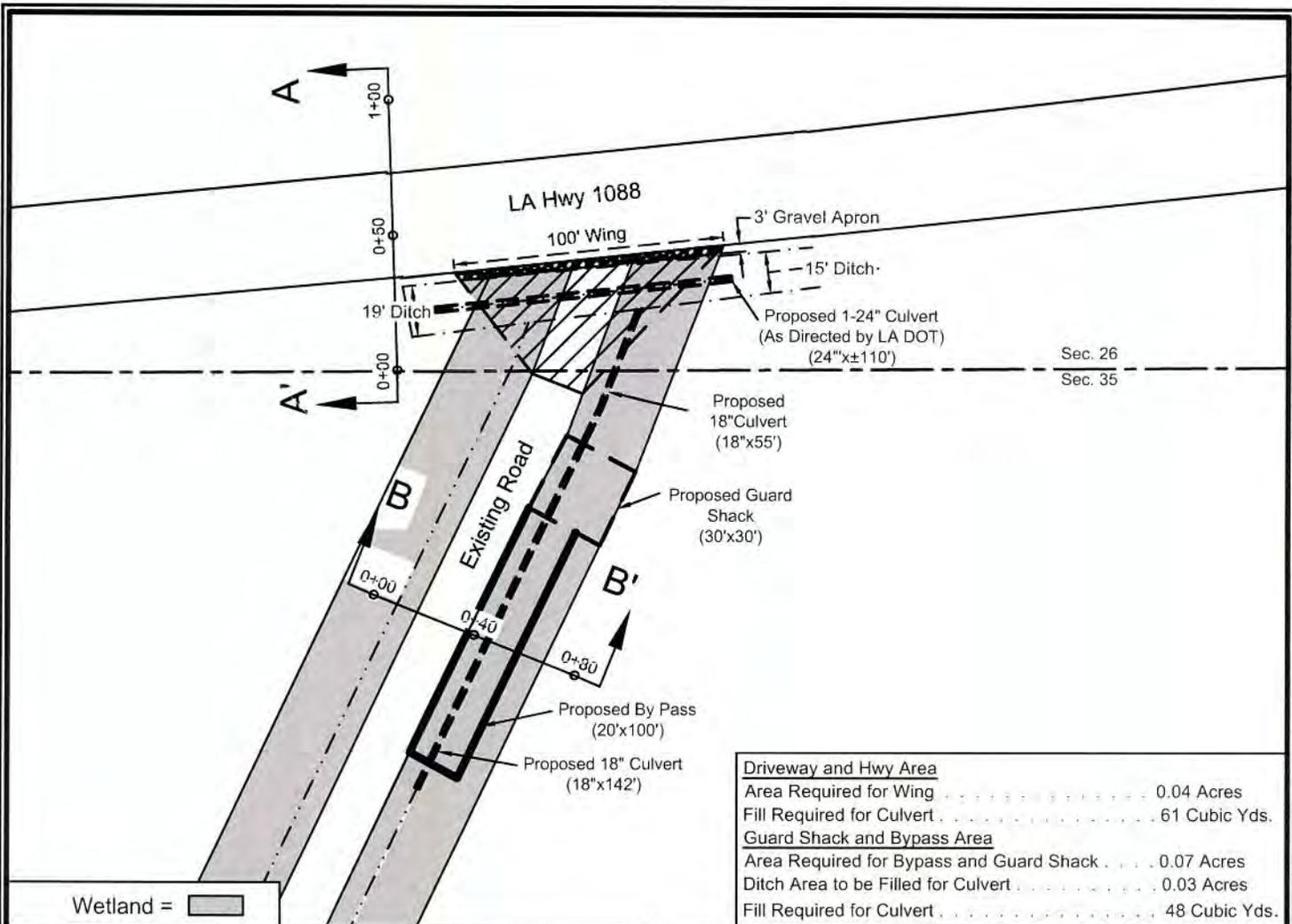
Section 34, T7S-R12E

St. Tammany Parish, Louisiana



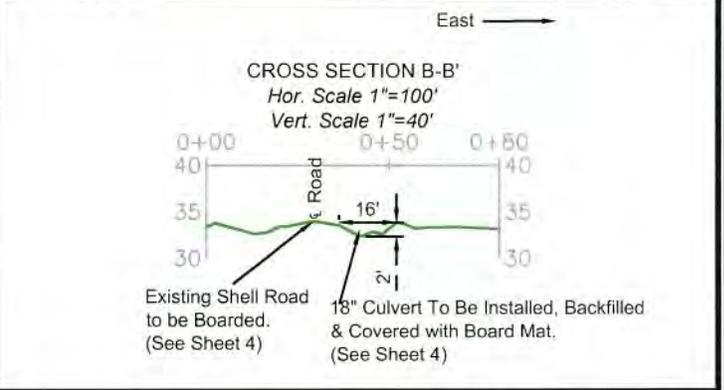
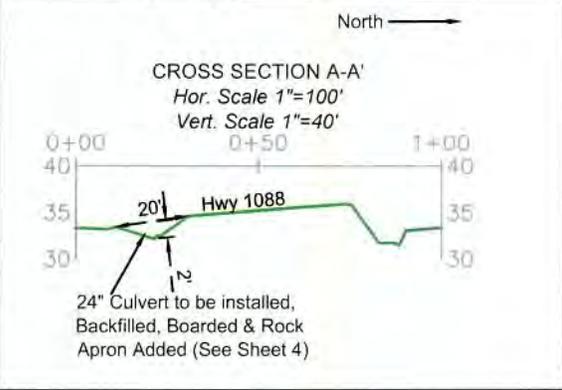
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PROJ. MGR.: RLL	08/28/2014	SHEET 2 OF 8 SHEETS
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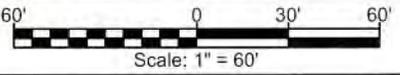
Driveway and Hwy Area	
Area Required for Wing	0.04 Acres
Fill Required for Culvert	61 Cubic Yds.
Guard Shack and Bypass Area	
Area Required for Bypass and Guard Shack	0.07 Acres
Ditch Area to be Filled for Culvert	0.03 Acres
Fill Required for Culvert	48 Cubic Yds.

Wetland =



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PLAN VIEW DRIVEWAY, GUARD SHACK & BYPASS



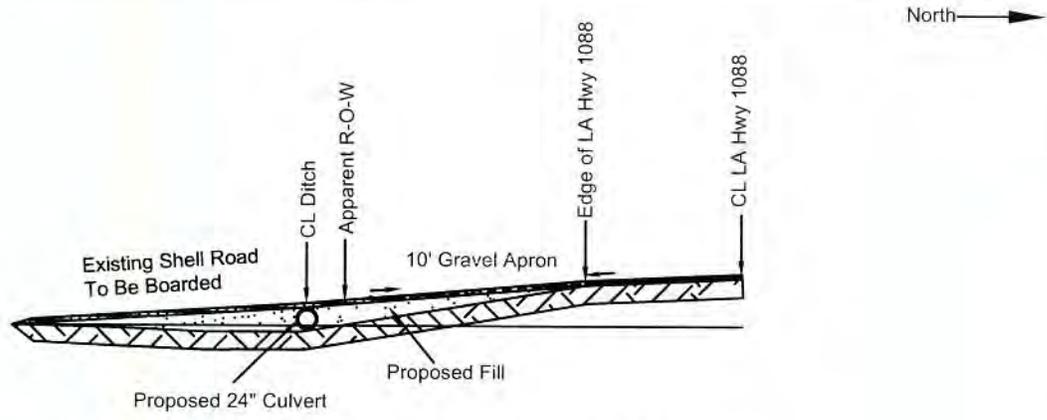
HELIS OIL & GAS COMPANY, L.L.C.
PROPOSED DRILLSITE & STRUCTURES
Eads Poitevent No. 1 Well
Section 34, T7S-R12E
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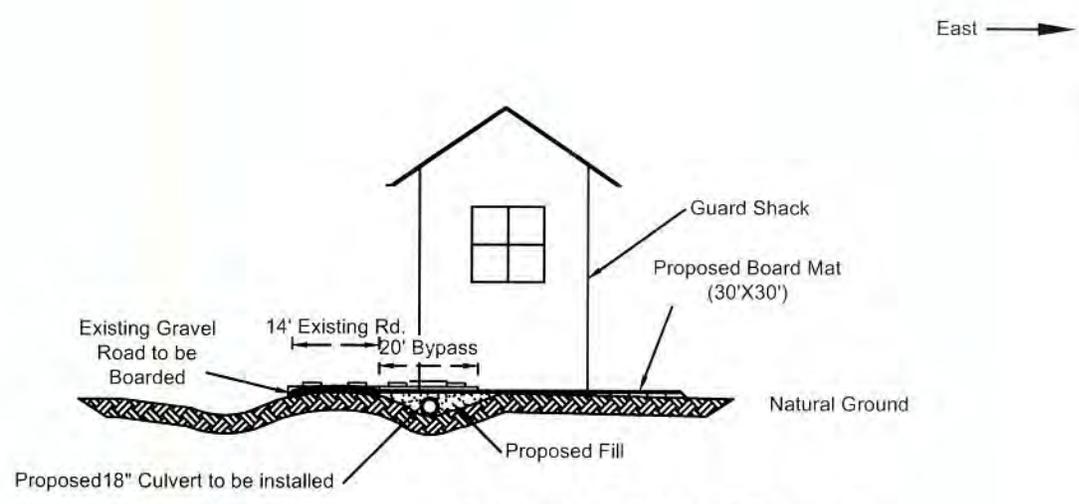
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DATE: 1/15/2014
SHEET 3 OF 8 SHEETS



TYPICAL DRIVEWAY WITH CULVERT INSTALLATION

No Scale



TYPICAL BYPASS, GUARD SHACK & CULVERT INSTALLATION

No Scale

Culvert to be installed in ditch, filled and covered with Boarded Mat or Boarded Bypass.

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HELIS OIL & GAS COMPANY, L.L.C.

PROPOSED DRILLSITE & STRUCTURES

Eads Poitevent No. 1 Well

Section 34, T7S-R12E

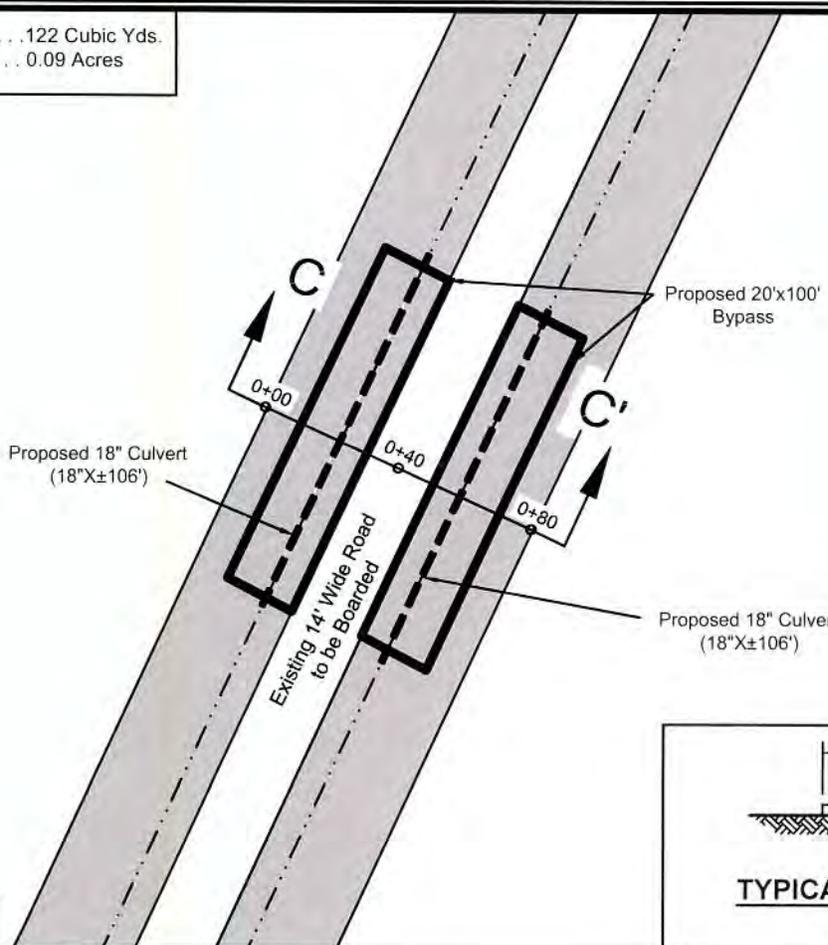
St. Tammany Parish, Louisiana



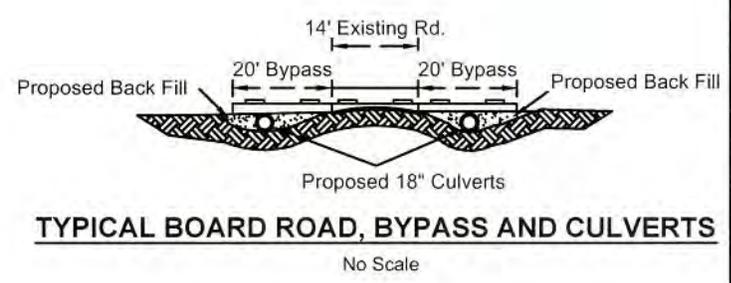
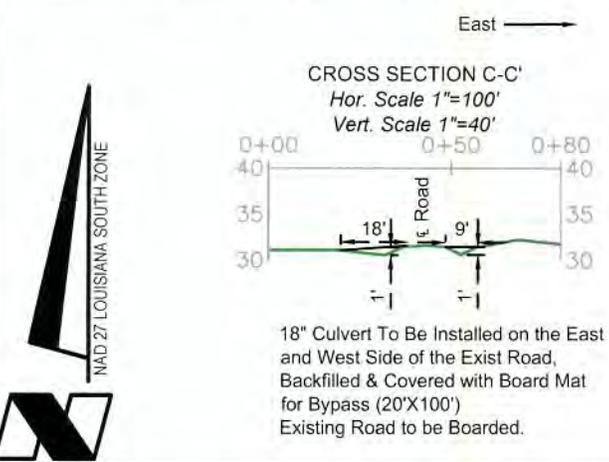
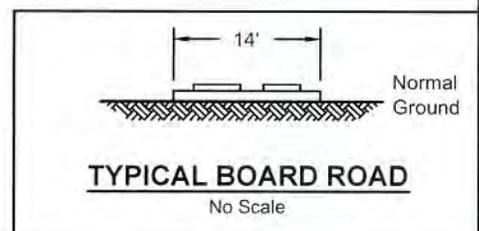
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Fill Required for Culverts. 122 Cubic Yds.
 Area Required for Culverts. 0.09 Acres

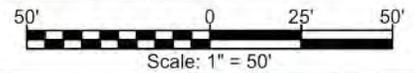


Wetland =



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PLAN VIEW BYPASS



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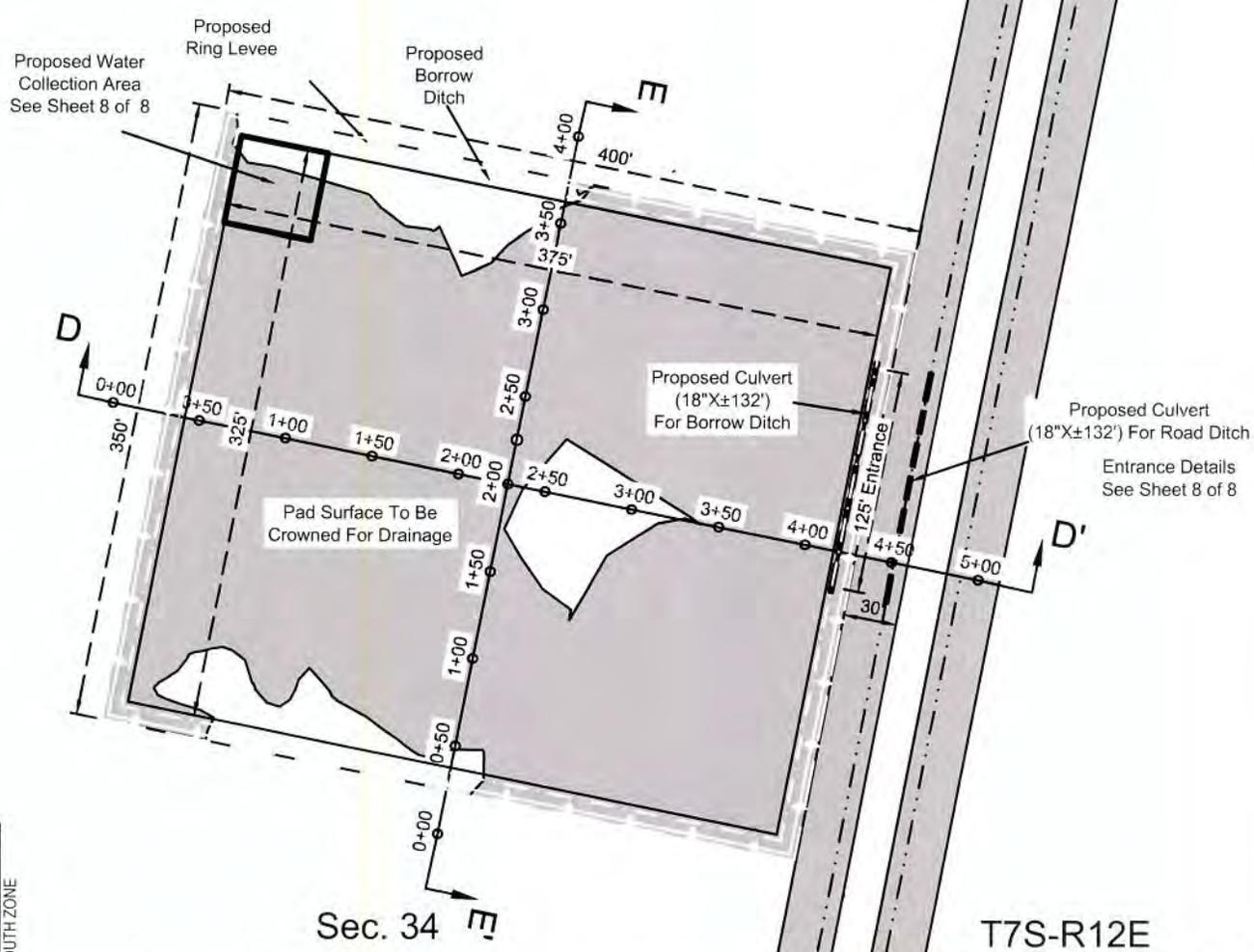
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REVISED: 3/14/2014
 08/28/2014
 09/05/2014

DATE: 1/15/2014
 SHEET 5 OF 8 SHEETS

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- Ring Levee
- - - Borrow Ditch
- · - · - Road Ditch
- - - - - Culvert

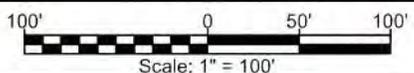


Excavation/Fill Required for Borrow Ditch/Ring Levee	492 Cubic Yds.
Fill Required for Drill Pad	10,776 Cubic Yds.
Fill Required for Entrance	1,500 Cubic Yds.
Area Required for Entrance	0.09 Acres
Wetland = Wetland Area	2.81 Acres



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PLAN VIEW PAD AREA



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PROPOSED DRILLSITE & STRUCTURES

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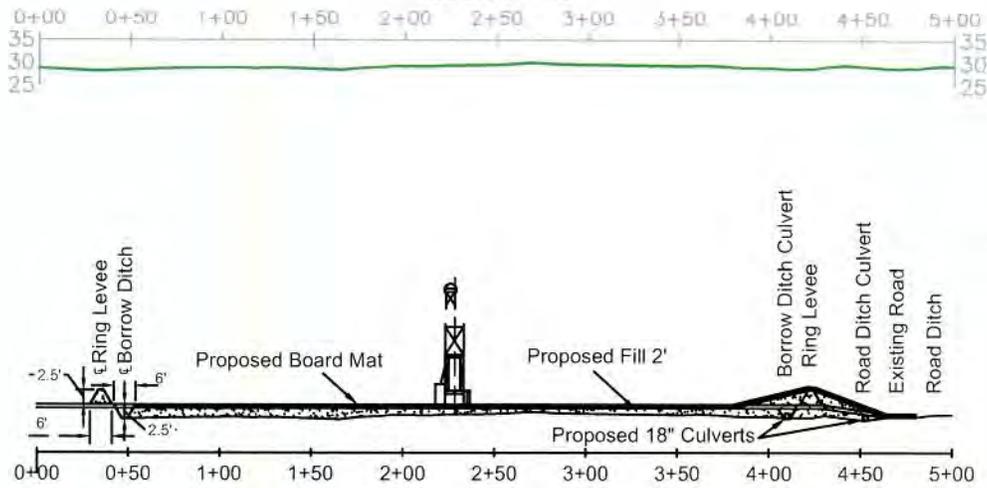
SHEET 6 OF 8 SHEETS

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CROSS SECTION D-D'

Hor. Scale 1"=100'

Vert. Scale 1"=40'



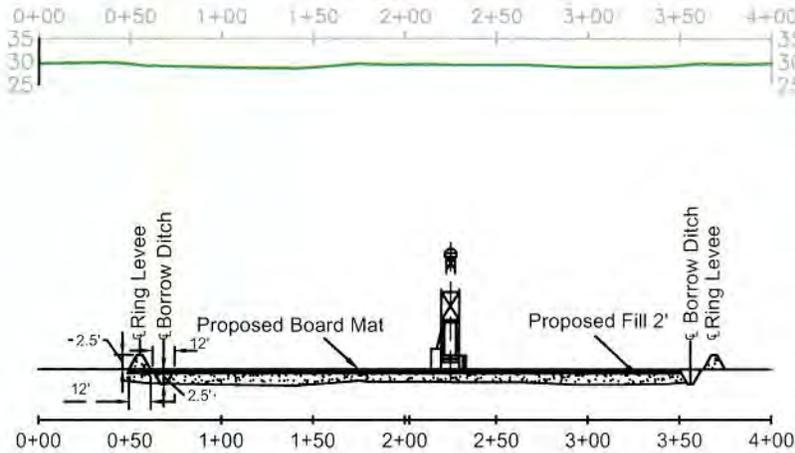
TYPICAL CROSS-SECTION OF DRILLSITE D-D'

No Scale

CROSS SECTION E-E'

Hor. Scale 1"=100'

Vert. Scale 1"=40'



TYPICAL CROSS-SECTION OF DRILLSITE E-E'

No Scale

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PROPOSED DRILLSITE & STRUCTURES

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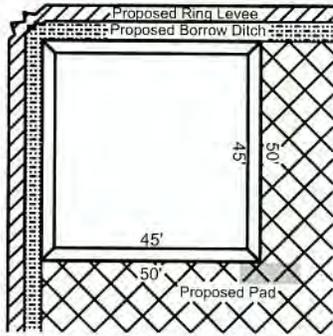
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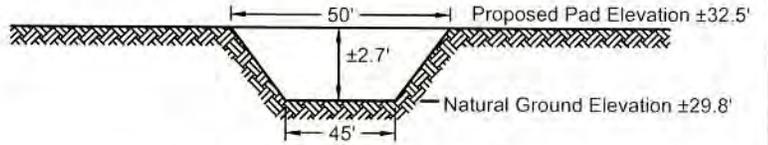
DATE: 1/15/2014

SHEET 7 OF 8 SHEETS



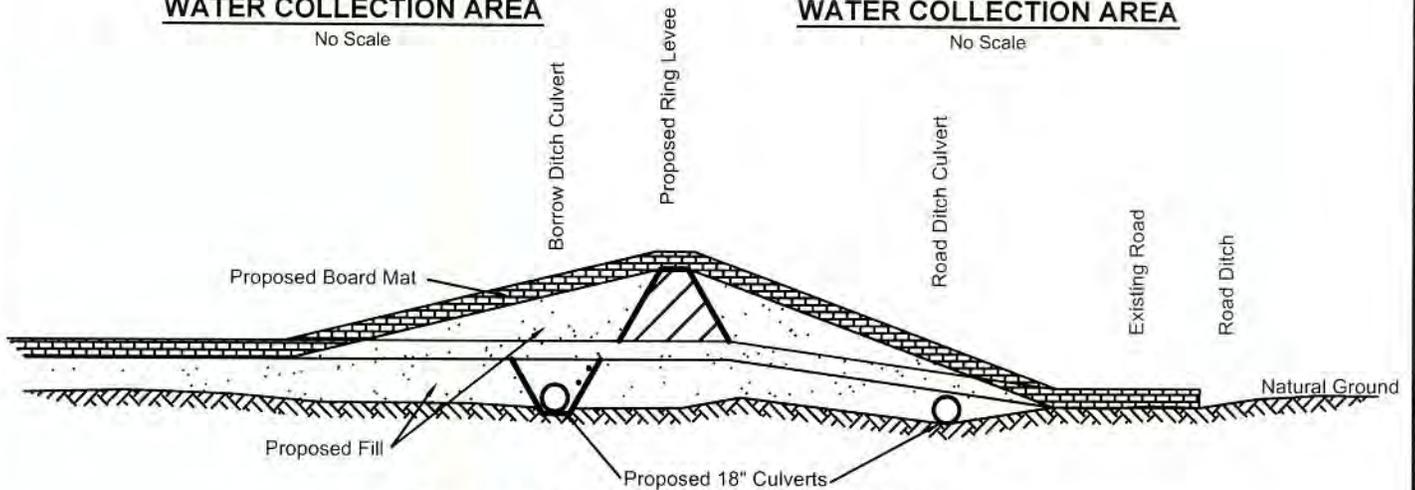
PLAN VIEW OF TYPICAL WATER COLLECTION AREA

No Scale



PROFILE OF TYPICAL WATER COLLECTION AREA

No Scale



PROFILE OF TYPICAL PAD ENTRANCE

No Scale

NOTES:

1. Material for drillsite levees will be taken from within the leveed perimeter.
2. Closure procedures, including onshore land treatment and/or offsite disposal of mud pit contents and other drilling residues, shall be conducted in accordance with appropriate Federal and State Regulations.
3. In order to ensure the safety of all parties, the permittee shall contact the Louisiana ONE CALL System (1-800-272-3020), a minimum of 48 hours prior to the commencement of any excavation (Digging, Dredging, Jetting, etc.) or demolition activity.

NOTES - DRY HOLE SCENARIO

1. The boards will be removed from the access road and drill pad.
2. The drill site and ring levees will be degraded within 90 days following abandonment. The levee material will be deposited, to the maximum extent practicable, into the borrow areas from which the material was excavated and the area will be leveled to as near pre-project conditions as practicable.
3. The drill pad site will be allowed to naturally re-vegetate.

DISCLAIMER: At this time, C.H. Fenstermaker & Associates, LLC has not performed nor was asked to perform any type of engineering, hydrological modeling, flood plain, or "No Rise" certification analyses, including but not limited to determining whether the project will impact flood hazards in connection with federal/FEMA, state, and/or local laws, ordinances and regulations. Accordingly, Fenstermaker makes no warranty or representation of any kind as to the foregoing issues, and persons or entities using this information shall do so at their own risk.

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PROPOSED DRILLSITE & STRUCTURES

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SHEET 8 OF 8 SHEETS

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ADDENDUM A

18. Nature of Activity (Description of Project, include all features)

Helis has proposed an exploration and production project (the "Helis Project") that will be conducted in two, separate phases (referred to hereafter as "Phase 1" and "Phase 2" respectively). Phase 1 will include the development of a drill site for the drilling of a vertical well from which geologic information will be obtained to confirm the production potential of a sub-surface geologic formation over two miles below the land surface from which Helis seeks to extract oil and/or gas. Helis will design and construct the vertical well to accommodate production, so if, as Helis anticipates, the geologic data collected from the vertical well confirms the potential for economically viable mineral production from this deep formation, Helis intends to implement Phase 2 which will consist of the development of the drill site to support the drilling, development and production of minerals from a horizontal well to be advanced from the vertical well drilled in Phase 1 into the aforementioned deep sub-surface geologic formation.

However, in order to comply with the recommendation issued by the consulting geologist who oversaw the July 29, 2014 geological review ("Geological Review") of the Helis project, that the initial Helis 404 permit application be limited to Phase 1 of the Helis Project (i.e., the drilling of the vertical well) only, **Helis is limiting the scope of this amended 404 permit application to encompass the surface development required for Phase 1 only.** Any additional authorization from the USACE that may be required for implementation of Phase 2 of the Helis Project will be addressed as necessary in a separate, subsequent permit filing with the USACE.

Phase 1 of the Helis project which is the subject of this clarified and amended application will involve the installation of a well pad area with associated access road improvements to support the drilling of a vertical well using mechanized excavation and grading of surface materials. The proposed activity will include the following:

- (1) Installation of minor improvements to the existing access road (Log Cabin Road) that will encompass approximately 0.32 acre of jurisdictional wetlands including:
 - Three separate 20' x 100' bypasses to be placed over existing roadside ditches. Each bypass will be constructed by the placement of an appropriately sized drainage culvert into the existing ditch to maintain pre-existing drainage patterns, the backfilling of the ditch around the drainage culvert to grade using off-site fill and the placement of board mats over the fill. (See Sheets 2-5 of 8 for bypass detail)
 - A 30' x 30' guard shack to be placed over the existing roadside ditch and constructed in the same manner as the bypasses described above. (See Sheets 3 and 4 of 8 for guard shack detail)
 - Turning apron of approximately 0.04 acre at the intersection of Log Cabin Road and State Highway 1088 that will extend over portions of the roadside ditches adjoining the existing access road and state highway and which are to be constructed in the same manner as the bypasses described above. (See Sheets 3 and 4 of 8 for turning apron detail)

- (2) Development of a 3.21 acre drill site/pad area (which includes 2.81 acres of jurisdictional wetlands) required for the drilling of the proposed vertical well and the associated environmentally protective features to be employed by Helis in connection with the drilling of the vertical well including:
- The excavation of a borrow ditch around the full perimeter of the 3.21 acre drill site (with the exception of a raised and sloped 125' section adjacent to the access road which will be used for the construction of an entrance way connecting the drill site to the access road). The borrow ditch will be used to collect, convey and manage storm water generated within the drill site and to supply native soils for the construction of the ring levee described below. (See Sheets 6 and 7 of 8 for borrow ditch detail)
 - The construction of a ring levee around the full perimeter of the 3.21 acre drill site (with the exception of the 125' section adjacent to the access road which will be used for the construction of an entrance way connecting the drill site to the access road). (See Sheets 6-8 of 8 for ring levee detail)
 - The construction of a partially elevated 3.21 acre drill site to be constructed by differential filling using off-site fill material and overlain by board mats in all areas except for a small 50'x50' storm water collection area in the northwest corner of the site and the borrow ditches. The pad area will be designed and utilized: to support the drilling and installation of the vertical well and the proposed installation of up gradient and down gradient monitor wells to assess and monitor the quality of groundwater in the Southern Hills Aquifer in the vicinity of the vertical well; and to provide storm water drainage and collection features required for the management and controlled discharge of uncontaminated storm water generated within the drill site during active drilling operations. The drill site will be grubbed to remove vegetation before the placement of fill and all grubbed material will be sent off-site for disposal. (See Sheets 6-8 of 8 for drill site detail)
- (3) A raised and sloped 125' wide entrance way connecting the 3.21 acre drill site to Log Cabin Road. The entrance way will be constructed by the placement of an appropriately sized drainage culvert into the existing roadside ditch between the drill site and the access road to maintain pre-existing drainage patterns, the backfilling of the ditch around the drainage culvert to grade using off-site fill and the placement of board mats over the fill. The entrance way will encompass 0.09 acre of jurisdictional wetlands. (See Sheets 6-8 of 8 for entrance way detail)

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Helis will use the proposed vertical well to obtain geologic data to confirm the production potential of a very specific subsurface geologic zone. Although not officially classified as a wildcat well, the Helis well will be drilled in an unproven area with no appreciable historical oil and gas production. Because the area Helis seeks to drill remains largely unexplored and subsurface geologic information from the area is relatively sparse, Helis sought to locate its proposed well site in an area where the limited existing subsurface geologic information would be of the most benefit. The most critical information regarding the subsurface geology in the area is the geologic

information obtained from several previously drilled wells on the edge of the prospect (the “control wells”). One of the factors Helis used in selecting the proposed drill site was its proximity to the control wells; the utility of the control well data in identifying the presence and location of the targeted geologic zone decreases as distance from the control wells increases so the well site must be in reasonably close proximity to the control wells (hereafter the “control well area”). The location of the control wells in relation to the proposed drill site is identified in Attachment 1 hereto.

Because the control well area is so interspersed with jurisdictional wetlands Helis could not identify a suitable drill site location within this area that did not encompass wetlands. Helis has therefore sought to select and configure a site that would minimize the number of wetland acres impacted and that would meet other of Helis’ site selection criteria. First, because the control well area south of the I-12 corridor consists of a much greater proportion of jurisdictional wetlands than the control area to the north of the I-12, Helis elected to locate its proposed well site to the north of the I-12 corridor to reduce wetland impacts.

Second, also to reduce the number of wetland acres impacted, Helis considered potential well sites located adjacent to existing access to the area/Log Cabin Road which can accommodate anticipated vehicular traffic to occur with well operations, without disturbing extensive wetland acreage for construction of new access.

Third, Helis selected a site location that would also meet sound planning criteria, including sufficient distance from: (a) public thoroughfares (Interstate 12 and Louisiana Highway 1088); (b) populated areas (e.g., City of Mandeville and Lakeshore High School); and (c) utility rights of way (e.g., existing underground pipelines and electrical transmission line corridors). Since selection of the proposed well site, Helis has confirmed that the site avoids recently-designated critical habitat for the Dusky Gopher Frog located to the northeast.

In selecting its proposed well location, Helis considered multiple alternative drill sites within the control well area during the pre-application scoping process. Using infrared and LIDAR data from the selected geographic area, and field inspections of the alternative well pad locations within the control well area, Helis chose a well site that contained isolated pockets of uplands which serve to reduce the total number of wetland acres impacted by the well pad.

In addition, Helis’ revised plan adopts the recommendations from the Geological Review to reduce the footprint of the well pad. As originally proposed, Helis’ site plan encompassed both Phase 1 (vertical well) and Phase 2 (horizontal well) on a **10.35 acre drill site** which included a surface water pond to accommodate both phases of the project as well as a proposed method of storm water management for the site. Based on the Geological Review, Helis has amended its application to encompass the surface development required for Phase 1 only – the drilling of the vertical well. Helis has **reduced the well pad size by approximately 70% to 3.21 acres** - the absolute minimum required for the Phase 1 drilling of the vertical well while maintaining effective surface water management.

Helis will also manage its activities at the selected well site location to minimize potential impact to area wetlands:

- Helis will manage site operations to ensure that contaminants are not discharged from the site into surrounding surface waters/wetlands:
 - Helis will use a self-contained, closed loop mud system to drill the vertical well; no reserve or production pits will be used in the drilling of the vertical well.
 - Deck drainage will be collected in the rig basement and transported off-site for disposal in accordance with all applicable regulations.
 - Sanitary waste water will be collected in portable facilities and transported off-site for disposal in accordance with all applicable regulations.
 - Helis will implement best management practices and structural controls to ensure that only uncontaminated storm water is discharged from the site. Such practices and controls include but are not limited to: (1) implementation of a Spill Prevention, Control and Countermeasures (SPCC) plan; (2) use of structural controls (where appropriate) to retard the entrainment of sediment/constituents in site generated storm water; (3) filtration and sampling of site generated storm water to confirm its quality prior to controlled discharge from the site.

- Helis will seek authorization from the Louisiana Department of Natural Resources to install ground water monitor wells (i.e., “sentinel wells”) both up gradient and down gradient from the proposed vertical well to assess and monitor the quality of groundwater in the Southern Hills Aquifer in the vicinity of the vertical well. The sentinel wells will be used solely for monitoring purposes; they will not supply water for any drilling activities to be conducted on the site.

Importantly, Helis’ proposal has undergone Geological Review and the State Geologist has concluded that there are “No less damaging feasible alternatives” to the proposed Helis well site.

Finally, Helis intends to provide compensatory mitigation for any unavoidable wetland impacts resulting from its proposed activities by the reservation and acquisition of mitigation acreage from a suitable mitigation bank.

EXHIBIT C: Response to USACE 6/20/14 Request for Information

(Responses limited to requests that pertain to the Phase 1 drilling of the vertical well only)

COE Request: Many St. Tammany Parish residents expressed concerns regarding local traffic with respect to congestion and safety on the roads, of this area of the parish, due to the anticipated increase in number of large trucks and other equipment that would travel back and forth from the proposed site. Please address this issue detailing the logistics of planned/anticipated large pump trucks, storage tanks, trailer equipment, pickup trucks etc. Please respond to these concerns and describe the type of vehicles, an estimate of the number of vehicles and equipment anticipated for this proposal; the length of days, weeks or months the increased road traffic for this proposal is expected to last.

Helis Response: Helis anticipates that the truck traffic will reach the well site by using Interstate 12, then taking the State Highway 1088 exit off of I-12. Once on State Highway 1088 the trucks will travel 2 miles east until they get to Log Cabin Road which will take the trucks to the well site. Log Cabin Road is a privately owned road. The road has been in place for years and it normally used in the Weyerhaeuser timber business. Along the 2 miles of State Highway 1088 going east from I-12 there are no residences and no businesses. The only thing on the State Highway 1088 in our area is a public high school. The turn off for Lakeshore High School is located about 300' past where we will turn off State Highway 1088 onto Log Cabin Road. During Phase 1, Helis anticipates an average traffic volume of 4-5 large 18-wheel type trucks and 10-20 pickup truck type vehicles per drilling day (a drilling day is 24 hours; so 5 large trucks per drilling day equals roughly 1 truck per every 5 hours). If the drilling rig is running casing or cementing casing we could have more truck traffic and would have pump trucks moving on those days. Helis has spoken to Parish President Pat Brister and members of the Parish School Board and has proposed the following: Helis will keep all large trucks off of State Highway 1088 during the 2 hours in the morning that Lakeshore High School students and facility will be arriving to school. Helis will also keep all large trucks off of State Highway 1088 during the 2 hours in the afternoon when the high school is releasing students. Helis will also have security at the turn in from State Highway 1088 onto Log Cabin Road. Helis plans to coordinate its activity with the St. Tammany Parish Sheriff's Department. If available, Helis will hire and deploy off-duty Sheriff Deputies at the Log Cabin Road entrance 24 hours per day. If a traffic situation develops the deputies will be on-site to respond and to call the St. Tammany Parish Sheriff's Department if additional assistance is required. Phase 1 will cover the mobilization of the drilling rig onto the site, the

drilling of a 13,000' vertical hole and moving the drilling rig off location. This phase will take +/- 30 days. Helis will then have no activity at the well site for 3-4 months as it evaluates the data gathered from the drilling, coring and logging of the vertical pilot hole.

COE Request: From development through end of production, what would the estimated water use for a single wellbore be? Please indicate what water resources are intended to be used for the water required during the full development and production phases of this project. Please describe what measures you have taken to coordinate the proposed water usage, of this project, with state and/or local water utility authorities.

Helis Response: Helis estimates that the water requirements for the Phase 1 drilling of the vertical well to be +/- 800,000 gallons. Helis has committed to the State of Louisiana and to the St. Tammany Parish government that it will not use water from the aquifer system for its drilling operations. Helis will also not use water from streams or bayous that might be in its area of operations. Water will be obtained from private ponds in the area.

COE Request: Will the proposed activity involve underground injection of diesel fluids for hydraulic fracturing and if it will, has an application for a UIC permit been submitted to the EPA?

Helis Response: This Request does not pertain to Phase 1 of the Helis Project which is the subject of the clarified and amended 404 permit application.

COE Request: **Frac Fluid Migration - Pathway 1 – Migration of Fluids Through a Faulty Injection Well Casing:**

Helis Response: This Request does not pertain to Phase 1 of the Helis Project which is the subject of the clarified and amended 404 permit application.

COE Request: **Frac Fluid Migration - Pathway 2 – Migration of Fluids Through the Annulus Located Between the Casing and the Well Bore:**

Helis Response: This Request does not pertain to Phase 1 of the Helis Project which is the subject of the clarified and amended 404 permit application.

COE Request: **Frac Fluid Migration - Pathway 3 – Migration of Fluids from an Injection Zone Through the Confining Strata:**

Helis Response: This Request does not pertain to Phase 1 of the Helis Project which is the subject of the clarified and amended 404 permit application.

COE Request: **Frac Fluid Migration - Pathway 4 – Vertical Migration of Fluids Through Improperly Abandoned and Improperly Completed Wells:**

Helis Response: *This Request does not pertain to Phase 1 of the Helis Project which is the subject of the clarified and amended 404 permit application.*

COE Request: **Frac Fluid Migration - Pathway 5 – Lateral Migration of Fluids from Within an Injection Zone into a Protected Portion of that Stratum:**

Helis Response: *This Request does not pertain to Phase 1 of the Helis Project which is the subject of the clarified and amended 404 permit application.*

COE Request: **Frac Fluid Migration - Pathway 6 – Direct Injection of Fluids into or above an Underground Source of Drinking Water:**

Helis Response: *This Request does not pertain to Phase 1 of the Helis Project which is the subject of the clarified and amended 404 permit application.*

COE Request: **Please describe what measures have been taken or will be taken, for this proposal to comply with the EPCRA requirements? If Helis intends to use diesel fluids injection for underground fracturing please describe what measures will be taken to mitigate the six potential pathways of contamination migration to the St. Tammany USDW? If diesel fuels will not be used for hydraulic fracturing procedures, in the public interest, please describe what measures / BMPs will be used to reduce the risk of entry of contamination, into the parish's USDW.**

Helis Response: *While this request pertains principally to Phase 2 of the Helis Project, Helis notes that in its commitment to safety of the community and emergency response organizations within the parish, Helis has setup at our own expense a training program to meet the requirements of LAC 33 Part V Section 10107 and Emergency Planning and Community Right-to-Know Act (EPRCA) standards 40 CFR Parts 350-372. Helis will provide this training to all personnel identified by St. Tammany Parish. This one day program will provide St. Tammany Parish 1st Responders with information on:*

- *Contents of the Emergency Action Plan (EAP) which has been prepared for the drill site (copies will be filed with the Emergency Response Commission via the Louisiana State Police and the Local Emergency Planning Committee in compliance with LAC 33 Part V Section 10107)*
- *Response procedures in the unlikely event of a well control incident*
- *Chemicals to be used and stored on site (MSDS)*

- *Emergency communication protocols and contacts information found in the EAP*
- *Command and Control procedures Helis will utilize in the unlikely event of an incident requiring parish emergency response resources*
- *Introduction to Wild Well Control and corresponding training of 1st Responders*

Once the drill site is established and before commencement of drilling operations Helis will contact the St. Tammany Local Emergency Planning Committee (LEPC) to coordinate a walk through of the facility to familiarize 1st Responders with specifics of the drill site:

- *Access route to drill site*
- *Layout of drill site*
- *Emergency Shut Down procedures*
- *Location of chemical stores*
- *Location of critical equipment*
- *Review Emergency Notification Procedures*
- *Location and anticipated duration of the drilling operations*
- *Name and telephone numbers of facility personnel to contact in the case of an emergency; and*

During operations, copies of the MSDS shall be maintained on the drill site, accessible to all crew members, and will be reviewed in safety meetings prior to a chemical's use onsite. Safety meetings will be documented and copies maintained onsite, in contractor's office, and a copy forwarded to the designated Helis representative. This requirement will be included in the HazCom section of the Safe Work Practices Plan (SWPP) for each contractor.

Helis will install surface casing in the vertical well and if the geologic data collected from the well confirms potential productivity sufficient for Helis to proceed with Phase 2, Helis will install a second well casing in the vertical well prior to the completion of Phase 1.

Additional safety procedures related to hydraulic fracturing will be addressed in connection with any future application required for Phase 2 operations.

COE Request:

The Corps of Engineers attached to its request for a response to a letter of objection from St. Tammany Parish Councilman, Jacob B. Groby III, and specifically described Mr. Groby's discussion of the zoning which he asserts is applicable to the lands covered by our

application. Mr. Groby contends that its zoning ordinances would preclude the oil and gas operations contemplated by this application.

Helis Response:

*Under established Louisiana law, St. Tammany Parish does not have the statutory power preclude the drilling of oil and gas wells within the Parish, as Louisiana law vests the Commissioner of Conservation with the sole authority regarding drilling operations for oil and gas in Louisiana. La. R.S. 30:28(f) expressly states that "No other agency or political subdivision of the state has the authority and they are hereby expressly forbidden to prohibit or in any way interfere with the drilling of a well or test well in search of minerals" under a permit issued by the Commissioner of Conservation. This clear, far reaching principle has been consistently upheld by the Courts. See for example, Energy Management Corp. v. City of Shreveport ("Energy Management"), 397 F. 3d 297 (5th Cir. 2005), *aff'd* and remanded by 467 F. 3d 471 (5th Cir. 2006). The Fifth Circuit noted that the statute "reflects a desire for state uniformity and addresses the danger of conflict between the state program and enforcement of local laws." [397 F. 3d 297, at 303-304]. If the Corps of Engineers were to allow the zoning ordinances cited by Mr. Groby to preclude the operations contemplated by Helis, it would destroy such uniformity and the balance the Louisiana Legislature sought to create in enacting that statute.*

The Fifth Circuit's decision in Energy Management is also relevant to the other concern raised by Mr. Groby, the protection of the Southern Hills aquifer. As the Court in Energy Management noted, Louisiana law "gives the Commissioner the authority to issue regulations and orders to "ensure ground water aquifer safety." [397 F. 3d 297, at 304]

Prior to commencing drilling operations, Helis must obtain a drilling permit from the Commissioner of Conservation. The Commissioner would consider the safety of the ground water in the course of considering the permit application. That is the venue in which the arguments that Mr. Groby raises are to be addressed. If the permit is denied, no drilling operations will take place. If however the permit is granted, then under the clear provisions of Louisiana law, as followed by the Fifth Circuit in Energy Management, the St. Tammany Parish zoning ordinances cannot prohibit or interfere with the operations to take place pursuant to such permit. For this reason, such zoning ordinances are simply not relevant to the application filed by Helis here.

Finally, Mr. Groby makes a relatively brief reference to the issue of mitigation for the usage of wetlands contemplated by our application. Helis's efforts to avoid, minimize and ultimately mitigate the impact of its project on wetlands have been documented in Helis's clarified and amended 404 permit application submitted in conjunction with this

Response and as concluded in the recommendations issued by the geological review, there are "no less damaging feasible alternatives" to the drill site location selected by Helis.

JOINT PUBLIC NOTICE

October 14, 2014

United States Army
Corps of Engineers
New Orleans District
Regulatory Branch
Post Office Box 60267
New Orleans, Louisiana 70160-0267

State of Louisiana
Department of Environmental Quality
Attn: Water Quality Certification
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

(504) 862-2041 FAX (504) 862-2117
robert.m.tewis2@usace.army.mil
Project Manager
Robert Tewis
Permit Application Number
MVN-2013-02952-ETT

(225) 219-3225;
Fax (225) 219-3156
Project Manager
Elizabeth Johnson
WQC Application Number
WQC-140328-02

Interested parties are hereby notified that a permit application has been received by the U.S. Army Corps of Engineers (Corps), New Orleans District (CEMVN) pursuant to: Section 10 of the Rivers and Harbors Act of March 3, 1899 (30 Stat. 1151; 33 USC 403); and/or Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344).

Application has also been made to the Louisiana Department of Environmental Quality for a Water Quality Certification (WQC) in accordance with statutory authority contained in LRS30:2047 A(3), and provisions of Section 401 of the Clean Water Act (P.L.95-17).

CONSTRUCT WELL PAD FOR A SINGLE VERTICAL EXPLORATORY WELL, IN ST. TAMMANY PARISH, LOUISIANA

NAME OF APPLICANT: Helis Oil & Gas Company, LLC, (Helis), Attention: Mike Barham, 228 St. Charles Avenue, Ste. 192, New Orleans, Louisiana, 70130.

LOCATION OF WORK: North of Interstate-12, east of LA Highway 1088, abutting the west side of Log Cabin Road, at Latitude: 30.38778, Longitude -89.97861, within the Liberty Bayou-Tchefuncta River Watershed (HUC # 08090201) of the Lake Pontchartrain Drainage Basin in St. Tammany Parish, Louisiana.

BRIEF FILE SUMMARY: On April 14, 2014, CEMVN published a public notice for a proposed ±10.55 acre well pad that would accommodate an oil and gas exploration well and up to 10 subsurface hydraulic fracturing production wells. Two time extensions to the comment period were granted and the comment period ended June 16, 2014. On July 29, 2014, a geological review meeting (GR) coordinated by CEMVN and facilitated by the Louisiana Geological Survey was held to discuss geological aspects associated with the proposal. The GR was attended by the applicant and their consultants along with other state and federal resource agencies representatives. The focus of discussion was on the viability of the proposed location as a production site for fossil fuels to be extracted from the Tuscaloosa Shale Play.

Upon reviewing the information presented by Helis, the consulting geologist at the GR recommended that a single exploratory well be constructed for the purpose of obtaining more data to better assess the site's viability as an oil and gas production site. CEMVN concurred with that recommendation concluding that the site's viability for production of fossil fuels, at this juncture, is speculative and that processing an application for a production site would not be in accordance with the Corps Regulatory Guidance requirements stipulating avoidance and minimization procedures to be followed for proposed wetland impacts nor would it be in the public interest. CEMVN requested Helis to submit revised plans proposing a single exploratory well for the purpose of obtaining the additional data/information necessary for CEMVN to evaluate whether the site is the less environmentally damaging alternative, in the public interest and for the applicant's desired goal of producing fossil fuels in this geographical area.

CHARACTER OF WORK: Clear, grade, excavate, and fill to construct a well pad and make access road improvements to install and service a single drill rig for the purpose of obtaining geological data from this area of the Tuscaloosa Shale Play. The proposed well pad site is 3.21 acres, of which 2.81 acres are jurisdictional wetlands. Access road improvements and the construction of a guard shack would result in an additional 0.32 acre of wetland impacts for a total of 3.13 acres of wetlands to be directly impacted by the proposed work. The site plans have incorporated a ditch and ring levee abutting and circumventing the drill pad and would be contiguous with a planned 125 ft elevated entrance driveway. The drill pad surface has been designed with sloping features to drain stormwater to a 2,500 sq ft drainage sump within the drill site and abutting the perimeter ditch. The design is for the purpose of managing stormwater runoff within the drill pad site for containment, use and proper disposal. The applicant states that $\pm 800,000$ gallons of water would be required for this single vertical well operation and that it would be obtained from private ponds. The drill rig deck design incorporates a basement/sump underneath the rig to capture drill deck drainage for collection, transport and proper offsite disposal. The applicant proposes to install so called "sentinel wells" up-gradient and down-gradient of the well site to assess and monitor water quality of the Southern Hills Aquifer in the vicinity of the well site. The applicant proposes to compensate for unavoidable wetland impacts by purchasing the appropriate credits from a Corps approved mitigation bank.

The comment period for the Department of the Army Permit and the Louisiana Department of Environmental Quality WQC will close **30 days** from the date of this joint public notice. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons thereof, are being solicited from anyone having interest in this permit and/or this WQC request and must be mailed so as to be received before or by the last day of the comment period. Letters concerning the Corps of Engineers permit application must reference the applicant's name and the Permit Application Number, and be mailed to the Corps of Engineers at the address above, **ATTENTION: REGULATORY BRANCH**. Similar letters concerning the Water Quality Certification must reference the applicant's name and the WQC Application number and be mailed to the Louisiana Department of Environmental Quality at the address above. In accordance with the Corps Regulatory Policies found within 33 CFR Part 325, Paragraph 325.2 (d) (2), this comment period is not to exceed 30 days from the date of this joint public notice.

Corps of Engineers Permit Criteria

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The U.S. Army Corps of Engineers is soliciting comments from the public, federal, state, and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the U.S. Army Corps of Engineers to determine whether to make, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

The New Orleans District is unaware of properties listed on the National Register of Historic Places near the proposed work. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, prehistorical, historical sites, or data. Issuance of this public notice solicits input from the State Archeologist and State Historic Preservation Officer regarding potential impacts to cultural resources.

The Corps is unaware of any species or designated critical habitat, listed by the Endangered Species Act (ESA), which may be directly affected by the proposed activity. Our initial finding is that the proposed work would neither affect any ESA listed species nor affect any habitat designated as critical to the survival and recovery of any ESA listed species. CEMVN's final determination, relative to project affecting any ESA listed species or any designated critical habitat, is subject to review by and coordination with the US Fish and Wildlife Service.

This notice initiates the EFH consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The proposal would result in temporary adverse impacts to N/A acres of EFH utilized by various life stages of red drum and penaeid shrimp. CEMVN's final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

If the proposed work involves deposits of dredged or fill material into navigable waters, the evaluation of the probable impacts will include the application of guidelines established by the Administrator of the Environmental Protection Agency. Also, a certification that the proposed activity will not violate applicable water quality standards will be required from the Department of Environmental Quality, Office of Environmental Services, before a permit is issued.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have interest in the matter.

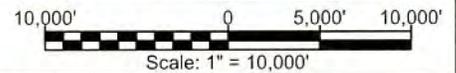
Michael V. Farabee
Chief, Eastern Evaluation Section
Regulatory Branch

Attachments



NOTE:
THE CONTENTS OF THESE PLANS ARE INTENDED
EXCLUSIVELY FOR THE PURPOSE OF OBTAINING
ENVIRONMENTAL COMPLIANCE PERMITS

VICINITY MAP



HELIS OIL & GAS COMPANY, L.L.C.

PROPOSED DRILLSITE & STRUCTURES

Eads Poitevent No. 1 Well

Section 34, T7S-R12E

St. Tammany Parish, Louisiana



Lafayette New Orleans Houston
135 Regency Sq. Lafayette, LA 70508
Ph. 337-237-2200 Fax. 337-232-3299
www.fenstermaker.com

DRAWN BY: TSM

REVISED: 3/14/2014

DATE: 1/15/2014

PROJ. MGR.: RLL

08/28/2014

SHEET 1 OF 8 SHEETS

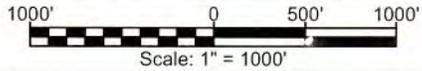
09/05/2014

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NOTE:
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PROJECT PLAN VIEW



HELIS OIL & GAS COMPANY, L.L.C.

PROPOSED DRILLSITE & STRUCTURES

Eads Poitevent No. 1 Well

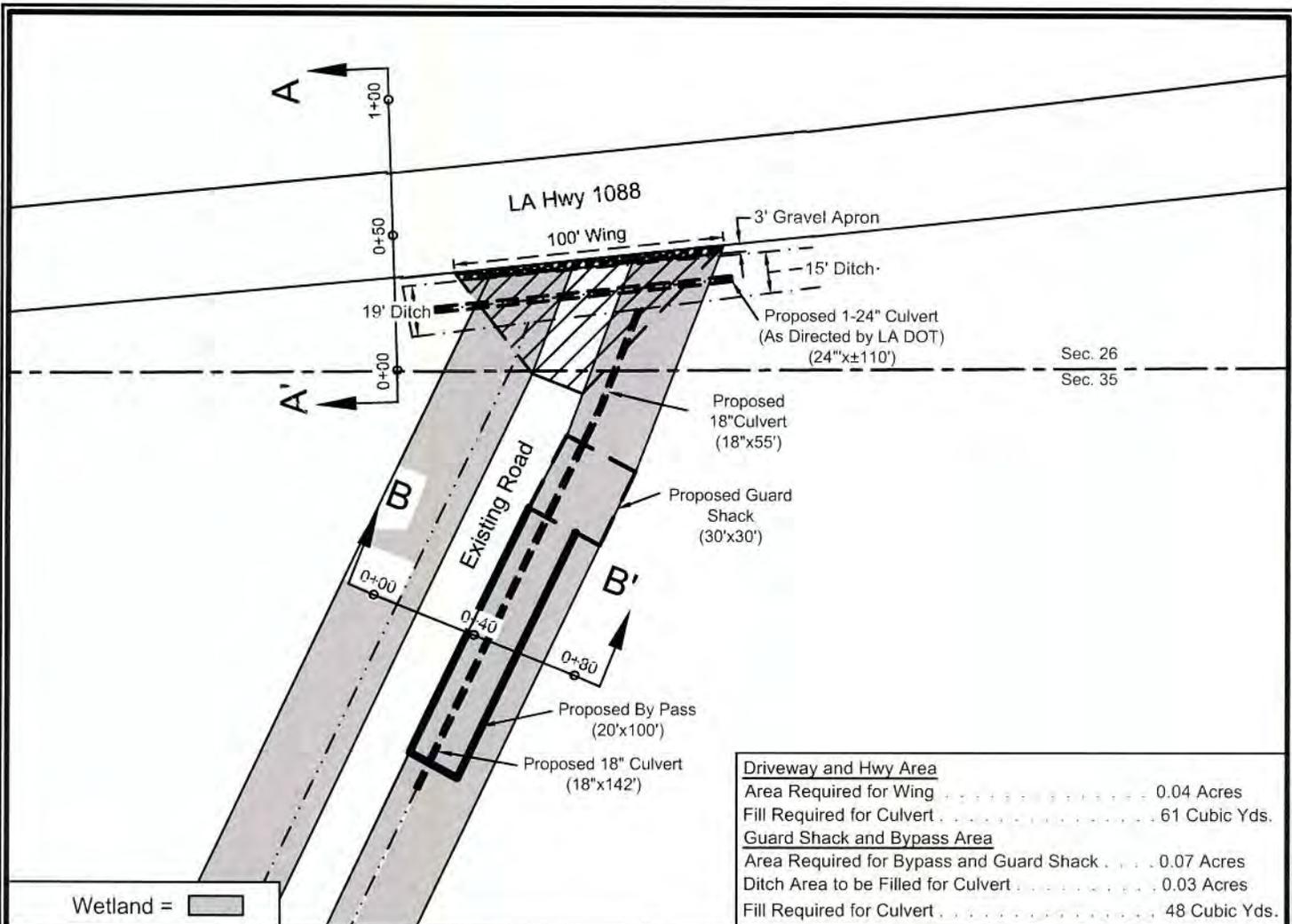
Section 34, T7S-R12E

St. Tammany Parish, Louisiana



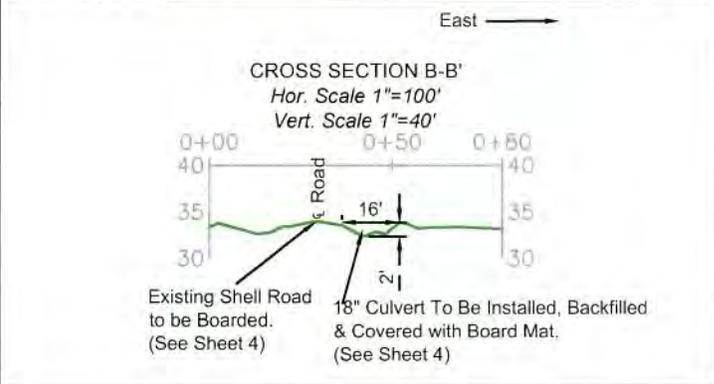
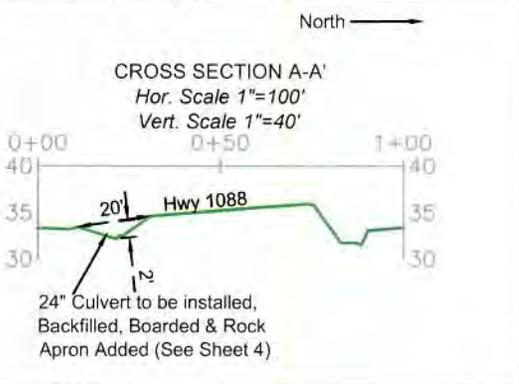
Lafayette New Orleans Houston
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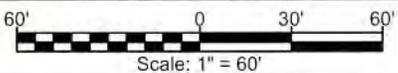
Driveway and Hwy Area	
Area Required for Wing	0.04 Acres
Fill Required for Culvert	61 Cubic Yds.
Guard Shack and Bypass Area	
Area Required for Bypass and Guard Shack	0.07 Acres
Ditch Area to be Filled for Culvert	0.03 Acres
Fill Required for Culvert	48 Cubic Yds.

Wetland =



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PLAN VIEW DRIVEWAY, GUARD SHACK & BYPASS



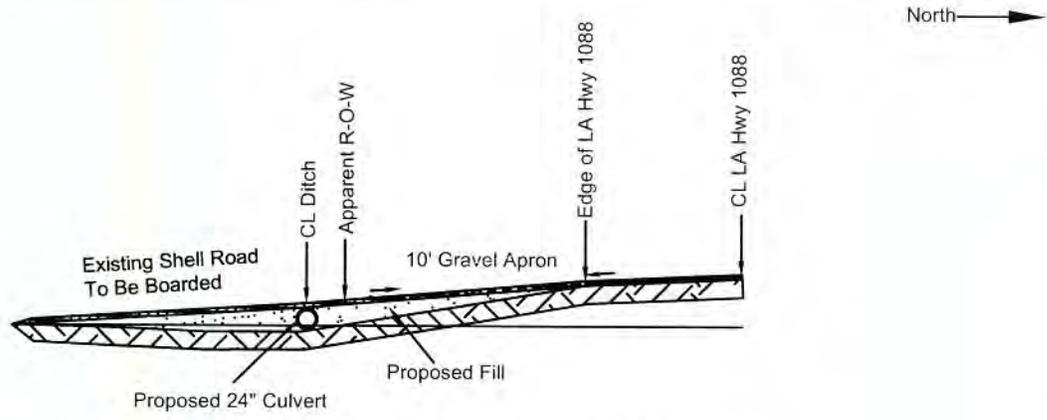
HELIS OIL & GAS COMPANY, L.L.C.
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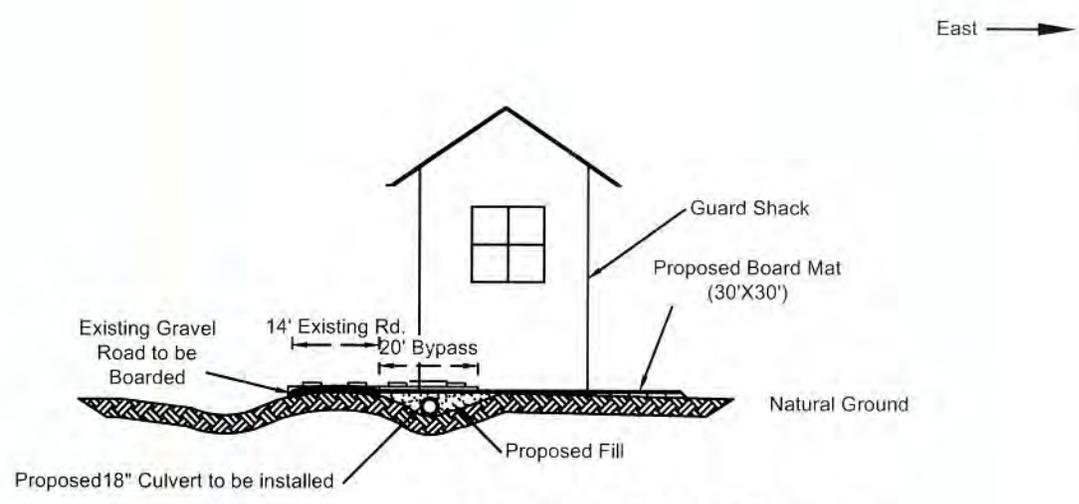
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DATE: 1/15/2014
SHEET 3 OF 8 SHEETS



TYPICAL DRIVEWAY WITH CULVERT INSTALLATION

No Scale



TYPICAL BYPASS, GUARD SHACK & CULVERT INSTALLATION

No Scale

Culvert to be installed in ditch, filled and covered with Boarded Mat or Boarded Bypass.

NOTE:
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ENVIRONMENTAL COMPLIANCE PERMITS

HELIS OIL & GAS COMPANY, L.L.C.

PROPOSED DRILLSITE & STRUCTURES

Eads Poitevent No. 1 Well

Section 34, T7S-R12E

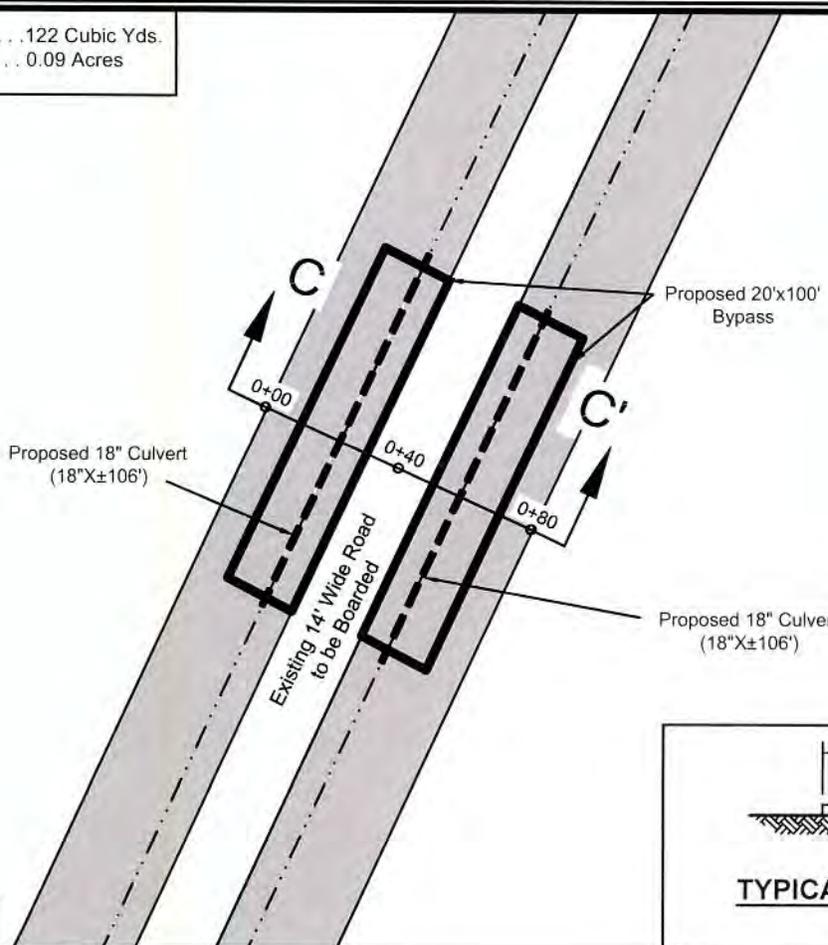
St. Tammany Parish, Louisiana



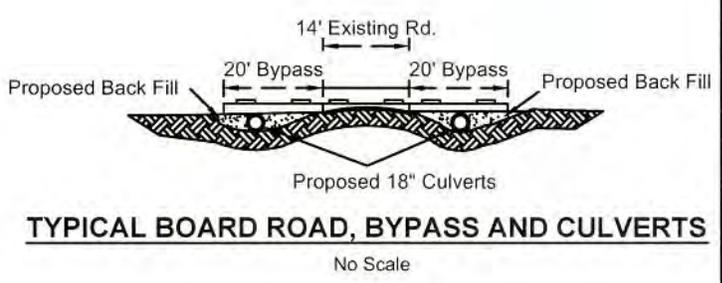
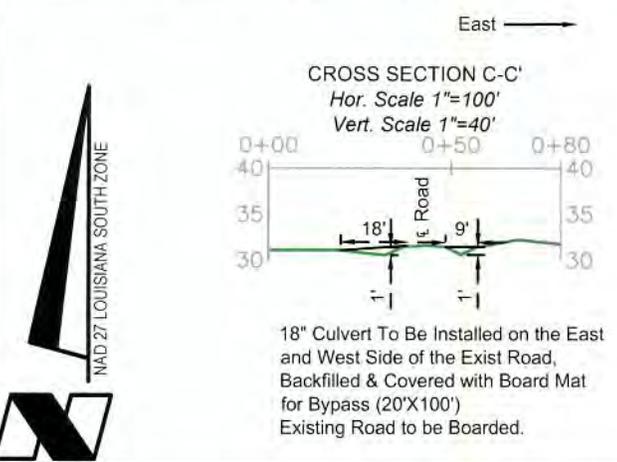
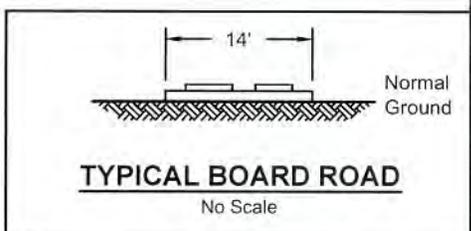
Lafayette New Orleans Houston
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www.fenstermaker.com

DRAWN BY: TSM	REVISED: 3/14/2014	DATE: 1/15/2014
	08/28/2014	
PROJ. MGR.: RLL	09/05/2014	SHEET 4 OF 8 SHEETS
FILENAME: T:\2013\2130980\DWG\ENVIRONMENTAL\Poitevent COE 082814.dwg		

Fill Required for Culverts. 122 Cubic Yds.
 Area Required for Culverts. 0.09 Acres

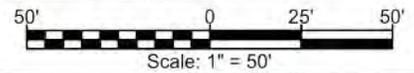


Wetland =



NOTE:
 THE CONTENTS OF THESE PLANS ARE INTENDED
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 ENVIRONMENTAL COMPLIANCE PERMITS

PLAN VIEW BYPASS



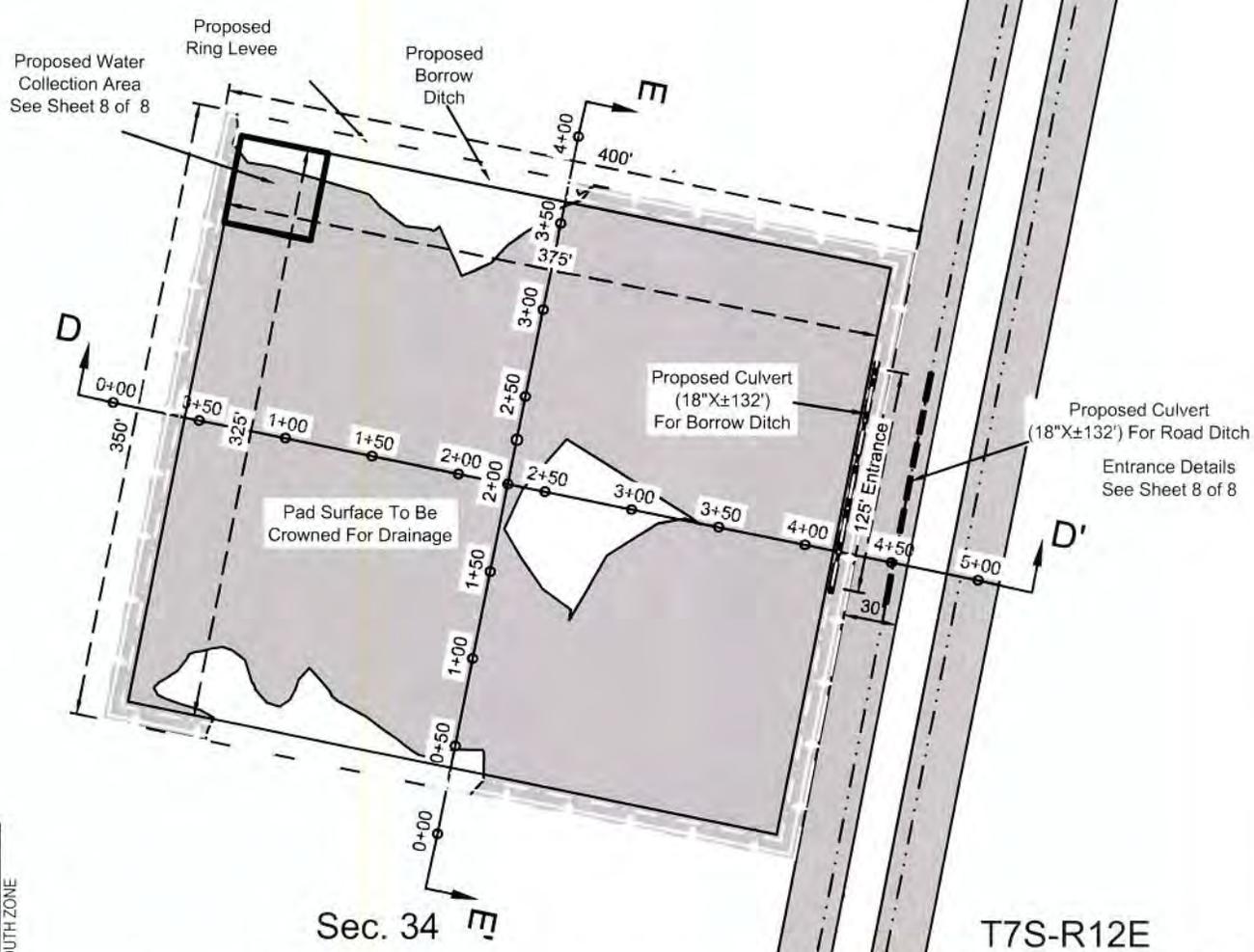
HELIS OIL & GAS COMPANY, L.L.C.
 PROPOSED DRILLSITE & STRUCTURES
Eads Poitevent No. 1 Well
 Section 34, T7S-R12E
 St. Tammany Parish, Louisiana



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 135 Regency Sq. Lafayette, LA 70508
 Ph. 337-237-2200 Fax. 337-232-3299
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FILENAME: T:\2013\2130980\DWG\ENVIROMENTAL\Poitevent COE 082814.dwg	09/05/2014	

- Ring Levee
- - - Borrow Ditch
- · - · - Road Ditch
- - - - - Culvert

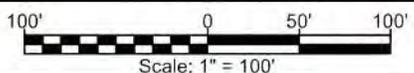


Excavation/Fill Required for Borrow Ditch/Ring Levee	492 Cubic Yds.
Fill Required for Drill Pad	10,776 Cubic Yds.
Fill Required for Entrance	1,500 Cubic Yds.
Area Required for Entrance	0.09 Acres
Wetland = Wetland Area	2.81 Acres



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PLAN VIEW PAD AREA



HELIS OIL & GAS COMPANY, L.L.C.

PROPOSED DRILLSITE & STRUCTURES

Eads Poitevent No. 1 Well

Section 34, T7S-R12E

St. Tammany Parish, Louisiana



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PROJ. MGR.: RLL

08/28/2014

SHEET 6 OF 8 SHEETS

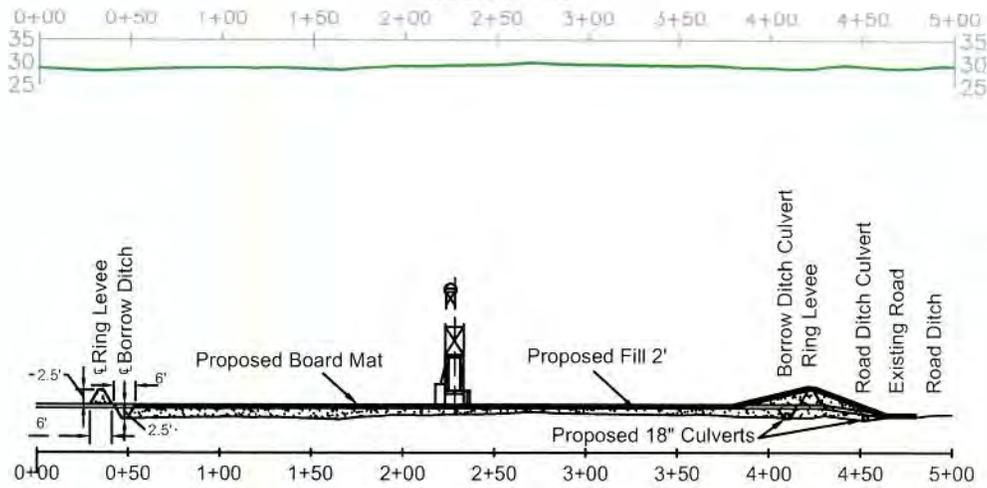
09/05/2014

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CROSS SECTION D-D'

Hor. Scale 1"=100'

Vert. Scale 1"=40'



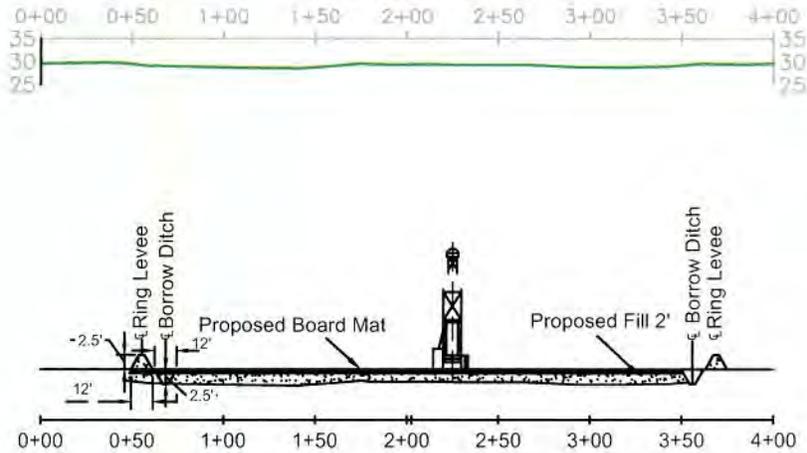
TYPICAL CROSS-SECTION OF DRILLSITE D-D'

No Scale

CROSS SECTION E-E'

Hor. Scale 1"=100'

Vert. Scale 1"=40'



TYPICAL CROSS-SECTION OF DRILLSITE E-E'

No Scale

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HELIS OIL & GAS COMPANY, L.L.C.

PROPOSED DRILLSITE & STRUCTURES

Eads Poitevent No. 1 Well

Section 34, T7S-R12E

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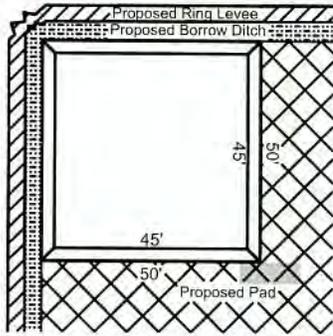
REVISED: 3/14/2014

08/28/2014

09/05/2014

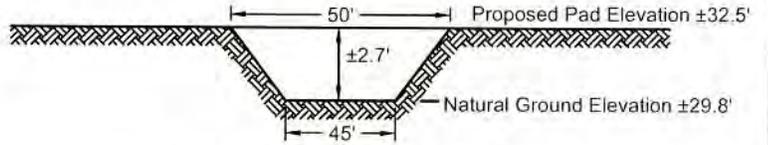
DATE: 1/15/2014

SHEET 7 OF 8 SHEETS



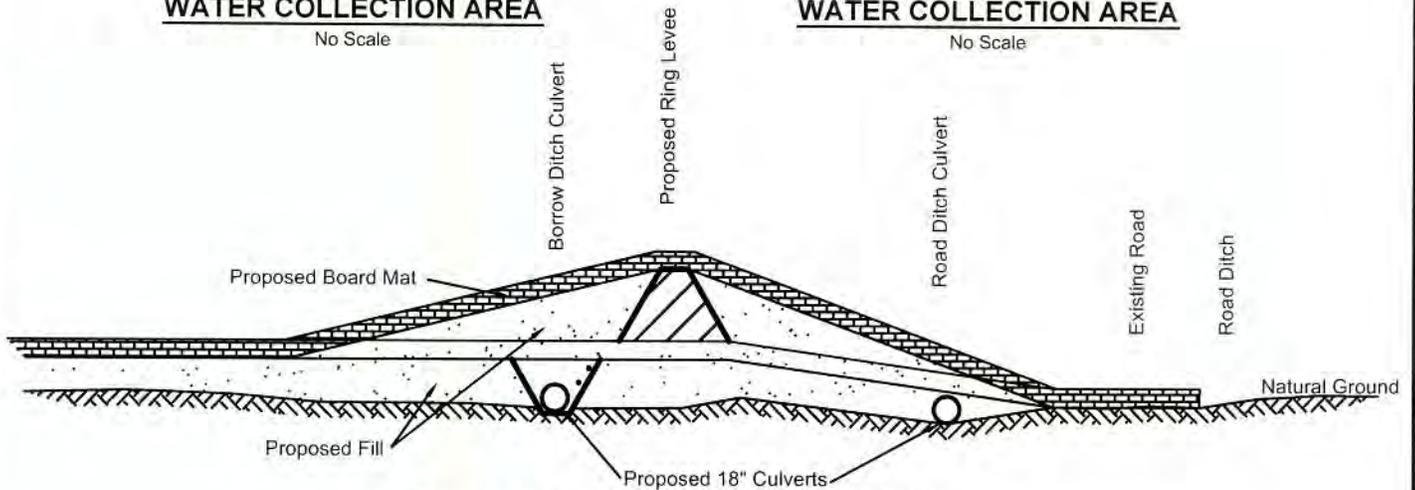
PLAN VIEW OF TYPICAL WATER COLLECTION AREA

No Scale



PROFILE OF TYPICAL WATER COLLECTION AREA

No Scale



PROFILE OF TYPICAL PAD ENTRANCE

No Scale

NOTES:

1. Material for drillsite levees will be taken from within the leveed perimeter.
2. Closure procedures, including onshore land treatment and/or offsite disposal of mud pit contents and other drilling residues, shall be conducted in accordance with appropriate Federal and State Regulations.
3. In order to ensure the safety of all parties, the permittee shall contact the Louisiana ONE CALL System (1-800-272-3020), a minimum of 48 hours prior to the commencement of any excavation (Digging, Dredging, Jetting, etc.) or demolition activity.

NOTES - DRY HOLE SCENARIO

1. The boards will be removed from the access road and drill pad.
2. The drill site and ring levees will be degraded within 90 days following abandonment. The levee material will be deposited, to the maximum extent practicable, into the borrow areas from which the material was excavated and the area will be leveled to as near pre-project conditions as practicable.
3. The drill pad site will be allowed to naturally re-vegetate.

DISCLAIMER: At this time, C.H. Fenstermaker & Associates, LLC has not performed nor was asked to perform any type of engineering, hydrological modeling, flood plain, or "No Rise" certification analyses, including but not limited to determining whether the project will impact flood hazards in connection with federal/FEMA, state, and/or local laws, ordinances and regulations. Accordingly, Fenstermaker makes no warranty or representation of any kind as to the foregoing issues, and persons or entities using this information shall do so at their own risk.

NOTE:
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HELIS OIL & GAS COMPANY, L.L.C.

PROPOSED DRILLSITE & STRUCTURES

Eads Poitevent No. 1 Well

Section 34, T7S-R12E

St. Tammany Parish, Louisiana



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REVISED: 3/14/2014

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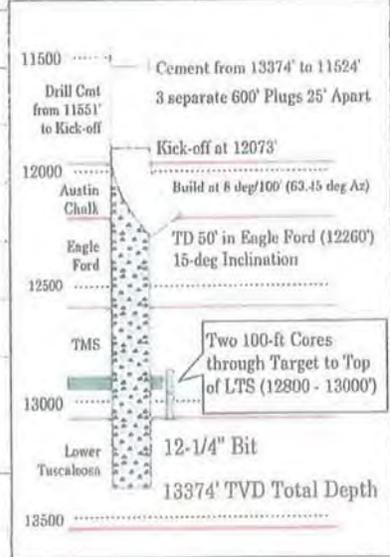
PROJ. MGR.: RLL

08/28/2014

SHEET 8 OF 8 SHEETS

FILENAME: T:\2013\2130980\DWG\ENVIRONMENTAL\Poitevent COE 082814.dwg

TYPE LOG	LITH- OLOGY	DESCRIPTION	EST. PORE PRESS. GRADIENT (PPG)	MUD WEIGHT (PPG)	TVD (ft)	WELL SCHEMATIC
					0	20" Driven to Refusal
					500	110' TVD
		Freshwater Bearing Sands and Gravels Interbedded with Clays and Silts	8.3	8.6 to 9.0	1000	Diverter System Used
					1500	17-1/2" Bit
					2000	Water Base Spud Mud
					2500	Newpark NewGel/ New PHPA Mud System Smith XR+C Bit
					3000	Closed Loop Solids Control.
		Increasing Salinity			3500	Will Control Drill Surface Hole
		Base of Freshwater			4000	No Trucks - School Zone Hours
		Predominately Saltwater Bearing Sands Interbedded with Shales and Silts	8.6	9.0 to 9.5	4500	13-3/8" Casing
		Est Top of Cris A			5000	J-55, 68 lb/ft, BTC
					5500	Cemented back to Surface
		Est Top of Oligocene			6000	4000' TVD / 12.0 ppg FIT
		Est Top of Het			6500	RSRRA Blowout Preventer
					7000	12-1/4" Bit
		Est Top of Vicksburg			7500	Water Base Mud
		Predominately Consolidated Shales	9.0	9.5 to 9.7	8000	Newpark Evolution Mud System Smith MS16BPX Bit down to 12800' Optional Diverter Collar at 7000'
		Est Top of Wilcox			9000	
					9500	
		Predominately Consolidated Shales		9.7 to 10.0	10000	
					10500	
		Austin Chalk	9.5	9.8 to 10.5	11000	
		Eagle Ford Shale			11500	
		Tuscaloosa Marine Shale	10.2	10.5 to 11.3	12000	9-5/8" Casing
		Lower Tuscaloosa Sand			12500	P-110, 53.5 lb/ft, BTC
					13000	12260' TVD / Cemented back to Surface
					13500	Tuscaloosa Marine Shale Target at 12894'



Log Sources:
 From 00190' to 03418': Serial No. 136552 / Currie No. 1
 From 03418' to 13500': Serial No. 170359 / Keller Heirs No. 1 (TYPE LOG)

EXHIBIT NO. E1-5 DATE: 11-12-14
 DOCKET NO. 14-626

HELIS OIL & GAS COMPANY, LLC

EADS POITEVENT ET AL NO. 1
 LACOMBE BAYOU FIELD
 ST TAMMANY PARISH, LOUISIANA

WELL PLAN SUMMARY
 HELIS EXHIBITS (WPPM 116800)

St. TAMMANY PARISH, LOUISIANA
"Eads Poitevent No. 1 Well"
LAT: 30° 23' 11.58" N
LONG: 89° 58' 45.79" W



Legend

- Existing 14' Wide Access Road (Non-Wet)
- Proposed Drillsite

Image courtesy of USGS Earthstar Geographics SIO © 2014 Microsoft Corporation © 2010 NAVTEQ © AND

VICINITY MAP

(BING HYBRID)

HELIS OIL & GAS COMPANY
PROPOSED DRILLSITE & STRUCTURES
Eads Poitevent No. 1 Well
Section 34, T7S - R12E
St. Tammany Parish, Louisiana
3/14/2014



BOBBY JINDAL
GOVERNOR



PEGGY M. HATCH
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

RECEIVED MAR 23 2015

March 19, 2015

Mr. Michael Barham
Helis Oil & Gas Company, L.L.C.
228 St. Charles Avenue, Suite 912
New Orleans, Louisiana 70130

AI No.: 191392
Activity No.: CER20140001

RE: Water Quality Certification WQC 140328-02
Corps of Engineers Permit MVN-2013-02952-ETT
St. Tammany Parish

Dear Mr. Barham:

The Louisiana Department of Environmental Quality, Water Permits Division (LDEQ), has reviewed the application to clear, grade, excavate and place fill to construct a well pad, make access road improvements, construct a guard shack, and install a vertical exploratory well to gather geological data to confirm the production potential of a very specific subsurface geologic zone in Mandeville, St. Tammany Parish.

The information provided in the documentation received October 20, 2014, as well as the information as public noticed by U.S. Army Corps of Engineers (Corps), New Orleans District October 14, 2014, has been reviewed in terms of compliance with State Water Quality Standards, the approved Water Quality Management Plan and applicable state water laws, rules and regulations. LDEQ determined that the requirements for a Water Quality Certification have been met. LDEQ concludes the discharge of fill material for the construction of a well pad and an exploratory vertical well to obtain geologic data to confirm the production potential of a very specific subsurface geologic zone will not violate water quality standards as provided for in LAC 33:IX.Chapter 11. Therefore, LDEQ hereby issues Helis Oil & Gas Company, L.L.C. Water Quality Certification, WQC 140328-02.

Should you have any questions concerning any part of this certification, please contact Elizabeth Johnson at (225) 219-3225, or by email at elizabeth.johnson@la.gov. To ensure all correspondence regarding this certification is properly filed into the Department's Electronic Document Management System, please reference Agency Interest (AI) number 191392 on all future correspondence to this Department.

Sincerely,

A handwritten signature in black ink that reads "Tegan B. Treadaway".

Tegan B. Treadaway
Assistant Secretary

c: IO-W
Corps of Engineers – New Orleans District

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

RATIONALE FOR DECISION

WATER QUALITY CERTIFICATION 140328-01

HELIS OIL & GAS COMPANY, LLC
EADS POITEVENT No. 1 WELL
AGENCY INTEREST (AI) 191392
MANDEVILLE, ST. TAMMANY PARISH

The Louisiana Department of Environmental Quality, Office of Environmental Services (LDEQ), through this decision, issues a water quality certification to Helis Oil & Gas Company, LLC (Helis) to excavate and place fill to construct a well pad, make access road improvements, construct a guard shack, and install a proposed vertical exploratory well to gather geological data for the Eads Poitevent No. 1 Well in Mandeville, St. Tammany Parish.

In accordance with the Clean Water Act, 33 U.S.C. §1341 *et. seq.*, any applicant for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into “navigable waters,”¹ shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate. To conduct an activity that may lead to a discharge into “navigable waters,” a person must receive authorization via a permit issued by the U.S. Army Corps of Engineers as per the Clean Water Act, 33 U.S.C. §1344 *et. seq.* Helis proposes to excavate and place fill to construct a well pad and make access road improvements; these proposed activities will result in a discharge into “navigable waters,” specifically wetlands. Therefore, Helis is required to obtain a federal permit from the U.S. Army Corps of Engineers and a water quality certification from LDEQ.

LDEQ's issuance of a water quality certification is a determination made that the project as proposed to the U.S. Army Corps of Engineers will not violate Louisiana's Water Quality Standards and is in accordance with Louisiana's Water Quality Management Plan and all applicable state water laws, rules, and regulations.

FINDINGS OF FACT

I. BACKGROUND

A. Description of the Project Site

The project site is located approximately 5.8 miles northeasterly of Mandeville in St. Tammany Parish. The site is located north of Interstate 12 and west of Log Cabin Road off Louisiana Highway 1088. Wetlands are found throughout the site. The closest known waterbody is an unnamed ditch that is parallel and on the north side of Interstate 12. This ditch flows easterly to Lacombe Bayou. Lacombe Bayou flows in a south, southeasterly direction until it empties into Lake Pontchartrain, east of Goose Point and West of Point Platte.

¹ “navigable waters” is defined in 33 U.S.C §1362

B. Description of the Project

The proposed well site will include the clearing, grading, excavating, and deposition of earthen fill material for the construction of a 3.21-acre drill pad, the installation of improvements to Log Cabin Road, and the construction of a guard shack. All vegetation removed will be sent off site for disposal. The proposed improvements to Log Cabin Road will impact 0.32 acres of jurisdictional wetlands. These improvements include three 20' x 100' bypasses to be placed over existing roadside ditches. Each bypass will be constructed by the placement of an appropriately sized culvert into the existing ditch and backfilled to grade using off-site fill material. Board mats will be placed over the fill. A 30' x 30' guard shack will be constructed in the same manner as the bypasses and a turning apron will be installed at the intersection of Log Cabin Road and Louisiana Highway 1088.

The development of the 3.21-acre drill pad area impacts 2.81 acres of jurisdictional wetlands. A ditch will be excavated around the perimeter of the drill site with the exception of a raised and sloped 125' section adjacent to the access road. This will be used for the construction of an entranceway connecting the drill pad to the access road.

The soils excavated from the ditch will be used to construct the ring levee around the perimeter of the 3.21-acre drill pad with the exception of the 125' section used for the entranceway.

The partially elevated 3.21-acre drill site will be constructed by using off-site fill material. This material will then be covered with board material. A 50' x 50' stormwater collection area will also be constructed with off-site material in the northwest corner of the drill site. The pad area will be designed to provide stormwater collection features required for the management and control of stormwater. Non-contact stormwater will be processed through multiple on-site filtration systems and visually inspected to confirm the absence of a visible sheen or floating or settleable solids or visible foam, either before being discharged from the drill site or recycled for use in the drilling operation.

II. PUBLIC NOTICE AND COMMENT PERIOD

On April 14, 2014, a public notice for a proposed 10.55-acre well pad that would accommodate an oil and gas exploration well and up to 10 subsurface hydraulic fracturing production wells was published by the Corps of Engineers – New Orleans District (Corps). Two time extensions to the comment period were granted and the comment period ended June 16, 2014. On July 29, 2014, a geological review meeting (GR) coordinated by the Corps and facilitated by the Louisiana Geological Survey was held to discuss geological aspects associated with this proposal. Helis and their representatives along with other state and federal resource agency representatives attended the GR. It was at this time the consulting geologist of the Louisiana Geological Survey recommended a single exploratory well utilizing the existing road with two turnarounds, a wing at the highway and a ring levee site of 350' x 400' be constructed to determine the site's viability as oil and gas production site. The Corps requested Helis to submit revised plans proposing a single exploratory well for the purpose of obtaining the additional data and information necessary for the Corps to evaluate whether the site is the less environmentally damaging alternative, in the public interest and for the applicant's desired goal of producing fossil fuels in this geographical area.

By application dated October 3, 2014, Helis applied to the Corps for review and issuance of a permit under Section 404 of the Clean Water Act (CWA) to construct a well pad for a single vertical exploratory well. The project was jointly public noticed between the Corps and LDEQ on October 12, 2014; a description of this single well project is given above in Section I.B. The comment period closed 30 days from the date of the joint public notice.

Included in the public comments, LDEQ received correspondence requesting a public hearing from several non-government organizations. These requests were not granted. The water quality certification approval process encompasses the evaluation of the water quality criteria of the subsegment in which the project is located to ensure that the designated water uses of the affected watershed are not further impacted. The evaluation concluded there are no significant water quality issues associated with the exploratory vertical well project as proposed.

A "Public Comment Response Summary" has been prepared and is attached to and made a part of this Rationale for Decision.

III. PUBLIC COMMENT RESPONSE SUMMARY

A "Response to Comments Summary" has been prepared and is attached to and made a part of this Rationale for Decision.

IV. WATER QUALITY

A. Water Quality Criteria

Surface water quality standards are described in LAC 33:IX.Chapter 11. The project is located within the boundaries of Subsegment 040903, Bayou Cane - From Headwaters to U.S. Highway 190 (Scenic).

The numerical water quality criteria for Subsegment 040903, Bayou Cane - From Headwaters to U.S. Highway 190 (Scenic), as listed in LAC 33:IX.1123, Table 3 are:

Chlorides:	30 mg/L
Sulfates:	30 mg/L
Dissolved Oxygen:	5.0 mg/L
pH:	6.0 to 8.5
Bacterial Criteria:	400 colonies/100 ml May 1 – October 31 2000 colonies/100 ml November 1 – April 30
Temperature:	30°C
Total Dissolved Solids:	150 mg/L

The designated water uses of Subsegment 040903 – Bayou Cane are primary contact recreation, secondary contact recreation, fish and wildlife propagation, and outstanding natural resource waters. Designated uses assigned to a subsegment apply to all water bodies, listed water body and tributaries and distributaries of the listed water body contained in that subsegment unless unique chemical, physical and/or biological conditions preclude such uses. The designated use of outstanding natural resource waters apply only to the water body specifically named.

B. Water Quality Assessment

The water quality assessment in the 2012 Integrated Report for Subsegment 040903 – Bayou Cane is shown in Table 1. Subsegment 040903 – Bayou Cane is currently supporting its designated uses of primary contact recreation, secondary contact recreation, and outstanding natural resource waters. Subsegment 040903 – Bayou Cane is currently not supporting the designated use of fish and wildlife propagation. The suspected cause of the impairment is total dissolved solids (TDS), chlorides, sulfates, and dissolved oxygen. The suspected sources of the TDS, chlorides, and sulfates impairment are the draining, filling and loss of wetlands, habitat modification and non-river shore and shoreline modifications. The suspected source of the dissolved oxygen impairment is the presence of septic systems.

Table 1
 Designated Uses of Subsegments and Suspected Causes of Impairments

Subsegment	PCR	SCR	FWP	ONRW	Suspected Cause of Impairment	Suspected Source of Impairment
040903	Y	Y	I	Y	Chlorides, Sulfates, TDS	Drainage/Filling/Loss of Wetlands
					Chlorides, Sulfates, TDS	Habitat Modification
					Chlorides, Sulfates, TDS	Littoral/shore Area Modifications (Non-riverine)
					Dissolved Oxygen (DO)	On-site Treatment Systems (Septic Systems and Similar Decentralized Systems)

PCR = Primary Contact Recreation (swimming)
 SCR = Secondary Contact Recreation (boating)
 FWP = Fish and Wildlife Propagation (fishing)
 DWS = Drinking Water Supply

Y = Supporting
 I = Impaired

C. Antidegradation

Each state must enforce a statewide antidegradation policy aimed at maintaining and protecting instream uses and existing high-quality waters. Helis' proposed vertical exploratory well is not expected to cause exceedances in numerical water quality criteria and/or cause non-attainment of the designated uses and therefore should not result in degradation of water quality.

Helis will use a closed loop mud system to drill the vertical well. There are to be no reserve or production pits of any kind. Deck drainage will be collected in the basement of the drill rig and transported off-site for disposal. Sanitary wastewater will be collected in portable facilities and transported off-site for disposal in accordance with all applicable regulations.

Helis will implement Best Management Practices (BMPs) and structural controls to ensure that only non-contact stormwater is discharged from the site. Helis will implement a Spill Prevention, Control, and Countermeasures Plan (SPCC) and use structural controls to retard the entrainment of sediment/constituents in site-generated stormwater. Non-contact stormwater will be processed through multiple on-site filtration systems and visually inspected to confirm the absence of a visible sheen or floating or settable solids or visible foam, either before being discharged from the drill site or recycled for use in the drilling operation.

V. AVOIDANCE OF ADVERSE ENVIRONMENTAL EFFECTS

Helis has developed and will employ BMPs and structural controls during the preparation and development of the drill pad site and during drilling operations of the vertical exploratory well to gather geological data to ensure no contamination of surrounding surface water occurs. Helis will use a self-contained, closed loop mud system. Reserve or production pits will not be used. Deck drainage from the drilling rig will be collected in the rig basement and transported off-site for disposal. Any produced water, all waste mud, rock cuttings and drilling wastes will be collected and transported off-site for disposal. Sanitary wastewater will be collected in portable facilities and transported off-site for disposal. The entire drill site is enclosed within a 2.5 high ring levee. Non-contact stormwater generated at the site will be collected and processed through a multiple on-site filtration systems and will be visually inspected prior to discharge through a permitted outfall or recycled for use in the drilling operation of the vertical exploratory well to gather geological data.

VI. CONCLUSION

Based on review and evaluation of the administrative record, which includes the U.S. Army Corps of Engineers permit application, additional information from the applicant and public comments, the Louisiana Department of Environmental Quality, Office of Environmental Services finds the construction of a well pad, access road, guard shack, and installation of a vertical exploratory well to gather geological data as proposed will not violate Louisiana's Water Quality Standards and will comply with Louisiana's Water Management Plan and all applicable state water laws, rules and regulations.

Water Quality Certification, WQC 140328-02 is hereby issued to:

HELIS OIL & GAS COMPANY, L.L.C.

Issued on March 19, 2015

Tegan B. Treadaway

Tegan B. Treadaway
Assistant Secretary

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
RESPONSE TO COMMENTS SUMMARY**

**HELIS OIL & GAS COMPANY, L.L.C.
AGENCY INTEREST (AI) 191392
WATER QUALITY CERTIFICATION 140328-02
MANDEVILLE, ST. TAMMANY PARISH**

The Louisiana Department of Environmental Quality, Office of Environmental Services, (LDEQ) through this decision issues a water quality certification to Helis Oil & Gas Company, L.L.C. (Helis). LDEQ's issuance of a water quality certification is a determination made that the project as proposed will not violate Louisiana's Water Quality Standards and is in accordance with Louisiana's Water Quality Management Plan and all applicable state water laws, rules, and regulations. LDEQ's approval does not authorize the applicant to perform the proposed activity. It is not a permit.

LDEQ received oral and written comments during review of Helis' Water Quality Certification application. Because of the large number of comments, comments addressing the same topic have been grouped and summarized.

1. Helis violates St. Tammany Parish Zoning Code.

In the application for a Section 404 permit to construct a drilling well pad and associated structures in St. Tammany Parish. The proposed well is located in an area that is zoned Tammany as A-3 Suburban District for residential purposes in St. Tammany Parish's Unified Development Code.

Response

LDEQ recognizes St. Tammany Parish Zoning Commission and the St. Tammany Parish Council master plans home rule. However, LDEQ's issuance of a water quality certification is a determination made that the project as proposed will not violate Louisiana's Water Quality Standards and is in accordance with Louisiana's Water Quality Management Plan and all applicable state water laws, rules, and regulations. LDEQ's approval does not authorize the applicant to perform the proposed activity. It is not a permit.

2. Many commenters expressed concerns regarding significant adverse effects of the discharge of pollutants on human health and environment from waste or produced water storage pits.

Response

Helis is not using surface pits to store any production waste or drill cuttings of any kind. Helis will use a self-contained, closed loop mud system to drill the vertical exploratory well to gather geological data to confirm the production potential of a very specific subsurface geologic zone. Order Number 1577-1 issued by the State of Louisiana, Department of Natural Resources, Office of Conservation (OOC) requires Helis to drill the well using a "closed-loop solids control systems, and there will be no pits, no earthen pits, either lined or unlined. Steel tanks will be used in the closed-loop solids control system with all the waste mud and rock cuttings being generated being removed as they are drilled."¹

¹ State of Louisiana, Office of Conservation, Office No. 1577-1, issued December 19, 2014, Page 12 of 14.

Helis certifies they will employ the following Best Management Practices (BMPs) to ensure minimization of risks to surrounding waters of the US.

- Deck drainage from the drilling rig will be collected in the rig basement and transported off-site for disposal in accordance with all applicable regulations.
- Produced water will be containerized and transported off-site for disposal in accordance with all applicable regulations.
- Sanitary wastewater will be collected in portable facilities and transported off-site for disposal in accordance with all applicable regulations.
- Except for emergency situations, vehicle maintenance, repair, refueling and cleaning shall be performed off-site; there shall be no on-site storage of gasoline/diesel for the fueling of on-road vehicles or heavy equipment.
- Structural controls will be used to retard the entrainment of sediments/constituent in site-generated stormwater during pad construction and the site will be promptly stabilized upon completion of grading activities.

3. Helis has estimated 800,000 gallons will be needed for drilling the vertical exploratory well. Many commenters question the availability and the source of this amount of water.

Response

Helis will construct a lined 50' x 50' stormwater collection area with off-site material in the northwest corner of the drill site. The pad area will be designed to provide stormwater collection features required for the management of non-contact stormwater. To the extent possible, Helis plans to use the stormwater that is collected on-site. The balance of water required will be delivered to the site by truck. There will not be any on-site water wells. The total estimated volume of freshwater required is approximately 800,000 gallons. Helis has identified private ponds from which the total estimated 800,000 gallons of water required can be obtained. These ponds are located within three to five miles of the drill site and are not supplied by and will not be replenished with groundwater wells. Prior to acquiring water, Helis shall provide information to the OOC to identify the proposed sources of water. The acquisition of water shall not commence until these sources are approved by the OOC.²

4. Public hearing was requested.

Response

All issues regarding water quality have been addressed during the comment and review period. The water quality certification approval process encompasses the evaluation of the water quality criteria of the subsegment in which the project is located to ensure that the designated water uses of the affected watershed are not further impacted. The evaluation concluded there are no significant water quality issues associated with the exploratory vertical well project as proposed. Therefore, LDEQ has determined that a public hearing regarding the issuance of the Water Quality Certification will not be held.

² State of Louisiana, Office of Conservation, Office No. 1577-1, issued December 19, 2014, Page 13 of 14

5. Direct, indirect, secondary and cumulative impacts must be fully considered.

Response

Each state must enforce a statewide antidegradation policy aimed at maintaining and protecting instream uses and existing high-quality waters. States may not ordinarily downgrade a designated use if that action would result in less stringent water quality standards.

Helis is not expected to cause exceedances in numerical water quality criteria and/or cause non-attainment of the designated uses and therefore should not result in any degradation of water quality. All direct, indirect, secondary and cumulative impacts have been considered in the issuance of the water quality certification.

6. Comments regarding FEMA, emissions, EIS/EA, traffic impacts, containment, and Clean Water Act Section 404(b)(1) guidelines

LDEQ recognizes these concerns; however, these comments do not present a water quality related issue. LDEQ's Water Quality Certification is a determination of whether the placement of fill material will result in a violation of state water quality standards as provided for in LAC 33:IX.Chapter 11.

All issues regarding water quality standards have been addressed during the certification process for this proposed project and the documentation can be found in LDEQ's Electronic Document Management System, EDMS, available through the public web page located at <http://www.deq.louisiana.gov/portal/>.



BOBBY JINDAL
GOVERNOR

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION

STEPHEN CHUSTZ
SECRETARY
JAMES H. WELSH
COMMISSIONER OF CONSERVATION

DECEMBER 19, 2014

HELIS OIL & GAS COMPANY, LLC
228 ST. CHARLES AVENUE
SUITE 912
NEW ORLEANS, LA 70130-0000

PERMIT TO DRILL

RE: SAINT TAMMANY PARISH
LACOMBE BAYOU FIELD
EADS POITEVENT ETAL NO. 001
SER NO. 248819

GENTLEMEN:

WE ARE ISSUING THE ATTACHED PERMIT TO DRILL FOR THE ABOVE REFERENCED WELL WITH THE UNDERSTANDING THAT YOU WILL COMPLY WITH THE FOLLOWING CONDITIONS:

FURNISH THE APPROPRIATE DISTRICT MANAGER WITH INCLINATION AND/OR DIRECTIONAL SURVEY DATA AS PROOF THAT THE WELL HAS BEEN DRILLED IN COMPLIANCE WITH THE PROVISIONS OF LAC 43:XIX 135 (STATEWIDE ORDER NO. 29-B).

IN THE EVENT THE WELL IS A PRODUCER, NO ALLOWABLE WILL BE ASSIGNED UNTIL A SUITABLE UNIT HAS BEEN FORMED.

ALSO, THERE CAN BE NO COMPLETION IN ANY RESERVOIR WHICH IS NOT IN COMPLIANCE WITH THE PROVISIONS OF THE LOUISIANA OFFICE OF CONSERVATION ORDERS OF THE 1577 SERIES, FOR THE ABOVE-CAPTIONED FIELD AND PARISH.

HELIS IS REQUIRED TO EXECUTE ITS PLAN AS PRESENTED AT THE HEARING AND IN ACCORDANCE WITH ORDER NO. 1577-1, WHICH INCLUDES BUT IS NOT LIMITED TO THE ITEMS BELOW:

- HELIS WILL DRILL THE WELL USING A CLOSED-LOOP SOLIDS CONTROL SYSTEMS, AND THERE WILL BE NO PITS, NO EARTHEN PITS, EITHER LINED OR UNLINED. STEEL TANKS WILL BE USED IN THE CLOSED-LOOP SOLIDS CONTROL SYSTEM WITH ALL THE WASTE MUD AND ROCK CUTTINGS BEING GENERATED BEING REMOVED AS THEY ARE DRILLED.
- HELIS WILL CEMENT THE INTERMEDIATE CASING FROM APPROXIMATELY 12000 TO SURFACE.
- HELIS WILL RESTRICT ITS ACQUISITION OF WATER (FOR FRACKING PURPOSES) TO SURFACE WATER FROM PRIVATE OWNER PONDS THAT ARE NOT REPLENISHED BY GROUNDWATER WELLS.

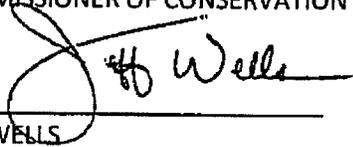
- o PRIOR TO ACQUIRING WATER, HELIS SHALL PROVIDE INFORMATION TO THE OFFICE OF CONSERVATION TO IDENTIFY THE PROPOSED SOURCES OF WATER. THE ACQUISITION OF WATER SHALL NOT COMMENCE UNTIL THESE SOURCES ARE APPROVED BY THE OFFICE OF CONSERVATION.
- HELIS WILL PROVIDE FULL DISCLOSURE OF THE CHEMICALS IT USES TO HYDRAULICALLY FRACTURE THE WELL (IF AND WHEN IT IS DEEMED NECESSARY TO HYDRAULICALLY FRACTURE THE WELL).
- HELIS WILL MONITOR GROUNDWATER, AIR, STORM WATER, AND NOISE AND MAKE ANY REPORTS ASSOCIATED WITH SUCH MONITORING AVAILABLE TO CONSERVATION AND THE PUBLIC.

NO ALLOWABLE WILL BE ASSIGNED SAID WELL UNLESS IN COMPLIANCE WITH THE ABOVE PROVISIONS.

PLEASE BE ADVISED THAT A PERMIT TO DRILL ISSUED BY THE OFFICE OF CONSERVATION DOES NOT RELIEVE THE OPERATOR OF THE OBLIGATION TO COMPLY WITH FEDERAL, LOCAL, OR OTHER STATE PERMITTING OR REGULATORY REQUIREMENTS.

YOURS TRULY,

JAMES H. WELSH
COMMISSIONER OF CONSERVATION



JEFF WELLS

JW : DP
CC: RICHARD HUDSON
LAFAYETTE, DISTRICT MANAGER
29B, 29E-U, 1577 SERIES, SPECIAL CONDITIONS



STATE OF LOUISIANA
OFFICE OF CONSERVATION
PERMIT TO DRILL FOR MINERALS

FEE: \$2528

SERIAL NO. 248819
API 17103200620000

Approval Date 12/19/2014
Expiration Date 12/18/2015

52 PARISH SAINT TAMMANY
4968 FIELD LACOMBE BAYOU
H172 OPERATOR HELIS OIL & GAS COMPANY, LLC
228 ST. CHARLES AVENUE
SUITE 912
NEW ORLEANS, LA 70130-0000

LAFAYETTE DISTRICT

WELL NAME: EADS POITEVENT ETAL

NO. 001

LOCATION OF WELL: SEC 034 T 07S R 12E M E

S 09 D 09' 17" W - 5,346.47' FROM USC&GS MONU. "PINEY 2" IN SEC 34.

ZONE OR RESERVOIR OF PROPOSED COMPLETION: LOWER TUSCALOOSA

Measured Dept 13374

True Vertical Depth

APPLICABLE OFFICE OF CONSERVATION ORDERS: 29B,29E- U,1577

JAMES H. WELSH

JEFF WELLS

COMMISSIONER OF CONSERVATION

ISSUING AUTHORITY

OPERATOR COPY



STATE OF LOUISIANA
OFFICE OF CONSERVATION
PERMIT TO DRILL FOR MINERALS

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Measured Dept 13374

True Vertical Depth

APPLICABLE OFFICE OF CONSERVATION ORDERS: 29B,29E- U,1577

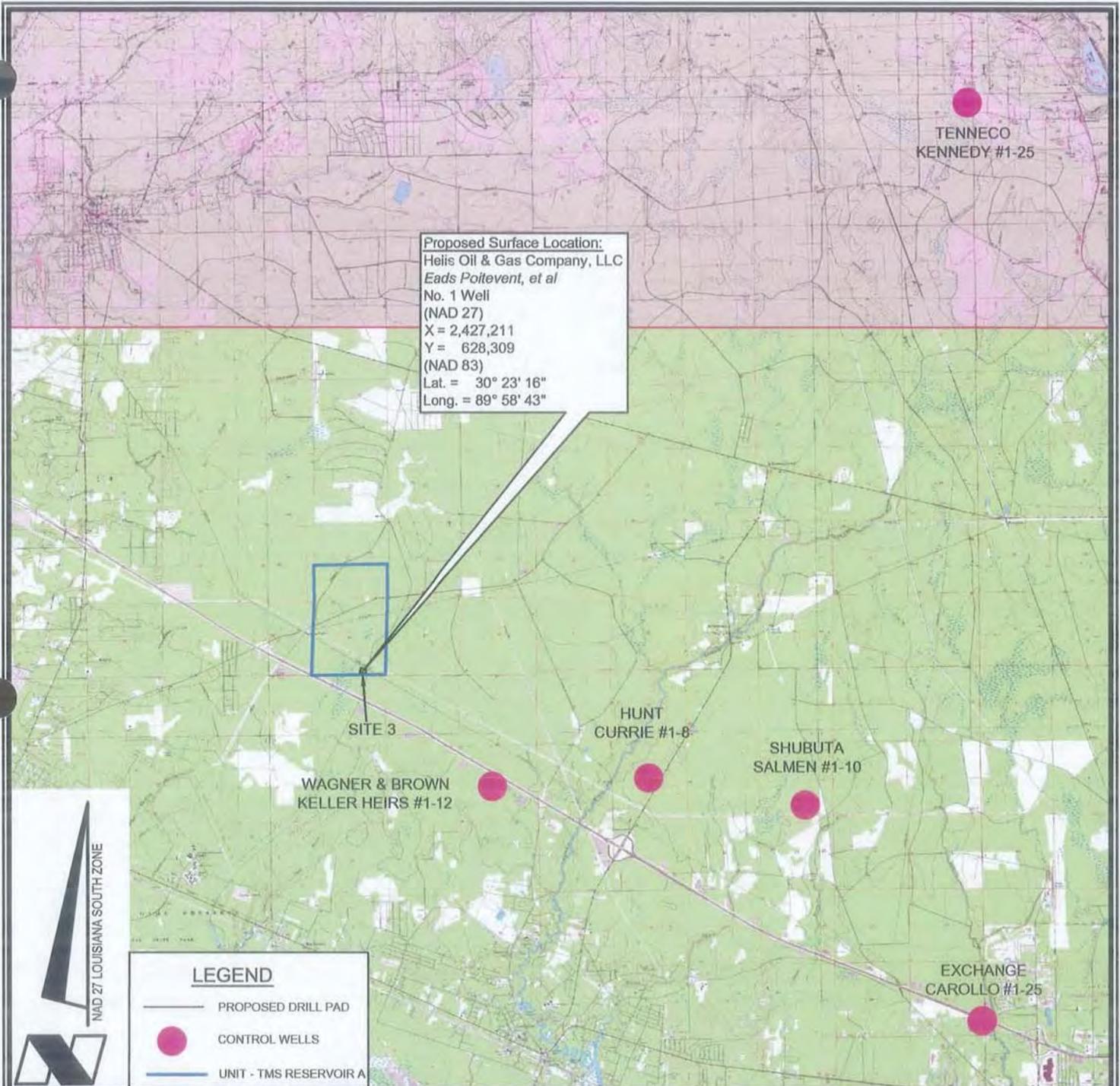
JAMES H. WELSH

JEFF WELLS

COMMISSIONER OF CONSERVATION

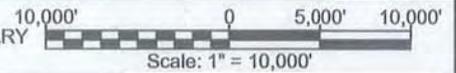
ISSUING AUTHORITY

WELL FILE



NOTE:
 THE CONTENTS OF THESE PLANS ARE INTENDED
 EXCLUSIVELY FOR THE PURPOSE OF OBTAINING
 ENVIRONMENTAL COMPLIANCE PERMITS

FIGURE 1 - CONTROL WELL AREA - NORTHERN BOUNDARY



HELIS OIL & GAS COMPANY, L.L.C.
 PROPOSED DRILLSITE & STRUCTURES
 Eads Poitevent No. 1 Well
 Section 34, T7S-R12E
 St. Tammany Parish, Louisiana



Lafayette New Orleans Houston
 135 Regency Sq. Lafayette, LA 70508
 Ph. 337-237-2200 Fax. 337-232-3299
 www.fenstermaker.com

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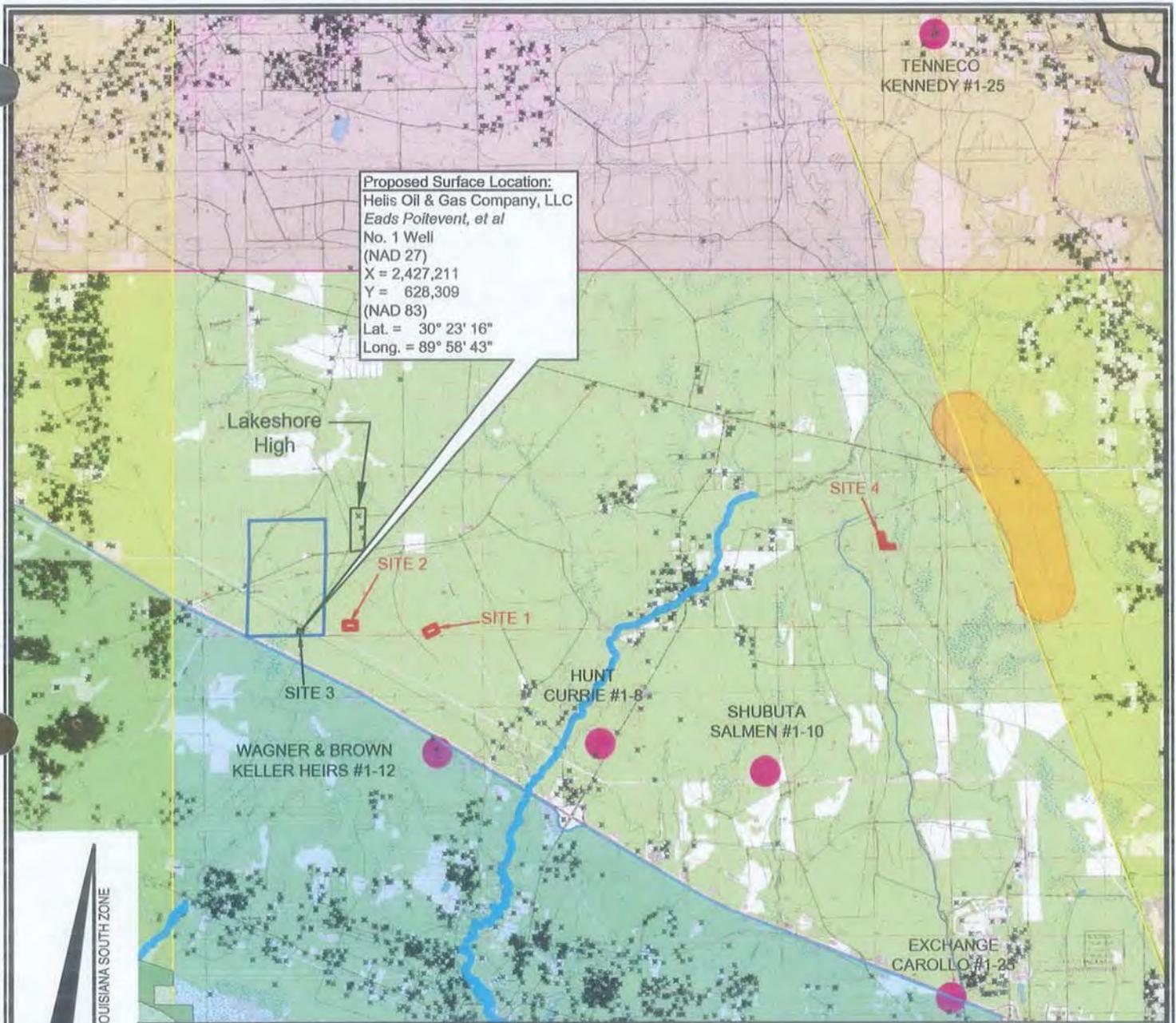
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REVISED:

DATE: 12/31/2014

SHEET 1 OF 5 SHEETS

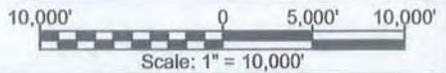


LEGEND

SCENIC RIVERS	LOUISIANA COASTAL ZONE	AREAS OF CONCENTRATED RESIDENTIAL WATER WELLS	CONTROL WELLS
PROPOSED DRILL PAD	GOPHER FROG CRITICAL HABITAT	WILDLIFE MANAGEMENT AREAS	WATER WELLS
UNIT TRACTS			

NOTE:
 THE CONTENTS OF THESE PLANS ARE INTENDED
 EXCLUSIVELY FOR THE PURPOSE OF OBTAINING
 ENVIRONMENTAL COMPLIANCE PERMITS

FIGURE 5 - Overall Map



HELIS OIL & GAS COMPANY, L.L.C.
 PROPOSED DRILLSITE & STRUCTURES
 Eads Poitevent No. 1 Well
 Section 34, T7S-R12E
 St. Tammany Parish, Louisiana



Lafayette New Orleans Houston
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 www.fenstermaker.com

DRAWN BY: NEG	REVISED:	DATE: 12/31/2014
PROJ. MGR.: NEG		SHEET 5 OF 5 SHEETS
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HELIS EXHIBITS (from Hearing)

EXHIBIT NO. G-7B
 DOCKET NO. 14-626
 DATE: 11-12-14

FENSTERMAKER
 135 Regency Sq. Lafayette, LA 70508
 Ph. 337-237-2200 Fax. 337-232-3299
 www.fenstermaker.com

Aerial Photography
 USDA-FSA-APFO NAIP Mosaic
 Date: 2013

HELIS OIL & GAS COMPANY, LLC
 Eads Poitevent, et al No. 1 Well
 Section 34 T7S-R12E
 Saint Tammany Parish, Louisiana

DRAWN BY: TSM	DATE: 10/15/2014	PROJ. MGR.: TSM
FILENAME: T:\2013\2130980\DWG\Historical Aerials.dwg		



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

Exhibit 10

FEB 19 2014

Operations Division
Surveillance and Enforcement Section

Mr. Nicholas Gaspard
C. H. Fenstermaker & Associates, Inc.
135 Regency Square
Lafayette, LA 70508

Dear Mr. Gaspard:

Reference is made to your request, on behalf of Helis Oil & Gas Co., for a U.S. Army Corps of Engineers' (Corps) jurisdictional determination on property located in Section 34, Township 7 South, Range 12 East, St. Tammany Parish, Louisiana (enclosed map). Specifically, this property is identified as the proposed drillsite for Helis Oil & Gas just north of I-12.

A field inspection of the property was conducted on December 19, 2013. Based on the results of this investigation, and the information provided with your request, we have determined that part of the property is wetland and may be subject to Corps' jurisdiction. The approximate limits of the wetland are designated in red on the map. A Department of the Army (DA) permit under Section 404 of the Clean Water Act will be required prior to the deposition or redistribution of dredged or fill material into wetlands that are waters of the United States. Additionally, a DA permit will be required if you propose to deposit dredged or fill material into other waters subject to Corps' jurisdiction. Other waters that may be subject to Corps' jurisdiction are indicated in blue on the map.

You and your client are advised that this preliminary jurisdictional determination is valid for a period of 5 years from the date of this letter unless new information warrants revision prior to the expiration date or the District Commander has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

Should there be any questions concerning these matters, please contact Mr. Michael Windham at (504) 862-1235 and reference our Account No. MVN-2013-02277-SK. If you have specific questions regarding the permit process or permit applications, please contact our Eastern Evaluation Section at (504) 862-2292. The New Orleans District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please complete the survey on our web site at <http://per2.nwp.usace.army.mil/survey.html>.

Sincerely,

for Martin S. Mayer
Chief, Regulatory Branch

Enclosures

